



Water for the People

State Bar of Texas
Advanced Government Law
July 23-24, 2015
Austin, Texas

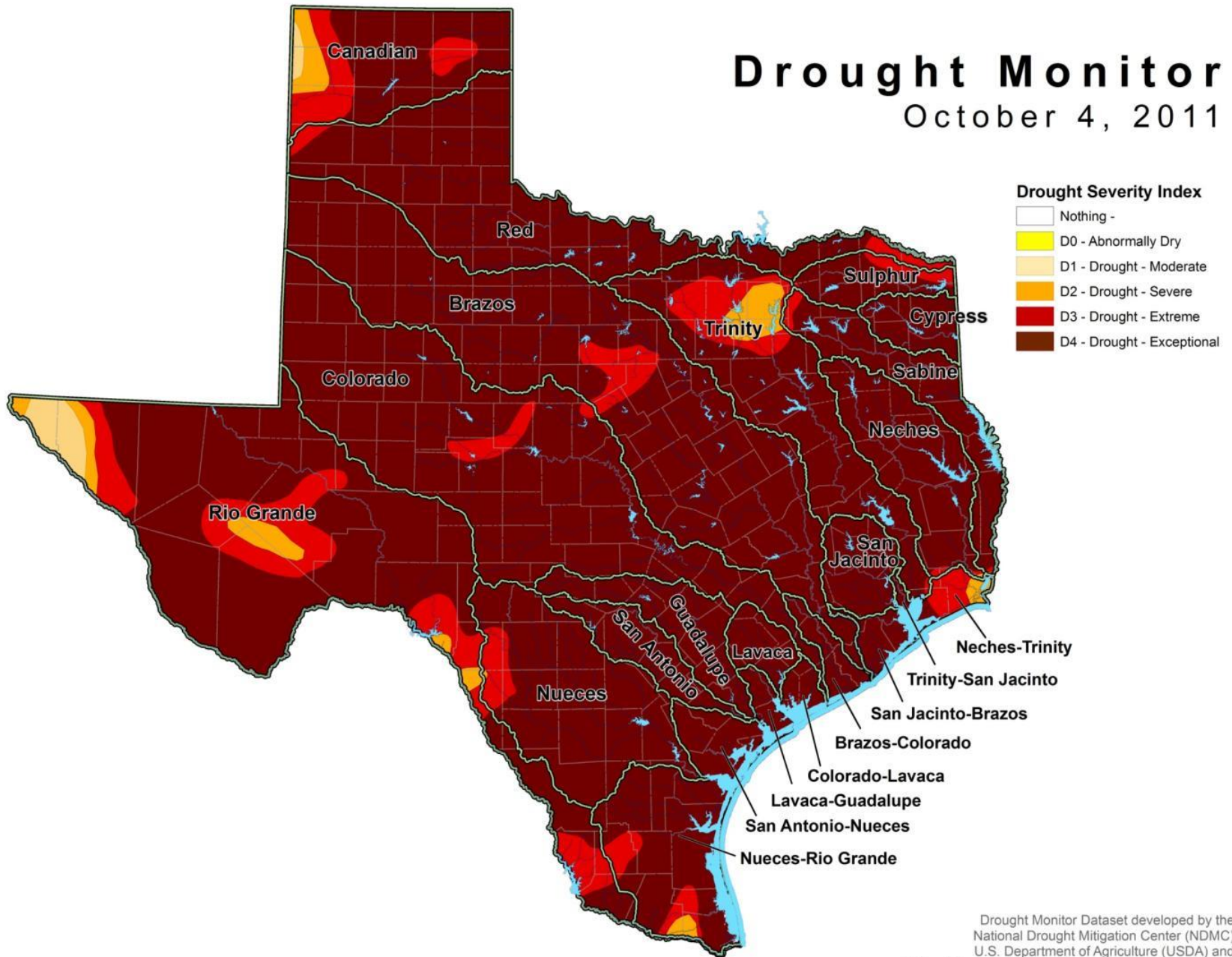
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Drought Monitor

