

Gulf Coast Authority Investigates Industrial Water Management and Reclamation for Permian Basin

The Permian Basin in West Texas is a major producing area for oil and gas, accounting for 14 percent of total annual petroleum production in the United States.

The Gulf Coast Authority (GCA) has been awarded a grant by the U.S. Bureau of Reclamation to study the feasibility of developing regional water recycling infrastructure to provide water for industrial use—including oil and gas exploration and production—in the Permian Basin. The conceptual approach is to build one or more facilities that would receive non-potable water from various sources, such as flow-back water from fracking, produced water from the operation of oil wells, brackish groundwater, treated municipal wastewater, and, possibly, water recovered from salt water disposal well fields. GCA would treat and blend water from these sources to provide water with a quality suitable for industrial use—including fracking and water flooding to enhance oil production—and then redistribute the reclaimed waters to industrial users. Transportation of water to the treatment facility and then on to the location of reuse would be by pipeline.

The potential benefits of such a system include the following:

- Additional water supply in a water-short area;
- Reduction of industrial demand on water suitable for potable use;
- Additional capacity for salt-water disposal; and
- Reduction in truck traffic on area roadways

The grant from the Bureau of Reclamation is for \$150,000 and is being matched by a \$150,000 grant from the Odessa Development Corporation. The primary investigator for the study is Dr. Peggy Glass of Alan Plummer Associates, Inc. For more information about GCA, please visit our web site at www.gcwda.com.