

PRODUCED WATER FORUM

OVERCOMING REGULATORY CHALLENGES, BUILDING TRUST

Carol Booth
Water & Energy Policy Director



Ground Water Protection Council

GWPC

The national (U.S.) association of state ground water protection agencies include both water and oil and gas regulatory programs.

Mission

To promote the protection and conservation of groundwater resources for all beneficial uses, recognizing ground water as a critical component of the ecosystem. We provide an important forum for stakeholder communication and research in order to improve governments' role in the protection and conservation of groundwater.

Board of Directors

GWPC Board is comprised of senior state agency managers including representatives of state regulatory agencies responsible for groundwater protection and underground injection activity.

Purpose

To help states fulfill their ground water protection missions.

OUR IMPACT AT A GLANCE

Celebrating our legacy and reach

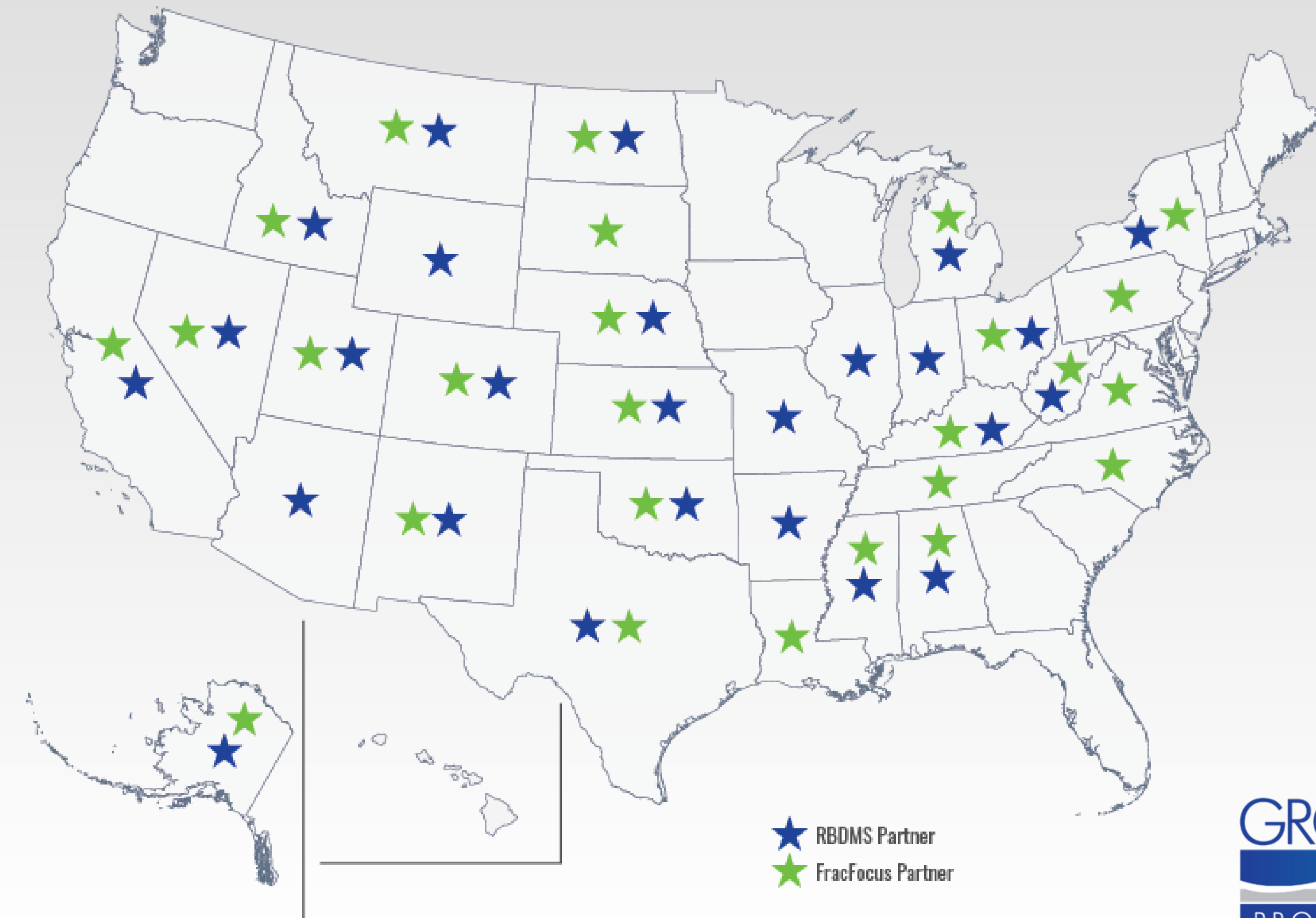


Years in Business



Agencies

RBDMS & FRACFOCUS



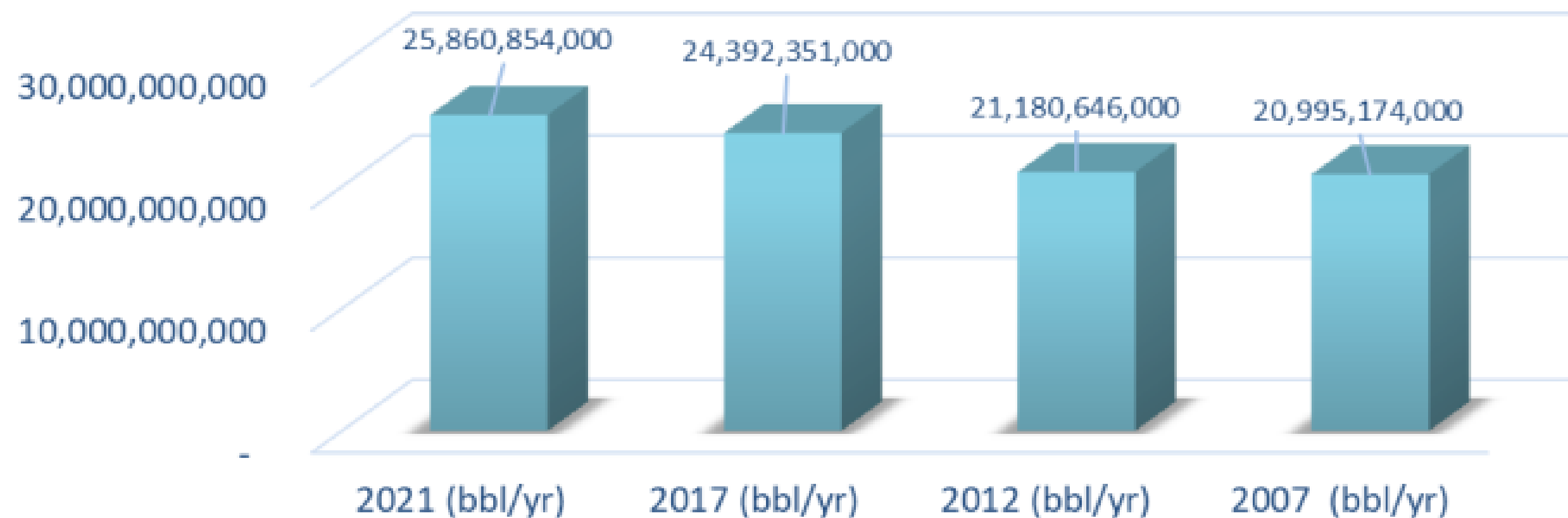
A stylized landscape illustration at the top of the slide. It features three rolling green hills of varying shades of green. A small white sheep is standing on the peak of the leftmost hill. The background is a solid light blue sky.

GWPC's Interest in Produced Water Reuse

By identifying opportunities and challenges of reusing produced water and offering options for addressing them, the GWPC hopes to facilitate the development of produced water as a supplement to freshwater resources and fulfill a part of our mission “to promote the protection and conservation of groundwater resources for all beneficial uses.”

Water Management

U.S. Produced Water Totals Rounded By Study Year



Produced water totals (2007, 2012, 2017, 2021)

Source: Data for chart from GWPC Produced Water Volumes and Management Practices Report Update 2021

