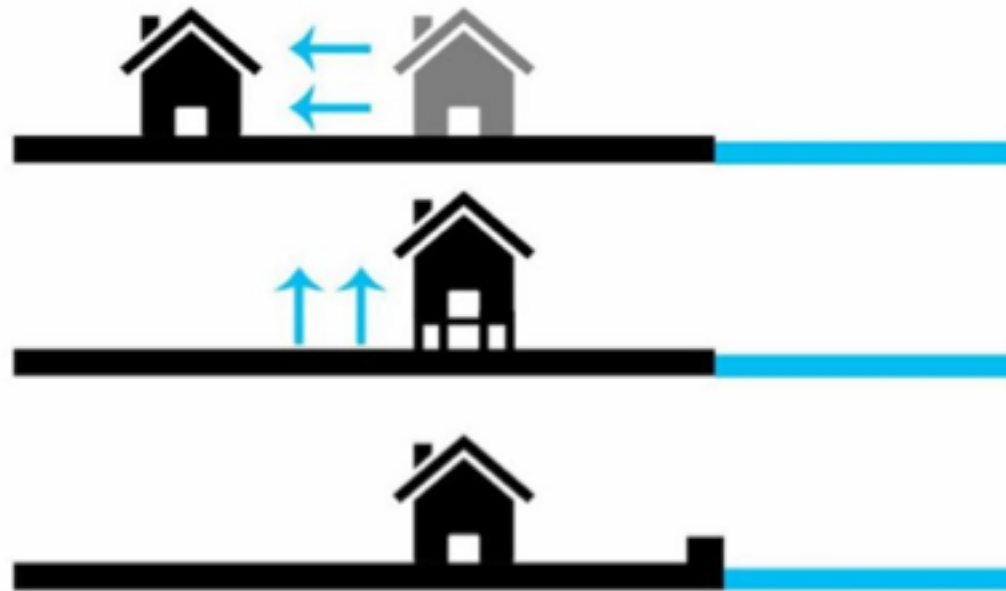


# MAKING DESIGNS FIT ON THE GROUND

## Conventional Solutions Won't Work



Wille Parks



WETLANDS  
WATCH

WWW.WETLANDSWATCH.ORG

Designing for Resilience  
Skip Stiles  
Executive Director, Wetlands Watch

# ADAPTATION DESIGN REALITIES

Adaptation Design Work Needs to Include a Range of Disciplines/Range of Factors Affecting Implementation.

Adaptation Design is a retail operation at this point – goal is to develop typologies that allow some efficiencies.

Adaptation work – novel approaches – need to identify disincentives/barriers to implementation and find solutions.

Novel Adaptation work demands % of funding for baseline and ongoing monitoring to develop performance standards.

