

**Short Term Storm Water Characterization Study Guidance**  
**State of Michigan Industrial Storm Water Program**



Water Resources Division  
DEQ Environmental Assistance Center 800-662-9278  
[www.michigan.gov/deg](http://www.michigan.gov/deg)

The Short Term Storm Water Characterization Study (STSWCS) is additional monitoring requirements 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 designated special-use areas. Special-use areas include, but are not limited, to the following:

- ✓ **Secondary containment structures required by state or federal law** – A STSWCS is required if storm water is discharged from secondary containment structures to surface water of the state. Many facilities have been able to forgo a STSWCS by rerouting storm water which collects in secondary containment structures, and discharge either to the sanitary sewer (with permission from the local wastewater treatment plant) or to the ground (e.g. in a grassy area which infiltrates and does not run off into surface waters). In order to discharge to the ground, the facility must implement pollution prevention measures and verify that the water is not contaminated by leaks or spills prior to discharge.
- ✓ **Lands on Michigan’s List of Sites of Environmental Contamination pursuant to Part 201, Environmental Remediation of the National Resources and Environmental Protection Act, 1994 PA as amended** – A STSWCS is required if the contamination could potentially be mobilized by storm water runoff or be collected in an subsurface drainage system and discharged to surface water. Typically, a STSWCS would be required if the contamination is present in the top 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.
- ✓ **Other areas with activities that may contribute pollutants to storm water** – A STSWCS may be required for a facility that has compliance issues and the Department of Environmental Quality (DEQ’s) Water Resources Division (WRD) staff have reason to believe the storm water discharge may be violating Water Quality Standards. Another example would be if 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.”](#)

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 ninety (90) days after submittal, the permittee shall begin storm water monitoring in accordance with the STSWCS plan submitted. The STSWCS results and all permit related documents are required to be submitted to the WRD via [MiWaters](#).

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

- ✓ For secondary containment structures or detention basins with detention periods greater than twenty four (24) hours, samples shall be collected from the water within a structure/basin, or of the discharge prior to mixing with the receiving water or other waste streams; grab samples shall be collected unless the WRD specifies other sampling methods.

- ✓ For sites of environmental contamination or areas with other activities (without secondary containment or twenty four (24) hour detention) that may contribute pollutants to the storm water for which the WRD determines monitoring is needed, samples shall be collected from any discharge resulting from a qualifying storm event. At least one (1) grab sample shall be collected during the first thirty (30) minutes of the discharge for each qualifying storm event. Additionally, composite samples may be required during the first three (3) hours of a discharge event if deemed necessary by the WRD to adequately characterize the pollutants discharged from the site.

To ensure that the STSWCS provides useful data, certain steps must be followed in designing and carrying out the STSWCS. A STSWCS Template and Checklist have been developed by the WRD and is available on the [DEQ 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 meets the permit conditions and there is no violations of the Water Quality Standards. Please review the NPDES Wastewater Discharge General Permit for Storm Water Discharges Associated with Special-Use Areas for specific information on this requirement. If permittees have questions related to the STSWCS requirements it is important to contact the district industrial storm water staff.

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### **Test Procedure Information:**

Test procedures 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 procedures used shall be sufficiently sensitive to determine compliance with applicable Water Quality Standards. Requests to use test procedures 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 DEQ 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.

Only pollutants expected to be in the storm water discharge are to be included in the STSWCS. The following are examples of pollutants and the associated test procedures that are typically seen in a STSWCS:

- ✓ 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 624.0
- ✓ Ethanol, USEPA Method 624.0
- ✓ BTEX (gasoline detection), USEPA Method 624.0
- ✓ Semi Volatile Organics, USEPA Method 625.0
- ✓ Polynuclear Aromatics (PNAs) (diesel detection), USEPA Method 625.0
- ✓ Phosphorus, USEPA Method 365.4

\*NOTE: The USEPA may update these test methods. Please see [CFR 40 Part 136](https://www.ecfr.gov/cgi-bin/text-idx?SID=18dd2b63e503b1d2dce7596e9e53f9d1&node=40:23.0.1.1.1.0.1.3&rgn=div8) (https://www.ecfr.gov/cgi-bin/text-idx?SID=18dd2b63e503b1d2dce7596e9e53f9d1&node=40:23.0.1.1.1.0.1.3&rgn=div8) for the most up-to-date methods.

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For information or assistance on this publication, please contact the Water Resources Division through the DEQ Environmental Assistance Center at 800-662-9278. This publication is available in alternative formats upon request.

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