



## Dye Testing for Storm Water and Sanitary Systems

### Guideline

Issue Date: 05/05/2000

Revision Date: 01/27/2022

**Applies To:** University of Michigan employees and contractors performing dye testing.

This guideline is for dye testing of the storm water and sanitary sewer systems on the University of Michigan (U-M) Ann Arbor Campus. Dye testing is conducted as part of the U-M National Pollutant Discharge Elimination System (NPDES) storm water discharge permit in order to check for illicit connections. Dye testing is regulated under Rule 97 of Michigan Water Quality Standards. This regulation requires that the Michigan Department of Environment, Great Lakes & Energy (EGLE) approve all dye testing. Note: UMF and UMD are required to obtain their own EGLE dye test approval prior to initiating any dye testing that could discharge to surface waters of the State.

Prior to dye testing approvals, the contractor or person(s) performing the dye test must fully read and understand these guidelines and must submit all information requested to Environment, Health & Safety (EHS). Additionally, **this form must be signed and submitted to EHS-Environmental Protection and Permitting Program (EHS-EP3)**, signifying acceptance to the terms and conditions herein.

1. Contact EHS-EP3 a **minimum of seventy-two (72) hours** prior to any dye testing to accommodate the required EGLE advance notice.
2. Provide the location of the proposed dye test. Be specific, so that the potential receiving water can be determined by EHS-EP3 through a review of the campus storm water system maps.
3. EHS-EP3 will forward dye testing requests to the EGLE Jackson District Office. EHS-EP3 will also notify other units on campus that should be aware of the activities, such as the Plumbing Shop, the Department of Public Safety and the EHS on-call emergency responder. EHS-EP3 will also contact the City of Ann Arbor Wastewater Treatment Plant, the Washtenaw County Water Resources Commissioner, and Washtenaw County Department of Environmental Health.
4. After the dye testing notification has been made, dye can be obtained from EHS-EP3 or Utilities. Before obtaining the dye, all requested information requested herein, including a signed copy of this form must be submitted to EHS-EP3. Follow the manufacturer's recommendation on the amount of dye used. Norlab, Inc. liquid powder tracing dye yellow green is the approved color for use on campus. Norlab, Inc. recommends using 1 oz. dye per 250 gallons of water or 1 oz. of dye per 100 gallons of water with high turbidity. If additional dye colors are needed or proposed for use – they must be approved by EHS, prior to use. **Absolutely no other materials or substances such as soaps may be used for testing without written approval from U-M EHS.**
5. Check for dye downstream of the testing location in manholes on the storm and sanitary systems to determine the sewer line connections. The time required for monitoring will vary, depending on flow in the lines that are tested. In order to make sure the test is properly conducted, the individual checking the downstream manholes should be in place prior to the introduction of the dye. Based on the circumstances at each location, additional people may be needed to monitor multiple locations. It is recommended that radios or cell phones be utilized to maintain contact during the dye test.

6. For projects primarily testing sanitary connections, a vacuum truck is not required. However, for projects primarily testing storm connections, a vacuum truck may be required to be on-site for the removal of dye colored water from the storm water drainage system. Please consult EHS-EP3 on whether or not a vacuum truck or other method is required. If a vacuum truck is required, please contact the Utilities Department at 734-647-1348 to arrange for the U-M vacuum truck (or contractor’s truck) to be on-site during the proposed dye test. If a vacuum truck is required, have the vacuum truck available and positioned by what is thought to be a downstream storm water manhole. If necessary, use the vacuum truck to remove any of the water and dye from the storm water system prior to it reaching a water body. Discharge the dye and water mixture to an approved sanitary sewer location.

**NOTE: EHS requires written follow-up of all findings, even if no cross-connections are found. All illicit connections must be reported to EHS-EP3 immediately.** Provide information about the actions that will be taken to prevent an illicit discharge (if possible) and to correct the cross connection.

EHS-EP3 will verbally notify the EGLE Jackson District Supervisor within 24 hours of any confirmed illicit connection that is suspected of being a danger to health or the environment as specified under the U-M NPDES permit. For discharges that do not pose imminent danger to health or the environment, EHS-EP3 will provide notification to the EGLE Jackson District Supervisor, verbally or in writing, within 5 days of discovery. Written documentation will be submitted to the EGLE within 14 days in either case. This information is also included in the storm water permit reports which are submitted to the EGLE on a regular basis. In addition to the above, please notify UM EHS-EP3 ASAP if dye is observed entering a surface water of the state, as we are required to notify EGLE of the discharge.

These dye testing guidelines will be reviewed on a periodic basis to determine if any modifications are required. Contact EHS-EP3 at 734-647-1143 or [stormwater@umich.edu](mailto:stormwater@umich.edu) with any questions regarding this guideline.

**Verification of Guideline Review**

Each person involved in the dye testing event should complete the information in the table below. Please scan and email to [stormwater@umich.edu](mailto:stormwater@umich.edu). Your signature on this document indicates that you have reviewed the storm water system dye testing guidelines and agree to follow these guidelines.

<b>Name</b>			
<b>Company</b>			
<b>Email Address</b>			
<b>Phone Number</b>			
<b>Signature</b>			
<b>Date</b>			

<b>Name</b>			
<b>Company</b>			
<b>Email Address</b>			
<b>Phone Number</b>			
<b>Signature</b>			
<b>Date</b>			