National Wildland Significant Fire Potential Outlook

National Interagency Fire Center
Predictive Services

Issued: August 1, 2011

Next Issue: September 1, 2011

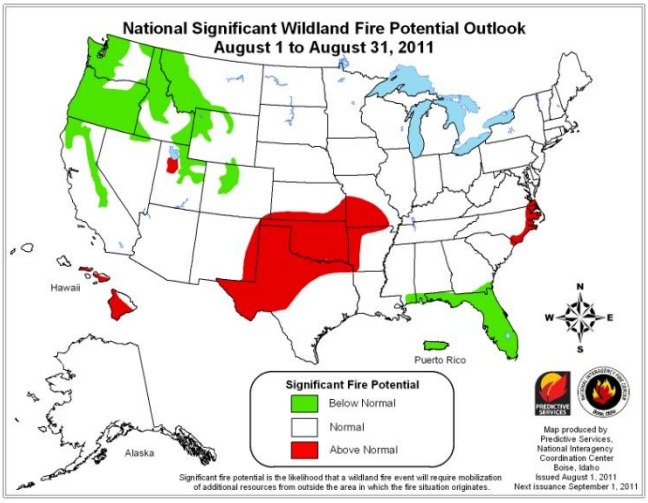
Wildland Fire Outlook – August through November 2011

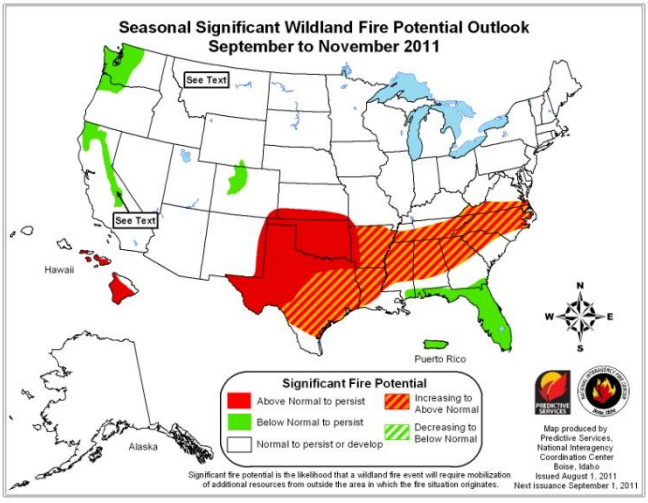
The August through November 2011 significant fire potential outlooks are shown below. The primary factors influencing these outlooks are:

- **El Niño - La Niña:** La Niña conditions have completely dissipated. However, atmospheric conditions continue to reflect a La Niña influence. This is manifested in a persistent trough over the northwest coast, keeping relatively cool and moist conditions over the Pacific Northwest. It is also prolonging extremely dry conditions over the southern plains.

- **Drought:** Drought will continue across much the south central U.S. including most of interior Texas, Oklahoma, and parts of Arkansas, Louisiana and Kansas. These areas remain very dry from precipitation deficits and long term drought conditions and will require significant amounts of precipitation to return to normal conditions.

- **Fuel Dryness:** Increases in precipitation and humidity across much of the southern tier of the U.S. has improved the moisture content of fuels across many of the driest areas of the country, except those areas of the south central U.S. where drought conditions continue to persist and intensify. In many areas of the Great Basin the cool, wet spring led to an increase in the fine fuel crop and near normal conditions so far this summer have led to an above normal fuel load and fuel continuity in normally sparsely vegetated areas. The northwestern quarter of the U.S. remains wet and vegetation is green from a cool and wet spring coupled with above average snow packs and slow melt. This will continue to delay significant fire potential at lower elevations and significantly reduce the significant fire potential at higher elevations for the remainder of the season.



