



# Drought Information Statement for Montana

Valid March 13, 2024

Issued By: NWS Great Falls, NWS Missoula

Contact Information:

- This product will be updated April 30, 2024 or sooner if drought conditions change significantly.
- Please see all currently available products at <https://drought.gov/drought-information-statements>.
- Please visit <https://www.weather.gov/TFX/DroughtInformationStatement> for previous statements.



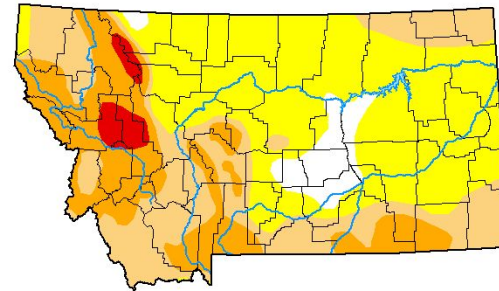


# U.S. Drought Monitor

Link to the [latest U.S. Drought Monitor](#) for Montana

- D3 Drought conditions are developing in Montana
- Drought intensity and Extent
  - D4 (Exceptional Drought): None occurring
  - D3 (Extreme Drought): Portions of the Rocky Mountain Front and east of Missoula
  - D2 (Severe Drought): Scattered areas over Western and Southern MT
  - D1 (Moderate Drought): Much of Western MT, Southern MT and portions of Northeast MT
  - D0: (Abnormally Dry): Much of Montana

## U.S. Drought Monitor Montana



**March 5, 2024**  
(Released Thursday, Mar. 7, 2024)  
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	5.42	94.58	48.60	21.98	2.36	0.00
<b>Last Week</b> 02-27-2024	6.11	94.89	47.30	23.26	2.36	0.00
<b>3 Months Ago</b> 12-05-2023	57.82	42.18	9.77	4.42	0.00	0.00
<b>Start of Calendar Year</b> 01-02-2024	39.20	60.80	21.30	2.68	0.00	0.00
<b>Start of Water Year</b> 09-30-2023	56.28	43.72	37.28	23.21	9.51	0.00
<b>One Year Ago</b> 03-07-2023	15.61	84.39	65.91	21.44	3.11	0.00

Intensity:



The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

Author:

Curtis Riganti  
National Drought Mitigation Center



[droughtmonitor.unl.edu](https://droughtmonitor.unl.edu)



National Oceanic and Atmospheric Administration  
U.S. Department of Commerce

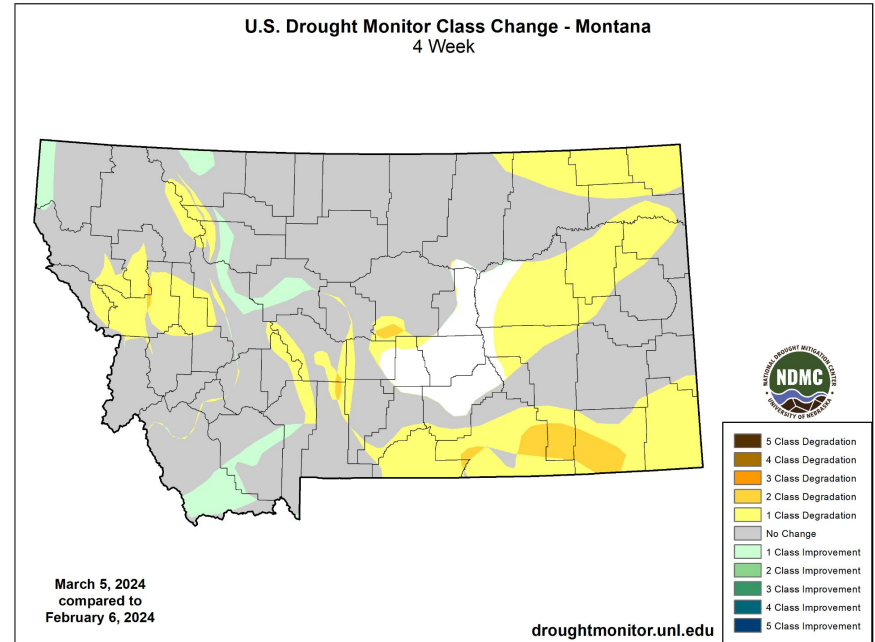
National Weather Service  
Great Falls, Montana



# Recent Change in Drought Intensity

Link to the latest [4-week change map](#) for Montana

- Four Week Drought Monitor Class Change.
  - Drought Worsened: The drought did get slightly worse over portions of Western, Central and Eastern MT.
  - No Change: No change in drought conditions over the past month were observed over portions of the state.
  - Drought Improved: Small areas of improvement were seen over the western half of the state in the past month.





