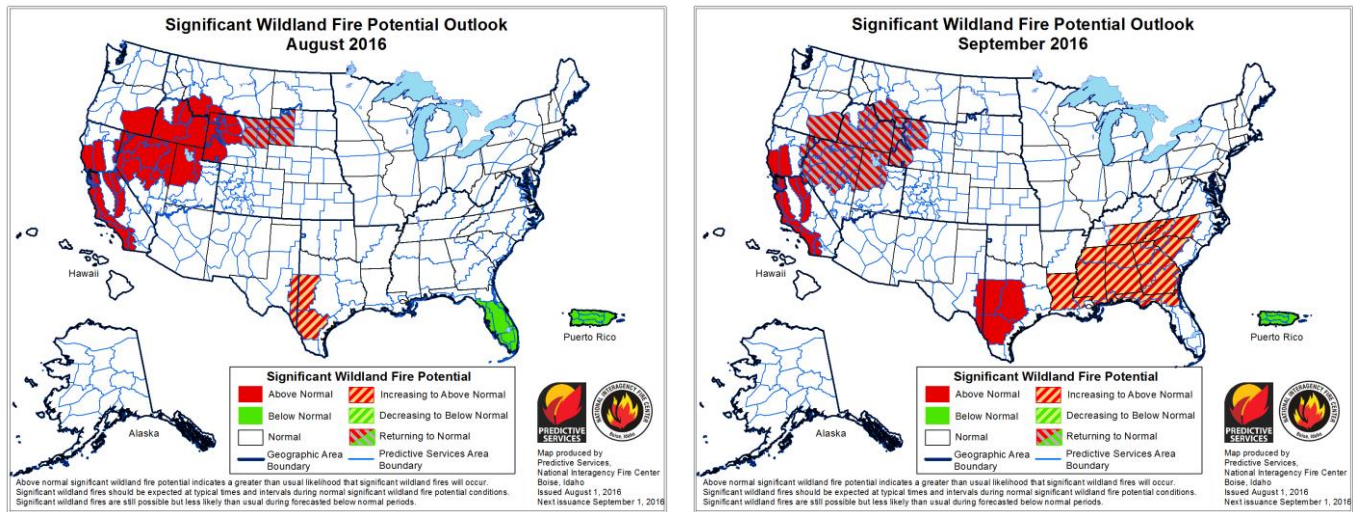


TETON INTERAGENCY FIRE

AUGUST 2016 WILDLAND FIRE OUTLOOK

August 1, 2016



Significant Wildland Fire Potential for August and September, 2016 (issued August 1, 2016).

<http://www.predictiveservices.nifc.gov/outlooks/outlooks.htm>

SUMMARY

Blocking high pressure and a prolonged neutral state of a transition from strong El Niño/Southern Oscillation (ENSO) conditions into likely La Niña conditions may have led to a drier than normal summer. This pattern featured:

- Five of the last six months with below normal precipitation, and six of the last 10 below normal (at Moose WY weather station).
- While moisture is near normal for the water year-to-date (October through July), the last three months of precipitation at Moose are at 59% of normal. For July, Moose received 41% of average moisture.
- In sagebrush flats and drier sites, fuels in grasses and sagebrush are at or near critical fire conditions and are available to rapid fire spread if heat, low humidity and wind align with a fire ignition. In conifer fuels, 1000 hour dead fuels are at the 90th percentile.

Key Points for August

- **LIVE FUELS** > Live fuels will continue to cure with seasonal drying trends. Live fuel moistures sampled on-site and projected moistures are at or near critical levels for sagebrush/grasses and may reach critical in exposed and/or drier conifer sites.
- **DEAD FUELS** > In conifer fuels, fine dead fuels and 1000-hour fuels are at or near the 90th percentile at sampled sites in Grand Teton NP, a trend observed in some sampled sites on the Bridger-Teton NF.
- **WEATHER** > At Moose weather station, the last three months received 59% of normal precipitation, a pattern reflected throughout the dispatch area.
- **LOCAL SUMMARY** > Active fires in the area have exhibited fire growth typical of dry summer conditions. Fire danger has increased to Very High and is likely to remain at this level or higher until moisture flow moves into the region. Monsoon flow this season continues to remain south of the Teton Dispatch area, though most storms have been wet enough to limit multi-fire dry-lightning busts.
- **REGIONAL OUTLOOK** > A weak, inconsistent monsoon may continue through August. Dry conditions are expected to continue and temperatures are expected to be near normal for August.
- **FIRE SEASON** > Local and regional outlooks call for an above-normal August with conditions returning to normal as cooler/longer nights overcome continuing dry conditions into September. During a normal season, Bridger-Teton National Forest will have 67 fires for 3290 acres and Grand Teton National Park will have 12 fires for 789 acres.

