## **National Wildland Significant Fire Potential Outlook**



National Interagency Fire Center Predictive Services

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# Wildland Fire Outlook – February 2009 through May 2009

During February, above normal significant fire potential is expected across portions of the Southwest, Southern, Rocky Mountain, and Northern California Areas. Below normal significant fire potential is forecast for portions of the Southern and Eastern Areas. For March through May, significant fire potential is forecast to persist and increase across parts of the Southwest, Rocky Mountain, Southern, Eastern and Northern California areas. Some improvement is expected in eastern Texas, Oklahoma, and Arkansas. The primary factors influencing fire potential this outlook period are:

- Extreme drought in Texas and Oklahoma is expected to persist and/or expand over the next several months. Trees damaged from hurricane and/or ice storm events over the past several winters are also producing areas of high fuel loadings.
- Continued dryness and carry-over fine fuels across eastern New Mexico and Colorado will create above normal significant fire potential conditions to expand though the outlook period.
- Persistent below normal precipitation and warm temperatures across the Sacramento Valley in northern California have created unusually dry fuels.
- Below-average precipitation and developing drought are forecast across much of Florida this spring.
- Soil moisture deficits and continuing drought persist across portions of North and South Carolina, northern Wisconsin, and Michigan. In addition, low stream flows and problematic ground fires in peat and/or deep duff continue across portions of the Carolinas.



Note: Significant fire potential is defined as the likelihood that a wildland fire event will require mobilization of additional resources from outside the area in which the fire situation originates.

### Past Weather and Drought

January was generally drier than normal across much of the country. However, the Pacific Northwest, Great Basin, northern Rockies and the Appalachians were wetter than normal. The southern Plains remain very dry with San Antonio setting a new record for the driest September through January on record with rainfall 19 inches below normal in 2008. January temperatures were warmer than usual in the West with unseasonably cold weather in Florida and the northeast quarter of the country. The first two weeks of January brought bitter cold to most of Alaska. However, warm Chinook winds brought dramatic warming by mid-month with record highs set in the Interior and South Central portions of the state. The latest Drought Monitor and Outlook products are shown below. Drought conditions are expected to persist or expand over the southern Plains, Florida, California and much of the Great Basin.



www.cdc.noaa.gov/Drought/images/prec4.gif



www.drought.unl.edu/dm/monitor.html

#### Weather and Climate Outlooks

La Niña conditions, i.e. cooler than normal sea surface temperatures in the tropical Pacific, have redeveloped this winter. However, this event is weaker than the 2007-2008 episode. The outlooks for February and February through May (shown below) are based on characteristic weather patterns of historic La Niña episodes as well as long-term climate trends. La Niña's maximum influence on U.S. climate and weather often occurs during the winter and spring months. Weak La Niña conditions are expected to persist into the spring with the event likely dissipating during the summer.



**A = Above** normal, **B = Below** normal, **N = Normal**, **EC = Equal Chances** of Above/Below/Normal. www.cpc.ncep.noaa.gov/products/predictions/multi\_season/13\_seasonal\_outlooks/color/page2.gif

#### **Area Discussions**

<u>Alaska:</u> Alaska is out of fire season and significant fire potential is projected to be normal through May. February is expected to start off very cold in the Interior and North Slope with temperatures as much as 30 degrees below normal. South Central Alaska will also experience cold weather, but not as severe. Precipitation amounts are expected to be below normal during early February as well. By mid-month, temperatures and precipitation should return to near normal.

**Southwest:** Normal significant fire potential is expected across most of the Area during February except for above normal significant fire potential across the eastern section of the region. During March through May, above normal significant fire potential will expand across most of southern and central New Mexico into southern Arizona and remain normal across most of northern Arizona and west/central New Mexico. An active storm pattern beginning in mid February is expected to bring normal to above normal moisture amounts across the western and central parts of the region. The eastern and far southern portions of the area are expected to remain primarily dry. Less frequent and weaker storms during March through May will generally lead towards warmer and drier conditions, especially across the southern and eastern sections of the Area.

