

2025 Texas Dormant Fire Season Considerations

Released December 19th, 2024



- The intent of the 2025 Texas Dormant Fire Season considerations is to provide general awareness of broad environmental conditions and the potential impact toward wildfire activity across Texas through the spring of 2025.
- The bi-weekly [Texas Fire Potential Update](#) provides up-to-date situational awareness of wildfire potential and fire environment conditions for the state of Texas. Firefighters and emergency management officials are encouraged to subscribe to the Texas Fire Potential Update listserve by sending an email to tx-fire-potential+subscribe@lists.tamu.edu.
- Texas A&M Predictive Services Fire Environment Products are updated daily and available at the [Texas Interagency Coordination Center website](#)
- Factors that drive the dormant wildfire season in Texas
 - Grass fuel loading produced during the previous growing season
 - Current and forecast drought conditions
 - Temperature and precipitation trends
 - Widespread, freeze cured grasses and timing of spring green up of grasses.
 - Frequency of cold front passages and magnitude of windspeed in the pre-and-post frontal environment
 - The peak period for dormant fire season activity is mid-February through early April.

2025 Texas Dormant Fire Season Considerations

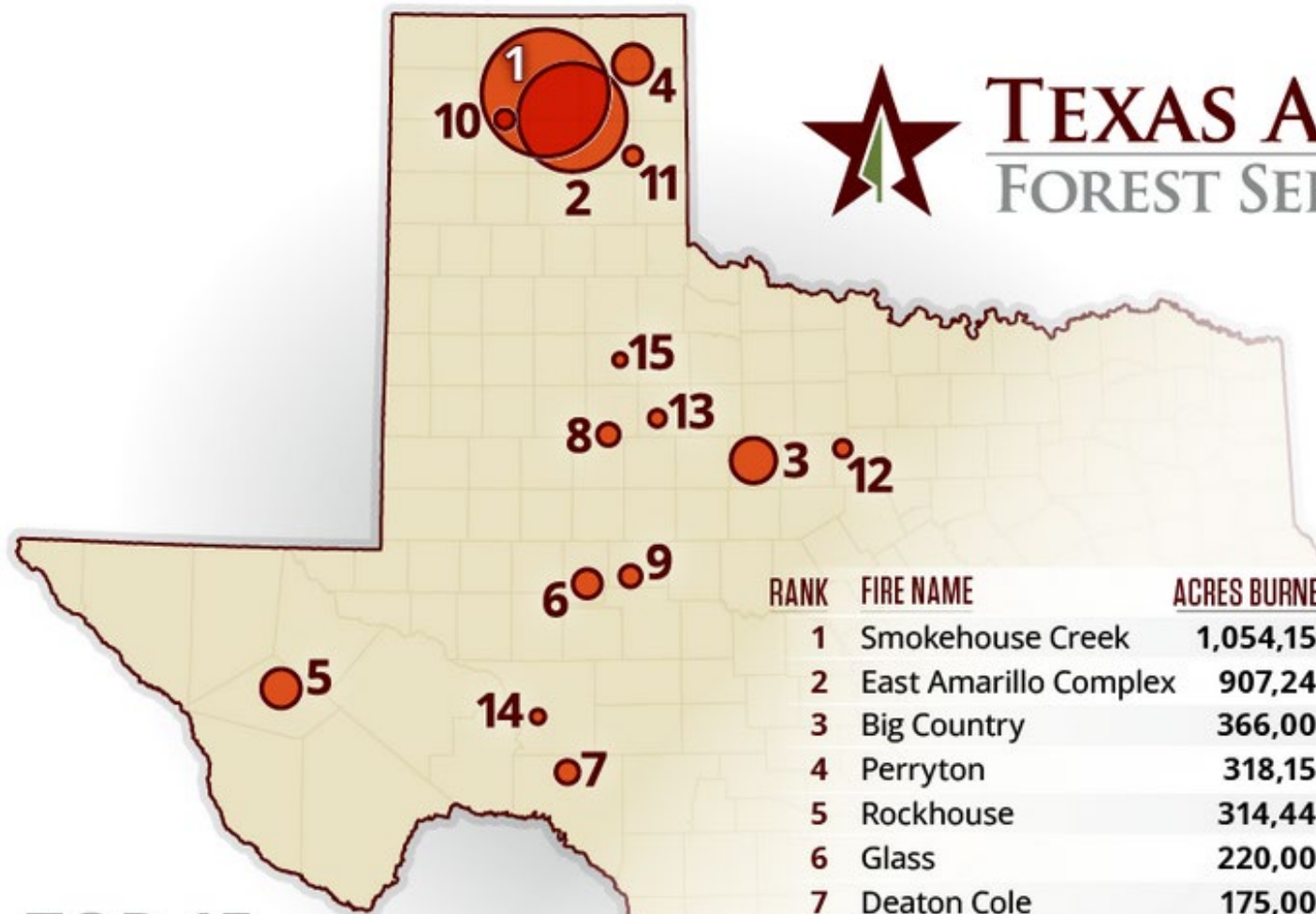
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- A wide range of grass loading is present along and west of Interstate-35. Below normal grass loading in the High Plains and parts of the Southern Plains will require critically dry fuel and critical to extreme fire weather to produce fires with high resistance to control that exceed the capacity of local firefighting resources.
- Above normal grass loading in Western and Eastern Hill Country only require dry fuel and elevated to critical fire weather to produce fires that exceed local fire response capacity.
- Normal to above normal grass loading in South Texas has yet to be [freeze cured](#) as of December 19th and will help limit wildfire potential until a hard freeze occurs. A fire environment consisting of dry to critically dry fuel, freeze cured grasses, and post-frontal elevated to critical fire weather is typically the requirement for large fires with high resistance to control in South Texas.
- A weak La Niña climate cycle is forecast for the dormant fire season. Increased frequency of fire effective weather in Texas is typical during La Niña, including increased risk for high impact, Southern Plains Wildfire Outbreaks.
- East and Central Texas typically observe a secondary peak of wildfire occurrence during the dormant season. Increased initial attack fire activity often coincides after short-term drying of surface fuel and increased wind surrounding dry cold front passages. Underlying drought is needed to produce large fires with high resistance control in timber fuel during the dormant season.



Most of the largest Texas wildfires occurred in freeze cured (dormant) grasses in the western half of Texas between mid-February and mid-April when exposed to high impact fire weather.

