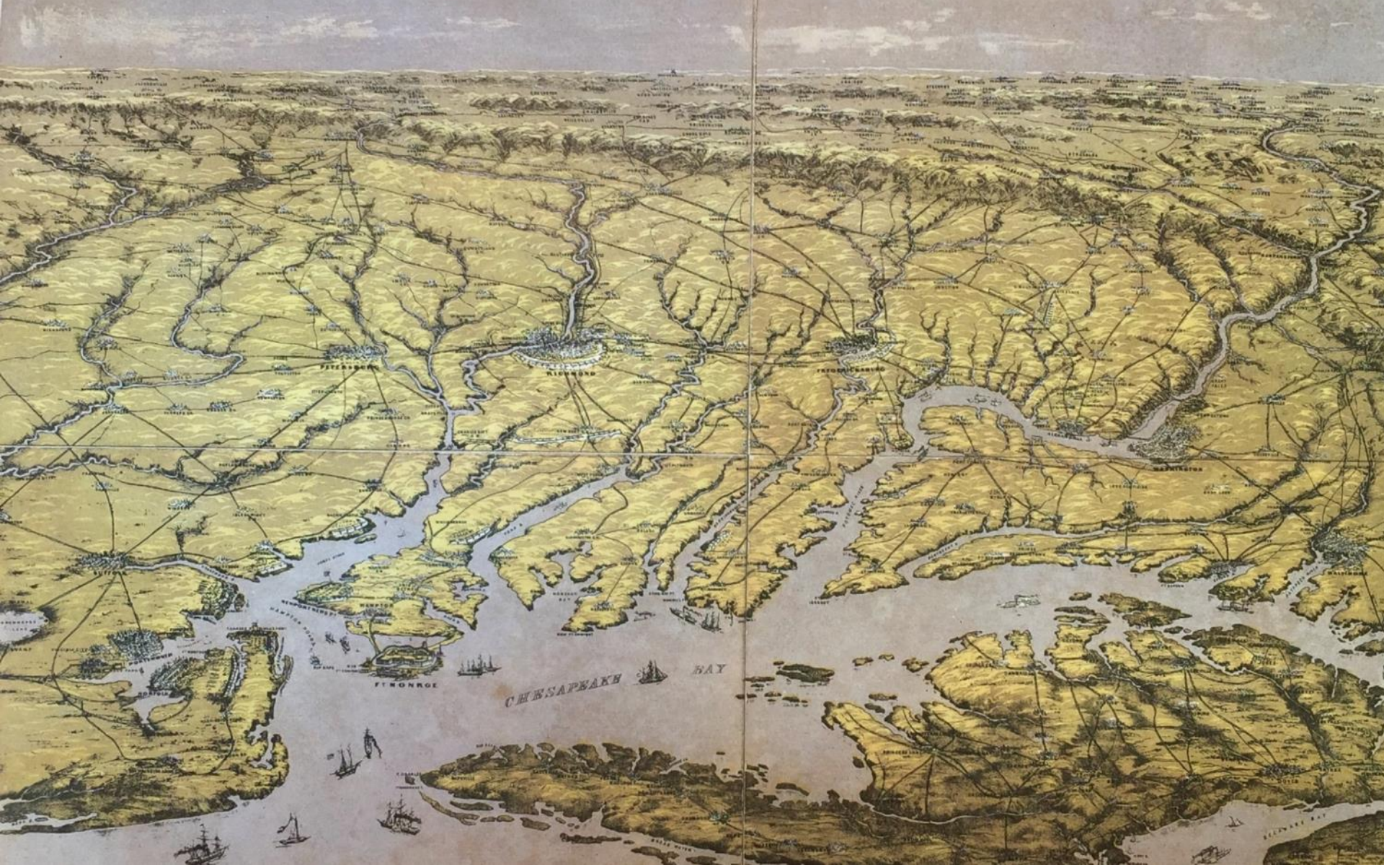
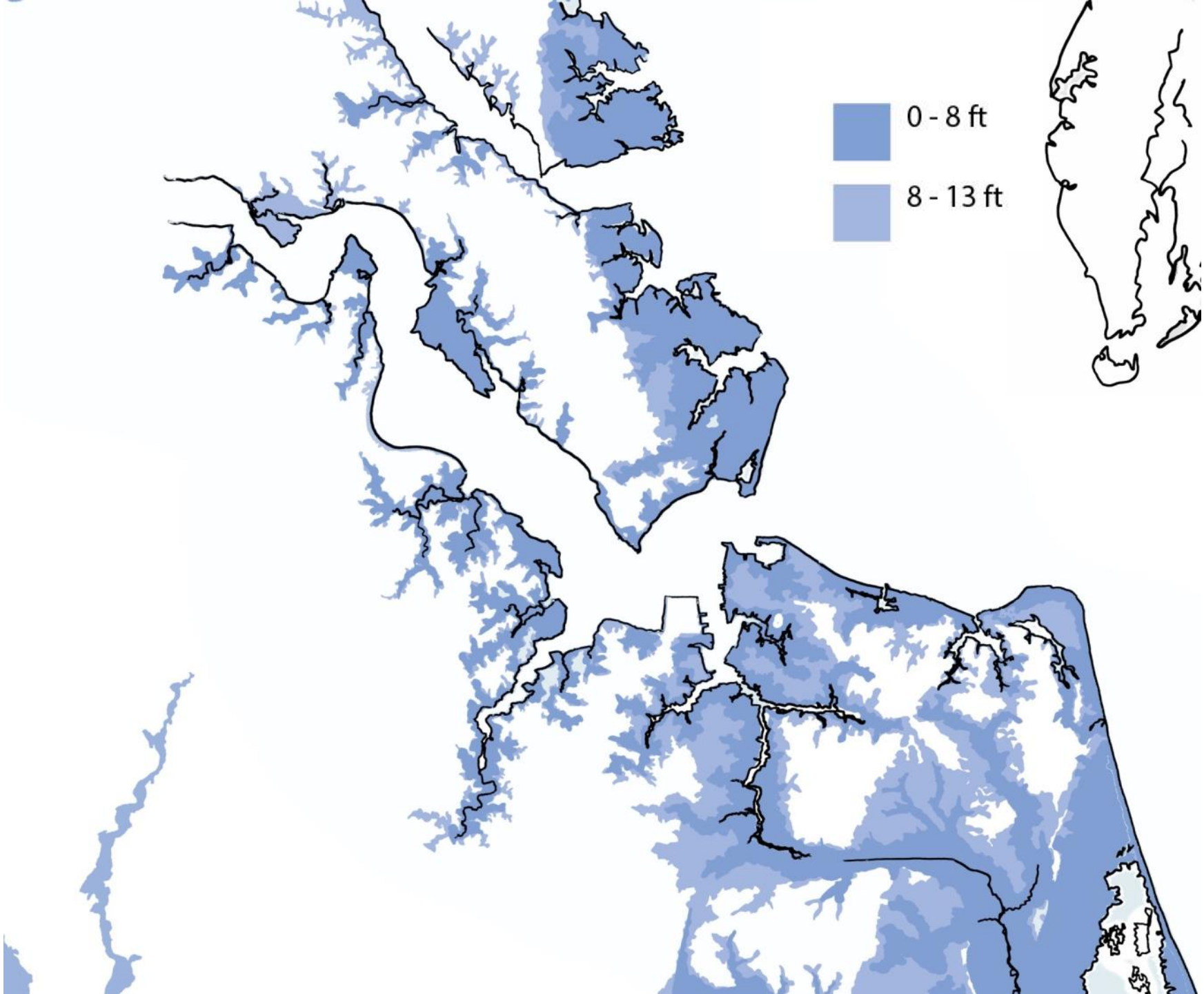
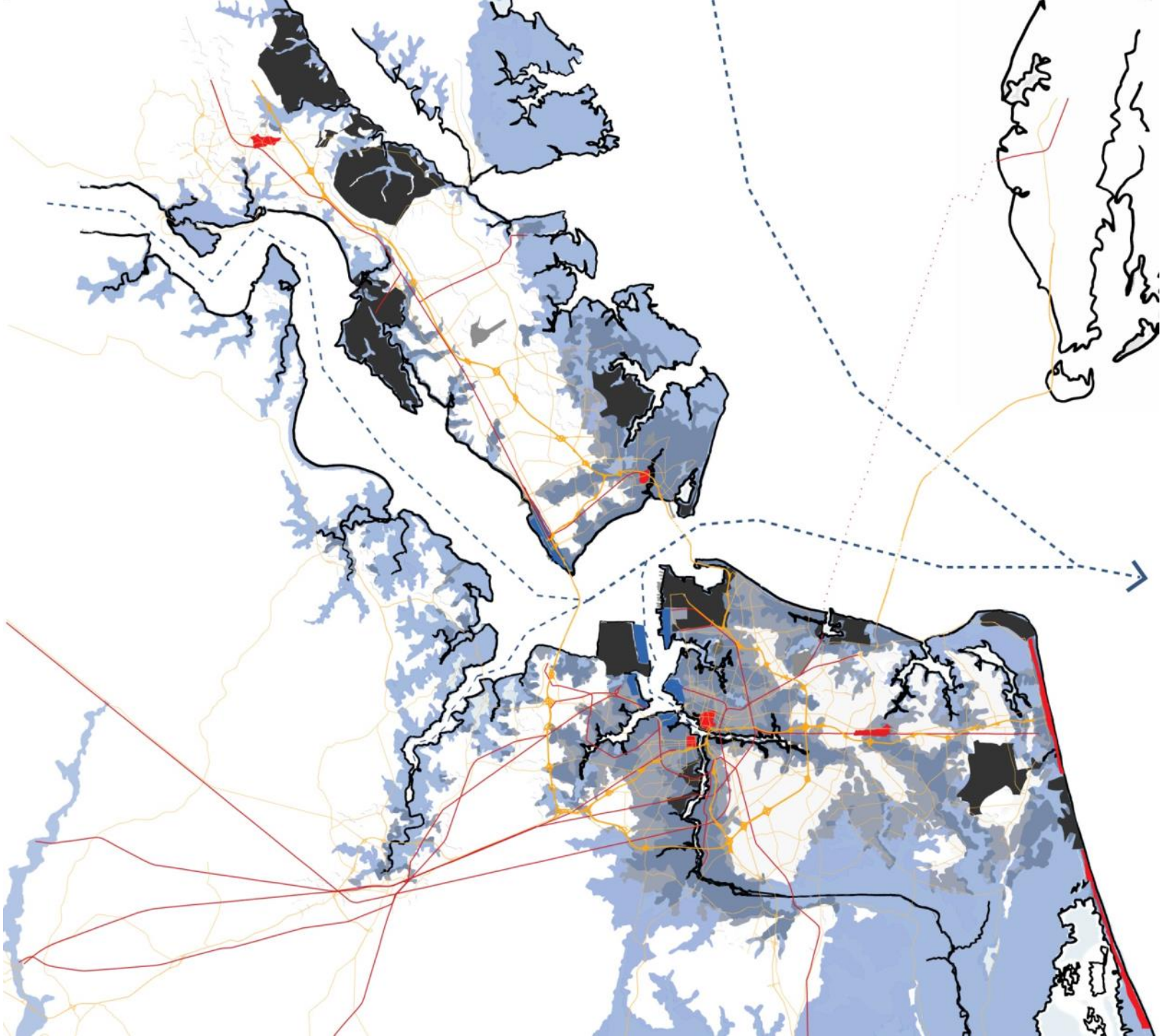
DUTCH DIALOGUES

