

TEXAS FOREST SERVICE

The Texas A&M University System

Winter Wildfire Risk Decision Support Document

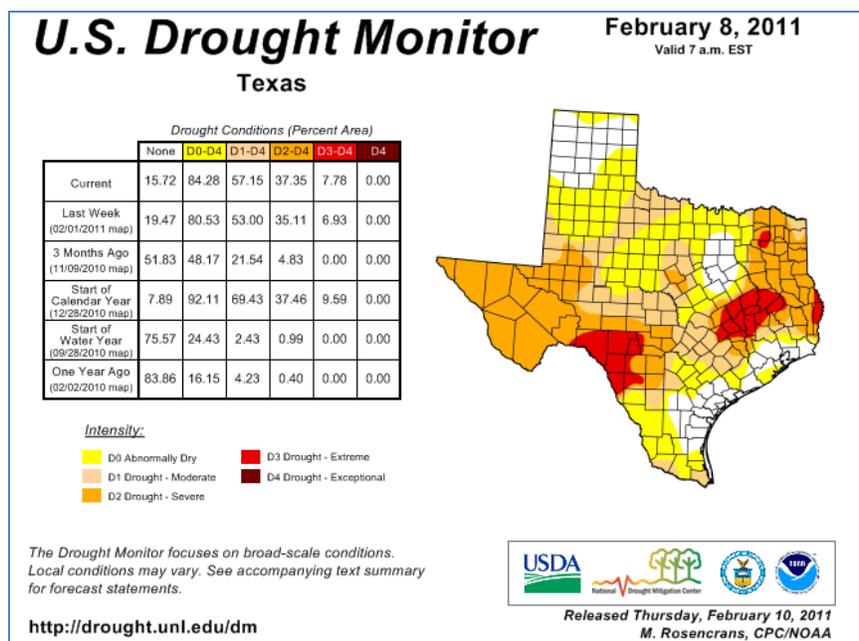
February 14, 2011

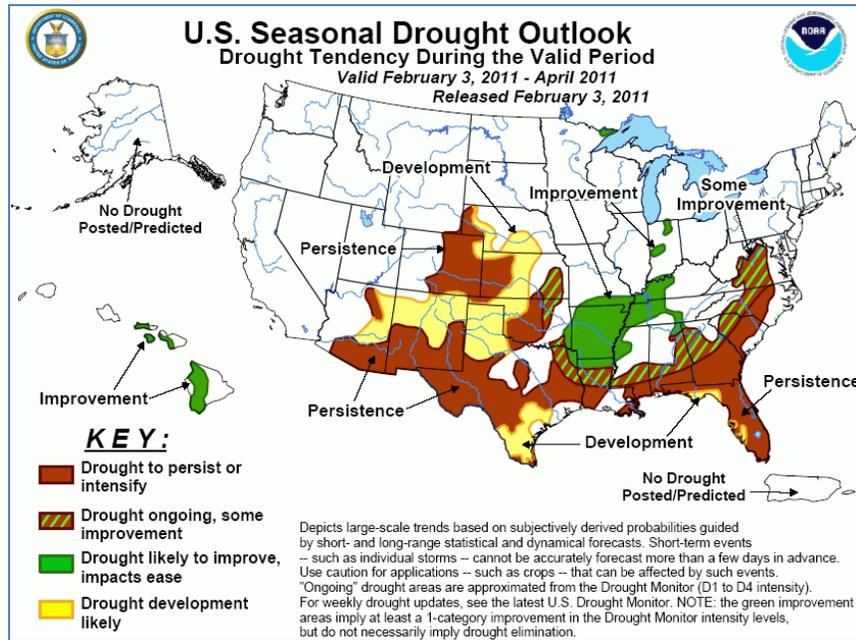
Weather and fuel indices indicate that the 2011 Winter Fire Season is moving into a more active phase. After a short lull in activity during January due to the Arctic Oscillation, La Nina conditions are now returning to the state and expected to dominate the weather pattern into April. This increases the potential for large and destructive wildfire occurrence over the state, and represents a serious threat to citizen safety. The primary causes for this increased threat are:

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

Existing and continued drought

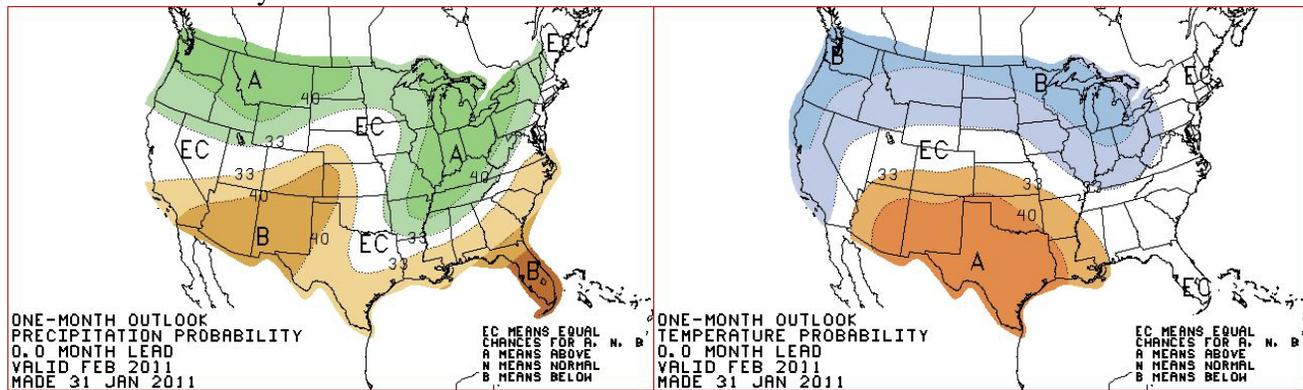
La Nina conditions, in place since the end of last summer, were the primary climate feature behind the increasing drought of the fall and early winter. The warm and dry conditions across the state lead to an early onset of the winter 2011 fire season on November 15th. The state experienced increased fire activity through most of December, until the Arctic Oscillation kicked in just after December 25th. The cold and moist weather provided by the Arctic Oscillation brought the state a brief reprieve from the increased fire activity of December. However, it did not alleviate the threats shown above, but rather just kept a lid on them. As can be seen in the image below, drought remains a concern across most of the state. The forecast is for it to increase over the next one to three months.



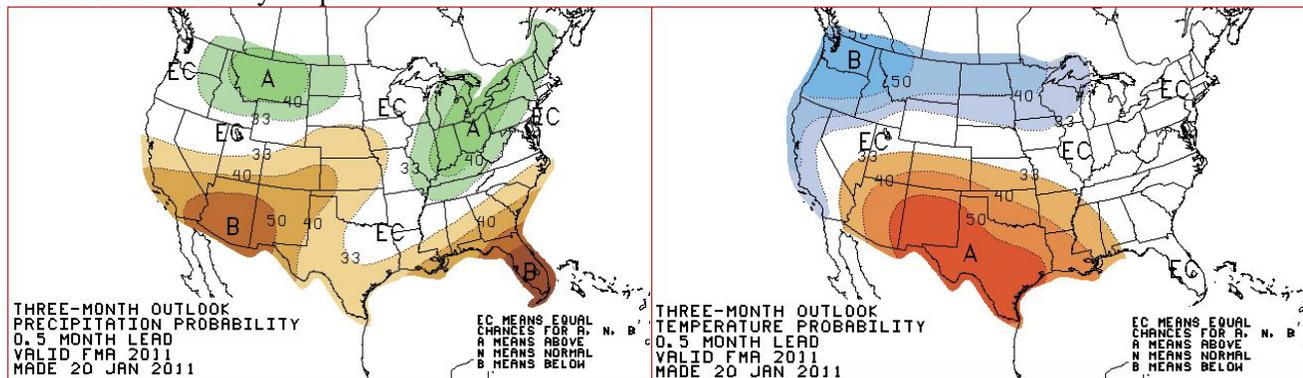


The suite of El Nino/Southern Oscillation (ENSO) models predicts that La Nina conditions will persist through spring 2011. The impact of the continued La Nina conditions also can be seen on the following National Weather Service seasonal forecast products which are predicting temperatures that are significantly above average and below average rainfall in February, March, and April.

Forecast for February



Forecast for February - April



Winter winds and frontal passages

The winter weather pattern for Texas is expected to regularly produce frontal passages and associated wind events.

According 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 historic patterns we would expect to see these increase in frequency as we move into the month of March.

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.

