



Saturday Stream Snapshot Program: Citizen Volunteer Monitoring Program

: Greenacres Foundation, Cincinnati Chapter Izaak Walton League, Little Miami Inc., Warren County Water and Sewer, Metropolitan Sewer District (MSD), Hamilton County Wet Weather Initiative, SW District of Ohio Scenic Rivers, Little Miami River Partnership

What is the Saturday Stream Snapshot Program:

- Volunteer Monitoring Program
- Located in the Lower Little Miami Watershed (all tributaries and main stem of the Little Miami River from Todd's Fork to the mouth of the river excluding East Fork)
- Second Saturday of the month from March – November
- "Snapshot" of water quality conditions in neighborhood streams

What is the purpose of the program? Collect baseline water quality information using citizen volunteers on neighborhood streams including bacteria, nutrient, and turbidity once a month from March – November

- Enter the data into the new Little Miami Watershed Volunteer Monitoring Database
- Make the data available for watershed planning and protection activities
- Identify water quality problems and share this information with responsible parties who can address the issues

How does the program work? Volunteers will be trained on how to properly collect water samples for fecal and nutrient/sediment analysis and how to complete the data sheet

- After the training we will give the volunteer two bottles – a fecal sample container and a wet chemistry sample container and a data sheet
- On the second Saturday of the month, they will collect the water samples, complete the data sheet, and take them to the nearest cooler between 8 am – 10 am. They will also pick up another set of bottles for next month. Sample runners will pick up the samples from the coolers at 10 am and transport the coolers back to the labs at the Ike Lodge for processing.
- Trained volunteers under the supervision of certified lab analysts will process the samples for bacteria, nutrients, and sediments.
- The data will be entered onto a lab data sheet.
- Other volunteers will enter these data into the Little Miami Watershed Volunteer Monitoring Database. Sample runners will pick up the samples from the coolers at 10 am and transport the coolers back to the labs at the Ike Lodge for processing.
- Trained volunteers under the supervision of certified lab analysts will process the samples for bacteria, nutrients, and sediments.
- The data will be entered onto a lab data sheet.
- Other volunteers will enter these data into the Little Miami Watershed Volunteer Monitoring Database. In addition to processing samples, we will also train new volunteers to collect water samples and distribute empty bottles and data sheets at the Ike Lodge at 10 am on Saturday Snapshot Monitoring Days.
- Additional training in how to collect and identify macroinvertebrate and how to conduct habitat surveys will also be provided on selected Saturday Snapshot Monitoring Days beginning in September. A schedule will be posted.
- Site Conditions on Citizen Data Sheet including presence of fish, barriers, litter, erosion, presence and types of pipes, stream shading, water color, water odor, surface appearance, bank vegetation, and land use.
- Bacteria using EPA Membrane Filtration Method
- Nitrate-Nitrogen using cadmium reduction method with Hach DR 2400 Spectrophotometer

- Total Phosphorus using digestion with the ascorbic acid method and Hach DR 2400 Spectrophotometer
- Turbidity using a Hanna Portable Turbidimeter
- pH using a YSI Multi Probe
- Conductivity using a YSI Multi Probe
- The site condition data will help us interpret the data by helping us understand conditions at the site where the sample was collected. In addition, this will provide us valuable information about potential water issues at the location.
- Bacteria data will help identify possible problems with leaking sewers and failing septic systems and tell us if the water is safe for body contact.
- Nitrate-Nitrogen and Total Phosphates are two pollutants identified in the main stem of the Little Miami River and this information will help us identify possible sources from tributaries.
- Sediment is another issue and turbidity measurements will help us see where the sediment is coming from.
- pH and conductivity are two general measurements water quality professionals use to identify problems.

How will use the data to evaluate your site?

- Because water is flowing, many samples are needed to evaluate conditions at your site.
- We prefer to have a minimum of 6 samples per year to evaluate a site.
- One set of data cannot be used to evaluate a site!
- If we notice a trend of high fecals or nutrients at your site, we may arrange to have you collect several samples over a shorter period of time to verify the problem.

