



Hang in there, folks! Winter is losing its icy grip. The maple buds are filling out and willow limbs are turning green. Spring will be here before we know it!

March / April 2015

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- Database Upgrades
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- By the Numbers

*Find a workshop near you and come play in the creeks with us!*



Hoosier Riverwatch is sponsored by



## Greetings Riverwatchers!

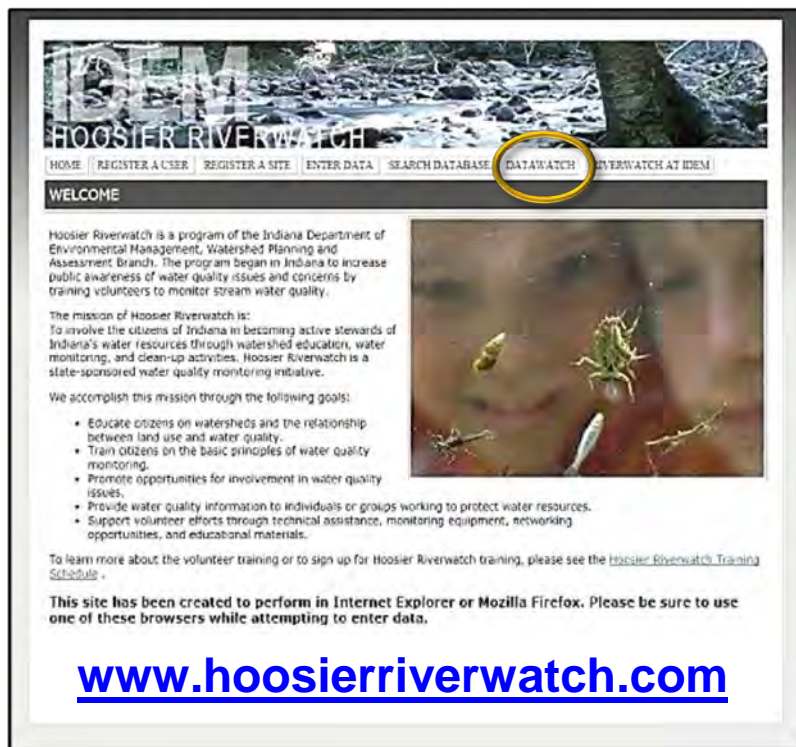
I am happy to announce that we have new staff member here at Hoosier Riverwatch Central! Cindy Jewell has moved into the position of Volunteer Coordinator. Cindy is now on hand to help with important tasks in support of Riverwatch, and especially our citizen volunteer monitors. We hope you will join us in giving her a hearty welcome when you encounter her on the phone, via e-mail or in the field! See her bio inside to learn a more about Cindy.

Welcome also to 22 newly trained volunteers who joined us recently via the 'Service Learning in Chemistry' class at Indiana University. HRW instructors Cathy Meyer and Kriste Lindberg teach this class each semester. Cathy is the Naturalist for the Monroe County Parks Department and Kriste is the Education (think stormwater) Specialist with the City of Bloomington Utilities Department.

Kudos to those who have been out sampling already this year! According to the database, our earliest stream monitor for the year was J. Krauser; a brand new volunteer monitor. She signed into the database in December and by Jan. 11 was already out sampling; and in St. Joseph County none-the-less! Brrr! Not far behind her were R. Wilkinson (Porter Co.), S. Hottel (Floyd Co.), and K. Terry (Vermillion Co.). In fact, R.W. and S.H., from above, and B. Burlingham (Monroe Co.) have really been tearing it up this quarter with multiple field days entered into the database. Good work!

BTW, it was great to meet some of you at the HASTI Conference in February! Thanks for stopping by the IDEM booth to introduce yourselves. - Carol

## Key Upgrades in Store for HRW Database



The Hoosier Riverwatch online database is undergoing a much-needed upgrade this year.

The database has served Riverwatch well for nearly two decades. Nevertheless, the original database language is now obsolete, as far as internet-use goes. It no longer supports many important web applications, such as our mapping tools and so on. Ever-increasing efforts to hold / patch the database together are no longer effective.

Most of the changes taking place are behind the scenes and the database is being rewritten in another language with the structure of and relationships between tables being upgraded.

Front end users should be pleased with the updated look of the database, as well as the ease with which they can navigate screens and enter data. Wherever change *is* apparent, clear instructions will guide the user.

Expect to see the new database up and running in August of this year, although mapping fixes will take a little longer with winter of 2015 as our target.

Some of you will be excited to learn that the new database will have an APP for use on iOS or Android tablets. This will allow for data entry, photo downloads, and so on while still streamside.



