National Significant Wildland Fire Potential Outlook

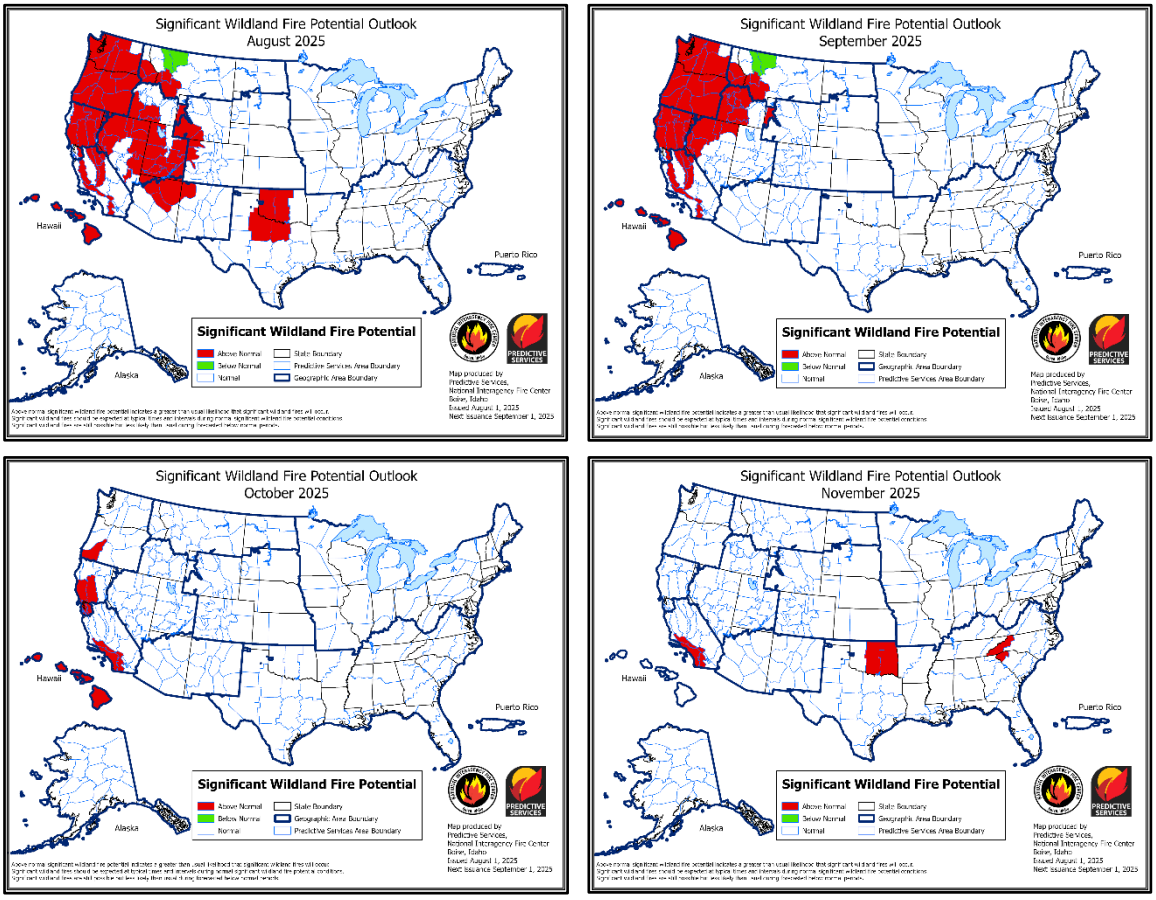
Predictive Services
National Interagency Fire Center

Issued: August 1, 2025
Next Issuance: September 1, 2025

Outlook Period – August through November 2025

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 increased across the US during the first half of July, with the most notable increases in activity occurring in the Northwest, Northern California, and Rocky Mountain Geographic Areas, while Alaska observed a decrease in activity. Activity moderated the third week of the month before slowly increasing again at the end of the month. The National Preparedness Level increased to four (on a scale of 1-5) July 13 due to large fires in several geographic areas but was decreased to three July 28 due to the moderation in activity. Total acres burned through July is below the 10-year average at 83%, but with an above average tally of wildfires of 120%.

July precipitation was below normal across most of the West, with the greatest anomalies west of the Cascades and in Utah, Arizona, and western Colorado. However, precipitation was above normal in portions of northern California and eastern Oregon, with much of Montana east of the Continental Divide above normal. Above normal precipitation extended from Montana into the Mid and Upper Mississippi Valley, with well above normal rainfall in central Texas. Below average

precipitation was also noted in the Lower Mississippi Valley and Northeast. Overall, drought increased slightly across the US in July, with the greatest improvements in central and West Texas, Florida, and portions of the Midwest. Drought expanded across much of the northern half of the West, especially in the Northwest extending south and east into western Colorado.

Climate Prediction Center and Predictive Services outlooks issued in late July indicate above normal temperatures are likely across much of the US through November, although portions of the Mississippi Valley may stay closer to normal in August. Drier than normal conditions are likely in the Four Corners states in August, with the area of likely below normal precipitation expanding into much of the Plains for the fall. Above normal precipitation is most likely along the East Coast and northeast Gulf Coast through November, with much of that weighted toward the Southeast in August. Warmer and wetter than normal conditions are likely in most of Alaska through November. However, confidence in this forecast is much lower than normal as climate models and analog tools have been unreliable this year when compared to the previous few years.

Above normal significant fire potential is forecast for most of the Northwest, California, northern Nevada, southwest Idaho, and the southern Idaho Panhandle through September. Above normal potential is forecast for much of eastern Nevada, Utah, northern Arizona, northwest Colorado, western Wyoming, central Oklahoma, and North Texas in August before returning to normal in September. Above normal potential is forecast to spread into central Idaho in September while persisting for the Bridger-Teton National Forest. Below normal significant fire potential is forecast for portions of north-central Montana through September due to recent abundant rainfall. Most areas return to normal potential in October, but above normal potential will persist in southwest Oregon, portions of northern California, and Southern California. Above normal potential will persist into November for Southern California, with above normal potential expected in eastern Oklahoma and the North Carolina and South Carolina mountains in November also. Above normal fire potential is forecast for the lee sides of Hawai'i through October before returning to normal in November.

