# North American Seasonal Fire Assessment and Outlook

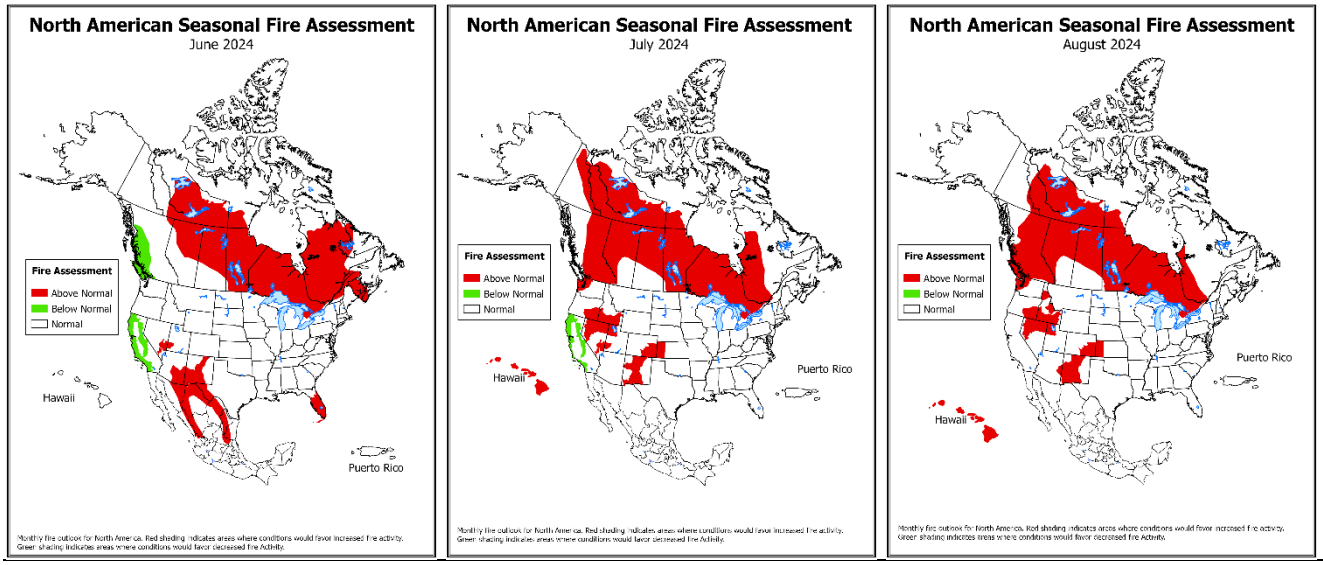
**National Interagency Fire Center ● Natural Resources Canada ● Servicio Meteorológico Nacional**
United States Canada Mexico

## Outlook Period June through August 2024
**Issued 14 June 2024**

## Executive Summary

Snow loss proceeded at a normal pace in northern Yukon, the Northwest Territories, and Quebec after little snow or rapid loss in southern regions over winter and early spring. Drought has been tempered somewhat with widespread rain, which in some regions persisted for several days at a time.

In western Canada, a short summer-like period just before mid-May featured high temperatures, low relative humidity, and wind that allowed 2023 holdover fires to flare up in northeastern British Columbia, northern Alberta, and the southern Northwest Territories. Large fires also burned in east central Saskatchewan and west central Manitoba, with evacuations in these regions, but the Northwest Territories had no evacuations.




Monthly fire outlook for North America for June 2024 (left), July 2024 (middle), and August 2024 (right). Red shading indicates areas where conditions would favor increased fire activity. Green shading indicates areas where conditions would favor decreased fire activity. *Click on each image to see larger versions.*

Stagnant troughing over the Prairie Provinces during mid-May provided heavy rain in some areas, which was then followed by several days of showers and thunderstorms that provided a bit more daily rain across many regions. Eastern Canada was wet as well, with well above average precipitation across central Quebec and Labrador, although southern regions were warm as well.

