



National Significant Wildland Fire Potential Outlook

Predictive Services
National Interagency Fire Center

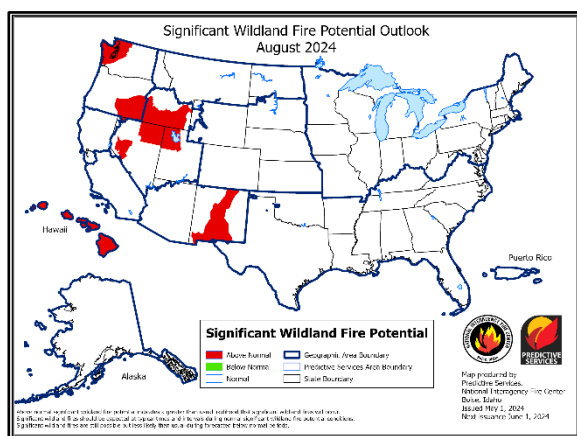
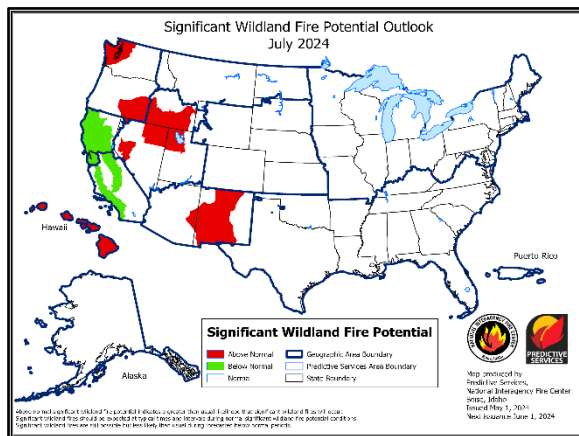
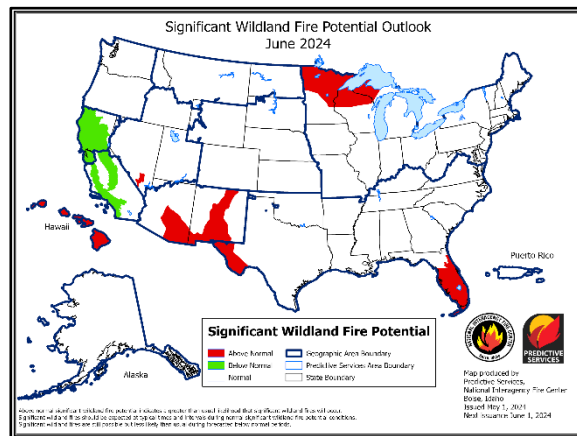
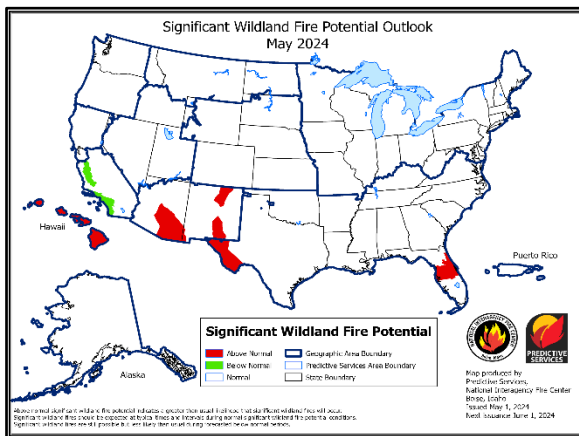


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Outlook Period – May through August 2024

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.



Fire activity slowly increased across the western geographic areas in the US in April, but remained at very low levels, while fire activity in the Eastern and Southern Areas decreased, with their Geographic Area Coordination Centers' (GACC) Preparedness Levels (PL) at PL1 and PL2 (on a scale of 1-5), respectively. Short-duration significant fires continued to emerge at times across the country, mainly across the Plains, Southwest, and Upper Midwest. While significant fire potential increased at times due to wind events, precipitation often followed across the Plains and Upper Midwest, subsequently decreasing activity. Year-to-date annual acres burned for the US is well above the 10-year average at 240% of normal, primarily due to late February's fire outbreak in the panhandles of Texas and Oklahoma that burned over a million acres, but the national year-to-date tally of wildfires remains below average, near 76%.

Precipitation across the contiguous US in April was above normal across much of the northern Plains into the Mid-Mississippi Valley and Great Lakes, with above normal precipitation also noted

across east Texas, northern Louisiana, and southern Arizona. Precipitation was below normal overall across the northern two-thirds of the West, the southern Appalachians, Carolinas, and central and south Florida. Temperatures were above normal across much of the Plains to Appalachians, with near normal temperatures across much of the West and near to below normal temperatures in Florida. Extreme to exceptional drought persists in southern New Mexico, with extreme drought also in portions of eastern Iowa, western Montana, and south-central Texas. Drought or abnormally dry conditions persist in much of the Upper Midwest westward into the Northwest and across much of Arizona.

Climate Prediction Center and Predictive Services outlooks issued in late April depict above normal temperatures are likely for much of the eastern and northwestern US in May, followed by above normal temperatures for the summer. Above normal temperatures are also likely for portions of eastern Alaska through the summer, with below normal temperatures likely for southwest Alaska. Precipitation is likely to be above normal across much of the southeastern and central Plains in May, with above normal precipitation likely for the Lower Mississippi Valley, Appalachians, and East Coast forecast over the summer. Below normal precipitation is likely for the Southwest in May, and across much of the Northwest, Intermountain West, and Plains over the summer.

