May 24, 2021

Lauren A. Molesworth
Maryland Transit Administration
6 Saint Paul Street,
Baltimore, MD 21202

Re: DNR comment to SCMAGLEV Draft Environmental Impact Statement, dated January 2021

Dear Ms. Molesworth,

The Maryland Department of Natural Resources (DNR) has received and reviewed the Draft Environmental Impact Statement and Draft Section 4(f) Evaluation Baltimore-Washington Superconducting MAGLEV Project (DEIS) and is sending this email to provide comments to the study team.

The above ground portions of the project require construction on undeveloped public federal lands that have been set aside as conservation and ecological research areas (Patuxent Wildlife Refuge, Beltsville Agricultural Resource Center) or as an encroachment buffer (NASA-Goddard). Much of this land is also classified as sensitive habitats that support rare, threatened, or endangered species, as described in the DNR Wildlife and Heritage Service coordination letter dated October 22, 2020. The Department of the Interior, local resource agencies, non-government organizations, and private citizens have all voiced concern over the sale of public conservation lands for the proposed viaduct and associated rail support facilities. DNR shares these concerns, especially related to the TMF locations. DNR encourages the project sponsor to re-evaluate these impacts, particularly the impacts of all the proposed TMF locations which will destroy or permanently degrade State designated rare, threatened, or endangered species' habitats. The significance of the impacts to these sensitive areas of state-wide importance is not adequately addressed in the DEIS. Protection of State-listed species must be addressed because state authorization is required to pursue this project (Maryland Nongame and Endangered Species Conservation Act, Maryland Code, Natural Resources 10-2A 01-09). DNR's concerns regarding impacts to this corridor include, but are not limited to:

- Patuxent River:
    - There is a Sensitive Species Project Review Area (SSPRA) associated with Patuxent River Floodplain that is impacted by all the proposed alignments. Additionally, there is a Nontidal Wetland of Special State Concern (NTWSSC) that will be impacted by any activities on the eastern side of Baltimore Washington Parkway. These areas are important for rare fish and dragonflies. DNR has significant concerns about impacts to rare, threatened, and endangered species and their habitat around the Patuxent River at the Anne Arundel/Prince George's County line:
        - The Glassy Darter (*Etheostoma vitreum*) and American Brook Lamprey (*Lethenteron appendix*), that have been documented both upstream and downstream of the project route. The Patuxent River is a stronghold watershed for the Glassy Darter due to the frequency of its occurrence and the abundance of fish documented in the area. Maintenance of hydrology and maintaining or improving water quality are necessary to help ensure the continued existence of these important aquatic species. Maintaining a stable stream temperature regime and relatively cool stream temperatures are also important. In addition to the potential for sedimentation from construction activity, increased water temperature from surface runoff degrades the aquatic habitat. The water quality and hydrology of the

