

Hydrologic and Climate Assessment

August 20, 2019



THE OHIO STATE UNIVERSITY

Aaron B. Wilson

STATE CLIMATE OFFICE OF OHIO (SCOO)

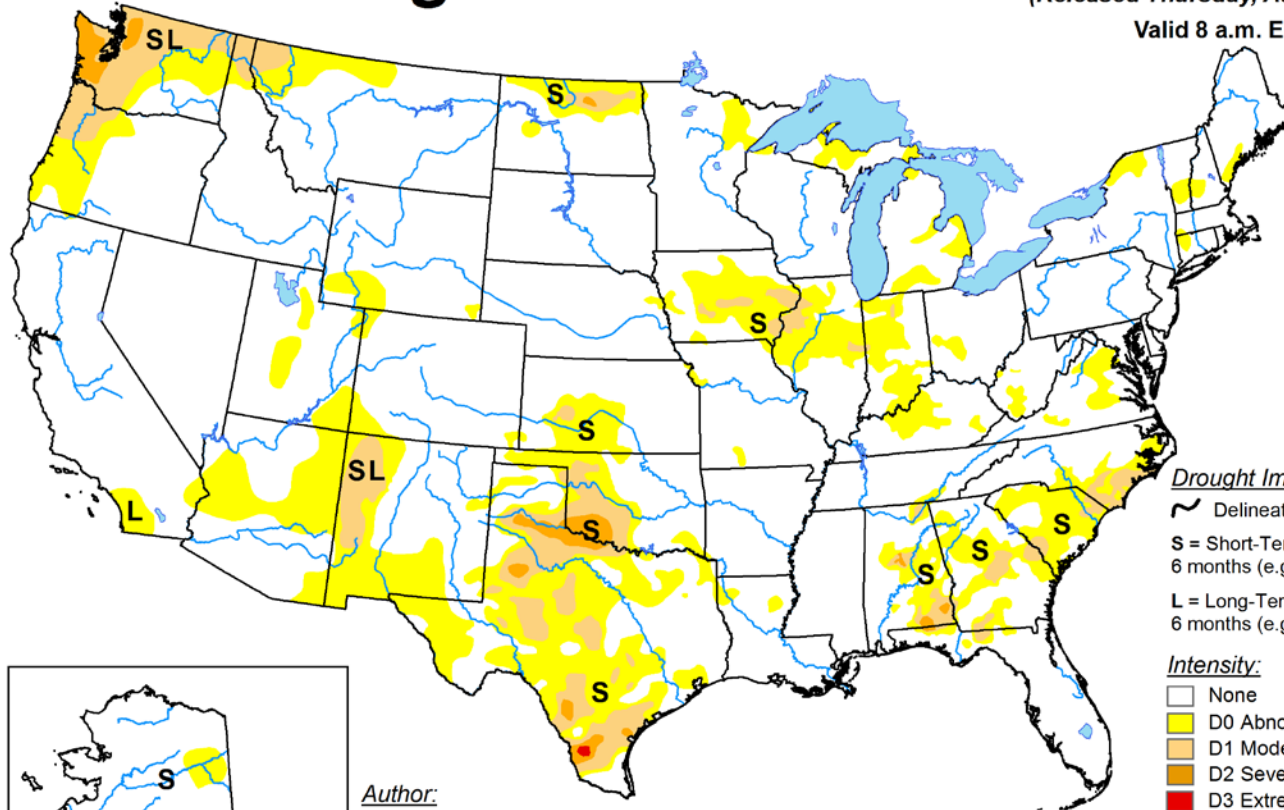
DEPARTMENT OF EXTENSION - CFAES

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



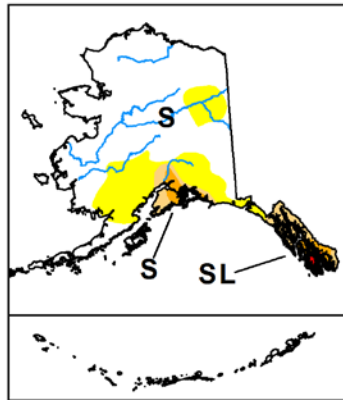
Drought Impact Types:

- ~ 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)

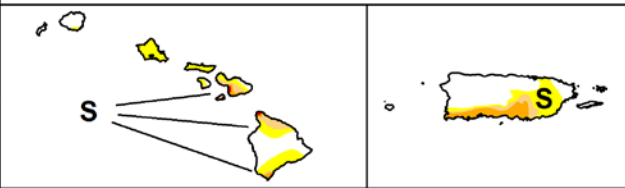
Intensity:

- 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

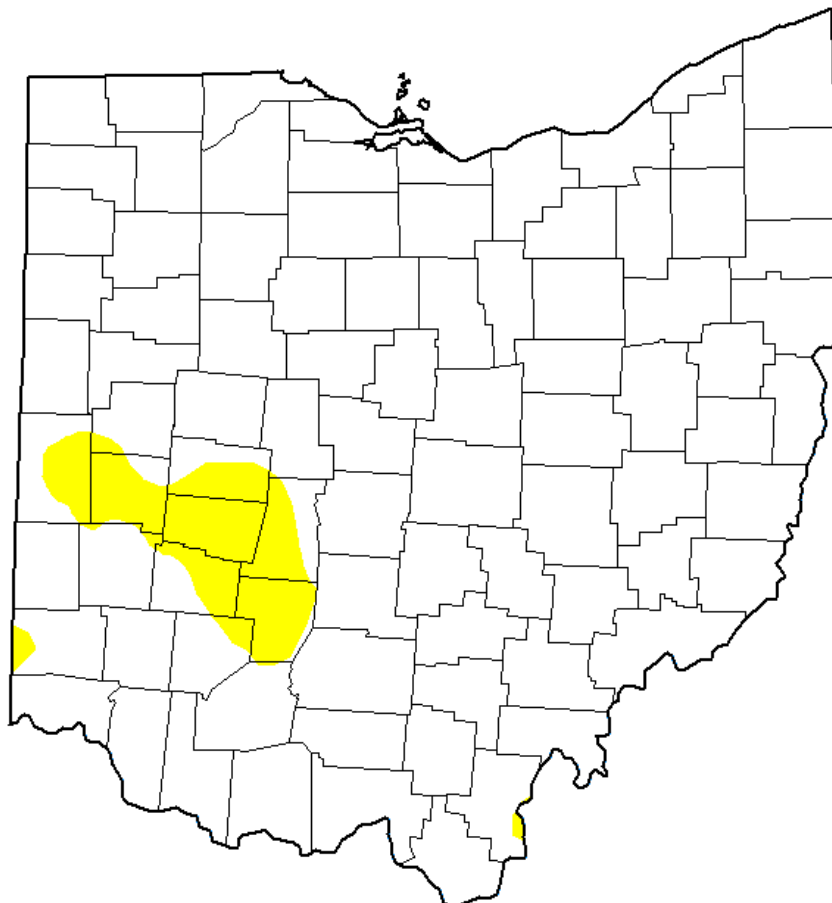


THE OHIO STATE UNIVERSITY

STATE CLIMATE OFFICE OF OHIO (SCOO)
 COLLEGE OF FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES
 DEPARTMENT OF EXTENSION
 BYRD POLAR & CLIMATE RESEARCH CENTER
 DEPARTMENT OF GEOGRAPHY

U.S. Drought Monitor Ohio

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



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
- 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

