

# The Texas Water Development Board: A Legislative Response to Drought

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Water Science and Conservation

Texas Water Development Board



***1950 – 1957 The  
Drought of  
Record?***

***“ some of the largest of these cities have been humiliated by having to ration the use of water for domestic purposes such as watering gardens and washing cars.”***

More Water for Texas, Walter Prescott Webb

***“the greatest outrage to City Hall was the Cotton Bowl, that emporium of gladiator pride, having to drill its own well within the stadium in order to water the turf because the Dallas water works could not furnish the means for such lavish irrigation.... Good strike made at a depth of only 35 feet just 27 yards south of the goal posts.”***

Hatfield, T.M., 1964, The Texas drought of 1950–1956, The University of Texas, 81 p.

# PROCLAMATION

BY THE

## Governor of the State of Texas

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**TO ALL TO WHOM THESE PRESENTS SHALL COME:**

I, RICK PERRY, Governor of the State of Texas, issued an Emergency Disaster Proclamation on July 5, 2011, certifying that exceptional drought conditions posed a threat of imminent disaster in specified counties in Texas.

WHEREAS, record high temperatures, preceded by significantly low rainfall, have resulted in declining reservoir and aquifer levels, threatening water supplies and delivery systems in many parts of the state; and

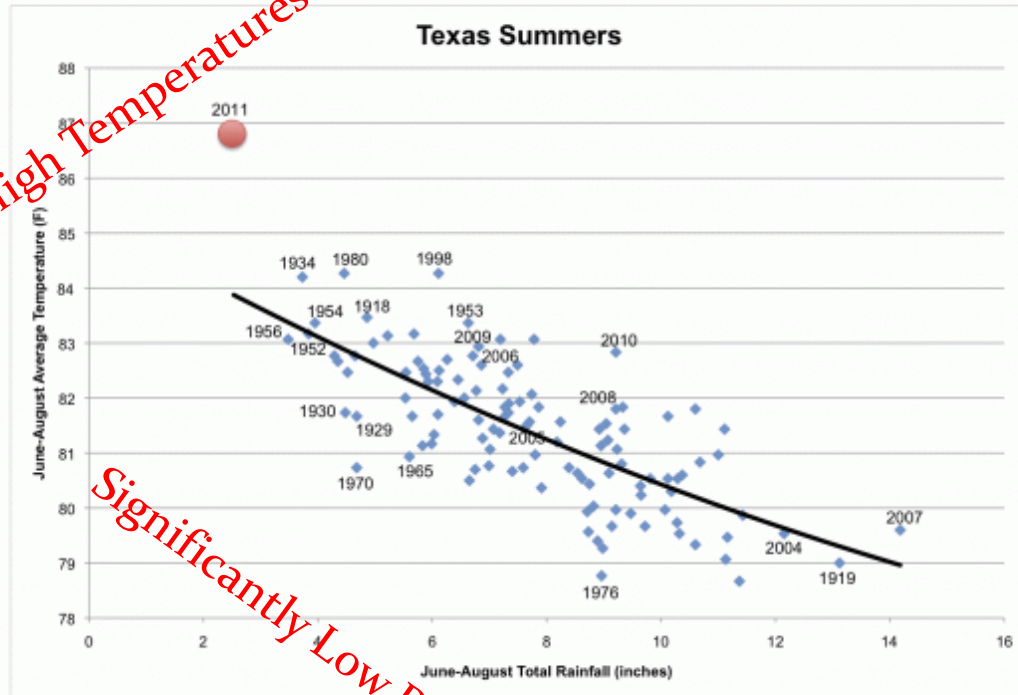
WHEREAS, these exceptional drought conditions have reached historic levels and continue to pose an imminent threat to public health, property and the economy; and

WHEREAS, this state of disaster includes all 254 counties in the State of Texas;

THEREFORE, in accordance with the authority vested in me by Section 418.014 of the Texas Government Code, I do hereby renew the disaster proclamation and direct that all necessary measures, both public and private as authorized under Section 418.017 of the code, be implemented to meet that threat.