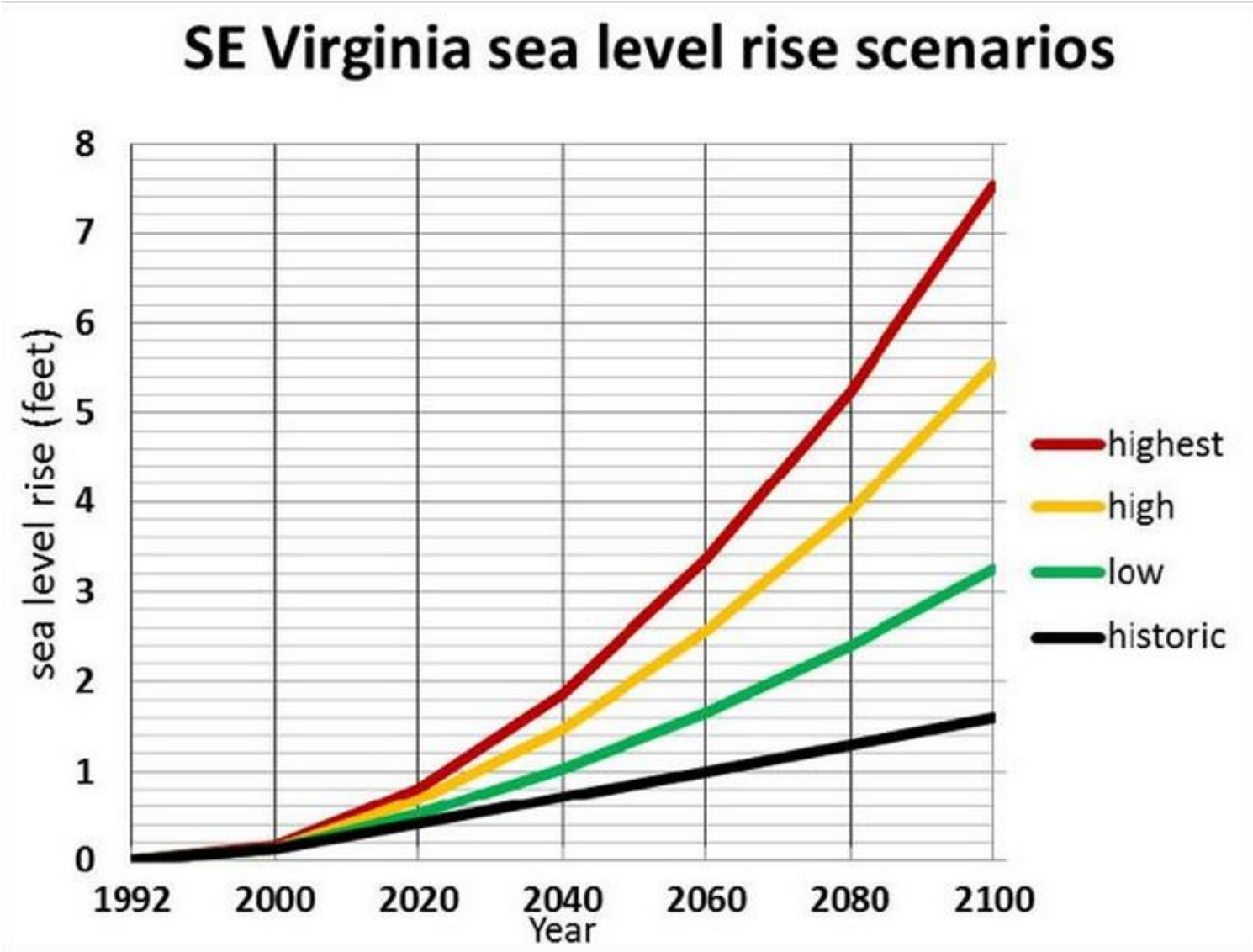
Hampton, Virginia

LIFE AT SEA LEVEL

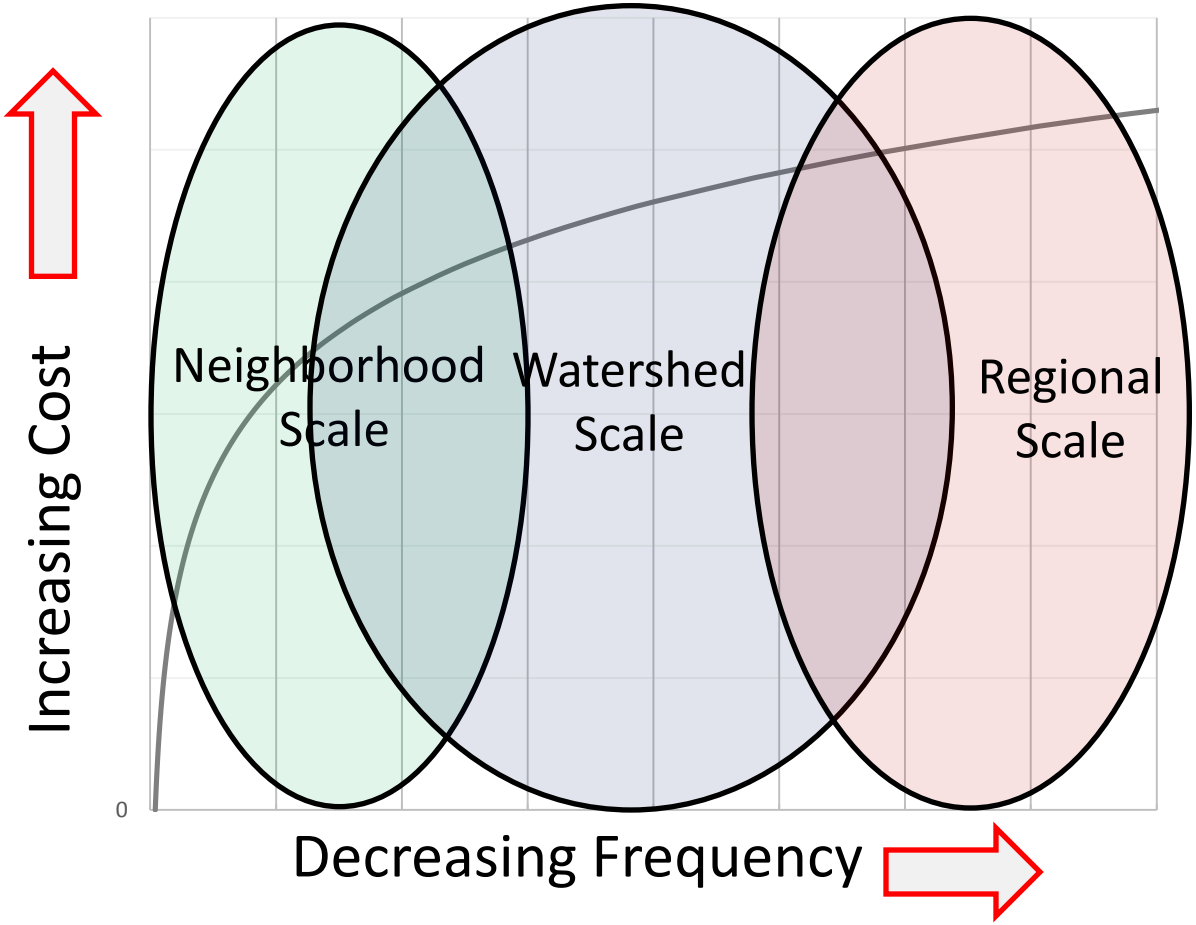

PETERSBURG
RICHMOND
FREDERICKSBURG
WASHINGTON
NORFOLK
NEWPORT NEWS
HAMPTON
FT MONROE
CHESAPEAKE BAY

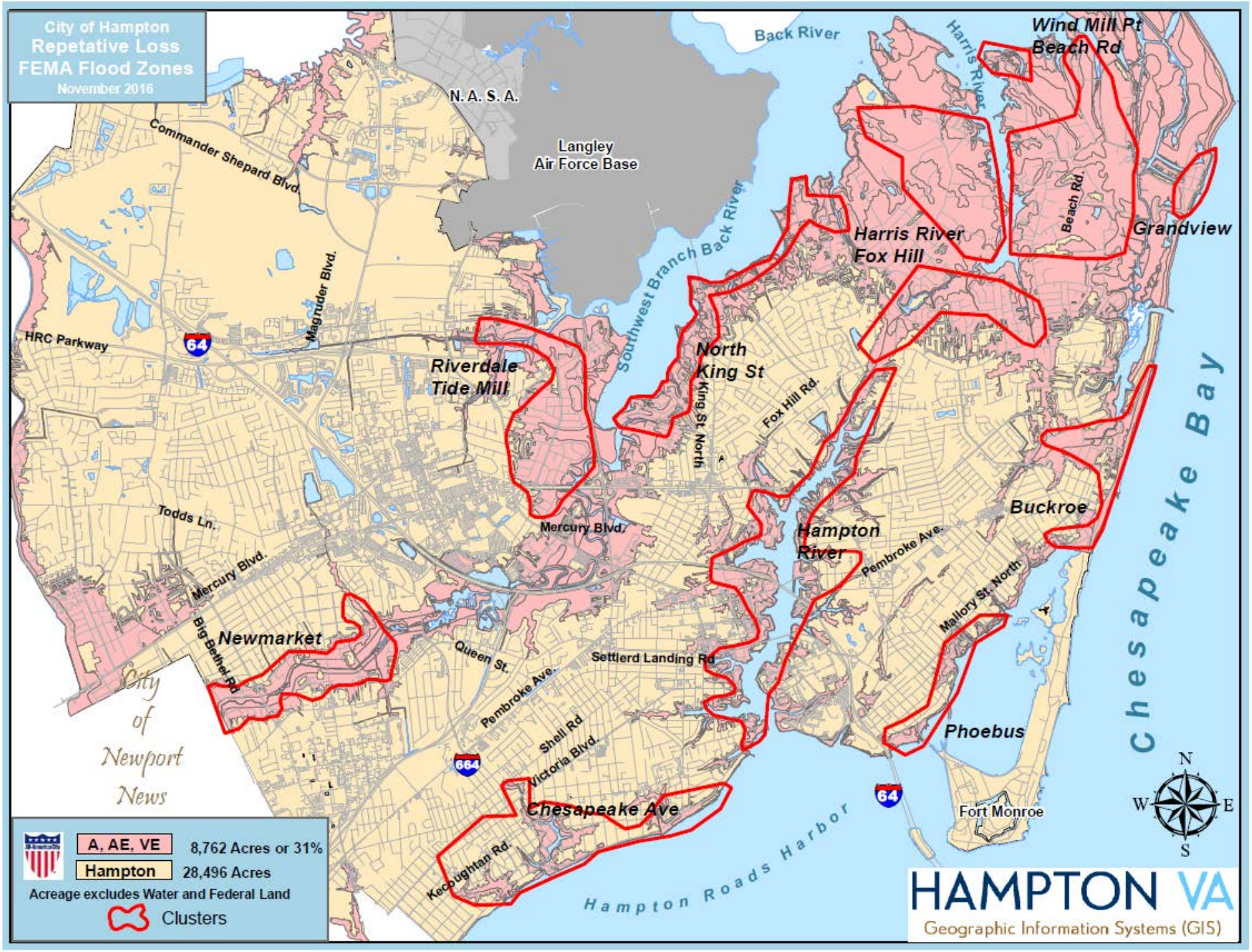

0 - 8 ft
8 - 13 ft

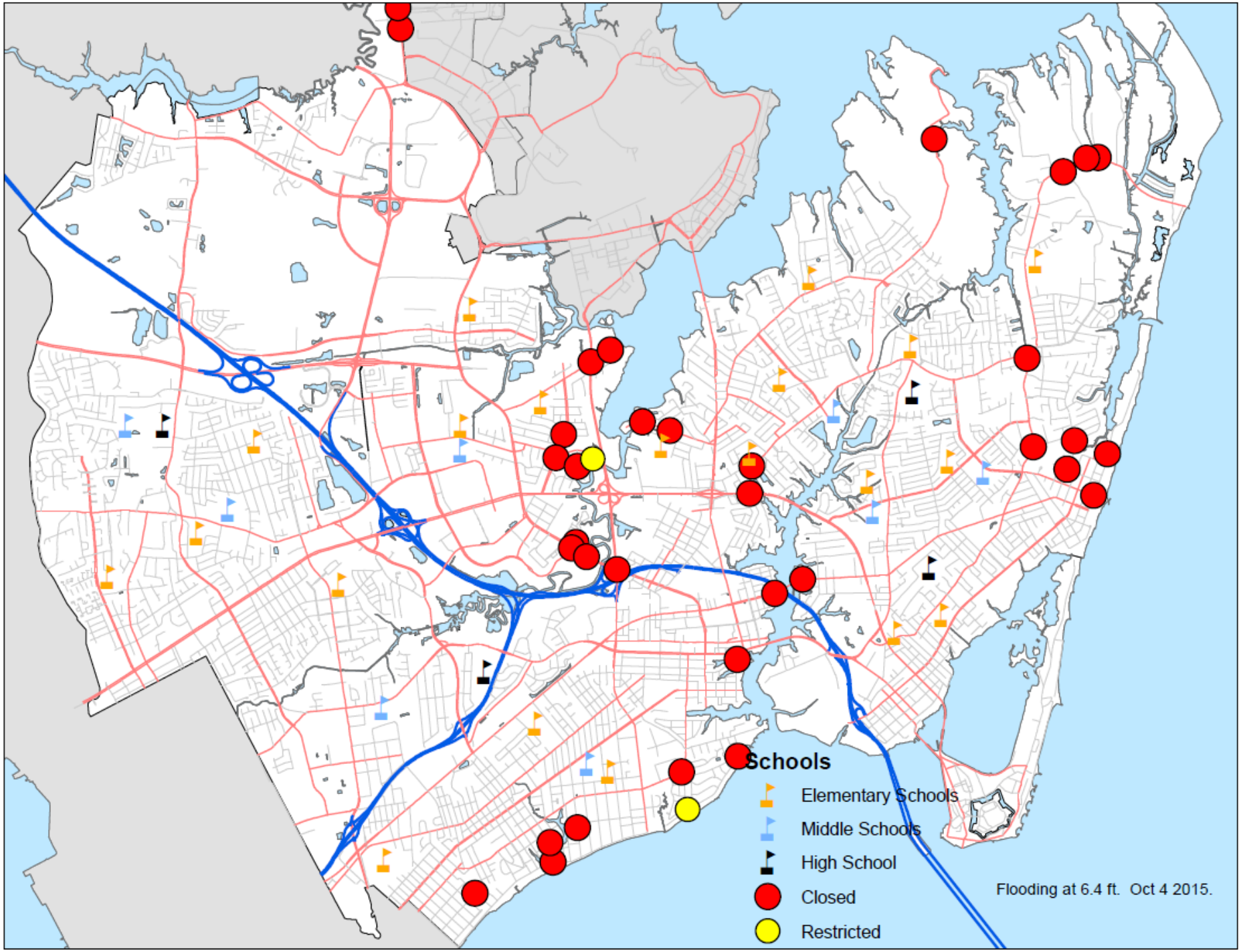



SE Virginia sea level rise scenarios
sea level rise (feet)
0
1
2
3
4
5
6
7
8
1992
2000
2020
2040
2060
2080
2100
Year
highest
high
low
historic

Size of Flood Impact

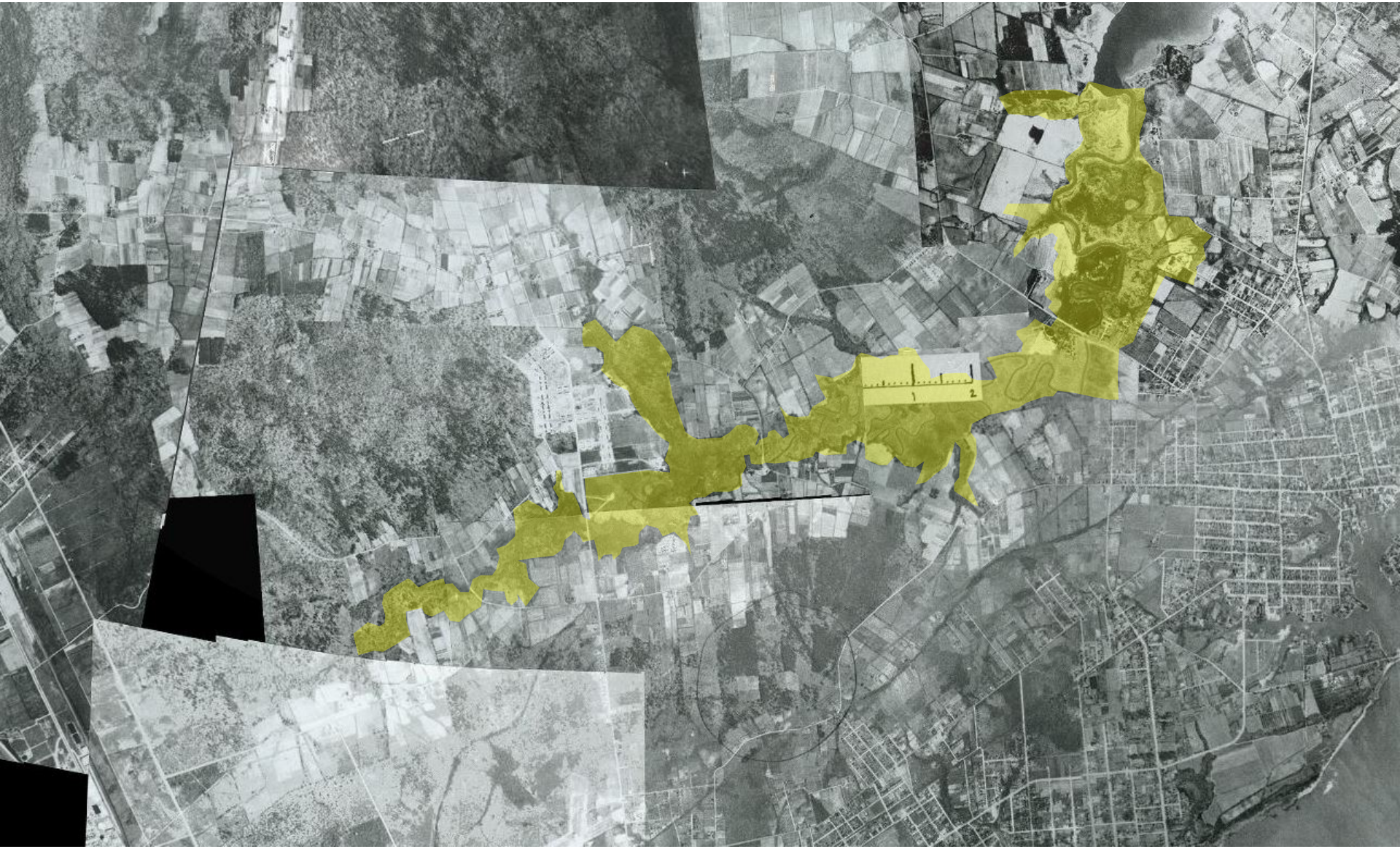



City of Hampton
Repetative Loss
FEMA Flood Zones
November 2016
N. A. S. A.
Langley
Air Force Base
Back River
Harris River
Wind Mill Pt
Beach Rd
Commander Shepard Blvd.
Magruder Blvd.
HRC Parkway
64
Southwest Branch Back River
Harris River
Fox Hill
Beach Rd.
Grandview
Riverdale
Tide Mill
North
King St
King St. North
Fox Hill Rd.
Chesapeake Bay
Todds Ln.
Mercury Blvd.
Mercury Blvd.
Hampton
River
Pembroke Ave.
Buckroe
Mallory St. North
Big Bethel Rd
Newmarket
Queen St.
Settlerd Landing Rd
Pembroke Ave.
Shell Rd
Victoria Blvd.
664
Phoebus
City
of
Newport
News
Chesapeake Ave
64
Fort Monroe
Kecoughtan Rd.
Hampton Roads Harbor
N
W
E
S
A, AE, VE
8,762 Acres or 31%
Hampton
28,496 Acres
Acreage excludes Water and Federal Land
Clusters
HAMPTON VA
Geographic Information Systems (GIS)


Schools
Elementary Schools
Middle Schools
High School
Closed
Restricted
Flooding at 6.4 ft. Oct 4 2015.

