VIRGINIA COASTAL RESILIENCE MASTER PLAN 2021

Public Meeting

Crater Planning District Commission

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

Dewberry

DCR

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

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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.

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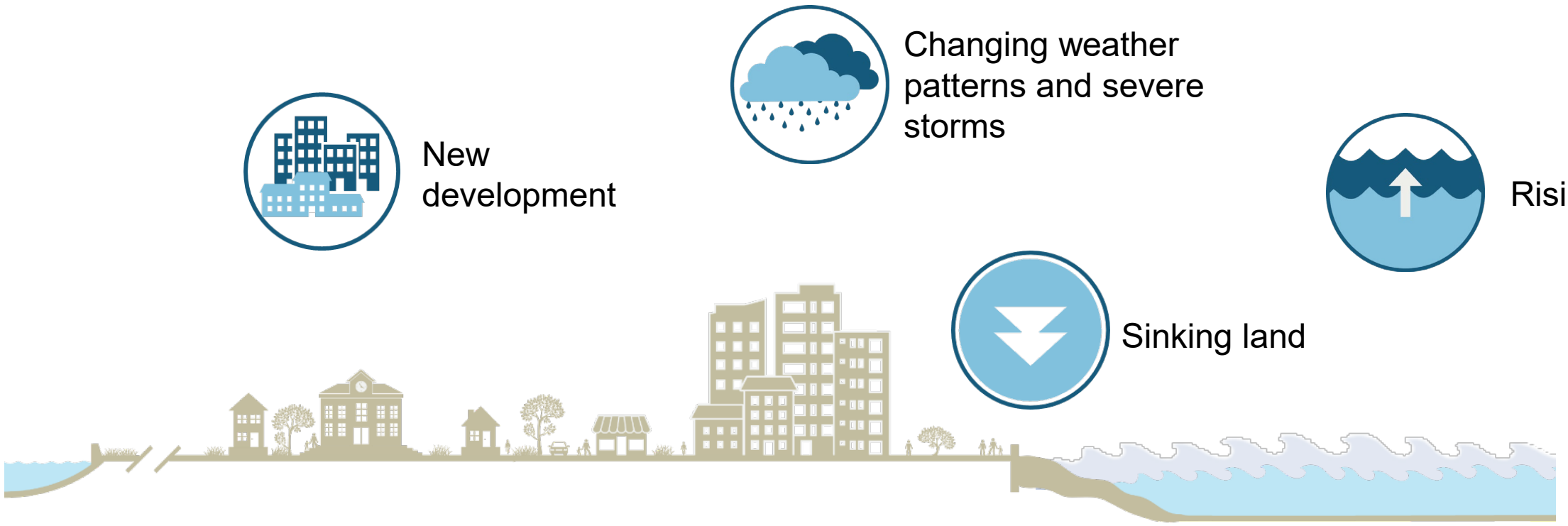
What is driving increased flooding?



