

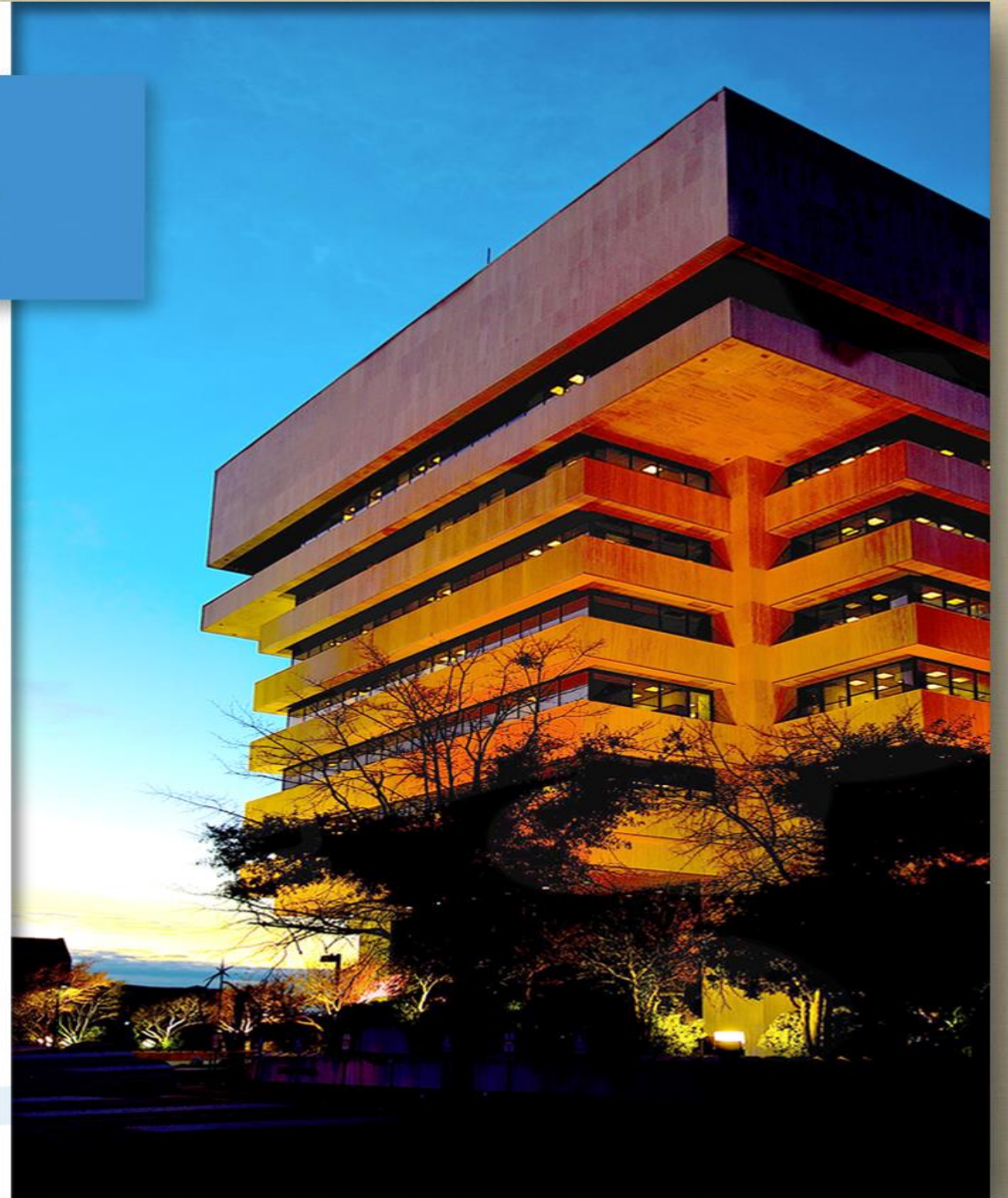
HAMPTON VA

RESILIENT HAMPTON



Briefing

City Council
September 9, 2020



Purpose

Update:

- Resilient Hampton's Newmarket Creek Water Plan
 - Pilot Projects
 - Resilient And Innovative Neighbors (RAIN)
- More Projects
 - Stormwater
 - Dredging

