

2016 FLORIDA AQUIFER CONFERENCE

PROGRAM SCHEDULE AND PRESENTER INFORMATION

“ASR 16” - Sixteenth year of this annual water management issues conference

Florida Hotel & Conference Center – 1500 Sand Lake Road, Orlando, Florida 32809

The “must attend” program for Florida water professionals



September 21-22, 2016, Orlando, FL
Convened by: American Ground Water Trust

The 2016 program will bring together engineers, scientists, planners, water-resource managers, agency professionals and attorneys to share up-to-date information regarding the challenges, feasibility, regulatory concerns and the economic & environmental benefits of water management strategies for Florida. Presenters will provide first hand scientific, engineering, management, legal and regulatory perspectives on solutions to water shortages, water quality concerns and solutions for management of aquifers for long term sustainability.



Conference is endorsed by the International Association of Hydrogeologists
IAH Commission: Groundwater for Decision-makers



CONTINUING EDUCATION

The AGWT will issue certificates of attendance

Approved - Water Well Contractors – 5 S/B and 7/RR, Course ID: 124-092116-101

(Day 1: 3 S/B, 3 R/R – Day 2: 2 S/B, 4 R/R)

Approved - FL Prof Engineers Provider #306 – 12.75 PDH (Day 1 – 6.50 - #0010195/ Day 2 - 6.25 PDH ~ #0009941)

Approved - Water/Wastewater Operators - 6 hours (6 PDHs, 0.6 CEUs) for each day



EVENT SPONSORS



7:45 REGISTRATION

Wednesday September 21

SESSION 1: 8:45AM – 10:30AM

8:30 – 8:45 ~Andrew Stone, Executive Director, American Ground Water Trust, Concord, NH
INTRODUCTION – PRINCIPAL THEMES OF THE CONFERENCE

8:45 – 9:15 ~ Bob Verrastro, Lead Hydrogeologist, SFWMD, West Palm Beach, FL
THE FUTURE FOR ASR IN EVERGLADES RESTORATION

9:15 – 9:45 ~ Dr. Virginia Walsh, Chief of Hydrogeology, Miami-Dade Water & Sewer Dept., Miami, FL
FUTURE WATER SUPPLY CHALLENGES IN SOUTHEAST FLORIDA

9:45 – 10:15 Keynote Presentation



**Brian Armstrong, Executive Director
Southwest Florida Water Management District, Tampa, FL**

“WATER MANAGEMENT CHALLENGES WITHIN THE SWFWMD”

10:15 – 10:30 BREAK

SESSION 2: 10:50AM – 12:30PM

10:30 – 11:00 ~ Joe Haberfeld, UIC Program, Florida DEP, Tallahassee, FL
UPDATE ON REGULATORY ISSUES RELATED TO AQUIFER RECHARGE AND ASR

11:00 – 11:30 ~ June Mirecki, Senior Hydrogeologist, US Army Corps of Engineers, Jacksonville, FL
OPERATION, PERFORMANCE, AND WATER QUALITY CHANGES IN RECLAIMED ASR SYSTEMS BELOW USDW AQUIFERS

11:30 – 12:00 ~ Dr. Robert G. Maliva, Principal Hydrogeologist, Dr. Weixing Guo, and Dr. Scott Manahan, WSP Parsons Brinckerhoff, Fort Myers, FL
ASR USING NON-USDW AQUIFERS (Underground Source of Drinking Water): MODELING RESULTS AND HISTORICAL EXPERIENCES

12:00 – 12:30 Albert Muniz, Vice-President, Hazen and Sawyer, Boca Raton, FL
INVENTORY OF FLORIDA ASR WELLS – THE TRUTH BEHIND THE MYTH

12:30 – 1:30 LUNCH (provided)

