

HAMPTON ROADS FLOODING IMPACTS AND ACTION



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Skip Stiles
Chesapeake Conservation Conference
March 6, 2020



WETLANDS WATCH

- Based in Norfolk, working statewide on wetlands conservation and protection
- Established on Earth Day, 2000, we have four staff (soon to be 5!)
- Began work on Sea Level Rise with local governments starting in 2006



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WETLANDS WATCH - WHAT WE DO

- Connect academic institutions and coastal communities to work on resilience needs.
- Train and certify landscape professionals on nature-based solutions to flooding/stormwater
- Developed and operate a citizen science flood mapping effort, “Catch the King.”
- Help change public policy



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PRE-DISASTER DESIGN - "WAITING FOR KATRINA" *Students Redefine Problem and Develop Solutions*



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TIDEWATER RISING RESILIENCY DESIGN CHALLENGE – THE WINNERS

**\$120 million award from HUD
National Disaster Resiliency
Competition**



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EXPANDING DESIGN WORK ONE COMMUNITY AT A TIME



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GREEN INFRASTRUCTURE PRACTICES

For Connectivity, Resiliency, Water Management in the Coastal Plain

Urban Planters



Open Space Conservation & Restoration

Open Space – Stormwater Parks



Living Shorelines & Buffers



Retention Ponds

Green Streets



Constructed Wetlands



Permeable Parking Lanes



Sources: George Homewood, City of Norfolk, Wetlands Watch, Scapes



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BRING PRIVATE SECTOR INTO THE SOLUTION



CHESAPEAKE BAY
Landscape Professional



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CROWDSOURCE FLOOD INFORMATION COLLECTION

Develop Smart Phone app that allows people to report trouble spots and actually map inundation zones on their terms.



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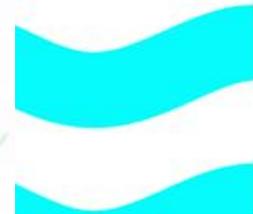
Data Collection Has Become a Community Event

F



700 people
125 High

t



8.
2018.



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WETLANDS WATCH - PUBLIC POLICY WORK

