



Environmental Bulletin

National Aeronautics and Space Administration



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Stormwater Superstars and the Outfall Screening Blitz

Volunteers are real stormwater pollution prevention superstars as they help identify stormwater pollution sources in streams throughout the Chesapeake Bay watershed. They're organized! They're collecting water samples! They're in a stream near you!

Observing Outfalls

Municipal Separate Storm Sewer Systems (MS4) are designed to convey water discharge from rainwater runoff, natural groundwater springs, and runoff associated with firefighting and other routine activities. These conveyances lead directly into local rivers and streams unfiltered and untreated. Discharges from leaking sewer pipes, broken drinking water pipes, and illegal connections from commercial or residential properties into stormwater systems are considered an illicit discharge. Illicit discharges into rivers and streams pose a threat to human health, can be toxic to aquatic organisms, cause damage to local waterways, and are one of the main pollution sources in the Chesapeake Bay watershed. Luckily, there are volunteer organizations working to track down and eliminate illicit discharges.

Let's Blitz!

Outfall Screening Blitzes (OSB) are just one of the many volunteer opportunities available that can help protect local streams and rivers. OSB events are hosted by Blue Water Baltimore (BWB), a non-profit organization that



specializes in community-based restoration, advocacy, and education to achieve clean water in the Chesapeake Bay's various watersheds. During the Blitz, teams comprised of BWB staff, interns, and volunteers walk lengths of streams and catalog every outfall that they encounter. Screenings are scheduled during dry weather when there is little chance for any discharges to be the result of stormwater runoff to make it easier to identify illicit discharges. If a discharge is present at an outfall during dry weather, a sample of the water is collected and the flow rate is estimated.

OSB volunteers are then tasked with testing the water sample for common pollutants, such as ammonia, potassium, and fluoride, and optical brighteners, surfactants, and turbidity. The presence of these contaminants can be traced to the following sources:



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Pollutant Indicator	Pollution Source
Ammonia, potassium	Sewage or wash water contamination
Fluoride	Drinking water contamination
Optical brighteners, surfactants	Illegal connections with Laundromats or carwashes
Turbidity	Improper erosion and sediment controls on construction sites

If a sample exceeds the target threshold for what is considered to be an illicit discharge, OSB volunteers report it to the State and local jurisdiction. Of the 49 stormwater outfalls that have been documented during OSB events in Baltimore City and Baltimore County, 12 have tested positive for contamination from an illicit discharge.

How can I help at GSFC?

GSFC has a general MS4 permit with the State of Maryland, which requires us to monitor outfalls that convey stormwater to local streams. It's our job to ensure that the water that leaves GSFC does not contain any pollutants that could potentially cause harm to our waterways or the wildlife that they support.

To help GSFC spot illicit discharges, contact the Medical and Environmental Management Division (6-6741) if you notice the following:

- Water flowing in a storm drain on a sunny day.
- Water that contains sediment flowing into a storm drain or discharging from an outfall.
- Water that has a strong smell of sewage or is cloudy in color.

We can all do our part to keep stormwater clean!



Visit the websites below for more information on Outfall Screenings and Volunteer events:

<http://www.bluewaterbaltimore.org/about/>

<http://www.bluewaterbaltimore.org/events/outfall-screening-blitz/>

<http://www.bluewaterbaltimore.org/blog/how-outfall-screening-can-make-streams-safer/>