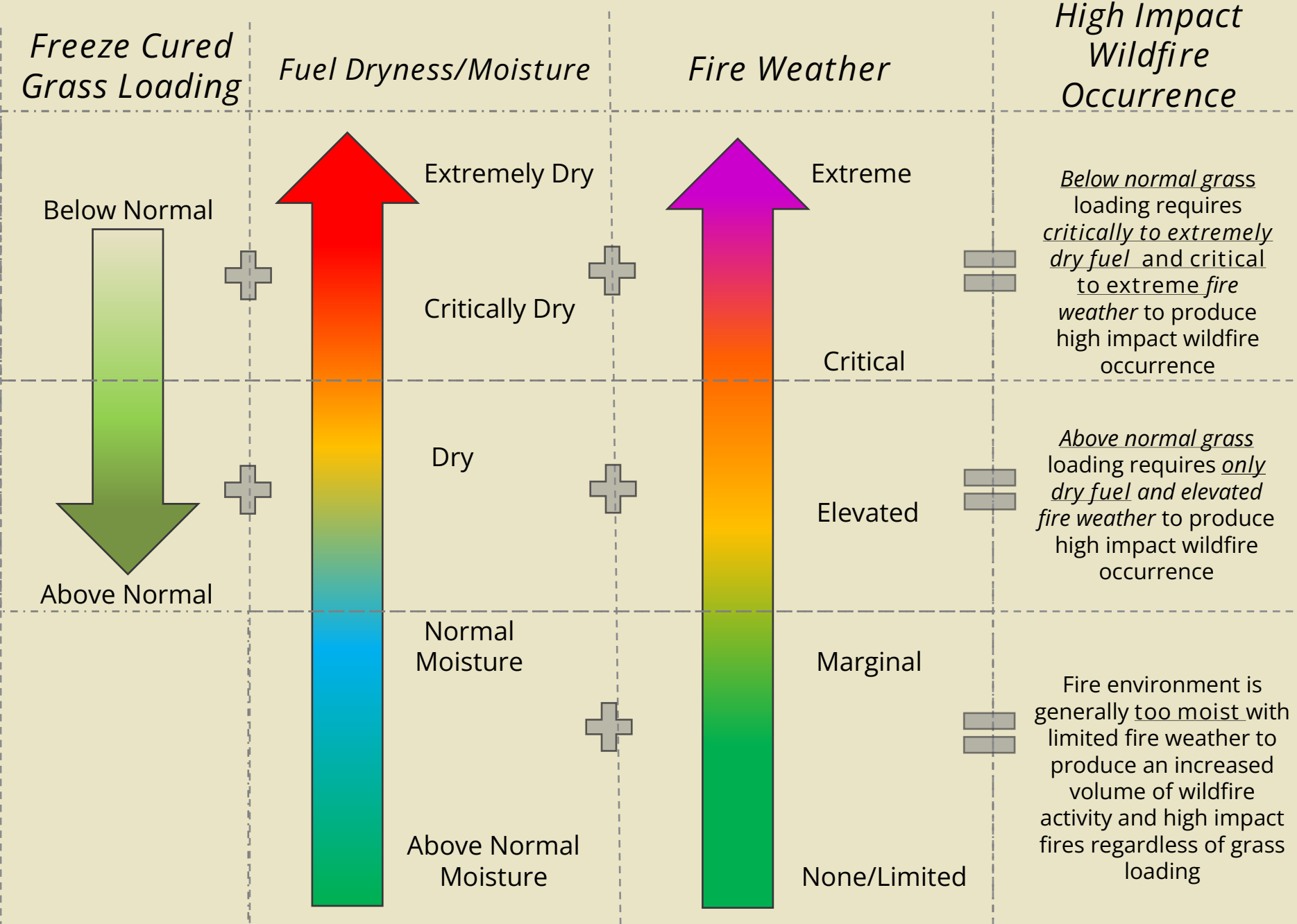


TOP 15 LARGEST TEXAS WILDFIRES ON RECORD AS OF 3/25/2024

RANK	FIRE NAME	ACRES BURNED	DATE
1	Smokehouse Creek	1,054,153	2/26/2024
2	East Amarillo Complex	907,245	3/12/2006
3	Big Country	366,000	3/10/1988
4	Perryton	318,156	3/6/2017
5	Rockhouse	314,444	4/9/2011
6	Glass	220,000	2/25/2008
7	Deaton Cole	175,000	4/25/2011
8	Cooper Mtn. Ranch	162,625	4/11/2011
9	Wildcat	158,308	4/10/2011
10	Windy Deuce	143,302	2/26/2024
11	Lefors East	135,000	3/6/2017
12	PK Complex	126,734	4/9/2011
13	Swenson	122,500	4/6/2011
14	Huckabee	98,168	4/30/2008
15	Dickens Complex	89,200	5/6/2011



Freeze-cured grass loading affects the fire environment, contributing to high impact wildfires across the West Texas Plains and South Texas during the winter and early spring.

