NWS Twin Cities Drought Update

July 21, 2022
10:42 AM

Drought Continues to worsen in and southwest of the Twin Cities metro

Key Messages

- Severe Drought (D2) introduced from the Twin Cities, up the MN River to Belle Plaine
- D0 and D1 drought expanded into western and central MN
- Minor improvements in Barron county, WI, where heavy rains fell last week.

NEW Important Updates

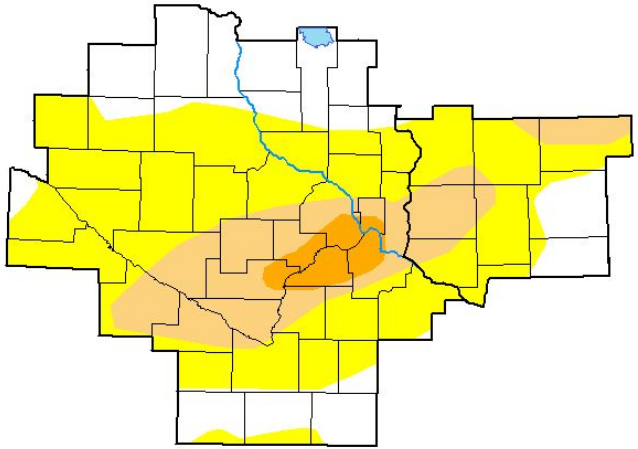
- Drought conditions continue to worsen across much of central and southern MN

Next Scheduled Briefing

- Next DROUGHT packet update is scheduled for Thursday, July 28th

U.S. Drought Monitor

Twin Cities/ Chanhassen, MN WFO



July 19, 2022

(Released Thursday, Jul. 21, 2022)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	26.29	73.71	22.68	3.66	0.00	0.00
Last Week 07-12-2022	55.81	44.19	14.71	0.00	0.00	0.00
3 Months Ago 04-19-2022	70.24	29.76	3.75	0.00	0.00	0.00
Start of Calendar Year 01-04-2022	48.18	51.82	25.73	0.00	0.00	0.00
Start of Water Year 09-28-2021	14.74	85.26	53.53	3.74	0.00	0.00
One Year Ago 07-20-2021	1.07	98.93	86.61	55.03	8.81	0.00

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:

Brian Fuchs
National Drought Mitigation Center

droughtmonitor.unl.edu

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

National Weather Service
Twin Cities, MN

Drought Monitor Change

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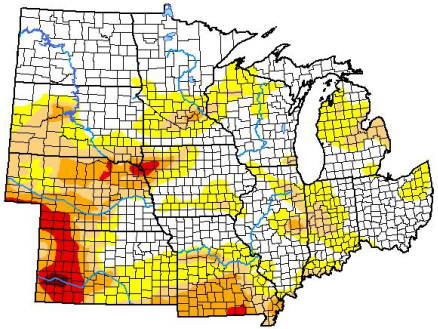
Latest Trend in the Drought Monitor for the North Central U.S.

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	50.63	49.37	26.58	13.09	3.79	0.30
Last Week 07-12-2022	54.87	45.13	25.00	8.99	2.90	0.11
3 Months Ago 04-19-2022	56.84	43.16	30.97	19.44	4.72	0.22
Start of Calendar Year 01-04-2022	44.51	55.49	27.55	7.10	1.31	0.00
Start of Water Year 09-28-2021	39.88	60.12	38.68	24.50	9.27	0.04
One Year Ago 07-20-2021	47.30	52.70	38.43	26.44	8.30	0.76

