



# 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]

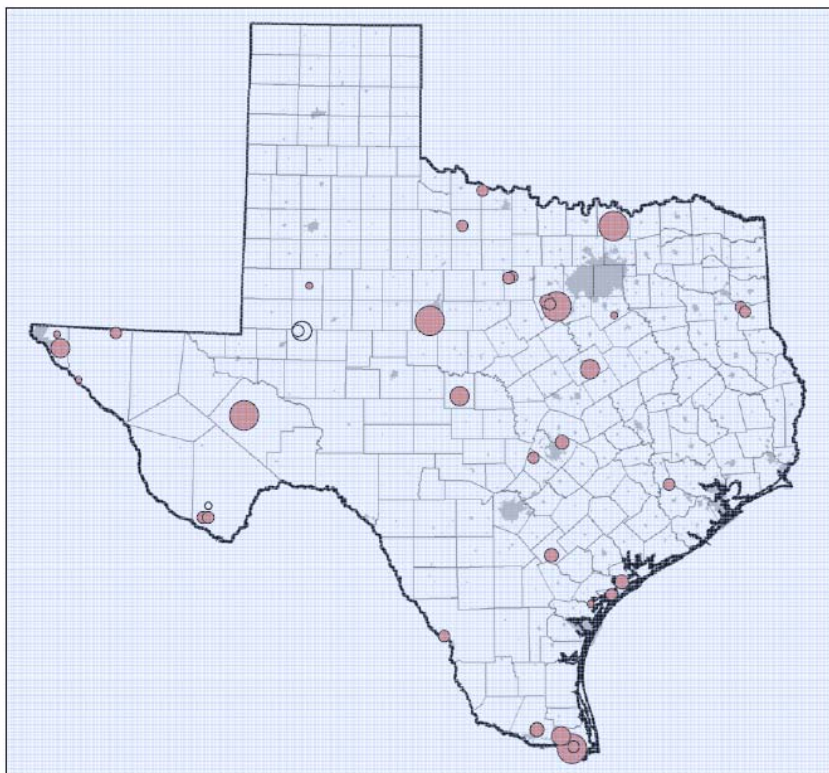
1973 – H. P. Burleigh, TWDB Ex. Director, Testimony  
before the US Congress “Continued Federal Support of  
Desalination Research and Development”

2003 – Seawater Desalination (HB 1370)

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

# Installed desalination capacity

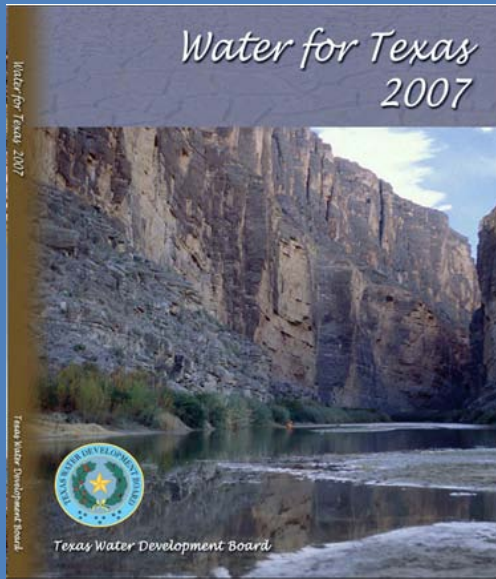
## 2005 Inventory of Desalination Plants