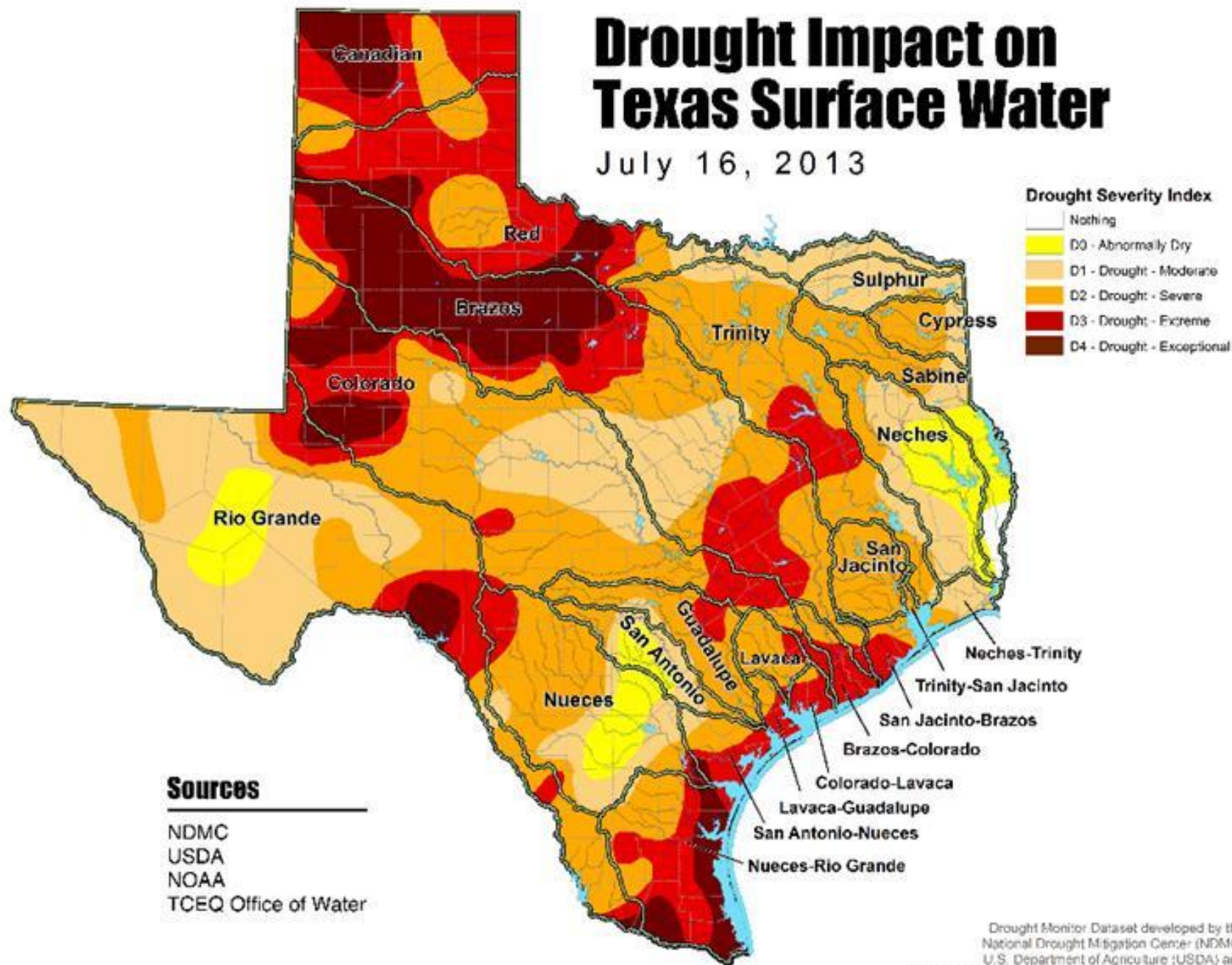
October 4, 2011



Drought Monitor Dataset developed by the
National Drought Mitigation Center (NDMC)
U.S. Department of Agriculture (USDA) and
National Oceanic & Atmospheric Administration (NOAA)

