



Desalination in Texas



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Texas Water Development Board**

**Presenting to
Multi-State Salinity Coalition
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Texas Water
Development Board

*To provide
leadership,
planning, financial
assistance,
information, and
education for the
conservation and
responsible
development of
water for Texas*



Examples of desalination efforts by the State of Texas

1959 – \$20,000 to study scaling problems in
desalination by electro dialysis

1965 – The potential contribution of desalting to
future water supply in Texas [TWDB & Office of Saline
Studies]

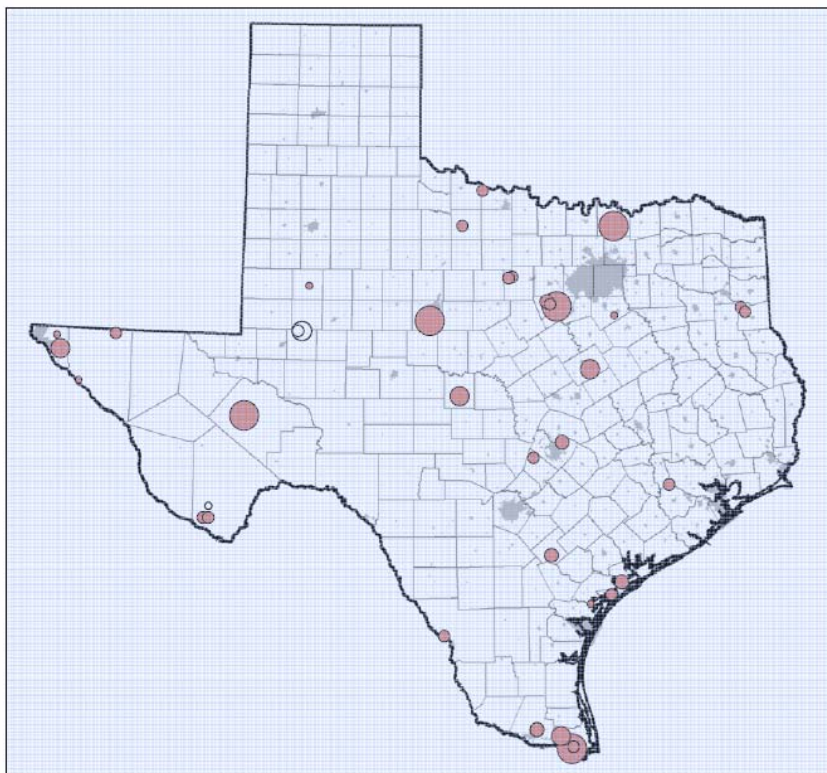
1973 – H. P. Burleigh, TWDB Ex. Director, Testimony
before the US Congress “Continued Federal Support of
Desalination Research and Development”

2003 – Seawater Desalination (HB 1370)

2005, 2007, 2009 – Texas Legislature appropriates
funds for brackish groundwater desalination
demonstration projects

