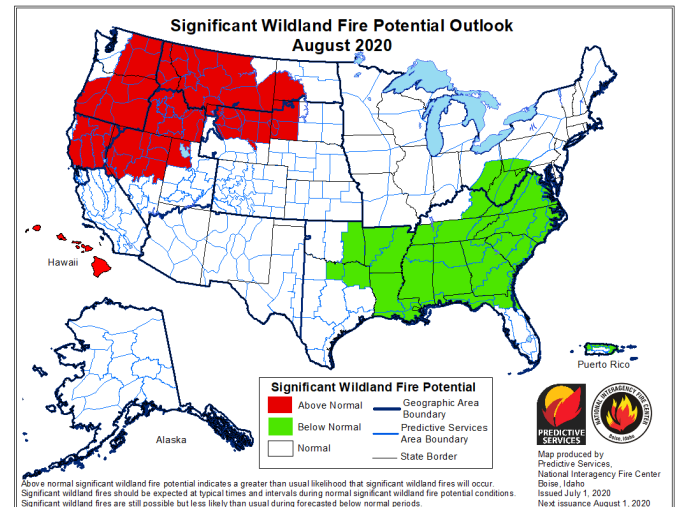
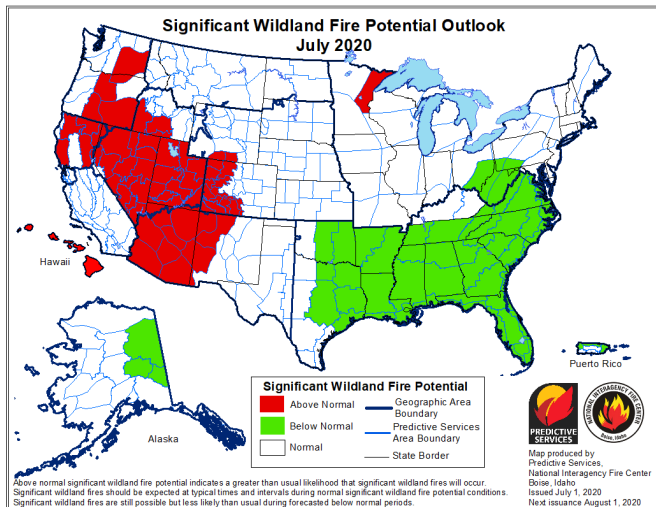


July 2020 Wildland Fire Outlook

July 9, 2020



[NIFC - Significant Wildland Fire Potential - July 2020](#) and [NIFC - Significant Wildland Fire Potential - August 2020](#) (issued July 1).

SUMMARY

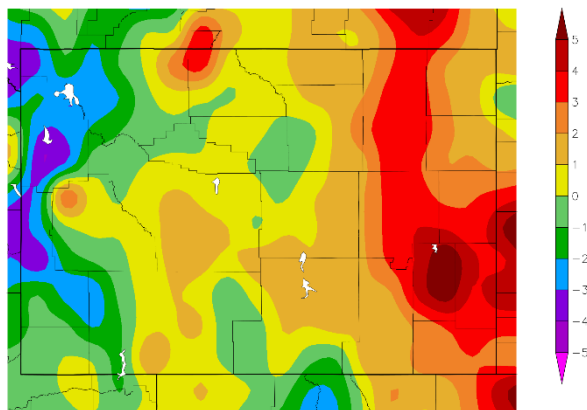
The wildland fire outlook for the Teton Interagency Dispatch area reflects the continuing effects of a wetter than normal winter, a fluctuation of drier and wetter months during green up and early summer, and cooler than normal early season conditions. A significant green fuel load may delay onset of fire activity during the season in areas that received high June moisture. This may be moderated by drier site conditions, the potential for a warmer-drier second half of summer, and a delayed and light Southwest monsoon. The outlook for the Great Basin Geographic Area indicates a mix of normal and above normal fire activity. Outlooks (as of July 1) in the Teton Interagency response area indicate **potential for normal fire activity for July and August**. 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). In the areas within our geographic dispatch area

CLIMATE AND FUELS OUTLOOK

1. 14-day and 60-day Temperatures

COOLER SPRING into EARLY SUMMER. The prior two weeks were cooler than normal in the Teton Interagency Dispatch area. The prior two months were mostly cooler than normal with some areas warmer.

