



National Significant Wildland Fire Potential Outlook

Predictive Services
National Interagency Fire Center



Issued: May 1, 2019
Next Issuance: June 1, 2019

Outlook Period –May, June, July and August 2019

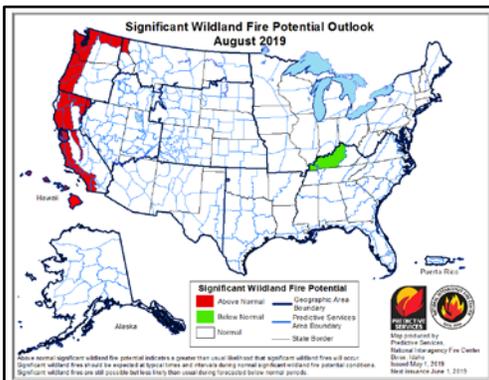
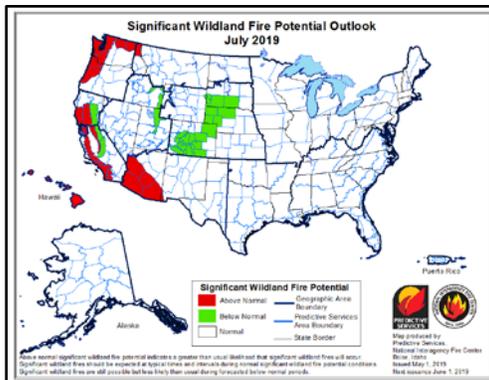
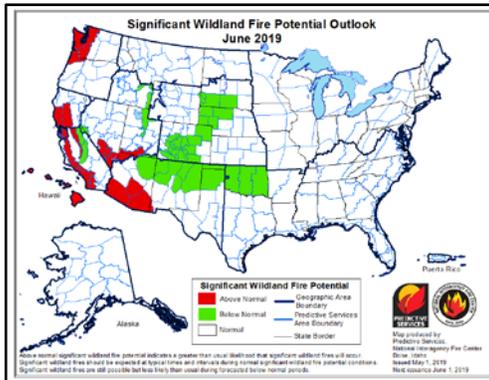
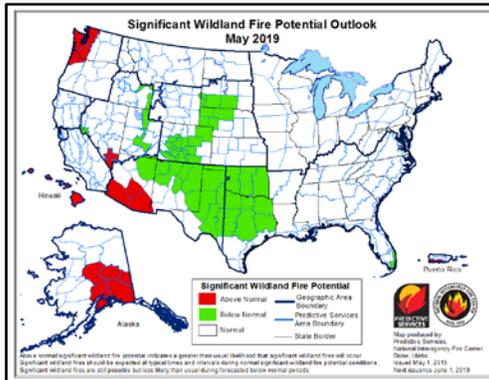
Executive Summary

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.

Below average fire activity continued in April as moist conditions from the recent winter with periodically wet conditions continued. Precipitation received was above average across the northwestern quarter of the nation and across a majority of the East. Below average precipitation was observed across the southwestern states and the central Great Plains. While drier than average conditions existed in these areas, timely precipitation events did occur. Temperatures were two to six degrees above average except across the Upper Midwest and the northern Gulf of Mexico Coast where they were slightly below average. In Alaska, temperatures and precipitation were near average. Drier than average conditions continued across Hawaii. Drought conditions nationwide continued to be minimal.

Greenup is occurring across the nation entering May; fuels across the Southwest are now drying and curing and will become increasingly receptive to fire activity as the month progresses. Looking north, Alaska's interior is becoming drier and increasing activity is expected. By late May and early June, California and the southern Great Basin will see an increase in activity as fine fuels dry and cure. In July, low and middle elevation fine fuels will dry across the remainder of the West and will gradually become receptive to fire activity from south to north. Unlike most years, there could be a delayed start to the season in the higher, timbered elevations due to preexisting weather conditions and slower than average snowpack melting rates. An exception to this could be along the Canadian Border with Washington, Idaho, and western Montana where below average snowpack and moderate drought conditions exist. These areas can expect an average start to the season with a potential for above normal activity. A normal transition out of fire season is expected across Alaska in July. The onset of the southwestern monsoon may be slightly delayed.

