

Agenda

Ohio Groundwater Hydrology *Dr. A. Sawyer*
The hydrologic cycle Precipitation and infiltration
Groundwater aquifers Declining groundwater levels
Relationship between groundwater and surface waters

Groundwater Use in Ohio *S. Smith, MS, CGWP*
High-capacity groundwater wells
• Municipal wells • Agricultural uses
• Industrial and mining use
• Operational challenges and asset management for wells
Domestic well maintenance
Expansion of low-temp geothermal use

Understanding Ohio Surface Water and Groundwater Rights *B. Barger*
Rights to Ohio surface waters
• Ownership of surface water • Regulation of surface water rights
• Obtaining surface water rights • Application and permitting process
• Amending surface water rights
Current issues in surface water rights
Rights to groundwater
• Ownership of groundwater • Regulation of groundwater rights
• Obtaining groundwater rights • Application and permitting process
Current issues in groundwater rights

PFAS Litigation Risks: Understanding Regulatory and Litigation Trends *J. Gardella*
Understanding SDWA and CERCLA current and future framework
Understanding current PFAS litigation landscape and future trends based on future regulations
ASTM revised standards for PFAS
Potential risks to architects, planners, and engineers from PFAS litigation issues

Can't Attend? Order the Webinar as an On-Demand Package!
Recordings of this webinar are available for purchase. See details online for more information and please refer to specific state licensing rules or certification requirements to determine if this learning method is eligible for continuing education credit.



Save up to 31% on Tuition!
Maximize your savings with Continuing Education Credit Packages and Knowledge Points. Visit halfmoonseminars.org and click on “NEW Packages and Knowledge Points” to learn more!

Ohio Groundwater Conference

Live, Interactive Webinar - Tuesday, February 25, 2025

NON-PROFIT
U.S. POSTAGE PAID
EAU CLAIRE, WI
PERMIT NO. 2016

HalfMoon Education Inc.
PO Box 278
Altoona, WI 54720-0278



Learning Objectives

- Why Choose HalfMoon Education?**
- **Learn from Experts:**
Gain insights from seasoned professionals with real-world experience.
 - **Up-to-Date Content:**
Our recordings are retired after two years to ensure you're learning the most current information.
 - **Flexible Options:**
Attend live webinars or learn at your own pace with on-demand courses.

To register, view webinar agendas, credit information and to learn about our distinguished faculty, please visit us online at:

www.halfmoonseminars.org



**HalfMoon Education Inc.,
Your LIVE Education Leader Presents**



- Continuing Education Credits**
- Professional Engineers**
6.5 PDHs
- Attorneys**
6.0 CLE Hours
- Certified Planners**
CMI6
- Geologists**
6.0 Hour Learning Opportunity

Ohio Groundwater Conference

Live, Interactive Webinar - Tuesday, February 25, 2025

The webinar explores Ohio groundwater hydrology, including the hydrologic cycle, aquifers, and challenges like declining water levels, as well as groundwater use for municipal, agricultural, and industrial purposes. It examines surface and groundwater rights, focusing on ownership, regulations, permitting, and current issues. Additionally, it addresses PFAS litigation risks, regulatory trends, and potential impacts on professionals.

Learn More and Register:
www.halfmoonseminars.org
Customer Service (715) 835-5900 Ext. 1

or scan here



Webinar Information

Online - Tuesday, February 25, 2025

Log into Webinar
8:00 - 8:30 am EST

Break
11:45 am - 12:15 pm EST

Morning Session
8:30 - 11:45 am EST

Afternoon Session
12:15 - 3:30 pm EST

Tuition

\$339 for individual registration.

\$237 per attendee for group registrations of two or more people registering at the same time for the same program.

That's a savings of 30 percent!

Included with your registration: PDF seminar manual.

How to Register

- Visit us online at www.halfmoonseminars.org
- Call customer service at 715-835-5900

Webinars are presented via GoToWebinar. Instructions and login information will be provided in an email sent close to the date of the webinar. For more information, please visit our FAQ section of our website, or visit www.gotowebinar.com.

Cancellations: Cancel at least 48 hours before the start of the webinar, and receive a full tuition refund, minus a \$39 service charge for each registrant. Cancellations within 48 hours will receive a credit toward another webinar or the on-demand package. You may also authorize another person to take your place.

Learn More and Register:

www.halfmoonseminars.org

Customer Service (715) 835-5900 Ext. 1

or scan here



Can't Attend? Order the Webinar as an On-Demand Package!

Recordings of this webinar are available for purchase. See details online for more information and please refer to specific state licensing rules or certification requirements to determine if this learning method is eligible for continuing education credit.

25 OHGNDWTR 2 25 WEBR LK

Faculty

Audrey Sawyer, Ph.D. *Professor, The Ohio State University*

Dr. Audrey Sawyer is a professor with The Ohio State University, School of Earth Sciences. Her main areas of expertise include hydrogeology, surface water-groundwater interactions, and coastal hydrology. Dr. Sawyer and her research group focus on understanding interactions between surface water and groundwater in streams, rivers, estuaries, and coasts. The team also focuses on determining hydrologic controls on the movement of nutrients, contaminants, and heat in watersheds. Dr. Sawyer earned her Ph.D. degree from the University of Texas-Austin.

