FEDERAL STORMWATER REGULATIONS AND LOCAL IMPLEMENTATION

RECENT STORMWATER DEVELOPMENTS IMPACTING MUNICIPALITIES

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Overview

- **Stormwater Regulation**
  - Clean Water Act 101
  - Water Quality
  - Stormwater and MS4s
  - Enforcement Trends
  - Case Study – The Chesapeake Bay
  - Different Direction Under Trump Administration?
- **Stormwater Infrastructure Financing**
  - Stormwater Fee Structure
  - Can My Municipality form a Stormwater Utility?
  - Case Study – Philadelphia
  - Legal Concerns

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Clean Water Act

- **History of CWA**
  - Initial focus on NPDES industrial and sewer
  - **Individual permits for point sources**
  - **EPA initially exempted municipal stormwater, but 1987 CWA amendments specifically targeted it as a point source**
  - CWA always contained water quality provisions to prevent impairment to waters

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Water Quality 101

- **Section 303(d) requires *states* to:**
  - Set WQ standards by designating "uses"
  - Identify "impaired" waters – designated/existing use not met
  - Prioritize + develop TMDLs for each impaired stream
- **Must identify polluntant(s) causing impairment**
- **TMDL = max amount of a pollutant that a water body can receive from all sources and assimilate without exceeding water quality standards (i.e., pollutant "budget" or "diet")**

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Water Quality 101

- ***Nonpoint*** **sources general meet load allocations (LAs) through implementation of BMPs**
- ***Point*** **sources meet wasteload allocations (WLAs) through numeric effluent limits**
  - WQS are always more severe than technology-based (by definition)



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Water Quality 101

- **TMDLs are case-by-case, segment-by-segment**
- **All TMDLs differ - vary based on stream, pollutant(s), methodology, models, reference stream, and group performing**

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Water Quality 101

- **Initial responsibility to develop TMDLs is with the states**
  - All TMDLs submitted to EPA for approval
  - Where state fails to act, EPA must develop TMDL
- **Citizen suits filed to force EPA to develop TMDLs**
- **Example: first PA TMDL approved in 1999**



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Municipal Stormwater 101

- **EPA required to regulate stormwater §402(p)**
- ***CSOs are handled differently than MS4s**
  - CSOs – over 800 in the U.S. – high EPA enforcement priority
- **For MS4s, must require controls to reduce the discharge of pollutants to the "maximum extent practicable" (MEP)**
  - Management practices, control techniques and system, design and engineering methods, and other provisions that EPA or the authorized state determines appropriate
  - BMPs are the key

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Stormwater 101

- **EPA stormwater regulations in two phases**
- **Phase I**
  - Categories of industrial activities
  - Large construction projects (5+ acres of disturbance)
  - Large MS4s (serve 250,000+)
  - Medium MS4s (serve 100,000+ but less than 250,000)
- **Phase II**
  - Smaller construction activities (1-5 acres disturbance to point source)
  - Small MS4s (generally, not large or medium; serve under 100,000)

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Small MS4s – Six MCMs

1. Public education programs on stormwater impacts

2. Public involvement/participation in decision-making

3. Elimination or treatment of discharges not composed entirely of stormwater

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Small MS4s – Six MCMs

4. **Erosion and sedimentation controls for construction activities**

5. **Requiring BMPs for post-construction stormwater management for all new developments and redevelopment projects**

6. **Good housekeeping/pollution prevention for municipal operations.**

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Tips for MS4s

- ***Determine Whether Permitting Applies***
- ***Understand the State and Federal Permitting Programs***
- ***Understand the Watershed***
- ***Analyze Templates***
- ***Consider BMPs, MCMs, and Potential Costs***
- ***Consider Delegation to Another Entity or Creation of Stormwater Utility***
- ***Determine Whether Funding Is Available***

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MS4 Developments

- **Proposed EPA rule in response to Ninth Circuit remand of small MS4 general permitting**
  - Permitting authority review of NOI not expressly required
  - No procedure for public participation for NOI



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MS4 Developments

- **EPA proposal includes three options**
  - Option 1—Traditional General Permit Approach (with NOIs, comment period, "specific, clear, and measurable" requirements)
  - Option 2—Procedural Approach (authority and EPA review of NOI, public notice/hearing)
  - Option 3—State Choice Approach (either Option 1 or 2, or some hybrid)

