CWFIS GeoNetwork catalogue (PROD)

Foliar Moisture Content

Foliar Moisture Content (FMC) is an estimate of the water content of the conifer needles in a forest canopy. The FMC varies somewhat throughout the fire season and is used in determining whether or not a fire is expected to move from the ground surface into the tree crowns. In live persistent conifer needles in healthy forests range from 80% to 120% (weight of water divided by dry weight times 100).

Detailed information is found in the parent document, "Canadian Forest Fire Weather Index (FWI) System -- Daily Maps", linked above, and in Supplemental Information below.

- Identification
- Distribution
- Quality
- Spatial rep.
- Ref. system Reference Systems
- Content
- Portrayal
- Metadata
- Md. constraints
- Md. maintenance
- Schema info

Identification

Data identification

Citation

Date (Publication)	2026
Date (Creation)	2017-01-01

Point of contact

Government of Canada; Natural Resources Canada; Canadian Forest Service - Data Owner (Data Owner)
5320-122nd Street, Edmonton, Alberta, T6H 3S5, Canada
780-000-0000

Other citation details	Canadian Forest Service. yyyy. Canadian Wildland Fire Information System (CWFIS), Natural Resources Canada, Canadian Forest Service, Northern Forestry Centre, Edmonton, Alberta. https://cwfis.cfs.nrcan.gc.ca.
Status	On going

Custodian

Government of Canada; Natural Resources Canada; Canadian Forest Service - Data Custodian (Data Custodian)
5320-122nd Street, Edmonton, Alberta, T6H 3S5, Canada
780-000-0000

Maintenance and Update Frequency	Daily
Government of Canada Core Subject Thesaurus	• Risk management • Forest fires
CWFIF Data Themes	• Fire risk • Fire behaviour
CWFIF Internal Workflow	• wf-sbx • wf-test • wf-prod
CFWIF Evaluation Method	• Analysis
CWFIF Model Method	• FWI 1987
CWFIF Temporal Type	• Day
	Unclassified

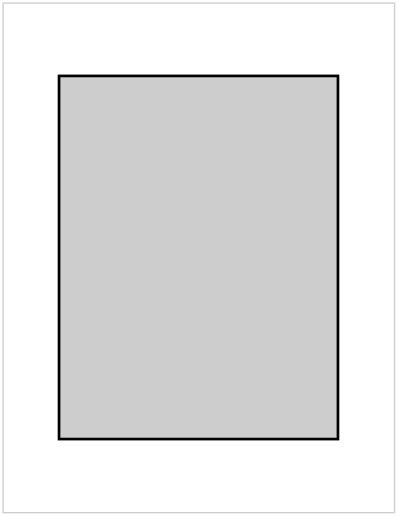
Security Classification	

Legal constraints

Use Limitation	Open Government Licence - Canada (https://open.canada.ca/en/open-government-licence-canada)
Access Constraints	License

Spatial representation type	Grid
Language	eng
Topic category	• Environment
Begin Date	2017
End Date	2026 now

83.12	N	41.67	S	-52.62	E	-141.01	W



Supplemental Information	The Foliar Moisture Content (FMC) is based on physiological (growth stage) changes during the year. The FMC is based on latitude, longitude, elevation, and Julian Day (day count accumulated from January 1). Moisture content in evergreen tree needles decreases in late spring ("spring dip"), and rises in summer as new needle growth occurs. The spring dip occurs later in the spring at higher latitudes and higher elevations. The FMC generally ranges between 80% and 120%. The FMC does not depend on weather, but only the factors listed above. It normally represents moisture content in trees that are at least one year old. The FMC can also be applied to mixed wood forests where evergreen and broadleaf trees intermingle. Some fire management agencies may use a different number of classes and different class boundaries. Fuel datasets at 30-metre and 100-metre resolution are included under "Source datasets", named CFFDRS Fire Behaviour Prediction (FBP) Fuel Types 2024 - 30m and 100-metre respectively. The fuels layer used in the CWFIS FBP maps has been upscaled to a 2-kilometre resolution to match the map grids. Reference: Alexander, M.E. 2010. Foliar moisture content input in the Canadian Forest Fire Behavior Prediction System for areas outside of Canada. In D.X. Viegas, editor. Proceedings of the 6th International Conference on Forest Fire Research, November 15-18, 2010, Coimbra, Portugal. University of Coimbra, Coimbra, Portugal. 13 pages.

Distribution

Distribution

Distribution format	• WMS (PNG, PNG8, JPEG, GIF, TIFF, TIFF8, GeoTIFF, GeoTIFF8, SVG, PDF, GeoRSS, KML, KMZ, OpenLayers) • TIFF (TIFF)

Publisher
Government of Canada; Natural Resources Canada; Canadian Forest Service - Distributor (Distributor)
5320-122nd Street, Edmonton, Alberta, T6H 3S5, Canada
780-000-0000

Digital transfer options

Online Resource	Foliar Moisture Content (HTTPS) Dataset;GeoTIF;eng,fra
Online Resource	Foliar Moisture Content (HTTPS) Web Service;Web App;eng,fra
Online Resource	Foliar Moisture Content (HTTPS) Web Service;PNG;eng

Online Resource	Foliar Moisture Content (HTTPS) Web Service;PNG;fra
Online Resource	Foliar Moisture Content (HTTPS) Web Service;Web App;eng,fra

Digital transfer options

No information provided.

