

Strategic Principles for a Resilient Virginia

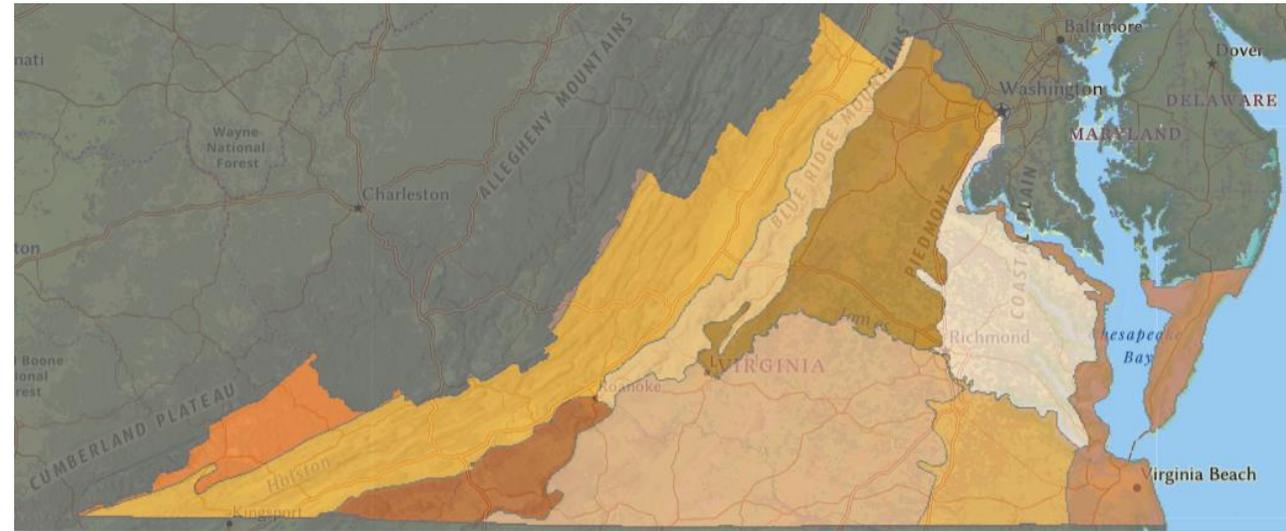
OCEANS 2022 Conference

October 19, 2022

Matthew Wells - Director, Virginia Department of Conservation and Recreation

About the Virginia Department of Conservation and Recreation

- The Department of Conservation and Recreation (DCR) is the state's lead natural resource conservation agency. DCR protects what Virginians care about - natural habitat, parks, clean water, dams, open space and access to the outdoors.
 - Parks and Natural Area Preserves
 - Land Conservation
 - Soil and Water Conservation
 - Dam Regulation
 - Floodplain and Resilience

