

The Ohio Water Table

A Publication of the Water Management Association of Ohio

No. 130 / Quarterly



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 recently completed project conducted by Dr. John Senko, Assistant Professor in the Department of Geoscience at the University of Akron. If you are interested learning more about our research projects see the Ohio Water Resources Center webpage at wrc.osu.edu.



Figure 1. Dr. Senko collecting samples from iron mound in the Mushroom farm, Lima, OH

The goal of the project titled “**Microbial Modulation of Acidic Coal Mine Drainage Chemistry: Implications for Passive Treatment of Minewater**” was to determine how microorganisms associated with formerly pristine soil that are influenced by acid mine drainage develop “iron mounds” (Figure 1) that could be exploited for removal of Fe from acid mine drainage (AMD).

Continued on Page 3

Inside this issue:

<i>President's Column</i>	2
<i>Passing the Pump in the Groundwater Division</i>	3
<i>WMAO Participates in 2014 State Science Day</i>	4
<i>July is Lake Appreciation Month</i>	5
<i>WMAO Conference</i>	5
<i>ODNR Launches a New Initiative</i>	6
<i>Ohio EPA Soliciting Grant Proposals</i>	6
<i>WMAO Luncheon Flyer</i>	7
<i>WMAO Golf Outing Fundraiser</i>	8
<i>Ohio Federation of SWCD Promotes 4R Certification Program</i>	10
<i>Upcoming Events</i>	10
<i>WMAO Membership Form</i>	11
<i>WMAO Board of Directors</i>	12

In Memoriam of Dr. Carolyn Merry

This issue of The Ohio Water Table is dedicated in memory of Dr. Carolyn Merry, who died in a car accident on Tuesday, June 3rd. Dr. Merry was a well-known researcher in remote sensing and geographic information systems. Many of our WMAO members were familiar with her work, even as students at The Ohio State University where she was a Professor and Chair of the Department of Civil, Environmental and Geodetic Engineering.

WMAO has made a contribution as a tribute to her career to the Carolyn J. Merry Engineering Scholarship Fund. If you wish to donate in her honor, direct checks to: The Ohio State University Foundation, Fund Number 664695, 1480 West Lane Avenue, Columbus, OH 43221. Or, contribute online at: give.osu.edu/DrCarolynMerry.



Points of Interest:

- ODNR promotes paddle sports by rewarding Ohioans for boating Ohio's scenic rivers.
- Ohio Federation of Soil and Water Conservation Districts encourages stewardship using the 4Rs in agriculture.

President's Column

Boris E. Slogar, P.E.

Welcome to the summer edition of the *Water Table*. I had serious doubts about summer arriving this year after the long winter we all endured. I made a promise late last winter not to complain about summer's heat and humidity. So, thanks to Willis Carrier and the wonders of Freon, I write this article in cool comfort. And so, I'll start off with an update on WRDA 2013 and then end on a sad note regarding the passing of a wonderful professor, person, and friend from OSU.



WRDA 2013: Turning my attention to water resources, on May 15th, 2014 the U.S. Senate (113th Congress) passed a bill (S.601), otherwise known as WRDA 2013. The bill has now moved on to the House for consideration. It has been more than a few years since the last WRDA was adopted in 2007. That particular WRDA was very controversial and was vetoed by President Bush whose veto was then overridden by both the House and Senate. So what is WRDA? In a nutshell, the Water Resources Development Act (WRDA) is the biennial legislation that authorizes the Civil Works program for the U.S. Army Corps of Engineers. WRDA often includes provisions to set policy for the Civil Works program as well as authorizations for new Civil Works projects.

Much of WRDA 2013 focuses upon ports and inland waterways and according to ASCE in a recent letter written to Senators Boxer and Vitter, Congressmen Shuster and Rahall, and members of the Conference Committee, stated that the nation's deteriorating ports and inland waterways infrastructure will cost the American economy more than nearly 800,000 jobs and suppress the growth of the country's GDP by \$697 billion in 2020. Fortunately, ASCE's letter goes on to stress the importance of tending to aging dams and levees.

