CHESAPEAKE BAY FOUNDATION
Saving a National Treasure

May 24, 2021

Ms. Lauren Molesworth
SCMAGLEV Project
Maryland Transit Administration
6 Saint Paul St, Baltimore, MD 21202

RE: Draft Environmental Impact Statement and Draft Section 4(f) Evaluation
Baltimore-Washington Superconducting MAGLEV Project

Dear Ms. Molesworth:

Please accept the following comments of the Chesapeake Bay Foundation, Inc. (CBF) with respect to the Draft Environmental Impact Statement (DEIS) for the Baltimore-Washington Superconducting MAGLEV project (SCMAGLEV).

Established more than 50 years ago to 'Save the Bay,' CBF currently represents approximately 94,000 members in Maryland. Our education department operates 15 field programs for students and teachers across the Chesapeake Bay watershed. CBF's land and oyster restoration programs have created and enhanced oyster reefs in the Chesapeake Bay and its tributaries and established riparian buffers, wetlands, and forests throughout the Maryland portion of the watershed.

CBF's mission to achieve clean water in the Bay and its tributaries also benefits from the contributions of the Beltsville Agricultural Research Center and Patuxent National Wildlife Refuge. These facilities would be heavily impacted by the project sponsor's proposed alignments. Both expect the loss of environmentally active lands to have substantial negative impacts on research that improves the ability of Chesapeake Bay stakeholders to manage pollution and natural resources effectively. In addition, the carefully managed forests, wetlands and open spaces that could be cleared or filled on these sites directly protect water quality.

While the following comments focus on three major topic areas (water and wetlands impacts; nutrient and sediment impacts from forest loss and construction activity; and environmental justice), there are two initial matters of importance with respect to this DEIS about which we are also particularly concerned: the description of purpose and need, and the alternatives studied. These two requirements for developing an environmental impact analysis are foundational components which greatly shape outcomes. We believe that, as described, they fail to conform to EIS regulations, guidance, standard protocols, and extensive caselaw.

1. **The statement of purpose and need unlawfully predestines the outcome.**

With respect to the statement of "Purpose and Need," its structure should avoid improperly foreordaining the outcome.[1] An inappropriate and too narrow purpose and need leads to an inappropriate and necessarily too cramped alternatives analysis (see below). In this case, the purpose and need statement too directly predicts the outcome, which circumstance should be eschewed. But even if the purpose is stated as "building a high-speed system to reduce travel time to meet the capacity and ridership needs of the Baltimore-Washington region"[2], and even if the agency proposing this solution is given more deference than appropriate as to what the purpose should be, how can the SCMAGLEV possibly stand up?

First, the SCMAGLEV as described is not a "system" but a *single*, *two-way*, *two-destination train* from each of the two end-point termini. While its two terminal stations (depending upon their ultimate locations) may be accessible to other transportation modes in those two cities, and while the single additional station at Thurgood Marshall-BWI Airport will provide a modest amount of access to air transport to those who can afford the cost of that access from the terminal stations, the SCMAGLEV does not a "system" make. People who live along the corridor (and who will absorb all the adverse impacts of its location – see below) will be unable to access the train unless they are able to drive to one of the two inner-city termini or the airport.

Second, despite the overly generous ridership figures developed, we sincerely find it hard to fathom how the train can "meet the capacity and ridership needs" in the region and the generalized corridor if it will only make one stop between its two terminal stations, and if a <u>one-way</u> ticket average fare was projected in this study to cost at least $60.00[3] (in 2020). Who but the wealthy will be able to afford to use it? Due to the cost (currently projected at *seven times* that of the MARC commuter train between Baltimore and Washington), the needs of most of the current commuting public in the area – and especially of the underserved within its corridor -- will decidedly not be met by this new service. Thus, it is extremely difficult to understand how this short service, with but two stops and an extraordinarily high fare, can "meet the capacity and ridership needs" in the region. Instead of a system, the SCMAGLEV will essentially serve as a multi-car, very fast, "limousine" that costs billions of dollars to build, which will significantly disrupt communities and the natural and augmented environment along its path (see below).

2. **Viable alternatives to truly improving transit service in the corridor are not considered.**

The study of "all reasonable alternatives" has been described by reviewing courts since the passage of National Environmental Policy Act (NEPA) as the heart or linchpin of an

[1] *See*, e.g., <u>Simmons v. U.S. Army Corps of Engineers</u>, 120 F.3d 664 (7th Cir. 1997), 667.
[2] Baltimore-Washington Superconducting MAGLEV Project Draft Environmental Impact Study (January 2021), [hereinafter SC MAGLEV DEIS], ES-6.
[3] Id. at 4.5-18; 4.6-13 suggests it could go as high as $80.

environmental impact statement.[4] While truly speculative alternatives, or ones which cannot possibly fulfill the purpose, need not be considered, all reasonable ones must be.

Here, as has been the case in several recent transportation projects in Maryland, a major transportation agency (in this case the Federal Rail Administration) presents and analyzes *no* alternative to the *already selected mode and configuration* of two termini, one station in between, and the use of magnetic levitation technology. This is, of course, because there are no alternatives -- *if* (as in this case) *ultra-high speed* is *the* major criterion for deployment, rather than accommodating, expanding, improving, and even making speedier, transit service along the corridor to better provide for the needs of the regular traveling public. In this DEIS, thus-hobbled by its cramped purpose and need, there are only alternative *alignments* in one corridor, alternative *locations* for terminal stations on either end, and several possibilities for storage yards and maintenance facility *sites* -- along with, of course, the mandated "no build" alternative.