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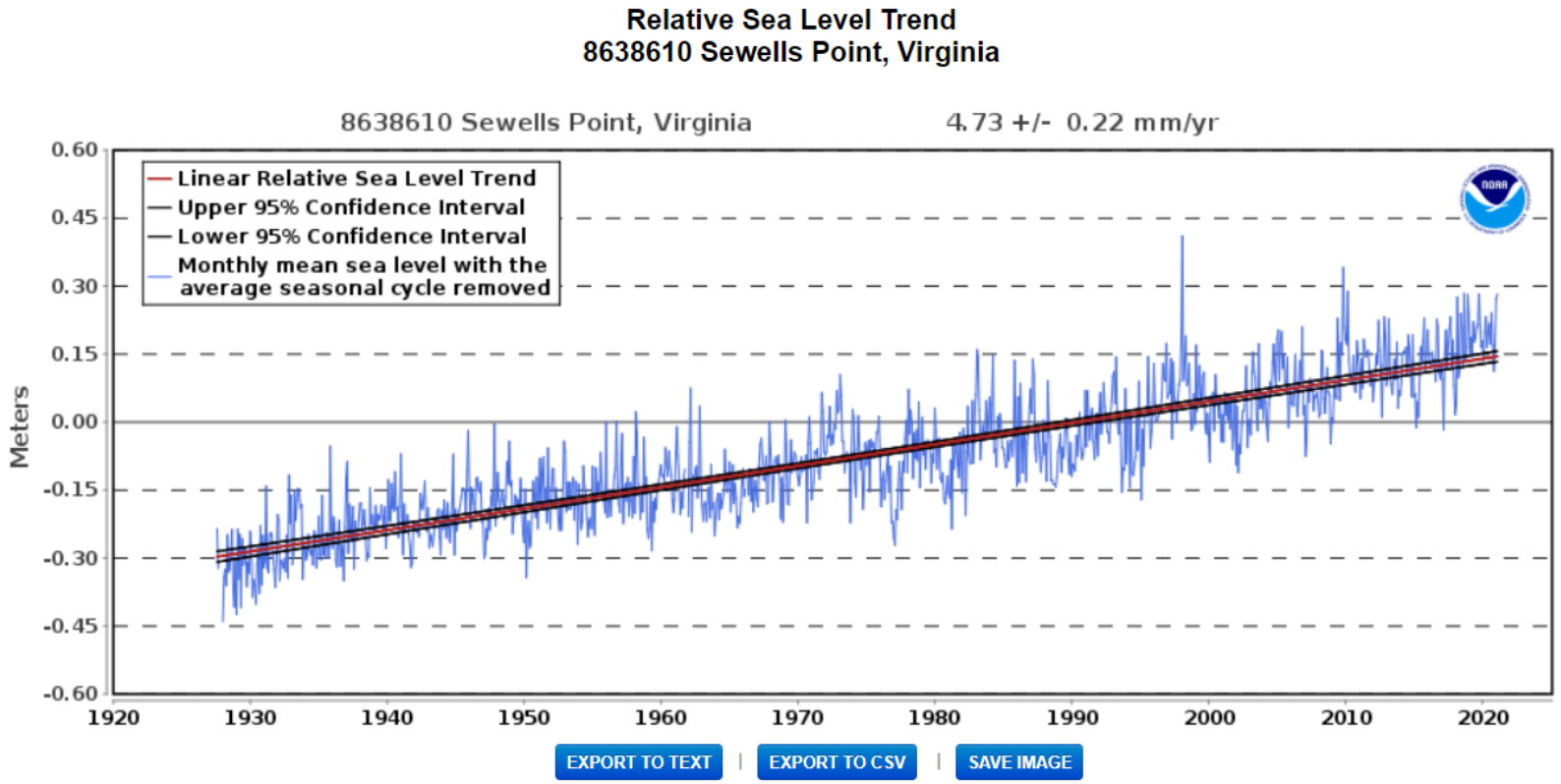
Sea Level Change in Virginia



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.

