

# Centre County Pennsylvania Senior Environmental Corps Newsletter



## ***Volunteering for future Generations***

Our work is made possible by ClearWater Conservancy, the Centre County Conservation District and the Centre County RSVP.

To connect or make a gift today:

Call: 814-237-0400 Click: email:

[clearwater@clearwaterconservancy.org](mailto:clearwater@clearwaterconservancy.org)

Mail: 2555 N. Atherton St. State College, PA 16803 Your gift keeps our working flowing!

***Thank you for your generous support!***

Centre County Pennsylvania Senior Environmental Corps

## December 2020

### About Us

We are a non-profit organization of senior citizens *Volunteering for future Generations*, who gather and publish data on the water quality of streams and tributaries of many local and remotely accessible streams in Centre County and the Beech Creek watershed.

The coronavirus pandemic heavily impacted our monitoring this year. Starting in June, many of our Centre County Senior Environmental Corps volunteers braved the pandemic to keep the public informed about our most precious natural resource and its importance as a critical contributor to the Chesapeake Bay watershed.

Volunteers (55+) work in teams of 3-6, regularly visiting sites throughout the Centre County to gather information on riparian characteristics, water chemistry, stream flow, and twice a year, counts of macroinvertebrates that indicate the yearlong health of the stream. – *Ken Johnson*

**We sincerely thank all the funding agencies and individuals who have contributed to our ongoing effort to protect water.**

This year (2020) we received a new grant from the Dominion Energy Watershed Mini Grant Program. This support enabled us to purchase enough new or refurbished equipment and supplies so that each of our 13 sampling teams has their own water testing and macroinvertebrate sampling kits.

We also received a grant from the Foundation for Pennsylvania Watersheds that will allow us to compose, edit, and print a new brochure to recruit new CCPaSEC members and to tell potential sponsors about what we do, who does it, and what benefits accrue to the entire Centre County community through our volunteer activity. – *Gary Moorman*

### CCPaSEC President's Report

The Penn State University Collegian fracking story by *Lilly Riddle* featured an interview with Lou describing the importance of our monitoring efforts, was published in the Collegian on November 11, 2020 - click on the link:

page 1

[https://www.collegian.psu.edu/news/borough/article\\_9d416bda-23ca-11eb-b61c-dfb](https://www.collegian.psu.edu/news/borough/article_9d416bda-23ca-11eb-b61c-dfb)

We thank Centre County Gazette's Sept. 24-30 edition for the continued role of CCPaSEC volunteers during the pandemic.

Members at November meeting agreed to share our data Chesapeake Monitoring Cooperative Phase 3 with the **ALLARM** organization and with the states of Delaware, Maryland, and Pennsylvania, the University of Maryland (laboratories) and with Dr. Susan Brantley of Pennsylvania State University. The Alliance for Aquatic Resource Monitoring's (ALLARM) project works with diverse partners to collect and share new and existing water quality and macro-invertebrate data to develop a comprehensive understanding of Chesapeake Bay Watershed health.

They had prior knowledge of our data and our quality methods and procedures.

They will be contacting us to ensure that our data will be acceptable by Pa. DEP.

<https://www.chesapeakemonitoringcoop.org>

I would also like to thank all of those at "CCPaSEC" who have worked on quite a number of special projects during my tenure: especially-- but not limited to-- the rewriting of our bylaws and constitution in 2019, the work of applying successfully for grants, the continuous upgrading of our website, the implementation of our quality assurance protocols by the QA Chair and Team, the working relationship with Clearwater Conservancy and especially the joint efforts in presenting the Clearwater Master Naturalist Program at Shavers Creek this Fall, the upgrading of our equipment, and the continuing outreach to the Communities we impact by our publicity efforts! Thank you to all!