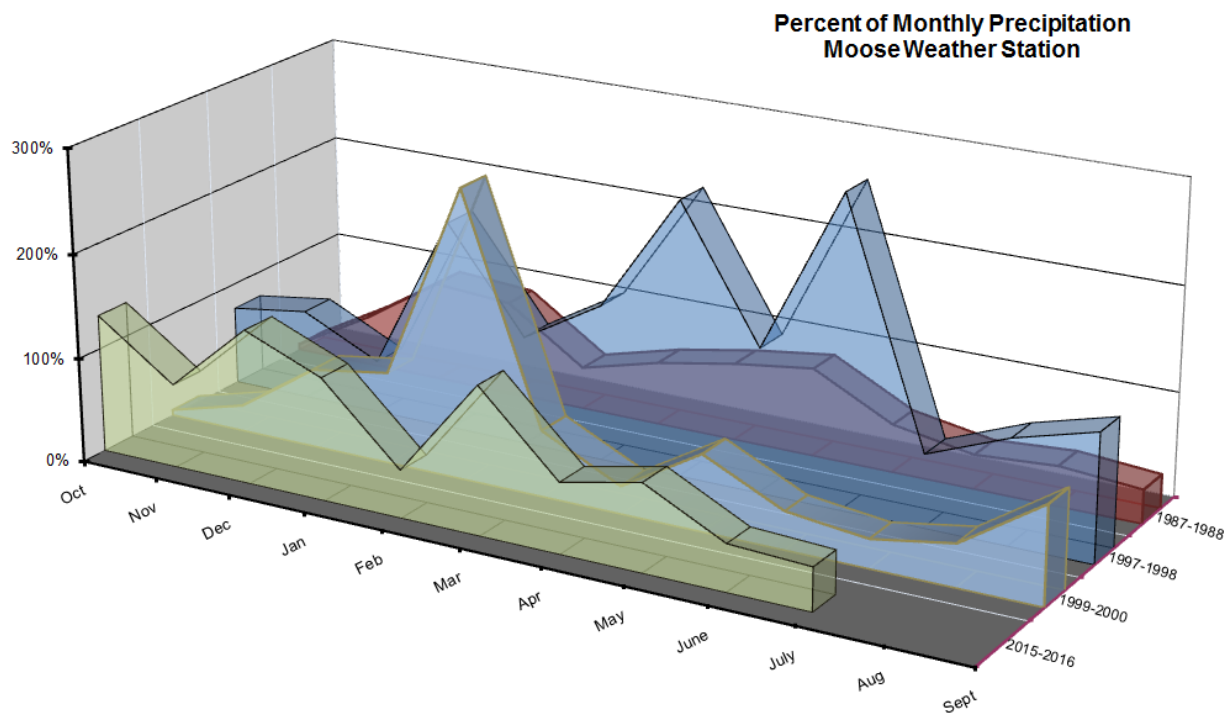
CLIMATE AND FUELS OUTLOOK

(1) Year-to-Date Precipitation for Area Weather Stations

A summer moisture deficit that has supported fire activity is reflected in summer moisture trends at nearly half our normal precipitation at the [Moose weather station \(automated\)](#), which is representative for lower elevation sites in Grand Teton National Park and some North Zone sites. While the Moose station is at nearly normal for water year-to-date, the prior 3 months of moisture is tracking comparably to active fire years, such as 2000, 1994, and 1988. Area-wide moisture tracking (Figure 1) captures the variety of moisture impacts for the entire Teton Interagency zone, with cumulative moisture ranging from 10-90 percent of normal.

