

Climate Change and Fire Danger Rating in the Northern Rockies

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Abstract

Studies have indicated that changes in wildland fire activity are, at least in part, a product of climate change. Fire danger indices, driven by climatology, should reflect these changes. Energy Release Component (ERC) is considered to be an effective indicator of drought conditions and seasonal drying of forest fuels and is often used in fire management planning. McHugh (2010) found that ERC has increased in the Greater Yellowstone Area over the past fifty years. We expand upon prior work to examine possible trends in both climate driver variables and the fire danger rating indices in the Northern Rocky Mountains. Further, we examine the seasonal trends in fire danger rating indices to ascertain if the indices reflect the increases in the length of the fire season that have been published previously. Increased ERCs may indicate a lengthening of fire season and increase the length of time during which more intense fires may occur, which have implications for staffing and preparedness.