
Characterizing historical fire weather patterns

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Abstract. *The Fire Weather Index (FWI), which provides a numerical rating of fire intensity, is a component of the Canadian Forest Fire Danger Rating System. Calculations in the FWI system are based on the consecutive daily weather measurements accumulated into fuel moisture codes and fire behavior indices. Automated electronic fire weather stations have been operating in British Columbia since the 1980s and there are now about 200 stations with records of daily fire weather for as long as 25 years. Currently agencies such as Canadian Forest Service and BC Forest Protection post maps daily which display regions of various levels of risk. Several methods that would allow us to summarize the change of regional risk over time have been investigated. This includes methods that cluster stations on the basis of the time series for each station. In addition to using the complete record, we have investigated changes in the annual station maximum, 90% quantile and the number of days within a fixed fire danger class. The utility of such summaries as a basis for comparison with current values and scenarios for the near future will be considered.*

Keywords.