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MS4 Developments

- **Other key features on the horizon**
- **Impacts of TMDLs**
  - Develop permitting strategy for use by POTWs and MS4 communities to combine cap loads
    - Require reductions for both entities within a single permit
    - Allows MS4-assigned reductions to be taken up by the POTW
    - Or vice-versa for expanded POTW capacity



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Recent MS4 Enforcement Trends

- Failure to identify all outfalls
- Failure to identify areas that are high risk for dumping to storm sewer system inlets and illegal connections
- Failure to conduct field screening of outfalls in priority areas

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Recent MS4 Enforcement Trends

- Failure to have systems in place to address illicit discharge detection and elimination ("IDD&E") systems
- Failure to document all steps taken during IDD&E investigation through resolution
- Failure to install (or require to be installed) certain BMPs



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Recent MS4 Enforcement Trends

- **Failure to have a detailed schedule or program documentation for the O&M and inspection of all municipal stormwater facilities (infrastructure and buildings)**

- **Paperwork violations to demonstrate compliance with permit requirements, including community education**

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Recent Enforcement Trends

- Rockford, IL - 2015 ($329,395) – MS4
- Rhode Island DOT - 2015 ($315,000) – MS4
- Salt Lake County - 2016 ($280,000) – MS4
- Swampscott, MA - 2016 ($65,000) – MS4
- City of Bangor, Maine - 2015 (no $) – CSO/MS4
- Lawrence, MA - 2015 (no $$) – CSO/MS4
- Harrisburg, PA - 2015 (no penalty, but $82M in upgrades) – CSO/MS4

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Case Study: Chesapeake Bay TMDL

- **Chesapeake Bay is "impaired"**
  - Entire watershed subject to TMDL for nitrogen, phosphorous, and sediment
  - MS4 permitting approaches are evolving in states like PA and MD
  - Similar situations could arise elsewhere where waters are impaired
- **Six States/DC - series of Chesapeake Bay Agreements, first in 1983**



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Chesapeake Bay TMDL

- **Obama Administration and EPA were not satisfied with progress**
- **Executive Order 13508 on May 12, 2009**
  - Established Chesapeake Bay Commission to oversee restoration
  - Increased Accountability
  - 2-year Milestones
- **EPA and Chesapeake Bay Program established target loads and broad allocation**
  - Allocated by state
  - States implement by county then local

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Chesapeake Bay TMDL

- **State WIPs (roadmaps)**
- **December 29, 2010 – EPA issued Bay TMDL**
  - Targets 2025 for implementation of all pollution controls
- **Update to wastewater Part II WIP (Sept 2015)**
  - Breakdown by facility
  - Trading baseline for point sources
- **Next deadlines – 2018**

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Chesapeake Bay TMDL

- **Why it is important?**
  - Largest TMDL ever adopted
    - Largest estuary in the U.S.
- **The Bay watershed has**
  - 206 MS4s
  - 10,000 sites/permits with a total of 55,000 BMPs
  - Primary source of new BMPs is new construction/redevelopment



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Chesapeake Bay TMDL

- **EPA critical of PA Phase II WIP for Bay**
  - Particularly agricultural and urban runoff from MS4s and development (PCSM)
  - No system for documenting BMPs
- **Withheld approval of MS4 General Permit**
- **Withheld federal funding (almost $3M)**
  - Says PA relies almost entirely on federal cost share

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Chesapeake Bay TMDL

- Caused Pennsylvania to change approach to compliance with the Bay TMDL
- Trickle down: Pennsylvania is also changing MS4 requirements for any TMDL watershed
- DEP new "Strategy for Enhancing Pennsylvania's Chesapeake Bay Restoration Efforts" (Jan. 2016)

http://files.dep.state.pa.us/Water/ChesapeakeBayOffice/DEP%20Chesapeake%20Bay%20Restoration%20Strategy%20012116.pdf

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Chesapeake Bay TMDL

- **Major focus on urban runoff**
  - Urban runoff includes MS4 and non point
  - Speaks generally of “stormwater”
  - Includes PCSM (implement by regulation)
- **MS4s must be held to load reductions**
  - Typically only BMPs and public education
  - Bay is forcing actual load reductions of sediment and nutrients

