# **Fuels and Fire Behavior Advisory**

### **Northern and Western Nevada**

September 5<sup>th</sup> - 19<sup>th</sup>, 2024

Subject: Recent above normal temperatures preceded by prolonged exceptional heat in June and July have allowed fuels to remain exceptionally dry in northern Nevada. Recent moisture in parts of northern Nevada has lowered fire danger temporarily in the dead fuels in localized areas, but current dry, warm and windy weather is quickly reversing those effects with fire potential increasing daily. Live sagebrush fuel moisture is still well below normal and near record lows in some areas. Fine fuel loading is also well above normal and fully cured, adding to rapid fire spread potential. These fuel conditions are rapidly increasing fire behavior, especially with increasing wind or lightning.

**Discussion:** The following conditions are being experienced/observed:

- Dry and breezy conditions followed by warming temperatures.
- Well above normal fine fuel loading, continuity, and tall grass across northern Nevada.
- Extreme critical Sagebrush live fuel moisture values below 80%.
- Above normal ERCs, and some areas near the 90<sup>th</sup> percentile.
- Reports of sagebrush die off and matted tumbleweed in northern Nevada drainages increasing fire spread.

Difference from normal conditions: Live and dead fuel moistures dried out weeks ahead of schedule in June which were amplified by exceptional heat and dryness in July, with hot temperatures lingering into August. Live sagebrush fuel moisture quickly dropped to well below normal and has remained at low levels, and in some areas at near record lows. 100-hr fuel moisture remains below normal across the region. Above normal fine fuels are also widespread over northern Nevada. Significant periods of hot and dry weather recently have also worsened the short-term drought conditions and allowed large fire activity to increase (See image below). Extreme fuel driven fire behavior was observed on the Stockade Canyon Fire in Northwest Nevada in the lower elevations where fine fuels are abundant, and is likely in most other areas when terrain, fuel loading and weather line up.

#### **Concerns to Firefighters and the Public:**

- Anticipate flashy fine fuels, sagebrush, and pinyon-juniper, to ignite easily and exhibit advanced rates of spread, elongated flaming fronts and increasing fire brands; expect more long-range spotting, even in absence of slope and wind. You can't out run it!
- Anticipate dust devils and fire whirls to develop in hot, dry and unstable conditions, especially in fine flashy fuels, that may jeopardize control lines and contribute to erratic fire behavior.
- Expect longer burn periods at mid to higher elevations.
- Fine fuel loadings in northern Nevada are dense and continuous and will support extreme rates of spread regardless of fuel heights.

#### **Mitigation Measures:**

- Modify tactics to account for potential high rapid rates of spread and high resistance to control.
- Communicate retardant drop effectiveness and modify as necessary; higher coverage levels or altered tactics may be required.
- Park all vehicles in clean, cold black; avoid driving or parking in unburned fuels.
- Ensure solid anchor points keep one foot in the black.
- Constantly re-evaluate LCES Lookouts Communications Escape Routes Safety Zones.
- Consult the latest weather and fire danger information at <a href="http://gacc.nifc.gov/gbcc/">http://gacc.nifc.gov/gbcc/</a>

**Area of Concern:** Northern and Western Nevada.

Issued By: Great Basin Coordination Center Predictive Services, Gina Palma (Meteorologist)

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