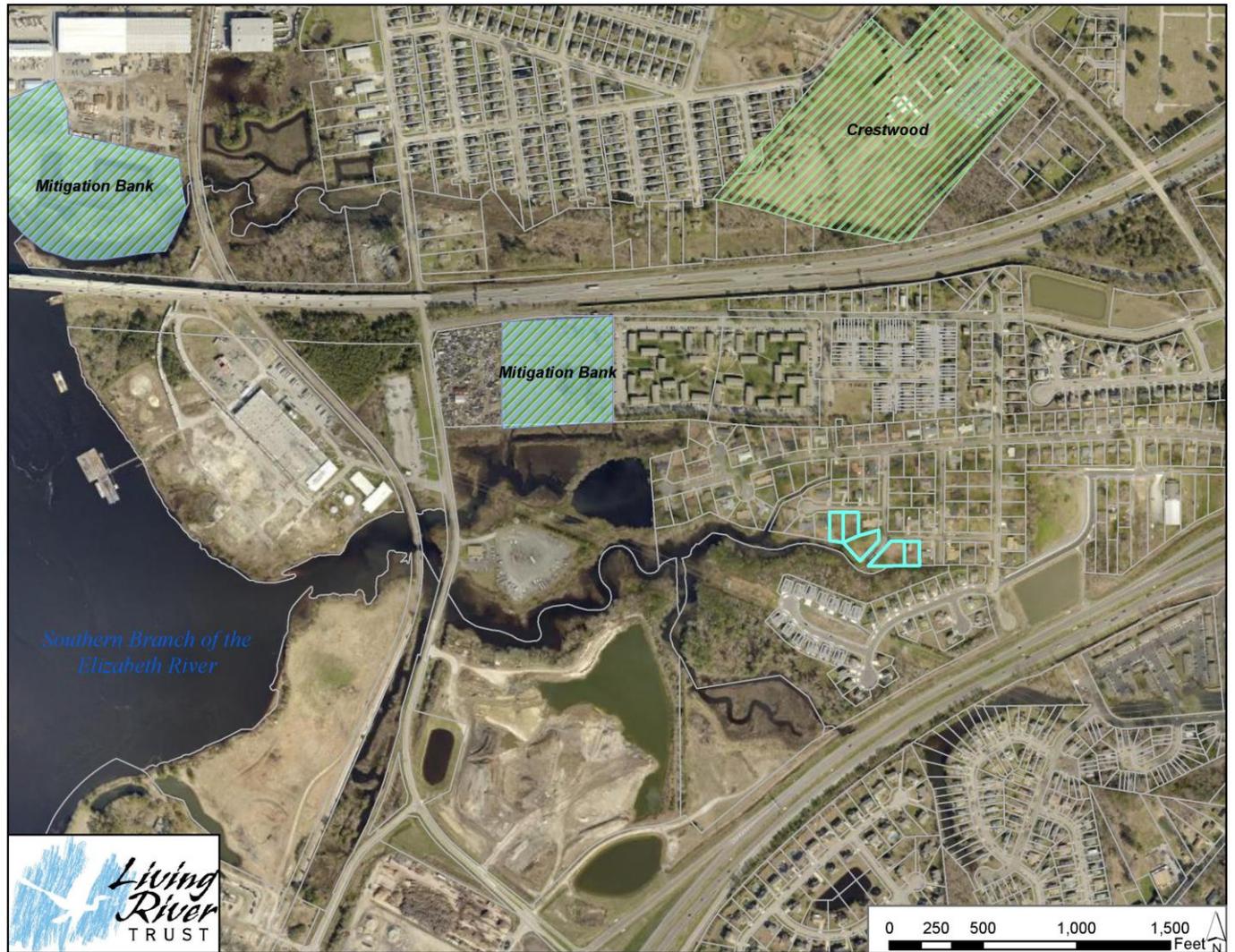
- Work with localities on flood insurance problems.
- Developed concept and support for Community Flood Preparedness Fund
- Developed planning resources for localities dealing with sea level rise – working on educational package for planning commissions



