

# Centre County Senior Environmental Corps Newsletter August 2018

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## PICNIC



### Clearfield will host the joint SEC picnic this year on August 8

Bring a dish and utensils. Invite your spouse or friend to come for a great time.

Location: Irvin Park, 900 Susquehanna Ave., Curwensville, PA.

Coordinates are 40.962720, -78.518599.

Time: Gather at 11:00 to set up and mingle. The potluck lunch begins at 12:00. After lunch, Kelly Williams, Clearfield County Conservation District Watershed Specialist, will present a PowerPoint program titled "Restoration of the Deer Creek Watershed: The Ongoing Journey."

### Chesapeake Bay seagrass rebound

Underwater grasses are growing back in the Chesapeake Bay. The plants now carpet three times as much real estate as in 1984, thanks to more than 30 years of efforts to reduce nitrogen pollution. This environmental success story shows that regulations put in place to protect the bay's health have made a difference, researchers reported the week of March 5 in Proceedings of the National Academy of Sciences.

The bay's aquatic vegetation, including sea grasses and freshwater grasses, is an important part of coastal ecosystems, says study coauthor Jonathan Lefcheck, a marine ecologist at the

Bigelow Laboratory for Ocean Sciences in East Boothbay, Maine. Beds of underwater grasses act as nurseries that shelter young fish and aquatic invertebrates. The plants clean the water by trapping particulates, and stabilize shorelines by preventing erosion. But the once-lush grasses began dying off in the 1950s when the region's human population boomed, and cities and farms dumped increasing amounts of nitrogen and other nutrients into the bay.

In the late 1970s and early 1980s, state and federal agencies acted, limiting the amount of nutrients that could enter the bay from farms, water treatment facilities and other sources. Those groups also instituted programs to monitor the bay's health, building up the stockpile of information that Lefcheck and his colleagues have now analyzed.

The researchers looked at aerial surveys of the bay, data on water temperature and nutrient levels, as well as land and fertilizer use. Using mathematical equations to test which variables had the biggest impact on seagrass regrowth, the team pinned down nitrogen reduction as the driving force. That makes sense: Too much nitrogen in water promotes the growth of plankton, which can block sunlight, and algae, which can settle on the grass blades and smother them.

*Laurel Hamers, March 5, 2018*

### Commonwealth of Pennsylvania DEP

Dept. of Environmental Protection allocates more than \$20 million to support water quality improvement projects statewide. Harrisburg, PA – Growing Greener Plus, Pennsylvania's most widely recognized environmental grant program, opened May 14 with more than \$20 million available to municipalities and nonprofit organizations for projects to improve water quality

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in their community or statewide. "Growing Greener Plus has provided almost \$300 million for more than 2,100 projects statewide since its inception," said Department of Environmental Protection (DEP).

*Secretary Patrick McDonnel (Department of Environmental Protection).*

## YSI DO Meter

The dissolved oxygen level is dependent on altitude and temperature. Please remember to enter the altitude of your sampling site into the YSI DO meter.

To assure an accurate DO measurement, please inspect the fine gold screen on the probe tip to make sure it is clean. Notify Dan Delotto if it requires cleaning. Do not attempt to clean it yourself.



Please remember to keep the sponge pad moist when you calibrate the meter.

## CCPaSEC Duplicate testing

We begin duplicate testing this month. The duplicate tests do not determine accuracy. They do not determine which test, the Field team or the QC team, is more accurate. The test is to determine our collective Relative Percent Deviation (RPD).

The RPD is one measure of the quality of our posted data. We are not using Laboratory certified equipment and we cannot expect Laboratory level results. Nature Abounds™ Quality Plan set a goal for the RPD to be less than 20%. It is incumbent upon us to make available the RPD of our data to users. The QC team will publish summary report of the results on our website to provide an indication of the quality of the data to potential users.

## Giant Hogweed CAUTION

Pennsylvania, New York and Washington state have the largest number of known giant hogweed (GH) sites. GH can form a monoculture in all habitats but especially riparian areas and wetland communities, displacing native or beneficial plants. **Its poisonous sap poses a serious health threat to humans.**

Alex Childress, 17, was inflicted with second- and third-degree burns after unknowingly touching the plant while he was doing work outside at his landscaping job. Childress reportedly believed the plant was an unwanted weed and went to remove it from the ground.

