



**UT Permian Basin**  
College of Engineering

## Texas Water and Energy Institute Virtual Water Lecture Series

### The University of Texas Permian Basin

Friday, November 6  
10:00 am - 11:30 am  
Virtual Link: [Link in the Bio](#)

**Registration required!**  
Email [twei-info@utpb.edu](mailto:twei-info@utpb.edu) or call  
(432) 552-3430

### + Presenting

### Topic: Recycle and Reuse of Produced Water – Current Technical and Regulatory Issues and Challenges

The quantity of produced water resulting from oil and gas exploration and development can be significant and the vast majority of this wastewater is disposed via underground injection wells. However, alternatives to underground injection including recycle back into the oil and gas well development process (sometimes requiring little to no treatment), or potentially reuse outside the oil and gas operations, or discharge (all requiring robust treatment and elevated levels of monitoring) are being considered – or in the case of recycle, being implemented to a greater extent.

Addressing potential adverse impacts from produced water recycle are straight forward. Since this practice requires greater amounts of produced water be storage and transported, engineering controls and process must be in place to minimize leaks and spills, and to rapidly identify and address leaks and spills when they do occur. Reuse outside oil and gas operations, or potential intentional releases to surface waters or groundwater present a higher level of risk to human health and the environment requiring significantly more complex engineering, monitoring, and regulatory oversight to address potential adverse impacts.



Water lecture series

LECTURE SERIES

# Dan Muller

## ABOUT THE SPEAKER

Dr. Dan Mueller is a registered professional engineer with 40 years of experience in the environmental field encompassing water resource assessment, management, and policy. This includes surface water and groundwater hydrology, water and wastewater treatment, use of alternate water supplies, and water conservation. With degrees in aquatic biology (B.S.) and civil engineering (B.S. and M.S.) his experience includes projects driven by a wide range of regulatory programs water resource management issues.