

National Significant Wildland Fire Potential Outlook

Predictive Services
National Interagency Fire Center

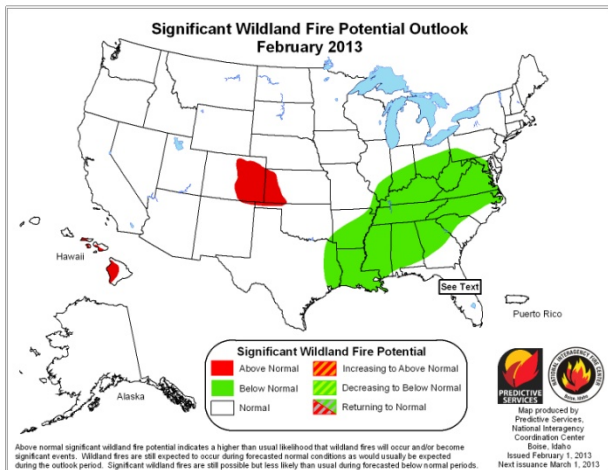
Issued: February 1, 2013
Next Issuance: March 1, 2013



Outlook Period – February, March and April through May

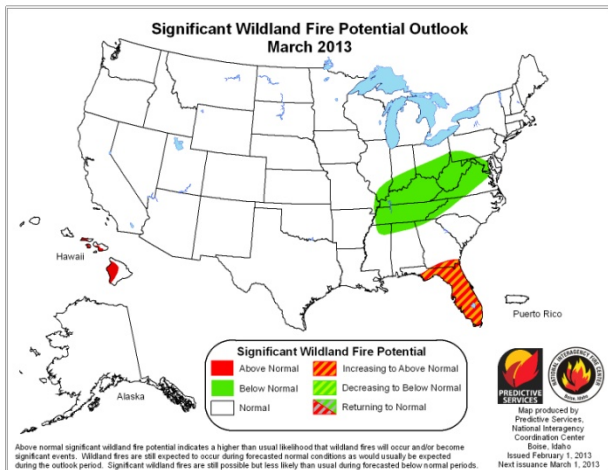
Executive Summary

The February, March and April through May 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.



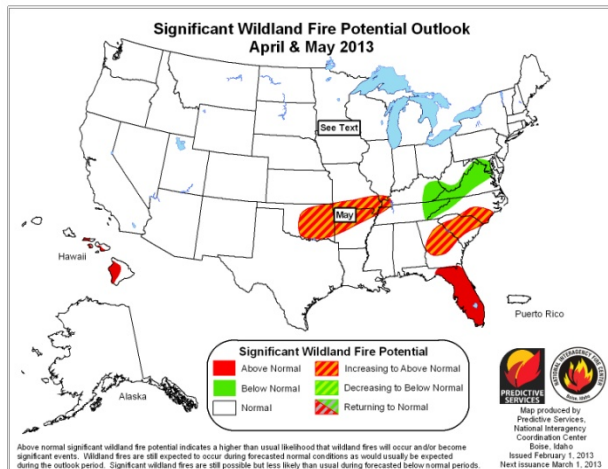
February

- Precipitation deficits and long term extreme drought contribute to above normal significant wildland fire potential in the central Plains.
- Periodic precipitation across the Mississippi and Ohio Valleys, central Gulf States and the mid-Atlantic will keep below normal significant wildland fire potential in much of the east.
- Long term drought in Hawaii will keep above normal significant wildland fire potential on the Big Island.



March

- The seasonal increase in fire across Florida will be amplified to above normal significant wildland fire potential by ongoing very dry conditions.
- Late winter storm track will continue across the Ohio and Tennessee Valleys, keeping significant wildland fire potential below normal.
- Drought continues in Hawaii.



April and May

- Spring pre-greenup potential and long term drought keep parts of the Southeast, Oklahoma and Arkansas in above normal significant wildland fire potential.
- Good winter precipitation and lingering spring precipitation keep the southern Appalachians and parts of mid-Atlantic below normal significant wildland fire potential.