Departure from Normal Temperature (F)
6/24/2020 – 7/7/2020



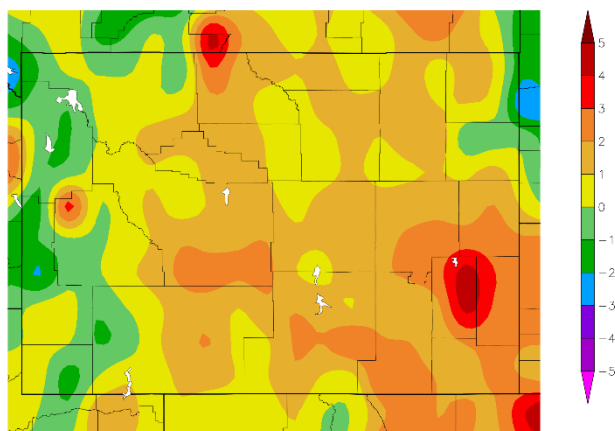
Generated 7/8/2020 at HPRCC using provisional data.

NOAA Regional Climate Centers

Figure 1a. 14-Day Departure from Normal Temperature, Wyoming, ending July 7, 2020.

<https://hprcc.unl.edu/products/maps/acis/hprcc/wy/14dTDeptHPRCC-WY.png>

Departure from Normal Temperature (F)
5/9/2020 – 7/7/2020



Generated 7/8/2020 at HPRCC using provisional data.

NOAA Regional Climate Centers

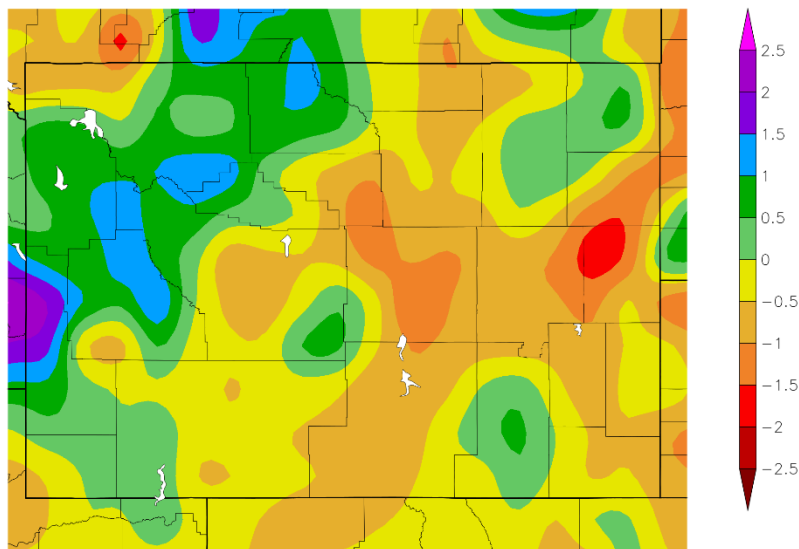
Figure 1b. 60-Day Departure from Normal Temperature, Wyoming, ending July 7, 2020.

<https://hprcc.unl.edu/products/maps/acis/hprcc/wy/60dTDeptHPRCC-WY.png>

2. 30-day, 90-day, and Year-to-Date Precipitation

Area precipitation tracking for the water year to date (October through June) reflects a wetter than normal pre-season and spring.

Departure from Normal Precipitation (in)
6/8/2020 – 7/7/2020

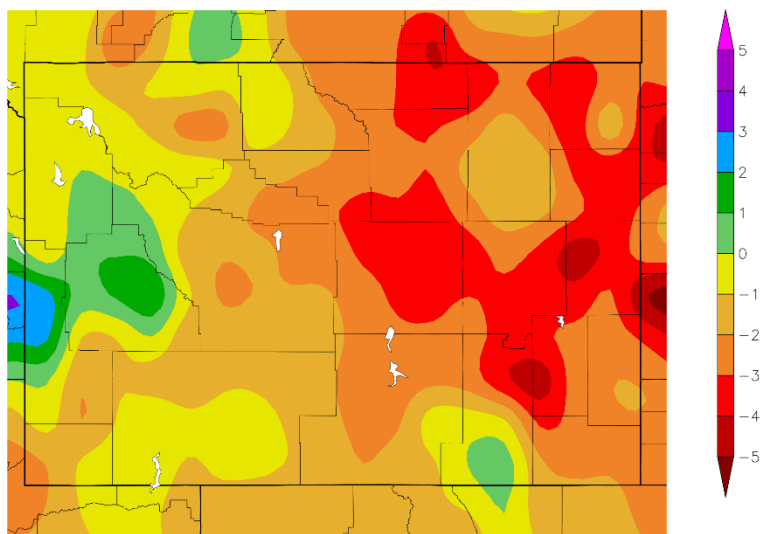


Generated 7/8/2020 at HPRCC using provisional data.

NOAA Regional Climate Centers

Figure 2a. Current Precipitation – Departure from Normal for the past 30 days ending July 7, 2020, shows Western Wyoming exhibits receiving above-normal precipitation. Wyoming in general is drier than normal in the center and east. [HPRCC - 30 Day Departure from Normal - Wyoming- Permalink](#).

