

Hydrologic and Climate Assessment

August 20, 2019



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Aaron B. Wilson

STATE CLIMATE OFFICE OF OHIO (SCOO)

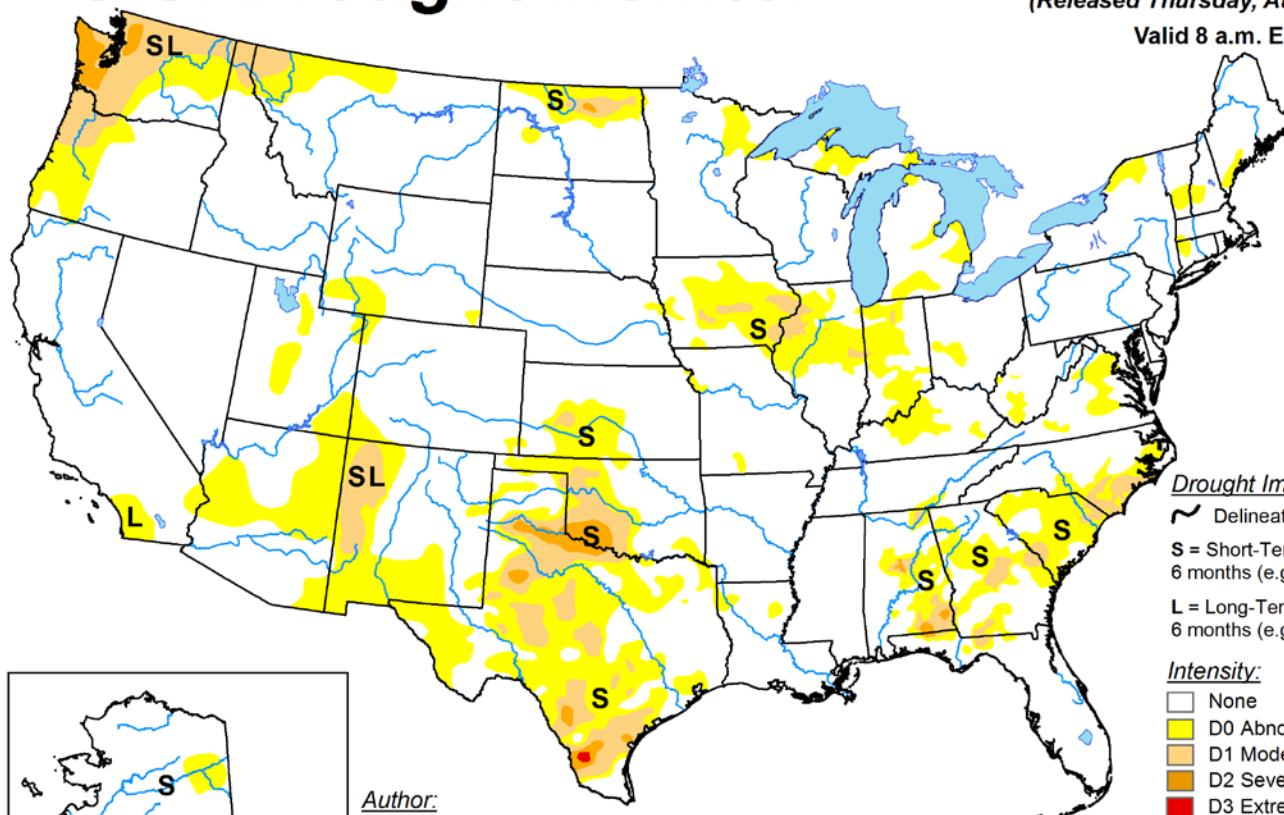
DEPARTMENT OF EXTENSION - CFAES

BYRD POLAR & CLIMATE RESEARCH CENTER

DEPARTMENT OF GEOGRAPHY

U.S. Drought Monitor

August 13, 2019
(Released Thursday, Aug. 15, 2019)
Valid 8 a.m. EDT



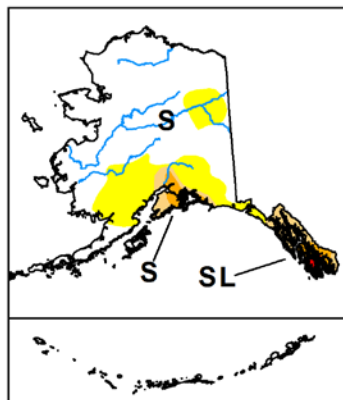
Drought Impact Types:

- ~ 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)

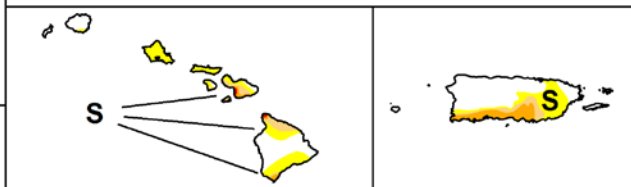
Intensity:

- 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. See accompanying text summary
for forecast statements.



Author:
Richard Tinker
CPC/NOAA/NWS/NCEP



droughtmonitor.unl.edu

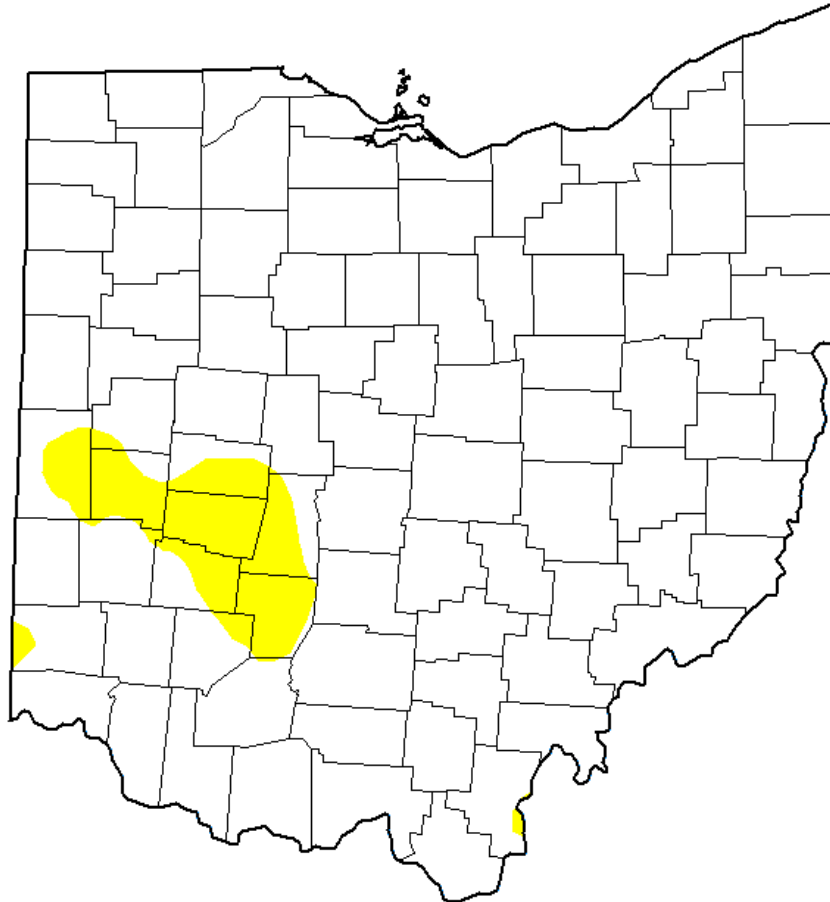


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U.S. Drought Monitor Ohio

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Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	94.33	5.67	0.00	0.00	0.00	0.00
Last Week <i>08-06-2019</i>	90.10	9.90	0.00	0.00	0.00	0.00
3 Months Ago <i>05-14-2019</i>	100.00	0.00	0.00	0.00	0.00	0.00
Start of Calendar Year <i>01-01-2019</i>	100.00	0.00	0.00	0.00	0.00	0.00
Start of Water Year <i>09-25-2018</i>	100.00	0.00	0.00	0.00	0.00	0.00
One Year Ago <i>08-14-2018</i>	87.73	12.27	1.69	0.00	0.00	0.00