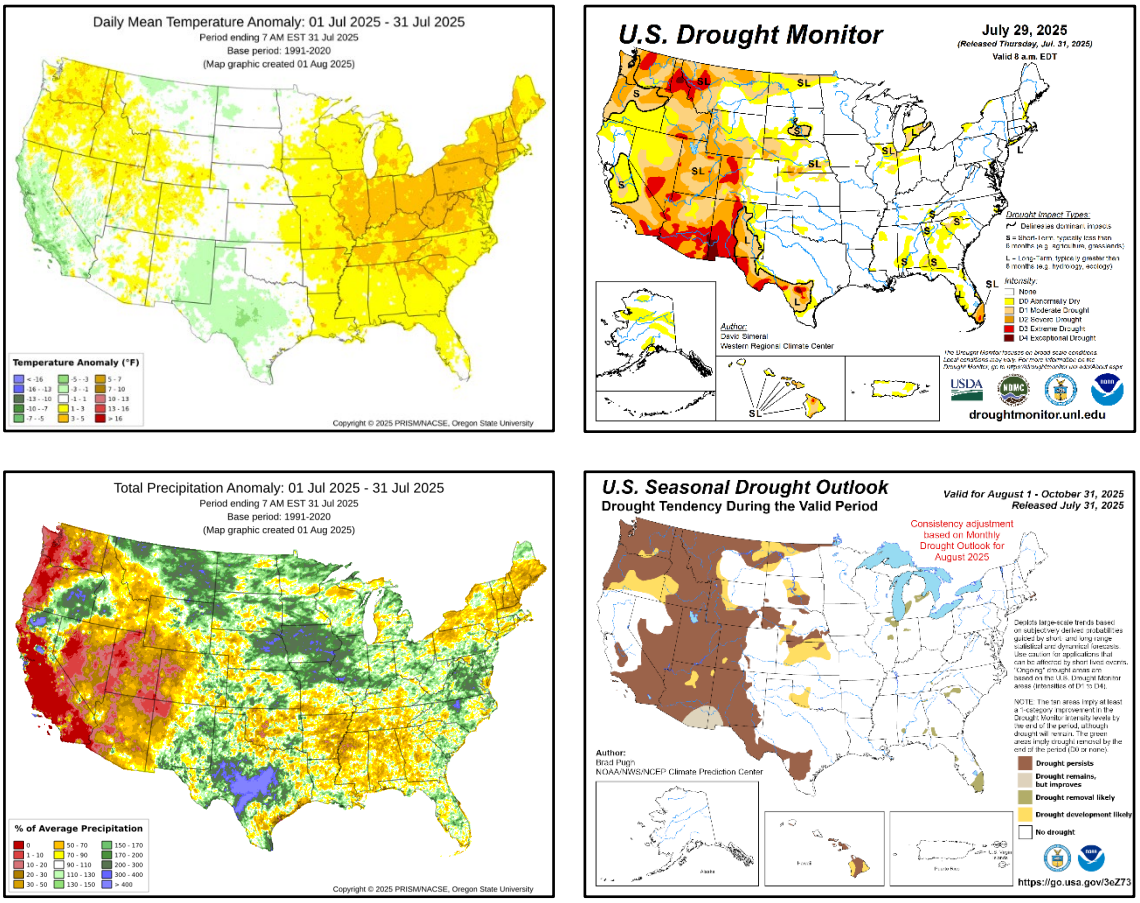
Past Weather and Drought

Temperatures in July were above normal across the northwestern US into the central Rockies, and from the Mississippi River to the East Coast. Much of California, eastern New Mexico, and Texas were below normal for July, with near normal temperatures across much of the Plains, Southwest, and Montana. Temperatures were above normal for most of Alaska in July, but below normal in southwestern Alaska. Temperatures across Hawai'i were generally near normal, but above normal for the southern half of the Big Island.

Precipitation across the US in July was well above normal in central Texas, much of it occurring early in the month when historic and catastrophic flooding was observed July 4, resulting in 135 deaths. Above normal precipitation was also observed in much of Montana east of the Continental Divide into the northern half of the Mississippi Valley. Smaller pockets of above normal rainfall were observed in northern California and eastern Oregon. Precipitation was largely below normal across the rest of the West, with the greatest departures from normal west of the Cascades, in California, and in the Greater Four Corners west of the Continental Divide. Other areas of below normal precipitation were in the Lower Mississippi Valley as well as much of the Northeast. Precipitation in Alaska was mostly a bit below normal, but above normal in southwest Alaska. Precipitation in Hawai'i was below normal, especially for Kaua'i and the Big Island.

Fire activity gradually increased across most geographic areas the first half of July with a moderation the latter half of the month before slowly increasing again at the end of the month. However, Alaska saw a gradual decrease in activity throughout the month after a very busy second half of June. Lightning events in the Northwest and Northern California Geographic Areas at the beginning of the month started several new large fires requiring incident management teams. Lightning in western Colorado July 10 ignited three large fires including the Turner Gulch

Fire, which remains active at the end of the month. However, two large fires in northern Arizona and central Utah are indicative of how dry the high elevation timber is in these areas after a dry winter. The Dragon Bravo Fire in Arizona and Monroe Canyon Fire in central Utah have been extremely active since emerging early in the month, with large plumes observed daily on each fire since July 23.



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 Seasonal Drought Outlook (bottom)** *(from National Drought Mitigation Center and the Climate Prediction Center).*

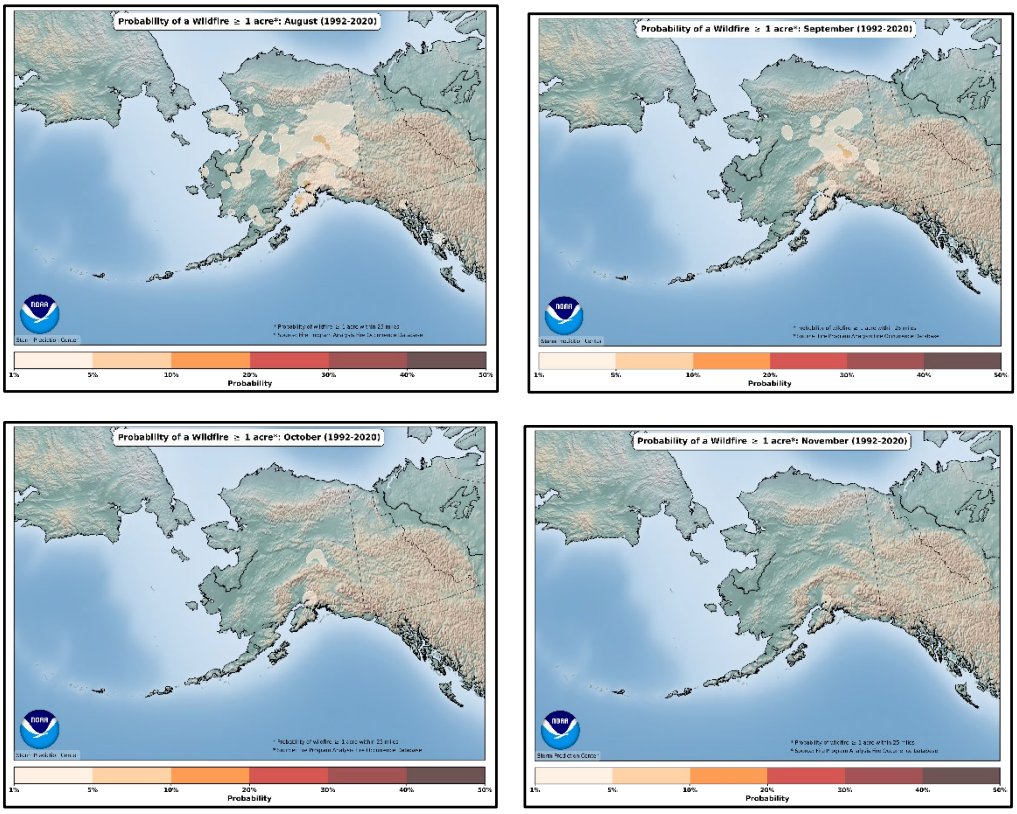
Overall drought slightly increased across the US since late May with just over 31% of the US in drought as of July 29. Drought persisted in the southwestern US, with slight improvement in portions of New Mexico. Drought also improved in much of the northern Plains and Florida, with the most pronounced improvement in drought across the Texas Hill Country, a result of the devastating flooding early in the month. However, drought has intensified and expanded across much of the Northwest into the northern Great Basin and western Colorado. Drought is also developing in portions of the Southeast and Lower Mississippi Valley due to the below normal rainfall in July. Extreme drought persists in portions of the southwestern US but has expanded into portions of the northern Intermountain West. Extreme drought now covers portions of every western US state except Wyoming. Extreme drought is also occurring in small portions of southwest Texas and South Florida. Small areas of exceptional drought persist in southwest New Mexico and South Texas, with a small area in the Idaho Panhandle.

