

DEEP WELL INJECTION

MIAMI CONFERENCE

TECHNICAL, ECONOMIC, ENVIRONMENTAL AND POLICY ISSUES

An educational information-exchange program from the American Ground Water Trust on disposal wells



Monday, March 2 and Tuesday, March 3, 2020

Hosted by:

Miami Dade Water and Sewer Department
 Conference venue - 3071 SW 38th Ave, Miami, FL 33146
 (Field trip opportunity, Sunday March 1)



CONTINUING EDUCATION

The AGWT will issue Certificates of Attendance

Approved by FUSE for Water and Wastewater Operators - Course #8118001, 1.05 CEUs (10.5 hrs)
 Approved for FL Professional Engineers

The objective of the conference is to provide an update on the status of deep well injection disposal in Florida and to showcase the “state-of-the-art” and operation-economics for current users and for potential adopters of the technology. The presentations will include information on disposal policies that are the drivers for DWI installations. Experts will present information about the latest technologies in design, construction, operation, maintenance and monitoring of deep well injection and will include case studies from DWI operations in the US and overseas. The conference will provide a focused information exchange and discussion opportunity among presenters and participants.

Conference Sponsors:



Happy Hour Sunday – after the field trip: - Black Point Ocean Grill, 24775 S.W. 87th Avenue, Cutler Bay, FL 33032
Happy Hour Monday – after conference first day: - Yardhouse, 320 San Lorenzo Ave Space 1320, Coral Gables, FL 33146

Sunday, March 1st 2:30 – 5:00pm

Field Trip
Miami-Dade Water and Sewer Department South District Wastewater Treatment Plant
Deep Injection Well Drilling Projects

Monday, March 2nd 8:30 – 5:00

7:30 – 8:30 REGISTRATION

8:30 – 8:40

PROTECTING THE INTEGRITY OF DRINKING WATER SOURCES: A NUMBER ONE PRIORITY

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

8:40 – 9:20

THE LONG-TERM FUTURE FOR DEEP WELL INJECTION IN THE US

Monte Markley, PG, Vice President/Project Director, National Expert: Deep Well and Underground Injection, SCS Engineers, Wichita, KS

9:20 – 10:00

OVERVIEW OF CLASS I INJECTION WELL PRACTICES IN THE UNITED STATES AND SIMILAR WELLS OVERSEAS

Robert Maliva, PhD, PG, Principal Hydrogeologist, WSP, Fort Myers, FL

10:00 – 10:20 BREAK

10:20 – 11:00

SEISMIC-REFLECTION IMAGING OF GEOLOGIC STRUCTURES THAT COULD IMPACT DEEP WELL INJECTION IN SOUTHEAST FLORIDA

Kevin Cunningham, PhD, PG, Research Hydrogeologist, U.S. Geological Survey, NSU Center for Collaborative Research, Carbonate Aquifer Characterization Laboratory, Davie, FL

11:00– 11:40

BOULDER ZONE REVEALED: THE FIRST 3D SEISMIC IMAGES OF THE BOULDER ZONE IN SOUTH FLORIDA

John Jansen, PG, PGp, PhD, Senior Geophysicist/Hydrogeologist, Collier Geophysics, West Bend, WI

11:40 -12:20

EXPANDING AN ACTIVE INJECTION WELL SYSTEM - DO'S AND DON'TS

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

12:20– 1:30 LUNCH

1:30 – 3:20

Session - THE MIAMI DADE INJECTION PROGRAM: (Four presenter panel)

Operations and Management of Large Scale Deep Injection Well Systems

Virginia Walsh, PhD, PG, Chief of Hydrogeology, Miami-Dade Water and Sewer Department, Miami, FL

Technical Design of the Deep Injection Wells

Ed Rectenwald, PG, Water Resources and Hydrogeology National Practice Leader, Black & Veatch Corp., Fort Myers, FL

Integrating Deep Injection Well Program into an Overall WWTP Capital Improvements Upgrades