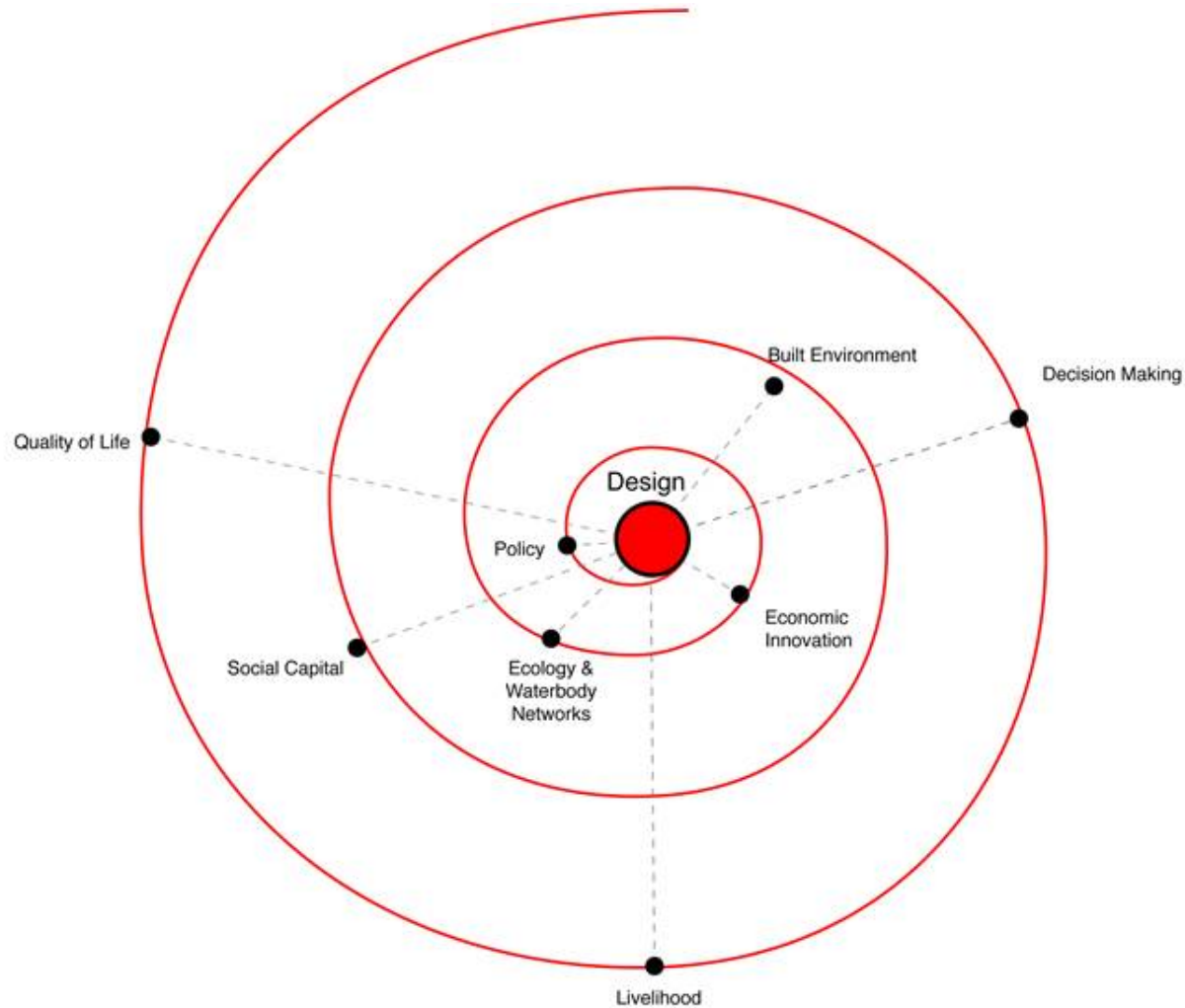


WETLANDS  
WATCH

[WWW.WETLANDSWATCH.ORG](http://WWW.WETLANDSWATCH.ORG)



