

**American Ground Water Trust - Aquifer Storage & Recovery Conferences in Florida
Listing of Conferences and Presentations from www.agwt.org**

2001 Conference on Aquifer Storage & Recovery I, Orlando, Florida, September 10, 2001

Water and Environment: Awareness, Information and Public Perception, *Andrew W. Stone, American Ground Water Trust, Concord NH*

The Florida ASR Issue: Why We Are Here, *David Pyne, ASR Systems LLC, Gainesville, FL*

Fate and Transport of Microorganisms in the ASR Process, *Joan Rose, University of South Florida, St. Petersburg, FL*

Bursting Bubbles: The Real Science of ASR, *Tom Missimer, CDM Missimer, Fort Myers, FL*

The Florida ASR Issue: The Sierra Club Perspective, *Geraldine Swormstedt, Chair of The Sierra Club, Florida Section, Sarasota, FL*

The Role of ASR in the Comprehensive Everglades Restoration Plan, *Pete Kwiatkowski, South Florida Water Management District, West Palm Beach, FL*

ASR Regional Study of South Florida, *Christopher Brown, Geotechnical Branch, US Army Corps of Engineers, Jacksonville, FL*

The FDEP's Position on ASR in Florida, *David Struhs, (invited) Secretary, Florida Department of Environmental Protection, Tallahassee, FL*

ASR as a Management Tool for Drought, *Ane Deister, Co-Chair of the National Drought Commission, Metropolitan Water District of California, Los Angeles, CA*

The Projected Role for ASR in the St. Johns Water Management District, *Kirby Green, Executive Director, St. Johns Water Management District, Palatka, FL*

The Long Term Importance of ASR for Water Management in South Florida, *Henry Dean, Executive Director, South Florida Water Management District, West Palm Beach, FL*

The Florida ASR Issue: LEAF's Perspective, *Suzie Ruhl, Legal Environmental Assistance Foundation (LEAF), Tallahassee, FL*

How Much Do We Know About the Potential Impact of ASR? *Carl Goodwin, USGS, Tallahassee, FL & Bob Renken, USGS, Miami, FL*

How to Measure Performance: South Florida Case Studies, *Mark Pearce, Water Resource Solutions, Cape Coral, FL*

Water Quality Changes during Aquifer Storage, *Mark McNeal, CH2M Hill, Tampa, FL*

2002 Conference on Aquifer Storage & Recovery II, Orlando, Florida, January 7, 2002

ASR: Risk Management and the Path Forward, *David Pyne, ASR Systems LLC, Gainesville, Florida*

Regulatory Perspectives On The Future Of ASR In Florida, *E. Stallings Howell, US Environmental Protection Agency, Region 4, Atlanta, Georgia*

What Laboratory Studies of Microbes Indicate About The Fate Of Microorganisms In Aquifers, *David John, University of South Florida, St. Petersburg, Florida*

Filtration Systems - What Are The Current Benefits/ Limitations/ Costs Of Surface Water Treatment Technology? *Bob McCarthy, US Filter Water Technology Center, Timonium, Maryland*

Ozone And UV Based Systems - What Are The Current Benefits/ Limitations/ Costs Of Surface Water Treatment Technology? *John Marrino, PCI - Wedeco Environmental Technologies, West Caldwell, New Jersey*

North American Water Utility Perspective on ASR: - Drivers, Issues And AWWA Research Foundation Work, *Chris Rayburn, Director, Research Management, AWWA Research Foundation, Denver, Colorado*

Central Florida Recharge Well Demonstration Project: Measuring Aquifer Water Quality Changes from Stormwater Recharge, *Alan W. Aikens, CH2M Hill, Orlando, Florida*

The Importance Of ASR As A Management Strategy For The Everglades Restoration Program And For Meeting Florida's Urban Water Supply Needs, *Pat Gleason, Camp, Dresser & McKee, West Palm Beach, Florida*

An Environmental Perspective On ASR For Florida, *Richard Pettigrew, Chairman of the Board for Florida Audubon and Chairman of the Governor's Commission for Sustainable South Florida, Coral Gables, Florida*

Open Discussion - All Speakers, Moderators and Audience

Chaired by Andrew Stone, American Ground Water Trust

- How will pre-treatment affect the economics of ASR?
- Is there any feasible alternative to ASR?
- When will we see the results of ASR pilot projects?
- How do environmental organizations view ASR as a management tool?

