



NWS Twin Cities Drought Update

September 7, 2023
3:30 PM

Introduction of Exceptional Drought in SE & NE MN This Week

Key Messages

- Very little rainfall over the past week.
- There has been 1 class degradation in drought conditions across portions of MN since last week.
- Exceptional drought (D4) added to MN for only the 2nd time in drought monitor history.
- Dry weather expected to continue for the next 7 days may deteriorate the drought further.

NEW

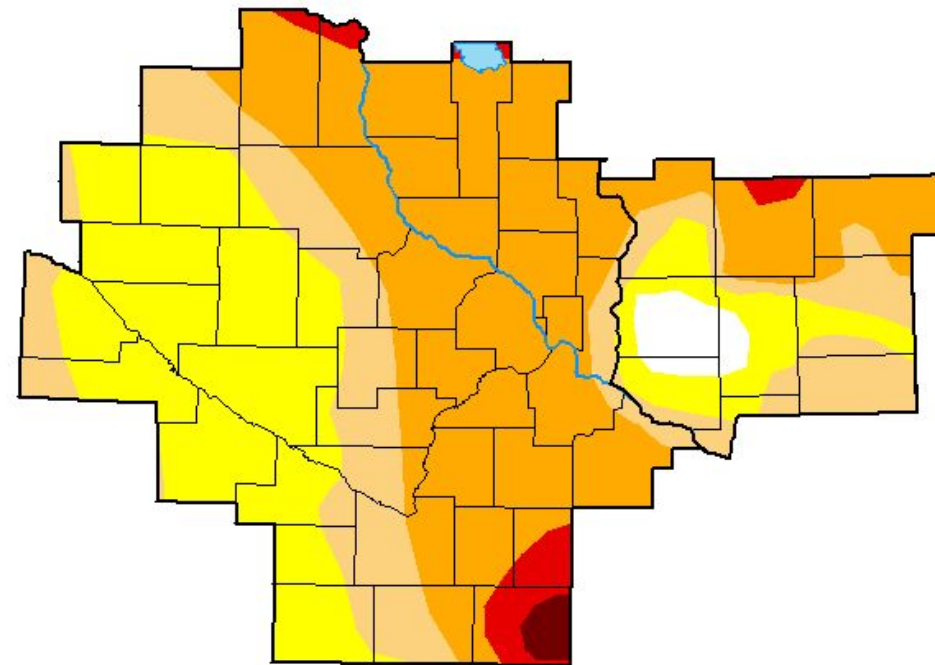
Important Updates

- One class degradation across portions of Twin Cities metro and S MN from last week.
- Exceptional drought (D4) added to SE & NE MN

Next Scheduled Update

- The next drought packet is scheduled for Thursday September 14th.

U.S. Drought Monitor Twin Cities/ Chanhassen, 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	2.17	97.83	67.35	46.12	3.67	0.76
Last Week 08-29-2023	2.17	97.83	67.38	36.05	1.87	0.00
3 Months Ago 06-06-2023	34.14	65.86	23.12	0.00	0.00	0.00
Start of Calendar Year 01-03-2023	16.54	83.46	67.01	32.37	0.00	0.00
Start of Water Year 09-27-2022	20.14	79.86	33.95	11.27	0.00	0.00
One Year Ago 09-06-2022	44.52	55.48	24.01	2.43	0.00	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:

Richard Tinker
CPC/NOAA/NWS/NCEP

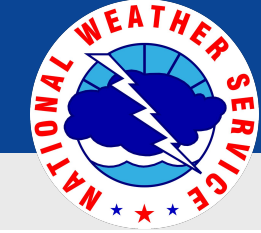


droughtmonitor.unl.edu



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Twin Cities, MN

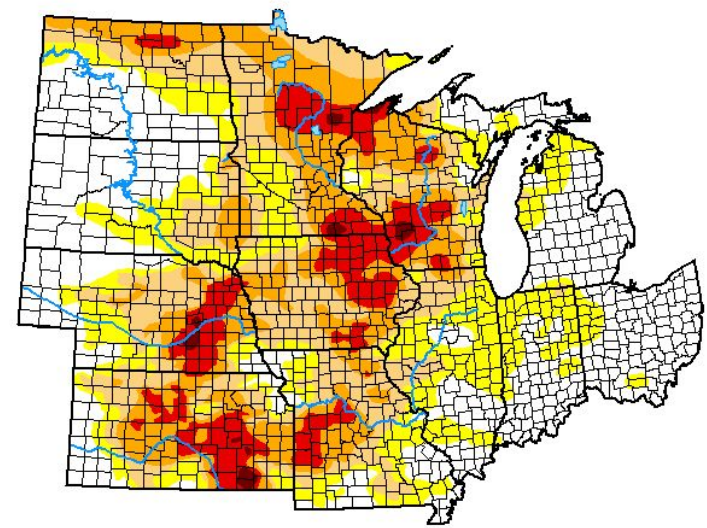


Drought Monitor Change

September 7, 2023
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Latest Trend in the Drought Monitor for the North Central U.S.

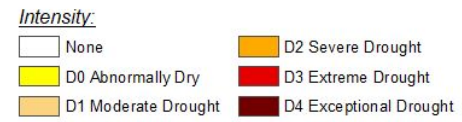
U.S. Drought Monitor North Central States



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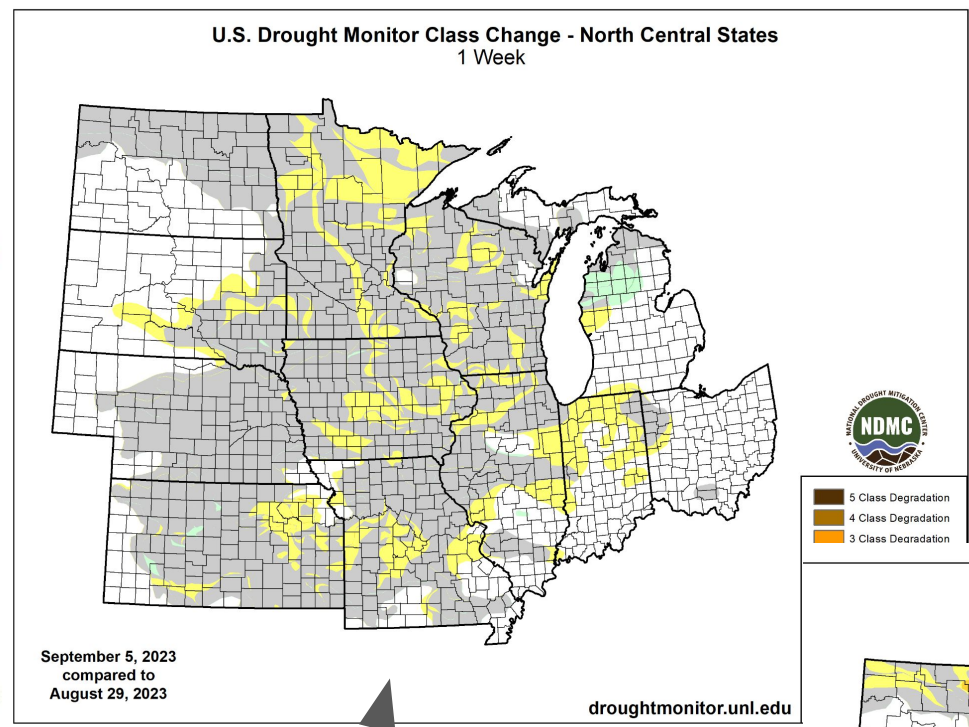
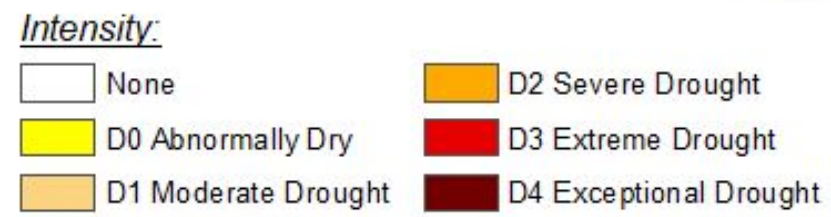
Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	32.65	67.35	46.31	27.02	10.04	0.64
Last Week 08-29-2023	37.30	62.70	43.65	23.17	7.82	0.32
3 Months Ago 06-06-2023	19.67	80.33	38.59	16.94	7.78	2.88
Start of Calendar Year 01-03-2023	23.51	76.49	51.22	24.39	11.79	5.25
Start of Water Year 09-27-2022	32.06	67.94	43.99	21.51	9.92	4.04
One Year Ago 09-06-2022	51.31	48.69	26.98	15.56	7.85	2.19