Intensity:

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

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

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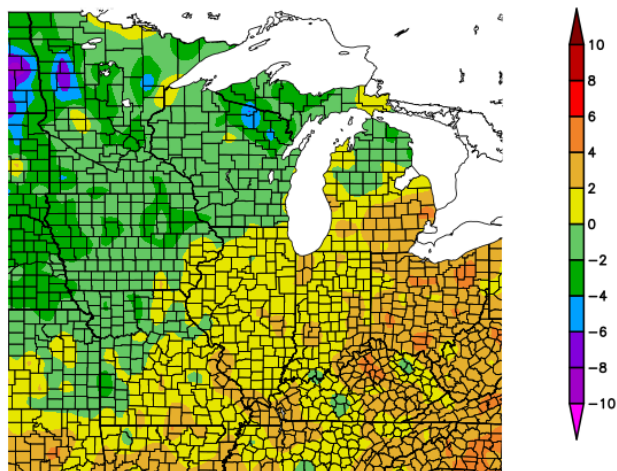
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Temperature Differences Compared to Average (1981-2010)

7-Day

Departure from Normal Temperature (F)
8/13/2019 – 8/19/2019

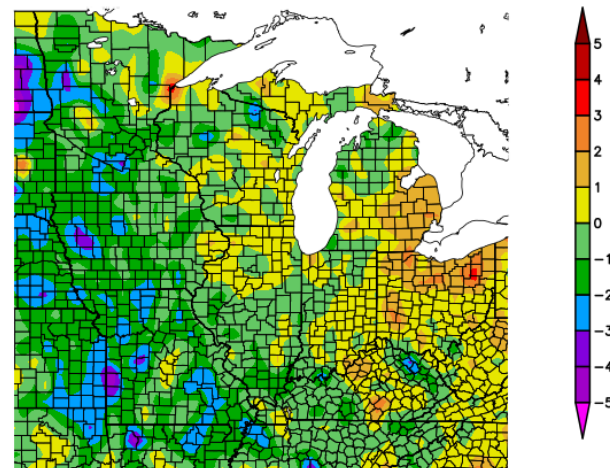


Generated 8/20/2019 at HPRCC using provisional data.

NOAA Regional Climate Centers

30-Day

Departure from Normal Temperature (F)
7/21/2019 – 8/19/2019

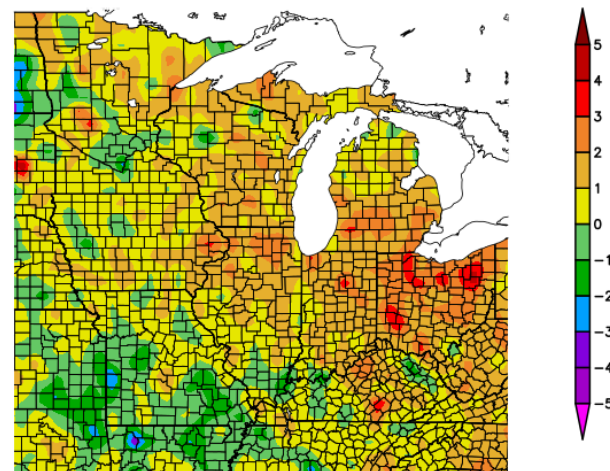


Generated 8/20/2019 at HPRCC using provisional data.

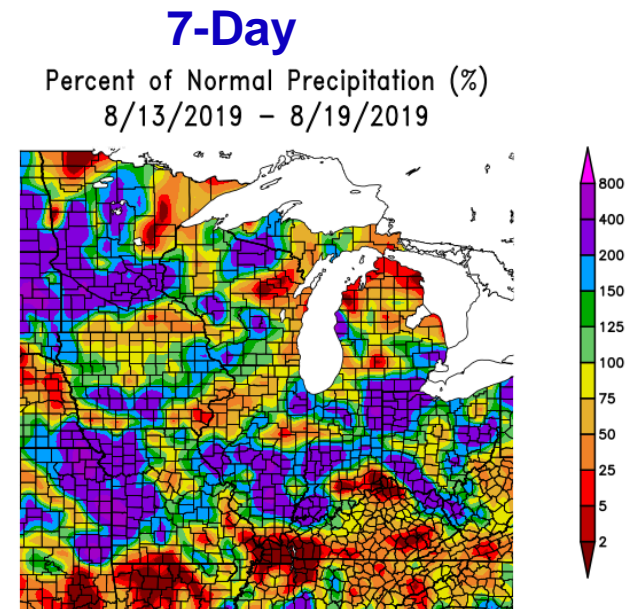
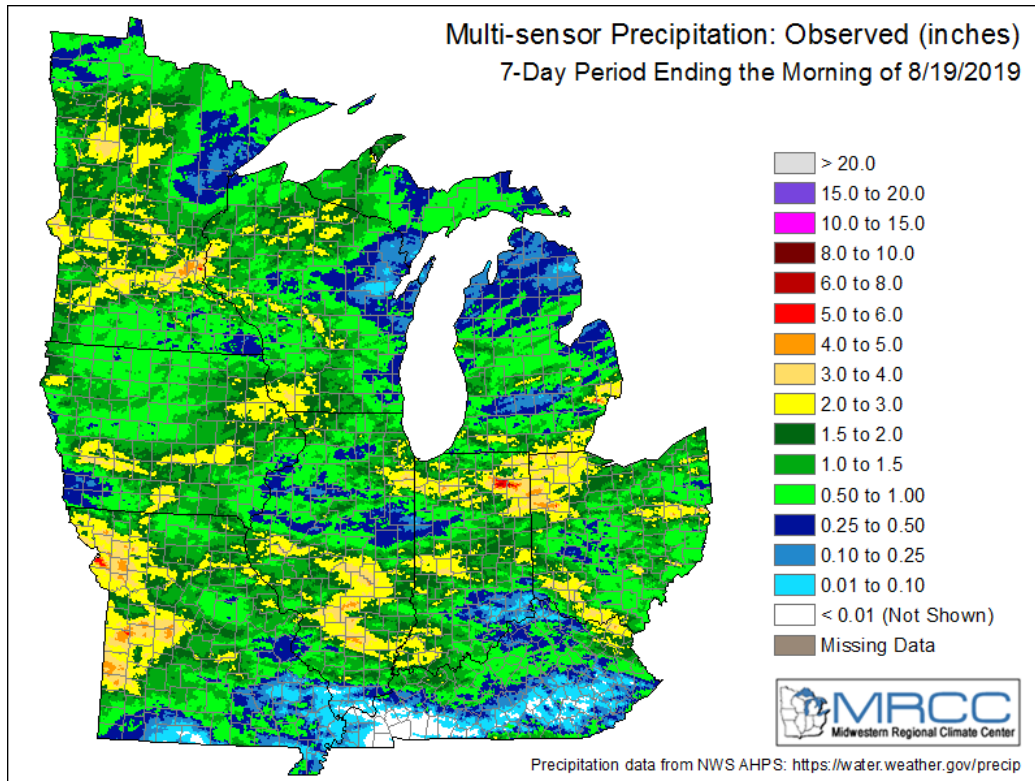
NOAA Regional Climate Centers

60-Day

Departure from Normal Temperature (F)
6/21/2019 – 8/19/2019



This Week's Precipitation



Generated 8/20/2019 at HPRCC using provisional data.

