



Drought Information Statement for SE SD, SW MN, NW IA, Far NE Neb

Valid October 5th, 2023

Issued By: WFO Sioux Falls, SD

Contact Information: w-fsd.webmaster@noaa.gov

- This product will be updated November 1, 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/fsd/DroughtInformationStatement> for previous statements.





U.S. Drought Monitor

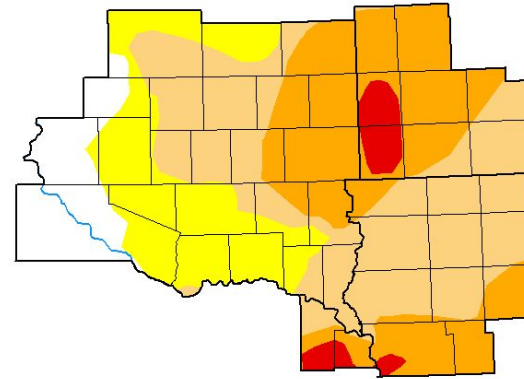
Link to the [latest U.S. Drought Monitor](#) for SE South Dakota, SW Minnesota, NW Iowa, far NE Nebraska

...RECENT RAINFALL HAS HELP BUT DROUGHT REMAINS GIVEN LONG TERM DEFICITS...

● Drought Intensity and Extent

- D3 (Extreme Drought): Portions of far northeast Nebraska and extreme western portions of Woodbury county, IA, as well as Rock and Pipestone counties in SW MN.
- D2 (Severe Drought): Northeast Nebraska into the Hwy 20 corridor in northwest Iowa as well as the I-29 corridor in far eastern South Dakota and adjacent portions of southwest Minnesota.
- D1 (Moderate Drought) and D0: (Abnormally Dry): The remain portions of the region not covered by D2 or D3 delineation.

U.S. Drought Monitor Sioux Falls, SD WFO



October 3, 2023
(Released Thursday, Oct. 5, 2023)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

| | None | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4 |
|---|------|--------|-------|-------|-------|------|
| Current | 9.98 | 90.02 | 70.90 | 33.00 | 3.54 | 0.00 |
| Last Week 09-26-2023 | 5.37 | 94.63 | 77.31 | 33.00 | 3.54 | 0.00 |
| 3 Months Ago 07-04-2023 | 4.90 | 95.10 | 78.60 | 50.88 | 10.02 | 0.65 |
| Start of Calendar Year 01-03-2023 | 0.00 | 100.00 | 93.62 | 63.86 | 20.61 | 1.98 |
| Start of Water Year 09-26-2023 | 5.37 | 94.63 | 77.31 | 33.00 | 3.54 | 0.00 |
| One Year Ago 10-04-2022 | 3.86 | 96.14 | 77.24 | 61.33 | 26.51 | 4.59 |

Intensity

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme 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>

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CPC/NOAA



droughtmonitor.unl.edu

NOTE: These conditions are as of the morning of Oct 3rd and do not reflect any rainfall that fell late in the day/overnight.

Image Caption: U.S. Drought Monitor valid 8am EDT October 3rd.



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

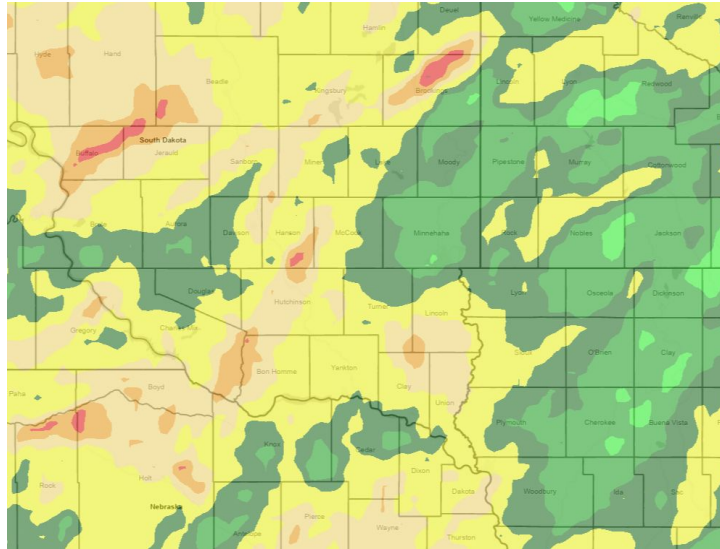
National Weather Service
Sioux Falls, SD



