

# National Significant Wildland Fire Potential Outlook

## Predictive Services National Interagency Fire Center

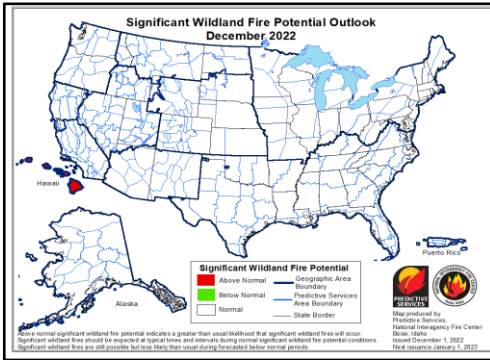
Issued: December 1, 2022  
Next Issuance: January 1, 2023



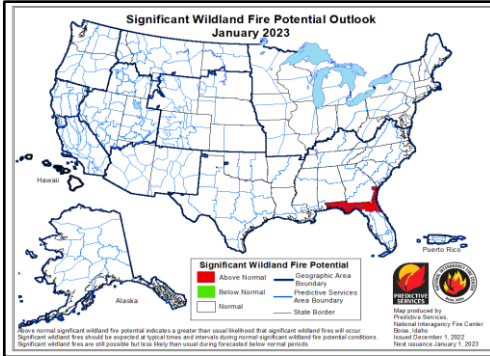
Outlook Period – December 2022 through March 2023

### Executive Summary

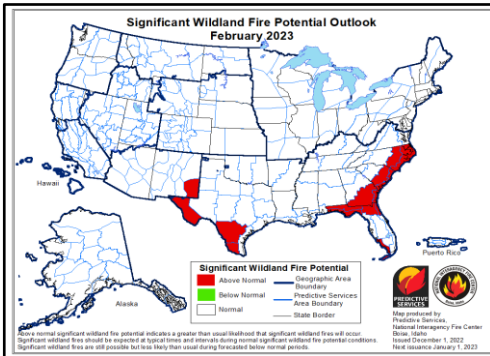
The significant wildland fire potential forecasts included in this outlook represent the cumulative forecasts of the ten Geographic Area Predictive Services units and the National Predictive Services unit.



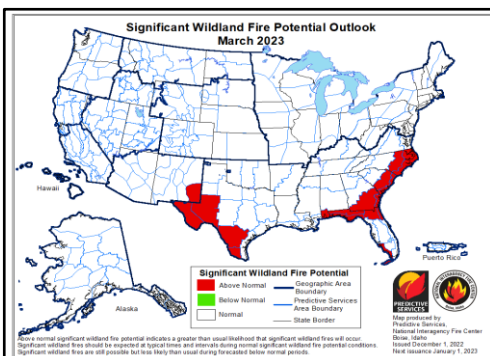
Significant fire activity decreased across the West in November, while activity increased across portions of the Southern and Eastern Areas through mid-month before waning. Heavy rain and mountain snow the first week of November across the West effectively ended fire season there except across portions of southern California and the Southwest. However, it remained dry across much of the central and southern High Plains with occasional significant fires. Year-to-date acres burned for the US is approximately 105% of the 10-year average, with the number of fires above average as well.



Although modest reduction in drought occurred across the US in November, drought continues across more than half the country. Drought continues in much of the West, with some improvement over the Northwest and southern California, while drought continues over much of the Plains to the Appalachians. Precipitation varied across the country much drier than normal conditions from portions of the Southwest into the central Plains, while the wettest conditions compared to average were observed across portions of southern California, south Texas, and the Florida Peninsula. A large area of below normal precipitation occurred across the Mid-Mississippi Valley into the Ohio and Tennessee Valleys and Great Lakes.



Below normal temperatures and near to above normal precipitation are forecast from the Pacific Northwest through the northern Plains into the Great Lakes December through March due to La Niña. Below normal precipitation is forecast across the southern tier of the US from southern California through the Southwest into the southern Plains and Gulf Coast. Above normal temperatures are forecast across the southwest US into Texas, the Gulf Coast, and East Coast.



The contiguous US (CONUS) and Alaska are forecast to have normal significant fire potential for December, with above normal significant fire potential for the lee sides of the Hawai'iian Islands. Significant fire potential is forecast to return to normal for Hawai'i in January and continue through March.