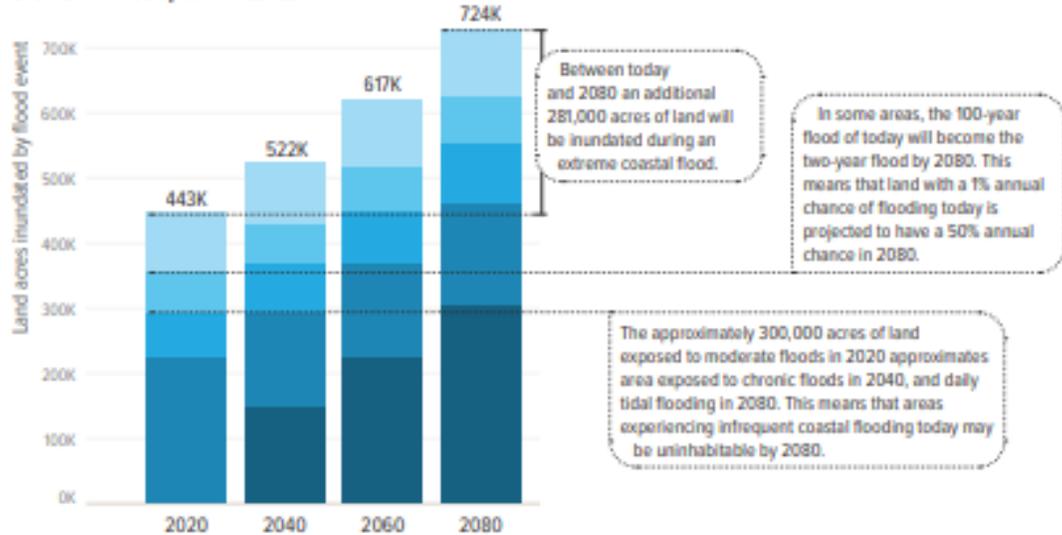


Virginia Physiographic Provinces – DCR Natural Heritage Data Explorer

Principle 1: We are committed to addressing challenges relating to flooding and resiliency

“The impacts of flooding are felt across the commonwealth, and Governor Youngkin has ensured that resiliency and flood mitigation efforts are a priority for this administration.”
 – Travis Voyles, Chief Resilience Officer and Acting Secretary of Natural and Historic Resources

Growth in Floodplain Extents



Reference Flood Event	Annual Exceedance Probability (AEP)	Average Return Interval (Frequency)	Example Storm/Event Type
Tidal	Mean High Water	Inundated Daily	Daily High Tide
Chronic	20% AEP	5 years	Gale, Smaller Coastal Storm
Moderate	4% AEP	25 years	Tropical Storm, Nor'easter
Major	1% AEP	100 years	Strong Nor'easter, Category 2 hurricane
Extreme	0.2% AEP	500 years	Category 3+ hurricane

Between 2020 and 2080...



the number of **residents** living in homes exposed to major coastal flooding is projected to grow from approximately 360,000 to 943,000, an increase of **160%**.



the number of residential, public, and commercial **buildings** exposed to an extreme coastal flood is projected to increase by almost **150%**, from 140,000 to 340,000, while annualized flood damages increase by over **930%** from \$550 million to \$5.7 billion.



