Outlook Period – November 2022 through February 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 continued across the Northwest into mid-October before waning, with gradually decreasing activity from the northern Rockies through the Great Basin into California during the month. A significant precipitation event occurred across the northwestern US October 21-22 that resulted in a significant decrease of fire activity. Occasional precipitation events continued across the Northwest through the end of the month as well. However, it was much drier than normal from the Plains to the Appalachians, with fire activity increasing across the central and southern Plains, Mid-Mississippi and Lower Ohio Valleys, and Southeast. Year-to-date acres burned for the US is approximately 107% of the 10-year average, with the number of fires above average as well.

Drought now covers nearly two-thirds of the contiguous US. Drought continues in much of the West, with expanding and intensifying drought in portions of the Northwest due to warmer and drier than normal conditions in October, including record setting temperatures. October turned wetter across much of Montana, with above average precipitation continuing in the Southwest where a reduction of drought continued. Drier than normal conditions also occurred in Plains into parts of the Midwest, Appalachians, and Southeast, with a significant expansion of drought.

Near to below normal temperatures and near to above normal precipitation are forecast from the Northwest through the northern Plains into the Great Lakes. Below normal precipitation is likely from southern California and the Southwest through the southern Plains to the Gulf and Southeast Coasts through winter. Above normal temperatures through the winter are likely across California, the southern Rockies into Texas, and along the Gulf and East Coasts.

Above normal significant potential is forecast for the Hawaiian Islands for November before returning to normal potential through winter. The Texas Panhandle, western Oklahoma, and western Mid-Mississippi Valley to the southern Appalachians and northern Gulf Coast are forecast to have above normal potential in November before mostly returning to normal for winter as well.

In December, above normal significant fire potential will remain across the Lower Mississippi Valley and northern Gulf Coast, with above normal potential remaining near the northern Gulf Coast in January. Above normal significant fire potential is then forecast to expand into southeast New Mexico, south and west Texas, southwest Florida, and the Southeast coastal plain in February.
Past Weather and Drought

Very warm conditions continued across the West, with temperatures consistently as much as 20 degrees above normal focused on the Northwest through the first three weeks of October. Fires continued to burn moderately active in the Northwest during this period, with an offshore, east wind event October 15-16 resulting in an increase of fire activity across Washington, including several new large fires. Meanwhile, weak upper lows combined with subtropical moisture led to several rounds of showers and thunderstorms across the Southwest. A weather pattern change occurred October 21, which brought significant rain and mountain snow to the northwestern quarter of the US through October 22, effectively ending the fire season across the Northwest. Despite the change, much of the West observed below normal precipitation, except for above normal precipitation in much of the Southwest. Drought increased across the Northwest during October, but otherwise was little changed across the remainder of the West.

Drier than normal conditions for October were observed across much of the Plains and Mississippi Valley to the Ohio Valley, Appalachians, and Southeast. Precipitation less than 25% of normal was observed over portions of the Lower Mississippi Valley, Ohio Valley, and central and northern Plains. The much drier than normal conditions resulted in expansion of drought into much of the Appalachians and Southeast. In addition, drought expansion and intensification were also observed across much of the Mississippi Valley and the Lower Ohio Valley. Occasional rain continued along coastal New England, with a significant reduction in drought.

Above normal temperatures continued across much of the Plains through October, but cool, northwesterly flow resulted in below normal temperatures for the Ohio and Tennessee Valleys, southern Appalachians, Mid-Atlantic, and Southeast. No significant wind events were noted east of the Mississippi River, but locally brisk winds resulted in an increase of fire activity across the Ohio Valley into the Southeast during the month. Strong south to southwest winds were observed October 22-23 across the central Plains into the western Mid-Mississippi and Lower Missouri Valleys, with several significant new fires in Kansas, Nebraska, Iowa, and Missouri.
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 through winter. The Climate Prediction Center (CPC) is forecasting a 75% chance of La Niña continuing through the winter. This will be a rare “triple dip” La Niña. 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 significant fire potential is expected in Alaska through February. With below freezing, damp weather and most areas covered with snow, Alaska is out of fire season until next spring.

