

National Significant Wildland Fire Potential Outlook

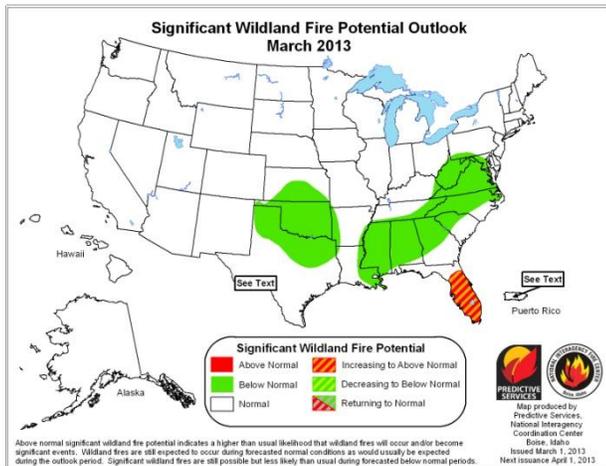
Predictive Services
National Interagency Fire Center

Issued: March 1, 2013
Next Issuance: April 1, 2013

Outlook Period – March, April and May through June

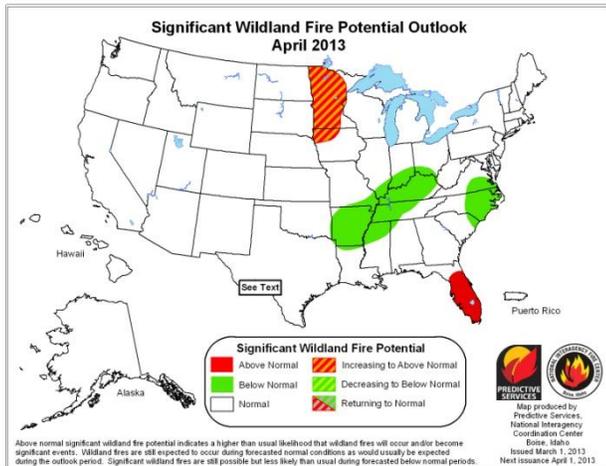
Executive Summary

The March, April and May through June 2013 significant wildland fire potential forecasts included in this outlook represent the cumulative forecasts of the eleven Geographic Area Predictive Services Units and the National Predictive Services Unit.



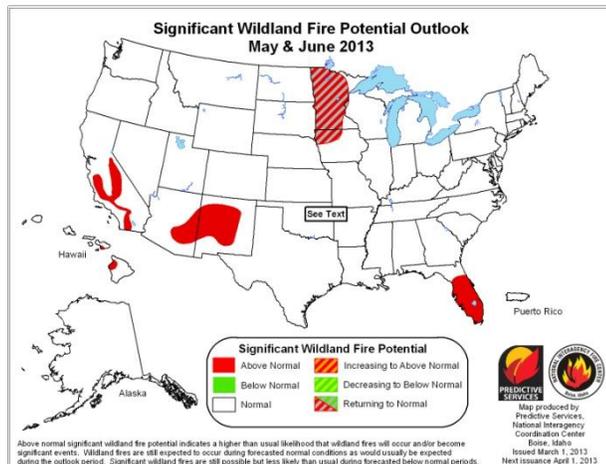
March

- February snow in the Plains and rain in the Southeast will keep fire potential normal to below normal, despite continuing drought conditions.
- Very dry February for Florida will favor early start to season and increasing potential for significant fires.



April

- Continuing rainfall deficits will keep significant fire potential above normal over most of Florida.
- Despite February snows, soil moisture deficits in the Upper Midwest will increase significant fire potential as the snow cover dissipates.
- Mid-Mississippi and Ohio Valleys will have below normal significant fire potential.



May and June

- Dry fuels will drive above normal significant fire potential for central parts of the Southwest and mountains and foothills of southern California.
- Above normal significant fire potential continues in Florida and on the lee side of Hawaii.
- Significant fire potential will decrease to normal in the upper Midwest as greenup commences.

Past Weather and Drought

A series of winter storms in February moved across the West, bringing scattered snow to the Intermountain region. Those storms, however, intensified over the Plains, the mid and upper Mississippi Valley, and the Upper Midwest, dropping heavy snow. Across the South, strong storms and heavy rain spread over Gulf Coast region.

