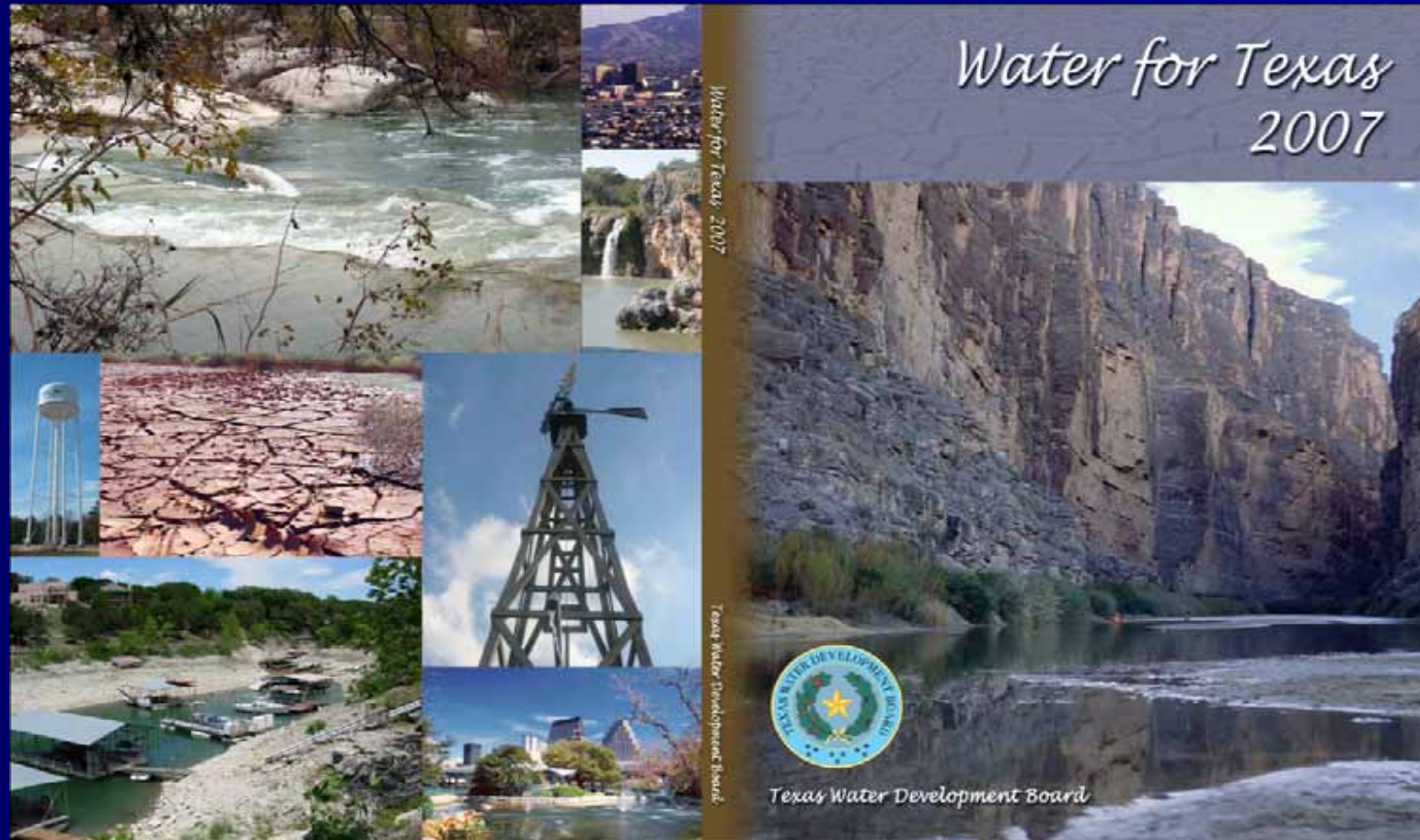


2007 Texas Regional & State Water Planning



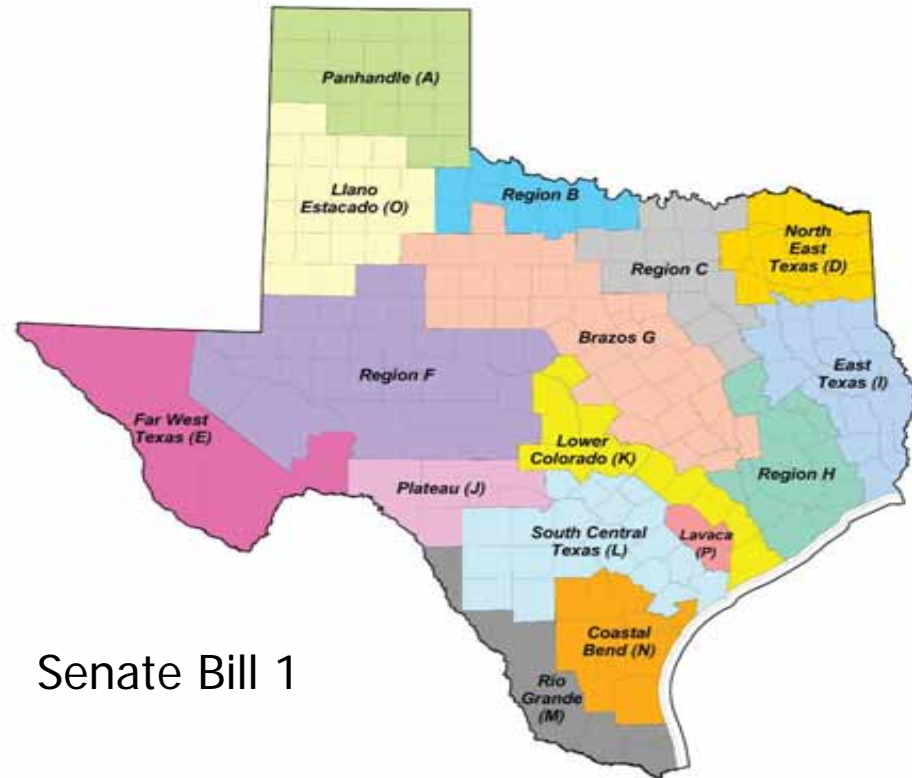
Texas Water Development Board Critical Missions

- Water Data
- Water Planning
- Project Financing
 - Water Supply
 - Water Infrastructure
 - Wastewater

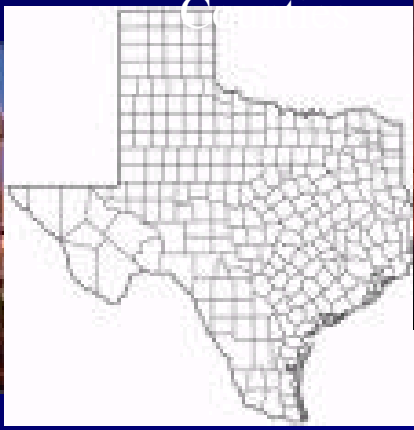


1997: Texas Regional Water Planning

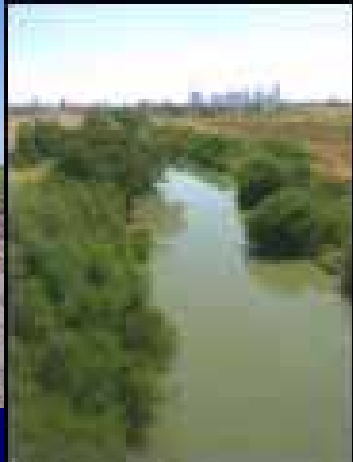
In the beginning...



