

International Society for Water Solutions
Industrial Water Use and Reuse Workshop
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TEXAS REGULATORY DIRECTION FOR WATER CONSERVATION

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Valero Energy

- International manufacturer and marketer of transportation fuels, other petrochemical products and power
- Valero subsidiaries employ approximately 10,500 people
- Assets include:
 - 16 petroleum refineries with a combined throughput capacity of approximately 3 million barrels per day
 - 10 ethanol plants with a combined production capacity of 1.2 billion gallons per year
 - A 50-megawatt wind farm
 - Approximately 7,300 branded wholesale outlets carry the Valero, Diamond Shamrock, Shamrock and Beacon brands in the United States and the Caribbean; Ultramar in Canada; and Texaco in the United Kingdom and Ireland.

Agenda

- Focus on Texas Water –
 - Current status - Drought
 - Population growth impact
 - Diverse supplies - facilities must have water to operate
 - Exposure
- History of Water Planning in Texas
- Funding Options identified in Texas
- Impact of drought on current session

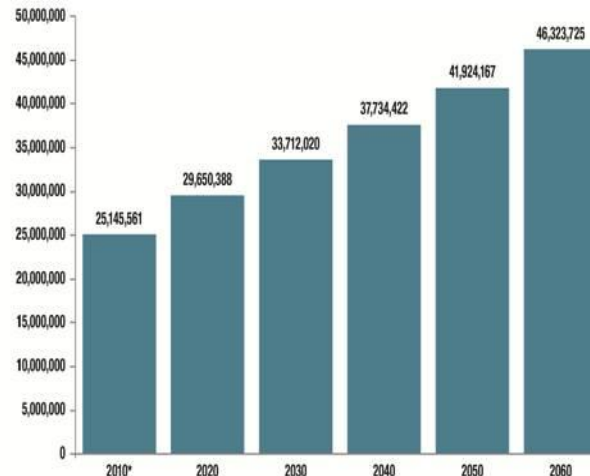
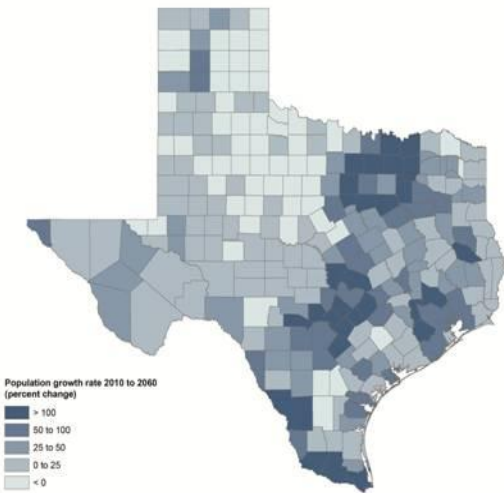
Water in Texas – Current Status

- In 2011 – 99% of Texas is in severe, extreme or exceptional drought (Texas 2012 State Water Plan)
- Even after the rains in 2012, 82% of Texas is still experiencing extreme/exceptional drought (US Drought Monitor)
- 1000 water systems impose voluntary or mandatory water use restrictions (Texas Drought Preparedness Council)
- Some communities ran out of water (Natural Resource committee Hearings in Spring 2012 in House and Senate)
- TCEQ suspended 1,200 water rights in Brazos, Colorado, Neches and Sabine river basins for the following types of users: municipal, industrial, irrigation, recreation, domestic and livestock. (TCEQ)
- 2011 ranked as worst 1 year drought in Texas history (Texas 2012 State Water Plan)

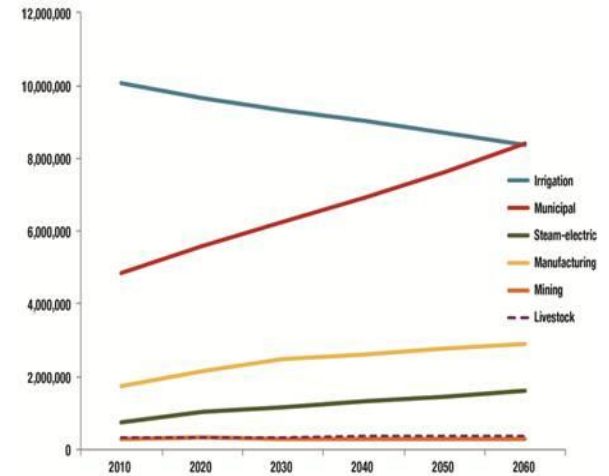
Population Growth

Per Texas Water Development Board Projections

- Texas’s population is projected to grow from 25 million now to 46 million in fifty years.
- The water demand is estimated to climb from 18 million acre-feet a year to 22 million acre-feet a year by 2060, an increase of twenty percent.



*2010 population is the official population count from the U.S. Census Bureau; 2020–2060 represent projected population used in the 2012 State Water Plan.



*Water demand projections for the livestock and mining water use categories are similar enough to be indistinguishable at this scale.