Gerrit Bulman, PG, Senior Project Manager, Jacobs, Miami, FL

Implementing the Construction of Deep Injection Wells

Neil Johnson, PG, PMP, Senior Principal, Stantec, West Palm Beach, FL

3:20 – 3:35 BREAK

3:35 – 4:15

MODELING OF THE BOULDER ZONE AT A MACRO AND MICRO SCALE

Angela Montoya, PE, Groundwater Modeling Program Coordinator, Miami-Dade Water and Sewer Department, Miami, FL

Vladislav Sumin, Analyst, The Sharpton Consulting Group, Miami, FL

Jorge Restrepo, PhD, Professor Emeritus, Dept. of Geosciences, Florida Atlantic University, Boca Raton, FL

4:15 – 4:55

DEEP WELL INJECTION: LESSONS LEARNED FOR SYSTEM COMPLIANCE, OPERATIONS AND MAINTENANCE

Stewart Magenheimer, PG, Principal Hydrogeologist, CDM Smith, Boca Raton, FL

4:55 – 5:00 WRAP-UP OF DAY ONE

Happy Hour - Yardhouse, 320 San Lorenzo Ave Space 1320, Coral Gables, FL 33146

7:30 – 8:30 REGISTRATION

**8:30 – 8:40
REVIEW OF DAY ONE PRESENTATIONS**

**8:40 – 9:20
FLORIDA KEYS INJECTION WELLS... HINDSIGHT IS 2020**
Michael Alfieri, PG, PHg, CGWP, Principal Hydrogeologist/Director of Hydrogeologic Services, Water Resource Associates, LLC, Tampa, FL

**9:20 – 10:00
NEXT GENERATION FIELD DATA ACQUISITION AND MANAGEMENT FOR LARGE SCALE DEEP INJECTION WELL PROJECTS**
Kevin Malone, Ocean Outfall Legislation Program – Systems Architect, Jacobs Engineering Group, Miami, FL
Anamaria Sarmiento, PG, Hydrogeologist, Stantec, Miami, FL
Manuel Arias, Staff Geologist, HBC Engineering Co., Doral, FL

10:00 – 10:15 BREAK

**10:15 – 10:55
NORTH LEE COUNTY INJECTION WELL 2**
Tyler S. Weinand, P.G., Hydrogeologist, Lee County Utilities, Fort Myers, FL
Wyatt Stutts, P.G., Hydrogeologist, Johnson Engineering, North Fort Myers, FL

**10:55 – 11:35
VERTICAL WELL PROFILING OF WELLS TO DETERMINE DEPTH-DEPENDENT ZONES OF FLOW AND THEIR WATER QUALITY CHARACTERISTICS**
Noah Heller, PG, President, BESST Inc., San Rafael, CA

**11:35 – 12:15
A DRILLER'S PERSPECTIVE: CONSTRUCTING DEEP INJECTION WELLS**
David Webb, Vice-President, All Webbs Enterprises, Jupiter, FL

12:15 – 1:15 LUNCH and CLOSING KEYNOTE SPEAKER

12:15 – 12:30

DEEP WELL INJECTION IN FLORIDA:

“Where does deep well injection fit with state water policy, economic reality and Florida’s environmental issues?”

Brandon D. Tucker, PA, President, The Tucker Group, LLC, Okeechobee, FL



Brandon was born and raised in Okeechobee, a third-generation Floridian, and has resided in Martin County for the past 20 years. From 2017 to 2019 he was a Governing Board Member of the South Florida Water Management District, Appointed by Governor Rick Scott. As a businessman, he has successfully sold over \$550,000,000 in farm and ranch real estate over the past decade throughout South-Central Florida.

1:15 Conference Ends

AMERICAN GROUND WATER TRUST



The AGWT was formed in 1986 as a non-profit education organization with the mission of promoting interest and awareness in groundwater issues. The AGWT’s conference and workshop programs and educational materials:

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

- **Please remember to complete continuing education form (blue) and the evaluation form (coral)**
- **Also..... Please leave your badge holder (we will reuse them at our next event)**
- **Details about downloads of pdf versions of presenter PowerPoints will be e-mailed in the next 10 days**