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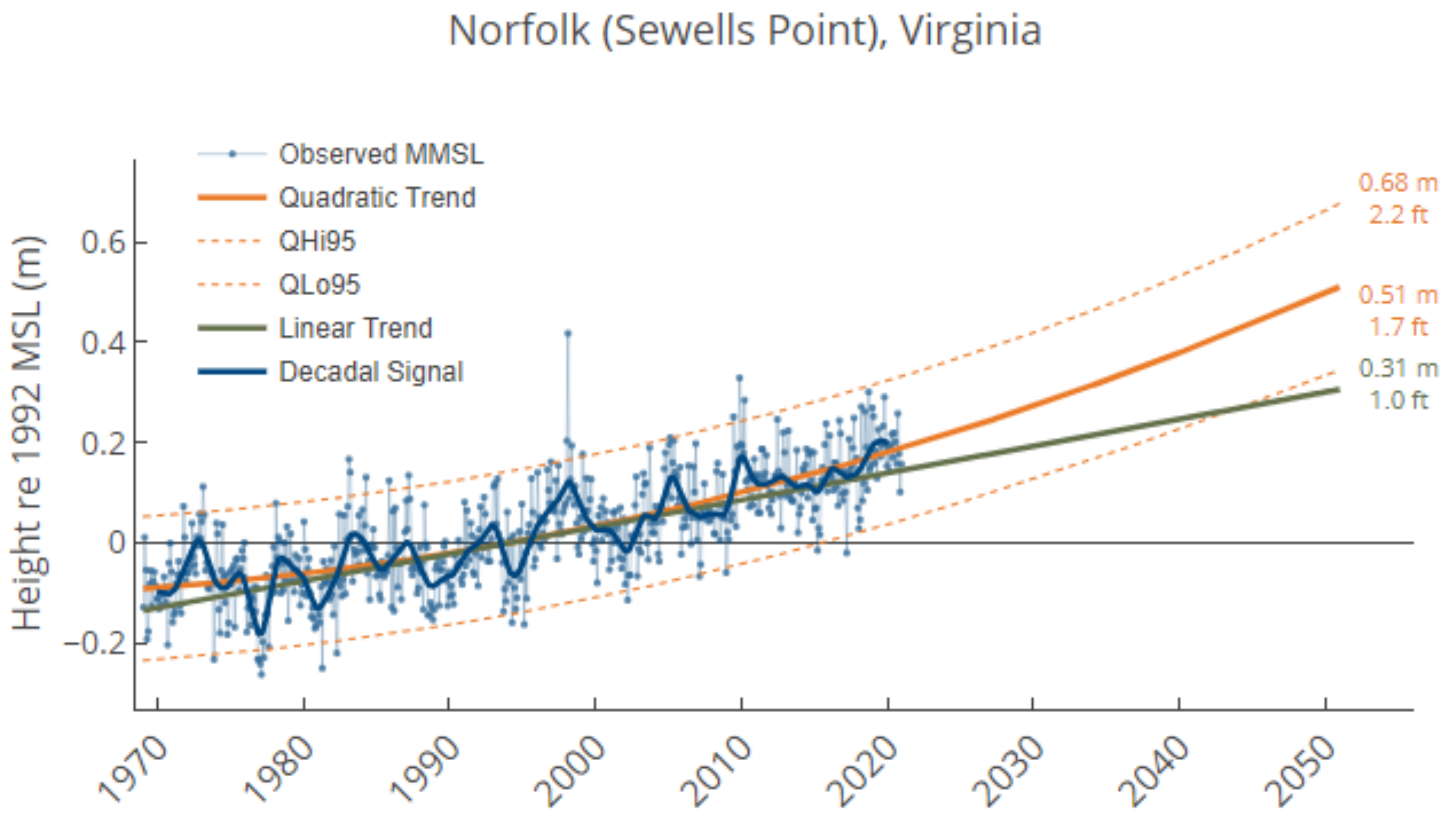
Sea Level Rise is Accelerating