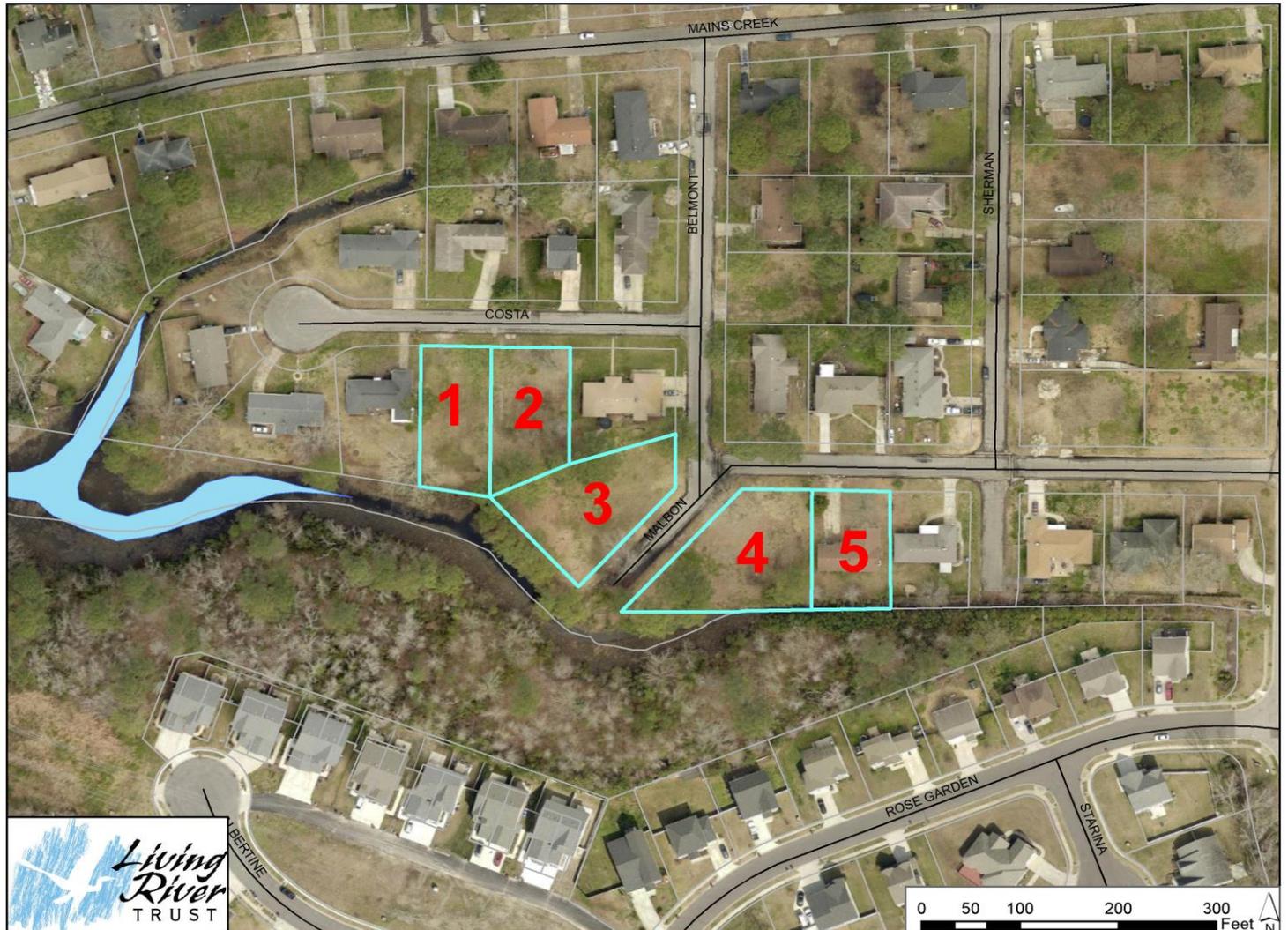
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CITY OF CHESAPEAKE PILOT: 5 PARCELS



CITY OF CHESAPEAKE PILOT: 5 PARCELS



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0 50 100 200 300 Feet

WHAT HAPPENS GOING FORWARD?