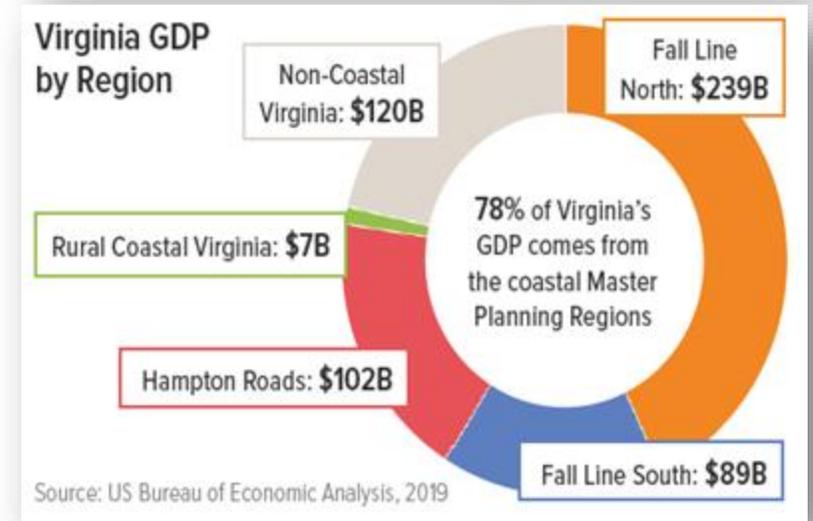
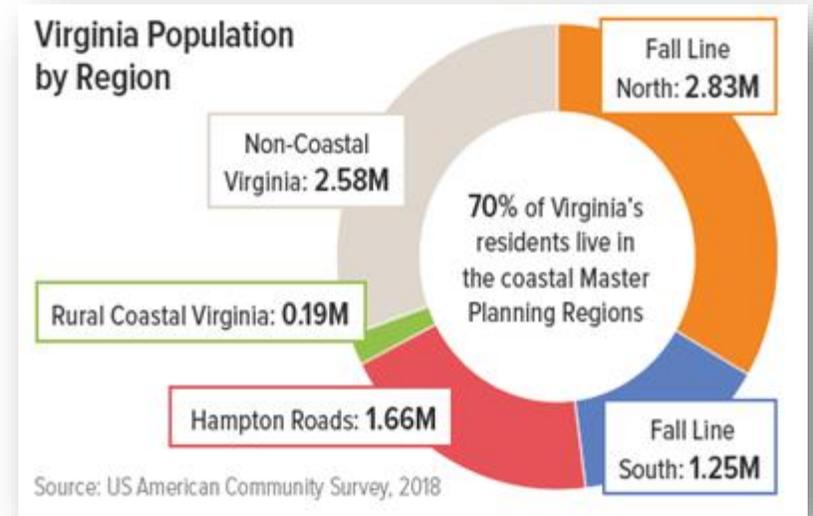
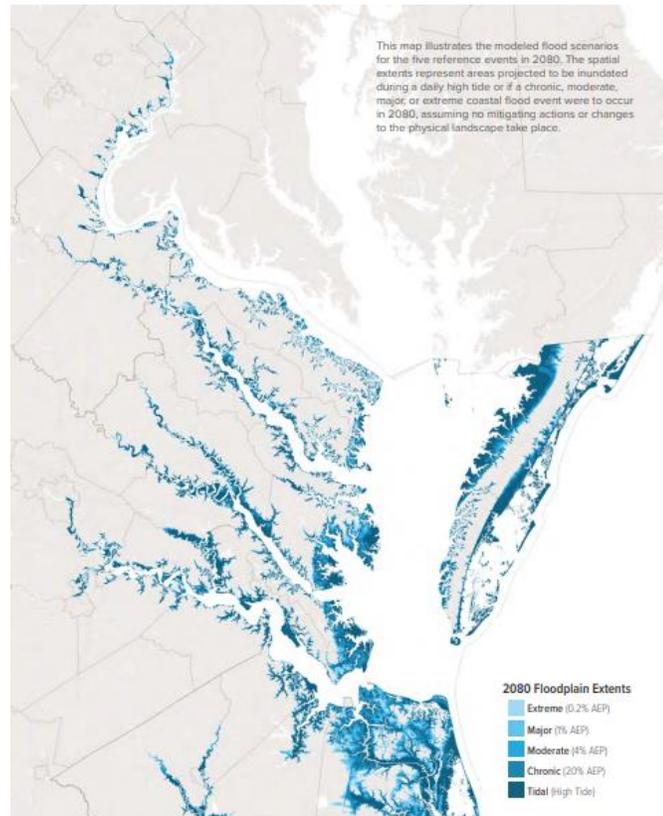
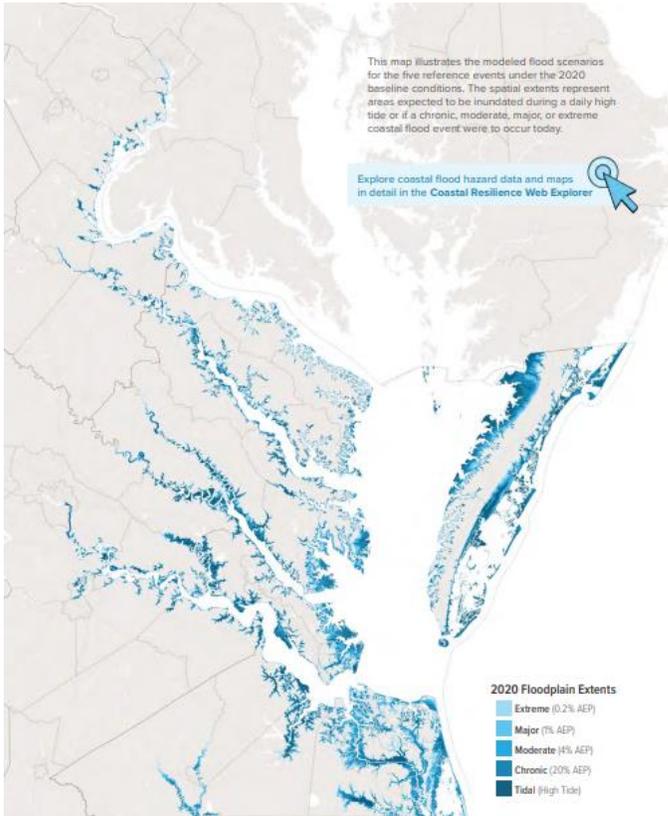
the number of miles of **roadways** exposed to chronic coastal flooding is projected to increase from approximately 500 to nearly 2,800 miles, an increase of **460%**.



