



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

July 16, 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

August 9, 2012- Austin, TX

2. GENERAL CONDITIONS

June 2012 was a bit of a mixed bag when it came to improvements in drought conditions—certain regions of the state saw improvements while others saw degradations. By the end of June, no region was considered to be in Exceptional Drought (D4) and the total areal coverage of Extreme Drought (D3) decreased by about half a percent (down to 8.77 from 9.24). However, the total coverage of drought conditions of any category saw minimal change (up to 2.65 from 2.45) while the regions under at least Moderate Drought (D1) increased by 11.18 percent (up to 76.76 from 65.58). Regions classified under at least Severe Drought (D2) also increased by 9.93 percent (up to 36.79 from 26.86), indicating that, while certain regions under heavy drought conditions improved somewhat, there was a much larger downturn of regions previously experiencing mild drought conditions. Geographically, regions experiencing improvements and degradation are numerous and spatially diverse. Reductions in D4 and D3 occurred in the regions north of Abilene and about Lubbock as well as in the Trans-Pecos region near the Texas-New Mexico border. Introduction of new D3 occurred in the northeast Panhandle along the border of Texas and Oklahoma, in East Texas near Texarkana, in the I-35 corridor north of Austin, and along the Upper Coast near Victoria. Other degradations into D1 and D2 are centered about these regions as well as in the Edwards Plateau.

The reasons for these changes are numerous. Texas was very warm in June, setting or tying several average maximum temperature records (6 in major metropolitan areas and 7 others from various reporting stations), peak maximum temperature records (66 from various reporting stations), highest average minimum temperature records (2 from various reporting stations), and highest peak minimum temperature records (22 from various reporting stations). Precipitation was also minimal in June, with 28 reporting stations setting or tying record low precipitation totals. Certain regions saw above normal rainfall, including the Trans-Pecos south of Midland and Odessa, Brownsville, Wood County (which incidentally saw a record 24-hour precipitation accumulation), and the region east of Lubbock, but, aside from these regions, the rest of the state was below normal precipitation for the month. The widespread heat acted to exacerbate the already dry conditions across much of the state.

The drought outlook, according to the Climate Prediction Center (CPC), released July 5, shows that the drought in much of the state is expected to either persist or intensify through September 30. Regions under this classification include almost the entirety of the High Plains, central Texas in the Edwards Plateau, southern Texas, and parts of the Upper Coast, as well as an isolated region east of Houston and an area along the Texas-Arkansas border. The only region of the state the CPC is showing any indication of improvement, though with the caveat that drought conditions are expected to remain, is the Trans-Pecos region and a sliver of land in the High Plains along the Texas-New Mexico border. No new drought forecasts were issued for any other part of the state.

3. OVERALL STATEWIDE DROUGHT CONDITIONS

Drought has come back, indicated by all except SPI.

- Palmer Drought Severity Index (PDSI):
Based on this index, the entire state was back to drought again: two regions in Extreme Drought, four regions in Severe Drought, and the remaining four in Moderate Drought.
- Crop Moisture Index (CMI):
Entire state was in dry/drought by the end of the month, with the Southern region being in the worst condition (Extremely Dry). Eight (8) out of ten regions were in Excessively dry, Severely Dry, or Extremely Dry
- Standardized Precipitation Index (SPI)
Based on this index, the precipitation in past 6 months period was still in normal level in all ten regions.
- Stream Flow Index (SFI)
The stream flows were near normal in two regions only (Trans-Pecos and Upper Coast); everywhere else flows were all below normal, from Abnormally Low to Extremely Low. Flow in Lower Valley region was not monitored.
- Keetch-Byram Drought Index (KBDI)
Entire state faced either High or Very High fire risk.

4. WATER UTILITY STATUS

There are 1,013 water systems that are asking their customers to restrict water use, compared with 1,010 a month ago. Of these systems, 598 are asking customers to follow a mandatory watering schedule and 416 are asking customers to follow a voluntary watering schedule. There are currently 29 PWSs that have prohibited all outside watering by their customers. A total of 1,256 water systems have reported to the TCEQ regarding their status using the online form on the TCEQ public website. Recent rains in parts of the state have allowed some water systems to relax their water use restrictions. The seasonal forecasts are for the drought to persist or intensify in many areas of the state during the summer months.

5. WATER RIGHTS – STATEWIDE

New temporary water use permit applications are being reviewed on a site-specific basis and issued if there is sufficient surplus water at the requested source. The number of applications for new water use permits and amendments to existing permits was normal for the month.

The availability of unappropriated water for new water use permits continues to decrease in all river basins in the State, and the search for long-term, dependable alternate sources of water remains a high priority issue.

