

# Hydrologic and Climate Assessment

May 14, 2019



**Aaron B. Wilson**

**STATE CLIMATE OFFICE OF OHIO (SCOO)**

DEPARTMENT OF EXTENSION - CFAES

BYRD POLAR & CLIMATE RESEARCH CENTER

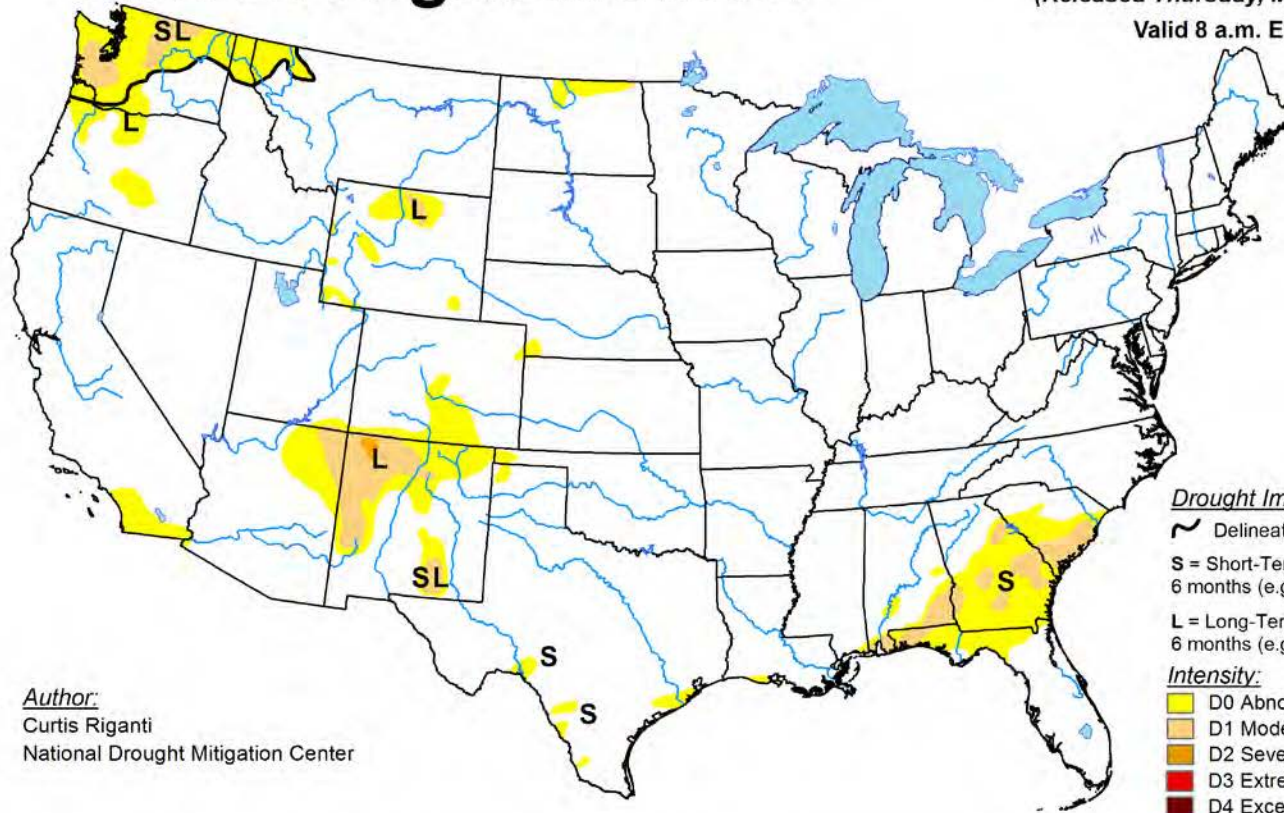
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# U.S. Drought Monitor

May 7, 2019  
 (Released Thursday, May. 9, 2019)  
 Valid 8 a.m. EDT



*Author:*  
 Curtis Riganti  
 National Drought Mitigation Center

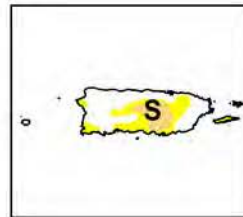
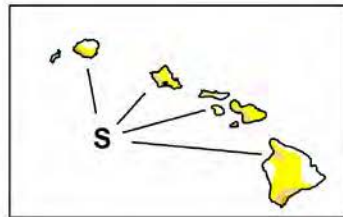
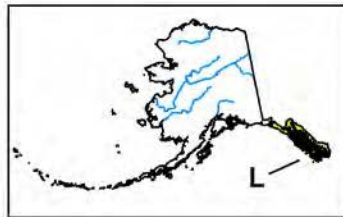
***Drought Impact Types:***

- ~ Delineates dominant impacts
- S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)
- L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)

***Intensity:***

- 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. See accompanying text summary for forecast statements.*



<http://droughtmonitor.unl.edu/>



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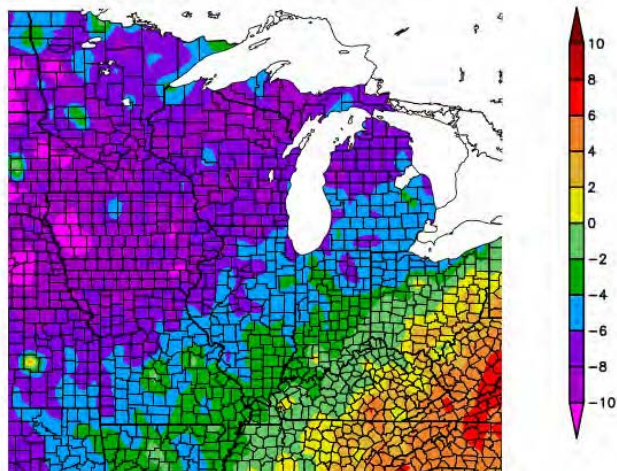
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# Temperature Differences Compared to Average (1981-2010)