Weather and Climate Outlooks

El Niño-Southern Oscillation (ENSO) neutral conditions persist in the equatorial Pacific Ocean with sea surface temperatures near average. The Climate Prediction Center is forecasting ENSO neutral conditions to continue into the early fall, with a possible transition to La Niña later in the fall. The negative phase of the Pacific Decadal Oscillation (PDO) persists and remains a factor for this outlook, as well. The Madden-Julian Oscillation (MJO) has been active the last half of July

in Indonesia and the tropical West Pacific and is expected to remain active into mid-August as it continues eastward in the tropics. The ENSO neutral conditions will continue to be the main driver of this outlook, coupled with the negative PDO. The MJO has a smaller impact on this outlook, mainly for August.

Geographic Area Forecasts



Normal fire season progression across Alaska shown by the probability of a fire greater than 1 acre within 25 miles. Fire severity cannot be inferred from this analysis. (Based on 1992-2020 FPA Data. Analysis courtesy of the Storm Prediction Center.)

Alaska

Season-slowing rains have tempered burning conditions in Alaska. For the rest of the summer, periods of warming and drying will lead to increased fire activity with fires remaining on the landscape that will demand focus. With weather forecasted to be typical of late summer, a normal fire season is expected for August, with little activity in the fall when Alaska moves out of fire season.

Weather patterns have been highly variable this summer, with seven- to ten-day periods of hot and dry weather followed by shorter periods of cooler weather with rain. The most recent rain event was by far the most significant, dampening conditions in all areas except the far southeastern Interior, including the uppermost Tanana Valley and the Copper River Basin. The Yukon Flats are also dry in some areas, having received scattered rainfall. These fuel conditions are well represented by the Buildup Index of the Canadian Forest Fire Danger Rating System.

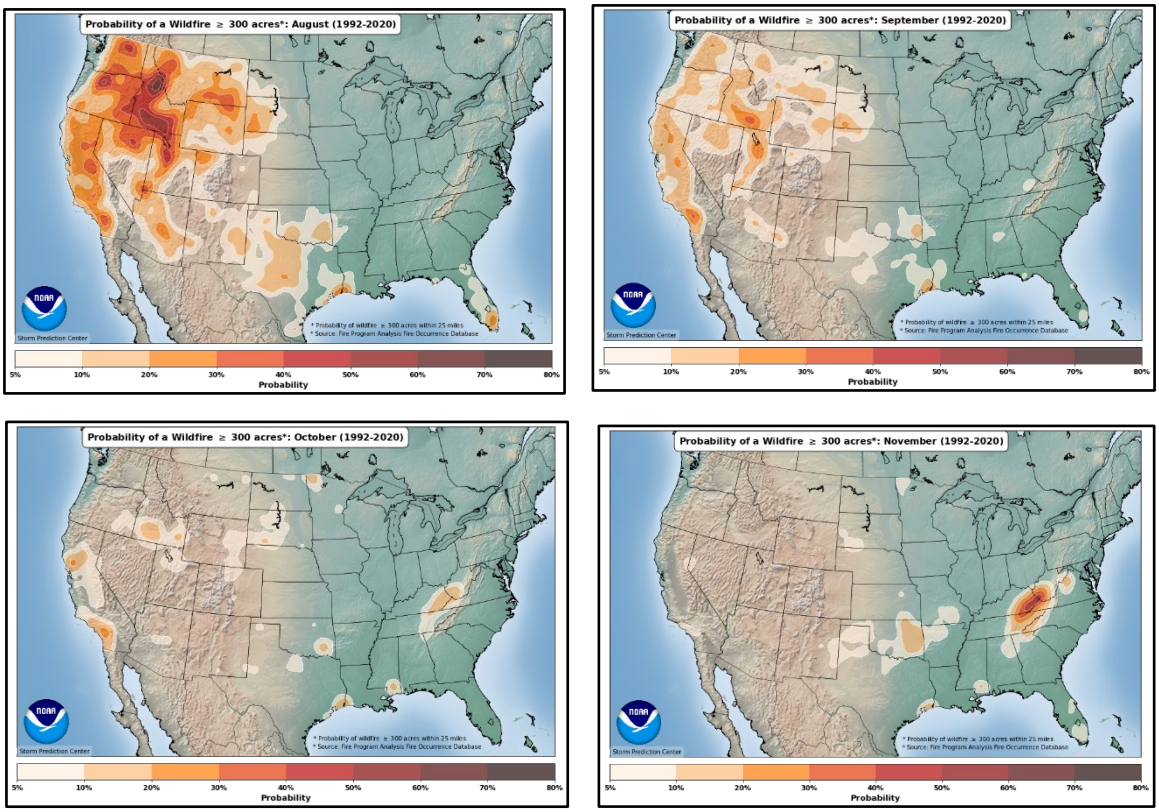
Medium-range models forecast a return of warm and dry weather for the first week of August, so it is likely that fire activity will increase again at the start of the month. A return to cooler and damper weather will follow for the second week, most likely followed by season-ending rains in the latter half of the month. Longer range models and Climate Prediction Center forecasts for the next few months show warmer and wetter than normal conditions are likely for most of Alaska.

Though warmer than normal temperatures are likely due to our ever-warming climate, the skill for long-term precipitation prediction in Alaska is low and is difficult to anticipate more than a week in advance.

Hot weather and multiple lightning events led to numerous ignitions across a wide footprint of Interior Alaska in June to early July. An ensuing long period with little precipitation allowed fires to become well established and spread over large acreages. However, the end of July brought significant rainfall across most of the Interior, slowing fire activity in all areas but the far eastern Interior. At the beginning of August, only a handful of fires are still staffed as most growth is expected in areas with no values at risk.

