

MANAGING FLORIDA'S AQUIFERS

The American Ground Water Trust's 15th annual aquifer recharge program with a focus on Florida water management issues.

Holiday Inn Hotel, Orlando Airport, Orlando, FL, Monday Sept 21 & Tuesday Sept 22, 2015

BIOGRAPHICAL INFORMATION FOR THE CONFERENCE PRESENTERS

James Andersen, President, JLA Geosciences, Inc., Jupiter, FL

Mr. Andersen has 26 years working experience in hydrogeology, groundwater water resource investigations, water resource permitting, well field design, construction, development, well problem evaluations and well rehabilitation. He has an extensive background in the state of Florida coastal and inland aquifer systems; membrane system raw water supply development for Nanofiltration, Low Pressure RO, Seawater RO and concentrate disposal. Mr. Andersen has served as a short course instructor at the biannual environmental permitting school given by the Florida Chamber of Commerce, has been an invited speaker at a Florida Department of Environmental Protection Workshop on contamination cleanup, an AWRA conference moderator on Aquifer Storage and Recovery, and a well design, water resource permitting and well construction speaker for the Southeastern Desalting Association and American Membrane Technology Association.

Jeff Barry, Principal Hydrogeologist, GSI Water Solutions Inc., Santa Barbara, CA

Jeff Barry is a Founder and Principal Hydrogeologist for GSI. He is a recognized expert in aquifer storage and recovery technology, having investigated and developed over 20 projects over the last 25 years in the Pacific Northwest, California, and South Korea. He has worked on innovative applications for ASR including agricultural ASR, thermal energy storage, recharge of highly treated wastewater (indirect potable reuse), and augmentation of stream flows for fisheries enhancement. He is a frequent presenter to regulatory and public audiences on these topics and provides technical expertise to support permitting and litigation. He has an MS in Hydrogeology, from University of Nevada-Reno and a BS in Natural Resources Planning, from Humboldt State University. He is a Registered Geologist and a Certified Water Rights Examiner in Oregon and a Licensed Geologist and Hydrogeologist in Washington.

Marty Clasen, Vice President, ASRus, LLC, Tampa, FL

Mr. Clasen is currently a Vice President for ASRus, LLC. Mr. Clasen has over 36 years of experience in the geologic sciences including 17 years with CH2M Hill and 6 years with Atkins (PBS&J). He has successfully managed water resource projects, hydrogeologic studies, contamination and assessment projects, remedial investigations and clean-ups, and munitions and explosives of concern (MEC) projects for both governmental and private clients. He has extensive experience on a wide variety of projects including groundwater modeling, water resource assessment, deep well injection, aquifer storage and recovery (ASR), surface geophysics, borehole geophysics, water supply, application of treated effluent, landfill monitoring, geologic interpretation, risk-based data management, and base and precious metal mining.

Chuck Drake, Vice-President, TetraTech, Orlando, FL

Mr. Drake has 32 years of geologic and hydrogeologic experience including groundwater resource evaluations, design and analysis of aquifer performance tests; groundwater flow and solute transport simulations; the design of water supply wells (open hole and screened) and wellfields; and obtaining consumptive use permits for public supply wellfields, golf course irrigation and other uses. Using analytical and numerical methods, Mr. Drake has estimated travel time and direction of groundwater flow and contaminant transport. He is a licensed professional geologist in Florida (PG #37) and is an AIPG Certified Professional Geologist (# 11179) and has been qualified as an expert witness in geology, hydrogeology and water supply planning and water well construction in several administrative hearings and civil court proceedings. He was appointed by Governor Rick Scott to the Governing Board of the St. Johns River Water Management District in 2011 for a 4 year term and was recently reappointed. The SJRWMD sets water policy according to Chapter 373 Florida Statutes, for the 18 county area in the SJRWMD.

