

Agenda

Development of Onsite Wastewater Treatment Technologies *S. Heger*

- Overview of decentralized wastewater treatment
- Residential
- Technology and operation of conventional wastewater treatment systems
- Key contaminant removal

Wisconsin Specific Regulations and Requirements *T. Wells*

- Licensing
- State and local permitting
- Allowable technologies – sizing and credits
- Management
- Local resources

Evaluating Sites and Setting Treatment Goals and Conventional System Design Considerations *S. Heger*

- Factors for selecting and sizing systems
- Site and soil evaluation
- System boundaries and loadings
- Soil treatment system design basics
- Pump sizing

Alternative and Sustainable Treatment Technologies *A. Blodig*

- Aerobic treatment units
- Media filters
- Drip dispersal

Management Programs for Onsite Wastewater Treatment Systems *S. Heger*

- Management plans
- Maintenance of systems
- Inspection and troubleshooting procedures

Septic System Overview - Design and Management

Madison, WI - Thursday, January 16, 2020



HalfMoon Education Inc.
PO Box 278
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Learning Objectives

You'll be able to:

Explain the basic functions and processes of conventional on-site sewage systems, and identify recent developments in technology and regulation.

Identify the factors to consider when selecting septic system sites and system components.

Get tips on conventional septic system design.

Describe alternative treatment technologies, including aerobic treatment units, media filters and drip dispersal.

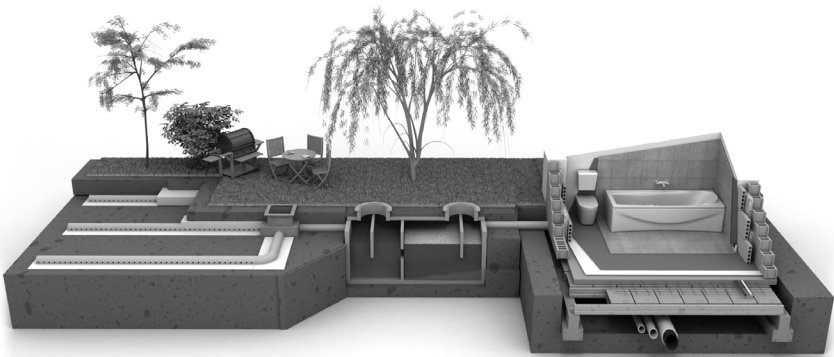
Develop management programs for onsite wastewater treatment systems.



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Examine onsite wastewater treatment technologies and regulations

Explore factors for selecting and sizing systems

Examine alternative and sustainable treatment technologies

Discuss Wisconsin-specific septic regulations and requirements

Review inspection and troubleshooting procedures

Continuing Education Credits

Professional Engineers

6.0 PDHs

Contractors

Non-Credit Continuing Ed.

Architects

6.0 HSW CE Contact Hours

6.0 AIA LU|HSW



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Dr. Sara Heger is an engineer, researcher, and instructor in the Onsite Sewage Treatment Program in the Water Resources Center and is an Adjunct Assistant Professor in the Bioproducts and Biosystems Engineering Department at the University of Minnesota. For over 20 years, she has been conducting research and providing education and technical assistance to homeowners, small communities, onsite professionals and local units of government regarding onsite wastewater treatment. Dr. Heger has presented in over 30 states and provinces regarding the design, installation and management of septic systems and related research. She is president-elect of the National Onsite Wastewater Recycling Association and the Education chair of the Minnesota Onsite Wastewater Association. Dr. Heger serves on the NSF International Committee on Wastewater Treatment Systems. She is also the chair of the Minnesota State Advisory Committee on Decentralized Systems. Dr. Heger has BS degree in Biosystems & Agricultural Engineering and a MS degree and a PhD in Water Resource Science.

Trevor Wells is a territory sales representative who covers Wisconsin, northern Michigan and northern Illinois for Infiltrator Water Technologies. During this time, Mr. Wells has presented in all three states on various topics. His topics have covered system malfunction, trouble shooting, site selection, and best installation practices. During the year he spends time meeting with contractors, regulators and designers. Those relationships have led and help with assisting on demos, trouble shooting and new product overviews. More than three years ago Mr. Wells was in

the wholesale industry focusing primarily on the onsite market, where he was a direct contact for contractors and designers regarding product installation, design assistance and trouble shooting. He has been able to troubleshoot all aspects of an onsite system whether it is drain fields, pumps, panels, tanks and advanced treatment.