WATER MANAGEMENT

The Ground Water Protection Council “***Produced Water Volumes and Management Practices***” 2021 report update evaluated the state of water management and potential for beneficial reuse outside of oilfield operations (https://www.gwpc.org/wp-content/uploads/2021/09/2021_Produced_Water_Volumes.pdf).

The key findings included approximately 25.8 billion barrels of produced water (*2.9 billion gallons per day*) were generated in 2021. Most of the produced water, nearly 96%, was disposed of by subsurface injection into 25,000 to 30,000 feet deep disposal wells (*approximately 20% of Class II wells*) in oil and natural gas producing regions.

Produced Water Totals (2007, 2012, 2017, 2021)

Source: Data for chart from GWPC Produced Water Volumes and Management Practices Report Update 2021

GWPC PRODUCED WATER TASK FORCE

Current task force:

Co-chairs from Wyoming Oil and Gas Commission and Oklahoma Department of Environmental Quality

Multi-stakeholders:

State oil & gas and water quality regulators, Environmental NGO's, Industry, Academics

Goals:

- To identify opportunities and challenges associated with utilizing produced water as a resource
- To provide information that policy makers, researchers, regulators and others can use to address these opportunities and challenges

GWPC PRODUCED WATER REPORT

MODULE 01

Regulatory & Legal Frameworks

This module describes the current legal and regulatory frameworks that address produced water. It also addresses changes that may need to occur to facilitate the use of produced water.

Leadership:

John Baza, Utah Division of Oil, Gas & Mining
Shellie Chard, Oklahoma DEQ, Water Quality

MODULE 02

Produced Water Use in the Oilfield

This module describes the current uses and potential future uses of produced water inside the oilfield. It defines the existing constraints of use and identifies the opportunities and challenges of expanded use.

