TPB Resiliency Planning Webinar Series Summary

Vision

Resilience is everyone's job. The purpose of this webinar series was to engage and build capacity of member agencies to understand pressing climate challenges in the region and advance resilience efforts at both the agency and regional scales. The four webinars built on one another to help participants understand climate impacts to the transportation system, climate vulnerability assessment approaches, and how to integrate resilience considerations into planning and programming, and project development and design. Integration across agencies and offices is critical to ensure a robust and resilient transportation system for decades to come. This document compiles the key takeaways and resources from each session for easy reference and will be a resource in upcoming TPB resilience activities.

Webinar 1. Transportation Resilience in the Region: What's Next?

Goal: Provide participants with an overview of transportation resilience to set the stage for the rest of the series

Please see the event page to access PowerPoint slides and view the recording

Key Takeaways	Available Resources
• Sea level rise, higher temperature and heat waves, and extreme precipitation and flooding are expected to impact transportation infrastructure in the region. • *Vulnerability* is the degree to which a system is susceptible to, or unable to cope with adverse effects of natural hazards. *Resilience* is the ability to anticipate, prepare for, and adapt to changing conditions and withstand, respond to, and recover from natural hazards. • COG and TPB have undertaken several studies to understand vulnerabilities to climate change and implement policies to prepare the region for climate change.	• Fourth National Climate Assessment, Chapter 12: Transportation • FHWA Vulnerability Assessment and Adaptation Framework • TPB Resiliency White Paper and inventory of TPB member agency resilience planning activities • COG Climate Risk and Vulnerability Assessment (CRVA), findings reported in the Climate Energy and Action Plan
• Equity is important to consider in resilience planning because traditionally marginalized populations are disproportionately affected by climate change.	• TPB Voices of the Region • TPB Equity Emphasis Areas considered in COG CRVA, reflected in TPB Resiliency Whitepaper • U.S. DOT Equity Action Plan
• There are an increasing number of federal and local funding opportunities to help agencies increase infrastructure resilience.	• PROTECT program • FEMA Building Resilient Infrastructure and Communities (BRIC) • FEMA Flood Mitigation Assistance (FMA) grant • Maryland Comprehensive Flood Management Grant Program • Maryland Chesapeake and Coastal Grants Gateway Program • Virginia Coastal Zone Management Program • Baltimore Metropolitan Council Climate Resource Guide

Webinar 2. Get Started: Climate Vulnerability Assessments

Goal: Increase participant understanding of different approaches to conducting a vulnerability assessment and why these assessments are valuable to decision makers

Please see the event page to access PowerPoint slides and view the recording

Key Takeaways	Available Resources
• Vulnerability assessments help agencies understand how climate change will affect transportation infrastructure and operations and how agencies can build resilience. • There are multiple approaches for how to conduct a vulnerability assessment, including: stakeholder input, indicator based, engineering assessment, and monetized risk. There are benefits and challenges to each of these approaches.	• FHWA Vulnerability Assessment and Adaptation Framework • Vermont Transportation Flood Resilience Planning Tool • Florida DOT Sea Level Scenario Sketch Planning Tool
• Examples from Maryland DOT, Virginia Office of Intermodal Planning and Investment, and Charles County illustrate different vulnerability assessments approaches.	• VTrans Flooding Risk Assessment Technical Memo • Charles County Climate Resilience Action Strategy • Charles County Nuisance and Urban Flooding Plan

Webinar 3. Break Down Barriers: Integrate Resilience into Project Development and Design

Goal: Illustrate the value of and process for integrating transportation resilience into project development and design

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Key Takeaways	Available Resources
• Climate change should be considered early in the project development process for the design to ultimately be climate resilient. There are a variety of existing resources that provide approaches and lessons learned for integrating climate change into project development and design.	• FHWA Synthesis of Approaches for Addressing Resilience in Project Development • FHWA Nature-Based Solutions for Coastal Highway Resilience: An Implementation Guide • HEC 25: Highways in the Coastal Environment, 3rd Edition • HEC-17: Highways in the River Environment – Floodplains, Extreme Events, Risk, and Resilience • Tech Brief on Climate Change Adaptation for Pavements
• Examples from Delaware DOT, City of Alexandria, and Maryland Department of Natural Resources illustrate different resilient project development efforts and lesson learned.	• DelDOT Sustainability and Resiliency • Flood Action Alexandria • Maryland Coast Smart Construction Program

Webinar 4. Break Down Barriers: Integrate Resilience into Planning and Programming

Goal: Illustrate the value of and process for integrating transportation resilience into planning and programming

Please see the event page to access PowerPoint slides and view the recording

Key Takeaways	Available Resources
• There are many opportunities for resilience in transportation planning and programming. Resilience can be integrated into asset management plans, transportation plans, and programs and policies.	• Bipartisan Infrastructure Law • FHWA Resilience webpage • FHWA Climate Change Adaptation Case Studies • FHWA Integrating Resilience into the Transportation Planning Process webpage
• Examples from Maryland DOT, Frederick County, and Fairfax County illustrate different resilient planning and programming efforts and lessons learned.	• Frederick County Hazard Mitigation and Climate Adaptation Plan • Resilient Fairfax webpage