What is an illicit discharge?

The EPA defines an illicit discharge as any discharge to the municipal separate storm sewer system (MS4) that is not composed entirely of stormwater, except for discharges allowed under a NPDES permit or waters used for firefighting operations.

Since the MS4 Partners (College, Ferguson, Harris, Patton, and Spring Townships; Penn State; and the State College Borough) hold MS4 stormwater permits, each is required to have an illicit discharge detection and elimination program.

Where do illicit discharges come from?

These non-stormwater discharges occur due to illegal connections to the storm drain system from business or commercial establishments. Illicit connections may be intentional or may be unknown and often are due to the connection of floor drains to the storm sewer system.

Additional sources of illicit discharges can be failing septic systems, illegal dumping practices, and the improper disposal of sewage from recreational practices such as boating or camping.

Why do illicit discharges matter?

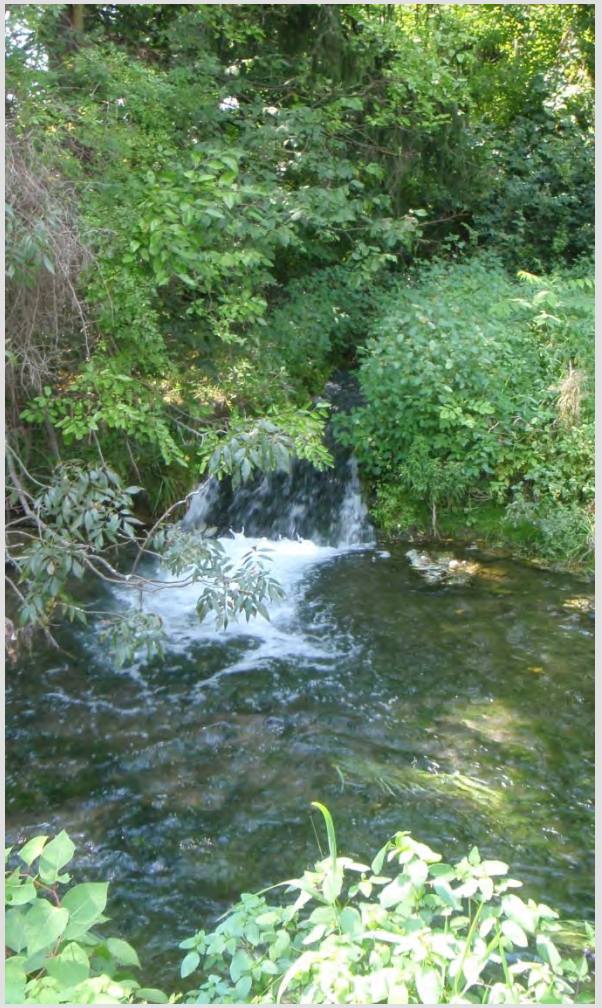
As a result of these illicit connections, contaminated wastewaters enter into storm drains or directly into local waters before receiving treatment from a wastewater treatment plant.

The result is untreated discharges that contribute high levels of pollutants, including heavy metals, toxins, oil and grease, solvents, nutrients, viruses, and bacteria to receiving waterbodies, which degrade receiving water quality and threaten aquatic, wildlife, and human health.

Are illicit discharges a major problem here?

The EPA's fact sheet on illicit discharges states: "*Discharges from MS4s often include wastes and wastewater from non-stormwater sources. A study conducted in 1987 in Sacramento, California, found that almost one-half of the water discharged from a local MS4 was not directly attributable to precipitation runoff.*"

Fortunately, these types of conditions don't exist in the region. However, illicit discharges are still importance to stop.

