



Current Drought Conditions

Important Drought Changes

NEW

- ✓ Recent rainfall was very welcomed, but not nearly enough to lead to large changes in our drought depiction
- ✓ Extreme (D3) to Exceptional (D4) Drought still covers more than 73% of the region.

Key Messages

- ✓ Extreme to Exceptional Drought continues for most of the Hill Country and portions of the Rio Grande Plains, Winter Garden, and the Coastal Plains.
- ✓ Late January of 2012 was the last time this much of South-Central Texas was in D3-D4 conditions.
- ✓ Weather pattern returning to warmer and drier than normal in the first half of July, additional drought improvement is not expected.

U.S. Drought Monitor Austin/San Antonio, TX WFO

June 28, 2022

(Released Thursday, Jun. 30, 2022)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0	D1	D2	D3	D4
Current	0.00	0.00	10.96	15.48	37.68	35.88
Last Week 06-21-2022	0.00	0.06	10.90	14.92	38.24	35.88
3 Months Ago 03-29-2022	5.75	4.71	11.01	28.98	46.05	3.51
Start of Calendar Year 01-04-2022	16.44	27.79	34.70	19.75	1.32	0.00
Start of Water Year 09-28-2021	28.99	67.39	3.62	0.00	0.00	0.00
One Year Ago 06-29-2021	77.60	21.65	0.75	0.00	0.00	0.00

Intensity:

None	D2 Severe Drought
D0 Abnormally Dry	D3 Extreme Drought
D1 Moderate Drought	D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

Author:

Curtis Riganti
National Drought Mitigation Center

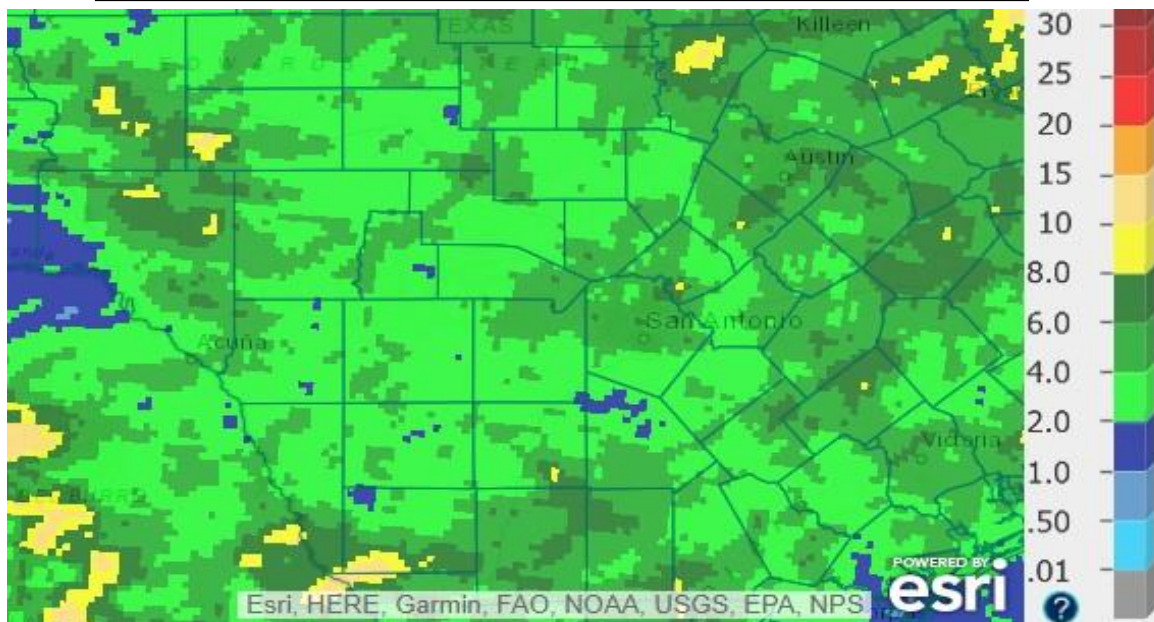


droughtmonitor.unl.edu

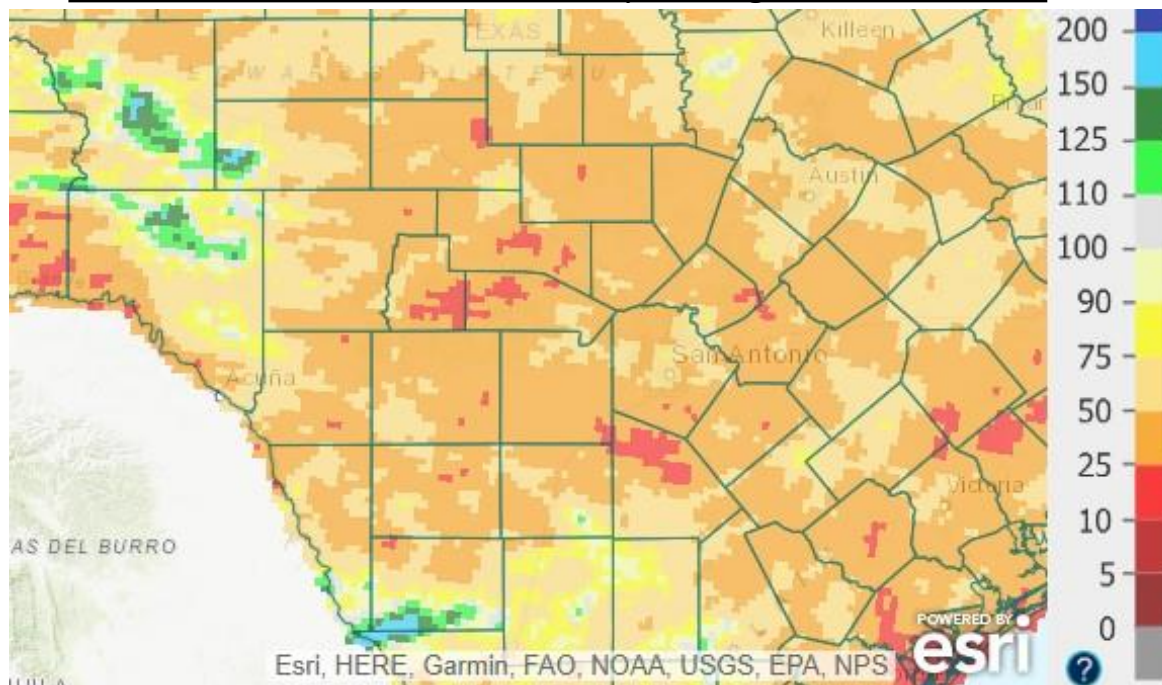


Recent Rainfall and Percent of Normal

Total Observed Rainfall Last 90 days ending 12Z June 29, 2022



Percent of normal Rainfall Last 90 days ending 12Z June 29, 2022



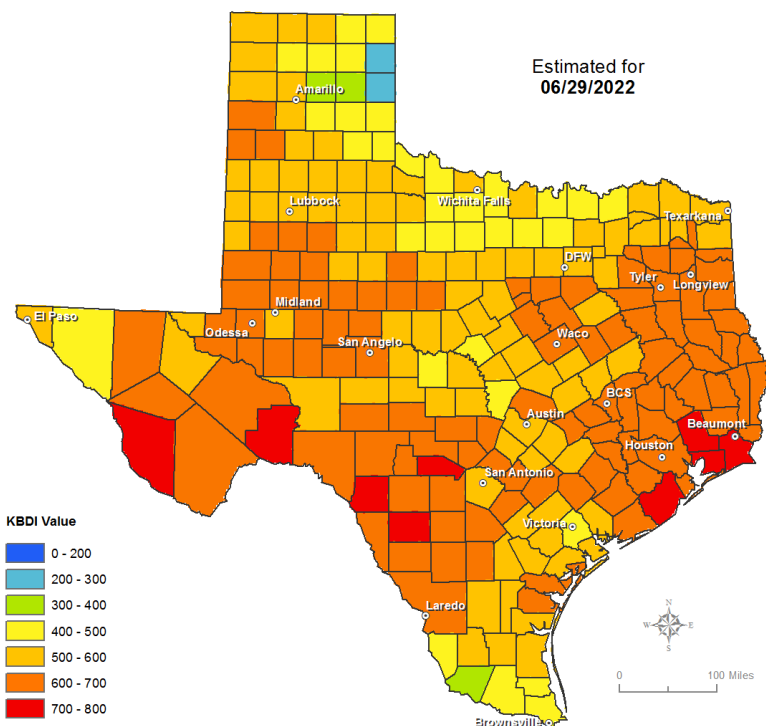
- ✓ Nearly all of South-Central TX has received at least 2" of rain in the past 3 months, with isolated areas seeing as much as 8".
- ✓ For the vast majority of the region, this translates to less than half the normal rain for this period.
- ✓ We are now entering a relatively dry period climatologically this summer. Monthly normal precipitation for the 1991-2020 period increases again in the Fall.



Fire Danger Impacts

The Texas Forest Service uses the Keetch-Byram Drought Index (KBDI) as a system for relating current and recent weather conditions to potential or expected fire behavior. It is a numerical index calculated daily for each county. Each number is an estimate of the amount of rain, in hundredths of an inch, needed to bring the soil back to saturation. The index ranges from 0 to 800, with 0 representing a saturated soil and 800 a completely dry soil.

