



# Drought Information Statement for NE Minnesota & NW Wisconsin

Valid September 7, 2023

Issued By: NWS Duluth

Contact Information:

- This product will be updated 09/21/2023 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/DLH/DroughtInformationStatement> for previous statements.



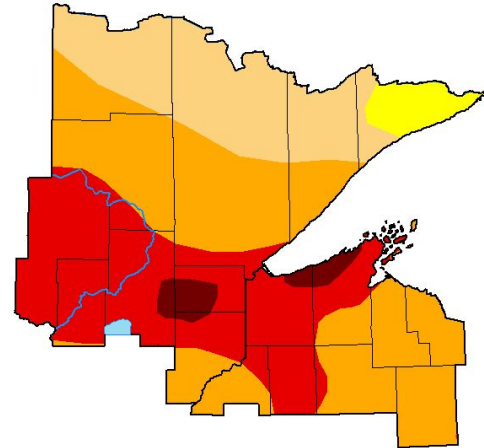


# U.S. Drought Monitor

Link to the [latest U.S. Drought Monitor](#) for NE Minnesota and NW Wisconsin

- **Drought conditions continue and expand over the region**
- Drought intensity and Extent
  - D4 (Exceptional Drought): East Aitkin, much of Carlton, northwest Pine, and along the Bayfield Peninsula
  - D3 (Extreme Drought): Most of east-central Minnesota into northwest Wisconsin
  - D2 (Severe Drought): Areas of northeast Minnesota and northwest Wisconsin
  - D1 (Moderate Drought): Canadian Border
  - D0 (Abnormally Dry): Far northeastern tip of the Arrowhead

## U.S. Drought Monitor Duluth, MN WFO



**September 5, 2023**  
(Released Thursday, Sep. 7, 2023)  
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	96.66	75.13	34.31	2.85
Last Week 08-29-2023	0.00	100.00	81.60	55.14	19.62	1.10
3 Months Ago 06-06-2023	17.91	82.09	7.73	0.00	0.00	0.00
Start of Calendar Year 01-01-2023	64.70	35.30	0.99	0.00	0.00	0.00
Start of Water Year 09-27-2022	71.95	28.05	11.27	2.57	0.00	0.00
One Year Ago 09-06-2022	81.03	18.97	4.70	0.00	0.00	0.00

Intensity

None	D2 Severe Drought
D0 Abnormally Dry	D3 Extreme Drought
D1 Moderate Drought	D4 Exceptional Drought

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:  
Richard Tinker  
CPC/NOAA/NWS/NCEP



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

Image Caption: U.S. Drought Monitor valid 8am EDT September 5th.





# Recent Change in Drought Intensity

Link to the latest [4-week change map](#) for NE Minnesota and NW Wisconsin

- Four Week Drought Monitor Class Change.
  - Drought Worsened: Parts of east-central Minnesota into northwest Wisconsin
  - No Change: Much of the region
  - Drought Improved: Areas near the Canadian border and tip of the Arrowhead

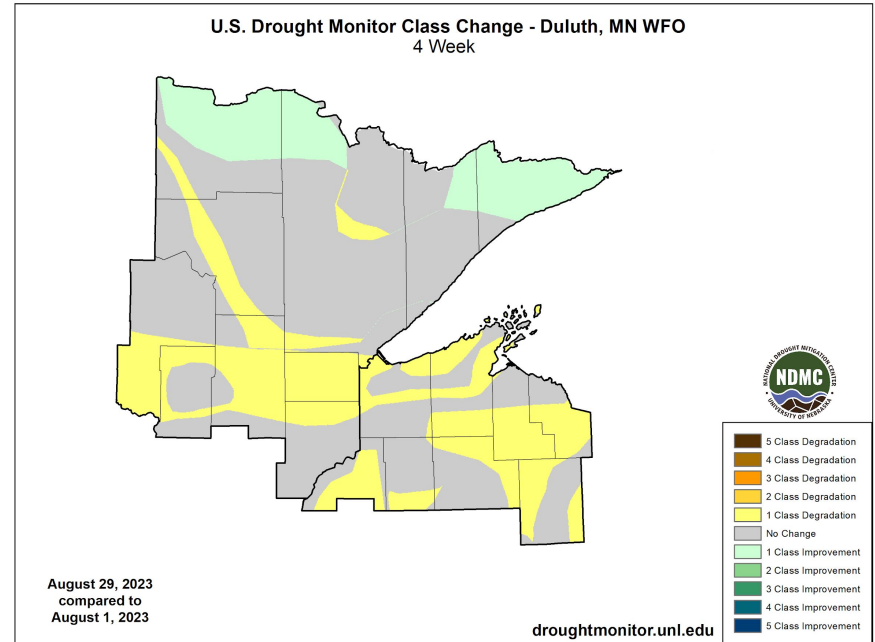


Image Caption: U.S. Drought Monitor 4-week change map valid 8am EDT August 29th.