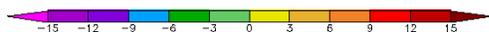
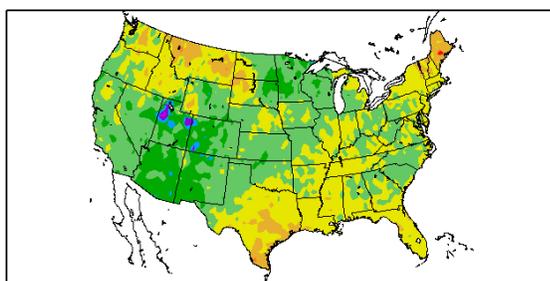
Temperatures were as much as three to six degrees below normal over the Southwest. The Northwest and northern Rockies were warmer with readings of to six to nine degrees above normal, especially over much of Montana and the western Dakotas. The central Plains, Upper Midwest and much of the East saw readings three to six degrees below normal. The South was near normal but south central Texas saw readings of three to six degrees above normal.

Despite several storms, much of the western and south central U.S. was dry for February. The driest areas, along the West Coast and across West Texas, saw below 25 percent of normal precipitation. Most of Florida was also dry. The Plains, the mid-Mississippi and the upper Midwest, saw heavy snowstorms drop over 150 percent of normal precipitation while heavy rain from Louisiana to South Carolina soaked the Gulf region. Less than 70 percent of normal precipitation fell from the Tennessee Valley through New England. Alaska saw patches of above and below normal precipitation while Puerto Rico was generally near normal. Hawaii was above normal. Western snowpack was below normal over most states with the less than 50 percent recorded across the Sierras and the central Rockies. Above normal snowpack remained over western Washington and Oregon.

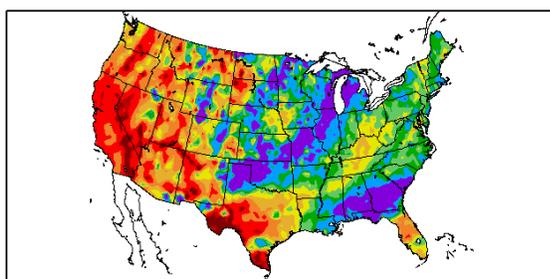
Despite heavy snows in the central U.S., the Plains region remained in severe to exceptional drought while drought in the Southwest continued to expand. Georgia, South Carolina and northern Florida continued to improve while central and southern Florida saw worsening conditions. Hawaii saw only a slight improvement while Alaska and Puerto Rico remained unchanged.

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)

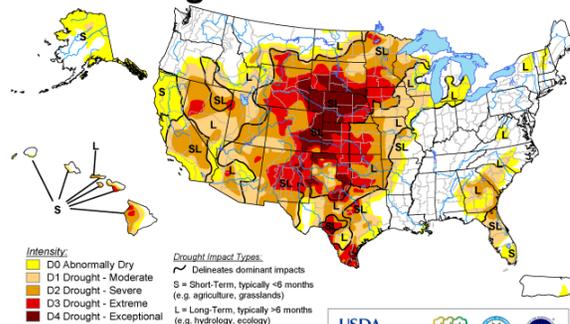
Departure from Normal Temperature (F)
1/30/2013 - 2/28/2013



Percent of Normal Precipitation (%)
1/30/2013 - 2/28/2013

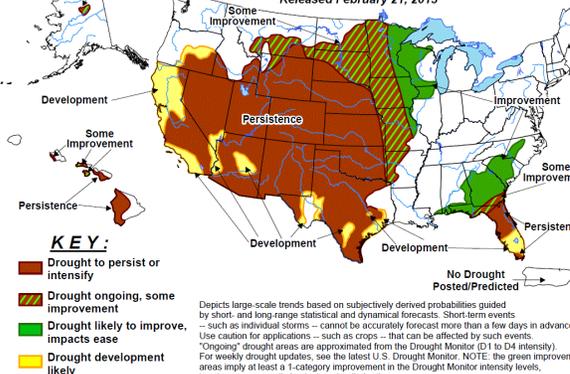


U.S. Drought Monitor February 26, 2013



The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.
Released Thursday, February 28, 2013
Author: Brian Fuchs, National Drought Mitigation Center

U.S. Seasonal Drought Outlook Drought Tendency During the Valid Period



Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Short-term events — such as individual storms — cannot be accurately forecast more than a few days in advance. Use caution for applications — such as crops — that can be affected by such events. "Ongoing" drought areas are approximated from the Drought Monitor (D1 to D4 intensity). For weekly drought updates, see the latest U.S. Drought Monitor. NOTE: the green improvement areas imply at least a 1-category improvement in the Drought Monitor intensity levels, but do not necessarily imply drought elimination.

