

National Wildland Significant Fire Potential Outlook



National Interagency Fire Center Predictive Services

Issued: September 1, 2012

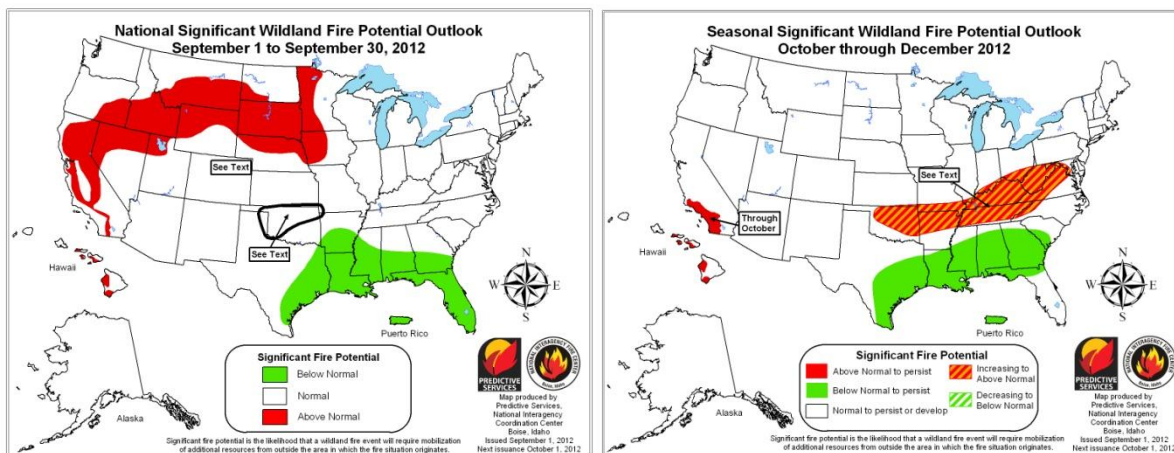
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Wildland Fire Outlook – September through December 2012

The September through December 2012 significant fire potential outlooks are shown below. The primary factors influencing these outlooks are:

- **El Niño/Southern Oscillation (ENSO):** Equatorial Pacific sea surface temperatures remain in ENSO neutral conditions but slowly move closer to weak El Niño levels.
- **Drought:** Above normal rainfall fell across much of the Southeast and Gulf Coast region as well as parts of the Southwest and southern Great Basin. The rest of the country largely experienced precipitation deficits in August with the worst deficits over the West Coast, the Northwest and the northern Rockies. Severe or worse drought conditions remained over the central U.S. from the Front Range of the Rockies to the mid-Mississippi Valley.
- **Fuel Conditions:** Above normal Energy Release Components (ERCs) and below normal live and dead fuel moistures continue across a band of the western U.S. stretching from central and northern California, through the northern Great Basin and into the Northern Rockies and north central U.S. Across many of these areas a heavier and more continuous than normal fuel bed is creating conditions where fires are able to spread more rapidly and into areas not normally seen this time of year. This is also leading to greater than normal fire behavior. Portions of the Hawaiian Islands also continue to see elevated fire danger indices. The far southeastern U.S. will continue to see periodic precipitation events and tropical activity increasing fuel moistures and reducing fire potential even further. As the fall leaf drop season develops the potential exists for a return to above normal significant fire potential across portions of the eastern U.S. depending on fall precipitation that would moisten leaf litter as it drops into the surface fuel layer.



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

The weather pattern for August was largely dominated by a strong ridge of high pressure and very hot conditions over the West and a deep trough and cool, wet weather over the East. A significant pattern shift in mid-August brought a strong trough across the Northwest and northern Rockies, producing a significant lightning outbreak that initiated several large fires. Other smaller waves through the end of the month continued lightning activity that increased the number of fires across the West.

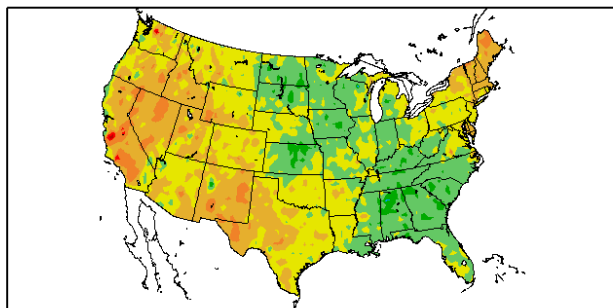
Temperatures in the West were generally above normal with much of the West Coast, the Great Basin, and most of New Mexico and west Texas two to six degrees above normal. In the East, temperatures were two to four degrees below normal across the northern and central Plains, the upper Midwest, the Ohio and Tennessee Valleys and most of the Southeast. The exception to the cool conditions was part of New England from eastern New York to Maine where temperatures were two to six degrees above normal.

