

September 6, 2019

FACT SHEET

Virginia Water Protection Individual Permit No. 19-0170
Potomac Yard Metrorail Station, City of Alexandria

DEQ has reviewed the application for the Virginia Water Protection (VWP) Individual Permit Number 19-0170 and has determined that the project qualifies for an individual permit.

The following details the application review process and summarizes relevant information for developing the Part I - Special Conditions for permit issuance.

1. Contact Information:

Permittee Legal Name and Address:

City of Alexandria
C/o Ms. Emily A. Baker
301 King Street, Suite 3500
Alexandria, Virginia 22314
Emily.Baker@alexandriava.gov
(703) 746-4300

Agent Legal Name and Address:

Stantec Consulting Services Inc.
Attn: Ms. Loretta Cummings
150 Riverside Parkway, Suite 301
Fredericksburg, Virginia 22406
Loretta.Cummings@stantec.com
(540) 785-5544

2. Processing Dates:

Received Joint Permit Application:	February 6, 2019
Received VMRC Number:	February 7, 2019
Received supplement Application Information:	February 15, 2019
1 st Request for Additional Information Sent:	February 21, 2019
1 st Additional Information Response Received:	March 11, 2019
2 nd Request for Additional Information Sent:	April 1, 2019
2 nd Additional Information Response Received:	April 29, 2019
3 rd Request for Additional Information Sent:	May 17, 2019
3 rd Additional Information Response Received:	May 21, 2019
Application Complete:	May 21, 2019

Permit Fee Deposited by Accounting:	March 8, 2019
Processing Deadline (120 days from Complete Application):	September 18, 2019
Notification of JPA sent to Local Government(s):	February 8, 2019
Commissioner of Revenue Contacted (if applicable):	N/A
Request for comments sent to VDH, VDGIF, VDCR, and VMRC:	February 8, 2019
Letters sent to Riparian Land Owners:	February 11, 2019
Draft Permit Package Issued:	May 24, 2019
Copy of Public Notice sent to DEQ Central Office:	May 24, 2019
Copy of Public Notice sent to Local Gov't and Planning District:	May 24, 2019
Public Notice of Draft Permit and Hearing:	June 13, 2019
End of Public Comment Period:	July 31, 2019
Received Verification of Publication:	June 24, 2019
Public Meeting or Hearing:	July 16, 2019
SWCB Meeting:	September 6, 2019

3. Project Location:

The project is located east of Potomac Avenue, west of George Washington Memorial Parkway, and north of Potomac Greens Drive in the City of Alexandria, Virginia.

City/County:	City of Alexandria
Waterbody:	Potomac River, Unnamed Tributary
Basin:	Potomac
Subbasin:	Potomac
Section:	7
Class:	III
Special Standards:	b
HUC:	02070010
Latitude & Longitude:	38.83233, -77.04633
U.S.G.S. Quadrangle:	Alexandria
State Watershed No.:	VAN-A12R

4. Project Description:

4.1 Application

The application for this project consists of the Joint Permit Application (JPA) received on February 6, 2019, additional information submitted by the applicant on February 15, 2019, March 11, 2019, April 29, 2019, and May 21, 2019, including all associated appendices, and all other information submitted by the applicant to DEQ. This information will be hereto referred to as the “application”. Staff requested information from the applicant to provide additional details on topics relating to citizen concerns and Virginia Department of Conservation and Recreation (DCR) revised comments. The information submitted were received on July 1, 2019 through August 9, 2019.

4.2 Project Purpose and Need

The purpose and need of the project is provided in Section 2 of the JPA document, dated and received on February 6, 2019. The purpose of the project is “to maximize access to local and regional transit to and from the Potomac Yard area along the U.S. Route 1 corridor for the greatest number of current and future residents, employees, and businesses in support of currently proposed and anticipated development in the area over the next several decades consistent with the adopted North Potomac Yard Small Area Plan, without excessive disruption of the current rail services while providing for the safety of workers and the general public.” The application states the project is needed to accommodate the forecasted growth in the City of Alexandria, provide additional transportation options to relieve congestion and constrained capacity of the roadway network, provide direct access to regional transit for the existing urban area, and provide Metrorail access in support of the redevelopment of the North Potomac Yard area.

4.3 Project Scope and History

The project consists of constructing a 46,922 square foot Potomac Yard Metrorail station with an associated entrance pavilion, entrance points, stormwater management facilities, construction staging areas, and 3,750 linear feet of new or re-aligned track. No parking facilities are associated with this project.

In April 2015, the Federal Transit Administration (FTA) and the City of Alexandria (the City or the applicant), in cooperation with the Washington Metropolitan Area Transit Authority (WMATA) and the National Park Service (NPS) prepared a Draft Environmental Impact Statement (DEIS) for the construction of the proposed Potomac Yard Metrorail Station. The DEIS considered the following alternatives: a No Build Alternative, three Metrorail station Build Alternatives (A, B, and D), and a design option of Build Alternative B (B-CSX). In June 2016, the FTA and the City, in cooperation with WMATA and NPS prepared a Final Environmental Impact Statement (FEIS), in order to identify impacts of the No Build Alternative and the Preferred Alternative (Alternative B). On October 31, 2016, the FTA issued their Record of Decision (ROD) memorializing their review and approval of the Preferred Alternative (also referred to as Alternative B) described in the FEIS. On November 1, 2016, the NPS issued their ROD stating that they are adopting the Potomac Yard Metrorail Station EIS and making their decision to authorize the use of land within the George Washington Memorial Parkway and Greens Scenic Area easement.

On October 3, 2017, the City originally submitted JPA No. 17-1756 for this project. Staff public noticed a draft permit on September 27, 2018. In response to comments received during the public comment period, staff reevaluated the application materials and determined that additional information was required. Subsequently, the City withdrew that JPA (17-1756) to prepare additional clarification and information with the intention to resubmit the application. A new JPA was received by DEQ on February 6, 2019, with JPA No. 19-0170.

4.4 Project Location and Site Description

Potomac Yard is a former rail yard spanning approximately 342 acres in the City of Alexandria, which was operated by the Richmond Fredericksburg and Potomac railroad from approximately

1906 – 1990. The project will occur on approximately 18.39 acres of land within a subsection of the Potomac Yard area. The project area is bordered by the George Washington Memorial Parkway (GWMP) to the east and active CSX tracks and Potomac Avenue to the west. The site is located north of the Potomac Greens neighborhood and east of the Potomac Yard Shopping Center. Construction of the proposed Potomac Yard Metrorail Station is scheduled to begin pending receipt of the VWP Permit and USACE Individual Permit, with anticipated completion of the station in 2022 – 2023.

4.5 Project Site Description

JPA Section 1.2 summarizes the project area's history of disturbance and land modification from heavy industrial use as a railyard, resulting in soils contaminated with heavy metals and hydrocarbons. The wetland impact area previously contained ponds used as oil/water separators, used to collect surface water containing grease and spilled fuel oil, discharging to the Potomac River through drainage channels. The application explains that as part of the remedial efforts in 1993, water was pumped from the ponds and sediments were solidified with kiln dust and disposed of off-site. The underlying soils were excavated until total petroleum hydrocarbon concentration in the soils was less than 100 milligrams per kilogram. The U.S. Environmental Protection Agency approved a remediation plan and deemed the site cleanup complete in 1998. Currently, the wetland impact site has existing vegetated soil piles that remain from the 1998 activities resulting in mounding and irregular topography. The southernmost portion of the wetland impact area contains a multi-use paved/bridged walking trail with educational signs.

The project area lies at a low elevation, is relatively flat, and bounded by slopes that lead up to the existing Metrorail tracks. Wetland impact areas are currently classified as PFO1Eh (palustrine forested wetland (PFO), broad-leaved deciduous, seasonally flooded/saturated, diked/impounded), and PEM1Eh (palustrine emergent wetland (PEM), persistent, seasonally flooded/saturated, diked/impounded). These wetland impact locations are associated with an approximately 12.5-acre wetland complex. The PFO wetlands located east of the GWMP are currently classified as PFO1S (broad-leaved deciduous, freshwater tidal, temporarily flooded – tidal).

Staff received several concerns from citizens and a non-profit organization during the public comment period for JPA No. 17-1756, stating that the proposed impacts were incorrectly classified as non-tidal wetlands and that the project would impact tidal wetlands directly and indirectly. Tidal wetlands are defined in 9VAC25-210 Virginia Water Protection Permit Program Regulations as vegetated and non-vegetated wetlands as defined in § 28.2-1300 of the Code of Virginia. The Virginia Marine Resources Commission (VMRC) implements this section of state law. VMRC confirmed via letter on March 15, 2019, to DEQ that there are no impacts to areas under VMRC jurisdiction (i.e. tidal wetlands). Also, in response to citizen concerns about whether the project will potentially impact tidal wetlands, VMRC staff stated that VMRC inspected the site several times in order to make the determination that the proposed work does not impact tidal wetlands.

Soils observed within the PEM wetlands are sandy to silty clay loams with colors ranging from 10YR 4/1 to 2.5Y 4/1 (as identified by Munsell color notation), with redoximorphic features

present. Dominant vegetation within the PEM wetlands includes species listed on DCR invasive species list, as indicated by an *.

The dominant vegetation consists of;

- Porcelain berry* (*Ampelopsis brevipedunculata*)
- Japanese honeysuckle* (*Lonicera japonica*)
- Common reed* (*Phragmites australis*)
- Goldenrod (*Solidago spp.*)
- Sawtooth blackberry (*Rubus argutus*)
- Arrow-leaved tearthumb (*Persicaria sagittata*)
- Broadleaf cattail (*Typha latifolia*)

Sparsely scattered trees, saplings, and vines are also present, and include;

- Eastern cottonwood (*Populus deltoids*)
- American sycamore (*Platanus occidentalis*)
- Siberian elm* (*Ulmus pumila*)
- Amur honeysuckle* (*Lonicera maackii*).

Soils observed within the PFO wetlands are primarily silty clay loams with colors ranging from 10YR 4/1 to 7.5YR 4/2 (as identified by Munsell color notation), with redoximorphic features present. Dominant vegetation within the PFO wetlands includes species listed on DCR invasive species list, as indicated by the *.

The PFO wetlands contain in the canopy layer;

- Red maple (*Acer rubrum*)
- Eastern cottonwood (*Populus deltoides*)
- Green ash (*Fraxinus pennsylvanica*)
- Silver maple (*Acer saccharinum*)

The understory contains;

- Red maple saplings
- American hornbeam (*Carpinus caroliniana*) saplings
- River birch (*Betula nigra*) saplings
- Amur honeysuckle*
- Porcelain berry*
- Japanese honeysuckle*
- Common greenbrier (*Smilax rotundifolia*)

DCR provided comment on February 27, 2019, which did not indicate the presence of any state imperiled, threatened or endangered plant species on the project site. On May 31, 2019, DCR notified DEQ that Torrey's rush (*Juncus torreyi*) was documented on the site, based on external data provided to DCR. DCR submitted the confirmed location to DEQ on June 17, 2019. Torrey's Rush is classified as critically imperiled in the state because of extreme rarity or because of some factor(s) making it especially vulnerable to extirpation from the state.

In response to this finding and citizen concerns that staff does have complete information about the species present on-site, staff required a plant inventory be completed. The survey was conducted in July 2019, and submitted to DEQ on August 6, 2019, identifying 107 species. The survey found that vine cover, generally porcelain berry, is prevalent throughout the proposed impact area and accounts for the highest percent aerial plant coverage.

The documented Torrey's rush occurs in an approximately 400 square foot colony adjacent to the existing railway and a paved trail. Torrey's rush comprises approximately 45% of the aerial plant coverage within the 400 square foot colony. Other plant species associated with the colony include rough barnyard grass, devil's beggartick, broadleaf cattail, shallow sedge (*Carex lurida*), strawcolored flatsedge (*Cyperus strigosus*), and common reed.