Installed desalination capacity

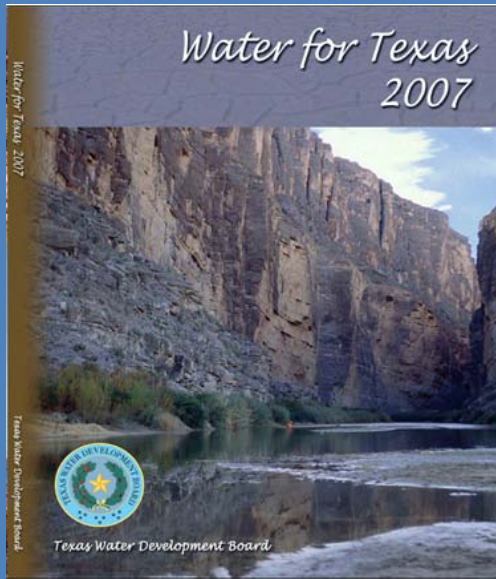
2005 Inventory of Desalination Plants



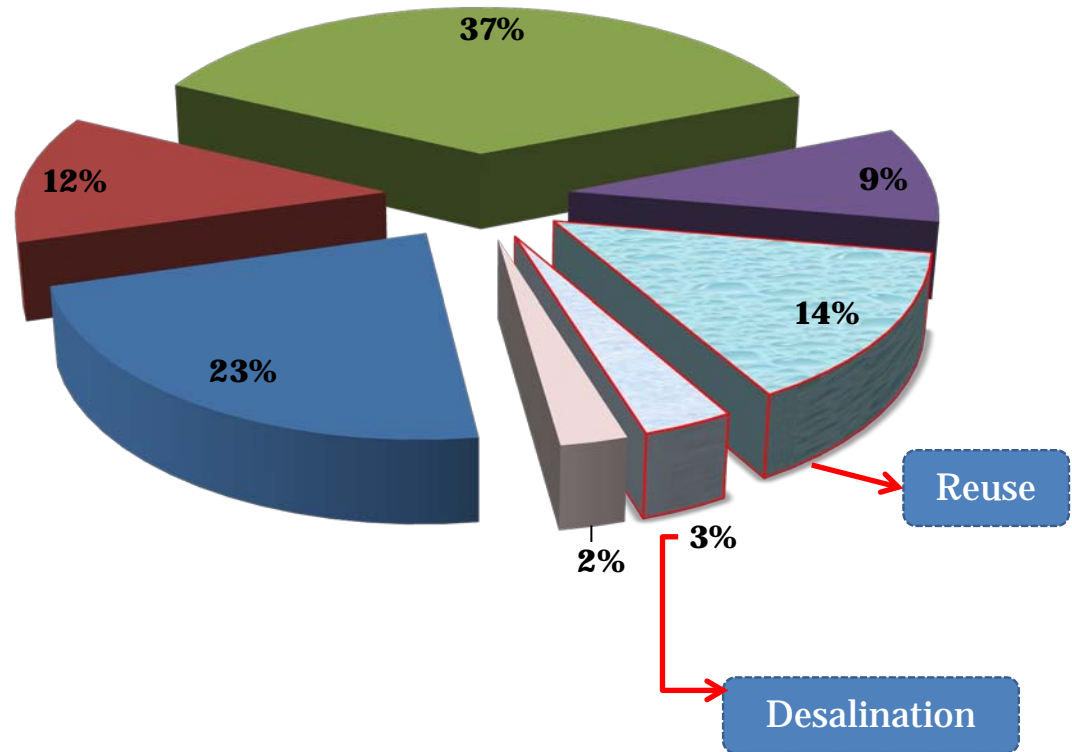
Today

- 87 MGD design installed capacity
 - 40 facilities
- Reverse-osmosis
- Surface disposal
 - Underground injection
- Brackish groundwater desalination costs
 - ~\$410 to \$850 per AF