an estimated 170,000 acres, or **89%**, of existing **tidal wetlands** and 3,800 acres, or **38%**, of existing **dunes and beaches** may be permanently inundated, effectively lost to open water.

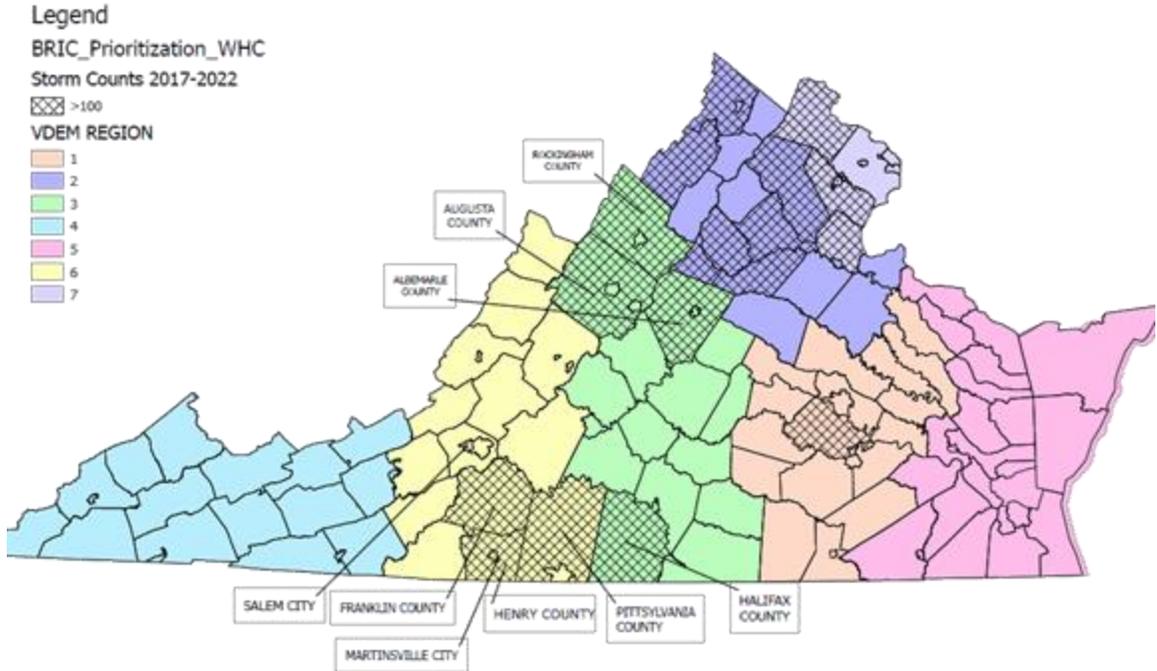
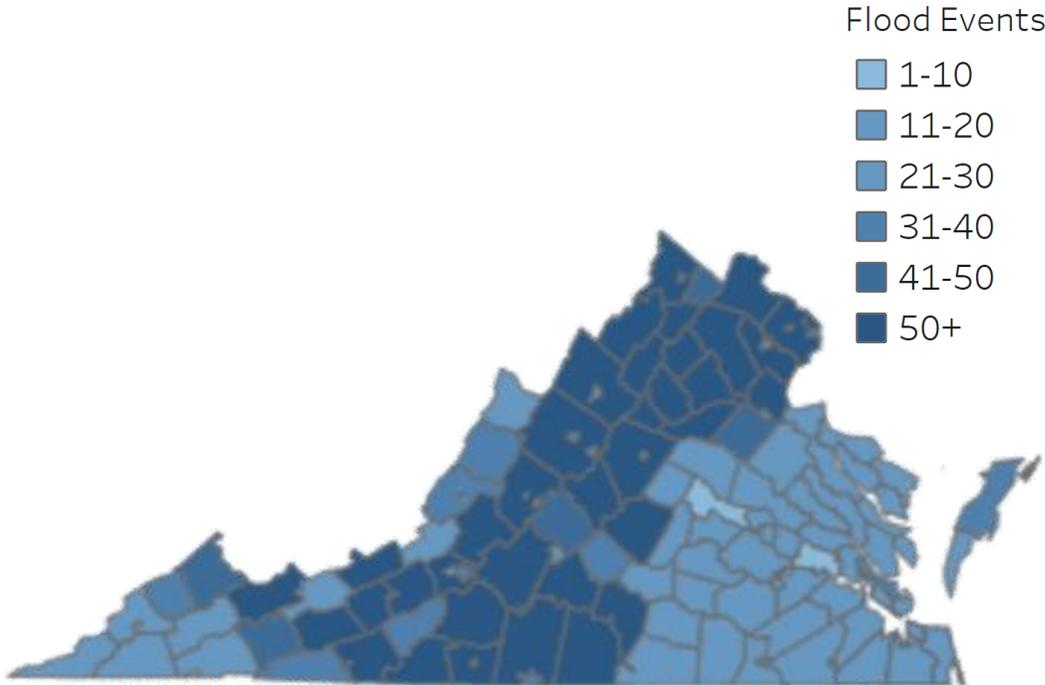
Principle 2: We must address these challenges with programs that work for all impacted parts of Virginia