**7-Day**

Departure from Normal Temperature (F)  
5/7/2019 – 5/13/2019

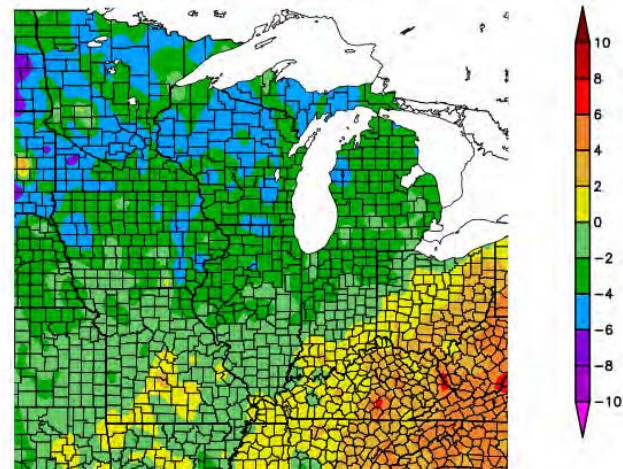


Generated 5/14/2019 at HPRCC using provisional data.

NOAA Regional Climate Centers

**30-Day**

Departure from Normal Temperature (F)  
4/13/2019 – 5/12/2019

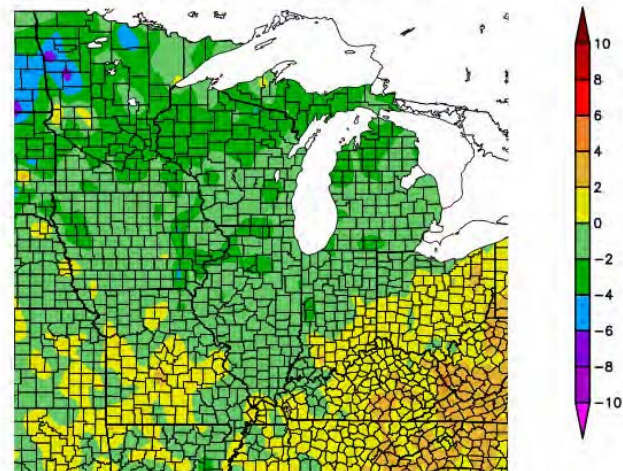


Generated 5/13/2019 at HPRCC using provisional data.

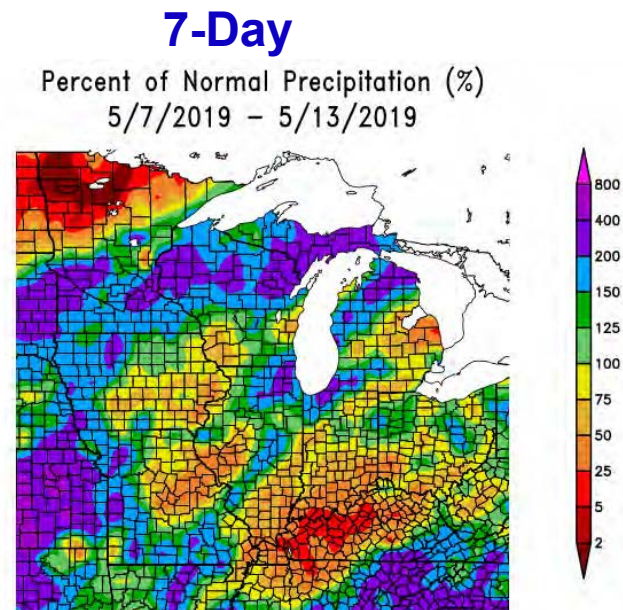
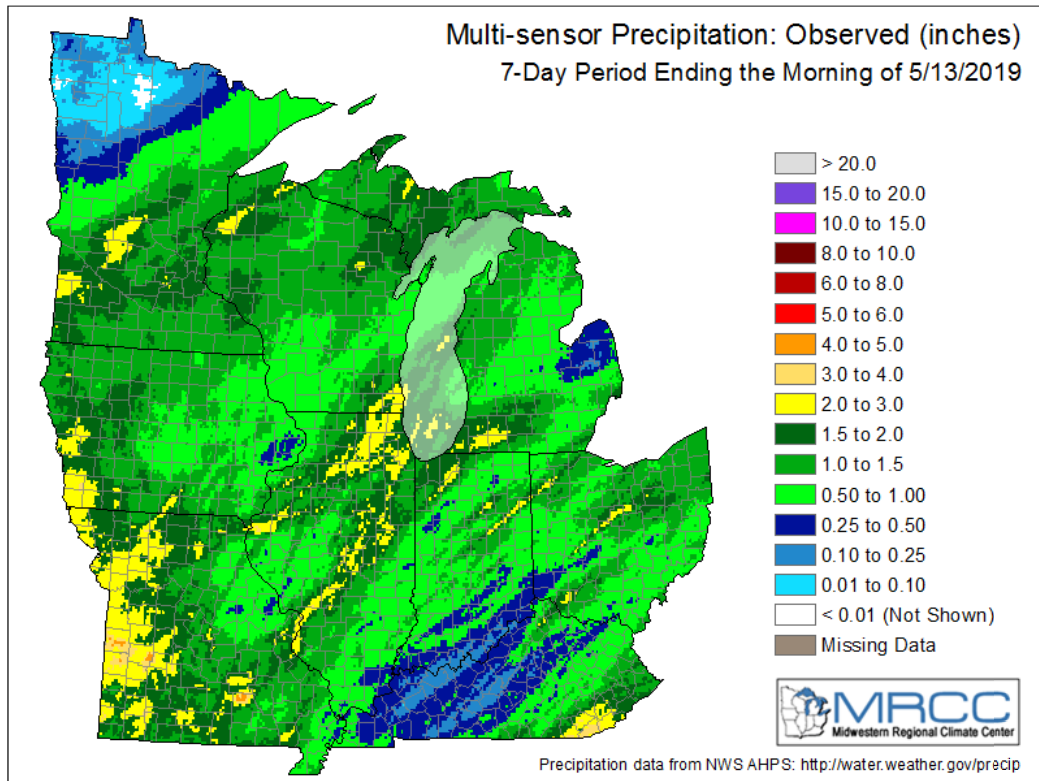
NOAA Regional Climate Centers

