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**The Conewago Creek Initiative** is a locally-led, collaborative partnership effort in the Conewago Creek watershed in Dauphin, Lancaster, and Lebanon Counties. We seek to work with local residents and stakeholders to increase awareness and adoption of land management practices that will improve water quality of local streams and ensure healthy farms and communities, implementing the vision of the Conewago Creek Watershed Community: *a restored Conewago as a centerpiece of pride and a treasured asset in a rural landscape.*

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# Conewago Currents

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## The Coordinator's Report

Summer might be winding to a close but opportunities to get involved are numerous. As you will see in this newsletter, a variety of Conewago Initiative partners are offering workshops and trainings in the coming weeks. One of them, a Right-of-Way Management Workshop is happening this Friday. If you have any interest in learning how to manage vegetation over a larger area (pipeline right of way, riparian buffers, native meadows, etc.) this might be a great opportunity for you. Check it out!

Tree planting season is just around the corner. So whether you join the Tri-County Conewago Creek Association for one of their fall opportunities or volunteer with another organization, I hope you will get a chance to get outside and contribute to the clean water

efforts occurring in your area. As the famous Chinese Proverb says, "The best time to plant a tree was 20 years ago. The second best time is now."

In other news, a fish survey was completed in the watershed early in the summer. The article below highlights some of the key findings but be sure to check out the full report on our website in the coming weeks once all the data has been compiled.

The US Geological Survey has also been monitoring

the Conewago Creek and shares some of its findings in this season's edition of Conewago Currents. Their results show that all the restoration work that has been completed is starting to show in water test results!

I hope to see you soon at one or all of this season's offerings.

*Kristen Kycler*

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## Conewago Creek 2015 Fish Survey Completed

Have you ever wondered what fish live in the Conewago Creek? On June 30th the Conewago Creek Initiative conducted a fish survey using the electroshocking method to find out the answer to that question. The Initiative partnered with SRBC, Lancaster County Conservation District, Larry Coble, the Milton Hershey School, and other partners and residents to make the day a success.

The fish survey is completed every 3 years with the most recent survey completed in 2012. The monitoring of the creek has been an ongoing effort. The first survey was

done in 1972, and followed by a 1973 survey. The data collected in the 1970's was completed by York College of Pennsylvania. The surveying was not picked up again until 2007 when the Tri-County Conewago Creek Association completed their survey. The 2012 and 2015 surveys were coordinated by the Conewago Creek Initiative as part of a comprehensive monitoring plan for the watershed.

The three locations surveyed are at the Hershey Meadows restoration site, within State Game Lands 145 (headwaters),

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## Fish Survey

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and at a site near Covered Bridge Road.

The 2015 survey found the Minnow family to be the dominant species at each site. A total of 21 Minnow species were found. Insectivores were found at each site at around 40% for each location. This is second only to Generalist feeders. All three sites are demonstrating similar fish population diversity and tolerability.

The Conewago Creek Initiative recognizes that monitoring is an important part of determining stream health and success of watershed restoration projects. By electroshocking fish, surveyors are able to determine whether species diversity has increased or decreased throughout the years. It can take several years for noticeable results to become evident in the stream after upland restoration projects are completed, making monitoring crucial.

Due to the need for consistent monitoring, the Initiative felt that it was imperative to continue the scheduled survey this year, despite rainy conditions that impaired electroshocking. The month of June recorded 6.84 inches of rain with 1.54 inches of that during the week of June 21, 2015-June 27, 2015. At the Hershey Meadows and Mouth locations the water was muddy and

difficult to see the fish. This could be an explanation for the downward trend in species numbers found, especially the minnows which are small and difficult to see in muddy water.

Overall, no significant decreases in fish population have been observed, suggesting that watershed conditions are remaining stable. This is a good sign, especially given the undesirable conditions of the 2015 survey. All findings, including comparisons to the previous year's surveys, will be available in a full Fish Survey Report on the Initiative's website in September.