Based on the Highway Methodology assessment in the application, current principal functions and values of the wetland impact area include groundwater recharge/discharge, flood-flow alteration, wildlife habitat, sediment/toxicant retention, nutrient removal, and recreation.

5. Off-Site Alternatives Analysis:

5.1 Off-Site Alternatives

The application explains the 70-acre North Potomac Yard is unique because it is developable, located within walking distance of the Metrorail systems, and in close proximity to Reagan National Airport. The DEIS and FEIS were submitted as supplemental information to the JPA. The JPA explains that the DEIS and FEIS screened 36 alternatives in order to select those that were responsive to the project purpose and need, consistent with land use and development plans, and technically feasible. The process also evaluated the No Build Alternative. The evaluation process and comments received through the DEIS and FEIS resulted in four build alternatives.

The application incorporates the DEIS and FEIS which describes how the applicant evaluated and eliminated previously considered alternatives; however, the application clearly proposes four build alternatives, referred to as A, B, B-CSX, and D, that were proposed by the City as most supporting of the project purpose and documents an alternative analysis for the purposes of the VWPP Permit application. The application states that the DEIS and FEIS processes recognized that station design, construction schedule, and cost details would be finalized at a later date in conjunction with the selection of a design-build contractor, and as those all have bearing on determining practicality of the project, the applicant further refined information originally dictated in the DEIS and FEIS in the VWPP Permit application.

5.2 Alternatives Analysis of A, B, B-CSX, D, and No Build

Each of the four build alternatives and the no-build alternative in the application were evaluated under the following criteria:

1. Meeting the Project Purpose and Need
2. Surface Water Impacts

3. Practicable after taking into consideration Costs
4. Practicable after taking into consideration Logistics
5. Practicable after taking into consideration Technology

Staff closely reviewed the application to evaluate whether the application demonstrated that Alternative B, the applicant's proposed Least Environmentally Damaging Practicable Alternative (LEDPA), satisfies the requirements of 9VAC25-210-80, taking into account cost, existing technology, and logistics in light of overall project purposes. This determination was made in accordance with the purpose provided by the applicant. The project purpose includes the following components:

- To maximize access to local and regional transit to and from the Potomac Yard area along the U.S. Route 1 corridor for the greatest number of current and future residents, employees, and businesses.
- In support of currently proposed and anticipated development in the area over the next several decades consistent with the adopted North Potomac Yard Small Area Plan.
- Shall not excessively disrupt current rail services while providing for the safety of workers and the general public.

Based upon staff's review of the application, Alternative B, although having the most wetland impacts of the off-site alternatives evaluated in the application, represents the LEDPA as it is the only practicable alternative when considering cost, technology, and logistics, and is the only alternative that meets the purpose and need provided in the application. A summary of the details considered in this evaluation is provided in the section below, and additional details can be reviewed in the VWP Permit file 19-0170.

Project Purpose and Need

The JPA states the project purpose is *“to maximize access to local and regional transit to and from the Potomac Yard area along the U.S. Route 1 corridor for the greatest number of current and future residents, employees, and businesses in support of currently proposed and anticipated development in the area over the next several decades consistent with the adopted North Potomac Yard Small Area Plan, without excessive disruption of the current rail services while providing for the safety of workers and the general public.”* Staff requested and received clarification on the meaning of the purpose statement to assist in review of the alternatives. The application explains the components of the project purpose as follows:

- *To maximize access to local and regional transit to and from the Potomac Yard area along the U.S. Route 1 corridor for the greatest number of current and future residents, employees, and businesses...*

The application states the number of persons with “access” to the station reflects the number of residents, workers, and expected visitors within walking distance of the station. In other words, maximum access is synonymous for the amount of high-density, high-value, walkable development that will be supported by the station. The application explains that the conventional metric for land use and transportation planning is that the public will be willing to walk between ¼ mile and ½ mile to access public transportation. The

Washington Metropolitan Area Transit Authority Station Area Planning Guide (2017) projects ridership to decrease between ¼ to ½ mile walking distances and significantly decrease when the walking distance is greater than ½ mile. This Metrorail station project does not include parking facilities as it is intended to support a transit-orientated urban development.

- *...In support of currently proposed and anticipated development in the area over the next several decades consistent with the adopted North Potomac Yard Small Area Plan...*

The North Potomac Yard Small Area Plan (NPYSAP) was adopted by City Ordinance 4673 on June 12, 2010, and updated in 2017. It envisions North Potomac Yard as an environmentally and economically sustainable and diverse 21st century urban, walkable, transit-oriented, mixed-use community that completes a vital link in the open space and transit networks in the City. The land use strategy of the plan is fundamentally based on proximity to the Metrorail station, high-capacity transit, and market conditions. The North Potomac Yard, is comprised of Landbay F, and is also referred to as Coordinated Development District #19 (CDD #19). The majority of Landbay F can support the high-density development and redevelopment, and the NPYSAP guides its development. The NPYSAP, as provided in the application indicates the Metrorail station is required at the location of Alternative B for the high-density transit-oriented NPYSAP development to be feasible.

- *...Without excessive disruption of the current rail services while providing for the safety of workers and the general public.*

The application states that excessive disruptions of rail services would be counterproductive to facilitating a transit-oriented environment because major disruptions to Metrorail service have long-term impacts on the public's perception and use of the system. Extended shutdowns will require mitigation such as bus shuttles to replace rail services and adding additional capacity to existing routes, while night and weekend shutdowns can significantly extend a construction timeline. Additionally, the application states that the City has a duty to protect its citizens, employees, and contractors from unreasonable harm and therefore, if any alternative does not adequately provide for the safety of workers and the general public, it cannot meet the overall project purpose.

Surface Water Impacts

Surface Water impacts are evaluated based on the surface water features and activities that require a VWPP Permit in accordance with 9 VAC 25-210-10 et seq. This evaluation does not include activities or features outside the authority of the VWPP Program.

Cost

Cost is evaluated on the premise of what is a reasonable expense for this type of construction project, whether the project cost is substantially greater than the costs normally associated with the particular type of project under consideration, and if an alternative is unreasonably expensive to the applicant, the alternative is not practicable.

In letters dated February 2, 2019, and April 1, 2019, staff requested additional information and more details about the cost for each alternative. The additional information responses explained that Alternative B is 33% more expensive when compared to five other at-grade Metrorail station construction projects in the Northern Virginia Region. Because the cost of Alternative B is substantially higher than similar construction projects occurring in the area, the applicant considers any substantial increase in construction cost to be unreasonably expensive. The application states a cost greater than 20% of Alternative B is not practicable. The cost of each alternative is calculated based on construction costs, other costs including equipment, obtaining contractors, public outreach, permitting, and a cost escalation factor caused by time delay associated with land acquisition, land access, permitting, and zoning.

Logistics

Logistics of each alternative is evaluated based on the ability to successfully complete the project when taking into consideration timing, constructability, land acquisition, project constraints, and safety hazardous.

Technology

Technology is evaluated by considering whether the technology is currently available to implement each of the alternatives.

5.3 Alternative A

5.3.1 Project Purpose

A. Maximum Access

In order for the Metrorail station to maximize access to the station for the greatest number of current and future people to and from Potomac Yard, the station must be located to accommodate the highest density development. Alternative A is located in close proximity to Alternative B; however, Alternative A does not provide the ¼ and ½ mile walkable access to developable parcels of the north section of the North Potomac Yard area (Landbay F). Given Alternative A's proximity to Alternative B, staff requested and received an analysis that evaluates Alternative A's performance in meeting the purpose and need if this land-use were rezoned, assuming that rezoning could be accomplished, to maximize access and development potential of Alternative A. The application explains that the central portion of Potomac Yard (i.e., Landbays G and H) can support additional high-density development, but its potential is limited by the fact that many of the parcels are already developed and FAA regulations restrict the height of buildings in this section. The results of the analysis indicate that Alternative A would provide access to 7,287 less employees and residents within walking distance and 1.3 million square feet less new office space; therefore, the application concludes that Alternative A does not meet the project purpose.

B. Consistency with NPYSAP

The application states that Alternative A is inconsistent with the NPYSAP because a Metrorail Station at this location supports lower density development, is less walkable, and delays development, which would be caused by construction logistics and the need for changes in zoning and other approvals. Given Alternative A's proximity to Alternative B, staff requested

and received an analysis that evaluates Alternative A's performance in meeting the purpose and need if this land-use were rezoned, assuming that rezoning could be accomplished, to maximize access and development potential of Alternative A. The application explains that the central portion of Potomac Yard (i.e., Landbays G and H) can support additional high-density development, but its potential is limited by the fact that many of the parcels are already developed, and FAA regulations restrict the height of buildings in this section. The results of the analysis indicate that Alternative A would provide 1.3 million square feet less new office space and \$566 million less in revenue over a 40 year period, and additional debt service cost of \$167 million; therefore, the application concludes that Alternative A does not meet the project purpose.

C. Safety/Disruption of Current Rail Services

The analysis concludes that Alternative A cannot be built without causing additional safety hazards beyond what Alternative B causes, or without significant disruption of Metrorail services (as further described in *5.3.4 Logistics – Alternative A* below).

5.3.2 Surface Water Impacts

The application states that Alternative A would permanently impact 0.02 acre of surface waters and temporarily impact 0.01 acre of surface waters.

5.3.3 Cost – Alternative A

The initial application submittal on February 6, 2019, included cost estimates from the DEIS. The DEIS stated that financial analysis of the projects reflected a level of detail applicable for a project in the EIS phase, and that subsequent phases will define the project at a greater level of detail resulting in more detailed cost estimates. Via letters dated February 2, 2019, and April 1, 2019, staff requested additional information and greater detail about the costs to construct Alternative A. The cost estimate concludes that Alternative A would cost \$398 million. As Alternative B is projected to cost \$320 million, this is an approximately 25% increase in cost. Based upon the above total project cost increase, and the City's 20% increase in cost tolerance, the application concludes that this alternative is not practicable considering cost.

5.3.4 Logistics – Alternative A

Alternative A requires that the station be constructed on-line, which means it has to be built over the existing operational Metrorail tracks, and the station has to be built within a smaller construction footprint situated between existing homes and active tracks. In order to safely construct the station on-line, the Metrorail tracks would either have to be shut down during construction, or a protective shell (also referred to as a protective cover) would have to be constructed to protect construction workers, train passengers, and the tracks during the station's construction.

The application evaluates the practicability of construction occurring when the Metrorail system is shut down. If construction were to occur on only nights and weekends, the construction is estimated to take 10 years, which would increase the cost of construction dramatically due to increased time that labor and heavy equipment would need to be employed. This method would

also create logistical challenges of material cost, availability, and inefficiency. The application states that this option is not practicable.

The application evaluates whether the Metrorail system can be shut down for the entirety of station construction to preclude the need for a protective shell. A two to three year projected shut down period would be required to build a Metrorail station at Alternative A. A shut down of this duration is stated to be not practicable, as WMATA has determined that that length of service disruption to their customers is not acceptable. A station shutdown of this length would result in additional costs as a result of providing bus services, and the potential to lose ridership in the future. The application cites a planned shut down in the summer of 2019 for 107 days, which is the longest shutdown ever allowed by WMATA for Metrorail, as costing WMATA \$3.3 million and costing the City (with some cost burden shared by the Commonwealth) \$2.7 million to provide additional bus services for the comparatively short time. This 107 day shutdown is stated to impact approximately 17,000 passengers per weekday morning.

