

ILLICIT DISCHARGE ELIMINATION PROGRAM

BAY AREA STORM WATER AUTHORITY

The Illicit Discharge Elimination Program (IDEP) is being performed as a part of a watershed strategy within the Bay Area Storm Water Authority (BASWA) communities. Many of the activities and program efforts required by this permit have been and are currently being performed throughout the Urbanized Area by various public and private entities. The Saginaw Bay area was recognized almost 30 years ago as having water quality impairments, and in fact is listed by the International Joint Commission as an “Area of Concern”. Directly as a result of this listing and directly in response to the local citizenry support and concern for this valuable local resource, hundreds of millions of dollars have been spent to characterize the problems and specific problem areas, identify contaminant sources, and implement many source reduction and pollution prevention activities by both public agencies and community interest organizations.

As a result of these efforts and expenditures, water quality improvements have been measured. The past 25 years have shown the success of these efforts as: 1) specific contaminants have been reduced, 2) source reduction has occurred and 3) data showing strong and measurable recovery. Clearly, pollution remediation and prevention activities to protect and improve the quality of water resources are not a new undertaking in this Bay County area. It is the intent of the Bay Area Storm Water Authority Committee communities to build on this successful existing effort, and increase activities and efforts where needed to comply with the Michigan Department of Environmental Quality’s (MDEQ) Permit.

Although each municipal BASWA member will obtain their own permit, this IDEP will serve as a document for all members with the exception of the City of Bay City, which will have their own. The rest of the urbanized area will be cooperatively utilize this plan.

PERMIT REQUIREMENTS AND DEFINITIONS

As required by the National Pollutant Discharge Elimination System (NPDES) Storm water Discharge of Storm water to Surface Waters from a Municipal Separate Storm Sewer System (MS4), the Authority will work to eliminate illicit storm water discharges from Separate Storm Water Drainage Systems within its watershed plan, the following definitions apply to the IDEP:

“Illicit connection” means 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).

“Illicit discharge” means any discharge (or seepage) to the separate storm water drainage system that is not composed entirely of storm water, except for discharges specified in Parts I.A.1.c. and d. of the permit. Examples of illicit discharges include dumping of motor vehicle fluids, household hazardous wastes, grass clippings, leaf litter, animal wastes, or unauthorized discharges of sewage, industrial wastes, restaurant wastes, or any other non-storm water waste into a separate storm water drainage

system.

“Point source discharge” (PSD) means 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.

“Significant illicit discharge” means a discharge that shows evidence of impairing water quality in the receiving water.

FINDING, PRIORITIZING AND ELIMINATING ILLICIT DISCHARGES AND CONNECTIONS

This program will be done using an investigative methodology to effectively identify and eliminate illicit discharges. Multiple steps may be ongoing simultaneously as the program is implemented. The investigative methodology includes first verifying the known PSD locations and locating unmapped PSDs; then field screening of each PSD will be conducted and a follow-up investigation will occur where needed to locate the source of an illicit discharge or connection; finally corrective action to remove illicit connections will occur and confirmation will be provided that the illicit connection has been removed. Jurisdictions will verify or develop necessary enforcement ordinances to allow the authority to take necessary legal action.

Maps and tables identifying the known PSDs and their ownership within the municipal limits have been developed and will be utilized as a starting point for the field verification and screening program.

PROGRAM:

Training

Training of staff employed by Authority members will occur every three years. New employees will be trained within one year of hire or election. The staff includes Drain Commissioner, Road Commission, and municipal department of Public Works staff. In addition, cross-training with the Bay County Health Department, Bay County Mosquito Control and other identified municipal employees will be conducted to increase on-going monitoring of open drains.

Training for all staff will include; techniques for identifying illicit discharges & connections, recognizing illicit discharges, understanding municipal storm water infrastructure, common types of illicit discharges, field observation, reporting requirements and spill reporting. Field screening and source investigation, more complete infrastructure analysis, field planning and preparation and enforcement procedures training will be done with personnel directly involved with the program. Training will also include definitions and photograph examples of illicit discharges. It will include recognition of natural occurring phenomena and their sources as well as utilization of GPS equipment and other necessary mapping and surveying skills to aid in the location of illicit discharges. Training will extend to both those directly involved in screening and as many additional personnel as possible. Training will include a test or quiz to ensure competence. BASWA will maintain a list of trained personnel.

Field Verification, Identification and Screening of PSDs

Beginning in January 2020, the field re-screening and verification will begin for known PSDs and be completed during the permit cycle. The field screening and verification will be done by trained Drain Commissioner, Road Commission, city and township staff. Those locations and any unmapped PSDs found during field investigations will be recorded and screened. The focus of the field screening is to observe for the presence or absence of flow, deposits/stains on structures or banks, vegetation condition, structural condition, bacterial sheens, algae and slime, water clarity, color, odor and floatable materials. 100% of the urbanized area will be re-screened during the permit cycle. Past efforts have demonstrated that a higher proportion of illicit discharges exist in older urbanized areas. The Kawkawlin River and older urbanized areas will continue to receive the initial screening as a primary concern. Field crews will record a coordinate of each PSD using a handheld Global Positioning System (GPS) device or other suitable surveying technique. PSDs found during the investigations will be added to the appropriate maps; this information, as well as any corrections or modifications to the map or table, will be reported to the MDEQ as required.