Though surface fuels are wet in many areas due to July precipitation, deeper duff fuel dryness is highly variable. In the valleys of the east, including the Yukon Flats, Upper Tanana Valley, and Copper River Basin, deeper duff layers are very dry, evidenced by high values of the Buildup Index and Drought Code. These areas could become burnable with a couple days of warming and drying and are likely to be problematic for the remainder of the summer. Even with substantial rain, these deeper duff fuels can sustain subsurface fire and become very active again after several days of hot and dry weather.

Thanks to late July rainfall, August's fire activity and significant fire potential in Alaska is likely to be normal state-wide, with some activity early in the month on the many existing fires in the state, followed by season-ending rains mid-month and the end to active burning by the end of August. September will likely see a few human ignitions, which will be easily managed. With the shorter daylight hours of September and October, Alaska's fire season will end in a normal fashion.



Normal fire season progression across the contiguous US shown by the probability of a fire greater than 300 acres within 25 miles. Fire severity cannot be inferred from this analysis. (Based on 1992-2020 FPA Data. Analysis courtesy of the Storm Prediction Center.)

Northwest

Most of the Northwest Geographic Area (NWCC) is expected to have above normal significant wildfire potential in August and September, followed by a rapid decline to normal fire potential in October and November. The Predictive Services Area (PSA) for northeast Washington (NW09) was returned to normal potential as fuels remain close to average dryness.

July in the NWCC area featured alternating periods of warm, dry weather and thunderstorms, mainly east of the Cascade crest. Thunderstorms produced above-average lightning counts, usually accompanied by significant rain. An exception was a mostly dry nocturnal thunderstorm event in southwest Oregon July 8 with over 700 strikes. The North American Monsoon did not significantly contribute to these thunderstorms; rather, most source moisture unusually came from the eastern Pacific.

Low-pressure systems occasionally brought strong winds through the Cascade gaps in July. Mid-month, a low-pressure system moved from northwest to southeast, causing strong west winds followed by moderate northeast winds across the Columbia Basin, which is unusual for July.

July's temperatures were generally near average, with southwest Oregon about 5 degrees above average. July remained typically dry for Oregon and Washington, though western Washington saw minimal rain. East-central and southeast Oregon experienced significantly higher rainfall from thunderstorms.

Drought conditions worsened across the region, except in southeast Oregon where rainfall alleviated dryness. The US Drought Monitor indicated extreme drought in far southeast Washington and far northeast Oregon. Most of Washington and western and northeast Oregon were labeled moderate to severe drought, while parts of the lower Columbia Basin and south-central and southeast Oregon were abnormally dry.

Initial attack activity across the Pacific Northwest remained light in July. The Fourth of July marked the largest ignition event of the month. Subsequent fire growth was primarily wind-driven, especially when aligned with slope and elevated fuel conditions. The Cram Fire expanded to nearly 100,000 acres after being affected by multiple wind events. Wind-driven fires east of the Cascades continue to show increased resistance to control when aligned with both wind and terrain. In contrast, over 12,000 lightning strikes in southeast Oregon over 72 hours resulted in twelve fires, a notably low ratio, likely due to the rainfall experienced with the storms.

Energy Release Component (ERC) values west of the Cascades trended between average and above average throughout the month. East of the Cascades, ERCs dropped significantly mid-month, followed by a sharp rebound by the end of July, and values remained average to above average. Live fuels remain green on north- and east-facing slopes at mid and upper elevations across much of the Northwest. Recent fire activity demonstrates that rangeland fires can persist across multiple burn periods as live fuels are mostly cured. Most PSAs are ending the month with ERCs hovering near average. Critically dry fuels in northwest Washington are driving active fire spread on the Olympic Peninsula. Areas of the Cascades also remain above average.

Sea surface temperatures in the central Pacific are near average, with ENSO-neutral conditions likely to continue through October. Starting in November, La Niña conditions become as equally plausible as neutral conditions. El Niño conditions are very unlikely, with only a 1-5% probability.

August starts with a 40-70% probability of above-average temperatures, highest along the Idaho border. Eastern Oregon and central Washington will likely see persistent heat, with multiple stretches of 90-100°F days through early September. The probability of above-average temperatures decreases to 35-45% from September through November, the highest in eastern Oregon and southeast Washington. There is a 35-50% probability of above-average temperatures through October across both states.

August is slightly favored (35-45%) for above-average precipitation, with equal chances (25-35%) each for the average and below categories. From September through November, no strong precipitation trends are indicated. Therefore, NWCC expects a typical fall pattern with increasing

low-pressure systems bringing wetting rain. Frontal systems will become more frequent as the season transitions into winter.

Weather models indicate monsoon moisture plumes will avoid the Pacific Northwest. However, thunderstorms are expected to have a significant influence. Passing low-pressure systems suggest periodic windy episodes can dominate the fire environment through early fall, like 2024, especially east of the Cascades. East wind events across western PSAs appear to be less likely under general westerly flow, but not impossible.

Confidence in temperature and precipitation outlooks remains moderately high. Unfortunately, thunderstorm rainfall has not been widespread enough to reduce the ratio of human versus natural ignitions. This ratio will remain much higher than the past 20-year average, likely at or above 2022-2024 levels.

All PSAs, except NW09, are indicated to have above-average significant fire potential through September. NW09 has not shown the rapid drying seen in the remaining PSAs and that trend is expected to continue.

An increasing frequency of weather systems and non-thunderstorm precipitation will decrease fire danger by early October, signaling the end of fire season for several PSAs. Certain PSAs, including those on the west side of the Cascades (NW01, 02, 03), northeast Washington (NW09), and northeast Oregon (NW11) typically benefit from upslope flow and increased precipitation. Burn periods in the remaining central and eastern PSAs usually become too short for multi-day fire spread events carried by grasses. Southwest Oregon (NW04) typically avoids early fall storms and remains susceptible to any potential early October offshore wind episodes.

Northern California and Hawai'i

Significant fire potential is projected to be near to above normal for August for almost all areas, above normal areawide during September, followed by a more limited footprint of above normal from the Sacramento Valley westward to the coast during October. Normal significant fire potential is projected areawide for November. Historically during August, on average one to four large fires occur per Predictive Services Area (PSA) except for the North Coast PSA, where the average is less than one. During September the PSAs generally average one to two large fires except for the Far Eastside and Bay Area PSAs, which average less than one. October averages one or less large fires within each PSA and during November the average falls to less than one. Hawaii's significant fire potential is above normal for August through October and normal for November.

The atmospheric patterns observed during July were highly variable with more trough or Pacific cold front impacts versus hot and dry upper-level ridging. Most of the impactful weather events revolved around lightning, observed during 19 of the 31 days. There were also a few wind events and one extended heat wave period from July 11-14. Precipitation anomalies were mixed since the precipitation mostly came in the form of showers and thunderstorms. The strongest above normal precipitation signature showed up across the north and east. Average temperature anomalies were also mixed with near to above normal temperatures across the north and east and near to below normal favoring the onshore flow influenced areas of the Greater Bay Area and portions of the Sacramento Valley. Persistent, deeper onshore flow led to unusual amounts of low stratus clouds and some fog near the coast.

