

TEXAS FOREST SERVICE

The Texas A&M University System

Spring Wildfire Risk Decision Support Document

April 14, 2011

Weather and fuel indices indicate that the 2011 Winter Fire Season has now transitioned into an active Spring Fire Season. La Nina conditions are expected to dominate the weather pattern into June. This will keep the potential for large and destructive wildfire occurrence over the state at an elevated level, and represents a serious threat to citizen safety. The primary causes for this increased threat are:

- Existing and continued drought
- Strong winds due to progressive fronts
- Southern Plains Wildfire Outbreak
- Above normal vegetation & Critically dry fuels (grass and brush)
- Increasing fire activity, size and risk

Existing and continued drought

The ongoing drought across the state continues to deepen to historic levels. As can be seen in the image below, drought at the D0 level or higher now covers 100% of the state. Since the National Drought Monitor has been keeping records, this has occurred only twice before, in September 2000, and June 2006. Both of those years saw severe droughts and active fire seasons within the state. The National Climatic Data Center (NCDC), indicates that the past six month period from October, 2010 through March, 2011 is the fourth driest October – March period in Texas, and the month of March was the driest March since they began keeping records in 1895. Unfortunately, it does not look like there is any relief on the horizon. The national drought forecast, shown at the top of the next page, indicates that drought is expected to persist and intensify across the state through June, 2011.

U.S. Drought Monitor

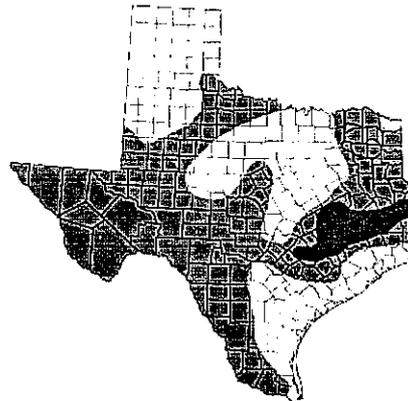
April 5, 2011
Valid 7 a.m. EST

Texas

Category	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
All Texas	0.00	100.00	87.89	85.60	69.14	4.81
Low Water Supply (US 2010)	0.00	100.00	64.84	78.64	43.07	0.00
Months with Precip. Deficit (US 2010)	15.00	75.25	65.65	45.30	13.00	0.00
Number of Months with Precip. Deficit (US 2010)	2.99	5.21	6.45	17.46	8.04	0.00
Standardized Water Deficit (US 2010)	25.30	24.43	2.43	0.59	0.00	0.00
Difference from US (US 2010)	85.00	1.49	0.00	0.00	0.00	0.00

Intensity

- 0 - No drought
- D0 - Drought - Extreme
- D1 - Drought - Very Severe
- D2 - Drought - Severe
- D3 - Drought - Moderate
- D4 - Drought - Marginal

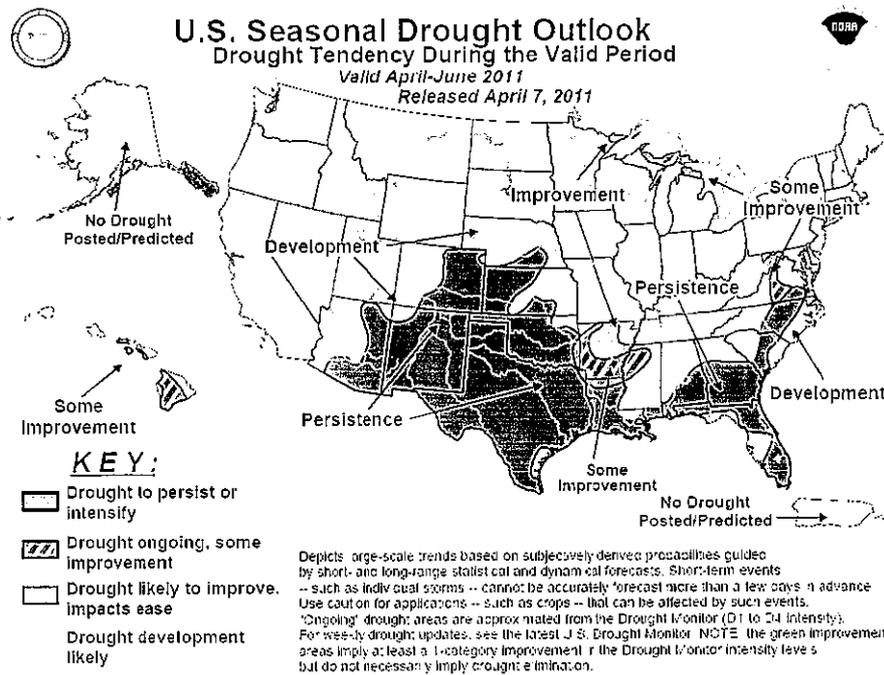


The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for detailed statements.

