National Significant Wildland Fire Potential Outlook

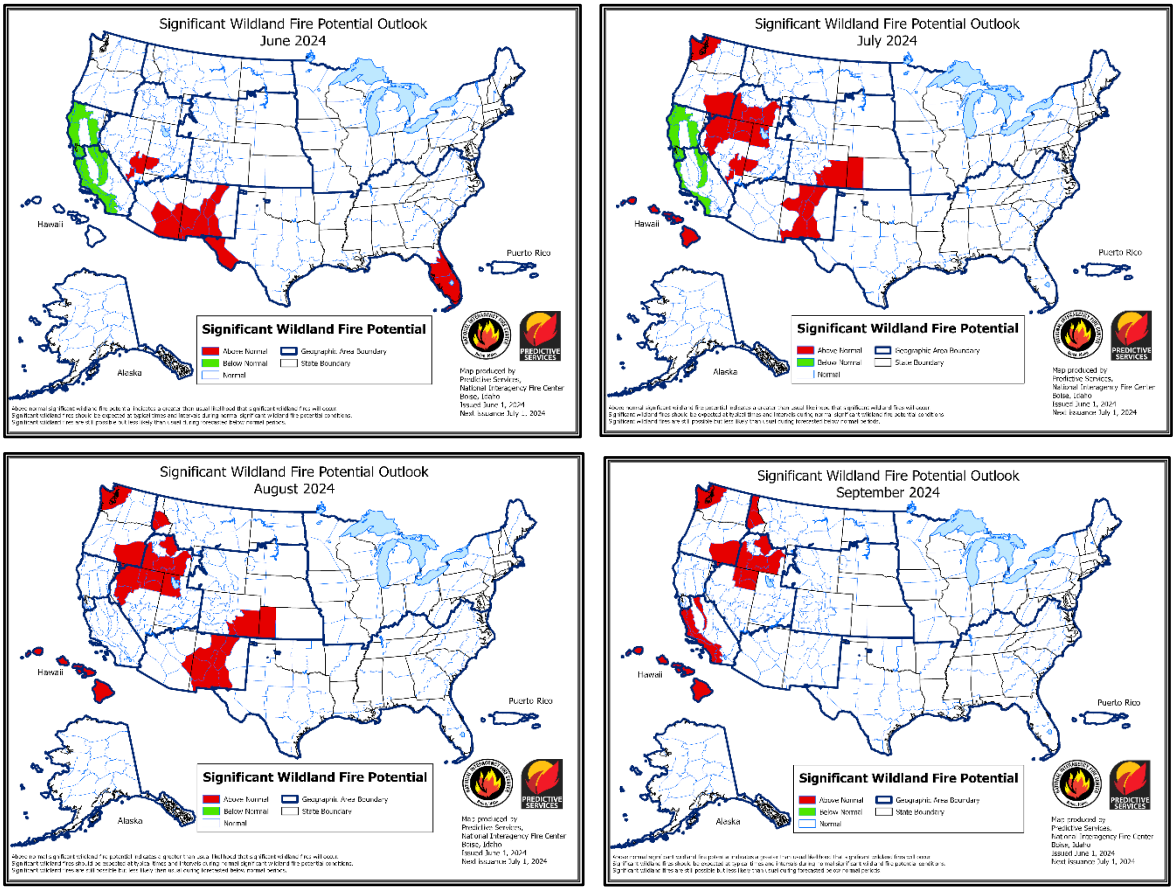
Predictive Services
National Interagency Fire Center

Issued: June 1, 2024
Next Issuance: July 1, 2024

Outlook Period – June through September 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 gradually increased across the western geographic areas in the US in May, while fire activity continued at low levels in the Southern Area, primarily in Florida and Texas. The National Preparedness Level was increased to two (on a scale of 1-5) on May 21. The Southwest observed the most significant increase in activity during May, with their Preparedness Level increasing to three May 24, while the Southern Area remains at Preparedness Level two. While most fires that emerged were of short-duration, two large fires in the Southwest, the Blue 2 and Indios Fires, continue to be active and have been burning for more than ten days. Year-to-date annual acres burned for the US is well above the 10-year average at 183% 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 75%.

Precipitation across the contiguous US in April was above normal across much of eastern Montana into North Dakota and the Upper Midwest. Precipitation was well above normal from

southeast Texas into south Georgia, with above normal precipitation across the Tennessee Valley and North Carolina. Precipitation was below normal across much of California, the Southwest, Great Basin, west Texas, and Florida peninsula. Temperatures were above normal across much of Texas into the Lower and Mid-Mississippi Valley to the East Coast, with near to below normal temperatures in the West and northern and central Plains. Extreme to exceptional drought persists in southern New Mexico, with extreme drought also in portions of southwest Texas. Drought or abnormally dry conditions persist in much Washington, northern Idaho and western Montana, while drought continues to develop in central and south Florida.

Climate Prediction Center and Predictive Services outlooks issued in late May depict above normal temperatures are likely for much of the West and Plains in May, as well as the Great Lakes, Northeast, and Gulf Coast. It is followed by above normal temperatures much of the US for July through September. While no clear signals exist for Alaska in June, above normal temperatures are likely for eastern Alaska July through September, with below normal temperatures likely for southwest Alaska. Precipitation is likely to be above normal across much of the southern Plains, Deep South, New England, and western Washington in June, with above normal precipitation likely for the Gulf and East Coasts over the summer. Below normal precipitation is likely for the northern Rockies and northern Plains in June, and across much of the Intermountain West to the Plains July through September.

Above normal significant fire potential is forecast for central and south Florida and far west Texas in June, returning to normal in July. Above normal potential is forecast for much of central and western New Mexico June through August, and for portions of southeast Arizona in June. Above normal significant fire potential is forecast for portions of southern Nevada and southwest Utah in June and July. Much of the northern Great Basin, southeast Oregon and northwest Washington is forecast to have above normal potential July through September. Portions of northern Idaho are forecast to have above normal potential in August and September as well. Similar to last year, a slow beginning to the peak fire season is forecast for California, with below normal potential forecast for much of California in June and for the Sierra and coast in July. However, significant fire potential is forecast to rise to above normal across the central and southern California coast and southern Sierra Foothills in September due to heavy fine fuel loading. Normal potential is forecast Hawai'i in June, rising to above normal for the lee sides July through September.