Leadership:

Tom Kropatsch, Wyoming Oil & Gas Commission
Scott Kell, Ohio Department of Natural Resources

MODULE 03

Produced Water Use & Research Needs Outside the Oilfield

This module describes current and potential use of produced water outside the oilfield and identifies the research needs that will need to be addressed to facilitate expanded use.

Leadership:

Ken Harris, California Department of Conservation
Nichole Saunders, Environmental Defense Fund

Recent state survey

Who has rules/regulations on Produced Water?

Alabama	Yes
Alaska	Yes
Arkansas	No
California	Yes
Colorado	Yes
Georgia	No
Kansas	Yes

Louisiana	Yes
Idaho	No
Indiana	Yes
Kentucky	Yes
Massachusetts	No
Michigan	Yes
Missouri	No
Montana	Yes

Nebraska	No
New Mexico	Yes
New York	Yes
Ohio	Yes
Oklahoma	No
Texas	Yes
Utah	Yes
Wyoming	Yes

STATES' REUSE: CURRENT AND POTENTIAL

California: Irrigation and wastewater treatment

Ohio: Brine is permitted for control of dust or ice but not from horizontal shale wells.

New York: Brine may be spread for dust suppression on roads. Discussions surrounding critical minerals or agricultural reuse.

Montana: Agriculture

Oklahoma: Agriculture, irrigation, concrete mixing, dust control, toilet/urinal flushing, fire protection systems, equipment washing.

Wyoming: Discharge for agriculture and wildlife

PRODUCED WATER FORUM

May 20 – 21 | Oklahoma City

- Two venues
- Four sessions
- 90 attendees



GROUNDWATER PROTECTION COUNCIL

**PRODUCED
WATER**
—FORUM—

PRODUCED WATER FORUM



1. RESEARCH SESSION

Adam Wygant, Zach Stoll,
Shane Walker, Marcus Drogen

2. COOPERATIVE FEDERALISM

Shane Khoury, Tom Kropatsch,
Peggy Browne, Brenda Yountkin,
Patrick Crowder

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3. REGULATORY FRAMEWORK

Shellie Chard, Rosa Romero,
Paul Dubois, Jonas Armstrong,
Jason Thomas, Taimur Shaikh

4. END USER POTENTIAL

Rick McCurdy, Nyle Khan, Eric
Bernard, Jason Thomas, Bud
Ground



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FEATURED SPEAKERS

Marilu Hastings, Executive Vice President, Cynthia and George Mitchell Foundation

- Community and Social Implications of Produced Water

Doug Klepacki, Chief Geoscientist, Devon Energy

- NPC Produced Water Study Update



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COLLABORATION

Question 1: What can agencies do to advance produced water reuse?

Question 2: How do we move produced water from a problem to a hero?

Question 3: What steps can we take to improve public perception around produced water?

Question 4: What are ways the Consortia or research universities can help move the needle?



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Theme	Recommended Action
Regulatory certainty and standards	Develop end-use-based water quality standards, clarify agency roles, align state and federal pathways, and create demonstration pathways that can operate outside full commercial requirements while still protecting health and the environment.
Demonstrations and local proof points	Prioritize a portfolio of highly visible pilots in communities with water stress or land restoration needs, then document before-and-after results using plain-language public materials.
Public trust, transparency, and education	Create a trust-building communications program that includes third-party verification, monitoring dashboards, incident-response transparency, and community-specific messaging.
Independent science and research translation	Convert research into usable regulatory and public materials: one-pagers, fact sheets, standards recommendations, toxicity summaries, and decision tools for lawmakers and regulators.
Economic and market development	Develop a market strategy that matches local produced water supply with nearby demand, identifies paying users, estimates treatment and transport economics, and uses incentives to reduce first costs.

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Question 1: What can agencies do to advance produced water reuse?

Overall finding: Respondents want agencies to move from general support to a clear, durable implementation framework. The most important agency role is to create certainty: standards, liability clarity, agency authority, collaboration, and practical pathways for pilots and end uses.

Question 2: How do we move produced water from a problem to a hero?

Overall finding: Respondents believe produced water becomes a “hero” when it visibly solves local problems. The strongest ideas centered on community-specific beneficial reuse, land and habitat restoration, drought resilience, economic development, and replacing negative language with opportunity-focused framing.

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Question 3: What steps can we take to improve public perception around produced water?

Overall finding: Public perception depends on trust, understandable science, visible proof, and credible messengers. Respondents repeatedly asked for plain-language education, transparency, community engagement, safety protocols, independent validation, and demonstrations people can see.

Question 4: What are ways the Consortia or research universities can help move the needle?

Overall finding: Respondents see consortia and universities as essential third-party validators, translators, and conveners. The strongest role is not only to produce research, but to convert research into standards, public trust, policy support, and scalable demonstrations.

PRODUCED WATER NEXT STEPS

GWPC ANNUAL FORUM

- **Work groups: Regulatory and Communications**

PRODUCED WATER REPORT UPDATE

GWPC ANNUAL FORUM

**September 15-17, 2026
Anaheim, California**

<https://www.gwpc.org/event/2026-annual-forum/>

CONTACT US

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