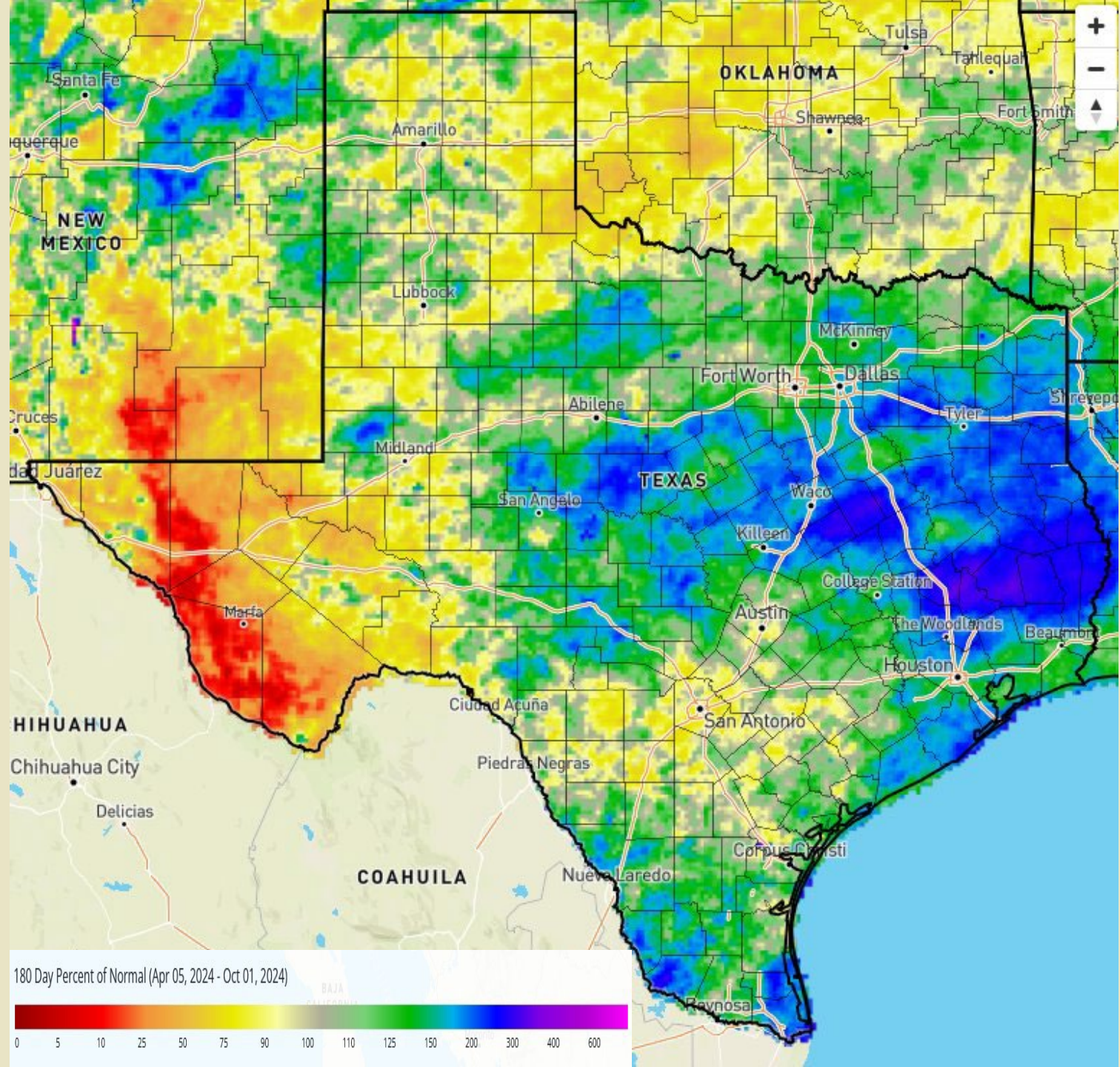


Extreme fire weather can overpower the fire environment to produce high impact wildfire occurrence, even when freeze cured grasses fuel moisture is near to above normal.



Growing season rainfall surpluses or deficits between April and September is part of the equation for herbaceous grass production that can serve to promote or limit wildfire activity the following winter for the western half of Texas.

Though grasses do support wildfire occurrence in Central and East Texas, fire activity is often focused on underlying drought in timber litter fuel








2024-2025 Herbaceous Fuel Loading Assessment

The herbaceous fuel loading assessment is based on growing season rainfall, field observations, rangeland analysis platform production explorer outputs, and grazing impacts.

Though freeze cured grasses support wildfire activity in Central and East Texas, dryness in timber litter fuel is needed to produce fires with increased resistance to control.

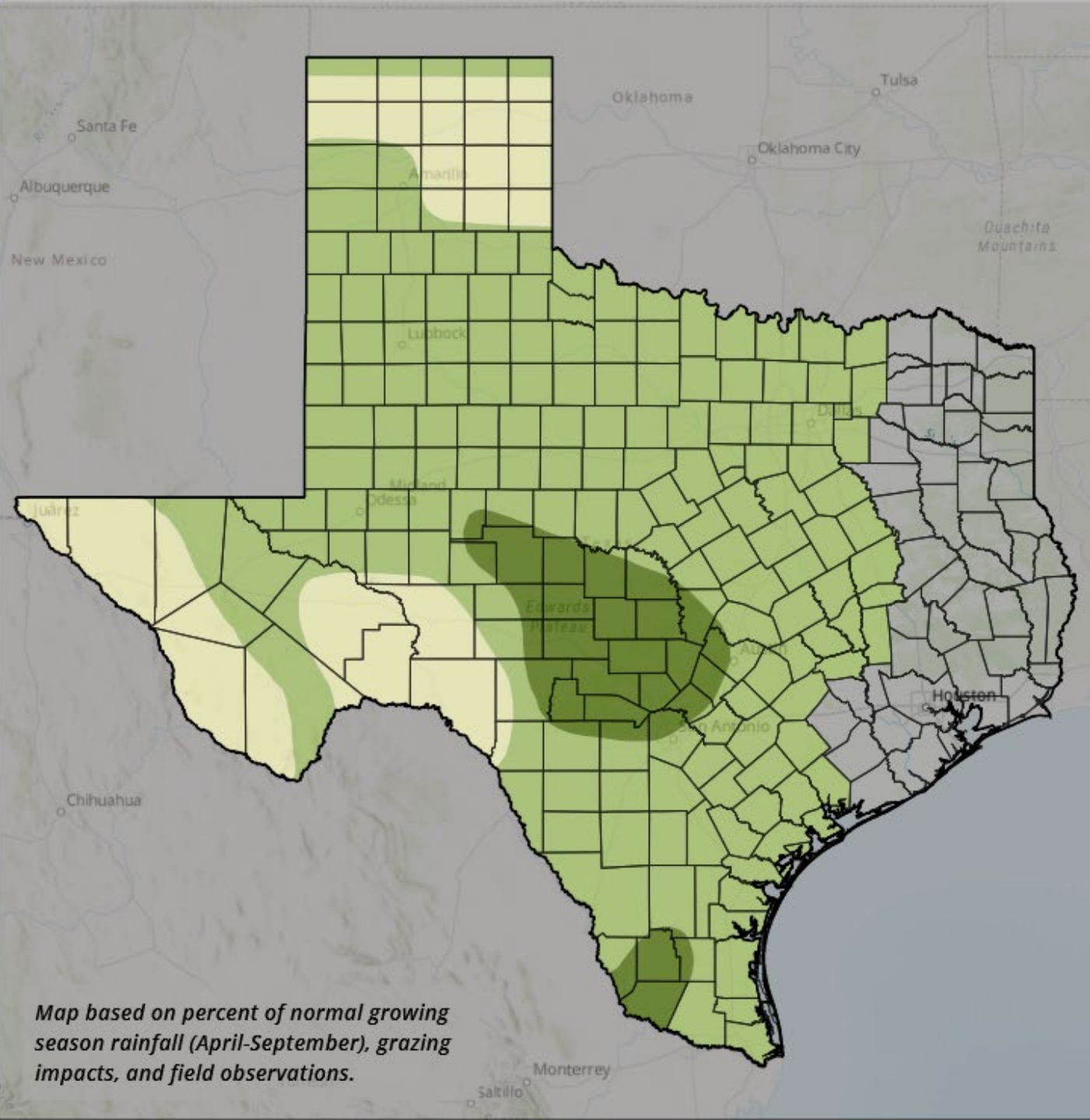


2024-2025 Dormant Fire Season Herbaceous Fuel Loading

-  Above Normal
-  Normal
-  Below Normal

Above normal grass loading often requires lower thresholds of dryness and fire weather to produce increased wildfire activity.

