

# WILDFIRE MANAGEMENT

## DATA DICTIONARY

The information in this dictionary relates to the historical wildfire database for Alberta. By definition, wildfires have a point of origin inside the Forest Protection Area (FPA) – either provincial lands or federal lands covered by agreement with the province.

Fires having a point of origin outside the FPA are referred to as Mutual Aid (MA) fires and are not covered by this dictionary.

Last update: 1 October 2018

**1. field name: 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 1<sup>st</sup> and terminating March 31<sup>st</sup> of each year.

Wildfire numbers are assigned based on the ignition area and do not change if the wildfire crosses the Forest Protection Area or provincial boundaries. For example, a wildfire starting in the Forest Protection Area burns into the non-protection area – numbered as an Area wildfire. A wildfire that starts in the border zone agreement area and burns back into the province is assigned a border zone number.

Wildfire numbers that are assigned in error or turn out not to be a valid wildfire are to be reused so may show out of date sequence.

**2. field name: fire\_name**

Wildfires of provincial significance are assigned a geographic name for ease of recognition. For example: Mosquito Lake Fire.

If the wildfire is part of a wildfire complex, the complex name would be recorded here. For example: Burnt Hill Complex

If both names have been assigned to a wildfire they are recorded as fire name then complex name. For example: Mosquito Lake Fire Burnt Hill Complex.

**3. field name: 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. field name: fire\_year**

The wildfire year runs from 00:00 hours on April 1<sup>st</sup> until 23:59 hours on March 31<sup>st</sup>. The fire year is named for the year in which the 1<sup>st</sup> of April falls. For example, the 2013 fire year begins April 1, 2013 and ends March 31, 2014.

The assessment date and time determines the fire year in which the wildfire occurred.

**5. field name: current\_size**

This is the final area burned of the wildfire. This size will not necessarily match the sizes from the fire status fields. If an updated size is determined after a wildfire has already been extinguished, the revised size is recorded in the Area Burned field of FIRES and the extinguished size recorded on the fire status line will not change.

Wildfires that have had aerial photography flown will generally not have the area burned updated until the following spring when the interpolation is complete. This interpolation includes removal of waterbodies, unburnt islands and man-made infrastructure.

**6. field name: 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

**7. field name: 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.

<b><u>LIGHTNING:</u></b>	A wildfire ignited by lightning.
<b><u>OIL AND GAS INDUSTRY:</u></b>	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.
<b><u>OTHER INDUSTRY:</u></b>	A wildfire caused by an industry other than power line, oil and gas, forest, agriculture or railway. <u>This general cause also requires an industry identification.</u>
<b><u>POWER LINE INDUSTRY:</u></b>	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.
<b><u>RAILROAD:</u></b>	A wildfire caused by any machine, employee, agent or contractor performing work associated with a railway operation.
<b><u>RECREATION:</u></b>	A wildfire caused by any person or equipment engaged in a recreation activity (e.g., camper, hunter, fisherman, biker, picnicker, berry picker, etc.). <u>This general cause also requires a responsible group.</u>
<b><u>RESIDENT:</u></b>	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.).
<b><u>UNDETERMINED:</u></b>	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.

## 8. field name: industry\_identifier\_desc

Two of the above mentioned general cause categories require further detail through the industry identifier.

Government - identify the branch of government responsible for the wildfire. Options are:  
 municipal government  
 provincial government  
 federal government

Other Industry – identify the industry (other than those with their own general cause) who is responsible for the wildfire. Options are:

commercial fishery	mining
commercial outfitting	trapping
commercial tourism	utility (water and gas service)
commercial transportation	waste disposal (municipal and industry)

**9. field name: responsible\_group\_desc**

For the general cause of Recreation, identify the recreational group responsible for causing the wildfire.

campers (includes day use)  
hunters  
other

**10. field name: activity\_class**

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

<b>Arson</b>	<p>A wildfire set intentionally or recklessly to cause damage by fire or explosion to property.</p> <p>This activity class does not require a true cause.</p>
<b>Cooking and Warming</b>	<p>A fire lit for the purpose of cooking or warming. This means by use of campfire, wood stove, smokehouse, sweat lodge or sauna.</p>
<b>Debris Disposal</b>	<p>A wildfire resulting from the disposal of any debris including:</p> <ul style="list-style-type: none"> <li>• all brush or other forest cover burned while still “standing”, including standing brush burned for the purpose of land clearing,</li> <li>• piles of brush or timber (whether hand or machine piled),</li> <li>• slash,</li> <li>• windrows, and</li> <li>• grass or stubble (can be standing, mowed or piled).</li> </ul>
<b>Flaring Gas</b>	<p>A wildfire caused by the flaring of petroleum and natural gas, or their associated by-products.</p>
<b>OHV Operation</b>	<p>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.</p>
<b>Operations</b>	<p>A wildfire caused by any construction, maintenance or day-to-day operations conducted by industry or a government agency.</p>
<b>Prescribed Fire:</b>	<p>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).</p> <p>This activity class does not require a true cause.</p>
<b>Refuse Disposal</b>	<p>A wildfire caused by the disposal of waste/garbage resulting from domestic, industrial, agricultural, or municipal sources, sawmill burners, etc.</p> <p>Fires solely within a municipal refuse site, in which Wildfire Management is required to assist with suppression, are mutual-aid fires not wildfires.</p>

