

Innovation In Soil Based Onsite Wastewater Treatment

Monday, April 7

- 8:30 AM *Introductory Remark*
8:40 AM Soil-Based Onsite Wastewater Treatment and the Challenges of Climate Change. **Jose A Amador**
9:30 AM Community Septic System Owners Guide. **Sara Heger**
10:20 AM *Break*
11:00 AM Engineering Design of a Modern Soil Treatment Unit. **Robert L Siegrist**,
11:50 AM *Lunch Break*

Track 1—Treatment and Fate of Contaminants: Nitrogen

- 1:00 PM Fosnrs 1: The Florida Onsite Sewage Nitrogen Reduction Strategies (FOSNRS) Study, Project Overview. **Elke Ursin**
1:30 PM Fosnrs 2: Passive, 2-Stage Biofilter Treatment Systems for Reduction of Nitrogen from Ows – Pilot Study Results. **Josefin Hirst**
2:00 PM Fosnrs 3: The Performance of a Full-Scale 2 Stage Passive Biofilter System. **Damann L Anderson**
2:30 PM Fosnrs 4: Water and Nitrogen Balance for Mounded, Drip Irrigation Systems Receiving Septic Tank Effluent. **Gurpal Toor**
3:00 PM *Break*
3:30 PM Fosnrs 5: Quantifying Rates of Denitrification in the Biozone and Shallow Subsurface within Soil Treatment Units for Wastewater Reclamation. **Simon A Farrell**
4:00 PM Fosnrs 6: Stumod-FL - a Tool for Predicting Fate and Transport of Nitrogen in Soil Treatment Units in Florida. **Mengistu Geza**
4:30 PM Fosnrs 7: Development of an Analytical Groundwater Model for Fate and Transport of Nitrogen from Onsite Wastewater Systems. **Cliff Tonsberg**
5:00 PM *Adjourn*

Track 2—Soils

- 1:00 PM Understanding and Interpreting Oxyaquic Conditions. **David L. Lindbo**
1:30 PM Infiltrative Surface Clogging that Develops during Soil Treatment of Wastewater as Affected by the Interaction of Cations with Organic Matter. **James McKinley**
2:00 PM Oxygen Transfer and Clogging in Vertical Flow Sand Filters for on-Site Wastewater Treatment. **Alain Petitjean**
2:30 PM Treatment of Drip Dispersed Effluent in Imported Soils. **Randall J. Miles**
3:00 PM *Break*
3:30 PM Performance of Riparian Buffers Around Onsite Systems in Suburban Settings. **Aziz Amoozegar**
4:00 PM Indicators of Soil Quality in a Waste Water Amended Semi-Arid Soil. **Omololu J. Idowu**
4:30 PM *Adjourn*

Track 3—Wetlands

- 1:00 PM Constructed Wetlands and Planted Sludge Drying Beds for Decentralized Integrated Wastewater Management. **Manoj K. Pandey**
- 1:30 PM Willow Based Evapotranspiration Systems for the on-Site Treatment of Domestic Wastewater in Areas of Low Permeability Subsoils. **Laurence William Gill**

Track 3—Education and Outreach

- 2:00 PM Developing an Extension Program on Onsite Septic Systems in Oklahoma. **Sergio Manacpo Abit Jr.**
- 2:30 PM Teaching Undergraduates the Basics of Decentralized Wastewater Treatment. **David L. Lindbo**
- 3:00 PM *Break*
- 3:30 PM Septic System Improvement Estimator. **Sara Heger**
- 4:00 PM Certification Programs for Inspection of Onsite Wastewater Systems at Time of Sale: The Missouri and Iowa Experience. **Randall J. Miles**
- 4:30 PM Onsite and Decentralized Wastewater Engineering: Course Development and Delivery Experiences to Fill a Perceived Void in Higher Education. **Robert L Siegrist**
- 5:00 PM *Adjourn*

Tuesday Morning, April 8

Track 1—Treatment and Fate of Contaminants: Nitrogen and Phosphorus

- 8:00 AM Nitrogen and Phosphorus Loading from Septic Systems in Small Piedmont Watersheds in North Carolina Estimated from Stream Monitoring Data. **Steven J Berkowitz**
- 8:30 AM Impact of Onsite Wastewater Treatment Systems on Nitrogen and Baseflow in Urban Watersheds of Metropolitan Atlanta. **Nahal Hoghooghi**
- 9:00 AM Paired Watersheds Approach For Evaluating The Influence Of Wastewater Management Strategies On Stream Nutrient Concentrations. **Charles P Humphrey Jr.**
- 9:30 AM *Break*
- 10:00 AM Water Movement and Nitrogen Fate In Drip Dispersal Systems. **Robert L Siegrist**
- 10:30 AM Water Quality Impact of Decentralized Onsite Wastewater Treatment Systems: Case Study of Urbanizing Watersheds in Metropolitan Atlanta, Georgia. **Mussie Y. Habteselassie**
- 11:00 AM Minimum Lot Size Estimates for Nitrogen Assimilation in Onsite Wastewater Treatment Systems. **David E. Radcliffe**
- 11:30 AM *Lunch Break*

