



## DROUGHT PREPAREDNESS COUNCIL

RICK PERRY  
Governor

5805 N. Lamar Blvd.  
P.O. Box 4087  
Austin, Texas 78773-0220  
Phone: (512) 424-2138  
Fax: (512) 424-2444

W. NIM KIDD  
Council Chairperson

**October 11, 2012**

**TO:** The Honorable Rick Perry, Governor, State of Texas  
The Honorable David Dewhurst, Lieutenant Governor, State of Texas  
Ms. Esperanza Andrade, Secretary of State, State of Texas  
The Honorable Steve Ogden, President Pro-Tempore of the Senate, State of Texas  
The Honorable Joe Straus, Speaker of the House, State of Texas  
The Honorable Steve Ogden, Chairman, Senate Finance Committee, State of Texas  
The Honorable Troy Fraser, Chairman, Senate Natural Resources Committee, State of Texas  
The Honorable Tommy Williams, Chairman, Senate Committee on Transportation & Homeland Security, State of Texas  
The Honorable Jim Pitts, Chairman, House Appropriations Committee, State of Texas  
The Honorable Allan Ritter, Chairman, House Natural Resources Committee, State of Texas  
The Honorable Rick Hardcastle, Chairman, House Agriculture & Livestock Committee, State of Texas  
The Honorable Pete Gallego, Chairman, House Criminal Jurisprudence Committee, State of Texas  
Mr. Jeff Boyd, Chief of Staff, Office of the Governor  
Mr. Steven McCraw, Director, Texas Department of Public Safety

**FROM:** Assistant Director Nim Kidd, Texas Division of Emergency Management

**SUBJECT:** Statewide Drought Situation Report

Nim Kidd, Chairman  
Texas Division of Emergency Mgmt

Brenner Brown, Member  
Texas Water Development Board

Richard Egg, Member  
State Soil & Water Conservation Board

Lance Williams, Member  
Texas Department of Agriculture

Dr. Travis Miller, Member  
Texas AgriLife Extension Service

David Bradsby, Member  
Texas Parks & Wildlife Department

Gilbert Jordan, Member  
Texas Department of Transportation

David A. Van Dresar, Member  
Texas Alliance of Groundwater Districts

Suzanne Burnham, Member  
Texas Department of State Health Services

Chris Loft, Member  
Texas Commission on Environmental  
Quality

Tad Curtis, Member  
Office of the Governor  
Economic Development & Tourism

Dr. John W. Nielsen-Gammon, Member  
Office of the State Climatologist

Michael Dunivan, Member  
Texas Forest Service

Marisa Callan, Member  
Texas Department of Housing and  
Community Affairs

## **1. NEXT COUNCIL MEETING**

November 8, 2012 2:00pm

## **2. GENERAL CONDITIONS**

September started hot and dry for most of the state, leading to drought conditions becoming more severe in many areas, but two high accumulation precipitation events helped limit degradations. Temperatures were at or above average for most of the state, with North Central Texas along the Texas-Oklahoma border seeing the highest anomalies, but isolated regions in the state were below average. For precipitation, the aforementioned precipitation events kept most of the state above average for the month; the Lower Valley, the Upper Coast, and the extreme northwest Panhandle saw the least precipitation compared to normal.

As with the previous months, the worst drought conditions are found in far South Texas and in West Texas along the Texas-New Mexico border. These regions generally missed out on the major precipitation events through the month, allowing drought conditions to persist. Surface water storage in South Texas is continuing to decline despite improved streamflow, while storage in west Texas remains extremely low. Areas in West Texas not along the border, such as the eastern Panhandle, did see precipitation in September and are showing improved soil moisture conditions; most of the Lower Valley has not been so fortunate, and still has serious short-term drought conditions to contend with.

