North American Seasonal Fire Assessment and Outlook

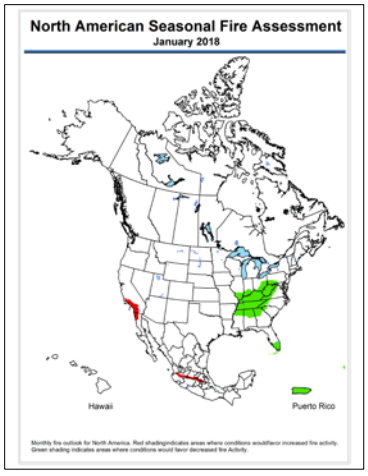
National Interagency Fire Center ● Natural Resources Canada ● Servicio Meteorológico Nacional
United States Canada Mexico

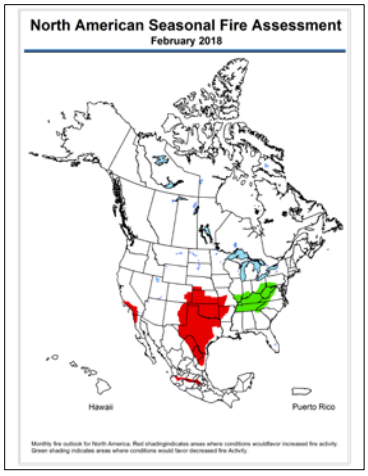
Outlook Period January, February, and March 2018
Issued 15 January 2018

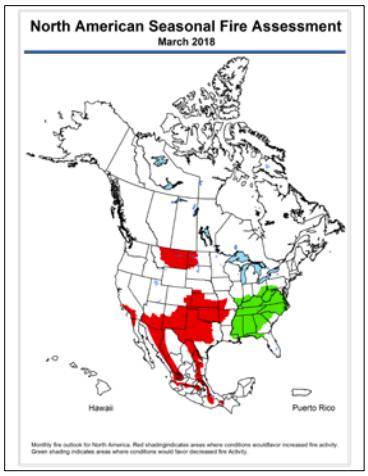
Executive Summary

Winter conditions spread deep into North America in early December as a strong ridge formed along the West Coast and a broad, deep trough covered most of continent. Cold arctic air surged southward deep into the central and eastern United States and northern Mexico by the second week of December, plunging many areas into frigid weather conditions that persisted through the month. Mild to warm conditions remained over the West Coast from northern Mexico to Alaska. Offshore winds and hot, dry weather fed fires over southern California well into the month. Very dry conditions spread across much of the continent with below normal precipitation over much of western and central Canada with normal to above normal precipitation in the mountains of southern British Columbia and along the U.S. border from the Great Lakes region to the Maritimes. In the U.S., much of the West, the central Plains, the Midwest, the Great Lakes, and the central Appalachians were well below normal precipitation. The Northern Rockies, the western Gulf Coast states, and parts of the Tennessee and Ohio Valleys were at or above normal. In Mexico, except for the northeastern states, most of the nation had below normal precipitation.

Fire activity is expected to be above normal along the southern California coast and the northern Baja California in January. By February and March, increased fire potential will spread across most of the south central and southwestern U.S. and along the eastern and western mountain ranges of Mexico. Increased fire potential will also spread over the northern Plains of the U.S. by March.







Monthly fire outlook for North America for January (left), February (middle), and March 2018 (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.*

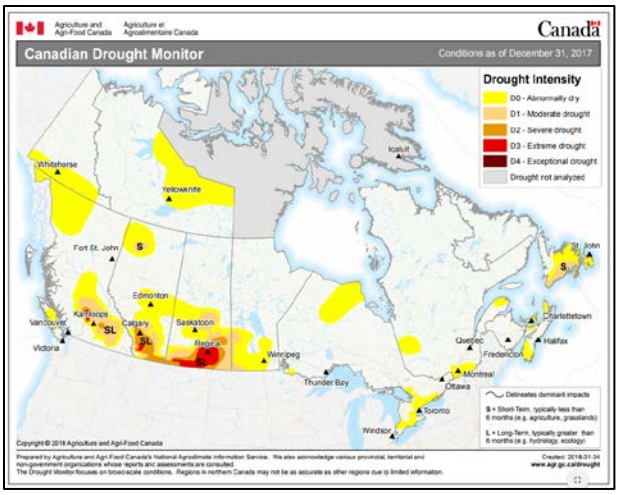
Critical Factors

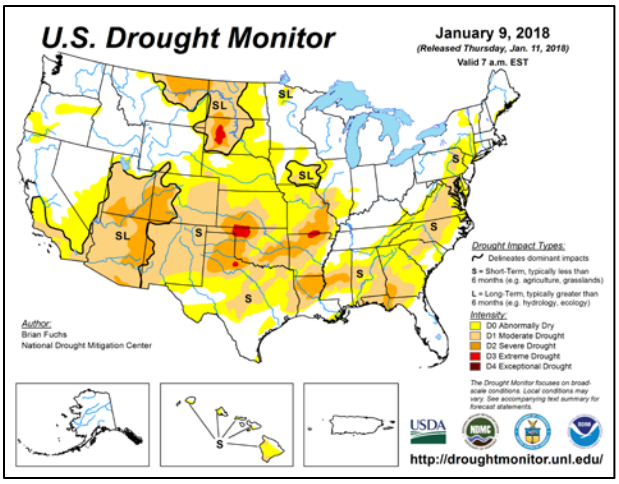
The critical factors influencing significant fire potential for this outlook period are:

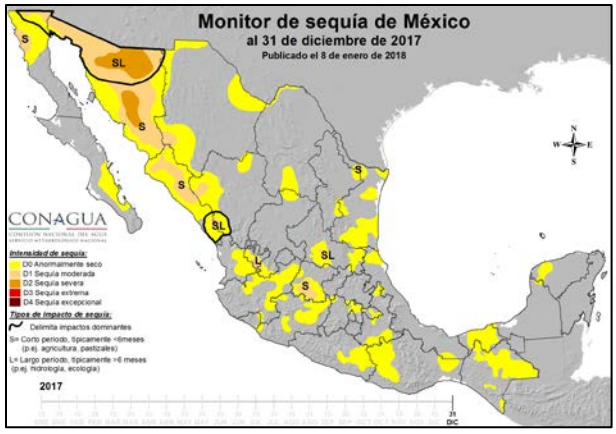
El Niño-Southern Oscillation: Equatorial Pacific sea-surface temperatures remained below normal through December. The latest forecasts indicate a high probability of La Niña conditions continuing through the Northern Hemisphere winter.

Drought: Severe to extreme drought conditions continued along Canada-United States border in southern Alberta and Saskatchewan and into northeastern Montana and the western Dakotas. Some decrease in severity occurred on the U.S. side but small pockets of exceptional drought remained in Canada. Some moderate to severe conditions also continued in southern British Columbia. Moderate to severe drought conditions spread across much of the southern U.S. with the biggest expansion east of the Rockies across New Mexico, Colorado, Kansas, Oklahoma, and western Texas. Dry conditions spread across the Southeast with pockets of moderate to severe drought from southern Alabama to Virginia. Little change to drought conditions occurred in Mexico with moderate to severe drought along the northwest coastal areas and pockets of dry conditions scattered throughout the central and southern states.

Fire Season Status: At the end of December, fire activity was very low with only a few fires scattered through the U.S. A very active fire period in mid-December brought several very large fires to coastal areas of southern California, with the largest fire, the Thomas Fire, burning over 250,000 acres. Winter conditions in Canada have mitigated most of the fire threat in the country.







Top: Canadian Drought Monitor for 31 December 2017 (from *Agriculture and Agri-Food Canada*). **Middle:** United States Drought Monitor for 9 January 2018 *(from U.S. National Center for Environmental Information).* **Bottom:** Mexican Drought Monitor for 31 December 2017 *(from CONAGUA-Servicio Meteorologico Nacional).*

Canada Discussion

January/February/March: Canada is expected to have minimal fire activity over the next few weeks with current winter conditions. An area of light snow
cover persists through central and eastern Alberta, central and southern Saskatchewan, and southern Manitoba. This area may be subject to spring fires in the grassland and parkland areas in spring if snowfall remains light and normal or early melting occurs

United States Discussion

January: La Niña conditions are likely to continue drying the southern third of the U.S., although occasional storms will bring some helpful moisture. Nonetheless, an elevated threat of large fires along the southern California coast will continue. Dry conditions in the Southwest and southern Plains will worsen but conditions in January are not likely to support much fire activity.

February/March: Drying continues across the southern third of the U.S. Transition to early spring across the southern Plains will bring increasing wind events that could spread fire quickly across the dry grasslands of the southern Plains and the Southwest. The increased potential will spread across Texas, New Mexico, Oklahoma, eastern Colorado, southern Kansas, western Arkansas and Missouri, and southern Arizona by March. Increasing potential for dry, windy fronts in the northern Plains and poor snow cover could contribute to elevated risk of large fires across eastern Montana and western North Dakota in March. Persistent dryness and potential for offshore winds will keep an elevated threat in coastal southern California.

Mexico Discussion

January: Latest conditions across most of Mexico indicated greenup and good vegetative health. Drought and vegetation dryness in the northwest leaves the far northern part of Baja California at an elevated risk for fires. Also, areas in the volcanic region of south central Mexico cannot be ruled out for increased fire activity.

February/March: By February, model forecasts indicated very rapid warming and dry acros most of the northern and central Mexico. This will greatly increase fire potential across northeastern Mexico from the Big Bend region to the Gulf Coast. Conditions continue to worsen in March with below normal precipitation along the Sierra Occidental. Increased fire potential spreads from Sonora to Jalisco in the west, and from Coahuila to Puebla and Oaxaca in the east.

Additional Information

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

United States:
National Significant Wildland Fire Potential Outlook
http://www.predictiveservices.nifc.gov/outlooks/monthly_seasonal_outlook.pdf

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

Mexico:
Servicio Meteorológico Nacional
http://smn.cna.gob.mx/index.php?option=com_content&view=article&id=156&Itemid=113

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

Contributions to this document were made by:

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Ginny Marshall, Natural Resources Canada

United States: Ed Delgado, Predictive Services, Bureau of Land Management
Jeremy Sullens, Predictive Services, USDA Forest Service

Mexico: Martín Ibarra, Servicio Meteorológico Nacional
Dario Rodríguez, Servicio Meteorológico Nacional