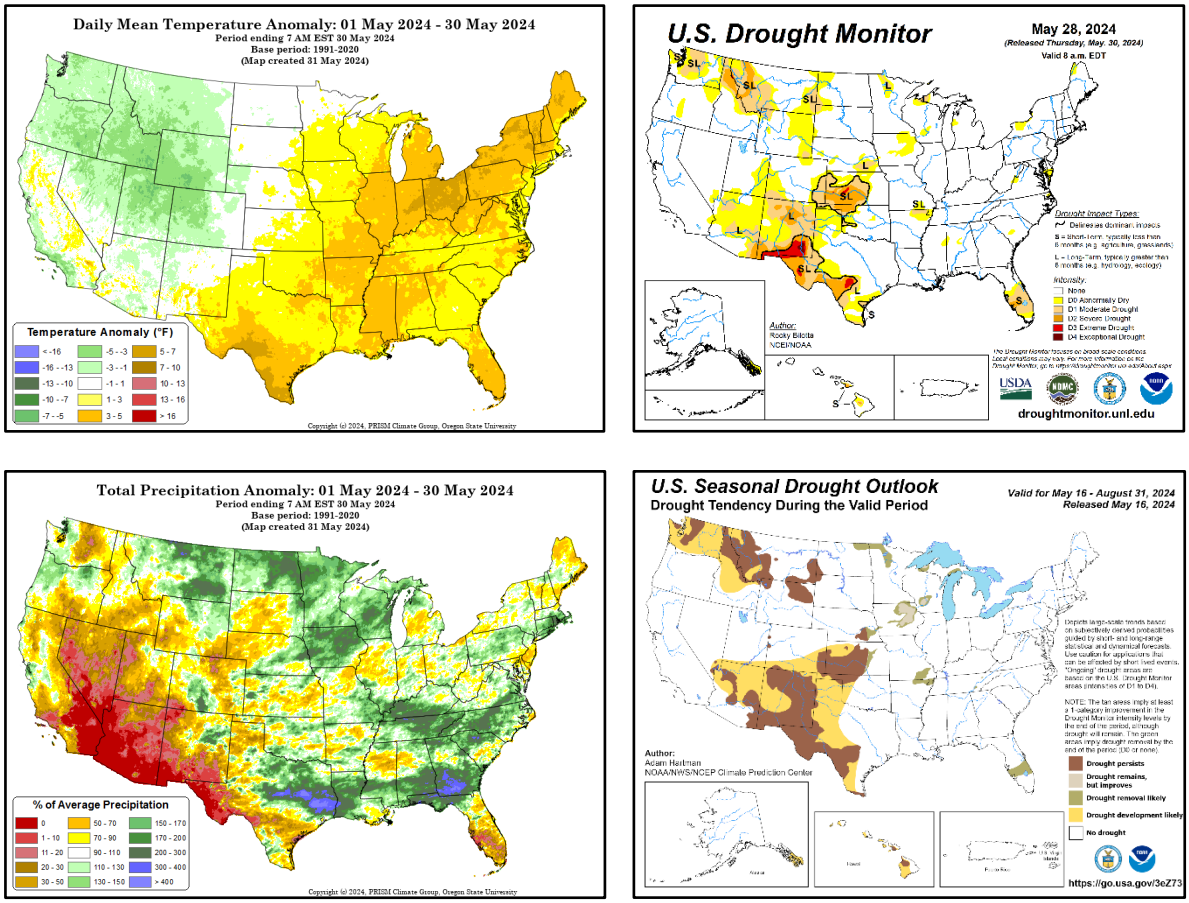
Past Weather and Drought

Temperatures were above normal for much of the southern Plains into the Lower and Mid-Mississippi Valley to the East Coast, with many locations in Florida recording their hottest May on record. Temperatures were near normal for California, the Southwest, and northern and central Plains, while below normal temperatures were observed across the Northwest, northern and central Rockies, and Great Basin. Temperatures in Alaska were below normal for much of west and southwest Alaska, and near to slightly below normal for the Interior and panhandle. Temperatures across Hawai'i were generally near normal, although temperatures were below normal for the western half of Maui.

Above normal precipitation fell across much of the central and eastern Montana, North Dakota, Minnesota, Wisconsin, and Iowa. Well above normal precipitation was observed along portions of the northern Gulf Coast, with above normal precipitation also recorded in the Tennessee Valley to North Carolina. Small areas of above normal precipitation occurred in northern Oregon, Pennsylvania, southern New England, south-central Colorado, and northeast New Mexico. Below normal precipitation was observed across much of the Great Basin, southern California, Arizona, southern New Mexico, and west Texas. Below normal precipitation was also recorded in portions of eastern Washington, south Texas, and much of the Florida peninsula. Above normal precipitation was recorded across much of Hawai'i, especially Oahu and the Big Island, but was below normal for Kauai. Above normal precipitation was observed across much of the eastern

Interior of Alaska into south-central Alaska but was near to below normal for much of western Alaska and portions of the central Interior.

Several strong wind events occurred across the Southwest into portions of southern Colorado and the central and southern High Plains. The strongest events occurred the final third of May, occurring on May 23 and 25, but few new significant fires were observed but growth was observed on the Indios and Blue 2 Fires in New Mexico. As the storms responsible for the winds moved onto the Plains and east into the Mississippi Valley, severe thunderstorms developed across portions of the Plains, Midwest, and Mid-Mississippi Valley. Several severe thunderstorms and deadly tornadoes occurred during one event May 5-7, with significant severe weather also observed May 23 and May 26-28, the latter included a strong derecho that moved through Dallas, Texas, while another strong derecho caused significant damage to Houston, Texas and the northern Gulf Coast May 16-17.



