UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
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May 24, 2021

Brandon Bratcher
Environmental Protection Specialist
USDOT Federal Railroad Administration
RPD-13: Environment and Corridor Planning Division
1200 New Jersey Ave SE
West Building, Mail Stop 20
Washington, DC 20590

Re: Draft Environmental Impact Statement and Draft Section 4(f) Evaluation: Baltimore-Washington Superconducting MAGLEV Project. CEQ# 20210010

SENT VIA EMAIL ONLY

Dear Mr. Bratcher:

In accordance with the National Environmental Policy Act (NEPA), Section 309 of the Clean Air Act, and the Council on Environmental Quality (CEQ) regulations implementing NEPA (40 Code of Federal Regulations (CFR) 1500-1508), the United States Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement (DEIS) for the Superconducting Magnetic Levitation (SCMAGLEV) Project (the Project or the Study). The DEIS evaluates the proposed construction and operation of an SCMAGLEV system between Baltimore, MD, and Washington, DC. The United States Department of Transportation Federal Railroad Administration (FRA) has prepared the DEIS.

SCMAGLEV is a high-speed rail technology that runs on a grade-separated, fixed guideway powered by magnetic forces at potential speeds of more than 300 miles per hour. The Project would construct two terminal stations (Washington, DC; Baltimore, MD) and one intermediate station at the Baltimore-Washington International Thurgood Marshall Airport (BWI Marshall Airport Station). The Project proposes to operate both in an underground tunnel and on an elevated viaduct. The system does not operate on standard steel wheel railroad tracks. The Project Study Area is bordered by I-95 to the west and the former Washington-Baltimore & Annapolis Electric Railroad alignment to the east. This area extends approximately 40 miles north to south and 10 miles east to west. The Study Area includes portions of Washington, DC; Prince George's County, MD; Anne Arundel County, MD; Howard County, MD; and Baltimore County, MD.

Given the geographic extent of the Study Area and its potential intersection with both built and natural environments, EPA recommends that FRA continue to pursue possible opportunities to avoid or minimize impacts. EPA suggests further public discourse concerning future facility locations (including the trainset maintenance facility (TMF), which may require a footprint as large as 180 acres) to inform the Project selection of a Preferred Alternative in the Final Environmental Impact Statement (FEIS).

Detailed comments on these conditions as well as other potential concerns are included in the enclosure for your consideration.

EPA's enclosed comments include notable depth on two subject matter areas, Aquatic Resources and Environmental Justice. Concerning Aquatic Resources, available records reflect potential concerns related to waters of the Unites States, subsurface water resources, and drinking water. EPA encourages avoidance, minimization, and mitigation of aquatic impacts to the greatest extent possible. Regarding Environmental Justice, current data indicate that local populations may face disproportionate vulnerabilities to Project-related environmental stressors, such as air toxics, traffic, and hazardous waste. EPA suggests that the Project consider and communicate measures to mitigate disproportionate stresses of such factors to support community wellbeing, health, and equity.

Thank you for the opportunity to review this project and for your consideration of our comments. EPA looks forward to continued cooperation with FRA during the development of the FEIS. If you have any questions regarding these comments, the staff contact for this project is Timothy Witman. He may be reached at (215) 814-2775 or by email at Witman.Timothy@epa.gov.

Sincerely,

STEPAN NEVSHEHIRLIAN

Digitally signed by STEPAN NEVSHEHIRLIAN
Date: 2021.05.24 11:29:04 -04'00'

Stepan Nevshehirlian
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Enclosure

Technical Comments

DEIS and Draft Section 4(f) Evaluation: Baltimore-Washington SCMAGLEV Project

Purpose and Need

The project has several complex engineering, environmental, financial, and transportation constraints. Additional clarification explaining the limits and constraints particularly regarding this new transportation technology would be helpful in further understanding the Project Purpose and Need and to avoid limiting the Project scope.

Recommendations

- EPA recognizes that the COVID-19 pandemic has fostered changes in commuting volume and other travel demands. EPA recommends that the FEIS discuss changes in travel demand needs within the Purpose and Need. EPA suggests that the FEIS state that the Project will continue to update ridership modelling throughout planning and design to ensure appropriate results.
- The discussion of optimum operating speed in the Purpose and Need narrows the Purpose scope. Although the Project may seek to achieve a design that reaches an optimum operating speed, that speed may not be appropriate to distinguish in the Purpose and Need, as such a definition may limit the feasible alternatives. EPA recommends clarifying the word optimum to reflect the ideal speed for the technology to operate within the constraints of the built and/or natural environments. This speed should consider regulatory requirements and/or other local constraints that may be satisfied through design modifications and/or speed reductions that allow alterations in the turn radius to avoid and minimize impacts to the built or natural environment.
- Based on the material available for review, it is not apparent if the operational and safety metrics and the Project purpose can be met with fewer cars and/or reduced cruising speed. EPA recommends additional information be provided addressing how the number of cars and cruising speed may inform the proposed alignments and avoidance/minimization opportunities.

