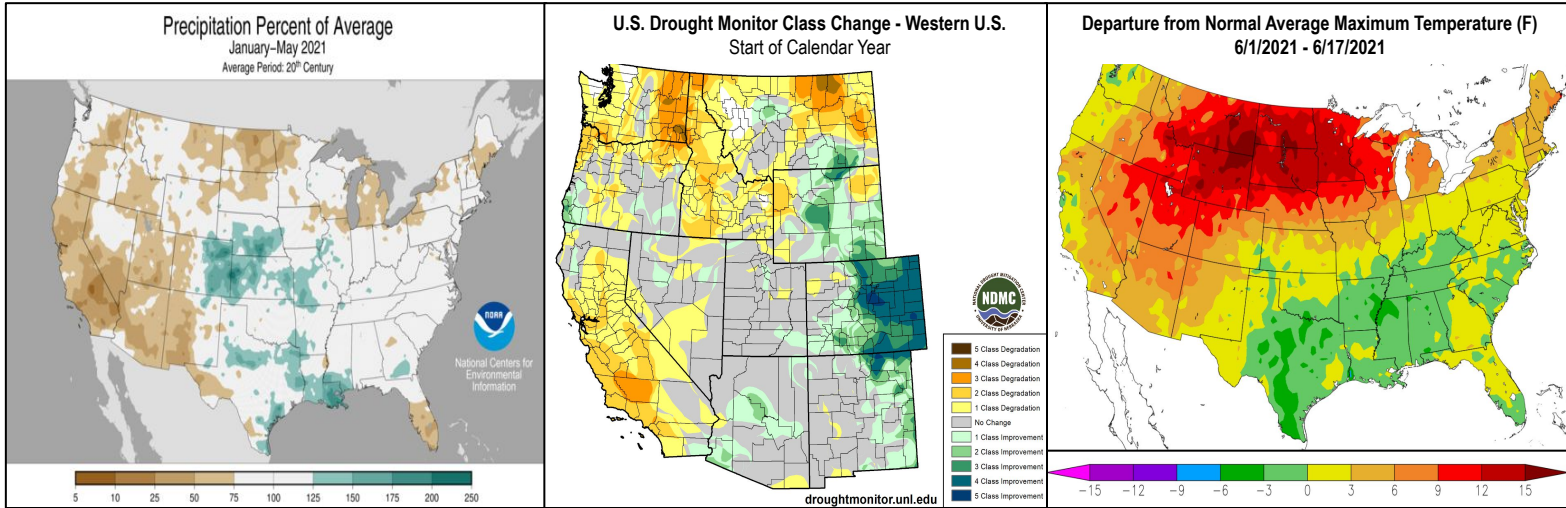




# Increasing Fire Weather and Water Resource Concerns this Summer as Drought Conditions Persist or Worsen Across Much of the Western U.S.