Digital transfer options

No information provided.

Digital transfer options

No information provided.

Digital transfer options

No information provided.

Digital transfer options

No information provided.

Digital transfer options

Online Resource	public:fmc (OGC:WMS) API;WMS;eng
Online Resource	public:fmc (OGC:WMS) API;WMS;fra

Quality

Data quality

Hierarchy level	Dataset

Lineage

Source	• Elevation of Canada (250m) • CFFDRS Fire Behaviour Prediction (FBP) Fuel Types 2024 - 100m • CFFDRS Fire Behaviour Prediction (FBP) Fuel Types 2024 - 30m

Ref. system Reference Systems

Reference system identifier	http://www.epsg-registry.org / EPSG:3978 /

Metadata

Metadata

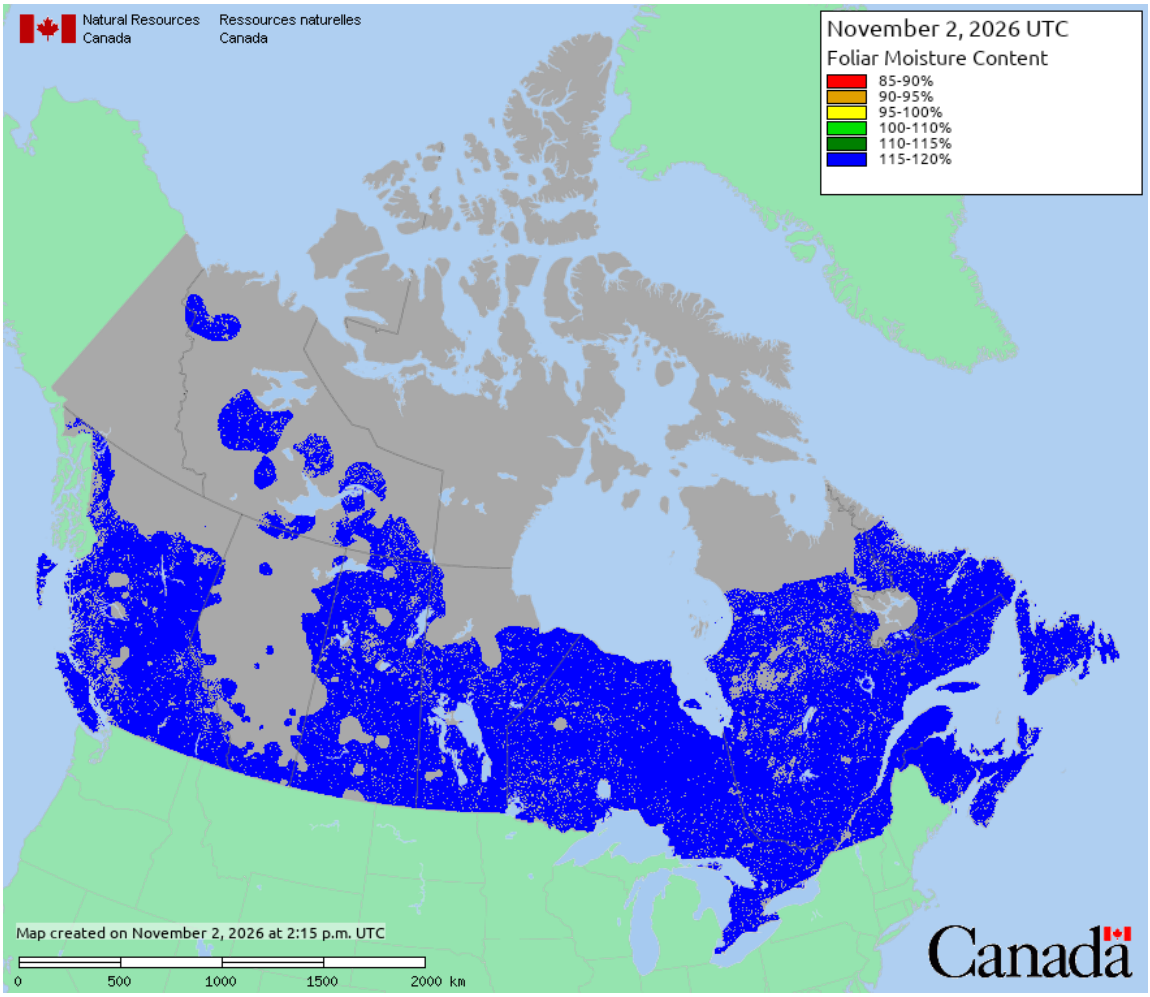
File Identifier	2c217fab-9452-49b0-910b-ecc32f485ed7 XML
Metadata language	eng; CAN
Character set	UTF8
Parent identifier	Canadian Forest Fire Behaviour Prediction (FBP) System - Daily Maps 12285f32-42ce-463c-9981-f6bd8a8e6b21

Hierarchy Level	Dataset
Date Stamp	2026-07-16T14:30:26.289Z
Metadata standard name	North American Profile of ISO 19115:2003 - Geographic information - Metadata
Metadata standard version	CAN/CGSB-171.100-2009

Point of contact

Government of Canada; Natural Resources Canada; Canadian Forest Service - Metadata Steward (Metadata Steward)
5320-122nd Street, Edmonton, Alberta, T6H 3S5, Canada
780-000-0000

Overviews



Foliar Moisture Content

Provided by