Alternatives Considered

EPA notes that additional documentation concerning the Preliminary Alternatives may help to further explain potential impacts as well as opportunities for impact minimization and mitigation.

Recommendations

- Plan Notes state that the Project will determine fencing requirements around the Project guideway as planning advances. EPA recommends that the FEIS provide details or diagram regarding the dimensions and material of these fences. Publicly available images of an SCMAGLEV system in Japan show a fence system that appears to create a grade-level barrier; however, cross-sectional images in this Project DEIS give the appearance that wildlife, vegetation, and people would be able to pass freely under the viaduct. EPA recommends clarifying this point and providing renderings that clearly depict potential impacts.
- EPA recommends that additional information be included regarding the possibility to vary the facility layouts within the TMF. Such layouts may consider reducing the footprint of the TMF by locating substations, maintenance of way (MOW) features, and/or other structures on adjacent or nearby properties.

- EPA recommends providing additional information that clarifies what, if any, flexibility there may be in the location of the TMF, MOW, and/or substations. For example, Alternative J-04 appears to include an MOW that is not associated with the TMF. EPA suggests discussing whether relocating some TMF features (e.g., MOW, substations, etc.) to other areas along the alignment may help to reduce impacts.
- EPA suggests that the FEIS elaborate on the TMF location parameters. EPA recognizes that it may be desirable to locate the TMF along the Project guideway; however, EPA also encourages the FEIS to consider additional locations whose parameters may support impact reduction.

Environmental Justice

EPA recognizes that the project utilized EJSCREEN in development of the DEIS and provided results in Appendix D.3. EPA notes that the two enclosed EJSCREEN reports each concern the entire project corridor. One report appears to cast a one-mile radius around the corridor, covering 70.52 square miles and including a 294,164-person population. The other report appears to cast a five-mile radius, covering 415.19 square miles and including a 1,935,963-person population. While this approach may provide demographic and environmental data for the whole corridor, it risks obscuring and understating conditions of individual communities.

Recommendations

- Given that EJSCREEN provides data at the block group level, one of the tool's strengths is its ability to offer community-level metrics. EPA encourages the FEIS to utilize EJSCREEN to review individual communities that may be impacted by project development, such as those areas identified within Attachment F of Appendix D.3.

On page 4.5-3, the DEIS states that "FRA used the United States Census Bureau (USCB) 2010 Decennial Census and the American Community Survey (ACS) five-year 2018 estimates (2014-2018) to identify minority and low-income populations." EPA recognizes that the most recent available data sets may precede the current year.

*Recommendation*s

- EPA encourages the FEIS to utilize the most recent available respective U.S. Census and ACS data sets to promote accurate and up-to-date analyses regarding minority populations, low-income populations, and other demographics.

EPA notes that the DEIS cites CEQ's 1997 *Environmental Justice Guidance Under the National Environmental Policy Act* concerning the identification of both minority and low-income populations; however, EPA also observes that the methods that the DEIS uses to develop both the minority population and low-income population benchmarks is inappropriate. Adding an additional 10 percentage points to percent minority population and percent low-income averages is mathematically inappropriate and inadvisable. This methodology may cause areas of EJ concern to be missed due to unduly high benchmark values being set.

EPA notes that the 1997 CEQ Environmental Justice Guidance does not call for the adding of additional percentages to the benchmarks for low-income populations:

- "Low-income population: Low-income populations in an affected area should be identified with the annual statistical poverty thresholds from the Bureau of the Census' Current Population Reports, Series P-60 on Income and Poverty. In identifying low-income populations, agencies may consider as a community either a group of individuals living in geographic proximity to one another, or a set of individuals (such as migrant workers or Native Americans), where either type of group experiences common conditions of environmental exposure or effect."

- EPA reiterates that adding 10 percentage points across the board may create a benchmark that eliminates some low-income populations. Using the data provided by the U.S. Census is most appropriate.

