

Green Infrastructure for Chesapeake Stormwater

Management:

Legal Tools for
Climate Resilient Siting

Monday, September 11, 2017



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Siting green infrastructure for climate resiliency...

Stormwater management

Legal toolbox

Updating the laws

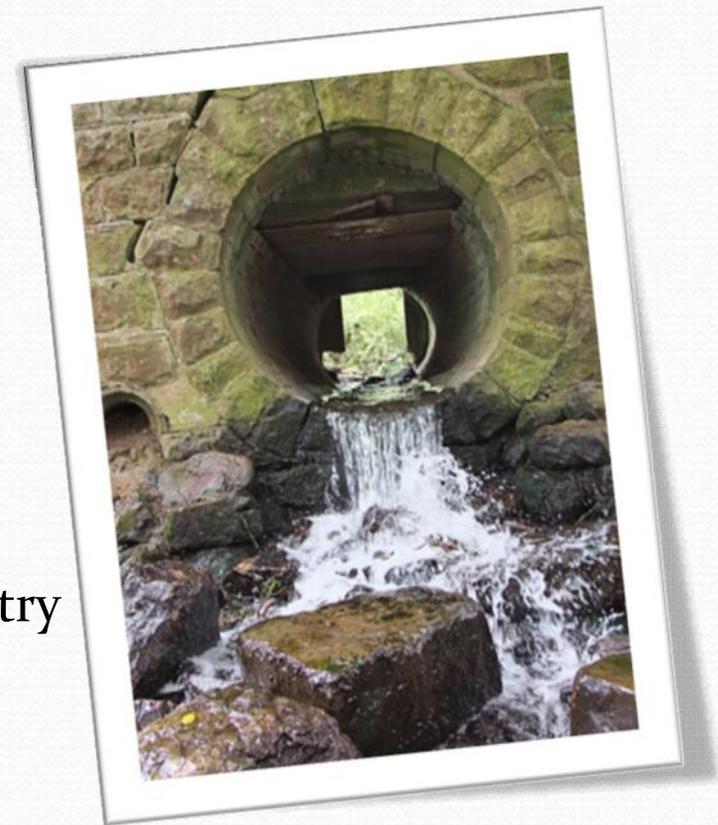
Policy considerations



Stormwater Management: Federal Background

National Pollutant Discharge Elimination System (NPDES)

- Regulates point sources discharging to waters of the United States, including:
 - Municipal separate storm sewer systems (MS4s)
 - Municipal combined storm and sanitary sewer systems (CSSs)
 - Discharges from construction and industry
- States establish and oversee NPDES permitting programs, including urban stormwater



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Stormwater Management: State Overview

Virginia

- Department of Environmental Quality (DEQ)
- Virginia Stormwater Management Act (VSMA) – Virginia Pollutant Discharge Elimination System (VPDES) Permit Program - local Virginia Stormwater Management Program (VSMP)
- Starting July 2018, MS4s administer a consolidated Virginia Erosion and Stormwater Management Program (VESMP)



Maryland

- Department of the Environment (MDE)
- Localities establish Stormwater Management Programs (SWMPs)
- New developments must apply Environmental Site Design (ESD/GI) to the “maximum extent practicable” (MEP)
- Apply techniques in the Stormwater Design Manual (referenced in regulations)



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Legal Toolbox: State Authority

Virginia

State Water Control Board (w. DEQ):

- General powers to regulate stormwater runoff and protect water quality and quantity
- Specific powers to:
 - Adopt regulations specifying minimum technical criteria in VESMPs
 - Encourage low impact design (LID)
 - Provide for innovative stormwater control technologies
 - Base regulations on hydrological conditions
- Incorporate criteria into model ordinance (guidance only)
- State flood protection plan (DCR)



Maryland

Water Management Administration:

- General powers to establish stormwater policies, procedures, standards, criteria
- MDE regulations determine minimum content in local stormwater ordinances to mitigate runoff, flooding
- Update Stormwater Design Manual (2000, updated 2009) – could include climate siting criteria (regulatory process)
- Revise flood control grant requirements



