



Water Quality Monitoring And Leadership With NOVA Streams

"Keeping Our Water Clean"



Seth Hatfield

Youth Conservation Leadership Institute





Seth Hatfield, an 11th grade home-schooled student in Prince William County, has developed much interest in water quality monitoring and the protection of the health of NOVA streams through the Youth Conservation Leadership Institute program.

Seth attended the 2015 Youth Conservation Camp (YCC) last summer at Virginia Tech where he became interested in learning more about the water quality in local streams and waterways. As a followup program to YCC, he joined the Youth Conservation Leadership Institute (YCLI) where he was tasked to select a specific area of study and volunteer service. From his studies and hands-on activities at YCC, he thought it would be interesting and enjoyable to pursue his YCLI project titled: *"Keeping Our Water Clean"*.

Seth had learned that increasing development leads to more stormwater runoff, more water pollution and lower water quality. His involvement with the Prince William Soil and Water Conservation District (District) Water Quality Monitoring program has definitely helped him to see the relationship between population density and lower numbers of healthy organisms in the local streams. The stream data collected during his project has also helped him to better understand the *how* and *what* in stream monitoring: how it's done and what is being looked for.

"It's one thing to discuss something theoretically, it's another to get in the water with high boot waders, collect the water samples, and start identifying and counting the organisms collected. This opens up a whole new understanding to the process," Seth reported.

Seth also volunteered with the District for the Meaningful Watershed Educational Experience (MWEE) at Windy Knoll Farm. He led the aquatics station, explaining to local third grade students what is involved in water quality monitoring. His hands-on experience acquired during his volunteering with the District has given him knowledge and insight into the importance of water quality and conservation.

"Overall, the lack of public awareness regarding the importance of maintaining the health of our waterways is a concern," said Seth.

Seth also took the opportunity to volunteer with "Friends of the Occoquan" in its cleanup efforts of the Occoquan River, during which he was amazed at the amount of trash and debris collected. These included tires, bottles, cans, and construction materials, just to name just a few.

He further points out the fact that many organizations in the county have

"Adopt A Highway" programs with roadside trash pickup campaigns. He strongly believes that **"Adopt A Stream"** programs through citizen and local club involvement, that include stream monitoring, is something NOVA needs to promote to help protect the health of its local streams.

"Get involved! Sign up to attend the Youth Conservation Camp. Protecting our environment, which includes clean water, is imperative to our future, ensuring NOVA remains a healthy place to live," is Seth's message to other students.

Seth also recommends the YCLI program because it is a broad scale program that enables students to select a particular area of study of interest in conservation and the environment. He further noted that the YCLI program has opened doors for him to participate in other educational programs; among them, the Envirothon team. He strongly believes a program like the Envirothon which has water quality monitoring as an integral part, will likely become more streamlined and demanded as it continues to evolve. This will also promote and help create more opportunities in efforts to protect NOVA streams and natural resources.

Seth enjoyed working with the District programs and greatly appreciates the experience he gained through the Youth Conservation Camp and the Youth Conservation Leadership Institute (YCLI).



Some Answers to your Questions

How often can a site be monitored?

Not more than 4 times in a year (quarterly).

What does it take to become certified?

1. Be able to [identify](#) the critters.
2. Be able to properly [demonstrate the field protocol](#) in data collection.

Both 1 and 2 are easy and open book!

Must I be a certified stream monitor?

No, you can help the existing monitoring teams, too! But DEQ only accepts data that comes from certified stream monitors.

What is recommended before taking the certification test?

Take part in at least 2-3 stream monitoring events before sitting for the certification test.

[Prince William Water Quality Directory](#)

Please Click [HERE](#)



Water Quality Monitoring Events

Sunday, January 10

Stream Monitoring: Catharpin Run /James Long Park

Time: 12 Noon - 2.30 p.m.

Location: James S Long Park, 4603 James Madison Hwy (Rt. 15), Haymarket, VA 20169

Parking: Library parking lot (first right past the horse field).

Join certified monitor [Elaine Wilson](#) and team for monitoring in the Gainesville area. Come meet a team of very dynamic stream monitors!

RSVP to Elaine at Elaine.Wilson@dcwater.com

Saturday, January 16

Stream Monitoring: Cedar Run in Nokesville

Time: 12 a.m. - 2.30 p.m.