Departure from Normal Precipitation (in)
4/9/2020 – 7/7/2020



Generated 7/8/2020 at HPRCC using provisional data.

NOAA Regional Climate Centers

Figure 2b. For the past 90 days of *Departure from Normal Precipitation*, the Teton Dispatch area is slightly below normal with areas wetter than normal. Wyoming is generally drier than normal. [HPRCC - 90 Day Departure from Normal - Wyoming- Permalink](#)

Precipitation tracking at the [Moose weather station \(manual\)](#) and the nearby [Moose 1 NNE](#), the regional long-term climate station in the Dispatch area, are representative of long-term trends in lower elevation sites in Grand Teton National Park and some North Zone sites. This site recorded above average precipitation for five of the past seven months. In the three months prior to July, the station received 149% of average precipitation.

		Dec	Jan	Feb	Mar	Apr	May	June	YTD total
Precipitation	1987-88	2.59	2.37	0.75	0.99	1.12	1.61	0.75	11.54
(inches)	1999-00	2.03	2.27	5.04	1.03	0.4	1.38	0.59	13.49
	2015-16	3.93	3.02	0.83	2.28	1	1.57	0.72	17.4
	2018-19	1.21	1.56	7.83	0.78	3.04	1.5	1.06	20.88
	<i>Normal</i>	1.62	1.49	1.88	2.58	1.82	1.62	1.61	17.78
	2019-20	2.16	4.09	2.36	2.43	2.78	1.52	2.9	20.39
Percent of NORMAL	1987-88	102%	92%	40%	63%	75%	84%	47%	65%
	1999-00	80%	88%	267%	66%	27%	72%	37%	76%
	2015-16	147%	117%	46%	141%	67%	84%	45%	98%
	2018-19	45%	60%	430%	48%	204%	80%	66%	117%
	2019-20	81%	159%	130%	150%	187%	81%	180%	115%

Monthly Precipitation Moose Weather Station (486428)

 2019-2020
  Normal
  2015-2016
  1987-1988

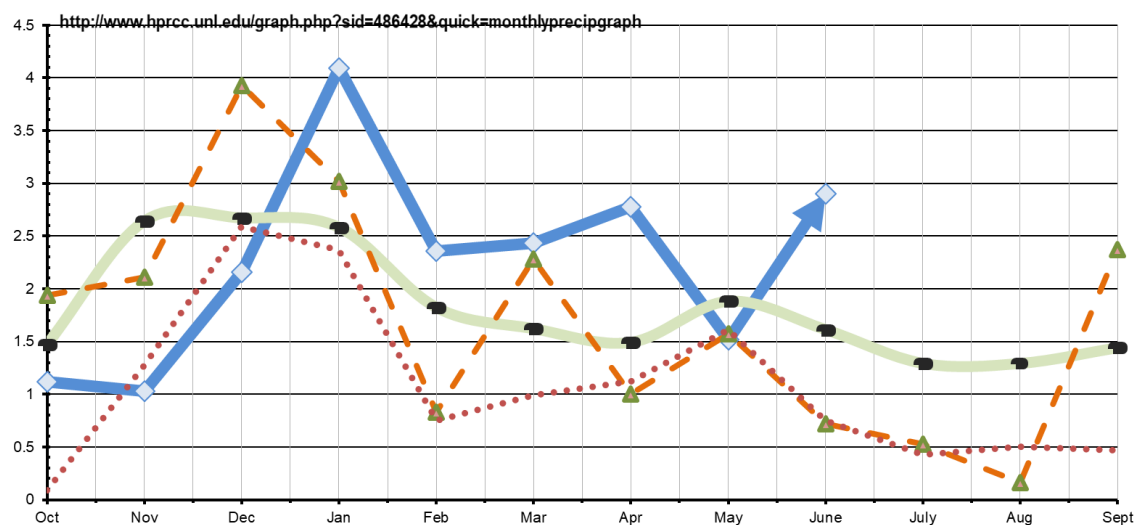


Table 2c and Graph: Precipitation at Moose Weather Station (Grand Teton National Park).

3. Drought Monitor

The U.S. Drought Monitor places 65% of the West in some level of drought conditions, compared to 13% at this time last year. While none of Wyoming is in extreme or exceptional drought, 74% of the state is in drought or abnormally dry conditions compared to no measurable drought this time last year, 16% in 2018 and 79% in 2017. The Dispatch area is primarily experiencing normal conditions with abnormally dry or moderate drought to the east and south.

