

Hydrologic and Climate Assessment

October 1, 2019



Aaron B. Wilson

STATE CLIMATE OFFICE OF OHIO (SCOO)

DEPARTMENT OF EXTENSION - CFAES

BYRD POLAR & CLIMATE RESEARCH CENTER

DEPARTMENT OF GEOGRAPHY



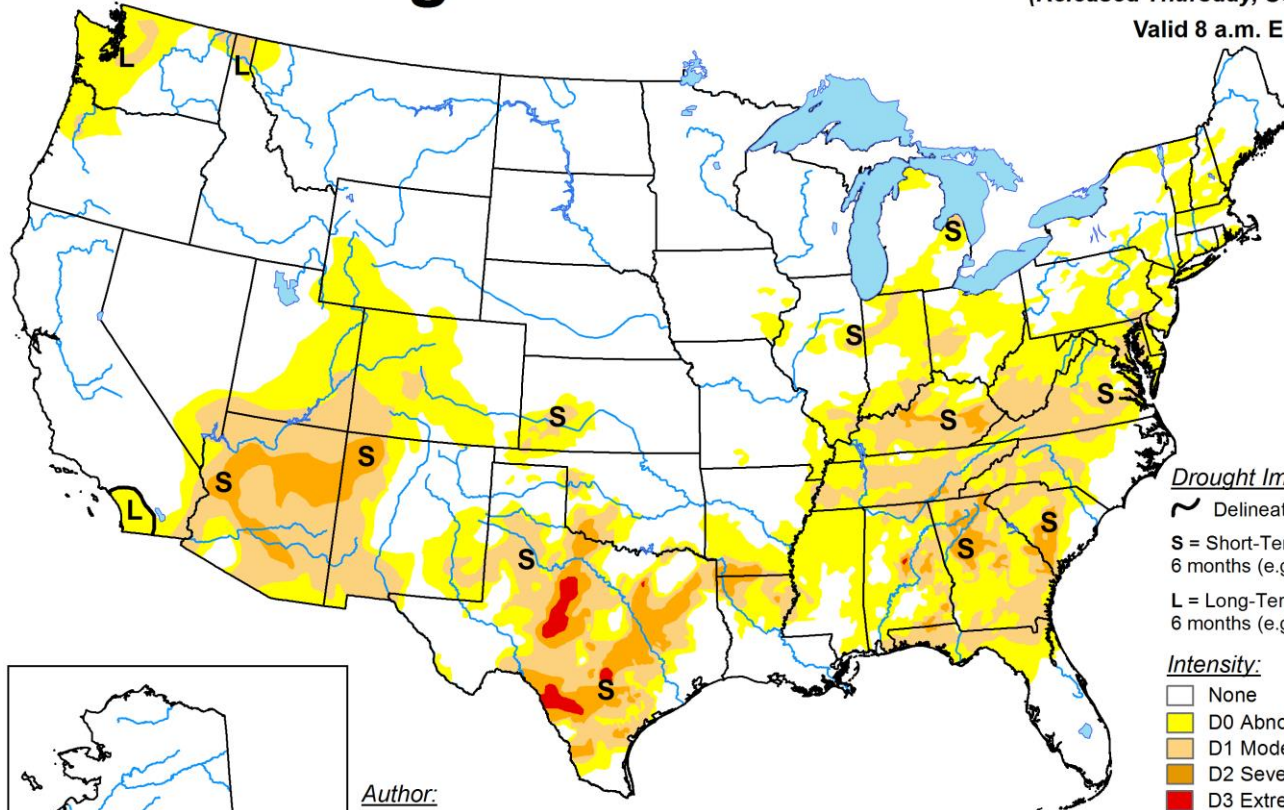
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U.S. Drought Monitor

September 24, 2019

(Released Thursday, Sep. 26, 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

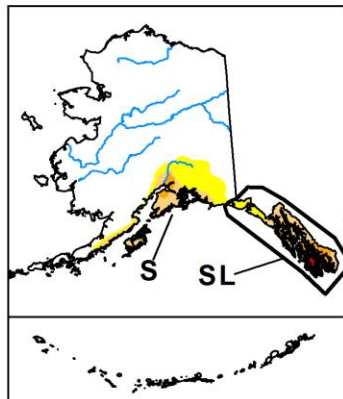
D0 Abnormally Dry

D1 Moderate Drought

D2 Severe Drought

D3 Extreme Drought

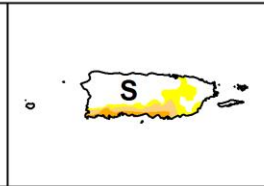
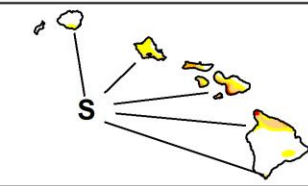
D4 Exceptional Drought



Author:

Eric Luebehusen

U.S. Department of Agriculture



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



droughtmonitor.unl.edu



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U.S. Drought Monitor Ohio

September 24, 2019

(Released Thursday, Sep. 26, 2019)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	34.22	65.78	8.85	0.00	0.00	0.00
Last Week <i>09-17-2019</i>	81.69	18.31	5.00	0.00	0.00	0.00
3 Months Ago <i>06-25-2019</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>09-25-2018</i>	100.00	0.00	0.00	0.00	0.00	0.00

Intensity:

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

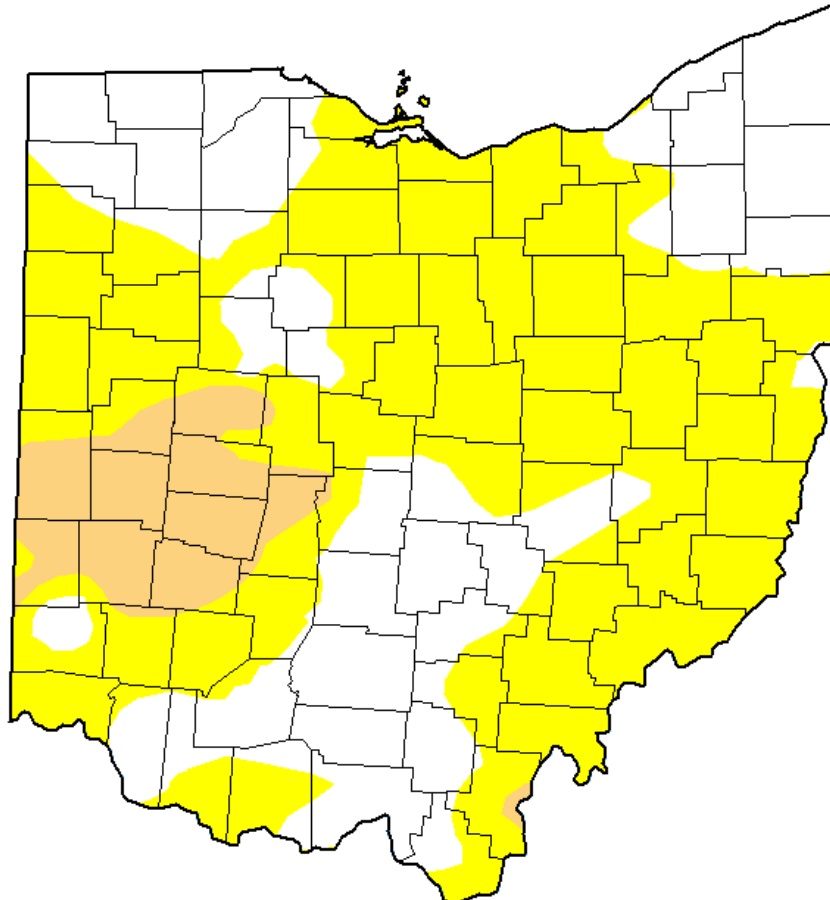
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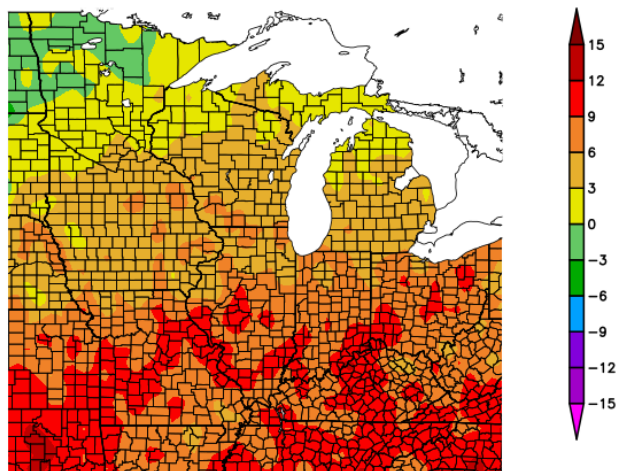
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Temperature Differences Compared to Average (1981-2010)

7-Day

Departure from Normal Temperature (F)
9/24/2019 – 9/30/2019

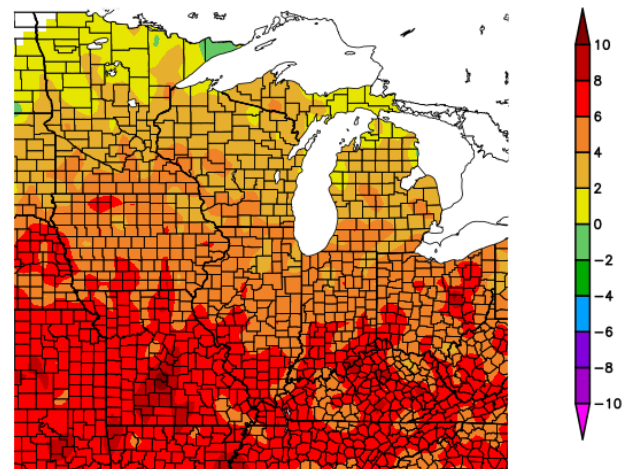


Generated 10/1/2019 at HPRCC using provisional data.

NOAA Regional Climate Centers

30-Day

Departure from Normal Temperature (F)
9/1/2019 – 9/30/2019

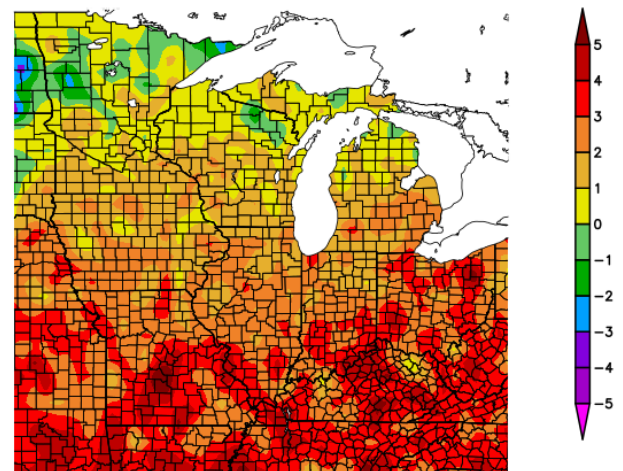


Generated 10/1/2019 at HPRCC using provisional data.

