

Draft Small MS4 General Permit

An Overview of the Permit Requirements

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EPA New England

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

Impaired

9.2 % Rivers

6.7% Lakes

11.3 % Estuaries

Pollutant Sources

Water Quality Impacts



Pollutants

Trash



Heavy Metals



Nutrients



Sediment



Pathogens

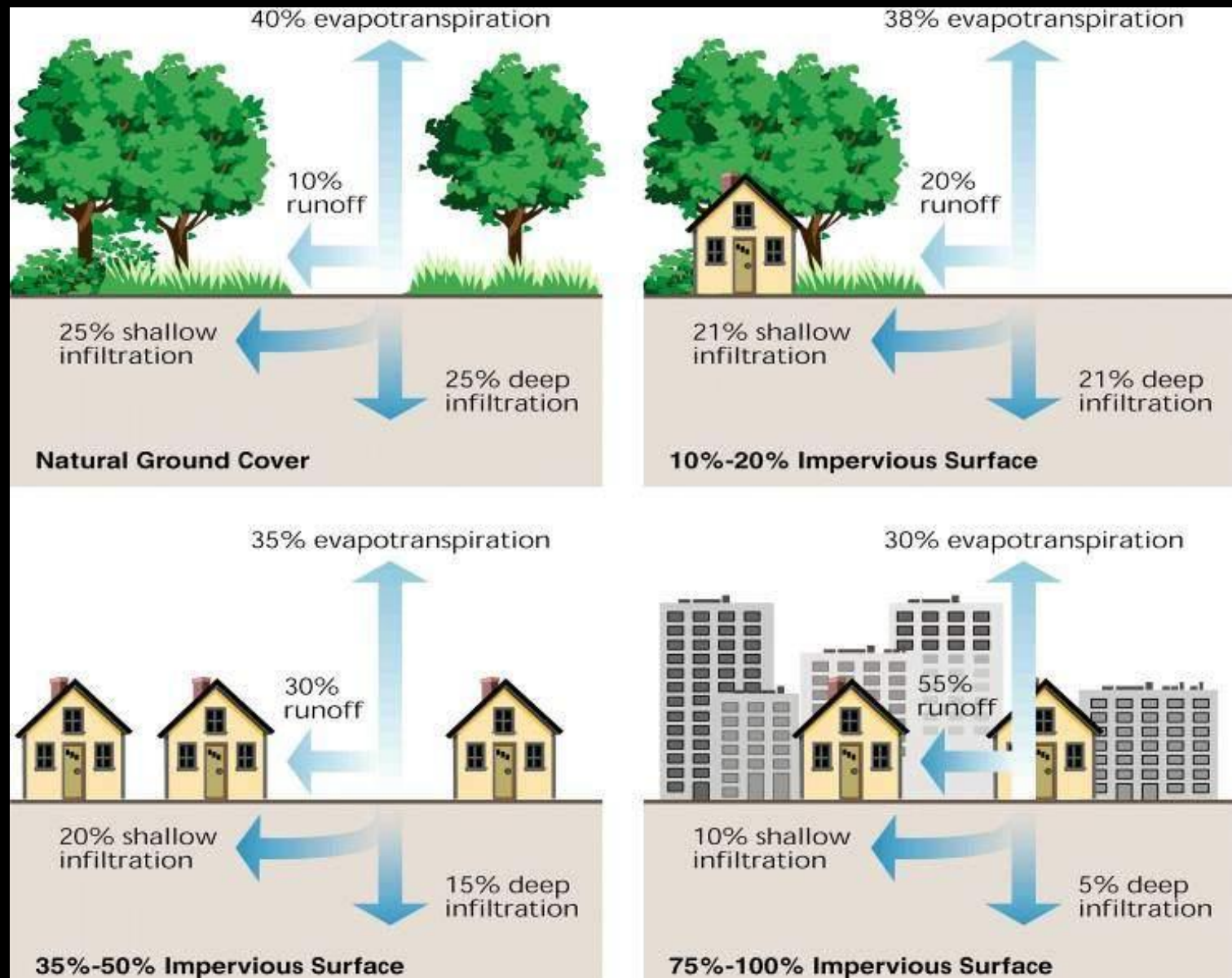


Oil & Grease



Increased Runoff

Reduced Infiltration



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)