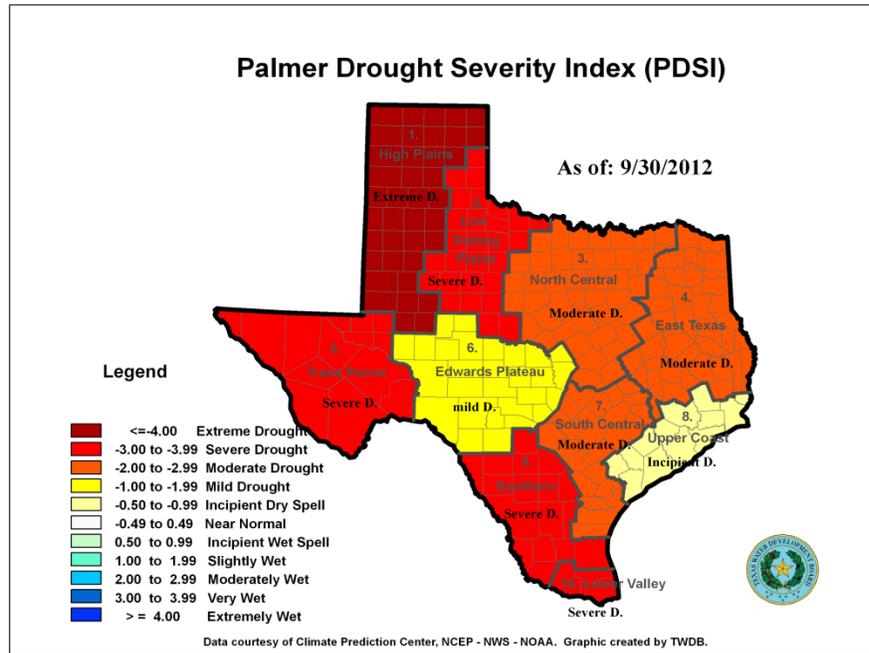
For the rest of the state, conditions have generally improved in the short-term. Regions unaffected by the two major precipitation events—North Central Texas and the Upper Coast—have lower soil moisture and higher fire risk indices than the rest of the state. More areas are still afflicted with longer-term conditions, however. Using the 6- and 12-month time scales, much of the state is in poor condition. Particularly bad are the western Trans-Pecos, the southern Edwards Plateau, and South Central Texas. The poor conditions at these time scales are indicative of ongoing hydrological problems in these areas; the low levels of the Edwards Aquifer, only a few feet higher than this time last year, as well as the steadily decreasing reservoir levels across the central part of the state, reflect this. Despite the large rainfall accumulations, these conditions persist, showing how strong these impacts have been across the state.

The temperature and precipitation outlook is indeterminate for next month, with no significant probability of being either above or below average. The latest ENSO outlook from the Climate Prediction Center shows a decreased likelihood for a strong positive phase, as indices are trending more toward neutral conditions as the month draws to a close. While it's still possible for a positive phase to occur, most dynamical models are predicting that it won't be strong and it's not likely to persist through winter if it forms at all.

### 3. OVERALL STATEWIDE DROUGHT CONDITIONS

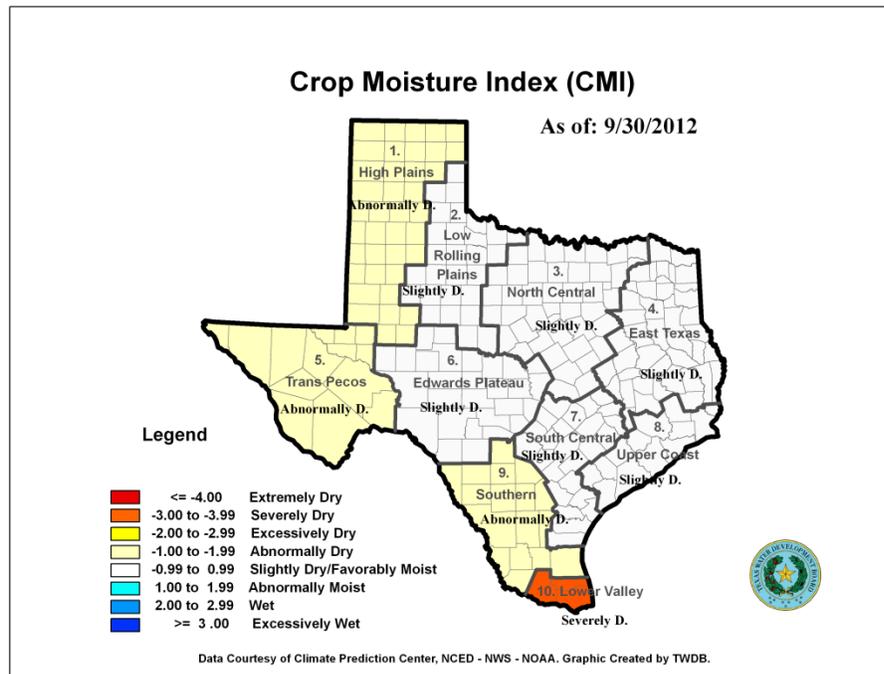
#### Palmer Drought Severity Index (PDSI):

Based on this index, entire state was back to drought except for the Upper Coastal Region One region are in Extreme Drought, four regions in Severe Drought, three in Moderate Drought and one Mild Drought