EPA further notes that the aforementioned 1997 CEQ EJ Guidance calls for two tests to help identify minority populations:

- The first test to be applied is the identification of populations that exceed the 50% minority population benchmark established by CEQ. This step should be done first, and all populations that exceed the 50% benchmark should be identified as minority populations.

- The second test is the application of the significantly greater benchmark. This method should be used when local minority population averages are below 50%. The process should be designed to promote the appropriate identification and inclusion of minority populations of concern in the assessment. It should be noted that adding a set percentage to the minority population averages has an adverse impact on the data for low minority population percentages. In a population that is 5% minority, adding 10 percentage points gives a benchmark of 15%, which is three times higher than the minority population average. If the percent minority population is 10%, the benchmark would be 20%, which is only twice the minority population percentage. If the minority population percentage is 30%, the benchmark would be 40%, which is only one third higher. The effect is inverse. Thus, the analysis would not have the same impact on all populations. Taking 10% of the minority population average and adding it to the minority population percentage is the correct way to calculate it.

Recommendations

- EPA recommends that the project review CEQ's 1997 EJ Guidance again and consider the above clarifications to inform appropriate analyses. EPA remains willing to coordinate with the lead agencies as needed to assist with interpretation and application of appropriate methods.

Page 4.5-5 states that "[t]he vast majority of the SCMAGLEV Project impacts would occur in EJ population areas due to the fact that most of the SCMAGLEV Project Affected Environment qualifies as EJ." Such a concentration of impacts in the described areas seems unnecessary and avoidable, as many areas that the DEIS characterizes as "No EJ" do not appear to be subject to potential ancillary construction features (e.g., stations, TMF footprints, etc.) and consequent impacts on the same scale as the impacts that appear in "EJ" areas. This contrast is apparent in Figure 4.5-1, where the TMF footprints, various stations, and other ancillary features appear predominately in areas identified as "EJ." The distribution of these impacts appears to be disproportionate, with a greater burden in areas with relatively higher minority and/or low-income populations.

Recommendations

- EPA strongly recommends that the Project limit and mitigate impacts within areas of potential EJ concern to the maximum extent possible and that it ensures the avoidance of disproportionate impacts to low-income populations and/or minority populations. EPA recognizes, per page 4.5-3, that "a disproportionality analysis to be conducted in the FEIS will consider the concentration of impacts for the relevant resource areas within EJ populations areas, as well as the context and intensity of the impacts, the associated mitigation and/or benefits."

Climate Change, Energy, and Greenhouse Gas (GHG)

Based on the regional Vehicle Miles Traveled (VMT) forecasts provided in Ridership Data Request (BWRR, May 6, 2020), the SCMAGLEV Project will likely reduce overall regional VMT in a range of nine to 12% between 2027 and 2045 under the Cherry Hill and Camden Yards Station option. However, corridor-wide emissions within the selected mesoscale network will slightly increase around station areas. The reduction of overall regional VMT from the SCMAGLEV Project, as compared to the No Build Alternative, will likely result in GHG emission reductions on a regional scale.

As stated in the DEIS, the SCMAGLEV system will operate entirely on electricity, with the exception of certain maintenance vehicles. The DEIS states the SCMAGLEV train will not increase GHG emissions. However, as described in Section 4.19 Energy, the SCMAGLEV construction (including the use of temporary standby generation facilities during construction) and operation will result in an increase in power consumption in the local area. Therefore, an increase in GHG emissions from powerplants would likely occur.

As indicated in Table 4.19-7, the SCMAGLEV system and ancillary facilities will increase net transportation energy consumption by approximately 3.0 trillion Btus. For context, this would be enough energy to power around 88,900 average homes for one year. The anticipated decrease in energy expenditure from the diversion of auto, bus, and rail traffic to the SCMAGLEV system is not expected to offset the increase in energy consumption from the SCMAGLEV system. FRA indicates in the DEIS that the Project Sponsor may pursue renewable energy projects to offset any increases in power generation-related emissions.

Recommendations

- EPA recommends the FEIS include information regarding how the project will be consistent with the Council for Environmental Quality's February 19, 2021, Federal Register notice rescinding the 2019 Draft GHG Guidance, how the Project is considering all available tools and resources in assessing GHG emissions and climate change effects of the proposed actions, including, as appropriate and relevant, the Final Guidance for Federal Department and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews (2016 GHG Guidance).