NOAA Regional Climate Centers

NATIONAL
INTEGRATED
DROUGHT
INFORMATION
SYSTEM



Drought.gov
U.S. Drought Portal



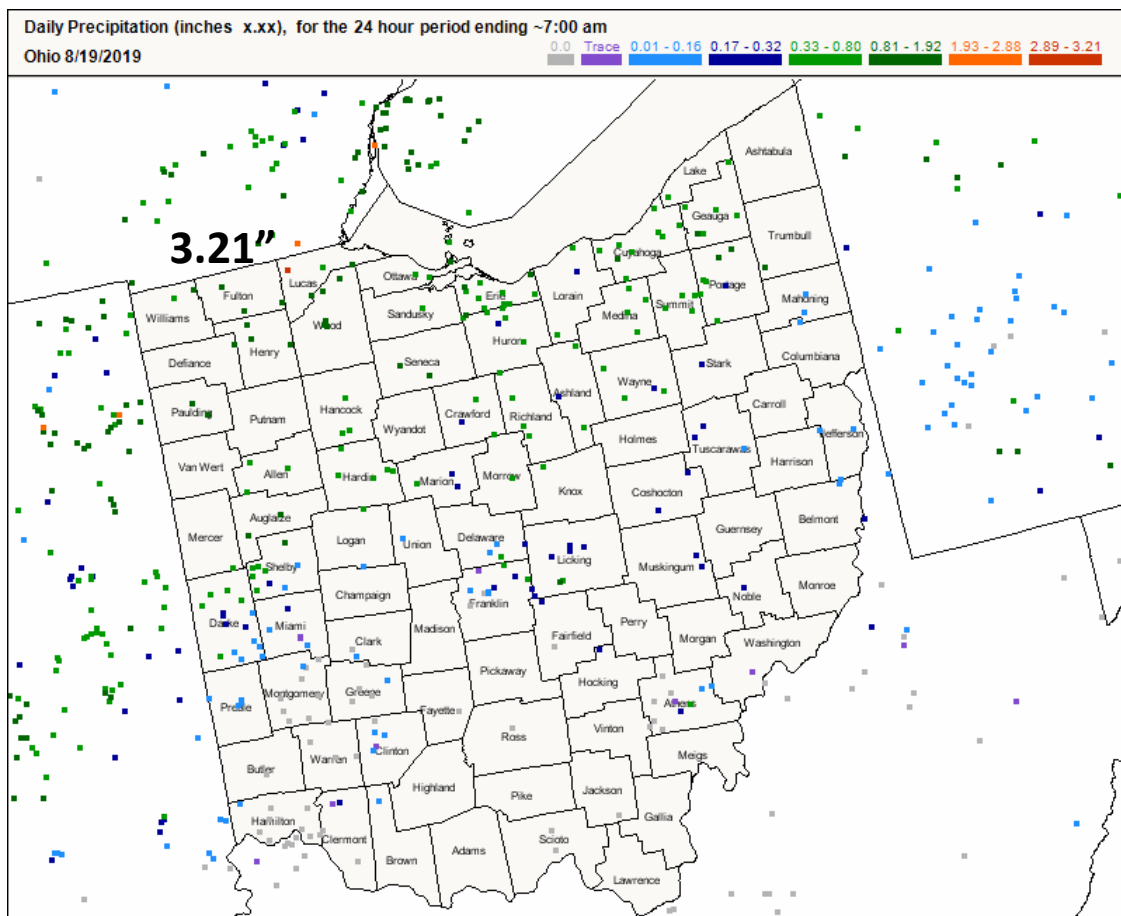
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CoCoRaHS

Since June 1

Cheviot: 48.32" since Jan 1



<https://cocorahs.org/>

CoCoRaHS Name	Total Precip (inches)
Canton 5.8 WNW	20.59
Mogadore 4.7 SE	20.56
Pataskala 3.2 E	20.38
Coshocton 5.5 WSW	20.11
Shelby 0.6 NNE	19.82
Parma 1.8 SE	19.45
Streetsboro 2.1 SSW	19.35
Lexington 0.9 NW	19.06
Kent 3.6 NE	18.87
Newton Falls 0.6 N	18.55



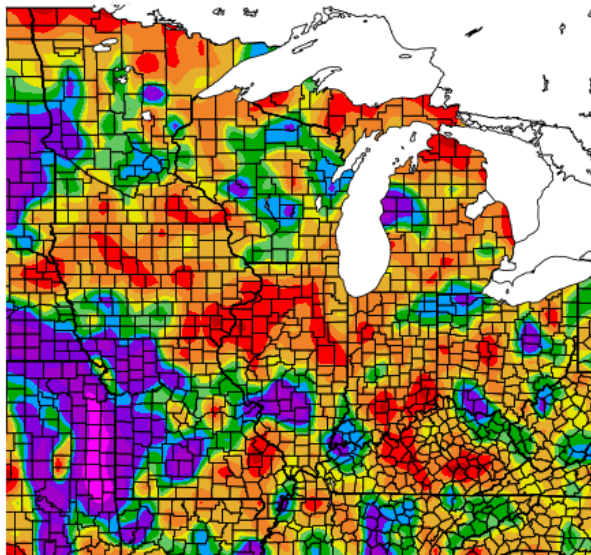
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Precipitation Differences Compared to Average (1981-2010)

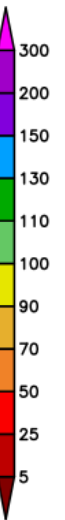
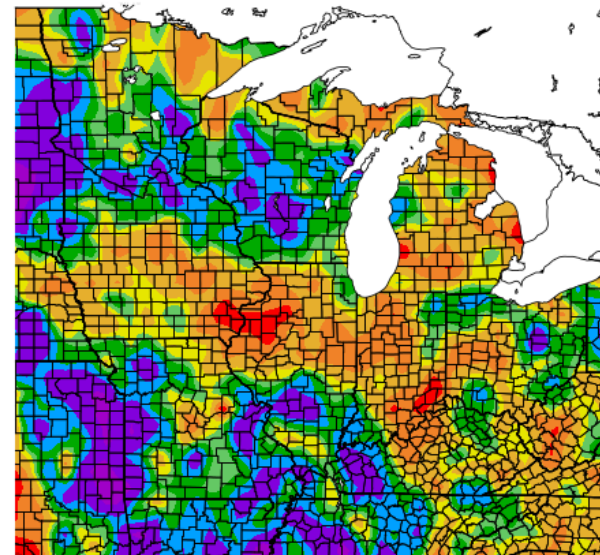
30-Day

Percent of Normal Precipitation (%)
7/21/2019 – 8/19/2019



60-Day

Percent of Normal Precipitation (%)
6/21/2019 – 8/19/2019



Generated 8/20/2019 at HPRCC using provisional data.

