

COASTAL RESILIENCY COMMITTEE MEETING

VDOT RESILIENCE EFFORTS

Chris Swanson
06/25/2021

Update on VDOT's Resilience Efforts

- Project Development and Design Process
 - Update Precipitation Estimates
 - Identify Existing At-Risk Infrastructure
 - Incorporate into New Construction Design Process
 - Collaboration with Stakeholders

Update Precipitation Estimates

- Collaborate with VTRC, Admiral Phillips' Team and DEQ
 - Funding assistance for NOAA Atlas 14
 - Funding assistance for predictive IDF Curves
- Use of Predictive IDF Curves
 - TBD
 - Presumably the preferred dataset

Identify Existing At-Risk Infrastructure

Virginia Institute of Marine Science (VIMS) currently studying potential impacts of sea level rise and other climatic factors on existing infrastructure

Task 1: Determine Transportation Infrastructure Vulnerability

- historical recurrent road flooding maps
- Road network analysis to better understand potential disruptions to mobility
- Develop an interactive planning portal for VDOT

Incorporation into New Construction Design Process

Recent Updates

- Chapter 33 of the Structure and Bridge Design Manual, effective 02/2020
- Virginia Drainage Manual to bring consistency with Chapter 33

Pending Updates

- Incorporation of a holistic risk-based design approach
 - Identify at-risk projects early in design process (pre-scoping or scoping)
 - Consider constraints/limitations
 - Incorporate the appropriate level of adaptive design to protect asset during its expected lifespan

Aligns with recent legislative from the 2021 General Assembly

Collaboration with Stakeholders

- VDOT Workgroup
- Office of Intermodal Planning and Investment
- Governor's Office for Coastal Adaptation and Protection
 - Master Planning Framework TAC
- Hampton Roads PDC
- Commonwealth Center for Recurrent Flooding Resiliency
- Resilient Fairfax Infrastructure Advisory Group
- EPA's Chesapeake Bay Program
 - Urban Stormwater Workgroup

Questions

Alex Forasté (Leading VDOT's efforts for Resilience)

Water Resource Program Manager

alex.foraste@vdot.virginia.gov

(804) 786-2548

Chris Swanson

Assistant State L&D Engineer

chris.swanson@vdot.virginia.gov

(804) 786-6839