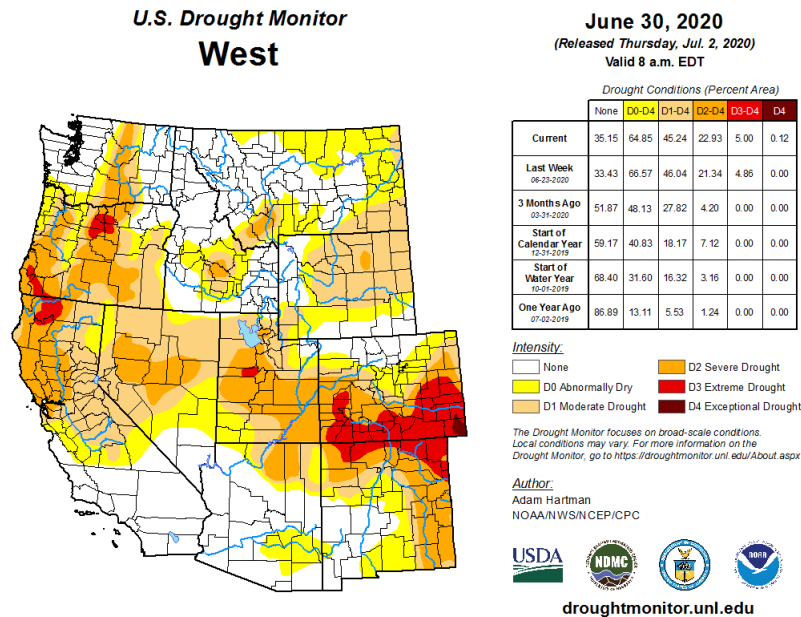


Figure 3a. U.S. Drought Monitor – West.

<https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?West>

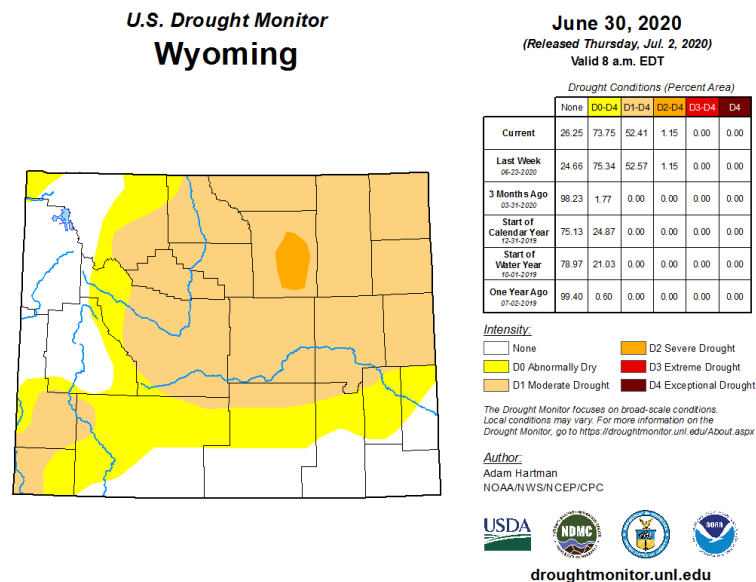


Figure 3b. U.S. Drought Monitor – Wyoming.