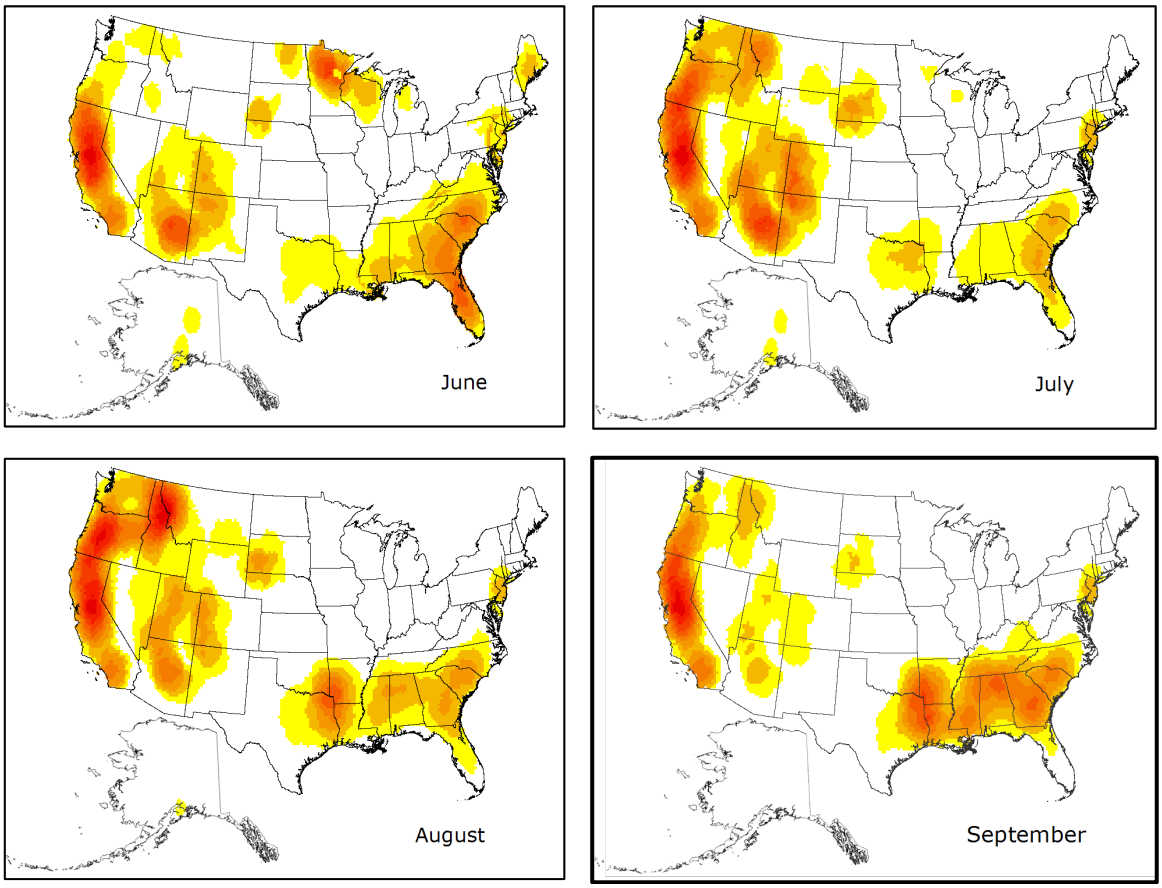
Left: Departure from Normal Temperature (top) and Percent of Normal Precipitation (bottom) *(from PRISM Climate Group, Oregon State University).* **Right: U.S. Drought Monitor (top) and Drought Outlook (bottom)** *(from National Drought Mitigation Center and the Climate Prediction Center).*

Drought coverage across the US decreased, with less than 13% of the US covered by drought. Drought was removed from much of the Midwest the past month due to above normal precipitation, with only far western portions of the Upper Peninsula of Michigan and a sliver of northern Minnesota in drought. Drought also was removed from much of Missouri and eastern Kansas, with some improvement in portions of Arizona, Oregon, eastern Utah, northeast Wyoming, and eastern Montana. However, drought developed across central and southern Florida and portions of southeast Colorado, while drought intensified in western Kansas. Drought persisted across much of New Mexico and Southwest Texas, across the northern Rockies, and portions of Washington. Drought is forecast to persist, develop, and intensify in the Southwest into southwest Texas, as well as the northern Rockies and Washington. However, drought improvement and/or removal is forecast in western Kansas and Florida.

Weather and Climate Outlooks

El Niño has weakened in the equatorial Pacific Ocean, with a return to neutral El Niño-Southern Oscillation (ENSO) conditions. Sea surface temperature (SST) anomalies in the central equatorial Pacific are slightly above average, while cooler than average SST anomalies are found off the South American Coast. A rapid transition to La Niña continued to be forecast over the summer, with the Climate Prediction Center forecasting a 69% chance of La Niña developing in the July through September period. The spring predictability barrier is still an issue, although less so than last month. Other climate oscillations like the Pacific Decadal Oscillation and Quasi-Biennial Oscillation will also influence weather and climate during the outlook period, but the transition from 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 June through September.

While no areas in Alaska are in drought status, the US Drought Monitor has classified the southern half of the southeast panhandle as abnormally dry as of late May. Ample rainfall over the southeastern Interior has eliminated the area of abnormally dry fuels in the middle Tanana Valley. The prominent El Niño of the past winter is transitioning to ENSO neutral conditions currently, with a transition to La Niña by late summer. The transition from El Niño to La Niña occurring during the peak of Alaska's wildfire season complicates the outlook and introduces considerable uncertainty.

As of late May, several fires have developed, but to date most fires have been relatively small and easily contained. Even with two larger wildfires emerging in late May, no areas are experiencing sustained problematic fire behavior.

Local areas in northern and western Alaska are yet to lose their winter snowpack, but melting will reach these areas soon. Comparatively cool and wet weather during the second half of May has left subsurface duff layers in an unburnable state.

Warmer and drier weather typical of June will precondition the subsurface duff layers and bring Alaska into its most intense period of the fire season by the middle of the month. Thunderstorm activity will increase over the Interior and brings the opportunity for increasing needs for initial attack. However, this activity is expected to be normal, and the outlook is for typical wildfire potential through the summer.

Northwest

The Northwest Geographic Area significant fire potential is expected to remain normal for June. Seasonal dryness develops and leads toward increasing fire danger.

