

# TEXAS AQUIFER CONFERENCE

June 26th 2015 - Austin, Texas

American Ground Water Trust Annual "Texas Groundwater and Aquifers Conference"



Convened by: American Ground Water Trust - Co-sponsored by TWDB

Omni Austin Hotel at Southpark, 4140 Governor's Row, Austin, TX 78744

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

## CONTINUING EDUCATION

The AGWT will issue certificates of attendance to attendees who sign-in and sign-out..

State Bar of Texas Course #901320265 – Sponsor #13854 – 02.00 MCLE and State Bar College Hours

## Program Schedule

### Introduction

8:15 – 8:25

#### INTRODUCTION: THE SUSTAINABILITY CONUNDRUM

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

8:25 – 8:35

#### PRIORITIES FOR STATE FUNDED WATER PROJECTS

Kathleen Jackson, Texas Water Development Board, Beaumont, TX

### Aquifer Storage Recovery

8:35 – 9:00

#### HISTORY AND STATUS OF ASR IN TEXAS

Matt Webb, TX Water Development Board, Austin, TX

9:00 – 9:25

#### THE 2015 LEGISLATIVE SESSION AND HOW ASR FARED

Bill Mullican, CDM Smith, Pflugerville, TX

**Keynote Presentation**

9:25 – 10:00

**Keynote Presenter: David Pyne, ASR Systems, Gainesville, FL**

**NEW TECHNOLOGIES AND INTERNATIONAL ASR—WHERE WE ARE AND WHERE WE ARE HEADED**

**10:00 -10:20 BREAK**

**Aquifer Storage Recovery (continued)**

10:20 – 10:35

**THE OTHER REASONS FOR IMPLEMENTING AN ASR PROJECT—THE VICTORIA PERSPECTIVE**

[Jerry James, City of Victoria Director of Intergovernmental Relations, Victoria, TX](#)

10:35 – 10:50

**CURRENT ISSUES AFFECTING ASR IMPLEMENTATION IN TEXAS**

[Fred M. Blumberg, Project Manager, ARCADIS-U.S. Inc., Austin, TX](#)

10:50 – 11:10

**Q & A WITH ALL ASR SESSION PRESENTERS** - [Moderated by Fred Blumberg](#)

**ATES Systems – Role of Aquifers as Major Energy Savers**

11:10 – 11:35

**AQUIFER THERMAL ENERGY STORAGE: DOMINANT IN EUROPE, WHEN WILL IT REACH TEXAS?**

[Chuck Hammock, Principal, Andrews, Hammock & Powell, Inc, Macon, GA](#)

**TWDB Update**

11:35 – 12:00

**UPDATE ON TWDB GROUNDWATER ISSUES AND PRIORITIES**

[Larry French, Director of Groundwater Resources, TX Water Development Board, Austin, TX](#)

**12:00 – 1:00 LUNCH**

**Compatibility or Conflict?**

1:00 – 1:25

**OIL AND GAS LAW AS IT RELATES TO GROUNDWATER LAW**

[Edmond McCarthy Jr., Attorney, Partner, Jackson, Sjoberg, McCarthy & Townsend, L.L.P., Austin, TX](#)

1:25 – 1:50

**GROUNDWATER: PROPERTY RIGHTS vs. WATER MANAGEMENT AUTHORITY**

[Shauna Fitzsimmons, Attorney, Sledge Law & Public Strategies, PLLC, Austin, TX](#)

**Desired Future Conditions**

1:50 – 2:15

**TEXAS' BILLION DOLLAR DESIRED FUTURE CONDITIONS (DFC) BALANCE – CONSERVATION VERSUS HIGHEST PRACTICABLE PRODUCTION**

[James Beach, Senior Vice President and Principal, LBG-Guyton, Austin, TX](#)

2:15 – 2:40

**DESIRED FUTURE CONDITIONS: TEXAS WATER PLANNING CHALLENGES**

[Mark Taylor Attorney-at-Law, San Marcos, TX](#)

**2:40 – 2:55 BREAK**

**Brackish Groundwater Resources**

2:55 – 3:20

**BRACKISH GROUNDWATER REGULATORY AND POLICY ISSUES IN TEXAS**

[Leonard Dougal, Partner, Environmental & Legislative Practice Group, Jackson Walker L.L.P. Austin, TX](#)

