

A Paradigm Shift for Municipal Stormwater Regulation?

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The Paradigm Shift:

A new federal regulatory
program for MS4s
based on Green Infrastructure
and Low Impact Development

Background

- **1987** – Clean Water Act § 402(p)
- **1990** – “Phase I” regulations [55 Fed. Reg. 47990; 40 CFR 122.26]
- **1999** – “Phase II” regulations [64 Fed. Reg. 68722; 40 CFR 122.30-37]
- **2008** – NRC Report on “Urban Stormwater Management in the United States”
- **2009** – EPA Request for Stakeholder Input [74 Fed. Reg. 68617]
- **2010** – “Listening Sessions” and Information Collection Requests (ICRs)
- **2012** – *New regulatory focus on LID ?*

Meanwhile . . .

- **March 5, 2007** EPA memo on *“Using Green Infrastructure to Protect Water Quality in Stormwater, CSO, Nonpoint Source and other Water Programs”*
- **April 19, 2007** EPA/NACWA/NRDC/LIDC/ASWIPCA *“Green Infrastructure Statement of Intent”*
 - strategies include “opportunities and incentives” for the use of green infrastructure provisions in MS4 permits”
- **August 16, 2007** EPA memo on *“Use of Green Infrastructure in NPDES Permits and Enforcement”*
 - permits may be structured “to encourage” permittees to utilize green infrastructure approaches, where appropriate, in lieu of or in addition to more traditional controls”
- **2008** EPA (et al.) *“Green Infrastructure Action Strategy”*
 - Objective IV.2: Develop model language for MS4 permits to incorporate green infrastructure management practices

METF:

The new kid on the block

One Hundred Tenth Congress
of the
United States of America

AT THE FIRST SESSION

*Began and held at the City of Washington on Thursday,
the fourth day of January, two thousand and seven*

An Act

To move the United States toward greater energy independence and security, to increase the production of clean renewable fuels, to protect consumers, to increase the efficiency of products, buildings, and vehicles, to promote research on and deploy greenhouse gas capture and storage options, and to improve the energy performance of the Federal Government, and for other purposes.

*Be it enacted by the Senate and House of Representatives of
the United States of America in Congress assembled,*

SECTION 1. SHORT TITLE; TABLE OF CONTENTS.

(a) SHORT TITLE.—This Act may be cited as the “Energy Independence and Security Act of 2007.”

(b) TABLE OF CONTENTS.—The table of contents of this Act is as follows:

Sec. 1. Short title; table of contents.

Sec. 2. Definitions.

Sec. 3. Relationship to other law.

TITLE I—ENERGY SECURITY THROUGH IMPROVED VEHICLE FUEL
ECONOMY

Subtitle A—Increased Corporate Average Fuel Economy Standards

Sec. 101. Short title.

Sec. 102. Average fuel economy standards for automobiles and certain other vehicles.

Sec. 103. Definitions.

Sec. 104. Credit trading program.

Sec. 105. Consumer information.

Sec. 106. Continued applicability of existing standards.

Sec. 107. National Academy of Sciences studies.

Sec. 108. National Academy of Sciences study of medium-duty and heavy-duty truck fuel economy.

Sec. 109. Extension of flexible fuel vehicle credit program.

Sec. 110. Periodic review of accuracy of fuel economy labeling procedures.

Sec. 111. Consumer tire information.

Sec. 112. Use of civil penalties for research and development.

Sec. 113. Exemption from separate calculation requirement.

Subtitle B—Improved Vehicle Technology

Sec. 131. Transportation electrification.

Sec. 132. Domestic manufacturing conversion grant program.

Sec. 133. Inclusion of electric drive in Energy Policy Act of 1992.

Sec. 134. Loan guarantees for fuel-efficient automobile parts manufacturers.

Sec. 135. Advanced battery loan guarantee program.

Sec. 136. Advanced technology vehicles manufacturing incentive program.

Subtitle C—Federal Vehicle Fleets

Sec. 141. Federal vehicle fleets.

Sec. 142. Federal fleet conservation requirements.

- **EISA** – The “*Energy Independence and Security Act of 2007*”
- 310 pages of provisions designed “to move the U.S. towards greater energy independence and security”
- Stormwater is mentioned only once – on page 129 of the Act

H.R. 6—3

Sec. 322. Incandescent reflector lamp efficiency standards.
Sec. 323. Public building energy efficient and renewable energy systems.
Sec. 324. Metal halide lamp fixtures.
Sec. 325. Energy efficiency labeling for consumer electronic products.

TITLE IV—ENERGY SAVINGS IN BUILDINGS AND INDUSTRY

Sec. 401. Definitions.