Senate Bill 1



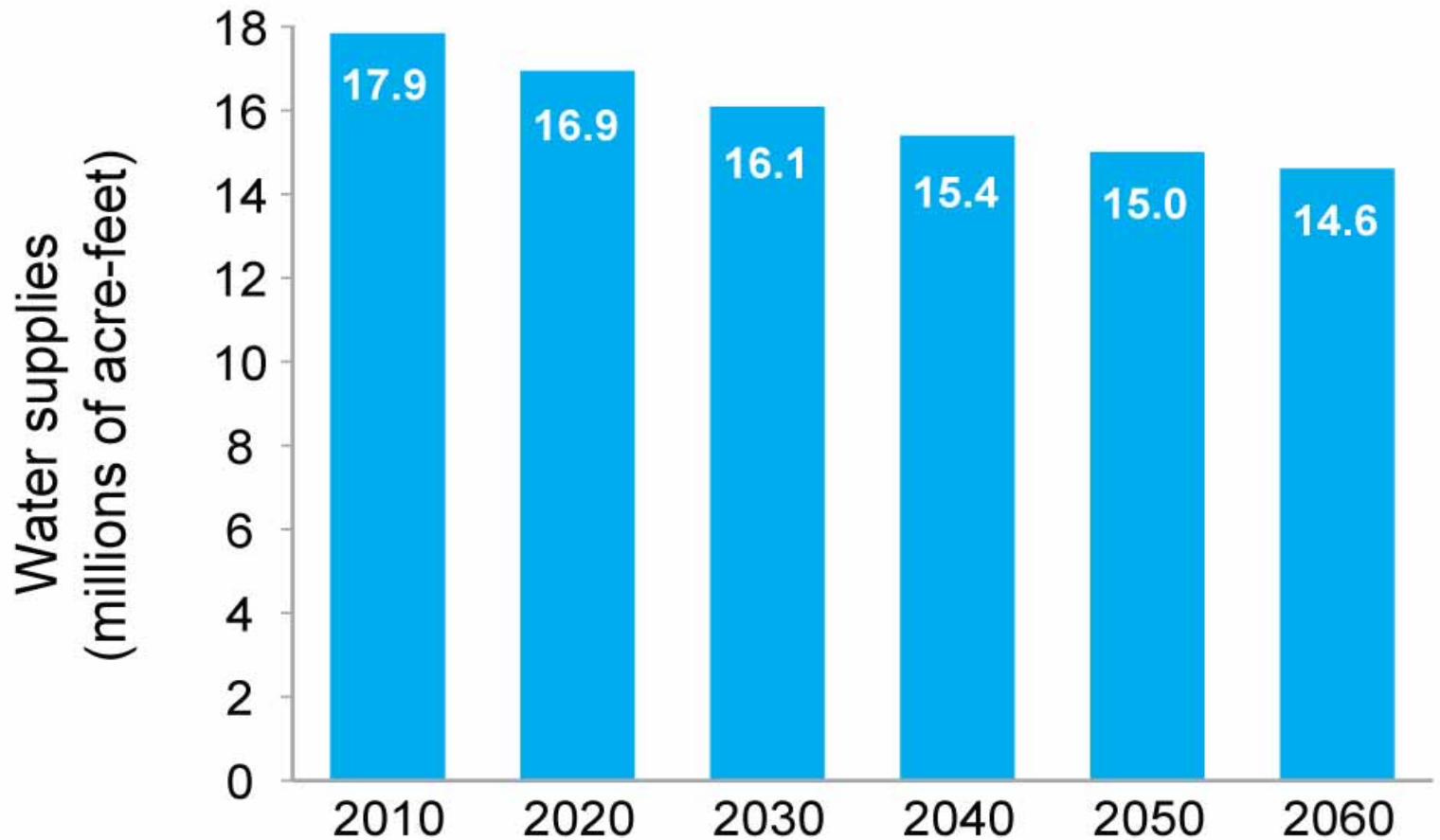
Eleven Interest Groups



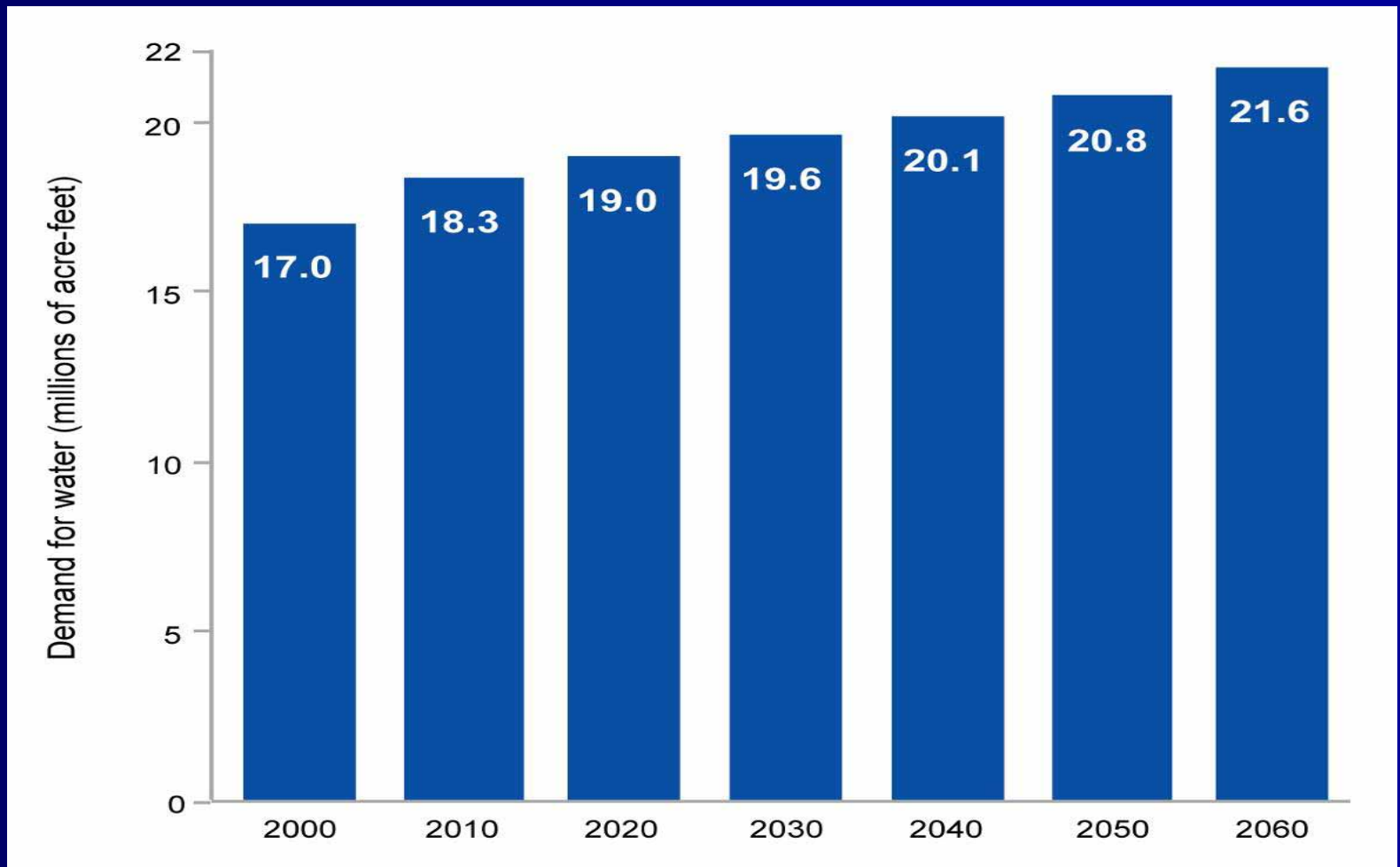
Regional Planning Process

- 50-year planning horizon
- Project population and water demand
- Existing supply
- Evaluate need for additional water
- Recommend strategies

