

Hydrologic and Climate Assessment

August 14, 2020



Photo Courtesy of Elizabeth Hawkins



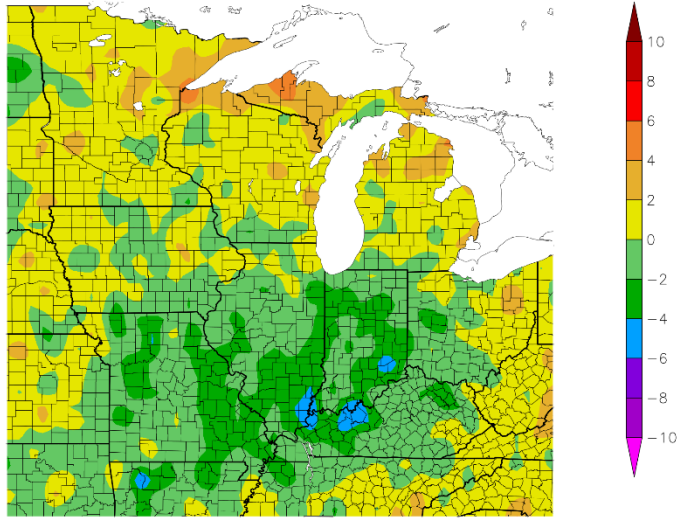
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Aaron B. Wilson

STATE CLIMATE OFFICE OF OHIO (SCOO)
DEPARTMENT OF EXTENSION - CFAES
BYRD POLAR & CLIMATE RESEARCH CENTER
DEPARTMENT OF GEOGRAPHY

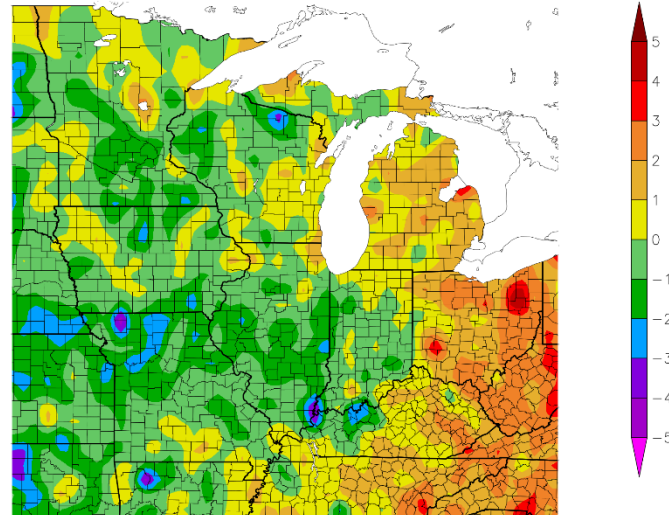
Temperature Differences Compared to Average (1981-2010)

Departure from Normal Temperature (F)
8/6/2020 – 8/12/2020



7-Day

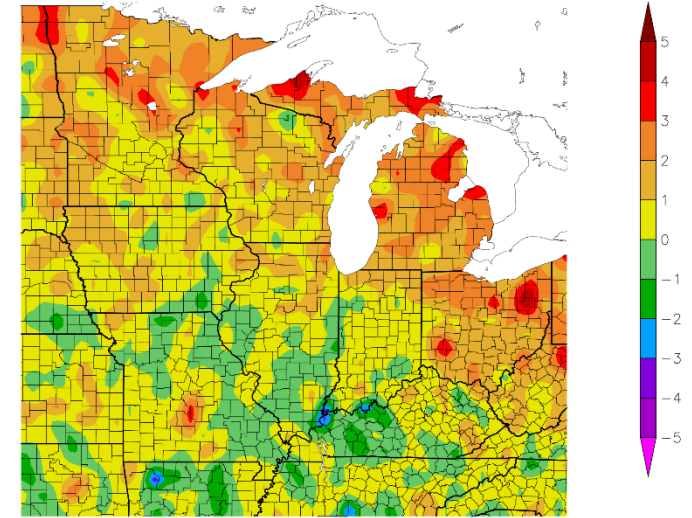
30-Day
Departure from Normal Temperature (F)
7/13/2020 – 8/11/2020



Generated 8/12/2020 at HPRCC using provisional data.

NOAA Regional Climate Centers

Departure from Normal Temperature (F)
6/14/2020 – 8/12/2020



Generated 8/13/2020 at HPRCC using provisional data.

