



2024 PERMIAN BASIN WATER IN ENERGY CONFERENCE AGENDA

WEDNESDAY – March 6, 2024

7:30 AM: Check-In & Breakfast Begins at Bush Convention Center

8:30 AM: Welcome

Becky Spurlock, Ph.D., Senior Vice President of Student Affairs and Enrollment Management, UT Permian Basin

Richard Brantley, Senior Vice President of Operations, University Lands; and 2024 Board Chairman

Bart Cahir, Senior Vice President of Upstream Unconventional, ExxonMobil

Evan Thomas, Chief Executive Officer, Midland Chamber of Commerce

9:00 AM: Update on Produced Water Treatment and Recycling and Reuse Efforts by the CO, NM, and TX Produced Water Consortia

Moderator: Richard Brantley, Senior Vice President of Operations, University Lands; and 2024 Board Chairman

Himali M. K. Delanka-Pedige, Ph.D., Postdoctoral Researcher, New Mexico Produced Water Research Consortium

Shane Walker, Ph.D., Director, Texas Produced Water Consortium

Hope Dalton, Director, Colorado Produced Water Consortium

This panel will provide a summary of recent and emerging research, testing, analysis, and permitting efforts over the past year in these three Western states for produced water treatment recycling, reuse, and discharge. Presenters will highlight recent accomplishments and proposed research, development, testing, and proposed state regulatory efforts in 2024.

9:45 AM: Waves of Progress: A Past, Present and Future Look at Water Reuse in New Mexico

Moderator: Ashley Kegley-Whitehead, Chief Communications Officer, Infinity Water Solutions

James C. Kenney, Cabinet Secretary, New Mexico Environment Department

Meredith Dixon, Representative, New Mexico State House of Representatives

Jennifer Bradfute, Founder of Bradfute Law

Join us for an insightful panel discussion that delves into the dynamic narrative of water reuse – past, present, and future. "Waves of Progress" traces the evolution of water reuse, shedding light on the origin of the Produced Water Act, examining the current challenges and successes since its adoption, and forecasting the potential advancements that await us on the horizon.

10:30 AM: Break

10:45 AM: Cooperation In Action

Moderator: Kelly Bennett, Co-Founder and CEO, B3 Insight

Stefan Hussenoeder, Ph.D., Geoscience Technology Advisor, ExxonMobil

Hannah Chittenden, Senior Staff Geophysicist, Diamondback Energy

Peter Hennings, Ph.D., Research Scientist, University of Texas Bureau of Economic Geology

Doug Klepacki, Chief Geophysicist, Coterra Energy

Aaron Velasco, Ph.D., State Seismologist, Railroad Commission of Texas

Seismicity challenges in the Permian Basin catalyzed a multi-year, cooperative effort to rapidly advance industry understanding of seismicity and identify approaches to mitigate earthquakes in the Basin. The process required an unprecedented degree of collaboration on numerous fronts, engaging saltwater disposal operators, academia, and regulators, and others. This panel will examine the operator-led response to seismicity through the eyes of a group of stakeholders who were deeply involved in these collaborative efforts to coordinate technical, operational, and regulatory resources. The discussion will cover how the process came to be, what results it has yielded, and importantly key learnings along the way as well as their thoughts on frameworks for managing future challenges.



2024 PERMIAN BASIN WATER IN ENERGY CONFERENCE AGENDA

11:30 AM: Lunch

“Water Resilience: Navigating Texas' Water Landscape and Building a Stronger Future”

State Representative Brooks Landgraf, Chairman of the Texas House Environmental Regulation Committee

Rep. Brooks Landgraf, who serves as the Chairman of the Texas House Environmental Regulation Committee, navigates the complexities of produced water and champions groundwater cleanup initiatives. Join Rep. Landgraf as he offers insights into critical water policy issues from the recent Texas legislative session and discusses the transformative potential of the Texas STRONG legislation to explore avenues for funding essential water projects.