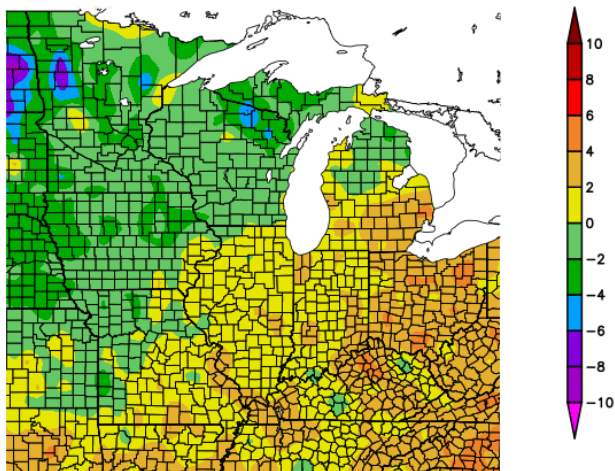


droughtmonitor.unl.edu

Temperature Differences Compared to Average (1981-2010)

7-Day

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

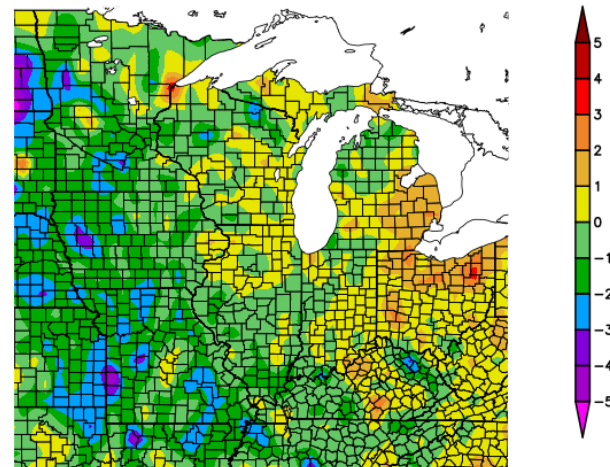


Generated 8/20/2019 at HPRCC using provisional data.

NOAA Regional Climate Centers

30-Day

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

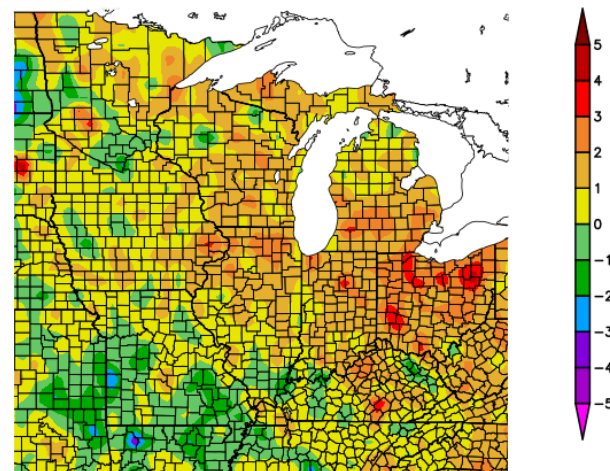


Generated 8/20/2019 at HPRCC using provisional data.

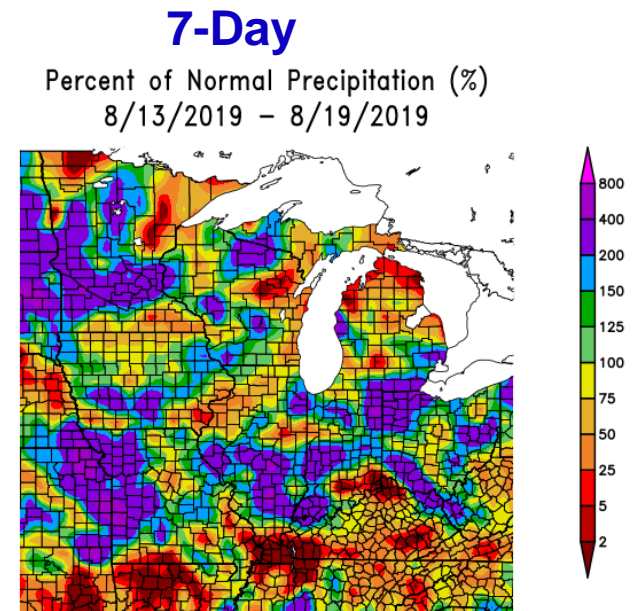
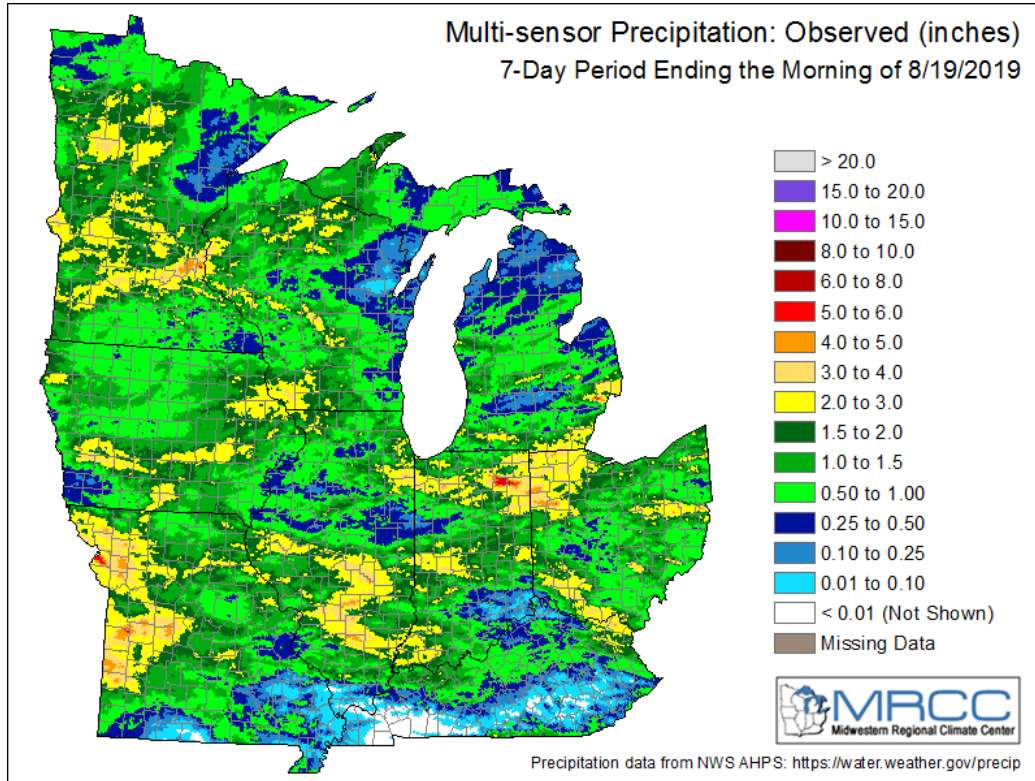
NOAA Regional Climate Centers

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.