# Precipitation

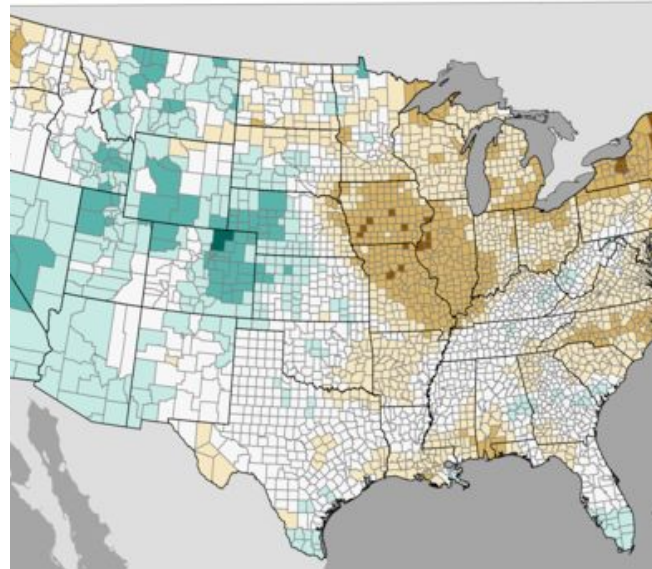
- February did have an increase in precipitation amounts, especially over portions of North Central MT.
- Only a small portion of northwest MT and far Southeast MT had below average precipitation for February

## County Precipitation Ranks

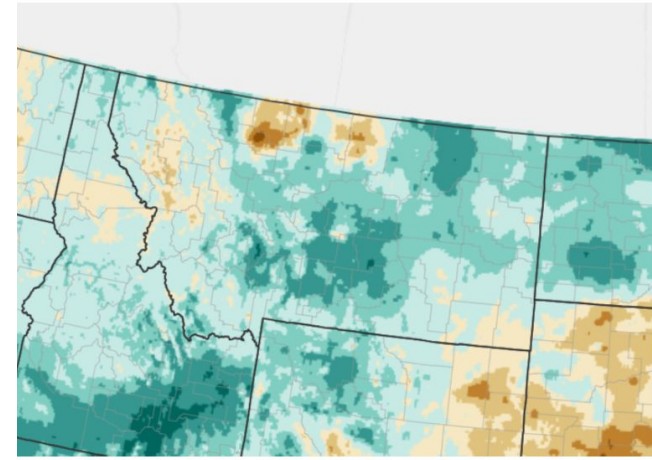
February 2024

Ranking Period: 1895–2024

NOAA's National Centers for Environmental Information

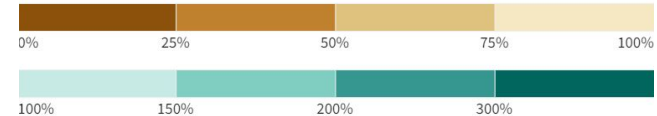


## 30-Day Percent of Normal Precipitation



Basemap Sources: Esri, HERE, Garmin, INCREMENT P, © OpenStreetMap contributors, and the GIS user community

### Percent of Normal Precipitation (%)



This map shows precipitation for the past 30 days as a percentage of the historical average (1991–2020) for the same time period. Green/blue shades indicate above-normal precipitation, while brown shades indicate below-normal precipitation.