Hello, Riverwatchers!

This is Cindy Jewell, the newest member of the IDEM Hoosier Riverwatch team. In addition to assisting with many functions of the program, my main task is to provide support for all of our HRW volunteer monitors.



Let me start by introducing myself. I am a native Hoosier from the Columbus area. I earned a degree in Biology and Environmental Studies from Indiana University; where I assisted Dr. Don Whitehead with his studies of Neotropical migrant birds in the Hoosier National Forest.

I have 19 years of experience with IDEM. I started in the Office of Water Quality by helping public water supplies meet the goals of the Safe Drinking Water Act. Next, I moved on to help build the Assessment Information Management System (AIMS) database; which houses all of IDEM's surface water quality data. I also have extensive experience in using Geographic Information Systems (GIS) to provide maps and geospatial data which are used by staff and others with their monitoring and planning decisions.

As stated above, my main duty now is to serve as the Volunteer Coordinator for those of you who are active in the Hoosier Riverwatch Program. Secondly, my GIS skills will be of continued use as I take over responsibilities for the 'BMP (Best Management Practice) Mapping Project', which our office is working on. Finally, I will assist in maintaining the Assessment Database, which IDEM uses to submit its 'integrated water quality and impaired waterbodies report' to the U.S. Environmental Protection Agency.

I am excited to be a part of the Hoosier Riverwatch Team. I look forward to meeting and working with many of you in the coming seasons!

*Cindy Jewell*

## Hoosier Riverwatch's Online Graphing Tools

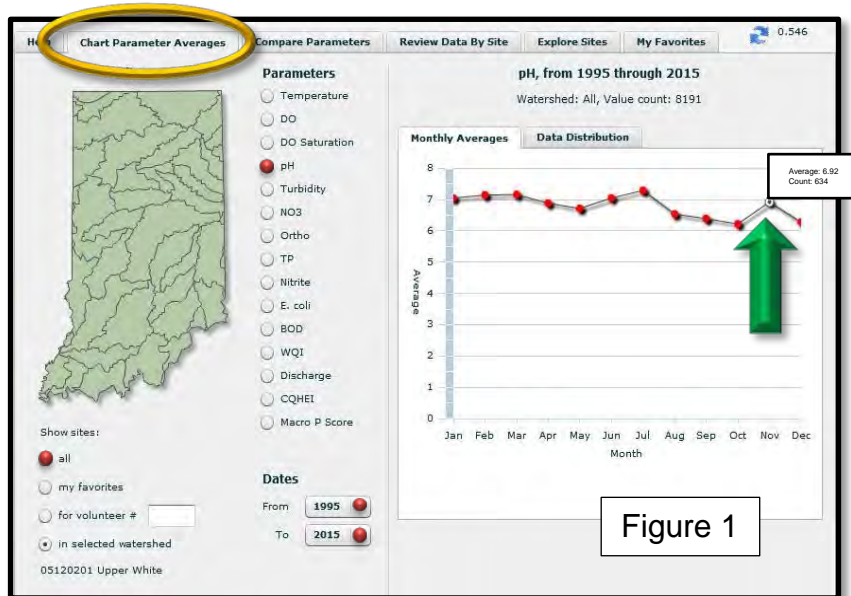


Figure 1

The Riverwatch online database currently has some excellent tools built into it. These tools are available for anyone who wishes to view stream data contained in the database; not just those who are entering data.

Use of these tools will not only continue with the upgrades mentioned on page 2 of this newsletter, but will be enhanced. Note also that the front page of the database (pictured on page 2) indicates the “DataWatch” tab (orange circle) where these and other tools are located.

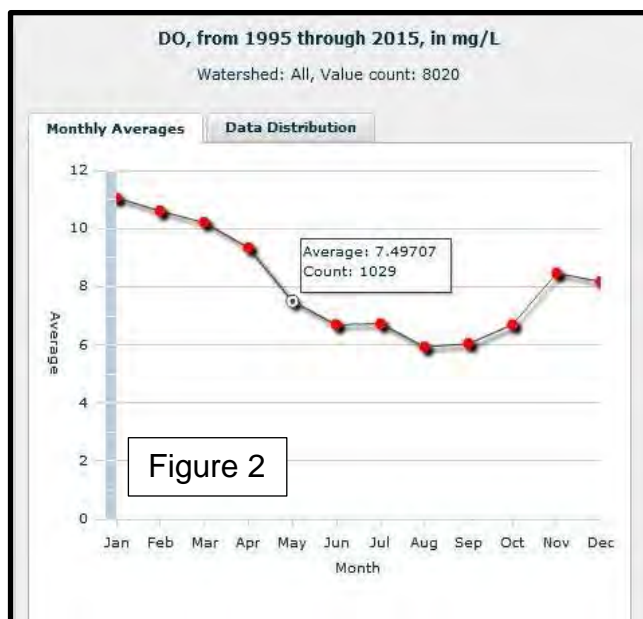


Figure 2

Figure 1 on this page shows the tab (orange circle again) and the selections (red pins) made in order to pull up the average monthly readings for the following: 1) pH, 2) all stream sites and 3) 1995-2015.

