

Minutes from the Indiana Water Monitoring Council Board of Directors Special Meeting (August 26, 2014)

Action Items

- Choose two symposium themes from the list provided by Shawn Naylor **by August 29**
(All board members)
- Inventory locations and stewards of existing groundwater monitoring sites where groundwater levels are recorded **by September 19** (Groundwater Focus Committee)
- Provide cost estimates and monitoring protocols for installing an additional 100 wells / groundwater monitoring sites over a 3-year period **by September 19** (Groundwater Focus Committee)
- Inventory locations and stewards where lake and reservoir water-level monitoring is conducted **by September 19** (InWMC members)
- Compile existing publications related to low-flow stream conditions in Indiana as well as related biological monitoring data/studies (InWMC members)
- Gather 1-page summaries of the capabilities of water-monitoring entities in Indiana as they relate to the objectives and recommendations outlined in the report **by September 19** (InWMC members)

Board Attendees (elected representatives and/or their designees):

Tom Bruns, Aqua America
Jeff Frey, U.S. Geological Survey
John Steinmetz, Indiana Geological Survey
Shawn Naylor, Indiana Geological Survey
Mike Griffin, U.S. Geological Survey
Jody Arthur, Indiana Department of Environmental Management
Joy Foye, City of Elkhart
Greg Bright, Commonwealth Biomonitoring
Allen Henderson, Madison county Council of Governments
Gretchen Quirk, Marion County Health Department
Sara Peel, Indiana Lakes Management Society
Melissa Clark, Indiana University School of Public and Environmental Affairs
Logan Garner, Indiana State Department of Agriculture
Tony Bailey, Natural Resource Conservation Service

Invited Speakers:

Vince Griffin, Indiana Chamber of Commerce
Jack Wittman, Intera

Guests:

- Bill Guertal, U.S. Geological Survey
- Scott Morlock, U.S. Geological Survey
- Randy Bayless, U.S. Geological Survey
- Martha Clark-Mettler, Indiana Department of Environmental Management
- Ben Sperl, U.S. Geological Survey/Indiana University-Purdue University Indianapolis

Shawn Naylor called the meeting to order at 10:08 a.m.

Presentations and Discussion

This was a special meeting of the Indiana Water Monitoring Council Board of Directors to learn more about the Indiana Chamber of Commerce study on water and economic development in Indiana. Several guests from various agencies were also in attendance. Vince Griffin and Jack Wittman who authored the study presented this work to the board. The full study is available on the Indiana Chamber of Commerce web site

at: <http://www.indianachamber.com/index.php/water-study>, and the presentations to the board are available on the InWMC web site at: XXXXXXXXXXXXXXXXXXXXXXXXXXXX.

Comment [J1]: Revise w/link to presentation on InWMC website.

Vince presented an overview of the study and the rationale behind commissioning it and the Chamber's plans going forward relative to this work.

Vince said that water is critically important and that we need to focus on our water resources in the state. He said the Indiana Chamber of Commerce is interested in water because without water and energy, we have no jobs, and if we want to keep, grow, and attract business in Indiana, we have to be thinking about this resource. Vince said that while Indiana has been blessed with lots of water and we've never had to worry about quantity before, there are challenges now, and there will be more in the future.

With regard to how Indiana manages water resources, Vince noted that there are approximately 600 pieces of Indiana statute that address water, and they are not well coordinated. He said that other than Citizen's Energy Water Technical Advisory Committee's effort to regionalize Boone County water systems, there are no other regional water utility plans. With 824 water utilities in Indiana, they will need to start working together to meet future water needs.

Allen Henderson asked how many new businesses are water-intensive. Vince said that the State of Michigan commissioned a study to find out what states are most dependent on water for their businesses. Indiana was number one. Vince said that more jobs depend on water in Indiana than

any other state (power companies, steel mills, auto industry). He added that Indiana is the number one per capita manufacturing state.

Vince said the Chamber has formed a water advisory council and the study was released in August of 2014. He said that the study focuses specifically on water quantity, not water quality.

Jack began his presentation saying that the political machine of the state is interested in water because it matters to jobs.

Jack described Michigan's water withdrawal assessment tool, which calculates whether the withdrawal from a proposed well will affect a lake or stream and said that this tool is used to make decisions about whether or not a well can go in. The tool can be found at: <http://www.deq.state.mi.us/wwat/>. Jack said that the tool is conservative in its calculation. He said around the country people are trying to address the question of how we manage and track our water use. He said that there is no regulation in Indiana on where irrigators can drill a well and that this could be a problem.

Jack said one of the things the study looked at was available surface waters. He said that the information on low flow streams is sparse and that more work needs to be done in this area. He noted that Kathy Fowler of the U.S. Geological Survey has worked on this for years but hasn't been able to consistently.

The study also looked at groundwater resources. Jack noted that aquifers are thicker along the streams than away from them. He said that unconsolidated aquifers represent a huge resource and are being used aggressively but are not being managed.