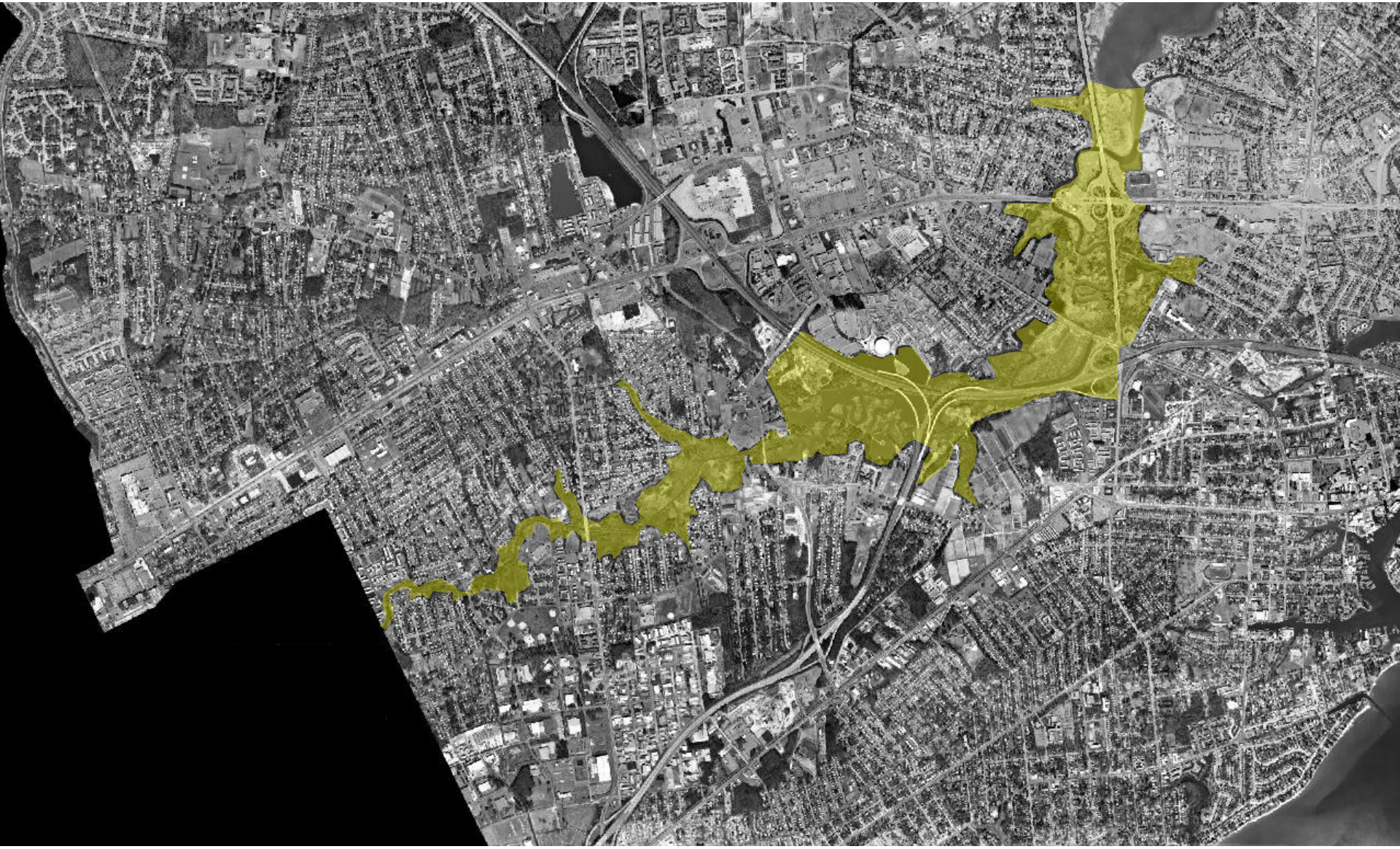
Newmarket Creek

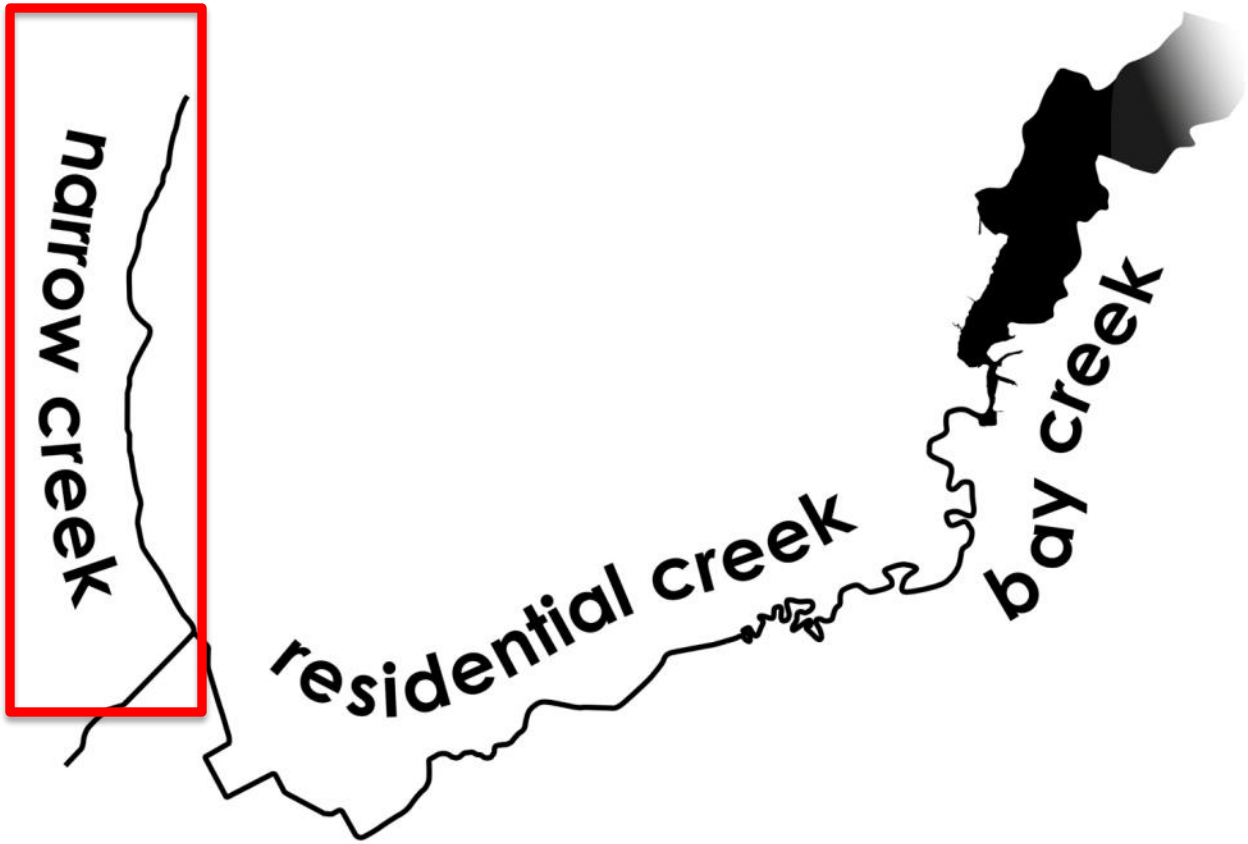
1937



1968

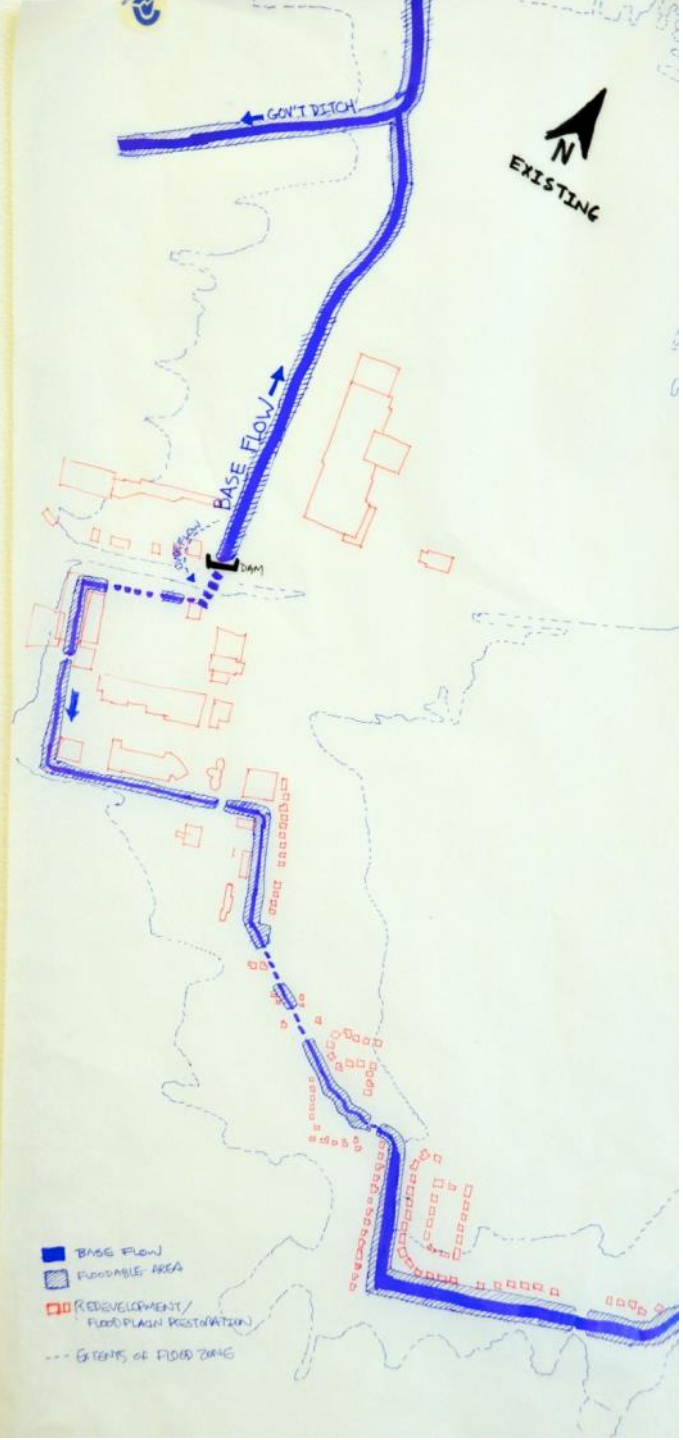
1995

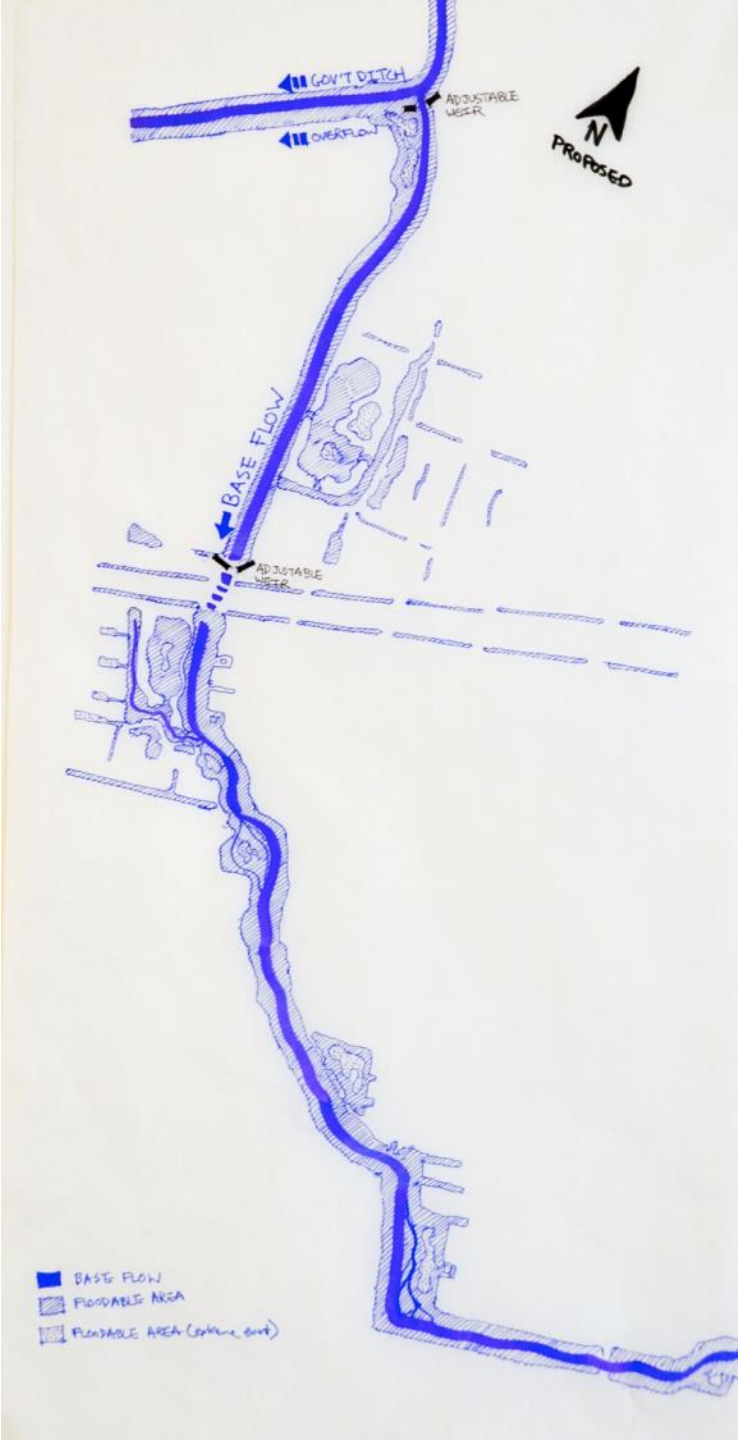


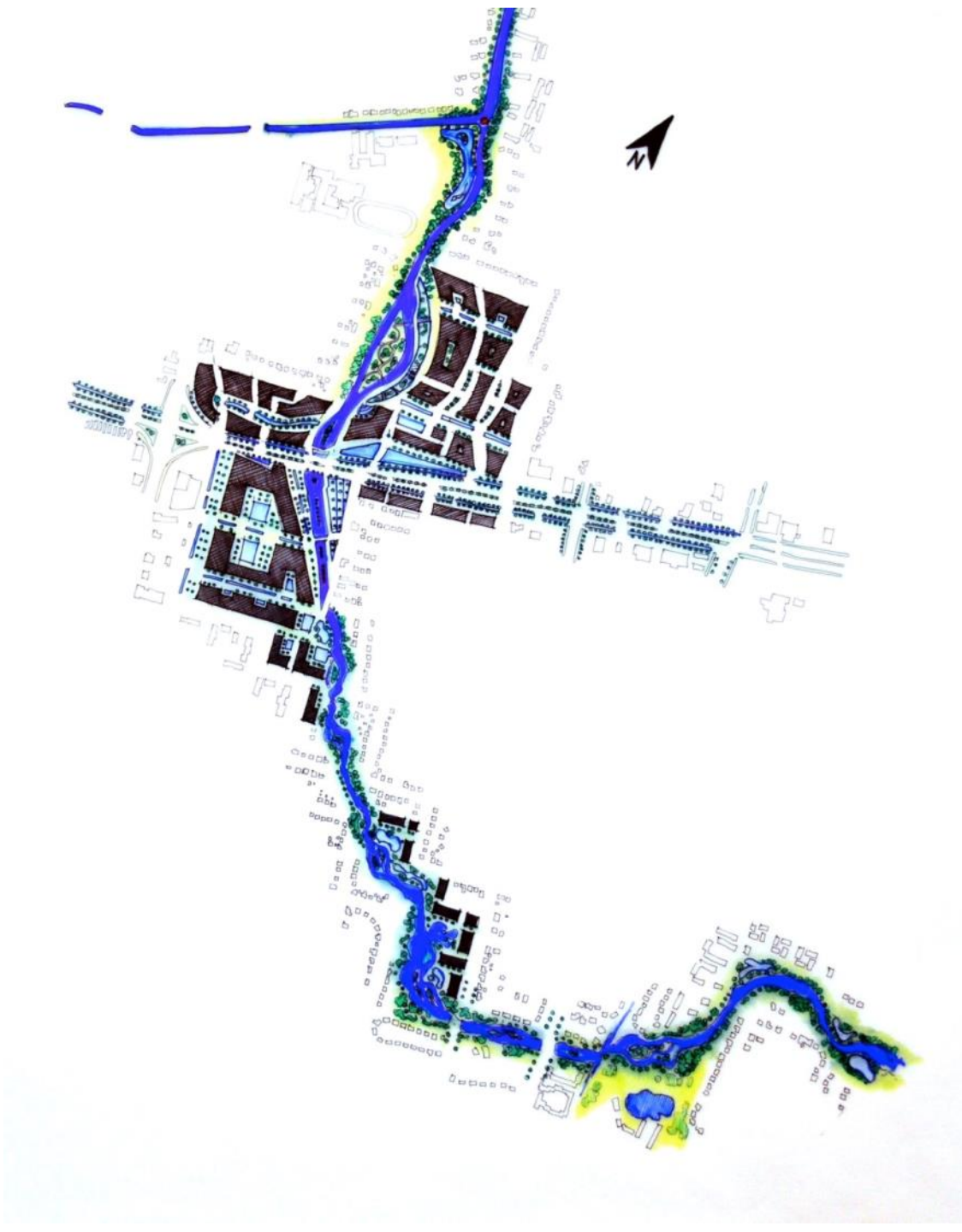

narrow creek
residential creek
bay creek

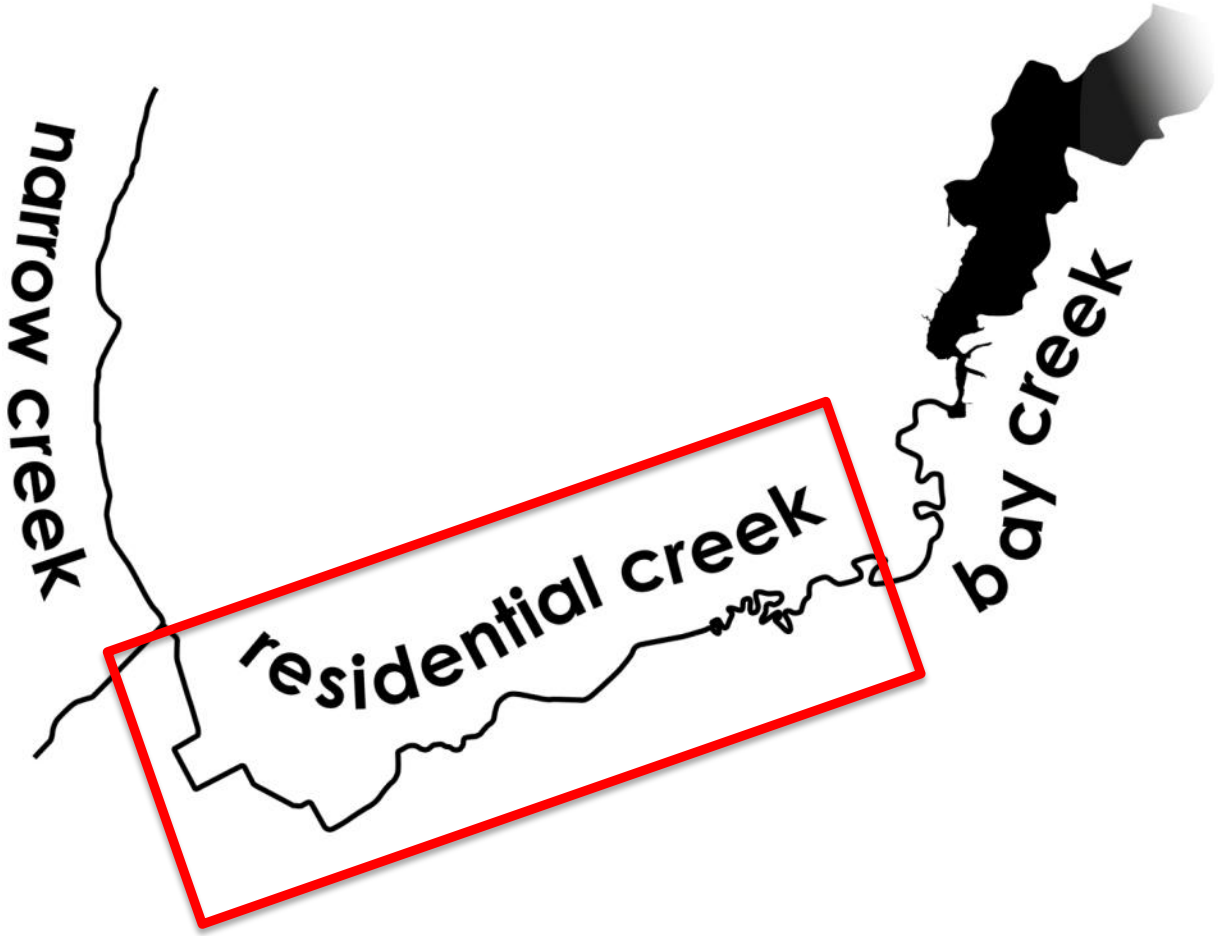
