

Surface fuel characteristics in boreal forests of north-western Alberta: Practical considerations for prescribed burn implementation

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Participants

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Background

The ease of ignition and fire spread in the boreal forest is strongly dependent on local fuel moisture. These conditions are estimated by applying the Canadian Forest Fire Weather Index (FWI) System. At EMEND, the implementation of prescribed fire has been challenging, since fire weather conditions based on the FWI System that normally promote successful prescribed fire implementation do not appear to correspond with on-site measured fuel moisture conditions for fire spread and prescribe burn completion.

Objectives

- 1) Study the surface fuel characteristics in the various cover types typical of the boreal forests of north-western Alberta and their practical implications with regards to the implementation of prescribed burns.
- 2) Analyze the moisture content of organic material in the various cover types.
- 3) Assess the relationship

between actual duff moisture and FWI System variables in the various cover types. 4) Assess the relationship between cover types and logging slash retention after conventional harvesting. 5) Study the differences between moisture contents in strongly sheltered locations near the base of overstory trees and other less sheltered locations within stands.

Key Results

n/a