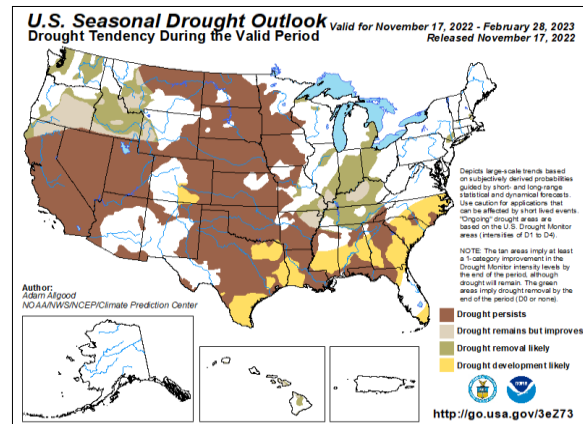
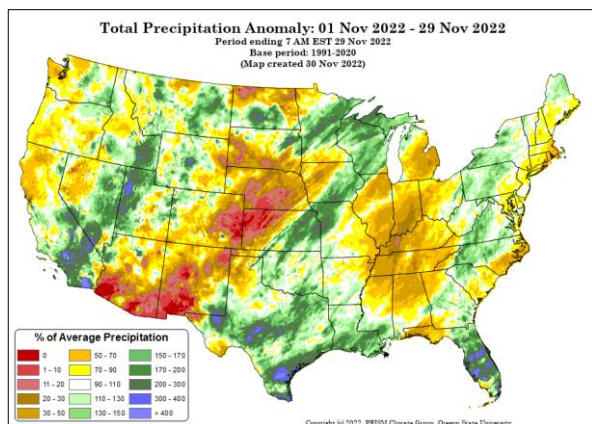
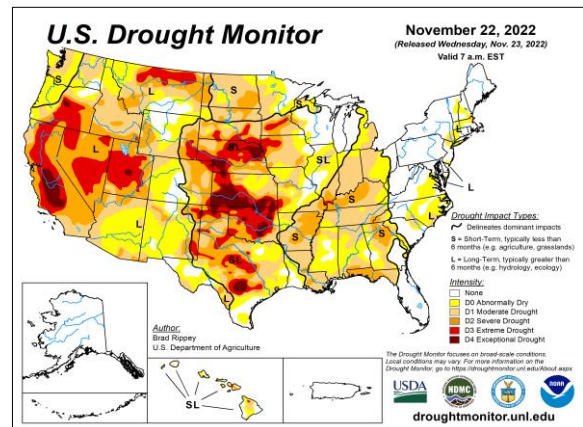
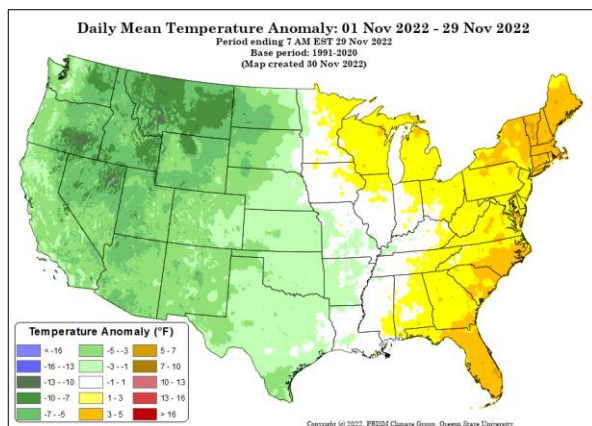
By January, above normal significant fire potential is forecast across the Florida Panhandle, north Florida, and the Georgia coast. Above normal potential will expand into much of the Southeast coast in February, with above normal potential also developing across south and west Texas, southeast New Mexico, and southwest Florida. Above normal potential will continue across these areas into March, with above normal significant fire potential expanding to cover much of the Trans Pecos of west Texas.

## Past Weather and Drought

Below normal temperatures were observed across the West into the Plains during November, with several outbreaks of Arctic air observed over portions of Montana into the northern Plains the latter half of the month. A series of strong Pacific storms affected the West November 4-8 with rain and heavy mountain snow. Precipitation amounts over eight inches were observed in portions of the Sierra and southern California mountains with these storms, while the Southwest observed only light precipitation. A transition to a drier, but colder weather pattern occurred over the West mid-month, with several Santa Ana wind events occurring over southern California. The strongest winds occurred November 15-16, but significant fires were not observed due to the heavy rainfall the week prior. Pacific storms returned to the northwestern US the last week of November. Overall, much below normal precipitation was recorded over the Southwest for November, with above normal precipitation over southern California into portions of the central Great Basin. Elsewhere across the West, precipitation was generally near normal with some areas slightly below normal, such as northern California, and others slightly above normal, such as eastern Washington.

Much below normal precipitation was observed across eastern Colorado into the central Plains, with below normal precipitation also observed from the southern Great Lakes south to the Tennessee Valley and northern Alabama. A narrow swath of above normal precipitation was recorded from portions of south and central Texas into the Lower Missouri Valley and western Great Lakes. Precipitation was near normal for much of the East Coast except across the Florida Peninsula, which was above normal. November temperatures were above normal east of the Mississippi River as well.