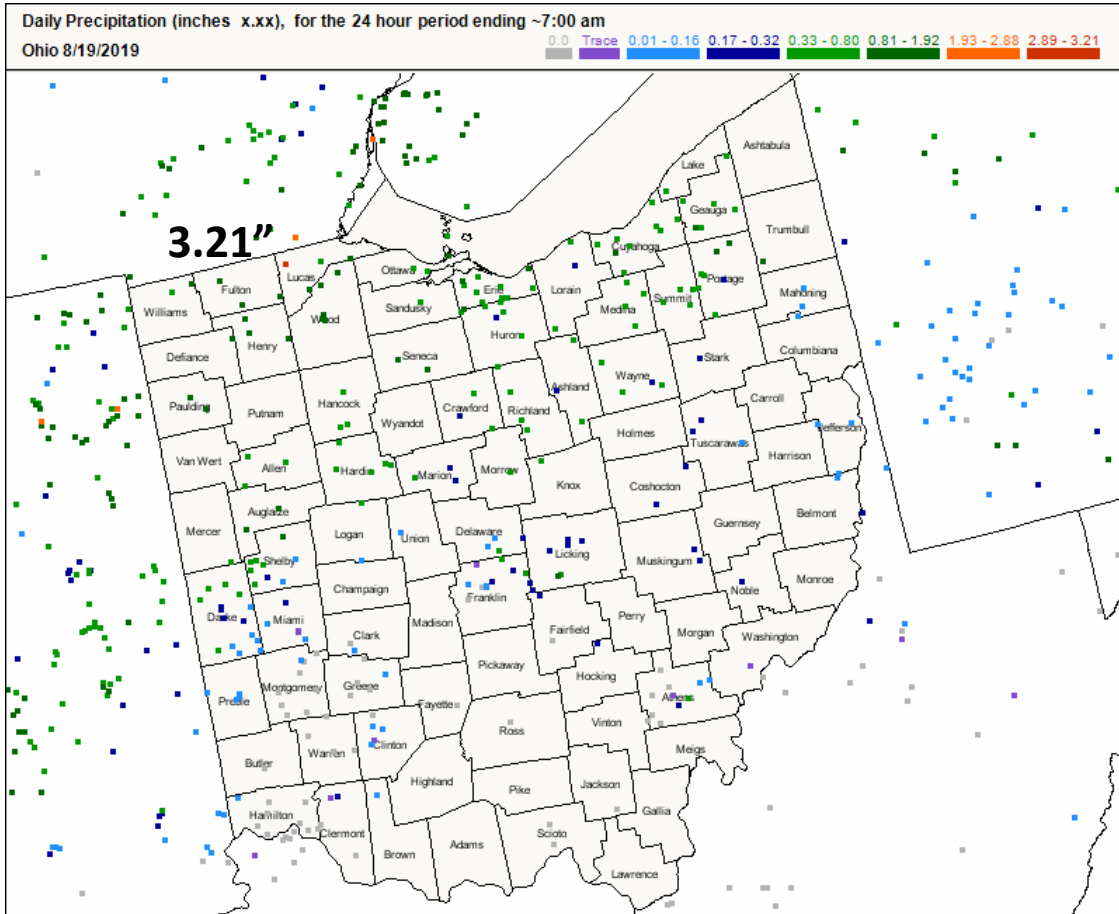
NOAA Regional Climate Centers



CoCoRaHS

Since June 1

Cheviot: 48.32" since Jan 1



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

<https://cocorahs.org/>



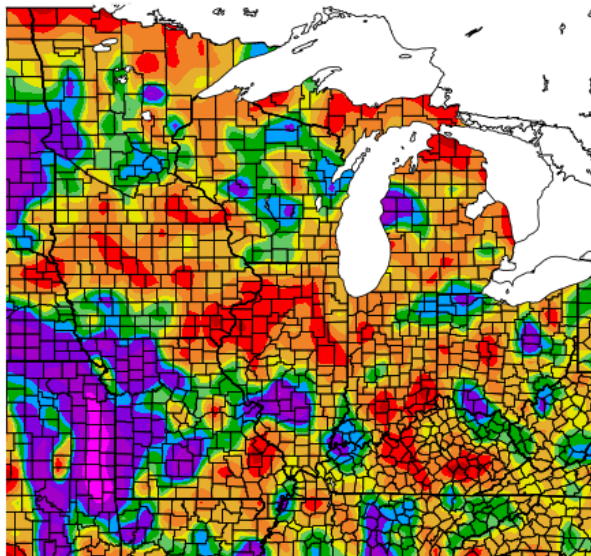
THE OHIO STATE UNIVERSITY

STATE CLIMATE OFFICE OF OHIO (SCOO)
COLLEGE OF FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES
DEPARTMENT OF EXTENSION
BYRD POLAR & CLIMATE RESEARCH CENTER
DEPARTMENT OF GEOGRAPHY

Precipitation Differences Compared to Average (1981-2010)

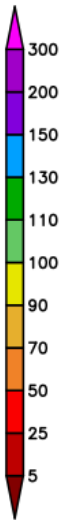
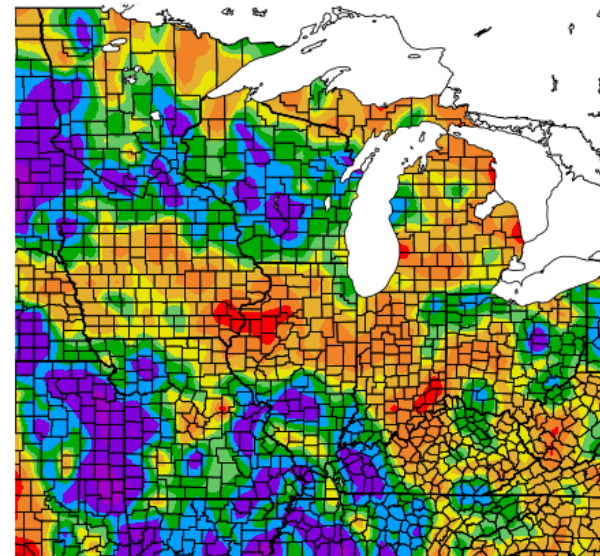
30-Day

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

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

NOAA Regional Climate Centers



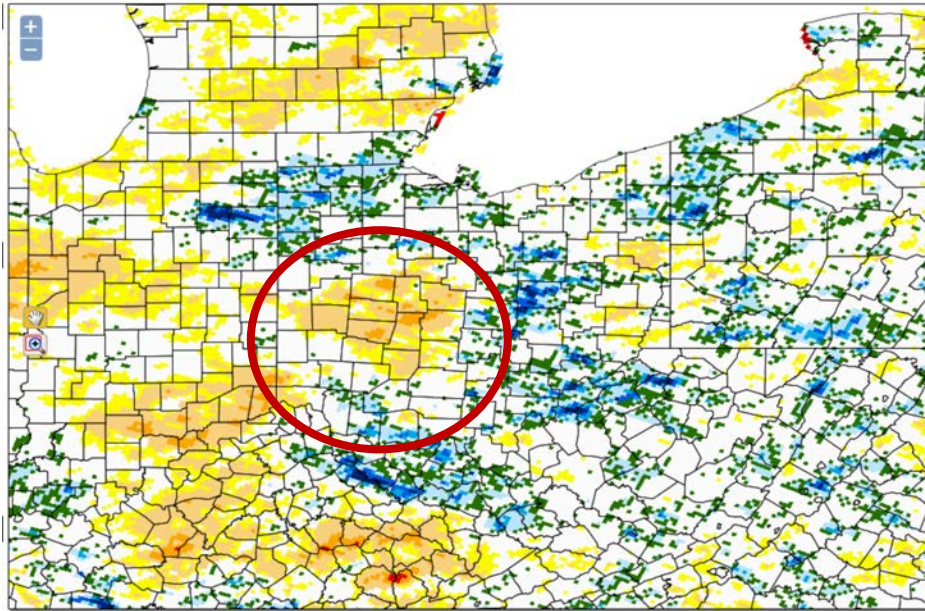
THE OHIO STATE UNIVERSITY

STATE CLIMATE OFFICE OF OHIO (SCOO)
COLLEGE OF FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES
DEPARTMENT OF EXTENSION
BYRD POLAR & CLIMATE RESEARCH CENTER
DEPARTMENT OF GEOGRAPHY

