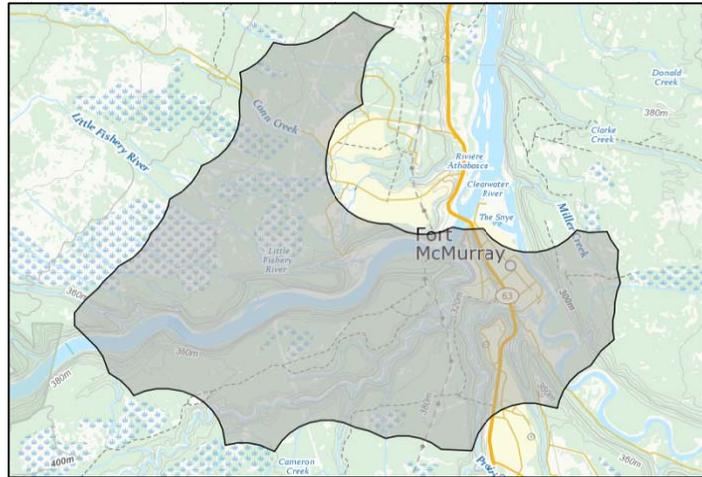


Raging wildfire forces Alberta's largest evacuation in history

A raging wildfire in the Canadian city of Fort McMurray has led to the largest evacuation in the history of Alberta province. Nearly 88,000 residents were evacuated on Tuesday and Wednesday as a major wildfire has burned entire neighborhoods, business districts, and a portion of Fort McMurray's downtown. Preliminary reports suggest that more than 1,600 homes and structures have already been damaged or destroyed. As of this writing at 01:00 UTC May 5, the fire – named the Horse Creek Fire – continues to burn out of control as firefighters are struggling to contain the blaze given gusty winds, well above normal temperatures and low relative humidity levels.

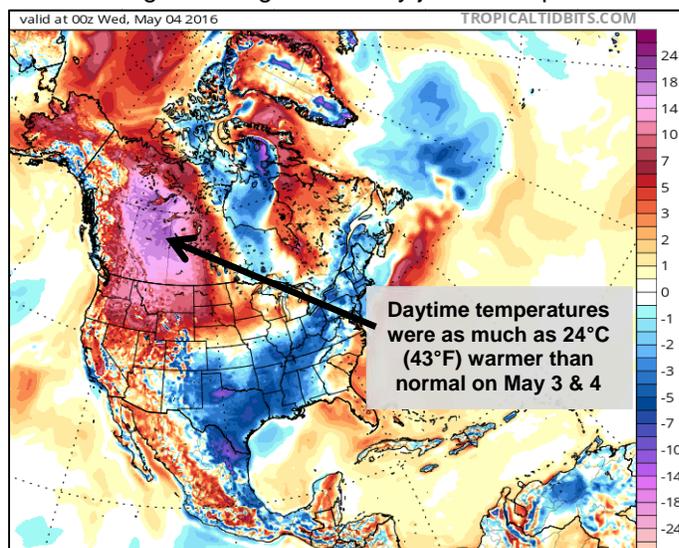


Fire Perimeter on May 4 (Source: CWFIS)

The blaze has now charred more than 10,000 hectares (24,710 acres) of land and the fire perimeter was expected to expand through the rest of Wednesday before cooler conditions reach the region on Thursday (May 5). Alberta's Premier was quoted as saying the event is "the single biggest overall impact on a community in the history of the province." A provincial state of emergency was declared, including a local emergency in the hardest-hit Regional Municipality of Wood Buffalo.

Meteorological Recap

The fire in Fort McMurray was enhanced by the combination of dry soil, above normal temperatures, humidity levels below 30 percent and winds gusting to 72 kph (45 mph). The atmospheric set-up that allowed these conditions to occur was largely attributed to what is known in the meteorological community as an "omega block" given a wavy jet stream pattern that is shaped like the Greek letter Omega.



Temperature anomaly on 0000 UTC May 4 (Source: Tropical Tidbits)

When such a pattern emerges, it is defined by a stalled ridge of high pressure that acts as a block between advancing storm systems. This prohibits the normally expected west-to-east progression of areas of low pressure.

As the omega block developed on May 2 and May 3, it allowed substantially warmer-than-normal air to track far northward into northern Alberta. Some areas on May 3 alone were as much as 24°C (43°F) warmer than typically expected at this time of year. Fort McMurray set a daily temperature record of 32.6°C (91°F) on May 3, which beat the previous record by 5°C (9°F). Environment Canada notes that the normal high is 14°C (57°F).