Drought Impact on Texas Surface Water

July 16, 2013

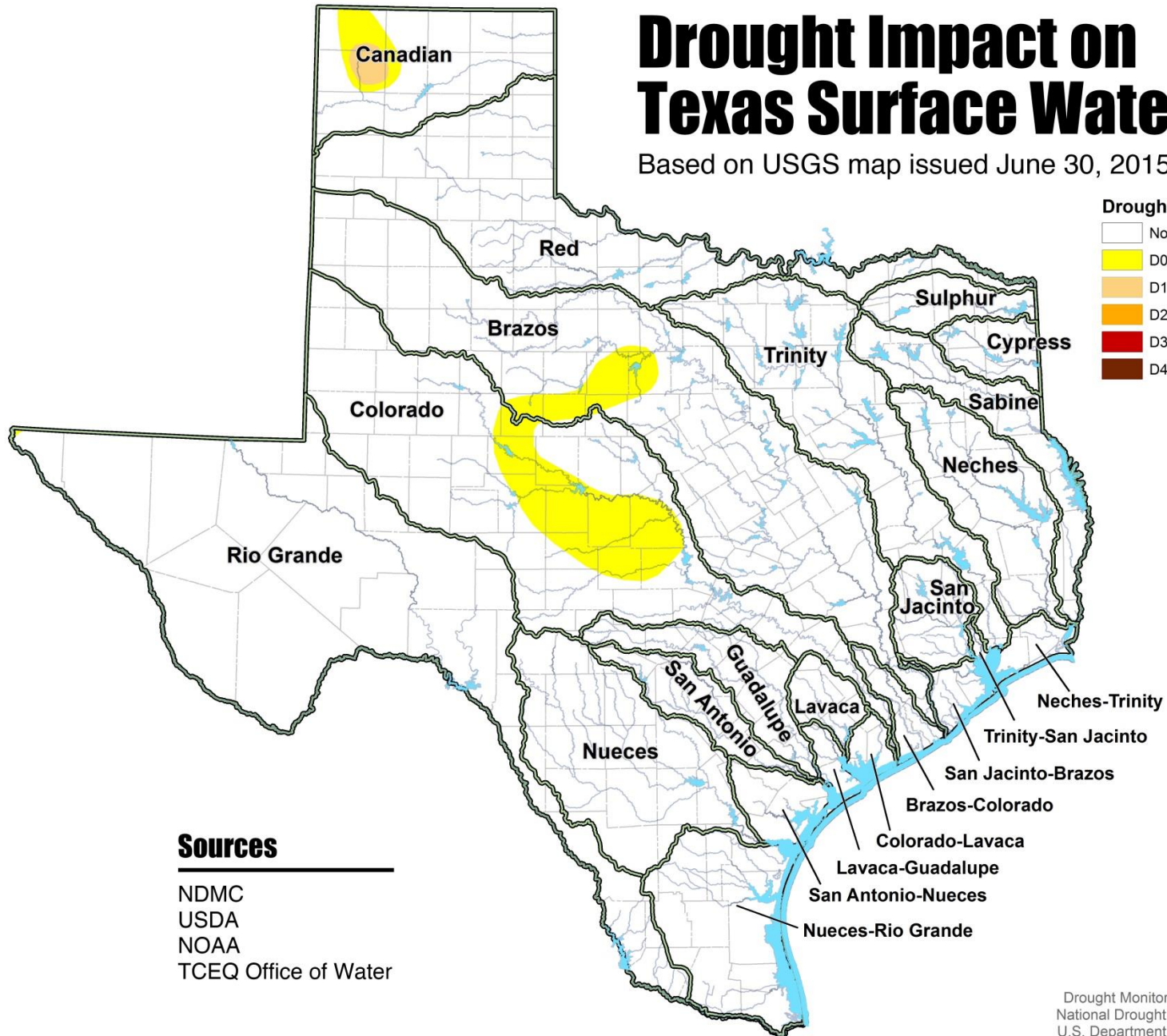


Drought Impact on Texas Surface Water

Based on USGS map issued June 30, 2015

Drought Severity Index

Nothing
D0 - Abnormally Dry
D1 - Drought - Moderate
D2 - Drought - Severe
D3 - Drought - Extreme
D4 - Drought - Exceptional



