

Season Ending Events, A Matter of Perspective

Laurie L. Kurth ^A

^A U.S. Forest Service, RMRS, Missoula Fire Sciences Laboratory, 5775 W US Highway 10, Missoula, Montana, USA, Email: lkurth@fs.fed.us

Abstract

Agency managers are often faced with making difficult wildland fire management decisions based on collating a significant amount of information regarding a fire. Supporting the decisions is understanding how long an incident may persist, especially if the fire has potential for resource benefits. Analysis of historical season ending events has occurred since the mid-1990's and was initially incorporated into the Rare Event Risk Assessment Process (RERAP) computer program. Definition of the season ending event has always been subjective and typically included a substantial rain event across a two or three-day period. For instance, ½ inch of rain over three days is commonly used in the northern Rocky Mountains. Data from Remote Automated Weather Stations (RAWS) are frequently used to determine the dates these events occurred each year in the past. Then a Weibull distribution ('term distribution') is developed from which to predict the probability of an event occurring by a particular date. A review of several term distributions developed by different analysts for the northern Rocky Mountains during the 2007 fire season was completed to compare season ending criteria and date selection in a relatively small geographic area. These distributions had a vast spread in season ending dates that caused the Weibull distribution to shift as much as three months. This paper highlights the differences among several term distributions, demonstrates the need for consistent definitions and determinations of season ending events within a small geographic area, and proposes a potential solution for greater consistency and thus higher reliability in season ending event distributions.