With most active fires receiving rain in mid to late May, activity was gradually reduced, allowing evacuation orders to be rescinded. Fires continue to burn in northeast British Columbia, northwest Alberta, and southern Northwest Territories, although at a slower pace. By the end of May, the national number of fires and area burned remained very close to the ten-year normal for the time of year.

A brief return to warm weather in western Canada in the last week of May was followed by showery conditions and seasonal temperatures. As the ridge providing the warm air moved eastward, wind

posed a potential problem in Manitoba, followed by Ontario and Quebec, although little fire activity occurred during this period. The dry and warm conditions appear likely to last longer in eastern Canada, and the first few days of June featured very warm temperatures in northern Quebec.

In the United States, fire activity gradually increased across the western geographic areas and Alaska in May and early June, while fire activity continued at low levels in the Southern Area, primarily in Florida and Texas. The National Preparedness Level was increased to two (on a scale of 1-5) on May 21 due to the gradual increase in fire activity. Precipitation across the contiguous US in May was above normal across much of eastern Montana into North Dakota and the Upper Midwest. Precipitation was well above normal from southeast Texas into south Georgia, with above normal precipitation across the Tennessee Valley and North Carolina. Precipitation was below normal across much of California, the Southwest, Great Basin, west Texas, and Florida peninsula. Temperatures were above normal across much of Texas into the Lower and Mid-Mississippi Valley to the East Coast in May, with near to below normal temperatures in the West and northern and central Plains. However, a heat wave gripped much of the West in early June, with temperatures well above normal and a few new daily records set in some cities.

Most climate outlooks depict a tendency for above normal temperatures across much of the US, with below normal to above normal anomalies likely for Alaska, from southwest to northeast. Precipitation is likely to be below across much of the Intermountain West into the Plains, with above normal precipitation along the Gulf and Southeast Coasts. Portions of the Southwest will have above normal significant fire potential through August, focused on New Mexico, as well as portions of central and south Florida in June. Above normal significant fire potential will develop over much of the northern Great Basin, southeast Oregon, northwest Washington, southeast Colorado, and western Kansas in July, continuing into August. Portions of central and northern Idaho are likely to be above normal fire potential in August as well. However, a slow start to the fire season remains forecast for California with portions of the state forecast to have below normal potential in June and July, but the lee sides of Hawai'i will have above normal significant fire potential.

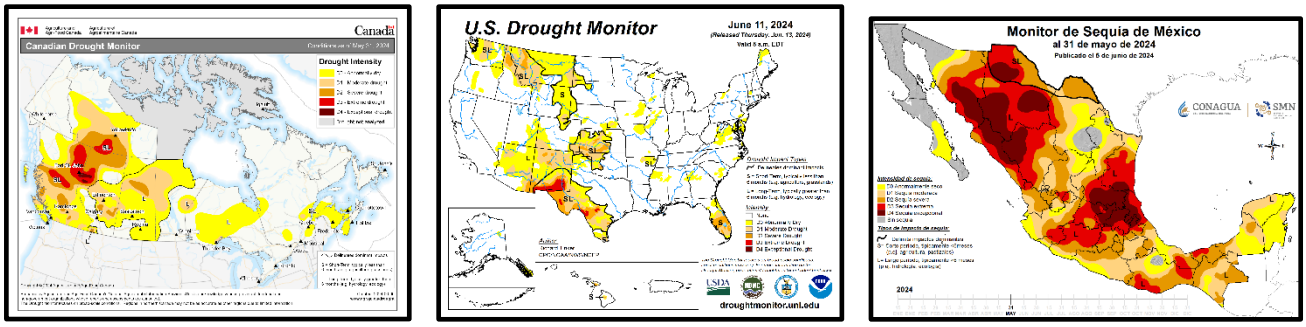
Fire activity has remained above normal in the western states of Mexico, while burned area anomalies have remained above normal across most of the country. For the months of March, April, and May, rainfall was below average, while average temperatures were above the national average. Hot to very hot temperatures were found across much of Mexico in May as well.