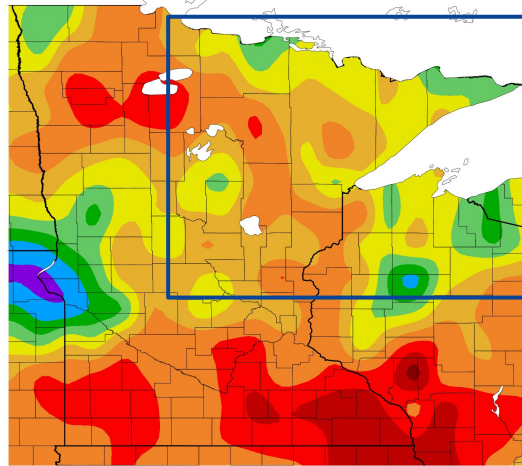




# Precipitation (Past 30 Days)

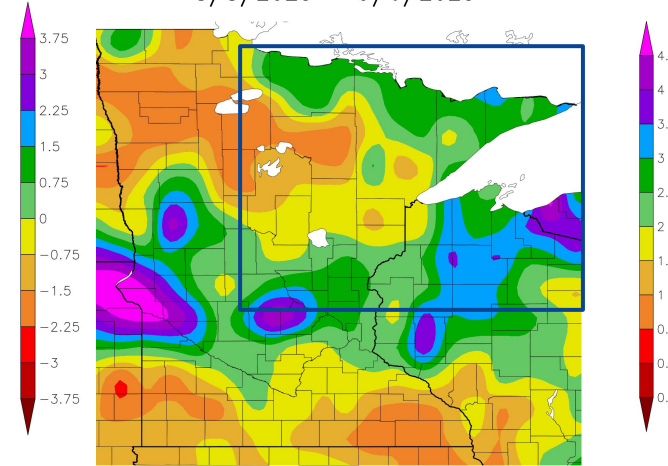
- Recent rainfall from September 5 thunderstorms have been beneficial for many, resulting in some areas where rainfall has been above average (particularly northwest Wisconsin)
- Many areas have still seen rainfall below average

Departure from Normal Precipitation (in)  
8/8/2023 – 9/6/2023



Generated 9/7/2023 at HPRCC using provisional data.

Precipitation (in)  
8/8/2023 – 9/6/2023



NOAA Regional Climate Centers

Image Captions:

Left - Percent of Normal Precipitation for northeast Minnesota and northwest Wisconsin

Right - Precipitation Amount for northeast Minnesota and northwest Wisconsin

Data Courtesy High Plains Regional Climate Center.