Background

- Resilient Hampton city-wide report (2018)
 - Vision & Goals
- Newmarket Creek Pilot Area Charette (2019)
 - Stakeholder Engagement
 - Conceptual Designs
- Newmarket Creek Water Plan (2020)
 - Watershed Strategy
 - Community Feedback
 - Fully design and implement initial pilot projects

WAGGONNER
& BALL

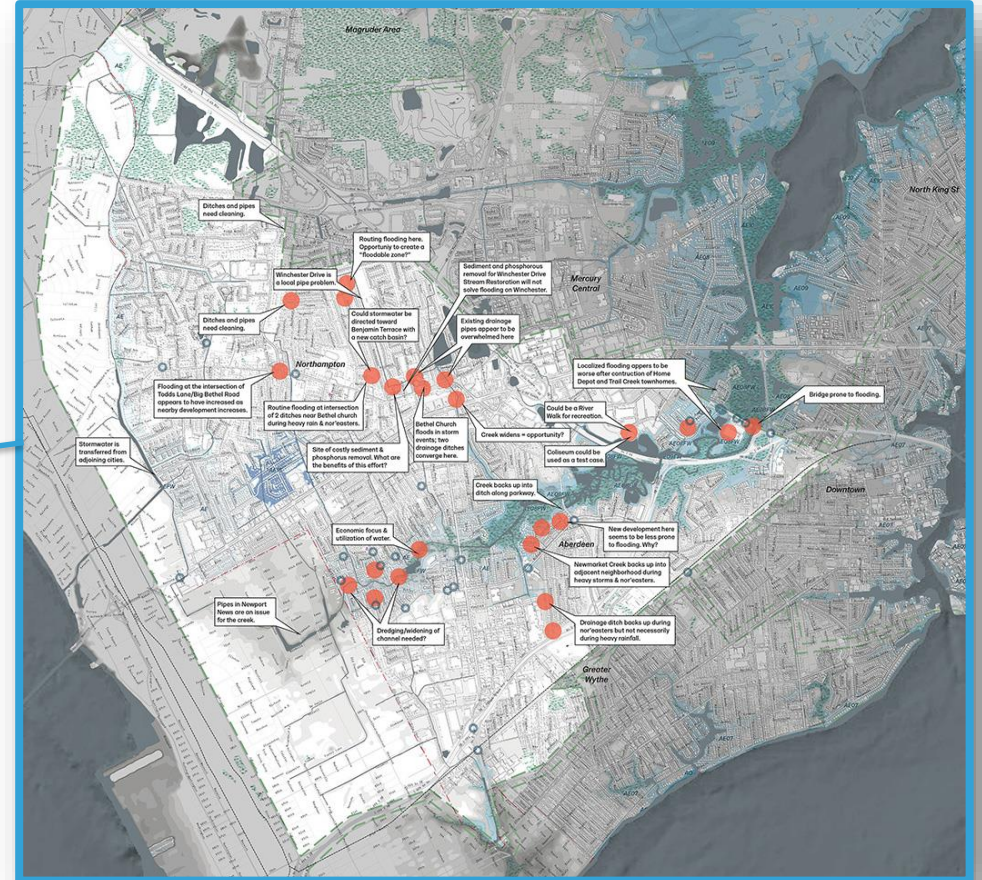
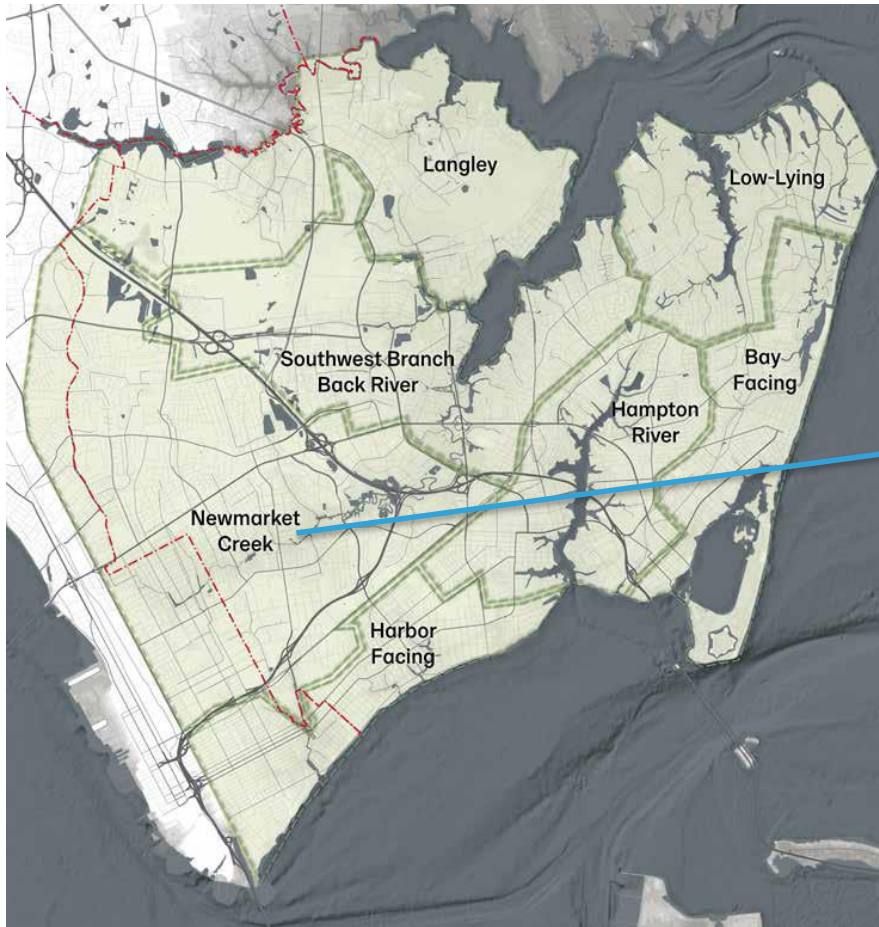
Bosch
Slabbers