Mike Dykes, Principal Hydrogeologist, CH2M Hill, Jacksonville, FL

Mike Dykes is a licensed Florida Professional Engineer and Water Well Contractor with nearly 30 years of experience in the planning, design, permitting, and construction of large-diameter water supply wells, wellhead appurtenances, raw water conveyance systems, and ASR wells. He is an expert in wellfield investigations and wellfield development and in the rehabilitation of Floridan aquifer water production wells using innovative processes, such as a slow-rate acidization process he helped develop. Mr. Dykes also has extensive experience developing and implementing contamination assessment investigations and designing groundwater remediation systems for environmental sites, including development of an innovative patented total fluids/vapor extraction system that is effective in remediating environmental sites.

Donald Ellison, Senior Professional Geologist, Southwest Florida WMD, Brooksville, FL

Mr. Ellison has managed ASR projects and research efforts for the Southwest Florida Water Management District (District) since 1993. Acting as liaison between the District and over 14 water suppliers/utilities he helped develop and establish District funding for ASR projects that have resulted in approximately 50 ASR wells throughout the District. He manages several ASR research projects performed by the United States Geological Survey, University of Florida, Florida Geological Survey, University of South Florida, and various consultants. These projects focused on die off of microorganisms in the aquifer, mobilization of arsenic in the aquifer, bench scale arsenic mobilization studies, arsenic mobilization modeling, detailed ASR monitoring projects and pre-treatment of injection water to minimize arsenic mobilization. He has been a participant on the Florida Department of Environmental Protection's Underground Injection Control work group and attended the EPA's ASR expert meeting in May 2008 in Chicago. Prior to the District he worked in the Northeast on Superfund site assessment and remediation projects. Mr. Ellison received his B.S. in Geology from the University of Cincinnati and his M.A. in Geology from Boston University.

Thomas Farkas, Senior Hydrogeologist, Atkins Global, Tampa, FL

Tom Farkas has worked for 24 years in water resource development/management and environmental consulting. He has extensive field-level, analytical, modeling, and project management experience on a wide variety of projects. He is a senior project manager responsible with developing projects with Atkins' clients and supervising Atkins' science staff in Tampa, Florida. Mr. Farkas has managed a variety of projects, including: public groundwater supply planning, permitting, and development, reclaimed water aquifer storage and recovery well permitting, design and construction, wastewater disposal through land application and deep well injection, groundwater contamination assessment/ remediation at landfills, petroleum storage facilities, and commercial properties, and provided expert witness testimony during administrative hearings.

Joe Haberfeld, UIC Program, Florida DEP, Tallahassee, FL

Mr. Haberfeld is a Hydrogeologist and Professional Geologist, Florida Department of Environmental Protection (DEP) in Tallahassee, Florida. Program Administrator for the State of Florida's Aquifer Protection Program, which is responsible for implementation of the Underground Injection Control regulations. He has worked all aspects of utilizing deep injection wells for wastewater disposal and aquifer storage and recovery in Florida, including hydrogeologic evaluation, well construction methods, ground water monitoring, permitting, and compliance. Particular interests include the hydrostratigraphy of the Floridan aquifer and the use of geophysical logs in injection well evaluation. Prior to joining DEP, he worked for 9 years as a petroleum geologist for Gulf Oil and Chevron in the Gulf Coast and Permian Basin in the areas of development, exploration and enhanced oil recovery. He was educated at the State University of New York at Fredonia (B.S. Geology, 1975) and Southern Illinois University (M.S. Geology, 1977).

Chuck Hammock, Partner, Andrews, Hammock & Powell, Inc., Macon, GA

Chuck Hammock is a mechanical engineer with extensive US and international experience in Heating, Ventilating and Air Conditioning (HVAC) systems. His specialty is centered on innovative deployments of Geothermal Heat Pumps. He is a registered Professional Engineer in Georgia, Alabama and South Carolina; a Certified Geothermal Designer and is LEED accredited. He has been selected by the Department of Defense Energy Program as Principal Investigator to demonstrate the advanced HVAC System Architecture of coupling a building's geothermal heat pump system with Underground Seasonal Thermal Energy Storage via either Borehole or Aquifer Thermal Energy Storage.