2003 Conference on Aquifer Storage & Recovery III, Orlando, Florida, January 13, 2003

ASR Background, Legal and Environmental Issues

The principal ASR issues in Florida and the latest trends in the implementation of ASR projects worldwide, *David Pyne, ASR Systems, Gainesville, FL*

Update on the status of the ASR components of the Everglades Restoration Project, *Peter Kwiatkowski, South Florida WMD, W Palm Beach, FL*

Environmentalists' concerns regarding implementation of ASR in Florida, *Scott Randolph, Attorney, LEAF, Tallahassee, FL*

How do the legal discrepancies between federal law and EPA regulations impact the implementation of ASR projects in Florida? *Sam Poole, Berger Singerman PA, Fort Lauderdale, Florida*

What Is Happening With ASR Beyond Florida?

Latest research on the fate of microbiota in aquifers – do we have answers? *Simon Toze, CSIRO, Perth, Australia (Keynote speaker)*

How political, operational and public perception issues have been overcome for ASR and Artificial Recharge projects in Southern California, *Kelly Rowe, CDM, Irvine, CA*

There are 9 ASR projects in Mid-Atlantic States. What have been the operational hurdles and how have they been overcome? *Ken McGill, CH2MHill, Philadelphia, PA*

How Are We Doing With ASR In Florida?

Technical issues regarding ASR operational success, *Thomas Missimer, CDM - Missimer, Fort Myers, FL*

What are the ASR lessons from the operational site in Tampa? *Mark McNeal, CH2MHill, Tampa, FL*

The economics of ASR pre-treatment technologies, *Robert Cushing, Carollo Engineers, Sarasota, FL*

ASR and deep well injection in South Florida, *Carl Goodwin, USGS, Miami, FL*

How have the news media in Florida approached the ASR issue? *Debbie Salamone, Orlando Sentinel, Orlando, FL*

Principal ASR issues that will influence water management decisions in SWFWMD, *Henry Dean, South Florida WMD, West Palm Beach, FL*

Principal ASR issues that will influence water management decisions in SWFWMD, *David Moore, South West Florida WMD, Brooksville, FL*

2004 Conference on Aquifer Storage & Recovery IV, Tampa, Florida, April 16, 2004

Special Presentations

Aquifer Recharge – A Global View and an Australian Perspective, *Peter Dillon, CSIRO, Adelaide, Australia*

The role of ASR as a water resource alternative in Southwest Florida, *David Moore, Executive Director, Southwest Florida Water Management Dist., Brooksville, FL*

Florida Water Resources in 2020, *Charles Pattison, Executive Director, 1000 Friends of Florida, Tallahassee, FL*

ASR Issues in South Florida, *John Mulliken, Acting Director, Water Supply Department, SFWMD, West Palm Beach, FL*

From California to Florida: Plans, Trends and Updates

ASR Activities in The Western United States, *Terry Foreman, Vice President, CH2M Hill, Thousand Oaks, CA*

Comprehensive Everglades Restoration Plan (CERP) ASR Pilot Study Update, *Pete Kwiatkowski, Lead CERP ASR Project Manager, SFWMD, West Palm Beach, FL*

ASR Performance and Recovery in Southern Florida, *Ron Reese, Hydrologist, US Geological Survey, Miami, FL*

ASR Water Quality Trends in Southern Florida, *June Mirecki, Hydrogeochemist, US Army Corps of Engineers, Vicksburg, MS*

Zooming in on Water, Rocks and Microorganisms

Water-Rock Interactions during ASR and Effects on Water Quality, *Jon Arthur, Hydrogeology Program Supervisor, Florida Geol. Survey, Tallahassee, FL*

Significance of Native Microbial Populations in ASR Storage Zones, *John Lisle, Microbiologist, US Geological Survey, St Petersburg, FL*

Survival of contaminant microorganisms in model ASR conditions for Florida, *David John, Microbiologist, University of South Florida, Tampa, FL*

Water Treatment Options for ASR, *Don Thompson, Vice President, CDM, Inc., Jacksonville, FL*

Case Studies, Modeling and What's Next

Recent ASR Developments in Southwestern Florida, *Mark McNeal, Hydrogeologic Sciences Manager, CH2M Hill, Tampa, FL*

Improving ASR recovery efficiency using modeling, *Mark Pearce, Vice President, Water Resource Solutions, Cape Coral, FL*

