

Agenda

Development of Onsite Wastewater Treatment Technologies and Regulations *J. Chan*

Historical background and evolution
Problems with conventional onsite systems
Technology and operation of conventional wastewater treatment systems
Federal regulation of systems
Recent scientific and technical advances

Key Contaminant Removal *S. Heger*

Design Considerations *J. Chan*
Factors for selecting and sizing systems

Evaluating Sites and Setting Treatment Goals and Conventional System Design *S. Heger*
Site and soil evaluation
System boundaries and loadings
Basic system design for trenches, at-grades and mounds using gravel and non-gravel distribution media

Alternative and Sustainable Treatment Technologies *S. Heger, J. Chan*
Aerobic treatment units
Other treatment technologies

- Media filters
- Constructed wetlands
- Drip dispersal

Management Programs for Onsite Wastewater Treatment Systems *S. Heger*
Monitoring of systems
Developing maintenance plans
Inspection and troubleshooting procedures

Failure Examples and Repair Options *S. Heger, J. Chan*

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

**Septic System Design,
Construction and Maintenance**
Atlanta, GA - Thursday, July 26, 2018

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



Learning Objectives

You'll be able to:

Examine onsite wastewater treatment technologies and regulations.

Evaluate potential sites for onsite treatment systems.

Explore factors for selecting and sizing systems.

Examine alternative and sustainable treatment technologies, including aerobic treatment units, media filters and constructed wetlands.

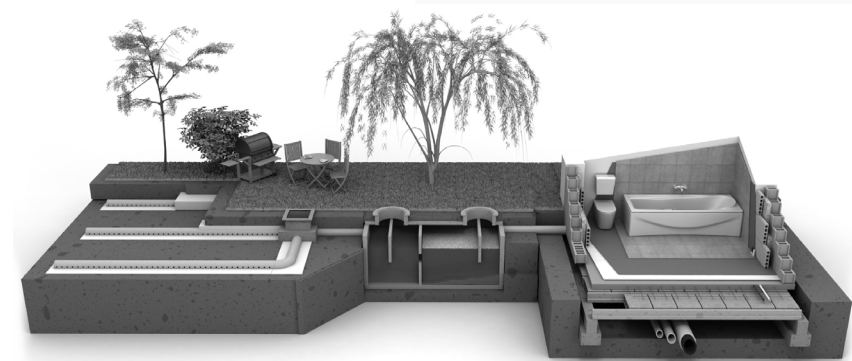
Develop septic system maintenance plans.

Review inspection and troubleshooting procedures.



Septic System Design, Construction and Maintenance

Atlanta, GA - Thursday, July 26, 2018



Examine onsite wastewater treatment technologies and regulations
Explore factors for selecting and sizing systems

Examine alternative and sustainable treatment technologies
Develop septic system maintenance plans
Review failure examples and discuss repair options

Continuing Education Credits

Professional Engineers
6.0 PDHs

Contractors
Non-Credit Continuing Ed.

Architects
6.0 Public Protection PDUs
6.0 AIA HSW Learning Units



HalfMoon Education Inc.
WWW.HALFMOONSEMINARS.ORG



Faculty

Sara Heger, Ph.D *University of Minnesota (UMN)*
Dr. Sara Heger is an engineer, researcher and instructor in the Onsite Sewage Treatment Program in the Water Resources Center at the University of Minnesota. Since 1999, she has been providing education and technical assistance to homeowners, small communities, onsite professionals and local units of government regarding onsite wastewater treatment. Dr. Heger coordinates the research program at the UMN and serves as the principal investigator on grants to create online owner’s guides and evaluate rest stops served by septic systems. She presents at many local and national training events regarding the design, installation and management of septic systems and related research. Dr. Heger is education chair of the Minnesota Onsite Wastewater Association (MOWA) and the National Onsite Wastewater Recycling Association (NOWRA). She serves on the NSF International Committee on Wastewater Treatment Systems and the Chesapeake Bay Review Panel. Dr. Heger is also the chair of the Minnesota State Advisory Committee on Decentralized Systems. She has a BS degree in Biosystems & Agricultural Engineering and a PhD degree in Water Resource Science.

Jennifer Chan *Decentralized Systems Manager with Infiltrator Water Technologies*
Ms. Chan is a passionate environmentalist dedicated to providing innovative technology for water sustainability. She holds a Bachelor of Science degree in Industrial Management and Engineering from Purdue University and spent the first 12 years of her career in stormwater management. She now deals with decentralized system technologies at Infiltrator Water, contributing to sustainable wastewater infrastructure designs.