Track 2—Soils and Design

- 8:00 AM Hydrologic Assessment for Wastewater Land Disposal. **Aziz Amoozegar**
- 8:30 AM Estimating Absorption Width & Mounding with Your Soil Information. **David M Gustafson**
- 9:00 AM Site Evaluation and System Design Strategies for Severe Sites. **Tom Ashton**
- 9:30 AM *Break*
- 10:00 AM Determining the Minimum Subsoil Permeability for Pressurised Infiltration Systems for on-Site Wastewater Treatment in Ireland. **Laurence William Gill**
- 10:30 AM Expected Treatment Level in a Soil Based Treatment System. **Dennis F. Hallahan**
- 11:00 AM Measuring Insitu Saturated Hydraulic Conductivity (Ksat) Using the Automated Aardvark Permeameter. **Thomas G. Macfie**
- 11:30 AM *Lunch Break*

Track 3—Alternative Designs

- 8:00 AM An Investigation For The Need Of Secondary Treatment Of Residential Wastewater When Applied With a Subsurface Drip Irrigation System. **John Buchanan**
- 8:30 AM Subsurface Drip Dispersal Following Lagoon Treatment—a Case for Optimizing Environmental Protection. **Brian T. Rabe**
- 9:00 AM Filtration of Stormwater Contaminants in Bioretention Cells. **Thorsten Knappenberger**
- 9:30 AM *Break*
- 10:00 AM Community Wastewater Infiltration at 69o Northern Latitude – 25 Years of Experience. **Petter D. Jenssen**
- 10:30 AM An Environmental Impact Study on the Manufacture, Production, and Transport of Septic Systems. **Jessica L Barringer**
- 11:00 AM EPA Update. **Maureen Tooke**
- 11:30 AM *Lunch Break*

Tuesday Afternoon, April 8

Track 1—Treatment and Fate of Contaminants

- 1:00 PM Fate and Transport of Phosphorus Beneath Mounded Septic Drainfields. **Gurpal Toor**
- 1:30 PM Treatment of Trace Organic Compounds in Onsite Wastewater Systems. **Robert L Siegrist**

- 2:00 PM Fate of Pharmaceuticals and Hormones in Mounded Septic Drainfields. **Yun-Ya Yang**
- 2:30 PM *Break*
- 3:00 PM Hydrologic Effects on Subsurface Transport of Surface-Applied Solutes and Bacteria in a Vadose Zone-Shallow Groundwater Continuum. **Sergio Manacpo Abit Jr.**
- 3:30 PM Characterization of Septic Tank Effluent from Coastal Residences. **George Loomis**
- 4:00 PM *Adjourn*

Track 2—Design and Evaluation of Systems and Sites

- 1:00 PM Determining Measurement Range and Other Important Technical Specifications for Aardvark Permeameter. **Ali Farsad**
- 1:30 PM Development of a GIS Based Decision Support Toolset to Assess the Feasibility of on-Site Wastewater Treatment and Disposal Options in Low Permeability Subsoils. **Donata Dubber**
- 2:00 PM Water Quality Tool Set for Coastal Georgia Onsite Wastewater Treatment System Planning. **Clarence Rayford Bodrey Jr.**
- 2:30 PM *Break*
- 3:00 PM Capacitively-Coupled Resistivity Surveys to Delineate Subsurface Wastewater Migration in Coastal Surficial Aquifers. **Michael O'Driscoll**
- 3:30 PM Spatial Distribution of Wastewater Microbial Indicators in Groundwater Beneath Two Large Onsite Wastewater Systems. **Charles P Humphrey Jr.**
- 4:00 PM *Adjourn*

Track 3—Alternative Designs

- 1:00 PM Evaluation Of Water Quality Renovation By Advanced Soil-Based Wastewater Treatment Systems. **Jennifer Cooper**

Track 3—Policy

- 1:30 PM The Past 100 Years and Future of Onsite Resource Water. **Colin Bishop**
- 2:00 PM *Break*
- 2:30 PM Public Confidence in Onsite Systems Requires Field Testing and Field Standards for Performance. **Nicholas Noble**
- 3:00 PM The Centralized Myth - Soil to the Rescue. **Dennis F. Hallahan**
- 3:30 PM *Adjourn*