

# Hydrologic and Climate Assessment

July 20, 2017

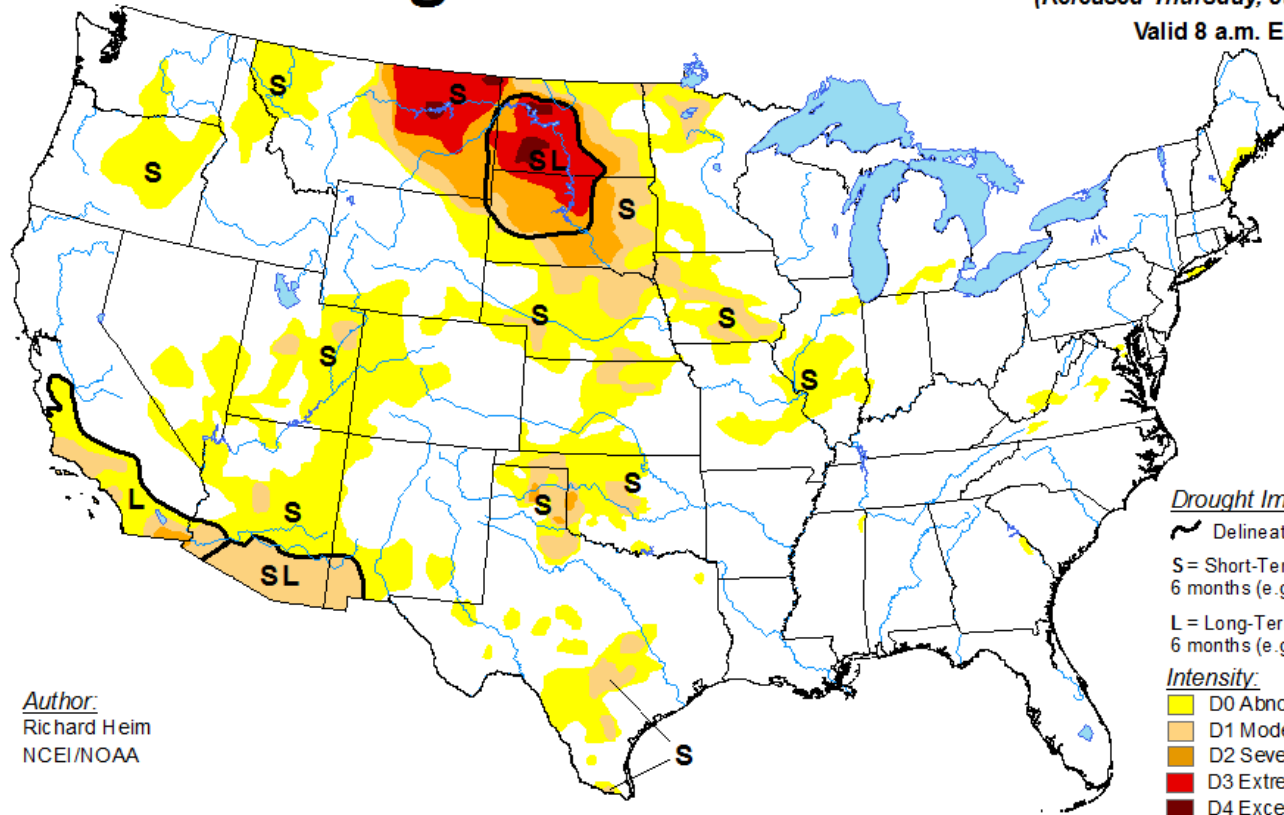


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DEPARTMENT OF GEOGRAPHY

# U.S. Drought Monitor

July 18, 2017  
 (Released Thursday, Jul. 20, 2017)  
 Valid 8 a.m. EDT



*Author:*  
 Richard Heim  
 NCEI/NOAA

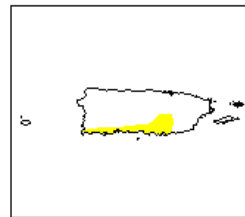
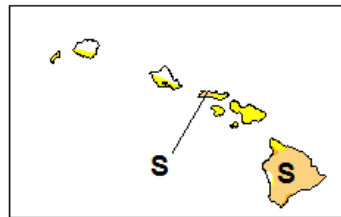
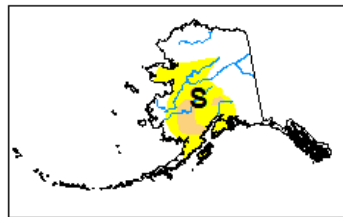
Drought Impact Types:

- ~ 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/>

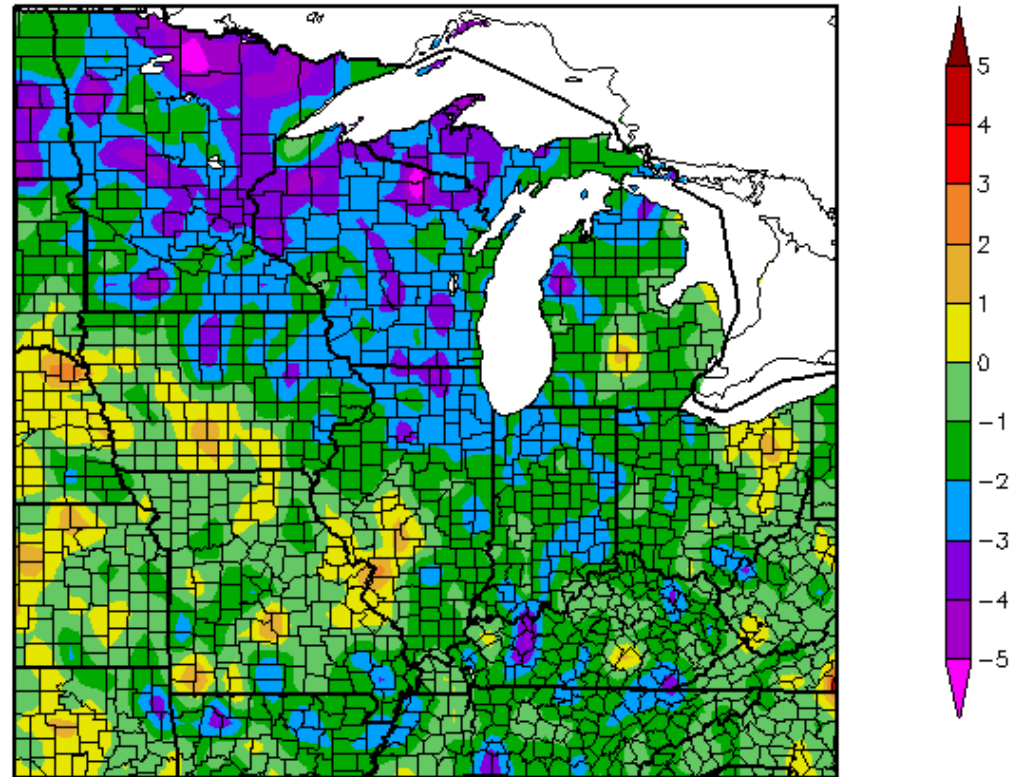


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# Previous 30-Day Temperature Difference Compared to Average (1981-2010)

Departure from Normal Temperature (F)  
6/20/2017 - 7/19/2017



NATIONAL INTEGRATED DROUGHT INFORMATION SYSTEM  
**NIDIS** Drought.gov  
U.S. Drought Portal

Generated 7/20/2017 at HPRCC using provisional data.

