

Attachment 6
ILLICIT DISCHARGE ELIMINATION PROGRAM
BAY AREA STORM WATER AUTHORITY
in conjunction with the
BAY COUNTY ROAD COMMISSION

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”. Local citizenry support and concern for this valuable local resource resulted in the expenditure of hundreds of millions of dollars to characterize water quality issues. Identification of specific problem areas and contaminant sources, resulted in implementation of many source reduction and pollution prevention activities by both public agencies and community interest organizations.

Resulting water quality improvements have been measured. The past 30 years have shown the success of these efforts as: 1) specific contaminants were reduced, 2) reduction in point sources and 3) measurable data showing a strong recovery. Pollution remediation and prevention activities are not a new undertaking in the Bay County area. It is the intent of the BCRC, in partnership with BASWA members and other permittees, to sustain this successful effort, and assist in the continued promotion of water quality activities and efforts. To comply with the Michigan Department of Environment, Great Lakes and Energy (EGLE) Permit issued for this cycle.

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 have their own. The rest of the urbanized area will be cooperatively utilizing this plan.

Permit Requirements and Definitions

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

“BCDWS” – Bay County Department of Water and Sewer. This is a department under the jurisdiction of the Bay County Road Commission Board and a partner of the Bay County Road Commission.

“BCRC” – Bay County Road Commission

“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).

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“Illicit Discharge” - 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) - 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” - a discharge that shows evidence of impairing water quality in the receiving water.

“Total Maximum Daily Load” - a TMDL for *E. coli* was implemented for the first time, by EGLE for lakes and rivers within the Bay County urbanized area for this permit cycle. A TMDL is a defined number set by EGLE, in an effort to reduce pollutant load a lake or river and eventually meet Water Quality Standards (WQS) for said lakes and rivers.

Field Verification & 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. PSD locations within the urbanized area were located, verified and a field screening of each PSD was completed during the last permit cycle. Any PSD showing signs of an active illicit discharge or connection; corrective actions were taken to remove the illicit discharge or connection and confirmation of said was recorded in CityWorks. BASWA members/permittees have developed and implemented necessary enforcement ordinances to allow the authority to take necessary legal action.

The same methodology will be used to field screen each of the, now identified, PSD’s. Any other PSD’ found through this permit cycle, will be added to CityWorks and field screening will occur as prescribed by EGLE. Enforcement will be in accordance with the ordinances adopted by the BASWA members/permittees.

Locations and related information associated with known PSDs and their ownership within the municipal limits are included on the BCRC’s CityWorks GIS and is available to EGLE staff as outlined in Attachment 2.

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Training

Training of staff employed by BASWA members/permittees will once during the permit cycle. In the case of the Bay County Road Commission, new employees will be trained as part of their orientation, during the first few days of employment. Cross-training to include other BASWA members employees can be coordinated and provided by the BCRC if requested. This included Bay County agencies such as; Health Department, Bay County Mosquito Control and other identified Bay County employees, based on their job duties.

Training for all BCRC staff will include; techniques for identifying illicit discharges & connections, recognizing illicit discharges (definitions and photos), 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. For those directly involved, training will include utilization of Global Positioning System (GPS) equipment and other necessary mapping and surveying skills to aid in the location of illicit discharges. Training will include a test or quiz to verify participation and understanding. The BCRC and each BASWA member/permittee, will maintain a list of trained personnel.

Field Verification, Identification and Screening of PSDs

Field screening and verification will be completed for each PSD once during the permit cycle. The field screening and verification will be done by trained staff either, employed or hired by the BCRC or BASWA members/permittees.

The CityWorks database will provide an ongoing record of inspection dates, screening results and locations. The focus of the field screening is to record 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. Studies indicate 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.

Dry Weather Flows

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 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. 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

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descriptions of date, time, and observation noting suspicious discharge, odors or note 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. If any of these characteristics are present, the location will be reported to the BCRC's office staff within 24 hours. A water sample will be collected using the "grab sample" method, using a trained BCRC employee, BASWA member/permittee or third-party contractor. A sample of the dry-weather flow will be taken to either the West Bay County Regional Wastewater Plant or Bay Area Water Treatment Plant laboratory within 48 hours and have it tested for representative tracer parameters including:

- pH – Within range of Water Quality Standard (WQS) of 6.5 to 9.0.
- Temperature – Notably higher or lower than nearby groundwater
- *E. coli* - 300 *E. coli* per 100 mL or the partial body contact WQS as the starting point for follow-up.
- Detergents – for surfactants, >0.5mg/l
- Fluoride – Check with potable water distribution in the area (Bay Area Water Treatment Plant) to determine fluoride level dosing. Compare fluoride test with that of the potable water to determine if discharge is actually potable water.
- Ammonia - >1.0 mg/l

**Please see Attachment 15, Section 1.0 and Appendix 1 for the
Standard Operating Procedure for Wet Weather Screening for *E. coli*.**

If any of the tracer parameters are present, BCRC staff will complete an investigation to determine the source of the flow. An investigation to determine the source of the illicit discharge shall be conducted within three (3) business days of receiving laboratory results.

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.

Wet Weather and *E. coli* Total Maximum Daily Loads (TMDLs)

For this permit cycle, permittees are part of the statewide *E. coli* TMDL and are required to submit a TMDL Implementation Plan with their permit application. Those BASWA members/permittees included in this application are: the BCRC, Bangor Township, Bay County, and Essexville. Bay City is submitting a NPDES Phase II permit independently. The BCRC will be working collaboratively with these entities to identify and eliminate sources of *E. coli*.

As stated above, *E. Coli* screening will be completed during dry weather sampling of the outlets within the urbanized area. Testing will occur at either the West Bay County Regional Wastewater Plant or Bay Area Water Treatment Plant laboratory.

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Best Management Practices (BMP or BMPs) will be implemented to reduce the discharge of the TMDL pollutant to, thus, from the MS4 system. Enforcement authorities have the ability to require the offending party to; replace their septic system, connect to the sanitary sewer, where available, require agricultural BMP's where animal waste is entering the BCRC's storm water system. The BCRC will work with these enforcing entities to monitor the implemented BMP's and report when repairs or replacement is needed.

Source Identification and Reporting

Methods readily available will be used to trace the illicit discharge to the source. In general, dye testing will be used as the final step to confirm positive identification of an illicit connection. However, televising the sewer by a BCRC, BCDWS or commercial sewer cleaner may be needed to further isolate the pollutant source, if dye-testing is inconclusive.

The public has the means to report an illicit discharge, spill or illegal dumping by visiting www.baycoroad.org. For illicit discharge reporting, the Bay County Road Commission will provide an icon on their website for the public to report an illicit discharge through our CityWorks GIS portal. The BCRC is currently developing a new website. This icon will likely change in both name and appearance. No matter if the icon changes during this update or a future one, a user-friendly, recognizable icon WILL REMAIN on the BCRC website for illicit discharge reporting (See Attachment 3).

If a complaint report is received involving an illicit discharge, spill or illegal dumping, the BCRC will strive to complete a field investigation 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. If the investigation reveals a spill or illegally dumped material, EGLE will be notified immediately. Contact will be made either through the Bay City District Office or 24-Hour Pollution Emergency Alerting System at 1-800-292-4706. This is especially urgent if there is a release of a polluting material into the surface waters or ground waters of the State.

Removal Actions and Confirmation of Removal

Regardless of location, illicit connections, spills or illegal dump locations identified through the screening process or reported will be addressed by the entity having jurisdiction. In the event multiple locations with exceeded parameters are identified, the illicit discharge with the highest estimated pollutant load or highest potential for harm, will be addressed first. Factors considered in addition to those stated above include; public use of the receiving waters, impairment of the water body or existing water quality and immediate endangerment of flora and fauna.

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-up site investigation will occur within 24 hours of receiving notification that a corrective action was implemented by the landowner.

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Corrective actions will follow enforcement standards outlined in the Bay County Road Commission's 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 EGLE to ensure requirements of the Permit are fulfilled, BASWA members will enact BASWA 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.
- * Timeliness of elimination of located illicit connections.
- * A listing of significant discharges by location, pollutants of concern involved, estimates of volume and load discharge.
- * Number of participants in training program.
- * Quiz before and after staff training.

Mapping

The BCRC uses the CityWorks GIS-enabled database computer program to map, track and record the information required by the Permit. As the Urbanize Area changes due to future census data, discharge points may be added to CityWorks and the same information will then be collected and tracked in the same manner as those currently in the system. EGLE personnel have been provided access to the BCRC's CityWorks program and can monitor the tasks performed at each discharge point location. Further, EGLE can monitor illicit discharge, spills and illegal dumping reports through the same CityWorks access portal.