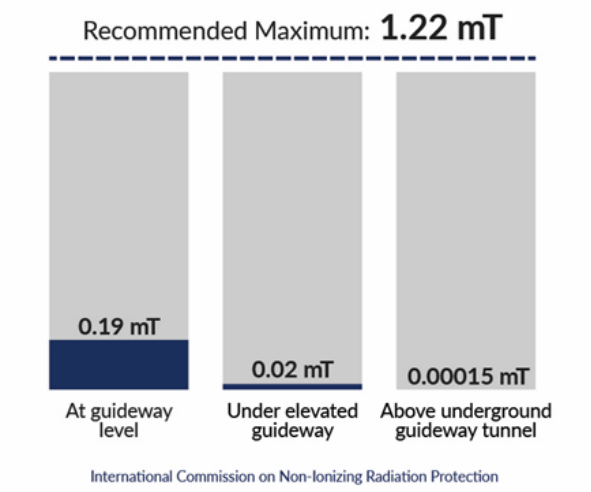
MAGLEV Questions

- ***Freight – will SCMAGLEV carry it? How much?***

The SCMAGLEV will exclusively be a passenger train that will bring industry leading technology and unprecedented standards of performance to the US Northeast Corridor. In its current state, the system is designed to be lightweight for fast, efficient passenger transport.

- ***Magnetism – what are the impacts on the people and objects inside? What are the impacts on the people, animals, plants, etc. outside? I read the cars need shielding to protect the people and their electronics inside. How is that done? How is it monitored?***

SCMAGLEV operations have been approved in Japan as safe for humans and the environment, meeting strict magnetic field exposure guidelines recommended by World Health Organization (WHO). WHO is globally recognized as "the directing and coordinating authority on international health within the United Nations' system," and includes among its responsibilities "setting norms and standards and promoting and monitoring their implementation." (http://www.who.int/peh-emf/en/)



This graphic shows EMF from the L0 series SCMAGLEV train.

As part of the EIS for this project, as well as the Federal Railroad Administration's review for safe train operation, magnetic fields and potential impacts will be evaluated in the EIS and by the FRA's Office of Safety. BWRR's commitment to be a safe train means BWRR will meet obligations to operate in a manner that appropriately takes the public's health and well-being into account.

- ***Employment – what is the breakdown of the kinds of employees during construction? For operation? For maintenance? Etc.***

In November 2017, BWRR signed a memorandum of understanding with North America's Building Trades Unions to construct the train route and its facilities. The unions will establish apprenticeship programs to develop the necessary job skills for Maryland citizens. BWRR anticipates diverse communities all over Maryland to benefit from these construction career opportunities.

Additionally, BWRR expects to soon begin planning discussions with local higher educational institutions on ways to best align coursework with future SCMAGLEV management careers.

BWRR anticipates a broad range in the type and number careers opportunities directly created when the SCMAGLEV project is approved and underway. There will be a variety of jobs available during construction and once completed, permanent jobs will be available at stations, facilities and related support businesses.
The jobs will include:

- Construction: logistics, assembly, planning and supervision
- Engineering: software, electrical & mechanical, fire, life and safety
- Maintenance: inspection, infrastructure and testing
- Operations: operators, on-board services, systems analysis
- Stations: ticketing, cleaning, security
- Facilities: yard management, rail control center, vehicle maintenance

- ***Economy – what is the likelihood that manufacturing plants will be developed in Maryland to make the parts needed for maintenance, and eventually, for manufacturing train cars and related equipment?***

The project is in early stages of development. As it evolves, BWRR will consider the source of equipment, parts, and other project for the SCMAGLEV project, which unquestionably will be one of the largest infrastructure projects in the state of Maryland's history. For now, the sources of manufacturing have not been determined, but we will take into consideration potential local business opportunities when/where possible.

- ***Economy – if items are shipped between Baltimore and Washington (and eventually extended to the other cities) could we expect their price to go down because of the speedier transport? Also, doesn't that mean that***

fewer items need to be warehoused since new supplies can arrive within hours, also reducing costs?