Intensity:
None
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
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None
D0 Abnormally Dry
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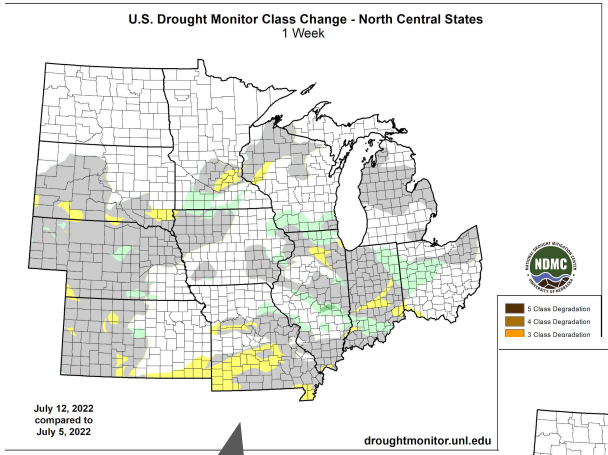
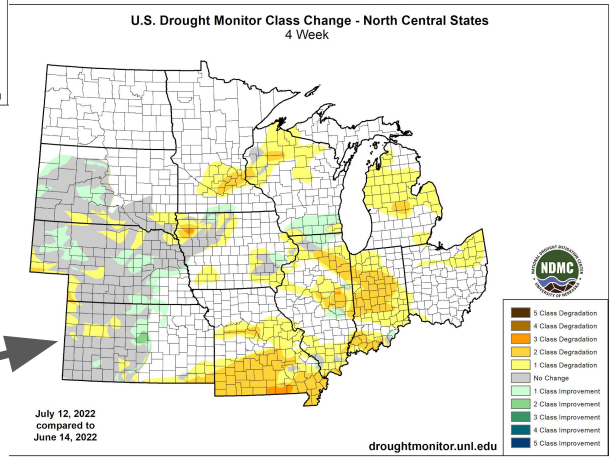


1 Week Change



4 Week Change

5 Class Degradation
4 Class Degradation
3 Class Degradation
2 Class Degradation
1 Class Degradation
No Change
1 Class Improvement
2 Class Improvement
3 Class Improvement
4 Class Improvement
5 Class Improvement

Recent Precipitation and

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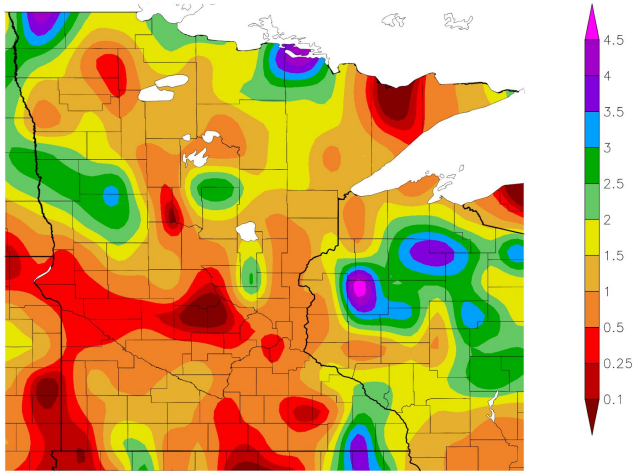
Very dry over the central and southern portion of the area

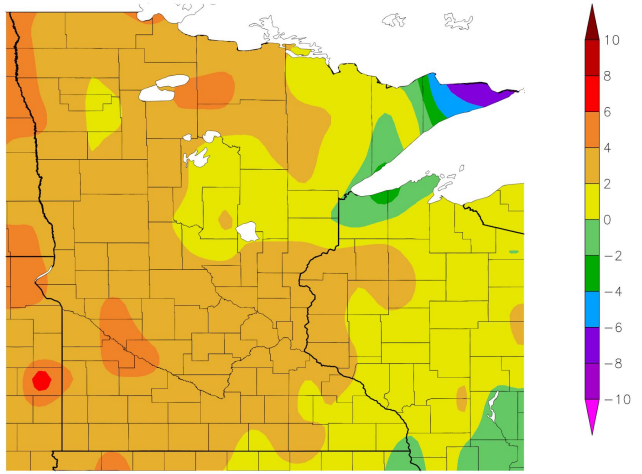
Previous 2 Weeks Precipitation Totals



Generated 7/21/2022 at HPRCC using provisional data.