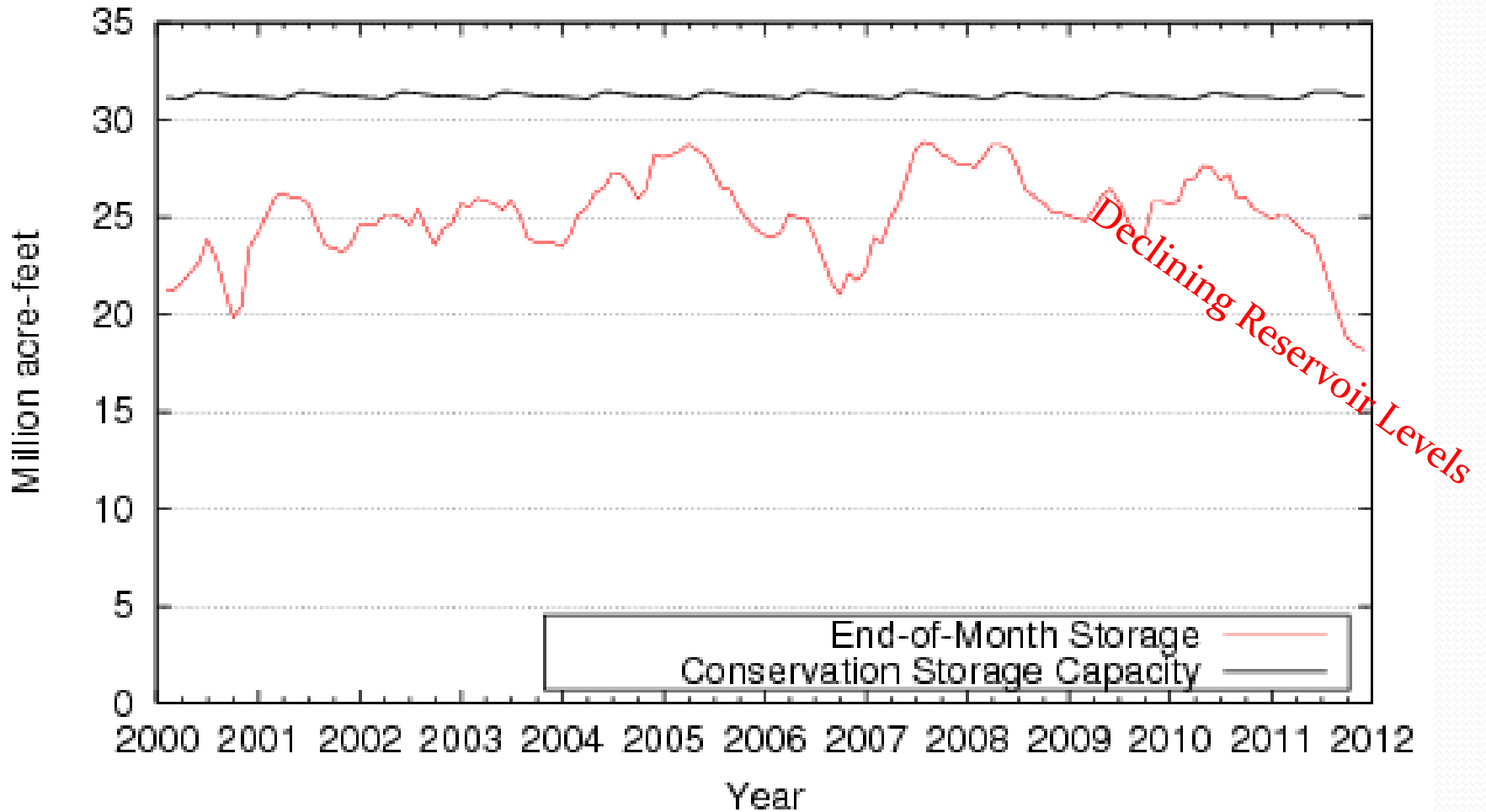
# Summer of 2011 The Outlier

Record High Temperatures



Significantly Low Rainfall

# CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS



# ***JULY STREAMFLOW CONDITIONS***

## 29 reporting index stations

- very high 1 station
- high 1 station
- low 15 stations
- very low 6 stations
- near normal 6 stations
- Compared to June, flows have increased at 4 index stations and decreased at 22 stations.

