

**VIRGINIA COASTAL
RESILIENCE
MASTER PLAN**
2021



Public Meeting

Middle Peninsula Planning District Commission

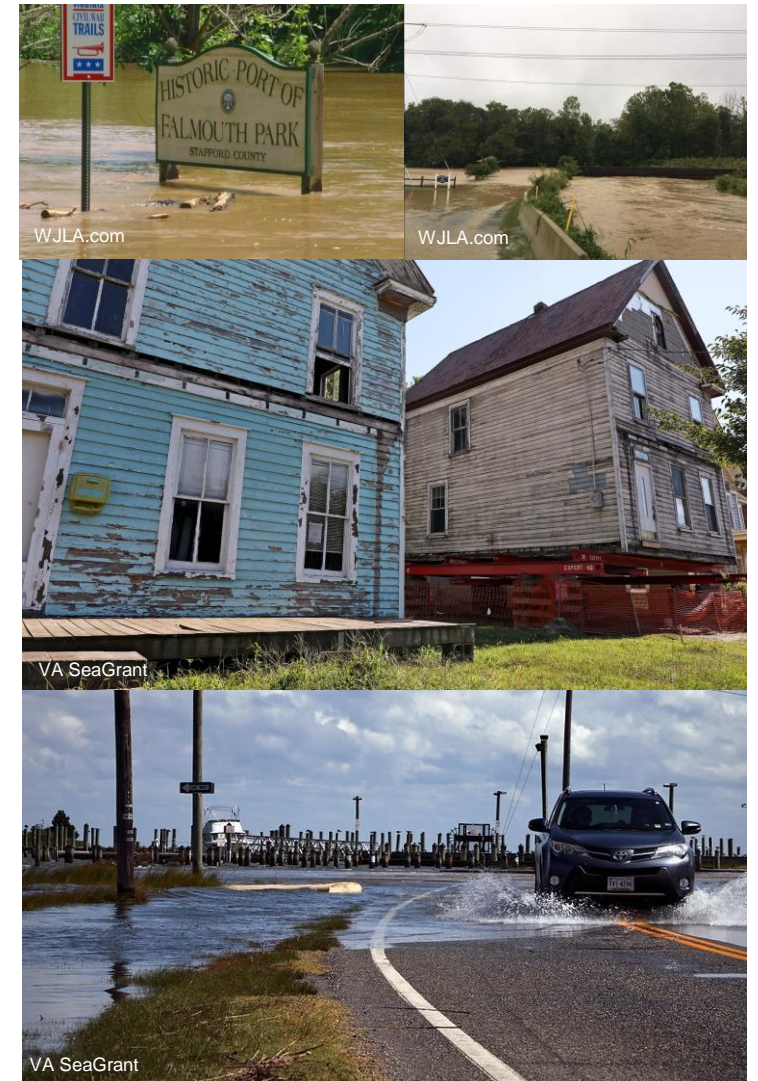
Commonwealth of Virginia Working Document – Contents Considered Draft and Subject to Change

An Overview of Tonight's Meeting

- **Welcome and Introductions**
- **Why does Virginia need a Coastal Resilience Master Plan?**
- **How will the plan work?**
- **Introduction to Interactive Stations**

The Challenge

- Over 6 million people, or 70% of Virginia's population, live in coastal areas at risk of flooding.
- In 2018 and 2019, Virginia experienced nine major floods; damage of \$1.6 billion.
- Virginia has the highest rate of sea level rise in the east coast, endangering billions of dollars in private property and public infrastructure.



What is driving increased flooding?