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1 Week Change



4 Week Change

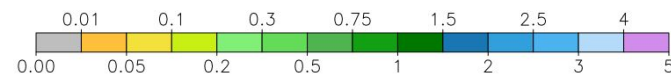
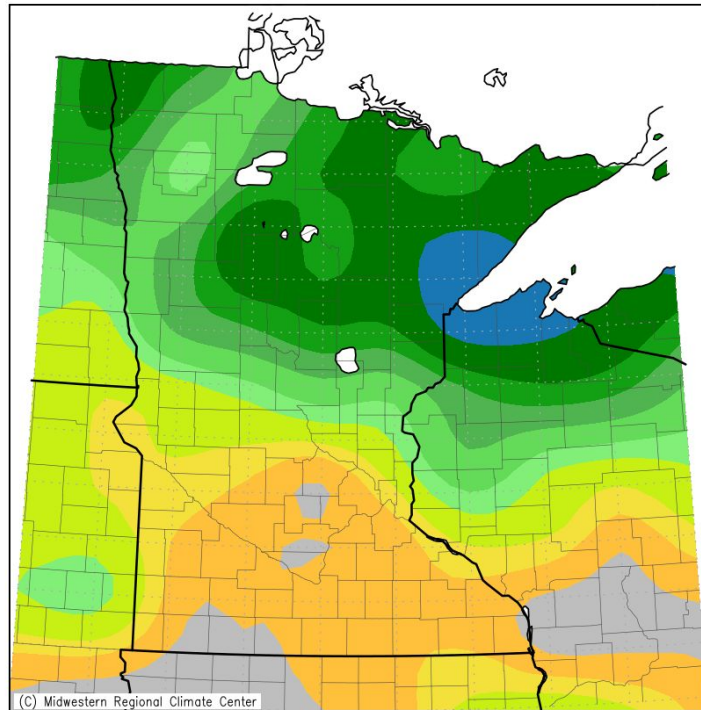


Recent Precipitation and Temperature

September 7, 2023
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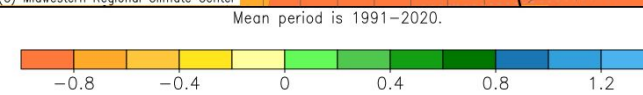
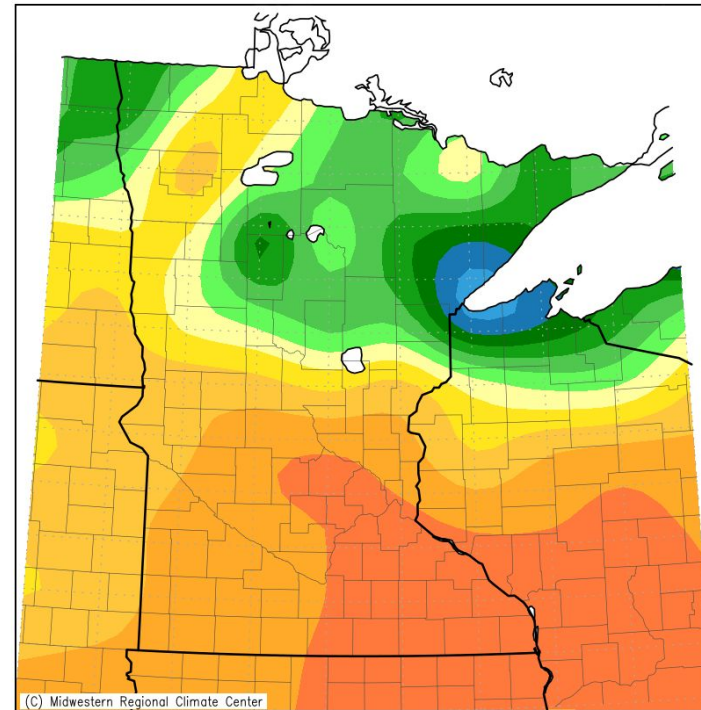
Last Week's Precipitation Totals/Departure

Accumulated Precipitation (in)
August 31, 2023 to September 6, 2023



Midwestern Regional Climate Center
cli-MATE: MRCC Application Tools Environment
Generated at: 9/7/2023 11:26:58 AM EDT

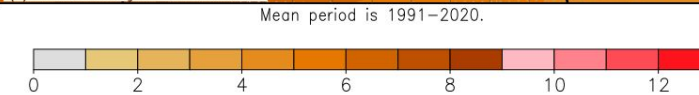
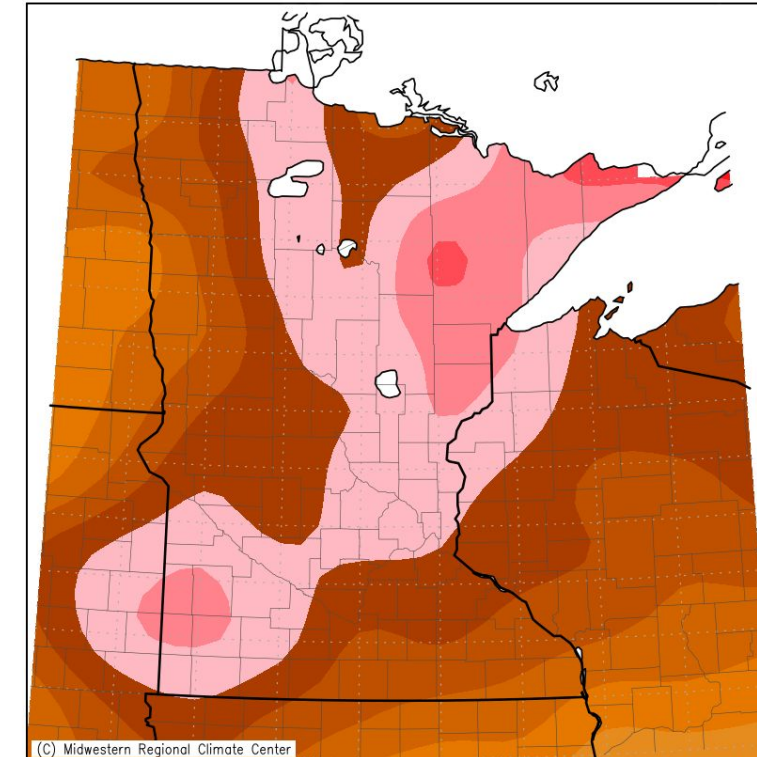
Accumulated Precipitation (in): Departure from Mean
August 31, 2023 to September 6, 2023



Midwestern Regional Climate Center
cli-MATE: MRCC Application Tools Environment
Generated at: 9/7/2023 11:27:33 AM EDT

Last Week's Temperature Departure

Average Temperature (°F): Departure from Mean
August 31, 2023 to September 6, 2023



Midwestern Regional Climate Center
cli-MATE: MRCC Application Tools Environment
Generated at: 9/7/2023 11:27:47 AM EDT

- ➔ Much of the region saw little meaningful rainfall in the last week, as well as much higher than normal temperatures.
- ➔ With little rainfall expected this week too, we can expect more deterioration in drought conditions across the region.



