

The Ohio Water Table

A Publication of the Water Management Association of Ohio

No. 140 / Quarterly



“Voices for Water” Heard at the 45th WMAO Annual Fall Conference

By **Craig Smith**, Ohio EPA, Division of Drinking and Ground Waters

The 2016 WMAO Fall Conference was held November 9 and 10, 2016, and marked our return to the Crowne Plaza Columbus North- Worthington Hotel. Our last visit to the Crowne Plaza, almost 20 years ago, is remembered as “The Conference the Power Went Out”. This conference was memorable for other, less stressful reasons.

Starting with our keynote address, “A Slithering Success Story: Rapid Recovery and Delisting of the Lake Erie Watersnake” by Dr. Kristin Stanford of The Ohio State University, through the final sessions on Day 2 we heard from professionals representing almost every aspect of water resources management, each providing a Voice for Water.

For the fourth year the Ohio Lake Management Society held its annual conference and meeting as part of the WMAO Fall Conference. As usual the OLMS sessions were well attended and provided important information about the health of Ohio’s lakes.

For the third year, university students had the opportunity to meet with water management professionals to discuss their big step into a full time job. The next generation closed the Conference with TerrAqua, our affiliated student organization at Ohio State presenting a festival of short films and videos about water resources issues.

All in all, it was a successful conference: over 300 individuals attended one or both days, including 40 college and university students; 16 students made impressive poster presentations; and 18 exhibitors participated. All of these figures are an increase from the 2015 conference.

The conference planning committee hopes you were able to attend this conference. The Conference Proceedings and other information about the conference are available on the website at <http://wmao.org/>.



Figure 1: Student presenter, Shagun Sharma from the University of Akron, discussing Potential for Remediation of Coal Mine-Derived Acid Mine Drainage by Soil-Associated Microorganisms.

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President's Column

Alex Covert, WMAO 2016-2017 President



Happy New Year, everyone! Welcome to 2017! According to fitness center commercials, self-help gurus, and my mother, it's time to kick our bad habits to the curb and welcome in the improved version of whatever it was that we were doing wrong. Out with the old and in with the new. My interpretation of this timeless adage was quite literal, this year. I decided to rip out my existing carpet at home and replace it with hardwood – a job not for the faint of heart.

It's not the actual physical labor that's difficult, mind you, but, the planning and prep work that's involved. You have to make sure that your subfloor is level. You have to fix existing creaks. You have to start on a perfectly straight line but, perfectly straight walls don't exist in the real world. You have to make sure that wherever you end up (across the house) is

somewhat square to your flooring. You have to watch for gaps between boards and so on and so forth. The point is that the upfront work is more cumbersome than the actual job. And, so it is with a lot of things in life - including WMAO and the work that we do.

Entering its 46th year, The Water Management Association of Ohio is growing - both in membership and breadth of activities. A lot has been accomplished in that time and it's thanks to the thought and foresight of past WMAO board members. There have been many hours, numerous phone calls, and countless emails spent on ironing out the details for each of WMAO's events – the workshops, presentations, conferences, etc.

But what comes next for WMAO? It's our time to think ahead... to do some strategic planning for the coming years. Do we want to continue to grow? What do we want to accomplish? Are we missing a major component to make WMAO the most effective and respected water resources organization in Ohio? It's these sorts of questions that I would like the WMAO Board to tackle in 2017 and in doing so, help make sure that when we get to future years, our floorboards are square with our walls, so to speak.

Thank you for your continued membership and have a prosperous and memorable 2017!

"It's our time to think ahead... to do some strategic planning for the coming years."



Figure 2: Annual Business Meeting , November 10th - Recognition of the esteemed WMAO Water Buffalo.

S. Alex. Covert

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WMAO Conference 2016



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Awards Presented at the WMAO 2016 Conference

By **Kimberly Shaffer**, US Geological Survey

Not only did the 45th conference have record attendance, but a record amount of awards were given; Some awards had not been given since 2011, like the R. Livingston Ireland Award, and other awards were new, like the Voices for Water Award.

Each year, the Water Management Association of Ohio (WMAO) presents a number of recognition awards at the annual conference – honoring those individuals who have significantly contributed to Ohio's water resources. In addition, the Ohio Lake Management Society and Ohio Dam Safety Organization gave out awards.



Harry Stark with the City of Wadsworth (right) was awarded the Wayne Nichols Award by Alex Covert (WMAO president, left). The Wayne Nichols award is given to a person from a public agency that demonstrates high qualities of leadership; innovation, cooperation and accomplishment in any field of water resources related endeavor in Ohio.