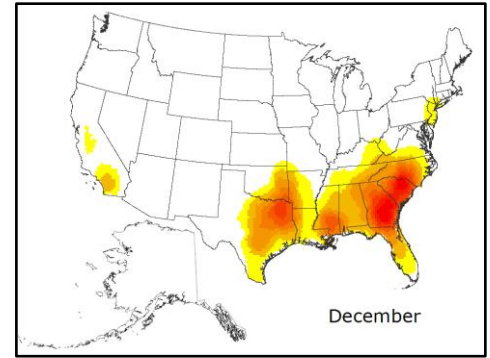
Abnormally dry to drought conditions continue across over 80% of the CONUS at the end of November. However, some improvement in drought was noted across portions of the northwestern US, particularly across western and northern Oregon, western Washington, and northwest Montana. Improvement also occurred over portions of the Lower Mississippi Valley, with modest improvement in drought across portions of southern California, western Wyoming, and western Colorado. However, drought persisted over much of the Plains, the Ohio Valley, and Florida Panhandle.



Left: Departure from Normal Temperature (top) and Percent of Normal Precipitation (bottom) (from PRISM Climate Group, Oregon State University). Right: U.S. Drought Monitor (top) and Drought Outlook (bottom) (from National Drought Mitigation Center and the Climate Prediction Center)

## Weather and Climate Outlooks

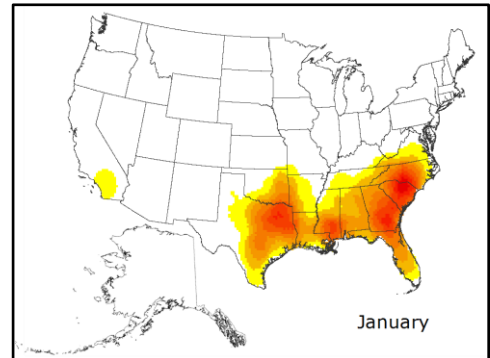
La Niña conditions continue, with below average sea surface temperatures (SSTs) over much of the equatorial Pacific Ocean. SSTs have remained generally steady for the past month, with La Niña conditions likely to continue but gradually weaken through winter. The Climate Prediction Center (CPC) is forecasting a 57% chance of neutral conditions returning by March. Other teleconnection patterns, such as the Madden-Julian Oscillation and Pacific Decadal Oscillation, may have smaller impacts over the winter, but La Niña is forecast to remain the dominant influence for this outlook period.



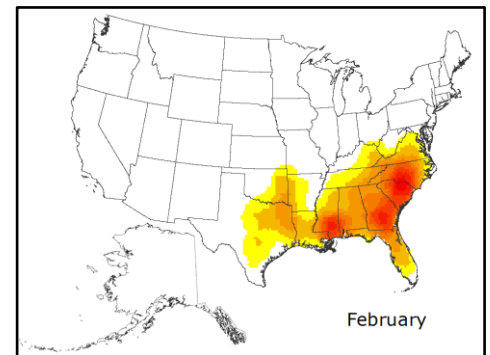
## Geographic Area Forecasts

**Alaska:** Normal fire potential is expected in Alaska through March as Alaska is out of fire season.

Ample rainfall over most of the state during the second half of the wildfire season eliminated all drought conditions across Alaska. Snow has fallen over most of the state, setting the base for the season's snowpack. There is lower than normal snowpack in some parts of southwest and southeast Alaska.

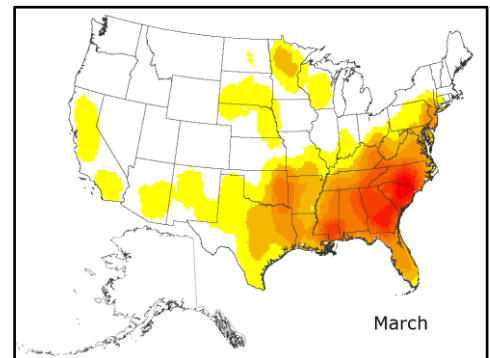


The Climate Prediction Center (CPC) forecasts that precipitation patterns will be near normal for much of Alaska with a moist signal over the west coast and drier conditions in the Panhandle, Kenai Peninsula, and Copper River Basin. CPC also indicates a trend for warmer temperatures along the North Slope with colder temperatures in southeast Alaska. Snow already covers most of the state, and December is typically one of the snowiest months of the year.