The lightning totals observed during July have been record-setting based on the 2012-2024 Earth Networks Total Lightning Network (ENTLN) database. Around 48,700 lightning strikes have been observed through the morning of July 30 with additional high lightning counts expected to finish out the month. Two days exceeded 10,000 strikes, with nearly 12,000 reported on July 1 and nearly 19,000 on July 25. The previous monthly maximum within the 13-year database was a little over 41,000 that occurred during June 2023. Three multiple-day periods of National Weather Service Red Flag Warnings and Predictive Services High Risk Significant Fire Potential were

issued during the month due to abundant lightning on flammable fuels. Two sets of Red Flag Warnings and High Risks were issued due to onshore dry and gusty wind periods.

Dead fuel dryness was variable during July due to the mix of weather patterns. The driest and most flammable period for dead fuels occurred during the second week of the month with Energy Release Component values across most PSAs near or above the 90th percentile. Moderation occurred early and late in the month due to daily rounds of showers and thunderstorms combined with a deeper marine layer influence. The region remained in a mixed state of green-up and curing, although curing became more expansive across the low and mid elevations, generally below 6,500 feet, by the end of the month. Annual grasses became cured across all areas while perennials were in some sort of green-up state, generally above 7,000 feet. Certain shrub species had cured in areas to critically low values such as chamise, bitterbrush, and sage. Live fuel moisture samples represented a mosaic of above, near, and below normal readings by the end of the month. The first moderate drought classification from the US Drought Monitor creeped into the far northwest during July while the abnormally dry area increased across the north. The one-month Evaporative Demand Drought Index (EDDI) value on July 25 showed a developing short-term drought or stress signal across far eastern portions of the northern California region.

Wildfire business increased a bit more during July compared to June. The daily wildfire ignition average rose to 27 through July 29, compared to 21 observed during June. The July 2008-2024 daily ignition average is 25. The lightning event during early July led to several large fires including two complexes and one significant fire that required incident management teams. A total of nine fires met the individual PSA significant fire definition based on reports through July 29. They were primarily found across the north in shrub and timber fuels that were less accessible to ground resources. The Butler and Green fires had burned around 20,000 acres each in the Northwest Mountains PSA. The lightning event from June 30 to July 3 led to approximately 110 new ignitions, and the event from the July 23-29 led to around 150 new ignitions. Prescribed burning was limited and mainly found across the grass and oak woodland areas when suitable weather conditions and enough resources were present.

The amount of convection and penetrating marine influences observed during July was a surprise and ultimately led to moderating fuel conditions the latter half of the month. Weather models are projecting an extended heat period by the middle of August, which will be needed to get fuel conditions back into alignment for an above normal significant fire potential forecast. Various projections suggest a warmer than normal late summer to early fall across the region with mixed precipitation anomalies likely. Lightning is likely to be most problematic during August. Offshore wind events are likely to be more problematic during September and October, although a near normal number of events is likely. An increased influence of onshore wind events should occur from August through September, especially following the expected significant heat periods. Wetting storm systems steered by the jet stream should start to increase during October and November, leading to moderating and season changing conditions.

Based on the current fuel state and future weather predictions, near to above normal large fire potential is projected for August through October with normal likely during November. Flash drought conditions are still a possibility and could provide additional stress to the fuel bed, although confidence is lower than earlier this year. Either way, the alignment of critically dry dead and live fuels should occur for an extended period during August and September and to a lesser extent in October. Marine layer influences should remain a factor near the coast, although its impact and intensity should lessen in the future compared to previous months, especially during September and October, which is normal. The near to above normal herbaceous fuel loading will also challenge suppression efforts across the lowlands.

Sea surface temperature (SST) anomalies surrounding the Hawai’ian Islands were near to above average during July. Temperature anomalies were generally near to above normal, although slightly cooler than normal across portions of Molokai and Maui. Precipitation anomalies were generally near to below normal. Little change to the drought categories occurred during July with

varying degrees of drought touching all the islands. The strongest drought signal remained across Molokai, Maui, and the Big Island. Curing within the herbaceous fuels was more noticeable, especially across the leeward areas. One National Weather Service Red Flag Warning was issued July 31 for a period of strong trade winds, with another enhanced trade wind period from July 6-8 across the southern half of the island chain. No significant fires were reported during the month.

The El Niño Southern Oscillation (ENSO) is currently in a neutral state and is expected to remain that way during most of the four-month outlook period. Average temperatures in Hawai'i during the next four months should generally be above normal. Precipitation should take on a mixed anomaly flavor although impacts by tropical systems are expected to be below normal, therefore providing more of a drier tilt versus a wetter one. Drought stress should continue within the live fuel bed with more and more herbaceous curing expected. Based on the weather projections and current state of the fuels, above normal significant fire potential is projected for August through October across the leeward sides of the islands. A return to normal is likely during November when Hawai'i's wet season normally commences, although confidence is low on that prediction.

Southern California

Weak high pressure centered over the Desert Southwest brought near normal temperatures for the first couple weeks of July. This high pressure became strong for a few days, bringing a brief period of hot temperatures to the deserts of southern California. High pressure became centered over the southeastern part of the country during the second half of the month, bringing below normal temperatures to most of central and southern California. Overall, most locations experienced near to slightly below normal temperatures for July. The marine layer was between 1,500 and 3,000 feet deep most days in July causing temperatures to be well below normal across the coastal areas. An area of low pressure moved inland into central California from the Pacific Ocean July 2 bringing scattered showers and thunderstorms to the Sierra and deserts. Another area of low pressure moved into southern California from the south July 17-19 bringing scattered showers and thunderstorms to southern California and to central California from the Sierra eastward. Otherwise, there was little or no shower or thunderstorm activity across the region during July. High pressure that is usually centered near the Four Corners this time of year was farther south and east than normal, keeping monsoon showers and thunderstorms to our east. Overall, precipitation was well below normal across the entire region. It was breezy most days in July, with southwest to northwest winds of 15 to 25 miles per hour (mph) with gusts to 40 mph across the mountain ridges and desert passes and a sea breeze of 8 to 15 mph with gusts to 25 mph elsewhere in the afternoons.

There was little change in drought for July compared to June. Southern California remains mostly under severe drought, with small areas of extreme drought over the deserts. Meanwhile, central California is abnormally dry, with the San Joaquin Valley under moderate drought. For the first couple weeks of the month, the 1000-hour and 100-hour dead fuel moisture across inland locations was well below normal and between the 3rd and 10th percentile. The dead fuel moistures across inland locations away from the deserts increased to between the 20th and 40th percentiles during the second half of the month. The lower elevations affected by the marine layer had well above normal 1000-hour and 100-hour dead fuel moisture the entire month. The live fuel moisture continued to gradually decrease and is now mostly between 60% and 85%, which is a little below normal for the time of year.