New development



Changing weather patterns and severe storms



Rising seas

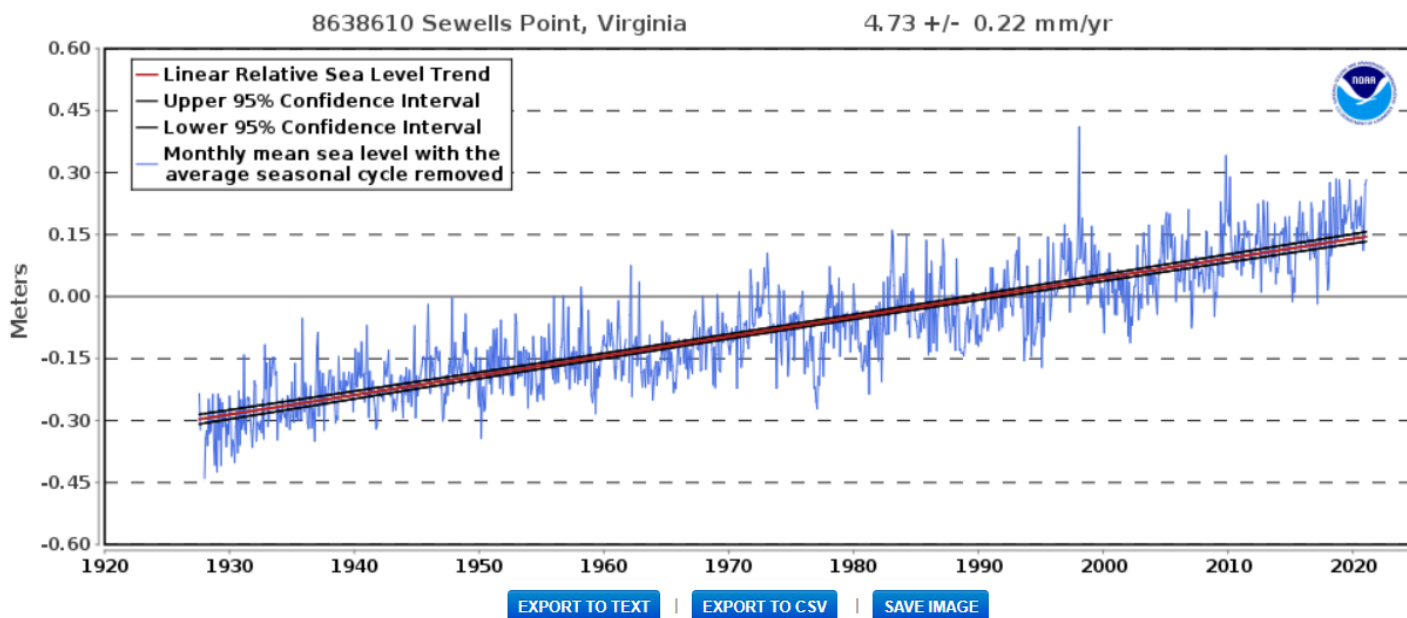


Sinking land



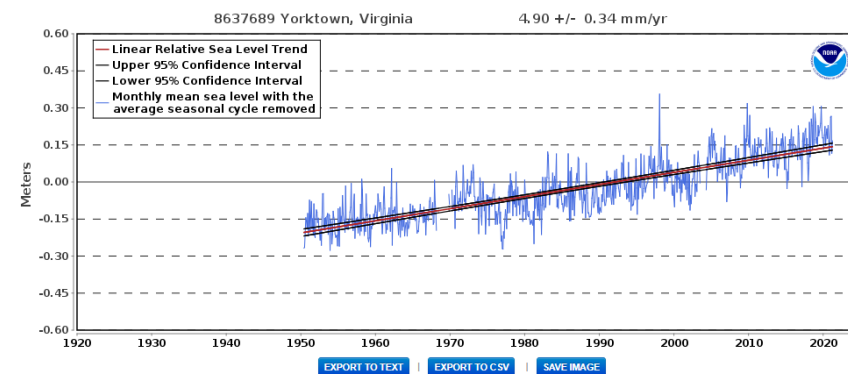
Sea Level Change in Virginia

Relative Sea Level Trend
8638610 Sewells Point, Virginia



The relative sea level trend is 4.73 millimeters/year with a 95% confidence interval of +/- 0.22 mm/yr based on monthly mean sea level data from 1927 to 2020 which is equivalent to a change of 1.55 feet in 100 years.

