

Industrial stormwater: How to collect a “Grab” sample

Accompanies the agency's related training video

The Industrial Stormwater Multi-Sector General Permit requires all permittees to conduct stormwater monitoring.

This fact sheet, and its companion video (<http://youtu.be/oWKdonc9iDw>), offer helpful guidance and tips about how to correctly collect a “grab” (collecting a single sample by placing a collection bottle in flowing stormwater) sample. For alternative sampling methods and for comprehensive guidance about the permit's sampling and monitoring requirements, please visit the Industrial Stormwater Program webpage, Step 7: Sampling - <https://www.pca.state.mn.us/business-with-us/step-7-sampling>

This basic grab sampling process contains six steps:

1. preparing for sampling
2. assembling the proper equipment
3. selecting the best sampling location
4. collecting the sample
5. sending the samples to a laboratory
6. submitting the results to the Minnesota Pollution Control Agency

Step 1. Preparing for sampling

Be prepared to collect your sample within 30 minutes of the start of a runoff event when the stormwater/snowmelt is flowing (not standing still or ponding) so you will get a more representative sample of your facility's conditions.

Step 2. Assembling the proper equipment

For **each** monitoring location, you will need:

- one new, one-gallon re-sealable plastic bag
- one pair powder-free, disposable nitrile or latex gloves
- one clean bottle for collecting the sample (provided by your lab)
- one container of preservative (if provided by your lab)
- chain of custody (COC), provided by your lab
- one cooler for shipping the sample
- ice

Suggested:

- Bring one field notebook, waterproof pens, and one camera for a visual record of sampling conditions.

- Before you go outside, be familiar with the lab instructions for sample collection to ensure the correct bottle, volume, and preservative (if required) are used.
- Before you go outside, write the name of the person collecting the sample, and the sample date and location on the collection bottle label.

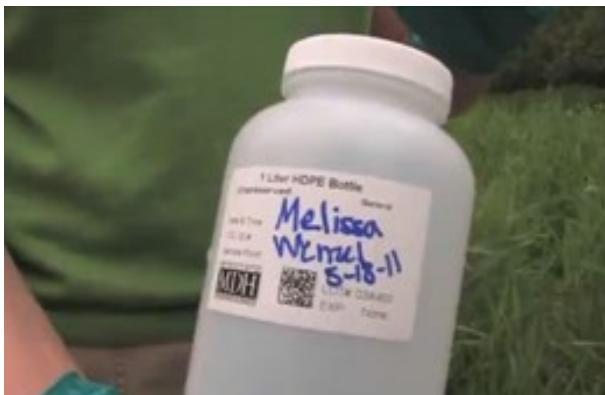
Step 3. Selecting the best sampling location

If possible, familiarize yourself with the site terrain prior to a rain or snowmelt event. In any case, choose locations that are most representative of the runoff and best allows for obtaining a sample. A grab sample can be taken from any of several possible locations where water is flowing, including a pipe, swale or ditch.



Step 4. Collecting the sample

Take care to not walk or stand upstream of the sample location as this disturbance could contaminate your sample.



Put on the clean gloves. This prevents the possibility of your fingers or hands accidentally contaminating the sample. And when you remove the bottle's cap, be sure to place it on an uncontaminated surface (not on the ground) to prevent cross-contamination.

Hold the bottle so the opening is facing upstream.



Collect the sample from as close to the middle of the stormwater flow as possible; this provides the most representative sample of that discharge.



Fill the lab's collection bottle with sufficient volume as instructed by the lab.

Add the sample preservative if your lab has provided one. Be sure to handle the preservative carefully; most are acids or bases and can cause skin or eye irritation if not handled correctly.



Once filled, cap the sample bottle, ensure your name and the sample collection date, location, and time are on the label, and place it inside a re-sealable plastic bag. Place the bag into a cooler and prepare the cooler for pickup or shipment to the lab. This will include packing the sample with ice. (Do not use ice packs. They cannot uniformly surround the sample bottle).



You may want to take notes about how the sampling event went, and record a photo too, to remind you of the facility's conditions.



For more information on the best sampling method for your facility, the monitoring guidance manual, to view other training videos, and to sign up for the program's electronic newsletter, visit the agency's website at <https://www.pca.state.mn.us/business-with-us/industrial-stormwater>.