Past Weather and Drought

After a relatively mild start to the year, a deep trough draped across much of the U.S., ushering in a series of winter storms in the West and rain and thunderstorms in the East. Deep, cold air plunged into the Great Basin and the Rockies under high pressure, keeping frigid conditions in place for several days. Periodic snow fell across the northern Plains and the upper Midwest as the arctic air gradually shifted eastward. By the end of the month, another series of Pacific storms crossed the West while a rapid warmup and strong thunderstorms returned to the East.

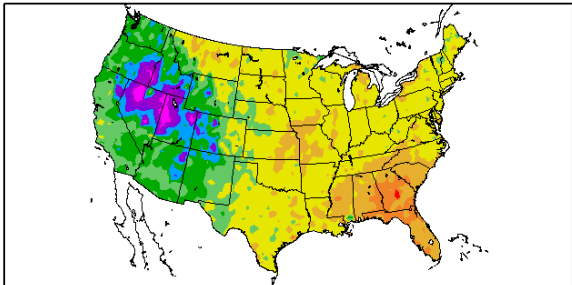
Temperatures for January were below normal in the West, with much of the region three to six degrees below normal. The Great Basin experienced average temperatures more than 12 degrees below normal. Much of the central and eastern U.S. was slightly above normal with the Southeast much above normal by as much as three to nine degrees.

Western precipitation was below normal despite several storms in the early and latter parts of the month. Only a few areas of the northern Rockies and the Southwest saw above normal precipitation. Regardless, snowpack was generally normal to above normal except in Colorado and New Mexico where a late start to winter snows left large deficits. In the Plains, Texas received over 150 percent of normal precipitation with west Texas seeing over 400 percent of normal. Most of the central and northern Plains recorded less than 50 percent of normal. The Mississippi Valley saw over 150 percent of normal with surpluses extending into the southern Appalachians. New England saw less than 50 percent of normal while the Southeast's deficits continued with less than 25 percent of normal rainfall for the month. In Alaska, snow water equivalent is around normal except much below normal in parts of the western Interior. Hawaii saw near normal precipitation.

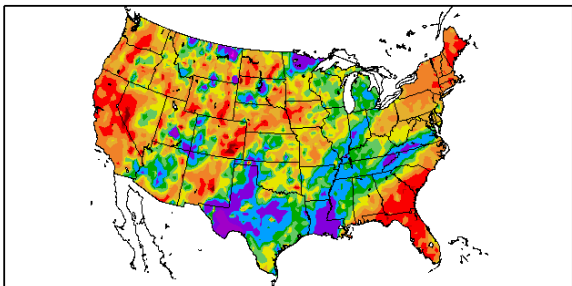
Severe to exceptional drought continued over central U.S. from the Mississippi Valley to the Rockies; most of Georgia and eastern Alabama; the Southwest and the Great Basin; and much of Hawaii.

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)

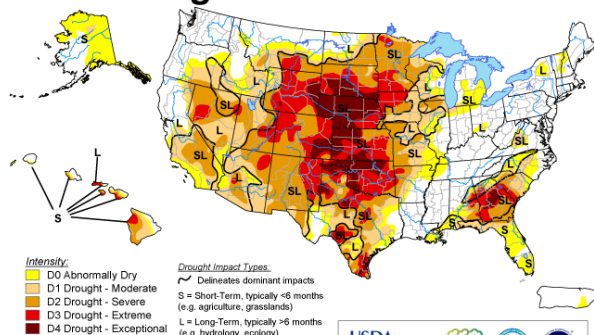
Departure from Normal Temperature (F)
12/31/2012 – 1/29/2013



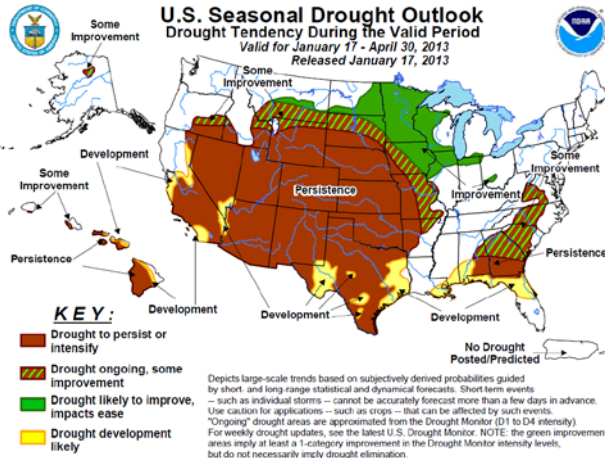
Percent of Normal Precipitation (%)
12/31/2012 – 1/29/2013