This serious DEIS defect also relates directly to the purpose and need statement which frames the entire study, noted above as unnecessarily and indeed, inequitably narrow. There is currently no alternative to this technology, in this configuration, if the sole purpose is extremely high-speed access between two termini with one location in between. The National Environmental Policy Act (NEPA) requires a detailed statement on "alternatives to the proposed action."[5] That central requirement was improperly removed from this environmental impact analysis before it even began.

This DEIS puts the caboose before the train.

With those preliminary considerations set forth, CBF finds the following substantive issues presented in the DEIS:

I. All alternatives except the 'No Build' alternative represent an unacceptable loss of wetlands detrimental to the Chesapeake Bay, with significant impacts to waterways.

II. The proposed mitigation for significant forest loss from the SCMAGLEV is insufficient to offset new pollution loads to impaired and high-quality waters that are tributaries to the Chesapeake Bay.

III. The adverse environmental impacts of the SCMAGLEV are to be absorbed, almost exclusively, by minority or low-income communities and neighborhoods, increasing environmental inequities in the Chesapeake Bay region.

---

[4] *See* e.g., Alaska v. Andrus, 580 F.2d 465 (D.C. Cir.), vacated in part as moot, 439 U.S. 922 (1978), 474-476; NRDC v. Hodel, 865 F. 2d 288 (D.C. Cir. 1988), 295.

[5] The National Environmental Policy Act of 1969, 42 USC § 4332, Sec. 102 (2)(C)(iii).

I. All alternatives except the 'No Build' alternative represent an unacceptable loss of wetlands detrimental to the Chesapeake Bay, with significant impacts to waterways.

By 2009, Maryland lost 70% of its wetlands compared to pre-Colonial times,[6] 60,000 acres of which were lost just since the 1940's.[7] While regulatory programs are now in effect to slow the loss of wetlands in Maryland, major projects such as the SCMAGLEV proposal have the potential to directly impact significant wetlands throughout all of the DEIS considered build alternatives within the alignment corridor.

Indirect impacts to wetlands from fragmentation and disruption of natural hydrology are mentioned in the DEIS, but not quantified and are therefore assumed to be underestimated. Moreover, the damage to wetlands within the considered corridor occurs within cherished national, State and local recreational areas enjoyed by diverse populations of Marylanders. The stated purpose and need of this project is to build a high speed rail yet the DEIS wetlands and waterways section has scant mention of species adapted to and dependent on wetlands and waterways for their survival which may be incompatible with high speed rail through and over wetlands, such as large flocks of migratory birds. The DEIS fails to adequately avoid wetland impacts by choosing an alignment corridor and build alternatives which convert precious undeveloped lands within an urban corridor without consideration of redevelopment on already existing converted lands. As such, all alternatives except the No Build alternative represent an unacceptable loss of wetland functions and values.

<u>The SCMAGLEV fails to fully gauge the lost value of wetlands affected by the project.</u>

The DEIS does not acknowledge the long-term federal investment and reliance on large, intact wetlands to continue fulfilling Beltsville Agricultural Research Center and Patuxent Research Refuge missions.

In section 4.11.3, the SCMAGLEV DEIS describes the project's affected environment, noting that the largest and most complex wetlands occur on publicly owned research lands such as Beltsville Agricultural Research Center and Patuxent Research Refuge. This is not an accident. Research facilities such as this require large, intact wetlands in context with their upland watersheds and buffers of native vegetation to conduct research on long-term trends of the wetlands themselves, fish and wildlife management experiments and agricultural best management practices. The DEIS does not acknowledge the long-term federal investment and reliance on large, intact wetlands to continue fulfilling that mission nor does it indicate any effort to define the relevance of those wetlands to researchers and the public that benefits from that research.

---

[6] Dahl, Thomas E., Wetlands Loss Since the Revolution, *National Wetlands Newsletter*, Nov/Dec 1990.

[7] Fears, Darryl, Study says US can't keep up with loss of wetlands, *Washington Post*, Dec. 8, 2013.

The DEIS does not acknowledge the lost value of wetlands that serve as recreational areas for underserved populations.

Similarly, the value these wetlands have to the general public as recreational space, especially for underserved populations in the urban corridor or the function of those wetlands in the context of protecting water quality in Chesapeake Bay are not evaluated. Simply mentioning that these wetlands are connected to downstream regional waterways does not assign their functions and values to those waterways suggesting the domain of the Project Affected Environment is far too small. So, in fact, Table 4.11-1 underestimates the real affected area by orders of magnitude.

Despite claiming to address indirect impacts, the DEIS evaluation's domain is limited, ignoring hydrology downstream.

The introduction to section 4.11.4, Environmental Consequences, claims that both direct and indirect impacts are considered, if the domain of the evaluation is only within the Limit of Disturbance, effects to hydrology downstream of all affected areas is not considered. Filling, removal of fill, diverting, converting to a different wetland type and placement of permanent structures will affect hydrology, plant species distributions and fish and wildlife dependent on the existing associations. These effects frequently go beyond the limit of disturbance or "footprint" of the direct impact because of hydrologic and sediment transport process alterations at the direct impact site. Because the domain of the Affected Area excludes downstream areas, the summary of effects in Table 4.11-2 again grossly underestimates the real potential indirect impacts of the build alternatives, and any site-specific shifts in the location of those ecological functions is effectively dismissed as having no impact.

The DEIS fails to acknowledge the long-term impacts of a conversion of palustrine emergent to palustrine scrub shrub cover.

Moreover, it is inaccurate to state in section 4.11.4, Environmental Consequences, that temporary conversion of cover type from Palustrine Forested wetlands (PFO) to Palustrine Emergent (PEM) or Palustrine Scrub Shrub (PSS) merely "alters" the environmental functions. For species adapted to PFOs, those functions will be lost for decades whether replanted, allowed to naturally regrow or are permanently maintained for access. This temporal loss of function for all PFO should be reflected in more careful consideration of avoidance and minimization as well as significantly higher mitigation ratios.