NOAA Regional Climate Centers

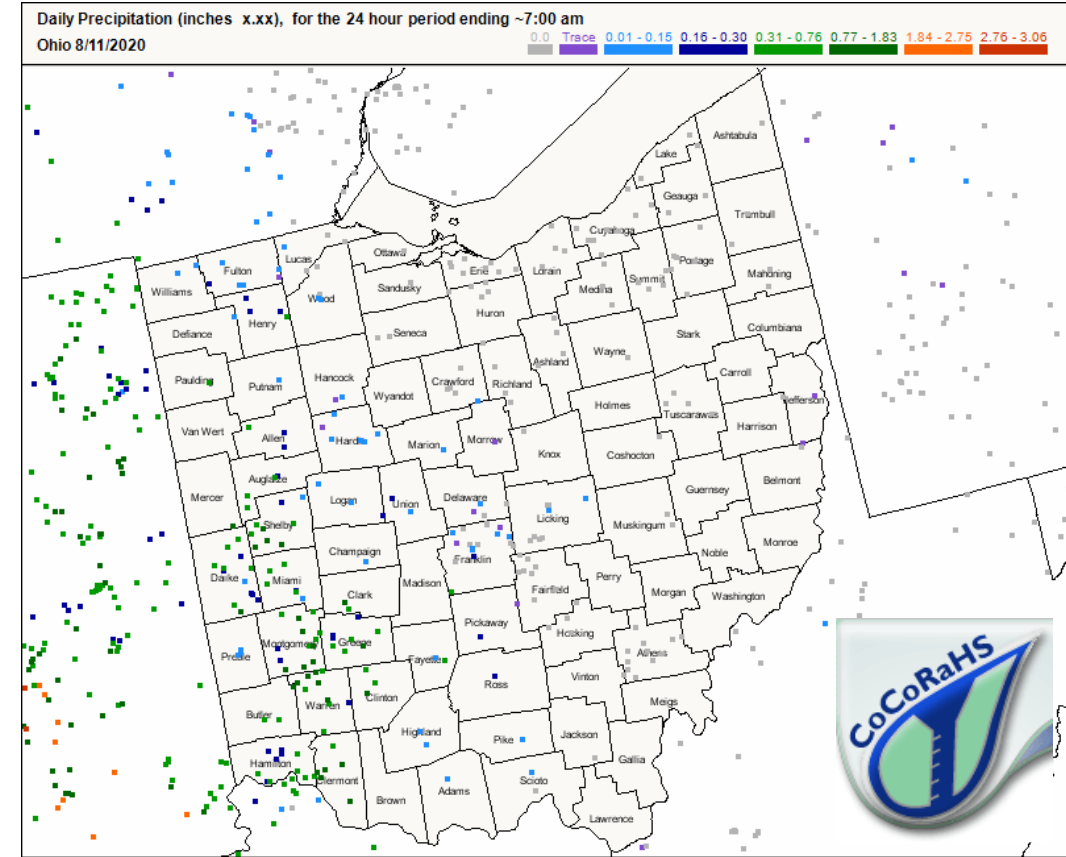
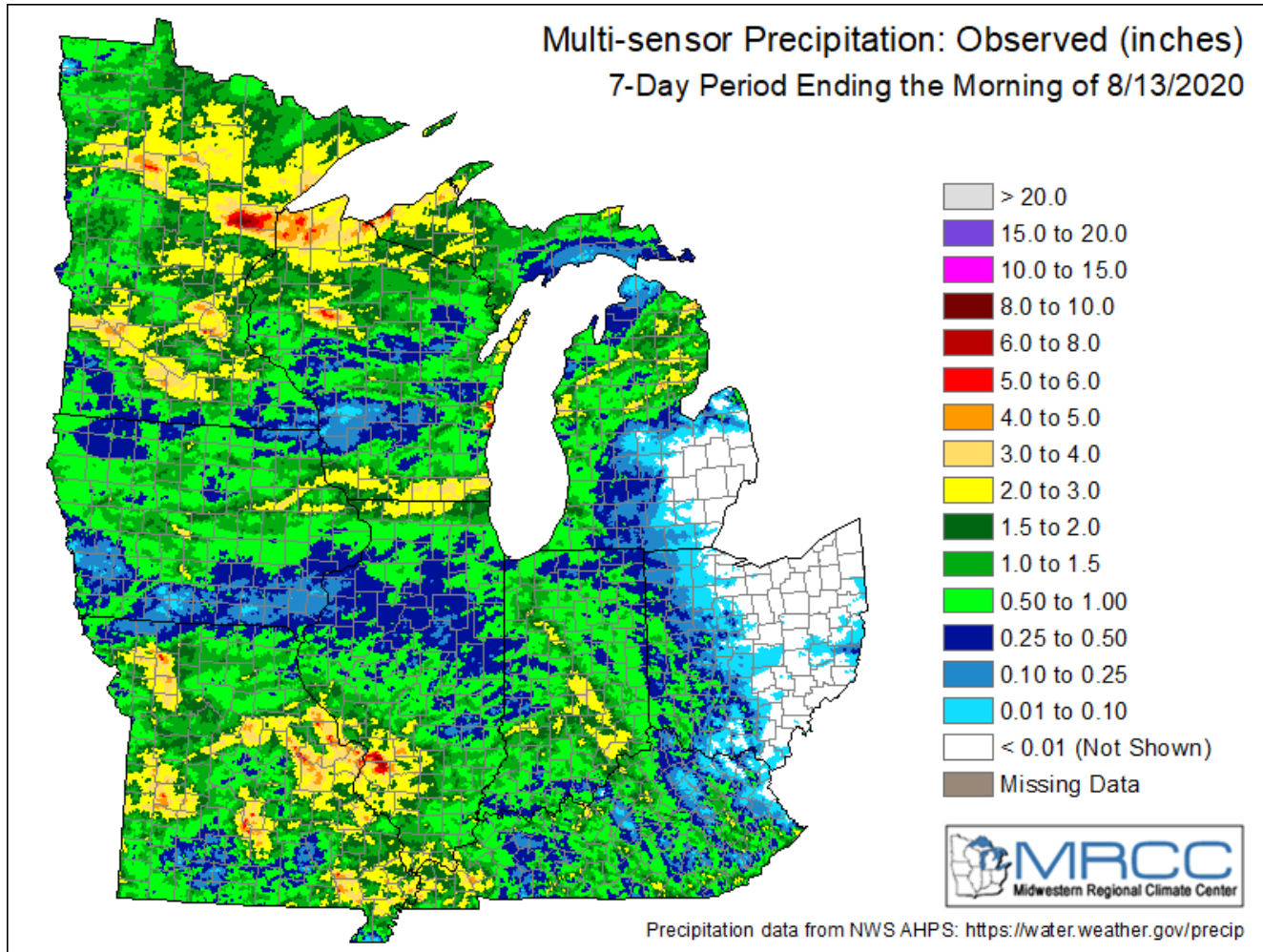
60-Day



<https://www.drought.gov/drought/dews/midwest/current-conditions>



This Week's Precipitation



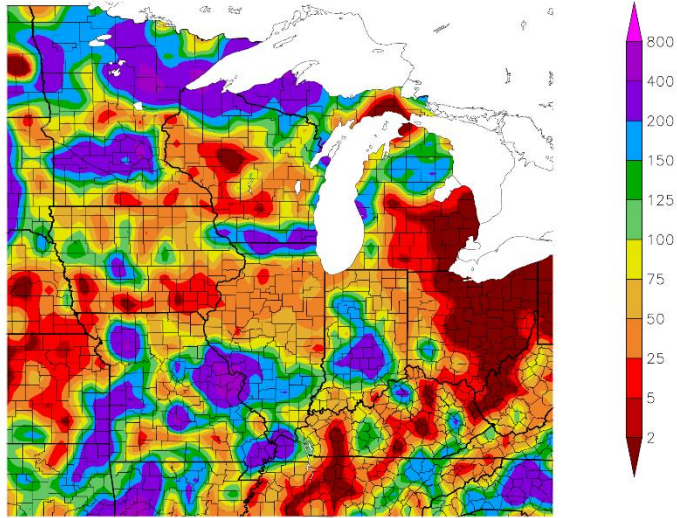
<https://www.cocorahs.org/>



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Precipitation Differences Compared to Average (1981-2010)

Percent of Normal Precipitation (%)
8/6/2020 – 8/12/2020

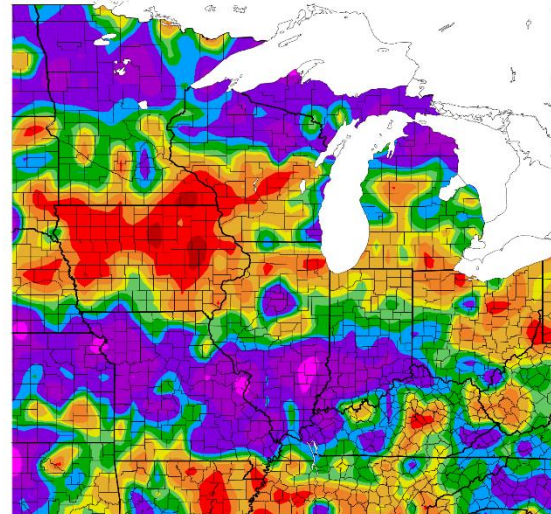


7-Day

Generated 8/13/2020 at HPRCC using provisional data.

