

Water Recycling & Conservation

State Policy and Advocacy

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Texas Water Recycling Association

October 15, 2014

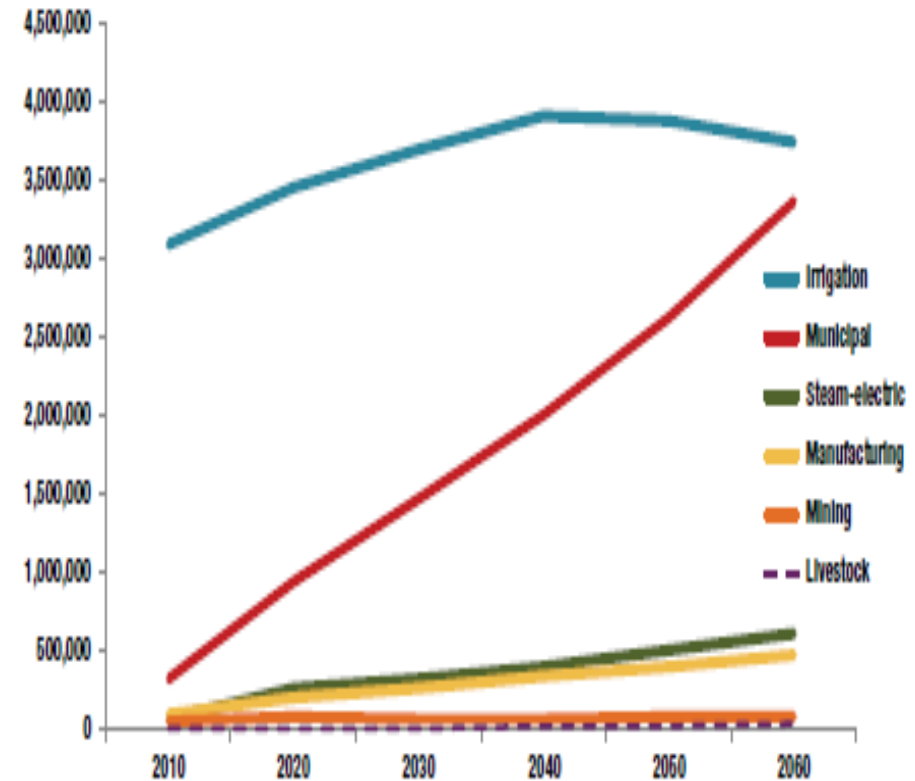


Water in Texas

- Background and Future Planning
 - 2012 State Water Plan: 50 year planning horizon, based on 16 regional plans
 - Using 2010 Census as baseline, population to almost double by 2060
 - Water demand projected to increase by 22% by 2060
 - Municipal and irrigation use will continue to lead demand
- Water Use for Mining Activity is Approximately 1.5% of Total Statewide Use

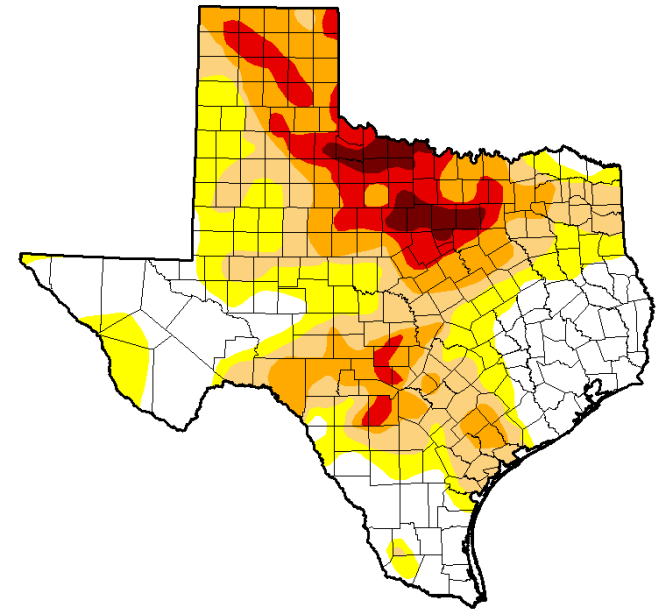


FIGURE 6.2. PROJECTED WATER NEEDS BY USE CATEGORY (ACRE-FEET PER YEAR).