**60-Day**

Departure from Normal Temperature (F)  
3/15/2019 – 5/13/2019



# This Week's Precipitation

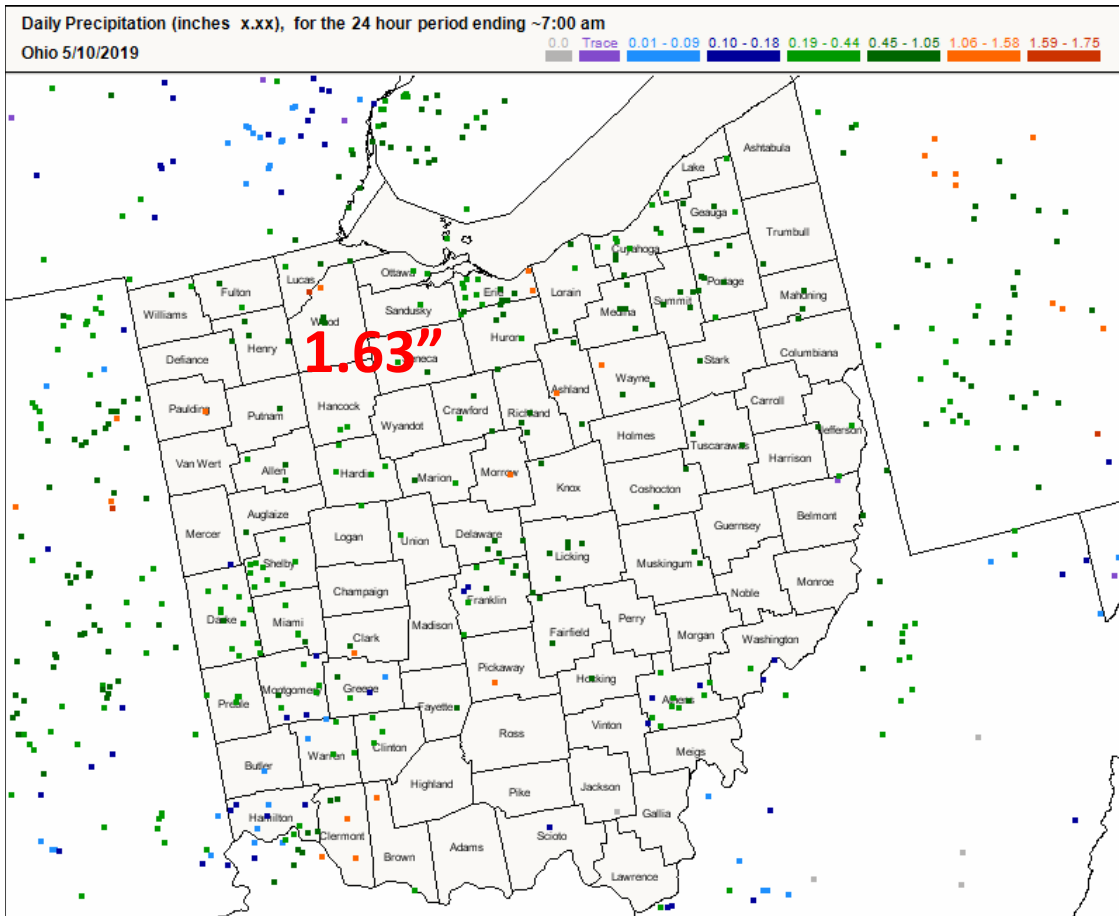


Generated 5/14/2019 at HPRCC using provisional data.

NOAA Regional Climate Centers



# CoCoRaHS



CoCoRaHS Name	Total Precip (inches)
Cheviot 3.4 W	28.90
Fayetteville 0.5 W	28.72
Cincinnati 8.4 NW	27.14
Amelia 0.3 SSW	27.12
Wilmington 2.2 N	26.57
Wyoming 1.2 NW	26.27
Wilmington 3.6 W	26.15
Cincinnati 8.9 NW	26.02
Bethel 3.8 SW	25.95
Clarksville 3.9 ENE	25.92

<https://cocorahs.org/>



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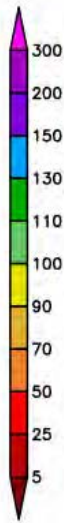
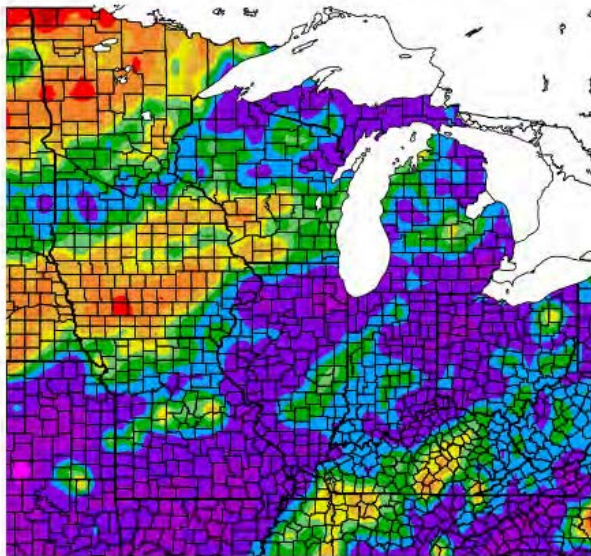
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# Precipitation Differences Compared to Average (1981-2010)

