



Southwest Onsite Wastewater Conference

February 1 and 2, 2012

Laughlin Resort and Casino, Laughlin Nevada

Time	Topic	Topic Summary	Speaker
Monday and Tuesday, January 30-31, 2012 Pre-Conference Session			
Jan 30-31, 2012 8:00am-5:00pm For class information, contact Kitt Farrell-Poe 520-621-7221 kittfp@ag.arizona.edu To register, contact Janine Lane 928-782-5882 janinel@ag.arizona.edu	NAWT Inspection Training & Certification	With your successful completion of the National Association of Wastewater Transporters, Inc. (NAWT) Inspection Training & Certification course, you will be recognized as a nationally certified inspector by NAWT, listed on a national registry of certified industry professionals for two years, and eligible to conduct inspections for the Arizona Transfer of Ownership Inspection program.	Dave Gustafson, P.E. Jim Anderson, Ph.D.
Tuesday, January 31, 2012 Pre-Conference Session			
Jan 31, 2012 1:00 – 4:00 PM For class information, Contact Jake Garrett 928-474-7177 jgarrett@co.gila.az.us Register on Conference Registration Form Limited to first 45	UV Disinfection of Onsite Effluent	Public health criteria for effluent disinfection in both soil applications and in direct discharge systems based on work from 20 field studies will be presented. Topics include: public health criteria for reuse of disinfected effluent, principles of UV disinfection, comparisons with chemical disinfection, design and installation considerations, operation and maintenance requirements, and the Arizona Proprietary Product Listing (PPL) process.	Jim Cruver, Ph.D. President, Salcor, Inc.
4:00 – 8:00 PM	Exhibitor Set-up		
6:00 – 8:00 PM	Pre-Registration		

Wednesday, February 1, 2012

Southwest Onsite Wastewater Conference



Time	Topic	Topic Summary	Speaker
7:00 – 8:00 AM	Registration		
8:00 – 8:10 AM	President's Welcome (Arizona County Directors of EH Services)		Jake Garrett
8:10 – 9:00 AM	Keynote Speaker: How Plumbing Saved the Planet	We will view evidence to show that the most dramatic lifespan and health gains over the past century and beyond have been due not to medical care of any kind, but to basic hygiene, most significantly to improvements in handling human waste. We will also discuss why it is still an issue and why the attendees' daily work really matters.	Dr. Bob England, M.D. Director, Maricopa County Dept. of Public Health
9:00 – 9:50 AM	Groundwater Quality and Public Health in Areas Utilizing Onsite Wastewater Systems in New Mexico	Many rural homes in New Mexico are served by both onsite wastewater systems and private domestic wells. Improper siting, design, construction and maintenance of wastewater systems can result in well water contamination with pathogenic microorganisms or with chemical constituents such as nitrate. At least three infants residing in homes supplied by water with excessive nitrate from onsite wells have suffered either methemoglobinemia or death by cyanosis. A study in the Albuquerque North Valley found that people utilizing onsite wells and septic systems had a higher incidence of serological cryptosporidium antigen than the control population served by city water and sewer. Eighty percent of private wells sampled in this study had fecal contamination in at least one sample.	Dennis McQuillen, New Mexico Environmental Department, Environmental Health Bureau
9:50–10:20AM	Break – visit exhibits		
10:20–11:10 AM	Naegleria fowleri: Highly Fatal but Rare- Water and Wastewater Implications	Naegleria fowleri (N. fowleri) is acutely pathogenic to humans if it enters the brain. This presentation summarizes research done by ASU for the Arizona Water Institute and addresses the following questions. How can drinking water be a source of N. fowleri? What are the reservoirs for N. fowleri in a drinking-water system? How can those reservoirs be eliminated? It focuses on drinking water as a possible source of N. fowleri infection since 2 of the cases of infection in Arizona were associated with an inadequately managed drinking-water supply. The results of the study have implications for onsite wastewater system management.	Al Brown, RS Director, Environmental Research Initiatives ASU Polytechnic Campus Technology Center
11:10 – 12:00PM	The Necessity for Local Water Reuse: Safe Water, Energy & Nutrient Recovery	The step-by-step refinement of our urban water systems has yielded unsustainable, centralized urban water services in many developed regions of the world. These large systems also provide the wrong role model and promote conservative thinking for the rapidly developing regions of the world. The new paradigm in urban water management needs to be based on the principle of source-separation of waste streams, which provides for an array of options for nutrient and energy recovery, as well as the local supply of water fit-for-purpose. A framework developed and used in Sweden and Australia to aid the realignment of urban water services will be discussed, along with what research questions arise from this new water paradigm.	Nicholas J. Ashbolt, Senior Research Microbiologist, Office of Research and Development, U.S. EPA Cincinnati, OH
12:00 – 1:10 PM	Lunch and visit exhibits		
1:10 – 2:00 PM	Environmental and Public Health Values and Impacts of Decentralized Water/Wastewater Reuse (DWR) and How It Relates to "Expanding Our Scope"	Wastewater reuse at the large "centralized" treatment plant scale is already proven safe. But can Decentralized Water/Wastewater Reuse (DWR) located nearer to the point of wastewater generation be a beneficial water reuse paradigm shift, both economically and environmentally in the future? What about the potential public health risks? Decentralized Water Reuse studies described here are assessing the expansion of water reuse opportunities to include systems with flows that are smaller than at typical centralized water reclamation plants. DWR systems are being studied in rural and peri-urban areas, but also in the city center itself where sewers already exist. NC State University along with the CDC and EPA are assessing performance of eight DWR wastewater treatment systems from New York to California.	Michael Hoover, Ph.D., Professor and Extension Specialist, Soil Science Dept., NC State University

