

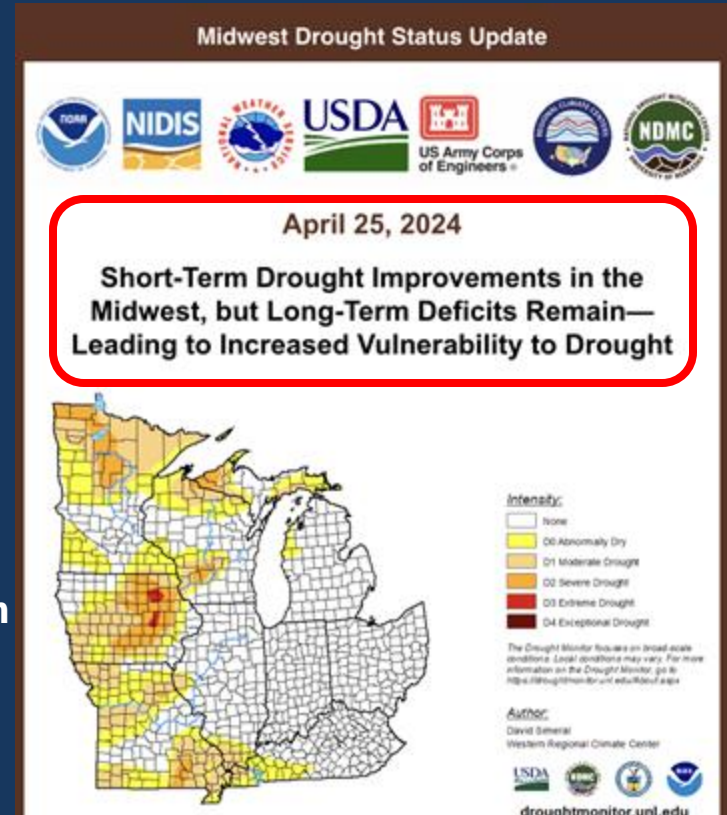


**Setting the Stage:
Recent Complex
Conditions in the Midwest**

Spring Rains-Yay!! But...

April 25th Key Messages

- 23% of the Midwest region is in drought
- Significant portions of the region, including Iowa and portions of Minnesota, Wisconsin, Missouri, and Indiana, have long-term precipitation deficits over last 4 years.
- Hydrology is showing the impacts (soil moisture, streamflow, AND groundwater)
- Short-term improvements: BUT long-term deficits are increasing our vulnerability in the Midwest.
- Underlying dryness means locations are VERY reliant upon regular spring and summer rainfall.
- Areas with below-normal rain in coming months: at risk for worsening drought conditions.