- EPA appreciates the consideration to pursue renewable energy projects to offset power generation-related emissions. EPA suggests the FEIS provide additional consideration for the emissions and GHG from energy production, transmission, and consumption, and commit to specific projects and use of renewable sources.

Air Quality – General Conformity

Applicable National Ambient Air Quality Standards (NAAQS) for General Conformity – Particulate Matter (PM).

Section 4.1.6 (Air Quality) of the DEIS contains a table of applicable general conformity NAAQS/pollutants for the project area (Table 4.16-1) that indicates the counties in the Project area are classified by EPA as "maintenance" for the 1997 PM2.5 NAAQS -- but that the 1997 PM2.5 NAAQS was revoked by EPA upon issuance of successive PM2.5 NAAQS (for which the area is classified "attainment"). Later, in describing general conformity applicability (p. 4.16-11), the DEIS states that "For PM2.5, EPA revoked the 1997 PM2.5 annual NAAQS and the area is in attainment for the 2006 PM2.5 NAAQS. Therefore, the [general conformity rule] is not applicable for PM2.5 emissions."

In the final rule promulgating the 2006 PM2.5 NAAQS on October 17, 2006, (71 FR 61144), EPA revised the 1997 24-hour PM2.5 standard to 35 micrograms per cubic meter ($\mu g/m^3$) and retained the level of the annual PM2.5 standard at 15 $\mu g/m^3$. In that same action, EPA retained the 24-hour PM10 NAAQS and revoked the annual PM10 standard. Similarly, when promulgating the 2012 PM2.5 NAAQS on January 15, 2013, (78 FR 3086), EPA tightened the annual PM2.5 standard by lowering the level to 12.0 $\mu g/m^3$ and retained the 24-hour PM2.5 standard at a level of 35 $\mu g/m^3$.

Recommendations

- EPA recommends that the FEIS consider and incorporate the above details and requirements associated with general conformity under the Clean Air Act.

EPA acted to redesignate the Baltimore 1997 PM2.5 Area from "nonattainment" to "maintenance" on December 14, 2014, (79 FR 75031) and the Washington area on October 6, 2014 (79 FR 60081).

Recommendation

- The statements in the DEIS indicating that the 1997 PM2.5 NAAQS has been revoked are therefore incorrect. The footnote to Table 4.1.6 should instead note that EPA revoked the annual PM10 NAAQS and that the area continues to be maintenance for the 1997 PM2.5 NAAQS. The statement on p. 4.16-11 indicating that EPA revoked the PM2.5 NAAQS and that the action area (i.e., Baltimore and Washington) is not subject to general conformity for the 1997 PM2.5 NAAQS is incorrect. As a 1997 PM2.5 maintenance area, general conformity applies for PM2.5 through the end of the maintenance period for each area. The FEIS should consider PM2.5 pollutants and their precursors as applicable pollutants under EPA general conformity requirements rule.

General Comment on calculation of direct and indirect emissions for general conformity (DEIS considers "construction and operation" emissions for general conformity evaluation.)

The DEIS Chapter 4 Introduction (p. 4.1-4) states that, "As the engineering design advances, the Project Sponsor will develop a specific construction plan describing construction sequencing, equipment, methodologies, and safety practices. In addition, they will develop and implement a construction management plan that will govern how, where, and when construction activities will take place. The plan will incorporate, implement, and manage commitments made in the forthcoming FEIS and Record of Decision (ROD) to avoid or minimize and mitigate natural and built environment impacts. Additional details related to construction are included in Appendix G.7."

In determining general conformity applicability, it is important to correctly characterize, on an annual basis, the total direct and indirect emissions from the federal action, as defined under EPA's conformity rules at 40 CFR Part 93, Subpart B. In order to determine if total direct and indirect emissions from the action exceed the de minimis thresholds for each subject NAAQS/pollutant, it is critical to accurately determine annual emissions from each year of the action.

Recommendation

- Once FRA has selected its preferred alternative and determined its construction schedule with more detail, EPA recommends that FRA attempt to refine its annual emissions analysis based on that final Project construction schedule to accurately characterize project construction, operation, and other direct and indirect emissions. This refinement may ensure that the emissions are characterized correctly based on the actual construction schedule and the specific equipment and activity levels to be used in the selected alternative. Apportionment of emissions using a final construction schedule can shift emissions from one year to another, potentially triggering general conformity where an earlier rough estimate did not. EPA suggests FRA revisit the emissions in Appendix D.9 when preparing the FEIS for this action with the Preferred Alternative. A presentation of the annual activities and emissions (for each year of the action) in a consolidated table showing actual (rather than worst case) emissions with an improved level of construction detail would present a clearer picture of general conformity applicability de minimis review.