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Chesapeake Bay TMDL

- **Keys to Pennsylvania Bay Strategy**
  - MS4 requires Chesapeake Bay Pollutant Reduction Plan (PRP)
  - Capture and calculate BMPs implemented since 2006
  - Focused compliance and enforcement efforts
  - Local water quality (LWC) improvements
  - Low cost/high impact BMPs in areas conducive

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Chesapeake Bay TMDL

- **Keys to Bay Strategy (cont.)**
  - Addressing pollution reduction deficiencies ("PRDs") for the agricultural and stormwater sectors
    - With focused compliance and enforcement efforts
  - Focusing on local water quality improvement projects ("LWQ")

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Chesapeake Bay TMDL

- **LWQ improvement projects**
  - Locating and quantifying previously undocumented BMPs
  - Putting new high-impact, low-cost BMP projects targeted at impaired watersheds where cause is ag or urban stormwater
  - Look for quick results BMPs
  - Focus federal and state cost-share dollars on those watersheds

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Bay Pollution Reduction Plans

- **Identify all BMPs that will be implemented to achieve the required pollutant reductions**
  - Locations
  - Implementation schedule
  - How each BMP is expected to reduce pollutants in the receiving waters
  - Estimate reduction in lbs/yr or % of the TMDL pollutants and how the estimates were determined
  - Rationale for selecting the BMP
  - Description of planned inspection and O&M of BMP

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Bay Pollution Reduction Plans

- **Identify municipal infrastructure planned projects**
  - ALL public infrastructure projects are required to be evaluated for the potential to implement BMPs
- **Determining "current loads" is optional**
  - Model plan suggests may be necessary to accurately determine the loading reductions that must be achieved

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Bay Pollution Reduction Plans

- **Determining the "current loads" could identify and "take credit" for the BMPs installed since 2006**
  - Goes toward the overall load reductions
  - Identifies load reductions already achieved
- **In identifying the control measures to be implemented by the MS4 to reduce pollutant**
  - Break into permit cycles, starting with “shovel ready”

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Bay Pollution Reduction Plans

- **Encourages financing through stormwater authority, P3, public funds**
- **Encourages regional planning**
- **Encourages use of codes and ordinances**
  - Land use (e.g., parking islands, minimize curbs, open section roadway)
- **Suggests that "over requiring" BMPs as part of PCSM can also achieve reductions in loadings**
  - e.g., BMPs that infiltrate more than the 2-year/24-hour storm may generate "credit" for the MS4 system area

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Bay Pollution Reduction Plans

- **Inspection and O&M for each BMP is critical to the success of the BMP**
  - Credit for the reduction depends on long-term O&M
- **Practical tips:**
  - Use ordinances to establish inspection requirements
  - Use O&M plans (recorded) for BMPs

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New Direction Under Trump Administration?

- **President Trump has directed the EPA to review the Clean Water Rule**
  - The Clean Water Rule addresses water quality for small streams and tributaries, but does not substantially impact MS4 permitting
- **Additionally, Trump Administration has stated an intent to reduce the EPA's budget by 25%**
  - Reductions could reduce funding for the Chesapeake Bay Program – reports indicate annual funding could be reduced from $73 million to $5 million
  - If approved by Congress, EPA budget cuts could shift responsibility for enforcement of Federal stormwater regulations to states

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Financing SW Utilities - Background

- To meet regulatory obligations under the Clean Water Act, municipalities across the country have developed and implemented stormwater programs

- Historically, many municipalities installed and maintained stormwater infrastructure using revenues from general funds, similar to police, school, and fire protection services

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Financing SW Utilities - Background

- **Heightened regulatory obligations require municipalities to improve current drainage capabilities by reducing or diverting stormwater runoff**
  - Costly! – Stormwater management upgrades range in cost, but can exceed $250,000 per treated acre

- **<u>How can municipalities generate additional revenue to improve stormwater management?</u>**

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Stormwater Utilities

- Like water and wastewater utilities, stormwater utilities provide a public service
- Stormwater utilities can develop a variety of fee structures to recover stormwater costs in proportion to customers' impact on the municipality's stormwater infrastructure

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Stormwater Utilities

- **Depending on the applicable governing law, stormwater utilities can be formed by a municipality or by an independent municipal authority**