6. WATER RIGHTS – LOWER RIO GRANDE / RIO GRANDE WATERMASTER (RGWM)

Current Conditions: On June 23, 2012, the U.S. combined ownership at Amistad/Falcon stood at 52.08% of normal conservation capacity, impounding 1,766,537 acre-feet, down from 82.68% (2,804,246 AF) of normal conservation a year ago at this time. Overall the system is holding 43.71% of normal conservation capacity, impounding 2,588,597 acre-feet with Amistad at 59.18% of conservation capacity, impounding 1,938,408 acre-feet and Falcon at 24.56% of conservation capacity, impounding 650,189 acre-feet. Mexico has 32.49% of normal conservation capacity, impounding 822,060 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 1.333 million acre-feet at Amistad (72.2%); and approximately 438 thousand acre-feet (28.2%) of normal conservation capacity at Falcon.

Evaporation and seepage losses at Amistad for the last 12 months, as of 06/23/12, are 124,846 acre-feet. For the same period, the U.S. has lost 113,406 acre-feet at Falcon.

Releases to meet demands: In 2012, (through 06/23/12), Mexico has released 713,748 acre-feet from Amistad and 881,205 acre-feet from Falcon Mexico needs. The U.S. has released 672,196 acre-feet from Falcon and 429,618 acre-feet from Amistad for U.S. needs. Combined with gains between Amistad and Falcon, U.S. inflows to Falcon have totaled 487,276 acre-feet. The U.S. demand in the lower Rio Grande has been met at a rate of 72% by direct Rio Grande inflows and Amistad releases this year.

Upper Rio Grande (New Mexico): Currently, Elephant Butte in New Mexico is currently storing 274,019 (13.54%) acre feet and Caballo Dam in New Mexico, downstream of Elephant Butte is storing 20,268 (8.93%) 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:

Site	June mean (cfs)	June historical median (cfs)
Red River near Burkburnett	352	811
Red River near De Kalb	2,073	12,600

Drought Condition: As of June 26, 87% of the Red River Basin is experiencing drought conditions; 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.

Sulphur River Basin:

Streamflow Conditions:

Site	June mean (cfs)	June historical median (cfs)
Sulphur River near Talco	129	94

Drought Conditions: As of June 26, 22% of the Sulphur River Basin is experiencing drought conditions; 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:

Site	June mean (cfs)	June historical median (cfs)
Little Cypress Creek near Jefferson	33	133

Drought Conditions: As of June 26, 53% of the Cypress Creek Basin is experiencing drought conditions; 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:

Site	June mean (cfs)	June historical median (cfs)
Sabine River near Beckville	438	1,080
Sabine River near Ruliff	2,148	4,380

Drought Conditions: As of June 26, 19% of the Sabine River Basin is experiencing drought conditions; 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:

Site	June mean (cfs)	June historical median (cfs)
Angelina River near Alto	93	275
Neches River at Evadale	1,735	3,660

Drought Conditions: As of June 26, 3% of the Neches River Basin is experiencing drought conditions; 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.

Trinity River Basin:

Streamflow Conditions:

Site	June mean (cfs)	June historical median (cfs)
Trinity River at Dallas	961	618
Trinity River near Oakwood	1,679	2,970
Trinity River at Romayor	1,851	5,070

Drought Conditions: As of June 26, 11% of the Trinity River Basin is experiencing drought conditions; 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.

Streamflow Conditions:

Site	June mean (cfs)	June historical median (cfs)
Double Mountain Fork Brazos River near Aspermont	22	28
Brazos River near Glen Rose	35	659
Little River at Cameron	89	966
Navasota near Easterly	17	30
Brazos near Hempstead	1,004	4,740
Brazos near Rosharon	449	4,300

Drought Conditions: As of June 26, 75% of the Brazos River Basin is experiencing drought conditions; 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.

Colorado River Basin:**Streamflow Conditions:**

Site	June mean (cfs)	June historical median (cfs)
Colorado River at Ballinger	0	31
San Saba River at San Saba	51	84
Llano River at Llano	69	138
Pedernales River near Johnson City	21	62
Colorado River at Columbus	386	2,340

Drought Conditions: As of June 26, 84% of the Colorado River Basin is experiencing drought conditions; 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 Concho Watermaster continues to monitor the streamflow conditions and diversion requests.

Colorado River Basin:**Streamflow Conditions:**

Site	June mean (cfs)	June historical median (cfs)
Colorado River at Ballinger	0	31
San Saba River at San Saba	51	84
Llano River at Llano	69	138
Pedernales River near Johnson City	21	62
Colorado River at Columbus	386	2,340

Drought Conditions: As of June 26, 84% of the Colorado River Basin is experiencing drought conditions; 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 Concho Watermaster continues to monitor the streamflow conditions and diversion requests.