Relative Sea Level Trend
8637689 Yorktown, Virginia

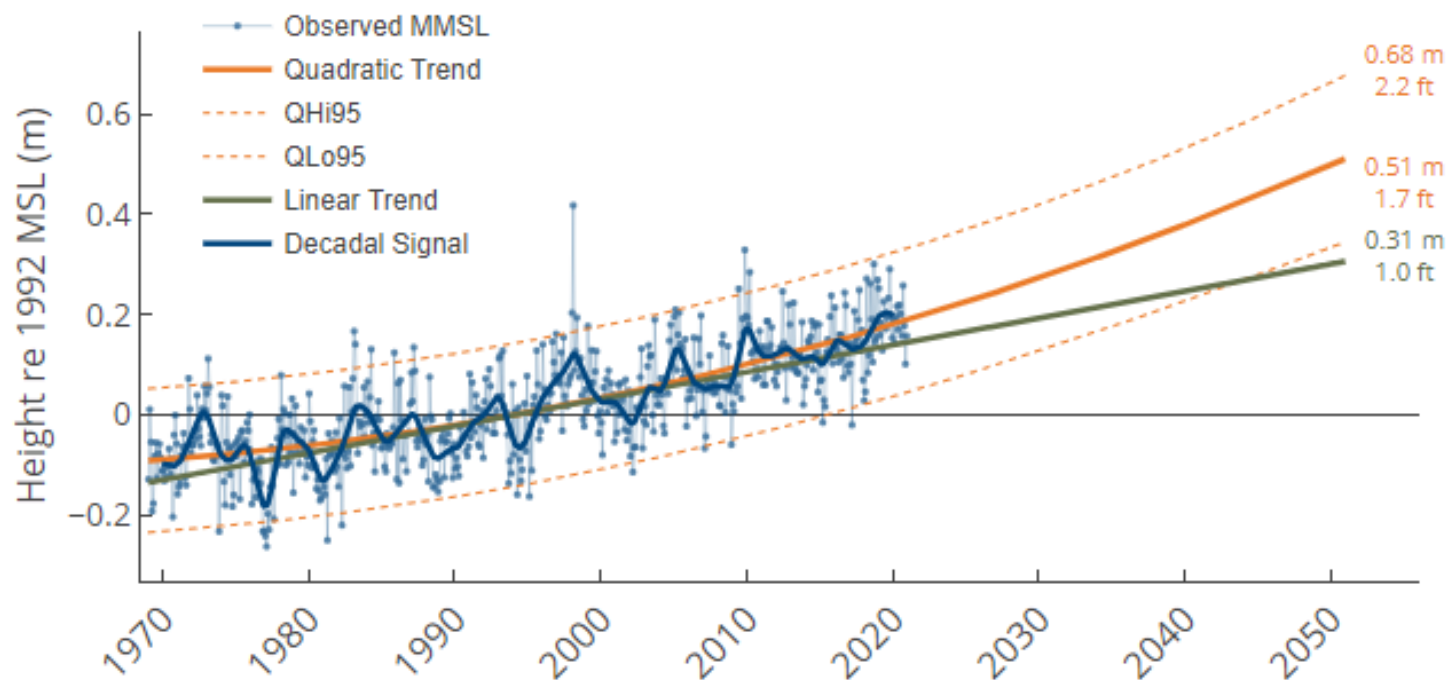


The relative sea level trend is 4.9 millimeters/year with a 95% confidence interval of +/- 0.34 mm/yr based on monthly mean sea level data from 1950 to 2020 which is equivalent to a change of 1.61 feet in 100 years.