aquatic habitat that sustains these species is maintained by the extensive forest that borders the river.
        - The State designated Rare dragonfly, Laura's Clubtail (*Stylurus laurae*), is documented for this portion of the Patuxent River.
        - Designated critical habitat for the federally threatened yellow lance (*Elliptio lanceolata*) lies upstream of the proposed work, and this species may be present within the project site. Additionally, DNR's Maryland Biological Stream Survey (MBSS) has documented the mussels species Elliptio producta (*Atlantic Spike*) and Eastern Lampmussel (*Lampsilis radiata*) in the vicinity of the project area in the Patuxent River. Please coordinate with DNR as plans for instream work are refined. Additional surveys or coordination regarding mussel conservation may be required.
    - The Patuxent River is a designated Maryland Scenic River. Visual impacts to the river (i.e., viaduct construction) will require direct coordination with DNR. Please continue to coordinate with DNR regarding Scenic and Wild River impacts.
- Alternatives J1-01 through J1-06 West appear to directly impact the rare natural community, Coastal Plain Oak Floodplain Forest (*Quercus phellos, Q. palustris, Q. michauxii*) - *Liquidambar styraciflua / Cinna arundinacea* Forest), ranked as Globally Rare.
- All the proposed alternatives show a deep tunnel in the Harmans area near the intersection of MD 713 and Severn Road, where there are nontidal wetlands associated with Stony Creek that support Swamp Pink (*Helonias bullata*), a Globally Rare plant that is state listed as Endangered and federally listed as Threatened. This perennial wildflower grows in perennially saturated nontidal wetland habitat, including forested wet depressions, spring seeps, bogs, wet meadows, and margins of small streams, but has very specific hydrological requirements. Activities that may alter the hydrology of these wetlands such as excavation or construction of impervious surfaces could result in negative impacts to the occurrences of Swamp Pink in this area. Swamp Pink is also highly vulnerable to sedimentation and nutrient runoff.
- Little Patuxent River:
    - Like the Patuxent River, there is an SSPRA around the Little Patuxent River Floodplain that is impacted by all the proposed alignments; this area is important for rare fish and dragonflies. DNR has significant concerns about impacts to rare, threatened, and endangered species and their habitat around the Little Patuxent River. Additional details are below.
    - The limit-of-disturbance for the MD198 TMF appears to have direct impacts to a portion of the Little Patuxent River which supports the Selys' Sundragon (State-listed as Threatened), Glassy Darter (State-listed as Threatened), American Brook Lamprey (State-listed as Threatened), and the White Catfish (*Ameiurus catus*), a species with Uncertain state status, but thought to be possibly rare in Maryland. It also supports several rare odonate species described in the October 2020 letter from DNR.
    - The limits-of-disturbance for the MD198 TMF also appears to encompass the location of a Great Blue Heron colony that was documented in the floodplain of the Little Patuxent River. Construction here has the potential to eliminate the breeding habitat at this site, or cause significant disturbance during the breeding season, which is considered to be February 15 through July 31 of any given year.
    - The J-01 through J-06 Alternatives that propose a viaduct over this crossing of the Little Patuxent River have potential to directly impact the RTE resources associated with this segment of the river. There are concerns for impacts to the Glassy Darter and American Brook Lamprey (both State-listed as Threatened) in this area. This portion of the project is upstream of numerous records of RTE dragonfly species, which are considered highly sensitive to changes in hydrology and water quality, especially during their aquatic larval stages. Adults of the State-listed Endangered Appalachian Snaketail (*Ophiogomphus incurvatus incurvatus*) feed at riffles in the river. The larvae of the state Rare dragonfly, Laura's Clubtail (*Stylurus laurae*), live in the small headwaters streams and migrate downstream to the Little Patuxent River as they mature. Adults of Laura's Clubtail and Sable Clubtail (*Gomphus rogersii*), a species with In Need of Conservation status in Maryland, perch along the river

