



City Council
22 January 2020

Agenda

1. Newmarket Creek Pilot Project Presentation
2. Community meeting feedback
3. Request to endorse pilot projects for implementation

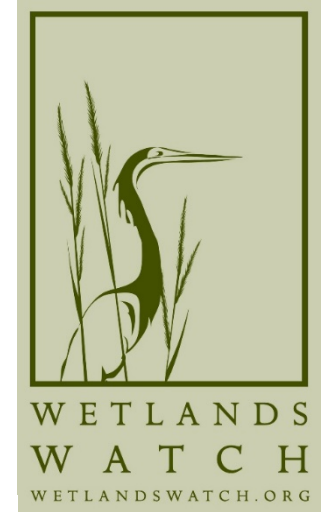


Terry O'Neill, City of Hampton

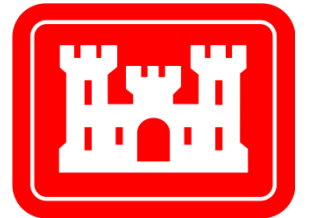
Partners



**CHESAPEAKE BAY
FOUNDATION**
Saving a National Treasure



RISE
Resilience Innovations



History

Resilient Hampton, 2015 - now

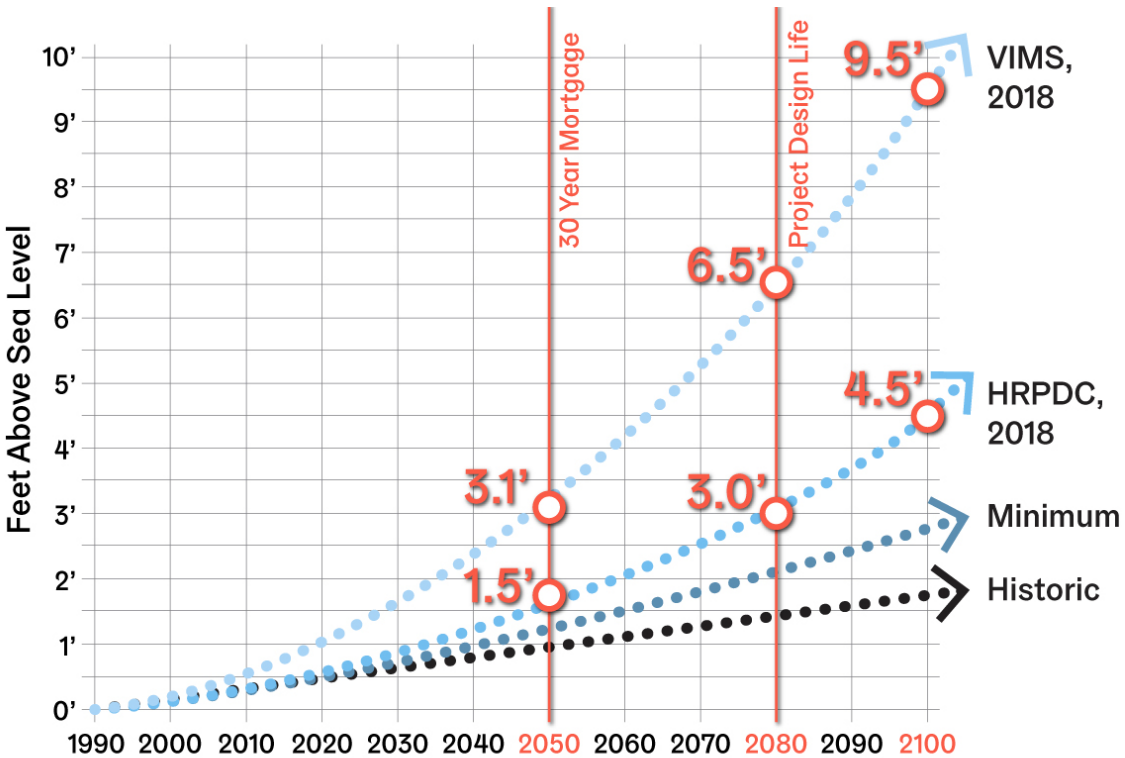
Resilient Hampton is an opportunity for the City of Hampton, its residents, and its partners to advance leadership in the resilience field.

- **Dutch Dialogues Virginia (2015)**
- **Resilient Hampton Phase I (2018)**
- **Hampton-Langley JLUS Addendum (2018)**
- **Resilient Hampton Phase II (2018 - current)**