Sea Level Rise is Accelerating

2050 Projection

Norfolk (Sewells Point), Virginia

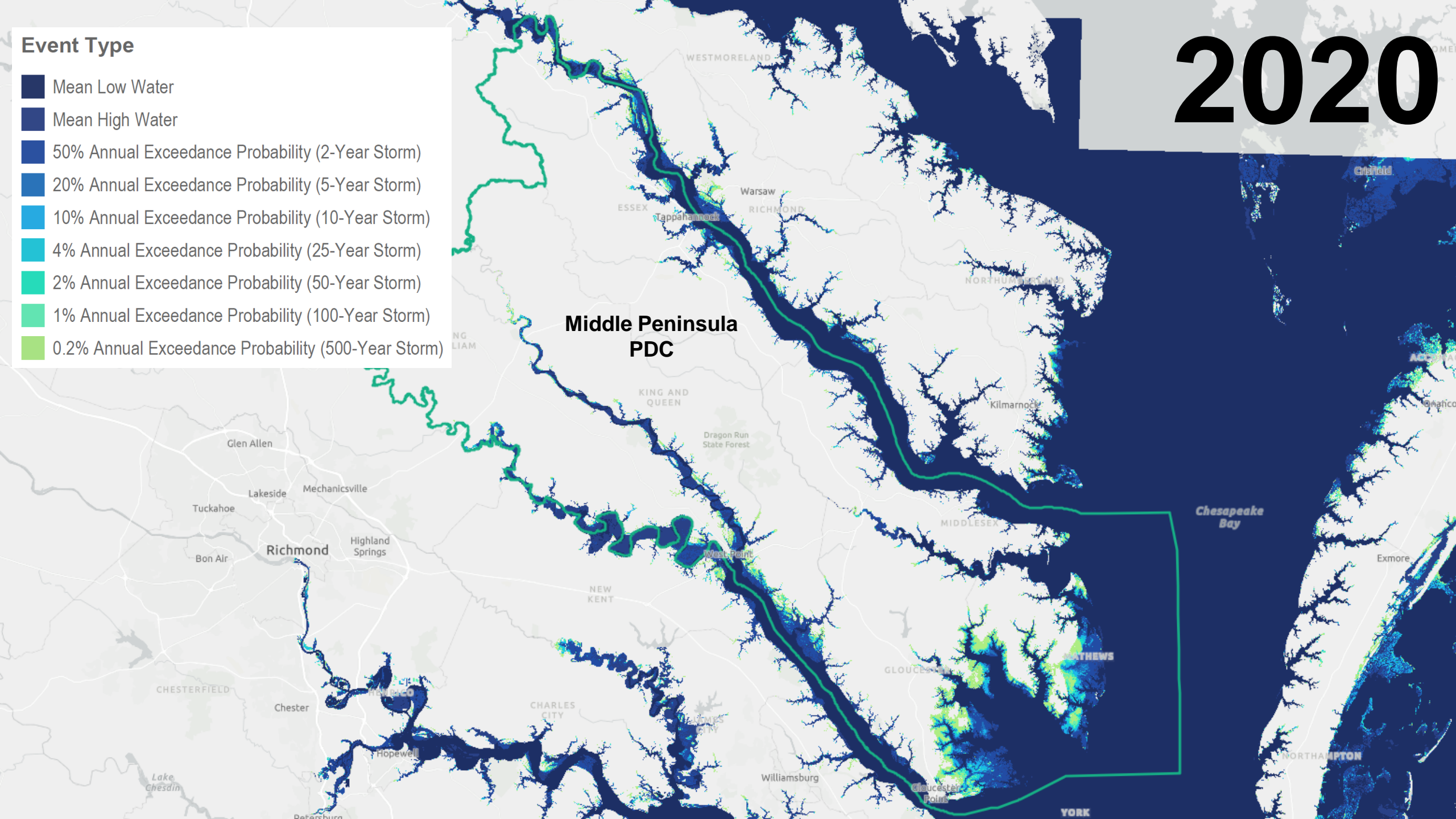


2020

Event Type

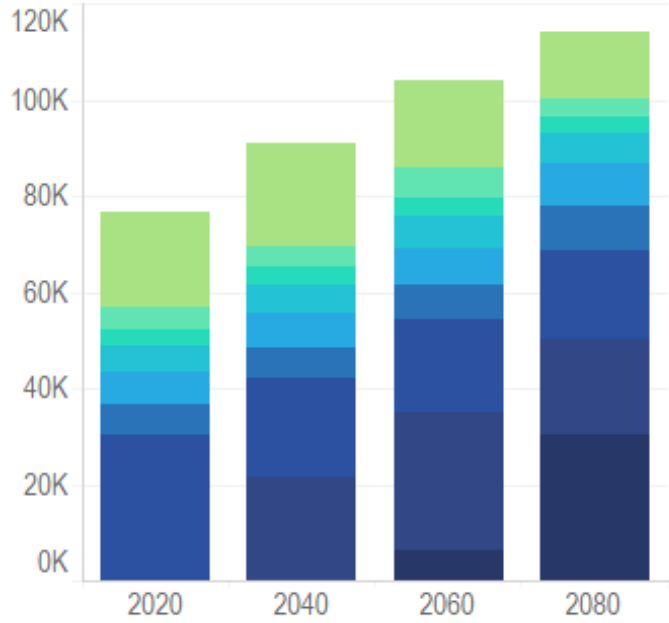
- Mean Low Water
- Mean High Water
- 50% Annual Exceedance Probability (2-Year Storm)
- 20% Annual Exceedance Probability (5-Year Storm)
- 10% Annual Exceedance Probability (10-Year Storm)
- 4% Annual Exceedance Probability (25-Year Storm)
- 2% Annual Exceedance Probability (50-Year Storm)
- 1% Annual Exceedance Probability (100-Year Storm)
- 0.2% Annual Exceedance Probability (500-Year Storm)

