



Town Of Tewksbury
Stormwater
Management
Program
IDDE Training

TOPICS TO BE COVERED IN TRAINING TODAY

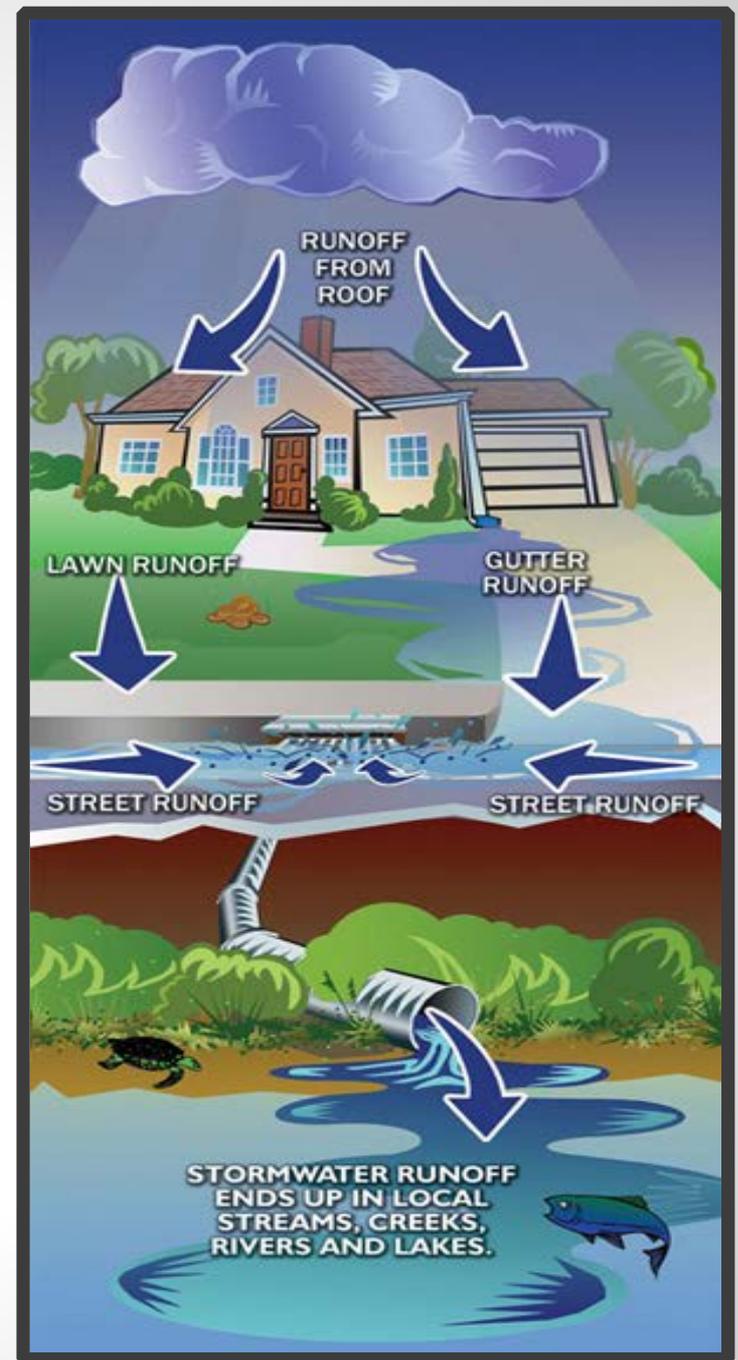
- **Introduction**
- **What is Stormwater?**
- **The Town's Stormwater Program (NPDES MS4 Permit)**
- **What is an Illicit Discharge?**
- **How to Identify an Illicit Discharge?**
- **What to do if you suspect an Illicit Discharge?**
- **Good Housekeeping and Best Management Practices at Town Facilities and Work sites**

What is Stormwater?

Stormwater is any runoff from rain or snow melt that drains into the Town's drainage system and ultimately ends up in groundwater, ponds, stream and/or wetland resource areas.

Why Does Stormwater Matter?

As rain or snow melt flows over paved services it carries with it any pollutants such as oils, fertilizer, sand, and trash. The pollutants will eventually enter groundwater, ponds, streams and/or wetland resource areas and can contaminate drinking water supplies, fish and wildlife habitat.



What is the NPDES MS4 Permit ?