## Setting the Stage: Early Summer Heat, Limited Rain and Snow, and Dry Ground

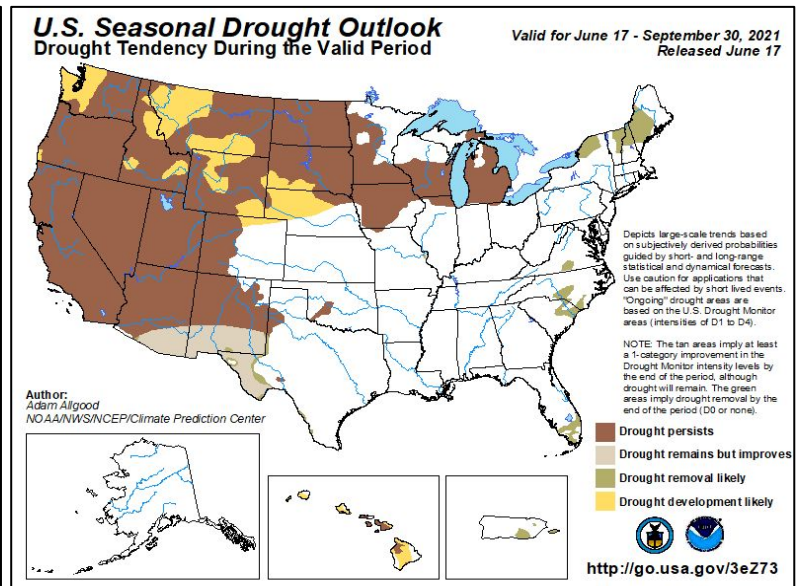
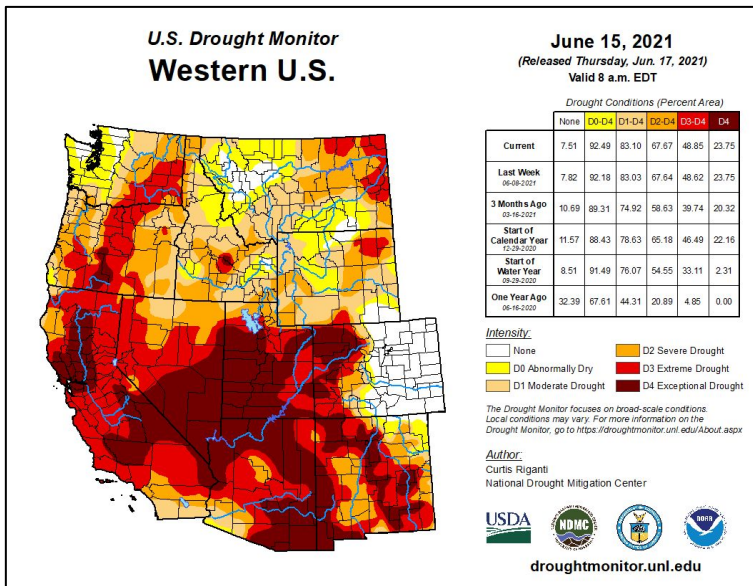
2021 has been a relatively dry year so far with limited rain and snow across many portions of the western U.S. The only exception is across eastern Colorado and central to southeast Wyoming where drought conditions have actually improved. Early summer heat was experienced across much of the region, with several new temperature records being set in early to mid June. This early excessive heat combined with dry conditions noted across much of the region has resulted in very dry soil, leading to continued or worsening drought conditions.



**ABOVE LEFT:** Precipitation percent of average across the U.S. from January - May, 2021 (Source: [ndbc.noaa.gov](https://ndbc.noaa.gov))  
**ABOVE MIDDLE:** U.S. Drought Monitor Class Change from December 29, 2020 to June 15, 2021 (Source: [droughtmonitor.unl.edu](https://droughtmonitor.unl.edu))  
**ABOVE RIGHT:** Departure from normal for the average maximum temperatures from June 1-17, 2021 (Source: [hprcc.unl.edu](https://hprcc.unl.edu))