NOAA Regional Climate Centers

Previous 2 Weeks Temperature Departure



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NOAA Regional Climate Centers

Highlights

- ➔ Little rain has fallen over the last 2 weeks over MN, with continued above normal temperatures
- ➔ Narrow band of 2-5” of rain fell last week from Barron into northern Chippewa county in WI

Precipitation Deficits

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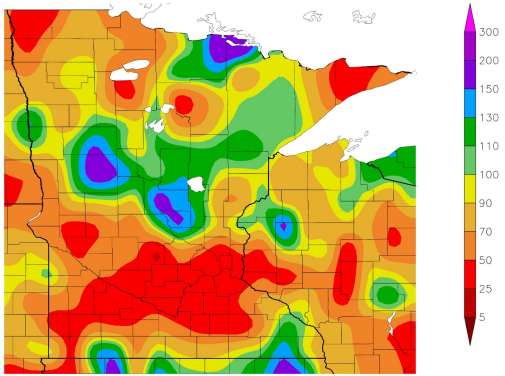
Deficits continue to worsen

30 Day Percent Normal

Percent of Normal Precipitation (%)
6/20/2022 – 7/19/2022



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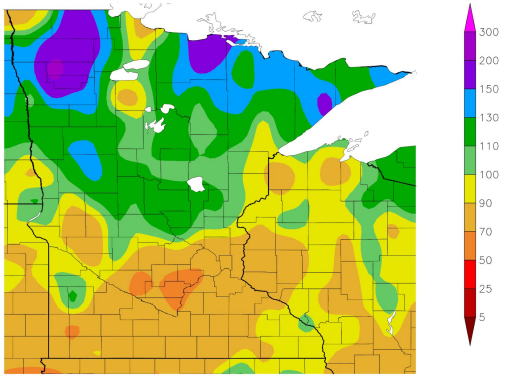
NOAA Regional Climate Centers

6-Month Percent Normal

Percent of Normal Precipitation (%)
1/20/2022 – 7/19/2022

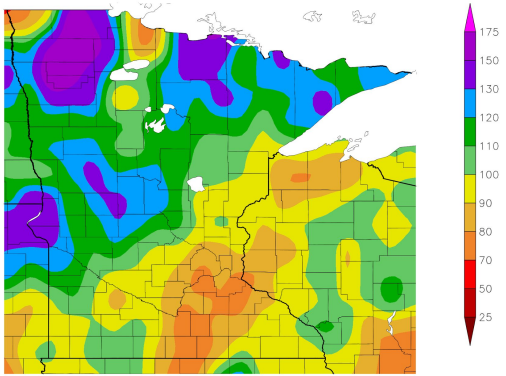


Generated 7/20/2022 at HPRCC using provisional data.

NOAA Regional Climate Centers

12-Month Percent Normal

Percent of Normal Precipitation (%)
7/20/2021 – 7/19/2022



Generated 7/20/2022 at HPRCC using provisional data.

NOAA Regional Climate Centers

Highlights

- ➔ Outside of central MN, very dry conditions have persisted through the last 60 days
- ➔ Most significant precipitation deficits have been observed from the Twin Cities back toward Redwood Falls in MN