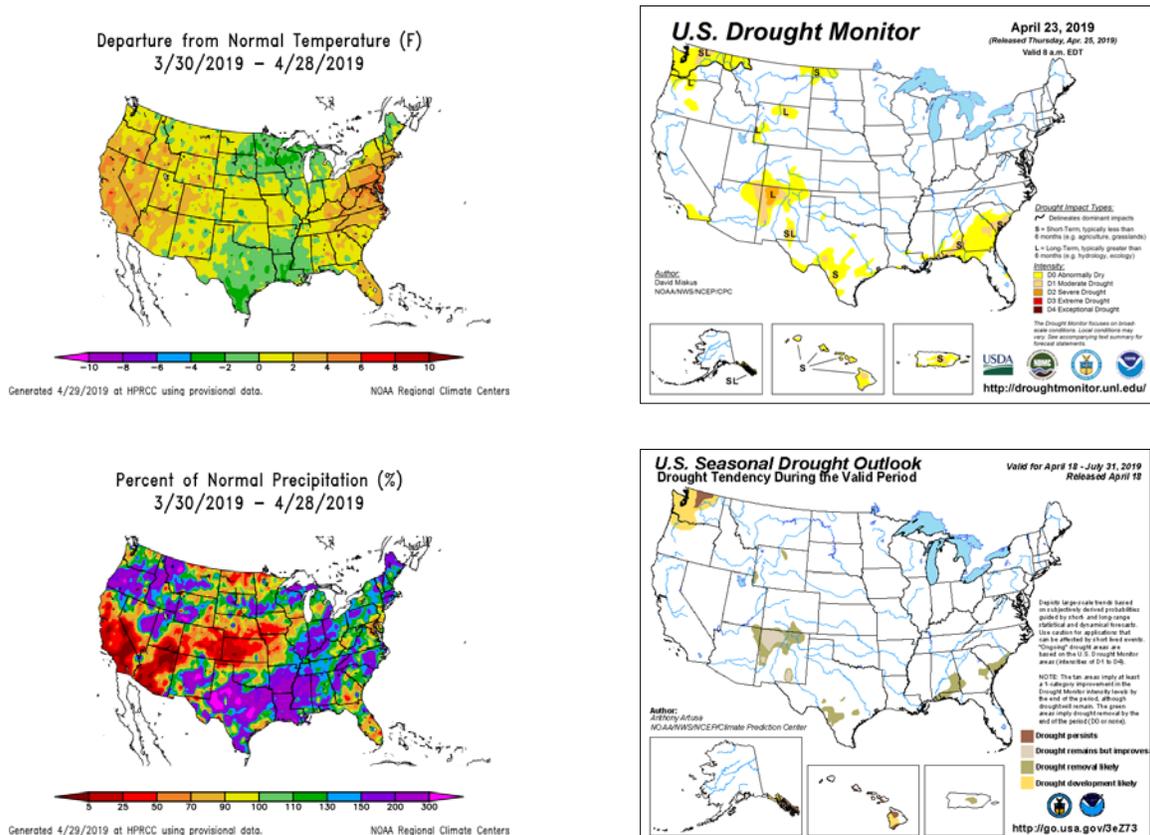
August marks the beginning of the peak of the western fire season. Most of the country can expect Normal conditions. Exceptions will be along the West Coast. A heavy crop of grasses and fine fuels has developed across California and should elevate the potential as it cures and dries. Higher elevations in the Sierra will likely see a late entry into the season due to the record-setting snowpack and slow melt-off. The Pacific Northwest has entered a period of moderate drought. An early entry is possible across the Cascades and in the Okanogan. Elsewhere, some high elevations across the Great Basin and central Rockies could experience Below Normal potential and conditions.



Past Weather and Drought

April began with generally below average temperatures and above average precipitation across the West. Precipitation events were common and increasingly impacted northwestern states as the seasonal northward shift of the jet stream to the north began. With the shift, southern California and the Southwest began to experience patterns that promoted dry and periodically windy conditions. Occasional moisture from passing systems kept drying and curing rates from accelerating. My mid-month, the frequency of passing systems began to slow. Storm systems were not as wet as earlier in the month. Short duration high pressure ridge events became more common. Temperatures remained mostly near average, but pockets of dryness were developing across California and along the Continental Divide. Overall wet conditions continued across the central Great Basin and across the southern portions of the Great Plains. By late month, a persistent ridge of high pressure had developed along the West Coast which allowed for the fine fuels to reach peak greenup and for an above average temperature pattern to develop. A persistent trough over the Inland West kept temperatures near to below average and precipitation above average. This pattern also allowed for a late season snow event across the Northern Rockies and northern Great Plains late in the month. Conditions across Alaska continued to be near average as the prior warming trend abated and as the Interior received precipitation.