Sources

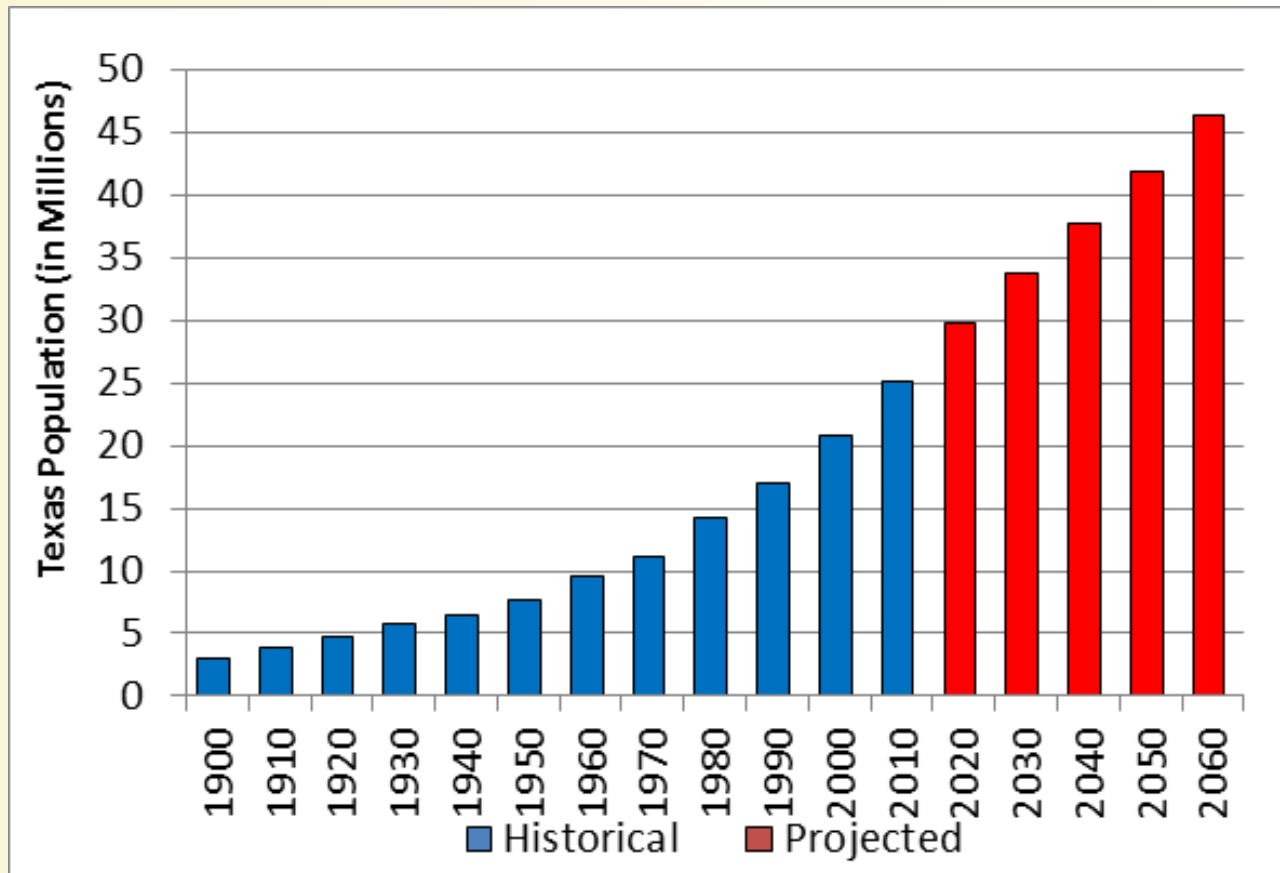
NDMC
USDA
NOAA
TCEQ Office of Water

Drought Monitor Dataset developed by the
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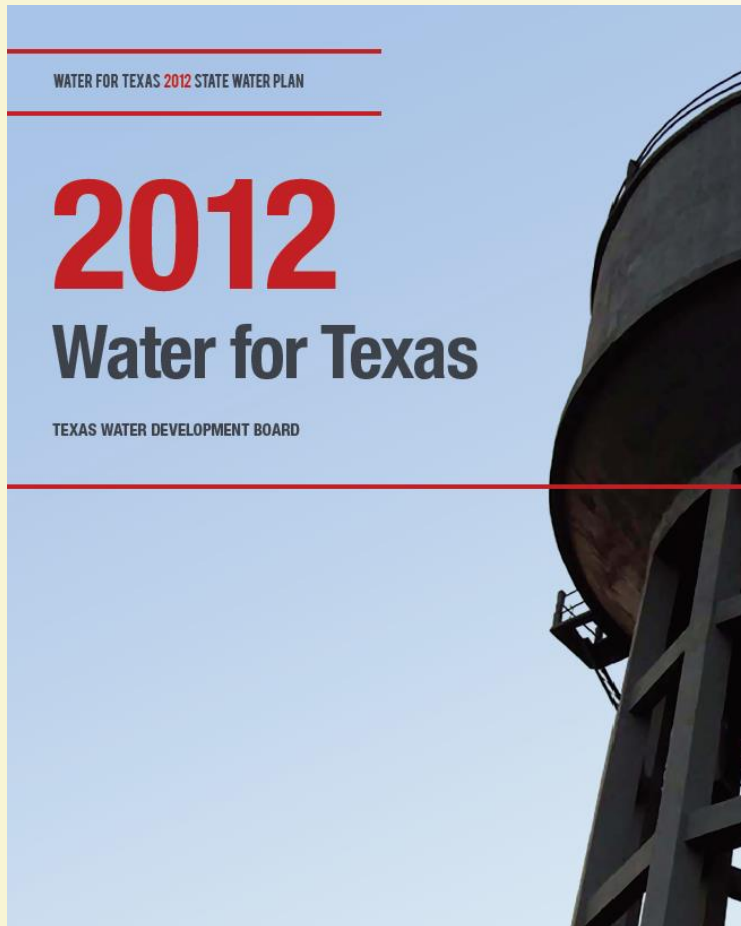
Overview

- The State's Long-Range Planning Process for Public Water Suppliers
- Impacts of the Drought on Water Supply
- New Drought Management Regulation
- New Financing Tools for Funding Water Supply Projects

