



Greetings Riverwatchers!

Happy Summer! The stories of summer often involve water-weekends at the lake, a water balloon battle amongst the neighborhood kids, or growing vegetables in the garden with the help of a new rain barrel. Similarly, this issue shares the stories of summer.

We're celebrating the people and places behind our work: highlighting a U.S. EPA success story that's close to home, inviting volunteer storytelling through NatureConnect™, connecting with youth through summer outreach, and pointing you toward the Pathway to Water Quality exhibit at the Indiana State Fair.

As always, thank you for your enthusiasm, your curiosity, and your willingness to get your feet wet for Indiana's waters. Here's to a summer full of clear creeks, good stories, and continued stewardship.

Dylan Allison
Hoosier Riverwatch Coordinator

Summer 2026

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Aug. 14 – Zionsville

Sept. 18 – Bristol

Sept. 18 – Spencer
Advanced Workshop

Sept. 19 – South Bend

More workshops soon!

Hoosier Riverwatch is
sponsored by IDEM



Streamside Stories

In the last issue, we introduced you to [NatureConnect™](#), an online platform that helps volunteers and organizations stay connected. Through NatureConnect™, Hoosier Riverwatch staff can track the hours they contribute, share updates with the volunteer base, and coordinate collaborations with partner groups. Invitations to the platform were previously emailed to all volunteers, and users must join a project to log hours. To receive another invite or password reset, reach out to riverwatch@idem.IN.gov.

Always looking to improve the volunteer experience, NatureConnect™ is now offering a storytelling function to users. Registered volunteers can now write about their workshop or sampling experience to share with the community. After all, the best part of engaging in community science is the *community*! To share a story, simply click on the 'Recent Stories' on your Project page and submit your piece for approval. You can even share photos! So next time you spot some wildlife or have a great experience, let the community know! Here is an example of a recent shared story:

Workshop Experience - Amazing!

By Susan Page
June 25, 2026

*I attended the workshop at the Purdue Davis AG facility in Farmland, Ind. on June 24. The class was led by Sam Gradle and co-sponsored by the Red Tail Conservancy and Flatland Resources. It was so much fun. We covered discovering the watershed you will be in, riparian zones, and learned how to complete a Citizens Qualitative Habitat Evaluation Index (CQHEI) which covers substrate, fish cover, stream shape, riparian areas, depth and velocity and riffles/runs. We also learned how to calculate river width, depth, surface velocity and discharge. Finally, we covered Chemical Monitoring which includes monitoring for dissolved oxygen, pH, biochemical oxygen demand, orthophosphate, *E. coli*, water temperature change, nitrate and nitrite, and turbidity. We ended the classroom portion discussing macroinvertebrates.*

We spent the first half of the day in the classroom, then in the afternoon, we went out to the stream behind the facility. We netted (and later released) macroinvertebrates, collected them for study, and practiced doing our various sampling tests. What a great group of people and fun experience. I can't wait to start doing water quality monitoring in my town.



Photos Courtesy of Susan Page



NONPOINT SOURCE SUCCESS STORY

Indiana

From Impaired to Thriving: Watershed Efforts Bring Big Branch Fish Community Back to Life

Waterbody Protected

Big Branch, a 4-mile stream within the Mud Creek-Big Branch watershed in Sullivan and Greene Counties, Indiana, has seen significant improvement in its fish community. Local stakeholders began water quality restoration efforts in the greater Busseron Creek watershed in 2010. In 2016, Indiana Department of Environmental Management (IDEM) monitoring revealed a very poor fish community in a 1.27-mile section of Big Branch (INB11F4_03), resulting in its placement on the Clean Water Act Section 303(d) List of Impaired Waters. This degradation stemmed from agricultural runoff and historical pollution sources. Following the implementation of the Busseron Creek watershed management plan across multiple phases, IDEM's 2023 follow-up assessment documented substantial fish community recovery. Based on these positive findings, IDEM now recommends removing this section of Big Branch from the 2026 impaired waters list.

Water Quality Challenge

Big Branch Creek flows through the Mud Creek – Big Branch watershed (051201111504) in Southwest Indiana (Figure 1). The watershed has a landscape primarily of forests, agricultural lands, and hay/pasture areas. Since 2000, IDEM has conducted systematic monitoring of various segments of Big Branch Creek. The Busseron Creek Watershed (0512011115) Management Plan identified the Mud Creek – Big Branch Creek subwatershed as a priority concern area due to elevated turbidity and total suspended solids (TSS) levels. IDEM's 2016 assessment revealed concerning ecological indicators: the stream's fish community scored only 18 (very poor) on the Index of Biotic Integrity (IBI), while achieving a Qualitative Habitat Evaluation Index (QHEI) score of 60 (good). For context, QHEI scores under 51 indicate inadequate habitat conditions, while Indiana requires an IBI score of at least 36 for streams to meet biological warmwater aquatic life use criteria. Pollutant runoff from agricultural land, in conjunction with other historical pollutant sources, contributed to the degradation of IBI scores. As a result of the compromised fish community despite adequate habitat, this section of Big Branch Creek (INB11F4_03) was added to the 303(d) List of Impaired Waters in 2018 for biological communities.