+JenCare
alabama plasma

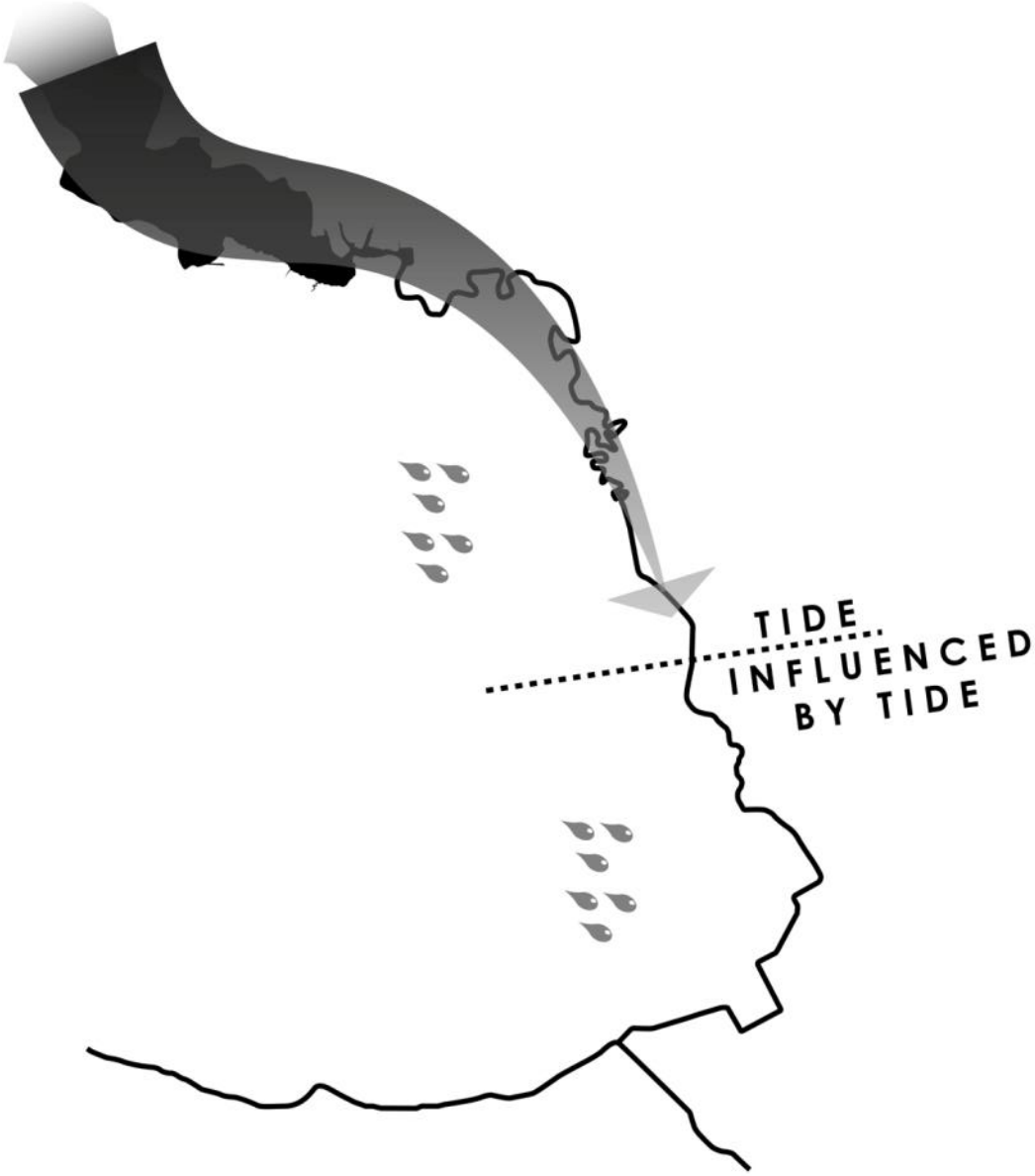
JenCare


GON'T DITCH
N
EXISTING
BASE FLOW
DAM
BASE FLOW
FLOODABLE AREA
REDEVELOPMENT/
FLOODPLAIN RESTORATION
EXTENTS OF FLOOD ZONE


GOV'T DITCH
ADJUSTABLE WEIR
OVERFLOW
N
PROPOSED
BASE FLOW
ADJUSTABLE WEIR
BASE FLOW
FLOODABLE AREA
FLOODABLE AREA (volume out)