Time	Topic	Topic Summary	Speaker
2:00 – 2:50 PM	NSF Onsite Wastewater Standards Update; Water Reuse, Field Performance and More	NSF Standards provide a detailed method of evaluation and acceptance criteria for a wide range of onsite wastewater treatment technologies. The presentation will discuss existing standards for onsite treatment systems, including those for residential and commercial treatment systems, treatment of blackwater and graywater, and laboratory and field evaluations. Such standards enable specifiers and public health officials a convenient tool for determining product selection, use and acceptance, and the industry with a common measure of product performance.	Tom Bruursema, General Manager, Environmental and Sustainability Services, NSF
2:50 – 3:20 PM	Break – visit exhibits		
3:20 – 4:10 PM	So You Think You Want to Own a Septage Treatment Facility?	There is much more to a Septage Treatment Facility than just a press. From permitting through process selection and construction, this presentation will offer a glimpse at what is involved with developing a waste treatment facility.	Tom Frank, President, Tim Frank Septic Tank Cleaning Company
4:10 – 5:00 PM	NSF Onsite Wastewater Inspector Accreditation Program: Raising the Bar for Wastewater Professionals	The presentation will discuss the NSF Onsite Wastewater Inspector Accreditation Program. This program enables local public and private inspectors a means demonstrate their skills and knowledge in the comprehensive assessment and reporting of treatment systems inspections. NSF offers a national accreditation for onsite inspectors, including a public listing of qualified inspectors.	Sharon Steiner, Business Unit Manager, Wastewater Program, NSF
5:00 – 6:30 PM	Exhibits and Mixer		

