

MANAGING FLORIDA'S AQUIFERS

ASR - Aquifer Storage Recovery and MFL - Minimum Flows and Levels

Holiday Inn Hotel, Orlando Airport, Orlando, FL, Monday Sept 9 & Tuesday Sept 10, 2013

↓ Scroll down for program details, registration information and speaker bios ↓



This is the American Ground Water Trust's 13th annual aquifer recharge program with a focus on Florida water management issues. For 2013 we have added sessions on the important issue of managing groundwater to ensure lakes and rivers maintain minimum flows and levels (MFL). Groundwater pumping from water storage in aquifers is a key element of MFL strategy. However, prioritizing groundwater use for maintaining MFL can restrict availability for economic water supply use. ASR technology provides a flexible water management tool that can play a key role in achieving the twin objectives of maintaining water utility, industrial and irrigation needs and MFL objectives. With rivers and lakes occurring in shared jurisdictions, there is a challenge for Districts and end-users to achieve management cooperation and a "level playing field" of mutually agreed MFL and water use thresholds.



The economy is beginning to rebound. There have been some recent "breakthroughs" in ASR permitting. This conference will present the "state of the art" for MFL and ASR in Florida and will provide information exchange opportunities among watershed associations, environmentalists, regulators and water supply providers about the potential and the limitations for water management using ASR to help achieve MFL requirements.

WHO SHOULD ATTEND?

Planners, water managers, engineers, geologists, hydrogeologists, utility operators, water re-use and aquifer recharge consultants, water treatment specialists, water well contractors, city & county government, regulatory authorities, environmental NGOs, water attorneys and interested citizens.



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CONTINUING EDUCATION



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Holiday Inn Hotel, 5750, TG Lee Blvd., Orlando, FL 32822

- Free shuttle service available from the airport. (Hotel is 2.0 miles from Orlando Airport Passenger Terminal)
- A block of rooms has been reserved at the *Ground Water Conference* rate of \$99 per night.
- Reservations received after Aug 19th subject to availability and prevailing room rates

↓ Scroll down for program details, registration information and speaker bios ↓

Program - Monday, September 9th

7:30 – 8:45 REGISTRATION

Session One 8:45 – 10:00

8:45 – 9:15 Chuck Drake, Member of the Governing Board of the SJRWMD, Orlando, FL
Aquifer recharge and MFL prevention and recovery strategies: A SJRWMD perspective

9:15 – 9:45 Cathleen McCarty, UIC Program, Florida DEP, Tallahassee, FL
Regulatory Update on ASR in Florida

9:45 - 10:15 David Pyne, President, ASR Systems, LLC, Gainesville, FL
A Comparison of Florida’s ASR Programs to other State’s Programs – What’s working and What’s not

10:15 – 10:35 BREAK

10:35 -11:05



Keynote presenter:

Mark Thomasson, P.E.
Director, Division of Water Resources, Florida DEP, Tallahassee, FL

The Future of ASR in Florida

Session Two 11:05 – 12:20

11:05 - 11:35 Mike Coates, Director, Peace River Manasota Regional Water Supply Authority, Bradenton, FL
Use of the Water Quality Criteria Exemption to Obtain an Operation Permit at the Peace River ASR System

11:35 - 12:05 Eric Olsen, Attorney, Hopping Green & Sams, Tallahassee, FL
A Legal Look at Institutional Controls for Florida’s ASR Systems

12:05 – 12:35 Neil A. Johnson, Principal Hydrogeologist, MWH, West Palm Beach, FL
The City of Cocoa Beach Reclaimed Water ASR and TMDL Compliance Program

12:35 – 1:30 LUNCH

Session Three 1:35 – 2:05

1:35 - 2:05 Mark Hammond, Resource Management Director, SWFWMD, Brooksville, FL
Cooperation among Florida's Water Districts to find common ground regarding MFL implementation

2:05 – 2:35 Tom Bartol, Bureau Chief - Bureau of Water Supply, SJRWMD, Palatka, FL
MFLs and water supply planning in Saint John’s River Water Management District

2:35 – 3:05 Mike Weatherby, Principal Hydrogeologist, MWH, Tampa, FL
Hillsborough County’s SHARP Program – Using Aquifer Recharge for MFL Support in the SWUCA MIA