NOAA Regional Climate Centers

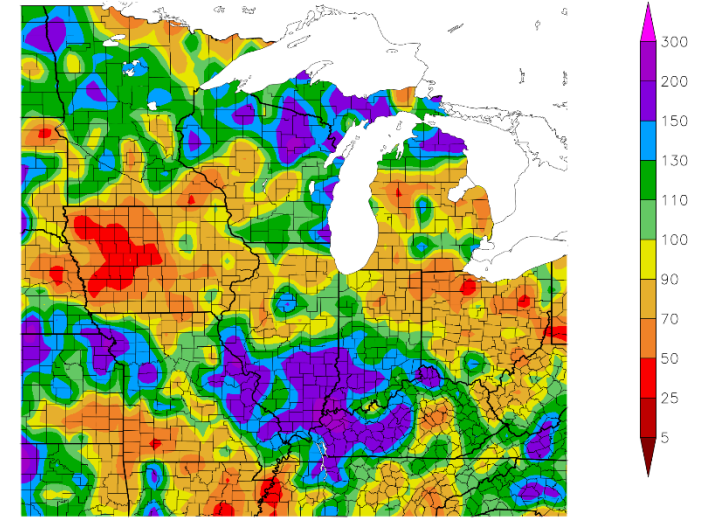
30-Day
Percent of Normal Precipitation (%)
7/13/2020 – 8/11/2020



Generated 8/12/2020 at HPRCC using provisional data.

NOAA Regional Climate Centers

Percent of Normal Precipitation (%)
6/14/2020 – 8/12/2020



60-Day

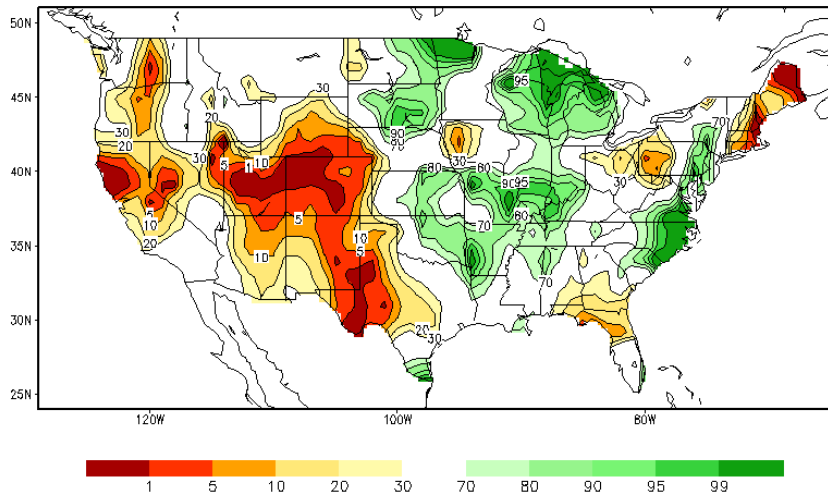
Generated 8/13/2020 at HPRCC using provisional data.

NOAA Regional Climate Centers



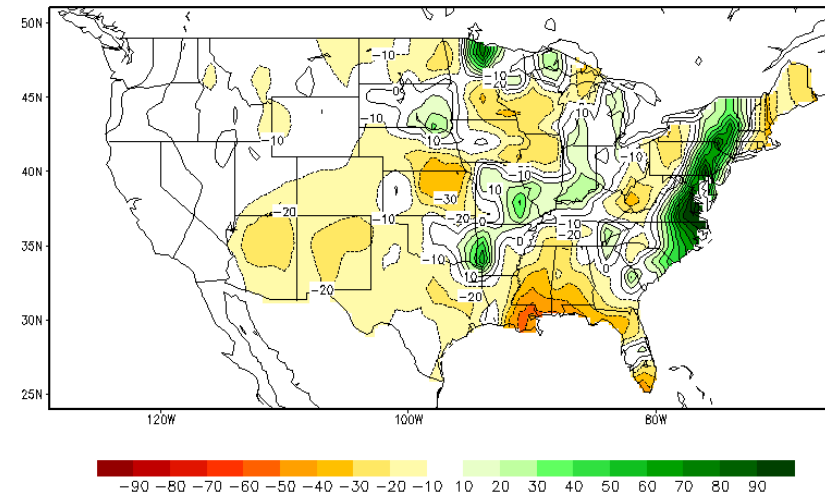
<https://www.drought.gov/drought/dews/midwest/current-conditions>

Calculated Soil Moisture Ranking Percentile
AUG 13, 2020

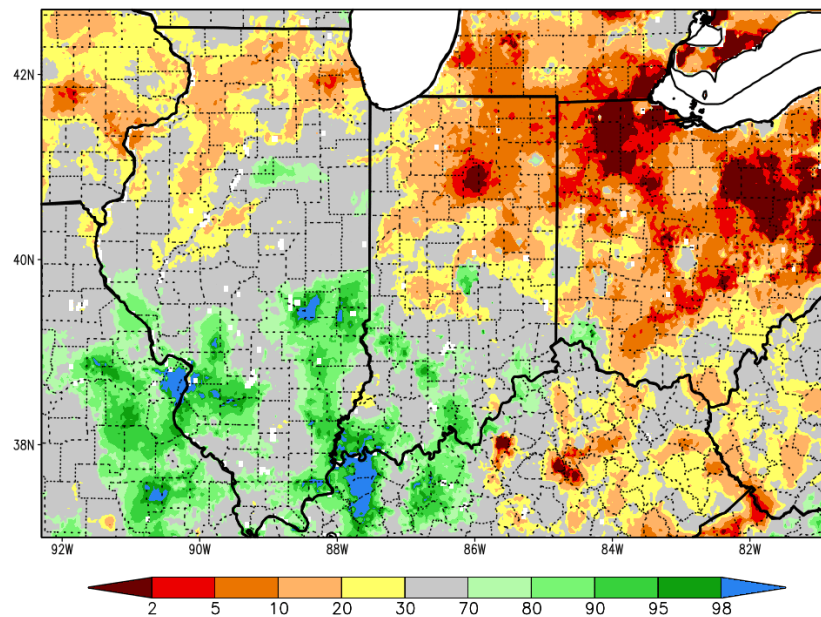


Soil Moisture

Calculated Soil Moisture Anomaly Change
AUG 13, 2020 from JUL.31



SPoRT-LIS 0-200 cm Soil Moisture percentile valid 14 Aug 2020



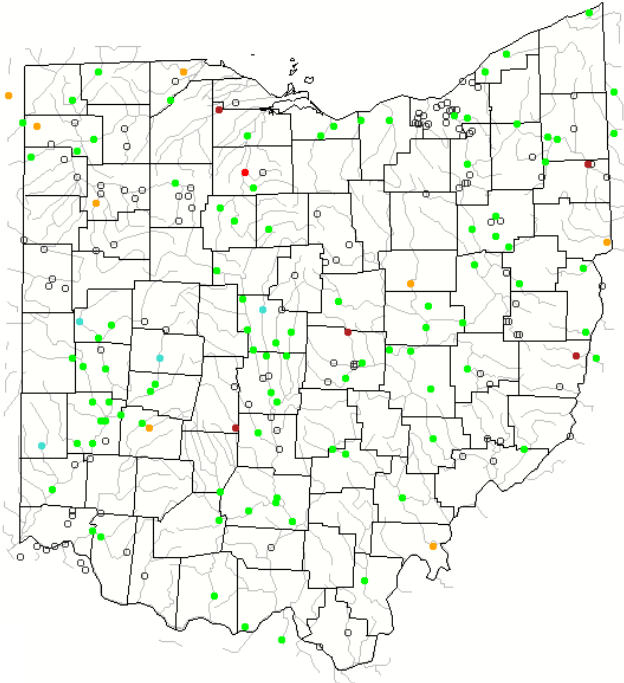
https://www.cpc.ncep.noaa.gov/products/Soilmst_Monitoring/US/Soilmst/Soilmst.shtml#

