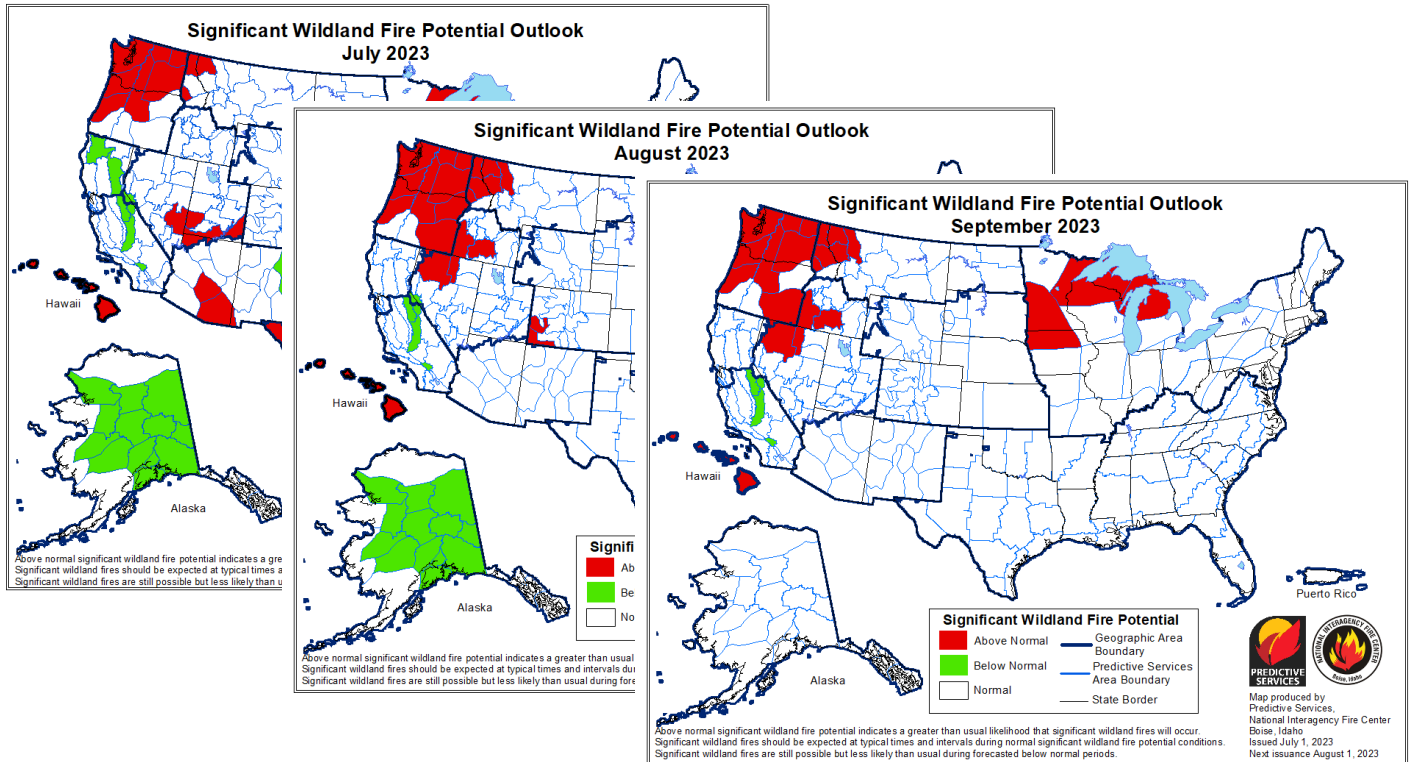


# July 2023 - Wildland Fire Outlook

July 7, 2023



Significant Wildland Fire Potential -- July, August, September 2023 (July 1, 2023, National Interagency Fire Center).  
<https://www.predictiveservices.nifc.gov/outlooks/outlooks.htm>

## SUMMARY

The Teton Interagency Dispatch experienced a cooler and wetter winter, with variable conditions in spring and early summer. The past 30 days have been warmer and wetter than normal, with the climate station at Moose receiving 153% of normal precipitation (and 116% of normal for water year to date). Locally, abnormally dry to moderate drought conditions continue in the north and have diminished to the south, with outlooks for soil moisture steady in August and decreasing through October. Outlooks call for warmer temperatures and from normal to drier precipitation for the rest of summer, and a normal fire season.

- Fire danger is at Moderate for Bridger-Teton National Forest / Grand Teton National Park, comparable with last year at this time while in 2021 we were entering Stage 1 Fire Restrictions.
- **Normal fire potential** for July-September, per the Great Basin Coordination Center's monthly outlook: <https://gacc.nifc.gov/gbcc/predictive/docs/monthly.pdf>
- Daily updates for GBCC Fire Potential Briefing and outlooks: <https://gacc.nifc.gov/gbcc/outlooks.php>