Above normal significant fire potential is forecast for central Florida in May, expanding to much of the Florida peninsula in June before returning to normal over the summer. Above normal potential is forecast for portions of the Southwest May through August, with above normal potential for northern Minnesota, the northern Great Lakes, and Red Rock area of southern Nevada in June. Much of the northern Great Basin, including portions of western Nevada, southeast Oregon, and northwest Washington, are forecast to have above normal potential in July and August. Similar to last year, a slow beginning to the peak fire season is forecast for California, with below normal potential forecast for portions of southern California in May, expanding to much of the state in June and July. Above normal potential is forecast for the lee sides of Hawai'i, especially for Maui and the Big Island, extending into August.

Past Weather and Drought

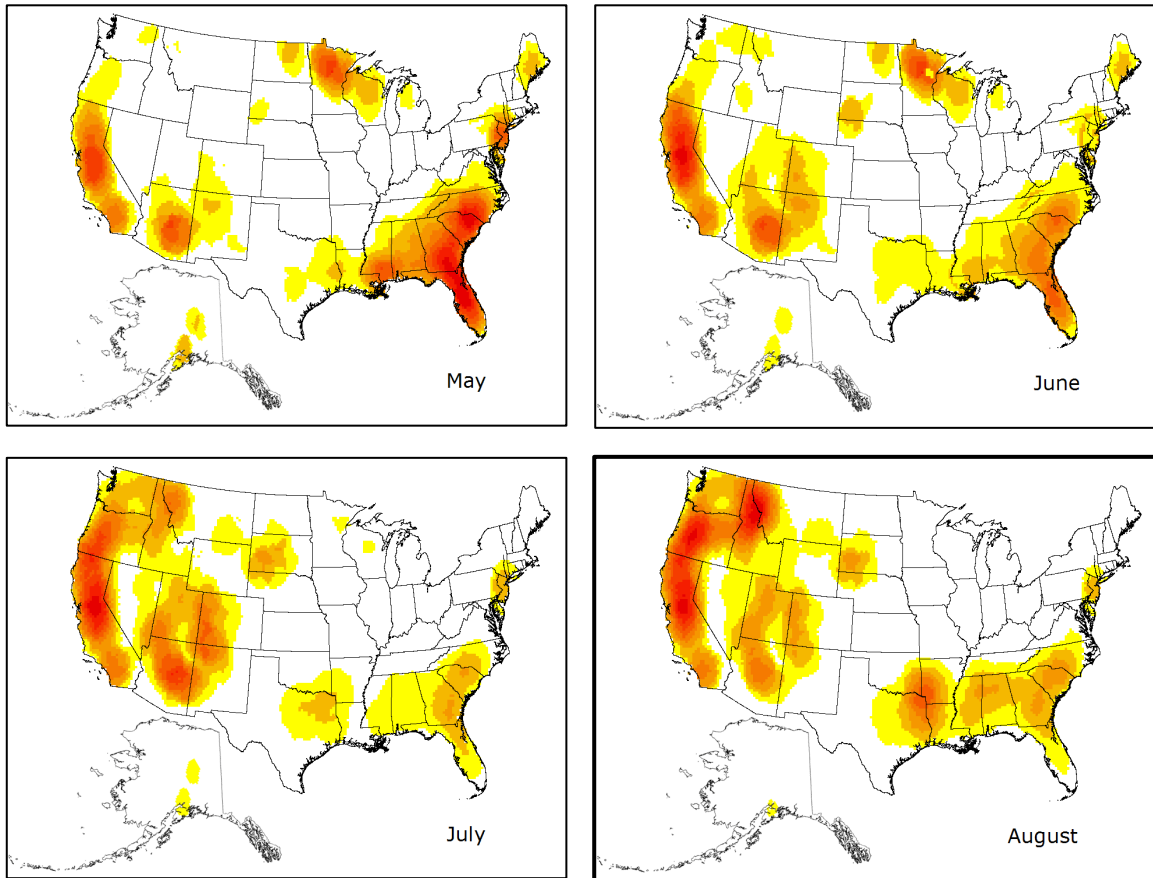
Temperatures were above normal for much of the Plains to the Appalachians in April, with near to above normal temperatures observed for much of the East Coast and Rockies as well. Near to below normal temperatures were observed across much of Florida, the West Coast, and Southwest. Temperatures in Alaska were near to below normal for southwest Alaska and above normal for much of the Interior, with temperatures averaging more than five degrees above normal across portions of the North Slope and eastern Interior. Temperatures across Hawai'i were mixed, with above normal temperatures for Oahu, Molokai, and the Big Island, but below normal for Maui and Kauai.

Above normal precipitation fell across much of the northern Plains, Mid-Mississippi Valley, and Great Lakes as well as much of east Texas, northern Louisiana, and southern Arizona. Precipitation was below normal across much of the northern two-thirds of the West, although pockets of above normal precipitation were observed across portions of the northern Great Basin and central California. Precipitation was well below normal across portions of eastern Montana, southeast Colorado, western Kansas, eastern New Mexico, and far West Texas. Below normal precipitation was also observed across the Tennessee Valley to the Carolinas and much of central and south Florida. Above normal precipitation was recorded across Kauai and Oahu, but it was below normal from Molokai to the Big Island. Much of Alaska received below normal precipitation except for the Seward Peninsula and northwest Alaska.

