

Technical Workshop on Water Acquisition Modeling: Assessing Impacts Through Modeling and Other Means

June 4, 2013

US EPA Conference Center at One Potomac Yards
Arlington, VA

June 4:

- 8:00 am **Registration/Check-in**
- 8:30 am **Welcome and Introductions** *Ramona Trovato, US EPA*
- 8:40 am **Opening Remarks** *Glenn Paulson, Science Advisor, US EPA*
- 8:45 am **Purpose of Workshop** *Workshop Co-Chairs:
Jennifer Orme-Zavaleta, US EPA
James Richenderfer, Susquehanna River Basin Commission*

Session 1: Data on Water Acquisition and Water Recycling/Reuse

- 8:55 am **Panel:**
- **Water Acquisition: Analysis of Existing Data** *Andrew Gillespie, US EPA*
 - **Sources of Data for Quantifying Hydraulic Fracturing Water Use in Texas**
..... *J-P Nicot, University of Texas at Austin*
 - **Water Acquisition for Unconventional Natural Gas Development Within the Susquehanna River Basin**
..... *James Richenderfer, Susquehanna River Basin Commission*
 - **Recycling and Reuse of Produced Water to Reduce Freshwater Use in Hydraulic Fracturing Operations**
..... *Matthew Mantell, Chesapeake Energy Corporation*

Questions of Clarification

Break (10 minutes)

Facilitated discussion among workshop participants focusing on key questions:

- What existing sources of data could be used to better understand the effects of hydraulic fracturing water acquisition on water system availability?
- What are key attributes of a scientifically robust approach to measuring and monitoring hydraulic fracturing water use and disposition?
- What is the current state of industry practice with respect to recycling/reusing water for hydraulic fracturing operations?
- What are the long-term lifecycle implications and regional trends of recycling/reusing water in hydraulic fracturing operations?

- 11:45 am **Summary of Session 1** *Workshop Co-Chairs*
- 12:00 pm **Lunch and Poster Session**

Session 2: Hydraulic Fracturing Water Acquisition and Water Availability Modeling Approaches

1:15 pm

Panel:

- **Evaluating Scenarios of Potential Impact of Water Acquisition**Stephen Kraemer, *US EPA*
- **Mapping Water Availability and Cost in the Western United States** Vincent Tidwell, *Sandia National Laboratory*
- **Integrated, Collaborative Water Research in Western Canada** Ben Kerr, *Foundry Spatial Ltd.*
- **Water Needs and Availability for Hydraulic Fracturing in the Bakken Formation, Eastern Montana**
..... Mitchell Plummer, *Idaho National Laboratory*

Questions of Clarification

Break (10 minutes)

Facilitated discussion among workshop participants focusing on key questions:

- What would a more generalized, conceptual model look like for assessing hydraulic fracturing impacts in different areas of the US and at different scales?
- What factors should be included in a generalized model?

3:45 pm

Summary of Session 2..... *Workshop Co-Chairs*

3:55 pm

Closing Remarks..... *Ramona Trovato, US EPA*

4:00 pm

Adjourn

Poster Session

Water and Energy Simulation Toolset (WEST)

Robert Jeffers, Idaho National Laboratory

Utilizing Produced Water as a New Water Resource

Andrew Stewart, Energy Water Solutions, LLC