Table 1 and Graph: Precipitation at Moose Weather Station (Grand Teton National Park).

		Apr	May	June	July	Last 3 months	YTD total
Monthly Precipitation	1987-88	1.12	1.61	.75	0.5	2.79	11.54
(inches)	1997-98	3.92	2.6	4.77	0.9	8.27	25.56
	1999-00	0.4	1.38	.59	0.36	2.33	13.49
	2014-15	0.8	3.83	1.03	2.72	7.58	17.56
	<i>Normal</i>	1.82	1.62	1.61	1.29	4.78	17.78
	2015-16	1	1.57	0.72	0.53	2.82	17.4
Percent of NORMAL	1987-88	75%	84%	47%	33%	58%	65%
	1997-98	263%	138%	296%	70%	173%	144%
	1999-00	27%	72%	37%	28%	49%	76%
	2014-15	54%	204%	64%	211%	159%	99%
	2015-16	67%	84%	45%	41%	59%	101%



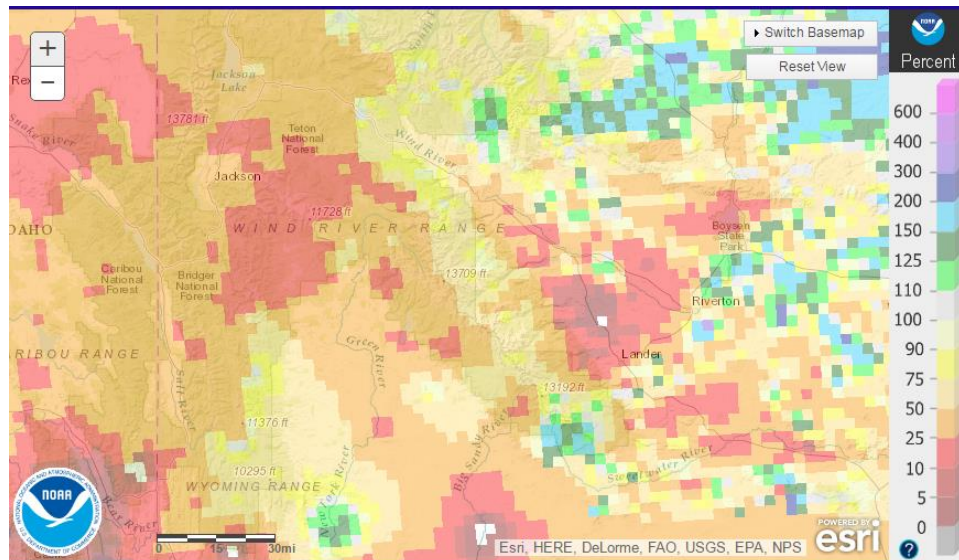


Figure 1. Wyoming, Current Precipitation – Percent of Normal Precipitation (focused on western/southwestern Wyoming). For the past 30 days (ending July 27, 2016), western and southwest Wyoming exhibits a range of below-normal rainfall, from 10-90 percent of normal. <http://water.weather.gov/precip/>. (Permalink to current data.)

(2) Drought Monitor

The current drought map for the U.S. West shows 72% of the West in some stage of abnormally dry to drought conditions. In Wyoming, 55% of the state is in some stage of abnormally dry to drought conditions, compared to 18% at this date last year. Dry conditions in Wyoming track across the northern and eastern tiers of the state, with “Abnormally Dry” impacts in the majority of the Teton Dispatch area.