CHESAPEAKE BAY
FOUNDATION
Saving a National Treasure



Newmarket Creek Pilot Area



Approach



SLOW

Tree canopy, rain gardens, rain barrels, less impervious

STORE

Space for water as community assets

REDIRECT

During high tide, temporary

ADAPT

Where water wants to go, avoid future flooding

Schedule

Timeframe	Activities
January 2019	Newmarket Creek pilot area design charette
January 2020	Community engagement meeting City Council endorsed conceptual pilot projects
February 2020	Pilot project design and engineering begins
July 2020	City Council adopts Stormwater Fee increase
Fall 2020	RAIN grant program begins
Late 2020	Environmental Impact Bond executed
Spring 2021	Project design and engineering complete
Fall 2021	Construction project bidding First phase of construction begins

Pilot Project: Big Bethel Blueway



Slow & store water

Water quality

Green infrastructure

Replicable within existing easements

Pilot Project: Armistead Avenue

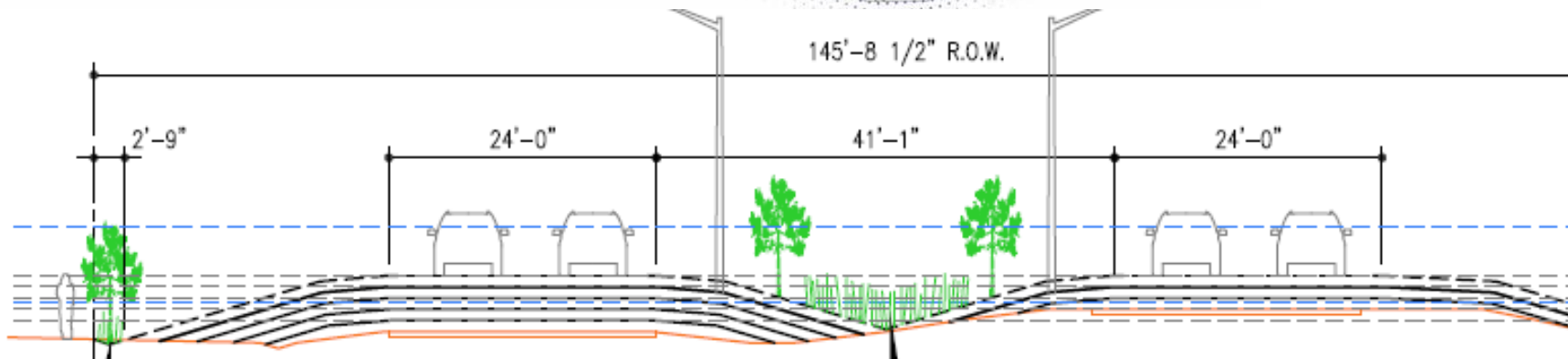


Slow & store water

Water quality

Green infrastructure

Replicable within existing right of way



Pilot Project: Lake Hampton



Slow & store water

Water quality

Green infrastructure

Replicable to other public spaces

Pilot Projects: RAIN grant

Anatomy of a RAIN yard

Rain barrels capture water coming off a house's roof through its gutter system. This collected water is prevented from becoming stormwater runoff, and can be used for non-drinking purposes such as watering the garden. A smaller, secondary rain barrel can be connected for additional storage.