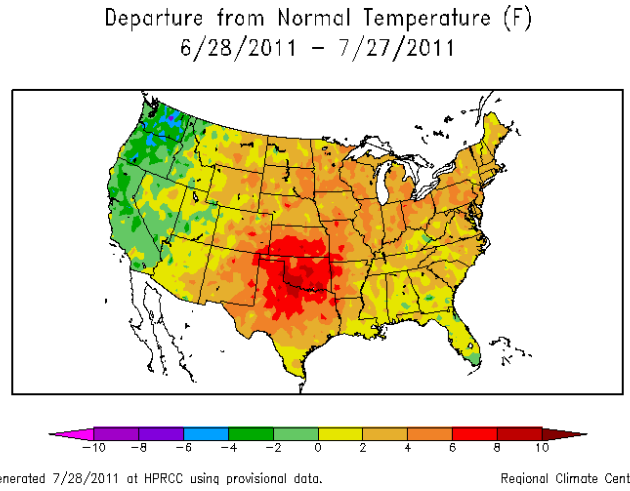


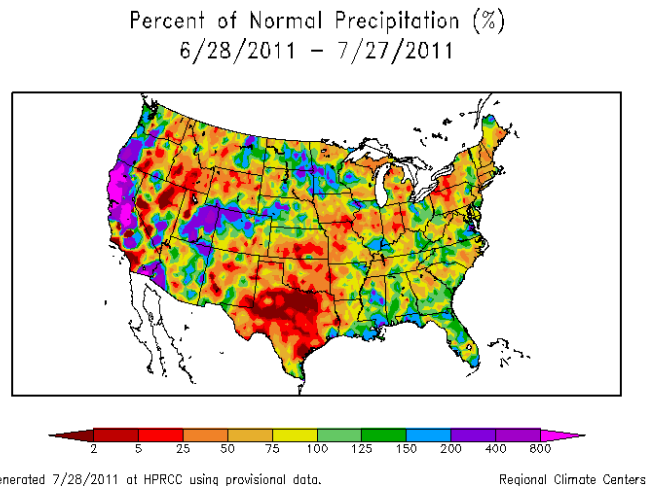
Note: Significant fire potential is defined as the likelihood that a wildland fire event will require mobilization of additional resources from outside the area in which the fire situation originates.

Past Weather and Drought

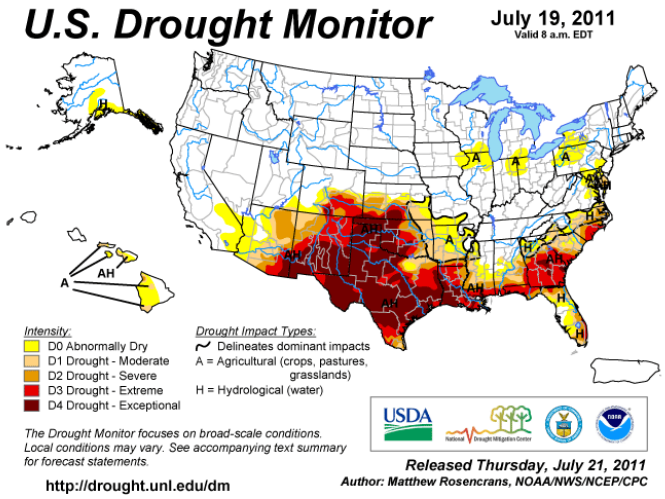
High pressure dominance over the central and eastern U.S. in July, drove temperatures above normal over much of the nation. From Texas to the Dakotas and from the Rockies to New England, temperatures ranged from two to ten degrees above normal. Texas, Oklahoma and Kansas felt the heat the most with readings six to ten degrees above normal. Meanwhile, the West Coast was cool with temperatures as much as four to six degrees below normal in Washington and Oregon. Precipitation varied across the country with much below normal rainfall across the southern and central plains and the upper Midwest while portions of the central Rockies, eastern Great Basin and the West Coast received four to eight times the normal July rainfall. Drought conditions remained the same or worsened for most of Texas, Louisiana, Oklahoma and much of New Mexico. Daily afternoon thunderstorms along the central and eastern Gulf coast and the southeast Atlantic coast brought some relief from drought conditions across Mississippi, Alabama, Georgia, Florida and the Carolinas.