Statewide Population Growth

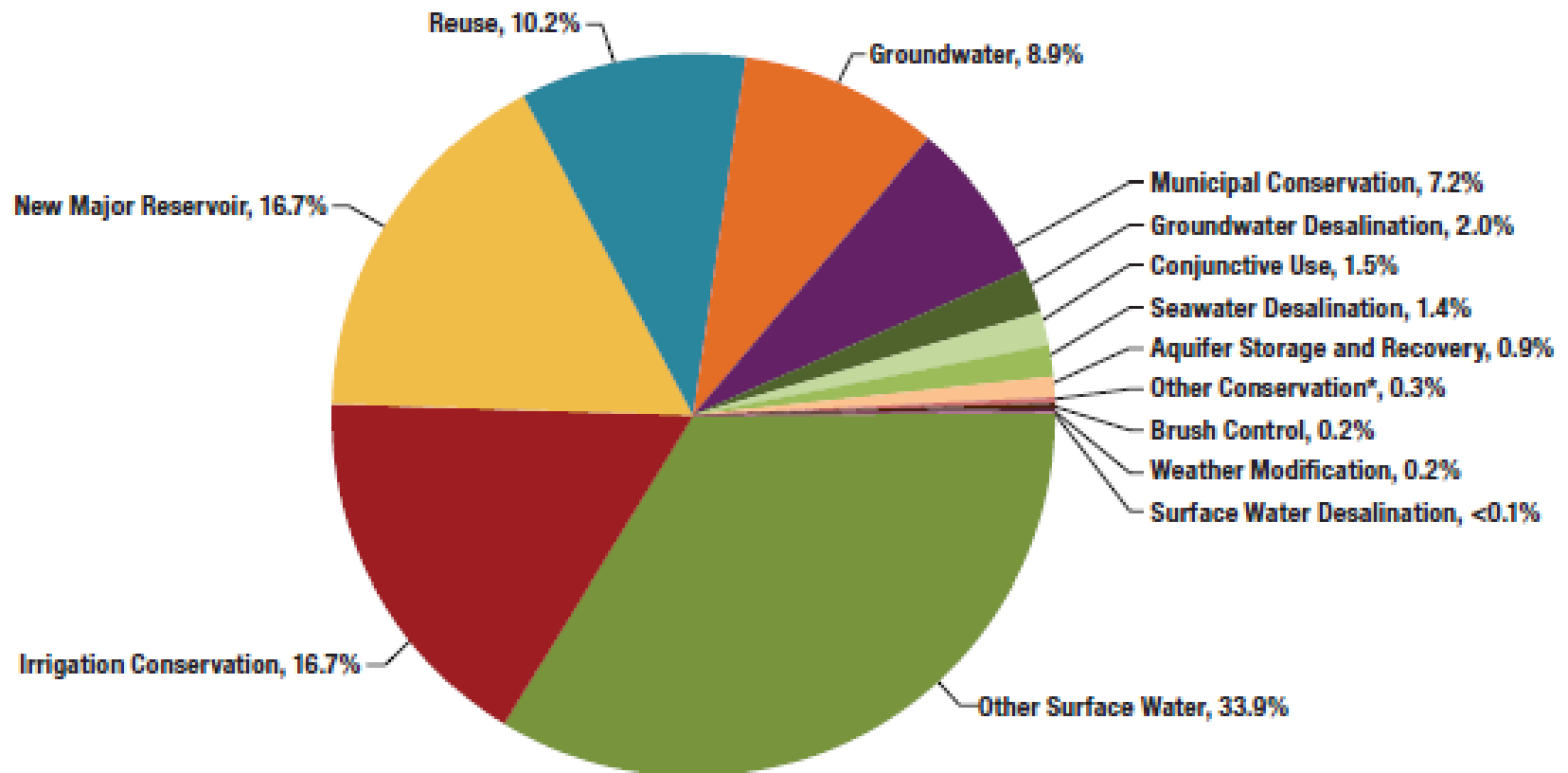


State Water Plan

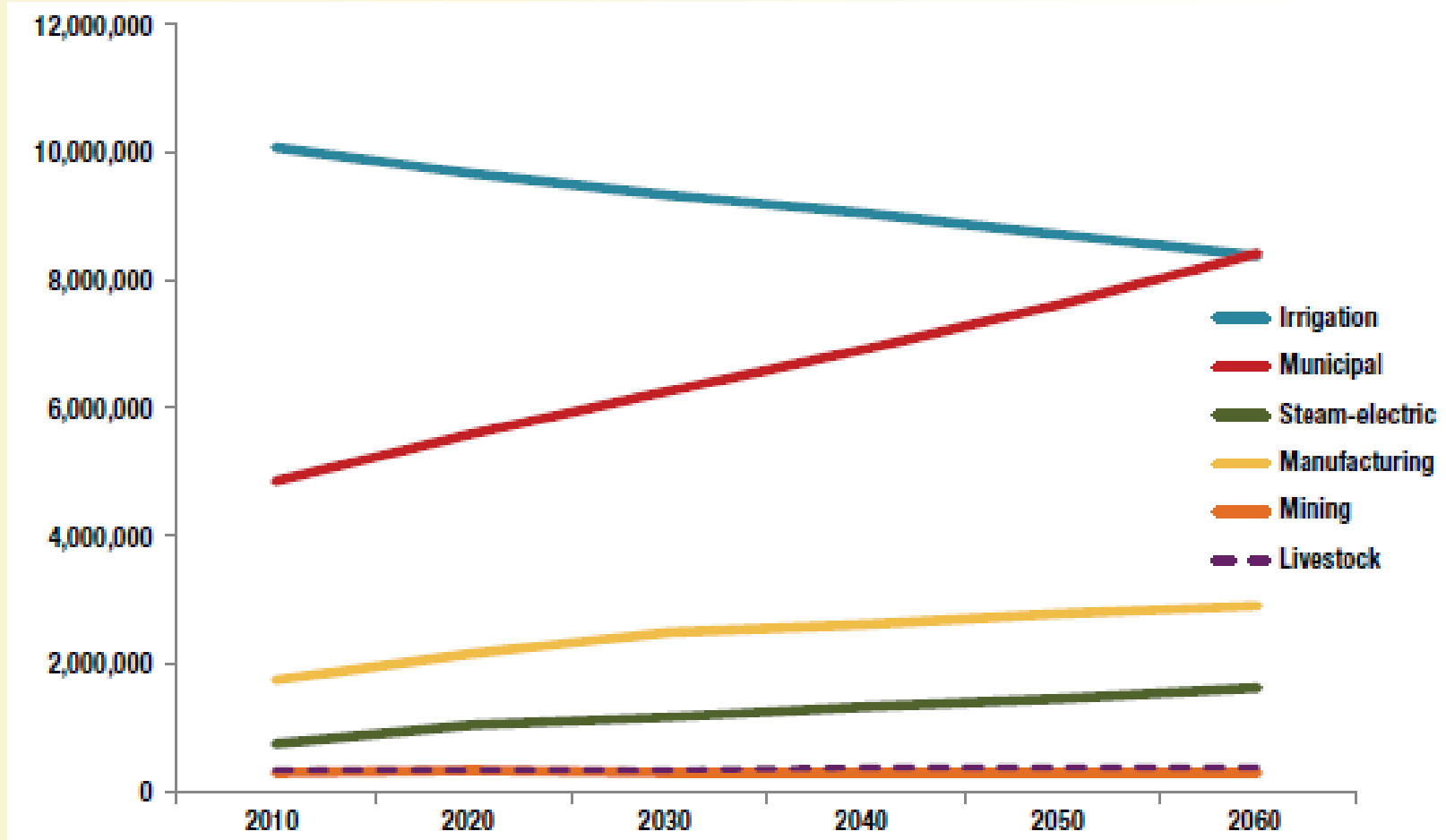


- Regional water planning was established in 1997 by Senate Bill 1
- State Water Plan is developed every 5 years by 16 Regional Water Groups
- Each Regional Water Plan assesses the projected 50-year demand of water supply in a region and identifies strategies to meet those demands
- Water use in Texas is projected to grow from 18 million acre-feet per year in 2010, to 22 million acre-feet per year in 2060

2012 SWP Recommended Water Management Strategies



Projected Water Demand by Type of Use



Water Management Strategies per 2012 SWP

- Water conservation
- Surface water strategies
- Groundwater supply strategies
- Water reuse strategies
- Other strategies

Water Conservation Strategies

Focus on efficiency of use and reduction of demands on existing water supplies

- Water-efficient appliances
- Public education programs
- Increased water efficiency in daily activities
- Limit turf/lawn irrigation

Impact of Conservation on Water Supplies

