

VDOT RESILIENCE PLAN

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Changing Environmental Conditions

Hazards and Threats

- Temperature
- Sea Level Rise
- Increased Precipitation
- Extreme Weather Events
- Rockfall

Impacts

- Asset deterioration and failure
- Operational, maintenance and emergency management challenges
- Investment and resource allocation decisions
- Shifting migration patterns, habitat, etc.



<https://wtop.com/virginia/2022/07/crews-still-searching-for-17-people-after-virginia-flooding/>



<https://www.delmarvanow.com/story/news/local/maryland/2021/10/29/flooding-high-surf-forecasted-maryland-virginia-eastern-shore/6190651001/>

Virginia Planning Efforts

Commonwealth Planning

- Virginia Coastal Resilience Master Plan
- Virginia Flood Protection Master Plan
- Virginia State Hazard Mitigation Plan
- Resilience Coordination Working Group



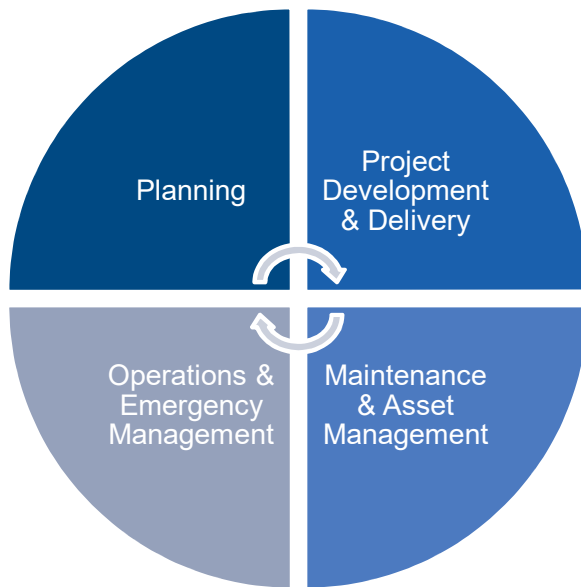
Local Planning

- Fairfax, Norfolk, Virginia Beach
- NVRC, HRPDC, MPPDC

➤ **VDOT plan was needed to inform and align agency, local planning efforts**

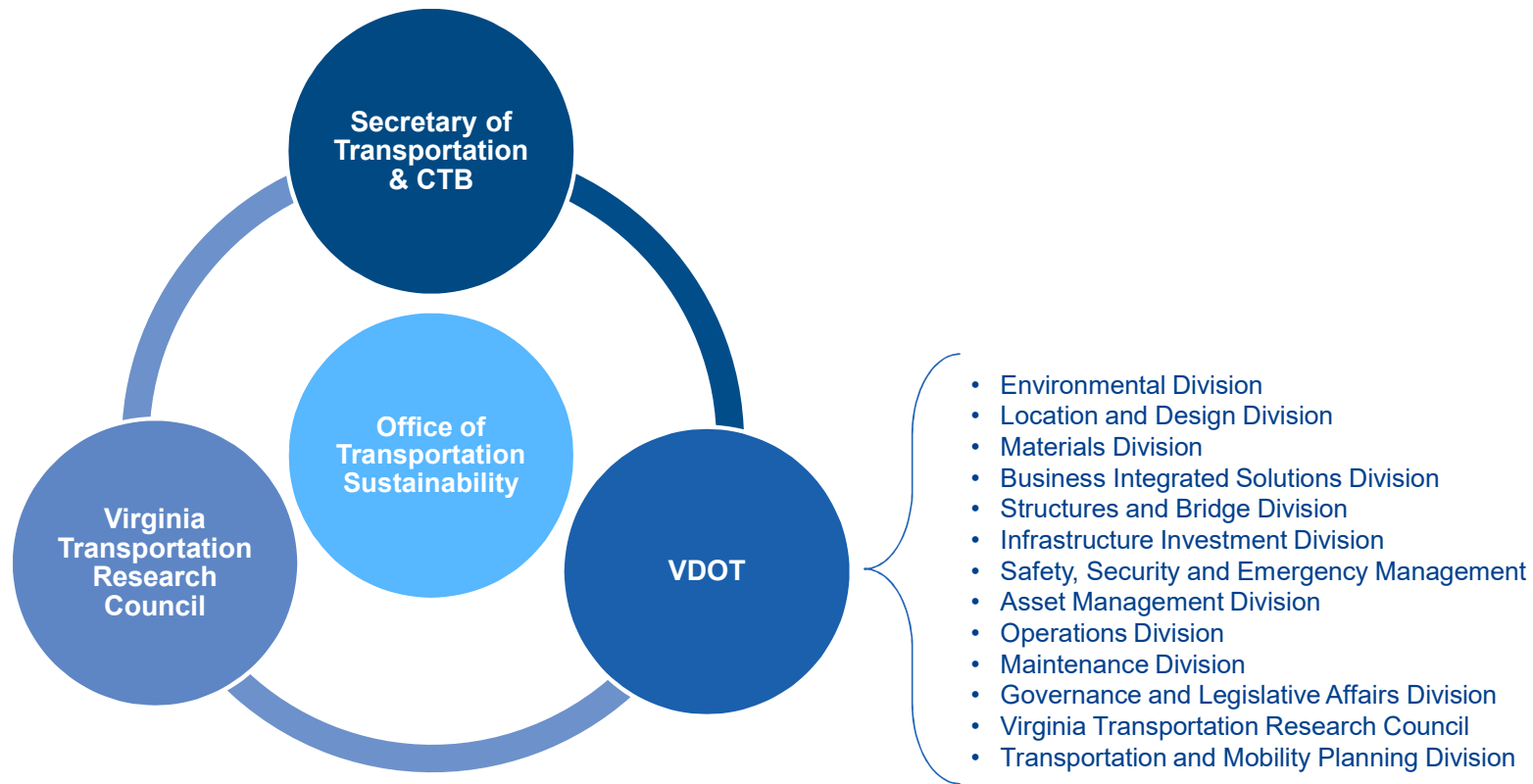
Need for Transportation Resilience

Resilience is the capability of a transportation project or strategy to anticipate, prepare for, respond to, or recover from significant multi hazard threats with minimum damage and disruption to the transportation network, while preserving and incorporating natural and built infrastructure that helps to mitigate these threats.



