

## Roundtable V.3 on the Economics of Innovating Water in the Oil & Gas Sector: Next Steps and Action Plan

November 14 2016 | 9:00am to 2pm | Baker Institute-Rice University

co-hosted with



### Statement of Purpose and Driver for Roundtable:

**"...to make Texas the lowest cost location for water management in the oil and gas sector..."**

### Immediate Actions:

- Form an ***Industrial Advisory Consortia*** comprised of SVP and above water management representatives of Texas/National E&Ps to advise and assign specific tasks to short-term working groups on "optimization of the water management value chain" in certain geographies, evaluation and demonstration of technology innovations, economics and price point impact, and data simulation-modeling to share knowledge and real-time insight;
- Form ***Demonstration & Commercialization Technology Test-Bed Working Group*** to create a clearinghouse AND the baseline of product and integrated solution outcomes to address Industrial Advisory Consortia's highest common inputs and interests for the Innovative Water Technology Demonstration Hubs in the Eagle Ford and Permian Basins, leading to more efficient technology development, investment, and deployment based on economics along the entire water management value chain;
  - Note: AccelerateH2O is currently capturing over 200+ technology products and solutions in 30+ categories of water sourcing, use, treatment, disposal, reuse, logistics, and operations to determine what would be a common proven and vetted 'toolbox' for water managers, and lead to a short-list for demonstration evaluation and assessment on quantity, quality, and economic factors
- Form ***Data Simulation and Modeling Working Group*** to inventory, connect, and establish a simplified platform of historical, current and projected water management information, leading to a more robust set of information for decision-making, resource allocation, and water-market opportunities
- Identify appropriate ***communications and engagement for sharing success stories, breakthroughs, and near-term effects on water technology, innovation, and economic impacts***, including the Texas Water Innovation Clearinghouse and/or affiliated networks of existing organizations, institutions, and interests;
- Host a ***Roundtable V.3 – comprised of representatives from the Consortia and two working groups – on November 14 2016 at the Baker Institute*** for a half-day, highly structured agenda to advance specific answers, implementation, and milestones for achievement in 2017.

INVITATION ONLY SESSION

## Roundtable V.3 Agenda

9:00am-9:30am	Registration, Coffee and Introductions (*)
9:30am-10am	Recap of V.2 Findings and Recommendations Linda Capuano, Baker Institute, Center for Energy Studies Richard Seline, AccelerateH2O
10am-10:30am	Review of Technology Assessment, Process, and Initial Findings Morris Hoagland, Produced Water Society Dustin Brownlow, Texas Water Solutions Management Group
10:30am-11:15am	Scoping the Critical Activities for Demonstrations – Common Interests Richard Seline, AccelerateH2O
11:15am-Noon	Defining “Hyper-Local Markets” and Unique Strategies for Addressing Economics Piers Wells, Digital H2O - Discussant Paul Choules, Water-Cycle - Discussant
Noon-1:30pm	Working Lunch – Breakout Rooms by Self-Assignment <ul style="list-style-type: none"><li>• Industrial Advisory Consortia – E&amp;P Representatives Only</li><li>• Test-Bed Working Group</li><li>• Data Simulation and Modeling Working Group</li></ul>
1:30pm-2pm	Implementation Planning for Remainder of 2016, 1 <sup>st</sup> Quarter 2017 Review Proposed Communications, Engagement Strategy

(\*) Joining remotely: Conference Call Dial-In USA (641) 715-0700 Access Code 634478

### **Roundtable Objectives:**

1. Capture current activities underway in the produced-water technology, engineering, investment, and overall water marketplace – what are success stories, what are ongoing challenges?
2. Capture barriers and limitations that need immediate attention – either from mutual interest of the private sector or encouragement, partnership from public sector (note: we are NOT proposing legislation nor rule-making).
3. Capture specific requirements, necessary actions, incentives to encourage the market for new water from treatment, recovery, reuse
4. Propose a framework for hyper-local markets for recovered water – how can all aspects of the marketplace come together in a certain location to prove out recovery-delivery-discharge pricing

### **Questions for Consideration in Addressing Objectives:**

1. We know that there are many technologies that will clean produced, impaired water from the conventional and unconventional fields to a level of potable standards, if not better – but not at \$10,000 a barrel per se! Identifying a baseline of standard for the marketplace, regulatory approval, and engineering – what precisely are the qualities and quantities required for meeting current and future market demand and price?
2. As expected recovery occurs in the oil and gas sector in 2017, water demand in certain regions will increase and/or become challenged, what are E&Ps, investors, and others doing now to address these issues – and going forward, what would be necessary, assistive from the technology, engineering, and investment communities?
3. We know that the Oklahoma scenario for seismicity and quantity issues are raising flags for both the industry and regulators – and that SWDs are under pressure to determine their future roles as a water-generator versus disposal. If disposal options emerge or become limited, what will incentivize or encourage reuse, reclamation, recovery?
4. Alternative uses of recovered water include agriculture, non-energy industrial, and possibly donation into bed and banks through partnership with municipalities or river authorities under “beneficial use” – what can the market place, investors, entrepreneurs do to open these additional opportunities – and are E&Ps, operators interested in partnering or going down similar paths?
5. Demonstration of integrated solutions, best practices, and technology products and services could advance breakthroughs, prove out effectiveness, as well as spark hyper-local water markets - AccelerateH2O is looking for guidance on serving consortia of E&Ps, operators, entrepreneurs, technology firms, and investment interests. What are scopes of mutually beneficial demonstrations that will accelerate the above answers, resolve challenges, and generate “new” water?
6. What are complimentary, positive actions that public utilities, authorities, agencies, should take to unleash the best of the private sector to address these issues, challenges, and market opportunities?