Standard Precipitation Index

30-Day

60-Day

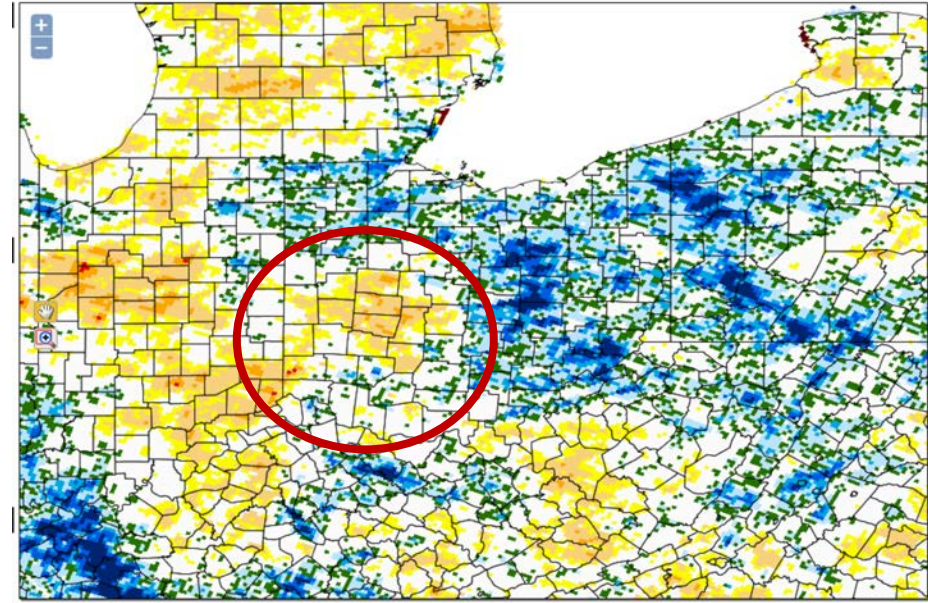


30 day SPI for August 19, 2019

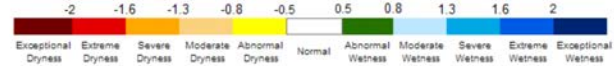


Transparency:

DOWNLOAD
GEO TIFF



60 day SPI for August 19, 2019



Transparency:

DOWNLOAD
GEO TIFF



NORTH CAROLINA
CLIMATE OFFICE

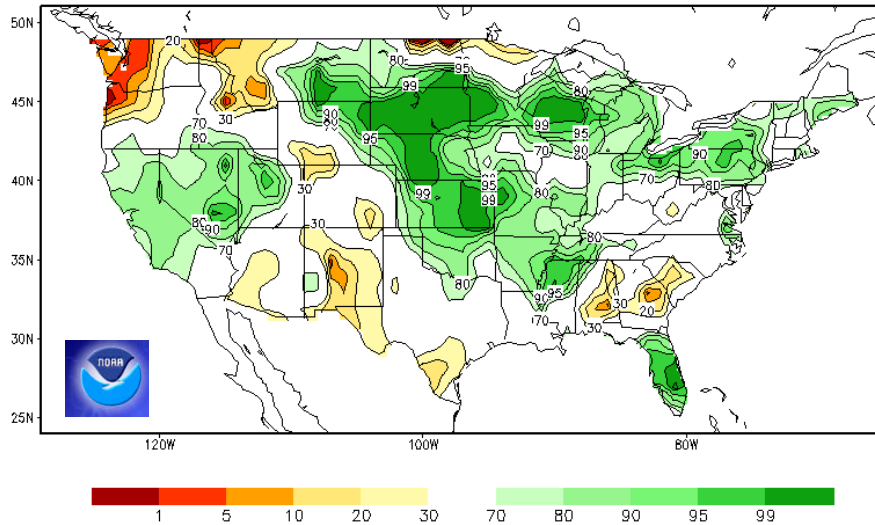


THE OHIO STATE UNIVERSITY

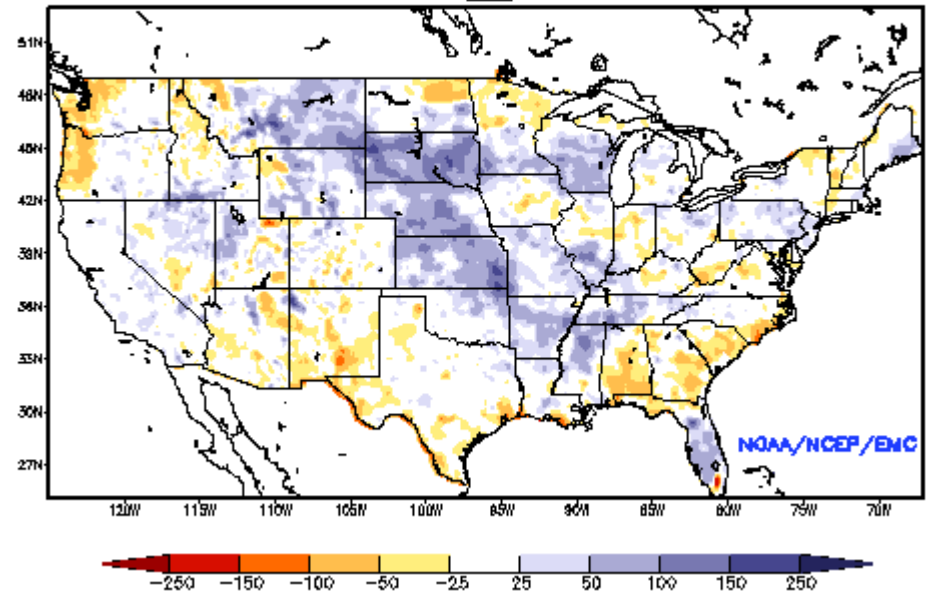
STATE CLIMATE OFFICE OF OHIO (SCOO)
COLLEGE OF FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES
DEPARTMENT OF EXTENSION
BYRD POLAR & CLIMATE RESEARCH CENTER
DEPARTMENT OF GEOGRAPHY

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



STATE CLIMATE OFFICE OF OHIO (SCOO)