NOAA Regional Climate Centers

60-Day

Departure from Normal Temperature (F)
8/2/2019 – 9/30/2019



NATIONAL
INTEGRATED
DROUGHT
INFORMATION
SYSTEM



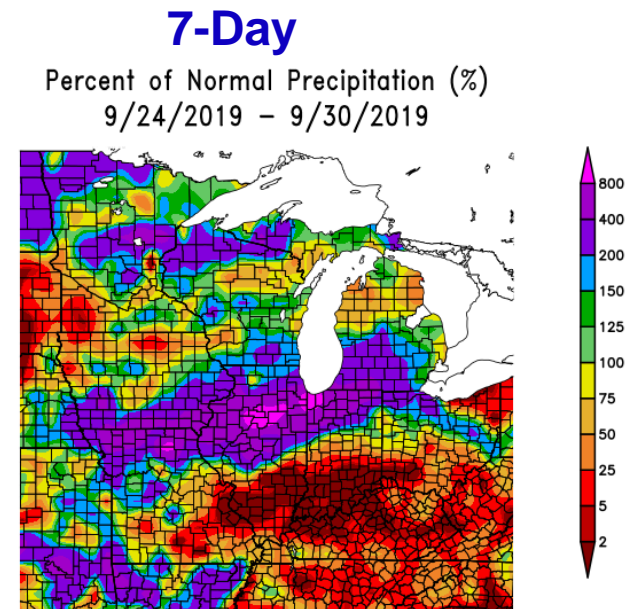
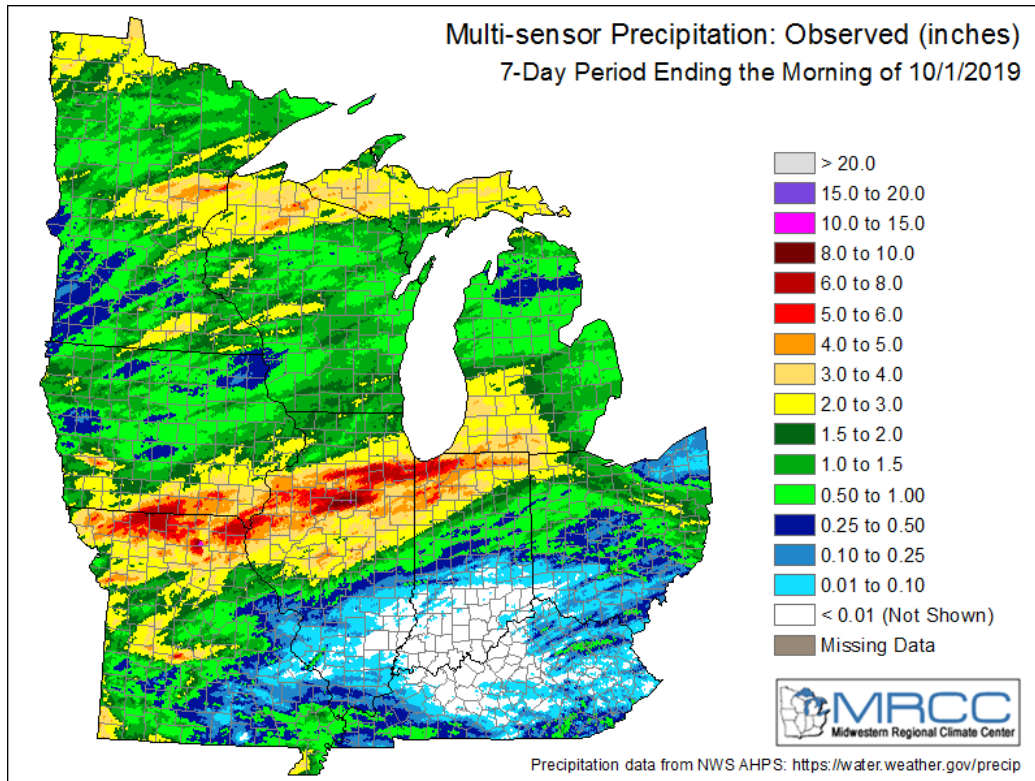
Drought.gov
U.S. Drought Portal



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This Week's Precipitation



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NOAA Regional Climate Centers

