North American Seasonal Fire Assessment and Outlook

Outlook Period June through August 2021
Issued 11 June 2021

Executive Summary

Small patches of snow cover remain south of the mean 2-cm snow depth line for early June in extreme northwestern British Columbia and the eastern Northwest Territories along the Nunavut border. These patches should disappear rapidly over the next few days. Temperatures in most of western Canada have been close to normal for the past month with below normal values in the eastern Territories and above normal temperatures through most regions from southern Manitoba eastward. Many regions have experienced swings between much below and above normal temperatures with occasional intrusions of Arctic air. While plentiful rain has fallen in central British Columbia, Alberta, and Saskatchewan, partially alleviating drought conditions, southern and northern parts of these provinces remain dry. A lack of moisture is also prolonging dry conditions in southern Canada from Manitoba eastward to the Atlantic coast, although the island of Newfoundland is also showing dry areas.

Drought now encompasses nearly 90% of the western US with more than half of the region in the highest two categories of drought. Well below average snowpack across most of the western US, including record low snowpack in some areas, intensified and expanded drought. Fire activity increased across the US in May with fuel dryness in the western US mostly two to four weeks ahead of schedule.

The southwest US through the Four Corners region is forecast to have above normal significant fire potential through June before the North American Monsoon arrives. Above normal significant fire potential will shift northward into the Intermountain West through July as moisture from the monsoon extends northward with much of the Great Basin and northern and central Rockies forecast to have above normal significant fire potential by August. Much of the northwest US and mountains and foothills of California will have above normal significant fire potential by July and continuing through August.

Forest fire activity has started to decline since May, due to short periods of rain, despite below average rainfall during the past three months. Fuels greened-up in the mountain ranges in the western, central, and southern Mexico, and green-up conditions will spread to the northern and northeastern states to bring the forest fire season to an end in June. For Baja California, the forest fire season will continue through summer due to the hot and dry conditions prevailing in the region. As of June, the states of Chihuahua, Coahuila, Durango, Sonora, Sinaloa, and Nayarit maintain favorable conditions for the presence of major forest fires.

Critical Factors The critical factors influencing significant fire potential for this outlook period are:

El Niño-Southern Oscillation (ENSO): ENSO-neutral conditions are present with near-to-below average sea surface temperatures (SSTs) over the east-central to eastern equatorial Pacific Ocean. Other teleconnection patterns, like the Madden-Julian Oscillation, are likely to play bigger roles in shaping the weather and climate patterns during ENSO-neutral conditions. The Climate Predictor Center (CPC) forecasts an 67% chance that ENSO neutral conditions continue through summer. Long-range forecast guidance indicates ENSO neutral conditions are likely to fall with slightly below average SSTs in the equatorial Pacific Ocean. A return to La Niña later this year is possible, but there remains forecast uncertainty with this scenario.
**Drought:** Areas of exceptional drought have appeared in Manitoba along the North Dakota border, while a large area of extreme drought extends to the north end of Lake Manitoba. Lesser drought categories in an almost unbroken band surround the area from western Ontario, extending through central Manitoba, Saskatchewan, Alberta, and into British Columbia, although the pattern is broken through Alberta and British Columbia. Another large drought area consisting of abnormally dry and moderate drought reaches from the east side of the Great Lakes to the western end of the Gulf of St Lawrence. A small area of severe drought is at the eastern end of Lake Huron. Smaller abnormally dry areas are scattered through the Atlantic Provinces and the Territories.

Nearly 90% of the western US is in drought with over half the region in extreme to exceptional drought. This represents the most expansive and intense drought for the West this century according to the US Drought Monitor and Steve Bowen. Drought continues to intensify in California and parts of the northwest US while persisting in the Great Basin and southwest US except for a small reduction in northeast New Mexico. Drought expanded in the Great Lakes and Carolinas but improved across much of Texas.

Cold frontal passages and Tropical Storm Andrés in the northeast Pacific, the earliest named storm since 1949, resulted in an active start to the rainy season and helped slightly reduce drought in portions of eastern, central, and southern Mexico. However, drought increased in western and northern portions of Mexico due to below average rainfall. Additionally, more than 75% of Mexico remains in moderate to exceptional drought.

**Fire Season Status:** Manitoba and western Ontario have the most widespread fire activity to date, although large fires (i.e., 200 hectares or larger) are also burning in the Northwest Territories, Alberta, Saskatchewan, and Quebec. The largest, at over 200,000 hectares, is burning north of Lake Manitoba. While area burned has been above the 10-year normal for the past few weeks, the value is
very close to normal for early June. Fire numbers are slightly below normal for the time of year, at about 87% of the 10-year mean.

Large fire activity increased in May and early June, especially in the western US. Year-to-date fire statistics show that through June 9, 26,833 fires burned 337,296 hectares (833,479 acres) across the US. The year-to-date acres burned is below the 10-year average while the number of fires is above average.