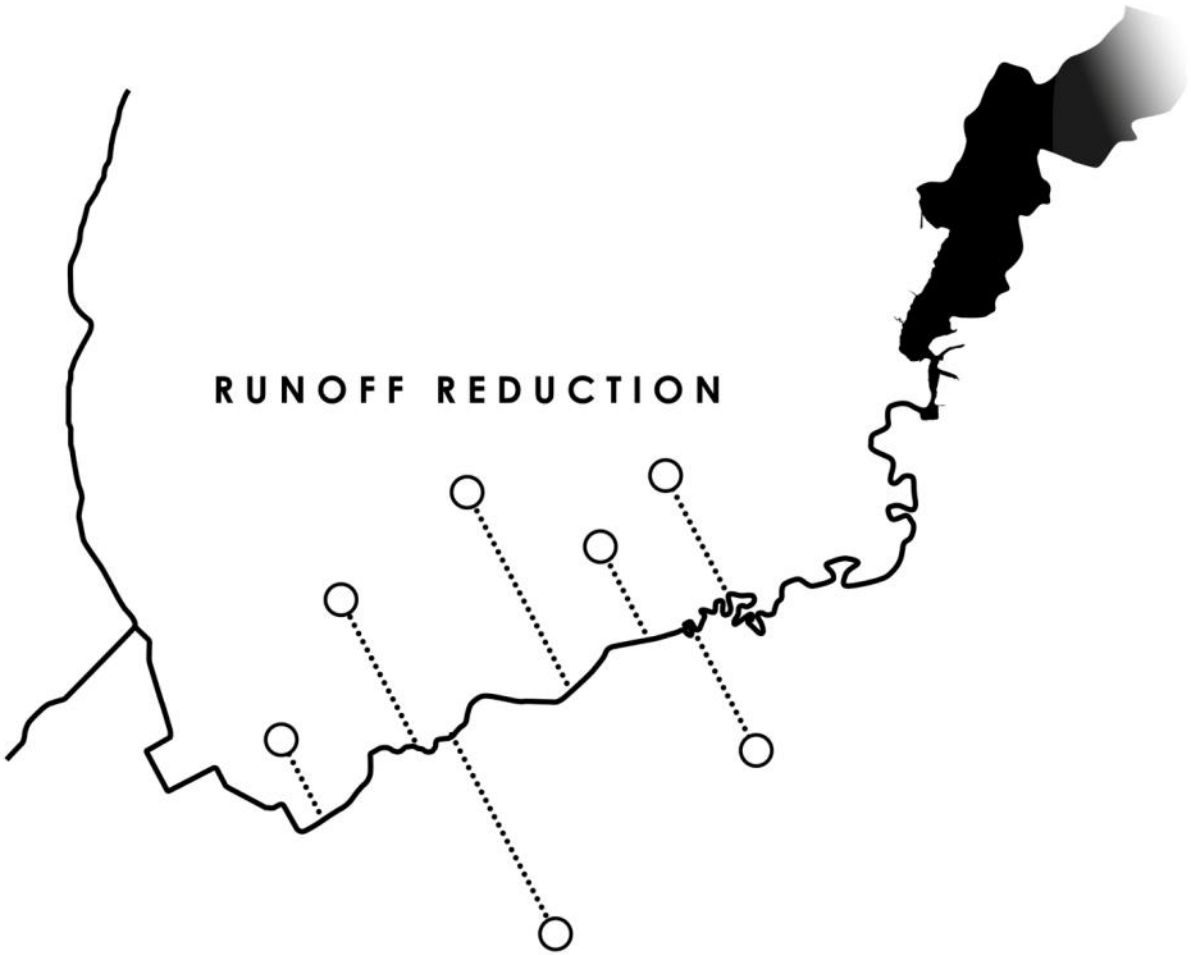

N

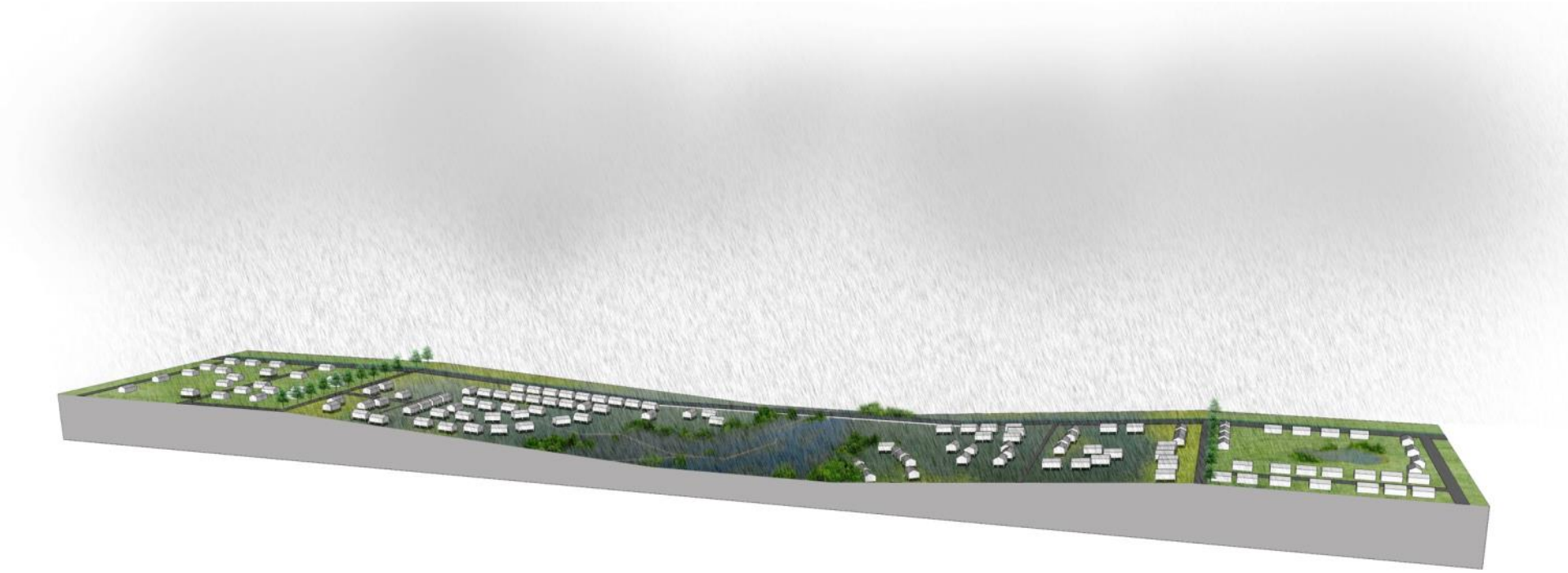

narrow creek
residential creek
bay creek

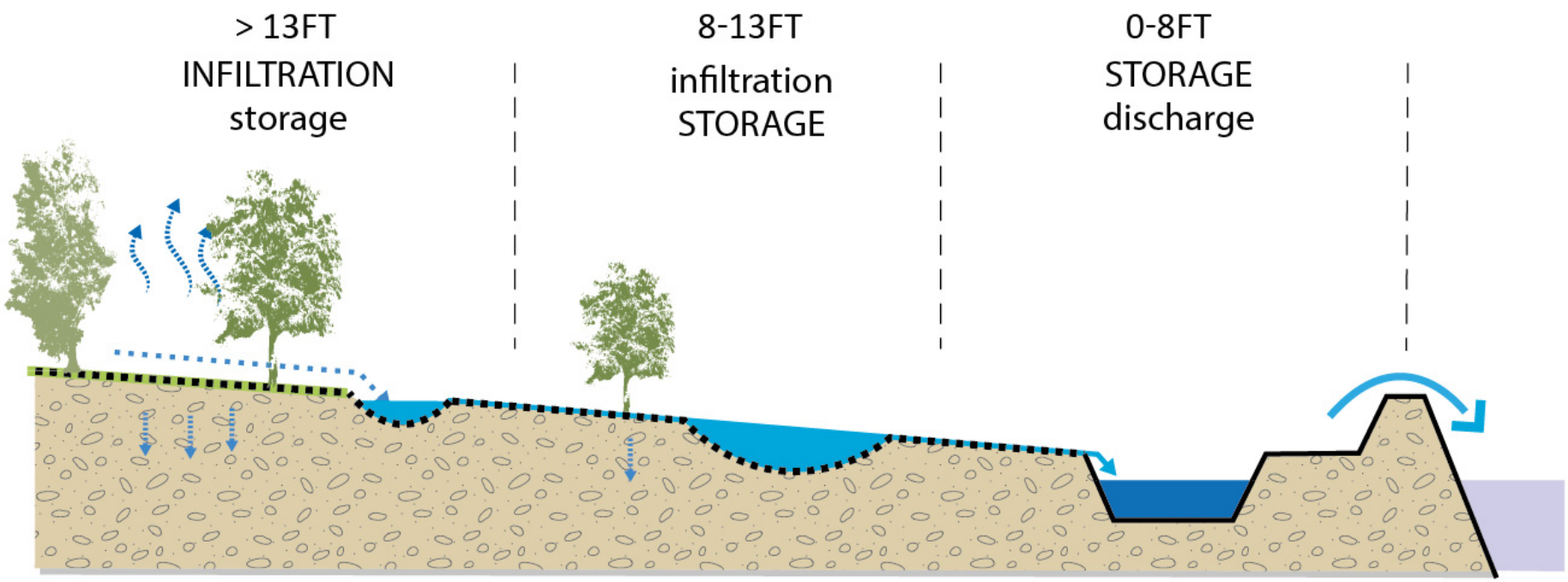

TIDE
INFLUENCED
BY TIDE

Regulate Water Level

Reduce Runoff



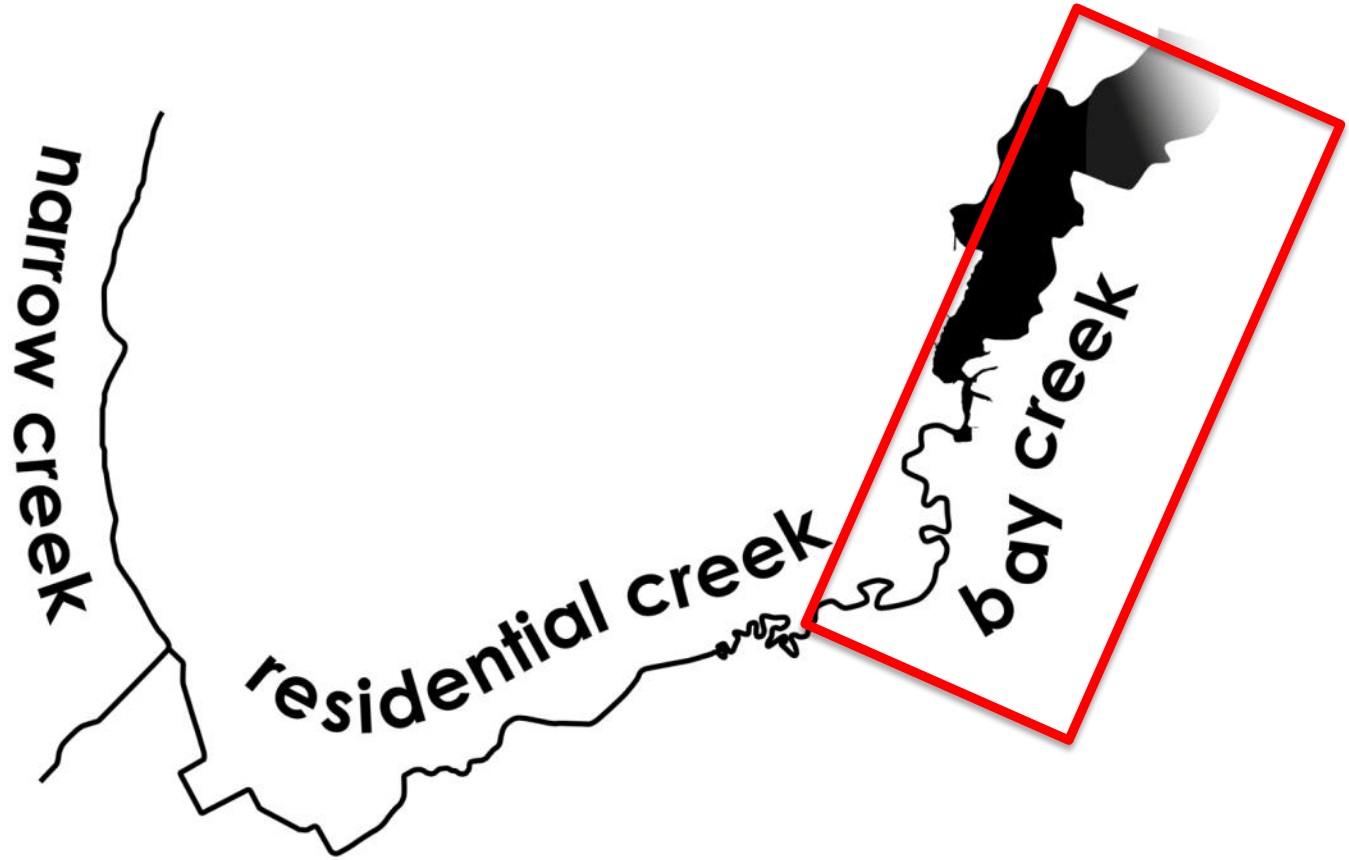


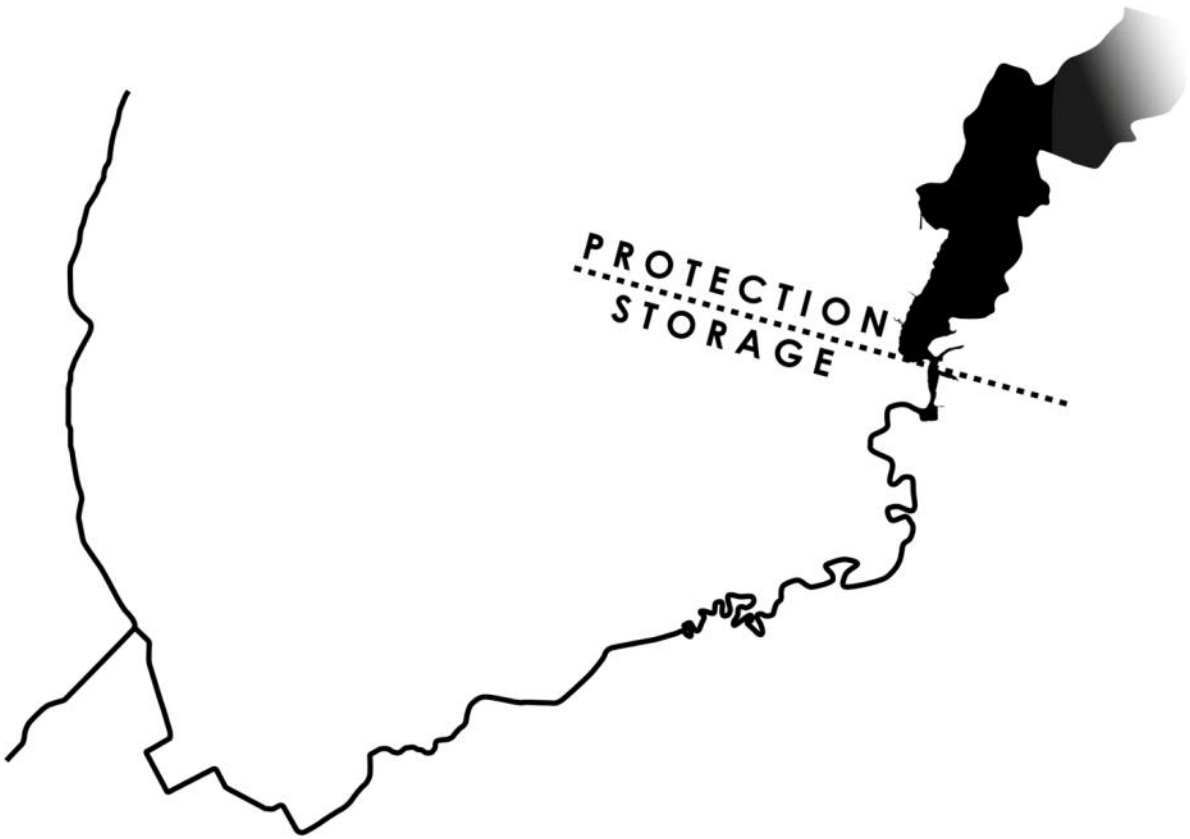


Sea Level Rise and storm water management: three zones

Sherelyn Dr

Enlarge Capacity / Add Value


narrow creek
residential creek
bay creek

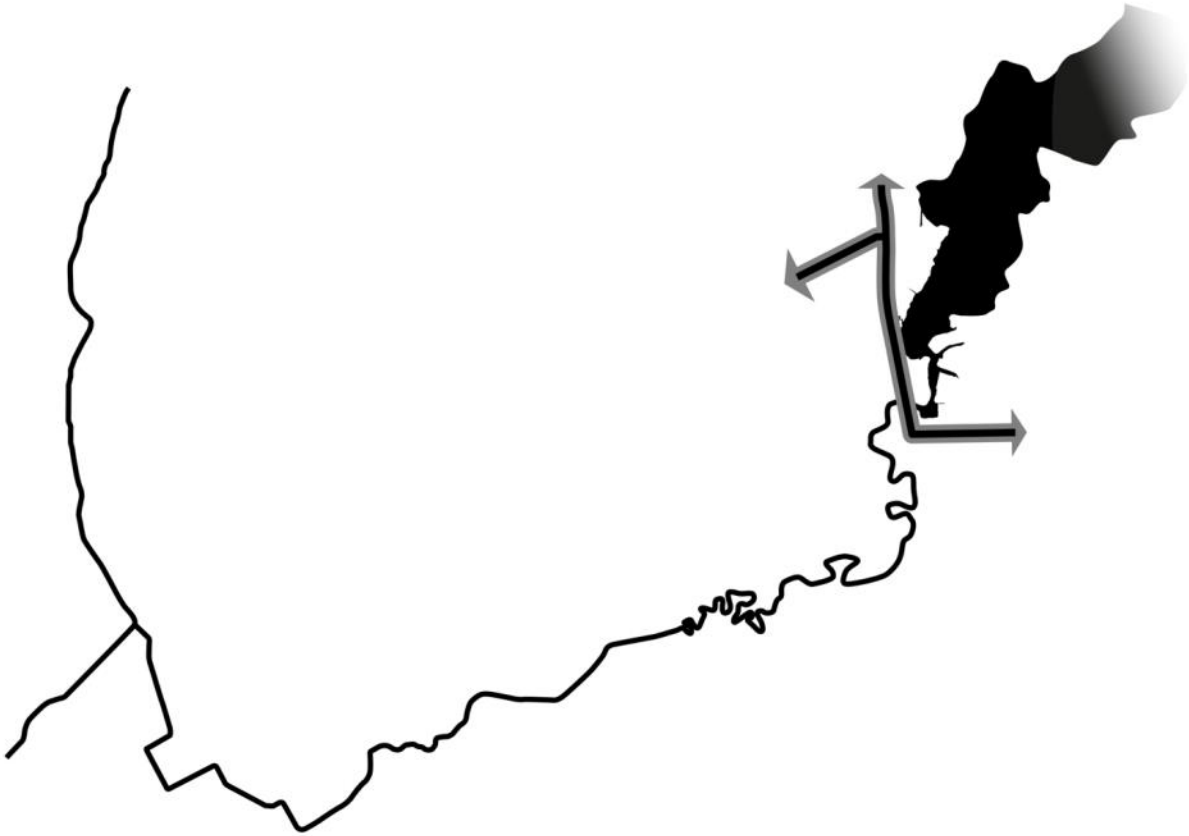

PROTECTION
STORAGE

0 95 190 380 570 760 Feet

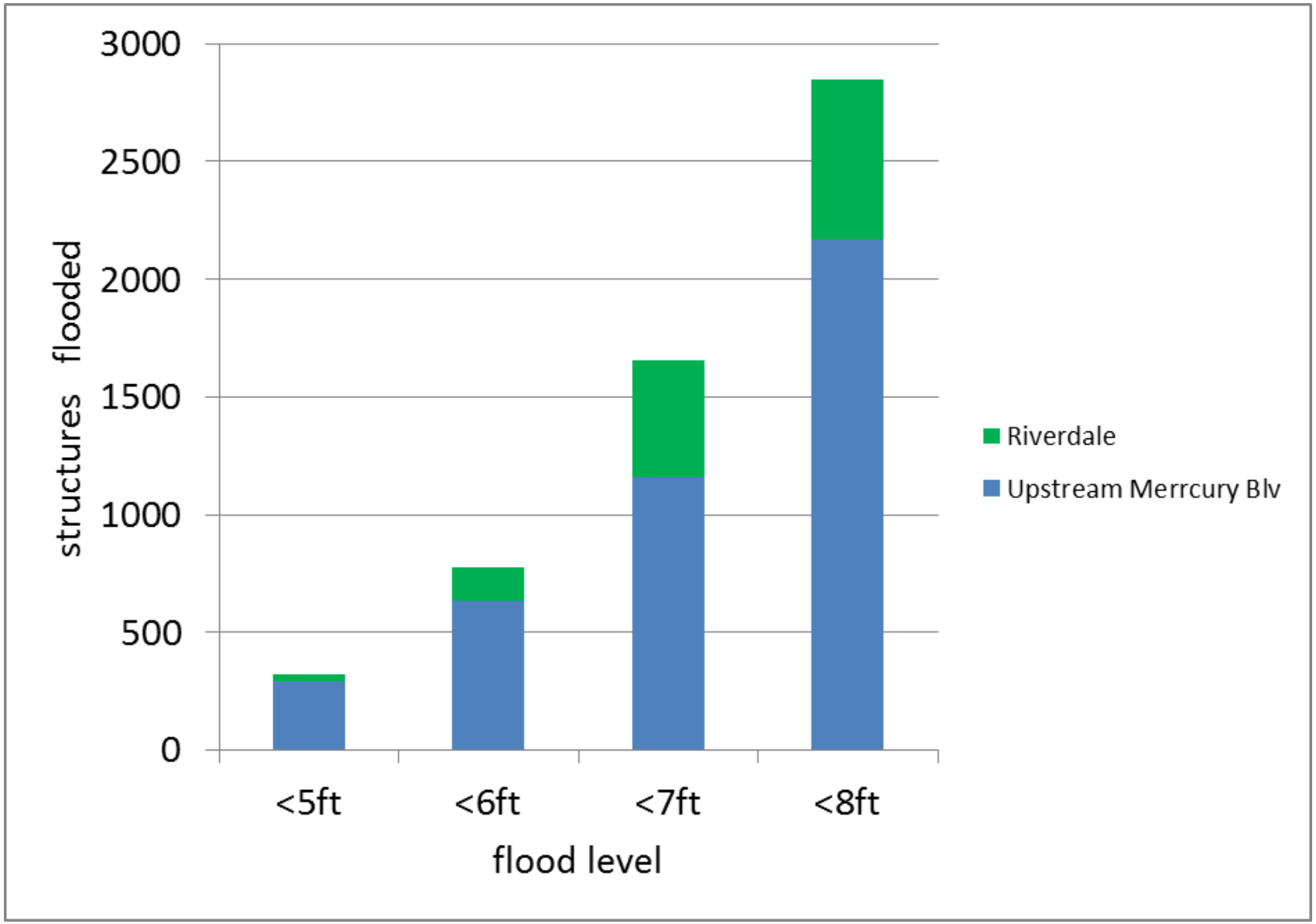
N