- National Pollutant Discharge Elimination System
- Municipal Separate Storm Sewer Systems

This is an EPA mandated program that addresses water pollution by regulating point sources that discharge pollutants to waters of the United States.

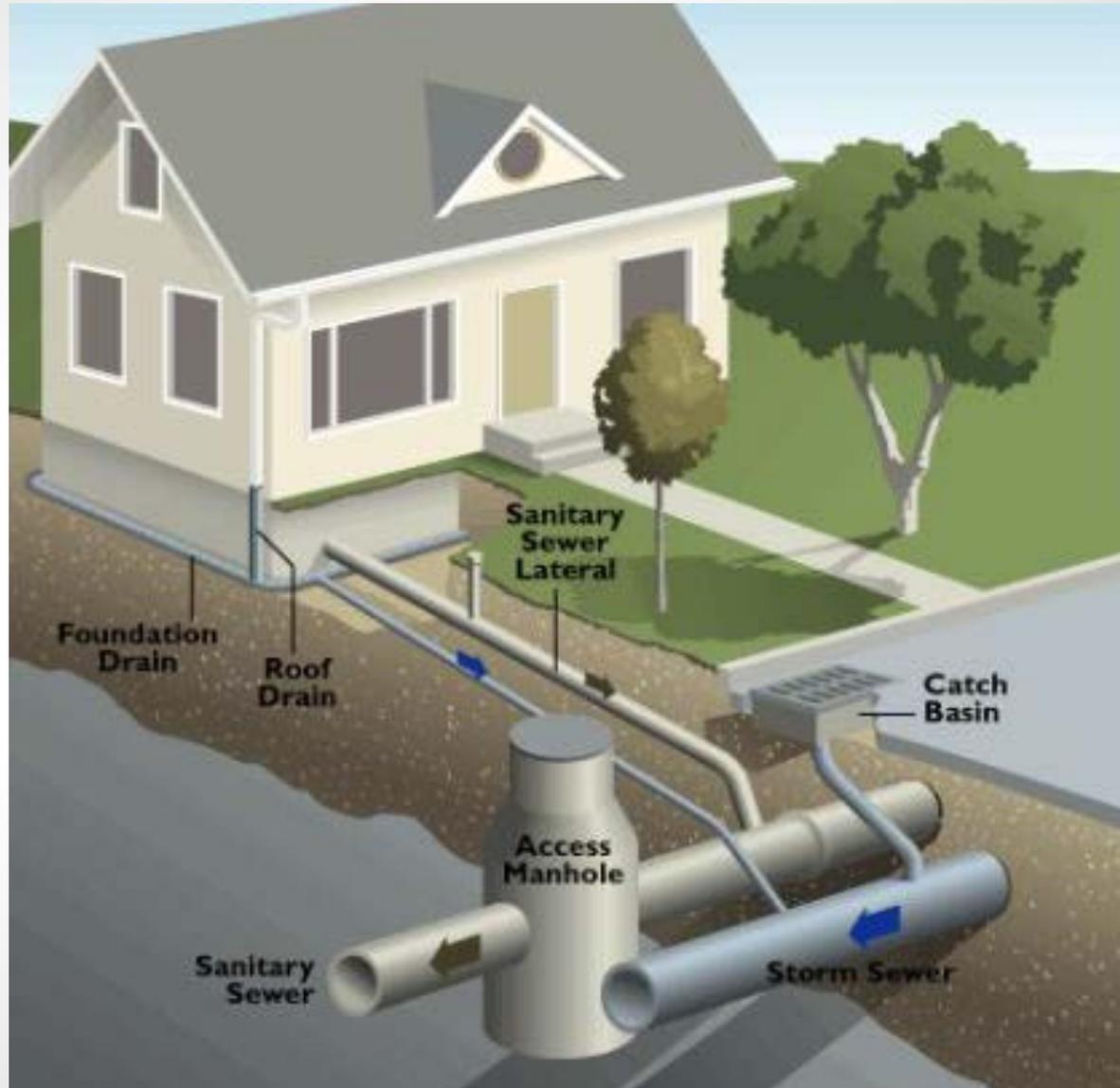


EPA REQUIREMENTS

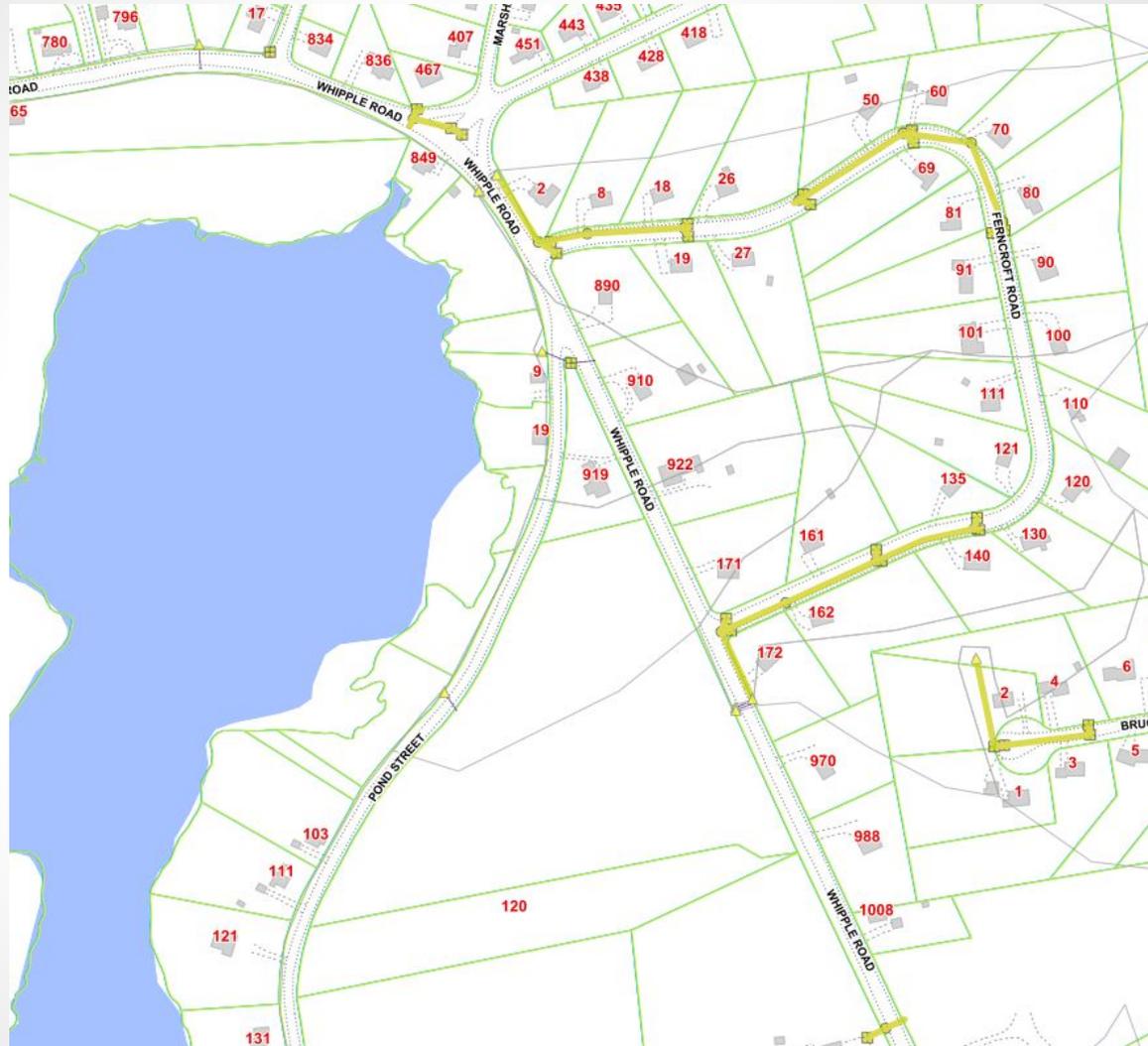
(SIX MINIMUM CONTROL MEASURES)

1. **Public Education and Outreach**
2. **Public Involvement and Participation**
3. **Illicit Discharge Detection and Elimination Program**
4. **Construction Site Stormwater Runoff Control**
5. **Stormwater Management in New Development and Redevelopment** (*Post Construction Stormwater Management*)
6. **Good Housekeeping and Pollution Prevention for Permittee Owned Operations**