2050 Projection



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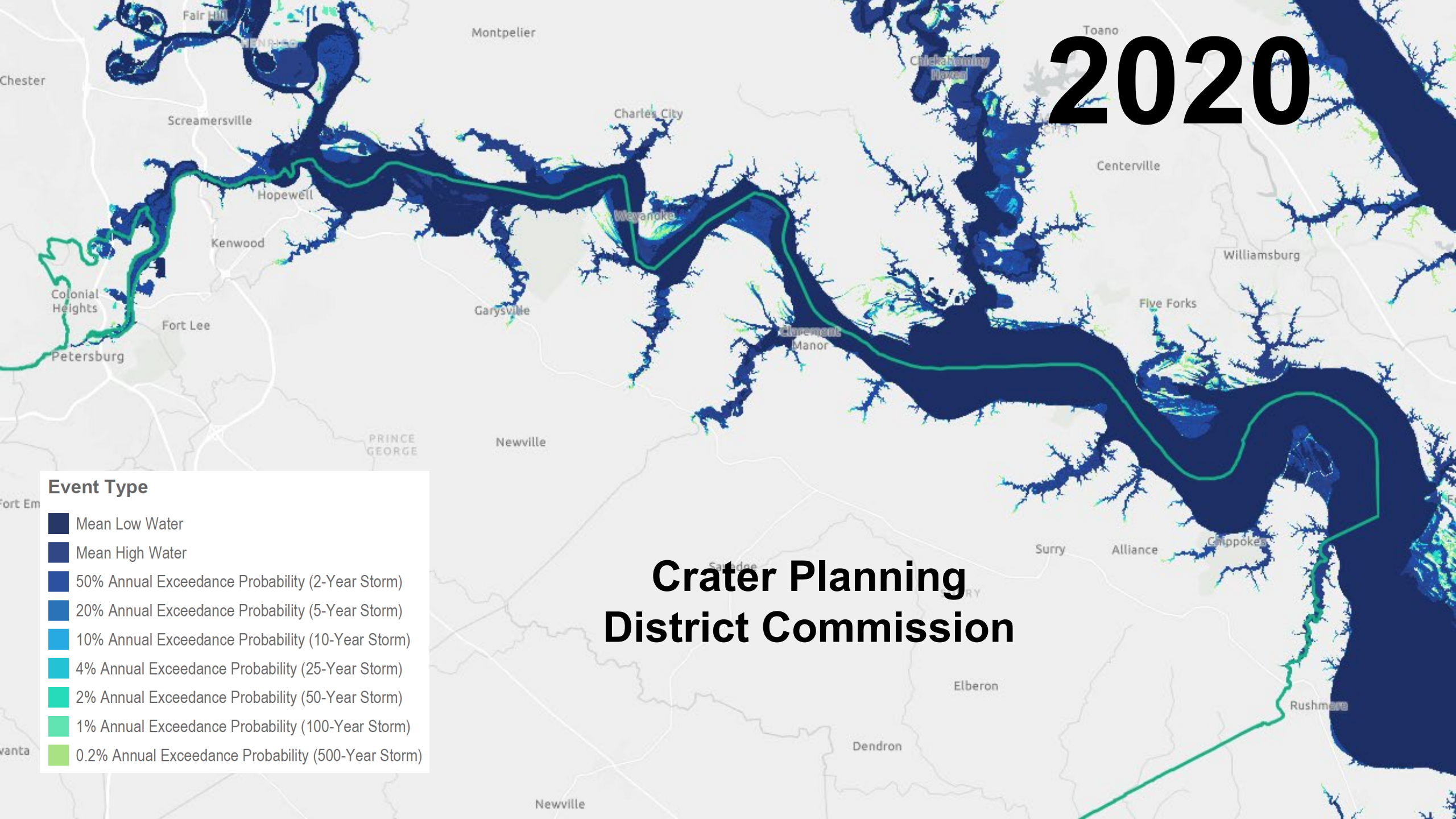
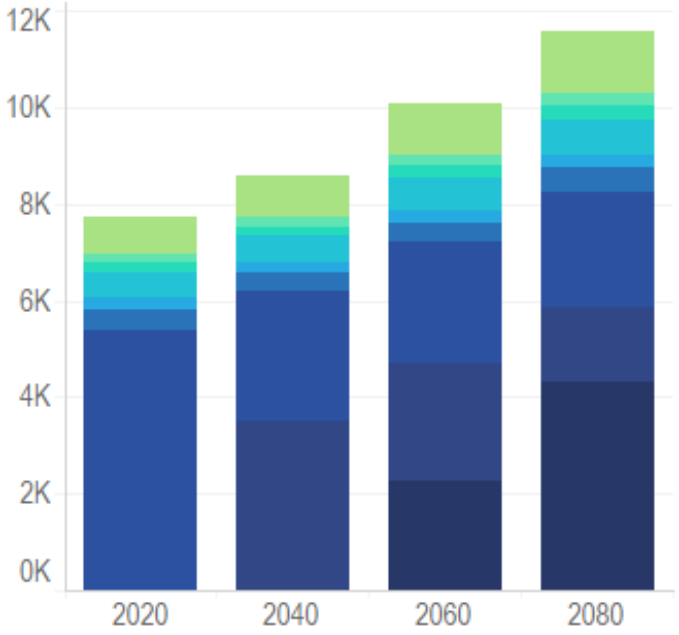