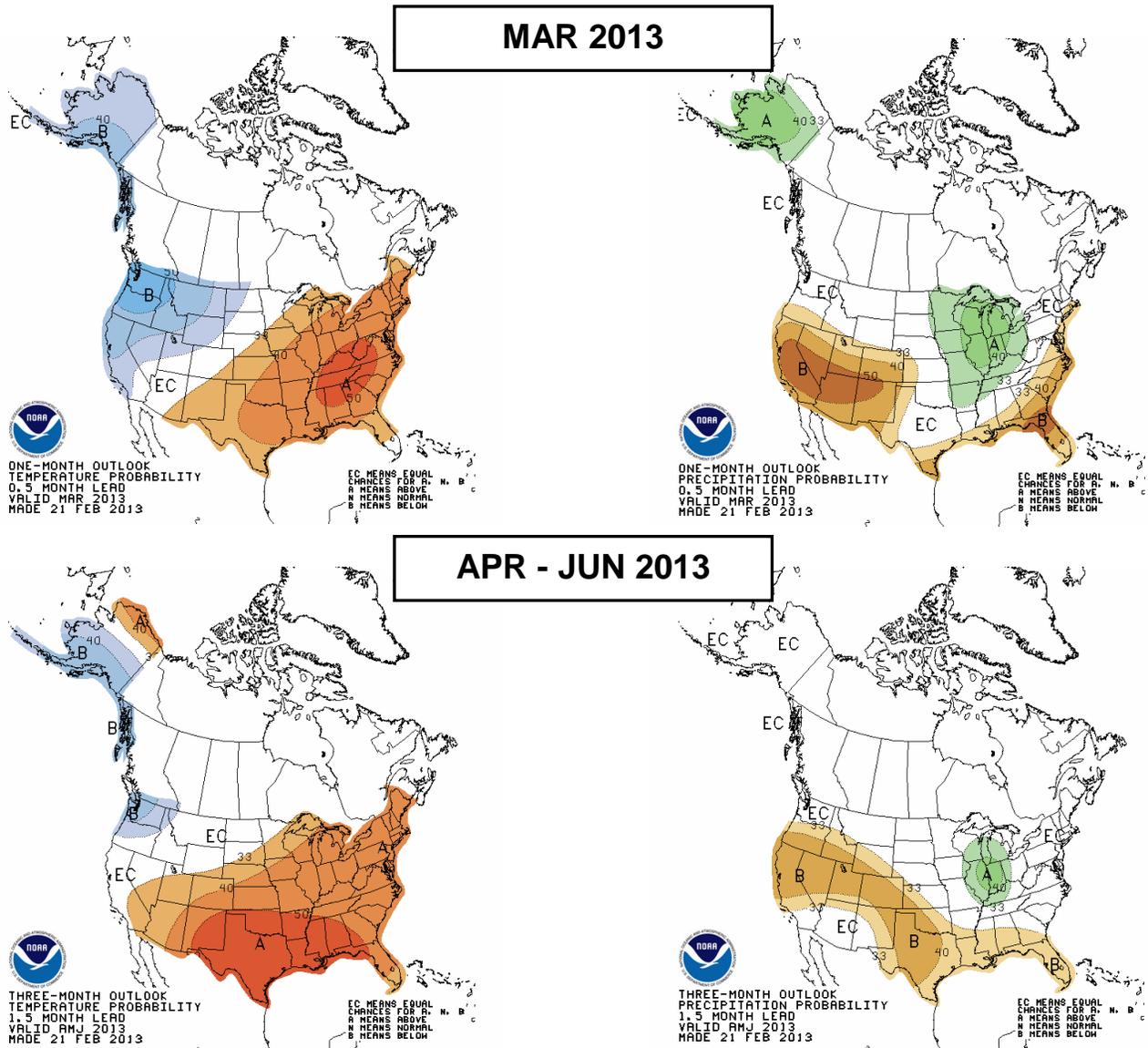
Weather and Climate Outlooks

Equatorial Pacific sea surface temperatures continue slightly below normal in the eastern Pacific. Coupled with other circulation patterns and the latest climate model forecasts, near neutral ENSO conditions are expected to continue into the late spring.