<http://drought.unl.edu/dm>

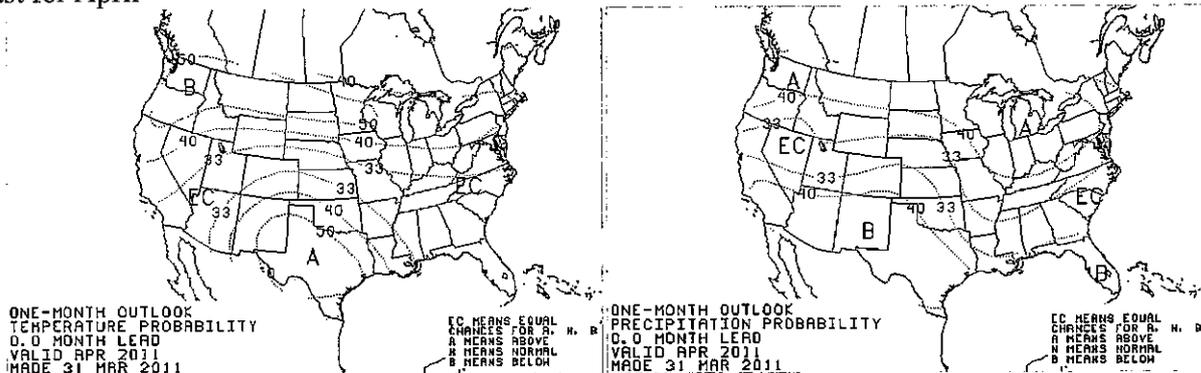


Released Thursday, April 7, 2011
National Drought Mitigation Center,

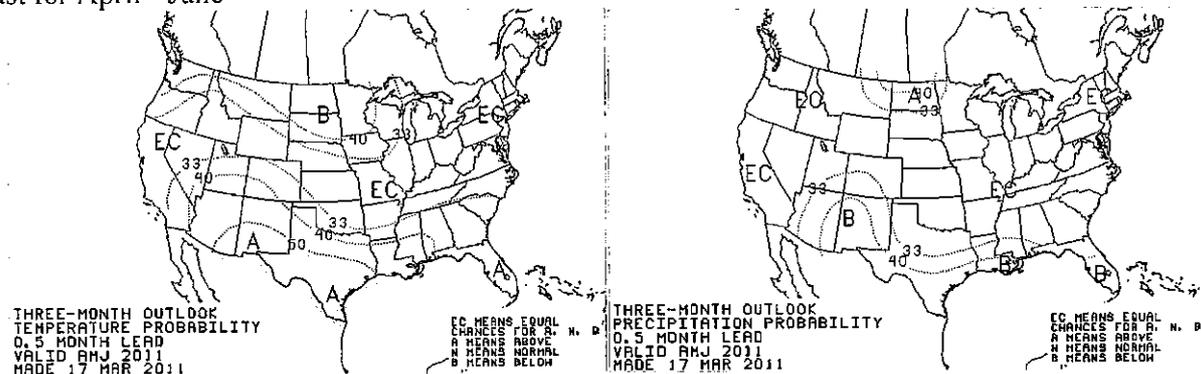


The suite of El Niño/Southern Oscillation (ENSO) models predicts that La Niña conditions will persist into June. The impact of the continued La Niña conditions can be seen on the following National Weather Service seasonal forecast products which are predicting temperatures that are significantly above average and below average rainfall in April, May, and June.

Forecast for April



Forecast for April - June



Strong Winds Due to Progressive Fronts

The weather pattern that produced the progressive frontal systems during March is expected to continue into April. Associated with these frontal passages are strong winds and low relative humidity.

According to the National Weather Service fire weather forecaster in Lubbock:

“A pattern of strong Pacific Northwest troughs swinging out across the northern Rockies/Plains already is established. It is inevitable that we will see a number of dry, warm, and windy days developing in the coming weeks and months.”

Based on historical weather data, Greg Murdoch, Meteorologist with the National Weather Service in Midland, Texas, states that April is the peak month for Red Flag conditions across the plains regions of the state. A Red Flag is issued by the National Weather Service when strong winds above 20mph and Relative Humidity values below 20% will be present during the afternoon time frame. He also states that the weather pattern this year is very similar to that which occurred during the springs of 2008 & 2009, when Red Flag conditions extended on into May and early June.