James "Jeff" Brooks, City of Columbus, Division of Water (right) is awarded the Distinguished Service Award by Alex Covert (WMAO president). The Distinguished Service Award is given to an individual who has made some noteworthy endeavor in behalf of improving water resources or their use in Ohio and is currently active in the water-related endeavor.



Jim Dieter from the Medina Soil and Water Conservation District was awarded the WMAO Technician of the Year. The Technician of the Year award is given to a paraprofessional or technical water service employee.



John Lyons with Strand Associates was awarded the R. Livingston Ireland Award. The R. Livingston Ireland Award is given to an individual from the private sector or industry that has demonstrated leadership and outstanding accomplishments in any field of water resources.



Kenneth Krieger, retired from Heidelberg University was the recipient of the Ohio Water Hall of Fame Award. This award is given to retired individual who has given years of distinguished service in behalf of bettering the management, use or enjoyment of Ohio's water resources.



Rick Weber, retired from the Miami Conservancy District was the recipient of the WMAO President's Award given by Alex Covert (WMAO President, left).



Rodney Yeoman with USDA (right) was awarded the Voice for Water Award by Alex Covert, WMAO president (left). The Voice of Water Award is a new award this year. This award will be circulated each year to a person randomly to remind us that we are each a Voice for Water.



Carl Moore, CLAM volunteer, (retired) was the recipient of the Ohio Lake Management Society's Lifetime Achievement.




Scott Winkler, Ohio EPA, (right) was awarded the Ohio Lake Management President's Award by Darren Bade (left).



Heather Raymond with Ohio EPA was awarded the Ohio Lake Management Society Innovation in Lake Management Award.

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2016

Ohio Floodplain Management Association



2016 - A Year in Review

By **Stephen Moore**, OFMA President

Another year has come and gone and I am sure it was busy for everyone. Now we can look forward to a new year and all the challenges and opportunities a new year brings. OFMA had a very successful year in 2016. The Board put the strategic plan in action and was able to complete many of the objectives outlined for 2016. First we determined 5 Priority Action Items from the Strategic Plan to work on in 2016. The 5 Priority Action Items are as follows 1) Stake Holders – Those who OFMA should partner with and provide support too. 2) Website Resources – Enhancing the use of the OFMA website as a resource to our members and stakeholders. 3) Electronic Surveys – to be used to gather feedback about training, the annual conference and other issues relevant to our members. 4) Video Conferencing – for use at Board meetings to reduce travel and time out of the office for Board members and guests. 5) Geocoding WMAO membership roster – geocoding is to help OFMA understand the geographic distribution of the membership across the state. Once complete, this can help us target outreach programs for training and other member needs. By implementing the Strategic Plan and the above Priority Action Items OFMA ensures that it is effective at what it does, and that the chosen strategies, tactics and actions are achieving the Mission and Vision of the organization.

“The Board put the strategic plan in action and was able to complete many of the objectives....”

Legislatively, OFMA tracked several topics that related to floodplain management in the State of Ohio and on the Federal level. One of these is the reauthorization of the NFIP which expires September 30, 2017. Congressional committees and offices have spent much time discussing the issues and preparing for a reauthorization bill. Flood insurance premiums are significantly increasing due to NFIP changes in 2012 and 2014 that direct a movement toward actuarial rated flood insurance policies. Actuarial rates have invigorated the private insurance and

re-insurance industry to further explore getting into the flood insurance business. OFMA was made aware of the House and Senate bills for private flood insurance by the ASFPM Executive Office. In response to these Bills, OFMA provided a letter expressing the impact and concern for how private flood insurance affects floodplain management to members of the Senate Committee. In a conference call arranged by ASFPM, OFMA Board members answered questions on flood insurance, local NFIP participation and flood hazard mapping sharing Ohio’s perspective. It was noted that there is complacency towards flooding issues and toward floodplain management priorities since there has not been a federally declared disaster for flooding in Ohio since January 2013.