The application evaluates construction of a steel protective shell over the tracks to create a barrier between the active tracks and the construction operation. The protective shell would protect construction workers and Metrorail users during active construction while maintaining the operation of the Metrorail System. The following logistical challenges are presented for this construction method:

- This alternative requires existing Metrorail service to be disrupted more frequently than Alternative B, as shutdowns would be required to erect and remove the shell. Construction of the protective shell would take approximately 12 weekend shutdowns and, allowing for three weekend shutdowns/month, would take approximately 4 months to erect. Once primary station elements are complete, it will take approximately 6 weekend shutdowns, (2 months) to remove the structure. Elements of station construction involving the lifting of heavy station elements over the tracks would require either additional shutdowns of the Metrorail line during revenue periods, and/or would be accomplished during night and weekend periods.
- The protective shell does not completely eliminate risks to the public and construction workers as trains would travel through the construction site each day.
- Workers, materials, and equipment would not be able to cross the operational Metrorail tracks. The nearest safe location to cross from one side of the station's construction site to the other would be a crossing point a quarter-mile south of the proposed station location. This would create additional logistical challenges and construction time delays.

Alternative A has the following additional logistical challenges resulting from its location between the existing CSX right-of-way and the Potomac Greens residential neighborhood:

- The available laydown area, particularly on the east side of the station between the existing rail track and homes in Potomac Greens, is extremely limited. Having construction proceed in a confined space increases the risk to workers and presents daily challenges to the efficient movement of equipment around the site.
- The application states that the extremely limited construction area could cause condemnation of a row of private homes in the Potomac Greens neighborhood

immediately adjacent to the site. Condemnation proceedings would have to be resolved prior to construction.

- Constructing a track double crossover in such close proximity to homes is expected to cause increases in noise and vibration. Noise levels that already exceed the WMATA noise criteria at seven residences would be increased. Additionally, new vibration impacts would exceed the Federal Transit Administration (FTA) criteria at six residences, and the WMATA criteria at one residence. These exceedances would trigger a mitigation review with FTA and WMATA. The City expects this mitigation review would add additional time (e.g., mitigation evaluation and construction periods) and costs (e.g., construction of vibration dampeners or sound barriers, purchase of noise and vibration easements) to the project.

The application materials state that Alternative A is not practicable when considering logistical constraints.

5.3.5 Technology – Alternative A

The technology exists to construct a Metrorail station at location A; therefore, this alternative is practicable in terms of technology.

5.4 Alternative B-CSX

5.4.1 Project Purpose

A. Maximum Access

In order for the Metrorail station to maximize access to the station to and from Potomac Yard for the greatest number of people, the station must be located to accommodate the maximum level of proposed high-density development. Alternative B-CSX locates the station closer to the northern end of North Potomac Yard; however, this alternative requires impacts to portions of five blocks of developable land, which results in less high-density development area. Staff requested and received an analysis that evaluates Alternative B-CSX's performance in meeting the purpose and need if this land-use were rezoned, assuming that rezoning could be accomplished, to maximize access and development potential of Alternative B-CSX. The analysis indicates that Alternative B-CSX, when compared to Alternative B, would provide access to 3,030 less new employees and residents within walking distance and 1.0 million square feet less of new office space.

B. Consistency with NPYSAP

The application states that Alternative B-CSX is contrary to the NPYSAP because the associated supported development will be significantly delayed, density will be lower and less diversified, less walkable, the City's revenues will be lower as a result of less developable land and delays in development, and the City would have a much higher station construction and debt service costs. Staff requested and received an analysis that evaluates Alternative B-CSX's performance in meeting the purpose and need if this land-use were rezoned, assuming that rezoning could be accomplished, to maximize access and development potential of Alternative B-CSX. The analysis indicates that Alternative B-CSX, when compared to Alternative B, would provide 2.0 million square feet less high-density development, \$516 million less in revenue over the life of

the project, and additional debt service cost of \$535 million; therefore, the application concludes that Alternative B-CSX does not meet the project purpose.

C. Safety/Disruption of Current Rail Services

The application states that Alternative B-CSX would significantly disrupt CSX, Amtrak, Metro, and Virginia Railway Express (VRE) services during construction as this alternative calls for the station to be located on the current CSX right-of-way. The CSX tracks would have to be relocated west of the current location, resulting in a shutdown of operations during construction and transfer of tracks. CSX Transportation (CSXT) has indicated that the disruption to both passengers and freight operations for the duration of construction would ultimately not benefit CSXT. Virginia Department of Rail and Public Transportation (DPRT) stated in a memo on May 4, 2015, submitted during the EIS process that they strongly oppose Alternative B-CSX as it would have a significant negative impact on VRE's operation during construction.

5.4.2 Surface Water Impacts

The application states that there are no surface water impacts associated with Alternative B-CSX.

5.4.3 Cost – Alternative B-CSX

The initial application submittal on February 6, 2019, included cost estimates from the DEIS. Via letters February 2, 2019, and April 1, 2019, staff requested additional information and more details about the costs to construct Alternative B-CSX. The most current cost estimate concludes that Alternative B-CSX would cost \$563 million. As Alternative B is projected to cost \$320 million, the selection of Alternative B-CSX would increase cost 76%. The application states that a 76% increase in cost is not practicable. Based upon the above total project cost increase, and the City's 20% increase in cost tolerance, the application concludes that this alternative is not practicable considering cost.

5.4.4 Logistics – Alternative B-CSX

The B-CSX alternative is located on property owned by CSXT and occupied by a rail line heavily used by CSX, Amtrak, and VRE. The application states that it is not likely that the City could obtain land owned by CSX and obtain approval to disrupt service and relocate portions of the track. If negotiations were possible, it could take several years to reach an agreement and there is no reasonable guarantee that an agreement could be reached. The application states that during the DEIS process, comments from Virginia Department of Rail and Public Transportation and VRE objected to the B-CSX design option based on impacts to existing rail operations. The application explains that the delay in construction would not facilitate the planned development to accommodate the City's projected growth. The application states that given that the land is situated on property owned by CSXT and cannot be reasonably obtained; Alternative B-CSX is not practicable when evaluating logistical constraints.

5.4.5 Technology – Alternative B-CSX

The technology exists to construct a Metrorail station at location B-CSX; therefore, this alternative is practicable in terms of technology.

5.5 Alternative D

5.5.1 Project Purpose

A. Maximum Access

In order for the Metrorail station to maximize access to the station from Potomac Yard for the greatest number of people, the station must be located to accommodate the highest density development. Alternative D occupies land containing 1,000,000 square feet of potential development area. Alternative D would remove five blocks of high density development land and would result in 2 million square feet less of high density development and 14,500 less employees and residents would be within ¼ mile and ½ mile of the station as compared to Alternative B. This alternative would not maximize access to the station.

B. Consistency with NPYSAP

The application indicates that Alternative D is not consistent with the NPYSAP as Alternative D would remove approximately 3 acres development land and would result in 2 million square feet less of high density development and 14,500 less employees and residents would be within ¼ mile and ½ mile of the station as compared to Alternative B.

C. Safety/Disruption of Rail Services

Alternative D has additional safety hazards associated with working within an active rail yard, requires construction of aerial structures over CSX tracks, and additional coordination with CSX. For these reasons the alternative is stated to be not practicable in the application. The application included comments provide by the Virginia Department of Rail and Public Transportation during the DEIS process dated May 15, 2015. In these comments, VRE states they are strongly opposed to Alternative B-CSX and D as these two alternatives would have significantly more negative effect on VRE's operation during construction.

5.5.2 Surface Water Impacts

The application states that Alternative D would permanently impact 0.52 acre of surface waters and temporarily impact 0.41 acre of surface waters. Additionally, due to the need for track re-alignment, a bridge would need to be constructed over Four Mile run resulting in stream and subaqueous bottomland impacts.

5.5.3 Cost – Alternative D

The cost of Alternative D is significantly higher than the other alternatives in the application. The application states that the cost of Alternative D is 84% higher than Alternative B. The application states that this cost was estimated in the DEIS and that any further evaluation of the cost would result in an increase as a result of more detailed accounting, and the increase in the cost of material and labor over time. In addition, the application indicates that Alternative D would have a large funding gap that exceeds the City's debt services and cost for eight years after construction. Based upon the above total project cost increase, and the City's 20% increase in cost tolerance, the application concludes that this alternative is not practicable considering cost.

5.5.4 Logistics – Alternative D

The application states that this alternative has several challenges which cause this alternative to be logistically not practicable. The reasons provided in the application are summarized below:

- Alternative D requires the construction of multiple aerial structures to create two crossings of the CSX tracks and a bridge over Four Mile Run. Construction of these structures would place workers at significant heights, increasing the risk to workers of falling. Construction of structures over the tracks also increase the risk of dropping tools or construction material onto the tracks below that may damage rail track or trains, and increases the risk of derailment.
- Alternative D requires the installation of the aerial track sections over the existing Metrorail and CSX rights-of-way that would require service shutdowns and require demolishing and rebuilding existing retaining walls due to space limitations.
- Alternative D would require the permanent acquisition of 10.04 acres of property in North Potomac Yard. The land to be acquired would include 5.55 acres of land owned by the City, 1.43 acres of NPS land in the area near Four Mile Run, and 3.06 acres of privately-owned land. The development of this alternative would require right-of-way currently owned by CSXT.
- The North Potomac Yard small area plan and CDD zoning would need to be significantly amended, resulting in a 60-84 month delay for an extensive re-planning community process, primarily because of the CSX involvement. This delay is stated to be prohibitive to the project. In addition, the development of Alternative D would require property in the City of Arlington because of the crossing over Four Mile Run, which would extend the project from the City into Arlington County.
- Alternative D would shift elevated tracks closer to residences in Potomac Greens and would exceed FTA and WMATA noise/vibration criteria at 10 residences. The application states that the location of the double crossover would result in vibration impacts at seven residences. Station and train public address announcements would also have the potential to impact residences in the Potomac Greens neighborhood. Due to the location of the station in proximity to Potomac Greens, these impacts would be greater in comparison to Alternative B both during and post-construction.

5.5.5 Technology-Alternative D

The technology exists to construct a Metrorail station at location D; therefore, this alternative is practicable in terms of technology.

5.6 No Build

The No Build Alternative would not impact any surface waters, would not require any track work, would not require any land, easements, or coordination with CSX, would not involve any constructability or safety issues, would not require any land acquisitions, would not impose any costs or materially affect current tax revenue, and would not impose any costs associated with Metrorail construction. The No Build Alternative would include the completion of the internal street networks within Potomac Yard, in addition to investments in transit and bicycle/pedestrian facilities.

The No Build Alternative does not maximize access to and from the Potomac Yard area and is not consistent with the NPYSAP. The No Build Alternative is not considered practicable because it does not meet the purpose and need of the project.

5.7 Alternative B

5.7.1 Project Purpose

A. Maximum Access

Alternative B is within walking distance of every block in North Potomac Yard, as well as the remaining developable parcels in Landbay G, supporting the maximum volume of sustainable, transit-oriented growth, high-density, mixed-use, walkable development in North Potomac Yard. The application also states that Alternative B will provide walkable access to Metrorail for the majority of the existing homes and business in the southern end of Potomac Yard. The application states that Alternative B would provide access to 23,238 new Metro riders (7,287 more than Alternative A and 3,030 more than B-CSX) and 4.1 million square feet of new office space.

B. Consistency with NPYSAP

The application indicates that Alternative B meets the project purpose and need because it is consistent with NYPSAP and provides the maximum access to station. The application estimates that Alternative B will generate \$566 million more tax revenue than Alternative A and \$516 million more than Alternative B-CSX over the 40 year life of the project. The debt service cost for Alternative B is estimated to be \$167 million less than A and \$535 million less than B-CSX.

C. Safety/Disruption of Rail Services

The application states that Alternative B is consistent with the project purpose because construction of Alternative B will not present any unnecessary safety hazards or cause unreasonable disruptions to Metrorail service. Additional discussion is provided in *5.7.4 Logistics – Alternative B* below.