The drought across the western states continued to show improvement as drought severity and coverage continued to decrease in response to the recent continued wet pattern. By month's end, most of the nation was drought-free. A noteworthy exception to this was along the Canadian border in Washington, Idaho, and western Montana, where drought conditions showed little change. Some drought development and expansion was observed across portions of the South and across Hawaii. While the developing drought across the South should be short lived, drought across Hawaii should persist.



Left: Departure from Normal Temperature (top) and Percent of Normal Precipitation (bottom) (from High Plains Regional Climate Center). Right: U.S. Drought Monitor (top) and Drought Outlook (bottom) (from National Drought Mitigation Center and the Climate Prediction Center)

Weather and Climate Outlooks

Latest sea surface temperature anomalies across the equatorial Pacific Ocean indicate that the weak El Niño has reached nearly a steady state and remains at its muted peak. Latest model forecasts show almost no change from the previous months' forecasts. Latest consensus of model data suggests that the El Niño will persist in a weak state through the summer months and into the fall before weakening into a neutral but positive state.

Latest outlook data for the spring and summer months overwhelmingly suggest a higher probability for average to slightly cooler than average temperatures across the Interior West and warmer than average conditions along the West and East Coasts. Average to cooler than average temperatures are possible across the Great Plains. Precipitation outlooks suggest a possibility that many areas across the West could see above average precipitation through July and into August. It should be noted that the term "above average" is a relative term since very little precipitation typically falls across most of the West during the summer months. So, even .50 inches of rainfall could be considered "above average" during July or August in some locations. Long-range model data does show a higher probability for drier than average conditions across western Washington and Oregon.

In Alaska, long-range outlooks suggest a continuance of warmer than average conditions along with a higher probability for above average precipitation, especially across the state's interior.

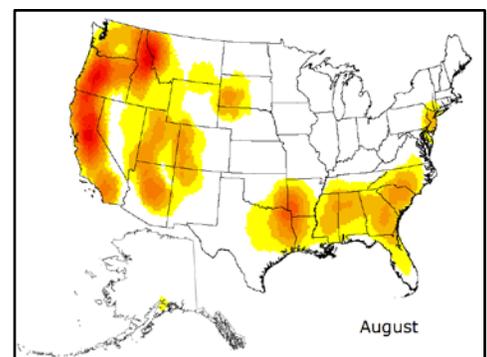
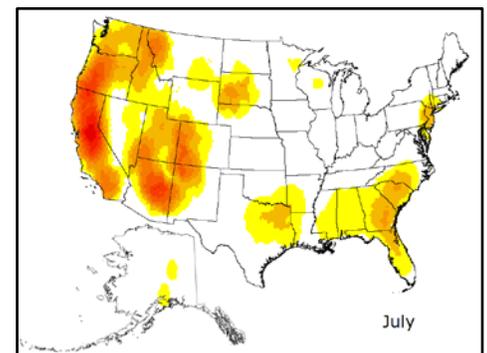
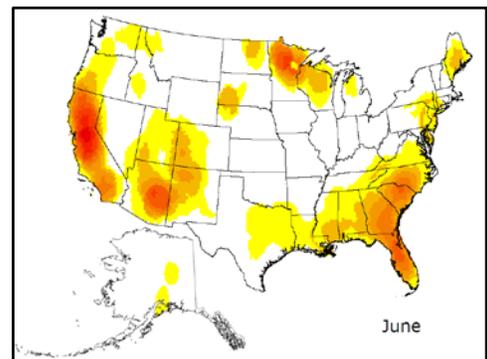
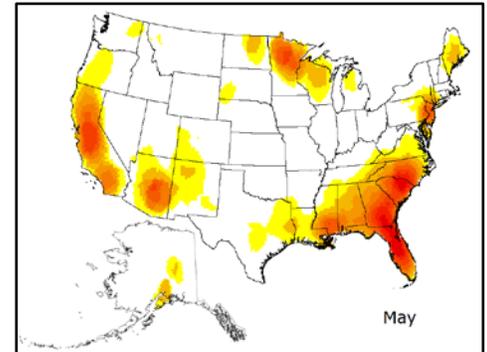
Geographic Area Forecasts

Alaska: Above Normal significant wildland fire potential is expected across the Interior along travel corridors in May. All other areas can expect Normal significant wildland fire potential during the outlook period.

The U.S. Drought Monitor shows an area of Abnormally Dry conditions in the northern panhandle and severe drought in the southern panhandle. This drought has held steady since last summer, and is expected to continue based on long-range forecasts. The remainder of the state is drought-free, though snowpack was low for many areas. This spring has proven to be a seesaw of precipitation versus melting. Though much of the southern two thirds of the state has been snow-free at some point, late season snowfall has kept fuels wet and cool.