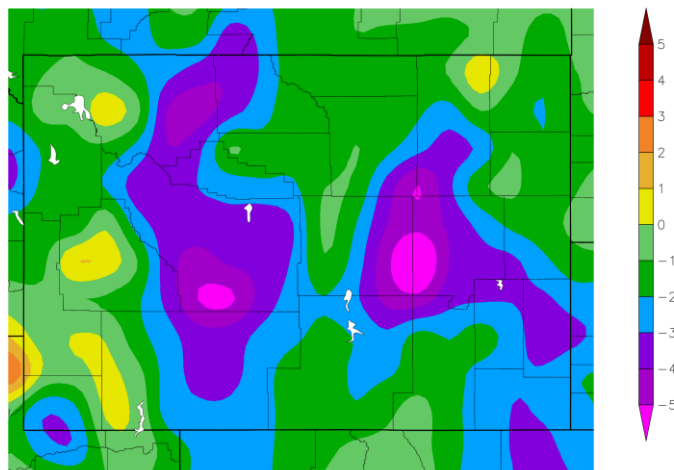
During an average fire season, based on a 20-year fire history from 2001-2020, Bridger-Teton National Forest will average 52 unplanned fires (32 natural starts per year, and 20 human-caused fires) for an average of 16,522 acres per year. Grand Teton National Park will average 10 unplanned fires (six natural starts per year, and four human-caused fires) for an average of 1332 acres per year. *Current information on fire conditions, indices and fire activity is at [www.tetonfires.com](http://www.tetonfires.com). Local, regional and national outlooks are at <https://gacc.nifc.gov/gbcc/dispatch/wy-tdc/home/predictive-services/outlooks>.*

# CLIMATE AND FUELS OUTLOOK

## 1. 30-day and 60-day Temperatures

**WARMER EARLY SUMMER.** After a cooler than normal winter, the past 30 and 60 days recorded a much warmer than normal early summer. These high temperatures may affect green-up intensity and timing and support the continued availability of dead fuels for fire ignition and spread.

Departure from Normal Temperature (F)  
6/7/2023 – 7/6/2023

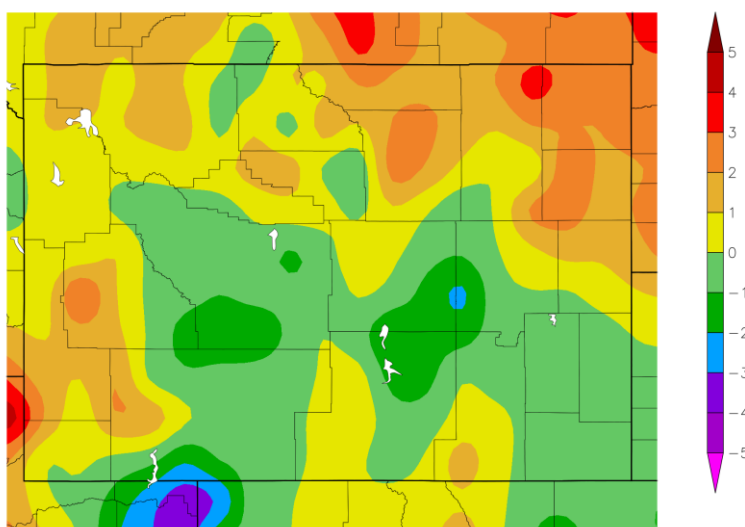


Generated 7/7/2023 at HPRCC using provisional data.

NOAA Regional Climate Centers

Figure 1a. Departure from Normal Temperature, Wyoming, prior 30 days through 07/04/2023.  
<https://hprcc.unl.edu/products/maps/acis/hprcc/wy/30dTDeptHPRCC-WY.png>

Departure from Normal Temperature (F)  
5/8/2023 – 7/6/2023



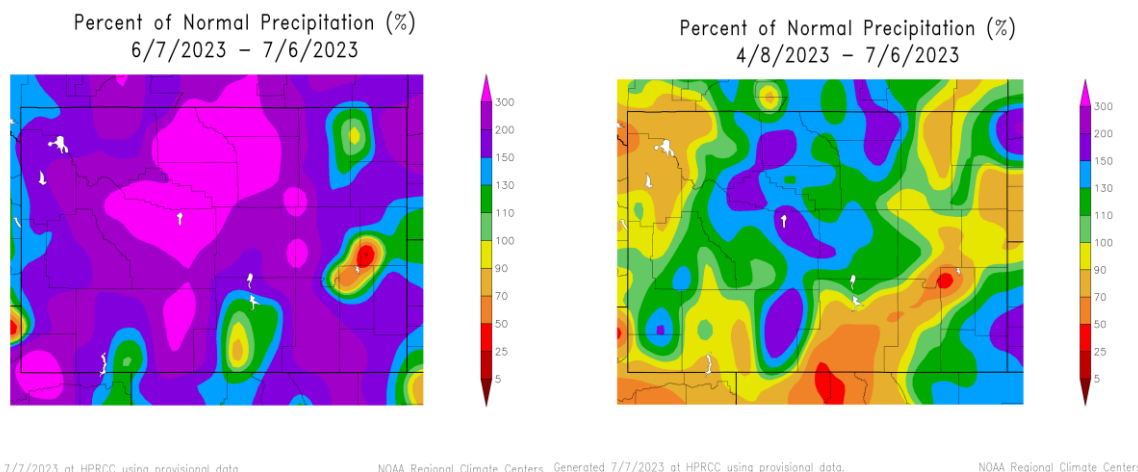
Generated 7/7/2023 at HPRCC using provisional data.

