

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



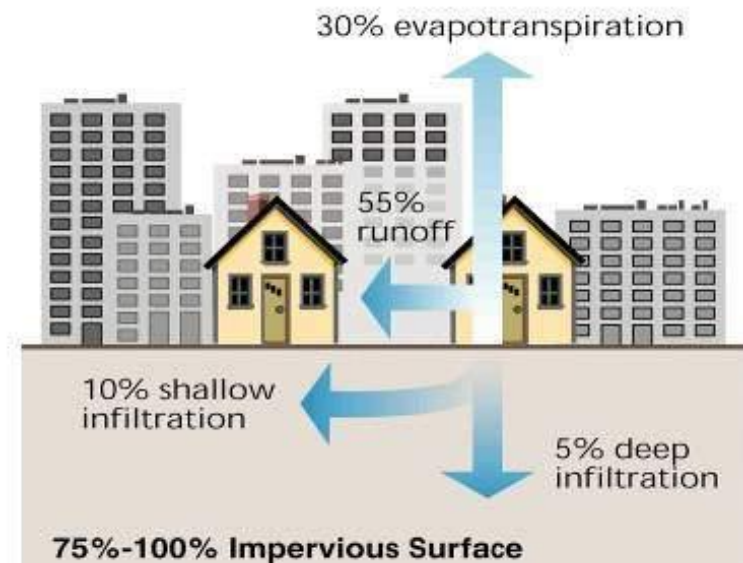
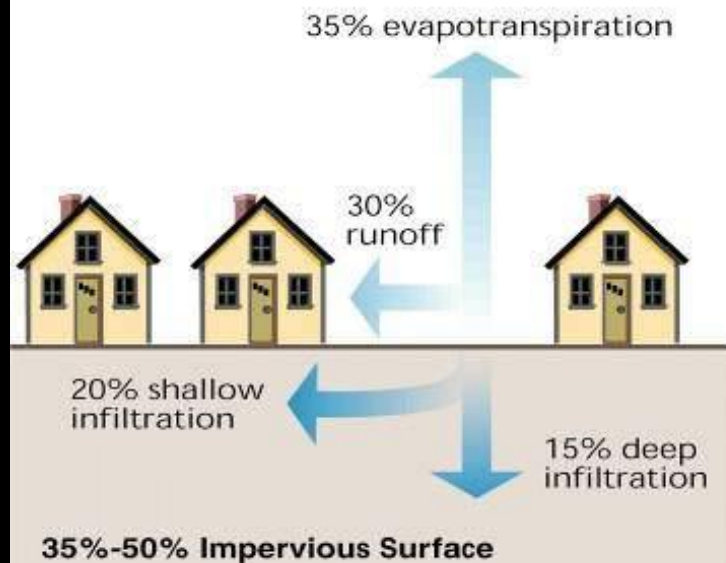
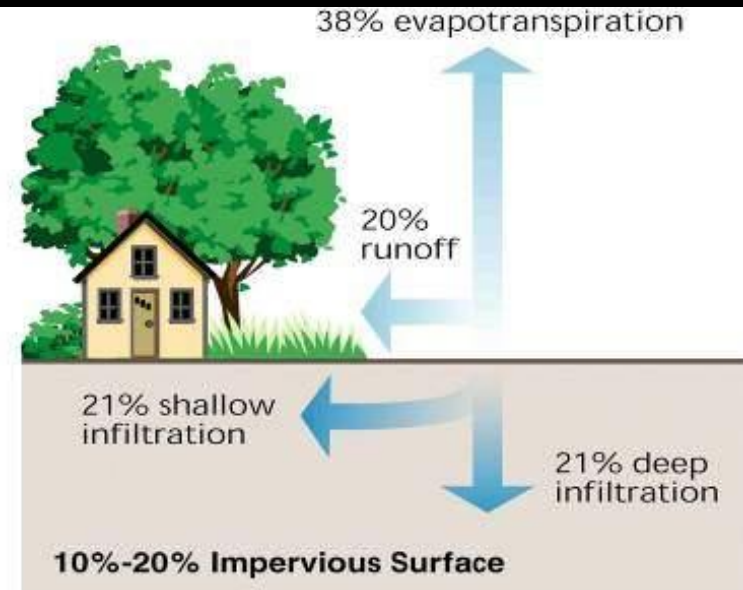
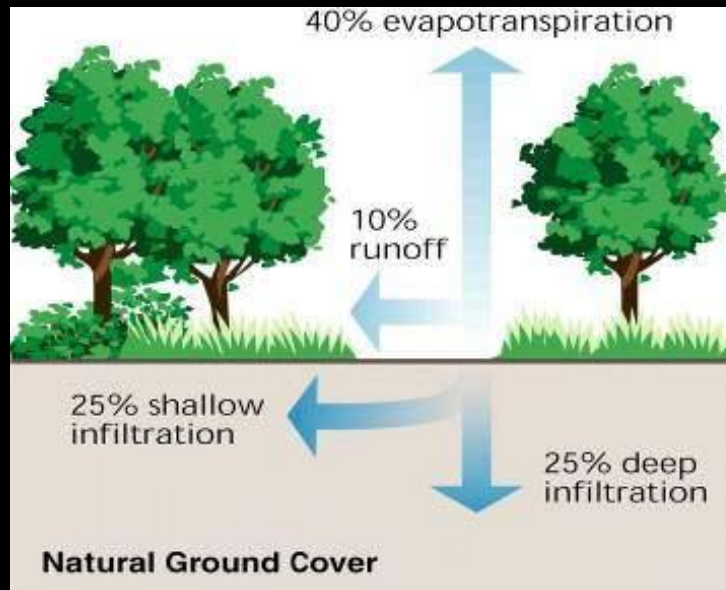
Pathogens