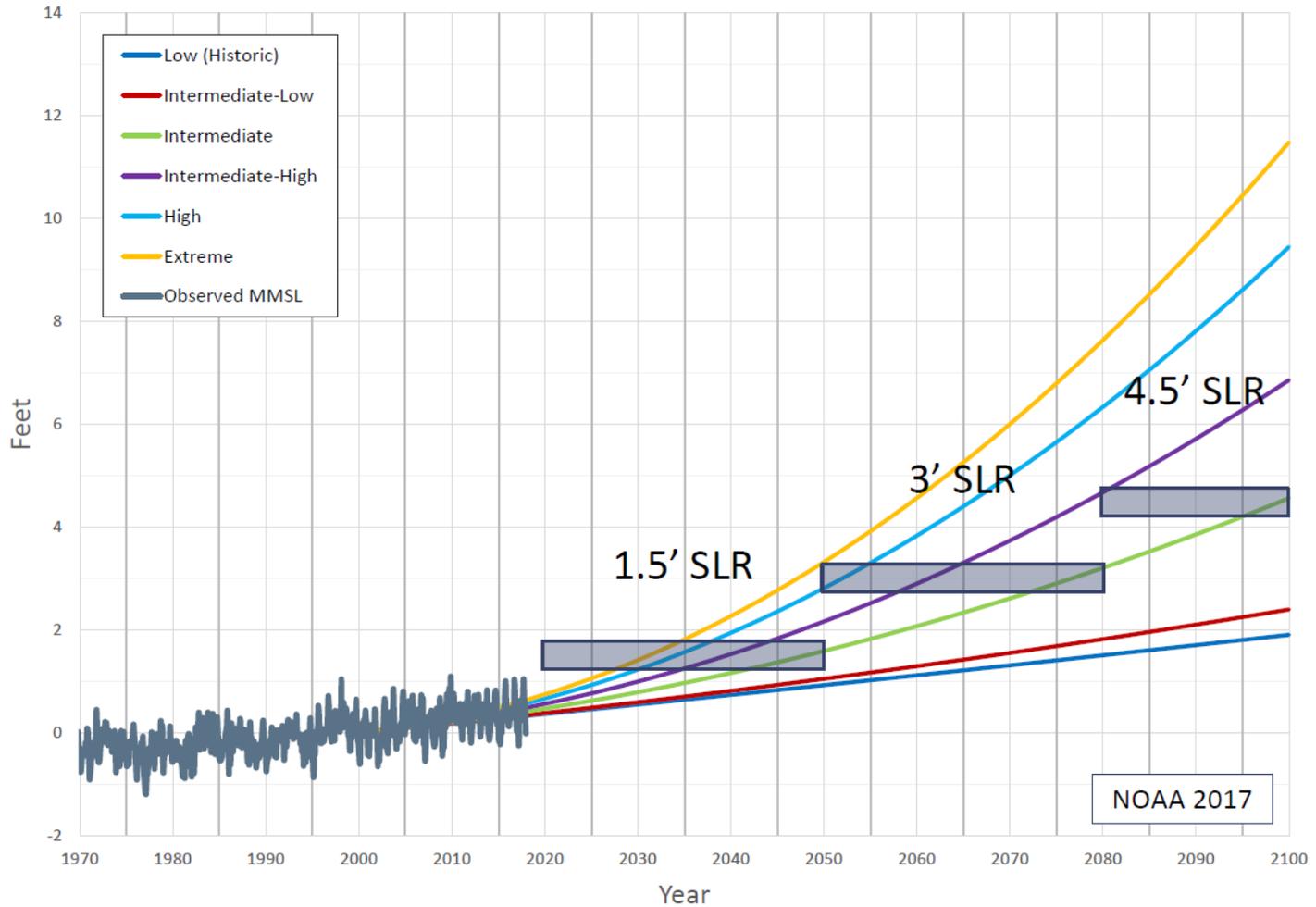


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HRPDC - OCTOBER 2018

Projected Relative Sea Level Change at Sewell's