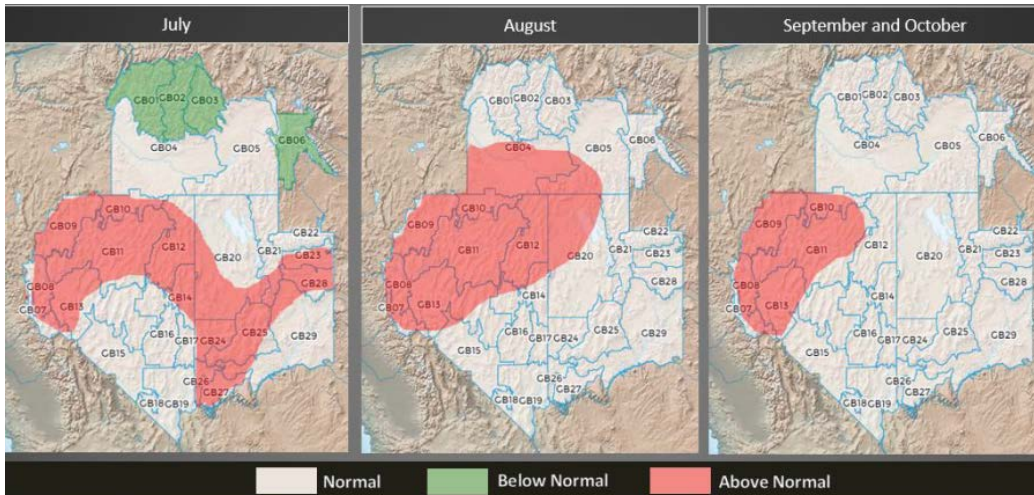
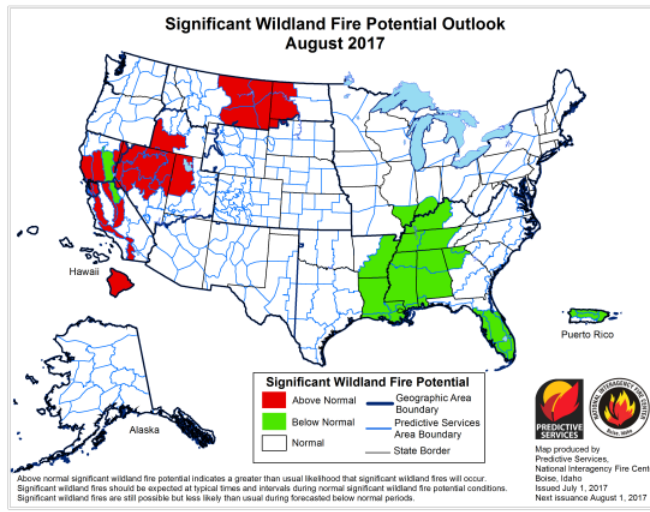


# TETON INTERAGENCY FIRE JULY 2017 WILDLAND FIRE OUTLOOK

July 7, 2017



(Top) [NIFC - Significant Wildland Fire Potential August 2017](#) (issued July 1). (Bottom) [Large Fire Potential July through September 2017](#) (issued July 1 by Great Basin Coordinating Center. [GBCC Monthly Outlook](#)).

## SUMMARY

Fire season outlooks for the Teton Interagency Dispatch area and for the Great Basin Geographic Area reflect the continuing effect of a record winter snowpack, with an outlook for below-normal fire activity in the dispatch area for July and normal fire activity for August and September.

As we enter full summer, the 30- and 90-day outlooks have changed some since the prior June TIDC outlook – now the outlooks are calling for above-normal temperatures predicted during the most active July-September and with equal chances of below-normal, normal or above-normal precipitation.

Regional outlooks (as of July 1) indicate below-normal fire activity July in the Teton Interagency response area, with potential for normal fire activity the rest of Wyoming. Normal fire activity is projected for August and September.

During a normal season, Bridger-Teton National Forest will have 67 fires for 3290 acres (40-year average from 2016) and Grand Teton National Park will average 11 unplanned fires for 1858 acres (based on a 20-year fire history, 1997-2016).

# CLIMATE AND FUELS OUTLOOK

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

Area precipitation for the water year to date (October through June) may reflect the earlier impact of weak La Niña conditions, with record moisture overall for the area. Precipitation tracking at the [Moose weather station](#), which is representative for lower elevation sites in Grand Teton National Park and some North Zone sites, recorded seven of nine months above average for the water year to date.