Emergency Generation Emissions

The plan does not appear to include emergency generator emissions, as it is unclear whether or how much they will operate during the project.

Recommendation

- Given the likelihood that generators will be used at least part of the time, EPA suggests that the lead agencies predict a reasonable level of annual emissions from generator use and include them in the Project.

Radon

As described in the DEIS, although the SCMAGLEV Project may have low potential to encounter radon gas and, in connection, affect public health, the use of a tunnel boring machine, a water-tight segmental lining, and constant ventilation may help to ensure that there is no accumulation of radon gas during construction and during the post-construction lifespan of the structures. Radon gas may be monitored in tunnels during construction and, if necessary, additional ventilation or personal protective equipment may be used to minimize health risk. Additional evaluation of radon content of sediments and groundwater may also be conducted at a later design phase. Tests may also evaluate the presence of other gases, such as methane and hydrogen sulfide.

Recommendation

- EPA appreciates the measures identified in the DEIS to reduce radon exposure in enclosed spaces during construction and operation of the Project. EPA recommends that additional information be included in the FEIS regarding the monitoring and/or identification of radon levels at vent station locations, particularly where tunnel vent locations are situated near homes or developed areas.

Aquatic Resources and Water Quality

Clean Water Act (CWA) 404 Alternatives Analysis: Avoidance and Minimization

While the methodology described in Chapter 4.23.2.2 of the DEIS includes an assessment of resource mapping, it does not describe what that resource mapping entails.

Recommendations

- EPA recommends the DEIS be updated to explain how aquatic resource functions were assessed to better inform the alternatives analysis, avoidance and minimization opportunities, cumulative effects, and compensatory mitigation requirements. At a minimum, EPA recommends baseline information be provided to aid in determining the existing function and condition of the aquatic resources impacted. The baseline information for wetlands should include data, such as, but not limited to, hydrogeomorphic classification, source(s) of hydrology, vegetative species diversity, ecological community groups(s), invasive cover, and disturbance history. Stream assessments should include biological, physical, and chemical information, such as a rapid bioassessment protocol, Maryland Biological Stream Survey, and basic water quality data (dissolved oxygen, conductivity, etc.). Photos, measurements, and other supporting information supporting the findings should be provided.

The Project is proposed in watersheds that have been urbanized, which has resulted in impacts to rare and/or highly valued aquatic resources.

Recommendations

- EPA recommends the DEIS include a description of the functions being performed by existing aquatic resources proposed to be impacted and, for each alternative, assess if and/or how these benefits and functions can be mitigated if lost.
- EPA recommends the DEIS be updated to include additional information on the water quality values and function that fringe habitat provides, particularly in disturbed watersheds.

Compared to the J1 alignment, the applicant's preferred alignment (J) is associated with greater impacts to aquatic resources and to the Patuxent Research Reserve (PRR) and includes more hazardous waste risk locations. Of the 24 criteria considered to compare the J and J1 alternatives, the preferable alternative is the least impactful for only three criteria (12.5%) - none of which consider impacts to environmental resources.

Recommendations

- EPA strongly recommends that the applicant consider all opportunities to avoid and minimize impacts to aquatic resources, including considering J1 as the Preferred Alternative.
- Please clarify how environmental impacts were considered for the comparison of locations for stations, MOW, TMF, fresh air vents, and emergency egress, including the Baltimore Station.
- The DEIS should consider the Least Environmentally Damaging Practicable Alternative in accordance with the CWA 404 permit decision process and further clarify in the FEIS what opportunities exist to reduce impacts throughout the entire project. To inform avoidance and minimization opportunities, EPA recommends the DEIS be updated to address how the "straddle bent" component is incorporated into the design for each build-alternative.

- EPA recommends the DEIS be updated to better describe how the long-term construction lay down areas will be dismantled and how impacted areas will be restored to pre-construction conditions.
- EPA recommends the various alignment combination figures be updated with impact values to assist with the review and better understand the magnitude of impacts to aquatic resources for each alignment.
- Under section 4.11.3.1, notable wetlands are to be avoided or offered special protection if avoidance is not possible. Please clarify what is meant by "special protection".