# Adaptation Design Touches a Range of Issues



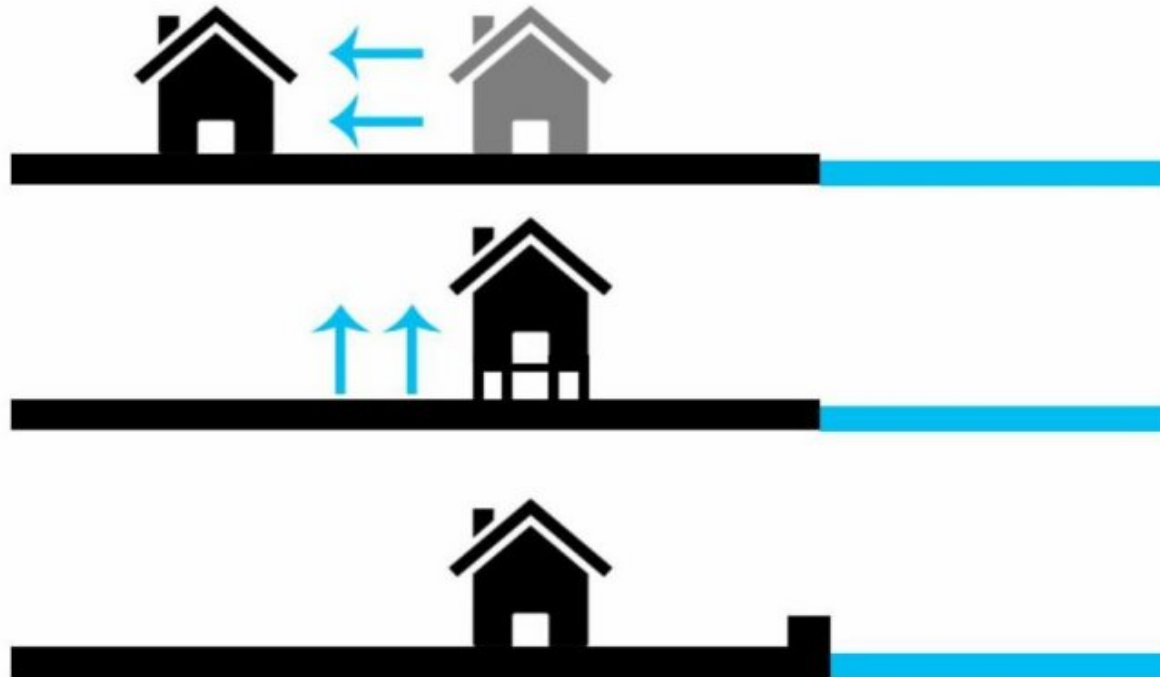
WETLANDS  
WATCH

WWW.WETLANDSWATCH.ORG

Shelly Jules Plaag

ALWAYS KEEP THIS IN MIND!

# Conventional Solutions Won't Work



WETLANDS  
WATCH

WWW.WETLANDSWATCH.ORG

Willie Parks

# Adaptation in Built Environments is Challenging

## Social Factors Are Critical