NOAA Regional Climate Centers

Figure 1b. 60-Day Departure from Normal Temperature, Wyoming, ending July 4, 2023.  
<https://hprcc.unl.edu/products/maps/acis/hprcc/wy/60dTDeptHPRCC-WY.png>

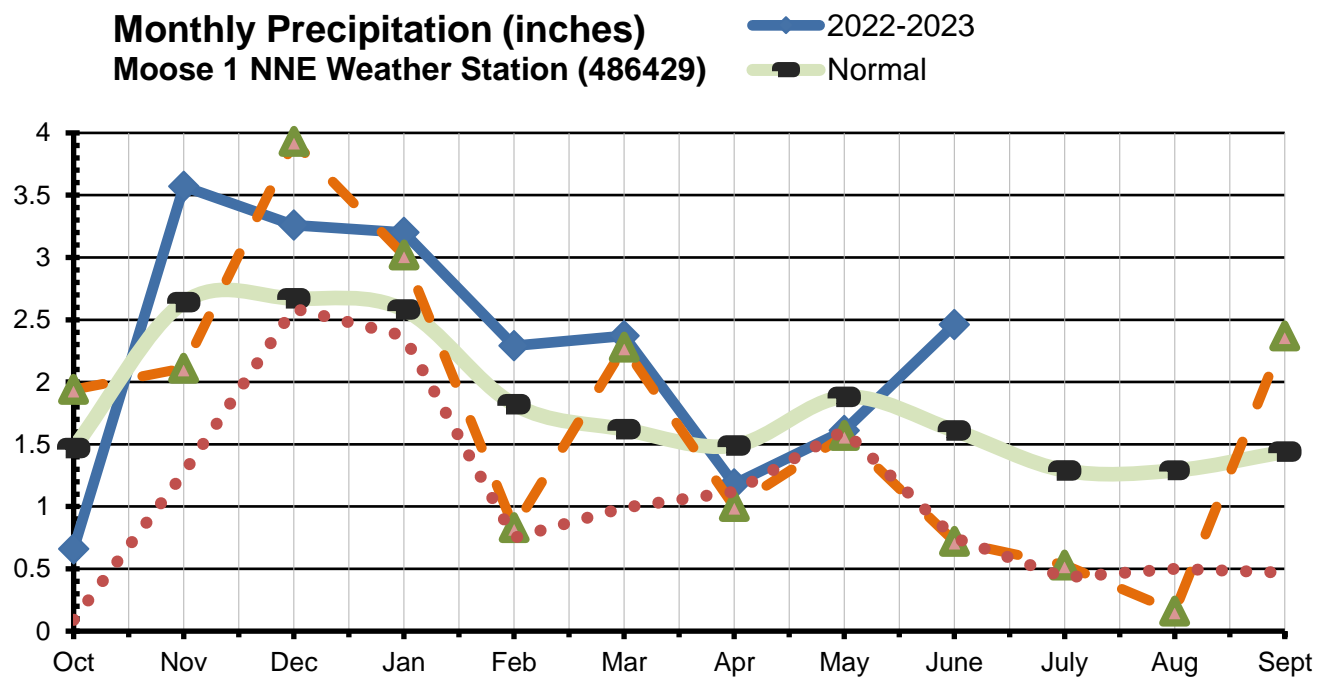
## 2. Precipitation

Area precipitation analyses for the past 30 and 90 days illustrate the effect of short- and long-term moisture deficits for the area – with [30-day percent normal \(Figure 2a\)](#) wetter when compared to the [90-day period \(Figure 2b\)](#). In the past 30 days, most of Wyoming received notably above-normal precipitation.



**Figure 2a (left) and 2b (right).** Wyoming, Percent of Normal Precipitation, past 30 and 90 days.

**Precipitation tracking at the [Moose 1 NNE WY Climate Weather Station](#)** -- the automated Climate Reference Station in the Applied Climate Information System in the dispatch area -- is representative for lower elevation sites in Grand Teton National Park and some North Zone sites. The station recorded 116% of normal for water year-to-date, compared to 107% for last year at this time and 98% for 2016, a prior active fire year. Three of the past nine months recorded below-normal precipitation. Compared to 30-year precipitation normal, the past three months received 105% of normal, with April-May below normal and June at 153% of normal.



		<b>Dec</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>June</b>	<b>YTD total</b>
<b>Precipitation</b>	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
	2021-22	3.52	3.09	0.45	1.17	3.1	2.49	1.72	18.78
	Normal	1.62	1.49	1.88	2.58	1.82	1.62	1.61	17.78
	<b>2022-23</b>	<b>3.26</b>	<b>3.2</b>	<b>2.29</b>	<b>2.37</b>	<b>1.18</b>	<b>1.61</b>	<b>2.46</b>	<b>20.6</b>
<b>Percent of NORMAL</b>	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%
	2021-22	132%	120%	25%	72%	208%	132%	107%	107%
	<b>2022-23</b>	<b>122%</b>	<b>124%</b>	<b>126%</b>	<b>146%</b>	<b>79%</b>	<b>86%</b>	<b>153%</b>	<b>116%</b>

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

### 3. Drought Monitor

Western Wyoming is in Abnormally Dry and Moderate Drought conditions to the north and not showing drought conditions in most of the rest of the state. With the warmer temperatures and normal or drier moisture outlooks for mid- and late-summer, fuels are likely to cure normally or slightly faster than normal, and may become available for fire spread earlier than normal at lower elevations and drier sites.