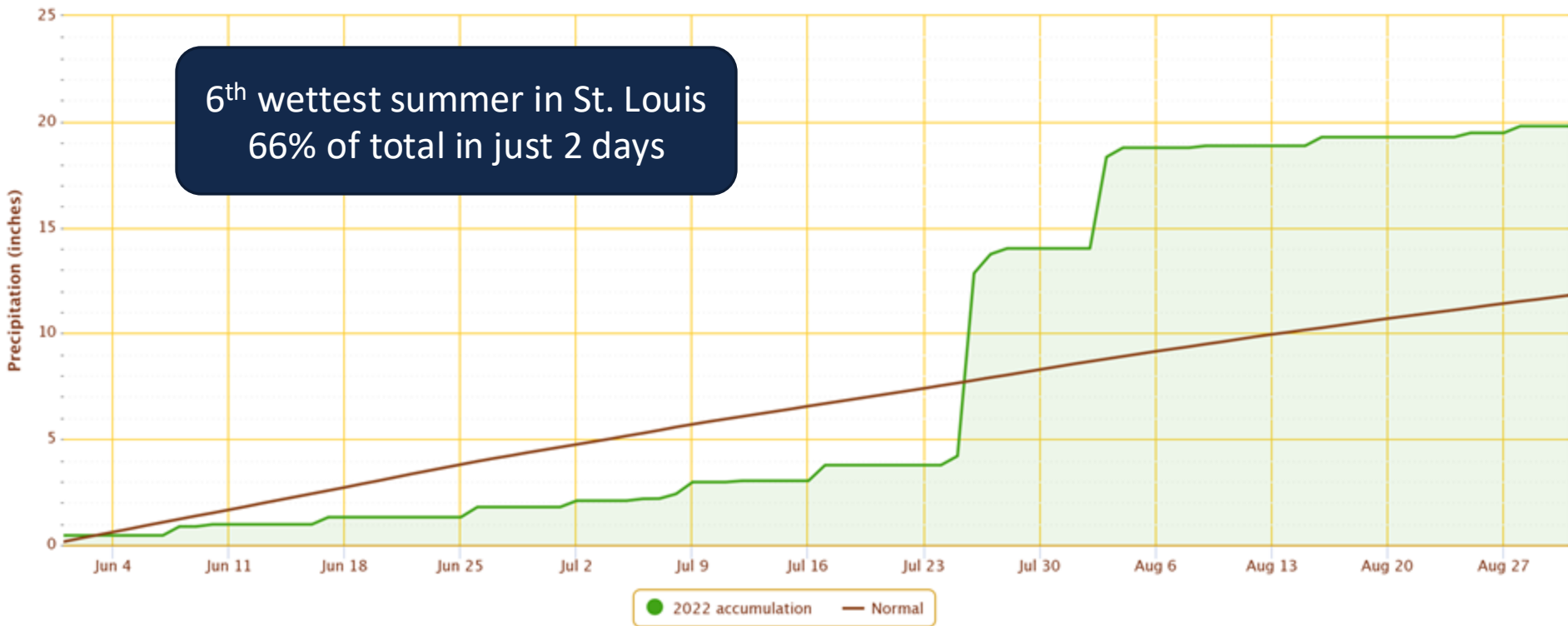


It Rains Finally! But...

(Stolen from Trent yesterday...)

2022 Summer Accumulated Precipitation – St. Louis, MO

6th wettest summer in St. Louis
66% of total in just 2 days



Midwest is Drought Free! Hold on...

U.S. Drought Monitor Midwest

June 11, 2024

(Released Thursday, Jun. 13, 2024)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	94.18	5.82	0.00	0.00	0.00	0.00
Last Week 06-04-2024	93.32	6.68	0.43	0.00	0.00	0.00
3 Months Ago 03-12-2024	28.03	71.97	42.19	11.49	2.32	0.00
Start of Calendar Year 01-01-2024	22.92	77.08	50.25	20.76	4.20	0.00
Start of Water Year 09-26-2023	16.82	83.18	54.98	23.81	6.21	0.13
One Year Ago 06-12-2023	10.72	89.28	48.72	7.96	1.21	0.00

Intensity:

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

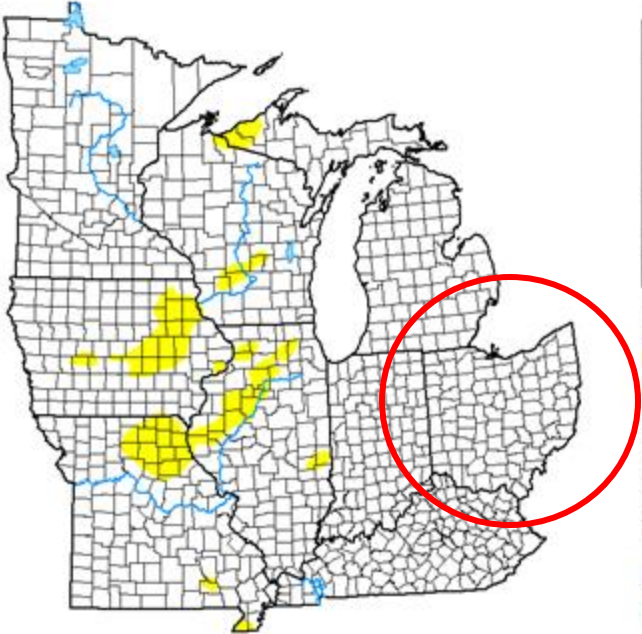
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