SESSION 3: 1:30PM – 3:00PM

1:30 – 2:00 ~ Dan Ringdahl, President, Florida Design Drilling, West Palm Beach, FL
MAXIMIZING EFFICIENCY AND MINIMIZING ANGST AT THE DRILL SITE: THE IMPORTANCE OF CONTRACTOR, CONSULTANT AND CLIENT COOPERATION IN GROUNDWATER PROJECTS

2:00 – 2:30 ~ Eric Olsen, Shareholder, Hopping Green & Sams, Tallahassee, FL
LEGAL CONSEQUENCES OF MFL ESTABLISHMENT AND THE EFFECT OF STRATEGIES ADOPTED BY DISTRICTS TO RESTORE A WATERBODY TO ITS MFL

2:30 – 3:00 ~ David MacIntyre, President, AquaSciTech Consulting, PLLC, Ocoee, FL
THE ROLE OF AQUIFER RECHARGE IN THE CENTRAL FLORIDA WATER INITIATIVE (CFWI)

3:00 – 3:15 BREAK



SESSION 4: 3:15PM – 5:15PM

3:15 – 3:45 ~ Clint Kromhout, FDEP - Florida Geological Survey, Tallahassee, FL
FLORIDAN AQUIFERS: - THE HYDROSTRATIGRAPHIC NOMENCLATURE CHALLENGE

3:45 – 4:15 ~ Aaron Collier, Hydrogeologist, Collier Consulting, Stephenville, TX and Finn Michelsen, Geophysicist, GeoSurvey Systems, Houston, TX
CHARACTERIZATION OF THE FLORIDAN AQUIFER UTILIZING HIGH RESOLUTION LAND AND MARINE SEISMIC METHODS

4:15 – 4:45 ~ Mark McNeal, CEO, ASRus, LLC, Tampa, FL
RE-PERMITTING OF A CLASS V ASR WELL TO A CLASS V INJECTION WELL FOLLOWING CONSTRUCTION AND TESTING ACTIVITIES

4:45 – 5:15 Keynote Presentation



**Dr. Ann Shortelle, Executive Director
St. Johns River Water Management District**

**WATER SUPPLY SUSTAINABILITY IN SJRWMD:
SILVER BULLETS AND WOODEN STAKES**

5:15 RECEPTION (cash bar)



7:30 REGISTRATION

Thursday September 22nd

SESSION 5: 8:15AM – 10:30AM

8:15 – 8:30 ~ Donald Ellison, Senior Professional Geologist, SWFWMD, Brooksville, FL
THE CURRENT STATE OF ASR AND AQUIFER RECHARGE: A CHRONOLOGY OF ASR INNOVATION, DISCOVERIES, AND SCIENTIFIC ACHIEVEMENTS

8:30 – 9:00 ~ Lisann Morris, Senior Professional Engineer and Kevin Vought, Modeling Engineer, SWFWMD, Brooksville, FL
NUMERICAL MODELING OF RECHARGE TRAVEL TIMES FOR A SOUTHERN WATER USE CAUTION AREA (SWUCA) RECOVERY PROJECT

9:00 – 9:30 ~ Michael Alfieri, Principal Hydrogeologist, Director of Hydrogeologic Services, WRA, and Dr. Sam Upchurch, VP and Senior Principal Geologist, SDII Global Corporation
PHOTOLINEARS, FRACTURES, AND FALLACIES: WHAT CAN WE ASSUME ABOUT THE STRUCTURES OF ASR HOST STRATA?

