



# Illicit Discharge Elimination Plan

**FOR:**

**SASWA Watershed & Urbanized Area of  
Saginaw County  
2010**

# ILLICIT DISCHARGE ELIMINATION PLAN

## INTRODUCTION

This Illicit Discharge Elimination Plan (IDEP) has been prepared in accordance with the requirements of the General Permit for Storm Water Discharges from Municipal Separate Storm Sewer Systems with controls based on six minimum measures for the SASWA. The IDEP is intended to prohibit and effectively eliminate illicit discharges (including the discharge of sanitary wastewater) to the separate storm water drainage system. The IDEP will focus on storm water outfalls and point source discharges within the urbanized area limits only. Illicit Discharges originating outside of the SASWA watershed or urbanized boundaries are not the responsibility of the SASWA, but will be reported to the Saginaw County Public Health Department. All aspects of the IDEP will be documented by action and evaluation methods as found in the SWPPI Reporting portion of the SWPPI.

The IDEP will be implemented by the consultant's staff and only involving County agencies and nested jurisdictions on an as needed basis.

The IDEP includes the following sections:

- Definitions
- IDEP goals
- Legal authority
- Training
- Locating problem areas
- Finding the source of illicit discharges
- Minimizing seepage from septic systems and sanitary sewers
- Removing/correcting illicit connections
- Preventive measures
- Documentation and reporting
- Implementation schedule

## DEFINITIONS

- **Municipal separate storm sewer system:** A system (including, but not limited to roads, catch basins, curbs, gutters, parking lots, ditches, storm sewers, conduits, pumping devices, or man-made channels) that is designed or used for collecting or conveying storm water; is not a combined sewer; and is not part of a publicly owned treatment works. The term does not include separate storm water drainage conveyances that serve an individual building or comparable discrete area. The system may convey specified non-storm water discharges as listed in Part I. A.7.a.2. The term includes both open and enclosed drainage systems that are owned or operated by the SASWA member and discharge either to a surface water of the state or to a separate storm water drainage system operated by another public body. It may include orphan or abandoned drains within the Urbanized Area or watershed limits. Open

drains that are considered to be surface waters of the state are not considered part of the separate storm sewer system.

- **Illicit discharge:** Any discharge (or seepage) to the separate storm water drainage system that is not composed entirely of storm water or uncontaminated groundwater.
- **Illicit connection:** A physical connection to the separate storm water drainage system that (1) primarily conveys illicit discharges into the system and/or (2) is not authorized or permitted by the local authority (where a local authority requires such authorization or permit).
- **Point source:** An outfall from a drainage system to waters of the state, or a point where a storm water drainage system discharges into a system operated by another public body.
- **Outfall point:** A point source from a drainage system that discharges to waters of the state.
- **Significant illicit discharge:** A discharge that shows evidence of impairing water quality in the receiving water.

## **IDEP GOALS**

- Find, prioritize, and eliminate illicit discharges and illicit connections identified during dry weather screening activities.
- Minimize infiltration of seepage from sanitary sewers and onsite sewage disposal systems into the separate storm water drainage system.
- Reduce illicit discharges into the separate storm sewer system by educating municipal employees and the general public.
- Establish the legal authority or regulatory mechanism for the municipality to eliminate illicit discharges found entering the separate storm sewer system.
- Maintain a map of the municipal separate storm sewer system, point sources, and storm water outfalls.
- Establish a system to document and report information regarding the IDEP, including complaints, outfall screening, and illicit connections found and removed.
- Determine a method to evaluate the effectiveness of the illicit discharge elimination activities based on the watershed goals.

## **LEGAL AUTHORITY**

The Michigan Plumbing Code of 2003, local members building codes, the Michigan Drain Code of 1956, Michigan Act 451, and the federal Clean Water Act provide the basic legal tools to implement the IDEP.

## **TRAINING**

Training will be provided to increase the awareness of the permittee's employees in regard to the goals and provisions of the IDEP.

Field personnel will be provided training prior to conducting storm water outfall screening and activities associated with identifying and eliminating the source of unauthorized discharges and illicit connections. Training will include:

- Types of illicit discharges/connections
- Techniques for finding and identifying illicit discharges/connections
- Health and safety
- Documentation and reporting procedures
- Use of sampling equipment and other tools
- Outfall mapping
- Visual and olfactory outfall screening procedures
- Chain-of-Custody Record completion
- Proper protocol for sample handling, preparation, and transportation
- Procedures for eliminating illicit discharges/connections

Training will be provided by a registered professional engineer or similar competent person, and include recognition of naturally occurring phenomena and their sources.