COLLEGE OF FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES

DEPARTMENT OF EXTENSION

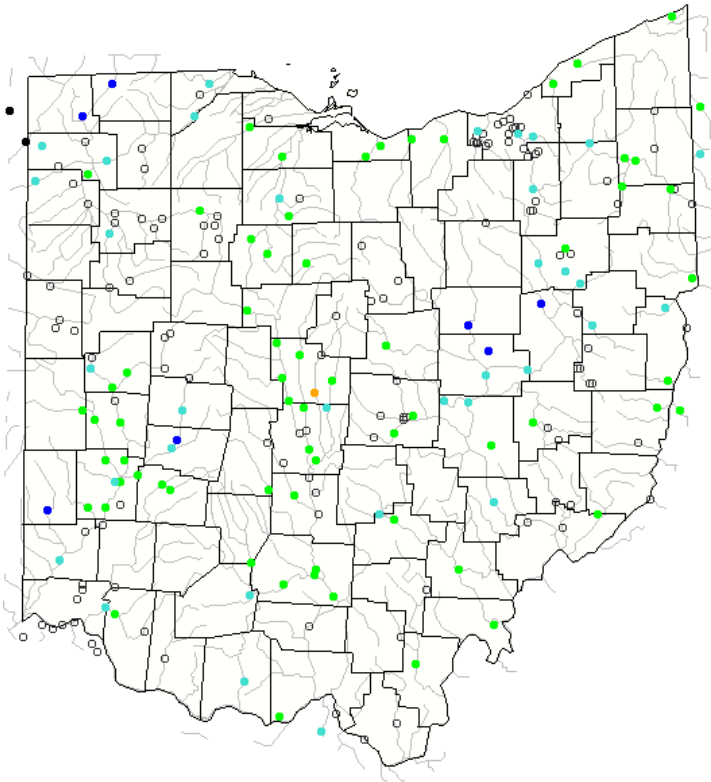
BYRD POLAR & CLIMATE RESEARCH CENTER

DEPARTMENT OF GEOGRAPHY



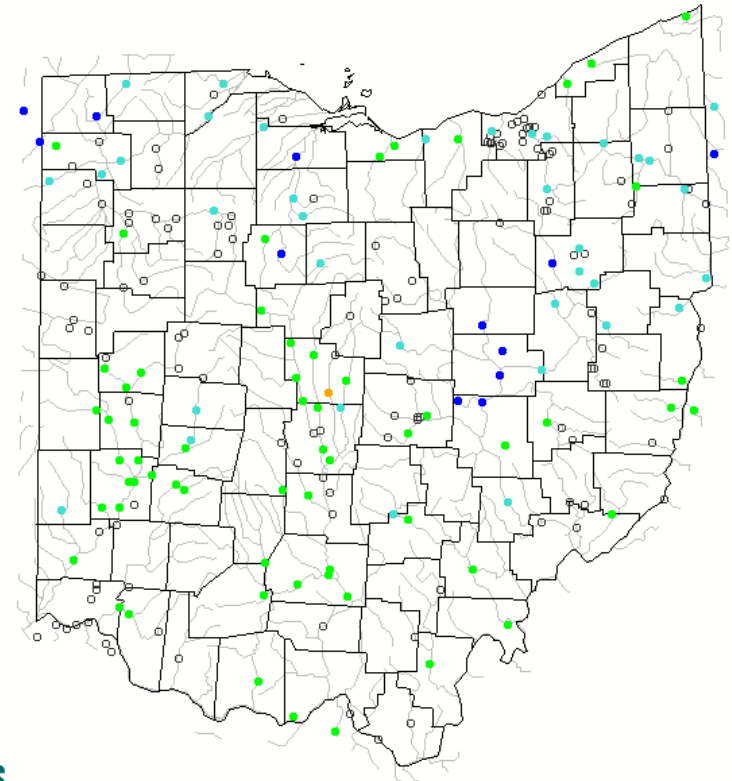
THE OHIO STATE UNIVERSITY

7-DAY



USGS Streamflow

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



STATE CLIMATE OFFICE OF OHIO (SCOO)