2020
Crater Planning
District Commission
Event Type
Mean Low Water
Mean High Water
50% Annual Exceedance Probability (2-Year Storm)
20% Annual Exceedance Probability (5-Year Storm)
10% Annual Exceedance Probability (10-Year Storm)
4% Annual Exceedance Probability (25-Year Storm)
2% Annual Exceedance Probability (50-Year Storm)
1% Annual Exceedance Probability (100-Year Storm)
0.2% Annual Exceedance Probability (500-Year Storm)
Fair Hill
Montpelier
Toano
Chester
Screamersville
Charles City
Centerville
Hopewell
Kenwood
Williamsburg
Colonial Heights
Garysville
Five Forks
Fort Lee
Petersburg
Manor
PRINCE GEORGE
Newville
Surry
Alliance
Elberon
Rushmere
Dendron
Newville

Land Area

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



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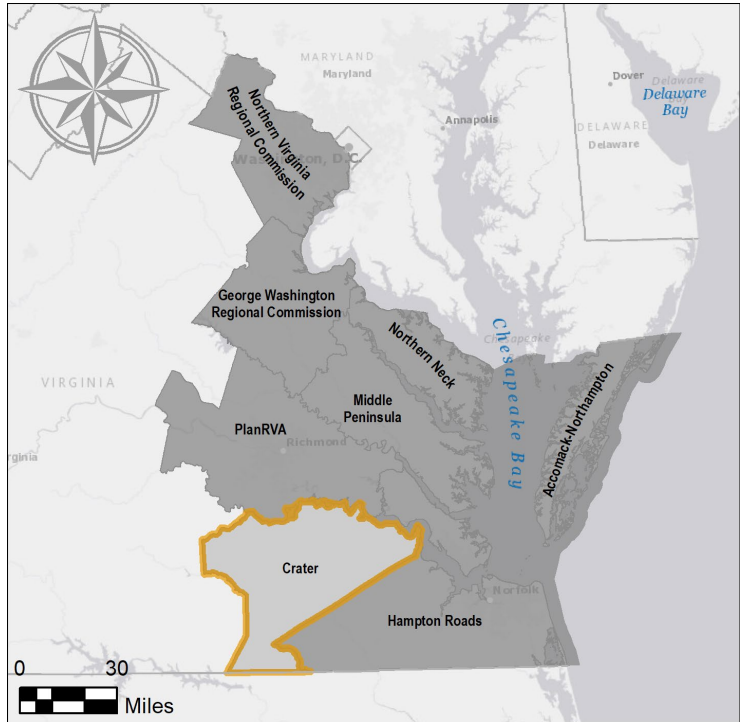
2080

Montpelier
Toano
Charles City
Centerville
Williamsburg
Five Forks
Garysville
Claremont
Manor
Newville
Surry
Alliance
Elberon
Dendron
Rushmere
Newville