5.7.2 Surface Water Impacts

The application states that Alternative B will permanently impact 1.56 acres of surface waters and temporarily impact 2.01 acres of surface waters.

5.7.3 Cost – Alternative B

The initial application submittal on February 6, 2019, included cost estimates from the DEIS. Staff requested additional information concerning the costs of Alternative B on February 21, 2019, and April 1, 2019. The additional information received on March 11, 2019, and April 29, 2019, further clarified that the estimated cost to construct Alternative B is \$320 million. This is based primarily on the actual budget figures from the executed design-build contract. Alternative B costs approximately 25% less than Alternative A, 76% less than B-CSX, and 84% less than Alternative D. Alternative B is stated to be practicable by the applicant from a cost standpoint.

5.7.4 Logistics – Alternative B

The application states that constructing a station at Alternative B does not present any unusual logistical challenges beyond those inherent to constructing any off-line station, and therefore is considered practicable. A summary of the logistical considerations for Alternative B is provided below.

- Via letter dated February 21, 2019, and April 1, 2019, staff requested additional information about the constructability and safety associated with the various alternatives. The April 1, 2019, letter requested a direct comparison of the construction safety conditions of Alternative A and Alternative B. The response stated that Alternative B has the normal safety concerns associated with rail construction, and does not have the risks associated with working immediately adjacent to a third rail, exposure to electrical current, an increased potential of fouling the tracks with foreign materials during construction adjacent to or below live tracks, or associated injury risks to construction workers and rail users. Alternative B is to be constructed off-line and separated from the operating railroad, except for the construction of a pedestrian bridge, which is common to both Alternative A and B. In addition, Alternative B will not require the use of a protective shell during construction.
- With regards to the land necessary for the proposed station's development, the City owns 6.68 acres of land that will transfer to WMATA and has an agreement to obtain the following from NPA: 0.33 acre in fee and the release of 2.2 acres of NPS scenic easement. The total land transfer to WMATA is approximately seven (7) acres.
- Alternative B meets the project purpose with minimal pre-planned outages on the CSX tracks.
- The construction is financially feasible and the debt service cost for Alternative B is substantially lower than the other alternatives.

The application concludes that in consideration of the above construction of a station at Alternative B is logistically practicable.

5.7.5 Technology – Alternative B

The technology exists to construct a Metrorail station at location B; therefore, this alternative is practicable in terms of technology.

6. On-site Avoidance and Minimization – Alternative B:

The application states that shifting the station either north or south along the existing tracks would not significantly reduce wetland impacts and may have additional temporary impacts as well as constructability challenges. According to WMATA design criteria, when constructing a Metrorail station, there is a maximum curvature and grade for the tracks when approaching and within a station, which were considered when siting Alternative B. Shifting the station west to construct on-line is not possible due to track curvature, the need for extended complete shutdown of rail services during construction, as well as other safety and logistic concerns similarly associated with Alternative A. Shifting the station south would move the track divergent point further south and thus shift the tracks into existing residences in Potomac Greens, displacing homes. Additionally, shifting the station south would also necessitate the station being

constructed further east due to the concave track curvature at this location thus increasing permanent wetland impacts. Shifting the station north would have equivalent impacts due to the grading, fill, and track layout required to maintain correct elevation and curvature.

The application states that permanent impacts associated with station design have been minimized to the maximum extent feasible. The station footprint is consistent with recently constructed stations built to current standards and does not include any design characteristics influencing the station width or length, or the size of the emergency access road outside of the defined WMATA, ADA, and National Fire Protection Association (NFPA) design codes. Thus no elements can be eliminated to further reduce the project footprint.

Temporary impacts have been reduced from previous design iterations both included in the FTA ROD and the previous application submittal (JPA No. 17-1756). The FTA ROD stated that temporary impacts are proposed to be between 2.98 acres and 3.34 acres pending further detailed designs, and JPA No. 17-1756 initially proposed 2.97 acres of temporary impacts and further reduced them to 2.85 acres. The application states that during the design-build process, temporary impacts have been reduced to the minimum size necessary in order to accommodate crane activities and a haul road. Currently, 2.01 acres of temporary impacts are proposed.

7. Project Impacts:

This permit authorizes the total impact of 3.57 acres of surface waters, consisting of 1.56 acres of permanent impacts and 2.01 acres of temporary impacts.

- Permanent impacts consist of 0.92 acre of palustrine forested (PFO) wetland and 0.64 acre of palustrine emergent (PEM) wetland for station construction and other associated permanent infrastructure.
- Temporary impacts consist of 1.10 acres of PFO wetland and 0.91 acre of PEM wetland for construction access/egress, laydown areas, and construction storage.
- Authorized surface water impacts described under this condition shall be as depicted on the impacts map entitled *Potomac Yard Metro Station Impacts Map* and *Potomac Yard Metro Station Impacts Inset Section*, dated March 2019, and received March 11, 2019.

8. Compensation for Unavoidable Impacts:

The application proposes compensation at the minimum 2:1 replacement to loss ratio for impacts to 0.92 acre of PFO and 1:1 replacement to loss ratio for 0.64 acre of PEM impacts. The application also proposes restoration of the temporary impacts to 1.10 acre of PFO and 0.91 acre of PEM.

The wetlands onsite were historically the location of oil/water separator ponds used by the railyard. While the wetlands have been historically disturbed, wetlands in dense urban areas serve a vital role in water quality and habitat; therefore, the permit requires compensation at a 4:1 replacement to loss ratio for PFO impacts and 2:1 replacement to loss ratio for PEM impacts. The permit also requires 1:1 compensation for the temporal loss of function for the temporary

impacts to 1.10 acre of PFO, as it could take years to restore the full function of a forested wetland.

Impact	Proposed Compensation	Required Compensation
0.92 acre of Palustrine forested wetlands (permanent)	1.84 wetland credits	3.68 wetland credits
0.64 acre of Palustrine emergent wetlands (permanent)	0.64 wetland credits	1.28 wetland credits
1.10 acre of Palustrine forested wetlands (temporary)	On-site restoration	1.10 wetland credits and on-site restoration
0.91 acre of Palustrine emergent wetlands (temporary)	On-site restoration	On-site restoration and Torrey's rush re-establishment zone

Compensation for wetland impacts shall be provided through the purchase of 6.06 wetland credits from a DEQ approved mitigation bank, in-lieu fee fund, or a combination thereof that is authorized and approved by DEQ to sell credits in the area in which the impacts will occur and has credits available (as released by DEQ).

In response to DCR's revised comments received May 31, 2019 and subsequent information about the presence of Torrey's rush within the permanent impact area, the draft permit was modified to require the reestablishment of Torrey's rush within the temporary impact area or adjacent wetlands.

The compensation and additional compensation package conforms with the preference hierarchy of the 2008 Compensatory Mitigation Rule issued by the U.S. Environmental Protection Agency and the U.S. Army Corps of Engineers (USACE) and DEQ's Guidance Memorandum No. 09-2004 (Applying Compensatory Mitigation Preferences Provided in the EPA Mitigation Rule to Virginia Water Protection Permitting).

9. Site Inspection:

A pre-application site visit was conducted on January 17, 2019, prior to the submittal of the JPA. The purpose of the site visit was for staff to observe the proposed project boundaries and wetland features. Staff walked the perimeter of the project and observed current field conditions. A summary of the site inspection is located in VWP Permit File No. 19-0170.

10. Relevant Regulatory Agency Comments:

As part of the application review process, DEQ contacted the appropriate state regulatory agencies. No comments were received that required a change to VWP individual permit Part I -

Special Conditions. Therefore, the staff anticipates no adverse effect on water quality and fish and wildlife resources provided the applicant adheres to the permit conditions.

By email/letter dated February 8, 2019, comments were requested from the following state agencies: Virginia Department of Game and Inland Fisheries (DGIF), Virginia Department of Conservation and Recreation (DCR), Virginia Marine Resources Commission (VMRC), and Virginia Department of Health (VDH). Failure to provide comments within 45 calendar days of the DEQ request for comments infers that the agency has no comments on the project activities. Comments were received outside of the 45-day time frame from DGIF. Comments were not received from VDH.

10.1 DCR

DCR provided the following comments in a memorandum dated February 27, 2019, and transmitted by email on February 27, 2019:

- Recommends coordination with DGIF as the agency has regulatory authority for the management and protection of identified threatened and endangered species.

Staff requested comments from DGIF on the proposed project on February 8, 2019.

DCR revised their comments in a memorandum dated May 31, 2019, and transmitted by email on May 31, 2019:

- Recommends avoiding impacts to the documented occurrence of Torrey's rush (*Juncus torreyi*) within the project site.

This recommendation was forwarded to the permittee for their consideration. DEQ will address impacts to the documented occurrence of Torrey's rush through mitigation activities. The applicant has stated that avoidance of the existing population is not feasible as the area will be permanently impacted.

- Recommends the implementation of and strict adherence to applicable state and local erosion and sediment control/stormwater management laws and regulations.

Oversight of stormwater management and erosion and sediment control measures is the responsibility of DEQ-Stormwater Management or the locality, if such responsibility has been delegated. Any such requirements will be implemented under the oversight of that program.

- Recommends coordination with DGIF as the agency has regulatory authority for the management and protection of identified threatened and endangered species.

Staff requested comments from DGIF on the proposed project on February 8, 2019.

DCR subsequently submitted comments on May 31, 2019 and June 17, 2019 confirming and providing the location Torrey's rush on-site.

10.2 DGIF

DGIF provided the following comments to DEQ by email dated October 2, 2018, and re-validated via email on May 28, 2019.

- Recommend that the permittee avoid and minimize impacts to undisturbed forest, wetlands, and streams to the fullest extent practicable to minimize overall impacts to wildlife and our natural resources. DGIF also recommended maintaining undisturbed naturally vegetated buffers of at least 100 feet in width around all on-site wetlands and on both sides of all perennial and intermittent streams.

Staff reviewed the proposed impacts to surface waters and based on the on-site and off-site Alternatives Analysis provided in the application, determined those proposed have been minimized to the maximum extent practicable.

- Recommended that the stormwater controls for this project be designed to replicate and maintain the hydrographic condition of the site prior to the change in landscape.

DEQ's Erosion and Sediment Control (ESC) Program (9VAC25-840), Stormwater Management (SWM) Program (9VAC25-870), and General Permit for Stormwater Discharges from Construction Activities in conjunction with the local government programs have the primary responsibility to ensure that stormwater runoff during and post-construction are controlled. The City of Alexandria has been approved by the Board to implement the regulations as a Virginia Erosion and Sediment Control and Stormwater Management Program Authority; therefore, the City will be responsible for the receipt, review, and approval of the erosion and sediment control and stormwater management plan(s).

- Recommended that all tree removal and ground clearing adhere to a time of year restriction protective of resident and migratory songbird nesting from March 15 through August 15 of any year.

This time of year restriction was not included in the permit as it's not associated with a threatened or endangered species. Migratory songbirds are not afforded any special protection under State Water Control Law and VWP Regulations. The recommendation was forwarded to the permittee for their consideration.

- Recommended adherence to erosion and sediment controls during ground disturbance.

DEQ's Erosion and Sediment Control (ESC) Program (9VAC25-840), Stormwater Management (SWM) Program (9VAC25-870), and General Permit for Stormwater Discharges from Construction Activities in conjunction with the local government programs have the primary responsibility to ensure that stormwater runoff during and

post-construction are controlled. The City of Alexandria has been approved by the Board to implement the regulations as a Virginia Erosion and Sediment Control and Stormwater Management Program Authority; therefore, the City will be responsible for the receipt, review, and approval of the erosion and sediment control and stormwater management plan(s). .