Southern Plains Wildfire Outbreak

A team of NWS meteorologists recently identified a weather phenomenon called the Southern Plains Wildfire Outbreak where specific weather components combine to create conditions conducive to catastrophic fire losses. Southern Plains Wildfire Outbreaks occur during the winter and spring. This has occurred 10 times since December 27, 2005 and the statistics are significant:

287 major wildfires
2.5 million acres burned
22 fatalities
1,065 structures destroyed

The fires included Cross Plains, December 27, 2005; Amarillo East Complex, March 12, 2006 and North Texas Fires, April 9, 2009.

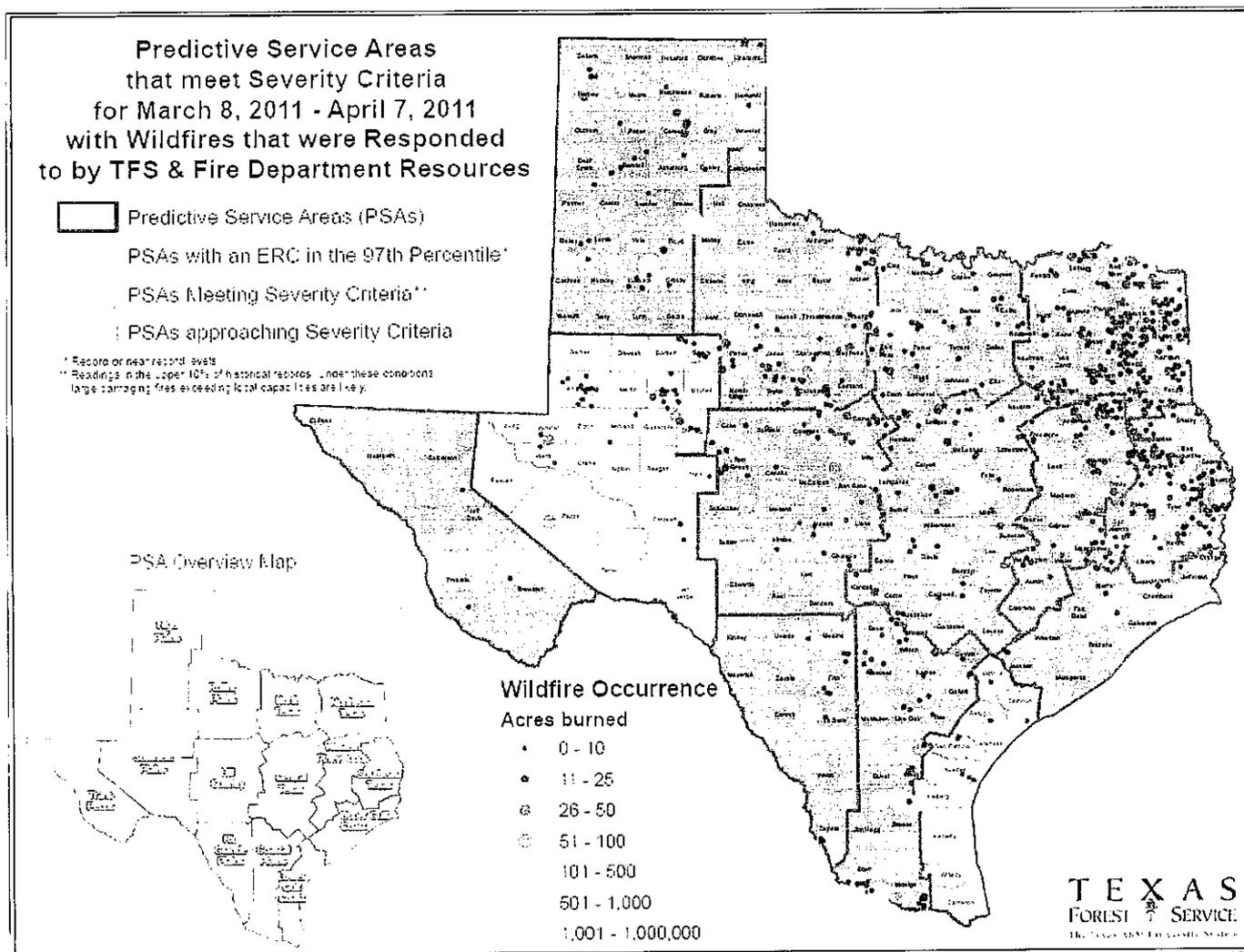
Above normal amounts of vegetation & critically dry fuels across the state

Most of Texas currently is supporting an increased amount of fine fuel loading due to above normal rainfall during the spring and late summer of 2010. The late summer precipitation, associated with four tropical systems has especially caused a flush of growth in the grasses.

