DESALINATION OF BRACKISH WATER AND DISPOSAL INTO WATERFLOOD INJECTION WELLS

Lead Organization:	Texas A&M University
Key Contact:	David Burnett
	(979) 845-2274, burnett@spindletop.tamu.edu
SWC Co-funding:	$105,103

A joint venture has been created to design and operate a pilot project for inland brackish ground water desalination with disposal of byproducts into an operating oil field waterflood. The city of Andrews, Texas, in cooperation with the Texas Water Resources Institute is planning this two year, $425,000 pilot demonstration to show the feasibility and the cost effectiveness of brackish ground water (BGW) desalination as a potential source of fresh water for the community. The U.S. Bureau of Reclamation is being asked to fund $270,000 of the cost.

The SWC is being asked for an additional $105,103 for the project to fund operations relating to the oil field brine disposal operation. The Andrews pilot demonstration will use the mobile Texas A&M desalination unit which will be modified to desalinate the BGW. We will utilize oil field disposal of the concentrate from the reverse osmosis (RO) process as a cost savings option.

ExxonMobil has agreed to incorporate the concentrate into its makeup water in the Means Field Water flood operation. SWC funds will allow our A&M team to coordinate the desalination activity with the operator and to monitor the mixing characteristics of the RO concentrate with waterflood brine and to ensure safe and proper operation. ExxonMobil will realize a cost savings because of lowered make-up water requirements. Finally, the Texas Commission on Environmental Quality has given approval to the project and will issue an authorization for this type of disposal operation. This is the very first authorization of this type in the nation.