Long range forecast data depicts warmer than average conditions for all of Alaska this spring and summer, which has been typical of the last three years. In fact, the long-range data indicates a likelihood for greater than average precipitation across portions of the state through the next 12 months.

Though calculations of the Canadian Forest Fire Danger Rating System have started, many areas are teetering between snow free and periodic new snow accumulations with each front that passes. Ground has



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)

thawed in some areas that is allowing for some drying to begin. Though ignitions are unlikely at this point, fuels in the driest areas will be receptive by early May. Alaska has made a slow entrance to fire season and will continue to see more areas in the north and west dry out and become receptive by the middle of May.

Alaska is transitioning into fire season with a forecast of Above Normal potential along the main road corridors for the month of May, with a return to Normal potential for June through August. As snow retreats in the southern parts of the state, human-caused fires will pop up in early to mid-May. By late May, most of the state will be snow-free, and fire activity will be on the rise, reaching its peak with more lightning starts around the summer solstice.

Northwest: Normal significant large fire potential is expected across the region during the outlook period except west of the Cascade crest in Washington and Oregon through August where Above Normal significant large fire potential is expected. The Above Normal potential in these areas will gradually spread southward and eastward along the Canadian Border from northwestern Washington as the season progresses.

After a dry March, April became much wetter as Pacific weather fronts moved into the region bringing ample moisture through much of the month. Rainfall totals were well above average for most the geographic area excepting sections of western Washington and northwestern Oregon. Snow continued to accumulate at higher elevations, most effectively in Oregon where snow accumulation remains above average for late April. Snowfall accumulation in Washington is below average. Temperatures were above average for April in the geographic area.

Outlooks through spring and into summer continue to indicate warmer than average conditions for the region. Precipitation is most likely to remain below average west of the Cascades but is more likely to be above average east of the Cascades during late spring and summer months.

The wet weather in April moderated fire danger indices west of the Cascades that had been climbing due to the dry weather observed in March. Currently, fire danger indices are now too low for risk of large, naturally ignited wildfires over the region. However, human-caused fire activity in populated areas may become possible during dry, windy conditions in May or June.

Long-range outlooks suggest fire danger will rise to be above average in during the summer, particularly west of the Cascades where outlooks suggest a warmer than average summer. Fire season will likely begin sooner than average in June for areas west of the Cascades and then spread southward in July and August. Areas across northern Washington also appear at risk for more large fires than usual due to persistent dryness.

Fire activity has been minimal in April and will likely continue to be so in early May. However, if drying continues due to warmth in May, western Washington appears to be at risk for possible burn escapes during dry, windy conditions. Large fire risk is expected to become higher than average and spread to Oregon and central Washington as the summer progresses.

Northern California and Hawaii: Normal significant large fire potential is expected across mainland portions of the region in May. Above Normal significant fire potential is expected across the mountains and forests surrounding the Bay Area and in the Sacramento Valley and surrounding foothills June through August. The Above Normal fire potential will expand north to the Oregon state line in August. Below Normal significant fire potential is expected in July across the high Sierras and across portions of the Northwestern Mountains. Above Normal significant fire potential is expected across the lee side of the Hawaiian Islands during the outlook period. Areas not mentioned above can expect Normal significant large fire potential during the outlook period.

The region has received well above average precipitation since January 1. Most of the winter storms this season have been accompanied by average to lower than average snow levels, and this has led to snow pack water content readings that reached more than 160% of the average seasonal peak. Temperatures

were cooler than average in early April, but warmer and drier than average weather in place since the middle of April has allowed led to robust growth of fine fuels and brush at elevations below 3000 ft. Periods of cool wet weather are expected into June, and perhaps even into late June. This will allow an already heavier than average fine fuel crop to increase before reaching its curing phase, which will take place later than usual. The snow pack is expected to melt off more slowly. This will lead to very quiet fire activity at elevations above 6500 feet through July. The above average fine fuel crop will likely cure out between late May and mid-June in the lower elevations of the Bay Area, Sacramento Valley, and Mid Coast areas. It bears to mention that in mid-February a significant heavy snow event in the northern Sacramento Valley. The event caused extensive damage to plants and trees of all sizes, leading to a large amount of dead and down fuels that will enhance the potential of significant wildfires starting in June.