3:05 – 3:20 BREAK

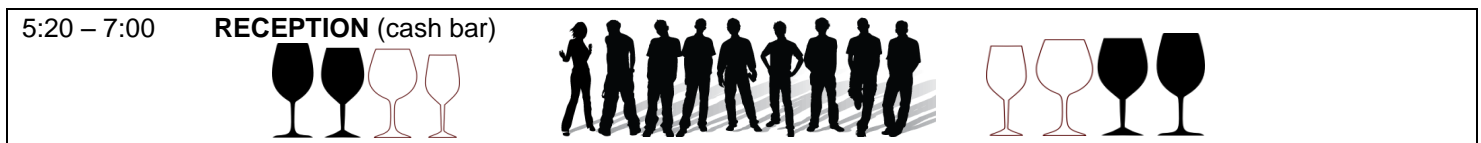
Session Four 3:00 – 5:00

3:20 – 3:50 Cameron Walker, Chairman, Walker Marine, Boca Raton, FL
ASR site characterization using high resolution geophysical imaging

3:50 – 4:20 June Mirecki, Geochemist, US Army Corps of Engineers, Jacksonville, FL and Isabel Johnson, Operations Manager, Golder Associates, Gainesville, FL
Ecotoxicology and Ecological Risk Assessment of ASR Recovered Water

4:20 – 4:50 Mark McNeal, CEO, ASRus, LLC, Tampa, FL
Dropping Acid can be Safe and Effective – An Alternative Well Rehabilitation Approach for ASR wells

4:50 – 5:20 David MacIntyre, Vice-President, Parsons-Brinkerhoff, Orlando, FL
Use of the new regional East Central Florida Transient (ECFT) groundwater model in assessing compliance of proposed future groundwater withdrawals with MFLs and other environmental constraints



Program - Tuesday September 10th

Session Five 8:30 – 10:30

8:30 – 9:00 Jeff Goodwin, Laboratory Manager, Manatee County Utilities, Bradenton, FL
The Future Role of Aquifer Recharge in North Manatee County

9:00 – 9:30 Pete Larkin, Project Manager, CH2M HILL, Tampa, FL
Hey Dad, are we there yet? An update on the Tampa ASR Program

9:30 – 10:00 Kirk Martin, Vice-President, CDM Smith, Fort Myers, FL
Digging a Little Deeper: Collier County's Irrigation Quality ASR Program Goes Below the Underground Source of Drinking Water

10:00 – 10:30 Thomas Farkas, , Senior Hydrogeologist, Water Systems Engineering, Atkins Global, Tampa, FL
Reclaimed Water ASR Projects - Up and Running in Sarasota County and City of Palmetto

10:30 – 11:00 BREAK

Guest Speakers:

11:00 – 11:30 Fred McManus, Chief, Groundwater and UIC Section & Becky Allenbach Chief, Safe Drinking Water Branch, USEPA Region 4, Atlanta GA

US Environmental Protection Agency Region 4 Perspective on ASR in Florida

Session Six 11:30 – 12:30

11:30 – 12:00 Marty Clasen, Vice President, ASRus, LLC, Tampa, FL
Aquifer Recharge in Northwest Hillsborough County – Never say Never

12:00 – 12:30 Brett, Goodman, Department Manager: Water Resources, Jones Edmunds & Associates, Gainesville, FL
Clay-Putnam MFLs and the potential recharge options to help mitigate the impacts to the lakes

12:30 – 1:30 LUNCH

1:30 – 2:00 Al Aikens, Hydrogeologist, CH2M Hill, Orlando, FL
Central Florida Utility Council MFL and ASR: Consultant's perspective

2:00 – 2:30 Donald Ellison, Senior Professional Geologist, Southwest Florida WMD, Brooksville, FL
ASR's Role in Meeting MFL's in Southwest Florida Water Management District

2:30 – 3:00 David Wiley, VP, and Jeffrey M. Trommer, Sr. Associate, Leggette Brashears & Graham Inc., Tampa, FL
City of Clearwater's Groundwater Replenishment Program of Direct Recharge to the Aquifer Using Purified Reclaimed Water

3:00 – 3:30 Sam Heady, Assistant Utility Director, City of West Palm Beach and
Jim Andersen, Principal Hydrogeologist, JLA Geosciences, Jupiter, FL
A Decade Later, Restarting the City of West Palm Beach ASR Project and a City's Perspective

3:30 – 4:00 Andrew Stone, Executive Director, American Ground Water Trust, Concord, NH
Thirteen years of Florida Conferences, ASR 2001 to ASR 2013: How the topics have changed