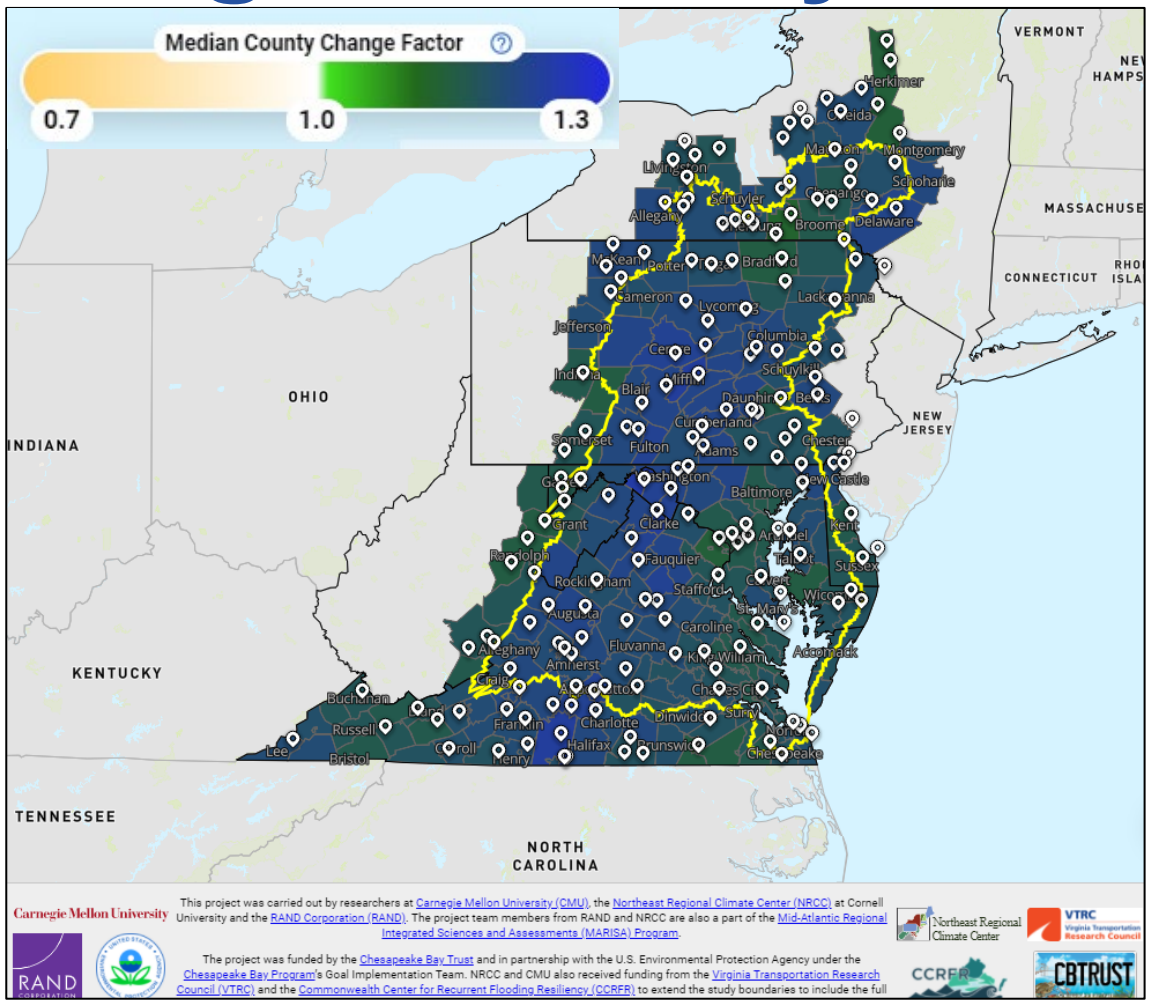
Crater Planning District Commission

Coastal Flooding - Projected Changes

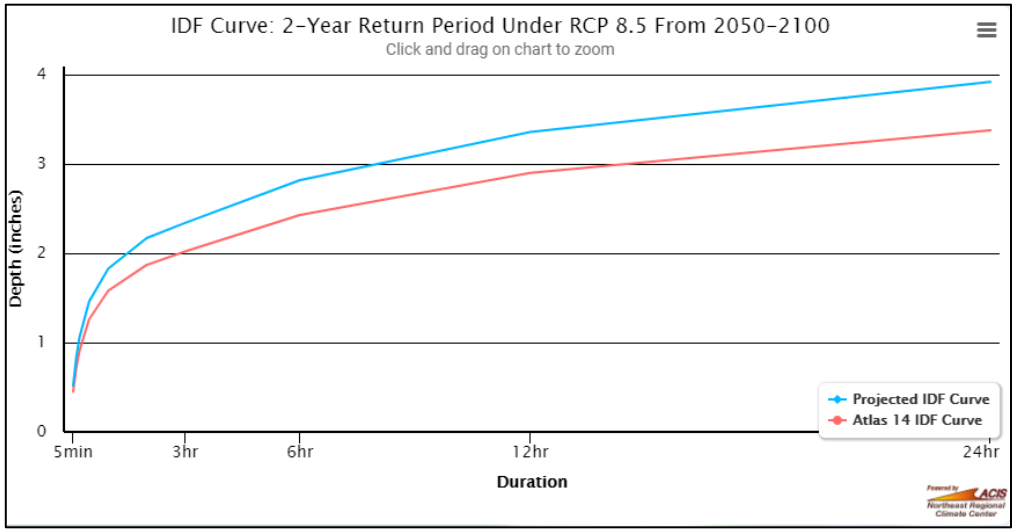
- **Crater PDC**
- **In the next 40 years, coastal flooding is projected to impact:**
  - 2,400 more acres of land
  - 240 more people
  - 160 more buildings