**Northern Rockies:** The Area is currently out of fire season and normal significant fire potential is expected for the entire outlook period. Current snowpack amounts are running near average across southwest Montana and slightly below average across the northern portions of the Area. Weak La Niña conditions should help to continue to produce good snow pack amounts in the mountains (especially on westerly aspects), however conditions east of the Divide typically tend to remain dry during February and March. April and May are typically wet months east of the Divide. Some fire activity is expected east of the Divide during late winter and prior to green up in mid to late May. La Niña conditions during the spring tend to be wet and cool for the Area with snow accumulating well into May and sometimes into June.

<u>Great Basin:</u> Significant fire potential is expected to be normal across the Area through May. January was warmer than normal across much of Nevada and drier than normal across the southern portions of the Area. Much of Nevada has moderate to severe drought which is expected to persist or worsen across much of the state through April. Some improvement to lingering drought conditions is expected for southern Idaho and western Wyoming. Climate forecasts call for above normal temperatures to persist across the southern and eastern portions of the Area through May. Snowpack is generally running near average across the Area with liquid water contents at 100-125% of normal for the water year (since 1 Oct). Forecast models indicate high pressure will dominate the weather the first part of February before several opportunities for rain and the likelihood of normal temperatures return during mid to late February. The Area typically has little, if any, large fire activity during February through May.

**Northwest:** The Area is currently out of fire season and normal significant fire potential is expected through May. During January, temperatures were cooler than normal across most of Washington and near normal over much of Oregon. Precipitation was above normal in western and portions of far eastern Washington and less than average elsewhere. Snowpack amounts are somewhat below average to near average across the Area with snow water content running below average at most SNOTEL sites. Climate outlooks suggest cooler and wetter weather than usual for February with cooler than normal temperatures extending into the spring months. Significant wildland fire occurrence is unlikely during March and April. Large fire risk typically begins to increase towards the end of May.

**<u>California:</u>** Normal significant fire potential is projected for most of California in February except for an area in and adjacent to the Sacramento Valley where above normal conditions are expected the first half of the month. Much of California received only 10-20% of its normal monthly rainfall in January (see image at right). The Northern Sacramento Valley experienced eleven consecutive days of high temperatures in the 70s, which is twenty degrees above normal for this time of year. Towards the end of the month the snow line near the Sacramento Valley had gradually moved up above 4,000-5,000 feet. Moderate to extreme drought continues across most of the State and is expected to persist or worsen everywhere except the very northwest corner of California where some improvement may occur this winter. Fuels remain dry for this time of year and have supported several fires during January, even in coastal areas of northwest California. Precipitation will likely remain below normal this winter, especially



across southern California given historic climate trends during La Niña conditions. Fuels are greening-up in Southern California and live fuel moistures are slowly climbing. However, periods of dry, offshore conditions are causing the dead fuel moistures to lower substantially from time to time.

**Rocky Mountain:** Normal significant fire potential is expected across the Area during February except for an area of above average significant potential in the grasslands of southeast Colorado and southwest Kansas. This area is highlighted due to abundant fine fuel loadings and below normal precipitation this winter, which are expected to exacerbate the drought and precipitation deficits that already exist. Agricultural burns are common during early spring in eastern Colorado and western Kansas, which increases the risk for wildfires during windy and dry prefrontal conditions. Significant fire potential is expected to increase and expand northward during March and April, then decrease once green up begins in late spring.

**Eastern Area:** During February, above normal significant fire potential is forecast for portions of southwestern Missouri while below normal significant fire potential is forecast for West Virginia. Elsewhere, significant fire potential is expected to be normal. Most locations have received ample seasonal snowfall and precipitation this winter. However, soil moisture values across much of Wisconsin remain below average due to extended drought conditions. While some improvement in the drought is expected, the availability of dry fuels during March through May is expected to lead to above normal significant fire potential in portions of north/central Wisconsin and the western half of the Upper Peninsula in Michigan as the snowpack decreases and spring temperatures warm. Elsewhere, the outlook calls for continued above normal significant fire potential across the remainder of the Area later this spring.

