The July, August, and September through October 2015 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.

**July**
- Higher than usual temperatures; minimal summer precipitation; and already dry fuels will combine to continue above normal potential across most of the Pacific coast states, as well as the northern Rocky Mountains and northern and western Great Basin.

- Fuels that were exposed to drying earlier than usual as well as hot and dry conditions throughout May and June have led to above normal potential throughout Alaska.

- Abundant spring and early summer precipitation and moist fuels will alleviate much of the fire concern for the Rocky Mountains, Southwest, and areas east of the Mississippi.

**August**
- Much of the above normal area from July will linger into August, with the exception of some of northern California. Above normal conditions will spread slightly westward to encompass more of the Great Basin.

- Most of the areas experiencing below normal potential will return to a more normal condition, with only some of the Central Rockies and Ohio Valley below normal.

**September through October**
- Almost all of the above normal potential will return to normal through this period, leaving only far southern California as above normal.

- Below normal fall conditions will develop across inland portions of the southeast.
Past Weather and Drought

June was a month of transition. It began with a trough of low pressure over the southwest with cool and damp conditions that extended northward into the Great Basin. Another trough over Alaska brought seasonal rains the first week of June. By mid-month high pressure extended coast to coast along the southern half of the Nation with severe weather and flooding in the southern Plains. Two Pacific hurricanes “Blanca” and “Carlos” brought much needed precipitation to the southwest U.S. including southern California within a week. Alaska saw a blocking ridge of high pressure with very warm and dry conditions, along with several days of lightning activity. By the last half of the month the weather pattern steeply amplified with a strong ridge of high pressure west of the Rockies that extended well into western Canada. This brought record-breaking heat and dryness with abundant lightning over much of the Western U.S. to end the month. East of the Divide a deep trough of low pressure brought cooler temperatures and a series of precipitation events.

Temperatures were well above normal the past 30 days, especially across the Northwest quarter of the U.S., Alaska, and the Mid-Atlantic. The southern Plains and Great Lakes were slightly cooler than normal.

Much above normal precipitation occurred over a large part of the southwest with Pacific hurricanes Blanca and Carlos but some areas remained deficient. The Great Lakes and northeast U.S. also recorded above normal precipitation in June, while the northwest quarter of the Nation was much below normal. The extreme southeast U.S. from Florida to South Carolina saw precipitation deficits in June also.

Extreme to exceptional drought remained over California, western Nevada, and southeastern Oregon. Drought conditions continued across most of the western U.S. as well as the Appalachians and New England. Heavy rain in Texas and Oklahoma for the second consecutive month greatly improved drought conditions across the region.
Weather and Climate Outlooks

El Niño conditions are strengthening. During the last month, positive sea surface temperature (SST) anomalies continued to increase in the eastern Pacific. According to NOAA’s Climate Prediction Center (CPC), there is a 90 percent chance that El Niño conditions will continue through the Fall and a 85 percent chance it will persist through winter 2015-2016. A strengthening El Niño during the summer could have the effect of more tropical moisture available for precipitation across the Gulf region and the Interior West. El Niño conditions typically decrease precipitation across the northwest U.S. in the winter and spring however.

For July through October, there is a high probability of warmer-than-normal conditions in Alaska and all of the western U.S. There is also a high probability that warmer-than-normal temperatures will be observed along the Atlantic coast. Below normal temperatures are likely across much of the Plains and the southern Rockies. Above median precipitation is expected for much of the U.S., with the exception of the Pacific Northwest and Mid-Atlantic Coast where below median precipitation is favored.

Top row: One-month (July) outlook for temperature (left) and precipitation (right). Bottom row: Three month (August-October) outlook for temperatures (left) and precipitation (right). (from Climate Prediction Center/NOAA)
Fuel Conditions and Fire Season Timing

Modeled fire danger indices in the interior of Alaska continue to indicate the potential for greater than usual acreage gains on currently existing fires. Storm events during the latter part of June brought ignitions but also helped to moderate conditions. Fine Fuel Moisture Codes across Alaska have moderated and Build Up Index has improved significantly across the eastern portions of the interior while the central and western interior remain well above normal. Alaska’s fire season could continue later into the year than is normally expected thanks to the elevated conditions that are currently in place.

During the last week of June, moisture moved into the Southwest in earnest, greatly reducing fire potential for Arizona and New Mexico. East of the divide fuels remain moist and provide limited potential for fire growth. West of the divide fuels have supported large fires, however generally have not allowed for significant fire control problems. As the moisture continues into July expect conditions to be normal for the Southwest Monsoon season. Short term increased fire activity is possible in western Arizona as normal seasonal dry patterns provide limited opportunities for significant fires.

