

# Southern Plains PSA Critical Thresholds and Fire Data

April 2018

## Fire Weather Stations:

**RAWS** – Gail, Midland, Barnhart

**ASOS** – Lubbock International, Winkler County Airport

**Data Years:** 2001-2017

## Critical Fire Weather Thresholds:

Relative Humidity      15% or less  
20' Wind speed        20 mph or greater  
Temperature            90° or greater



**Fuels:** Improved and native grasses, Mesquite brush, Juniper brush



## Peak Fire Season:

February through April with cured grasses and wind events

## Normal TFS Wildfire Response and Acres Burned by Month

*Based on 2005-2017 Fire Occurrence Data*

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
<i>Fires</i>	0	0	1	1	0	0	0	0	0	0	0	0	2
<i>Acres</i>	0	0	2,500	700	0	0	0	0	0	0	0	0	3,200

## Dead Fuel Moisture Thresholds

	Percentiles				
	3	4-10	11-25	26-50	51-100
<b>1000-hr</b>	7	8-9	10-11	12-13	14
<b>100-hr</b>	7	8	9	10-11	12
<b>10-hr</b>	3	4	5-6	7	8

**NFDRS Thresholds (Fuel Model G)**

	Percentiles				
	97	90-96	75-89	50-74	0-49
<b>ERC</b>	80	69-79	59-68	50-58	0-49
<b>BI</b>	106	89-105	74-88	59-73	0-58
<b>KBDI</b>	742	631-741	561-630	472-560	0-471

**Live Fuel Moisture**

	Percentiles				
	3	4-10	11-25	26-50	51-100
<b>Juniper</b>	62	63-69	70-76	77-83	84+
<b>Mesquite</b>	86	87-99	100-106	107-117	118+

**Significant Fire Potential Matrix**

The Significant Fire Potential (SFP) Matrix is a **daily** situational awareness and decision making tool at the local level based on a fire weather station’s observed and forecast ERC and forecast BI. A significant fire is defined as a wildland fire that will require the mobilization of additional resources from outside the area of the fires origin (Extended attack, ICT3+).

Midland RAWS 2017		Local Preparedness Level Energy Release Component G (ERC)			
		<b>1</b> 0-59	<b>2</b> 60-75	<b>3</b> 76-83	<b>4</b> 84+
<b>Dispatch Level Burning Index G (BI)</b>	<b>1</b> 0-68	Low	Low To Moderate	Moderate To Low	Moderate
	<b>2</b> 69-92	Low To Moderate	Moderate To Low	Moderate	Moderate To High
	<b>3</b> 93-111	Moderate To Low	Moderate	High	High
	<b>4</b> 112+	Moderate	Moderate To High	★ High	Very High

**To Use:** Find nearest [Fire Weather Station](#) to open Matrix. Open [SFP Indices](#) page for forecast ERC and BI of chosen fire weather station. Plot ERC and BI for intersection and SFP forecast.

*Example: 4/9/11 Midland RAWS Forecast*

*ERC: 78 BI: 117*

*SFP Forecast: High*

*Hickman Fire, 16,500 Acres in Midland County*