A concern of mine going into 2021: We currently have three teams -- that I know of-- that are "under strength" and need to have at least two new members each if they are to continue to be viable. I mentioned at the November meeting that we may have to "consolidate teams or sites" in order to continue to provide monitoring in 2021 and beyond. This is an issue that should be addressed soon in 2021 in my opinion. – *Lou Mayer, President*

## **ClearWater Conservancy partnered with Pennsylvania Master Naturalist Program**

ClearWater Conservancy partnered with Pennsylvania Master Naturalist Program to offer a volunteer training course and bring the program to Centre County. This was the first time this statewide program has been in Centre County. PA Master Naturalist is a non-profit organization dedicated to building a corps of knowledgeable citizen volunteers who engage in protecting Pennsylvania natural heritage through outreach service.

CCPaSEC was asked to present a class on Citizen Science and our organization including History, what we do, why it is important, data collection, in essence learn what CCPaSEC members as Citizen Scientist do in the field.

CCPaSEC was pleased to present to a group of 11 participants at Shavers Creek Environmental Center on October 30. The activity session with break out groups with testing water samples was especially well received with good questions and interaction. Lou Mayer, President of CCPaSEC, with Genie Robine and Dan DeLotto, resource advisors conducted an informative session with active participation. We have received much positive feedback and as a result of the class, one participant has requested membership in ClearWater Conservancy and CCPaSEC. – *Carolyn Hatley, CCPaSEC V.P.*

## **Treatment Wetland Research**

Several research projects have focused on nutrient cycling and transformations within constructed wetlands designed to treat a variety of wastes.

In the full-scale subsurface flow wetland, the wetlands are effectively removing nitrogen, phosphorus and Biological Oxygen Demand (BOD), the amount of oxygen consumed by bacteria and other microorganisms while they decompose organic matter from domestic waste.

The processes by which this removal occurs are imperfectly understood, and research on the mechanisms for treatment within wetlands will lead to better design criteria for these systems. The research looks at the role of vegetation and alterations to the flow of waste to determine how nitrification denitrification processes are affected.

<https://abe.psu.edu/research/areas/agricultural-production>

### More on Testing for Tick diseases

Residents of Pennsylvania can send any ticks to a tick lab to have the tick identified and also find out if the tick is infected with Lyme disease, anaplasmosis, ehrlichiosis, babesiosis, or Rocky Mountain spotted fever for no charge. The lab will identify the tick for more infections for a fee. I have sent in 2 ticks that I found on my leg and on my back. Both were engorged and Fred had to remove them with forceps. I filled out a form from the tick lab web site, placed the tick in a plastic zip-lock bag and mailed it by US mail. I received the results in less than a week. One tick carried no infections (I only had the "free" tests done). **The second tick, however, was positive for anaplasmosis!** I made an appointment with my family doctor and after showing her the report from the tick lab, I was able to get a prescription for 10 days of doxycycline. It was easy and I'm sure it saved me much discomfort and illness.

The Tick Research Lab of Pennsylvania web site is: [www.ticklab.org](http://www.ticklab.org) *Viqui Gildow*

*Thank you Viqui, anyone finding a tick on their person should **see your doctor or go to the urgent care facility as soon as you see a tick on your body.***

*I didn't see distinctive circular rash like Lyme and so ignored it. I was unaware of the service. I later developed a fever 103+°F. Anyone experiencing that should go to the emergency room where they started the antibiotic doxycycline treatment on me, even before they received my lab result for anaplasmosis. – Ken Johnson*

### The metal chromium

Now, researchers reporting in ACS' *Environmental Science & Technology* have investigated how hexavalent chromium, known as Cr(VI), can form in drinking water when corroded cast iron pipes interact with residual disinfectant.

The metal chromium, known as Cr(0), is found in cast iron alloy, which is the most widely used plumbing material in water distribution systems. As pipes corrode, a buildup of deposits, known as scale, forms on the pipes' inner walls. Trace chemicals in water can react with scale, forming new compounds that could be released into the water. Some of these compounds

contain Cr(VI), which, at high doses, can cause lung cancer, liver damage, reproductive issues, and developmental problems.

In 2014, California set a drinking water standard of 10 µg/L (micro grams per liter) Cr(VI), but the guideline was later withdrawn because no economically feasible treatment to remove Cr(VI) from tap water existed.

