

DATE: February 7, 2023

Ms. Danielle Spendiff

Maryland Department of the Environment
Water and Science Administration
Montgomery Park Business Center – Suite 430
1800 Washington Boulevard
Baltimore, MD 21230-1708

Neb Sertsu

Baltimore-Washington Rapid Rail (BWRR)
6 South Gay Street
Baltimore, MD 21202

CONTRACT: 20-PO012912

TRACKING #: 20-NT-1398/202061983

SUBJECT: Water Quality Certification Application for Super Conducting Magnetic Levitation (SCMAGLEV) Baltimore – Washington highspeed transportation project

Dear Ms. Spendiff,

BWRR is requesting a Water Quality Certification (WQC) for the SCMAGLEV project (DEIS Build Alternative J-03).

Attached hereto is the Key Elements outline with responses as well as the following Exhibits in support of this certification request:

- Exhibit A – Adjacent Property Owners List
- Exhibit B – Signed Public Notice Billing Form
- Exhibit C – Water Quality Certification Site Layout
- Exhibit D – Discharge Points on USGS maps
- Exhibit E – Aquatic Life Data
- Exhibit F – Latitudes and Longitudes of Potential Discharge to Navigable Waters
- Exhibit G – Tier II Antidegradation Analysis
- Exhibit H – Summary of Stormwater Treatments
- Exhibit I – Construction Planning Memorandum
- Exhibit J – Memorandum on Tunneling Impacts



BWRR (the project proponent) hereby certifies that all information contained herein is true, accurate, and complete to the best of my knowledge and belief. BWRR hereby requests that the certifying authority review and take action on this CWA 401 Certification request within the applicable reasonable period of time.

Very truly yours,



Baltimore Washington Rapid Rail
Neb Sertsu
Director of Project Development

cc: Heather Nelson, MDE
Matt Hynson, USACE
Joseph DaVia, USACE
Larry Pesesky, WSP
Pam McNicholas, WSP
Bill Scott, BWRR
Steve Cassard, MEDCO
Jacqueline Thorne, MDOT



Key Elements (MDE provided data requirement in bold, BWRR response in italics):

(a) Identify the project proponent(s) and a point of contact. Name, address, phone number, email address of the applicant, and the authorized agent.

Applicant: Baltimore Washington Rapid Rail (BWRR), 6 South Gay Street, Baltimore, MD 21202, (443) 758-8360, nsertsu@bwrapidrail.com

Authorized Agent: Pamela McNicholas (WSP USA, Inc.), 1 East Pratt Street, Baltimore, MD 21202, (410) 246-0532, Pam.McNicholas@wsp.com

(b) Identify the applicable federal license or permit. For example, include the assigned U.S. Army Corps of Engineers and Maryland Department of Environment tracking numbers along with a copy of the Joint Permit Application (JPA). The JPA shall be included with a Request for a Water Quality Certification, as well as any supplemental documents that address all of the following not contained in the JPA:

BWRR has submitted a Joint Federal/State Permit Application (JPA) for the Alteration of any Floodplain, Waterway, Tidal or Nontidal Wetland in Maryland. BWRR is seeking to obtain Section 404 Clean Water Act and Section 10 Rivers and Harbors Act of 1899 permits from the:

- *US Army Corps of Engineers (CENAB-OPR-MN, NAB-2016-01622)*
- *Maryland Nontidal Wetlands Permit from the Maryland Department of Environment (20-NT-1398/202061983).*

The most recent Joint Permit Application (JPA) with a Request for Water Quality Certification pre-filing request and meeting minutes were submitted to MDE on March 11, 2021.

(c) The project site address, including coordinates in degrees, minutes, seconds, 12-digit HUC no., Watershed name:

The coordinates where the project begins and ends are:

Location	Coordinates
Southern end of project in Washington, D.C.	38°54'10.7"N 77°01'20.5"W
Northern end of project in Baltimore, Maryland.	39°16'06.8"N 76°37'51.3"W



The corridor impacts will take place in the following Maryland (MD) watersheds:

MD 8-Digit Watershed Name	MD 12-Digit Watershed Number
Anacostia River 02140205	021402050823
	021402050822
	021402050808
Baltimore Harbor 02130903	021309031008
	021309031010
Gwynns Falls 02130905	021309051043
Little Patuxent River 02131105	021311050952
	021311050949
	021311050948
Patapsco River Lower North Branch 02130906	021309061012
	021309061011
Severn River 02131002	021310021002
Patuxent River Upper 02131104	021311040938
	021311040940

(d) The name(s) and address(es) of adjacent property owners:

Adjacent property owners are included for your review in Exhibit A. Exhibit A includes mapping of the project alignment and a listing of all identified adjacent property owners along the alignment.