With no wildfire activity in the state, Alaska is out of fire season. Fuels across most of the state are snow-covered. Areas that don't have snow are generally coastal locations with cool and damp conditions, so fuel burnability is very low statewide. With the winter snowpack established in many areas and seasonably cold, damp weather in the forecast, Alaska is out of fire season through March.

**Northwest:** Climate outlooks suggest the Northwest Geographic Area will undergo colder and wetter than typical weather through spring. Therefore, normal (i.e., very low) risk of significant fires is expected over the geographic area through March.



A series of Pacific frontal systems brought wetter and cooler weather to the geographic area during the first week of November. Dry and cool weather with periods of gusty easterly winds followed as strong high pressure became established inland during the middle of the month and wetter weather returned later in the month. Overall, temperatures were cooler than normal for the geographic area in November. Monthly precipitation totals were mixed, with some areas above average and others below average. Snow totals at higher elevations are above normal.

Normal fire season progression across the contiguous U.S. and Alaska shown by monthly fire density (number of fires per unit area). Fire size and fire severity cannot be inferred from this analysis. (Based on 1999-2010 FPA Data)

Drought designations worsened slightly both west of the Cascades and on the east side in November. The entire geographic area remains in some form of drought, with extreme to exceptional drought areas persisting in central Oregon. Around November 17, the 1-week Evaporative

Demand Drought Index values reached the highest two categories over much of western Oregon and western Washington, representing much warmer and drier than normal conditions.

Wildfire activity was minimal during the first week of November due to wet weather. However, during the middle of the month fire activity increased during a persistent spell of dry weather with gusty east winds. Wildfire activity culminated November 18-19 when dry, gusty east winds propelled escaped burns in western Oregon and western Washington, several of which grew to over a hundred acres in size with homes threatened. Fire activity diminished during the last week of the month as wetter weather returned. Fire danger indices fell below average during the first week of November on the west side but generally remained at or above average east of the Cascades. During the dry spell in the middle of the month fire danger climbed steadily and reached record high energy release component values for November on both sides of the Cascades, especially western Washington. Fire danger fell again in the last week of the month as wetter weather returned.

**Northern California and Hawai'i:** Significant fire potential is projected to be normal. Historically, during December through March less than one large fire occurs for each PSA. Hawai'i's significant fire potential is forecast to be above normal during December, especially the leeward sides, then likely drops back to normal January through March.

The weather pattern during November across northern California was mixed with alternating wet and cool followed by dry and warm periods. Average temperatures were below to well below normal, with the coolest anomalies east of the Cascade-Sierra Crest. There were mixed precipitation anomalies, with some areas near to a little below normal, while other areas near to above normal. The first two weeks were the most active in terms of the storm track. No Red Flag Warnings or High-Risk triggers for significant fire potential were issued, although a few dry gusty northerly and easterly wind events did occur, with the strongest on November 18-19. Lightning was observed on five separate days totaling a little over 400 cloud-to-ground strikes but was accompanied by cool and moist weather.

Herbaceous fuels, which had begun to cure during October following the initial flush in September started to green-up again, generally below 1,500 to 2,500 feet, due to the added soil moisture while freezing and snow cover affected the mid and upper elevations. Live shrub and tree canopy sampling was more limited during November with dormancy setting in across the mid and upper elevations. Some light green-up was likely in the shrubs, especially manzanita and chamise, across the lower elevations, although the cooler than normal temperatures likely slowed that process down. Therefore, many of the live fuels were likely still flammable during the month. Fire business was light with most days reporting less than five initial attack fires for minimal acres. Prescribed burning remained active, although the dominant project type was piles versus landscape burns due to the abundant precipitation and snow cover from earlier in the month.

The weather outlook for December through March calls for mixed temperature and precipitation anomalies. Similarly, some months will experience near to above normal temperatures while others near to below normal. Pacific troughs are expected to be more active during December and provide above normal precipitation, with some extended drier and warmer periods during January due to upper ridging. Critically dry fuel moistures are not likely to be reached for any great length of time, if at all, during the four-month outlook. The light flush of green-up observed in November should continue to grow during December with that growth likely to remain below 1,500 to 2,500 feet. The normal to above normal carryover herbaceous fuel loading should get altered or broke down during the next few months due to periodic wind and precipitation events coupled with further green-up across the low elevations. Shrubs should also continue to slowly green-up across the lower elevations and become less flammable over time. As a result, no significant fire activity is expected from December through March due to the combination of timely cool and moist intrusions, upper elevation snow cover, lower elevation herbaceous and shrub green-up, and seasonality. Some moderately sized fires could develop in the timbered areas below persistent snowpack as well as within the heavier carryover herbaceous fuels that are still standing following a two to three week warm and dry period if that occurs. These moderately sized fires would occur during dry and gusty wind events. A normal amount of dry and gusty northerly and offshore wind events should occur during the coming months but could be somewhat enhanced during portions of January and possibly February.

