National Capital Region
Transportation Planning Board

TPB Technical Committee
Agenda Item 5
March 7, 2025

MEMORANDUM

TO: Transportation Planning Board Technical Committee

FROM: Sergio Ritacco, TPB Transportation Planner
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SUBJECT: Visualize 2050 Update: Environmental Consultation and Mitigation Process

DATE: February 28, 2025

Federal regulations require the TPB to consult with State and local agencies and note a discussion on potential environmental mitigation activities to preserve and restore environmental functions affected by the transportation plan (23 CFR § 450.324 f.10 and 450.324 g). Mitigation efforts address the impacts to the environment at all phases of a project. In response to these requirements, staff developed an environmental consultation process between 2007-2009 which found that because of the unique regional transportation planning process of the National Capital Region limits the TPB's ability to implement a regional environmental mitigation program, an interactive map that highlights the region's environmental features, as noted in 450.324 g, with planned projects was found to be a useful tool for informing local and state agencies within their respective mitigation activities.[1]

In this memo staff also provides an updated list of possible mitigation resources and activities for inclusion in Visualize 2050 informed through on a review of select capacity adding Visualize 2050 projects with a NEPA class of action category requiring consideration of possible environmental impacts. TPB staff asks Technical Committee members to share with and collect comments from its own relevant staff as we welcome feedback, as part of the consultation process, before Visualize 2050 is adopted in December 2025.

BACKGROUND

In 2007, federal regulations from SAFETEA-LU mandated that the TPB discuss possible mitigation activities that may have the greatest potential to restore and preserve environmental functions:

> *"A discussion of types of potential environmental mitigation activities and potential areas to carry out these activities, including activities that have the greatest potential to restore and maintain the environmental functions affected by the metropolitan transportation plan. This discussion may focus on policies, programs or strategies, rather than at the project level"* (23 CFR § 450.324 f.10.).

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[1] Visualize 2050: Environmental Consultation Environmental Inventory Mapping : https://mwcog.maps.arcgis.com/apps/instant/sidebar/index.html?appid=e1a4447305f047fba6e1117b65a1328e.

To foster collaboration between regional transportation and environmental agencies, TPB staff developed its environmental consultation process between 2007-2009. This effort gathered input on the draft metropolitan transportation plan and discussions on mitigation activities. From this process, feedback from environmental agencies representatives concluded that their staff would face challenges in providing meaningful comments on the regional, system-wide scale of the plan due to the lack of project-level details and limited resources. Instead, these agencies play integral roles in project-level planning during National Environmental Policy Act (NEPA) reviews. The District of Columbia, Maryland, and Virginia each have their own approach and regulations on the environment and implementation of transportation projects. Aside from regional ambient air quality, offsetting environmental impacts during the metropolitan transportation planning process is not required.

ENVIRONMENTAL CONSULTATION OVERVIEW

From that process staff found the development of a map that highlights environmental and historic features alongside transportation projects to be an insightful consultation tool for the regional scale level of meeting these requirements. Thus, the focal point of the TPB's environmental consultation process has been the development of an interactive map that is designed to inform local and state agencies, as well as the public, on how planned projects in the region's transportation plan relate to environmental concerns. Planned transportation improvements are compared with state conservation plans or maps, as well as with inventories of natural or historic resources.

To update the environmental inventory mapping tool for Visualize 2050, TPB staff completed extensive data collection throughout summer 2024 on the categories as noted in federal regulations: floodplains, green infrastructure (as defined by Virginia and Maryland conservation plans), protected lands (as defined by state wildlife management and conservation plans), historic sites (as defined by national and separate state registers), and wetlands. The mapping of Visualize 2050 projects (major and non-major) are still undergoing review and corrections by member agencies. Once the Visualize 2050 projects are added to the map, the projects will be interactive, allowing users to click on them for project-level information such as the status of any environmental reviews and links to project websites. The map production, analysis, and publication took place in early fall 2024, and updates featuring Visualize 2050 projects will be announced upon completion. Additional details including spatial data sources and metadata are outlined in Visualize 2050's process documentation.