Several strong wind events occurred on the southern High Plains during April, including one April 14-15, and another April 25-28. However, few significant fires were observed, and precipitation across much of the Texas Panhandle at the beginning of the month helped to mitigate some of

next two months, an 85% chance forecast by the Climate Prediction Center (CPC). A rapid transition to La Niña conditions is becoming more likely over the summer, with CPC forecasting a 60% chance of La Niña for the June – August period. The spring predictability barrier is still an issue, with a better forecast for the ENSO transition likely over the next few weeks. Other climate oscillations like the Madden-Julian Oscillation and Pacific Decadal Oscillation will also influence weather and climate during the outlook period, but the transition from El Niño to ENSO neutral and potential La Niña conditions will be the main driver.

Geographic Area Forecasts



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)

Alaska

Typical wildfire potential is expected for Alaska from May through August.

The southern half of the southeast Panhandle has become abnormally dry due to persistent dry weather over the last few weeks. Other areas are experiencing a typical dry spring, albeit with warmer than normal temperatures across the Interior.

The CPC's outlook shows a slight tilt toward warmer temperatures through the summer for the eastern half of Alaska and cooler temperatures in the west. There is also a minor signal for wet weather over western Alaska, with no meaningful signal over the remainder of Alaska.

The prominent El Niño now in place is expected to fade over the coming months and is likely to transition to La Niña by late summer. The flip from El Niño to La Niña occurring during the peak of Alaska's wildfire season complicates the outlook and introduces considerable uncertainty.

Alaska is coming into the season now, with some small fires along the road system, but no significant wildfires being tracked as of late April.

Cured fine fuels have already been exposed at many coastal locations and at lower elevations in the Interior and south-central Alaska. While the snowpack will complete its retreat from burnable elevations by the end of May, the subsurface duff layers typically don't become dry enough to influence wildfire behavior until June.

Wind-driven grass fires will be increasing during the window between the melting of the snowpack and the green-up of vegetation a few weeks after snowmelt. Thunderstorms become a factor in starting wildfires by late May and even more so in June and July. Alaska's wildfire season typically tapers off in late July and August as temperatures cool and rainy weather moves in from the Bering Sea. The overall outlook for Alaska calls for normal wildfire potential statewide from May through August.

Northwest

The Northwest Geographic Area significant fire potential is expected to remain normal for May and June, but above normal potential is expected for the far southeastern and northwestern parts of the region in July and August.

The Northwest Geographic Area was largely under split upper-level flow during April. This took most of the precipitation north and south of the area, with precipitation 10-50% of normal. Driest areas were across the lower Columbia Basin and far southwest Oregon. Some improvement in the rain deficit occurred across the Cascades westward during the last several days of April. Only portions of central Oregon, the upper Columbia Basin, and far eastern Oregon received near and above normal amounts. Mean temperatures were within two degrees of normal.

Snow water equivalent in the snowpack across the mountains appeared to have peaked in mid-March, a couple weeks earlier than normal. Values have since shown a steady decline. Currently, most Washington river basins are 50-65% of late April median values. The state of Washington has declared a drought emergency due to low snowpack and water supply concerns. Far southern Washington plus northeast Oregon snowpack values mostly range from 70-85% of median while the remainder of Oregon is 90-97% of median. As mentioned in previous outlooks, snowpack itself does not necessarily indicate peak season significant fire potential, although lower accumulations in a basin may indicate an earlier than typical beginning for increased fire occurrence.

Drought designations were increased for portions of western Washington and northwest Oregon. The north Washington Cascades and far northern Olympic Peninsula had increases in moderate drought. The remainder of that region was designated abnormally dry. Elsewhere, little change was noted. Central and south-central Oregon, plus far northeast Washington remain classified in moderate drought. Surrounding areas remain designated as abnormally dry.

Fire activity continued to be minimal in April. Prescribed fire activity continued across the region during warmer and drier periods.

Fuels continue to be too moist to support noteworthy risk of significant fires in the Northwest Geographic Area. Extended periods of warmer and drier weather temporarily increased fire danger, but subsequent moisture dropped fire potential back to more normal conditions. Lower elevation fuels have begun to green up west of the Cascades. East of the Cascades, green-up has been slower and has not yet occurred consistently across rangeland fuels. When aligned with wind, cured rangeland fuels have higher potential for increased rates of spread and higher potential for ignition.

The ENSO outlook continues to indicate a rapid transition from El Niño to La Niña over the next few months. NOAA's outlooks covering May through August July indicate a 50-60% chance of above normal temperatures through the period. May precipitation does not have a strong signal pointing toward either above or below normal amounts, but far northern Washington has a 33-50% probability of below normal amounts. June, July, and August see below normal precipitation probabilities expanding to cover all but south-central and southwest Oregon, where no strong

signals are present. The highest probabilities of below normal precipitation cover the eastern quarter of Washington. Past years under a similar transition have resulted in large swaths of the geographic area ending the summer season with above normal precipitation. The northern Olympic Peninsula was an exception where end of summer precipitation was below normal. One year, however, the area remained with below normal precipitation like the CPC outlook, but also with below normal lightning counts and presumably fewer thunderstorms.

The Northwest Geographic Area is taking a nod toward the CPC outlook but is strongly considering past years under a similar ENSO transition. From 1992 to 2020, all similar rapid ENSO transition years had below average fire activity for that period across the entire geographic area, including the drier 2016. Past fire occurrence data during similar transitions strongly favored 1,000 plus acre fire size activity located east of the Cascade Crest. There is some historical focus for 10,000-acre fires across east central and southeast Oregon in the grass and rangelands. As such, above normal significant fire activity is forecast across southeast Oregon in Predictive Service Area (PSA) NW12 covering July and August. Owing to the tendency for northwest Washington to remain dry, even under the wetter analog years, PSA NW01 is also forecast to have higher than normal significant fire activity for July and August. Remaining areas still contain too much uncertainty to push one direction or another.