- Statewide, municipal conservation strategies are expected to result in approximately 650,000 acre-feet of “new” supply by 2060
- Statewide, irrigation and other conservation strategies are projected to result in approximately 1.5 million acre-feet per year of additional supply by 2060

Surface Water Strategies

- Proposed stream diversions
- New reservoirs
 - 26 new reservoirs recommended in 2012 SWP
 - Two permits issued by TCEQ in past two years
- New or expanded contracts and connection of currently developed supplies
- Operational changes in surface water management

Groundwater Strategies

Groundwater supply sources:

- New freshwater wells
- Increased production from existing wells
- Temporarily overdrafting aquifers to supplement supplies
- Desalination of brackish groundwater

These strategies are anticipated to add up to about 800,000 additional acre-feet per year by 2060

Water Reuse Strategies

Direct Reuse

- Treated effluent that never reaches a state watercourse – flange to flange
- Primarily used for irrigation and industrial supply

Indirect Reuse

- Treated effluent that is discharged into a state watercourse and then diverted downstream for reuse
- This water often treated and used for drinking water supplies

Other Strategies

- Conjunctive use of groundwater and surface water
- Weather modification
- Aquifer storage and recovery “ASR”
- Brush control
- Desalination
- Operational Changes/System Operations



Drought Management



The central role of drought management is to ensure the uninterrupted supply of water in an amount sufficient to satisfy essential human needs.

Drought Contingency Plans

RESOLUTION NO. 20120816-005

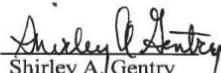
WHEREAS, the adoption and periodic update, as appropriate, of the City's Drought Contingency Plan is a requirement of the Texas Commission on Environmental Quality; and

WHEREAS, revisions to the City's Water Conservation Code include changes to the drought response triggers and corresponding water use reduction goals; **NOW, THEREFORE**,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF AUSTIN:

The Council repeals Resolution No. 20090423-002 and adopts a new plan entitled "The City of Austin Drought Contingency Plan", incorporating applicable revisions to the City's Water Conservation Code, as shown in Exhibit A.