9:30 – 10:00 ~ Mike Weatherby, CEO, HydroGeo Consulting LLC, Tampa, FL
OPERATIONAL UPDATE: SOUTH HILLSBOROUGH AQUIFER RECHARGE PROGRAM

10:00 – 10:30 ~ Mike Hancock, Water Resources Division, SWFWMD, Brooksville, FL
CREATE WETLANDS AND RECHARGE AQUIFERS: PASCO COUNTY RECLAIMED WATER PROJECT

10:30 – 10:45 BREAK

SESSION 6: 10:45AM – 12:15PM

10:45 – 11:15 ~ Greg Munson, Attorney, Shareholder, Gunster Law Firm, Tallahassee, FL

Topic 1 HOW AMENDMENT 1 FUNDING (Section 28, Article X of the Florida Constitution) CAN BE DIRECTED TO HELP GROUNDWATER PROTECTION

Topic 2 WHAT ARE THE IMPLICATIONS FOR WATER MANAGERS OF EXPANDING THE USE OF RECLAIMED WATER, STORMWATER, AND EXCESS SURFACE WATER? WHERE WILL THE CURRENT FLORIDA DEP RECLAIMED WATER INITIATIVE TAKE US?

11:15 – 11:45 ~ Dr. William Hutchings, Senior Hydrogeologist, GHD, Ft Myers, FL

PERSPECTIVES ON THE POTENTIAL MIGRATION OF FLUIDS ASSOCIATED WITH HYDRAULIC FRACTURING IN SOUTHWEST FLORIDA

11:45 – 12:15 ~ Dr. John Lisle, Microbial Ecologist, US Geological Survey, St. Petersburg, FL

UPDATE ON USGS MICROBIOLOGY AND ASR/GROUNDWATER RECHARGE RELATED WORK

12:15 - 1:15 LUNCH (provided)

SESSION 7: 1:15PM – 3:45pm

1:15 – 1:45 ~ Renee Murch, Senior Water Resources Engineer, INTERA, Patrick Tara, Senior Engineer, INTERA, Tampa, FL, and Lynn Spivey, Principal Consultant, Arcadis, Tampa, FL

EVALUATION OF RAPID INFILTRATION BASINS TO RESTORE SURFACE WATER AND GROUNDWATER RESOURCES WITHIN THE HILLSBOROUGH RIVER WATERSHED USING THE INTEGRATED HYDROLOGIC MODEL (IHM)

1:45 – 2:15 ~ Dr. Michael Sukop, Professor, Florida International University, Miami, FL

TRENDS IN SEA LEVEL RISE: THE FUTURE FOR GROUNDWATER SUPPLY IN SOUTHERN FLORIDA

2:15 – 2:45 ~ Dave Smith, Principal Scientist CDM Smith, Boca Raton, FL

FLORIDA'S COASTAL AQUIFERS: HOW "FRESHKEEPER" CAN REDUCE OR PREVENT GROUNDWATER SALINIZATION

2:45 – 3:15 Boyd Gunsalus, Project Manager, Caulkins Water Farming Pilot Project, SFWMD, West Palm Beach, FL
MARTIN COUNTY CAULKINS PROJECT: RETENTION & STORAGE WATER MANAGEMENT

3:15 – 3:30 ~ David Pyne, President, ASR Systems, Gainesville, FL

PERSPECTIVE ON THE FUTURE OF AQUIFER RECHARGE: STATE, NATIONAL & INTERNATIONAL

3:30 – 3:45 ~Andrew Stone, Executive Director, American Ground Water Trust, Concord, NH

BEYOND FLORIDA: "OTHER" AQUIFER MANAGEMENT ISSUES IN THE US

3:45 ADJOURN



AMERICAN GROUND WATER TRUST (Non-profit education organization)
Ground Water Information, Awareness & Education Since 1986..... This is what we do:



- ~ Promote efficient and effective ground water management
- ~ Communicate the environmental and economic value of ground water
- ~ Showcase ground water science and technology solutions
- ~ Increase citizen, community and decision-maker awareness
- ~ Facilitate stakeholder participation in water resource decisions



FLORIDA AQUIFER CONFERENCE

Sixteenth year of this annual water management issues conference

Florida 2016 ASR –

professional background of conference presenters

(Listed in presentation order)



~ Bob Verrastro, Lead Hydrogeologist, SFWMD, 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.

