

EECO

Environmental Education Council of Ohio



Spring 2023

Benjamin Logan Environmental Science Club

By Bruce Smith

Trout, indeed, are special fish, and trout fishing (and trout rearing) at Benjamin Logan Schools is alive and well. Six members of the TU Mad River Chapter visited the campus in February to provide instruction in fly tying and fly casting to students in the Benjamin Logan Environmental Science Club.

Tom Allen and Sam Hanna provided fly casting instruction. The students learned the basics using a practice rod to establish rhythm and then progressed to an 8-foot fly rod. Taking advantage of the high ceiling in the high school commons, many of the students became proficient enough to consistently hit the target laid out for them. If only the commons floor was a deep pool with a six pound rainbow responding to their casts.

Fly tying vices were set up at tables in the commons. Students created wooly buggers under the tutelage of Kevin Ramsey, John Davis, and Mitch Tucker. The students learned that flies could be created to mimic whatever the fish are feeding on at the moment.

At another station, Pam Allen taught the students how to identify macroinvertebrates in order to assess the health of an aquatic ecosystem. In addition, the ESC members discussed the importance of the green corridor that should

line a healthy stream, the riparian zone. Each student received an Ohio Scenic Rivers Activity Book courtesy of the Ohio Department of Natural Resources.

Due to its special status as a cold water ecosystem, both brown trout and rainbow trout are found in the Mad River. For more than ten years, Benjamin Logan Schools have participated in a Trout Unlimited sponsored program known as "Trout in the Classroom."

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Save the Date

Annual Student Wildlife Research Symposium

April 13, Deer Creek State Park

<https://eeco.wildapricot.org/>

EECO Annual Conference

April 13 - 16, Deer Creek State Park

<https://eeco.wildapricot.org/>

OEEF Letter of Intent Deadline

July 8

www.epa.ohio.gov/oeef

OEEF Grant Submission Deadline

July 15

www.epa.ohio.gov/oeef

Environmental Education for



The 56th Anniversary of the EECO Annual Conference

April 13 -16, 2023
at Deer Creek State Park Lodge

Please join us for a fun, hands-on, and outstanding professional development opportunity!

<https://eeco.wildapricot.org/>

Graduate credit is available

Thursday Student Wildlife Research Symposium

Join high school students and teachers from around Ohio as they present their wildlife and habitat research projects in this fourth annual research symposium. There are half and full day registration options.

Friday educational workshops and field trips

Friday Night Keynote: Marci Lininger

Marci Lininger currently works for the Ohio Department of Transportation as the District 6 Environmental Coordinator. Marci has worked in the field of wildlife several years having experience in research, endangered species, transportation ecology, and landscape habitat restoration. In addition, she has studied the use and implementation of wildlife crossings in the State of Ohio including the use of strategic roadside habitats that enhance use and crossing capabilities. In addition to her regular duties, Marci serves as the Director for the Ohio Pollinator Habitat Initiative, which is a statewide network of partners who work to increase pollinator awareness and hands on habitat creation throughout the State, and also sits on the board for the Ohio Wildlife Management Association.

Friday evening Open Space: Have you ever had a topic that you would like to discuss at an EECO Conference? Great! Bring your topic ideas and your expertise to the EECO Open Space! A great place for people to share issues and solutions around Environmental Education, Outdoor Education, and Nonprofit/small organizations.

Saturday Sessions: morning and afternoon

Saturday Keynote: Dr. Marijke Hecht

As environmental educators, we confront eco-anxiety daily. We also experience wonder and awe in the persistent beauty of the world. How can we foster eco-hope within ourselves and the learners we work with through a practice of radical imagining and community action that helps to create new possible futures?

Saturday EECO Kids Conference: On Saturday, while you are attending EECO conference sessions, your child/children can, too! Like our adult attendees, they will CONNECT with new friends in a positive and supportive setting. This is a fabulous opportunity to enjoy the conference and begin a family tradition for your children to GROW into our future EECO Leaders, all while enjoying the amenities of the state park! Ages 6 and up are welcome!

Many thanks to our Conference Sponsors, which include:



Benjamin Logan Continued

Benjamin Logan teachers Spencer Reames and Bruce Smith obtained initial funding through the Ohio EPA to purchase 55-gallon aquaria, one for each building, and special chiller units that provide the low temperature high oxygen content water required by trout. Each year, TU members arrive on campus with trout eggs from various western states via the state hatchery in London, Ohio. Brown trout eggs arrive in the fall, and rainbow trout eggs arrive a few months later in early winter. The eggs hatch in the aquariums and the students in each building care for the newly hatched alevin. As the trout grow and develop, the students monitor water quality to maintain the conditions that the trout need in their natural ecosystem. The following spring, the fingerlings are released, at the direction of the Division of Wildlife, into a tributary of the Mad River in West Liberty.

