CWFIS GeoNetwork catalogue (PROD)

Fire M3 Hotspots

A hotspot is a satellite image pixel with high infrared intensity, indicating a heat source. Hotspots from known industrial sources are removed; the remaining hotspots represent vegetation fires, which can be in forest, grass, cropland, or logging debris. A hotspot may represent one fire or be one of several hotspots representing a larger fire. Not all fires can be identified from satellite imagery, either because the fires are too small or because cloud cover obscures the satellite's view of the ground.

The Fire M3 hotspots are obtained from these sources:

1. National Aeronautics and Space Administration (NASA) Land, Atmosphere Near real-time Capability for EOS (LANCE) Fire Information for Resource Management System (FIRMS), derived from Moderate Resolution Imaging Spectroradiometer (MODIS) and Visible Infrared Imaging Radiometer Suite (VIIRS) imagery

2. European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT) Copernicus program, derived from Sea and Land Surface Temperature Radiometer (SLSTR) imagery

Fire M3 maps, reports and data services are updated daily (every three hours) from May through September.

More information about Fire M3 is available at: https://natural-resources.canada.ca/forest-forestry/wildland-fires/fire-monitoring-mapping-modelling-system

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Identification

Data identification

Citation

Date (Publication)	2026
Date (Creation)	2019-09-09

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

Status	On going

Custodian

Government of Canada; Natural Resources Canada; Canadian Forest Service - Data Custodian (Data Custodian)
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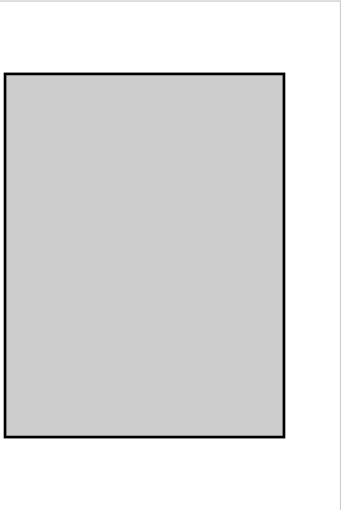
Maintenance and Update Frequency	Continual
Government of Canada Core Subject Thesaurus	• Forest fires • Remote sensing
CWFIF Data Themes	• Fire mapping and monitoring
CWFIF Internal Workflow	• wf-test • wf-prod
Security Classification	Unclassified

Legal constraints

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

Use Constraints	Other restrictions
Other constraints	When the Data is displayed, in print, electronically, or otherwise, the source (i.e., Natural Resources Canada) must be acknowledged along with the following citation: Canadian Forest Service. 2026. Canadian Wildland Fire Information System (CWFIS), Natural Resources Canada, Canadian Forest Service, Northern Forestry Centre, Edmonton, Alberta. https://cwfis.cfs.nrcan.gc.ca.
Spatial representation type	Vector
Language	eng
Topic category	• Environment
Begin Date	1994
End Date	2026

83.11	N	41.68	S	-52.62	E	-141.00	W



Supplemental Information

The Fire Monitoring, Mapping, and Modeling System (Fire M3) began operations in 1998 as an initiative of the Canada Centre for Remote Sensing and the Canadian Forest Service, both agencies of Natural Resources Canada.

The goals of Fire M3 are to use low-resolution satellite imagery to identify and locate actively burning fires on a daily basis; to estimate daily and annual area burned; and to model fire behavior and biomass consumption from fires.

Subsequent processing of hotspot data involves combining the datasets from multiple sources, estimating fire weather conditions and fire behavior potential at hotspot locations using the Canadian Forest Fire Danger Rating System, and mapping burned area. In addition to images and reports for the web, data is made available to partners in fire management and industry, and it is used as input to other models such as smoke forecasting.

Historical Fire M3 hotspot data sources:

Years / Source / Sensor(s)

2025+ / SLSTR / EUMETSAT

2012+ / NASA / MODIS, VIIRS

2011-2023 / USFS / MODIS, VIIRS

2005-2021 / NOAA / AVHRR, MODIS, VIIRS

2003-2005 / CFS / AVHRR

2001-2020 / UMD / MODIS, VIIRS

1996-2010 / ESA / ATSR2, AATSR

1994-2002 / CCRS / AVHRR

Natural Resources Canada gratefully acknowledges the data contributions and collaboration of these organizations, which make Fire M3 possible.

Acronyms (sources and sensors):

AATSR – Advanced Along-Track Scanning Radiometer

ATSR2 – Along-Track Scanning Radiometer 2

AVHRR – Advanced Very High Resolution Radiometer

CCRS – Canada Centre for Remote Sensing

CFS – Canadian Forest Service

ESA – European Space Agency

EUMETSAT – European Organisation for the Exploitation of Meteorological Satellites

MODIS – Moderate Resolution Imaging Spectroradiometer

NASA – U.S. National Aeronautics and Space Administration

NOAA – U.S. National Oceanic and Atmospheric Administration

SLSTR – Sea and Land Surface Temperature Radiometer

	UMD – University of Maryland USFS – United States Forest Service VIIRS – Visible Infrared Imaging Radiometer Suite More information about Fire M3 is available at: https://natural-resources.canada.ca/forest-forestry/wildland-fires/fire-monitoring-mapping-modelling-system

Distribution

Distribution

Distribution format	• SHP (ESRI shapefiles geospatial vector data format) • CSV (Comma separated text files) • WMS (PNG, PNG8, JPEG, GIF, TIFF, TIFF8, GeoTIFF, GeoTIFF8, SVG, PDF, GeoRSS, KML, KMZ, OpenLayers) • WFS (GML2, GML3, Shapefile, JSON, JSONP, CSV)