https://weather.msfc.nasa.gov/sport/case_studies/lis_IN.html



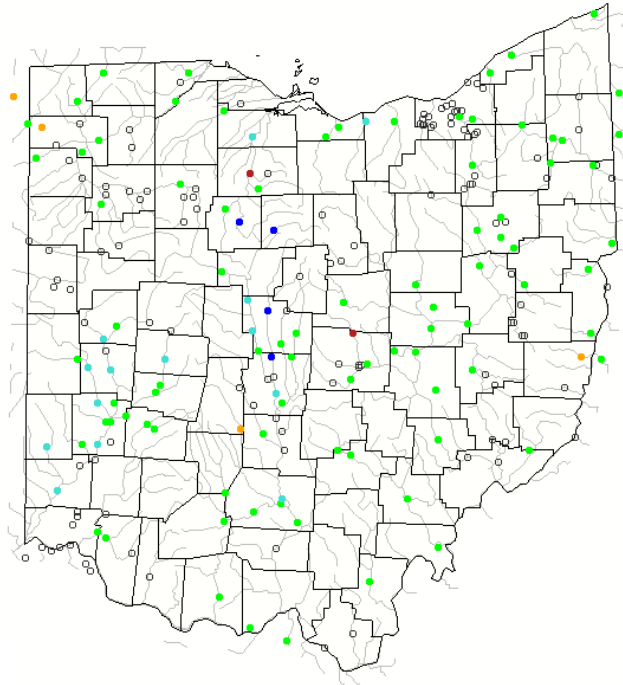
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7-DAY

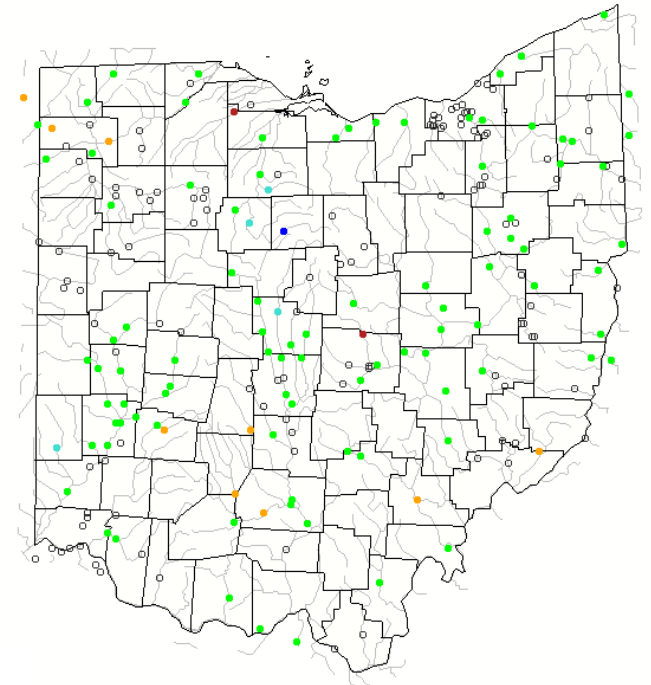


USGS Stream Flow

14-DAY



28-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

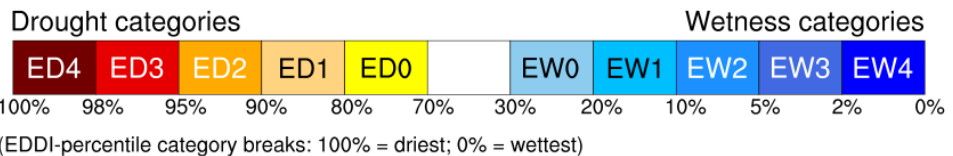
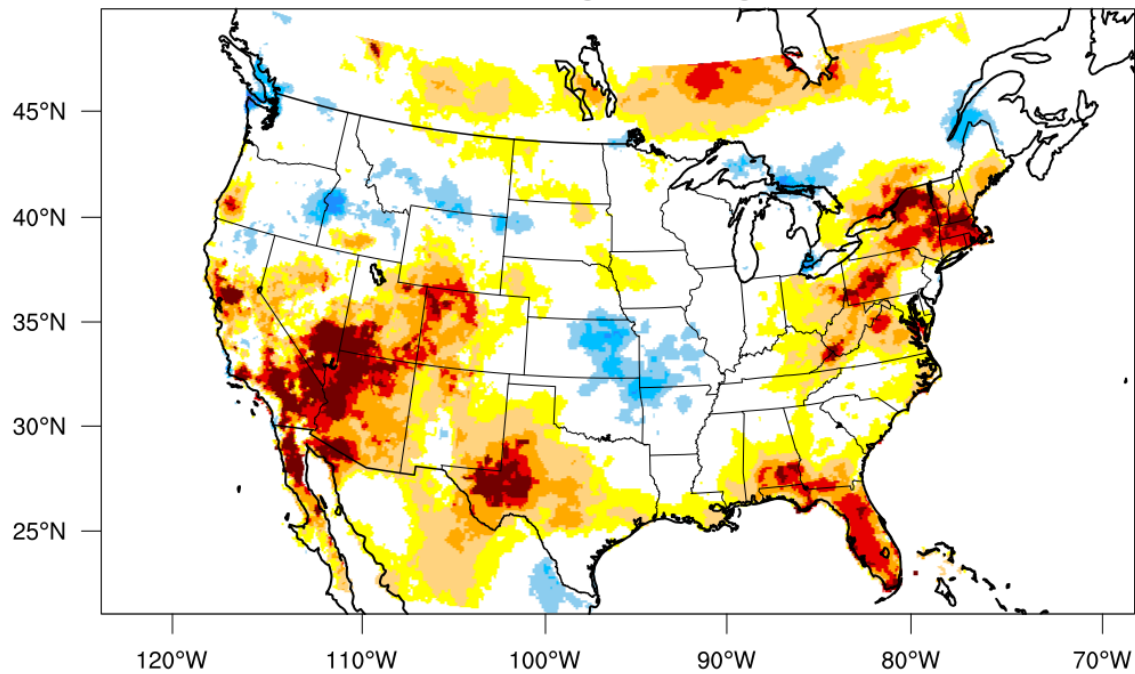
Average streamflow compared to historical streamflow for the day of the year