U.S. Drought Monitor January 29, 2013



The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.
 Released Thursday, January 31, 2013
 Author: Mark Svoboda, National Drought Mitigation Center
<http://droughtmonitor.unl.edu/>



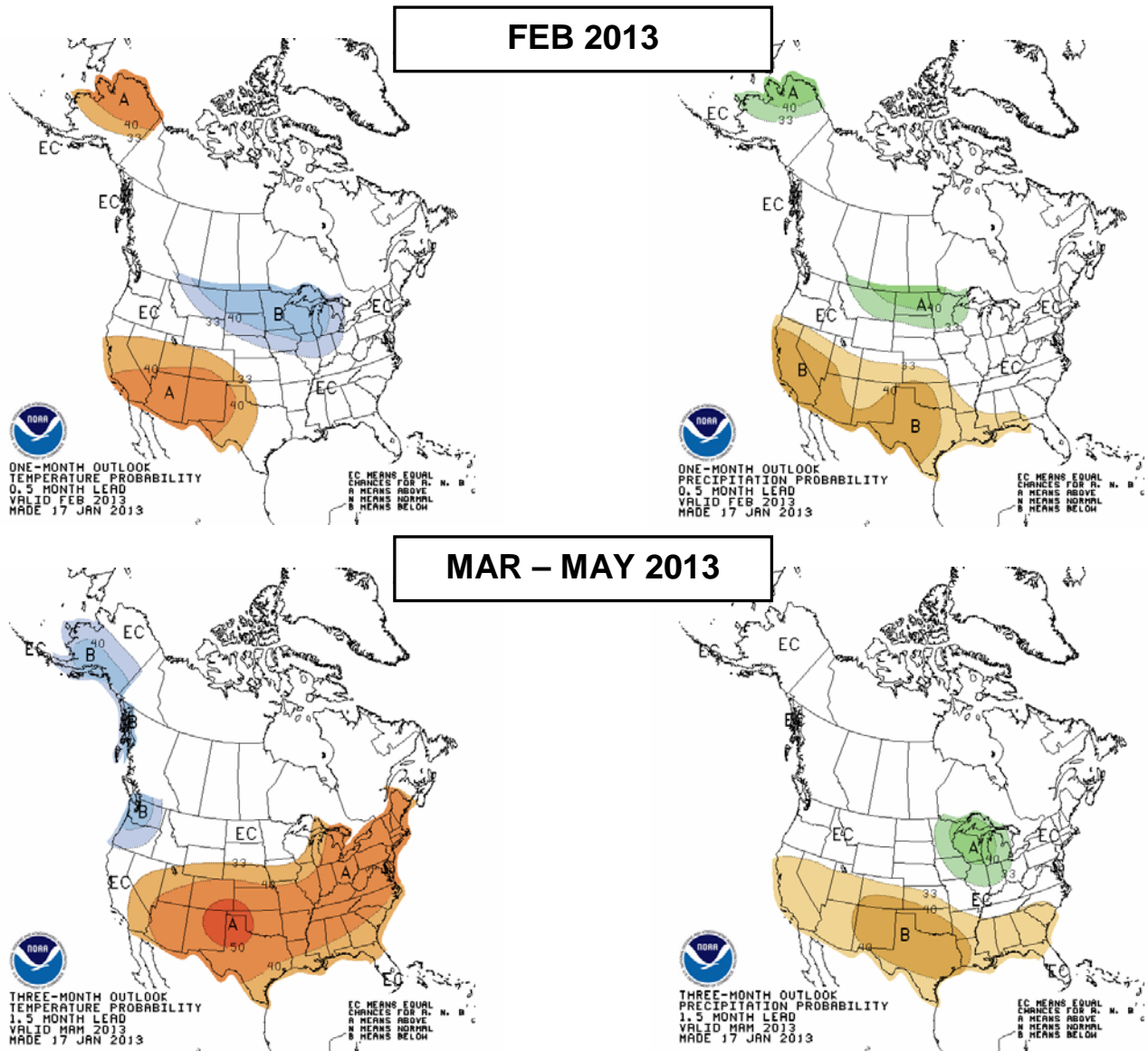
Weather and Climate Outlooks

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

Current climate projections by the Climate Prediction Center (CPC) favor this scenario. For February, CPC expects a higher probability of above normal temperatures in the southwestern U.S. and across the northern half of Alaska. Below normal temperatures are favored from the northern Rockies to the Great Lakes. Precipitation projections indicate a higher probability of below median precipitation across the south central and southwestern U.S. Above median precipitation is favored across the northern Plains and across northwestern Alaska.

For March through May, CPC expects a higher probability of above normal temperatures over most of the eastern, central and southwestern U.S. with below normal temperatures in the Northwest and southern Alaska. Precipitation is expected to be below median across the southern half of the U.S. with above median precipitation favored around the Great Lakes and the upper Midwest.