## USGS Survey

During the July 22 Conewago Initiative Project Advisory Team meeting, Mike Langland, a hydrologist with the U.S. Geological Survey, presented results from the new USGS report (in review) which characterizes and contrasts three USDA "Showcase Watersheds." The Conewago Creek is one of the three watersheds that USDA designated as a Showcase Watershed within the Chesapeake Bay Region. Environmental factors such as land use, geology, nutrient applications, and BMP's were discussed to provide an indication of land and water conditions in the watershed.

Some of the key findings that Mike pointed out in his presentation were: temperatures at both gauging sites in the Conewago Creek are similar, however downstream can be more warm or cold due to stream exposure. Higher flows occur during the winter which is directly related to rainfall and the growing season. Additionally, nitrates (a form of nitrogen) gets diluted, due to the significant rainfall, with high flows, while nitrogen increases because of sediment increases. Mike also pointed out that 70% of cumulative total sediment downstream came from three major storms.

One of the biggest take a ways from Mike's presentation is that there has been a 2.8% decrease in nitrogen watershed wide. While this may seem like a small number, it is an improvement that is important to recognize. The final USGS report will be released in 2020 when over 10 years of data can be analyzed.

## Right of Way Management Workshop to be Held

On **August 28th** Penn State's Agriculture and Environment Center, in partnership with the Lancaster County Clean Water Consortium, will be hosting a Right of Way Management Workshop at the **Lancaster Farm and Home Center**. The workshop is aimed at pesticide applicators, residents, vegetation managers, and anyone who would like to learn more about application techniques, invasive species, keeping pesticides out of groundwater, and native plants.

Pesticide applicator, Society of Arboriculture, and Society of

American Foresters re-certification credits will be available. Anyone interested in learning about these topics is encouraged to attend.

There will be a \$25 registration fee (cash or check) that can be paid during registration the day of. Registration will take place at 8:00am with speakers presenting

from **8:30am-1:30pm**. Lunch will be provided!

If you plan on attending we ask that you fill out the short registration form at: <http://agsci.psu.edu/aec/events/right-of-way-management-workshop>.

We look forward to seeing you there!



## Lesson on Meadows

On Friday August 21, Penn State Extension and the Chesapeake Conservation Landscaping Council held a Native Meadow field day that gave participants the opportunity to see some established meadows and learn some valuable tips. Here are some of the great tips shared:

- Early maintenance is important.

Mulching and weeding are key to getting the "good" plants established.

- Do a soil test and then pick plants that fit your conditions.
- If you are creating a walking path, use small plants near the edge and leave plenty of space for them to grow.
- Curved edges and well kept

grass on the outside will keep neighbors satisfied that your meadow is more than a "weed patch."

- Use signage in public areas to aid in acceptance.
- The look of a meadow changes season to season and year to year—let it, enjoy it, and relax.

## Come F.I.S.H.ing with Manada Conservancy

How healthy is your stream? Come F.I.S.H.ing with Manada Conservancy and Penn State Extension to find out!

**Tuesday, September 8th**  
**6:00PM - 8:00PM**

Dress to get wet! This hands-on outdoor workshop teaches you how to check up on the health of your local stream. We will meet at Swatara Creek Park,

151 South Hanover Street in Hershey and then focus on Spring Creek and Swatara Creek.

Please RSVP to Manada Conservancy at [office@manada.org](mailto:office@manada.org) or (717) 566-4122 .

for more details about the First Investigation of Stream Health program, visit <http://extension.psu.edu/natural-resources/water/watershed-education/watershed-evaluation/fish>

## Conewago Photo Gallery



*This edition's Photo Gallery features photos from the June 30th Fish Survey, volunteers planting trees at Hershey Meadows in the spring, the Conewago Creek Earth Day Celebration at Aberdeen Mills, and the newest watershed boundary sign.*

## Pond Walk in Schaefferstown

Ponds and lakes are common features of the landscape and provide a source of enjoyment for many residents. The management of these water resources can be challenging. Join Penn State Extension for a brief presentation on common pond management problems and strategies, followed by a group discussion and a walk along two ponds.

Participants are encouraged

to bring plant and algae samples from your own ponds to be identified. Plant and algae samples should be brought in sealed plastic bags or bottles to be identified. Photos of pond issues can be brought instead of samples for identification as well.