Current climate projections by the Climate Prediction Center (CPC) favor this scenario. For March, CPC expects a higher probability of above normal temperatures in the eastern half of U.S. and extending toward the Southwest. Below normal temperatures are favored across the West Coast, the northern Great Basin, the northern Rockies and Alaska. Precipitation projections indicate a higher probability of below median precipitation across the southwestern quarter of the U.S. and along the Gulf and East Coasts. Above median precipitation is favored across the mid and upper Mississippi, the Upper Midwest, the Ohio Valley and most of Alaska.

For April through June, CPC expects a higher probability of above normal temperatures over most of the eastern, central and southwestern U.S. and northern Alaska with below normal temperatures in the Northwest and southern Alaska. Precipitation is expected to be below median across the interior West and Texas with below median precipitation over mid and upper Mississippi.

Top row: One-month (March) outlook for temperature (left) and precipitation (right). Bottom row: Three month (April-June) outlook for temperatures (left) and precipitation (right). (from Climate Prediction Center/NOAA)



Fuel Conditions

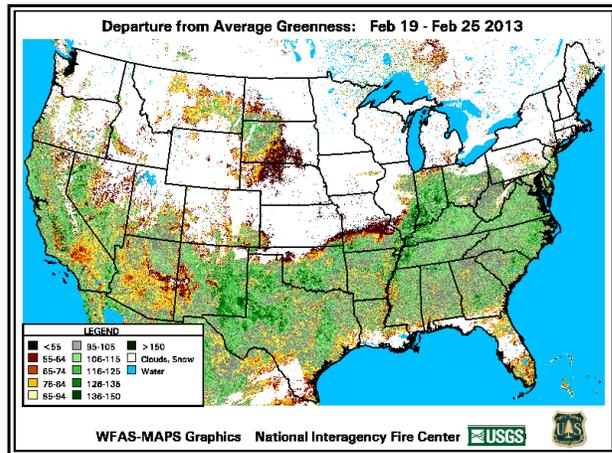
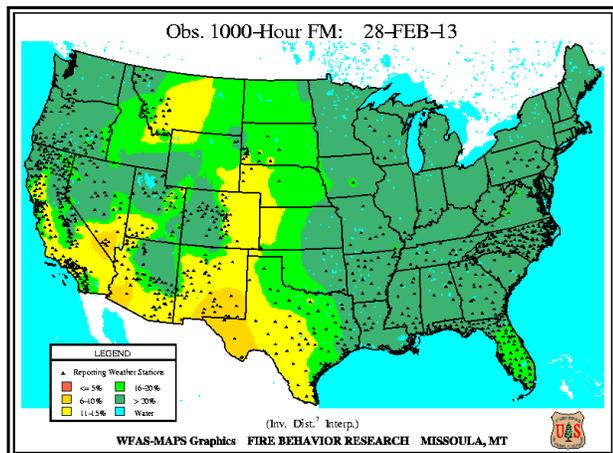
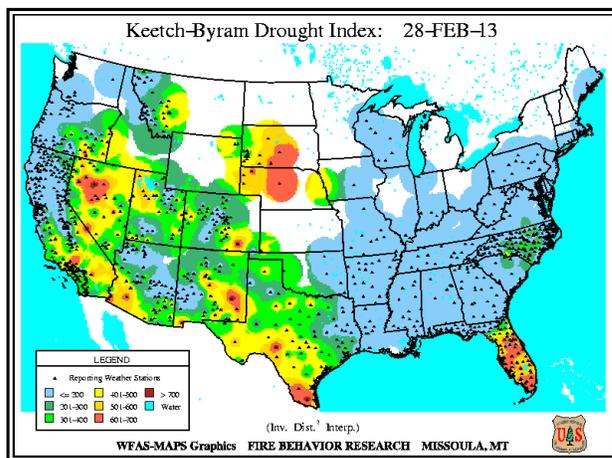
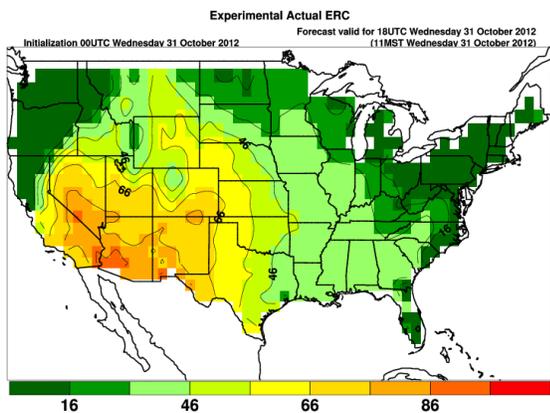
Generally, the areas of most concern this time of year have seen frequent storms and significant precipitation to keep fuel conditions, and in turn significant wildland fire potential, well below normal. In the Southeast, fuel moistures largely remained above normal. Precipitation was below normal in western and southern Texas and across most of the Florida peninsula, allowing dry conditions to increase. Periods of stronger winds and lower humidities in these areas, typically associated with fronts, could promote rapid fire growth.

