



# Volunteer Water Quality Monitoring to Protect Your Streams



Three volunteers work together searching for macroinvertebrates in Menominee County. The more eyes helping to look, the better!

Fall & Winter 2009  
Sessions 3-4:

Recruiting Helpers  
Funding – how much?  
Media and Public Outreach

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# What we'll cover

1. Recruiting helpers, experts, volunteers, natural resource agency staff
2. Funding – do you need it? If so, how much? How to get it?
3. Media and Public Outreach

Grant Proposal  
Spring 2010 – Spring  
2012  
\$5,997.00  
*Clean Water For All*  
Volunteer Monitoring  
Group

# Recruiting Experts / Advisors

**Recruiting experts** – these are the people who might provide your training, advise your program, help with project design & statistical analysis, help choose methods & equipment, how to calibrate and use equipment, help with grant writing, teach you to i.d. bugs, how to get a grab sample, interpret lab reports, & lend your project credibility with media & agency staff. **And don't forget to consider agency staff as your experts - they may even volunteer.** Most are scientists, and they like using their science training to do more than just write permits!

Where to find them?

**Get on the internet!** Check university extension programs, local colleges or universities, grad students looking for work, watershed groups, state agency volunteer monitoring programs. Pay attention at public meetings about your cause, you may meet someone there. It never hurts to ask them, the worst they can do is tell you no, they're too busy. On the other hand, it may fit in well with what they're doing. One caveat – they may want to know if there is funding. This isn't because they're greedy – just that they have costs to cover for equipment use, calibration solutions, etc. They will also want to know what kind of time commitment you're expecting or anticipating.

## More on Recruiting Experts / Advisors

**Example:** I'm no expert – but I rely greatly on people who are, and meanwhile I've learned a lot along the way, so that I'm always improving my work. What we're doing isn't rocket science, so we can learn to do it. We just want to assure we're doing it right.



### **Example:**

When ECCSCM and Lynn Henning needed to learn how to sample water downstream from CAFOs, they went straight to the top – they were taught by EPA enforcement staff. Their quality assurance project plan spells out their sample collection & chain of custody procedures, as they were taught by EPA staff.

# More on Recruiting Experts / Advisors

## Example:

For the Menominee Co. project, I applied for and received a grant from MiCorps, Michigan's Volunteer Monitoring Program. As a condition of the grant, I was required to write a QAPP & to have it approved before I could begin monitoring. I also picked their brains early & often for guidance on the project. Rather than reinvent any wheels, I used forms & training materials from their website. <http://www.micorps.net>

## Example:

In 2001 I worked on the Pine River in Gratiot County. Gratiot County is home to Alma College, where Dr. Murray Borrello (Chair of Environmental Studies Program) was already using the Pine as a study site for his students. The Pine was polluted by 2 oil refineries, and an old chemical factory downstream in St. Louis. Dr. Borrello & I agreed to work together on a water monitoring project. We also asked MDEQ for assistance in training our 45 new volunteers! The project lasted 5 years, with lots of media coverage, and helped raise community awareness of the river. The agencies are still investigating & negotiating on the cleanup of the old chemical factory. It will get done.

# Recruiting Helpers & Volunteers

Recruiting Helpers – how many you need depends on what type of monitoring you'll do.

If you're sampling macroinvertebrates, then the jobs you need to cover for each monitoring site are: **Team Leader (w/ clipboard), Collector, Collector Assistant, and 1 or 2 Pickers.** You'll also want a **site photographer**, but the Team Leader may be able to do that.

If you're sampling bugs at 6 – 10 sites, you'll want **18 to 50** people, allowing 4 to 5 at each site.

If the streams are 1-4 feet wide and 2 feet or less deep, then 4 volunteers per team is plenty, or 5 at larger streams. You can also ask teams to monitor 2 sites, if you don't have enough people.