The Environmental Science Club is cosponsored by the school district and the Logan County Land Trust and is in its 5th year of operation. Approximately forty students from fourth through sixth grade participate in activities weekly. The club hosts guest speakers, conducts learning activities such as the dissection of owl pellets, and participates in service projects such as the establishment of a permaculture area in Ricketts Park in West Liberty. The Environmental Science Club is directed by Ryan Kerns, Spencer Reames, Bruce Smith, and Bob Stoll. For more information about the Logan County Land Trust, visit <https://www.logancountylandtrust.org/>

Water Industry Career Panel: Virtual

April 6th from 6:00-7:00 PM

This virtual career panel will feature three professionals from various sectors of the water industry. Panelists will share about their day-to-day work, how they got their start in the water industry, and why they are passionate about the water field! An overview of the water industry will also be provided to highlight different opportunities and organizations. Attendees can ask questions during the panel and speak directly with panelists during breakout room Q&A sessions.

We will hear from Taylor Carnahan, PE, Project Engineer at Stantec Water Group, Billy Fagan, Ph.D., Process Engineer at Black & Veatch Water Technology Group, and Elizabeth Hiser, Stream Restoration Ecologist at Cleveland Metroparks Natural Resources Division.

Register: <https://www.eventbrite.com/e/careers-in-water-series-spring-2023-tickets-596036359797>



Passport to Fishing

Any adult, group, or conservation club who has a sincere interest in taking kids fishing should consider becoming a certified First Cast (Passport to Fishing) instructor. First Cast is a one-day instructor training program that qualifies individuals to become ODNR Division of Wildlife certified fishing instructors, like a hunter education instructor.

2023 Instructor Training

Spring Valley Education Center

April 22 from 9am – 4pm.

Participants are asked to bring a lunch and to dress comfortably. The class requires the instructor candidates to complete and pay for a background check prior to the class at the following link: https://odnra-quatics.quickapp.pro/apply/applicant/start?_ref=qap_session_06cc99bd7ab6af16f3c1ad89970436fcbc81b-66c7869f83f05941162b469a00f

By becoming a certified instructor, you will be able to help reconnect students with the outdoors through fishing. Resources available include grants, equipment, brochures, and training.

Registration and questions pertaining to this specific training can be directed to Jordan Skates jordan.skates@dnr.ohio.gov.

For additional class information and other educational opportunities, visit wildohio.gov

Passport to Fishing was developed by the U.S. Fish & Wildlife Service and adopted by the Recreational Boating and Fishing Foundation. Trainings teach volunteers the basics of fishing and how to run a four-station fishing program with a fishing event. These instructors then go back to their communities with a written curriculum and training aids to teach beginning anglers the basics of fishing.



PROJECT WILD'S EARTH MONTH WEBINAR SERIES

For formal and non-formal educators



KERRY WIXTED
AMPHIBIAN & REPTILE AND
INVASIVE SPECIES MANAGER, AFWA

April 5 3:00-4:00 p.m. ET
Scales and Slime: Exploring
the Roles of Amphibians and
Reptiles



JACOB BLANDFORD
CLIMATE ADAPTATION
MANAGER, AFWA

April 12 3:00-4:00 p.m. ET
Nature-Based Solutions for People
and Wildlife



MEAGHAN GADE
ENERGY AND WILDLIFE
MANAGER, AFWA

April 19 3:00-4:00 p.m. ET
Renewable Energy Development



KALINA VATAVE
AGRICULTURE POLICY
MANAGER, AFWA

April 26 3:00-4:00 p.m. ET
How Soil Health Impacts a Greater
Ecosystem

[www.fishwildlife.org/
projectwild/
project-wild-resources/
earth-month-2023](http://www.fishwildlife.org/projectwild/project-wild-resources/earth-month-2023)

www.fishwildlife.org/projectwild/project-wild-resources/earth-month-2023

Ohio Lottery and ODNR to Award Deserving Teacher

The Ohio Lottery, in partnership with the Ohio Department of Natural Resources (ODNR), has announced the Teacher Appreciation Week Field Trip Giveaway. One lucky Ohio teacher will win a field trip for their entire class to learn and experience the outdoors with the help of ODNR experts.

Nominations are accepted by the 10th of each month through an online submission form on the Ohio Lottery website.

One teacher and their class will receive a field trip to an ODNR property, with all transportation costs covered. ODNR properties include state parks, forests, nature preserves, wildlife areas, and much more. The winning teacher will be contacted by a Lottery representative in May.

The Partners in Education program recognizes Ohio students, teachers, and schools for outstanding performance and achievement. Based on the nominations received, one teacher and one student from every region are recognized monthly, September through May, either as an Academic All-Star or as a Teacher of the Month.

Contact the Ohio Lottery with questions about Partners in Education.

[https://www.ohiolottery.com/
About/Partners-in-Education](https://www.ohiolottery.com/About/Partners-in-Education)

Support EECO

...by making a donation

Would you like to help further environmental education in Ohio? Consider contributing an amount of your choice to EECO. All donations are tax-deductible and will help increase awareness of environmental issues in Ohio. Find out more at <https://eeco.wildapricot.org/support>

Other ways to support EECO:

Goodshop. Shop hundreds of popular retailers at [Goodshop](https://www.goodshop.com/); purchases will benefit EECO.

