

Maryland Coalition for Responsible Transit



Supplemental Comments, Concerns, and Questions on the SCMaglev WQC



**Submitted to:
The Maryland Department of Environment**

December 22, 2023



MARYLAND
COALITION FOR
RESPONSIBLE
TRANSIT

December 22, 2023

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Subject: MCRT Comments on BWRR's Supplemental Documents for the Baltimore-Washington SCMaglev Water Quality Certification Application

In a memo dated September 8, 2023, the Maryland Department of the Environment (MDE) informed Baltimore-Washington Rapid Rail (BWRR) that additional data and reports were needed to complete the Superconducting Magnetic Levitation (SCMaglev) train project Water Quality Section 401 Certification (WQC) application and Tier II Waters Antidegradation report. BWRR belatedly submitted the requested supplemental documentation on November 16, just as the public comment period closed. The submission contains two reports—268 and 547 pages—of highly technical details missing from the original application. The public has been denied sufficient time to access, review, and comment on BWRR's voluminous submission.

The Maryland Coalition for Responsible Transit (MCRT) had already reviewed the original BWRR application and submitted comments on November 9. We found that the applicant's WQC materials significantly understated the negative impacts building and operating the SCMaglev would have on our waterways and watersheds, including the Tier II Beaverdam Creek and Patuxent River (and ultimately the Chesapeake Bay), while overstating the offsetting benefits for building and operating the SCMaglev train system. The MCRT recommended that the MDE deny the permit.

We are now submitting our review and comments on the supplemental documents and specific requests made in the MDE September 8 memo to BWRR. We find that the materials and information provided subsequently by the applicant continue to be woefully inadequate.

The MDE has a critical decision to make on whether BWRR's WQC application and related reports provide sufficient research, substantiated processes, protections, and analysis of environmental and social impacts about the SCMaglev train project, to ensure it would not harm our state's waterways. The MCRT feels it would be a travesty to approve this application with supplemental reports that remain vague and lack binding commitment. BWRR employs language that continues to indefinitely postpone detailed and comprehensive plans, and continually uses qualifiers to avoid assuming responsibility for the proper oversight, management, design, and execution of actions to which they would be held accountable should the project ultimately be approved.

The MCRT finds the supplemental documents that BWRR provided are deficient and misleading in six principal areas:

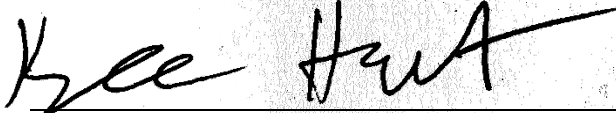
1. Not developing a Concept Stormwater Approach in compliance with the appropriate Federal regulations and using an outdated manual for Environmental Site Design standards.
2. Not correctly and fully understanding, investigating, studying, and reporting on the extent of potential impacts on wetlands that will occur beyond the Limit of Disturbance (LOD).
3. Not representing the negative impact of the guideway access roads as being the impervious surfaces that they are specific to Right-of-Way maintenance protocols.
4. Not providing a full summation and impact of the tunneling work related trips that will be in the millions of vocational truck trips.
5. Not being provided the "Attachment H" for review and comment on the list of current characterizations and planned studies for endangered species and habitats, and the proposed protection measures.
6. Not identifying additional mitigation opportunities, or providing updates on existing mitigation opportunities.

That BWRR's November 16 submission of maps, calculations, and reports was missing from the original application is deeply concerning, and this negligent approach to providing required documentation must not be overlooked. The MCRT strongly maintains that *the MDE should not approve this application* because this project would permanently and negatively impact Maryland waters; BWRR has consistently refused to provide substantiating details of their justification claims; and the stormwater and pollution mitigation approaches, despite the use of volumes of maps, contain noncommittal and indeterminate statements.

Please feel free to contact us should you have any questions about our submission or whether you would like further information about the MCRT and our work. Our website is www.mcrt-action.org. Our email is MCRTaction@gmail.com.

Thank you for your efforts and for considering the critical issues and concerns raised by the MCRT Board and its members in our supplemental submission.