Fire danger indices remain well below seasonal averages across the entire Rocky Mountain Area. Cheat-grass has cured at most lower elevations in western Colorado and is beginning to transition in central Wyoming. Oak brush live fuel moisture has dropped during the latter half on June over portions of the lower elevations of western Colorado, which is supportive of fire. Fire season typically begins in late May over southern Colorado and moves northward into Wyoming and South Dakota by July. Due to significant moisture during the late spring and early summer, a later than average onset of fire season has occurred. Fire activity has remained below seasonal averages. Occasional significant fires are still expected during dry periods.

In Southern California, the wet weather in May provided a brief respite from the high fire danger. Energy Release Components fell to below normal while both live and dead fuel moisture values rose to levels not seen since early January. The return of warm weather coupled with long daylight hours, quickly negated the effects of the unusually high May precipitation. By the third and fourth week of June, ERC values climbed back to above normal readings and dead fuel moisture values fell to below normal. Fuels will be supportive of large fire growth and will be highly receptive to new starts. All lightning episodes, except those producing heavy rain, will be capable of generating new fires. During windy periods, expect extreme fire behavior in any ongoing fire. At the current time, there is no evidence indicating an early or late start to offshore flow, which is expect to begin to become possible in late September. In Northern California, long term drought conditions are likely to lead to a condition where above normal fire activity is possible, even though the forecasted weather conditions indicate a continued somewhat frequent moisture input.

Very dry conditions in June across the Northwest have led to large dead fuel moisture values that are generally as dry or drier than what is typically observed at the peak of fire season in August. This is three to five weeks ahead of schedule. Fire season for the Northwest has already begun and will continue until substantial rain occurs or
Across the northern and western portions of the Great Basin, fuels have been rapidly drying during the last two weeks in June. Lower elevation grasses are cured over much of Nevada and southwest and central Idaho. Sagebrush live fuel moisture is now decreasing to closer to normal, or even below normal in some areas. Pinyon-Juniper and Timber fuel moisture remains well below normal in many areas of the Great Basin. Fuel loading is near to below normal across the southern half of Nevada and into parts of western Utah, with near or above normal fuel loading over the eastern half of Utah, Idaho and far northern and western Nevada and the Sierra. Therefore the main concerns are in the Pinyon-Juniper and Timber areas where fuel moisture is low and fuel loading is higher, as well as in the lower elevation grasses of Idaho and northern and western Nevada and the Sierra Front that are already cured. Moisture entering much of the area during at the least the first half of July will likely allow fuel moisture to increase, especially over the eastern two-thirds of the Great Basin. However drier air may return later in July and into August to allow fuel moisture to rapidly decrease again, especially over western and northern areas. Fire season should be well under way by the beginning of July, especially over western and northern areas, which will likely remain active into August. Utah will likely see a shorter window for higher fire activity due to the monsoon developing and pushing moisture into the eastern half of the Great Basin. In September, there still is a possibility of warm and dry conditions throughout the month. If the warm and dry conditions in September were to materialize, the fire season could extend through the month, with the biggest concerns being over western and northern Nevada, the Sierra and into southwest and central Idaho.

Dead fuel moisture levels in North Idaho and Western Montana are below normal for this time of year in several PSAs, and will continue to be very dry through the summer. Fine fuel and live fuel moisture values in these areas are curing out rapidly with hot dry weather and will be at peak summer dryness levels in early July. Dryness levels in the rest of the Area are near seasonal levels, but fine fuel curing will accelerate the next few weeks in Central and Eastern Montana. Central Montana fine fuel moisture will likely be low enough to support significant fires by the first or second week of July. North Idaho and Western Montana are four to five weeks earlier than normal fire season development, and ERCs and 1000hr fuel moistures will be extreme by mid-July and continue through September while returning to normal is anticipated by October.

East of the Mississippi River there has been an emergence of short term drought areas in a mosaic pattern across mainly the south Atlantic states. Overall, fuel moistures remain above critical thresholds with the 100hr and smaller fuels showing more variability given typical summertime heat and rain patterns. Fire activity to date remains well below average. While warmer and drier than average precipitation patterns have increased short term potential, broader scale above average fire potential is not expected. Still, there could be periods of elevated initial attack. In the Northeast, fuel moistures were at or below the 90th percentile across the majority of the Eastern Area towards the end of June. The wettest fuels were indicated across the Mid-Mississippi and Ohio Valleys. The late summer and early fall fire season may begin later than normal across the southern tier of the Eastern Area if wetter than normal conditions persist. A wetter and moist weather and fuels environment persists in Texas and Oklahoma.