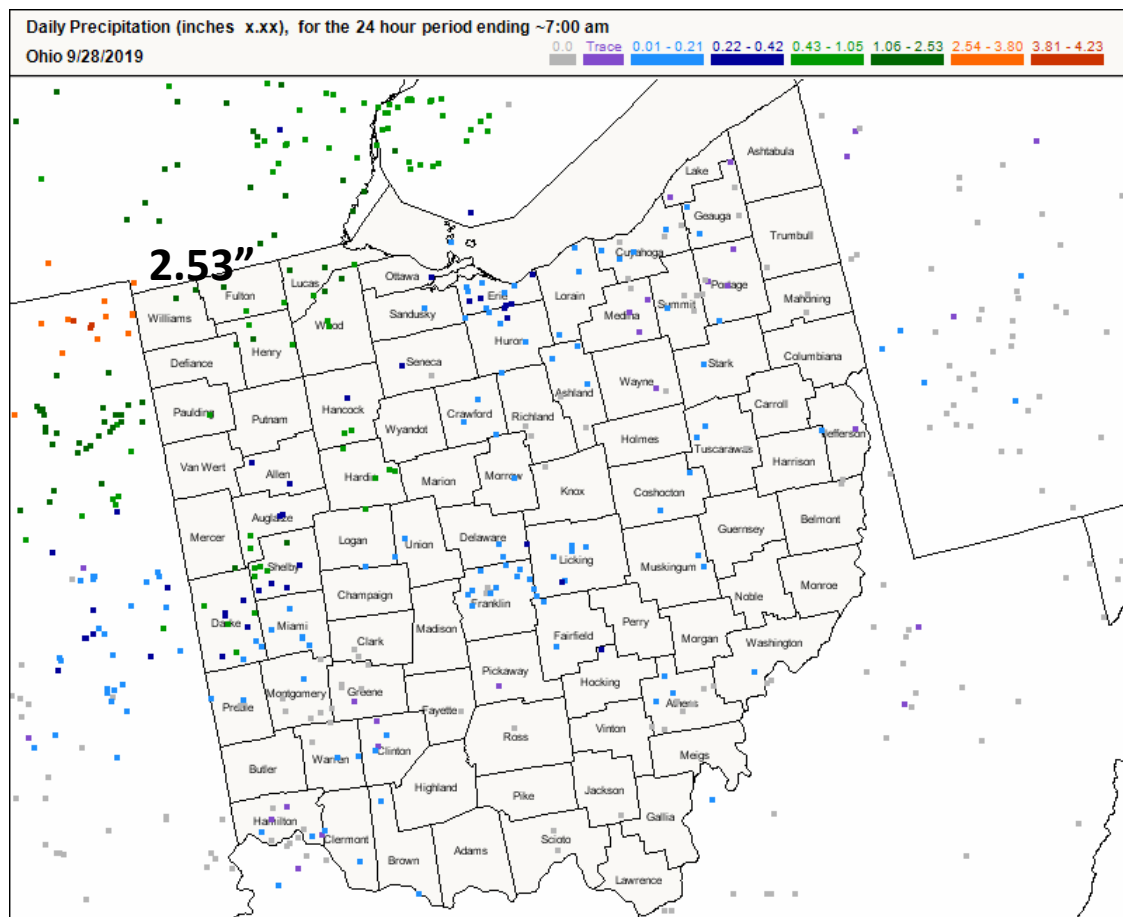


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CoCoRaHS

Cheviot: 52.93" since Jan 1



<https://cocorahs.org/>

Driest since July 1

CoCoRaHS Name	Total Precip (inches)
Greenville 1.6 NNW	4.24
Piqua 0.8 SSE	4.55
Huber Heights 1.8 NNW	4.97
Potsdam 2.6 WSW	5.19
Bradford 2.3 NW	5.54
Raymond 3.5 NW	5.62
Ripley 0.9 SSE	5.64
Greenville 4.5 N	5.73
Eaton 1.1 WSW	5.85
Versailles 1.6 WSW	5.97



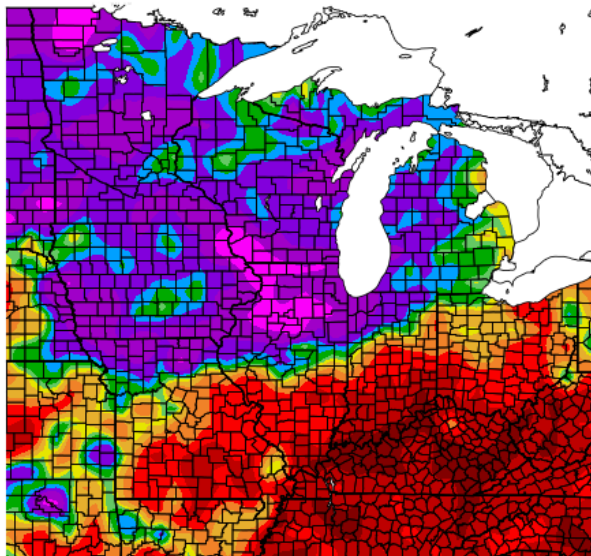
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Precipitation Differences Compared to Average (1981-2010)

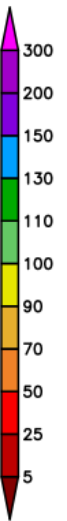
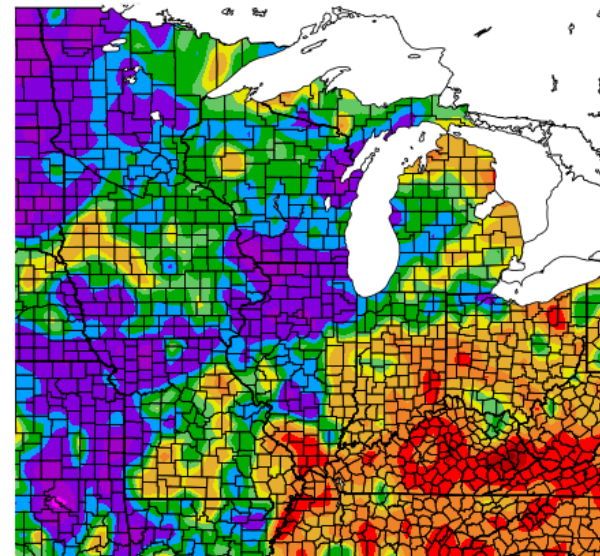
30-Day

Percent of Normal Precipitation (%)
9/1/2019 – 9/30/2019



60-Day

Percent of Normal Precipitation (%)
8/2/2019 – 9/30/2019



Generated 10/1/2019 at HPRCC using provisional data.