Middle Peninsula PDC



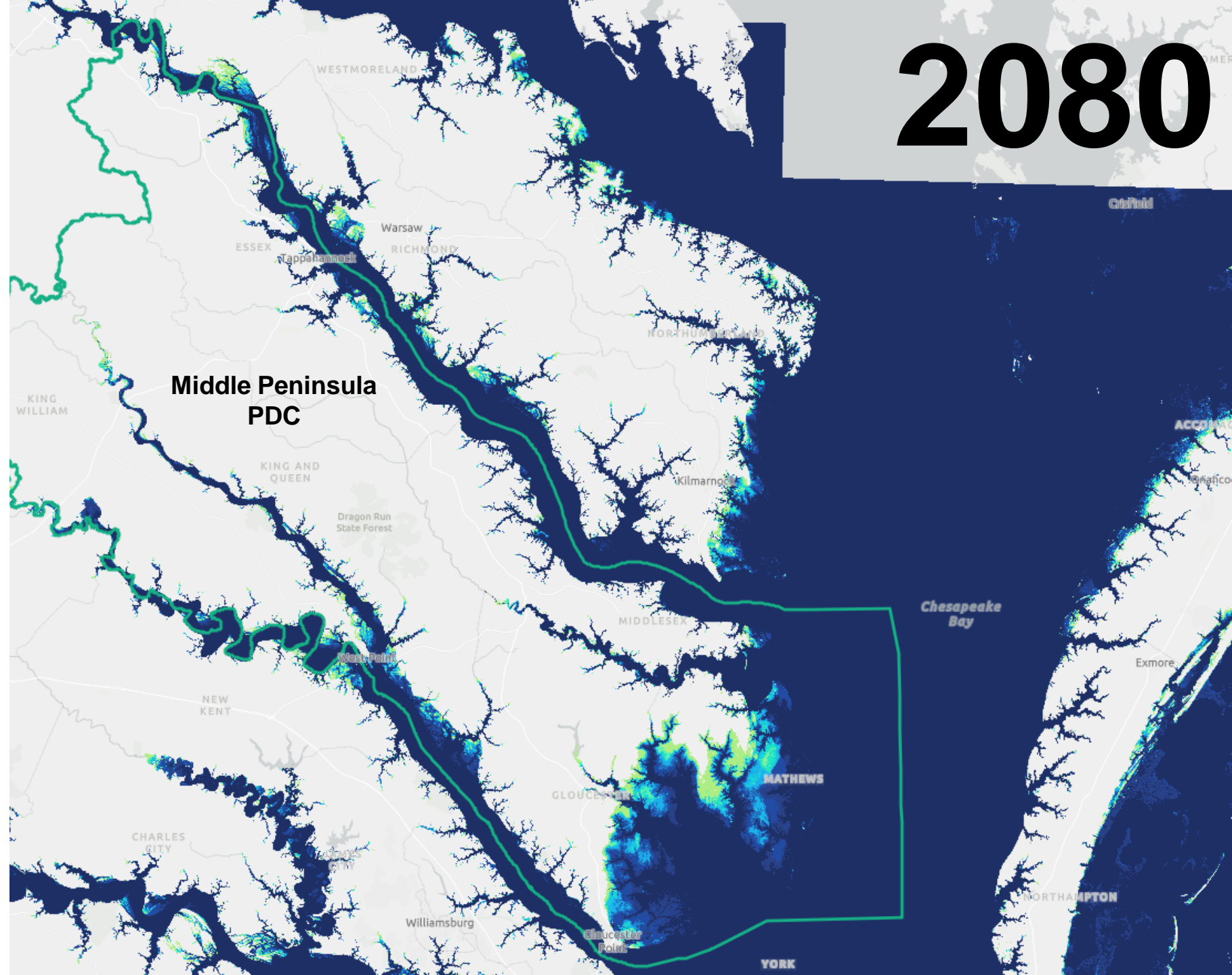
Land Area

Acres of land area inundated by event type, relative to 2020 mean high water.