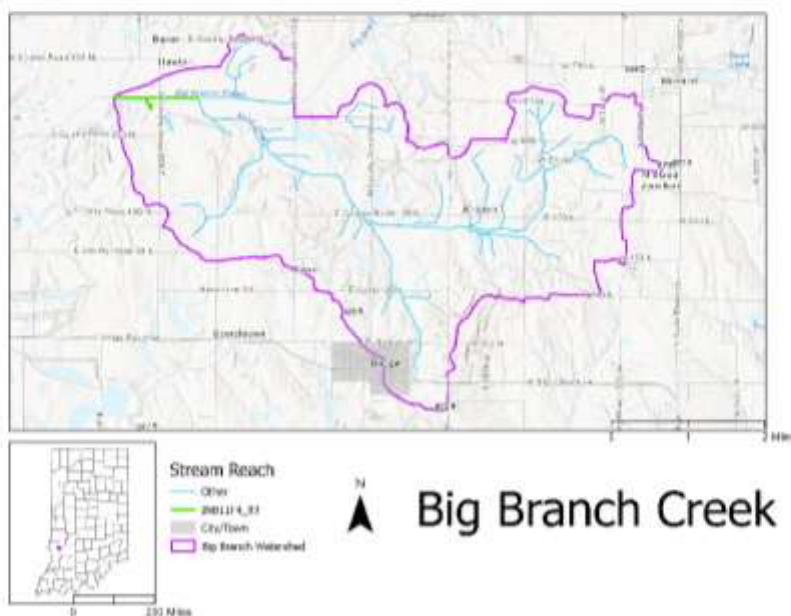


Figure 1 - Location of Big Branch Creek Watershed.

Project Highlights

In 2007, Sullivan County Soil and Water Conservation District (SWCD) initiated development of the Busseron Creek Watershed Management Plan, which includes Big Branch Creek. This effort, funded through Clean Water Act (CWA) Section 319 grants, resulted in plan approval in 2010. The SWCD secured additional Section 319 funding to implement the plan through education, outreach, and cost-share initiatives.

Implementation activities outlined in the Mud Creek – Big Branch watershed include over 1,275 acres of cover crops, nearly six acres of tree/shrub establishment, and half an acre of upland habitat wildlife management. In addition to this work, Sullivan County collaborated with federal, state, and local partners to achieve significant conservation milestones across the broader Busseron Creek watershed:

- 6,300+ acres of cover crops established in critical areas
- 36 Water and Sediment Control Basin (WASCOB) structures installed
- Nearly 4,000 new acres utilizing precision agriculture tools
- Over 800 new acres adopting nutrient management or no-till practices

The initiative successfully engaged 43 unique agricultural producers in best management practice (BMP) implementation. Notably, many participants were first-time adopters and younger farmers showing particular interest in new approaches like cover cropping and precision agriculture. Several producers who received cost-share assistance had never previously participated in government conservation programs. Additionally, Sullivan County implemented a demonstration project featuring one mile of two-stage ditch construction as part of a stream mitigation initiative.



Figure 2 - Big Branch Creek Downstream in 2023.

Best Management Practice	Number Installed	Units	Comments
Cover Crop	6300	ACRES	
Tree/Shrub Establishment	5.7	ACRES	
Upland Wildlife Habitat Management	.5	ACRES	
Water & Sediment Control Basin	36		
Nutrient Management	800	ACRES	

Results

In 2023, IDEM conducted a follow-up assessment on the previously impaired segment of Big Branch Creek through their performance monitoring program (Figure 2). The site underwent two sampling events, showing remarkable improvements in biological health indicators. The fish community IBI score rose dramatically to 48 (good), while the average QHEI reached 72 (excellent) (Figure 3). IBI scoring metrics showed substantial improvements:

- Species diversity increased from 11 to 20 species
- Individual fish abundance grew from 28 to 110 specimens
- Pollution-tolerant species declined from 57% to just 12% of the total catch

This significant reduction in pollution-tolerant species indicates a fundamental shift in community composition, reflecting improved water quality conditions. The overall fish community score now exceeds Indiana's minimum passing threshold of 36 for biological warmwater aquatic life use support. Based on these positive ecological indicators, this segment of Big Branch Creek is now proposed for removal from the 2026 List of Impaired Waters.