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)

**State by
State**

State NPDES Permits

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

**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 on a metal post. The sidewalk is bordered by a concrete curb and a grassy area with some trees. The street is wet and reflects the overcast sky. The text "Phase II Coverage" is overlaid in large white letters.

Phase II Coverage

MS4s

Urban areas

Designated non urban

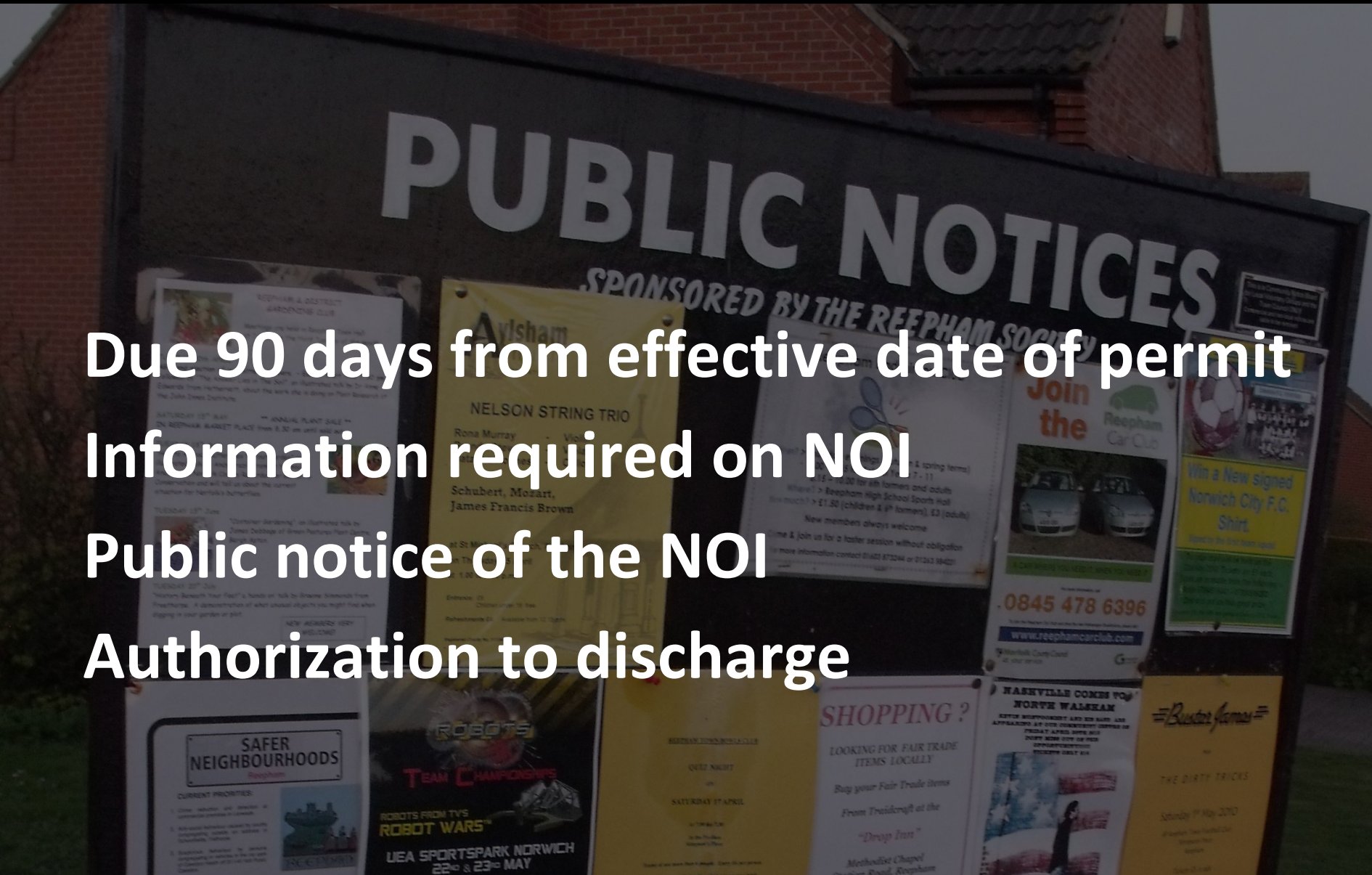
Non-traditional MS4s

So, what's an MS4?



Notice of Intent - NOI

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

National Register

www.nps.gov/nr

Massachusetts Register

www.sec.state.ma.us/MHC

Public Notice of NOI

EPA posts NOIs on web

EPA provides public opportunity to comment

PUBLIC NOTICES

SPONSORED BY THE REEPHAM SOCIETY

REEPHAM & DISTRICT GARDENING CLUB

Meetings are held in Reepham Town Hall at 7.30 on the first Tuesday of the month.

SATURDAY 18th MAY **ANNUAL PLANT SALE**
ON REEPHAM MARKET PLACE from 9.30 am until 4.00 pm

TUESDAY 18th MAY
How to attract Butterflies to your garden! An illustrated talk by Andy Broad, from St. James' Church, Reepham. Andy is the Norfolk County Recorder for Norfolk's Diocese and will tell us about the current situation for Norfolk's Butterflies.

TUESDAY 18th JUNE
"Dawnstar Gardening" an illustrated talk by James Dobbie of Green Pastures Plant Centre, Reepham.