Ample rainfall over most of the state during the second half of the wildfire season eliminated all drought conditions across Alaska. Early season snowfall has already begun the winter snowpack across most inland areas. Some portions of the southwest coast, south-central Alaska, and the Panhandle remain snow-free but are wet.

Precipitation patterns are expected to be near normal for all of Alaska, with slight moist signal over the North Slope and western coastal areas. There is also a trend for warmer temperatures over those same areas. Snow already covers most inland areas and will expand farther south into south-central and southeast Alaska over the next couple of weeks. Though some coastal areas will remain mostly snow-free, they will be cold and damp.

Wildfire activity in Alaska was minimal in October, with fewer than five human ignitions. For all intents and purposes, Alaska’s 2022 wildfire season has ended.

Fuels across most inland areas are snow-covered at this time, and snow is expected in the remaining portions of the state over the next two weeks. Areas that don’t have snow are cold and damp, so fuel burnability is low statewide even without snowpack.

Northwest: A brief cooling trend at the end of September gave way to a persistent warm and dry period that lasted until the final ten days of October when cooler weather and rain arrived. Temperatures rose to above average during the first few days of October and went on to equal or exceed record high values until the weekend of October 22-23. Relative humidity was correspondingly low during the same period, particularly over higher elevations. Precipitation accumulation for the region was virtually nil for roughly a twenty-one day period.

A strong east wind event accentuated the warm and dry weather during October 15-16. Even with rain arriving in the last ten days of the month, the geographic area was warmer and mostly drier than typical during October.
Drought designation was re-introduced into much of Washington and northern Oregon in late September due to the record warmth and very dry conditions experienced over the region since July, especially in western Washington and northwest Oregon. These new drought areas worsened in October.

October had an above average number of ignitions with 236 fires reported, and most fires had an undetermined cause. Lightning activity was light for the month accounting for only four of the fires. Most new ignitions were in the first half of the month while the area was under an unseasonably warm and dry weather pattern.

Ongoing large fires showed little growth each day with fire activity picking up in the afternoons. Fire behavior was reported as moderate and characterized by isolated torching, backing, and flanking. Several of the existing large fires were in the repair stage.

Strong east winds in mid-October brought an increase in fire activity and caused new ignitions to grow rapidly. New incidents reported extreme fire behavior and existing incidents reported considerable growth. Five fires became large fires which required two incident management team (IMT) mobilizations. Several fires utilizing other than full suppression strategies also grew and required one IMT mobilization. One fire in southwest Washington caused the evacuation of nearly 2,500 people. The increased fire activity was most notable in Washington state.

The latter part of the month brought a series of cold fronts with widespread rain, cooler temperatures, and mountain snow. Fire activity corresponded to the change in weather and diminished accordingly.

The first half of October brought above average to record setting energy release components (ERCs). In mid-October, ERCs hit values typically seen during the middle of fire season. Fuel moistures were below average also setting new records for the 100 and 1000-hour fuels. Leaf fall also added to the fuel load. East winds mid-month brought low relative humidity and poor recoveries further drying out the fuels. Fuels supported active fire behavior and challenged initial attack resources.

Towards the end of the month, a series of weather fronts brought widespread moisture to the geographic area. ERCs declined from record setting values down to average levels for the time of year. Large 1000-hour fuels are seeing improved moisture content, coming up from record low values, although still below normal levels for this time of year. The 100-hour fuels have rebounded to average levels.

Climate outlooks suggest the Northwest Geographic Area will undergo colder and wetter than typical weather through winter and possibly into spring. Normal (very low) risk of significant fires is expected over the northwest geographic area through February.

