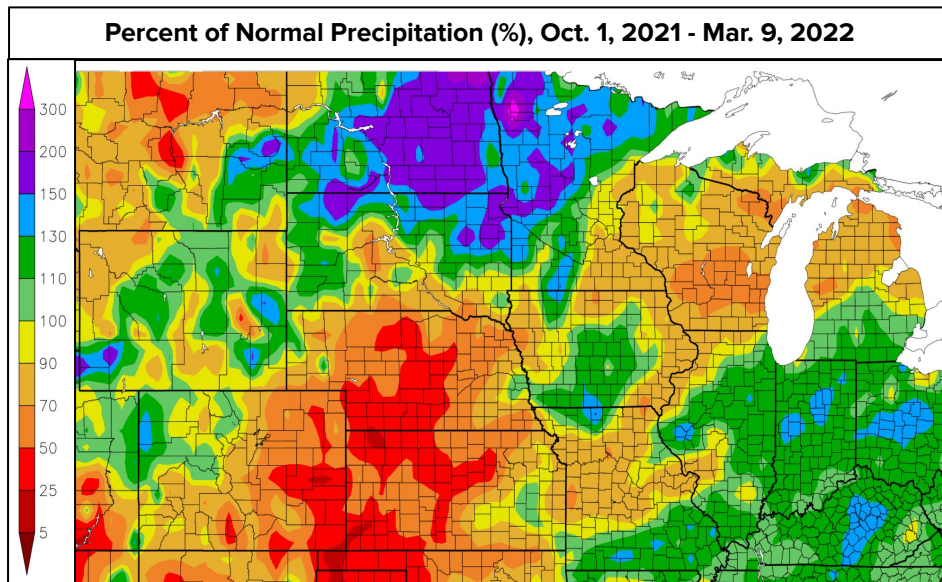


## Missouri Basin Spring Hazard Outlook Below Normal Flood Risk Expected Across Much of the Basin

### Setting the Stage: Precipitation and Soil Moisture

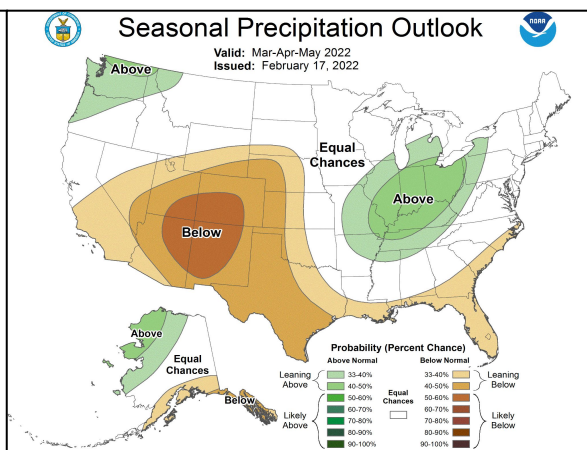
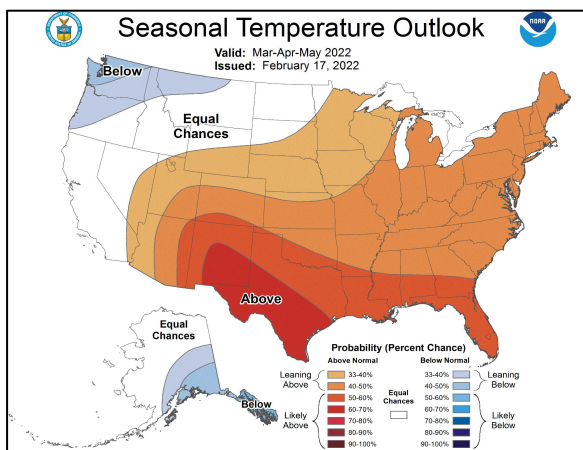
While the winter season started with wetter than normal conditions across northern and western parts of the basin, much of the remainder of the basin experienced drier than normal conditions from December through February. As a result, drought conditions have worsened across many parts of the basin. The only exceptions are across the eastern Dakotas and eastern Missouri where several winter storm systems brought above normal precipitation. With warmer and drier than normal conditions noted across the central and southern parts of the basin this winter, soils have become very dry in these areas.



