OUR MISSION

To provide leadership, information, education, and support for planning, financial assistance, and outreach for the conservation and responsible development of water for Texas.
TWDB provides funding for projects that research, educate, demonstrate, and implement proven best management practices to conserve water and increase irrigation water use efficiency.
IRRIGATION: 9 million acre-feet on about 6 million irrigated acres

EFFICIENCY: Individual Ag producers can achieve up to 98 percent irrigation efficiency with their irrigation systems

EDUCATION: Technical assistance, public speaking, and outreach to Ag communities

FUNDING: TWDB has provided over $100 million in Ag Grants and Ag Loans since 1985
Texas Tech University, Texas A&M AgriLife, High Plains Water District, Irrigation Equipment Dealers, Crop Consultants & Agricultural Producers in the Southern High Plains

→ Mission: To conserve water with practices and technologies that reduce depletion of groundwater while enhancing economic opportunities

www.tawc.us
3-4-5 Gallon Production Maximization

→ Participants apply variable rate irrigation to simulate 3, 4, and 5 gallons-per-minute (GPM) per-acre conditions in side-by-side, production-scale demonstrations.

→ $197,313 in grant assistance provided by TWDB
Texas Natural Resource Information System (TNRIS) helped plot the route using Geographic Information System (GIS) data to analyze the surrounding terrain, enabling a rancher to move cattle to higher ground.

*Dayton, Texas*
REGIONAL WATER PLANNING GROUPS

Region O

Region A

- Local Political Subdivision serves as administrator
- Public, consensus-driven
- Local/regional decision making process