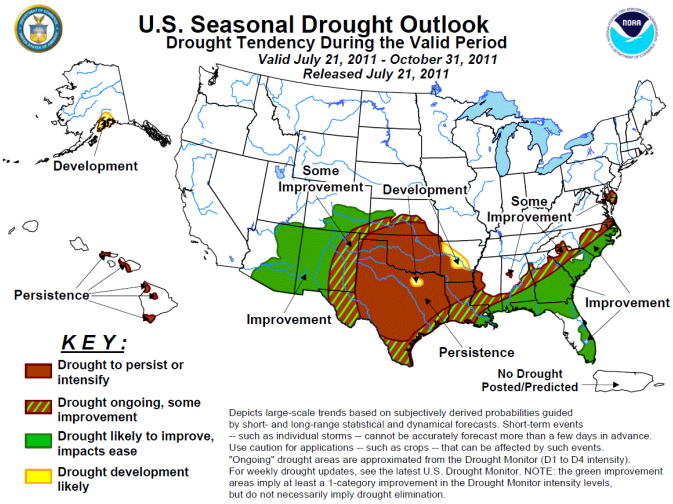
Departure from Normal Temperature (top) and Percent of Normal Precipitation (bottom) *(from High Plains Regional Climate Center)*





U.S. Drought Monitor (top) and Drought Outlook (bottom) *(from National Drought Mitigation Center and the Climate Prediction Center)*