~ Dr. Virginia Walsh, Chief of Hydrogeology, Miami-Dade Water & Sewer Dept., Miami, FL



Dr. Walsh has over 20 years experience as a hydrogeologist in various hydrologic, geologic, and environmental investigations. She has been Chief of the Hydrogeology Section at Miami-Dade Water and Sewer Department (MDWASD), Miami-Dade County, Florida for the past 9 years. Dr. Walsh received her Ph.D. in Geology from Florida International University in 2012. Dr. Walsh and her staff are responsible for all hydrogeologic investigations for MDWASD, and are involved in the design, operation and maintenance of water production wells and the deep injection well systems at MDWASD. She is also the Project Manager for the Aquifer Storage and Recovery cycle testing at MDWASD South and West wellfields.

~ Brian Armstrong, Executive Director, SWFWMD, Brooksville, FL



Brian Armstrong has more than 15 years of experience in water resource management and was appointed as SWFWMD Executive Director in June 2016. He had served as the District's assistant executive director since May 2014. In that role he was responsible for the leadership and oversight of the Operations, Maintenance & Construction, Regulation, and Resource Management divisions. Previously, Armstrong was the assistant director for the Department of Environmental Protection (DEP) Southwest District. There he led the restructure of the DEP District operations by reducing costs and improving internal operating performance, including the creation of a successful compliance management team. Prior to that, Armstrong served as the Water Supply and Resource Development manager for the District.

Armstrong is a licensed professional geologist who earned his Bachelor of Science in Geology and his Master's Degree in Hydrogeology from the University of South Florida.

~ Joe Haberfeld, Environmental Administrator, UIC Program, Florida DEP, Tallahassee, FL



Mr. Haberfeld is a Hydrogeologist and Professional Geologist at the Florida Department of Environmental Protection (DEP) in Tallahassee, Florida. He is the Environmental 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).

~ Dr June Mirecki, Senior Hydrogeologist, 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).

~ Dr. Robert Maliva, Principal Hydrogeologist, WSP Parsons Brinckerhoff, Fort Myers, FL



Dr. Maliva has been a consulting hydrogeologist since 1992 and is currently a Principal Hydrogeologist with WSP Parsons Brinckerhoff. 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 a 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 three books, "*Aquifer Storage and Recovery and Managed Aquifer Recharge Using Wells: Planning, Hydrogeology, Design, and Operation*" (2010), "*Arid Lands Water Evaluation and Management*" (2012) and "*Aquifer*

Characterization Techniques" (2016).

Albert Muniz, Vice-President, Hazen and Sawyer, Boca Raton, FL



Mr. Muniz is a Vice President with Hazen and Sawyer and manager of their Boca Raton office. Hazen and Sawyer focuses on assisting clients with their water needs and is recognized as one of the top environmental engineering firms in the United States. Water services range from water resources, water treatment, and wastewater treatment. Mr. Muniz is a civil engineer by education, and a registered professional engineer in the States of Florida and New York. He received his degree from the University of Florida with honors, and has been working in the water/wastewater industry for over 35 years. Much of Mr. Muniz's experience has been in the water resources arena, especially with aquifer storage and recovery.

~ Dan Ringdahl, President, Florida Design Drilling, West Palm Beach, FL



Dan Ringdahl possesses nearly forty years of professional experience with some of the country's most challenging municipal, industrial, irrigation, and commercial water drilling projects.

Mr. Ringdahl is currently President and Co-Founder of Florida Drilling, a licensed water well and general contractor of water well drilling and water resource construction services located in West Palm Beach and founded in 2005. He also serves as Director of the Florida Ground Water Association, an organization that seeks to improve methods of well construction and advance the science of ground water hydrology.

Prior to founding Florida Drilling, Mr. Ringdahl was the East Coast Operations Manager at Diversified Drilling Corporation and Vice President and Co-Owner of Well Water Systems, Inc. Before moving to Florida, he co-owned the family business, Ringdahl Well Drilling, and specialized in water well drilling in eastern North Dakota.

