

Agenda

Presented by Dr. Karen Mancl

Septic Systems

- Sewage disposal historical background
 - Environmental Protection Agency and Ohio perspectives
- What a basic septic system is composed of and how it works
- Septic tank design and how they work

Onsite Wastewater Treatment Systems

- System design
- Siting
- Construction

Alternative Treatment Technologies

- Mound systems
- Sand bioreactor systems (aka sand filter systems)
- Media filters – peat, textile

System Management

- System inspections
- Regular maintenance
- Troubleshooting

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 \$279. This learning method does not qualify for the continuing education requirements of Ohio engineers, architects, and AIA members. No contractor credit available. Please allow five weeks from the seminar date for delivery.

Ohio Septic System Short Course

Cincinnati, OH - Thursday, April 30, 2020

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PO Box 278
Altoona, WI 54720-0278



Learning Objectives

You'll be able to:

Define what a basic septic system is and understand how it works.

Examine the regulatory roles of the U.S. and Ohio Environmental Protection Agencies and local governments.

Discuss design, siting and construction considerations related to onsite wastewater treatment systems.

Identify alternative treatment technologies such as mound systems and media filters.

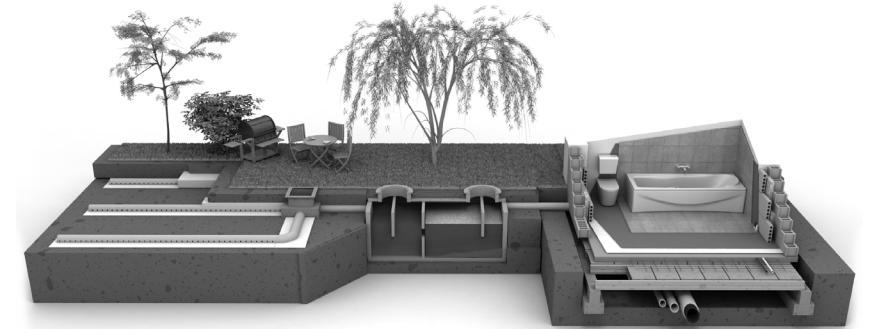
Understand requirements for inspections and maintenance, and troubleshoot septic system problems.



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Examine the historical background and regulation of sewage disposal

Explore septic tank function and design

Discuss onsite wastewater treatment system siting and construction considerations

Learn about alternative treatment technologies including sand bioreactor systems and media filters

Discuss key issues in septic system management

Continuing Education Credits

Professional Engineers

6.0 PDHs

Contractors

Non-Credit Continuing Ed.

Architects

6.0 HSW Continuing Ed. Hours

6.0 AIA LU/HSW



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Dr. Karen Mancl
Professor of Food, Agricultural and Biological Engineering and Water Quality Specialist at The Ohio State University

Dr. Mancl has published 50 journal articles and about 80 Extension publications on rural infrastructure and outreach initiatives. She is a nationally-known expert in onsite wastewater treatment, having conducted research, written and taught the subject over 30 years.

Dr. Mancl is the past-president and now vice-president of the Ohio Onsite Wastewater Association. In 2013, Dr. Mancl constructed a teaching facility at a slaughterhouse in southwestern Ohio to teach low-cost, low-energy treatment of food processing wastewater. At this outdoor teaching and research facility, Dr. Mancl teaches designers, installers and regulators the science and technology of sand bioreactor wastewater treatment systems.

She is originally from Wisconsin where she received her bachelor’s degree in Environmental Science from the University of Wisconsin. Dr. Mancl has a master’s degree in Environmental Science from the University of Texas, and received her PhD degree in Water Resources from Iowa State University. In 2010 she received a second master’s degree in East Asian Studies, and she conducts research and teaches wastewater treatment in rural China. She was an assistant professor and water specialist at The Pennsylvania State University for four years before joining the Ohio State faculty in 1986.

Here’s what past attendees had to say about the program and presenter Karen Mancl:

- “Very informative overview of on-site wastewater treatment options in the state of Ohio.” — *Civil engineer*
- “A great presentation—clear, well organized.” — *Architect*
- “High-energy, passionate about subject.” — *Mechanical engineer*
- “One of the best I have attended.” — *Civil engineer*

Seminar Information

Holiday Inn Eastgate (I-275E)
4501 Eastgate Blvd.
Cincinnati, OH 45245
(513) 752-4400

Tuition
\$299 for individual registration
\$279 for three or more registrations.
***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 hours to architects in all states. Educators and courses are not subject to preapproval in Ohio.

This American Institute of Architects Continuing Education System has approved this course for 6.0 LU|HSW (Sponsor No. J885). Visit www.halfmoonseminars.org for complete AIA/CES information under this course listing. Only full attendance is reportable to the AIA/CES.

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 contractors. It has not been approved by any state contractor licensing entity for licensing maintenance.

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

International Residential Code

- **Development and Enforcement of International Residential Code**
Thurs., March 12, 2020, 11:00 AM - 12:00 PM CDT
- **IRC Building Planning and Shell Construction, Part I**
Thurs., March 12, 2020, 1:00 - 2:30 PM CDT
- **IRC Building Planning and Shell Construction, Part II**
Fri., March 13, 2020, 11:00 AM - 12:30 PM CDT
- **IRC Energy Efficiency and Building Systems**
Fri., March 13, 2020, 1:00 - 3:00 PM CDT

Erosion and Sediment Control

- **Erosion and Sediment Control Requirements and Practices**
Thurs., March 12, 2020, 12:30 - 2:00 PM CDT
- **Selection of Erosion Control Practices and Best Practices**
Thurs., March 19, 2020, 12:30 - 2:00 PM CDT
- **Small Channels, Control Measure Estimating and Pollution Prevention Plans**
Thurs., March 26, 2020, 12:30 - 2:00 PM CDT
- **Stormwater Management Inspection, Maintenance and Case Studies**
Thurs., April 2, 2020, 12:30 - 2:00 PM CDT

Construction Cost Estimating

- **Introduction to Cost Estimating**
Thurs., March 19, 2020, 11:00 AM - 12:30 PM CDT
- **Assessing the Impact of Sea Level Rise, Changing Temperature and Changing Weather Patterns**
Thurs., March 19, 2020, 1:00 - 3:00 PM CDT
- **Cost Estimate Organization and Examples**
Fri., March 20, 2020, 11:00 AM - 1:00 PM CDT
- **Adapting Sites, Outdoor Spaces, New Construction and Existing Buildings to Withstand Extreme Weather Events**
Fri., March 20, 2020, 1:30 - 3:00 PM CDT

For more information and other online learning opportunities visit:
www.halfmoonseminars.org/webinars/

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Registration

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How to Register	
Online: www.halfmoonseminars.org	
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Complete the entire form. Attach duplicates if necessary.	
Registrant Information Name: _____ Company/Firm: _____ Address: _____ City: _____ State: _____ Zip: _____ Occupation: _____ Email: _____ Phone: _____ Additional Registrants: Name: _____ Occupation: _____ Email: _____ Phone: _____ Name: _____ Occupation: _____ Email: _____ Phone: _____ 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 - **\$299.00**. Three or more registrants from the same company registering at the same time - **\$279.00** each.

() **I am not attending.** Please send me the self-study package:

☐ Downloadable MP3 Audio/PDF Manual for **\$279.00**.
☐ CD/Manual Package for **\$299.00**. ☐ USB/Manual Package **\$299.00**.
(S&H included. Please allow five weeks from seminar date for delivery)

Checks: Make payable to HalfMoon Education Inc.

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