10.3 VMRC

VMRC provided comments in a letter dated February 26, 2019, and transmitted by email on February 27, 2019, stating that the project does not impact vegetated tidal wetlands as defined in section 28.2-1300 of the Code of Virginia as all proposed work is in areas with an elevation above mean low water equal to a factor one and one-half times the mean tide range at the site. As such, the proposal does not fall within the jurisdiction of the Wetlands Zoning Ordinance, and no tidal wetlands permit will be required from this agency.

10.4 VDH

Comments were not received from VDH.

10.5 Summary of Federal Agency Comments and Actions

The project is being reviewed by the U.S. Army Corps of Engineers (USACE) for an individual permit, which the USACE public noticed on April 5, 2019.

11. Riparian Landowner Notification:

Staff notified riparian landowners located adjacent to the impact area and within one-half mile downstream of each distinct impact area by letter dated February 11, 2019. Notifications of riparian and adjacent landowners were conducted in accordance with DEQ's Guidance Memorandum No. 11-2005 (Revised Local Government, Riparian Property Owner, Adjacent Property Owner or Resident, and General Public Notification Procedures for VPDES, VPSA and VWP Permit Applications and Draft Permits).

Riparian landowners were provided by letter dated May 24, 2019, a copy of the draft Public Notice for the proposed permit action for review.

12. Public Comments and Hearing:

Due to the significant public interest in the previous application (JPA No. 17-1756), the applicant requested staff to hold a public hearing regarding the proposed issuance of VWP Permit No. 19-0170. The Director authorized a public hearing on May 13, 2019.

The public notice of the hearing was published in the *Washington Post* on June 13, 2019. Notification of the draft permit and public hearing, and copies of the public notice were sent to the locality in which activities are proposed. The public comment period was from June 14, 2019, to July 31, 2019.

The public hearing was held on July 16, 2019, beginning at 7:00 p.m. at the Oswald Durant Arts Center, 1605 Cameron Street, Alexandria, Virginia 22314. An informal briefing session was held prior to the hearing from 6:00 p.m. to 6:45 p.m. in the same location. The public hearing adjourned at 8:48 pm after everyone present had an opportunity to speak.

During the public comment period, staff received written and oral comments from a total of 76 individuals or organizations/local government, including elected officials Mayor Justin Wilson, State Senator Adam Ebbin, Delegate Mark Levine, and Councilman Canek Aguirre. The organizations and/or local government represented were: sit Alexandria

- Potomac Yard Civic Association
- Alexandria Small Business Development Center
- Alexandria Economic Development Partnership
- Northern Virginia Transportation Authority
- Northern Virginia Transportation Commission
- Alexandria Transit Company
- Alexandria Chamber of Commerce
- Environmental Council of Alexandria
- Virginia Department of Rail and Transportation
- Virginia Native Plant Society
- Virginia Native Plant Society, Potowmack Chapter

A summary of citizen comments and staff's response are included as Attachment A to this fact sheet. In response to citizen comments and the revised comments received from DCR on May 31, 2019 and June 17, 2019, staff made the following changes to the draft permit.

Part I.F.1.a and c. were modified to require additional pre-construction photographs to document the existing condition of adjacent wetlands.

Part I.F.2 was modified to require that weekly self-inspections be submitted to DEQ monthly instead of being kept on-site.

Part I.H.3 was added to provide clarity that the permit requires the successful restoration of 1.10 acre of PFO and 0.91 acre of PEM wetland.

Part I.H.4 was added to require the on-site reestablishment of Torrey's rush that would be disturbed by the permanent impact area.

Part I.J.1.b was added to require specific information on how Torrey's rush will be re-established in the temporary impact restoration area for DEQ's review and approval.

Part I.J.1.e was modified to account for upland soil piles within the project area and address that the permittee shall re-establish 1.10 acre of forested and 0.91 acre of emergent wetlands.

Part I.K.4.a.vii and b.ii were modified to update the link to DCR's invasive plant list.

Part I.K.4.b.iv was added to require that the 400 square foot Torrey's rush colony be re-established with a 45% cover density.

Part I.K.5 was modified to specify that soils also be evaluated in the Torrey's rush re-establishment zone.

Part I.L.5 was modified to specify vegetative monitoring requirement take place within the Torrey's rush re-establishment zone.

Part I.L.6.e was added to specify when vegetative data is to be collected within the Torrey's rush re-establishment zone.

Part I.N.1 was modified to include specifics on corrective action plan monitoring within the Torrey's rush re-establishment zone.

Part I.N.2.d was added to define a Significant Corrective action at the Torrey's rush re-establishment zone.

Part I.N.3 was removed to alleviate concern that permit allowed for the wetland restoration to not be successful.

13. Special Conditions:

The following conditions were developed to protect instream beneficial uses, to ensure compliance with applicable water quality standards, to prevent significant impairment of state waters or fish and wildlife resources, to provide for no net loss of wetland acreage, and to provide no net loss of functions in all surface waters through compensatory mitigation and monitoring and reporting.

Section A Authorized Activities

Nos. 1-3 address the activities authorized by this permit, including impact types and limits.

Section B Permit Term

Nos. 1 and 2 addresses the permit term and re-issuance process to ensure that all permit conditions are completed. The permit term was set to be 15 years to allow for the temporary impact restoration and success monitoring.

Section C Standard Project Conditions

No. 1 addresses the requirement for the minimization of adverse impacts to instream beneficial uses.

No. 2 ensures that the project will be executed in a manner that limits the disruption of the movement of aquatic life.

- No. 3 ensures that downstream flows will be maintained to protect both instream and off-stream beneficial uses
- Nos. 4 through 6 provide requirements and limitations on the entry of various materials (including concrete, fill, construction and waste material, fuels, lubricants, and untreated stormwater runoff) into state waters.
- No. 7 prohibits the violation of Water Quality Standards in surface waters as a result of project activities
- No. 8 requires the identification of all non-impacted surface waters in the vicinity of the proposed activity to prevent unpermitted impacts
- Nos. 9 through 13 set forth all reporting requirements concerning construction, monitoring, compensation, and restoration as required by current law and regulations.

Section D Temporary Impacts

- No. 1 requires all temporary impacts be returned to preconstruction elevations and that replanting occur by March 31, 2022. This date was based from the construction schedule provided in the application.
- No. 2 requires minimum 10 foot buffer from tidal wetland and the proper installation and maintenance of super silt fence. The erosion and sediment control plan will be reviewed and approved by local government. Staff added this condition to ensure specific measures to present sediment discharge at the point where the project construction is closest to tidal wetlands.

Section E Stormwater Management Facilities

- No. 1 defines the general requirements for stormwater management facility construction to minimize adverse effects to aquatic resources and provide for long-term aquatic resources protection and enhancement.
- No. 2 requires correct draining methods to minimize sedimentation of surface waters.

Section F Project Construction Monitoring and Submittals (Impact Site)

- Nos. 1 through 6 address monitoring and submittals required for pre-construction, during construction and post-construction for the impact areas on site. Staff added the requirement that the pre-construction photographs be submitted to DEQ so that can be used as a baseline during construction monitoring. Because the construction is occurring in and adjacent to wetlands, staff increased the self-inspection frequency to weekly instead of monthly and that the reports be submitted monthly.

Section G Soil Management

- No.1 requires a soil management plan. Staff added this condition to ensure that soil being removed from the site is tested and handled in accordance with any applicable state regulations.

Section H Compensatory Mitigation

Nos. 1 through 2 describe the compensatory mitigation required to mitigate for the permitted impacts. Staff added Condition No. 2 to off-set the temporal loss of wetland function understanding that the temporary impact will be approximately 2 years.
No. 3 requires the restoration of 1.10 acre of forested wetland and 0.91 acre of emergent wetland.
No. 3 requires the reestablishment of the Torrey's Rush colony.
No. 5 describes the documentation requirement for the purchase of the required amount of compensatory mitigation credits.

Section I On-Site Restoration Standard Conditions

Nos. 1 through 3 lists the requirements to ensure the success of the compensation site to provide appropriate compensation for unavoidable surface water impacts.

Section J Wetland Restoration Site Construction Tasks, Monitoring, and Submittals

Nos. 1 through 6 lists the requirements for the Final Restoration Plan and monitoring and reporting during restoration grading and site preparation.

Section K Wetland Restoration Success Criteria

Nos. 1 through 6 identify the success criteria required for the restoration of the authorized temporary impacts.

Section L Success Monitoring Requirements

Nos. 1 through 6 identify what on-site observations are required to be documented to assess success of the restoration of the authorized temporary impacts.

Section M Restoration Reporting

Nos. 1 through 2 identify what data and observations are required to be reported to DEQ to document success or lack thereof of the temporary impacts restoration.

Section N Restoration Corrective Action

Nos. 1 through 2 identify how the permit responds to corrective actions that may be necessary if the restoration is not successful during discrete occasions or throughout the monitoring period.

14. General Conditions:

The general conditions specified in the effective VWP Permit Program Regulation 9VAC25-210 apply to all VWP individual permits.

15. General Standard:

This project may result in minimal, temporary impacts to beneficial uses related to the propagation and growth of aquatic life as defined in the General Standard. Provided the permittee abides by the conditions of the permit, no substances shall enter state waters in concentrations, amounts or combinations that would contravene established standards or interfere with beneficial uses or are inimical or harmful to human, animal, plant, or aquatic life.

16. Staff Findings and Recommendations:

- The proposed activity is consistent with the provisions of the Clean Water Act and State Water Control Law, and will protect instream beneficial uses.
- The proposed permit addresses avoidance and minimization of wetland impacts to the maximum extent practicable.
- The effect of the impact, together with other existing or proposed impacts to wetlands, will not cause or contribute to significant impairment of state waters or fish and wildlife resources.
- The proposed permit conditions address no net loss of wetland acreage and no net loss of functions in all surface waters, through compensatory mitigation via the purchase of wetland credits and restoration of the temporary wetland impacts.
- The draft permit reflects the required consultation with and full consideration of the written recommendations of VMRC, VDH, DCR and DGIF. The staff invited, but did not receive, comments from VDH and DGIF.

Staff recommends VWP Individual Permit Number 19-0170 be issued as proposed.

17. Action by the State Water Control Board:

The Board unanimously approved VWP Individual Permit No. 19-0170.

Attachment A
Summary of Comments and DEQ Responses
VWP Permit 19-0170 for Potomac Yard Metrorail Station

1. Support

Staff received comments in support of the project and permit.

Staff Response:

Staff has no response to these comments.

2. Habitat Loss and Wetland Poorly Characterized

Staff received comments about the importance of wetlands and that the wetlands proposed for impact are not accurately characterized. The comments focused on:

- *These wetlands are valuable ecological resources which support large hardwood trees and wildlife and Alternative B destroys the habitat of numerous plant and animal species, mature trees, aesthetic value, and functions of the current wetlands onsite.*
- *The wetlands are connected to an adjacent historic tidal wetland system.*
- *The impacted wetlands are tidal.*
- *The wetland delineation was completed during the winter and does not accurately reflect the vegetation of the site.*
- *State critically-imperiled Torrey's rush and the state-imperiled River bulrush are present at Alternative B or in the adjacent freshwater marsh.*

Staff Response:

In response to comments that tidal wetlands could be present within the proposed work area of the project, DEQ consulted with the Virginia Marine Resources Commission (VMRC) to confirm the lack or presence of tidal wetlands within the construction area. Tidal wetlands are defined in Virginia Water Protection Permit (VWP) Program Regulations (9VAC25-210) as vegetated and non-vegetated wetlands as defined in 'Chapter 13 – Wetlands' of 'Title 28.2 – Fisheries and Habitat of the Tidal Waters' of the Code of Virginia; VMRC implements this section of state law. VMRC confirmed via letter on March 15, 2019, to DEQ that there are no impacts to areas under VMRC jurisdiction (i.e. tidal wetlands). In response to citizen comments about whether the project will potentially impact tidal wetlands, VMRC stated they inspected the site several times in order to make the determination that the proposed work does not impact tidal wetlands.