Here are a few items which may be of interest regarding this latest iteration of WRDA:

Creation of a National Levee Safety Program. Specifically, the WRDA (Senate version) directs the US Army Corps of Engineers (USACE) to develop a national levee safety program including the completion of a national levee database as well as the creation of levee safety guidelines. There would be financial assistance to states to develop their own safety programs and provide some funding to rehabilitate levees.

Re-authorization of the National Dam Safety Program from 2014-2018. \$13.9 million dollars would be appropriated for this program annually.

Increase expenditures in the Harbor and Maintenance Trust Fund to address dredging needs in America's ports and harbors.

Reform and expedite USACE project delivery and project selection processes as well as to allow non-federal interests to submit projects for review and open up the process to stakeholders.

WRDA 2013 has its controversies and issues; however, I do believe that one thing we can all agree upon is that water resources overall have been significantly underfunded for quite a long time now. This bill does address this underfunding, but there is still much to be done. Stay tuned for further updates.

"I...remember a young professor that smiled a lot, cared a lot, and treated students with respect and compassion."

The passing of Dr. Carolyn Merry, former Chair of the OSU Department of Civil, Environmental and Geodetic Engineering:

Dr. Merry, a world-renowned scholar in remote sensing and geographic information systems passed away in early June in a tragic accident on I-71. Carolyn retired from OSU this past fall after 25 years of distinguished service. I was in her very first remote sensing class as a senior back in the late 80's and remember a young professor that smiled a lot, cared a lot, and treated students with respect and compassion. She touched so many students' lives and left many of us Buckeye engineers with a strong legacy of professionalism, compassion, and warmth. She will be sorely missed by all of us.

We still don't know exactly what happened on that terrible day on I-71, but we do know that she stopped with traffic in a construction zone and a semi-truck, apparently not noticing that traffic had stopped, plowed into the back of Carolyn's car. I'm editorializing here, but I can't help but wonder if that trucker was texting or doing something else that distracted his attention. This is something to consider and think about as we drive around our great State.

Please be safe this summer!

Research Highlights from State of Ohio Water Resources Center

Continued from Page 1

The results from laboratory microcosms experiments are quite striking in that they illustrate the rapid rate at which microbial communities associated with pristine soil adapt to intrusion of acid mine drainage, resulting in rapid rates of Fe(II) oxidation (Figure 2). The robust Fe(II) oxidizing activities appear to be attributable to some type of synergistic activities between microorganisms associated with the formerly pristine soil and microorganisms suspended in the AMD that may colonize the soil. We observed that this adaptation is quite rapid, with combined soil- and AMD-associated microorganisms catalyzing Fe(II) oxidation at rates comparable to iron mound sediment after one exchange with fresh AMD. This response appears to be enhanced by the addition of iron mound material (with associated microorganisms). Analysis of microbial communities indicates that soil-associated microbial communities develop characteristics of “mature” iron mound sediments quite rapidly, and indicate that relatively simple approaches to mimic the hydrologic characteristics of iron mounds may lead to the development of robust Fe(II) oxidizing microbial communities in soils that had not previously been impacted by AMD.

...illustrate(s) the rapid rate at which microbial communities associated with pristine soil adapt to intrusion of acid mine drainage...

Researcher: Dr. Senko studies the microbially mediated formation and dissolution of mineral phases and controls on the activities of microorganisms mediating such processes. He is particularly interested in how the ecology, physiology, and in-situ activity of these microorganisms influence migration of environmental contaminants. The major focus of work in his lab is on microbially mediated redox transformations of iron in AMD-impacted systems, and how these activities can be exploited to mitigate the widespread and legacy problem associated with nearly 200 years of coal mining activities in the Appalachian coal-producing regions of the United States.

