Draft Small MS4 General Permit

An Overview of the Permit Requirements

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Presentation Overview

Effects of stormwater runoff
Stormwater regulatory framework
Status of Permits
Permit Requirements
Notice of Intent/SWMP
TMDLs
Illicit Discharge Program
LID Provisions
Questions
Effects of Runoff

Hey, water quality and quantity are impacted ...
Urban runoff is the source of problems

- 9.2% Rivers
- 6.7% Lakes
- 11.3% Estuaries
Water Quality Impacts

Pollutant Sources

Construction

Urban Development

Industrial

Commercial

Residential
Pollutants

- Trash
- Heavy Metals
- Nutrients
- Pathogens
- Sediment
- Oil & Grease
Increased Runoff

Reduced Infiltration

- Natural Ground Cover: 10% runoff, 25% shallow infiltration, 25% deep infiltration, 40% evapotranspiration
- 10%-20% Impervious Surface: 20% runoff, 21% shallow infiltration, 21% deep infiltration, 38% evapotranspiration
- 35%-50% Impervious Surface: 30% runoff, 20% shallow infiltration, 15% deep infiltration, 35% evapotranspiration
- 75%-100% Impervious Surface: 55% runoff, 10% shallow infiltration, 5% deep infiltration, 30% evapotranspiration
Water Quantity Impacts

Increased stormwater volume & velocity
Stream widening & down-cutting
Decreased baseflow
And . . . more flooding!

Changes to Stream Geomorphology
**Regulatory Framework**

**Clean Water Act, Section 402(p)**

**EPA NPDES Regulations, 40 CFR 122**

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**National**

**EPA NPDES Permits**
(5 states, most territories and Indian country lands)

**State Laws and Regulations**
(45 States and PR)

**State NPDES Permits**

**Regulated Universe**

**MS4s, Construction Sites, Industrial Facilities**

**State by State**

**Authorized States**

**Unauthorized States**
Regulatory History

CWA Section 402(p)

Phase I regulations

Phase II regulations
Availability of Draft Permits

MA North Coastal Draft
Public Noticed 2/4/10 – 3/31/10

www.epa.gov/region1/npdes/stormwater/draft_manc_sms4gp.html

MA Interstate, Merrimack, South Coastal Draft

www.epa.gov/region1/npdes/stormwater/mimsc_sms4.html
700+ comment letters & emails

Cities & towns
Citizens
Legislators – state and federal
Environmental and watershed organizations
Types of Comments

Costs & funding

Timing of requirements

Clarifications & tools
Next Steps

Response to comments

Notice of availability

Effective date
Permit Requirements

Getting Started
Phase II Coverage

MS4s

Urban areas
Designated non urban
Non-traditional MS4s
So, what’s an MS4?
Due 90 days from effective date of permit
Information required on NOI
Public notice of the NOI
Authorization to discharge
Required NOI Info

Basic Info
2003 permit items
Endangered Species
Historic Properties
BMPs
Cert & signature
Species of concern

- Northern Red-bellied Cooter
- Dwarf Wedge Mussel
- Bog Turtle
- Shortnose Sturgeon

More >>

www.fws.gov/newengland/index.htm
Historic Properties

National Register
www.nps.gov/nr

MA Register
www.sec.state.ma.us/MHC
Public Notice of NOI

EPA posts NOIs on web

EPA provides public opportunity to comment
Stormwater Management Program

What is it?

Where to keep it

Making it available
Elements of SWMP

Description & details

Map

Annual evaluation
Permit Requirements

Water Quality
TMDLs
What is it?
The connection?
Phosphorous
Bacteria/pathogen
Requirements in the permit
What is a TMDL?