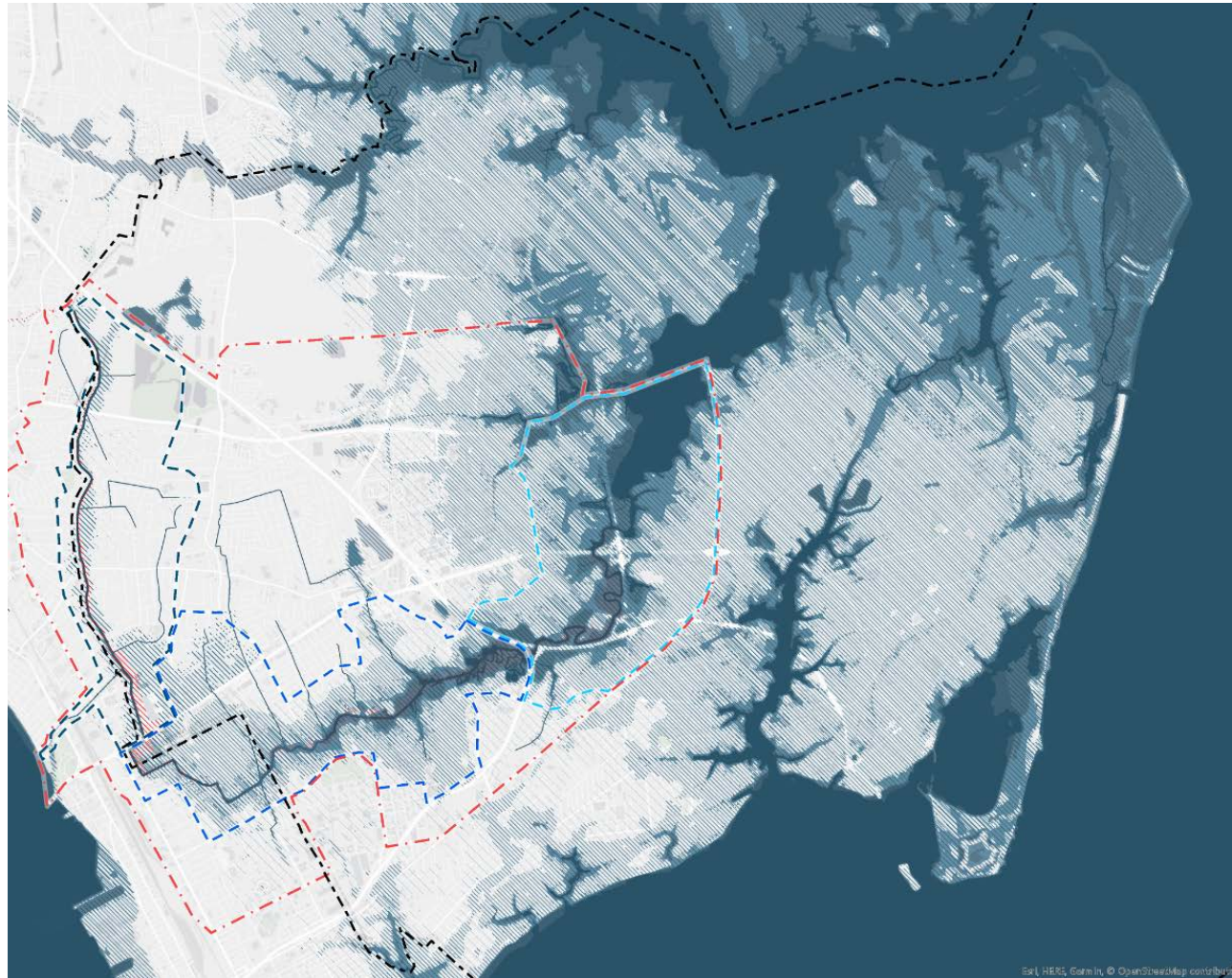
The Science of the Challenge

Forces of Water and Sea Level Rise

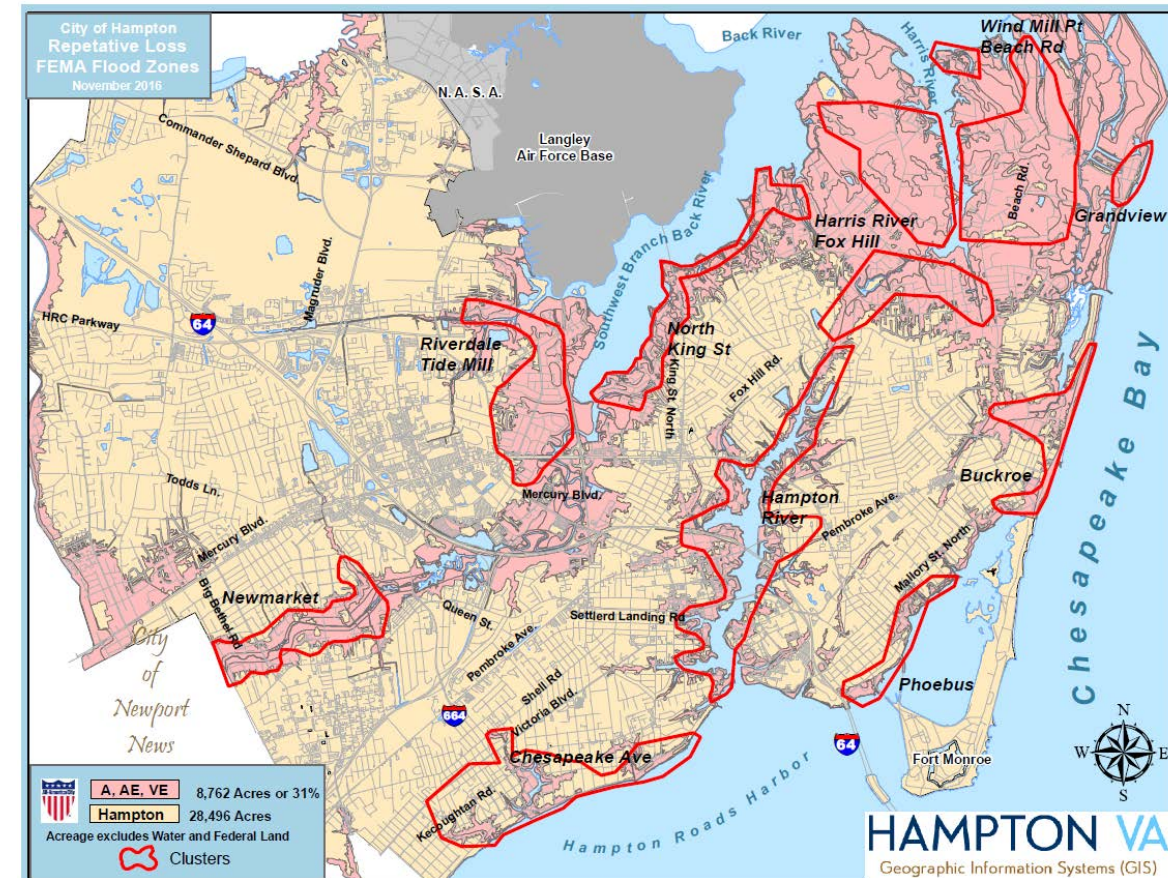


Impacts of Sea Level Rise

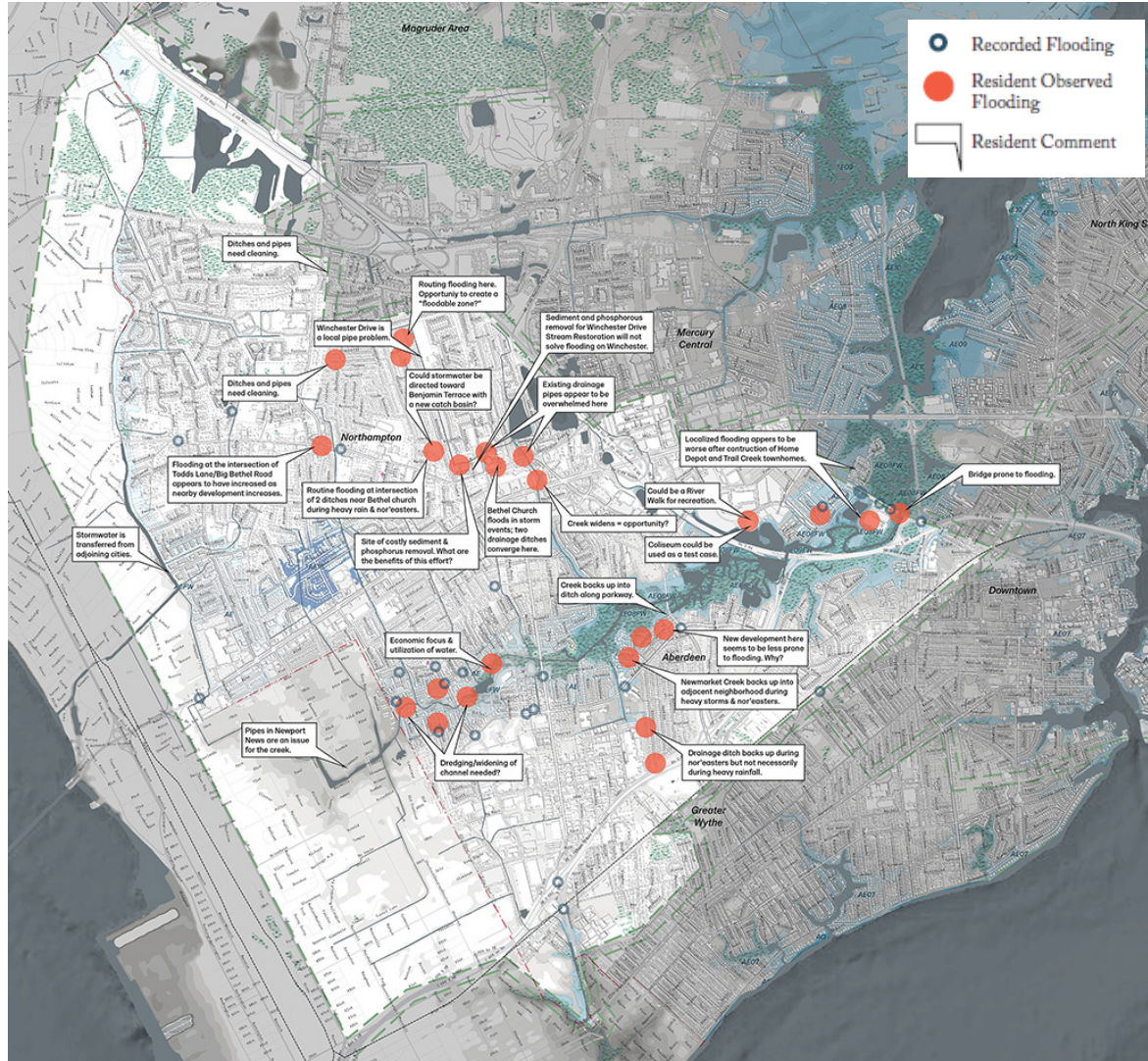
Floodplain with 4.5 feet of Sea Level Rise per HRPDC projection for 2100



Today's flooding properties (in red)