1:00 PM: Produced Water + Renewable Energy = Hydrogen

Moderator: Rick McCurdy, Vice President of Sustainability and Innovation, Select Water Solutions

Aurko Dutta, Vice President of Commercial, Swift Current Energy

Michael Dunkel, Energy, Water & Carbon Advisor; Tetra Tech

Zachary Stoll, Ph.D., Research Assistant Professor, New Mexico Produced Water Research Consortium

Brian Weeks, P.E., Senior Director of Business Development, GTI Energy

As the United States and the rest of the globe focus on reaching a carbon neutral status at some point in the future, much of that focus is on replacing conventional fossil fuels with carbon free, and renewable energy sources. One such source of energy is hydrogen which has the potential to greatly reduce greenhouse gas emissions. To incentivize the movement from fossil fuels to hydrogen, the 2023 Inflation Reduction Act includes a maximum \$3.00 per kilogram for plants producing hydrogen without discharging carbon dioxide (CO₂). This session will address upcoming hydrogen projects, water demands of hydrogen production, and the possibility of utilizing brackish or produced water to meet these demands.

1:45 PM: Capitalizing on Change: M&A, Financing, and ESG Alignment

Moderator: Bill Austin, Managing Partner, Daniel Energy Partners

Scott Mitchell, Chief Executive Officer, Deep Blue

Michael Dyson, Co-Founder and CEO, Infinity Water Solutions

David Szmigielski, Executive Director, Wells Fargo Sustainable Finance & Advisory Group

David Miller, Partner, Latham & Watkins

Sustainability hinges on efficiency, and efficiency thrives on consolidation. Join our panel of experts as they discuss mergers and acquisitions, financing strategies and ESG principles in the world of water. Through insightful discussions and real-world examples, attendees will gain valuable insights into harnessing change to drive positive outcomes for businesses, investors and society.

2:30 PM: Break

2:45 PM: Beneficial Reuse Pilot Project Progress - Part 1

Moderator: Shane Walker, Ph.D., Director, Texas Produced Water Consortium

Chris Harich, Ph.D., Chief Operating Officer, XRI

Scott Mitchell, Chief Executive Officer, Deep Blue

Jeff Braune, LEEDS Product Manager, Bechtel

This panel will provide details and status updates on the current beneficial reuse projects ongoing throughout the Permian Basin. As the industry has recognized the need to pivot toward finding beneficial reuses for produced water, several and water midstream companies have begun pilot programs to evaluate the chosen technologies; we will hear these companies on where these pilots stand today and the future for commercial implementation. Topics for discussion: technology and process details, pilot partners (midstream, operator, tech provider), analytical program and results, end use of water, commercial scale plans, economics.



2024 PERMIAN BASIN WATER IN ENERGY CONFERENCE AGENDA

3:30 PM: Break

3:45 PM: Beneficial Reuse Pilot Project Progress - Part 2

Moderator: Shane Walker, Ph.D., Director, Texas Produced Water Consortium

Adrienne Lopez, Research and Development Manager, Texas Pacific Water Resources

Whitney Dobson, Vice President of Beneficial Reuse, Aris Water Solutions

Himali M. K. Delanka-Pedige, Ph.D., Postdoctoral Researcher, New Mexico Produced Water Research Consortium

This panel will provide details and status updates on the current beneficial reuse projects ongoing throughout the Permian Basin. As the industry has recognized the need to pivot toward finding beneficial reuses for produced water, several operators and water midstream companies have begun pilot programs to evaluate the chosen technologies; we will hear these companies on where these pilots stand today and the future plans for commercial implementation. Topics for discussion: technology and process details, pilot partners (midstream, operator, tech provider), analytical program and results end use of water, commercial scale plans, economics.

4:30 PM: Cactus vs. COG Lawsuit

Carroll Martin, Partner, Scott, Douglass & McConnico, L.L.P.

The recent decision in *Cactus Water Services, LLC v. COG Operating, LLC*, 676 S.W.3d 733 (Tex. App. – El Paso July 28, 2023, pet. filed) addresses the issue of who owns the produced water recovered from oil and gas wells after hydraulic fracturing (“fracking”) operations. The oil operator prevailed at trial and in the court of appeals, but the water services company has filed a petition for review with the Supreme Court of Texas. The presentation will cover the case history and legal issues of the Cactus Water Services case, the possible outcomes if the Supreme Court accepts the case and discuss how the Court has analyzed oil and gas issues in recent years.

