

Fuels and Fire Behavior Advisory

California Wide

October 3, 2024



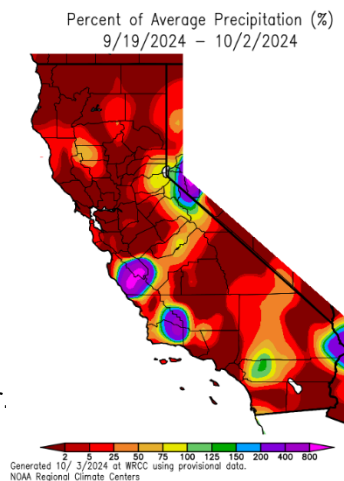
Subject: Elevated to extreme ERC values, low fuel moistures, and above average herbaceous fuel loads across the state result in a **fire environment that is far more flammable heading into October than is typical for the time of year.**

Discussion: Maximum temperatures across much of the state have trended well above average for the past 2 weeks, peaking at more than 20°F above average, while humidity values have trended very low. In addition, recent precipitation is well below average, with no rain coming across much of state since mid-September. These ‘flash drought’ conditions have resulted in the well above average ERC values, well below average dead fuel moistures, and have prevented appreciable moisture uptake by live fuels. Daily to weekly fluctuations will occur, but overall conditions will remain elevated until precipitation arrives. In addition, heavy herbaceous fuel loads from the past months remain across all portions of the state that have not been impacted by fires.

Difference from normal conditions:

Typical fall conditions across California include the onset of periodic precipitation, decreasing ERC values, and increasing fuel moisture in both live and dead fuels. The weather conditions since mid-September have prevented these typical trends from materializing, placing the flammability of fuels, and the overall fire environment, at above average levels.

In much of the state, these levels are high enough to exceed average mid-summer conditions. Many areas have ERC values near to, and forecast to exceed, the 97th percentile and will approach or break daily ERC records for the period of record. The same holds true for 100 Hr. and 1,000 Hr. dead fuel moisture values.



Concerns to Firefighters and the Public:

- Wind events are common this time of year, both from approaching frontal systems and from offshore wind events – the elevated fire environment means that any fires occurring during either wind event will rapidly exceed initial attack capabilities and exhibit extreme rates of spread with very high flame lengths.
- All fuel types and size classes remain available at a time of year when firefighters expect flammability to be decreasing. Near record dry heavy dead and down material may exhibit rapid escalation in fire behavior and offer a high level of resistance to control.
- Frequent spotting is likely on both wildfires & prescribed fires as a result of the highly available fuels.

Mitigation Measures:

- Modify tactics to account for expected rapid rates of spread, high resistance to control, and frequent spotting potential. Consider augmentation of initial attack resources.
- Brief all resources on these conditions, especially out-of-area resources unfamiliar with local conditions.
- **Think critically about prescribed fire implementation.** Are your predicted fire behavior parameters valid under these flash drought conditions? Is the spotting distance greater than expected in the burn plan? https://gacc.nifc.gov/oncc/predictive/weather/Drought_Analysis_Tools.pdf

Area of Concern: Areas of concern for extreme ERC and low fuel moistures include PSAs along and west of the Cascade-Sierra Crest and much of the deserts of SE California. Far eastern areas are not at extreme levels but are still above average and could exhibit problematic fire behavior during strong wind events. Above average fine fuel loading remains present in ecosystems with a significant grass or herbaceous component.

Issued By: Predictive Services Units of Northern California and Southern California, in coordination with Cal Fire and Cal OES Fire and Rescue Division.

Fuels and Fire Behavior Advisory

California Wide

October 3, 2024