to Implementing Designs:

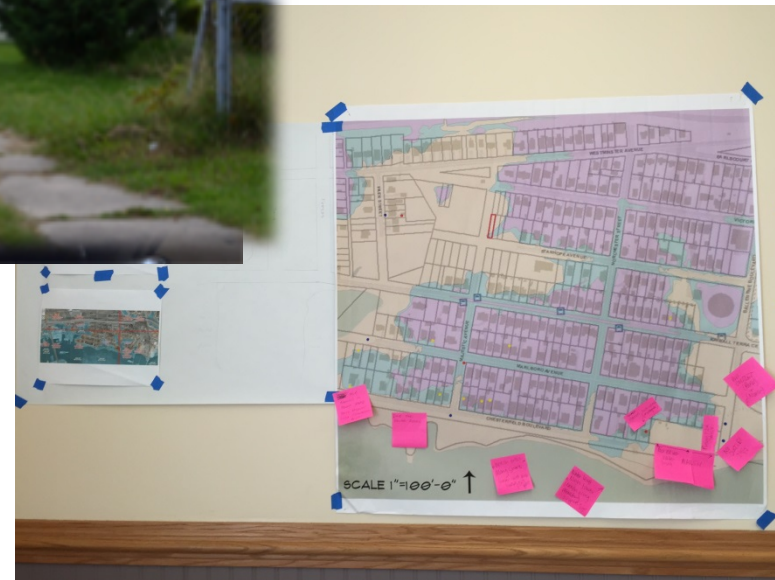
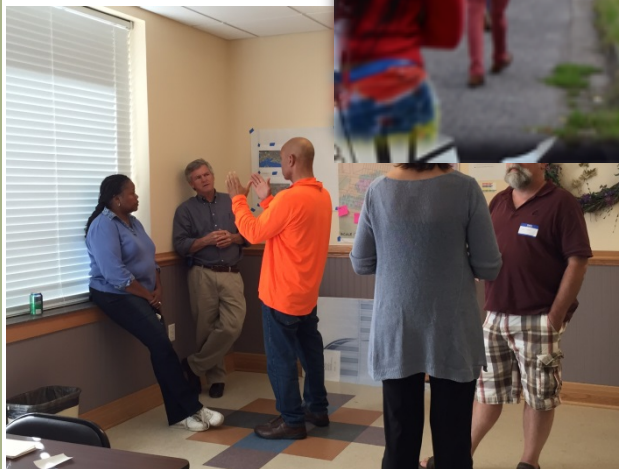
- Intact civic structure?
- Willingness to engage in planning?
- Experience with flooding?
- Owner occupied/rental housing?
- Relationship to Water (both bad and good)?
- Tolerance for changes?
- Partnerships with non-government entities?



