



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

Valid September 21st, 2023

Issued By: WFO Sioux Falls, SD

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

- This product will be updated October 26, 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

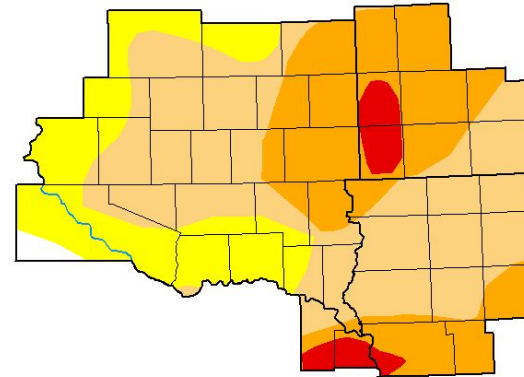
...RAINFALL EXPECTED OVER NEXT SEVERAL DAYS MAY SLOW OR IMPROVE EXPANDING DROUGHT...

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.

NOTE: These conditions are as of Sept 19th and do not reflect any rainfall that fell Wednesday night or is expected to fall into the weekend

U.S. Drought Monitor Sioux Falls, SD WFO



September 19, 2023

(Released Thursday, Sep. 21, 2023)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.93	99.07	78.69	33.63	4.13	0.00
Last Week 09-12-2023	0.93	99.07	78.69	30.24	1.77	0.00
3 Months Ago 06-20-2023	10.62	89.38	80.07	57.05	14.45	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 09-27-2022	3.86	96.14	71.66	53.30	20.34	4.59
One Year Ago 09-20-2022	11.87	88.13	69.10	48.35	15.68	4.17

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>

Author:

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NCEI/NOAA



droughtmonitor.unl.edu

Image Caption: U.S. Drought Monitor valid 8am EDT September 19th.



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

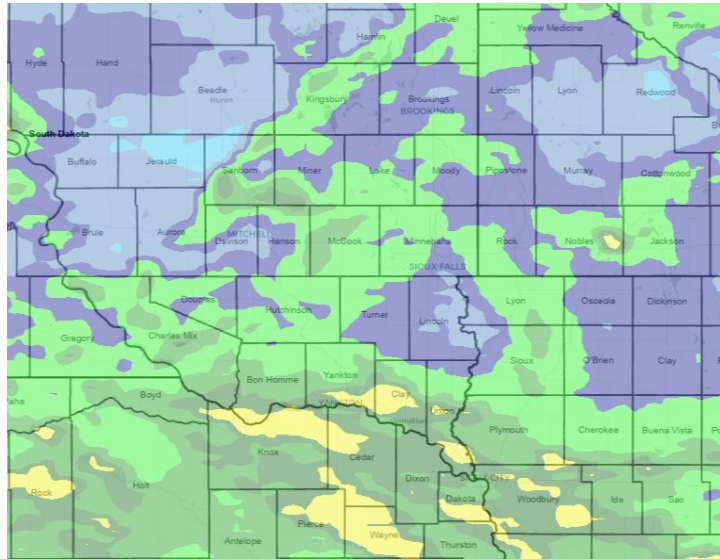
National Weather Service
Sioux Falls, SD



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

- Rainfall over the past 2 weeks has generally been below 1 inch in most locations, which is below the seasonal normals for the period.
- Higher rainfall totals occurred through the MO River Valley, where 1-2 inches of rain fell. This was near to above normal for the period.

Observed Precipitation



Departure of Normal Precipitation

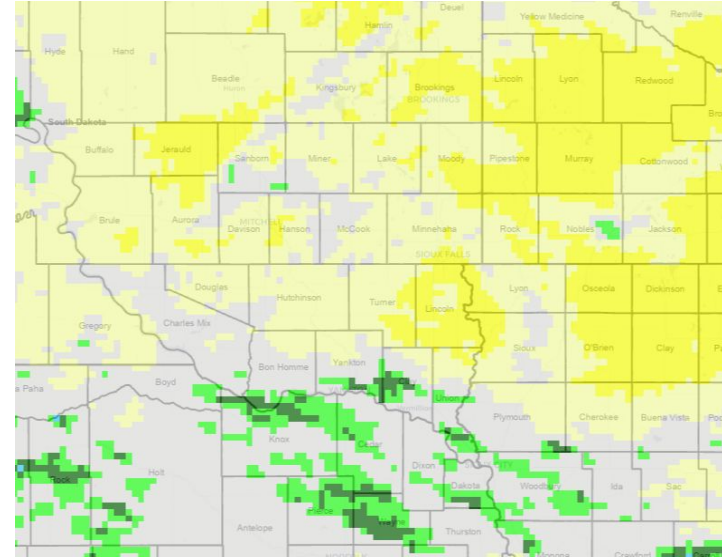


Image Captions:
 Left - Precipitation Amount
 Right - Departure of Normal Precipitation