*Richmond Times-Dispatch*



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## **Active and healthy aging, *Xiyang Wang***

Xiyang Wang, a postdoctoral researcher of the Information Sciences and Technology Department at Pennsylvania State University, is working on a research project that aims to explore people's practices on maintaining their health and well-being and designing web and mobile applications to support their practices. Primarily, there are two focuses of the project.

First, the project aims to cultivate the health and well-being aspects through the lens of creativity and innovation of retirees, where CCPaSEC is a great example to demonstrate the construction of an active and healthy lifestyle through innovative activities. For example, all of the CCPaSEC members are actively engaged in innovative activities such as voluntary water quality monitoring events to improve the local environment of Central Pennsylvania. Some of the members extend their interest in environment sustainability in other self-organized, creative activities, such as releasing over-produced farm trout into the nature, tackling technology challenges, and protecting local farm lands. All of the activities are naturally formed based on a collective and collaborative effort to the local environment and community, in which members actively generated creative concepts and turned those ideas into innovative activities and artifacts that facilitate the development of an active aging.

Second, the project explores the healthy aging through social well-being. CCPaSEC members take the initiatives to actively engage in the social activities which promote their health and well-being, such as stepping into the stream to collect water, hiking as a group to the water monitoring site, and organizing lunch and dinner gathering with the group. This indicates that CCPaSEC is a great model to promote the health and well-being of people, particularly the active engagement in social activities.

Our Grassroots approach to ensuring quality local water is for citizens to view water quality monitoring as a community engagement activity. Engagement and participation in community work strengthens trust and social capital throughout the local community and promotes broader public awareness of local water resources. Water quality monitoring specifically cultivates critical environmental knowledge and skills within the community and provides robust and meaningful activity for members of water groups.

*Dr. Jack Carrol (PSU College of Information Science)*

## **CCPaSEC Participation**

My information about this research activity comes from a general meeting of a group of people with Jack Carroll, Information Sciences and Technology at Penn State and his team, and with a Ph.D. student Tiffany and a postdoctoral scholar Xiyang.

I had a meeting with both Tiffany and Xiyang on two separate occasions. Both individuals asked me questions about the benefits to the participants in CCPaSEC work. I have developed a sort of hobby about healthy aging. As a result, I probably talked a lot about the value of staying active in the retirement years. I also talked about the value of conversations that take place on these stream visits.

Both Tiffany and Xiyang attended 1 or 2 stream visits with my team and participated in some of our activities. Because of the stream visits they both got a clear picture of what happens on those events. They both asked questions about our motivation and so the discussion about the health of our streams and their value to life in the county took place.

*Ralph Locklin (CCPaSEC Training)*

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## Join us? Citizens are stakeholders in water quality

Our area has seen the results of acid mining and is now undergoing changes due to urban development, deep well gas exploration (fracking) and new gas pipelines.

Our primary interest for joining the Centre County Pennsylvania Senior Environmental Corps is the protection of our natural resources. Our members join from many professions, retired education, Forestry Service, Fish and Boat Commission, outdoor lovers, fisherman and concerned citizens.

*Dave Truesdale (Quality Control)*

## Example of team activity

Example: Team 16 monitors 2 creeks every month. The first Thursday of the month we monitor two sites on Moose Run. One site is about 1.5 miles north of Milesburg and the second site is in Milesburg before Moose Run flows into Bald Eagle Creek. Moose Run is a small creek that flows into the northern side Bald Eagle Creek. The second creek that we monitor on the 4th Thursday of the month is Muddy Creek. This creek is in Penn's Valley and flows into the southern side of Penn's Creek. We monitor two sites along this waterway: one site is at Reeder Road and the other site is along Penn's Creek Road before Muddy Creek enters Penn's Creek. Over the two or so years that we have been monitoring these streams the chemical parameters have been fairly consistent; we have not observed any dramatic changes. The flow rates, of course,

vary with the amount of rain that has fallen and the season that we monitor, as one would expect.

*Viqui Gildow (Team 16 leader)*



The Centre County Pennsylvania Senior Environmental Corps is looking for volunteers. Help us develop our monitoring and reporting procedures and help support teams of seniors who gather water quality data and macroinvertebrate populations that are published on our public website, <http://www.ccpasec.org>.

To join us: Please call the Centre Counter RSVP

(Retired and Senior Volunteer Program)

Monday – Friday 8:30 am - 5:00 pm

Phone **(814) 355-6816**

The CCPaSEC newsletter is published quarterly except for special events. To contribute news articles or request corrections please contact Ken Johnson via our CCPaSEC website.

We make a living by what we get, but we make a life by what we give. **Winston Churchill**