- **Although increasingly widespread (over 1,500 stormwater utilities in United States), municipal stormwater fees can be subject to legal challenges**

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Stormwater Fee Structure

- **Stormwater fees are most often (80%) based on the impervious area on a parcel of land**
  - Impervious area – buildings, pavement, or other material impeding the natural infiltration of surface water into the soil, (e.g. parking lots, rooftops, driveways, etc)
- **In addition to area-based fees, stormwater fees may also include a separate billing and collection charge**

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Stormwater Fee Structure

- **Two basic rate structure options**
  - Flat Fee – Simple per-parcel fee for all
  - Dual Fee – Separate fees for Non-Residential and Residential
    - In dual-rate situations, Residential parcels typically pay a flat fee
    - Non-Residential parcels may pay a higher flat fee or a fee based on the individual parcel area, as determined by Geographic Information System ("GIS") measurements

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Stormwater Fee Structure

- **More detailed variants**
  - Equivalent Residential Unit ("ERU")
    - ERU = average impervious area for a single family residential parcel
  - Equivalent Hydraulic Unit ("EHA")
    - EHA = combined impact of impervious and pervious areas
    - Fees based on estimated runoff flows, with a higher per-unit rate for impervious area and a lower rate for pervious area
  - Tiered/Development – Fees based on sliding scale from vacant/light development to heavy development

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Can My Municipality Form a Stormwater Utility?

- **Some states may not affirmatively grant power to form stormwater utilities**
- **The requisite authority may be granted by statute or caselaw**
  - In cases of uncertainty, municipalities may seek an opinion from their State Attorney General to affirm power to form a stormwater utility
- **To establish the stormwater fees and other program terms, the municipality must enact a local ordinance**

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Can My Municipality Form a Stormwater Utility?

- **In some jurisdictions, stormwater utilities can be formed as independent state bodies with jurisdiction over multiple municipalities**
  - Ex. – In 2013, Pennsylvania state legislature passed an amendment allowing municipalities to form independent stormwater authorities

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Can My Municipality Form a Stormwater Utility?

- **Where applicable, creation of a stormwater authority, or similar alternative, may carry advantages:**
  - Flexibility to monetize municipal assets through sale or leaseback arrangements
  - Greater potential for regional coordination of stormwater rates and programs

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Case Study: Philadelphia Water Department ("PWD")

- **History of PWD Stormwater Fee Structure**
  - Prior to 1976 - PWD recovered stormwater costs as part of its wastewater charges
  - In 1976, PWD implemented separate stormwater fees based solely on water meter size
    - 40,000 PWD customers have no water meter!
  - In 2002, PWD implemented parcel-based stormwater fees for Residential customers
  - In 2010, PWD began four year phase-in of parcel-based stormwater fees for all Non-Residential customers
  - By July 1, 2013, PWD had transitioned to 100% parcel-based fees for Non-Residential customers

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Case Study: Philadelphia Water Department ("PWD")

- **PWD Stormwater Rate Structure**
  - Rate Based on Runoff Factor
    - Residential customers pay uniform fee based on the city-wide average Impervious Area ("IA") and average Gross Area ("GA") for Non-Residential parcels
    - Non-Residential Customers pay a per sq. ft. fee for total parcel GA and an additional per sq. ft. fee for total parcel IA
      - <5,000 sq. feet = estimated IA (25% IA for undeveloped lots, 85% IA for developed)
      - ≥5,000 sq. feet = GIS-mapped IA and GA

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Case Study: Philadelphia Water Department ("PWD")

- **PWD Stormwater Rate Structure**
  - Credits
    - NPDES credit – automatic 7% reduction of total stormwater charge for parcels holding NPDES Industrial Discharge permits
    - IA and GA area credits:
      - Parcels implementing stormwater mitigation measures (pervious pavement, green roofs, etc.) eligible for up to 100% reduction of IA or GA fee

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Case Study: Philadelphia Water Department ("PWD")

- **Community Engagement**
  - Following implementation of Non-Residential parcel-based rates, PWD received barrage of complaints from non-residential customers experiencing significant rate increases from meter-based stormwater fees
    - For example, a used car lot would have paid minimal stormwater fees under meter based rates, but would be assessed high stormwater fees under parcel-based rates due to extensive paved area
    - Similarly, vacant lots with no connected water meters would now be assessed stormwater fees based on parcel size