Much below normal precipitation was the rule across most of the West with the worst conditions along the West Coast, most of the Northwest and the northern Rockies. Parts of the mid-Mississippi Valley also experienced large precipitation shortfalls. While much of the western U.S. was hot and dry, a strong monsoon kept parts of the Southwest quite wet. Much of southern Nevada, western Arizona and the lower deserts of southern California received 200-400 percent of normal precipitation. Much of the East and Gulf Coast states and parts of the Ohio Valley received over 200 percent of normal precipitation as a persistent trough and stalled fronts parked over the region.

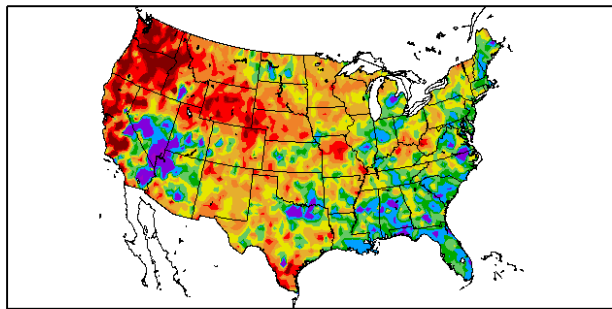
Few areas of the country escaped some level of drought, including the northwest and far northern Rockies, the Gulf Coastal region, the mid-Atlantic coast, the Appalachians and far northern New England. The rest of the nation continued in drought conditions with portions of at least 27 states in severe to exceptional drought.

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

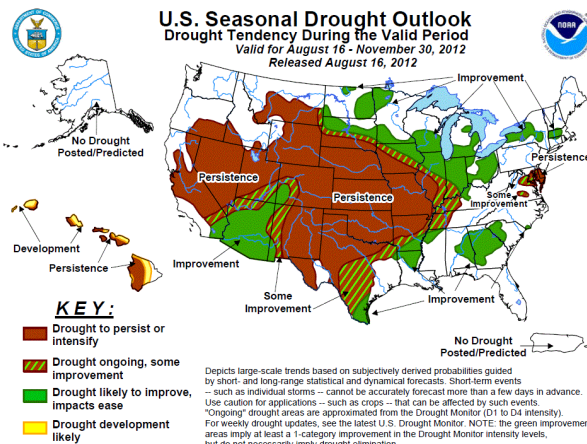
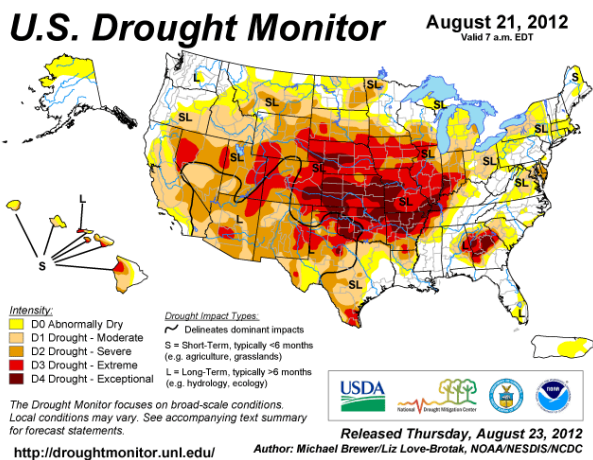
Departure from Normal Temperature (F)
7/31/2012 – 8/29/2012