Respectfully,
MCRT Board members



Kyle Hart, Acting President



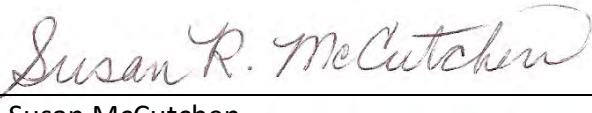
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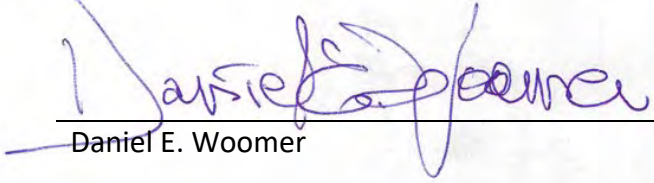
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I. Additional BWRR WQC Documents and Public Review

The MCRT has been reviewing the additional documents submitted by Baltimore-Washington Rapid Rail (BWRR) on November 16, 2023, in response to the request of the Maryland Department of the Environment (MDE). This information was withheld from the MDE by the permit applicant until the last minute, and, subsequently, was not available to be released to the public in a timely manner. The information contained in the BWRR Concept Stormwater Management (SWM) Approach report is an extraordinary amount of new technical information that was not provided to the MDE at the time of BWRR's permit application for Water Quality Certification (WQC). The public only had access to BWRR's February 2, 2023, permit application documents to make informed comments.

BWRR should have presented this information with its permit application, as required; however, it was only made available by the intervention of the MDE. That this information was not provided in full to the public until after the October 19, 2023, public hearings is improper and unfair, providing extremely limited time for public review and comment on this complex information with MDE's inflexible deadline for a decision fast approaching (February 7, 2024).

Even with these additional documents from BWRR, important Information on potential impacts to water quality is still not provided. Significant problems remain concerning the application meeting the conditions of the regulations to obtain WQC. Certain required information is provided incompletely, inadequately, or inappropriately for the regulatory requirements to protect Maryland's precious Tier II waters.

II. MDE General Comment

Potential impacts to water quality are of particular concern in areas already overburdened by pollution and for sensitive populations (Refer to the Department's EJ Screening Tool for further information). Additional analysis should be conducted when responding to the below comments to determine whether the project may have disproportionate construction or operational impacts to protected areas of water quality, and any additional best management practices (BMPs) or mitigation measures that may be implemented for unavoidable impacts.

I. BWRR's response to MDE General Comments

BWRR recognizes the importance of considering the potential for disproportionate construction or operational impacts to water quality in areas already overburdened by pollution and for sensitive populations. BWRR has reviewed MDE's EJ Screening Tool, and a response to this comment along with mapping of areas that have an EJ score in the 75th percentile or higher can be found in Attachment A.

Document: 11-16-23 BWRR Compiled Comment Response Package.pdf (228 pages)
Attachment A: General Comment – Page 7 of 228

II. MCRT Response to MDE General Comments

In general, much of BWRR's response is full of possible approaches and void of commitment to carry them out, despite the applicant having more than sufficient time to provide the details. Basically, BWRR glosses over the impacts to EJ communities and the environment and provides answers lacking the needed (and required) detailed content, comprehensive plans, and commitment. It is striking that instead of describing the actions BWRR will commit to take to achieve the best results for the communities, citizens, and environment, the applicant continues to be vague and continually kicks the can down the road with bromides (to placate the reviewer) that they will employ best management practices without identifying them in express detail and purpose of choice), work with government agencies at later dates, and perform required duties "to the extent possible or feasible."

The answers they provide throughout do not bind BWRR to what it *shall* do. It is written as BWRR intends, using words such as "would," "could," or "may." Instead, "shall" indicates future actions, obligations, or intentions. "Would" is used in hypothetical situations that do not indicate a firm commitment. By virtue of not providing solid answers about promised actions, BWRR has demonstrated that they are not committed to protecting Maryland's EJ communities or waters.