A 55 gallon rain barrel can collect nearly **7,700 gallons of stormwater** per year.



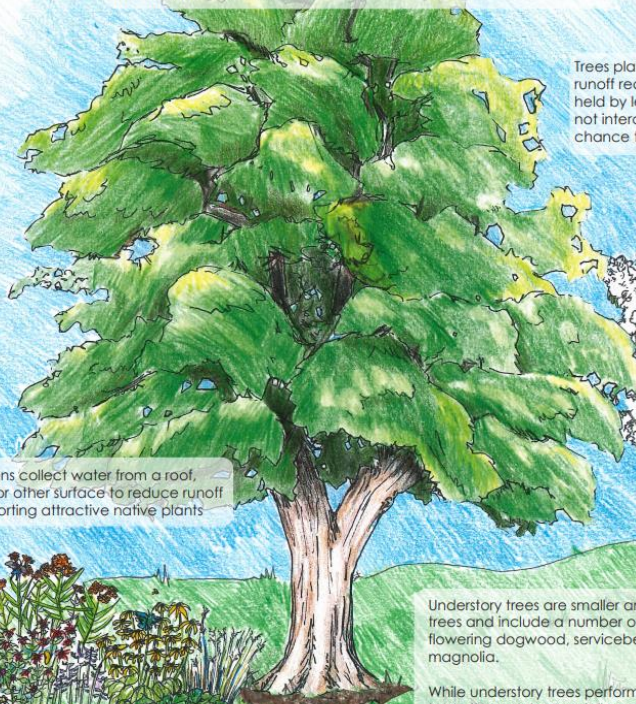
Permeable pavers allow more rain water to absorb directly into the ground, without compromising a safe surface for vehicles.

Rain gardens collect water from a roof, driveway, or other surface to reduce runoff while supporting attractive native plants



Canopy trees are also known as shade trees; they are large trees with thick canopy or foliage covering. Examples around Hampton include oak trees, birch trees, and loblolly pine trees.

A mature canopy tree can capture and retain upwards of **330 gallons of water** in a rain event!



Trees play a significant role in stormwater runoff reduction. Rain is intercepted and held by leaves and branches, and what is not intercepted is slowed so it has a better chance to infiltrate into the soil.

Understory trees are smaller and shorter than canopy trees and include a number of ornamental trees such as flowering dogwood, serviceberry, and sweetbay magnolia.

While understory trees perform in similar ways as canopy trees, they work especially well in tandem: rain slowed by the large leaves and branches of canopy trees are further slowed by understory trees, and their more delicate flowers and foliage are protected.