High-Intensity Rainfall is Increasing



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



HOPEWELL

Atlas 14 Change Factors for Hopewell City:

10th Percentile:	1.01
25th Percentile:	1.08
Median:	1.16
75th Percentile:	1.20
90th Percentile:	1.27

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

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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**.

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Why a coastal resilience master plan?

Whole of Government and Community Approach

Ensure Equity

Broader View

Funding Strategy

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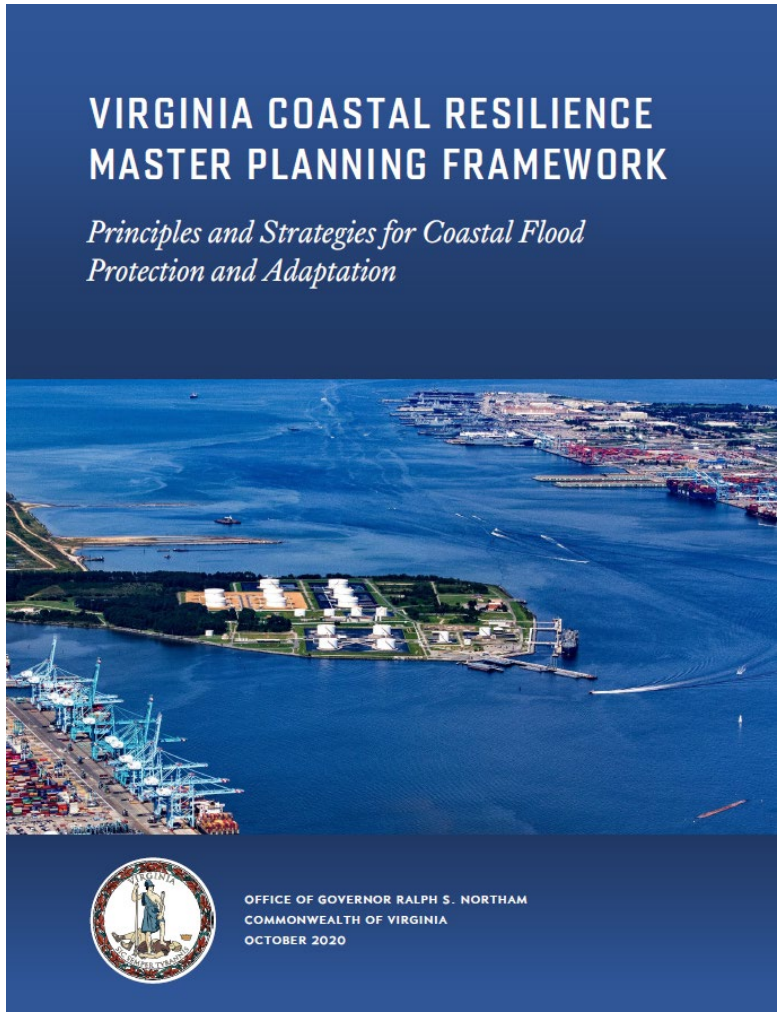
Guiding Principles

- 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.



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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

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2021 Coastal Master Plan

- Short-term Priorities
- Capacity Building
- Long-term Needs
- Funding Requirements

Learn and Improve

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Website:

www.virginia.gov/coastalresilience

Email Questions or Comments to:

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