Projected Supply



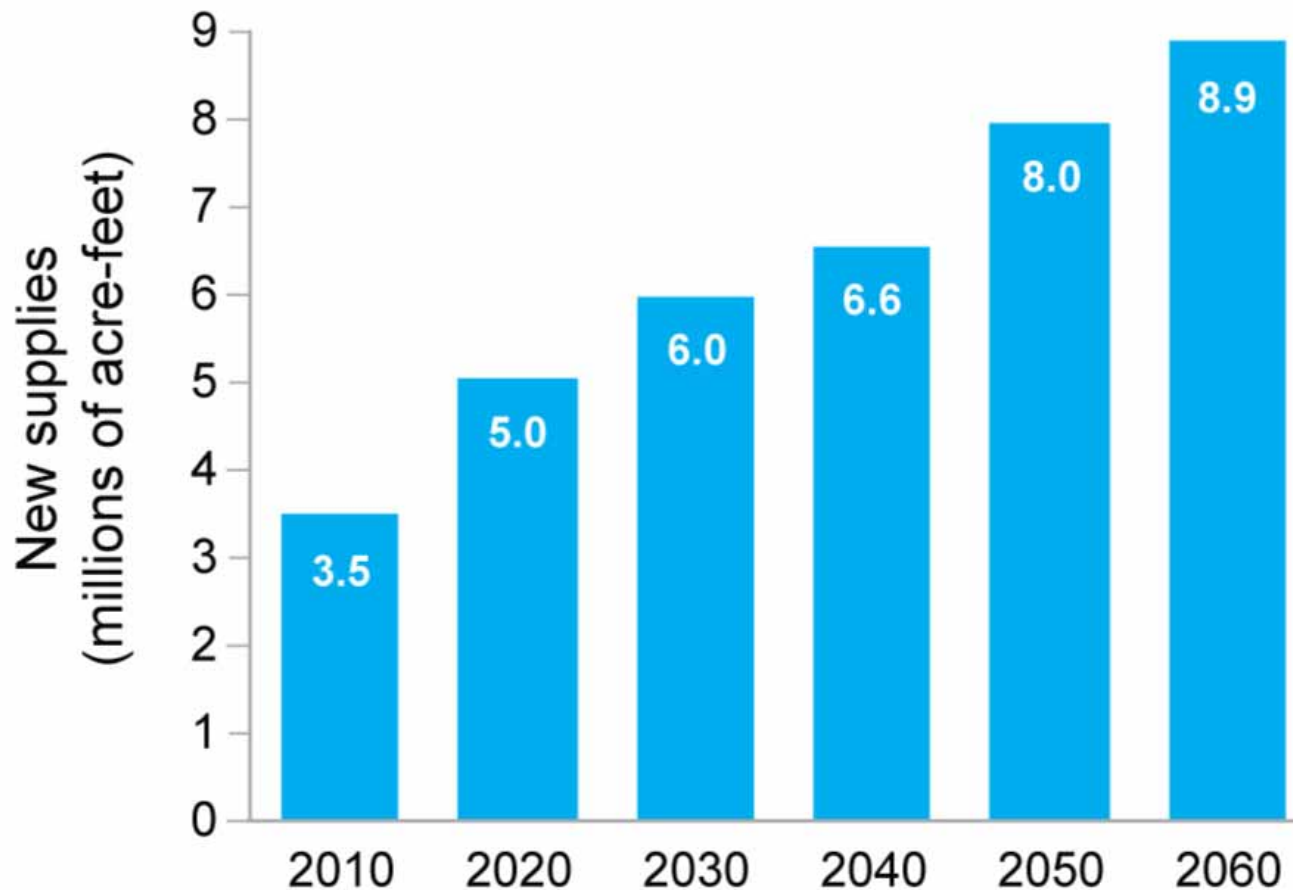
Projected Demand



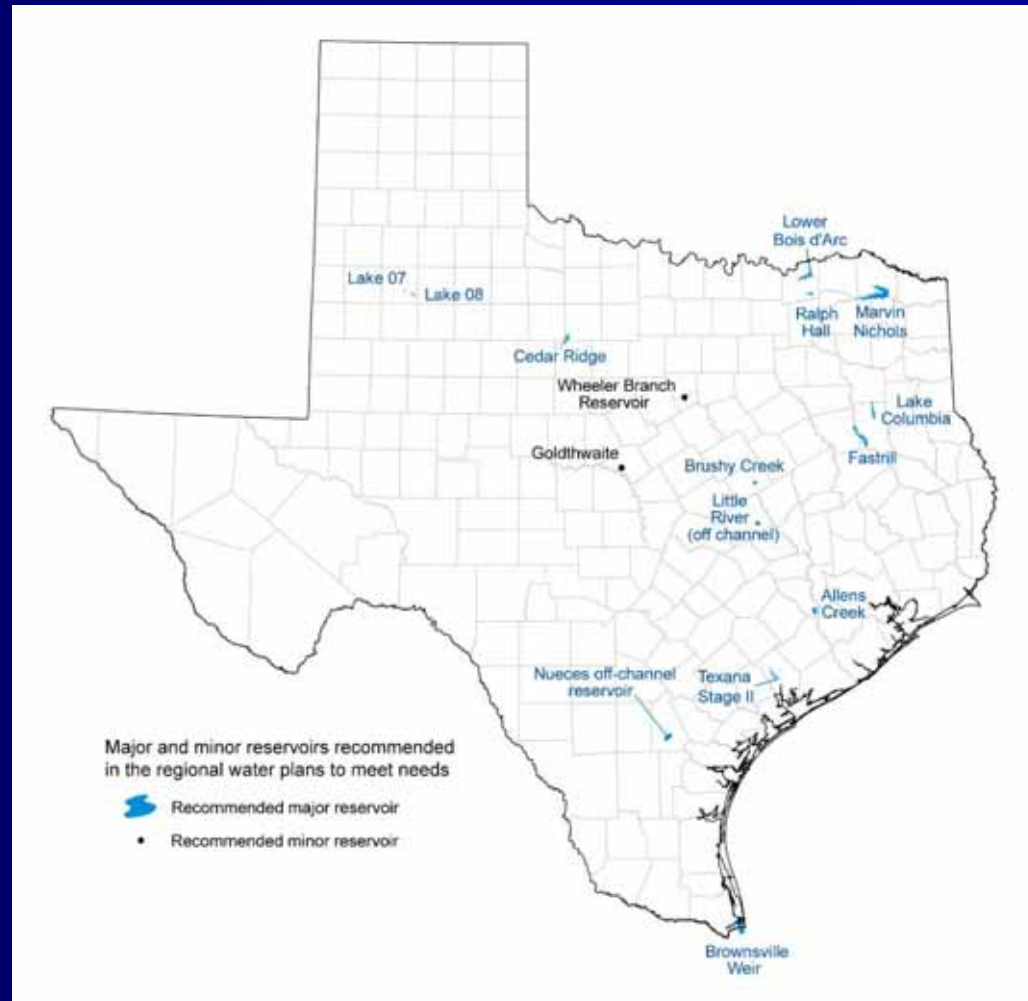
Water Management Strategies

- Regions identified 4,500 strategies.
- Evaluated strategies based on:
 - Water quantity and reliability
 - Financial Costs
 - Impacts to environment and agriculture
 - Impacts to water quality
 - Other factors such as regulatory requirements, time required to implement, etc.