You can view pertinent data by placing the cursor over points marked on the graph. The tag above the green arrow on Figure 1, for instance, indicates an average pH value of 6.92 for the month of November. This is for a sample size of 634 readings collected during the month of November for the past 19 years. Notice under the chart title that there are currently 8,191 pH values in the database.

Likewise, Figure 2 shows statewide monthly averages for dissolved oxygen data from the database. You can use the same tool to view data for:

- smaller watersheds,
- shorter timeframes,
- just one sample site, or
- a single sampling event.

*(continued)*

## Riverwatch Online Tools *(continued)*

In Figure 3, the user can see the distribution of data behind one of the graphs they have generated. Once again, placing the cursor on any of the bars will reveal the number of occurrences for any of the data intervals.

For instance, we see that the stream temperature readings between 29.4 and 33.7°C occurred in 49 of the 7,458 sampling events. In other words, we know that volunteers recorded stream temperatures between 85 and 93°F less than 1% of the time during this period.

As indicated earlier, anyone can use the same tools for any site, any year, or any watershed within the state; simply by changing the selections made under the tab highlighted back in Figure 1.

Lastly, Figure 4 shows that DataWatch tools also allow users to view two parameters at a time for comparison purposes in a given time period. The example shown here is for Eel watershed in the northern part of the state.

Tune in later for more highlights of HRW database tools!

