

Agenda

Presented by Dr. A. Robert Rubin and Scott Mitchell, PE, LSS

Overview of Onsite Wastewater Treatment Technologies

- Technology and operation of conventional wastewater treatment systems
- Problems with conventional onsite systems
- Recent scientific and technical advances
- Performance-based management of systems

Regulation, Permitting and Sustainability of Onsite

- Wastewater treatment systems
- Federal, North Carolina and local regulation of systems
- Coordinating system regulation with surface and groundwater regulations
- Treatment of systems under LEED certification systems
- Permit requirements and procedures
- Permitting procedures

Evaluating Sites and Setting Treatment Goals

- System boundaries and loadings
- Analyzing the receiving environment
- Evaluating landscape and soil types
- Nitrogen and pathogen removal
- Treatment/removal of phosphorus and other pollutants
- Mapping the site

Conventional Treatment System Selection and Design

- Factors for selecting and sizing systems
- Design considerations
- System performance
- Initial system design

Alternative and Sustainable Treatment Technologies

- Aerobic treatment systems
- Peat biofilter wastewater treatment systems
- Drip dispersal wastewater disposal systems
- Fixed-activated sludge treatment
- Recirculating sand filters
- Trickling filters
- Sequencing batch reactors
- Vegetated submerged beds
- Evapotranspiration
- Enhanced nutrient removal
- Stabilization ponds and constructed wetlands

Management Program for Onsite Wastewater

- Treatment Systems
- Monitoring of systems
- Developing maintenance plans
- Inspection procedures
- Repair options

North Carolina Onsite Wastewater Treatment System Design, Construction and Maintenance

Live, Interactive Webinar - Tuesday, June 29, 2021

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Learning Objectives

You'll be able to:

Discuss the technology and operation of conventional wastewater treatment systems.

Comply with federal, North Carolina and local regulation of onsite systems.

Determine system loadings and analyze the on-site receiving environment.

Explore alternative treatment technologies, such as aerobic treatment, peat biofilter treatment, and fixed-activated sludge treatment.

Learn about sand filters, vegetated submerged beds and enhanced nutrient removal.

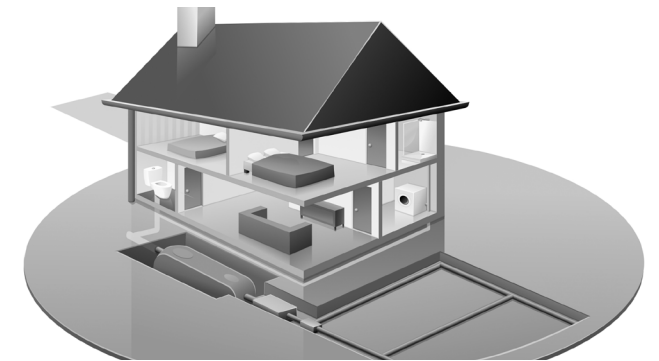
Maintain and monitor installed systems.



HalfMoon Education Online Learning

North Carolina Onsite Wastewater Treatment System Design, Construction and Maintenance

Live, Interactive Webinar - Tuesday, June 29, 2021



Featuring North Carolina faculty
Dr. A. Robert Rubin and Scott Mitchell, PE, LSS

Comply with North Carolina regulation of onsite wastewater treatment systems

Evaluate sites and set treatment goals

Use conventional and alternative treatment technologies

Develop management programs for onsite wastewater

Continuing Education Credits

Professional Engineers
6.5 PDHs

Architects
6.5 HSW Contact Hours
6.5 AIA LU | HSW

NC Soil Scientists
6.5 PDHs

Wastewater Contractors
CE Approval Pending



Faculty

A. Robert Rubin *A.R. Rubin and Associates in Pittsboro, North Carolina*

Dr. Rubin is an emeritus professor in the Biological and Agricultural Engineering Department at North Carolina State University. He has published in scientific journals and popular press on issues related to wastewater and biosolids treatment, solid waste management, stormwater management and ISO 14000 environmental management systems addressing the animal industry. Dr. Rubin was a visiting scientist at the U.S. Environmental Protection Agency (EPA) in Washington D.C. from 1999 through 2005. He was active in development of guidelines for wastewater and biosolids management at USEPA. Dr. Rubin is currently president of A.R. Rubin and Associates, a consulting firm dedicated to evaluation and assessment of sustainable resource management and recovery solutions.

Scott Mitchell, PE, LSS

President at Mitchell Environmental, PA in Fuquay-Varina, North Carolina

Mr. Mitchell is the founder and president of Mitchell Environmental, PA, a multidisciplinary consulting firm specializing in septic systems, wetlands, and stormwater, through an effective merger of soil science, engineering, and environmental sciences. With over 24 years of experience in land development, he is an expert in land use consulting and specializes in advanced onsite wastewater systems; stormwater BMPs; wetland and surface water identification, delineation, and impact permitting; and Phase I environmental site assessments. Mr. Mitchell is a licensed professional engineer in North Carolina and Virginia, and licensed soil scientist in North Carolina.