4:00 – 4:05 Wrap-up

↓ Scroll down for registration information and speaker bios ↓

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Registration includes: access to exhibits, reception, handouts, breaks and lunch(s)

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- CD - (Presentation information from speakers mailed post-event)
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Background & Experience of Conference Presenters

Al Aikens, P.G. , Hydrogeologist, CH2M Hill, Orlando, FL

Mr. Aikens is a hydrogeologist and senior project manager with CH2M HILL for 27 years. He specializes in hydrogeology, water resource development, site characterization and remediation, computer modeling, contaminant transport, and aquifer mechanics. Most recently he has been a member of three technical teams of the Central Florida Water Initiative, one of which is the MFL and Reservations Team to assess MFLs to establish the amount of traditional groundwater available for all use types in the CFWI area. He has extensive experience in developing and permitting water resources projects; water, wastewater, and reclaimed water infrastructure master planning; artificial recharge including ASR and rapid infiltration basins; groundwater tracer testing; groundwater flow and solute transport analytical and numerical modeling; developing, executing, and managing assessment of impacted environmental media for public and private sector clients in Central Florida. He earned a B.A. in Geology from Thiel College, Greenville, Pennsylvania in 1980 and a M.S. in Hydrology and Water Resources from the University of Arizona, Tucson, Arizona in 1986.

Becky Allanbach, Chief, Safe Drinking Water Branch, USEPA Region 4, Atlanta, GA

Becky graduated from Jacksonville University with a BS in Medical Technology and Minor in Chemistry. She began her environmental career in Jacksonville, at a local pulp and paper mill, before joining the Environmental Protection Agency's Atlanta Regional Office in 1990. Since then, she has held various progressive leadership positions at the Agency. She currently serves as Chief of the Safe Drinking Water Branch in the Region 4 office in Atlanta. Region 4 is comprised of the eight Southeastern states, includes a vast majority of the industry, sensitive ecosystems and environmental justice areas of the Nation. Becky ensures implementation of the Region's Safe Drinking Water Act (SDWA) Programs, including the Public Water System Supervision (PWSS) Program, the Underground Injection Control (UIC) Program and the Ground Water and Source Water Protection Programs. Simply put, she ensures that Americans in the Southeast receive safe drinking water and that the sources of their drinking water are protected. Becky also serves as a Policy Board Member for the Sarasota Bay National Estuary Program.

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

Mr. Andersen has 24 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.

Tom Bartol, Bureau Chief - Bureau of Water Supply, SJRWMD, Palatka, FL

Tom Bartol is Chief of the Bureau of Water Supply at the St. Johns River Water Management District. His degrees include a Bachelor of Science in civil engineering from the U.S. Air Force Academy and a Master of Science from Purdue University. Bartol is a registered professional engineer in Florida and he has over thirty years experience in civil and environmental engineering in both the public and private sectors. At the water management district, he is responsible for water supply and the minimum flows and levels (MFL) programs. For the Central Florida Water Initiative, Bartol is leading the team that is preparing the three-District water supply plan.

Marty Clasen, P.G., ASR-US, LLC, Tampa, FL

Mr. Clasen is currently a Vice President for ASRus, LLC. Mr. Clasen has over 34 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.

Mike Coates, Deputy Director, Peace River Manasota Regional Water Supply Authority, Lakewood Ranch, FL.

Mike is the Deputy Director of the Peace River Manasota Regional Water Supply Authority in Lakewood Ranch Florida. He's responsible for directing planning, engineering, construction and compliance operations at Peace River's water supply facilities in southwest Florida, which includes the largest ASR system in the state. Mike has a degree in Geology from Central Michigan University and is a professional geologist in Florida with over 33 years of experience focused on utility management, water supply planning and development and water resources management.

Charles W. Drake, CPG, PG, SJRWMD Governing Board Member, Orlando, FL

Mr. Drake's is a hydrogeologist whose experience includes groundwater resource evaluations for water supply, water supply master plans, the design, permitting and coordination of mechanical integrity tests; design and analysis of aquifer performance tests; groundwater flow and solute transport simulations; the design of wells and wellfields; and obtaining consumptive use permits. He was appointed to the governing board of the St. Johns River Water Management District in 2011 by Governor Rick Scott. The governing board sets water policy for the agency and establishes goals and priorities to meet the core missions of the district as set forth in Chapter 373, the Florida Water Resources Act. He is Past-President of the Florida Association of Professional Geologists and executive committee member of the AIPG.