Keetch-Byram Drought Index
(County Average Value)



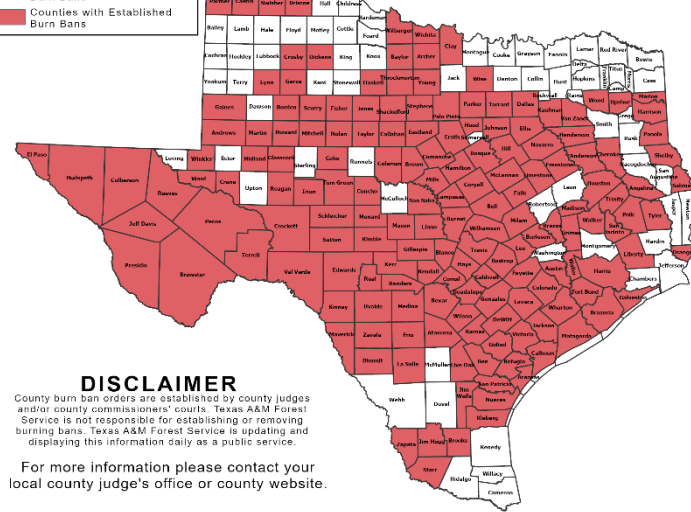
OUTDOOR BURN BANS

June 29, 2022



Counties without Established Burn Bans
Counties with Established Burn Bans

Email updates to:
burnban@tfs.tamu.edu



DISCLAIMER

County burn ban orders are established by county judges and/or county commissioners' courts. Texas A&M Forest Service is not responsible for establishing or removing burning bans. Texas A&M Forest Service is updating and displaying this information daily as a public service.

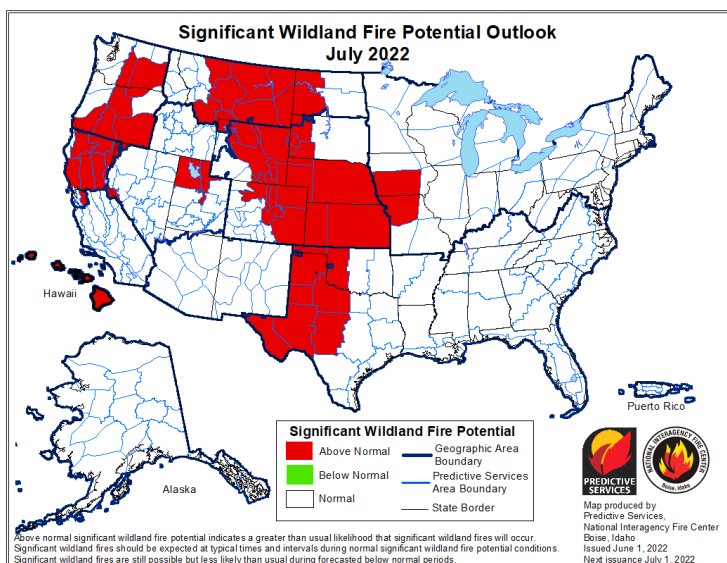
For more information please contact your local county judge's office or county website.

RED FLAG WARNINGS: www.weather.gov
Additional map formats available at <https://tfsweb.tamu.edu/Burnbans/>

As of June 29, all 33 counties in our coverage area are under Burn Bans. These burn bans are established by county officials.

As shown at left, the June 29th issuance of the KBDI showed values ranging from 400-500 for Burnet County to 700-800 for Kinney, Bandera, and Zavala

Wildland fire potential outlook for next month from the [National Interagency Coordination Center](https://www.nidc.gov/)

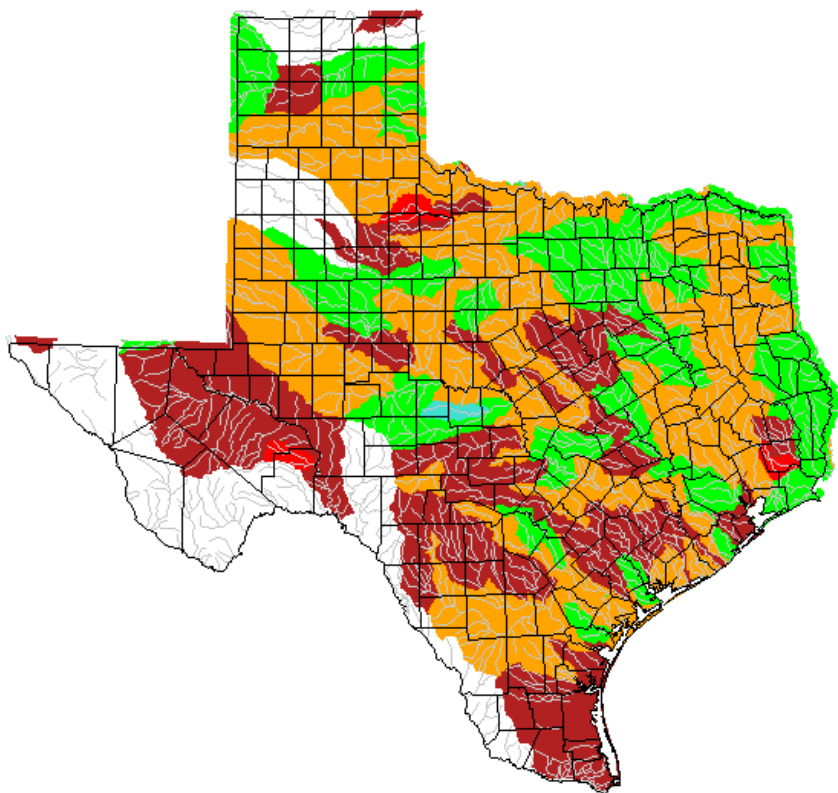


[Energy Release Components](#) remain near record highs for late June in areas that did not receive rain this week. Elsewhere, there have been improvements but ERC remains above average. With warming temperatures and dry conditions returning to start July, these improvements are likely to be short-lived.