Allison Blodig, REHS has been in the onsite wastewater treatment industry since 1997 and has worked most of her career in the wastewater treatment manufacturing industry. Ms. Blodig had her own consulting company for three years, specializing in decentralized wastewater regulatory consulting, market research, and training across the US. Currently she is an engineered systems specialist with Infiltrator Water Technologies, a leading developer of decentralized wastewater treatment technology. Along with a degree in Biology from Benedictine College in Atchison, Kansas, she has been a registered environmental health Specialist and member of the National Environmental Health Association since 1996. Ms. Blodig is also very active with the National Onsite Wastewater Recycling Association (NOWRA) and is the former chair of the Technical Practices Committee. She is the current chair of the Conference Committee and participates in the Online Education Committee. Ms. Blodig received the Women in Manufacturing award in 2012 and was the 2017 recipient of the Raymond Peat Lifetime Achievement award for outstanding achievement in the Kansas onsite wastewater field.

Seminar Information

Sheraton Madison Hotel 706 John Nolen Drive Madison, WI 53713 (608) 251-2300	Registration 8:00 - 8:30 am Morning Session 8:30 - 11:45 am Lunch (on your own) 11:45 am - 12:45 pm Afternoon Session 12:45 - 4:00 pm
Tuition \$289 for individual registration \$269 for three or more registrants from the same company at the same time.	

Included with your registration: Complimentary continental breakfast and printed seminar manual.

Receive a reduced tuition rate of \$101 by registering to be our on-site coordinator for the day. For availability and job description, please visit www.halfmoonseminars.org.

How to Register

- Visit us online at www.halfmoonseminars.org
- Mail-in or fax the attached form to 715-835-6066
- Call customer service at 715-835-5900

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

Continuing Education Credit Information

This seminar is open to the public and offers 6.0 PDHs to professional engineers and 6.0 HSW continuing education contact hours to architects in all states. Educators and courses are not subject to preapproval in Wisconsin.

This seminar is approved by the American Institute of Architects Continuing Education System for 6.0 LU|HSW (Sponsor No. J885). Only full attendance can be reported to the AIA/CES. Please visit www.halfmoonseminars.org for complete AIA information under this course listing.

HalfMoon Education is an approved continuing education sponsor for engineers in Florida, Indiana (License No. CE21700059), Maryland, New Jersey (Approval No. 24GP00000700), North Carolina, and North Dakota. HalfMoon Education is deemed an approved continuing education sponsor for New York engineers and architects.

This course offers a non-credit continuing education opportunity to construction contractors.

Attendance will be monitored and attendance certificates will be available after the seminar for most individuals who complete the entire program. Attendance certificates not available at the seminar will be mailed to participants within fifteen business days.

Additional Learning

Webinar Series

Geothermal Heating and Cooling

- Thermodynamic Basics of Geothermal Systems**
Thurs., Jan. 9, 2020, 11:00 AM - 12:00 PM CST
- Understanding Earth Loop Systems**
Thurs., Jan. 9, 2020, 12:30 - 2:00 PM CST
- Choosing and Designing Geothermal Systems**
Fri., Jan. 10, 2020, 11:00 AM - 12:00 PM CST
- Evaluating and Maintaining Geothermal Systems**
Fri., Jan. 10, 2020 , 12:30 - 2:30 PM CST

Off-Grid Master Class

- Part I**
Wed., Jan. 22, 2020, 11:00 AM - 2:15 PM CST
- Part II**
Thurs., Jan. 23, 2020, 11:00 AM - 2:15 PM CST

For more information and other online learning opportunities visit:
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Can't Attend? Order the Manual and Audio from the Live Seminar as a Self-Study Package!

Audio recordings of this seminar are available for purchase starting at \$269. See registration panel 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.

Registration

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How to Register	Registrant Information
Online: www.halfmoonseminars.org	Name: _____ Company/Firm: _____ Address: _____ City:_____ State: _____ Zip:_____
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Fax: 715-835-6066	Additional Registrants: Name: _____ Occupation: _____ Email: _____ Phone: _____
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Complete the entire form. Attach duplicates if necessary.	Email address is required for credit card receipt, program changes, and notification of upcoming seminars and products. Your email will not be sold or transferred.
	() I need special accommodations. Please contact me.

Tuition
() **I will be attending the live seminar.** Single Registrant - **\$289.00**. Three or more registrants from the same company registering at the same time - **\$269.00** each.
() **I am not attending.** Please send me the self-study package:
☐ Downloadable MP3 Audio/PDF Manual for **\$269.00**.
☐ CD/Manual Package for **\$289.00**. ☐ USB/Manual Package **\$289.00**.
(S&H included. Please allow five weeks from seminar date for delivery)

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Credit Card Number: _____
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