Massachusetts Stormwater News

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STORMWATER OUTREACH IN MASSACHUSETTS

WELCOME

Massachusetts Stormwater News is a collaborative effort of the Massachusetts Department of Environmental Protection (MassDEP) and the New England office of the U.S. Environmental Protection Agency (EPA). This newsletter will be sent via email every few months to provide information to municipalities and others related to the Massachusetts Small Municipal Separate Storm Sewer System (MS4) permit. Massachusetts Stormwater News will feature topics of interest, provide updates on upcoming permit deadlines, and highlight assistance resources from MassDEP, EPA and others.

EPA and MassDEP know that stormwater management is just one of the many challenges facing municipalities. We are committed to working with municipalities as you move forward on permit implementation.

This issue focuses on the key components for effective Illicit Discharge, Detection and Elimination (IDDE). We also highlight some upcoming assistance and training resources from EPA and MassDEP.

Understanding Illicit Discharge Detection and Elimination (IDDE)

Illicit Discharge Detection and Elimination (IDDE) is one of the most challenging, yet environmentally beneficial elements of the Municipal Separate Storm Sewer System (MS4) Program. Illicit discharges[1] - like sewage, industrial cross-connections and residential hook-ups - are not only illegal, but also significantly harm water quality. They contribute to the closure of beaches and shellfish areas.

EPA and MassDEP have placed significant emphasis on the removal of illicit connections from MS4s because illicit discharges, once they enter municipal stormwater systems, flow untreated into our local rivers, ponds and beaches.

Actions to reduce illicit discharges have positive environmental impacts. For example, ongoing illicit discharge work by MS4s within the Boston Harbor watershed has removed over 58 million gallons of untreated sewage from the storm sewer system and contributed to improved conditions in the harbor.

While many IDDE requirements of the 2016 permit build upon those of the previous 2003 permit, they require an expanded level of effort. Municipalities that have already completed work that satisfies 2016 permit requirements are not expected nor required to "redo" this work.

The IDDE program consists of three foundational components that must be in place and work together:

1. Regulatory Authority

The first component requires MS4s to have an effective regulatory mechanism in place (e.g., a local ordinance, by-law, or regulation) that provides the municipality with the legal authority to prohibit illicit discharges, investigate suspected illicit discharges, eliminate illicit discharges (including those from properties not owned or controlled by the MS4) and implement appropriate enforcement procedures. Development of such legal authority is a requirement under the 2003 MS4 permit with an expected completion date of May 2008, and this requirement is still in effect for the 2016 permit. Reviews of recent annual reports indicate that a majority of municipalities report having an effective IDDE ordinance in place.

[1]An illicit discharge is a discharge to an MS4 that is not composed entirely of stormwater except discharges pursuant to a NPDES permit and discharges resulting from fire- fighting activities. (40 CFR 122.26(b)(2)

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2. System Map

The second component requires MS4s to have an accurate map of the separate storm sewer system. The 2003 permit requires a map that consists of only outfalls and receiving waters. The 2016 permit requires that a more comprehensive map be developed in two phases over a 10–year period. Phase I – due 2 years after the permit takes effect – states that the 2003 map be updated to include the following elements:

- open channel conveyances,
- interconnections with other MS4s and separate storm sewer systems,
- municipally owned treatment structures,
- waterbodies by name and impairments, and
- initial catchment delineations.

Maps must be updated annually as information becomes available to the municipality during catchment investigations. Updates to the map continue during Phase II, which must be completed 10 years after the permit begins. By then the municipal maps should be comprehensive and include the following elements:

- outfall spatial location,
- pipes,
- manholes,
- catch basins,
- refined catchment delineations,
- if applicable, the sanitary and/or combined sewer system.

Many municipalities have not only completed the mapping of the outfalls and receiving waters, but have also completed a mapping of their entire storm sewer system.

3. Written IDDE Program Document

The third component requires MS4s to develop a written IDDE program document, which identifies departments or programs within the municipality and their responsibilities for meeting IDDE requirements. Under the 2016 permit, a written IDDE program must be completed by the end of Year 1. As discussed in the first edition of Massachusetts Stormwater News (https://go.usa.gov/xncZF), more than one municipal department or board may be involved in implementation of the stormwater program. The IDDE program is an example of a permit requirement that may involve multiple players such as boards of health, public works, inspectional services, and the town counsel/solicitor. In addition to defining roles and responsibilities, the IDDE program document details procedures that will be used to identify priorities, locate illicit discharges, identify sources, define removal procedures, and define removal confirmation. If a municipality has an effective regulatory mechanism, an accurate and complete system map, and clearly defined roles and procedures, the municipality should be able to effectively implement the required IDDE elements of the permit.