Hydrologic Impacts

Wednesday, June 29, 2022



Explanation - Percentile classes

Low	<10	10-24	25-75	76-90	>90	High	No Data
	Much below normal	Below normal	Normal	Above normal	Much above normal		

Seven day average streamflow compared to the historical streamflow for the day of the year. Map courtesy USGS

According to the [USGS Current Water Data](#) shown at left, 7-day flows remain below to much below normal across the majority of basins in south-central Texas. Streamflows again fall within the normal category, or between the 25th and 75th percentiles for this time of year, for a few basins mainly along and east of I-35/I-37.

Reservoir conditions as of June 30, 2022 are presented in the following table.

Reservoir	Pool Elevation (ft)	Current Elevation (ft)
Amistad	1117.00	1057.4
Medina Lake	1064.2	1000.3
Canyon Lake	909.00	905.6
Granger Lake	504.00	503.3
Georgetown Lake	791.00	780.2
Lake Buchanan	1020.00	1008.6
Lake LBJ	825.00	824.8
Lake Marble Falls	738.00	736.4
Lake Travis	681.00	650.7
Lake Austin	492.9	492.0

Edwards Aquifer, Bexar Index Well J-17 as of 6/30/2022:

10 day average: 634.6

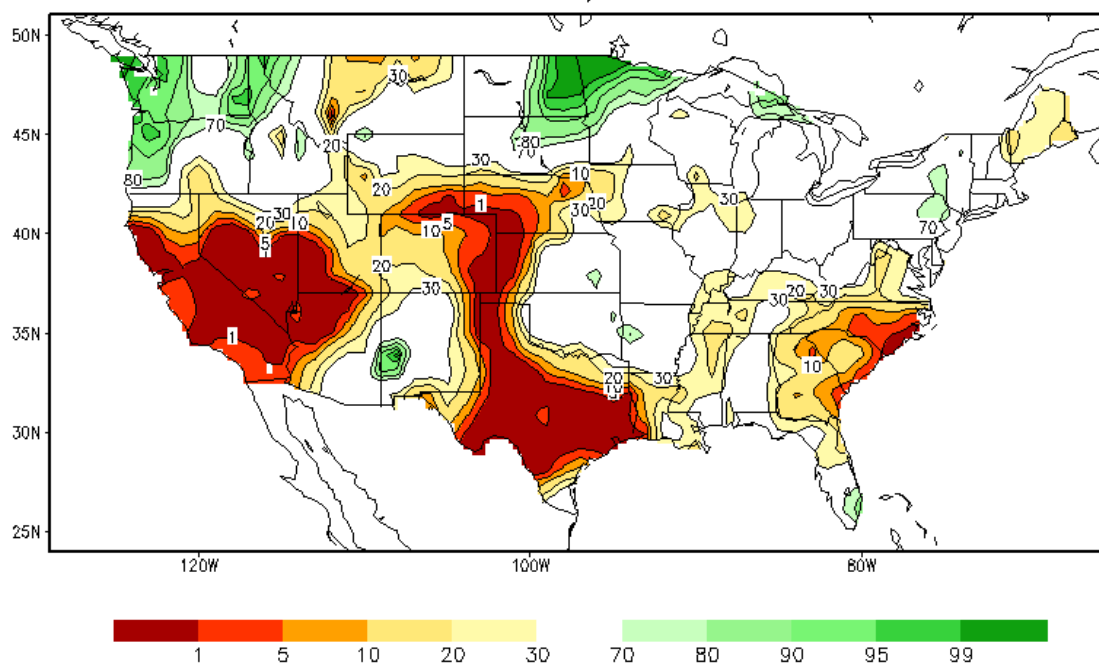
Historical June Average: 662.8

Departure from Average: -28.2



Agricultural Impacts

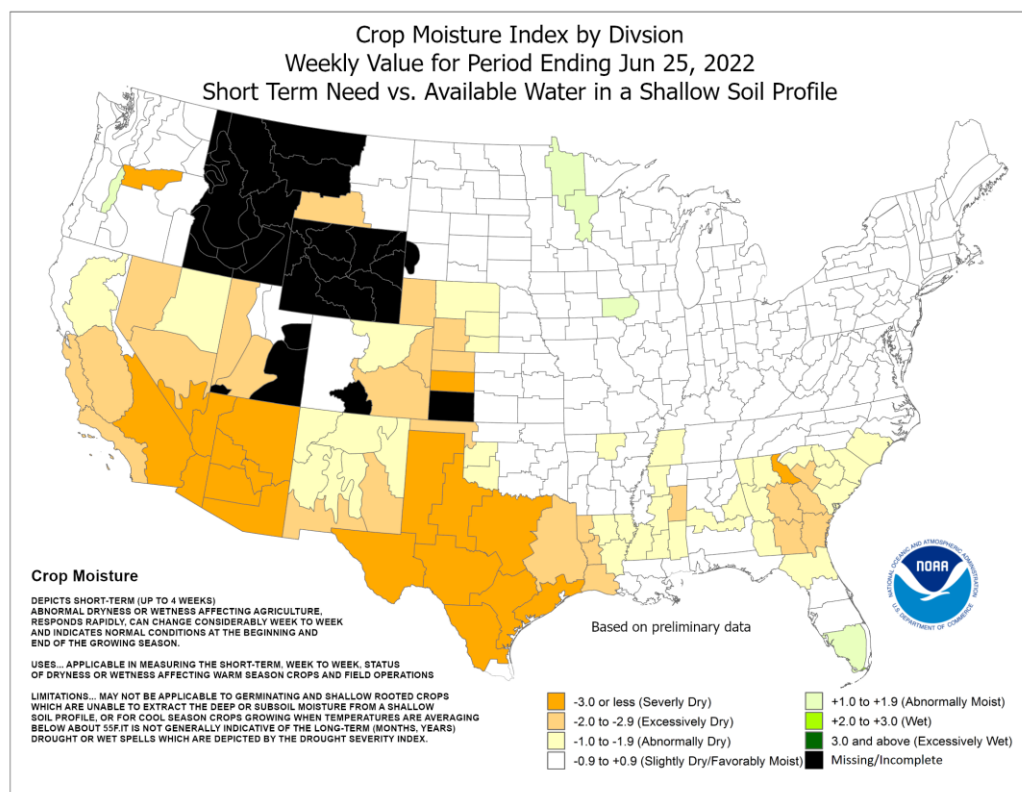
Calculated Soil Moisture Ranking Percentile
JUN 28, 2022



