Winter 2025 #172 Quarterly

The Ohio Water Table

A Publication of the Water Management Association of Ohio

ODA Press Release, January 23, 2025,

ODA Recognizes Significant Contributions to Water Quality at Annual Awards Ceremony

REYNOLDSBURG, Ohio -- The Ohio Department of Agriculture (ODA) today recognized three entities for their significant leadership and commitment to conservation. Independent crop consultant Joe Nester, the Lucas County Engineer's Office, and the Greene Soil & Water Conservation District were all honored for their contributions to improving water quality through H2Ohio. "We are immensely grateful to our dedicated partners who have helped make H2Ohio a success," said ODA Director Brian Baldridge. "Their efforts have been instrumental in improving water quality in our state and making a lasting impact on our communities." (continued on page 11)

Ohio Department of Agriculture Director Brian Baldridge presents the H2Ohio Lifetime Achievement Award to Joe Nester for being a long-time champion of and contributor to water quality efforts.

Ohio Department of Agriculture

This issue:

President's Letter

BY CINDY BROOKES, BOARD PRESIDENT

Happy New Year! As we reflect on 2024, it's hard to ignore the challenges we faced—from devastating floods and hurricanes to severe drought in Ohio that left us with much lower-than-usual rainfall, impacting many communities. Despite a continued increase in funding for infrastructure improvements, these efforts remain far from sufficient to address the overwhelming need. We also learned of emerging contaminants threatening our water supplies and the new programs required to monitor and manage them.

As we entered 2025, new water-related challenges emerged. Toledo started the year with a snow drought, and California faced devastating wildfires. These wildfires, which are largely fueled by a lack of water, have become even more concerning, especially considering Ohio's own drought last year. Beyond the immediate devastation, these fires stress the region's water resources and bring with them additional threats—such as contaminants introduced by new firefighting chemicals. For instance, I recently read about fire retardants that stain homes pink—what might these chemicals carry? How do they affect water, public health and wildlife?

While the priority must be on helping those impacted by the fires, these are important questions for us to consider as we look at the broader picture.

WMAO remains committed to keeping everyone in the water industry informed about the pressing issues we face, the innovative solutions emerging, and how we can adapt or replicate these solutions in different regions.

One way we do this is through our quarterly WMAO Scholarship Luncheons—held virtually on the third Wednesday of January, April, July, and September. These webinars feature presentations on important research and work happening across various fields related to water. In addition, several of our divisions offer other webinars, training events, and conferences throughout the year. For more details, including event dates and registration information, please visit the Events Calendar at www.wmao.org

Let's stay connected and work together to drive meaningful change in the world of water.

Cindy Brookes

Looking forward to the next issue of The Ohio Water Table?

Send articles for consideration to Sarah Saylor, Administrative Director, WMAOhio@gmail.com by March 31 for the Spring Quarterly Issue with "Spring25" in the subject line.

Water Re-use for Ohio's Future

Implications for advanced industry, land conservation, and resource efficiency.

Tuesday, March 25, 2025
7:15 am-11:45 am

Nationwide and Ohio Farm Bureau 4-H Center at Ohio State

SPEAKERS

Tiffani Kavelec, **Policy Director, Ohio Environmental Protection Agency**
John Newsome, PE, Administrator, City of Columbus, Division of Water
Diana Rodriguez, Principal, Sustainability Public Policy, Amazon Web Services (AWS)
Kristy Hawthorne, **District Program Administrator, Licking County Soil and Water Conservation District**
Linda Weavers, PhD, **Co-Director, Ohio Water Resources Center**

8:15 a.m. - 9:30 a.m. A cross-disciplinary panel of leaders involved in water management, conservation, and reuse will discuss Ohio's current water reuse projects and the implications for regional natural resource and economic sustainability.

9:45 a.m. - 11:45 a.m. An in-person only extended educational program for water management professionals and students focused on overcoming economic and engineering challenges associated with implementing water reuse projects across the state. Continuing education units (CEUs) offered at this session.