Precipitation - Past 14 Days (Ending Wednesday 10/4)

- Rainfall over the past 2 weeks has generally been near to above normal over much of the region.
- Several stripes of higher totals occurred west of I-29 where departures from normal were in the 2 to 5 inch range.
- These amounts were still only a fraction of the longer term deficit in most areas

Observed Precipitation



Departure of Normal Precipitation

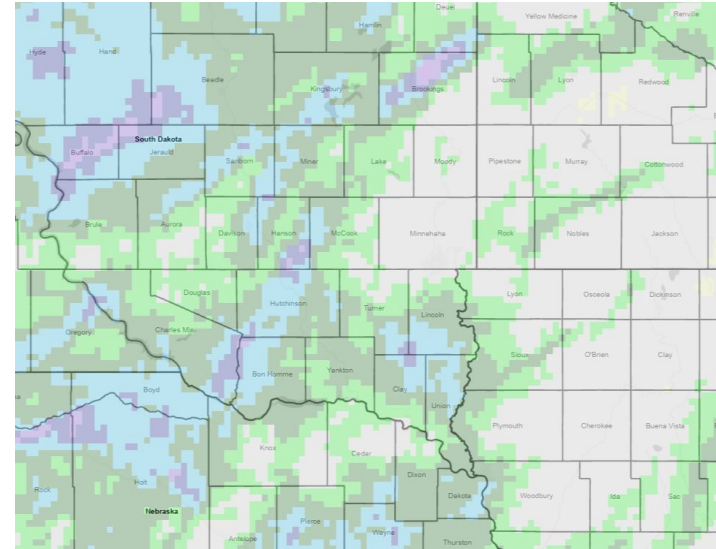


Image Captions:
 Left - Precipitation Amount
 Right - Departure of Normal Precipitation

Data Courtesy [AHPS Precipitation Analysis](#)
 Data over the past 14 days ending Oct 4, 2023

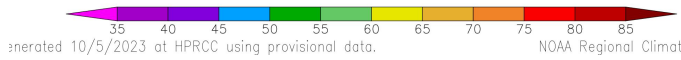
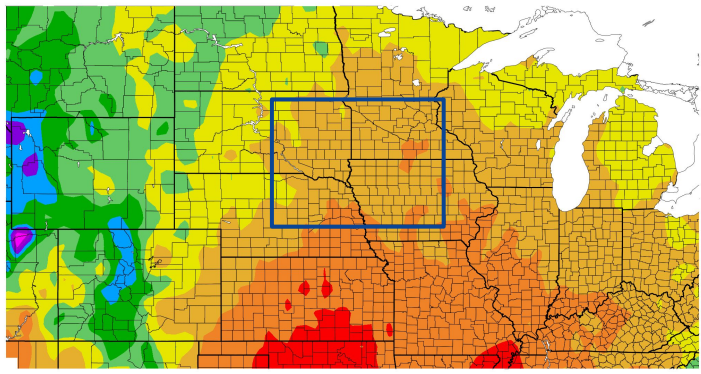




Temperature - Past 14 Days (Ending Wednesday 9/20)

- Temperatures during this period were well above normal driven by record breaking temperatures to close out September and begin October.
- High temperatures at times soared into the 90s with lows in the upper 60s and 70s; both rare for this time of year.

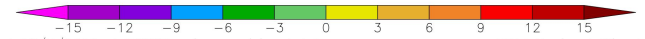
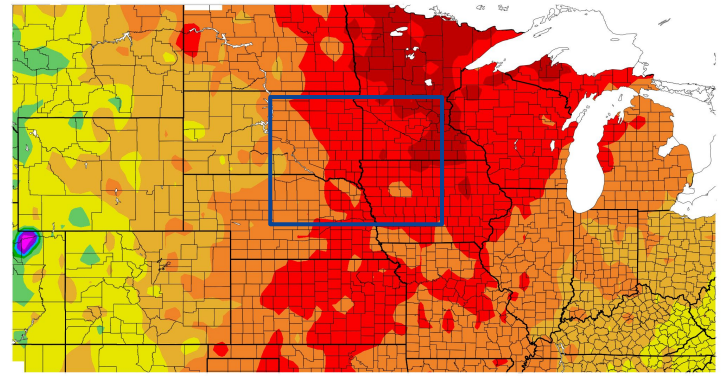
Temperature (F)
9/21/2023 - 10/4/2023



generated 10/5/2023 at HPRCC using provisional data.

