

# Riffles & Pools

Office of Water Quality

[www.idem.IN.gov](http://www.idem.IN.gov)

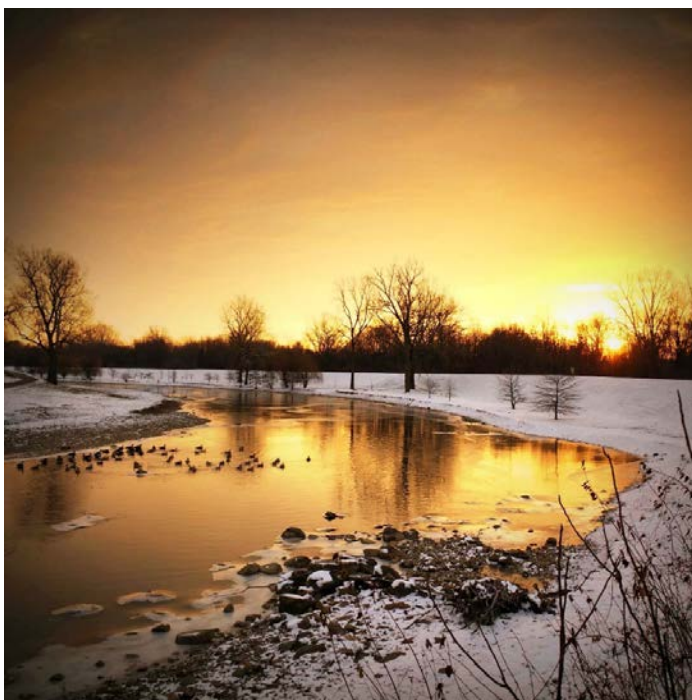


"One swallow  
does not make  
a summer,  
but one skein  
of geese,  
cleaving the murk  
of March thaw,  
is the spring."

-- Aldo Leopold

Sunset over  
West Fork White River,  
Muncie, February 5, 2017

Photo by  
Jim Garringer  
Muncie, Indiana



## Spring 2017

### In this Issue:

- Equipment Grants Through the Years
- Photographer Highlights
- Upcoming Workshops
- Our Valuable Volunteers!
- What it Takes to Host a Workshop
- Water Activity Guide

### MARK YOUR CALENDARS!

#### Upcoming Workshops

Friday, April 7 – Paoli

Two Sundays,  
April 23 & 30 –  
South Bend

Saturday, April 29 –  
Indianapolis

Tuesday & Thursday,  
May 9 & 11 – Kokomo

Friday, May 12 – Bristol

Wednesday, June 7 –  
Evansville

Hoosier  
Riverwatch is  
administered by



## Greetings Riverwatchers!

We are rolling right along into another stream sampling season!

Time for everyone, volunteer monitors and instructors alike, to check your supplies to make sure everything is in good order for any upcoming events. Feel free to read Hoosier Riverwatch's [refill instructions](#) and use the online [refill request form](#) if any of your chemicals have expired or supplies need to be replaced.

If you have not taken advantage of one of our wonderful training [workshops](#), we encourage you to sign up for one soon or contact us about the possibility of organizing and hosting one in your area. You will enjoy learning more about Indiana's amazing water resources and [things you can do](#) on your own to both monitor and improve the quality of the streams where you live.

If you or someone in your club, neighborhood association, school, local nature center, etc. has completed a Hoosier Riverwatch training course, then you have already heard you are eligible to receive a stream monitoring kit on behalf of your group. [Guidelines](#) and an [application](#) for these kits are available on our website. We look forward to having you join the Riverwatch team!

-- Carol Newhouse, Hoosier Riverwatch Coordinator

## Equipment Grants Through the Years



Since 2001, Hoosier Riverwatch has provided well over 300 monitoring kits via our equipment grants to schools, government agencies and nonprofits.

Eligible groups apply for either a chemical or biological monitoring kit or a combined package including both sets of gear. Combined packages contain close to \$500 worth of equipment and supplies.

IDEM can refill equipment kits for groups that continue to monitor and enter stream data into the online database. As you will see below, this effort is a win-win for both the volunteers and IDEM.