**Geographic Area Forecasts**

**Alaska:** Significant wildland fire potential is expected to be above normal across much of the Interior for July and August. It’s expected that significant fire potential will return to normal in September and remain normal for October.

Spring warmed up quickly with record high temperatures in May and snow melting at least two weeks earlier than normal in many areas. Spring was very dry as a large upper level high moved in over Alaska and stayed through most of May. June began with a cool, damp pattern that transitioned by the second week to a large blocking high that brought heat and low humidities. A large area of abnormally dry exists in almost all the Interior, and extends south through the Susitna Valley, Anchorage Bowl and onto the Kenai Peninsula and Panhandle of southeast Alaska. Long range forecast models indicate that significantly warmer than normal temperatures will continue to dominate the state through the
summer. The precipitation forecast for the next two weeks indicates drier than normal conditions throughout southern Alaska. This is a continuation of the weather the last few weeks in June. Fire Weather Indices, particularly in the central and eastern Interior, have been climbing rapidly under hot and dry conditions. Alaska is in the heart of its fire season, and fire season could continue to be quite busy for another two months.

**Northwest:** Above normal significant wildland fire potential is expected for the outlook period through September, with normal potential in October.

June proved to be unusually warm and dry across the Area. Temperatures were well above normal and precipitation well below normal at nearly every reporting station in the Area. Virtually no snow remains at upper elevation reporting sites. Climate outlooks continue to suggest July through October will be warmer and drier than usual across the Pacific Northwest. The very dry conditions in June have led to 1000hr fuel moisture values that are generally as dry or drier than what is typically observed at the peak of fire season in August. This is three to five weeks ahead of schedule. Many 1000hr fuel moisture values are one to three standard deviations below normal for late June according to records compiled since 1990. Fire season for the Northwest has already begun and will continue until substantial rain occurs or daylight hours become too short in late September, whichever comes first. Due to the unusual warmth and dryness over the Area, the potential for a busy fire season is high.

**Northern California and Hawaii:** Above normal significant wildland fire potential is expected for much of northern California in July. In August, portions of northeast California will return to normal potential. The Area should see normal significant wildland fire potential in September and October. Above normal potential is expected for most of Hawaii for the entire outlook period from July through September.

June was significantly warmer than average. Precipitation was below normal across much of the Area, but normal or above near the northern Sierras and eastward. Due to occasional lows over the eastern Pacific and a strong high pressure ridge aloft, the Area will see plenty of southeast to south flow patterns. Warm waters from a strengthening El Nino will aid in supplying moisture to those southerly flow periods. This makes it possible that July will see at or above average mountain thunderstorm activity, of varying cell moisture content. July is forecast to start off very hot, and to end up above normal for the bulk of the Area. Above normal significant fire potential conditions are primarily expected due to fuels effects from long-term drought coming increasingly into play, as well as early July patterns favorable for dry to mixed lightning. The western fringes of the Southwest monsoon, and the subtropical moisture associated with a strengthening El Nino, are both expected to contribute to California precipitation potential in August through September. It's possible that fuels in much of the Area receive wetting precipitation at least once in each two to four week period through September. Normal does not imply a lack of large fires. Normal for August alone is about 25 large fires in Northern California.

For Hawaii: The Hawaiian Islands saw a wide range of precipitation anomalies in June. Varying degrees of drought have become an issue over a sizeable portion of the state. Due to the strengthening El Nino, and its' reduction of northeast trade winds, the next few months may continue to see below normal rainfall. On the other hand, eastern Pacific tropical storm frequency will get higher, increasing the chances that one or more islands will be affected by a wet storm or its' remnants before late September.

**Southern California:** Much of Southern California will persist above normal significant wildland fire potential through June, July and September. Central and portions of southern California will return to normal in October, while far southern California will remain above normal.