NOAA Regional Climate Centers

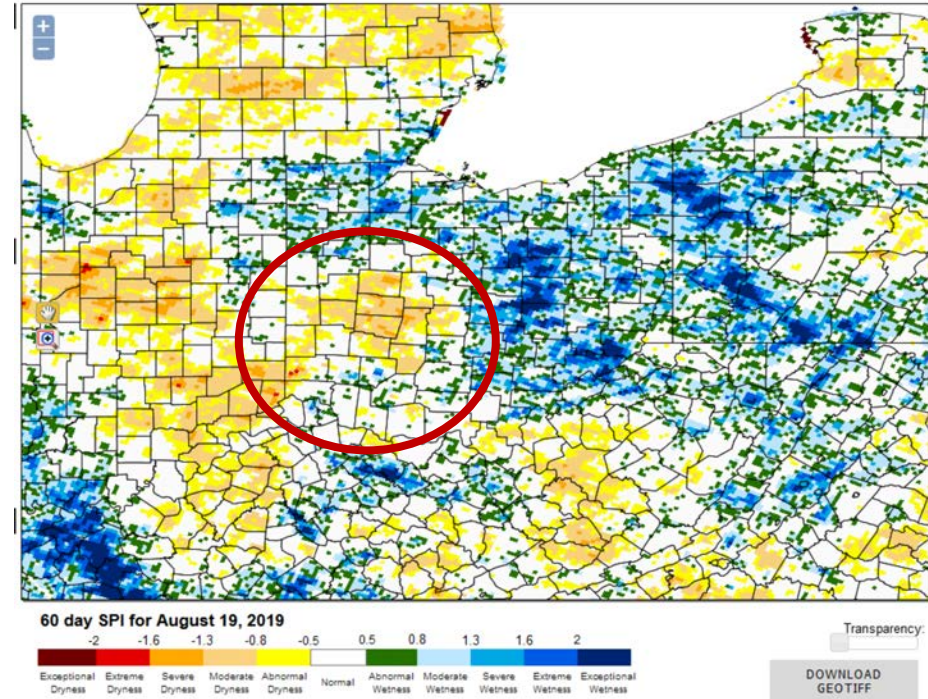
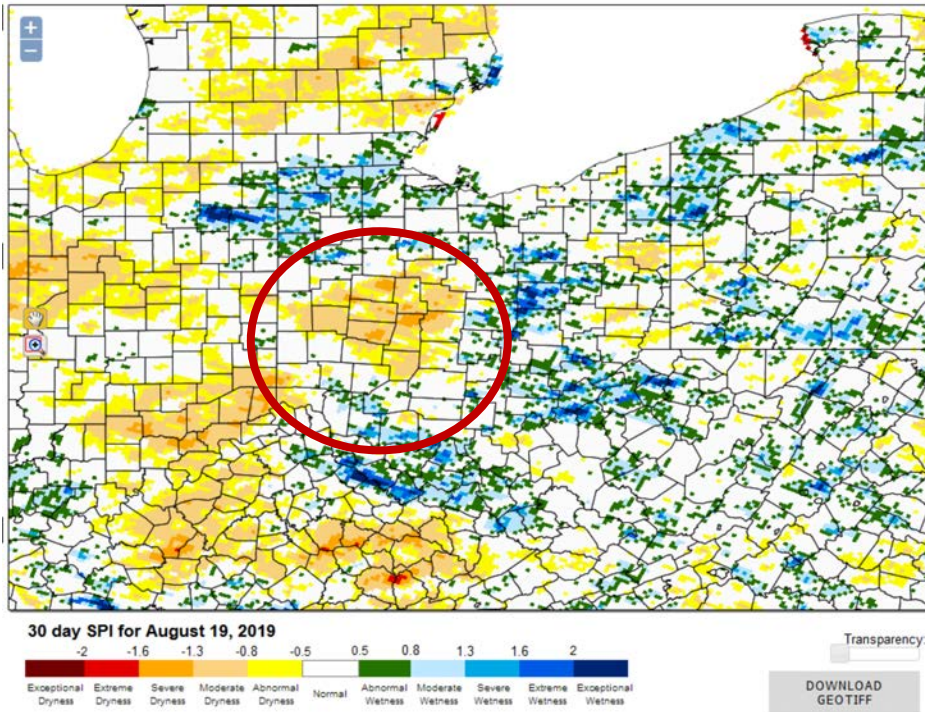
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NOAA Regional Climate Centers

Standard Precipitation Index

30-Day

60-Day



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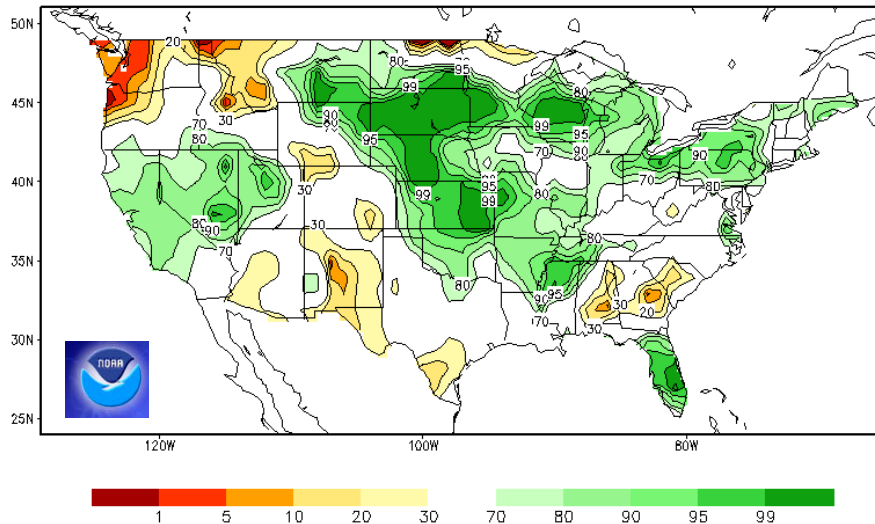
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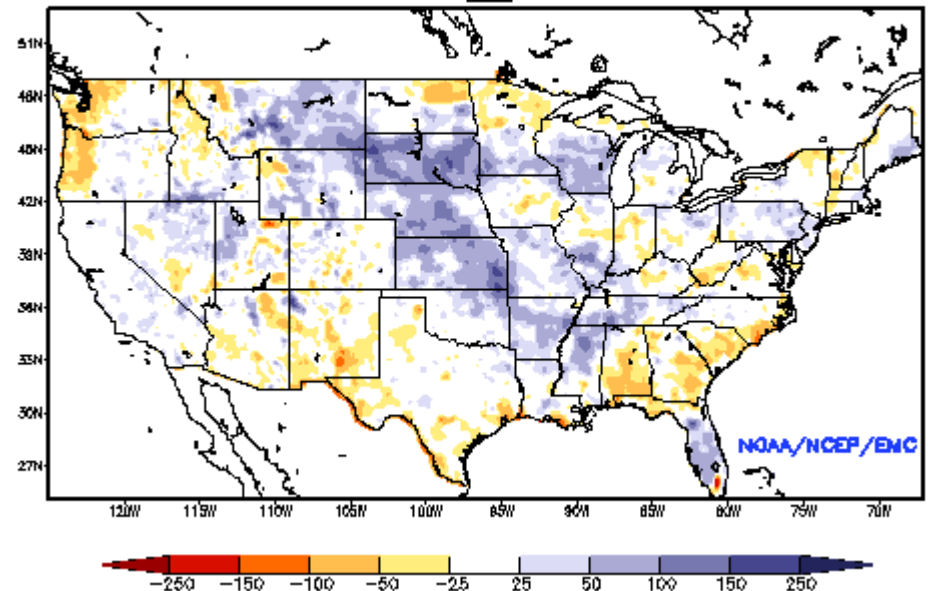
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Soil Moisture