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CPC/NOAA/NWS/NCEP

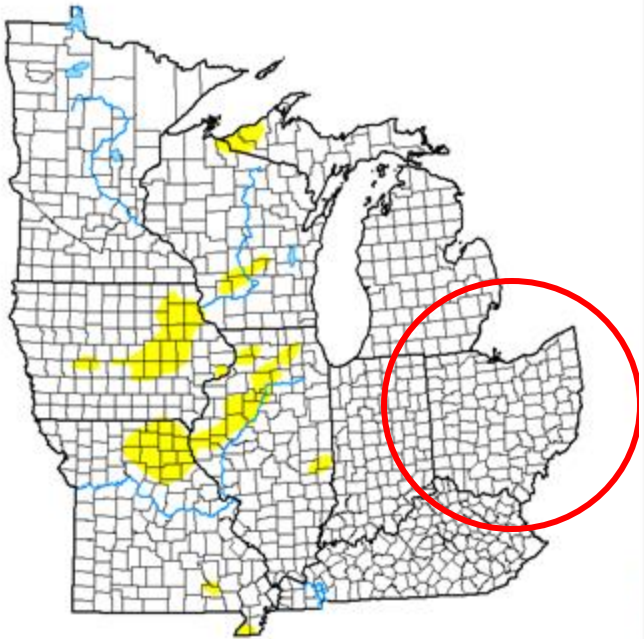


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Midwest is Drought Free! Hold on...

