
Data Dictionary

Predict the area burned by wildfires

20 juillet 2020

1. fire_number

Ex: CWF001

The first letter of the wildfire number indicates the forest area in which the ignition area is located :

- C—Calgary
- E—Edson
- H—High Level
- G—Grande Prairie
- L—Lac La Biche
- M—Fort McMurray
- P—Peace River
- R—Rocky
- S—Slave Lake
- W—Whitecourt

WF indicates that this is a wildfire.

Three digits (with leading zeros) number wildfires consecutively within each forest area commencing April 1st and terminating March 31st of each year.

2. fire_year

The year the fire occurred.

3. assessment_datetime

The date and time the wildfire was originally assessed by Wildfire Management employees. This date determines the fire year in which the wildfire occurs.

4. size_class

The label to predict. This is a grouping of wildfires into classes based on final area burned. Size class can change as the wildfire grows until the final area burned is determined after extinguishment.

The breakdown is as follows:

- A class = 0 to 0.1 ha
- B class > 0.1 ha to 4.0 ha

C class > 4.0 ha to 40.0 ha
D class > 40.0 ha to 200 ha
E class > 200 ha

5. fire_location_latitude

6. fire_location_longitude

Location of the ignition area of the wildfire recorded as a GPS (recorded as decimal degrees (DD)).

7. fire_origin

This indicates who owns or administers the land the wildfire is burning on. If the wildfire covers more than one origin, this will be the land where the ignition area of the wildfire is.

Provincial Private
Indian Reserve
Metis Settlement
Provincial Park
Department of National Defense

8. general_cause_desc

Classification of the wildfire cause according to the general group, individual industry or ignition source (for lightning) that started the wildfire.

For wildfires that are currently being investigated, the temporary general cause of UNDER INVESTIGATION is used.

Agriculture Industry	A wildfire resulting from an agricultural or farming activity performed by either people or machines (livestock or crop). This general cause was introduced in 2012. For 2011 and earlier wildfires, Agriculture Industry was captured under the Resident cause.
Forest Industry	A wildfire caused by people or machines used in any activity associated with forest fiber production. This category includes pulp mills, sawmills and plywood/panel/post operations related to resource industry inspection, surveying, protection, scaling, silviculture, etc.
Government	A wildfire started by employees, agents or contractors of the government. Mountain pine beetle control burns that become wildfires would fall in this category with the provincial government as the industry identifier. This general cause also requires an industry identification. This general cause was introduced in 2012. For 2011 and earlier wildfires, Government was captured under the Other Industry cause.
Incendiary	A wildfire that has been intentionally ignited in an area or under circumstances where and when there should not be a fire.
Lightning	A wildfire ignited by lightning.

Oil and Gas Industry	A wildfire caused by any machine, employee, agent or contractor performing work associated with exploration, construction, production or transmission by an oil and gas company, including oil sands companies.
Other Industry	A wildfire caused by an industry other than power line, oil and gas, forest, agriculture or railway. This general cause also requires an industry identification.
Power Line Industry	A wildfire caused by any machine, employee, agent or contractor performing work associated with a power line company, any animals or trees interacting with a power line, or any power line hardware or mechanics.
Railroad	A wildfire caused by any machine, employee, agent or contractor performing work associated with a railway operation.
Recreation	A wildfire caused by any person or equipment engaged in a recreation activity (e.g., camper, hunter, fisherman, biker, picnicker, berry picker, etc.). This general cause also requires a responsible group.
Resident	A wildfire resulting from an activity performed by either people or machines on residential land or any wildfire caused by an activity associated with normal living in a forested area (e.g., residence/building fires, debris burning, smoking, vehicle accidents that cause wildfires, etc.).
Undetermined	A wildfire that has been investigated but the cause cannot be determined. Upon further evidence or new information the final cause may be determined and this cause may be updated.

9. activity_class

Identifies the specific activity that was going on when the wildfire was started.

Arson	A wildfire set intentionally or recklessly to cause damage by fire or explosion to property. This activity class does not require a true cause.
Cooking and Warming	A fire lit for the purpose of cooking or warming. This means by use of campfire, wood stove, smokehouse, sweat lodge or sauna.
Debris Disposal	A wildfire resulting from the disposal of any debris including: <ul style="list-style-type: none"> all brush or other forest cover burned while still "standing", including standing brush burned for the purpose of land clearing piles of brush or timber (whether hand or machine piled), slash windrows grass or stubble (can be standing, mowed or piled).
Flaring Gas	A wildfire caused by the flaring of petroleum and natural gas, or their associated by-products.
OHV Operation	A wildfire caused by an off-highway vehicle (OHV) or by its operator (dirt bikes, quads or track units). For example, embers falling from the exhaust, no spark arrestor, etc.
Operations	A wildfire caused by any construction, maintenance or day-to-day operations conducted by industry or a government agency.

