SUMMARY
Drier than average conditions in mid- and late-winter transitioned to wetter conditions in spring, with normal green-up now progressing. Similar to last season’s conditions, outlooks indicate a potential for above-normal fire activity in the Teton Interagency Dispatch area and the Great Basin Geographic Area. While the TIDC area received above-normal precipitation in some locations, overall moisture patterns continue in drought conditions, and outlooks for the summer call for drier and warmer conditions than normal.

The Great Basin Coordination Center “Seasonal Outlook for June-September 2022” shows the TIDC area with Above Normal fire potential for August-September. For additional information see:


Potential fire activity is projected to be above normal for the first half of this period in southern and western areas of the Great Basin Region and above normal for July-September for the central and northeastern portions of the region, including the Teton Interagency Dispatch zones.

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.

The Teton Interagency Wildland Fire Outlook is updated monthly during fire season. Current information on fire conditions, fire indices and activity can be found at [www.tetonfires.com](http://www.tetonfires.com), with local, regional and national outlooks at [https://gacc.nifc.gov/gbcc/dispatch/wy-tdc/home/predictive-services/outlooks](https://gacc.nifc.gov/gbcc/dispatch/wy-tdc/home/predictive-services/outlooks).
CLIMATE AND FUELS

(1) Area Snowpack and Streamflow
Snowpack, accumulated precipitation and streamflow in western Wyoming were below normal during mid- and late-winter but spring moisture brought year-to-date moisture toward normal or slightly below for many river basins. Snowmelt is proceeding at a normal rate, with most sites clear of snow, which may affect the validity of basin-wide conditions.

Table 1: Percent of 30-Year Average Snow Water Content and Precipitation by Basin. 05/30/21. * = Analysis may not be valid measure of conditions.

<table>
<thead>
<tr>
<th>Basin</th>
<th>Snow Water Content</th>
<th>Total Precipitation (Water YTD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Snake River</td>
<td>107 % *</td>
<td>92 %</td>
</tr>
<tr>
<td>Upper Green River</td>
<td>128 % *</td>
<td>94 %</td>
</tr>
<tr>
<td>Yellowstone</td>
<td>114 %</td>
<td>99 %</td>
</tr>
<tr>
<td>Wind River</td>
<td>128 % *</td>
<td>100 %</td>
</tr>
<tr>
<td>Upper Bear River</td>
<td>74 % *</td>
<td>99 %</td>
</tr>
</tbody>
</table>

Wyoming Snow Precipitation Update (uwyo.edu)
Figures 1c-e (below). SNOTEL Water Year to Date, Snow Water Equivalent for Grassy Lake (North Zone), Elkhart Park Guard Station (East Zone), and Snider Basin (West Zone). Generally, these representative sites exhibited below-normal moisture (in total precipitation and snow water equivalent), with a slightly faster rate for snowmelt. Precipitation in late May has partly offset prior deficits.

Figure 1c: NRCS Grassy Lake Snotel with season statistics (above) at https://www.nrcs.usda.gov/Internet/WCIS/AWS_PLOTS/siteCharts/POR/WTEQ/WY/Grassy%20Lake.html, and Grassy Lake Snotel (Teton Zone), 499 with YTD precip and SWE (below).
Figure 1d: NRCS Elkhart Snotel with season statistics (above) at https://www.nrcs.usda.gov/Internet/WCIS/AWS_PLOTS/siteCharts/POR/WTEQ/WY/Elkhart Park G.S., and Elkhart Snotel (Wind River Zone), 468 with YTD precip and SWE (below).

Figure 1e: Snider Basin Snotel (Wyoming Range Zone), 765.
(2) Precipitation Monitoring

Area precipitation maps reflect areas of increased May precipitation (30-day, Figure 2a) compared to the generally drier-than-normal 90-day total (Figure 2b). Both periods illustrate a general moisture transect, wetter to the east and north of the divide.

Figure 2a (left). Wyoming, Percent of Normal Precipitation for the past 30 days. https://hprcc.unl.edu/products/maps/acis/subrgn/WY/30dPNormWY.png. Moisture patterns transitioned in May, with wet storms early and later in the month and snow in the last week.