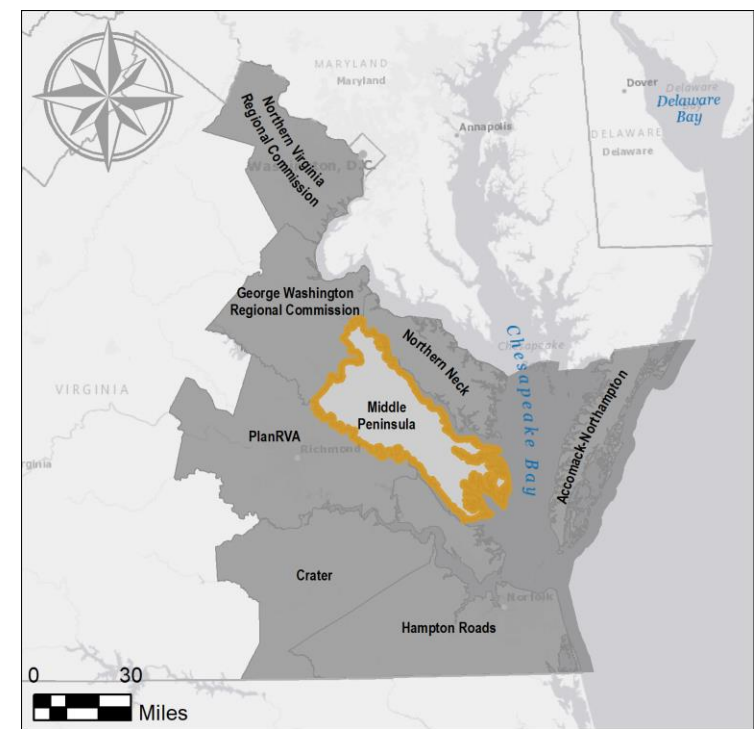
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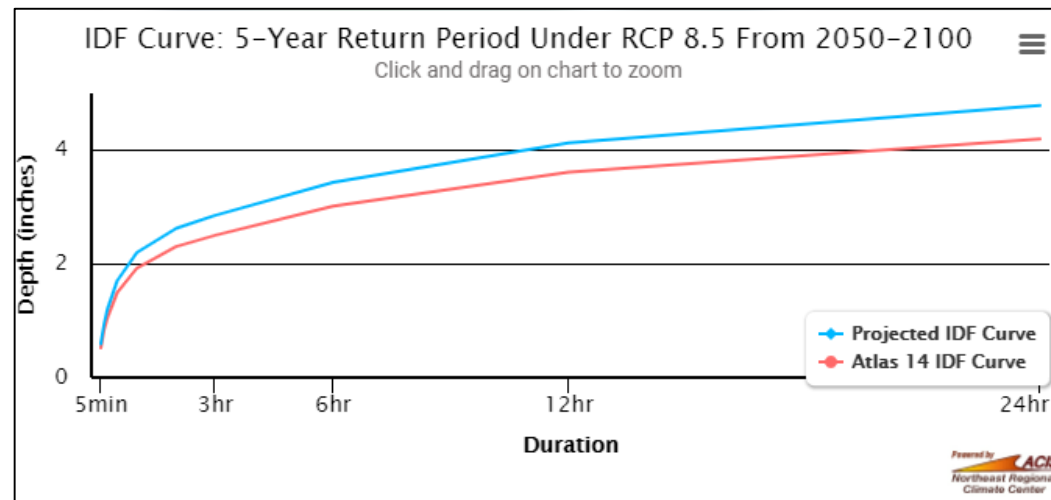
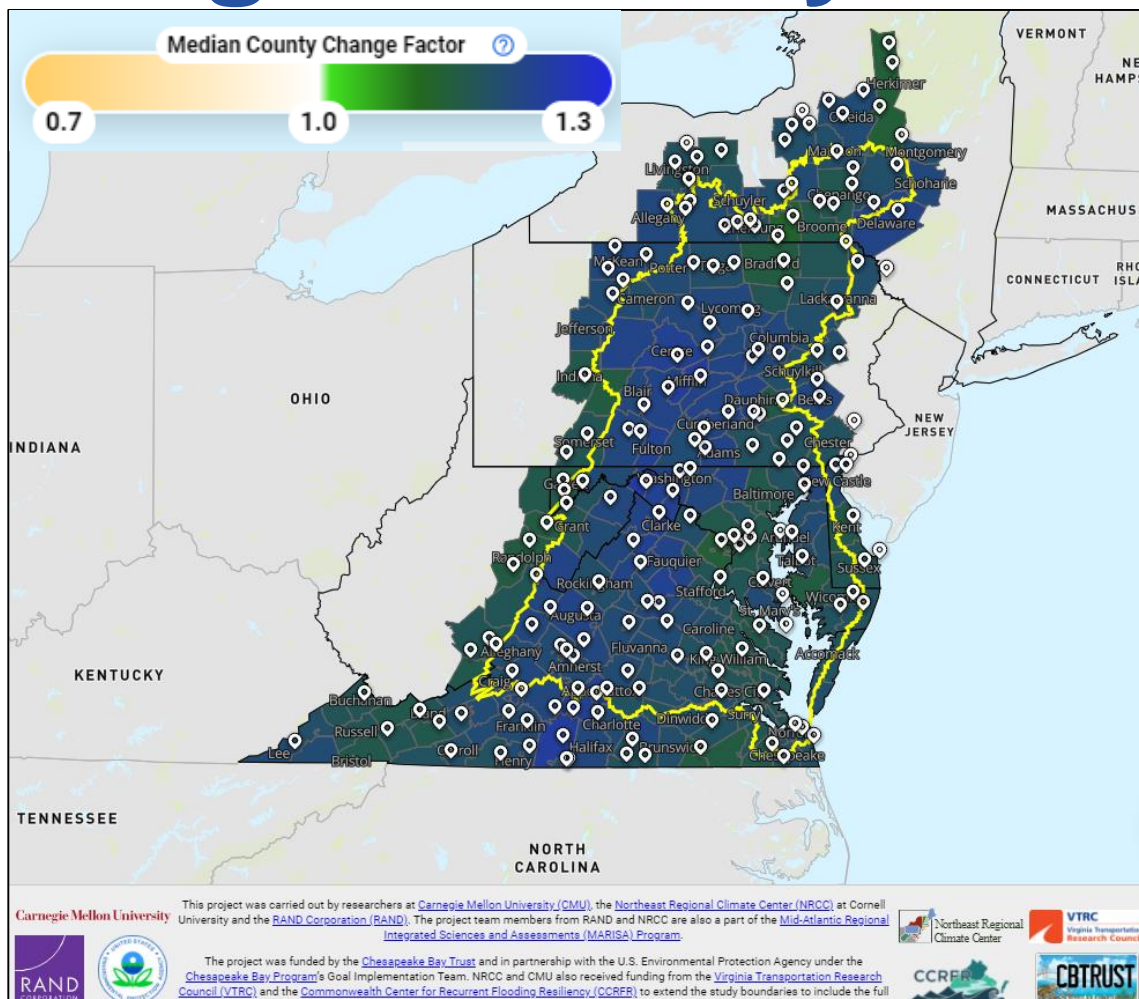