<http://droughtmonitor.unl.edu/Home/StateDroughtMonitor.aspx?WY>

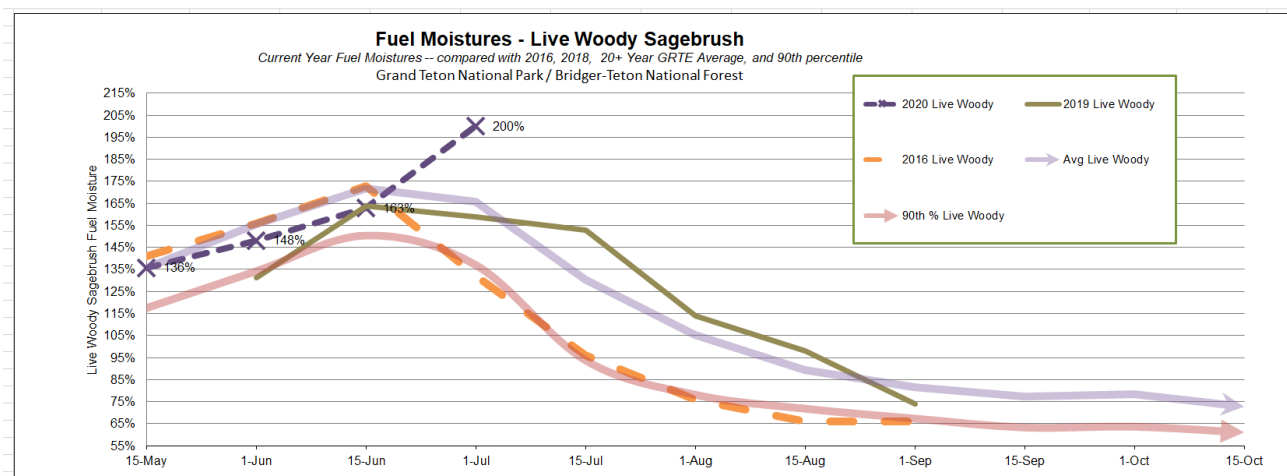
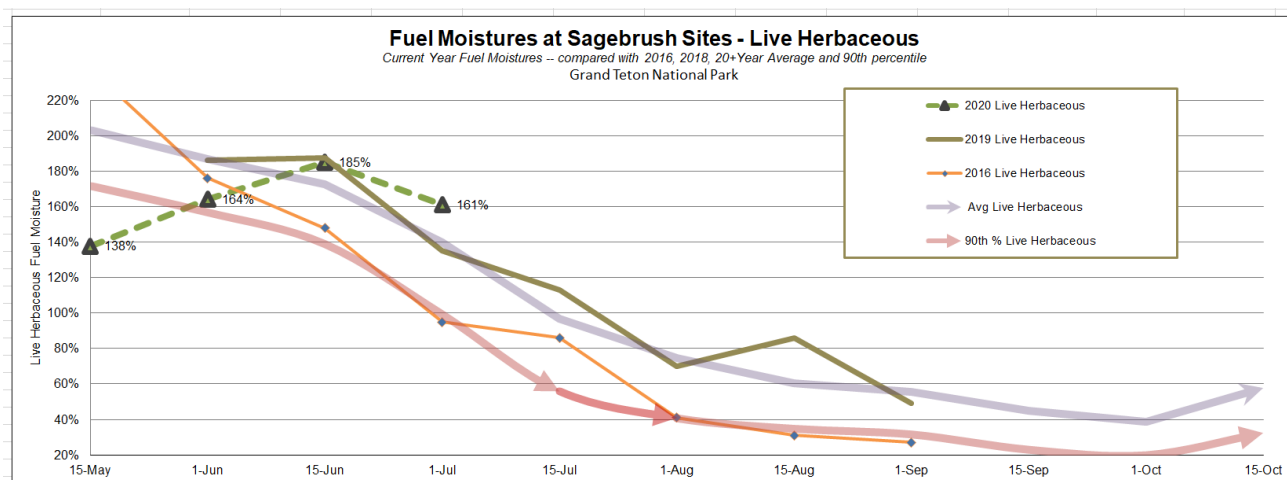
4. Fuel Moisture

