

# IDDE

## Illicit Discharge Detection & Elimination

(MCM #3)





# What is an Illicit Discharge?

Any discharge to a MS4 that is not composed entirely of stormwater (except those requiring separate NPDES permits and fire fighting activities)





# Mode of Entry

## o INDIRECT

The illicit discharge enters the system via inlets or infiltration

- o Spills
- o Dumping
- o Washing activities
- o Irrigation

## o DIRECT

Piping plumbed directly into the MS4.

- o Sewage cross-connections
- o Illegal bypasses (straight pipes)
- o Industrial or commercial cross connections

# Frequency

- o **Continuous** – Discharges that are on-going and un-interrupted
- o **Intermittent** – These discharges occur over a shorter period of time (e.g., a few hours per day or a few days per year). Intermittent discharges come and go on an irregular basis.
- o **Transitory** – Transitory discharges are short in duration or temporary. These events are usually in response to a singular event such as an overturned tanker truck, industrial spill, illegal dumping, etc.





# Continuous Illicit Discharge



Septic overflow



# Intermittent Illicit Discharge



Sump pump (legal) discharging anything other than groundwater

# Transitory Illicit Discharge



<https://www.flickr.com/photos/129902018@N02/16277671441/in/photostream/>





# Permit Requirements

- o Develop Legal Authority
- o Produce a Written Program Document
- o Eliminate Illicit Discharges
- o Inventory and Eliminate Sanitary Sewer Overflows [NA for Amherst at this time]
- o Develop A System Map
- o Assess and Priority Rank Outfalls/Interconnections
- o Conduct Catchment Investigations
- o Conduct Ongoing Screening
- o Track Program Progress
- o Train Employees





# Responsible Parties

- o Develop Legal Authority – *2007 Stormwater Regulations*
- o Produce a Written Program Document – *Community Development*
- o Eliminate Illicit Discharges – **DPW**
- o Develop A System Map – *Community Development & DPW*
- o Assess and Priority Rank Outfalls/Interconnections – *Community Development & DPW*
- o Conduct Catchment Investigations - **DPW**
- o Conduct Ongoing Screening - **DPW**
- o Track Program Progress – *Community Development*
- o Train Employees – *Community Development & DPW*



# Eliminate Illicit Discharges

## o Locate

- o Stumble upon, tips, inspections

## o Identify

- o Trace back to source (variety of methods)

## o Eliminate ASAP

- o Under authority of the regulations



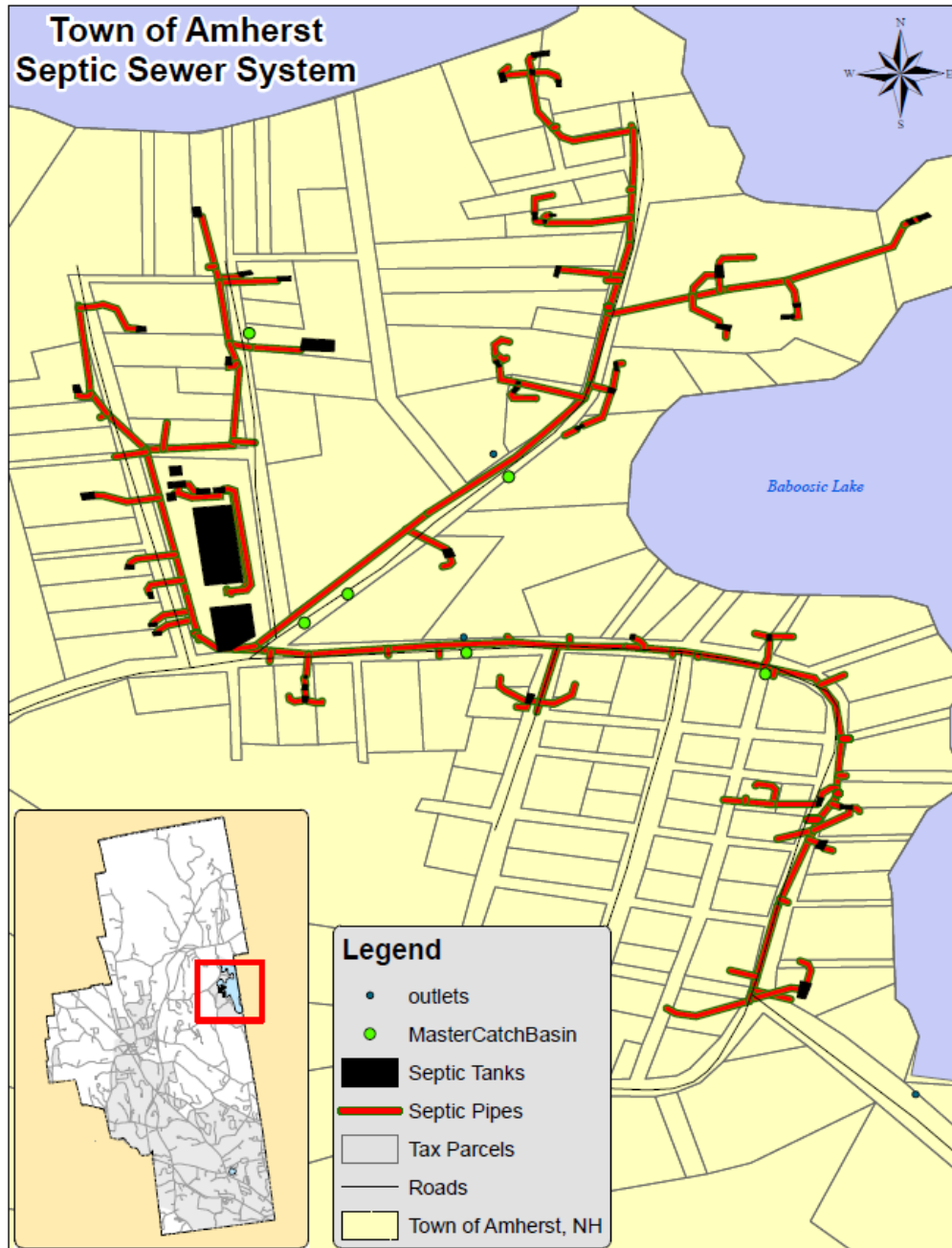




[https://spcwater.org/ed\\_res\\_idde.shtml](https://spcwater.org/ed_res_idde.shtml)