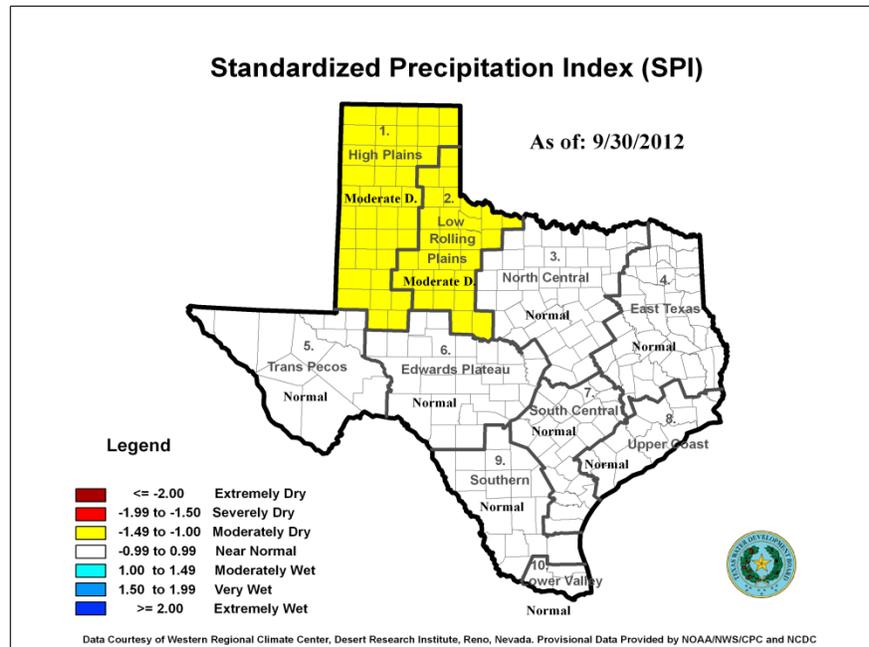
#### Crop Moisture Index (CMI):

Most of the state saw some improvement by the end of the month. One Region is Extremely Dry, Three (3) Regions were in Abnormally Dry conditions, and six (6) were in Slightly Dry/Favorably Moist



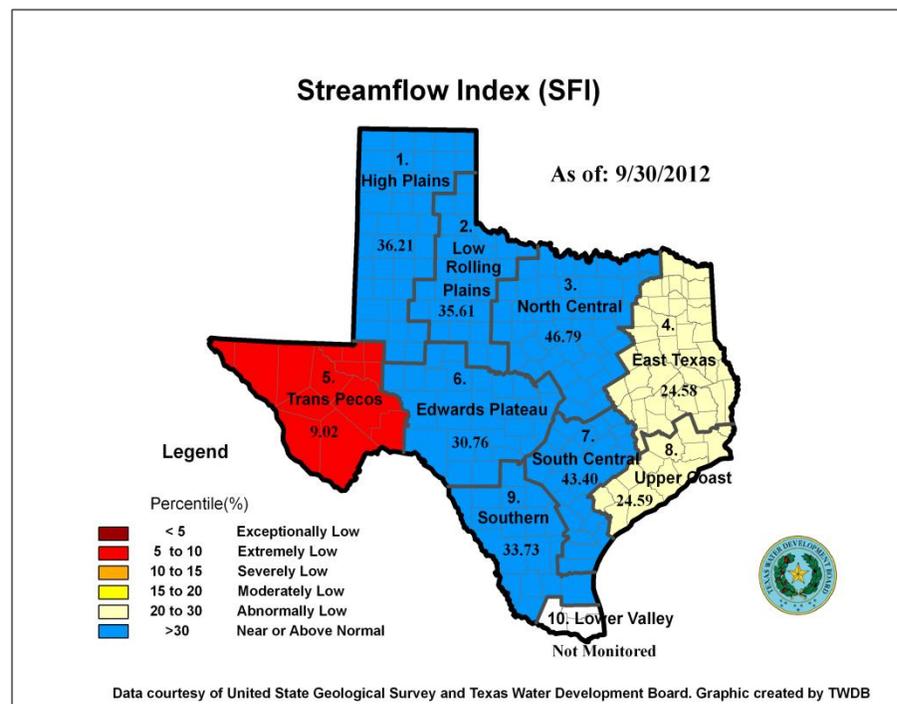
## Standardized Precipitation Index (SPI)

Based on this index, the precipitation in two regions are in Moderately Dry conditions while eight are still in Near Normal conditions.