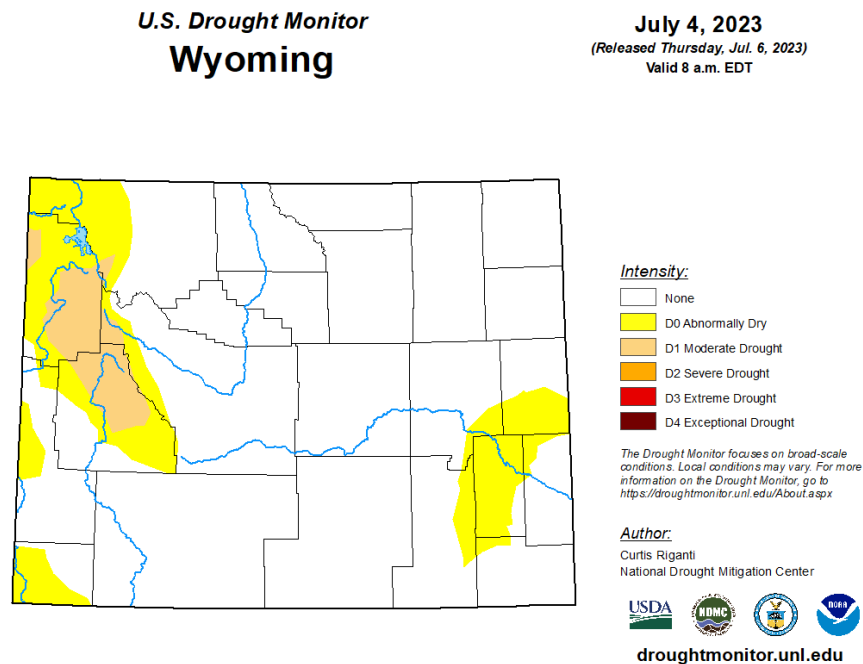
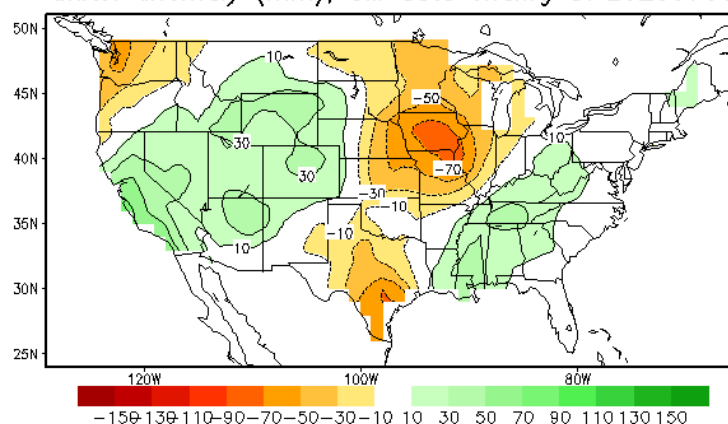


Figure 3a. U.S. Drought Monitor – Wyoming – July 4, 2023. [Wyoming | U.S. Drought Monitor \(unl.edu\)](https://droughtmonitor.unl.edu)

Lagged Averaged Soil Moisture Outlook for End of AUG2023  
units: anomaly (mm), SM data ending at 20230706



Lagged Averaged Soil Moisture Outlook for End of OCT2023  
units:anomaly (mm), SM data ending at 20230706

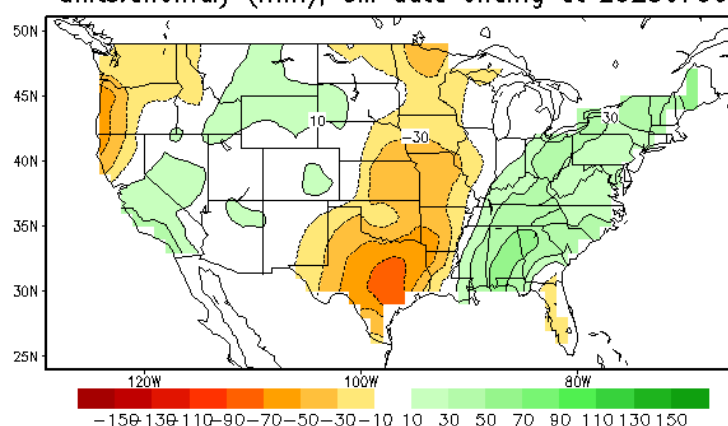


Figure 3b. Soil Moisture Outlooks for end of July and September 2023.

[https://www.cpc.ncep.noaa.gov/products/Soilmst\\_Monitoring/US/Outlook/CAS/SM.shtml](https://www.cpc.ncep.noaa.gov/products/Soilmst_Monitoring/US/Outlook/CAS/SM.shtml)

## 4. Fuel Moisture

Sampling in Bridger-Teton National Forest and Grand Teton National Park for late June show green-up at a typical rate and primarily wetter than normal, with some variation by site and species.