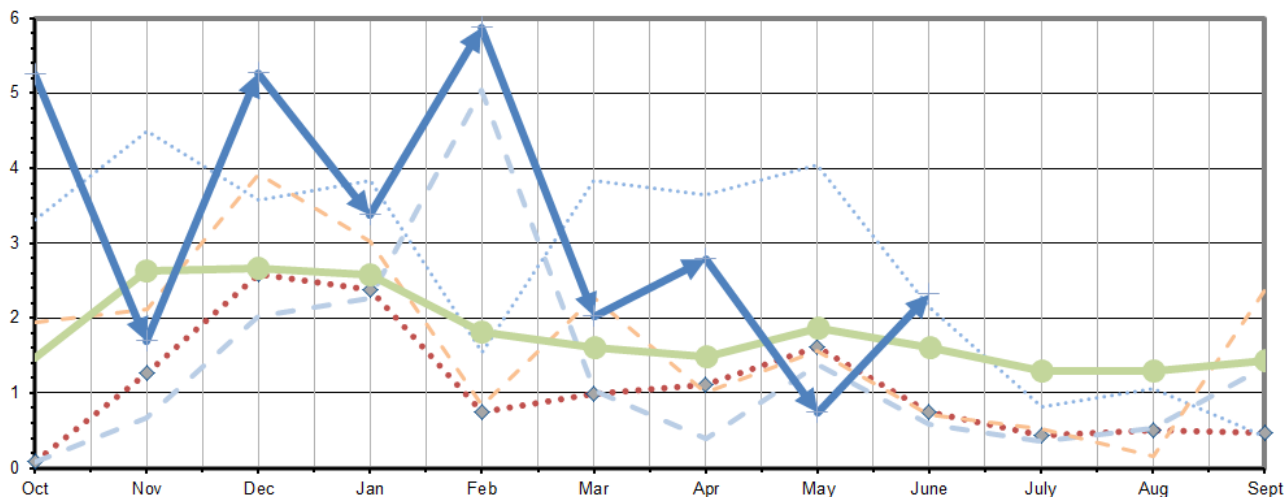
For area-wide moisture, June (Figure 2a) and the past 90 days (Figure 2b) display wetter than normal trend on the west and drier toward the eastern area of the Dispatch region. The wet trend is notable in precipitation tracking at Moose (Table 2 and Graph), where year-to-date moisture is 167% of normal and June was 145% of normal.

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

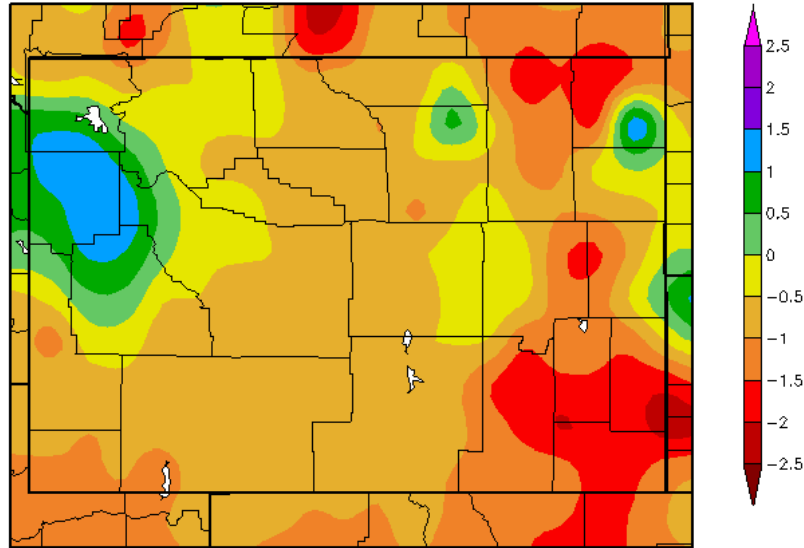
|  |                | Oct         | Nov        | Dec         | Jan         | Feb         | Mar         | Apr         | May         | June        | YTD total    |
|--|----------------|-------------|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| <b>Monthly Precipitation</b><br>(inches) | 1987-88        | 0.09        | 1.27       | 2.59        | 2.37        | 0.75        | 0.99        | 1.12        | 1.61        | 0.75        | 11.54        |
|  | 1999-00        | 0.08        | 0.67       | 2.03        | 2.27        | 5.04        | 1.03        | 0.4         | 1.38        | 0.59        | 13.49        |
|  | 2010-11        | 3.31        | 4.5        | 3.57        | 3.84        | 1.54        | 3.84        | 3.64        | 4.04        | 2.16        | 30.44        |
|  | 2015-16        | 1.94        | 2.11       | 3.93        | 3.02        | 0.83        | 2.28        | 1           | 1.57        | 0.72        | 17.4         |
|  | Normal         | 2.58        | 1.82       | 1.62        | 1.49        | 1.88        | 2.58        | 1.82        | 1.62        | 1.61        | 17.78        |
|  | <b>2016-17</b> | <b>5.25</b> | <b>1.7</b> | <b>5.27</b> | <b>3.39</b> | <b>5.88</b> | <b>2.03</b> | <b>2.79</b> | <b>0.74</b> | <b>2.33</b> | <b>29.38</b> |
| <b>Percent of NORMAL</b>                 | 1987-88        | 6%          | 60%        | 102%        | 92%         | 40%         | 63%         | 75%         | 84%         | 47%         | 70%          |
|  | 1999-00        | 6%          | 32%        | 80%         | 88%         | 267%        | 66%         | 27%         | 72%         | 37%         | 83%          |
|  | 2010-11        | 225%        | 170%       | 134%        | 149%        | 85%         | 237%        | 244%        | 215%        | 134%        | 175%         |
|  | 2015-16        | 132%        | 80%        | 147%        | 117%        | 46%         | 141%        | 67%         | 84%         | 45%         | 103%         |
|  | <b>2016-17</b> | <b>357%</b> | <b>64%</b> | <b>197%</b> | <b>131%</b> | <b>323%</b> | <b>125%</b> | <b>187%</b> | <b>39%</b>  | <b>145%</b> | <b>167%</b>  |

