

# North Texas PSA Critical Thresholds and Fire Data

April 2018

## Fire Weather Stations:

**RAWS** – Caddo, Greenville, Cedar Hill, Athens, Round Prairie

**ASOS** – Denton Municipal, Terrell Municipal

**Data Years:** 2001-2017

## Critical Fire Weather Thresholds:

Relative Humidity      25% or less  
20' Wind speed        20 mph or greater  
Temperature            90° or greater



**Fuels:** Improved and Native Grasslands, Post Oak Timber, Juniper Brush



## Peak Fire Seasons:

July through September with summer drying

January 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>	6	5	6	1	1	2	5	8	5	6	2	2	49
<i>Acres</i>	200	165	200	15	20	75	140	350	120	100	100	100	1,585

## Dead Fuel Moisture Thresholds

	Percentiles				
	3	4-10	11-25	26-50	51-100
<b>1000-hr</b>	12	13	14-15	16	17
<b>100-hr</b>	9	10-11	12-13	14-15	16
<b>10-hr</b>	5	6	7	8-9	10

### NFDRS Thresholds (Fuel Model G)

	Percentiles				
	97	90-96	75-89	50-74	0-49
ERC	64	54-63	43-53	33-42	0-32
BI	65	53-64	44-52	33-43	0-32
KBDI	735	678-734	576-677	448-575	0-447

### Live Fuel Moisture

	Percentiles				
	3	4-10	11-25	26-50	51-100
Juniper	71	72-78	79-84	85-92	93+
Mesquite	57	58-92	93-104	105-123	124+
Live Oak	74	75-80	81-86	87-93	94+
Post Oak	70	71-75	76-85	86-95	96+

### 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+).

Greenville RAWS 2017		Local Preparedness Level Energy Release Component G (ERC)			
		1 0-37	2 38-53	3 54-65	4 66+
Dispatch Level Burning Index G (BI)	1 0-36	Low	Low To Moderate	Moderate To Low	Moderate
	2 37-53	Low To Moderate	Moderate To Low	Moderate	Moderate To High
	3 54-63	Moderate To Low	Moderate	High	High
	4 64+	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: 8/18/11 Greenville RAWS Forecast*

*ERC: 66 BI: 69*

*SFP Forecast: Very High*

*Penial Fire, 250 Acres in Hunt County*