



# MS4 Stormwater Compliance Training

IDDE Program

June 18, 2019



# PRESENTATION GOALS

Everyone should be able to:

1. Correctly **IDENTIFY**
2. And **REPORT** an illicit discharge



**BETA**

# Presentation Outline

1. The **PROBLEM**
2. The **PERMIT**
3. The **PRACTICALS**



# The Problem



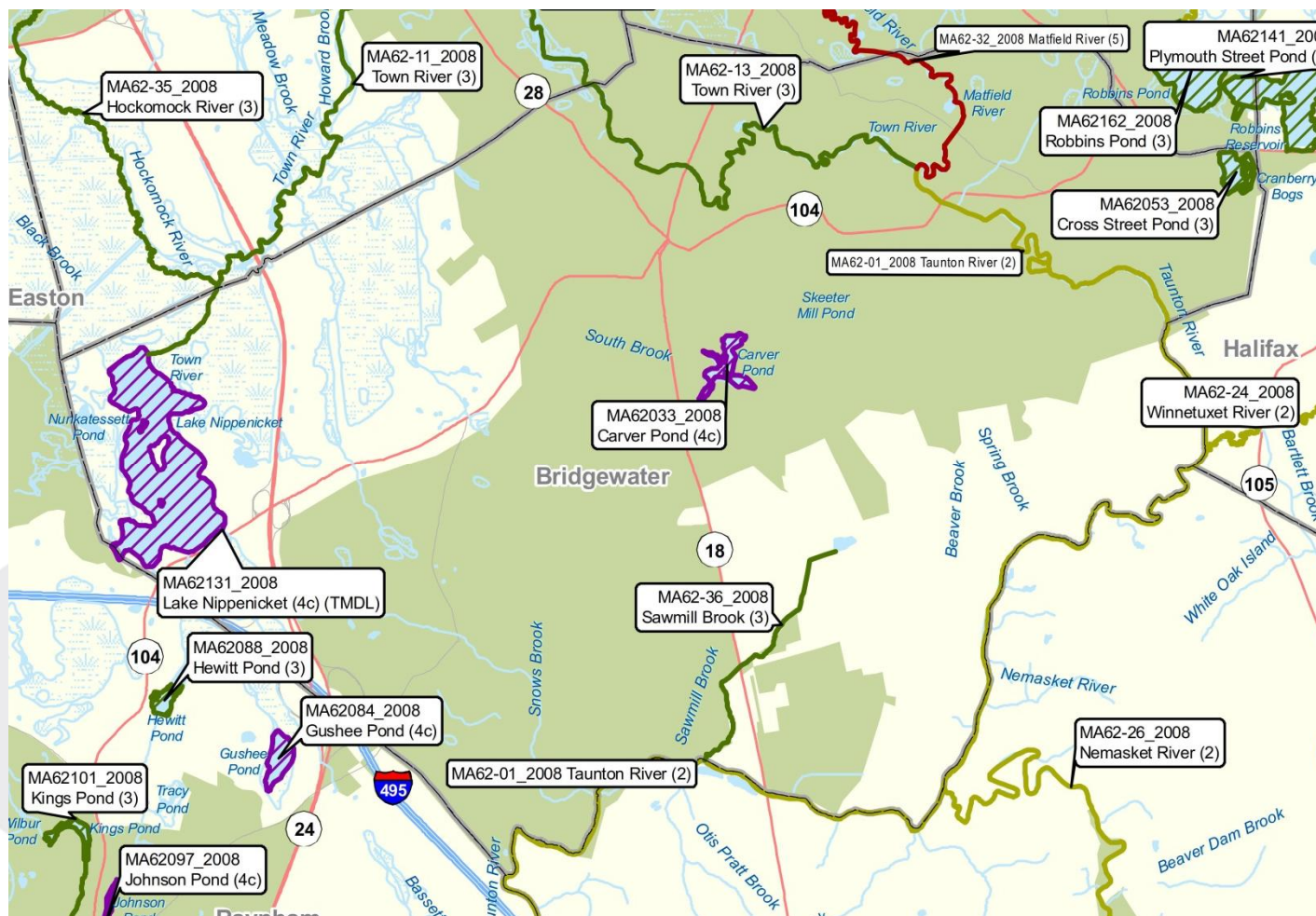
As a result of the 1969  
Cuyahoga River Fire

- The goal of the **Clean Water Act (CWA)** was to reduce pollution in all U.S. waters to "restore and maintain the chemical, physical, and biological integrity of our nation's waters." The law called for interim goals of the Clean Water Act were to achieve “**fishable and swimmable**” waters by 1983 and “**zero discharge of pollutants**” into navigable waters by 1985."