[TICC.TAMU.EDU/
PREDICTIVESERVICES](http://TICC.TAMU.EDU/PREDICTIVESERVICES)



Oldham County north of Boys Ranch



Normal to below normal grass loading due to grazing and slightly below normal rainfall between April-September north of Interstate-40 will support fire activity, but will require higher levels of dryness and fire weather to produce fires with high resistance to control.

April 2024



October 10, 2024



Hemphill County south of Canadian



Normal to below normal grass loading due to grazing and slow recovery of grass production in the footprint of the Smokehouse Creek fire will support fire activity but will require dry to extremely dry fuel and critical to extreme fire weather to produce fires with high resistance to control.

October 2023



October 10, 2024



Canadian River Drainage 2023 vs 2024 Grass Production Analysis



Additional support/quantification for less grass in the Canadian River Drainage for the 2025 dormant fire season.

[Click here for additional information on the Rangeland Analysis Platform](#)

Rangeland Analysis Platform Production Explorer

IMPORT DATA CURRENT YEAR PRODUCTION HISTORICAL PRODUCTION STOCKING RATE

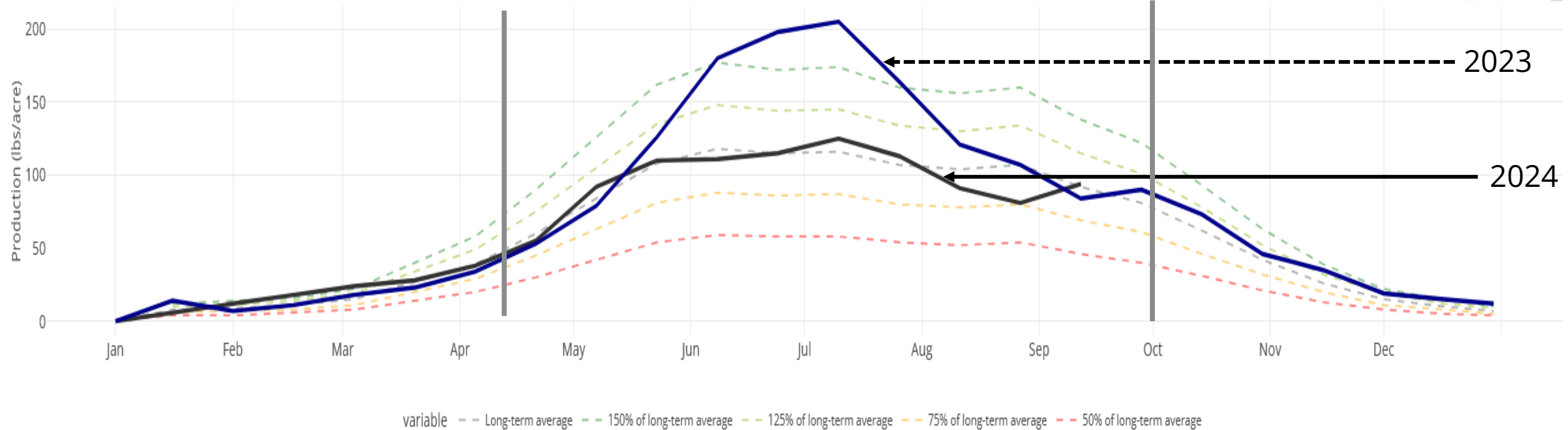
16-day production

The plot below compares 16-day estimates of herbaceous vegetation production for the current or selected year to the long-term average, 75% of the long-term average, and 50% of the long-term average. As such, each datapoint represents estimated production for the previous 16-day period.

Add another year to the plots

2023

General Growing Season Period



Southern Plains



Grass Loading is normal to below normal due to extended drought conditions and grazing. September 2024 rainfall did produce some late season growing of herbaceous fuel resulting in localized areas having normal grass loading. Lower grass loadings will provide increased opportunities for success for local firefighting resources.

Sterling County west of Sterling City (10/8/24)



Ector County north of Odessa (10/8/24)



Southern Plains 2023 vs 2024 Grass Production Analysis



Additional support/quantification for less grass in the Southern Plains near Midland/Odessa/Andrews. Much of the southern plains has experienced poor grass production since 2022 growing season.

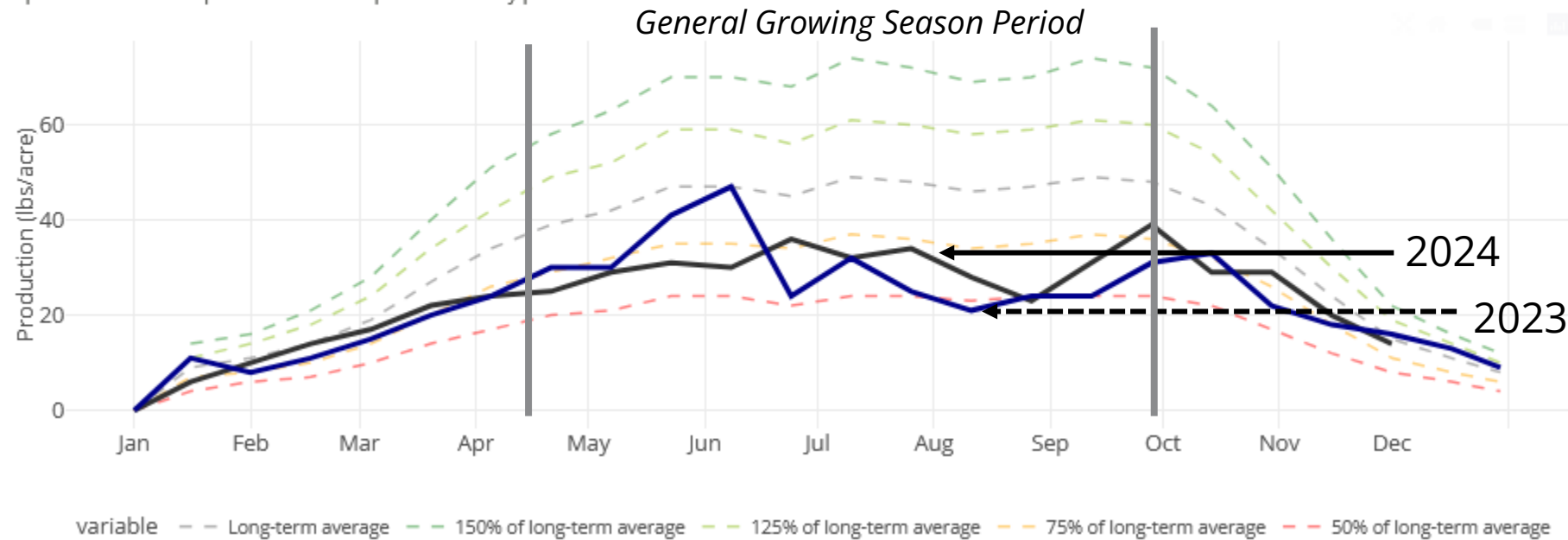
[Click here for additional information on the Rangeland Analysis Platform](#)



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Add another year to the plots
2023



Hill Country



Grass loading is generally above normal near and south of Abilene and near San Angelo with extension east into the Hwy 281 corridor. Dry fuel and elevated fire weather will be needed to support wildfires with increased resistance to control in above normal grass loading.