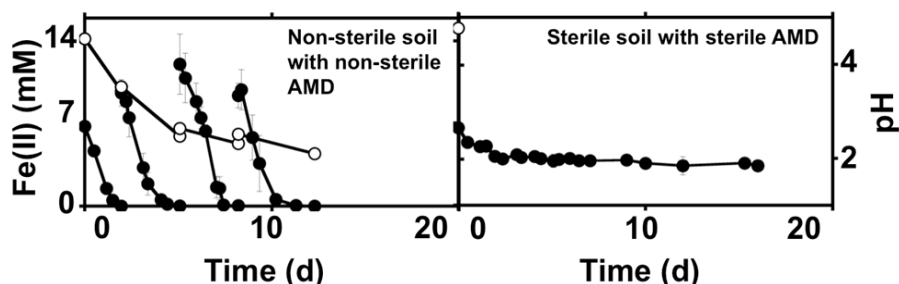


Figure 2. Dissolved Fe(II) (closed circles) and pH (open circles) in two different microcosm incubations including pristine soil and AMD from an AMD-impacted system. These results illustrate 1) that Fe(II) removal from AMD is mostly a biological process, and 2) the development of microbial communities that are capable of rapid and efficient removal of dissolved Fe(II) from AMD.

Passing the Pump in the Groundwater Division

By Craig Smith, Environmental Specialist, Ohio EPA

At the January WMAO Board Meeting, Ralph Haefner announced he had accepted a position as Deputy Director of the USGS Michigan Water Science Center in Lansing, Michigan. With that announcement Ralph also ended his leadership of WMAO's Groundwater Division as of the May Board meeting. I was honored to be named on the short-list to replace Ralph and at the May Board meeting moved from my At-Large Directorship to fill his place with the Groundwater Division.

Please allow me to take a few moments to introduce myself. I earned my Bachelor-of-Science degree in Geology from The Ohio State University, and have been employed by the State of Ohio for almost 25 years. I've worked at the Bureau of Underground Storage Tank Regulations and Ohio EPA's then Division of Emergency and Remedial Response. My work with these programs included environmental site investigations, evaluations and clean up; facility inspections; and enforcement actions. For the last 15 years, I've worked for Ohio EPA's Division of Drinking and Ground Waters in the Source Water Assessment and Protection Program. I've worked with public water systems interested in protecting their



We're going to miss you, Ralph!

Continued on Page 4

water supplies from contamination and coordinated source water protection efforts with federal and state government agencies. I've participated in a number of multi-agency workgroups that have developed guidance on issues ranging from human and waste management to geothermal heating and cooling systems and am currently working with the Agency workgroup tasked with revising the Water Well Standards rules.

Back to Ralph - I've had the privilege and pleasure to work with Ralph on projects and workgroups over the 15 years I have been in Ohio EPA's Ground Water Program. From data management to resource protection to groundwater's importance in the water cycle, Ralph's knowledge and insights have been crucial to the success of our work. As the Director of the Groundwater Division, Ralph has been a leading voice in ensuring that groundwater resources are not taken for granted. Ohio's loss is Michigan's gain. **Thank you Ralph!**

I hope to continue Ralph's tradition of strong advocacy for the importance of our groundwater resources and sustainable resource management. I also hope to work toward the goal of my predecessors and make the Groundwater Division a more formal entity within WMAO. I look forward to representing all of the dedicated groundwater resource professionals working in Ohio.

...Ralph's knowledge and insights have been crucial to the success of our work.

WMAO Participates in 2014 State Science Day

By Rick Weber, Science Day Chair, Water Management Association of Ohio

The 2014 State Science Day was held at The Ohio State University in French Field House, on Saturday May 10, 2014. Forty-five students requested to be judged for the two WMAO awards: 30 were in the lower 7th-9th grade category, and 15 were in the upper 10th-12th grade category. The Peter G. Finke Water Management Award in each grade category includes: a \$250.00 check, a plaque, recognition in WMAO's "Water Table" publication, and an invitation to the WMAO Fall Conference in November. Peter Soltys, Bob Vertrees, and Rick Weber did the judging this year for WMAO.

Forty-five students requested to be judged for the two WMAO awards.



Peter Soltys and Lauren E. Phillips, award recipient.