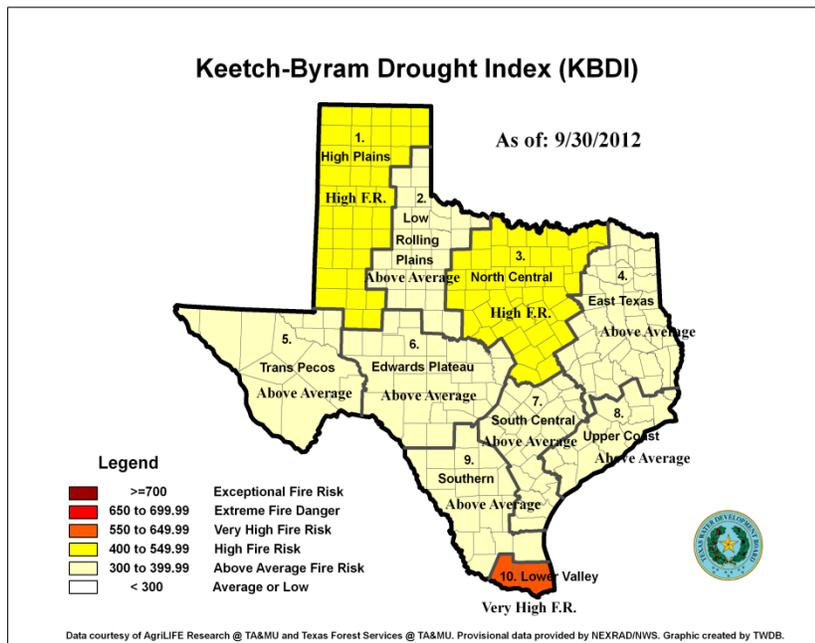
## Stream Flow Index (SFI)

The stream flow index improved in 4 out of the 10 regions. East Texas and Upper Coast regions were Abnormally Low. Trans Pecos saw Extremely Low flows. The High Plains, Low Rolling, North Central, Edwards Plateau, South Central and Southern Regions are experiencing near or above normal stream flows. Flow in Lower Valley region was not monitored.



### Keetch-Byram Drought Index (KBDI)

Most of the state faced either Above Average to Very High fire risk. Extreme High Risk in the Lower Valley.



### 3. RESERVOIR STORAGE CONDITION

Water storage conditions are summarized below by river basins for the 109 of Texas major reservoirs at the end of the month:

- The statewide combined storage was 68% full, or 0.47 million acre-feet less than a month ago.
- By the river basins, storage was lower than normal in 9 basin or sub-basins but Near or Above Normal in all other 12 basin or sub-basins
- Exceptionally low in Canadian River basin and Up/Mid Rio Grande sub-basins,
- Extremely low in Upper Colorado sub-basins and San Antonio River basins,
- Severely low in Upper Red River sub-basin,
- Moderately low in Lower Colorado, Lower Rio Grande, and Nueces river basin or sub-basins,
- Abnormally low in Upper Brazos sub-basin, and
- Near or above Normal in all other 12 basin or sub-basins.

The elephant Butte Reservoir had 6% full by the month end.



impounding 1,632,770 acre-feet and Falcon at 20.67% of conservation capacity, impounding 547,229 acre-feet. Mexico has 30.47% of normal conservation capacity, impounding 770,985 acre-feet at Amistad/Falcon.

**Allocations:** As of printing of the April ownership report, we have allocated 119,256.2922 acre-feet to Class A & B water rights, which include irrigation, mining and recreation.

**Storage & Loss Amistad vs. Falcon:** The U.S. is currently storing approximately 998 thousand acre-feet at Amistad (54.2%); and approximately 411 thousand acre-feet (26.5%) of normal conservation capacity at Falcon.

Evaporation and seepage losses at Amistad for the last 12 months, as of 09/22/12, are 201,042 acre-feet. For the same period, the U.S. has lost 164,680 acre-feet at Falcon.

**Releases to meet demands:** In 2012, (through 09/22/12), Mexico has released 745,848 acre-feet from Amistad and 955,411 acre-feet from Falcon Mexico needs. The U.S. has released 1,031,475 acre-feet from Falcon and 872,459 acre-feet from Amistad for U.S. needs. Combined with gains between Amistad and Falcon, U.S. inflows to Falcon have totaled 870,630 acre-feet. The U.S. demand in the lower Rio Grande has been met at a rate of 84% by direct Rio Grande inflows and Amistad releases this year.

**Upper Rio Grande (New Mexico):** Elephant Butte in New Mexico is currently storing 112,688 (5.57%) acre feet and Caballo Dam in New Mexico, downstream of Elephant Butte is storing 4,864 (2.14%) acre-feet. This water storage in part is used to meet water needs in the El Paso area.

**Outlook:** 71% of all accounts began 2012 with 100% of their usable balance and 29% of all accounts began 2012 less than 100% of their usable balance of water available. The National Weather Service continues to report that moderate to severe drought conditions are affecting much of South Texas counties.