Data over the past 30 days ending September 6, 2023



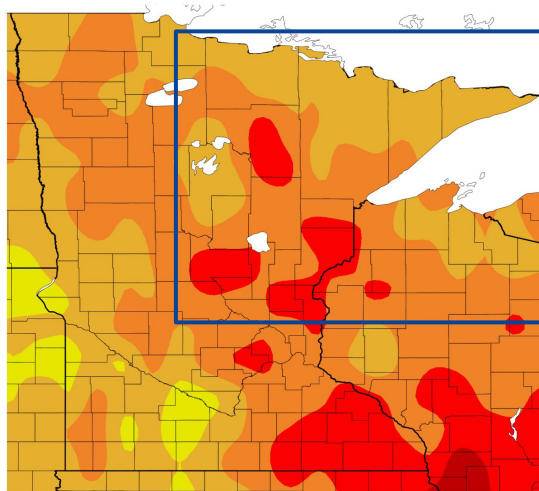




# Precipitation (Past 120 Days)

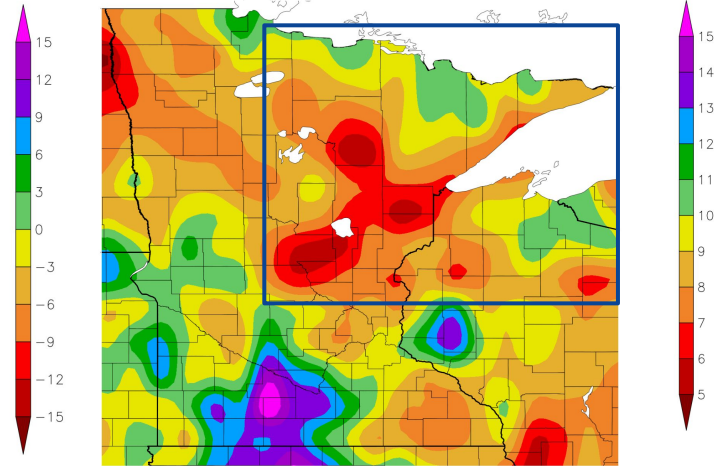
- Note that areas that have seen above average rainfall in the past month still largely remain below average considering the dry conditions from late spring and early summer!

Departure from Normal Precipitation (in)  
5/10/2023 - 9/6/2023



Generated 9/7/2023 at HPRCC using provisional data.

Precipitation (in)  
5/10/2023 - 9/6/2023



NOAA Regional Climate Centers

Image Captions:

Left - Percent of Normal Precipitation for northeast Minnesota and northwest Wisconsin

Right - Precipitation Amount for northeast Minnesota and northwest Wisconsin

Data Courtesy High Plains Regional Climate Center.

Data over the past 120 days ending September 6, 2023

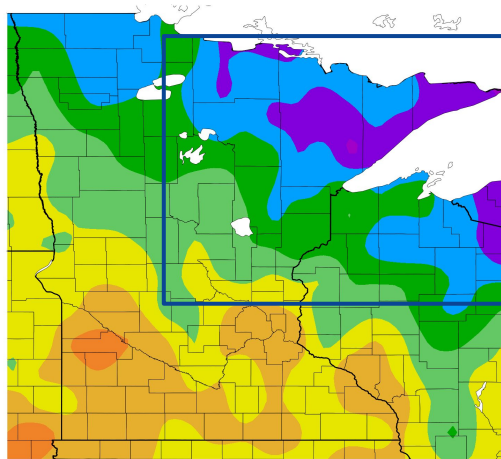




# Temperature

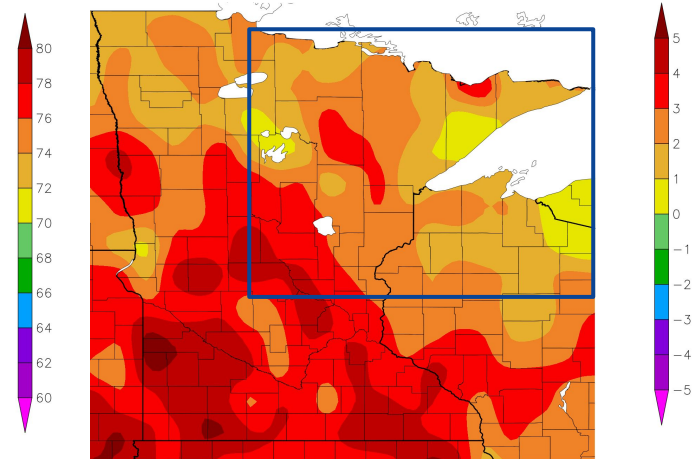
- Temperatures have been above average for the past month
- Warm weather has likely contributed to the ongoing drought conditions

Temperature (F)  
8/8/2023 - 9/6/2023



Generated 9/7/2023 at HPRCC using provisional data.

Departure from Normal Temperature (F)  
8/8/2023 - 9/6/2023



NOAA Regional Climate Centers <sup>23</sup> at HPRCC using provisional data.