Source(s): UC Merced  
Data Valid: 03/08/24

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

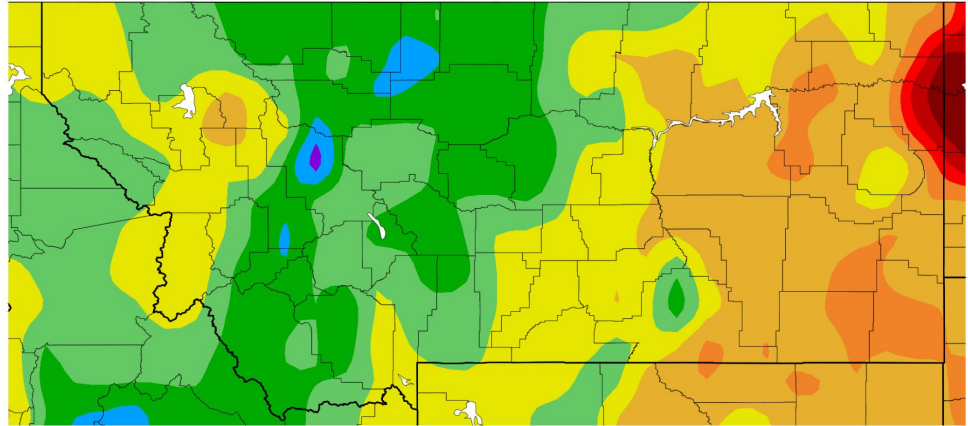




# Temperature

- For temperatures, the eastern one third of the state had above normal temperatures for February, while much of western two thirds of the state had below normal temperatures.

Departure from Normal Temperature (F)  
2/9/2024 – 3/9/2024



Generated 3/10/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers





# Summary of Impacts

Links: See/submit [Condition Monitoring Observer Reports \(CMOR\)](#) and view the [Drought Impacts Reporter](#)

## Hydrologic Impacts

- Mountain snowpack is below normal for this time of year
- Our mountains are not only below normal, but close to record low for the date in terms of SWE. There's a real concern for water supply issues as we move thru the middle and late summer, assuming we don't get a lot of high elevation snow in the next couple months.

## Agricultural Impacts

- Possible impacts to winter wheat and grasslands

## Fire Hazard Impacts

- Possible concerns later this spring if we melt out quickly and don't receive spring moisture

## Other Impacts

- Fishing and water impacts on rivers are possible this summer

## Mitigation Actions

- Reminder, low snowpack does not mean you can't flood. Flooding is possible at any time until the snow melts out of the mountains. Flood insurance needs to be purchased 30 days in advance.

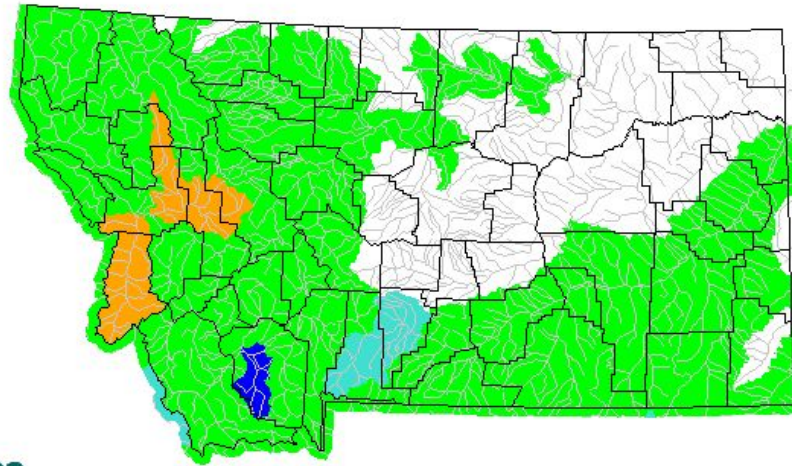




# Hydrologic Conditions and Impacts

- Much of MT has streamflow that is consider normal for this time of year.

Monday, March 11, 2024



Explanation - Percentile classes							
Low	<10	10-24	25-75	76-90	>90	High	No Data
	Much below normal	Below normal	Normal	Above normal	Much above normal		