Typically, wildfire activity is minimal through May. Although low elevation grass fires increase in May, they do not typically grow to significant sizes. Significant fire potential will remain Normal, or minimal, through May. Due to the down and dead fuel loading in the northern Sacramento Valley and the expected curing of a robust fine fuel and brush crop at lower elevations, the Bay Area, Sacramento Valley, and Mid Coast areas (except the Mendocino NF) have Above Normal Significant Fire Potential in June and July. All other areas will continue to have normal Significant Fire Potential in June. However, the higher elevations will likely be on the quiet side of the Normal fire potential range in June, and that will continue into July due to the time it takes for the snow pack to melt. Since it is typical for large fire activity to increase at higher elevations in July, the northwestern mountains and northern Sierra have Below Normal significant fire potential in July. All other areas will remain Normal in July. In August, elevations above 6500 feet, especially the Northern Sierra, will be move to the Normal significant fire potential category, but likely lean toward the quiet side of the Normal range. Most areas below 5000 feet in the region will be Above Normal in August, with the exception of the North Coast, which will be Normal.

Sea surface temperatures (SSTs) surrounding the Hawaiian Islands have been near to slightly cooler than average until recently, and are near to slightly above average as April ends. Rainfall was below average throughout much of the region in April, which is typical during an El Niño event. El Niño conditions are now expected to continue in the equatorial Pacific through the summer, and this will likely lead to a continuation of dry conditions. Fuel loading remains above average, and wildfire activity has been above average over the winter and into the early part of spring, especially on the lee sides of the islands. Weather outlooks suggest that warmer and drier than average conditions will continue through the rest of spring and summer. Therefore, Significant Fire Potential will remain Above Normal through August on the lee sides of the islands. On the windward sides, significant fire potential will remain Normal through August.

Southern California: Normal significant large fire potential is expected across the region during the outlook period except in the foothills and coastal mountains where Above Normal significant large fire potential is expected June through August. Below Normal significant wildland fire potential is expected in the southern Sierra in June and July.

The weather began its usual transformation from cool and wet to a much warmer and drier pattern in April. While troughs still frequented the West Coast during the past few weeks, it was a case of diminishing returns in terms of precipitation across the District. Most storms were too far north or contained too little moisture to produce widespread wetting rains over Southern California. Areas south of San Luis Obispo and Tulare County generally received only 25% of normal precipitation, at best, from the end of March through the end of April. The central part of the state fared better, but only the Sierras north of the Stanislaus N.F. received normal amounts of rain and snowfall. Fortunately, offshore wind events continued to be minimal.

Fuels cured at a rapid pace in the fine fuels during the past month, including seasonal grasses. Across inland areas and valleys, curing is nearing completion at the time of this writing. Other non-coastal areas are not far behind. By the middle to latter portions of May, all seasonal grasses should be cured and available for ignition in all but the highest alpine areas. Dead fuel moisture remains a bit above normal in heavier fuels, but with warm days with long daylight hours at hand, most dead fuels will see a quick drop to below normal moisture by June. These fuel types will be of concern later this spring and into the summer. The interplay between a heavy grass crop and a high level of tree mortality will likely lead to

above normal large fire potential again this year in many valleys and lower elevations. The highest potential continues to be over the Sierra Foothills due to the poor vegetative health of the forest in these elevations and the high amount of dead fuel loading. Conversely, higher elevations of the Sierras may not see much activity until the middle to latter portions of summer due to the heavy snowpack of this past winter.

Long-range models continue to point toward a wet and active monsoon for much of the West. However, sea surface temperatures (SST) being cooler than average west of the Gulf of Alaska may keep troughs stalled out west of the California coast. This may keep the District under a prevailing southwesterly flow aloft which could keep most of the monsoonal moisture east of the state. Fewer than average thunderstorm activity is expected outside the desert with a lower than average number of dry thunderstorms this summer. Temperatures should be near, to slightly above normal this summer which would be significantly cooler than 2018. Offshore wind events should continue at a slightly below normal rate the remainder of the spring.

Northern Rockies: Normal significant large fire potential is expected across the region during the outlook period except across the northern Idaho Panhandle where Above Normal significant large fire potential is expected in July and August.