In the section that is an answer to MDE's general comments, BWRR's response is a non-response and does not commit to doing or changing anything. They use words like "minimize" and "consider" and do not say what, if any, erosion and sediment controls will be implemented.¹ This reply is vacant of any meaning; BWRR can ultimately implement, or not implement anything they choose given this response. This is a pattern throughout the document. The lack of this required detail demonstrates a clear focus only on building this project, and not on building it with the best interests of the Maryland's water or residents in mind. BWRR also states:

"A Conceptual Mitigation Plan (CMP) was prepared and updated in April 2021, and will be updated and revised during the National Environmental Policy Act (NEPA) Final Environmental Impact Study (FEIS) phase and as the design advances. A Final Mitigation Plan (FMP) will be prepared prior to permit decisions for an MDE Nontidal Wetland permit and the U.S. Army Corps of Engineers (USACE) Section 404 permit."²

It is interesting that should a substantial structure be built, the architectural plans are described almost down to each bolt and nail that would be required and provided. Yet, *again*, BWRR pushes water quality management decisions and mitigation beyond the permit decision date, obfuscating a final design that will most certainly have a direct impact on the Tier II waters and environment.

¹ MDE SCMaglev WQC Permit Application. 11-16-23 BWRR Compiled Comment Response Package. General Comments. Page 10 of 228.

² *Id.*

The MCRT has raised several issues in its comments on the BWRR Draft Environmental Impact Statement (DEIS) and the MDE WQC permit that the applicant has not bothered to address. An example of this is completely ignoring the impact of hundreds of thousands of diesel dump truck trips to haul spoil materials to a yet to be identified spoil disposal site and the resulting cumulative particulate air pollution, polycyclic aromatic hydrocarbons³ (PAHs), and other pollution from highway surface runoff into the Anacostia, Patuxent, and other Chesapeake Bay (Bay) tributaries. The effect on EJ communities and the water quality of tributary waterways, rivers, and the Bay itself is not negligible. Similarly, it was not addressed in the WQC Permit Application Exhibit I: Construction Planning Memorandum, which provided information on the dump trucks and which would be considered vocational Heavy-Heavy-Duty (HHD), that would be hauling the tunnel “muck” or spoils, or the Heavy Duty (HD) equipment and supply delivery vocational trucks. This holds true for a cumulative assessment of the impact on both EJ communities and water quality of the Patuxent River downstream from the project site.

After thoroughly reviewing BWRR’s mitigation plan in its previously submitted MCRT WQC submission, the MCRT determined that BWRR *cannot* meet the requirements for mitigating the damage done to the Beaverdam Tier II watershed. In the Patuxent Tier II plan there also appeared to be several specific problems with the properties chosen and *none* of these property owners have given BWRR a commitment or contract and, thus, some are unlikely to. But much more concerning is that BWRR intends to put their industrial facility in the middle of federally protected lands in a protected landscape. And even though mitigation cannot replace the biological and hydrological losses on the original sites, they cannot even meet this very low bar of providing detailed and comprehensive plans. Beaverdam Watershed is unbuildable for this sort of project and the permit should be primarily denied on this fact.

III. MDE Comment #1, MDE Comment #5, and MDE Tier II Waters Comment #1

I. MDE Comment #1

The MDE WQC Request memo dated February 7, 2023, (WQC Memo) states that local discharge points were identified based on likely locations of surface flow leaving the project area and entering receiving waters. While some discharges have been identified, it is required that the requestor identify the location and nature of any potential discharge that may result from the proposed project and the location of the receiving waters.

³ Polycyclic aromatic hydrocarbons (PAHs) are a class of chemicals that occur naturally in coal, crude oil, and gasoline, and result from burning these and other organic materials. PAHs are persistent organic pollutants (POPs) that can migrate over long distances and have carcinogenic, teratogenic, mutagenic, and other toxic effects. [PAHs in air pollution are mainly bound to particulate matter and are associated with increased cancer incidence in exposed populations](#). Centers for Disease Control and Prevention. [Polycyclic Aromatic Hydrocarbons \(PAHs\) Factsheet | National Biomonitoring Program | CDC](#). Retrieved December 20, 2023.