See GIS for Complete Details

Figure 14. Storm Gate Site and Median Improvement



Structures Protected



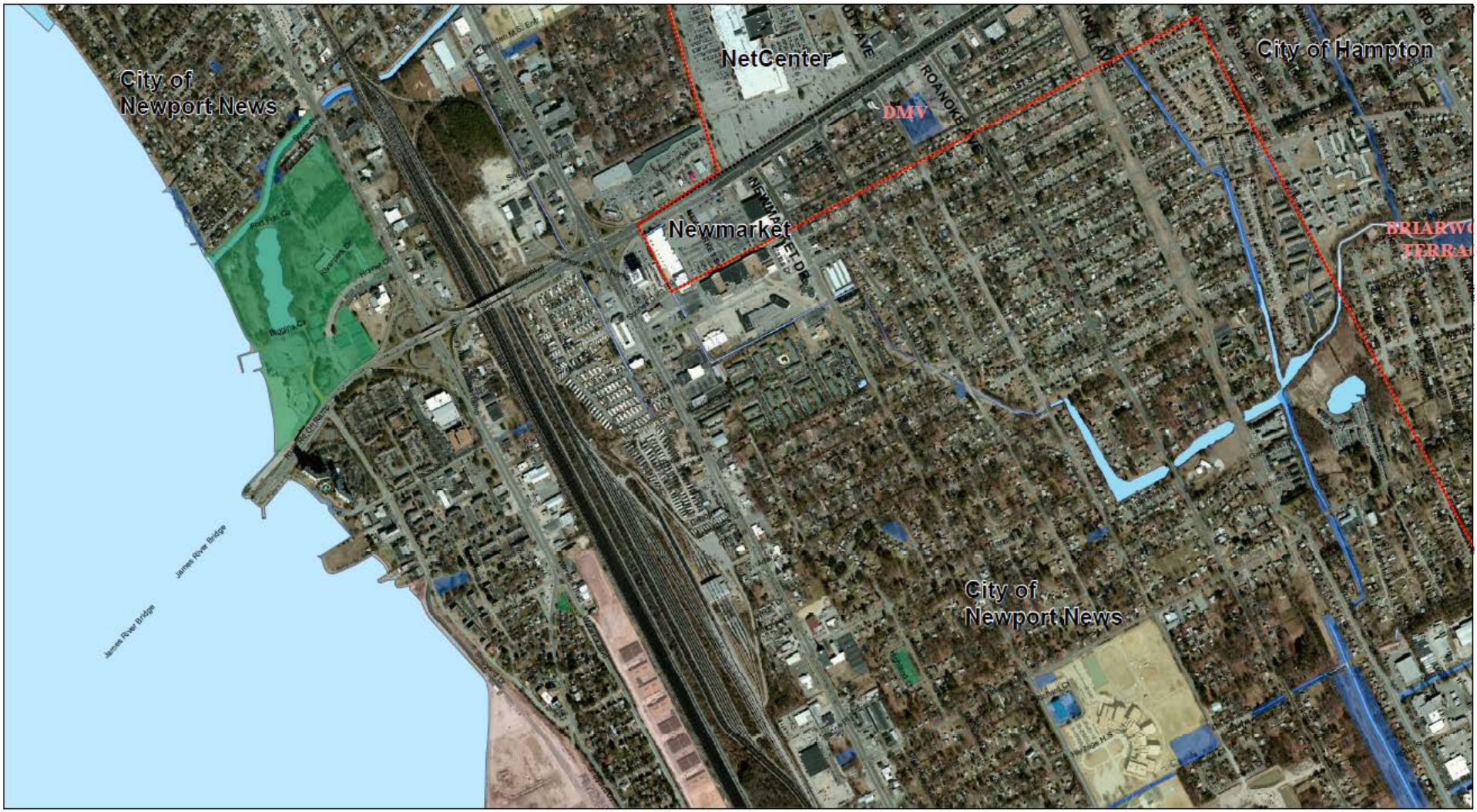
Dutch Dialogues
Hearnmarket Creek Vicinity

Guidelines

Work with the system, not against it
- Understanding presents opportunity

Don't accept solutions that ***only*** work
- Solution must work and add value

Be careful with water
- Retain, store, drain



Water
City Boundary
Railroads

State or Federal Properrty
City of Hampton Property
Parks Property
School Property
City of Newport News School Property
City of Newport News Property
Huntington Ingalls Shipyard