Additionally, EPA recommends the following alternatives be considered to reduce impacts to aquatic resources:

- Consider reducing impacts to natural resources by including alignment combinations that increase tunnel length.
- Elevating aboveground segments to avoid natural resources.
- Examining shifts in alignment J and J1 that result in fewer impacts to aquatic resources at the BARC airstrip TMF (such as headwater wetlands).
- Analyzing alternative locations of all substations and fresh air and emergency egress (FA/EE) sites.
- For crossings that require a culvert, consider bridge options and alternative culvert types such as open bottom construction designed appropriately to allow for low flows and sustain aquatic life passage.
- Selecting alignment combinations that minimize impacts to fringe habitat.

<u>CWA 404 Direct, Secondary and Cumulative Effects and Analysis</u>

The proposed activities are likely to result in direct impacts of 900 to 1,100 acres across eight watersheds including up to 89 acres of wetlands and 42,000 linear feet of streams.

Recommendations

- EPA recommends the DEIS identify permanent and temporary impacts for all proposed activities. The DEIS should also describe actions to restore all temporary impacts to pre-construction conditions.
- EPA recommends the DEIS be updated to address how secondary and cumulative impacts in each watershed will be addressed and minimized.
- EPA recommends additional information be included in the DEIS to address long term monitoring needs of the watershed, including adaptive management plans.
- EPA recommends the DEIS include additional information summarizing which utilities are likely to be affected by the proposed alignments and which utility changes may lead to future impacts to aquatic resources on a watershed scale.
- EPA recommends the DEIS be updated to address potential expansion of invasive species[4] (ex. *Typha spp., Persicaria perfoliata, Microstegium vimineum*) into the watersheds, directly or indirectly, due to the proposed development. The DEIS should also address the mitigation needs associated with invasive species.

TMF development is expected to increase impervious surface acreage by 712 to 826 acres across impacted watersheds, including a minimum of 20 acres of impacts to aquatic resources and at least 31 acres of impacts to the Little Patuxent River Watershed floodplain. Given that most impacts to natural

resources will occur at the TMF locations, it is unclear why the cumulative effects assessment focused on the transit station areas.

Recommendations

- EPA recommends the DEIS clarify this information and update it to assess cumulative effects throughout the alignment of each build alternative, including expected secondary effects within each watershed. This analysis should clearly document the resource functions that were considered along the alignment route including the TMF locations, PRR, and parks.
- EPA recommends the DEIS also address in detail how stormwater best management practices will be incorporated into the TMF/MOW designs to reduce secondary and cumulative impacts to water quality of downstream resources.

The Upper Beaverdam Creek is a reference stream in the Anacostia Watershed.

Recommendations

- EPA recommends the DEIS be updated to address potential cumulative impacts within the Upper Beaverdam Creek, particularly addressing how the current use of this stream will be affected and specific measures expected to be employed to minimize impacts.

CWA 404 Compensatory Mitigation

Once it is determined that all appropriate and practicable steps to avoid and minimize adverse impacts have been taken, compensatory mitigation is then considered.

Recommendations

- EPA recommends the DEIS include a mitigation statement or narrative that describes how the proposal will adequately compensate for unavoidable permanent and temporary impacts to waters.
- EPA requests the DEIS clarify if any impacted resources (including direct or secondary impacts) are incapable of being restored or otherwise mitigated. For example, the Mitigation Rule notes that streams are difficult resources to replace, and, thus, the required compensation should be provided through in-kind rehabilitation, enhancement, or preservation since there is greater certainty that these methods of compensation will successfully offset permitted impacts (230.93(e)(3)). The DEIS should document the likelihood of success of any required mitigation and present alternative mitigation options as well as a remedial action plan if any proposed mitigation fails.
- To ensure a functional replacement of aquatic resources in the impacted watershed, EPA recommends using a mitigation bank whose primary service area encompasses the Project location.
- To avoid temporal loss of wetland and stream functions in watersheds that lack sufficient credits from a third-party mitigation project, EPA recommends the compensatory mitigation be conducted concurrent with or prior to impacting on-site aquatic resources. If this cannot be achieved, replacement ratios greater than one-to-one may be necessary to address temporal loss and to reduce risk of success.
- It is not clear how compensatory mitigation required for this project would be guaranteed into perpetuity given that the proposed impacts include habitat currently protected through conservation easements. EPA requests the applicant update the DEIS and explain in detail how compensatory mitigation required from this project would be protected long-term. The DEIS

should clarify if the proposed activities include impacts to mitigation habitat and describe how temporal losses will be addressed.
- EPA recommends the DEIS be updated to include how climate change models were used to assess the appropriate mitigation for direct, secondary, and cumulative impacts to the aquatic resources.