### Monthly Precipitation Moose Weather Station

◆ 1987-1988      - - - 1999-2000      ⋯ 2010-2011  
- - - 2015-2016      ● NORMAL      ➔ 2016-2017



Departure from Normal Precipitation (in)  
6/6/2017 – 7/5/2017



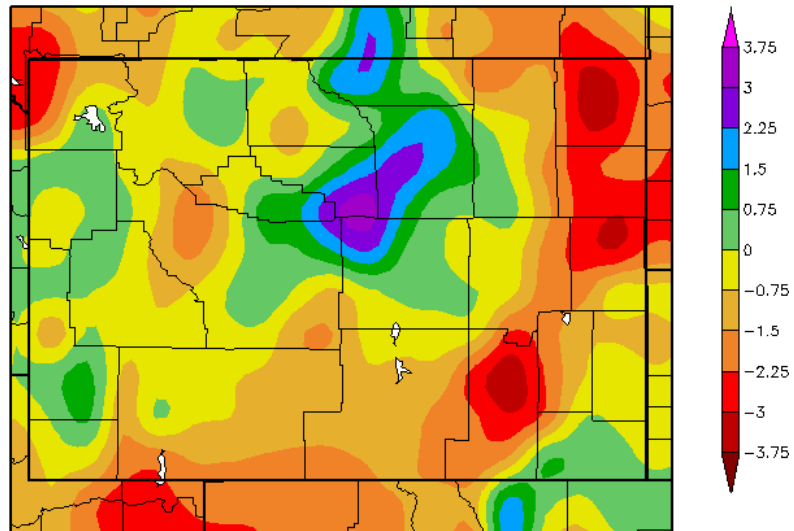
Generated 7/6/2017 at HPRCC using provisional data.

Regional Climate Centers

*Figure 2a.* Wyoming, Current Precipitation – Departure from Normal -- for June (the past 30 days ending July 5, 2017), Western Wyoming exhibits above-normal precipitation compared to normal for the prior 30 days, and is wetter than most of Wyoming. Much of this moisture fell as rain in early- and mid-June and, when combined with snowmelt, resulted in high-water damage to area roads.

[NRCS - Departure from Normal - Wyoming - Permalink.](#)

Departure from Normal Precipitation (in)  
4/7/2017 – 7/5/2017



Generated 7/6/2017 at HPRCC using provisional data.

Regional Climate Centers

*Figure 2b.* This moisture pattern is drier when reviewing the past 90 days of Precipitation – Departure from Normal, with a range of slightly below and above normal precipitation zones.

<https://hprcc.unl.edu/products/maps/acis/hprcc/wy/90dPDeptHPRCC-WY.png>

**(3) Drought Monitor**

The current drought map for the U.S. West shows 75% of the West with no drought conditions, compared to 65% exhibiting some drought conditions at this time last year. In Wyoming, 79% of the state has no drought conditions, compared to 69% exhibiting no drought conditions at this time last year.

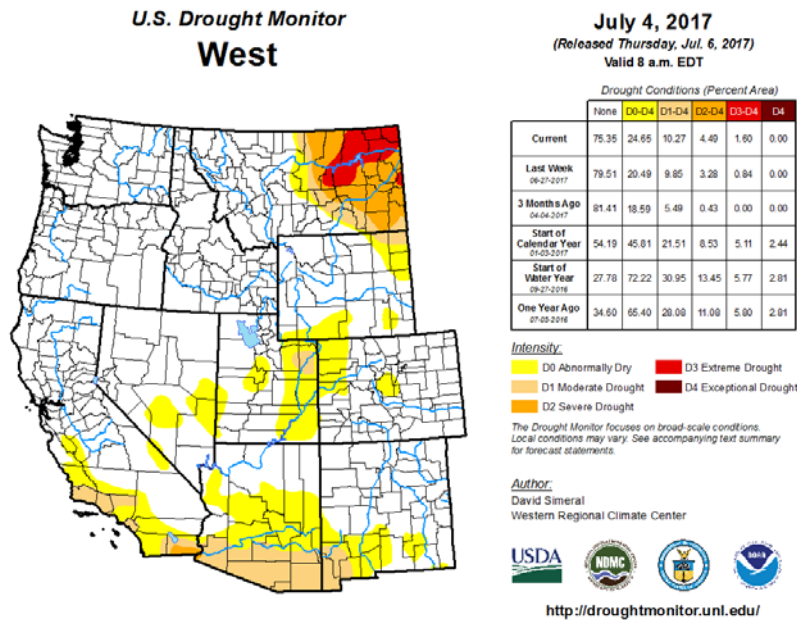


Figure 3a. U.S. Drought Monitor – West.  
<http://droughtmonitor.unl.edu/Home/RegionalDroughtMonitor.aspx?west>