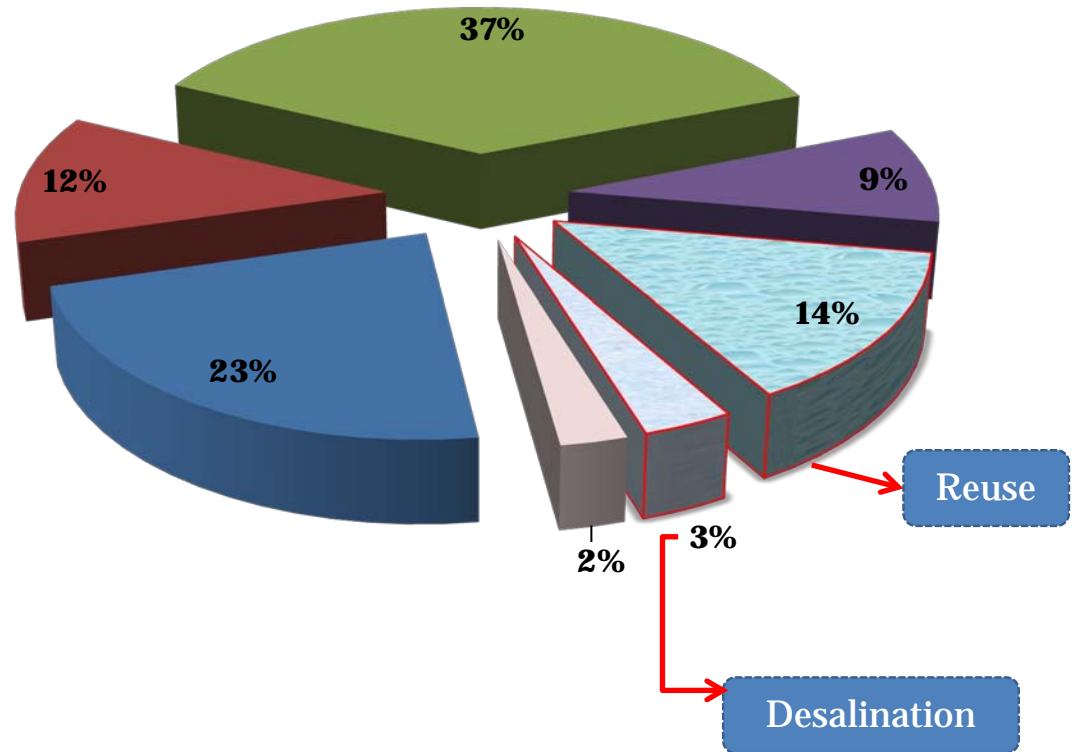
## Today

- 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