With office supplies from our [amazon wishlist](https://www.amazon.com/s?ref=odn_aod_rsel)



Ohio Environmental Education Fund

The OEEF was created by the General Assembly in 1990 to enhance Ohio citizens' awareness and understanding of environmental issues. It is administered by the Director of the Ohio Environmental Protection Agency (Ohio EPA) and provides approximately \$1 million annually in grants to support environmental education efforts within the state of Ohio. The OEEF derives its funds from one-half of the civil penalties collected from violations of Ohio's air and water pollution control regulations. <https://epa.ohio.gov/oeef/>

Grant Applications

The Ohio Environmental Education Fund (OEEF) invites applications for mini grants (\$500 - \$5,000) and general grants (\$5,000 - \$50,000) for education projects targeting pre-school through university students and teachers, the general public, and the regulated community. Prospective applicants can start the application process by opening an account in Ohio EPA's eBusiness Center at <https://ebiz.epa.ohio.gov/>

Ohio EPA encourages OEEF applicants to discuss their proposal ideas with OEEF staff members before completing their applications. OEEF staff members will be happy to provide a pre-review of draft applications as they are under development in the online grant service.

Electronic Letter of Intent Deadline is due by 5:00 p.m. on Thursday July 10th.

Application Deadline is 5:00 p.m on Thursday July 17th.

Grant Writing Workshops

The Ohio EPA Office of Environmental Education typically offers grant writing workshops around the state throughout the year. If interested in finding out more, please contact Dennis Clement at dennis.clement@epa.ohio.gov

- Grant Writing 101: Finding the Right Funder. Prospecting tips to help you identify foundations, corporations, and government grant programs, and how to approach different kinds of grantmakers.
- Grant Writing 102: Writing a Winning Proposal. How to avoid common mistakes applicants make, and develop realistic objectives, activities, and budgets. OEEF will be referred to during this session.

Upcoming Grant Writing Workshops

Registration is required for these FREE workshops at dennis.clement@epa.ohio.gov or call 614-644-2048 for additional information. **Registration is by e-mail only.** When registering, please include your name and contact information (e.g., phone number) where you can best be reached.

The deadline to register will be the Friday before each workshop or until the workshop is full at 30 participants.

Lunch will not be provided.

April 27, 10:00 AM - 4:00 PM
Johnny Appleseed Metropolitan Park District
1682 Slabtown Rd, Lima, OH 45801

May 25, 2023, 10:00 AM - 4:00 PM
Ohio EPA, Northeast District Office
2110 E. Aurora Rd. Twinsburg, Ohio 44087

Thursday, September 14, 2023
10:00 AM - 4:00 PM
Pickaway Soil and Water Conservation District, Pickaway County Service Center
110 Island Rd. Circleville, OH 43113

October 5, 2023, 10:00 AM - 4:00 PM
Muskingum County Public Library
220 N. Fifth St. Zanesville, OH 43701

Ohio Environmental Education Fund

New Mini Grant Awards Spring 2023

For the spring 2023 cycle, the OEEF awarded mini grants to the following five projects for a total of \$23,364.

Lucas Soil & Water Conservation District, "Let's Be Clear: Every Drop Counts," S-23M-012, \$4,200

Lucas County, Audience: Pre-school to University (Grades 2-4 and 5-12)

Contact: Patrick Troyer, ptroyer@co.lucas.oh.us, 419-280-6827.

Ohio's soils, wetlands, & drinking water resources are under constant threat due to nutrient overloading, erosion, toxic chemicals, as well as other sources of non-point pollution. Education is critical to show citizens of all ages the devastating effects that pollution has on our environment, solutions to mitigate pollution issues, and how we all play an individual part in the health of our water resources. This project seeks to provide two educational tools: the Wetlands and the Hazardous Waste Enviroscope Models. These models will be used to give a visual and bring awareness to the important functions of wetlands, the seriousness of contamination by various hazardous chemicals, and the solutions that can be employed to help in addressing the problems presented by wetland loss or solid waste contamination of our soil and groundwater resources. Programs have the potential to reach 5,000 students and 200 educators in the county.

Hamilton to New Baltimore Groundwater Consortium, "Community Education on Water Use and Source Water Protection Inside and Outside the Home," S-23M-013, \$5,000

Butler County, Audience: General Public

Contact: Tim McLelland, tim.mclelland@hamilton-oh.gov, 513-383-3162.

The Consortium, founded in 1967, endeavors to add to existing educational signage along the Great Miami River Bike Path to raise awareness about the importance of protecting the local drinking water source through best management practices of salt usage. We also want to send packages directly to homes in neighborhoods surrounding Water Works Park in Fairfield, Ohio where the bike path begins. Project involves 500 homes that will be contacted to be made aware of the new education sign in their local park and give them the opportunity to register to receive the educational package. The packages will include cups to measure the necessary amount of salt for a given area so homes can be conscientious users and reduce overuse. Another important tool in the package will be chloride testing kits from the Salt Watch program run by Izaak Walton League of America. This will spark enthusiasm in the community to get involved with source water protection and provide an active learning experience about the impact of salt.

Miami University – Geography, "Runoff and Watershed Education to Preble County Landowners," S-23M-015, \$4,164

Butler and Preble Counties, Audience: General Public

Contact: Bart Grudzinski, 773-308-3353, grudzibp@miamioh.edu.