## More on Recruiting Helpers & Volunteers

If you're using hand-held meters or taking samples to test, then the jobs may be fewer for each monitoring site. You may still want:

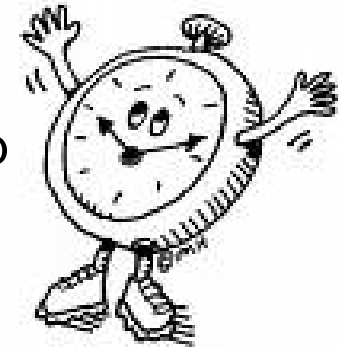
Team Leader (w/ clipboard), a meter tech, and someone to measure the water velocity and other physical parameters, etc. But your time spent at each site should be less, so one or two teams may be able to do all the monitoring sites.

The number of people may be influenced by how fast you need to get in and out of a site. If you're monitoring around CAFOs, you'll want to move pretty quick – Lynn's rule of thumb is 2-3 minutes per site. She does this by having everything turned on & ready in the trunk of her car, with all equipment already calibrated. She carries extra batteries, and checks the batteries before she gets to the site. Plus she keeps her cell phone and her camera turned on & ready to use.



# Volunteer Time and Motivation

Volunteers need to know what time commitment you're asking them for. You'll want a range of tasks that a volunteer can pick and choose, or some way of breaking up the day so that someone who can't be there all day can still help out for half the day. It's important to respect a volunteer's time, the most important gift they can give.



It's also important to delegate out the jobs that you can!

I've learned people have different motives for helping a project (though they may be close!)

Some people monitor to protect the river or to protect nature.

Some do it for fun and social time with like-minded people.

Some do it to get outside and hear the birds.

Some may want to bring the kids because "it's good for them" to learn about ecology or about protecting rivers. And maybe it is – but you may want to assure the kids are old enough to not jeopardize your QA/QC! I've found kids are great at helping as Bug Pickers – because their young eyes see the little critters that we miss.

# Make it enjoyable, and your volunteers will come back

- Make monitoring day an Event, with food and time for social interaction (often while bug picking, or during lunch).
- Make sure volunteers feel confident with good thorough training.
- Encourage people to become friends – arrange for non-monitoring-day time together. Share data with the group after monitoring day with a cookout.
- Together, work on presenting your data to local groups, like the Rotary, local township, or library board.



The Shakey Water Sentinels in Menominee County enjoy a lunch cookout after a full morning of stream monitoring.

Everyone pitches in, they all enjoy themselves, and catch up on the neighborhood news, including about the would-be mining company.

# Funding – do you need it?

Do you need funding in order to start a monitoring project?

The answer is – it depends:

- on your monitoring goals,
- and your methods or parameters, and therefore your equipment needs.





# Funding – do you need it?

Create a plan & a budget to figure out what your needs are.  
It's possible you don't need an outside source of funding.

Benefits: Don't need to submit monthly or quarterly reports to a funder; don't need to worry about creating a nonprofit group with 501(c)3 tax status, or collaborating with one, just to get a grant. Some foundations don't want to grant money to purchase expensive equipment – or they may want you to give them the equipment at the end of the grant period.

Example: I want to monitor dissolved oxygen in streams near CAFOs.

Equipment needed – one YSI handheld meter

Cost – \$850, for meter & carry case

If you won't monitor any other parameters, if you are likely to work with only one or two other people, and if you can afford to pay for the meter yourself, then you may want to do that. That way, it's your meter. If you can't afford it, then you may want to connect with a larger group that has 501(c)3 status, and apply for funding from a foundation or other source.



## Funding – do you need it?

If you plan to sample *E. coli* in streams near CAFOs, then you will need to decide several items:

Which lab will you use?

How often will you monitor?

How many sites?

For how long?

How much does the lab charge to run (to culture) one sample?

Will they give you a break if you promise them some number of samples per month, or if you were to pre-pay for a large number of tests?

Will you run duplicates, or blanks, or split samples?

Will you monitor upstream and downstream every time?

Say you have \$500 for *E. coli* monitoring. At \$6 per sample, that would give you 83 samples – how would you use them?