5:15 PM: Break & Travel Time to Midland Country Club

6:00 PM: Cocktail Hour at Midland Country Club

7:00 PM: Keynote Dinner at Midland Country Club

“It’s a Small World After All: Global Considerations in the Future of the Energy Transition”

John Moon, Ph.D., Managing Director, Morgan Stanley Energy Partners (MSEP)

While global economic and geopolitical factors often loom large in the energy sector, recent events have heightened the relevance of global factors on the U.S. energy industry of late. Geopolitical unrest has required rethinking global supply chains of both critical resources and manufactured goods. Central bank policy and threats to global economic growth raise concerns for energy demand. Armed conflicts represent concerns for both energy supply as well as energy demand. Efforts to reduce greenhouse gas emissions will require decades of global coordination and cooperation. What are the implications for the U.S. energy industry? What specific dynamics are most pertinent to near- and medium-term outlooks for the energy industry? John Moon, Managing Director and Head of Morgan Stanley Energy Partners will offer up his perspectives on the current state of the U.S. energy sector.



2024 PERMIAN BASIN WATER IN ENERGY CONFERENCE AGENDA

THURSDAY – March 7, 2024

7:30 AM: Check-In & Breakfast Begins at Bush Convention Center

8:30 AM: Recognition of Advisory Board Members

Becky Spurlock, Ph.D., Senior Vice President of Student Affairs and Enrollment Management, UT Permian Basin

9:15 AM: “Water Companies with an Oil Problem: Technology Advances and How They Are Applied”

Moderator: Ben Warden, Director of Supply Water, Deep Blue

Lauren Palmer, Production Reporting Manager, Diamondback Energy

Ben Nabors, Superintendent of Field Services, Pioneer Natural Resources

Bryce Reed, Vice President of Water Transfer and Operational Technology, Select Water Solutions

Hayden McEntire, Vice President of Corporate, Engineering, and Integrated Operations, WaterBridge Operating LLC

Water has been a byproduct of the oil and gas industry since its inception. With the prominence of slick-water completions and increasing lateral lengths causing volume needs to increase, produced water is finding new life. Water treatment has given rise to the wide use of produced water in completion programs throughout the oilfield and especially in the Permian. As this byproduct becomes a major supply for most operators, so has the need to track where the water came from and where it is being used or disposed of. The technology being deployed to manage and report water volumes is being upgraded and improved as the industry grows. This panel will discuss automation improvements over the years, how data migrates to the places it needs to be used, and why the data we collect matters.

10:00 AM: “Treated Produced Water: A Potential Game-Changer for Large-Scale Agriculture”

Moderator: Zacariah Hildenbrand, Ph.D., Chief Scientific Officer, Infinity Water Solutions

Adrienne Lopez, Research and Development Manager, Texas Pacific Water Resources

Sid Miller, Commissioner, Texas Department of Agriculture

Mahdi Malmali, Ph.D., Assistant Professor, Texas Tech University

Adam Jacques, Chief Geneticist, AgSense LLC

From logistics and treatment, to the large-scale cultivation of consumptive and medicinal crops, this panel of experts will discuss the opportunities and challenges that are associated with utilizing treated produced water for agricultural applications.

10:45 AM: Pore Space Pressure Vs. Disposal Volume Challenge

Moderator: Robert Crain, Executive Vice President, Texas Pacific Water Resources

Patrick Patton, Vice President of Products, B3 Insight

Ted Wooten, Chief Engineer in the Division of Oil and Gas, Railroad Commission of Texas

Kirby Lindsey, Vice President of Strategic Projects, Oxy

Jon VandenBrand, Vice President of Delaware Basin Commercial Development, Western Midstream

This panel will provide an all-encompassing look at the challenges the industry is facing due to increasing pressures in the shallow disposal formations of the Delaware Basin. Beginning with a dive into pressure data provided by B3 insights, we will then hear how both operators and water midstream companies are dealing with these challenges. Lastly, the RRC will provide updates on how the regulatory authorities are addressing these issues. Topics for discussion: pressure data trends and forecasts, operator challenges of drilling through the DMG, water midstream approach to well spacing, out of basin disposal and commercial contracting, RRC approach to permitted pressure limits, and pending Pressure Response Areas (PRAs).