- Please provide a complete and accurate characterization of discharges, their locations, and project impacts resulting from: all direct fill in regulated resources; clearing and grading in regulated resources; discharges from stormwater outfalls; stormwater which may bypass treatment facilities (including runoff from the entire length of the viaduct and any permanent or temporary storage or maintenance facility or access roads); structures such as piers or culverts; specific stockpile locations and disposal sites for excavated or other material; inadvertent discharges to surface or groundwater from construction, operation, and maintenance facilities; and any of these activities or project elements which may enter a regulated water while not originating in a regulated resource.

II. BWRR's response to MDE Comment #1

The Project was re-evaluated to include a complete and accurate characterization of all discharge points and locations based on the current level of design. See Attachment B for an updated set of WQC Plan Sheets which includes the additional discharge points (shown and labeled as POI/LOI). Additional Comment #1 items are address in other comment responses including areas of stormwater treatment and bypass (see Comment Response #5) and potential inadvertent discharges from construction, maintenance, and operations (see Comment Responses #3 and 4).

Document: 11-16-23 BWRR Compiled Comment Response Package.pdf (228 pages)

Attachment B: Comment 1 – Page 47 of 228

III. MDE Comment #5

The request for WQC notes that several permits related to water quality will be requested later in the design process - e.g., Stormwater Management Plan and Erosion and Sediment Control Plan approvals, the 20-CP National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Industrial Activity, as may be required. The information provided in the Certification request is limited to demonstration that sufficient footprint exists to construct stormwater BMPs and gives a description of stormwater discharge points and gives a summary of BMP treatment recommendations (underground storage, surface treatment, etc. In addition, the Certification request (Exhibit H) states that drainage scuppers may be utilized for the viaduct section to disperse runoff in the air, presumably avoiding the need for additional BMPs. For significant projects of this type and scale, a request for Certification should include a concept-level Stormwater Management Plan that has been submitted and reviewed by the appropriate authority, thereby demonstrating how Maryland's water quality standards are minimally and conceptually planned to be met. While MDE acknowledges not all state or other required authorizations must already be obtained in order to review a Certification request, a statement that the requestor will obtain them later is also not sufficient demonstration of a project's demonstration that water quality standards will not be violated.

- Please provide a Stormwater Management Plan concept design, or otherwise identify specific additional information and BMPs which adequately demonstrate Environmental Site Design to the Maximum Extent Practicable and compliance with state requirements related to stormwater and erosion and sediment control.

IV. BWRR Response to MDE Comment #5

See Attachment F for a Stormwater Management Concept Approach Report which identifies specific ESD/BMPs which can be implemented to show compliance with state requirements related to stormwater and erosion and sediment control.

Document: 11-16-23 BWRR Compiled Comment Response Package.pdf (228 pages)
Attachment F: Comment 5 – Page 150 of 228

V. MDE Tier II Waters Comment #1

Section 1.2.2.4 of the March 1, 2022, Social and Economic Justification (SEJ states that “all new impervious surfaces are fully mitigated.” Until stormwater management plan documentation is provided to support that all new impervious surfaces within the Tier II watershed will be treated using environmental site design (ESD) practices, conservatively, the Tier II review will consider the 204 acres of impervious surfaces in Beaverdam Creek 2 and the 18 acres of impervious surfaces in Patuxent River I as untreated (by ESD). These additional acres have increased total impacts in Beaverdam Creek 2 to 461 acres, and 84 acres in Patuxent River 1.

VI. BWRR Response to MDE Tier II Waters Comment #1

BWRR is working towards providing a Concept Stormwater Approach report in response to Comments #1 and #5 above and in Attachments B and F. The overall approach addresses proposed stormwater BMP's using ESD to the maximum extent practicable in Tier II watersheds. The BMPs in Beaverdam Creek 2 and Patuxent River 1 are depicted on PP-52 to F-20 and PP-56 to PP-59 in Attachment B, respectively. BWRR anticipates that 50% of new impervious surface will be treated with ESD in the Beaverdam Creek 2 watershed. All new impervious surface in the Patuxent River I Tier II watershed will be treated using ESD. BWRR is actively re-assessing to obtain ESD to the maximum extent practicable in this watershed, and the Tier II reports will be revised to reflect the proposed Concept Stormwater Approach.

