National Significant Wildland Fire Potential Outlook

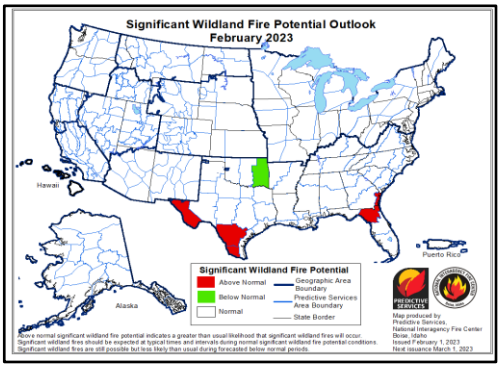
Predictive Services
National Interagency Fire Center

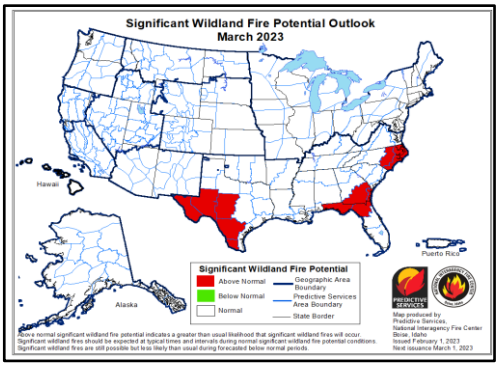
Issued: February 1, 2023
Next Issuance: March 1, 2023

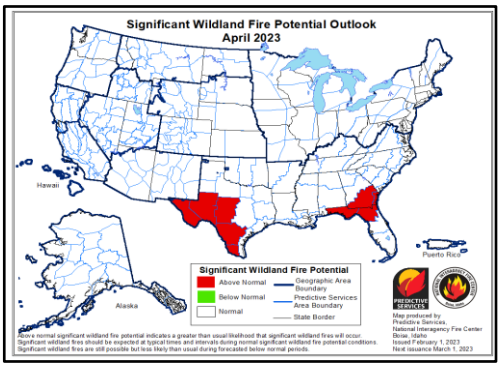
Outlook Period – February through May 2023

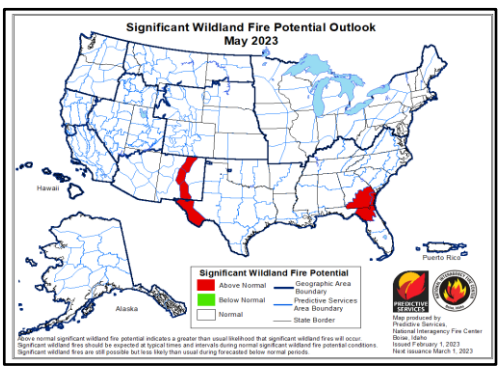
Executive Summary

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 was minimal across the US during January as consistent upper-level trough passages with enough precipitation limited significant fire potential. However, isolated large fires were reported in central Oklahoma and central Florida. It remained dry across much of the southern High Plains into the Rio Grande Valley, with occasional elevated fire weather conditions. Year-to-date acres burned for the US is 62% of the 10-year average, with the number of fires about 25% above average.

Significant drought reduction occurred in January across much of California and the Great Basin. However, drought continues in nearly half the country, with the most intense drought continuing on portions of the southern and central Plains. The southern Plains into the Rio Grande Valley had another month of below normal precipitation, while below normal precipitation was also observed across the Florida Peninsula, Mid-Atlantic, Northwest, northern Rockies, and northern Plains. Well above normal precipitation fell from California eastward through the Great Basin, central Rockies, central Plains, and western Great Lakes. Above normal precipitation also occurred across portions of the Southeast and from the Mid-Mississippi Valley through the Ohio Valley into the Northeast.

Near to below normal temperatures and near to above normal precipitation are likely from the Pacific Northwest to the Great Lakes into April. Warmer and drier than normal conditions are likely through April in the Southwest and southern Plains, then stretching along the Gulf Coast into Florida. Above normal temperatures are also forecast for much of the eastern US near and east of the Appalachians, with above normal precipitation in the Ohio and Tennessee Valleys. Drought is anticipated to expand into portions of the Four Corners, south Texas, and Florida Peninsula, but drought conditions will likely improve across northern California, northern Great Basin, Montana, and the northern Plains.