Jennifer Hecker, Director – Natural Resources Policy, Conservancy of SW Florida, Naples, FL

Jennifer Hecker is the Director of Natural Resource Policy for the Conservancy of Southwest Florida, specializing in water resource and listed species policy, everglades restoration, environmental lands acquisition and management and natural resources legislation. Her educational background includes a Bachelors in Environmental Studies from Prescott College, a graduate degree in Tropical Biology and Conservation from University of Missouri-St. Louis, as well as studying environmental law at the North Carolina Central University School of Law. Prior to joining the Conservancy, Jennifer was a Project Ecologist for WilsonMiller and had worked for Hillsborough County, FL as an Environmental Specialist in their Environmental Lands Acquisition and Management Program. Having worked for government, for-profit, and the non-profit sectors, Jennifer embraces an approach of involving a diverse stakeholder group to improve natural resource policy and preserve our quality of life in Southwest Florida.

Eve Kuniansky, GW Specialist, United States Geological Survey, Norcross, GA

Eve L. Kuniansky currently serves as the Water Science Field Team Southeastern Region Groundwater Specialist providing technical assistance to groundwater projects throughout the southeastern USA, Puerto Rico, and the Virgin Islands. She earned a degree in physics from Franklin and Marshall College in 1978 and Bachelor of Civil Engineering 1981, with highest honor, and Master of Science in Civil Engineering (hydrology/hydraulics) 1982 from Georgia Institute of Technology. In 1983, she began a career with the U.S. Geological Survey and gained experience in surface-water modeling, project management, borehole geophysics, geologic mapping, field data collection, groundwater flow and transport simulation, Geographic Information System, karst hydrology, and aquifer hydraulics. Because of her expertise, she is frequently asked to provide training within the USGS and selected for short term international assignments by the USGS International Water Resources Branch in China, Israel, Cyprus, Ethiopia and Kenya, where she has either done groundwater training or worked on groundwater projects.

Tom Larson, Conservation Chair, Florida Sierra Club, Jacksonville Beach, FL

An active volunteer with Sierra Club, now serving as Florida Chapter conservation chair, Tom Larson is committed in a number of channels to fostering critical land, water and habitat protection. Since 2000, Tom has been active with the Sierra Club in Northeast Florida and across the state; until recently, he worked for six years with the Southern Alliance for Clean Energy on energy policy research, analysis and advocacy focused on Florida. Following a career principally in cargo transportation marketing, finance & strategy, Tom has been campaigning for smart growth, sustainable water management and climate protection in Florida. In 2007, Tom served on the Climate Change Advisory Group of the Florida Energy Commission. Presently, Tom is also a board member for the North Florida Land Trust, the North Florida Clean Fuels Coalition and for Scenic Jacksonville, and he supports several non-profits with policy research, accounting & treasury services. Tom has a bachelor degree from Miami University (Oxford, Ohio) in Public Administration and an M.B.A. from the University of Chicago

Janet Llewellyn, Policy Administrator, Florida DEP, Tallahassee, FL

Janet G. Llewellyn oversees the Florida Department of Environmental Protection's (DEP) water related regulatory and funding assistance programs, including Drinking Water, Wastewater, Environmental Resource Permitting, Beaches and Coastal Systems, and Mining and Minerals Regulation. She also oversees the Office of Water Policy, the DEP's lead office for water policy analysis and development, and coordination with the state's five water management districts. Ms. Llewellyn has worked for the DEP since 1983. She received a bachelor's degree in biology from the University of Nebraska and a master's degree in biological oceanography from Oregon State University.