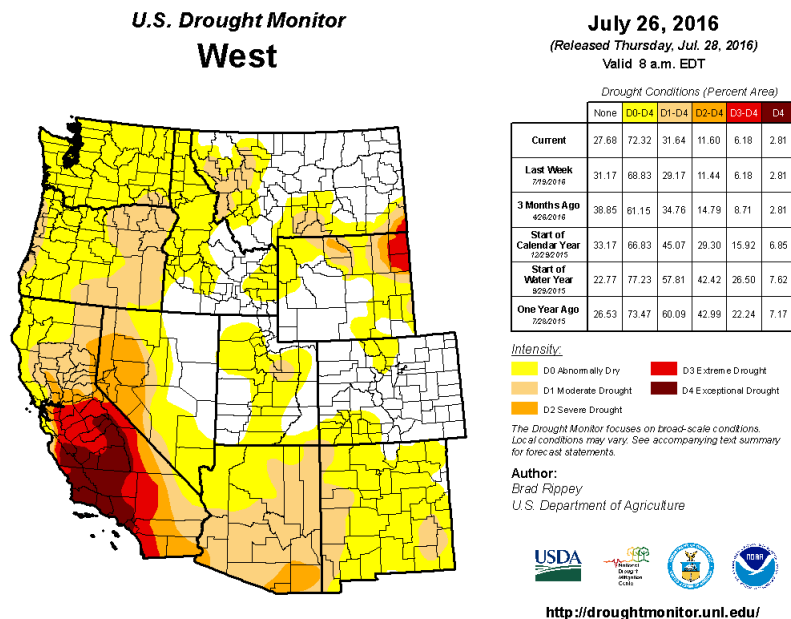
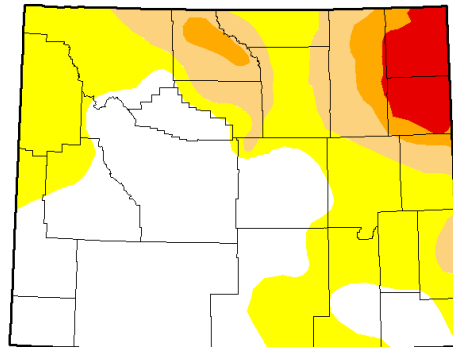


Figure 2a. U.S. Drought Monitor – West.
<http://droughtmonitor.unl.edu/Home/RegionalDroughtMonitor.aspx?west>

U.S. Drought Monitor Wyoming

July 26, 2016
(Released Thursday, Jul. 28, 2016)
Valid 8 a.m. EDT



	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	44.56	55.44	20.74	8.95	4.77	0.00
Last Week 7/19/2016	56.68	43.32	16.99	7.81	4.77	0.00
3 Months Ago 4/26/2016	60.40	39.60	6.95	1.73	0.00	0.00
Start of Calendar Year 1/1/2016	38.46	61.54	4.25	0.00	0.00	0.00
Start of Water Year 9/26/2015	60.81	39.19	0.48	0.00	0.00	0.00
One Year Ago 7/26/2015	81.65	18.35	0.54	0.00	0.00	0.00

Intensity
 D0 Abnormally Dry D3 Extreme Drought
 D1 Moderate Drought D4 Exceptional Drought
 D2 Severe Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

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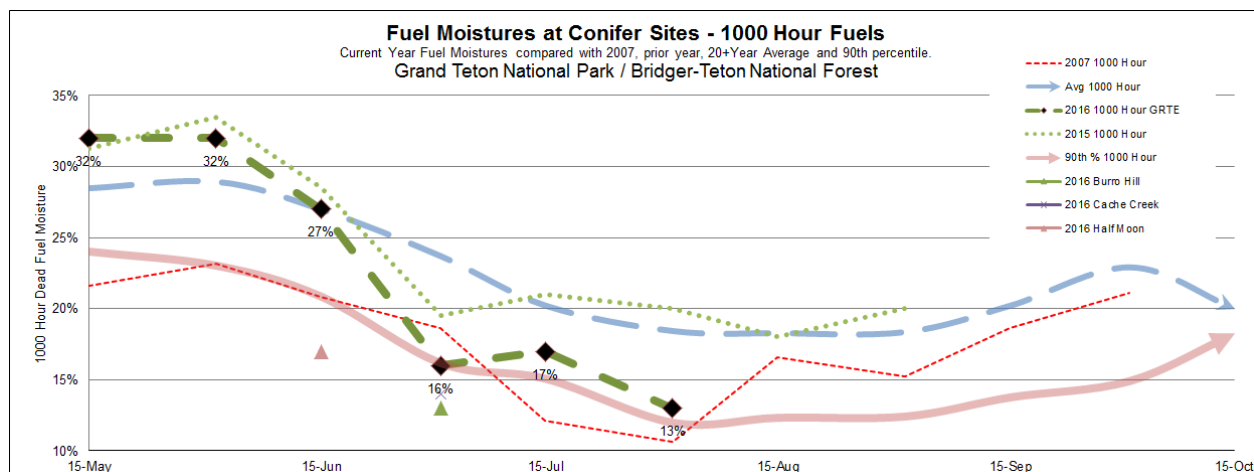
<http://droughtmonitor.unl.edu/>