(e) Signed Public Notice Billing Form

This form is included for your review in Exhibit B.

(f) Identify the proposed project. Description of facility or activity:

The Project consists of a dedicated alignment and structures for high-speed SCMAGLEV train system between Washington, DC, and Baltimore, MD, with an intermediate stop at Baltimore/Washington International Thurgood Marshall (BWI) Airport. The SCMAGLEV alignment consists of both below ground and elevated rail on viaduct. SCMAGLEV infrastructure includes the Cherry Hill Station and supporting ancillary facility sites such as maintenance of way (MOW), train maintenance facility (TMF), substations, systems, and fresh air/emergency egress facilities. The majority of the rail alignment is below ground (~70%) with the remaining rail alignment elevated in the air on concrete piers. The below ground sections will be installed using tunnel boring machines. FRA and MDOT are developing the EIS in compliance with the National Environmental Policy Act of 1969 (NEPA), 42 USC 4321 et seq. The Project encompasses portions of the District of Columbia (Washington, DC), Prince Georges County, Anne Arundel County, Baltimore County, and Baltimore City. The Project traverses 14 Maryland 12-digit watersheds. See Figure 1 for the location of sites included with this submittal.



Figure 1. Location Map



(g) A plan showing the proposed activities to scale including:

- **The location(s) and boundaries of activities;**
- **The location(s), dimension(s), and type(s) of any existing and/or proposed structures; and**
- **The location(s), name(s), identification number(s), and extent of all potentially affected surface water bodies, including wetlands.**

Water Quality Certification Site Layout exhibit sheets include boundaries of proposed activities, the location and dimensions of the activity, local discharge points along project perimeter and types of existing and/or proposed structures. The local discharge points were identified based on best available information to confirm likely locations of surface flow leaving the project area which then ultimately flows into identified downstream receiving waters. These WQC exhibit sheets are in Exhibit C and the discharge points into downstream receiving waters are included in Exhibit D for your review. The locations, names, identification numbers, and extent of all potentially affected surface water bodies, including wetlands, are included in the Joint Permit Application (JPA) most recently submitted to MDE for review on March 11, 2021.



(h) Identify the location and nature of any potential discharge that may result from the proposed project and the location of receiving waters; A description of any discharge which may result from the conduct of any activity, including:

(i) Biological, chemical, thermal or other characteristics of the potential discharge;

(a) A description of any other aspect of associated with construction and operation the activity that would affect the chemical composition, temperature, flow, or physical habitat of the surface water.

(b) The characteristics of the discharge

- **Flow rate (cfs)**
- **Potential chemical, physical, biological constituents**
- **Frequency (e.g., daily, hourly)**
- **Duration**
- **Temperature (Celsius)**

The Maryland Biological Stream Survey existing data for chemical composition, temperature, flow, and physical aquatic habitat of the surface water are included in the Aquatic Life Data maps and reports in Exhibit E.

BWRR intends to maintain the existing condition downstream hydrologic discharge characteristics along the entire proposed project corridor perimeter which will result in no increase in discharge flow rates for regulated design storms and no negative impact to chemical composition of stormwater runoff. Stormwater Management (SWM) Environmental Site Design (ESD) will be used to the Maximum Extent Practicable (MEP), which will result in water quality discharges similar to that of good condition forested woods (up to a 1" rainfall event) and attenuation of the 1-year 24-hour storm event for channel protection (as required) not to exceed existing discharge conditions. Both SWM ESD and Best Management Practice (BMP) facilities will provide water quantity treatment for the 2, 10, and 100-year 24-hour design storm events. Therefore, the proposed conditions at a 2-year and 10-year design storm will not increase from the existing conditions, and the 100-yr storm event will safely convey through the SWM facility.

During construction, BWRR will implement Erosion and Sediment Control (ESC) measures to prevent sediment laden runoff from leaving the project site. As the project is a typical linear development, ESC measures will primarily include stabilized construction entrances (for site access), silt fence and super silt fence (for perimeter controls), stone or gabion outlet structures (for concentrated flows) and expeditious implementation of temporary and permanent stabilization techniques.