Considering the Patuxent River's recent identification as a critical habitat for Yellow Lance freshwater mussels, this DEIS should specifically determine the potential for adverse effects on that habitat.

As for waterways, Table 4.11-3 is probably much more accurate than the wetland tables above in this section because of the relative size of infrastructure at those crossings compared to wetlands. However, since publication of this DEIS, US Fish and Wildlife Service identified the Patuxent River upstream of the Affected Area as critical habitat for the Yellow Lance freshwater mussel. The Waterways sections of the Final EIS should be

updated with any information from that designation on the potential to impact the Yellow Lance or any of its host fish' ability to freely migrate to and from that critical habitat.

The DEIS fails to assess impacts to wetlands with consideration of their relationship to adjacent uplands and connections to groundwater aquifers.

Section D.7D.2.4, Wetlands, identifies wetlands appropriately using accepted delineation methods but assesses impacts to those discreet polygons as though they could exist without the complex hydrology of adjacent uplands and connecting groundwater aquifers. In particular, Figure D.7-15 "Comparison of NTWSSC and Field Delineated Boundaries" suggests that the impacts are less somehow because the jurisdictional boundaries of those wetland polygons are smaller than the mapped NTWSSCs. Mapping discrepancies aside, the larger boundary is more precise in identifying the upland, surface water and potential groundwater interconnections required to sustain RTE species and rare plant assemblages like bald cypress swamp that have unique ecological value regardless of whether their origin was human planted or naturally occurring.

The DEIS fails to provide any quantitative estimate of erosion and sediment pollution during construction.

CBF has broad experience responding to incidents of erosion and sediment control lapses during construction by hired contractors, especially if not carefully overseen by the agencies responsible for environmental permits. Sometimes these pollution events far exceed the scope of long-term permanent effects of the existence of the built project. Section 4.11.4.3, Short-term Construction Effects, simply identifies the circumstances under which these incidents could occur and minimization measures generally apply, but this does not provide the reader with an estimate of the limits of these additional impacts.

<u>The DEIS fails to adequately avoid and minimize extensive and long-term environmental impacts to wetlands and waterways.</u>

The DEIS fails to avoid and minimize of Palustrine Forested wetlands and floodplain wetlands.

Section 4.11.3.1, *Wetlands*, mentions that many of the Palustrine Forested wetlands (PFO) are within floodplains of perennial waterways but assigns no value to their current function within those systems. Floodplain wetlands are crucial for absorbing storm flows and their associated pollutant loads to downstream waterways. Trees within these riparian settings also help to stabilize stream banks and provide critical fish habitat within those waterways. This suggests their value may be higher than other Palustrine Forested wetlands in other more isolated settings which should affect decisions on avoidance, minimization, and compensatory mitigation ratios, but it does not seem the DEIS gives this subset of PFO any special value. The section goes on to identify a subset of these wetlands and other NTWSSC wetlands where agencies requested avoidance or minimization because of the presence of Rare, Threatened or Endangered species. But doing so should occur for ALL wetlands and specific higher mitigation expectations should be set for all riparian PFOs.

The methodology for selecting a 30-foot buffer for wetland is not adequate, does not reflect state law and is not justified.

In Section 4.11 Wetlands and Waterways of the DEIS, 4.11.22 Methodology, the Federal Rail Administration defined the geographic limits of the project impact area for wetlands and waterways plus a 30-foot buffer. The DEIS does not justify the selection of this buffer size pursuant to any of the regulatory programs. While MDE regulates a 25-foot buffer for normal non-tidal wetlands, Section 4.11.21 states that Nontidal Wetlands of Special State Concern (NTWSSC) are regulated including a 100-foot buffer. Although later in the section, it states that NTWSSCs were evaluated based on maps produced by MD Dept. of Natural Resources of the wetlands themselves, it does not suggest the full 100-foot buffer for those wetlands was considered.

The DEIS fails to indicate that the applicant will be required to employ heightened avoidance and minimization strategies for notable waterbodies.

Section 4.11.3.2, *Waterways*, lists certain waterbodies as "notable" because the affected area was at their headwaters or bounded by NTWSSC. However, this section does not indicate that avoidance, minimization, or compensatory mitigation criteria will be applied any differently because of their notable designation. Also, regardless of the 2020 rulemaking on Waters of the United States, ephemeral streams still have an impact on water quality when they hold water, even if not (currently) considered jurisdictional.

The DEIS presents and fails to avoid unacceptable impacts to long-term reference monitoring stations in the Anacostia and to the stronghold watershed of the Little Patuxent.

Appendix D7, *Natural Environment Technical Report*, *Watersheds*, states,

> Upper Beaverdam Creek is the least developed sub-watershed within the Maryland portion of the Anacostia watershed. As such, it has been used by MDE and other agencies as a reference stream for the Coastal Plain portion of the Anacostia. The Anacostia Watershed is also a designated location by the Urban Waters Federal Partnership, which aims to improve interagency collaboration to restore the Anacostia. The USEPA studies of the Anacostia indicate that it has lost 6,500 acres of wetlands and 70 percent of its forest cover, resulting in impervious surfaces covering more than 25 percent of the watershed as a result of urbanization. It is however indicated as ecologically steadily improving.[8]

SCMAGLEV's highest level of impact of any watershed is in the Anacostia. Disruption of long-term reference monitoring stations with a development of this scope and scale will render those stations meaningless for future comparisons and reverse the trend of ecologically steadily improving conditions. We find this impact unacceptable from both an ecological standpoint and for the degradation of water quality that would occur within the headwaters of a tidal system on which many underserved communities depend.

[8] SCMAGLEV DEIS, Appendix D at 7C.3.1.