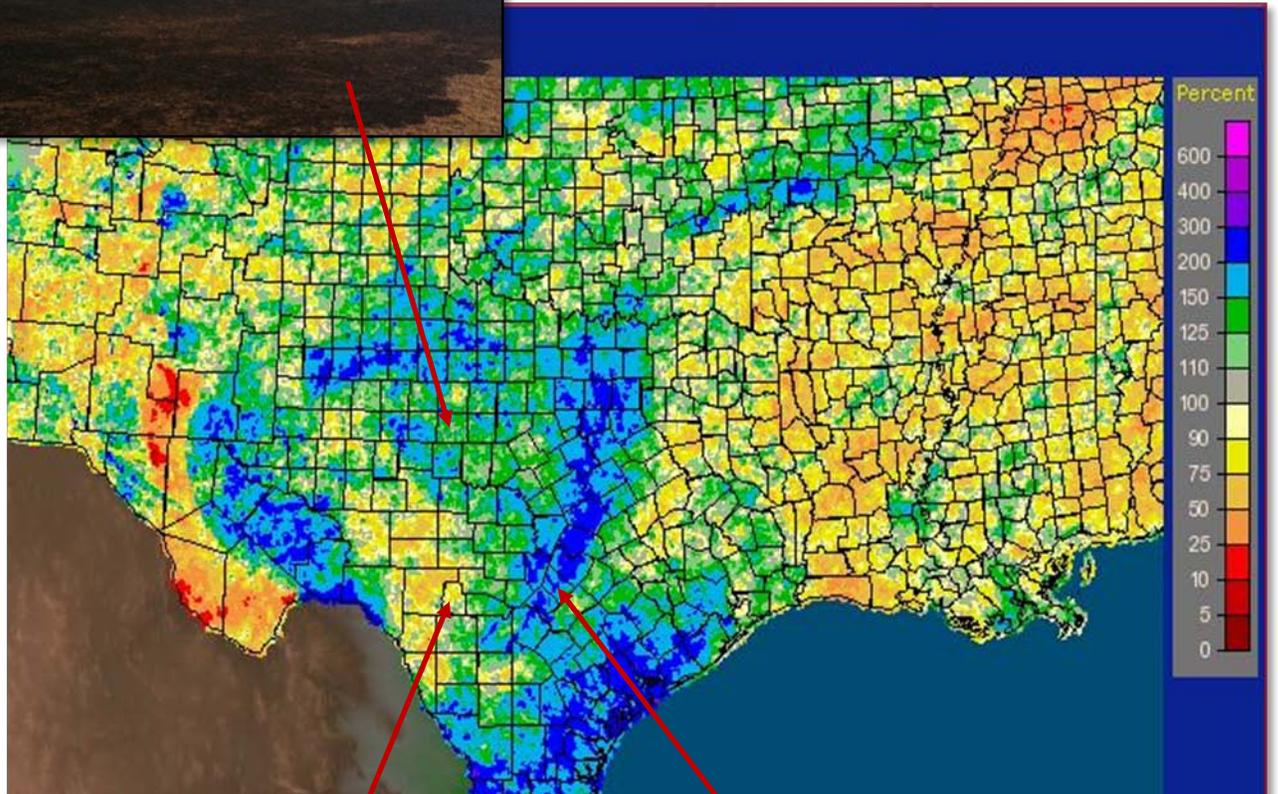
Above normal amounts of vegetation (fuel) across the state

Most of Texas currently is supporting an above average amount of fine fuel loading due to rainfall during the first four months of this year and the above-average rainfall associated with the four tropical systems that impacted Texas this summer. The late summer rainfall particularly, has caused a flush of growth in 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. The map on the next page shows the rainfall resulting from the tropical storms of this past summer. There is a good correlation between where the heavy rains occurred and where the above normal grass (or fuel) growth is present. Recent pictures from across the state are also included to help show the concern for the fuel loading.