The VWP Regulations require the wetlands be identified in accordance with the U.S. Army Corps of Engineers (USACE) "Wetland Delineation Manual, Technical Report Y-87-1, January 1987, Final Report" (Federal Manual) and any regional wetland supplements approved for use by USACE. The USACE confirmed the wetland delineation originally on September 28, 2012, and reconfirmed the delineation in September 2017. The delineation process identifies the wetland boundaries and is not intended to be a plant inventory.

On May 31, and June 17, 2019, DEQ received comments from the Virginia Department of Conservation and Recreation (DCR) noting the presence of Torrey's rush (*Juncus torreyi*) on the project site. Torrey's rush is designated as secure throughout its total range and as critically imperiled within its range in Virginia. In response to comments that the wetland delineation does not provide comprehensive

vegetation data and acknowledging that Torrey's rush was found after the draft permit was issued, DEQ requested that the applicant provide an inventory of plant species within the impact area. Stantec conducted the survey in July 2019, and submitted it to DEQ on August 6, 2019. The plant inventory identifies 107 species of which Torrey's rush is the only species of special concern. Torrey's rush occurs on-site in an approximately 400 square foot colony adjacent to the existing railway and a paved trail. Torrey's rush comprises approximately 45% of the aerial plant coverage in this 400 square foot area. Other plant species associated with the colony include rough barnyard grass, devil's beggartick (*Bidens frondosa*), broadleaf cattail, shallow sedge (*Carex lurida*), strawcolored flatsedge (*Cyperus strigosus*), and common reed.

Staff visited the site on January 17, 2019, June 19, 2019, and July 23, 2019, during the pre-application and permit process and the permit file contains the below documents which staff believes sufficiently details the proposed wetland impact characteristics.

- Joint Permit Application (JPA) Section 1.2 and 1.3 provides a site history
- JPA Appendix H -Wetland Delineation Report
- JPA Section 5.1.2 and Appendix K Functional assessment
- JPA D Draft Special Use Permit provides a detailed tree survey.
- JPA Appendix I – Tidal Survey
- Joint Permit Application Appendix J- Habitat Assessment
- Plant inventory submitted August 6, 2019

3. Compensation

Staff received comments that the compensation is not adequate to offset the wetland impacts. The comments focused on:

- *The mitigation plan is not commensurate to the impacts.*
- *Credits purchased should be more localized than the entirety of the watershed.*
- *Remediation of a wetland is not possible.*
- *It will take many years for any planted trees to reach maturity.*
- *DEQ does not have the authority to allow mitigation in another state and it will not compensate citizens of the City of Alexandria.*
- *The permit includes a condition that allows the City to purchase credits if the restoration does not work.*

Staff Response:

The VWP Regulation establishes a preferred sequence (based ecological performance) of the types of compensatory mitigation used to compensate for unavoidable impacts to wetlands. In accordance with 9VAC25-210-116.C.2, when considering options for providing the required compensatory mitigation, DEQ shall consider the type and location options in the following order:

- a) Mitigation bank credits;
- b) In-lieu fee program credits;
- c) Permittee-responsible mitigation under a watershed approach;
- d) Permittee-responsible mitigation through on-site and in-kind mitigation;
- e) Permittee-responsible mitigation through off-site or out-of-kind mitigation;

- f) Restoration, enhancement, or preservation of upland buffers adjacent to wetlands when utilized in conjunction with subdivision 2a, 2b, 2c, 2d, or 2e of this subsection and when consistent with subsection A of this section; and
- g) Preservation of wetlands when utilized in conjunction with subdivision 2a, 2b, 2c, 2d, or 2e of this subsection and when consistent with subsection A of this section.

In their application, the City proposed the purchase of compensation credits at the standard 2:1 replacement to loss ratio for impacts to 0.92 acre of palustrine forested wetland (PFO) and 1:1 replacement to loss ratio for 0.64 acre of palustrine emergent wetland (PEM) impacts. The application also proposes restoration of the temporary impacts to 1.10 acre of PFO and 0.91 acre of PEM. While the wetlands have been historically disturbed, wetlands in dense urban areas serve a vital role in water quality and habitat; therefore, the permit requires compensation at a 4:1 replacement to loss ratio for PFO impacts and 2:1 replacement to loss ratio for PEM impacts. The permit also requires 1:1 compensation for the temporal loss of function for the temporary impacts to 1.10 acre of PFO, as it could take years to restore the full function of a forested wetland.

Impact Type	Proposed Compensation	Required Compensation
0.92 acre forested wetlands (permanent)	1.84 wetland credits	3.68 wetland credits
0.64 acre emergent wetlands (permanent)	0.64 wetland credits	1.28 wetland credits
1.10 acre forested wetlands (temporary)	On-site restoration	1.10 wetland credits and on-site restoration
0.91 acre of emergent wetlands (temporary)	On-site restoration	On-site restoration (including 400 square feet of Torrey's rush)

Impacts to surface waters require compensatory mitigation sufficient to achieve no net loss of wetland acreage and no net loss of function of wetlands and surface waters. The permit requires the credits be purchased from a DEQ approved mitigation bank, an approved in-lieu fee fund, or a combination thereof that is authorized and approved by DEQ to sell credits in the area in which the impacts will occur and has credits available (as released by DEQ). Mitigation credits shall be purchased prior to taking any impacts on-site.

The applicant has indicated that they intend to purchase credits from the Buena Vista Wetland Mitigation Bank that is authorized to sell credits to compensate for impacts to wetlands in the lower Potomac Watershed and Hydrologic Unit Code (HUC) 02070010. The Buena Vista Wetland Mitigation Bank is located in King George County, Virginia. As of August 2019, there are six banks authorized to provide credits to the project site. Five of the banks are within and 32-35 miles from the project site and one bank is 53 miles away. The Buena Vista Bank is the closest bank that has enough credits to cover the draft permit requirement. The Buena Vista Bank is located adjacent to a tidal wetland system to the Potomac River and offers a better landscape position in the watershed compared to the other banks. The use of Buena Vista Wetland Mitigation Bank fulfills the requirement of 9VAC25-210-116.C.2.

DEQ has overseen the restoration of many wetlands in accordance with regulations and DEQ has no reason to believe that the restoration of this project will not be successful. The application process required a conceptual restoration plan for the temporary impacts on-site. Subsequently, based on public comments, DEQ is proposing additional restoration requirements for the re-establishment of Torrey's rush. The draft permit requires a more detailed Final Restoration Plan be submitted within 60 days of an

approved permit. The Final Restoration Plan must be approved by DEQ prior to the commencement of any construction activities in wetlands. Part I Sections J-N of the permit detail all the informational, monitoring, and success requirements of the restoration work. The draft permit included a condition (Part I.N.3) that requires the purchase of credits if DEQ determines that corrective action cannot sufficiently address deficiencies in the wetland restoration performance. Staff received citizen comments that this provides an avenue for the restoration to be not be successful. In response to the comment, staff removed this condition from the permit.

Through the Environmental Impact Statement process that preceded the VWP process, the City and the National Park Service developed an “Agreement Regarding Wetland Mitigation for the Potomac Yard Metro” dated November 1, 2016. As part of this agreement, the City is to contribute \$1 million per acre, not to exceed \$4.7 million, of impact to National Park Service wetland areas. The details of this compensation and where these monies are allocated are not within the purview of the VWP Program and are independent of any requirements of the proposed permit. The permit requires mitigation in addition to any compensation provided to the National Park Service developed in the Agreement. Any mitigation provided to the National Park Service does not offset or alter what is required or provided under the VWP Program.

4. Project does not account for all impacts (including secondary or off-site)

Staff received comments that the permit does not account for all the wetland impacts associated with the project. The comments focused on:

- *The tidal channel will be used for stormwater runoff from the Potomac Yard development.*
- *Inadequate details in regards to stormwater management and erosion/sediment control.*
- *The proposed temporary impacts will be permanent.*
- *A ten-foot buffer around the tidal wetlands is inadequate.*

Staff Response:

DEQ’s Erosion and Sediment Control (ESC) Program (9VAC25-840), Stormwater Management (SWM) Program (9VAC25-870), and General Permit for Stormwater Discharges from Construction Activities in conjunction with the local government programs, have the primary responsibility to ensure that stormwater runoff during and post-construction are controlled. The City of Alexandria has been approved to implement the regulations as a Virginia Erosion and Sediment Control and Stormwater Management Program Authority; therefore, the City will be responsible for the receipt, review, and approval of the erosion and sediment control and stormwater management plan(s). DEQ has purview over the Erosion and Sediment Control and Stormwater Management Program and may independently conduct compliance inspections under these programs and the VWP Permit Program.

Construction activities will be occurring in and immediately adjacent to non-tidal wetlands and near tidal wetlands that are present adjacent to the non-tidal wetlands. There is a specific point where the tidal wetland is within 10 feet of the temporary impact boundary (identified on cross-section 450+50 provided in Attachment M- Temporary Fill Cross-sections received on April 29, 2019). The draft permit requires: a minimum 10-foot buffer between the tidal wetland and the project limits; properly install and maintain a row of super silt fence a minimum of 10 feet from the tidal wetland to provide secondary sediment control; and, properly install and maintain a row of silt fence 5-feet landward of the super silt fence to provide primary sediment control. The condition is in the permit to ensure that more than the minimum erosion and sediment controls be employed at this location.

In response to citizen concerns, staff is proposing the draft permit be modified to require increased self-inspections from monthly to weekly, including walking the perimeter of the construction site, and that these reports be submitted monthly to DEQ versus keeping them on-site. This condition was added to increase the construction staff awareness of the adjacent wetlands and ensure frequent observations are taking place. This monitoring is in addition to the inspections and monitoring required by the ESC, SWM and Construction General Permit as well as any inspections conducted by DEQ, USACE, or the City of Alexandria staff.

The City is responsible for assuring that no unauthorized impacts occur beyond those that are authorized in the VWP Permit. In the event that unauthorized impacts occur, enforcement actions consistent with DEQ's policies and practices will be taken.

5. Floodplain Impacts

Staff received comments about the existing flooding concerns in the City of Alexandria and how this permit/project will exasperate the flooding. The comments focused on:

- *The JPA does not adequately address the effects of fill within the floodplain and the flooding risks associated with Alternative B.*
- *The VWP Permit does not consider flooding.*
- *The JPA does not address flooding of the Metrorail Station.*
- *The JPA does not assess climate change consequences associated with Alternative B.*

The local government manages impacts to floodplains in accordance with FEMA Regulations and the City's floodplain ordinance. The Alexandria City Department of Transportation and Environmental Services, which administers the floodplain regulations, indicated in a letter dated July 24, 2019, that the development has adequately demonstrated no significant impact on existing floodplains adjacent to the development and that the project would not increase the risk of flooding in the immediate vicinity.

The wetlands proposed for impact inherently function to absorb and store runoff during storm events. The SWM Program accounts for changes in stormwater runoff caused by the changes in land cover associated with development activities. The SWM Program requires that the volume, velocity, and peak discharge rate of stormwater runoff be controlled. The stormwater runoff during and post construction activities will be under the purview of City of Alexandria's Erosion and Sediment Control and Stormwater Management Programs. DEQ has purview over the Erosion and Sediment Control and Stormwater Management Program and may independently conduct compliance inspections under the programs; however, the receipt, review, and approval of the erosion and sediment control and stormwater management plan(s) are completed by the local government program authority (City of Alexandria).