VII. MCRT Response to MDE Comment #1, MDE Comment #5, MDE Tier II Waters Comment #1

The MDE asked BWRR to submit a stormwater management (SWM) plan concept design based on the proposed rail facilities treating stormwater to the “maximum extent practicable” (MEP). For Comment #5, BWRR has submitted such a concept design report in its response to the MDE. BWRR answered this and Comment #1 together, as indicated above. However, both the request and response are inaccurate in several respects.

First, the proposed project is an industrial facility with large areas of impervious surfaces discharging from multiple locations to Maryland and U.S. waters. Thus, the project must comply

with 33 U.S.C. §§ 1311 and 1342(p)(3)(A), not the MEP standard as used in subsection (p)(3)(B) for municipal separate storm sewer systems (MS4s). Moreover, as the MDE notes in its comment, BWRR suggests that it will apply for a 20-CP NPDES General Permit Associated with Industrial Activity. Such a permit is not applicable to a project of this size and amount of stormwater discharge, especially to Tier II waters as noted in the MCRT's first comment submission.

If the MDE grants a WQC, which the MCRT opposes, BWRR must seek an individual discharge permit that meets Technology Based Effluent Limitation Standards (TBELS), 40 C.F.R. Part 438, Sector P (see also, EPA Industrial Stormwater Fact Sheet and reference to removal of PFAS), and Water Quality Based Effluent Limitation Standards, 40 C.F.R. §§ 122.26(b)(14)(viii)(railroad transportation); 125.3; 131.12, if TBELS are not sufficient. 33 U.S.C. § 1311(b). See also, the pending legal challenge to and reconsideration of the MDE's Industrial Stormwater General Permit 20.

Second, in its SWM concept design, BWRR relies on the MDE's outdated Environmental Site Design standards. The MDE's stormwater design manual was written in 2000 and revised in 2009. It relies on rainfall data and techniques that are in some cases more than two decades old. Recent data establish that rainfall events in Maryland are more frequent and of greater intensity and duration than when the manual was published and updated. (See the Mid-Atlantic Regional Sciences and Assessments (MARISA) project at www.midatlanticrisa.org.) For example, Projected Intensity-Duration-Frequency (IDF) Curve data for Beltsville shows the projected increase in rainfall IDF from Atlas 14 data, which BWRR has relied on.

According to an article by Milley and Niel (October 2021):

“Over the past 20 years, rainfall, flooding, and sea level have increased across Maryland, according to data collected from the National Oceanic and Atmospheric Administration (NOAA). From 2000 to 2020, precipitation in Maryland increased by 2.63 inches per decade, according to NOAA. The administration also found the Northeast Atlantic region saw 100 to 150 percent more flood days in 2020 than in 2000.”⁴

The authors also referred to increased precipitation:

“Across the northeast United States, precipitation has become more frequent and heavier, a trend that is projected to continue throughout the 21st century, according to the 2017 [Climate Science Special Report](#). Precipitation is especially heavy in counties surrounding the Chesapeake Bay. When evaluating precipitation by year, coastal

⁴ Milley, Devon and Niel, Clara. “Maryland is seeing an increase in precipitation, sea level and flooding.” *Capital News Service*. October 13, 2021. [Maryland is seeing an increase in precipitation, sea level and flooding – CNS Maryland](#). Retrieved December 17, 2023.

counties were consistently among those with the most precipitation over a 20-year period, according to the Capital News Service (CNS) analysis of data from NOAA.”⁵

Because BWRR’s concept design is based on outdated data, its proposed stormwater controls will be insufficient to address projected rainfall IDF. Thus, if constructed, many (if not all) of the proposed stormwater BMPs will be insufficient to protect downstream water quality in violation of the Chesapeake Bay Total Maximum Daily Load, the Clean Water Act, 33 U.S.C. § 1313, and Maryland law. Given that fact, the MDE should not grant BWRR WQC for the project.