A mix of extremes occurred for the Northwest Geographic Area during May. A cold upper trough started the month with below normal temperatures accompanied by soaking rainfall for many areas. Then, a strong upper ridge built overhead to bring above normal temperatures and a few days of record highs. The last half of May saw a cool, but mainly dry, low pressure pattern return. Only the Washington Cascades west slopes and parts of northeast Washington saw precipitation in the late month pattern. At the end of the month, temperatures ranged 3 to 5 degrees below normal except for the Columbia Basin and areas west of the Cascades, which finished near or slightly above normal.

Snow water equivalent across the mountains continues to decline as would be expected during May. It is worth noting that despite the Washington Cascades ending May with 35 to 65 percent of normal water in the snowpack, there is still snow after what had been a challenging winter for snowpack development.

Fire activity continued to be relatively minimal in May. Prescribed fire activity continued across the region during warmer and drier periods. The Little Yamsay Fire, which ignited in southern Oregon in April, was managed using a confine and contain strategy due to favorable fuels conditions, and it grew to over 6,000 acres before growth ceased around mid-May. Elsewhere, more frequent and larger fires began to arise, particularly in the lighter fuels of the Columbia Basin, as is typical per the seasonal progression; however, initial attack continues to be successful.

Fuels continue to be too moist to support noteworthy risk of significant fires for June in the Northwest Geographic Area. Green-up is taking place across most of the region, temporarily reducing flammability. Extended periods of warmer and drier weather briefly increased fire danger, but subsequent moisture dropped fire potential back to more normal conditions. East of the Cascades, green-up has been slower and not as vigorous as west of the Cascades. When aligned with wind, cured rangeland fuels have higher potential for increased rates of spread and higher potential for ignition. An increased grass fuel load and good fuel continuity in southeast Oregon Predictive Service Area 12 will enhance the potential for larger fires once live fuels begin to cure later in the summer.

El Niño conditions in the equatorial Pacific have transitioned to ENSO-neutral by late May. A rapid transition to La Niña is likely occur by July to September. The CPC outlooks covering June through September start with a 40-50 percent chance of above normal temperatures in June then increase areas east of the Cascades to a 50-60 percent chance during July through September. June precipitation has a 40-50 percent chance of being below normal in most of Washington at a 40-50 percent, while most of Oregon does not show a strong signal for precipitation. For July through September, most of the area does not have a strong signal pointing either way, through eastern Washington and far northeast Oregon are shown with a 33-40 percent chance of below normal rain amounts. Temperature outlooks from CPC have remained rather consistent over the past few months but are trending away from a definitive drier than normal scenario. Long range

deterministic model runs are beginning to cover this period and initially appear to support the warmer than normal scenario. However, precipitation signals are mixed.

The Northwest Geographic Area will have above normal significant fire potential July through September for both northwest Washington (NW01) and southeast Oregon (NW12) Predictive Service Areas. The analog ENSO transition years of 1973 and 2010 are most prominent for the Olympic Peninsula, among others, while 2016 is emerging as another potential close fit where temperatures ended above normal with below normal precipitation. For all analog years since 1992 (including 2016), the total number of fires remained below the 1992-2020 seasonal averages. The year 2016 had more 10,000-acre fires versus the wetter analog years, but the regional total still was less than the 28-year average. If a trend toward 2016 continues, areas around the Columbia Basin may need to be added to the area of above normal potential.

Northern California and Hawai'i

Northern California's significant fire potential is projected to be below normal for June and July with the exceptions of the Sacramento Valley and Foothills, Northeast California, and Far Eastside Predictive Service Areas (PSAs) where normal is designated. August and September are projected as normal for all PSAs. During June, generally one to three large fires occur in most PSAs, with less than one large fire on average in the North Coast and Northeast California PSAs. Typical fire occurrence in July is similar to June, with most PSAs experiencing one to three large fires, excluding the North Coast, where less than one large fire arises on average. During August, an average of one to four large fires occur per PSA, again excepting the North Coast, where the month's average large fire frequency is less than one. During September, most PSAs typically experience one or two large fires, excluding the Bay Area and Far Eastside PSAs, where large fires occur with even less frequency. Hawaii's significant fire potential is normal during June and above normal for July through September across the leeside areas.

The weather patterns remained quite variable during May with alternating cool/moist and warm-dry periods. Unusually warm and dry conditions developed from May 7-17, resulting in unusually dry dead fuels the latter half of the month and rapidly eroding the snowpack. Moisture found within the snowpack ranged between 90-110% of normal on May 1 but had dropped to 40-80% of normal May 29. Snow cover was also reduced and was generally found above 6500-7500 feet in the most sheltered locations. A notable widespread wetting rain event, including snow across the mid and upper elevations, occurred from May 3-5. Mixed precipitation and temperature anomalies resulted from the May weather patterns, with some areas of above and below normal. A little over 850 lightning strikes were recorded during the month, which fell well short of the 2012-2022 May average of around 5,400 strikes. Six separate drier northerly or easterly wind events of varying magnitude occurred during the month, with the strongest occurring during May 8-9. A strong south to southwest wind event occurred May 4, ahead of a vigorous cold front, but relative humidity values were elevated.

The growing season in both the herbaceous and shrub/canopy fuels continued to transition up the slopes during May. Live fuel moisture samples in the woody fuels were generally near to a little below normal, with the below normal readings likely due to periods of cool overnight temperatures including frost. Despite some below normal readings, most shrub species overall became less flammable as the month progressed. Herbaceous fuels were in various phases of green-up between 3,000 to 7,000 feet, with various forms of curing below 3,000 feet, especially away from the more significant coastal influences. Early growth indications suggest near to above normal herbaceous fuel loadings, and grass growth is generally more abundant across the Sacramento Valley-Foothills PSA compared to last year. No drought or abnormally dry areas were found across northern California based on the US Drought Monitor. The last time that occurred was October 2019.

Fire business increased noticeably during May, especially during the latter half of the month when 10-to-20-acre wildfires started to occur, and daily initial attack numbers trended near double digits. An average of eight fires occurred per day during May. Until the third week of May, fires were of

short duration and limited to a few acres due to successful initial attack; however, resistance to control increased as the month progressed. On May 21, a fire ignited in light fuels in the western Sacramento Valley and grew to 19 acres within an hour before it was contained. That same day the Valley fire ignited in heavy slash east of Likely, and it burned over 500 acres over a multiday period. No lightning ignitions were reported during the month. Prescribed burning also increased with a heavy mix of pile and broadcast burning.

