

Riffles & Pools

Office of Water Quality

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Photo Courtesy of IDEM

Greetings Riverwatchers!

Happy 2024! We are off to a great start to the year with a full page of workshops (see page 5 or go to the [calendar](#)). I would be remiss if I did not acknowledge the success of our 2023 season. Last year, 36 workshops were held around the state. *This is the highest total of workshops since 2013!* Of those workshops, eight were advanced trainings involving an in-depth look at *E. coli* and our sampling techniques for the bacteria. Two workshops were instructor trainings; we added nine new instructors to our team of talented facilitators. A new ArcGIS map was published to display the locations of instructors (and loaner kit sites). Workshop attendance was over 260 participants. I personally engaged with over 450 K-12 students at outreach events. I know our instructors led outreach for countless other students in their own parts of the state.

I hope to continue last year's momentum into 2024. At least two instructor trainings will be held, in addition to an Instructor Gathering in April. A new advanced training will be unveiled in the form of a macroinvertebrate workshop. Additional 2024 goals include a series of training videos for volunteers, a Hoosier Riverwatch Junior curriculum for youth outreach, and new data visualization tools on our website. The weather may be cold and snowy now, but there is nothing but blue skies for Hoosier Riverwatch!

Dylan Allison
Hoosier Riverwatch Coordinator

Winter 2024

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Upcoming Workshops

- March 15 – Indianapolis (Instructor Training)
- March 22 – Bloomington (Instructor Training)
- March 25 – Chesterton
- March 26 – Chesterton (Advanced *E. coli* Training)
- April 5 – Greenwood
- April 26 – Indianapolis
- April 29 – La Porte
- April 30 – La Porte (Advanced *E. coli* Training)
- May 3 – Greenwood
- May 22 – Brownsburg
- June 7 – Greenwood
- More Coming Soon!

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Salamander Success in Indiana

A collective effort of multiple organizations saw an exciting milestone last year when a juvenile Hellbender salamander (*Cryptobranchus alleganiensis*) was documented in the Blue River in south-central Indiana. The achievement involved everything from animal breeding, habitat restoration and community outreach. The success is not only crucial due to the salamander's endangered status, but also to the fact that a juvenile had not been reported to the state since 1983. Although adult Hellbenders have been documented in the last 40 years, the lack of younger individuals points to an eventual conservation crisis. The species has seen a decline for decades due to factors such as habitat loss, poor water quality, a slow maturation rate and increased predation. However, this discovery may mark a turnaround for the threatened species.



At over two feet in length, Hellbenders are the largest salamander in North America. While most salamanders become terrestrial after metamorphosis, Hellbenders retain an aquatic lifestyle throughout their life. Although they possess lungs, they absorb most of their oxygen through their skin. They prefer cool, well-oxygenated streams with a sediment-free streambed. These amphibians will defend their territory, which usually consists of the small spaces under rocks, emerging at night to hunt crayfish, small fish, and

other amphibians. Hellbenders do not reach maturity until 7-8 years old. Females will produce eggs in nests established by males, who will then guard the eggs until hatching. Because the species requires clean water, maintaining best management practices to reduce pollution loads is crucial.

Fortunately for the Hellbender, there are many partners in the effort to reestablish the amphibians. The *Indiana Hellbender Partnership* is a collaboration between Indiana DNR, Purdue University, IDEM, the Indianapolis Zoo, the U.S. Fish & Wildlife Service, and other local organizations. With the help from its conservation partners, Purdue's *Help the Hellbender Lab* has raised and released around 500 immature Hellbenders into the Blue River. Through grant funding, the project looks to continue through 2027 with an additional 500 salamanders released. The hope is that as habitat restoration continues, the Hellbenders can be released into new waterways too. For more info, visit ag.purdue.edu/departments/extension/hellbender.



Hoosier Riverwatch Featured in PBS *Outdoor Elements*

Outdoor Elements is a PBS Michiana (WNIT) show, hosted by naturalist Evie Kirkwood, that explores a variety of natural resources in northern Indiana. The show airs weekly episodes and shorter webisodes which can be found at wnit.org/outdoorelements.



Photo Courtesy of Outdoor Elements

Hoosier Riverwatch instructor, Jan McGowan of St. Joseph County Parks, was able to share her knowledge on aquatic macroinvertebrates and their important role in the ecosystem. Jan set up sampling equipment at Spicer Lake Nature Preserve in New Carlisle, IN. She provided helpful tips for gathering and identifying these critters, while inspiring the exploration of underwater life. Jan referenced Hoosier Riverwatch resources and represented the program well. A big thanks to Jan McGowan! Check out the entire webisode at wnit.org/outdoorelements/s/aquatic-macroinvertebrates.html.



Photo Courtesy of Outdoor Elements

Advanced Training Available

Hoosier Riverwatch offers more than the basic workshop to volunteers. In 2023, eight advanced *E. coli* trainings were conducted. During these trainings, participants take a closer look at the indicator bacteria and its significance in water quality monitoring. Hands-on practice gives volunteers more confidence in collecting, plating, incubating, and counting the coliform colonies. Hoosier Riverwatch Coordinator, Dylan Allison, instructed one of these advanced trainings in Vanderburgh County this past December. He states, "Generally, we hold Riverwatch workshops in the warmer months, but we lucked out with a nice December day. Workshop evaluations were very positive. It was a great opportunity to learn for local SWCD staff, interested community members and even myself."