shoreline between forays to feed. There are additional RTE dragonfly species in this area of the Little Patuxent that were provided to the BWRR project team in an October 2020 letter from DNR.
    - Where the J1-01 through J1-06 Alternatives propose a deep tunnel under the Little Patuxent River between MD 32 and MD 198, it appears that direct impacts to RTE species are avoided. However, hydrological impacts from the tunneling are still of potential concern. Any tunneling under the Little Patuxent River should incorporate stringent best management practices for sediment and erosion control to reduce the likelihood of adverse impacts to the rare species found in the Little Patuxent.
- Beaver Dam Creek:
    - Beaver Dam Creek is designated as Tier II High Quality Waters in the project area, demonstrating that both benthic and fish data for this stream segment is significantly higher than the standard. A large area of the MD295 corridor from approximately Greenbelt to north of Patuxent River is the "Tier II Catchment" for this area.
    - There is an SSPRA and NTWSSC associated with Beaver Dam Creek in the area where the BARC TMFs and elevated portion of the rail is proposed. In addition to RTE plants and animals, this SSPRA/ NTWSSC area supports a network of Pine Barren Woodlands and Acidic Fen and Seepage Swamp Wetlands which occur only on the mid-Atlantic Coastal Plain and are highly vulnerable to the impacts of fragmentation and construction of impervious surface area associated with this project. These habitats are designated Globally Rare and rely on their proximity to one another to maintain their healthy ecosystem. To maintain these natural communities and rare species, it is essential to provide an extensive natural buffer. The pine barrens woodlands need to be burned over the long term and need buffer areas to do that, and the fen and seepage swamp need extensive upland buffer to maintain the groundwater hydrology and water quality of the wetlands. They are also vulnerable to nutrient runoff which promotes the growth of more common plants at the expense of the rare species.
- A proposed long-term construction laydown area surrounds Konterra Wet Woods site, which is an SSPRA that supports rare, threatened, and endangered plants, Low rough aster (State-listed as Endangered) and Long-stalk greenbrier (State-listed as Threatened). Protection of these rare species and the habitat that supports them must be addressed.
- Patapsco River:
    - The NETR Section 5.2.4 contains the statement "No tidal wetlands were identified within the SCMAGLEV Project Affected Environment". However, all or part of the Patapsco Emergency Egress Facility, Construction Laydown Area, and Cherry Hill Station are in the Chesapeake Bay Critical Area and will need to conform to Critical Area laws and policies. Please coordinate with the Critical Area Commission as appropriate. Additionally, these areas may contain forested areas or wetlands which may be subject to additional review by the CAC.
    - Any crossing or construction in the Patapsco River should allow unimpeded passage for resident and anadromous fish. This project should also avoid impacting the tidal Largemouth bass fishery in the lower Patapsco.
    - DNR managed land is adjacent to the Patapsco Emergency Egress facility. Impacts to the DNR managed lands from the use of heavy equipment, disposal of excavated material, or other construction activities should be avoided or directly coordinated with DNR.
    - Additionally, tunneling under Patapsco State Park or impacting any other DNR managed land in any way will require DNR authorization and direct coordination with DNR as project planning and review continues, this will include engaging in DNR's Internal Review process.
- The viaduct, Train Maintenance Facilities (TMFs), and supporting facilities for this project are located within forested areas. Most forested areas within or adjacent to the proposed TMF and viaduct sites are defined as Forest Interior Dwelling Bird habitat. Populations of many Forest Interior Dwelling Bird Species (FIDS) are declining in Maryland and throughout the eastern United States. The conservation of FIDS habitat and all forested areas is strongly encouraged by the Department of Natural Resources. Disturbance of the riparian corridor should be minimized to the greatest extent possible. DNR expects that forest impacts will be

minimized or avoided to the greatest extent possible. The Forest Conservation Act requires that any project, on areas 40,000 square feet or greater, that is applying for a grading or sediment control permit shall have an approved Forest Conservation Plan and Forest Stand Delineation (Nat. Res. Art. 5-1601–5-16122, Annotated Code of Maryland). Note that habitats that support plant species ranked as state rare, threatened, or endangered are identified as priority retention areas under the Act. Projects proposed by a state or federal agency on state or federal land need to be submitted to the Maryland Department of Natural Resources Forest Service for review. Projects proposed for private land should be submitted to the local planning and zoning authority for review. For forestry permitting, please contact:

- Marian Honeczy, MD DNR Forest Service, at (410) 260-8511 or via email at mhoneczy@dnr.state.md.us
- Mailing address: MD DNR Forest Service, 580 Taylor Avenue, E-1, Annapolis, MD 21401

DNR has communicated in previous correspondence, site visits, and the comments above how the proposed alignments are likely to adversely impact State-listed rare, threatened, and endangered species and rare natural communities, and has concerns that the TMF locations do not avoid and minimize impacts to the rare natural resources described above. Furthermore, some TMF locations that were eliminated from consideration (i.e., Patapsco) were in less naturally sensitive areas. DNR requests additional coordination regarding avoidance of impacts from the TMF locations. As per State law and regulations, DNR cannot support a project that will result in the take (mortality) of State-listed species. DNR would also like to emphasize that to maintain these natural communities and rare species, it is essential to provide buffer and maintain their hydrology, water quality and connectivity.