Coastal Virginia Sea Level Rise Risk Projections



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Statewide Historic Flood Risk Data (1996-2019) Statewide Storm Risk Data (2017 – 2022)



Principle 3: The programs we implement must work together as parts of comprehensive, cohesive plans

Coastal Resilience Master Planning Framework

Framework Goals



Prioritize Projects



Financing Strategy



Incorporate Climate Change Projections



Coordinate Efforts

Framework Principles



Best Available Science



Socioeconomics



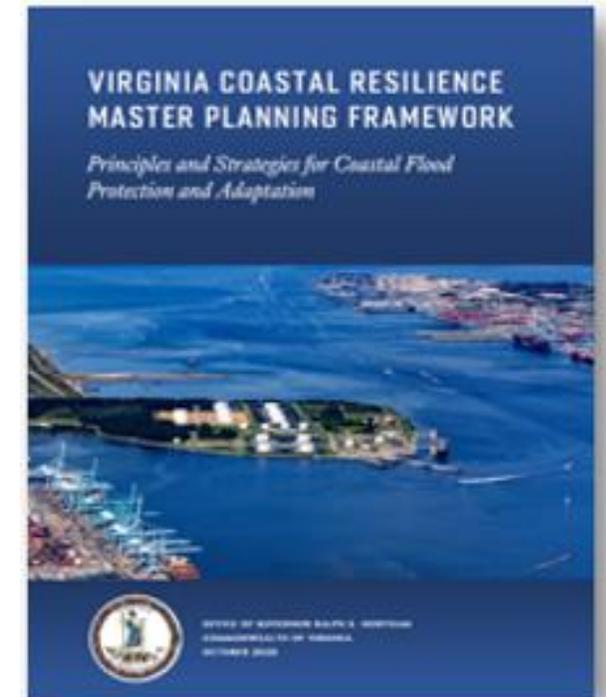
Nature-Based Solutions



Community and Regional Scale

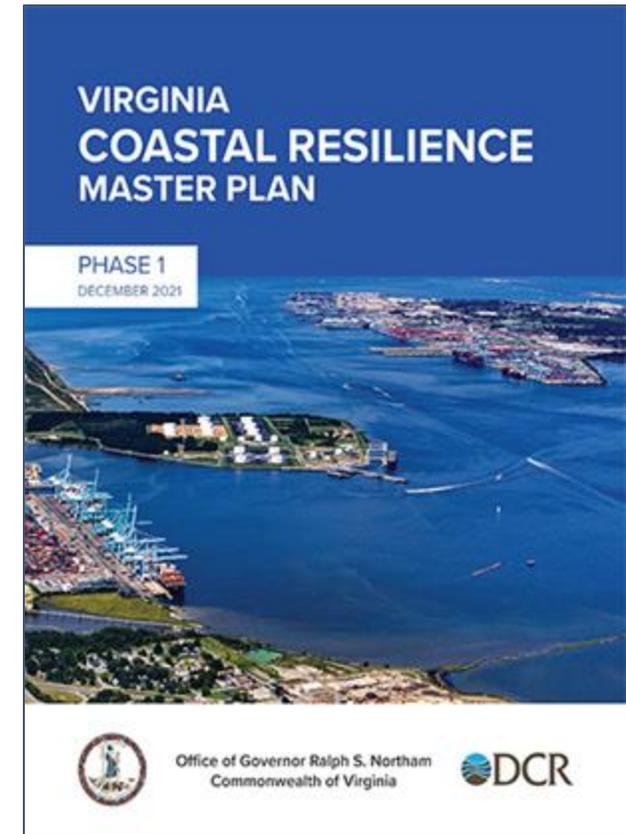
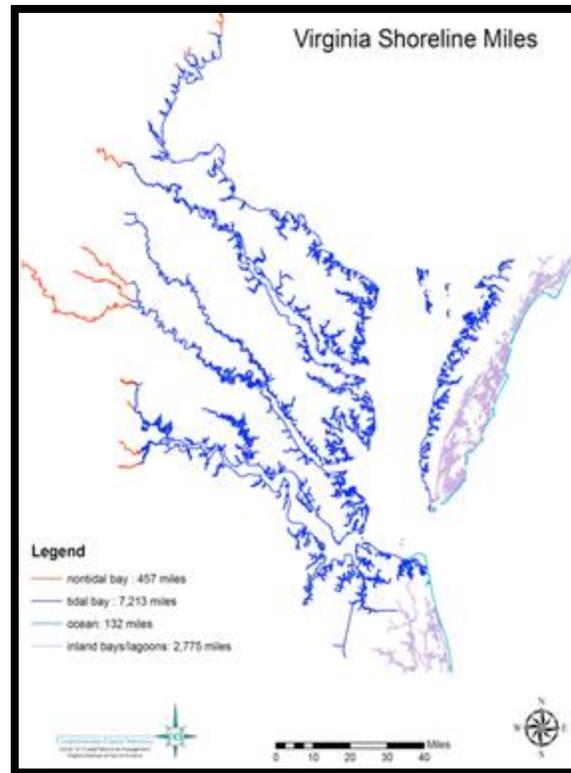
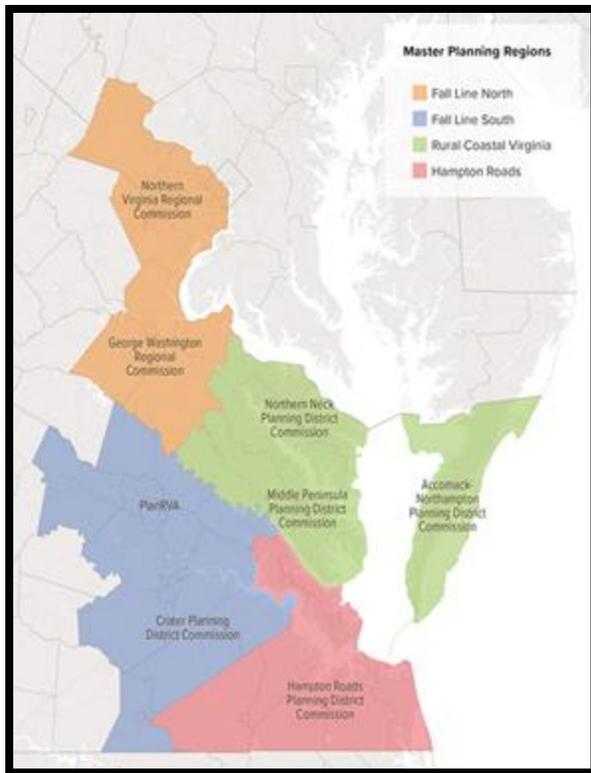


