

Water Quality Stream Monitoring under the VSMP

Benthic Macroinvertebrate Sampling

An evaluation of benthic macroinvertebrate communities can be used to increase the amount of information available on the ecological quality of a stream or river. Because of their varying tolerances to physical and chemical conditions, data on macroinvertebrate populations are used to calculate a MiCorps Stream Quality Index, which provides a straightforward summary of stream conditions that can be tracked over time to identify trends.

Stream Habitat Assessment

A visual assessment of stream conditions and watershed characteristics covering approximately 300 feet of stream length at each site can provide additional clues to the causes of stream degradation over time. Stream habitat assessments are typically conducted in conjunction with macroinvertebrate sampling.

Road/Stream Crossing Inventory

An assessment of the condition of road/stream crossings throughout a target watershed can help to understand where problem areas exist and maintenance funds should be targeted. Inventories include the type and condition of the culvert and road, water speed through the culvert, condition of the stream embankment, and other site observations.

VSMP leaders receive basic training from MiCorps staff in the stream assessment methods described above and must commit to utilizing standardized assessment and data recording procedures. Trained program leaders are then qualified to train their volunteers in these procedures.

Program Partners

The Michigan Department of Environmental Quality (DEQ) established the VSMP in 1998 and contracted with the Great Lakes Commission to administer it as part of the Michigan Clean Water Corps (MiCorps) beginning in 2004. The Commission also partners with the Huron River Watershed Council and other MiCorps partners in implementing the program.



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Volunteer

Stream

Monitoring

Program



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Program Overview

The Volunteer Stream Monitoring Program (VSMP) is one of the core programs of the Michigan Clean Water Corps (MiCorps), a network of volunteer monitoring programs in Michigan.

With support from the Michigan DEQ under the Clean Michigan Initiative, the VSMP provides technical assistance and grants to support volunteer monitoring of habitat and aquatic macroinvertebrates and road/stream crossings in wadable streams and rivers within Michigan. Through these monitoring and data collection efforts, volunteers across the state are helping to protect and manage state and local water resources.

VSMP grant recipients receive training and support to ensure program leaders and volunteers are using standard monitoring procedures, collecting high-quality data, and running successful programs. Data collected under the VSMP are available on the web-based MiCorps Data Exchange platform.



Our Goals

- Network and expand volunteer water quality monitoring organizations statewide for the purpose of collecting, sharing and using reliable data.
- Educate and inform the public about water quality issues.
- Foster water resources stewardship to facilitate the preservation and protection of Michigan's water resources.
- Increase the information available on the ecological quality of Michigan rivers and the sources of pollutants, for use by Michigan DEQ staff, local communities and monitoring groups.
- Serve as a screening tool to identify issues and the need for more thorough investigations.

Available Funding

Local units of government and nonprofit entities are eligible to receive funding under the VSMP. Each year, approximately \$50,000 is made available through a competitive grant process. Funds may be used to fund a local monitoring coordinator or purchase water quality monitoring supplies. A local match (25%) is required for most VSMP grants.

The VSMP offers two-year grants which provide support for existing volunteer programs to monitor macroinvertebrate communities and habitat characteristics in wadable streams and rivers, one-year "start-up" grants for newly forming volunteer monitoring groups, and one-year road/stream crossing inventory grants.

Why Monitor?

Long term monitoring of parameters provides data needed to recognize the status and trends of a stream's water quality and habitat quality.

Monitoring the benthic macroinvertebrate population of a stream is a quick and easy process, that volunteers can do with only a small amount of training. The data will not necessarily identify specific water quality problems; but it can identify if a problem exists, much like the proverbial canary in a coal mine.

Monitoring stream habitat as well as road/stream crossings will help to identify some of the specific problems that cause the macroinvertebrate populations to decline, such as bank erosion, flashy water flow, and degraded riparian zones.



To learn more about the VSMP, contact:

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