*Reduced Streamflow*



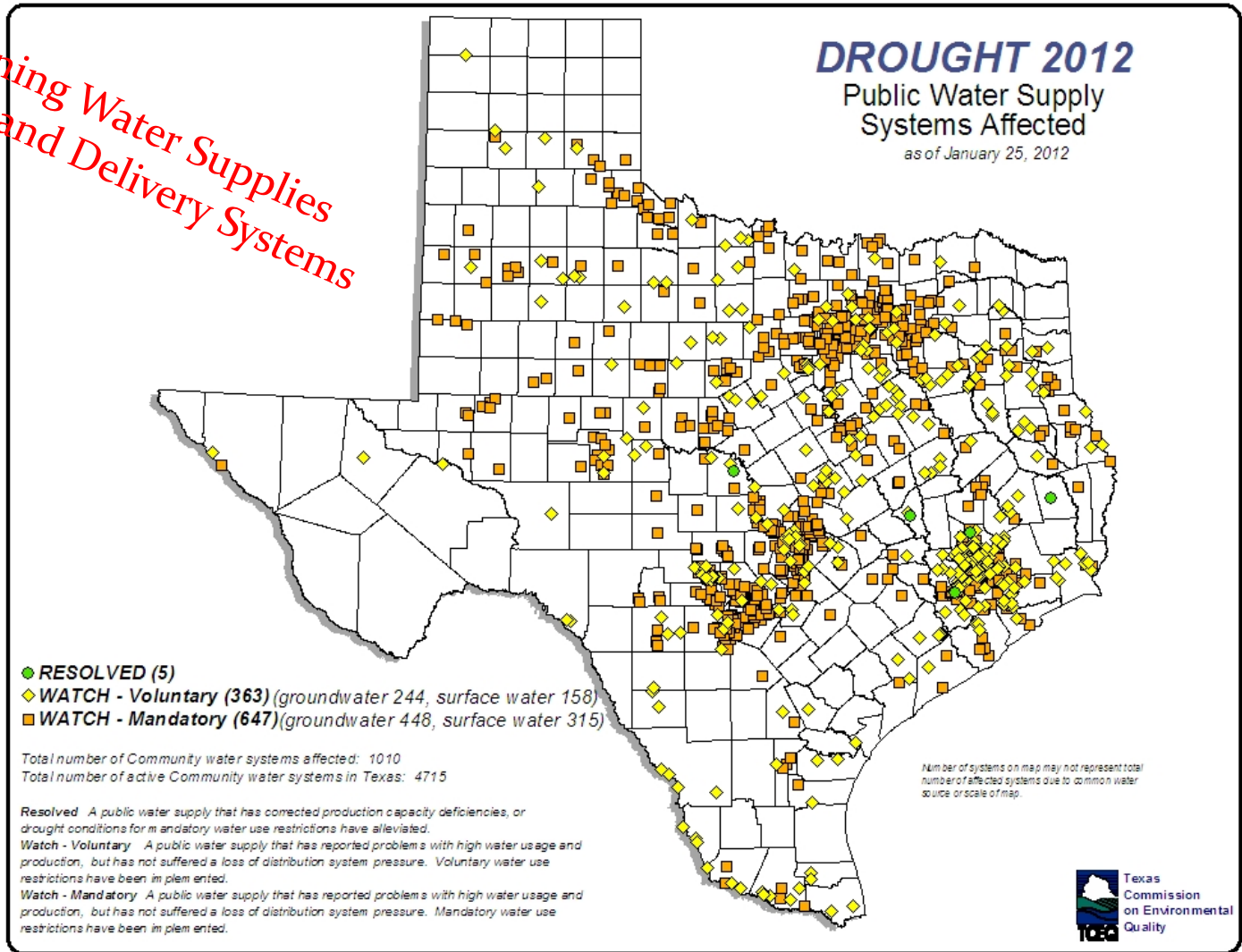
# JULY 2011 GROUNDWATER LEVELS IN OBSERVATION WELLS

*Declining Aquifer Levels*

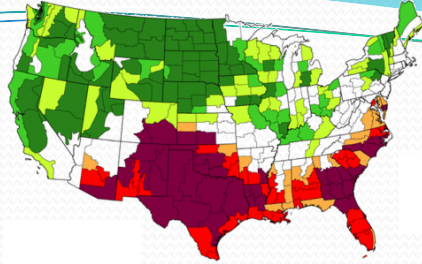
- Declined thirteen monitoring wells
- The J-17 well in San Antonio recorded a water level of 88.88 feet below land surface. This water level is 7.88 feet below the Stage II critical management level in that segment of the Edwards Aquifer. Stage II restrictions were triggered on June 1, 2011 by the Edwards Aquifer Authority after the 10 day average of water levels fell below 650 foot elevation or 81 feet below land surface.