To increase farmer and landowner connectedness to their watershed, Miami University and Hueston Woods State Park will be partnering with Preble County Soil and Water Conservation District (SWCD) to add an educational element to their annual stakeholder meeting. This meeting typically draws over 100 participants every year with most of these participants being local farmers. The meeting will be held at the Hueston Woods Lodge where we will be able to use pontoons (observing all safety regulations) to take participants on the lake to provide interactive discussion of lake condition and connect watershed land use practices with the participants. We would also like to use these funds to purchase a rainfall simulator to show runoff on a small scale to make the connection from field to the downstream lake. This rainfall simulator would then be available for use by Miami University, Preble SWCD, and the Hueston Woods State Park Naturalists for future education events.

Tinker's Creek Watershed Partners, "Telling the Story of Tinker's Creek and Stormwater," S23M-023, \$5,000,

Cuyahoga and Summit Counties, Audience: General Public

Contact: David Jenkins, david@tinkerscreek.org, 330-963-6863.

Tinker's Creek is the largest tributary to the Cuyahoga River, which drains directly into Lake Erie. This grant will help Tinker's Creek Watershed Partners (TCWP) to grow public education and awareness in the community around the creek's history and role in stormwater management. Project has the potential to reach 21,000 Twinsburg and Walton Hills residents.

CIPTT, Inc. "Bees, Trees & Sunflowers: Mapping Ecosystem Changes & Environmental Hazards," S23M-020, \$5,000.

Cuyahoga County, Audience: Pre-school to University (Grades PreK – 12 and IEP)

Contact: Danielle White, mustardseedworks@ciptt.net, 216-313-4136.

Disabled students are adversely affected by little understood environmental hazards that can affect mental health. This request supports Phase 2 of an environmental educational program for disabled youth to conduct comprehensive mapping of the E. 39 garden ecosystem after introducing bees, sunflowers, and fruit trees last year (Phase 1), without realizing how it affected the ecosystem. The data will inform on pollinators and plant selection for the garden and modifications required to the plant irrigation system. Mapping will involve in depth soil tests for hazardous environmental contaminants, testing honey to identify pollinators within 3 miles, identify insects and small animal predators affecting plants, and tagging critical elements. Findings will be compiled in a color-coded map for a Scavenger Hunt game activity to educate disabled students in K-12 on how the environment affects activities and opportunities. Educational materials will come from Project Learning Tree. Project has the potential to reach 185 residents and students.

June 11-16, 2023



Join us at the beautiful FFA Camp
Muskingum on Leesville Lake!

Registration is open at

campcanopy.com

Students who have completed the eighth grade through high school seniors graduating in 2023 are eligible to attend.

Camp Canopy 2023 will explore forests and creeks with sessions focused on **tree ID, insects, fungi, and amphibians.**

ODNR Conservation Teen Advisory Council

The Ohio Department of Natural Resources (ODNR) is looking for highly motivated high school students who are driven by their passion for Ohio's great outdoors to serve on the Conservation Teen Advisory Council (ConTAC). ConTAC provides a unique opportunity for high school student-leaders from diverse backgrounds across Ohio to work together and contribute ideas to enhance ODNR's youth outreach and program efforts.

What we do:

- Develop innovative and practical ideas that empower youth to be wise stewards of Ohio's natural resources
- Provide feedback on youth-focused strategies, resources, campaigns and programs, and make recommendations to enhance outdoor outreach
- Enact conservation-focused initiatives in our communities
- Explore careers in the natural resources sector
- Develop valuable networking and leadership skills
- Make a difference!

Find Out More: <https://ohiodnr.gov/wps/portal/gov/odnr/discover-and-learn/education-training/contac>

or contact Alyssa Yaple Alyssa.Yaple@dnr.ohio.gov

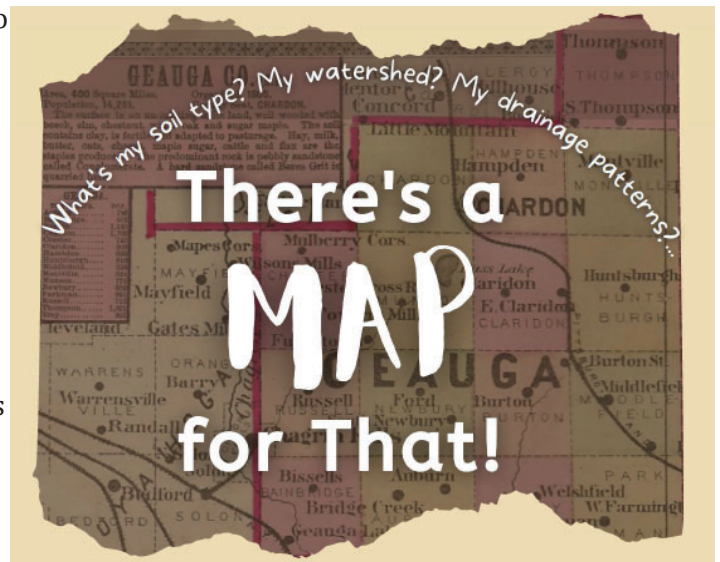
Curious to Learn More About Your Property? There's a MAP for That!