NOAA Regional Climate Center

Departure from Normal Temperature (F)
9/21/2023 - 10/4/2023



generated 10/5/2023 at HPRCC using provisional data.

NOAA Regional Climate Center

Image Captions:
Left - Average Temperature
Right - Departure from Normal Temperature

Data Courtesy [High Plains Regional Climate Center](#).
Data over the past 14 days ending Oct 4, 2023



Summary of Impacts

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

Hydrologic Impacts

- Several streams and rivers have fallen below normal streamflow (at or below the 25th percentile). This is most prevalent through the Big Sioux Basin and basins east into SW MN and NW IA.

Agricultural Impacts

- No recent new impacts not already previously discussed

Fire Hazard Impacts

- Rural fire districts becoming increasingly concerned for fall fire season as drying continues.

Crops Rated 'Poor' or 'Very Poor'

Nebraska - As of Oct 1

Corn: 25%
 Soybean: 18%
 Sorghum: 9%
 Pasture: 16%

South Dakota - As of Oct 1

Corn: 19%
 Soybean: 20%
 Sorghum: 15%
 Pasture: 16%

Iowa - As of Oct 1

Corn: 15%
 Soybean: 15%
 Pasture: 48%

Minnesota - As of Oct 1

Corn: 24%
 Soybean: 17%
 Pasture: 65%





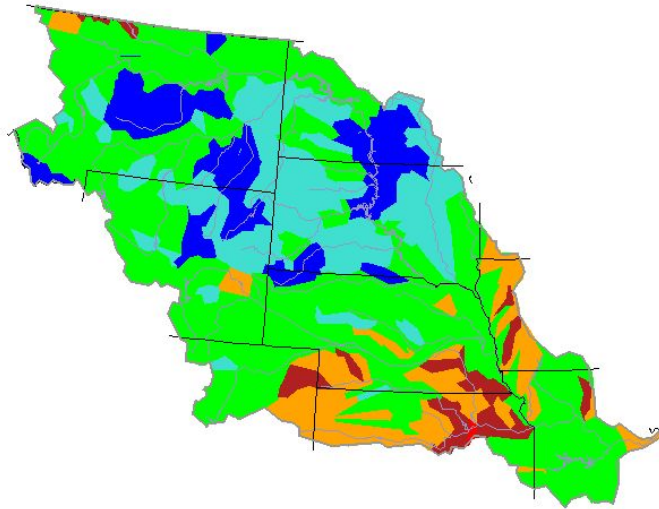
Hydrologic Conditions and Impacts

- Several area streams across eastern SD into southwest MN and northwest IA have fallen below to much below normal.
- Groundwater well data across the region continues to show steady to falling values.

USGS Streamflow Data:
[National Water Dashboard](#)

Groundwater Wells Data:
[Renner, SD](#)
[Near Huron, SD](#)
[Windom, MN](#)

Tuesday, October 03, 2023



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

Image Caption: USGS 7 day average streamflow HUC map valid 10/04/2023

Renner GW Well NO.2 Near Renner, SD - 433726096444501

May 1, 2021 - October 4, 2023

Depth to water level, feet below land surface

11.67 ft - Oct 04, 2023 07:45:00 PM CDT

11.65 ft - Oct 03, 2023 11:20:00 AM CDT



Image Caption: USGS Groundwater Well near Renner, SD





Agricultural and Soil Moisture Impacts

SD

| As of Oct 1st | Very Short Moisture | Short Moisture | Adequate Moisture | Moisture Surplus |
|---------------|---------------------|----------------|-------------------|------------------|
| Topsoil | 10% | 30% | 57% | 3% |
| Subsoil | 15% | 33% | 49% | 3% |

IA

| As of Oct 1st | Very Short Moisture | Short Moisture | Adequate Moisture | Moisture Surplus |
|---------------|---------------------|----------------|-------------------|------------------|
| Topsoil | 28% | 45% | 26% | 1% |
| Subsoil | 36% | 43% | 20% | 1% |