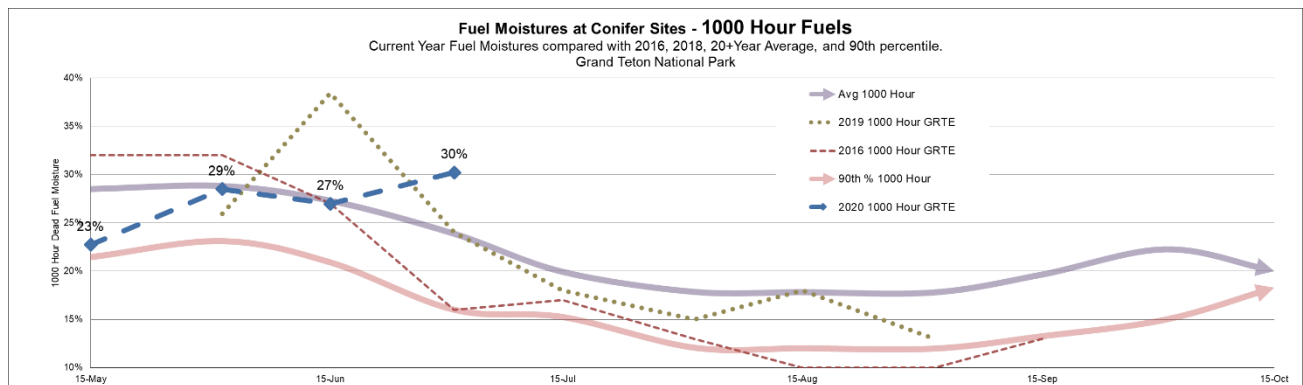
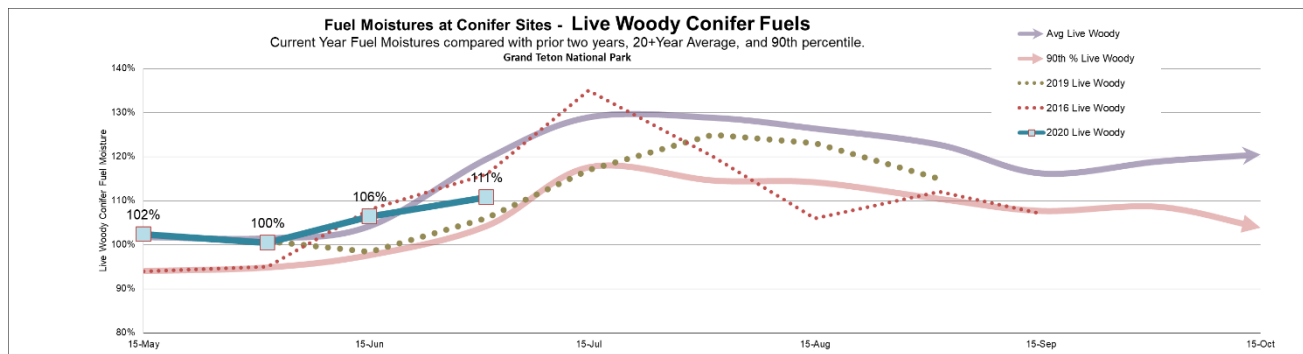
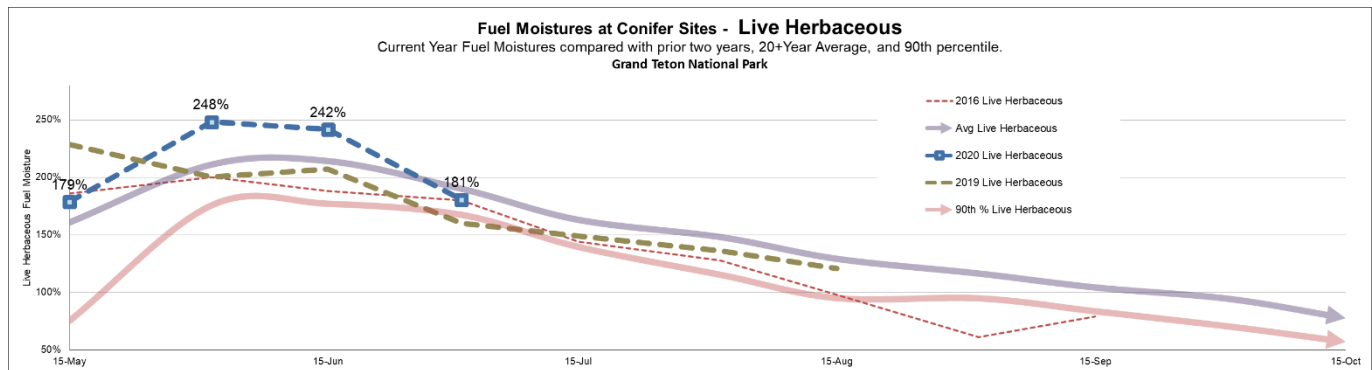
Fuels are generally wetter than normal for late June and early July.

- **1000 Hour Dead Fuel Moisture:** At Bridger-Teton NF sampling sites, the 1000 hour fuels (heavy dead and downed logs) for mid- to late June averaged **21%** (ranging from 17-30%), and at Grand Teton the 1000 hour fuels averaged **30%**, which is wetter than normal for the park for July 1.
- **Live Woody Fuel Moisture / Conifers:** Fuel moisture ranged from **50-102% (average 85%)** at Bridger Teton NF sampling sites, and from **91-132% (average 111%)** at Grand Teton sampling sites. For Grand Teton, this is midway between normal and the 90th percentile for this date.
- **Live Woody Fuel Moisture / Sagebrush:** At sagebrush sites in Bridger-Teton NF, fuel moisture averaged **221%** (Wyoming Big and Silver Sagebrush), and in Grand Teton NP averaged **200%** (Wyoming Big Sagebrush), which is trending above normal conditions.

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

At long-term sampling stations in Grand Teton National Park, the growing season reflected a wetter than normal winter and opened with a dry May followed by a wet June. Early-season fuel moistures are in the above-normal ranges in sagebrush sample sites in the park (see charts below). In conifer sites, 1000 hour dead fuels are much wetter than normal, reflecting the wetter than average June moisture at the park sample sites, while live herbaceous and live woody conifer fuel moistures are normal to slightly drier than normal, perhaps a result of fluctuations in May-June moisture patterns.





5. Oceanic Niño Index (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.

CURRENT STATUS **ENSO-neutral is favored to continue through the summer, with a 50-55% chance of La Niña development during Northern Hemisphere fall 2020 and continuing through winter 2020-21 (~50% chance).** Potential impacts for the region include a higher probability of a drying trend in mid- to late autumn if the **La Niña transition** occurs. Monthly updates:

http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/enso_advisory/.