<https://waterwatch.usgs.gov/index.php>

Moisture Demand

1-month EDDI categories for August 8, 2020

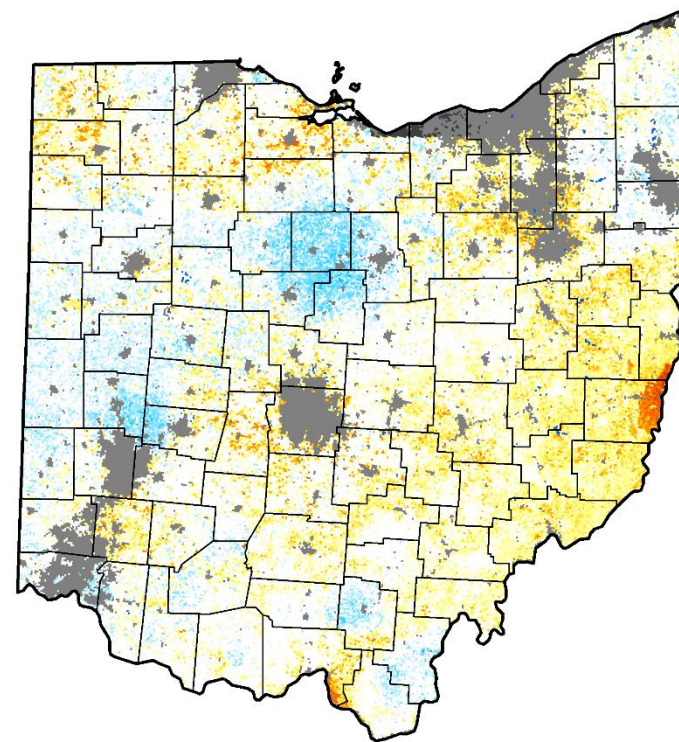


Generated by NOAA/ESRL/Physical Sciences Laboratory

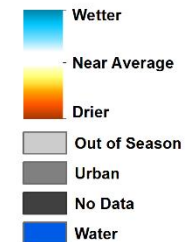


Quick Drought Response Index
Ohio

August 9, 2020
(Week 32)

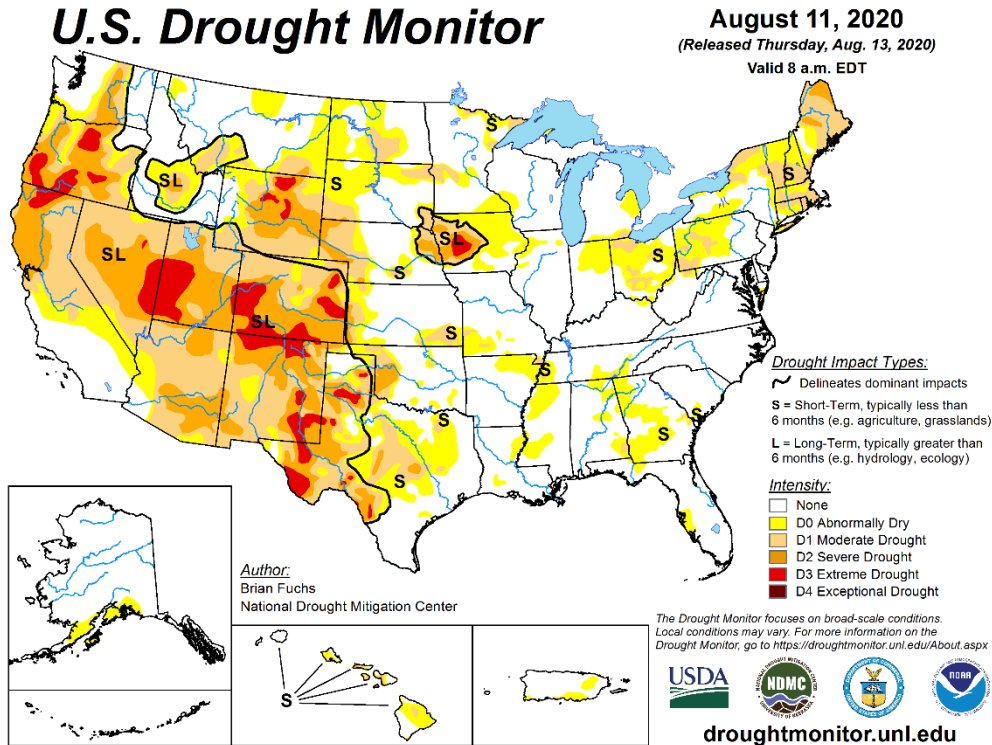


Conditions Relative to
4-Week Historical Average



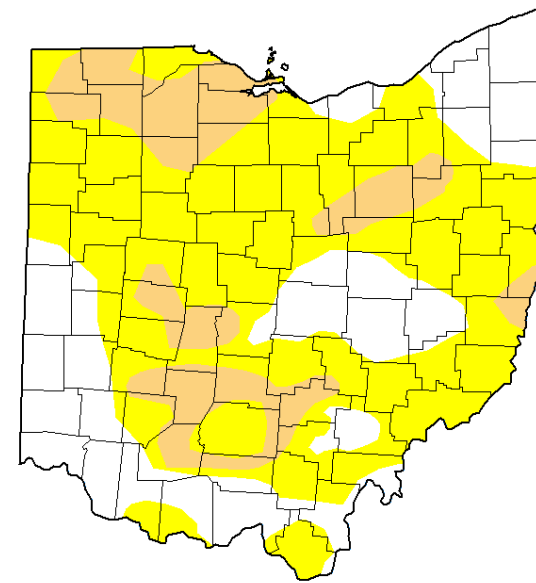
<https://quickdri.unl.edu/State.aspx?OH>

Current U.S. Drought Monitor



U.S. Drought Monitor Ohio

August 11, 2020
(Released Thursday, Aug. 13, 2020)
Valid 8 a.m. EDT



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	29.12	70.88	17.18	0.00	0.00	0.00
Last Week 08-04-2020	20.93	79.07	16.60	0.00	0.00	0.00
3 Months Ago 05-12-2020	100.00	0.00	0.00	0.00	0.00	0.00
Start of Calendar Year 12-31-2019	100.00	0.00	0.00	0.00	0.00	0.00
Start of Water Year 10-01-2019	19.41	80.59	12.37	0.00	0.00	0.00
One Year Ago 08-12-2019	94.33	5.67	0.00	0.00	0.00	0.00

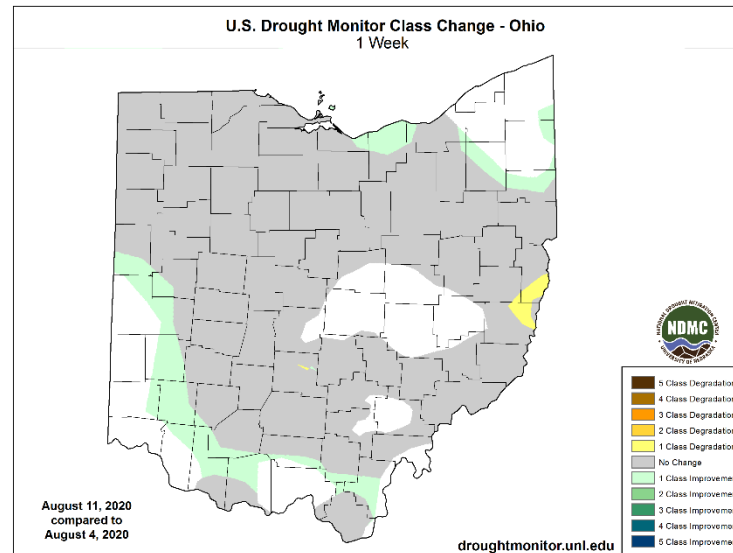
Intensity:
 None
 D0 Abnormally Dry
 D1 Moderate Drought
 D2 Severe Drought
 D3 Extreme Drought
 D4 Exceptional Drought