Water Volume from Recommended Water Management Strategies



Recommended Major and Minor Reservoirs



Costs

Total capital costs: \$30.7 billion



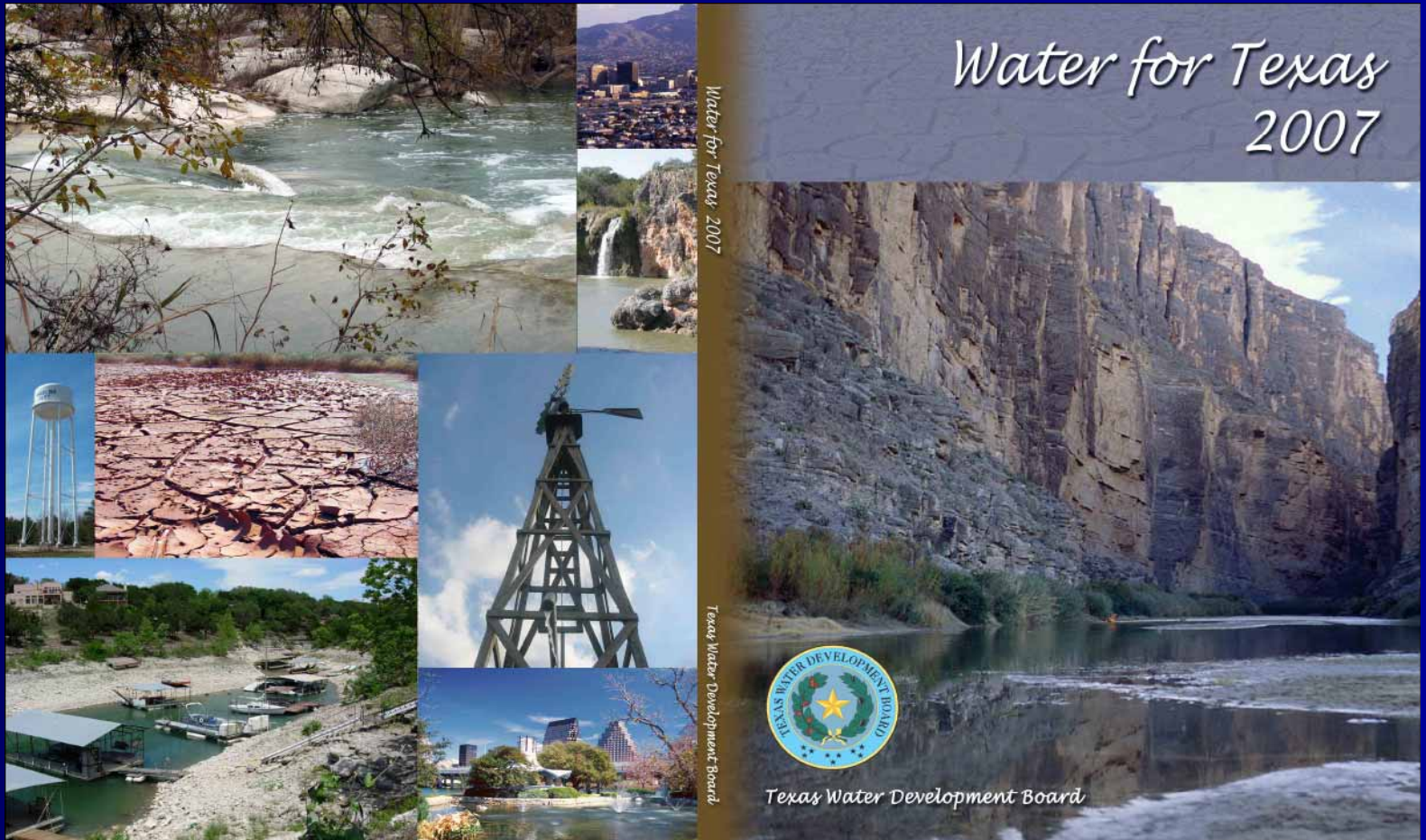
Costs of Not Implementing Plan

- Businesses and workers: \$9.1 billion in 2010 and \$98.4 billion in 2060