Accumulated year-to-date fire statistics through May 27 show 5,562 fires occurred in 32 states affecting an area of 360,435 hectares with 93% of area burned in grass and brush fuel types. The states with the highest number of fires were Mexico, Mexico City, Michoacán, Chihuahua, Puebla, Tlaxcala, Chiapas, Jalisco, Durango, and Morelos, which accounted for 83% of the national total. States with the largest area affected were Guerrero, Nuevo León, Chihuahua, Chiapas, Durango, Oaxaca, Michoacán, Nayarit, Mexico, and Tamaulipas representing 77% of the national total.

Canada Discussion

June/July/August: June, being the wettest month in many inland areas, is a critical month for determining summer fire activity in Canada. The latest seasonal forecast from the Canadian Wildland Fire Information System indicates elevated fire activity will likely continue in southern parts of Manitoba, Ontario, and Quebec. While portions of southern and northern British Columbia and Alberta are dry, fire activity in these provinces has been minimal to date and an increase may only bring levels back to normal. The forecast depicts northwestern regions of Canada having below normal fire severity during June.

Expectations of a warm summer with dry southern areas leads to a broadening area of potentially above normal fire severity south of an arc from central British Columbia through the northern Prairies and returning to the US border along the Ontario-Quebec border. Manitoba and far western Ontario will likely continue to be the most active region in Canada. Yukon and northwestern British Columbia may still experience below normal conditions. While other northern regions should have normal fire activity in July, this can still lead to substantial fire activity, since the northern Prairie Provinces and Northwest Territories normally experience the most area burned in Canada.

The pattern in August appears to be much the same as July, although above normal severity anomalies extend farther east into western Quebec and farther north into southern Northwest Territories and Nunavut. Much above normal severity is projected in southwestern British Columbia. The much above normal area in Manitoba and western Ontario extends north to Hudson Bay, affecting a larger area than in July.

United States Discussion

June/July/August: Climate outlooks indicate warmer and drier than normal conditions are likely for much of the High Plains and western US into summer continuing and exacerbating drought there. Near normal timing and precipitation is forecast with the North American Monsoon in July, which should help mitigate significant fire activity in the southwest US. However, there remains considerable forecast uncertainty regarding the North American Monsoon in the southwest US and the broader Intermountain West.

The Southern Area is likely to have near normal fire potential through the summer with below normal potential across the southern Plains in June. Near normal significant fire potential is also likely for Eastern Area and Alaska through the summer, although elevated periods of activity are possible during short-term drying episodes.

The Southwest is forecast to have above normal significant fire potential through June before the North American Monsoon arrives. Above normal significant fire potential will expand northward into the Great
Basin and Rocky Mountain Geographic Areas through August with areas closer to the monsoon likely returning to near normal significant fire potential in July and August. Central Oregon into southeast Washington is likely to have above normal significant fire potential beginning in June before expanding across much of the northwest US during July and August. Portions of the Coast Ranges, Sierra, and Cascades in California will increase to above normal in June and July and continuing through August. West of the Continental Divide in the Northern Rockies is expected to have above normal significant fire potential in July before spreading across the entire geographic area during August. Leeside locations of Hawaii are likely to have above normal significant fire potential through August due to heavier fuel loading and forecast warm and dry conditions.

Mexico Discussion

June/July/August: Forecast guidance indicates above average temperatures for much of Mexico in June with above average precipitation across much of the country except for Baja California, Chiapas, Chihuahua, Coahuila, and Tabasco. In July, precipitation and temperature are likely to be below normal across much of Mexico with above average temperatures continuing through August across the country. A mix of below and above normal precipitation is forecast across Mexico during August.

Temperature, precipitation, and drought conditions across Mexico combined with climatological analysis indicate above normal significant fire potential is forecast over Baja California, Sonora, Chihuahua, Sinaloa, Durango, Nayarit, and northern Jalisco during June. Above normal significant fire potential is likely to continue in northern Baja California through August. Low significant fire potential is forecast much of the country during July and August due to the rainy season. However, short-term weather could result in increased forest fire activity.

Additional Information

Additional and supplemental information for this outlook can be obtained at:

United States:
National Significant Wildland Fire Potential Outlook

Canada:
Canadian Wildland Fire Information System
[http://cwfis.cfs.nrcan.gc.ca/home](http://cwfis.cfs.nrcan.gc.ca/home)

Mexico:
Servicio Meteorológico Nacional

Outlook Objective

The North American Seasonal Fire Assessment and Outlook is a general discussion of conditions that will affect the occurrence of wildland fires across Canada, the United States, and Mexico. Wildland fire is a natural part of many ecosystems across North America. This document provides a broad assessment of those factors that will contribute to an increase or decrease of seasonal fire activity. The objective is to assist wildland fire managers prepare for the potential variations in a typical fire season. It is not intended as a prediction of where and when wildland fires will occur nor is it intended to suggest any area is safe from the hazards of wildfire.

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