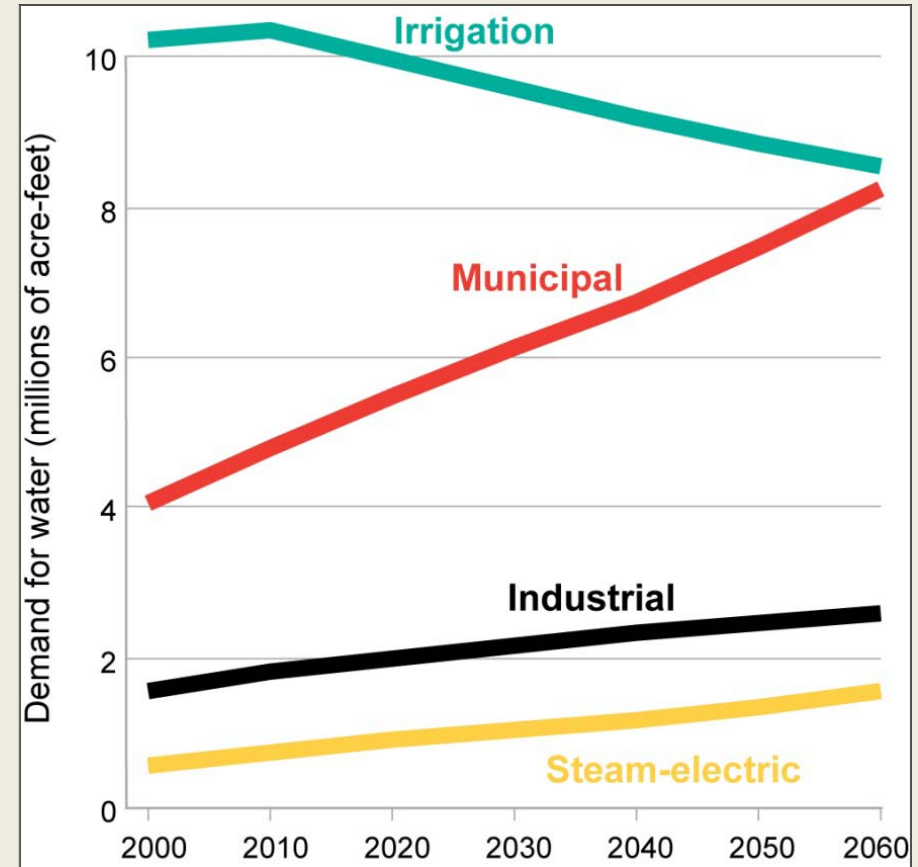
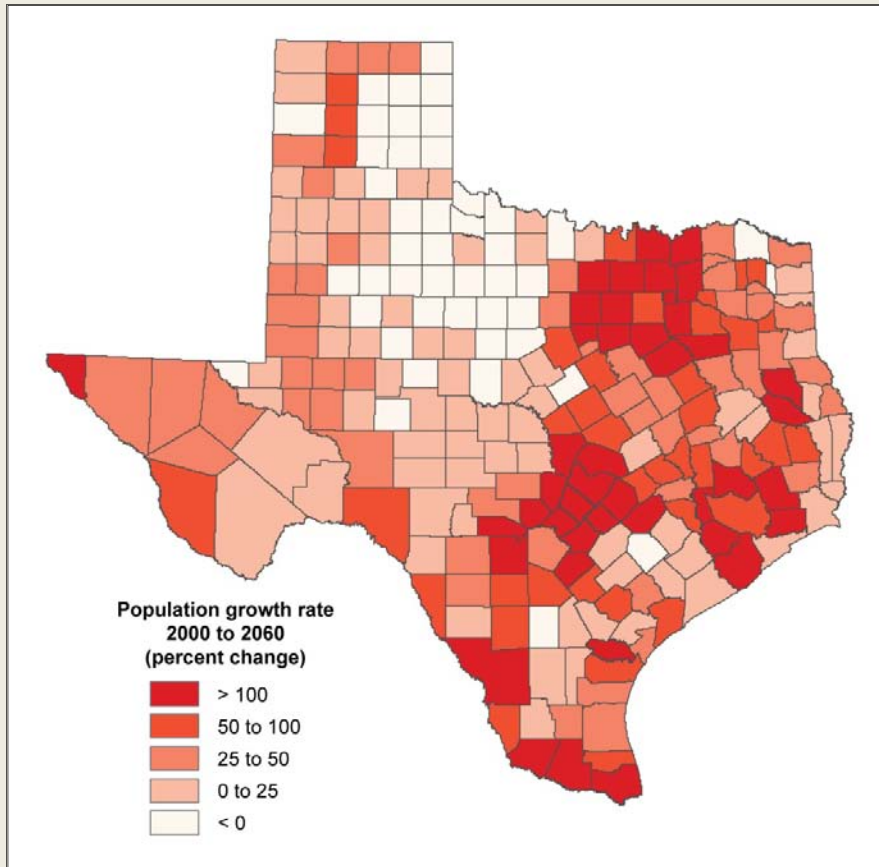