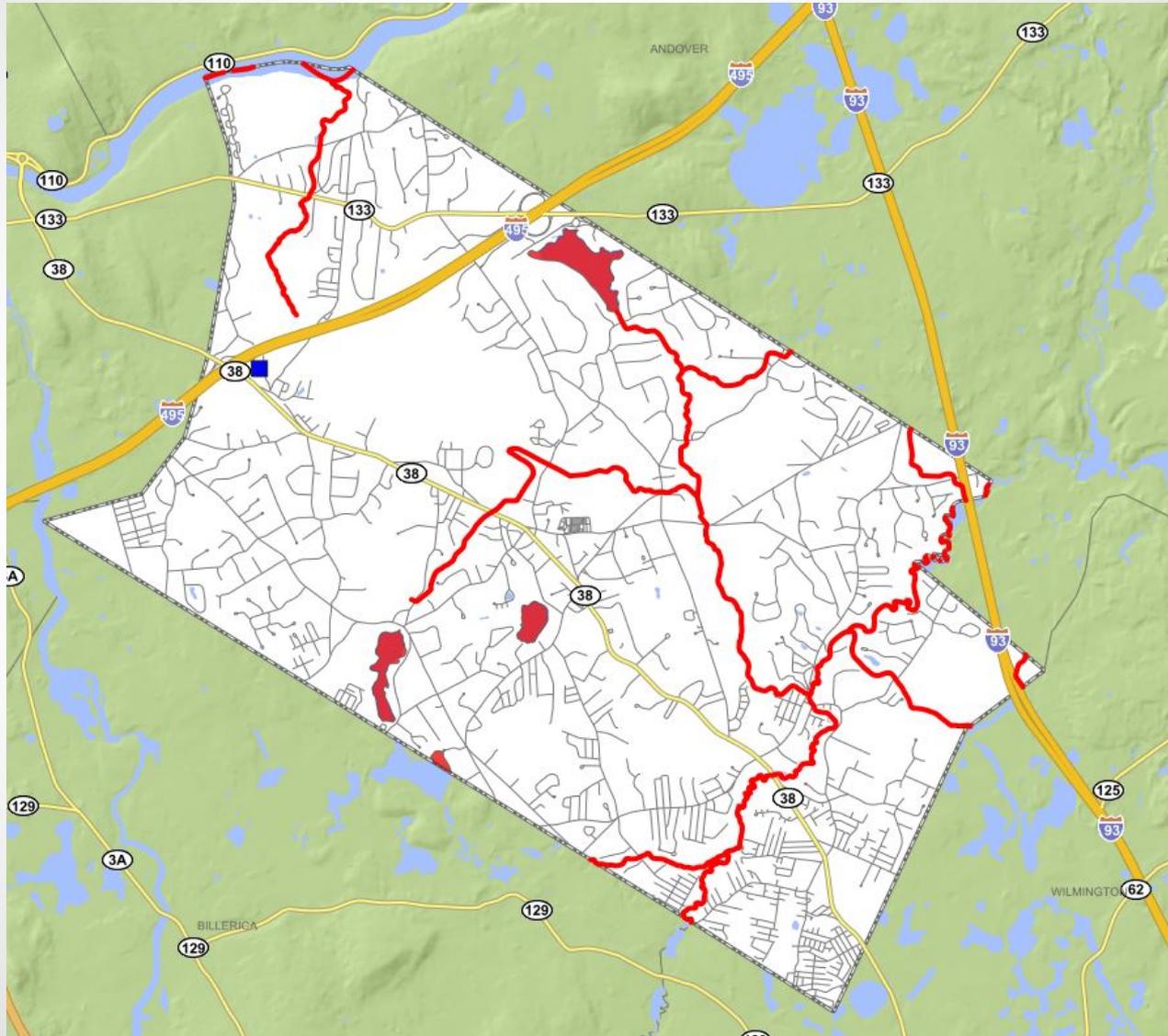
Sanitary Sewer System vs. Storm Drain Systems



EXAMPLE OF OUR DRAINAGE SYSTEM



MAP OF IMPAIRED WATERS IN TOWN



List of Impairments in Tewksbury

- **Fecal Coliform**
- **Chloride**
- **Phosphorus**
- **Mercury in Fish Tissue**
- **Dissolved Oxygen**
- **PCB in Fish Tissue**
- **E. Coli**
- **Secchi Disk Transparency**
- **Eurasian Water Milfoil**
- **Myriophyllum**