Region F
<table>
<thead>
<tr>
<th>Voting Region</th>
<th>First Name</th>
<th>Last Name</th>
<th>Entity</th>
<th>Interest County</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Ben</td>
<td>Weinheimer</td>
<td>Texas Cattle Feeders Association</td>
<td>All counties</td>
</tr>
<tr>
<td>A</td>
<td>Joe</td>
<td>Baumgardner</td>
<td>Farmer</td>
<td>Collingsworth</td>
</tr>
<tr>
<td>A</td>
<td>Janet</td>
<td>Tregellas</td>
<td></td>
<td>Lipscomb</td>
</tr>
<tr>
<td>B</td>
<td>Wilson</td>
<td>Scaling</td>
<td>Clay County Commissioners Court</td>
<td>Clay</td>
</tr>
<tr>
<td>B</td>
<td>Dale</td>
<td>Hughes</td>
<td>W.T. Waggoner Estate</td>
<td>Wilbarger</td>
</tr>
<tr>
<td>C</td>
<td>Tom</td>
<td>Woodward</td>
<td>Broseco Ranches</td>
<td>Wise</td>
</tr>
<tr>
<td>D</td>
<td>Dennis</td>
<td>Hilliard</td>
<td></td>
<td>Van Zandt</td>
</tr>
<tr>
<td>D</td>
<td>David</td>
<td>Nabors</td>
<td>RWPG</td>
<td>Lamar</td>
</tr>
<tr>
<td>D</td>
<td>Johnny Mack</td>
<td>Bradley</td>
<td></td>
<td>Marion</td>
</tr>
<tr>
<td>D</td>
<td>Bob</td>
<td>Staton</td>
<td></td>
<td>Smith</td>
</tr>
<tr>
<td>E</td>
<td>Rick</td>
<td>Tate</td>
<td>Presidio County Rancher/Agriculture</td>
<td>Presidio</td>
</tr>
<tr>
<td>E</td>
<td>Tom</td>
<td>Beard</td>
<td></td>
<td>Brewster</td>
</tr>
<tr>
<td>F</td>
<td>Kenneth</td>
<td>Dierschke</td>
<td>Texas Farm Bureau</td>
<td>Tom Green</td>
</tr>
<tr>
<td>F</td>
<td>Don</td>
<td>Daniel</td>
<td></td>
<td>Mason</td>
</tr>
<tr>
<td>G</td>
<td>Wayne</td>
<td>Wilson</td>
<td>Wilson Cattle Company</td>
<td>Brazos</td>
</tr>
<tr>
<td>G</td>
<td>Dale</td>
<td>Spurgin</td>
<td>Jones County</td>
<td>Jones</td>
</tr>
<tr>
<td>H</td>
<td>Robert</td>
<td>Bruner</td>
<td>Bruner Cattle</td>
<td>Walker</td>
</tr>
<tr>
<td>H</td>
<td>Pudge</td>
<td>Willcox</td>
<td></td>
<td>Chambers</td>
</tr>
<tr>
<td>Voting Region</td>
<td>First Name</td>
<td>Last Name</td>
<td>Entity</td>
<td>Interest County</td>
</tr>
<tr>
<td>---------------</td>
<td>------------</td>
<td>-----------</td>
<td>---------------------------------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>I</td>
<td>Josh Wilson</td>
<td>David</td>
<td>Rancher</td>
<td>Tyler</td>
</tr>
<tr>
<td>I</td>
<td>David</td>
<td>Alders</td>
<td>Carrizo Creek Corporation</td>
<td>Nacogdoches</td>
</tr>
<tr>
<td>J</td>
<td>Wes</td>
<td>Robinson</td>
<td>Rancher</td>
<td>Kinney</td>
</tr>
<tr>
<td>K</td>
<td>Paul</td>
<td>Sliva</td>
<td></td>
<td>Matagorda</td>
</tr>
<tr>
<td>K</td>
<td>W.A. (Billy)</td>
<td>Roeder</td>
<td>Gillespie County Commissioners Court, Pct. 2</td>
<td>Gillespie</td>
</tr>
<tr>
<td>L</td>
<td>Weldon</td>
<td>Riggs</td>
<td>South Texas Cattleman's Association</td>
<td></td>
</tr>
<tr>
<td>L</td>
<td>Adam</td>
<td>Yablonski</td>
<td>Medina County Farm Bureau</td>
<td>Medina</td>
</tr>
<tr>
<td>L</td>
<td>Blair</td>
<td>Fitzsimons</td>
<td>Tx Agricultural Land Trust</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>Neal</td>
<td>Wilkins</td>
<td>East Wildlife Foundation</td>
<td>Jim Hogg</td>
</tr>
<tr>
<td>M</td>
<td>Dale</td>
<td>Murden</td>
<td>Texas Citrus Mutual</td>
<td>Cameron</td>
</tr>
<tr>
<td>N</td>
<td>Chuck</td>
<td>Burns</td>
<td>Willacy Co.</td>
<td>Willacy</td>
</tr>
<tr>
<td>N</td>
<td>Charles</td>
<td>Ring</td>
<td>San Patricio Co.</td>
<td>San Patricio</td>
</tr>
<tr>
<td>O</td>
<td>Jimmy</td>
<td>Wedel</td>
<td>Wedel Farms</td>
<td></td>
</tr>
<tr>
<td>O</td>
<td>Mark</td>
<td>Kirkpatrick</td>
<td>Farming and Ranching</td>
<td></td>
</tr>
<tr>
<td>O</td>
<td>Delmon</td>
<td>Ellison, Jr.</td>
<td>Agricultural Producer</td>
<td></td>
</tr>
<tr>
<td>O</td>
<td>Ben</td>
<td>Weinheimer</td>
<td>Texas Cattle Feeders Association</td>
<td></td>
</tr>
<tr>
<td>O</td>
<td>Chris</td>
<td>Grotegut, DMV</td>
<td></td>
<td></td>
</tr>
<tr>
<td>O</td>
<td>Harry</td>
<td>DeWit</td>
<td>Blue Sky Farms</td>
<td></td>
</tr>
<tr>
<td>P</td>
<td>Robert</td>
<td>Martin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P</td>
<td>L.G.</td>
<td>Raun</td>
<td>El Campo Farmer</td>
<td>Wharton</td>
</tr>
<tr>
<td>P</td>
<td>Lester</td>
<td>Little</td>
<td>Lavaca County Farmer</td>
<td>Lavaca</td>
</tr>
</tbody>
</table>
Regional Water Project Teams