With the foundational components of the IDDE program in place, a municipality is positioned to prioritize, locate, and remove illicit discharges.

Prioritize Outfalls

Prioritizing involves assessing each outfall based on current knowledge and giving it a ranking of either "problem," "high," "low," or "excluded" according to its potential to have illicit connections. This prioritization is due by the end of Year 1 of the permit. If an outfall is identified as "problem," dry weather screening is not required and a municipality can begin investigations. "Excluded" outfalls are those with no potential for illicit discharges. Investigations are not required in these areas. Remaining outfalls are ranked either "high" or "low" based on knowledge of the catchment draining to that outfall. Outfalls identified as high or low must be screened during dry weather for evidence of dry weather discharges. When flow exists, it must be sampled. Information gained from the dry weather screening can be used to update the outfall priority ranking.

Locate Illicit Discharges

Locating illicit discharges involves a systematic investigation of the catchment draining to the outfall to isolate the location of the illicit discharge. The decision to investigate from the outfall up or from the top down, or a combination of the two, is solely up to the municipality. The catchment investigation should inform the mapping and updates to the map should be made accordingly. Investigations should also identify any factors that bring a higher potential for illicit connections. The existence of any of these System Vulnerability Factors (SVFs) – like common trench connections serving both wastewater and stormwater systems – triggers the requirement to conduct wet weather screening. The SVFs included in the permit are those which represent an increased likelihood of illicit wet weather discharges. While there are interim requirements, this process must be completed by Year 10.

Remove Illicit Discharges

Once an illicit discharge is located, the permit requires a municipality to remove it "as expeditiously as possible" using the tools available to the municipality to do so. Within one year of removal, the municipality must conduct confirmatory screening. If the catchment has an SVF, wet weather confirmatory screening must also be conducted. Once complete, the outfall is reprioritized and scheduled for ongoing screening every five years.

These procedures are described in detail in the 2016 permit and what is presented here is only a very brief summary of the requirements. EPA anticipates providing both webinars and in-person workshops addressing the nuts and bolts of both the written and field aspects of the illicit discharge program requirements in greater detail.

In Fall 2016, there were multiple appeals of the federal MS4 permit for Massachusetts. As of October 2017, this litigation is ongoing.

EPA and MassDEP are pleased to share the following outreach documents to help MS4 communities:

- Stormwater Management: MA MS4 Permit, First Year Requirements: https://go.usa.gov/x5SD2
- Stormwater Management: Summary of the Six Minimum Control Measures for Small MS4: https://go.usa.gov/x5hVX

Upcoming Assistance from EPA and MassDEP

- **"Introduction to Global Positioning Systems (GPS) for Stormwater Outfall Mapping,"** Webinar, November 2, 2017 1:30 p.m. – 2:30 p.m. https://attendee.gotowebinar.com/register/5305164880453839363
- **"Exploring the Green Infrastructure Workforce: Jobs, Training and Certification for Installation, Maintenance and Monitoring,"** Webinar, November 15, 2017 1:00 p.m. - 2:30 p.m. https://attendee.gotowebinar.com/register/4705991516585453058
- **"Engaging Urban Residents: Innovative Approaches to Promoting Community-Based Stormwater Management,"** Webinar, December 14, 2017 1:00 p.m. – 2:00 p.m. https://attendee.gotowebinar.com/register/8520543699503181570
- **Soak Up the Rain Webinar Series:** https://go.usa.gov/xncZG and **Customizable Public Outreach Tools:** https://go.usa.gov/x5znT
- **The MS4 Permit requires each town to implement a public education and outreach program that reaches four different audiences and that includes messages that are most relevant to that community.** Town officials can click on the links below to download – and save – brochures, pamphlets and other materials and use those to help comply with Section 2.3.2.c of the MS4 permit: https://go.usa.gov/x5dgr
- **Additional IDDE tools are available on the Massachusetts Small MS4 General website at:** https://go.usa.gov/xncZs
- **For "hands on" MS4 training and assistance for your community, call MassDEP's Stormwater Coordinator Fred Civian at 617-292-5821.**

Important Reminder: Annual Reports Due

For municipalities authorized under the 2003 MS4 permit, the Annual Report for the permits was due May 1, 2017. If you missed the deadline, reports are still being accepted.

Massachusetts Stormwater News is a collaborative effort of the Massachusetts Department of Environmental Protection (MassDEP) and the New England office of the U.S. Environmental Protection Agency (EPA).

Specific questions about the permit should be directed to:

EPA: Newt Tedder - tedder.newton@epa.gov or 617-918-1038
MassDEP: Fred Civian - frederick.civian@state.ma.us or 617-292-5821

Suggestions for future topics, questions, assistance or requests to be added or removed from the MA Stormwater News mailing list can be sent to: StormwaterNewsMA@epa.gov