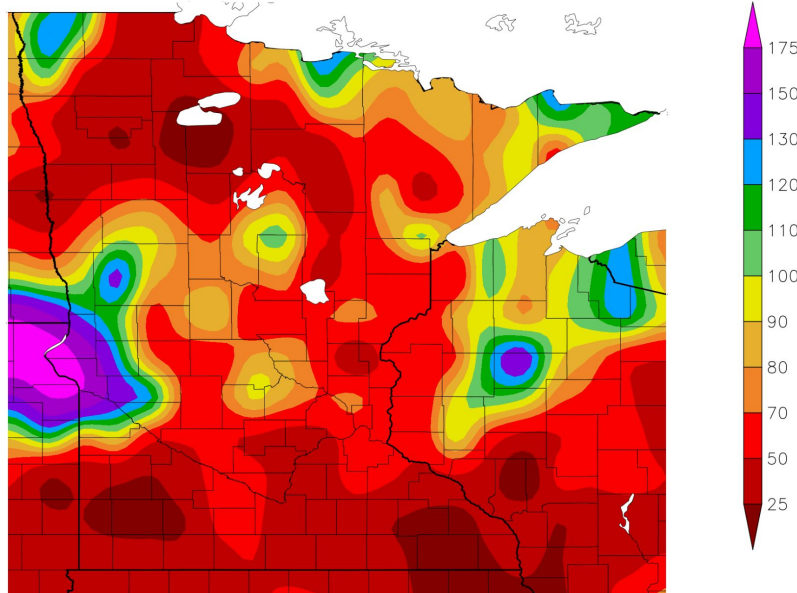


Precipitation Deficits

September 7, 2023
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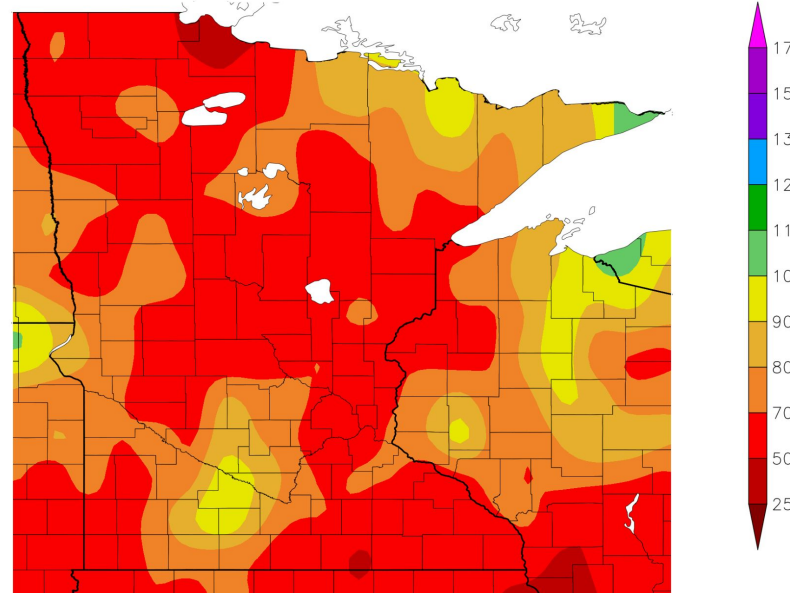
30 Day Percent Normal

Percent of Normal Precipitation (%)
8/8/2023 – 9/6/2023



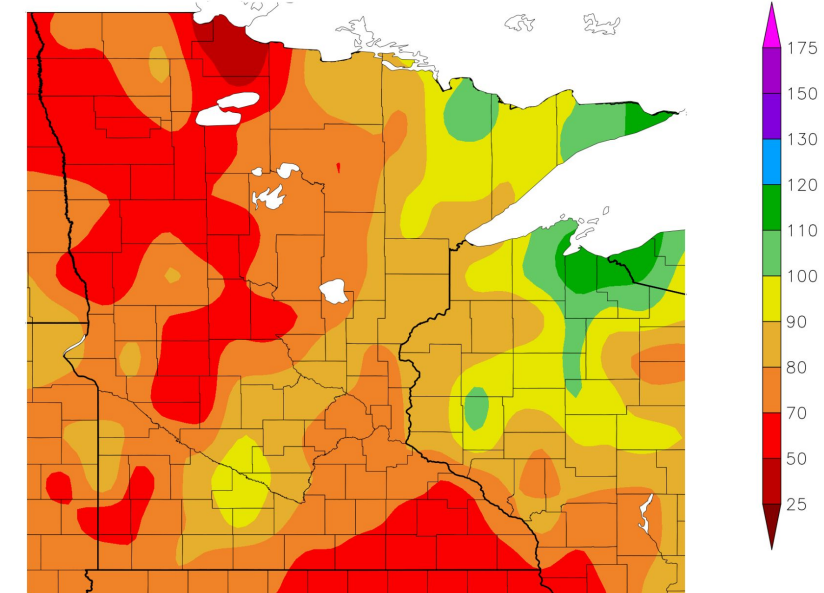
6-Month Percent Normal

Percent of Normal Precipitation (%)
3/7/2023 – 9/6/2023



12-Month Percent Normal

Percent of Normal Precipitation (%)
9/7/2022 – 9/6/2023



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

NOAA Regional Climate Centers

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

NOAA Regional Climate Centers

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

NOAA Regional Climate Centers

Highlights

- At least in the past 30 days, a few pockets of the region have seen above normal rainfall.
- However, even with some short term help, over the past 6 to 12 months, major precipitation deficits remain and drought conditions persist.





Hydrologic Conditions - MN and WI

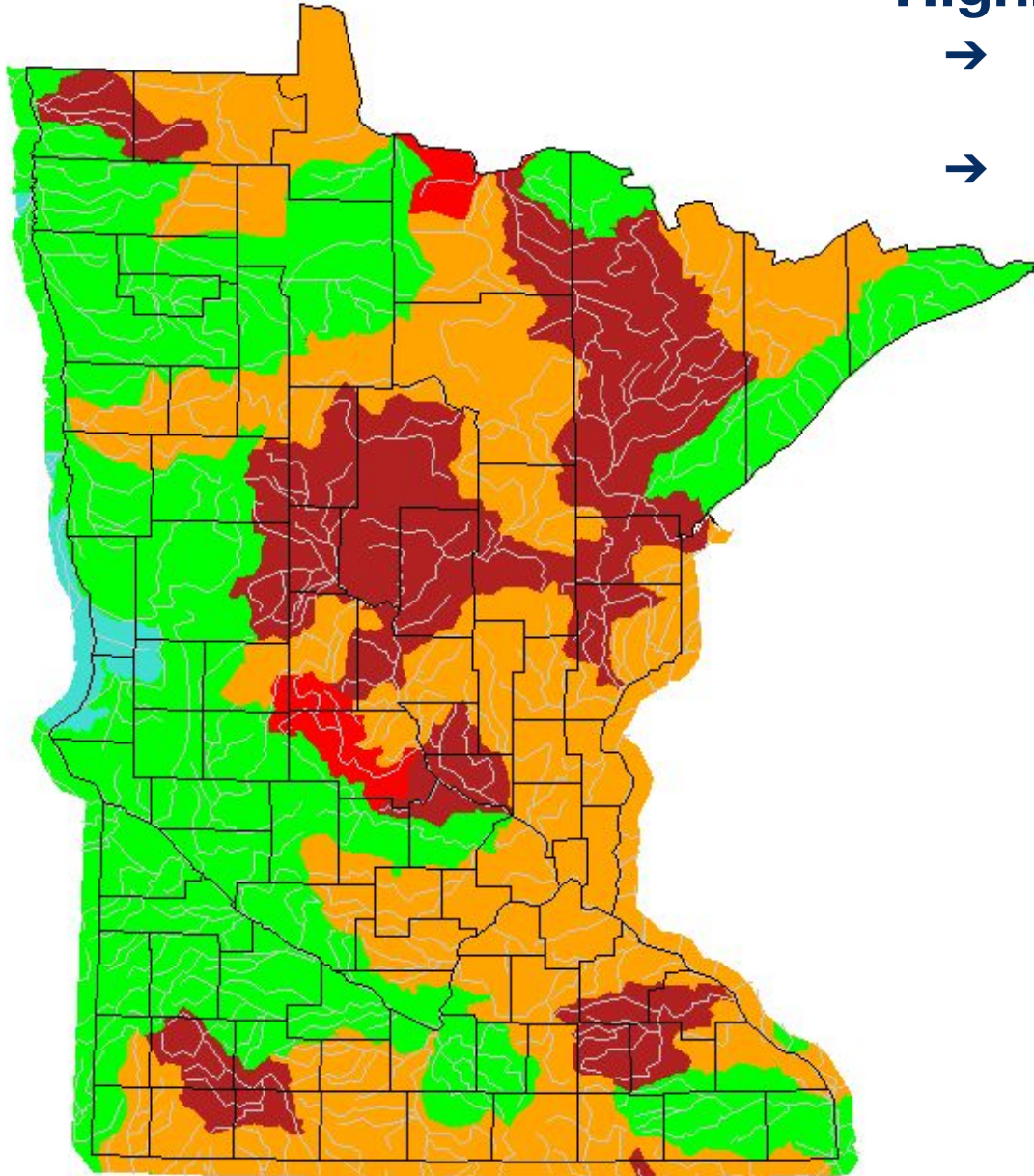
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Average streamflow for the past 7 days