## 7. RIVER BASIN REPORTS

Stream flow conditions vary widely across the state. When considering drought conditions, United State Geological Survey (USGS) streamflow data are commonly used as a metric for comparison. This report uses monthly mean river flows in cubic feet per second (cfs) to represent average monthly conditions within each river basin. The historical median flow value for the month (the discharge which is equaled or exceeded 50% of the time) is used to prevent the inclusion of high flow values that would skew the data.

## **Red River Basin:**

### **Streamflow Conditions:**

<b>Site</b>	<b>September mean (cfs)</b>	<b>September historical median (cfs)</b>
Red River near Burkburnett	12	245
Red River near De Kalb	829	3,350

**Drought Condition:** As of September 25, 100% of the Red River Basin is experiencing at least moderate drought conditions; with 0.7% of the basin experiencing exceptional drought conditions.

**Drought Restrictions:** Water rights in this area are eligible to impound or divert according to the terms of their permits.

## **Sulphur River Basin:**

### **Streamflow Conditions:**

<b>Site</b>	<b>September mean (cfs)</b>	<b>September historical median (cfs)</b>
Sulphur River near Talco	1.8	12

**Drought Conditions:** As of September 25, 100% of the Sulphur River Basin is experiencing at least moderate drought conditions; however, 0% of the basin is experiencing exceptional drought conditions.

**Drought Restrictions:** Water rights in this area are eligible to impound or divert according to the terms of their permits.

## **Cypress Creek Basin:**

### **Streamflow Conditions:**

<b>Site</b>	<b>September mean (cfs)</b>	<b>September historical median (cfs)</b>
Little Cypress Creek near Jefferson	0.7	8

**Drought Conditions:** As of September 25, 62% of the Cypress Creek Basin is experiencing at least moderate drought conditions; however, 0% of the basin is experiencing exceptional drought conditions.

**Drought Restrictions:** Water rights in this area are eligible to impound or divert according to the terms of their permits.

### **Sabine River Basin:**

#### **Streamflow Conditions:**

<b>Site</b>	<b>September mean (cfs)</b>	<b>September historical median (cfs)</b>
Sabine River near Beckville	122	156
Sabine River near Ruliff	925	1,770

**Drought Conditions:** As of September 25, 17% of the Sabine River Basin is experiencing at least moderate drought conditions; however, 0% of the basin is experiencing exceptional drought conditions.

**Drought Restrictions:** Water rights in this area are eligible to impound or divert according to the terms of their permits.

### **Neches River Basin:**

#### **Streamflow Conditions:**

<b>Site</b>	<b>September mean (cfs)</b>	<b>September historical median (cfs)</b>
Angelina River near Alto	58	80
Neches River at Evadale	1,818	1,230

**Drought Conditions:** As of September 25, 0% of the Neches River Basin is experiencing drought conditions.

**Drought Restrictions:** Water rights in this area are eligible to impound or divert according to the terms of their permits.

### **Trinity River Basin:**

#### **Streamflow Conditions:**

<b>Site</b>	<b>September mean (cfs)</b>	<b>September historical median (cfs)</b>
Trinity River at Dallas	572	314
Trinity River near Oakwood	738	775
Trinity River at Romayor	1,093	1,150

**Drought Conditions:** As of September 25, 72% of the Trinity River Basin is experiencing at least moderate drought conditions; however, 0% of the basin is experiencing exceptional drought conditions.

**Drought Restrictions:** Water rights in this area are eligible to impound or divert according to the terms of their permits.

## **Brazos River Basin:**

### **Streamflow Conditions:**

<b>Site</b>	<b>September mean (cfs)</b>	<b>September historical median (cfs)</b>
Double Mountain Fork Brazos River near Aspermont	4	14
Brazos River near Glen Rose	29	293
Little River at Cameron	129	199
Navasota near Easterly	14	9
Brazos near Hempstead	1,323	1,460
Brazos near Rosharon	855	1,870

**Drought Conditions:** As of September 25, 94% of the Brazos River Basin is experiencing at least moderate drought conditions; however, 9.5% of the basin is experiencing exceptional drought conditions.

**Drought Restrictions:** Water rights in this area are eligible to impound or divert according to the terms of their permits.

## **Colorado River Basin:**

### **Streamflow Conditions:**

<b>Site</b>	<b>September mean (cfs)</b>	<b>September historical median (cfs)</b>
Colorado River at Ballinger	258	16
San Saba River at San Saba	26	65
Llano River at Llano	53	127
Pedernales River near Johnson City	67	30
Colorado River at Columbus	425	1,490

**Drought Conditions:** As of September 25, 97% of the Colorado River Basin is experiencing at least moderate drought conditions; however, 0.4% of the basin is experiencing exceptional drought conditions.