Northern California and Hawai'i

Significant fire potential is projected to be normal for May and August and generally below normal for June and July with the exceptions of the northeast California and Far Eastside PSAs where normal has been designated. During May all PSAs average less than one large fire per month. During June, generally one to three large fires occur per PSA although less than one for the North Coast and Northeast California PSAs. During July, generally one to three large fires occur per PSA except for the North Coast which is less than one. During August, one to four large fires occur per PSA except for the North Coast which is less than one. Hawaii's significant fire potential is above normal for the leeward areas, particularly Maui and the Big Island, from May through August.

The weather patterns during April were highly variable with cool/wet periods and warm/dry ones. There were four separate multi-day wetting precipitation events during April. Precipitation anomalies were mixed with pockets of near to above normal found across the Modoc Plateau, Sacramento Valley, and portions of the East Bay while below normal precipitation was observed elsewhere. Average temperature anomalies were generally near to above normal. Around 3,200 lightning strikes were recorded during the month or double the 2012-2022 April lightning strike average of around 1,600 strikes. Four separate very weak drier northerly or easterly wind events occurred during the month.

Dead fuel moisture levels fluctuated due to the varying April weather patterns but were generally near to above seasonal levels. The most flammable period occurred during the third week of April. The growing season within the shrub and tree canopies was generally found below 4,000-4,500 feet while dormancy remained across the upper elevations. Herbaceous fuels were generally in various stages of green-up below around 6,000 feet with the 4,000-6,000 feet elevation range significantly increasing in green-up across the most exposed areas. Initial curing was noticed across the lowest elevations where thinner soil and the most exposed locations existed. Moisture found within the snowpack ranged between 90-110% of normal by April 26. Snow cover was generally found in the fully sheltered areas above 5,500-6,500 feet by the end of the month. There were no drought designations for northern California.

Fire business increased during April, especially during the third week, with an average of two fires occurring per day. The largest fire was 19 acres observed April 21 in the Sierra Foothills. One lightning ignition was reported due to the abundant lightning observed April 23. Pile burning transitioned into more broadcast burns the latter half of the month.

Timely cool/moist intrusions in the form of showers or higher humidity due to a dominant onshore

flow are expected during the next four months. Gusty and dry westerly wind periods are likely to cause more fire growth issues versus lightning patterns due to the expected West Coast troughing this spring and summer. Problematic lightning is expected to be less this summer due to a more subdued North American Monsoon and less potential for influences from East Pacific tropical systems due to the developing La Niña. Pacific disturbances originating from the North Pacific are more likely to create some lightning ignitions although they tend to be less problematic overall due to the lack of a significant heat signal associated with them. It should be mentioned that it only takes one significant lightning event, like what was experienced during 2020 and 2023, to change the course of the fire season.

Northern California will experience a robust shrub and tree canopy green-up due to adequate soil moisture levels and will act as a growth resistance barrier during the next few months. The snowpack will also create a fire growth resistance barrier across the higher elevations through around mid-June although snow melt will come earlier this year compared to last year and expose fuels to additional drying. The lower elevations will experience more noticeable herbaceous curing and allow for increased initial attack and fire spread the latter half of May into June although the frequent onshore moist intrusions will temper the potential throughout most of the outlook period, especially across the near coastal areas and portions of the Sacramento Valley. Herbaceous curing should be more noticeable across the Modoc Plateau and Far Eastside during the latter half of June into July, and the gusty dry westerly wind systems should heighten the potential for large fire growth during the peak of the summer. The lack of a significant heat signal creating shorter duration heat wave events due to timely cool-moist intrusions should keep dead fuels from experiencing unusually long or extended critically dry periods. Drought is also expected to be absent during the next 4 months with perhaps some more noticeable dryness across the far north. Based on the aforementioned ingredients, near to below normal significant fire potential is expected through July. Since confidence in the forecast lessens further out in time, normal potential has been designated for August. The fire environment should be suitable for an extended prescribed burn season from spring to early summer.

Sea surface temperature (SST) anomalies surrounding the Hawai'ian Islands were generally near normal by the end of April. Average temperature anomalies observed during April were mixed with some above and below normal areas. Precipitation anomalies were also mixed with above normal precipitation across the northern tier of islands while below normal was more prevalent across the southern tier. A slow-moving front brought heavy rain to Kauai and Oahu April 11-14 and alleviated drought conditions across those islands. However, little rain fell for the southern tier of islands where moderate to severe drought intensified across Maui and the Big Island. Gustier westerly and easterly wind events continued throughout the month, but no Red Flag Warnings were issued. Satellites detected several smaller fires during April.

El Niño conditions will transition to an ENSO neutral state during the next few months and could transition to La Niña sometime during the summer. Average temperatures during the next four months should generally be near to above normal while precipitation should generally be below normal. Drought coverage and intensity is likely to expand in Hawai'i as the dry season fully takes hold and allows more of the live fuel component to burn. Herbaceous green-up will occur across the northern tier of islands resulting from the mid-April rain event and act to initially suppress fire growth there across the leeward areas but herbaceous fuels will become more available to burn as the dry season progresses. Wind events will be a wildcard but a developing La Niña may portend additional enhanced trade wind scenarios that could lead to fire growth periods. There is less likelihood of tropical storms creating fire season slowing or growing periods due to the expected La Niña conditions. Above normal significant fire potential is forecast May through August across most leeward areas due to drought expansion and its impacts on live fuels plus the possibility of more enhanced trade wind scenarios. Maui and the Big Island will be most susceptible early on during the outlook period.

Southern California

Over the past three-month period, temperatures remained slightly below normal for most of the Southern California while precipitation remained well above normal for most of the region. The only exception is the Central Valley, where temperatures remained slightly above normal. Some areas received over 200% of their normal late January to late April precipitation.