Drinking Water

Section 4.10.3.3 identifies the proposed alignment intersecting with Surface Water Protection Areas that are considered critical to drinking water supply and delineates Well Head Protection Areas (WHPA) at a 1-mile radius. In addition, the proposed project will cross numerous drinking water utilities.

Recommendation
- EPA recommends including additional details and information that will inform the public and ensure impacts to Surface Water Protection Areas will be considered and mitigated.
- EPA and many states designate WHPA at a 5-mile radius. EPA recommends the project consider including WHPA within a 5-mile radius. EPA also recommends identifying what precautions would be taken to minimize impacts during construction to the WHPA in Anne Arundel and Prince George Counties.
- EPA recommends including additional information to ensure a stable and safe drinking water supply is maintained during construction and after the project has been constructed.

Hazardous Materials

As outlined on page 4.15-3, the DEIS assigns "Listing Scores" to reviewed databases to describe risk levels associated with sites recorded in those databases: "Using the definition of each database and best professional judgement, FRA estimated the relative risk posed by sites in each database to assign a Listing Score using numerical indicators 2 through 5. Thus, the Listing Score reflects the relative risks of the listing(s) associated with a site, without regard to location or site conditions."

In Appendix D.8, various databases that appear to contain similar types of records also appear to receive divergent Listing Scores. For example, per Table D.15-1, there appear to be references to several Superfund-related databases under consideration (e.g., National Priority List (NPL), Delisted NPL, Superfund Enterprise Management System - SEMS (CERCLIS), SEMS Archive, CONSENT Superfund Consent Decrees, ROD - NPL Records of Decision). These databases appear to bear Listing Scores ranging from level 2 to 5 in Appendix D.8.

Recommendations
- For public benefit, EPA recommends further discussion to explain the assignment of greater risks to certain databases than others (for instance, the disparities between Superfund-related databases) given the implications of Listing Scores for site-level characterization.

On page 4.15-10, the DEIS states that "[d]ewatering and excavation activities may further cause migration of contaminants through the soil and groundwater." The same page also states that short-term construction effects may include "[a]ccidental spills or releases of hazardous substances used to run construction equipment."

Page 4.15-11 states that forthcoming Project-related assessments may include "[e]valuation of completed soil and groundwater sampling and monitoring to determine the potential for contaminant migration due to construction and project operations and identify measures that could avoid or minimize such migration."

Recommendations

- EPA encourages location-specific analyses (e.g., sampling, modeling, and/or mapping) to evaluate potential pollutant impacts prior to, during, and after Project activities that may contribute to surface and/or subsurface contaminant transport. EPA recommends prevention and mitigation of pollutant migration to the greatest extent possible.

Electromagnetic Field and Electromagnetic Interference

Section 4.18 Electromagnetic Fields and Electromagnetic Interference (EMF/EMI) states in page #4.18-2, "FRA did not conduct EMF/EMI calculations or simulations of the SCMAGLEV system as part of the DEIS. The Project Sponsor will coordinate with self-identified receptors to conduct appropriate analysis at site specific locations, as necessary. Additional coordination will be required with potentially impacted resources to identify impacts and develop appropriate mitigation strategies through the FEIS and final design process. When the SCMAGLEV system is in operation, the Build Alternatives J-01 through J-06 will be in closer proximity to some of these self-identified government properties and facilities. Additionally, Build Alternatives J-02, J-05, J1-02, and J1-05 have the potential to affect the NASA GSFC and GGAO due to proximity of the BARC Airstrip TMF."

Recommendation

- EPA recommends that additional coordination occur as part of the FEIS and construction and operation of the project to identify impacts and develop appropriate mitigation strategies. The SCMAGLEV Project has the potential to increase electric and magnetic fields as part of operations and potential issues may exist from increased electric and magnetic fields associated with the operation of the SCMAGLEV system.

- EPA recommends including statistical information regarding the current adjacent populations residing near the Project with a focus on potential public health concerns (including cancer rates and birth defects).

General Comments

<u>Section 4.3 Land Use and Zoning</u>

The proposed alignments impact substantial undeveloped areas in an otherwise highly developed corridor. Adverse impacts on land use and local planning objectives may be significant, especially as the local area continues to develop. Plan Prince George's 2035 - Approved General Plan indicates that sprawl is a serious issue, as the County experienced a 6.3% decrease in prime agricultural and resource lands between 2002 and 2010.

