

DEVELOPING BRACKISH GROUNDWATER FOR INLAND DESALINATION

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Texas is at the forefront in identifying alternative water supplies and implementing projects to prove innovative approaches. The Texas Water Development Board (TWDB) is a water-planning agency that prepares the state water plan every five years, finances various water-related projects, and collects water resource data. In 2015, the 84th Texas Legislature passed a couple of bills that appropriated funds to the agency to support innovative projects. House Bill 30 directed the TWDB to identify and designate brackish groundwater production zones in aquifers of Texas by 2022. TWDB will complete this work through the Brackish Resource Aquifer Characterization System program that maps and classifies brackish groundwater in the aquifers. Using water well data and geophysical well logs, the staff maps the geologic structure of an aquifer, estimates the salinity of water in the aquifer, and enters the project information into the BRACS Database that the TWDB developed to store and analyze the information. These studies are of great value as the entire aquifer is characterized and the scientific work can be used by entities considering brackish groundwater desalination. Another bill directed the TWDB to fund feasibility studies and demonstration projects to prove aquifer storage and recovery. TWDB funded three groundwater conservation districts that will drill new test wells and convert existing wells. The projects will conduct geochemical analysis and pump tests and collect data that will advance the implementation of a full-scale aquifer storage and recovery system.