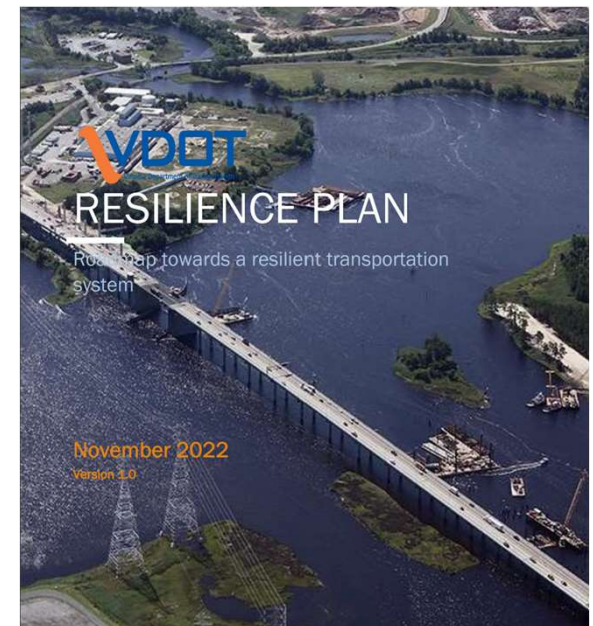
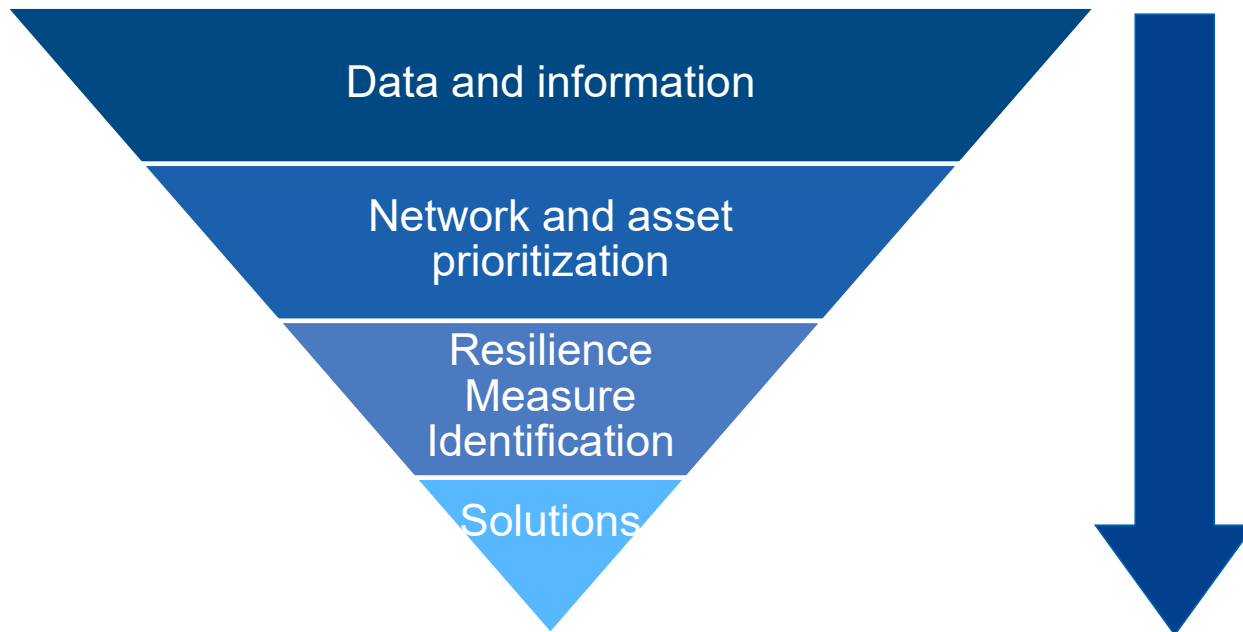
Incorporate resilience into existing business practices

Organizational Support for Resilience Efforts



VDOT Resilience Plan

How do we cost-effectively allocate our resources?



Resilience Plan Objectives

Anticipated 2-year timeframe to gather data, develop tools, and implement strategies



PROTECT Program

(Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation)

- Formula Based and Discretionary Grants
 - Planning Activities, including Resilience Improvement Plan (RIP) development
 - Vulnerability assessments, technical capacity building, evacuation planning
 - Resilience Improvements
 - Flood mitigation, drainage improvements, roadway realignment
 - Community Resilience
 - Evacuation route improvements
 - At Risk Coastal Infrastructure
 - Strengthening, stabilizing, hardening, elevating, and relocating infrastructure

Next Steps

- Continue coordination with Federal, State, and local agencies, MPOs
- Continue coordination with counterpart DOTs
- Outreach and engagement with communities, stakeholder groups
- Continue strategy development and implementation
 - Data and research
 - Identification of at risk infrastructure
 - Resilience measures
 - Planning
 - Design
 - Operations and maintenance
 - Emergency management
 - Benefit Cost and Life Cycle Analyses