Phase I Community Outreach



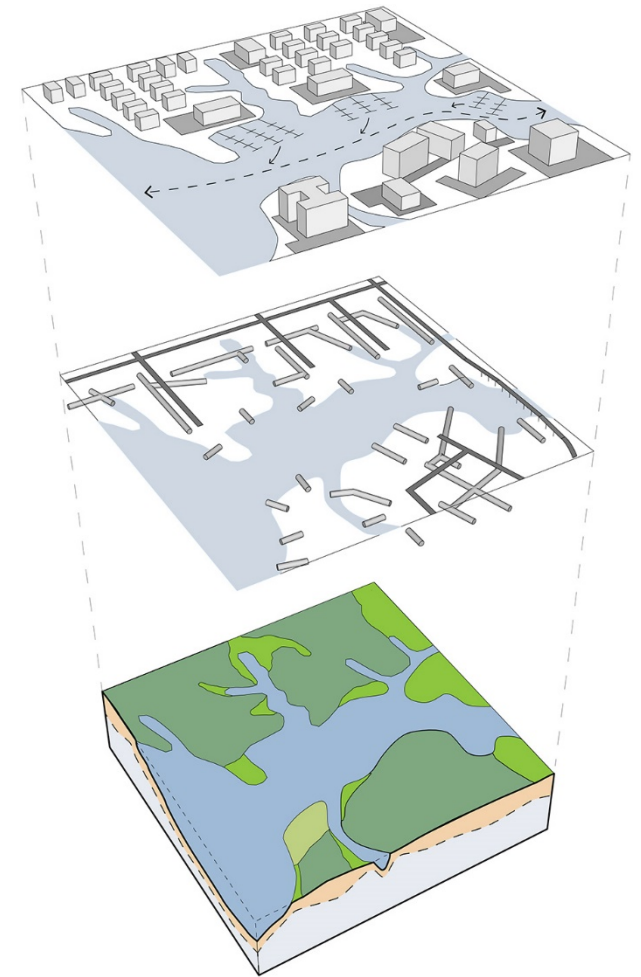
What are you experiencing and where?

Of these events, what are the most important to address?

Brainstorm possible actions for these priorities.

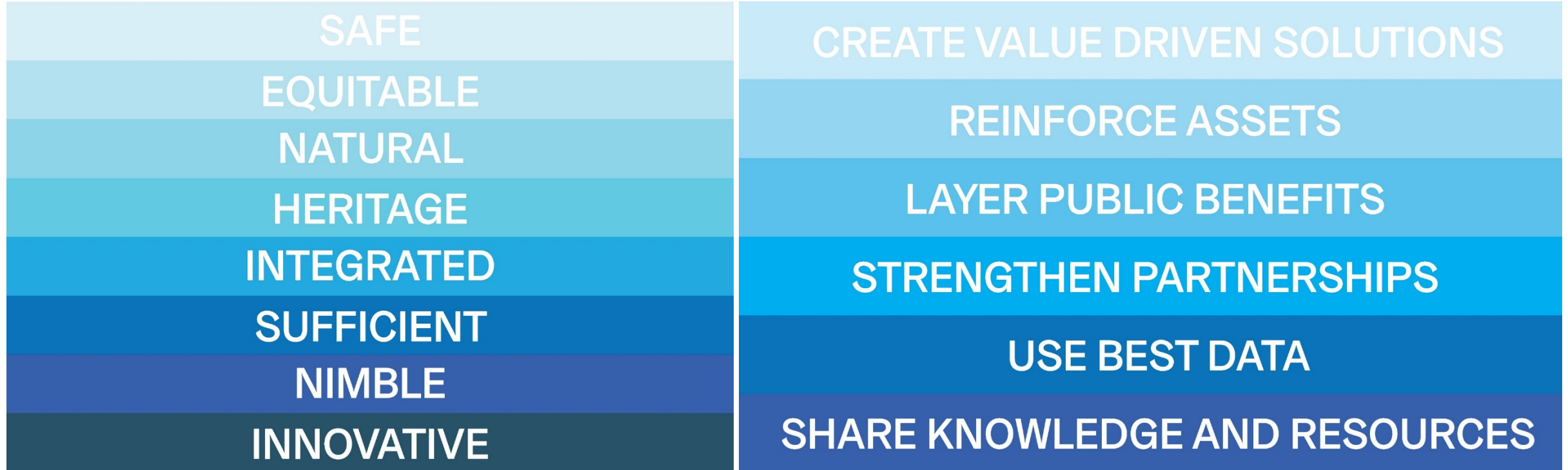
Key Findings from Phase I

ADDRESS THE CHALLENGE
EMBRACE THE INITIATIVE
ADOPT RESILIENCE STANDARDS
SOLUTIONS AT MULTIPLE SCALES
EDUCATE COMMUNITY
FOLLOW GUIDING PRINCIPLES
EVALUATE
LEAD THE WAY



Layered Planning approach

Values and Principles



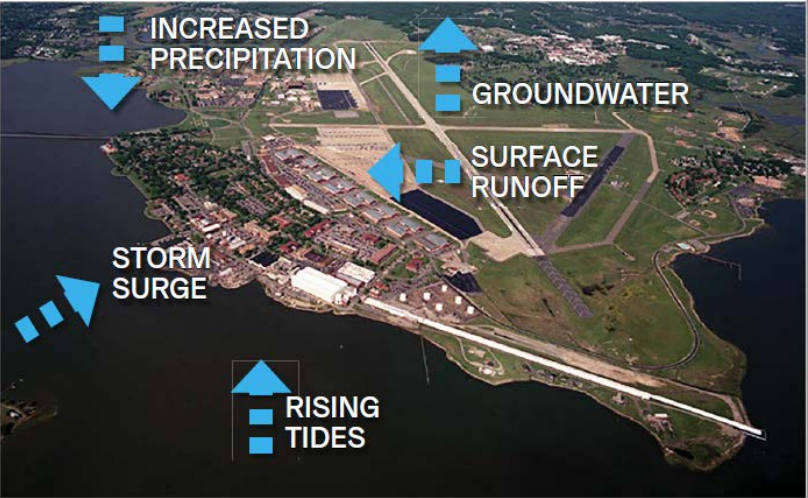
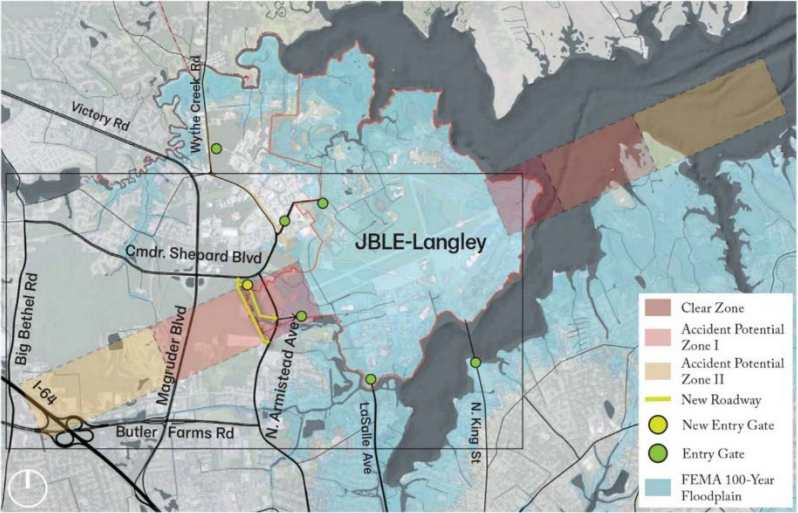
Multiple Scales

“Enhancing our response to sea level rise and resiliency shall be addressed at multiple scales: regional, city-wide, neighborhood, and individual parcel.” Hampton Community Plan



Image Credit: Hampton University Student

Hampton-Langley JLUS Addendum



11. Assess vulnerability, and create a plan for key assets on JBLE-Langley and off base

Strategy
Assess structures at JBLE-Langley and rank them according to vulnerability in order to prioritize which facilities should be protected and in which order.