**Table 1-1. Impaired Waters
The Town of Tewksbury, MA, Massachusetts**

Water Body Name	Impairment(s)	Associated Approved TMDL
Shawsheen River	Dissolved Oxygen/D.O. Saturation, Fecal Coliform, Mercury in Fish Tissue	TMDL for Coliform
Strong Water Brook	Chloride, Fecal Coliform	TMDL for Coliform
Pinnacle Brook (Unnamed Tributary to Meadow Brook)	Chloride, Fecal Coliform	TMDL for Coliform
Merrimack River	Phosphorous, Mercury in Fish Tissue, PCB in Fish Tissue	
Wetland Draining to Concord River	Phosphorous, Eurasian Water Milfoil, <i>Myriophyllum spicatum*</i>), (Non-native Aquatic Plants*), Mercury in Fish Tissue	
Long Pond	Chlorophyll-a, Dissolved Oxygen/D.O. Saturation, Phosphorous, Excess Algal growth, Secchi disk transparency	
Ames Pond	Mercury in Fish Tissue	
Unnamed Tributary to Shawsheen River; Dascomb Road, Andover to confluence with Shawsheen River	Chloride	
Trull Brook	E.Coli	

IDDE PROGRAM

(To Be Completed by DPW)

- **Establish legal authority and regulatory mechanism to prohibit illicit discharges and enforce this prohibition**
- **Storm system mapping**
- **Inventory and ranking of outfalls (650)**
- **Dry weather outfall screening**
- **Catchment investigations**
- **Identification/confirmation of illicit sources**
- **Illicit discharge removal**
- **Follow up screening**
- **Employee training**

What is an Illicit Discharge?

An “illicit discharge” is any discharge to a drainage system that is not composed entirely of stormwater, with the exception of discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the MS4) and discharges resulting from fire-fighting activities.



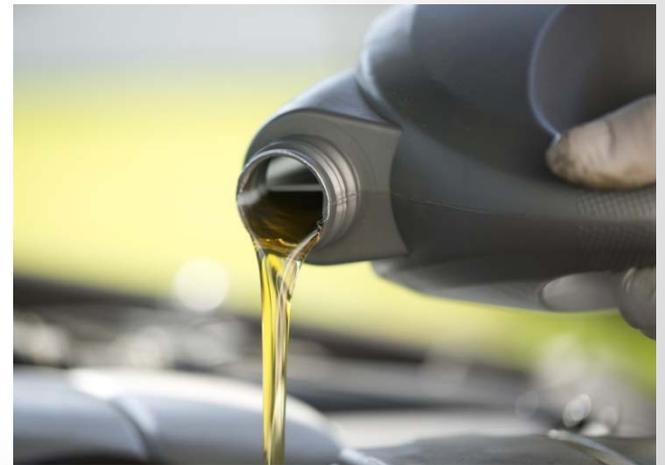
Allowable Non-Stormwater Discharges

- **Water line flushing**
- **Fire Fighting Activities**
- **Landscape irrigation**
- **Diverted stream flows**
- **Rising ground water**
- **Uncontaminated ground water infiltration** (as defined at 40 CFR 35.2005(20))
- **Uncontaminated pumped groundwater**
- **Discharge from potable water sources**
- **Air conditioning condensation**
- **Irrigation water, springs**
- **Water from crawl space pumps**
- **Footing drains**
- **Lawn watering**
- **Individual resident car washing**
- **De-chlorinated swimming pool discharges**
- **Street wash waters**
- **Residential building wash waters without detergents**



TYPES ILLICIT DISCHARGES

- **Pet Waste**
- **Motor Oils**
- **Antifreeze**
- **Paints**
- **Cleaning Products**
- **Fertilizers**
- **Hazardous Waste**
- **Trash**
- **Chlorinated Pool Water**
- **Sediment**
- **Soaps/Detergents**
- **Sanitary Sewer**



PLACES WHERE ILLICIT DISCHARGES OCCUR

- **Roadways**
- **Driveways**
- **Catchbasins**
- **Wetlands**
- **Rivers**
- **Streams**
- **Parking Lots**
- **Industrial Sites**
- **Building Material Storage Areas**
- **Construction Sites**
- **Gas Stations/Vehicle Repair**



INDICATORS OF AN ILLICIT DISCHARGE

- **Foam:** indicator of upstream vehicle washing activities, or an illicit discharge.
- **Oil sheen:** result of a leak or spill.
- **Cloudiness:** indicator of suspended solids such as dust, ash, powdered chemicals and ground up materials.
- **Color or odor:** Indicator of raw materials, chemicals, or sewage.
- **Excessive sediment:** indicator of disturbed earth of other unpaved areas lacking adequate erosion control measures.
- **Sanitary waste w/optical enhancers** (fluorescent dyes added to laundry detergent): indicators of illicit discharge.
- **Orange staining:** indicator of high mineral concentrations.