The past month saw a return toward more average temperatures over the region, after the very cold mid-February through mid-March period in Montana and North Dakota. Westerly and southwesterly flow aloft with upper troughs and periods of brief ridging became the predominant pattern. This brought above average precipitation to most of the western areas (with the exception of far northern Idaho), while east of the Continental Divide much drier than average conditions occurred. Once snow cover melted over the plains region in late March, one of the brief dry windy periods ushered in a typical pre-greenup fire season there. Mountain snowpack accumulations over the western areas continue though overall levels are decreasing due to compaction and slow melting. Levels are now just slightly below average across northern Idaho and northwestern Montana, near average over west central and southwestern Montana, and above average in south central Montana and Yellowstone National Park. The latest US Drought Monitor maintains drought-free conditions region-wide, but an Abnormally Dry area is highlighted across northern Idaho and northwestern Montana, which will need monitoring.

Monthly and seasonal temperature outlooks through July depict a probability of above average temperatures across the western half of the region that would lead to a faster spring snowmelt and loss of its moisture influence in the Western areas. Near average temperature probabilities are shown in the outlooks for the eastern half of the geographic area for the remainder of spring, continuing through July. In terms of precipitation, the long-term outlooks all suggest above average precipitation for much of the region this summer, with the highest probabilities in the southern areas.

Green-up is underway, and has already occurred over the lowest elevations in northern Idaho. Although the northern halves of central and eastern Montana and North Dakota have been dry over the past month, enough moisture has occurred to allow live fuels to begin greening up. Additionally, significant precipitation is forecast over those areas in the short term, so precipitation deficits should not increase. Mountain snowpacks are currently generally ripe and melting across northern Idaho and western through central Montana at the lower and middle elevations. Higher elevations are just starting to show signs of melting. May monthly temperature outlooks are forecasting above average potential for the western half of the region. This would favor a somewhat faster melt rate, which could allow for a quicker drop in dead fuel moistures over northern Idaho by middle to late June, even if precipitation remains near average. Drying of dead fuels in the rest of the western areas would not be as fast if monthly precipitation outlooks of above average potential verify. With the region drought-free, live fuel moistures will remain at near average levels if current long-range temperature and precipitation outlooks verify.

Once greenup becomes more continuous east of the Continental Divide, fire potential should become low until middle or late June. If the long range temperature outlooks of above normal temperatures verify in northern Idaho in May and June, and the trend continues into the summer, Above Normal significant large fire potential will be likely in heavily timbered PSA 01 in July and August, even if average precipitation

occurs, as outlooks forecast. For the rest of the region, near to above average precipitation is forecast into July and August. This should result in Normal significant large fire potential in July and August in those areas. Areas of Montana west of the Continental Divide will need to be monitored for the possibility of achieving Above Normal potential if above average temperatures develop in May and June. However, if above average temperatures do occur there in May and June, even with average precipitation, fire potential can quickly increase to above average in July and August.

Great Basin: Normal significant large fire potential is expected across the region during the outlook period except across the southern portion of the region in May and June when Above Normal significant wildland fire potential is expected and across the higher mountains of eastern Idaho and Utah where Below Normal significant large fire potential is expected May through July. Below Normal significant wildland fire potential is also expected across the eastern portions of the Sierras in May and June.

The majority of the Great Basin is at or above average for precipitation over the past two to three months. However, over the last 30 days, the southern portion of the Great Basin has seen much drier conditions than previously observed as the storm track shifted north, with little to no precipitation received over the last 30 days. Snowpack is 140-200% of average in the higher elevations of Nevada and Utah into eastern Idaho. Even though conditions have not been as wet further north, snowpack across Idaho and Wyoming is just above average for the time of year. There have been several cold, low elevations snowfalls this winter and spring across the northern half of Nevada into Utah. This likely will compact some of the carryover fuels we have seen from the last two years, which in turn could reduce fuel loading going into fire season. However, wet weather has occurred off and on across the northern two thirds of the Great Basin much of the spring. Forecast data continues to show wet conditions are expected across the northern two thirds of the Great Basin for the next several months, which potentially could last into the summer. This has already allowed for new fine fuel growth, which may be continuous, albeit short in some areas. A potential also exists for multiple crops of fine fuel through June, depending on the length and amount of wet weather and the ensuing dry periods. This expected weather pattern, and reduced carryover fuels may keep things fairly quiet early in the fire season across many areas of the Great Basin that have seen well above normal fire activity the last few years. However, smaller fires will continue to increase during drier periods. Southern areas of the Great Basin will likely see more fine fuel compared to the last 2 years due to the wet winter and spring. This may raise fire concerns early in the season across southern areas.