RESILIENT HAMPTON



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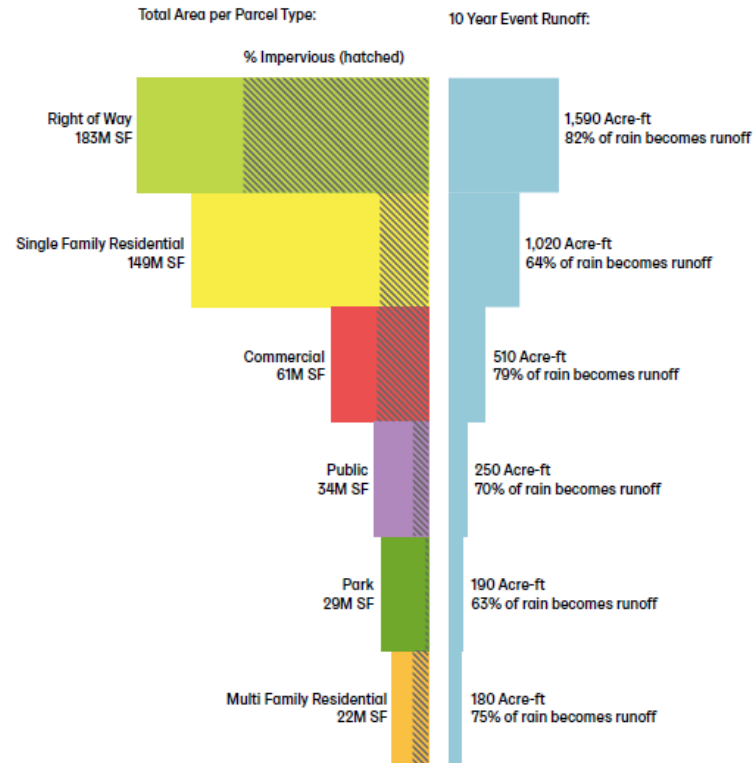
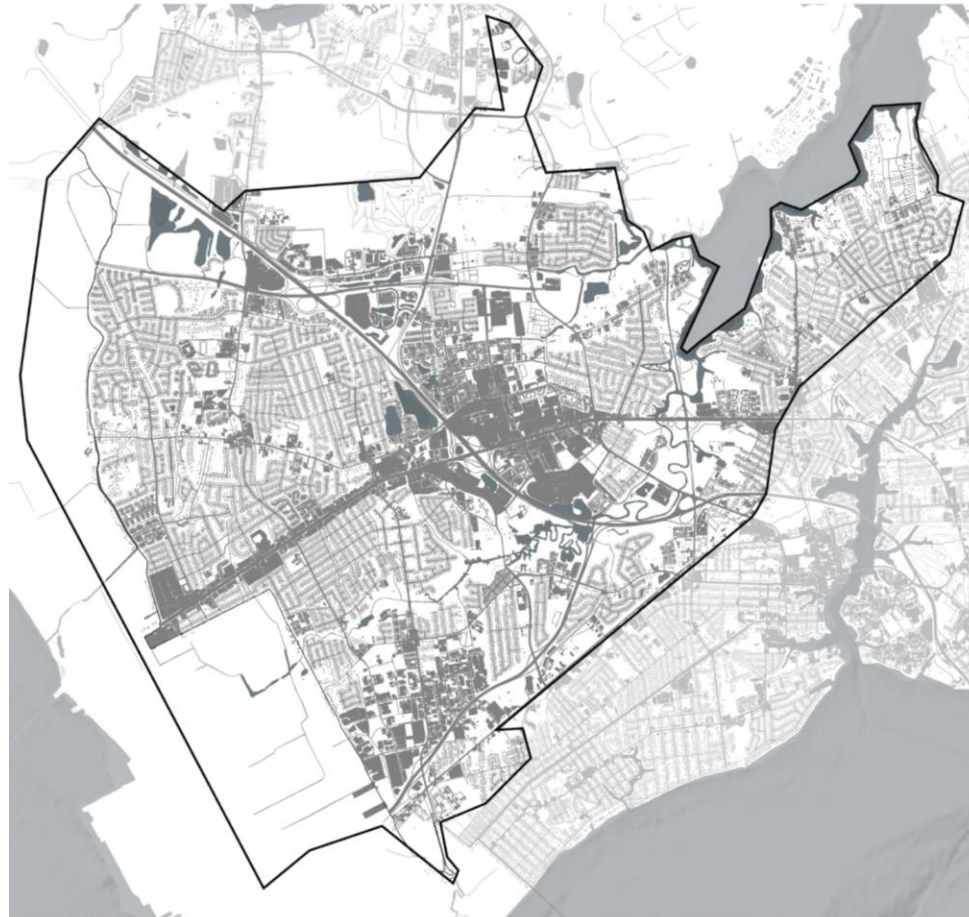
Saving a National Treasure

Together, let's:

- reduce flooding
- improve waterways of the Chesapeake Bay
- help our downstream neighbors
- enhance your property