**Northern California and Hawaii**: Significant fire potential is projected to be normal. Historically during November through January less than one large fire occurs for each Predictive Services area (PSA). Hawaii’s significant fire potential is forecast to be above normal during November, especially the leeward sides, then drops back to normal December through February.

The weather pattern during October across northern California was generally dry and warm. Temperatures were generally near to above normal, with near average readings found near the coast. Precipitation was generally drier than normal with pockets of near normal along the Oregon border and far northeast. The weather pattern was largely comprised of an atmospheric blocking pattern from October 11-20, which provided light, variable winds and warm temperatures, including several record high temperatures observed October 19. The blocking pattern broke down October 21 and weak disturbances affected northern California the rest of the month. Gusty northerly and westerly winds and light precipitation affected the north and eastern portions of the geographic area. High risk significant fire potential was observed October 21 and 23.

Long-term drought changed very little despite the warmer and drier conditions. Dead fuel moistures rose into the critically dry category for several PSAs during the third week of October but then moderated due to the change in the weather pattern. Herbaceous fuels were in a mixed state with a light flush of green-
up below 5,500 feet, following the mid-September wetting precipitation event. Several weeks of very little or no precipitation allowed the new growth to cure, while plenty of standing dead fuel from the previous growing season was found across the landscape. Live shrub and tree canopy fuels reached their seasonal low values with most of the sampled species below 100%. Widespread frosts and freezes were observed a few mornings during the last week of the month across the mid and upper elevations, generally above 3,500 to 4,000 feet. Lightning was only reported on two days, October 9 and 22, totaling 14 strikes. Fire business activity was generally minimal with most days reporting less than ten initial attack fires. Land managers took advantage of the persistent weather pattern during most of the month to execute several large landscape prescribed burns.

The weather outlook for November through February calls for near to above normal precipitation across northern portions of North Ops and near to below normal across southern areas. The jet stream is expected to be active across the northern tier of the US and buckle periodically to create unsettled weather periods across northern California. November is likely to be the month when the weather patterns are most unsettled based on projected oceanic-atmospheric conditions and analog years of the past. Temperatures will also fluctuate with near to above normal readings forecast during the 4-month period. Typical wind patterns should prevail with some breezy northerly and westerly wind events. Lightning is not expected to be a big factor during this seasonal outlook period, although November could contain periods of lightning associated with a few Pacific trough passages, thus leading to a few ignitions. It should be cautioned that since the region lies between two distinct weather regimes or patterns from cool and moist to warm and dry characteristics, both are in play during the next four months.

Long-term drought is expected to improve during November then hold steady if not intensify slightly during part of winter. Unusually low fuel moistures should improve or rise as November progresses and wetter periods are forecast. Critically dry fuel moisture values are not likely to be reached for any great length of time, if at all, during the four-month outlook period due to seasonality and timely cool, moist intrusions. A light flush of herbaceous green-up that developed in September across the lower elevations should re-invigorate during November, while dormancy sets in across the mid and high elevations. The normal to above normal carryover herbaceous fuel loading should start to 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. A widespread low elevation green-up and a matted dead fine fuel bed from the previous growing season is crucial for mitigating fire spread across the low elevations during periods of dry-gusty winds during the late fall and winter period.

Sea surface temperature (SST) anomalies surrounding the Hawai’ian Islands are above normal. Temperature anomalies during October were mixed with some areas reporting near to a little below normal while others near to a little above normal. Precipitation anomalies were also mixed, although generally below normal across the northern and southern tier of the island chain and near to above normal from the northern tip of the Big Island to Moloka’i. Long-term drought improved slightly across Maui and western portions of the Big Island, but varying intensities of drought remained across portions of all the islands. The four-month weather outlook calls for near to above normal temperatures consistent with the above normal SST forecast. Models have trended towards a wetter rainy season for November through February, which would improve both live and dead fuel conditions and lessen the intensity of drought impacts. Enhanced trade winds brought on by La Niña should continue, thus providing a mosaic of fire danger during November as the transition starts to take place. Therefore, above normal significant fire potential is forecast for November followed by normal potential for December through February.