IV. MDE Comment #2

[BWRR’s] NEPA DEIS Exhibit D, page 7-86 notes the potential for both direct and indirect impacts (E.g., including dewatering, altering hydrological connections and habitat, introduction of invasive species) to occur past the limit of disturbance (LOD) without significant minimization or mitigation. The extent of these potential impacts is not described in the WQC request so that the Department may determine whether or not water quality standards will be met, and what measures may be needed to ensure compliance with water quality standards.

- Please identify the nature and extent of impacts that may occur beyond the LOD

I. BWRR Response to MDE Comment #2

BWRR reviewed the Project to determine the potential for impacts such as dewatering, alteration of hydrologic connections and habitat and introduction of invasive species to occur outside the Project LOD. See Attachment C for further details on the nature and extent of these potential impacts.

Document: 11-16-23 BWRR Compiled Comment Response Package.pdf (228 pages)

Attachment C: Comment 2 – Page 104 of 228

II. MCRT Response to Comment #2

In their response, BWRR states:

“Of these 59 wetlands, 35 were determined to have no potential impact beyond the LOD, 20 were determined to have potential impacts beyond the LOD where BMP would be applied, and four were determined to have permanent loss of the remaining wetland beyond the LOD. The following is a summary of the methods used to evaluate potential direct or indirect impacts that may occur past the LOD.”⁶

This is a very specific tally of wetlands in various impact categories. However, in the next few paragraphs, BWRR goes on to demonstrate that they really do not know what the impacts will be and, by their own admission, need to study this further to properly classify the damage.

⁵ *Id.*

⁶ MDE SCMaglev WQC Permit Application. 11-16-23 BWRR Compiled Comment Response Package. General Comments. Page 105 of 228.

BWRR has therefore negated their own ability to provide an accurate reckoning of wetland damage. They should have either indicated that they cannot categorize damage to these wetlands or admit they need to carry out the studies to be able to assess the damage. BWRR has done neither and clearly cannot identify the extent to which these wetlands will be damaged.

BWRR has not provided firm plans of what they *shall* commit to doing. They have identified approaches that can be done, which can be applied to a wide variety of circumstances and conditions, but they have *not committed to what they will do* in the known circumstances and conditions of their construction and operational practices. This is another example of giving nondeterminative answers to the basic requirements of the permit. More examples of BWRR statements are provided below:

“As the SCMAGLEV design advances, BWRR would further consider planning or design measures intended to minimize impacts to and preserve areas adjacent to the construction or operation. Further, BWRR intends to continue coordination with agencies, landowners, and stakeholders in identifying BMPs to avoid and/or minimize direct/indirect and both on site and off-site impacts.”⁷

“Below is a compilation of actions that would be incorporated into the design to prevent hydrologic changes off-site; these will be further evaluated and implemented as design advances. BWRR does not anticipate dewatering beyond the LOD. More detail on the dewatering operations that will occur at large excavation sites, such as the tunnel portals, is provided in Response 4.”⁸

Note the use of the words “would” and “intends.” Again, these actions should have already been planned out. How can a permit on the ability to maintain water quality be granted to BWRR when the applicant cannot, or will not, provide answers on how they promise to do that?

BWRR also comments on invasive species measures: “The following minimization and mitigation measures will be considered and implemented, as appropriate and to the extent feasible, to minimize the potential for invasive species impacts outside of the LOD: 1.”⁹ Of concern is the double qualifier sentence clause: “*as appropriate and to the extent feasible . . .*”

V. MDE Comment #3

Certification of projects also requires the Department to consider discharges related to operation of facilities after construction. The WQC memo states that BWRR will implement practices for safe storage and use of chemicals and develop a Stormwater Pollution Prevention Plan when required. Potential operational discharges need to be clearly identified as part of the

⁷ *Ibid.* Page 106 of 228.

⁸ *Id.*

⁹ *Ibid.* Page 107 of 228.

WQC request as future activities can have deleterious effects on water quality. Right-of-Way maintenance protocols (for structural elements, as well as vegetation management) and proposed deicing plans must be identified.

- Please provide details regarding potential operational impacts to water quality as described above.