Dave MacNevin, Project Engineer, Tetra Tech, Miami, FL

Dave MacNevin is an environmental engineer at Tetra Tech. He has nine years of engineering experience, with an emphasis in water quality, groundwater recharge, pilot studies, and membrane treatment. Dave was responsible for directing the operations and engineering oversight of Clearwater's yearlong groundwater recharge pilot program. He is a licensed professional engineer in the State of Florida. He holds a B.S. in civil engineering and M.S. and Ph.D. in environmental engineering from the University of Central Florida. He also serves as a Project Advisory Committee (PAC) member under the WaterReuse Foundation's California Direct Potable Reuse Initiative.

Bob Maliva, Principal Hydrogeologist, Schlumberger Water Services, Fort Myers, FL

Dr. Maliva has been a consulting hydrogeologist since 1992 and is currently a Principal Hydrogeologist with Schlumberger Water Services USA Inc. He has a Ph.D. from Harvard University and has held research positions in the Department of Earth Sciences at the University of Cambridge, England, and the Rosenstiel School of Marine and Atmospheric Science of the University of Miami, Florida. Dr. Maliva specializes in alternative water supply projects including managed aquifer recharge and desalination. He is registered Professional geologist in Florida and Texas. Dr. Maliva has managed or took the technical lead on numerous water resources and hydrologic investigations including contamination assessments, environmental site assessments, water supply investigations, wellfield designs, and aquifer storage and recovery (ASR) projects. He has designed raw water supply wellfields for brackish water desalination systems, alternative intakes for seawater desalination systems, and injection well systems for concentrate disposal. He is the senior author of two books, "*Aquifer Storage and Recovery and Managed Aquifer Recharge Using Wells: Planning, Hydrogeology, Design, and Operation*" (2010) and "*Arid Lands Water Evaluation and Management*" (2012).

John Mayhut, Senior Project Hydrogeologist, Kadrmas Lee & Jackson, Lake Worth, FL

Mr. John Mayhut has worked as a hydrogeologist with the firm for the last 12 years with an emphasis in both construction and permitting associated with water use and disposal. He is experienced in both the technical and managerial aspects of water resource development, navigating state and federal regulatory agency regulations relating to design, permitting, testing, and construction of municipal brackish and fresh water supply production wells, and Class I and Class V injection wells. John has served as project manager for the design, construction, and testing of several municipal water supply wellfield projects and other major projects involving water supply development, aquifer storage and recovery (ASR) and hydrogeologic analysis. He has also performed well design, permitting, mechanical integrity testing (MIT), and construction management of several southern Florida Class I and V injection well systems.

Mark McNeal, CEO, ASRus, LLC, Tampa, FL

Mark McNeal holds a B.S. degree in Engineering Geology from Brigham Young University. In 2006, he founded ASRus, where he has served as Chief Executive Officer for the past eight years. Before founding ASRus, he worked for CH2M HILL for 21 years and served as Groundwater Practice Leader and Reuse Practice Leader for the Southeast Region. His project experience includes project management and senior review of aquifer storage recovery (ASR), reclaimed water, water supply planning, and deep injection well projects. He has played an active role in the development of Florida's rules related to water reuse (including the ASR provisions), underground injection control, wellhead protection, and concentrate disposal. Mr. McNeal has been actively involved in numerous ASR projects, including storage of fully treated, partially treated, and untreated surface water, as well as reclaimed water. He assisted with design and permitting services for an injection well in Polk County, Florida to pilot test carbon capture and sequestration in a Class V Experimental Injection Well completed to 8,000 feet in depth, and oversaw construction of a 2,944-foot ASR well in northwest Polk County, believed to be the deepest ASR well worldwide.

Brian Meier, Associate Environmental Engineer, Burns & McDonnell, Wichita, KS

Brian Meier is a graduate from Kansas State University. For 13 years he worked for Layne Christensen and for the last 16 years has been an environmental engineer with Burns & McDonnell. A major project responsibility has been the 30MGD aquifer storage and recharge (ASR) project in Wichita, Kansas This project deploys the world's largest advanced oxidation facility to treat water from the Little Arkansas River during high-flow periods and inject it into the overdrawn Equus Beds aquifer. Burns & McDonnell teamed with Alberici Constructors and CAS Construction on a design-build project to complete the river intake, water treatment facilities, recharge wells and basins. Brian recently served as lead project manager for the Wichita ASR project, recognized as one of four finalists for global water project of the year in 2015.