The pond walk will be held on **August 25 from 6:00 PM - 7:30 PM at the Red Rose Chapter of the Isaak Walton League at 26 Sportsman Lane, Schaefferstown.**

This is a free event but registration is required. To register or for more information visit: <http://extension.psu.edu/natural-resources/water/>



## Practice Spotlight: New Research on Cover Crops (taken from an article by Maya Yakobi, PSU AEC)

Pennsylvania farmers are innovative by nature and by necessity. Providing meaningful metrics to these innovations is among the prime objectives of the active team of cover crop researchers at the College of Agricultural Sciences.

This team, made up of faculty, students, extension educators, and collaborating farmers from across the state, is focusing their multi-year study on designing cover crop mixtures that are multipurpose. But the work doesn't stop at design. Their goal is to determine agronomic, environmental and economic benefits and costs of these mixtures within an organic corn-soy-wheat crop rotation.

The premise of the Penn State research is that, by planting multiple species, farmers can get more from the cover cropping window than just one ecosystem service. Researchers are studying mixes of up to six cover crop species. The mixes are designed to give a variety of functions farmers want, such as nitrogen management, weed suppression, and erosion control. Each combination of species is assessed for its ecosystem services and the associated economic benefits and costs.

Now, four years into the project, the evidence is emerging to support high diversity cover crops. He describes these cocktails of cover crops as a form of insurance for farmers.

Insurance that acts as a buffer against the year-to-year and field-to-field variability which farmers experience. But it's not the number of species, that determines the benefits in most cases, it is the farmer's management. For instance, a farmer might need to make modest changes to farm conditions to reduce the risk that one of the six species will dominate. Small changes like these, according to the research, make all the difference.

For more information and to follow continued progress of Penn State's cover crop researchers, visit their website, <http://agsci.psu.edu/organic/research-and-extension/cover-crop-cocktails>.

## Tri-County Conewago Creek Association is looking for volunteers



The Tri-County Conewago Creek Association had another great tree planting season this spring and would like to invite you to join them for some more tree planting and buffer maintenance projects this fall. There are not any dates set yet, but

they will likely take place on Saturday mornings in October and November. Email the Association's president, Stewart, if you would like to help out, [sawmee@rocketmail.com](mailto:sawmee@rocketmail.com).

The watershed association is also offering free evergreen trees to local landowners. The tree seedlings are well established and are 2-4 feet tall. They are in pots and easily transferable. They are currently being watered

frequently and will hold up fine until the fall planting season. The species are White Pine and Norway Spruce. Contact Stewart for more info@ [sawmee@rocketmail.com](mailto:sawmee@rocketmail.com) or call (717) 341-5301 (leave detailed message).

The Tri-County Conewago Creek Association has ambitious goals and lots of potential projects but is in need of more members. Please consider joining this group. More information can be found at [www.conewagocreek.org](http://www.conewagocreek.org).

Community working together for a restored Conewago.

## CONEWAGO CREEK INITIATIVE

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**The Conewago Creek Initiative is a project of Penn State Cooperative Extension made possible through funding by the National Fish and Wildlife Foundation and the Foundation for Pennsylvania Watersheds**



**The Conewago Watershed Community has envisioned a future that establishes the restored Conewago and its tributaries as a centerpiece of pride and a treasured asset in a rural landscape.**

**This vision includes a strong agricultural community and productive farmland, community recreation areas and vibrant, well planned communities. Pristine landscapes will be protected while providing sustainable uses of natural resources, clean water and streams, and educational opportunities for generations to come.**



## Calendar of Events

**F.I.S.H. Training**  
September 8, 6-8 PM  
151 South Hanover St, Hershey  
\* registration required

[www.facebook.com/  
ConewagoCreekInitiative](http://www.facebook.com/ConewagoCreekInitiative)

**Right of Way Management  
Workshop**  
August 28, 8:00 AM  
Farm & Home Center,  
Lancaster  
\* registration required

**Pond Walk**  
August 25, 6 - 7:30 PM  
26 Sportsman Lane,  
Schaefferstown  
\* registration required