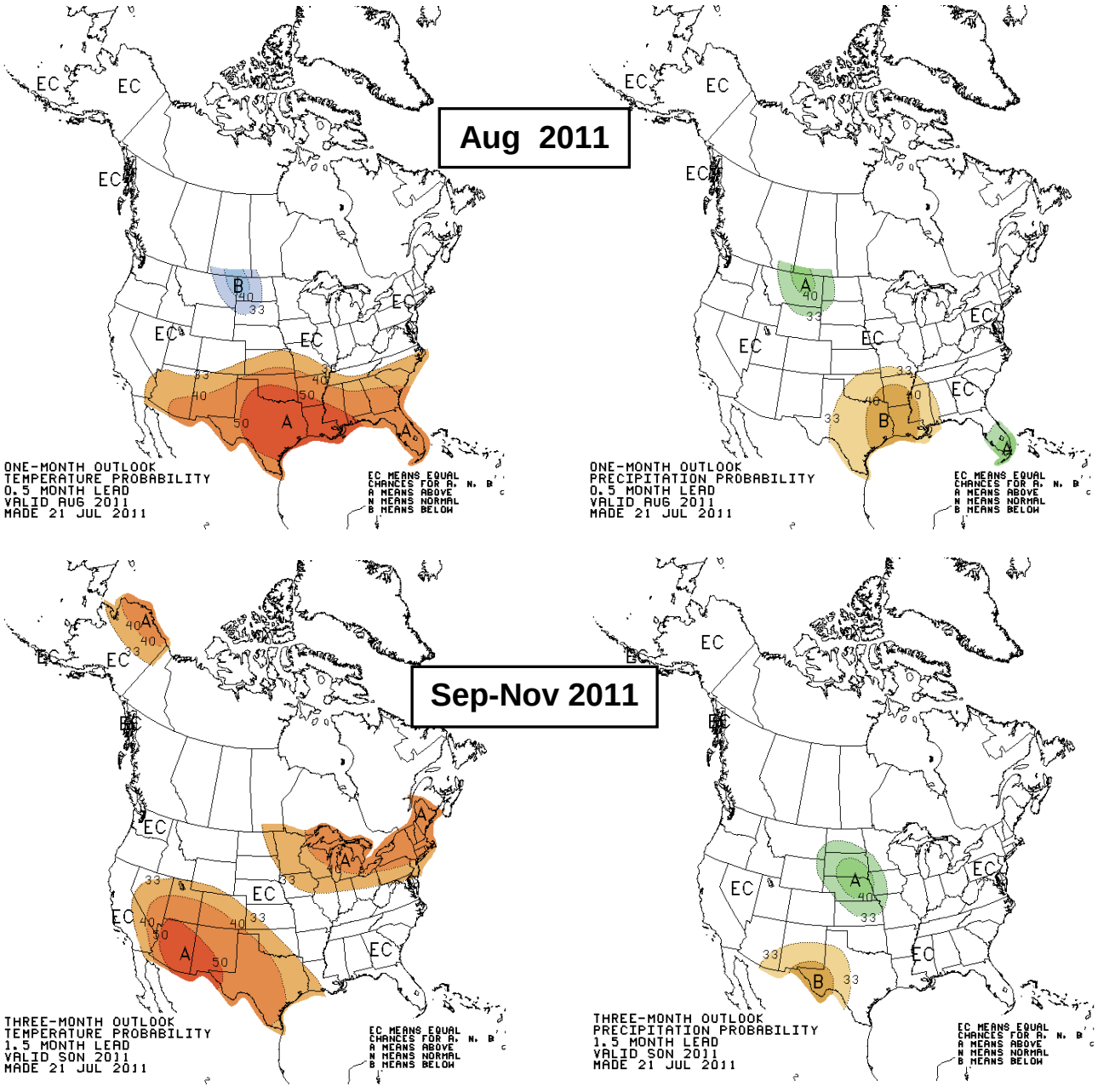




Weather and Climate Outlooks

Near-neutral El Niño-Southern Oscillation (ENSO) conditions are expected through the fall. However, atmospheric conditions continue to reflect the recent La Niña pattern. This is expected to keep temperatures in August above normal across much of the southern third of the country. Meanwhile, only a small area across eastern Montana and western North Dakota will see temperatures below normal. Precipitation in August is expected to be below normal across much of western and central Gulf from Texas to Mississippi northward to southern Missouri. For September through November, temperatures are expected to be above normal across much of the Southwest and the Great Basin. Also, a large portion of the upper Midwest, the Great Lakes region and New England are expected to see above normal temperatures. Precipitation for September through November is expected to be below normal in west Texas and southern New Mexico while the northern and central plains can expect above normal precipitation.

Top row: One-month (August) outlook for temperature (left) and precipitation (right). Bottom row: Three month (September-November) outlook for temperatures (left) and precipitation (right). *(from Climate Prediction Center/NOAA)*



Area Discussions

Alaska: Expect normal significant fire potential for most of Alaska for August through November. A damp and cool end of July will moderate into August. Some portions of the state have received significant precipitation and are not likely to see significant fires. The potential does remain for warmer and drier periods of weather in August and a return to moderate fire danger, but above normal fire activity is highly unlikely statewide. The western Upper Yukon remains somewhat drier and could potentially see sustainable significant fires given a few days of warmer drier weather and an ignition source. The forecast for August calls for normal temperatures and precipitation. Warmer than normal conditions are forecast across the far north for September through November. These conditions should persist into the fall.

Southwest: Normal significant fire potential is expected across the entire Southwest Area for August. The established monsoon pattern is expected to continue to bring near normal to above normal precipitation and mitigate significant fire potential across much of Arizona, the western half to two-thirds of New Mexico, and parts of southwest Texas. At the same time, the plains areas of eastern New Mexico and adjacent western Texas and Oklahoma are expected to remain seasonally hot and dry. As this persists, escalated significant fire potential across the eastern plains is not expected even though the potential for greater initial attack activity exists. Excellent nighttime humidity recoveries and a lack of windy conditions will reduce the likelihood of significant fires.