The most significant rainfall in the last quarter occurred in portions of southeast and central Mexico, with a slight improvement in drought across some of these areas. However, dry conditions in the rest of the country increased the areas of drought, with drought severity increasing as well. Fire potential across Mexico is expected to remain above normal in June across the Sierra Madre Oriental and Occidental, but the remainder of Mexico will see fire activity decrease as the rainy season begins.

## Critical Factors

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

**El Niño-Southern Oscillation**:
El Niño has weakened in the equatorial Pacific Ocean, with a return to neutral El Niño-Southern Oscillation (ENSO) conditions. Sea surface temperature (SST) anomalies in the central equatorial Pacific are slightly above average, while cooler than average SST anomalies are found off the South American coast. A rapid transition to La Niña continues to be forecast over the summer, with the Climate Prediction Center forecasting a 69% chance of La Niña developing in the July through September period. The spring predictability barrier is still an issue, although less so than last month. Other climate oscillations like the Pacific Decadal Oscillation (PDO) and Quasi-Biennial Oscillation will also influence weather and climate during the outlook period, but the transition to La Niña conditions and the negative PDO will be the main drivers.




**Left:** Canadian Drought Monitor from *Agriculture and Agri-Food Canada.* **Middle:** United States Drought Monitor. **Right:** Mexican Drought Monitor from *CONAGUA-Servicio Meteorológico Nacional.*

**Drought**:
About 45% of Canada (outside Nunavut, where drought is not assessed) is experiencing some level of dryness, from abnormally dry to exceptional drought. This marks a reduction of about 16% from the end of April assessment. Some southern Prairies regions dropped two to three drought classes, while dry conditions have been eradicated in much of eastern Canada, although an abnormally dry region has developed in the St Lawrence River Valley in Quebec, New Brunswick, southern Nova Scotia, and Prince Edward Island.

Intense drought persists in northern British Columbia and Alberta, and southern regions of the Northwest Territories. Small patches of exceptional drought stretch across the Alberta/British Columbia border in the Peace River region, while extreme drought patches persist in central British Columbia near Prince George, northeast British Columbia, Alberta's Peace River region, and across the northwestern Alberta/Northwest Territories border southwest of Great Slave Lake. Lesser drought levels, from severe drought to abnormally dry, surround these most-impacted areas.

Drought is minimal or absent in northwestern Canada, including Yukon and much of northwestern British Columbia. The most easterly patch of moderate drought lies along the central Manitoba/Ontario border, and east of that only patchy abnormally dry conditions remain.

Temperatures across the US were above normal for much of the southern Plains into the Lower and Mid-Mississippi Valley to the East Coast, with many locations in Florida recording their hottest May on record. Temperatures were near normal for California, the Southwest, and northern and central Plains, while below normal temperatures were observed across the Northwest, northern and central Rockies, and Great Basin. Temperatures in Alaska were below normal for much of west and southwest Alaska, and near to slightly below normal for the Interior and panhandle. Temperatures across Hawai'i were generally near normal, although temperatures were below normal for the western half of Maui.

Above normal precipitation fell across much of the central and eastern Montana, North Dakota, Minnesota, Wisconsin, and Iowa. Well above normal precipitation was observed along portions of the northern Gulf Coast, with above normal precipitation also recorded in the Tennessee Valley to North Carolina. Below normal precipitation was observed across much of the Great Basin, southern California, Arizona, southern New Mexico, and west Texas. Below normal precipitation was also recorded in portions of eastern Washington, south Texas, and much of the Florida peninsula.

Several strong wind events occurred across the Southwest into portions of southern Colorado and the central and southern High Plains in May. The strongest events occurred the final third of May, occurring on May 23 and 25. Few new significant fires were observed, but growth was observed on the Indios and Blue 2 Fires in New Mexico. A heat wave developed across the western US in early June, with well above normal temperatures, which were hottest in California, the southern Great Basin, West Slope, and Southwest. The second week of June also brought heavy rainfall and flooding to central and south Florida, where a few locations in south Florida have received over 300 mm of rainfall the past four days.