**Southern California:** Significant fire potential will be near normal across the geographic area November through February.

A summer type pattern continued for the first three weeks of October, with strong high pressure over northern California and the Pacific Northwest and weak areas of low pressure moving inland from off the southern California coast into northern Baja, northwest Mexico, and southern Arizona. A more fall like pattern occurred during the last week of the month with the dominant high setting up off the California coast along with troughs moving inland into the Pacific Northwest then dropping into the Great Basin. Abundant sunshine along with persistent strong high-pressure to the north caused well above normal
temperatures across inland portions of southern and central California. The weak low-pressure areas to the south brought a much deeper marine layer than normal causing temperatures to be below normal over the coastal areas. Isolated to scattered showers and thunderstorms moved across southern California most days through the first couple weeks of October. Central California received little or no rainfall during this period, with just a couple of days of isolated afternoon showers and thunderstorms over the High Sierras. A brief period of scattered showers with light rainfall totals moved across the Sierra and southern California as the dominant area of high pressure transitioned from over the Pacific Northwest to off the California coast. Otherwise, it was dry the last week of the month. Rainfall for the month was well below normal over central California and near to above normal over southern California. Winds were light most of the month and primarily from the south to west. There was one weak Santa Ana wind event toward the end of the month.

There has been no change to the drought conditions across central and southern California as interior areas across central California remain in extreme to exceptional drought. Severe drought remains over the coastal areas, deserts, and most of southern California. The only exception is over San Diego and Imperial Counties where moderate drought exists. The 1000-hr and 100-hr dead fuel moisture remained above normal across much of southern California through October, but warm and dry conditions caused the dead fuel moisture to drop across central California and by the middle of the month a few areas were at record low levels. There was little change to the below normal live fuel moisture, and it remains between 50% and 70% across most of South Ops, with some of the old growth between 40% and 50%.

Sea surface temperatures (SSTs) remain above normal over the Gulf of Alaska and off the West Coast, with below normal SSTs over most of the Equatorial Pacific. Forecast guidance shows SST anomalies will slowly cool over the Gulf of Alaska and off the West Coast but remain above normal through the winter months. Forecast guidance also shows SST anomalies will slowly warm over the Equatorial Pacific but remain below normal through winter. Therefore, expect high pressure just off the California coast to be the dominant feature November through February. This area of high pressure off the California coast will most likely bring above normal temperatures and below normal precipitation to South Ops. There will be brief periods of showers and below normal temperatures as the high pressure moves to the west allowing Pacific troughs to drop southward into California, but these periods are expected to be infrequent. Even though temperatures will likely be above normal and precipitation below normal, there will likely be enough precipitation for significant fire potential to be normal through winter. The amount of Santa Ana wind events across southern California will likely be near to a little below normal.

**Northern Rockies:** October was generally a dry month for the first three weeks as a dominant long wave ridge over the Pacific Northwest blocked most moisture flow into the region. The ridge supported above normal temperatures until a storm system broke down the ridge around October 21. Before the ridge breakdown, a portion of this period resulted in strong inversions in western valleys, which kept wind winds light. There were periods of strong winds across the plains through the middle of the month, but they resulted in no significant fires. The October 21-23 storm system brought the first meaningful snow to the mountains along the Continental Divide and beneficial rain and snow to parts of northern Montana, which had observed the greatest drought impacts. The pattern at the end of the month favored a westerly flow, which is expected to bring additional moisture to the western portion of the Northern Rockies Geographic Area (NRGA).

Energy release components (ERCs) across many predictive services areas (PSAs) set records between October 15-20, reaching or exceeding the 70th percentile for any calendar date. The precipitation near the end of the month dropped values back towards normal. Fuels are likely to remain close to seasonal normals into the fall and early winter months.

Significant fire activity was minimal during October and no incident management team deployments occurred. The Northern Rockies went from preparedness level two to one on October 3, with many units engaged in active prescribed burning.