- Lost local and state taxes: \$466 million in 2010 and \$5.4 billion in 2060
- ***About 80% of the state's population will not have enough water by 2060 in drought of record***



2007 State Water Plan

Three volumes



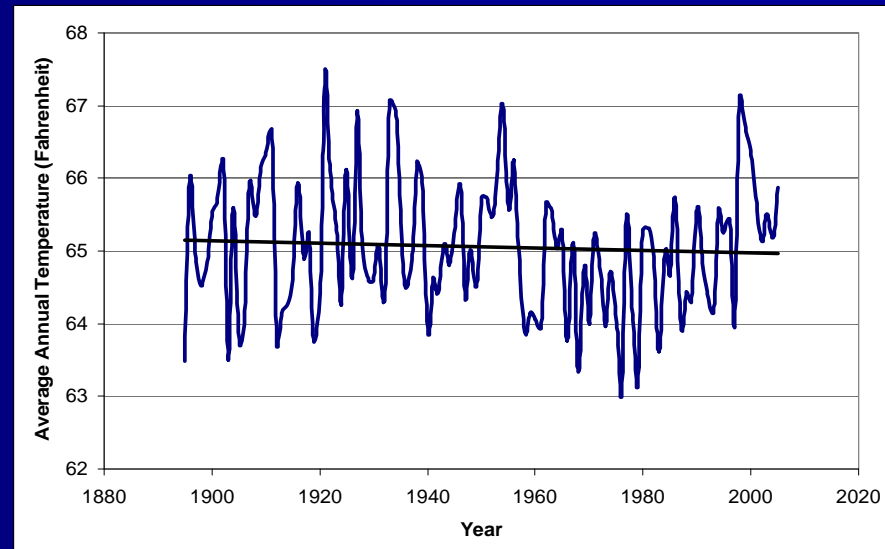
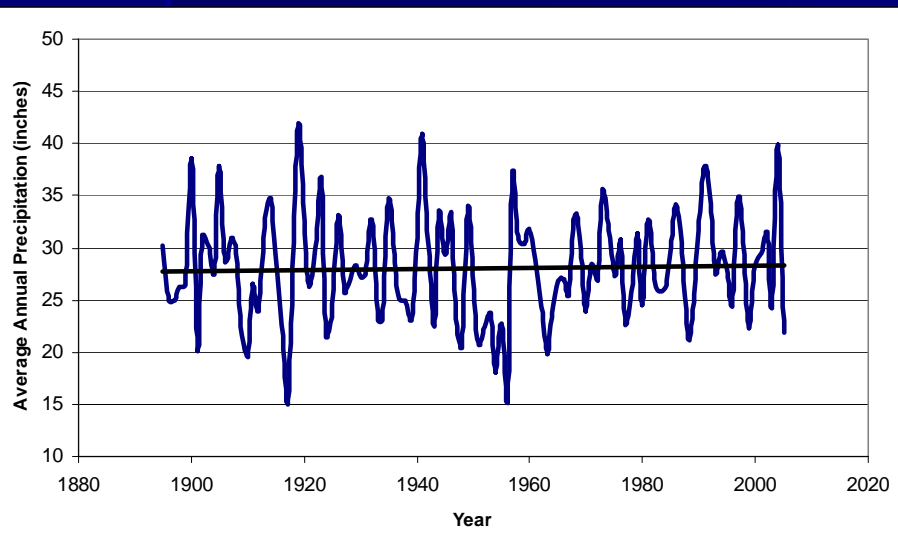
How is Texas dealing with Climate Change?