National

EPA NPDES Regulations, 40 CFR 122

← **Authorized States** → ← **Unauthorized States** →

State Laws and Regulations
(45 States and PR)

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

State by State

State NPDES Permits



Regulated Universe

MS4s, Construction Sites, Industrial Facilities

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](http://www.epa.gov/region1/npdes/stormwater/draft_manc_sms4gp.html)

MA Interstate, Merrimack, South Coastal Draft

Public Noticed 11/4/10 – 3/11/11

[www.epa.gov/region1/npdes/stormwater/
mimsc_sms4.html](http://www.epa.gov/region1/npdes/stormwater/mimsc_sms4.html)

700+ comment letters & emails

Cities & towns

Citizens

Legislators – state and federal

**Environmental and watershed
organizations**



LETTERS

Types of Comments

Costs & funding

Timing of requirements

Clarifications & tools



Next Steps

Response to comments

Notice of availability

Effective date



Permit Requirements

Getting Started

A photograph of a wet urban street scene. A person in a light blue shirt and dark pants is standing on a concrete sidewalk, looking down. To their right is a yellow and black striped sign. The street is wet and reflects the overcast sky. Trees and a building are visible in the background.

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



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Species of concern

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



More >>

www.fws.gov/newengland/index.htm

Historic Properties

A photograph of the Franklin Public Library, a large, light-colored stone building with a classical architectural style. A large, leafy green tree stands in front of the building. To the right, an American flag flies on a tall pole. A green street sign for 'SCHOOL ST' is visible. In the foreground, a sign for the 'Franklin Public Library' is placed on the lawn, advertising a 'Library Book Sale & DPW Open House Touch-A-Truck' on Saturday, May 21st from 10:00 to 4:00 PM. The building is surrounded by a well-maintained lawn and shrubs.

National Register
www.nps.gov/nr

MA Register
www.sec.state.ma.us/MHC

EPA posts NOIs on web

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 **T**otal **M**aximum **D**aily **L**oad