# The Problem

## Receiving Water Impairments



Bacteria/Pathogens

Matfield River

Phosphorus

Matfield River

Nitrogen

Taunton River

Watershed

# The Problem



**SW Runoff washes away anything that it can move from Yards & Streets**



# The Problem



**And discharges it to waters of the U.S.**

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# The Problem

**Pollutants in stormwater is a major cause of:**

- 1. Impairment of water quality and flow in local waters**
- 2. Contamination of drinking water supplies**
- 3. Alteration or destruction of aquatic and wildlife habitat**

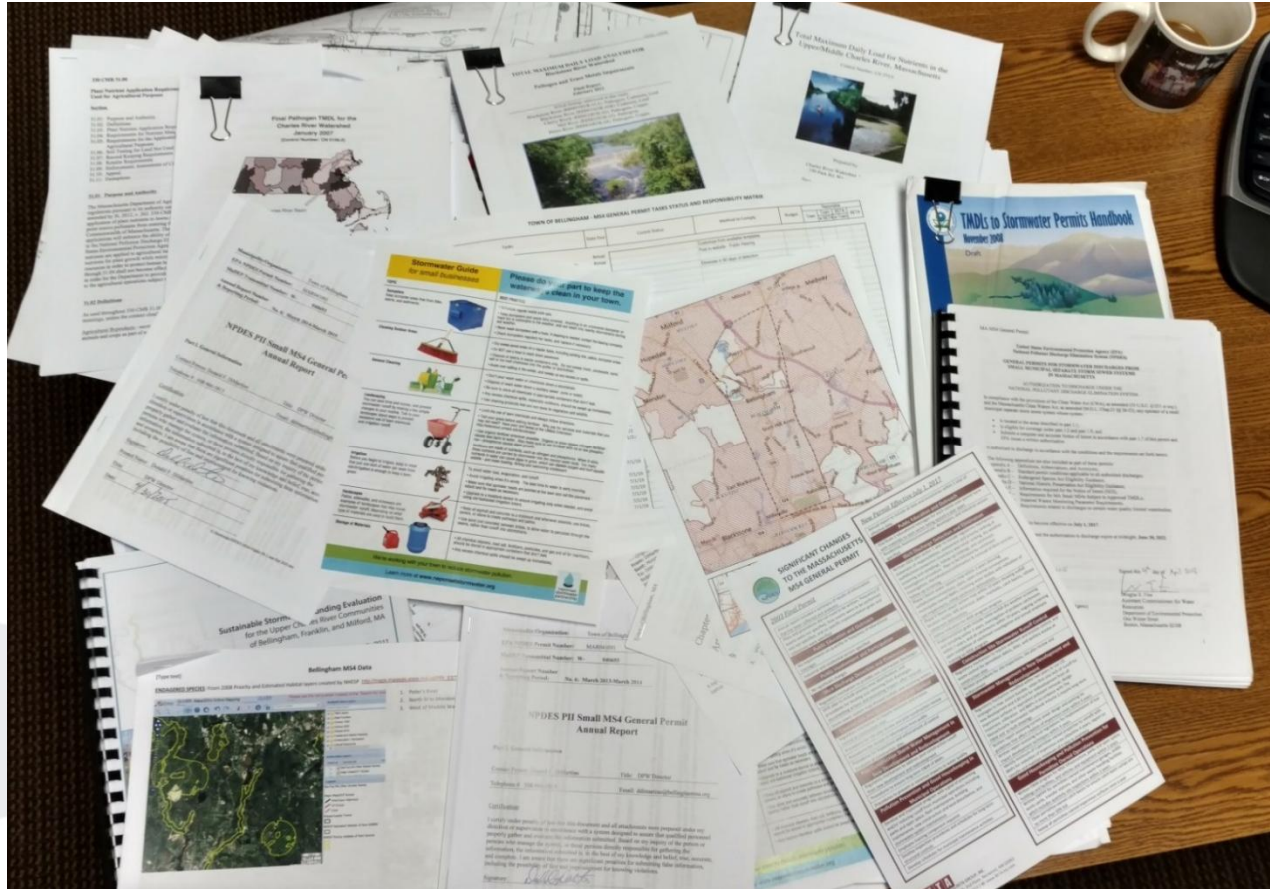


<https://www.thinkbluemassachusetts.org/>

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# The Permit



**EPA Issues 2016 MS4 permit to replace  
2003 Permit – Effective July 1, 2018**

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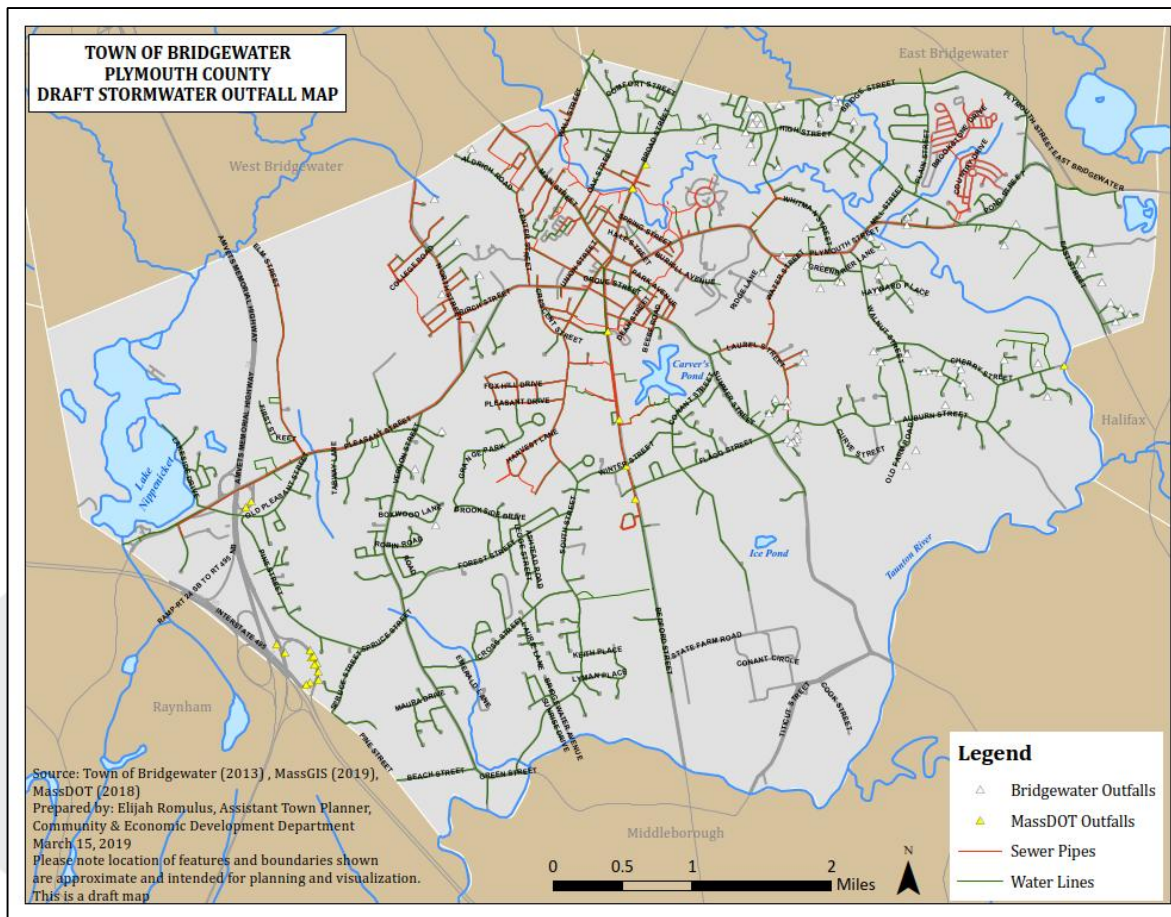
# The Permit