In the upper Mississippi Valley drought conditions persist. This will lead to lower than normal fuel moistures as the spring develops, likely leading to slightly increased fire activity in the spring.

Across the southern Rocky Mountains and the Southwest, snow and precipitation finally occurred to help mitigate some of the fuels concerns for the short term. It is likely that as spring and summer develop moisture deficits will play a role in drying fuels more quickly than normal, possibly leading to above normal pre-greenup fire activity, especially in the finer fuels.

Elsewhere across the West, normal winter fuel conditions exist. Some potential exists in snow-free, lower elevation grasslands for fires to develop in dead and dormant light fuels with windy conditions. Expect some increases in fire activity as winter turns to spring and pre-greenup conditions allow for fire to spread with any wind and low humidity events. However, many of these areas would be considered out of fire season at this point.

Top left: Energy Release Component (from Desert Research Institute). **Bottom left: Observed 1000 Hour Fuel Moisture.** **Top right: Keetch-Byram Drought Index.** **Bottom right: Departure from Average Greenness** (from Wildland Fire Assessment System)



Fire Season Timing

Fire season is expected to develop normally across the United States during the outlook period with a few exceptions.

Persistent drought conditions across the Florida Peninsula could lead to a slightly earlier than normal onset of fire season. Drought could also lead to somewhat earlier than normal significant fires across western and southern Texas.

Across the rest of the U.S. expect normal timing of fire season onset, with many areas not beginning to see significant fire activity during this outlook period.

Normal peak fire season occurrence of the months covered during this outlook period.

MARCH



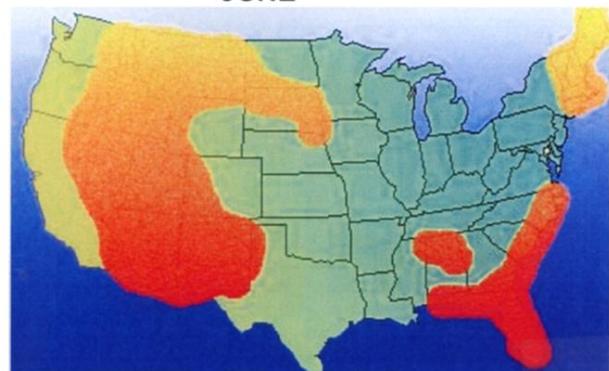
APRIL



MAY



JUNE



Geographic Area Forecasts

Alaska: Normal significant wildland fire potential is expected through June for Alaska. Though there have been extended cold spells and localized episodes of rain with warmer temperatures, this winter overall has been drier and cooler than normal in the north and west and near normal in the south and east. Cooler and wetter March conditions are expected across most of central and southern Alaska with warmer than normal temperatures evolving on the north slope later this spring. The south should continue the spring cool trend into June. Alaska is generally out of fire season this period. Fuels are frozen and covered in snow and will remain so into April, keeping fire activity minimal. April will see the start of snow melt; however, expected cooler than normal temperatures this spring may delay snow melt. The Alaska fire season timing is expected to be near normal with a peak in the second half of June and new starts tapering off through July.

Northwest: Normal significant wildland fire potential is expected for Northwest for the outlook period. February was cooler than typical west of the Cascades and generally a bit above normal east of the Cascades. Rain and snow accumulation for the month followed the trend of January being below average across the Area, well below average in central Washington and central Oregon. Drought continues over southeastern Oregon. Snowpack is at or above average in Washington while Oregon is near average except for below average in southeastern Oregon. Climate outlooks suggest a cool and moist March over most of the Area. However, no unusual temperature or precipitation trends are foreseen for April, May or June. Fire season typically begins in June for much of the Area. There is no reason to believe this will be any different in 2013.