Timely cool-moist intrusions in the form of showers or higher humidity due to a dominant onshore flow are expected during the next two to three months with less certainly during the latter portions of the four month outlook period. Gusty and dry wind periods are likely to cause more fire growth issues versus lightning patterns due to the expected West Coast troughing this summer. Problematic lightning events are also expected to be less during the early to mid-stages of summer due to less flammable fuel alignments. Heat wave events should not last as long or be as numerous compared to the recent big fire years, and the lack of a drought signal should help to promote near to a little above normal live fuel moistures.

Therefore, a slower start to the significant portion of the fire season is expected during June and July. A more dominant onshore flow shifts the better potential for dry-gusty winds creating a higher risk across the Northeast California and Far Eastside PSAs and should be more problematic during July when both the shrub and grass fuels become more flammable. Larger portions of the Sacramento Valley-Foothills PSA, with its above average herbaceous fuel loading, will also be susceptible to dry and gusty winds that contain lower relative humidity. The better potential for problematic lightning aligning with a more flammable fuel bed due to seasonal curing should occur areawide during August and likely last into September. It should be noted that the snowpack will erode several weeks earlier this year compared to last, thus exposing the surface fuels to an earlier drying period. The fire environment conditions should be suitable for an extended prescribed burn season from late spring to early summer.

Sea surface temperature (SSTs) anomalies surrounding the Hawai’ian Islands were generally near normal. Temperatures observed during May were near normal. Most areas received above normal amounts of precipitation thanks in large part to two separate periods, centered on the second week of the month that brought significant precipitation to the islands. Drought conditions improved across Maui and the Big Island because of the heavier rainfall, with snow across the highest elevations of the Big Island. However, northern portions of the Big Island and western portions of Kaua’i ended up with below normal rainfall. Several gustier westerly wind periods occurred during the first half of the month as well.

El Niño conditions have transitioned to an ENSO neutral state, with a transition to La Niña conditions sometime late in the dry season. Average temperatures during the next four months should generally be near to above normal while precipitation should generally be below normal. Despite the fluctuating drought conditions the past few months, drought conditions going forward should increase, especially as the dry season takes hold across the leeside areas. This should result in an increase in live fuel becoming available, including herbaceous fuels curing after another growth period initiated by the earlier heavier rains. A flammable transition is likely to occur during June and July, with peak flammability expected during August and potentially September. Wind events will be a wildcard, but a developing La Niña may portend enhanced trade wind scenarios, which could lead to periods of large fire growth as the summer progresses. There is less likelihood of tropical storms creating fire season slowing events or growing periods due to the expected La Niña conditions. For Hawai'i, above normal significant fire potential has been designated for July through September, with portions of Maui and the Big Island most susceptible early during the outlook period.

Southern California

Since the start of the water year, October 1, central and southern California has mainly experienced near normal temperatures and well above normal precipitation. The strongest

precipitation anomalies are in the high desert with some areas experiencing over 150% of the average precipitation since the start of the water year. The driest anomalies are in the lower and eastern deserts where many portions received 50-70% of their average precipitation since October 1. The central and southern Sierra experienced slightly above average snowfall during the winter season.

The latest analysis of the equatorial Pacific suggests the continuation of a transition towards a La Niña state as sea surface temperatures (SSTs) have cooled considerably since late November. The latest equatorial Pacific upper-ocean heat anomaly data shows values consistent with a transition to La Niña since early March.

The latest US Drought Monitor shows zero areas of drought across California. There is a small area of abnormally dry conditions in southeastern San Bernardino and northeastern Riverside Counties. The latest 1000-hr dead fuel moisture and Energy Release Component (ERC) data suggests above normal 1000-hr dead fuel moisture and below normal ERC values for most of the area. The lowest anomaly for ERC is the South Coast Predictive Service Area due to the strong marine layer.

The latest available live fuel moisture data from the Los Padres National Forest shows live fuel moistures well above the 5- and 10-year averages. The 5- and 10-year averages in May are near 100% with May 2024 being at 120%. The critical point where live fuel cures is near 60% live fuel moisture. Due to the large amount of precipitation in the wet season, there is a larger fine fuel load this fire season, specifically grasses and other 1- and 10-hr fuels.

Climate models suggest the continued transition towards a La Niña pattern during the summer and early fall months. La Niña patterns generally support warmer and drier conditions across southern California. SST anomalies have significantly cooled to well below normal off the California coast which supports a prolonged marine layer season. These cold SST anomalies support troughing over the east Pacific and the center of the North American Monsoon upper-level high to be further to the east. The eastward placement of this high-pressure ridging supports a weaker than normal monsoon season across central and southern California.

For the upcoming fire season, below normal significant fire potential is likely for the coast and the Sierra Nevada in June due to the combination of a longer than normal marine layer season with above normal snowfall in the Sierra. For July, below normal significant fire potential is likely to continue for the coast and Sierra as the marine layer season is likely to extend into July. Normal significant fire potential is likely area-wide in August. For September, above normal large fire potential is possible along the coast, the southern California mountains, and Sierra Foothills. This is a result of above normal fine fuel loading combined with a likely warmer and drier pattern after a forecast weaker than normal monsoon season.

Northern Rockies

Significant wildland fire potential in the Northern Rockies Geographic Area (NRGA) for June and July is expected to be normal. Most of the Northern Rockies Predictive Services Areas (PSAs) are expected to remain normal in August and September except for the southern portion of the Idaho Panhandle (PSAs NR03 and NR05) in August and September and northern Idaho Panhandle (PSA NR01) in September, which will be above normal. Moisture that fell in May is expected to delay the start of significant fires around the Northern Rockies, especially east of the Continental Divide, while continuing dryness through the summer and early fall months is expected to extend the end of fire season.

Abundant moisture has fallen on almost all of the Northern Rockies east of the Continental Divide the past 30 days and over the year so far, eradicating most areas of drought to the east of the Continental Divide. The only exception is an area of moderate drought along the Montana/North

Dakota border, surrounded by an area of abnormal dryness, where precipitation amounts have been closer to normal and insufficient to counteract persistent dryness in that area.