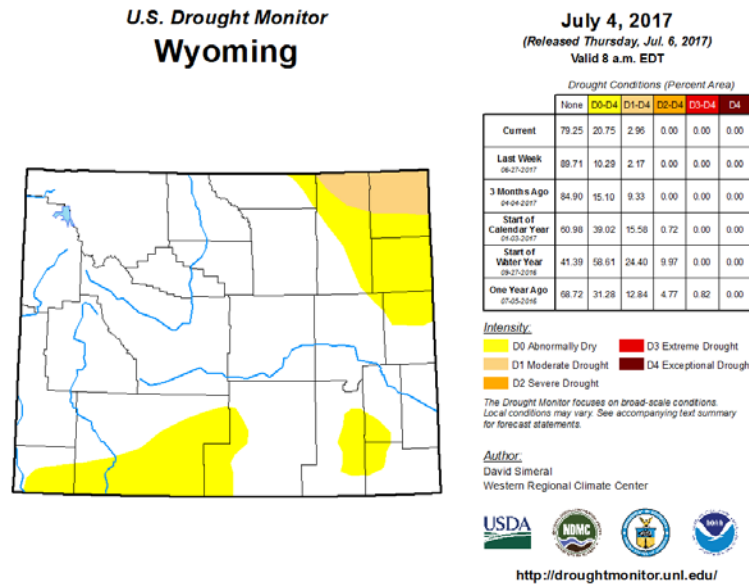


Figure 3b. U.S. Drought Monitor – Wyoming.  
<http://droughtmonitor.unl.edu/Home/StateDroughtMonitor.aspx?WY>

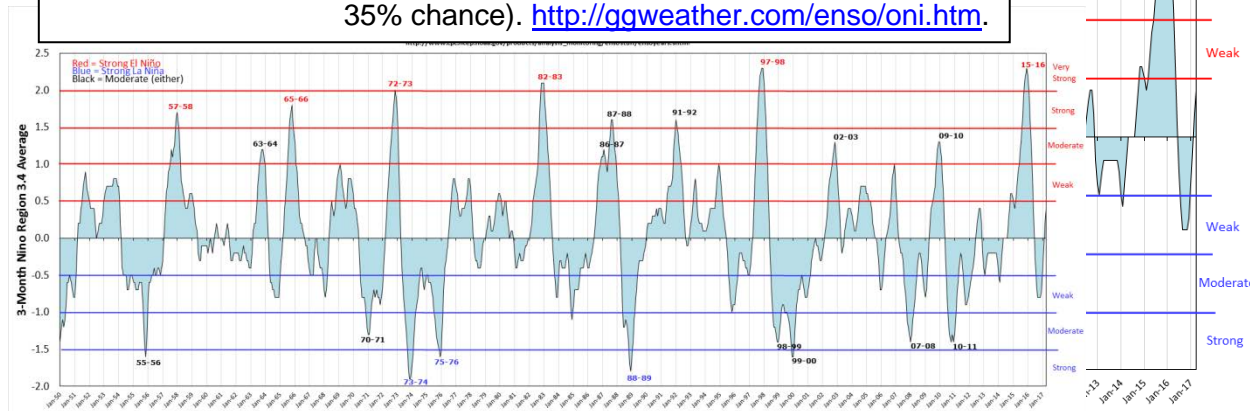
**(4) Oceanic Niño Index (for tracking El Niño / La Niña / ENSO-Southern Oscillation)**

BACKGROUND: The Oceanic Niño Index (ONI) (<http://ggweather.com/enso/oni.htm>) offers a streamlined tool for tracking El Niño (warm) and La Niña (cool) events in the tropical Pacific. During 2015-16, strong El Niño conditions persisted for 15 months, comparable if not stronger than the prior El Niño conditions in 1997-1998, which lasted 13 months. In summer 2016 we transitioned to ENSO-neutral followed by an eight-month (June 2016 through January 2017) period of weak La Niña conditions.

Analogue years for these conditions correlate these weak La Niña conditions with dry summer extremes and wet winter extremes, which we experienced during this past La Niña.

CURRENT STATUS: We are currently in ENSO-neutral condition and ENSO-Neutral is favored (50 to ~55% chance) through the Northern Hemisphere through fall 2017. Monthly are at <http://www.cpc.ncep.noaa.gov/products/precip/CWlink/MJO/enso.shtml>.

*Figure 4a. Oceanic Niño Indicator tracks the strong El Niño conditions of 2015-2016 and transition to La Niña conditions in the summer-fall 2016 / winter 2017, which may be linked to the transition from last year's dry summer to the warmer and wetter winter of 2016-2017. ZOOM on right: A potential shift this summer from weak La Niña to neutral conditions (50-55% chance) or weak El Niño conditions (30-35% chance).* <http://ggweather.com/enso/oni.htm>.



**El Niño/ENSO Impacts:** A forecasted shift to either neutral ENSO conditions or a return to El Niño conditions in the Pacific Ocean has been correlated with national and regional weather extremes (and thus fire activity). Monthly and seasonal risk assessment maps from the Desert Research Institute offer a visual analyses of this risk (Figure s 4b/4c, <http://www.wrcc.dri.edu/enso/ensorisk/index.html>).

For Wyoming, the ENSO Climate Risk maps during El Niño conditions (should those occur) indicate a normal or decreased risk of “dry extremes” for July-August-September and a normal to decreased risk for warm extremes. However, it is unclear when or if effects from shifting neutral to El Niño conditions will have impact. For additional ENSO background, see [http://www.cpc.ncep.noaa.gov/products/analysis\\_monitoring/lanina/enso\\_evolution-status-fcsts-web.pdf](http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/lanina/enso_evolution-status-fcsts-web.pdf).