The early season nature of the western Canadian wildfires can partially be attributed to the intensity of El Niño during the last several months. Temperatures were above normal during the winter months, which led to a below-average snowpack and brought the arrival of early spring-like conditions. The milder air caused the snowpack to melt much earlier than usual and a lack of precipitation caused soils to dry out and become vulnerable for wildfires.

Environment Canada cited that cooler conditions were expected to reach Fort McMurray on May 5, as the omega block breaks and slowly migrates eastward.

Event Details

The cause of the Horse Creek Fire near Fort McMurray currently remains unknown. The rapid spread of the fire on May 3-4 caught many residents by surprise as city officials raced to evacuate all 88,000 residents. Local authorities estimated that 17,000 citizens evacuated north to oil industry sites, while another 35,000 evacuated towards the city of Edmonton. Traffic was bumper-to-bumper on Highway 63 and other major thoroughfares as residents quickly fled Fort McMurray. No fatalities or injuries have been directly linked to the fires at this time.

Fort McMurray Location	Event Notes
Waterways	90% homes destroyed
Beacon Hill	70% homes destroyed
Abasand	50% homes destroyed
Wood Buffalo	30 homes destroyed
Timberlea	13 trailers destroyed
Grayling Terrace	10 homes damaged/destroyed
Dickinsfield	2 homes destroyed
Thickwood	1 home destroyed
Downtown	1 home destroyed
Draper	<i>Under Assessment</i>
Gregoire	No residences affected
Saline Creek	No residences affected

Data as of 12:30 PM May 4 (Source: Regional Municipality of Wood Buffalo)

Preliminary assessments indicated that entire neighborhoods were completely destroyed as well as pockets of the downtown area. Numerous businesses also burned as the fire perimeter spread despite 88 firefighters and 22 fire trucks being initially dispersed near the heart of the fire. Officials confirmed that none of the firefighting tactics had been able to stop the growth of the blaze. An initial assessment suggested that 1,600 homes and structures had minimally been damaged or destroyed, with many buildings burned to their foundations in piles of soot. The hardest-hit areas of Fort McMurray were on the city's south side. Swaths of infrastructure were also heavily damaged.



Damage in Fort McMurray (Source: @CBCEyeopener)

Fort McMurray is a major part of Canada's oil sands industry, and the fires led to the shutdown of production at multiple oil facilities which were located dozens of kilometers (miles) north of the city. No damage had been reported despite the shutdowns, which included such companies as Royal Dutch Shell Canada, Suncor Energy Inc., Husky Energy Inc. and Inter Pipeline. Alberta oil sands are the third-largest reserves of oil in the world behind Saudi Arabia and Venezuela. Canada's total oil sands production is roughly two million barrels a day – much of which is exported to the United States.

The rapid spread of the fires was also aided by an abundance of boreal forest (such as spruce trees and pine trees) that is very conducive to burning. Given the dry conditions and the availability of significant fuel for the fire(s) to expand, once the fire was ignited and strong wind gusts arrived that tracked it into Fort McMurray, it set the stage for a major and devastating event.

Financial Loss

Given the ongoing nature of the event, it remains too early to provide a specific economic or insured loss at this time. However, it is expected that once assessments are finalized, the Horse Creek Fire in Fort McMurray will end as one of the costliest natural disasters in Canada's history.

Insurance industry officials in Canada report that home insurance typically provides coverage for property, indoor contents and living expenses incurred by policyholders while being unable to stay at the residence. Businesses are also able to purchase insurance that protects from any lost sales or earnings due to interruption from catastrophe events.

The current record for costliest Canadian wildfire was the Slave Lake Fire that damaged or destroyed 522 homes and structures in May 2011. That fire caused more than CAD700 million (USD680 million) in nominal insured losses, and at the time, was the second-costliest event in the history of Canada's insurance industry. Overall economic losses in the Slave Lake Fire were greater than USD1.0 billion.

It is worth noting that the average price of homes in Fort McMurray is much higher than those in Slave Lake. Data from the Fort McMurray Real Estate Board in February 2016 cited that the cost of a single-family home was CAD627,150 (USD487,307). This compares to an average home price of CAD300,000 (USD233,118) in Slave Lake, as per the Slave Lake government.

Costliest Canadian Insured Events (Actual Loss)

- 1) Alberta Floods (June/July 2013): CAD1.7 billion (USD1.65 billion)
- 2) Ontario & Quebec Ice Storm (January 1998): CAD1.6 billion (USD1.1 billion)
- 3) Slave Lake Fire (May 2011): CAD700 million (USD680 million)

Additional and updated details will be found in this week's Weekly Cat Report.

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