

Why water quality monitoring speaks to me

By Pete Yarrington

Editor's note: This article was adapted from Pete Yarrington's testimony at the May 17, 2001 ANS presentation to the Montgomery County Planning Board

ANS water quality monitoring site #29 is

located on a small, unnamed tributary of Rocky Gorge Reservoir on the Patuxent River, in a large wooded area just inside Montgomery County's Ednor Park. Monitoring at the site began in 1996, and I have been on the monitoring team there since that time. I have always felt that our site has special importance—its waters flow into the Patuxent's water supply reservoir, I grew up fishing the upper Patuxent for trout and bass, I still do, and I am encouraging my young son to join me.

An important benefit of participating in the ANS monitoring program is the training ANS gives its volunteers—the data we record are collected in a uniform manner and are considered to be of high enough quality to be used by county and state environmental protection officials. An aquatic ecologist by training, I have done extensive habitat assessment and biological monitoring of local streams using macroinvertebrates and fish as indicators. Despite this previous work, I learn new things from our ANS field work virtually every time we go out.

It's rewarding, too, to know that we are serving as environmental "watchdogs." We know that outdoor areas that receive visible attention on a regular basis are a little less likely to be targets of abuse, and that we can help identify problems that occur before they have a chance to fester.

An incident that began during our monitoring session in February brings the "watchdog" aspect of our monitoring work into very sharp focus.

Upon arriving at our stream on February 11, 2001 we found that a very large area around our once-forested site had been basically leveled of trees—it looked a lot like "clearcut" pictures you see of western logging operations. Very few trees were left standing, and vegetation was removed right down to the stream edge. In fact, the stream immediately downstream from our site had been reduced to a small flow through mud, due to runoff from the work area.



Yarrington and his team discovered this logging violation on a routine monitoring visit to their stream site.

Despite the fact that the area cleared of trees was privately owned, according to maps obtained from the Maryland National Capital Park and Planning Commission (MNCPPC), it seemed to our team that the removal of bankside vegetation over such a large area was probably a water quality protection violation of some sort, especially considering the water supply reservoir just downstream. We returned later that day with a camera, and wrote a letter with attached pictures to Blair Ewing of the Montgomery County Council, with copies to the MNCPPC. MNCPPC directed us to Bruce Payne, who works in enforcement of sedimentation and stormwater management regulations with Montgomery County. The site of the tree cutting, which was later measured at more than forty acres in size, was visited very quickly by both county and state inspectors, who determined that a violation of requirements had indeed occurred.

A recent telephone conversation with Payne indicated that a settlement with the landowner and the tree-cutting company is currently being pursued. The settlement will likely include a series of mitigative measures, including modification of access roads to the work site, removal of debris from the stream channel, and reforestation of the stream's riparian borders. Indications are that the costs of this mitigative work will exceed profits made from the sale of the wood.

This forest destruction may have gone unnoticed, were it not for our monitoring visit, for the site is largely invisible to the public due to the surrounding wooded area and hilly terrain. I also don't know if authorities would have followed up if we hadn't pursued the issue. But I can tell you that while this isn't the kind of thing we like to find in our monitoring activities, I am certainly glad that we went out that day in February.

Award-winning science projects based on water quality monitoring experiences

Water quality is near and dear to the hearts of the next generation—at least if recent science fair awards recipients are any indication. While ANS can't personally take the credit, we are gratified that the conservation message has meant more than just taking a class here and there.

When faced with an assignment for science fair at her high school, sophomore Natasha Lewandroski turned to what she knew best—streamwater quality monitoring—for inspiration. As a six-year water quality monitor veteran—and qualified as a team leader (she doesn't want to, since it would mean displacing her mother!)—Natasha worked with Stephanie Mason at ANS to come up with a project that would comparatively assess six different streams in Maryland—from pristine to urban—and relate stream quality to the surrounding land use. "I was surprised to find how little diversity there really was in the down-county streams," Natasha said. "It's really dramatic—there was only one ephemeroptera [mayfly] in the data that we looked at."

Natasha's project won her a first place in her category, grand prize for all science fair projects at Poolesville High School, and a spot in the Montgomery County Science Fair competition, where she took second place in her category, Environmental Life Sciences.



Nellie Darling was also recognized for her work in water quality science. A 6th grader at Earle B. Wood Middle School, Nellie was fascinated by the idea that you could look at water quality by counting the bugs. When her mother asked Stephanie Mason if Nellie could sit in on a Macroinvertebrate ID class, things took off. The class translated into a true water quality assessment, as Nellie looked at Rock Creek—from headwaters to end. Although not a water quality monitor, she looked at both the macroinvertebrate (bugs) assessments as well as chemical indicators to see which stood up best as a test of water quality. Her mom, Mary Darling, said that attending Stephanie's class "opened a door for her—she was so enthusiastic about water quality that she recently talked the girls at her birthday party into checking out a local stream."

Congratulations, Natasha and Nellie—keep up the good work!



Get Your Feet Wet!

How? While receiving an introduction to stream monitoring

When & Where?

Maryland site: Saturday, September 29, 12:30 to 5:00 p.m.
Council Office Building, Rockville, MD: METRO accessible

- or -

Virginia site: Saturday, October 6, Noon to 4:30 p.m.
Manassas Battlefield Park, Manassas, VA

Who? Teachers, students, concerned citizens, public officials: anyone interested in local water quality

Why? To learn about stream ecology and the health of our area watersheds and how you can get involved with efforts to preserve, protect, and improve these precious resources.

These free workshops are made possible through generous grants to the Audubon Naturalist Society, a local non-profit environmental education and conservation organization.

Space in the workshops is limited; advance registration is required at least two weeks prior to the program. Visit our website at WWW.AUDUBONNATURALIST.ORG/EEREG/HTM to register



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