Prescribed Fire	A wildfire caused when a prescribed fire or hazard reduction burn escapes its containment unit boundary and suppression is required, or is thought to be extinguished but flares up (regardless of whether it burns outside the containment unit boundary or not). This activity class does not require a true cause.
Refuse Disposal	A wildfire caused by the disposal of waste/garbage resulting from domestic, industrial, agricultural, or municipal sources, sawmill burners, etc. Fires solely within a municipal refuse site, in which Wildfire Management is required to assist with suppression, are mutual-aid fires not wildfires.
Restart:	A restart of a wildfire thought to be previously extinguished. This activity class does not require a true cause.
Structure Fire	A wildfire caused by the spread of a fire to the surrounding forest fuels from a structural facility (e.g., outbuilding, house, oilfield building, temporary residence [not recreational]). This activity class does not require a true cause.
Transportation	A wildfire resulting from the operation of an aircraft or vehicle excluding OHVs (e.g., trucks, cars, buses, camping trailers, motorhomes, rotor wing, fixed-wing).
Unclassified	A wildfire caused by any activity class not classified or listed. Specify in remarks the details of how the wildfire started (e.g., spontaneous combustion, discarded cigarette). For wildfires with a general cause of incendiary, unclassified refers to a wildfire that is purposely lit but not thought to be arson. Beginning in 2018, for wildfires with a general cause of recreation or resident, unclassified is used for wildfires caused by exploding targets and fireworks (with the true cause of incendiary device).

10. true_cause

Identifies the specific reason why the wildfire started.

Animals	A wildfire caused by an animal making contact with a power line.
Burning Substance	A wildfire caused when a burning substance is placed on flammable forest fuels. For example: A wildfire caused when a burning substance is placed on flammable forest fuels. For example: <ul style="list-style-type: none"> hot exhaust or carbon from an OHV, train or heavy equipment sparks from a chimney children playing with matches or lighters, and cigarette butt.
Friction Spark	A wildfire caused by friction sparks from a vehicle, heavy equipment, farm equipment or train (e.g., grater on gravel road, train, etc.).
Incendiary Device	A wildfire caused by an incendiary device or ammunition (e.g., flares, fireworks, exploding targets, fusees, etc.).
Line Impact	A wildfire caused by any object contacting a power line (e.g., tree, tarp, truck, beaver cuts tree down and tree strikes power line).

Mechanical Failure	A wildfire caused by the failure or malfunction of an engine or mechanical component (e.g., a blown fuse on a power line, a bearing/hotbox on a train).
Unclassified	A wildfire caused by any true cause not classified or listed. Specify the cause in the remarks (e.g., spontaneous combustion, smudge, discarded cigarette).
Unsafe Fire	<p>A wildfire caused by any action or conditions that deemed the burning as unsafe. For example:</p> <ul style="list-style-type: none"> • an abandoned or unattended fire • burning without a permit or not following permit conditions, • high hazard • insufficient buffer/fireguard between fire and forest fuels • high winds, spotting, extremely dry conditions • insufficient resources on site, and • a fire that was started during the fire season and was not extinguished.
Vehicle Fire	A wildfire caused by the spread of fire to the surrounding forest fuels from a vehicle fire.
Winter Burning	A wildfire that was lit outside the fire season and was not extinguished.

11. fire_start_date

The time and date the wildfire started.

If the exact time and date is unknown, an estimate is made of the wildfire start time.

12. det_agent_type

The general type of detection agent responsible for discovering the wildfire.

LKT – lookout

AIR – air patrol

GRP – ground patrol

UNP - unplanned

13. det_agent

A more specific description of the detection agent that discovered the wildfire.

Lookout (LKT) - two digit code identifying the lookout tower.