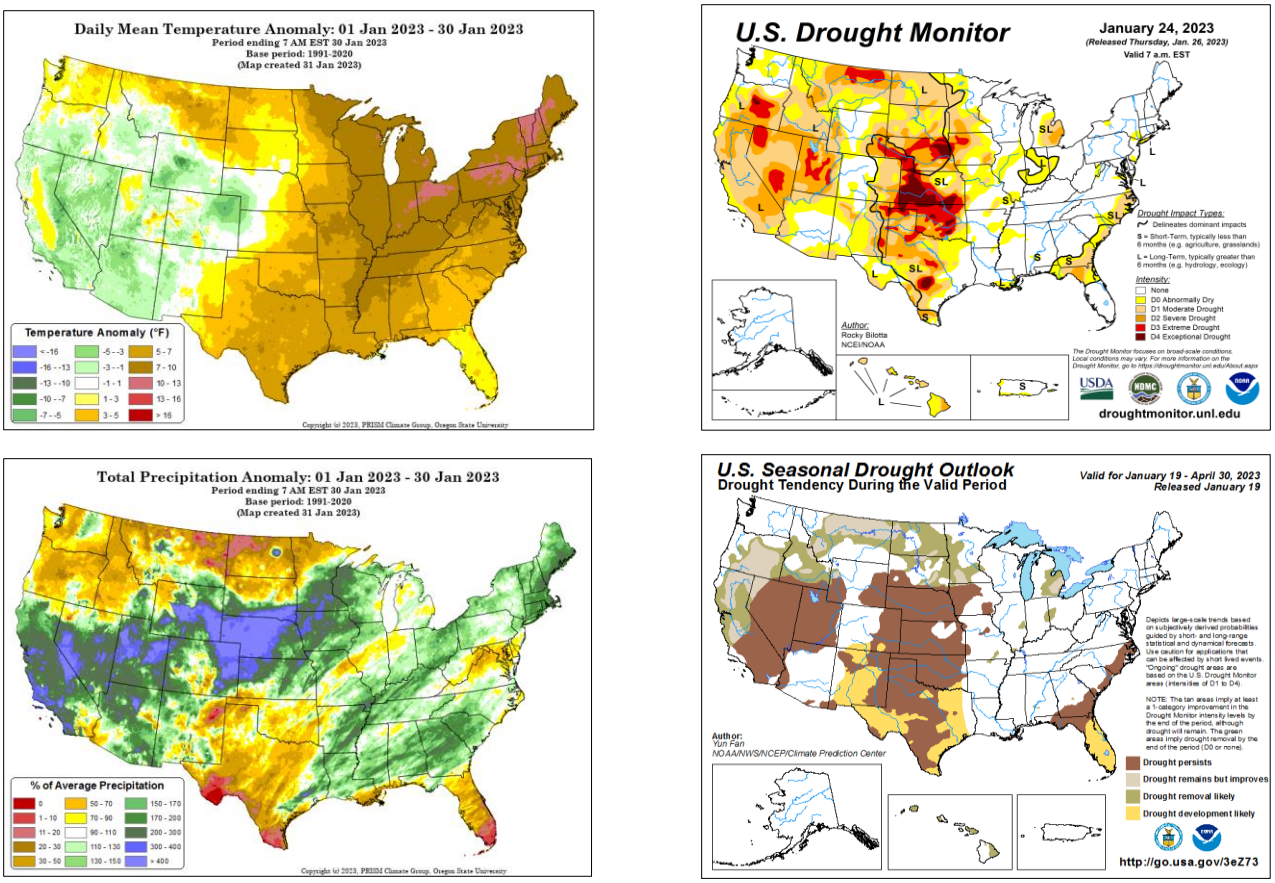
Above normal significant fire potential is forecast across the west Texas mountains February through May, expanding to include much of southwest Texas in March and April. Above normal potential is also forecast in northeast Florida and the Georgia Coast through the period, expanding to include the Florida Panhandle and southeast Georgia in March and April, before retreating to northeast Florida and southeast Georgia in May. Above normal potential is expected in eastern North Carolina in March, with above normal potential forecast across the central New Mexico Mountain chain in May. Above normal potential may expand into the eastern New Mexico plains at times this spring during strong wind events. However, below normal potential is forecast in eastern Oklahoma in February before returning to normal in March.

Past Weather and Drought

Multiple moderate to strong atmospheric rivers continued to bring heavy precipitation to California into the Great Basin and central and southern Rockies through mid-January. Extensive flooding was reported across much of California due to the heavy rainfall in lower elevations associated with the atmospheric rivers. Snowpack is near to above normal across the West, except for portions of the southern Rockies, and some basins have received 200% or more of normal for snow water equivalent in the Sierra and southern Great Basin. Snowpack and snow cover are also near to above normal across Alaska. Above normal precipitation was also observed across the central Plains and western Great Lakes as well as the Mid-Mississippi and Ohio Valleys into the Northeast.