West of the Continental Divide, less precipitation has fallen in most areas. The northwestern corner of Montana has had above normal precipitation over the past 30 days but is near to slightly below normal for the year so far. Most of northern Idaho has had below normal precipitation in both the last month and the year to date and moderate to severe drought is widespread. Extreme drought is present in the high terrain of Glacier National Park and in a small area along the Idaho/Montana border. A portion of northwest Montana and north Idaho and a portion of southwest Idaho are abnormally dry on the drought map, and all areas in the Northern Rockies west of the Continental Divide are currently designated as having drought impacts.

Snowpack was well below normal for most of the winter across the Northern Rockies. However, with recent storms, snowpack has increased at most high elevations over the last month, and at some stations has even increased to above normal for late spring (but not exceeding normal annual snowpack peak). This trend has not been as strong in the western basins of the Northern Rockies, with May snow water equivalent generally showing a continual decrease of the snowpack but not as quickly as a normal spring melt in elevations above 6,000 feet. Many eastern basins have reversed spring melt, but that trend will cease at the end of May.

Green-up has initiated across almost all areas of the Northern Rockies, except for areas that are still snow-covered in higher elevations. Growing Season Index values are near normal to above normal in lower-elevation PSAs, and below normal in higher-elevation PSAs where snow is still present and green-up is still in the beginning stages. Live fuels are expected to provide a barrier to fire spread in all areas that are no longer snow covered for much of June and July. As a result of the plentiful May moisture over central and eastern Montana and North Dakota, a large grass crop is expected across the plains, which will add to the fine fuel complex once grasses cure later in the summer. There is lower confidence for the fire season in the plains by the end of the outlook, though, as the long-term precipitation forecast has not been consistent for the end of summer.

While future fine fuels are the concern in the east, large dead fuels and dry duff are the concern in the west. Long term drought to the west of the Continental Divide, especially in northern Idaho, paired with lower snowpack and a forecast for above normal temperatures and below normal moisture in the summer months, means that effects of recent precipitation will be short-lived, and moisture levels are expected to quickly drop this summer. Last summer, live vegetation acted as a barrier to fire spread while large dead fuels promoted fire activity. Until significant curing occurs later in the summer, we can expect a similar pattern for the early summer months.The severe to extreme drought designations generally align with areas having limited access, which could support longer duration fires. Southwest Montana has also experienced a deficit in precipitation for the last 90 days and will be important to monitor for decreases in 1,000-hr dead fuel moisture and curing of fine fuels as the summer progresses.

Wildfire activity was slow for May due to cool and wet conditions. Overall, 348 acres burned in 94 wildfires, and just over 50% of that acreage burned in Montana. The mild May weather also limited much of the prescribed fire activity outside of pile burning west of the Continental Divide and limited broadcast burning in central Montana. Approximately 12,500 acres were burned in prescribed fires across the NRGA, including an 8,290-acre fire in central Montana and a 1,302-acre fire in western Montana.

All PSAs are expected to have normal significant wildland fire potential for June and July, with the northern Idaho PSAs gradually moving into above normal fire potential in August and September. Overall, we are expecting a later start and a later end to fire season in the Northern Rockies. Main impacts of a drier late summer would be a better window for live vegetation to cure and be available to wildland fire, the increased chance of fall storms and frontal passages interacting with wildfires, concurrence of wildfire and prescribed burning, and the increased chance for agricultural

fires to become an issue during harvest time in the eastern NRGA. Forecast confidence decreases regarding precipitation forecasts for later in the summer.

Great Basin

Fire activity remains low in the Great Basin but is gradually increasing with smaller fires popping up in the lower elevations and even some growth on fires in the southern portions of the Great Basin. Prescribed fire activity is still ongoing in parts of Utah and Idaho but is winding down. Fire activity is expected to pick up in June from south to north, which would be normal. Due to spring moisture, fine fuel growth is expected to be above normal over northern and western Nevada, southern Idaho, northern Utah, and small portions of southern Nevada and southwest Utah. Carryover fuels will still be present in many of these areas as well, adding to the fine fuel loading since very little fire activity occurred last year. Once fine fuels dry out by early summer, above normal fire potential is anticipated across the northern areas mentioned by July and August and possibly into September. Otherwise, smaller areas of above normal fire potential are forecast for June and July in parts of Southern Nevada near Red Rock and the Spring Mountains, southern Lincoln County, Nevada, and far southwest Utah due to above average fine fuel loads that are consistent with higher fire years. Therefore, the area designated with above normal fire potential has been expanded a bit in the south for June, and continued into July, due to expectations for a lower-than-average monsoon season. By August and September, fire potential may pick up in portions of central Idaho due to below normal snowpack over much of the winter and the forecast of drier conditions through the fire season.

Temperatures over the last 30 days have been cooler than normal in most areas of the Great Basin, although shorter periods of warmer temperatures have occurred. Precipitation was well below normal in most areas, except for portions of northern and eastern Utah, which was near normal. The snow continues to slowly melt across the Great Basin, but snow remains in the higher elevations, even in the far south. The Great Basin is generally absent of drought. There are small areas of abnormally dry conditions over eastern Utah, the Arizona Strip, and far southern Nevada, along with small portions of central Idaho. Drought may develop further in these areas over the next few months due to the potential for a weaker monsoon. Currently, no drought is expected to develop across the rest of the Great Basin heading into the fire season.

Fuel conditions are in various stages across the Great Basin. Fuel moisture will remain high through the spring in the north as green-up is underway in most areas. Green-up may last a bit longer than normal across central Idaho with expectations of continued storms bringing periods of precipitation through early June. Farther south, green-up and curing are in various states. Once curing completes, we are expecting above normal fine fuel loading over parts of northern and western Nevada, southern Idaho, northwest Utah, and in smaller areas of southern Nevada and southwest Utah. Due to the lack of drought and two wet winters, the soil was primed for above normal fine fuel growth. Parts of southern Nevada in the Red Rock area, southern Lincoln County, and portions of southwest Utah are seeing above normal fine fuel loading which could lead to above normal fire potential through June and July 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. The only exception will be central Idaho, where the snowpack was below normal most of the season. These areas are expected to see increased fire potential by late July or August.