The proposed wetland impacts are located within a 655 acre watershed. The existing tracks are the west boundary of the watershed. The watershed drains to Four Mile Run and to tidal wetlands flowing into a tidal channel to the Potomac River. Staff does not anticipate the proposed impacts to exasperate flooding within the City of Alexandria because the entirety of the project area discharges to the Potomac River adjacent to the project and does not pass through the City's internal streets or storm sewer network.

Climate change is beyond the scope of VWP's regulatory authority. While DEQ acknowledges the concern regarding climate change, there is no statutory or regulatory authority to address this under the VWP Permit Regulations.

6. Threatened and Endangered Species

Staff received comments that the project will affect state imperiled, threatened or endangered species. The comments focused on:

- Lack of substantive discussion and data in the current JPA in regards to threatened and endangered species.
- Torrey's rush will be extirpated from the site and no mitigation is sufficient.
- River bulrush are documented onsite and not considered in the JPA.
- Potential habitat for the Sensitive Joint-vetch was found onsite and the survey is expired.

Staff Response:

Based upon a review of the file materials and DEQ's coordination with other state agencies, the draft VWP Permit does not anticipate nor authorize any impacts to threatened or endangered species. Torrey's rush is rare in Virginia but is not threatened nor endangered.

During the VWP Permit application processing, staff coordinated the project with Virginia Department of Game and Inland Fisheries (DGIF) and DCR. DGIF provided comments that there were no threatened and endangered animals associated with the project. DCR provided comments on February 27, 2019, that they do not anticipate any impacts to natural heritage resources, including rare, threatened or endangered plants. DCR provided additional comments on May 31, 2019, indicating that Torrey's rush was reported to be on the project site. DCR staff confirmed the presence of Torrey's rush on June 10, 2019. Torrey's rush is not currently listed as threatened or endangered species by DCR. Coordination with these agencies did not indicate the presence of River bulrush (*Bolboschoenus fluviatilis*) or Sensitive Joint-vetch (*Aeschynomene virginica*) within the project footprint.

In response to the presence of Torrey's rush on-site in the location of the proposed Metrorail infrastructure, staff proposes a modification to the permit that requires that the wetland restoration plan include re-establishment of the Torrey's rush colony within or adjacent to the temporary impact restoration area. The proposed modification requires that the final restoration be provided to DEQ for review and approval before initiating work in surface waters and include the following:

- Multiple approaches to assure successful mitigation through relocation of mature plants, as well as planting of propagules and/or seeds, which have been successfully reared off site in greenhouse setting or on-site.
- The location where the colony will be re-established (the re-establishment zone);
- The method to harvest the on-site seed source (starting in June through September of 2019), transferrable rooting structures, individual plant specimens, and/or entire in-situ plant colony including associated soil media within the rooting zone;
- The method of re-establishment; and,
- Soil amendments (if applicable).

In response to concerns that the wetland delineation does not provide comprehensive vegetation data and acknowledging that Torrey's rush was found after the draft permit was issued, DEQ requested that the City provide an inventory of plant species within the impact area. The survey was conducted in July 2019, and submitted to DEQ on August 6, 2019, identifying 107 species in the wetland impact area. The survey found that vine cover, generally porcelain berry, is prevalent throughout the proposed impact area and accounts for the highest percent aerial plant coverage.

The documented Torrey's rush occurs in an approximately 400 square foot colony adjacent to the existing railway and a paved trail. Torrey's rush comprises approximately 45% of the aerial plant coverage within the 400 square foot area. Other plant species associated with the colony include rough barnyard grass, devil's beggartick, broadleaf cattail, shallow sedge, strawcolored flatsedge, and common reed.

Acknowledging that the results of the plant inventory reflect vegetative cover present at the time of the field investigation, no threatened or endangered, or additional rare species were found within the impact areas.

7. DEQ Process

Staff received comments that public noticing a draft permit indicates that DEQ has already made a decision on the permit. The comments focused on:

- *DEQ's mission statement is to protect the environment not support economic development.*
- *Issuing the permit would mean DEQ failed its mission to protect the environment.*
- *Public input is not considered by DEQ.*
- *DEQ has already decided to issue the permit.*

Staff Response:

DEQ implements and enforces laws passed by the General Assembly designed to protect human health and the environment in a fair, consistent, and transparent manner. The VWP regulations, 9VAC25-210, do not prohibit the taking of or impacts to wetlands and surface waters; they limit and prescribe how impacts may occur so as to avoid, minimize, and compensate such impacts to assure no net loss of wetlands. The application and draft permit for this project have been processed in accordance with the regulations in a consistent manner with past VWP permit actions.

DEQ is tasked with evaluating applications for VWP Permits in accordance with the applicable State Water Control Law and VWP Permit Regulations. When a VWP permit application receives significant public interest, in accordance with 62.1-44.15:02, DEQ will schedule a public comment period that includes a public hearing and make a recommendation to be presented to the State Water Control Board (SWCB). In response to public comments, DEQ evaluates the concerns in light of the VWP Permit regulations and makes appropriate recommendations to the Board. DEQ does not make the final decision, the SWCB, a separate entity from DEQ, makes the final decision.

8. Purpose and Need

Staff received comments that the purpose of the project provided in the application is not approvable. The comments focused on:

- *The City of Alexandria changed their purpose in the revised JPA.*
- *The USACE should not have accepted the changed purpose.*
- *The purpose is too narrow and only allows Alternative B to meet the purpose.*
- *Economic development should not be considered in an environmental permit.*
- *Development will occur (regardless of Metrorail) in Potomac Yard because land in the area is finite.*

Staff Response:

The City originally submitted an application for this project on October 3, 2017, (JPA No. 17-1756), which was subsequently withdrawn by the City. A new Joint Permit Application was received on February 6, 2019, and staff has reviewed this application in accordance with the VWP regulations. DEQ is required to evaluate the application in context of the VWP regulation, but does not have authority over whether the applicant elects to withdraw an application or modify portions of their application, including the project purpose.

The purpose of the project stated in the application is “to maximize access to local and regional transit to and from the Potomac Yard area along the U.S. Route 1 corridor for the greatest number of current and future residents, employees, and businesses in support of currently proposed and anticipated development in the area over the next several decades consistent with the adopted North Potomac Yard Small Area Plan, without excessive disruption of the current rail services while providing for the safety of workers and the general public.” An applicant’s purpose and need must be sufficiently specific to enable a review of avoidance and minimization of alternatives. Staff recognizes that this project has a very specific project purpose and staff requested specific information about how Alternatives A, B-CSX, and D performed in meeting the purpose. Based upon review the JPA and the responses provided, the City has sufficiently explained the various components of their purpose statement. The various components are described below and in more detail in the Fact Sheet, as to their relevance to the proposed project.

- To maximize access to local and regional transit to and from the Potomac Yard area along the U.S. Route 1 corridor for the greatest number of current and future residents, employees, and businesses...

The application states the number of persons with “access” to the station reflects the number of residents, workers, and expected visitors within walking distance of the station. In other words, maximum access is synonymous for the amount of high-density, high-value, walkable development that will be supported by the station. The application explains that the conventional metric for land use and transportation planning is that the public will be willing to walk between 0.25 mile (5-minute walk) and 0.5 mile (10-minute walk) to access public transportation. The *Washington Metropolitan Area Transit Authority Station Area Planning Guide (2017)* projects ridership to decrease between 0.25 to 0.5 mile walking distances and significantly decrease when the walking distance is greater than 0.5 mile. The application explains that being a joint development partner with WMATA in creating a transit oriented development, they must fully integrate WMATA’s transit access requirements, standards, and guidelines into the master plan. This Metrorail station does not include parking facilities as it is intended to support a transit-orientated urban development.

- ...In support of currently proposed and anticipated development in the area over the next several decades consistent with the adopted North Potomac Yard Small Area Plan...

The North Potomac Yard Small Area Plan (NPYSAP) was adopted by City Ordinance 4673 on June 12, 2010, and updated in 2017. It envisions North Potomac Yard as an environmentally and economically sustainable and diverse 21st century urban, walkable, transit-oriented, mixed-use community that completes a vital link in the open space and transit networks in the City. The land use strategy of the plan is fundamentally based on proximity to the Metrorail station, high-capacity transit, and market conditions. The North Potomac Yard is comprised of Landbay F and is also referred to as Coordinated Development District #19 (CDD #19). The NPYSAP guides the high-density development and redevelopment of Landbay F. Benefits of high-density development can be hindered by an increase in traffic congestion, thus the application highlights the need for the redevelopment to be transit oriented, placing the majority of high density redevelopment within a 0.25 mile and 0.5 mile radius of the future station. Development outside of the radii will happen at a slower rate and will tend to be a lower density. The NPYSAP indicates the Metrorail station is required at the location of Alternative B for the high-density transit-oriented development to be feasible.

- ...Without excessive disruption of the current rail services while providing for the safety of workers and the general public.

The application states that excessive disruptions of rail services would be counterproductive to facilitating a transit-oriented environment because major disruptions to Metrorail service have

long-term impacts on the public's perception and use of the system. Extended shutdowns will require mitigation such as bus shuttles to replace rail services and adding additional capacity to existing routes, while night and weekend shutdowns can significantly extend a construction timeline. Additionally, the application states that the City has a duty to protect its citizens, employees, and contractors from unreasonable harm and therefore, if any alternative does not adequately provide for the safety of workers and the general public, it cannot meet the overall project purpose.

While considering the project purpose it is also important to note that staff's analysis is not based solely on Alternative B meeting the project's purpose but is also being done in consideration of practicability of each Alternative after considering cost, existing technology, and logistics in light of the overall purpose and need.

Comments pertaining to the USACE's process are outside the purview of the VWP regulations and DEQ's permit process.

9. LEDPA Determination

Staff received comments that Alternative B is not demonstrated to be the Least Environmentally Damaging Practicable Alternative (LEDPA). The comments focused on:

- *The impacts of the other alternatives have not been fully examined and were not ever seriously considered.*
- *The LEDPA has yet to be discovered.*
- *The bus alternative was not fully assessed.*
- *Practicability statements made in the JPA are hypothetical and not adequately quantified, including cost.*
- *Cost analysis in 2012 demonstrated Alternative B cost more than Alternative A and additional costs have been erroneously applied to other Alternatives.*
- *Cost for Alternative B does not account for the South entrance enhancement currently being considered by the City.*
- *Alternative B-CSX is the LEDPA and negotiations with CSX have not been fully pursued.*
- *Alternative B-CSX could work in conjunction with the future High Speed Rail project.*

Staff Response:

The details of Alternatives Analysis are contained in the application materials and the Fact Sheet for the draft permit. After several requests for additional information and analyses, staff determined the application materials satisfy the requirements of 9VAC25-210-80, demonstrating that Alternative B, although having the most wetland impacts of the alternatives evaluated in the application, is the least environmentally damaging practicable alternative taking into account cost, existing technology, and logistics in light of overall project purpose. Purpose, cost, and logistic are in detail in factsheet and are summarized in the following paragraphs; staff did not consider technology to be a deciding factor in differentiating between the alternatives.

Purpose: The JPA for this project submitted on February 6, 2019, provided practicability analyses for each alternative under the current zoning proposal (North Potomac Yard Small Area Plan or NPYSAP). The City's analysis concluded that Alternative B is the only alternative that provides walkable access to every re-developable parcel in Potomac Yard and the majority of the existing homes and business in the southern portion of Potomac Yard. Alternative B provides maximum access and the highest density of re-development.

Staff requested an analysis of how the land area could be rezoned to best support a Metrorail Station at Alternative A and B-CSX in order to be sure that the NPYSAP zoning was not limiting the potential for Alternative A and B-CSX to support re-development and provide maximum access. Staff did not request this analysis for Alternative D as the application materials demonstrated that Alternative D was 84% more expensive than Alternative B and included logistical challenges such as constructing a bridge over Four Mile Run. The rezoning analysis did not change the conclusion that Alternative B is the only practicable alternative and highlighted the cost and logistical challenges of rezoning.