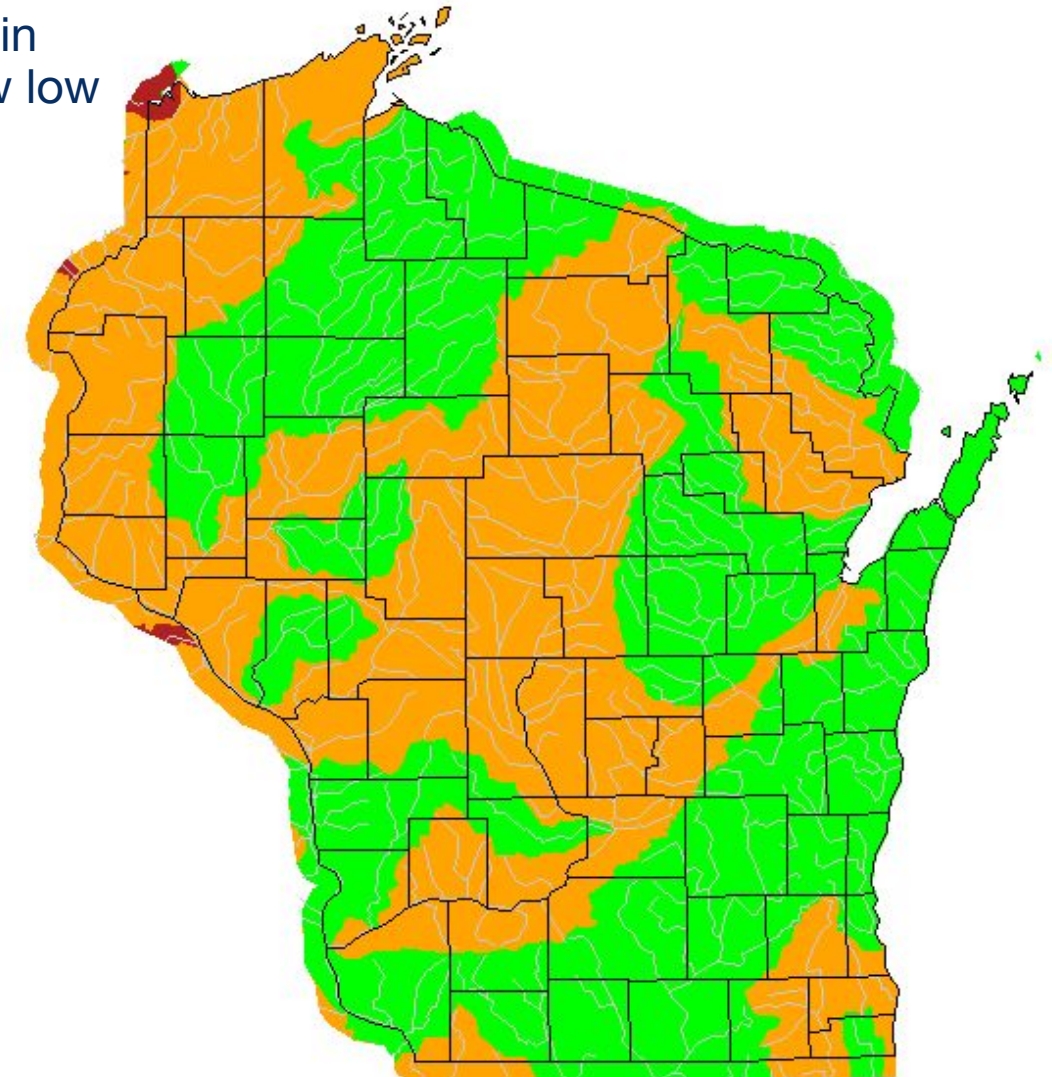
Hednesday, September 06, 2023

Highlights

- USGS streamflows are mostly near to below normal for early September.
- The Upper Mississippi (above the Twin Cities) remains very close to or below low water thresholds.



Hednesday, September 06, 2023



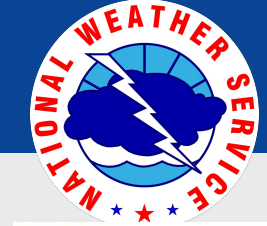
USGS



National Oceanic and Atmospheric Administration
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USGS

National Weather Service
Twin Cities, MN



Soil Moisture Conditions

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United States
Department of
Agriculture