Mr. Ringdahl attended North Dakota State University and received a B.S. in Agronomy in 1979.

~ Eric Olsen, Shareholder, Hopping Green & Sams, Tallahassee, FL



Eric T. Olsen is an attorney with Hopping Green & Sams. He is licensed by the Florida Bar and a member of the American Bar Association. Eric has been practicing for over 20 years in the areas of water supply, underground injection control, and wetlands regulation. He has spoken at numerous professional conferences and published professional articles on these subjects. He assists local government water utilities, electric power generation entities, manufacturers, agriculture and other industries in obtaining governmental authorizations to withdraw and use water and to plan for long term water supplies, including alternative water supplies. He has also assisted these entities in obtaining Underground Injection Control permits and defending those permits from third party challenges in litigation. He received his undergraduate degree from Clemson University and his law degree from the University of Florida College of Law.

~ David MacIntyre, President, AquaSciTech Consulting, PLLC, Ocoee, FL



David F. MacIntyre, PE has 30 years of experience in water management. After serving 24 years as an officer and technical leader for a large national consulting firm, he has recently started working as owner and principal engineer of AquaSciTech Consulting, where he provides consulting solutions for planning, permitting, design and implementation of water and wastewater infrastructure projects. With particular expertise in water supply, water reuse and natural systems analysis, he is known for his extensive experience with regional scale water supply and reuse projects.

Mr. MacIntyre works mostly with public sector clients in state and local government agencies. In 1979, he earned a Bachelor of Arts in civil engineering at the University of Cambridge, England, and he received a Master's degree in environmental engineering from the University of Florida in 1986. He is a registered professional engineer.

~ Clint Kromhout, FDEP - Florida Geological Survey, Tallahassee, FL



Clint attended Florida State University where he attained a bachelor of science degree in geology. He is a licensed Professional Geologist currently employed by the Florida Department of Environmental Protection's Florida Geological Survey where he has worked for 15 years, having started there part-time while attending Florida State University. He is currently a Professional Geologist Administrator overseeing the Applied Geoscience Services Section, which directs many of the ongoing hydrogeologic and geochemical projects at the FGS.

Mr. Kromhout began his career working on the hydrogeologic framework of the Southwest Florida Water Management District and the Florida Aquifer Vulnerability Assessment projects. In 2007, Mr. Kromhout served on the 2nd Ad Hoc Committee on Florida Hydrostratigraphic Unit Definition. Mr. Kromhout has a passion for sinkhole research. He has gained significant professional expertise during his career at the FGS and he currently serves as the lead contact for FDEP involving sinkhole response in emergency situations. He is also the principal investigator on a statewide project to map the State's vulnerability to sinkhole formation for the Florida Division of Emergency Management.

~ Aaron Collier, Hydrogeologist, Collier Consulting, Stephenville, TX



Aaron Collier is a professionally licensed hydrogeologist with 14 years of experience in all facets of groundwater management, planning, sourcing, and subsurface investigations. As one of the vice presidents of Collier Consulting, Mr. Collier's primary responsibilities are overseeing the daily operations of the organization and being the primary point of contact for many of the firm's geoscience and engineering projects. Representative projects have included local and regional hydrogeological investigations throughout Texas and Florida, groundwater modeling, borehole and surface geophysical investigations, water resource engineering, and environmental litigation. Mr. Collier also is the managerial lead for Collier Consulting's water asset management software product HYDROS, a custom built cloud-based Software. Mr. Collier was educated at Tarleton State University (B.S. Geology) and the University of Texas at San Antonio (M.S. Geology).

~ 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 ten 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.