Resilient Hampton Principles
Reinforce Assets, Use Best Data

Resilient Hampton Values
Safe, Heritage, Integrated, Sufficient, Nimble, Innovative

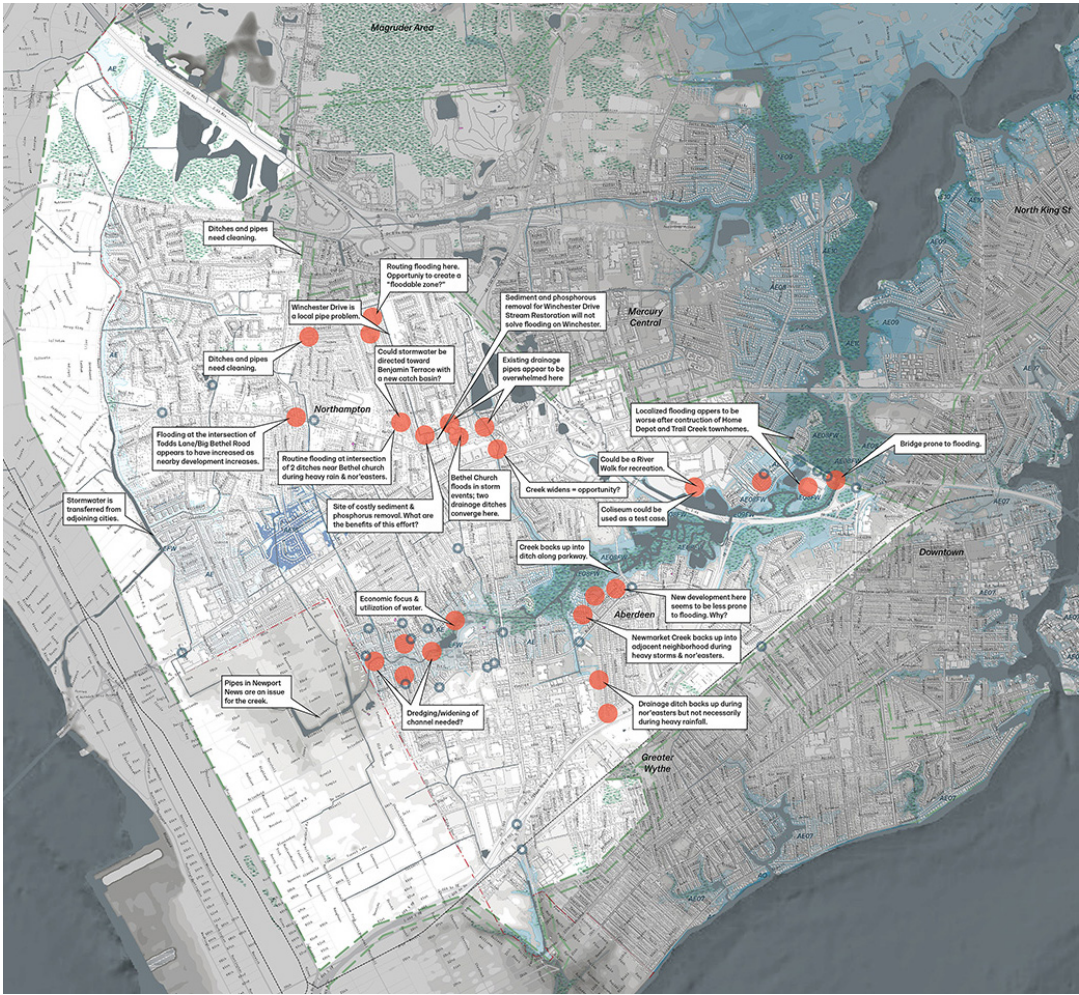
Implementation Actions
Action 111
Assess buildings and infrastructure on the base, as well as critical infrastructure off-base, in terms of the likelihood and impact of an extreme event like flooding. Develop a matrix to illustrate how to prioritize the structures based on importance of use and the elevation. Use the matrix below to determine which buildings or infrastructure are most vulnerable, and should be protected first.

		Impact			
		Low	Moderate	High	Very High
Likelihood	Low				
	Moderate				
	High				
	Very High				

PRINCIPLES	
Create Value-Driven Solutions	
Reinforce Assets	
Layer Public Benefits	
Strengthen Partnerships	
Use Best Data	
Share Knowledge & Resources	
VALUES	
Safe	
Equitable	
Natural	
Heritage	
Integrated	
Sufficient	
Nimble	
Innovative	
LOCATION	
Inside JBLE-Langley	
Outside JBLE-Langley	
Both	
RESPONSIBILITY	
City of Hampton	
JBLE-Langley	
City of Newport News	
City of Poquoson	
York County	
Commonwealth of Virginia	
JLUS Implementation Commit.	
HRTPO	
VDOT	
NASA	
Other (see text)	
ROM COST	
< \$50,000	
> \$50,000	
> \$1,000,000	
PRIORITY	
Short Term	
Medium Term	
Long Term	
Lead Agency =	