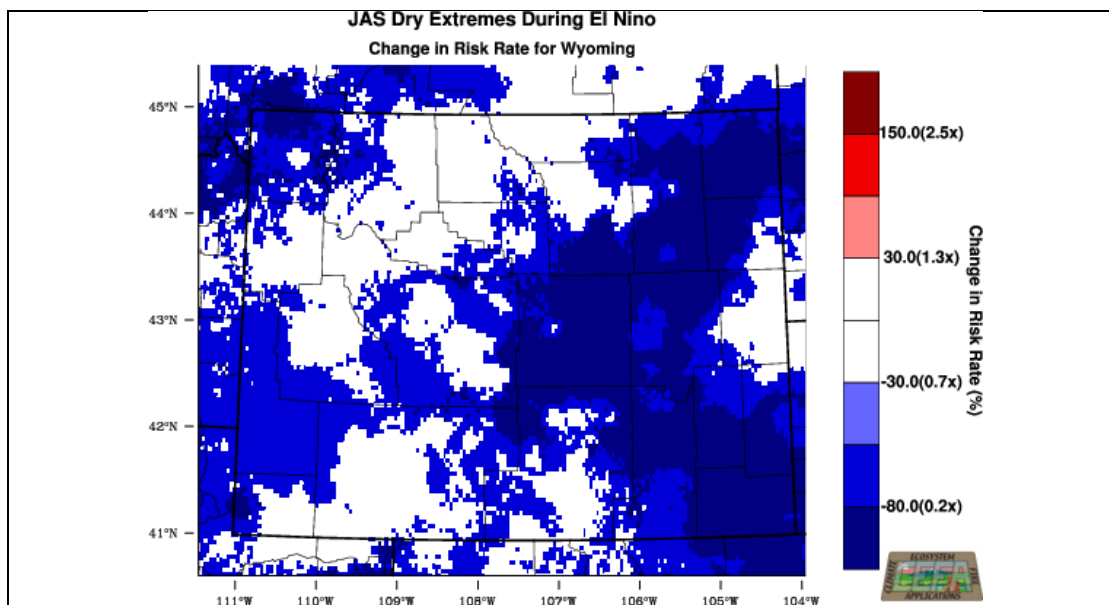




Figure 4b: ENSO Climate Risk, Desert Research Institute. **Dry Extremes less likely**, July-Aug-Sept. <http://www.wrcc.dri.edu/enso/ensorisk/lanina/precip/aso/index.html>

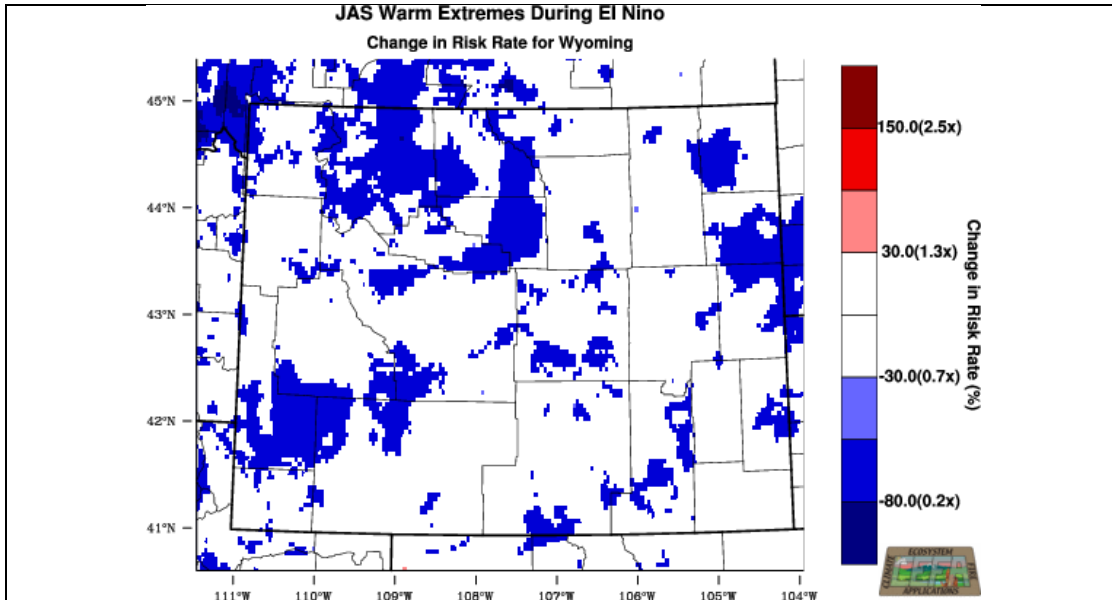


Figure 4c: ENSO Climate Risk, Desert Research Institute. **Warm Extremes normal or less likely** for July-Aug-Sept. <http://www.wrcc.dri.edu/enso/ensorisk/lanina/temp/jas/index.html>