Thursday, February 2, 2012

Southwest Onsite Wastewater Conference



Time	Topic	Topic Summary	Speaker
7:00 – 8:00 AM	Registration		
8:00 - 8:50 AM	Aconcagua Man Project "The Inner Journey of Aconcagua - Moving beyond Your Comfort Zone"	The presentation, at its core, is about the inner quest of leaders (from all walks of life) to identify their true purpose and to move beyond what is familiar and comfortable to that which is meaningful and fulfilling. In June, 2010, seven businessmen, with unique leadership and athletic abilities but without extensive mountain climbing experience, joined together as a team to prepare and climb a high mountain in Argentina. In February 2011 this team climbed Aconcagua, at 22,834 feet, the highest mountain in the world outside Asia. Through this experience these men pushed themselves to the edge of their physical, emotional, mental and spiritual boundaries and challenged each person's physical, financial and relational success. The presentation focuses on life transitions, moving out of one's comfort zone, commitments to self and others, leadership and what it may mean to find self-fulfillment in service to others. Attendees will be asked to identify their own Aconcagua.	Dennis Carruth President, Carruth Properties Company, Littleton, CO
8:50 – 9:40 AM	Septic Tank Additive Impacts on Microbial Populations, Solids Accumulation Rates, Effluent Quality and Overall Septic Tank Efficacy in the Field	The usefulness of some 1,200 plus septic tank additives in the market has always been of concern to Environmental Health Specialists, due to the prior lack of independent, third party, field-scale research studies. This presentation will report upon microbe counts, solids volumes and solids accumulation rates for sludge, scum layers and total solids for all three maintenance levels as well as BOD and TSS septic tank effluent levels. Potential long-term additive treatment effects will be studied and reported. Recommendations regarding additional research directions, potential test protocols to use and related potential establishment of national standards for septic tank additives will be discussed.	Sushama Pradhan, Ph.D., LSS, Soils and On-Site Technology Researcher NC State University
9:40 – 10:10 AM	Break – visit exhibits		
10:10 – 11:00 AM	A Case Study: The Sea Ranch Onsite Waste Disposal Zone, Sea Ranch, CA	The Sea Ranch, a planned unit development consisting of 2,300 lots on 3,500 acres, is located on the isolated Northern California Coast about 120 miles north of San Francisco. Sea Ranch is served by onsite systems managed centrally through an On-site Wastewater Disposal Zone program. This program monitors up to 1,300 standard and alternative septic systems and involves education and personal contact with the system owners, inspection & monitoring of the systems, enforcement for corrective measures, system related groundwater and surface water monitoring, systems performance management and administrative, mapping and permitting functions. Tax payments of \$195/lot/year fund the operation of The Zone.	Randy H. Burke, MPH, REHS Director of Works Richard C. Stover, MS Wastewater Zone Inspector Sea Ranch Water Company
11:00 – 11:50 PM	Research Tools Used to Identify Inadequate Onsite Wastewater Treatment in a Disadvantaged Community in the Coachella Valley, California.	Many residents of the Eastern Coachella Valley of Riverside County California live in semi-permanent mobile home sites that rely on failed septic systems for wastewater treatment. The purpose of this presentation is to define the community problem and outline what makes a wastewater system fail. This presentation will also detail community network activities such as crowd sourcing using GIS tools. The presentation initiates with a definition of an on-site system failure and some microbial monitoring methods that can be used to determine if household wastewater is pooling in the community.	Ryan Sinclair, PhD, MPH Loma Linda University

Time	Topic	Topic Summary	Speaker
11:50 – 1:00 PM	Lunch and visit exhibits		
1:00 - 1:50 PM	Onsite Wastewater Assistance Program for Indigent Households	Cesspools and other substandard onsite liquid waste systems can pollute water wells and pose hazards of entrapment, asphyxiation, and drowning. The State of New Mexico has been developing a program to utilize public funds to replace substandard onsite wastewater systems serving indigent households with modern systems, or to connect such households to public sewer systems if available. These efforts include enabling legislation in 2007 and in 2009, and the use of natural resource damage settlements to fund the construction work. Pilot projects have been conducted in Dona Ana County and in the Middle Rio Grande Basin.	Dennis McQuillen, New Mexico Environmental Department, Environmental Health Bureau
1:50 – 2:20 PM	Break – visit exhibits		
2:20 – 3:10 PM	Troubleshooting for On-Site Wastewater System Sustainability	Today we understand that on-site wastewater treatment systems need to be a permanent part of the wastewater infrastructure in many communities. But in order for on-site systems to be permanent infrastructure we must change some of our views. Firstly, we need to see system malfunctions more as “out-of-compliance systems” that can be remediated (fixed) and brought back into compliance rather than planning to replace these permanently “failed” systems. If this new view is embraced then we need to focus more upon troubleshooting problems and correcting them as a normal, but critical, life-cycle stage of sustainable on-site systems instead of focusing upon “throwing away” “failing” systems and replacing them with centralized public sewer systems.	Michael Hoover, Ph.D., Professor and Extension Specialist, Soil Science Dept., NC State University
3:10 – 4:00 PM	Mud River, WV Decentralized Wastewater Disinfection Demonstration	Improperly treated sewage from low-income homes in West Virginia has caused severe pollution of the Mud River tributaries. From 2005 through 2010, grants provided new onsite wastewater treatment systems for 70 homes. Sampling of treatment system performance and receiving water quality showed dramatic reduction in the E. coli count in the tributary water. The local project management’s extraordinary ongoing maintenance and troubleshooting activities and performance of the alternative technologies and UV disinfection systems will be presented.	Jim Cruver, Ph.D. President, Salcor, Inc.
4:00 PM	Conference End		