OFMA Annual Conference, August 24 & 25, 2016

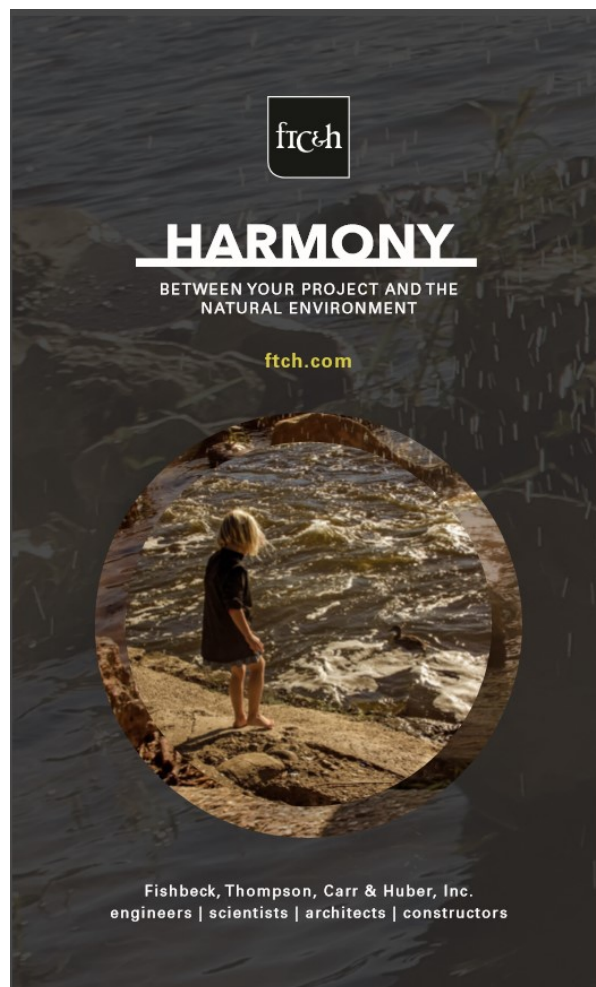
The annual Ohio Statewide Floodplain Management Conference (OSFMC) was held on August 24-25, 2016 at the Doubletree Columbus/Worthington Hotel. This year's theme focused on "Educating Communities about Flood Risk". Over 200 public and private sector professionals convened to learn about and engage in the most current issues in floodplain management. The Ohio Floodplain Management Association (OFMA) awarded the following honors: · Floodplain Manager of the Year - James Mako (Fairfield County) · Innovation in Floodplain Management - Dan Willhoite, PE (Medina County) OFMA also recognized Joe Gies (City of Shelby) for winning the Community Rating System (CRS) National Award for Excellence. OFMA also provided 10 scholarships to attend the conference this year. I would like to express my gratitude to Alicia Silverio, Conference Chair and the conference committee for all their hard work to make the conference a great event every year.



Kimberly Shaffer, OFMA Presenter



Shawn Arden, OFMA Past-President



Call for Papers

OFMA is seeking presentations for the 2017 Conference.

Abstracts due March 13th.

Click [here](#) for more information and online submittal.

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Research Highlights from State of Ohio Water Resources Center

The Ohio Water Resources Center is a federally authorized center situated at The Ohio State University. We fund State relevant water related research. Below are highlights from a completed Ohio WRC project funded via a joint Office of Energy and Environment at OSU and 104(b) USGS program. The project was conducted by Dr. Jeff Bielicki, Assistant Professor with a joint appointment in the Department of Civil, Environmental, and Geodetic Engineering and in the John Glenn College of Public Affairs at the Ohio State University. If you are interested learning more about our research projects, see the Ohio Water Resources Center webpage at wrc.osu.edu.

This project, “**Developing Integrated Assessments of Water and Energy in Ohio**” was conducted with Yaoping Wang, a Ph.D. student, and seeks to improve understanding of how electricity demand, and the demand for water by thermoelectric power plants that supply electricity, depend on weather in the short and long term. This integrated assessment of energy and water interactions in Ohio's electricity system will enable stakeholders from multiple agencies at different levels to coordinate energy and water policy and planning.

The relationships between electricity and meteorological variables in two transmission zones in the eastern US (Figure 1) was investigated using “segmented” regression. The effects of temperature, past days’ temperatures, relative humidity, and wind speed were quantified and compared in terms of their relative importance. Past temperatures were found to be important predictors of electricity load, the effect of relative humidity was found to be smaller than temperature, and wind speed was potentially negligible. Past studies noted that the effect of humidity was only significant in hot, humid regions like Louisiana, but the two transmission zones in this study are in the northern part of the United States. Furthermore, the results of this empirical study indicate existence of “comfort zones” (about 5 °C wide but varying somewhat diurnally), where the slope of electricity response was either zero (the AEP zone) or small but non-zero (the PS zone) (Figure 2). Therefore, the base temperatures of heating- and cooling-degrees should not be assumed to be identical. That the electricity response to temperature increase in the comfort zone can be non-zero also suggests that the use of heating- and cooling-degrees might not be adequate for electricity demand projection under all situations.