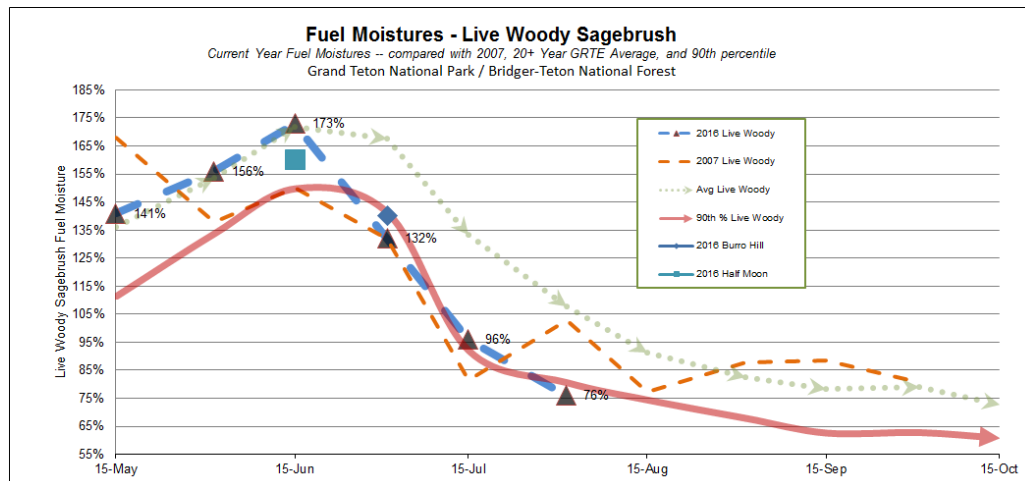
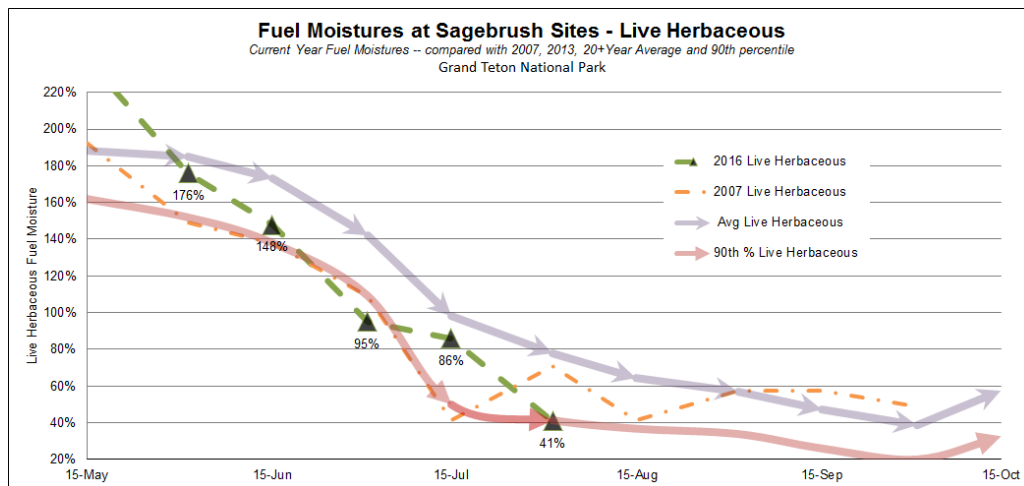
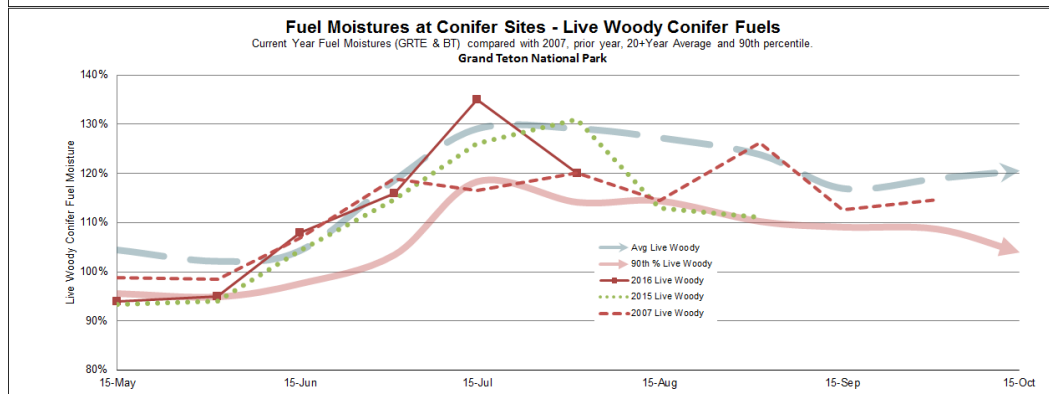
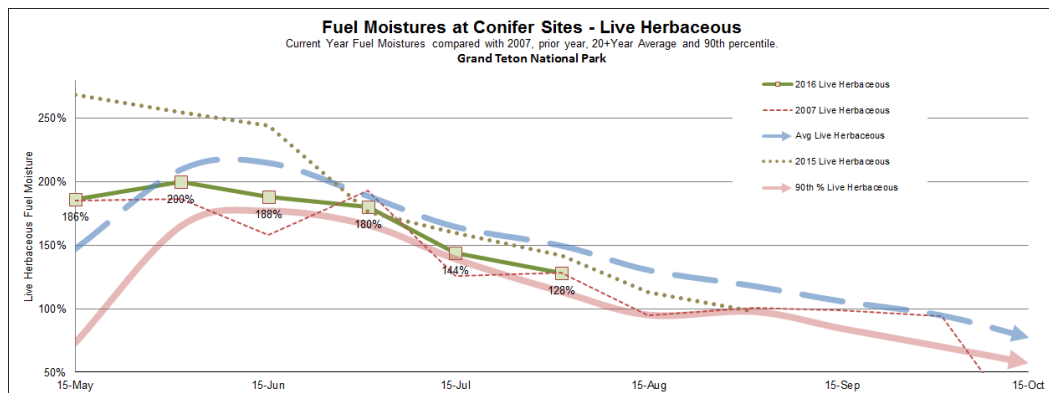
Figure 2b. U.S. Drought Monitor – Wyoming.
<http://droughtmonitor.unl.edu/Home/StateDroughtMonitor.aspx?WY>