Image Caption: USGS 7 day average streamflow HUC map valid March 9, 2024

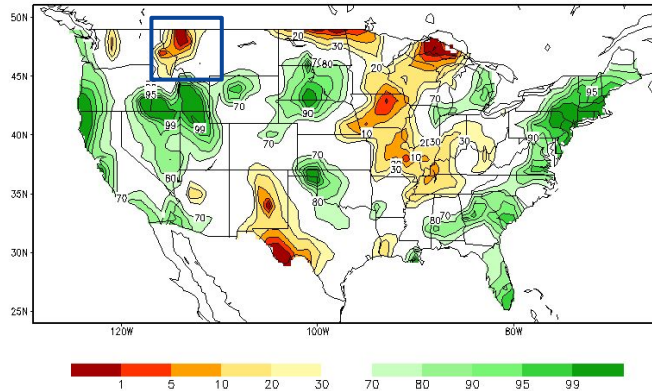




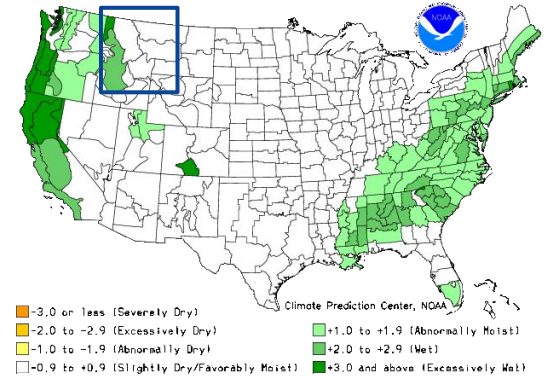
# Agricultural Impacts

- Northwest MT continues to be an area area soil moisture ranking is very low.

Calculated Soil Moisture Ranking Percentile  
MAR 09, 2024



Crop Moisture Index by Division  
Weekly Value for Period Ending MAR 2, 2024  
Short Term Need vs. Available Water in a Shallow Soil Profile



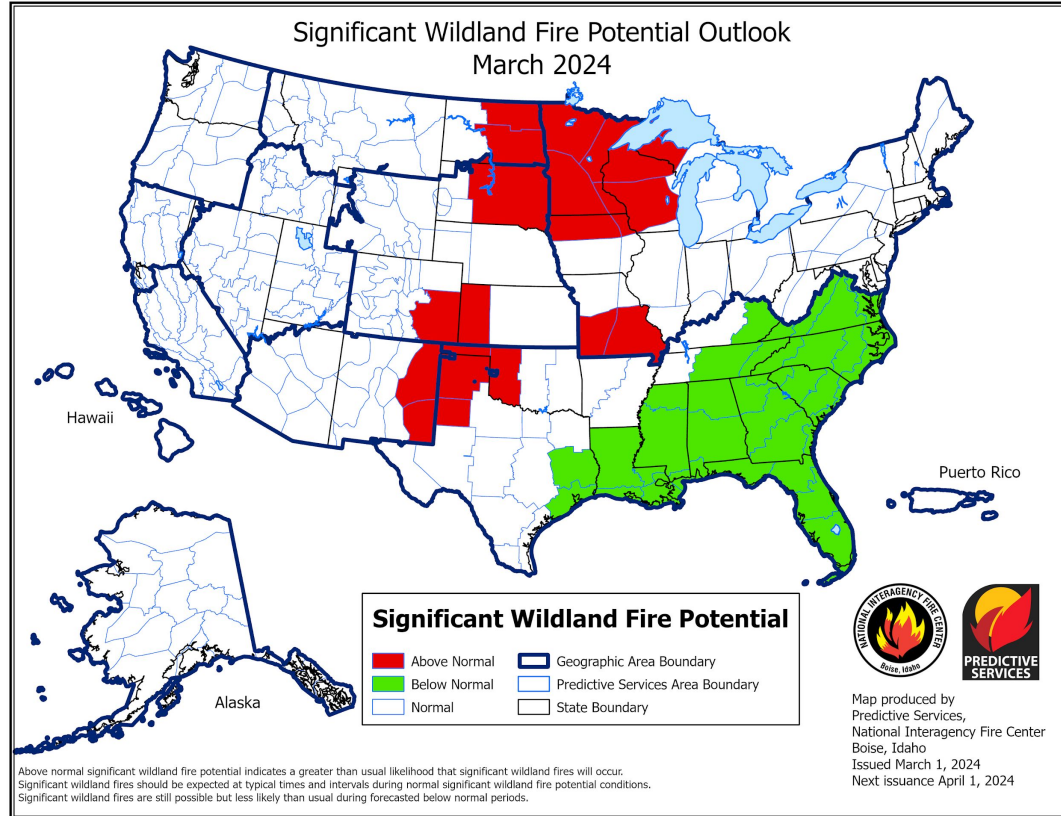




# Fire Hazard Impacts

Link to [Wildfire Potential Outlooks from the National Interagency Coordination Center](#).

- Fire impacts are possible on grasslands a few weeks after they dry out and before they have the spring green up.
- For the mountains, fire season will occur after the snow melts out.