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Case Study: Philadelphia Water Department ("PWD")

- **In 2011, PWD convened a Customer Advisory Committee ("CAC") comprised of non-residential customer, regulatory, and community stakeholders**
- **CAC recommended modifications to PWD's stormwater fee structure**
  - Grant program to support customer investment in stormwater mitigation measures
  - Enhanced Customer Assistance Program for parcels subject to extraordinary rate increases
  - Reduced maximum IA and GA credits to 80%
- **PWD implemented each of the CAC recommendations in 2012**

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Legal Concerns

- **Litigation Over Stormwater Fees Generally Concerns Three Issues:**
  - Statutory/Regulatory Authority to Form Stormwater Utility
  - Distinction between fees properly collected by the utility and taxing power limited to the state
  - Rate Allocation to Customers
- **Although many municipalities have created stormwater utilities without litigation, some have faced significant legal challenges**

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Legal Concerns

- **Statutory Authority to Establish Stormwater Utility**
  - *Northeast Ohio Regional Sewer Dist. V. Bath Twp.*, 44 N.E.3d 246 (Ohio 2015)
    - Supreme Court of Ohio rejected Bath Township's allegation that the Northeast Regional Sewer District lacked statutory authority to implement a stormwater management program and collect stormwater fees.
    - The court found the governing statute defined "wastewater" to include stormwater, thereby authorizing the Sewer District to regulate and assess fees for both services.

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Legal Concerns

- **Fee v. Tax**
  - *City of Lewiston v. Gladu,* 40 A.3d 964 2012 ME 42 (Me. 2012)
    - Supreme Court of Maine found the City of Lewiston's stormwater assessment charge to be a valid fee and not a tax
    - Court applied the following four-factor test:
      - Regulatory Purpose or Revenue Generator?
      - Direct or Indirect Relationship between Fee and Benefit?
      - Voluntary or Involuntary Fee?
        - Court found credit program allowing for 100% fee reduction conferred voluntariness
      - Fair Approximation of Costs and Benefits?

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Legal Concerns

- **Fee v. Tax**
  - *Jackson County v. City of Jackson,* 836 N.W.2d 903 (Mich. Ct. App. 2013)
    - Court of Appeals of Michigan found the stormwater management charge implemented by the City of Jackson met no regulatory purpose and was intended primarily to increase revenue
    - Court also found the charge did not reflect usage of the stormwater sewer system and therefore constituted a tax for the public benefit rather than a fee for services rendered

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Legal Concerns

- **Rate Allocation to Customers**
  - *Mint Mgmt v. City of Richmond,* 2017 Ind. App. LEXIS 66 (Ind. Ct. App. 2017)
    - Court of Appeals of Indiana upheld a stormwater service charge imposed by the City of Richmond on all property owners regardless of whether stormwater runoff from each parcel flows into the City's stormwater system.
    - The court determined that all parcels benefit from the City's stormwater infrastructure because the stormwater infrastructure included combined sewers carrying both stormwater and sanitary sewer flows.

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Legal Concerns

- **Rate Allocation to Customers**
  - *City of Kew W. v. Key Golf Club Homeowners' Ass'n,* 2017 Fla. App LEXIS 802 (Fla. Dist. Ct. App. 2017)
    - Court of Appeals of Florida overturned a lower court order authorizing the City of Key West to recover stormwater fees from a group of customers.
    - The court found that said customers demonstrated that stormwater runoff from their properties did not flow through the City's stormwater system and that assessing a stormwater fee to such customers would shatter the distinction between a tax and a utilty fee.

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Legal Concerns

- **Lessons Learned?**
  - To minimize potential for legal challenges to stormwater fees, municipalities must:
    - Develop equitable fee structures based on customers' use of stormwater infrastructure
    - Engage in extensive customer outreach campaign to secure public support
    - Educate key local leaders and media outlets on the cost drivers and ultimate purpose of stormwater fees

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Conclusion

- **Municipalities will face increasing costs to comply with Federal and State water quality regulations**
- **Relying in general fund revenue hinders development of sustainable stormwater management practices**
- **With appropriate formation, fee structures, and customer outreach, stormwater utilities provide an excellent vehicle to appropriately recover costs of environmental compliance from the affected customers**

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QUESTIONS?

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