Data Courtesy [AHPS Precipitation Analysis](#)
 Data over the past 14 days ending Sep 20, 2023

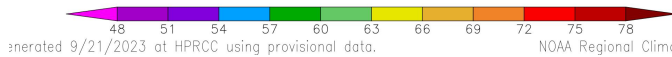
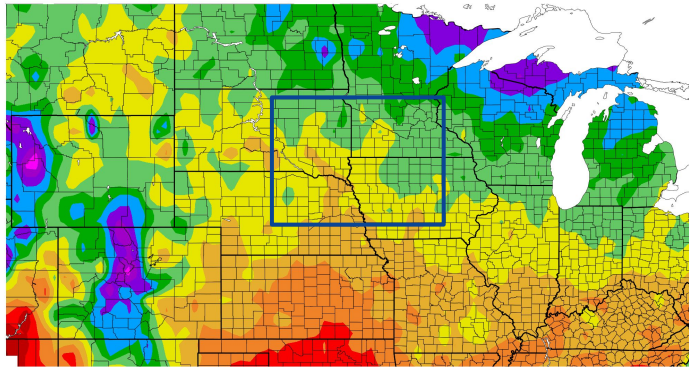




Temperature - Past 14 Days (Ending Wednesday 9/20)

- Temperatures on average were generally within a couple degrees of normal through the period.
- High temperatures in most locations were in the 70s and 80s with lows in the 40s and 50s.

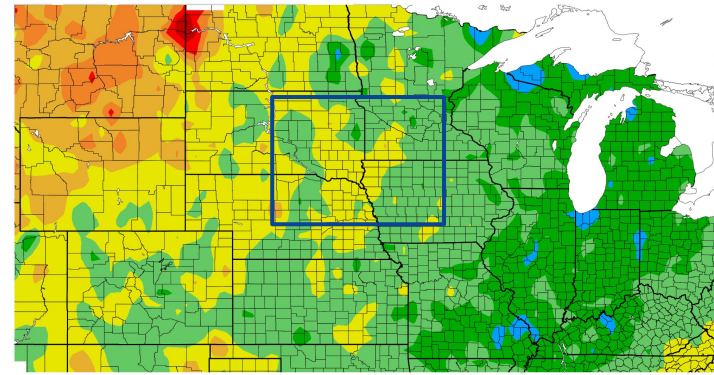
Temperature (F)
9/7/2023 - 9/20/2023



Generated 9/21/2023 at HPRCC using provisional data.

NOAA Regional Climate Center

Departure from Normal Temperature (F)
9/7/2023 - 9/20/2023



Generated 9/21/2023 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 Sep 20, 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

- Corn and soybean crops are yellowing and drying down earlier than typical. Degraded soybean yields and degraded silage quality reported. Some apple orchards reporting lack of apples for fall picking.

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 Sep 17

Corn: 27%
 Soybean: 28%
 Sorghum: 13%
 Pasture: 31%

South Dakota - As of Sep 17

Corn: 20%
 Soybean: 19%
 Sorghum: 8%
 Pasture: 21%

Iowa - As of Sep 17

Corn: 15%
 Soybean: 14%
 Pasture: 48%

Minnesota - As of Sep 17

Corn: 24%
 Soybean: 18%
 Pasture: 66%





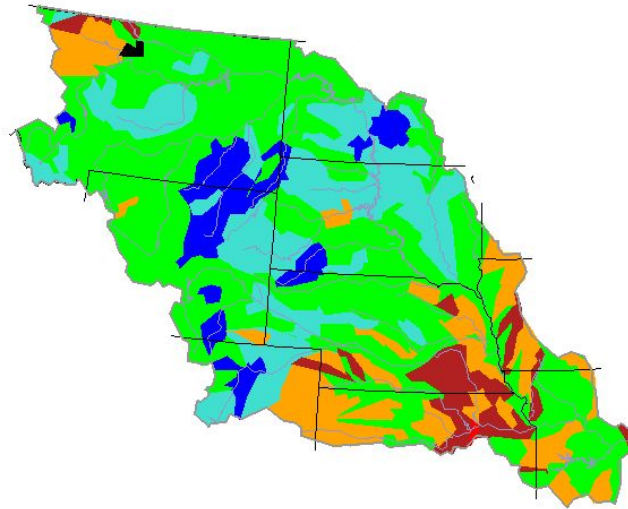
Hydrologic Conditions and Impacts

- 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 falling values.