The rainy and cool pattern that occurred in May lasted into the first week of June before warmer and drier weather returned by the middle of the month. A ridge of high pressure then developed over the Great Basin and northern Rockies, and the weather turned warmer and drier as is typical in June. Precipitation in May and early June averaged above of normal over many areas of Central California,
but rainfall amounts during that time period are often quite light. The wet weather provided a brief respite from high fire danger and ERCs fell to below normal while both live and dead fuel moisture values rose to levels not seen since early January. But the return of warm weather coupled with long daylight hours, quickly negated the effects of the unusually high May precipitation. By the third and fourth week of June, ERC values climbed back to above normal readings and dead fuel moisture values fell to low levels. Southern California may experience a cooler summer compared to the past two years. Last summer was one of the hottest on record despite an above average monsoon year. Troughs off the coast may keep a southwesterly flow in place much of the summer. If this were to occur, there should be less thunderstorm activity this summer. But there may be a higher number of dry thunderstorms due to an absence of sustained monsoonal flow. Temperatures are still expected to be above normal this summer, mainly due to warm ocean conditions. Therefore, fuels will be supportive of large fire growth and will be highly receptive to new starts. All lightning episodes, except those producing exceptionally heavy rain, will be capable of generating new fires. During windy periods, expect extreme fire behavior in any ongoing fire. There is no indication of an early or late start to the offshore season and some offshore flow will begin to become possible in late September.

Northern Rockies: Northern Idaho and western Montana will develop above normal significant wildland fire potential from July through the Outlook period. Conditions will return to normal in September or October.

Moderate to severe short-term drought has arisen in northern Idaho and western Montana, caused by a warm, dry spring with lower than average snowpacks, which melted four to six weeks earlier than normal over the lower and mid elevations. May and June precipitation failed to materialize over much of the Area with many areas recording their driest ever May through June period. Along with this, exceptional heat occurred west of the Divide in June. East of the Continental Divide, drought signals are generally absent, as temperatures and precipitation were generally more average. Dead fuel moisture levels in North Idaho and Western Montana are very dry for this time of year. Fine fuel and live fuel moistures in these areas are curing out rapidly with hot dry weather and will be at peak summer dryness levels in early July. Otherwise dryness levels in the rest of the Area are near seasonal levels, but fine fuel curing will accelerate the next few weeks in Central and Eastern Montana with much warmer weather anticipated. North Idaho and Western Montana are four to five weeks earlier than usual fire season development, and ERCs and 1000hr fuel moistures will be extreme by mid-July. For the rest of the Area, temperature and precipitation outlooks are maintaining near-average temperatures and near to above-average precipitation potential for the summer, and into the fall. Thus, fine fuel curing and grass fire potential should remain near-average for July, August, and September and October.

Great Basin: Above normal significant wildland fire potential will increase over western and northern areas of the Great Basin in July, expanding to northwest and northern Nevada in August, with a return to normal by September and October.

Average temperatures over the last 30 days were above normal across the Great Basin, especially over the northern portions of the Area. Precipitation over the last two weeks was minimal over the western portions of the Area, however was above normal over western Nevada and the Sierra and over parts of southeast Nevada and the southern half of Utah due to early June rains. Extremes to exceptional drought continues over the western half of Nevada and the Sierra and into far southwest Idaho, with moderate to severe drought over much of the rest of the Area. The extended weather outlook still indicates an unsettled weather pattern in the Area through much of July, especially across Utah, and the eastern portion of Nevada, with less overall moisture in Idaho and far western and northwest Nevada and the Sierra. Temperatures will still likely remain above normal overall; however precipitation may also increase to above normal over the eastern half of the basin due to thunderstorms and the return of monsoon moisture. The potential for wetter conditions is expected to continue over southern and eastern areas. Fuels have been rapidly drying out during the last two weeks in June. Lower elevation grasses are cured over much of Nevada and southwest and central Idaho. Sagebrush live fuel moisture is now decreasing to closer to normal, or even below normal in some areas. Pinyon-Juniper and timber fuel moisture remains well below normal in many areas of the Great Basin. Therefore the main concerns are in the Pinyon-Juniper and timber Pinyon-Juniper and
timber areas where fuel moisture is low and fuel loading is higher, and in the lower elevation grasses of Idaho and northern and western Nevada and the Sierra Front that are already cured. Fire season should be well underway by the beginning of July, especially over western and northern areas, which will likely remain active into August. If the warm and dry conditions persist into September, the fire season could extend through the month.

**Southwest:** For July eastern portions of the Southwest Area will remain below normal significant wildland fire potential. The entire area will return to normal conditions in August and then remain normal throughout the Outlook period.