Location: Evergreen Acres, 12801 Hazelwood Dr., Nokesville, VA 20181

Access this beautiful 3/4 miles long of the Cedar Run at Evergreen Acres Farm in the Nokesville area. Evergreen Acres Farm is the recipient of the Department of Conservation and Recreation's (DCR's) Bay Friendly Clean Water Farm Award for 2015. Residents, especially those in the Nokesville area are invited to come and learn more about the health of their stream and how it interacts with agriculture.

Email [Veronica Tangiri](#) at waterquality@pwsxcd.org or call 571-379-7514

Free Water Quality Test Kits

The Virginia Department of Environmental Quality (DEQ) is distributing water monitoring kits to test for dissolved oxygen, pH, turbidity, and temperature. These kits are free for schools and organizations with interest in water quality monitoring. This is DEQ's effort for residents to learn more about water quality in local streams and participate in the World Water Monitoring Challenge (WWMC): <http://www.monitorwater.org/>. The time frame for monitoring is **March 22 (World Water Day)- December 31**. For your free kit, please contact [Mr. Stuart Torbeck](#) at charles.torbeck@deq.virginia.gov. Mailing address information, number of monitoring sites, number of participants, and the total number of participants from your organization or school that will take part in the WWMC will be required.

Watershed Education, Events and Opportunities

Do you know that Virginia Naturally is your gateway to statewide environmental education? Visit: [Virginia Department of Conservation and Recreation](#).

Virginia Governor's Executive Order on "Establishing the Virginia Environmental Literacy Challenge." For more information Click [here](#) or [visit](#).

Virginia Envirothon Current Competition Program: [Click here.](#)

This natural resources competition for high school students is offered by the Virginia Association of Soil and Water Conservation Districts. Students compete in the areas of: soils, forestry, aquatics, wildlife, among others. Students relate these topics to some of the present environmental issues and apply their knowledge in solving some of these real-life environmental problems. For more information contact: education@pwsxcd.org or call 571-379-7514

Watershed Educators Institute

[Trainings through June 2016](#)

Organized by the Department of Environmental Quality, the Watershed Educators Institute is a series of one and two day workshops for participants to promote effective and meaningful watershed experiences for their students and communities. Participants who complete all 5 workshops will be recognized as a Virginia Watershed Leader. Registration fees range from \$15 to \$30 per workshop. The full schedule of all workshops could be found [online](#).

The Chesapeake Bay Foundation Grasses of the Masses Program

[For Schedules, Dates and Locations Visit](#)

*You can help restore the health of the Chesapeake Bay and Virginia's rivers by participating in CBF's Grasses for the Masses program. Participants in the program grow wild celery (*Vallisneria americana*), a type of underwater grass, in a simple grow-out system in their homes for 10-12 weeks. After 10-12 weeks of grow-out, participants will gather to plant their grasses in select local rivers to bolster grass populations and help restore the Bay. For more information visit: www.cbf.org/grasses.*

Climate Change in Virginia: Observation and Communication Workshop

[Register by: January 15, 2016;](#)

[Workshop: January 26, 2016 \(8:30am-12:15pm\)](#)

McHugh Auditorium, Virginia Institute of Marine Science, Gloucester Point, VA -- There is no charge for this workshop, but pre-registration is required. To register, send an email to Sandra Erdle at syerdle@vims.edu with the following information: name, email address, work affiliation, and telephone number. For more information, contact Sandra Erdle. Offered by the Chesapeake Bay National Estuarine Research Reserve.

U.S. Stockholm Junior Water Prize

[State Competition: April 15, 2016;](#)

[National Competition: May 18, 2016;](#)

[International Competition: June 17-19, 2016](#)

This competition is open to any high school student in grades 9-12, who will be at least 15 years of age by August 1, 2016. All research papers must be uploaded online no later than April 15, 2016 to compete in the state competition. All state winners will receive an all-expenses paid trip to the SJWP National Competition. The national winner will receive \$10,000 and an all-expenses paid trip to Stockholm, Sweden to participate in the SJWP International Competition. To learn more about the SJWP competition, go to <http://www.wef.org/sjwp/>. Also provides a guide to possible mentors.

Soil, Plants and Landscapes

Thursday, January 14, 2016

VNPS Event: A Talk by Charles Smith

Helping Nature Help Itself: Restoring the Land with Natural Processes

Time: 7:30 -9:00pm

Location: Green Spring Gardens, 4603 Green Spring Road, Alexandria, VA 22312

The Potowmack Chapter of the Virginia Native Plant Society invites you to its first program of the new year. Charles Smith, a natural area restoration professional, will explore the broader issues affecting our natural resources, and focus on what we can do regionally and locally to make a positive impact.