Temperatures across the CONUS east of the Mississippi River were well above normal in January, with values averaging near 10°F above normal in portions of the Great Lakes and Northeast. Above normal temperatures also occurred across the Plains into the northern Rockies and Washington, with near to below normal temperatures across California into the southern Intermountain West. Below normal precipitation was focused across the Northwest into the northern Plains and portions of the Gulf Coast, Florida, and Mid-Atlantic. Eastern New Mexico into the southern Plains also recorded below normal precipitation in January, but deficits were eased at the end of the month, with two storms bringing moderate precipitation.

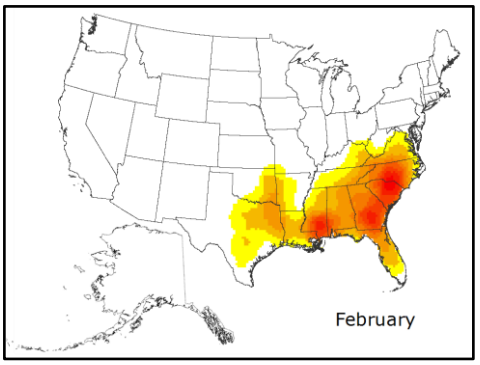
Significant drought improvement was observed across California into much of the Great Basin due to the numerous atmospheric river events during the first half of January. However, drought continues in almost half the country, and drought expanded in portions of the southeast Coastal Plain and northern Ohio Valley. Precipitation associated with the atmospheric rivers fell across the Southwest during January, with a slight amelioration of drought in portions of eastern New Mexico. The most intense drought remains on the southern and central Plains, with severe to extreme drought also in portions of California, Oregon, Nevada, Utah, Montana, and Wyoming.



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)*

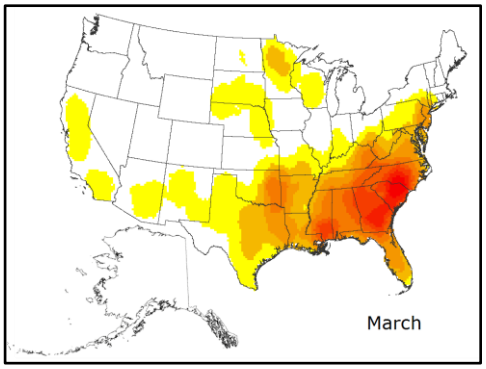
Weather and Climate Outlooks

La Niña conditions continue, with below average sea surface temperatures (SSTs) over much of the equatorial Pacific Ocean, but SSTs have warmed over the past month. La Niña conditions will continue for the next month but continue to weaken through March according to most guidance. The Climate Prediction Center (CPC) is forecasting an 82% chance of neutral El Niño-Southern Oscillation (ENSO) conditions returning in spring. Other teleconnection patterns, such as the Madden-Julian Oscillation, Pacific Decadal Oscillation, Pacific-North American Pattern, and Arctic Oscillation are likely to influence weather and climate during the outlook period, but La Niña is forecast to remain the dominant influence through February.



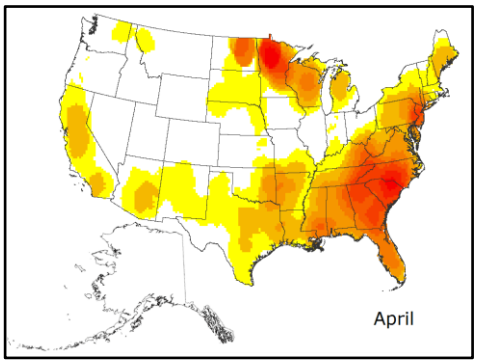
Geographic Area Forecasts

Alaska: Normal significant fire potential is expected in Alaska through May, and Alaska will be out of fire season through March. Typical conditions are expected in April, with the first wind-driven grass fires of the season occurring as the snowpack retreats. In May, the threat of more significant wildfires will increase toward the end of the month, but, once again, such behavior is normal as the wildfire season begins.



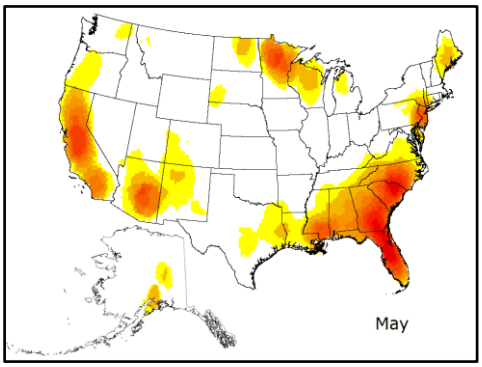
Ample precipitation has fallen across much of Alaska during the fall and early winter, and no areas of the state are in drought as of late January.