Also in Appendix D7, the DEIS, it states,

> MDE designates Stronghold Watersheds, which are "watersheds around the State that are the most important for the protection of Maryland's aquatic biodiversity. These locations are the places where rare, threatened, or endangered species of fish, amphibians, reptiles or mussels have the highest numbers." Within the SCMAGLEV Project Affected Environment, the Little Patuxent River Watershed is a Stronghold Watershed.[9]

So, from the standpoint of dwindling biological diversity in a rapidly urbanizing corridor, the Stronghold nature of the Little Patuxent must be preserved suggesting the "greenspace" development concept of the SCMAGLEV is completely inappropriate.

Weaknesses in Maryland's anti-degradation program demand that water quality impacts to Tier III waters are avoided entirely.

In the section on water quality in Appendix D, the DEIS states,

> MBSS data helps the MDE designate certain waterbodies as Tier II High Quality Waters, which are "waters that have water quality that is better than the minimum standard necessary to meet designated uses." FRA identified two locations; Beaverdam Creek, a Tier II stream segment within Beaverdam Creek Tier II Catchment; and T the Patuxent River Upper Watershed Tier II Catchment, with Tier II waters.[10]

CBF's experience through three Triennial Reviews of Water Quality Standards, with MDE management of the state's anti-degradation program, suggests that no additional protective measures will be required to prevent degradation of these high-quality waters and they will become degraded as a result of the SCMAGLEV construction. Avoiding impacts to them entirely is the only way to prevent degradation in violation of the Clean Water Act.

The DEIS fails to identify downstream impacts of altering 100-year floodplains. These impacts cannot be mitigated through work in other locations, so the DEIS must include avoidance strategies.

In the section on floodplains in Appendix D, the DEIS states,

> Within the SCMAGLEV Project Affected Environment, areas of 100-year floodplain are associated with several surface waters and waterbodies within the previously identified watersheds: the Anacostia River and tributaries, an unnamed tributary to Brier Ditch, Beck Branch, Beaverdam Creek and tributaries, Patuxent River and tributaries, Little Patuxent River and tributaries, Stony Run and tributaries, Dorsey Run, Patapsco River and tributaries, Middle Branch Patapsco River, and Gwynn Falls.[11]

The functions of these floodplains are site-specific. The impacts cannot be mitigated through work elsewhere. Each of these floodplains attenuate floods that would otherwise cause bank scour and downstream sedimentation. Such downstream consequences are not identified or quantified in any way by the DEIS.

---

[9] Id.
[10] Id. at 7C.3.2.
[11] Id. at 7C.3.4.

The DEIS fails to avoid impacts to Scenic and Wild Rivers that provide opens-space and recreation opportunities to millions of Marylanders.

In the section on scenic and wild rivers in Appendix D, the DEIS states,

> Scenic Rivers are rivers whose shorelines are dominated by forest, agricultural land, grasslands, marshland, or swampland with a minimum distance for development of at least two miles for the length of the river and have been given such status by MDNR. FRA identified two state Scenic Rivers located within the SCMAGLEV Project Affected Environment: the Anacostia River and the Patuxent River.[12]

Both of these scenic rivers would cease to be scenic if the SCMAGLEV development came within 2 miles as allowed by the definition of scenic and wild rivers of Maryland. These rivers are also within proximity to millions of urban Marylanders with ever-shrinking access to open space and are heavily used for recreation both on and along both banks of the rivers.

The impacts of allowing encroachment on the Anacostia and Patuxent Scenic Rivers segments could not be mitigated at some other location. Only deep tunnel build options should be considered for these crossings. The tunnels would also need to be sufficiently long so as to prevent the disruption of the scenic corridors and associated floodplain and fish and wildlife functions. As stated above, however, other impacts associated with all build alternatives are unacceptable.

<u>Agency coordination and review, in advance of reviewing comments to this DEIS, is contrary to the purpose and spirit of NEPA.</u>

In the section on wetlands and waterways in Appendix D, the DEIS states,

> Coordination with the regulatory agencies for submission of a Joint Federal/State Application for the Alteration of Any Floodplain, Waterway, Tidal or Nontidal Wetland in Maryland (JPA), is currently ongoing and anticipated to coincide with release of this document.[13]

This statement suggests that the public input being sought by this DEIS under The National Environmental Policy Act (NEPA) is a mere formality and will not result in any changes to the preferred alternative's quantified impacts already being coordinated by state and federal agencies. While it may be prudent to identify specific agency concerns through Joint Evaluation Meetings about avoidance and minimization of each alternative for purposes of scoping and informing this DEIS, going forth with processing of an individual permit assumes the project will move forward under the identified alignment.

NEPA states that all federal agencies shall "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources."[14] Yet, the statement of this DEIS that joint evaluation of impacts has already begun seems to convey that alternative alignments not proposed in this DEIS that result in fewer impacts to wetlands and

[12] Id. at 7C.3.5.
[13] Id at 7D.3.
[14] The National Environmental Policy Act of 1969, 42 USC § 4332, Sec. 102 (2)(E).

waterways will not be considered. In that case, the Chesapeake Bay Foundation's efforts to review and comment on the DEIS are a waste of time. While streamlining certain interagency DEIS processes may make sense, doing so at the consequent expense of necessarily ignoring public input in the NEPA process is inappropriate and unacceptable.

II. The proposed mitigation for significant forest loss from the SC MAGLEV is insufficient to offset new pollutions loads to impaired and high-quality waters that are tributaries to the Chesapeake Bay.

Forest loss and construction activity from SCMAGLEV will likely add significant, impermissible loads to impaired and high-quality waters. The proposed mitigation of those new loads may reduce but would not fully offset their impacts. Additional pollution flowing into Chesapeake tributaries, such as the Patapsco, Patuxent, and Anacostia as a result of the SC MAGLEV project, burden the Bay clean-up, creating challenges not accounted for in state Watershed Implementation Plans.