$25 for non-students, FREE for students & virtual participants - Food and beverage refreshments will be provided.

Register at WMAO.org/EPN25
Sponsorships also available

Event updates: go.osu.edu/epnmar25

WMAO Water Management Association of Ohio

WATER RESOURCES CENTER OHIO WRC

TERRAQUA

ENVIRONMENTAL PROFESSIONALS NETWORK
Connecting our community

THE OHIO STATE UNIVERSITY
COLLEGE OF FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES

2024 STUDENT POSTER WINNERS SELECTED

At the 53rd Water Management Association of Ohio (WMAO) Conference, 21 posters were displayed and presented by students from universities from across Ohio. Students majoring in the environmental sciences presented to judges Laura Fay, Retired ODNR/OEPA Division of Surface Water; Eugene Braig, The Ohio State University; Carter Bailey, AQUA DOC; Doug Kane, Heidelberg University; and John Lenhart, The Ohio State University Water Resources Center.

First place was awarded to Richard Nana Arthur, Ohio University, for "hur, Ohio University. The title of his poster was "Environmental Impacts of Electrochemical Phosphorus Recovery Using Different Magnesium Sources." Jason Trembly was a contributing author. SECOND PLACE went to Jihae Dick at Ashland University for her poster "Vegetation Decomposition and Leaching in H2Ohio Wetlands". Emma Rettig, Laura Johnson, Jakob Boehler, Austin Nainiger, Emily Clark, & Deandra Jones at Heidelberg University were contributing authors.

First place took home a $250 prize and second place earned $100. Each winner also received a 1-year membership to WMAO. Honorable mention mention went to Justin Furby, The Ohio State University for "Evaluating Fish Community Performance Across a Longitudinal Gradient in Novel Ecosystems". Dr. Casey Pennock was a contributing author.

Congratulations to all who participated for their hard work and excellent presentations.

FIRST PLACE

Richard Nana Arthur, Ohio University
"Environmental Impacts of Electrochemical Phosphorus Recovery Using Different Magnesium Sources." Jason Trembly, contributing author.

Large Woody Debris as a Low-Cost Water Quality Management Practice in Urban Headwater Streams

With support from the Ohio Water Resources Center via a USGS 104(b) annual base grant, University of Cincinnati researchers Dr. Michael Booth, Dr. Stephen Matter, Adam Lehmann, and Dr. Dylan Ward completed a project titled "Assessment of large woody debris as a low-cost best management practice for improving water quality in urban headwater streams." The team aimed to find a low-cost solution to "urban stream syndrome" — the tendency of urban streams to display a pattern of ecological degradation due to mechanisms like powerful flows from urban stormwater runoff. The team evaluated the efficacy of large woody debris, or LWD, a relatively new method for stream restoration, in reducing the erosivity of flows, streambank erosion, and sediment transport, thereby increasing the availability of pool habitat.

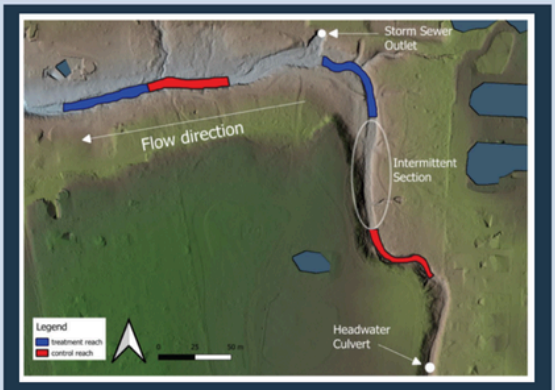

Figure 1. Locations of the four 60-meter reaches; two treatment and two control sites. Control sites were placed upstream of treatment reaches.

The research team, including University of Cincinnati undergraduate and graduate students, selected four 60-meter sites — two treatment and two control, following a Before-After Control-Impact study design — and installed eight log jams in April 2022 in Cooper Creek in Cincinnati (Figure 1). Unlike other restoration techniques that can be costly, intensive, and infeasible in urban areas due to limited access, LWD uses existing dead wood found on site and can be implemented in hours to days. After the jams were implemented, researchers monitored stream flow, wood abundance via passive integrated transponder (PIT) tags, fine sediment transport, streambed particle mobility, pebble counts, and pool habitat availability via longitudinal depth profiles and fixed-location channel cross-sections. The monitoring period lasted from April 2022 to July 2023.