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

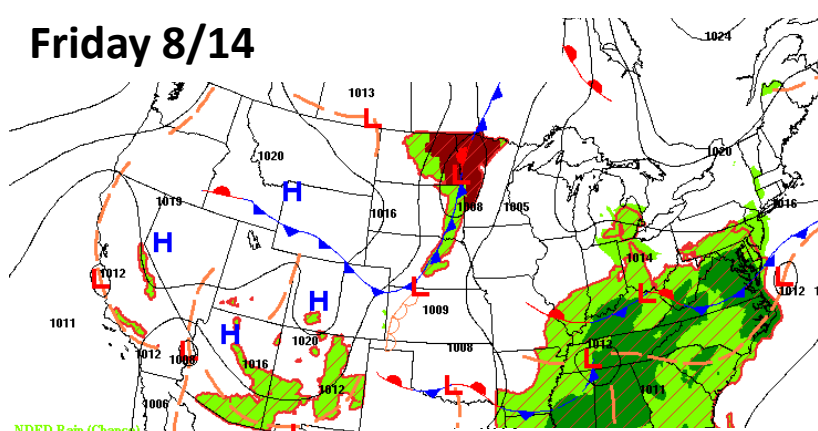


droughtmonitor.unl.edu



Weather for the Week Ahead

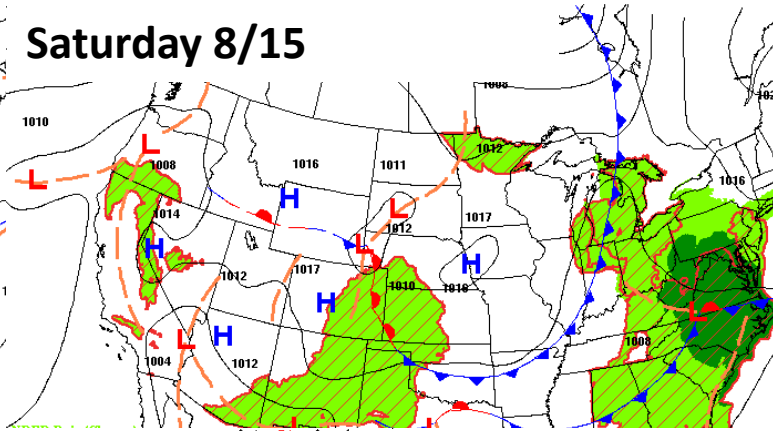
Friday 8/14



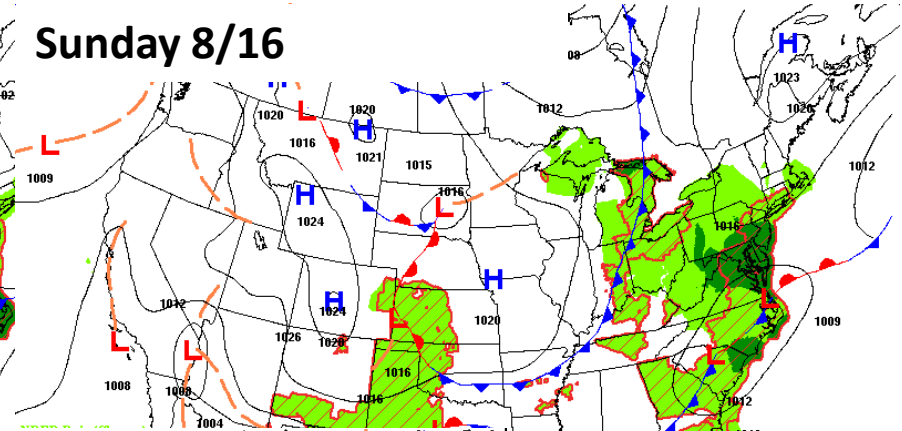
- NDFD Rain (Chance)
- NDFD Rain (Likely)
- NDFD Snow (Chance)
- NDFD Snow (Likely)
- NDFD Mix (Chance)
- NDFD Mix (Likely)
- NDFD Ice (Chance)
- NDFD Ice (Likely)
- NDFD T-Storm (Chance) (Hatched)
- NDFD T-Storm (Likely and/or Severe)

WPC Fronts/NDFD
Issued: 1242Z Friday
Valid 18Z Friday A
Forecaster: KONG

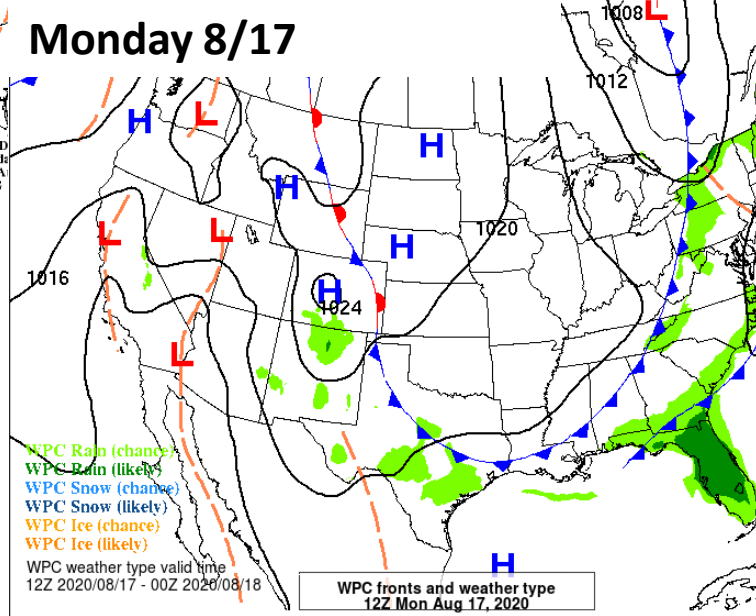
Saturday 8/15



Sunday 8/16



Monday 8/17

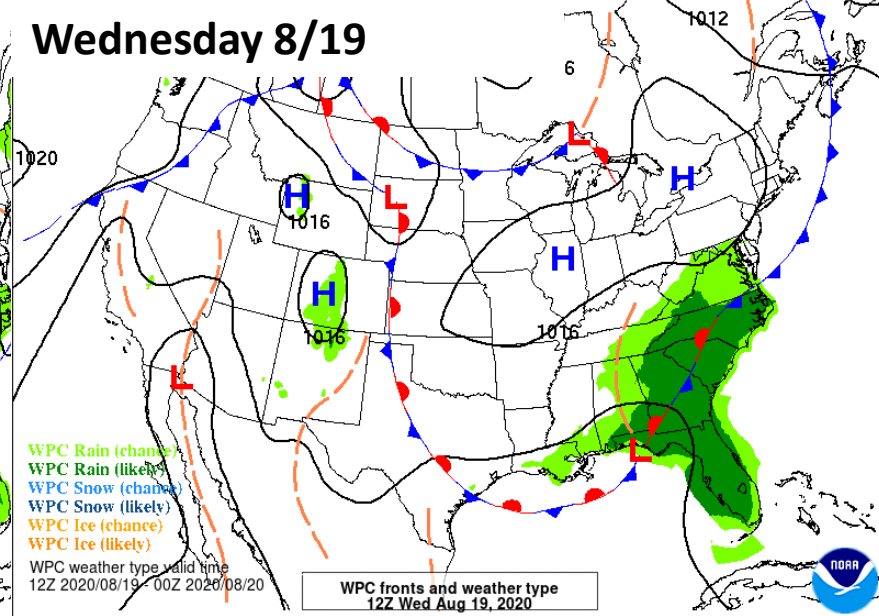


- WPC Rain (chance)
- WPC Rain (likely)
- WPC Snow (chance)
- WPC Snow (likely)
- WPC Ice (chance)
- WPC Ice (likely)