Cost-Effective Solutions



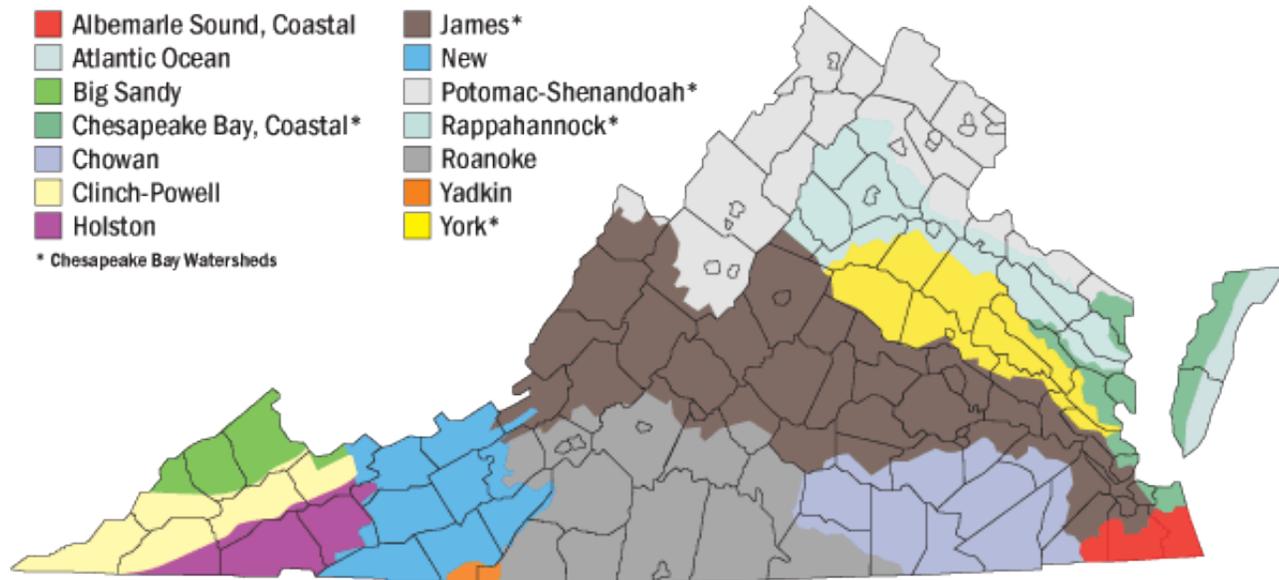
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Coastal Resilience Master Plan