Northern California and Hawaii: Normal significant wildland fire potential is forecast through the period but may increase to above normal if the dry pattern continues, especially for the Sierra. February was extremely dry with less than a quarter of normal precipitation across northern California. Moderate drought conditions have expanded across northeastern California. Snowpack was only half of normal by the end of February. Much drier than normal conditions are expected through early March with normal precipitation expected for the end of the month. However, snowpack across the higher elevations will continue to shrink. April is expected to have near normal temperatures and precipitation, but normal precipitation for April is a much lower amount than the winter months. May through June is expected to have near normal precipitation, with long range models showing above normal precipitation for May. However, this is not expected to reduce deficits significantly. It is quite possible that drought conditions will expand during this time. Fuels continue much drier than normal. An earlier start to greenup is expected for many areas, and normal snowpack regions are expected to emerge from snow cover several weeks earlier than normal. Expect an earlier start to fire season in many areas which typically begins by the end of May for most of Northern California.

In Hawaii, February was very wet across most areas and provided some drought relief and reduced significant wildland fire potential to normal. For some areas this was wettest period in several years and brought on widespread flooding. Drought conditions still linger in isolated leeward areas along the lower islands but fuels have moderated considerably. Near normal precipitation is expected for March as well as the rest of the period. Precipitation is typically showery in nature, and there is a slight chance of drier conditions by late May into June which could bring back drought conditions. Overall, expect normal significant wildland fire potential to continue for March and April with a gradual return to above normal for May-June for leeward areas of the Big Island and Maui.

Southern California: Expect normal significant wildland fire potential for Southern California for March and April. Near normal temperatures and below normal precipitation are likely throughout the period. One or two offshore wind events are possible per month. Towards the end of April significant wildland fire potential could begin to transition toward above normal for the foothills and mountains of Southern California. In May and June expect near normal precipitation, which is very little, for most of the Area. Above normal significant wildland fire potential will likely develop in the foothills of the Sierras and the local mountains.

Northern Rockies: Normal significant wildland fire potential is expected through the period. Mountain snowpack across western Montana and northern Idaho will remain slightly below normal through season's end. Typically, northern Idaho and southwestern Montana begin to experience the passage of more significant systems coming from the Pacific Northwest during March and April. Forecast data reflects that the best chances for the passage of such systems this year will be mid-March through mid-April. The more important factor will be the rate of snowpack loss. Long range data suggests overall warmer than normal conditions induced by a southwesterly flow. However, the data does not suggest the presence of any strong ridge events during May which would lead to an accelerated loss of mountain snowpack. East of the Continental Divide, the impact of the long term drought and below normal soil moisture may not be felt until late June when grasses begin to cure. Some pre-greenup grassfire activity is expected during late April across portions of south central and southeastern Montana but this is not unusual.

Eastern Great Basin: Significant wildland fire potential is expected to be normal for the month of March, which means minimal fire activity for the Eastern Great Basin. Current snowpack remains near to slightly below normal. Unusually cold winter temperatures have allowed the limited snow cover to remain intact. Temperatures are expected to remain below normal through March. This will help slow snowmelt and allow heavy fuels to take in moisture as normal. March may be drier than normal across Utah, particularly southern Utah, which may lead to an early start to the fire season in May. Moderate to severe continues across Utah, western Wyoming and portions of southern Idaho.

Normal significant wildland fire potential is expected to continue for April through June. Significant fire activity is still relatively low during this period. Large fires normally begin to increase during May and June across southern Utah first then migrate through the lower elevations of northern Utah and southern Idaho through June. With warm and dry conditions anticipated across southern Utah late in the spring, large fire activity could elevate to slightly above normal.

Western Great Basin: Normal significant wildfire potential is expected through the period but will likely see an increase in large fire activity in June across much of the Area. Temperatures for the last month were generally normal with some cooler areas in the north. February precipitation was largely focused in the northeast quadrant of the state but still only raised that area to just slightly above normal. The rest of the state remained below normal. Dry conditions continued to take a toll on snowpack with most areas remaining below normal, including western Nevada and the Sierra. Precipitation deficits have affected fire danger indices with ERCs increasing to above normal over the Sierra, western and southern Nevada. Severe to extreme drought conditions continued across the northern half of the state with worsening drought conditions elsewhere.