2002  
2007  
2012

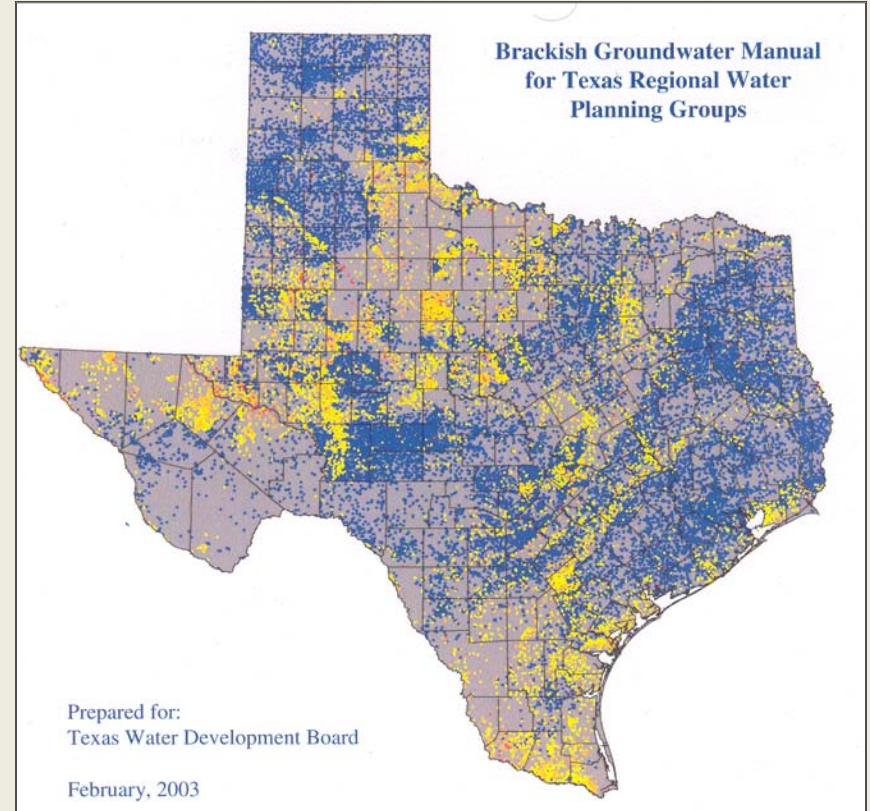
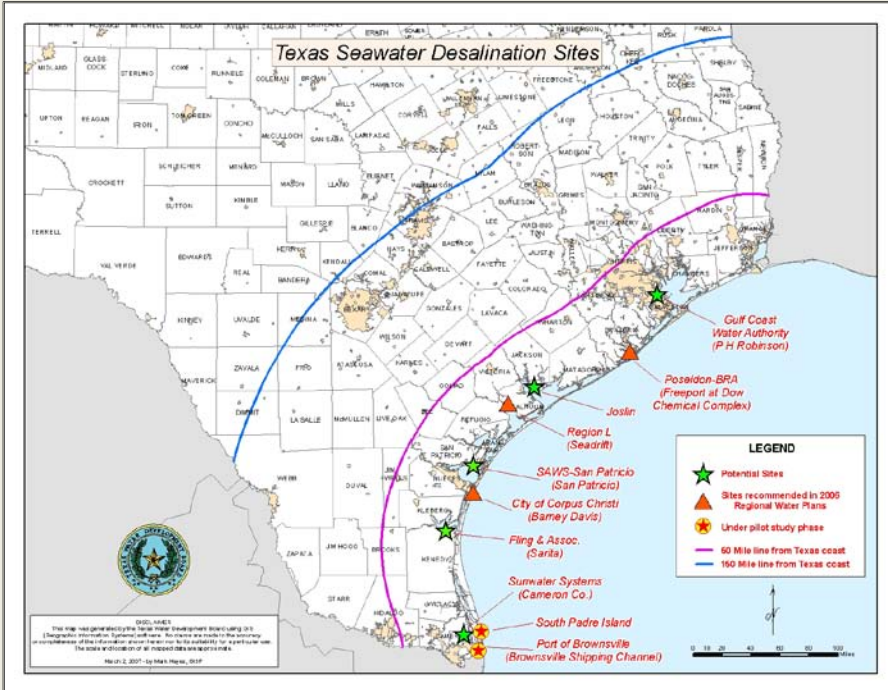


- Conservation
- Other Surface Water
- Reuse
- Conjunctive Use
- New Reservoirs
- Groundwater
- Desalination

# Population growth and demand for water



# Opportunities for desalination



Prepared for:  
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# 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 AFY<sub>2060</sub>**
  - 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