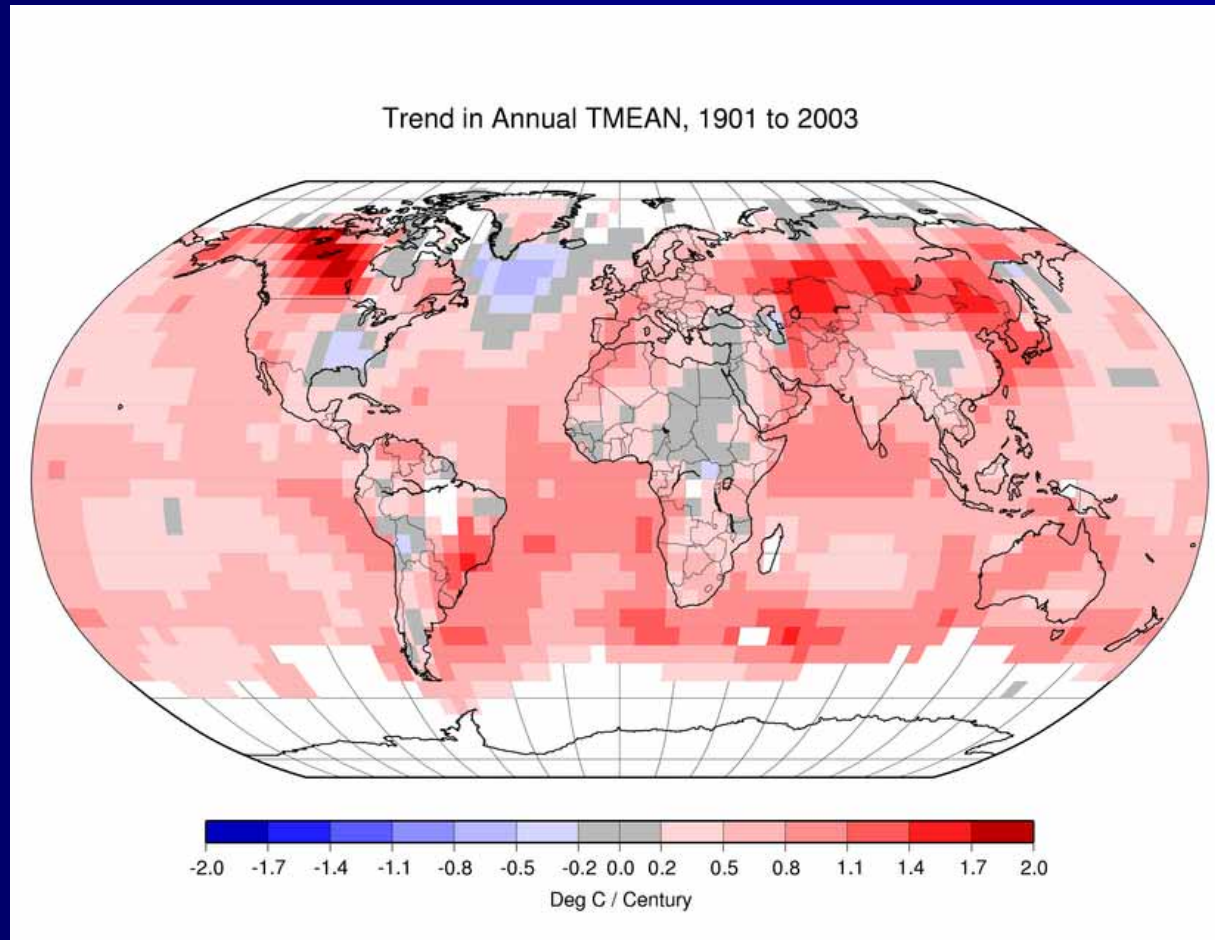
Cartoon by Chris Madden, www.chrismadden.co.uk

2007 State Water Plan

- Section on Climate Change
 - Slightly increasing precipitation
 - Slightly decreasing temperature



Temperature trends from climatologists...



Source: Hadley Centre, University of East Anglia, UK, 2005

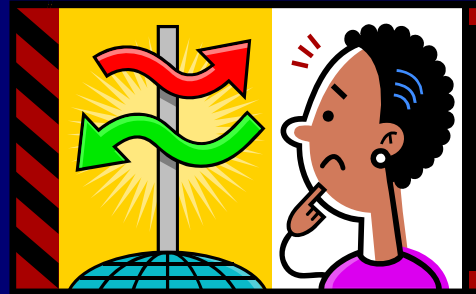
2012 State Water Plan: Risk & Uncertainty

Models

Permitting

Population
projections

Land use



Implementation

Economics

Politics

Climate change

TWDB

Funded research



- How to integrate uncertainty into the Regional Water Planning process?
- Tree ring study – Central Texas
- Precipitation & Temperature trends
- Guidance on use of GCMs for Texas water availability studies