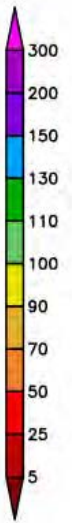
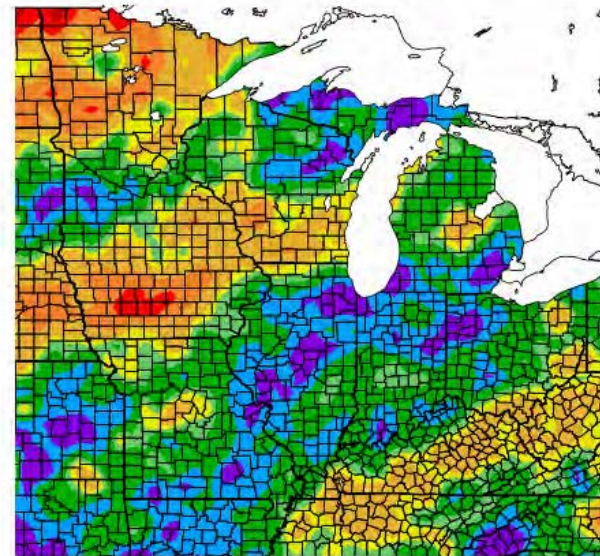
## 30-Day

Percent of Normal Precipitation (%)  
4/13/2019 – 5/12/2019



## 60-Day

Percent of Normal Precipitation (%)  
3/15/2019 – 5/13/2019



Generated 5/13/2019 at HPRCC using provisional data.

NOAA Regional Climate Centers

Generated 5/14/2019 at HPRCC using provisional data.