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

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

Wednesday, September 20, 2023



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 09/19/2023

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

May 1, 2021 - September 20, 2023

Depth to water level, feet below land surface

11.57 ft - Sep 20, 2023 01:00:00 PM CDT

12.54 ft - Dec 14, 2022 09:01:00 AM CST



Image Caption: USGS Groundwater Well near Renner, SD





Agricultural and Soil Moisture Impacts

SD

As of Sep 17th	Very Short Moisture	Short Moisture	Adequate Moisture	Moisture Surplus
Topsoil	16%	34%	46%	4%
Subsoil	15%	37%	43%	5%

IA

As of Sep 17th	Very Short Moisture	Short Moisture	Adequate Moisture	Moisture Surplus
Topsoil	34%	45%	20%	1%
Subsoil	37%	43%	19%	1%

MN

As of Sep 17th	Very Short Moisture	Short Moisture	Adequate Moisture	Moisture Surplus
Topsoil	31%	44%	25%	0%
Subsoil	26%	50%	24%	0%

USDA Crop Progress and Condition Reports

[South Dakota](#)

[Minnesota](#)

[Iowa](#)

[Nebraska](#)

Calculated Soil Moisture Anomaly (mm)
SEP 20, 2023

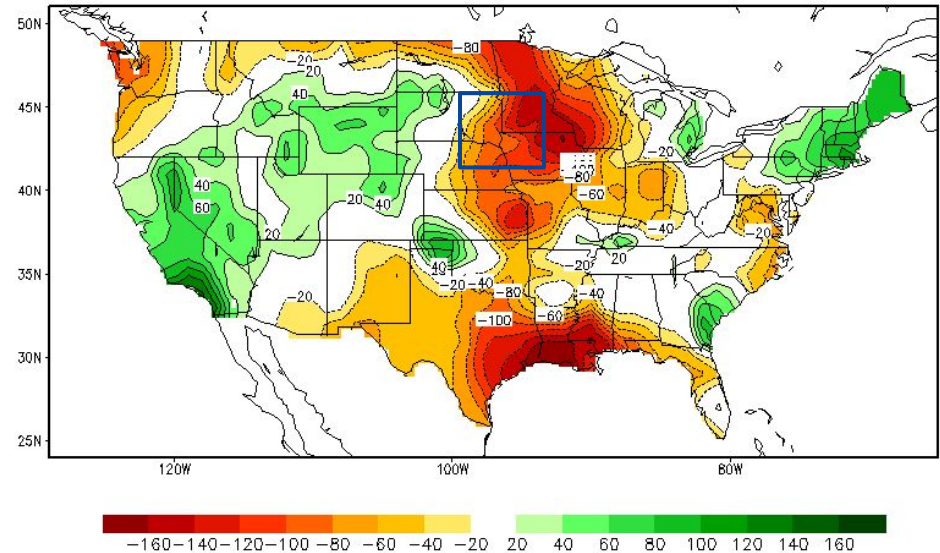


Image Captions:

CPC Calculated [Soil Moisture Anomaly \(mm\)](#) valid Sep 19, 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 September 27th are expected to be near to perhaps below normal.
- Precipitation chances increase through Sunday with periods of showers and thunderstorms likely during this timeframe. Precipitation amounts will vary but some local drought relief is possible.

Medium Range Outlook

- Temperatures may rise above normal into early October.
- At least a slight signal exists for near to above normal precipitation in late September and early October

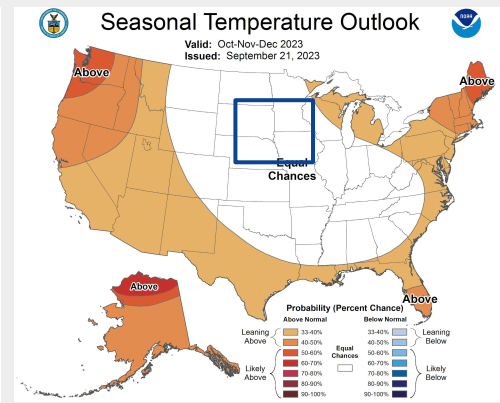
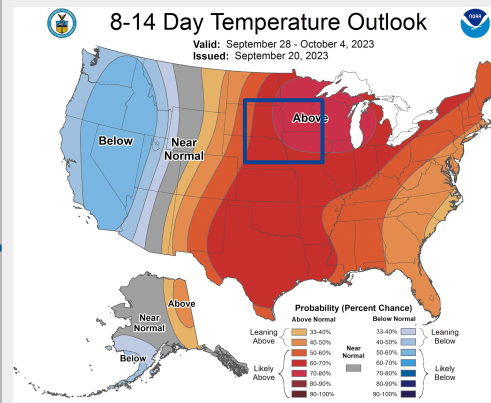
Image Captions:

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

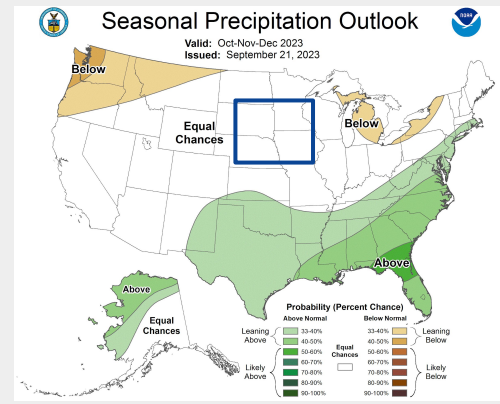
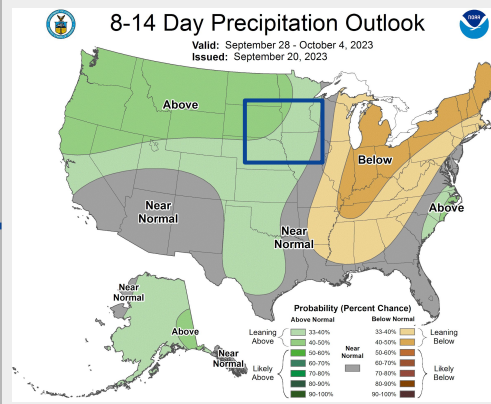
Right - [Climate Prediction Center Seasonal Outlooks](#)

Valid 09 2023

Temperature



Precipitation





Drought Outlook

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

- Current temperature and precipitation outlooks favor the continuation of long term drought conditions although rainfall during the period of 9/21-9/24 may provide some drought relief or removal where higher rainfall totals occur.
- Given the long term soil moisture and precipitation deficits, any rainfall is beneficial but substantial precipitation over a longer duration period will be beneficial in drought improvement as opposed to heavy, but brief rainfall that will be allowed to runoff into area rivers and streams.

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.

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

Valid for September 21 - December 31, 2023
Released September 21, 2023

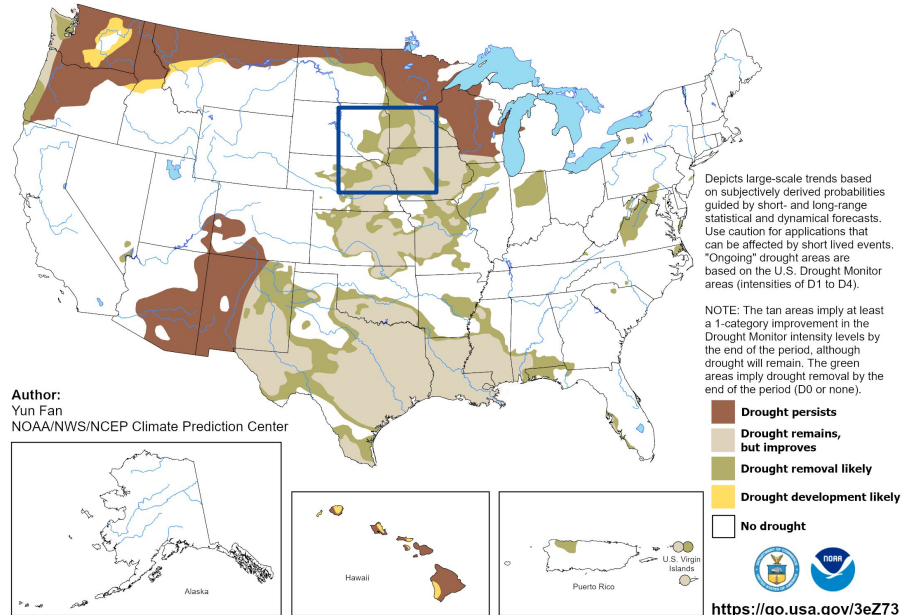


Image Caption:

Climate Prediction Center Monthly Drought Outlook Released 08/31/2023 valid for Sep-Nov 2023



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Sioux Falls, SD