Volunteer Opportunities:

1. Water Sample Collector:

- Requires: training in sample collection and completing data sheet
- Responsibilities: take water samples and complete data form between 8 – 10 am and take samples/data sheets to nearest cooler or Ikes Lodge.
- Time commitment: Training 1 hour once. Sample collection and transport to cooler 1 hour once a month March – November
- It is not necessary you sample every month but the more samples we have the better to evaluate the site

2. Sample Runner:

- No training required. Need transportation and knowledge of local roads. Map will be provided.
- Responsibilities: Unlock and pick up one or more coolers and bring them back to the Ikes Lodge starting at 10 am.
- Time commitment: 1-2 hours on the second Saturday of each month March – November generally between 9:30 am – 10:30 am.
- Runners will need to make sure they let us know if they cannot be a runner so we can make other arrangements but it is not necessary to commit to every month if we have a schedule.

3. Lab Analyst:

- Requires training in how to properly handle the samples and use the equipment provided to process the samples. Works under the supervision of a certified lab analyst.
- Responsibility: Process volunteer collected water samples. May be asked to perform the following procedures: EPA Membrane Filtration Method for Fecals, Nitrate-Nitrogen Test and/or Total Phosphate Test using DR2500, turbidity test using Hanna Turbidimeter, and/or pH and conductivity using YSI probe.
- Time Commitment: 3-4 hour training session to learn how to use equipment. 2–3 hours on second Saturday of the month from March - November between 10:30 am – 1:30 pm

3. Data Entry

- Requires: training in how to use the Little Miami Volunteer Monitoring Database. Job can be performed at how.

- Responsibilities: Enter data from the field and lab datasheets into the computer. Flexible schedule. Requires arranging to pick up copies of the data sheets.
- Time Commitment: 1 hour training. 1 hour data sheet pick up depending on location. Data entry time will vary depending on number of sites. Requires 10 – 15 minutes per site after site is set up in computer.
- Sign up on clip boards provided
- Water sampler training follows this presentation.
- Other trainings will be set up as volunteers are identified and we will work within your schedules.
- The first lab analyst training will be held before June 14th.
- We will work with runners individually.
- The first data entry training will be in June.
- The second water sampler training will be June 14th at 10 am.
- Do I have to be available every second Saturday? No, just let us know when you can help and we will work with you.
- Can I recruit others? Yes, please do!
- Can I have more than one job? Yes. Please don't take on more than you have time for!
- Can I switch jobs? Yes, just let us know and we will get you trained.
- Can I switch sample sites? Yes, just enter the correct site on the data sheet. Remember we need about 6 samples to evaluate a site properly!
- What if I take bottles and decide I can't do it? Please return them to Ikes Lodge.
- What if I take bottles and need to skip a month. Save them in a clean dry location and do not open them. They will be ready to use next time.
- Others????



WATER SAMPLER INFORMATION:

Choosing a Sampling Site:

- Pick a sample site you have access to and unless it is public property, obtain landowner permission.
- Pick a site with easy access and a place to safely park your car.
- Choose a site with perennial flow.
- Avoid sites posted with safety warnings.

Labeling your samples:

- Use a permanent marker, ink pen, grease pencil, or regular pencil – no felt markers!
- Label the containers before you collect the water!
- Put your first initial and last name, stream name, date, and time collected on the bottle.
- Put the same information on your data collection form.

Example:

A. Lyon	5/3/03	8 am
North Branch Sycamore Creek		

How to collect the samples:

- Collect your samples from the center of the stream in the flow – not from the banks or in pool areas with stagnant water.
- Open the container when you are ready to sample and plunge the container below the water surface.
- Fill the container to the line on fecal bottles and to the top leaving about an inch on wet chemistry bottles.
- You must collect one fecal and wet chemistry from each site. Single samples of either will not be processed.

Fill in the data sheet.

- Samples without data sheets will NOT be processed!
- The top portion of the form is required. If more than one person took the sample, please put the name of the person we could call it ask a question.
- We urge you to complete the general observation section to because your data cannot be properly evaluated without this information.
- One data sheet is required per site (fecal and wet chemistry bottles).
- Most of general site information is self explanatory.
- Follow the directions on the form to check or circle one or to circle or check all that apply.
- General observations apply only to the site where the sample was collected.
- On percentages, use your best guess.
- If you check other, please describe.
- If there is something else significant about your side, put this information in the comments section.
- It is very important to get your sample on ice as soon as possible because bacteria and algae continue to grow rapidly in warmer water and this will affect the results.
- Also, NEVER leave the sample in a hot car! This will kill bacteria and algae. Cars can reach over 100° F quickly in warmer months!
- Put your datasheet in the zip lock bag inside and re-zip the bag!!!

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