

# Centre County Pennsylvania Senior Environmental Corps April 2024 Newsletter



## “Volunteering for future Generations”



RSVP (Retired and Senior Volunteer Program) Centre County, PA Official Website ([centrecountypa.gov](http://centrecountypa.gov))

Call: 814-237-0400



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

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Donations may also be made through the ClearWater website.

For other options see: [Donations \(ccpasec.org\)](http://Donations(ccpasec.org)) **Thank you for your generous support!**

## Presidents Report:

*Bill Smith / CCPaSEC President*

As we begin another year of stream monitoring, we should all consider our safety while out in the field. Nothing is worth getting hurt or seriously injured while you are collecting data. Our streams can be beautiful and peaceful places, but they can also be dangerous if you're not careful. Here are some tips and precautions to keep in mind.

- Watch for slippery rocks and uneven terrain. Wear sturdy shoes or boots with good traction. Be careful when stepping from one rock to another to avoid slipping or falling.
- Be prepared for emergencies as accidents can happen quickly, especially near water. Make sure your team has a well-stocked first aid kit and a plan for emergencies.
- At least one team member should have a cell phone.

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- During the summer months, UV exposure can be an issue, so be sure to use sunscreen and stay hydrated.
- Some sites have an abundance of brush so take precautions against ticks and insect bites. Treat clothing, boots, and skin with insect repellent. Alternatively, you can buy treated clothing.
- If the weather forecast is calling for thunderstorms and other adverse weather conditions for the testing site, consider postponing data collection for that day.

Let's all have a safe and successful monitoring season.

## **Membership News:**

Our training advisor, Ralph Locklin, is concerned that the hands-on field training may not provide essential information for new members about why we do stream monitoring.

The formal training sessions were discontinued a few years ago in favor of hands-on field training by the team members. This was to be supplemented by our Quality control team yearly visitations to answer any in-depth technical questions a new member may want to ask.

New... Our training advisor, Ralph Locklin and Ken Johnson, developed informational "PDF files" to provide new members with information about why we selected the stream parameters to monitor, why they are important, how we selected our test equipment and a bit about how to care for them and how the equipment works.

The interactive PDFs pose some optional *Frequently Asked Questions* (FAQ's), example: "Why do we need to measure flow?" When you click on one, it will display the answer. You are not graded and no report is generated. It is an exercise to help us remember the information. Rob will have them available on our website. While these are intended for new members, everyone who can open a PDF are invited to give them a try... Kj

## **Environmental News**

**Orphan Well Grant** Rep. Glenn "GT" Thompson introduced the Orphan Well Grant Flexibility Act along with colleague from Pennsylvania Rep. Chris Deluzio. This legislation is designed to empower states to maximize their operational flexibility when plugging abandoned oil wells. These abandoned wells, either unplugged or improperly plugged, can pose serious environmental threats to surrounding communities such as water contamination, methane emission, and can introduce other harmful pollutants to the local ecosystem. Pennsylvania's oil and gas sites ushered in the modern petroleum industry, which helped lead the United States to become a global power and energy producer. Now, we must ensure these sites are properly and safely restored. This bill will cut red tape, accelerate environmental rehabilitation, and provide economic benefits throughout oil and gas producing regions.

## Hydrogen is coming to Pennsylvania?

*Pennsylvania's first green hydrogen plant planned for Lancaster County disallowed.*

<https://stateimpact.npr.org/pennsylvania/2021/04/02/pennsylvanias-first-green-hydrogen-plant-planned-for-lancaster-county/>

A plan to produce emission-free fuel in Martic Township has been nixed by a New York-based company that originally planned to break ground this year on a green hydrogen production plant near the Holtwood Dam. The decision, officials at Plug Power said, was made after discovering that construction [at the proposed site](#) — just east of the Susquehanna River — could disturb local ecosystems. “Plug decided not to pursue a plant in south-central Pennsylvania to protect local wildlife, as we’ve since learned that this area is home to endangered species,” a Plug spokesperson said this week, citing discussions with officials at the U.S. Fish and Wildlife Service.

## America is running out of power

Vast swaths of the United States are at risk of running short of power as electricity-hungry data centers and clean-technology factories proliferate around the country, leaving utilities and regulators grasping for credible plans to expand the nation’s creaking power grid.

It threatens to stifle the transition to cleaner energy, as utility executives lobby to delay the retirement of fossil fuel plants and bring more online. The power crunch imperils their ability to supply the energy that will be needed to charge the millions of electric cars and household appliances required to meet state and federal climate goals. Planners are increasingly concerned that the grid won’t be green enough or powerful enough to meet these demands.