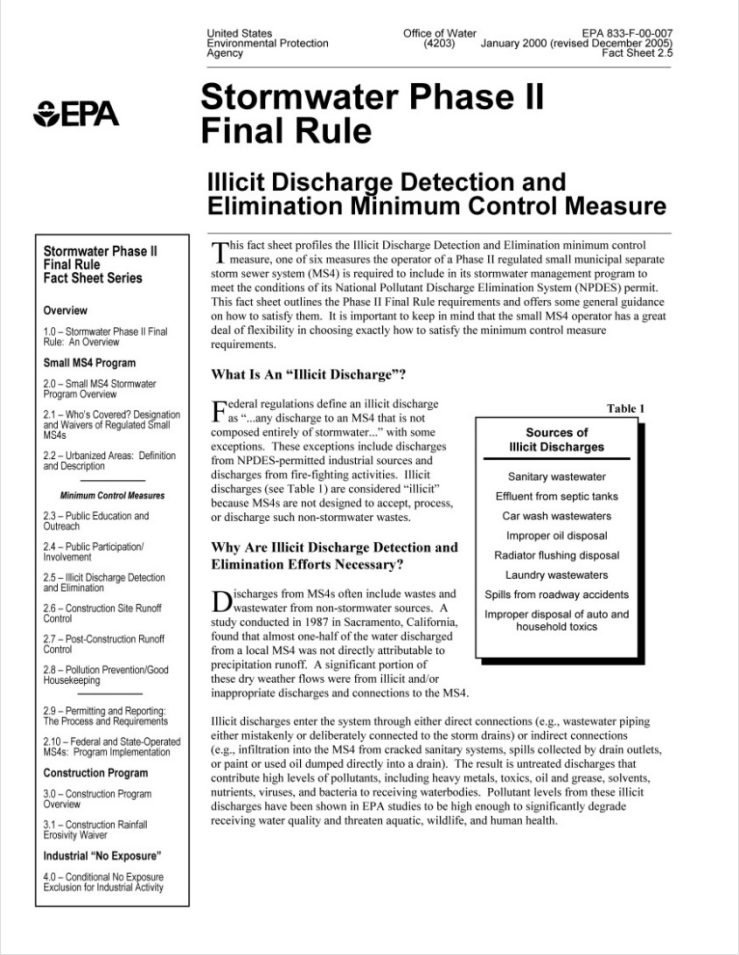


The rule of thumb is if it doesn't fall from the sky as precipitation, its not allowed into the storm system.

What are some examples of non-stormwater discharges that are permitted?

1. Discharges or flows from firefighting activities.
2. Discharges from potable water sources including water line flushing and fire hydrant flushing, if such discharges do not contain detectable concentrations of Total Residual Chlorine (TRC).
3. Non-contaminated irrigation water, water from lawn maintenance, landscape drainage and flows from riparian habitats and wetlands.
4. Diverted stream flows and springs.
5. Non-contaminated pumped ground water and water from foundation and footing drains and crawl space pumps.
6. Non-contaminated HVAC condensation and water from geothermal systems.
7. Residential (i.e., not commercial) vehicle wash water where cleaning agents are not utilized.
8. Non-contaminated hydrostatic test water discharges, if such discharges do not contain detectable concentrations of TRC.

Where can I find out more information?



United States Environmental Protection Agency | Office of Water (4203) | EPA 833-F-00-007 January 2000 (revised December 2005) Fact Sheet 2.5

EPA

Stormwater Phase II Final Rule

Illicit Discharge Detection and Elimination Minimum Control Measure

Stormwater Phase II Final Rule Fact Sheet Series

Overview

1.0 – Stormwater Phase II Final Rule: An Overview

Small MS4 Program

2.0 – Small MS4 Stormwater Program Overview

2.1 – Who's Covered? Designation and Waivers of Regulated Small MS4s

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Minimum Control Measures

2.3 – Public Education and Outreach

2.4 – Public Participation/ Involvement

2.5 – Illicit Discharge Detection and Elimination

2.6 – Construction Site Runoff Control

2.7 – Post-Construction Runoff Control

2.8 – Pollution Prevention/Good Housekeeping

2.9 – Permitting and Reporting: The Process and Requirements

2.10 – Federal and State-Operated MS4s: Program Implementation

Construction Program

3.0 – Construction Program Overview

3.1 – Construction Rainfall Erosivity Waiver

Industrial "No Exposure"

4.0 – Conditional No Exposure Exclusion for Industrial Activity

This fact sheet profiles the Illicit Discharge Detection and Elimination minimum control measure, one of six measures the operator of a Phase II regulated small municipal separate storm sewer system (MS4) is required to include in its stormwater management program to meet the conditions of its National Pollutant Discharge Elimination System (NPDES) permit. This fact sheet outlines the Phase II Final Rule requirements and offers some general guidance on how to satisfy them. It is important to keep in mind that the small MS4 operator has a great deal of flexibility in choosing exactly how to satisfy the minimum control measure requirements.

What Is An "Illicit Discharge"?

Federal regulations define an illicit discharge as "...any discharge to an MS4 that is not composed entirely of stormwater..." with some exceptions. These exceptions include discharges from NPDES-permitted industrial sources and discharges from fire-fighting activities. Illicit discharges (see Table 1) are considered "illicit" because MS4s are not designed to accept, process, or discharge such non-stormwater wastes.