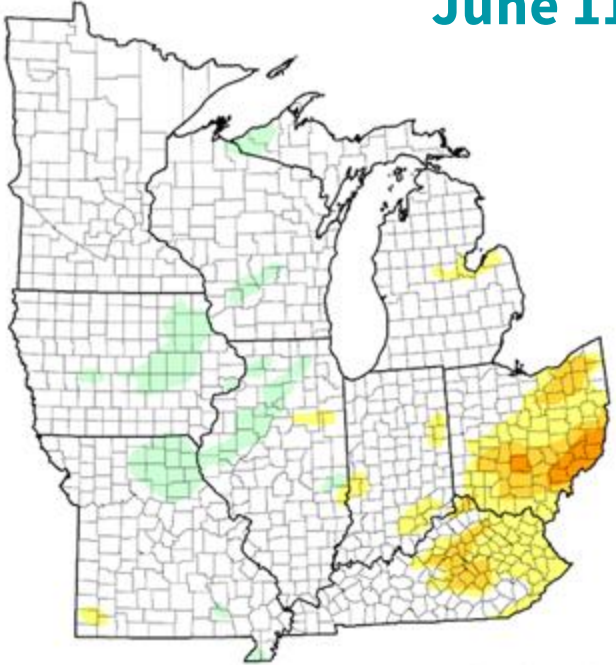
U.S. Drought Monitor
Midwest



July 23, 2024
compared to
June 11, 2024

U.S. Drought Monitor Class Change - Midwest Climate Region
6 Week

June 11 → July 23

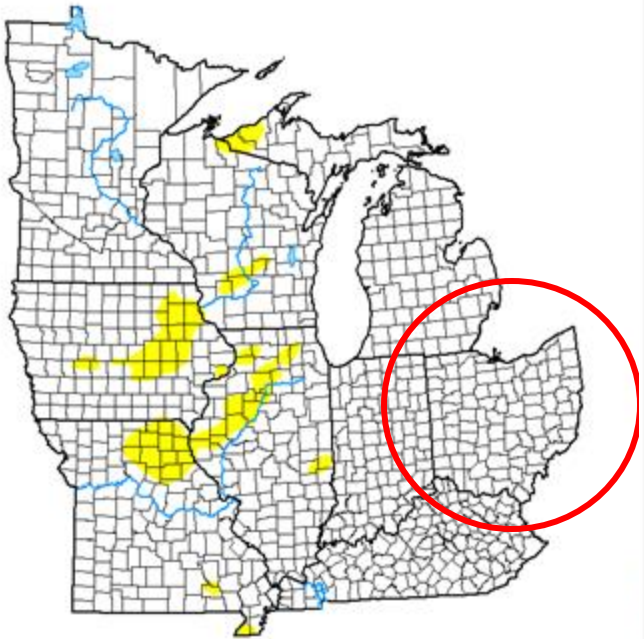


- 5 Class Degradation
- 4 Class Degradation
- 3 Class Degradation
- 2 Class Degradation
- 1 Class Degradation
- No Change
- 1 Class Improvement
- 2 Class Improvement
- 3 Class Improvement
- 4 Class Improvement
- 5 Class Improvement

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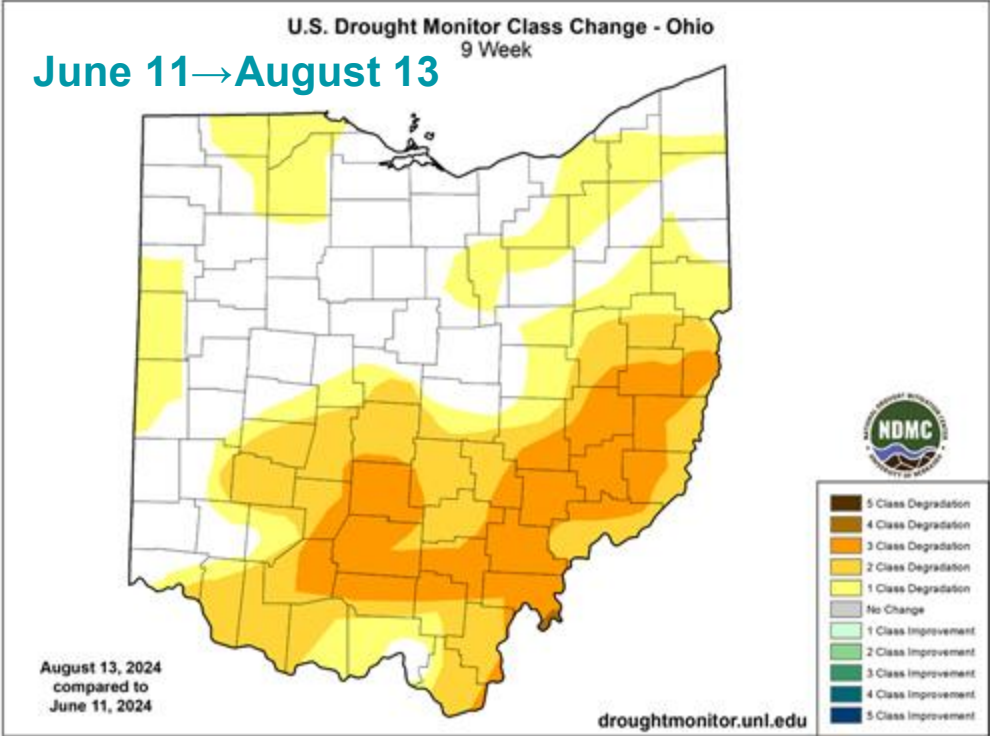
Midwest is Drought Free! Hold on...