ADOPTED: August 16, 2012 **ATTEST:**


Shirley A. Gentry
City Clerk

The Legislature has required all public water suppliers to adopt and implement drought contingency plans consistent with their approved regional water plans

Drought Impacts on Groundwater Supply



- Finite resource
Slow aquifer recharge rate
- Increased regulation
Creation of new
groundwater districts
- Desired future
conditions designation
Mandated by Texas Water
Code Ch. 36

Water Use Restrictions

Locations of PWS systems enforcing water use restrictions because of drought

DROUGHT 2015

Public Water Supply Systems Affected

as of July 01, 2015

- **RESOLVED (9)**
- ◆ **WATCH - Voluntary (398)**
- **WATCH - Mandatory (720)**

Total number of Community water systems affected: 1,118
Total number of active Community water systems in Texas: 4,630

Resolved A public water supply that has corrected production capacity deficiencies, or drought conditions for mandatory water use restrictions have alleviated.

Watch - 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.

Watch - 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.

Number of systems on map may not represent total number of affected systems due to common water source or scale of map.

Economic Impacts of Water Shortages

The 2012 State Water Plan notes the impacts of failure to address projected water needs:

- Annual economic losses from not meeting water supply needs could result in a reduction in income across the State of approximately \$11.9 billion annually
- Failure to meet the State's need for water could cost Texas businesses and employees as much as \$115.7 billion annually by 2060, with over a million lost jobs

Projections for Future Water Supply

By following the identified strategies in the 2012 State Water Plan, by 2060 the anticipated annual water supply would increase significantly:

- Municipal conservation – 650,000 acre-feet
- Groundwater strategies – 800,000 acre-feet
- Build all reservoir projects – 1.5 million acre-feet
- Implement surface water strategies – 3 million acre-feet

Regulatory Drought Management Tools

- TCEQ's Recent Drought Rules
- Doctrine of Prior Appropriation
- Texas Water Code § 11.053 and the Drought Rules
- The Appeal of *Texas Farm Bureau v. TCEQ*

Prior Appropriation

“First in time is first in right”

Senior water right holders are given preference to water over holders of rights who received their water rights later in time



TCEQ Drought Rules

The rules adopted in 2012 provide TCEQ with the authority to:

- temporarily suspend or adjust water rights during a drought or emergency shortage of water in order to allow a senior water rights holder to obtain water
- exclude certain junior priority water rights users from curtailment or suspension orders when, in the judgment of TCEQ, such exclusion is necessary to protect human health and safety

Texas Water Code § 11.053

The Legislature authorized TCEQ to temporarily suspend or adjust water rights during periods of drought, under specific limitations

The Drought Rules

Allow TCEQ to enforce a senior “call” on surface water against junior users upstream, while exempting from curtailment cities, other public water suppliers, and power generators who hold junior rights



In 2012, Dow made a call due to low flows in the Brazos River. TCEQ issued an order suspending upstream diversions, but exempted certain municipal and power generation junior rights from the call

The Texas Farm Bureau and others filed suit seeking a judgment that the Drought Rules were invalid

The courts (so far) ruled that the Drought Rules violated the priority rights of senior water rights holders

Appeal of Texas Farm Bureau v. TCEQ

TCEQ appealed, but the 13th Court of Appeals affirmed the judgment of the District Court that declared the Drought Rules invalid

The Court held that TCEQ lacked authority to adopt its Drought Rules through either TWC § 11.053 or its police powers and general authority

TCEQ has filed notice of appeal to the Texas Supreme Court

Financing Tools for Water Supply Projects

In 2013, the 83rd Legislature passed House Bill 4

- Restructured the Texas Water Development Board
- Created State Water Implementation Fund (SWIFT) to fund and implement the State Water Plan
- \$27 billion for SWP water supply projects
- Not less than 20% of SWIFT financial assistance to fund water conservation and reuse projects
- 10% of funds for projects in agricultural areas

Questions?

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