$$\text{TMDL} = \sum \text{WLA} + \sum \text{LA} + \text{MOS}$$

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

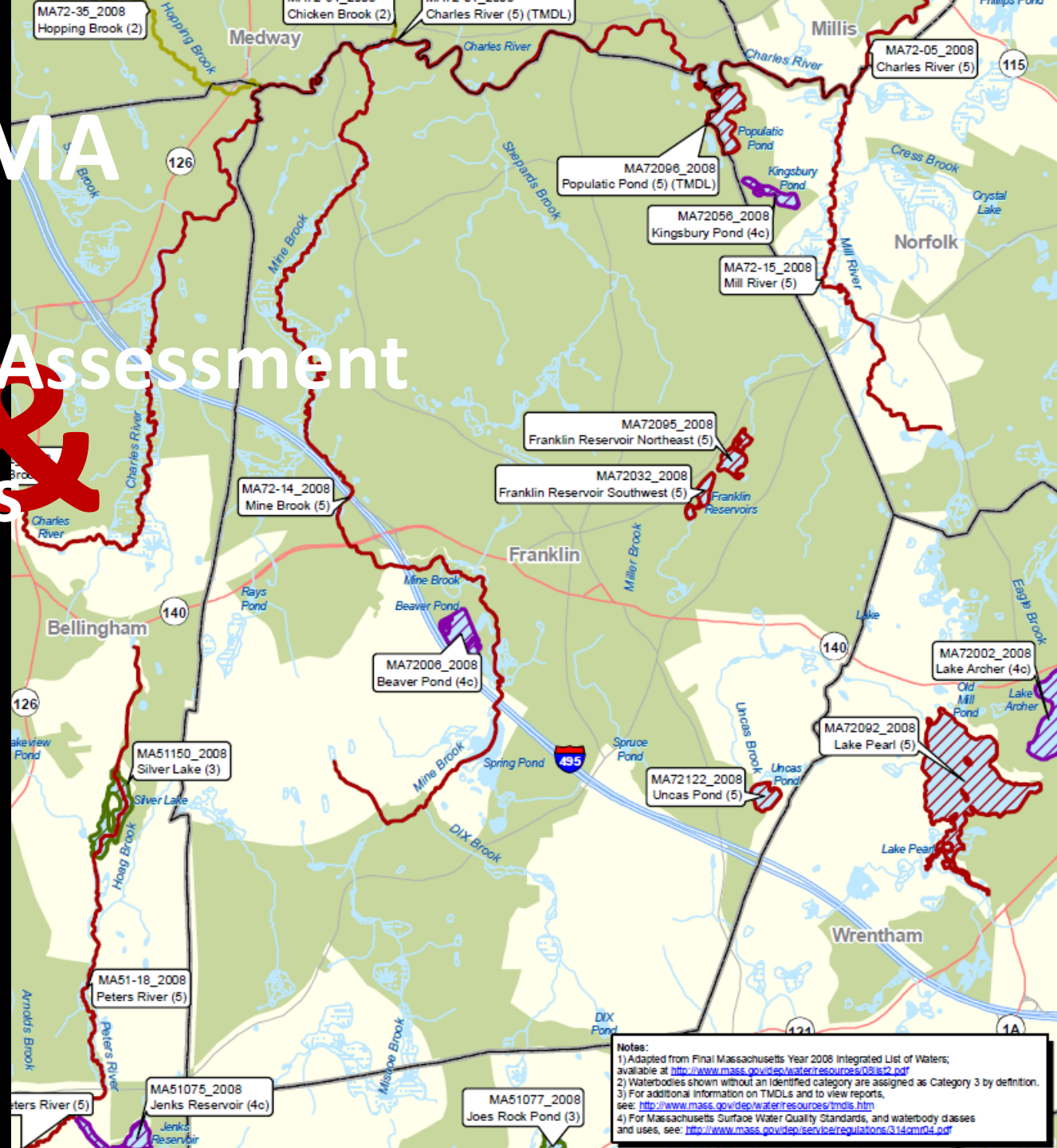


Availability of WQ Information

[www.epa.gov/region1/npdes/
stormwater/ma/305b303dstats
.pdf](http://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