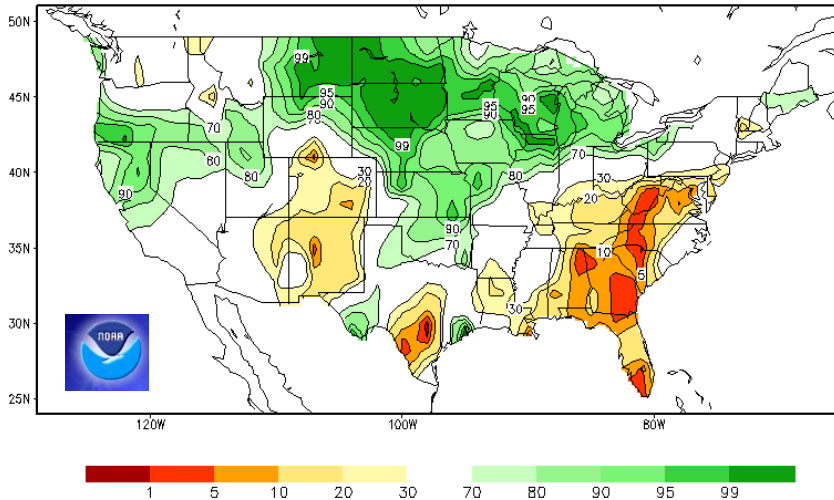
NOAA Regional Climate Centers

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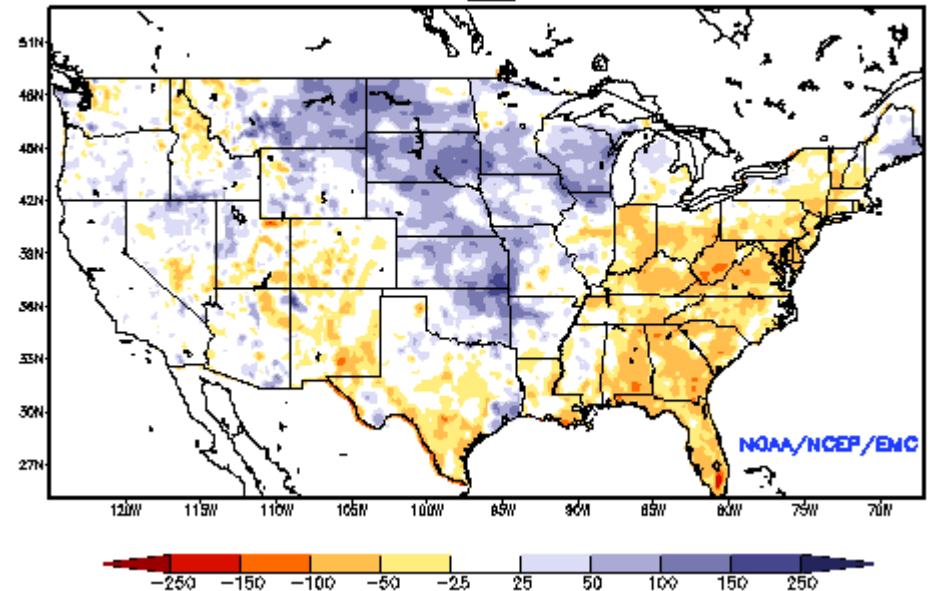
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Soil Moisture

Calculated Soil Moisture Ranking Percentile
SEP 30, 2019



Ensemble-Mean - Current Total Column Soil Moisture Anomaly (mm)
NCEP NLDAS Products Valid: SEP 27, 2019



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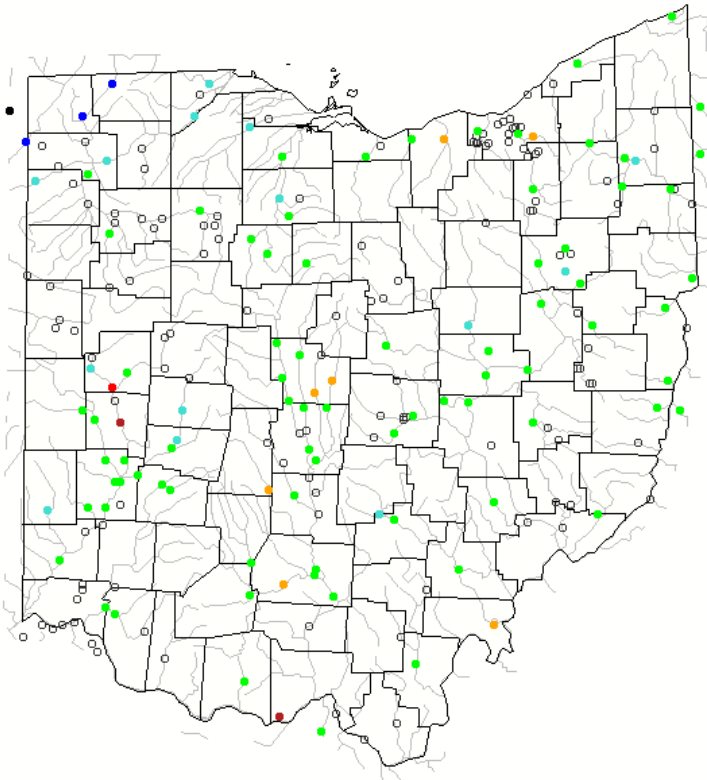
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7-DAY



