



Benchmark Monitoring Plan Checklist

Industrial Storm Water Program

Water Resources Division

This checklist can be used by permittees to ensure their Benchmark Monitoring Plan (collectively “study plan”) meets the study plan requirements of the storm water permit that authorizes discharges associated with special-use areas. Benchmark monitoring is required for permittees classified under Standard Industrial Classification (SIC) codes 5015 and 5093. The purpose of benchmark monitoring is to determine the quality of the storm water being discharged from each regulated discharge point and to evaluate the effectiveness of the non-structural and structural controls implemented onsite. Additionally, it ensures permittees are evaluating and assessing the discharge to make sure it meets the effluent limitations of the permit. This document and other related compliance assistance materials can be found at the [WRD Industrial Storm Water webpage](#).

Upon approval of the study plan, the permittee shall begin monitoring the authorized discharge as specified in the study plan. If the WRD does not take action to approve or comment on the study plan within ninety days after its submittal, the permittee shall begin storm water monitoring in accordance with the study plan submitted. All permit related documents are required to be submitted to WRD via the permittee’s [MiEnviro site](#).

The items listed in sections one through four below should be included in the study plan to ensure it can be considered administratively complete.

Section 1: General Information

- ✓ Facility name and address
- ✓ Facility contact information (Name, Title, Phone Number, and Email Address)
- ✓ The type of industrial activity associated with the site (SIC code 5015 Auto Salvage, SIC code 5093 Scrap Metal Recycling, or both)
- ✓ The facility’s normal hours of operation
- ✓ Certificate of Coverage (COC) Number or National Pollutant Discharge Elimination System (NPDES) Individual Permit Number
- ✓ COC or NPDES Individual Permit issuance or reissuance date
- ✓ Receiving Waters
- ✓ Date the study plan was submitted to WRD for review

Yes, the study plan includes all items in this section.

Section 2: Metal Particulate Exposure Information

- ✓ A description of the industrial activities occurring at the site that generates metal particulates (e.g. shredding, cutting, grinding, smelting, or other activities)
- ✓ A description of the type of metal particulates handled onsite (e.g. turnings, grinding sludges, swarf, or other types)

Yes, the study plan includes all items in this section.

Section 3: Sample Collection and Handling

Permit conditions to consider regarding this section:

- ❖ *Benchmark monitoring samples shall be collected concurrently with the visual assessment samples during normal facility operating hours from discharges resulting from qualifying storm events occurring within three consecutive quarters.*
- ❖ *A qualifying storm event is defined as a storm event causing greater than 0.1 inch of rainfall and occurring at least 72 hours after the previous measurable storm event that also caused greater than 0.1 inch of rainfall.*
- ❖ *Snowmelt samples collected for benchmark monitoring shall be collected during a period with measurable discharge from the site.*
- ❖ *The substantially identical discharge point condition in the permit does not apply to benchmark monitoring. Any substantially identical discharge points identified in the visual assessment procedures must be sampled individually during benchmark monitoring.*
- ❖ *Personnel collecting samples manually for benchmark monitoring must be an Industrial Storm Water Certified Operator or meet the permit conditions to be considered Qualified Personnel.*
- ❖ *Qualified Personnel are individuals who have been trained by the facility's Industrial Storm Water Certified Operator to collect storm water samples.*
- ❖ *Storm water samples need to be collected within the first 30 minutes of the start of a discharge resulting from a qualifying storm event. If it is not possible to collect the sample within the first 30 minutes of discharge, the sample shall be collected as soon thereafter as practicable*
- ❖ *Adverse weather conditions, that would prevent sample collection for benchmark monitoring, are those that are dangerous or create inaccessibility for personnel, such as local flooding, high winds, electrical storms, or situations that otherwise make sampling impractical such as drought or extended frozen conditions.*
- ❖ *Written documentation is required, explaining the reason a storm water sample was not collected within the first 30 minutes of discharge or if benchmark monitoring was not completed during a quarter. The written documentation shall be retained with the SWPPP files for three years.*