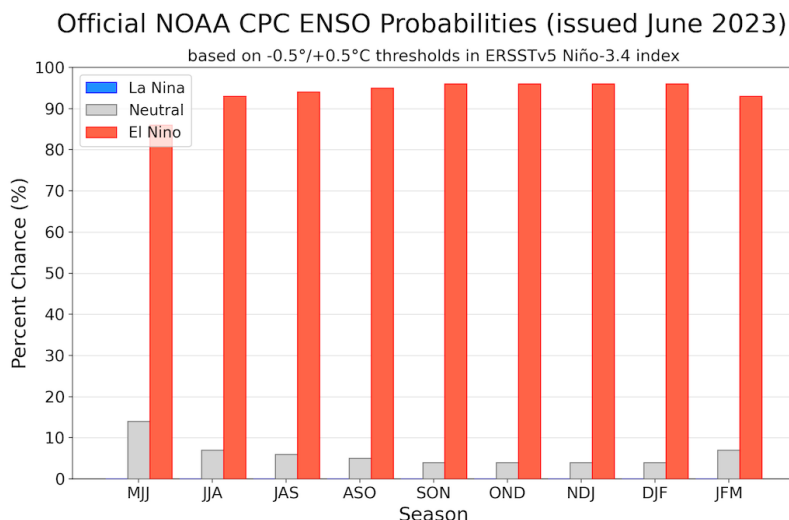
SITE TYPE	FUEL TYPE	East Zone BTNF	West Zone BTNF	North Zone BTNF	Grand Teton NP
<b>Sagebrush</b>	LH Grass				173%
	LW Sagebrush	214%	290%	194%	218%
<b>Conifer</b>	LH Grass			240%	216%
	LW Lodgepole	102%	102%		134%
	LW Fir (Douglas/Subalpine)	SF: 104%	SF: 90%	DF: 147%	DF: 113%
	1000 Hour Dead	31%	22%	23%	39%

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

## 5. El Niño / La Niña / ENSO-Southern Oscillation)

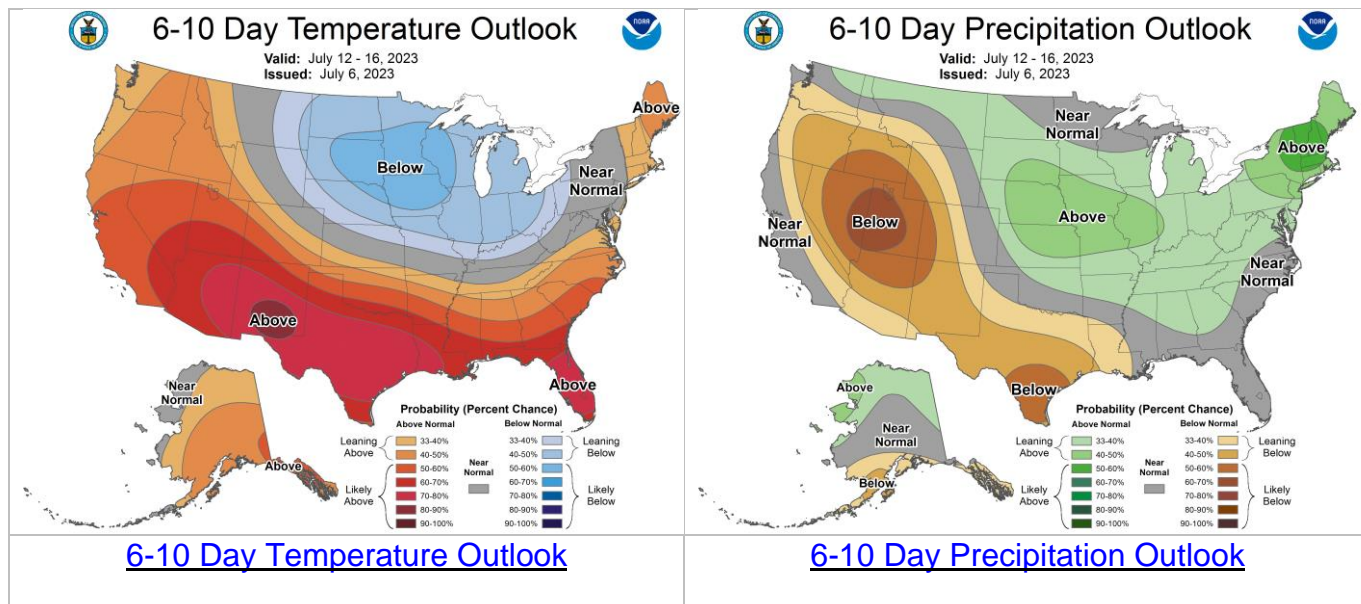
The mid-month ENSO Forecasts (Figure 5 below - [IRI – International Research Institute for Climate and Society | Quick Look \(columbia.edu\)](#) tracks *El Niño* (warm) and *La Niña* (cool) events in the tropical Pacific. *El Niño* conditions are forecast to continue through early winter of 2024. In the US West, [El Nino impacts in summer may be weak or inconsistent](#) with greater impacts typically occurring in winter.