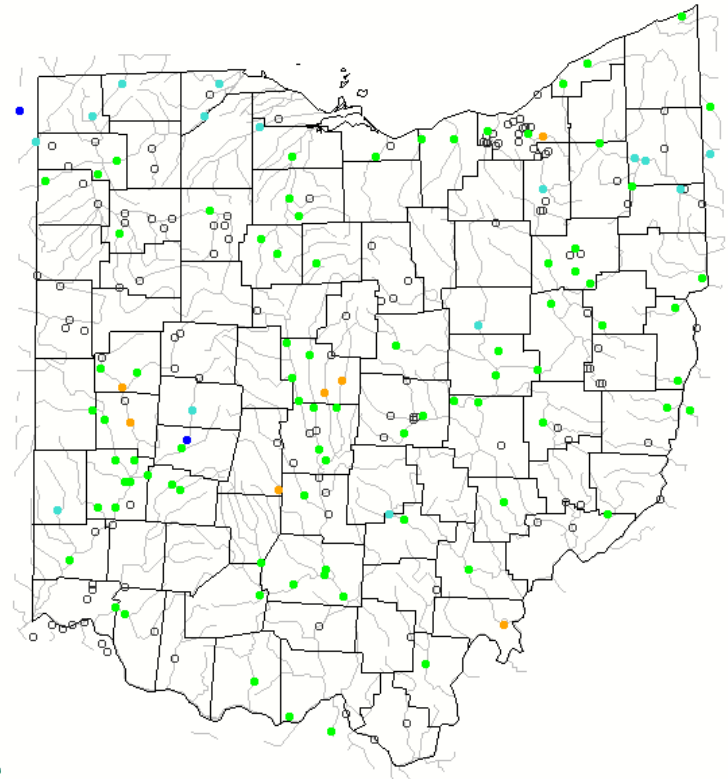
Explanation - Percentile classes

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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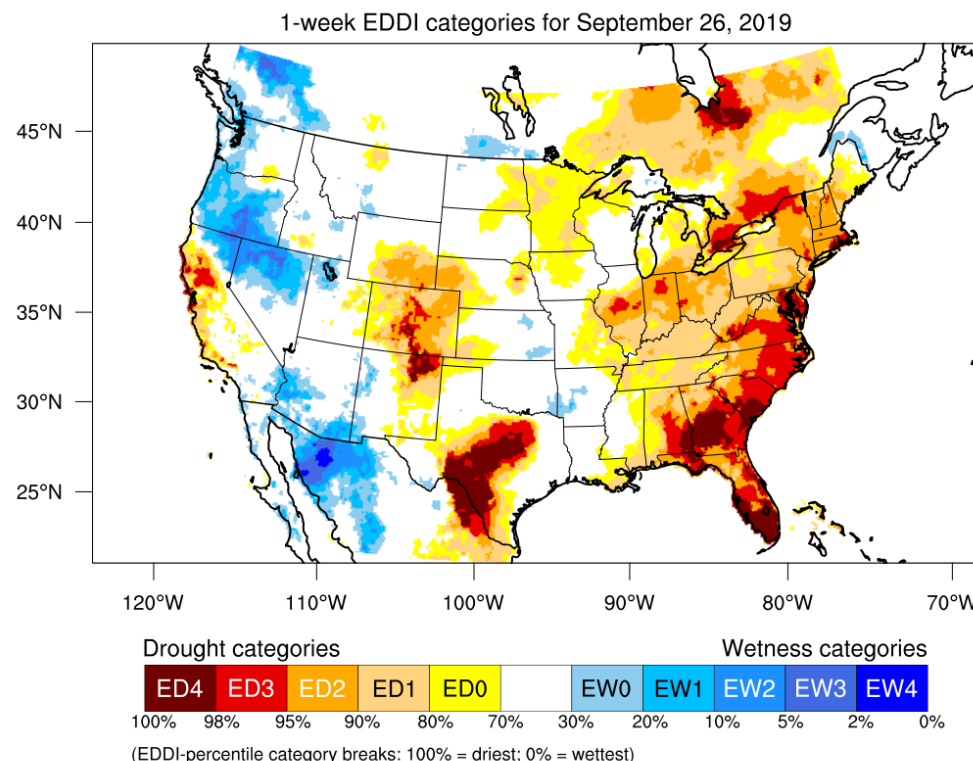
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Evaporative Demand Drought Index

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

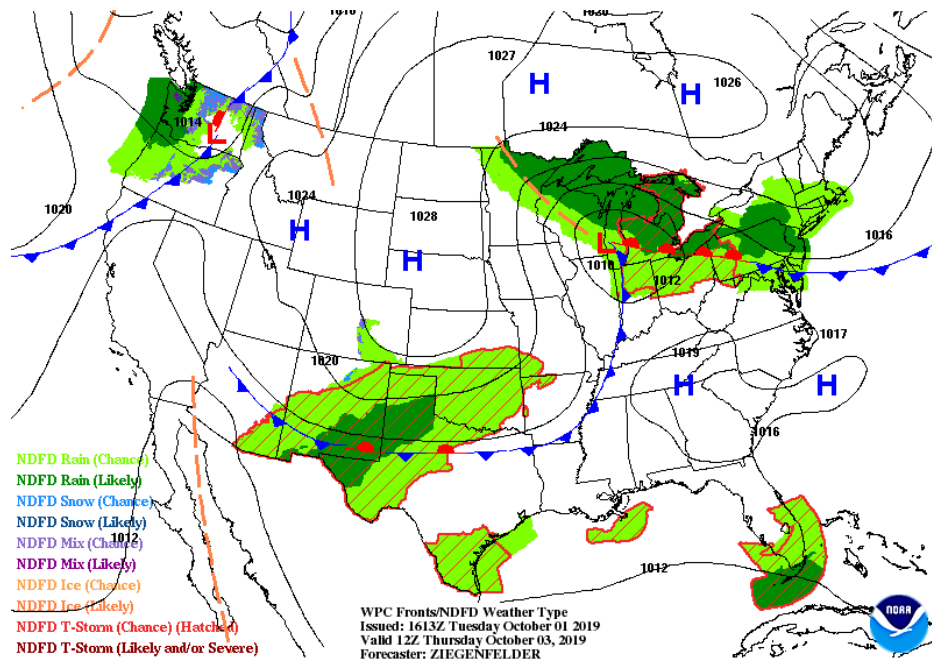
Image provided by the NOAA/ESRL Physical Sciences Division, Boulder, Colorado, from their web site at: <https://www.esrl.noaa.gov/psd/>.



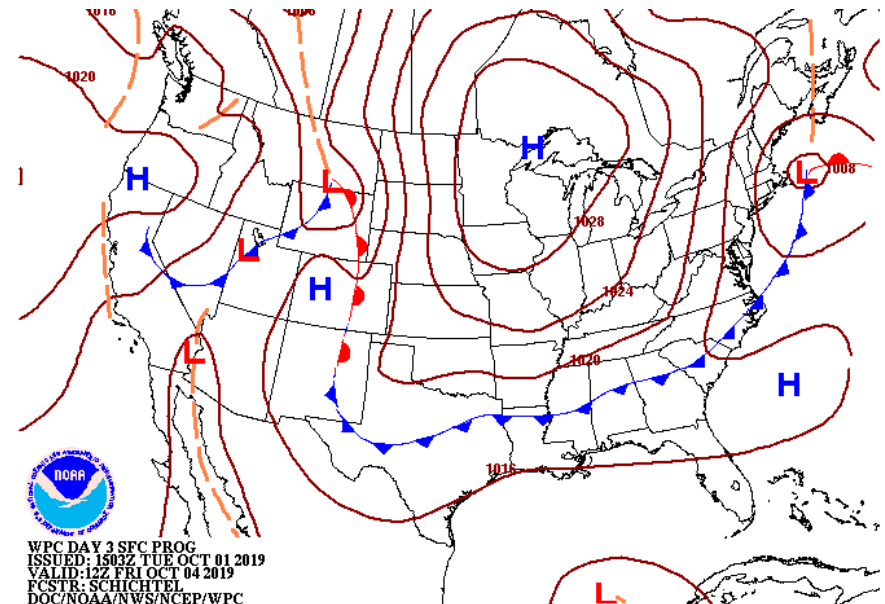
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Weather for the Week Ahead



