Indiana Water Monitoring Council Field Day:
A Cost-Effective Capacity-Building Collaboration

Flow data is an important element in calculating pollutant loads for the purposes of watershed planning and total maximum daily load development and to show improvements in the watershed within the context of load reductions. With the wide variety of equipment and methods available for monitoring flow, many monitoring organizations find it difficult to determine which are most appropriate given their available resources and expertise. This is also true of chemical monitoring methods.

In order to help these organizations make more informed choices about the methods they use, the Indiana Water Monitoring Council (InWMC) (http://www.inwmc.org/) – whose mission it is to facilitate communication, collaboration and coordination of professionals, organizations, and individuals involved in water monitoring within Indiana – held its first Field Day on September 8. The InWMC Field Day (http://www.inwmc.org/Default.aspx?pageId=303781&eventId=181506&EventViewMode=EventDetails) brought together more than 50 watershed coordinators, storm water coordinators, local health departments, county surveyors, educators, and state and federal agency staff from all over the state, all seeking to learn more about the methods used by the three agencies that conduct statewide water monitoring in Indiana:

- U.S. Geological Survey (USGS), which conducts monitoring throughout Indiana for its National Water Quality Assessment and other programs;
- Indiana Department of Environmental Management (IDEM), charged with conducting most of the water quality monitoring necessary to fulfill Clean Water Act requirements;
- Indiana Department of Natural Resources (IDNR) Hoosier Riverwatch Program, which provides training and administers the state's volunteer water monitoring program.

The InWMC Field Day was designed to be a hands-on event. Participants were encouraged to bring any water quality sampling and/or flow metering equipment they currently use to collect their own data side-by-side with USGS, IDEM and IDNR Hoosier Riverwatch staff. Results were then compiled and will be posted on InWMC web site to allow participants to compare their own results with those obtained using the different agency methods. Web links were also provided to all the materials used during the event.

Logistics such as access to rest rooms, adequate parking, and of course a wadeable stream, were important factors in deciding where to hold this event. However, the InWMC also wanted to find a location in a watershed with an active watershed group and/or stormwater utility. Such organizations can add value to this kind of event because they provide participants with more detailed information about land uses surrounding the stream and water quality in the watershed – better context in which to understand the data they collect.

Participation was limited to 60 people – about half in the morning and half in the afternoon – to ensure that everyone would be able to see, hear, and get into the water. During each session, participants broke into small groups of about ten and rotated through each of three stations to:

- Collect nutrient and E. coli samples and measure stream flow
- Discuss the relative equipment needs and costs, data quality and other considerations associated with each method.
- Discuss the different methods and models available for calculating loads, and the pros and cons of each method within the context of different management needs.

The InWMC Field Day was not a costly affair – only about $30 for name tags and bottled water. Participants were able to choose from a morning or afternoon session, which allowed plenty of time for travel and to get lunch on their own.

The main cost was in the staff resources required to pull it all together. So, in a time of ever shrinking budgets do you get an agency to allocate staff to a project that is related to but may be outside the scope of its normal activities?

You turn to your state monitoring council.

Although the value of this event was readily apparent to the individuals who initiated the idea, it was important to get buy-in from the appropriate decision makers in each agency to make it happen. The InWMC – a politically benign and independent organization that supports all water monitoring interests in Indiana – was able to speak fluently to each participating agency about how this event would address one or more of their needs.

As a result, each agency agreed to provide between two and four staff to do the necessary pre-sampling and develop content for the event. The InWMC coordinated the planning meetings, handled the reservations and logistics, developed and sent notices of the event through various email listservs targeting water resource professionals in Indiana.

The weather for the InWMC Field Day was spectacular! September 8 in this part of Indiana was a warm and sunny day with just enough of a breeze to keeps the bugs at bay. Participants gathered for the event in central Indiana at McCloud Nature Park where Big Walnut Creek meanders through a forested area bordered by prairie. The stream was perfect for wading and a large sand and gravel bar allowed plenty of room for participants to gather at each station for about 45 minutes of hands-on learning.

Based on participant evaluations, the event was a success in terms of providing take-away value to participants. Almost everyone who filled out an evaluation cited something specific that they could use in their day-to-day work. Most expressed a desire for the InWMC to repeat the event in the future, and several suggested making it an all day event.

The InWMC plans to oblige.

Given the number and diversity of participants in attendance, the agencies that lent the InWMC their staff saw first-hand the need and interest in such capacity-building events and the value that they can have for the water resource professionals that they serve and work with through their respective programs.

Each agency has expressed an interest in making the InWMC Field Day an annual event. Having already made the initial investment necessary to develop the content, they know that with the assistance of the InWMC in coordinate supporting such events in the future will require less staff time and become increasingly cost effective.

If you or your monitoring council is interested in more information about the nuts and bolts of coordinating this type of event, please contact Jody Arthur at jarthur@idem.in.gov or (317) 308-3179.