Well below normal sea surface temperatures are expected to continue off the West Coast through September. These well below normal sea surface temperatures will cause the marine layer to be deeper than normal. Thus, coastal areas will continue with below normal temperatures. The high pressure that is usually near the Four Corners during the summer will likely remain farther to the south and east, keeping most monsoon showers and thunderstorms to our east. However, there may be a brief period of showers and thunderstorms during the first couple weeks of August. Inland locations will likely see a little above normal temperatures as abundant sunshine is

anticipated to continue. The drier than normal conditions will bring an above normal chance for significant fires away from the coastal areas, San Joaquin Valley, and deserts through September. Sea surface temperatures across most of the Pacific Basin are expected to remain well above normal through the fall. These above normal sea surface temperatures will likely cause upper-level troughs to move inland into the Pacific Northwest during October and November instead of into California. Thus, precipitation is expected to be well below normal. The amount of Santa Ana wind events will likely be normal to above normal as some of the troughs moving into the Pacific Northwest drop into the Great Basin and Desert Southwest. High pressure off the California Coast will bring above normal temperatures during the fall. Warm and dry conditions will bring an above normal chance for significant fires to southern California from the mountains westward, which is the area most prone to offshore winds.

Northern Rockies

The outlook for August and September reflects a significant change from previous forecasts. The Northern Rockies Geographic Area (NRGA) had situationally adequate precipitation in July coupled with a lack of significant heat waves mitigating widespread dryness from developing on the landscape. Only the southern part of the Idaho Panhandle and part of southwest Montana have remained drier than seasonal normal and maintain potential for above normal significant wildland fire potential in August and September. The rest of the NRGA is expected to see normal potential except for Glacier National Park and the Northern Front Range Predictive Services Areas, where abundant rainfall supports below normal potential. The outlooks for October and November designate normal for all NRGA areas.

While episodic hot weather occurred through the month of July, it was disrupted by unusually potent mid-summer storm systems that brought widespread thunderstorm activity and cooler temperatures providing effective mechanisms to offset drought influences on the landscape. This impact was strongest over the northern part of the Idaho Panhandle through northwest Montana and then most of the NRGA east of the Continental Divide. Less moisture was observed in the southern part of the Idaho Panhandle and in southwest Montana, but a lack of sustained heat mitigated most large fire activity, especially in the latter half of the month.

Drought indicators show an area of severe to extreme drought over north Idaho and western Montana, but rainfall forecasts the later part of July and early August will continue to offset these conditions. East of the Continental Divide, northern Montana and northern North Dakota report moderate drought with an area of severe drought over northeast Montana. However, this area received heavier rain in late July, and drought is expected to decrease. Southeast Montana and southern North Dakota are reporting normal conditions.

While a few large fires were observed in the hotter and dry part of early July, since July 10, fire activity in NRGA has been limited to initial attack, with fires rarely staying active beyond two operational periods. Exceptions were a handful of fires in southwest Montana where rainfall did not fall after early July, and a few fires reached 100 acres.

Large, dead, and downed surface fuels have not had sufficient time to dry out and support large fire potential given the weekly precipitation events during July. Energy Release Component (ERC) values escalated to the 90th percentile for a day or two, but fuel moisture improved with wetting thunderstorm events, higher dew points, and higher relative humidity. West of the Divide, thunderstorm precipitation was spotty with isolated locations receiving 0.25 inch of rain but nothing a half mile away. Pockets of wet and dry fuels reside across the western portion of the NRGA. Live fuels are holding onto moisture except in open stands and lower elevations where grasses are fully cured. Fuels are generally drier in Idaho and southwest Montana with moisture content in 1000-hour fuels ranging from 10% to 13% in the driest parts of north-central Idaho. East of the Continental Divide, hot, dry, and windy weather will promote drying of fine fuels and trigger increased initial attack activity, but moisture has been sufficient to keep larger fuels from drying to critical levels.

Long-term forecasts this summer have been unreliable as the northern branch of the jet stream has resisted the development of large areas of high pressure forming over the western CONUS. This pattern is expected to persist into early August. With an absence of significant heat or dryness in the forecasts in early August, it becomes difficult for fuels to experience rapid drying to support significant wildland fire potential. Only areas with multi-month moisture deficits, mainly in north Idaho and southwest Montana, have persisting above normal significant wildland fire potential.

Great Basin

Fire potential is expected to be above normal heading into August as warm and unseasonably dry conditions continue across most areas of the Great Basin. Some cooler, showery conditions in the first part of August in northern areas will briefly minimize large fire potential in western Wyoming and the mountains in central and southern Idaho, but warm and dry conditions are likely to redevelop there by mid-month. That warm and dry pattern is tentatively expected to continue into at least the first half of September in most areas, before the potential of any season-ending events takes shape by late September or early October.

Temperatures overall in July were near normal in most areas. However, precipitation was less than normal in most areas, most notably in southern and eastern areas that normally get relief from the North American Monsoon in July. Drought conditions have slowly expanded in both southern and northern areas, converging on central areas of the Great Basin. Most areas are in moderate to severe drought, and pockets of extreme drought exist in southern and northern areas.

Grasses have long since cured in lower elevations. Of particular concern is the heavy fine fuel loading in parts of northwest Nevada and southwest Idaho. Another concern is the near record low live fuel moisture in the sagebrush across large portions of Nevada and western Utah. Lastly, record high Energy Release Component levels are being seen across many southern and eastern areas that have not seen much in the way of the monsoon so far this season, and this is where most of the large fire activity has been ongoing the past month. Farther north, the mountains of southern and central Idaho have seen gradual moistening with occasional bands of showers and cooler temperatures in the last week of July, reverting fuels to below critical levels for now.

Fire activity continues at high levels across the southern and central areas of the Great Basin with numerous large fires and several incident management teams active in the region through July. Extreme fire behavior was observed on some incidents, given the near record fuel dryness for this time of year.

Warm and dry conditions will continue for southern and central areas the first half of August with no signs of an organized monsoon. Thus, above normal significant fire potential from July was extended into August for these areas, with an expansion into parts of northern Utah and eastern Nevada. Long range models indicate the potential of a strong, semi-permanent upper-level ridge of high pressure along much of the West by mid-August, extending into September. This high should rapidly dry out areas of Idaho and thus was added to the above normal area for September. Normal conditions are expected areawide for October and November, in the absence of reliable climate model outlooks.

Southwest

Due to inconsistency in this year's monsoon, above normal significant fire potential will persist in northern Arizona and the Four Corners area in August. Despite persisting drought and forecasted warmer than normal conditions into the fall months, the combination of monsoon moisture and the onset of favorable seasonal conditions will allow significant fire potential to revert to normal areawide for September through November.