State Water Plan

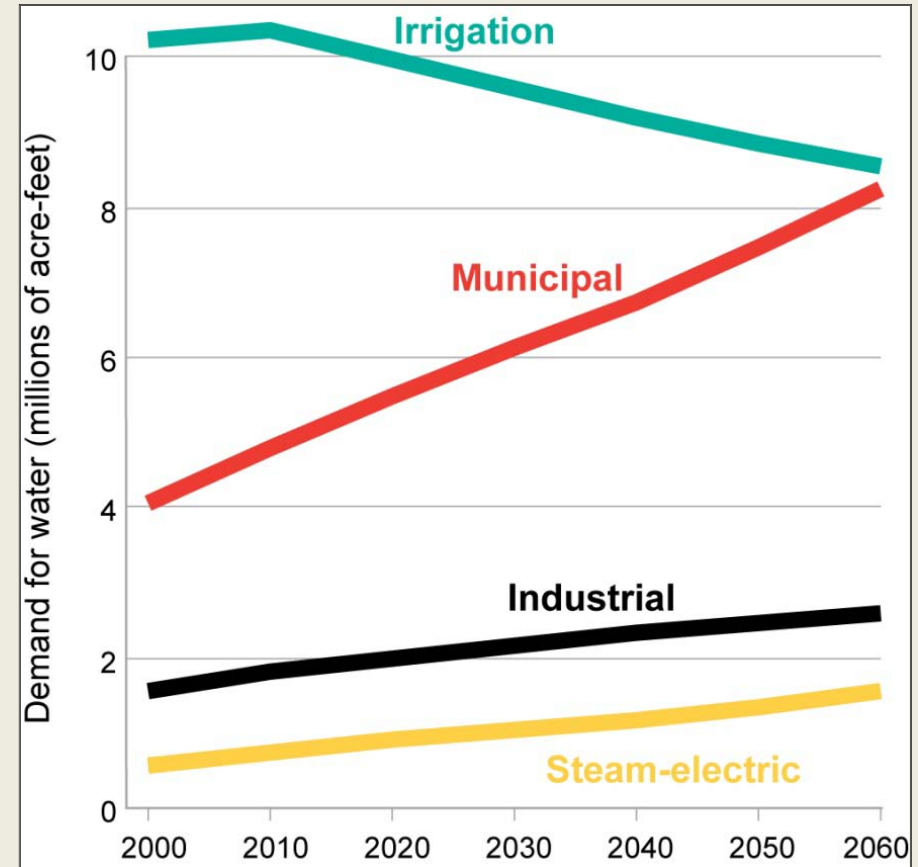
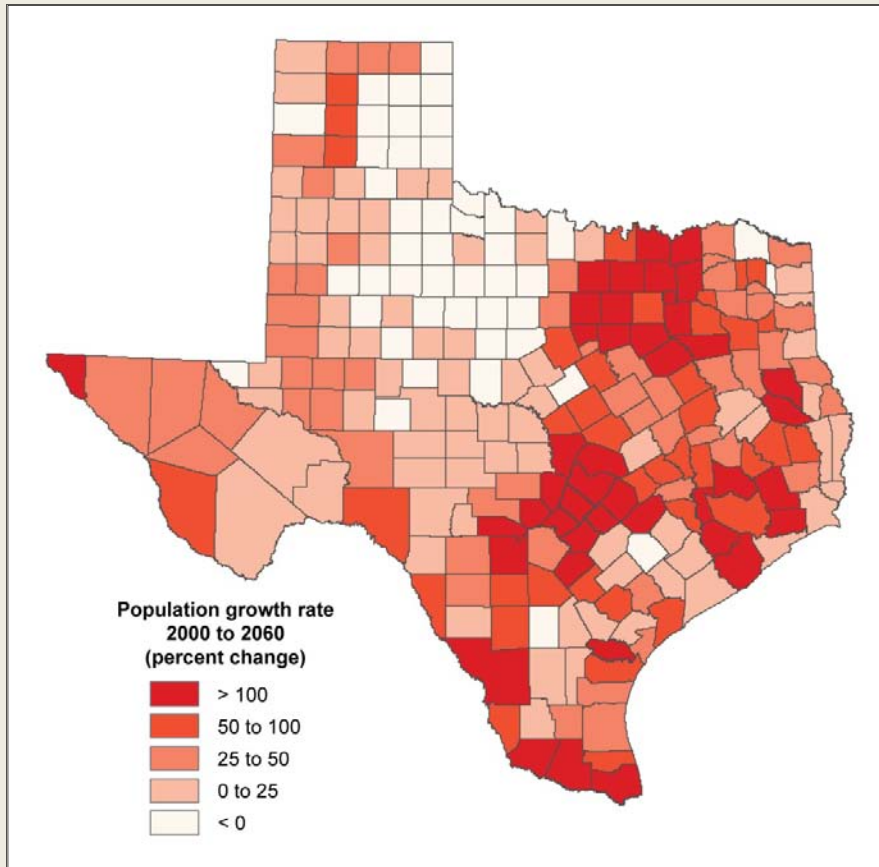