MN

| As of Oct 1st | Very Short Moisture | Short Moisture | Adequate Moisture | Moisture Surplus |
|---------------|---------------------|----------------|-------------------|------------------|
| Topsoil | 20% | 44% | 35% | 1% |
| Subsoil | 22% | 54% | 24% | 0% |

USDA Crop Progress and Condition Reports

[South Dakota](#)

[Minnesota](#)

[Iowa](#)

[Nebraska](#)

Calculated Soil Moisture Anomaly (mm)
OCT 04, 2023

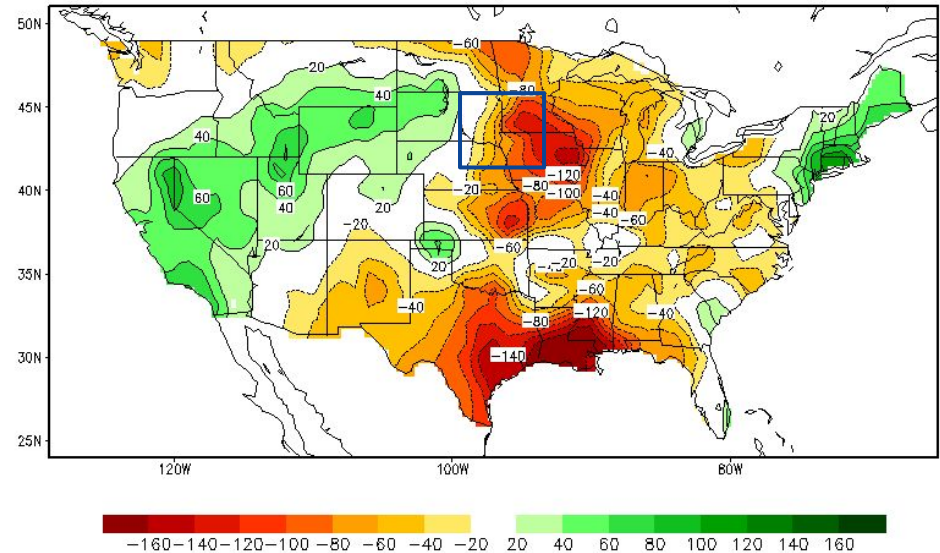


Image Captions:

CPC Calculated [Soil Moisture Anomaly \(mm\)](#) valid Oct 4, 2023





Medium and Long-Range Outlooks

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

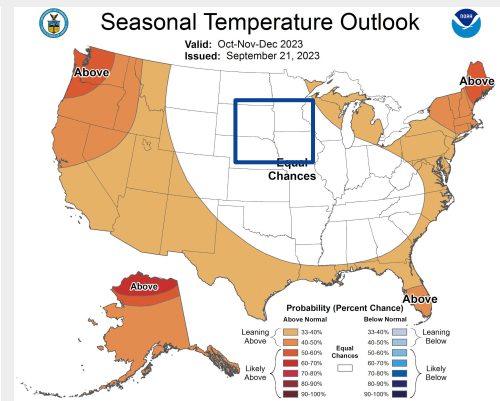
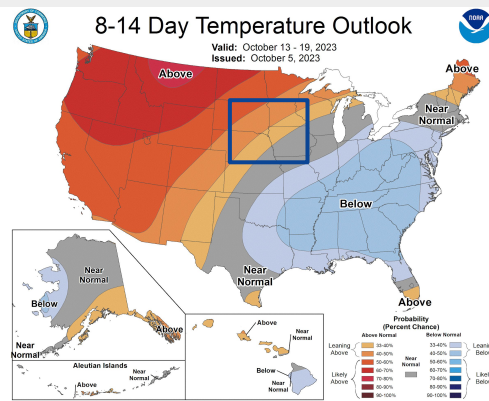
Short Term Outlook

- Temperatures thru October 10th are expected to generally be below normal.
- Chances for any meaningful precipitation over this period are minimal.

Medium Range Outlook

- Temperatures may rise above normal into mid October.
- Precipitation into mid October may favor below normal.