Normal fire activity is expected for the November through February outlook. Winter outlooks favor below normal temperatures and above normal precipitation. This is consistent with global weather patterns like...
La Niña at the start of the cool season. Drought outlooks project improving or ending drought over western portions of the NRGA but continuing drought over north-central and northeast Montana into North Dakota. A wet pattern in the last part of October and early November is expected to mitigate existing dryness and support normal conditions in the latter part of fall.

All PSAs in northern Idaho and western and central Montana have near normal ERCs. Eastern Montana and North Dakota PSAs are showing above normal dryness, which is supported by the latest drought monitor. However, these are the most likely areas to experience periodic snow cover over the coming months mitigating fire concerns.

**Great Basin:** Fire activity significantly decreased in October, and the Great Basin dropped to preparedness level one on October 12, despite a prolonged drying trend through the middle of the month. Fire danger crept upwards with the dry and warm weather but not enough to be problematic. A strong cold front dropped south through the Great Basin the third week in October and ended fire season.

Cold fronts should bring periods of colder temperatures and precipitation, especially to the northern third of the Great Basin through early November, followed by a drier period mid to late month. Regardless, fire danger is expected to remain low. Storms are expected to mainly target the northern one-third of the Great Basin through the winter with minimal fire potential. Drier and warmer conditions are expected in the south, but fine fuels are of minimal concern, therefore, normal (i.e., low) significant fire potential is expected through February.

October saw warm and dry conditions for much of the month with above normal temperatures and well below normal precipitation. However, a strong cold front dropped south across the Great Basin late in the third week of October. This front brought very cold temperatures, gusty winds, and precipitation to most of the Great Basin, except the Arizona Strip, and southern and western Nevada into the Sierra. Storms continued every four to five days through the end of the month, officially ending fire season. Severe to extreme drought continues across Nevada and Utah into southern Idaho and western Wyoming, with moderate drought conditions farther north into central Idaho. Drought improvement is expected in Idaho and Wyoming in the next few months, with the storm track remaining on the north side of the Great Basin.

Energy release components (ERCs) have dropped to below normal across the Great Basin due to late October cold fronts. The only exception is in far southern Nevada, where ERCs remain above normal due to dry and warm weather. However, even where ERCs are above normal they are not near critical levels, and fire danger remains low. Grasses will be transitioning into dormancy through November across the Great Basin.

Fire activity remains low across the Great Basin with no significant fires.

Normal significant fire potential is expected from November through February 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. However, any uptick in fire potential will typically only last a burning period or two and be most likely in localized areas where there are more continuous grasses.

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

The early arrival of the North American Monsoon in mid to late June ended the large fire season in the Southwest Area. The monsoon season was quite impressive overall regionally, with precipitation amounts at or greater than 150% across much of the region over the past 90 days. This was one of the more robust monsoon periods in recent history for many portions of the region.
Temperatures overall have averaged about normal with a warmer tilt to the northwest and a cooler tilt across the far south of the Southwest Area for October. Precipitation has been generally above normal for most of the geographic area continuing the trend of above normal moisture since mid to late June.

Active weather periods will more than likely continue through the first half of November with generally near to below normal temperatures likely. As the second half of November arrives and through the heart of the winter, given the ongoing La Niña, the expectation is that a warmer and drier than normal weather pattern will arrive, with the general storm track likely to the north. Some areas of near normal precipitation and high elevation snow will be likely across the northern tier of the geographic area, but below normal precipitation is expected overall elsewhere. Given the ongoing dryness across the plains through early-mid winter, areas of above normal significant fire potential are expected across the southeastern plains of New Mexico in February. More localized above normal significant fire potential could also occur farther north across the plains. Despite the forecast warmer and drier than normal conditions, significant fire potential will remain near normal across the remainder of the geographic area.