Normal significant fire potential is expected from September through November throughout the entire Southwest Area. Similarly to August excellent nighttime humidity recoveries and a lack of windy conditions will reduce the likelihood of significant fires. Normal rainfall is expected across the western and northern portions of the Area. Relatively hot, dry conditions will persist across the east as the area transitions into fall. As in August, elevated fire danger conditions across the eastern portions of the Area are not expected to have a major impact on significant fire potential unless windy conditions develop during the fall.

Northern Rockies: Below normal significant fire potential will continue in areas west of the Great Divide for August. Fire season in the Area traditionally peaks around the second week of August. However, with a wet, cool spring, abnormally long lived snow pack and relatively mild summer temperatures, the risk of significant fires will be below normal**.** All classes of fuels will continue to dry, and grasses will carry fire at the mid and lower elevations. Higher elevations are still in full green up, and some north aspects are still snow covered. Significant fire activity at higher elevations this summer is not expected. The Area loses between two and three hours of daylight from the beginning to the end of August and convective activity also drops off substantially.

Dry cold fronts with wind events typically develop in early September and significant fire potential will increase to normal after mid September. New significant fire starts typically decline around mid September as well. Thunderstorm activity goes down significantly from September through November. With above normal fine fuel loading, there is the possibility of late season human caused grass fires, especially for eastern Montana and western North Dakota. This activity is assessed as normal and may not become an issue until after the first freeze. Normal temperatures with a chance of slightly above normal precipitation are expected for the fall. A normal season typically ends around the third week of September.

Western Great Basin: A small area of below normal significant fire potential exists in the higher elevations over far northern Nevada. However, normal significant fire potential continues across the rest of the Area for August. August is typically the second busiest month for fire activity in the Western Great Basin, and this year all lower elevation areas are cured and ready to carry fire. Cool, wet conditions this spring contributed to fine fuel growth and many areas have above normal fuel loading. Fuels are also more continuous than normal, but are not extreme enough to cause above normal significant fire potential. There may be brief periods of above normal fire activity over parts of western and central Nevada, but as a whole Nevada should see near normal conditions during

August. Temperatures over the last 30 days have been near normal for southern, western and north-central Nevada and slightly above normal over central and northeast Nevada. Precipitation for the same time period was nearly twice the normal amount over southern Nevada due to monsoonal moisture. Over the rest of Nevada, precipitation has been very low, averaging 10 to 50 percent of normal. August forecasts indicate equal chances of above or below normal temperatures and precipitation across most of Nevada, with the exception of the far southern tip of the state, which is more likely to see above normal temperatures. Mild drought conditions have returned to far southern Nevada and no change to the drought status is expected during the month of August.

Normal significant fire potential is forecast from September through November. The Western Great Basin typically has the majority of its fire activity during July and August, tapering off quickly during September, and no significant fires in October or November. The current drought outlook shows no drought development in Nevada over the next several months, even though the forecast for the same time period shows a good chance of above normal temperatures over southern and central Nevada. Above normal temperatures and continued dry conditions could be signs of an extension of the fire season into October.

Eastern Great Basin: Above normal significant fire potential exists over a small portion of northwestern Utah. Considerably high loadings of fine fuels and continuity of those fuels in typically sparse areas has lead to a threat of significant fires with rapid rates of spread and fewer than normal areas where fires will slow or stop. Sagebrush will continue to dry during August and increase its contribution to significant fire potential in this area. Below normal significant fire potential conditions will continue in the high and middle elevations of Idaho, western Wyoming and northern Utah. Fuel moisture values remain normal to slightly above normal and with no long duration hot and dry periods expected across the northern half of the region, especially Idaho and Wyoming. In the northern portions of the Area all but southern slopes still have green grass. Normal significant fire potential is expected to continue elsewhere including the lowest elevations of Idaho and most low elevations of Utah. Fine fuel loadings are somewhat above normal and these fuels have cured. However, these fuels are not expected to increase significant fire potential substantially. Significant fire potential will decrease to below normal when moisture or cool temperatures move in, but quickly increase back to normal or above normal when hot, dry air returns.