Coastal Flooding - Projected Changes

- Middle Peninsula PDC
- In the next 40 years, coastal flooding is projected to impact:
 - 27,400 more acres of land
 - 6,100 more people
 - 4,700 more buildings



High-Intensity Rainfall is Increasing



Atlas 14 Change Factors for King and Queen County:

10th Percentile:	1.02
25th Percentile:	1.08
Median:	1.14
75th Percentile:	1.22
90th Percentile:	1.27

See "Using the Data" above for correct and incorrect application of these change factors.

<https://midatlantic-idf.rcc-acis.org/>

What is resilience?

Strengthen communities' capability to **anticipate, prepare for, respond to, and recover from** hazards

Minimize damage to **social well-being, public health, the economy, and the environment.**

Why a coastal resilience master plan?

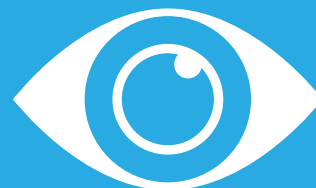
Whole of
Government
and
Community
Approach



Ensure
Equity



Broader
View

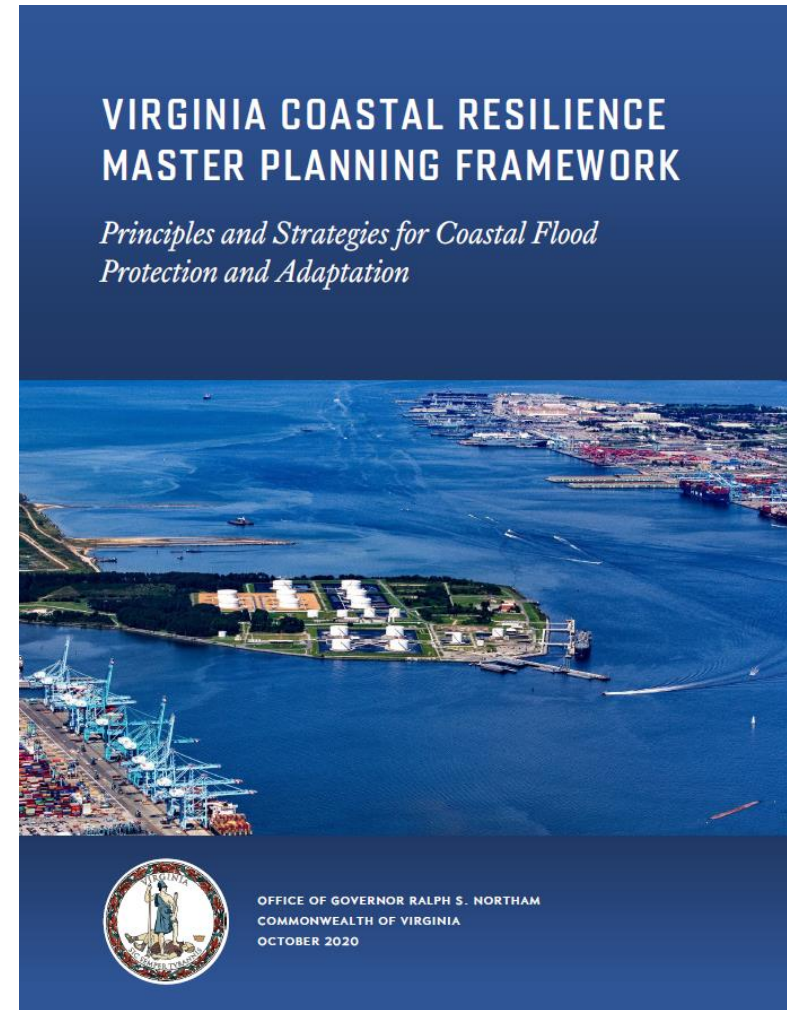


Funding
Strategy



Guiding Principles

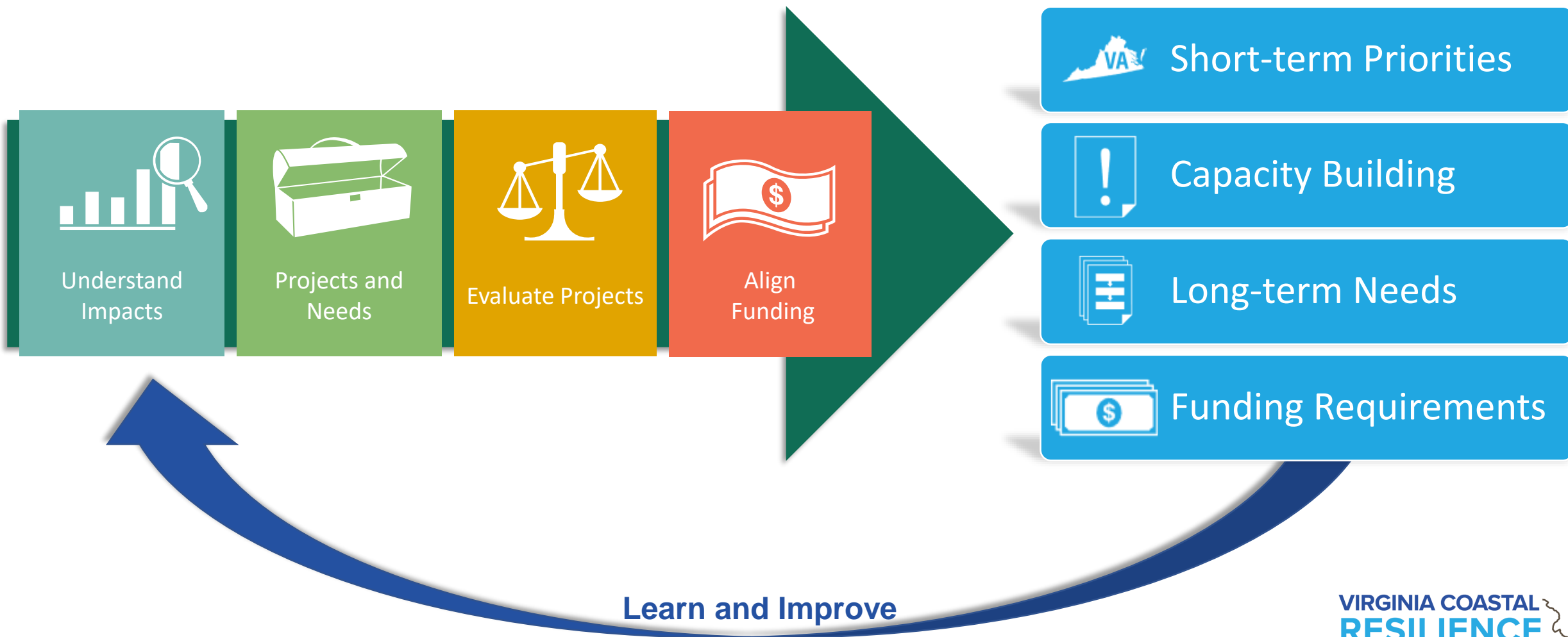
- Acknowledge climate change and its consequences, and base decision-making on the best available science.
- Identify and address socioeconomic inequities and work to enhance equity through coastal adaptation and protection efforts.
- Recognize the importance of protecting and enhancing green infrastructure like natural coastal barriers and fish and wildlife habitat by prioritizing nature-based solutions.
- Utilize community and regional scale planning to the maximum extent possible, seeking region-specific approaches tailored to the needs of individual communities.
- Understand fiscal realities and focus on the most cost-effective solutions for protection and adaptation of our communities, businesses and critical infrastructure.



Goals:

1. Identify and prioritize projects to increase the resilience of coastal communities, including both built and natural assets at risk due to flooding and sea level rise
2. Establish a financing strategy, informed by regional differences and equity considerations
3. Incorporate and promote climate change projections into Commonwealth's programs addressing coastal adaptation and protection
4. Coordinate state, federal, regional, and local coastal region adaptation and protection efforts

2021 Coastal Master Plan





@NatResourcesVA



@VaCoastalResilience

VIRGINIA COASTAL RESILIENCE MASTER PLAN

2021



Website:

www.virginia.gov/coastalresilience

Email Questions or Comments to:

resilientcoastVA@governor.virginia.gov

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Interactive Stations

Survey Station

Fill out a survey describing your experience with coastal and other flooding hazards.

Comment Station

Identify your flooding experiences and ideas for flood protection and mitigation actions.

Map Station

Review maps of current and future flood hazards and impacts. Help us identify other problem areas that are not included.

Visioning Station

What does a resilient community look like for you in 30-50 years? What are the priorities?