Legal Toolbox: Local Action



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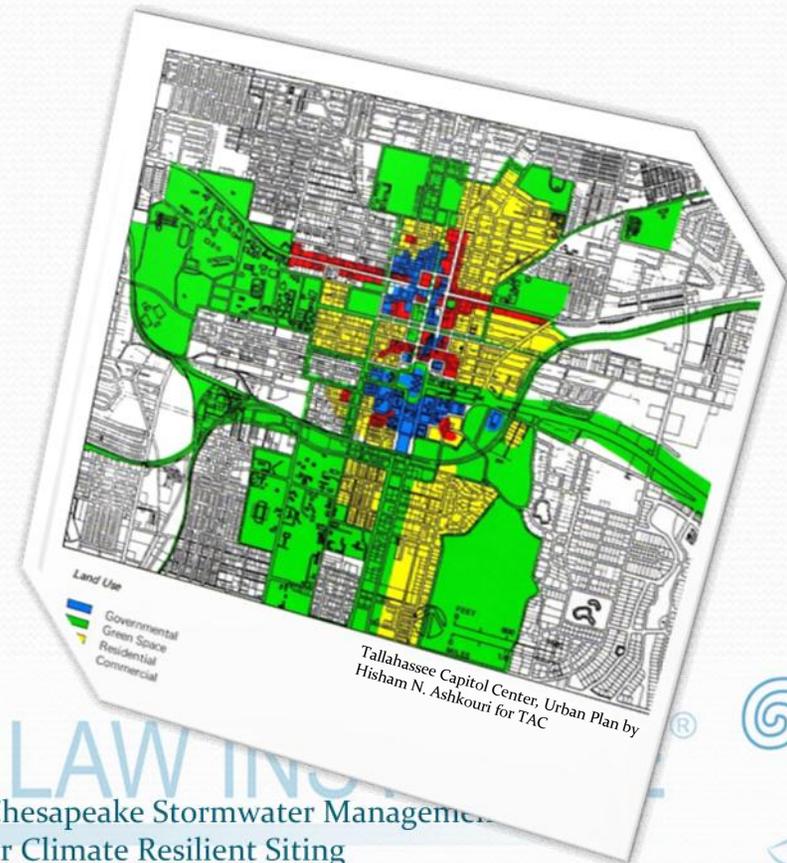
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Legal Toolbox: Local Action

Zoning authority

- *Zoning* means dividing an area into separate districts and regulating land uses in each, including structures
- Broad power over land use decisions
- Can regulate location of structures
i.e., stormwater infrastructure
- Options include:
 - Overlay districts
 - Incentive zoning



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Legal Toolbox: Local Options



Virginia

VA Stormwater Management Act:

- Allows local adoption of more stringent local criteria

1. Factual finding
2. Hearing
3. Report to DEQ

OR

- Comprehensive stormwater management plans

Maryland

MD Stormwater Management Act

- Sets only *minimum* content of local ordinances (floor rather than a ceiling)

- Approving authority can require more than minimum “if hydrological or topographic conditions warrant or if flooding, stream channel erosion, or water quality problems exist downstream”

- Flood management plans



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Minor Modifications



Virginia

- Update the Stormwater BMP Clearinghouse Website

Maryland

- MDE can identify program changes to implement climate adaptation policies for stormwater management (SB 258)
- Update the Stormwater Design Manual

Both states

- Can update *specific provisions* of regulations or statutes to provide clearer authority regarding **predicted climate change impacts, future hydrological conditions, green infrastructure practices**

(Statutory, regulatory provisions identified in report)



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New Legislation



1. Could require **mandatory climate siting guidelines**
 - Give localities **flexibility** to account for local conditions
2. Allow localities to **act prospectively** instead of relying on outdated data in stormwater and flood management
 - Update **design storm methodology** and **data** and set their use as a **floor**
3. Require **planning bodies** to incorporate strategies to combat projected climate change impacts
4. Create and reference in laws/regulations an easy-to-update **policy document** containing detailed siting criteria



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Tallahassee Capitol Center, Urban Plan by
Hisham N. Ashkouri for TAC



Policy Considerations in Siting Guidelines

- Update standards for design storms to account for predicted changes in runoff
- Target geographic areas with long-term benefits, which will be sustainable under future conditions
- Incorporate uncertainty by planning for multiple climate scenarios
- Account for slope and elevation in assessing site vulnerability
- Identify areas with high flow risk
- Adjust for groundwater table
- Consider the speed at which climate impacts occur with respect to the intended design life of practice
- Account for all significant impacts of sea level rise, i.e. inundation and saltwater intrusion
- Consider the vulnerability of coastal segments that may be reconfigured by storm events



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