COLLEGE OF FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES

DEPARTMENT OF EXTENSION

BYRD POLAR & CLIMATE RESEARCH CENTER

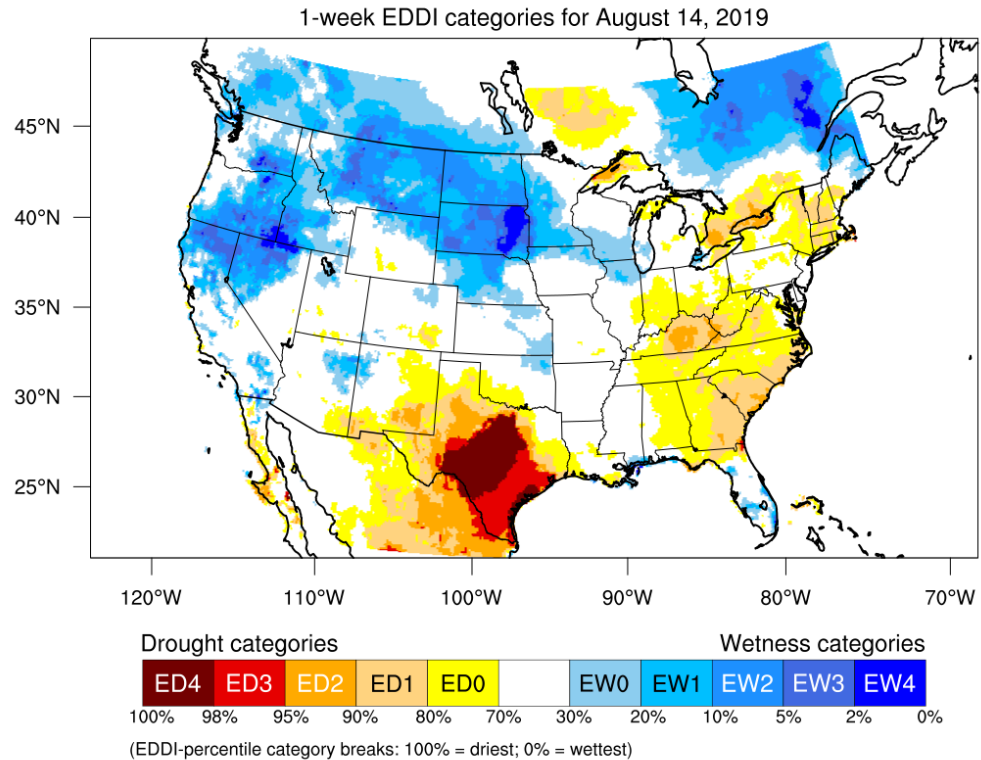
DEPARTMENT OF GEOGRAPHY



THE OHIO STATE UNIVERSITY

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

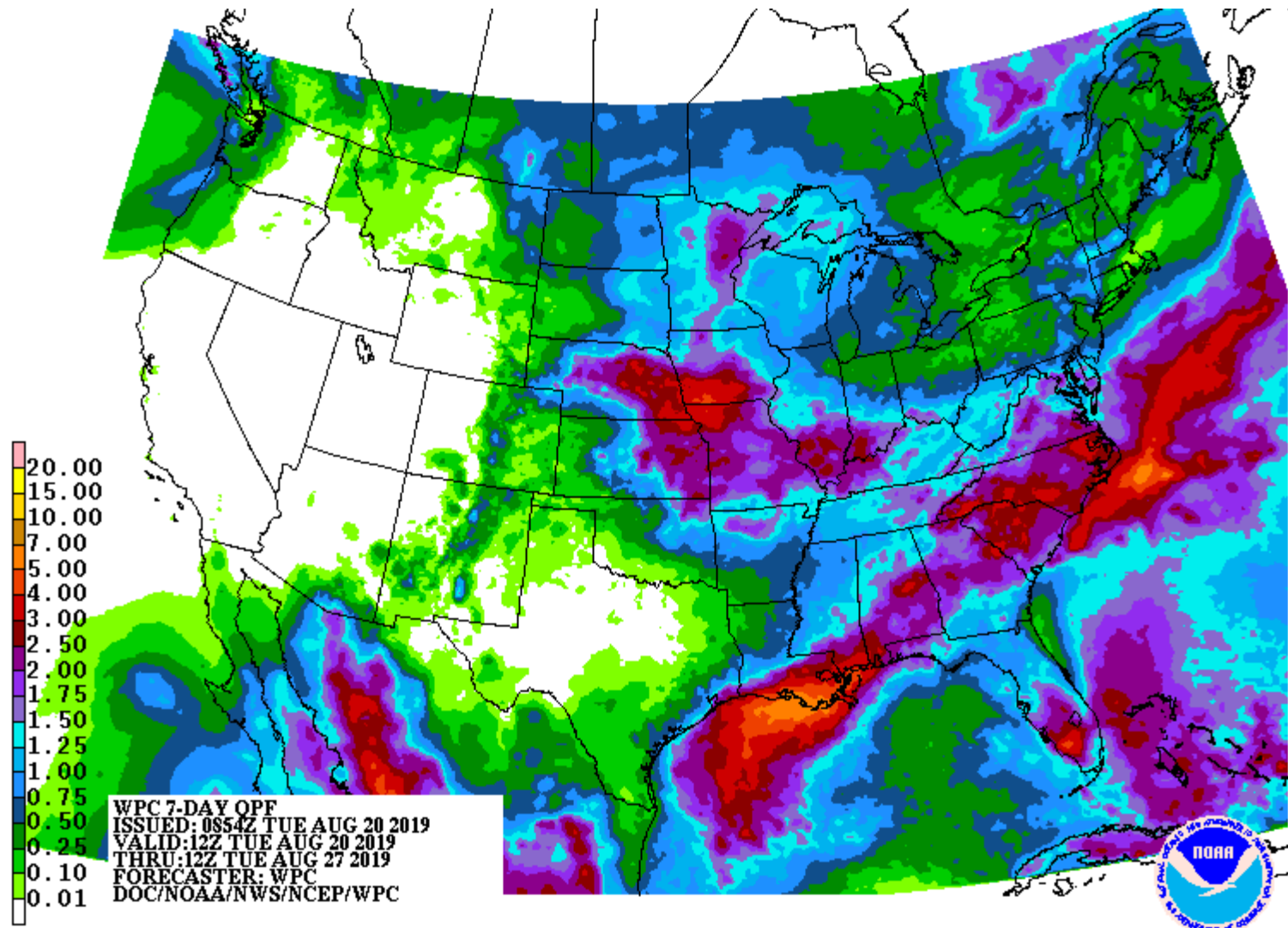
Image provided by the NOAA/ESRL Physical Sciences Division, Boulder, Colorado, from their web site at: <https://www.esrl.noaa.gov/psd/>.



THE OHIO STATE UNIVERSITY

STATE CLIMATE OFFICE OF OHIO (SCOO)
COLLEGE OF FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES
DEPARTMENT OF EXTENSION
BYRD POLAR & CLIMATE RESEARCH CENTER
DEPARTMENT OF GEOGRAPHY

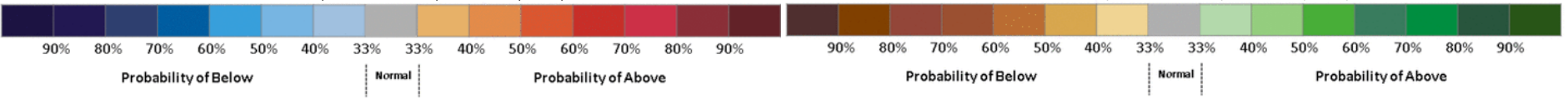
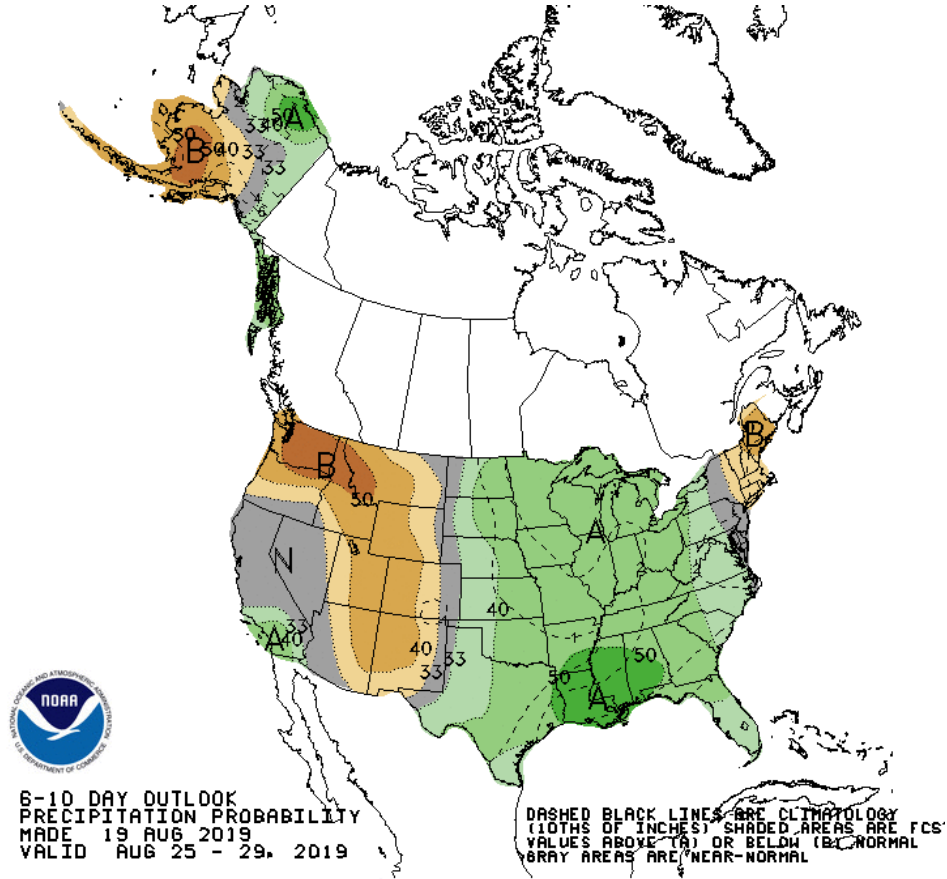
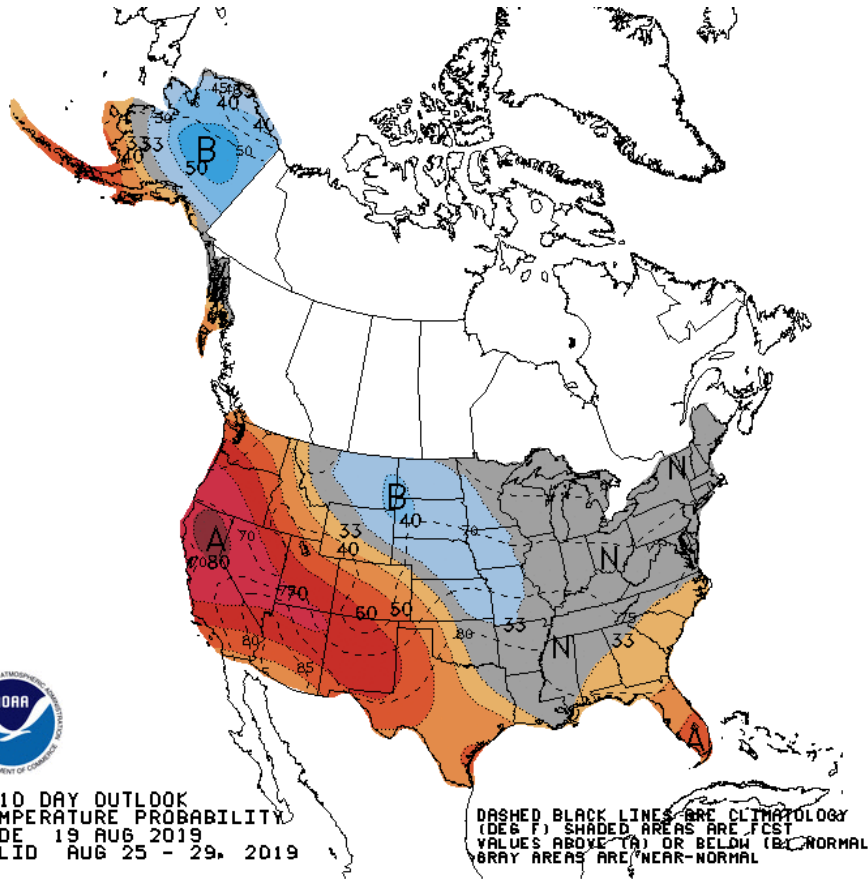
Weather for the Week Ahead



