

# Buildup index

## Description

The Buildup index (*BUI*) is one of the two intermediate indices required for calculating the Canadian fire weather index (*FWI*). The *BUI* represents the total amount of fuel available to the spreading fire. It is a combination of the *DMC* and the *DC* (Van Wagner 1987).

The *BUI* is affected mainly by the *DMC*. The *DC* only has a limited and variable weight in the equation (Van Wagner 1987).

## Formula

For  $DMC \leq 0.4 \cdot DC$  the *BUI* is calculated as follows (Van Wagner and Pickett 1985):

$$BUI = 0.8 \cdot \frac{DMC \cdot DC}{DMC + 0.4 \cdot DC}, \text{ for } DMC \leq 0.4 \cdot DC$$

and for  $DMC > 0.4 \cdot DC$  as follows:

$$BUI = DMC - \left(1 - \frac{0.8 \cdot DC}{DMC + 0.4 \cdot DC}\right) \cdot [0.92 + (0.0114 \cdot DMC)^{1.7}], \text{ for } DMC > 0.4 \cdot DC$$

where *DMC* is the Duff moisture code and *DC* the Drought code.

## References

Original publication:  
Van Wagner and Pickett (1985)  
Van Wagner (1987)

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The original document is available at <http://wiki.fire.wsl.ch/tiki-index.php?page=Buildup+index>