Taylor County southwest of Abilene 12/2/24



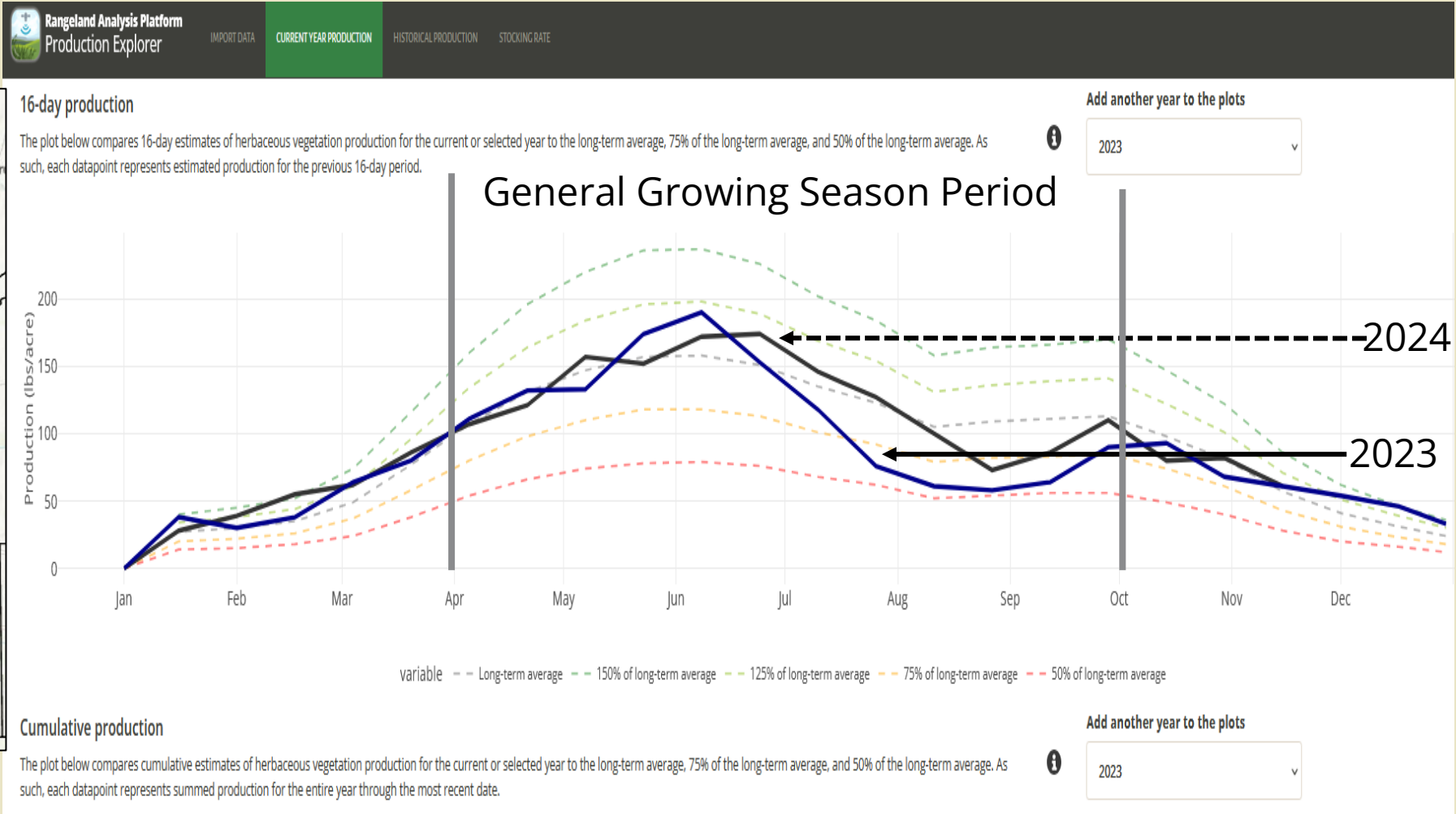
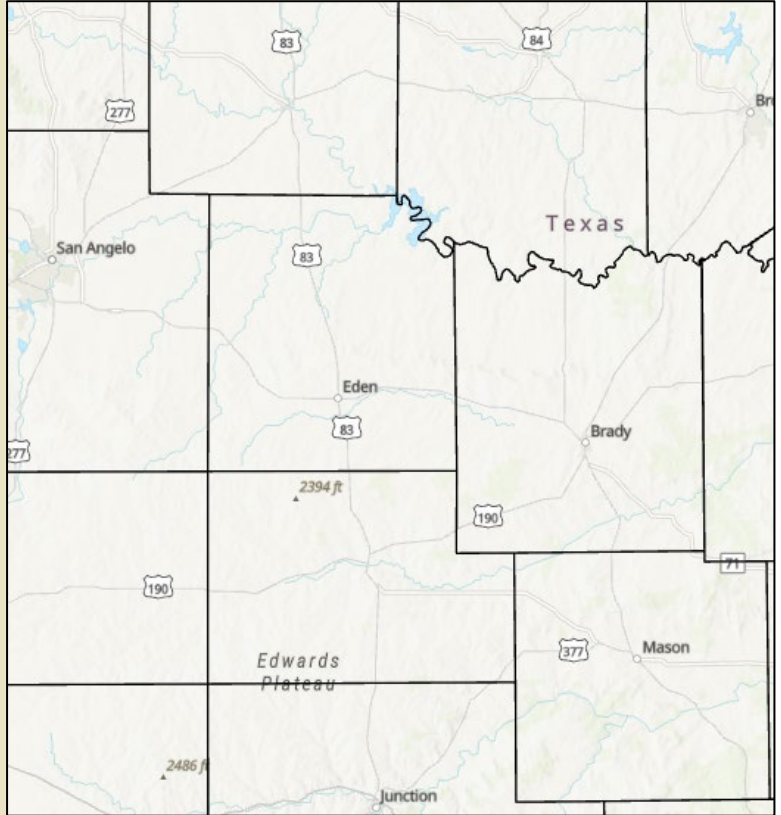
Mason County near of Mason 10/12/24





Hill Country grass loading quantification 2023 vs 2024 highlights the above average production in the spring and early summer and late summer/early fall of 2024.