San Antonio River Basin:

Streamflow Conditions:

Site	June mean (cfs)	June historical median (cfs)
San Antonio River at Falls City	122	252
Cibolo Creek at Falls City	23	31

Drought Conditions: As of June 26, 100% of the San Antonio River Basin is experiencing drought conditions; 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 diversion requests. All temporary permits are being reviewed on a case by case basis.

Nueces River Basin:

Streamflow Conditions:

Site	June mean (cfs)	June historical median (cfs)
Nueces river at Tilden	4	20
Frio River near Derby	0	2.7
Atascosa River at Whitsett	2	11

Drought Conditions: As of June 26, 100% of the Nueces River Basin is experiencing drought conditions; 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 streamflow conditions and diversion requests. All temporary permits are being reviewed on a case by case basis.

Statewide Rainfall Totals
June 1-30, 2012

City/Station	Rainfall Totals (in)
Brazos River Basin	
Lubbock	1.60
Abilene	2.11
Waco	1.81
College Station	2.13
Colorado River Basin	
Midland	1.80
San Angelo	.53
Austin Mabry	.06
Austin Bergstrom	.21
Neches River Basin	
Tyler	2.50
Lufkin	1.28
Sabine River Basin	
Longview	1.62
Trinity River Basin	
Dallas/ Fort Worth	2.82

9. WILDLIFE CONCERNS

No information available at this time.

10. AGRICULTURE CONCERNS

Precipitation across the state was highly variable over the last month, with heavy showers over the Upper Coast, and isolated parts of Central, southern East Texas and the eastern side of Far West Texas. Most of these showers came in the first and second week of July. For the coastal field crops, rain was too late for much benefit on most field crops as corn and sorghum are near harvest, but the moisture may be beneficial to finish the cotton crop and will certainly benefit pasture, grazing and haying.

Most of the state was dry, with precipitation ranging from 5- to 50% of normal. South Texas and the Rolling Plains reported ranchers some selling of cows and calves or hauling hay and water trying to maintain herds. Crops were highly variable. Harvest is rapidly progressing for sorghum along the coast and yield are average or below. Corn harvest is just beginning. Grain crops and cotton were very stressed from lack of moisture in the Blacklands and North Texas, with moisture very short south of Hillsboro and somewhat better to the North. Hay harvest was good throughout much of East Texas in May and early June, but has slowed and ceased due to dry weather. Irrigators are very busy in the Plains as farmers seek to save crops facing very dry conditions.

The first week of July saw the last of the 2012 wheat harvest being completed in the Northern High Plains, although most of the wheat harvest was complete much earlier than normal due to a very warm winter.

The following are observations from AgriLife Extension District reporters for the week ending on July 7, 2012:

Central: Hot weather promoted the rapid maturation of corn and sorghum. Some sorghum was harvested for silage. Pastures were in good to fair condition but being heavily hit by grasshoppers in some areas. Some sorghum and earlier-planted corn was already being harvested. Most cotton was at the bloom stage to three-quarter grown bolls. Cotton needed rain. Plenty of hay was put up earlier in the summer, but producers were starting to worry about drought again. Irrigators were watering full tilt.

Coastal Bend: Drought prevailed in the southern part of the region. All crops were moisture-stressed. The grain sorghum harvest was in full swing. Most growers were reporting low yields. The cotton harvest was expected to begin soon. Pastures were in poor condition. The area could see more herd liquidations if drought persists. Grasshoppers remained abundant, eating grasses, ornamental plants and garden plants. There were spotty showers reported in the northern part of the region. Hay was being harvested in the northern counties with near average yields. Livestock producers throughout the region continued to supplement cattle with hay and protein.

East: Most counties reported 0.5 inch of rain or less. Houston County was the exception with as much as 2 inches. Pond and creek levels dropped. With the dry and hot weather, pastures showed less growth. Hay harvesting slowed, and some producers are concerned that conditions may deteriorate to those of last year. Grasshoppers were problems to both agricultural producers and homeowners. Fruit and vegetable growers continued to harvest their crops.. Cattle were still in good shape.

Far West: Highs were in the upper 90s and lows in the mid to upper 70s. Conditions remained mostly dry, and the windy weather was drying out what little soil moisture was left. Pastures were browning due to heat and wind. Winkler County reported high wildfire danger due to large loads of dry forage. In Pecos County, melon harvesting continued with excellent quality reported. Also in that area, the onion harvest was ongoing. Cotton was rated average to good in Upton County. Ranchers were still providing supplemental feed to their livestock. Herd numbers remained low due to continuing drought conditions. Producers shipped all lambs and kid goats.