I. BWRR Response to MDE Comment #3

The operations of the SCMAGLEV system that may have effects on water quality have been reviewed and summarized in a memorandum that is included in Attachment D. This memorandum discusses the maintenance operations along the elevated viaduct and at the train maintenance facility.

Document: 11-16-23 BWRR Compiled Comment Response Package.pdf (228 pages)

Attachment D: Comment 3 – Page 114 of 228

II. MCRT Response to MDE Comment #3

Regarding right-of-way maintenance protocols, BWRR states: “A proposed maintenance road is provided under the elevated viaduct to inspect the structure and provide vehicular access to the SCMAGLEV systems sites.”¹⁰

The referenced maintenance roads to be located under the elevated viaducts do not appear to be included on the maps in Attachment D, and it is not shown how the maintenance roads would be accessed. Many sites do not have access, particularly on the refuge and off the Baltimore-Washington Parkway. Each of these maintenance and access roads needs to be drawn and documented, and stormwater plans need to be written up specific to each road and stream crossing.

BWRR primarily speaks of installing culverts and indicates that they consider many of these access roads to be temporary. However, the roads cannot be temporary because the guideway must always be able to be accessed in case of accidents, for maintenance and inspection. These are permanent structures that need to be added to the impervious surface lists and these new numbers need to be added to the “mitigation” of the project.

VI. MDE Comment #4

Potential impacts to groundwater are considered in the review of tunneling activities and underground construction as these may result in discharges to drinking water aquifers and wellhead protection areas or to surface waters in the event of inadvertent returns of material. The DEIS (Affected Environment, Environmental Consequences and Mitigation, page 4.10-30) states that groundwater modeling will be conducted during final design and permitting to

¹⁰ *Ibid.* Page 115 of 228.

quantify potential effects. The WQC request includes a Construction Planning Memorandum as well as a Tunneling Memorandum with descriptions and narrative details related to construction methods including tunneling and excavation activities, including statements that adverse impacts will be minimized through implementation of contractual requirements and specifications, but does not appear to incorporate project-specific modeling. Detailed plan and profile drawings identifying discharge locations (including from pumping operations) are necessary to determine potential impacts, and all regulated resources must be shown in areas where tunnels or subsurface construction is proposed.

- Please provide any additional plans or modeling developed since the time of the WQC request, as well as construction specifications and/or contractual requirements that will be utilized to protect groundwater resources particularly in sensitive areas.
- As referenced in the Tunneling Memorandum, please provide specific protocols for addressing inadvertent returns (including notification procedures and contingency restoration measures) based on sensitive areas and ground conditions identified around the alignment.

I. BWRR Response to MDE Comment #4

Contractual requirements and specific protocols that would be implemented to ensure that tunneling activities and underground construction have minimal effects on water resources have been summarized in a memorandum that is included in Attachment E. This memorandum includes sketches outlining the construction operations that are likely to occur at major excavation sites such as the project's three tunnel portals.

Document: 11-16-23 BWRR Compiled Comment Response Package.pdf (228 pages)
Attachment E: Comment 4 – Beginning on page 128 of 228

II. MCRT Response to MDE Comment #4

In their response, BWRR states: “Information used and developed to delineate WHPAs can be a valuable source of information for developing an understanding of the specific resource that requires protection.”¹¹ BWRR did not state that the information “will” be used, just that it “could” be used.

BWRR also states: “After identification of the groundwater resources and users, and working closely with MDE, the BWRR will determine whether additional hydrogeological investigations are required along the project alignment. Hydrogeologic investigations may include one or more of the following activities:”¹² It seems convenient for BWRR that they are going to decide whether additional investigations are required, and that they “may” include certain activities.

¹¹ *Ibid.* Page 131 of 228.