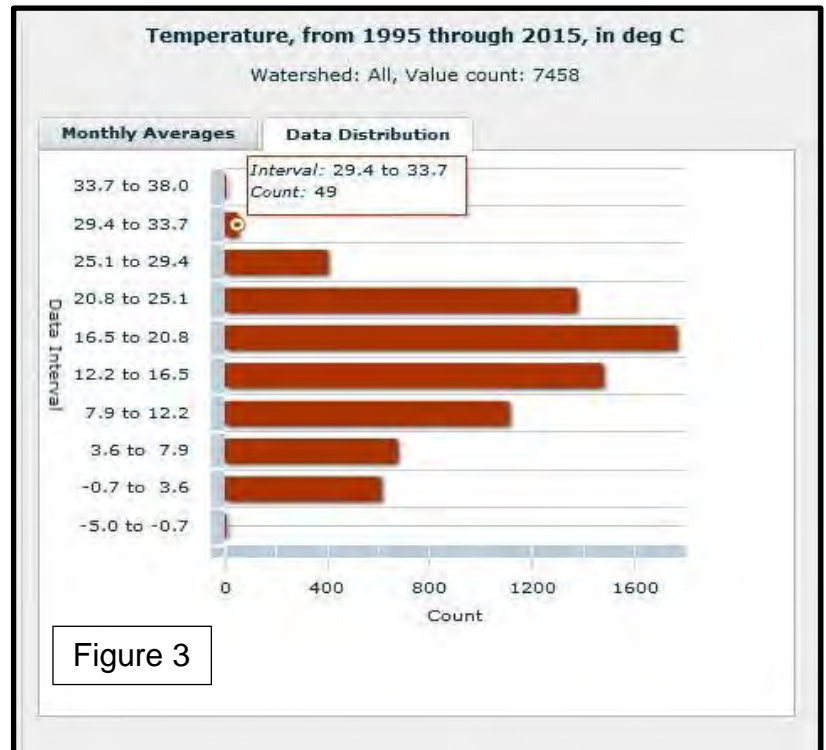


Figure 3

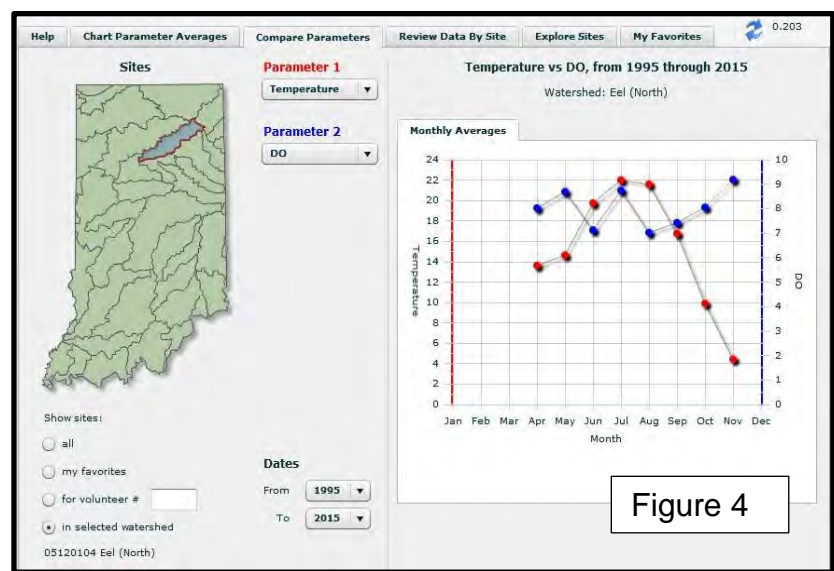
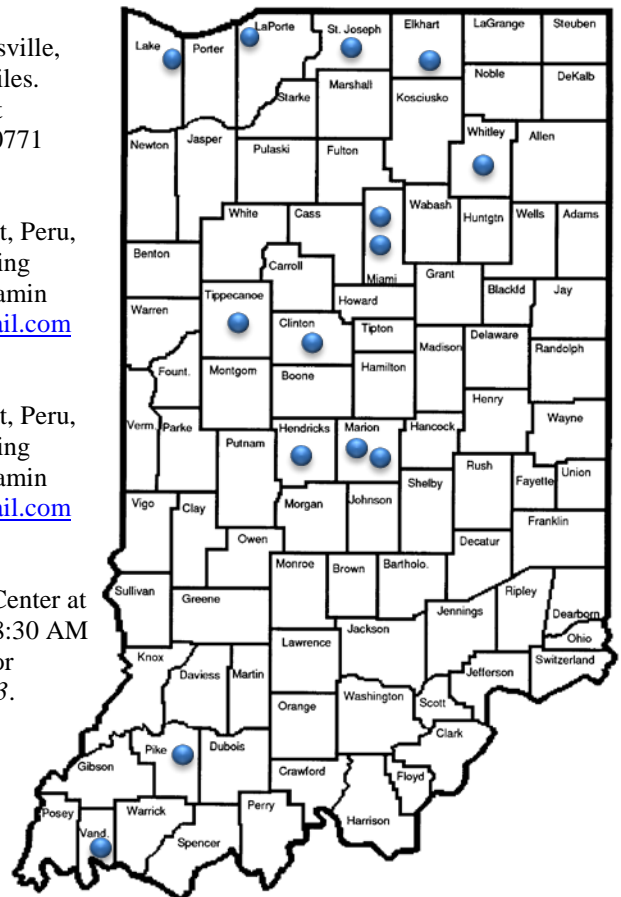


Figure 4



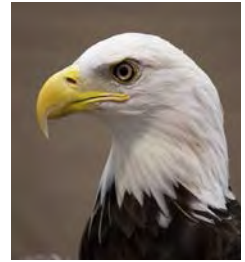
# Mark Your Calendars For a Workshop Near You!