Fire activity remains low across the Great Basin, although smaller fires are popping up almost daily in the lower elevations. There is still some prescribed fire ongoing in parts of Utah and Idaho, but burning opportunities will continue to decrease in June. There have been a few wildfires that have exhibited some growth in some far southern areas of the Great Basin due to increased fine fuel loading. The potential for more aggressive growth and emerging large fires will increase through June especially in the south and throughout July in many areas.

Fire activity will continue to pick up over the southern half of the region in June, along with the lower elevations in northern Nevada, southern Idaho, and northern Utah later in June and July due to the above normal fine fuel load. The Red Rock area and Spring Mountains in southern Nevada into southern Lincoln County and southwest Utah are reporting above normal fine fuels that are consistent with higher fire years. Therefore, above normal fire potential was added to this area for June and July. The monsoon is expected to be delayed or weaker than normal, therefore increased fire potential in the south may linger through July.

Otherwise, the focus over the next few months will be across parts of western and northern Nevada, Idaho, and northwest Utah due to above normal fine fuel loading. Much hotter and drier weather is anticipated in June, which should rapidly start curing out the lower elevation grasses and decrease the brush fuel moisture. Confidence is increasing for above normal fire potential by July across southern Idaho, northern Nevada, and portions of western Nevada and northwest Utah. These areas of above normal fire potential in July will likely continue into August and possibly into September with drier conditions forecast later in the summer as well. Long range weather forecasts are still showing periodic storms through early June in central Idaho, which will delay curing. Warmer and drier weather is expected to materialize across Idaho later in June, and curing of fuels should accelerate through late June and July. With cooling and troughs still possible along the West Coast, this will increase the likelihood of windy periods for the Great Basin heading into the summer. This will also increase the potential for dry lightning with upper-level features embedded in the southwest flow moving across the Great Basin and limited monsoon moisture. 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 with the below normal snowpack followed by warmer and drier weather forecast later in the season. Therefore, east-central Idaho was increased to above normal fire potential for August and September. This threat could be expanded as this period nears, but confidence is still moderate at this time.

Southwest

While normal significant fire potential is expected for many areas of the region from June through August, some areas of above normal significant fire potential are expected across much of New Mexico and across portions of southeastern of Arizona in June. Areas of above normal significant fire potential are likely to continue along and east of the Divide in both July and August with normal significant fire potential returning to the geographic area in September.

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 play a prominent role in shaping the weather pattern for the summer months. El Niño has transitioned into ENSO neutral conditions over the last month and is expected to transition to La Niña by the late summer and early fall, although some uncertainty remains. While the late fall through early winter turned out to be milder than average for much of the western half of the region, the new year turned cooler than normal for most locations of the region in January and has continued to have a cooler tilt for much of the last few months. However, milder temperatures have occurred across far eastern New Mexico. A thorough inspection of past years with a flip from an El Niño to La Niña in less than six months reveals an overall correlation to a very warm to hot summer, with a tendency for more moisture initially along and east of the Divide in June. Areas farther west will remain overall hot and dry. The monsoonal period will begin in July with an average signal regionally, combined with a persisting hot temperature regime areawide.

There is decent potential for a slightly delayed to a normal monsoon onset this year with an eventual focus for enhanced precipitation along and west of the Divide. There is also a higher tendency for both drier and hotter than normal conditions to linger through July and likely into August east of the Divide, especially east of New Mexico's central mountains. The period of peak fire season conditions very well could linger much longer than usual through the summer and early fall months, especially along and east of the Divide, but possibly across much of the region as a shift to La Niña normally heralds a return to a drier than normal pattern as early as August, but especially so by September into October.

Rocky Mountain

For most of the Rocky Mountain Area (RMA), the weather in May was typical overall, with increasing shower and thunderstorm activity. El Niño has ended, and neutral conditions are now present in the equatorial Pacific, with a quick transition into La Niña later in the summer or early fall expected. The summer continues to look hot and dry with a weaker monsoon. This will result in the southern Front Range and the adjacent plains in southeast Colorado increasing in significant fire potential for July and August, while the rest of the RMA will see normal fire potential.

As May progressed, there was the typical increased shower and thunderstorm activity. North-central Wyoming, south-central Colorado, and eastern Nebraska observed above average precipitation for the month. The rest of the RMA was below average, with southwest Colorado significantly below average. However, looking at longer precipitation trends over the last three months, much of the RMA is still trending around average. Temperatures across the RMA for May were largely normal to below normal with only the southeast corner of Kansas above normal. Drought conditions have largely remained unchanged over the last month with only a slight increase in the moderate drought in eastern Colorado and western Kansas due to the continued below average precipitation.

Fuels have greened up across the RMA. With the generally cooler conditions and the increasing shower and thunderstorm activity, most areas have seen fire danger around typical values for the late spring. Southwest Colorado has seen a bit of an increase in fire danger, due to significantly below normal precipitation, with the very dry and windy days pushing the Burning Index towards the 97th percentile.

Most of the fires occurring the past month remained small and were contained within one operational period. The one larger fire that occurred in May was the Spruce Creek fire near Dolores, Colorado, which grew to more than 5,000 acres because fuels were more receptive to burning.

El Niño has ended, with neutral conditions now occurring. June is forecast to have above normal temperatures. The precipitation for most of the RMA will be normal, however, southern Colorado will likely see a little less precipitation. La Niña conditions are still expected to quickly develop late this summer into the early fall, becoming likely between July and September. The remainder of the outlook, July through September, will see the entire RMA above normal for temperatures and drier than average. The monsoon still looks like it will be weaker than usual, likely having a late onset, with most of the monsoon thunderstorm activity west of the Continental Divide in Wyoming and Colorado.

Until fuels begin to dry and cure, large fire potential in the RMA will be normal through June. With the increasing dryness going into July and August, along with anticipated above normal temperatures, large fire potential will trend towards above normal along the southern Front Range and the adjacent plains in southeast Colorado. However, there is still uncertainty based on possibility of a faster transition to La Niña, which could expand the area of above normal fire potential to other areas.