Topsoil Moisture Percent Short to Very Short Week Ending - September 3, 2023

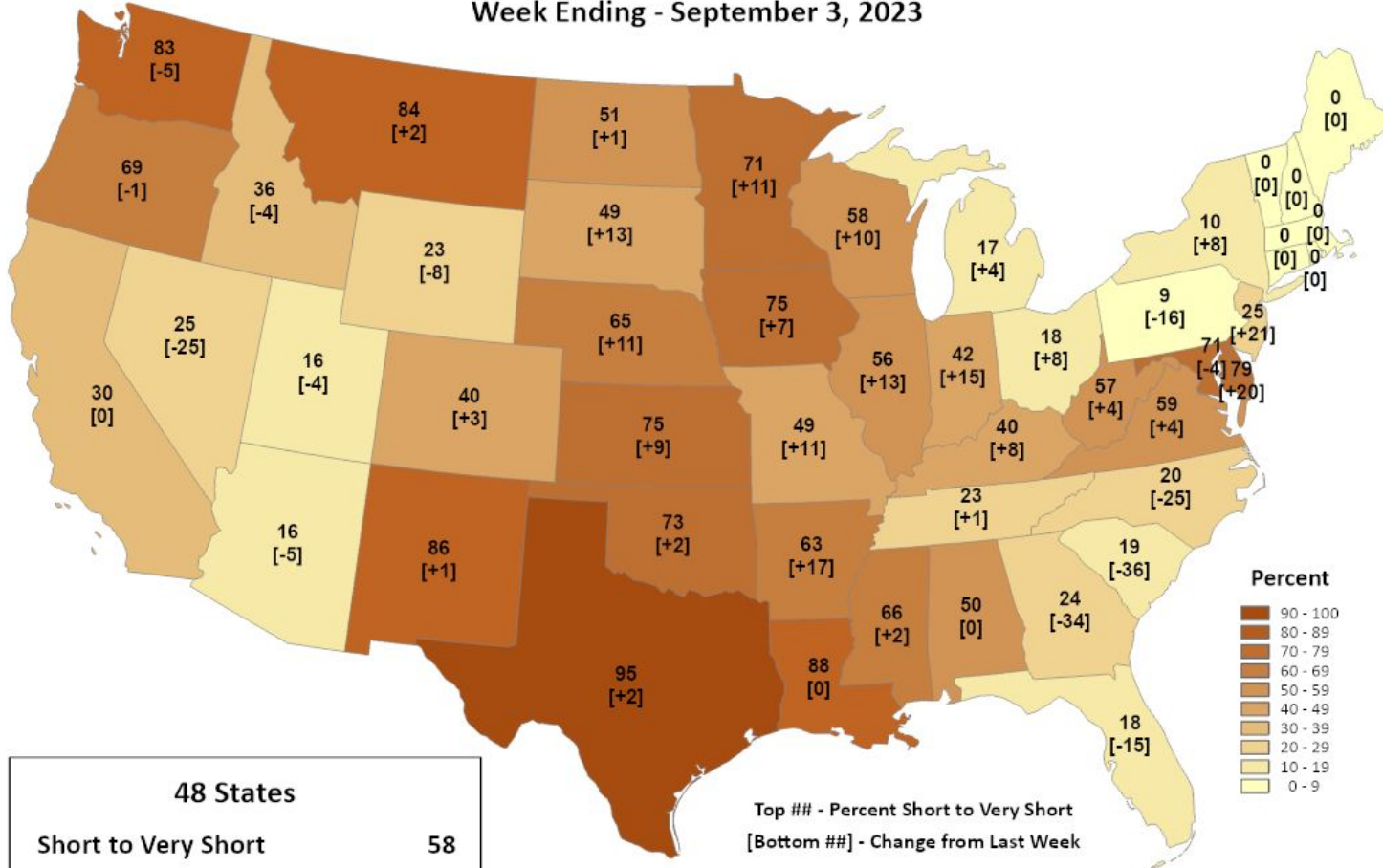


United States
Department of
Agriculture

Subsoil Moisture Percent Short to Very Short Week Ending - September 3, 2023

This product was prepared by the
USDA Office of the Chief Economist (OCE)
World Agricultural Outlook Board (WAOB)

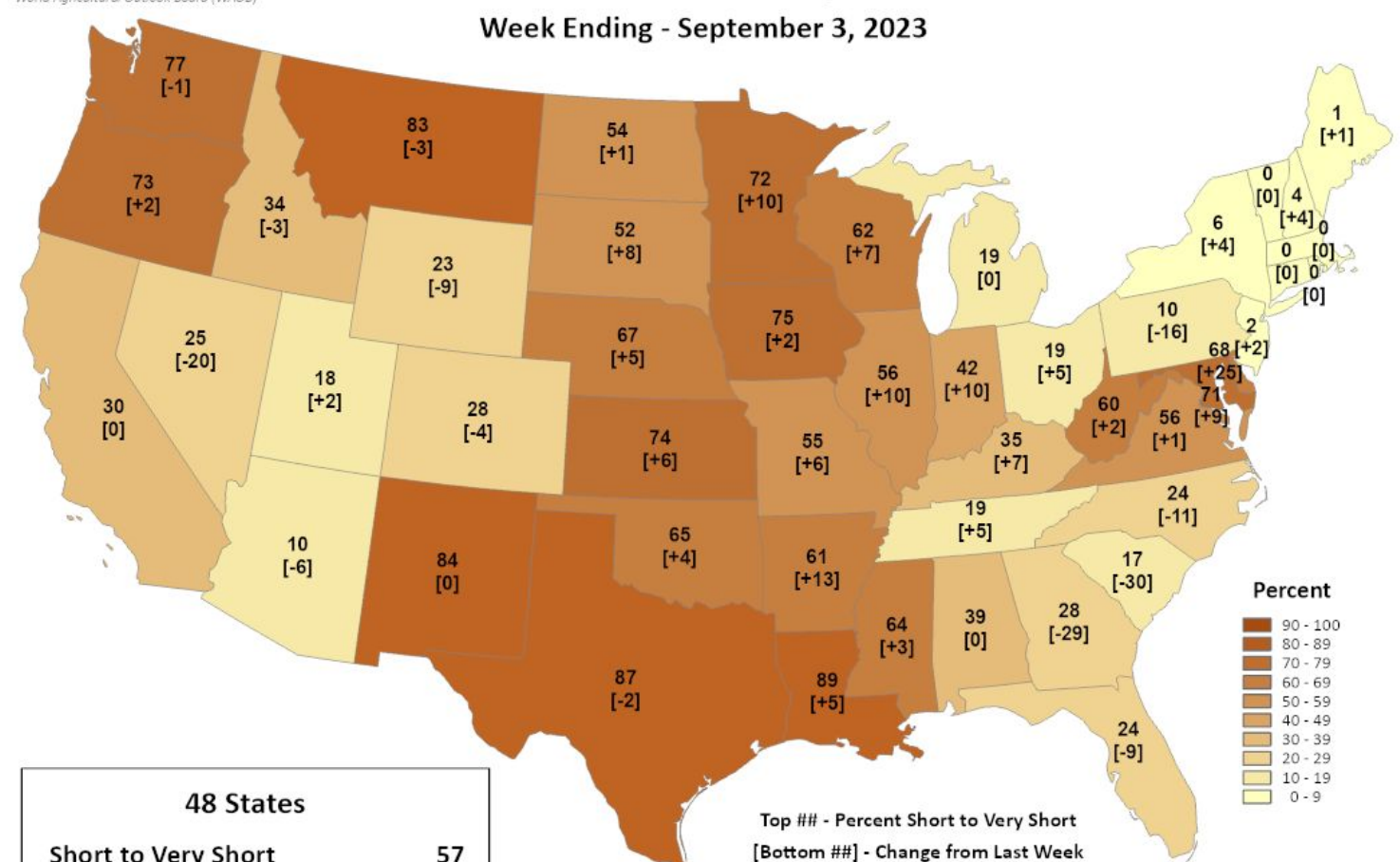
This product was prepared by the
USDA Office of the Chief Economist (OCE)
World Agricultural Outlook Board (WAOB)



48 States	
Short to Very Short	58
Change from Last Week	+6

Top ## - Percent Short to Very Short
[Bottom ##] - Change from Last Week

Data obtained from USDA National Agricultural Statistics Service weekly Crop Progress reports.



48 States	
Short to Very Short	57
Change from Last Week	+3

Top ## - Percent Short to Very Short
[Bottom ##] - Change from Last Week

Data obtained from USDA National Agricultural Statistics Service weekly Crop Progress reports.

Highlights

➔ Both Topsoil and Subsoil moisture conditions have decreased due to the recent heat waves and dry weather this week.



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Twin Cities, MN



Soil and Crop Conditions

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Soil Conditions and Crop Conditions for mid August

Soil Moisture Condition

Minnesota (Entire State)	As of Sep 3	Very Short Moisture	Short Moisture	Adequate Moisture	Moisture Surplus
	Topsoil	28%	43%	29%	0%
	Subsoil	24%	48%	28%	0%

Wisconsin (Entire State)	As of Sep 3	Very Short Moisture	Short Moisture	Adequate Moisture	Moisture Surplus
	Topsoil	18%	40%	42%	0%
	Subsoil	23%	39%	38%	0%

Crop Condition as of September 3, 2023

Item	Very Poor	Poor	Fair	Good	Excellent
	(percent)	(percent)	(percent)	(percent)	(percent)
Corn	7	18	36	33	6
Dry edible beans	1	9	32	52	6
Pasture and range ...	22	41	28	9	0
Potatoes	0	1	14	59	26
Soybeans	5	13	35	40	7
Sugarbeets	0	2	5	33	60
Sunflowers	0	4	32	63	1

Crop Condition as of September 3, 2023

Item	Very Poor	Poor	Fair	Good	Excellent
	(percent)	(percent)	(percent)	(percent)	(percent)
Corn	5	14	27	41	13
Hay, all	4	17	34	37	8
Pasture and range .	10	25	37	27	1
Soybeans	5	13	27	41	14

Highlights

Crop conditions remain relatively good considering the drought conditions, with pasture/hay bearing the worst of it. Corn and beans are in the 15 to 20 percent poor/very poor range.