By Gail Prunty, Geauga Soil and Water Conservation District

The recent freight train derailment in the small village of East Palestine has brought our bare-bones connection to natural resources into the limelight of national headlines and the forefront of our minds. In an instant, we could clearly see and strongly feel our fundamental ties to the earth... its soil, water, and air. The unknown consequences of the controlled release and burn-off of toxic chemicals serve as stark reminders of our vulnerable dependency on these resources as the lifelines of our survival. For many of us, we all-of-the-sudden had a lot more questions about the environment in which we live. Perhaps for the first time in a long time, we realized again the importance of understanding where our water comes from, where it goes, and how it moves throughout the region and the planet.

Every day, the staff of Ohio's eighty-eight Soil and Water Conservation Districts (SWCDs) strive to help residents better understand their connection to natural resources and offer guidance on responsible soil and water management. From farming to forestry, waterways to wildlife, plants to ponds, soil to stormwater, and construction regulations to conservation easements, districts assist their local communities and residents with a wide array of land use issues, education, and technical assistance. Ultimately, SWCDs try to help residents find the information they are seeking. If we can't help, we try to connect you to other local agencies that can. Throughout the years, the use of Geographic Information Systems (GIS) and web-based mapping tools have revolutionized our ability to find, interpret, and convey information to our residents. More and more, the growing amounts of online resources continue to make our lives easier in our quest for data and information. However, it can be daunting for many of us to navigate through the maze, or rather – web, to find what we are looking for or even to know these tools exist.

The Geauga Soil and Water Conservation District sought to help empower residents to explore their own properties with this extremely beneficial technology. So last year the district offered a brand-new program entitled *There's a MAP for That!* In collaboration with the Geauga County Auditors Office and the Geauga County Public Library Administrative Center, the program provided an opportunity for residents to learn more about their property using Geauga County's REALink property information system as well as other online resources available. This hands-on, introductory program guided participants through the process of using online resources to investigate and map natural features of parcels. With laptops for all and plenty of resource staff to assist, attendees were able to find information about their own property including soil types, drainage patterns, stream locations, groundwater wells, and watersheds. This program helped them gained independence to find property information for themselves and dig even deeper into topics of interest in the future. The GIS programs differ on a county-by-county level, so be sure to search specifically for your county or contact your Auditors Office or local SWCD for more information. No matter where you live or whatever the reasons you are seeking to explore more, begin your search for helpful tools and remember there's a MAP for that!



Some Online Resources:

USDA Natural Resources Conservation Service Web Soil Survey

<https://websoilsurvey.nrcs.usda.gov/app/>

Community Collaborative Rain, Hail & Snow Network: Volunteer-based source of precipitation data

<https://www.cocorahs.org/>

Map Resources Continued

USGS Stream Stats

<https://www.usgs.gov/streamstats>

USGS National Water Dashboard

<https://dashboard.waterdata.usgs.gov/app/nwd/en/?region=lower48&aoi=default>

ODNR Division of Geologic Survey Water Wells Database

<https://waterwells.ohiodnr.gov/search>

River-Runner Visualization by Sam Learner: Watch where a drop of rainwater travels that hits the land

<https://river-runner.samlearner.com/>

Search your local counties Auditors page for the GIS Viewer.



TOTAL SOLAR ECLIPSE

APRIL 8, 2024

Planning for Spring 2024 Solar Eclipse Educators Resources

The Ohio Department of Education has created a resource page for educators and school administrators on logistics and curricular approaches to educating students and the community about the total solar eclipse, which will be visible in Ohio on April 8, 2024. <https://education.ohio.gov/Topics/Learning-in-Ohio/Science/Resources-for-Science/2024-Solar-Eclipse>

US EPA recognizes Ohio educator with 2022 Presidential Innovation Award

U.S. Environmental Protection Agency, in partnership with the White House Council on Environmental Quality, has awarded the Presidential Innovation Award for Environmental Educators to Amy Boros, a teacher at Hull Prairie Intermediate School in Perrysburg, Ohio.

Ms. Boros pioneered Project PRAIRIE, which comprises seven school districts and 21 elementary and middle schools that have installed or are in the process of installing prairies. She encourages students to take charge of their own learning by gathering data on local species and monitoring local populations through participatory science projects, such as Bumble Bee Watch and Monarch Watch.

"Children are naturally curious and the environment around us harbors so much diversity and opportunity for discovery," said EPA Regional Administrator Debra Shore. "These awards recognize enterprise and leadership – in the classroom and outside its walls. We celebrate these teachers' environmental stewardship."

"I am extremely honored to receive this prestigious award for environmental education," said Amy Boros, awardee. "Introducing students to environmental awareness and conservation while teaching them how they can make a difference is very rewarding. It is an honor to be recognized for my work in environmental education with elementary students."

The Presidential Innovation Award for Environmental Educators award was established by the 1990 National Environmental Education Act. It seeks to recognize, support, and bring public attention to the outstanding environmental projects performed by teachers who go beyond textbook instruction to incorporate methods and materials that utilize creative experiences and enrich student learning in K-12 education. The White House Council on Environmental Quality, in partnership with EPA, administers this award.