NOAA Regional Climate Centers

Image Captions:  
 Left - Departure from Normal Temperature  
 Right - Average Temperature  
 Data Courtesy High Plains Regional Climate Center.  
 Data over the past 30 days ending September 6, 2023





# Summary of Impacts

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

## Hydrologic Impacts

- Streamflow remains below normal to around normal

## Agricultural Impacts

- There are continued reports of very dry conditions across the region

## Fire Hazard Impacts

- There are pockets of high fire danger in northeast Minnesota

## Other Impacts

- There are no known impacts at this time

## Mitigation Actions

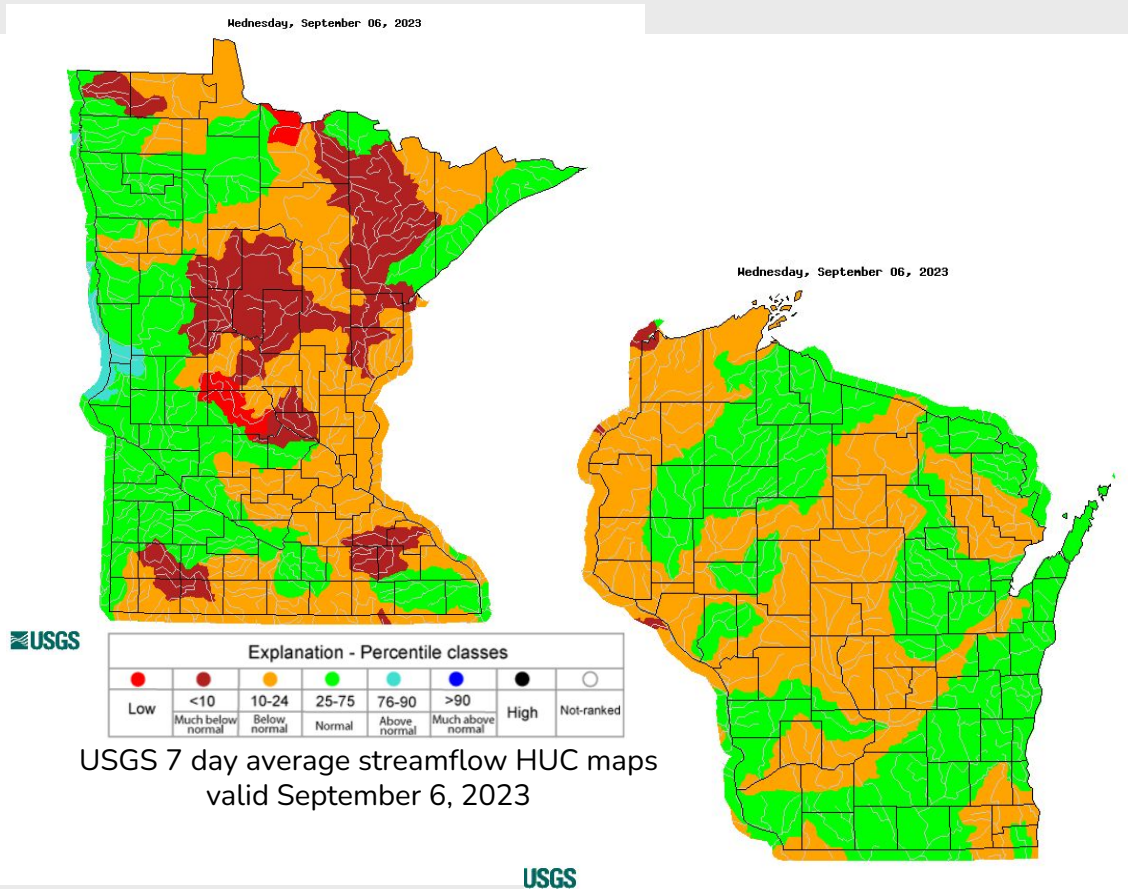
- None reported





# Hydrologic Conditions and Impacts

- Streamflow remains around normal to below normal across the region.