The late winter and spring are typically quite dry across Alaska. The Climate Prediction Center calls for a slightly warmer and wetter spring for western Alaska, and the forecast for the southeast Panhandle includes a weak signal toward cooler and drier conditions, with neutral conditions expected across the remainder of the state. In the longer term, a potential transition from El Niño to La Niña by summer could increase significant wildfire potential for Alaska in 2023. El Niño summers are generally paired with more active seasons in Alaska, but this correlation is only weak at best.



With no wildfire activity in the state, Alaska is out of fire season. Fuels across most of the state are snow-covered. Areas that do not have snow are generally coastal with cool and damp conditions, so fuel burnability is very low statewide.

With the winter snowpack established in many areas and seasonable cold, damp weather in the forecast, Alaska is out of fire season through March. The winter snowpack typically begins melting at lower elevations in April as cured fine fuels from the previous season are exposed and wind-driven grass wildfires become possible to begin the 2023 season. By the end of May, the snowpack commonly retreats to cover only the North Slope and the highest elevations of the Interior, thus providing the opportunity for the heart of Alaska's wildfire season to open in early June.



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)

Northwest: Normal (i.e., very low) risk of significant fires is expected over the Northwest Geographic Area through May. Precipitation was light over the geographic area during January. Only the east slopes of the Washington Cascades, the Olympic Peninsula, and sections of southern Oregon accumulated normal or above normal totals for the

month. Temperatures were below normal over southern Oregon and a bit above normal in northern Oregon and Washington.

Drought slightly improved in Washington, and drought severity eased somewhat in central Oregon but remained largely unchanged elsewhere. Despite a relatively dry month in January, snowpack in the higher elevations is near average over much of the geographic area. Snow accumulation is well above normal over southeastern Oregon and a bit below normal in western Washington.

Wildfire activity was minimal through January. Fire danger indices are low, indicating a very low risk of large, costly fires. However, in drought designated areas prescribed burn escapes may be possible during dry, windy conditions.

Climate outlooks suggest the majority of the Pacific Northwest will remain colder than normal through May. Precipitation accumulation is expected to be near or above normal through March, but no clear trend is foreseen in April and May.

Northern California and Hawai'i: Significant fire potential is projected to be normal through May for northern California. Historically during February through May less than one large fire occurs for each PSA. Hawaii's significant fire potential is normal from February through May.

The weather pattern during January was unsettled and moist, with most areas receiving above to well above normal precipitation. Several atmospheric river events, providing heavy amounts of rain and snow, occurred during the first two weeks of the month. Average temperatures were mixed, with near to below normal temperatures found across the eastern portions of northern California and near to above normal temperatures across most western and central areas. North and east wind events occurred January 19-26. The January 22-23 event was particularly strong and provided noticeable drying. Long term drought conditions improved with a category drop across all locations and the removal of drought across most of the North Coast. A solid herbaceous green-up was found across the lower elevations, generally below 2,500 to 3,000 feet, with a significant altering of the previous carryover grass crop. Snowpack varied but was generally found above 3,500 to 4,000 feet by the end of the month. Snow water equivalent within the snowpack improved from near 140-160% of normal at the beginning of the month to 180-220% January 25. There was very limited shrub sampling during January, but samples that did occur generally showed rising moisture levels. Fire business was light with most days reporting zero to one initial attack fires and very little growth. Prescribed burn projects were mainly associated with pile burning.

The weather outlook for February through May calls for mixed temperature and precipitation anomalies. Near to below normal precipitation and near to below normal temperatures are expected for February although a somewhat active storm track will likely occur the first half of the month. There are mixed signals for March, but a more active storm track is expected at this time. Near to below normal precipitation is anticipated for April and May, although confidence is much lower for the spring period based on how the polar vortex dissipates, how active the Madden Julian Oscillation (MJO) is, and how quickly the El Niño-Southern Oscillation (ENSO) transitions from La Niña to neutral conditions. Critically dry live and dead fuel moisture alignments are not likely to be reached for any great length of time during the next four months. However, we will be closely monitoring herbaceous curing across the lowlands during May and how that could align with a period of unusually low dead fuel moistures. Snowpack will keep fire danger lower across the upper elevations during the four-month period. Mid elevations, found between significant green-up and snowpack, will have the most potential for moderate fire growth, but the potential will be limited due to expected higher than average live fuel moisture. A normal amount of dry and gusty northerly and offshore wind events should occur during the next four months but could be somewhat enhanced during the latter half of February. Lightning ignitions are not anticipated to be a concern during the period.