U.S. Drought Monitor
Midwest



U.S. Drought Monitor Class Change - Midwest Climate Region

U.S. Drought Monitor Class Change - Ohio
9 Week
June 11 → August 13



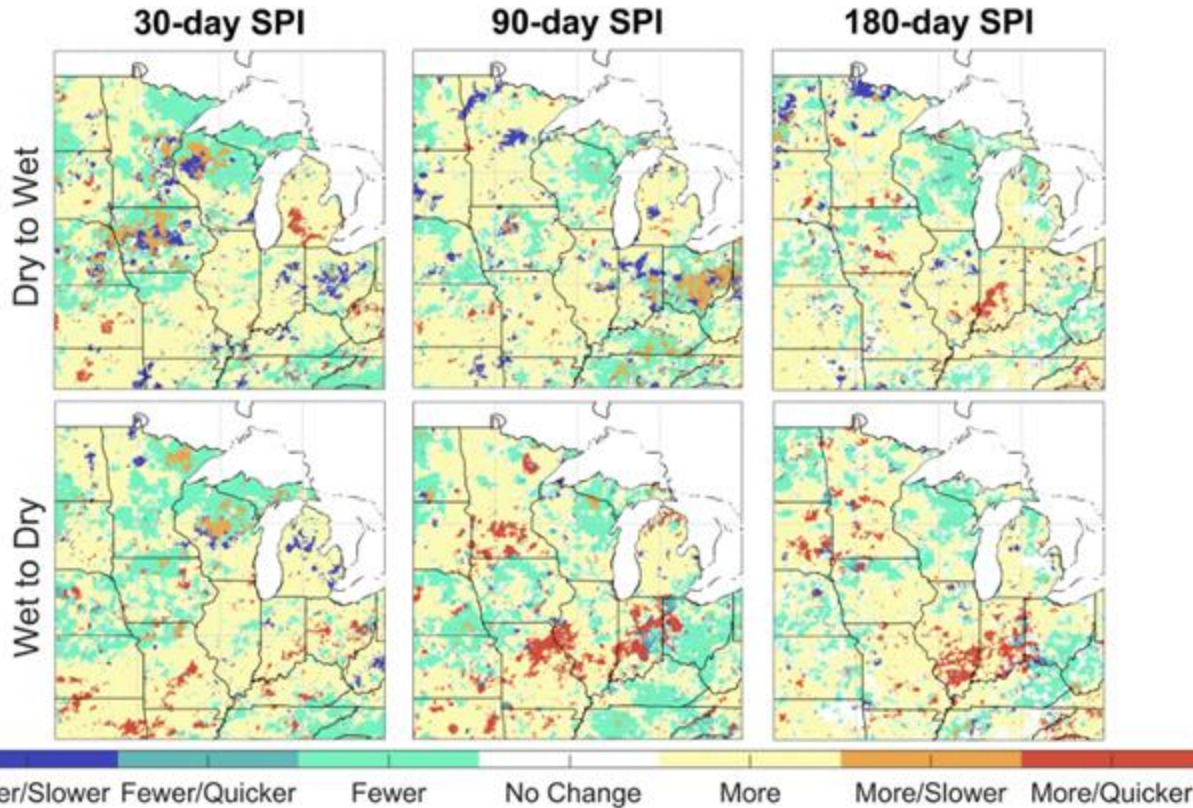
August 13, 2024
compared to
June 11, 2024

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Understanding the Complexity of Midwest Drought