Sea surface temperature (SSTs) anomalies surrounding the Hawai'ian Islands are above normal. Average temperatures during November were generally near or above normal with a cooler than normal anomaly across portions of the Big Island. Precipitation anomalies were generally below normal with near normal readings across eastern portions of the Big Island. Long term drought improved across portions of the Big Island, otherwise drought of varying intensities remained across all the islands.

The four-month weather outlook calls for near to above normal temperatures consistent with the above normal sea surface temperature forecast. An above average wet season is still forecast during the next four months, although enhanced trade winds at times due to a weakening La Niña will provide some drier leeward locations. A rare Red Flag Warning was issued November 21, which was the first Red Flag Warning issued in November since 2012. A 2,000-acre wildfire also affected west Maui during the month. Drought intensities will likely ease, but it may take some time across the leeward sides. Therefore, above normal potential has been extended for mainly the leeward portions of the islands through December, with normal potential forecast January through March.

**Southern California:** The unusually stormy weather pattern of the summer and early fall months abated as the monsoon season ended. Precipitation from late June through early September was above normal with nearly every day punctuated by afternoon and evening thunderstorms. But little, if any, dry lightning occurred which kept weather-related new starts quite low despite the amount of lightning that was received.

As the synoptic pattern transitioned from summer into fall, one notable early-season storm occurred on November 8. This storm brought widespread significant rain and mountain snow to nearly the entire geographic area. Some of the heaviest rain of the past several Novembers occurred, particularly over southern California. A few of the south-facing aspects of the Angeles National Forest received over eight inches of rain, which is more than the rest of the calendar year (January – November) combined for that area. Only two years since 2000 have had wetter Novembers at the Downtown Los Angeles official weather station.

A week later, the first offshore wind event hit on November 15-16. As has been the case the last couple of years, the first event of the season was strong one and wind gusts topped 100 mph at the Magic Mountain Truck Trail weather station. Some minor tree and vehicle damage occurred in some of the windiest passes and canyons before the winds relented a few hours later. This offshore event was followed by two additional, less intense, wind events. However, at the time of this writing, a pattern shift to a wetter one is expected to occur in December.

The intermittent wet periods of weather followed strong drying conditions has resulted in a sawtooth dead fuel moisture trace across many PSAs. This was especially true in locations with larger diameter dead fuels where the monsoon was able to bring an unusual amount of rainfall to areas, which ordinarily do not see much precipitation during the summer months. However, the net overall impacts of the unusually heavy rain were fleeting as the precipitation occurred too far out of season to change both live and dead fuel moisture much in the long term. Likewise, the monsoon did little to alleviate the drought in which over 40% of the state is mired in the extreme category, or worse.

The expectation of near normal precipitation through most of December should help bring both live and dead fuel moisture closer to normal values. Wetting rains and mountain snow are most beneficial during this time of year. Days are short and the sun angle is low, which both lessen the impact of evaporation. Seasonal grasses are beginning to grow over many areas below 3,000 feet in shady areas and across north aspects with good soil. Grass growth should continue during the next few weeks and native shrubs will begin to take on moisture. Subsoil moisture is good over many areas despite the dry weather of late November, which should result in subsequent December rain producing further live fuel growth.

For the third consecutive year, SSTs are below normal, indicative of La Niña. Therefore, the winter weather pattern across the West should eventually settle into one of a typical, mature La Niña. The official [Climate Prediction Center \(CPC\) 90-day outlook](#) is forecasting for below normal precipitation from the Monterey Bay southward into southern California. CPC is also calling for a 76% chance of the La Niña to continue through February.

Given that circumstance, it is likely the jet stream and most associated weather systems will remain north of the geographic area during wettest time of year, climatologically. This may cause associated plant growth to slow early next year in a fashion similar to the 2021-2022 season. The amount of fuel loading may be below normal heading into the spring, and thus, lead to less of a spike in fire activity in late winter or spring.

Somewhat counterintuitively, while the projected dry start to the 2023 calendar year may lead to an earlier start of the grass fire season, it may be less severe than if the wet conditions expected in December were to continue for a longer period. There may be less fuel available for consumption, which may lessen chance of significant fires during the outlook period. This should not be confused with a lesser than normal chance of new fire starts. Dead fuels would be especially susceptible to ignition and there may be a higher-than-normal level of initial attack and local resource engagement early next year in a dry early 2023 scenario. However, the initial attack may have a greater chance of success than if there were more fuel available for burning.