Sea surface temperature (SST) anomalies surrounding the Hawai'ian Islands are near to a little above normal. Average temperatures during January were generally near to above normal, with the warmest anomalies across the Big Island. Precipitation anomalies were below to well below normal for Oahu and the Big Island, near normal on Kaua'i, and above normal for Moloka'i, Maui, and Lanai. A Kona Low at the end of the month brought heavy precipitation to the islands, particularly Moloka'i and Maui. Long term

drought increased in intensity through January 24 with at least moderate drought touching all the islands. The four-month weather outlook calls for near to above normal temperatures and near to above normal precipitation. La Niña will continue to weaken during the next two to three months with a transition to ENSO neutral likely. The weakening La Niña will likely allow for a more active MJO thus providing better chances for organized precipitation on the islands. Enhanced trade winds are likely to occur during the next couple of months as La Niña weakens. Therefore, pockets of leeside dryness may occur but should be very localized and not occur for extended periods of time. Drought intensities are expected to ease as well. Therefore, significant fire potential is projected to be normal through May.

Southern California: Significant fire potential will be near normal across South Ops from February through May.

A series of strong Pacific troughs and associated atmospheric rivers moved inland into California from the Pacific Ocean during the first two weeks of January. High pressure approached the California coast during the third week of the month and remained just off the coast the end of the month. Temperatures were well below normal over most of the region during the first few weeks of January then warmed to near or a little above normal during the last week of the month. Overall, temperatures were well below normal for the month, except for the San Joaquin Valley, which was slightly above normal. Rain, heavy at times, moved across most of the area during the first two weeks of the month. The last two weeks of the month were essentially dry, with only a couple days with scattered light showers as a couple of troughs dropped into the Great Basin from the Pacific Northwest. For the month, precipitation was well above normal across most of the region, except for near to a little below normal across the eastern deserts. The snow level averaged between 6,000 and 8,000 feet for much of the month, with several feet of new snow over the High Sierra and lighter amounts over the southern California mountains. The snowpack in the Sierra is currently between 200% and 300% of normal, which also represents between 125% and 150% of normal for April 1, when peak snowpack usually occurs. Strong southerly winds accompanied the Pacific storms during the first two weeks of the month. Offshore flow was prevalent during the last couple weeks of the month with a couple strong Santa Ana wind events.

There has been a significant improvement in drought conditions due to the well above normal rainfall that South Ops has received since the beginning of December. Extreme to exceptional drought has been reduced to moderate to severe drought across central and southern California over the past month. Severe drought is present only over the central Mojave and northern deserts, with most of the area now under moderate drought. There are some abnormally dry conditions from Monterey County to western Los Angeles County as well as much of Imperial County and far eastern Riverside County. The well above normal rainfall brought well above normal 1000-hr and 100-hr dead fuel moistures during the first couple weeks of the month with some drying toward the end of the month. The 100-hr dead fuel moisture ended the month near normal across most of the region. Live fuel moisture increased slowly through month due to the wet conditions during the first half of the month and slightly above normal temperatures toward the end of the month, with values between 70% and 100%. Widespread green-up has occurred across the lower elevations as well.

Sea surface temperatures (SSTs) are slowly warming over the Gulf of Alaska, West Coast, and Equatorial Pacific. Forecast models show that the SSTs over all three of these areas will continue to slowly warm through the spring months. With SSTs warming over the Gulf of Alaska and West Coast, high pressure off the California coast is likely to become the dominate feature from February through May. This area of high pressure would bring above normal temperatures and below normal precipitation to the region. High pressure will migrate a little to the west at times allowing a few troughs to move in from the Pacific Northwest and bring showers at times, but they are expected to be few and far between. The amount of Santa Ana wind events will likely be near normal February through May. Even though precipitation will likely be below normal, there is expected to be little in the way of fire activity through March due to the well above normal precipitation from the beginning of December through the middle of January. If well below normal precipitation occurs during the spring months, which looks likely, fine fuel loading will be below normal and we can expect a near to below normal grass fire season across the lower elevations in April and May.

Northern Rockies: Significant wildland fire potential in the Northern Rockies Geographic Area (NRGA) for February through May is expected to be normal. Though January has generally been below normal for precipitation and above normal for temperatures in the NRGA, it has not been wind prone. Evaporative Drought Demand Index 30-day products show that only limited areas of emerging stress have been generated**.** A return to much colder weather across the NRGA the last week of January into early February will pause this trend. Longer term outlooks favor northwest flow across the NRGA, which will bring intermittent cold spells and periods of precipitation for February maintaining limited fire potential into early spring.

Little change in long-term drought indices has been observed over during the past month. Severe to extreme drought is still indicated over western North Dakota, northern Montana east of the Continental Divide, and portions of southwest Montana. North Idaho and northwest Montana along with the rest of North Dakota are showing abnormally dry to moderate drought, but south-central Montana is generally drought free.

Snow cover has retreated for much of central Montana, but snow water equivalent is 80-100% of normal for most basins. Most of the NRGA has seen less than 50% of normal precipitation during the past four weeks but 60-day percent of average precipitation is closer normal. Temperature trends are similar with above normal temperatures the past four weeks, but 60-day average temperatures are slightly below normal.