Newmarket Creek Pilot Project Area



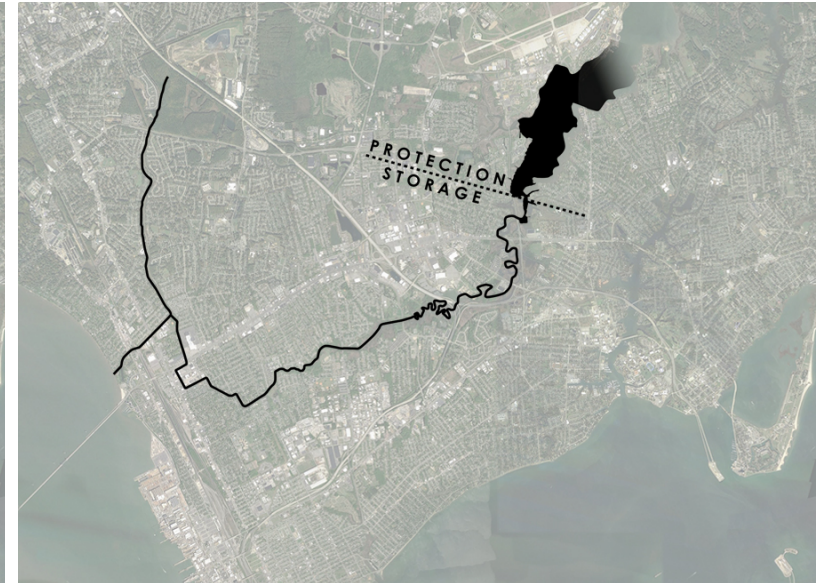
Newmarket Creek Water Systems



Runoff and Drainage



Tidal



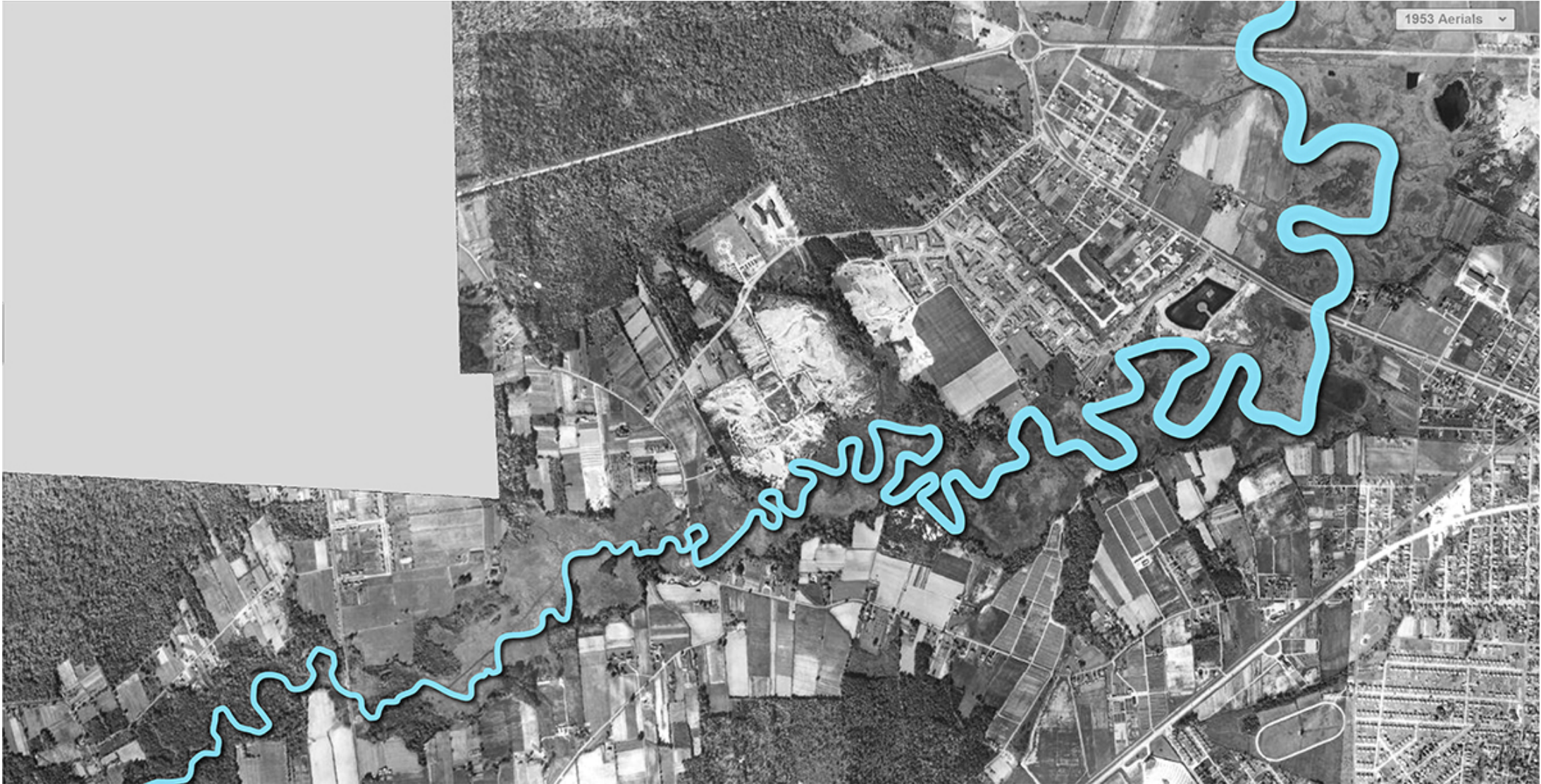
Coastal

History of Development



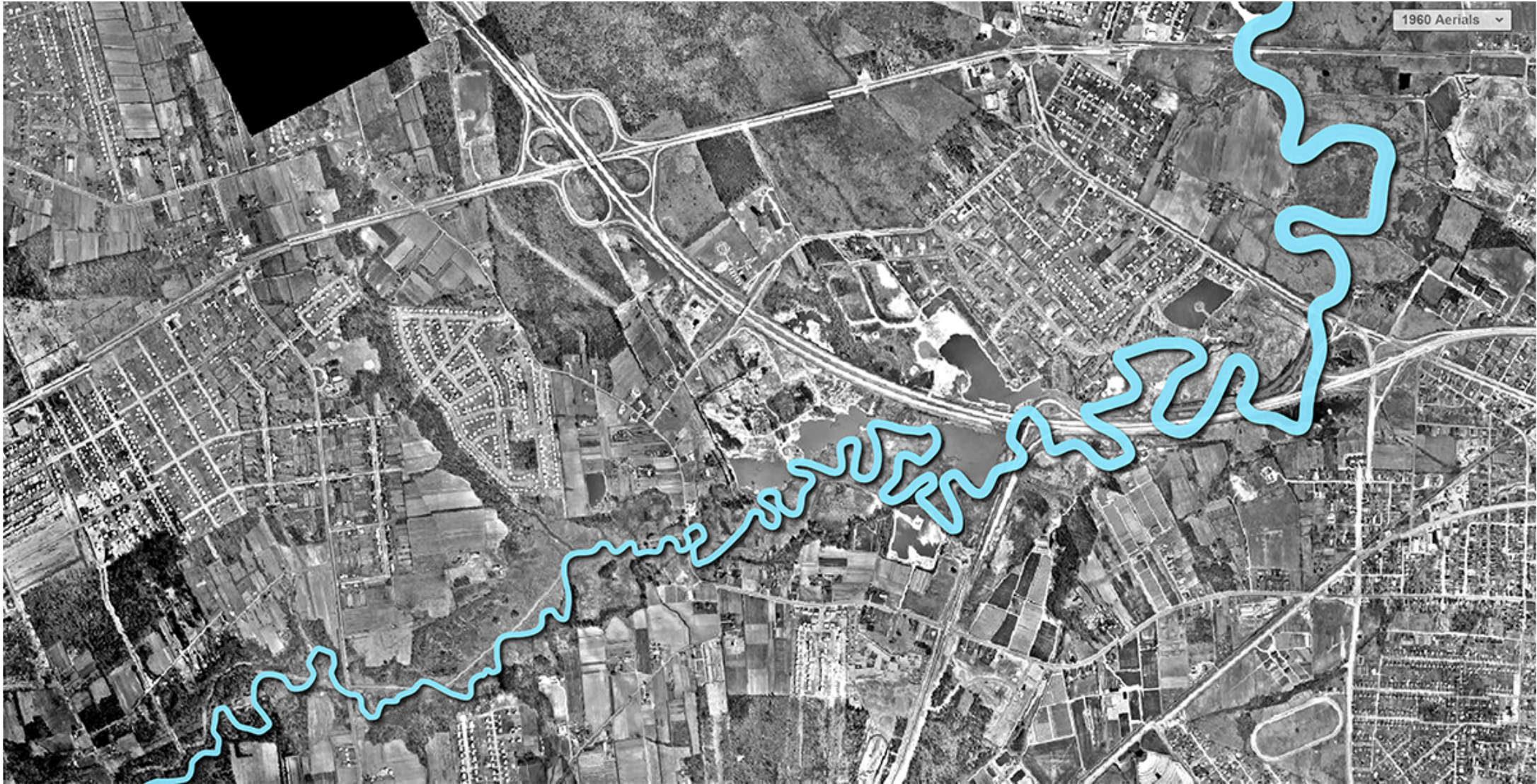
1937

History of Development



1953

History of Development



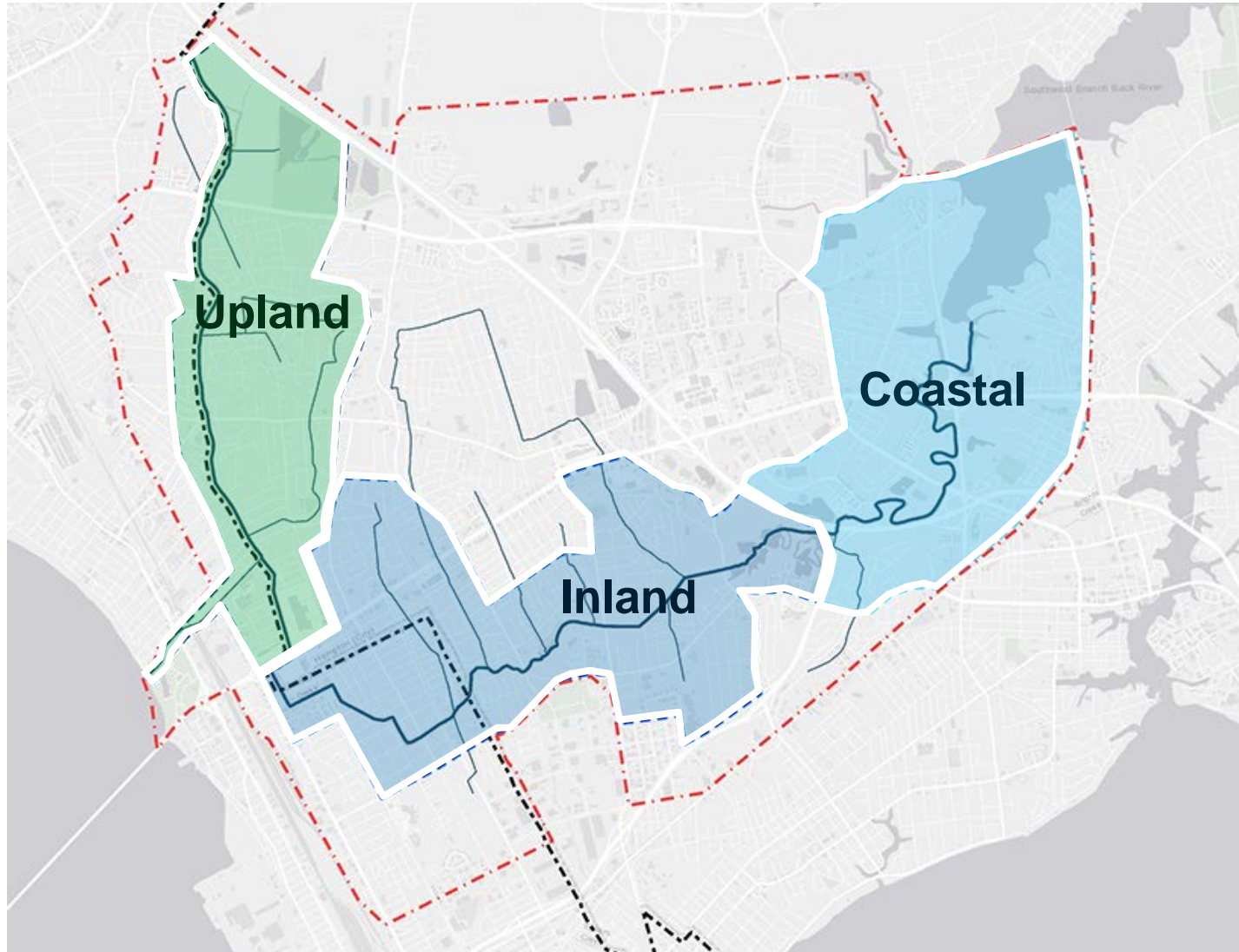
1960

History of Development



2013

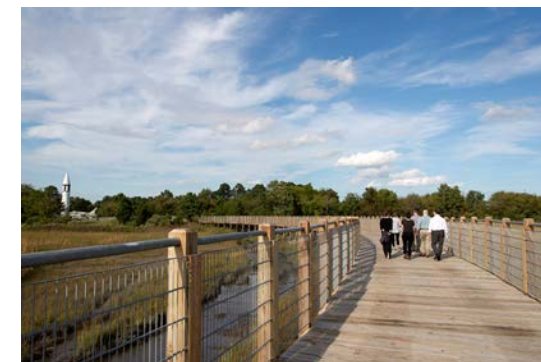
Newmarket Creek Identity Zones



Upland



Inland



Coastal

Phase II Community Outreach



Design Workshop, January 2019



Community Meeting, January 2019



JBLE-Langley

Sandy Bottom
Nature Park

Magruder Blvd

Billy Woods Canal

Hampton Roads Center Pkwy

Armistead
Pointe Park

Tide Mill Creek

Southwest Branch Back River

Newmarket Creek

Todds Lane

Mercury Boulevard

N Armistead Ave

Locust Ave

Crossroads Parking Lot
N. Armistead Avenue Green
Infrastructure & Road Raising
Lake Hampton