ASR Dynamics, Issues and Solutions, *David Pyne, President, ASR Systems LLC, Gainesville, FL*

Modeling ASR Hydraulics and Plume Geometry, *Thomas Missimer, Vice President, CDM-Missimer, Fort Myers, FL*

Geochemistry, Geophysical Applications and Data Gaps, *Sam Upchurch, Vice President, SDII Global, Tampa, FL*

Discussion, Deliberation and Recommendation Session Science & Technology - Session Leaders Walter Schmidt, State Geologist, Florida Geological Survey, Tallahassee, FL, and Albert Muniz, Hazen & Sawyer, Boca Raton, FL

This session will include discussion among presenters and attendees. The objective will be to interactively generate an ASR state-of-the-art summary with where-do-we-go-from-here recommendations. Discussion topics are likely to include:

- What have we learned from operational ASR facilities?
- Which technologies appear to be most effective?
- What are the research gaps and how can they be funded?
- What science and engineering issues are of greatest uncertainty?
- What are strategies for maximizing ASR performance and recovery?
- How water quality issues being addressed and what are the associated costs?

Florida Regulations: Protecting People and Resources

Florida Aquifer Protection: The Regulatory View, *Judy Richtar, UIC Program Manager, Florida DEP, Southwest District, Tampa, FL*

Water Quality and Human Health, *Bart Bibler, Water Programs, Florida Department of Health, Tallahassee, FL*

Water-Resource Management: The View from Here, *Don Ellison ASR Projects Coordinator, SWFWMD, Brooksville, FL*

Facility Operations, Management and the Law

A City Utility's Perspective, *Pete Mazzella, Deputy Director of Utilities, City of Boynton Beach, FL*

The Environmentalists' Perspective, *Scott Randolph, Attorney, Legal Environmental Assistance Foundation, Tallahassee, FL*

State and Federal Regulations: Is Everything Black and White?, *Cynthia Christen, Senior Attorney, Florida Dept. of Environmental Protection, Tallahassee, FL*

Thoughts from Beyond Florida

Regulatory Issues and Solutions: The Wisconsin Story, *Richard Roth, UIC Program Director, Wisconsin Dept. of Natural Resources, Madison, WI*

From the Outside Looking in: Is ASR Right for Georgia? *Bill McLemore, State Geologist, Georgia Geological Survey, Atlanta, GA*

The EPA Perspective on a Continually Developing and Needed Technology, *John Taylor, Senior Environmental Engineer, US EPA, Region V, Chicago, IL*

Discussion, Deliberation and Recommendation Session Management & Policy - Session

Leaders: Peter Dillon, CSIRO, Adelaide, Australia and Jon Arthur, Hydrogeology Program Supervisor, Florida Geol. Survey, Tallahassee, FL

This session will include discussion among presenters and attendees. The objective will be to interactively generate an ASR state-of-the-art summary with where-do-we-go-from-here recommendations. Discussion topics are likely to include:

- Is there enough time for research to address the unknowns?
- Is the CERP ASR timeline in synch with regulatory requirements?
- Cycle-test durations – how long is enough?
- What are regulatory interpretations of “point of compliance,” and other terms?
- How can the permitting process be improved?
- Should Class I standards be applied to ASR?

2005 Conference on Aquifer Storage & Recovery V, Tampa, Florida, October 20, 2005

ASR site selection considerations using GIS matrix overlays, *Chris Brown, Senior Engineer, Steve Sutterfield, Planner, Michael W Fies, Senior Hydrogeologist, US Army Corps of Engineers, Jacksonville, FL*

Borehole geophysics and sequence stratigraphy: Key methods for developing reliable high-resolution hydrogeologic frameworks for modeling Florida aquifers, *Kevin Cunningham, Hydrologist, USGS, Miami, FL*

Hydrogeologic Framework for a Regional ASR System, *Emily Richardson, Lead Hydrogeologist, South Florida Water Management District, West Palm Beach, FL*

Evaluation of geologic structures and aquifer geometry in the Lake Okeechobee area using seismic reflection, *Michael W. Fies, Senior Hydrogeologist and Steve Myers, Geologist, US Army Corps of Engineers, Jacksonville, FL*

South Florida's Perspective on the future of ASR, *Chip Merrian, Deputy Executive Director, South Florida Water Management District, West Palm Beach, FL*