There are no strong anomalies present regarding fuels. However, there are areas around the Bitterroot region that have maintained less snow than expected and could dry quickly if a warm pattern develops. Rangeland areas have seen snow retreat in central Montana, but snow cover is expected to return and persist for a few weeks, delaying any fine fuel fire potential. Fire activity has been minimal in January.

Normal fire activity is expected for the NRGA for February through May. The mostly dry and above normal temperatures that persisted for most of January will end during the next week with a return to significant cold. This will offset any drying trends that developed, which were tempered by a cool and wet fall. March through May seasonal outlooks are not showing strong signals, with uncertainty associated with the breakdown of La Niña pattern during the spring toward neutral conditions in the Equatorial Pacific. The prevalence of a “net normal” setup since November and short-term outlooks reducing drying processes should buffer any onset of significant drying in March should the breakdown of La Niña bring a dramatic shift in large scale weather patterns.

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 February into March, and target mainly the northern half to two-thirds of the Great Basin keeping fuel moisture higher and fire potential low. Drier and warmer conditions are expected in far southern portions of the Great Basin, but fine fuels are of minimal concern. Therefore, normal (i.e., low) significant fire potential is expected.

Temperatures over the last thirty days have been near to below normal across much of Nevada and Utah and near to above normal from northern Utah into Idaho and Wyoming. Precipitation over the last thirty days was well above normal across Nevada, Utah, the Arizona Strip, and eastern Idaho due to strong Pacific flow and wetter storms for the Great Basin. The snowpack remained well above normal throughout January, despite a drying trend the last week or so of the month. Snowpack ended January 180-250% of normal in Nevada, Utah, and northern Arizona, but was closer to normal in Idaho and Wyoming. Low snow levels brought heavy snow to valley floors and snow remained on the ground for extended periods throughout December and January across all but southern Nevada and the Arizona Strip. Although the wetter conditions over the last couple of months has improved drought conditions, severe drought with pockets of extreme drought continues across Nevada and Utah into far southern Idaho and western Wyoming, while moderate drought remains farther north into central Idaho. The drought is expected to continue improving through the spring across the Great Basin, with drought possibly being removed across portions of Idaho and Wyoming.

Fuel moisture is above normal across the Great Basin due to consistent storms and heavy precipitation. Fine fuels were above normal last year across the Snake River Plain and parts of far northwest Nevada but were near or below normal elsewhere. Snow fell down to valley floors in December and January across most areas of the Great Basin, except in the far south, and likely has compacted any carryover fine fuels due to the extended period the snow cover. This is expected to decrease fine fuel load heading into the spring. New growth is likely this year due to winter and spring precipitation, however, the carryover component is expected to be lower.

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

Normal significant fire potential is expected through April in all areas, which typically means low fire potential. Below normal fire potential is possible in some of the higher elevations of southern areas of the Great Basin in May depending on snow melt. Areas farther north will continue with low fire potential in May, but that is considered normal for the time of year. We will continue to monitor spring fine fuel growth across the Great Basin.

Southwest: Normal significant fire potential is anticipated for much of the geographic area through early spring. Some areas of above normal significant fire potential are expected to arrive by mid to late spring across the east slopes of the New Mexico mountains and perhaps sections of the eastern plains as well. The increased potential on the plains could be more localized.

The months of October through December were wetter than average for many locations across the Southwest Area (SWA), except for far western Arizona. High temperatures trended below normal overall during this period, with the coldest values compared to normal across the southern tier of Arizona into southwestern New Mexico. This trend has continued for much of January, with below normal temperatures for much of the geographic area except the eastern half of New Mexico, including many areas experiencing above normal precipitation. Generally, the eastern one-third of New Mexico has observed below normal precipitation so far in January.

Snowpack is above to well above normal across the northwestern half to two-thirds of the SWA, with below average snowpack values on the east slopes of the northern New Mexico mountains and the south-central mountains of New Mexico. Last summer's above normal monsoon produced an abundance of fine fuel buildup across many areas of the SWA, although across many northern portions fuels have been compacted by above normal snowfall. Farther south, these dead fuels are likely to come into play later in the spring and become available to burn.