<b>Restart:</b>	A restart of a wildfire thought to be previously extinguished.  This activity class does not require a true cause.
<b>Structure Fire</b>	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.
<b>Transportation</b>	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).
<b>Unclassified</b>	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).
<b>11. field name: true_cause</b>	
Identifies the specific reason why the wildfire started.	
<b>Animals</b>	A wildfire caused by an animal making contact with a power line.
<b>Burning Substance</b>	A wildfire caused when a burning substance is placed on flammable forest fuels. For example: <ul style="list-style-type: none"> <li>• hot exhaust or carbon from an OHV, train or heavy equipment,</li> <li>• sparks from a chimney,</li> <li>• children playing with matches or lighters, and</li> <li>• cigarette butt.</li> </ul>
<b>Friction Spark</b>	A wildfire caused by friction sparks from a vehicle, heavy equipment, farm equipment or train (e.g., grater on gravel road, train, etc.).
<b>Incendiary Device</b>	A wildfire caused by an incendiary device or ammunition (e.g., flares, fireworks, exploding targets, fusees, etc.).
<b>Line Impact</b>	A wildfire caused by any object contacting a power line (e.g., tree, tarp, truck, beaver cuts tree down and tree strikes power line).
<b>Mechanical Failure</b>	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).
<b>Unclassified</b>	A wildfire caused by any true cause not classified or listed. Specify the cause in the remarks (e.g., spontaneous combustion, smudge, discarded cigarette).

<b>Unsafe Fire</b>	A wildfire caused by any action or conditions that deemed the burning as unsafe. For example: <ul style="list-style-type: none"> <li>• an abandoned or unattended fire,</li> <li>• burning without a permit or not following permit conditions,</li> <li>• high hazard,</li> <li>• insufficient buffer/fireguard between fire and forest fuels,</li> <li>• high winds, spotting, extremely dry conditions,</li> <li>• insufficient resources on site, and</li> <li>• a fire that was started during the fire season and was not extinguished.</li> </ul>
<b>Vehicle Fire</b>	A wildfire caused by the spread of fire to the surrounding forest fuels from a vehicle fire.
<b>Winter Burning</b>	A wildfire that was lit outside the fire season and was not extinguished.

## 12. field name: permit\_related

For any wildfires with an activity class or debris disposal or refuse disposal, the true cause will identify winter burning (no permit required outside the fire season) or unsafe fire (during the fire season). For those that are unsafe, the permit related field identifies the permit status when the fire occurred:

- burning without a permit (includes expired permits), or
- not following permit conditions.

## 13. field name: 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.

Actual start time can be obtained by storm tracking, a witness or statement from the responsible party. Start time for lightning-caused wildfires can be estimated from lightning map data.

## 14. field name: fire\_location\_latitude

## 15. field name: fire\_location\_longitude

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

The location is originally captured during the assessment but may be further investigated as the wildfire progresses. The final location is the confirmed ignition area of the wildfire.

## 16. field name: det\_agent\_type

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

LKT – lookout  
AIR – air patrol  
GRP – ground patrol  
UNP - unplanned

**17. field name: det\_agent**

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

**Lookout (LKT)** - two digit code identifying the lookout tower. Click here for [provincial lookout list](#).  
**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

**18. field name: 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.

**19. field name: 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.

**20. field name: 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.



**21. field name: fire\_fighting\_start\_date**

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

**22. field name: fire\_fighting\_start\_size**

The size of the wildfire at the time the initial action resource began physical suppression, recorded to the nearest hectare or hundredth (0.01) of a hectare.

**23. field name: initial\_action\_by**

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

Airtanker	this indicates that an airtanker group based in Alberta 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.  If a wildfire is actioned by, for example, a Saskatchewan based airtanker or a British Columbia based Helitack crew, this would be "other agency". However, if a resource from another division or department of our provincial government, another provincial government or the federal government is assigned to Wildfire Management on manup or a wildfire, they would be considered FPD staff, airtanker, helitack, etc. and not "other agency".
Public	members of the general public.
RAP	Rappel Crew
UNIT	Unit Crew

**24. field name: assessment\_hectares**

The size of the wildfire at the time of assessment is recorded to the nearest hectare or hundredth (0.01) of a hectare.