Calculated Soil Moisture Ranking Percentile
AUG 19, 2019



Ensemble-Mean - Current Total Column Soil Moisture Anomaly (mm)
NCEP NLDAS Products Valid: AUG 15, 2019



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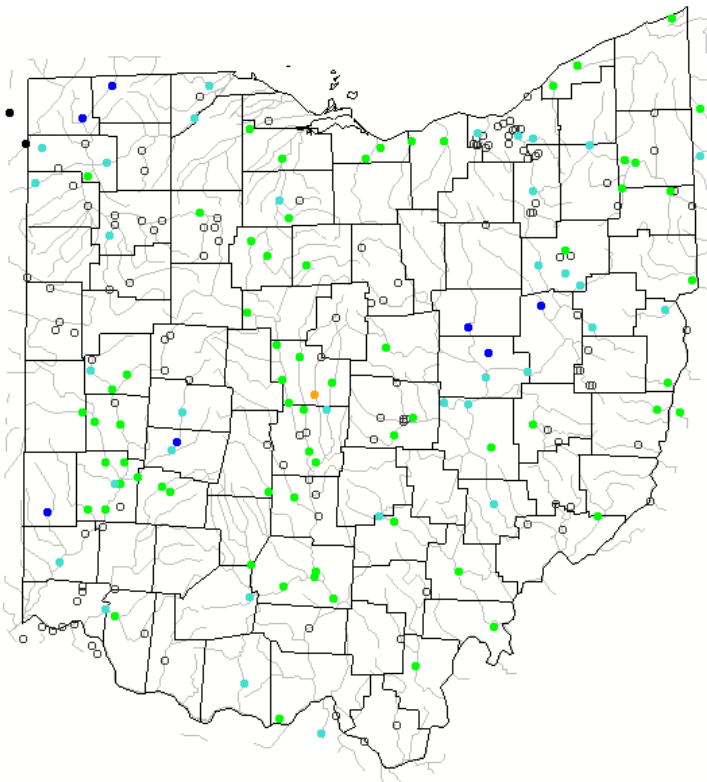
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7-DAY



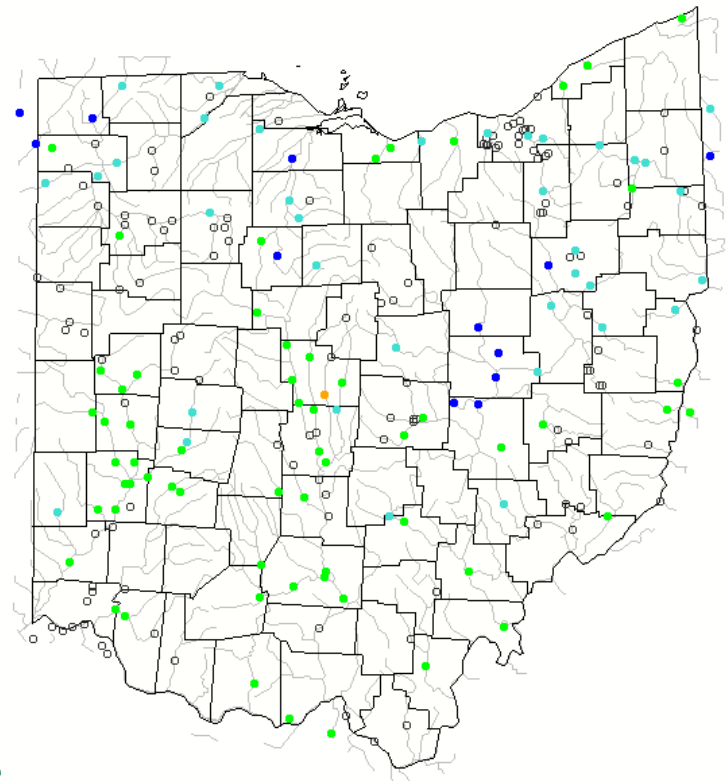
Explanation - Percentile classes

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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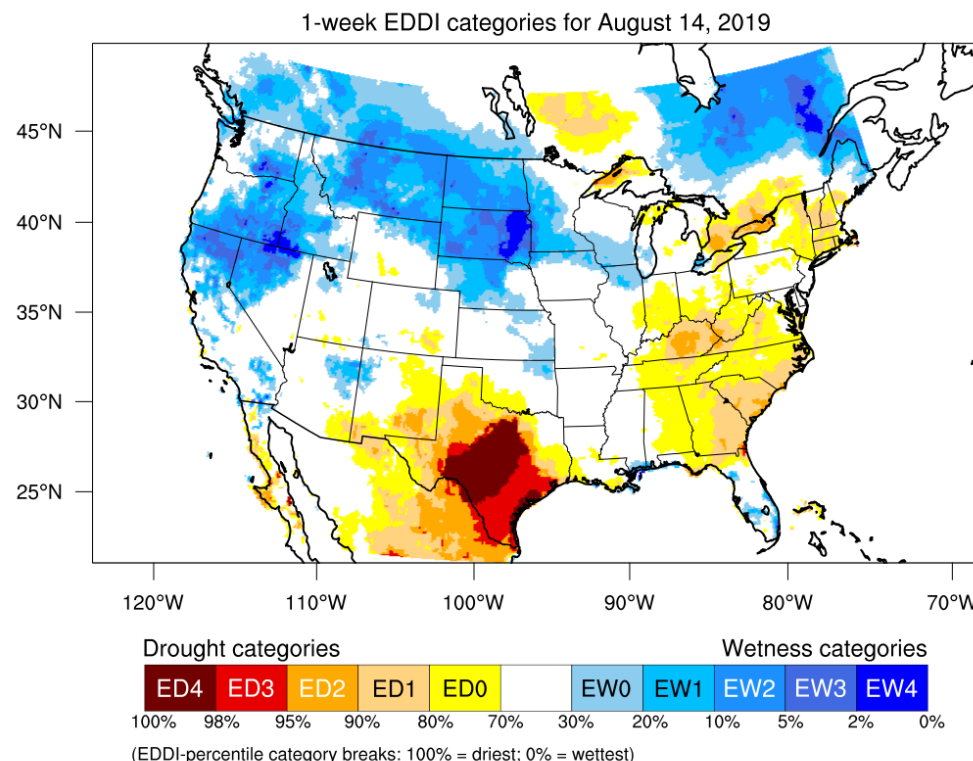
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Evaporative Demand Drought Index