Very few significant fires occur from September through November, and the small number that do typically occur in September. September could be warmer than average, therefore normal significant fire potential is expected across the Area. For October and November no significant fires typically occur, so normal significant fire potential is expected.

Northwest: Much of the Area remains below normal significant fire potential for August, except in the Columbia Basin and lower Deschutes Basin where normal significant fire potential exists. An unusually cool July kept temperatures across the Northwest generally three to five degrees below average. Precipitation amounts were less than average east of the Cascades and average or above average west of the Cascades. Energy Release Components in late July are well below average and are expected to remain below average in August. Generally cool conditions will prevent fire danger from rising to critical levels. 1000 hour fuel moistures are significantly higher than average over most of the region. Green fuels and live fuel moistures up to 125 percent to 150 percent exist across much of the Area. Fuels remain unusually moist from the lingering effects from the cool, wet spring and summer at elevations above 4,500 feet. Lower elevation grasslands in the Columbia Basin and lower Deschutes Basin appear to be the only areas likely to contribute to typical risk of significant fires in August.

Significant fire potential is expected to be normal from September through November across the Area, except western Washington and Northwest Oregon where below normal significant fire potential will persist in September then trending to normal for October and November. Temperatures across the Northwest Geographic Area are expected to remain near or above average through September with little rainfall. Lightning tends to diminish dramatically in September, thus limiting the significant fire

potential east of the Cascades. Increasing offshore winds tend to elevate large fire threat west of the Cascades.

Northern California and Hawaii: Significant fire potential will continue below normal in the higher elevations and normal in lower elevations of northern California. Slow, gradual drying has brought many low to mid elevations to near normal dead fuel moistures. However, higher soil moisture and above normal live fuel moisture in mid to upper elevations will limit the possibility of large fire activity in the absence of wind or extreme, prolonged heat. Near normal temperatures are expected for August and this will continue below normal significant fire potential across the Sierras and Cascades as well as the North Coastal Mountains. Grasses below 2,000 feet are unusually high and thick, and could produce increased large fire concern towards the end of the month as large scale offshore wind events typically begin. In the Hawaiian Islands, gradual drying and increasing trade winds have expanded drought conditions across the lower islands, where above normal significant fire potential is expected.

Below normal significant fire potential continues over the cooler higher terrain from September through November. The remainder of the region should return to normal significant fire potential during this time. The Sacramento Valley and lower foothills grass crop should fully cure, and barring early rains, could pose a concern during this time period. In Hawaii, drought areas will continue above normal significant fire potential for the lower islands.

Southern California: Normal significant potential will continue across much of Southern California, except in the Sierra Range where below normal significant fire potential will extend from just north of Lake Isabella northward. Temperatures and precipitation will be near normal with at least two lightning episodes, expected during the month of August with each episode lasting three or four days.

The entire Area will see normal significant fire potential for September through November. Temperatures and precipitation will be near normal with at least one lightning episode during this time, lasting two to three days. The Sierras will trend back to normal significant fire potential as fire occurrence during this time period in this area is very infrequent. Expect at least two offshore (Santa Ana) wind events to occur across southern California during this time, mainly occurring in October and November. Wetting rains are expected to return to the region sometime in late October or early November.