# System Map





# Assess & Rank

## Outfalls/Interconnections

- o **Problem** – Known or suspected illicit discharges based on existing info
- o **High priority** – Discharge to an area of concern (beaches, reservoirs, etc.)
- o **Low priority** – None of the above
- o **Excluded** – No potential for illicit discharges (limited to roadway drainage where no one lives,



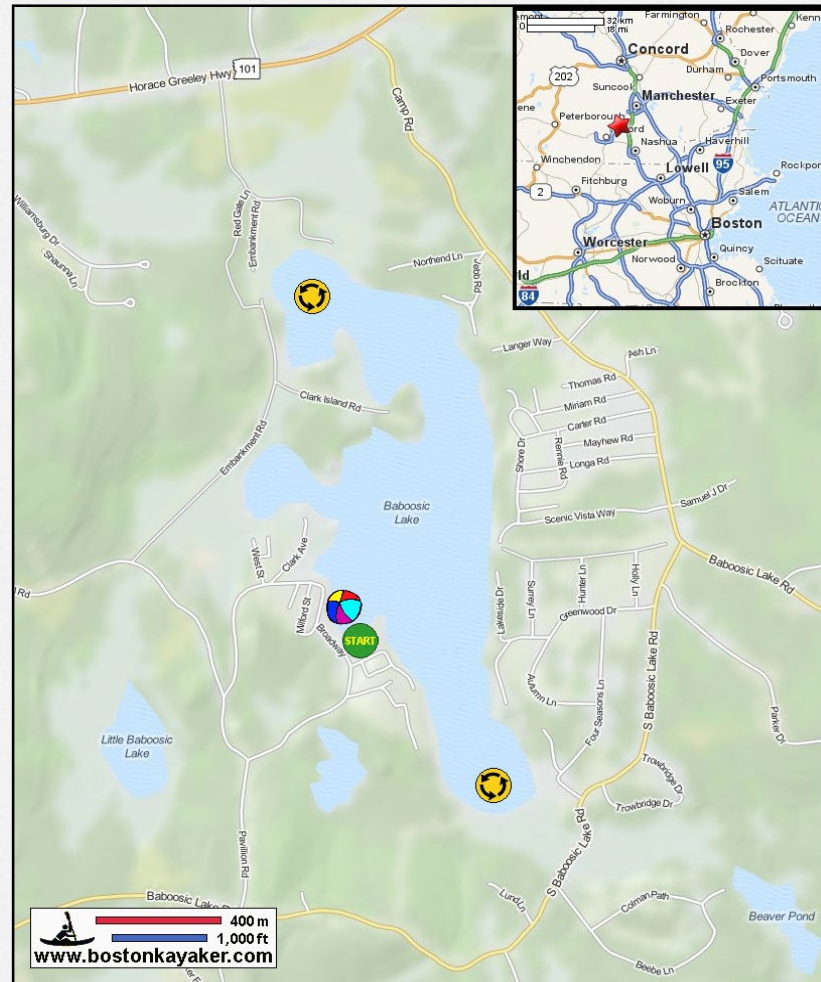


# Outfalls





# Locating Priority Areas





# Catchment Investigations





# Dry Weather Outfall Inspections

## Interconnection screening & sampling

- o Within 3 years
- o Screen all outfalls in priority order
- o Looking for flow in dry conditions = ID



# Case Study

- o The illicit discharge originated from a legal connection to the storm drain system (transient, intermittent, or continuous). For example, a washing machine discharging through a basement sump that was a municipally approved connection to the storm drain system would be considered an illicit discharge. The connection was legal, and the municipality's ordinance does not require disconnection. The ordinance requires only that the washing machine be disconnected from the sump discharge. The sump connection to the storm drain system, that was legally made, can remain. A Notice of Violation could be issued and a fine could be imposed.





# Allowable Non-Stormwater Discharges

1. Water line flushing
2. Landscape irrigation
3. Diverted stream flows
4. Rising ground waters
5. Uncontaminated ground water infiltration
6. Uncontaminated pumped ground water
7. Discharge from potable water sources
8. Foundation drains
9. Air conditioning condensation
10. Irrigation water, springs
11. Water from crawl space pumps
12. Footing drains
13. Lawn watering
14. Individual resident car washing
15. Flows from riparian habitats and wetlands
16. Dechlorinated swimming pool discharges
17. Street wash water
18. Residential building wash waters



- o <https://www.youtube.com/watch?v=hnXMaImmcKo>
- o Illegal discharge recognition
- o <https://www.kingcounty.gov/services/environment/water-and-land/stormwater/videos/illicit-discharge-elimination.aspx>
- o <http://www.allianceofrouragecommunities.com/PDFs/technical/IDEPTipCard2018.pdf>
- o Tip card for municipal employees