The application indicates that a Bus Alternative was considered in the EIS process; however, it was not provided in the VWP Permit application as a viable alternative as it does not support the project purpose.

Cost: The initial application submitted on February 6, 2019, included cost estimates from the Environmental Impact Statement (EIS) process. Staff requested a more up to date and detailed cost analysis. The additional information received on March 11, 2019, and April 29, 2019, clarified that the estimated cost to construct Alternative B is \$320 million, which is based primarily on the actual budget figures from the executed design-build contract. Alternative B costs approximately \$78 million (25%) less than Alternative A, \$243 million (76%) less than Alternative B-CSX, and \$269 million (84%) less than Alternative D. The City states that a 20% percent increase in cost (\$64 million) to the City is determined to be not practicable.

The application materials also explain the project tax revenue and debt service cost associated with each alternative, which is a function of how and when the high value, dense, walkable development will occur in relation to each alternative. The below table summarizes the findings.

Alternative	Station Cost (millions)	Tax Revenue (millions)	New Office Space (million sq.ft.)	Metro Access (workers and residents)
Alt. B	\$320	\$2,771	4.1	23,238
Alt. A	\$398	\$2,205	2.8	15,951
Alt. B-CSX	\$563	\$2,255	3.1	20,208

The cost associated with an enhanced south entrance at the Alternative B scenario is not included in the application cost analysis because the enhancement was removed from the project. Subsequently, the Commonwealth of Virginia announced in a Memorandum of Understanding dated November 12, 2018, its intention to grant \$50 million toward the enhancement of a south entrance to the Potomac Yard Metro station. Based upon information provided by the City, it is staff's understanding that the City has requested the Potomac Yard Contractor to evaluate an option that would enhance the south access point to the proposed Metrorail Station and remain within the \$50 million offered by the Commonwealth and without delaying the station opening date so that limited or no additional cost would be realized by the City.

Logistics: The application materials state that Alternative B-CSX is located on property owned by CSXT and occupied by a rail line heavily used by CSX, Amtrak, and VRE. The application states that it is not likely that the City could obtain land owned by CSXT and obtain approval to disrupt service and relocate portions of the track. If negotiations were possible, it could take several years to reach an agreement and there is no reasonable guarantee that an agreement could be reached. The application includes comments provided during the DEIS process from Virginia Department of Rail and Public Transportation (VDRPT) and VRE which objected to the B-CSX design option based on impacts to existing rail operations. The DRPT provided comments in support of Alternative B during the VWP Permit public comment period. The application explains that the delay in construction would not facilitate the planned development to accommodate the City's projected growth. The application states that given that the land is situated on property owned by CSXT and cannot be reasonably obtained; Alternative B-CSX is not practicable when evaluating logistical constraints.

The City provided information that the future High Speed Rail project is a VDRPT project funded by the Commonwealth. The proposed project includes improving CSX track existing alignment in the Potomac Yard whereas the B-CSX Alternative would require realignment of the tracks; therefore, the B-CSX Alternative does not have any cost savings associated with this proposed future project by VDRPT.

10. Noise and Vibration Impacts at Alternative A vs. Alternative B

Staff received comments that the noise and vibration impacts associated with Alternative A were not thoroughly/accurately vetted in the application. The comments focused on:

- *Construction noise and vibration impacts would be the same between Alternative A and Alternative B.*
- *Other occurrences of excessive vibrations occurring at other Metro and rail sites was not discussed in the JPA analysis.*
- *Consequences of exceeding WMATA and Federal Transit Administration vibration criteria is not discussed in terms of project practicality.*

Staff Response:

Noise and vibrations were one of the environmental factors considered in the EIS processes. The application materials explain that the WMATA Noise and Vibration criteria are design standards incorporated into the WMATA Manual of Design Criteria (2016) that sets standards for all projects, and that construction of Alternative A would make the existing noise and vibration impacts substantially worse both during the multi-year construction period and during operation of the station. Failure to satisfy those standards could force WMATA to employ mitigation measures for the impacts of noise and/or vibration. Accordingly, these potential impacts on the project are factored into the practicability analysis as part of the contingency in the cost estimate for Alternative A. The application states that it is not reasonably possible to quantify the "consequences" with respect to Alternative A with any substantial degree of certainty at this time because the mitigation measures would have to be developed in discussions with WMATA, FTA, and affected homeowners and would be driven in large part by future discretionary decisions of WMATA and FTA.

The application states that exceedances occur at other lines either temporarily or permanently. A permanent exceedance typically occurs due to a change in the surrounding environment. The example provided was that the Blue and Yellow lines were constructed on undeveloped land and adjacent to an active rail yard in Northern Alexandria. Later, a landowner built a townhome community immediately adjacent to Blue and Yellow lines transit rail. In these cases, any permanent exceedance from WMATA's

rail activity is considered ‘grandfathered’ in, meaning no remedial work would be required at this site under WMATA’s standards. Construction of Alternative A would create a new noise and vibration impact both during the construction period and during operation of the station.

11. Proximity of Alternative A and Alternative B

Staff received comments that Alternative A and Alternative B are within 200 feet of each other and it is not clear why these are not more similar in terms of access.

Staff Response:

Staff recognizes the footprint of the north ramp of Alternative A and the south ramp of Alternative B are very close. However, the entrance/exit for Alternative B is approximately 1,000 feet closer to North Potomac Yard than Alternative A. The consequence of this is discussed in Comment Number 8 - Purpose and Need.

12. Alternative A – Protective Shell

Staff received comments that the Protective Shell associated with Alternative A is erroneous, that a shell structure is not required, and that Alternative B has similar risks.

Staff Response:

The application states there is no feasible way to construct a Metrorail station around and overtop of an operating rail line without extraordinary mitigation safety measures, such as a protective shell (also referred to as a “protective structure”) or a rail line shutdown and that traditional construction techniques cannot be safely employed at Alternative A. The worksite for Alternative A would be above and within one foot of the active rail as where Alternative B is 15 feet from the third rail at its closest point, but generally is further away.

Staff requested additional information about the need and cost of the protective shell on February 21, 2019, and April 1, 2019. In response, the City submitted an updated and detailed cost evaluation of Alternative A, including the protective shell. The estimated cost of the protective shell is \$20 million which includes:

- i. design, materials, and construction of the protective structure;
- ii. engineering services to design the station over and around the structure;
- iii. additional time (estimated to be at least 6 months) added to the construction schedule to construct station elements during weekend and night periods when trains are not running;
- iv. removal and disposal of the protective structure;
- v. real estate accommodations; and,
- vi. insurance

The application provided the below table to summarize the safety factors associated with Alternative A as compared to Alternative B.

Factor	Alternative A	Alternative B
Proximity to electrical current	<p>Worksite is immediately adjacent (within a foot) to third rail, with electrical current on both sides of the railroad, for a distance of at least 600 feet (the length of the station platform).</p> <p>Arcing of current is a concern. This risk is mitigated but not entirely eliminated by the protective shell.</p>	<p>The worksite is isolated from electrical current by distance and a fence. The construction site is 15 feet from the third rail at its <i>closest</i> point, but generally is much further away.</p> <p>Although arcing possible up to 100 feet, much of the construction activity will be outside that distance, except during the two weekend shutdowns to re-align the track. The third rail will be de-energized during these times.</p>
Potential for fouling tracks by falling debris and tools.	<p>Worksite is immediately adjacent (less than 1 foot) to and above the operating railroad, for a distance of at least 600 feet (the length of the station platform).</p> <p>Falling debris and tools have the potential to foul the tracks creating an unsafe situation. This risk is partially mitigated but not eliminated by protective shell.</p>	<p>Construction zone is separated from the operating railroad. The closest point is approximately 15 feet from the operating railroad.</p> <p>Reduced potential for fouling the operating tracks due to falling equipment.</p>
Potential for fouling tracks due to overhead crane work.	<p>Worksite is immediately adjacent (less than 1 foot) to and above the operating railroad, for a distance of at least 600 feet (the length of the station platform).</p> <p>Worksite is immediately adjacent (less than 1 foot) to and above the operating railroad, for a distance of at least 600 feet (the length of the station platform).</p> <p>Overhead work has the potential to foul the tracks creating an unsafe situation over the entire duration of construction. This risk is partially mitigated by railroad shutdowns when overhead work is taking place.</p>	<p>Construction zone is separated from the operating railroad (except for pedestrian bridge over the CSX tracks, which is common to both alternatives). Most overhead work will not threaten operating railroad.</p> <p>With no material being lifted <i>over</i> the operating tracks for most elements of station construction, the only relevant risk is of a crane in close proximity to the tracks tipping over (rare occurrence), but this is a common risk for both alternatives.</p>

13. Contaminated Soils

Staff received comments that the project will disrupt and expose contaminated soils onsite.

The application provided details regarding project area's history of disturbance and land modification from heavy industrial use as a railyard, resulting in soils contaminated with heavy metals and hydrocarbons. Based on the information provided in the Environmental Assessment, remedial efforts began in 1993, and in 1998 the U.S. Environmental Protection Agency deemed the site cleanup complete.

A condition is in the draft permit requiring a soil management plan be submitted to DEQ to ensure that soil being removed from the site is tested and handled in accordance with any Virginia waste management regulations.

14. History of Process

Staff received comments about the inadequacies of various local zoning processes, EIS process, and negotiations with National Park Service. The comments focused on:

- *The Final EIS violates NEPA because it only analyzes the preferred alternative and the no-build alternative.*
- *The City has a history of not disclosing pertinent information to citizens.*
- *Alternative A would have already been constructed by now.*
- *Political influence has impacted the regulatory process.*
- *The EIS process did not account for Amazon and Virginia Tech.*
- *The EIS process did not take into account recent flooding and should be revisited.*
- *Alternative A was the original site selection.*
- *Until recently, the location of Alternative B was considered part of a Scenic Easement.*
- *The National Park Service should not have traded land.*

It is not DEQ's purview to revisit the decision of the NEPA process. The application incorporates the DEIS and FEIS which describes how the applicant evaluated and eliminated previously considered alternatives; however, the application proposes four build alternatives, referred to as A, B, B-CSX, and D, that were proposed by the City as most supporting of the project purpose and documents an alternative analysis for the purposes of the VWP Permit application.

The VWP permit process requires that the application demonstrate an accurate and thorough alternatives analysis. This requirement must be fulfilled regardless of the sequences in which the alternatives were identified or the history of the project. DEQ has no authority under either to Code of Virginia (§62.1-44.15:20) or the Virginia Administrative Code (9VAC25-210-10, et seq.) to require preparation of an EIS or EA, new or revised, for this project. While these comments on the history of this project at the local government and NEPA review level have been noted, these concerns are not within the purview of the VWPP Program. DEQ must evaluate the currently proposed project for compliance with the VWPP Permit Regulation.

The process and conclusions of the City's negotiations with the National Park Service are not within the purview of DEQ regulatory authority.

15. Request Reports to DEQ be Public

Staff received comments that the mandatory inspection reports required by DEQ be made public.

Staff Response:

The City has committed to posting the inspection reports submitted to DEQ on-line at <https://www.alexandriava.gov/potomacyard/default.aspx?id=101657> along with the other information for this project. In addition, DEQ staff will promptly respond to any request for copies of documents associated with this project.

16. Historic Properties

Staff received comments that the project will negatively effective many Historic Properties and the USACE is required to take these effects into account.

Staff Response:

The VWP regulations do not require an applicant to address historic sites for a VWP permit. The USACE must address such considerations through their permitting process.