Percent of Normal Precipitation (%)
7/31/2012 – 8/29/2012



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



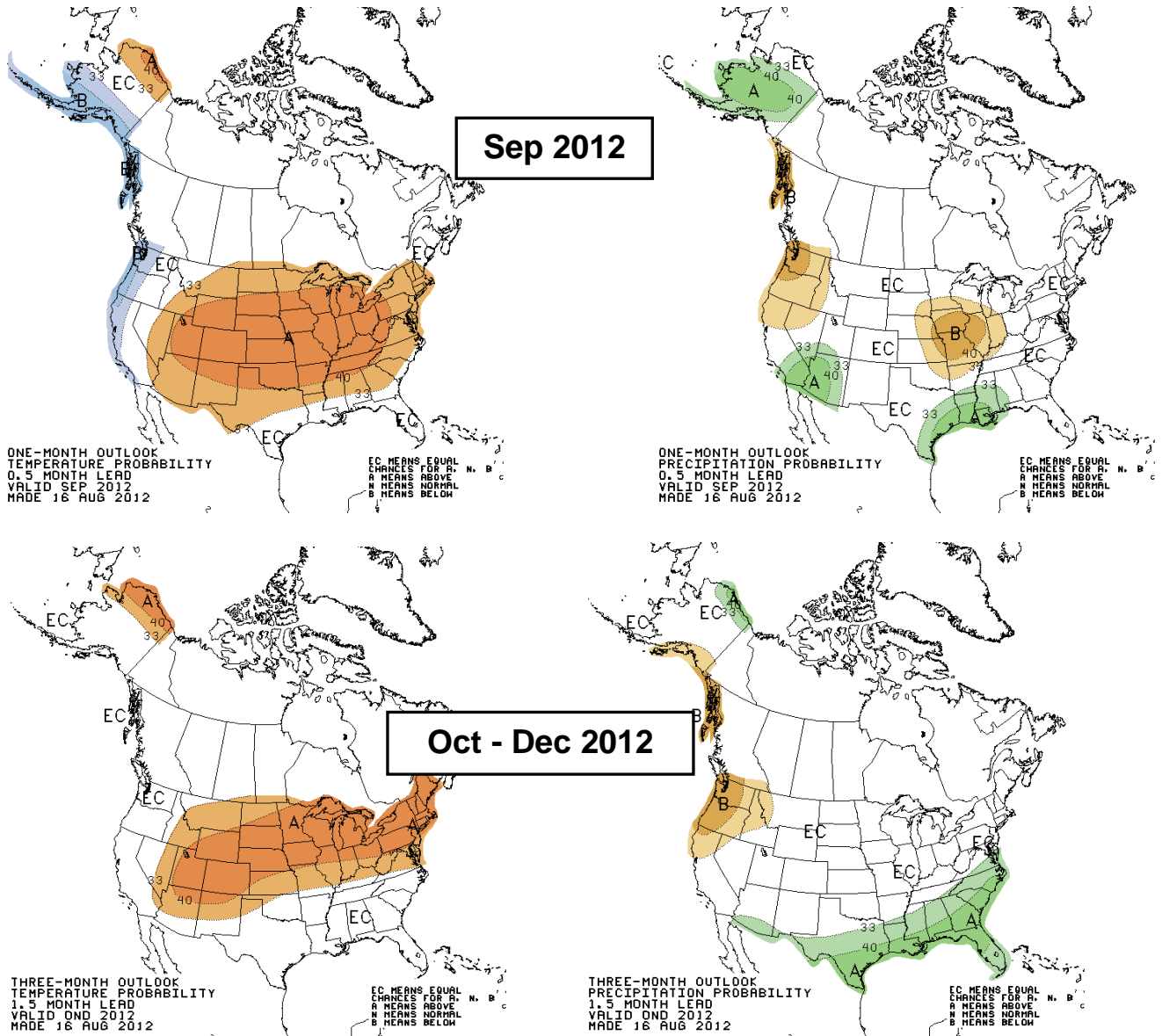
Weather and Climate Outlooks

Sea surface temperatures along the equatorial Pacific continue above normal, bordering on El Niño conditions, despite slight cooling recently. Conditions remain favorable for a weak El Niño to take hold but it remains likely that atmospheric effects of El Niño will not be felt across the U.S. until this fall.

Current climate projections by the Climate Prediction Center continue to trend toward a transitioning state as fall begins. For September, this suggests a high probability of above normal temperatures for most of the U.S. except along the Gulf and West Coast states and the southern third of Alaska. Precipitation projections indicate a high likelihood of below median precipitation for the Northwest and the mid and upper Mississippi Valley with an elevated likelihood of above median precipitation in the Southwest, the western Gulf Coast, and much of western and central Alaska.

For October through December, climate projections suggest above normal temperatures from New England and the mid-Atlantic Coast, through the Great Lakes, the upper Mississippi Valley, the northern and central Plains, the northern Rockies, the Great Basin, and northern Alaska. Precipitation will be below median in southern Alaska and the Northwest, and above median over the coastal states from Texas to Virginia.