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



Fuel Conditions

In the southeastern U.S., fuel moistures for the most part remained above normal. Even in Texas ERC conditions remained below critical thresholds. Any significant fire development will continue to be in the light fuels as they respond to rapid changes in relative humidity. Elevated wind speeds, typically associated with frontal movement, will also be necessary to promote rapid fire growth.

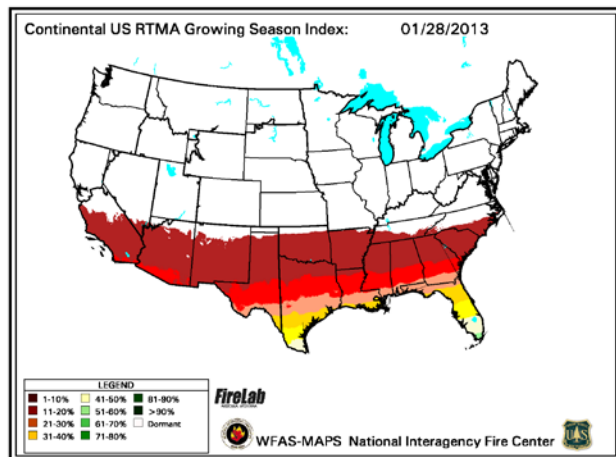
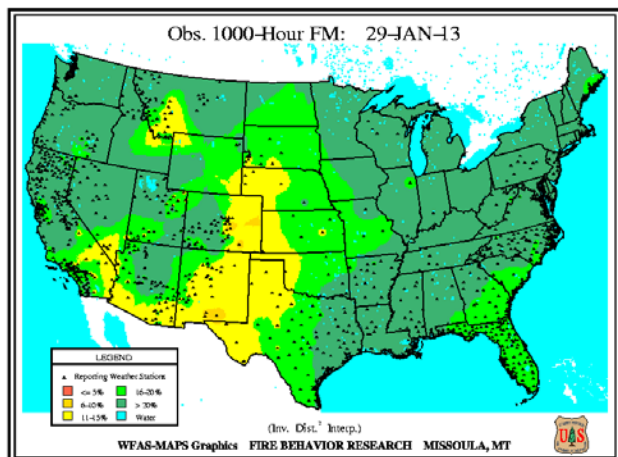
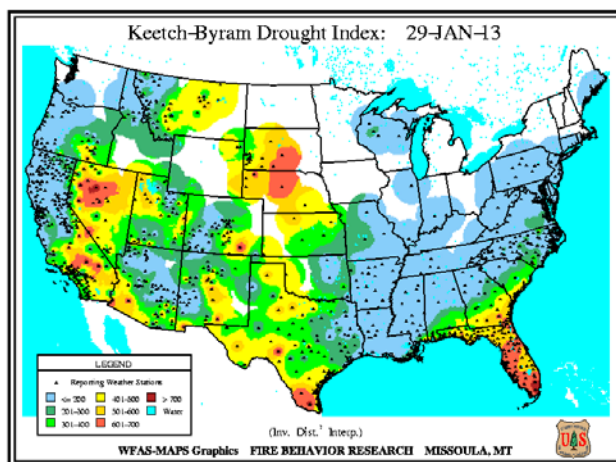
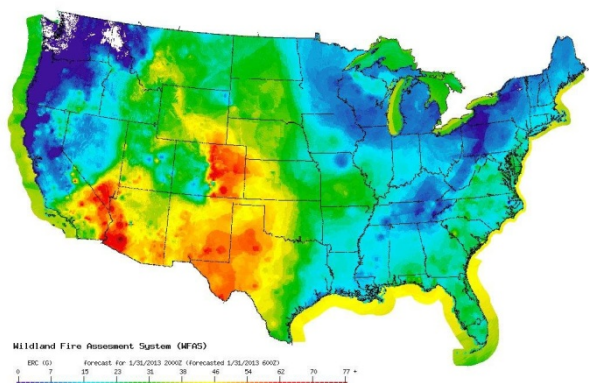
In the Northeast and Midwest, fuels remained near normal. Fuel moistures across the Ohio Valley were above normal due to wetter than normal conditions through the first half of the winter. Fine fuels across drier portions of the Upper and mid-Mississippi Valley were drier than normal due to below normal precipitation. In addition, fine fuels across portions of these areas were not packed down due to below normal snow pack.