Drought coverage across the US decreased slightly, as less than 12% of the US remains covered by drought. Drought was removed from the remaining areas of the Midwest in the past month due to above

normal precipitation. Drought also was removed from of Missouri, with improvement and removal in central and western Kansas. While drought improved in northeast Wyoming and southeast Montana, these areas, now along with the remainder of eastern Montana, are abnormally dry. Drought developed across central and southern Florida due the very hot and dry conditions of May, but improvement is likely due to the recent and forecast rainfall. Drought persisted across much of New Mexico and southwest Texas, across the northern Rockies, and portions of Washington. Drought is forecast to persist, develop, and intensify in the Southwest into southwest Texas, as well as the northern Rockies and Washington. However, drought improvement and/or removal is forecast in western Kansas and Florida.

During the second half of May 2024, several weather systems affected Mexico as low-pressure troughs interacted with moisture from the Pacific Ocean, Gulf of Mexico, and Caribbean Sea. This caused above normal precipitation in portions of the northeast and center of Mexico, as well as in the state of Oaxaca, generating a slight decrease in exceptional drought in the border area between Guanajuato and Queretaro, and abnormally dry conditions in the border area between Nuevo Leon and Tamaulipas.

However, the presence of strong upper-level high pressure maintained the third heat wave of the season across the country, favoring hot to very hot weather and scarce rainfall in most of the country. This resulted in persistence of exceptional drought in the northwest and center of the country, with increased drought from severe to extreme in portions of Oaxaca, southern Veracruz, and Tabasco, as well as an increase in moderate to severe drought in Chiapas and abnormally dry areas in Quintana Roo. Coverage of moderate to exceptional drought for the second half of May 2024 was nearly 76% across Mexico, an increase over 5% since mid-May.

**Fire Season Status**:
Fires carrying over from 2023 across Canada continue to mingle with new fires starting in 2024, although the number of fires, and/or intensity has been reduced, likely due to regular rainfall over the past few weeks and suppression by crews. Clusters of new fires have started in western Yukon north of the St Elias Mountains and in northern Quebec.

Apart from these clusters of fires, the season is quiet in most areas of Canada. Based on 10-year averages, both fire numbers and area burned are close to normal or below normal in most jurisdictions. New Brunswick has had about 10-15% more fires than usual, but area burned is just over 50% of normal for this time of year. Area burned in British Columbia, mainly in the northeast corner, is at about 375% of normal for the time of year, with most of the burning earlier in the spring. Area burned is also high in Yukon at about 250% of normal, much of that occurring in early June, and the Newfoundland area burned is at about 170% of normal.

Fire activity gradually increased across the western geographic areas in the US in May into early June, while fire activity decreased in the Southern Area, except in Florida and Texas as the national Preparedness Level was increased to two May 21. The Southwest observed the most significant increase in activity during May into early June, with their Preparedness Level increasing to three May 24, while the Southern Area remains at Preparedness Level two. The Rocky Mountain and Southern California Geographic Areas increased to Preparedness Level two in early June, with the Great Basin Geographic Area also elevating itself to Preparedness Level two in mid-June. While most fires that emerged were of short-duration, two large fires in the Southwest, the Blue 2 and Indios Fires, burned for more than two weeks, with the Pioneer Fire in the Washington Cascades is expected to be a long duration fire. Year-to-date annual acres burned for the US is above the 10-year average at 163% of normal, but the national year-to-date tally of wildfires remains below average, near 77%.

So far this year 5,482 fires have been registered in 32 Mexican states resulting in 538,234 hectares burned. The vegetation corresponding to grass and brush was 94%, while timber was 6%. States with the highest number of wildfires were State of Mexico, Jalisco, Mexico City, Michoacán, Puebla, Durango, Chihuahua, Tlaxcala, Veracruz, and Oaxaca, representing nearly 83% of the total fires. States with the largest area burned were Jalisco, Oaxaca, Michoacán, Chiapas, Guerrero, Nayarit, Durango,

State of Mexico, Sinaloa, and Chihuahua, representing almost 84% of the national area burned. Out of the total fires, 752 (14%) occurred in fire-sensitive ecosystems, with a burned area of 57,480 hectares, which represents 11% of the total area burned. Fire activity has remained above normal in the western states, while burned area anomalies have remained above normal across most of Mexico.