NOAA Regional Climate Centers

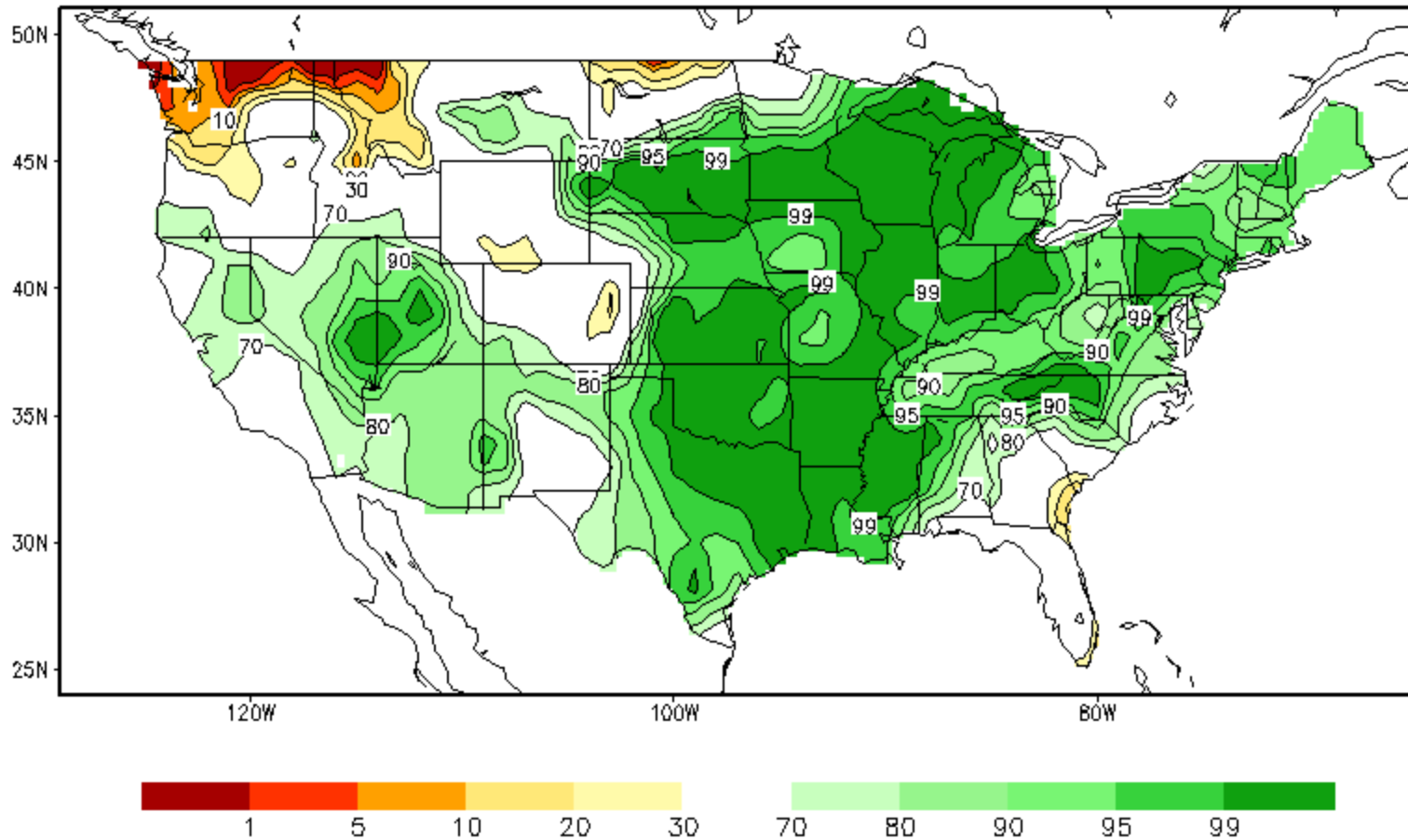


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# Soil Moisture

Calculated Soil Moisture Ranking Percentile  
MAY 12, 2019



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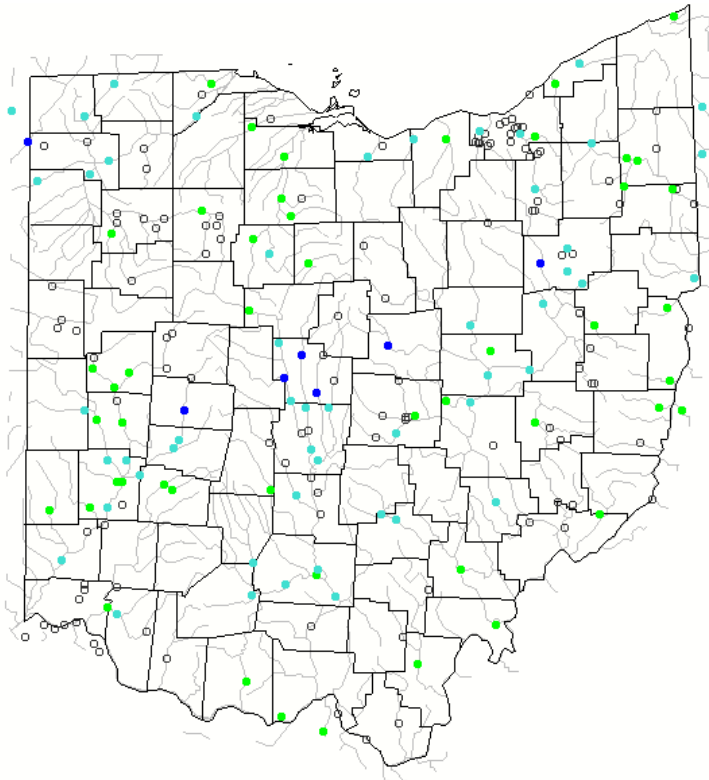
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7-DAY



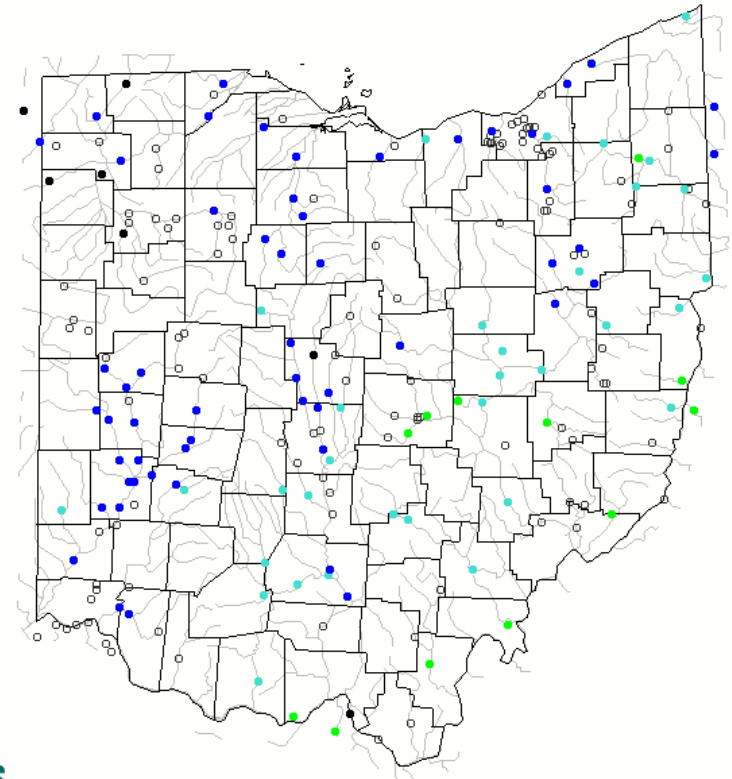
Explanation - Percentile classes

Low	<10 Much below normal	10-24 Below normal	25-75 Normal	76-90 Above normal	>90 Much above normal	High	Not-ranked

Average streamflow compared to historical streamflow for the day of the year

# USGS Streamflow

28-DAY



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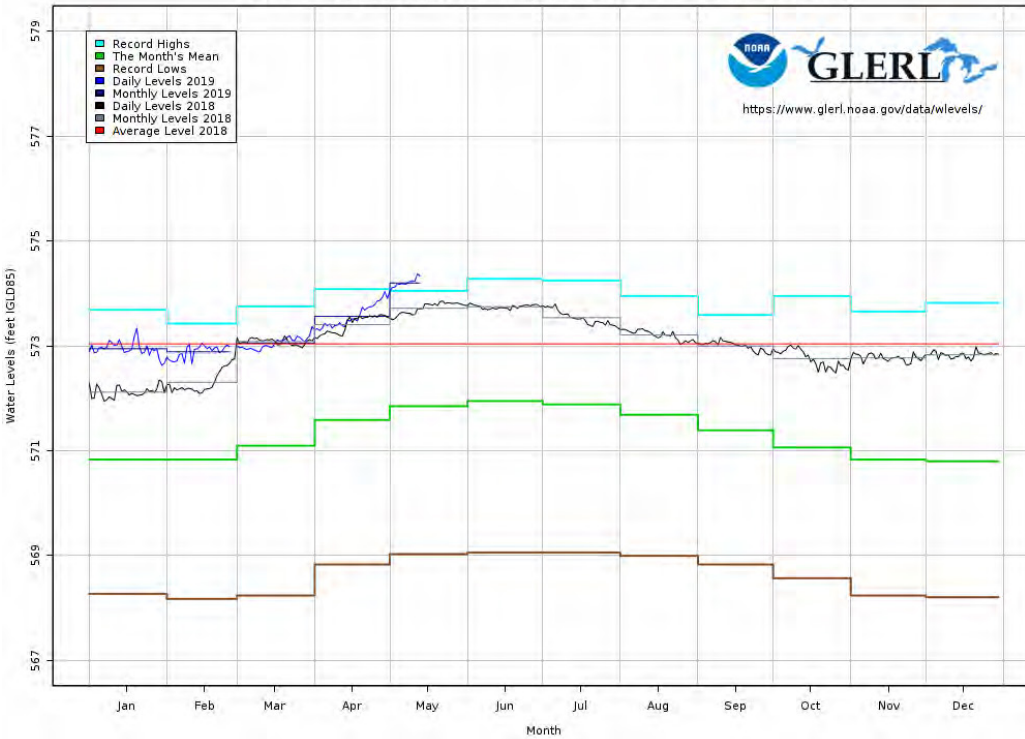