ENVIRONMENTAL MITIGATION OVERVIEW

Environmental mitigation is the process of addressing damage to the environment caused by transportation or other public works projects. Federal regulations require that the TPB include a discussion of possible mitigation activities that may have the greatest potential to restore and maintain environmental functions (23 CFR § 450.324 f.10.).

Transportation projects generally impact environmental resources because of construction, increased traffic, stormwater runoff from paved surfaces, habitat destruction, and other factors. Environmental mitigation is the process of addressing this damage, including before, during, and after the construction process. A strategy designed to prevent environmental impact is considered minimization, while one aimed at compensating for environmental impact is referred to as mitigation. Ideally, environmental impacts are avoided altogether when possible. Mitigation efforts

can be focused on various scales, including neighborhoods; community amenities like open spaces; cultural resources, wetlands and other water resources; forested and other natural areas; agricultural lands; endangered and threatened species; and air quality.

Identifying and Updating Possible Mitigation Activities
To refresh and update the existing mitigation activities identified as relevant to the National Capital Region, staff reviewed a selection of environmental studies for projects approved by the TPB for the Air Quality Conformity Analysis of Visualize 2050 that are required to consider potential environmental impact because their National Environmental Policy Act (NEPA) class of action do not fall under "Categorical Exclusion". These capacity-growing projects include the Purple Line Transitway, the West End Transitway, Manassas National Battlefield Bypass, Richmond Highway (US 1) Widening, and Fairfax County Parkway Widening. The review found a wide range of minimization and mitigation strategies being considered throughout the region.

Following the Technical Inputs Solicitation (TIS), staff will review feedback on additional mitigation activities under consideration for the region. This review will focus on Visualize 2050 projects that have undergone a NEPA assessment, environmental assessment (EA), or environmental impact statement (EIS).

Environmental resources and areas are generally impacted by transportation projects because of construction, increased traffic, stormwater runoff from paved surfaces, among others. Examples of these resources where mitigation efforts can be focused include:

- Neighborhoods and communities, homes and businesses
- Cultural resources (e.g., historic properties or archaeological sites);
- Parks and recreation areas;
- Wetlands and water resources;
- Forested and other natural areas;
- Agricultural areas;
- Endangered and threatened species; and
- Air Quality.

Environmental mitigation is the process of addressing damage to the environment caused by transportation or other public works projects. Actions taken to avoid or minimize environmental damage are considered the most preferable method of mitigation.

Potential environmental mitigation activities for the environmental resources may include:

- Constructing noise barriers to reduce noise pollution;
- Compensate for lost or impacted land by offering replacement in the form of additional parkland, recreational facilities, or improved amenities;
- Minimizing the footprint of a project to avoid damage to historic and cultural resources, parks, or other valuable natural spaces;
- Installation of planting strips or bioswales to compensate for lost permeable surfaces or to capture runoff;
- Installation of riparian buffers along water bodies to filter pollutants and reduce erosion;
- Invasive plant management on project sites as a means to compensate for impacts;
- Design drainage structures so flood waters are retained and slowed;
- Stabilizing soil through strategic planting of trees and native grasses;

- Restoring, enhancing, or creating new wetlands to replace those impacted by the project;
- Mitigation banking by offsetting wetland/stream impacts by purchasing credits of wetlands/streams that were restored by a third party;
- Avoiding critical habitats or minimizing the fragmentation of ecosystems;
- Provide compensation or easements to protect agricultural lands;
- Monitor presence of animal species before and during construction; and
- Use of dust and emission control measures.

VISUALIZE 2050 AND ENVIRONMENTAL ANALYSIS

The environmental consultation and mitigation process will be documented in the Visualize 2050 planning and programming process documentation. TPB members are encouraged to provide feedback on the environmental consultation and mitigation process before Visualize 2050's adoption in December 2025, please contact Sergio Ritacco, sritacco@mwcog.org, or Jamie Bufkin, jbufkin@mwcog.org. This memo and its accompanied presentation serve to inform the TPB's Technical Committee on the environmental mitigation requirements and the consultation process that staff have adopted.