The following are some report specific comments for your consideration:

- Section 1.2—Table 1.2-1 lists federal permits and authorizations that will be required. However, no State authorizations are listed. This should include the DNR internal review approvals related to tunneling and Patapsco State Park described within this comment document.
- Section 3.3.2.2 Trainset Maintenance Facility – As stated above, DNR has concerns about the TMF locations. As coordination regarding the TMF impacts continues, DNR is interested reviewing additional information related to the fill requirements, final elevations, and vertical profiles of these facilities.
- Section 4.1.2.2 Material Haul Routes – Please continue to coordinate with DNR regarding impacts for material haul routes. The DEIS notes that at least one haul route option would require bridge modifications. DNR has concerns that future designated haul routes and impacts will not be adequately captured in the project's LOD currently presented.
- Section 4.1.2.2 Material Haul Routes – The DEIS states that the Konterra site is a potential stockpile site. As a point of information, the Konterra site is being proposed as a mitigation site by sponsors of other projects. These may be conflicting uses.
- Section 4.3.3.1 and 4.3.4.2 – As stated above, citizens' organizations and other agencies have expressed concerns over the conversion of federal preservation lands to a private transportation project. Table 4.3-2 highlights the amount of public lands within the project study area, and Table 4.3-3 notes that 43.3% of the lands affected by the project are forested. DNR shares the concerns of the federal property owners, commenting agencies, and non-governmental organization regarding this land use conversion.
- Section 4.7 – As stated above, DNR managed land is adjacent to the Patapsco Emergency Egress facility. Impacts to the DNR managed lands from the use of heavy equipment, disposal of excavated material, or other construction activities should be avoided or directly coordinated with DNR. Additionally, tunneling under Patapsco State Park or impacting any other DNR managed land in any way will require DNR authorization and direct coordination with DNR as project planning and review continues, this will include engaging in DNR's Internal Review process.
- Section 4.9 – Viaduct construction will have impacts to the aesthetic qualities of the Patuxent River, a State Scenic River. Although Section 4.10 discusses the Scenic River status of the Patuxent River in more detail, this should also be referenced within Table 4.9-3 and this aesthetics section of the DEIS. Visual impacts to the Patuxent River will likely require further review by DNR, as stated above.