The unusually wet winter is expected to lead to an above average grass crop across southern Nevada, southern Utah and parts of the Arizona Strip. With the shift to warmer and drier conditions in April and likely heading into May especially for southern Nevada, southwestern Utah and parts of the Arizona Strip, vegetation will begin to dry and cure, with above average fuel loading expected to be available by May and June. With this in mind, Above Normal significant large fire potential is expected across these areas through May, then expanding east across southern areas of the Great Basin by June, which may also extend into July depending upon the monsoon. The length of the drier conditions will likely determine the potential for fire activity in the south. Further north, an early fire season is not anticipated with wet weather expected to continue to affect the northern two thirds of the Great Basin through at least May periodically. Small fires can be expected to increase during periods of dry and warm weather in May and June in the fine fuels, however storm systems will likely still move across the Great Basin every week or so and bring some periods of cooling and wet weather. The passage of systems may continue into June and July, which could further limit the fire potential in the north. The deep snowpack will also delay fire season in the higher elevations of the Sierra into Nevada, Utah, and eastern Idaho. The highest mountain ranges of the Sierra and Central through Northern Utah into Eastern Idaho will likely see Below Normal large fire potential through at least June, and possibly into July. Currently, we are keeping normal conditions for fire potential in the lower elevations of northern and western Nevada into northern Utah, but if drier weather resumes by June and July, depending on the fine fuel loading and continuity, a reevaluation may be needed.

Southwest: Below Normal significant large fire potential is expected across portions of northern Arizona, northern New Mexico, and West Texas in May and June. Above Normal significant large fire potential is expected across southern Arizona May until the monsoon arrives in July...then expect Normal decreasing large fire potential. Elsewhere, expect Normal significant large fire potential during the outlook period.

Since mid-January, average high temperatures have been slightly below average west of the Continental Divide region and across many areas of New Mexico. However, some areas across New Mexico into West Texas have experienced high temperatures a few degrees above average during the period. The region has generally seen above average precipitation across the northwestern half of the region over the past 90 days whereas most of the southeastern portion of the region has experienced precipitation between 20-70% of average.

Although the weather pattern has been generally active over the past 4-5 months, parts of the southeastern half of New Mexico into West Texas have received below average precipitation overall from late fall through the present. However, over the past month, these areas have begun to receive precipitation as return moisture from the Gulf of Mexico has begun to occur semi-regularly. The present El Niño episode is expected to remain in the weak-moderate state through at least the early-mid summer months and likely longer. Historically, this points towards a higher frequency of below average to average high temperatures focused across New Mexico and a higher likelihood of areas of average to above average precipitation area-wide. This will be especially so along and east of the Continental Divide as spring continues due to a more active storm track. Further west, expect high temperatures to oscillate between average and above average, especially by May and June with the accompanying drier conditions expected in western areas.

The mid-late spring period has increased potential for moisture to be drawn northwestward through New Mexico toward and west of the divide region. This will temper down significant large fire potential to below normal across many areas along and east of the divide region through early summer. However, it will also bring the potential for lightning along and west of the divide that could eventually lead to areas of significant large fire potential primarily in the lower to middle elevations of Arizona where already dry fuels will continue to dry out further by late spring. With the expected drier areas regionally to be focused west of the divide, it's possible that higher elevation areas across Arizona will begin to experience Significant large fire potential increase by late May, and more so in June.

Monsoonal coverage and timing is difficult to predict months out, but indications at this time suggest that the monsoonal onset could be slightly delayed this summer and focused more east of the divide than usual. Significant Fire Potential west of the divide region could linger a bit longer than usual this July. By later in July and August, monsoonal moisture is expected to be adequate to diminish significant large fire potential.

Rocky Mountain: Normal significant wildland large fire potential is expected across the region during the outlook period except across south central-southwestern South Dakota, Northeastern Colorado, and Central through southern Colorado where Below Normal significant wildland large fire potential is expected in May, June, and July.

After relatively cool and wet period earlier in the spring, conditions transitioned into a warm and dry regime in April across central to southern Colorado into much of Kansas. The Drought Mitigation Center eliminated much of the drought across the region in their latest Analysis. Mountain snowpack in April was near average across Wyoming into northern Colorado; while snowpack was above average across the remainder of Colorado, especially in the south. Snowpack amounts in southern to central Colorado were in the top 5 for many sites in late April for the period of record, with a few reporting sites at their 1st or 2nd highest values. Statewide amounts in Colorado were the third highest since 1992 on April 1 and May 1. Spring run-off from snowpack in the Black Hills of South Dakota came off about a week to a week and a half earlier than normal.

Greenup has begun and is progressing over a large portion of the geographic area in the lower elevations. Areas of heavy fuel loading across the eastern plains has shown substantial reduction due to compaction from snowfall during the latter portion of winter into early spring. Snow cover and frozen precipitation this time of year limits the utility of ERC/NFDRS readings from RAWs sites.