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

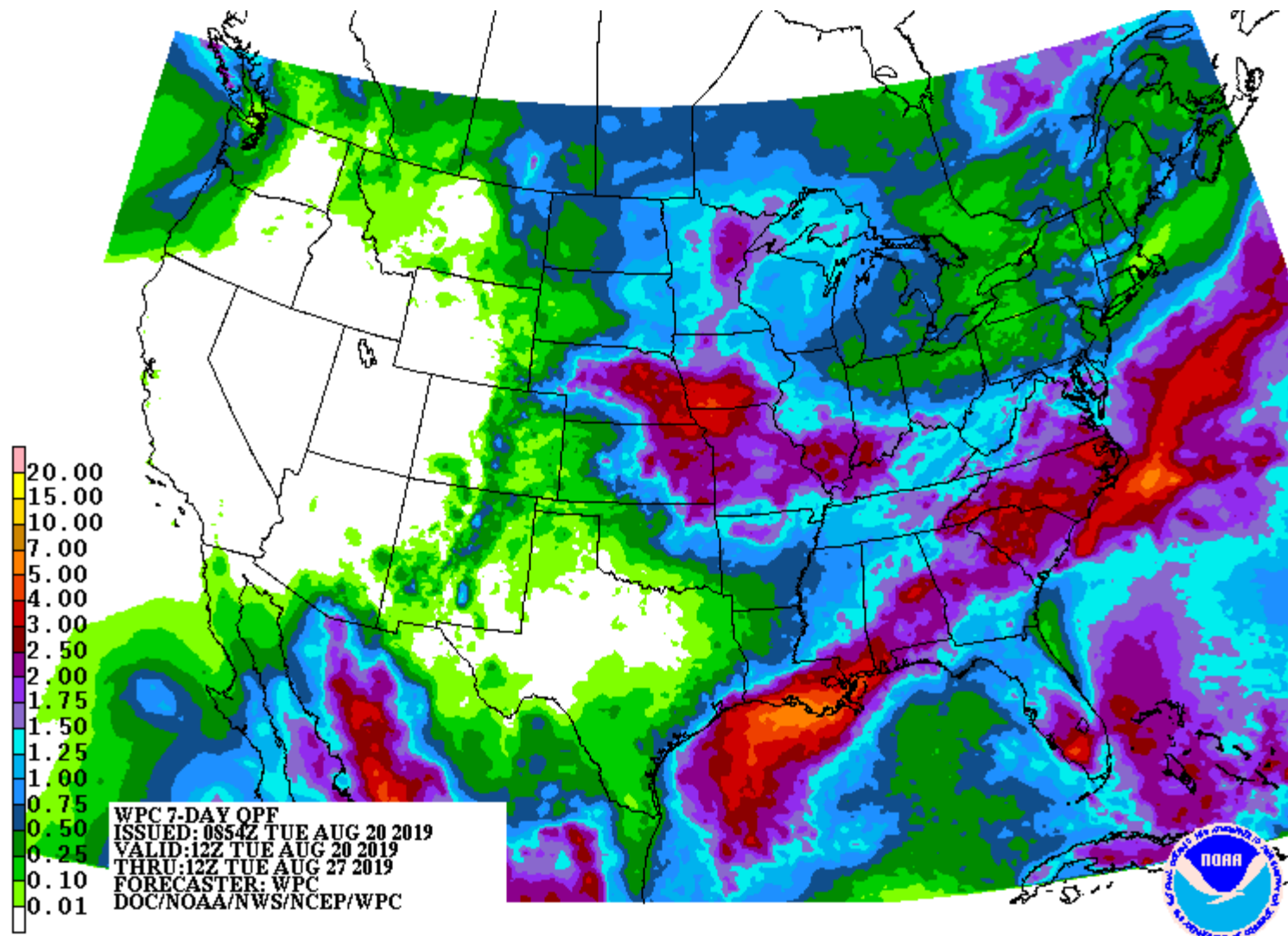
Image provided by the NOAA/ESRL Physical Sciences Division, Boulder, Colorado, from their web site at: <https://www.esrl.noaa.gov/psd/>.



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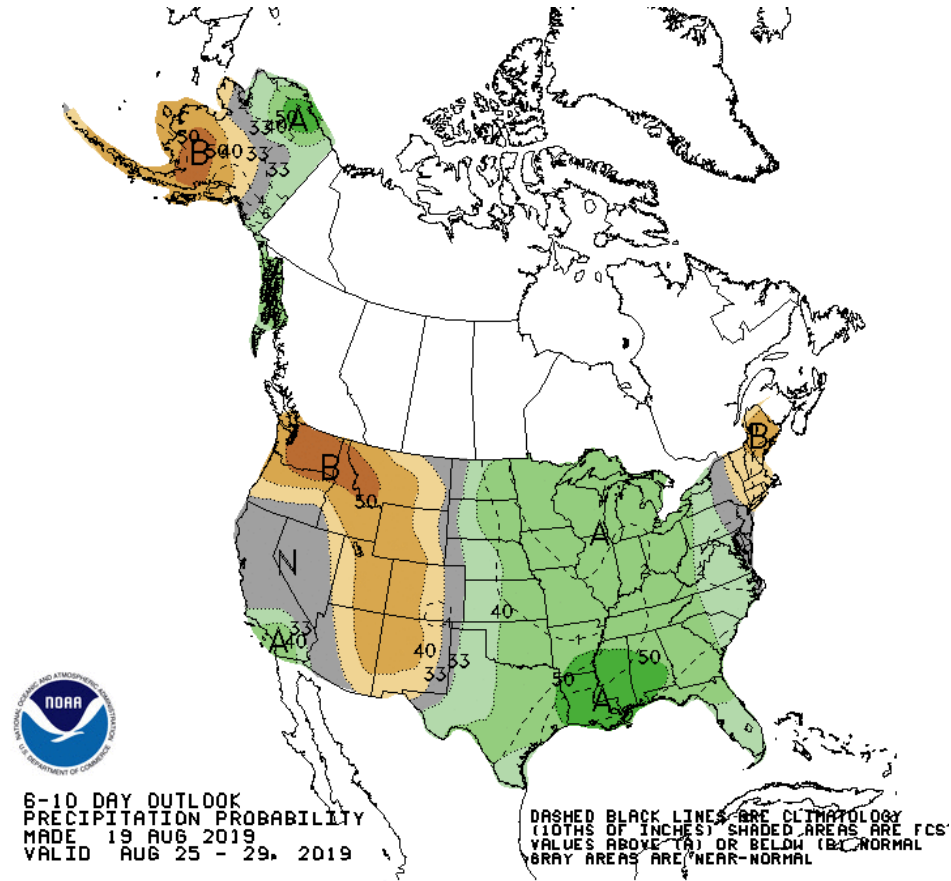
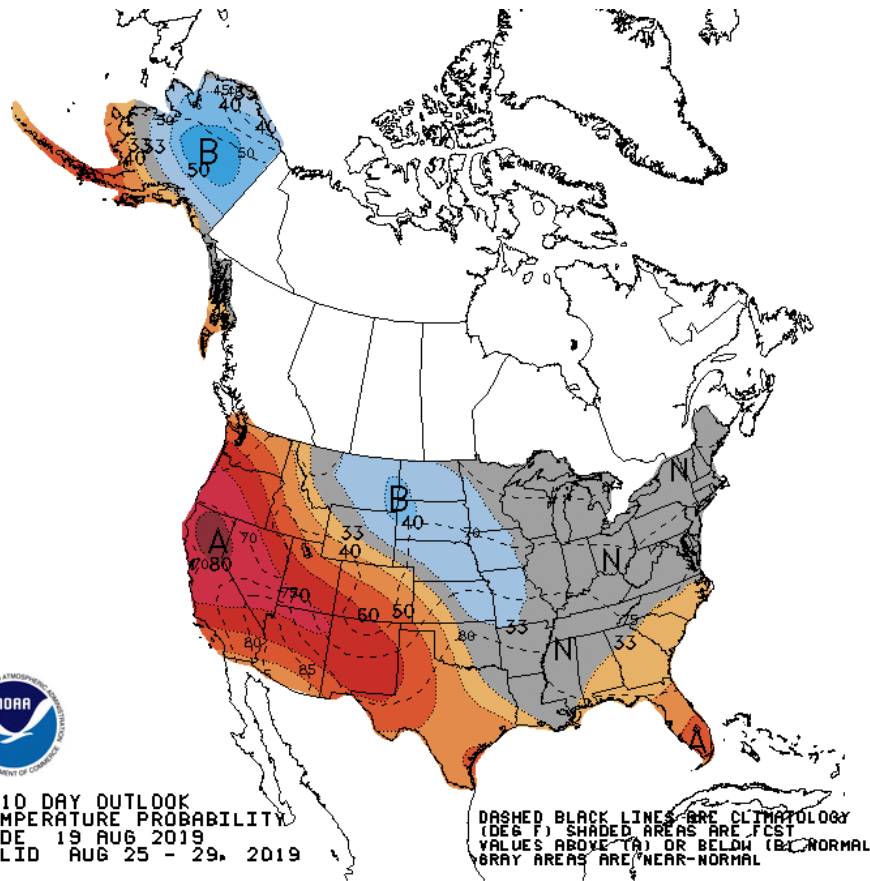
Weather for the Week Ahead