11:30 AM: Break



2024 PERMIAN BASIN WATER IN ENERGY CONFERENCE AGENDA

11:45 AM: Seismicity Legal Update and Expansion

Paul Tough, Partner; McElroy, McElroy, Sullivan, Miller & Weber LLP

Adam Friedman, Partner; McElroy, McElroy, Sullivan, Miller & Weber LLP

This presentation will cover recent seismic events in Texas, discussing any resulting litigation and regulatory responses related to induced seismic activity. Additionally, updates on proposed changes to Texas Statewide Rule 8, focusing on the overhaul of Water Protection and Oil & Gas Waste Management Rules will be discussed, highlighting significant regulatory issues and comparing proposed changes with current rules. Lastly, the jurisdictional debate over responsibility for plugging wellbores in Texas, including recent regulatory actions and initiatives by landowners and groundwater conservation districts, will be summarized, particularly in relation to Oil Wells, Water Wells, and Form P-13.

12:30 PM: State Land Management Announcement

Richard Brantley, Senior Vice President of Operations, University Lands; and 2024 Board Chairman

Alan McWilliams, Deputy Director of Leasing Operations, Texas General Land Office

12:45 PM: Lunch

"The Texas General Land Office"

Mark A. Havens, Chief Clerk and Deputy Land Commissioner, Texas General Land Office

Navigating the legal and regulatory future of Oil and Gas Development, Produced Water, and Critical Minerals on State Owned Lands.

2:00 PM: Innovations in Water Quality Monitoring: Addressing Emerging Contaminants and Toxicological Measures for Sustainable Reuse

Moderator: Zacariah Hildenbrand, Ph.D., Chief Scientific Officer, Infinity Water Solutions

Aaron Redman, Ph.D., Environmental Scientist, ExxonMobil

Brian Bohm, Environmental Sustainability Manager, Apache

Jason Mothersbaugh, Vice President, WaterTectonics

Join us for a comprehensive look at the cutting-edge advancements in water quality monitoring technologies. Together, we'll delve into the dynamic landscape of emerging contaminants and their implications for environmental and human health. Our panel of experts will navigate through the latest developments in detecting contaminants of concern, discussing their potential impacts on water resources and ecosystems, and examining the pivotal role of toxicological measures in facilitating the safe and sustainable reuse of produced water.

2:45 PM: Break



2024 PERMIAN BASIN WATER IN ENERGY CONFERENCE AGENDA

3:00 PM: Critical Mineral Opportunities

Moderator: Jake Hendricks, Senior Director of Business Development, Renovo Resources LLC

Kyle Murray, Ph.D., Principal Scientist, Murray GeoConsulting LLC

Forest Dorn, President, IoFina PLC

Hood Whitson, Chief Executive Officer, Element3

This panel will outline the geological process through which water co-produced with oil and gas becomes a subsurface brine with elevated concentrations of critical minerals and other elements of interest (EOI). While traditionally disposed of, these wastewaters contain valuable resources crucial for medical, computer, and energy technologies. The pathway for recovery involves assessing commodity markets, characterizing water and waste, computing gross values, and evaluating economically favorable extraction technologies. Ongoing projects focus on characterizing EOI in various water sources, exploring correlations between water quality and EOI concentrations, and identifying produced water resources with the highest potential for recovery.

3:45 PM: Texas & New Mexico Regulatory Updates – RRC – SWR 8

Ted Wooten, Chief Engineer in the Division of Oil and Gas, Railroad Commission of Texas

This summary will provide high-level comments on potential revisions to Texas Statewide Rule 8, as well as an overview of the current state of produced water management.

4:30 PM: Closing