

Community Exposures to Produced Water
The Table Mountain Inn, Golden CO
August 6, 2024

Time	Activity
9:00-9:30	Registration
9:30-10:00	Introductions and Workshop Overview <ul style="list-style-type: none"> • Why a research planning workshop about produced water now?
PANEL 1 10:00-10:45	What is in produced water? <i>Facilitated by G. Hornberger</i> <ul style="list-style-type: none"> • Ryan Hall, NGL Energy Partners, Director, Technical Operations • Aaron Jubb, Research Chemist with the USGS Geology, Energy & Minerals (GEM) Science Center in Reston, Virginia. • Holly Puglis, Research Ecologist with the Columbia Environmental Research Center at USGS • James Rosenblum, CO School of Mines, Assistant Research Prof, WE2ST Water Technology Hub
Q&A 10:45-11:00	
11:00-11:30	Breakout group discussion of Panel 1 charge questions
11:30-12:00	Report back on Panel 1 discussion
12:00-1:00	<i>Lunch</i>
PANEL 2 1:00-1:45	What produced water uses are being contemplated outside of the oil field? <i>Facilitated by N. Warner</i> <ul style="list-style-type: none"> • Hope Dalton, Director, Colorado Produced Water Consortium • Rusty Smith, Executive Director, Texas Produced Water Consortium • Pei Xu, Professor, NMSU, research director of the New Mexico Produced Water Research Consortium
Q&A 1:45-2:00	
2:00-2:30	Breakout group discussion of Panel 2 charge questions
2:30-2:45	<i>Break, coffee</i>
2:45-3:15	Breakout groups report back on Panel 2 discussion
PANEL 3 3:15-4:00	What do we know about the fate and transport of produced water following release to the environment? <i>Facilitated by G. Hornberger</i> <ul style="list-style-type: none"> • Thomas Borch, Professor in the Department of Soil and Crop Sciences, with joint appointments in the Department of Civil and Environmental Engineering, and Department of Chemistry • Isabelle Cozzarelli, Research Hydrologist with the USGS Geology, Energy & Minerals (GEM) Science Center in Reston, VA • Nat Warner, Associate Professor, Civil and Environmental Engineering, Penn State
Q&A 4:00-4:15	
4:15-4:40	Breakout groups discussion of Panel 3 charge questions
4:45-5:15	Report back on Panel 3 discussion
5:15-5:30	Wrap up, review plan for next steps

Community Exposures to Produced Water

PANEL OBJECTIVES AND CHARGE QUESTIONS

Panel 1: What is in produced water?

Objective of Panel 1 – Introduce what is known about produced water, its chemical composition, and treatment options.

Panel 2: What uses are currently being considered for PW outside of the oilfield?

Objective of Panel 2 – Present the uses of produced water outside the oilfield that are proposed or underway, particularly to offset the need for fresh water in water-stressed regions of the western United States.

Panel 3: What do we know about the fate and transport of produced water following release to the environment?

Objective of Panel 3 – Present case studies and general experiences about how constituents of concern found in produced water move in the environment.

Breakout Session Charge Questions:

- *What do we already understand well about produced water composition?*
- *What research is needed to better characterize produced water? Do these research needs differ by location (e.g., state and basin)? Do they differ by anticipated use?*
- *What do we already understand well about produced water treatment options?*
- *Is research needed on treatment options?*
- *Is research needed to better characterize the fate and transport of produced water treated for a given use in the environment? Do these research needs differ by location (e.g., state and basin)? Do they differ by anticipated use?*
- *How might people be exposed to produced water based on anticipated uses and management?*
- *Do you think any of the exposures merit research, and if so, why?*
- *If research proceeds on produced water exposure, how might the community (e.g., ranchers, farmers, and indigenous communities) be engaged?*
- *Have you observed or been involved in produced water research that successfully engaged individuals from the host community (e.g., ranchers, farmers, and indigenous communities)? Do you have recommendations for doing so?*

Community Exposures to Produced Water

Event Information

Date/Time:

Tuesday August 6, 2024
9:00 am – 5:30 pm

Location:

The Table Mountain Inn
1310 Washington Ave, Golden, CO

Parking:

Mountain Inn offers complimentary valet parking to workshop attendees. Overnight valet parking is \$25 per night.

Alternative parking is available around Golden.

<https://www.visitgolden.com/plan-your-visit/getting-here-around/parking/>

Suggested lots and garages (see attached map)– public parking lots are \$2.50/hr, \$10/daily

Arapahoe Lot – Public Parking Lot (\$10 max)

1211 Arapahoe Street, Golden CO

[0.1 miles](#)

South Garage – Public Parking Garage (\$10/max)

1250 Jackson St, Golden, CO

[0.2 miles](#)