WETLANDS  
WATCH

[WWW.WETLANDSWATCH.ORG](http://WWW.WETLANDSWATCH.ORG)

# Community Engagement BEFORE Engineering



WETLANDS  
WATCH

WWW.WETLANDSWATCH.ORG

# Adaptation in Built Environments is Challenging

## Physical Factors:

- Availability of data/physical information
- Soil, depth to groundwater, etc.?
- Infrastructure status?
- Housing age and type?
- Extent of regulatory floodplain?



WETLANDS  
WATCH

[WWW.WETLANDSWATCH.ORG](http://WWW.WETLANDSWATCH.ORG)

# Adaptation in Built Environments is Challenging

## Legal Factors Affecting Implementation:

- Historic status?
- Land ownership (any public land)?
- CBPA RPA/regulated floodplain/etc.?



WETLANDS  
WATCH

[WWW.WETLANDSWATCH.ORG](http://WWW.WETLANDSWATCH.ORG)



# INFRASTRUCTURE IN OLDER NEIGHBORHOOD



Undersized, outdated stormwater pipes were installed so long ago they are underwater at *low* tide! Stormwater solutions must involve holding water and infiltrating.



# CHESTERFIELD HEIGHTS - SHORELINE COMMON AREA, STREET ENDS PUBLIC LAND, MANY NRHA PARCELS



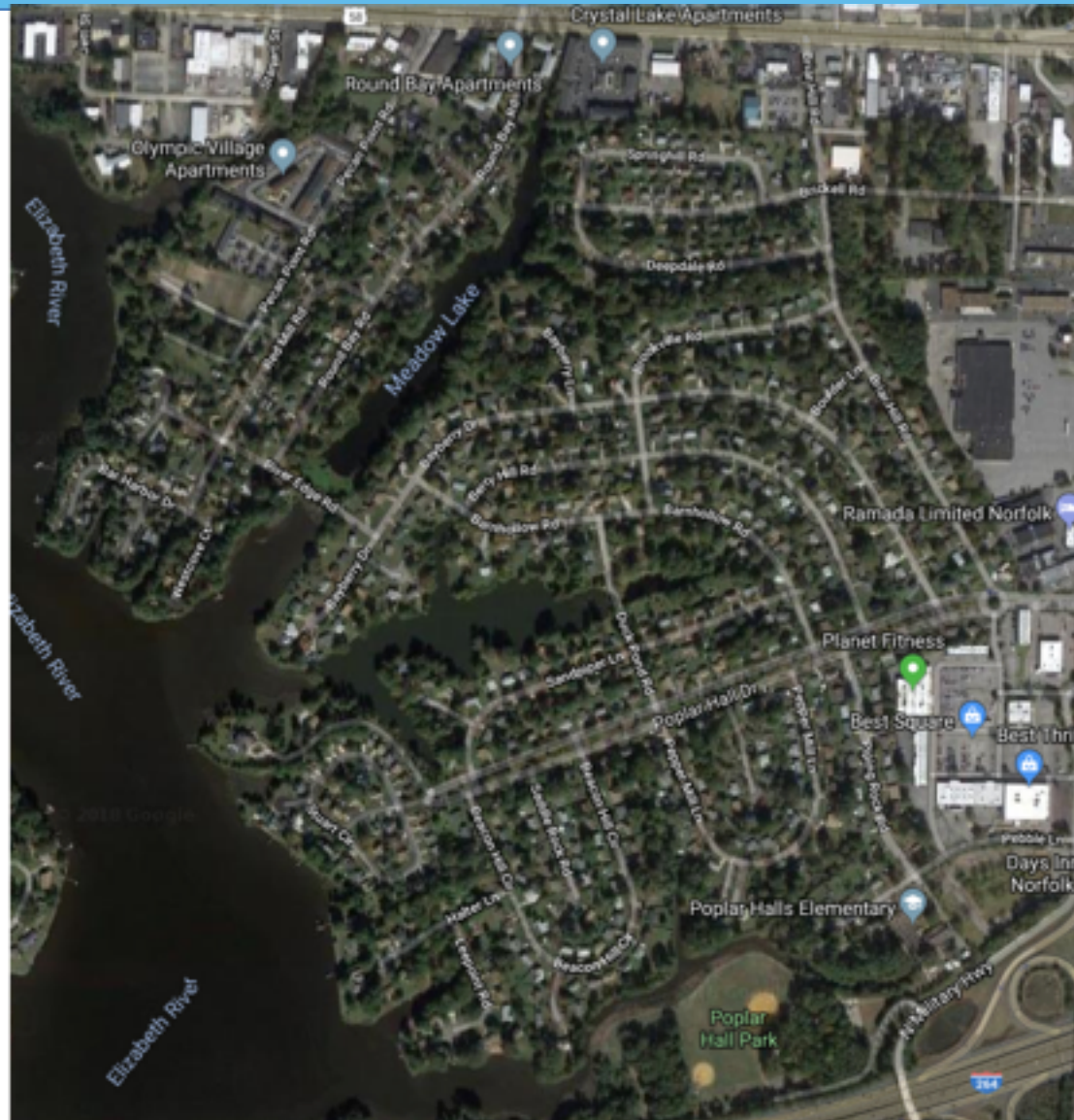
WETLANDS  
WATCH

[WWW.WETLANDSWATCH.ORG](http://WWW.WETLANDSWATCH.ORG)