Across the southern Rocky Mountains, lower elevation grasslands east of the Continental Divide were drier than average from the lack of snow cover and persistent precipitation deficits. Additionally, with snowpack along the Colorado Front Range into southeast Wyoming at less than 60% of average, ERCs were well above average for this time of year.

In the Southwest, normal to below normal fuel loading across the eastern plains region, high dependence on spring precipitation, and continued long term drought on larger fuels at mid and high elevations, are leading to concerns for the spring fire season.

Elsewhere across the West, normal winter fuel conditions exist. Some potential exists in lower elevation grasslands where snow is absent for fires to develop with winds in dead and dormant light fuels. However, many of these areas would be considered out of fire season at this point.

Top left: Energy Release Component. Bottom left: Observed 1000 Hour Fuel Moisture. Top right: Keetch-Byram Drought Index. Bottom right: Growing Season Index (from Wildland Fire Assessment System)



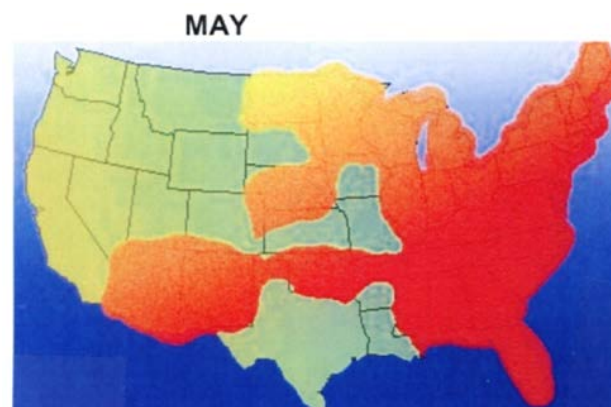
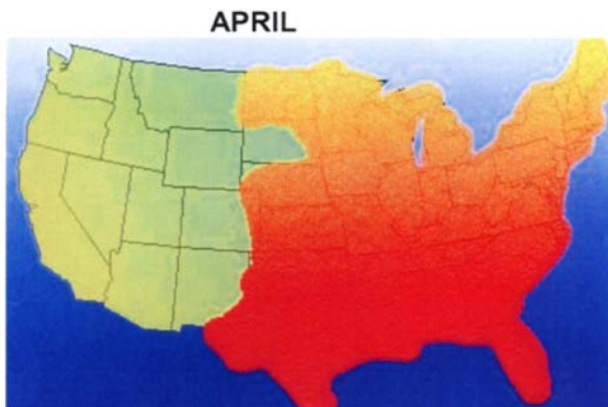
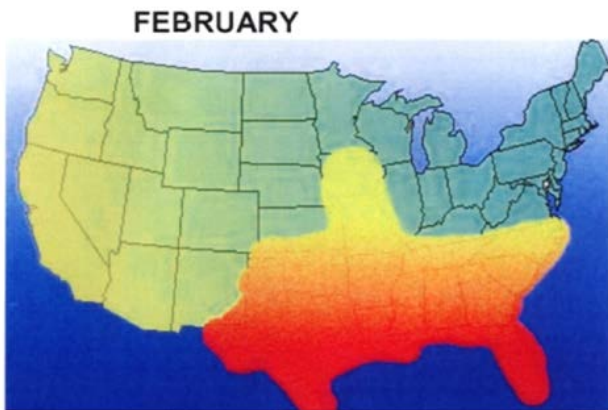
Fire Season Timing