Current *El Niño* conditions will likely continue with high probabilities (> 85%) for *El Niño* conditions for July-September and continuing into fall/winter of 2023-24.



## 6. Temperature and Precipitation Outlooks

Most outlooks call for warmer or near-normal temperatures and slightly drier or normal precipitation for July into September.

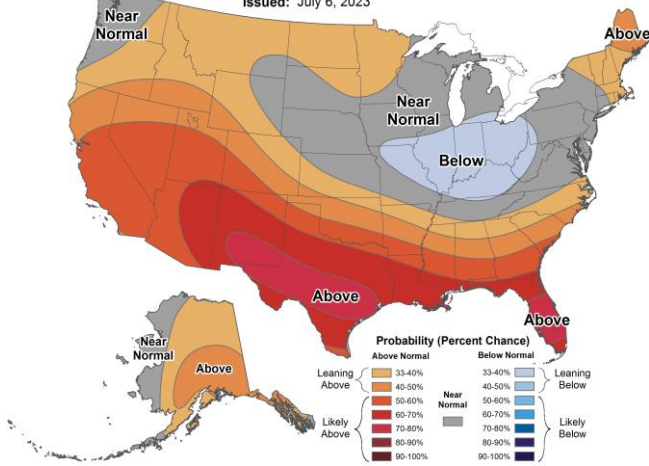






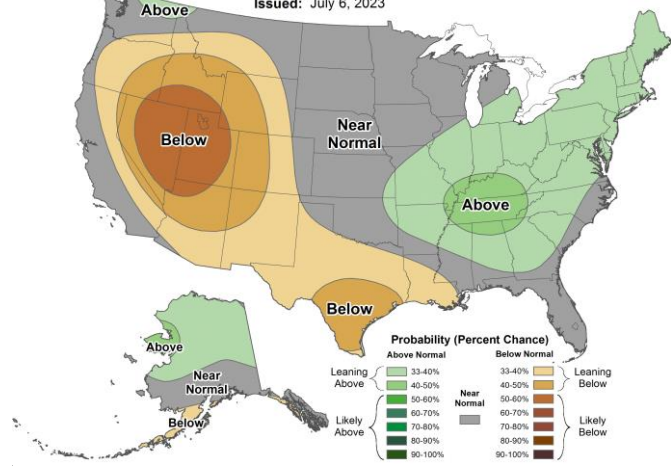
### 8-14 Day Temperature Outlook

Valid: July 14 - 20, 2023  
Issued: July 6, 2023



### 8-14 Day Precipitation Outlook

Valid: July 14 - 20, 2023  
Issued: July 6, 2023



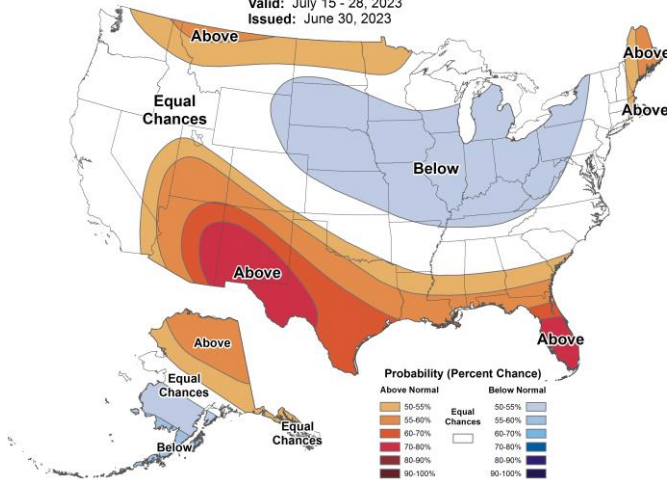
### 8-14 Day Temperature Outlook

### 8-14 Day Precipitation Outlook



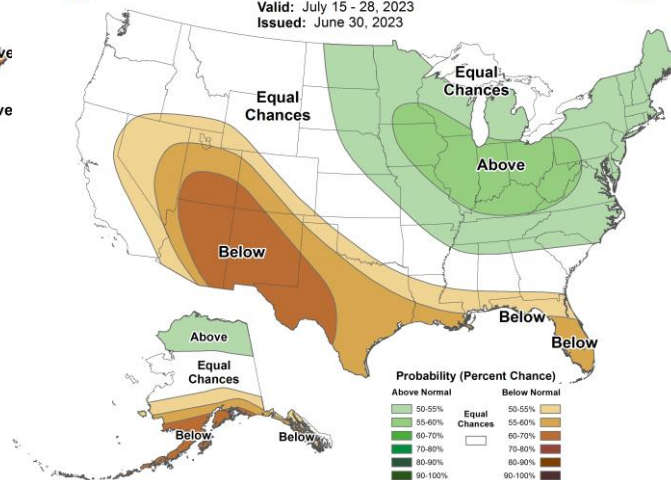
### Weeks 3-4 Temperature Outlook

Valid: July 15 - 28, 2023  
Issued: June 30, 2023



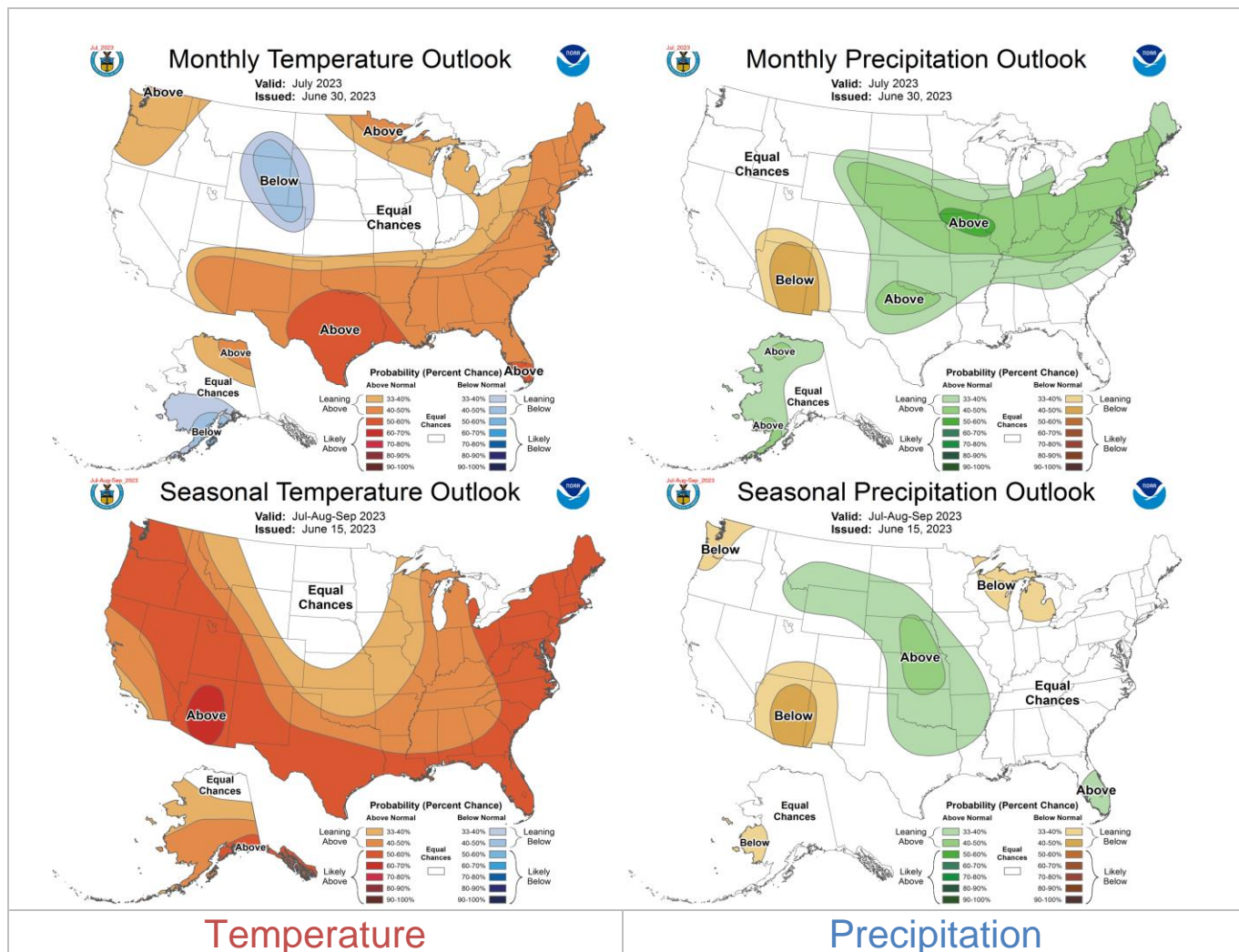
### Weeks 3-4 Precipitation Outlook

Valid: July 15 - 28, 2023  
Issued: June 30, 2023



### 3-4 Week Temperature Outlook

### 3-4 Week Precipitation 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 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” \(July 1, 2023, NIFC Predictive Services\)](#).

### National – Executive Summary (excerpts)

Significant fire activity remained below normal across the US during June. Wildfire activity remained low in much of the Southern Area, with the West observing a gradual increase in activity, but hot and windy conditions at the end of the month saw a marked increase in activity in the Southwest, Colorado, and Texas. Alaska continued to have a very slow season, one of the slowest on record. Year-to-date acres burned for the US is 36% of the 10-year average, with a below average number of fires, about 88% of average



## Past Weather and Drought

Upper-level troughs continued to affect the northwest quarter of the US during June with scattered showers and thunderstorms daily from the Sierra north and east through the Great Basin and Rockies into the High Plains. Above normal precipitation in the West was focused in these areas, but much of the Northwest, Idaho Panhandle, northwest Montana, and Southwest received well below normal precipitation. Much of the Midwest, Great Lakes, and Mississippi Valley were dry through mid-June, but rainfall returned to much of these areas in late June to alleviate the very dry conditions at least temporarily. Temperatures were above normal across the Northwest, northern Rockies, northern Plains, and Texas, with near to below normal temperatures from California through the Great Basin into the central Plains, then across much of the eastern US. A heat wave developed across much of the southern US in late June, with rapidly drying conditions and fuels in the Southwest, greater Four Corners area, and Texas.