¹² *Id.*

Further, BWRR provides another noncommittal response:

“If necessary, and again working closely with MDE, BWRR may develop one or more two dimensional or three-dimensional numerical groundwater flow and/or fate and transport models (e.g., ModFlow, MT3D) for use in evaluating the potential effects of tunneling and underground construction on groundwater resources. The models may also be used to design mitigation measures to protect groundwater resources.”¹³

Regarding tunneling issues and the impact on water quality, the matter of how BWRR will deal with the spoils (muck) material has not received adequate attention. The MCRT consolidated the number of truck trips that were represented in numerous tables in the WQC application documents and included this information in our initial comments to the MDE. The number of trips for dump trucks (considered HHD, vocational trucks), equipment delivery trucks (considered either HHD or HD vocational trucks), and other work-related trips is staggering. The impact alone on local infrastructure, fuel pollutant emissions, and for quality of life in EJ neighborhoods is going to be very high.

Below is a table providing totals of work-related trips specific to each type of facility/infrastructure to be constructed. The information was extrapolated from BWRR’s WQC Exhibit I: Construction Memorandum, tables 6 (pp. 15-16), 8 (pp. 18), 13 (pp. 30), 15 (pp. 31), 19 (pp. 39-40), 22 (pp. 45), 26 (pp. 47), and 28 (pp. 48).

Total Work-Related Facility/Infrastructure Construction Trips

Construction Type	Est. Total Vocational Truck Trips	Est. Total Worker Related Trips	Est. Total All Trips
FA/EE Shaft, TBM Launch/Retrieval	202,125	195,000	397,125
Tunnel Boring	1,027,031	643,125	1,670,156
Viaduct (Guideways)	148,500	297,000	445,500
TMF Ramp (TMF Access)	39,400	56,300	95,700
Station (DC, BWI, Baltimore)	1,087,500	645,000	1,732,500
Portal (Tunnel/Surface Transition)	179,875	224,250	404,125
TMF (Train yards)	195,000	292,500	487,500
Substation (Electrical)	18,000	300,000	318,000
Total Trips	2,897,431	2,653,175	5,550,606

It should be noted that the Estimated Total Vocational Truck Trips for the spoils are for the hauling of spoils from the tunnel to an assumed and yet-to-be-identified “disposal facility within 20 miles.”¹⁴

¹³ *Ibid.* Page 132 of 228.

¹⁴ Draft Environmental Impact Statement. Appendix D.9. Air Quality Technical Report. Page D.9-53.

There also does not appear to be any overall estimate of these impacts to the water quality of the Patuxent River downstream from the project site. This concern has been raised, but it seems that because the project design and its impacts are chopped up into increasingly smaller areas of impact, there is no need to carry out any cumulative assessment, except for Tier II waters. A project of this magnitude should be required to show cumulative impacts to water quality.

VII. MDE Comment #7

The project has the potential to impact a number of sensitive species, including aquatic species such as fish and freshwater mussels as well as wetland-dependent species. The Certification request is missing current characterizations or planned studies of State and federally listed potential endangered species and habitat, threatened species, or rare, threatened, or endangered species in Maryland and/or species in need of conservation at both project and mitigation sites, and the measures planned for their protection.

- Please provide information related to studies and proposed protection measures as described above.

I. BWRR Response to MDE Comment #7

BWRR assembled agency correspondence to provide current species characterizations and compiled the many protection and mitigation measures outlined in the DEIS. See Attachment H for a list of planned studies and proposed protection measures.

Document: 11-16-23 BWRR Compiled Comment Response Package.pdf (228 pages)
Attachment H: Comment 7 – Page 7 of 228

II. MCRT Response to MDE Comment #7

The MCRT did not have access to Attachment H and therefore was unable to review any documentation specific to this question.

VIII. MDE Tier II Waters Comment #2

Update the list of additional mitigation opportunities that have been identified since March 1, 2022, the date of the last SEJ update.

I. BWRR Response to MDE Tier II Waters Comment #2

BWRR has not identified any additional opportunities since the SEJ was submitted. BWRR will further evaluate additional mitigation opportunities as the Project advances to the NEPA FEIS phase and as the design advances.

II. MCRT Response to MDE Tier II Waters Comment #2

The question is focused on additional mitigation opportunities; however, BWRR explicitly stated that there are no additional mitigation opportunities. BWRR also did not provide any updates about the previously identified mitigation opportunities.