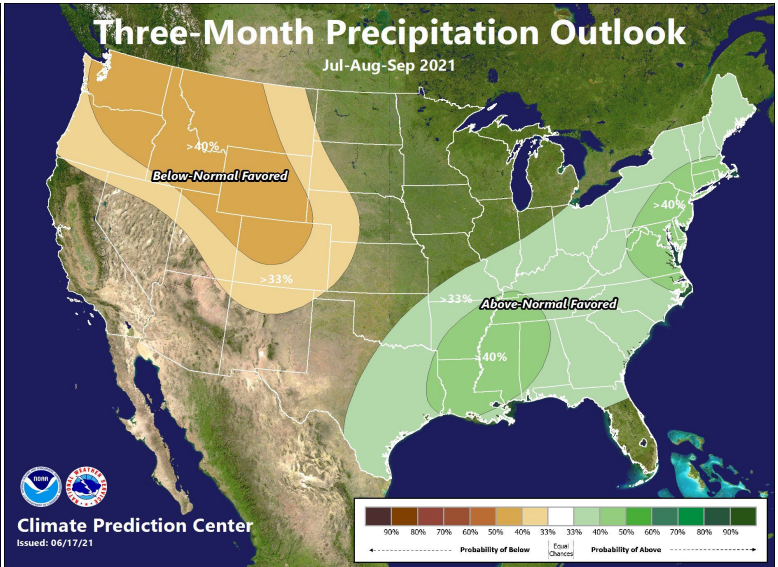
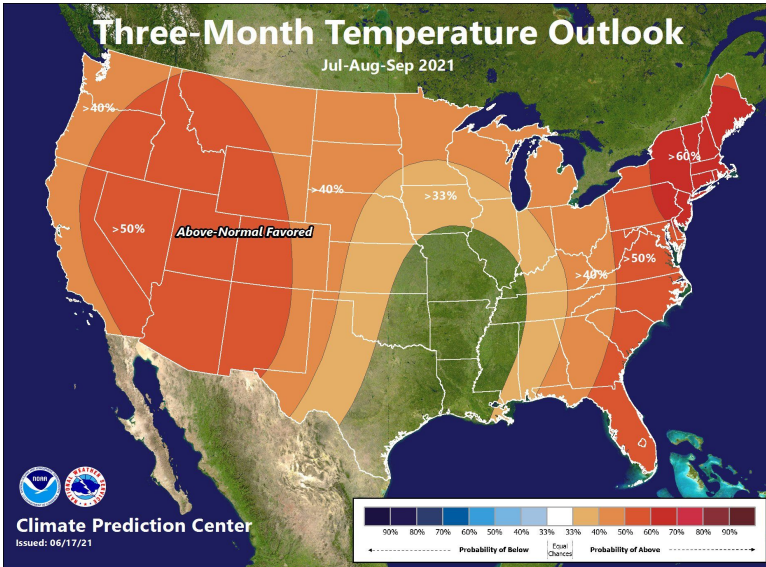
## Assessing Drought Conditions

The U.S. Drought Monitor notes that 92% of the western U.S. is experiencing some degree of drought conditions, with 48% of the region experiencing extreme or exceptional drought conditions. The long-range forecasts for much of the western U.S. are favoring the continuation of hot and dry conditions through the summer (see next page for these seasonal temperature and precipitation/rain outlooks). These odds, combined with the excessive heat that occurred in early to mid June, lead to increasing concerns for persistent or worsening drought conditions.



**ABOVE:** U.S. Drought Monitor for the western U.S., as of June 15, 2021 (Source: [droughtmonitor.unl.edu](https://droughtmonitor.unl.edu))

**ABOVE:** U.S. Seasonal Drought Outlook through September 30, 2021 (Source: [cpc.ncep.noaa.gov](https://cpc.ncep.noaa.gov))



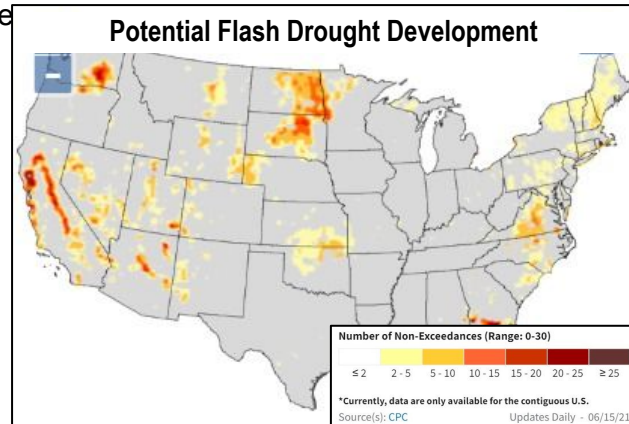
ABOVE: Temperature and Precipitation Outlooks for the 3-month period of July through September 2021 (Source: [cpc.ncep.noaa.gov](https://cpc.ncep.noaa.gov))

