

Agenda

Presented by Robert Rubin & Scott Mitchell

Wastewater Characteristics and Impacts to Public Health and Environmental Quality

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

Common Elements of Laws and Rules Impacting Onsite Wastewater Systems

- Federal, state 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

Site and Soil Assessments - The Foundation for Proper Design

- 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 Treatment and Dispersal 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

System Management - Assurance that Onsite Infrastructure is Sustainable

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

Septic System Design, Construction and Maintenance

Live, Interactive Webinar - Thursday, May 20, 2021

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Learning Objectives

You'll be able to:

Compare the technology and operation of conventional wastewater treatment systems with new technologies.

Identify and comply with local septic system regulations as well as with surface and groundwater regulations.

Determine system boundaries and loadings, and assess receiving site landscape and soils.

Discuss design considerations for traditional treatment systems.

Explore new technologies such as aerobic treatment systems, peat biofilter wastewater treatment systems and drip dispersal wastewater disposal systems.

Develop plans for monitoring and maintaining septic systems.



HalfMoon Education Online Learning

Septic System Design, Construction and Maintenance

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Review technology and operation of conventional wastewater treatment systems

Coordinate system regulation with surface and groundwater regulations

Examine factors for selecting and sizing systems

Discuss treatment/removal of phosphorus and other pollutants

Practice a management program for onsite wastewater treatment systems

Continuing Education Credits

Professional Engineers
6.5 PDHs

Architects
6.5 HSW CE Hours

AIA
6.5 LU | HSW

International Code Council
.65 CEUs (Sitework)

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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.

Scott Mitchell, PE, LSS *President at Mitchell Environmental, PA in Fuquay-Varina, NC*
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 20 years of experience in land development, Mr. Mitchell is an expert in land use consulting and specializes in advanced onsite wastewater systems, stormwater BMPs, wetland and surface water identification, delineation, impact permitting, and Phase I environmental site assessments. He is a licensed professional engineer and soil scientist and an active member of the Soil Science Society of North Carolina, the Virginia On Site Water Recycling Association (VOWRA), the National On Site Water Recycling Association (NOWRA), and the North Carolina Irrigation Society.

Webinar Information

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

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Additional Learning

The 2021 International Fire Code
- Thurs, April 22, 2021 | 8:30 am - 5:00 pm CDT

Low Impact Development
- Thurs, April 22, 2021 | 10:00 am - 2:00 pm CDT
- Fri, April 23, 2021 | 10:00 am - 12:45 pm CDT

Deep Dive into Water Infiltration in Soil
- Fri, April 23, 2021 | 11:00 am - 1:00 pm CDT

New Developments in Parking Facilities
- Mon, April 26, 2021 | 9:30 am - 4:30 pm CDT

Passive House: Planning and Design
- Mon, April 26, 2021 | 8:30 am - 4:00 pm CDT

Stormwater Basins and Underground Systems
- Mon, April 26, 2021 | 8:30 am - 4:30 pm CDT

Deep Dive into Landscaping for Climate Change
- Mon, April 26, 2021 | 9:00 am - 12:15 pm CDT

How To Set Goals for and Select Erosion and Sediment Control Practices
- Tues, April 27, 2021 | 11:00 am - 12:00 pm CDT

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