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**Cc:** [Lauren Hunt](#); [Cheskey, Mark](#)  
**Subject:** SCMAGLEV - NASA Comment  
**Date:** Monday, June 14, 2021 3:32:16 PM  
**Importance:** High

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Good afternoon,

We have been doing some backchecking/clean up in our database and discovered the NASA comment.

**From:** Montgomery, Lizabeth R. {Beth} (GSFC-2500) <[lizabeth.r.montgomery@nasa.gov](mailto:lizabeth.r.montgomery@nasa.gov)>  
**Sent:** Wednesday, May 19, 2021 1:11 PM  
**To:** [info@BaltimoreWashingtonSCMaglevProject.com](mailto:info@BaltimoreWashingtonSCMaglevProject.com)  
**Subject:** GSFC Comments on SCMAGLEV Draft Environmental Impact Statement (DEIS)

SCMAGLEV Team,

NASA Goddard Space Flight Center is submitting the following comments on the SCMAGLEV DEIS. These comments reinforce our comments submitted in November 2020 on the Administrative DEIS. If you have any questions regarding our comments, please do not hesitate to contact me.

Thank you for the opportunity to comment on the DEIS.

Beth Montgomery  
GSFC-Greenbelt NEPA Manager

### **NASA Goddard Space Flight Center's Comments on the SCMAGLEV DEIS**

NASA is concerned about SCMAGLEV impacts on operations at NASA's Goddard Geophysical and Astronomical Observatory (GGAO) facility on BARC property. A Trainset Maintenance Facility (TMF) located at the BARC Airstrip would have devastating impacts on the GGAO operations and the science data collected. The GGAO site was specifically selected because of its remoteness and isolation from human activity. Part of the site's current importance is that the data collected at this very stable site has a 50+ year history. Specific impacts are listed below.

- Impacts from vibration, lighting, radio frequency (RF) interference, EMF, and traffic would jeopardize the quality of the measurements that all satellite missions and other applications rely on.
- The long-term geodetic measurements made at GGAO require a stable environment, with a requirement for accuracy of the geodetic coordinates at 1 mm and a stability of 0.1 mm/yr. The construction and operation of a major facility adjacent to the GGAO, such as a TMF, could disturb the stability of the GGAO site through ground deformation due to dewatering or other activities. This would render the data from this site difficult, if not impossible to use, disrupting the essential contribution made to the national and global reference frame used for all civil and scientific applications.

- Artificial lighting from a TMF would negatively impact the optical systems at GGAO. Many of these operations can only be performed at night and any nearby artificial lighting would severely limit or eliminate these capabilities. These include regular satellite laser ranging to Earth orbiting satellites including Global Navigation Satellite System (GNSS) satellites, as well as on occasion interplanetary laser ranging experiments.
- RF Interference from Wi-Fi and any other transmitting device (in the 2-14GHz range) would interfere with highly sensitive operations and in some situations may damage the equipment, which would compromise the ability of the Very Long Baseline Interferometry radio telescope to routinely participate in sessions to determine Earth Orientation Parameters, including UT1, the change in the rotation angle of the Earth. UT1 is an essential input to all GNSS positioning (civil, military, and scientific).
- Significant EMF could negatively impact the sensitive equipment used for many of the systems at GGAO.
- **Traffic/Roads:** Rerouted roads could negatively impact nearly all the systems operating at GGAO due to increased light pollution and vibration from changes in the traffic patterns.

NASA believes that adequately resolving impacts to operations at GGAO through mitigation measures would not be possible.

NASA appreciates the inclusion of the NASA's concerns and those of other federal agencies in the Executive Summary of the DEIS. It is important that the impacts on science and operations be considered, along with the environmental impacts, in the decision making process and the EIS should reflect this.

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