Short term model forecast precipitation into early May indicates average to above average amounts across the geographic area in an average to cooler than average regime. The consensus of long range weather forecasts indicate an average to wetter than average tendency for May through August, with average to cooler than average temperatures.

The combination of cool and wet spring trends overall so far in 2019 and average to wetter and cooler than average long range predictions through the summer are in part tilting the odds toward Normal to Below Normal significant large fire potential across the region May through August. Below Normal large fire potential is predicted for May through August from south central through southwestern South Dakota into western Nebraska, northeastern Colorado, and central to southern Colorado. In addition to the recent and forecast wet and cool spring and summer, the heavy snowpack in the central to southern Colorado mountains is projected to delay the onset of core fire season that typically sees an increase in fire activity by late May. Historical trends show that fire activity from June to July has a tendency to increase across western Colorado, Wyoming, and western South Dakota into northwestern Nebraska. Conversely, decreasing trends are often the case in July across the southern Colorado Front Range. Colorado statewide snowpack is at the third highest amount since 1992, and above median snowpack in Colorado has always been followed by below average large fire activity (since 1992) in Colorado from the Front Range westward during the core fire season which is June through August. The current El-Niño sea-surface pattern correlates historically with a below average fire season across the entire region for June through August in terms of large fire acres burned, with only one year since 1992 that wasn't below average.

Eastern Area: Below Normal significant large fire potential is across the southern portion of the region across southern Missouri, southern Indiana, and southern Illinois in May. Normal significant wildland fire potential is expected elsewhere during the outlook period.

30 to 90 day soil moisture and precipitation anomalies were near to well above average across the majority of the Eastern Area towards the end of April. Some shorter term drying had occurred across portions of the western middle Mississippi River Valley and northwestern Minnesota through the second half of April.

Somewhat cooler and wetter than average trends are forecast over much of the region in May. Wetter than average trends may persist across portions of the Mississippi Valley through the summer of. Warmer and drier trends are expected to develop this summer across portions of the eastern half of the geographic area possibly creating periods of above normal summer fire potential.

100 and 1000 hour fuel moistures as well as Energy Release Components or Canadian Build-Up Indices were near seasonal average levels respectively towards the end of April over the majority of the Eastern Area. Fire danger indices were running above average levels towards the end of April across parts of the western Mississippi Valley.

The spring 2019 fire season began later than average along with lower overall fire potential across parts of the northern tier of the region due to late snow melt and colder and wetter than average conditions, which are expected to persist into May.

Normal to Below Normal significant large fire potential is expected across the majority of the Eastern Area through the late spring and summer. However, periods of Above Normal potential may develop across parts of the eastern half of the region this summer if anticipated warmer and drier trends come to fruition.

Southern Area: Above Normal significant large fire potential is expected across southern Puerto Rico in May. Below Normal significant large fire potential is expected across portions of Texas and Oklahoma in May and June and across western Kentucky in August. In areas not mentioned above, expect Normal significant fire potential during the outlook period.

The expected ocean and atmospheric states should result in a warmer and drier than average pattern for the southeastern states and a wetter than average pattern for the western states, especially when the monsoon develops in middle to late July. ALL global models and historical analogs are promoting this weather patterns that promote this solution. This is a rare occurrence for such good agreement to exist in the data and for it to be consistent for an extended period.

For Puerto Rico, a still variable ocean surface temperature pattern in the north and tropical Atlantic suggests the overall drier than average precipitation pattern that has been the theme through winter will persist possibly into June. While the onset of the more humid and unstable tropical season will help increase rain potential across the island, the colder water in the Atlantic should result in areas still seeing below average precipitation since colder Atlantic ocean water temperatures typically produce drier and longer trending drought conditions.

With the exceptions of southeastern Georgia, Alabama, and southern Texas, the region remains largely drought-free. That said, the analogs are pessimistic by showing a hotter and drier summer forecast which could allow for some drought development and expansion. As always, any seasonal tropical effects could quickly alter any drier conditions that have developed.

Fire activity remained minimal across the Southern Area in April. The unusual and record-setting wet trend in place since last fall continues. Based on this factor and the factors discussed previously, the overall trend in fire potential towards Normal to Below Normal will continue. At least through June. Some time will be needed to ameliorate the current ground moistures levels. Some drying will occur and activity will increase to be above average, but the duration of such events will be short and the geographic scope will be limited.

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>