The equatorial Pacific's El Niño Southern Oscillation (ENSO) is undergoing a transition from an El Niño state to a neutral state as sea surface temperatures (SSTs) have shown signs of persistent cooling over the past three-month period. SST anomalies are much lower across the Niño 3.4 Region, down near 0.5 C. Spatially, the core of the warmest water remains in the central Pacific with cooler anomalies beginning to develop off the South American coast. This is a sign of the strengthening of the easterly trade winds which indicates a transition away from the El Niño state.

The latest US Drought Monitor shows no areas in drought across Southern California. There is only a small area of the eastern Mojave Desert that is considered abnormally dry; however, this area is not classified in drought. Live fuel moisture continues to remain above average for most of the region. Larger dead fuel moisture for most of the region except for the Eastern Sierra PSA remains above normal, while Energy Release Component (ERC) values remain below normal for most of the region except for the Eastern Sierra PSA.

Climate models suggest a transition across the equatorial Pacific from El Niño to La Niña over the summer. This results in a slightly favored warmer and drier period. However, there is lower than average confidence given summer is the time of year when ENSO influences are at their weakest, combined with conditions either remaining ENSO neutral or in a weak La Niña. Another reason the odds tilt slightly towards a warmer and drier summer is the cold SST anomalies in the Gulf of California. The cold anomalies in the Gulf of California will help promote atmospheric stability and lessen the chance for convection to develop over the Gulf of California that could move over the southwestern US.

For fuels, there is high confidence dead and live fuel moisture remains above normal across the various mountain ranges, especially the central and southern Sierra, through July. There is moderate to high confidence the dead and live fuel moistures will remain above normal for the coastal locations through July. There is more forecast uncertainty for August given the latest temperature and precipitation forecast. There is likely to be a larger fine fuel load this year given the excess precipitation in the late winter and spring months combined with the lack of significant fires during the previous season. Due to these factors, near normal significant fire potential is forecast for August rather than below normal.

Northern Rockies

Significant wildland fire potential in the Northern Rockies Geographic Area (NRGA) for May through August is expected to be normal. This projection is a balance between existing drought and weak snowpack for the western part of the NRGA offset by a forecast of near to above normal precipitation for the months of May and June. The expectation is the spring moisture should be adequate to ensure a normal to slightly slower than normal start to fire season. The eastern half of the NRGA currently maintains a dry signal, but short-term forecasts favor cooler weather with light moisture, and longer-term forecasts depict above normal spring moisture. The latter part of the summer has fewer clear signals across the NRGA, and late August and September could be drier than normal yielding an extended fire season.

Eastern Montana and western North Dakota have had a critically dry period receiving less than 40% of expected April precipitation. A smaller deficit was noted in north Idaho and western Montana. The western areas will benefit from short term forecasts for frequent shower activity. Central Montana and parts of western Montana, and central and eastern North Dakota have been

closer to normal precipitation. Temperature anomalies have been within two degrees of normal for most locations in April.

Dry areas staying dry and slightly dry areas getting less dry summarizes the NRGAs drought picture. Drought has changed slightly over the past month with severe drought observed in most of the higher terrain of western Montana and northern Idaho. In these areas, small pockets of extreme drought have been observed. However, there was a decrease in areas reporting moderate drought or abnormally dry. The strongest improvements have been noted over south-central Montana and most of southern North Dakota. North Idaho has seen little change, and the higher elevations persist with severe drought.

A lack of snow water equivalent (SWE) in the snowpack is a significant concern with most basins reflecting less than 70% of normal snowpack for the end of April. Cooler temperatures and a series of disturbances bringing showers should slow snowmelt for the first half of May.

Green-up is progressing in many areas but is stunted in eastern Montana and parts of North Dakota where receptiveness to rangeland fire will continue into early May. Growing Season Index values have tracked below normal to close to normal for most of April but have recently begun tracking slightly above normal due to warmer overnight temperatures.

In north Idaho and northwest Montana, 1000-hour fuel moistures are tracking below normal for late April but have not yet exceeded the 50th percentile for dryness. In other areas, 1000-hour fuels are not showing significant deviations from normal.

Wildfire activity during April was limited due to timely precipitation for most of the NRGAs. The larger fires were in North Dakota where conditions were drier and windier days supported a few fires greater than 100 acres. The largest fires in North Dakota were 1200 and 350 acres and were wind driven. April's total wildfire activity for the NRGAs tallied 164 fires for about 4,000 acres. A significant amount of prescribed fire was accomplished during the month.

All PSAs are expected to have normal significant wildland fire potential for May through August. The presence of drought and limited snowpack is a concern for above normal potential, especially for northern Idaho and northwest Montana, but forecasters are considering several offsetting factors related to the expected weather in May and June. El Niño is transitioning to neutral conditions with La Niña expected to develop by midsummer. Considering other years where this transition occurred during this time frame, the months of May and June usually featured lower pressures over the Pacific Northwest, which is a pattern associated with above normal moisture tracking into the NRGAs. Climate forecast models have indicated at this possibility since December. Above normal spring moisture would not completely offset drought impacts but would contribute to a slower start to fire season. Forecast confidence decreases regarding precipitation forecasts for later in the summer.