Given the ongoing, yet weakening La Niña, an active weather pattern is expected to continue with wetter and colder than normal conditions focused on northwest portions of the SWA and warmer and drier conditions on southeast portions into early spring. With the ongoing dryness across the eastern plains of New Mexico and eastern slopes of the central New Mexico mountains, areas of above normal significant fire potential are likely to arise by spring. Areas farther north and west will have normal significant fire potential overall. A shift to ENSO-neutral over the next two to four months and perhaps a weak El Niño by early-to-mid summer could shift the weather pattern by May. Many uncertainties exist regarding how quickly the persistent La Niña pattern will breakdown over the next few months. If it deteriorates more quickly, a more active and wetter weather pattern could ensue focused along and west of the Continental Divide by late spring into early summer compliments of a deep, persistent upper-level trough near or just off the coast of southern California or near Baja California. The plains are expected to stay generally drier than normal through spring.

Rocky Mountain: Normal significant fire potential is expected across all areas of the Rocky Mountain Area (RMA) for the outlook period, which typically means low fire potential. However, the outlook period may have a few periods of elevated fire potential along and east of the southern Front Range Foothills, southeast Colorado, and western Kansas due to persistent drought and the availability of cured and freeze-killed fuels that may lack sufficient moisture when dry and windy conditions occur.

Colorado and Wyoming have accumulated snow with cold, wet weather systems since the beginning of November. In December and January, temperatures were anomalously cool over the entire RMA and most of the CONUS. The mountains in Wyoming and Colorado have established snowpack that is well above normal for early winter. The southern half of South Dakota, western Nebraska, and northeastern Colorado received significant snowfall in mid-January with two-to-three foot accumulations. In fact, this winter has shown record longevity for snow cover even at lower elevations on the Front Range, where there is normally a more active freeze/thaw cycle. Cooler temperatures noted above, along with the low sun angles, and more persistent cloud cover than normal are resulting in the more persistent snow cover. An upcoming cold air outbreak in early February will likely result in the snow cover remaining for at least the next few weeks, if not longer.

Following several atmospheric river events early this winter through mid-January, the upper air pattern has shifted slightly. Upper ridging is now present along the West Coast, with a very broad upper trough across the remainder of the country. This pattern shift has provided upper air flow from the northwest and that will persist into February, which tends to be a more favorable flow for Arctic or modified Arctic air to push south into the RMA this time of year. Additionally, these types of airmasses typically bring periods of light snow, focused along and east of the Continental Divide.

Prior to the more active period during the past two months, the fall and early winter brought infrequent precipitation and lack of snow cover. Areas of moderate to severe drought increased across eastern Colorado, while extreme to exceptional drought conditions continue in western Kansas and far southwest Nebraska. The US Drought Monitor depicts drought improvement in Colorado compared with November and December, but little change elsewhere. Recent and expected precipitation on the Plains is anticipated to bring noticeable improvements to drought there, especially for the spring and summer months.

The latest satellite snow depth analysis indicates that most of the RMA now has a uniform and substantial snow cover that will help to compact the fine fuels and eliminate vertical arrangement for fire spread. Despite snow cover over much of the RMA, there is an area in the southern Front Range near Pueblo, Colorado that remains snow-free. Over the last several weeks, pre-frontal winds and moderately low relative humidity combined with dry fine fuels slightly raised fire danger over southeast Colorado and southwest Kansas. The third week in January brought some relief and provided some snow cover in this area. However, in fine fuel beds outside of snow cover fire potential will be elevated during periods of warm and dry wind events.

Lightning is negligible in February so natural ignitions are not a factor and ignitions are confined to human caused. As we progress into spring, the potential for thunderstorms and natural ignitions increases, but moisture also increases as the March through May period is climatologically the wettest and snowiest time of year in the RMA, especially on the Front Range.

Favorable conditions in January continued to allow prescribed and pile burning to continue in many areas of Colorado, Wyoming, and the Black Hills of South Dakota.

A third consecutive La Niña is underway but already showing signs of weakening. A return to neutral conditions is expected this spring, followed by El Niño conditions likely developing during summer. In the short-term, another Arctic cold front is expected to move through the RMA the first week in February. Another influence on our weather pattern will come into play later in February and March with a phase change of the Madden Julian Oscillation. Overall, the RMA is expected to have higher probabilities of cooler and wetter than average conditions that may favor a slower melt of the high elevation snowpack with soil moistures remaining higher as well.

The outlook for the RMA depicts normal significant fire potential across the geographic area through May. Due to the persistent drought across portions of the Plains, fire potential may be elevated at times during the outlook period, especially along and east of the southern Front Range Foothills, across portions of southeast Colorado, and western Kansas during warm, dry, and windy weather events. Statistically, there is an increase in fire activity and significant fire occurrence across the Plains prior to green-up in March

and April, which is considered normal. The rest of the RMA is anticipated to see normal green-up following the melt-off of the spring snowpack.

Eastern Area: Near normal significant fire potential is forecast across the majority of the Eastern Area February into May.