Map 1, Area C

Vicinity and Area of Interest

N
W E
S

400 200 0 400 800 Feet

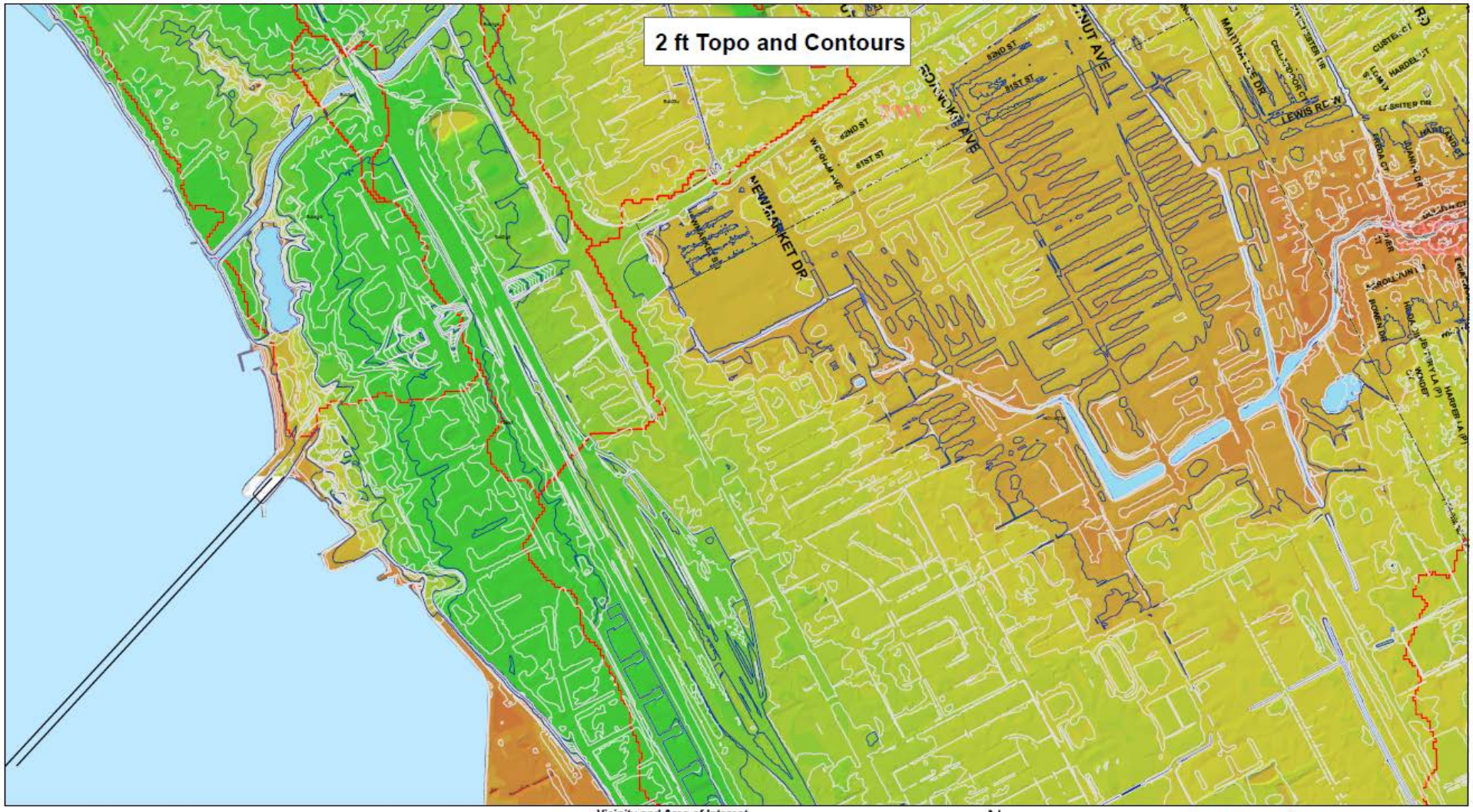
120 60 0 120 240 Meters

Dutch Dialogues
Newmarket Creek Vicinity

HAMPTON VA

Newport News Virginia

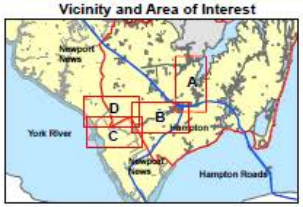
City of Hampton, IT Dept, GIS Office, June 2015



Water

16 - 143.604	8 - 10	2 ft Increments
14 - 16	6 - 8	10 ft Increments
12 - 14	4 - 6	
10 - 12	2 - 4	
	-12.203 - 2	

Vicinity and Area of Interest



N

400 200 0 400 800 Feet

120 60 0 120 240 Meters

Dutch Dialogues
Newmarket Creek Vicinity

HAMPTON VA

Newport News Virginia

City of Hampton, IT Dept, GIS Office. June 2015

Map 2, Area C

Water
Thick Vegetation
Impervious*
Managed Turf
Wetland
Railroads

*Impervious is not attributed any further than shown for either city.

Map 8, Area C

Vicinity and Area of Interest

N

400 200 0 400 800 Feet

120 60 0 120 240 Meters

Dutch Dialogues
Newmarket Creek Vicinity

HAMPTON VA

Newport News Virginia

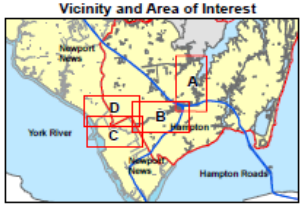
City of Hampton, IT Dept, GIS Office. June 2015

Flood Zone AE and Buildings Affected

City Boundary
Buildings
Water
Railroads

RL and SRLClusters with Sum
BldgsPartiallyin_AE
Newmarket Creek Sub basins
Building Completely in Flood Zone
FLOODWAY (Hamp)
AE in Hampton, F5 in Newport News

Vicinity and Area of Interest



N

400 200 0 400 800 Feet

120 60 0 120 240 Meters

Map 3, Area C

Dutch Dialogues
Newmarket Creek Vicinity

HAMPTON VA

Newport News Virginia

City of Hampton, IT Dept, GIS Office. June 2015

City of Hampton

City of Newport News

NEWMARKET DR

ROANOKE AVE

LEWIS RD W

MARTHA LEE DR

James River Bridge

City Boundary

Railroads

Water

Flood Zones
Hampton and Newport News

FLOODWAY (Hamp)

AE (H) and A5 (NN)

X (H) and B (NN)

X-500 (H) and C (NN)

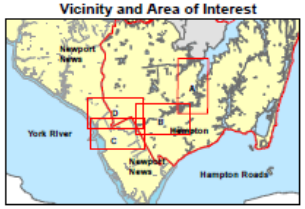
VE (Hamp)

NN - BFE

Map 5, Area C

A5 --An area inundated by 100 year flooding, for which no BFEs have been established.
AE --An area inundated by 100-year flooding, for which BFEs have been determined.
B --An area inundated by 500-year flooding; an area inundated by 100-year flooding with average depths of less than1 foot or with drainage areas less than 1 square mile; or an area protected by levees from 100-year flooding.
X and C --An area that is determined to be outside the 100- and 500-year floodplains.
X500 --An area inundated by 500-year flooding; an area inundated by 100-year flooding with average depths of less than 1 foot or with drainage areas less than 1 square mile; or an area protected by levees from 100-year flooding.
V --An area inundated by 100-year flooding with velocity hazard (wave action); no BFEs have been determined.
Floodway --the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height.

Vicinity and Area of Interest



N

400 200 0 400 800 Feet

120 60 0 120 240 Meters

Dutch Dialogues
Newmarket Creek Vicinity

HAMPTON VA

Newport News Virginia

City of Hampton, IT Dept, GIS Office. June 2015

Work Session #1

Input from three primary sources:

- **Community** expectations & observations
- **Leadership** expectations & observations
- **Technical Partners** observations

Community

- Identify solutions at all scales
- Need a cultural shift - collective sense of responsibility
- Need a new way of thinking
- Do regional and local governments have the powers necessary to tackle these issues?
- How do we pay for this?

Leadership

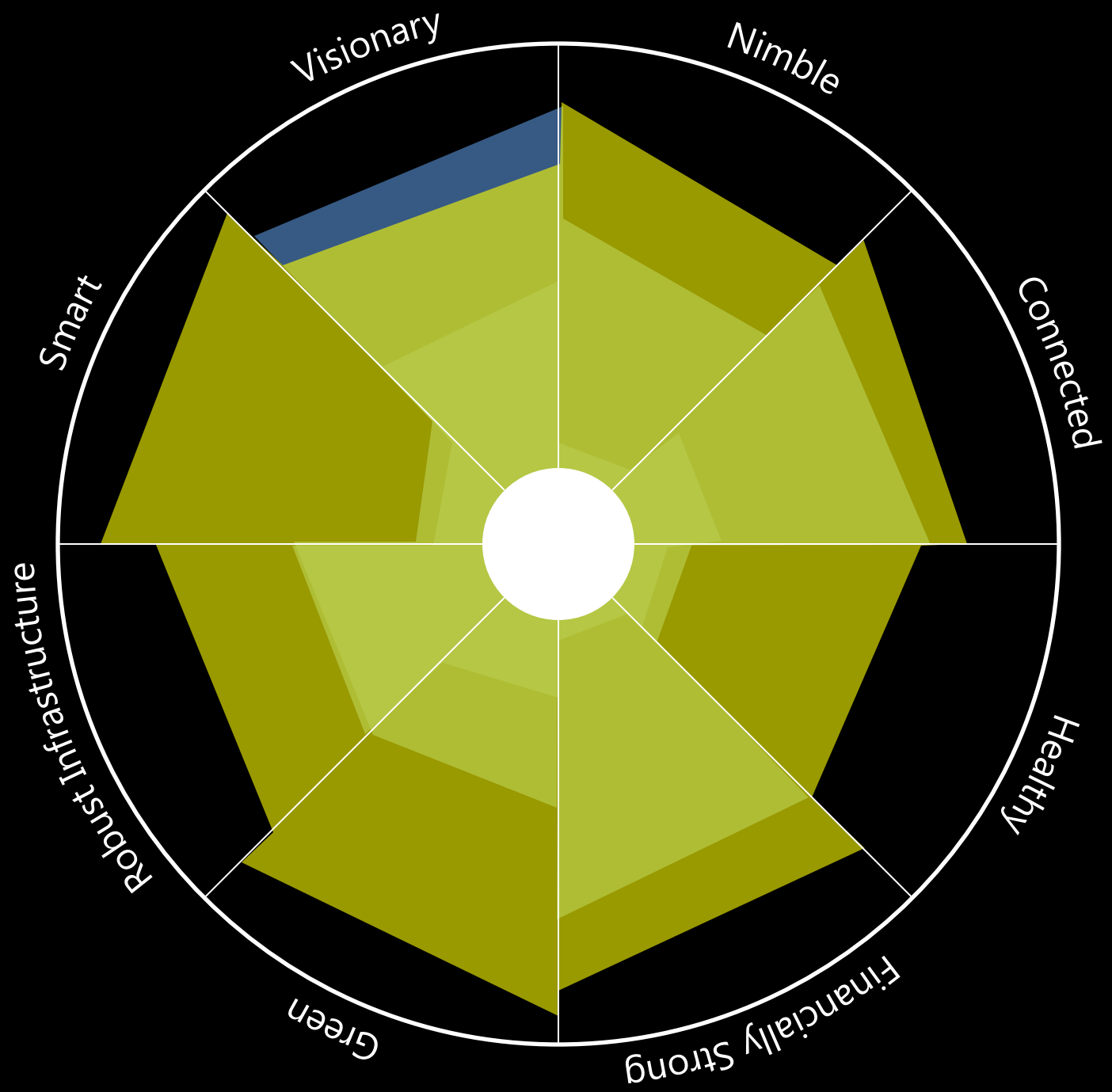
- Citizens are most concerned with <u>increased frequency</u>
- Focus on protecting key assets
- Educate citizens so they understand the "why" and are better prepared to live with water under "new" conditions.
- Hampton cannot do this alone. Need partners: "coalition of the willing."
- Solutions must generate multiple public benefits

Technical Partners

- Lots of good work already underway
- Coordination of information is a key issue
- There still are important "gaps" in key data
- What do we plan for? Need an accepted target regarding SLR

Initial Takeaways

- World class technical partners
- Scale of solutions must be broad
- Need better data, coordination, & sharing
- Educate citizens and foster a sense of responsibility & shared interest
- Multiple benefit solutions
- Turn “risk” into “asset” – will require a different decision making methodology


Visionary
Nimble
Connected
Healthy
Financially Strong
Green
Robust Infrastructure
Smart

Next Steps

- Grow working relationship with our partners
- Tentative $2 million for implementation
- Address some of the data challenges
- Apply methodology to Newmarket Creek as a pilot
- Next work session: February/ March 2017