There is no clear indication whether there will be an above normal or below normal number of offshore wind events the next few months. However, if the blocking pattern over the eastern Pacific resembles that of some recent years, there may be more opportunities for cold air advection to occur to our east, which may increase the likelihood of such wind events.

**Northern Rockies:** Significant wildland fire potential in the Northern Rockies Geographic Area (NRGA) for December through March is expected to be normal. November brought cold temperatures and snow cover to the much of the geographic area, and this pattern is expected to continue through winter.

November has been generally cold, with temperature departures of 7 to 15 degrees below normal for almost the entire region although north Idaho a bit less extreme. Moisture was mostly above normal for the region with a few localized exceptions. North-central Montana was one of the drier spots, which caused retention of extreme drought (D3) for that part of the region. Most of the moisture fell as snow, which was held in the landscape by the below normal temperatures. This insulation factor has slowed any evapotranspiration from the soils.

The November moisture fell onto warm ground and then was insulated from above by snowfall allowing the moisture to be retained in the landscape and transferred into the larger fuels. Most PSAs are reporting near normal moisture with many areas reporting 1000-hr fuel moistures above 20 percent. No significant fire activity was reported.

Normal fire activity is expected for the December through March outlook. November transitioned the NRGA into a less fire prone regime and short-term weather trends look to maintain this environment. Even though La Niña is weakening, its presence along with other global weather patterns favor below normal temperatures and above normal precipitation chances through the mid-winter months. The presence of drought in north-central Montana may combine with periods of downslope winds to bring short windows of fire concern. However, as this can occur in any given year, normal significant fire potential is still forecast for this area.

**Great Basin:** Fire activity remains low across the Great Basin, which is normal for the time of year. Storms are expected to move across the Great Basin through December, then target mainly the northern half to two-thirds of the geographic area January through March keeping fuel moisture higher and fire potential low. Drier and warmer conditions are expected in the southern Great Basin beginning in January, but fine fuels are of minimal concern, therefore, normal (i.e., low) fire potential is expected through March.

Cooler than normal temperatures and strong inversions occurred throughout much of November between storms, with a brief warm-up toward the end of the month. Precipitation over the last thirty days was above normal over the central Great Basin and into parts of Idaho but remained below normal elsewhere. Severe to extreme drought continues across Nevada and Utah into far southern Idaho and western Wyoming, with moderate drought conditions farther north into central Idaho. The drought is expected to continue across

Nevada and Utah, with improvement expected in Idaho and Wyoming in the next few months as the storm track is forecast to remain on the north side of the Great Basin.

Fuels are drier than normal over southern areas of the Great Basin but are not critical. 100-hr fuel moisture remains low in the 6-10% range over southern areas of the Great Basin, and 10-hr fuels are 3-4% due to lack of recent moisture. Farther north, fuel moisture is much higher. Grasses are transitioning to dormancy across most of the Great Basin. Fine fuel loading was above normal this year across the Snake River Plain and parts of far northwest Nevada. Fire activity remains low across the Great Basin with no significant fires.

Normal fire potential is expected December through March in all areas, which typically means low fire potential. There could be upticks in fire potential across parts of the southern half of the Great Basin on windy days after prolonged dry periods if there are ignitions. However, any uptick in fire potential will typically only last a burning period or two and be very localized as fine fuels are not significant in the southern Great Basin. Areas that saw above normal fine fuels this past year across the Snake River Plain and parts of far northwest Nevada may see fire starts during prolonged dry periods with growth possible on windy days. However, the northern storm track should keep those areas moist enough to minimize that threat.

**Southwest:** Normal significant fire potential is anticipated area-wide for the winter through the early spring. Localized areas of enhanced fire potential are possible at times, especially in February and March, for portions of the southeastern plains in New Mexico.

The early arrival of the North American Monsoon in mid to late June ended the large fire season in the Southwest Area and was one of the more robust monsoonal periods in recent history for many portions of the region. The months of October and November have been wetter than average for many areas along and east of the Divide, with some wetter than average areas farther west in Arizona. Temperatures have trended below normal overall, especially across southeastern Arizona into southern New Mexico, where values have been four to six degrees below normal overall over the past sixty days.

However, as anticipated, the last couple of weeks have turned drier with temperatures still below normal, although not as much as earlier in the fall. Through winter, the forecast is for a milder and drier than normal weather pattern due to an ongoing La Niña. The jet stream will generally remain to the north, and the Southwest Area will generally end up beneath frequent northwest flow aloft. Some areas of near normal precipitation and high elevation snow will be likely across the northern tier of the geographic area, elsewhere, below normal precipitation is expected overall. Given the ongoing dryness across the plains through the winter, areas of above normal significant fire potential are expected across sections of the southeastern plains of New Mexico. More localized above normal significant fire potential could also occur farther north across the plains. Elsewhere, despite the drier and milder conditions, significant fire potential will remain normal areawide through March.