Peace River Enhanced Geochemical Monitoring Program, *Susan Hochuli, Water Resources Planner, Peace River/ Manasota Regional Water Supply Authority, and Mark McNeal, Manager, Hydrogeologic Sciences, CH2M Hill, Tampa, FL*

Ecotoxicological effects of recovered ASR water using Caloosahatchee River Pilot Project Ground Water: Phase 1-Screening-Level Method Development, *Isabel Johnson, Sciences Group Leader and Jonathan E. Shaw, P.G., Senior Consultant, Golder Associates Inc. Gainesville and Boca Raton, FL*

Update on the Hillsboro ASR Pilot Project, *Bob Verrastro, Project Manager South Florida Water Management District, West Palm Beach, FL*

City of Tampa: Geochemical changes using ozonated water for recharge, *Mark McNeal, Manager, Hydrogeologic Sciences CH2M Hill, Tampa, FL*

ASR for Florida utilities in an uncertain regulatory environment, *John Kaufman, Water Resources Manager, & Mark Chandler, Senior Engineer, Montgomery Watson Harza, Fort Lauderdale, FL*

The behavior of arsenic and other metals in bench-scale leaching studies that simulate ASR conditions, *Jonathan D. Arthur, Assistant State Geologist, FDEP/Florida Geological Survey, Tallahassee, FL*

Geochemical Models to Interpret Water-Quality Data During ASR Cycle Tests, *June Mirecki, Hydrogeochemist, US Army Engineer Research & Development Center, Vicksburg, MS*

Arsenic Mobilization In Florida's Aquifers During ASR Cycles - A Basic Perspective, *Mark Pearce, Vice President, Water Resources Solutions, Cape Coral, FL*

Well or Aquifer? - Where ASR water quality compliance should be measured, *David Pyne, President, ASR Systems, Gainesville, FL*

ASR implementation: quality issues now emerging from darkness to enlightenment, *Don Ellison, ASR Projects Coordinator, South West Florida Water Management District, Brooksville, FL*

Federal Perspective on Injection well regulations, *Bill Bates, Geologist, Underground Injection Control Branch, USEPA REGION 5, Chicago, IL*

Florida Regulatory Update, *Richard Deuerling, Underground Injection Control Program, Florida DEP, Tallahassee, FL*

2006 Conference on Aquifer Storage & Recovery VI, Orlando, Florida, October 16-17, 2006

Special Presentations

The Present and Future Role of ASR in the St. John's River Water Management District, *Kirby B. Green III, Executive Director, St. John's River Water Management District, Palatka, FL*

"The Saga of Man's Abuse of Nature in Southern Florida and his Unprecedented Efforts to Make Amends", *Michael R. Grunwald, National Reporter, Washington Post, Washington DC*

Aquifer Storage Recovery - Managed Aquifer Recharge Today and Tomorrow

ASR Technology vs. Surface Storage Options: Costs, Feasibility, Pros & Cons, *Christopher J. Brown, Senior Geotechnical Engineer, US Army Corps of Engineers, Jacksonville, FL*

Comprehensive Everglades Restoration Plan: Status Report & Update, *Stuart Appelbaum, Chief of Ecosystem Restoration Branch, United States Army Corps of Engineers, Jacksonville, FL*

Will ASR Work in the Aquifers of Central and North Florida? *Mark Pearce, Vice President, Water Resource Solutions, Cape Coral, FL*

ASR as a Solution for US Army Corps Projects & Engineering Problems Nationwide, *Steve Sutterfield, Planner, and Chris Brown, US Army Corps of Engineers, Jacksonville, FL; Glen Stevens, Chief of Hydrology & Hydraulics, Philadelphia, PA*

How Mighty are the Microbes and Minerals?

A National Perspective on New Technology, Innovative Methods and Future Directions with Respect to Research on Microbial Communities in Ground Water, *Ronald W. Harvey, Research Microbiologist, U. S. Geological Survey, Boulder, CO*

Results of Monitoring the Effects on Chemical and Microbial Quality of the Upper Floridian Aquifer from Long-Term Recharge of Surface Water in Central FL, *Al Aikens, Hydrogeologist, CH2M Hill, Orlando, FL and Jim Gross, Senior Project Manager, St. Johns River WMD, Palatka, FL*

Studies of Recharge Water and Native Water – The Significance of Alterations in Native Aquifer Microbial Physiology in the Tampa Bay Aquifers, *John Lisle, Microbiologist, U.S. Geological Survey, St. Petersburg, FL*