FALSE INDICATORS

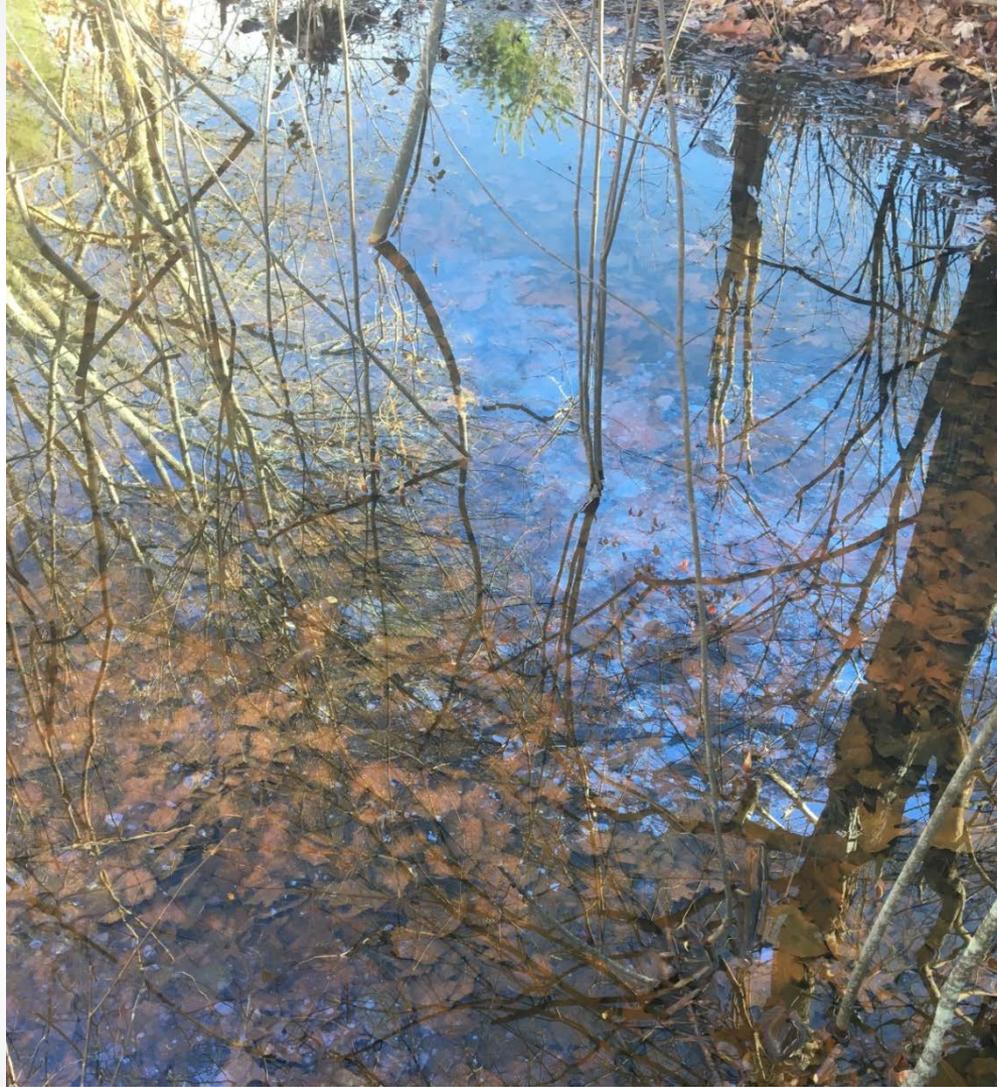
- Natural foam is typically persistent, light, not slimy to the touch.
- Presence of decomposing plants or organic material in water can smell like sewage
- Natural Gas Leaks may smell like sewage
- Orange Rust Color can indicate high iron content
- Both natural bacteria and petroleum can create a sheen on the water surface
- Algae blooms may be varies colors but may indicate accumulation nutrients such as of Phosphorous, Ammonia or Nitrogen



Pet Waste



Oil Sheen in Water



Dumping



Dumping



Dumpster Runoff



Discoloration in Waterways



Suds in Streams



Trash and Debris



Vehicle Fluid Leaks



Sediment



Hoses in Catchbasins



Odors

- **Sewage**
- **Petroleum/Gas**
- **Sulfide**
- **Chemical**

VIDEO: IDDE (FINDING & FIXING HIDDEN
SOURCES OF WATER POLLUTION)