Although typical rainfall events did not rearrange the jams, rapidly moving flows caused by large storms mobilized pieces of LWD (Figure 2). The total amount of wood in the study area remained relatively constant, as errant LWD was replaced with wood from the surrounding riparian area. Only one of the eight jams remained in its original spot throughout the 15-month post-installation period.

The quantity of streambed particles mobilized was not impacted by LWD additions, but the distance particles traveled on average was significantly reduced. LWD installations did not appear to affect the amount of fine sediment transported, but sediment traps were less reliable than anticipated, making the amount transported difficult to quantify. Sediment particle size distribution remained the same pre- and post-LWD.

LWD jams did increase pool habitat availability. Channel-spanning jams were associated with larger ponds, while jams that were off to one side did not impact pool size or depth.

The researchers noted jam instability during high-flow events is a limitation of LWD installation as it currently stands. Jams were most effective when spanning the full waterway, but their movement could potentially clog bridges and culverts. One possible solution is bracing the wood against trees instead of plants with shallow root systems, but this limits potential sites for LWD applications. Other methods include implementing a stormwater management strategy to reduce flow rate. Further research is needed to investigate LWD stability.

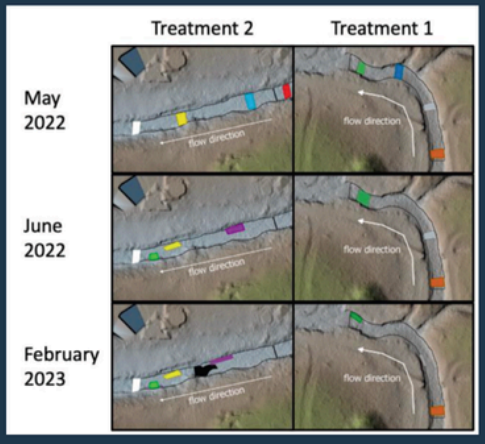

Figure 2. Illustration of LWD movement over time. Some wood pieces drifted and combined with others to form new jams (combinations of previous colors).

Researcher Profiles: Principal investigator Michael Booth is a research assistant professor in the University of Cincinnati's Department of Biological Sciences. Co-PI Stephen Matter is an associate professor in the same department. Co-PI and government collaborator Adam Lehmann is the Central Ohio Water Manager for the Nature Conservancy. Faculty collaborator Dylan Ward is an associate professor in the University of Cincinnati's Department of Geology. This project was completed with assistance from graduate student Peter Grap, who is earning his MS at the University of Cincinnati.

WMAO Scholarships 2024 Awardees

BY DENNIS CLEMENT

WMAO's ad hoc Scholarships Committee, led by Dennis Clement, reviewed applications and considered a number of impressive candidates for our 2024 Graduate and Undergraduate Scholarships. Those who receive our scholarship awards are invited to the WMAO Awards Luncheon on the first day of our Conference each year and are highlighted here in our newsletter because of their remarkable achievements in their education and chosen paths of study and because WMAO values investing in the future of these soon-to-be water professionals.

WMAO offers an annual $1,000 scholarship to the top Graduate student applicant, $1,000 to the top Undergraduate student, and $500 to a student pursuing an Associates degree. The deadline to apply is April 15, 2025.

The successful applicant must be an Ohio resident planning to attend an accredited Ohio college or university on a full-time basis and pursuing a degree in a water-resources-related field. Student applications are evaluated on: Academic achievement and potential, Financial need, Character, Extracurricular activities and community service, and Commitment to their academic program

To obtain more information and/or to submit an application, visit the online application hosted through The Columbus Foundation at: https://www.grantinterface.com/Home/Logon?urlkey=columbusfdns.