The statistics on kits being tracked in the database are given in the table below. An idea of cost per sampling event was roughly calculated by multiplying the number of grants per year by \$500, then dividing by the number of sampling events to date for that year. These are not indicative of real costs to Hoosier Riverwatch, but are rather a means of comparing program efficiencies from year to year.

While a small number of grantees end up not sampling and often return their unused kits to IDEM for reassignment elsewhere, an even larger number receive kits in order to sample as part of an IDEM Section 319 Nonpoint Source Management Program [grant](#). Data collected by these groups enter the agency through means other than the online database; thus, they are underrepresented in this scenario.

Grant Award Year	Number of Grants	Schools & Universities	Government Agencies	Environmental Groups	Clubs & Civic Groups	Other Eligible Groups	Sampling Events	Cost per Sampling Event	Last Sampled
2006	34	11*	5	11*	5	2	606	\$28.00	2016
2007	57	31*	8*	14*	3	1	509	\$56.00	2015
2008	35	14*	3*	6***	2	0	877	\$20.00	2016
2009	31	14*	8	7**	2	0	1292	\$12.00	2016
2010	12	5	5*	2	0	0	270	\$22.00	2016
2011	26	7*	9*	10**	0	0	736	\$17.66	2016
2012	15	6	5**	3	1	1	50	\$150.00	2016
2013	4	2	0	1	1	0	6	\$333.33	2008
2014	13	6*	3*	3	1	0	285	\$22.81	2016
2015	16	5**	6**	2†	0	0	187	\$42.78	2016/2017
2016	8	1*	3**	4***	0	0	300	\$13.33	2016
	<b>251</b>	<b>102 (9)</b>	<b>55 (11)</b>	<b>63 (13)</b>	<b>15</b>	<b>4</b>	<b>5118</b>	<b>\$15.78</b>	

KEY: \* = each asterisk represents a group that was still monitoring in 2015-16; two asterisks = two groups, etc.

† = group that is still monitoring in 2017

# = sampling conducted pre-award date, with none entered into database post-award (included here because pre-award data from all other groups and years was included)

# (bold) = overall totals

(#) = number of groups that are still monitoring (as represented by \* or † above)

The Hoosier Riverwatch database attaches sampling events to groups who have received a monitoring kit award without differentiating between pre- and post-award events. Still, an overall estimate of nearly \$16 per sampling event—obtained by taking a weighted average of the costs/event for the years presented here—indicates that awarding such kits to qualifying groups is a worthwhile effort.

It is great to see that a number of groups from each year's classes are still using their kits to monitor streams today. Often, this is the result of a group or individual training a replacement to continue after they have retired or moved on. Much can be gained from such continuity of sampling, as well as by new groups or individuals going back to pick up monitoring tasks at key sites within their watersheds.

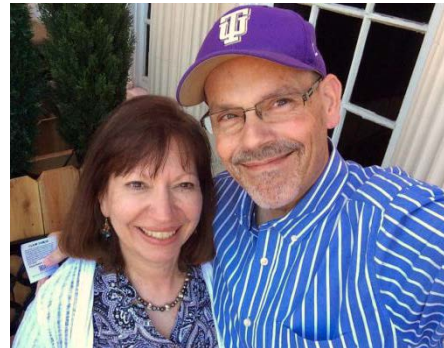
## Photographer Highlights

Some of our readers may be wondering who is responsible for the steady supply of photos used here to supplement those taken by Hoosier Riverwatch staff and instructors or culled from IDEM sources. I admit to being a routine user of social media and am often impressed and inspired by photos posted there by friends, family, and acquaintances. This issue highlights three creative photographers—whom we tap often during the preparation of these quarterly newsletters—who donate the use of their eye-catching photographs. We appreciate their generosity and assistance in making this newsletter shine.

First is Mr. James Garringer of Muncie, Indiana.

After studying photojournalism at Ball State University, Jim worked at a handful of photography and journalistic professions. His current position is director of Media Relations at Taylor University.

Jim and his lovely wife, Lois, (pictured right) are the proud parents of three talented children.



Next is Mr. Douglas Newhouse of Fort Wayne and Mongo, Indiana.