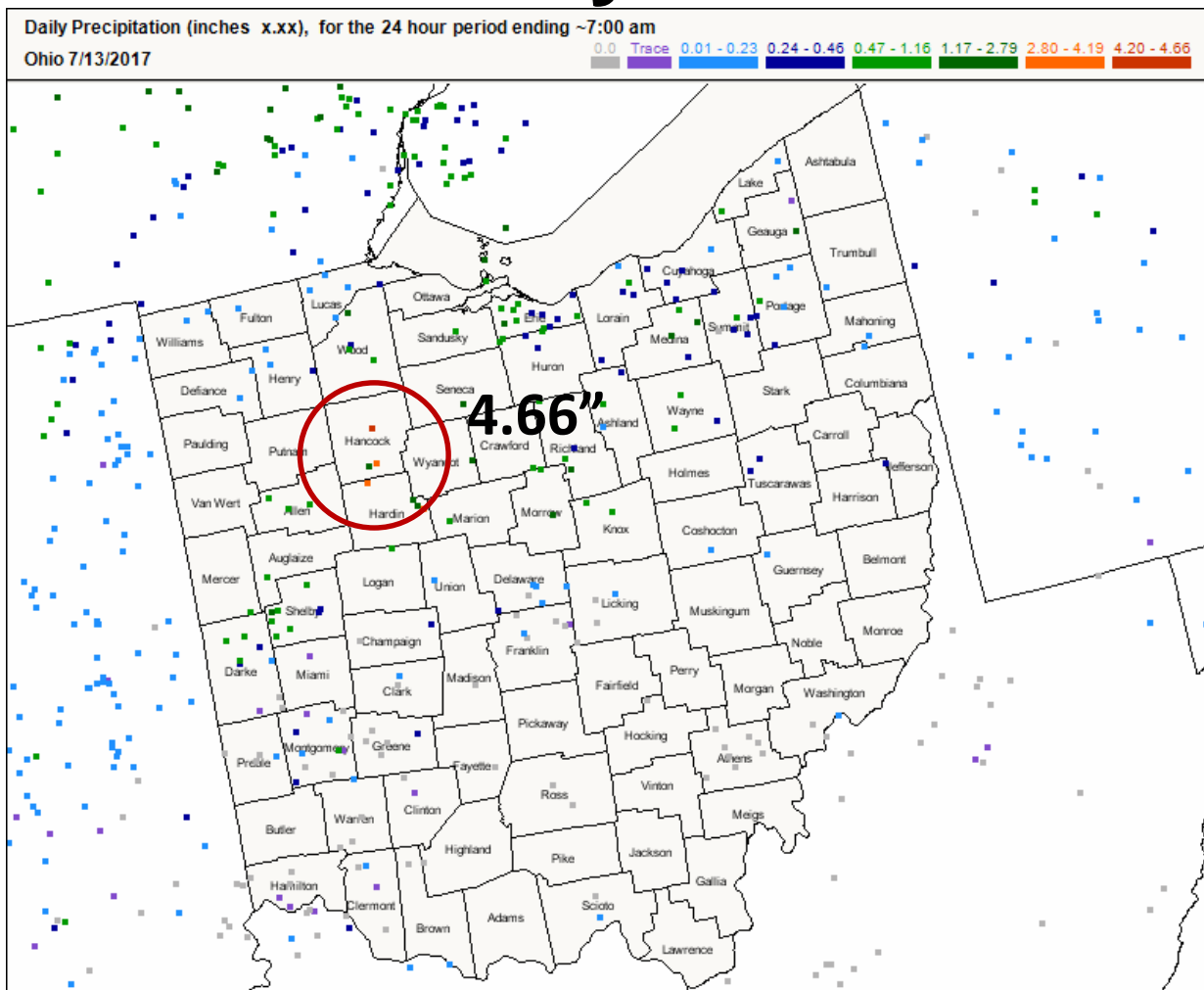
Regional Climate Centers



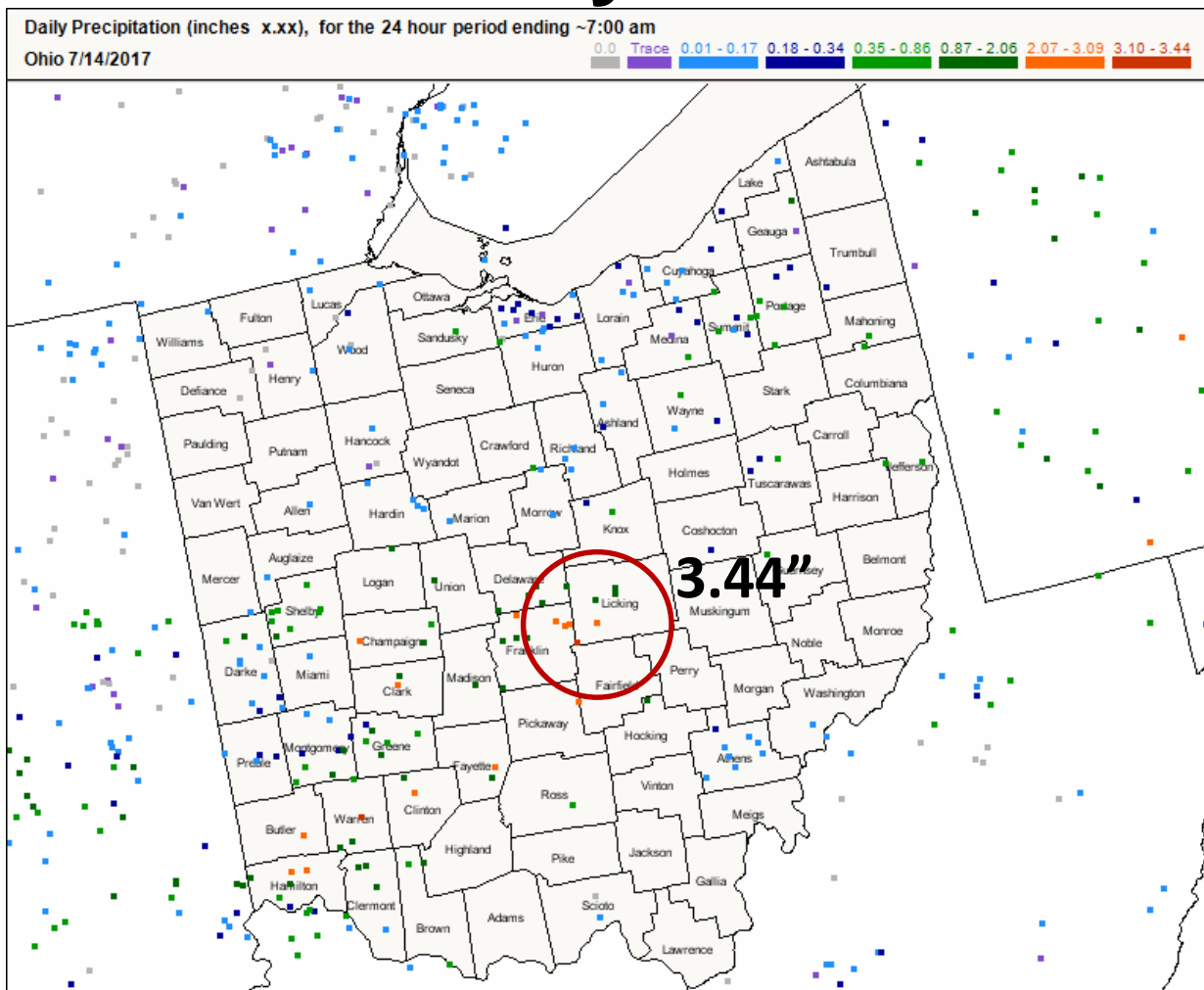
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# CoCoRaHS Observed Precipitation: July 13