**25. field name: 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.

**26. field name: 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

**27. field name: 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

**28. field name: fuel\_type**

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

Coniferous	Slash
C-1 Spruce-Lichen Woodland	S-1 Jack or Lodgepole Pine slash
C-2 Boreal Spruce	S-2 White Spruce-Balsam slash
C-3 Mature Jack or Lodgepole Pine	Deciduous
C-4 Immature Jack or Lodgepole Pine	D-1 Leafless Aspen
C-6 Conifer plantation	Grass
Mixedwood	O-1a Matted Grass
M-1 Boreal Mixedwood-Leafless	O-1b Standing Grass
M-2 Boreal Mixedwood-Green	
Other Fuel Type_____	

**29. field name: other\_fuel\_type**

If the predominant fuel burning involves a campfire, brush pile, or garbage the fuel will be "other fuel type" and this field will specify what was burning.

**30. field name: 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.

**31. field name: bh\_hectares**

The size of the wildfire at the time the Incident Commander changed the status to Being Held (BH), recorded to the nearest hectare or hundredth (0.01) of a hectare.

If the wildfire is assessed as under control (UC) without the BH stage, the BH size will be the same as the UC size.

**32. field name: 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.

**33. field name: uc\_hectares**

The size of the wildfire at the time the Incident Commander changed the status to Under Control (UC), recorded to the nearest hectare or hundredth (0.01) of a hectare.

**34. field name: to\_fs\_date**

This is the date and time the Incident Commander determined the wildfire to be at the fire status of turned over (TO).

A turned over wildfire status is when Wildfire Management turns over the responsibility for extinguishment of a wildfire to another agency or individual. Before a wildfire can be “turned over, Wildfire Management must ensure that the agency or individual is willing and has the capability and resources to completely extinguish the wildfire.

**35. field name: to\_hectares**

The size of the wildfire at the time the Incident Commander turned over the extinguishment of the wildfire to another agency or individual, recorded to the nearest hectare or hundredth (0.01) of a hectare.

**36. field name: ex\_fs\_date**

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

**37. field name: ex\_hectares**

The size of the wildfire at the time the Incident Commander changed the status to Extinguished (EX), recorded to the nearest hectare or hundredth (0.01) of a hectare.

**38. field name: size\_class**

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

**Lookout Identifiers**

AC	Adams Creek	FL	Falls	PA	Panny
AD	Adair	FO	Fontas	PD	Petitot
AL	Algar	FT	Flat Top	PL	Porcupine
AM	Amber	GE	Grande	PO	Ponton
AN	Ansell	GF	Grave Flats	PS	Pass Creek
AT	Athabasca	GL	Gordon Lake	PT	Pinto
AU	Aurora	GM	Goose Mountain	PU	Puskwaskau
BC	Basset	GT	Gift Lake	RA	Ram
BD	Bald Mountain	HA	Hammel	RE	Red Earth
BE	Berland	HB	Hailstone Butte	RH	Round Hill
BF	Buffalo	HH	Hawk Hills	RK	Rock Island Lake
BH	Blue Hill	HK	Hotchkiss	RR	Raspberry Ridge
BI	Birch Mountain	HL	Heart Lake	RT	Rainbow
BL	Baseline	HM	House Mountain	RY	Rocky
BN	Buckton	HU	Huckleberry	SA	Saddle Hills
BP	Barrier Lake	IM	Imperial	SD	Swan Dive
BR	Battle River	IS	Ironstone	SG	Sugarloaf
BS	Bison Lake	JE	Jean Lake	SI	Simonette
BT	Blackstone	JM	Junction Mountain	SK	Smoky
BY	Baldy	JO	Johnson Lake	SN	Snuff Mountain
BZ	Brazeau	KA	Kakwa	SP	Salt Prairie
CA	Chinchaga	KE	Keg	SQ	Sandy Lake
CB	Carbondale	KK	Kananaskis	SR	Sand River
CC	Carrot Creek	KM	Kimiwan	ST	Stony Mountain
CE	Cline	KB	Kirby Lake	SV	Steen
CF	Cambrian	LG	Legend	SW	Sweathouse
CH	Clear Hills	LI	Limestone	TM	Trout Mountain
CK	Conklin	LK	Livock	TO	Tom Hill
CM	Chisholm	LO	Lovett	TP	Teepee Lake
CP	Cowpar Lake	LV	Livingstone	TR	Torrens
CT	Copton	MB	Mayberne	TT	Talbot Lake
CU	Cadotte	MH	Mockingbird Hill	TY	Tony
CY	Chipewyan Lakes	MN	Meridian	VG	Vega
DG	Doig	MO	Moberly	WC	Whitecourt
DM	Deer Mountain	MQ	Muskwa	WD	Whitemud
DW	Deadwood	MR	Marten Mountain	WF	Whitefish
EA	Eagle	MS	Moose Mountain	WM	White Mountain
EC	Economy Creek	MU	Muskeg Mountain	WT	Watt Mountain
ED	Edra	MY	May	WU	Wadlin
EH	Enilda	NM	Nose Mountain	YA	Yates
EL	Ells River	NO	Notikewin	YH	Yellowhead
FG	Foggy Mountain	OB	Obed	ZA	Zama
		OL	Otter Lakes		