Snowfall and precipitation were below normal across northwestern Minnesota in January. Longer term drought was in place across parts of the Mississippi Valley as well as the southeastern Lower Peninsula of Michigan towards the end of January. 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 expected over the Upper Mississippi Valley February into March. Above normal temperatures are expected across much of the southern tier of the Eastern Area during February and May.

According to the NOAA Climate Prediction Center and Predictive Service's long-term outlooks, near to above normal precipitation is forecast across the Eastern Area February into May. However, periods of below normal fuel moisture levels may persist into the spring across drier parts of the western Mid-Mississippi Valley.

Southern Area: Ongoing impacts from the multi-year La Niña continue for the Southern Area, with long-term drought in place across large parts of Oklahoma and Texas, in addition to eastern North Carolina. Even as La Niña begins to fade heading into spring, the typical lag seen in the atmosphere, combined with depleted soil moisture in several areas could allow for an active spring fire season for some portions of the Southern Area.

After a brief return to wintry conditions in early February, model guidance is indicating the return of a more classic La Niña pattern the rest of the month, which has strong support from past analogs. This should result in an anomalous high pressure ridge building over the eastern states throughout most of the month, promoting widespread and potentially record-breaking warmth across the Southeast. Furthermore, the Madden-Julian Oscillation (MJO), a measure of atmospheric forcing caused by large-scale thunderstorm complexes either side of the equator, is highly supportive of this warm potential for most of the Southern Area after the first week of February. There is a statistically significant signal for anomalously wet weather from much of north and east Texas into Oklahoma, Arkansas, Tennessee, and Kentucky as the MJO rotates through the maritime continent and western Pacific later in the month, as well. Eastern Oklahoma typically sees a rapid increase in the probability of large fires in late winter and early spring, but because of the wintry weather early in the month, along with low Keetch-Byram Drought Indices (KBDIs) and the anticipated wet pattern, this PSA is forecast to see below normal significant fire potential during February. It is possible that areas from eastern Oklahoma into east Texas, the Mississippi and Tennessee Valleys, in addition to the Appalachians see below normal activity through the period, should heavy precipitation potential be realized in the next several weeks. Below normal significant fire potential was considered for February through April across western Oklahoma into the Texas High Plains, where below normal grass loading has proven to be an inhibitor to large fires, despite multiple instances of elevated to critical fire weather in January. Nonetheless, longer days in spring and the extreme to exceptional drought conditions warrant hesitation for now.

Meanwhile, portions of south and west Texas are unanimously forecast to remain warmer and drier than normal the next few months. PSAs adjacent to the Rio Grande have largely missed out on recent wetting precipitation events and at times saw energy release components near the 90th percentile during periods of accelerated drying in January. Above normal grass loading has been observed by the Texas A&M Forest Service across the Trans Pecos and south Texas PSAs, where grasses are dormant due to the late December freeze. Drought has accelerated across south Texas, with a three-class degradation noted from late December to late January. Above normal significant fire potential continues for the south Texas PSAs and Trans Pecos for February, despite what may be a slow start, and this potential is forecast to expand into portions of central and west Texas during March and April. By May, only the Trans Pecos PSA is

included in above normal potential, mainly due to the combination of long-term drought and the typical increase in lightning-induced fires observed there by late spring.

For the Southeast, drought has migrated farther east the past several months, with severe drought now encompassing northern Florida, where streamflow data shows water levels are largely below normal for this time of year. Rainfall amounts in recent weeks have quickly tapered off from the panhandle into northern Florida and southeast Georgia, resulting in the maintenance of above normal large fire potential there in February. Recent wetting rain in the Carolinas and a continued wet pattern into early February have prompted a downgrade to normal significant fire potential there in February, but rainfall observations and forecasts are not supportive of significant drought improvement. The March forecast calls for above normal significant fire potential for the two eastern North Carolina PSAs, with a return to normal in April and May given increasing uncertainty in how quickly La Niña weakens.

There are few indications that a consistently wetter than normal pattern will develop across northern Florida and southern Georgia anytime soon, and with below to well below normal water levels observed in local swamps and waterways, it seems prudent to maintain above normal significant fire potential there through the forecast period. It is not yet clear what impact the late December freeze may have had on shrubs and other native vegetation, but cured herbaceous fuels are certainly of concern. While the wet season should eventually bring relief, the potential for lightning-induced starts can be expected to ramp up during May. Farther south in Florida, drought development is now expected by the Climate Prediction Center. Despite this and KBDIs that would otherwise be alarming, reported water levels do not illicit concern by local experts, which is almost exclusively due to lingering flood water left behind by Hurricanes Ian and Nicole. Nonetheless, it is imperative to watch trends across the Florida Peninsula given that a very warm and dry spring could lead to flash drought development, a rapid depletion of water levels, and increasing significant fire potential.

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