



Changes in the extremes of fire danger across the western United States

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Seemingly, more extreme fire events have been occurring in the U.S. and globally as seen by fire events in Australia, France, Greece, Italy, Portugal, Spain and the U.S. during the past decade. Numerous studies suggest that extreme fire events are likely to increase in frequency during the 21st century resulting from climate change. While it is difficult to predict future natural and human caused specific fire occurrence, atmospheric components related to fire are available from global climate models. The elements of temperature, humidity, wind and precipitation from GCM's are also primary inputs into fire danger rating systems. In this presentation, we compare fire danger computed from the National Fire Danger Rating System (NFDRS) for the late 20th century to changes shown from IPCC scenario GCM's during the mid- and late-21st century. Specifically, we focus on changes in percentile extremes of the NFDRS energy release component index for various fuel models for the western half of the U.S., where the majority of the country's large and notable fires occur. We will also discuss the utilization of this information for fire management planning.