### Potential Impacts

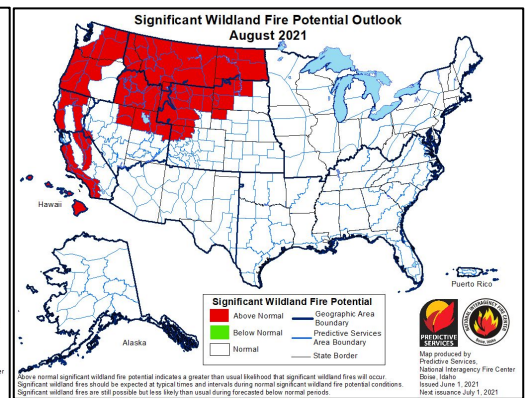
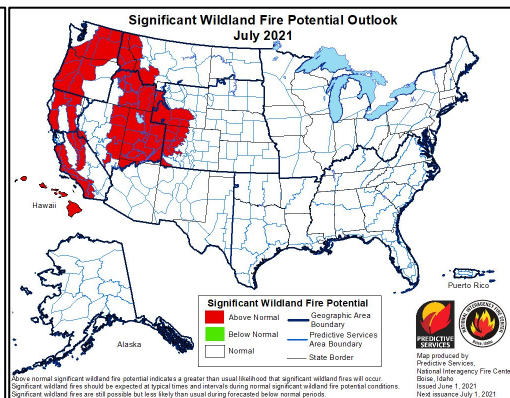
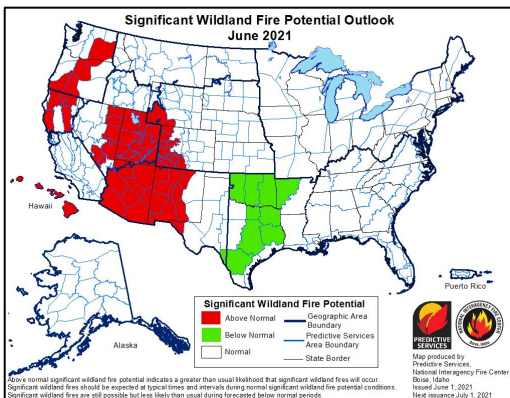
Much of the snow across the western U.S. melted 1-4 weeks early. The combination of low snowpack, rapid melting, poor runoff efficiency, long-term dryness, and the early summer extreme heat has led to increasing concerns for significant water supply issues through the summer. Additionally, there's increasing potential for some areas of flash drought development, which could further exacerbate drought impacts.

Persistent or worsening drought conditions may contribute to:

- Larger and more frequent wildfires
- Lack of water resources for crops and livestock
- Stress on water resources for communities
- Reduced or adapted outdoor recreation and tourism
- Decreased air quality



ABOVE: Potential Flash Drought Development, valid through mid-July (Source: [cpc.ncep.noaa.gov](https://cpc.ncep.noaa.gov))



ABOVE: June-August 2021 outlooks for Significant Wildland Fire (Source: [NIFC Significant Wildland Fire Potential Outlooks](https://nifc.gov/nicc))

### For more information visit:

Local Forecast – [weather.gov](https://weather.gov)

Long-Range Outlooks – [cpc.ncep.noaa.gov](https://cpc.ncep.noaa.gov)

River Forecasts – [water.weather.gov/ahps/forecasts.php](https://water.weather.gov/ahps/forecasts.php)

Weather & Climate Data – [ncei.noaa.gov](https://ncei.noaa.gov)

Fire Outlook – [nifc.gov/nicc](https://nifc.gov/nicc)

Drought Information – [drought.gov](https://drought.gov)

Agricultural Outlook – [usda.gov/oce/ag-outlook-forum](https://usda.gov/oce/ag-outlook-forum)

Streamflow Data - <https://waterwatch.usgs.gov/index.php?id=ww>