Temperature



Precipitation

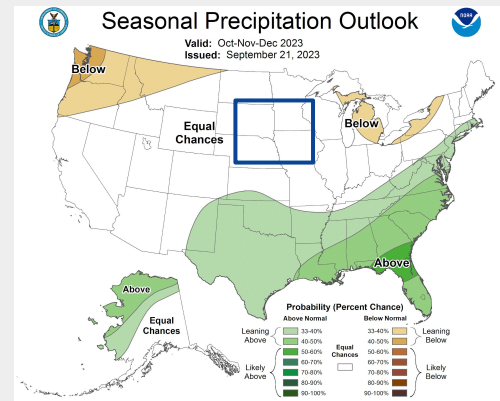
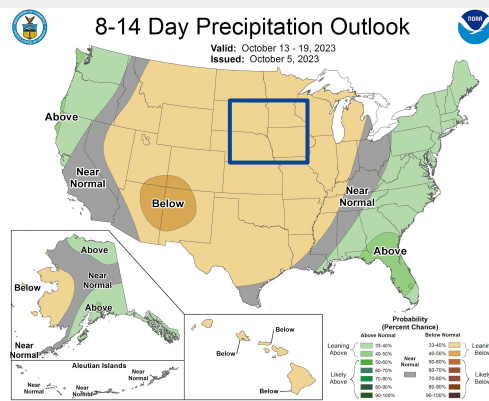


Image Captions:

Left - [Climate Prediction Center 8-14 Day Outlooks](#)

Right - [Climate Prediction Center Seasonal Outlooks](#)

Valid 10 2023





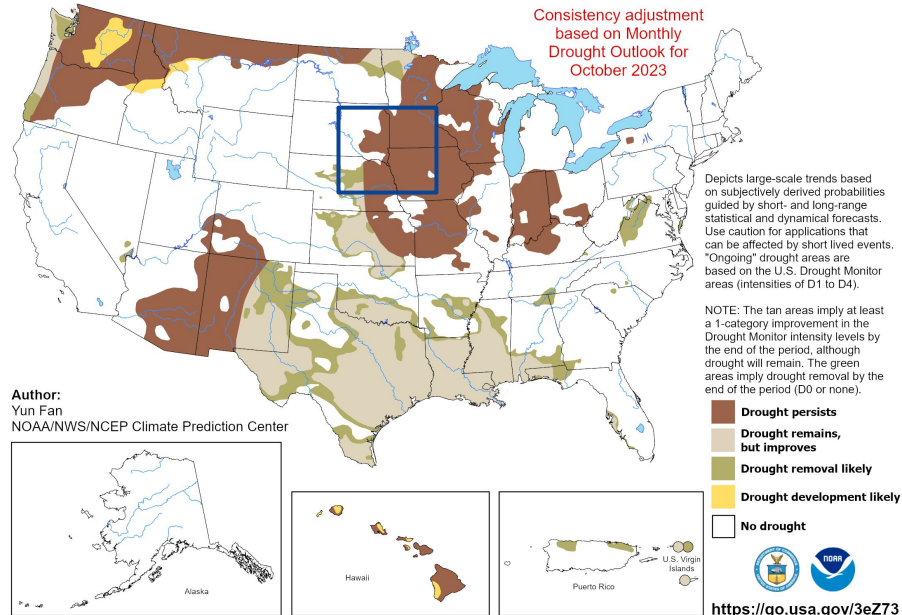
Drought Outlook

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

- While some localized improvement in drought status is possible, overall trends favor drought persistence across much of the area. This is especially true east of the James River where long-term precipitation and soil moisture deficits are highest.
- Despite the lack of expected precipitation in the near term, cooler temperatures should help temper any further drought degradation.

U.S. Seasonal Drought Outlook Drought Tendency During the Valid Period

Valid for October 1 - December 31, 2023
Released September 30, 2023



Acknowledgements

The drought monitor is a multi-agency effort involving NOAA's National Weather Service and National Climatic Data Center, the USDA, state and regional center climatologists and the National Drought Mitigation Center. Information for this statement has been gathered from NWS and FAA observation sites, cooperative and volunteer observations, USDAFS, the USDA and USGS.

Image Caption:
Climate Prediction Center Monthly Drought Outlook Released
09/30/2023 valid for Oct-Dec 2023



National Oceanic and
Atmospheric Administration

U.S. Department of Commerce

National Weather Service
Sioux Falls, SD