

FDRA 3: Central Florida FUEL MODEL 16Y

NWS Forecasting Offices

Jacksonville FL, Melbourne FL, Tampa FL

RAWS

083501 – Central
083502 – Lake George
083703 – Lake Woodruff

084001 – Paisley
084402 – Merritt Island
084802 – Lake Wales

All stations meet NWCG Weather
Station standards

FIRE DANGER POCKET CARD

January - December



Graph Interpretation: Energy Release Component (ERC)

MAXIMUM: Highest **ERC** by day 2012-2024.

AVERAGE: Shows peak fire season.

2023: Representative fire season **ERC**.

97th PERCENTILE: Only 3% of the days from 2012-2024 had an **ERC** above 29.

67th PERCENTILE: Represents **ERC** of 22 where large/multiple fire occurrences increase.

Energy Release Component (ERC) is a number related to the available energy (BTU) per unit area (square foot) within the flaming front at the head of a fire. The **ERC** is considered a composite fuel moisture index as it reflects the contribution of all live and dead fuels to potential fire intensity. As live fuels cure and dead fuels dry, the **ERC** will increase and can be described as a build-up index. Each daily calculation considers the past 7 days in calculating the new number. Daily variations of the **ERC** are relatively small as wind is not part of the calculation.

Remember what Fire Danger tells you:

Fire danger gives general conditions across the entire FDRA. Watch for localized conditions and variations across the landscape--Fuel, Weather, Topography. Listen to weather forecasts--especially WIND.

Local Thresholds-- WATCH OUT!

Combinations of any of these factors can increase fire behavior: **20' windspeed** over 15 mph; **Temperature** over 90°; **RH** < 30%; **KBDI** > 620. Large fires become more frequent when **ERC** exceeds 26 and **BI** exceeds 19.

Past Experience / Local Knowledge:

- Expect extreme fire behavior in areas with high fuel loads, esp. from tropical storms.
- Green fuels with volatile oils & waxes can burn even under high fuel moisture content.
- Afternoon sea breezes usually leads to thunderstorms and sometimes lightning.
- Some fuels available to burn ~1hr post rainfall.
- During dry conditions, swamps may not hold water and should NOT be considered as safety zones.
- Problematic fire behavior is likely if **ERC** > 26, **BI** > 19, and Dispersion Index > 75.

Notable Fires:

• Major	05/10/23	Marion & Lake Cos.,	566 ac	ERC = 26.5
• Powerline & Island Pond	05/29/19	Marion Co.,	566 ac	ERC = 32.8
• Perchman	07/01/19	Putnam Co.,	1,300 ac	ERC = 24.1

ENERGY RELEASE COMPONENT

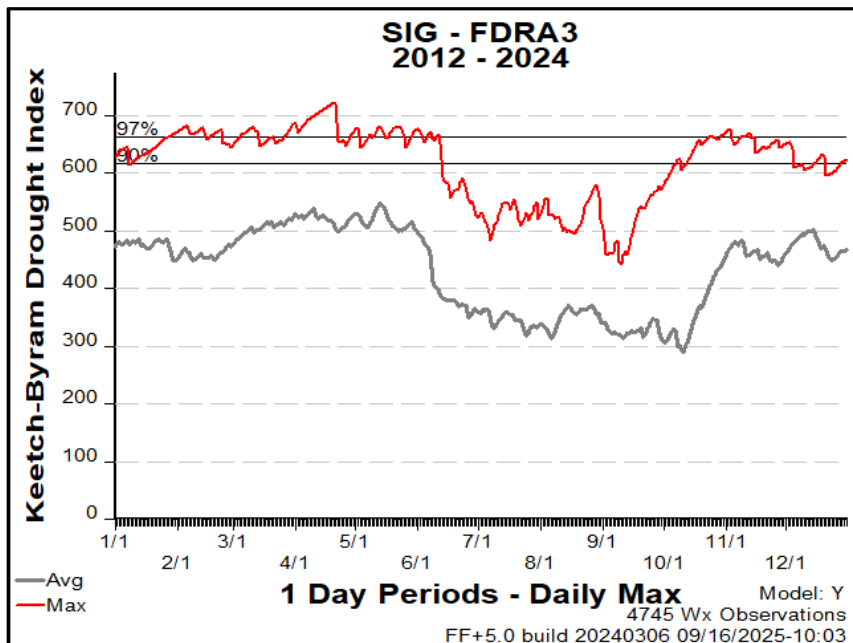
Fuel Model Y	Average Seasonal Value	Average Highest Value	Highest Observed Value
January	13.9	18.7	21.6
February	16.4	19.4	23.9
March	20.9	23.7	29.0
April	23.2	26.8	30.5
May	25.0	28.2	35.5
June	21.4	28.9	33.5
July	21.5	25.9	33.4
August	20.1	23.0	31.3
September	17.3	20.8	26.2
October	17.6	20.3	25.6
November	14.3	18.8	24.4
December	12.8	14.5	22.0

Approved 09/30/2025

This card is based on

13 years of data





Keetch-Byram Drought Index (KBDI) - A rating assessing the risk of fire by representing the net effect of evapotranspiration and precipitation in producing cumulative moisture deficiency in deep duff and upper soil layers. **KBDI over 620 is a critical threshold value** indicating swamp fuels may be available to burn where past fires have been infrequent and fuel loading is high.

Ignition Component (IC) – the probability a firebrand will cause an “actionable” fire and requires suppression action. **IC** is more than just a probability of a fire starting. The fire has to have the potential to spread. IC can be an aid in assessing spotting potential. **An IC value of 23 is a critical threshold value.** Values at this level are critical especially during March, April & May as firebrands initiate spot fires.

Burning Index (BI) - relates to the contribution of fire's behavior in containing the fire. The difficulty of containment is directly proportional to the fireline intensity. **BI** is derived from the combination of the SC & ERC. **BI** can be a cross reference to fireline intensity & flame length. It assists in assessing spotting & crown fire potential as well as suppression resource needs & tactical considerations. Doubling the burning index indicates that twice the effort will be required to contain a fire, providing all other parameters are held constant. **A BI value of 19 is a critical threshold value.** Values at this level see a sharp increase in large fire growth and multiple fire days during March, April & May.