## Minimum Control Measures (MCM)

1. Public Education & Outreach
2. Public Involvement & Participation
- 3. Illicit Discharge Detection and Elimination (IDDE)**
4. Construction Site Runoff Control
5. New & Redevelopment (Post Construction)
6. Good Housekeeping and Pollution Prevention



# The Permit



## Screening and Sampling of MS4 Outfalls & Interconnections

83 City-owned Outfalls  
(34 City-owned MS4)

22 State-owned Outfalls



# The Permit

## Town of Bridgewater Municipal Code: STORMWATER MANAGEMENT ORDINANCE - DRAFT

The **purpose** of this Ordinance is to protect the health, safety, general welfare and environment by **regulating illicit connections and discharges to the storm drain system** and controlling the adverse effects of construction site stormwater runoff and post-construction runoff.

- Article II, Section 2 prohibits illicit discharges and connections.
- Article II, Section 3 prohibits pet waste for entering stormwater system
- Article II Section 6 describes enforcement parameters
- Article III, Section 1 describes requirements for land development (>5,000 sf)

# The Permit

Town of Bridgewater, MA  
**Stormwater Management Program (SWMP):  
Volume 2**

*NPDES Phase II Small MS4 General Permit  
June 2019*

## **ILLICIT DISCHARGE DETECTION & ELIMINATION (IDDE) PLAN**



**BETA**

315 Norwood Park South  
2nd Floor  
Norwood, Massachusetts 02062  
781.255.1982  
www.BETA-Inc.com

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# The Practicals

An **illicit discharge** is any discharge to a municipal separate storm sewer that is not composed entirely of stormwater, except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges resulting from firefighting activities.

**Direct** - Sewage, Industrial, Commercial cross-connections, Direct pipe

**Indirect** - Groundwater seepage, Spills, Dumping, Outdoor Washing Activities





# The Practicals

## What is an Illicit Discharge?

### Typical Pollutants include:

- Sand, salt and soils
- Garbage, litter and floatables
- **Sewage, fecal coliform, pathogens**
- **Animal waste**
- Paints, varnishes and solvents
- **Oil and automotive fluids**
- Nonhazardous liquid, solid waste & yard waste
- **Pesticides, herbicides & fertilizers**
- Hazardous materials and waste
- Dissolved and particulate metals
- Noxious or offensive matter or any kind

# The Practicals

## What is not an Illicit Discharge

### Non Stormwater Discharges Include:

- Diverted stream flows
- Air conditioning condensation
- Water from crawl space pumps
- Individual resident car washing
- Residential building wash waters
- **Uncontaminated pumped ground water**
- De-chlorinated swimming pool water
- Uncontaminated ground water infiltration
- Discharge from potable water sources
- Flows from riparian habitats & wetlands
- Residential building wash waters without detergents
- **Water line flushing**
- **Fire Fighting**
- Landscape irrigation
- Diverted stream flows
- Foundation drains
- Footing drains
- Irrigation water, springs
- Lawn watering
- Street wash waters
- Rising ground water

# The Practicals

## Discharge Frequency

**Continuous** – occur most or all of the time

**Intermittent** – occurs over short periods (a few hrs/day or days/yr)

**Transitory** – occur rarely, usually in response to a single event





# The Practicals

## Examples of Illicit Indicators



**CLOUDY**



**OIL SHEEN**



# The Practicals

## Examples of Illicit Indicators



**SOAP SUDS (Surfactants)**



# The Practicals

## Examples of Illicit Indicators



**STAINING**



**STAINING/FLOATABLES**



# The Practicals

## Examples of Illicit Indicators



**STAINING**

# The Practicals

## Examples of Illicit Indicators



**DISCOLORATION**



**OTHER?**



# The Practicals

## Examples of Illicit Indicators



Unknown Connection

# The Practicals

## Examples of Illicit Indicators



FLOATABLES

### Odors

- Sewage
- Rotten Eggs
- Laundry
- Petroleum

# The Practicals

## TV Inspection Illicit Indicators

- Dog waste bags
- Toilet paper
- Solids
- Staining
- Soap Suds
- Grease
- Suspicious Connections
- Odors at manholes
- Flow at joints
- Broken sewer pipes