Donald Ellison, Southwest Florida Water Management District, 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, PG, Senior Hydrogeologist, Water Systems Engineering, 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 (ASR) 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.

Brett Goodman, Sr. Project Engineer. Jones Edmunds & Associates, Inc.

Mr. Goodman has 18 years of experience in integrated water resources and the multiple regulatory programs that impact water supply projects including consumptive use permitting, environmental resource permitting, National Pollutant Discharge Elimination System, Total Maximum Daily Loads (TMDLs), and safe drinking water. More recently, his work has focused on innovative technologies for controlling the formation of disinfection byproducts in reclaimed water and integrated water resources management to comply with TMDLs and Minimum Flows and Levels (MFLs). Mr. Goodman represents the North Florida Utility Coordination Group (NFUCG) on technical matters related to MFLs and the ongoing Recovery and Prevention Process for the Clay-Putnam County area lakes. He earned his BS in Civil Engineering from the Missouri University of Science and Technology and an MS in Water Resources Engineering from the University of Iowa.

Jeff Goodwin, Wastewater Division Manager, Manatee County Utilities, Bradenton, FL

Jeff Goodwin has been with Manatee County's Wastewater Division for over fifteen years including several years as manager of the County's analytical testing laboratory and industrial pretreatment program. In his current position as Division Manager, Mr. Goodwin is responsible for an extensive wastewater collection system that includes over 580 lift stations, three water reclamation facilities with a combined capacity of 34 MGD, a county-wide reclaim distribution system that integrates all three treatment plants, and a biosolids dryer that treats wastewater residuals to Class AA standard. Additionally, he provides oversight for the operation of a Class I municipal injection well system, is working to permit a reclaim ASR system. and leads a project team developing a deep injection well system that includes two Class V recharge wells and a Class I industrial injection well.

Mark A. Hammond, Resource Management Division Director, SWFWMD, Brooksville, FL

As director of the Resource Management Division, Mark Hammond is responsible for overseeing the bureaus that plan, develop and implement District water resource management initiatives concerning water supply, flood protection, natural systems and water quality. The initiatives include water supply planning and development of alternative water supplies, such as conservation, reuse, and aquifer storage and recovery, as well as the implementation of the District's springs and Ridge lakes restoration initiatives and the watershed management, minimum flows and levels, Facilitating Agricultural Resource Management Systems (FARMS) and Surface Water Improvement and Management (SWIM) programs.

Hammond began his career at the District in 1987 and is a licensed professional engineer in Florida. He holds a bachelor's degree in chemical engineering, a master's degree in engineering and a master's degree in business administration from the University of South Florida.

Isabel Johnson, Environmental Toxicology Practice Leader, Golder Associates, Gainesville, FL

Isabel Johnson has 35 years of experience in the environmental field and is the Environmental Toxicology Practice Leader for Golder Associates, Inc. Ms. Johnson previously served on the Board of Directors for Golder Associates Inc. She holds a Courtesy Scientist position at the University of Florida's Center for Environmental and Human Toxicology, and is a guest lecturer on aquatic toxicology and ecological risk assessment. Ms. Johnson holds a Bachelor of Science degree in Zoology from the University of Florida and a Master of Science degree specializing in Marine Biology from the University of West Florida. She is responsible for management of multidisciplinary projects for the power, mining, and manufacturing industry, marine and freshwater aquatic baseline and environmental impact studies, and ecological risk assessments. Her efforts in these studies include implementation of aquatic biological programs, development of environmental impact assessments, permitting of facilities, and regulatory compliance..

Pete Larkin, P.G., Hydrogeologist, CH2M Hill, Tampa, FL

Mr. Larkin is a project manager and hydrogeologist at CH2M HILL with 14 years of experience in aquifer storage and recovery (ASR), Class I injection wells, and groundwater supply wells. Mr. Larkin has experience in FDEP UIC permitting, well design, planning and implementation of well construction and testing, aquifer performance testing, well rehabilitation, and well mechanical integrity testing. He is actively working on several aquifer recharge projects including Manatee County Conceptual Recharge Well project, City of Tampa ASR, Peace River Facility ASR, and the City of St Petersburg Injection Well and Reclaimed Water ASR system.

