MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

Short-Term Storm Water Characterization Study

State of Michigan Industrial Storm Water Program Guidance

The Short-Term Storm Water Characterization Study (STSWCS) is an additional monitoring requirement for a facility that requests authorization, through a Notice of Intent (NOI) or National Pollutant Discharge Elimination System (NPDES) application, to discharge storm water from the following designated special-use areas:

- **Secondary Containment Structures**
- **Sites of Contamination**

Secondary Containment Structures

A STSWCS is required if storm water is discharged to surface waters of the state from secondary containment structures required by state or federal law. The EGLE Secondary Containment Guidance document describes when secondary containment is required. The STSWCS is intended to verify that the tank(s), piping, or other equipment within the secondary containment structure are not leaking pollutants. A STSWCS is not required for discharges from a required secondary containment structure to sanitary sewers (with permission from the local wastewater treatment plant) or to the ground (e.g.: in an area which infiltrates and does not run off to surface waters). With any discharge method, the facility must implement pollution prevention measures and verify that the water is not contaminated by leaks or spills prior to discharge.

Sites of Contamination

Sites of contamination are areas regulated pursuant to Part 201, Environmental Remediation, or Part 213, Leaking Underground Storage Tanks, of the National Resources and Environmental Protection Act, 1994 PA 451, as amended. If a Baseline Environmental Assessment that shows contamination has been submitted to EGLE, the property is regulated under Part 201 and/or Part 213. Sites regulated under Part 201 or Part 213 can be viewed on EGLE's RIDE Mapper. A STSWCS is required if there is a potential for storm water exposure to the area(s) of known contamination. Typically, a STSWCS would be required if the contamination is present in the top six (6) inches of the soil. A STSWCS may also be required in situations where contaminants are present at lower soil depths and may reach surface water through infiltration into storm sewers or footing drain discharges. The results of the STSWCS will be used to determine if the discharge is in compliance with the permit requirements.

Other times a STSWCS may be required

In addition to these special use areas, an STSWCS may be required when:

- WRD staff have reason to believe the facility's storm water discharge may be violating Water Quality Standards.
- WRD staff have reason to believe a facility is discharging storm water that may be negatively impacting the receiving waters Total Maximum Daily Load (TMDL). For more information related to TMDL and how they relate to storm water permits, please see the compliance assistance document, "Understanding Total Maximum Daily Load (TMDL) Requirements as they relate to the Industrial Storm Water Permit."

STSWCS Process

The purpose of the STSWCS is to evaluate the quality of the storm water being discharged from a special use area to surface waters of the state. Within six (6) months of the effective date of a Certificate of Coverage (COC) or a NPDES Individual Permit, the permittee shall submit to the WRD an approvable STSWCS plan developed in accordance with the permit conditions. The permittee's Storm Water Pollution Prevention Plan (SWPPP) should be submitted along with the STSWCS plan. Upon approval of the STSWCS plan, the permittee shall begin monitoring the authorized discharge as specified in the STSWCS plan. If the WRD does not take action to approve or comment on the STSWCS plan within 90 days after submittal, the permittee shall begin storm water monitoring in accordance with the STSWCS plan submitted. Once the STSWCS is completed the results need to be submitted to WRD for review and approval.

Conditions to Consider

It is important to consider these conditions prior to completing the STSWCS plan:

- ✓ For secondary containment structures, samples need to be collected from the water within the structure, or from the discharge as it is released from the structure. If samples are collected from the discharge, it is important to collect the sample as close to the structure's discharge point as possible to prevent any cross-contamination issues. Grab samples shall be collected unless the WRD specifies other sampling methods.
- ✓ For sites of environmental contamination, wet weather samples shall be collected from discharge points during a qualifying storm event. A qualifying storm event is any precipitation event that results in a discharge of storm water from the facility's discharge points and that follows the preceding storm event by at least 72 hours (3 days). In situations where contaminated groundwater infiltrating the storm sewer

system is a concern, dry weather sampling will also be required. Dry weather sampling events can occur when there is a discharge from a discharge point that is not a result of a precipitation event. Typically, the sampling efforts will include grab samples collected at the discharge points, and for wet weather events, during the first 30 minutes of the discharge. However, in some cases composite samples may be required by the WRD to adequately characterize the pollutants discharged from the site.

To ensure that the STSWCS provides useful data, specific steps must be followed in designing and carrying out the STSWCS. A STSWCS Template and Checklist have been developed by the WRD and are available on the EGLE WRD Industrial Storm Water Web page. Permittees are encouraged to use the resources provided by the WRD to comply with this permit requirement. The results from the STSWCS will be evaluated by the WRD to determine if the discharge is in compliance with the permit conditions and the Water Quality Standards. Please review the NPDES General Permit for Storm Water Discharges Associated with Special-Use Areas for specific information on this requirement. If you have questions related to the STSWCS requirements, please contact the WRD industrial storm water staff for your area.

Pollutant Test Method Information

Test methods for the analysis of pollutants shall conform to regulations promulgated pursuant to Section 304(h) of the Federal Act (40 CFR Part 136 – Guidelines Establishing Test Procedures for the Analysis of Pollutants), unless specified otherwise in the permit. Test methods used shall be sufficiently sensitive to determine compliance with applicable Water Quality Standards. Requests to use test methods not promulgated under 40 CFR Part 136 for pollutant monitoring required by this permit shall be made in accordance with the Alternate Test Procedures regulations specified in 40 CFR 136.4. These requests shall be submitted to the Manager of the EGLE WRD, Permits Section, P.O. Box 30458, Lansing, Michigan, 48909-7958 or discussed with the district industrial storm water staff. The permittee may use such procedures upon approval.

Common Pollutants and Methods

Listed below are examples of pollutants and the associated test methods that could be included in a STSWCS. Note that it is important to monitor for the pollutants that will help determine if storm water is negatively impacted by the pollutants associated with the special use area.

- Michigan 10 Metals except Hg (As, Ba, Cd, Cr, Cu, Pb, Se, Ag, Zn), United States Environmental Protection Agency (USEPA) Method 200.8
- Oil & Grease, USEPA Method 1664
- Volatile Organics, USEPA Method 624.1

- Ethanol, USEPA Method 624.1
- BTEX (gasoline detection), USEPA Method 624.1
- Semi Volatile Organics, USEPA Method 625.1
- Polynuclear Aromatics (PNAs) (diesel detection), USEPA Method 625.1
- Phosphorus, USEPA Method 365.4

*NOTE: The USEPA may update these test methods. Please see 40 CFR Part 136.3 for the most up-to-date methods.

For this and other related guidance, visit Michigan.gov/IndustrialStormWater.

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