Geochemical and Microbial Characterization of Aquifer Systems to Assess ASR Suitability, *Jon Arthur, Assistant State Geologist, FL Geological Survey/Florida DEP, Tallahassee, FL and John Lisle, Microbiologist, USGS, St. Petersburg, FL*

Evaluating Changes in Water Quality during ASR: A Research Update, *Jess Brown, Engineer, Carollo Engineers, Sarasota, FL, Chris Rayburn, Director, AWWA Research Foundation, Denver CO*

Dating of Florida's Ground Water: Mapping the Chronology of Flow from Recharge to Ocean Discharge, *Mike Bennett, Hydrogeologist, SFWMD, West Palm Beach, FL and June Mirecki, Hydrogeochemist, US Army Corps of Engineers, Jacksonville, FL*

Using Geophysical and Instrumentation Technology to Predict the Performance of a Large Scale Desalinated Water Storage (ASR) Project, *Rolf Herrmann, Worldwide Technical Support, Schlumberger Water Services, Abu Dhabi, United Arab Emirates*

Using WASH123D to Assess ASR Recovery Efficiency in Brackish Water Aquifers, *Laura D. Bittner and Steve M. England, Hydrologists, USACE, Philadelphia, PA; Hwai-Ping (Pearce) Cheng, ERDC, Vicksburg, MS and Chris Brown, US Army Corps of Engineers, Jacksonville, FL*

Quality Questions - Recharge, Recovery and Regulations

The Target Storage Volume (TSV): A Proven Approach for Achieving High Recovery Efficiency and for Attenuating Arsenic, *David Pyne, President, ASR Systems, Gainesville, FL*

Potable Water ASR – Results of Cycle Testing from City of Bradenton, Progress towards an Operating Permit, *Stuart Norton, Project Manager, and Allan Biddlecomb, Director of Applied Sciences, Jones Edmunds & Associates, Gainesville, FL*

Roseville ASR Project - Highlights the Regulatory Issues with Disinfection Byproducts Involving the Application of Drinking Water for Storage, *Chris Petersen, Supervising Hydrogeologist, MWH, Sacramento, CA and John Izbicki, Hydrogeologist, USGS, San Diego, CA*

Reclaimed Water for ASR – Results of Cycle Testing at Manatee County, Englewood and St. Petersburg - Progress Towards Operating Permits, *John Powers, Senior Hydrogeologist, CH2M Hill, Tampa, FL*

An Update on the Peace River ASR Groundwater Monitoring Program, *Mark McNeal, CEO, ASRUS, LLC, Tampa, FL*

Ecotoxicology Studies to Establish Bioaccumulation Impacts on Freshwater Fauna Using Recharge Waters From Operational ASR Systems, *Isabel Johnson, Sciences Group Leader and Jonathan E. Shaw, Senior Consultant, Golder Associates Inc., Gainesville and Boca Raton, FL*

Regulatory Update – Permitting Requirements for Operating ASR Investigations and Projects, *Judy Richtar, UIC Program Manager, Florida DEP, Temple Terrace, FL*

Discussion Session - Presenters and Participants

- How much more research do we need to do?
- Are there clearly defined roles for federal, state and local authority?
- How far and how fast will Florida's ASR projects proceed?
- Is the money there for ASR projects? Is serious consideration being given to other water management options?

2007 Conference on Aquifer Storage & Recovery VII, Orlando, Florida, Sept. 19-20, 2007

Tools and Applications for Optimization of Ground Water Resources, *Eve Kuniatsky, Southeastern Region Ground Water Specialist, US Geological Survey, Norcross, Georgia*

Florida and the Vanishing Waters of the Eastern US, *Cynthia Barnett, Journalist & Author, Gainesville, FL*

Recommendations from the National Academy of Sciences Committee on Sustainable Underground Sources of Recoverable Water, *Jon Arthur, Assistant State Geologist, FDEP/Florida Geological Survey, Tallahassee, FL*

St. Johns River WMD and Central Florida Cooperators Planning for Future Water Supply Alternatives Through ASR Construction and Testing Program, *Leslie Turner, Lee Wiseman, and Jason Mills, CDM, Orlando, FL; Doug Munch, St Johns' River WMD; and Glenn Forrest, Glenn E. Forrest, Inc, Winter Park, FL*

