Hydrologic and Climate Assessment

THE OHIO STATE UNIVERSITY
COLLEGE OF FOOD, AGRICULTURAL AND ENVIRONMENTAL SCIENCES

16 May 2017

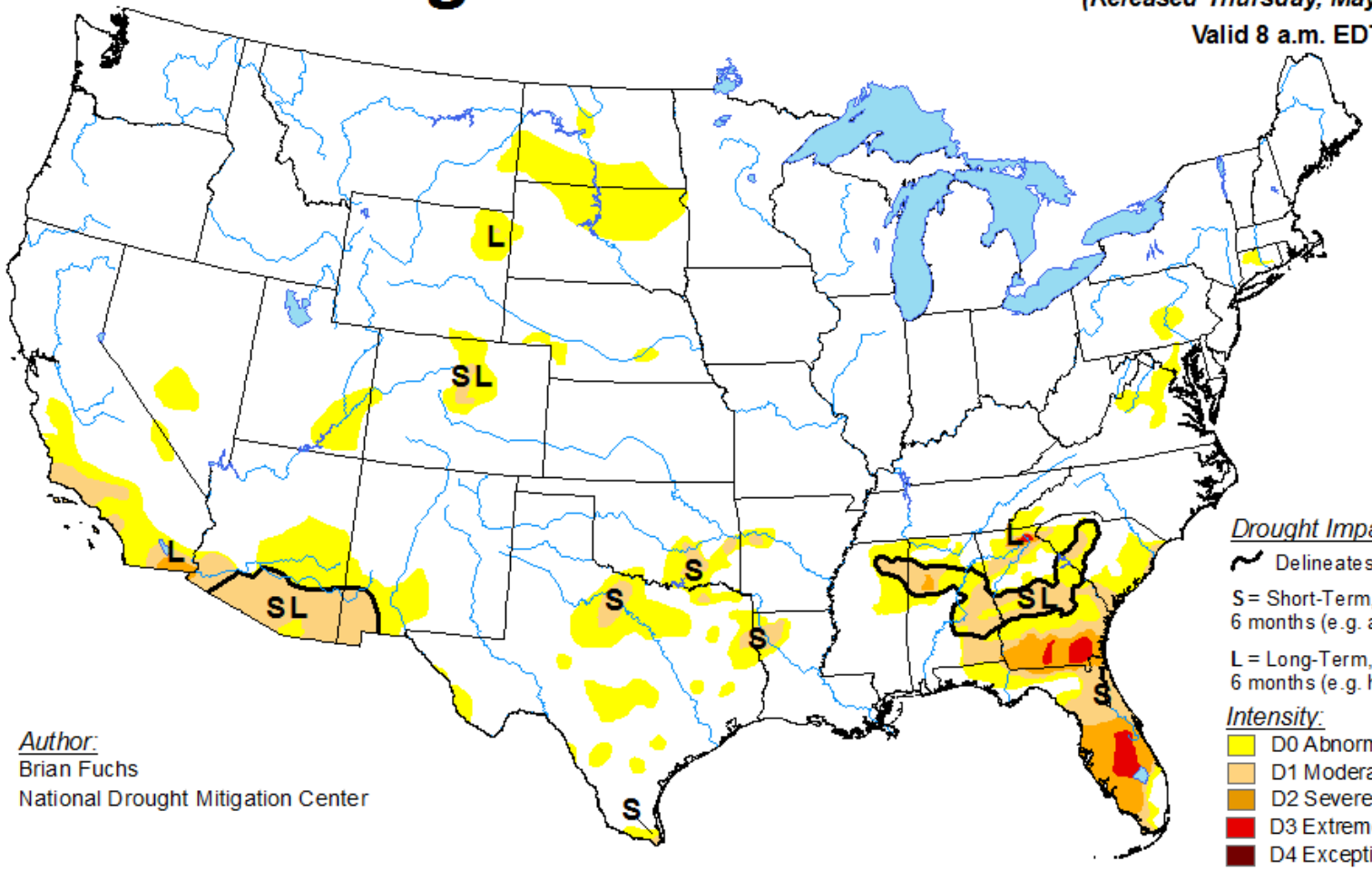
BPCRC.OSU.EDU

U.S. Drought Monitor

May 9, 2017

(Released Thursday, May. 11, 2017)

Valid 8 a.m. EDT



Author:
Brian Fuchs
National Drought Mitigation Center

Drought Impact Types:

Delineates dominant impacts

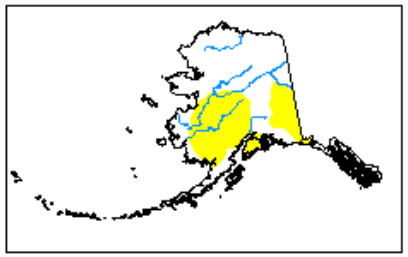
S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)

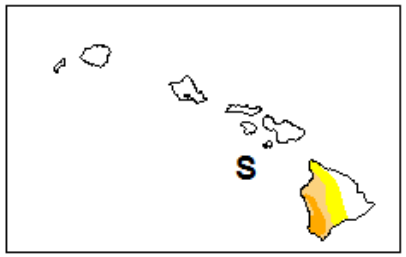
L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)

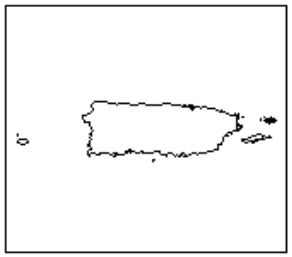
Intensity:

- 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.



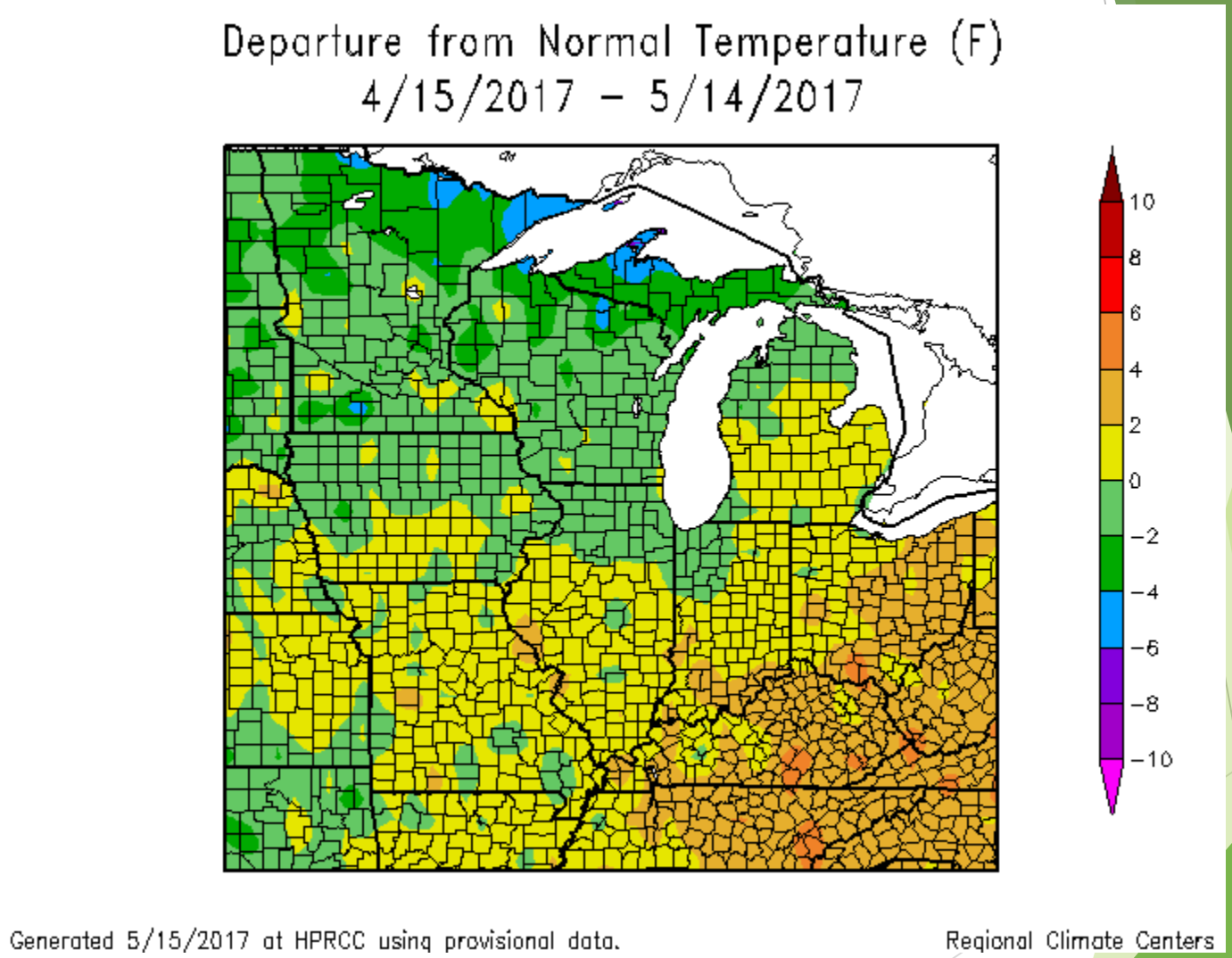




USDA NDMC NOAA

http://droughtmonitor.unl.edu/