Aylsham

NELSON STRING TRIO

Rona Murray - Violin
Brenda Stewart - Viola
Natasha Holmes - Cello

Schubert, Mozart,
James Francis Brown

at St Michael's Church, Aylsham
on Thursday 24 April
7.30 pm

Reepham Car Club

What? > Thursday evenings (autumn & spring terms)
7.00 - 8.15 for School Years 7 - 11
8.15 - 10.00 for 6th formers and adults

Where? > Reepham High School Sports Hall

How much? > £1.50 (children & 6th formers), £3 (adults)

New members always welcome

Come & join us for a taster session without obligation

For more information contact 01403 872344 or 01403 394021

Join the Reepham Car Club

www.reephamcarclub.com

Win a New signed Norwich City F.C. Shirt

Sign up to the Reepham newsletter

SAFER NEIGHBOURHOODS
Reepham

CURRENT PRIORITIES:

1. Crime reduction and awareness of anti-social behaviour in the area
2. Environmental improvement - reduce the number of littering incidents, reduce the number of fly-tipping incidents
3. Environmental improvement - reduce the number of littering incidents, reduce the number of fly-tipping incidents

ROBOTS TEAM CHAMPIONS

ROBOTS FROM TV'S 'ROBOT WARS'

UEA SPORTSPARK NORWICH
22nd & 23rd MAY

REEPHAM TOWN SOCIETY

QUIZ NIGHT

SATURDAY 17 APRIL

at THE GRANGE, REEPHAM

SHOPPING?

LOOKING FOR FAIR TRADE ITEMS LOCALLY

Buy your Fair Trade items From Treasurcraft at the "Drop Inn"

Methodist Chapel, Station Road, Reepham

NASHVILLE COMES TO NORTH WALSHAM

KEVIN McFERRIN and his band are appearing at the REEPHAM CAR CLUB on FRIDAY APRIL 18th at 7.30 pm. Tickets only £10