The DEIS fails to fully offset new pollution loads to the Chesapeake Bay, creating new burdens for Maryland in achieving Total Maximum Daily Load reductions required by the US EPA.

As referenced in the DEIS, the Chesapeake Bay and many of its tributary rivers and streams are listed as impaired waterways under Section 303(d) of the Clean Water Act. As a result of those impairments, the Chesapeake Bay states, including Maryland, asked the U.S. Environmental Protection Agency to develop a Total Maximum Daily Load (TMDL) for nitrogen, phosphorous and sediment in the Chesapeake Bay and its tributaries. The Chesapeake Bay TMDL establishes specific pollution loading limits for all major source sectors, including agriculture, wastewater, stormwater, septic systems, atmospheric deposition, and forest.[15] These limits represent the maximum amount of pollution that the Chesapeake Bay can assimilate while meeting water quality standards. Specific target loads for each sector have been assigned for the Bay watershed, the State of Maryland, major basins within the state, and county jurisdictions. All of these allocations require reductions from current loads. The state, in coordination with its local jurisdictions and the U.S. Environmental Protection Agency, has developed a Watershed Implementation Plan to provide reasonable assurance that these reductions will be achieved.

Construction of the SCMAGLEV corridor and associated stations, major maintenance facilities and exhaust/access ports along the route could result in damaging increases in pollution loads including nutrients, sediment, and toxic contaminants. Systemic, long term increases in pollution loads could result from the conversion, filling, or degradation of porous, bio-active resource lands such as forests, wetlands, and mixed open areas along the route. The Chesapeake Bay Foundation is also concerned about greater air deposition of nitrogen from the significantly increased energy generation required to power the system.

[15] United States Environmental Protection Agency (2010). Chesapeake Bay Total Maximum Daily Load for Nitrogen, Phosphorus and Sediment.

This DEIS inappropriately relies on Maryland's existing legal and regulatory standards to prevent or fully offset pollution from the SCMAGLEV while undermining existing state forest conservation easements.

CBF rejects the notion that standard erosion, sediment control, post-construction stormwater, and forest conservation practices would fully prevent a pollution increase and forestall the potential degradation of Beaverdam Creek or further impairment of Chesapeake Bay tributaries. Most mitigation options presented by the project sponsor to address natural resources are already required by state law. These laws reduce impact but do not fully protect local waters from forest loss and construction activity.

Compliance with Maryland's Forest Conservation Act results in a significant net loss of woodlands, even after replanting requirements are considered. In fact, until nearly 80% of the trees on the site are removed, the project sponsors must only replant one acre for every four acres converted to development. If the state delineates a broad "net tract area" for the project, SCMAGLEV may not end up with any replanting requirement at all, despite clearing more than 400 acres of forest. These losses are compounded by the fact that the DEIS proposes to impact up to 39 *existing forest conservation easements* – land that was specifically set aside as mitigation for prior forest clearing in the area. Cutting these forests not only results in direct impacts from the SCMAGLEV project, but also delays the ecological mitigation, possibly by decades, for damage done by past projects. The DEIS must account for this cumulative effect.

The DEIS can and should quantify the change in nitrogen, phosphorus and sediment expected from construction activity using the Chesapeake Assessment and Scenario Tool.

Construction activity is an extreme land disturbance that Erosion and Sediment Control regulations like those in Maryland struggle to contain. Violations, intentional or not, are common. Even when practices are installed and fully functional, a construction site is among the highest-polluting land covers recognized by the Chesapeake Bay Program (CBP).

CBP's Phase 6 Watershed Model indicates that urban impervious land loads nitrogen at a per-acre rate that is 13 times higher than forest, and phosphorus at a rate nine times higher than forest. Phosphorus loads during construction could be as much as 32 times higher than the current forested condition. The Bay Model includes the application of standard control practices in these loading estimates.[16] The DEIS can and should quantify the change in nitrogen, phosphorus and sediment expected with each alignment using the Chesapeake Assessment and Scenario Tool.

[16] EPA: *Chesapeake Bay Program Phase 6 Watershed Model – Section 2 – Average Loads Draft Phase 6*. June 1, 2017.

The DEIS fails to examine the contribution of each alternatives direct, indirect, and cumulative impacts to impaired water bodies and identify conflicts with the Chesapeake Bay Total Maximum Daily Load and local Total Maximum Daily Load requirements.

Under the TMDL framework, new or expanding loads to an impaired water body must be accounted for and fully offset so there is no increase in pollution.[17] It is highly likely that the SCMAGLEV, as proposed, will result in new pollution loads from construction activity and permanent land conversion from forest to urbanized uses. To our knowledge, these increases are not accounted for in the state's TMDL allocations, nor are they mitigated for in the Phase III WIP. The Tier I EIS should examine the contribution to changes in pollution loads caused by each alternative's direct, indirect and cumulative impacts and identify any conflicts with the Chesapeake Bay TMDL and any applicable local TMDLs. The project sponsors should identify the feasibility and expense of offsetting these loads in accordance with federal law.

The DEIS fails to comply with Maryland's Tier II watershed requirements.

Furthermore, an increase in pollution loads in a high-quality Tier II watershed must either fit within the assimilative capacity of that waterbody or obtain approval of a Social and Economic Justification from the Maryland Department of the Environment. The DEIS includes neither of these required showings. Given the potential nutrient and sediment increases from construction and extensive forest clearing, it would be inappropriate to advance the EIS without reconciling the assimilative capacity of the Tier II waters within the study area.

III. The adverse environmental impacts of the SCMAGLEV are to be absorbed, almost exclusively, by minority or low-income communities and neighborhoods, increasing environmental inequities in the Chesapeake Bay region.