Through the end of July, the Southwest Geographic Area remained in fire season as the monsoon has failed to establish a regular or robust pattern this year. Extreme fire behavior continued on the Dragon Bravo Fire in northern Arizona due to exceptionally low humidity, poor overnight recoveries, and occasional breezy winds. Elevated fire danger and ongoing wildfire activity has constrained the fuels treatment work that normally begins this time of year. The unfavorable conditions, particularly the lack of meaningful amounts of moisture, are expected to continue in August, so no large-scale burn projects are expected. Pile burning has commenced in some areas, and prescribed burning activities may occur at times as the weather allows through August, increasingly so heading into the fall months.

As of the end of July, the US Drought Monitor shows widespread severe to extreme drought over much of the Southwest, aside from areas of mostly moderate drought in the Four Corners. Drought abates to the east, with abnormally dry areas east of the Continental Divide leading to the only drought-free area in northeast New Mexico. These widespread and significant drought conditions will likely persist in most areas through early fall; however, some improvement is expected for the exceptional drought in the New Mexico Bootheel and the immediately adjacent area in far southeast Arizona.

Rather than the typical prolonged surges, this season's monsoon moisture has occurred in pulses interspersed among longer than usual dry periods. Precipitation in July was above normal in New Mexico near and east of the Divide, and near to just above normal in some areas of southern Arizona. Otherwise, precipitation in July was below normal across the rest of Arizona and just 10% of normal in the Four Corners, parts of northwest Arizona, and areas south of the Mogollon Rim. Temperatures in July were near to just above normal in most areas west of the Divide and below normal east of New Mexico's central mountain chain.

The Climate Prediction Center (CPC) outlook for August favors warmer than normal temperatures areawide, and temperatures will likely remain largely above normal beyond August into the fall months. The CPC precipitation outlook for August has equal chances for either above or below normal precipitation. However, it is important to note that normal for August is for the monsoon season to be well established across the region. With this year's inconsistency in the monsoon pattern, the first half of August will likely see below normal precipitation in northern Arizona and the Four Corners, with most heavier wetting rains focused east of the Divide. Farther west into Arizona and the Four Corners region, precipitation is expected to be more scattered and lighter overall. Precipitation may remain below normal heading into September and October; however, a slow decline in overall fire activity is expected with the seasonal progression toward cooler and shorter days and other favorable conditions.

For August, elevated potential for significant wildland fires will become confined to the northern and western areas of Arizona, as monsoon moisture in the form of increased humidity and some areas of wetting rain will be common in areas farther east. On the western fringe of the monsoon moisture surges, initial attack is expected to increase, bringing an elevated risk for new large fires to emerge in northern Arizona, especially with lightning strikes amid the critically dry fuels there. Chances of large-scale and high-risk wind events will be minimal as August progresses, but persistent West Coast low pressure troughs will occasionally allow breezy winds to develop in parts of Arizona. Initial attack may continue at times heading into September due to the outlook for warmer and drier conditions. However, significant fire potential is expected to diminish, reverting to normal for all areas in September and for the remaining fall months, due to the seasonal progression, as shorter, cooler days and other favorable factors curtail ignitions and inhibit wildfire activity.

Rocky Mountain

Above normal potential will continue in northwest Colorado and southwest Wyoming for August; otherwise, normal significant fire potential for the Rocky Mountain Area (RMA) is expected

through November. July saw continued hot and dry conditions west of the Continental Divide, with limited precipitation. Meanwhile east of the Divide, temperatures were cooler, with more rain.

In July there was a stark difference between the West Slope to east of the Continental Divide. In the west, temperatures were above normal for the month, generally running 2 to 4 degrees hotter, though this was not as extreme as June was. Precipitation was still much less abundant in the west for July, with much of the West Slope and western Wyoming seeing less than 50% of average rainfall. Drought conditions have increased in the west with the hot, dry weather, with the amount of severe drought increasing on the West Slope. East of the Divide, the pattern has been more favorable, with more regular rounds of the monsoon. The increased moisture led to much more numerous showers and thunderstorms along and east of the Continental Divide into the central Plains. While there was more rainfall, there were some areas that saw amounts that were slightly below normal. The increased showers and thunderstorms east of the Divide also helped to keep the temperatures near to slightly below average. Drought conditions here have not changed over the last month given the regular rounds of showers and thunderstorms.

Fire danger metrics and fuels conditions largely followed the differences in the weather patterns on either side of the Divide. In the west, fuels have continued to dry, with many areas seeing fire danger indices well above normal, some exceeding the 97th percentile. The long-term drought conditions that began during the winter have seen the larger timber fuels drying out significantly, to below 10% moisture content in many of the mid-slope locations in the West. In the east with more regular rainfall, fire danger indices have generally hovered around average to below average. The areas that did not see as much rainfall have seen indices starting to rise above normal but remain below extreme values.

July saw several large fires start in the RMA, mostly in the Montrose and Grand Junction dispatch zones. Many of these started with a dry lightning event July 9-10. The South Rim Fire and Turner Gulch Fire both saw the mobilization of incident management teams. Despite the increase in ignitions, the rest of the area continued to see wildfires that could be contained in one or two operational periods.

In the short-term, conditions will continue to be hot and dry across the West Slope and into western Wyoming, with only weak monsoon impulses expected. The first part of August will continue to see rounds of moisture east of the Continental Divide but may turn drier towards the end of the month. Overall, the trend in the long-range forecast will likely see warmer and drier conditions than normal for the northern half of the RMA.

With the hot, dry weather on the West Slope and into southwest Wyoming for August, elevated significant fire potential will continue, while the rest of the RMA remains normal due to higher likelihood for rain. For the remaining months of the outlook period, while the norther tier of the RMA will see drier conditions, this may be offset by longer nights and moving past the hottest part of the year. Accordingly, confidence is not high enough to put any areas of the RMA above normal for September through November.

Eastern Area

The Eastern Area saw a pattern change over the 30-day period through the end of July. Significant rainfall amounts were observed in Minnesota, Missouri, Illinois, and Iowa, with the 30-day anomaly ranging from near normal up to near double the normal amount. The greatest area of above normal occurred in Iowa, Illinois, and northern Missouri. High temperatures over the 30-day period were near normal to slightly above normal areawide.

Michigan, Wisconsin, Indiana, and Ohio saw a mix of conditions, with northern Michigan, central Wisconsin, southern Indiana, and southern Ohio receiving near normal to just above normal rainfall in July. For other areas in this tier of states, rainfall was near normal to slightly below normal. Daily high temperatures in July were slightly above normal for most of these areas.

Indiana experienced the warmest temperature anomalies, which also extended into eastern Illinois. Across the westernmost states, Minnesota, Iowa, and Missouri, temperatures were near normal over the period.

Rainfall amounts over the 30-day period were near normal in West Virginia, Maryland, New Jersey, and the southern two thirds of Pennsylvania, while daily high temperatures were a few degrees warmer than normal in West Virginia, New Jersey, and western Pennsylvania. Temperatures in Maryland and eastern Pennsylvania and Maryland were closer to normal but still slightly above average.