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



Area Discussions

Alaska: September significant fire potential is expected to be normal statewide. October through December fire potential is expected to be normal as well, which puts Alaska out of fire season. September is typically the close of Alaska's fire season, with only a few escaped human caused fires and minimal to no growth on existing fires. The Alaska fire season has been well below normal this year. Below normal temperatures are forecasted over the southern third of the state for September, with above normal precipitation over most of mainland Alaska. This will keep fire activity in check. October brings snow cover to the Interior by the middle of the month, with south central Alaska getting snow by the beginning of November.

Southwest: Normal significant potential is expected Area-wide for the Southwest. Early in September, high pressure is expected to keep eastern New Mexico and western Texas warmer and drier than normal. This could cause a brief increase in initial attack during the first one to two weeks of the month. By mid-September, a pattern shift will bring a cooler, more normal, temperature signal Area-wide with more frequent cold fronts. This could lead to areas of above normal precipitation, especially along and east of the divide.

Normal significant fire potential is expected across the entire Area from October through December. As oceanic patterns switch to El Niño, atmospheric patterns will lead to most of the Area experiencing below normal temperatures with the exception of the southern third of Arizona. Above normal precipitation is expected across the western half of the Area with the plains of New Mexico and western Texas becoming drier. Overall, no significant fire concerns are likely during this period.

Northern Rockies: The Northern Rockies will continue to see above normal temperatures and below normal precipitation for at least the first three weeks of September. The Area will remain convectively active during this time until the strong ridge subsides and monsoonal moisture stops flowing over the Area. Dry cold fronts will continue to sweep across the Area every few days, fanning ongoing fires. Better humidity recovery will cause a downward trend in ERCs, as will shorter daylight hours from lower sun angles. All classes of fuels will remain receptive to fire until rain occurs with snow at higher elevations. The heavy grass loading east of the divide will remain a problem until covered by snow. Normally, a transition occurs from lightning starts to human starts in September. Unfortunately, both will be likely for at least the first half of the month.

The onset of weak to moderate El Niño points to a dry fall and dry early winter for the Northern Rockies. Grass fires east of the divide will continue a possibility until snow covers the ground. This activity is generally normal in the fall shoulder season. Expect increased initial attack due to the dryness of the heavier fuels. Significant fire potential historically decreases in the fall.

Western Great Basin: Significant fire potential typically winds down quickly in September. Average temperatures have been slightly above normal over the northern portion of Nevada and near to below over southern Nevada. Very dry conditions continued over northern and western Nevada with precipitation less than half of normal. Precipitation increased in August over the southern half of Nevada. Despite the wetter conditions, large fires continued through the middle of August over parts of the higher elevations of southeast Nevada where fuels were more plentiful. Due to recent dry and breezy weather, ERCs over western and northern Nevada increased above the 90th percentile at the end of August. Continued dry and breezy weather is expected through at least the middle of September in many areas of western and northern Nevada. These indices will remain high into September. Fuels will remain dry with high ERCs which will keep ignition efficiency higher at all elevations. Expect above normal temperatures across the eastern half of Nevada with above normal precipitation over southern Nevada and below normal precipitation over western and parts of northern Nevada.

Fire season typically ends by October across the Western Great Basin. However, above normal significant fire potential may continue into October or even November depending on when the transition to a wetter and cooler pattern occurs. There are some indications that drier conditions will

continue over the northern half of Nevada through December. Much wetter conditions will need to occur over the northern Nevada to reduce significant fire potential to normal. Therefore, some areas of above normal significant fire potential may return by the next outlook if drier conditions persist through September over parts of western or northern Nevada. Drought is likely to persist across all but the far southern tip of Nevada, where some improvement is possible. Above normal temperatures over eastern Nevada are likely with near normal elsewhere. Wetter conditions in the fall over parts of southern and eastern Nevada are possible, with drier conditions more likely over western and northern Nevada.

Eastern Great Basin: Significant fire potential will continue above normal for much of central and southern Idaho and western Wyoming. Fire danger indices are above the 97th percentile across much of central and southern Idaho and western Wyoming going into September. Little relief is expected for at least the first half of September with warm and dry conditions continuing across the north. Current large fires will likely continue to see growth under these conditions. Pre-frontal winds and dry cold front passages will become the main fire weather threat during September. The combination of dry fuels and gusty winds will lead to quick but intense grass and brush fires. Typically most fires in September are human caused. With shortening days and better overnight humidity recovery, initial attack efforts will become increasingly more effective, except when hampered by high winds. After the first significant fall storm brings a widespread wetting rain sometime during the second half of the month, the potential for new large fires will quickly drop and current large fires will generally experience less activity. Northwestern Utah remains fairly dry with an abundant grass crop available. An increase in fire activity is expected during September as cold fronts bring critical fire weather conditions to the Area and above normal significant fire potential.