The WMAO 2014 State Science Day awardee in the lower grade category is **Lauren E. Phillips**, a 9th grade student at Archbishop Alter High School in Kettering, Ohio. Lauren's project was titled "What is the difference on nitrate levels and turbidity in a straight and meandering channel?" Lauren's project which compared the water quality of five straight channels with five meandering channels entering Grand Lake St. Marys was most interesting. In each channel Lauren took three samples and tested the water for nitrates and suspended solids. From her results, she realized that the water quality was not significantly

different between the two types of streams although she hypothesized that the meandering type would have a greater impairment. Lauren gained valuable laboratory experience and made effective use of the scientific method. Lauren's science teacher at Archbishop Alter High School is Mrs. Jennifer Butler. Her mentor who helped her with the laboratory analyses is

Mr. Jim Davis, Environmental Lab Manager of the Montgomery County Water Services Environmental Lab.



Hannah G. Meller, award recipient, and Robert Vertrees.

The WMAO 2014 State Science Day awardee in the upper grade category is **Hannah G. Meller**, an 11th grade student at Pettisville High School in Pettisville, Ohio. Hannah's project was titled "The effect of various barley straw applications on the growth of Chlorophyta." Hannah hypothesized that an application of chlorine in conjunction with barley straw would be the most effective method to prohibit algal growth. She also investigated applications of only chlorine, only barley straw, and a control of algae water with no other treatment. She conducted all of her water quality analyses in the school greenhouse, and tested for light absorbance, turbidity, temperature, and pH over time. Hannah demonstrated a thorough understanding of her project and made effective use of the scientific method. Hannah's science teacher at Pettisville High School is Mr. John Poulson.

July is Lake Appreciation Month!

By Dr. Robert Carlson, Professor Emeritus, Kent State University

Celebrate Lake Appreciation Month by participating in this year's **Secchi Dip-In**, June 28-July 20. This is the 21st **Dip-In**, and it continues to demonstrate that volunteers can be an invaluable part of the effort to monitor status and change on a continental, if not global, scale.

The **Dip-In** monitors water transparency. Transparency is sensitive to changes in nutrient inflows caused by changes in land use and to changes in the temperature structure of the lake. Transparency and turbidity can be measured by a variety of instruments in most every aquatic habitat. We also welcome measurements of temperature.



Probably never in recent history have our environmental efforts been more under attack by budget cuts and special interests. The **Dip-In** won't solve our environmental crisis, but its data has and will continue to be a chance for volunteers to contribute to a large scale consideration of status and trends of water quality in North America. You can make a difference, both for your local efforts and for the world. Visit www.secchidipin.org to join this global effort.

WMAO 43rd Annual Meeting and Symposium

VALUING WATER: Exploring the interactions between people, markets, and water

November 18 & 19, 2014

[Doubletree Hotel](#), 175 Hutchinson Ave., Worthington - Columbus

Keynote Address: **Dr. G. Dennis Cooke**,

[Professor Emeritus](#) of Limnology, Kent State University

The conference agenda will be presented under these session topics*:

Fisheries	Water and Agriculture	Nutrient Management
Public Water Supply	Mineral Resource Management	Climate Change
Groundwater	Dam Safety	Watershed Management
Water Assessment	Education and Outreach	Public Health
Fish Ecology	Nutrient Loading	Wetlands
Water Quality	Nutrients and Cyanobacteria	Water Use and Availability

The conference will conclude with a viewing of "[Chasing Ice](#)", a documentary on climate change.

Recognize a deserving colleague!

WMAO [Award Nominations](#) are due by September 30, 2014.

**The full agenda with abstract titles and registration information will soon be available. Visit www.wmao.org for regular updates.*

ODNR Launches New Initiative Aimed at Promoting Outdoor Paddling Sports

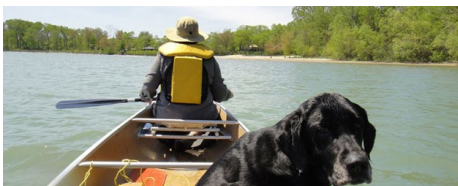


Photo courtesy of ODNR.

