



Underground Injection Control Conference

Agenda

San Antonio, Texas | February 16-19, 2020

(Last Updated Feb. 13, 2020)

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Sunday, February 16, 2020

3:00 – 5:30

Registration (El Cabildo, 4th Floor)

Monday, February 17, 2020

7:30 -5:00

Registration (El Cabildo, 4th Floor)

7:30 – 8:30

Breakfast Buffet (Veramendi, 4th Floor)

8:30-10:00

Opening General Session (Iberian Ballroom, 5th Floor)

Induced Seismicity
Workgroup
(Los Hidalgos, 3rd Floor)

Moderator: Lawrence Bengal, Arkansas Oil & Gas Commission, GWPC President

- Paul Dubois, Assistant Director for Technical Permitting, Railroad Commission of Texas
- Shawn Bennett, Deputy Assistant Secretary, Office of Fossil Energy, U.S. DOE
- Jennifer McLain, Director, Office of Groundwater and Drinking Water, U.S. EPA

Closed Workgroup Meeting

10:00 – 10:30

Break (Iberian Foyer, 5th Floor)

10:30-12:00

Class II Session
(Iberian Ballroom, 5th Floor)

Class I Session: Technical Issues
(Madero, 5th Floor)

Moderator: Kim Collings, Kentucky Division of Oil & Gas

“Analyses of Step Rate Tests for Estimating Maximum Injection Pressure”
Scott Frailey, UIUC

“Limitations of Step Rate Testing when Estimating Formation Parting Pressure”
Joshua Ticknor, ALL Consulting

Moderator: Lindsay Taliaferro, Ohio Environmental Protection Agency

“Annulus Pressure Monitoring and Control Design for High Pressure Class I Wells with Depths in Excess of 10,000 Feet”
Stephanie Hill, SCS Engineers

“Class I Annulus Monitoring & Workover & Packer Problems”
Tim Jones, WSP USA


	<p><i>"Probabilistic Real-time Induced Seismicity Forecasting Tool: Operational Performance Review"</i> Adam Baig, Nanometrics</p> <p><i>"Hindsight in 2020: A Decade of Seismicity versus HF, SWD, EORI, and CO₂ Injection in Oklahoma"</i> Kyle Murray, Ph.D., University of Oklahoma</p>	<p><i>"Remedial Cementing Options for Class I Wells"</i> Randy Homburg, SCS Engineers</p>	
12:00-1:30	Lunch on your own		
1:30 - 3:00	Produced Water (Iberian Ballroom, 5 th Floor)	Class I: PFAS (Madero, 5 th Floor)	Class VI Work Group (Espada, 3 rd Floor)
	<p><i>Moderator: Shellie Chard, Oklahoma Department of Environmental Quality</i></p> <p><i>"Produced Water Volumes and Management Practices for 2017"</i> John Veil, Veil Environmental LLC</p> <p><i>"Evaluation of Produced Water Reuse Within and Outside the Energy Sector"</i> Bridget Scanlon, Bureau of Economic Geology, University of Texas</p>	<p><i>Moderator: Brandon Kernen, New Hampshire Department of Environmental Services</i></p> <p><i>"Addressing the PFAs Challenge with Class I Wells"</i> Steve Mobley, Buckeye Brine LLC</p> <p><i>"PFAS Regulation – What Does the Future Hold for Class I Wells?"</i> Monte Markley, SCS Engineers</p> <p><i>"Class I UIC Wells to Manage PFAS in Wastewaters"</i> Frank Marine, Texas Molecular</p> <p>Panel Discussion</p>	Closed Workgroup Meeting
3:00 – 3:30	Break (Iberian Foyer, 5 th Floor)		

3:30 – 5:00

Setting Priorities for Produced Water Research (Iberian Ballroom, 5th Floor)	Class V Roundtable (Madero, 5th Floor)	Class VI Work Group (Espada, 3rd Floor)
<i>Moderator: Shellie Chard, Oklahoma Department of Environmental Quality</i> <i>“Produced Water Research Needs and Smart Decision Making for Reuse”</i>	Closed Meeting for States and EPA	<i>(Continued)</i> Closed Workgroup Meeting

6:00 – 8:00

Reception: Mokara Hotel on the Riverwalk

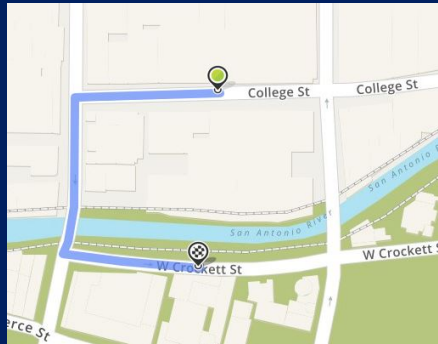


Join us at the Mokara Hotel on the historic San Antonio Riverwalk for a reception at Ostra.