The increased fuel loading now provides a continuous blanket of tall, dead grass across the surface that makes it easier for fires to ignite and spread, even with low to moderate wind speed. Fire intensities also can be expected to increase with this above normal fuel loading, and exhibit a higher resistance to control - requiring additional resources for effective containment. Some green-up of the grasses have begun primarily east of I-35 and south of HWY 90. But due to the drought, the green-up is weak, and will quickly wilt without any sustaining moisture soon.

As we exit the driest March on record and enter April, the fuels across the state are at critical fuel dryness levels. The map on the next page shows that every Predictive Service Area in the state is in the upper 10% of historical Energy Release Component (ERC) readings, with most above the upper 3% of historical readings. The Energy Release Component of the National Fire Danger Rating System is a measure of the amount of heat

generated within a specified area, and correlates well to the potential intensity and difficulty of control of a wildfire. When ERC's are within the top 10% of historical readings, wildfires can be expected to burn with high intensities and have a very high difficulty of control, requiring multiple firefighting resources for effective containment. The map also shows wildfires where state resources were involved in suppression action. As the map indicates, all regions of the state are at risk to large and damaging fires due to the ongoing drought and critical fuel dryness.



An example of what can happen when critical fuel dryness and critical fire weather are present is the Swenson Fire that started on April 7th in Stonewall County, and burned into King County. On the morning of April 8th, the fire was approximately 71,000 acres in size, had threatened multiple homes, two were lost, with multiple ground and air resources involved in the suppression effort.

A couple of images at the top of the next page show the intensity and size of the fire.