## Canada Discussion

**June/July/August:** While the Natural Resources Canada seasonal forecast indicates above normal severity is possible from eastern Alberta and the Northwest Territories to Quebec, much of this area has been wet enough to keep fire activity low. If drying persists during the second half of June, activity could increase, but this may only bring numbers back up to normal for the time of year. Areas most prone to increased burning are Yukon, the Northwest Territories, and northern Quebec, although most fires in these regions are lightning-caused, since the human population is very low.

Predictions for warmth continue for July, with below normal rainfall in much of Canada. While precipitation forecasts lack accuracy, normal rainfall in the presence of above normal temperatures could still increase fire activity. Eastern British Columbia, Yukon, and eastward into western Quebec may be susceptible to increased fire activity, although the Prairie Provinces and eastern Northwest Territories may be at highest risk. At this time of year, grasslands and agricultural regions are generally excluded unless prolonged intense drought has prevented vegetation green-up.

Climate models predict a similar outcome for August, with warm temperatures and large areas of low rainfall. The predicted outcome looks similar to that of July, except the highest severity anomaly includes all of British Columbia except the northwest corner. The Prairie Provinces are also included in the area with highest predicted severity anomaly, as in July, with a lesser severity anomaly covering most of Ontario and western Quebec. High severity anomaly in much of British Columbia may result from the latest ENSO forecast delaying the transition to La Niña; if ENSO lingers in neutral status for a few weeks, the outcome may resemble the warm, dry, and active 2017 and 2018 summer fire seasons in the province.

## United States Discussion

**June/July/August:** Climate Prediction Center and Predictive Services outlooks issued in late May depict above normal temperatures likely for much of the US through August. Precipitation is likely to be above normal for much of the Southeast, Appalachians, and East Coast into the summer, but below normal precipitation is likely for much of the Northwest, Intermountain West, and High Plains through August.

Above normal significant fire potential is forecast for central and south Florida and far west Texas in June, although potential across Florida has decreased significantly due to the heavy rainfall that commenced around June 10. Above normal potential is forecast for much of central and western New Mexico June through August, and for portions of southeast Arizona in June. Above normal significant fire potential is forecast for portions of southern Nevada and southwest Utah in June and July. Much of the northern Great Basin, southeast Oregon and northwest Washington is forecast to have above normal potential July and August, with portions of northern and central Idaho forecast to have above normal potential in August. Like last year, a slow beginning to the peak fire season is forecast for California, with below normal potential forecast for much of California in June and for the Sierra and coast in July. Normal potential is forecast Hawai'i in June, rising to above normal for the lee sides July through September.

## Mexico Discussion

**June/July/August:** For the next three months through August, precipitation is expected to be below normal across most of Mexico, except for wet regions in southeast Mexico. This pattern will change in July, with above normal precipitation likely through August over most of the country. Maximum temperatures are expected to be above average in most of the country during through August as well. However, below normal temperatures are expected for the Baja California Peninsula and in western Mexico.

With the recent temperature and precipitation, as well as the current state of drought in the country, the weather outlook for June through August is forecast to be warm and above normal. Precipitation is forecast to be below normal in June, and above normal in July and August. Fire potential for the month of June will remain above normal in the northern Sierra Madre Oriental and Occidental, while the rest of the country will see fire activity begin to decrease due to the onset of the rainy season.

## Additional Information

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

United States:
National Significant Wildland Fire Potential Outlook
https://www.nifc.gov/nicc-files/predictive/outlooks/monthly_seasonal_outlook.pdf

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

Mexico:
Servicio Meteorológico Nacional
https://smn.conagua.gob.mx/es/observando-el-tiempo/monitoreo-atmosferico-ambiental

## 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.


## Acknowledgements

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