[Click here for additional information on the Rangeland Analysis Platform](#)



South Texas



Grass loading is generally normal to above normal in some portions of far south Texas from frequent early growing season rainfall. Once grasses become freeze cured, a fire environment consisting of dry surface fuel and elevated fire weather will support the potential for large fires that can exceed local firefighting capacity due to the above normal grass loading.

Jim Hogg County near Hebbronville (10/8/24)



Books County south of Falfurrias 10/17/24

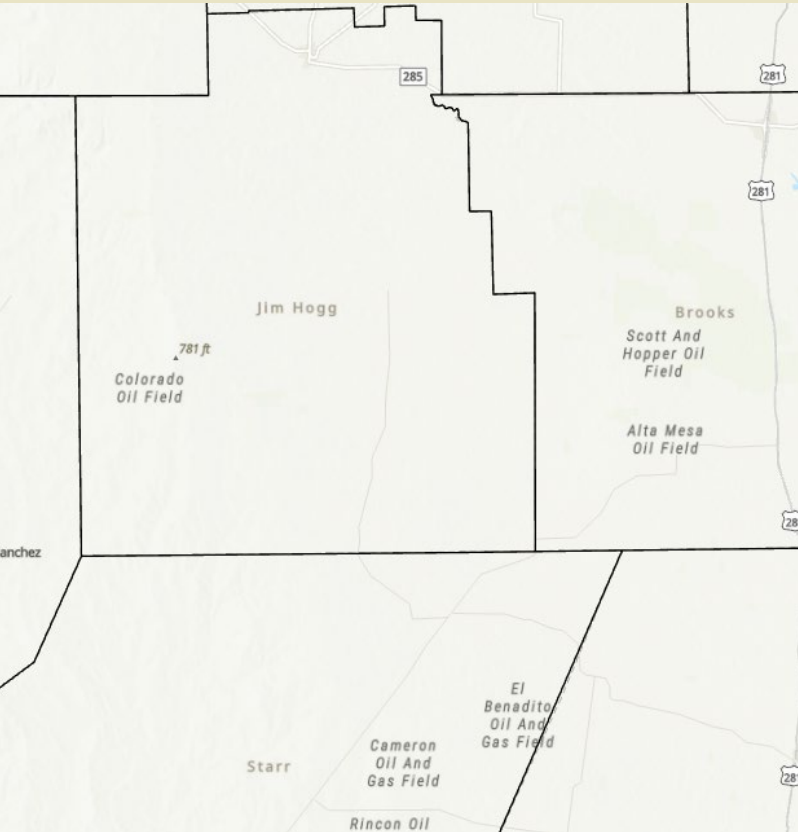


South Texas 2023 vs 2024 Grass Production Analysis



Additional Support/quantification for near to above normal grass loading near Hebbronville and Falfurrias.

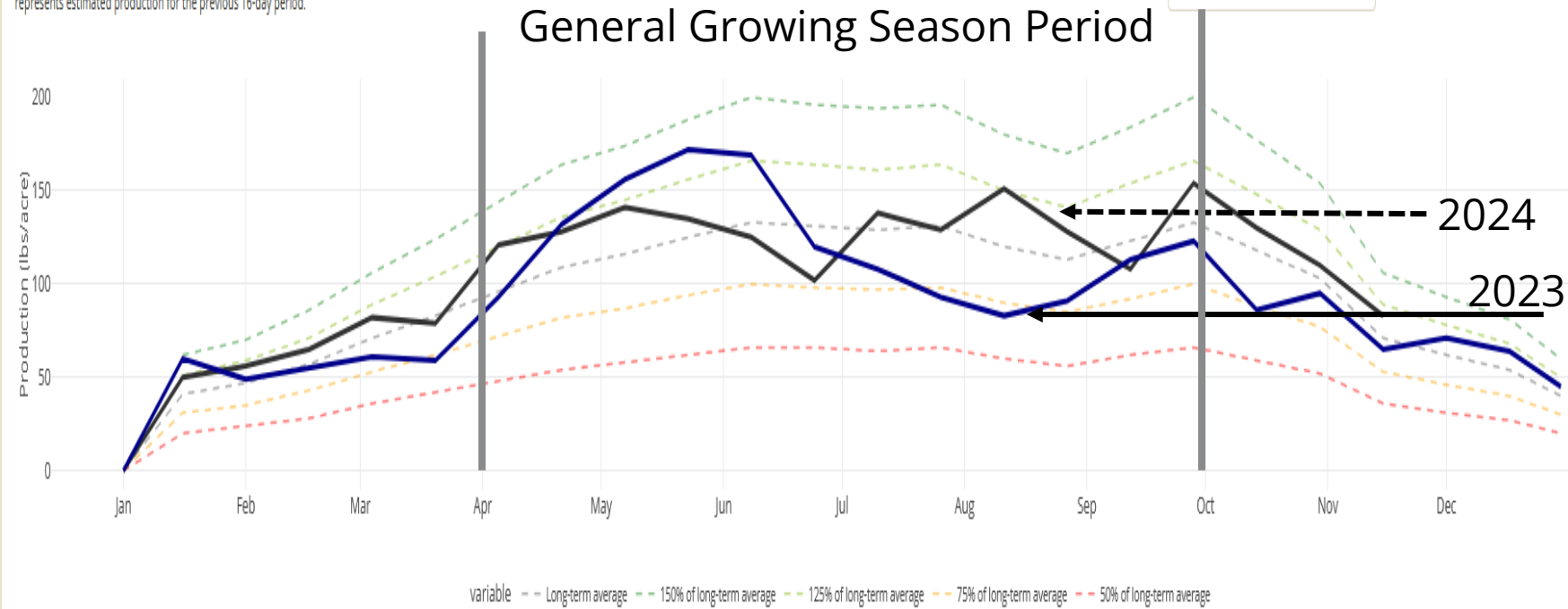
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CURRENT YEAR PLOTS