## **LOCATING PROBLEM AREAS**

The field work to identify and eliminate illicit discharges and illicit connections has been completed during the first permit period. The SASWA will now be in a maintenance mode for this permit period. This will involve updating the completed Storm Sewer System Map on an as needed basis. The SASWA will use Table 1 of the permit in Part I, A,b,2. as a means of prioritizing and problems noted when the outfall monitoring is occurring over the period of time until the permit expires in 2013. The SASWA will use its existing IDEP and to monitor as necessary until 2013 when new requirements may be in the new jurisdictional permit.

## **PLAN**

All aspects of the IDEP will be documented by action and evaluation methods as found in the SWMP Reporting portion of this SWMP. Locating Problem Areas and the presence of unauthorized discharges from the municipal separate storm water drainage system to the waters of the state will be identified using the following techniques:

- Field personnel will conduct a reconnaissance of all storm water outfalls from municipal separate storm water drainage systems originating within the Urbanized Area or SASWA watershed limits. The locations for this reconnaissance will be based on the outfall mapping and information provided by the municipal personnel. The SASWA is developing a

Geographic Information System (GIS) including the storm water drainage system. The GIS was utilized to identify all MS4 outfalls and potential reconnaissance locations. The location of all observed storm water outfalls will be documented. Field personnel will complete a log of preliminary findings, judgments, and suspicions during the course of the reconnaissance. Additional internal locations (outlets) may be included in the reconnaissance where it can be accomplished without special equipment. The drainage areas tributary to each outfall is indicated on the existing map and is available upon request.

- Dry weather screening of all municipal separate storm water outfalls will be completed between June 1, 2010, and September 30, 2013. Dry weather screening will not commence until at least 48 hours after any rainfall event. At a minimum, visual and olfactory screening of any dry weather discharge from the storm water outfalls will be completed. A digital photo record of the outfall will be taken. A follow-up investigation of outfalls which do not have dry weather flow will be conducted if there is evidence of dry weather discharges. The minimum data collected from the outfall screening will include information about odor, color, clarity, deposits, stains, foam, sheen, trash, floatable matter, and vegetation around the outfall. If dry weather flow is present, an estimate of the flow rate will be made and recorded.
- Field screening tests may also be completed for parameters such as dissolved oxygen, ammonia, pH, conductivity, surfactants, bacteria, chlorine and temperature if there appears to be a significant potential that there is an unauthorized dry weather discharge from the outfall. At a minimum the required parameters identified in the permit will be used.
- A report form will document the results of outfall screening and testing.
- The map of storm water outfalls will be updated to document the findings any future reconnaissance.
- A map of point sources, reconnaissance locations, and the MS4 will be prepared. This will indicate the approximate drainage area tributary to each outfall, if possible.
- The reconnaissance will be repeated at least every five years.
- If untreated or partially treated sewage of human origin is found to be discharged from the drainage system, the SASWA will comply with the requirements of Section 324.3112a of Part 31 of Public Act 451 of 1994 as amended, including notification of the DNRE, local health department, and one or more daily newspapers of general circulation.

## **FINDING THE SOURCE**

The field investigation necessary to Finding the Source of illicit discharges will be completed based on the results of the efforts in Locating Problem Areas. The prioritization for tracing illicit discharges to their source will be based on factors such as whether the area is known to have high bacteria problems or vulnerability to bacterial contamination, significant industrial or commercial development, dense housing without sanitary sewer connections, public notification,

or complaints, and the sensitivity of the receiving stream. The procedures to determine the source of illicit discharges will include the following type of activities:

- Inspection and/or testing the discharges within the upstream separate storm water drainage system.
- Televising the storm sewers or dye testing premises in the vicinity of a suspected illicit connection. Dye testing will not be conducted without prior DNRE approval, in accordance with Rule 1097 (Rule 323.1097 of the Michigan Administrative Code).
- Investigation of point sources located upstream of outfalls with documented dry weather flow
- Investigation of complaints, reports, or notification of suspected illicit discharges
- Distribution of letters to residents and businesses alerting them to the problem that is under investigation and soliciting their assistance in finding the source of an illicit discharge.
- A building-by-building evaluation where a potential illicit connection has been Isolated to a small area.

## **MINIMIZING SEEPAGE FROM SEPTIC SYSTEMS AND SANITARY SEWERS**

There are many areas in SASWA urbanized area and watershed area that are served by onsite sewage disposal systems (OSDS). The SASWA will coordinate its IDEP effort with the Saginaw County Health Department (SCHD) to assist in mitigating any problems found with these OSDS.