# Agricultural Impacts

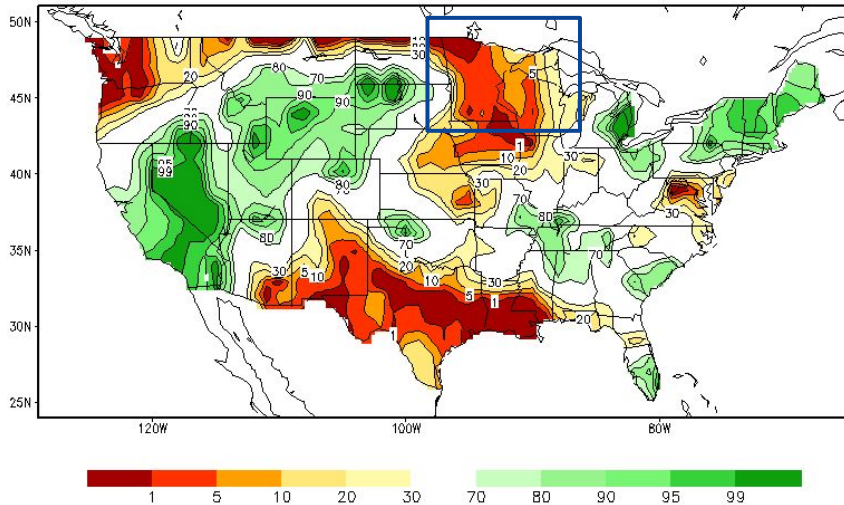
- There are continued regional reports of very dry conditions across the region

Image Captions:

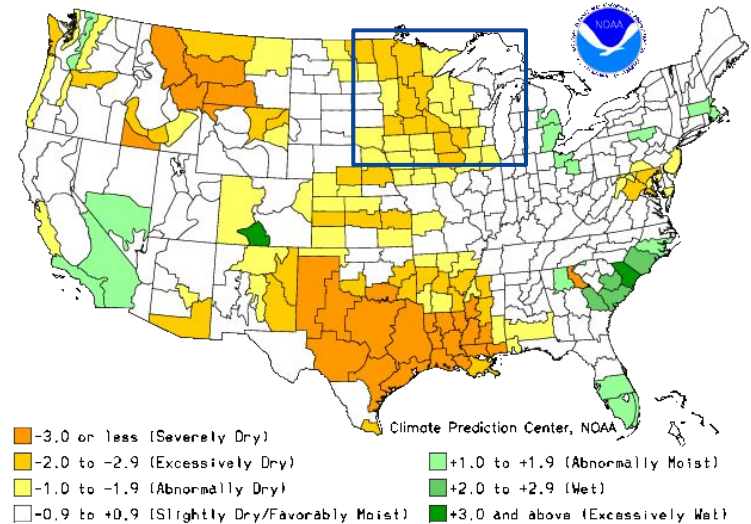
Left: CPC Calculated [Soil Moisture Ranking Percentile](#) valid September 6, 2023

Right: [Crop Moisture Index by Division](#). Weekly value for period ending September 2, 2023

Calculated Soil Moisture Ranking Percentile  
SEP 06, 2023



Crop Moisture Index by Division  
Weekly Value for Period Ending SEP 2, 2023  
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](#).

- Above normal chances for significant wildland fire potential across the region

Latest MN burn ban and fire danger information available [here](#).

Latest WI burn ban and fire danger information available [here](#).

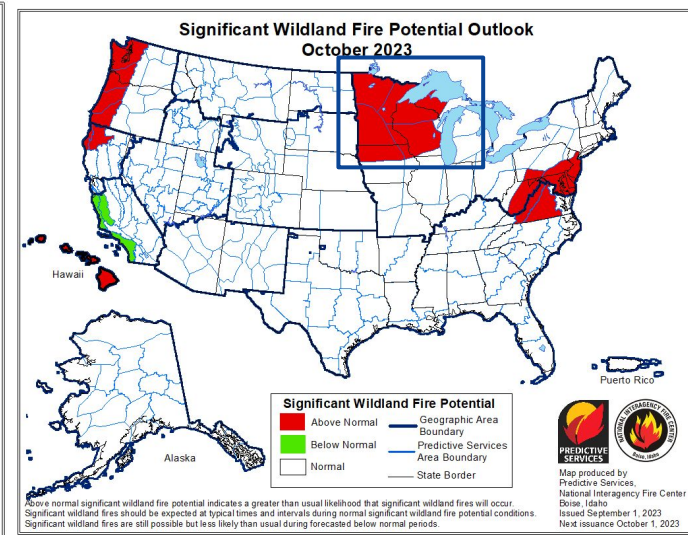
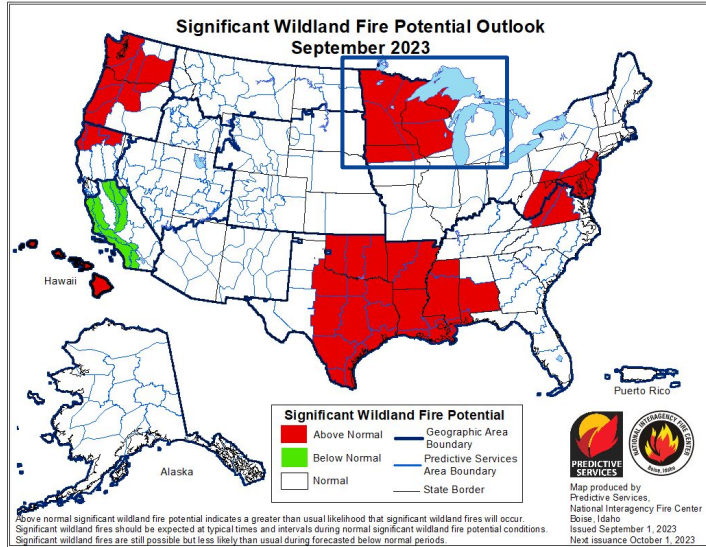