Great Basin

Fire activity remains low in the Great Basin due to continued storm systems moving across the region keeping humidity higher, bringing consistent periods of precipitation, and periods of cooler temperatures. Prescribed fire activity is still very high in the Great Basin, especially across Idaho, Utah, and Wyoming. Fire activity is expected to pick up in May and June from south to north, which would be normal. Due to continued spring moisture in April forecasted to linger into May, fine fuel growth is expected to be above normal over northern and western Nevada, southern Idaho, northern Utah, and possibly eastern Utah. Carryover from last year will still be present in many of these areas as well, adding to the fine fuel loading since very little fire activity occurred in 2023. Once fine fuels dry out later in the spring toward summer, above normal significant fire potential is possible in these areas by July and August, and possibly as early as mid to late June. Otherwise, smaller areas of above normal fire potential are possible in portions of southern Nevada near Red Rock due to above average fine fuel loads that are consistent with prior years

with high fire activity. Therefore, above normal significant fire potential is indicated for a small part of southern Nevada for June. Potential could pick up in May since the month overall looks very windy, and some fuels become increasingly available as curing proceeds during that time.

Temperatures over the last thirty days have been near to above normal in most areas of the Great Basin, although storms have moved through to drop temperatures below normal at times. Precipitation was above normal in parts of Nevada, and near or below normal elsewhere. The snowpack is near to just above normal across most areas of the Great Basin except for central Idaho which is 70-80% of normal. The Great Basin is generally absent of drought. There are small areas of abnormally dry conditions or moderate drought over eastern Utah, the Arizona Strip, and far southern Nevada, along with portions of central Idaho. Drought may develop further in far eastern Utah or parts of central Idaho over the next few months. Currently, no drought is expected to develop across the rest of the Great Basin heading into the fire season.

Fuel moisture will continue to increase through the spring as green-up is underway in most areas. Green-up may last a bit longer into the spring due to forecasted storms bringing cooler temperatures and periods of precipitation through May. Once green-up completes, above normal fine fuel loading is expected over portions of northern and western Nevada, southern Idaho, and northwest Utah, and potentially eastern Utah. Due to the lack of drought and two wet winters, the soil should be primed for above normal fine fuel growth. Parts of southern Nevada in the Red Rock area are seeing above normal fine fuel loading which could lead to above normal fire potential in June until the monsoon arrives. Due to lack of drought in higher elevations and near to above normal snowpack, fuel moisture in the timber should remain elevated until later in the summer, which would be normal.

Fire activity remains low across the Great Basin, although prescribed burning activity continues across the Great Basin, especially in Idaho, Wyoming, and Utah. Smaller fires have been popping up over the last month in the lower elevations with no control issues, which is normal for this time of year.

Normal significant fire potential is expected through May, which means low fire potential for most of the Great Basin, with gradually increasing small fires over southern and eastern areas. Despite areas of above normal carry-over fuels in portions of northern Nevada, southern Idaho, and northwest Utah, the continued pattern of cold fronts moving through the Great Basin is expected to extend through the spring, keeping fire potential low. However, May looks like a windy month, and fires could start increasing in the dead carryover fine fuels in these areas, potentially growing for a burning period or until they reach uncured grasses and brush. Fire activity should start picking up over the southern half of the region in May and June, along with the lower elevation grasses in northern Nevada, southern Idaho, and northern Utah, which would be normal. The Red Rock area in southern Nevada is reporting widespread above normal fine fuels that are consistent with higher fire years. Therefore, above normal fire potential was added to this area for June. Fire potential may start picking up in the Red Rock area later in May once fuels completely cure.

Otherwise, the focus over the next few months will be watching the precipitation pattern, temperatures, and fine fuel growth. The Great Basin could be primed for significant fine fuel growth later in the spring. Confidence is increasing for above normal significant fire potential by July across southern Idaho, northern and western Nevada, and northwest Utah. These areas of above normal in July will likely continue into August but could change and expand as we move through May depending on the weather pattern. Long range weather forecasts are still showing periodic storms moving through during May and possibly into June with drier and warmer conditions later in May or June. The North American Monsoon looks to be delayed or weaker this year, so we could see warmer and drier conditions across the Great Basin. This adds to the likelihood of significant fuel drying in June and July, with better chances of above normal fire potential. Most of the fire potential concerns will be in the lower elevations, however the higher elevations of central Idaho may be a concern later this summer due to the below normal snowpack.

Southwest

While normal significant fire potential is expected for many areas of the region from May through August, some areas of above normal significant fire potential are expected across portions of the New Mexico central mountains and across the southeastern portion of Arizona in May. Areas of above normal significant fire potential are likely to continue along and south of the Mogollon Rim into June with areas of significant fire potential likely to remain above normal east of the Divide through August.

Over the bulk of the period from late last fall through January, precipitation was below normal across central and northwestern Arizona and across far southeastern New Mexico, while southern sections of Arizona and much of central New Mexico experienced above normal precipitation. During January through March, wetter than normal areas occurred across northern New Mexico and across southern Arizona into southwestern New Mexico, while eastern New Mexico saw below normal precipitation.

A shift in the equatorial Pacific sea surface temperatures will most likely play a prominent role in shaping the weather pattern for the rest of the spring and well into the middle of summer. El Niño has weakened sharply over the last several weeks and is expected to weaken further with a transition into La Niña by the middle of summer and fall, although some uncertainty remains. Although the late fall through January period turned out to be milder than average for much of the western part of the region, the beginning of the new year turned cooler than normal for most locations during the month of January. This cooler trend has continued for much of the last two months except for milder temperatures in place across far eastern New Mexico. A thorough inspection of past years with a flip from an El Niño to near or into La Niña in less than six months reveals overall cooler and more moist tendencies across the northwestern half of the region through May and into early June. Late spring could see periods of cooler temperatures with wetter than normal precipitation focused across the northwest portion of the area, with an uptick of precipitation across the eastern plains as May wears on. As a result, significant fire potential is expected to remain near normal for most portions of the region for May except for sections of the New Mexico central mountains and across the lower deserts of southern Arizona due to the elevated amounts of fine fuels.