[HTTPS://YOUTU.BE/AHIS_5ZNBLO](https://youtu.be/AHIS_5ZNBLO)

CONSTRUCTION AND WORK SITE BEST MANAGEMENT PRACTICES (BMPS)

- Do not store materials near a storm drain, catchbasins, wetlands or streams
- Schedule excavation, grading, and paving operations for dry weather periods
- Use silt sacks in catchbasins, hay bales and silt fences as needed
- Protect stockpiles by storing under a roof, impermeable tarp, or plastic sheeting
- Use soil stabilization practices such as mulching and temporary seeding
- Never pump water directly into the town's grated catchbasins, wetlands, stream and rivers



VIDEO: CONSTRUCTION SITES (STORMWATER POLLUTION PREVENTION TRAINING SERIES)

[HTTPS://WWW.YOUTUBE.COM/WATC
H?V=8RR4RBFVKE](https://www.youtube.com/watch?v=8RR4RBFVKE)

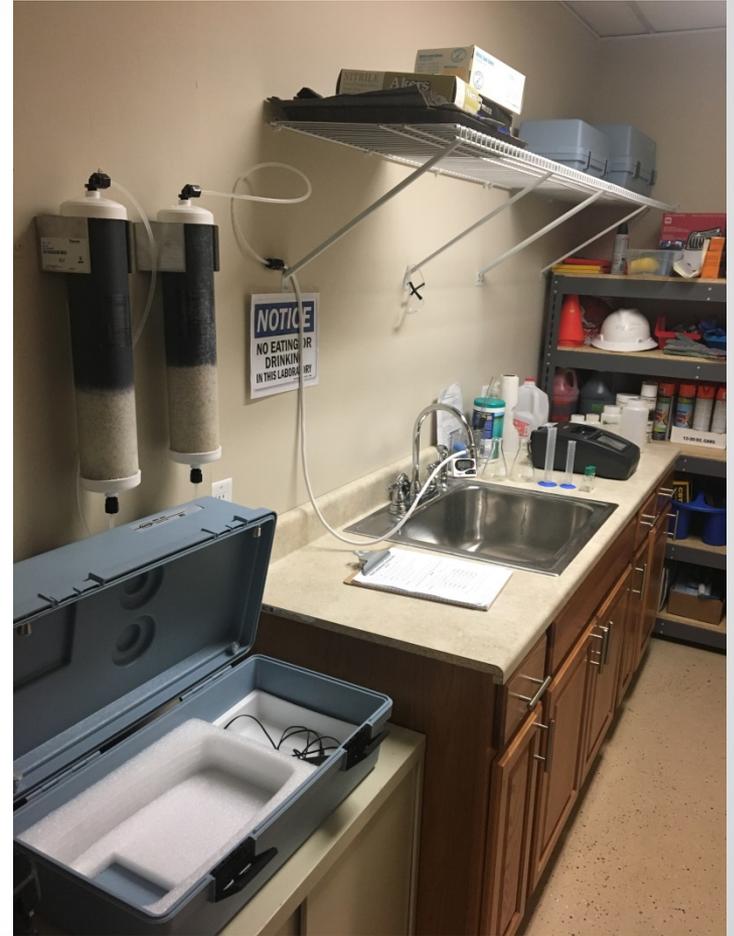
GOOD HOUSEKEEPING/FACILITIES BEST MANAGEMENT PRACTICES (BMPS)

- Keep all work areas neat and well organized. Sweep or pick-up all trash and debris daily or as needed.
- Recycle or dispose of all wastes properly and promptly. Do not let waste accumulate at or around the work place.
- Do not handle, use, pour, dispose or transfer materials outdoors near storm drain inlets or drainage ditches.
- Do not try to handle a container alone if it is awkward or requires over-exertion. Get help or use powered equipment.
- Use tarps or containers to contain any wastes or spills.
- Do not wash down or hose down any outdoor work areas except where wash water will only enter the sanitary sewer (if approved).
- Use only dry clean-up methods to clean up spills.



How To Report an Illicit Discharge

- Call The Department of Public Works
978-640-4440



Questions?

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978-640-4440 ext. 237

For More Info Visit The Town's Stormwater Website:

www.tewksbury-ma.gov/stormwater