**Drought Restrictions:** Water rights in this area are eligible to impound or divert according to the terms of their permits however, the Concho Watermaster continues to monitor the streamflow conditions and modify diversion requests as needed.

## **Guadalupe River Basin:**

### **Streamflow Conditions:**

<b>Site</b>	<b>September mean (cfs)</b>	<b>September historical median (cfs)</b>
Guadalupe River near Spring Branch	31	109
San Marcos River at Luling	171	183
Guadalupe River at Cuero	415	882
Guadalupe River at Victoria	408	826

**Drought Conditions:** As of September 25, 94% of the Guadalupe River Basin is experiencing at least moderate drought conditions; however, 0% of the basin is experiencing exceptional drought conditions

**Drought Restrictions:** Water rights in this area are eligible to impound or divert according to the terms of their permits however, some water rights in the upper Guadalupe River Basin can only divert on a limited schedule. The South Texas Watermaster continues to monitor the streamflow conditions and modify diversion requests as needed. All temporary permits are being reviewed on a case by case basis.

## **San Antonio River Basin:**

### **Streamflow Conditions:**

<b>Site</b>	<b>September mean (cfs)</b>	<b>September historical median (cfs)</b>
San Antonio River at Falls City	578	240
Cibolo Creek at Falls City	105	24

**Drought Conditions:** As of September 25, 99% of the San Antonio River Basin is experiencing at least moderate drought conditions; however, 0% of the basin is experiencing exceptional drought conditions.

**Drought Restrictions:** Water rights in this area are eligible to impound or divert according to the terms of their permits however, the South Texas Watermaster continues to monitor the streamflows conditions and modify diversion requests as needed. All temporary permits are being reviewed on a case by case basis.

**Nueces River Basin:**

**Streamflow Conditions:**

<b>Site</b>	<b>September mean (cfs)</b>	<b>September historical median (cfs)</b>
Nueces river at Tilden	0	27
Frio River near Derby	8	3
Atascosa River at Whitsett	40	8

**Drought Conditions:** As of September 25, 100% of the Nueces River Basin is experiencing at least moderate drought conditions; however, 0.8% of the basin is experiencing exceptional drought conditions.

**Drought Restrictions:** Water rights in this area are eligible to impound or divert according to the terms of their permits however, the South Texas Watermaster continues to monitor the streamflow conditions and modify diversion requests as needed. All temporary permits are being reviewed on a case by case basis.

**Statewide Rainfall Totals**

**September 1 - 30, 2012**

<b>City/Station</b>	<b>Rainfall Totals (in)</b>
<b>Brazos River Basin</b>	
Lubbock	2.04
Abilene	8.48
Waco	4.63
College Station	3.22
<b>Colorado River Basin</b>	
Midland	5.89
San Angelo	6.91
Austin Mabry	5.70
Austin Bergstrom	4.75
<b>Neches River Basin</b>	
Tyler	5.40
Lufkin	6.05
<b>Sabine River Basin</b>	
Longview	6.69
<b>Trinity River Basin</b>	
Dallas/ Fort Worth	1.75

## 9. WILDLIFE CONCERNS

A water sample collected from Lake Diversion in the Red River Basin on September 17 contained moderate concentrations of the golden alga *Prymnesium parvum*. The water was not found to be toxic. Continued monitoring is planned.

In general, salinities in Texas bays and estuaries have been a little higher than average with high salinities recorded in the Rio Grande system. Salinity levels reached 70 ppt. at the northern end of Alazan Bay this week while Baffin Bay averaged 54.7 ppt. and Laguna Madre averaged 48.8 ppt.

## 10. AGRICULTURE CONCERNS

Much of the state benefitted from cooler temperatures and beneficial rains in the month of September. Winter pastures, wheat and other small grains are typically planted over much of the state in September and October, and beneficial rains were received across much of the state for timely planting of these crops. Over most of the western and southern parts of the state and the panhandle, livestock have had very short grazing and continue to be fed hay. These small grains and winter pastures will be most helpful in alleviating feed shortages if we continue to get favorable rains. Rain was short in parts of far west Texas and south Texas and farmers and ranchers are still faced with dry fields and short grazing.

Most of the cotton crop has been harvested along the coast and through the Texas Blacklands. Some fields that had been prepared for harvest in west Texas may have suffered some quality damage from heavy rains. In general, rains were too late to benefit any of the warm season crops. Some hay producers on the coast and in east Texas may get an additional hay cutting from the beneficial moisture.