**Rocky Mountain:** Normal significant fire potential is expected across all areas of the Rocky Mountain Geographic Area (RMA) for the outlook period, which typically means low fire potential. However, this outlook period is expected to have a few periods of elevated fire potential across eastern Colorado, Nebraska, and western Kansas due to persistent drought and above-normal loading of cured and freeze-killed fuels when dry and windy conditions occur.

Weather patterns fluctuated significantly across the RMA from the end of October through November. A few deep, cold troughs moved across the geographic area, bringing cold temperatures to South Dakota and mountain snow to Wyoming and Colorado, while warmer and drier downslope conditions under periods of high pressure persisted along the Front Range eastward across the High Plains of Kansas and Nebraska.

Periodic snow showers occurred across western Colorado and Wyoming, while the greatest precipitation deficits remained across the lower elevations east of the Divide. This exacerbated the very dry conditions that have been in place across southern South Dakota, most of Nebraska, eastern Colorado, and western

Kansas. CPC soil moisture anomaly analysis captures the extreme dryness across the southern and central Plains extending north into the Dakotas over the last month. The lack of precipitation effectively expanded drought across the High Plains, with extreme and exceptional drought now observed across most of Nebraska, far northeastern Colorado, and western Kansas.

The mountains of western Colorado and Wyoming have accumulated snow, and areas in north-central and eastern South Dakota have received a beneficial mix of snow and rain due to several weather systems since mid-October. However, fire danger will remain elevated across southwest South Dakota, the Black Hills, the Nebraska Panhandle, northeast Colorado, and portions of the central Front Range extending east into western Kansas until snow cover or substantial precipitation occurs. A combination of colder temperatures and higher relative humidity for an extended period would also aid in mitigating the risk.

Many of the aforementioned areas continue to show Energy Release Component (ERC) values at or above the 90<sup>th</sup> percentile. Large fuels in the Black Hills remain near record values for mid to late November. Moisture from precipitation events has been scattered for the southern half of the Black Hills and southwest South Dakota, resulting in very dry conditions.

Across lowland areas of southeast Wyoming, northeast Colorado, and the Nebraska Panhandle, similarly dry conditions persist, with fuels significantly drier than normal for this time of year and increased fuel loading in many areas. Precipitation deficits and extreme to exceptional drought conditions across the High Plains have kept values of both ERC's and fuel moistures at some of the most severe levels recorded in the last fifteen years.

Under periods of warm, dry weather and lower humidity, any snow cover will quickly erode and once again expose fuels. These same critical areas will show an additional rise and spike in ERC values, conditions that will easily support very rapid fire spread under any prolonged wind event or dry frontal passage. Favorable conditions in November allowed prescribed burning in many areas. However, there were a few large fires over the past month as well, including the Turkey Day Fire, which started November 23 on the Pine Ridge Reservation in South Dakota.

La Niña will retain an influence for a third consecutive winter season for the December through March outlook. Even though the ENSO pattern is expected to weaken and return close to a neutral state by March, CPC outlooks continue to suggest cooler and wetter conditions are favored for most of the RMA into the first week of December. Then a return to a warmer and drier pattern is forecast across the southern portions of the area by the end of the month. A split pattern is expected for the outlook January through March where cooler temperatures and normal precipitation continue across northern portions of the geographic area while warmer and somewhat drier conditions persist across the south. It is important to note the colder and wetter troughs that have impacted the Intermountain West since mid-October, suggest that other evolving climate signals may continue to reinforce a wetter pattern for the western United States. These troughs could include the Rocky Mountain Area as we go through the winter months.

The outlook for the RMA depicts normal significant fire potential across the geographic area through March. However, due to the persistent drought across the Plains, significant fire potential may be elevated at times during the outlook period, especially across Nebraska and Kansas during dry and windy weather events. Statistics also point to an increase in large fire occurrence across the Plains in March, which is considered normal within the geographic area fire history. Areas of enhanced risk at any time will be dictated by a lack of snow cover or moisture where fuels remain receptive.

**Eastern Area:** Long-term drought was in place across parts of the Mississippi and Ohio Valleys towards the end of November. Thirty to 90-day soil moisture and precipitation anomalies were near to above normal across the remainder of the Eastern Area.

Below normal temperatures are likely over the Upper Mississippi Valley in December and the majority of the Eastern Area in January. Above normal temperatures are likely across much of the southern tier of the Eastern Area in March. According to CPC and Predictive Service's long-term outlooks, wetter than normal conditions are increasingly likely across much of the Eastern Area January into March.