Doug is an industrial electrician with a keen talent for carpentry, plumbing, woodworking, gardening, hunting, and fishing. After retiring from the former General Electric plant in Fort Wayne, Doug is currently employed with the City of Fort Wayne wastewater system and treatment plant.

He and his dear wife, Susan, (pictured left) have three active children and two adorable grandchildren.

When they are not busy chasing their two tiny grandkids around or working on a remodeling project, they enjoy the views (shared with us via camera) from their cabin overlooking Pigeon Creek, just below Mongo Mill Pond.

Last, but not least, is Mr. John M. Craddock, also of Muncie, as our third featured photographer.

John's life and accomplishments remind me of our favorite Hoosier Riverwatch quote (on page 4) espousing the idea that even one person—dedicated to things that matter most—has the ability to bring about change.

John and his wife, Pamela, (pictured right) are parents to two, and grandparents of three. When not entertaining grandkids, John stays busy enjoying and photographing a [27-acre wetland nature preserve](#) that bears his name. He also actively serves on many local environmental and community boards.



*Continued on next page*



## Photographer Highlights *(Continued from previous page)*

As a Ball State University student in the late 1960s, John doggedly approached the City of Muncie with concerns about the health of the White River.

John soon found himself tasked by the city with “fixing” these very problems. So, he created, and then directed for many years, the award-winning laboratories of the Muncie Sanitary District’s [Bureau of Water Quality](#).

The efforts of John and the bureau are credited with bringing clean water, wildlife, and a vital riverfront back to Muncie. His process of working with local industries to develop successful pretreatment programs has been shared globally.

Among many honors and awards, John received a Lifetime Achievement Award from the Hoosier Environment Council for his life’s work and was selected last year to be one of the torchbearers in the historic 2016 Indiana Bicentennial Torch Relay.



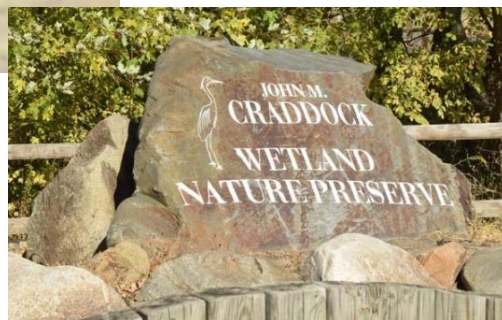
*All photos on this page are used with permission from John Craddock, except where indicated.*

**“Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it’s the only thing that ever has.”**

*-- Margaret Meade*



Twelve-spotted skimmer dragonfly photographed by John Craddock at the wetlands that bear his name.



Stone entry sign. Photo adapted and used with permission from [Red-Tail Land Conservancy](#).



*Above left:* The pavilion along the boardwalk at the John M. Craddock Wetland Nature Preserve in Muncie is shaped like a hawk’s wing. *Above:* A close-up of the pavilion’s green roof design.

## Upcoming Workshops

### 2017 Basic Training Workshop Schedule

A Hoosier Riverwatch Basic Training Workshop will introduce you to hands-on water quality monitoring methods. You will learn about aquatic habitats and chemical and biological assessment techniques. Sessions are held both in a classroom and outdoors. All interested persons age 18 and over are welcome to attend. Once trained, certified educators are qualified to teach these methods and topics to their students.