- Section 4.10 - As stated above, DNR has concerns regarding the impacts of the proposed viaduct and TMFs on the hydrology, floodplains, and water quality of streams within the project area due to the presence of sensitive natural resources. DNR is requesting additional coordination regarding impact avoidance in these areas.
- Section 4.10.3.2 – DNR provided preliminary time of year restrictions for instream work, based on the assigned designated use class for the waterways affected by this project as part of DNR's comments to the Wetlands Joint Permit Application (JPA) in January 2021. Please note that these may be further refined as the JPA is finalized.
- Section 4.10.3.2 – Beaverdam Creek is a designated Tier II high quality waterway within the BARC West proposed location. Although the DEIS states that the Tier II watershed is within the BARC West area, there should be more emphasis regarding the Beaverdam Creek segment's Tier II status and potential impacts at this location.
- Section 4.10.4.2 – Water Quality, Alignments- Little Patuxent needs to be added to the list of major streams being crossed by the viaduct on page 4.10-17.
- Section 4.10.4.2 – Page 4.10-19 of the DEIS states that "FRA anticipates that stream relocations and/or creation of large culverts would be required for these streams, including the headwaters. Beaverdam Creek… With direct and permanent impacts to its headwaters proposed there is the potential that the health of this waterway would decline, potentially resulting in inclusion on 303(d) listed waters." Proposed piping, enclosing, or relocation of a Tier II High Quality stream should be avoided. DNR requests continued coordination regarding the alteration or piping of streams within the sensitive areas noted in the comments above.
- Section 4.10.2 – Groundwater – The DEIS notes that TMF construction have the potential to affect groundwater tables. As stated above, sensitive habitats that have been documented around the TMF locations are dependent on maintaining groundwater supply and hydrology. DNR requests additional coordination and avoidance measures related to these impacts.
- Section 4.10.5.1 – Groundwater –Changes to the groundwater tables and aquifers used for local water supplies should be avoided.
- Section 4.10.4.2 – Scenic and Wild Rivers – DNR appreciates the discussion regarding the Patuxent River status as a Scenic River. DNR requests continued coordination through the Scenic and Wild Rivers contact within DNR Land Acquisition and Planning unit.
- Section 4.10.4 & 4.10.5 – The proposed viaduct will cross many streams, as acknowledged by the DEIS. DNR has concerns about water quality related to runoff from the viaduct, TMFs, and other above ground facilities. Particularly how will runoff from the viaduct be managed? There are significant concerns about runoff from scuppers or other stormwater infrastructure impacting water quality of the Patuxent River, Little Patuxent River, Beaver Dam Creek, and other surface waters. DNR is requesting continued review and coordination regarding design of stormwater management and runoff from these facilities.
- Section 4.10.5.2 – Please note that instream work time of year restrictions are a regulatory requirement and applied as a permit condition. All projects must be planned in accordance with these conditions.
- Section 4.10.5.2 – DNR has reviewed this project information as it relates to Coastal Zone consistency. This project lies within the Maryland Coastal Zone, has foreseeable coastal effects and will likely be subject to multiple federal consistency reviews under the Coastal Zone Management Act. This means ongoing, multi-year state-federal-industry coordination will be required to ensure consistency with Maryland's enforceable policies--federally approved policies designed to protect coastal resources and avoid or minimize coastal use conflicts. Key review aspects under federal consistency include:
    - The Federal Rail Administration (FRA) does not presently have safety and operational regulations in place for MAGLEV technology. This means one or more future federal actions that would likely come under review.
    - If the preferred option moves forward as proposed, it will require multiple federal agencies to provide easements. These are additional federal actions that would come under review. In addition, it isn't clear whether there would be a payment or a land swap or mitigation to compensate affected

agencies. Plus, given the nature of some of the parcels in question, it is likely that replacement properties would be woefully insufficient in terms of lost ecological value.

  - The Patuxent Research Refuge is the only wildlife refuge in the country dedicated to ecological research. There is a strong argument that it is a national treasure that is irreplaceable. Further, the Refuge is a major coastal resource in Maryland connected to other regional ecosystems, especially Patuxent River and the Chesapeake Bay. Traditional NEPA analysis and traditional economics are poorly equipped to measure the ecological value of the Refuge itself as well as the value of the national wildlife research conducted at the Refuge.

