Designing for Resilience
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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.
Adaptation Design Touches a Range of Issues

Shelly Jules Plaag
Conventional Solutions Won't Work
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?
Community Engagement BEFORE Engineering
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?
Adaptation in Built Environments is Challenging

Legal Factors Affecting Implementation:

• Historic status?
• Land ownership (any public land)?
• CBPA RPA/regulated floodplain/etc.?
Undersized, outdated stormwater pipes were installed so long ago they are underwater at low tide!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
Poplar Hall - Little Public/Common Land
SAME CHALLENGES, DIFFERENT SITUATIONS
HAMPTON, VA ADAPTATION PLANS

Rural/Open Space

Suburban/Beach front

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?
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.
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
QUESTIONS?

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