The Ohio Department of Natural Resources (ODNR) recently launched the Paddle Ohio initiative to promote paddling on Ohio's state-designated wild, scenic and recreational rivers and water trails. In the last decade, the number of Ohioans that own kayaks and canoes has increased 128 percent," said ODNR Director James Zehringer. "The goal of the Paddle Ohio initiative is to encourage more people to explore Ohio's hundreds of miles of scenic waterways that often go unnoticed."

Four regional kick-off events were held Sunday, June 22, on the Sandusky State Scenic River in northwest Ohio; the Grand River State Wild and Scenic River in northeast Ohio; the Stillwater State Scenic River in southwest Ohio; and the Kokosing State Scenic River and Water Trail in central Ohio.

The Paddle Ohio initiative will reward individuals who paddle four of Ohio's wild, scenic and recreational rivers or water trails with a commemorative pin. Participants simply submit information about their four paddling trips on the Paddle Ohio registration form at paddle.ohiodnr.gov, and ODNR will mail the pin to qualifying individuals. Future plans include a series of pins paddlers will be able to collect for paddling up to 20 different segments of Ohio's wild, scenic and recreational rivers or water trails.

*"In the last decade,
the number of
Ohioans that own
kayaks and canoes
has increased 128
percent"*

Ohio pioneered the river preservation movement in 1968 with the passage of the nation's first scenic rivers act. This legislation created a state movement to protect Ohio's high quality streams for future generations. Maintaining Ohio's scenic rivers and water trails requires the partnership of numerous volunteers, conservation groups, nonprofit organizations, local leadership, government agencies and private owners.

Maps and more information on Ohio's scenic rivers and water trails, as well as information on volunteering to be a stream quality monitor, is available from the ODNR Division of Watercraft at watercraft.ohiodnr.gov/scenicrivers.

The ODNR Division of Watercraft is responsible for boating safety, education and law enforcement on all waters of the state. This statewide area includes the near-shore area along 451 miles of the Ohio River, approximately half the entire surface area of Lake Erie, more than 605 inland lakes and more than 60,000 miles of inland streams, rivers and other waterways.



Photo courtesy of ODNR.

ODNR ensures a balance between wise use and protection of our natural resources for the benefit of all. Visit the ODNR website at ohiodnr.gov.

Ohio EPA Soliciting Grant Proposals for FFY2015 Section 319(h)

Grants up to \$400,000 will be awarded for the implementation of projects that address nonpoint source pollution and/or storm water runoff and result in water quality improvements in Ohio's streams, rivers and lakes.

Water quality improvement projects eligible for Section 319 grant funding include: Stream Restoration and/or Dam Removal/Modification, Wetland Restoration and/or Re-Naturalization, Innovative Storm Water Demonstration (reduced eligibility amount), Agricultural Best Management Practices, Inland Lake Management and Restoration, Acid Mine Drainage Abatement and Abandoned Mine Land Reclamation, Riparian Restoration Projects (reduced eligibility amount), Riparian and Wetland Protection and Conservation Easement on High Quality Waters (reduced eligibility amount).

The deadline for submitting Section 319 grant applications is close of business **July 25, 2014**. The Request for Proposals and applications are available at the Ohio EPA Division of Surface Water webpage located at <http://epa.ohio.gov/dsw/nps/index.aspx#LiveTabsContent120842>. If you require additional assistance or have questions, please do not hesitate to contact Russ Gibson, Manager, at 614-644-2020 or Martha Spurbeck, Grant Administrator, at 614-644-2869.

A Water Luncheon Seminar



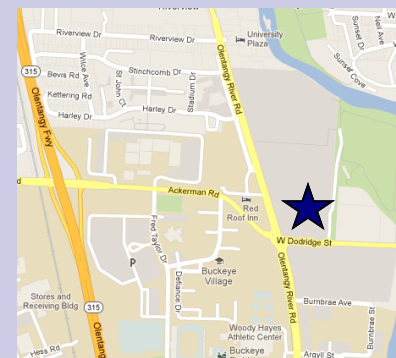
► Presented by:

The Water Management Association of Ohio
and

The Ohio Water Resources Center

July 16, 2014; 11:30 a.m. - 1:00 p.m.