Image Caption: [Significant Wildland Fire Potential Monthly Outlook](#) for September and October 2023





# Seven Day Precipitation Forecast

- Some rain chances in the next week, especially over the weekend, but nothing that is expected to make a significant reduction in drought conditions

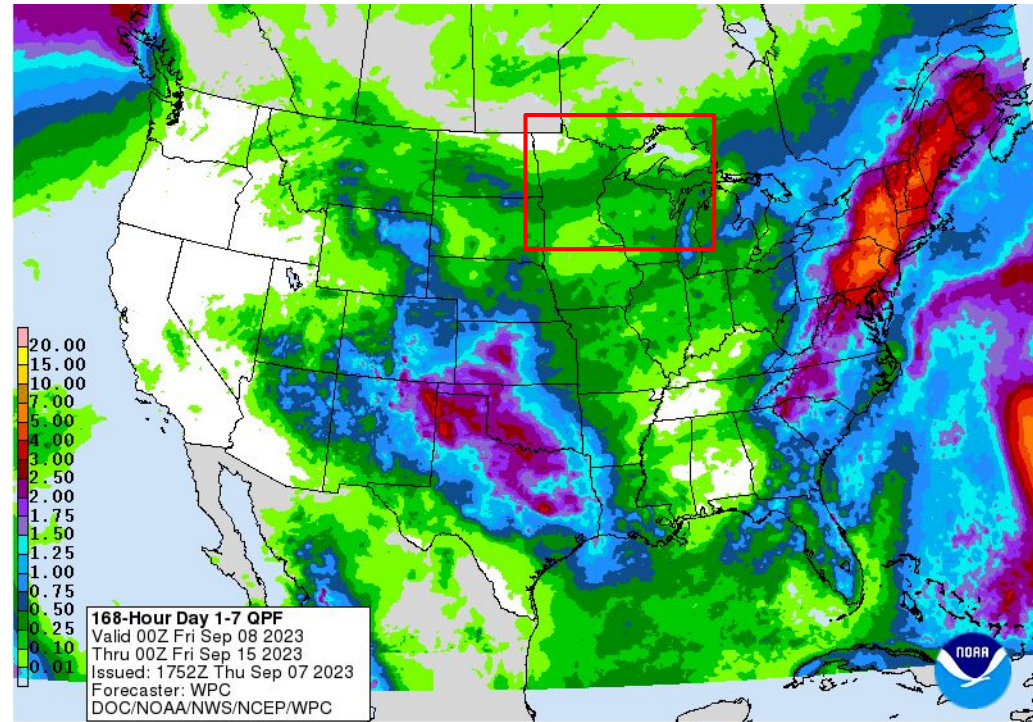


Image Caption: Weather Prediction Center [7-day precipitation forecast](#) valid Friday September 8 to September 15







# Long-Range Outlooks

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

- CPC outlooks favor above normal temperatures and below normal precipitation chances through September