Operational controls will be implemented according to applicable regulations and standards. The site will include transportation infrastructure and is potentially subject to the NPDES General Permit for Discharges of Stormwater Associated with Industrial Activity (20-SW permit). If subject



to the 20-SW, BWRR will need to develop a Stormwater Pollution Prevention Plan (SWPPP) for operational activity, to include procedures for preventing stormwater runoff from interacting with any potential pollutant sources during operational activities. Potential pollution sources would be any chemicals that may be needed for operational activity such as de-icing agents or any chemicals used for maintenance activities, including those that may be stored in the TMF sites. BWRR currently does not intend to use de-icing agents for their operations and has not yet identified other potential chemicals that may be stored or used for routine operations. BWRR will prepare a SWPPP, as needed, to identify potential on-site pollutants and BWRR's plan for safe storage and usage while preventing any contaminated stormwater runoff.

(ii) The location or locations at which discharge may enter navigable waters;

(a) Latitude and longitude (dd:mm:ss):

The latitudes and longitudes at which discharge may enter navigable waters is included in Exhibit F. These discharge points are displayed on the USGS maps included in Exhibit D and represent the locations where runoff from each surface project site area reaches navigable waters. Note that some of the discharge points to receiving waters are at a significant distance from the project site area. The runoff from each project site area flows through existing drainage conveyance networks and channels prior to the discharge point to the navigable waters. Approximate locations for local discharges leaving the project site areas are provided in Exhibit C.

(b) An original or color copy/reproduction of a United States Geological Survey Quadrangle Map that clearly shows the location of the activity and all potential discharge points.

The USGS mapping depicting all activities are located in Exhibit D. The summary below, lists the receiving water's location ID, potential discharge point, and reference to WQC sheets in Exhibit C. Each description is also depicted on each USGS map.

Anacostia River 01:

The discharge starts at the site, enters an existing drainage conveyance system, and outfalls into combined sewer outfall CSO 012.

WQC Sheets: PP-39,PP-40,PP-41,PP-42

Hickey Run 01:

The discharge starts at the site and flows southeast into Hickey Run tributary, which discharges into the Anacostia River.

WQC Sheets: PP-42

Anacostia River 02:

The discharge starts at the site and flows southwest into an unnamed tributary, which discharges into the Anacostia River.

WQC Sheets: PP-45

Brier Ditch 01:

The discharge starts at the site and flows northwest into Brier Ditch tributary, which discharges into Northeast Branch Anacostia River.

WQC Sheets: PP-48



Cattail Branch 01:

The discharge starts at the site and flows northeast into Cattail Branch.

WQC Sheets: LA-01

UnTrib Indian Creek 01:

The discharge starts at the site and flows south into an unnamed tributary to Indian Creek, which discharges into main Indian Creek.

WQC Sheets: LA-02

UnTrib Beaverdam Creek 01:

The discharge starts at the sites and flows southwest into an unnamed tributary to Beaverdam Creek, which discharges into Beaverdam Creek.

WQC Sheets: TMF-02

UnTrib Beaverdam Creek 02:

The discharge starts at the sites and flows initially northeast and then south into an unnamed tributary to Beaverdam Creek, which discharges into Beaverdam Creek.

WQC Sheets: TMF-02, TMF-03, PP-54, PP-55, F-19, F-20

UnTrib Beaverdam Creek 03:

The discharge starts at the sites and flows initially west and then north into an unnamed tributary to Beaverdam Creek, which discharges into Beaverdam Creek.

WQC Sheets: PP-52

Beaverdam Creek 01:

The discharge starts at the sites and flows south into Beaverdam Creek.

WQC Sheets: PP-53a

Beck Branch 01:

The discharge starts at the site and flows north into Beck Branch.

WQC Sheets: PP-52, PP-53a

Patuxent River 01:

The discharge starts at the sites and flows south and east into various an unnamed tributaries to Patuxent River, which discharges into the main Patuxent River.

WQC Sheets: PP-56, PP-57, PP-58, LA-03

Little Patuxent River 01:

The discharge starts at the sites and flows east into various an unnamed tributaries to Little Patuxent River, which discharges into the main Little Patuxent River.