- |  |   |
|--|---|
| <b>Friday, April 7</b>                             | Paoli, IN – Orange County Soil and Water Conservation District Office, 573 SE Main St. (9:00 AM – 3:00 PM). Contact Michael Wilhite at <a href="mailto:OrangeSWCD@gmail.com">OrangeSWCD@gmail.com</a> or 812-723-3311 (x3) to register.   |
| <b>Sunday, April 23<br/>&amp; Sunday, April 30</b> | South Bend, IN – Brown Barn, St. Patrick's County Park, 50651 Laurel Rd. (12:30 PM – 4:30 PM). Must attend both sessions to receive certification. Contact Shelley Chaffee at <a href="mailto:schaffee@sjcparks.org">schaffee@sjcparks.org</a> or 574-674-9765 for information or to register.  |
| <b>Saturday, April 29</b>                          | Indianapolis, IN – Holliday Park Nature Center, 6363 Spring Mill Road (9:15 AM – 4:30 PM). Contact John Ulmer at 317-769-3500 or <a href="mailto:hoosierwatersheds@gmail.com">hoosierwatersheds@gmail.com</a> for more information or to register.  |
| <b>Tuesday, May 9<br/>&amp; Thurs., May 11</b>     | Kokomo, IN – Kirkendall Nature Center, Jackson Morrow Park, 4200 N. Park Road (5:00 PM – 9:00 PM). Attendance at both sessions is required to be certified. Contact Sarah Brichford at 765-456-2217 or <a href="mailto:sarah.brichford@howardcountyin.gov">sarah.brichford@howardcountyin.gov</a> to register.  |
| <b>Friday, May 12</b>                              | Bristol, IN – Baldwin Schoolhouse, Bonneyville Mill County Park, County Road 131 (9:00 AM – 4:00 PM). Contact Krista Daniels at 574-875-7422 or <a href="mailto:krista@elkhartcountyparks.org">krista@elkhartcountyparks.org</a> for information or to register.  |
| <b>Wed., June 7</b>                                | Evansville, IN – St. Peter's United Methodist Church Basement Dining Room, 2800 St. Phillips Rd. (7:30 AM – 3:00 PM CST). Contact Carrie Parmenter, Posey Co. SWCD at <a href="mailto:carrie.parmenter@in.nacdnet.net">carrie.parmenter@in.nacdnet.net</a> or 812-838-4191(x3) for information or to register. Come earn CEUs for certified drinking water and/or wastewater operators and Professional Growth Points for science teachers! |

Although volunteer stream monitoring training workshops are free, you must contact the local host in advance to register. Training comes at a cost to the program, as well as to the host and/or instructor. Please be considerate and, once confirmed, contact your instructor if you will not be able to attend the workshop for which you have registered.

***Check the [website](#) often to see what other workshops are added to the schedule!***

## Our Valuable Volunteers!

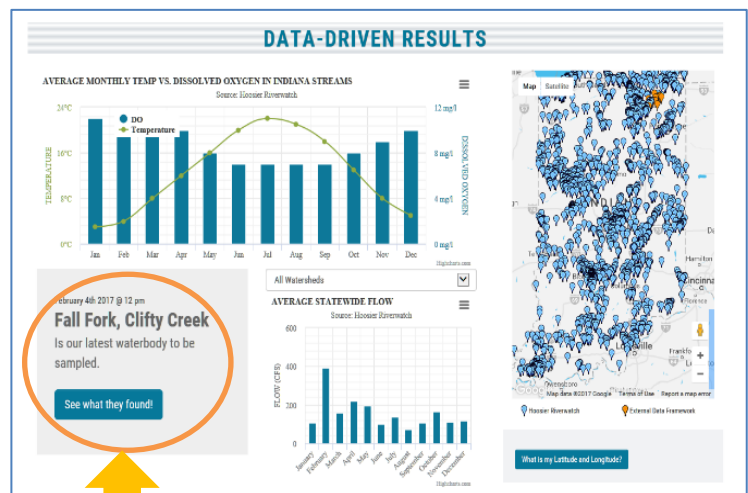


A little birdie told us that, even though it's not yet spring in Indiana, Mr. Charles Mitch of the Winding Waters Group of the Indiana Chapter of the Sierra Club has already

begun his 2017 stream sampling season.

Kudos to you, Charles, for hitting the creek **and** getting your data into the database during the very first week of February 2017!

Keep up the good work!



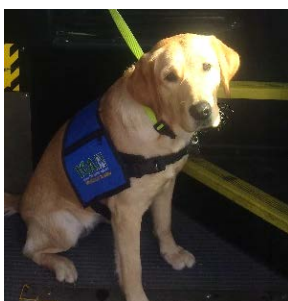
Keep track of who is doing what, where by watching the home page of the Hoosier Riverwatch [database](#). The latest data entry, along with what they found, is posted on the lower left corner of the page under the Data-Driven Results heading.