Reference: "Hexavalent Chromium Release in Drinking Water Distribution Systems: New Insights into Zerovalent Chromium in Iron Corrosion Scales" by Cheng Tan, Sumant Avasarala and Haizhou Liu, 30 September 2020, *Environmental Science & Technology*. The authors acknowledge funding from the National Science Foundation.

[DOI: 10.1021/acs.est.0c03922](https://doi.org/10.1021/acs.est.0c03922)

### Welcome new Marcellus Team 13 members



Jerry Dittmann left measuring water velocity, Marian Garcia right recording, Kathi Ferrigno background measuring pH.

### DEPARTMENT OF ENVIRONMENTAL PROTECTION

Applications, Actions and Special Notices, Pa DEP submitted a Notice of Intent [50 Pa.B. 6269] [Saturday, November 7, 2020] The clean stream law and the Federal Clean Water Act applications for natural pollutant discharge elimination system permits and quality management permits. The applications concern, but are not limited to, discharges regarding industrial, animal or sewage waste, discharges to groundwater, discharges associated with municipal separate storm sewer systems (MS4), stormwater associated with construction activities or concentrated animal feeding operations (CAFO).

## Upcoming events

### Holiday Luncheon



Members are reminded we will not have a holiday luncheon this year.

### Officers Election scheduled for December 9, 2020

Officers shall be elected at the Annual Meeting, scheduled for the December 9 general meeting, of the membership for a term of one year, and may succeed themselves. Officers shall include a President, Vice-President, Secretary, and Treasurer. Susan Sapp is interested in the office of president. All of the other officers are willing remain in their positions if elected again.

### Any time activity:



### ClearWater Conservancy

Wondering how to improve your mood and have an increased

positive mindset? Spending more time outdoors helps! We all need a bit of self-care and wellness in our daily lives.

<https://www.facebook.com/ClearWaterConservancy>



Special thanks to [Mount Nittany Health](#) for this Centred Outdoors health tip!



### Zoom Meeting December 3 at 7:30PM

"Cicada - the Big Eastern Hatch" by Dr. Greg Hoover widely acknowledged as

North America's most knowledgeable fly-fishing entomologist.

<https://us02web.zoom.us/j/83664895117>

### At home activity!



Feeling the urge to have fun and create something unique that helps wildlife? Build a bird roosting box

<https://files.constantcontact.com/d97bbebc001/2de3ca-bf-66c0-4acf-931f-7c055fd3a914.pdf>

### Free Webinars:



### Dec. 1, 2020 at 6 pm Where

Learn the basics of where water is sourced from and how it's treated in public

systems.

**Dec. 10, 2020 at 6 pm** Household Waste & Wastewater Treatment: What happens to water after it goes down the drain?

**Dec. 15, 2020 at 6 pm** Cleaner Water Begins with You: It takes everyone to improve and protect water quality. Learn helpful approaches for everyone from homeowners to farmers.

<https://www.eventbrite.com/o/allegheny-county-conservation-district-30124813842>

### February 18, 2021:

Native Plants and Pollinators Technical Training for Conservation Districts. The USDA Natural Resources Conservation Service is offering free technical training on native plants and pollinators. The webinar will take place from 10:00 am to 11:30 am. [www.pacd.org](http://www.pacd.org) Click [here](#) to register by February 16, 2021.

**"The struggle of today is not entirely for today, but for a vast future." --Abraham Lincoln**

*The ClearWater Conservancy and Centre County RSVP are major supporters. The following have provided additional support funding for special equipment for one field kit: Financial support for this grant is provided by the Dominion Energy Charitable Foundation which is dedicated to the economic, physical, and social health of the communities served by Dominion Energy companies. Western Pennsylvania Conservancy: This grant program was administered by the Western Pennsylvania Conservancy in commitment to its core mission of conserving Pennsylvania's diverse ecosystems through science-based strategy, leadership, and collaboration, Patagonia for the protection of water resources in Centre County, PIG Difference, a charitable initiative to salute our customers' passion for protecting habitats and preserving wildlife and our many individual contributors through Centre Gives.*