During the field verification stage, each PSD will be screened for signs of illicit discharges or connections. Where illicit discharges or connections are suspected, a systematic investigation upstream of the PSD will be conducted to trace the discharge to the source. The PSDs will be observed in the field during dry weather conditions, typically assumed to be 72 hours with less than 0.10 inches of rainfall. Favorable seasonal conditions such as winter freeze up or summer drought will be utilized as much as practicable. When field screening PSDs in open channels, a longer dry weather duration preceding the observation may be needed. Specific dry weather duration requirements may be site specific and will be determined during the field investigation. The sites will also be further checked for intermittent flows, if suspected, due to field observations. Fieldwork may be limited to certain times of the year to promote identification; for example, when the water table in the waterways is relatively low (late summer, fall and winter), winter thaws and spring will be avoided. Each field check will be recorded and fully documented with descriptions of date, time, and observation notes confirming any discharge or odors or recording that none exist.

If dry-weather flow is present, it will be visually observed by checking water clarity and color, the presence of foam, oil sheen, trash or other materials. It will also be checked for odor, bacterial sheen, slime, excessive vegetative growth and staining of the banks. The location will be reported to the Drain Office staff within 24 hours, who will take sample of the dry-weather flow within 48 hours, weather permitting, and have it tested for representative tracer parameters including:

- pH
- temperature
- *E. coli*
- detergents
- fluoride
- hardness
- ammonia

- total organic carbon

At that time, the BASWA Administrator designee will also do a preliminary investigation to determine the source of the flow.

The presence of dry-weather flow does not automatically indicate an illicit discharge or a connection, but it does require that laboratory testing be performed to analyze the discharge for indicator parameters (ammonia, fluoride, and detergents). The water may simply be groundwater seepage and seasonal flow or it may be an illicit connection. The water sample will be grabbed by the BASWA Administrator designee and submitted to a contract lab for a detailed analysis. Field tests will include visual observations, PH and water temperature. Test results and observations will be used to identify areas that require follow-up investigations.

If the sample is determined to exceed parameters and the source was not identified in the initial screening, a source investigation shall be conducted within three business days of receiving laboratory results. This will be accomplished by tracing the pollutant stream until the source is isolated. This may include multiple water samplings, and/or dye testing by drain office or health department personnel. In general, dye testing will be used as the final step to confirm positive identification of an illicit connection. Televising the sewer by a commercial sewer cleaner or the Bay County Road Commission may be used to further isolate the pollutant source or may be used if dye testing does not reveal the source of the problem. This approach is intended to locate illicit discharges and connections in the most cost-effective and efficient manner possible. It will focus the use of dye testing in those situations necessary to confirm illicit connections. The BASWA Administrator may engage a qualified contractor to assist in the identification if they cannot identify the source.

In the event multiple locations with exceeded parameters are identified, priority of addressing them will be based on estimated total load of pollutant as determined by value of flow volume and level of tracers. The illicit discharge with the highest estimated pollutant load will be addressed first.

If a complaint is received for an illicit discharge or illegal dumping/spill a field investigation will occur on the same business day, or within 24 hours. If a flow is identified, testing and identification will take place as with any other discharge.

MDEQ will be notified immediately via District Office or 24-Hour Pollution Emergency Alerting System (800) 292-4706 to report any release of polluting material from the MS4 to the surface waters or ground waters of the state if they are in excess of the threshold of reporting quantities in the Part 5 Rules.

Removal Actions and Confirmation of Removal

All illicit connections or illegal dumpings/spillings that are located through the screening process or reported regardless of their location whether inside or outside of the priority area are responded to by the entity with jurisdiction. If multiple illicit discharges are discovered, they will be prioritized based on the

severity and potential harm they may cause. Factors that would influence the prioritization include analyzing results from ambient water quality, dry weather observation, chemical and bacterial analysis, as well as video, smoke or dye testing results. That analysis coupled with a review of the receiving water for beneficial uses, impairment of the water body, existing water quality data and endangered flora and fauna will determine the priority of removal actions. A field investigation will be performed within 24 hours and if necessary a water sample will be obtained. Upon completion of the investigation, a letter will be prepared by the local jurisdiction to notify the property owner of the violation and the required corrective action that needs to occur. A follow site investigation will occur within 24 hours of corrective action by the landowner.

Corrective Actions will follow enforcement standards outlined in the BASWA Enforcement Response Procedure utilizing the most appropriate statute or ordinance identified. This includes timelines for discharge removal as specified in the selected enforcement method.

Review of the Legal Authority

Upon approval of the MDEQ to ensure requirements of the Permit are fulfilled, BASWA members will enact a Bay Area Storm Water Authority Storm Water Regulations. The adoption of the regulation through ordinance provides the necessary authority to address illicit discharge connections.

DETERMINING THE EFFECTIVENESS OF THE IDEP ACTIVITIES

As required by the permit, a report will be generated and include the following information which will become the baseline for measurable improvements:

- * Number of PSDs verified, located and screened.
- * Number of illicit discharges found and percentages of those remedied.
- * The number of complaints in the tracking systems received and the percentage that leads to the discovery of illicit connections.
- * Status of the implementation of various aspects of the IDEP
- * Timeliness of elimination of located illicit connections.
- * A listing of significant discharges by location, pollutants of concern involved, estimates of volume and load discharge.
- * Improvements in ambient water quality.
- * Number of participants in training program
- * Quiz before and after staff training

MAPPING

As part of the ongoing program, maps in the urbanized area are reviewed and a map of identified outfalls has been created. It is the basis of field screening and verification. When crews walk the drains during the screening process they will confirm the outfall locations as well as locate and map additional outfalls along the drains. In addition, the utility map will incorporate any results from televising storm sewers. Mapping of located, verified and screened PSDs will be

continually updated utilizing GPS information. Updated maps will be submitted annually to the MDEQ with the annual report. The maps will include designation of located and remedied illicit discharges. Maps that have been submitted can be referenced in the NPDES Certificate of Coverage.