The reception is within walking distance. Business casual attire.

Directions:

- Start out going west on College St toward N Saint Marys St.
- Turn left onto N Saint Marys St
- Turn left onto W Crockett St.
- Ostra, 212 W Crockett St, San Antonio, TX, 212 W CROCKETT ST is on the right.



Tuesday, February 18, 2020

7:30 – 5:00

Registration (El Cabildo, 4th Floor)

7:30 – 8:30

Buffet Breakfast (Veramendi, 4th Floor)

8:30-10:00

CCS: Overviews, Challenges & Opportunities
(Iberian Ballroom, 5th Floor)

ASR-MAR
(Madero, 5th Floor)

Moderator: Bob Van Voorhees, Underground Injection Technology Council

“Meeting the Dual Challenge: An Overview of the NPC Study on At-Scale Deployment of CCUS in the U.S.”

Leslie Savage, Texas Railroad Commission & Susan Blevins, ExxonMobil

“EPA Action Plan for Class VI Geologic Sequestration Permitting”

Kurt Hildebrandt, Bruce Kobelski, Bill Bates, U.S. EPA

“U.S. EPA Class VI Injection Permit: Regulatory, Technical, and Economic Challenges and Lessons Learned from the Wellington, KS, Project”

Tiraz Birdie, Ph.D., TBirdie Consulting, Inc.

“Industry Opportunities for Carbon Capture, Utilization and Storage (CCUS) in the U.S.”

Mike Godec, Advanced Resources International, Inc.

Moderator: Carrie Ridley, Kansas Department of Health and Environment

“ASR and MAR in Texas’ 2017 State Water Plan”

Andrea Croskrey, Texas Water Development Board

“ASR Feasibility in Central Texas”

Brian Smith, Barton Springs/Edwards Aquifer Conservation District

“Statistical Analyses of Successes and Failures of Aquifer Storage and Recovery Systems in the U.S.”

Chi Ho Sham, Ph.D., Eastern Research Group

10:00 – 10:30

Break (Iberian Foyer, 5th Floor)

10:30 - 12:00

CCS: Economics & Characterization
(Iberian Ballroom, 5th Floor)

Moderator: Scott Anderson, Environmental Defense Fund

“Cost of Selecting a Storage Site – Staged Investment to Decrease Risk”

Susan Hovorka, Ph.D., Bureau of Economic Geology, The University of Texas at Austin

“The CO₂ Storage Resource Management System (SRMS): A Project Maturity Based Classification and Categorization of Storable Quantities”

Scott Frailey, Illinois State Geological Survey

“Quality assurance of CO₂ storage - Verification against ISO 27914”

Jørg Aarnes, Ph.D., DNV GL

“Stacked Storage and Tax incentive Impacts on CO₂-EOR Sustainability”

Ramón Gil-Egui, Bureau of Economic Geology, Gulf Coast Carbon Center, University of Texas

ASR-MAR Workgroup
(Madero, 5th Floor)

Moderators:

- *Lorrie Council, Texas Commission on Environmental Quality*
- *Chi Ho Sham, Eastern Research Group*
- *Karen Feret, U.S. EPA*

I. Introduction and GWPC Executive Director Charter

II. Organization - Work Group and Interested Party Group

III. Review of Agenda and San Antonio ASR Field Trip

IV. Texas ASR-MAR Initiatives – First in an ongoing series of spotlights

V. Lightning Round Discussion

1. Status of Data for ASR-MAR Facilities

2. Balancing sustainability with protecting underground source of drinking water from contamination

3. Permits or Permit by Rule for State Approvals

4. Financial Assurance for ASR-MAR Facilities

5. What is new or currently going on with enhanced or managed aquifer recharge

(Activities do not fall under the UIC Program)

6. New Technology and Treatment Advances

VI. Wrap up topics for next meeting and action items

12:00 – 1:30

Lunch On Your Own

1:30 – 3:00

CCS: Permitting, Operations, and MMV
(Iberian Ballroom, 5th Floor)

Injection Well Seminar:
The Basics of Reservoir Engineering as it Applies to Cone-of-Influence, Well Siting, and Injection Interval Formation Evaluation
(Madero, 5th Floor)

Moderator: Mark Bohrer, North Dakota Industrial Commission

Presented By: Ken Cooper, PE
Petrotek Engineering Corporation
Ground Water Research & Education Foundation