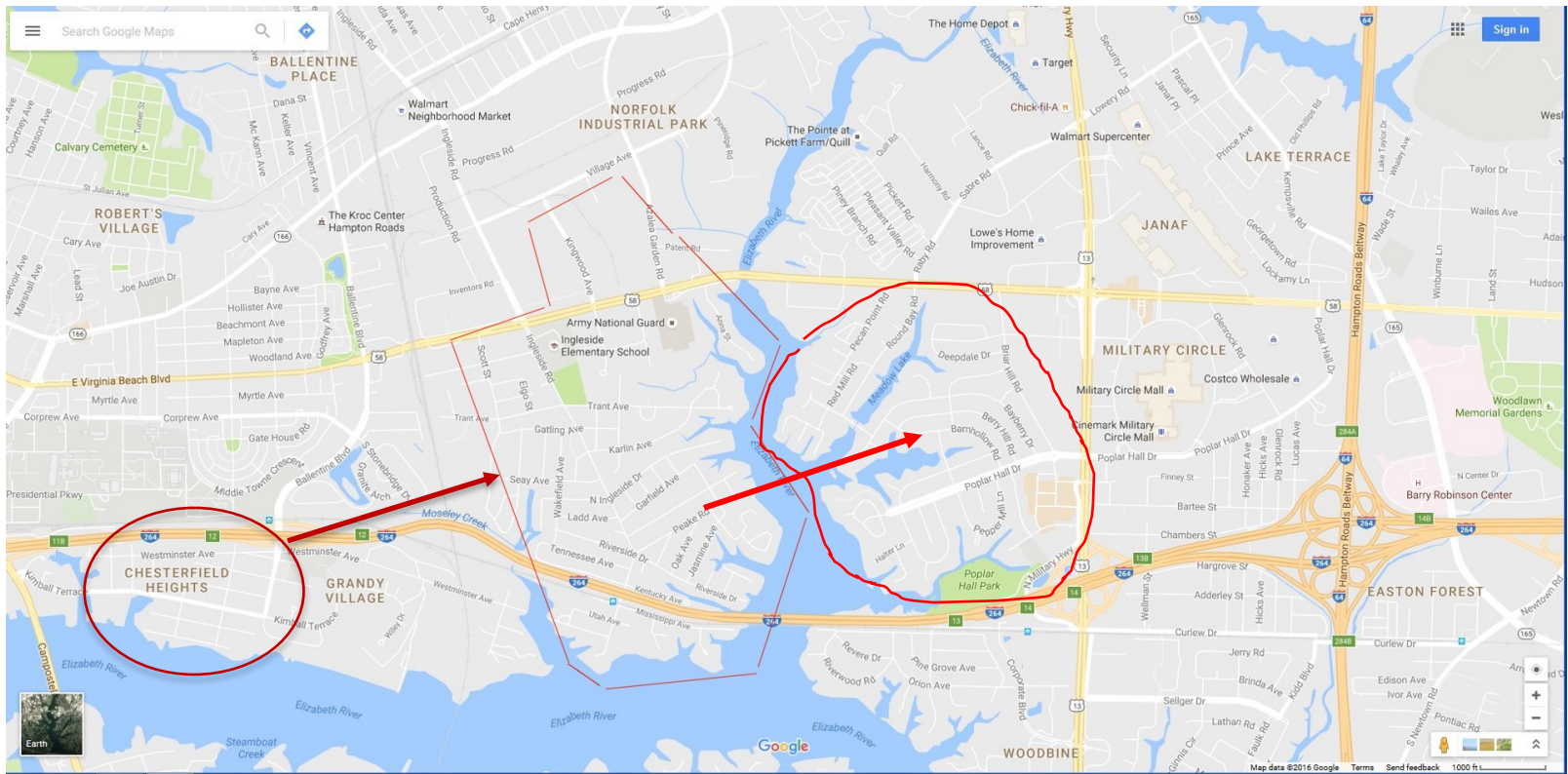
# Poplar Hall - Little Public/Common Land