Each week, the [Climate Prediction Center \(CPC\)](#) analyzes the percent of available soil moisture as compared to normal. The June 28th available soil moisture ranges from the 1st percentile (extremely dry) over the vast majority of south-central TX to about the 5th percentile over our far southeastern areas. As this is a low resolution product, most areas have soil moistures that are less dire than shown here. NASA SPORT-LIS products for both 10cm and 100cm depths show near-normal soil moistures in some areas and only portions of Val Verde County below the 2nd percentile.

The Crop Moisture Index monitors short term need compared to available water across major crop producing regions. This index is not used to monitor long term drought conditions. The latest Crop Moisture Index issued by the CPC on June 25th indicated short term moisture conditions were Severely Dry across all three CPC divisions that cover our area of responsibility.

Crop Moisture Index by Division
Weekly Value for Period Ending Jun 25, 2022
Short Term Need vs. Available Water in a Shallow Soil Profile



[Latest Crop and Weather
Report from Texas A&M
Agrilife](#)



Monthly Outlook

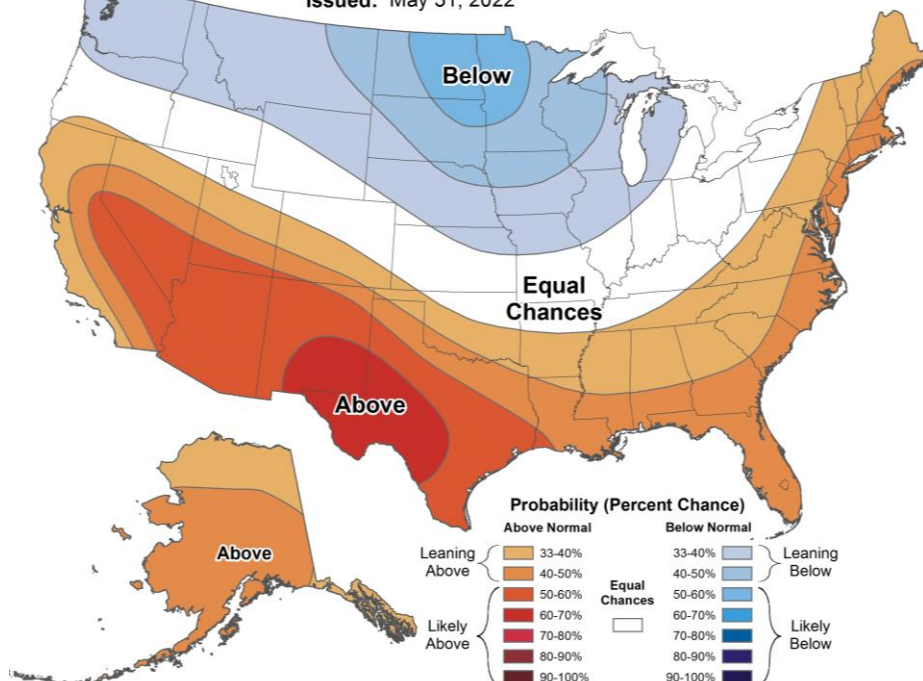
The Climate Prediction Center
Outlook for July suggests:

- Above normal temperatures are likely to continue, especially west along the Rio Grande
- Odds are also tilted towards drier than normal conditions
- Excessive heat may return to portions of the region in early to mid July.
- Drought is likely to gradually worsen