~ Dr. Ann Shortelle, Executive Director, St. Johns River Water Management District



Dr. Ann Shortelle is Executive Director of the St. Johns River Water Management District, where she began work June 1, 2015. She has more than 25 years of professional experience in lake, riverine and reservoir management for water quantity and quality, which includes surface water/wetlands restoration, surface water modeling, permitting and environmental assessments. Her prior positions include three years as executive director for the Suwannee River Water Management District, director of the Office of Water Policy for the Florida Department of Environmental Protection, and work as a consultant in the private sector. She holds a doctorate degree in limnology from the University of Notre Dame and a bachelor of science degree in biology from Mercer University. She has authored/co-authored more than 40 publications and presentations on environmental topics.

~ Donald Ellison, Senior Professional Geologist, SWFWMD, Brooksville, FL



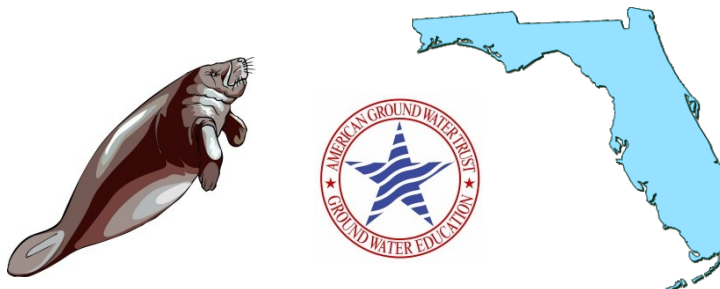
Mr. Ellison has managed ASR projects and research efforts for the Southwest Florida Water Management District (District) since 1993. Acting as liaison between the District and over 14 water suppliers/utilities he helped develop and establish District funding for over 50 ASR wells throughout the District. He is currently active in the development of ASR and recharge projects using direct surface water to assess the feasibility of cost effective projects to provide public supply, manage saltwater intrusion and mitigate drawdown impacts to surface water bodies. Over the last 24 years, his ASR management role at the District has given him the privilege to work, learn and participate in problem solving with many of the industries foremost experts. He has promoted and managed research efforts with the United States Geological Survey, University of Florida, Florida Geological Survey, University of South Florida, Army Corp of Engineers, and numerous talented and experienced consultants. These research projects focused primarily on microorganism die-off and arsenic mobilization in the aquifer.

Don continues to work closely with Florida Department of Environmental Protection's Underground Injection Control work group to ensure beneficial projects for the public are developed. 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.

~ Lisann Morris, Senior Professional Engineer, SWFWMD, Brooksville, FL



Lisann has over 30 years of technical and project management experience. She is a licensed Professional Engineer in Florida and a certified Project Management Professional. She received her BS in Civil Engineering from Purdue University. Lisann has spent the past 17 years at the Southwest Florida Water Management District (District) with the last 11 years in the Water Supply section. Her responsibilities include developing water supply planning documents, managing water supply development projects and assisting municipalities in implementation of their water supply projects. Prior to her working at the District, she worked in the consulting field.



~ Michael Alfieri, Principal Hydrogeologist, Director of Hydrogeologic Services, WRA,



Michael Alfieri is a professionally licensed geologist in twelve states and a nationally certified/registered hydrogeologist. Mr. Alfieri has over seventeen years of experience and currently manages and oversees the operation of hydrogeologic services for WRA. As a Principal Hydrogeologist at WRA, he provides geologic and hydrogeologic interpretation and evaluations and expert witness services. Mr. Alfieri was appointed by Florida Governor Rick Scott as a Board Member of Florida Board of Professional Geologists for a term beginning July 15, 2013 and ending October 31, 2015 and was elected Vice Chair of the FL BPG on April 22, 2015.

Prior to his career at WRA, Mr. Alfieri conducted and/or oversaw the design of many hydrogeologic investigations and the collection of field data for water resource evaluations across the United States, as well as performed third party reviews of hydrogeologic evaluations. Mr. Alfieri is Chair of ASTM Subcommittee D18.21.03 Well Design.