- April 11** Basic Workshop at Deep River County Park, Hobart, IN. **9 AM – 4 PM CST.** Contact Joe Exl at (219)763-6060 (x137) or [jexl@nirpc.org](mailto:jexl@nirpc.org) for info or to register.
- April 18** Basic Workshop at the Crooked Lake Biological Station, Columbia City, IN. 8 AM – 4 PM. Contact Jane Loomis at (260)799-4422 or [cjloomis7551@gmail.com](mailto:cjloomis7551@gmail.com) for info or to register.
- April 25** Basic Workshop at Holliday Park, Indianapolis, IN. 9 AM – 4 PM. Contact John Ulmer at (317)769-3500 or [remlu@tds.net](mailto:remlu@tds.net) for info or to register.
- May 2** Basic Workshop at Krueger Memorial Hall, Michigan City, IN. **9 AM – 4 PM CST.** Contact Joe Exl at (219)763-6060 (x137) or [jexl@nirpc.org](mailto:jexl@nirpc.org) for info or the register.
- May 2 & 9** Basic Workshop (split sessions) at St. Patrick's County Park, South Bend, IN. One workshop, two separate sessions held 8:30 AM - 12:30 PM on consecutive Saturdays. Questions? Contact Shelley Chaffee at [schaffee@sjcparks.org](mailto:schaffee@sjcparks.org) for more info. Or call (574)654-3155 by April 24 to register.
- May 15** Basic Workshop at the Baldwin Schoolhouse, Bonneyville Mill County Park, Bristol, IN. 9 AM – 4 PM. Register before May 8 with Krista Daniels at (574)875-7422 or at [krista@elkhartcountyparks.org](mailto:krista@elkhartcountyparks.org).
- May 29** Basic Workshop at McCloud Park Nature Center, North Salem, IN. 9 AM – 5 PM. Contact Julie Speelman at [jspeelma@purdue.edu](mailto:jspeelma@purdue.edu) or (765)430-6255 for info or to register.
- May 30** Basic Workshop at Wesselman Nature Center, Evansville, IN. 9 AM – 4 PM CST. Instructor will be Kevin Miles. For info or to register, please contact Gena Garrett at [ggarrett@wesselmannaaturesociety.org](mailto:ggarrett@wesselmannaaturesociety.org) or (812)479-0771 (x102).
- June 2** Basic Workshop at Peru Wastewater Treatment Plant, Peru, IN. 8:30 AM – 4:30 PM. CEUs available for Drinking Water and Wastewater Operator licenses. Contact Jamin Beisiegel at (765)473-7651 or [perustormwater@gmail.com](mailto:perustormwater@gmail.com) for info or to register.
- June 5** Basic Workshop at Peru Wastewater Treatment Plant, Peru, IN. 8:30 AM – 4:30 PM. CEUs available for Drinking Water and Wastewater Operator licenses. Contact Jamin Beisiegel at (765)473-7651 or [perustormwater@gmail.com](mailto:perustormwater@gmail.com) for info or to register.
- July 10** Basic Workshop at Brier Environmental Education Center at the Tippecanoe Battlefield Park, Battleground, IN. 8:30 AM – 4:30 PM. Contact Mary Cutler at (765)567-2993 or [mcut@msn.com](mailto:mcut@msn.com) for more info or to register by July 3.



Why are bald eagles in Georgia and elsewhere dying of brain lesions? After years of research, University of Georgia scientists have found the answer; a previously undescribed toxic cyanobacteria which occurs in conjunction with invasive Hydrilla plants.

See more at <http://news.uga.edu/releases/article/identify-name-toxic-cyanobacteria-killing-american-bald-eagles-0215/> or <http://www.washingtonpost.com/news/energy-environment/wp/2015/02/18/the-eagle-killer-the-name-of-a-new-scary-red-bacteria-is-well-earned/>. Full study at <http://www.biotaxa.org/Phytotaxa/article/view/phytotaxa.181.5.1>.



WORLD WATER MONITORING CHALLENGE™ begins another season. Join with others from 51 countries, March 22-December 31. Do not forget to monitor your favorite sites especially on Sept. 18, World Water Monitoring Day, each year. What a great motto they have: "Test. Share. Protect." Learn more at [www.youtube.com/MonitorWater](http://www.youtube.com/MonitorWater) or <http://www.worldwatermonitoringday.org/Resources.aspx>.



## Hoosier Riverwatch by the Numbers:

**2**

*Sampling events that  
Lakeland Middle School  
needs to add to the database to  
become a member of  
HRW's "100+ Club"*

**300+ Club**

*One member with >300 (& <400)  
monitoring events entered into the  
database*

*Clifty Creek Watershed Project  
(343 events on 24 sites, 2003-2013)*

**3**

Health Departments which  
have rec'd HRW training

White Co – 2007  
Henry Co – 2007-10  
State Dept of Health – 2014

**600+ Club**

*Two organizations which have >600  
monitoring events entered into the  
database*

*Jasper County SWCD  
(22 sites from 2011-2014) and  
Madison County SWCD  
(11 sites from 2009-2011)*

**100**

*Percent of data  
collected that HRW  
& IDEM would like to  
see entered into the  
database  
(call us if you need  
assistance with this)*

**1**

*Newspaper Reporter who has  
participated in a Hoosier  
Riverwatch training workshop.  
(Kudos to Carol K. from  
Bloomington's Herald Times!)*

**>3000**

*Attendees at the  
44<sup>th</sup> Annual  
HASTI  
Conference in  
Indy during  
February 2015*



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[www.in.gov/idem/riverwatch/](http://www.in.gov/idem/riverwatch/)

Database URL:  
[www.hoosierriverwatch.com](http://www.hoosierriverwatch.com)



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### **IDEM OWQ 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 waste water facilities; protecting watersheds and wetlands and providing outreach and assistance to the regulated community and the public while supporting environmentally-responsible economic development.

**"I believe education is all about being excited about something. Seeing passion and enthusiasm helps push an educational message." – Steve Irwin**

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



**Please, remember to pick up after your pets.  
When it comes to clean water, even they will thank you for it!**