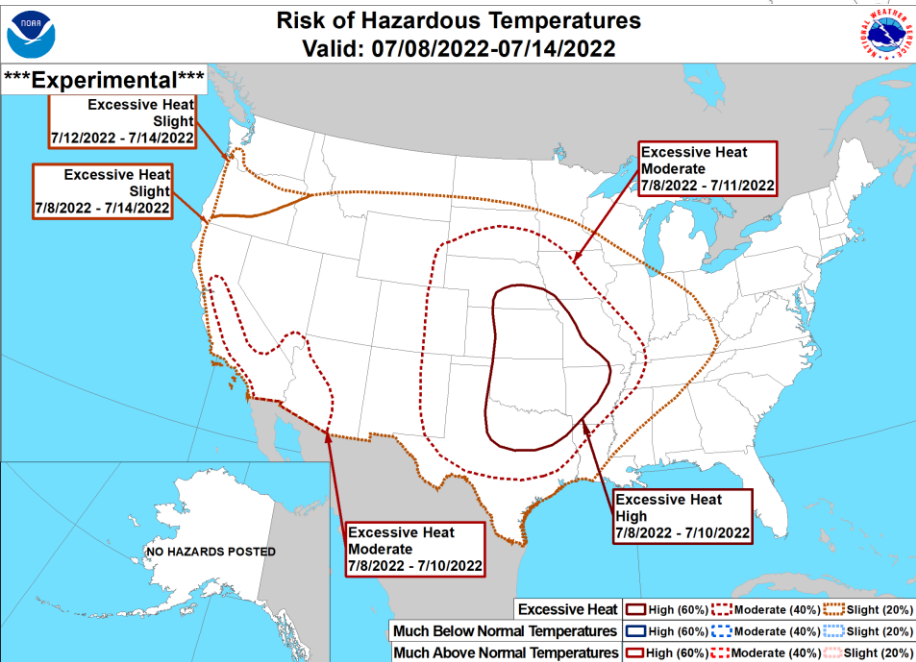
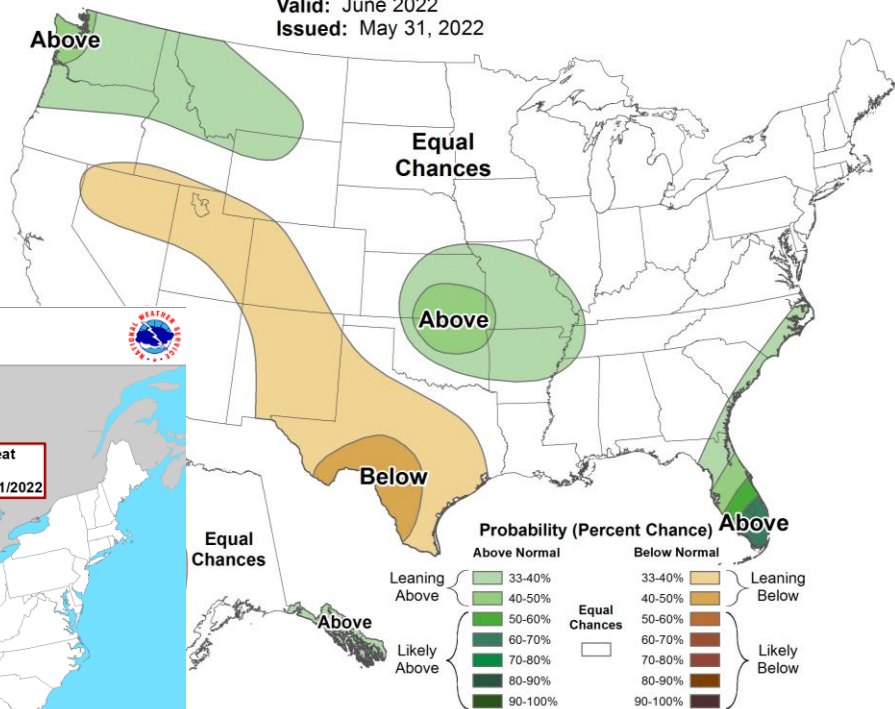
Monthly Temperature Outlook

Valid: June 2022
Issued: May 31, 2022



Monthly Precipitation Outlook

Valid: June 2022
Issued: May 31, 2022





Seasonal Outlook

The Climate Prediction Center Outlook through the end of September suggests:

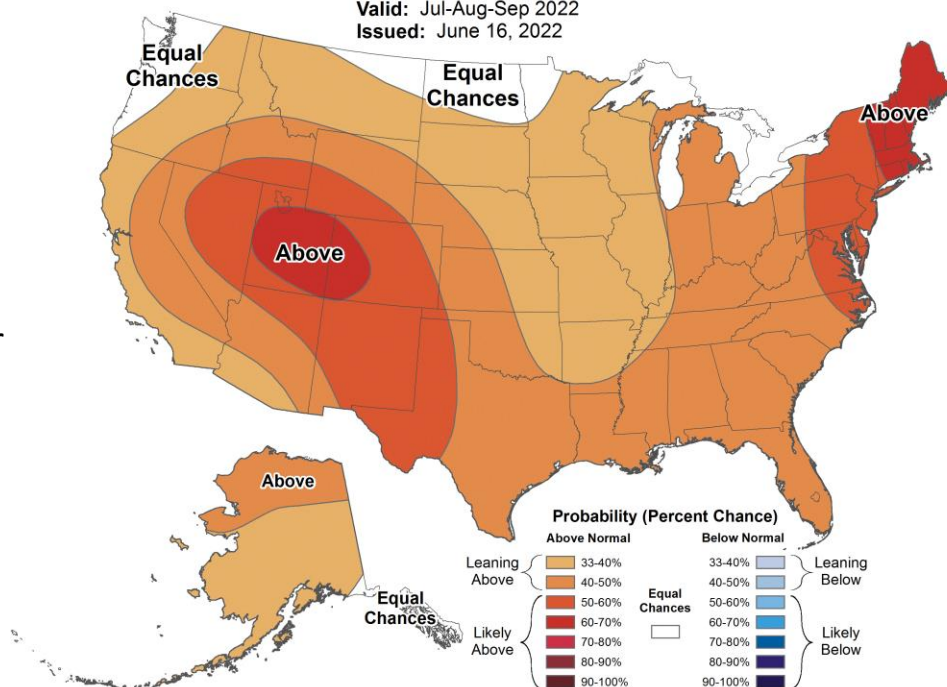
- Odds remain tilted towards warmer than normal conditions.
- Equal chances for Above, near, or below normal precipitation on average
- Drought is expected to persist at least through the end of September.



Seasonal Temperature Outlook



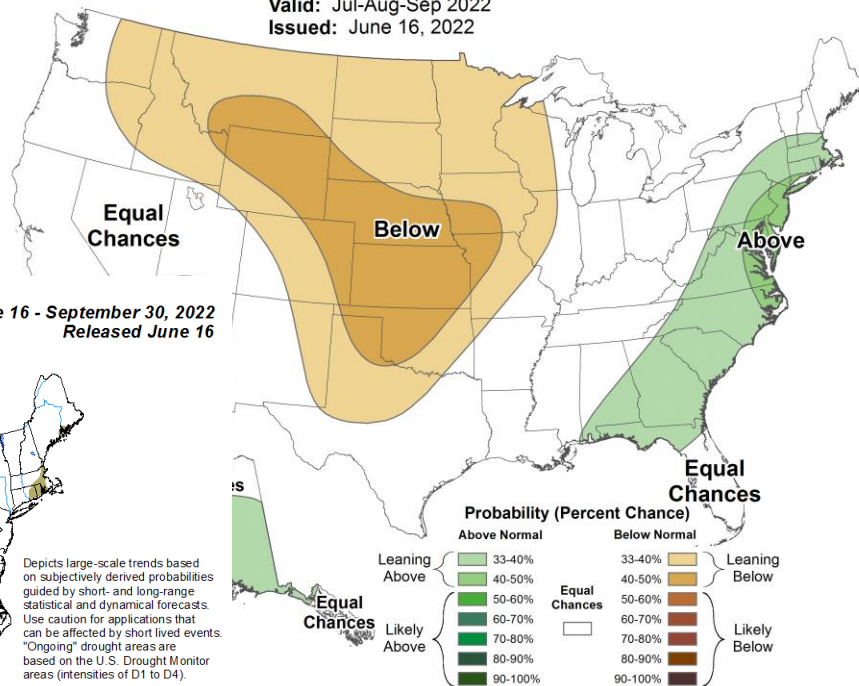
Valid: Jul-Sep 2022
Issued: June 16, 2022



Seasonal Precipitation Outlook

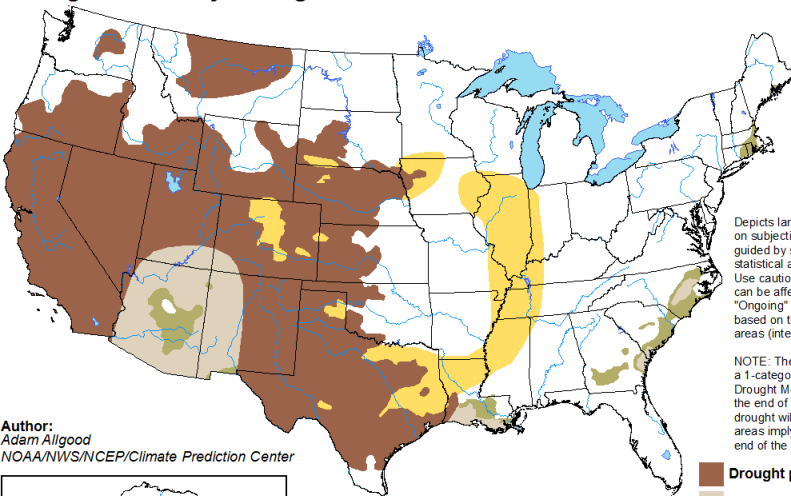


Valid: Jul-Aug-Sep 2022
Issued: June 16, 2022



U.S. Seasonal Drought Outlook Drought Tendency During the Valid Period

Valid for June 16 - September 30, 2022
Released June 16



Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short-lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).

NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).

- Drought persists
- Drought remains but improves
- Drought removal likely
- Drought development likely



<http://go.usa.gov/3eZ73>

Author:
Adam Allgood
NOAA/NWS/NCEP/Climate Prediction Center



Drought Classification

			Ranges				
Category	Description	Possible Impacts	Palmer Drought Severity Index (PDSI)	CPC Soil Moisture Model (Percentiles)	USGS Weekly Streamflow (Percentiles)	Standardized Precipitation Index (SPI)	Objective Drought Indicator Blends (Percentiles)
D0	Abnormally Dry	Going into drought: <ul style="list-style-type: none">• short-term dryness slowing planting, growth of crops or pastures Coming out of drought: <ul style="list-style-type: none">• some lingering water deficits• pastures or crops not fully recovered	-1.0 to -1.9	21 to 30	21 to 30	-0.5 to -0.7	21 to 30
D1	Moderate Drought	<ul style="list-style-type: none">• Some damage to crops, pastures• Streams, reservoirs, or wells low, some water shortages developing or imminent• Voluntary water-use restrictions requested	-2.0 to -2.9	11 to 20	11 to 20	-0.8 to -1.2	11 to 20
D2	Severe Drought	<ul style="list-style-type: none">• Crop or pasture losses likely• Water shortages common• Water restrictions imposed	-3.0 to -3.9	6 to 10	6 to 10	-1.3 to -1.5	6 to 10
D3	Extreme Drought	<ul style="list-style-type: none">• Major crop/pasture losses• Widespread water shortages or restrictions	-4.0 to -4.9	3 to 5	3 to 5	-1.6 to -1.9	3 to 5
D4	Exceptional Drought	<ul style="list-style-type: none">• Exceptional and widespread crop/pasture losses• Shortages of water in reservoirs, streams, and wells creating water emergencies	-5.0 or less	0 to 2	0 to 2	-2.0 or less	0 to 2



Drought Impacts in Texas

Category	Historically observed impacts
D0	Producers begin supplemental feeding for livestock
	Planting is postponed; forage germination is stunted; hay cutting is reduced
	Grass fires increase
	Surface water levels decline
D1	Dryland crops are stunted
	Early cattle sales begin
	Wildfire frequency increases
	Stock tanks, creeks, streams are low; voluntary water restrictions are requested
D2	Pasture conditions are very poor
	Soil is hard, hindering planting; crop yields decrease
	Wildfire danger is severe; burn bans are implemented
	Wildlife moves into populated areas
D3	Hydroelectric power is compromised; well water use increases; mandatory water restrictions are implemented
	Soil has large cracks; soil moisture is very low; dust and sand storms occur
	Row and forage crops fail to germinate; decreased yields for irrigated crops and very large yield reduction for dryland crops are reported
	Need for supplemental feed, nutrients, protein, and water for livestock increases; herds are sold
	Increased risk of large wildfires is noted
	Many sectors experience financial burden
	Severe fish, plant, and wildlife loss reported
D4	Water sanitation is a concern; reservoir levels drop significantly; surface water is nearly dry; river flow is very low; salinity increases in bays and estuaries
	Exceptional and widespread crop loss is reported; rangeland is dead; producers are not planting fields
	Culling continues; producers wean calves early and liquidate herds due to importation of hay and water expenses
	Seafood, forestry, tourism, and agriculture sectors report significant financial loss
	Extreme sensitivity to fire danger; firework restrictions are implemented
	Widespread tree mortality is reported; most wildlife species' health and population are suffering
	Devastating algae blooms occur; water quality is very poor
	Exceptional water shortages are noted across surface water sources; water table is declining
	Boat ramps are closed; obstacles are exposed in water bodies; water levels are at or near historic lows



Contact Information and Links

Contact Information:

Austin/San Antonio National Weather Service
2090 Airport Road
New Braunfels, TX 78130
830.606.3617 Press 2

Website: <http://www.weather.gov/ewx/>

Email: sr-ewx.webmaster@noaa.gov

Find us on social media! (images are links)



Drought Related Links:

Office of the State Climatologist: <https://climatexas.tamu.edu/>

Precipitation Data: <http://water.weather.gov/precip/>

The U.S. Drought Monitor: <http://droughtmonitor.unl.edu/>

USGS Stream Flow Conditions: <https://waterdata.usgs.gov/nwis/rt>

The Texas Counties Burn Ban Map: <http://tfsfrp.tamu.edu/wildfires/DecBan.png>

The KDBI County Average Map: http://twc.tamu.edu/tfs/kbdi_daily/kbdicounty.png

CPC Soil Moisture:

http://www.cpc.ncep.noaa.gov/products/Soilmst_Monitoring/US/Soilmst/Soilmst.shtml

Texas AgNews: <https://agrilifetoday.tamu.edu/>

CPC Outlook Maps: <http://www.cpc.ncep.noaa.gov/>

CPC U.S. Seasonal Drought Outlook: <http://www.cpc.ncep.noaa.gov/products/Drought/>

[Southern Plains regional drought status updates from NIDIS](#)