Convention
Center
Coliseum

I-64

City Hall

Hampton River

Big Bethel Rd

Newmarket Creek

Briarfield
Park

I-664

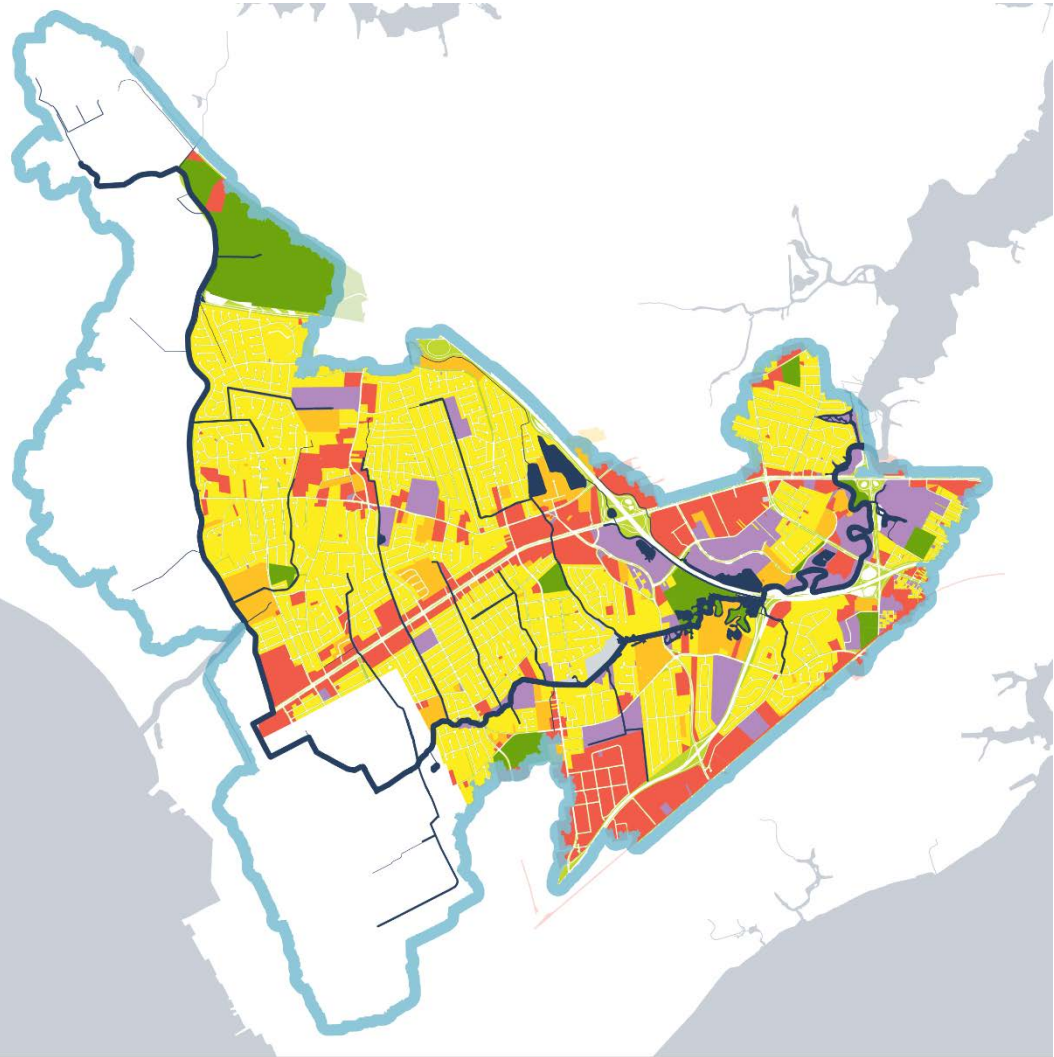
City of Newport News

Big Bethel Blueway

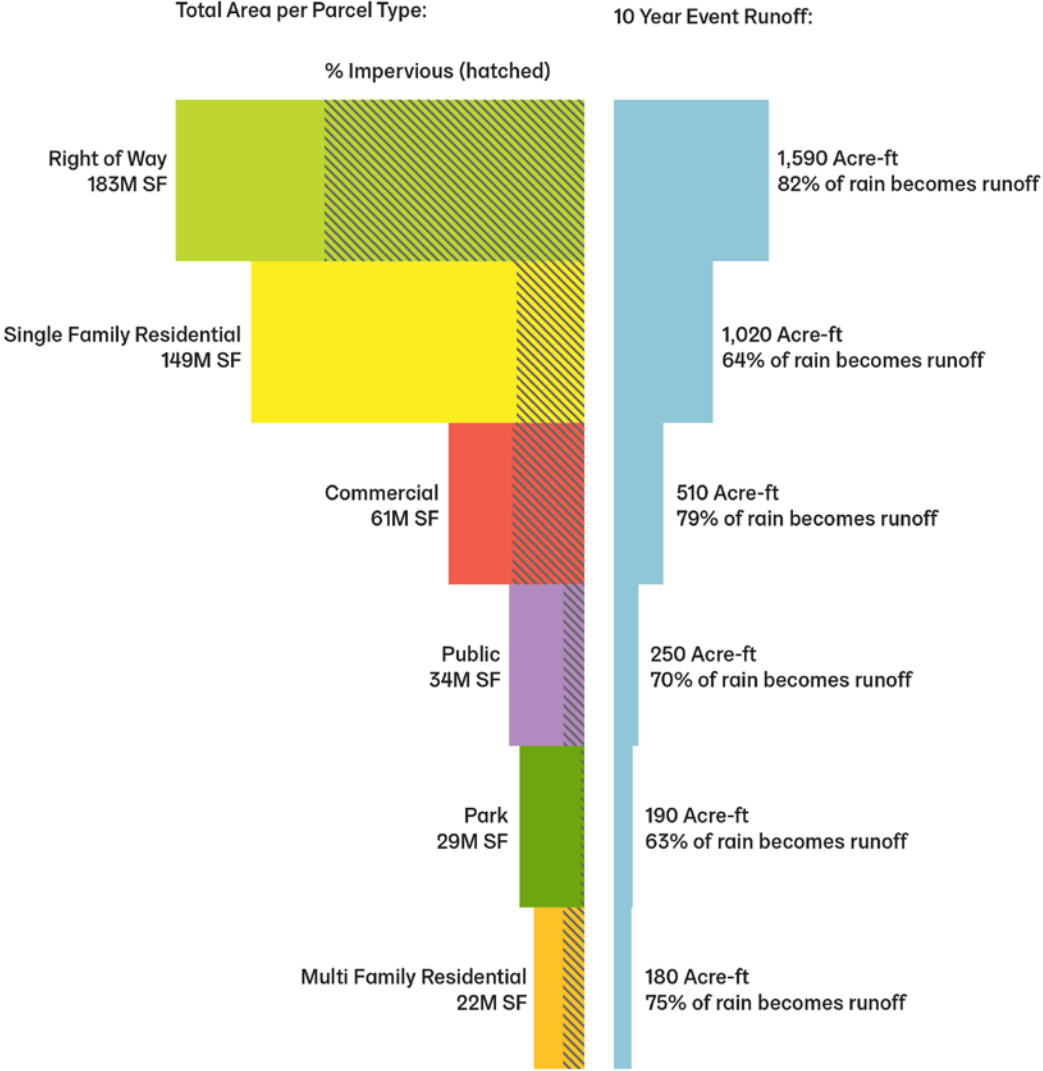
MarCenter
Newmarket
Square

James River

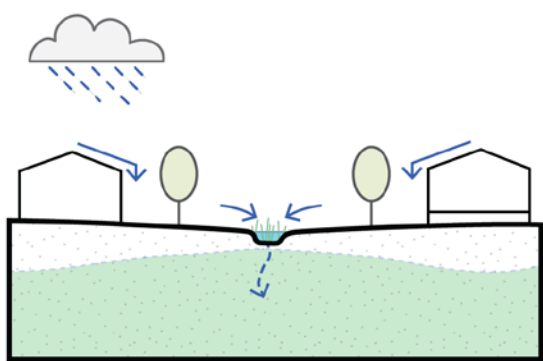
Runoff



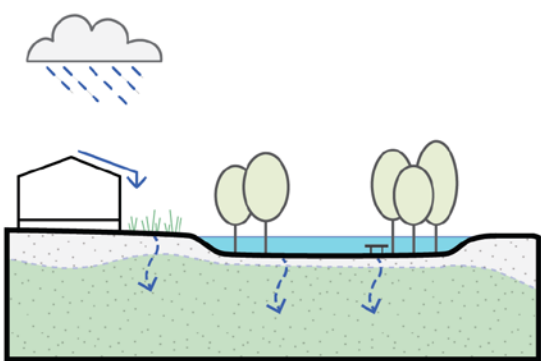
Land Use in
Newmarket
Creek
Watershed



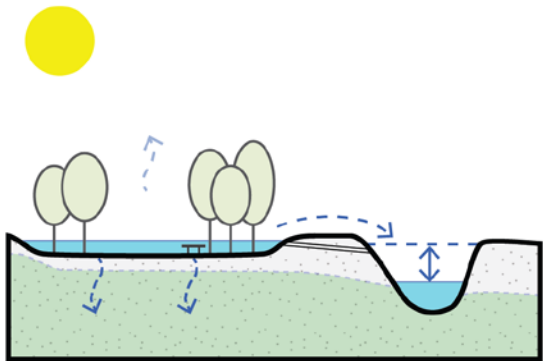
Slow, Store, Redirect & Adapt



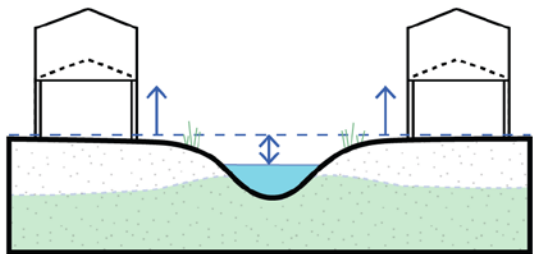
Slow



Store



Redirect



Adapt

Pilot Project: Big Bethel Blueway



- **Slow & store water**
- **Water quality**
- **Green infrastructure**
- **Shared use path**
- **Replicable within existing easements**

Pilot Project: Armistead Avenue



- Elevate major street
- Slow & store water
- Birthplace of America Trail
- Treat water with Lake Hampton
- Green infrastructure
- Replicable for other streets

Pilot Project: Public spaces

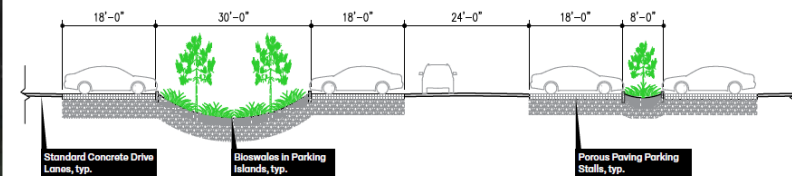


- Public spaces to slow & store water
- Water quality
- Green infrastructure
- Waterwalk loop & park