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6-10 Day Outlook



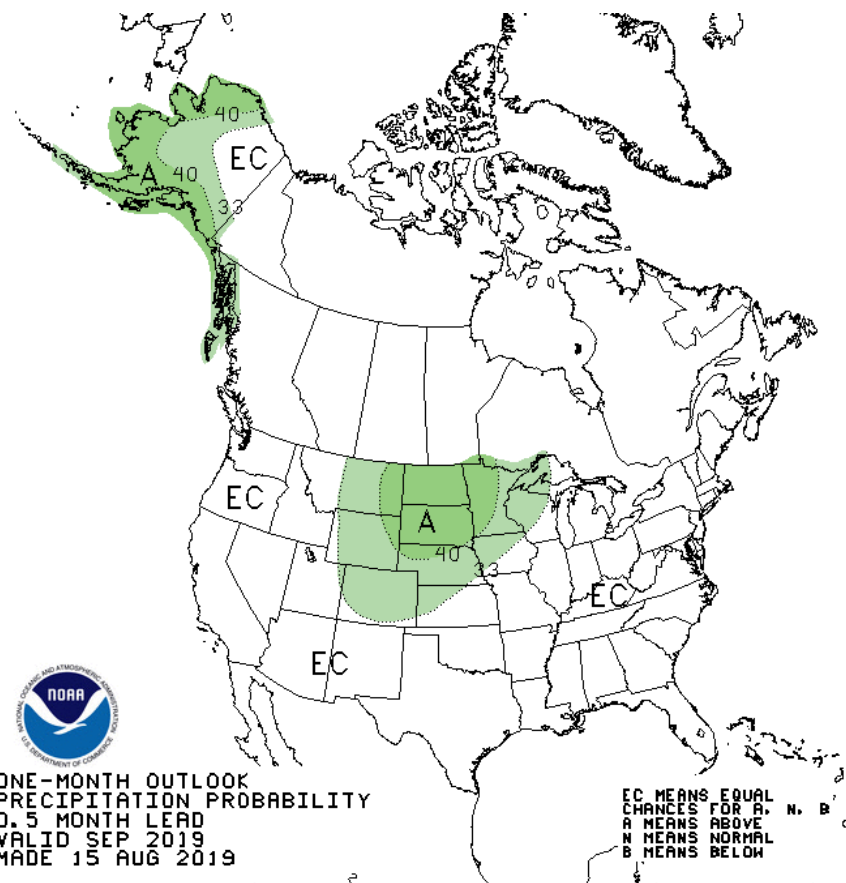
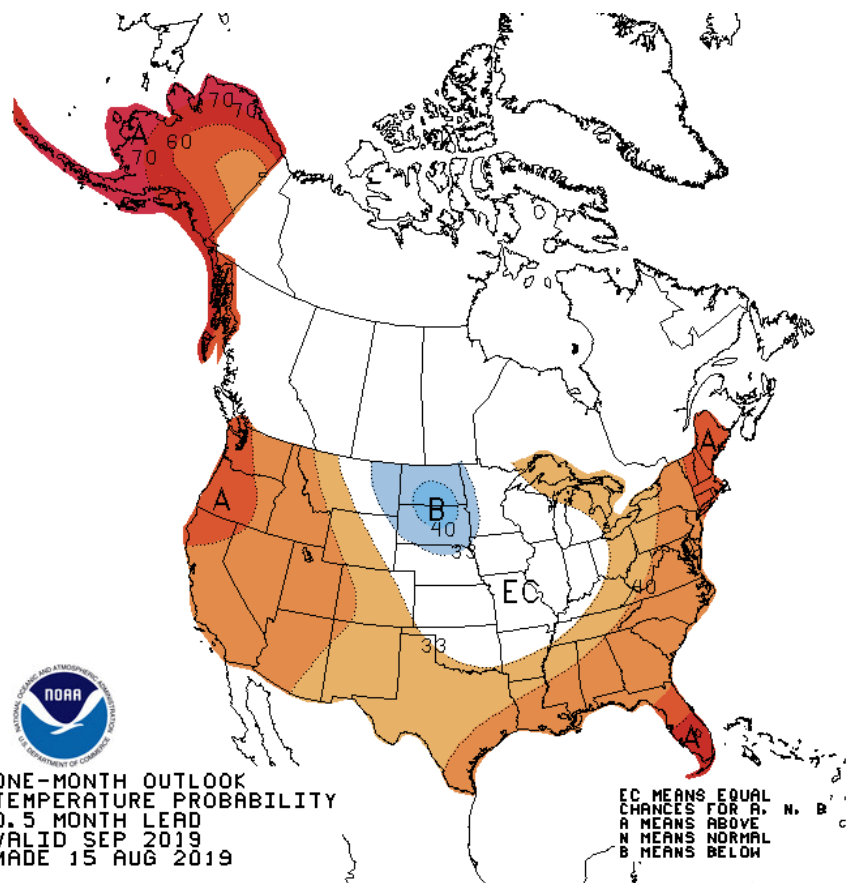
Highs: 80-85°F; Lows: 60-65°F; Precip: 0.75-1.0" (per week)



