Medical and Environmental Management Division

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How to Spot Non-Rain in the Drain!

The 411 on MS4

For most urban areas in Maryland, stormwater conveyance systems (or storm drains) are designed to carry stormwater runoff from roads and properties into local streams and water bodies. Unlike sanitary sewer systems, which send water to a treatment plant, anything that enters a storm drain will go directly to the nearest waterway, such as a stream or river, and eventually, the Chesapeake Bay.

GSFC has a Municipal Separate Storm Sewer System (MS4) Permit with the State of Maryland. The permit requires GSFC to control stormwater pollution from our site. One way to help stop stormwater pollution is to look for illicit discharges by monitoring outfalls, the point where stormwater discharges to a local body of water.

What is an Illicit Discharge?

An illicit discharge is any discharge to a storm drain system that is not composed entirely of stormwater. In other words, if the water didn't come from the sky, it can't go down the drain. Research from the U.S. Environmental Protection Agency has shown that pollutants from illicit discharges significantly degrade water quality, close recreational waterways, and threaten aquatic life, wildlife, and human health.

A common illicit discharge is a sanitary sewer overflow (SSO) resulting from a blockage or break in the sanitary sewer line that causes wastewater to flow out of the collection system into waterways. Common causes of SSOs are "Rags, Roots, and Grease," which can block the flow of water in pipes or cause structural damage to pipes. To help prevent SSOs, avoid pouring fats, oils, or grease (FOG) down into sinks and flush only appropriate materials in toilets. Preventing FOG and other materials from entering the sanitary sewer system can lessen the likelihood of illicit discharges occurring downstream.

How to Identify Illicit Discharges

Under the MS4 Permit, GSFC is required to implement an Illicit Discharge Detection and Elimination (IDDE) Program to find and correct illicit discharges. Checking for water flow through the storm drain system during a period of dry weather is one way to catch illicit discharges. When GSFC conducts dry weather screenings, we look for the following indicators of illicit discharges.

- Does the discharge have a distinct odor? *Odors of sewage, gasoline, or chemical smell could indicate a spill to the environment.*
- Is there any smoke, steam, or foam? *This could be the result of chemicals being introduced to the stormwater system reacting with each other.*
- Is the water cloudy or full of sediment? *Cloudy water can be a sign of a pollution. Sediment in the water could be a discharge from a construction site with poor erosion and sediment controls.*
- Does the discharge have a color? *Discoloration can be the result of pollutants, although sometimes there is a natural cause.*

- Is there too little vegetation or wildlife around the outfall pipe? *Dead insects, fish, crustaceans, and vegetation could be a sign of pollutants being discharged.*

Who you gonna call?

If you suspect an illicit discharge to the storm sewer system at GSFC, notify the Code 250 MEMD. Any suspected spills or releases to the environment should be reported immediately to the security operations center by dialing 911 from a GSFC phone or (301) 286-9111 from a cell phone.

In your community, you can contact your county government during business hours, or the Maryland Department of the Environment's toll-free 24-Hour emergency number for pollution problems at 866-633-4686 (or 866-MDE-GOTO) during non-business hours. When reporting, try to include the date and time of incident, location of dumping or discharge, and/or description of incident observed, and vehicle and license plate information if involved.

Visit the websites below for more information on Illicit Discharges:
Sanitary Sewer Overflow
Outfall Screenings
Maryland's Stormwater Management Program