

Cross Timbers PSA Critical Thresholds and Fire Data

April 2018

Fire Weather Stations:

RAWS – Possum Kingdom, Granbury, Comanche, McGregor, Cedar Hill, LBJ
ASOS – Sheppard AFB, Mineral Wells, Denton Municipal

Data Years: 2001-2017

Critical Fire Weather Thresholds:

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



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



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
Fires	1	3	2	1	1	2	2	4	1	1	1	1	20
Acres	250	540	200	100	50	100	200	500	120	80	25	100	2,265

Dead Fuel Moisture Thresholds

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

NFDRS Thresholds (Fuel Model G)

	Percentiles				
	97	90-96	75-89	50-74	0-49
ERC	71	59-70	49-58	39-48	0-38
BI	80	66-79	56-65	43-55	0-42
KBDI	703	638-702	556-637	429-555	0-428

Live Fuel Moisture

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

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+)

Possum Kingdom RAWS 2017		Local Preparedness Level Energy Release Component G (ERC)			
		1 0-50	2 51-68	3 69-80	4 81+
Dispatch Level Burning Index G (BI)	1 0-49	Low	Low To Moderate	Moderate To Low	Moderate
	2 50-68	Low To Moderate	Moderate To Low	Moderate	Moderate To High
	3 69-81	Moderate To Low	Moderate	High	High
	4 82+	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: 4/15/11 Possum Kingdom RAWS Forecast
ERC: 72 BI: 134
SFP Forecast: Moderate
Possum Kingdom Complex, Palo Pinto County*