Pilot Project: Parking Lot

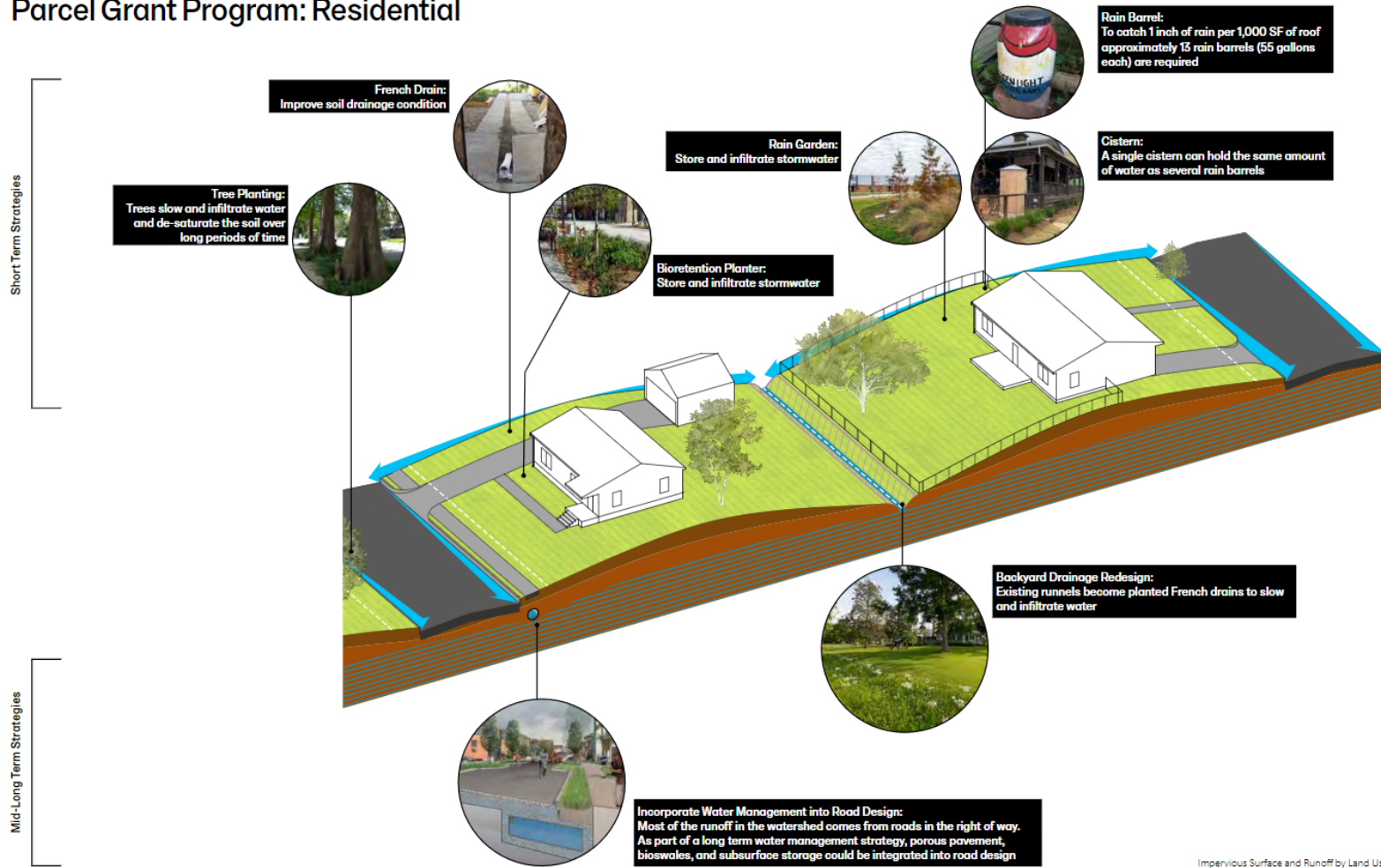


- Public spaces to slow & store water
- Parking +
- Green infrastructure
- Urban heat island



Pilot Project: Resilient And Innovative Neighbors

Parcel Grant Program: Residential



- Incentives for property owners
- Small-scale green infrastructure
- Partnerships
- Multiply our efforts



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Funding and Opportunities

Local

City Council allocated \$12M in FY20 budget Capital Improvement Plan

State

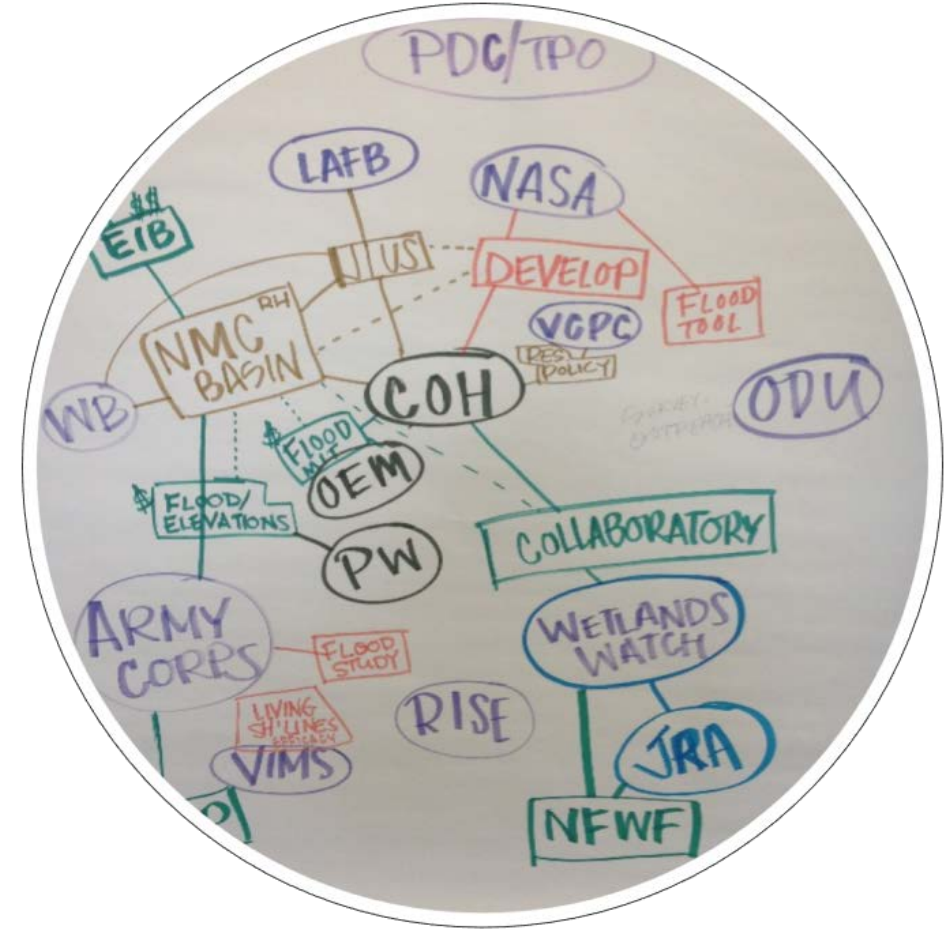
University in-kind work

Federal

US Army Corps of Engineers CAP FEMA home elevation program

Other

Environmental Impact Bonds Partnerships Grants



Schedule & Next Steps

Timeframe	Activities for first bundle*
January 2020	<ul style="list-style-type: none">• Community Engagement Meeting• City Council endorses conceptual pilot projects
February 2020	<ul style="list-style-type: none">• Project design and engineering begins• RAIN grant program begins
Fall 2020	<ul style="list-style-type: none">• Project design and engineering complete
Early 2021	<ul style="list-style-type: none">• Construction project bidding
Spring 2021	<ul style="list-style-type: none">• Construction begins

*typical for subsequent phases

Summary of Projects: Phase I

*Subsequent Phases to Follow

Bundle #1	Project
	<ul style="list-style-type: none"> • Armistead Avenue Elevation
	<ul style="list-style-type: none"> • Armistead Avenue Green Infrastructure
	<ul style="list-style-type: none"> • Parcel Grant Program – Area #1
	<ul style="list-style-type: none"> • Water Storage Sites
Bundle #2	Project
	<ul style="list-style-type: none"> • Crossroads Parking Lot
	<ul style="list-style-type: none"> • Big Bethel Blueway
	<ul style="list-style-type: none"> • Lake Hampton Waterwalk Expansion
	<ul style="list-style-type: none"> • Parcel Grant Program - Area #2
	<ul style="list-style-type: none"> • Water Storage Sites



- **Implementing the pilot projects**
- **Green infrastructure approach over hard solutions**
- **Incorporating multiple benefits, multi-use paths**
- **RAIN grant, planting canopy trees and native plants**

- Keep looking for opportunities on public/private land to store water
- Ensure maintenance is considered and monitor for success
- Desire to address tidal portion of the creek + other neighborhoods
- Don't encourage mosquitos





#resilienthampton

www.hampton.gov/ResilientHampton

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