Rocky Mountain: Above normal significant fire potential is forecast for extreme southeast Colorado and much of southern Kansas. Severe to exceptional drought conditions, above average temperatures and expected below average precipitation is forecast to continue through August. Occasional windy conditions will further exacerbate fire potential conditions. Elsewhere, normal significant fire potential is anticipated across much of the Rocky Mountain Area during August. The only exception is over the higher elevations of north central Colorado where a wet spring has continued into a wetter than average July and created below normal significant fire potential conditions. Monsoonal moisture is predicted to provide wet thunderstorms at times over Colorado and the eastern plains, mixed with some hot and dry periods during the August. With the thunderstorm activity in Colorado there will be initial attack at times along with some limited significant fire activity. Over western South Dakota and especially Wyoming the monsoonal moisture will have less influence with drier conditions expected, and only brief episodes of wet thunderstorms intermixed with breezy, warm, and dry periods. Normal significant fire potential for this time of year in the Rocky Mountain Area consists of occasional periods of elevated significant fire potential, along with some large fire activity, especially over Wyoming and to a lesser extent western South Dakota.

Above normal significant fire potential is forecast for extreme southeast Colorado and much of southern Kansas during the fall. Periods of low humidity, wind and warm temperatures become more typical during the fall months across this area. These weather factors, combined with long-term drought conditions in the severe to exceptional categories, could result in a very busy fall fire season across southeast Colorado and much of southern Kansas. Elsewhere, below normal significant fire

potential is forecast to continue over the higher elevations of north central Colorado from September through November. Otherwise, normal significant fire potential is predicted to persist across the remainder of the Rocky Mountain Area. Except for a slight trend towards wetter than average conditions over South Dakota and Nebraska, long range climate outlooks point towards an average precipitation regime over the Area during the fall.

Eastern Area: Normal significant fire potential is forecast for much of the Area, except above normal significant fire potential in southwest Missouri through August. Above normal temperatures and below normal precipitation occurred across the southwestern portions of Missouri through much of July. Fire potential increased across this area during this time period with fine fuels drying out. Below normal precipitation and above normal temperature trends are forecast to persist over portions of the central plains southward into the southern plains into August. Above normal significant fire potential over portions of southwestern Missouri could extend through the late summer months. Near normal temperature and precipitation trends are expected this fall which should produce near normal significant fire potential across much of the Area. However, any short term windy, warm and dry periods will create short term elevated significant fire potential events.

Southern Area: Extended drought in Texas and Oklahoma will keep significant fire potential above normal in August for most of northern and western Texas. Hot temperatures will keep fine fuels cured and also contribute to low live fuel moisture values. Texas and Oklahoma continue to have ongoing fire activity and continue to establish record high Energy Release Component values on a near daily basis. This trend will continue in August. Monsoonal moisture is not expected to progress past the Trans Pecos area of far west Texas. Tropical activity will be the only chance for respite across the southern plains and Gulf Coast. Tropical Easterlies will continue daily high humidities and seasonal rain activity across Florida and the Gulf Coast, leading to below normal significant fire potential. In general, abnormally low water tables along the Eastern and Gulf Coasts will continue to be problematic due to the persistence of surface and sub surface fire. However, the threat of tropical systems is increased and highest along the Atlantic and southeastern Gulf states in the upcoming peak of the tropical storm season. A tropical system making landfall has the potential to mitigate severe drought due to the sheer volume of water deposited. Tropical systems have the ability to raise water tables in the sub-surface peat and organic soil to a near average condition in the area affected. Areas affected by tropical systems will transition to below normal fire potential. Robust tropical easterlies will keep Puerto Rico in a recurring rain pattern and in below normal significant fire potential.

