

Wolf Creek

Stream Team

"Occasional" Newsletter ☺

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In This Issue

1. Tweaking Our Stream Monitoring Program
2. Martin-Marietta Limestone Plant Tour
3. Two Practice Sessions Completed
4. Stream Monitoring FAQs

Stream Team Members Regroup

I've heard tell that ambitious programs often have humble beginnings. In August of last year, we began with a couple of workshops on stream quality monitoring. The original plan was to have 2-3 volunteers adopt a site, and perform chemical and biological monitoring once a month from spring through fall.

As someone new to coordinating this kind of program, I have learned that the goal of monthly monitoring at several sites, though not unrealistic, will take a bit longer than we thought. Most of you have heard me say this before, but it's worth repeating just to remind us that *anything really worthwhile takes time, patience, and perseverance.*

Initially we started with about 35 people completing the workshops and about 25 committing to the Wolf Creek Stream Team. At this point we have about 15 folks who have stayed involved. I'm neither surprised nor disappointed by this, because it's simply the nature of volunteer organizations. People who volunteer their time to worthy causes

tend to want to help out with lots of different things, and then we find that there simply aren't enough hours in the day (sound familiar?)!

Another challenge we've encountered is the extensive time and tediousness involved in completing some of the chemical tests, and the practice that will be needed to confidently identify the macroinvertebrates when we sample for those.

Bearing these things in mind, I want to emphasize to all of you who are reading this that we need to think of this year as a time for ongoing training; that the workshops you completed were just an introduction. The real training goes on when you're out there (or in your kitchen) doing the tests and playing with bugs!

At this point in our program, I am more concerned with helping you to practice and build confidence, than cranking out official data. Also keep in mind that if you come to a point that you're unable to continue being involved with the Wolf Creek Stream Team, please don't feel bad about telling me. I am a very busy person too, having some experience at resigning from things after realizing I'd unintentionally over committed myself.

Here is the short-term (flexible!) plan for Wolf Creek Stream Team:

1. *Schedule two practice sessions for July and two for August.*

For each month, one session will be during the week, and one on a Saturday morning. We'll cover chemical and biological testing. Here are the dates: Friday, July 11th, Saturday, July 19th, Friday, August 8th, and Saturday, August 16th. I'm scheduling these dates on my calendar, and hope to have at least two or three of you per Session. We'll meet at the office at 9am for all sessions, and plan to limit the time to three hours.

2. *Limit the number of monitoring sites to six – see enclosed map*

The basic reasoning here is that with a conservative estimate of twelve Volunteers that would work out to two per site, or maybe three if someone Miraculously has extra time and motivation at their disposal ☺ ...Based on the Original ten sites (circled on map), note those highlighted in orange. The six sites we'll concentrate on for the time being will be #s 3,5,7,8, 9, and 10. We can discuss who wants to monitor what sites as we go through the practice Sessions.

Here's why I chose those sites. # 10 is the headwaters of the main branch. # 9 is upstream and #8 is downstream of the Brookville Wastewater Treatment Plant. #s 7 and 5 are both on the north branch, and are also residences of 2 Team members. Finally, site #3 is just downstream of the confluence of the North and Main branches of Wolf Creek. If our program continues to grow, we can Pick up sites 1, 2, and 6 some time in the future.

3. *Develop a list of FAQs for the monitoring procedures.*

Inquiring minds want to know! Since we're all detail-oriented persons, those pesky little questions keep popping up when we're in the middle of say, the total Phosphate test. Does the sample have to boil constantly? Should it be a hard Boil or a medium one? How does turbid water affect the various test Results? Etc, etc. You get the picture. I've currently got about 8 questions on my list, and anticipate more from you all as we go along. My strategy is to correspond with a state-wide group that's been at it for 11 years, The Missouri Stream Team (<http://www.mostreamteam.org/>) I'll keep you all posted with a new regular feature in this newsletter, entitled *Stream Monitoring FAQs*

In addition to the three points mentioned above, I encourage anyone to borrow the kit for practice, whenever you're willing and able. When the time comes, we may want to reconsider the notion of monthly monitoring; every other month might be more practical. This idea is up for discussion. The Missouri Stream Team monitors quarterly.

Martin-Marietta Tour

Here's a heads up for the article coming in our Montgomery SWCD District newsletter in the next week, –it was a very educational experience. Not to repeat myself here, just want to say thanks to Steve Krieg for getting the great pictures and notes I used to write the article. Hats off to Jim Henderson for making all the phone calls and arrangements. Just for future reference, any team member who wants to explore a local natural resource issue, just let me know and we'll look into arranging tours, much as Larry Bell did last December for the look at the Brookville Wastewater Treatment Plant. That is something we could do again, since not very many folks were able to make that one.

Two Practice Monitoring Sessions Completed June 6th and 7th

On that Friday, I went out with Nancy Bain, Nancy Powers and Patricia Brechlin – it was an absolutely gorgeous day, sunny and dry. Nancy B. is our resident birder, and helped us learn what the song of a Wood Thrush sounds like... We tried out the backpack stove for the first time and it worked beautifully for the total phosphate test. We used the index cards I made for quick reference, and completed one trial each of the total phosphate, dissolved oxygen, and nitrate tests. These are the most time consuming of the six chemical parameters, and we're working out a procedure to follow that outlines which ones can be done simultaneously without confusion. I'm thinking that we can complete one D.O. test while the sample is boiling for the total phosphate. The other three tests – turbidity, pH, and temperature change are relatively easy and quick to do.

We think that three people with lots of practice, can perform a complete monitoring (chemical and biological) in three hours or less.

Saturday's weather wasn't as nice, but at least it didn't rain. Jim Henderson 'hosted' as we explored the North Branch in a lovely little flood plain area across the road from his house. Jim also graciously provided bug spray, as it was definitely mosquito territory. Besides team members Deb Hull, Rachel Weiland-Burch, and Margaret Flinn, Larry Bell brought his daughter Heather Ritter, and Jim's son Sean was also in attendance. We performed the same three tests as in the Friday session, in about the same time frame. Since I provided a rather verbose running commentary for each procedure, the actual tests will take less total time when I manage to keep my mouth shut! However, this is an advantage of going with one, preferably two other members: in the course of discussion, we come up with good questions and are learning new techniques and trying out various suggestions.

I'd also like to thank Jim for giving us a tour of the creek and ponds behind his house. The wildlife and local history were very interesting.

Stream Monitoring FAQs

Q: If the nitrate and phosphate tests both are indicators of the same pollutant (fertilizer or nutrients), why are both tests necessary?

A: Each test is an indicator of a specific type of nutrient; Nitrate is more related to land-applied animal wastes, and phosphate is more from improperly treated human waste (sewage treatment plants). Furthermore, drinking water is closely monitored for nitrate contamination because it's a factor in Blue Baby Syndrome.

Q: Does very turbid water skew the results of chemical tests?

A: Yes. This is because during high flow, many other chemicals are present in the water because of the runoff from the watershed area. They're often bound to excessive soil particles (hence the turbidity) suspended in the water. Specifically, nitrates will probably be extremely high because of wild animal, pet and livestock feces, according to Mike Irwin from the Missouri Stream Team. Therefore, it's best to monitor during low flow.

We had several questions about the BOD5 and total phosphate tests, but the Missouri Stream Team doesn't perform those. I'll see if tech support at Hach Company can provide some information.

Until next time,

Be well, do good work, and keep in touch.

Caroline