Thursday



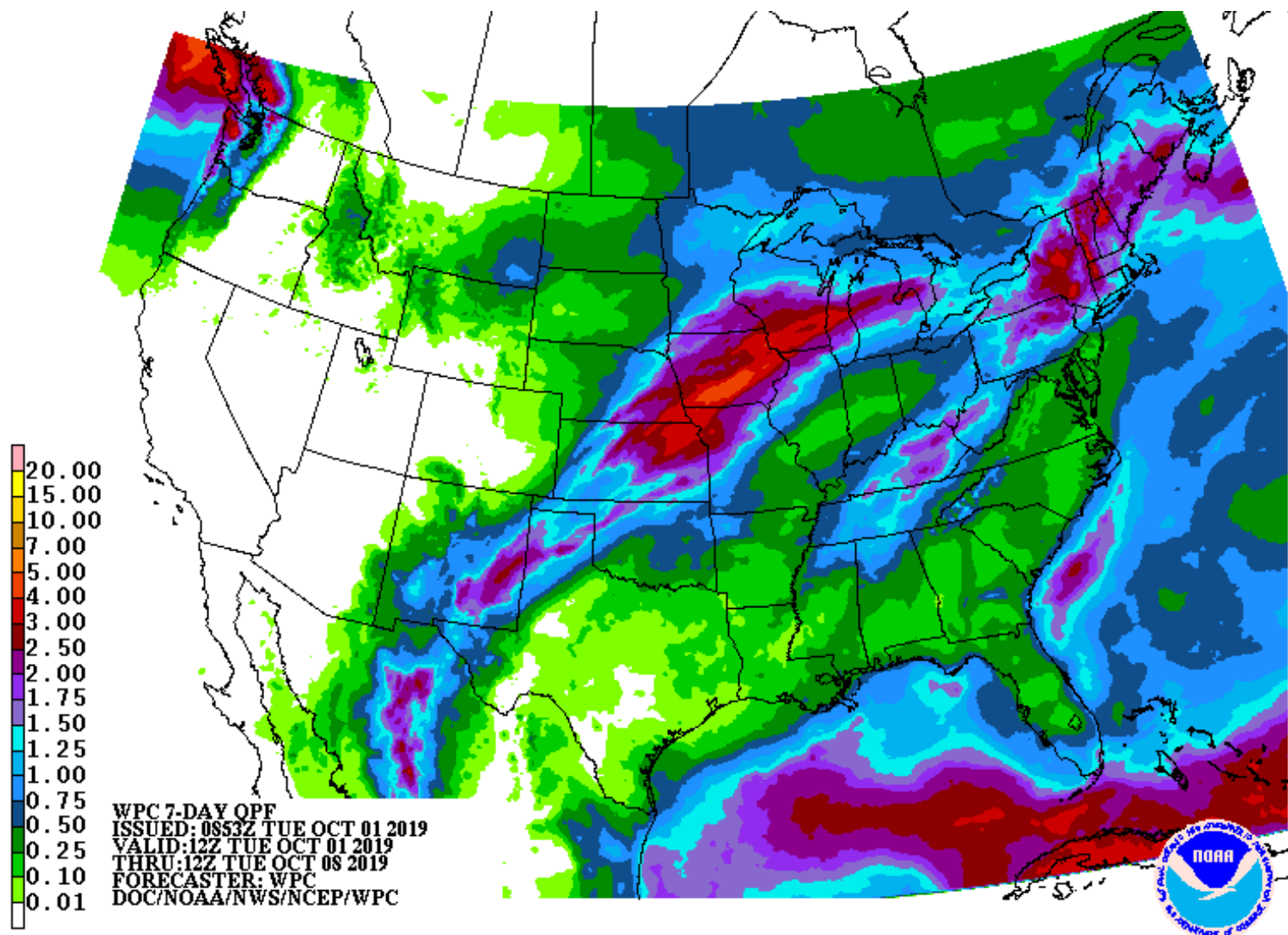
Friday



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Weather for the Week Ahead



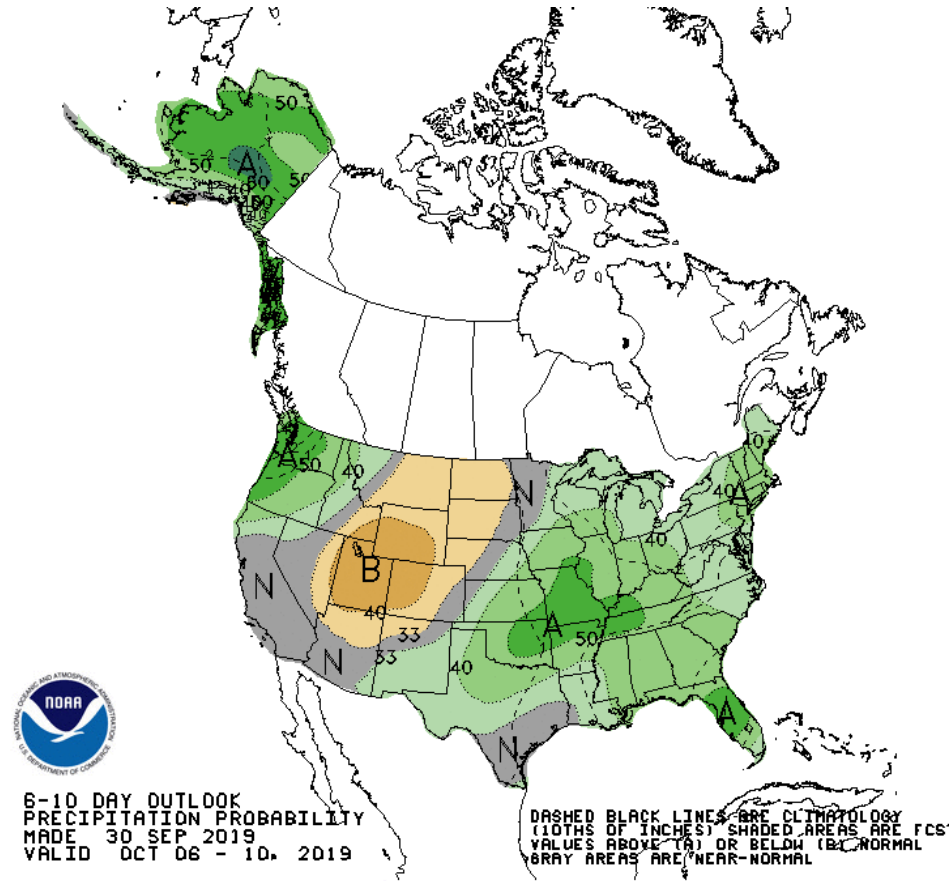
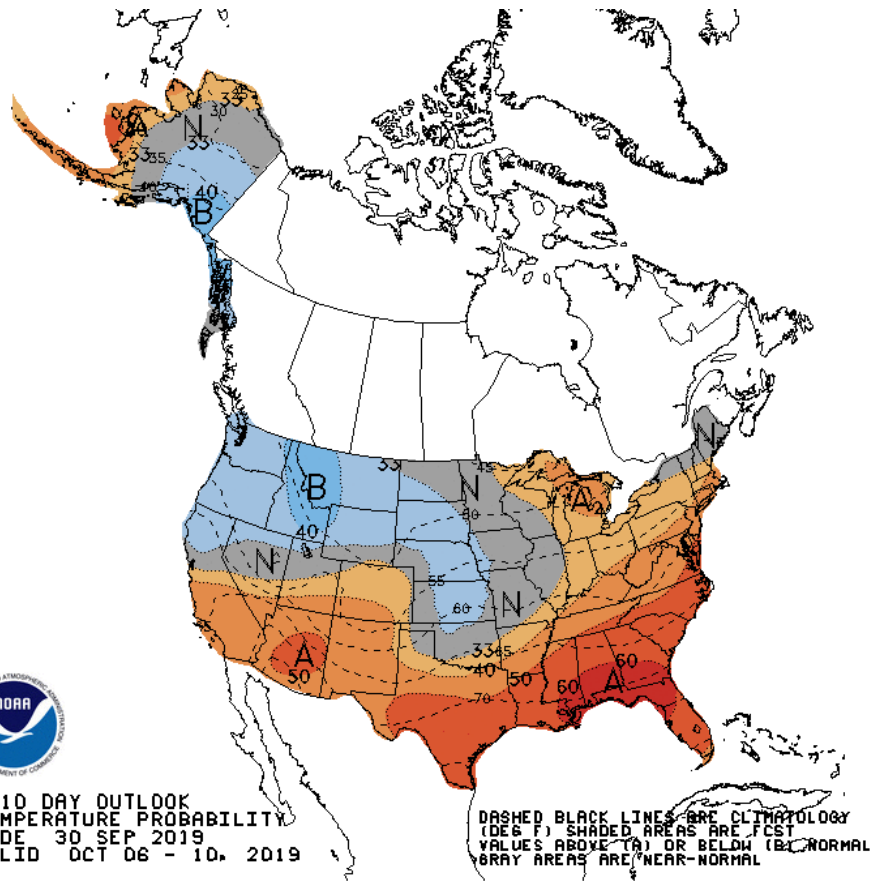
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6-10 Day Outlook



Highs: 66-70°F; Lows: 46-50°F; Precip: 0.60-0.70" (per week)

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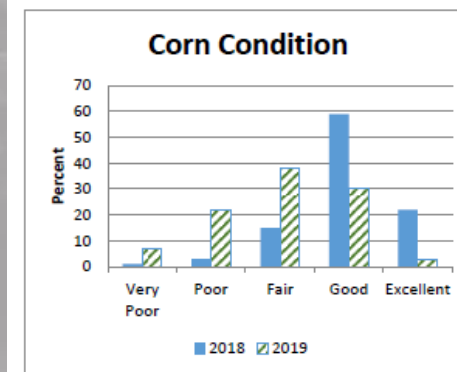
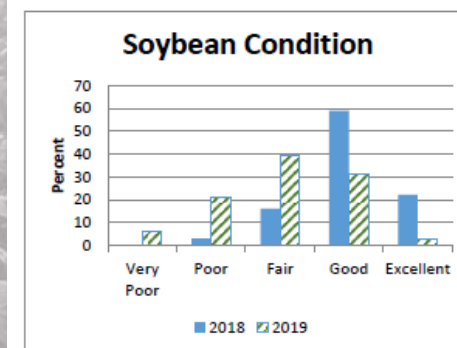
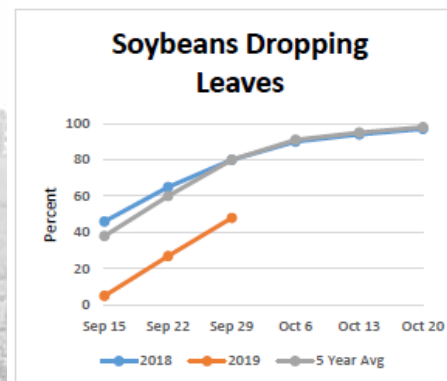
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Ag Highlights

- 6.3 days suitable for fieldwork during the week ending September 29.
- Warm temperatures helped to mature corn and soybeans, although they were still well behind the 5-year average development.
- Winter wheat planting progress leapt ahead of last year and the 5-year average as planters rolled quickly through dry fields.
- Pasture conditions decreased slightly as growth was stunted.

NASS: Cheryl Turner –

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



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Summary of Conditions



Drought Monitor: Moderate Drought conditions continue across part of the state

Climate Recap: Dry and very hot conditions continued this week

The week ahead: Much cooler weather ahead – increase in the chance of showers



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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