Aquifer Storage Recovery in San Antonio, Texas, *James Dwyer, CH2M Hill, Austin, TX and Adam Eddy, San Antonio Water System, San Antonio, TX*

Operational Optimization – An assessment of ASR recovery efficiencies, *Frank Winslow, CDM, Fort Myers, FL*

Are all USDWs really potential Underground Sources of Drinking Water? *Mark McNeal, President, ASRUS, LLC, Tampa, FL*

The View of the Regulated Community on how ASR Arsenic Issues have been addressed by the Florida DEP – History and Case Studies, *John Powers, Senior Hydrogeologist, CH2M Hill, Tampa, FL*

Innovative conjunctive use solution to West Palm Beach water supply shortage, *Marjorie Craig, Director of Public Utilities and Kenny Blakeney, Water Plant Manager, City of West Palm Beach, West Palm Beach, FL*

Arsenic Attenuation during Successive Cycle Tests: Influence of disinfection method on arsenic mobility, *June Mirecki, Hydrogeochemist, US Army Corps of Engineers, Jacksonville, FL; Mark McNeal, President, ASRUS, LLC, Tampa, FL and John Powers, Senior Hydrogeologist, CH2M Hill, Tampa, FL*

Achieving Water Supply Sustainability with ASR *David Pyne, President, ASR Systems, Gainesville, FL*

Water volumes and water quality in aquifers recharged by rapid infiltration basins at the Water Conserv II Project, Orange County, *David MacIntyre, Vice President, Parsons-Brinckerhoff, Orlando, FL*

ASR for Lake Okeechobee and Estuary Restoration (Taylor Creek/L-63N Canal ASR system), *Raphael Frias, Engineer, Black & Veach, Tampa FL*

Engineered aquatic filter barrier systems - technical characteristics - actual and potential applications, *Andy McCusker, Vice President-Technical Services, Gunderboom, Inc., Scarborough, ME*

The Effectiveness of Bank Filtration as water pre-treatment for ASR injection, *Phil Brown, Project Manager and Mark Wirganowicz, Senior Hydrogeologist, Golder Associates, Lake Oswego, OR; Chris Brown, Senior Consultant, Golder Associates, Jacksonville, FL*

Application of membrane degasification technology for removing oxygen from ASR source water, *Patrick McMurray, Sales & Technical Service, Membrana - Celgard LLC, Charlotte, NC*

Oxygen removal processes for ASR injectant - fundamentals, applicability, and costs, *Chance Lauderdale, Engineer, Carollo Engineers, Sarasota, FL*

Status of ASR recharge water de-gassing pilot studies at Bradenton, *Don Ellison, Senior Professional Geologist, South West Florida WMD, Brooksville, FL*

A typical ASR well can cost a million dollars - Where does the money go? Do they have to cost so much? *Stuart Anderson, President, Applied Drilling Engineering, Tampa, FL*

Conjunctive use of surface water and ground water in Cape Coral, *Gordon Kennedy, Principal Hydrogeologist, MWH Americas, Cape Coral, FL and George Reilly, Utilities Manager, City of Cape Coral, Cape Coral, FL*

Update report from EPA national working group on artificial recharge/ASR EPA Region 4 Monitoring, Cycle Testing, and Permitting of ASR Systems - A Regulatory Perspective, *Richard Deuerling, Jr, UIC Program Manager, FL DEP, Tallahassee FL*