**TMDL**  **Total Maximum Daily Load**

\[ \text{TMDL} = \sum \text{WLA} + \sum \text{LA} + \text{MOS} \]

- **WLA** = Wasteload allocation
- **LA** = Load allocation
- **MOS** = Margin of safety
TMDLs and MS4 Permits

Implementation plan

BMPs to meet LA and WLA Permit limits
Approved TMDLs
North Coastal
Interstate Merrimack South Coastal

TMDL Provisions
The Charles River

Phosphorus Control Plan

Objective

Elements

Timeframes

Tools
End Result
A Cleaner Charles
Polishing an Urban Jewel
Other Water Quality Requirements

Discharges to impaired waters without approved TMDLs
New discharger
Anti-degradation
Availability of WQ Information

www.epa.gov/region1/npdes/stormwater/ma/305b303dstats.pdf
Franklin, MA

Waterbody Assessment &
TMDL Status
Permit Requirements

MEP Requirements
Six Minimum Measures

1. Public education
2. Public involvement
3. Illicit discharge detection & elimination
4. Construction runoff
5. Post-construction stormwater management
6. Pollution Prevention
Shared Responsibility

The regulations, 40 CFR 122.35, allow for MS4s to share responsibility for the implementation of the six minimum measures.
Illicit Discharge Detection and Elimination (IDDE)

Ordinance
Map
Illicit discharge assessment
Locating and removing
Tracking
Public education
Monitoring

www.cwp.org
IDDE Ordinance

Required by 2003 permit
Must allow the MS4 to:

Prohibit non-stormwater discharges

Implement enforcement
MS4 Maps
Outfalls and receiving waters
Complete system wide map
Program Components

- Identification of responsibility for illicit activities
- Outfall inventory
- Assessment of system for illicit activities
- Investigation procedure
- Tracking progress
Wet & dry weather sampling
Many comments
Outfalls from the MS4
Interconnections

Monitoring
Development ordinance
Mass SW standards
Minimize water quality impacts
BMP plan review
Built drawings
BMP operation
LID street design
Impervious area

www.cwp.org
Post Construction Ordinance

Required by 2003 permit – effective May 1, 2008

Amend to include MA Stormwater standards 3 - 7
Minimize Water Quality Impacts

Avoid erosion susceptible areas

Preserve areas with important water quality benefits

Flood control measures

Protect natural resources
Street design & Parking assessment

Green infrastructure

Impervious area
Permit Requirements

Evaluation and Reporting
Reporting Requirements

Annual reporting

EPA will provide a suggested format for reports
Binoculars – Credit: http://www.flickr.com/photos/gcbb/2465054692/

Sparrow Dock – Credit:
http://www.flickr.com/photos/zim2411/3790850184/in/photostream/

Sidewalk Tree – Credit: http://www.flickr.com/photos/madmardign777/79436383/

Pollutant Sources & Types – Credit: EPA HQ

Stream Geomorphology - Credit: EPA HQ

EPA HQ Building – Credit: EPA HQ

Mail Slot – Credit: http://www.flickr.com/photos/snooette/3486843495/

Letters – Credit: http://www.flickr.com/photos/calliope/234447967/

Spanish Steps in Rome – Credit:
http://www.flickr.com/photos/1stutler_photo/4965902875/

LID Green Street #1 – Credit: EPA HQ
Charles No Swimming – EPA

Boston’s Back Bay & Charles River -
http://www.flickr.com/photos/andrewjosephkatz/4997444618/

Merrimack River Lawrence, MA – Credit:
http://www.flickr.com/photos/phillacombe/4286375063/

Wet Parking Space – Credit: EPA HQ

GIS Map – Credit: EPA NE

Ruler – Credit: http://www.flickr.com/photos/vrillusions/5197046091/

Rowers – Credit: MS Office Clip Art

Dirty Water – Credit: EPA HQ

Enforcement - MS Clip Art

Middle Earth Map – Credit: http://www.flickr.com/photos/kevan/389444425/
Maple Leaf in Rain – Credit: http://www.flickr.com/photos/lanier67/184302007

Rainy Street – Credit: http://www.flickr.com/photos/aaronknox/3866924142/

Ribbon Cutting – Credit: http://www.flickr.com/photos/sanjoselibrary/3870090928/

Boat Water Sampling – Credit: EPA NE

Green LID Street # 2 – Credit: EPA HQ

Watch – Credit: http://www.flickr.com/photos/dibytes/4647624108/

2 Center for Watershed Protection Publications – Credit: http://www.cwp.org

All pictograms sourced from EPA HQ
Questions?

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Thank you