Some wet weather is possible through most of March, especially over northern Nevada. However, the threat of some large fire activity remains in the south and west where wind events could enhance fire spread in the dry conditions. This should be tempered somewhat by early spring precipitation systems that should temporarily bring fire indices down. Even with indications of spring rains, precipitation deficits are likely to continue. This will affect new fuel growth. Further, wet December conditions compacted much of the carryover fine fuels at most elevations. Uncertainty over fuel loadings and continuity remains a key factor but while there are typically no large fires in the Area during May, by June the potential will increase in southern, western and parts of northern Nevada, especially where available fuels remain very dry and in timbered areas of the Sierra.

Southwest: Normal significant wildland fire potential is expected early in the forecast period with a shift to above normal likely across the central portions of the Southwest for May and June. Most of the Area has experienced a colder than normal winter. Despite this, the frequency of precipitation-producing storm systems has not been sufficient to improve moisture deficits except around the Mogollon Rim in northern Arizona where snowpack has been near or above normal. Much of western New Mexico has well below normal snowpack as storms have primarily missed this portion of the Area. Northern sections of New Mexico presently show slightly below average snowpack amounts. Fortunately cooler than normal temperatures through late February have helped maintain what little snowpack exists at higher elevations. Uncertainties in temperature and precipitation trends for the

region over the next few weeks will require close monitoring of conditions as the spring season commences.

Rocky Mountain: Recent snowfall across the Area brought short term relief from drought conditions, especially east of the Continental Divide. Snow cover across the eastern Plains will result in minimal fire activity for early March, especially in southern Kansas. As this snow cover gradually diminishes, expect normal significant wildland fire potential to return by the second half of March.

Significant fire potential for April and May through June is expected to be normal. Medium range forecasts for early March point toward a still active weather pattern for the Rocky Mountain Area. While precipitation probabilities are high in northern portions of the Area, a somewhat drier weather pattern is anticipated across the southern portion of the Area. However, it is expected that occasional cold frontal passages will carry a chance of some precipitation. Longer range predictors for the end of March through April suggest temperatures and precipitation will be closer to average.

Eastern Area: Significant wildland fire potential is expected to remain normal for March. However, drought was in place across portions of the upper and mid-Mississippi Valley at the end of February. Snowpack was also below normal across these areas, leaving fine fuels exposed. With warmer than normal conditions expected to develop in April it is likely that these areas will increase to above normal significant wildland fire potential. If these areas do not receive a substantial increase in precipitation through the end of winter, an earlier and above normal spring fire season is likely across the drier portions of the upper and northern mid-Mississippi Valley in April. Drier than normal conditions may also develop over the southern mid-Mississippi Valley in May, possibly leading to above normal significant wildland fire potential across southern Missouri. An increase in wind events is also possible across the southwestern Big Rivers in May. The rest of the Eastern Area has received near to above normal precipitation through the first half of winter. Drought indicators were near normal over most of the Area. Thus, normal significant wildland fire potential is expected over the most of the Eastern Area.

Southern Area: The most significant precipitation deficits remained over areas of far western and southern Texas and the Florida peninsula. Generally wet to very wet conditions occurred elsewhere. The weather pattern of the past couple of months is expected to persist into early March with possibly the coldest weather of the season. Record breaking low temperatures are likely in the Southeast, possibly into Florida. Late season snow flurries are possible into March but the number of precipitation free days between storms is likely to increase. Expect continued lower than normal rainfall for Florida with moderate chances for rain in Oklahoma and Texas. Also, moderate to strong wind events will likely remain a feature in the storm pattern for this area. ERC values continue to run well below the 70th percentile with notable exceptions occurring in western to southwestern Texas (80th percentile) and southern Florida (90th percentile). Despite wind and low humidity events in Texas producing some critical fire weather events, the Area has yet to see any significant fire activity, partly due to the below average fine fuel loading. But a threat still exists. A warmer and drier pattern emerging across the central and southern plains could yield some higher initial attack periods.

A longer term below average precipitation trend across much of Puerto Rico has allowed the heavier fuels to dry. While the island has seen periodic rain events during the winter season, deficits of generally around 1 inch to 4 inches in the last 30 and 60 days have developed. Consequently, human caused initial attack activity is expected to remain elevated for the island in March. Forecasted periods of higher rain activity will help reduce upward trending of ERCs during March. Puerto Rico ERCs seasonally peak by the beginning of April with a return to a more unstable easterly tropical flow and rain during April to the beginning of June.

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 and property, 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>