

Fuels and Fire Behavior Advisory

Northwestern Third of the Great Lakes States



May 6, 2016

Subject: Fuel conditions/elevated significant fire potential across the northern half of Minnesota into northwestern Wisconsin.

Discussion: Short to medium range drought developed across northern Minnesota into northwestern Wisconsin through late April into early May 2016. Most of these areas did not receive rainfall through the end of April into early May.

Calculated 1000 hour fuel moisture levels at many RAWS across these areas were below 18 percent and 100 hour fuels approaching 10 percent. NFDRS Energy Release Component indices using fuel model G were near or above the 90th percentile as well. These conditions have led to periods of above normal fire potential across the northwestern third of the Great Lakes when low relative humidity levels and windy prevailed.

Foliar moisture across the Great Lakes in conifers reached critical values through the first week of May.

Fire behavior reports from fires occurring near and within the areas of concern through early May indicated rapid rates of spread. While the main driver of fire occurrence and behavior was fine fuels/grass fuel types, 100 and 1000 hour fuels were also receptive to ignition and some consumption, leading to more intense and persistent fires. Until rainfall increases over these areas, elevated fire potential and problematic fire behavior is likely during any dry and windy periods through the late spring fire season.

Difference from normal conditions: Calculated NFDRS indices and fuel moistures from various RAWS across the areas of concern were near or above/below the 90th percentile respectively. At some RAWS the 97th percentile had been reached or exceeded. Prolonged periods of very low minimum RH levels were observed through the first week of May of 2016 significantly drying out fuels.

Concerns to Firefighters and the Public:

- Anticipate any ignition in flashy fine fuels to burn readily and move rapidly during periods of dry and windy weather conditions.
- Anticipate heavier fuel involvement where 1000 and 100 hour fuel moistures have dropped to critical levels.

Mitigation Measures:

- Make certain firefighters have good anchor points and keep one foot in the black.
- Ensure LCES is in place on every fire before engaging. Lookouts should have a good understanding of the effects of weather changes and topography on fire behavior.
- Become familiar with local fuel conditions and current fire danger indices, and their implications for fire behavior.

Area of Concern: Northern half of Minnesota into northwestern Wisconsin.