# The Practicals

## Good Housekeeping

- Keep parking lots clean.
- Keep potentially harmful materials stored and kept indoors, or covered.
- Trash should be covered,
- Parking lots should be swept, and any liquids should be contained and not allowed to flow into storm drains
- Proper spill kits in place & leaks or spills should be cleaned up in a timely manner.

**MAINTAINED**



**NOT SO MUCH**



# The Practicals

Illicit Discharge Detection and Elimination Program  
Town of Bridgewater

IDDE

## ILLCIT DISCHARGE INCIDENT REPORTING FORM

Incident ID		Logged By:	
Location, Nearest Street Address,:		Outfall #	
		Latitude	
		Longitude	
Reported by:		Date:	
Contact Info			
Discharge Type:	<input type="checkbox"/> Sewer Overflow <input type="checkbox"/> Sewer Connection	<input type="checkbox"/> Spill <input type="checkbox"/> Dumping	<input type="checkbox"/> Wash <input type="checkbox"/> Other
Incident Description:			
Area Impacted	<input type="checkbox"/> Stream/River (name) _____ <input type="checkbox"/> Upland (name) _____	<input type="checkbox"/> Wetland (near) _____ <input type="checkbox"/> Other _____	
Stormwater System Impacted	<input type="checkbox"/> Catchbasin (ID #) _____ <input type="checkbox"/> Drain Manhole (ID #) _____ <input type="checkbox"/> Surface Basin (ID #) _____		
Recent Rain:			
Add. Info:			

### AREA ACTIVES – POSSIBLE CAUSE OF ISSUE

Dumping:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Oil/Chemicals	<input type="checkbox"/> Yes <input type="checkbox"/> No	Sewerage	<input type="checkbox"/> Yes <input type="checkbox"/> No
Septic System:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Wash Water:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Staining	<input type="checkbox"/> Yes <input type="checkbox"/> No
Other:			Suds:	<input type="checkbox"/> Yes <input type="checkbox"/> No	

### INDICATORS OF POTENTIAL ISSUES – FURTHER INVESTIGATION RECOMMENDED

Odor:	<input type="checkbox"/> None <input type="checkbox"/> Sewer <input type="checkbox"/> Eggs <input type="checkbox"/> Petroleum <input type="checkbox"/> Laundry <input type="checkbox"/> Unknown	Floatables	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Oil Sheen:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Cloudy:	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Other:			Suds:	<input type="checkbox"/> Yes <input type="checkbox"/> No

### SUSPECTED VIOLATOR KNOWN: ☐ YES ☐ NO

Name		Address	
Description		License Plate	



Illicit Discharge Detection and Elimination Program  
Town of Bridgewater

IDDE

## ILLCIT DISCHARGE INCIDENT INVESTIGATION REPORT FORM (CONT.)

### LOCATION MAP/SKETCH/PHOTOS

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### RESPONSE ACTION(S)

Date Investigated:		Investigator:	
<input type="checkbox"/> No Investigation		Reason:	
<input type="checkbox"/> Referred to another Department		Department:	
<input type="checkbox"/> Investigated – No Action Required		Action Description	
<input type="checkbox"/> Investigated – Action Required			
<input type="checkbox"/> Action Completed		Date:	
<input type="checkbox"/> Incident Closed		Date:	

Notes:
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# Presentation Recap

1. The PROBLEM
2. The PERMIT
3. The PRACTICALS



# ACCOMPLISHED GOALS

You are now able to:

1. Correctly **IDENTIFY**
2. And **REPORT** an illicit discharge