Table 1

Sources of Illicit Discharges
Sanitary wastewater
Effluent from septic tanks
Car wash wastewaters
Improper oil disposal
Radiator flushing disposal
Laundry wastewaters
Spills from roadway accidents
Improper disposal of auto and household toxics

Why Are Illicit Discharge Detection and Elimination Efforts Necessary?

Discharges from MS4s often include wastes and wastewater from non-stormwater sources. A study conducted in 1987 in Sacramento, California, found that almost one-half of the water discharged from a local MS4 was not directly attributable to precipitation runoff. A significant portion of these dry weather flows were from illicit and/or inappropriate discharges and connections to the MS4.

Illicit discharges enter the system through either direct connections (e.g., wastewater piping either mistakenly or deliberately connected to the storm drains) or indirect connections (e.g., infiltration into the MS4 from cracked sanitary systems, spills collected by drain outlets, or paint or used oil dumped directly into a drain). The result is untreated discharges that contribute high levels of pollutants, including heavy metals, toxics, oil and grease, solvents, nutrients, viruses, and bacteria to receiving waterbodies. Pollutant levels from these illicit discharges have been shown in EPA studies to be high enough to significantly degrade receiving water quality and threaten aquatic, wildlife, and human health.

Complete EPA IDDE fact Sheet: http://www.epa.gov/npdes/pubs/fact2-5.pdf

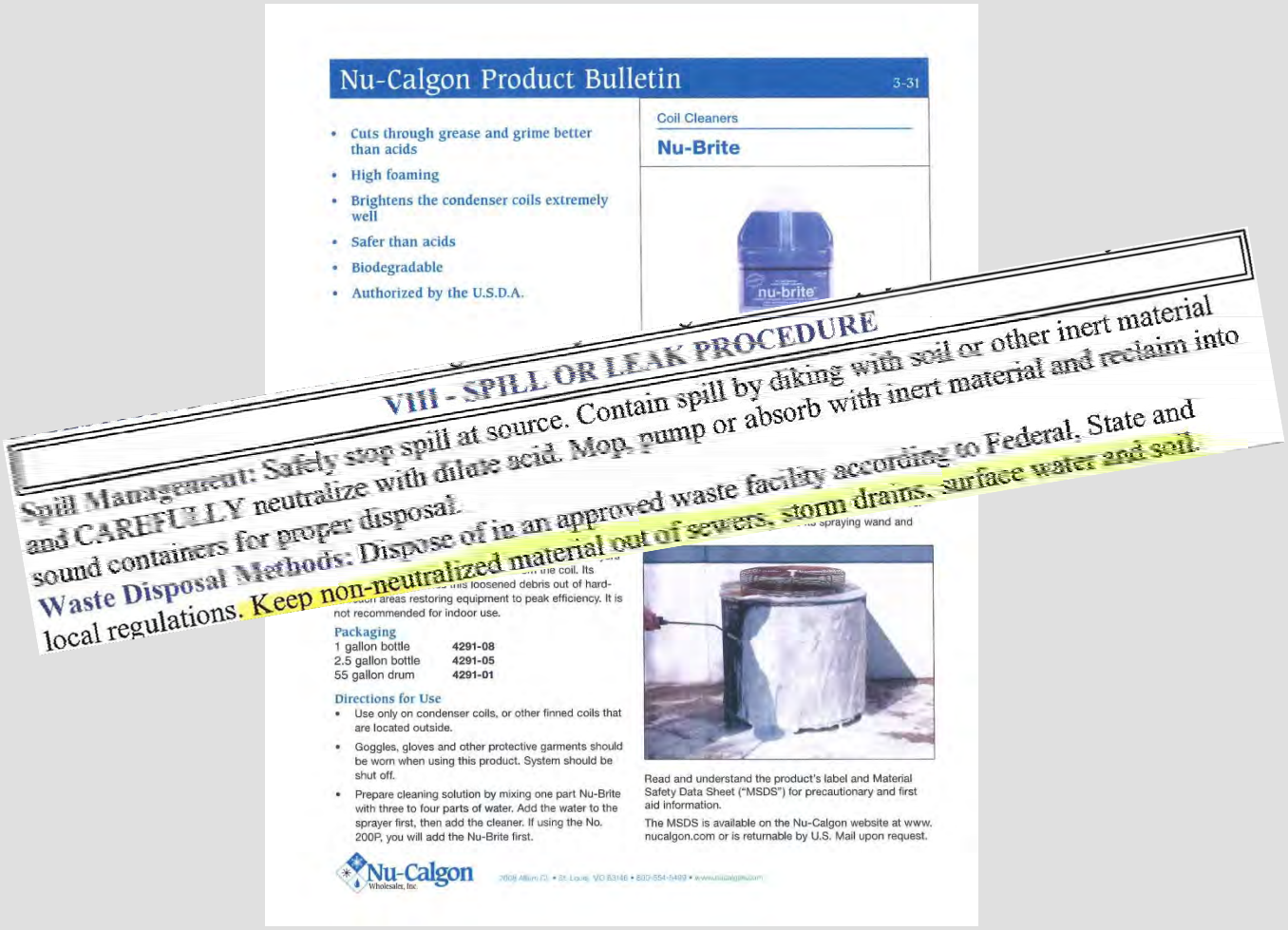
The MS4 Partners are required check for illicit discharges during dry periods. We have found several utility line breaks during these inspections.