ASR/Water Reuse Field Trip – San Antonio Water Systems



Pre-registration & Pre-Paid Ticket Required / Sack lunch & transportation included

	<p><i>“Permitting Commercial Scale Carbon Dioxide Geological Storage”</i> Kevin Connors, UND Energy & Environmental Research Center</p> <p><i>“Life Cycle Well Integrity of CO₂ Storage Wells: Engineering Imperatives for Success”</i> Talib Syed, TSA Inc.</p> <p><i>“Monitoring Geological CO₂ Sequestration Using Perfluorocarbon Tracers”</i> David Graham, Oak Ridge National Labs</p>	<ul style="list-style-type: none"> • Injection Well Background and History • How and Why Injection Wells Function • How Pressure is Integral to the Regulation of Injection Wells – Permits and Petitions • Reservoir Characterization and Testing • Course Review and Discussion <p>Click Here for Course Full Description</p>	<p>Meet in the Omni Lobby at 12 p.m. to board buses to the H2Oaks Center. A box lunch will be served en route to the location.</p> <p>Field trip buses to return at 5:15 p.m.</p> <p>Visiting H2Oaks facility in San Antonio for a tour. Tour will cover water and wastewater history, desalination, aquifer storage and recovery, and water recycling.</p> <p>Tour Links (Click for more Information):</p> <ul style="list-style-type: none"> • View Full Agenda • Desalination Tour Background • Clouse Water Recycling Center Tour Background
3:00 – 3:30	Break (Iberian Foyer, 5 th Floor)		
3:30 – 5:00	<p>CCS: Case Studies (Iberian Ballroom, 5th Floor)</p> <p><i>Moderator: Kevin Connors, UND Energy & Environmental Research Center</i></p> <p><i>“What it All Means: CO₂-EOR Greenhouse Gas Life-Cycle Analysis of 22 Years of Class II UIC Field Operations and Monitoring”</i> Joel Sminchak, Battelle</p> <p><i>“Scaling Up to Industrial CCUS Projects – A Regional Prospective (North Dakota)”</i> John Hamling, University of ND EERC</p> <p>(Continued)</p>	<p>Injection Well Seminar (Madero, 5th Floor)</p> <p>(Continued)</p>	

"Importance and Limitations of using Seismic Reflection Data to Understand the Risk of Induced Seismicity and Reservoir Capacity"

Hannes Leetaru, Ph.D., University of Illinois

"Industrial Waste-Fluid Disposal and Availability of Pore-space: Technical and Regulatory Challenges"

Yevhen Holubnyak, Kansas Geological Survey

6:00 – 8:00

Hotel Reception: Omni (Veramendi, 4th Floor)

Business Casual Attire

Wednesday, February 19, 2020

8:00 -9:00

Registration (Madero Foyer, 5th Floor)

8:00 – 9:00

Continental Breakfast (Madero Foyer, 5th Floor)

8:30 -12:15

NETL National Risk Assessment Program Workshop (NRAP) (Madero, 5th Floor)

This free full-day workshop is hosted by the U.S. Department of Energy's National Energy Technology Laboratory.

- [Full Agenda](#)

Attendees do not have to have a paid registration to the UIC Conference to attend; however, pre-registration is required as space is limited.

Innovative Approaches to Groundwater Evaluation Seminar (Veramendi, 4th Floor)

Brad Cross, WSP (Moderator)

"Mapping Brackish Groundwater in Texas"

John Meyer, Texas Water Development Board

"Arsenic Mobilization during Aquifer Storage and Recovery: Role of Sediment Heterogeneity"

Sarah Fakhreddine, Ph.D., University of Texas at Austin

		<p><i>"Three Decades of Water-Quality Studies in Texas for the National Water Quality Assessment Project"</i> Patricia Ging, USGS, Texas Water Science Center</p> <p><i>"Geophysics-Based Assessment of Groundwater Salinity in Transboundary Aquifers in Doña Ana County, New Mexico, and El Paso County, Texas"</i> Andrew Teeple, USGS, Texas Water Science Center</p> <p>PM Roundup and Panel Discussion</p>
12:00 – 1:00	Break for Lunch	
1:15 – 4:30	NETL National Risk Assessment Program Workshop (NRAP)	
	(Continued)	

Conference Information

The GWPC is offering free Wi-Fi on our conference floor.

Wi-Fi Network: Omni Meeting | Wi-Fi Password: GWPC2020

Parking

The overnight rate for parking at the Omni is \$42.00 + tax. Attendees may also use the city parking garage across the street - Houston Parking Garage (limited availability).



Save the Date for the 2020 Annual Forum!

September 27-30, 2020

Salt Lake City, Utah
Sheraton Salt Lake City Hotel