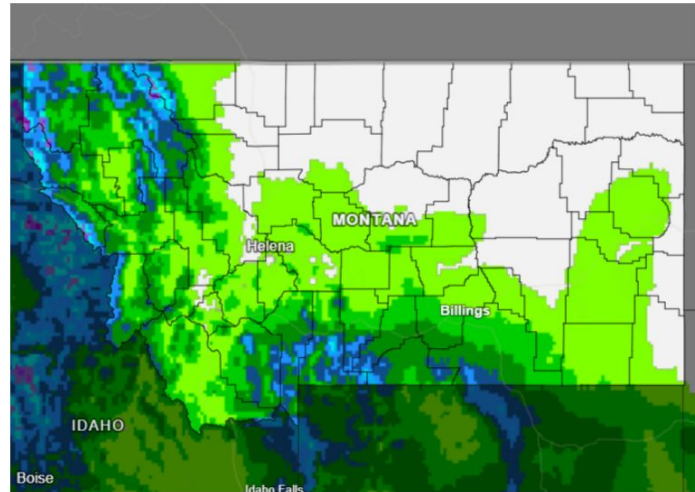




# Seven Day Precipitation Forecast

- Some rain/snow is expected to fall over the western and southern portions of the state this week.
- However, much of North Central and Northeast MT are expected to remain mostly dry this week.

## 7-Day Quantitative Precipitation Forecast



Predicted Inches of Precipitation



Source(s): National Weather Service Weather Prediction Center

Data Valid: 03/10/24

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





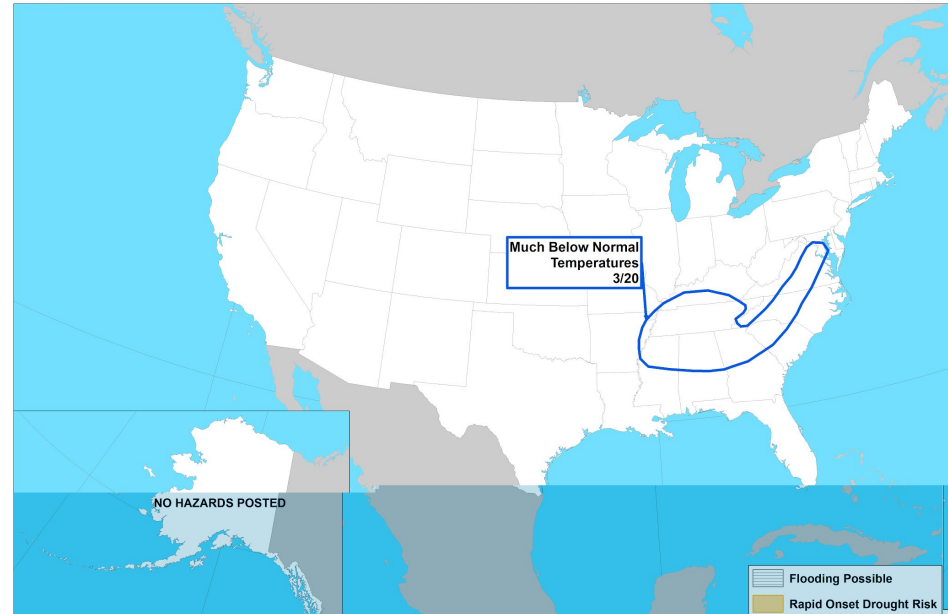
# Rapid Onset Drought Outlook

Links to the latest Climate Prediction Center 8 to 14 day [Temperature Outlook](#) and [Precipitation Outlook](#).

- No significant hazards are expected over Montana from March 8th thru the 14th at this time.



Day 8-14 U.S. Hazards Outlook  
Valid: 03/20/2024-03/26/2024



Climate Prediction Center  
Made: 03/12/2024 3PM EDT

Follow us:   
[www.cpc.ncep.noaa.gov](http://www.cpc.ncep.noaa.gov)