Hydrologic Conditions - MN and WI

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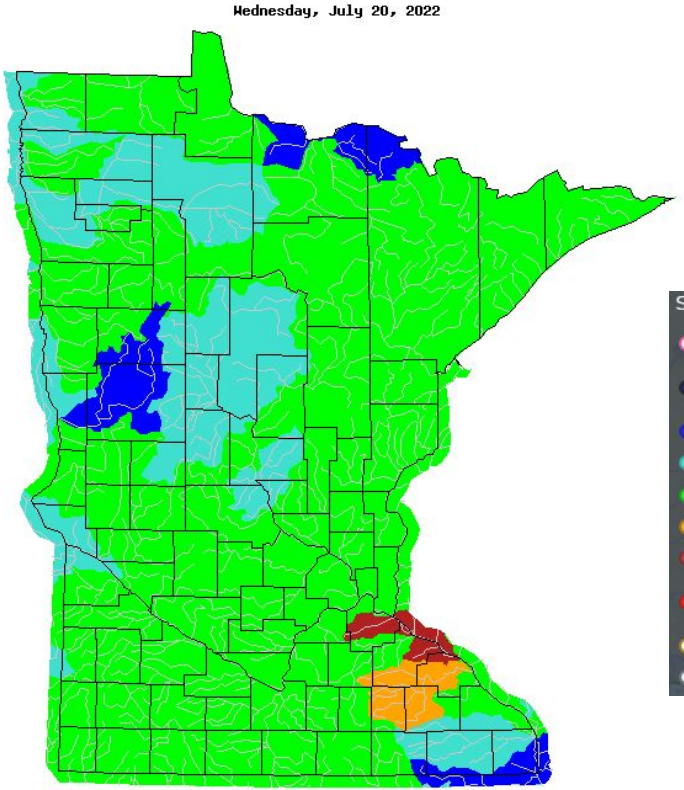
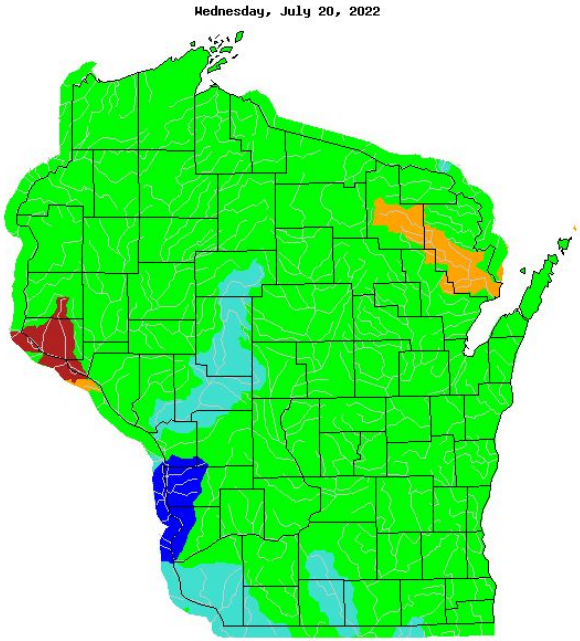
Average streamflow for the past 7 days



USGS

Highlights

- ➔ Most mainstem river basins have flows within normal ranges
- ➔ Smaller basins in/near the Twin Cities metro are starting to observe below normal flows



USGS

Soil Moisture Conditions

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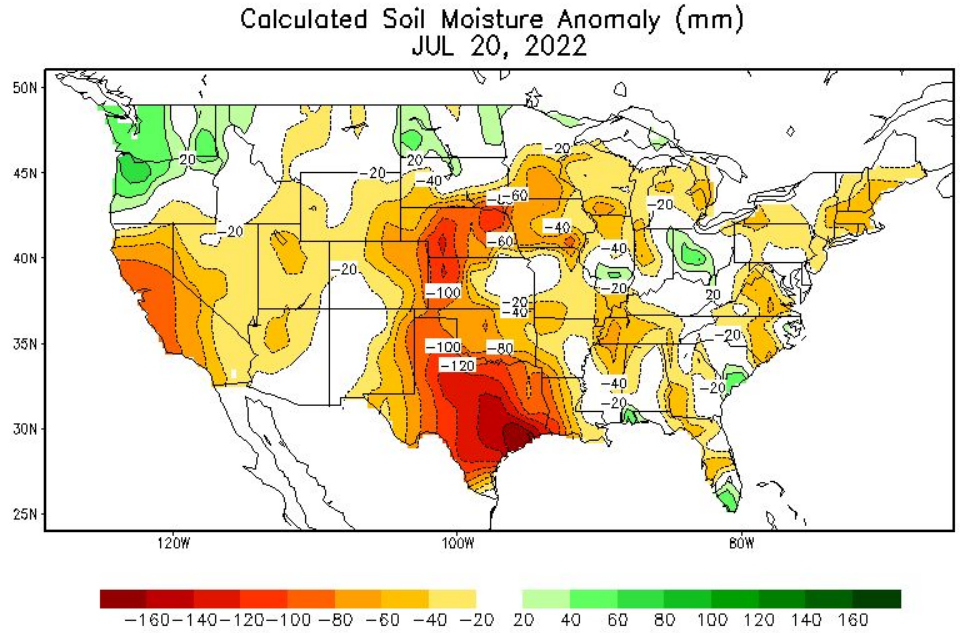
|**Add Weather/Water Message (optional)**|