Figure 2b (right). Percent of Normal Precipitation for the past 90 days was below-normal for late-winter precipitation in most of the TIDC area. https://hprcc.unl.edu/products/maps/acis/subrgn/WY/90dPNormWY.png.

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 106% of normal for water year-to-date, with five months receiving above-normal precipitation and three below normal. The drier months occurred in November, February and March (one month earlier than the prior year’s dry months). The Fall-Winter period (October-February) was 85% of the 30-year normal while late Winter-Spring (March-May) was 135% of normal (Table 2 and Graph). As other maps illustrate, this site may not be representative for other areas.

Table 2 - Graph / Table: Precipitation at Moose Weather Station (Grand Teton National Park).
(3) Drought Monitor
The current drought map for the U.S. West shows predominant drought conditions, with some moderation potential with spring moisture. If the warmer and drier conditions forecast for mid-summer occur, this drought may expand and support earlier fuel availability in 1000-hour fuels (downed logs) and curing of live fuels.

*Figure 3a. U.S. Drought Monitor – West.*
https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?West


Figure 3d. Evaporative Demand Drought Index (https://psl.noaa.gov/eddi/). This index can reflect recent moisture trends and may forecast drought transitions.
(4) El Niño / La Niña / ENSO-Southern Oscillation
The mid-month ENSO Forecasts (Figure 4 below: IRI – International Research Institute for Climate and Society | May 2022 Quick Look (columbia.edu)) tracks El Niño (warm) and La Niña (cool) events in the tropical Pacific. This summer, the probability of current La Niña (cool) conditions may decline and neutral ENSO neutral conditions may increase, but overall the model forecasts support continued La Niña conditions through August. In some summers, this may result in normal temperatures and increased risk for drier than normal conditions July-August-September.

![Mid-May 2022 IRI/CPC Model-Based Probabilistic ENSO Forecasts](https://wrcc.dri.edu/Graphics/Maps/ENSO/LaNina_Dry/JAS/ww.png).

**Synopsis:** Though La Niña is favored to continue, odds decrease for La Niña into late Northern Hemisphere summer (58% chance, August-October 2022) before slightly increasing through the Northern Hemisphere fall/early winter 2022 (61% chance).


(5) Fuel Moisture
Initial sampling and monitoring in Grand Teton National Park and Bridger-Teton National Forest show green-up occurring at a typical rate. Live and dead fuels are generally drier than average for May 15, though late-May moisture supported the early June green-up, with only some samples of live woody conifer not yet in green-up. For current fuel moistures:


<table>
<thead>
<tr>
<th>Bridger-Teton NF – North Zone averages (06/01-02/2022)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sagebrush</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LW Sagebrush</td>
<td>172%</td>
<td></td>
</tr>
<tr>
<td>Conifer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LH Grass</td>
<td>257%</td>
<td></td>
</tr>
<tr>
<td>LW Conifer</td>
<td>86%</td>
<td></td>
</tr>
<tr>
<td>1000 HR Dead Fuel</td>
<td>36%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Grand-Teton NP – Representative Sites (05/17-18/2022)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sagebrush</td>
<td>30-year AVG</td>
<td>2022</td>
</tr>
<tr>
<td>LH Grass</td>
<td>136%</td>
<td>165%</td>
</tr>
<tr>
<td>LW Sagebrush</td>
<td>134%</td>
<td>119%</td>
</tr>
<tr>
<td>1000 HR</td>
<td>28%</td>
<td>22%</td>
</tr>
</tbody>
</table>
(6) Long-term Temperature and Precipitation Trends and Outlook

RANGE OF WINTER TEMPERATURES. Northwestern and higher elevation sites were cooler than normal in the Teton Interagency area and in Wyoming, with a majority of other areas warmer than normal. This winter was cooler than normal in the north half and warmer in the south (see Figure 6a).

Figure 6a (above). Departure from Normal Temperature, Wyoming, October 1, 2021 to May 31, 2022 (Water Year-to-Date) indicates a cooler winter than normal in the north zones of TIDC and warmer to the south and east. [Link](https://hprcc.unl.edu/products/maps/acis/hprcc/wy/WaterTDeptHPRCC-WY.png).