Team 1 Panhandle/West
- Lee Huntoon
- Team Manager
  512-463-6021
  lee.huntoon@twdb.texas.gov

Team 2 Brazos
- Caaren Skrobarczyk
- Team Manager
  512-475-1128
  caaren.skrobarczyk@twdb.texas.gov

Team 3 Northeast
- Luis Farias
- Team Manager
  512-475-4816
  luis.farias@twdb.texas.gov

Team 4 East
- Nancy Richards
- Team Manager
  512-463-0250
  nancy.richards@twdb.texas.gov

Team 5 Central
- Dain Larsen
- Team Manager
  512-463-1618
  dain.larsen@twdb.texas.gov

Team 6 South
- Mireya Loewe
- Team Manager
  512-475-0590
  mireya.loewe@twdb.texas.gov
IRRIGATION WATER USE AND DEMAND PROJECTIONS
SHARE OF WATER MANAGEMENT STRATEGIES IN 2070

- Other surface water: 30.5%
- Irrigation conservation: 15.7%
- New major reservoir: 13.0%
- Municipal conservation: 9.6%
- Indirect reuse: 7.6%
- Groundwater wells and other: 7.4%
- Other direct reuse: 4.4%
- Other conservation: 2.4%
- Drought management: 2.7%
- Aquifer storage and recovery: 1.8%
- Seawater desalination: 1.4%
- Groundwater desalination: 1.3%
- Conjunctive use: 0.8%
- Other strategies: 0.6%

Source: 2017 State Water Plan; reflects percent of water volume in plan.
BRACKISH RESOURCES AQUIFER CHARACTERIZATION SYSTEM

BRACS PROGRAM: Brackish = 1,000 to 10,000 ppm TDS

• Program began in 2009

• Objective is to map in sufficient detail the brackish groundwater resources of each major/minor aquifer

• We collect and load data into a relational database (BRACS) and GIS datasets

• We maintain a collection of well reports and geophysical well logs

• All data is available from our website: www.twdb.texas.gov
Major Aquifers of Texas

Legend

- Pecos Valley
- Seymour
- Gulf Coast
- Carrizo-Wilcox (outcrop)
- Carrizo-Wilcox (subcrop)
- Hueco-Mesilla Bolson
- Ogallala
- Edwards-Trinity Plateau (outcrop)
- Edwards-Trinity Plateau (subcrop)
- Edwards BFZ (outcrop)
- Edwards BFZ (subcrop)
- Trinity (outcrop)
- Trinity (subcrop)

NOTE: Chronology by Geologic age
SUBCROP (portion of a water-bearing unit occurring below other formations)
TWENTY-ONE MINOR AQUIFERS

Minor Aquifers of Texas

Legend

- Brazos River Alluvium
- West Texas Bolson
- Lipan (outcrop)
- Lipan (subcrop)
- Yegua (outcrop)
- Yegua (subcrop)
- Ignacean Sparta (outcrop)
- Ignacean Sparta (subcrop)
- Queen City (outcrop)
- Queen City (subcrop)
- Nacatoch (outcrop)
- Nacatoch (subcrop)
- Blossom (outcrop)
- Blossom (subcrop)
- Woodbine (outcrop)
- Woodbine (subcrop)
- Rita Blanca
- Edwards - Trinity (High Plains)
- Dockum (outcrop)
- Dockum (subcrop)
- Rustler (outcrop)
- Rustler (subcrop)
- Capitan Reef Complex
- Bone Spring - Votioro Peak
- Balmorhea - Midland (outcrop)
- Balmorhea - Midland (subcrop)
- Hickory (outcrop)
- Hickory (subcrop)

NOTE: Chronology by geologic age.

