



Legal Context for Green Infrastructure Under the Clean Water Act

***Greening the Gray: Innovative Infrastructure Solutions
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Legal Context for Green Infrastructure under the Clean Water Act

- Stormwater Management
- CSO Management

Clean Water Act Permits (§ 402)

- It is illegal to discharge any pollutant into a navigable water without a permit.
- NPDES Permits (CWA §§ 301, 402)
 - Point Sources subject to CWA Permits:
 - Storm water discharges*
 - Combined Sewer Overflows (CSOs)

Stormwater Permit Program

- **Stormwater Permits (CWA § 402(p))**
 - EPA or state issues stormwater permit to utility
 - Stormwater utility develops and implements stormwater controls through Stormwater Management Plan
 - Must develop a program to address six minimum control measures
 - Including post-construction runoff
 - Controls revolve around the use of “Best Management Practices” (BMPs) to control stormwater
 - **BMPs can be non-structural or structural**
 - **Performance Standards & BMPs can encourage LID / GI**

Stormwater: New Rulemaking

- **Post-Construction Stormwater Rule (EPA):**
 - Expand universe of regulated dischargers
 - Newly Developed / Redeveloped Sites: Develop discharge standards. Examples:
 - Retain minimum storm volume on site (*e.g.* retain first 1")
 - Limit total impermeable surfaces
 - Removal requirements (*e.g.* must remove 80% of TSS).
 - Already-Developed Sites: Require retrofitting to achieve standards
 - Timing: Proposed Rule - Sept 2011
Final Rule – November 2012

CSOs: CSO Control Policy

- CSO Control Policy
 - Create comprehensive, nationwide approach to CSO problem
 - Incorporate CSO Controls in Enforceable (NPDES) Permits
 - Municipalities with CSOs must
 - Implement Nine Minimum Controls
 - Develop Long Term Control Plan

CSOs: Consent Decrees

- Municipalities w/CSOs → enforcement → federal or state consent decrees targeting CSO control
- Incorporate NMC, LTCP into Enforceable Requirements
- Traditionally, focus on grey infrastructure fixes for CSOs:
 - Construction of CSO storage (tanks, tunnels, etc);
 - WWTP and Pump Station upgrades to increase wet weather treatment
 - Sewer Cleaning
 - Sewer Separation

→ But this focus is shifting from grey to green

CSOs: Consent Decrees

- Supplemental Environmental Projects (in lieu of civil penalties)
 - **Hamilton County / City of Cincinnati** (2002) (streambank stabilization, greenway creation)
 - **DC WASA** (2003) – (rain gardens, vegetated swales, green roofs)
 - **Washington Suburban Sanitary Commission** (2005) (downspout disconnections, purchase of conservation easements)
 - **Sanitation District No. 1 of Northern Kentucky** (2005) (conservation easements and watershed restoration)
 - Consent Decree Requires **Watershed Planning Approach**
 - District is implementing a number of “Green Projects,” including reforestation, rainwater harvesting, etc.

Consent Decrees

- Onondaga County –
 - 4th Amended Consent Judgment – (November 2009)
 - Replaced planned grey infrastructure requirements with a combination of grey and green infrastructure to meet CSO Control requirements
 - Mandates construction of GI projects

Clean Water Act Consent Decrees: Cleveland

- Northeast Ohio Regional Sewer District (December 2010)
 - \$3B / 25 years
 - Requires \$42M expenditure on use of GI control measures to capture 44 MG of wet weather flows in a typical year.
 - Green Infrastructure Plan (by December 31, 2011)
 - Authorizes replacement of required grey infrastructure with GI
 - GI must achieve same level of control on same compliance schedule
- Kansas City, MO (May 2010)
 - \$2.5 B / 25 years
 - Plans to use an adaptive management approach to extensively use GI in lieu of and in addition to structural controls.

Beyond Enforcement

- Recovery Act Funds (ARRA) – 20% set aside for green projects, including green infrastructure
- EPA has embraced use of GI
 - Office of Water – Memoranda in support of GI, including the use of GI in NPDES permits and enforcement actions
- Many Cities Implementing GI outside of Enforcement Context
 - Milwaukee Green Seams program
 - City of Chicago

Green Infrastructure & the Clean Water Act: Some Challenges

- Paradigm shift
- Bridge Administrative Silos
- Quantifying and Maintaining performance
- Educating your regulator
- Accepting Risk

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