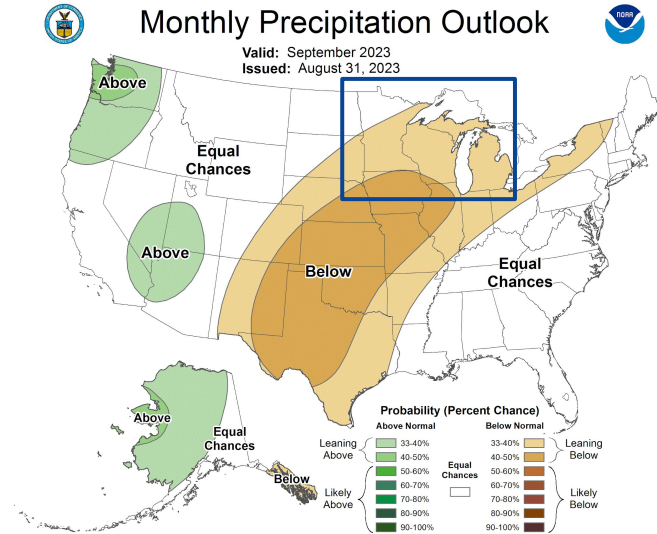
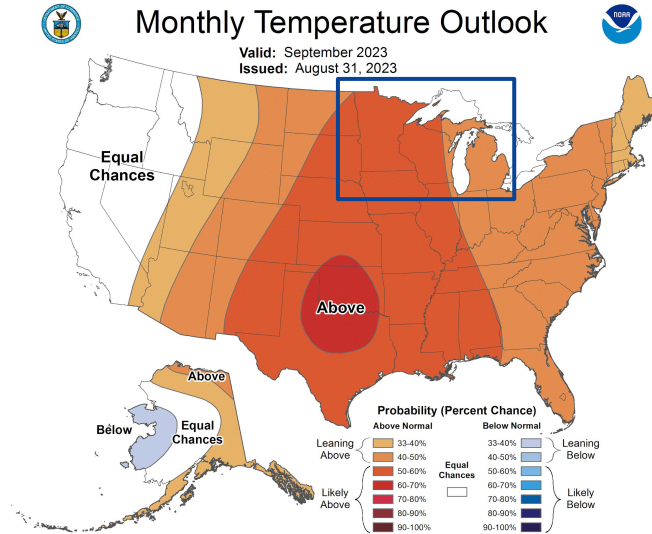


Image Captions:

Left - [Climate Prediction Center Monthly Temperature Outlook](#)

Right - [Climate Prediction Center Monthly Precipitation Outlook](#)

Valid 09/2023







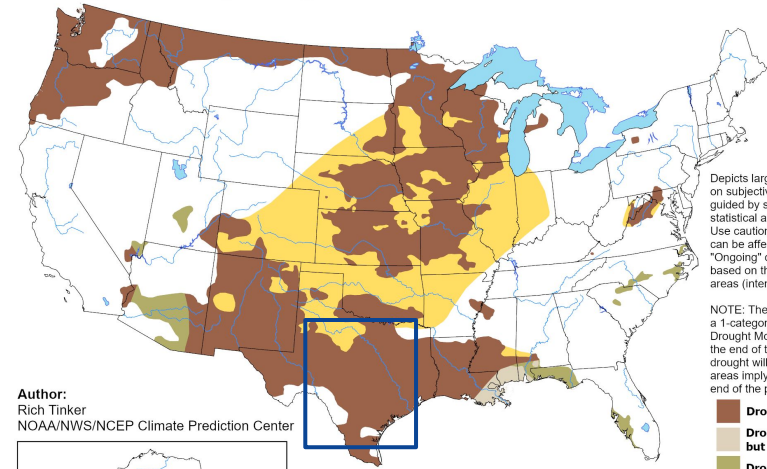
# Drought Outlook

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

- Drought is expected to persist through September

## U.S. Monthly Drought Outlook Drought Tendency During the Valid Period

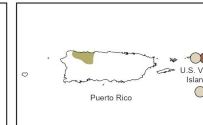
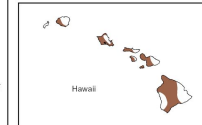
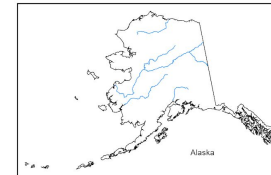
Valid for September 2023  
Released August 31, 2023



Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. \*Ongoing\* drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).

NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).

Author:  
Rich Tinker  
NOAA/NWS/NCEP Climate Prediction Center



- Drought persists
- Drought remains, but improves
- Drought removal likely
- Drought development likely
- No drought



<https://go.usa.gov/3eZGd>

Image Caption:

Climate Prediction Center Monthly Drought Outlook Released 08/31/2023 valid for 09/2023

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  
Duluth, MN