Diversity of Water Resources but consistent concern with lack of available water

- Water resources for our significant Texas assets:
 - Texas City purchases Brazos River water from the Gulf Coast Water Authority; this supply is threatened by residential growth
 - Corpus Christi purchases water from the City of Corpus Christi; they report they have 2 years worth of water if there is no rain, or nothing is done; expect ongoing drought is likely to require mandatory water conservation
 - Three Rivers uses city water and well water – both of which are threatened by growth
 - Panhandle uses well water but is threatened by competition from agriculture
 - Houston has indicated no immediate concerns regarding security of process water supply but need long term projects
 - Port Arthur has the largest water supply/demand, historically abundant from the canal system, but threatened restrictions
 - Headquarters is in San Antonio, which has implemented water conservation restrictions for years.
 - Dallas needs additional water due to growth

Exposure



- Water curtailment at facilities if water solutions are not resolved
 - **Domestic and municipal use of surface water has priority over all other beneficial uses of water** including the uses of water for industrials (Section 11.204, Texas Water Code)

- Cost of being part of the solution
 - Water efficiency projects at our plants
 - Ensure funding of Texas Water Plan



! DON'T HOG ALL THE WATER !
Think 7 Generations Ahead

Texas Water Planning

- Formal water supply planning began in the 50's after the worst “drought of record” for Texas – a 7 year drought; the legislature passed the Water Planning Act of 1957, creating a water planning group
- Plans were adopted in 1968, 1984, 1990, 1992 and 1997 recognizing growth in population and the need to develop future water supplies
- In the 80's Harris County area had to get off ground water dependence and move to surface water because city was sinking; thus subsidence districts



- Due to 10 month drought in mid-90's, Lt. Gov. Bob Bullock declared that water planning would be the primary issue that session

More Serious Water Planning



- 1997 – Senator Brown passed SB1 requiring **consensus** based water planning by region on how to meet water needs in times of drought. Required State plan every 5 years based on the 16 regional plans. It made inter-basin transfer rights Jr. water rights. Rest of State is 1st in time, 1st in Right.
- Sen. Armbrister passed SB2 and Edwards Aquifer legislation
- Sen. Averitt passed SB3 creating process to address environmental flows, designate unique reservoir sites and sites of unique ecological value. TCEQ Sunset bill gave them rights to curtail surface water.
- Need to get started funding water plan: it's gone from a cost of \$17.9B in 2002, to \$31B in 2007 to \$53B in 2012.



Difficulties in Funding the State Water Plan

Several sessions of FAILED proposed funding mechanisms for long term for 4 main reasons:

1. Opposition by group most heavily impacted.
 - Water rights/Conservation development fee would have exempted Ag and residential, but would have cost industry hundreds of millions a year.
 - Removal of sales tax exemption on bottled water, fought by those businesses.
2. Opposition from the entity having to collect the fee
 - Example was TX Municipal League against the tap fee
3. Exclusion of Ag from contributing, even though they use over 50% of the water in Texas
4. Legislators afraid to raise fees/taxes



Plan needs long term funding solution

- State Water Plan estimates \$53 Billion needed for capital projects by 2060.
 - Going into 2013 Session, looked like we needed funding source of \$150 Million a year (can be leveraged with bonds, federal funding, local funding).
 - Most traction Proposal was on electrical meters
 - While not ideal philosophically since fee on electricity and not water, lacking better annual funding solution
 - Electrics/Municipals have worked out collection allowance
 - Texas Blessed with oil and gas boom, adding significant resources (Billions) to the Rainy Day Fund
 - Majority of legislators seem to agree that using the “rainy day fund” is the best way to finance the Texas Water Plan





Texas Legislative Solution-2 major parts

- Part 1 is HB4 by Chairman Ritter and SB4 by Chairman Fraser
- Creates State Water Implementation Fund for Texas (SWIFT) – water infrastructure bank that operates as a revolving account for financing projects included in the State Water Plan
 - Support thru state funding of locally identified water projects
 - Funds lent through SWIFT would be repaid and made available for future local and regional water projects
 - \$2 Billion investment in SWIFT would satisfy the \$27 billion in state-assisted financing requested by local planning groups implementing projects over next 50 years.

Funding Mechanism – Part 2

- Several bills filed in House and Senate
- Allocate \$2 Billion from Rainy Day Fund as one time funding source
- No significant opposition to water funding
- Disagreement is in whether to take it to the voters to avoid the Constitutional spending cap
- Prognosis for passage of water funding is better than it has ever been

Time to \$Fund the Texas Water Plan



- Texas Legislature rises to the occasion when issues must be resolved: Worst 1 year drought in history in 2011 covering 99% of the State, costing Billions of dollars
- Funding the State Water Plan is not a silver bullet solution
- Several proven water tools will be necessary
 - Conservation
 - Surface Water projects
 - Groundwater projects
 - Reuse and other



Water Management Tools that work

See H2O4TEXAS.ORG

- Water conservation will still be necessary thru-out Texas
 - Efficiency of use & decreased demand on existing supplies
 - Savings from every sector including Industrial Users: Ensure we are not viewed as water hogs; we must demonstrate water efficiency
- Surface Water
 - Connection to existing supplies via pipelines and other tools
 - Building/expanding water treatment plants
 - Stream diversions
 - Reservoirs
- Groundwater
 - New Wells
 - Aquifer Management



Water Management Tools that work

See H2O4TEXAS.ORG

- Reuse – treated wastewater for irrigation, etc.
- Treatment of Brackish Water
- Desalinization
- Conjunctive use of surface and groundwater

Do your part!

THANK YOU