Air Patrol (AIR)

RAP – rappel crew

HAC – helitack crew

ASU – unit crew

MD – man up rotor wing

FW – fixed wing patrol

RW – rotor wing patrol

Ground Patrol (GRP)

FRST – forest officer
CREW – wildfire crew
PATR – patrolman
PIND – industry patrol

Unplanned (UNP)

310 – called in on 310 FIRE phone line
GOVT – other government agencies
LFS – other department personnel
PUB – general public
UAA – unplanned department aircraft
UIND – unplanned industry aircraft
UPA – unplanned public aircraft

14. discovered_date

The time the detection agent first discovered the wildfire.

This field is mandatory for all detection agents except unplanned, therefore, this field may be blank on those wildfires.

15. reported_date

The time and date the wildfire was first reported to Wildfire Management. This is generally the time the discovery agent calls the Area dispatch.

The report time can be the same as the discovery time.

16. start_for_fire_date

The time and date that the first Wildfire Management resource started for the wildfire.

For a rotor wing this would be skids up. For an airtanker group, this would be wheels roll on the birddog aircraft. For a vehicle, it would be the time the vehicle departed the base/compound/home for the wildfire (after the briefing, picking up personnel or loading of equipment if any of these are done after resource was dispatched).

If the discovery agent took initial action on the wildfire, the started for fire time may be the same as the dispatch time.

17. fire_fighting_start_date

The time and date that the initial action resource began physical suppression on the wildfire.

18. initial_action_by

The resource that took the first physical suppressive action directly on the wildfire.

Airtanker	This indicates that an airtanker group dropped on the wildfire.
Fire Department	This would include fire departments from the city, town, county, municipal district, Indian reserve or Metis settlement.
FPD Staff	This could be a Ranger, Fire Guardian, Patrolman, Strike Team Leader, etc.

FTAC	Firetack crew
HAC	Helitack crew
Industry	Includes forest, oil and gas and utility industries.
Land Owner	Private landowner upon whose land the wildfire started.
Other Agency	This would include a county, municipal district, other division or department of the provincial government, other federal government agency and Metis settlement.
Public	Members of the general public.
RAP	Rappel Crew
UNIT	Unit Crew

19. fire_type

This is the predominant fire behaviour that was observed when the fire was originally assessed.

Ground Fire	A fire that burns in the ground fuel layer.
Surface Fire	A fire that burns in the surface fuels and involves less than 10% of the trees torching. Campfires, brush piles and windrows that have not burned into the duff layer would be considered surface fires.
Crown Fire	A fire that advances through the crown fuel layer and involves more than 10% of the tree crowns.

20. fire_position_on_slope

The position of the wildfire relative to the slope it is travelling on at the time of initial assessment.

Bottom
Flat
Lower 1/3
Middle 1/3
Upper 1/3

21. weather_conditions_over_fire

Description of the weather conditions over the wildfire at the time of initial assessment.

CB dry
CB wet
Clear
Cloudy
Rain showers

22. fuel_type

The predominate fuel type (vegetation cover) in which the wildfire is burning, at the time of initial assessment.

Coniferous

- C-1 Spruce-Lichen Woodland
- C-2 Boreal Spruce
- C-3 Mature Jack or Lodgepole Pine
- C-4 Immature Jack or Lodgepole Pine
- C-6 Conifer plantation

Mixedwood

- M-1 Boreal Mixedwood-Leafless
- M-2 Boreal Mixedwood-Green

Slash

- S-1 Jack or Lodgepole Pine slash
- S-2 White Spruce-Balsam slash

Deciduous

- D-1 Leafless Aspen

Grass

- O-1a Matted Grass
- O-1b Standing Grass

23. bh_fs_date

The date and time the Incident Commander (IC) determined the wildfire to be at the fire status of being held (BH).

A wildfire that is being held is where the resources are currently committed and sufficient action has been taken, such that the wildfire is not likely to spread beyond existing or predetermined boundaries under prevailing and forecasted weather and fire behaviour conditions.

A wildfire is not required to have a being held status. If at the initial assessment of the wildfire, the IC determines the wildfire to be under control, the date and time for being held will be the same as the date and time for under control.

24. uc_fs_date

The date and time the Incident Commander determined the wildfire to be at the fire status of under control (UC).

A wildfire that is under control has sufficient suppression action and the entire fire perimeter is secured from further spread. The fireline perimeter has mechanical, handline, or natural barriers with a high confidence level of no further hectare loss through predicted weather and present resources.

25. ex_fs_date

This is the date and time the Incident Commander determined the wildfire to be completely extinguished (EX).