Just as examining true alternatives comprises the heart of an EIS process, equity and disproportionate impact are at the heart of evaluating environmental justice impacts. When virtually *all* of the adverse impacts of a project are to be experienced and absorbed by minority or low-income communities and neighborhoods, and when those communities mostly become the victims of its establishment rather than having an equitable share in its benefits, a serious and substantial environmental injustice is identified.

In the case of the SCMAGLEV that is precisely the case, as shown in the facts uncovered in the DEIS, some of which are demonstrated with the impact information summarized below. It is not only the specific kind of inequity routinely and systemically created by major transportation and other public infrastructure projects which have been imposed upon environmental justice (EJ) communities for decades but is also the kind of disproportionate

[17] 40 CFR § 122.4(i)

adverse impact addressed by, and to be avoided in every way possible, in accordance with Presidential Executive Orders 12898[18] and 14088.[19]

102 of 124 (85%) of the block groups within the impact area in some way exceed one or more environmental justice (EJ) thresholds.

Of the block groups within the impact area ("project affected environment"), 59 are minority majority, 10 are low income, and 33 have both characteristics.[20] These communities will bear the brunt of the impacts from this project yet reap few or none of the benefits: "Generally, the majority of the SCMAGLEV project impacts for each Build Alternative… would occur within EJ populations, given that the large majority of the Affected Environment consist[s] of EJ populations."[21]

18 of 20 community facilities identified are within EJ population areas, and nearly all property acquisitions would occur in neighborhoods and areas containing EJ populations.

18 of 20 community facilities identified are within EJ population areas, and while impacts differ according to alignments and SCMAGLEV facility locations, "nearly all property acquisitions and disruptions to community facilities would occur in neighborhoods and areas containing EJ populations."[22] These include, for example, the acquisition of numerous commercial and industrial properties near a possible Cherry Hill station in Baltimore, as detailed in Chapter 4.4; and full or partial acquisition of numerous residential properties along the right-of-way or due to the placement of ancillary facilities. Table 4.4-1 contains a list of potentially impacted neighborhoods and community facilities, with a designation as to what such temporary or permanent impacts might be. These include, for example, the permanent displacement of the Woodlands Job Corps Training Center in the alternative that includes the MD 198 train maintenance facility – objected to by the U.S. Department of Labor since it is the "only one of two of its kind the D.C. area and relocating it would be extremely costly;"[23] displacement of the Medmark (Addiction) Treatment Center in the alternative which includes the Cherry Hill Station in Baltimore; and both acquisition of the New York Avenue Playground and Park, and permanent displacement of the private family Snowden Cemetery in another set of alternative alignments.[24] Property acquisitions would occur in Summerfield, South Laurel, Maryland City, Severn, and other neighborhoods.

Cultural resources in and among EJ Communities may be adversely impacted.

An extensive list of *cultural resources in and among EJ communities may be adversely impacted* by the various alternative alignments.[25] Many cultural resources that will be adversely impacted are listed or eligible for listing on the National Register of Historic Places, a program largely administered by state-level (and District of Columbia) historic

[18] Executive Order 12898 (February 11, 1994).
[19] Executive Order 14088, §§219-223 (January 27, 2021).
[20] SCMAGLEV DEIS, 4.5-6.
[21] Id., 4.5-10.
[22] Id.
[23] Id., 4.5-11.
[24] Id., 4.4-5.
[25] Id., Chapter 5.

preservation agencies. A station at Camden Yards, for example, would require the permanent destruction of the historic, NRHP-listed Old Otterbein United Methodist Church (1785-1786).[26]

State and local parks within EJ areas would be adversely affected.

12 of 14 state or local parks that would be adversely affected are within EJ areas (the other two impacted parks, Greenbelt Park and Patuxent National Wildlife Refuge and Research Center, are federal). In Alternative J1, Maryland City Park would lose four playing fields and a paved trail, although the communities around it are not well served by recreational facilities because of the existence of Fort Meade and the Patuxent NWRRC. Greenbelt Forest Preserve, part of nationally historic City of Greenbelt, would experience adverse impacts, as several uses within it would be foreclosed and one set of alternative alignments (J1) would have the viaduct traverse and permanently affect about 40 acres of the Hamilton Woods and North Woods tracts.[27]

47 of 56 areas identified as moderate to high visual impact zones in the DEIS are in EJ-identified block groups or neighborhoods.

With respect to *aesthetics and visual quality*, *47 of 56* areas identified as moderate to high visual impact zones were in EJ-identified block groups or neighborhoods. The longer "Alignment J" viaduct produces more impacts, versus a longer deep tunnel that would be a part of alternative J1[28], but overall, a 150-foot high elevated trainway or viaduct anywhere along the route would become a highly visible neighborhood intrusion when seen from medium distances; when residences, buildings or community gathering places are close to the support structures; when the viewshed is more open than shielded by trees; or when the viewer is in a somewhat elevated location. One example is the direct visual intrusion, in the South Laurel neighborhood, upon The Villages at Montpelier Apartments, Applewalk Condominiums, and Laurelwood Condominiums, where the viaduct could be as close as 90 feet away and a forest buffer would be completely removed.[29] The construction and placement of high-tension power lines to serve a new substation would also adversely affect aesthetics visual quality.[30]

Any direct economic development or improvements in adversely affected EJ areas is unlikely based on the DEIS.

The DEIS states that (one of the only) positive impacts on EJ communities will purportedly come from the 8,700-10,560 annual construction jobs needed over the period[31]. It is not made clear that these may not all be continuous nor all full-time equivalent jobs. Further, none of these jobs will be allocated or limited to those living in EJ neighborhoods but rather will be regionally available. Thus, they are just as likely to be filled by a worker from upper

[26] Id., 4.4-8.
[27] Id. 4.5-11-12.
[28] Id. 4.5-13.
[29] Id., 4.4-11.
[30] Id.
[31] Id. 4.5-12.

