

Fuels and Fire Behavior Advisory

Southern California Geographic Area Coordination
Center



December 29, 2017

Subject: The lack of precipitation this fall, along with a prolonged period of warm, dry, and occasional windy weather has caused fuels to be extremely dry across portions of Southern and Central California.

Discussion: With the absence of any significant precipitation this fall, fuels have become critically dry across portions of Southern and Central California. In addition, there has been a prolonged period of warm, and occasionally windy weather, which has worked in concert with the lack of rainfall to produce catastrophic wildfires earlier this month across Southern California. The Thomas Fire which is now the largest fire in the state's recorded history, serves as a testimony to the extreme volatility of the fuels.

The combination of critical fire weather and dangerously dry fuels has caused extreme fire behavior to occur on recent incidents. Also, the abundant grasses from last winter's plentiful rains have resulted in heavy fuel loading which has greatly contributed to the rapid rates of spread that was observed on recent fires.

Little change in the overall weather pattern is expected through at least the first part of January which will cause fuels to remain highly receptive to new ignitions, with the potential for new large fires during windy conditions.

Difference From Normal Conditions: Dead fuels away from the coast are near all-time record dry levels. The 100-hour dead fuel moisture is normally in the mid-teens, but values in the single digits have been observed across the Angeles, San Bernardino, Cleveland, Los Padres, and Sequoia national forests. Live fuel moisture in chamise would normally be around 80% by this time of year. However, moisture levels in much of this native vegetation are in the upper 50s to low 60s.

The fire behavior that was observed on the Thomas Fire as well as some of the other recent fires was extreme. Fires were actively backing downhill and into the wind in both the fine dead fuels as well as in the heavier chaparral. Fires had exhibited extremely high resistance to control, and retardant in many cases proved to be ineffective.

Concerns to Firefighters:

- Fires will be uncontrollable during windy episodes.
- Extreme rates of spread with both long and short range spotting can be expected on any new fires with active burning at night.
- Stagnant weather patterns and long duration fires can lead to complacency.

Mitigation Measures:

- Local and inbound fire personnel need to be aware that fire behavior is exceeding normal expectations for this time of the year. **Local briefings need to be thorough and highlight specific fire environment conditions. These include but are not limited to local weather forecasts, Pocket Cards, ERC's, live and dead fuel moistures.**
- PPE, including shrouds and eye protection shall be utilized during suppression operations.
- Suppression actions need to be based on good anchor points, escape routes, and safety zones. **Remember LCES. Experienced lookouts are essential under these conditions.**
- **Base all actions on current AND EXPECTED behavior of the fire.** Augment initial attack resources as incident activity dictates.

Area of Concern: This advisory is **valid through 1/12/2018** for the following PSAs...**Southern Sierra (SC03), Central Coast Interior (SC06), Central Coast (SC07), South Coast (SC08), Western Mountains (SC09), Eastern Mountains (SC10), and the Southern Mountains (SC11).**

Issued: December 29, 2017 (Note this advisory will be in effect for 14 days and will be reviewed/updated at that time.)