Subtitle A—Residential Building Efficiency

Sec. 411. Reauthorization of weatherization assistance program.
Sec. 412. Study of renewable energy rebate programs.
Sec. 413. Energy code improvements applicable to manufactured housing.

Subtitle B—High-Performance Commercial Buildings

Sec. 421. Commercial high-performance green buildings.
Sec. 422. Zero Net Energy Commercial Buildings Initiative.
Sec. 423. Public outreach.

Subtitle C—High-Performance Federal Buildings

Sec. 431. Energy reduction goals for Federal buildings.
Sec. 432. Management of energy and water efficiency in Federal buildings.
Sec. 433. Federal building energy efficiency performance standards.
Sec. 434. Management of Federal building efficiency.
Sec. 435. Leasing.
Sec. 436. High-performance green Federal buildings.
Sec. 437. Federal green building performance.
Sec. 438. Storm water runoff requirements for Federal development projects.
Sec. 439. Cost-effective technology acceleration program.
Sec. 440. Authorization of appropriations.
Sec. 441. Public building life-cycle costs.

Subtitle D—Industrial Energy Efficiency

Sec. 451. Industrial energy efficiency.
Sec. 452. Energy-intensive industries program.
Sec. 453. Energy efficiency for data center buildings.

Subtitle E—Healthy High-Performance Schools

Sec. 461. Healthy high-performance schools.
Sec. 462. Study on indoor environmental quality in schools.

Subtitle F—Institutional Entities

Sec. 471. Energy sustainability and efficiency grants and loans for institutions.

Subtitle G—Public and Assisted Housing

Sec. 481. Application of International Energy Conservation Code to public and assisted housing.

Subtitle H—General Provisions

Sec. 491. Demonstration project.
Sec. 492. Research and development.
Sec. 493. Environmental Protection Agency demonstration grant program for local governments.
Sec. 494. Green Building Advisory Committee.
Sec. 495. Advisory Committee on Energy Efficiency Finance.

TITLE V—ENERGY SAVINGS IN GOVERNMENT AND PUBLIC INSTITUTIONS

Subtitle A—United States Capitol Complex

Sec. 501. Capitol complex photovoltaic roof feasibility studies.
Sec. 502. Capitol complex E-S5 refueling station.
Sec. 503. Energy and environmental measures in Capitol complex master plan.
Sec. 504. Promoting maximum efficiency in operation of Capitol power plant.
Sec. 505. Capitol power plant carbon dioxide emissions feasibility study and demonstration project.

Subtitle B—Energy Savings Performance Contracting

Sec. 511. Authority to enter into contracts; reports.
Sec. 512. Financing flexibility.
Sec. 513. Promoting long-term energy savings performance contracts and verifying savings.

The context:

- **Title IV** – “Energy Savings in Buildings and Industry”
- **Subtitle C** – “High-Performance Federal Buildings”
- **Sec. 438** – “Stormwater runoff requirements for Federal development projects”

The provision:

- **Title IV** – “Energy Savings in Buildings and Industry”
- **Subtitle C** – “High-Performance Federal Buildings”

SEC. 438. STORM WATER RUNOFF REQUIREMENTS FOR FEDERAL DEVELOPMENT PROJECTS.

The sponsor of any development or redevelopment project involving a Federal facility with a footprint that exceeds 5,000 square feet shall use site planning, design, construction, and maintenance strategies for the property to maintain or restore, to the maximum extent technically feasible, the predevelopment hydrology of the property with regard to the temperature, rate, volume, and duration of flow.

EISA did not amend the CWA

METF \neq MEP

but . . .

United States
Environmental
Protection Agency

Office of Water (4503T)
Washington, DC 20460

EPA 841-B-09-001
December 2009
www.epa.gov/owow/nps/lid/section438



Technical Guidance on Implementing the
Stormwater Runoff Requirements for
Federal Projects under Section 438 of the
Energy Independence and Security Act



- **EPA's Federal Facilities Guidance – “*Technical Guidance on implementing the Stormwater Runoff Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act*” (Dec. 2009)**
- 63 pages describing green infrastructure/low impact development tools to implement § 438 of the EISA



**Guidance for
Federal Land Management
in the Chesapeake Bay Watershed**



- **Chesapeake Bay Guidance**
– “*Guidance for Federal Land Management in the Chesapeake Bay Watershed*” (March 2010)
- 660 pages of guidance on “the most up-to-date, proven and cost-effective practices for controlling runoff from federal facilities as required by Executive Order 13,508”

Chesapeake Bay Guidance (cont.)

- **Chapter 3** – “Technical Guidance on Controlling Urban Runoff in the Chesapeake Bay”

“From the perspective of land management and water quality restoration/protection, the same set of ‘proven cost-effective tools and practices that reduce water pollution’ are appropriate for both federal and nonfederal land managers to restore and protect the Chesapeake Bay. Therefore, EPA has written this document to be equally applicable to federal and nonfederal land management.”