In 2024, a brand-new advanced training will be available to volunteers. The program is adding an advanced macroinvertebrate workshop that will take an in-depth look at aquatic organisms. In basic workshops, the level of identification typically ends at the Order taxonomic level. In the new training, participants will look closer, exploring the family or genus levels. Sampling for macroinvertebrates has been a long-time favorite activity in basic workshops. This training will open a new door for individuals especially interested in the biology of our waterways.



Family: Ephemeridae

- "Burrowing", large mandibular tusks
- Prefer silty/sandy substrates in slower water
- "Fluffy" gills undulate to increase flow for oxygen



Hoosier Riverwatch hopes to continue to add advanced trainings to the program to facilitate continuing education, increase data quality and maintain volunteer engagement. Please note that a basic workshop is a prerequisite for any advanced trainings. You can find advanced trainings on our calendar at hoosieriverwatch.com. If you would like to see advanced trainings offered on specific topics, please feel free to make suggestions to the Hoosier Riverwatch Coordinator at riverwatch@idem.IN.gov.

Mark Your Calendars

Friday, April 15

**Indianapolis, IN – INSTRUCTOR TRAINING
(Must have basic workshop training)**

Indianapolis Public Library, Michigan Road Branch (10 a.m.–1 p.m.)
Instructor: Dylan Allison. Register [here](#) by March 8.

Friday, March 22

**Bloomington, IN – INSTRUCTOR TRAINING
(Must have basic workshop training)**

Karst Farm Park Commons Building (Shelter #6) (10 a.m.–1 p.m.)
Instructor: Dylan Allison. Register [here](#) by March 15.

Monday, March 25

Chesterton, IN – Coffee Creek Preserve (9 a.m.–1 p.m.)
Instructor: Ashley Sharkey. Register [here](#) by March 18.

Tuesday, March 26

Chesterton, IN – Advanced E. coli workshop (Basic training required)
Coffee Creek Preserve (9 a.m.–1 p.m.) Instructor: Ashley Sharkey.
Register [here](#).



Photo Courtesy of IDEM



Photo Courtesy of IDEM

Friday, April 5

Greenwood, IN – Greenwood Nature Center (10 a.m.–4 p.m.)
Instructor Dylan Allison.
Register [here](#) by March 29.

Friday, April 26

**Indianapolis, IN – Indianapolis Public Library, Fort Ben Branch
(10 a.m.–4 p.m.)** Instructor: Dylan Allison.
Register [here](#) by April 19.

Monday, April 29

La Porte, IN – Red Mill County Park (9 a.m.–4 p.m.)
Instructor: Ashley Sharkey. Register [here](#) by April 22.

Tuesday, April 30

La Porte, IN – Advanced E. coli workshop (Basic training required)
Red Mill County Park (10 a.m.–1 p.m.) Instructor: Ashley Sharkey.
Register [here](#).

Friday, May 3

Greenwood, IN - Greenwood Nature Center (10 a.m.–4 p.m.) Instructor Dylan Allison.
Register [here](#) by April 26.

Wednesday, May 22

Brownsburg, IN – Arbuckle Acres Park (10 a.m.–4 p.m.). Instructor: Sarah Wolf.
Register [here](#) by May 15.

Friday, June 7

Greenwood, IN - Greenwood Nature Center (10 a.m.–4 p.m.) Instructor Dylan Allison.
Register [here](#) by May 31.

More Workshops Coming Soon!



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Call Out for Instructors!

Do you have an interest in outreach and engaging with the public? Do you enjoy getting your feet wet and sampling in our streams and rivers? If so, you may be interested in becoming a Hoosier Riverwatch Instructor! Benefits include receiving monitoring equipment from IDEM and an invitation to annual Instructor Gatherings. For more information, reach out to riverwatch@idem.IN.gov or register at hoosieriverwatch.com.



Photo Courtesy of IDEM

IDEM Office of Water Quality Mission

The Office of Water Quality's mission is to monitor, protect and improve Indiana's water quality to ensure its continued use as a drinking water source, habitat for wildlife, recreational resource, and economic asset.

The office achieves this by developing rules, guidance, policies, and procedures; assessing surface and groundwater quality; regulating and monitoring drinking water supplies and wastewater facilities; protecting watersheds and wetlands; and providing outreach and assistance to the regulated community and the public while supporting environmentally responsible economic development.

Hoosier Riverwatch Mission

The mission of Hoosier Riverwatch is to involve the citizens of Indiana in becoming active stewards of Indiana's water resources through watershed education, water monitoring, and clean-up activities. Hoosier Riverwatch is a water quality monitoring initiative sponsored by the **Indiana Department of Environmental Management's** Office of Water Quality.

For more information, go to idem.IN.gov/riverwatch.