**Rocky Mountain:** Normal significant fire potential is expected across all the Rocky Mountain Geographic Area (RMA) for the outlook period, which typically means low fire potential. Historically, there is a bi-modal trend of increased fire occurrence on the High Plains due to the seasonal curing of fine fuels. This outlook period is expected to have a few periods of elevated fire potential across Kansas and Nebraska due to persistent drought and above-normal fine fuel loading when dry and windy conditions overlap.

Weather patterns fluctuated significantly across the RMA from the end of September into October due to several troughs that moved across the area. These troughs shunted moisture for thunderstorms to the south into New Mexico and Texas, with stronger cold frontal passages across the northern half of the RMA. While periodic snow showers and wetting rain occurred across western Colorado and Wyoming, the greatest precipitation deficits and dryness continued across South Dakota, Nebraska, and Kansas in the last 60-day period. Similarly, the Climate Prediction Center (CPC) depicts extreme soil moisture anomaly changes for last month or two in eastern South Dakota southward through central and eastern Kansas. The lack of precipitation intensified the drought into extreme and exceptional categories across portions of eastern South Dakota, Nebraska, and Kansas, while significant improvements occurred across portions of Wyoming and Colorado.

Fine fuels in the lower elevations cured as they completed their growing season and are available for fire spread except during any prolonged period of showers and thunderstorms. Much warmer and drier pre-frontal conditions with each trough passage combined with stronger, gusty winds brought fire danger indices back above the 90th percentile at many sites across western South Dakota, Nebraska, and Kansas. After each disturbance, fire danger moderated with cooler temperatures and a mosaic of light precipitation and higher relative humidity levels across areas of the High Plains, while mountain snow and valley rain fell over Colorado and western Wyoming. During periods of warm, dry, and breezy weather, elevated to critical fire conditions developed on the Plains and that pattern is expected to continue until snow covers the fuels to mitigate the risk.

There were considerably fewer than average large fires and below average acres burned across the RMA during the past few months. Statistically, both the number fires and acres burned are about 10 percent of average for the season, allowing resource mobilization to remain below average for this time of year as well. Favorable conditions in the last couple weeks allowed prescribed burning to resume in the Black Hills and along portions of the central Front Range and Foothills. There were a few large fires in northeast Colorado, western Nebraska, and central South Dakota in October that quickly spread with frontal winds, but they were short-lived once the winds subsided and relative humidity increased during the overnight hours.

For the outlook period from November through February, a third consecutive La Niña is forecast. The monthly outlook from the CPC favors a cooler and wetter than normal November for most of the RMA, with southern portions of the geographic area trending warmer and drier by the end of the month. Moving into winter, December through February are anticipated to transition once again into a split pattern of slightly cooler temperatures and normal precipitation across the north, while the southern portions of the
geographic area continue to trend drier and warmer. Other climate signals such as the Madden-Julian Oscillation will need to be monitored through the winter season as they may produce a wetter pattern for the western United States, including the RMA.

The outlook for the RMA depicts normal significant fire potential across the geographic area for the period through February 2023. A fading La Niña influence on the weather patterns, lower sun angle, and shorter burning periods are expected to lower the potential through the winter months.

One caveat is that November still will carry a resurgence of fire potential on the High Plains, and this will be elevated during windy periods and cold frontal passages. The longer-term drought conditions may elevate fire potential during these events, but not to critical levels for long periods of time.

**Eastern Area:** Near normal significant fire potential is forecast across the majority of the Eastern Area November into February. Above normal fire potential is expected across portions of the western Mississippi and Ohio River Valleys through the remainder of fall.

Longer term drought was in place across portions of the western Mississippi Valley towards the end of October. Drier than normal conditions were indicated towards the end of October across much of the Upper Mississippi and Ohio River Valleys as well as portions of the Mid-Mississippi Valley. Thirty to 90-day soil moisture and precipitation anomalies were near to above normal across the remainder of the Eastern Area.