# CoCoRaHS Observed Precipitation: July 14



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# Licking County Flooding

## July 14



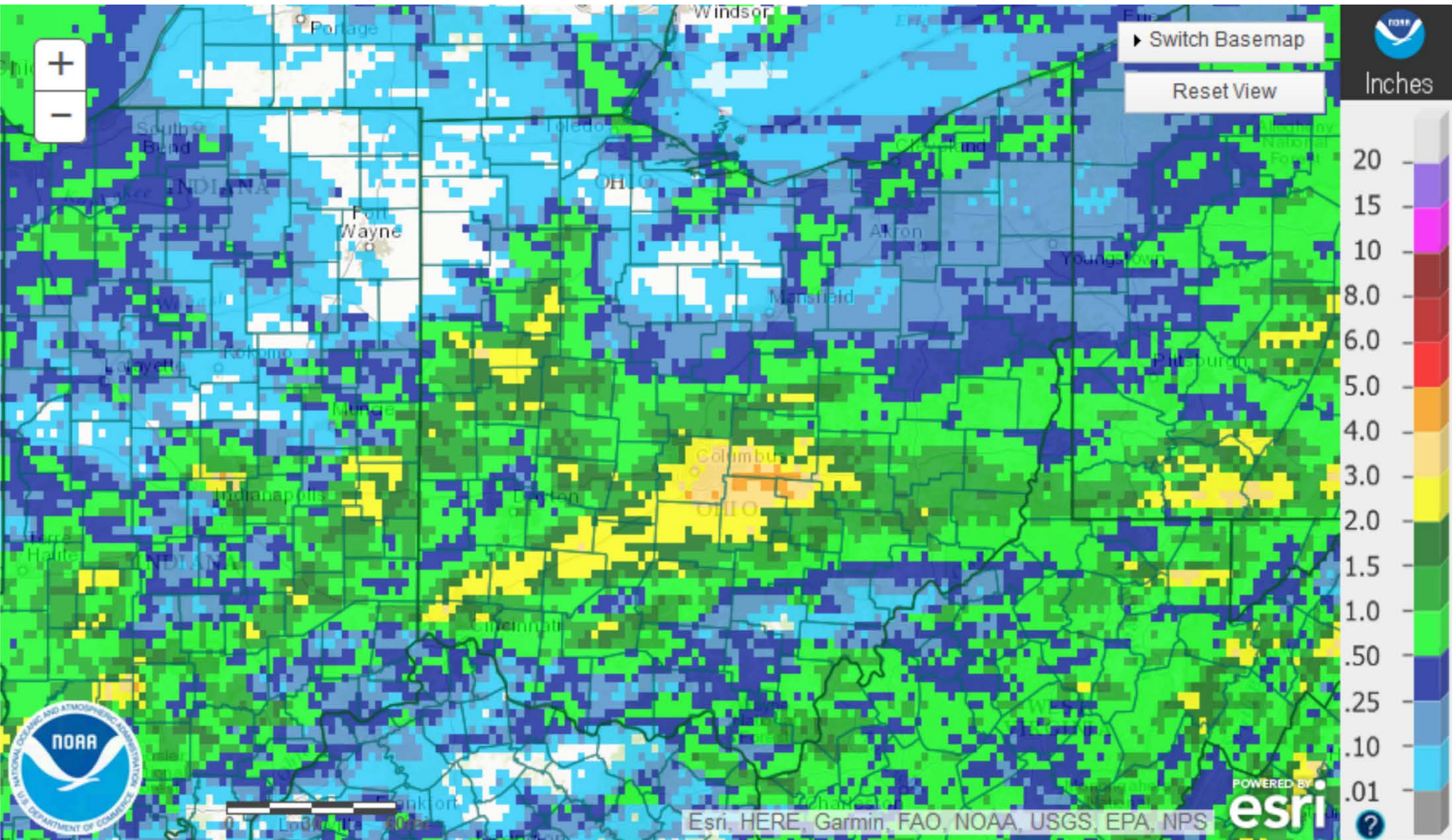
**Photos courtesy of Ohio DOT:  
Flooding of I-70 through Licking  
County in Central Ohio on July 14,  
2017**