Stuart Smith, MS, CGWP *Partner, Ground Water Science*

Stuart Smith is one of the nation's foremost experts on the diagnosis and treatment of well problems and performance deterioration, and well and wellfield asset management. He is a Certified Ground Water Professional (CGWP) by the National Ground Water Association, a Registered Geologist with the Commonwealth of Kentucky (he would have an Ohio registration if there were one), and has been consulting in the ground water field since 1983. In addition to his consulting career, he has also worked for the National Water Well Association (now NGWA), developed the curriculum and instructed ground water science and technology at Wright State University (where he developed portions of the WSU IRIS distance-learning hydrogeology training program), and taught biology courses and advised hydrogeological engineering projects at Ohio Northern University. He has spoken on well maintenance and asset management, rehabilitation, and microbiology topics in Argentina, Australia, Belgium, England, Tanzania, Slovenia, Jordan, and throughout North America. In recent years, he has become active in the effort to equip professional water sector capabilities and to develop water supplies in Tanzania and other developing countries. He is currently also a partner in a water management and construction company, Ground+Water Tanzania, Ltd., and its Ohio-corporation affiliate Earth Water Services Africa LLC. He and Allen Comeskey have contributed *Sustainable Wells: Maintenance, Problem Prevention, and Rehabilitation* (CRC Press). He is also a coauthor of both the 1992 *Australian Drilling Manual* and the 1997 edition of its successor, *Drilling* (CRC Press), and he is a major contributor to AWWA's *Manual M21, Groundwater* (two editions), and ASCE's recent *Hydraulics of Wells* text. He is a principal author-editor of NGWA's *Manual of Water Well Construction Practices*, as well as a contributor to the *Water Well Journal*, *National Driller*, *GeoDrilling International* and other publications. Mr. Smith earned a bachelor of arts (BA) degree with majors in Biology and Earth Science from Wittenberg University in 1977 and a master of science (MS) degree from The Ohio State University in 1984.

Brian Barger *Attorney, Eastman & Smith LTD*

Mr. Barger's practice focuses on environmental, land use, natural resources, regulatory, and zoning law. He has experience representing clients both in court and before administrative agencies such as the Ohio EPA and the Ohio Department of Natural Resources. Prior work experience includes employment by companies in the mining and gas industries. Mr. Barger is a member of the National Stone Sand & Gravel Association's Council of Counsels, the Ohio Aggregates and Industrial Minerals Association, the Ohio Farm Bureau's Healthy Water Ohio work group, the Ohio Forestry Association, the Ohio Water Resources Advisory Group and the American, Ohio State and Columbus Bar Associations.

John Gardella *Co-Owner, CMBG3 Law*

John Gardella is a co-owner of CMBG3 Law and a trial attorney with over 19 years of environmental litigation experience and over 75 cases tried to verdict. He is chair of the firm's PFAS practice group and represents companies in PFAS litigation, including class action, pollution, injury and medical monitoring cases. He represents a defendant in the AFFF MDL, as well as companies involved in PFAS litigation in state and federal courts. For his work in environmental and PFAS related matters, Mr. Gardella was recognized in 2023 as one of the top 20 environmental lawyers in Massachusetts. In addition to his litigation work, Mr. Gardella guides companies through PFAS compliance needs, including compliance with state-level product reporting obligations, TSCA and TRI reporting, and numerous other U.S. federal, state and E.U. specific PFAS regulations. He assists companies with risk assessment efforts related to PFAS, including developing diligence programs internally to minimize future compliance and litigation risks. Mr. Gardella is a frequent speaker and author on the subject of PFAS, and is regularly sought after for his thought leadership by media, including *Bloomberg*, *Wall Street Journal*, and the *Washington Post*.

Credit Information

This webinar is open to the public and is designed to qualify for 6.0 PDHs for professional engineers and provides a 6.0-hour learning opportunity to geologists in Ohio. The Ohio Board of Engineers and Surveyors does not pre-approve continuing education courses or providers.

This webinar has been approved by the Supreme Court of Ohio's Commission on Continuing Legal Education for 6.0 general CLE hours.

HalfMoon Education is an approved CM Provider with the American Planning Association. This course is registered for CM | 6 for Certified Planners.

Attendance will be monitored, and attendance certificates will be available after the webinar for those who attend the entire course and score a minimum 80% on the quiz that follows the course (multiple attempts allowed).

On-Demand Credit: The preceding credit information only applies to the live presentation. This course in an on-demand format is not pre-approved by any licensing boards and may not qualify for the same credits; please consult your licensing board(s) to ensure that a structured, asynchronous learning format is appropriate.



Save up to 31% on Tuition!

Maximize your savings with Continuing Education Credit Packages and Knowledge Points. Visit halfmoonseminars.org and click on "NEW Packages and Knowledge Points" to learn more!