Tracy Mercer, Public Utilities Director, City of Clearwater, Clearwater, FL

Tracy Mercer holds an MBA degree from Webster University. She has 30+ years of managing several or all departments and divisions within a municipality or county. Her work experience spans fire/EMS, utilities, fleet maintenance, cemetery, solid waste, streets, meter reading operations, utility billing/customer service operations, personnel, the coordination of water and wastewater operations, stormwater, budgets, and capital improvement projects. Current position involves management and administration of water supply, treatment and distribution, wastewater collection, wastewater treatment, and reclaimed water. The Public Utilities Department has an annual operating budget of \$75 million, six-year capital improvement program of \$170 million and 184 employees. In 2014, Ms. Mercer was named Top Ten Public Works Leader by the American Public Works Association.

June Mirecki, Geochemist, US Army Corps of Engineers, Jacksonville, FL

June Mirecki, Ph.D. PG is a senior hydrogeologist with the US Army Corps of Engineers-Jacksonville District. She is a registered Professional Geologist in Florida, and earned a Ph.D. in geology/geochemistry from the University of Delaware. She serves as the USACE technical lead for the ASR pilot projects and the ASR Regional Study, two Comprehensive Everglades Restoration projects to increase water storage in south Florida. She is an associate editor for two international scientific journals, and works on geochemical modeling and groundwater quality projects as a consultant (Mirecki Geoscience, LLC).

Thomas Missimer, College of Engineering, Florida Gulf Coast University, Fort Myers, FL

Thomas M. Missimer, P.G., PhD is a hydrogeologist with 42 years of experience in Florida, other US states and 20 foreign countries. He has managed more than 250 groundwater and water management consulting projects. He has focused on a large variety of groundwater and water-resources projects at the local, regional, and country-wide scale. He has experience in the design of potable water supply wellfields, saline-water wellfields used to feed brackish-water reverse osmosis facilities, intakes for seawater reverse osmosis facilities, in the development of regional and local water supply plans, analysis of impacts of groundwater withdrawals on seawater intrusion and wetlands impacts, development of water policy plans, and aquifer storage and recovery projects. He is an expert in groundwater hydraulics and has taught classes in undergraduate and graduate groundwater hydrology. He is the author of nine books and 400 technical publications with 90 being published in peer-reviewed journals.

Greg Munson, Shareholder, Gunster Law Firm, Tallahassee, FL

Gregory Munson, attorney, obtained his JD degree from Vanderbilt University School of Law. He is a shareholder who joined Gunster in 2013. He has twice held senior positions at the Florida Department of Environmental Protection (FDEP). He served as general counsel from 2004 to 2006, and most recently as the deputy secretary for water policy and ecosystem restoration. In his capacity as deputy secretary, Gregory supervised the Department's activities related to Everglades restoration, the state's water management districts, and the state's coastal and aquatic areas. In between his work at FDEP, he worked as general counsel for WRScompass, a company providing environmental remediation, civil construction and consulting services to commercial, federal and state clients. Gregory now provides strategic advice and counsel on issues related to water policy, water rights and the Everglades.

Eric Olsen, Attorney, Hopping Green & Sams, Tallahassee, FL

Eric Olsen obtained a JD degree from University of Florida School of Law in 1989. He was the former Senior Assistant General Counsel, St. Johns River Water Management District 1990-1999. As a water law attorney he assists clients across the State of Florida on issues related to environmental regulation. He primarily focuses on wetland regulation, mitigation banking, stormwater regulation, consumptive use or water use permitting, water supply, and underground injection control. He has represented clients before the U.S. Army Corps of Engineers, United States Environmental Protection Agency, and U.S. Fish and Wildlife Service to obtain permits and solve enforcement issues under section 404 of the Clean Water Act. Eric Regularly lectures on the topics of consumptive use permitting and water supply at Florida Chamber of Commerce environmental permitting courses, CLE International courses, and Public Utility Research Center and the Askew Institute, University of Florida, conferences.