Point, Virginia - 2000-2100



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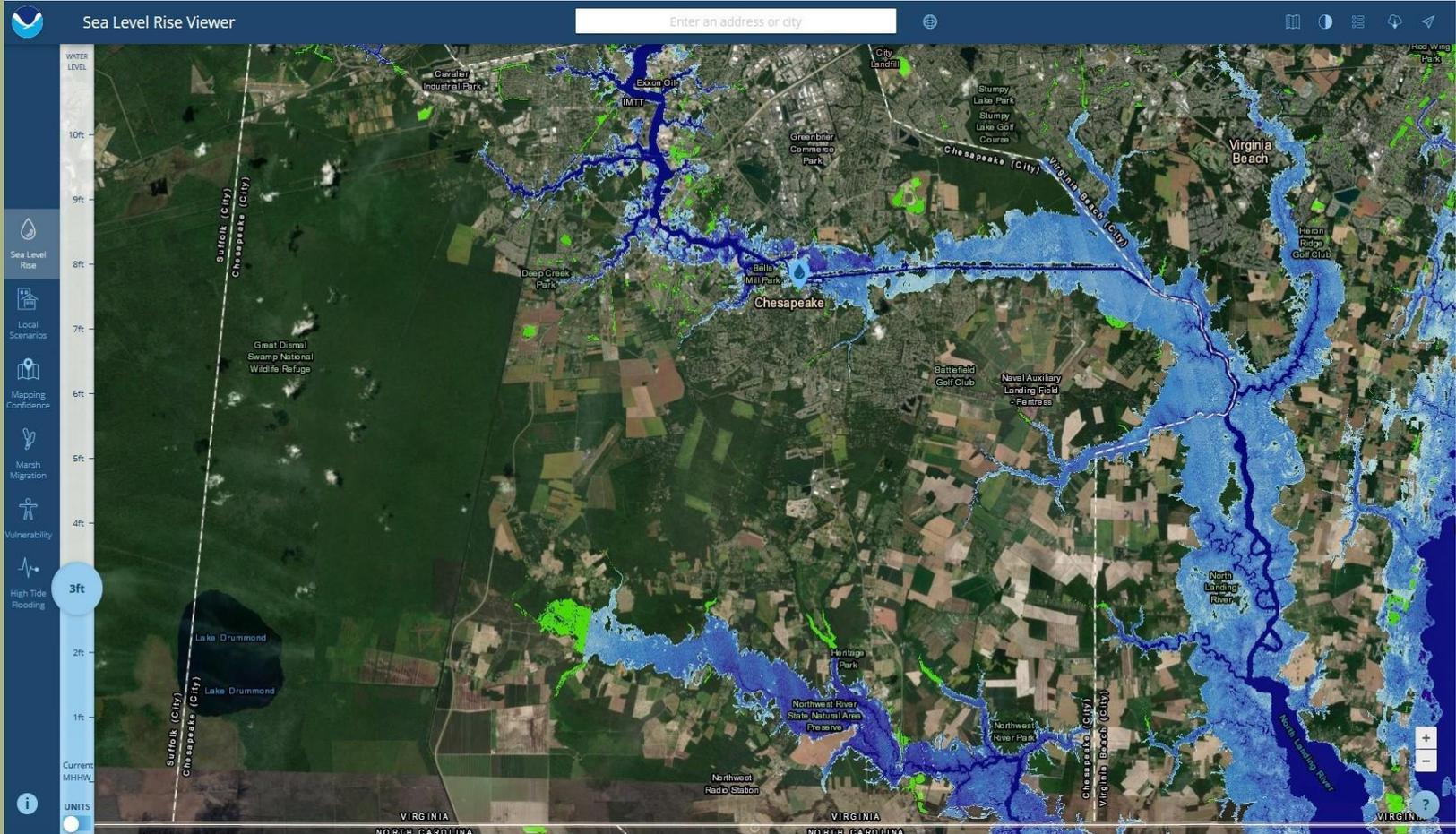
CHESAPEAKE'S TWO CONNECTIONS TO THE SEA