Fire season is expected to develop somewhat later than normal across the southeastern U.S. Normally during this period fires would be expected over most of the Southeast in January and February and much of the eastern U.S. in April and May. Given anticipated patterns over the next couple of months, the mid to late winter fire threat is not expected to be significant across the Southeast. Fire risks, however, will spike at times for areas of Oklahoma, west Texas, and Florida. An increase in fire potential is, however, expected to develop for Florida from April into May. An earlier than normal start to the spring fire season may occur across drier portions of the upper and mid-Mississippi Valley. However, these areas are forecast to receive more frequent and widespread precipitation events in March. A later than normal start to the spring fire season may occur across the Ohio Valley into the southwestern half of the mid-Atlantic states if a wetter than normal pattern persists into the end of winter.

Fire activity would be expected to begin developing across the southern Rocky Mountains and Southwest toward the end of this outlook period. As is normal a brief increase in fire activity typically occurs across portions of the Plains including Kansas, Nebraska, and eastern Colorado associated with the early spring pre-greenup period during March and April. Current trends suggest a normal start for the main fire season with the Plains becoming active first, followed by parts of the South.

For the remainder of the U.S. this outlook period typically is considered out of fire season and there are no indications for an early onset of significant fire occurrence at this time.

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



Geographic Area Forecasts

Alaska: If the cold trend from the first half of the winter continues, temperatures are expected to remain below normal for much of the Interior and south central Alaska. Fuels are frozen and snow-covered but it is likely that a few holdover fires are smoldering beneath the snowpack. However, fuels conditions raise no concerns at this time. Temperature and precipitation trends are not expected to have a significant effect on fire conditions for this outlook period. Normal significant wildland fire potential is expected through May.

Southwest: Normal significant wildland fire potential is expected for the remainder of the winter into the spring months. Snowpack is below normal across much of New Mexico. However, a periodically active pattern through February could begin to add to these totals. Although the present outlook through the spring months is for normal significant wildland fire potential there is a chance southeastern Arizona and the western two-thirds of New Mexico will emerge into the early summer months as an area of above normal significant wildland fire potential. This particular portion of the region will be closely monitored through the spring months.

Northern Rockies: Mountain snowpack across western Montana and northern Idaho will continue below normal but will show signs of improvement by the end of the February as a more progressive westerly pattern develops with the peak of the northern Rockies snow season. Typically northern Idaho and southwestern Montana begin to experience the passage of more significant systems coming from the Pacific Northwest during the late winter. The latest forecasts suggest this should occur from March to mid-April. The more important factor will be the rate of snowpack loss. Long range data suggests normal conditions for mid-spring. Therefore, expect the Northern Rockies Area will lose its snowpack at a normal rate.

In lower elevations, fire potential will remain low in most locations through May. One exception may be the upper plains along the Rocky Mountain Front in south central Montana for April. Below normal snowfall along with preexisting drought conditions may briefly allow significant wildland fire potential to increase during strong wind and low humidity events typically brought on by Chinook winds or passing fronts. This will be monitored closely.

Western Great Basin: Average temperatures over the last 30 days have been below normal. Precipitation decreased significantly in January compared to a wetter December. The snowpack decreased to 90 to 118 percent in the Sierra and western Nevada and remained fairly consistent over northeast Nevada with snowpack 45 to 85 percent of normal. Due to cold temperatures keeping snow on the ground even in the lowest elevations in January, fire indices remained well below normal in many areas. December saw wetter conditions over the Sierra and western Nevada which improved short term conditions slightly but dry conditions in January offset those improvements. Severe to extreme short term drought conditions still exist across the northern half of Nevada, with moderate to severe long term drought over the southern half of the state. Early February storms will keep conditions a bit wet but drier patterns are likely to return for the remainder of the outlook period.