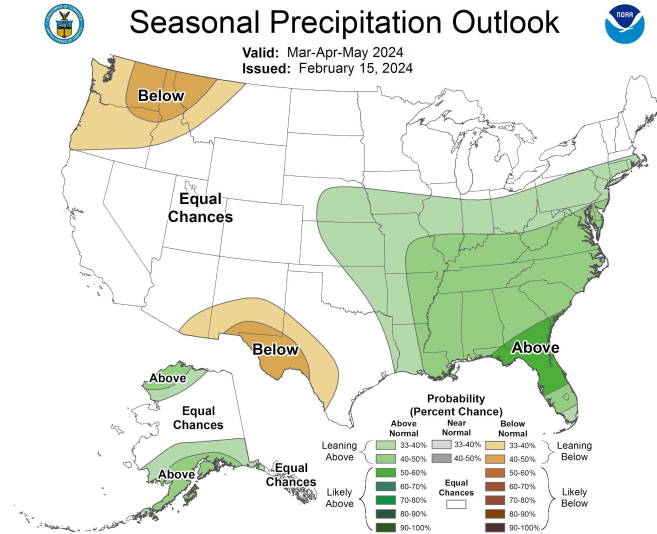
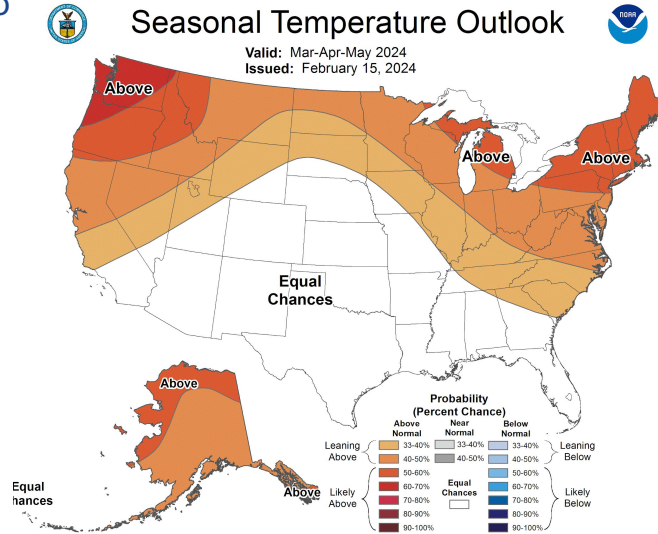




# Long-Range Outlooks

The latest monthly and seasonal outlooks can be found on the [CPC homepage](#)

- Above normal temperatures are favored for Montana as we go into Spring.
- Additional, near normal chances for precipitation are favored for all of MT expect Northwest MT, where below normal precipitation is favored.



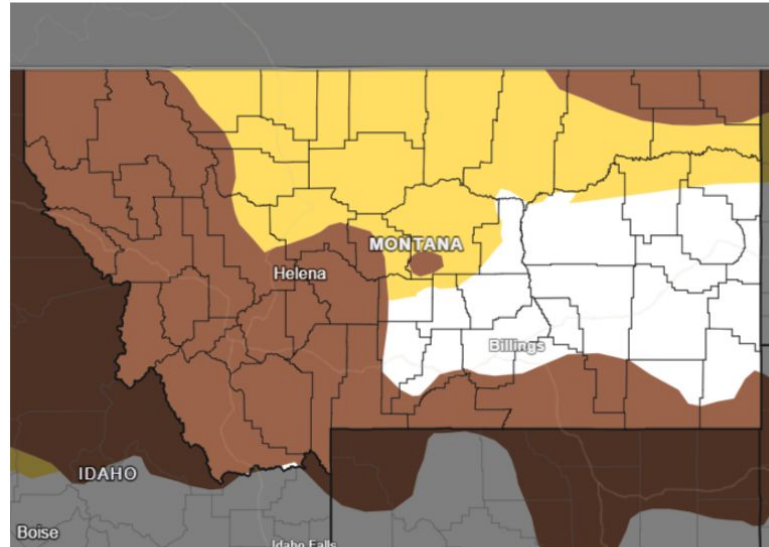


# Drought Outlook

The latest monthly and seasonal outlooks can be found on the [CPC homepage](#)

- Drought conditions are expected to continue over Western, Southern and far Northeast MT.
- Some expansion in the drought is possible over North Central MT and the southern portions of Northeast MT.

## Seasonal (3-Month) Drought Outlook



### Drought Is Predicted To...



Source(s): Climate Prediction Center

Data Valid: 03/07/24

**Drought.gov**

Links to the latest:

[Climate Prediction Center Monthly Drought Outlook](#)

[Climate Prediction Center Seasonal Drought Outlook](#)



National Oceanic and Atmospheric Administration  
U.S. Department of Commerce

National Weather Service  
Great Falls, Montana