David MacIntyre, Vice-President, Parsons-Brinckerhoff, Orlando, FL

David F. MacIntyre, PE, D.WRE, has 28 years of experience in water supply management. For the past 13 years he has served as vice president and director of the Water Technical Excellence Center, which is part of Parsons Brinckerhoff. The firm provides consulting solutions for infrastructure projects. With expertise in water reuse and natural systems analysis, he is responsible for overseeing water resources and supply. Mr. MacIntyre works with clients in federal, state and local governments, and public and private sectors. Mr. MacIntyre received a master's degree in environmental engineering in 1986 from the University of Florida. In 1979, he earned a Bachelor of Arts in civil engineering in Cambridge, England. He is a registered professional engineer. Mr. MacIntyre holds certification in water resources engineering from the American Academy of Water Resources Engineers.

Fred McManus, Chief, Groundwater and UIC Section, USEPA Region 4, Atlanta GA

Fred received a B.S. in Geology from the University of Alabama in 1975. Since that time, he has served in various positions with the U.S. Geological Survey, private oil and gas exploration companies and the U.S. Environmental Protection Agency. From January 2009 to the present, he has served as Chief of the Ground Water and Underground Injection Control (UIC) Section in the Safe Drinking Water Branch, Water Protection Division, EPA, Region 4. He has primary responsibility for directly implementing the UIC Program in Kentucky and Tennessee for all classes of injection wells and Class II wells in Florida and has oversight responsibility for the UIC Program in Alabama, Florida (except Class II), Georgia, Mississippi, North Carolina and South Carolina. His Section also has state program oversight responsibility for the Region's Ground Water Protection Program, which includes source water protection and protection of sole source aquifers in Florida and Mississippi.

Kirk Martin, Vice-President, CDM Smith, Fort Myers, FL

Kirk Martin has over 30 years experience as a practicing hydrogeologist specializing in water supply planning and development, water resource characterization, and the application of a wide range of analytical methods in developing innovative solutions to complex water resource challenges. Mr. Martin's experience includes development of large capacity water supply and aquifer recharge projects for state and municipal governments, agricultural enterprises, and industrial applications. He commonly serves in a technical advisory capacity to state, regional, and local governing councils and legislative bodies on water resource issues. Mr. Martin is a Vice President with CDM Smith where he currently serves as a water resource lead practitioner and groundwater modeling technical director.

Cathleen McCarty, P.G., UIC Program, Florida DEP, Tallahassee FL

Cathleen McCarty has over 25 years of experience in the Florida Underground Injection Program. She is responsible for geologic and hydrogeologic reviews and data management. Cathleen also has geology, ground water, and environmental experience from working at the Ohio EPA and Wyoming DEP. She represents Florida for the UIC National Data Management Steering Committee. Ms. McCarty received her Bachelor in Science degree in geology from Wright State University in Dayton, Ohio.

Mark McNeal, ASR-US, LLC, Tampa, FL

Mark McNeal is the CEO, ASRus, LLC. Prior to founding ASRus, Mr. McNeal was with CH2M Hill in their Tampa, FL, office for 21 years. While with CH2M Hill, Mr. McNeal served as Reuse Practice Leader and Groundwater Practice Leader for their Southeast Region. He has been Project manager for numerous ASR, injection well, water supply wells, and reuse systems throughout Florida. Mr. McNeal is actively involved with several potable water ASR programs, including the City of Tampa and the Peace River Facility. Mr. McNeal has had significant involvement with the all four reclaimed water ASR systems that have undergone operational testing in Florida, including assisting the Englewood Water District with obtaining the first operating permit for a reclaimed water system in Florida. Mr. McNeal's firm is also part of the team tasked with implementation of a 50 mgd ASR system near Lake Okeechobee as part of the Lake Okeechobee & Estuary Recovery (LOER) program.

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

June Mirecki is the Senior Hydrogeologist with the Jacksonville District of the US Army Corps of Engineers. She currently serves as Technical Lead for the ASR projects in the Comprehensive Everglades Restoration Plan. She is also a contributing hydrologist/geochemist on other projects that study flow and quality of the Biscayne Aquifer. She currently serves as an Associate Editor for the peer-reviewed journals *Engineering and Environmental Geosciences* and *Applied Geochemistry*. Dr. Mirecki earned a Ph.D. in Geology (Geochemistry) from the University of Delaware and is a professional geologist registered in Florida.