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# Lake Erie Water Levels

Lake Erie Water Levels from Fairport, OH - 9063053 2018 - 2019  
As of End of Day 05/13/2019 (Refresh your browser to ensure plot is up to date)



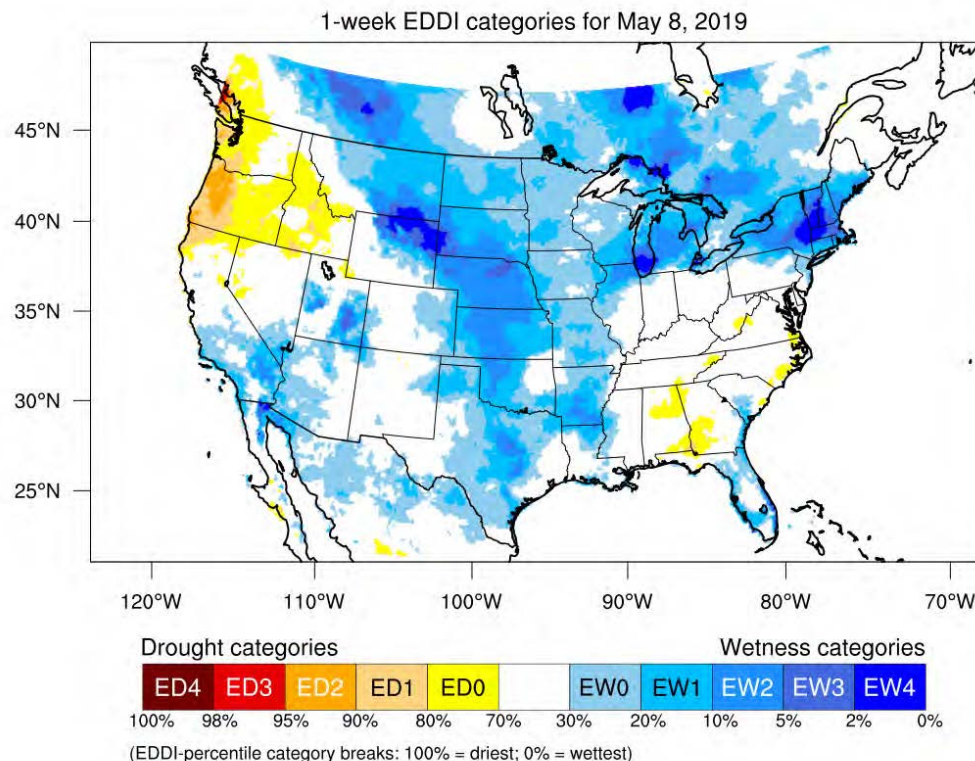
MILLER FERRY BOAT LINE/BILLY MARKET



THE BLADE/JEREMY WADSWORTH

# Evaporative Demand Drought Index

EDDI can offer early warning of agricultural drought, hydrologic drought, and fire-weather risk by providing near-real-time information on the emergence or persistence of anomalous evaporative demand in a region. A particular strength of EDDI is in capturing the precursor signals of water stress at weekly to monthly timescales, which makes EDDI a strong tool for preparedness for both flash droughts and ongoing droughts.



Generated by NOAA/ESRL/Physical Sciences Division

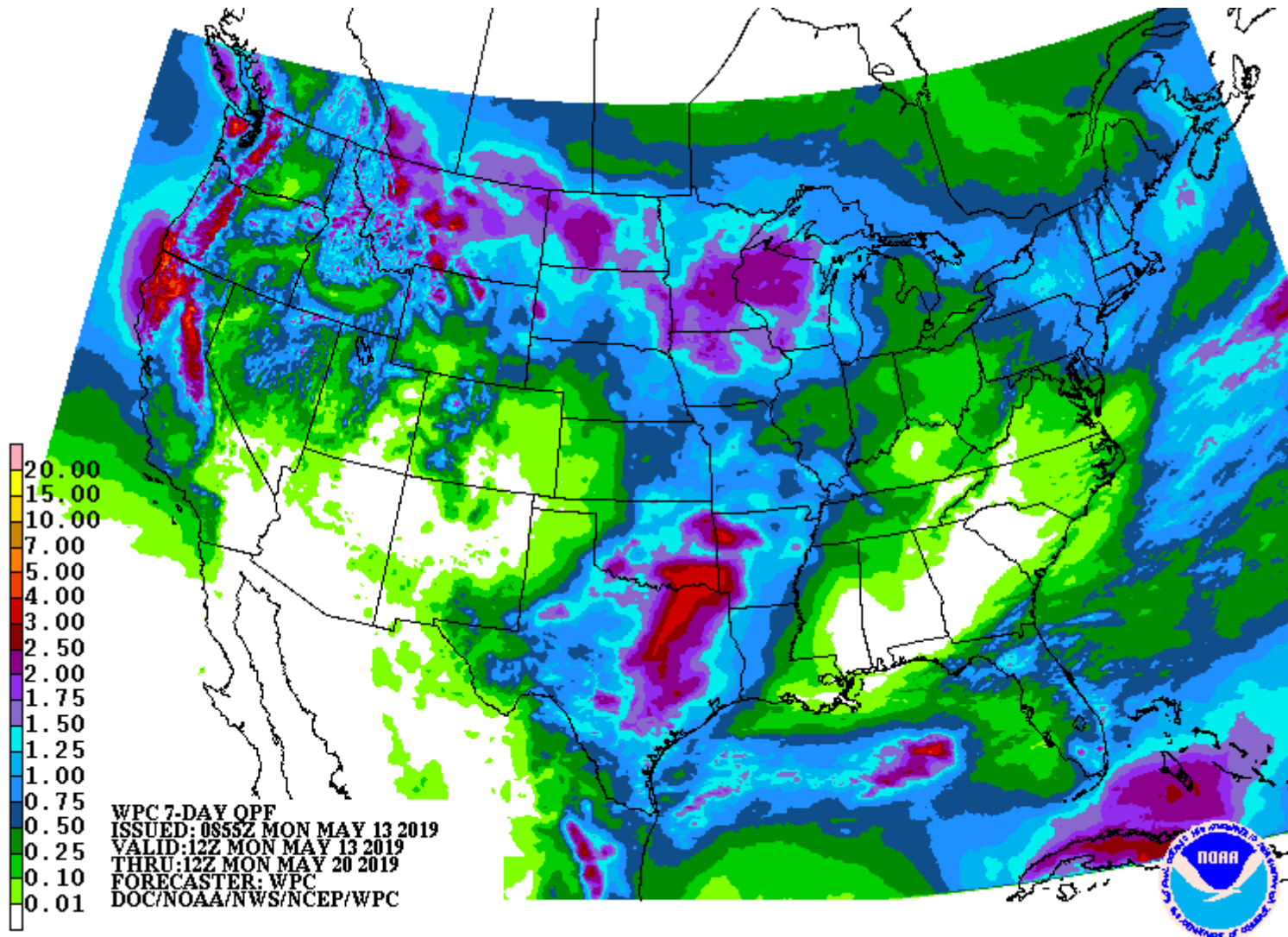
Image provided by the NOAA/ESRL Physical Sciences Division, Boulder, Colorado, from their web site at: <https://www.esrl.noaa.gov/psd/>.