(3) Fuel Moisture

Fuel moisture sampling of live and dead fuels at long-term sampling sites in Grand Teton National Park indicate a drying trend in sagebrush fuels and less so in conifer fuels. In sagebrush, both live herbaceous and live woody are tracking at the 90th percentile (the driest 10 %) compared to average moisture for August 1. In conifer fuels, 1000 hour fuels (dead/downed logs) are also at the 90th percentile (driest 10 %) and live herbaceous and live woody are trending drier than average. Samples in Bridger-Teton are trending comparably, with additional data to be added. For current fuel moistures and additional tracking of park and forest fuels, see the National Fuel Moisture Database for Wyoming
<http://www.wfas.net/index.php/national-fuel-moisture-database-moisture-drought-103>.

- NOTE: For all graphs below, the 90th percentile is the lower, solid red line. 1000 Hour Fuels (first graph below) demonstrate a trend throughout the Dispatch area of long-term drying in these fuels. In live fuels, most sample types are at or trending toward the 90th percentile/driest 10 % of fuel conditions for August, though live-herbaceous and live-woody in conifers are between 50th and 90th percentiles.





(4) Long-term Temperature and Precipitation Outlook

Outlooks from the Climate Prediction Center reflect a transition from El Niño to La Niña conditions as we move from summer into fall, with potential impacts on the US West. The 30- and 90-day outlooks for August-September-October indicates an increased probability for above normal temperature. The precipitation outlook places Western Wyoming in a normal precipitation zone between drier-than-normal precipitation along the west edge of the Teton Dispatch area and wetter than normal to our east and north. (<http://www.cpc.ncep.noaa.gov/products/predictions/90day/>).