Baltimore County, Howard County, Montgomery County, Alexandria or Fairfax in Virginia, or elsewhere in Prince George's or Anne Arundel Counties, as someone from the adversely impacted EJ communities along the line.

It is also unlikely that there would be any direct economic development or improvement in most of the otherwise adversely impacted EJ areas, since there are no station areas to be accessed therein except around the possible Cherry Hill terminal station in Baltimore and certain neighborhoods in Washington, D.C. While positive economic impacts will be unlikely with respect to most EJ areas, there is a very good possibility of gentrification and residential or business displacement impacts occurring in the two terminal cities, due both to station placement and improved access – with the most displacement and gentrification occurring in lower-priced Baltimore.[32]

Environmental health is likely to be adversely impacted during construction.

Spills and perhaps hazardous materials from various construction-related equipment and materials are likely in and around maintenance facilities and activities, such as fuels and oil leaks from trucks, excavators, loaders, and the like, solvents and other liquids from degreasing activity, storage tanks, polluted stormwater from temporary and permanent parking facilities, etc. Construction activities include digging and deep excavation, tunneling, pile driving, stockpiling of materials, and the like; both fugitive dust and noise and vibration, and the potential for exposure to hazardous materials is higher in those locations.[33]

Transportation impacts from trucks and other heavy vehicles working on the extensive project and traveling on local roads are likely; these include regular congestion, detours, or constant noise exceeding healthy levels. More concerning, temporary (i.e., over the course of five years of construction activities) small particle (PM 2.5) air pollution from diesel exhaust is likely, which can exacerbate lung diseases such as COPD and asthma, as well as cardiac effects[34]; these are known to affect EJ communities more than the general

[32] Id. 4.5-13.
[33] Id., 4.4-9.
[34]83 FR 42986, 43337, August 24, 2018; Peters A, Dockery DW, Muller JE, Mittleman MA. (2001). Increased particulate air pollution and the triggering of myocardial infarction. Circulation. 2001 Jun 12;103(23):2810-5; Thurston GD, Ahn J, Cromar K, Shao Y, Reynolds H, Jerrett M, Lim C, Shanley R, Park Y, Hayes RB. (2016a). Ambient Particulate Matter Air Pollution Exposure and Mortality in the NIH-AARP Diet and Health Cohort. Env. Health Persp. 2016 Apr;124(4):484-90. doi: 10.1289/ehp.1509676; Zanobetti A, Schwartz J. Air pollution and emergency admissions in Boston, MA.. J Epidemiol Community Health. 2006 Oct;60(10):890-5; U.S. Environmental Protection Agency (2009). Integrated Science Assessment for Particulate Matter (Final Report), Washington, DC, EPA/600/R-08/139F, at 2-10, 2-11 at http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=216546; Mar TF, Koenig JQ, and Primomo J. (2010). Associations between asthma emergency visits and particulate matter sources, including diesel emissions from stationary generators in Tacoma, Washington. Inhal Toxicol. Vol. 22 (6): 445-8.

population as a whole.[35] Such effects occur even when the air quality is within air quality standards.[36] Communities such as Adelphi, Hyattsville, Riverdale and numerous EJ neighborhoods along alternative routes will experience adverse health impacts at least for a period of five years.

Noise and vibration impacts could persist during regular SCMAGLEV operation, with impact areas closest to the viaduct almost entirely in EJ communities.

Design features enclosing noise-producing elements with walls and louvres, for example, will be used as mitigation but the DEIS does not offer an estimate of the geographic reach or extent/severity of vibration impacts due ostensibly to the newness of the technology being used (although it is technology now in use in Japan). While some mitigation is possible using dampening techniques, it is not clear how effective that can be.[37] Indeed, no matter how much shielding is employed, there would be vibration impacts on "multiple residential properties" located above the tunnel portions of the J01-J06 alignments in the Woodlawn, New Carrollton, Greenbelt, and South Laurel neighborhoods.[38] Such community facilities as the Tabernacle Church and Learning Center, the New Life Christian Center, Resurrection Church and others would be impacted by noise and vibration due to proximity to the trainway or viaduct in certain alternative alignments.[39]

SCMAGLEV operations will necessarily create electromagnetic fields.

In addition to noise and vibration, SCMAGLEV operations will necessarily create *electromagnetic fields*.[40] While there are safety standards for exposure to non-ionizing radiation for workers in occupational settings, there evidently are none in Maryland for residential exposure.[41] The DEIS states that "there will be a magnetic field generated… [and] shielding and other mitigation will be designed to fully comply with International Commission on Non-Ionizing Radiation Protection and WHO guidelines and technical specifications."[42] The DEIS should reveal what levels of EMR are likely to occur at set

---

[35]U.S EPA, Integrated Science Assessment for Particulate Matter (Final Report, Dec. 2019), U.S. Environmental Protection Agency Washington, DC), EPA/600/R-19/188, 2019, §12.5.4; Miranda ML, Edwards SE, Keating MH, Paul CJ. "Making the environmental justice grade: The relative burden of air pollution exposure in the United States." Int J Environ Res Public Health. 2011; 8: 1755-1771; O'Lenick, CR et al. Assessment of neighbourhood-level socioeconomic status as a modifier of air pollution-asthma associations among children in Atlanta. J Epi Comm Health. 2017:71(2):129-136; Di Q, et al, Air Pollution and Mortality in the Medicare Population. N Engl J Med, 2017; 376:2513-2522.
[36] Thurston, GD, Written Report of George D. Thurston Regarding the Public Health Impacts of Air Emissions From the Wheelabrator Facility, Nov 2017 (report for the Chesapeake Bay Foundation), 5.
[37]Id. 4.5-16.
[38] Id., 4.4-10.
[39] Id., 4.4-11; 4.4-6
[40] Id. 4.18-1.
[41] This begs the question as to whether such standards exist elsewhere (i.e. in other states) for residential exposure, and how the levels of electromagnetic radiation (EMR) produced through the use of this train technology and equipment may compare with such standards, with respect to nearby homes, schools, yards, and parks. To the extent such standards exist, this information should have been made available in the DEIS, for comparison purposes.
[42] SCMAGLEV DEIS, 4.5-18-1.

distances from trackage and electrical facilities, what the international guidelines and specifications are with respect to those levels, and precisely what will be the mitigation used to shield people, pets, and electronic equipment from adverse exposure levels.