MS4 Permit Improvement Guide



U.S. ENVIRONMENTAL PROTECTION AGENCY

OFFICE OF WATER

OFFICE OF WASTEWATER MANAGEMENT

WATER PERMITS DIVISION

APRIL 2010

EPA 833-R-10-001

- **MS4 Permit Improvement Guide** – (April 2010)
- Cover letter states that all MS4 permits “should contain a performance standard for post-construction that is based on the objective of maintaining or restoring stable hydrology to protect water quality of receiving waters or another mechanism as effective”

Letter sent to State Water Directors in Region 4 on April 15, 2010

Re: Expectations for Municipal Separate Storm Sewer System permits

Dear [State Water Director]:

The U.S. Environmental Protection Agency (EPA) has recently finalized the “MS4 Permit Improvement Guide” (Guide) which is available on our website at: www.epa.gov/npdes/pubs/ms4permit_improvement_guide.pdf. The Guide underscores the importance of permit requirements that are clear, specific, measurable, and enforceable, and it includes examples of permit provisions as well as sample language for supporting rationale. As described in my letter to your office dated November 24, 2009, EPA Region 4 expects Municipal Separate Storm Sewer (MS4) permit requirements and performance standards to reflect a level of detail and specificity similar to that of the examples in the Guide. I would also like to take this opportunity to further describe EPA Region 4’s expectations for MS4 National Pollutant Discharge Elimination System (NPDES) permits submitted for our review, and to identify aspects of the permits that are particular areas of focus when we conduct our review.

The Region will be taking a closer look at future MS4 permits for clear, specific and measurable performance standards sufficient to ensure the implementation of controls to reduce the discharge of pollutants to the maximum extent practicable, as required under Section 402(p)(3)(B) of the Clean Water Act. Our expectation is based on the principle that it is the permit writer’s obligation to determine performance standards that are consistent with the maximum extent practicable (MEP) requirement, and the development of appropriate performance standards should not be left to the permittee. Our expectation for more effective requirements also serves to help gauge progress and delineate accountability, and it applies to all sections of the permit. As such, permits should specify minimum requirements, with schedules, for the establishment and maintenance of a MS4’s stormwater management program. For example, specific obligations and timeframes should be included in the public education and outreach/public involvement and pollution prevention/good housekeeping components of the permit. Where applicable (primarily Phase I MS4s), permits should include measurable performance standards for inventorying and inspecting industrial and other high-risk stormwater systems, as well as specific conditions for monitoring activities (*e.g.*, monitoring type, frequency, location, protocol, etc.). EPA also expects MS4 permits to require that the permittee operate its system and any structural controls in a manner to reduce the discharge of pollutants, and to that

- **Region 4 Letter to States – (April 15, 2010)**
- Sets forth “expectations” for MS4 permits
- Discusses the 95th percentile/pre-development hydrology requirements in EPA’s § 438 Guidance
- Suggests that, although developed to meet the federal facilities standard, “they can serve as a useful guide for municipal systems as well”

Impact on Recent Permits

Washington DC Draft Renewal Permit

(Region 3 – April 21, 2010)

- 60 pages long; MEP not mentioned even once
- New provisions based on “METF” standard and recent EPA federal facilities guidance
- Measurable requirements for Green Infrastructure or Low Impact Development include:
 - planting 4,150 trees annually
 - installing 120,000 square feet of green roofs annually
 - reducing impervious surfaces by 13.5 million sq. ft. in 5 years
- Fact Sheet states that “the meaning of the MEP standard has continued to evolve since it was first articulated two decades ago.”

Impact on Recent Permits

North Carolina Draft Phase II Renewal Permits

- Would require MS4s to implement a list of 14 specific Post-Construction BMPs, including “LID-Based Design:”
- “Establish, implement and enforce a requirement that” developers “design, install, implement and maintain” green infrastructure measures, and
- “Ensure site planning, design, construction, and maintenance strategies for new development maintains or restores, **to the maximum extent technically feasible**, the predevelopment hydrology of the property with regard to the temperature, rate, volume, and duration of flow”

Future Legal Issues

- What is “practicable” (“MEP”) must be both technically feasible and financially achievable
- “METF” eliminates the issue of affordability and cannot replace MEP without amending the CWA
- Mandatory, numeric on-site retention requirements may not be even technically feasible (one size does not fit all soil conditions or climates)
- Federal land use control raises significant issues under both the 10th Amendment (federalism) and the 5th Amendment (takings)
- “Retrofit” requirements will be particularly vulnerable to legal challenge