This year, 11 educators from across the nation received the 2022 Presidential Innovation Award for Environmental Educators, and two educators were recognized with an honorable mention distinction. Winning educators demonstrated leadership by integrating environmental education into multiple subjects and using topics such as climate change, waste management, water quality, wildlife conservation, STEM education, and school gardens.



Amy Boros, a teacher at Hull Prairie Intermediate School in Perrysburg earned the Presidential Innovation Award for Environmental Educators.



Thursday April 13, 2023
at Deer Creek State Park Lodge
10 am - 3:30 pm

The Student Wildlife Research Symposium kicks off the annual EECO Conference. You will not want to miss this truly inspiring event! This is a great opportunity to hear about research students are doing, and how their mentors are guiding them through the process. This is a unique event where students learn from students, educators learn from educators, and everyone is inspired and filled with hope for the future. With these students, the future looks brighter!

Keynote: Jeff Baker-ALPHA Program How to Increase Student Interest by Offering Lessons Involving Real Science

Jeff teaches students who come through the court system. Therefore, all of them are at-risk and credit deficient. After studying more about scientific inquiry during his MAT in biology studies at Miami University of Ohio, he began to change the way he taught science from giving information to asking questions. He now has two published papers in the American Biology Teacher based entirely on student-driven studies using real scientific investigation. He has found the key to student interest is allowing them the freedom to have input into the lesson design.

Registration is \$40 (Includes lunch) Presenter's and Advisor's Registration is covered by a grant. Must use a CODE for registration. **Student registration is FREE.** Register online at <https://eeco-online.org/event-5129418>

College Credit (if combined with EECO Annual Conference) and Contact Hour Certificates.

The symposium is sponsored by the ODNR-Division of Wildlife, EECO-the Environmental Education Council of Ohio, and the Ohio Academy of Sciences.



Volunteers Needed for Ohio Sandhill Crane Survey

A volunteer-driven sandhill crane survey to locate breeding birds in Ohio is seeking observers to help with the count on Saturday April 15. The Ohio Department of Natural Resources' Division of Wildlife is coordinating this project as part of the Midwest Crane Count with the International Crane Foundation and Ohio Bird Conservation Initiative.

Ohioans interested in volunteering should contact a county coordinator: <https://obcnet.org/get-involved/ohio-crane-count/> The time commitment includes the time it takes to scout an area, a virtual training, and the morning count. Birders of all abilities who can identify a sandhill crane can participate. A vehicle is also required. Participation in pairs and some experience using the eBird community science platform is preferred.

The sandhill crane is listed as threatened in Ohio, but their population has increased in recent years. They can be secretive during their nesting season and the count is an effort to better track Ohio's breeding population.

This year's count will occur in Ashland, Columbiana, Delaware, Erie, Franklin, Fulton, Geauga, Hardin, Holmes, Knox, Lake, Licking, Logan, Lorain, Lucas, Mahoning, Marion, Morrow, Ottawa, Pickaway, Portage, Richland, Sandusky, Stark, Summit, Trumbull, Wayne, Williams, and Wyandot counties. These counties have habitats where sandhill cranes typically nest.

Ohio's cranes are seasonal residents that migrate south for the winter. They feed during daylight hours on grain, insects, birds, small mammals, amphibians, and reptiles. They migrate at high elevations in large flocks, often composed of hundreds of birds. The range of these native birds extends from Mexico and Florida into Alaska and Canada, depending on the season.

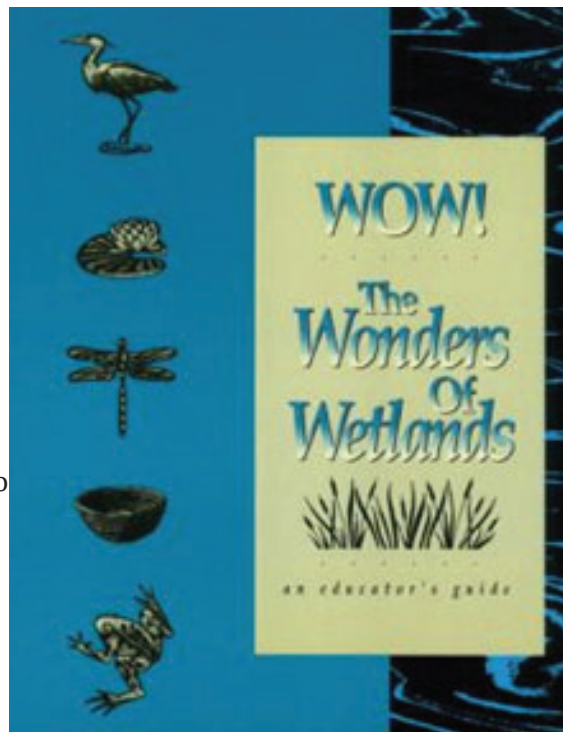
The Wonders of Wetlands (WOW) Curriculum: Let's Get Mucky

By Dennis Clement, Ohio EPA, Office of Environmental Education

Environmental Concern, Inc.

Environmental Concern Inc. (EC) is a 501(c)3 not for profit corporation, that is dedicated to working with all aspects of wetlands – the most productive and fascinating ecosystems in the world and is the creator/owner of The Wonders of Wetlands Guide.

