Citizens' Water Quality Monthly Monitoring Dates

When: Second Saturday of each month
March - November
Where: UC Center for Field Studies
11053 Oxford Road, 45030
Sample drop off: 9:00 a.m. - 11:00 a.m.
Sample analysis: 10:30 a.m. - early afternoon
Lunch provided.

Get started today! Contact:

Lisa Link
513.324.2567
Lisa.Link@riversunlimited.org

Visit our web site for more information:
www.riversunlimited.org/wqm

We would also like to acknowledge our local sister programs:
Butler County Stream Team
Little Miami Saturday Stream Snapshot
Mill Creek Volunteer Water Quality Monitoring

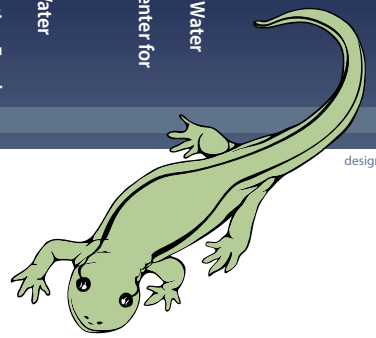
Safety Rules for Volunteer Monitors

- Watch weather reports prior to going into the field.
- Carry first aid kit and water.
- Dress properly for the weather.
- Sample in teams or with partners.
- Inform someone where you are going and when you plan to return.
- All monitoring sites should be safe for volunteers to access and perform their sampling.
- Inform sampling team members of relevant health information in case of emergency.
- If you do not feel comfortable with the monitoring site or your surroundings, leave the site.
- If a site appears severely polluted, report it.
- If you drive to a site, park in a safe location.
- Do not cross private property without permission.
- Watch out for poisonous plants and wildlife.
- Dress appropriately for protection against ticks and poinonous plants.
- Do not wade in fast moving or high water.
- Use antibacterial soap after monitoring and do not eat until you have washed your hands.
- In the field or in the lab, avoid water contact with open skin.
- In the lab, avoid contact between chemicals and skin, eyes, or mouth. Wearing gloves is recommended.
- Properly clean and dispose of any spills of chemicals in the lab.
- Properly dispose of all wastes from tests.

Sponsors
Hamilton County Soil and Water Conservation District
University of Cincinnati Center for Field Studies
Oxbow, Inc
Chevron
Hamilton County Storm Water District
Ohio Environmental Education Fund

RIVERS UNLIMITED
PO Box 20231 Cincinnati, OH 45220

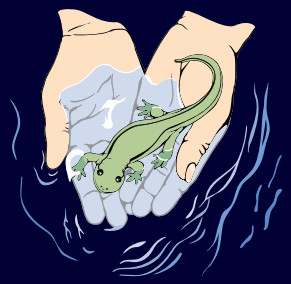
FRIENDS OF THE GREAT MIAMI



Citizens' Water Quality Monitoring

GREAT MIAMI RIVER WATERSHED
HAMILTON COUNTY, OHIO

Where water goes, we go.



Citizens' Water Quality Monitoring is making a positive impact on water quality in the Great Miami River watershed today!

Our success is made possible through the amazing work of our volunteers; a strong relationship with government agencies; and the support of other local non-profits, businesses, and higher education institutions.

The data we collect are important. The information we gain is used by local government agencies, including Hamilton County Soil and Water Conservation District, to pinpoint and act on problem areas as well as to create a baseline for future understanding of our waterways.

Citizens' WQM is a collaborative volunteer effort run by the 501c3 organizations Rivers Unlimited and Friends of the Great Miami. Our primary goals are to educate the citizens of our watershed about water quality issues to encourage protection of the lower Great Miami and its tributaries as a valuable natural resource and, secondly, to provide quality data that meet EPA reportable standards.

The importance of our program is evidenced by the enactment of Ohio HB43 which states that Ohio should have as much good scientific information about its surface waters as possible in order to properly manage them.

Goals of Citizens' WQM

- Educate the local community about water quality issues to encourage protection of our watershed.
- Establish baseline data.
- Supplement water quality data collected by agencies.
- Document water quality changes over time (trends in water quality).
- Identify and address potential water quality problems.
- Provide a scientific basis for making watershed management decisions.
- Work with local agencies to implement and evaluate the effectiveness of best management practices.
- Determine impact of land use activity.

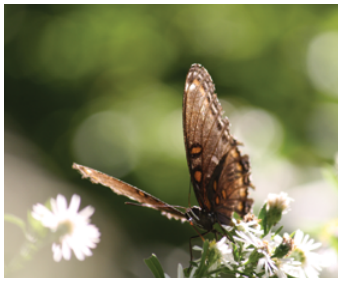
Be part of an energized group of volunteers making a difference. Becoming a volunteer is easy and rewarding!

Volunteers are the heart of our program and offer a personal connection with the streams they monitor. Sampling and analysis techniques are taught by qualified professionals and are easily mastered. Also, our volunteers have fun!

One of our top priorities is to connect citizens to their watershed. This is not only accomplished through hands-on sampling of streams and sample analysis but also through the availability of information to the public. Go to our web site to find information regarding:

- our program
- becoming a sampler/analyst
- data and analyses from this and previous monitoring years
- our next sampling date and other water quality events

www.riversunlimited.org/wqm



What We Monitor and Why...

BACTERIA: *E. coli* and total coliforms are used as indicators of fecal contamination.

Why we test for bacteria...
The presence of *E. coli* and other coliforms is a possible indicator of human and/or animal fecal contamination of water which can lead to human illness if that water is ingested. Human and animal feces, leaking septic systems, wastewater treatment plants, and water runoff can all contribute fecal bacteria to waterways.

CONDUCTIVITY: measure of electric current passage through a volume of water.

Why we test conductivity...
Conductivity readings can indicate environmental problems such as excessive salts that may be harmful to plants and aquatic organisms. Exceptionally low conductivity may indicate high levels of oils or hydrocarbons. Conductivity can be influenced by the geology of the stream and surrounding watershed, urbanization, temperature, and industrial and wastewater discharges.

NITRATES: the most common form of nitrogen found in aquatic environments; a macronutrient for algal growth.

Why we test for nitrates...
Nitrate is necessary to aquatic plant life, but can result in excessive plant growth, especially algae, if available in disproportionate amounts. Sources of nitrates include wastewater treatment plants, septic systems, fertilizers, industrial discharges, and animal manure.

pH: measure of how acidic or basic water is based on a scale of 1 (acidic) to 14 (basic) where 7 is neutral.

Why we test pH...
pH is an important measure because most plants and animals can only survive in a pH range from approximately 6.5 to 8. pH can be altered by intense algal growth, acid rain, rocks in the stream, and wastewater discharges.

PHOSPHORUS: occurs naturally as phosphate, a necessary nutrient to aquatic plant life.

Why we test for phosphorus...
Elevated phosphate levels can lead to excessive algal growth and possibly algal blooms. Sources of excess phosphates include sewage treatment plants, septic systems, fertilizers, industrial discharges, and animal manure.

TURBIDITY: concentration of suspended solids in water, such as soil and high algal density.

Why we test turbidity...
A high turbidity level can interfere with filter-feeding devices of macroinvertebrates and even clog fish gills. As solid matter settles, it may cover and harm bottom dwelling plants and animals. High turbidity can reduce the amount of available dissolved oxygen. These stressors result in overall depleted habitat quality. Turbidity can be influenced by erosion, urban runoff, and algal blooms.