## What it Takes to Host a Workshop

Have you ever considered hosting a Hoosier Riverwatch workshop in your area? Here is what it takes to organize and hold a successful workshop:

- **Imagination** – Do you have a watershed project? Need volunteer monitors? Have interested staff and/or teachers?
- **Communication** – Look for an [instructor near you](#) or contact the Hoosier Riverwatch [coordinator](#).
- **Location** – Secure an adequate location and an agreeable date and time. Consider parking, seating, classroom needs and amenities, stream accessibility, etc.
- **Promotion** – Advertise! Get the word out! Use flyers, websites, word of mouth, and radio and news spots.
- **Registration** – Respond to incoming calls and messages. Gather names and contact info so you can send details and reminders to those who sign up.
- **Coordination** – Secure audiovisual equipment, plan refreshments, and help move monitoring gear to and from the creek. Be present for setup and tear down.
- **Dedication** – Follow up with newly trained volunteers! Plan additional training; help select sampling sites; apply for and store a monitoring kit; help with data entry; and celebrate successes.

## We've 'Gone to the Dogs'!



The Hoosier Riverwatch office has “gone to the dogs”! ... the Indiana Canine Assistant Network’s (ICAN) [service dogs in training](#) to be exact. The Riverwatch coordinator has completed training and is now serving as an [ICAN furlough volunteer](#). For every six weeks of training in an Indiana correctional facility, dogs must come out on “furlough” to practice their skills in home, neighborhood, office, and public settings. Pictured here, 14-month-old Ritter takes a break from office duties to learn to ride on an IndyGo bus.

## Water Activity Guide

Are you looking for an education tool? An outing with your family? A worthwhile volunteer cause? People you can connect with while working on water issues? There just isn't enough time or space to write about all the great things folks are working on! So, click on the logos below to check out the interesting things each group or program has to offer.



Project WET reaches children, parents, teachers, and community members of the world with water education that promotes awareness of water and empowers community action to solve complex water issues.



Go FishIN promotes, supports, and conducts youth and family fishing events. The program offers Crew Captain workshops, where adult educators and youth leaders learn about fish biology, aquatic ecology, angler ethics, and angling skills. These Crew Captains can then bring fishing into their classroom or community.



Clear Choices, Clean Water is a campaign to increase awareness about choices we make and the impacts they have on our streams and lakes. Water friendly practices such as landscaping with native plants, using less fertilizer, managing yard and pet wastes, maintaining septic systems, fostering soil health, and using less water all help to protect our precious water resources.



Indiana Lakes Management Society (ILMS) promotes the understanding and comprehensive management of Indiana lakes and reservoirs and their watershed ecosystems. ILMS provides a forum and technical assistance network for information sharing; assists with development of lake restoration and protection programs, policies, and legislation; and encourages local and statewide organization cooperation.



The Friends of the White River promote the continued improvement of the quality of the river's water and maintain and restore habitat and wildlife in the river and along its adjacent greenway.



White River Alliance is a 16-county consortium of local governments, industry, utilities, universities, agriculture, and the regional community that exists to improve and protect water quality on a watershed basis in the larger Upper White River Region.



Hayes Arboretum provides nature and recreational education for visitors through instruction, experiences, and amenities.

**"Play is the highest form of research."**

-- Albert Einstein





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*Hoosier Riverwatch Database:*  
[www.hoosierriverwatch.com](http://www.hoosierriverwatch.com)



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to the State of Indiana's  
Events Calendar (look for  
subscribe in the upper right)

Look for Hoosier Riverwatch equipment awards and loaner kits to come in a handy drawstring backpack soon! These should help you carry your gear to even the roughest stream sampling sites, while keeping your hands a little more free. We expect they will also help keep equipment supplies together and clean during storage.



## ***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 ground water 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 cleanup activities. [Hoosier Riverwatch](http://www.hoosierriverwatch.com) is a water quality monitoring initiative sponsored by the Indiana Department of Environmental Management's Office of Water Quality.

A sunny  
day over  
Mongo Mill  
Pond,  
November  
2015

*Photo by  
Doug Newhouse,  
Mongo, Indiana*

