Regional Water Planning
The Texas Model

Presented to:
Oklahoma’s Water Plan: Charting a Course

Oklahoma Governor’s Water Conference
November 13, 2006
Oklahoma City, OK

Bill Mullican
Texas Water Development Board
Why Plan?
Lavon Lake
-2006
Public Water Supply Systems Affected by Drought

DROUGHT 2006
Public Water Supply Systems Affected
as of September 1, 2006

- RESOLVED (1)
- WATCH - Voluntary (95)
- WATCH - Mandatory (171)

Total number of Community water systems affected: 267
Total number of active Community water systems in Texas: 4,607

Resolved: A public water supply that has corrected production capacity deficiencies, or drought conditions.
Voluntary: A public water supply that has reported problems with high water usage and production, but has not suffered a loss of distribution system pressure. Voluntary water use restrictions have been implemented.
Mandatory: A public water supply that has reported problems with high water usage and production, but has not suffered a loss of distribution system pressure. Mandatory water use restrictions have been implemented.
Legislative Response to Drought

• Late 1950’s Drought of Record
  – 1957: Creation of TWDB
  – $200 million Development Fund
  – 8 State Water Plans

• Late 1990’s: Potential New Drought of Record
  – $6 billion estimated economic losses in 1996 - most in agriculture
  – Approximately 300 entities with threat to water supplies
  – 1997: Implementation of Senate Bill 1 (SB 1)
Water Planning Prior to SB 1
Regional and State Water Planning Under SB 1

- Development, management, and conservation of water resources
- Drought preparation and response
- Regional Water Plans foundation for State Water Plan
- Ensure sufficient water supplies to meet needs of ALL users
Incentives to Participate

• Surface water permits for municipalities only in areas with approved regional water plans.

• TWDB loans only in areas with approved regional water plans.

• Projects must be consistent with regional and state water plans to obtain surface water permits or TWDB financial assistance.

• May waive these requirements.
Diverse Interest Groups Represented
Memberships Required by Statute

- Public
- Agricultural Interests
- County
- Small Business
- Water Utilities
- Electric Generating Utilities

- Municipal
- Industries
- Environmental Interests
- River Authorities
- Water Districts
Basic Steps in Texas Water Planning

- 50 year planning period
- Projection of population
- Projection of water demands
- Determine existing supplies
- Determine future surplus or needs
- Evaluate and select water management strategies
Basic Steps in Texas Water Planning

- TWDB resolution of interregional conflicts
- TWDB approval of regional water plans
- TWDB develops and adopts State Water Plan
Projected Water Demand & Supply

- Water Demand
- Water Supply

Here are the projected figures for water demand and supply from 2010 to 2060:

- **2010**: Water Demand 18.3 millions of acre-feet, Water Supply 17.9 millions of acre-feet
- **2020**: Water Demand 19.0 millions of acre-feet, Water Supply 16.9 millions of acre-feet
- **2030**: Water Demand 19.6 millions of acre-feet, Water Supply 16.1 millions of acre-feet
- **2040**: Water Demand 20.1 millions of acre-feet, Water Supply 15.4 millions of acre-feet
- **2050**: Water Demand 20.8 millions of acre-feet, Water Supply 15.0 millions of acre-feet
- **2060**: Water Demand 21.6 millions of acre-feet, Water Supply 14.6 millions of acre-feet
16 Planning Regions
Water User Groups
Cities
- Cities: 956
- Cities: 956
- Utilities: 378
- Cities: 956
- Utilities: 378
- County-Others: 254
- Cities: 956
- Utilities: 378
- County-Others: 254
- Manufacturing: 174
Steem Electric

- Cities: 956
- Utilities: 378
- County-Others: 254
- Manufacturing: 174
- Steam Electric: 83
Livestock

- Cities: 956
- Utilities: 378
- County-Others: 254
- Manufacturing: 174
- Steam Electric: 83

- Livestock: 254
- Cities: 956
- Utilities: 378
- County-Others: 254
- Manufacturing: 174
- Steam Electric: 83

- Livestock: 254
- Mining: 226
- Cities: 956
- Utilities: 378
- County-Others: 254
- Manufacturing: 174
- Steam Electric: 83

- Livestock: 254
- Mining: 226
- Irrigation: 239
Total = 2,564

- Cities: 956
- Utilities: 378
- County-Others: 254
- Manufacturing: 174
- Steam Electric: 83

- Livestock: 254
- Mining: 226
- Irrigation: 239
Costs of Recommended Water Management Strategies

Total capital costs: $30.7 billion
Policy Recommendations to the Legislature

- Financing water management strategies
- Reservoir site designation and acquisition
Policy Recommendations to the Legislature

• Interbasin transfers of surface water
• Environmental water needs
• Water conservation
• Expedited amendment process
• Indirect reuse
Successes, Challenges, and Lessons Learned
Positive Outcomes of the Regional Planning Process

- Broad-based expansion of public knowledge and understanding of water resources issues
- Fosters direct link between water planning and implementation
- Enhanced cooperation and coordination between different interest groups and regions
Positive Outcomes of the Regional Planning Process

• Improved relationships between environmental and development interests that have not had a history of working together

• Development and implementation of Water Management Strategies
Challenges

• Conflict between two or more regions
  – Conflict occurs if more than one region plans on using the same water—overallocation
  – TWDB mediates disputes

• Funding for planning is appropriated for 2 years while effort and scope are designed for 5 years

• Funding the water management strategies
What We Would Do Different

- First round of regional plan would focus on data
  - Demands
  - Supplies
    - WAMs
    - GAMs
- Expedited amendment process
- Develop mechanism to better involve small communities
- TWDB continue approval of additional members to the planning groups on an ongoing basis
- Addition of a Recreation interest group
Thanks for the invite, and come see us next time you’re in Texas