Figure 6b (below): 30-day and 90-day Outlooks for Temperature / Precipitation (June and June-August).
SEASON OUTLOOKS – Warmer temperatures with below normal precipitation.
The 30- and 90-day temperature and precipitation outlooks (Figure 6b above) show normal June followed by a higher probability for a warmer and drier summer for the TIDC area, along with much of the US West. This trend is supported by soil moisture outlooks (figure 6c). This warmer-drier trend, if realized, may support a typical start of wildfire activity, with the potential for fire spread that is at an increased rate and intensity that may affect strategic and tactical management choices. (http://www.cpc.ncep.noaa.gov/products/predictions/multi_season/13_seasonal_outlooks/color/page2.gif).

NATIONAL AND 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 fire activity trends. 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 by August for western Wyoming and much of the surrounding area to the north and east, with normal fire activity in southwest Wyoming., eastern Idaho and northern Utah.
National – Fire Activity Outlook

Fire activity increased in May, mostly across the Southwest Area, with activity also across portions of California, the southern Great Basin, and southern Colorado. However, fire activity decreased in the Southern Area and Eastern Area. Year-to-date acres burned for the US is approximately 112% above the 10-year average, with nearly 88% of the total acres burned from the Southwest and Southern Areas.

Most of the West, Plains, and Texas remain in drought, with areas of drought in the Southeast and Hawai’i. Temperatures were above normal across the Southwest, Texas, and east of the Mississippi River, with below normal temperatures across much of the northern Intermountain West. Little snow remains across California and the southern Rockies, but snowpack in Washington and the northern Rockies is above normal for the end of May due to cool, moist storms thus far this spring.

Climate outlooks indicate below normal precipitation is likely across much of the Plains through the central Rockies to the Northwest, with above normal temperatures likely across most of the contiguous US (CONUS) through summer. Critically windy and dry periods are likely to continue through mid-June for the Southwest and southern Great Basin. The North American Monsoon is likely to arrive on time and be robust this summer, but potential early moisture surges during June could result in periods of lightning across the Southwest, Colorado, and the southern Great Basin.

Great Basin

Significant wildfire potential will gradually increase through June and July from south to north across the geographic area. Significant long-term drought has improved in some areas but remains across much of the Great Basin. Despite late fall and early winter precipitation that could have increased the likelihood of a greater fine fuel crop in western Nevada, drier conditions the last few months have stunted some of the grass growth. Therefore, shorter grass overall will limit fire potential in the lower elevations going into the fire season, although fuels will be continuous. However, wetter conditions in parts of Idaho in May that will continue into the first half of June will likely trigger an increase in fine fuel growth and be available later in the fire season. Fire activity will be higher in western Nevada and southern Idaho than in 2021, but likely still near normal, unless the grass growth in Idaho is more significant when it cures in July and August.

Great Basin Coordination Center – Seasonal Outlook for June-September 2020 (excerpt).

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CURRENT FIRE ACTIVITY

Fire Activity: Teton Interagency Dispatch Center
https://gacc.nifc.gov/gbcc/dispatch/wy-tdc/home/predictive-services/intelligence

Early season wildland fire activity is typically limited to a period after snowmelt and prior to green-up. The early fire season saw minimal fire activity, limited to two human-caused fires. Prescribed fires in spring 2022 treated 292 acres with 18 fires, with prescribed fire activity curtailed in mid-May by weather and a 90-day pause and review of prescribed fires by the US Forest Service.

Table 3: Year-to-Date Fire Activity (Unplanned and Planned Ignitions).

<table>
<thead>
<tr>
<th>TETON INTERAGENCY FIRE MANAGEMENT AREA TOTALS</th>
<th>Human Fires</th>
<th>Human Acres</th>
<th>Natural Fires</th>
<th>Natural Acres</th>
<th>RX Fires</th>
<th>RX Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>0.2</td>
<td>0</td>
<td>0</td>
<td>18</td>
<td>292</td>
</tr>
</tbody>
</table>

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 / Wyoming: https://www.drought.gov/states/wyoming
- Intermountain West Climate Dashboard: https://wwa.colorado.edu/climate/dashboard.html

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For further information, contact Teton Interagency Fire:

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