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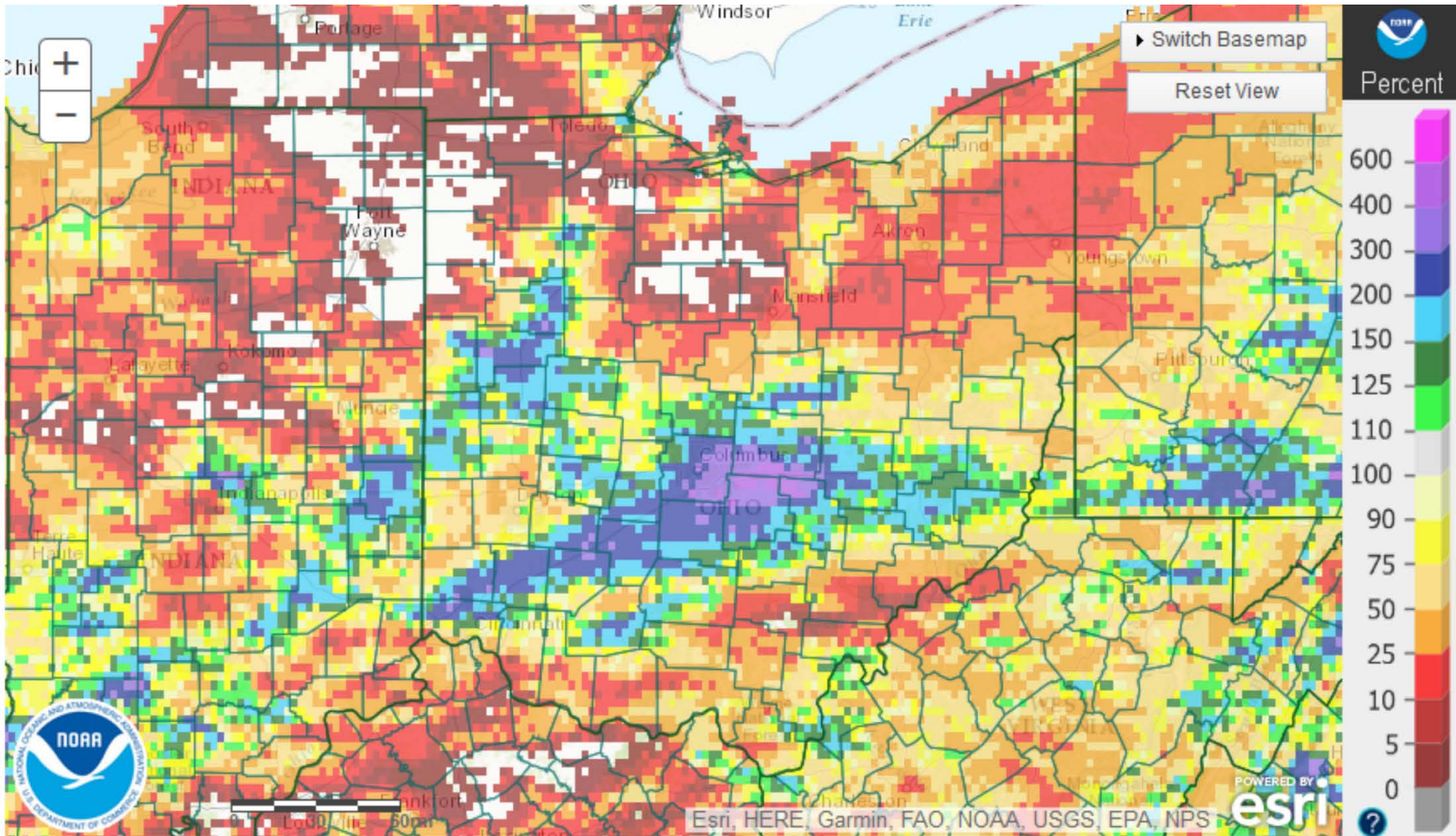
# Previous 7-Day Precipitation: Total



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# Previous 7-Day Precipitation: Percent of Normal



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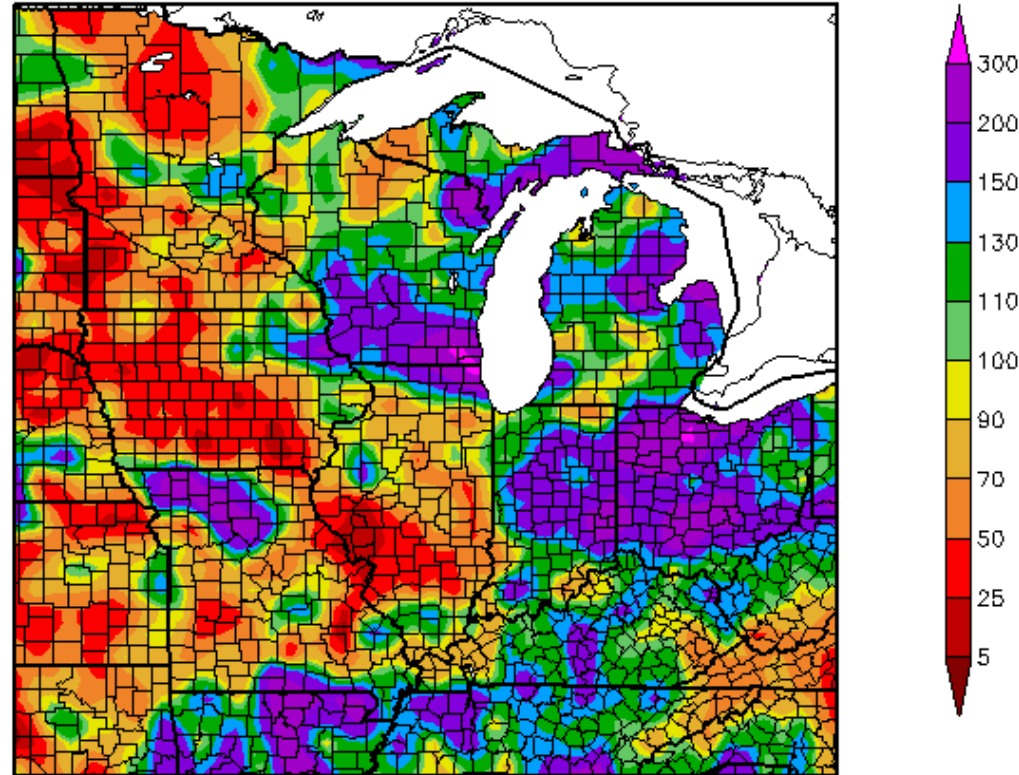
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# Previous 30-Day Precipitation Difference Compared to Average (1981-2010)

Percent of Normal Precipitation (%)  
6/20/2017 - 7/19/2017



NATIONAL INTEGRATED DROUGHT INFORMATION SYSTEM  
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U.S. Drought Portal

Generated 7/20/2017 at HPRCC using provisional data.