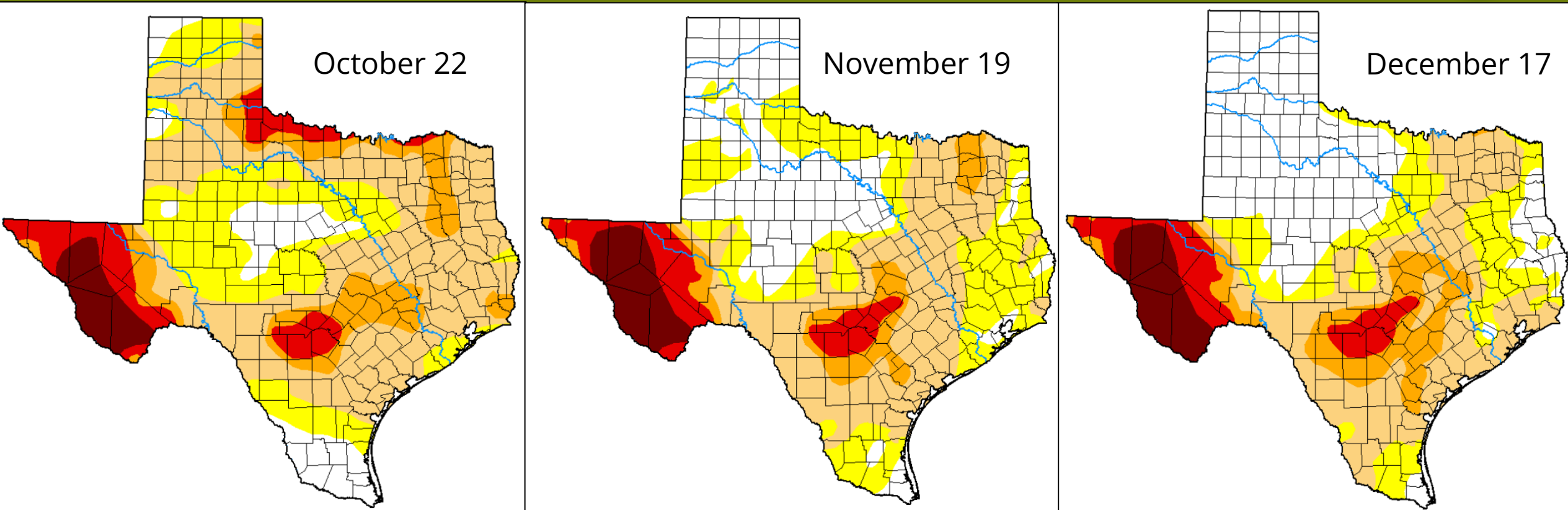
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The U.S Drought Monitor through mid to late October highlights the growing drought after an abnormally dry period statewide beginning in September. Rainfall during the first half of November eliminated drought in the High Plains and much of the Rolling Plains. Underlying drought has been building in the Hill Country and across South Texas since mid-November. Underlying drought continues to persist in Central Texas and portions of East Texas.



Drought Classification

- None
- D0 (Abnormally Dry)
- D1 (Moderate Drought)
- D2 (Severe Drought)
- D3 (Extreme Drought)
- D4 (Exceptional Drought)
- No Data



U.S. Seasonal Drought Outlook

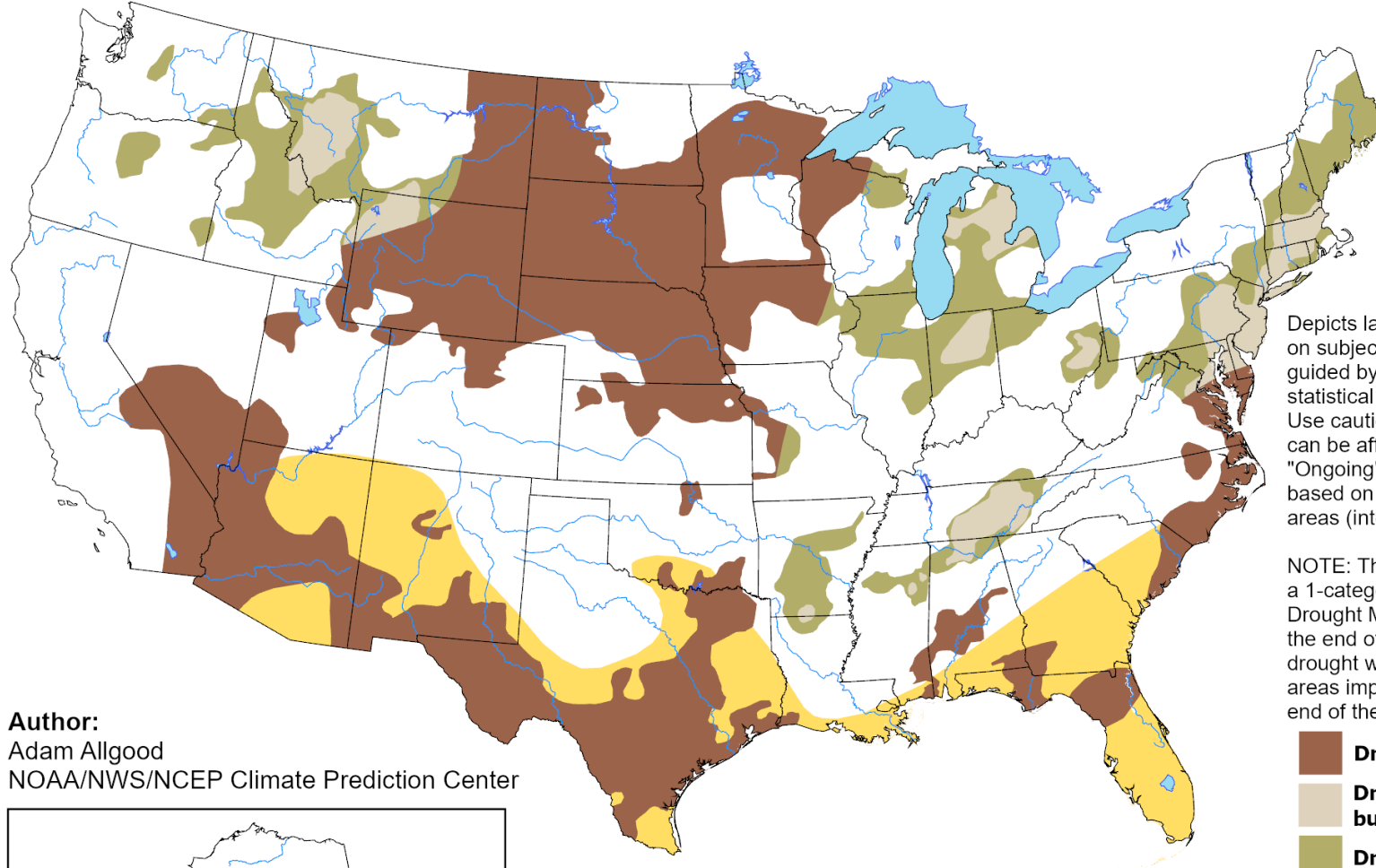
Drought Tendency During the Valid Period

Valid for December 19, 2024 - March 31, 2025
Released December 19, 2024

The forecast of a weak La Niña climate cycle by the Climate Prediction Center often results in warmer and drier conditions during the dormant fire season Texas.