Webinar Information

Log into Webinar 8:00 - 8:30 am EDT	Break 12:00 - 1:00 pm EDT
Morning Session 8:30 am - 12:00 pm EDT	Afternoon Session 1:00 - 4:30 pm EDT

Tuition

\$289 for individual registration

\$199 for three or more registrants from the same company at the same time.

Included with your registration: PDF seminar manual.

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

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 self-study package. You may also authorize another person to take your place.

Additional Learning

AIA Contract Document Workshop

- Tues, June 1, 2021 | 8:30 am - 4:30 pm CDT

Commercial Site Pavement Design, Installation and Maintenance

- Wed, June 2, 2021 | 8:30 am - 4:30 pm CDT

How to Design and Construct MSE Walls

- Wed, June 2, 2021 | 10:00 am - 1:30 pm CDT

Fruit Trees: Are They Right for Your Landscape Design?

- Thurs, June 3, 2021 | 3:00 - 5:00 pm CDT

Community Solar Project Workshop

- Thurs, June 3, 2021 | 8:30 am - 4:30 pm CDT

Basics of Structural Steel Design

- Fri, June 4, 2021 | 8:30 am - 3:45 pm CDT

National Electrical Code 2020: Grounding and Bonding

- Fri, June 4, 2021 | 8:30 am - 5:00 pm CDT

Slope Stabilization and Landslide Prevention

- Mon, June 7, 2021 | 8:30 am - 5:00 pm CDT

Soils Engineering

- Tues, June 8 2021 | 11:00 am - 2:15 pm CDT

- Wed, June 9, 2021 | 11:00 am - 2:15 pm CDT

Writing Successful Proposals and RFPs

- Tues, June 8, 2021 | 8:30 am - 5:00 pm CDT

Deep Dive into Integrated Stormwater Management

- Tues, June 8, 2021 | 2:00 - 5:15 pm CDT

Practical Site Engineering: Science & Techniques

- Thurs, June 10, 2021 | 11:00 am - 3:15 pm CDT

- Fri, June 11, 2021 | 11:00 am - 2:15 pm CDT

The Tree Course for the Mid-Atlantic Region

- Fri, June 11, 2021 | 8:00 am - 3:30 pm CDT

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

Continuing Education Credit Information

This seminar is open to the public and offers 6.5 PDHs to professional engineers and 6.5 HSW contact hours to architects in North Carolina. HalfMoon Education is an approved continuing education provider for North Carolina engineers (Sponsor No. S-0130).

The American Institute of Architects has approved HalfMoon Education as a continuing education provider (Sponsor No. J885). Course approval is applied for and pending. Activities approved by the AIA qualify for North Carolina architects.

The American Institute of Architects Continuing Education System has approved this course for 6.5 LU | HSW (Sponsor No. J885). Only full participation is reportable to the AIA/CES.

HalfMoon Education has applied to the North Carolina Onsite Wastewater Contractor Inspection Certification Board for course approval, which is pending.

Updates to pending continuing education credits can be found under this course listing at www.halfmoonseminars.org.

Completion certificates will be awarded to participants who complete this event, respond to prompts, and earn a passing score (80%) on the quiz that follows the presentation (multiple attempts allowed).

Can't Attend? Order the Webinar as a Self-Study Package!

Recordings of this webinar are available for purchase. 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. Self-study packages do not qualify for AIA credit.

Registration

North Carolina Onsite Wastewater Treatment System Design, Construction and Maintenance - Live, Interactive Webinar - Tuesday, June 29, 2021

How to Register		Registrant Information
Online: www.halfmoonseminars.org		Name: _____ Company/Firm: _____ Address: _____ City: _____ State: _____ Zip: _____ Occupation: _____ Email: _____ Phone: _____
Phone: 715-835-5900	Code:	Additional Registrants: Name: _____ Occupation: _____ Email: _____ Phone: _____ Name: _____ Occupation: _____ Email: _____ Phone: _____
Fax: 715-835-6066		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.
Mail: HalfMoon Education Inc., PO Box 278, Altoona, WI 54720-0278		Phone: _____
Complete the entire form. Attach duplicates if necessary.		() I need special accommodations. Please contact me.

Tuition

() **I will be attending the live webinar.** Single Registrant - **\$289.00**. Three or more registrants from the same company registering at the same time - **\$199.00** each.

() **I am not attending.** Please send me the webinar recording:

Streamable MP4 Video/PDF Manual for **\$299.00**.

USB Video/PDF Manual for **\$299.00**.

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