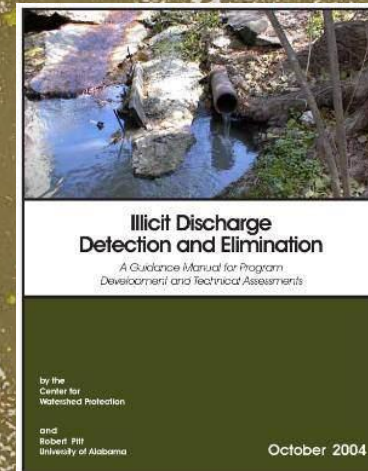
Illicit discharge assessment

Locating and removing

Tracking

Public education

Monitoring



www.cwpp.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

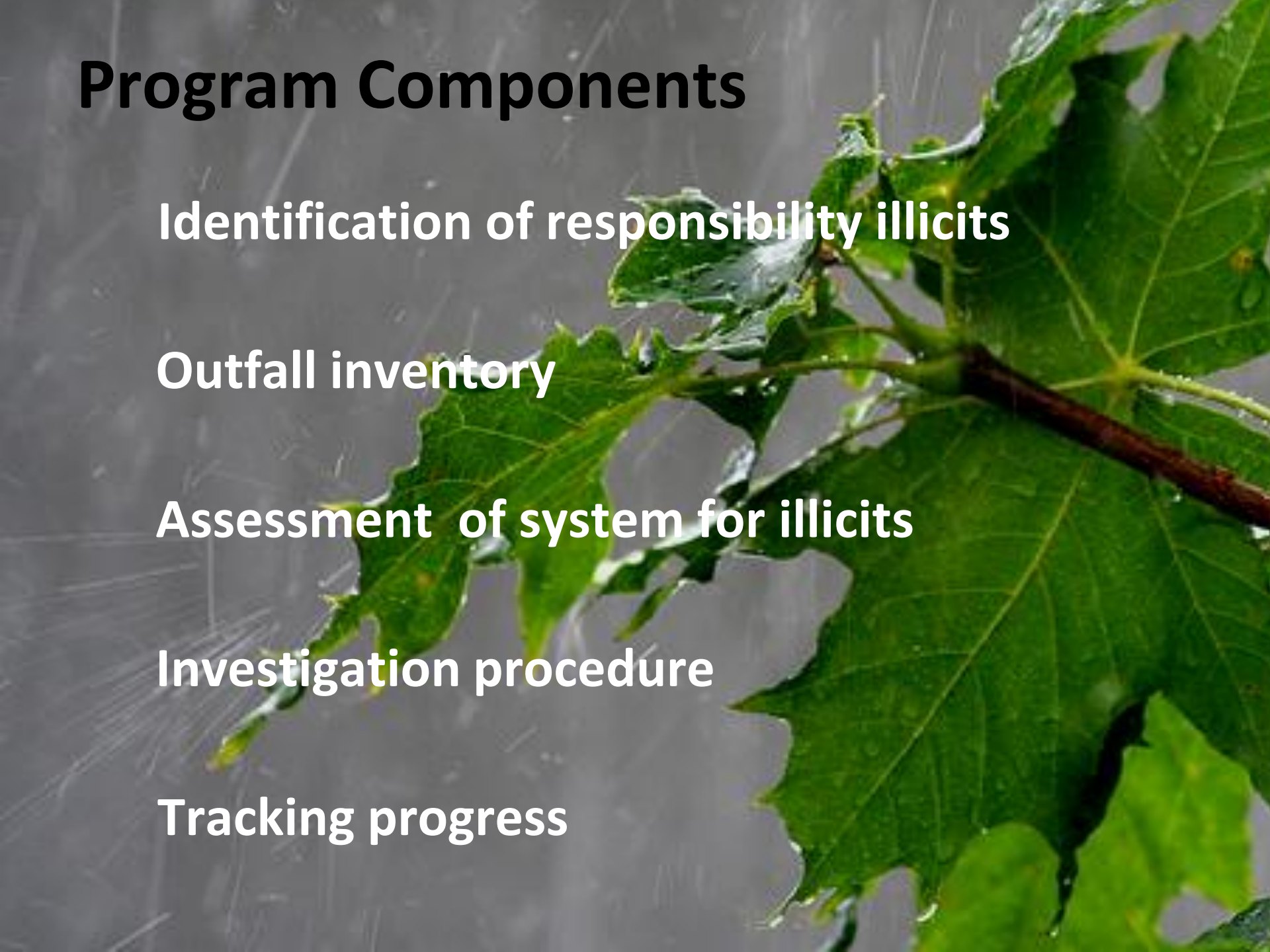
Identification of responsibility illicits

Outfall inventory

Assessment of system for illicits

Investigation procedure

Tracking progress



A photograph of a rainy street scene viewed through a windshield. The windshield is covered in numerous water droplets of varying sizes, some of which are blurred due to motion. In the background, a wet street reflects the ambient light. A yellow diamond-shaped road sign is visible on the right side of the frame. In the distance, there are blurred lights from other vehicles and streetlights, suggesting an urban or suburban setting. The overall atmosphere is overcast and damp.

Wet & dry weather sampling

Many comments

Outfalls from the MS4

Interconnections

Monitoring

Post-Construction

Development ordinance

Mass SW standards

Minimize water quality impacts

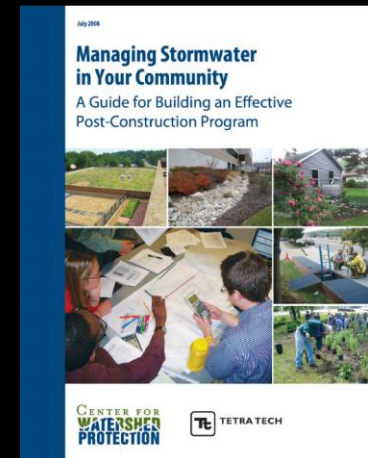
BMP plan review

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/snoodette/3486843495/>

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

Spanish Steps in Rome – Credit:

http://www.flickr.com/photos/lstutler_photo/4965902875/

LID Green Street #1 – Credit: EPA HQ

Image Credits I

Image Credits II

Downtown Franklin – Credit: EPA NE

Public Notices – Credit: <http://www.flickr.com/photos/ell-r-brown/4555539387/>

Roseate Turn – Credit: http://www.flickr.com/photos/andy_li/4862883387/

Turtle – Credit: <http://www.flickr.com/photos/usfwsnortheast/4924260944/>

Franklin Library – Credit: EPA NE

3 Ring Binder – Credit: <http://www.flickr.com/photos/jkfid/4333767484/>

Elements Cupcakes – Credit: <http://www.flickr.com/photos/nickbusse/4163894602/>

TMDL Waterbody – Credit: MassDEP

Fishing – Credit: EPA HQ

Charles River Winter Boats – Credit:
<http://www.flickr.com/photos/38117207@N03/4291865942>

Charles No Swimming – EPA

Image Credits III

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/38944425/>

Image Credits IV

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



Thank you

Questions ?