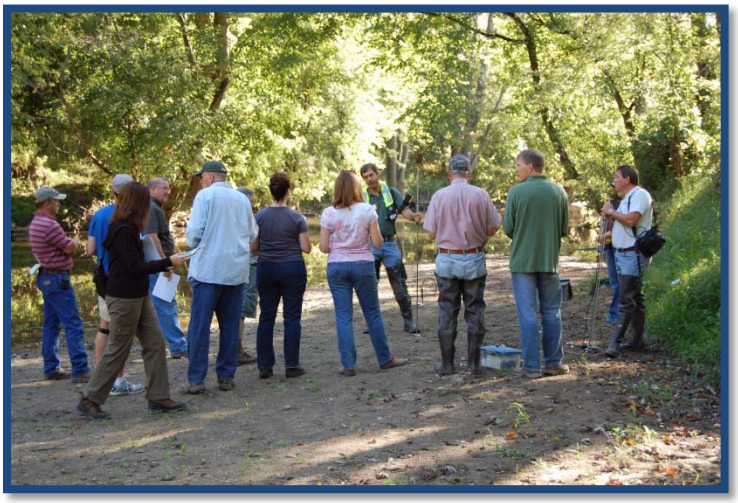
Participant Quotes from the InWMC Field Day:

"Seeing the actual technology used having multiple groups out comparing methods was very useful."
"Having so many partners, IDEM, USGS, Riverwatch, etc. was great."
"Seeing the different varieties of flow meters was useful and will be helpful when deciding which to purchase."
"To see how IDEM, USGS, and IDNR Hoosier Riverwatch each collect data and to discuss pros and cons was most useful."
"Overall, a great day. This needs to be continued in other parts of the state."
"This event showed I need more information/training. This was a good intro or "Monitoring 101". Now I need a "201" class."
"This training will help us to use our collected data more effectively and to benefit water quality monitoring programs in general"
"This information will be useful for educational discussions of rivers and monitoring data."

Photographs of the InWMC Field Day:

Lisa Ritter-McMahan (IDNR Hoosier Riverwatch), Tim Lathrop (USGS) and Chuck Bell (IDEM) set up for the event. *(Photo courtesy of Jeff Frey, USGS)*

Tim Lathrop, USGS Hydrologist, prepares the USGS sampling equipment for the day's demonstrations. (Photo courtesy of Bonny Elifritz, IDEM)



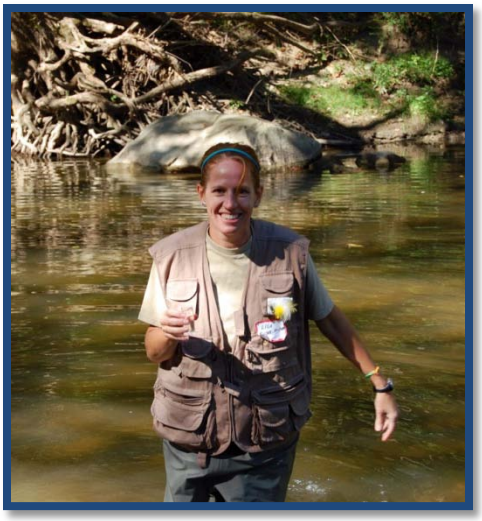
Chad Menke, USGS Hydrologic Technician (left), and Tim Beckman, IDEM Environmental Manager, (right) explain discuss factors to consider when measuring stream flow. *(Photo courtesy of Bonny Elifritz, IDEM)*

Tim Lathrop, USGS Hydrologist, discusses methods for sampling for nutrient parameters before his demonstration. *(Photo Courtesy of Bonny Elifritz, IDEM)*

Ed Dobrowolski, USGS Hydrologic Technician, demonstrates USGS methods for collecting nutrient samples. *(Photo courtesy of Bonny Elifritz, IDEM)*

Check Bell, IDEM Senior Environmental Manager, shows participants IDEM's methods for collecting nutrient samples. *(Photo courtesy of Bonny Elifritz, IDEM)*

Chad Menke, USGS Hydrologic Technician, and participants talk about their flow measurement results *(Photo Courtesy of Jeff Frey, USGS)*



Lisa Ritter McMahan, Program director for IDNR's Hoosier Riverwatch Program, daring participants to get in and collect a sample. *(Photo courtesy of Bonny Elifritz, IDEM).*

Lisa Ritter McMahan, Program director for IDNR's Hoosier Riverwatch Program, discusses volunteer monitoring methods that participants can use to test for nutrient-related parameters. *(Photo courtesy of Jeff Frey, USGS)*

Kathleen Hagan, IDEM Watershed Specialist, explains to participants the pros and cons of using models for calculating pollutant loads. *(Photo courtesy of Bonny Elifritz, IDEM)*

Participants take advantage of a break in the action for some one-on-one discussion with agency staff. *(Photo courtesy of Bonny Elifritz, IDEM)*