## Funding – do you need it?

If you plan to sample water for a number of chemical parameters at a certified lab, some of the same questions apply:

Which lab will you use?

How often will you monitor?

How many sites?

For how long?

How much does the lab charge for each parameter for one sample?

Will they give you a break if you promise them some number of samples per month or per year, or if you were to pre-pay for a large number of tests?

Will you run duplicates, or blanks, or split samples?

When you figure out what you'll do, add up the numbers, and you'll know how much you want.



# Who can you ask for funding?

Think about....

- Community Foundations
- Public health agencies
- Non-profit organizations often have grant opportunities –
  - Sierra Club Water Sentinels
  - Freshwater Future – works with grantees on capacity building, technology grants
  - Your own non-profit group
- Michigan: Michigan Clean Water Corps <http://www.micorps.net>
- Minnesota: MN Pollution Control Agency, Citizen Stream-Monitoring Program <http://www.pca.state.mn.us/water/csmp.html>
- Wisconsin: Water Action Volunteers <http://watermonitoring.uwex.edu/wav/>

# Media & Public Outreach

## Why announce your project to the media, and the public?

Attract volunteers, experts, funders

Garner invitations to speak at gatherings, recruit volunteers or get donations.

Let the public know what you're doing and why

Get public attention to an issue the public may know nothing about.

Let them hear YOUR side of the story.

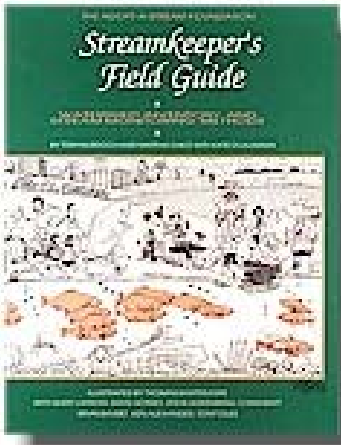


# Media & Public Outreach

How to tell your story?

- You will want a website at some point.
- Facebook! <http://www.facebook.com>
- Twitter <http://twitter.com/>
- Local news & statewide press – reach those people who have a 2<sup>nd</sup> home in your monitoring area.
- Blog your results! Again – tell your story.
- Announce your events:  
<http://www.publicdrum.org>

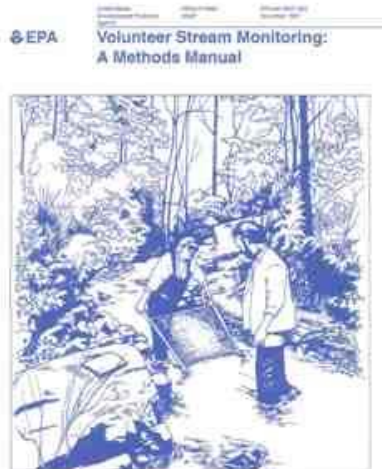
# More Resources



## [Streamkeeper's Field Guide, Watershed Inventory and Stream Monitoring Methods,](#)

by Tom Murdoch & Martha Cheo with Kate O'Laughlin, funded by the Adopt-a-Stream Foundation ; ISBN 0-965210901, some 20 copies available "used" at Amazon.com starting at less than \$7, and available here new for less than \$30:

<http://www.streamkeeper.org/catalog/books.htm>



USEPA's [Volunteer Stream Monitoring: A Methods Manual](#), released Nov. 1997, this is a free download, a little less than 4MB

<http://www.epa.gov/volunteer/stream/stream.pdf>

Both of these are excellent resources that are used in many volunteer monitoring programs.



**H<sub>2</sub>O**  
*Sentinels*

**Thank you!**

If you want to help monitor water in Michigan, please contact Rita Jack at the Sierra Club Michigan Chapter office at 517-484-2372

109 E. Grand River Avenue  
Lansing, Michigan 48906

<http://www.michigan.sierraclub.org>

<http://www.sierraclub.org/watersentinels>

or send email to:

[rita.jack@sierraclub.org](mailto:rita.jack@sierraclub.org)

