



## Identifying and Reporting Water Pollution

City of Flint citizens can fight water pollution by reporting it to the City. This brochure explains how you can help.

### Visible Water Pollution

State of Michigan law prohibits water pollution caused by unnatural:

- turbidity
- color
- oil films
- solids
- foams
- deposits

### Storm Sewers

Rain and snow falls on paved parking lots and streets.

In the City of Flint, this “storm water”, from rain and snowmelt, drains from the pavement via “storm sewers”, which empty directly into lakes and streams via “outfalls”.



They are pipes in, or extending from, the banks of lakes and streams.

The City of Flint has about 300 of them, of various sizes.

Wastes dumped or flowing into storm sewer inlets go into lakes and streams. Wastes can also enter storm sewers via wastewater disposal systems connected to them.



### Storm Sewer Permit

The City has a National Pollutant Discharge Elimination System permit issued by the Michigan Department of Environmental Quality for regulating its storm sewer system. This permit prohibits the discharge of any substance other than storm water from storm sewers, with a few exceptions (i.e., clean groundwater, fire fighting water, potable water, etc.). It requires the City to have an “[Illicit Discharge Elimination Program](#)” for regulating how storm sewers are used to prevent and stop prohibited discharges.

### Illicit Discharge Elimination Program

It is illegal in the City of Flint to:

- Dump or allow wastes and other prohibited substances to flow into storm sewers
- Connect wastewater disposal systems to storm sewers, except as regulated by law
- Allow eroded soil from construction sites to flow into storm sewers

The City inspects storm sewer outfalls at least once every five years during dry weather to look for illicit discharges coming through them. If water is flowing out of them, it is measured and tested for chemical and physical indicators of water pollution. Sensory indicators of water pollution are also observed if present. If illicit discharges are suspected, based on testing and other observations, investigations to find and eliminate them are done.

## Illicit Discharge Indicators

Indicators of illicit discharges include:

- Dead fish
- Algae blooms and bacteria slime
- Pipe staining and discoloration
- Feces and toilet tissue paper
- Unnatural deposits, odor, color, turbidity and floating substances and objects

### Turbidity

Turbidity makes water hard to see through. It is the opposite of clarity. It is often caused by suspended solid substances such as mud.

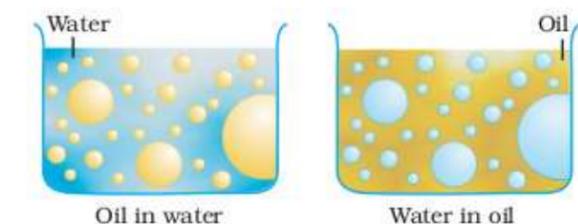


### Floating Liquids

Petroleum substances, such as oil, gasoline, and hydraulic fluids, float on water and spread out over it in layers of varying thickness:

- A “slick” is a thick layer
- A “film” is a thinner layer
- A “sheen” is a thin layer
- A “translucent” sheen is thinner than an “iridescent” sheen.

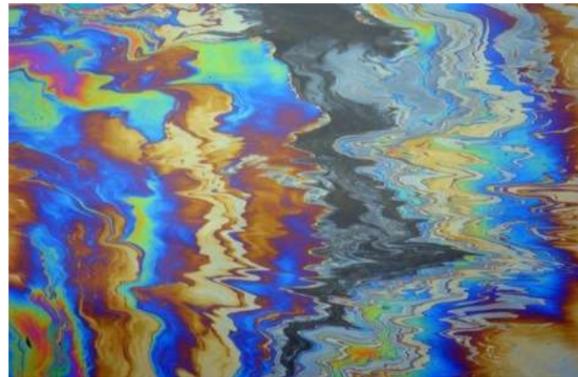
Oil often forms an “emulsion” when mixed with water. There are “oil-in-water” emulsions, which have more water than oil and “water-in-oil” emulsions that have more oil than water.



Larger amounts of floating petroleum substances form thick slicks on water that are often in the form of water-in-oil emulsions that do not look like oil.



Thicker sheens are iridescent (they diffract light). Small amounts of floating oil can form colorful iridescent sheens, and floating gasoline often forms them.



Smaller amounts of floating petroleum substances form very thin translucent sheens, that look white.



## Other Floating Substances

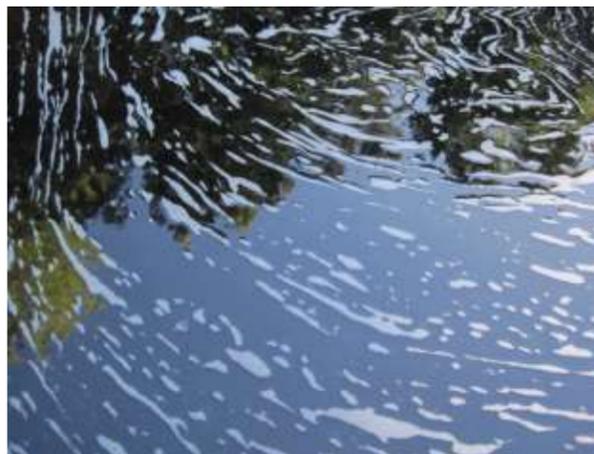
Algae is a type of plant. It can form thick “blooms” that float on and spread out over water. Algae blooms are often green. They can be caused by plant fertilizers.



Bacteria are microscopic. They can form thin layers of slime that float on and spread out over water. They can be caused by carbon substances.



Foam can cover the water surface. It can be caused by detergents.



Litter can wash off parking lots and streets into lakes and streams through storm sewers. Every bit of litter can add up to an unsightly mess.



## Odors

Un-natural odors can include:

- Gasoline, oil or solvent fumes
- Fecal odor
- Perfumes (from soaps, cleaners, personal care products, etc. in wastewater)

## **Detecting and Reporting Illicit Discharges**

Pollution observed in lakes and streams can result from illicit storm sewer discharges.

Dry-weather storm sewer discharges may indicate illicit discharges. And sensory water pollution indicators at or near storm sewer outfalls may also indicate illicit discharges.

**Illicit storm sewer discharges should be immediately reported to City of Flint Water Pollution Control at 810-766-7210.**

Contact either the Environmental Compliance Unit or Operations Foreman and provide detailed information (where, what, when and who) along with photographs if available.