Above normal temperatures are expected over the majority of the Eastern Area into November. Below normal temperatures are forecast to spread across the Great Lakes December into February. Below normal precipitation is forecast over mainly the southern tier of the Eastern Area into November. Near normal precipitation is likely across the majority of the Eastern Area December into February.

Periods of below normal fuel moisture levels are likely to persist into November across drier parts of the Mississippi and Ohio Valleys if the forecast warmer and drier than normal trends occur. As a result, above normal fire potential is expected to persist over drier parts of the western Mississippi and Ohio Valleys through the remainder of the fall season, with the forecast warmer and drier trends.

**Southern Area:** There are multiple conflicting signals for significant fire potential across the Southern Area for the next several months. Despite more frequent episodes of rainfall in recent weeks for parts of the geographic area, both short-term and long-term drought indicators remain concerning. The variability of conditions across individual Predictive Service areas (PSAs) and in months-long timescales also adds complexity. For example, across the mountains of North Carolina, Keetch-Byram Drought Indices range from 50-150 on the north end, to 500-700+ on the south end. Oklahoma PSAs continue in long-term extreme to exceptional drought, but southern and eastern parts of the state have seen several rounds of heavy rain since mid-October. Additionally, portions of Appalachia that saw record flooding in July have dried out rapidly since then, to the point that ERCs have crossed the 97th percentile in recent weeks, while 100-hour fuel moisture has dropped below the 10th percentile across some areas of eastern Kentucky.

A major factor in the forecast expanse of above normal significant fire potential in November is the combination of widespread earlier than normal frost followed by what may be an exceptionally warm and largely dry first half of the month. A canonical La Niña warm spell appears likely the next few weeks and has strong support from global ensemble forecast guidance and the weak but still important Madden Julian Oscillation. All of this should favor well above normal temperatures over the majority of the Southern Area through mid-November. At least initially, moisture recovery from the Gulf of Mexico and Atlantic may temper frost and drought-cured fine fuel dryness. Fuel loading is generally near to below normal in the grass-dominant Plains, but above normal significant fire potential is forecast in November for the drier parts of Oklahoma into the Texas Panhandle due to ongoing La Niña-fueled drought and an expectation that western troughing and eastern ridging could lead to frequent high wind events. Across the Mississippi, Ohio, and Tennessee Valleys, Appalachians, and much of the Southeast, above normal significant fire potential is expected in November, especially where an earlier than normal leaf drop has occurred. It should be noted that sub-seasonal forecast guidance indicates the potential for a pattern reversal sometime during the latter half of November, and should this occur, a more typical critical fire weather pattern may develop,
featuring dry and windy frontal passages that could continue into early December. Despite weather that has been drastically different from 2016, numerous agencies have expressed fear that fuel conditions are similar to that memorable autumn. A weather pattern featuring low pressure rapidly intensifying on its way from the Southern Plains or Rockies to the Great Lakes would be of most concern for the Appalachians.

The immediate Gulf Coast from east Texas through Florida Panhandle saw an early demise of rainy season thunderstorms, followed by rapid drying through the rest of September and much of October. These areas are expected to see persistent warmth and dryness throughout the winter months, resulting in above normal significant fire potential from November through February. By February, portions of the Rio Grande Valley into west Texas are included in above normal potential given what should be a very warm and dry winter. Abundant moisture that spilled into the Trans Pecos and Rio Grande Valley at times during the 2022 monsoon season should lead to above average fuel loading in these areas as well. A warm and dry winter is most likely for the coastal Southeast, thus an early start to the spring season is forecast for the coastal plain and coasts of the Carolinas into southern Georgia. Lastly, although most of the Florida Peninsula continues to see lingering flooding from Hurricane Ian, several agencies have expressed concern that salt-cured fuels associated with Ian’s historic storm surge could easily burn at any moment. Due to this and the likelihood of a drier and warmer than normal dry season, southwest Florida is included in above normal potential for February.

**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](http://www.nifc.gov/nicc/predictive/outlooks/outlooks.htm)