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

Eric Olsen helps solve environmental regulatory issues for clients across Florida. He focuses on helping clients achieve timely and cost effective approvals in regulatory programs involving underground injection control, consumptive use or water use permitting, water supply, and wetland and stormwater regulation. He routinely represents clients before the Florida Department of Environmental Protection to resolve Underground Injection Control (UIC) issues. He has successfully defended UIC permits against third party opposition by working with experts to demonstrate permitting criteria satisfaction such as adequate confinement, adequate injection and monitoring well construction, injection zone capabilities, and proper testing and monitoring protocol. Mr. Olsen has obtained water use permits and helped solved water supply regulatory issues for water and wastewater utilities, electrical power plants, rock and sand mines, recreational facilities, and agricultural operations. He works on legislation, rule and policy development in these areas. He was a senior attorney with the St. Johns River Water Management District from 1990-1999.

David Pyne, ASR Systems LLC, Gainesville, FL

David Pyne is the President of ASR Systems LLC, Gainesville, Florida. He has pioneered development of ASR technology during the past 35 years and 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, the second edition of which was released in 2006.

Andrew Stone, Executive Director, American Ground Water Trust, Concord, NH

Andrew Stone is a hydrogeology graduate from University College, London, with additional academic qualifications in geology, geography and education. 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. He has convened and coordinated over one hundred and fifty conference programs related to geothermal technology, well design, ground water management, aquifer storage recovery, conjunctive use, water banking, and asset management. 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 ground water industry.

Mark P. Thomasson, P.E., Director, Division of Water Resource Management, Florida DEP, Tallahassee, FL

Mr. Thomasson has oversight responsibility for the drinking water, wastewater, NPDES, UIC, Environmental Resource Permitting, Beaches and Coastal Systems, and Mines and Minerals regulatory programs. Prior to joining FDEP, he spent 20 years as a consultant in Florida working on utilities and infrastructure projects. He has Bachelor and

Master of Science Degrees in Civil Engineering from Louisiana State University and is a Registered Professional Engineer with 21+ years experience with Florida's environment.

Jeffrey M. Trommer, P.G., Sr. Associate, Leggette, Brashears and Graham, Inc., Tampa, FL.

Mr. Trommer has 27 years of experience in hydrogeological investigations, specializing in water supply development, water use permitting, injection well permitting, construction, and testing, effluent disposal and reuse, groundwater modeling, and regional groundwater resource evaluations. Jeff has been with LBG since 1997 starting as a Sr. Hydrogeologist. He has worked on many water resource projects throughout the southeast US and Puerto Rico. His primary expertise includes groundwater flow modeling, well field design, aquifer testing and UIC projects for concentrate disposal and ASR. He has also performed contamination assessment projects at industrial facilities, underground storage tank sites, and landfills. Jeff has a Bachelor's Degree in Geology from the University of Wisconsin and a Master's Degree from the University of South Florida.

Mike Weatherby, P.G., MWH Americas, Tampa, FL

Mr. Weatherby is a Principal Hydrogeologist and Project Manager involved in many applications of hydrology, geology, and engineering. His 22 years of experience is in environmental contamination assessments, groundwater supply, water resource evaluations, wellfield expansion, injection well design and testing, aquifer storage recovery (ASR) technology, aquifer recharge, and various types of permitting and funding activities. Mr. Weatherby is the MWH Southeast Project Technical Leader for MWH and currently involved in several unique projects in FL. Mr. Weatherby is the Project Manager for the deepest injection wells in the state of Florida at 8,000 feet bls and the first reclaimed water coastal direct aquifer recharge pilot system in Florida. Mr. Weatherby has been involved in numerous international projects in areas such as Puerto Rico, Panama, Dominican Republic, Bolivia, and the West Bank.

David A Wiley, P.G., Senior VP, Leggette, Brashears and Graham, Inc., Tampa, FL

David Wiley has 33 years of experience in providing Hydrogeological services to government agencies and private industry. His first 5 years were with the SWFWMD. Since that time he has been with Leggette, Brashears and Graham, Inc. (LBG) and is currently a member of the firm's Board of Directors. LBG is a Hydrogeological Consulting firm with offices in Tampa and Orlando, as well as other areas around the country. David is responsible for LBG projects in the southeast U.S. from North Carolina to Florida to Puerto Rico. Services in these areas have included permitting, development and management of groundwater supplies, wastewater disposal and reuse, UIC permitting and aquifer recharge, assistance with mining operations, contamination assessment and remediation and groundwater modeling. He has also provided expert testimony. David has a Bachelor's Degree in Geology from the University of South Florida.