The main threat for large fires in February and March is in the far south after a prolonged dry period and during strong wind events ahead of cold fronts. However, occasional wet weather will likely diminish this threat with normal conditions expected through March. There are typically no large fires across the Western Great Basin in April and May. There are some indications that periods of wetter weather and warmer than normal temperatures may return by the spring, especially over the northern half of the Area. Therefore normal fire conditions are expected through April, and might continue into May.

Eastern Great Basin: Significant wildland fire potential is expected to be normal for February and March, which is typically very low for this period. Snowpack is near normal across the Area while temperatures have been very much below normal. This trend is expected to continue with frequent spring storms keeping snowpack in place and increasing soil moisture. Spring storms will likely continue into April, keeping the potential for significant wildland fires quite low, especially across the

north. Warming and drying should begin in May. This will result in normal snow melt and green-up rates for much of the Area, contributing to a normal start to the fire season, especially for southern and eastern Utah where fires activity could increase through May.

Northwest: January was cooler than normal across the Area, particularly over southeastern Oregon. Precipitation was generally below normal except for sections of western Washington. 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 no unusual precipitation trends through May. Temperatures are likely to be at or slightly below normal. Fuels are far too moist to support a risk of significant wildland fires. Fire season typically begins in late June for much of the Area. There is no reason to believe this will be any different in 2013. Prescribed burning opportunities appear as if they will begin at the usual times.

Northern California and Hawaii: Fairly dry conditions are expected thru the first half of February. However, a major pattern change is expected late in the month with the main storm track expected to slowly shift back across Northern California for late February. March may become much wetter than normal. April into May is also expected to be near or slightly wetter than normal. For Hawaii, long term drought continues across most of the islands with the exception of the far northwestern islands. There was some precipitation and slight drought reduction across the Big Island. Otherwise above normal significant wildland fire potential continues for the drier, leeward sections of the lower islands.

Southern California: Expect near normal temperatures across Southern California as well as near normal precipitation. One or two offshore flow events are possible per month and any offshore flow event increases significant wildland fire potential for the short term. Generally, near normal significant wildland fire potential is expected throughout the forecast period. Below normal precipitation may develop across Southern California in April and May. This will likely lead to slightly above normal significant wildland fire potential in Southern California toward the end of the outlook period.

Rocky Mountain: Precipitation deficits and extreme to exceptional long term drought conditions continue across much of the Rocky Mountain Area. Significant wildland fire potential is above normal east of the Continental Divide, mainly across the lower foothills and eastern plains of Colorado and into western Kansas. This area will remain more susceptible to periods of above average temperatures, low humidity and windy conditions through mid-February. Climate forecasts indicate a possible pattern shift by late February and especially March through May that would result in average precipitation and an overall reduction of significant wildland fire potential. Other than the brief period of above normal significant wildland fire potential during the first half of February, it is anticipated the Area will have near normal significant wildland fire potential during most of the outlook period.

Eastern Area: Drought continued across portions of the upper and mid-Mississippi Valley at the end of January. Snowpack was below normal across portions of these areas leaving fine fuels exposed. Warmer than normal conditions are expected to develop in April. If these areas do not receive an anticipated 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 mid-Mississippi Valley. Drier than normal conditions are forecast to develop over the southern mid-Mississippi Valley in May leading to above normal significant wildland fire potential across southern Missouri. Wetter than normal conditions are expected to persist across the Ohio Valley into the southwestern half of the mid-Atlantic states through the rest of winter. This will lead to below normal significant wildland fire potential across these areas through March. A later start to the spring may also occur over these areas. The rest of the Eastern Area has received near to above normal precipitation through the first half of winter. Drought indicators were also near normal over the majority of the Area at the end of January. Therefore, near normal significant wildland fire potential is expected over the majority of the Eastern Area.

Southern Area: Expect a weather pattern yielding recurring periods of much colder and wetter than average precipitation areas into February. Because of this, above normal significant wildland fire potential is not expected to develop except for isolated areas including portions of Florida in March.

As the season develops April and May will see an increase in significant wildland fire potential across Georgia and South Carolina as well as Oklahoma and Arkansas. However, even though somewhat long periods of dryness between weather systems are possible, a higher frequency pattern of rain and snow events will continue to significantly limit broad scale increases in significant wildland fire potential.

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>