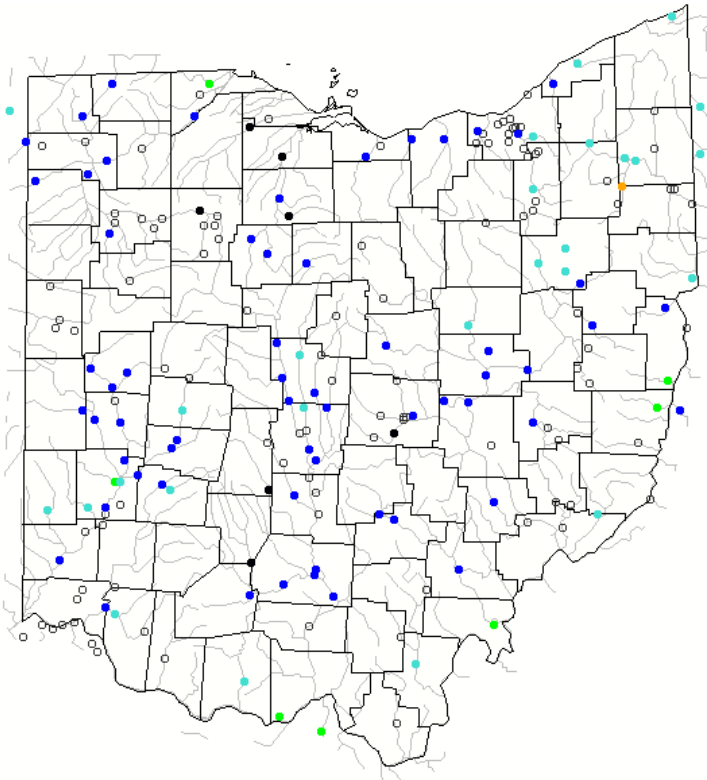
Regional Climate Centers



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7-DAY



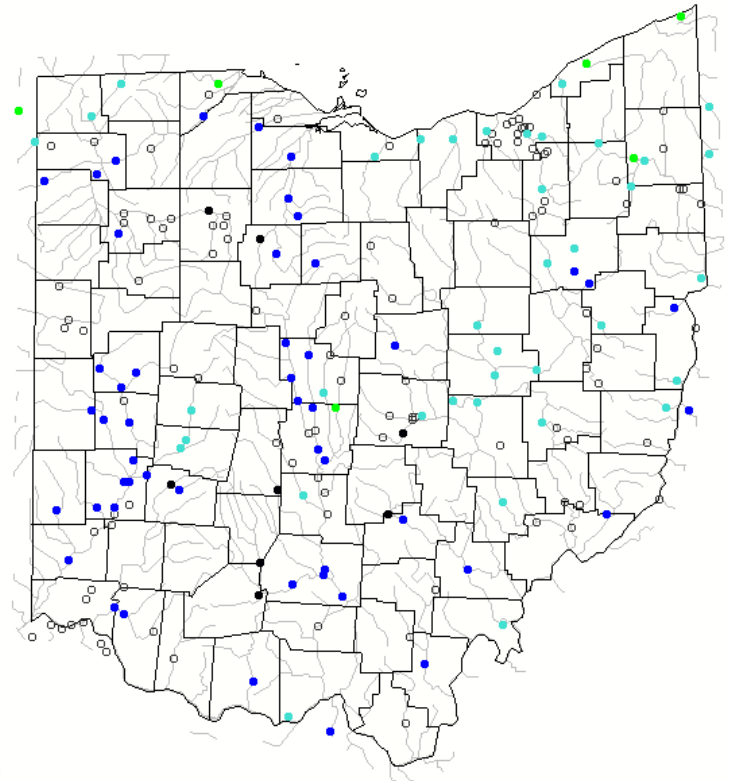
Explanation - Percentile classes

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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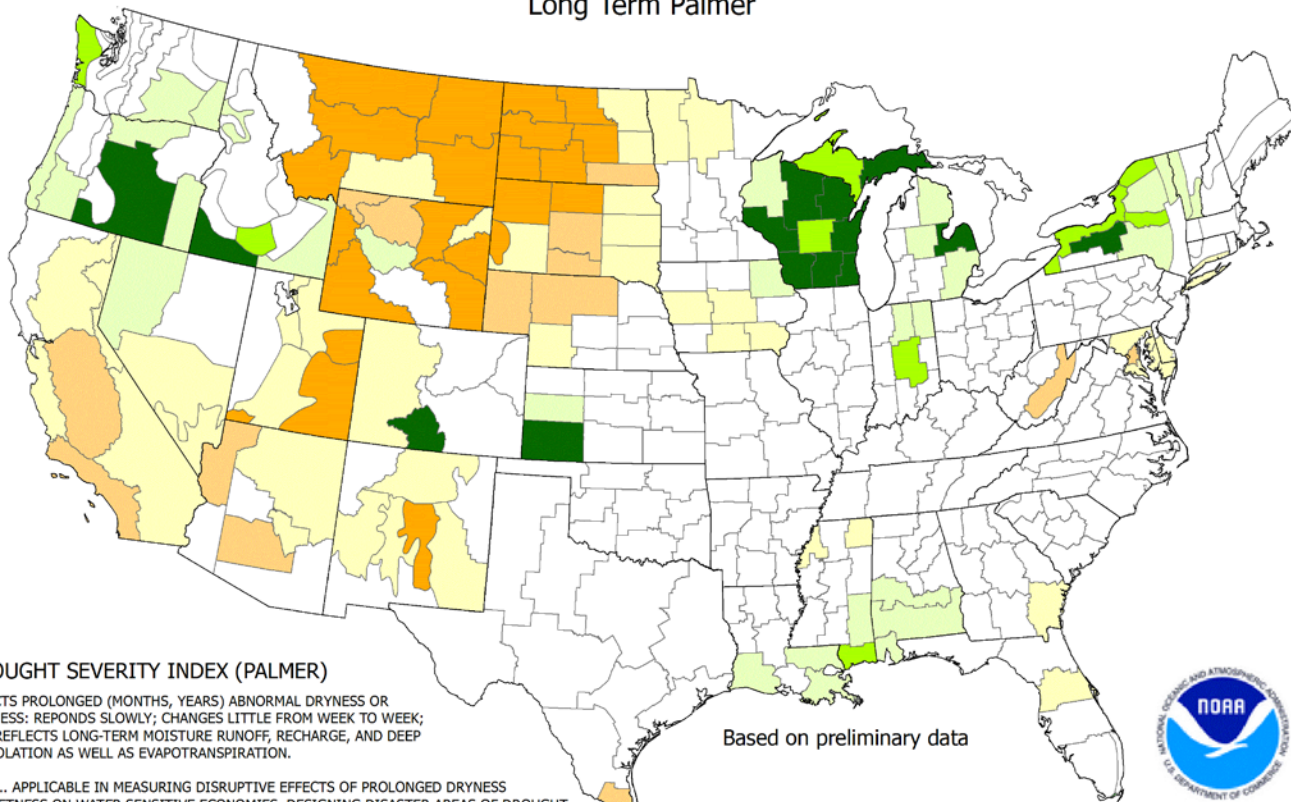
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# Palmer Drought Severity Index (PDSI)

Drought Severity Index by Division  
Weekly Value for Period Ending Jul 15, 2017  
Long Term Palmer



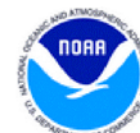
## DROUGHT SEVERITY INDEX (PALMER)

DEPICTS PROLONGED (MONTHS, YEARS) ABNORMAL DRYNESS OR WETNESS; REponds SLOWLY; CHANGES LITTLE FROM WEEK TO WEEK; AND REFLECTS LONG-TERM MOISTURE RUNOFF, RECHARGE, AND DEEP PERCOLATION AS WELL AS EVAPOTRANSPIRATION.

USES... APPLICABLE IN MEASURING DISRUPTIVE EFFECTS OF PROLONGED DRYNESS OR WETNESS ON WATER SENSITIVE ECONOMIES, DESIGNING DISASTER AREAS OF DROUGHT OR WETNESS; AND REFLECTING THE GENERAL LONG-TERM STATUS OF WATER SUPPLIES IN AQUIFERS, RESERVOIRS AND STREAMS.

LIMITATIONS... IS NOT GENERALLY INDICATIVE OFFSHORT-TERM (FEW WEEKS) STATUS OF DROUGHT OR WETNESS SUCH AS FREQUENTLY AFFECTS CROPS AND FIELD OPERATIONS (THIS IS INDICATED BY THE CROP MOISTURE INDEX).

