

Ohio Water Resources Center Newsletter

From Our Directors

The Ohio State Community Engagement Conference: Partnering for a Resilient and Sustainable Future, held January 23-24 had an attendance of over 500 researchers, extension agents, and community partners. **Dr. Linda Weavers**, Ohio Water Resources Center co-director, moderated a panel on water which featured **David Rankin**, Executive Director of the Great Lakes Protection Fund, **Ken Heigel**, Assistant Executive Director of the Ohio Water Development Authority, and **Robert Davis**, Director of City of Cleveland Department of Public Utilities. David Rankin highlighted the value yet uneven distribution of freshwater. Ken Heigel impressed upon us that many counties in Ohio have declining population causing challenges with managing water assets and maintaining affordability. Robert Davis talked about Cleveland's participation in the US Water Alliance and Cleveland's efforts on water equity. Ohio has myriad water challenges that many of us are researching with an aim to find solutions. Fortunately, we also have dedicated water stakeholders in Ohio that provide partnership opportunities, potentially increasing the impact of research results. Let us know if we can help make connections for your next research project!


[About Us](#)
[Research](#)
[Outreach](#)
[Publications](#)
[Resources](#)

Spotlight

Environmental Professionals Network (EPN) Breakfast & Extended WMAO Program

Emerging Contaminants and Our Water Resources

Featuring: Newly Appointed Ohio EPA Director, Laurie Stevenson
Sponsored by: EPN, Ohio WRC, WMAO, TerraAqua

Experts are steadily finding new or previously unrecognized contaminants in our waterways and drinking water systems. Some emerging contaminants result from everyday use of products such as sunscreens, soap and medicines. Other contaminants such as algal toxins are formed in watersheds with excessive nutrients. Yet other contaminants are due to manufacturing and firefighting. There are potential environmental and health risks associated with many of these contaminants, however these risks are not yet fully understood.



Ohio Environmental Protection Agency's recently appointed Director, **Laurie Stevenson**, will kick-off the morning with an overview on some of the emerging contaminants in Ohio. Her talk will be followed up by discussion with a panel of experts, featuring:

- **Dr. Wayne W. Carmichael**, Professor Emeritus, Wright State University
- **Dr. Andrew Lindstrom**, Research Physical Scientists, U.S. EPA's National Exposure Research Laboratory

- Sarah Lowe, Great Lakes Regional Coordinator for the NOAA Marine Debris Program

The breakfast will be held on **March 5th**, from **7:15AM-9:30AM**, followed by an extended WMAO program from **9:30AM-11:45AM** at the **Nationwide & Ohio Farm Bureau 4-H Center**, 2201 Fred Taylor Drive, Columbus, OH 43210. As the event nears, check [our website](#) for updates regarding registration.

News Updates

[Trump EPA won't limit 2 toxic chemicals in drinking water](#)

Via Politico, January 28th, 2019

[Can road salt contaminate drinking water?](#)

Via the WKYC, January 17th, 2019

[Trump signs Brown, Portman bill to clean up Ohio lakes and rivers](#)

Via the Vindicator, January 15th, 2019

[Kent State Ecologist Part of Global Collaboration to Answer Pressing Question About Global Climate Change on River-based Ecosystems](#)

Via KSU News, January 10th, 2019

Featuring: Dave Costello, Assistant Professor in the KSU Department of Biological Sciences

[State to Invest Nearly \\$10 Million to Help Protect Lake Erie: ODNR and Ohio EPA partner with Ohio communities on projects that create beneficial use options for dredge material](#)

Via Ohio EPA, January 8th, 2019

[Dewine says he'll make Lake Erie a priority as governor](#)

Via Sandusky Register, January 7th, 2019

[Study to examine Toledo's water needs](#)

Via The Blade, January 4th, 2019

Have a news article you'd like us to feature in our Newsletter? Email us at OhioWRC@osu.edu!