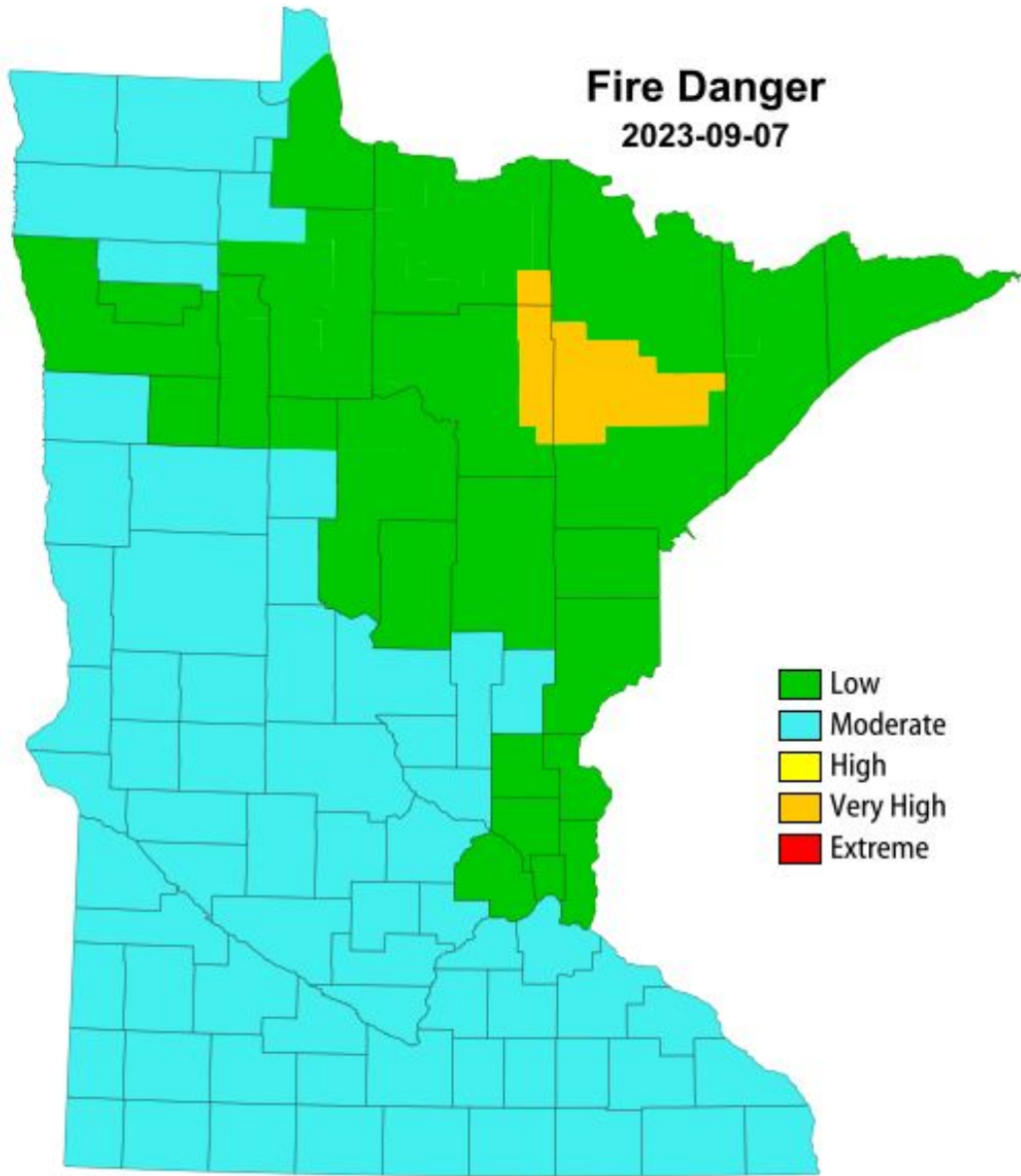




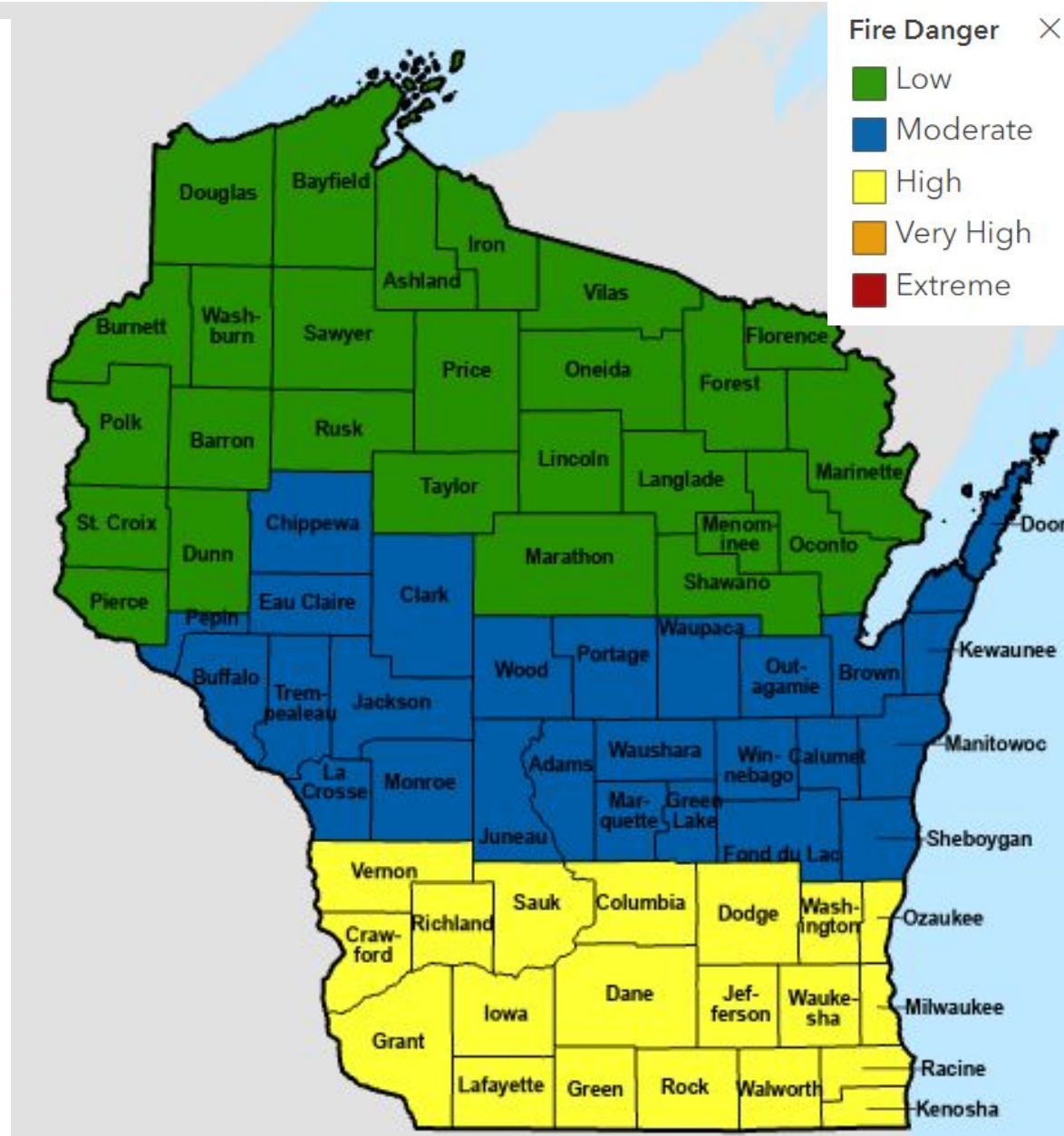
Fire Danger Condition

September 7, 2023
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Fire Danger ratings for date specified ONLY



© MNDNR



[Current MN Fire Danger](#)

[Current WI Fire Danger](#)

Highlights

- Areas of moderate to high fire danger persist over both states.
- Recent hot dry weather will not help.