Impervious Area Limitations

Impervious Surfaces

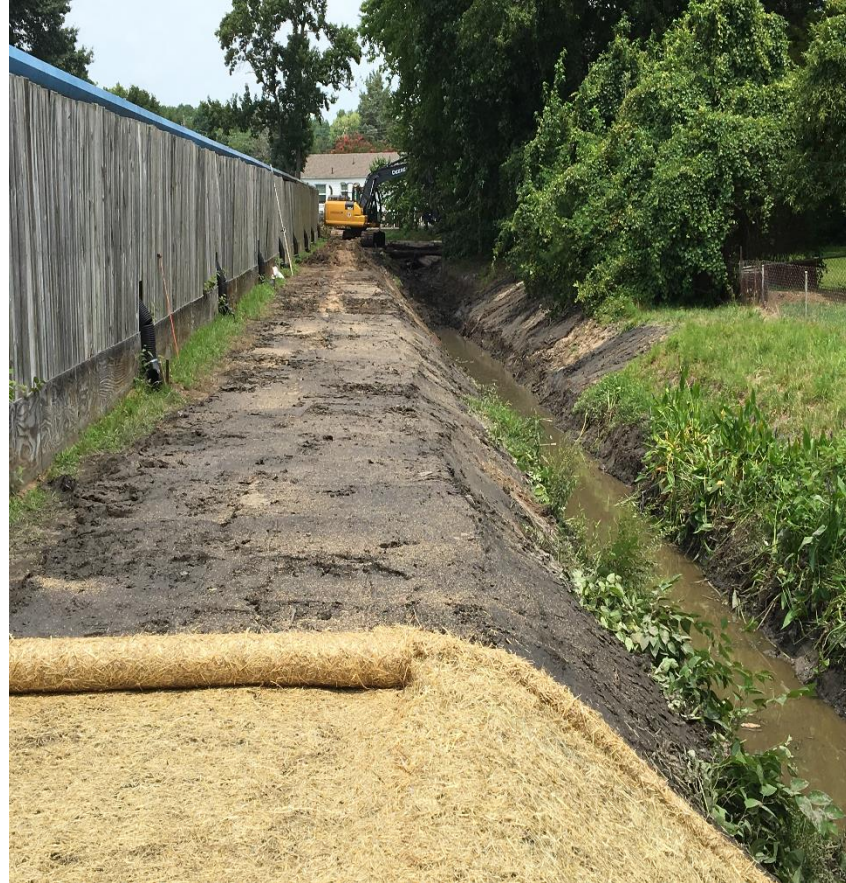


Limit and reduce impervious area

Reserve green area

Improve property

Improving Waterways & Reducing Flooding



Northampton Area:

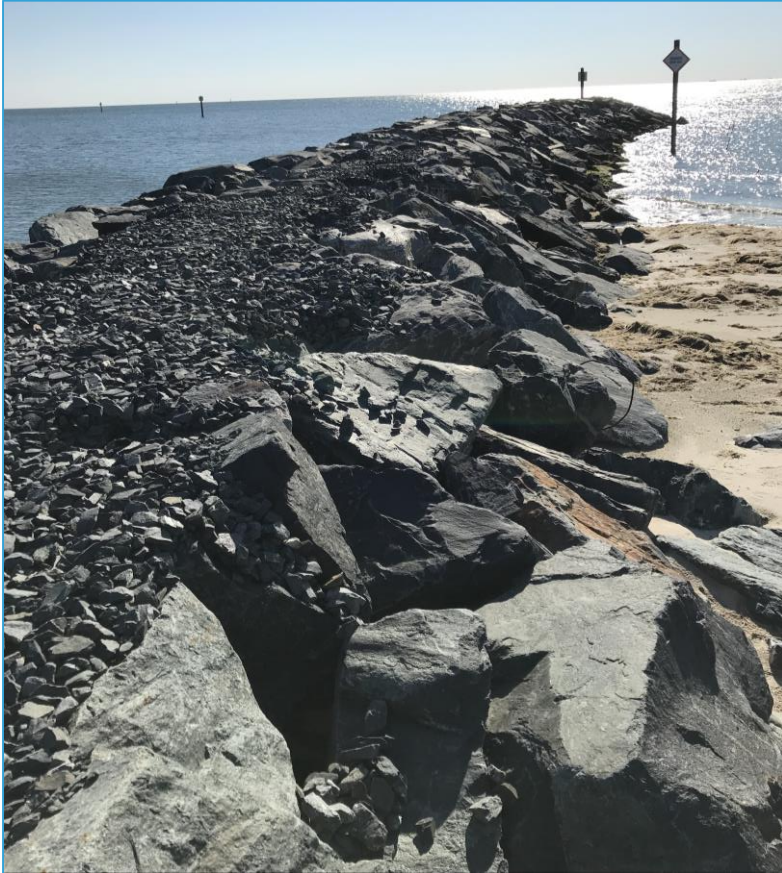
- Drainage Improvements

Improving Waterways & Reducing Flooding



- Indian River Creek:
- Mouth of River Dredging
 - Outfall Improvement

Improving Waterways & Reducing Flooding



- Salt Ponds Inlet:
- Improvement
 - Dredging

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