Ohio WRC Research Highlight

[Bog HELPR: Bog History, Ecosystem status and Land-use for Peatland Restoration in Ohio](#)

Currently, human impacts on peatland ecosystems in Ohio have left them in a perilous state; only 2% of Ohio's peat bogs remain. The Ohio WRC funded **Professor Matthew Davies** and his team at the Ohio State University to collate detailed data on the current and historic spatial distribution of peat bogs in Ohio and combine this data with a ground survey to assess the bogs ecological condition. Dr. Davies research is based on the increasing recognition that restoration of wetland ecosystems can play an important role in mitigating the effects of diffuse agricultural pollution in watersheds and increasing catchment resilience in the face of climate change. There can, however, be significant trade-offs inherent in restoration, not least the potential impacts on greenhouse gas emissions.



Peatland ecosystems in Ohio are of significant conservation concern as, in addition to being degraded or destroyed during land-use conversion, the remaining systems are at the limits

of their climatic range and have been impacted by drainage, disturbance, and nutrient inputs from surrounding agriculture. Peat stratigraphy is related to climatic and geomorphological changes at a few sites; bog distribution is related to glaciation patterns; vegetation zonation is related to variations in water level and chemistry in intact basin-type bogs; and that degradation of tamarack bogs is driven by interactions between ditching and drainage, invasive species, and deciduous tree encroachment. Developing a peatland restoration agenda will require better knowledge of Ohio's existing peatland resource and the links between historical disturbance, land-use and the ecological structure of these sites.

Find out more about Dr. Davies' research by visiting his [website](#). If you'd like to find out more about other Ohio WRC research projects, visit: <https://wrc.osu.edu/past>.

Opportunities

USGS 104(g) Grant Announcement

The Water Resources Research National Competitive Grants Program is announcing pre-proposal instructions for 104(g) grants. The goals of the 104(g) grant is to promote collaboration between the USGS and university scientists in research on significant national and regional water resources issues; promote the dissemination of results from research funded under this program; and to assist in the training of scientists in water resources. Specific pre-proposal submission instructions for FY2019 can be found [here](#). **Despite the government shutdown, the USGS is honoring the original deadline of February 15th, 2019. Therefore, applicants are required to submit their pre-proposal to the ohiowrc@osu.edu by February 14th, 4:00PM. Check our [website](#) for more updates.**

Ohio Sea Grant Issues Request for Proposals for 2020-2022 Research Projects

Ohio Sea Grant is requesting pre-proposals for one- to two-year research projects on Great Lakes issues with particular significance to Ohio and Lake Erie. This year Ohio Sea Grant's main priorities for funding include: Crude oil and hazardous materials transport, Identification and treatment of pharmaceuticals and personal care products, Tourism and coastal economic development, Aquaculture improvements, Sensor technology development and infrastructure, Community hazard resilience, and Green infrastructure performance analysis, modeling and decision support tools. Visit ohioseagrant.osu.edu/research/funding for proposal guidelines, required forms and to submit your documents. Pre-proposals must be submitted [online](#) by **5PM on Thursday, March 14, 2019**.

Water Management Association of Ohio (WMAO) Student Scholarship

This scholarship is an opportunity for undergraduate and graduate students in a water-related field. This \$1000 scholarship is available to applicants who meet the following eligibility criteria:

- Candidates must attend, or plan to attend, a public or nonprofit independent college or university in Ohio on a full time basis.
- Candidates must be pursuing one of the following water resource-related disciplines: Agricultural engineering, Aquatic Biology, Civil Engineering, Education, Geology, Hydrogeology, Hydrology, Natural Resources, Water Policy, or Other Sciences.
- Candidates must be a resident of Ohio.
- Candidates must have a minimum 2.75 grade point average.

Please share this opportunity with all of your eligible students. **The deadline to apply is March 1st, 2019, 5:00PM.** [More information.](#)

Ohio EPA Offering \$3 Million in Grants for Nonpoint Source Reduction

Ohio EPA is requesting proposals for implementation projects to reduce nonpoint source pollutants, such as nutrients, sediment and bacteria; improve stream and riparian habitat; or reverse the impacts of stream hydromodification. Proposals should be linked to critical areas identified in Ohio's watersheds such as projects that improve water quality in Ohio streams from nonpoint sources of pollution. Projects that measurably reduce nutrients, eliminate impairments, or restore impaired stream segments are more of a priority than general nonpoint source pollution prevention projects. **Proposals are due to Ohio EPA by February 15th, 2019.** [More information.](#)

The Water Research Foundation Announces 3 RFPs for 2019

(1) [New Approaches for Improved Nutrient Management: Phase 1](#)

This project will engage stakeholders from point and non-point source communities, as well as regulators, who are impacted by nutrient loading in water systems. Together, a research roadmap will be developed that could include investigating new, holistic, and practical approaches to nutrient management to help utilities adopt innovative technologies for nutrient removal, probabilistic permitting, watershed-based approaches, and data transparency based on sound science.