2002
2007
2012

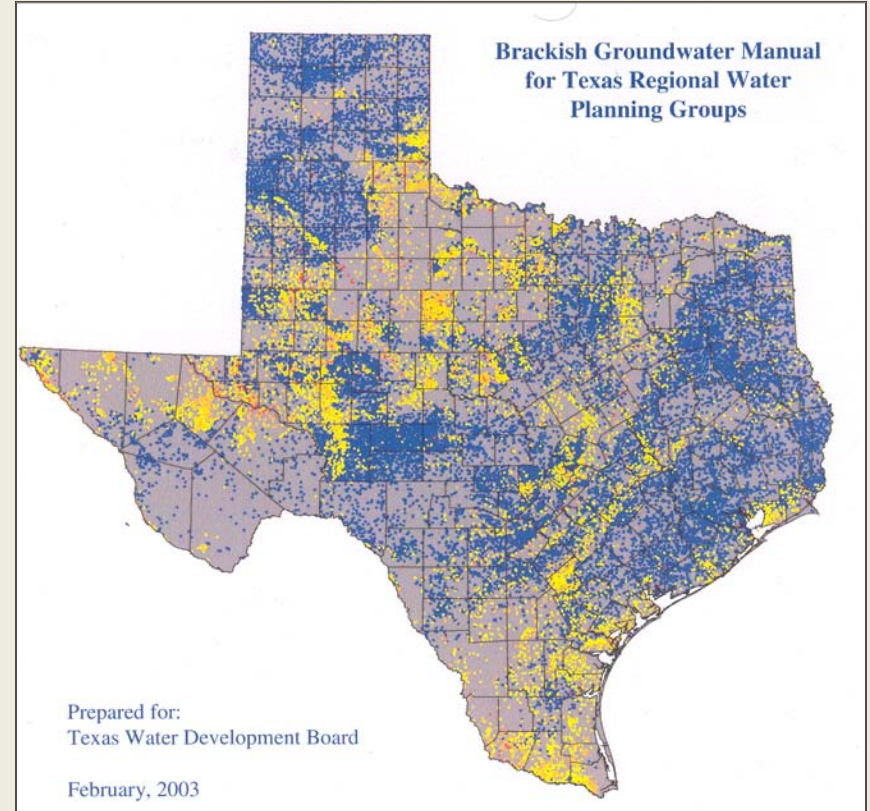
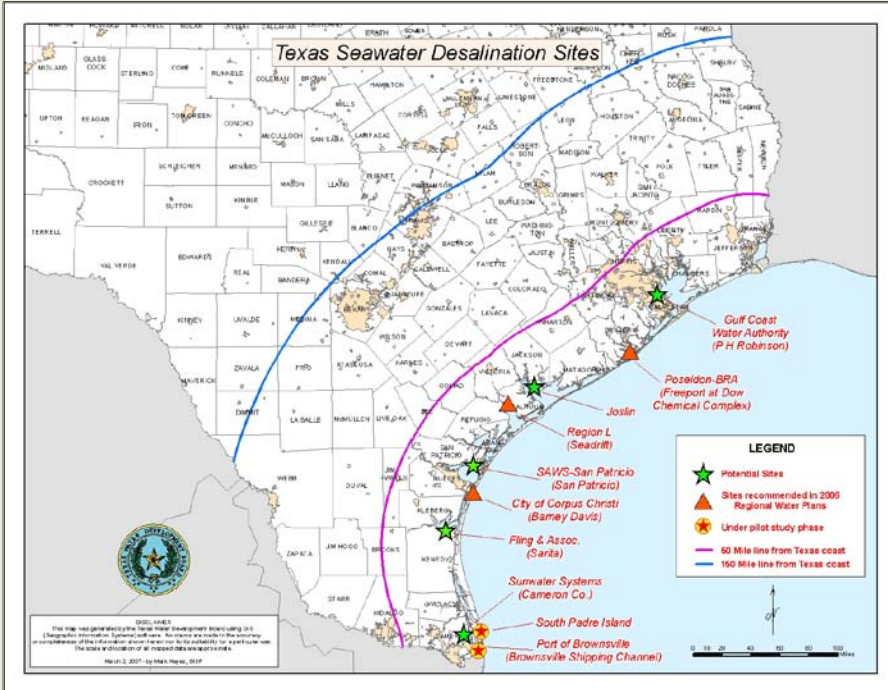


- Conservation
- New Reservoirs
- Reuse
- Other Surface Water
- Groundwater
- Desalination
- Conjunctive Use

Population growth and demand for water



Opportunities for desalination



Desalination projects in the pipeline



Seawater

- **Initiating permitting:**
 - Brownsville Demonstration Project
 - South Padre Island
- **Recommended in regional water plans**
 - San Antonio (Seadrift)
 - Freeport, Corpus Christi
- **Interest**

Brackish groundwater

- **~175,000 AFY₂₀₆₀**
 - 50,000 AFY in Region E
 - 16,200 AFY in Region F
 - 29,568 AFY in Region K
 - 5,600 AFY in Region L
 - 69,900 AFY in Region M
 - 3,360 AFY in Region O

Future



Momentum changing

- Success/failure in implementing regional water plans
- Dramatic climate events more severe than the drought of record
- Technological breakthroughs

Legislation and water development policies

- Continued research and technology demonstration programs
- Lead in resolving *front-end* issues
 - Permitting
 - Intake and discharge modeling
 - Environmental studies