

New Mexico and Southwest Regional Forum on Reclaiming Produced/Brackish Water for Beneficial Uses

Forum Summary

As the ability of available fresh water supplies to meet ever growing water demands becomes an increasingly critical issue, municipalities and industries are turning to non-traditional water resources, such as brackish surface or ground water, to supplement limited fresh water supplies. This is increasingly common in New Mexico and the Southwest where oil and gas companies are showing interest in projects to reclaim brackish produced water for beneficial reuse and where several water utilities and municipalities are investigating the treatment of brackish ground water for municipal supplies. Of the many solutions being put forth to alleviate New Mexico's water problems, reclaiming brackish water is one of the few approaches to create a **new** source of water.

To provide technical and programmatic information on brackish water desalination and produced water reclamation projects in the Southwest, a **New Mexico Forum on Reclaiming Produced/Brackish Water for Beneficial Uses** was held, July 22nd and 23rd on the campus of the New Mexico Junior College, in Hobbs, New Mexico. The forum sponsors included the Water Reclamation Committee of the Lea County/Carlsbad Soil and Water Conservation Districts, the Eddy/Lea Regional Commission, Sandia National Laboratories, The Petroleum Recovery Research Center at New Mexico Tech, and the Water Resources Research Institute at New Mexico State University.

The goals of the Forum were to:

- Provide information on the national direction in desalination and produced water reclamation research and New Mexico's potential role,
- Acquaint interested parties, (producers, government/legislators, resource management agencies) with past, current, and future activities to reclaim brackish water within New Mexico,
- Discuss new and emerging technologies for brackish water treatment, and
- Identify ways to enhance the coordination, support, and ability to leverage future desalination and brackish water treatment projects in New Mexico and the Southwest.

It was hoped that the Forum would result in better coordination of support for future desalination and produced water reclamation projects in New Mexico and the Southwest. Attendance was excellent with approximately 150 people attending the Forum.

The Forum was two parts, 1) a set of presentations on brackish and produced water treatment research and development and water reuse projects and 2) a public forum and discussion of interests, support, and needs required to help accelerate the evaluation and implementation of cost effective desalination technologies. The presentations covered the first and early part of the second day of the Forum. Seventeen presentations were given covering a wide range of desalination and produced water treatment studies and research. The Bureau of Reclamation gave the keynote address, discussing the recent

expansion of the U.S. desalination program and the recently completed national desalination technology research roadmap. Other presentations covered a wide range of topics including brackish water resources and recent brackish aquifer studies in New Mexico and surrounding states; produced water treatment and desalination studies in New Mexico and West Texas; brackish water treatment and water reuse facilities under construction and investigation in Rio Rancho, Alamogordo, and El Paso; produced water reuse studies for agriculture and electric power generation applications in southeastern and northwestern New Mexico, and desalination research in New Mexico and Texas.

An open discussion session was included on the morning of the second day. The purpose of this open discussion was to collect ideas on ways to support an initiative to enhance consideration and application of the reclamation and reuse of brackish and produced waters. The attendees broke into three groups with each group identifying their top four or five main issues associated with accelerating utilization of brackish and produced waters. The recommendations of the three groups were surprisingly similar and included:

- Addressing liability issues
- Education of the public to benefits and issues of water reclamation and reuse
- Broadening economic incentives for produced water reuse
- Improve characterization of brackish and produced water resources
- Reduce or eliminate overlapping jurisdictional control of treated waters
- Improve technology capabilities and applications
- Develop a steering committee to maintain momentum on desalination and produced water treatment and reclamation

The attendees agreed to help the initial efforts of the formation of a steering committee. They agreed a body was needed to help represent statewide produced/brackish water interests to the public and to all levels of government (legislators, executives, regulators). They also identified the groups that should be represented on the steering committee including representatives of:

- Oil and gas producers
- Municipalities
- Universities and research institutions
- Agriculture
- Industry
- Resource Managers

A three person executive committee was formed to help establish this steering committee. The volunteers included Will Palmer of the Water Reclamation Committee of the Lea County/Carlsbad Soil and Water Conservation Districts, Frank Yates Jr. of Yates Petroleum, and Bobby Creel of the New Mexico Water Resources Research Institute. Their role is to contact representative stakeholder groups and identify potential steering committee participants. Expected stakeholders will include organizations such as the New Mexico Oil and Gas Association, Independent Producers Association of New Mexico, the Municipal League, the New Mexico Association of Counties, Soil and Water Conservation Districts, Oil Conservation Division of NM Energy Minerals and Natural Resources, etc. The executive committee is to complete this effort by early September

2003 at which time the steering committee would be constituted with the cooperation and support of the New Mexico Water Resources Research Institute and the Petroleum Recovery Research Center. For example, the NM WRRI has agreed to maintain information on the steering committee efforts on their web site at wrri.nmsu.edu and to host the steering committee meetings at their facility at New Mexico State. Additionally, the NM WRRI has posted all of the Forum presentations and discussions on their web site.

The Forum not only provided information to participants from across the state on the wide range of brackish and produced water reclamation and reuse efforts underway, but also provided an important start in unifying support for produced/brackish water reclamation interests of New Mexico. With continued dedication on the part of the organizers of the forum and the attendees, New Mexico has an opportunity to become a national and international leader in the utilization and reclamation of nontraditional water resources, such as brackish and produced water, for beneficial uses.