(2) [Guidelines for Optimizing Nutrient Removal Plant Performance](#)

This project builds on existing work, with the objective to develop updated guidelines for optimizing nutrient removal plant performance. This will be accomplished through research or demonstration and from documented performance for nitrogen and phosphorus removal through the use of tools such as operational best practices, online instrumentation, control capabilities, model-based controls, and smart systems (Research and LIFT). The results of this research should be presented as a set of guidelines for both facility operators and design engineers. These guidelines will expedite the use of advanced technologies and can help reduce energy and chemical consumption and better manage the impact of carbon diversion on resource recovery.

(3) [Assessing the State of Knowledge and Research Needs for Stormwater Harvesting](#)

This project builds on WRF's existing work, Drivers, Hindrances, Planning, and Benefits Quantification – Economic Pathways and Partners for Water Reuse and Stormwater Harvesting (SIWM8R14), which provided a framework for utilities considering wastewater and stormwater reuse elements in their water management portfolios. The research will specifically focus on stormwater reuse/harvesting, with the objective to evaluate the state of the knowledge and research needs of stormwater harvesting. Specific regional issues including, but not limited to, the unique limitations of water rights in the western U.S. and how these limitations might impact stormwater harvesting will also be considered. This exploratory effort will help facilitate the use of stormwater harvesting at both national and regional levels.

All WRF proposals are due **Wednesday, February 27th at 4:00PM.**

To find more resources offered by Ohio WRC, please visit: <https://wrc.osu.edu/resources>

Upcoming Events

[Byrd Center Symposium on Climate Change Research - March 22](#)

The Byrd Polar & Climate Research Center (BPCRC) will host its inaugural Byrd Center Symposium on Climate Change Research at Ohio State, on Friday, March 22. The symposium will take place at BPCRC in Scott Hall on West Campus. The goal of the Symposium is to gather all of the climate research at OSU under one roof for one day, in order to increase visibility of your research on campus, and to help you connect with other OSU climate researchers. **Please submit your climate-related abstract by February 15th, 2019.** [More information.](#)

[OSU Forum on Water Research - February 8th](#)

There is a water crisis of global proportions, with 1.1 billion people lack access to clean water worldwide, resulting in the deaths of 6,000 children per day. In addition, 80% of disease can be attributed to a lack of clean water. The Forum on Water Research will gather faculty input on the purpose and direction for a research community focused on water protection. Drawing faculty from the humanities, sciences, technology, engineering and math, this forum and other related activities will bring insights to water resource issues in the Middle East and offer opportunities to partner with faculty from other departments for a multi-disciplinary approach. [More information.](#)

FLOW Public Meeting: Water Conservation and Sustainability - February 11th

FLOW will host Kent Halloran from OSU to speak on the importance of water conservation and various techniques to save water without spending a dime. Topics will include gardens and xeriscaping, grey water, and green roofs. Kent Halloran serves as a water compliance engineer for The Ohio State University where he manages water, environmental issues, and regulations. Kent is also a licensed professional engineer in the states of Ohio & Idaho, and a Board Certified Environmental Engineer with the American Academy of Environmental Engineers and Scientists. He has over 30 years' experience in the design, construction, and rehabilitation of potable water, wastewater, and stormwater facilities. [More information.](#)

Ethics & Engineering Professional Development Workshop - February 12th

Tinker's Creek Watershed Partners is hosting an Engineering Professional Development workshop on February 12, 2019. This workshop offers 2.5 ethics CEU's, your choice between two half-day sessions, and presentations from The Ohio Board of Registration for Professional Engineers and Surveyors. [More information.](#)

Have an event you'd like us to feature in our Newsletter? Email us at OhioWRC@osu.edu!

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