WPC weather type valid time
12Z 2020/08/17 - 00Z 2020/08/18

WPC fronts and weather type
12Z Mon Aug 17, 2020

Wednesday 8/19



- WPC Rain (chance)
- WPC Rain (likely)
- WPC Snow (chance)
- WPC Snow (likely)
- WPC Ice (chance)
- WPC Ice (likely)

WPC weather type valid time
12Z 2020/08/19 - 00Z 2020/08/20

WPC fronts and weather type
12Z Wed Aug 19, 2020

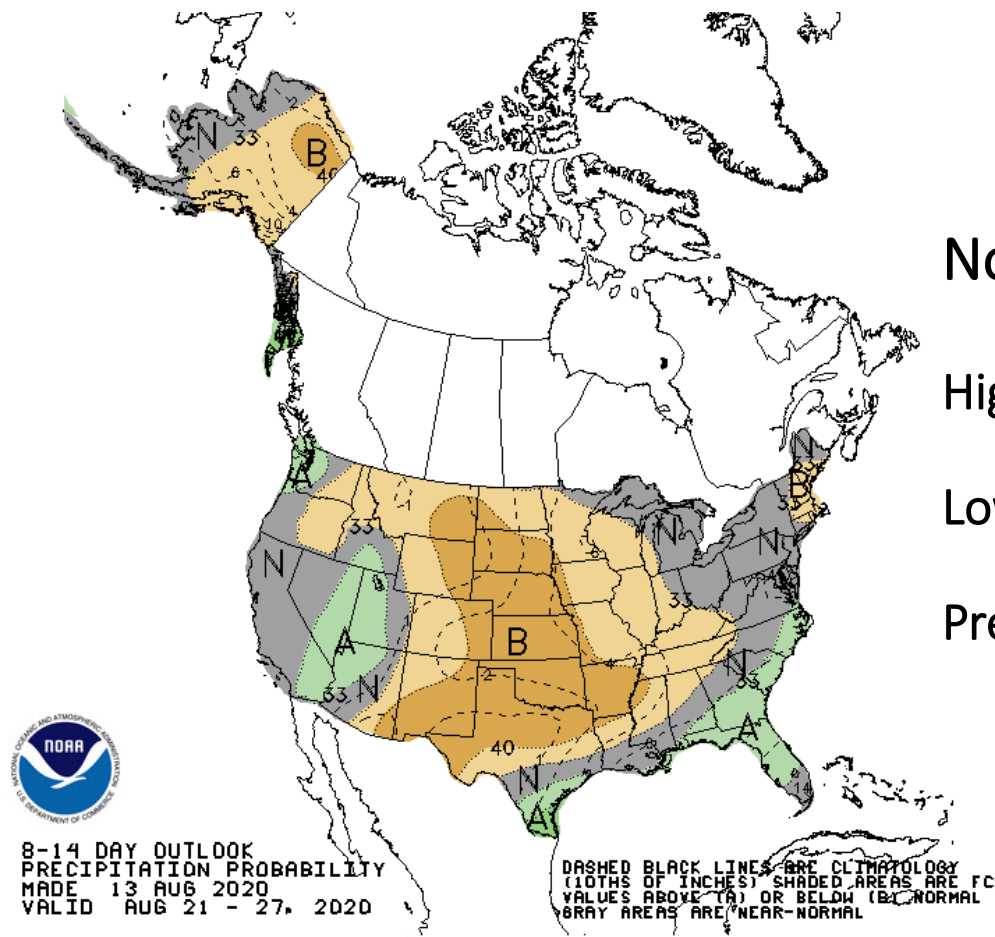
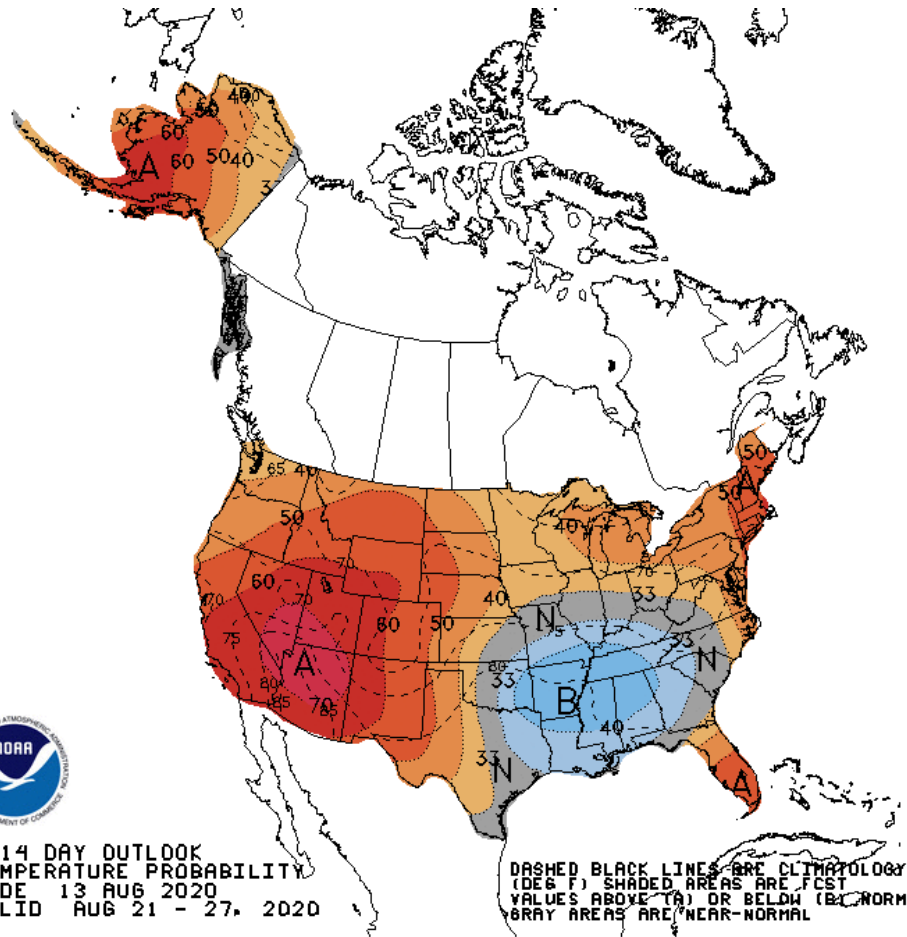
WPC weather type valid time
12Z 2020/08/14 - 00Z 2020/08/16