Based on preliminary data



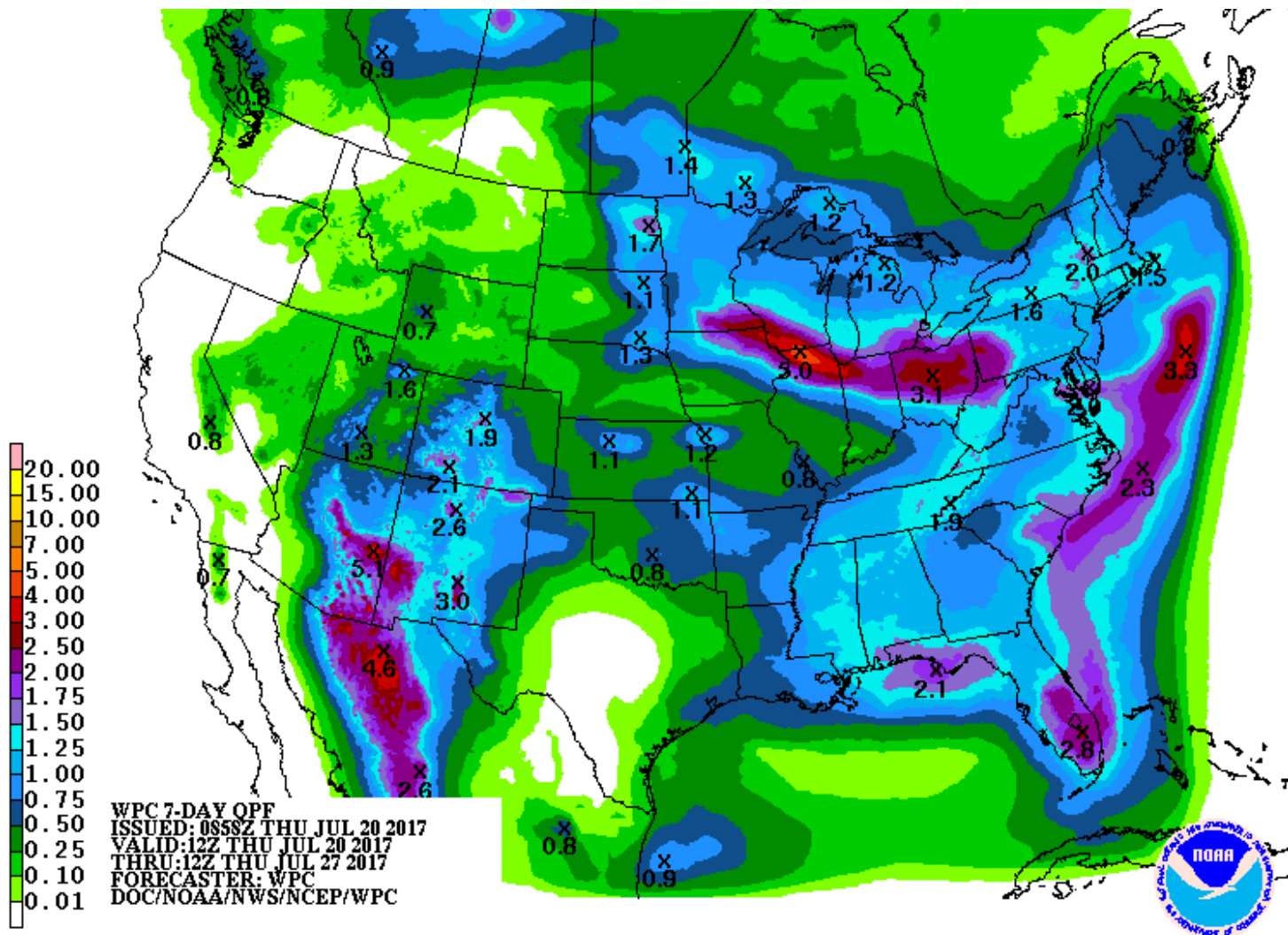
- 4.0 or less (Extreme Drought)
- 3.0 to -3.9 (Severe Drought)
- 2.0 to -2.9 (Moderate Drought)
- 1.9 to +1.9 (Near Normal)
- +2.0 to +2.9 (Unusual Moist Spell)
- +3.0 to +3.9 (Very Moist Spell)
- +4.0 and above (Extremely Moist)



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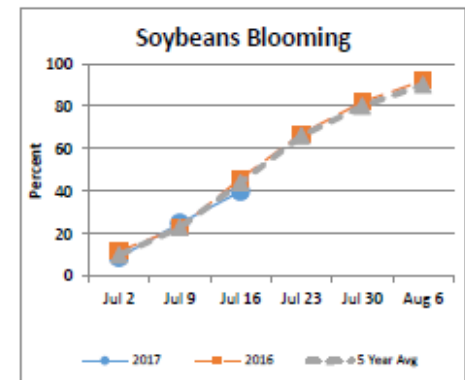
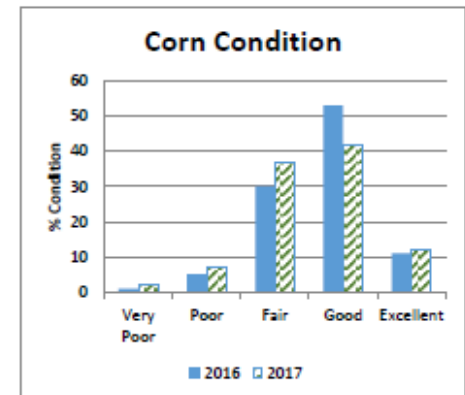
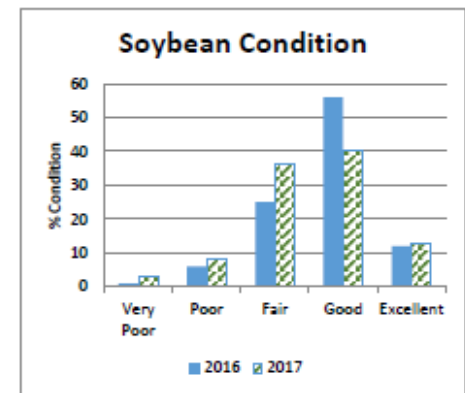
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# Weather for the Week Ahead



# Ag Highlights

- Crops are stressed from too much rain!  
Bottom line: Early planted crops are faring much better than late planted crops.
- **Corn:** Fields are highly variable due to replanting and wetness
- **Soybeans:** Lots of yellowing, stunted growth, “ugly looking”



NASS: Cheryl Turner –

[https://www.nass.usda.gov/Statistics\\_by\\_State/Ohio/Publications/Crop\\_Progress\\_&\\_Condition/2017/cw2817oh.pdf](https://www.nass.usda.gov/Statistics_by_State/Ohio/Publications/Crop_Progress_&_Condition/2017/cw2817oh.pdf)



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# Summary of Conditions



**Drought Monitor:** No signs

**30-Day and 60-Day:** 1-3x normal; lots of standing water remains

**Precipitation:** After a short dry period, thunderstorms likely today through the weekend with locally heavy rain possible



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