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# Weather for the Week Ahead

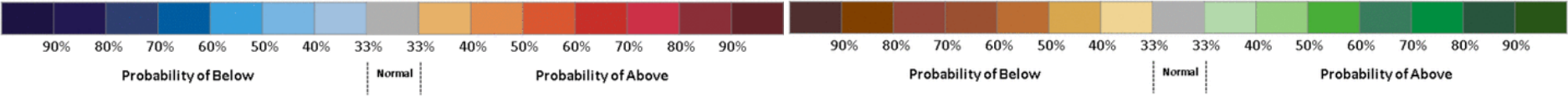
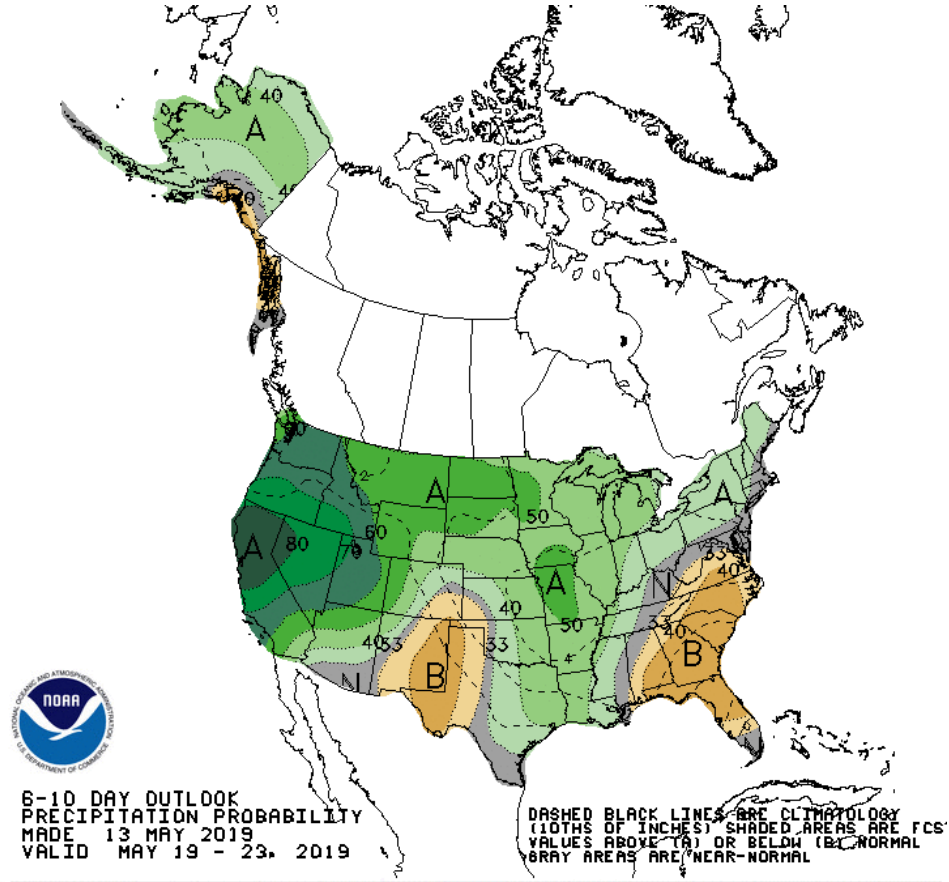
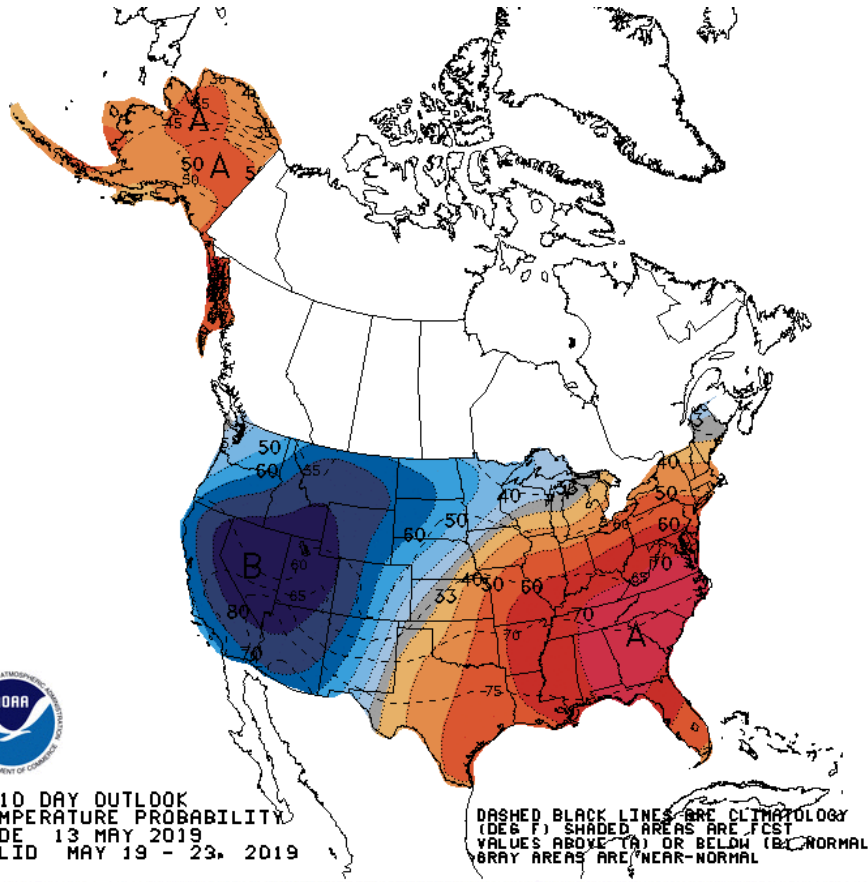