2008 Conference on Aquifer Storage & Recovery VIII, Orlando, Florida, Sept. 22-23, 2008

Special Presentations

- Water Issues in Florida, *Mimi Drew, Deputy Secretary, Florida Department of Environmental Protection, Tallahassee, FL*
- The American Ground Water Trust Position on Aquifer Recharge, Storage and Recovery, *Andrew Stone, Executive Director, American Ground Water Trust, Concord, NH*
- Preliminary Results of Full-Scale Membrane Deoxygenation at the Bradenton ASR Facility – A Status Update, *Stuart Norton, Hydrogeologist, Jones Edmunds & Associates, Inc., Gainesville, FL, Don Ellison, ASR Projects Coordinator, Southwest Florida Water Management District, Brooksville, FL and Seth Kohn, Engineer, City of Bradenton, Bradenton, FL*
- Feasibility of Using Mined Phosphate Lands to Naturally Treat Storm-Water Prior to Recharge: A Concept That Can Expand Regional Ground Water Resources Availability, *Peter J. Schreuder, President, and Dana J. Gaydos, Environmental Scientist, Schreuder Inc., Tampa FL*
- The ASR – Arsenic Surrogate Model: A Giant Leap Forward, *David Pyne, President, ASR Systems, Gainesville, FL; Pieter J. Stuyfzand, Hydrogeology Group, Faculty of Earthsciences, Utrecht University, Utrecht, The Netherlands and Christopher Brown, Senior Geotechnical Engineer, Golder Associates, Jacksonville, FL*
- Construction Cost Comparison of Surface Reservoir and ASR Storage Options for the Comprehensive Everglades Restoration Program, *Brian Files, Senior Project Manager, Parsons, Jacksonville, FL*
- New Challenges and Opportunities for Environmental ASR in South Florida, *June Mirecki, Hydrogeochemist, Army Corps of Engineers, Jacksonville, FL and Bob Verrastro, Lead Hydrogeologist, South Florida Water Management District, West Palm Beach, FL*
- Methods to Evaluate and Rank Potential Aquifer Recharge Sites: Colorado's Experience, *Andy Horn, Hydrogeologist, CDM, Denver, CO*
- Twenty Years of ASR Success in Oregon, *Kent Madison, President, 3R Valve LLC, Echo, OR*
- Opportunities for Surface Water Reservoir - ASR Conjunctive Use Projects in Georgia, *Chris Brown, Senior Geotechnical Engineer, Golder Associates, Jacksonville, FL*
- Obtaining the First Operating Permit for "Reclaimed Water ASR" at Englewood, FL, *Mark B. McNeal, CEO, ASRus, LLC, Tampa FL*
- Regulatory Update: Consent Orders, Administrative Orders, Cycle Testing Recommendations etc., *Joe Haberfeld, UIC Program Manager, Florida DEP, Tallahassee, FL*
- SJRMWD ASR Program and Catalytic de-oxygenation in DeLand, FL, *Glenn Forrest, Senior Project Manager, Glenn E Forrest Inc., Orlando, FL and Peter Ritchey, Technology Development Manager, Severn Trent Water Purification, Inc., Pittsburgh, PA*
- The Next Generation of ASR Disinfection Technologies - Overcoming the Limitations of Chlorination and UV Disinfection, *David MacNevin and Lyle Munce, Process Engineers, Carollo Engineers, Sunrise, FL and Bob Verrastro, Lead Hydrogeologist, South Florida Water Management District, West Palm Beach, FL*
- Managing Geochemical Conditions - Selecting a Pretreatment Design, *Katherine Bell, Environmental Engineer, CDM, Nashville TN and Lee P. Wiseman, Principal Engineer, CDM, Maitland, FL*
- Water Quality Data for ASR Projects: How to Effectively Receive, Deliver, Manage and Validate Electronic Field and Laboratory Information, *Julio Paredes, President, Laboratory Data Consultants FL, Inc. Royal Palm Beach, FL*
- Bench-Scale Testing to Evaluate Potential Subsurface Geochemical Reactions, *Mike Weatherby, Ed Rectenwald, and Gordon Kennedy, MWH Americas, Cape Coral, FL*
- What to do with CO₂? The Knowns and Unknowns of Geologic Sequestration: Updates from DOE National Energy Technology Lab (NETL) Field Test Sites in West Texas and Mississippi, *Catherine Romanak, Research Associate, Bureau of Economic Geology, Austin, TX (Also affiliated with the Gulf Coast Carbon Center)*

Deep Aquifer Carbon Sequestration Projects in the Southeast: Current Status and Future Outlook, *Larry Cole, Environmental Engineer, EPA Region 4, Atlanta, GA*

Seminole Tribe of Florida ASR project: Use of Advanced Borehole Geophysics for Analysis of Storage Zone Heterogeneity, *Weixing Guo, Senior Scientist; Robert. Maliva, Senior Hydrogeologist; and Thomas Missimer, Vice President, Schlumberger Water Services USA Inc., Ft. Myers, FL*

The Use of Neutron and Compensated Density Technologies to Monitor Water Recharge at ASR Facilities – Examples from Southern California, *Tony Morgan, Manager - Western Operations, Layne Geosciences, Layne Christensen Company, Fontana, CA*

Susceptibility of the Floridan Aquifer System to Saltwater Intrusion from Sea-level Rise, *Joseph D. Hughes, U.S. Geological Survey, Florida Integrated Science Center, Tampa, FL*