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Holyoke, MA Slides

So, what's an MS4?



Historic Properties

National Register

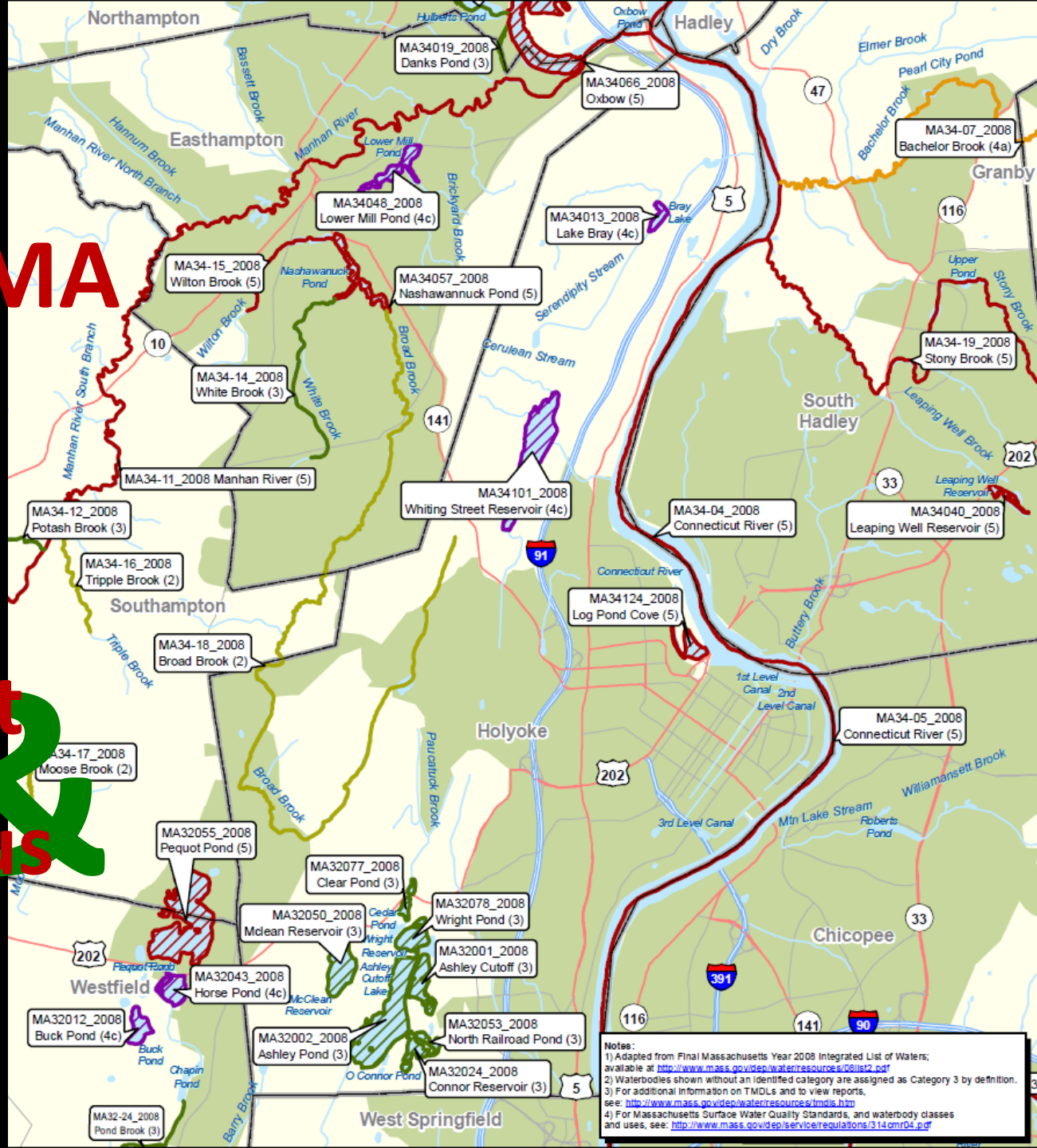
www.nps.gov/nr

Massachusetts Register

www.sec.state.ma.us/MHC

Holyoke, MA

Waterbody Assessment & TMDL Status



Historic Properties

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