La Nina is expected to gain strength during the September through November time frame. La Nina is typically associated with drier than average conditions from the Carolinas to the Gulf Coast region and westward to Texas and Oklahoma. Given the current state of drought, La Nina's strengthening could lead to increasing significant fire potential and a significant fall fire season. Tropical activity will peak during this time. The favored area for land impacts is the Atlantic Seaboard, particularly the Carolinas. Land falling tropical systems, should they occur, would significantly improve drought conditions and help recharge water levels. Areas that experience the subsidence region of nearby tropical systems could see a dramatic upswing in significant fire potential, especially if they are already experiencing drought or elevated ERC values. Leaf drop may begin slightly earlier than normal, in mid to late October. Leaf drop, combined with the frequency of precipitation events, will be the determining factor for any fall fire season. Precipitation that falls every three to four days will prevent a fall fire season. Rain events that come seven to ten days apart will allow for a brief period of increased significant fire potential. If the frequency of rain goes past 10 to 14 days, significant fire potential will increase enough to support a few large fires. The frequency of rainfall events is more important than the actual amount of rain received. Below normal rainfall, if frequent enough, will still prevent a fall fire season. Temperatures are expected to be above normal with below normal precipitation for September through November.

Historic and Predicted Wildland Fires and Acres Burned Data

Based on data reported year-to-date in 2011, nationally there were 90 percent of the average numbers of fires burning approximately 162 percent of the average acres. Nationally, as of July 31, the 10 year average number of fires is 50,473 and the 10 year average acres burned is 3,749,980. The following table displays 10 year historical, current and predicted information pertaining to fire statistics.

Jul 31 Reported Year-To-Date		AVG reported for AUG	Projection for AUG YTD+Forecast	Average Reported YTD AUG 31	Historical Low YTD AUG 31	Year of Low	Historical High YTD AUG 31	Year of High
ALASKA								
Fires	468	39	506	473	276	2006	648	2010
Acres	290,587	599,373	527,572	1,751,932	56,553	2008	6,143,152	2004
NORTHWEST								
Fires	541	1,175	884	2,868	1,870	2010	3,521	2004
Acres	3,441	236,287	62,513	395,891	93,051	2010	1,049,796	2002
NORTH OPS								
Fires	1,114	740	1,509	2,987	1,947	2005	3,826	2006
Acres	10,911	52,698	24,085	165,780	25,960	2010	816,847	2008
SOUTH OPS								
Fires	2,574	642	3,262	3,139	2,626	2006	3,930	2007
Acres	48,053	67,430	115,483	168,478	46,462	2003	365,985	2002
NORTHERN ROCKIES								
Fires	506	860	791	2,405	1,415	2010	3,339	2006
Acres	1,493	192,290	49,566	314,692	3,339	2009	964,595	2007
EAST BASIN								
Fires	610	713	960	1,935	1,183	2008	2,772	2004
Acres	51,311	231,678	282,989	571,437	80,302	2004	2,044,839	2007
WEST BASIN								
Fires	281	182	372	689	346	2010	981	2006
Acres	32,492	112,757	145,249	382,185	15,720	2003	1,140,197	2006
SOUTHWEST								
Fires	2,731	446	3,079	3,541	2,160	2010	5,319	2006
Acres	1,947,164	24,747	1,971,911	444,839	56,474	2001	955,339	2002
ROCKY MOUNTAIN								
Fires	1,330	621	1,753	2,257	1,693	2004	3,322	2004
Acres	285,529	51,256	383,056	164,784	41,564	2004	623,177	2002
EASTERN AREA								
Fires	5,212	1,074	6,411	10,811	8,400	2005	13,534	2002
Acres	43,084	5,860	48,944	106,416	51,589	2005	195,448	2008
SOUTHERN AREA								
Fires	30,030	1,998	32,385	27,918	11,988	2006	42,112	2006
Acres	3,351,606	73,500	3,498,605	932,852	228,755	2004	2,404,326	2006
NATIONALLY								
Fires	45,397	8,540	51,910	59,013	44,684	2003	80,744	2006
Acres	6,065,671	1,653,722	7,109,973	5,403,702	2,679,598	2010	7,924,449	2006

Prepared August 1, 2011 by the National Interagency Coordination Center Predictive Services Staff. The information above was obtained *primarily* from Incident Management Situation Reports from 2001-2011, however some inaccuracies and inconsistencies have been corrected. Therefore, the data may not reflect other historic records and should *not* 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**