Callia Tellez (above) is a first-year law student at Ohio State's Moritz College of Law pursuing a specialty in environmental law. Callia holds a Bachelor of Science in Environmental Policy and Decision Making from The Ohio State's School of Environment and Natural Resources. During her first semester at Moritz she has had the opportunity to be a part of an energetic community of students and professionals dedicated to leadership and change. Callia aims to practice law in Columbus after graduation and has a specific interest in water quality and equitable water use amidst the rapid development of the city.

Undergraduate Cayleigh Mulgrew is studying Environmental Engineering and in her words she is, "[G]rateful for the hands-on learning experience that comes with the engineering discipline at the University of Cincinnati for giving me the opportunity to apply what I learn in real-world scenarios." As part of UC's Cooperative Education, she has worked as an intern on regional projects. After earning her degree, she looks forward to "stepping into a rapidly growing field, with global opportunities to tackle."

Congratulations to this year's scholarship recipients. WMAO is proud to support you and your education goals. For more information about WMAO scholarships, please contact Dennis Clement, WMAO's Education Chair (dennis.clement@epa.ohio.gov) . If you are interested in donating to the scholarship fund, please contact Sarah Saylor at (wmaohio@gmail.com).

Renew your WMAO

Membership for 2025

WMAO Water Management Association of Ohio

WMAO membership includes all six divisions for a modest fee

Hoover Marina Receives Gold Tier Ohio Clean Marina Certification

ODNR PRESS RELEASE, JANUARY 16, 2025

WESTERVILLE, Ohio – The Ohio Department of Natural Resources (ODNR), in partnership with the Ohio Sea Grant, has awarded Hoover Marina in Westerville as a Gold Tier Ohio Clean Marina. This certification, through the Ohio Clean Marinas Program, recognizes marinas that adopt environmentally responsible practices.

Hoover Reservoir and the marina, jointly managed by the City of Columbus Recreation and Parks Department and City of Columbus Department of Public Utilities' Division of Water, is a 3,024-acre reservoir just north of Columbus. Hoover Reservoir was constructed as a water supply facility by the City of Columbus in 1955.

"This is a great honor for Hoover Reservoir, which now joins a growing list of other certified Ohio Clean Marinas," said Sarah Orlando, Ohio Clean Marinas Program Manager.

The city's Division of Water team has gone above and beyond to implement polices that keep Hoover Reservoir's water clean. This is especially critical as the reservoir is Columbus' primary drinking water source. Marina staff have implemented practices to divert stormwater runoff from carrying pollutants into the lake, create habitat using native plants, and educate boaters about invasive species like hydrilla.
"Joining the Clean Marinas program reinforces our commitment to protecting and conserving our natural environment," said Bernita A. Reese, M.S., CPRP, director of Columbus Recreation and Parks Department. "Protecting Hoover Reservoir ensures residents have access to clean drinking water and protects this important resource for generations to come."

Launched in 2004 with grant funding from the National Oceanic and Atmospheric Administration (NOAA), the Ohio Clean Marinas Program is administered through ODNR's Office of Coastal Management and the Ohio Sea Grant College Program. The program expanded statewide in 2015 with funding from the ODNR Division of Parks and Watercraft.

The Ohio Clean Marinas Program is a proactive partnership designed to encourage marinas and boaters to implement simple, innovative solutions to keep Ohio's coastal and inland waterways clean. The program assists participating marina operators in protecting the resources that provide their livelihood – clean water and fresh air. Its primary goal is to promote environmental stewardship through best management practices that increase awareness of environmental laws, rules, and jurisdictions.

For more information on the Ohio Clean Marinas Program, visit www.ohioseagrant.osu.edu/clean.

Ohio Department of NATURAL RESOURCES

UNLIMITED MEMBERS

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WMAO ANNUAL STUDENT SCHOLARSHIPS

ATTENTION college students:

We invite you to apply for a $1,000 WMAO Scholarship through the Columbus Foundation.