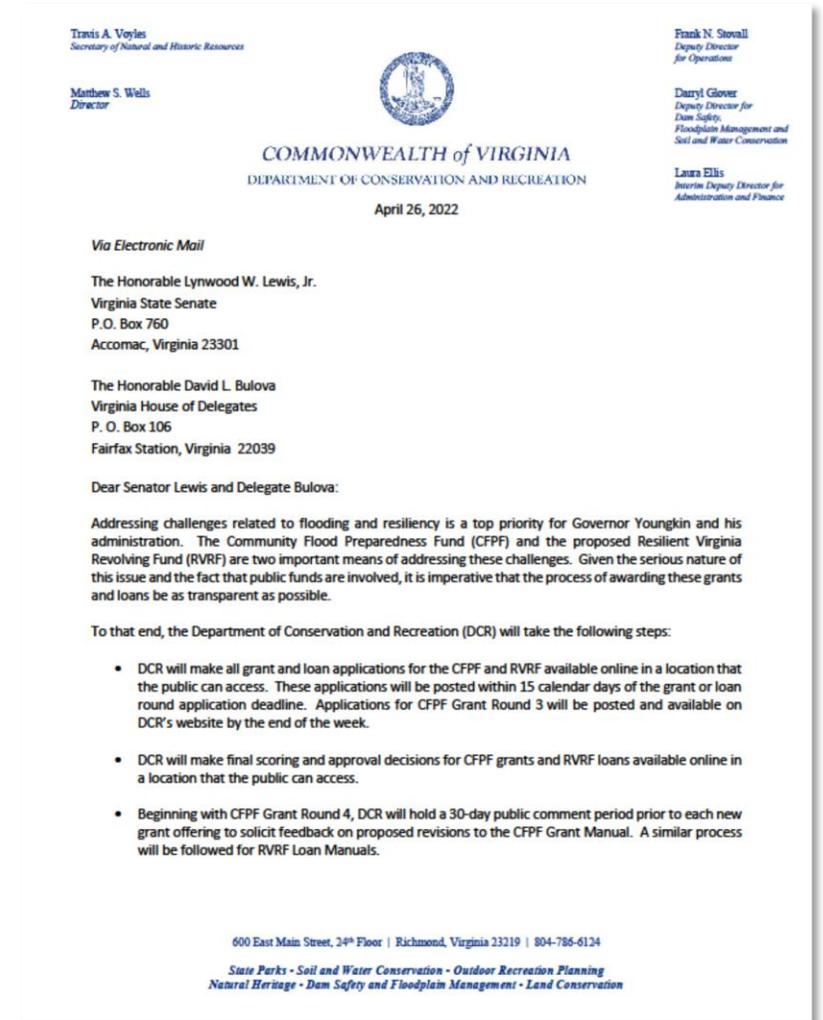
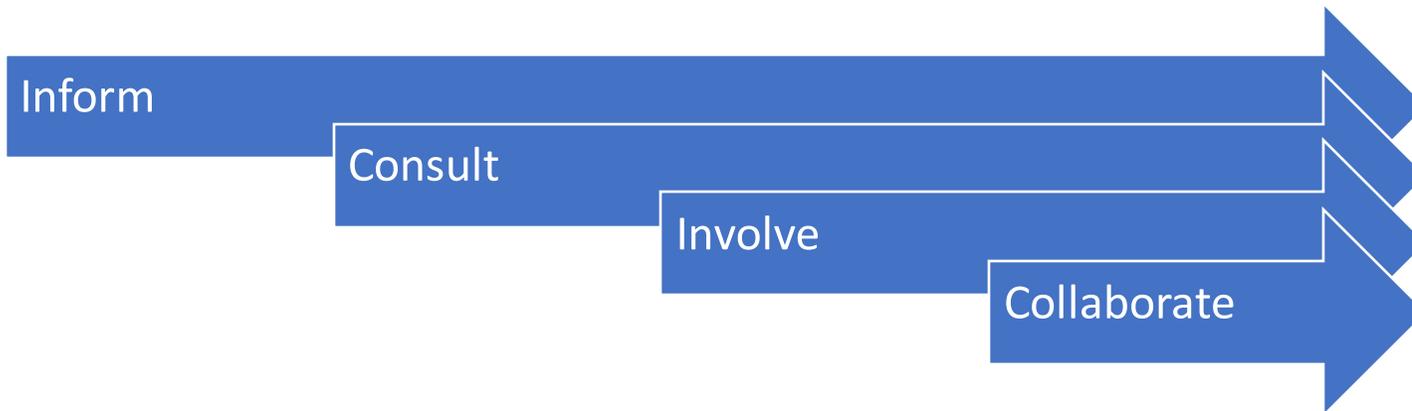
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Virginia Flood Protection Master Plan



Principle 4: These programs and plans must be developed and implemented with transparency and input from the public

- Coastal Resilience Technical Advisory Committee
- Resilience Coordination Working Group
- Community Outreach and Engagement Plan
- Annual Resilience Stakeholder Meetings
- Public Comment Periods for Coastal & Statewide Plans



Summing It Up

Principle 1: We are committed to addressing challenges relating to flooding and resiliency

Principle 2: We must address these challenges with programs that work for all impacted parts of Virginia

Principle 3: The programs we implement must work together as parts of comprehensive, cohesive plans

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