

# Agenda

Presented by Robert Rubin

**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, South Carolina and local regulation of systems
- Working with the South Carolina Department of Health and Environmental Control and local municipalities
- 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

## South Carolina Onsite Wastewater Treatment Systems

Live, Interactive Webinar - Friday, July 12, 2024

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



## Learning Objectives

***You'll be able to:***

- Explore** recent scientific and technical advances in onsite wastewater treatment.
- Comply** with federal, South Carolina and local onsite wastewater regulations.
- Evaluate** sites and set treatment goals.
- Discuss** selection and design of conventional treatment systems.
- Explore** alternative and sustainable treatment technologies, including aerobic treatment systems, drip-dispersal systems and recirculating sand filters.
- Monitor** and **maintain** onsite wastewater treatment systems.



HalfMoon Education Inc.,  
Your LIVE Education Leader Presents

# South Carolina Onsite Wastewater Treatment Systems

Live, Interactive Webinar - Friday, July 12, 2024



- |   |   |
|---|---|
| <b>Examine</b> onsite wastewater treatment technologies   | <b>Study</b> conventional treatment system selection and design           |
| <b>Discuss</b> regulation, permitting and sustainability of onsite wastewater treatment systems | <b>Explore</b> alternative and sustainable treatment technologies         |
| <b>Learn</b> about evaluating sites and setting treatment goals                                 | <b>Get tips</b> on monitoring of systems and developing maintenance plans |

**Continuing Education Credits**

- |   |  |
|---|--|
| <b>Professional Engineers</b><br>6.5 PDHs                 | <b>International Code Council</b><br>.65 CEUs (Building) |
| <b>Architects</b><br>6.5 HSW CE Hours<br>6.5 AIA LU   HSW |  |



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# Webinar Information

Online - Friday, July 12, 2024

**Log into Webinar**

8:00 - 8:30 am EDT

**Break**

12:00 - 1:00 pm EDT

**Morning Session**

8:30 - 12:00 EDT

**Afternoon Session**

1:00 - 4:30 pm EDT

**Tuition**

**\$339** for individual registration.

**\$309** for two or more registrants from the same company at the same time.

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# Faculty

**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.

# Credit Information

This webinar is open to the public and is designed to qualify for 6.5 PDHs for professional engineers and 6.5 HSW continuing education hours for licensed architects in South Carolina.

The South Carolina Board of Registration for Professional Engineers and Surveyors does not pre-approve specific continuing education programs or providers.

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

The International Code Council has approved this event for .65 CEUs in the specialty area of Building (Preferred Provider No. 1232).

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 Credits**

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. The following pre-approvals may be available for the on-demand format upon request:  
6.5 HSW LUs (AIA)

# Additional Learning

**Residential and Small Commercial**

**Timber Frame Design and Construction**

- Tuesday, June 11, 2024 | 9:00 am - 4:30 pm CDT

**Scaffold Design and Use in Construction**

- Friday, June 14, 2024 | 9:00 am - 12:15 pm CDT

**Trenching and Excavation Safety in Construction**

- Friday, June 14, 2024 | 1:00 - 4:15 pm CDT

**Benchmarking and Building Performance Standards:**

**Addressing Climate Change and Equity in the Built Environment**

- Monday, June 17, 2024 | 9:00 am - 4:00 pm CDT

**Designing to Withstand Tornadoic Loads on Buildings**

- Monday, June 17, 2024 | 9:00 am - 4:00 pm CDT

**Introduction to the National Environmental Policy Act (NEPA)**

- Tuesday, June 18, 2024 | 9:00 am - 4:00 pm CDT

**Mastering RFQ & RFP Responses: Crafting Winning Proposals**

- Tuesday, June 18, 2024 | 1:00 - 3:00 pm CDT

**Environmental Law for Engineers**

- Thursday, June 20, 2024 | 8:30 am - 3:20 pm CDT

**Moisture-Resistant Buildings**

- Thursday, June 20, 2024 | 9:00 am - 4:00 pm CDT

**Designing for Accessibility under ADA Standards and IBC**

- Friday, June 21, 2024 | 8:30 am - 4:30 pm CDT

**Brownfields Assessments, Grants and Redevelopment Opportunities**

- Tuesday, June 25, 2024 | 10:00 am - 12:00 pm CDT

**Elevating Homes for Flood Resistance**

- Tuesday, June 25, 2024 | 9:00 am - 4:00 pm CDT

**Generation Interconnection under the**

**RTO Model and Changes Coming from Order 2023**

- Tuesday, June 25, 2024 | 2:00 - 4:00 pm CDT

**Passive House Design and Construction**

- Wednesday, June 26, 2024 | 9:00 am - 4:30 pm CDT

**Modular Design and Construction**

- Tuesday, July 2, 2024 | 1:00 - 3:00 pm CDT

**Roadmap to Ethical Issues in Construction:**

**A Primer for Design Professionals**

- Tuesday, July 16, 2024 | 11:00 am - 1:00 pm CDT

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