Challenges in Texas

- Seems Manageable – What's the Issue?
 - Drastically increasing population
 - Ongoing drought
 - Water ownership
 - Regional mining areas and water supply
- Oil & Gas Industry Viewed as Part of the Problem



Use and Disposal Comparisons

- Fresh & Brackish Water Used per Year:

- 1,397,965,619 barrels
- 58,714,555,998 gallons
- 180,106 acre feet

- Less than 1% of Total State Water Demand

- Produced Water Disposed per Year:

- 7,066,172,806 barrels
- 296,779,257,852 gallons
- 910,365 acre feet

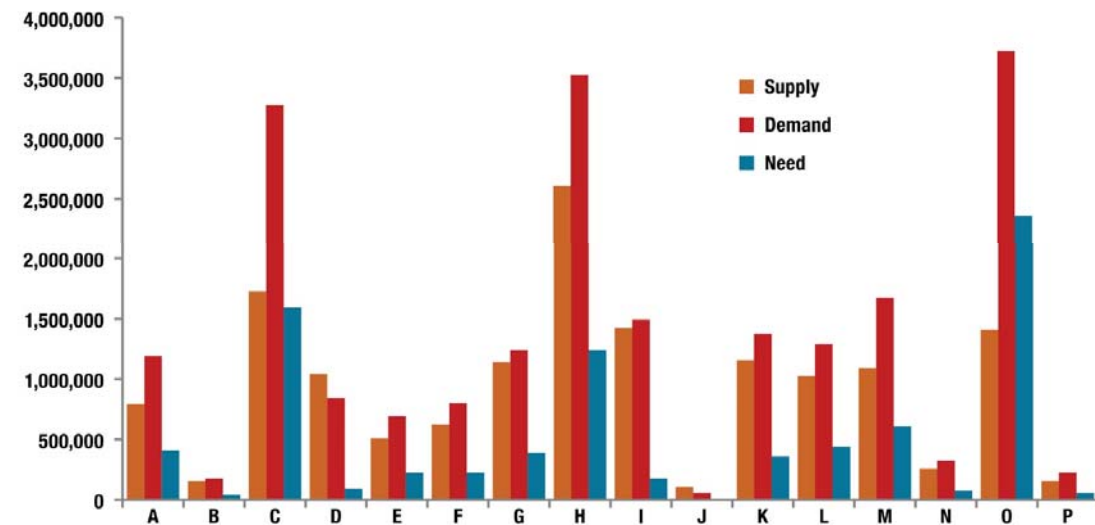
- Approximately 5% of 2010 Total State Water Demand Disposed

- Recycling 2/3 of Produced Water Yields 26% of Projected 2060 Water Shortage

Bottom Line on Water: Shortages Will Hurt

- Existing water supplies expected to decrease 10% by 2060
- Average expected shortfall:
 - 2020: 2.3M acre feet
 - 2040: 2.6M acre feet
 - 2060: 2.5M acre feet
- Worst case scenario:
 - 2060: 8.3M acre feet shortfall

FIGURE 6.1. EXISTING WATER SUPPLIES, PROJECTED DEMANDS, AND NEEDS BY REGION IN 2060 (ACRE-FEET PER YEAR).



Economic Impact

- By the year 2060, water shortages could account for \$116 billion in lost income and 1.1 million lost jobs in the state of Texas alone.

Industry and the Environment

- Unintended Technological Advances
 - Whaling industry and discovery of oil
 - Horse manure and horseless carriage
- Change the Focus on Water
 - Recycling and conservation vs Disposal
 - Incentives vs Mandates

