

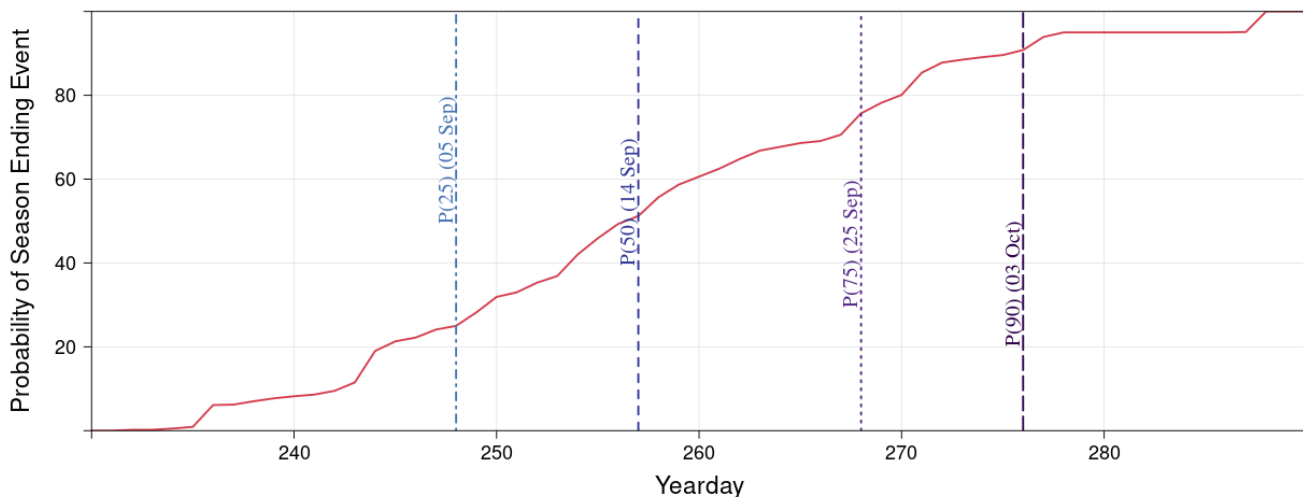
Season-ending Analysis for the Archie Fire, Umpqua NF, OR

Date: Sept. 10, 2020

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Below is a season-ending graph for the Archie Fire. A season-ending event consists of a fire-stopping—sometimes referred to as a fire-slowing event(s)—followed by a persistent combination of environmental factors that mark the end of the fire season. These factors can include subsequent pulses of rain or snow, lower temperatures, higher relative humidity, a lower sun angle, and a shorter photo period.

This is a **new product** in development by Dr. Matthew Jolly of the Fire Sciences Laboratory, Rocky Mountain Research Station; your feedback is encouraged. It is based on 20 years of gridded weather data (2000-2019) and instead of the nearest Remote Automated Weather Station (RAWS) or a grouping of RAWS (a SIG), it uses the most recent fire perimeter. The criteria for choosing the term threshold is much less subjective than the traditional approach. A time series of ERC is extracted for each pixel within the fire perimeter. If the ERC drops below a relative ERC of 75 (data is scaled 0 to 100)—25% of the historic max—and remains below that threshold, the season-ending criteria is met. The graph is interpreted as follows: Sept. 5, there is a 25% probability for a season-ending event, Sept. 14, a 50% probability, etc.



For more information on season-ending analysis and Term files, refer to these publications:

Latham, D.J. and Rothermel, R.C. 1993. **Probability of fire-stopping precipitation events.** USDA Forest Service GTR-INT-410. <https://digitalcommons.usu.edu/cgi/viewcontent.cgi?article=1360&context=govdocs>

Soule, P.T., and P. Knapp. 2007. **Does an August singularity exist in the Northern Rockies of the United States?** Journal of Applied Meteorology. 47:1845-1850. <https://journals.ametsoc.org/jamc/article/47/6/1845/13065/Does-an-August-Singularity-Exist-in-the-Northern>

Stratton, Richard D. 2006. **Guidance on spatial wildland fire analysis: models, tools, and techniques.** Gen. Tech. Rep. RMRS-GTR-183. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 15 p. <https://www.fs.usda.gov/treearch/pubs/25139>

U.S. Department of Agriculture, Forest Service. 2000. **RERAP User's Guide** (version 5.03). National Fire and Aviation Management Information Systems Team. Boise, ID. 154 p.

Wiitala, M.R.; Carlton, D.W. 1994. **Assessing long-term fire movement risk in wilderness fire management.** Proceedings of the 12th conference on Fire and Forest Meteorology, 26-28 October, Jekyll Island, Georgia. Society of American Foresters: Bethesda, MD.