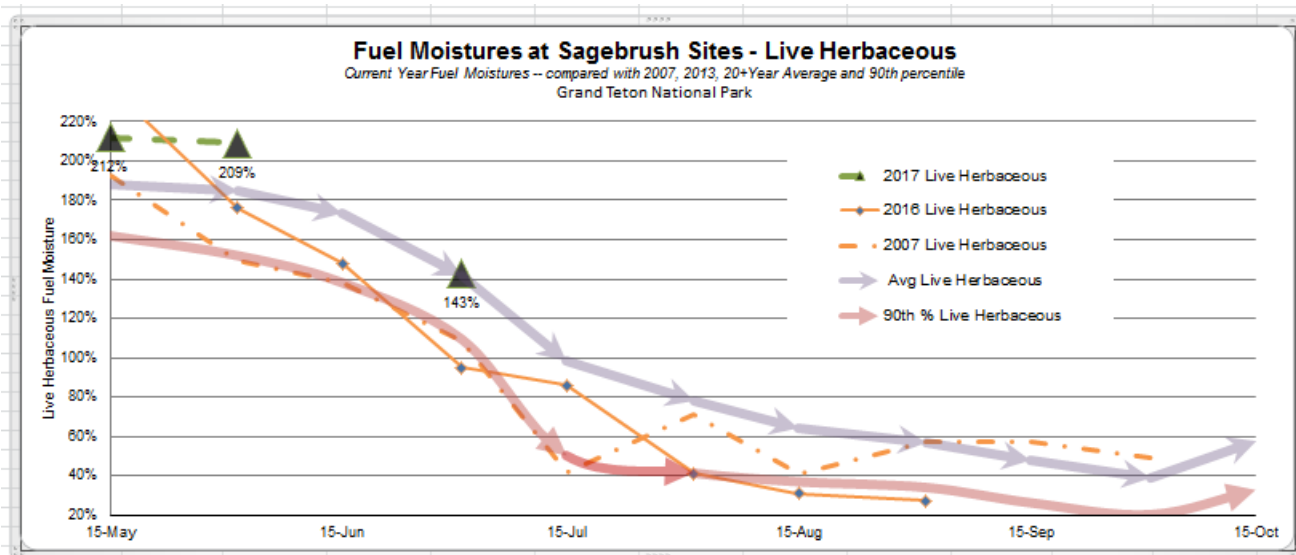
### (5) Fuel Moisture

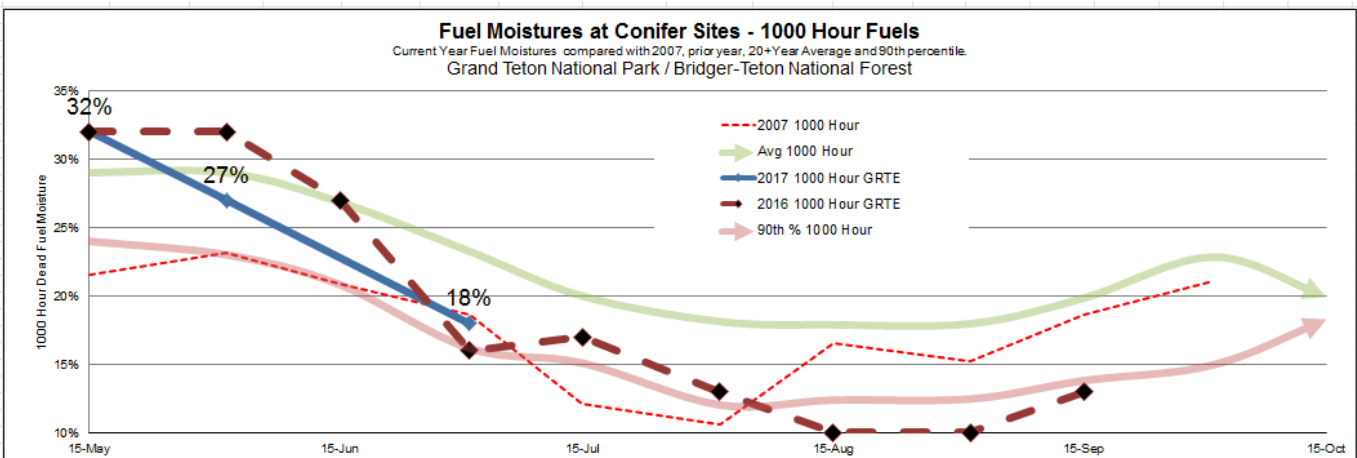
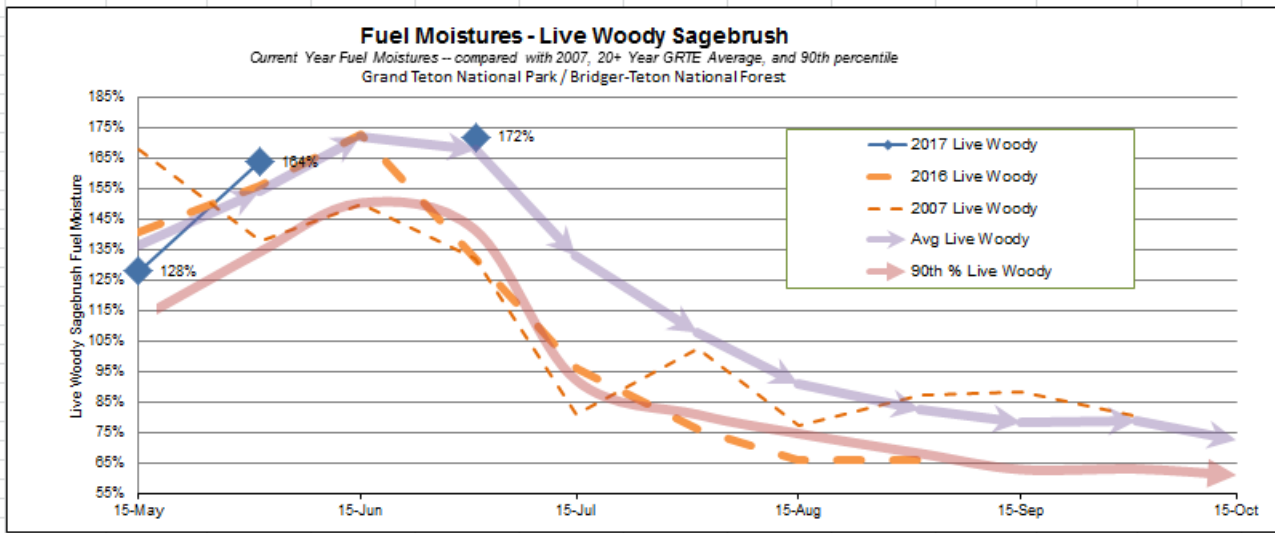
Fuel moisture sampling continues in Bridger-Teton National Forest and Grand Teton National Park.