The following are observations from AgriLife Extension District reporters for the week ending on October 6, 2012:

Central: Following good rains, small grains were emerging. The pecan harvest began, with varying quality. The cotton harvest was nearly complete, and gins were running at high capacity. Livestock were in good condition.

Coastal Bend: Fieldwork for the 2013 crop season began where conditions were dry enough. The only cotton left unharvested was in the northern part of the region. Hay was abundant, with many producers looking for different methods to market their excess stocks. Shorter days and cooler nights slowed Bermuda grass growth, but bluestem and other bunch grasses were growing well. Farmers expected to take another hay cutting before the first frost. Where there was not adequate rain, livestock producers continued to provide supplemental feed. Cattle remained in good condition, with herd numbers steady. The pecan harvest was expected to begin in a few weeks, with phenomenal yields anticipated. Many of the early season varieties were nearly ready, while later-season varieties and natives are a month to six weeks away from harvest.

East: A cold front was accompanied by slow, soaking rains that raised soil-moisture levels and lowered temperatures. Accumulations ranged from 2 to 10 inches. Though cooler temperatures slowed growth of warm-season grasses, many hay producers expected to get one more cutting. Many have taken four cuttings already this year. Winter-forage planting continued, with some ryegrass already emerged. Livestock were in good shape. Producers continued to cull herds, and

wean and sell market-ready calves. Armyworm numbers increased. Pecan scab was reported in some orchards. Some areas reported increased feral hog activity.

**Far West:** Scattered showers brought at least 0.2 to 0.5 inch of rain to much of the region, with some counties receiving considerably more. Pecos, Ector and Crane counties received from 1 inch to 1.5 inches, while Val Verde County got up to 3 inches. The rains came hard and fast in some areas, leading to more runoff than filtration into the soil profile. Ranchers began working cattle. Pregnancy rates on palpated cows were reportedly lower than usual, perhaps due to poor summer grazing conditions. Producers were culling herds, with a few still feeding. Pawnee pecans were being harvested. Western variety pecans began shuck split. High winds blew out lots of nuts and broke small limbs in some orchards. Cotton growers were applying harvest aids and defoliants. Bolls were opening. Alfalfa growers finished the sixth cutting of the season. If days remain warm, a seventh cutting may be possible. Onion planting was finished.

**North:** Though the district received from 1 inch to 5 inches of rain, soil moisture mostly remained short to adequate. The rains were slow, so there was not much in the way of runoff water to replenish livestock ponds, most of which remained low. There was an early frost in a few counties. Unseasonably cool weather slowed grass growth but brought up early wheat. Hay supplies were good, with some producers still cutting and baling. Livestock were in fair to good condition. Ryegrass planting proceeded rapidly. The corn harvest was finished, the cotton harvest nearly done, and the soybean harvest more than 75 percent completed. From 15 to 80 percent of oats and 10- to 100 percent of wheat were planted, depending upon the area.

**Panhandle:** Temperatures varied, being average at the beginning the week, with much cooler weather later. Some areas saw the first freeze. Most areas received some moisture, from a trace to 2 inches. Soil-moisture levels were mostly short. The corn harvest continued, and cotton was mostly in fair condition. Wheat planting continued. Cattle were in fair to good condition.

**Rolling Plains:** Cooler, wet weather prevailed, which was good news for the winter wheat crop, prompting extensive plantings. Some producers planted wheat for winter grazing. Others planned to bale the crop to replenish hay supplies. Late-planted cotton was in good to excellent condition as the wet weather came just in time. Producers hoped for a late freeze, which will allow cotton to mature. Dryland cotton producers were contacting insurance companies, discussing options for this year's crop. Peanut producers were in the middle of harvest, with average yields reported. Pastures took a turn for the better after the rains, and grasses and wild rye grew about a foot within the last two weeks. Livestock were in good condition. Some pecans neared harvest-ready status. Runoff moisture was still needed for stock tanks.

**South:** Northern counties received substantial rains, and soil-moisture levels varied throughout the region. Northern counties reported 50 to 100 percent adequate soil-moisture conditions. Eastern counties had 25 to 100 percent very short soil moisture. Western counties reported 50 to 100 percent short soil-moisture levels, except for Zavala County, where soil-moisture levels were 100 percent adequate. Southern counties had 80 to 100 percent very short soil-moisture conditions, with the exception of the Willacy County where they were 60 percent adequate. Rangeland and pastures were in fair to good condition, especially in parts of the region fortunate enough to get substantial rains in the last few weeks. Livestock producers were still providing supplemental feed, and along with the improved grazing, cattle body-condition scores improved. In Frio County, peanut growers were harvesting early maturing varieties. In Jim Wells County, producers were preparing fields for planting winter forages, but had to wait for seed. In Zavala

County, producers were planting dryland wheat and oats to take advantage of the good soil moisture. Also in that area, early planted cabbage progressed well, the cotton gins were running around the clock, and spinach planting began. In Cameron County, farmers were irrigating early planted sugarcane and row crops, and fall tomatoes and onions were progressing. In Starr County, late-summer cantaloupes were being harvested and onion-planting preparations continued.