ASR Progress in Florida: A Well Driller's Perspective, *Ed Finch, President, Diversified Drilling Corporation, Tampa, FL*

Indirect Potable Re-use: ASR by Another Name, *John Powers, Senior Hydrogeologist, CH2M Hill, Tampa, FL*

2009 Conference on Aquifer Storage & Recovery IX, Orlando, Florida, Sept. 28-29, 2009

Special Presentations

Water Supply Issues and Water Policy in Florida, *Trudi Williams, Florida State Representative (District 75), Tallahassee, FL*

A National Perspective on Water Resource Issues: Focus On Aquifer Storage, *Edward J. Bouwer, Johns Hopkins University, Baltimore, MD*

ASR Can Make India's Groundwater Sustainable and Improve Water Quality, *Professor Y. Venkatarami Reddy, Sri Venkateswara University, Tirupati, India*

Economics of Solving Water Management Needs With Aquifer Recharge Technology, *David Pyne, ASR Systems LLC, Gainesville, FL*

Overview of SWFWMD Water Issues - Water Issues in Florida: A Business Person's Perspective, *Jennifer E. Closshey, Ideas & Innovations, Inc., Plant City, FL*

Two Days In Chicago: What Happened at the "ASR Experts Meeting"? What Needs To Happen Now? *John Powers, CH2M Hill, Tampa, FL*

The State By State "ASR Regulatory Smorgasbord" in the US, *Tim Parker, Parker Groundwater, Sacramento, CA*

Aquifer Storage Projects in the Southwest: Technical, Economic and Regulatory Perspectives, *Stephanie J. Moore, Daniel B. Stephens & Associates, Inc., Albuquerque, NM*

Umatilla Basin, Oregon - Aquifer Recovery Assessment Project, *Said Amali, Amali Consulting LLC, Beaverton, OR*

Kissimmee River ASR Pilot: An Environmental ASR System for Multi-Year Sub-Surface Storage, *June Mirecki, US Army Corps of Engineers, Jacksonville, FL*

Reclaimed Water For 21 Mgd Biscayne Aquifer Recharge, *Jason Mills, CDM, Maitland, FL*

Impacts Of Limiting ASR Bubble Growth and a Chemical Approach to Eliminating Arsenic Mobilization in the Subsurface, *Mark Pearce, Entrix Water Solutions, Ft Myers, FL*

Review and Assessment of the Status of Artificial Recharge In Florida, *Mark McNeal, ASR-US, LLC, Tampa, FL*

National Review and Assessment of US ASR Projects, *Mark Lucas, CH2M Hill, Philadelphia, PA*

The Vital Role of Recycled Water in Basin-Wide ASR, Orange County, Ca, *Adam Hutchinson, Orange County Water District, Fountain Valley, CA*

82 Years of Aquifer Recharge in Ventura County, California: Economics, Technology, Regulation and Long-Term Future Challenges, *Tony Morgan, United Water Conservation District, Santa Paula, CA*

A Toxicologist's Perspective on Health-Risk Issues Frequently Raised in Connection with Aquifer Recharge, *Bruce Narloch, MWH, Bellevue, WA*

Wetlands on Mined Phosphate Lands Can Naturally Treat Stormwater, Producing Low Dissolved Oxygen Recharge to the Floridan Aquifer, *Dana Gaydos, Schreuder Inc, Tampa, FL*

Bugs in the Water: Microbial Ecology Studies in the Upper Floridan and Biscayne Aquifers, *John Lisle, U.S. Geological Survey, St. Petersburg, FL*

Past, Present and Future of the Bradenton ASR Degasification Project, *Claude D. Tankersley, Director of Public Works, City of Bradenton, Bradenton, FL*

Aquifer Recharge in Colorado, *Kevin G. Rein, Colorado Division of Water Resources, Denver, CO*

Aquifer Recharge in Oregon, *Barbara Priest, Oregon Department of Environmental Quality, Portland, OR*

Aquifer Recharge Recovery in Utah, *Mike Suflita, Utah Division of Water Resources, Salt Lake City, UT*

Aquifer Recharge in Florida, *Joe Haberfeld, Florida Dept of Environmental Protection, Tallahassee, FL*

Conference Summary – Conclusions, *Donald Ellison, Southwest Florida Water Management District, Brooksville, FL*