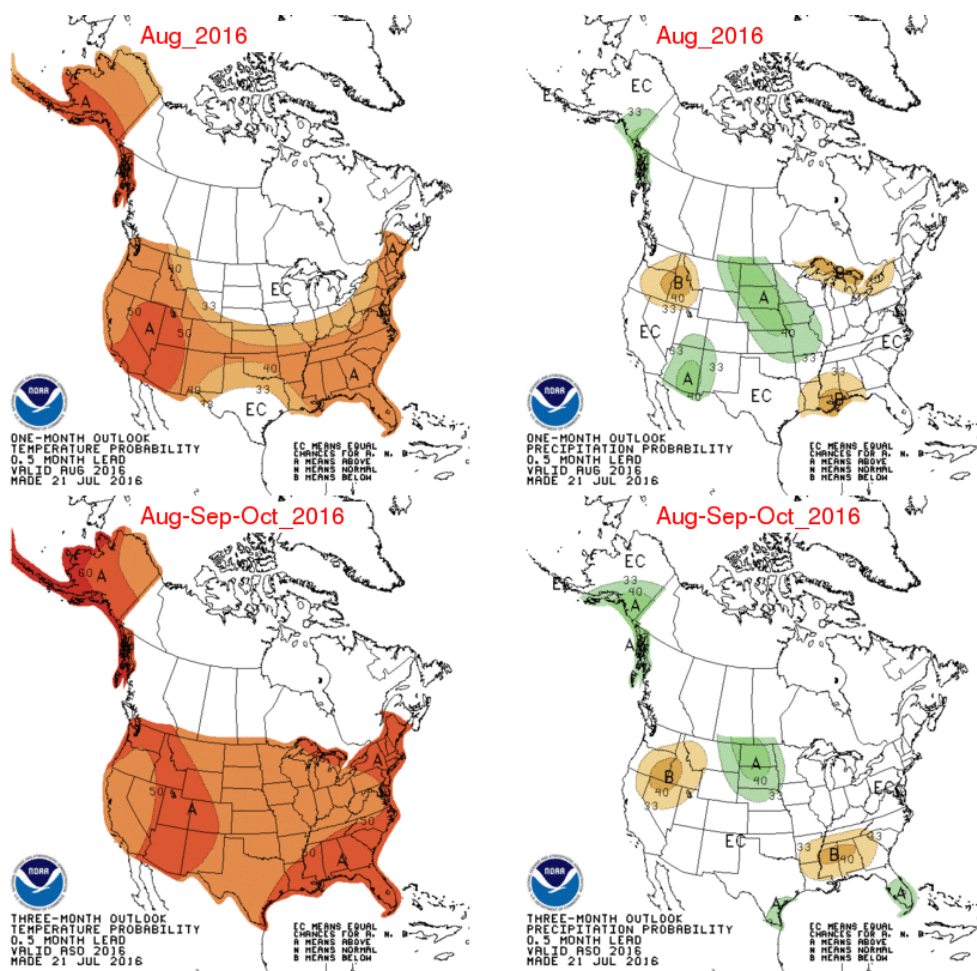


Figure 4: Temperature and Precipitation Outlook for August and August-September-October Outlook (http://www.cpc.ncep.noaa.gov/products/predictions/multi_season/13_seasonal_outlooks/color/page2.gif)

GEOGRAPHIC AREA OUTLOOKS

The Teton Area fire zone is within the Great Basin Geographic Area. Fire seasons in our zone also track with similar conditions in adjacent areas within the Rocky Mountain and Northern Rockies geographic areas, which converge within the Greater Yellowstone Area (GYA) and share common trends of fire activity.

The season outlooks excerpted below support an outlook for normal fire activity in the Teton Interagency Dispatch zone and neighboring units, with potential for above-normal fire activity in northern and western areas of the Great Basin geographic area. Neutral El Niño conditions will shift to weak La Niña conditions in the fall, which will likely support normal wildfire potential with a potential for the fire season extending later than normal.

Excerpts of National and Regional Outlooks from “National Wildland Significant Fire Potential Outlook” (July 1, 2016, NIFC Predictive Services). http://www.nifc.gov/nicc/predictive/outlooks/monthly_seasonal_outlook.pdf.