# Public Water Supply Systems Affected by Drought

Threatening Water Supplies  
and Delivery Systems



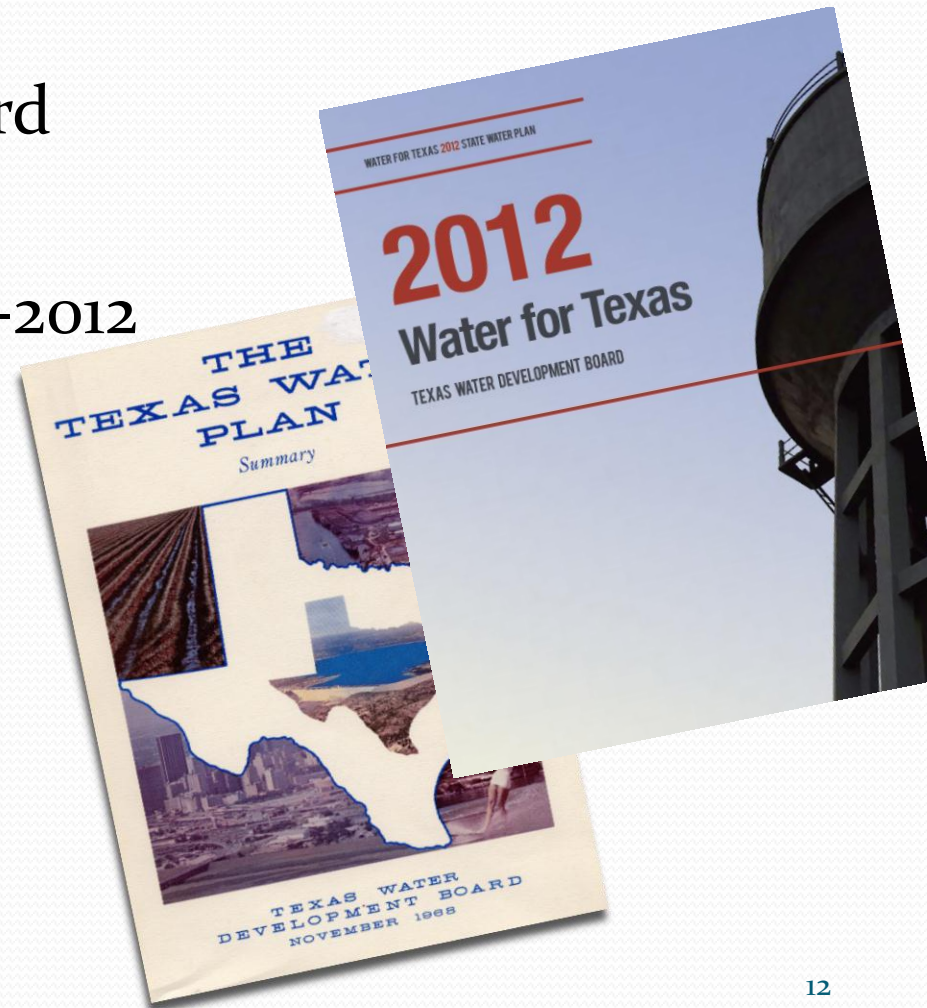
# Records



- Worst one-year drought on record
- Driest period on record
- Hottest period on record
- Statewide reservoir storage lowest since 1978 at <60%
- Ag losses at \$5.2 billion
  - 50% cotton crop lost in West Texas
  - Ranchers selling herds
- ~ 4 million acres burned by wildfires
- Rivers with first-time calls on water rights