As early summer arrives, expect generally warmer than normal temperatures for much of the region, especially across the eastern half of the area, with drier tendencies east of the Divide. Therefore, a continuation of above normal significant fire potential is expected in June along and east of the Divide, with a continuation of the elevated threat across the southern tier of Arizona. As the monsoon arrives, there is some potential for a slightly delayed to a normal onset this year and an eventual focus for enhanced precipitation along and west of the Divide. Hotter and drier than normal conditions are likely to linger through July and August east of the Divide, especially east of the New Mexico central mountains which will be coincident with a swath of abnormally dry and hot conditions over the midsection of the US. Confidence is increasing in this scenario as there is a strong signal from past transitions from El Niño to La Niña.

Rocky Mountain

The last month saw some significant dryness develop across the southern part of the Rocky Mountain Area. This resulted in some increasing drought conditions across eastern Colorado and much of Kansas. Snowpack has started to melt ahead of schedule, with most basins at only 75% of average. Despite the dryness, green-up has been able to progress with many areas starting to see fuel breaks developing. Normal significant fire potential is forecast through August.

The last month saw a series of storm systems move across the northern half of the area. In South Dakota, the precipitation over the last month reversed the deficit of precipitation since the beginning of the year. Most storms tracked north, leaving much of Kansas into southeast Colorado

with very little in the way of moisture through the month. These storms also brought very gusty winds across the Rocky Mountain Area. One of these systems during the first week of April brought long-lived gusts of 50 to 60 mph, with very dry conditions as well. Overall, the combination of the wind and the precipitation resulted in increased moisture loss from the landscape in the southern half of the Rocky Mountain Area, while there was increased moisture in the landscape in the north. Drought conditions have expanded across Kansas and started to creep into eastern Colorado. In contrast, drought conditions decreased across portions of eastern Wyoming and South Dakota.

During the wind events, Burning Index (BI) values on the central Plains exceeded the maximum values recorded from the past 20 years, with more PSAs east of the Divide observing BI values exceeding their 90th percentile. Despite the dry conditions in the south, much of the area over the last couple of weeks saw green-up continue to progress.

Many of the fires over the last month occurred during wind events. The first week of April saw increased fire activity in northeast Kansas; however, most of the fires remained small and were contained within one operational period.

Through May, expect typical temperatures across the Rocky Mountain Area and wetter conditions on the central Plains. El Niño will weaken, becoming neutral by the end of June. The forecast is for a quick transition into La Niña by late summer. For the summer months, temperatures are likely to increase to above average with less precipitation area wide by July. The monsoon will likely be weaker again like last year, mostly impacting areas west of the Continental Divide, with less activity east of the Divide. With the anticipated warmer and drier conditions in the lower elevations, drought conditions are likely to increase in portions of eastern and central Colorado.

With increasing green-up across the Rocky Mountain Area and the expectation of a wetter May, significant fire potential will be normal through June. With the increasing dryness going into July and August, along with above normal temperatures, significant fire potential will be normal but may trend towards above normal for portions of the Rocky Mountain Area. There remains uncertainty with the rapid transition from El Niño to La Niña.

Eastern Area

Normal fire potential is forecast across the majority of the Eastern Area through August, excluding a portion of the western Great Lakes and northern Minnesota, where above normal significant fire potential is expected to return in June. Thirty- to sixty-day negative precipitation anomalies were indicated across the northwestern and north central Great Lakes as well as portions of northeastern New England. Longer term drought persisted across portions of the Mississippi Valley and the eastern Upper Peninsula of Michigan towards the end of April. Shorter term precipitation deficits developed over portions of central and northeastern New England as well as portions of the Mid-Atlantic through the latter half of April.

The El Niño Southern Oscillation (ENSO) continues to transition from a weak El Niño to an ENSO neutral sea surface temperature regime through late spring into June, and then La Niña conditions through the rest of summer. Other sea surface temperature regimes also contribute to global weather patterns adding to some uncertainty in long term weather forecasts. With El Niño conditions expected to linger through into the remainder of the spring season, the north central portions of the contiguous US will likely continue to experience above normal temperatures into the summer. Precipitation trends are more uncertain, but wetter than normal conditions may affect much of the western and southern tiers of the Eastern Area into May with drier than normal conditions possibly developing over parts of the Eastern Area June into July.

The Predictive Services precipitation outlooks forecast above normal precipitation across the western and much of the southern tiers of the Eastern Area in May. Drier than normal precipitation is forecast over the Upper Mississippi Valley as well as most of the eastern states in June and

the Mid-Atlantic States in July. Wetter than normal conditions may develop in August across much of the Great Lakes into Iowa, northern Illinois and Indiana, and the northwestern Mid-Atlantic states. NOAA's CPC forecasts above normal precipitation across the southern tier of the Eastern Area April into June.

According to the Predictive Service temperature outlooks, above normal temperatures are forecast across the majority of the Eastern Area May into August. The CPC forecasts also predicts above normal temperature trends across the majority of the Eastern Area May through July.

With climate patterns shifting and the beginning of May having significant precipitation forecasted for Minnesota and Wisconsin where drought persists, along with green-up progressing northward, normal fire activity is likely to occur for much of May. However, there is potential for above normal fire activity later in the month as models indicate a return to drier than normal conditions. The chance for significant fire potential still exists in areas with the combination of hot, dry, windy days and the spring dip in pine live fuel moistures.