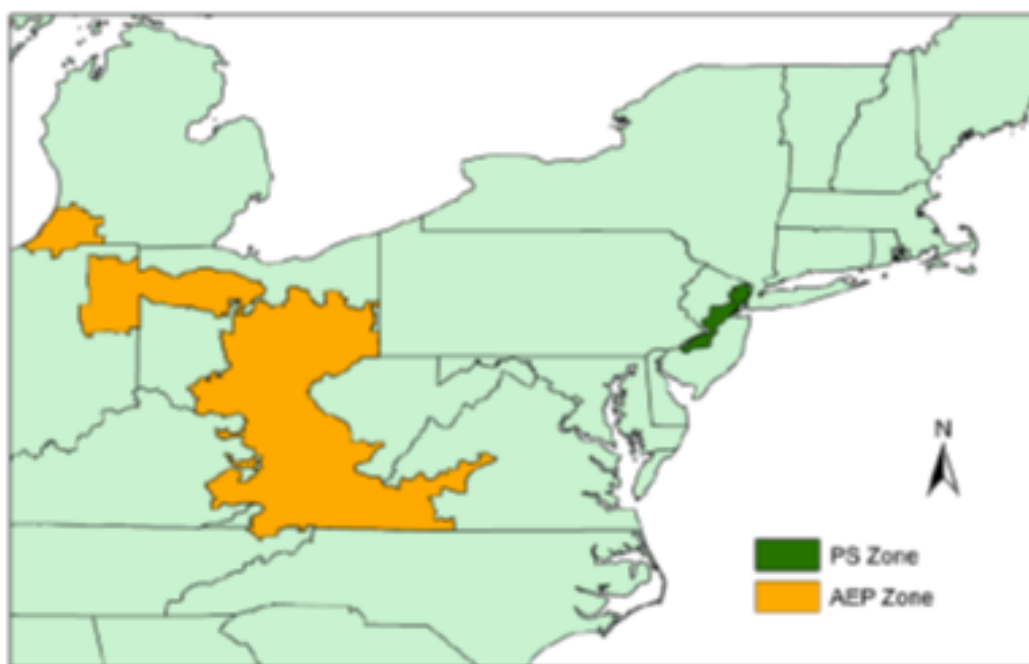


Figure 1: The transmission zones used in this study. Map adapted from the information on the PJM website (PJM, 2016). PS - Public Service Electric and Gas Company. AEP - American Electric Power Co., Inc.

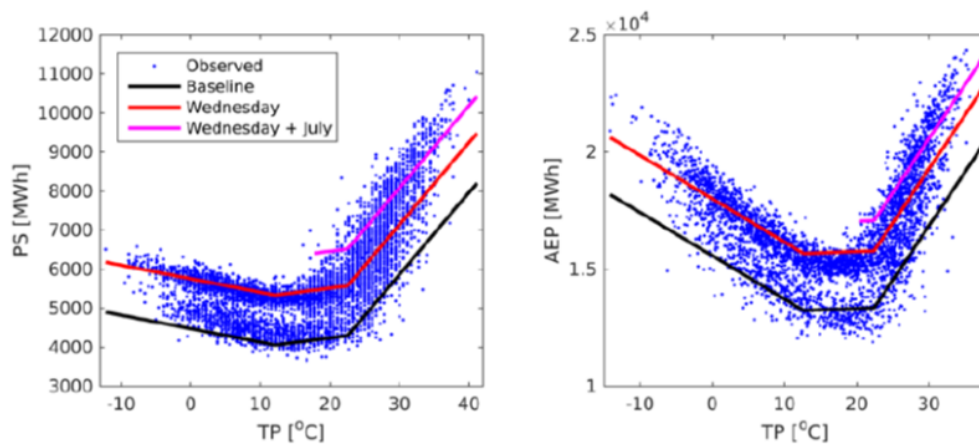


Figure 2: Observed relationship between temperature and electricity load at hour 14, and the fitted piecewise linear relationship for the baseline (i.e. December Sunday), Wednesday (December), and July Wednesday. The July relationship is only shown for July temperatures.

Researcher Profile: Prof. Jeff Bielicki holds a joint appointment in the Department of Civil, Environmental, and Geodetic Engineering and in the John Glenn College of Public Affairs. He researches issues in which energy and environmental systems and policy interact. He focuses on understanding opportunities, causes, and consequences of energy development and technology deployment in order to understand how energy systems have evolved and how this evolution can be directed in ways that will improve environmental, economic, and social conditions.