Minnesota (Entire State)	As of July 18	Very Short Moisture	Short Moisture	Adequate Moisture	Moisture Surplus
	Topsoil	**5%**	**19%**	**69%**	**7%**
	Subsoil	**3%**	**14%**	**75%**	**8%**

Wisconsin (Entire State)	As of July 18	Very Short Moisture	Short Moisture	Adequate Moisture	Moisture Surplus
	Topsoil	**3%**	**21%**	**73%**	**3%**
	Subsoil	**6%**	**17%**	**74%**	**3%**

Highlights

The combination of above normal temperatures and significant precipitation deficits are driving the lowest soil moisture locally across southern Minnesota

Crop Conditions

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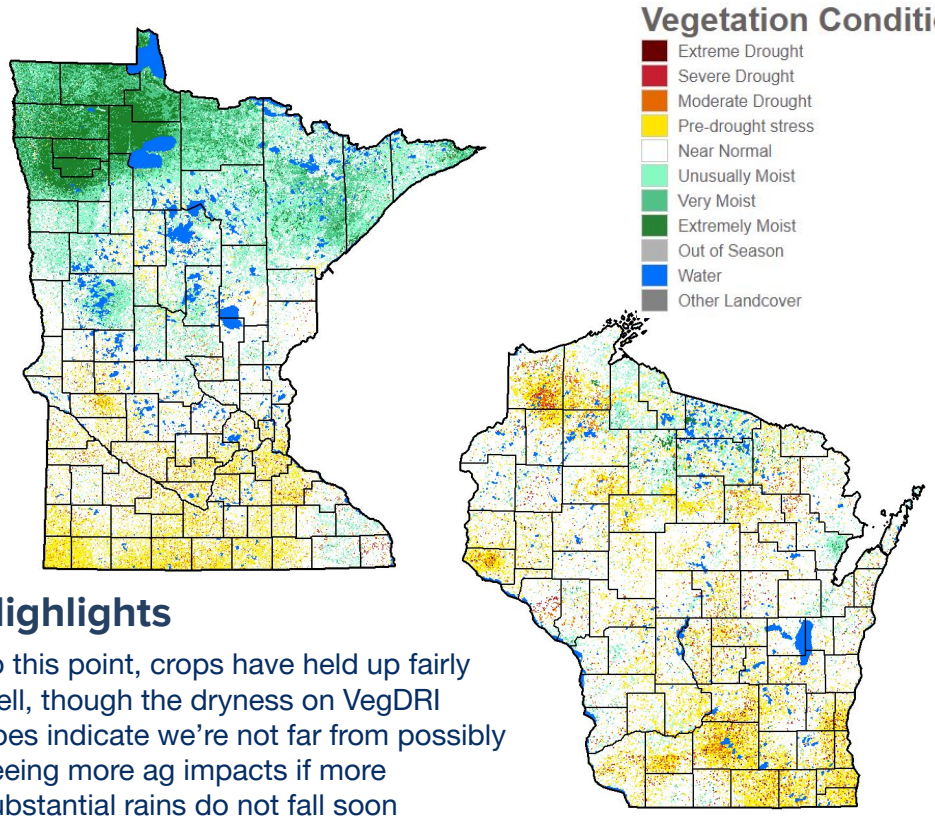
Images are current Vegetation Drought Response Index (VegDRI)



Highlights

To this point, crops have held up fairly well, though the dryness on VegDRI does indicate we're not far from possibly seeing more ag impacts if more substantial rains do not fall soon