Snow depth was below normal all winter with the most significant deficits occurring across the entire northern tier of the Eastern Area and in the Appalachians, including West Virginia. All these areas have experienced above normal fire activity in the spring due to hardwood leaf litter and grasses that were not compressed under snow. This will continue to provide available dead fuel loading even after green-up. With these persisting fuels conditions and likely above normal temperatures, the Northeast and Mid-Atlantic will potentially continue to have periodic above normal fire activity throughout the outlook period. All models agree with drier than normal conditions for the Great Lakes in June. With June normally being the wettest month of the year for that area, below normal precipitation is likely to enhance drought. Moisture stress on live fuels combined with above normal temperatures and available dead fuel loading means the area could experience significant large fire potential or above normal fire activity. Hot, dry, windy events and persistently strong winds will be a big determinant in both the potential for increased and significant fire activity during the outlook period.

Longer term drought, negative soil moisture and precipitation anomalies remained in place across portions of the Mississippi Valley and the Great Lakes towards the end of April. Shorter term precipitation deficits developed over parts of central and northeastern New England as well as portions of the Mid-Atlantic. If these areas experience below normal precipitation and above normal temperature trends through rest of the spring into the summer season, periods of above normal fire potential are likely. However, it does appear that these areas are likely to continue to observe an increase in the frequency in precipitation events keeping significant fire potential curtailed through May. Some areas across the Eastern Area may observe periods of above normal fire potential heading into the summer, but confidence is low regarding the areas and timing of any increase in potential.

Southern Area

Leaf out is approaching completion across the hardwood-dominant forests of the Southern Area, while elevations in the Appalachians above approximately 3,500 feet will take until the second week of May to reach full shading, per local reports. Scattered areas in the High Plains are transitioning into green-up, which has allowed the previous Fuels and Fire Behavior Advisory to expire. Any trend backwards towards a cured state could become problematic in West Texas and Oklahoma, but high winds capable of producing large fires there are much less common as summer approaches. It should also be noted that above normal rainfall is strongly favored in the coming weeks over much of Oklahoma into the eastern two thirds of Texas. While this will bring drought relief to northern Oklahoma and parts of Texas in the short-term, a flush of new fuels will also develop, likely resulting in above normal herbaceous fuel loading where rainfall is especially heavy. These areas will have to be watched by July and August as heat waves could lead to flash drought, curing and depleting live fuel moisture. Areas of long-term severe to extreme drought in the Texas Hill Country should be monitored especially closely.

Large parts of the Coastal Plain will be deep into a multi-week stretch of dry weather heading into May. Concerns for most of the area are limited for the time being, but if this dry spell unexpectedly lingers into the heat of June and July, several areas could quickly come into play. Ground fires have already been reported in North Carolina's pocosin fuels, but there are fewer indicators of drought there than at this time last year. Perhaps of more concern is pine mortality from last year's drought and hurricane debris in Louisiana and Mississippi and the impacts this may have as summer heat sets in. Prior year analogs in the transition from El Niño to La Niña are supportive of warmer and drier than normal conditions across the Lower Mississippi Valley the next few months, but model guidance is generally wet for these areas, leading to low confidence.

Above normal significant fire potential is maintained across the Texas mountains through May and June, due to the combination of long-term drought, near to locally above normal grass loading in the complex terrain and expectations for only patchy rainfall in the coming weeks. Lightning ignitions are the main source of wildfires in this area, while occasional high wind events remain possible, though less likely as summer approaches. Monsoonal rainfall is not expected to be prolific for the area this year, and that could prolong or enhance drought and wildfire risks later into the summer months.

Increasing signals of flash drought are evident over portions of central and southern Florida. This follows a mostly wetter than normal winter, which has left above normal water levels across the southern tip of the peninsula. While perhaps not as much a factor as places like the Great Plains, the unusually wet November-to-March period has likely left above normal fuel loading in some of the upland dry prairies and pine flatwoods. The overlap of above normal cool season rainfall and recent flash drought is perhaps most concerning across east-central Florida. While this pattern is similar to what occurred during and after the Super El Niño of 1997-1998, rainfall was not nearly as heavy across the state during the late fall and winter of 2023-2024. Evaporative demand forecasts for May suggest that water levels across South Florida will decrease more rapidly than what has occurred so far this spring, and sawgrass marshes south of Lake Okeechobee into the Everglades should become more fire-receptive heading into late May and June. Meanwhile, remnant debris from 2022's Hurricane Ian in southwest and central Florida will also contribute to fuel loading. Quick drying through the next few weeks will likely result in a steady but climatologically normal uptick in wildfire potential across central Florida during the first half of May, followed by increasing significant wildfire potential heading into the latter half of May and much of June as sea breezes begin to kick off widely scattered thunderstorms. Any late season cold fronts that trigger scattered thunderstorms followed by a few days of post-frontal drying will be of concern, as will any extended periods of intense heat. The rainy season should eventually put an end to wildfire risks by mid-summer as rainfall frequency increases and water levels rise. Any direct impacts from early season tropical cyclones could quickly end wildfire risks, while near misses may also increase the potential for wind-driven fires. Should the Saharan Air Layer (a large mass of dusty, dry air) dominate through much of the summer, dry weather and worsening drought would become more likely, but confidence is low in this scenario for now.

The tropics are a wild card for nearly the entire region later this summer into the fall months. Above normal numbers of named storms, hurricanes, and major hurricanes are probable in the Atlantic basin given the expected La Niña and historically warm sea surface temperatures. However, there is no guarantee that rainfall from tropical storms and hurricanes will impact the entire Gulf Coast and East Coast. Tropical systems could just as easily enhance the nearby fire environment should drought develop or expand in the region leading up to hurricane season.

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>