- Section 4.11 - As stated above, DNR has concerns regarding the impacts of the proposed viaduct and TMFs on the NTWSSCs, rare wetlands habitats, Tier II high quality waterways, and the streams and floodplains within the Patuxent River, Little Patuxent River, and Beaverdam Creek watersheds. DNR is requesting additional coordination regarding impact avoidance in these areas
- Section 4.11, Table 4.11-2 – DNR appreciates that the NETR provides the impacts of the TMF separately, however, it would be helpful to also show TMF impacts to natural resources separately in the DEIS tables. This will allow readers to clearly understand the differences in impacts between the TMFs and the viaduct and other components of the project. This comment applies to similar tables in Section 4.12.
- Section 4.11.4.2 –Impacts from the TMFs and other components of the project construction on the sensitive resources described above should be avoided. It is important to avoid directly impacting or affecting the hydrology to sensitive wetlands and waterways. Particularly the Pine Barren Woodlands and Acidic Fen and Seepage Swamp Wetlands located in the area of the BARC Airstrip and BARC West TMFs, as these habitats cannot be re-created through mitigation. DNR is requesting continued coordination and avoidance measures for these resources.
- Section 4.11.4.2 and 4.11.5.1 – The maintenance of aquatic passage in existing streams is a priority for DNR. Permanent crossings should maintain or enhance aquatic passage. The Mitigation discussion in the DEIS references low-water fords at small stream crossings; these may not be optimal for sediment erosion control and aquatic passage. Please continue to coordinate with the DNR and the appropriate agencies regarding appropriate stream crossings.
- 4.11.4.3 – The DEIS discusses the short term construction effects related to viaducts. DNR is requesting clarification if the access roads and areas around the viaducts will be subject to vegetation management (i.e., eliminating trees, mowing, not planting tall trees under the viaduct), and if these habitat conversions would be considered permanent or temporary impacts.
- 4.11.4.3 – Please note that potential groundwater alterations discussed in previous sections of the DEIS is an area for concern as it relates to maintaining hydrology to wetlands around the tunneled portions of the project, as well as the above ground components. Maintaining hydrology to all wetlands, including the sensitive habitats previously discussed, should be a priority.
- 4.11.5.2 – DNR appreciates being included in the ongoing compensatory mitigation planning for these projects. Please continue to coordinate with DNR as mitigation planning progresses.
- 4.11.5.2 – The DEIS notes that there is potential for on-site wetland re-establishment. DNR is requesting clarification about how (or if) wetland re-establishment would be incorporated into the compensatory mitigation requirements for this project.
- Section 4.12 –DNR has concerns regarding the impacts of the proposed project on sensitive forest, rare species, and ecological resources, as described above. Specific information regarding rare, threatened, and endangered species was provided by DNR Wildlife and Heritage Service in a coordination letter dated October 22, 2020. DNR is requesting additional coordination regarding impact avoidance to RTE species and sensitive habitats, especially in the proposed locations of the TMFs. Many of the sensitive habitats that will be impacted by proposed TMF locations cannot be re-created through mitigation.
- Section 4.12.2 - Forest clearing should be avoided and minimized. Note that habitats that support plant species ranked as state rare, threatened, or endangered are identified as priority retention areas under the Forest Conservation Act.

- Section 4.12.3.3 – The DEIS should note that designated critical habitat for the federally threatened yellow lance (*Elliptio lanceolata*) lies upstream of the proposed work, and this species may be present within the project site. As stated above, additional surveys and coordination may be required to evaluate and avoid potential impacts to mussels.
- Section 4.12.4 – Please note that construction and other activities in the vicinity of nesting sites may be subjected to distance-related time of year restrictions to reduce noise and disturbance.
- Section 4.13 & 4.15 – In response the Alternatives Retained for Detailed Study report (ARDS), DNR provided the following comment: "For tunnel construction and operation activities, DNR Maryland Geological Survey (MGS) notes that the tunnel alignment is situated at the geologic division of loose sandy/ gravel coastal plain sediments and the hard crystalline geology of the Piedmont, and as such, borings should be conducted for geologic reconnaissance, and this data should be shared with the state. MGS is concerned about potential impacts to: recharge zones of coastal plain aquifers; grouting of annulus surrounding tunnels, and; the dewater and beneficial use of, and the local market response to removed/ excavated materials. Additionally, MGS requests more information on the investigation of brownfield/ hazardous materials/ known contaminant plumes along the proposed alignment, and the potential that any such sites may deteriorate further by construction. A more detailed comment has been provided by MGS and is included (Attachment A) to this comment letter for reference and review." DNR is requesting continued coordination related to this comment and subsurface impacts related to this project. We are happy to re-send Attachment A, if requested.

DNR appreciates the opportunity to review and comment on this project. As stated in this letter, DNR is requesting continued coordination and additional impacts avoidance for the sensitive habitats described above. Please contact us for any additional information or discussion.

Sincerely,

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