After 50 years of providing wetland services in the Chesapeake Bay Watershed and beyond, we continue to broaden our partnership efforts. We have made significant progress in the ongoing effort to improve the water quality in the bay, yet there is still much work to be done. Protecting our wetlands is vital! At our 7-acre facility at the head of the San Domingo Creek in St. Michaels, MD, our native plant nursery propagates and grows over 120 native wetland and upland plant species. In addition to supplying shrubs and emergent grasses to wholesale and retail buyers, the nursery also supplies wetland plants for EC's restoration and education projects. Since EC's founding in 1972, the restoration division has restored over 50 miles of shoreline in the Chesapeake Bay Watershed using the bioengineering protocol developed by our founder, Dr. Ed Garbisch. Over the years, engineers and scientists at EC have refined this technique, a process that has been proven over time as an effective long-term solution to control shoreline erosion. In addition, the restoration team also constructs and restores wetland facilities to improve wastewater treatment and stormwater management. EC's education department works to increase understanding of, foster appreciation for, and encourage the stewardship of wetland systems. This is accomplished through materials/curriculum development, schoolyard habitat development, and innovative outreach programs.



Wetland Education and WOW Guide

Education workshops that involve WOW are educational, fun, and truly can get really messy. Students enjoy digging into wetland soils and getting dirt under their nails, taking water samples to see the smallest of organisms under a microscope, and identifying plants. Be careful because you never know what critter you may find or what might jump out at you. One of the fun, interactive activities from the guide that I enjoy is called Wetland Metaphors. With this activity, you compare common household objects and how they each relate to wetlands or wetland surroundings (e.g., kitchen strainer = wetlands filter water). The WOW Guide is an acclaimed, comprehensive,



Items picture above are used for the WOW Activity Wetland Metaphores.

interdisciplinary curriculum guide for educators of grade levels K-12 focusing on the three definitive wetland parameters: water, soil, and plants. More than 50 fun and effective learning activities for both indoor and outdoor use are included in the 348-page guide. WOW! activities are correlated with the National Science Education Standards (NGSS) and aligns to the Ohio Academic Content Standards for Science. You can test your knowledge on wetlands by taking their test and then check your answers with the provided answer key by Environmental Concern, Inc. Guides are currently OUT OF STOCK on the Environmental Concern, Inc. website. However, Project WET Store has copies of the guide IN STOCK and currently at a reduced price \$7.95 reduced from \$21.95. The Project WET Store also offers a fun and educational interactive Celebrate Wetlands KIDS Activity Booklet.

Water Management Association of Ohio Annual Student Scholarships

ATTENTION college students

We invite you to apply for a \$1,000 Water Management Association of Ohio (WMAO) Scholarship through the Columbus Foundation.

Each year, we offer one undergraduate and one graduate scholarship to recipients who are students with an academic focus on water resources pursuing a degree at an Ohio college or university.

Check out their informational video for guidance. This along with more information and past recipients can be found on the WMAO website: https://wmao.org/content.aspx?page_id=22&club_id=259593&module_id=348925

Deadline to submit an application online is April 15, 2023.

If you have any questions, please contact Dennis Clement (dennis.clement@epa.ohio.gov), Chair of the Education Committee.

Join Us

By joining EECO, you will receive:

- A network of professional educators exchanging new ideas, resources, and techniques in EE
- An informative quarterly EECO newsletter
- Periodic email newsletters with links to events, job opportunities, and updates about EE in Ohio
- Outstanding EE publications and resources
- Annual statewide and regional conferences
- Regional professional development workshops
- Special member rates for conferences, workshops, and publications as specified
- An opportunity to participate in a variety of committees & activities to promote innovative EE in Ohio
- Peer recognition of professional efforts through EECO's Awards program

<https://eeco.wildapricot.org/joinus>

Educators' Week: Life Beyond the Glacier

June 4-9, 2023

Shawnee State Park

Are you an educator? Do you want to connect with other educators who have a passion for their work? Join formal and non-formal educators in their quest for new knowledge and teaching techniques during Educators' Week in beautiful Scioto County, Ohio. Educators' Week provides opportunities to gain an understanding of topics related to state academic standards by being immersive in a natural setting and creating a supportive learning environment. Attend sessions that will explore hands-on best practice strategies for introducing people to the natural world. Learn from top experts on a wide range of cross curricular topics and explore new methods that will enhance your skills as an educator. By the conclusion of this unique, retreat-like conference, you will come away with a renewed sense of wonder, a feeling of community and kinship, and the confidence to share your new knowledge with others.

Cost: \$525. A deposit of \$50.00 is required with registration. This deposit is applied to the total conference cost.

Scholarship: 2023 Scholarship application period will open March 1st and end March 31st. See <https://educatorsweek.com/> for details.

Lodging is included with the cost of registration for the conference. We have reserved a block of cabins so that we can all be together and retain the community atmosphere that is fundamental to the success of Educators' Week

Graduate Credit: Up to 3 hours of graduate credit are available from Ashland University.

Registration and more information: Please go to <https://educatorsweek.com/> to register!