3:20 – 3:45

**BACK TO THE FUTURE WITH BRACKISH GROUNDWATER: DEVELOPING A VALUABLE TEXAS RESOURCE**

Hughbert A. Collier, President, Collier Consulting, Stephenville, TX

3:45 – 4:10

**SCAVENGER WELLS: A COST-EFFECTIVE TOOL FOR MANAGING TEXAS COASTAL AQUIFER SALINITY PROBLEMS?**

Rhett Moore, Senior Hydrogeologist, Layne Christensen Company, Bloomington, IN

4:10 – 4:35

**BRACKISH GROUNDWATER: THE NEXT BEST AVAILABLE SOURCE IN TEXAS**

Stefan Schuster, Texas Water Resources Strategy Leader, MWH Global, Austin, TX

4:35 – 4:40      **WRAP-UP AND FINAL Q & A**

**PRESENTER BIOGRAPHICAL INFORMATION**

**Kathleen Jackson, Texas Water Development Board, Beaumont, TX**



Kathleen Jackson was appointed to the TWDB by Governor Rick Perry. She has a diverse background representing agricultural, environmental, industrial, and wholesale-supply interests, which includes developing and implementing water management strategies for Southeast Texas. As a registered professional engineer, Jackson served as public affairs manager for one of the world's largest petroleum and petrochemical producers. Additionally, she was involved in production agriculture with her late husband, who ran a cattle operation and farmed rice. She served as a past member of the Lower Neches Valley Authority Board of Directors, the Texas Water Conservation Association, and participated on the Sabine and Neches Rivers Bay and Estuary Environmental Flows Assessment Program Stakeholders Committee.

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



Andrew Stone is a 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.

**Matt Webb, TX Water Development Board, Austin, TX**



Matt is the ASR expert point of contact in the TWDB's Innovative Water Technology group. His primary role is to collect, evaluate, and disseminate data from available data sources in support of the advancement of ASR activities in the state. He also performs technical review and assessment of ASR proposals requesting funding from TWDB with a focus on the determination of feasibility and application of best practices. Additionally, Matt has the role of collecting and interpreting information from geophysical well logs and other data sources in support of the Brackish Resources Aquifers Characterization System (BRACS) initiative. Matt has a B.S. in Mechanical Engineering and a Masters in Water Management from Texas A&M University.

**Bill Mullican, CDM Smith, Pflugerville, TX**



Bill Mullican is a Water Resources Specialist with CDM Smith. He graduated from Texas Tech with a B.S. in Broadfield Science and a M.S. in Geology. Since 2009, his efforts have focused on water resources planning and project implementation. Most recently, he served as the Co-Chairman of the TWCA ASR Committee which was responsible for developing consensus recommendations adopted in House Bill 655.. He previously worked at the TWDB serving as Director for Water Resources Planning and as Deputy Executive Administrator for Planning and Water Science and Conservation. Bill is a leading authority on state water planning and has assisted other states in establishing statewide water planning initiatives. In 2005, Governor Perry appointed Bill to the Rehabilitation Council of Texas and in 2007 the, US EPA Administrator appointed Bill to the National Advisory Council for Environmental Policy and Technology.

**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.

**Jerry James, City of Victoria Director of Intergovernmental Relations, Victoria, TX**



Jerry James is Victoria's Director of Intergovernmental Relations and participates in regional planning efforts to develop suggested changes to state surface/groundwater policies for the Texas Legislature. He is the appointed, non-voting member of the Edwards Aquifer Authority Board of Directors representing the South Central Texas Water Advisory Committee. He is also a charter member of the Region L Planning Group and serves on the Edwards Aquifer Recovery Implementation Program Steering Committee as a Texas Commission on Environmental Quality (TCEQ) appointee.

**Fred M. Blumberg, Project Manager, ARCADIS-US Inc., Austin, TX**



Mr. Blumberg leads his firm's efforts to expand and develop water supplies for clients throughout Texas. Prior to joining Malcolm Pirnie/ARCADIS in 2007, Mr. Blumberg was deputy general manager and chief operating officer with the Guadalupe-Blanco River Authority (GBRA). During his career with GBRA, he led the operations, engineering and construction management departments. For the last 8 years, he has been involved in a variety of water resources projects related to ASR, water supply planning, dam investigations and watershed master planning. Mr. Blumberg has both B.S. and Master of Agriculture degrees from Texas A&M University.

**Chuck Hammock, Principal, 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.

**Shauna Fitzsimmons, Attorney, Sledge Law & Public Strategies, PLLC, Austin, TX**



Shauna's practice focuses on water and environmental legal issues. She represents groundwater conservation districts, municipalities, public and private water utilities, and landowners in matters involving regulation and planning, water rights, water quality, water resource development and transactions, environmental permitting, oil and gas matters, service area disputes, rates, litigation, board governance, and governmental relations. She practices before the Texas Commission on Environmental Quality, the Texas Water Development Board, the Railroad Commission of Texas, the U.S. Environmental Protection Agency, the Texas Legislature, and numerous local and regional governmental bodies. Shauna received her Doctor of Jurisprudence from the Texas Tech School of Law.