Crop Condition as of July 17, 2022 — **MN**

Item	Very Poor	Poor	Fair	Good	Excellent
	(percent)	(percent)	(percent)	(percent)	(percent)
Barley	0	1	45	49	5
Corn	1	4	27	56	12
Dry edible beans	0	1	36	55	8
Hay, all	0	4	21	58	17
Oats	1	4	32	52	11
Pasture and range	2	6	22	56	14
Potatoes	0	0	9	70	21
Soybeans	1	4	33	53	9
Sugarbeets	2	8	21	14	55
Sunflowers	0	0	16	79	5
Wheat, spring	0	0	29	65	6

Crop Condition as of July 17, 2022 — **WI**

Item	Very Poor	Poor	Fair	Good	Excellent
	(percent)	(percent)	(percent)	(percent)	(percent)
Corn	0	4	19	56	21
Hay, all	0	3	14	62	21
Oats	0	1	17	64	18
Pasture and range	1	6	19	60	14
Potatoes	0	1	4	81	14
Soybeans	1	3	20	56	20
Wheat, winter	0	1	13	56	30

Fire Danger Condition

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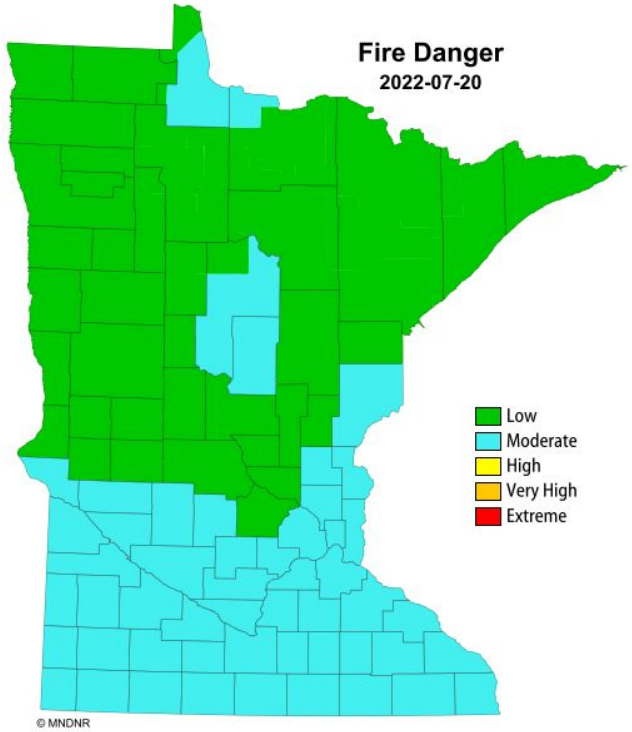
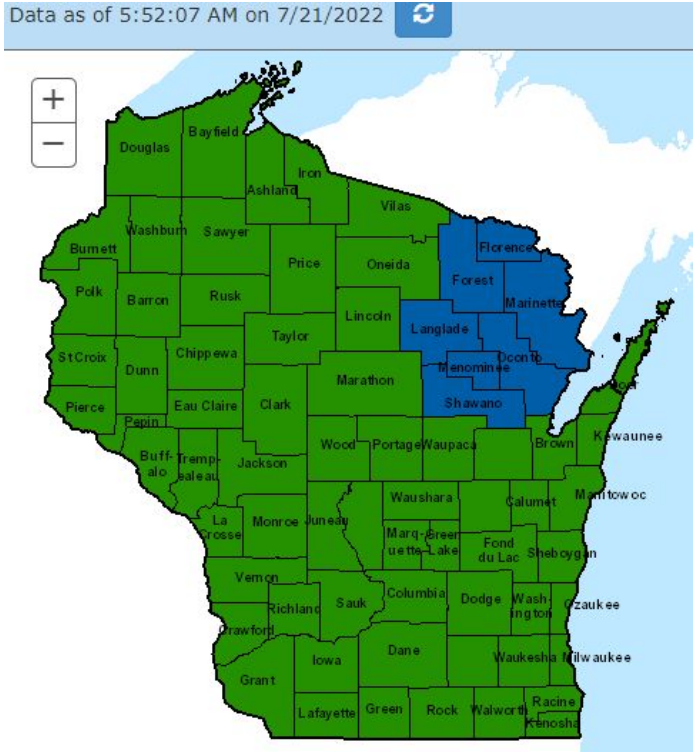
Fire Danger ratings for date specified ONLY