National > Season Trend (excerpts)

- For August, significant wildland fire potential will continue to be focused in the finer fuel and brush areas of California and the Great Basin with some expansion into Oregon, Montana and Wyoming. Primary concerns continue to focus on the abundant fine fuels and their ability to carry fires more effectively than in a typical year. Additionally significant mortality will increase heavy fuel availability throughout the mountains of California, while typical summer dryness will bring fire activity in the heavier fuels of the Northwest, Northern Rockies, Rocky Mountains and Great Basin up to normal levels. Furthermore, the Southwest, Rocky Mountains and southern Great Basin will see an intermittent monsoon which will continue some level of fire activity in those areas.

Weather and Climate Outlooks

- El Niño-Southern Oscillation (ENSO) conditions remain near neutral across the equatorial Pacific Ocean. The latest model forecasts suggest a continued trend toward a weak La Niña pattern by winter.

Fuel Conditions and Fire Season Timing

- Robust fine fuel crops will continue to drive the significant fire potential across the Great Basin and California. These fine fuel crops will lead to periods of increased fire activity, larger fires and more rapid rates of spread throughout fire season especially when associated with dry and windy periods.

Great Basin

- Significant wildland fire potential is expected to continue above normal for the northern portions of the Great Basin, including northern Utah, northern Nevada and Idaho in August and return to normal in September.
- By the end of July, ERCs across most areas were near or above the 90th percentile. Only the northwestern areas and southeastern Utah were lower where significant precipitation fell early in the month. Grasses and finer fuels in lower elevations cured and live fuel moisture was below normal in most areas and near record dry levels in some areas. Fire activity steadily picked up during the month, with large fires occurring in Utah and Nevada early in the month and in southern Idaho and western Wyoming by the latter half of the month.
- A weak, inconsistent monsoon is expected to continue through August, meandering across the southern half of the Great Basin. Of more significance, dry conditions are expected to continue across Idaho and Wyoming where fuels are drier-than-normal. Temperatures are expected to be near normal for August.
- Significant fire potential should be above normal across most central and northern areas.
- Climate outlooks for September into October indicate a prolonged warm and dry period for most of the Great Basin, including northern Idaho and western Wyoming. This should maintain above normal significant fire potential going into September. However, even above normal warmth and dryness cannot overcome the longer nights and sharply decreased lightning activity through September. For this reason, expect any above normal fire activity at the start of September to trend toward normal during the latter half of September.

CURRENT FIRE ACTIVITY

Fire Activity: Teton Interagency Dispatch Center

Early season wildland fire activity is trending comparable to other years with wet springs, with slightly more acres than in recent years.

Table 2: Year-to-Date Fire Activity for Dispatch Center response zones, August 1, 2016.

([http://gacc.nifc.gov/gbcc/dispatch/wy-tdc/documents/predictive-services/intelligence/BTF GRTE Fire Numbers 2016.xlsx](http://gacc.nifc.gov/gbcc/dispatch/wy-tdc/documents/predictive-services/intelligence/BTF_GRTE_Fire_Numbers_2016.xlsx))

Teton Interagency Fire Management Area Totals	Human Fires	Human Acres	Natural Fires	Natural Acres	RX Fires	RX Acres	Abandoned Non-escape Campfires
	7	.88	10	26831	114	208	90

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Selected Sources

- Precipitation Tracking: <http://water.weather.gov/precip/>
- Snow / Snotel Tracking: <http://www.wcc.nrcs.usda.gov/snotel/Wyoming/wyoming.html>
- Climate Prediction Center, Three-Month Outlooks:
<http://www.cpc.ncep.noaa.gov/products/predictions/90day/>
- *Regional outlooks from “National Wildland Significant Fire Potential Outlook” (June 1, 2016, NIFC Predictive Services):*
http://www.nifc.gov/nicc/predictive/outlooks/monthly_seasonal_outlook.pdf.
- Great Basin Predictive Services/Outlooks: <http://gacc.nifc.gov/gbcc/outlooks.php>.
- Teton Interagency Fire and Dispatch Center: <http://www.tetonfires.com>.