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 In situ 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 69° 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