Temperatures from late March through late June were below normal across the majority of the Area with a few small pockets of above normal temperatures mainly along and west of the divide. Much of the Area has experienced near to above normal precipitation from late March through late June, especially the eastern half of the Area. With the exception of the eastern and southeastern half of the Area, much of the above normal precipitation has occurred in the past 30 to 60 days. The driest area relative to normal since late March has been across far northwestern Arizona with another relatively dry area across far western and southwestern New Mexico into adjacent parts of eastern and southeastern Arizona. Upper level ridging has arrived over northern stretches of the Area into the Great Basin and is expected to oscillate over this vicinity for the next few weeks. This has led to a significant moisture increase into the majority of the Area from the southeast allowing the summer thunderstorm pattern to increase across the Southwest Area. Into July, periodic storms into the northwestern portion of the country could shift the position of the upper level ridge eastward more into the central sections of the U.S. This would act to reposition entrenched moisture and shift it over areas that perhaps hadn’t been receiving as much over the previous few weeks. The only concern, if any exist, would be for the western of Arizona to become drier and hotter for any length of time that could lead to an unusual mid-summer increase in fire activity. A wetter than normal September and October is anticipated for many areas.

**Rocky Mountain:** Significant wildland fire potential will continue to be below normal for the Rocky Mountain Area in July. Most of the Area will return to normal by August with some of the Colorado mountains remaining below normal.

Long term drought has been reduced across the entire Area as a result of a wetter than normal May and June. Precipitation amounts during May through much of June were in most cases greater than 200 percent of normal. The onset of the Southwest Monsoon will bring mainly moist conditions over the higher elevations and eastern plains of Colorado, into eastern Wyoming and plains of South Dakota, Nebraska and Kansas through July. Temperatures east of the divide will generally be near seasonal averages through the period. Near normal precipitation is forecast for western Colorado and western Wyoming, along with normal to above normal temperatures. ERC’s remain well below seasonal averages across the entire Area. Cheat grass has cured at most lower elevations in western Colorado and is curing into central Wyoming. Oak brush live fuel moisture has dropped during the past two weeks over portions of the lower elevations of western Colorado, which is supportive of primarily initial attack fires. Due to significant moisture during the late spring and early summer, a later than average onset of fire season has occurred. Fire activity has remained below the seasonal averages. However, wet springs do not completely eliminate large fire activity. Fine dead fuel loading will be significant later in the summer and fall. The combination of the fine dead fuel loading and warm, dry, unstable and windy conditions that frequent the area during this the late summer and fall, raises concerns of increased large fire potential. However, natural ignition is typically reduced during this period, with human ignition the main component east of the divide.

**Eastern Area:** Below normal significant wildland fire potential is expected for much of the Eastern Area through July with a return to normal expected by August.

Soil moisture and precipitation anomalies were near to above normal across the majority of the Eastern Area towards the end of June. Precipitation events occurred with enough frequency through June to curtail any short term early summer fire potential. The wettest portions of the Eastern Area at the end of June were the Mid-Mississippi and Ohio Valleys. The driest portion of the Eastern Area
through the second half of June was the northern third of Minnesota. Cooler than normal temperature trends are forecast over the Great Lakes and northern half of the Mid-Mississippi Valley into July before expanding eastward in August. A slight tendency towards wetter than normal conditions is expected over the northern tier of the Eastern Area in July and the western portions of the Area from August into October. Below normal fire potential is expected across the Mid-Mississippi Valley into July where precipitation and soil moisture anomalies were well above normal. Near normal fire potential is expected elsewhere through the end of the summer.

**Southern Area**: Significant wildland fire potential is expected to continue at or below normal for the Southern Area through the Outlook period.

The precipitation anomaly since last month has evolved into a wetter west and drier southeast pattern. With this evolution, the emergence of short term drought areas in a mosaic pattern across the southeast is occurring. Overall, fuel moistures remain above critical thresholds with the smaller fuels showing more variability given typical summertime heat and rain patterns. A wetter weather and fuels environment persists west of the Mississippi River. While a wetter and cooler weather environment is expected for a large area of the South during the first half of July, expect the last half of the month to yield a return to a warmer and drier. As the transition out of late summer and into fall occurs, expect a gradual increase in rain activity from the continuing El Nino. Although tropical activity is expected to be low for this season, we will be entering a period when some storm activity will be likely, mainly for the eastern and Gulf coast 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 your local Geographic Area Predictive Services Unit.*

**Note**: Additional Geographic Area assessments may be available at the specific GACC websites. The GACC websites can also be accessed through the NICC webpage at: [http://www.nifc.gov/nicc/predictive/outlooks/outlooks.htm](http://www.nifc.gov/nicc/predictive/outlooks/outlooks.htm)