Climate Change Conferences/Education

- Austin – April
 - White paper within two weeks
- El Paso – June
 - Senate Bill 1762
 - Region E (West Texas, incl. El Paso)
 - Proceedings available on TWDB web site

Studies by Regional Water Planning Groups and local agencies

- Report on Evaluation Methods and Climate Scenarios – CH2M HILL/LCRA
- Region G : Firm Yield/Safe Yield
- The Impact of Global Warming on Texas – North et al., 2nd Edition

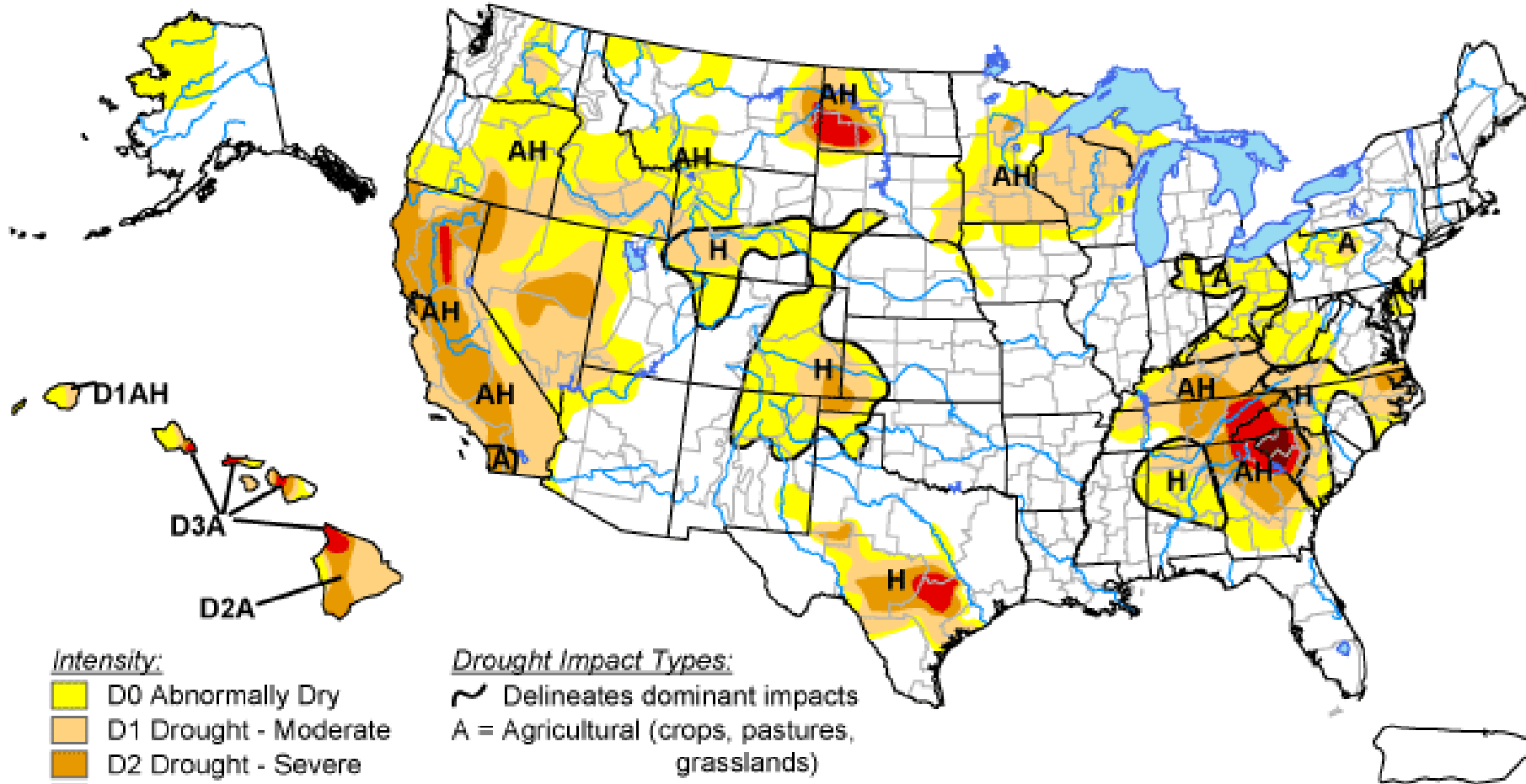
New Legislation in Texas?

- Exceptional item request (add. funding)
 - More data and modelers
- Mitigation?
- Adaptation?






U.S. Drought Monitor

September 23, 2008


Valid 8 a.m. EDT



Intensity:

-  D0 Abnormally Dry
-  D1 Drought - Moderate
-  D2 Drought - Severe
-  D3 Drought - Extreme
-  D4 Drought - Exceptional

Drought Impact Types:

-  Delineates dominant impacts
- A = Agricultural (crops, pastures, grasslands)
- H = Hydrological (water)

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

<http://drought.unl.edu/dm>



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