South Plains: The region remained mostly dry, but with much cooler weather. A few areas received rain as the cold front moved through. Garza County received from 1 inch to 2 inches of rain during a two-day period. The western part of Mitchell County got 12 inches of rain, while the rest of the county received 5-6 inches. Cotton growers were applying harvest aids. The grain sorghum, sunflower and peanut harvests were ongoing. Winter wheat continued to do well. Pastures and rangeland were in poor condition, but have improved somewhat where there was rain in the past couple of weeks. Cattle were mostly in good condition, with limited supplemental feeding needed.

Southeast: Some counties received rain, raising soil moisture levels, while near-normal temperatures promoted more forage growth in some areas. Cooler temperatures began to slow summer-forage growth in others. Many producers planted winter forages, with a few planting oats and winter wheat but most planting annual ryegrass. A few producers took a final cutting of hay. In Brazoria County, the cotton harvest was complete. Preparation of seedbeds for rice, corn, and grain sorghum continued. Many growers reported good hay supplies. Jefferson County had 4 to 6 inches of rain. Orange County continued to have dry weather, which allowed for hay harvesting.

Southwest: The region had cooler temperatures early in the week, followed by a warming trend. Recent rains kicked off grass growth and aided wheat and oats. Rain was still needed in some areas. Overall, pastures looked good.

West Central: The region had mild fall weather, with warm days and much cooler nights. Fields were drying out after rains the previous week, allowing wheat and oat planting to proceed. Hay fields improved thanks to earlier rains. Rangeland and pastures were greening up. Runoff from the rains helped replenish stock-water tanks. Livestock remained in good condition, with supplemental feeding continuing. Some pecan growers began harvesting.

**The Drought Preparedness Council is comprised of state agencies concerned with the effects of drought and fire on the citizens of the State of Texas.**

The attached information was compiled and provided by representatives listed below. Points of contact, telephone numbers, and web site addresses are also provided.

Nim Kidd, Texas Division of Emergency Management, (512) 424-2436, fax (512) 424-2444, website: <http://www.txdps.state.tx.us/dem>

Brenner Brown, Texas Water Development Board, (512) 475-1128, fax (512) 475-2053, website: <http://www.twdb.state.tx.us>

Chris Loft, Texas Commission on Environmental Quality, (512) 239-4715, fax (512) 239-4770, website: <http://www.tceq.state.tx.us>

Richard Egg, Texas State Soil & Water Conservation Board, (254) 773-2250, fax (254) 773-3311, website: <http://www.tsswcb.state.tx.us>

Lance Williams, Texas Department of Agriculture, (512) 463-3285, fax (800) 835-2981, website: <http://agr.state.tx.us>

Dr. Travis Miller, Texas AgriLife Extension Service, (979) 845-4808, fax (979) 845-0456, website: <http://texasextension.tamu.edu>

David Bradsby, Texas Parks & Wildlife Department, (512) 912-7015, fax (512) 707-1358, website: <http://www.tpwd.state.tx.us>

Gilbert Jordan, Texas Department of Transportation, (512) 416-3270, fax (512) 416-2941, website: <http://www.txdot.state.tx.us>

Michael Dunivan, Texas Forest Service, (830) 997-5426, website: <http://txforests.tamu.edu>

Suzanne Burnham, Texas Department of State Health Services, (512) 801-9816, fax (512) 458-7111, website: <http://www.dshs.state.tx.us/>

Tad Curtis, Office of the Governor, Economic Development & Tourism, (512) 936-0047, website: <http://www.governor.state.tx.us/divisions/ecodev>

David A. Van Dresar, Texas Alliance of Groundwater Districts, (979) 968-3135, fax (979) 968-3194, website: <http://www.texasgroundwater.org/>

Dr. John W. Nielsen-Gammon, Office of the State Climatologist, (979) 862-2248, fax (979) 862-4466, website: <http://www.met.tamu.edu/osc/>

Marisa Callan, Texas Department of Housing and Community Affairs, (512) 475-3964, website: <http://www.tdhca.state.tx.us>

# Attachment 1 Climatic Regions