On Bridge-Teton NF sampling sites, 1000 hour fuels averaged 23%, and at Grand Teton the 1000 hour fuels averaged 18%.

At long-term sampling stations in Grand Teton National Park, a wetter than average June is reflected in above average early season fuel moistures, now beginning to moderate toward normal ranges in both sagebrush and forest sample sites in the park (see charts below).

Additional fuel moisture data is available at the National Fuel Moisture Database: this link is for [fuel moistures in Bridger-Teton NF and Grand Teton NP](#).

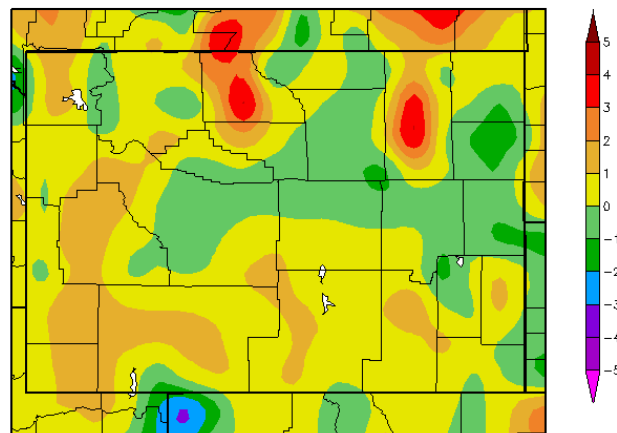




**(6) Long-term Temperature and Precipitation Trends and Outlook**

**WARMER SPRING** into **EARLY SUMMER**. May and June were warmer than normal in the Teton Interagency area.

Departure from Normal Temperature (F)  
5/7/2017 - 7/5/2017



Generated 7/6/2017 at HPRCC using provisional data.

Regional Climate Centers

Figure 6a. Departure from Normal Temperature, Wyoming, past 60 days ending July 5, 2017 (Water Year-to-Date). <https://hprcc.unl.edu/products/maps/acis/hprcc/wy/60dTDeptHPRCC-WY.png>

**SEASON OUTLOOKS:** The 30- and 90-day temperature outlook (left) calls for above-normal temperature ranges throughout the summer and early fall. The precipitation outlook (right) indicates an equal probability for below, normal or above normal moisture for the next three months. ([http://www.cpc.ncep.noaa.gov/products/predictions/multi\\_season/13\\_seasonal\\_outlooks/color/page2.gif](http://www.cpc.ncep.noaa.gov/products/predictions/multi_season/13_seasonal_outlooks/color/page2.gif)).