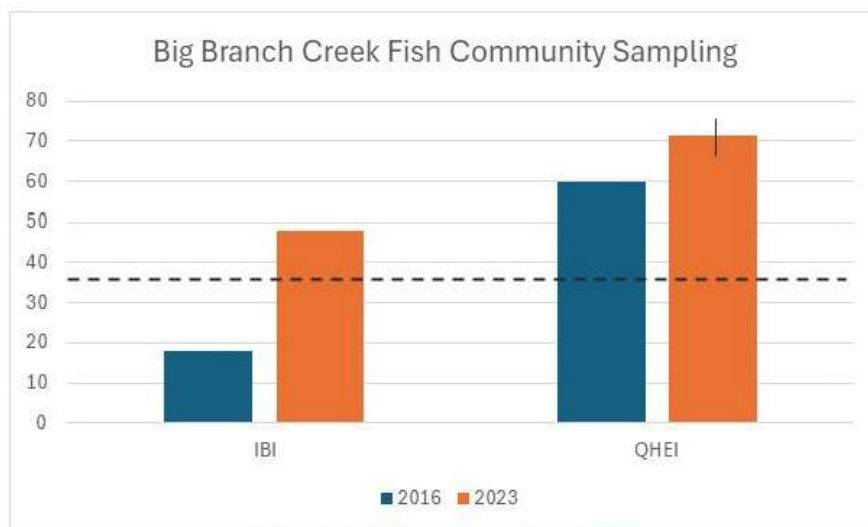


Figure 3 - Big Branch Creek Sampling Results

Partners and Funding

Partner Type	Agency	Funding	Notes
Federal	NRCS - EQIP	\$2,600	
Federal	Clean Water Act Section 319	\$795,635	For planning and implementation of larger Busseron Creek watershed project.
State	IDNR - LAKE AND RIVER ENHANCEMENT (LARE) PROGRAM	\$24,000	Funding provided for a better ditch design project within the larger Busseron Creek watershed.
State	CLEAN WATER INDIANA	\$60,000	\$36,000 in technical assistance and \$24,000 in local match amount to expand on-farm network program in local area to promote use of cover crops.
County	SULLIVAN COUNTY SOIL AND WATER CONSERVATION DISTRICT	\$612,885	Local matching funds used for CWA Section 319 grant awards for planning and implementation of the larger Busseron Creek watershed.



U.S. Environmental Protection Agency
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Summer Outreach

Hoosier Riverwatch Coordinator Dylan Allison met with several summer camps this year to share about water and offer some hands-on experiences. Three Indy Parks locations, Grassy Creek Park, Washington Park, and Riverside Park, all received instruction. Topics covered included watersheds, pollution runoff, and macroinvertebrates. If you are interested in Hoosier Riverwatch visiting your summer camp or classroom, email riverwatch@idem.IN.gov.



Photos
Courtesy
of IDEM



Indiana State Fair: Pathway to Water Quality

If you're heading to the [Indiana State Fair](#), make time to visit the Pathway to Water Quality, sponsored by the Indiana Conservation Partnership (ICP). This interactive, walk-through model watershed shows how everyday conservation practices protect Indiana's soil and water. You'll witness rain gardens, permeable pavement, native plantings, buffer strips, two-stage ditches, and more. Perhaps the most appreciated part of the walk is the flowing well, a great place to fill up water bottles and cool off with a splash. Don't miss the Education Area on the other side of the covered bridge for kid-friendly activities, including an Augmented Reality Sandbox (ARS). The ARS is a great tool for demonstrating topography and watersheds as the projected landscape changes in real-time as visitors move the sand! The exhibit is a perennial favorite for families, educators, and curious fairgoers alike. We hope to see you there!



Photos Courtesy of IDEM

Mark Your Calendars

2026 Workshops

- Friday, Sept. 18** **Bristol** – Bonneyville Mill County Park (9 a.m.– 4 p.m.)
Instructor: Krista Daniels & Ally Pudlo
[Register online.](#)
- Friday, Sept. 18** **ADVANCED WORKSHOPS E. coli & Macroinvertebrate**
(*Basic Workshop Prerequisite*)
Spencer – Owen Co. SWCD
Instructor: Dylan Allison
[Register online.](#)
- Saturday, Sept. 19** **South Bend** – St. Patrick's County Park (Time TBD)
Instructors: Jan McGowan & Dr. Kate Barrett
Email jmcgowan@sjcparks.org to register.
- Friday, Oct. 2** **ADVANCED WORKSHOP (Macroinvertebrate)**
(*Basic Workshop Prerequisite*)
Greenwood – Greenwood Nature Center (10 a.m. – 2 p.m.)
Instructor: Dylan Allison
[Register online.](#)
- Friday, Oct. 16** **Mishawaka** – The Res (9 a.m. – 4 p.m.)
Instructor: Shelley Chaffee
[Register online](#) by Oct. 9.

Welcome New Instructors!

Three individuals have recently taken on the role of Hoosier Riverwatch instructor and joined our network of facilitators. Thank you for choosing to lead others on the path to water stewardship:

- Chuck Harvuot, Jefferson Elementary School (Warsaw)
- Rebecca Fields, Greenfield-Central High School
- Sandy Drake, Bloomington Parks & Recreation



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idem.IN.gov



Call 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, email riverwatch@idem.IN.gov.

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.