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Abstract

An analysis of escaped fires from broadcast burning in the Prince George Forest Region of British Columbia

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Prescribed fire is an important silvicultural tool. Several factors, including changes in silvicultural techniques, regulations regarding the use of prescribed fire, air quality concerns, and concerns over escaped fires have led to a declining use of prescribed fire for silvicultural purposes in British Columbia. Using records from 351 prescribed fires that escaped control measures in the Prince George Forest Region, we examined the feasibility of using "Control Rank" from Muraro's Prescribed Fire Predictor model as an indicator of the risk of fires escaping from broadcast burning, and estimated the costs of suppressing these fires. We also outline the benefits (including potential dangers) of prescribed burning, and provide recommendations on how to estimate the probability, or the risk, of a fire escaping from a prescribed burn. We found that 84.3% of the escaped fires occurred within control ranks 5 and 6, and control ranks 7 and 8. These control ranks also had the largest and most costly fires to suppress, in some cases running in the hundreds of thousands of dollars. Our results suggest that control rank is a useful indicator of risk. However, we recommend that better records of burning conditions of all prescribed burns be kept to allow for more complete analyses of risk in the future. To reduce the risk of fires escaping from prescribed burning, factors that should be carefully considered are also outlined in this paper.

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