

Minimum Control Measure #3: Illicit Discharge Detection & Elimination

The goal of the Illicit Discharge Detection & Elimination (IDD&E) MCM is to locate and stop illicit discharges into your MS4.

DEP recommends that you utilize the 2004 IDD&E Guidance Manual that is referenced in the MS4 NPDES permit to develop or improve your IDD&E Program. Common sources of illicit discharges include sanitary wastewater, improper disposal of auto and household toxins, and car wash wastewaters.

Why are illicit (illegal) discharges important?

Illicit discharges make their way to our waterways untreated. Illicit discharges such as paint or oil dumped into storm drains, septic effluent, car wash wastewater, and illegally connected wastewater piping into sewers can cause serious pollution issues. These illicit discharges can carry a variety of pollutants, such as heavy metals, bacteria, viruses, nutrients, oil and grease, and solvents. Illicit discharges are dangerous to public and environmental health, it's unsightly, may affect drinking water, and will diminish recreational value.

Dry weather flows need to be sampled to determine if discharge is illicit. Dry weather flow outfalls need to be screened annually.

BMP #1 — Develop and implement a written IDD&E program for the detection, elimination, and prevention of illicit discharges into your MS4. The program must include dry weather field screening of outfalls for non-stormwater flows, and sampling of dry weather discharges or selected chemical and biological parameters. Test results are to be used as indicators of possible discharge sources.

BMP #2 — Map streams and outfalls. This map can be combined with BMP #3. The map must show the location of all outfalls and the locations and names of all surface waters of the Commonwealth that receive discharges from those outfalls. Surface waters that should be included are creeks, streams, ponds, lakes, basins, swales, and channels that receive stormwater discharges. Maps should be developed within the first year of permit coverage and updated/maintained from thereafter.

BMP #3 — The storm sewer collection system including pipes, municipal watershed boundaries and roads (including streets, catch basins, curbs, basins and artificial channels) must be mapped. This map can be created in conjunction with BMP #2.



Figure 5: Illicit discharge (Source: EPA IDDE Manual: https://www3.epa.gov/npdes/pubs/idde_manualwithappendices.pdf)

What should be included in your IDD&E Program?

- ◆ Identify priority areas with a high likelihood of discharge or dumping. Consider looking at old infrastructure, dumping history, sewage conversion or failing septic systems — put this info on a map.
- ◆ Screen outfalls — check for dry weather flows and sample them for pollutants or pathogens. Two people should do this together for safety reasons.
- ◆ Identify pollution sources. Did you find an illicit discharge? Where is it coming from? Investigate using standard written procedures. Photographic documentation is useful.
- ◆ Eliminate illicit discharge when a contaminated flow is detected. Have a process in place to follow — start by knocking on doors and escalate as necessary.
- ◆ Sewage discharge potential — is your MS4 a retrofit built separately?
- ◆ Access to private property — your ordinance should address this as it is a big issue for MS4s and should provide adequate authority. Include access as a discussion topic in public education and involvement activities (MCMs 1 and 2). Provide instructions to staff to avoid liability and ensure safety.
- ◆ Documentation and evaluation — record who went where, what they found, and what was done (what was the follow-up? was it effective?).
- ◆ Develop and maintain a reporting system for the public to report illicit discharges. Make sure the reporting system is user-friendly so that anyone can understand how to submit the complaint. Also, keep records on what actions were taken and how.



Figure 6: From left to right: astenciled storm drain in Pittsburgh; Staining which shows some sort of illicit discharge poured down a drain; a "no dumping" stormwater identification marker in Etna; an outfall to a stream (Sources: SPC and Westmoreland Conservation District)

BMP #4 — Outfall screenings must be done in your MS4. "Screening" means that you physically check your outfalls and report the results as outlined in your SWMP. Documentation is key — write down who went, what they found, include their inspection checklist and any photos taken. New permittees need to screen each outfall twice (screen 40% of outfalls each year of the permit term). During subsequent permit terms, outfalls are to be screened once per permit term (screen 20% of outfalls each year).

BMP #5 — Enact a stormwater management ordinance to implement and enforce a SWMP. Two model ordinances are included in the DEP permit application. Sections that should be included are prohibitions, right of entry, and enforcement. The ordinance must meet the requirements listed in the MS4 Stormwater Management Ordinance Checklist.

Ordinance-related BMPs of MCMs 3, 4 and 5 can be combined into a single stormwater management ordinance.

Ordinances associated with an Act 167 Stormwater Management Plan that was approved by DEP in 2005 or later meet the requirements of BMP #5. You can also meet the ordinance requirement by utilizing DEP's model MS4 Stormwater Management Ordinance or by developing an ordinance that meets all applicable requirements outlined in the MS4 Stormwater Management Ordinance Checklist.

BMP #6 — Provide educational outreach on IDD&E to your target audience. Programs should be developed to encourage and facilitate public reporting of illicit discharges, illegal dumping, or outfall pollution.

Helpful Tips

- ◆ Stay current on IDD&E ordinances. Be sure that they are up to date and check to see if you have multiple ordinances that may make regulating this issue burdensome.
- ◆ When screening 20% of your outfalls each year, make sure that you're screening different outfalls each year. Don't screen the same ones year after year.
- ◆ Be sure to be informed on what a proper outfall is. Mapping your outfalls, as well as outfalls maintained by PennDOT, will be helpful in the process.
- ◆ DEP has an MS4 IDD&E Checklist that can be useful for completion of MCM3:
http://www.dep.pa.gov/Business/Water/PointNonPointMgmt/StormwaterMgmt/Stormwater/Pages/MS4-Resources.aspx#.VxfJG_krKUK.