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<https://www.wpc.ncep.noaa.gov/#>

8-14 Day Outlook

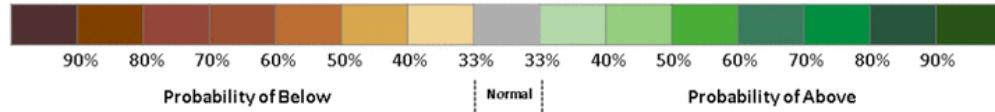
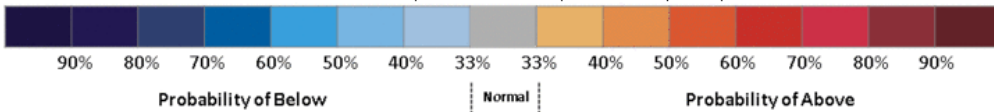


Normals (1981-2010)

Highs: 80-85°F

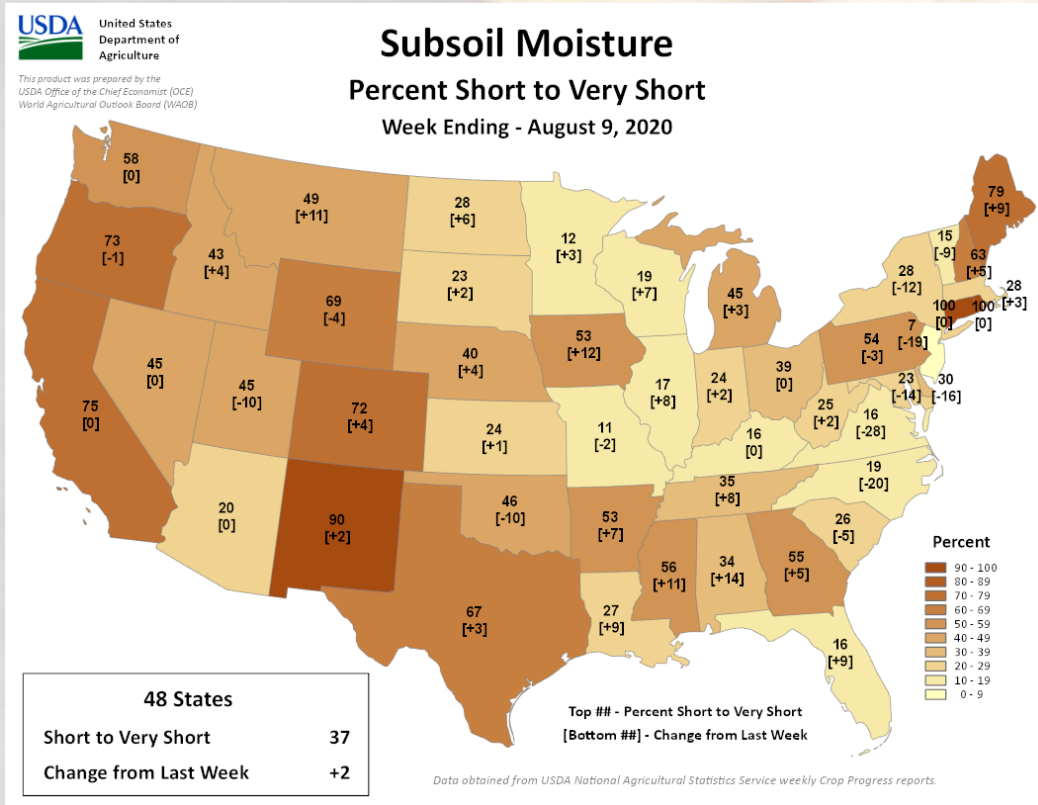
Lows: 60-65°F

Precip: 0.85-1.05"



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Ag Highlights



- 5.9 suitable days for fieldwork ending August 9
- Cooler but dry weather decreased topsoil moisture
- Fungicide and herbicide applications, seeded alfalfa, and spread manure

NASS: Cheryl Turner –

https://www.nass.usda.gov/Statistics_by_State/Ohio/Publications/Crop_Progress_&_Condition/2020/cw3220oh.pdf

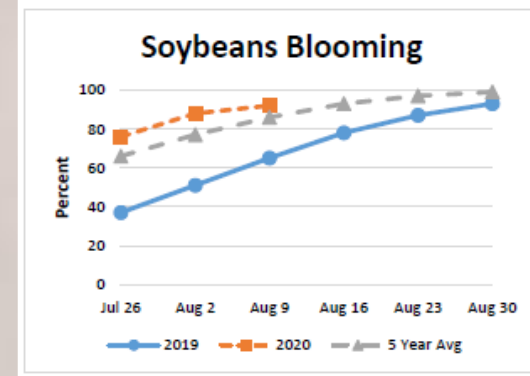
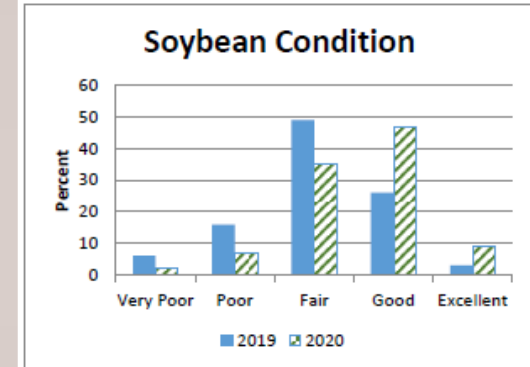
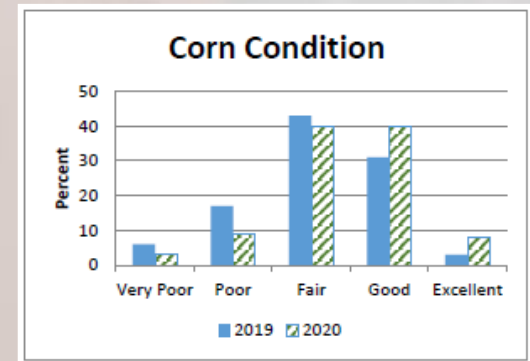


Photo Credit: Elizabeth Hawkins

Summary of Conditions

Drought Monitor: D1 moderate drought conditions cover ~17% of the state

Climate Recap: Cooler than average and in the west; Warmer than average and dry in eastern Ohio

Week Ahead: Locally heavy rainfall over the weekend; cooler drier weather expected next week

Photo Courtesy of Kat Bledsoe



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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
 - Monthly climate reports (U.S. & Global): www.ncdc.noaa.gov/sotc/
- NOAA's Climate Prediction Center: www.cpc.ncep.noaa.gov
- USDA Midwest Climate Hub: <https://www.climatehubs.oce.usda.gov/hubs/midwest>
- Climate Portal: www.climate.gov
- U.S. Drought Portal: 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>
- Song: "Wishful Thinking" by Dan Lebowitz