WETLANDS  
WATCH

WWW.WETLANDSWATCH.ORG

# SAME CHALLENGES, DIFFERENT SITUATIONS

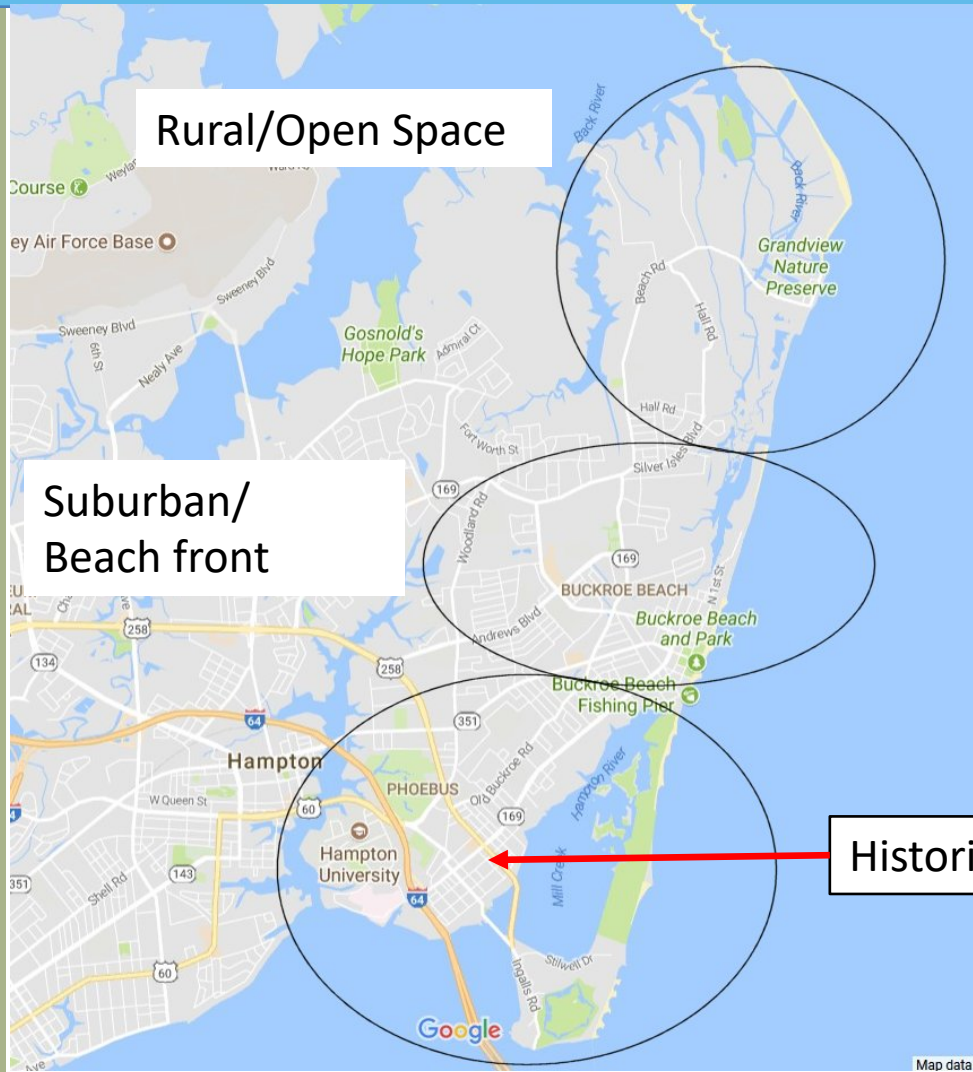


WETLANDS  
WATCH

WWW.WETLANDSWATCH.ORG



# HAMPTON, VA ADAPTATION PLANS



WETLANDS  
WATCH

WWW.WETLANDSWATCH.ORG

Historic Town of Phoebus ca. 1900





# Novel Approaches will Challenge Existing Government Programs

## Legal, Financial, Regulatory Challenges to Implementation:

- Do building codes/engineering standards allow?
- Does regulatory system allow?
- How do you do work on historic structures/in historic districts and not lose tax credits?
- Can you qualify for credits under MS4/WIP or CRS?
- Can you use public funds for project?



WETLANDS  
WATCH

[WWW.WETLANDSWATCH.ORG](http://WWW.WETLANDSWATCH.ORG)

# Novel Approaches Require Baseline and Performance Data

## Performance Standards for Novel Approaches Need Development:

- Need to include baseline and monitoring as part of project implementation.
- Need for clearinghouse or collection point for knowledge and experience developed – we cannot get the job done at current, one-by-one pace.



WETLANDS  
WATCH

[WWW.WETLANDSWATCH.ORG](http://WWW.WETLANDSWATCH.ORG)

# GOING FORWARD

We need a clearinghouse or repository for information on design implementation:

What worked, what didn't work, lessons learned

What regulatory, legal, financial issues emerged

Can we begin to develop best practices and community typologies that will accelerate this process



WETLANDS  
WATCH

[WWW.WETLANDSWATCH.ORG](http://WWW.WETLANDSWATCH.ORG)







# QUESTIONS?



Virginia Coastal Zone  
MANAGEMENT PROGRAM



WETLANDS  
WATCH

WWW.WETLANDSWATCH.ORG



Skip Stiles  
[skip.stiles@wetlandswatch.org](mailto:skip.stiles@wetlandswatch.org)