Seminar Information

Embassy Suites - Galleria
2815 Akers Mill Road SE
Atlanta, GA 30339
(770) 984-9300

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
\$279 for individual registration
\$259 for three or more registrations.
Each registration includes a 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 CD/manual 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 Georgia professional engineers and 6.0 Public Protection PDUs to Georgia architects. Educators and courses are not subject to preapproval in Georgia.

This seminar is approved by the American Institute of Architects for 6.0 HSW Learning Units (Provider No. J885). Only full attendance can be reported to the AIA/CES.

Architects and engineers seeking continuing education credit in other states will be able to apply the hours earned at this seminar, in most cases. HalfMoon Education is an approved continuing education sponsor for engineers in Florida, Indiana, Maryland, New Jersey (Approval No. 24GP00000700), New York (NYSED Sponsor No. 35), North Carolina, and North Dakota. HalfMoon Education is deemed an approved architect continuing education sponsor in New York.

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

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

Additional Learning

Webinar Series

- National Electrical Code: Onsite Power Generation and Distribution**
- **National Electric Code: Onsite Power Generation and Distribution Part 1**
Weds., June 6, 2018, 11:00 AM - 2:15 PM CDT
 - **National Electric Code: Onsite Power Generation and Distribution Part 2**
Thurs., June 7, 2018, 11:00 AM - 2:15 PM CDT

- HVAC Series**
- **Heating, Ventilation and Air Conditioning Principles**
Thurs., June 7, 2018, 11:00 AM - 1:00 PM CDT
 - **HVAC System Design Considerations**
Thurs., June 7, 2018, 1:30 - 2:30 PM CDT
 - **Evaluating HVAC Systems and Equipment**
Fri., June 8, 2018, 11:00 AM - 12:00 PM CDT
 - **HVAC System Controls and Techniques**
Fri., June 8, 2018, 12:30 - 2:30 PM CDT

- Introduction to Vibrations**
- **Introduction to Vibrations**
Thurs., June 14, 2018, 11:00 AM - 1:00 PM CDT
 - **Eigenvalues, Eigenvectors and Motion**
Thurs., June 14, 2018, 1:30 - 3:00 PM CDT
 - **Analysis and Test Methods**
Fri., June 15, 2018, 11:00 AM - 12:30 PM CDT
 - **Designing for Vibration and Failure Analysis**
Fri., June 15, 2018, 1:00 - 2:30 PM CDT

- Pedestrians and Bicycle Transport Planning**
- **Introduction to Current Conditions and Trends in Biking and Walking**
Thurs., June 21, 2018, 11:00 AM - 12:30 PM CDT
 - **Engineering and Infrastructure: Design for Walkability and Bikeability**
Thurs., June 21, 2018, 1:00 - 2:30 PM CDT
 - **Developing a Walking and Biking Plan, Part I**
Fri., June 22, 2018, 11:00 AM - 12:30 PM CDT
 - **Developing a Walking and Biking Plan, Part II**
Fri., June 22, 2018, 1:00 - 2:30 PM CDT

For more information visit:
www.halfmoonseminars.org/webinars/

Can’t Attend? Order the CD/Manual Package:
An audio recording of this seminar is available for \$289 (including shipping). Allow five weeks from the seminar date for delivery. Please refer to specific state licensing rules or certification requirements to determine if this learning method is eligible for continuing education credit.

Registration

Septic System Design, Construction and Maintenance
Atlanta, GA - Thursday, July 26, 2018

How to Register	Registrant Information
Online: www.halfmoonseminars.org	Name: _____ Company/Firm: _____ Address: _____ City: _____ State: _____ Zip _____ Occupation: _____ Email: _____ Phone: _____
Phone: 715-835-5900	Additional Registrants: Name: _____ Occupation: _____ Email: _____ Phone: _____
Fax: 715-835-6066	Name: _____ Occupation: _____ Email: _____ Phone: _____
Mail: HalfMoon Education Inc., PO Box 278, Altoona, WI 54720-0278	Name: _____ Occupation: _____ Email: _____ Phone: _____
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 - **\$279.00**. Three or more registrants from the same company registering at the same time - **\$259.00** each.
() **I am not attending.** Please send me the CD manual package for **\$289.00**. (S&H included. Please allow five weeks from seminar date for delivery)

Checks: Make payable to HalfMoon Education Inc.

Credit Card: *Mastercard, Visa, American Express, or Discover*
Credit Card Number: _____
Expiration Date: _____ CVV2 Code: _____
Cardholder Name: _____
Billing Address: _____
City: _____ State: _____ Zip: _____
Signature: _____
Email: _____