Wilma H. Schiermeier Olentangy River Wetland Research Park,
The Heffner Building, 352 Dodridge St. Columbus, OH 43202



Ohio River Basin Climate Change Project

James Noel, Service Coordination Hydrologist/Meteorologist; James.Noel@noaa.gov; NOAA, National Weather Service, Ohio River Forecast Center, Wilmington, Ohio; weather.gov/ohrfc.

The Army Corp of Engineers (USACE) Great Lakes and Ohio Valley division (LRD) along with the Huntington District (LRH) created a pilot project to analyze climate change in the Ohio Valley. In 2011 a group of agencies developed a project called Ohio River Basin Climate Change (ORBCC) project to identify what adaptations may be necessary based on hydrologic climate changes. The group included USACE, NOAA/NWS, USGS, EPA, University of New Hampshire, University of Cincinnati, Marshall University, Nature Conservancy and Battelle.

The ORBCC project has several phases. This project is scheduled to be completed with a report due out of the USACE in later 2014. The project took climate change model data of temperatures and precipitation downscaled using CMIP 3 and used it as input into the NOAA/NWS Ohio River Forecast Center (OHRFC) hydrologic river model.

Results show mean, minimum and maximum flows within the historical range through 2040 except autumn. Beyond 2040 increases occur in the mean and maximum flows of between 10 to 40%. Minimum flows decrease beyond 2070. Minimum and maximum flows exceed the historical range especially beyond 2050-2070. Autumn season experiences the greatest changes.

Please register by July 9, 2014. Late or on-site registrations cost \$5 extra and are not guaranteed a meal. For registered engineers who need Professional Development Hours (PDHs), this presentation offers 1 PDH.

☐ WMAO Member (\$10) ☐ Nonmember (\$15) ☐ Student (\$7) Special meal? _____

Name _____

Organization _____

Address _____

City _____ State _____ Zip _____

Phone _____ Email _____

Please send form and check to: WMAO-Luncheon, 8440 E. Washington St. #206, Chagrin Falls OH 44023.

OR, register online with a credit card at: www.wmao.org.

Proceeds from the luncheon benefit the continued operation of WMAO and our scholarships. Sponsorship opportunities are available for those interested in providing extra support. More information on sponsorship is available at www.wmao.org.

Another Successful WMAO Golf Outing Fundraiser

By Jim Shoemaker, Golf Outing Chair, Water Management Association of Ohio

The 14th Annual WMAO Scholarship Golf Scramble was played on June 13th at Buck Ridge Golf Course near Marysville, Ohio. This was Friday the 13th following a full moon, so it was no surprise that Mother Nature would throw us a curve with a wet and chilly morning. However, this small but very mighty group of fun-loving golfers took the weather in stride and by noontime the sun came out and it became a perfect golf day.

We appreciate the financial support of all the players, sponsors and donors. We wish to acknowledge the following:

Event Sponsors: **AMEC Environment & Infrastructure** and **VGC Chromatography**

Hole Sponsors:

Burgess & Niple

Dayton Department of Water

Special thanks to **Admiral Engineering & Surveying** for buying two rounds of “refreshments” for everyone (AKA the 19th Hole Sponsor)

*We appreciate the
financial support of
all the players,
sponsors, and donors.*

Prize Donations:

Dayton Dept. of Water

Heidelberg Distributing

All sponsorship, mulligans, and raffle proceeds go directly to the Scholarship Fund established in 2003. This year we raised over \$400 towards this worthy cause! We strive to provide an event that is financially successful as well as entertaining and fun for all the participants. Players of all skill levels are encouraged to join us.

The Scholarship Fund is available to all members and their relatives. For more information, visit wmao.org.



Players enjoy refreshments, hoping to win one of the door prizes.



Team USGS lead by our very own Ralph Haefner.



Players from Wright State University.



Team Beagle Bioproducts relaxes after the golf game.