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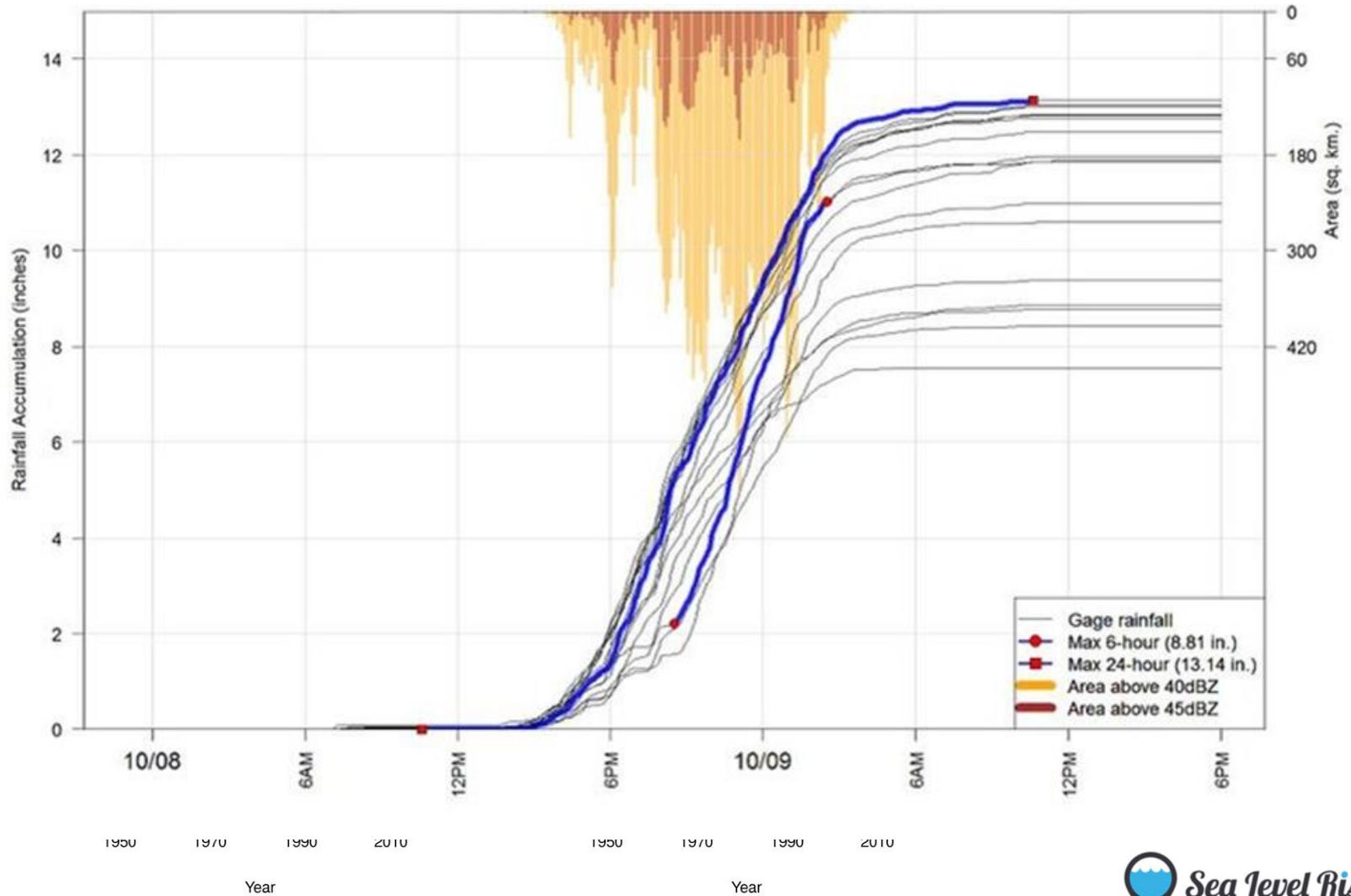
PROJECTED IMPACTS - 2080



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RAINFALL INTENSITY IS INCREASING



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ECONOMIC IMPACTS STARTING



Dear Homeowner Policyholder:

Enclosed is the declarations page for your policy's 2019 billing anniversary. **Your annual assessment invoice will be mailed separately.** The assessment rates applicable to your policy that were adopted by the Society's Board of Directors for policy anniversaries in 2019 expressed as a percent of your policy premium are reflected on the enclosed assessment summary. 2018 proved to be another challenging year for the Society. Our operating and investment results for 2018 were again mixed. Despite economic uncertainties, the stock market has been solid, resulting in good investment performance for our portfolio. This increase in market value helped to offset significant losses from several severe storms during 2018. A severe winter freeze event in January, significant wind/hail

Changing Weather Patterns

Over the past four years, the Society has seen a sharp rise in both the frequency and severity of losses resulting from severe weather events. Winter freeze events, tornados, torrential rain, straight line wind, hail, and hurricane events during the period from January 2015 to October 2018 have resulted in a 74% increase in total losses incurred from the previous four year period. This has resulted in a net operating loss for the society during each those years, and it is more than likely that this pattern will continue into the foreseeable future. This year's increase in the Society's base annual assessment to 25% is intended to cover the increase in losses from these types of weather events and to allow the Society to reduce its net operating loss to a more manageable level. Member policyholders can assist in keeping

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Policy Anniversary 2019
Forms HO-3, HO-4, HO-6



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THE BIGGEST ISSUE = FUNDING

Needs in Hampton Roads probably start at \$2 billion/city ~ \$40 billion (Norfolk \$2 billion - flood wall, stormwater system, raise roads, etc.) (Va Beach \$3 billion infrastructure needs, etc.)

Army Corps of Engineers has a \$60 billion backlog of projects and gets ~\$2 billion /year in funding

State Funding to date = \$0



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QUESTIONS?



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