# Texas Water Development Board: A Legislative Response to Drought

- Late 1950s Drought of Record
  - 1957: Creation of TWDB
  - 9 State Water Plans, 1961-2012

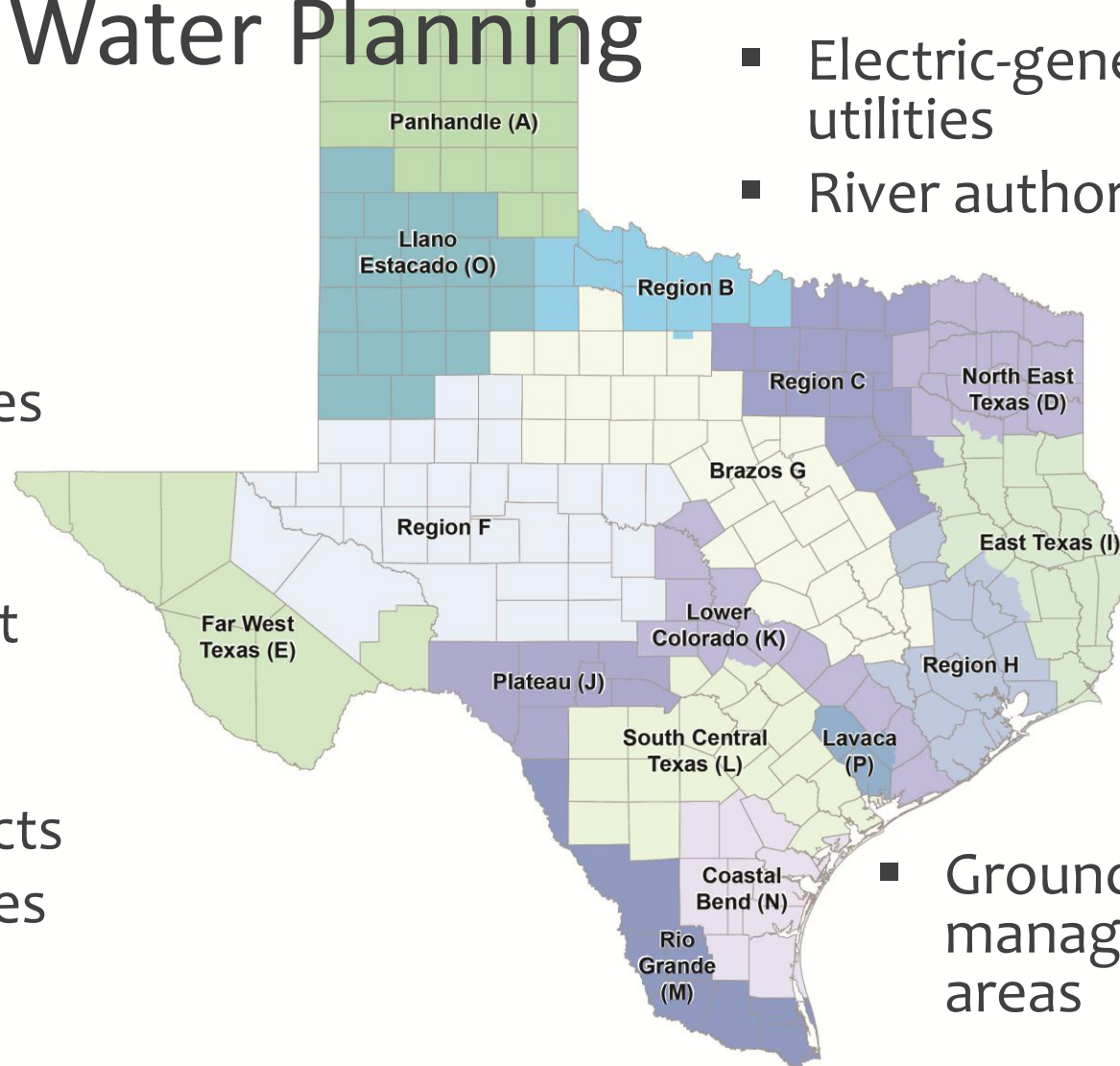


# Regional Water Planning

Statutory interests:

- Public
- Counties
- Municipalities
- Industries
- Agriculture
- Environment
- Small businesses
- Water districts
- Water utilities