Fire activity remained below normal much of the US in June, with year-to-date fire activity in both number of fires and acres burned remaining well below normal. Above normal activity was noted in the Great Lakes in June due to a prolonged dry period since May. Above normal cool season precipitation and snowpack along with periodic precipitation since May helped to slow fuel curing across California, the Southwest, Great Basin, and Rockies. However, strong high pressure at the end of the month, with well above normal temperatures, resulted in rapidly increasing fire activity in the Southwest, Colorado, and Texas. Fire activity also gradually increased across the rest of the West in June, with the greatest increase in the Northwest which has received only light precipitation since May 1. Alaska remained cool and wet during June, with fire activity well below normal.

## Climate and Fire Potential Outlooks

El Niño has developed in the equatorial Pacific Ocean, and rapid warming continues in much of the ENSO region, especially in the central Pacific with continued anomalous warmth off the coast of South America. Above normal sea surface temperatures are observed in all ENSO regions. Most forecast guidance depicts continued warming through summer, with El Niño conditions forecast to continue into winter. The Climate Prediction Center forecasts a greater than 95% chance of El Niño conditions continuing into winter, with a 56% chance of a strong El Niño developing this fall. Other teleconnection patterns, such as the Madden Julian Oscillation (MJO), Pacific Decadal Oscillation, and Pacific-North American Pattern may influence weather and climate during the outlook period, but El Niño will be the main driver.

## Great Basin

Fire season has been delayed due to the melting and runoff of the snowpack, cooler temperatures in June, and near daily showers and thunderstorms over the northern half of the Great Basin. Above normal carry-over fuels across southern Idaho into far northwest Nevada allowed for late spring fires that grew to several hundred or a few thousand acres before running into uncured fuels. Fires mainly in the carryover grasses will continue into July before surrounding fuels cure out. Drier conditions have been the main story over southern areas of the Great Basin, where grasses are mostly cured in the lower elevations. However, live fuel moisture in the sagebrush is still well above normal across most of the Great Basin and has not dropped to critical levels. Much warmer temperatures heading into July are expected to accelerate the curing process, but it will still take a few weeks. The monsoon may develop in July but is likely to be weaker with more sporadic bursts of moisture than normal. Above normal significant fire potential was removed from the previous forecast in northern Utah in July, as were areas of eastern Idaho and western Wyoming in August due to continued precipitation in spring and early summer. Those areas are now forecast to have normal fire potential through October.

Great Basin Coordination Center – Seasonal Outlook for July-September 2023 – is posted at <https://gacc.nifc.gov/gbcc/predictive/docs/monthly.pdf>.

Excerpts include ...

As for future forecast weather, temperatures will be warming through July and August, and will likely be near to above normal. The wet weather in June delayed the onset of the four corners high pressure and hence, delayed the development of monsoon moisture. Drier conditions in much of the Great Basin are expected through most of July. Monsoon moisture may not make its way up into the Great Basin until the end of July into August.

Above normal fire potential is expected in July over southern areas of the Great Basin due to the delay in monsoon moisture. These areas would normally be seeing moisture start to wind down the fire season in the south, but this year activity should continue to ramp up through July. Even when the monsoon moisture begins, it is expected to be weaker than normal. Therefore, we will need to monitor August for the potential of continued above normal fire potential in the south.

Further north, fuels are still in various states of curing and live fuel moisture is still not yet critical in most areas. Dry weather in July will quickly dry out fuels later in the month with a quick shift into fire season. Above average carryover fuels across parts of southern Idaho into northwest Nevada will likely be the focus in the Great Basin through June where grass fires will pop up, driven by wind until the surrounding fuels fully cure. Above Normal Fire Potential is more likely by August and potentially into September in southern Idaho and northwest Nevada. Of note, years coming out of drought tend to lead to an increase of fires and acres burned in the lower elevations of the Great Basin, especially when a very wet year follows an average or a wet winter the year before. However, the summer weather pattern will dictate how active this fire season will be.

## CURRENT FIRE ACTIVITY

*Teton Interagency Dispatch Center*

<https://gacc.nifc.gov/gbcc/dispatch/wy-tdc/home/predictive-services/intelligence>

Early-to-mid season wildland fire activity is typically limited to a period after snowmelt and prior to extensive green-up. Both the number and acres of fire activity has been minimal this season compared to the prior two seasons at this time.

**Ten abandoned non-escape campfires have been reported to date this year** compared to 29 at this time last year and 80 in 2021.

Year-to-Date Fire Activity for Dispatch Center response zones, July 7, 2023. [2023 Fire Numbers and Stats.xlsx](#).

Teton Interagency Fire Management Area Totals	Human Fires	Human Acres	Natural Fires	Natural Acres	RX Fires	RX Acres	Abandoned Non- escape Campfires
	1	0.1	1	0.1	5	249.25	6

## 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>
- Drought.gov Portal / Wyoming: <https://www.drought.gov/states/wyoming>
- Intermountain West Climate Dashboard: <https://wwa.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](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](http://www.tetonfires.com) / <https://gacc.nifc.gov/gbcc/dispatch/wy-tdc/home/>.

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*For further information, contact Teton Interagency Fire:*

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