~ Mike Weatherby, CEO, HydroGeo Consulting LLC, Tampa, FL



Mike has 24 years of technical and management experience and is a licensed Professional Geologist in FL and GA. He has a MS in hydrogeology from Ohio University. He has conducted and managed high profile projects involving design, permitting and construction of projects involving water supply, well-fields, ASR well-fields, aquifer recharge, deep well disposal, groundwater and surface water resource evaluations, groundwater modeling (flow and solute transport density dependent), recovery strategy evaluations, both domestically and internationally, (Palestine, Bolivia, Panama, and the Dominican Republic).

He is currently the Project Manager and Project Technical Expert for the construction of the deepest injection wells in the state of Florida. At 8,000 feet deep, this high profile project consists of the deepest disposal wells in the state and is the first to evaluate the Upper Cretaceous formations below the anhydrite layer in the middle Cedar Keys formation. Prior to establishing HydroGeo Consulting LLC, Mike worked as the Water Resources Practice Lead for MWH and Project Manager and Water Business Practice Lead for CH2M Hill.

~ Mike Hancock, Senior Professional Engineer, Water Resources Division, SWFWMD, Brooksville, FL



Mike Hancock is a Senior Professional Engineer with the Southwest Florida Water Management District. Mike has a MS in environmental engineering from the University of Florida, and over 30 years of experience developing water management plans, regional eco-hydrologic assessments, and hydrologic models. He has been a Professional Engineer in the State of Florida for 25 years. Mike is currently managing the Northern Tampa Bay hydrologic recovery effort.

~ Greg Munson, Attorney, 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.

~ Dr. William Hutchings, Senior Hydrogeologist, GHD, Ft Myers, FL



Dr. Hutchings obtained B.S. degrees (geology, 1982). and M.S. (paleomagnetism; 1986) from the University of Florida. Subsequently, he pursued studies in hydrogeology at the University of South Florida where he obtained an Advanced Certificate in Hydrogeology (1992) and a M.S. degree in Hydrogeology (2005). His M.S. research focused on the potential effects of aquifer heterogeneities and variable density in the Upper Floridan aquifer of Florida on aquifer storage recovery systems using numerical models. Subsequently, he earned a Ph.D. degree (2012) from USF researching the occurrence and distribution of arsenic in Upper Floridan aquifer ASR systems and the potential effects of fracture flow and aquifer heterogeneities, using reactive mass transport models.

Dr. Hutchings is currently employed as a hydrogeologist with GHD and his interests include flow and mass transport modeling related to remediation of environmental impacts and seawater intrusion.

~ Dr. John Lisle, Microbial Ecologist, US Geological Survey, St. Petersburg, FL



Dr. Lisle earned his Ph.D. at the University of South Florida in the College of Public Health. Following his post-doctoral fellowship at Montana State University, Dr. Lisle was employed by NASA's Astrobiology Institute at Johnson Space Center in Houston, TX where his research focused on the microbial ecology in extreme environments, including Antarctica. Since 2002 Dr. Lisle has been employed by the USGS Center for Coastal and Watershed Research in St. Petersburg, FL, where he's applied his experience to projects related to the biogeochemistry of surface and groundwater systems, ocean acidification and climate change. His expertise is in the use of non-culture based and molecular techniques and biogeochemistry to assess the survival and persistence of microorganisms in aquatic and sediment systems and the influence microorganisms have on the geochemistry within these systems.

~ Renee Murch, Senior Water Resources Engineer, INTERA, Tampa, FL



Renee Murch's professional experience has focused on water resources, hydrology, and civil infrastructure. Her areas of expertise include the development and application of hydraulic, hydrologic, and statistical models to support minimum flow and level development (MFL), restoration of surface water resources, evaluation of saltwater and freshwater interaction, and simulation of regional and local-scale hydrologic conditions as part of water resource planning efforts. Renee has specialized expertise in the development and application of statistical models. Her work has focused on surface water, groundwater, and integrated modeling applications. Renee's experience also includes the application of geographic information system tools for data analysis and model input development and hydrologic data collection. She has a variety of field experience related to instrumentation and data collection on both water resources- and geotechnical-related projects.