6. Season Temperature and Precipitation Outlooks

For our region, the 30- and 90-day outlooks for temperature (left) and precipitation (right) indicate equal chances for below-normal, normal to above-normal temperatures and precipitation for July. For July

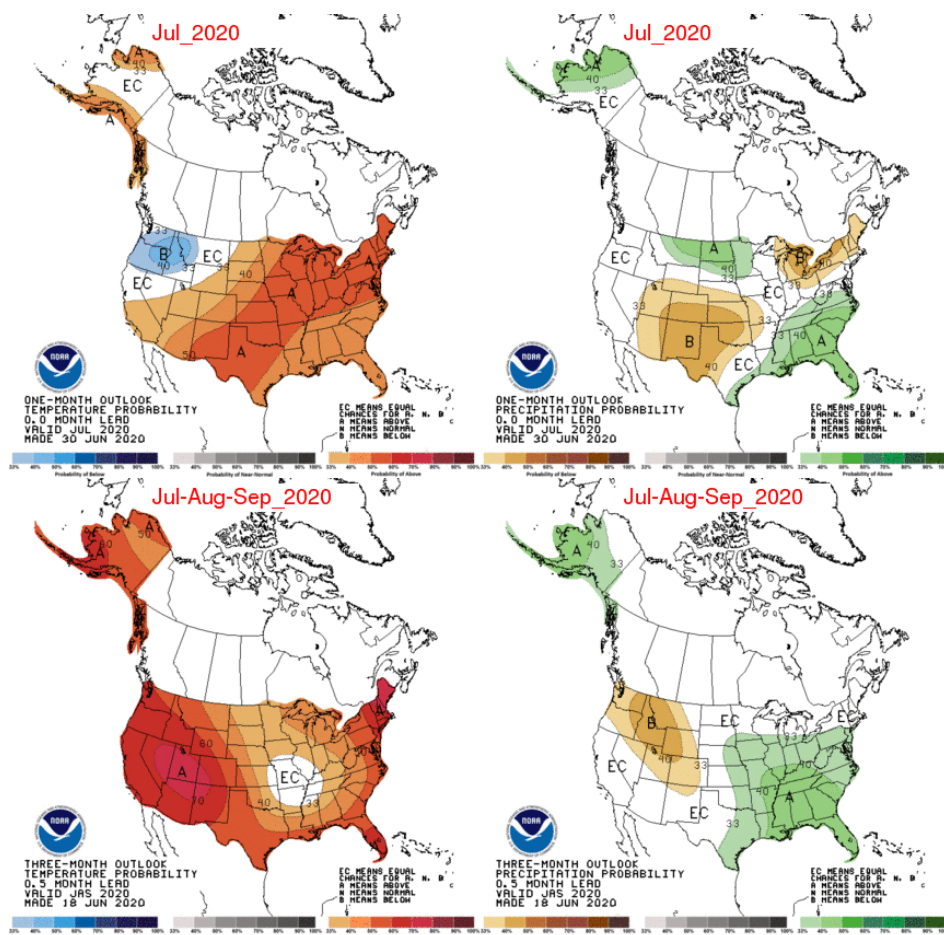
through September, the outlooks indicate a higher probability for warmer and drier conditions. This is reflective of a delayed onset of the monsoon season in the Southwest with little moisture from that annual pattern making it to the Teton Zone.

TEMPERATURE

PRECIPITATION

Figure 6: July and July through September 30- and 90-day 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 area, with potential for above-normal fire activity in July in the eastern Great Basin, transitioning in August to above normal fire activity in the northern and western areas of the Great Basin Geographic Area.

Excerpts of National and Regional Outlooks from "National Wildland Significant Fire Potential Outlook" (July 1, 2020, NIFC Predictive Services). http://www.nifc.gov/nicc/predictive/outlooks/monthly_seasonal_outlook.pdf.

National – Executive Summary (excerpts)

Precipitation was below average in June across most of the country except across the Pacific Northwest where amounts were generally 150% of average or greater. Areas of concern emerged across California, the Great Basin, and Arizona where less than 5% of monthly precipitation was received. Temperatures were generally a few degrees above normal along the Pacific Coast and a few degrees below normal across the

Interior West. In the East, temperatures were generally near normal in June. July is the entry point into the core of the Western Fire Season. As the season sequentially expands west and north across California, the Great Basin and the Central Rockies into the Northern Rockies and the Pacific Northwest, it will encounter areas of intensifying and expanding drought. This will lead to Above Normal significant large fire potential across large portions of the Great Basin and Northern California that will expand further north into the Pacific Northwest and Northern Rockies in August and September. The elevated potential in southwestern areas will begin to diminish with the arrival of the monsoon in early July. Activity will linger into mid-September in northern areas until the seasonal transition begins and begins to bring the season to a close. In Alaska, significant large fire activity will become less frequent in late July as returning moisture events gradually reduce the fire potential.