While transporting freight may seem like a potential service for the world's fastest train to consider, it is not envisioned currently for SCMAGLEV operations. Based on the existing service experience in Japan, the Northeast Corridor route is being solely designed for passenger transportation purposes, providing benefits for people looking to reduce travel time to and from major Northeast Corridor destinations.

- ***Energy consumption – what are the comparisons of the SCMAGLEV energy usage compared to low-speed MAGLEV, wheeled trains, airplanes? From what I have read, a large portion of the energy consumption is caused by air drag – true? I assume airplanes use many times more energy than a train because an airplane needs to lift many tons of people and cargo many miles into the air, but the SCMAGLEV only lifts it a fraction of an inch - true? If not, what is the truth?***

Overcoming air resistance is one of the largest expenditures of energy in any transportation platform. The current stage of SCMAGLEVs development is the result of countless hours of wind tunnel and materials design - all efforts to keep weight and air resistance at a minimum. In comparison, an airplane uses more than eight times more energy per seat-mile than SCMAGLEV. We are currently assembling a comparative analysis which will include more specific numbers. We'll share that with you once complete.

- ***Environment – what issues will be included in the Environmental Impact Statement (EIS)?***

The EIS will address a variety of potential issues, including:

- description of the affected environment.
- range of alternatives to the proposed action; alternatives are considered the "heart" of the EIS.
- analysis of the environmental impacts of each of the possible alternatives, including:
  - impacts to threatened or endangered species
  - air and water quality impacts
  - impacts to historic and cultural sites, particularly sites of significant importance to Indigenous peoples.
  - social and economic impacts to local communities, often including consideration of attributes such as impacts to available housing stock, economic impacts to businesses, property values, aesthetics and noise within the affected area
  - cost and schedule analyses for each alternative, including costs and timeline to mitigate expected impacts, to determine if the proposed action can be completed

at a acceptable cost and within an reasonable amount of time

- ***How much time will citizens have to review and comment on the EIS findings?***

The public input process is essential and should allow multiple opportunities for residents and businesses to weigh in. The independent EIS process led by the State of Maryland is evaluating a number of route options. Several open houses were held throughout Maryland and Washington DC to discuss the project and route options with the public. In fact, representatives for BWRR hosted or participated in more than40 public meetings since Fall 2016. This process will continue as the EIS proceeds and the preferred route is defined. Coordinating with local communities and respecting their concerns will continue to be a priority along every step of this project. The final route will be subject to approval by the FRA in collaboration with two dozen state and federal agencies following a completed EIS as required by the National Environmental Policy Act.

There will be ample additional opportunities for public comment as the Environmental Impact Statement study continues.

- ***Air pollution, ground pollution, noise levels, stability of soil (boring and trestles), aquifers, etc.?***

All of these topics will be addressed in the EIS.

- ***Where will be soil and rocks (and water?) from the boring be deposited?***

The details of this process are still in progress. We hope to reuse materials in beneficial ways.

- ***Will it be contaminated with anything? What if the bore goes thru an aquifer, how is that handled?***

Any such eventualities will be addressed in the EIS.

- ***Operation - Will the trains have a driver, conductor, etc.? Restrooms? Food?***

The trains will be fully automated -- without a driver/conductor on board. Full control will be remotely managed from the rail control center. This has proven to be an effective standard operating procedure for the SCMAGLEV train in Japan as well as many rail systems around the world. SCMAGLEV procedures are based on Japan’s 50+ of experience. Safety and operation

standards developed by the operators of Japan's bullet trains have worked exceptionally well to deliver passengers to their destinations with unmatched on-time and safety records.

There will be restrooms in the train. Though the interiors of our train sets have not yet been designed, there is the possibility to add a food/beverage car for longer trips along the Northeast Corridor.

- **Cybersecurity: What are the cybersecurity protections? I assume a massive amount of software is required to operate the SCMAGLEV. And I assume you will get most of it from Japan. What are the controls to make sure the software does not contain malicious code, and that during software enhancements that nothing malicious is entered either accidentally or on purpose?**

With service planned in the Capital region and numerous neighborhoods and government facilities within close distance of the SCMAGLEV train route, BWRR considers the safety and security of nearby communities as well as our passengers, equipment and facilities as top priorities. The project will take all precautions and measures to ensure that software and all other aspects of our project are safe and secure from any potential issues.