Southern Area: During February, above normal significant fire potential is expected across Oklahoma, much of Texas, and western Arkansas. Below normal significant fire potential is forecast for an area extending from Virginia and the northern half of North Carolina west to northern Mississippi and northeastern Arkansas. Drought is expected to persist or worsen across much of Texas and Oklahoma, and both states have seen considerable fire activity already this winter. Low fuel and soil moisture values are causing fires to burn intensely consuming large diameter fuels and readily supporting torching and crown fire runs. In addition, blow down and damage from past hurricanes and ice storms is producing areas with heavy dead fuel accumulations. In Florida, continued below average precipitation is expected to exacerbate the already very dry conditions increase significant fire potential to above normal during March through May, KBDI values already range from 500 to 700+ and ERC-G values across the peninsula are already above the 90th percentile. The southern half of North Carolina will also see increasing significant fire potential March through May. Soil moisture deficiencies this year along with last year's accumulated deficits are producing critical areas with long term precipitation departures ranging from 12 to 20 inches. Dry duff and organic soils will require additional mop up efforts to mitigate residual smoke impacts. Elsewhere fire potential is expected to be normal.

#### Historic and Predicted Wildland Fires and Acres Burned Data

Based on data reported in 2009, nationally there were 129% of the average numbers of fires burning approximately 101% of the average acres. The following table displays 10 year historical, current and predicted information pertaining to fire statistics.

Jan 31, 2009 Reported Year-To-Date		Average reported for FEB	Projection for FEB YTD+Forecast	Average Reported YTD FEB 28	Historical Low YTD FEB 28	Year of Low	Historical High YTD FEB 28	Year of High
ALASKA								
Fires	0	0	0	0	0	many	1	2003
Acres	0	0	0	43	0	many	433	2003
NORTHWEST								
Fires	2	1	3	2	0	many	5	2007
Acres	0	1	1	2	0	many	12	2005
NORTH OPS								
Fires	41	7	70	13	0	many	46	2003
Acres	234	234	701	488	0	many	2,655	2007
SOUTH OPS								
Fires	63	59	133	117	8	2005	237	1999
Acres	7	605	430	1,554	0	2005	8,427	2001
NORTHERN ROCKIES								
Fires	0	1	1	1	0	many	2	2005
Acres	0	90	90	107	0	many	895	2004
EAST BASIN								
Fires	2	1	4	1	0	many	3	2003
Acres	0	1	11	1	0	many	5	2003
WEST BASIN								
Fires	2	1	3	2	0	many	11	2007
Acres	6	6	12	14	0	many	125	2007
SOUTHWEST								
Fires	42	79	184	99	12	2001	375	2000
Acres	1,593	13,917	21,077	19,985	12	2001	96,734	2000
ROCKY MOUNTAIN								
Fires	32	7	67	14	0	many	64	2006
Acres	3,592	1,705	8,706	4,181	0	2001	27,709	2006
EASTERN AREA								
Fires	121	80	281	121	16	1999	315	2006
Acres	4,549	1,885	9,261	2,608	412	1999	11,691	2006
Fires	2,303	3,755	7,560	5,486	3,509	2003	7,706	2001
Acres	51,487	63,256	146,371	106,901	24,526	2005	314,253	2006
Fires	2,608	3,991	8,307	5,855	3,944	2003	8,467	2000
Acres	61,468	81,698	186,660	135,884	28,149	2005	411,011	2006

Prepared February 2, 2009 by the National Interagency Coordination Center Predictive Services Staff. The information above was obtained *primarily* from Incident Management Situation Reports from 1998-2007, however some inaccuracies and inconsistencies have been corrected. Therefore, the data may not reflect other historic records and should <u>not</u> be considered for official statistical purposes.

**Note:** This national outlook and some geographic area assessments are currently available at the NICC and GACC websites. The GACC websites can also be accessed though the NICC webpage at: http://www.nifc.gov/nicc/predictive/outlooks/outlooks.htm