The forecast of drought persistence and expansion could delay on the onset of green up in grasses, causing fire potential to persist into early to mid- April in South Texas and the Hill Country where grass loading is above normal.

Drought persistence and expansion in Central and East Texas could result in increased fire occurrence in timber litter fuel through March.

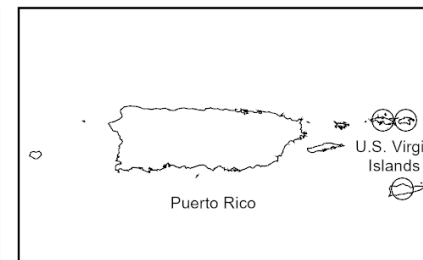
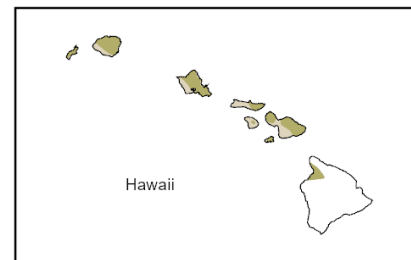
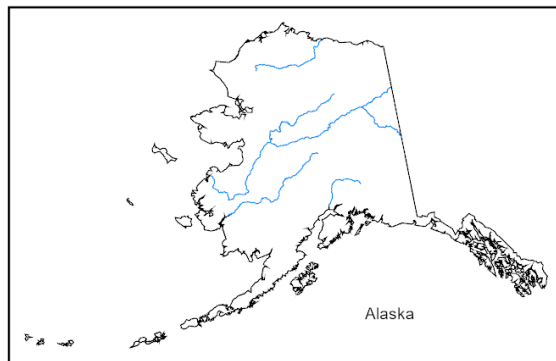


Author:
Adam Allgood
NOAA/NWS/NCEP Climate Prediction Center

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**
- No drought**

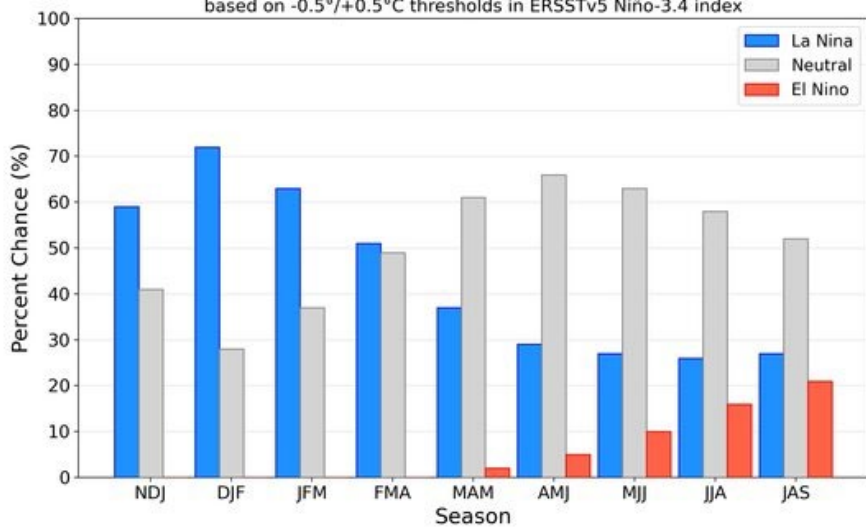


<https://go.usa.gov/3eZ73>

Official NOAA CPC ENSO Probabilities (issued December 2024)



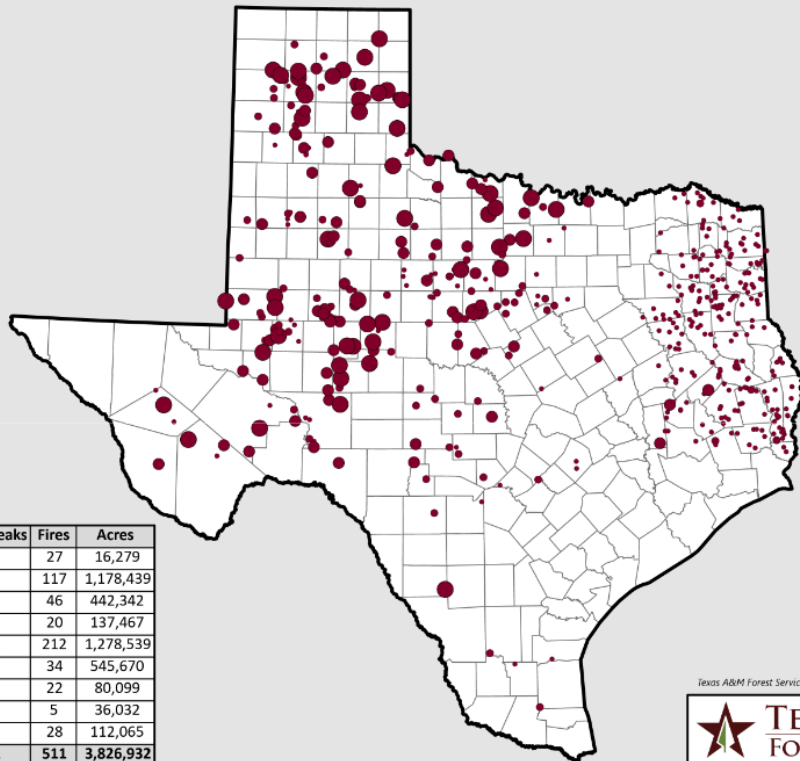
based on -0.5°/+0.5°C thresholds in ERSSTv5 Niño-3.4 index



La Niña Climate Conditions and fire effective weather

The Climate Prediction Center is forecasting a weak and brief La Niña climate pattern. This pattern typically results in the increased frequency of fire effective weather in western Texas and Oklahoma, including the potential for high impact fire weather associated with Southern Plains Wildfire Outbreaks. The February 26th-27th 2024 Outbreak occurred during an El Niño climate cycle, an indication that firefighters and emergency officials need to constantly monitor fire environment trends during the dormant fire season.

Southern Plains Wildfire Outbreaks (SPWO) During La Niña Years, 2005-2022



Acres Burned

- < 100
- 100 - 999
- 1,000 - 9,999
- ≥ 10,000

Texas A&M Forest Service response to SPWO wildfire incidents.



TAMFS EOC 1/2/2023

Southern Plains Wildfire Outbreak conceptual model
April 14, 2011 (Todd Lindley, NWS)