Normal significant fire potential is expected Area-wide during October, November and December. Normal fire occurrence for this time of year is generally quite low.

Northwest: August was warmer and much drier than typical for the Northwest Area. Only a few reporting sites along the southern Oregon coast reported below average temperatures. Rainfall accumulation was nearly zero with only isolated thundershowers providing any moisture. The extended warm and dry weather caused fire danger to peak in the third week of August. Several Predictive Services Areas reported ERC values at or above the 97th percentile value. Several large timber and rangeland fires occurred as fuels dried and became available to burn in August. Fire danger and wildfire activity began to decline with the onset of cooler weather in the last week of the month. Expected dry weather in September will lead to significant fire potential being near normal for the majority of the Area. The exception is southeastern Oregon which remains at above normal significant fire potential due to extended drought. Wildfire activity usually begins a significant decline in the Northwest Area in September due to the onset of cooler and wetter conditions.

Fall weather over the Northwest Area is typically cool and moist. Fire danger indices are unlikely to be high enough to support much risk of significant fire activity and the Area is considered to be out of fire season. This year is not expected to be any different than usual; therefore, normal significant fire potential is likely. This means, virtually no potential for significant fires will exist from October through December and into the winter months.

Northern California and Hawaii: Drier than normal fuels will continue into September across much of Northern California. Near normal temperatures are likely with little precipitation expected for September. Additionally, the marine layer influence along the coast is expected to weaken. For these reasons the region of above normal significant fire potential has expanded across the Coastal Range into much of the Bay Area, as well as into much of the Sierra and Cascade Ranges. Significant fire potential will continue above normal across the eastside as well, although the eastside should trend towards normal in the latter part of the month. Near normal significant fire potential continues elsewhere.

Expect a return to normal significant fire potential as the Area transitions into the October through December timeframe. As fall rains are expected to resume, the Area will most likely transition out of fire season.

For Hawaii, gradual drying has expanded drought conditions across the lower islands, where above normal significant fire potential is expected to continue through September and into the October through December period.

Southern California: Above normal significant fire potential will be present for September across most mountain and foothill locations of Southern California. Continued near normal temperatures and precipitation is also likely. These conditions should lead to above normal initial attack assuming ignitions continue with at least normal numbers of fire starts.

Above normal significant fire potential is likely to continue over portions of Southern California into October, and return to normal after October or early November. Expect seasonal rains to return to central California in November. As Southern California transitions into the fall fire season the likelihood increases of offshore wind events. This fall will likely produce one or two offshore flow events per month.

Rocky Mountain: The Southwest Monsoon typically weakens in early September as the jet stream strengthens over the northern U.S. As the jet becomes more active, cold front passages become more frequent across the Rocky Mountain Area, especially in mid to late September. Lingering dry conditions, long term drought, above average temperatures, and increased wind events lead to above normal significant fire potential into September across portions of Wyoming, South Dakota, Nebraska, and to a lesser extent over northern Colorado. The threat of significant fire activity is expected to decrease as cooler conditions develop and natural ignition triggers decrease later in the month.

The majority of fire activity typically occurs in October across the grasslands ahead of cold fronts where wind becomes a major influence. These fires are typically short lived. The severity of October fire conditions will be highly dependent on September moisture and the influence of El Niño this fall. Currently normal significant fire potential conditions are forecast for the October through December period, with typical grass fires in October and little if any fire activity in November and December.

Eastern Area: Medium range drought is expected to persist across western Minnesota southward into western Iowa into September. Below normal soil moisture and precipitation is expected to persist or increase into September over these areas. Fire danger indices were above the 90th percentile in many areas and fuel moistures were below the 90th percentile in late August. The majority of Missouri, Illinois, Iowa, Indiana and the far southern Great Lakes are expected to receive much needed rainfall through late August and early September, curtailing significant fire potential over these areas. Occasional precipitation events into mid-September over the mid-Mississippi valley should gradually decrease the drought in place over this portion of the Area.

Portions of the mid-Mississippi and Ohio River valleys are likely to develop above normal significant fire potential for the October through December period, even though an increase in precipitation is expected across the mid-Mississippi later in the fall and into early winter. Cooler than normal conditions are forecast to develop this fall over the upper Midwest. Until these weather patterns develop, windy periods with low humidity will lead to short term above normal significant fire potential across western Minnesota southward into western Iowa. Near normal significant fire potential is expected across the rest of the Eastern Area through the fall. However, any short to medium term dry and windy periods will produce elevated significant fire potential as fine fuels dry out.