Reepham Family

THE DIRTY TRICKS

Saturday 1st May 2010

Whispering Trees Theatre Club, Reepham

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

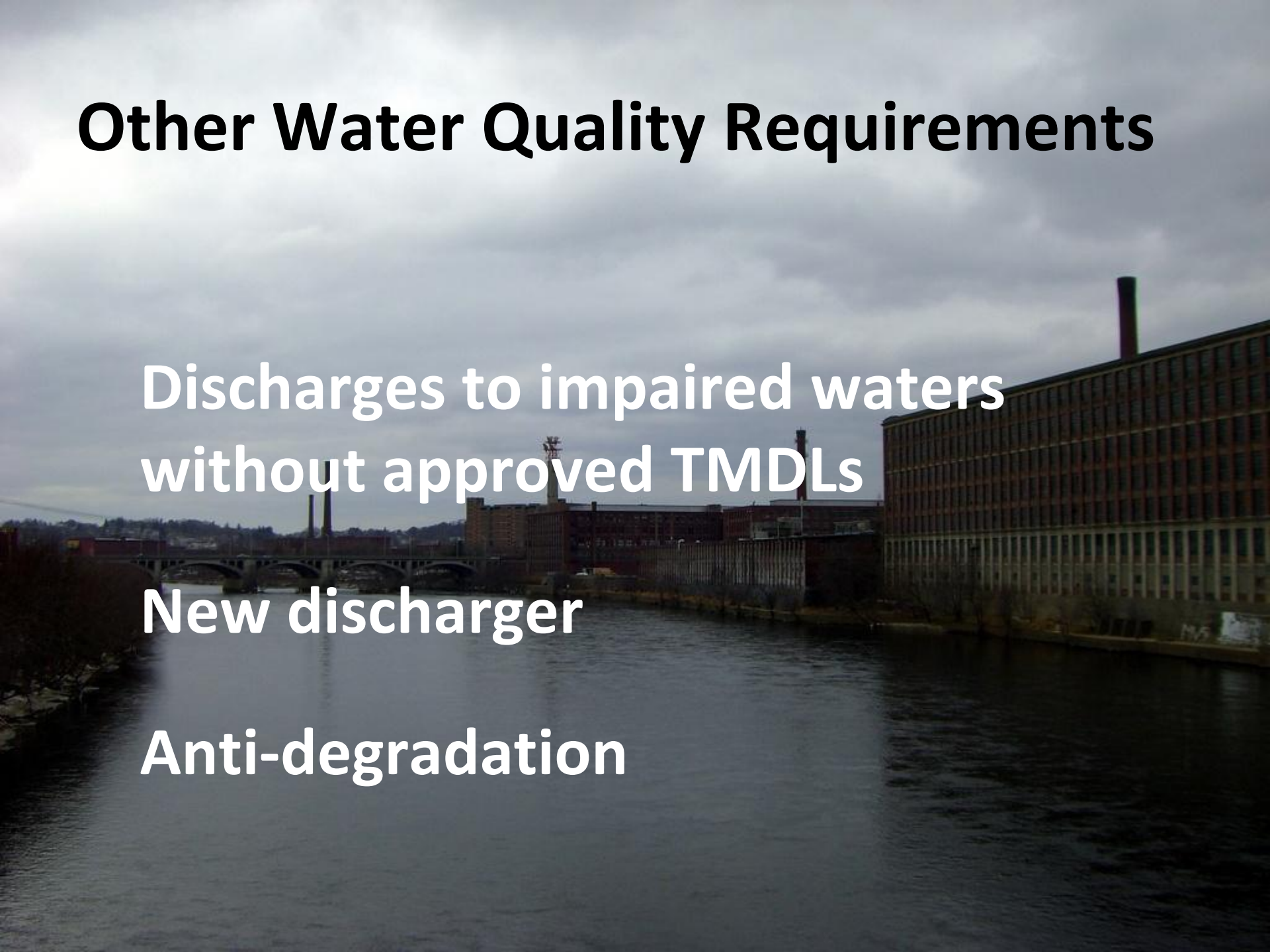
Polishing an Urban Jewel

Other Water Quality Requirements

Discharges to impaired waters
without approved TMDLs

New discharger

Anti-degradation



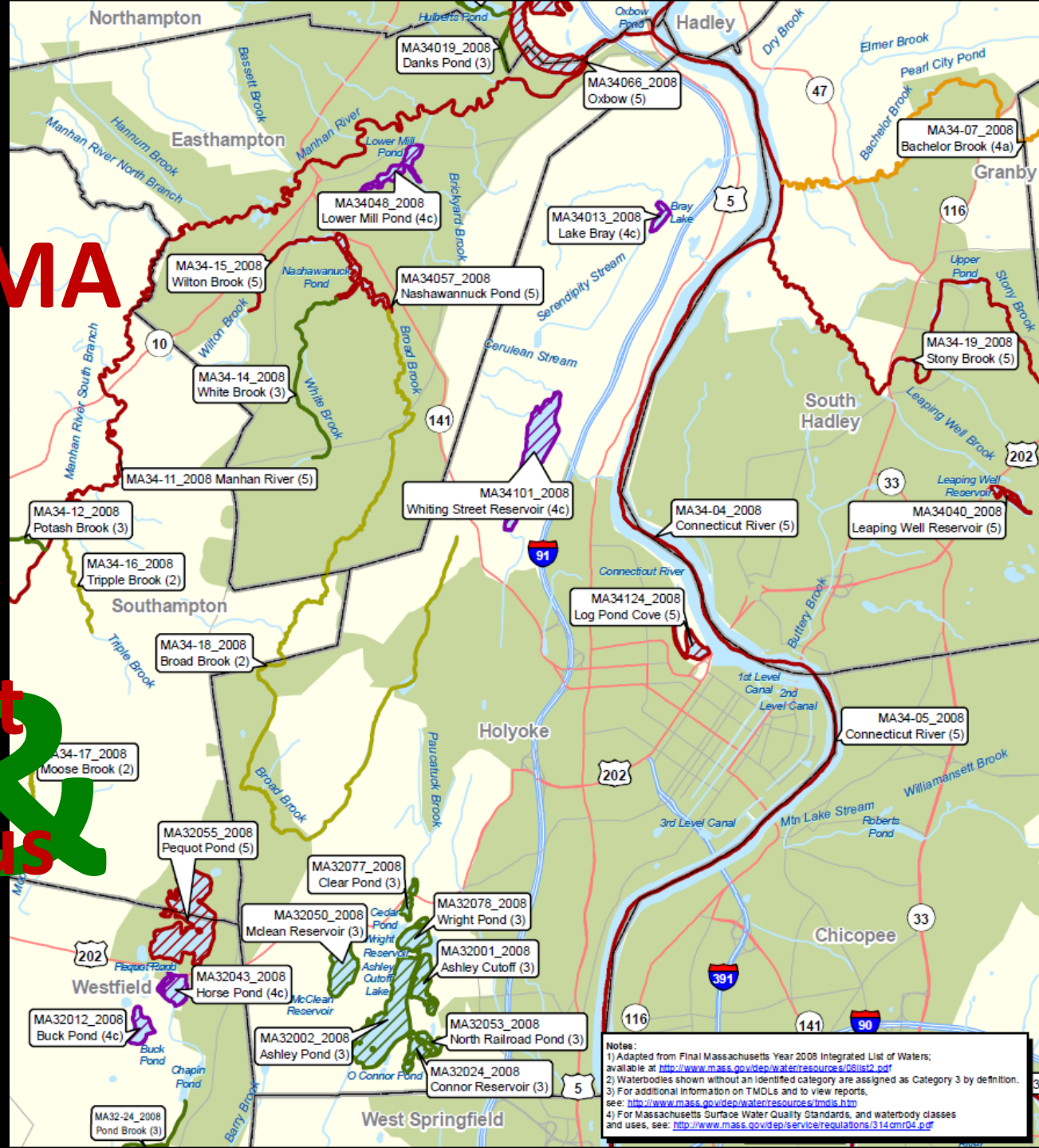


Availability of WQ Information