Recommendation

- EPA recommends the FEIS consider the potential that the Project may induce additional sprawl and how the Project may impact and further avoid/minimize the concerns identified in the above-mentioned 2035 plan.

As detailed in the DEIS, each build alternative would impact the Beltsville Agricultural Research Center (BARC). Section 4.3 notes that construction and operation of a TMF at either the BARC Airstrip or the BARC West location would not be consistent with Prince George's County Master Plan. This development would also conflict with several other local or regional land use plans and planning goals**,** which generally consider BARC to be protected land and/or open space. BARC is listed as a Priority Preservation Area and is considered "permanently preserved" in the County's Priority Preservation Area Functional Master Plan and is designated as Tier IV by the County in accordance with the Maryland Sustainable Growth and Agricultural Preservation Act of 2012. Construction of the TMF and other project components at BARC would not only impact both terrestrial and aquatic habitat value but would likely contribute to degradation of a historically and aesthetically valued viewscape.

Recommendation

- EPA recommends that the FEIS address the numerous concerns regarding the impacts associated with BARC property and fully analyze any potential alternative(s) and design modifications that could be implemented to avoid and minimize impacts to BARC. In addition, should the project not be able to avoid impacts to BARC property and its resources, then appropriate mitigation should be considered and utilized.

As detailed in the DEIS, potential impacts are also proposed at other important federal lands and facilities, including the PRR, NASA's Goddard Space Flight Center, Fort George G. Meade, the U.S. Secret Service, and the Baltimore Washington Parkway. Each is a unique facility with functions that are important regionally and nationally. For example, in addition to supporting biodiversity, PRR is the nation's only national wildlife refuge established to support research. The refuge is one of the largest forested areas in the mid-Atlantic region and provides critical breeding habitat and an important nesting area for neotropical migratory birds. Research at the Goddard Space Flight Center is critical to our understanding of the Earth and other planets, solar science, and astrophysics, with more than 50 spacecraft collecting observations. The proposed impacts associated with the alternatives may adversely impact or prevent research and may not be compatible with the mission and security needs of the facilities. Overall, the extent of impacts and whether they can be avoided or mitigated is not clear.

Recommendation

- EPA recommends that the FEIS further discuss the impacts the construction and operation of the project could have on the facilities near the Study Area as well as proposed avoidance, minimization, and mitigation measures.

EPA notes that comparing overall acreage and number of parcels is not a particularly informative way to assess and compare the land use impacts of the alternatives (Table 4.3-4).

Recommendation

- EPA recommends including a table in this section that compares acreage of facilities and private parcels for each alternative along with relevant aspects such as forest removal, agricultural conversion, and other land use impacts (e.g. historic resources, security, research, etc.).

Section 4.3.5 *Potential Minimization and Mitigation Strategies* states that the Washington, D.C., Station and the Camden Yards Station in Baltimore are located underground to avoid significant land use changes in urban, highly developed areas.

Recommendation

- EPA strongly recommends considering additional impact avoidance to valuable agricultural and forested lands in a mostly developed landscape, including relocation of facilities underground to avoid impacts. We also recommend evaluating alternative locations for the TMF, including locating the facility in an existing developed or industrial location.

Section 4.3.5 indicates that a reforestation effort would be initiated to mitigate impacts from forest land use changes. At this point, it is not clear that there is sufficient acreage in the vicinity to replace the impacted forest acreage, which ranges from 268 to 437 acres. The specific location and species composition of forest replacement resources is also critical in providing habitat value. Furthermore, given the decades it takes for trees to grow to maturity, the temporal loss, especially for Forest Interior Dwelling Species (FIDS), could be substantial.

Recommendation

- EPA recommends avoiding FIDS habitat and identifying potential mitigation locations.

Appendix F

As indicated, before approving a project that uses a Section 4(f) property, it must be determined that the project has a *de minimis* impact, or there is no feasible and prudent alternative that avoids the Section 4(f) properties and that all possible planning to minimize harm to the Section 4(f) properties has occurred. These properties are critical to quality of life, biodiversity, and preservation of cultural resources. At this time, potential impact on Section 4(f) properties appears significant and it is not clear that there are no feasible or prudent alternatives to impacting these resources.

Recommendation

- EPA recommends providing additional information that focuses on avoidance and minimization of 4(f) properties and how the impacts may be *de minimis* for the Project.