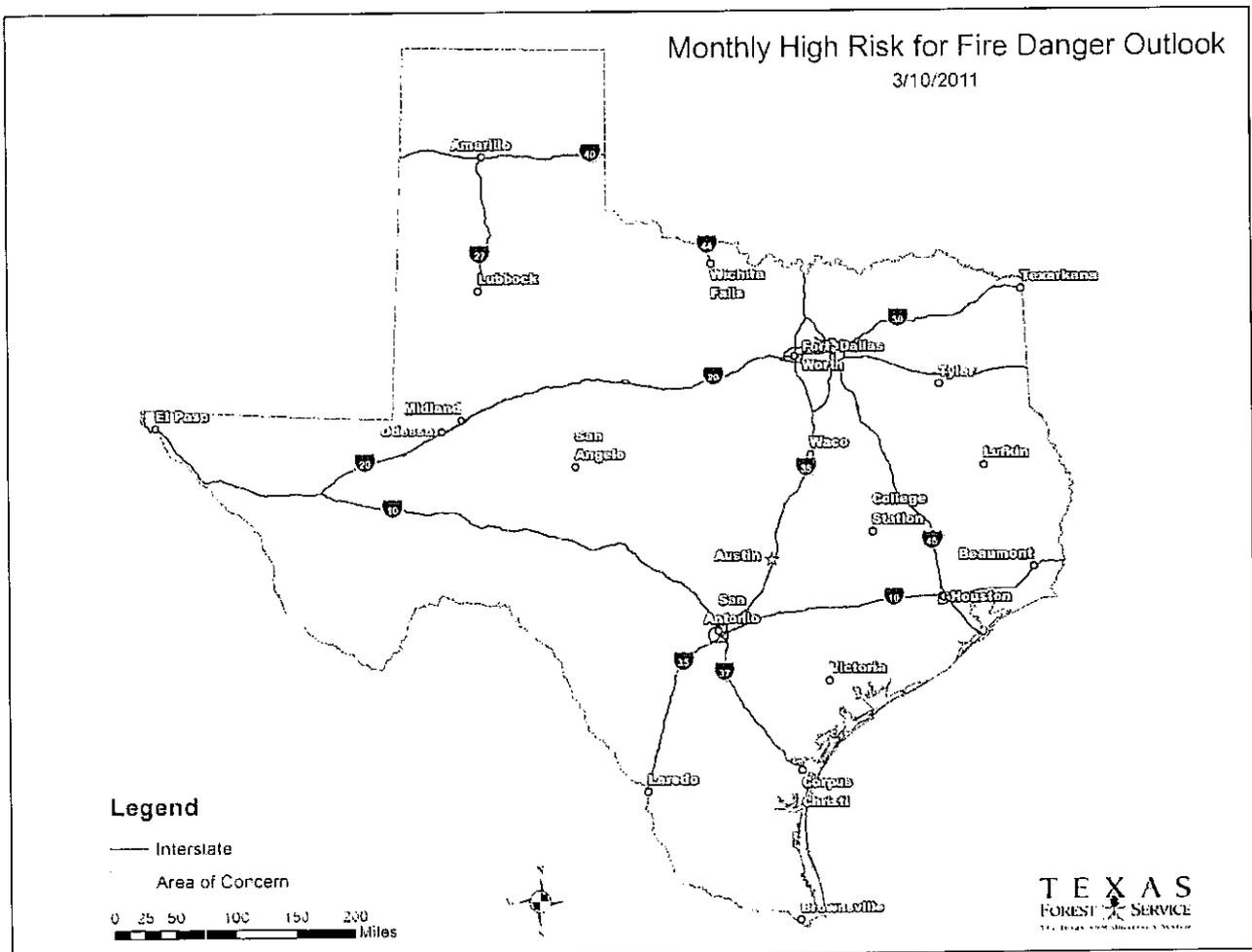
Shows fast moving head of fire

Shows high intensities on the fire



State Fire Danger Outlook

Based on current and forecast conditions, state and national fire analysts are expecting significant fire risk with the potential for large, damaging fires to continue through April and into May. The area of concern includes the entire state.



Fire Activity

TFS and Fire Department fires since start of fire season – November, 15, 2010

Date Range	AGENCY	Fires	Acres	Homes Saved	Other Structures Saved	Total Saved	Homes Lost	Other Structures Lost	Total Lost
11/15/2010 - 4/7/2011	FD	6443	358315.88	4668	6134	10802	58	978	1036
11/15/2010 - 4/7/2011	TFS	792	387516.6	2029	1364	3393	117	68	185
Nov 15th Total		7235	745832.48	6697	7498	14195	175	1046	1221

Burn Ban Map

Outdoor Burn Bans

April 08, 2011

TEXAS

FOREST SERVICE

U.S. DEPARTMENT OF AGRICULTURE

Counties without Established Burn Bans

Counties with Established Burn Bans

DISCLAIMER

County burning bans are established by County Judges and or County Commissioners Courts. The Texas Forest Service is not responsible for establishing or removing burning bans. The Texas Forest Service is only displaying this information as a public service.

For More Information Please Contact
Your Local County Judge's Office

Report updates to:
burnban@tfs.tamu.edu

Counties with Burn Bans: 180

Andrews	Gallegos	Moore
Archer	Gonzales	Motley
Armstrong	Gray	Nolan
Atarosa	Gilmes	Nueces
Austin	Guadalupe	Ochiltree
Bailey	Hale	Oldham
Bandera	Hill	Palo Pinto
Bandera	Hamilton	Parola
Beckham	Hansford	Parker
Baylor	Harris	Parmer
Bell	Harrison	Pecos
Bexar	Hartley	Potter
Blanco	Hays	Presidio
Borden	Hemphill	Randall
Bosque	Hidalgo	Reagan
Bowie	Hill	Real
Brazos	Hockley	Reeves
Brewster	Hood	Roberts
Briscoe	Howard	Burnell
Brown	Hudspeth	Sabine
Burleson	Hunt	San Augustine
Burnet	Hutchinson	San Jacinto
Calhoun	Jack	San Saba
Callahan	Jackson	Schleicher
Cameron	Jeff Davis	Scot
Castro	Jim Wells	Shackelford
Chambers	Johnson	Sherman
Childress	Jones	Somervell
Cochran	Karnes	Starr
Coke	Kendall	Stephens
Colman	Kerr	Stevenson
Collingsworth	Kerr	Stonewall
Colorado	King	Sutton
Comal	Kimble	Swisher
Comanche	Kinney	Tarrant
Concho	Kleberg	Taylor
Cook	Knott	Terrell
Coryell	La Salle	Terry
Crockett	Lamb	Travis
Crosby	Lampasas	Tom Green
Dallas	Lee	Tarrant
Darrell	Leon	Trinity
Davis	Liberty	Tyler
DeWitt	Dimmit	Upton
Dickens	Duval	Uvalde
Dimmit	Dwight	Val Verde
Donley	Edwards	Waller
Dove	Erath	Ward
Duval	Fayette	Washington
Ector	Fisher	Webb
Edwards	Floyd	Wharton
El Paso	Foard	Whitaker
Elbert	Frio	Wichita
Elbert	Garza	Wilbarger
Elbert		Williamson
Elbert		Wilson
Elbert		Winkler
Elbert		Wise
Elbert		Yoakum
Elbert		Zavala

Burn Ban RSS feed available at <http://tfsfp.tamu.edu/wildfires/BurnBan.xml>