VNPS programs are free and open to the public. No reservations are necessary for lectures. For more information about this event, visit the [VNPS website](#).

The Young Naturalist Program-Blandy Experimental Farm

Saturday sessions in January, February, and March.

Location: Blandy Farm Lane, Boyce VA 22620

These programs get kids outdoors to explore nature in winter--a time of year when they may not have many such opportunities. Programs focus on the area's natural history, geography, weather, and related topics.

Programs include observation, hands-on activities, crafts, snack, and time outside. For more information [visit](#) or contact: Blandy@virginia.edu

Lecture by Author Thomas Rainer

Sunday, February 21

Time: 2 PM.

Location: Manassas Park Community Center 99 Adams St, Manassas, Virginia 20111

Free presentation by Thomas Rainer, co-author of *Planting in a Post-Wild World: Designing Plant Communities for Resilient Landscapes*, based on this book, Mr. Rainer is a landscape architect, university professor, and writer. Copies of this book, published by Timber Press and co-authored with horticulturalist Claudia West, will be available for purchase and signing by Mr. Rainer. The book was reviewed by The Washington Post on December 3, 2015.

Fairfax Master Naturalist (FMN) Basic Training Course: Fall 2016

The FMN Basic Training course will be held in Fall 2016. Applications for the Fall 2016 course will open in summer (June 2016), and will be available for download from the

[FMN website](#). Please direct any questions to the FMN Outreach Committee at vmnfairfax@gmail.com



Projects in your Backyard

...aimed at improving Prince William Watersheds

- Prince William Soil & Water Conservation District: [Visit](#)
- Prince William Native Plant Society: [Visit](#)
- Prince William Master Gardeners: [Visit](#)
- Prince William Conservation Alliance: [Visit](#)

- Keep Prince William Beautiful: [Visit](#)
- Virginia Master Naturalist: [Visit](#)
- Trees Virginia: [Visit](#)
- Plant NOVA Natives: [Visit](#)
- Northern Virginia Soil & Water Conservation District: [Visit](#)

...aimed at improving the Chesapeake Bay

- Department of Environmental Quality: [Visit](#)
- Department of Conservation and Recreation's :[Visit](#)
- Environmental Protection Agency: [Visit](#)
- Virginia Save Our Streams: [Visit](#)
- Virginia Citizen for Water Quality: [Visit](#)
- Alliance for the Chesapeake Bay: [Visit](#)
- Chesapeake Bay Foundation: [Visit](#)
- Virginia Water Monitoring Council: [Visit](#)
- Virginia Green Travel Alliance: [Visit](#)
- Audubon Naturalist Society: [Visit](#)

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Prince William Soil & Water Conservation District is funded by Prince William County Public Works Department, Stormwater Management Branch, and through financial and administrative assistance provided by the Virginia Soil and Water Conservation Board, and the Department of Conservation and Recreation, Division of Soil and Water Conservation.

Programs, activities and employment opportunities are available to all people regardless of race, color, religion, sex, age, national origin, or political affiliation. Prince William Soil and Water Conservation District is an equal opportunity/affirmative action employer.

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**[EPA Website Allows Public to Track Drinking Water Quality Nation-Wide](#)**

EPA has released the Safe Drinking Water Act (SDWA) dashboard, a website that presents data about violations and the compliance status of public water systems. The interactive charts and graphs provide information on the compliance of public water systems with federal drinking water regulations, as well as enforcement actions. Explore the summary of key activities to get answers to most of your questions on public water systems regulations, inspection, violations and enforcement actions. Visit: [dashboard](#).

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**Potomac Basin News and updates**

**[Interstate Commission on the Potomac River Basin: Visit](#)**

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**How can you help Prince William County have good water quality water?**

- \*Volunteer for the Save Our Streams Citizen Science program.
- \*Adopt a stream of your choice or work with existing sites
- \* Monitor only 3 times a year - spring, summer and fall.
- \* Get monitoring equipment once you become certified.
- \* Track your volunteer hours working for the

District.

>>Volunteer timesheet is available. Ask your monitoring coordinators<<



>> Citizen water quality monitoring also counts towards service hours for all Virginia Master Naturalists <<

For all stream monitoring updates anytime, please visit: [PWSWCD Facebook page](#)

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**Prince William Soil & Water Conservation District**

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