Paul Petrey, Operations Manager, Applied Drilling Engineering Inc. Tampa, FL

Paul Petrey studied Petroleum Engineering at University of Louisiana Lafayette. As Operations Manager at Applied Drilling Engineering for the last ten years he has applied his extensive oil and gas drilling experience to water well construction and performance challenges. (Florida water well contractor license # 9340). His experience includes public supply, Class I Injection, Class V ASR, RO supply, irrigation, exploration, monitoring and well rehabilitation wells. In addition to well construction, he oversees well data collection technology such as coring, lithologic sampling, packer testing, aquifer testing, geophysical logging and downhole video interpretation. Paul was project manager for over fifteen different ASR drilling programs in Florida over the past nine years, which included all the ASR work associated with the Comprehensive Everglades Restoration Project for South Florida Water Management District.

David Pyne, President, ASR Systems, LLC, Gainesville, FL

David Pyne is a professional engineer who has pioneered development of the ASR technology for storage of water through wells in fresh, brackish, or seawater aquifers to meet seasonal, long-term, or emergency demands and to achieve sustainable water supplies through underground storage in confined and unconfined aquifers. He has directed or provided technical consultant assistance during development of about half of the 100 operating ASR wellfields in the United States. He is a civil engineer with extensive national and international experience, and is the author of the first book published on ASR.

Andrew Stone, Executive Director, AGWT, Concord, NH

Andrew Stone is a MS hydrogeology graduate from University College, London. He has over thirty five years of ground water experience in Africa and the U.S. as a university professor, ground water consultant and ground water advocate & educator. From 1990 to 2003 he taught an annual course on Groundwater Protection Policy at Antioch New England University. In recognition of his work in promoting ground water resource education in the US, he received the 1998 National Ground Water Association "Oliver Award" for outstanding contributions to the groundwater industry.

Robert Verrastro, Hydrologist, South Florida WMD, West Palm Beach, FL

Mr. Verrastro (Florida P.G. #1120) has been a professional geologist for 33 years. He holds an undergraduate degree in Geology from Rider University (Lawrenceville, New Jersey) and an M.S. from the University of Louisiana at Lafayette ("Raging Cajuns"). Mr. Verrastro initiated the first seven years of his career in Houston, Texas as an Explorationist with Conoco, Inc., in the search for deep Jurassic oil fields in Alabama, Mississippi and Florida. He subsequently "got his mind right" and switched to the environmental field and moved to Palm Beach County, Florida. Prior to joining the South Florida Water Management District (SFWMD) in 2000, he worked for eleven years as a groundwater consultant at Arcadis (Geraghty & Miller) and MWH (Montgomery Watson). While at the SFWMD, he has managed and been the principal investigator on numerous projects associated with the Comprehensive Everglades Restoration Program and other State-led initiatives associated with Aquifer Storage and Recovery.

Mike Waldron, Senior Hydrogeologist, Water Resources Management, Kadmas Lee & Jackson, Lake Worth, FL

Mike Waldron PG, is a graduate from State University of New York College at Oswego. He provides lead hydrogeologic support and project management for KLJ's Florida groundwater group centered in the West Palm Beach office. Previously he worked for 8 years with Cardno ENTRIX as a hydrogeologist. He has more than 25 years experience in water well design, construction management and permitting; experience designing and implementing well rehabilitation programs; experienced in the detailed design and construction management of Class I injection wells. He has permitted and managed construction of Class V aquifer recharge and aquifer storage and recovery wells and well system components. He was project manager for the first ASR recharge-water pre-treatment system using sodium hydrosulfide for chemical deoxygenation.

