



TOPIC 7A
Canadian Forest Fire Weather Index System



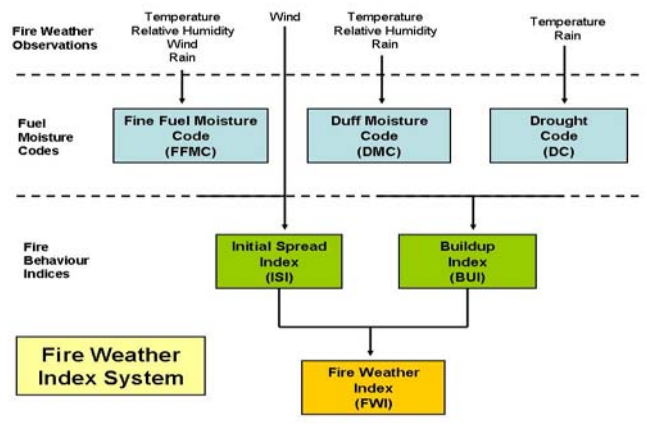
The Canadian Forest Fire Weather Index System

Calculation of the components of the FWI System is based on consecutive daily observations of temperature, relative humidity (RH), wind speed, and 24-hour rainfall, measured at a suitable weather station. Specifications are standard and can be found in the “Weather Guide for the Canadian Forest Fire Danger Rating System.”

The six standard components of the FWI System provide numerical ratings of relative wildland fire potential. The first three components are fuel moisture codes that follow daily changes in the moisture contents of three classes of forest fuel with different drying rates. For each, there are two phases – one for wetting by rain and one for drying – arranged so that the higher values represent lower moisture contents and hence greater flammability. The final three components are fire behaviour indexes, representing rate of spread, amount of available fuel, and fire intensity; their values increase as fire weather severity worsens.

The system is dependent on weather only and does not consider differences in risk, fuel, or topography. It provides a uniform method of rating fire danger across Canada. The six components are as follows:

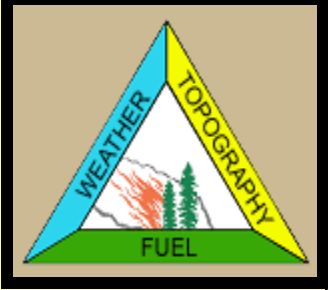
Fine Fuel Moisture Code (FFMC); Duff Moisture Code (DMC); Drought Code (DC); Initial Spread Index (ISI); Buildup Index (BUI); Fire Weather Index





TOPIC 7B

Canadian Forest Fire Weather Index System



The Canadian Forest Fire Weather Index System – Starting the Calculations (Spring Start-up)

Start the daily record as soon as there is measurable fire danger in the spring. The exact date and starting values of the FFMC, DMC, and DC will normally be provided by the appropriate fire weather authorities. In the absence of such direction, choose the starting date according to the following criteria.

1. In regions normally covered by snow during the winter, begin calculations on the 3rd day after snow has essentially left the area to which the fire danger rating applies.
2. In regions where snow cover is not a significant feature, begin calculations on the 3rd successive day that noon temperatures of 12°C or higher have been recorded.

In either case, use the following starting values: FFMC 85 DMC 6 DC 15.

These values should not be applied to late starting stations.