- Electric-generating utilities
- River authorities



- Groundwater management areas

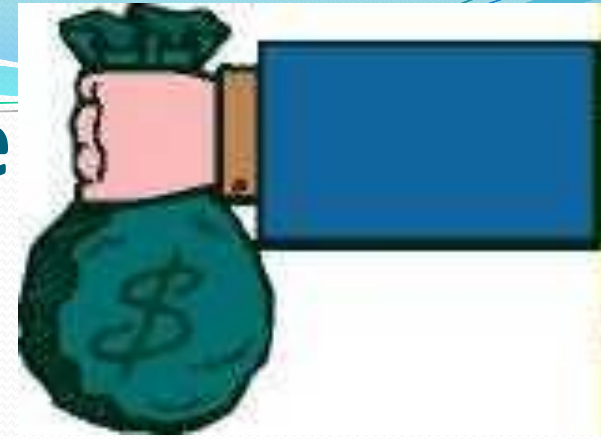
# ARE WE PREPARED?

**The primary message of the 2012 State Water Plan is a simple one:**

**In serious drought conditions, Texas does not and will not have enough water to meet the needs of its people, its businesses, and its agricultural enterprises.**

# Costs of Recommended Water Management Strategies

Total capital costs: \$30.7 billion (2007)  
\$53 billion (2012)



# What's Being Done

- TCEQ Weekly Drought Meetings
- Drinking Water Task Force Meetings Weekly
- Drought JIC Weekly Teleconferences
- Providing County Level Groundwater Analysis
- Providing System Level Surface Water Analysis
- Fast Tracking of Permits
- State and Federal Assistance to Agriculture
- Working With FEMA
- Coordinated Statewide Approach – (successful so far)




http://www.twdb.texas.gov/data/drought/index.asp

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Texas Water Development Board

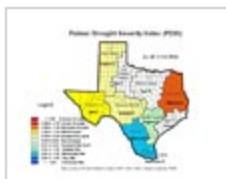
## Drought

 Use the [Drought FAQ](#) to find information faster!

Texas is no stranger to drought. This page describes our role in monitoring drought and providing assistance in times of drought as well as providing links to learn more about current conditions in Texas.

## TWDB and Drought

The Texas Water Development Board (TWDB) serves on the [Texas Drought Preparedness Council](#). The Council is charged with supporting drought management efforts in the state and with conducting drought monitoring, assessment, preparedness, mitigation, and assistance. The Council prepares monthly drought situation reports on the status of drought conditions in the state and delivers these reports to state leadership. The latest monthly report can be viewed at the Council's home page.



In an effort to provide updated drought information the TWDB has been compiling drought index data from National Oceanic and Atmospheric Administration, Texas A&M University, and the University of Nebraska in Lincoln since August 2009. The TWDB maintains a database for these data in addition to a dataset of reservoir storage and streamflow conditions. This information is provided in a user-friendly application in terms of [drought summaries, maps, charts and animations](#).

TWDB staff also prepare monthly [Texas Water Conditions reports](#). These reports document storage in the state's reservoirs as well as groundwater levels in the state's aquifers. In addition, the TWDB maintains information on [reservoir storage](#) for different regions of the state as well as for [individual reservoirs](#) (Note that we only have information for those reservoirs with level gages).

The Board is also a cooperator with the U.S. Geological Survey in [monitoring real-time stream flows across the state](#).

The TWDB, in coordination with regional water planning groups across the state, develops a state water plan that plans for a repeat of the drought of record. The latest state water plan and planning efforts are available at [Water Resources Planning & Information](#).

## Surface Water

- ★ [Bays & Estuaries](#)
- ★ [Reservoir Volumetric Surveys](#)
- ★ [Instream Flows](#)
- ★ [Texas Water Condition Report](#)

## ★ Drought

- [Drought FAQ](#)
- [Contact for Drought](#)

***“Joe, looks like rain, don’t you think?”***

***“Sam, long as you’ve lived in West Texas you ought to know better’n that .”***

***“But Joe, just look at those big clouds over there.”***

***“Hell Sam, they’re just empties coming back from Florida.”***

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**Texas Water**

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