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Forecast Precipitation

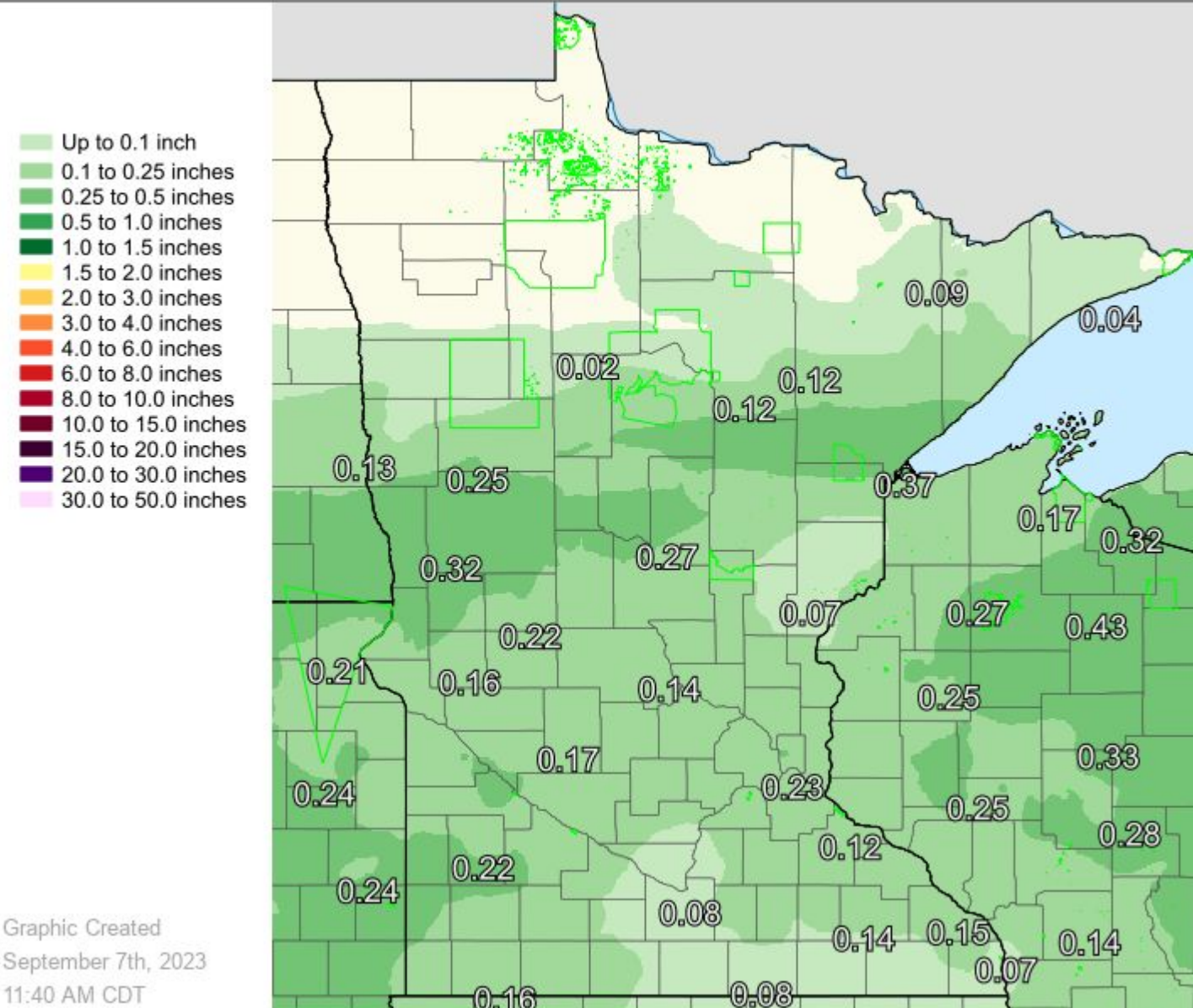
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Next 7 Days



Forecast Precipitation

Valid Ending Thursday September 14th, 2023 at 7 AM CDT



Highlights

- Very little rainfall is expected over the next seven days.

Graphic Created
September 7th, 2023
11:40 AM CDT





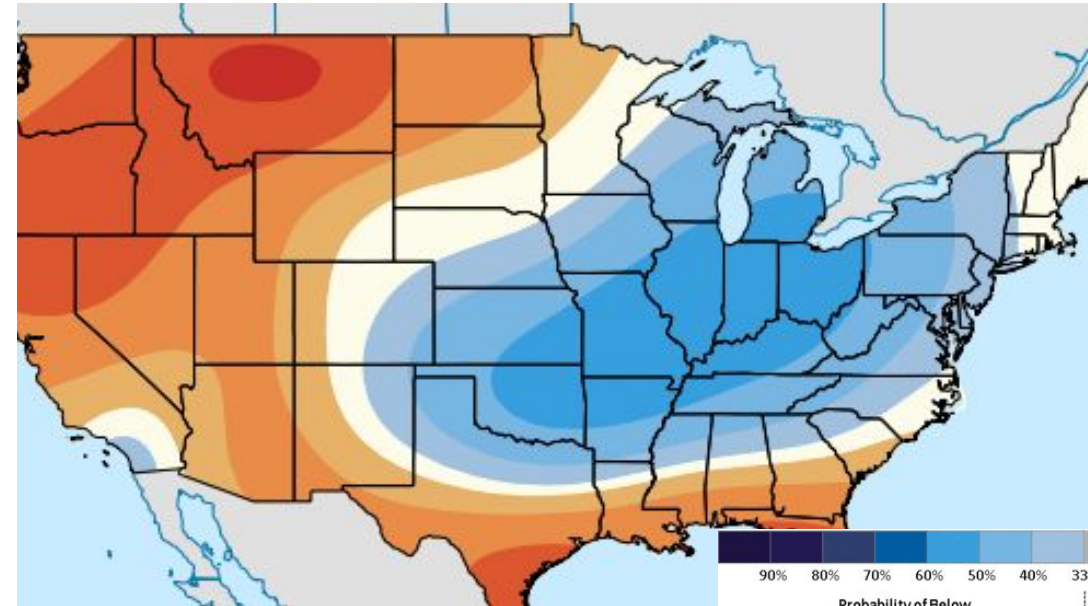
Short Term Climate Outlook

September 7, 2023
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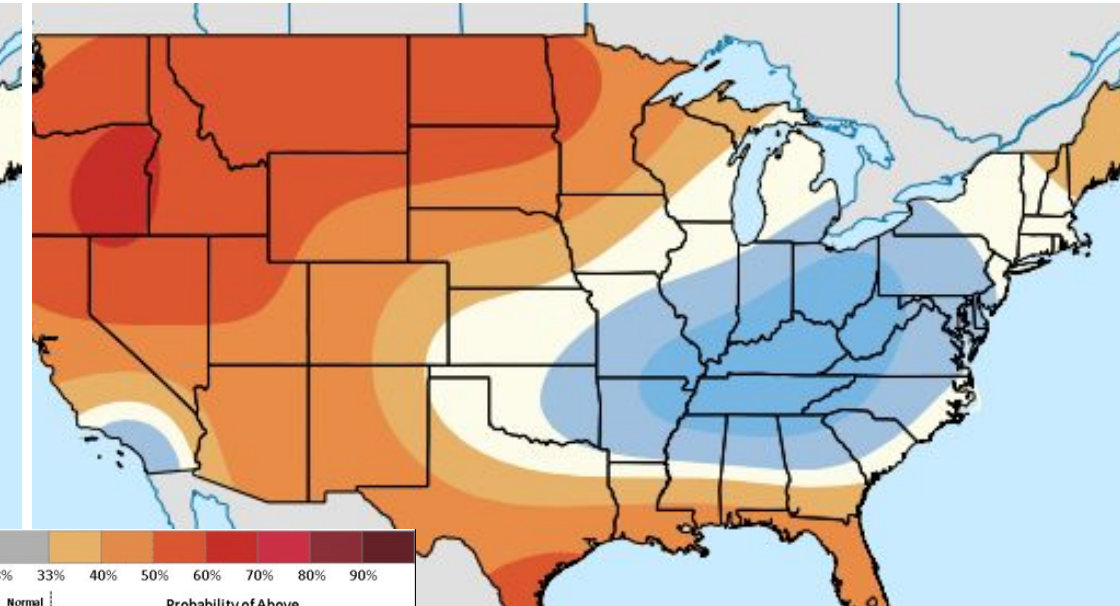
For more information visit: <https://www.cpc.ncep.noaa.gov/>