- ✓ A list of the discharge points where the water samples will be collected. If the water sample collection location is not at the actual discharge point, the study plan should include a description of the reason for choosing an alternate sampling location (All water sampling locations need to be identified on the Storm Water Pollution Prevention Plan (SWPPP) site map).
- ✓ A description of how the water samples will be collected (manually or with an automatic sampler)
 - If an automatic sampler will be used, then the study plan needs to include the type of automatic sampler used and a description of how it will be set up to effectively collect water samples at each discharge point or alternate sampling location.
 - If the water samples will be collected manually, then the study plan needs to include the names of the Qualified Personnel that will collect the samples and a description that includes:
 - How each discharge point was evaluated to determine when a discharge would begin after the start of a rain or snow melt event.
 - The methods and equipment used to collect the water samples.

Yes, the study plan includes all items in this section.

Section 4: Water Sample Analysis Information

- ✓ The laboratory that is contracted to perform the chemical analysis of the of the water samples
- ✓ The receiving water hardness
- ✓ The parameters required by the permit and the following associated information for each parameter:
 - EPA test method
 - Quantification level
 - Holding time
 - The Benchmark value

Yes, the study plan includes all items in this section.

<i>Additional items to consider related to the benchmark monitoring requirements</i>

Water Sampling Event Report Form

- ✓ The study plan should include the report form that will be utilized during each sampling event to record the required information to be submitted with the Benchmark Monitoring Report. The EGLE WRD Benchmark Monitoring and Visual Assessment Report form available on the [Industrial Storm Water Program page](#) can be used for the report form.

Benchmark Monitoring Data Evaluation, Outcomes, and Required Responses

- ✓ The Benchmark Monitoring results need to be evaluated as such:
 - The first evaluation will be performed when lab results are received from a sampling event. The results will be compared to the benchmark values. If a Copper, Lead, or Zinc result is **three times higher** than the corresponding benchmark value, the following actions will be taken within 30 days of receiving the analytical results:
 - Review all controls and develop a schedule for implementing corrective actions.
 - Submit a Benchmark Monitoring Report for review and approval to WRD.
 - Continue sampling once approval is received.
 - The second evaluation will be performed when lab results have been received for three consecutive sampling events. Sample event results will be averaged for all like parameters. The average value for each parameter will be compared to the benchmark values. The following actions will be taken based on the results of this evaluation:
 - If the average values for all parameters **do not exceed** the benchmark values, the Benchmark Monitoring Report will be submitted to WRD within 90 days of last sampling date. The benchmark monitoring effort will be considered complete for the permit cycle.
 - If the average value for any parameter **exceeds** the benchmark values, the Benchmark Monitoring Report will be submitted to WRD within 90 days of the last sampling date and the following actions will be taken:
 - Control measures will be reviewed and modified as necessary.
 - Sampling will commence for an additional three successive quarters for the parameters that exceeded the benchmark values.

Benchmark Monitoring Report

- ✓ The Benchmark Monitoring Report needs to be submitted to WRD under the following circumstances:
 - If the Copper, Lead, or Zinc results exceed the benchmark values by three times during any of the sampling events, A Benchmark Monitoring Report will be submitted to WRD within 30 days of receiving the analytical results.
 - Once sampling has been completed for three successive quarters, a Benchmark Monitoring Report will be submitted to WRD within 90 days of the last sampling date.
- ✓ The Benchmark Monitoring Report shall include:
 - All analytical results obtained during the study, including actual quantification levels, any notations, and all sheets provided by the laboratory. If an alternative hardness value obtained through sampling was used in the metals data evaluation, analytical results for hardness shall be provided, as well.

- For each qualifying storm event, the report will provide:
 - The qualifying storm event date.
 - Rainfall measurement expressed in inches.
- The time (in days or hours) elapsed between the qualifying storm event sampled and the end-date of the previous qualifying storm event.
- A summary of the data evaluation, including the hardness value used in the metals data evaluation.
- Written notification of any exceedances of benchmark values.
- A description of the response(s) made to the data evaluation, including any corrective actions considered necessary and a schedule for implementing them.

Yes, the benchmark monitoring requirements are understood and will be implemented.

If you need this information in an alternate format, contact EGLE-Accessibility@Michigan.gov or call 800-662-9278.

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