Environmental Career Ambassadors

Environmental Career Ambassadors are environmental professionals willing to make classroom or school career fair presentations for middle and high school grades about their careers and/or provide shadowing, internship, field trip, and scholarship opportunities to Ohio students. <https://eeco.wildapricot.org/eca>

For Schools- If you would like to have a Career Ambassador come to your classroom or event, please contact the EECO Executive Director director@eeco-online.org.

For Environmental Professionals - If you would like to be more involved by volunteering to be a Career Ambassador, please contact the EECO Executive Director director@eeco-online.org. You can also check out the the Environmental Professionals Network (EPN) hosted by the School of Environment and Natural Resources at The Ohio State University. <https://epn.osu.edu/>.

The Environmental Education Council of Ohio is in search of leadership for various committees and tasks. We also are looking for Environmental Career Professionals that can “chat” with students about their careers. If you would like more information please contact the EECO Executive Director at director@eeco-online.org

EECO is also seeking volunteers to assist at the Annual Conference, April 13 - 16. If you are interested in helping at the check -in, being a driver for a fieldtrip, or assisting in the silent auction, please contact Lynn White whitelr@butlercountyohio.org.

Water Quality Monitoring Credible Data Program Level 1 Training

Broken Timber Outdoor Education Center

42722 St. Rt. 7 Hannibal, OH 43931

Thursday, May 18, 2023, 8:00 a.m. – 4:30 p.m.

This training will be hands-on with all participants getting in the water to learn techniques for biological, physical, and chemical water quality monitoring. This is an entry level training intended for participants who desire basic water quality information. Level 1 was designed with educators in mind and may be appropriate for Soil & Water Conservation Districts, Park Districts, Health Departments, or anyone with an interest in Ohio water quality. The purpose of Level 1 is primarily to promote public awareness and education about surface waters of the state. Approval of Level 1 QDC will be automatic by the Ohio EPA after completion of this training. Healthy Water, Healthy People Curriculum will be used in this training.

Please bring with you: waders or shoes you don't mind getting wet and wear old clothing for this training.

Cost: There are no fees associated with this training other than your own traveling costs. Monroe SWCD will be our local hosts. They will be providing doughnuts and coffee in the morning and a catered lunch around Noon. Please note any dietary concerns on the registration form.

For more information, contact Dennis Clement, Ohio Environmental Protection Agency, Office of Environmental Education at dennis.clement@epa.ohio.gov 614-644-2048.

Register on or before May 12, 2023 <https://www.eventbrite.com/e/training-water-quality-monitoring-credible-data-program-level-1-oe-tickets-484016876507> Workshop is limited to 20 participants.

Contact EECO

Partnerships strengthen EE in Ohio, leading to a more environmentally literate population and a healthier environment. You are welcome to become a partner and friend to EECO. Please contact any of our regional directors, officers, advisors, and board members to find out more about becoming a part of EECO.

Regional Directors

Region 1 - Central Ohio

Linda Pettit, Franklin SWCD
lpettit@franklinswcd.org

Region 2 - NW Ohio

Jennifer Elsworth, Metro Parks of the Toledo Area
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Region 3 - NE Central Ohio

Sheila Cubick
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Region 4 - SW Central Ohio

Vacant

Region 5 - SW Ohio

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Region 6 - N Central Ohio

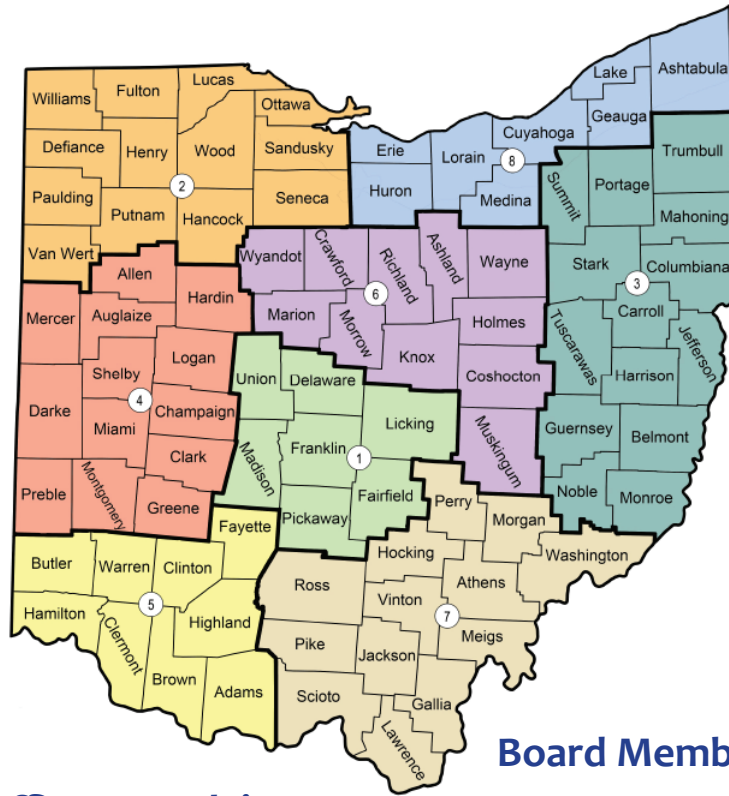
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Region 8 - NE Ohio

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