An OSDS found during the implementation of the IDEP to be infiltrating into a municipal separate storm water drainage system will be referred to the SCHD. In the unlikely event that the SCHD finds unacceptable seepage, the SASWA will cooperate with them and report to the DNRE on the finding in the annual report.

At such time that a sanitary sewer system becomes available, the property owner will be required to connect whether or not the OSDS is failing, if ordinances or codes so permit.

The potential for seepage from sanitary sewers into the storm water drainage system will be investigated in the process of *Finding the Source* of illicit discharges. Sanitary sewer overflows or cross-connections to a storm sewer will be corrected as soon as possible when discovered.

## **REMOVING/CORRECTING ILLICIT CONNECTIONS**

Those responsible for illicit connections will be notified to correct the problem. The facility that is suspected of having an illicit connection will be investigated by dye testing the plumbing system, visual observations, or other strategies to document the existence of illicit connections. The property owner will be required to implement appropriate BMPs to eliminate the potential

for illicit discharges. A follow-up inspection will be conducted to ensure that the correction is satisfactorily completed.

The plan for *Removing/Correcting* Illicit Connections will include notifying the property owner and current occupant that a site investigation is necessary. If an illicit connection is found, a second notice will be sent to the property owner requiring that the connection be removed/corrected per the IDEP ordinance. Enforcement action will be taken if necessary. Follow-up inspection of facilities will be conducted following removal of illicit connections.

The SASWA and its permittees expect "expeditious" correction of problems identified. Problems vary widely in complexity and cost of correction. Some problems can be corrected almost immediately or within 30 days, while others may take preparation of detailed drawings and specifications, bidding, and construction. The severity of the problem will also affect the time frame for correction. Some illicit connections almost never have discharges. While these need to be corrected, they do not have the urgency of connections that have continuous discharges.

## **PREVENTIVE MEASURES**

Mechanisms will be put in place to prevent future illicit discharges and connections. The SASWA will evaluate strategies for prevention of new illicit discharges. Examples of potential preventive measures that will be considered include:

- Provide and advertise the availability of recreational vehicle sewage disposal.
- Programs to eliminate sanitary sewer overflows.
- Consideration of potential illicit connections/discharges during site plan review.
- Inspection procedures for new development or redevelopment.
- Training a permittee's personnel in recognizing indications of illicit discharges and how to properly report their observations.

## **DOCUMENTATION AND REPORTING**

A Progress report will be submitted to the DNRE on the implementation status of the IDEP by the dates stated in the COC. The progress report will cover all of the decisions, actions, and results performed as part of the IDEP during the reporting period. At a minimum, the progress report will include:

- Documentation of any actions taken to eliminate illicit discharges.
- A list of pollutants of concern, the estimated volume and load discharged, and the locations of the discharge into both the MS4 and the receiving water will be provided for significant illicit discharges.
- The status of the program to minimize seepage from sanitary sewers and onsite sewage disposal systems into the MS4.
- Updated outfall mapping.

- A schedule for elimination of illicit connections that have been identified, but have yet to be eliminated.
- An updated IDEP implementation schedule.
- An evaluation of the effectiveness of the IDEP program. The evaluation will include statistics on the number of outfalls screened, the elimination of illicit connections, and the number and type of violations that are investigated.

## **IMPLEMENTATION SCHEDULE**

The implementation schedule for completion of the IDEP is as follows:

- The permittee's currently have legal authority to deal with illicit discharges.
- Training of general municipal and permittee staff in regard to the IDEP goals and program will be completed as needed and will be documented in the reporting mechanism for this section.
- Training of field personnel who are responsible for Implementation of the IDEP will be completed prior to beginning the reconnaissance of the waters of the state.
- *Locating Problem Areas* has been completed in 2009, with some minor follow ups to be completed when funding permits.
- A program for *Finding the Source* of illicit discharges to the municipal separate storm water drainage system will begin after completion of *Locating Problem Areas*, and will be completed within 12 months. Significant illicit discharges will be investigated immediately upon discovery.
- *Removing/Correcting Illicit Connections* to the municipal separate storm water sewer system will be completed expeditiously. Significant illicit discharges will be eliminated as soon as possible.
- A map of point sources, reconnaissance locations, and the municipal separate storm water system will be submitted to the DNRE with the progress report.
- A progress report will be submitted by the date indicated on the COC and thereafter as scheduled. It is impossible to measure the environmental benefit of actions taken to prevent water pollution. Monitoring of outfalls by the consultant or the SCHD will provide data that will be useful in assessing the success of the IDEP process.