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# 6-10 Day Outlook



Highs: 69-73°F; Lows: 47-52°F; Precip: 0.95-1.05" (per week)



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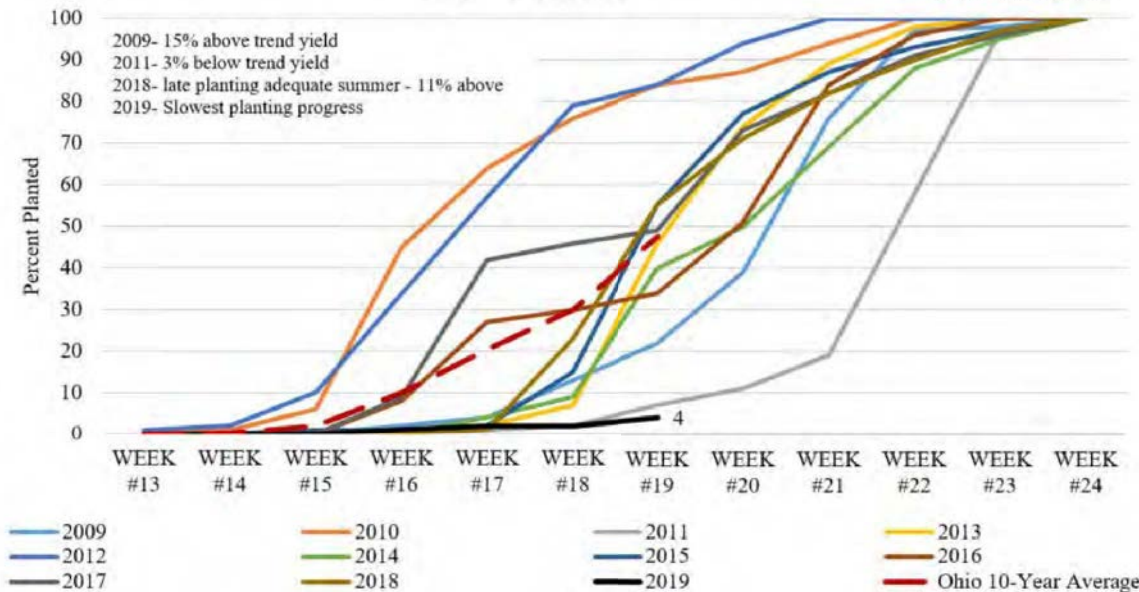
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# Ag Highlights

- 1.5 days suitable for fieldwork through May 12
- Saturated soils, standing water – limiting work in fields
- Some corn and beans planted – only 4% corn – behind the long-term averages

Weekly Planting Progress of Ohio's Corn Crop  
thru - Week #19

Source: USDA-NASS



**NASS: Cheryl Turner –**

[https://www.nass.usda.gov/Statistics\\_by\\_State/Ohio/Publications/Crop\\_Progress\\_&\\_Condition/2019/cw1719oh.pdf](https://www.nass.usda.gov/Statistics_by_State/Ohio/Publications/Crop_Progress_&_Condition/2019/cw1719oh.pdf)



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# Summary of Conditions



Photo Credit: Ben Brown

**Drought Monitor:** None

**Climate Recap:** WET! Cold in the NW; A little above average in the SE

**The week ahead:** Seasonally mild and a bit drier this week. Perhaps some planting windows.



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# Partners and Additional Information

- SCOO's Website: <https://climate.osu.edu>
- NOAA's National Climatic Data Center: [www.ncdc.noaa.gov](http://www.ncdc.noaa.gov)
  - Monthly climate reports (U.S. & Global): [www.ncdc.noaa.gov/sotc/](http://www.ncdc.noaa.gov/sotc/)
- NOAA's Climate Prediction Center: [www.cpc.ncep.noaa.gov](http://www.cpc.ncep.noaa.gov)
- USDA Midwest Climate Hub:  
<https://www.climatehubs.oce.usda.gov/hubs/midwest>
- Climate Portal: [www.climate.gov](http://www.climate.gov)
- U.S. Drought Portal: [www.drought.gov](http://www.drought.gov)
- National Drought Mitigation Center: <https://drought.unl.edu/>
- Midwest Regional Climate Center: <https://mrcc.isws.illinois.edu>
- Community Collaborative Rain Snow Hail Network (CoCoRaHS):  
<https://cocorahs.org>