Periods of below normal fuel moisture levels may persist into December across drier parts of the western Mississippi Valley. However, near normal fire potential is expected across the Eastern Area through winter into early spring.

**Southern Area:** More frequent episodes of wetting rain have improved conditions across the Southern Area over the past several weeks, while Hurricane Nicole and its remnants brought drought relief to eastern portions of the geographic area. The most notable drought improvement has occurred from eastern Texas and western Louisiana into portions of eastern Oklahoma, Arkansas, and Mississippi. Beneficial rainfall associated with Nicole brought relief to eastern Tennessee and Kentucky that experienced a short-lived uptick in fire activity after the early leaf drop. Moderate to severe drought remains widespread across the region, with notable areas of Keetch-Byram Drought Indices (KBDIs) above 600 across southwest Florida, the Florida panhandle into southern Alabama, western Kentucky, and Tennessee, and in localized areas across Texas and Oklahoma, where extreme to exceptional drought continues.

Looking at the bigger picture, La Niña is expected to be the dominant climate driver through winter and perhaps early spring. Even if equatorial Pacific water temperatures trend towards neutral, as is currently forecast, changes in the atmosphere typically lag by several months. More importantly, lack of soil moisture recharging typically observed during La Niña winters could maintain areas of drought and fire potential well into spring. One major area of uncertainty this winter lies in the potential for high latitude blocking over the Arctic, north Pacific, or north Atlantic Oceans. Blocking episodes, where an abnormally strong high-pressure ridge dominates the higher latitudes, have the potential to force extremely cold and dry air into the southern U.S., similar to what has already occurred twice this fall. Predicting their development is of somewhat low skill, but medium range model guidance has been persistent in showing blocking developing again by the second week of December. It is also worth noting that some years with late season hurricane impacts in the eastern US have featured abnormal cold in the South during early winter, which was also a feature of the last "triple-dip" La Niña in December 2000. La Niña should continue to favor episodes of abnormally warm and dry conditions across portions of the Southern Area, but periods of extreme cold could temper the warm signal and lead to significant winter storms if this blocking materializes. More importantly, the battle between blocking-induced cold and La Niña-favored warmth is expected to produce a stormy pattern capable of wiping out drought conditions for some portions of the South during at least the first half of December. Areas from eastern Texas and Oklahoma through the Mississippi, Ohio, and Tennessee Valleys, including the Appalachians, are most favored to see above normal precipitation or frequent wetting rainfall the first two weeks of the month. Due to this, normal significant fire potential is forecast across the geographic area through December.

Areas across the Florida Peninsula and Southeast Piedmont with high streamflow as of late November may see near to below normal large fire potential in December and January, but portions of north Florida into southern Georgia are included in above normal potential by January given the potential for rapidly developing or worsening drought. A warm and dry winter is perhaps most likely for the coastal Southeast, thus an early start to the spring season is maintained for the coastal plain and coasts of the Carolinas into southern Georgia and northern Florida, with above normal potential continuing into March. Lastly, several agencies have expressed concern that salt-cured fuels associated with Ian's historic storm surge could easily burn at any moment. Because of this and the likelihood of drought development this winter, southwest Florida is included in above normal potential for February and March. KBDIs in south and southwest Florida are already trending above 500, especially over portions of the Everglades and Big Cypress National Parks.

No changes have been made to the forecast for above normal significant fire potential in the Texas Trans Pecos and along the Rio Grande during February, given continued signals for a warm and dry winter ahead. The Texas Forest Service has confirmed that grass loading is above normal in these areas due to spillover from the active North American Monsoon last summer. Above normal significant fire potential is expanded into southwest Texas during March, where drought persists but grass loading is near normal. Grass loading is below normal over much of the Texas and Oklahoma High Plains due to the multi-year drought and excessive grazing, so the spring season across the panhandles could end up below normal even if conditions lead to episodes of dry and windy weather.

## **Outlook Objectives**

*The National Significant Wildland Fire Potential Outlook is intended as a decision support tool for wildland fire managers, providing an assessment of current weather and fuels conditions and how these will evolve in the next four months. The objective is to assist fire managers in making proactive decisions that will improve protection of life, property, and natural resources, increase fire fighter safety and effectiveness, and reduce firefighting costs.*

**For questions about this outlook, please contact the National Interagency Fire Center at (208) 387-5050 or contact your local Geographic Area Predictive Services unit.**

**Note:** Additional Geographic Area assessments may be available at the specific GACC websites. The GACC websites can also be accessed through the NICC webpage at:

<http://www.nifc.gov/nicc/predictive/outlooks/outlooks.htm>