## TEMPERATURE

## PRECIPITATION

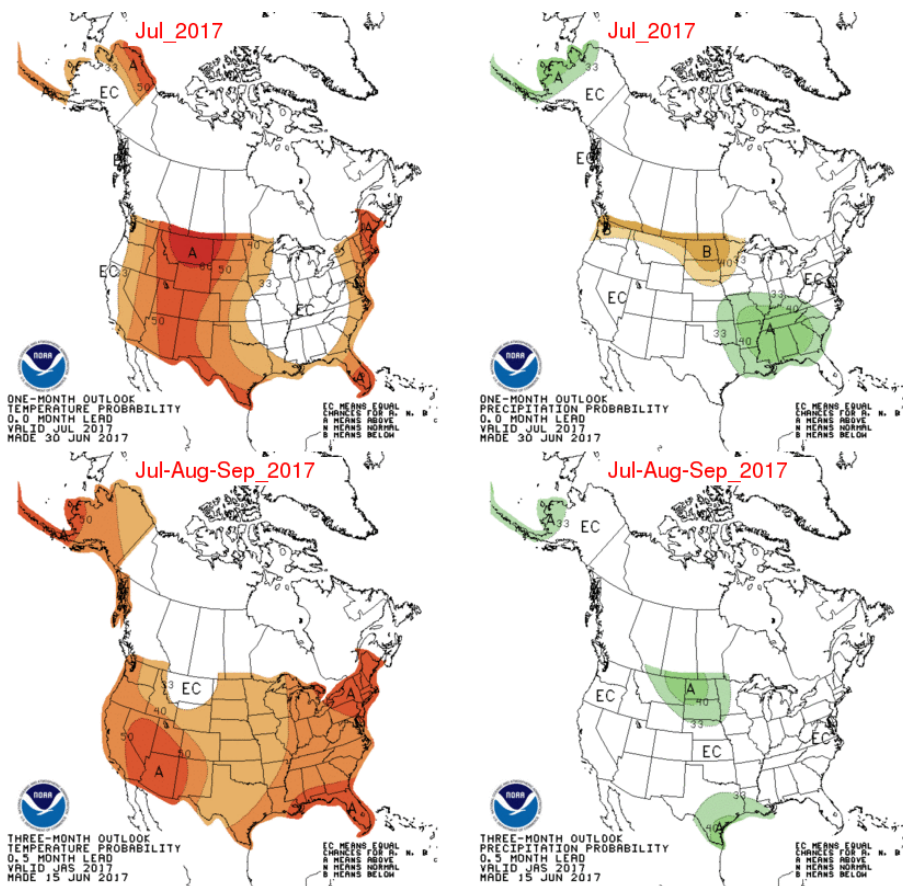


Figure 6b: July and July through September, 30- and 90-day Outlook.

## 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 below-normal fire activity in the Teton Interagency Dispatch area, with potential for above-normal fire activity in western areas of the Great Basin geographic area.

*Excerpts of National and Regional Outlooks from “National Wildland Significant Fire Potential Outlook” (July 1, 2017, NIFC Predictive Services).* [http://www.nifc.gov/nicc/predictive/outlooks/monthly\\_seasonal\\_outlook.pdf](http://www.nifc.gov/nicc/predictive/outlooks/monthly_seasonal_outlook.pdf).

**National - Weather and Climate Outlooks:** El Niño-Southern Oscillation (ENSO) continues in a slightly positive, neutral state. Latest model forecasts show existing conditions persisting through the remainder of the summer and fall into winter. Across the country, expect overall warmer than average conditions to persist into September with the highest possibility for heat events being in July and August across western portions of the Southwest and California. Due to the observed progressive nature of the current season, heat events may be of shorter duration than what is typically observed and could suggest it could also suggest that the onset of the southwestern monsoon might be slightly delayed. A higher frequency of breezy conditions across central portions of the West is also possible. Available data suggests that near average precipitation is expected



across most of the West in July and August followed by a transition to slightly wetter than average conditions for September and October.

**Great Basin:** Below Normal significant large fire potential is expected across the higher terrain of Idaho and Wyoming for July followed by Normal conditions for the remainder of the outlook period. Further south, above normal fire potential is expected across the northern half of Nevada and the southern two thirds of Utah for July and August followed by Normal conditions for Utah. Elsewhere expect Normal significant large fire potential for the outlook period.

The Great Basin saw some very dramatic extremes in the weather during the month of June with temperatures more than fifteen degrees below normal during the first half of the month, then rapidly swinging in the other direction with highs more than twenty degrees above normal a week later. Many high temperature records were set across the area during the middle of June. The entire area saw below normal precipitation with the exception of far southwestern Nevada and southern Utah.

Snowpack in the higher elevations of Idaho and Wyoming is finally diminishing, and fuels are in the curing process. Higher than normal fuel loading and continuity exist over the northern half of the Great Basin where winter and spring precipitation was heavier than normal. With the recent hot and dry weather during the second half of June, fuels have quickly dried, particularly across the southern two thirds of the Great Basin where temperatures have been the most anomalously warm. Lower elevation grasses have cured over the southern two thirds of the Great Basin and are in various states of curing across Idaho and Wyoming.

**CURRENT FIRE ACTIVITY: Teton Interagency Dispatch Center**

Wildland fire activity is light and comparable to other years with wet springs, with fewer early season acres burned than in recent years. Last year at this time TIDC had recorded 44 abandoned campfires compared to 25 to date this year.

Table 2: Year-to-Date Fire Activity for Dispatch Center response zones, July 7, 2017.

[https://gacc.nifc.gov/gbcc/dispatch/wy-tdc/documents/predictive-services/intelligence/BTF GRTE Fire Numbers 2017.xlsx](https://gacc.nifc.gov/gbcc/dispatch/wy-tdc/documents/predictive-services/intelligence/BTF_GRTE_Fire_Numbers_2017.xlsx)

| Teton Interagency Fire Management Area Totals | Human Fires | Human Acres | Natural Fires | Natural Acres | RX Fires | RX Acres | Abandoned Non-escape Campfires |
|---|-------------|-------------|---------------|---------------|----------|----------|--------------------------------|
|   | 2           | 0.2         | 1             | 0.1           | 3        | 166      | 25                             |

**Selected Sources**

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

\* \* \*

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