Aaron learned that chipping into a golf cart's cup holder costs the team a penalty stroke (WMAO Golf Rule #4).



Team AMEC Environmental & Infrastructure, one of our Event Sponsors.

Ohio Federation of Soil and Water Conservation Districts Promotes 4R Certification Program



By Mindy Bankey, CEO, Ohio Federation of Soil and Water Conservation Districts

A new program has been launched involving the agriculture community as a proactive, responsible commitment aimed at the long-term improvement of Lake Erie's water quality. This new **4R Nutrient Stewardship Certification Program** encourages agricultural retailers, service providers and other certified professionals to adopt proven best practices through the 4Rs, which refers to using the Right Source of Nutrients at the Right Rate and Right Time in the Right Place. This approach provides a science-based framework for plant nutrition management and sustained crop production, while considering specific individual farms' needs.

The **4R Nutrient Certification Stewardship Certification Program** was created to address the following goals: Maximize crop uptake of nutrients and minimize nutrient loss; Create long-term positive impacts on water bodies associated with agricultural production areas; Encourage sharing of the most up-to-date information about responsible nutrient stewardship with Nutrient Service Providers and growers; and, Help the agriculture sector adapt to new research and technology in the area of nutrient stewardship

*Right Source of
Nutrients at the
Right Rate and Right
Time in the Right
Place.*

The **4R Nutrient Stewardship Certification Program** outlines an initial three-year plan for those going through the certification process. A third-party evaluation or audit will take place every three years to ensure 4R adoption has taken place. The program is ongoing with goals to continually adapt and improve upon new advancements.

The **4R Nutrient Stewardship Certification Program** is governed and guided by the Nutrient Stewardship Council, a diverse set of stakeholders from business, government, university and non-governmental sectors with a common goal of maintaining agricultural productivity while also improving the quality of Lake Erie and its contributing watersheds. To learn more about the program standards, how to become certified, and /or who is involved, go to www.4rcertified.org. Also follow the 4R Certified program on Twitter and Facebook at: www.twitter.com/4rcertified and www.facebook.com/4rcertified

The Ohio Federation of Soil and Water Conservation Districts (OFSWCD) is a member of the Nutrient Stewardship Council and is pleased to share that Ohio's 88 SWCDs are engaged and active in the promotion of this new program, 4R Nutrient Stewardship outreach efforts provided through our 4R Tomorrow program (www.4RTomorrow.org), and a key partner in the efforts to improve water quality throughout the state of Ohio.



EPN Breakfast Club

Tuesday, July 8, 2014 - 7:15 a.m.– 10:00

Grange Insurance Audubon Center

Plants Make the World Go 'round: Why We Must Protect Our Native Ecosystems.

Jim McCormac, Ohio Department of Natural Resources, Division of Wildlife.

For more information and to register, visit the EPN [website](#).

Ohio Watershed Leaders (OWLS) Conference

August 28-29, 2014

Cuyahoga Valley National Park

Lipscomb/White Pines Campus, Peninsula, Ohio 44264

Register at www.regonline.com/owls-2014 or contact Jerry Iles at iles.9@osu.edu.



If You Haven't Yet, Join WMAO or Renew for 2014!

Membership Application Form*

Water Management Association of Ohio



*Use this form to join or renew a WMAO membership, or online at: www.wmao.org

Name: _____ Credentials: _____

Company: _____ Job Title: _____

Address: _____

City: _____ State: _____ Zip: _____ County: _____

Email: _____ Ohio Region (circle): Central NW NE SE SW Statewide

Phone: _____ Mobile Phone: _____

Additional Members and Emails (Organizational or Unlimited): _____

Division Affiliation (check one*):

*Members are in all Divisions. Select a primary, if applicable.

- ☐ None
- ☐ Ohio Dam Safety Organization (ODSO)
- ☐ Ohio Floodplain Management Association (OFMA)
- ☐ Ohio Lake Management Society (OLMS)
- ☐ Ohio Stormwater Association (OSWA)
- ☐ Ohio Watershed Professionals Association (OWPA)

Areas of Interest (check all that apply*):

*For dissemination of WMAO information.

