



# Fire Weather Indices WIKI



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## Symbols

Variable	Description	Unit
$T$	air temperature	°C
$T_{dew}$	dew point temperature	°C
$H$	air humidity	%
$P$	rainfall	mm
$U$	windspeed	m/s
$w$	days since last rain (or rain above threshold)	d
$rr$	days with consecutive rain	d
$\Delta t$	time increment	d
$\Delta e$	vapor pressure deficit	kPa
$e_s$	saturation vapor pressure	kPa
$e_a$	actual vapor pressure	kPa
$P_{atm}$	atmospheric pressure	kPa
$PET$	potential evapotranspiration	mm/d
$r$	soil water reserve	mm
$r_s$	surface water reserve	mm
$EMC$	equilibrium moisture content	%
$DF$	drought factor	-
$N$	daylight hours	hr
$D$	weighted 24-hr average moisture condition	hr
$\omega$	sunset hour angle	rad
$\delta$	solar declination	rad
$\varphi$	latitude	rad
$Cc$	cloud cover	Okta

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Search

$J$	day of the year (1..365/366)	-
$I$	heat index	-
$R_n$	net radiation	MJ·m <sup>-2</sup> ·d <sup>-1</sup>
$R_a$	daily extraterrestrial radiation	MJ·m <sup>-2</sup> ·d <sup>-1</sup>
$R_s$	solar radiation	MJ·m <sup>-2</sup> ·d <sup>-1</sup>
$R_{so}$	clear-sky solar radiation	MJ·m <sup>-2</sup> ·d <sup>-1</sup>
$R_{ns}$	net shortwave radiation	MJ·m <sup>-2</sup> ·d <sup>-1</sup>
$R_{nl}$	net longwave radiation	MJ·m <sup>-2</sup> ·d <sup>-1</sup>
$\lambda$	latent heat of vaporization	MJ/kg
$z$	elevation	m a.s.l.
$d_r$	inverse relative distance Earth-Sun	-
$\alpha$	albedo or canopy reflection coefficient	-
$\Delta$	slope of the saturation vapor pressure curve	kPa/°C
$C_c$	cloud cover	eights
$ROS$	rate of spread	m/h
$RSF$	rate of spread factor	-
$WF$	wind factor	-
$WRF$	water reserve factor	-
$FH$	false relative humidity	-
$FAF$	fuel availability factor	-
$PC$	phenological coefficient	-

Suffix	Description
—	mean / daily value
<i>max</i>	maximum value
<i>min</i>	minimum value
12	value at 12:00
13	value at 13:00

$15$	value at 15:00
$m$	monthly value
$y$	yearly value
$f/a$	value at fuel-atmosphere interface
$dur$	duration
$soil$	value at soil level

Constant	Description
$e$	Euler's number
$\gamma$	psychrometric constant
$G_{SC}$	solar constant
$\sigma$	Stefan-Boltzmann constant