THE OHIO STATE UNIVERSITY

STATE CLIMATE OFFICE OF OHIO (SCOO)
COLLEGE OF FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES
DEPARTMENT OF EXTENSION
BYRD POLAR & CLIMATE RESEARCH CENTER
DEPARTMENT OF GEOGRAPHY

6-10 Day Outlook



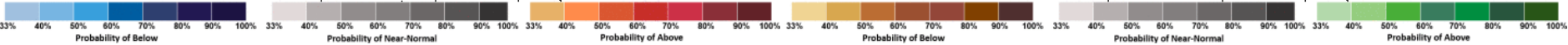
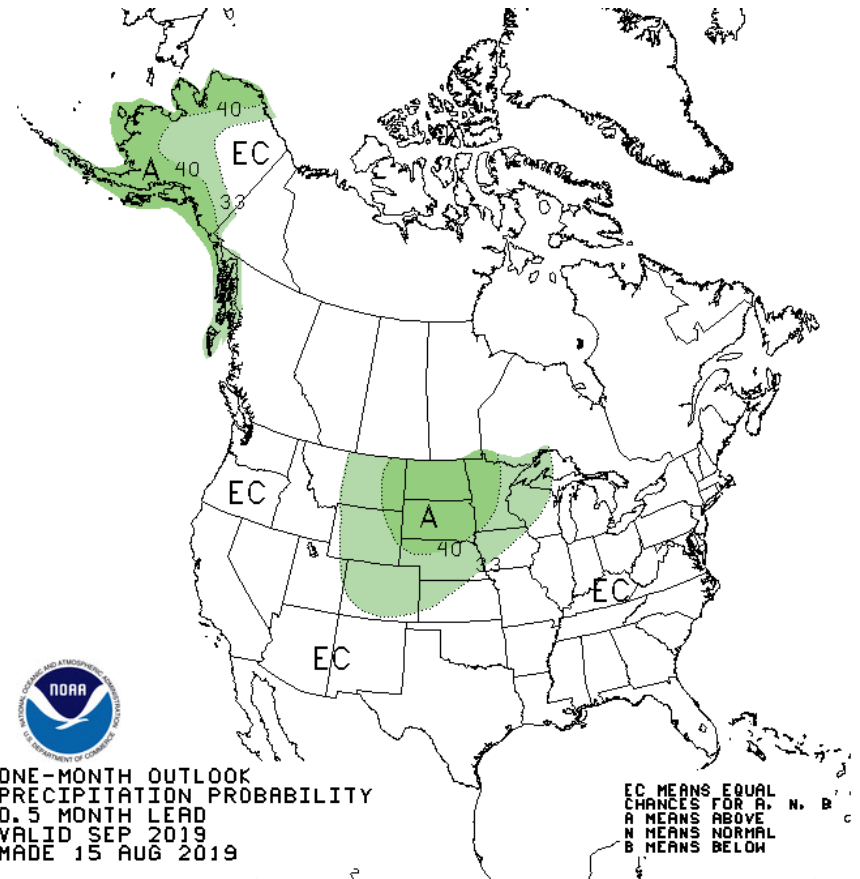
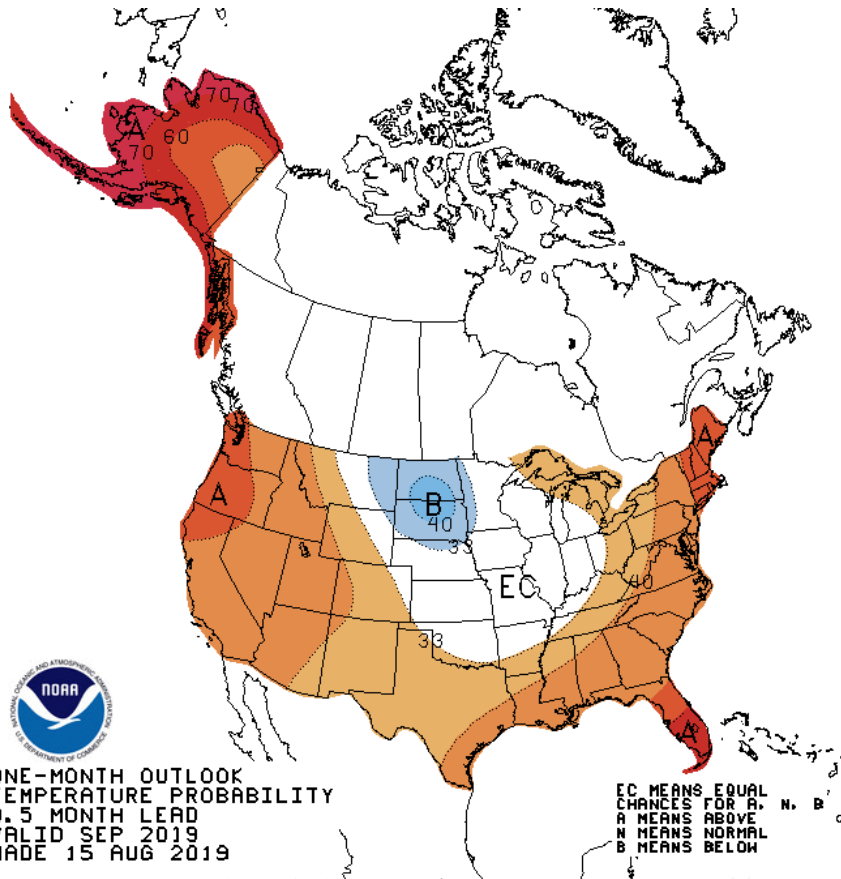
Highs: 80-85°F; Lows: 60-65°F; Precip: 0.75-1.0" (per week)



THE OHIO STATE UNIVERSITY

STATE CLIMATE OFFICE OF OHIO (SCOO)
COLLEGE OF FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES
DEPARTMENT OF EXTENSION
BYRD POLAR & CLIMATE RESEARCH CENTER
DEPARTMENT OF GEOGRAPHY