- ☐ Agriculture ☐ Lake management
- ☐ Dam safety ☐ Mineral resource management
- ☐ Drinking water / wastewater ☐ Navigation and recreation
- ☐ Education ☐ Research and data management
- ☐ Floodplain management ☐ Stormwater
- ☐ Ground water ☐ Watersheds

Membership Annual Dues:

Individual	\$ 65
Organizational	\$ 180
Added individuals above 3 members	\$ 60
Unlimited	\$ 600
Citizen	\$ 25
Emeritus	\$ 25
Student	\$ 10

Individual = anyone interested in Ohio's water resources.

Organizational = an incorporated or unincorporated entity interested in Ohio's water resources with up to three (3) individual memberships.

Unlimited = an incorporated or unincorporated entity interested in Ohio's water resources with unlimited individual memberships, advertisement space in WMAO's newsletter, and recognition on the WMAO website.

Citizen = anyone with an interest in Ohio's water resources but not employed in a water-resource field, as a non-voting member with benefits limited to the WMAO newsletters and notification of activities.

Emeritus = any individual who is at least 65 years of age and who has been a member of WMAO for not less than five (5) consecutive years.

Student = any student currently enrolled in an accredited high school, technical school, college or university.

Amount Due:

Member Type: _____

Additional Members (organizational) _____

Ohio Water Education Program* _____

WMAO/WRFO Scholarship Fund* _____

OLMS Dan Kush Education Fund* _____

Total Enclosed: _____

*Donated contributions to OWEP and special Funds are fully deductible under federal income tax law. Membership dues are not tax deductible.

Apply for 2014 membership online at: www.wmao.org

Or by check payable to **WMAO**; Or by credit card:

Credit card #: _____

Expiration Date: _____ CVV#: _____

Name on card: _____

Email for receipt: _____

Please submit completed registration form and dues to:

Water Management Association of Ohio

8440 E. Washington Street #206

Chagrin Falls, OH 44023

WATER MANAGEMENT ASSOCIATION OF OHIO

8440 E. Washington St. #206
Chagrin Falls, OH 44023

330-466-5631, admin@wmao.org
Dana Oleskiewicz, Administrative Director

www.wmao.org

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.

Permission to reprint with credit to WMAO.



2014 WMAO Executive Board of Directors



Boris Slogar, PE
Alex Covert
Peter Soltys, PE, PH
Gregory Nageotte
Stuart Ravary, PE
Robert Kirkbride
Alicia Silverio, CFM
Eugene C. Braig IV
Mark McCabe
Cindy Brookes
Larry Antosch
Joe Bonnell
Craig Smith
Scot Hindall
John Hoopingarner
John Lenhart
Jim Shoemaker
Kari Mackenbach, CFM
Open Position

bslogar@mwcd.org
sacovert@usgs.gov
pwsoltys@ftch.com
greg.nageotte@dnr.state.oh.us
sravary@msconsultants.com
rob.kirkbride@stantec.com
alicia.silverio@dnr.state.oh.us
braig.1@osu.edu
mark_mccabe@gspnet.com
cabrookes@wsos.org
lantosch@ofbf.org
bonnell.8@osu.edu
craig.smith@epa.ohio.gov
scot.hindall@dnr.state.oh.us
jhoopingarner@mwcd.org
lenhart.49@osu.edu
james.shoemaker@daytonohio.gov
kari.mackenbach@urs.com
To Be Determined

President
Vice President
Past President
Treasurer
Secretary
Division Director—Dam Safety (ODSO)
Division Director—Floodplain Management (OFMA)
Division Director—Lake Management (OLMS)
Division Director—Stormwater Management (OWSA)
Division Director—Watershed Management (OWPA)
Director—Agriculture
Director—Education
Director—Groundwater
Director—Mineral Resources Management
Director—Navigation & Recreation
Director—Research & Data Management
Director—Water & Wastewater
Director-at-Large
Director-at-Large