Weather and Climate Outlooks

June was a transitions month for sea surface temperature (SST) anomalies along the equator. At the beginning of the month, temperatures were average to slightly above average. The upwelling of cooler water across the Central and Eastern Pacific allowed for a quick cooling of surface waters. By month's end surface temperature profiles were beginning to resemble a weak La Niña. Temperature depth profiles suggest that the cooling trend will be sustained as temperatures at depth remain slightly cooler than average. Latest statistical and dynamical models continue to trend slightly cooler with each passing run in their long-term assessment. This would suggest that chances for a La Niña event are becoming increasingly likely for the fall and winter...if not sooner.

Great Basin

Above Normal significant large fire potential is expected across most of Utah, Nevada, and southern Idaho in July. In August and September, Above Normal significant large fire potential is expected across southwestern Idaho and northern Nevada. Areas not mentioned above can expect Normal significant large fire potential.

Temperatures across the northern areas of the Great Basin have been just below normal over the past month, and near to just above normal further south as low pressure systems continued to track across the north bringing periods of cooler temperature and showers. Precipitation over the last month has been above normal across central, western and eastern Idaho into far northern Nevada and northern through eastern Utah due to a northerly storm track. Otherwise, precipitation was well below normal over the rest of the southern 2/3 of the Great Basin. Precipitation since October 1, 2019 has been below normal across all but the far southern portions of Nevada into northwestern Arizona and far southwestern Utah, which is 130%-200% of normal which is due to wet conditions observed in November and December. Elsewhere, precipitation was just above normal across parts of Idaho into Wyoming, and well below normal across the rest of the Great Basin.

Moderate to severe drought continues across much of the Great Basin, especially across Nevada and Utah.

With the expectation that the monsoon will be weak at the onset, or even delayed we are expecting fire potential to remain elevated in Utah and southern Nevada and the Arizona Strip through much of July. Above normal fire potential is expected to last into August and September across western and northern areas if the dryness continues, especially as early fall cold fronts start to bring more wind to the region. Fire potential could increase to above normal in parts of the central Idaho Mountains by August after a significant dry period once the snow melts and soil moisture/fuel moisture drops.

CURRENT FIRE ACTIVITY

Teton Interagency Dispatch Center

Wildland fire activity remains light and comparable to other years with wet winters, with fewer early season acres burned than in recent years. This year's abandoned campfires to date are approximately half of 2019 and 2016, when TIDC had recorded 49 and 44 abandoned campfires by this date and are comparable to the 25 abandoned campfires to date in 2017 and 2018.

Year-to-Date Fire Activity for Dispatch Center response zones, July 3, 2020.

<https://gacc.nifc.gov/gbcc/dispatch/wy-tdc/home/sites/default/files/site-files/2020%20Fire%20Numbers%20and%20Stats.xlsx>.

Teton Interagency Fire Management Area Totals	Human Fires	Human Acres	Natural Fires	Natural Acres	RX Fires	RX Acres	Abandoned Non- escape Campfires
	4	4.2	0	0	3	1	28

Selected Sources

- Precipitation Tracking: <https://water.weather.gov/precip/>
- Precipitation Tracking focused on [Snotel sites, Wyoming](#) (beta site)
- Climate Prediction Center, Three-Month Outlooks: <https://www.cpc.ncep.noaa.gov/products/predictions/90day/>
- Drought.gov Portal / Fire: <https://www.drought.gov/drought/data-maps-tools/fire>
- Intermountain West Climate Dashboard: <https://www.colorado.edu/climate/dashboard.html>
- Regional outlooks from “National Wildland Significant Fire Potential Outlook” (first of each month during fire season, NIFC Predictive Services): https://www.nifc.gov/nicc/predictive/outlooks/monthly_seasonal_outlook.pdf.
- Great Basin Area – Predictive Services/Outlooks: <https://gacc.nifc.gov/gbcc/outlooks.php>.
- Rocky Mountain Area – Predictive Services/Outlooks: <https://gacc.nifc.gov/rmcc/outlooks1.php>.
- Teton Interagency Dispatch: www.tetonfires.com / <https://gacc.nifc.gov/gbcc/dispatch/wy-tdc/home/>.

+ + +

For further information, contact Teton Interagency Fire:

Ron Steffens. Long Term Fire Analyst, Grand Teton National Park | 307 739 3675 | ron_steffens@nps.gov

Diane Abendroth. Fire Ecologist, Grand Teton National Park | 307 739 3665 | diane_abendroth@nps.gov