Her current work is focused on the development, calibration, and application of surface water, groundwater, and statistical models using applications such as MODFLOW, HEC-RAS, CE-QUALW2, ELM, HSPF, IHM, SPLUS, and R to support water supply planning and MFL development.

~ Dr. Michael Sukop, Professor, Florida International University, Miami, FL



Michael has a Ph.D from the University of Kentucky and a MS from Washington State University. His research is focused on computational fluid dynamics in cavernous, fractured, and porous media. Solute transport in these complex media and its simulation, including inverse modeling, are key interests. This research is done at pore to aquifer scales using both traditional ground water models and lattice Boltzmann models. Single and multi-phase lattice Boltzmann models figure prominently in research aimed at better methods for solute transport in karst aquifers, and for water and nonaqueous fluid behavior in fractured and porous media – especially unsaturated media. Dr. Sukop maintains ongoing interests in fractals, multifractals, cellular automata, percolation phenomena, geostatistics, and surface chemistry and their applications.

The classes he teaches include - Environmental Geology, Hydrogeologic Modeling, and Chemical Hydrogeology. Michael has been at Florida International University since 2003. Prior private sector experience was with CH2M HILL Engineering, Redding CA (8 years) and Donohue and Associates Engineering, Sheboygan, WI (3 years).

Dave Smith, Principal Scientist, CDM Smith, Boca Raton, FL



David has 33 years experience of hydrogeological investigations in a wide variety of geological settings for both water resource and environmental projects in the US and internationally. He specializes in the feasibility, design, permitting, and construction of alternative water supply projects and since the early 1990's has completed numerous large diameter brackish groundwater supply systems and Aquifer Storage Recovery (ASR) wells. He also is actively engaged in the design, permitting, construction, testing, and operation of high capacity, deep, Class I, and Class V Injection well systems used for the recharge or disposal of treated wastewater, reverse osmosis concentrate, brines, and other non-hazardous industrial wastes for municipal, industrial, and mining clients throughout the US. David works with Florida and Texas clients to solve challenging water supply, quality, and protection issues.

~ Boyd Gunsalus, Project Manager, Caulkins Water Farming Pilot Project, SFWMD, West Palm Beach, FL



Boyd Gunsalus is a Lead Environmental Scientist with the South Florida Water Management District (SFWMD). Boyd has been with the SFWMD for 31 years. He is the Co-Author of the "Wetland Rapid Assessment Procedure" (WRAP) which is used to evaluate wetland functions in the field for regulatory processes. He was also responsible for conducting water quality assessments within the watersheds of the St. Lucie Estuary and southern Indian River Lagoon. He also provided technical support to the North Palm Beach Comprehensive Everglades Restoration Project and the Restoration Plan for the Loxahatchee River. Currently, he is working with the Dispersed Water Management Program utilizing interim lands (publicly owned lands slated for regional water management projects in the future) to retain stormwater and developing the "water farming" concept for storing water from regional canals on fallow citrus lands.

~ David Pyne, President, ASR Systems, 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, American Ground Water Trust, Concord, NH



Andrew Stone has a BSc Honors (Birkbeck College, London) and an MSc in hydrogeology from University College London. Between 1974 and 1989 he was a lecturer and groundwater researcher at Rhodes University, South Africa. Since 1989 he has worked in the United States as a private-sector groundwater consultant, as adjunct professor teaching groundwater protection policy in the MS Degree program at Antioch New England University and as groundwater educator, advocate and outreach specialist for the non-profit AGWT. He is a recipient of the National Ground Water Association "Oliver Award" in for his work in promoting groundwater education.

In his time with the American Ground Water Trust he has convened and organized over 250 conferences, workshops and training programs on groundwater issues throughout the US.