

Produced Water and the Oilfield Boundary:

Maximizing New Mexico's Water Recycling Capabilities

The Goal:

- Creating an environment that promotes oilfield water recycling
 - Promoting injection alternatives
 - ► Identifying outlets for re-use
 - ► Agriculture, manufacturing, technology
 - ▶ Building a new economic driver for New Mexico

The Method:

- Using technological advances
 - Produced water can be treated to secondary drinking water standards in other states where incentives exist
 - ➤ The development of disposal alternatives and the commoditization of what is currently classified as a waste product in New Mexico is possible
 - ► Multiple opportunities exist for re-use, including reintroduction into the hydrologic cycle

Challenges to Recycling:

- Multiple jurisdictions and New Mexico's "Checkerboard"
 - ▶ Difficult to maximize economies of scale
 - Diverse ownership impedes development of large-scale projects
 - ► Transportation access is critical yet uncertain
 - Regulatory uncertainty via multiple agencies, highly discretionary approval processes

Challenges to Recycling:

- Regulatory impediments
 - Conflicting agency directives impact operational flexibility
 - >Agency fresh water protections in direct conflict
 - ► Unclear jurisdictional environment
 - ► Lack of incentivization
 - Very limited ability to use recycled water outside of the oilfield
 - ► Cost inefficiency is the natural result

The Solutions:

- Regulatory improvements
 - Agency rule changes to allow produced water to be used for industrial uses outside of the oilfield
 - Cooperative agency approaches to permitting facilities and associated infrastructure on a project level
 - ► The creation of a favorable regulatory environment for recycling projects on a regional basis

The Opportunity:

- New Mexico can proactively lead the way on this critical issue
 - ► Oil and gas operations can convert from net users to net suppliers of water
 - Although the industry uses only approximately 1% of industrial water in the state, the ability to supply other industrial sectors in New Mexico could incentivize co-location of manufacturing and renewable energy projects