**Larry French, Director of Groundwater Resources, TX Water Development Board, Austin, TX**



Larry French administers and directs the activities of the TWDB Groundwater Resources Division. The Division is comprised of three sections: Monitoring, Availability Modeling, and Technical Assistance. The Groundwater Monitoring Section measures groundwater quality and levels in the major and minor aquifers in Texas. The Groundwater Availability Modeling Section develops, reviews, and uses numerical groundwater flow models to run predictive simulations for the major and minor aquifers in Texas. The Technical Assistance Section reviews groundwater conservation district management plans, reviews desired future conditions submitted by the groundwater management areas, and conducts studies on the occurrence, quantity, quality, and availability of groundwater. Larry has a B.S. in Geological Sciences from the University of California at Riverside and a M.A. in Geological Sciences from The University of Texas at Austin.

**Edmond McCarthy Jr., Attorney, Partner, Jackson, Sjoberg, McCarthy & Townsend, L.L.P., Austin, TX**



Ed McCarthy's practice is primarily in water and natural resources. Mr. McCarthy's background is rooted in property rights and land titles, and the development of subsurface property rights, including mineral and groundwater rights. Mr. McCarthy was lead counsel on the first ASR project permitted in Texas to use state water rights, and subsequently worked on the development of legislation to codify the use of ASR as a water development resource. He also participated on an ad hoc committee to assist the predecessor agency to the Texas Commission on Environmental Quality to develop rules for ASR permitting and operations. He earned his J.D. in 1981 from St. Mary's University School of Law, and his B.A., from the University of Notre Dame in 1978.



**James Beach, Senior Vice President and Principal, LBG-Guyton, Austin, TX**



Mr. Beach is a Professional Geoscientist with over 20 years of experience in quantitative groundwater and surface water hydrology, regional and local water resources planning, environmental assessments, numerical flow and solute transport modeling, and litigation support. Some of his most recent projects include development of brackish groundwater supplies, aquifer storage and recovery assessments, and development of new wellfields to offset recent drought impacts. Mr. Beach has consulted with municipalities, industrial and mining concerns, private landowners, groundwater districts, and government entities. James received his B.S. in Hydrology from Tarleton State University, and his M.S. in Hydrology from the New Mexico Institute of Mining & Technology.

**Mark Taylor, Attorney-at-Law, San Marcos, TX**



Mark Taylor has a private law practice. He has over 30 years of experience in municipal, water rights, public utility and land use law, advising elected and appointed officials and drafting/review of ordinances, resolutions, contracts, and policies. Prior to establishing his private practice he participated in drafting Edwards Aquifer Authority Act in 1993, and amendments in 1995 and 2007. He served on South Central Texas Water Advisory Committee, 1999 - 2007, and on the Edwards Aquifer Authority Board, 2007 – 2010.

**Leonard Dougal, Partner, Environmental & Legislative Practice Group, Jackson Walker L.L.P. Austin, TX**



Leonard Dougal represents a diverse group of clients in complex environmental permitting and water supply matters. He is active in water quality issues where he represents mining and energy companies, developers and agricultural operators in permit and compliance matters. He is a co-author of two chapters in the treatise on Texas water law, *The Essentials of Texas Water Resources*. Mr. Dougal has a special interest in hydraulic fracturing and shale play development as he worked as a petroleum engineer for Exxon Company, U.S.A. prior to attending law school. He is Board Certified in Administrative Law by the Texas Board of Legal Specialization and is also a Texas licensed Professional Engineer (inactive).

**Hughbert A. Collier, President, Collier Consulting, Stephenville, TX**



Dr. Collier is a hydrogeologist and the Vice President of Collier Consulting, a geoscience, environmental, and engineering firm. Hughbert has over 30 years experience in consulting, research, technical support for litigation, and lecturing throughout the country. One of his specialties is the integration of various types of data (e.g. borehole geophysical, pumping tests, cuttings, cores, and surface geophysical) for the hydrogeological characterization of aquifers, including ASR feasibility. This expertise has assisted Collier Consulting in developing wells and well fields in Texas and Florida. He has a geology degree from Mississippi State University and a Ph.D. in Geosciences from the University of Texas at Dallas.

**Rhett Moore, Senior Hydrogeologist, Layne Christensen Company, Bloomington, IN**



Mr. Moore has over 20 years experience in implementing water-resource investigations for management, planning, permitting, and development. His project management and technical experience includes water-resource assessments, aquifer testing, source-of-supply planning, and well and well field design. He has worked with a variety of clients throughout the United States, including public and private water-supply utilities, industry, water management districts, and state agencies. Rhett's work experience includes seven years with the United Geological Survey. He has an MS in Environmental Science from the University of Indiana, Bloomington.

**Stefan Schuster, Texas Water Resources Strategy Leader, MWH Global, Austin, TX**



Mr. Schuster has more than 20 years of experience as a project manager, hydrologist, and water resource planner working on diverse water resource planning projects throughout Texas. The work includes regional and statewide water supply planning, water use demographics, water law issues, water supply evaluations, water rights analyses, analyses of impacts to the agricultural community, strategy and alternatives development, and availability modeling of watersheds. He has extensive experience in surface and groundwater availability modeling, water quality analyses, policy development and implementation, coordinating and working with the Texas Legislature, GIS, water rights, and public involvement.