Eastern Area
Normal fire potential is forecast across the majority of the Eastern Area through September. Some areas are drier than normal, with 30-to-60-day negative precipitation anomalies across portions of the Northeast, southeastern Mid-Atlantic States, and the southern Lower Peninsula of Michigan. Longer term drought lingered across portions of the Mississippi Valley towards the end of May.

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

The Predictive Services precipitation outlooks forecast above normal precipitation across the much of the southern tier of the Eastern Area in June. Below normal precipitation is forecast over the western Mississippi Valley and the Mid-Atlantic States in July and southeastern New England in August. Wetter than normal conditions may develop in August across the Upper Mississippi Valley, Wisconsin, Iowa, northern Illinois and Indiana, and the western Mid-Atlantic states. The Climate Prediction Center forecasts above normal precipitation is likely across the southeastern half of the Eastern Area June into August.

According to the Predictive Services temperature outlooks, above normal temperatures are forecast across the majority of the Eastern Area June into August. The Climate Prediction Center forecasts also predict above normal temperatures across the majority of the Eastern Area through August.

With climate patterns shifting, significant rainfall occurred during the month of May across the western tier of the Eastern Area reducing areas of long-term drought. This coupled with the green-up of live fuels should produce near normal fire activity through the summer season. The chance for significant fire potential still exists in areas where a series of hot, dry, and windy days reduces live fuel moisture and combines with dead fuel loading of standing grasses or continuous leaf litter to increase ignition and spread potential. Due to this and above normal temperatures forecast, the northern tier of the Eastern Area will potentially continue to have periodic above normal fire activity throughout the outlook period, but the likely intensity and duration of these periods currently does not warrant above normal designation for any of the summer months. With June normally being the wettest month of the year, any below normal or spotty precipitation is likely to enhance drought levels. Moisture stress on live fuels from predicted above normal temperatures could also make normally green fuels more available to burn. Prolonged dry periods and persistent winds will be a big determinant in both the potential for increased and significant fire activity during the outlook period.

Shorter term precipitation deficits developed through the late spring over portions of the Northeast, the southern Lower Peninsula of Michigan, and the southeastern Mid-Atlantic States. If these areas experience below normal precipitation and above normal temperatures through the summer season, periods of above normal fire potential are likely. With green-up complete over the majority of the Eastern Area, the remainder of the Eastern Area should experience near normal fire potential through the summer season outside of any dry and windy periods that may occur.

Southern Area
Abnormal heat has been commonplace along the southern tier of the region the past few weeks, resulting in the warmest May on record across most of the Florida peninsula, in portions of the Lower Mississippi Valley, and across South Texas. Heat was combined with below normal rainfall over much of central and southern Florida, where the Keetch-Byram Drought Index (KBDI) has surpassed the historical maximum for this time of year, with values above 700 increasingly common. Although fire activity has yet to significantly respond to these worsening drought conditions, the growing season index, 100- and 1000-hour dead fuel moisture, and the Energy Release Component are all indicative of increasingly parched and fire-receptive fuels. Meanwhile, drought in West Texas continues, particularly in the mountains, where recent and long-term precipitation has been well below normal. Scattered rainfall has impacted South Texas, but hot, dry, and breezy conditions have resulted in several coastal fires during May. Drought continues in portions of the High Plains and northwest Oklahoma, but most of this area has seen a transition towards green-up due to sporadic rainfall. Otherwise, most of the geographic area has seen plentiful rainfall, in some cases far too much, to close out meteorological spring. Historic flooding that has impacted eastern Texas into western Louisiana is helping to ease dryness left from last year's drought, but the U.S. Forest Service in Texas reported that some of the heavy dead fuels did show signs of lingering dryness in some of their spring prescribed fire operations. Areas farther east along the Gulf Coast in eastern Louisiana, Mississippi, and southwestern Alabama will have to be watched later in the summer if a drying trend emerges, given the likelihood of pine mortality due to drought last year and beetle kill impacting fire potential. Hurricane debris from Laura and Ida is also of continued concern across Louisiana and Mississippi, while portions of the Florida peninsula could be impacted by down and dead fuels remaining behind 2022's Hurricane Ian. It is also worth noting that widespread tree damage has occurred across large swaths of the Southern Area due to an unusually active period of severe thunderstorms in recent weeks.

Prior analogs for years that feature a transition from El Niño to La Niña generally do not agree with long-range model and Climate Prediction Center outlooks, which lowers confidence as the summer wares on. The tropics will eventually factor into rainfall for at least some portion of the Southern Area, but it is too early to say with any certainty where the favored tracks may be this year. With record warm waters in the Gulf of Mexico, consistently above normal temperatures are likely for most of the Southern Area, particularly along the Gulf Coast from Texas to Florida. Rainfall patterns are of much lower confidence, especially across the Plains and over Florida. June is typically the wettest month of the year across the Florida peninsula as daily thunderstorms return, but there are some indications that high pressure aloft and feeds of abnormally dry air may continue to suppress meaningful rainfall in June and possibly into July. This dryness has historically been common in past years with ENSO trends similar to what is expected this year.

Given the state of drying fuels and increasing drought across central and southern Florida, any increase in thunderstorms could significantly increase lightning ignitions until frequent episodes of rainfall become widespread. Confidence is highest in above normal significant fire potential in June. Any extended breaks in thunderstorm activity or near misses with tropical cyclones could be of concern through the summer given the likelihood of above normal temperatures into September.

The Texas mountains are forecast to see above normal significant fire potential during June, as sufficient fuel loading exists in the complex terrain to carry fire. Lightning ignitions may be especially likely as monsoonal activity increases the next few weeks, but if rainfall does not remain consistent or widespread, wildfire risks could easily continue through July and August, similar to what is forecast nearby in the Southwest Area.

Conditions across the rest of the region are forecast to be normal, although confidence is rather low in trends from July onward. Given the excessive rain through spring in parts of Texas and southern Oklahoma, above normal herbaceous fuel loading could lead to sharp increases in wildfire risk if very hot and dry weather becomes the dominant pattern by August. South Texas and the High Plains were considered for above normal significant fire potential in June and July,

but recent and expected rainfall along with decreasing wind potential is expected to maintain normal wildfire risks in these grass-dominant areas.

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