Each year, we offer one undergraduate and one graduate scholarship to recipients who are students with an academic focus on water resources pursuing a degree at an Ohio college or university. We also offer a $500 scholarship for students seeking an Associates of Applied Sciences degree in a water resource-related discipline.

Check out this informational video for guidance. More information can be found at wmao.org/scholarships

Deadline to apply online is April 15, 2025.

If you have any questions, please contact Dennis Clement (dennis.clement@epa.ohio.gov), Chair of the Education Committee.

Ohio communities look to update water systems

PUBLIC NEWS SERVICE
FARAH SIDDIQI, PRODUCER

January 27, 2025 --

Lead contamination in drinking water continues to be a significant concern in Ohio.

With new federal regulations to tackle the issue, local water utilities are accelerating their efforts to replace aging infrastructure.

Kevin Kappers, lead program manager for the Greater Cincinnati Water Works, explained what the changes mean.

"How EPA regulates lead and copper in drinking water changed, so all utilities are reacting to make sure they stay in compliance," Kappers pointed out. "We have already had a lead service line replacement program since 2018, but what that means for us is, we're accelerating that."

Federal Lead and Copper Rule Improvements mandate replacing lead service lines within the next decade. But concerns remain about funding and logistic challenges, especially for smaller Ohio communities with fewer resources to comply with these changes.

Alicia Smith, executive director of the Junction Coalition in Toledo, and other advocates stressed the importance of communication and transparency about lead contamination between cities and their residents.

"You have to tell families what and how this impacts their lives. If you don't do that, then no one's doing it right," Smith argued. "The intersectionality of infrastructure impacts public health, public safety and public awareness, for the benefit of environmental and economic justice."

Maureen Cunningham, chief strategy officer and director of water at the Environmental Policy Innovation Center, emphasized the hazards of lead in water systems.

"Lead is a neurotoxin; there's basically no safe level of lead in drinking water for human health," Cunningham noted. "Replacing lead service lines, and replacing all lead in our water systems, will significantly reduce and hopefully even eliminate the threat of lead in drinking water."

Jeff Swertfeger, superintendent of water quality and treatment for the Greater Cincinnati Water Works, stressed the importance of public participation in updating the systems.

"Participation by the people who own those houses that may have lead lines is really important, to get cooperation in order to get those lines out," Swertfeger explained. "A lot of our pipes are over 100 years old. There's a lot of needs in drinking water now, besides just lead."

Nationally, $15 billion in federal funding is available for lead line replacements.

Original PNS story here:
https://www.publicnewsservice.org/2025-01-27/water/ohio-communities-look-to-update-water-systems/a94869-1

ODA Annual Awards Ceremony

(continued from cover)

The awards were presented by ODA Director Brian Baldridge at the 2025 Ohio Federation of Soil and Water Conservation Districts Annual Partnership Meeting in Columbus.

The H2Ohio Lifetime Conservation Advocate Award recognizes those who exhibit exceptional leadership and commitment to water quality throughout their career. Recipients of this award are devoted stewards of water quality improvement and conservation who demonstrate innovation, partnership, enthusiasm, and a “get it done” attitude.

The awards recognize Governor DeWine’s statewide water quality initiative designed to address complex issues impacting Ohio's waters. Launched in 2019, H2Ohio uses a comprehensive approach guided by science and data to reduce algal blooms, stop pollution, and improve access to clean drinking water by supporting best farming practices, road salt runoff reduction, litter cleanup, dam removal, land conservation, and water infrastructure revitalization. For more information visit h2.ohio.gov.

Director Baldridge presents the H2Ohio Lifetime Conservation Advocate Award to the Lucas County Engineer’s Office for lasting impact on water quality through conservation ditch implementation.

Director Baldridge presents the H2Ohio Lifetime Conservation Advocate Award to Greene Soil & Water Conservation District for outstanding program delivery and administration.

WATER MANAGEMENT ASSOCIATION OF OHIO

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Berea OH 44017-1351

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

VISION: To be recognized statewide as the go-to community for people who manage and safeguard Ohio's water resources.

MISSION: To support Ohio's water resource professionals with essential information, education, and networking opportunities

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