[Current MN Fire Danger]

[Current WI Fire Danger]

Highlights

- Fire activity has been pretty light across MN and WI this summer
- Highest fire dangers in MN do correspond to where precipitation deficits have been greatest

Forecast Precipitation

July 21, 2022
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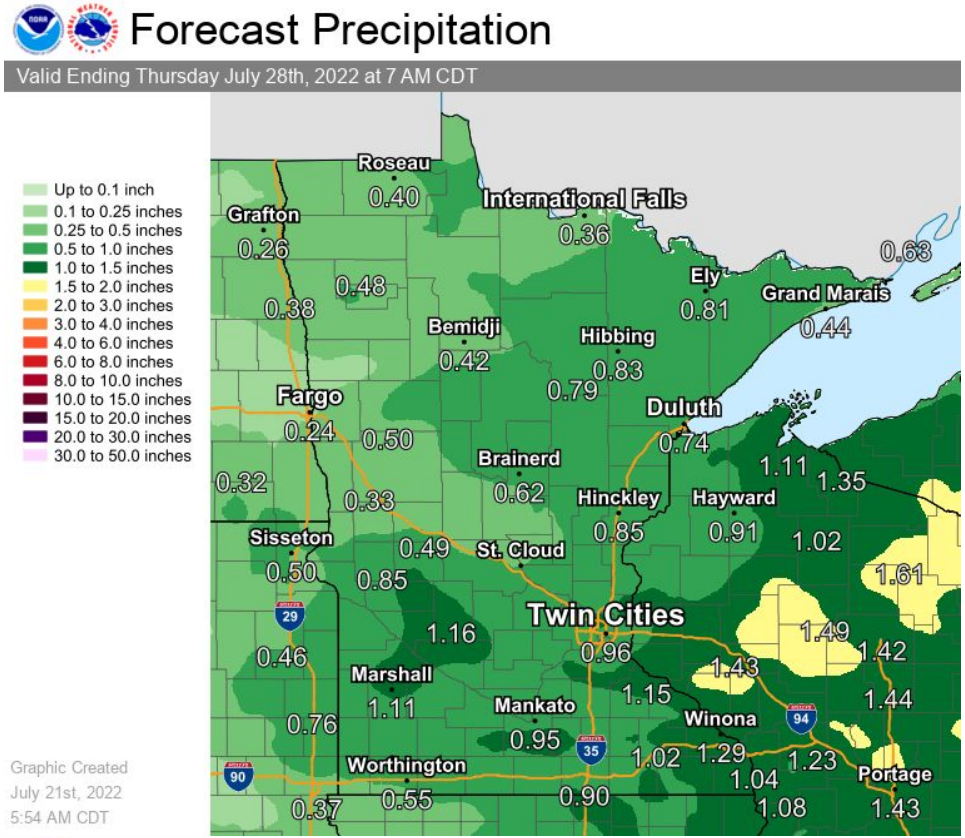
Next 7 Days



Highlights

- ➔ Best chances for rain come Saturday and Tuesday into Wednesday
- ➔ Widespread soaking rains are not expected, with isolated pockets of higher rainfall totals expected within thunderstorms
- ➔ Normal 7-day precipitation in the summer is 1-1.25”