North: Soil-moisture levels were very short to adequate. Continued hot, dry weather prevailed. Perennial grass in pastures still showed patchy damage from last year's drought. The hay harvest continued but lack of moisture slowed grass growth. Irrigated cropland looked good. Dryland corn and soybeans were very moisture stressed. Grain sorghum was coloring and beginning to mature. Grasshoppers were abundant and becoming a concern for many producers. Cattle were in fair to good condition but stressed by the heat. Spotty wildfires were started by fireworks.

Panhandle: The region remained hot, dry and windy. Irrigators were very active. Corn was mostly in fair to good condition. There was some leaf scorch reported in corn, as well as wilt from heat and water stress. Grain sorghum was mostly in fair to good condition. Cotton made good progress with the hot weather, and was rated mostly in good to fair condition. A few wheat fields were not yet harvested. Insect activity was generally light with a few reports of spider mites in older corn and a few pest problems in cotton. Rangeland and pastures were in very poor to excellent condition, with most counties reporting poor conditions. Cattle were in fair to good condition. Some producers were weaning calves early.

Rolling Plains: The region remained hot and dry with high temperatures above 100 degrees. A few counties reported that rangeland and pastures were in fair condition, but pastures were declining fast in many areas. Most dryland cotton needed rain. Grasshopper pressure increased, and some producers were spraying to control them. Livestock were generally in good condition but starting to decline. Many calves from the cowherds still left were being sold early. Some ranchers were beginning to have problems with water wells with dropping groundwater levels. Ranchers had to not only provide supplemental feed to cattle but also haul water to some areas. Area lake levels were at about 50 percent capacity. There were pecan trees lost due to drought.

South: Only three weeks into the summer and high temperatures were depleting soil-moisture levels. All counties in the region have reported short to very short soil moisture. Crops under irrigation were doing well. Those fields not under irrigation were stressed. Rangeland and pastures continued to rapidly turn brown. Ranchers were increasing supplemental feeding of livestock. Stock-tank water levels were dropping; some tanks were already completely dry. Corn harvesting began in Frio County. Jim Wells County cotton was in good condition, improved with 0.5 inch to 4 inches of rain. In Live Oak County, the harvesting of the remaining corn crop was ongoing. Much of the corn and grain sorghum crops in that area were zeroed-out by insurance adjusters. In Maverick County, watermelon, grain sorghum and hay harvesting continued. In Zavala County, cotton progressed well, the watermelon harvest was completed and the grain sorghum harvest began. In Cameron County, cotton was setting bolls, and conditions were favorable for maturing corn and harvesting grain sorghum. In Hidalgo County, the sunflower harvest was mostly complete and the grain sorghum harvest was finished. In Starr and Willacy counties, the grain sorghum harvest was nearly complete.

South Plains: Temperatures ranged from the mid-to upper 90s with high winds. There were a few spotty, light showers reported, which helped cotton as it entered the bloom stage. Irrigated cotton continued to progress well, but dryland cotton began to show signs of stress due to lack

of moisture. Some grain sorghum was in the boot stage. Some hail-damaged cotton fields were being replanted to grain sorghum. Corn was silking, and sunflowers began to bloom. Producers were dealing with insect pests, spraying weeds, cultivating and replanting in some areas. Pasture and rangeland were still holding on in most locations but needed rain soon. Livestock were in mostly good condition.

Southeast: Rain helped forage growth, but some producers still had dry ponds. Hot, dry conditions were still limiting warm-season forage production. Dryland corn was drying down quickly and was expected to be ready for harvest 15-20 days earlier than normal. Grasshoppers continued to be a problem in some areas. Rice looked very good in Chambers County with most farmers spraying fungicide to avoid blast and other diseases.

Southwest: Dry, hot weather persisted. Pastures continued to decline. Hay harvesting slowed dramatically. Cattle were beginning to show signs of stress, and producers remained hesitant to restock. Milo and corn were drying down quickly, and the harvest was expected to begin soon.

West Central: Continued hot, dry, windy weather took their toll on soil moisture. A few areas received some scattered showers but none were significant. Some grain sorghum and sudan hay crops were harvested early due to poor growing conditions. Cotton was showing signs of moisture-stress. Producers were irrigating where water was available. Producers were stubble mulching wheat fields in preparation for fall wheat and oat planting. Rangeland and pastures continued to decline. Stock-tank levels were critically low in some areas. Livestock remained in fair condition.

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.service.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