WQC Sheets: PP-58, PP-59, PP-60, F-32, PP-61, PP-62, PP-63, F-37

UnTrib Stoney Run 01:

The discharge starts at the sites and flows northeast into an unnamed tributary to Stoney Run, which discharges into main Stoney Run.

WQC Sheets: PP-66

UnTrib Stoney Run 02:

The discharge starts at the sites and flows west into an existing drainage conveyance system which flows into an unnamed tributary to Stoney Run, and then discharges into main Stoney Run.

WQC Sheets: PP-67

Stoney Run 01:

The discharge starts at the sites and flows west into main Stoney Run.

WQC Sheets: PP-68



UnTrib Cabin Branch 01:

The discharge starts at the sites and flows southeast into an existing drainage conveyance system which flows into an unnamed tributary to Cabin Branch, and then discharges into main Cabin Branch.

WQC Sheets:PP-70

UnTrib Patapsco River 01:

The discharge starts at the sites and flows northeast into an existing drainage conveyance system which flows into an unnamed tributary to Patapsco River, and then discharges into main Patapsco River.

WQC Sheets:F-43

UnTrib Patapsco River 02:

The discharge starts at the sites and flows southeast into an existing drainage conveyance system which flows into an unnamed tributary to Patapsco River, and then discharges into main Patapsco River.

WQC Sheets:PP-75,PP-76,STA-301,STA-301a,STA-302,STA-303,LA-04

Patapsco River 01:

The discharge starts at the sites and flows east into main Patapsco River.

WQC Sheets:LA-04

Patapsco River 02:

The discharge starts at the sites and flows east into an existing drainage conveyance system which flows into the Middle Branch Patapsco River.

WQC Sheets:PP-76,F-44,LA-04

(iii) Data supporting existing aquatic life use for each waterway.

Aquatic life data is included for your review in Exhibit E.

(iv) Antidegradation alternatives analysis as applicable to Tier II waters.

The alternatives analysis is included in Exhibit G.



(v) The existing and designated use(s) that are potentially affected by proposed activities.

Receiving Water Location ID	Use Class
Anacostia River (DC)	N/A
Hickey Run to the Anacostia River	I
Brier Ditch to Northeast Branch Anacostia River	I
Cattail Branch	I
Unnamed tributaries to Indian Creek	I
Unnamed tributaries to Beaverdam Creek	I
Beck Branch then confluences to Beaverdam Creek	I
Patuxent River	I
Little Patuxent River	I
Unnamed tributary to Stoney Run	I
Unnamed tributary to Cabin Branch	I
Unnamed tributary to Patapsco River	II

(i) Include a description of any methods and means proposed to monitor the discharge and the equipment or measures planned to treat, control, or manage the discharge; a description, if applicable, of the function and operation of any equipment or facilities to treat any discharge and the degree of treatment to be attained. A description of any other aspect of associated with construction and operation of the activity that would affect the chemical composition, temperature, flow, or physical aquatic habitat of surface water.

This Project will follow both Environmental Protection Agency (EPA) and Maryland SWM guidelines for Federal Projects. Throughout the project corridor, SWM will be provided to meet current Maryland Department of Environment (MDE) regulations for both regulated SWM quality and quantity treatment. BWRR intends to demonstrate the implementation of ESD to the MEP before proposing traditional structural BMPs for SWM treatment. During construction, BWRR will implement ESC measures to prevent sediment laden runoff from leaving the project site, including site stabilization according to standard MDE practices and timeframes. After construction and during facility operations, BWRR will implement practices for safe storage and



use of any chemicals needed for facility operations and will prepare a SWPPP to document these operational procedures, when required.

Chemical composition, temperature, flow, and physical aquatic habitat of the surface water is included in the Aquatic Life Data displaying the MBSS stream health maps, and stream summary reports in Exhibit E. A summary of the project site's stormwater treatment areas is included in Exhibit H.

Additional aspects associated with the construction and details regarding construction practices can be found in Exhibit I, BWRR Construction Planning Memorandum. This plan outlines Earth Pressure Balance (EPB) Tunnel Boring Machines (TBM) as the preferred tunneling method with a minimum depth (~50 feet) based on preliminary geological investigations showing soft soils throughout most of the alignment. Depending on final design, instances where bedrock are encountered, a mix shield TBM may be employed. Unlike directional bores, these method of tunneling generally minimize concerns with frac-out. Exhibit J includes additional information regarding tunneling methodology and proposed methods for how it will minimize concerns with frac-out.