Short Term Climate Outlook

July 21, 2022
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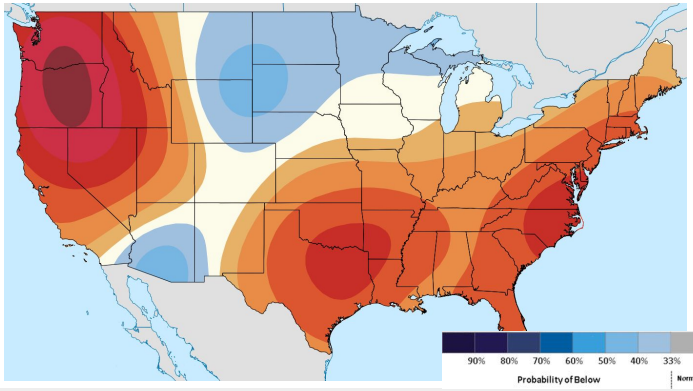
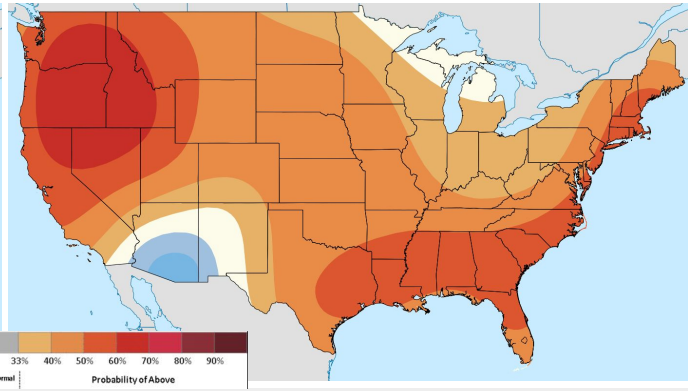
For more information visit: https://www.cpc.ncep.noaa.gov/

Highlights

- ➔ Temperatures closer to normal expected to finish out July
- ➔ Trends show above normal temperatures returning to start August
- ➔ Best chances for seeing above normal precipitation are trending south of the area to end July and begin August

Temperature

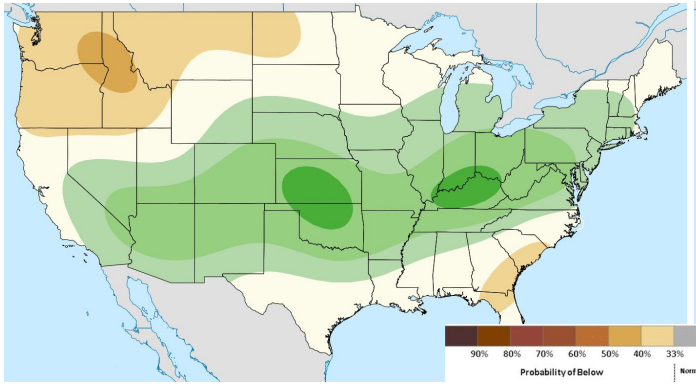


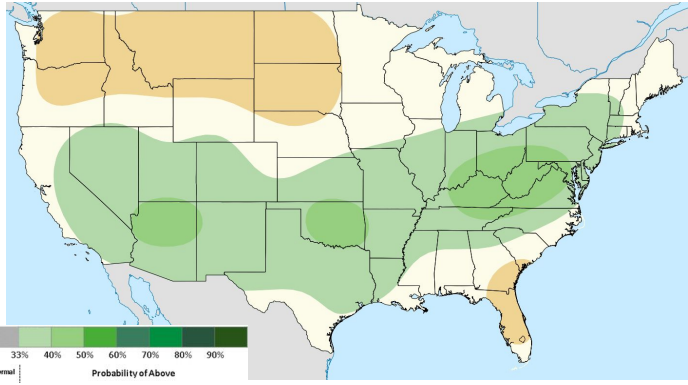


6-10 Day Outlook

8-14 Day Outlook

Precipitation





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

National Weather Service
Twin Cities, MN

Drought Category Definitions

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D0	**Abnormally Dry**	**Going into drought:** • Short-term dryness slowing planting, growth of crops or pastures	**Coming out of drought:** • Some lingering water deficits • Pastures or crops not fully recovered
D1	**Moderate Drought**	• Some damage to crops, pastures • Streams, reservoirs, or wells low, some water shortages developing or imminent • Voluntary water-use restrictions requested	
D2	**Severe Drought**	• Crop or pasture losses likely • Water shortages common • Water restrictions imposed	
D3	**Extreme Drought**	• Major crop/pasture losses • Widespread water shortages or restrictions	
D4	**Exceptional Drought**	• Exceptional and widespread crop/pasture losses • Shortages of water in reservoirs, streams, and wells creating water emergencies	

Questions, Comments, and Resources

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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/