Southern Area: For northern and western Oklahoma, a warming and drying trend is expected in early September that will elevate significant fire potential but quickly return to normal by mid-month. Significant rainfall from Hurricane Isaac spread over a large portion of the Area from Louisiana to the southeastern states during the last few days of August and will continue through the Labor Day weekend. Recent precipitation surpluses, and continuing high humidity will keep fire activity below

normal for this area. Continued tropical storm threats remain through much of this period and will continue the trend of below normal significant fire potential.

A below average precipitation pattern is likely to develop from Oklahoma to western Virginia during the normal fall leaf-drop period of mid-October to mid-November. This could produce conditions suitable for above normal significant fire potential in the fall. Cold front activity will introduce the lower, post frontal humidity needed to rapidly dry fine fuels. Precipitation frequency will ultimately determine the ignition potential of the fallen leaf material. Only a short dry period will create favorable burning conditions.

For questions about this outlook please contact the National Interagency Fire Center at (208) 387-5050.

Historic and Predicted Wildland Fires and Acres Burned Data

Based on data reported year to date in 2012, nationally there were 76 percent of the average number of fires burning approximately 133 percent of the average acres. Nationally, as of August 31, the 10 year average number of fires is 58,586 and the 10 year average acres burned is 5,808,819. The following table displays 10 year historical, current and predicted information pertaining to fire statistics.

	Aug Reported Year-To-Date	AVG reported for Sep	Projection for Sep YTD+Forecast	Average Reported YTD Sep	10 Yr Low YTD Sep	Year of Low	10 Yr High YTD Sep	Year of High
ALASKA								
Fires	348	19	361	508	308	2006	682	2010
Acres	249,021	103,940	262,938	1,863,620	62,647	2008	6,298,136	2004
NORTHWEST								
Fires	1,504	399	1,709	3,122	2,016	2010	4,120	2001
Acres	1,329,912	63,679	1,457,271	408,804	121,825	2004	1,061,373	2002
NORTH OPS								
Fires	2,868	638	3,441	3,444	2,479	2010	4,329	2001
Acres	648,793	36,047	720,887	183,036	22,605	2011	851,143	2008
SOUTH OPS								
Fires	3,290	559	3,863	3,759	3,046	2006	4,370	2008
Acres	69,133	52,035	91,880	221,294	48,263	2003	425,005	2002
NORTHERN ROCKIES								
Fires	2,539	314	2,853	2,643	1,604	2010	4,169	2006
Acres	952,305	69,672	1,091,649	385,603	37,097	2004	1,089,796	2006
EAST BASIN								
Fires	2,027	291	2,322	2,100	1,456	2008	2,922	2001
Acres	1,788,313	89,776	1,967,866	668,540	88,088	2008	2,393,631	2007
WEST BASIN								
Fires	900	69	998	662	0	2010	1,192	2006
Acres	761,601	22,514	806,628	349,010	0	2003	1,306,780	2006
SOUTHWEST								
Fires	2,431	194	2,571	3,706	2,262	2010	5,390	2006
Acres	535,692	9,029	539,407	657,202	137,000	2001	2,089,496	2011
ROCKY MOUNTAIN								
Fires	3,833	292	4,270	2,564	2,004	2004	3,984	2006
Acres	863,676	29,612	922,899	224,914	44,262	2004	650,971	2002
EASTERN AREA								
Fires	9,154	1,196	10,197	11,322	4,737	2011	13,891	2002
Acres	96,657	15,407	127,471	120,047	56,339	2005	198,607	2008
SOUTHERN AREA								
Fires	15,630	2,032	16,914	30,739	12,350	2006	43,014	2006
Acres	429,852	66,458	488,372	1,274,212	230,523	2004	3,702,794	2011
NATIONALLY								
Fires	44,524	6,056	46,927	64,642	49,295	2003	86,035	2006
Acres	7,724,955	570,387	7,937,860	6,379,206	86,035	2003	9,189,781	2006

Prepared September 1, 2012 by the National Interagency Coordination Center Predictive Services Staff. The information above was obtained *primarily* from Incident Management Situation Reports from 2002-2012, 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 through the NICC webpage at: <http://www.nifc.gov/nicc/predictive/outlooks/outlooks.htm>