The construction plan also outlines methods for building the transition zones from viaduct to tunnel. In brief, cut-and-cover tunneling will require installation of support of excavation (slurry walls, bored pile walls, soldier pile and lagging, or shotcrete) depending on ground conditions. Depending on the limits of disturbance, in general, tieback support or internal strutting will be used for deeper excavations. Open cut construction will be similar to cut-and-cover tunneling, without installation of a roof slab and ground restoration.

BWRR does not anticipate any tunneling or transition zone construction to cause discharges that would adversely affect the water quality above or below ground. BWRR will develop comprehensive tunneling and contingency/restoration plans as the design progresses and additional geological investigations are conducted, in addition to the typical procedures for addressing impacts described in the Memorandum in Appendix J.

(j) The date on which the activity will begin or end, if known, and the date or dates on which any discharge may occur.

To be determined.

(k) A description, if applicable, of the methods proposed or employed to monitor the quality and characteristics of any discharge.

BWRR intends to develop a project corridor-wide programmatic maintenance plan based on the standard maintenance requirements included within the MDE SWM Design Manual. The plan will include, but not be limited to, inspection frequency for key operational/functional elements with associated maintenance action items for all SWM treatment facilities. The anticipated goal is to organize all the project key site elements and associated SWM treatment facility maintenance



activities. These activities will include but are not limited to semi-annual visual inspections, seasonal ground cover maintenance, landscaping, etc. Any identified deficiencies impacting quality treatment and/or discharge, such as accumulated sediments/debris and blockages, will be addressed promptly.

BWRR will also inspect ESC measures during construction to check that they are functioning as intended, and to identify corrective measures and repairs that may be needed. According to MDE standards, as long as ESC measures are functioning as intended, they are assumed to be providing the required sediment control and additional monitoring is not required.

Post-construction operations will comply with all monitoring conditions of the SW-20, as required.

(l) A specific and detailed mitigation plan as applicable for projects requiring mitigation.

The JPA Phase I Mitigation Plan were included in the JPA submittal package, most recently submitted on March 11, 2021.

(m) Include a list of all other federal, interstate, tribal, state, territorial, or local agency authorizations required for the proposed project, including all approvals or denials already received; Other related permits issued or required (Individual 404 Permit, Nationwide Permit No., Section 10 Permit, Erosion and Sediment Control Plan Approval, NPDES permit (including Stormwater Permits), Regional Permits.

- The Individual 404 and Section 10 permit is pending approval by the USACE.
- The Stormwater Management/Erosion and Sediment Control Permit will be submitted later in the design process for MDE approval.
- The 20-CP National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction Activity will be submitted later in the design process for MDE approval.
- The 20-SW NPDES General Permit for Stormwater Discharges Associated with Industrial Activity may be required, and MDE approval will be obtained prior to initiating operations if required.
- Critical Area Commission (CAC) Concurrence Letter for development within a designated state Critical Area will be submitted later in the design process for CAC approval.
- Coastal Zone Management Act (CZMA) is pending approval from MDE/DNR.

(n) Any other information for evaluation of the impact of the activity on water quality. This may include quantitative analysis to demonstrate that the proposed activity may not violate State water quality standards.

BWRR is proposing to use MDE approved treatment practices for all storm runoff associated with the proposed SCMAGLEV project. This includes MDE standard Erosion & Sediment Control practices for temporary construction disturbances and MDE standard SWM treatment facilities for required proposed developed conditions. Use of these MDE approved practices will meet the



State water quality standards, therefor, no additional quantitative analysis is believed to be required.

- (o) Include documentation that a pre-filing meeting request was submitted to the certifying authority at least 30 days prior to submitting the certification request; If you have not completed this step you may file a Pre-Filing here.**

A pre-filing meeting request was submitted on 11/4/2020.

- (p) Contain the following statement: ‘The project proponent hereby certifies that all information contained herein is true, accurate, and complete to the best of my knowledge and belief.’**

We have provided this information in the cover letter that is signed by Bill Scott.

- (q) Contain the following statement: ‘The project proponent hereby requests that the certifying authority review and take action on this CWA 401 Certification request within the applicable reasonable period of time.’**

We have provided this information in the cover letter that is signed by Bill Scott.