OUTCROP: portion of a water-bearing rock unit exposed at the land surface.
SUBCROP: portion of a water-bearing rock unit underlying other rock units.

DISCLAIMER: This map was generated by the Texas Water Development Board. This is an informational map and should not be used for water supply planning or development. Information may not apply to all localities and is subject to change.

Map updated December 2006 by Mark Hoyos, GWX
Regional water planning groups propose to implement 39 groundwater desalination projects.
AGRICULTURAL WATER CONSERVATION GRANTS

$600,000
RFA Open until February 14, 2018

1. Equipment cost share and technology transfer

2. Demonstrations of innovative & alternative production systems

3. Planning and design for irrigation system improvements

4. Feasibility study of irrigating with produced water

To submit an application, please visit: http://www.twdb.texas.gov/
Eligible applicants are political subdivisions and state agencies
TOTAL SWIFT COMMITMENTS

2015
$3,793,370,000*

2016
$759,255,000

2017
$1,052,915,000

$5,605,540,000

* Reflects subsequent adjustment based on actual closings.
TWDB SWIFT AG FUNDED PROJECTS

Hidalgo County Irrigation District #1
SWIFT - $7,100,000
Ag Irrigation Conveyance System Improvements

United Irrigation District
SWIFT - $8,100,000
Off Channel Storage Facility
• TWDB has committed over **$24.5 BILLION** in loans and grants since inception (1957)

• TWDB has committed over **$1 BILLION TO RURAL ENTITIES** (population<10,000) in loans and grants in the last 10 years
# TWDB REGIONAL FINANCIAL ASSISTANCE WORKSHOPS

<table>
<thead>
<tr>
<th>Location</th>
<th>Date</th>
<th>Building Name/Room</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beaumont</td>
<td>December 13, 2017 – 9 a.m. <em>Disaster Recovery Topics Only</em></td>
<td>South East Texas Regional Planning Commission-Mayor Homer E. Nagel Conference Room</td>
<td>2210 Eastex Frwy Beaumont, TX</td>
</tr>
<tr>
<td>Glen Rose</td>
<td>January 9, 2018 – 1 p.m.</td>
<td>Somervell County Water District Administrative Office-Board Room</td>
<td>2099 County Road 301 Glen Rose, TX</td>
</tr>
<tr>
<td>Denton</td>
<td>February 6, 2018 – 9 a.m.</td>
<td>Public Safety Training Facility-Conference Room C</td>
<td>719 Hickory Denton, TX</td>
</tr>
<tr>
<td>Big Spring</td>
<td>March 15, 2018 – 2:00 p.m.</td>
<td>Colorado River Municipal Water District-Perry Board Room</td>
<td>400 E. 24th Street Big Spring, TX</td>
</tr>
<tr>
<td>Sugar Land</td>
<td>April 10, 2018 – 9 a.m.</td>
<td>Sugar Land Public Works-Training Room</td>
<td>111 Gillingham Lane Sugar Land, TX</td>
</tr>
<tr>
<td>Pleasanton</td>
<td>May 8, 2018 – 9 a.m.</td>
<td>Pleasanton Civic Center-Main Exhibit Hall</td>
<td>115 N. Main St Pleasanton TX</td>
</tr>
<tr>
<td>Beeville</td>
<td>June 5, 2018 – 1 p.m.</td>
<td>Beeville Community Center</td>
<td>111 E. Corpus Christi Street Beeville, TX</td>
</tr>
</tbody>
</table>
AGRICULTURE SUPPORTS A STRONG TEXAS!

Joe Reinart
Stratford
Sherman County
HOW TO CONTACT ME

Kathleen Jackson, P.E.  
@twdb_kathleen  
512.463.7847  
Kathleen.Jackson@twdb.texas.gov

www.twdb.texas.gov