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

Holyoke, 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

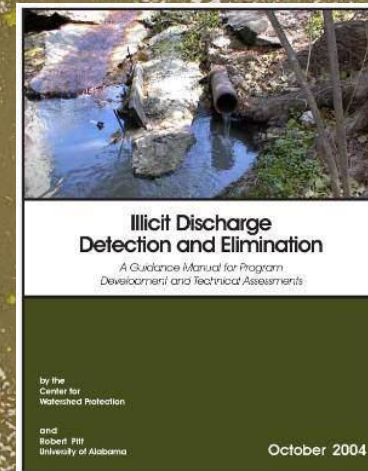
Illicit discharge assessment

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

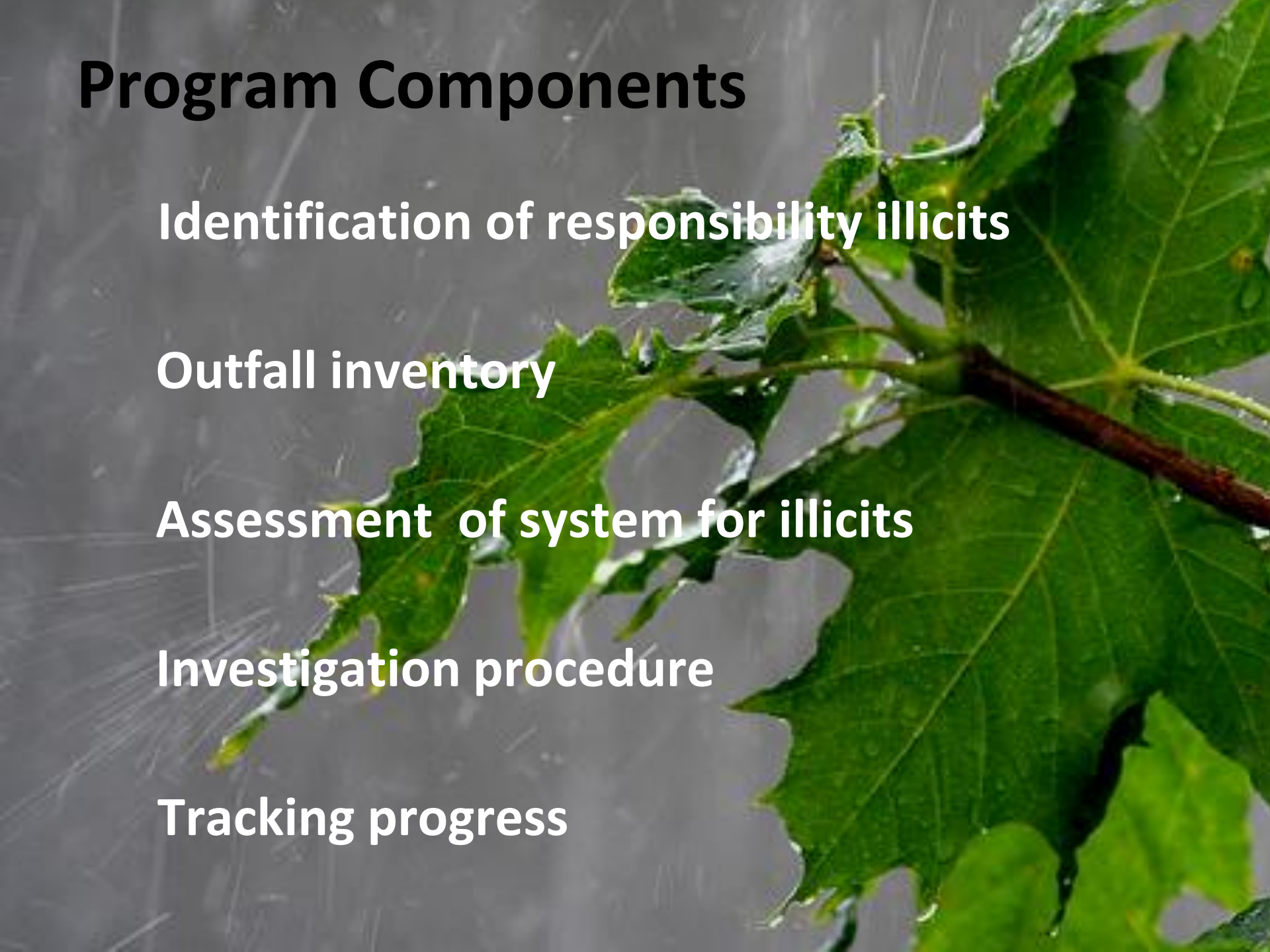
Identification of responsibility illicits

Outfall inventory

Assessment of system for illicits

Investigation procedure

Tracking progress



A photograph of a rainy street scene viewed through a window covered in water droplets. The background is blurred, showing a wet road, some greenery, and a yellow traffic sign on the right. The text is overlaid in yellow.

Wet & dry weather sampling

Many comments

Outfalls from the MS4

Interconnections

Monitoring

Post-Construction

Development ordinance

Mass SW standards

Minimize water quality impacts

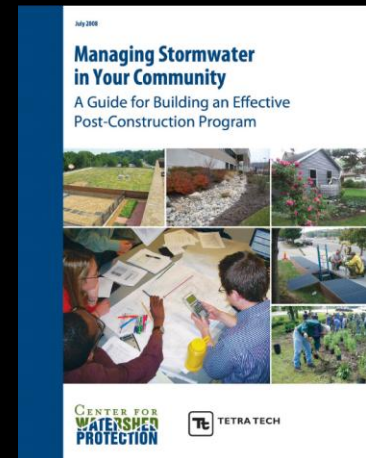
BMP plan review

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

Downtown Holyoke - http://www.flickr.com/photos/c_conn/2519167169

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/>

Holyoke Church – Credit: http://www.flickr.com/photos/c_conn/2519987172/

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>

Image Credits II

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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