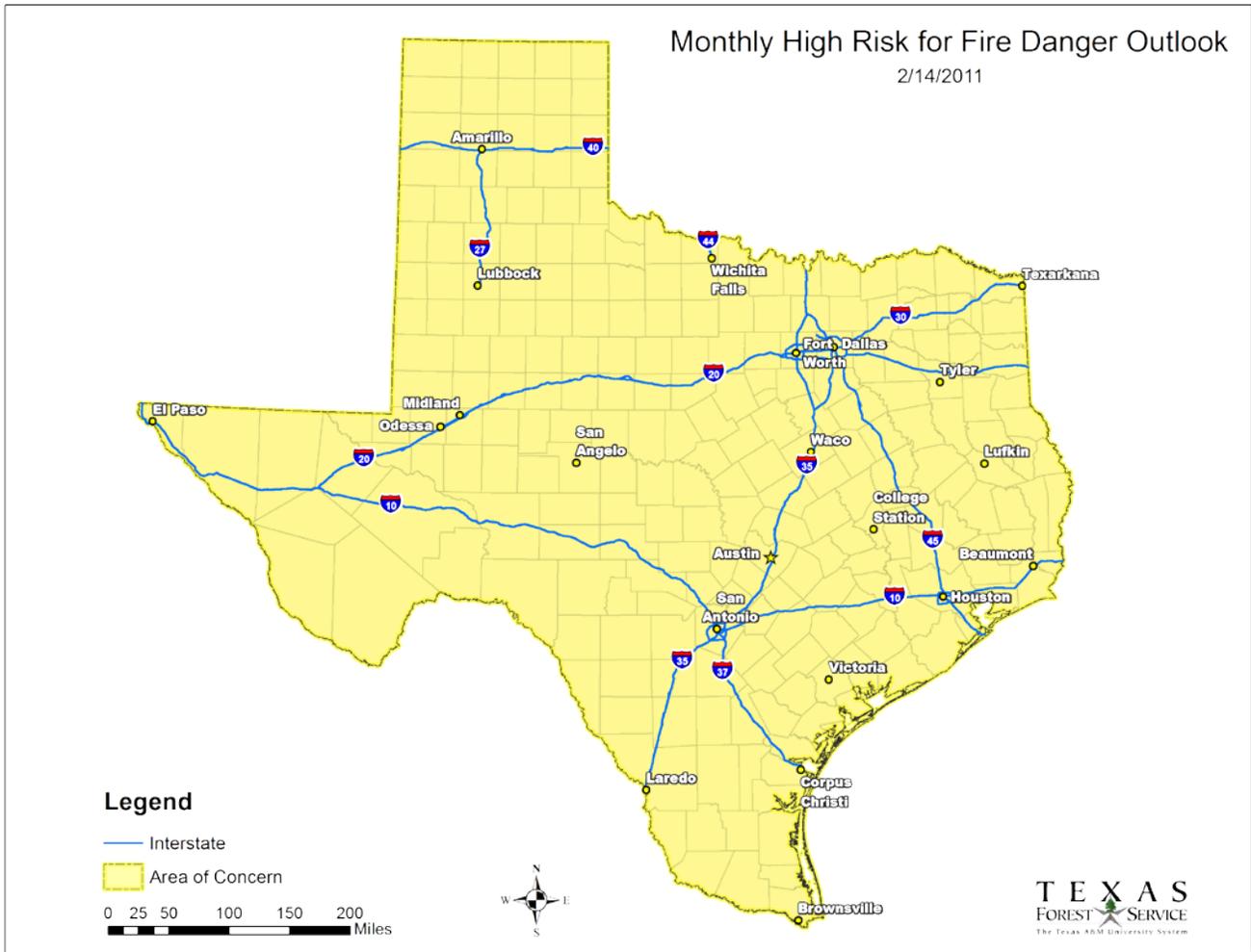


Summer Precipitation and Grass Production



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 and escalate through March and into April.



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 - 2/13/2011 | FD | 2,712 | 65,335 | 1233 | 767 | 2,000 | 18 | 644 | 662 |
| 11/15/2010 - 2/13/2011 | TFS | 272 | 40,914 | 309 | 174 | 483 | 5 | 15 | 20 |

TFS and Fire Department fires in the past seven days

| Date Range | AGENCY | Fires | Acres | Homes Saved | Other Structures Saved | Total Saved | Homes Lost | Other Structures Lost | Total Lost |
|----------------------|--------|-------|-------|-------------|------------------------|-------------|------------|-----------------------|------------|
| 2/7/2011 - 2/13/2011 | FD | 98 | 1,800 | 128 | 49 | 177 | 0 | 2 | 2 |
| 2/7/2011 - 2/13/2011 | TFS | 35 | 8,658 | 31 | 9 | 40 | 0 | 1 | 1 |

TFS and fire department fires this past weekend

| Feb 12-13 | | | | | | | | | |
|-----------|-------|-------|-------------|------------------------|-------------|------------|-----------------------|------------|--|
| AGENCY | Fires | Acres | Homes Saved | Other Structures Saved | Total Saved | Homes Lost | Other Structures Lost | Total Lost | |
| TFS | 28 | 5,470 | 26 | 4 | 30 | | 0 | 0 | |
| FD | 32 | 510 | 49 | 19 | 68 | 0 | 0 | 0 | |

Burn Ban Map