Jack said that most other states have far more groundwater monitoring wells than Indiana. Vince said this is ironic given how much Indiana relies on water. However, Jack said it's not that surprising given the relative abundance of water here.

Jack presented two maps groundwater and surface water uses by sector:

- Agriculture (most consumptive use; water taken out of the basin)
- Industry
- PWS (pretty consumptive in the summer when people are mowing)
- Mining and Power

Jack said that the cycle and timing of the different types of uses affect their compatibility.

This study also forecasts future water need by county. The main factors driving water needs are population and irrigation.

Jack noted that the study doesn't factor in some things. For example, he said it is unlikely that the need for irrigation will be what it has been for the last 10 years because the corn prices during this time are not sustainable. Jack said that the study also doesn't consider the potential impacts of I-69.

Tony Bailey said that the NRCS has recently been seeing irrigation in places they would never have expected to see it (e.g. between Indianapolis and Louisville). He said more irrigation systems have been going in the last two years. Jack said that irrigation is a way to reduce risk for producers and that this may be as much a driver as real need. Shawn Naylor said lots of farmers are looking for write-offs. He said many have been flush for the last five years, and now is a good time to invest in the infrastructure.

Jack said that groundwater in the western United States is almost all being unsustainably used. It's going to run out. He said what that means to Indiana is unclear but the way Indiana will deal with water shortages will be increased use of groundwater.

Vince said the picture with energy use (largest use in Indiana) is going to change dramatically as plants make changes in their infrastructure.

Someone asked how recharge rates stack up with use. Jack said that even in areas that look okay, there may be problems depending on timing of use. He said that users would be more affected more than the resource itself. He added that the distances between users and supply will also need to be considered (e.g. Brookville reservoir has no city nearby).

Jack said that instream flow needs should be considered. He said that with respect to quantity, there are no limits whatsoever in Indiana on how much water can be withdrawn from a river. A user could, theoretically, dry up a river. Jack said that we have never considered flow an issue here in Indiana. Shawn said that out west, instream flow needs are the first right, then all other appropriations come after.

Jack said instream flow in Indiana is a cultural value, adding that our Libertarian views on water rights is good but can also be a problem when a collective change is needed to resolve a quantity issue.

Jack said that the study proposes approximately 100 new groundwater monitoring wells. Martha Clark-Mettler asked what would be monitored with these wells. Jack said the purpose would be to watch how water levels change – the amount and timing of changes. He said we need to understand changes on the local and regional scale.

Observing that the information presented focused on counties, John Steinmetz asked if the results would be different if planning occurred by watershed. Jack said there would be a different shape to the colored zones on the map but not much change otherwise. Jack said he used counties to make it more understandable to the public. Shawn added that there are a couple of arguments for using counties. He said transporting water can become an issue, which requires local level analyses. He said, too, that from a development standpoint, businesses don't work with watersheds they work with county level authorities.

Martha asked if the study considered groundwater quality. Jack said it didn't. Martha said that we cannot assume that all groundwater is usable. She added that with respect to whether or not someone can dry up a stream, Indiana does have water quality regulations that protect biotic communities. This issue illustrates that there are gray areas in how we manage the resource – things that are tough to address. Martha said this study does not consider biotic use, and that this can't be ignored when someone wants to develop a resource. Jack said that in Indiana, if you put a well in, you own the water that comes out of it. Vince noted this issue illustrates the convergence of political science w/water science.

Jack said that in the future, it is highly likely that there will be a number of ways that the water resource needs will be addressed by the state legislature. In order for any of this to work, there has to be credible data, reliable (i.e. not collected by an interest group). Jack thinks professional organizations need to do the data collection. He asked the InWMC to take a position on this work.

John asked if the Chamber is going to take a position to the General Assembly

Vince said that while there have been a number of legislators who have expressed interest in this issue there are five that are leading the effort:

- Senator Ed Charbonneau, R-District 5
- Senator Jim Merritt, R-District 31
- Representative Eric Allan Koch, R-District 65
- Senator Douglas Eckerty, R-District 26
- Representative Steven Stemler, D-District 71

Vince said that this year, we can expect to see some sort of step by the legislature to identify a way to gather and organize data, perhaps to establish and fund an entity to do this work. He sees the InWMC as a data group and that is essential to this effort.

Greg Bright said that water conservation needs to include an educational effort conducted locally within the population. Jack agreed and said that water conservation has to be a standard practice. People are becoming more aware of water issues. He said that the problem is not going to be a lack of understanding of the issue. Rather, it's going to be institutional gaming. Jack said that there are lots of stakeholders that are partly responsible and who all have a stake in the game. He said that we will need to more clearly define the roles of the respective agencies. But, he expects that there will be some sort of independent group that sits somewhere – doesn't know where. Jack cited an example in Oklahoma, where he said it took them three years to figure out what to do. He said the legislature raised a tax, which raised \$15 million to be allocated over three years. Then they built an institute where the Oklahoma water resources board is responsible for the statewide planning process and conduct it on a regional basis. Jack said the Oklahoma report is good because it explains how they got to where they are with this issue.