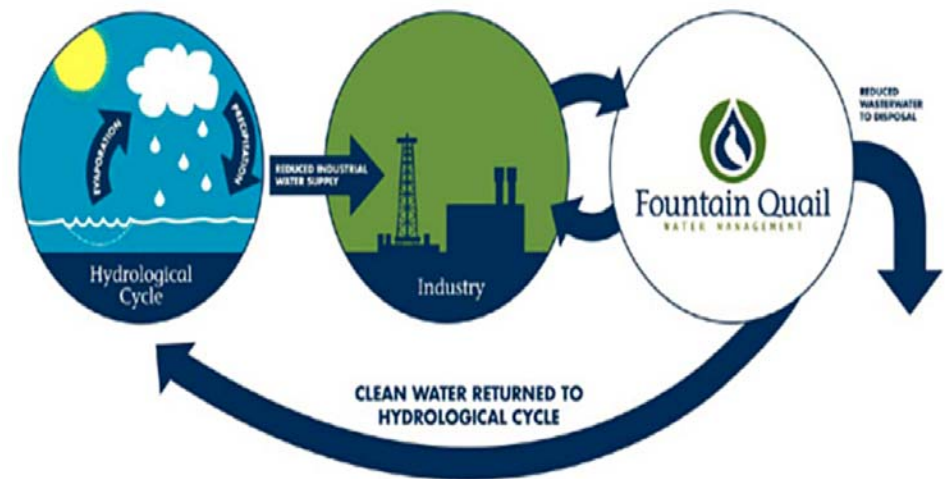
Texas Water Recycling Association

- Newly Formed (2012) and Rapidly Growing
- THE Voice of the Texas Water Recycling Marketplace
- Technology- and Industry- Agnostic
- Facilitate Bringing All Interested Industries Together
- Working With State Legislators and Regulatory Agencies



What's Been Accomplished by TWRA

- Railroad Commission Has Been a Good Partner
 - Permit by Rule
 - Multi-Lease, Multi-Operator
 - Fresh Water Standard
 - Clean Saltwater
 - Recycling Pits
 - Solids
- State Legislature Has Been Helpful
 - HB 2767 by Rep. Phil King





Measure takes aim at oil field wastewater

By Emily Pickrell | April 2, 2013 | Updated: April 2, 2013 10:46pm

Home Oil Field Pipelines Refining Power

Regulator eases rules to encourage frac water recycling

Posted on March 27, 2013 at 10:24 am by Jeannie Kever in Hydr...

Comments(4)

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Industry urged to pay attention to proposals legislating water use

Mella McEwen | Posted: Wed

April 10, 2013 10:31 pm

John Tintera, executive director of the Texas Water Recycling Association, noted that the historic drought Texas has been experiencing since 2011 placed a number of water-related issues on the front burner. He urged those in the audience to pay attention.

The commission votes to apply for a recycling permit if they recycle, lease or transfer their fluids to another operator's lease for recycling.

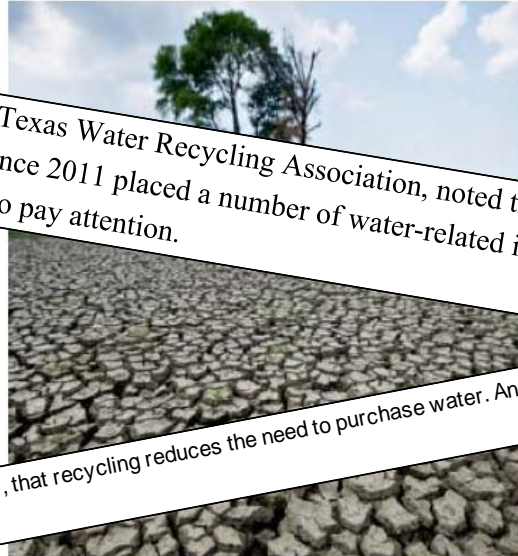
That applies to water used in hydraulic fracturing, as well as any other fluids coming out of the well bore.

Video: Companies tout recycled water for fracturing

Commission Chairman Barry Smitherman said the goal is to encourage oil and gas operators to recycle by removing regulatory hurdles.

The new rules become effective April 15.

The issue of water recycling and natural gas production, as legislators and natural gas economic benefits the shale oil boom has brought to the state. Still, lawmakers said they can't ignore concerns about water use, especially in the midst of a lingering drought.



Growing concern about water use during hydraulic fracturing prompted the Railroad Commission to adopt new rules for water recycling. Photo: Daniel Acker/Bloomberg

Brent Halldorson, chairman of the **Texas Water Recycling Association**, noted, however, that recycling reduces the need to purchase water. And because the recycling processes occur at or near the well, transportation costs are lower.



Future Public Policy Recommendations

- Texas Tax Policy/Incentives
- Texas Tort Reform/Civil Liability
- Federal Environmental Regulation

Help TWRA Advocate for Public Policy Changes

Join the Texas Water Recycling Association in its advocacy efforts surrounding water recycling, reuse, and conservation in Texas.

Help TWRA ensure the state's growing water demand is met.

Visit www.txwra.org for information on leadership, membership, and the Association's current initiatives.