Flow at University Park due to a broken water line

If you're in an older building where the floor drain is posted as going to the storm system, or you simply know it does, then utility blow downs like this can be an illicit discharge.

If roof top utilities have chemicals added to them, then blow downs or intentional releases are illicit discharges.

Cleaning roof top equipment such as cooling towers without neutralizing cleaning chemicals can result in an illicit discharge



Nu-Calgon Product Bulletin 3-31

- Cuts through grease and grime better than acids
- High foaming
- Brightens the condenser coils extremely well
- Safer than acids
- Biodegradable
- Authorized by the U.S.D.A.

Coil Cleaners

Nu-Brite

nu-brite

VIII - SPILL OR LEAK PROCEDURE

Spill Management: Safely stop spill at source. Contain spill by diking with soil or other inert material and CAREFULLY neutralize with dilute acid. Mop, pump or absorb with inert material and reclaim into sound containers for proper disposal.

Waste Disposal Methods: Dispose of in an approved waste facility according to Federal, State and local regulations. Keep non-neutralized material out of sewers, storm drains, surface water and soil.

spraying wand and

the coil. Its

this loosened debris out of hard-

areas restoring equipment to peak efficiency. It is not recommended for indoor use.

Packaging

1 gallon bottle	4291-08
2.5 gallon bottle	4291-05
55 gallon drum	4291-01

Directions for Use

- Use only on condenser coils, or other finned coils that are located outside.
- Goggles, gloves and other protective garments should be worn when using this product. System should be shut off.
- Prepare cleaning solution by mixing one part Nu-Brite with three to four parts of water. Add the water to the sprayer first, then add the cleaner. If using the No. 200P, you will add the Nu-Brite first.

Read and understand the product's label and Material Safety Data Sheet ("MSDS") for precautionary and first aid information.

The MSDS is available on the Nu-Calgon website at www.nucalgon.com or is returnable by U.S. Mail upon request.

Nu-Calgon Wholesale, Inc.

Where can I drain my pool?
Pool water can't be drained to the storm system or to surface waters in the MS4 permit area.

Courtesy Penn State Live

Washing out garbage cans into a storm drain inlet is prohibited, regardless of how clean you think they are.

Washing out small containers into a storm drain inlet is prohibited, even if only has minimal “juice” in the bottom.

Dumping mop buckets, rinsing out paint cans or brushes into an inlet is also prohibited and may result in an environmental cleanup.

Courtesy Old Dominion University

Even rinsing off paint brushes on pervious areas is prohibited, wash water must be directed to the sanitary sewer system.

The EPA even considers these examples to be illicit discharges.

The washing of vehicles should be done at a specifically designed wash facility, or on lawns or other pervious areas.

Discharging chlorinated water or other pollutants down storm drains can result in fish kills and other adverse affects. Always know for sure where a drain discharges.

Fluids from vehicular accidents need to be cleaned up, removed from the site and properly disposed, which includes absorbent material. Significant spills may require a Hazmat cleanup.

Help educate others about illicit discharges.

Courtesy Shruthi Baskaran

If you see a problem, who do you notify?

If you observe a problem that is an emergency that may result in the loss of life or property, please call 911.

If you observe a suspected illicit discharge, or would like to report another type of stormwater related problem that needs immediate attention, please contact your Municipality.