Jack would like to see a three-year budget for the number of wells recommended. However, what they would be outfitted with – the kinds of instrumentation – the frequency of monitoring, stream flows, etc. – is yet to be determined.

Tom Bruns said that there are a number of legislators that figure, if it ain't broke, don't fix it. And, then there are others that are asking the questions. Tom says a group like the InWMC is ideally suited to support this kind of effort.

Jack said if this is a first step, how long will the first step take? This isn't known. Shawn Naylor said it would be very powerful to couple recharge estimates with other types of data -- super gages. Jack agreed but said this wouldn't make sense everywhere.

Jeff Frey asked if water quality should be considered now because there is so much work going on with water quality. Jack said that water quality is polarizing – he is afraid that it could stop this effort. He said that quantity is easier to agree on. Water quality is something that could be pulled in down the road.

Tony asked if everyone is aware of what data are out there. Jack said that this is better with the quantity side than the quality side. He said that the information on water quantity is less fractured

– you can find it in fewer places. He added that water levels in aquifers are still a big unknown – this information is hard to get at.

Discussion Regarding Next Actions

Shawn suggested that the InWMC should summarize groundwater data from the IGS, USGS, and IDNR into a shapefile. He said the groundwater focus committee that could probably pull this together.

Jeff asked if there are also cities and counties that have groundwater monitoring networks. Jack said there are. Shawn suggested that Jack could work with the groundwater focus committee to identify those.

Vince said about 15% of all Public Water Utilities in Indiana are independent of the Indiana Utility Regulatory Commission and that these are the biggest producers. He said they might also be able to provide good information. John asked if they would be willing to share their data. Shawn said the goal is really just to get a simple inventory of what data are available. Jack said this is a lot of work – there are a lot of municipalities to call. Tom suggested that we start with the state and federal agencies because they represent the largest number of wells.

Shawn said he would like for the groundwater committee to come up with a rough estimate of costs to implement the 100 wells recommended by the study. Jack said that this is critical to getting this to the legislature.

Shawn suggested that we should send out a request to our general membership for a one-page summary of what capabilities their agencies/organizations have with regard to supporting the development of a water resource plan for Indiana.

Jack said time is of the essence where this information is concerned – needs to be done in the next month. Martha said three weeks is extraordinarily ambitious. She said it takes a lot of time to get something through the legislature.

Jack said we would need to decide on the type of information that is needed, what to put into the summary. One size doesn't fit all. Will it include a description of what the agency roles should be? We need to have a good inventory of what capabilities the state already has (FTEs).

Shawn said that the Indiana Geological Survey put together a capabilities paper that we could use as a model. He added that these papers should take into consideration the Chamber report.

More specifically, what capabilities does your organization have to meet the goals and/or implement the recommendations in the report? Shawn said it would be good to have some documentation on what each organization has to offer when the time comes for the legislature to make decisions about where to put the funding.

Shawn suggested that Mark Basch would be a good person at Indiana Department of Natural Resources to work on this. He suggested that Jody Arthur and Jim Sullivan might be able to put one together for Indiana Department of Environmental Management.

Shawn said that based on the discussion, we should try to find out where any data on reservoir levels might exist. Members in attendance mentioned that Sara Peel (Indiana Lakes Management Society) and Melissa Clark (IU-SPEA Clean Lakes Program) as well as the Army Core of Engineers would be good resources to speak to reservoir level data.

Bill Guertal said the USGS had to abandon its lake and reservoir level monitoring back in 2002-2003 but that many of the individual municipalities have picked up that monitoring. He said that for those wells that weren't picked up by local municipalities, there would be a 15+ year gap in measurements.

Shawn said that instream flow is still a concern and that even though this isn't something that would be presented to the legislature right now, it's going to be important in the future. He suggested tasking the people that Greg Bright consulted when developing his white paper on biological integrity to figure out how to best communicate instream flow needs to the general public. This would be a longer term effort, not needed right away.

Jack said that in the short term, trends in flow are more important than linking flow to biological impact. He said no one is arguing about the quantity questions. He would like to dodge the water quality question in the short term to keep the momentum on this effort.

Shawn suggested that Kathy Fowler work with Greg Bright to look at low flow data with biological results adding that this can be a longer term effort. He said they might also look at physical hydrology and other types of water quality data and suggested that Jeff Frey might also be able to help in this effort.

Shawn said he will work with Jack to draft an email to send to the general members to solicit responses to the action items discussed at this meeting.

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Symposium Planning

Shawn provided a list of symposium themes to board members and asked them to choose their two favorites so the InWMC can move forward with sending out the Save-the-Date notice. He asked that board members return their choices to him before the end of the week.

Meeting adjourned at 12:31 p.m.