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September 2019 Outlook



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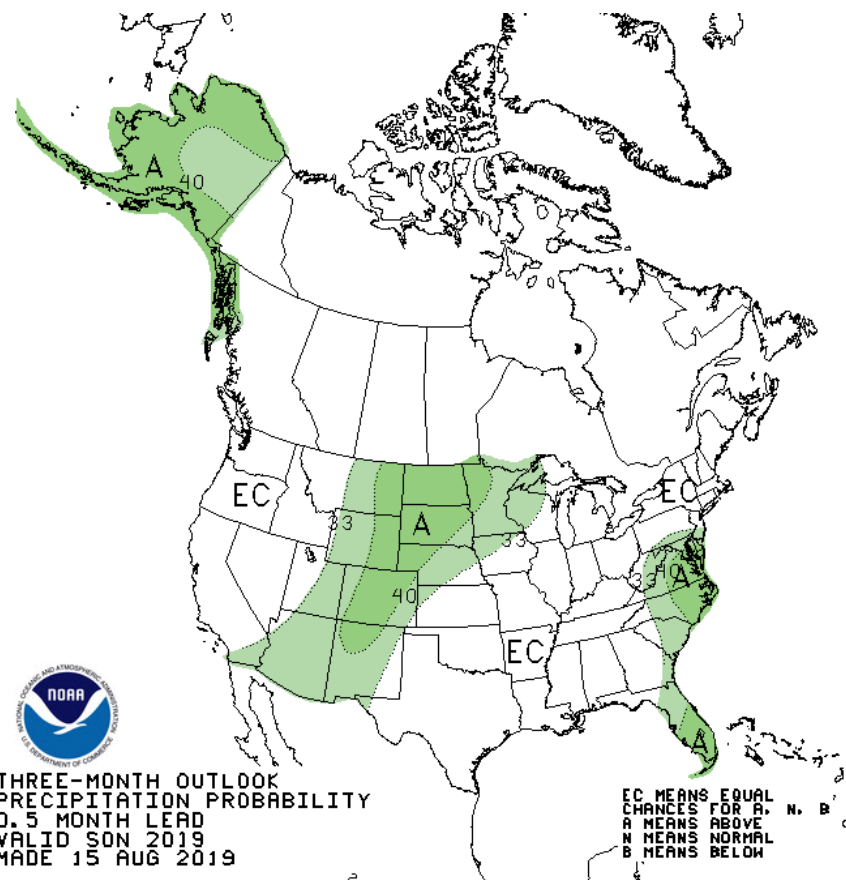
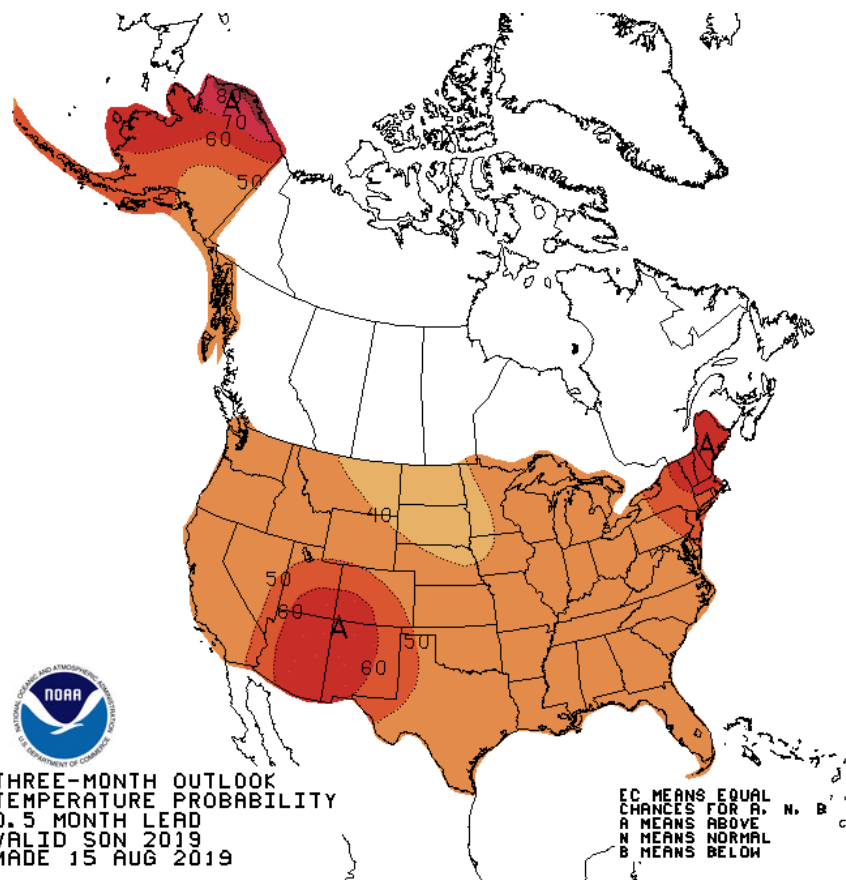
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Sep – Nov 2019 Outlook



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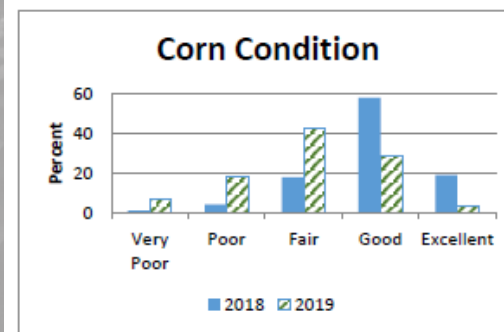
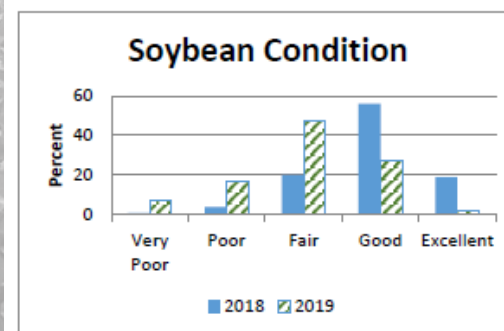
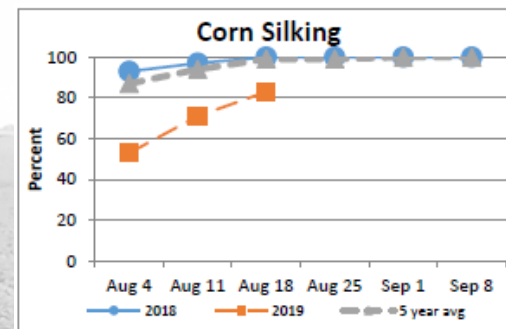
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Ag Highlights

- 5.8 days suitable for fieldwork for the week ending August 18
- Scattered rains improved some areas; some areas stayed dry
- Crops deteriorating; areas without water not filling grain well
- Busy with field work (herbicides and fungicides, hauling manure, harvesting hay, tilling fields, and planting cover crops)

NASS: Cheryl Turner –

https://www.nass.usda.gov/Statistics_by_State/Ohio/Publications/Crop_Progress_&_Condition/2019/cw1719oh.pdf



Summary of Conditions



Drought Monitor: Abnormally dry across west/SW

Climate Recap: Rain was scattered and some areas remained fairly dry

The week ahead: Scattered storms possible; no major systems likely; wetter across south



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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://cocoahs.org>
- Song: "Lazy River Rag" by Dan Lebowitz