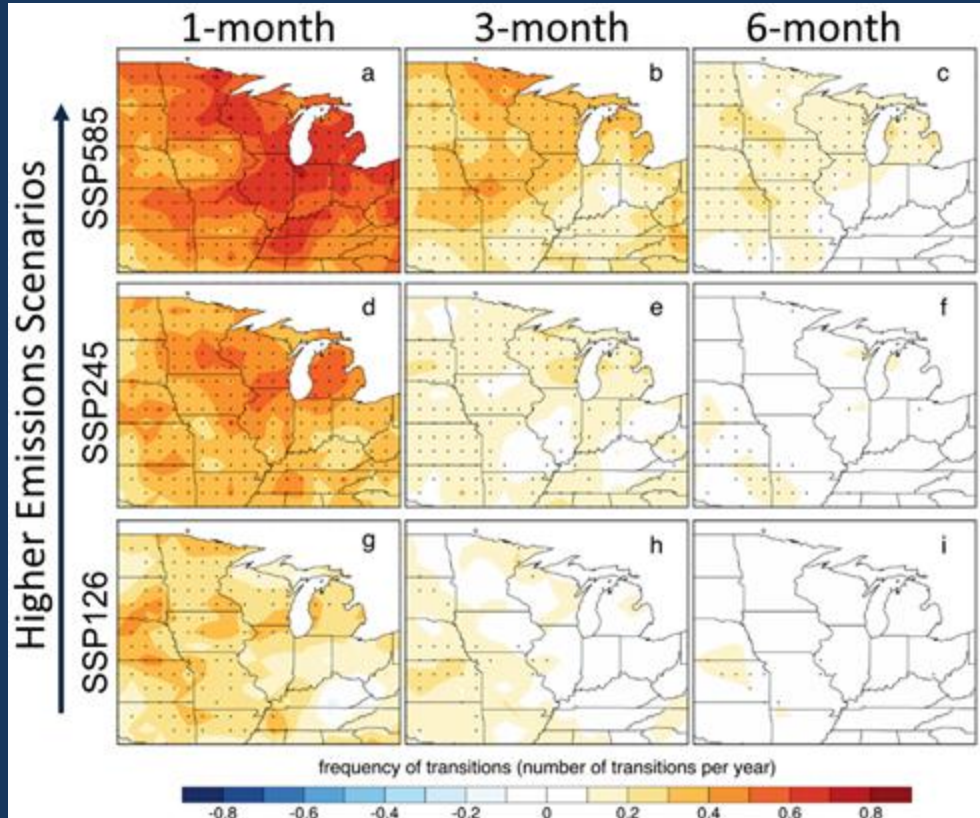


Transitions between extremely wet and extremely dry conditions, and vice versa, were assessed across the Midwest over the past 70 years.

Transitions from wet to dry extremes are happening more quickly and more frequently in the lower Midwest (red).

Yellow: more transitions...but no distinct trend on if events are happening more quickly or slower.

Understanding the Complexity of Midwest Drought

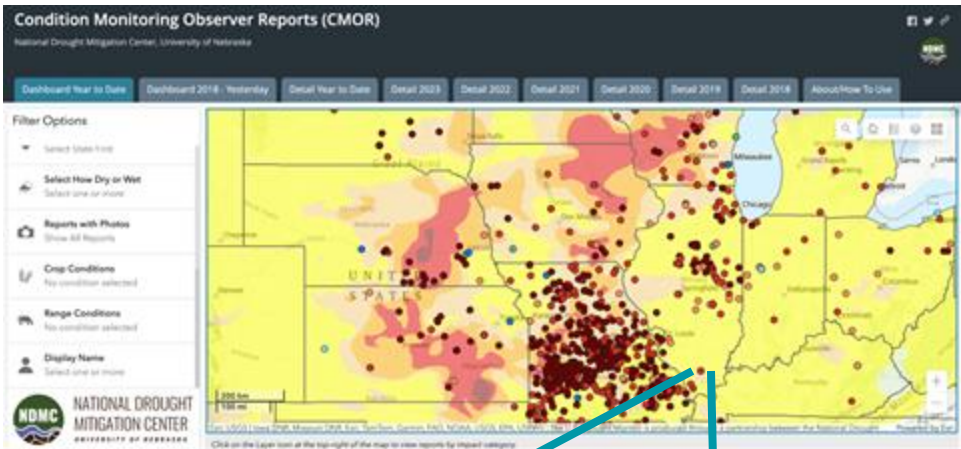


What about the future?

Climate projections (CMIP6) also show an increase in the frequency and intensity of transitions between extremes in the Midwest.

Potential intensification of precipitation extremes seasonality:

- Wet extremes become more frequent in winter and spring
- Dry extremes become more frequent in summer and fall



Condition Monitoring Reports

- It is **really important to know what is happening on-the-ground** for drought monitoring, response, and planning.
- Especially **when conditions are complex** - data may not always match what is happening on the ground
- Condition Monitoring Observer Reports (CMOR): <https://droughtimpacts.unl.edu>



“Severe impact on plants (even after watering,) cracked ground, high levels of dust, blowing dust, corn crops stressed/stunted relative to average year. Stressed trees dropping leaves and developing seed pods, creeks dry, rivers low.”