For the northern third of Pennsylvania, New York, and New England, the 30-day rainfall through the end of July was near normal to below normal, with southern Vermont and southern New Hampshire seeing the driest conditions, receiving as little as 25% of the normal rainfall amounts. Daily high temperatures during this period were up to 4 degrees warmer than normal across the northern third of Pennsylvania, most of New York, southern New England, and Vermont, while the rest of New England was just slightly warmer than normal.

Benefitting from ample atmospheric moisture, the area's seasonal green-up period concluded normally. Wildfire activity was relatively insignificant in July, even in most areas with warmer than normal temperatures and below normal precipitation. However, wildfire activity has been somewhat elevated in northern Vermont.

Looking ahead into August, there is no dominant signal for either above or below normal precipitation for much of the Eastern Area. However, the southern areas of Illinois and Indiana, Ohio, West Virginia, Maryland, most of Pennsylvania, and New Jersey may see conditions favoring normal to slightly above normal rainfall in August. The temperature outlook leans toward August being warmer than normal in many areas, with highest confidence for New England and the Mid-Atlantic states. The exceptions are Missouri, Iowa, Illinois, and southern Indiana, where there is no dominant signal for above or below normal temperatures.

Overall, most of the Eastern Area should see near normal fire activity, including normal significant fire potential, for August. However, New England and New York will need to be watched as above normal conditions could be possible if rain remains scarce. Northwest Minnesota has been wet enough to be removed from the above normal category for August.

For September, conditions should favor near normal rainfall for most of the Eastern Area, with chances for slightly above normal precipitation in Ohio, Pennsylvania, West Virginia, and Maryland. Temperatures for September are forecast to be above normal for the entire Eastern Area. September is when foliage begins to change for the fall season and fine fuels begin curing or become fully cured. However, there should be enough moisture in the soil and atmosphere to keep fire activity and potential at normal levels for September areawide.

October and November will see the onset of fall conditions across the Eastern Area, which will contribute to fuel availability. Nonetheless, normal significant fire potential is expected for all areas. The fall forecast favors warmer than normal temperatures for the entire area, except northern Minnesota. The forecast also indicates near normal amounts of precipitation are likely for most areas outside of the Great Lakes, Ohio, Indiana, and Illinois, where above normal liquid accumulations are favored. Depending on the amount and coverage of precipitation in August and September, northwestern Minnesota ultimately may need to be placed into the above normal category for October and possibly November.

Southern Area

Conditions in the Southern Plains did not materialize as expected in July, but confidence is increasing in an extended period of hot and dry weather where consistent high rainfall during the growing season left grass loading at 130-200% of normal. Meanwhile, further curing of abundant

heavy dead fuels in the path of last September's Hurricane Helene is expected to strongly influence risk for the upcoming fall fire season.

Drought in Texas improved dramatically in July after historic rainfall devastated central portions of the state. Lower amounts across South Texas resulted in continuing severe to exceptional drought, which will have to be monitored. Excessive dead fuels from long-term drought and oak wilt will remain a concern in central Texas once drier trends resume, but abundant soil moisture and recent improvement have eased concerns there for now. Meanwhile, southern Florida has observed worsening drought that will maintain at least normal risks for lightning fires until tropical activity picks up. Localized drought is evident across the Southeast and Lower Mississippi Valley, which could be impactful if it persists into the fall fire season. Dryness over the Caribbean observed earlier in the summer has begun to ease during the latter half of July with more frequent and typical seasonal rainfall returning to most of the islands. Unusual fire activity across Puerto Rico in July should now ease back to normal.

Weather prediction this summer has been a nightmare, with most medium- to long-range weather models performing unusually poorly. Analog guidance has also not been particularly helpful. All of this results in somewhat low confidence in conditions the next few months, especially amid uncertain tropical impacts and model forecasted El Niño Southern Oscillation (ENSO) neutral conditions. Probabilistic guidance from NOAA's Climate Prediction Center now slightly favors La Niña by the October-to-December period, a potential concern for both a back-loaded hurricane season, similar to last year, along with growing drought and fire risks during the fall. In the shorter term, a robust Madden-Julian Oscillation (MJO) signal leads to increased confidence in heavy rain for much of the Gulf coastal plain through most of the Southeast in early to mid-August, driven at least partially by an increase in tropical activity. Large fire climatology and short-term weather trends, in addition to unusual fuel loading, are the main factors in this outlook.

Recent increases in initial attack across Oklahoma and northern Texas have occurred amid hot and dry weather that is expected to become more common in August than it was earlier in the summer. Well above normal grass loads are widespread, but drought-curing has only been localized so far, so this may not be a major factor in fire potential until a mass curing event occurs from either flash drought or freezes this fall. Above normal significant fire potential is forecasted across western and central Oklahoma into adjacent portions of northern Texas for August, where heat and dryness in early to mid-August may be most impactful to fuels. These areas also have the most concerning soil dryness per NASA's Short-term Prediction Research and Transition Center (SPoRT) products. Otherwise, activity elsewhere in Texas for August and early September is expected to increase to normal levels from a quieter July, with timber litter in eastern parts of the state and adjacent western Louisiana typically most susceptible during the hottest and/or driest part of the year. Fire climatology decreases through most of September and October but picks back up in central and eastern Oklahoma during November. This outlook follows suit, keeping in mind herbaceous fuel loads, and forecasts above normal significant fire potential there during November. If drought manages to become more widespread or intense than expected, filling in the gaps between August and November is a possibility.

For now, the only other area of concern is across the mountains of the Carolinas in November, due in large part to Helene's impacts. The 2025 spring fire season there foretells issues we are likely to deal with for years to come. Access issues driven by downed trees and washed-out roads are expected to be as much an issue as the abundant dead fuels. Zombie trees partially knocked over with their roots still tapping into the soil have greened back up but will be more susceptible to early curing. This may already be beginning per changes in NASA-SPoRT's greenness products. Lofted dead leaves were cited as a major contributor to long-range spotting this spring, so there is reason to believe this issue will crop back up during the fall fire season. In addition to the abundant fine dead fuels, larger trees that were felled will be more likely to consume after a full year of curing, so fire intensity should increase compared to areas with normal fuel loads. Adjacent far northeastern Georgia, the Carolina Piedmont, northeastern Tennessee, and southwest Virginia will all likely see the same issues after leaf drop, but Helene's impacts in these

Predictive Services Areas was less widespread than in the North Carolina and South Carolina mountains. A consistently humid and wet fall is the only thing that would prevent above normal significant fire potential there, and that currently appears unlikely.

Normal significant fire potential is forecasted elsewhere through the period due to uncertainties in weather and tropical impacts. Herbaceous fuel loads are reported to be higher than normal in most of the rest of the geographic area because of the widespread high rainfall that occurred in spring and early summer, so any continuation of recent dryness will have to be monitored. Better clarity and confidence will arise once we see where this year's tropical activity occurs over the next few months, as well as the progression and intensity of ENSO and MJO influences.

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 Coordination Center at (208) 387-5400 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