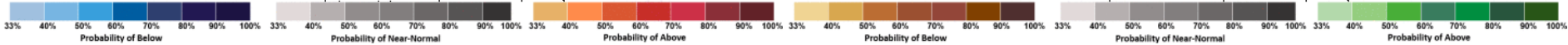
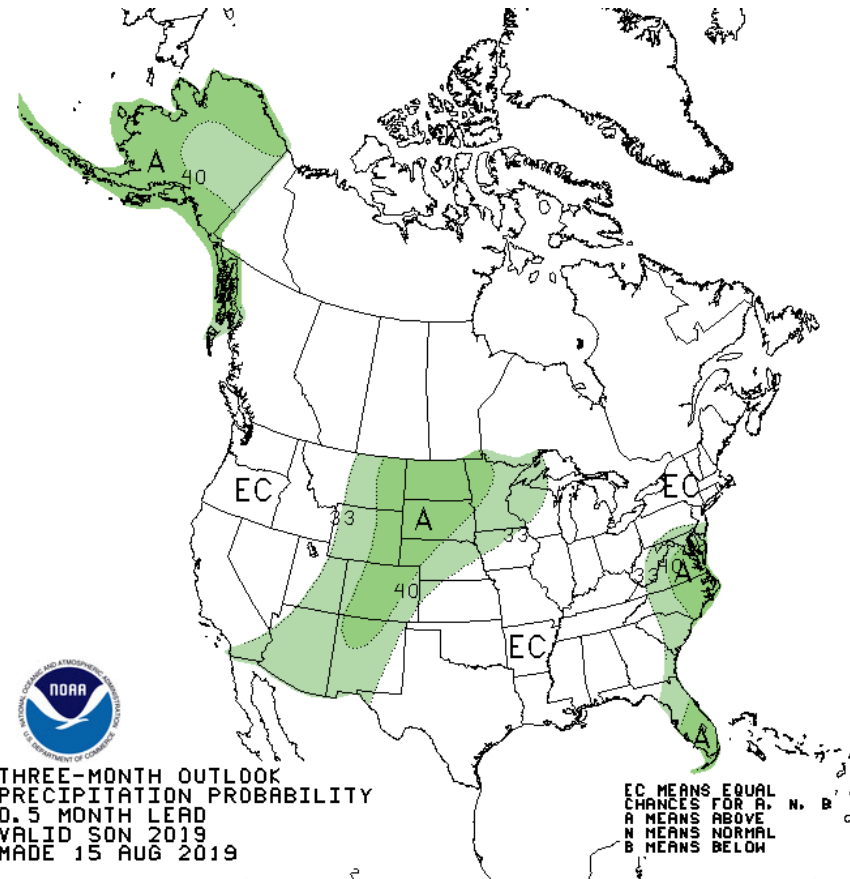
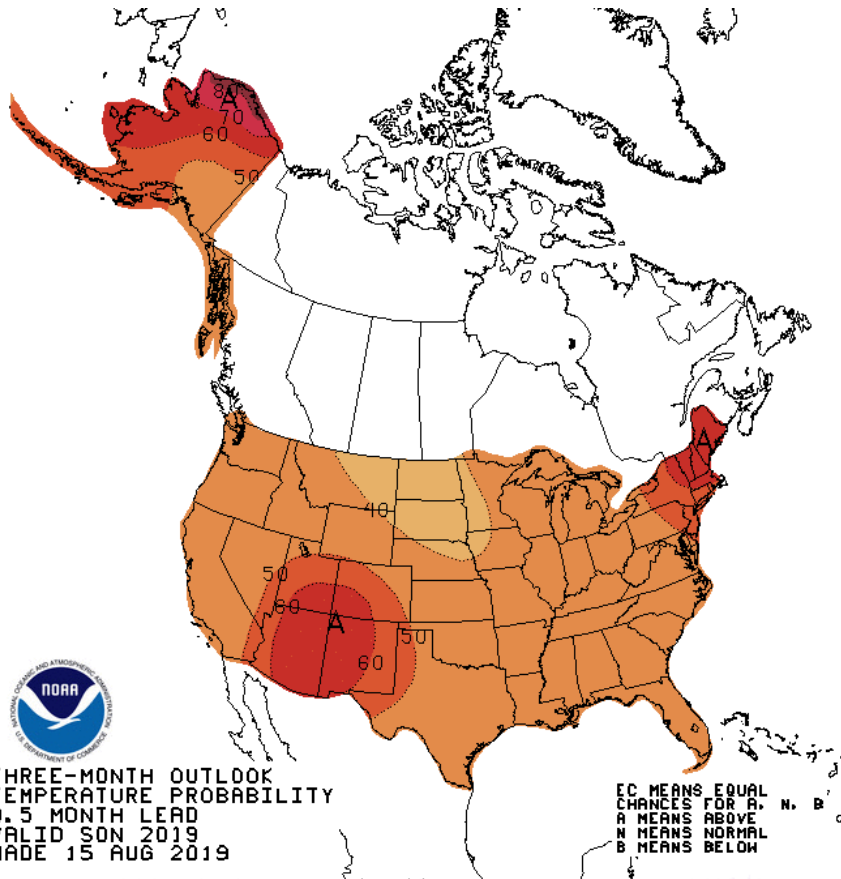
September 2019 Outlook



THE OHIO STATE UNIVERSITY

STATE CLIMATE OFFICE OF OHIO (SCOO)
COLLEGE OF FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES
DEPARTMENT OF EXTENSION
BYRD POLAR & CLIMATE RESEARCH CENTER
DEPARTMENT OF GEOGRAPHY

Sep – Nov 2019 Outlook

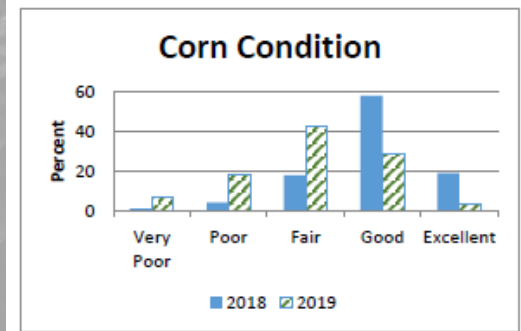
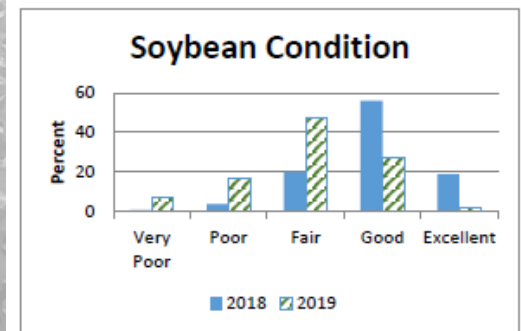
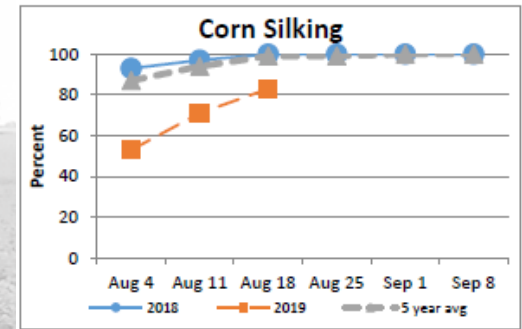


Ag Highlights

- 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



THE OHIO STATE UNIVERSITY

STATE CLIMATE OFFICE OF OHIO (SCOO)
COLLEGE OF FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES
DEPARTMENT OF EXTENSION
BYRD POLAR & CLIMATE RESEARCH CENTER
DEPARTMENT OF GEOGRAPHY

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: "Lazy River Rag" by Dan Lebowitz