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

Online Resource	Daily Hotspots - Datamart (/downloads) (HTTPS) Dataset;CSV;eng,fra
Online Resource	public:hotspots (OGC:WMS) API;WMS;fra
Online Resource	public:hotspots (OGC:WMS) API;WMS;eng
Online Resource	Fire M3 Hotspots (HTTP) Web Service;Web App;eng,fra
Online Resource	Fire M3 Hotspots (HTTP) Web Service;Web App;eng,fra
Online Resource	Daily Hotspots Map (HTTPS) Web Service;PNG;fra
Online Resource	Hotspots - 2026 - Shapefile (HTTP) Dataset;SHP;eng,fra
Online Resource	Hotspots - 2026 - CSV (HTTP) Dataset;CSV;eng,fra
Online Resource	Hotspots - Dataset Attributes (HTTPS) Dataset;XML;eng,fra
Online Resource	Hotspots - Last 7 Days - CSV (HTTP) Dataset;CSV;eng,fra
Online Resource	Hotspots - Last 7 Days - Shapefile (HTTP)

	Dataset;SHP;eng,fra
Online Resource	Archive of Daily Hotspots - Datamart (/downloads) (HTTPS) Dataset;CSV;eng,fra

Digital transfer options

Online Resource	Daily Hotspots Map (HTTPS) Web Service;PNG;eng

Digital transfer options

No information provided.

Digital transfer options

Online Resource	Canadian Wildland Fire Information System (HTTPS) Web Service;HTML;eng,fra

Digital transfer options

Online Resource	Fire M3 Hotspots - Full Metadata (HTTPS) Supporting Document;XML;eng,fra

Digital transfer options

Online Resource	Attributes for FireM3 Hotspots (HTTPS) Supporting Document;PDF;eng,fra

Ref. system Reference Systems

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

Metadata

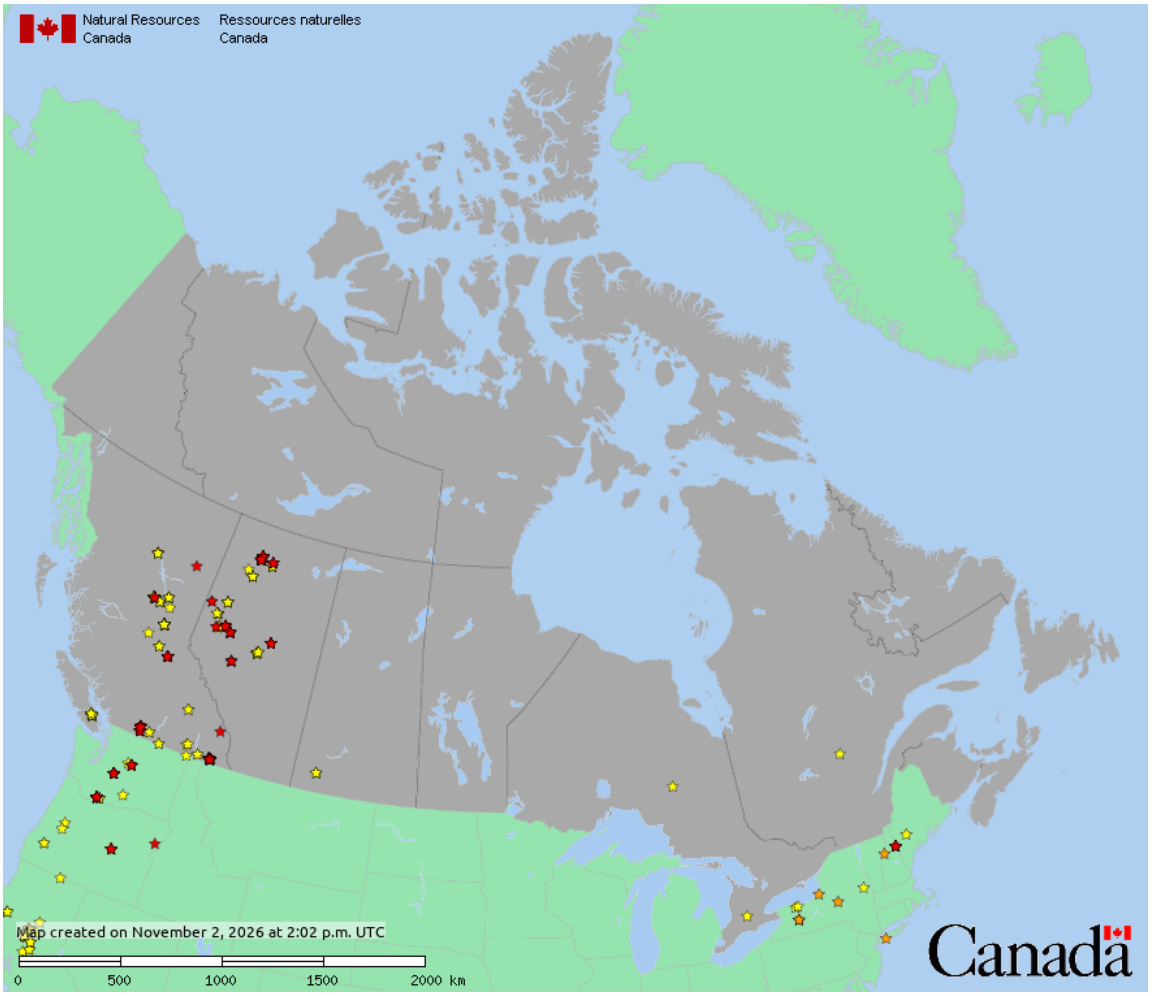
Metadata

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Metadata language	eng; CAN
Character set	UTF8
Hierarchy Level	Dataset
Date Stamp	2026-09-03T20:20:40.342Z
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)
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780-000-0000

Overviews



Hotspots
Fire M3 Hotspots

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