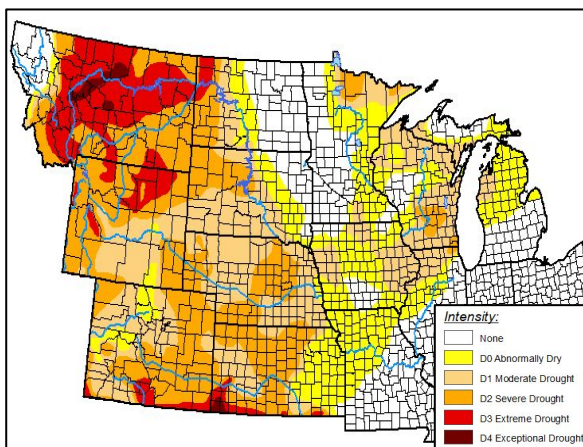
ABOVE: Percent of 1991-2020 Normals Precipitation from Oct. 1, 2021 to Mar. 9, 2022. (Source: [HPRCC](#))

### Spring Climate Outlook: March - May

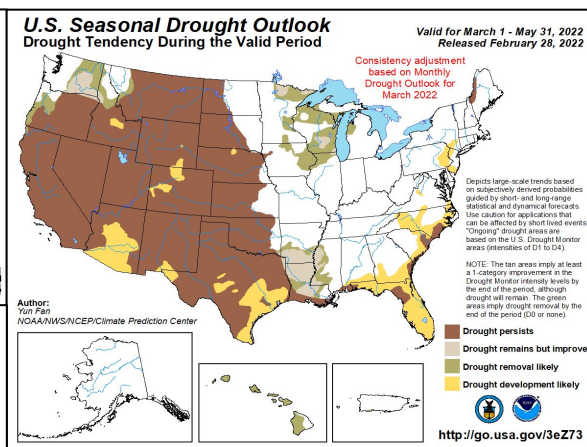
The long-range outlook for March through May favors increased chances for warmer than normal conditions across the southern half of the basin, with equal chances for above or below normal temperatures across the northern part of the basin. The only exception is across northwest Montana where cooler than normal conditions are slightly favored. Wetter than normal conditions are slightly favored across Missouri with drier than normal conditions favored across the central Rockies and central High Plains. Elsewhere across the basin, there are equal chances for wetter or drier than normal conditions.



ABOVE: Temperature and Precipitation Outlooks for March through May 2022. (Source: [CPC](#))



ABOVE: U.S. Drought Monitor as of March 8, 2022 (Source: [U.S. Drought Monitor](#))



ABOVE: Seasonal Drought Outlook through May 31, 2022 (Source: [CPC](#))

### Flood Risk

The flood risk for this spring is considered to be lower than normal for much of the Missouri Basin. With below average snowpack noted in the mountains, significant flooding due to mountain snow runoff alone is not likely. Episodic minor to moderate flooding is likely in the lower portion of the basin due to springtime thunderstorm activity. This includes the mainstem Missouri River itself, where episodic minor flooding is likely downstream of Kansas City. The risk for ice jam break-up flooding is low.

### Fire Risk

The combination of ongoing drought and warmer and drier than normal conditions favored for this spring will result in an early and active start to the fire season across parts of the southern High Plains and Central Plains. Limited snow from the winter has left grasses upright in some areas, which will further increase the fire risk.

### Drought Risk

The U.S. Drought Monitor shows that drought conditions exist across much of the region. The combination of dry soils, long term ongoing drought conditions, and a below normal flood risk could result in continued or worsened drought conditions this spring. In fact, drought impacts could become widespread across agricultural, energy, transportation, and water resources if the region doesn't receive significant precipitation this spring.

### Water Resource Information

At or below normal streamflow and water levels, along with dry soils suggest the following potential impacts to water resources:

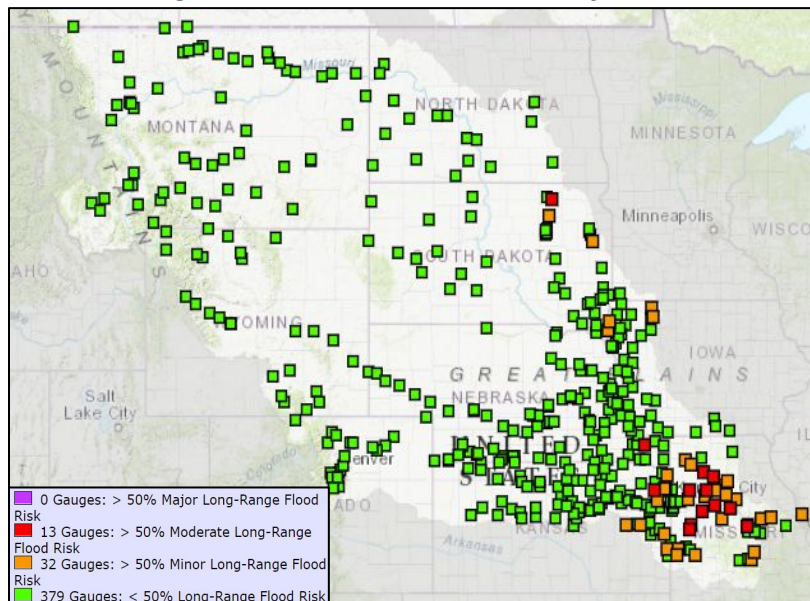
- Lower flow on the Missouri River.
- Potential impacts for water recreation and/or tourism.
- Increase in water quality issues.

### Agricultural Information

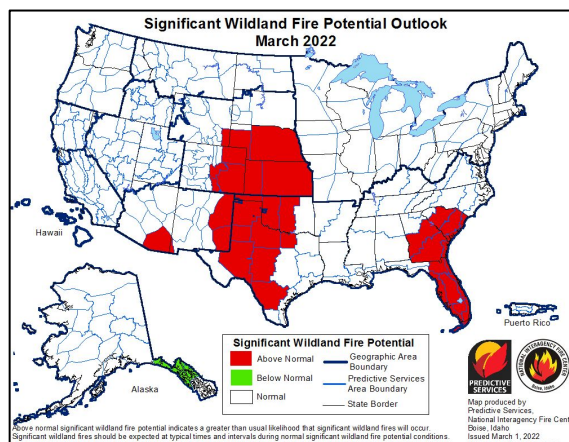
Dry soils and limited snowpack suggest the following potential impacts for those with agricultural interests:

- Continued winter wheat damage from ongoing drought.
- Rangeland will continue to be stressed due to the ongoing lack of precipitation.
- Lack of water possible for livestock or irrigation.
- Low water in stock ponds due to dry conditions.
- Earlier than average crop planting may be possible.

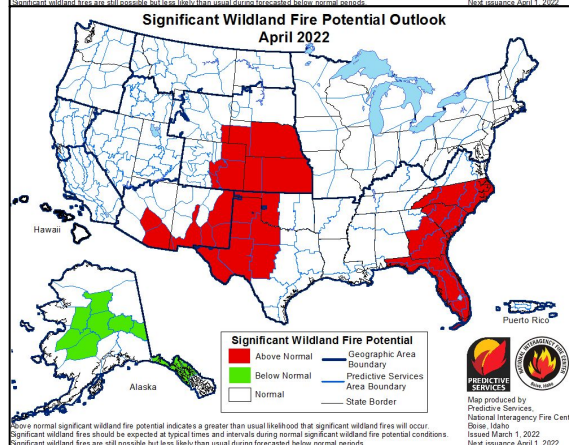
### Spring Flood Outlook: March - May, 2022



ABOVE: March-May 2022 Spring Flood Outlook, (Source: [NOAA NWS AHPS](#))



LEFT: March 2022 Significant Wildland Fire Outlook  
Source: [NIFC](#)



LEFT: April 2022 Significant Wildland Fire Outlook  
Source: [NIFC](#)

### For more information visit:

- Local Forecast – [weather.gov](http://weather.gov)
- Long-Range Outlooks – [cpc.ncep.noaa.gov](http://cpc.ncep.noaa.gov)
- River Forecasts – [water.weather.gov/ahps/forecasts.php](http://water.weather.gov/ahps/forecasts.php)

- Weather & Climate Data – [ncei.noaa.gov](http://ncei.noaa.gov)
- Fire Outlook – [nifc.gov/nicc](http://nifc.gov/nicc)
- Drought Information – [drought.gov](http://drought.gov)
- Agricultural Outlook – [usda.gov/oce/ag-outlook-forum](http://usda.gov/oce/ag-outlook-forum)
- Streamflow Data - <https://waterwatch.usgs.gov/index.php?id=ww>