## Explosion in Soil Microbes Carbon Cycle Surprise: Global Warming Sparks a Diversity Explosion in Soil Microbes.

DOI: 10.1126/sciadv. adk6295 The Role of Soil in Carbon Cycling “Soils are Earth’s largest reservoir of organic carbon,” states Andreas Richter, lead author of the study and professor at the Centre for Microbiology and Environmental Systems Science. Microorganisms silently dictate the global carbon cycle, breaking down this organic matter thereby releasing carbon dioxide. As temperatures rise – under climate change—microbial communities are thought to emit more carbon dioxide, further accelerating climate change in a process known as soil carbon-climate feedback.

“We saw that more than 50 years of consistent soil warming increased microbial growth at the community level,” says Dennis Metze, PhD student and primary author of the study. “But remarkably, the growth rates of microbes in warmer soils were indistinguishable to those at normal temperatures.” The pivotal difference lay in the bacterial diversity: Warmer soils harbored a more varied array of active microbial taxa.

*Reference: “Soil warming increases the number of growing bacterial taxa but not their growth rates” by Dennis Metze, Jörg Schneck, Coline Le Noir de Carlan, Biplabi Bhattarai, Erik Verbruggen, Ivika Ostonen, Ivan A. Janssens, Bjarni D. Sigurdsson, Bela Hausmann, Christina Kaiser and Andreas Richter, 23 February 2024, Science Advances.*

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## **Earth Is Getting Hotter, but Soil Is Getting Wetter**

A recent paper from Harvard University researchers found that precipitation, rather than temperature, overwhelmingly explains Soil moisture trends.

While it's not surprising that more rain means wetter soil, the research challenges a long-standing assumption that increases in global temperatures will lead to drier soils.

The study highlights the importance of accurate precipitation predictions and effective water management in agriculture amidst uncertainties in long-term soil moisture trends.

<https://scitechdaily.com/challenging-long-standing-climate-assumptions-earth-is-getting-hotter-but-soil-is-getting-wetter/>

By HARVARD JOHN A. PAULSON SCHOOL OF ENGINEERING AND APPLIED SCIENCES MARCH 24, 2024

## **Upcoming Events:**

**Clean Up Day on Saturday**, April 20th, 2024 from 12 pm- 4 pm. Please contact Genie who will make a list of volunteers. Earth Day Celebration [2024 Watershed Cleanup Day](#)

**Macros:** Team leaders who need Genie's assistance should contact her to set up dates for the spring macro count.

**Outdoor Adventure Expo – June 2** We will have our own table and tent this year. Dan volunteered to set this up. Anyone interested in helping should contact Dan.

## **At home activity:**

**Please due your part, help us compose our newsletter**, have you found something of general interest to share? *We have to come up with articles of interest to our members.* Our newsletter is supposed to be about our experiences, why you joined, how have you benefitted from volunteering? What is your advice to stimulate ideas and creativity? Let me know?

**Provide vital Social Support** to strengthen families, help all adults remain connected, companionship and support diverse communities—providing win-win benefits for all address social wellbeing with the RSVP Centre County **Telephone Touch Reassurance Program**. <https://centrecountypa.gov/497/Telephone-Touch-Reassurance-Program>

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**Equipment maintenance** Properly maintained equipment assures good data. While we plan to conduct our yearly equipment check and battery replacement in January, it's a good idea to inspect the equipment and reagent expiration dates before we visit our site.

**Centre County Pennsylvania Senior Environmental Corps**

**Review your data** Team members can help by reviewing their data on our website. Fill in missing information, look for misplaced decimals, correct dates and incorrect entries. It's a good time too, to look at the accompanied charts to see how streams have changed over time.

**State College SKYWARN Program:** SkyWarn Spotter talks scheduled for Central Pennsylvania, presented by the National Weather Service Office in State College. Please be aware that SkyWarn talks are conducted during the Spring and Fall. Anyone can attend any talk - regardless of where you live! March 18 thru May 29  
<https://www.weather.gov/ctp/SkyWarn>

***“Clean water, the essence of life and a birthright for everyone, must become available to all people now.”***

*- Jean-Michel Cousteau*



*Please send any suggestions, responses or corrections to me via our website.*

*We need Photos. We are in need of team action photos working at a site, and a posed Team photo that have new members.*

**Membership** You must be a member of the Centre County RSVP or the Centre County ClearWater Conservancy to join the Centre County Senior Environmental Corps. As members you will be covered by accidental insurance while serving on volunteer activities.

CCPaSEC is Supported by the Following Organizations **ClearWater Conservancy, the RSVP of Centre County, PA and the Centre County Conservation District** are the primary sponsors for CCPaSEC and provide additional support and our many individual contributors through *Centre Gives*. Centre County RSVP is supported in part by the [Corporation for National & Community Service](#) and by the [Centre County Board of Commissioners](#) through the [Office of Aging](#). Providing additional funding for special equipment: **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.