Highlights

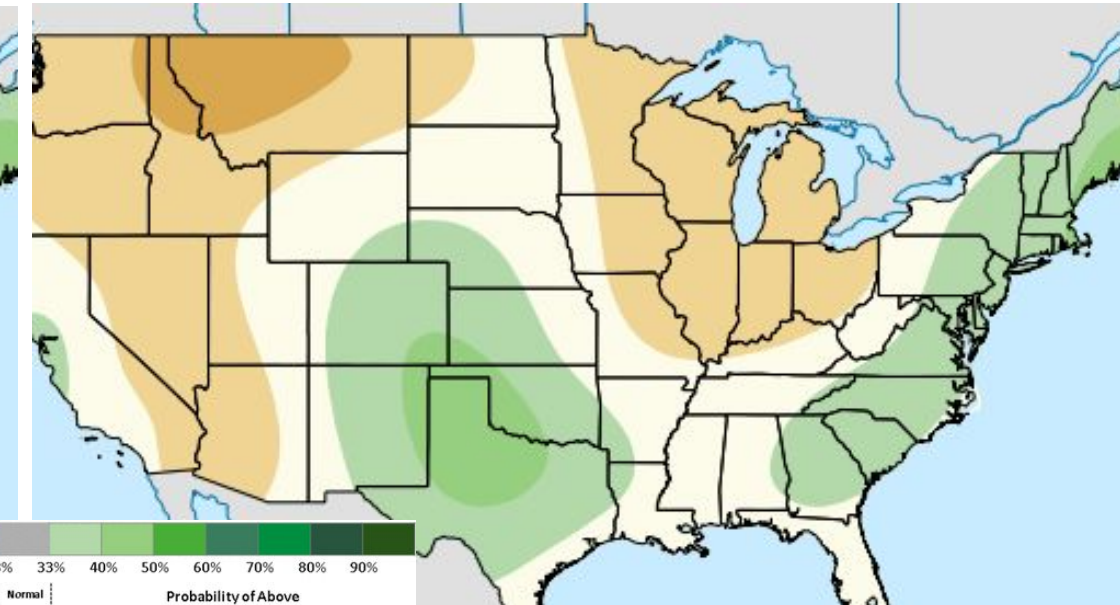
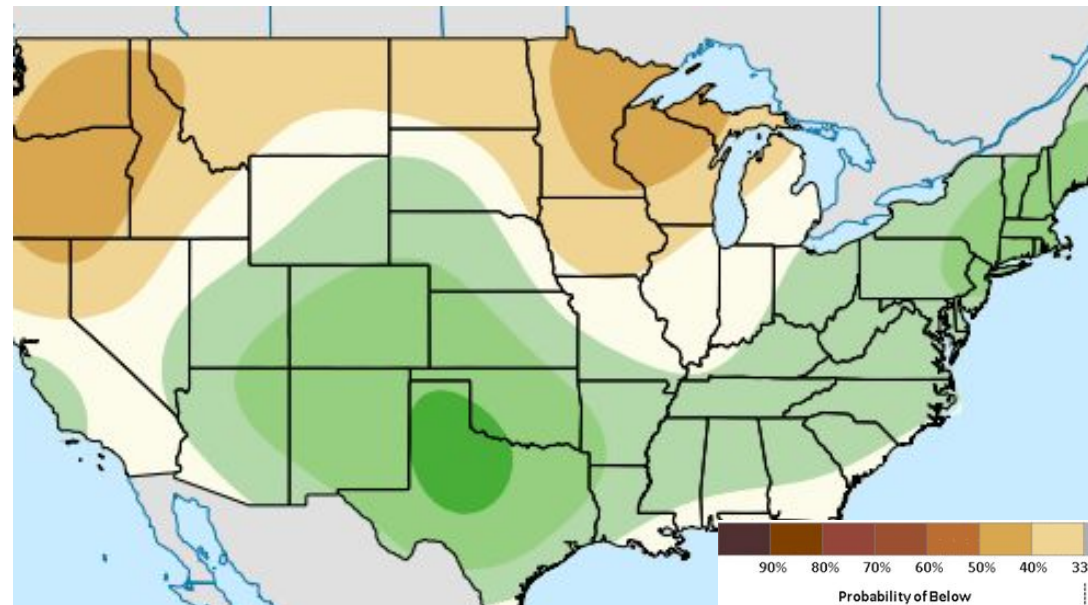
- A brief reprieve from the heat with near normal temperatures likely during the second week of September.
- Above normal temperatures are favored to build back in mid-month.
- There is a moderate trend toward drier than normal conditions during the next two weeks.

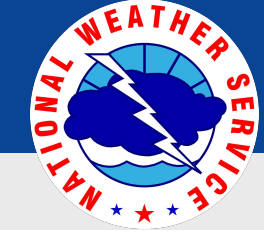


6-10 Day Outlook (Sep 12th-16th)



8-14 Day Outlook (Sep 14th-20th)



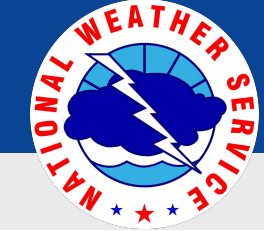


Drought Category Definitions

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D0	Abnormally Dry	<u>Going into drought:</u> <ul style="list-style-type: none"> Short-term dryness slowing planting, growth of crops or pastures 	<u>Coming out of drought:</u> <ul style="list-style-type: none"> Some lingering water deficits Pastures or crops not fully recovered
D1	Moderate Drought	<ul style="list-style-type: none"> Some damage to crops, pastures Streams, reservoirs, or wells low, some water shortages developing or imminent Voluntary water-use restrictions requested 	
D2	Severe Drought	<ul style="list-style-type: none"> Crop or pasture losses likely Water shortages common Water restrictions imposed 	
D3	Extreme Drought	<ul style="list-style-type: none"> Major crop/pasture losses Widespread water shortages or restrictions 	
D4	Exceptional Drought	<ul style="list-style-type: none"> Exceptional and widespread crop/pasture losses Shortages of water in reservoirs, streams, and wells creating water emergencies 	





Questions, Comments, and Resources

September 7, 2023
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Contact Information

If you have questions or comments about this information, please contact:

NOAA/National Weather Service
Twin Cities/Chanhassen
1733 Lake Drive West
Chanhassen, MN 55317

Phone: 952-361-6670

Email: nws.twincities@noaa.gov

Acknowledgments:

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.

Additional Resources

Additional information on current drought conditions may be found at the following web addresses:

U.S. Drought Monitor: www.droughtmonitor.unl.edu

Current MN drought conditions: www.drought.gov/state/minnesota

Current WI drought Conditions: www.drought.gov/state/wisconsin

Climate Prediction Center (CPC): www.cpc.ncep.noaa.gov

Midwestern Regional Climate Center: <https://mrcc.illinois.edu/>

MN Climatology Office: <https://climateapps.dnr.state.mn.us/index.htm>

WI State Climatology Office: www.aos.wisc.edu/~sco

MN DNR Fire Danger:

https://www.dnr.state.mn.us/forestry/fire/firerating_restrictions.html

WI DNR Fire Danger: <https://dnr.wi.gov/topic/forestfire/restrictions.asp>

NWS Precipitation Data: <https://water.weather.gov/precip/>

USGS Hydrologic data: <https://waterwatch.usgs.gov/>

USDA crop reports: <https://www.nass.usda.gov/>