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Nutrient Mass Balance Study for Ohio's Major Rivers

Ohio EPA has released a nutrient (nitrogen and phosphorus) mass balance study covering seven major watersheds in Ohio. The seven watersheds (Maumee, Portage, Sandusky, Cuyahoga, Great Miami, Scioto and Muskingum rivers) cover 63 percent of the state's land area. The watersheds studied were in both the Lake Erie and Ohio River drainages. The objective of the study was to determine nutrient (nitrogen and phosphorus) loads and relative proportions of point and nonpoint sources. The study highlights differences noted between the watersheds both as total loads and relative contributions from different sources in the watersheds. The study identifies opportunities for data collection and new approaches that can refine future analysis on a biennial basis. The report can be found at: <http://epa.ohio.gov/dsw/wqs/NutrientReduction.aspx#146065085-nutrient-mass-balance>.



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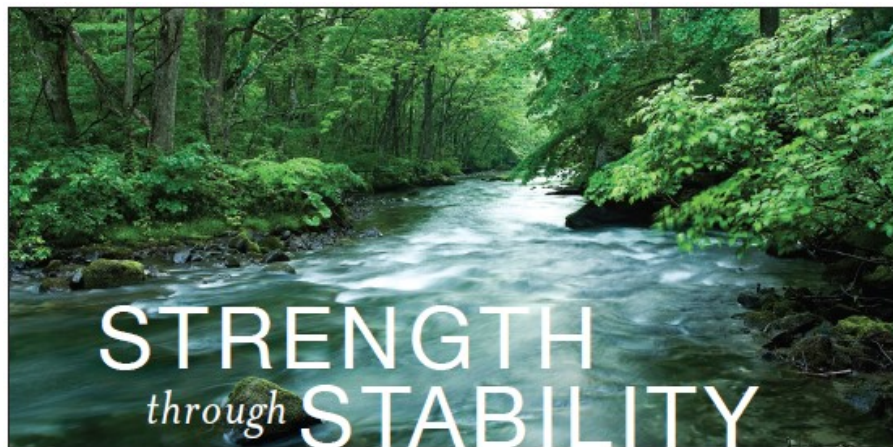
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A regular advisor to the U.S. Congress and the California Governor's office on water availability and water security, Famiglietti is a frequent commentator on water and climate change issues. His work is often featured in the international news media, including *The New York Times*, the *Los Angeles Times*, the *Washington Post*, *The Guardian*, and *The Economist*. He has been a frequent guest on *60 Minutes*, *Real Time with Bill Maher*, *CBS Evening News*, *The Rachel Maddow Show*, *PBS News Hour*, as well as National Public Radio and BBC Radio.

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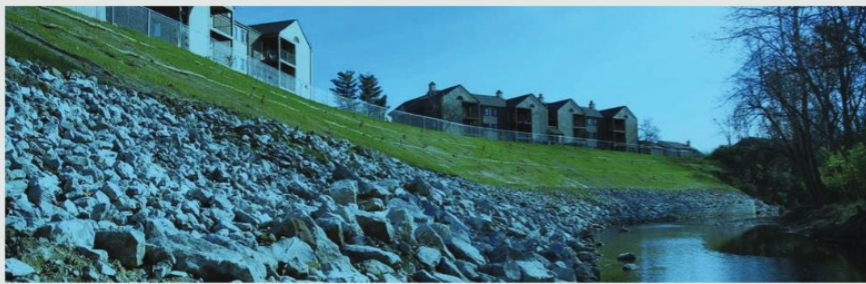
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The Water Management Association of Ohio (WMAO) is the one organization dedicated to all of Ohio's water resources.

VISION: The Water Management Association of Ohio will be the most effective and respected independent water resources organization in Ohio.

MISSION: The Water Management Association of Ohio promotes the comprehensive understanding, conservation and multifaceted use of Ohio's water resources.

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Joe Bonnell	bonnell.8@osu.edu
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Eugene C. Braig IV	braig.1@osu.edu
Craig Smith	craig.smith@epa.ohio.gov
Scot Hindall	scot.hindall@dnr.state.oh.us
John Hoopingarner	jhoopingarner@mwcd.org
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Jim Shoemaker	james.shoemaker@daytonohio.gov
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John Herchl	john.herchl@davey.com
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