Temporary and permanent changes from the SCMAGLEV project may decrease access, mobility, and community cohesion in EJ neighborhood and communities.

Changes to access and mobility, as well as community cohesion, often accompany the construction of large public infrastructure projects adjacent to, across, or within neighborhoods and communities. The DEIS identified a "project affected environment" (PAE) for neighborhoods and community facilities as an area within a 500-foot buffer around the proposed build alternatives alignments and within a quarter mile buffer around stations and maintenance facilities."[43] Both temporary and permanent impacts would occur due to construction (road detours and blockages, noise and vibration, etc.), and permanent changes would occur as properties are acquired and neighborhoods change accordingly, with on-going noise and vibration of the operations or visual quality also impacting both residential areas and community facilities.[44]

In summary, the adverse and sometimes serious social, community and environmental impacts of this project will almost solely be experienced within EJ neighborhoods along its alternative alignments and near its termini, while these communities will unlikely obtain many of its purported benefits, such as temporary or permanent jobs, beneficial community investment, or improved accessibility. This is precisely the kind of inequity and disproportionate impact which defines environmental injustice, which has characterized hundreds of major transportation projects for decades, and which at least two Presidential Executive Orders aim to reduce or eliminate. It should weigh heavily against the FRA proceeding with the SCMAGLEV project.

Conclusion

The lack of articulated purpose and need for the SCMAGLEV project, coupled with the broad and permanent adverse environmental impacts it would affect, indicate that this project should not proceed as planned. The impacts of the SCMAGLEV, some, but not all of which are captured by the DEIS, are extensive. Wetlands and waterways will be lost and damaged, including stronghold watersheds that support other natural systems, area used for monitoring and environmental research, and habitats of rare threatened and endangered species.

Additional impacts, not considered by the DEIS, should be acknowledged and weighted. The SCMAGLEV fails to fully gauge the downstream effects of harming wetlands and polluting waterways that are tributaries to the Chesapeake Bay and provide natural flood protection to a highly populated region. The extra burden this project creates for

[43] Id., 4.4-2.
[44] Id., Table 4.4-1.

Maryland's environmental commitments under the EPA's Total Maximum Daily Load mandate are not considered in the DEIS. The DEIS fails to quantify the change in nitrogen, phosphorus and sediment loads expected from construction activity.

The DEIS describes clearing more than 400 acres of forest for the SSCMAGLEV project, an action which may not, under current state law, implicate any mitigation. This loss is compounded by the fact that the DEIS proposes to alter up to 39 existing forest conservation easements – land that was specifically set aside as mitigation for prior forest clearing in the area. Cutting these forests not only results in direct impacts from the SCMAGLEV project, but also delays the ecological mitigation, possibly by decades, for damage done by past projects.

The adverse and sometimes serious social, community and environmental impacts of this project will almost solely be experienced within EJ neighborhoods along its alternative alignments and near its termini, while these communities will be unlikely to obtain many of its purported benefits, such as temporary or permanent jobs, beneficial community investment, or improved accessibility. This is a glaring concern in the project's design and should weigh heavily in the FRA's consideration.

Despite identifying many significant impacts, the DEIS sets forth no less-damaging real alternatives for analysis, except the no-build alternative, creating a high-stakes dynamic. The purpose of "building a high-speed system to reduce travel time to meet the capacity and ridership needs of the Baltimore-Washington region"[45] inevitably excludes reasonable alternatives, a requirement of NEPA.

The project's need should be based upon an intention to improve transit between Baltimore and Washington for the total population of users instead of solely for the privileged few. This outlook would bring multiple alternatives into analysis. In addition to considering other modes of transit and improvements to existing systems, the DEIS should be required to consider already existing rights-of-way for their location, such as the medians of major highways like I-95.

Should the SCMAGLEV be considered for construction instead of other possible transit modes, the the impacts, some of which are well-explored within the DEIS, must be sought to be avoided, minimized, and mitigated in a meaningful way. Based on the Chesapeake Bay Foundation's analysis, the SCMAGLEV simply should not further be considered along this corridor, because adequate mitigation and avoidance is not possible in many of the route alternatives presented for such issues as wetlands, forests, and adverse impacts upon environmental justice communities and neighborhoods.

While transit improvement and enhancement in Maryland can certainly support the Chesapeake Bay's long-term recovery, CBF finds that the potential adverse environmental impacts from this project far outweigh any possible benefits. The content of this DEIS, and the issues described in the comment above, necessarily require that the FRA take a step back and reconsider the wisdom of embarking on this project.

---

[45] Baltimore-Washington Superconducting MAGLEV Project Draft Environmental Impact Study (January 2021), [hereinafter SC MAGLEV DEIS], ES-6.

Please do not hesitate to contact my office at 410.268.8816 or jkurtz@cbf.org if you have any questions or would like to discuss this matter in further detail.

Sincerely,

Josh Kurtz
Executive Director Maryland Office
Chesapeake Bay Foundation