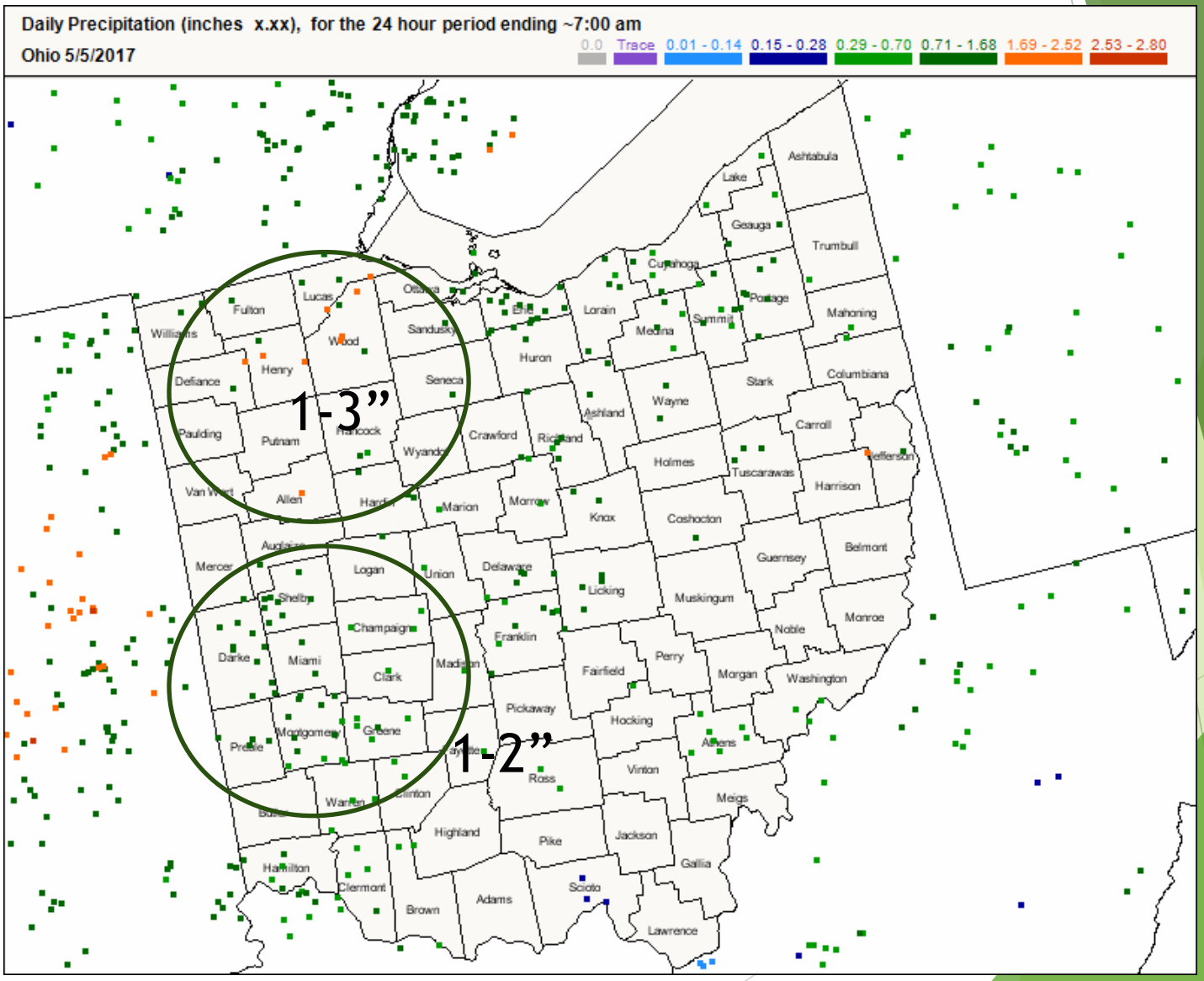
Previous 30-Day Temperature



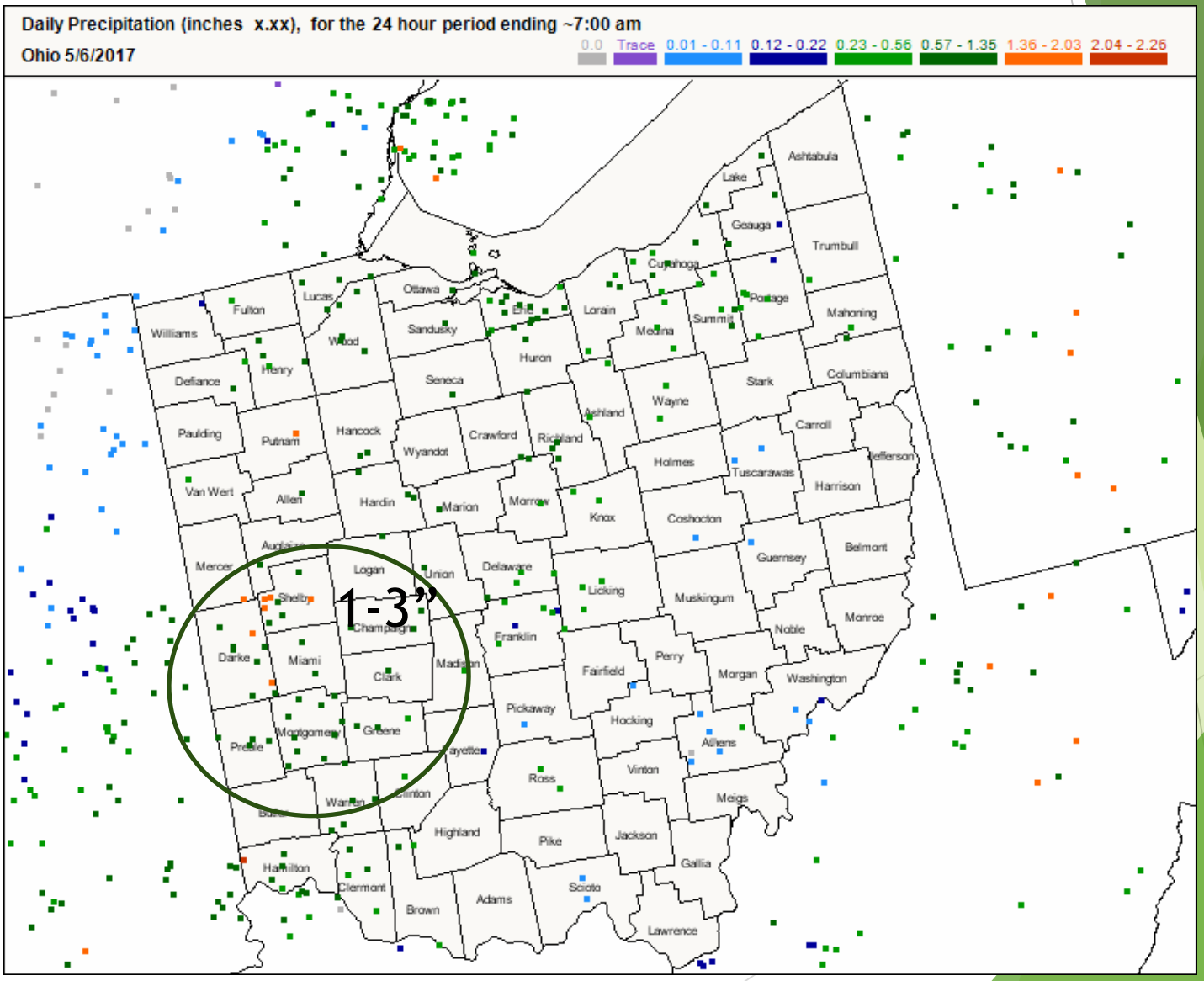
NATIONAL INTEGRATED DROUGHT INFORMATION SYSTEM

NIDIS Drought.gov
U.S. Drought Portal

CoCoRaHS: 5 May

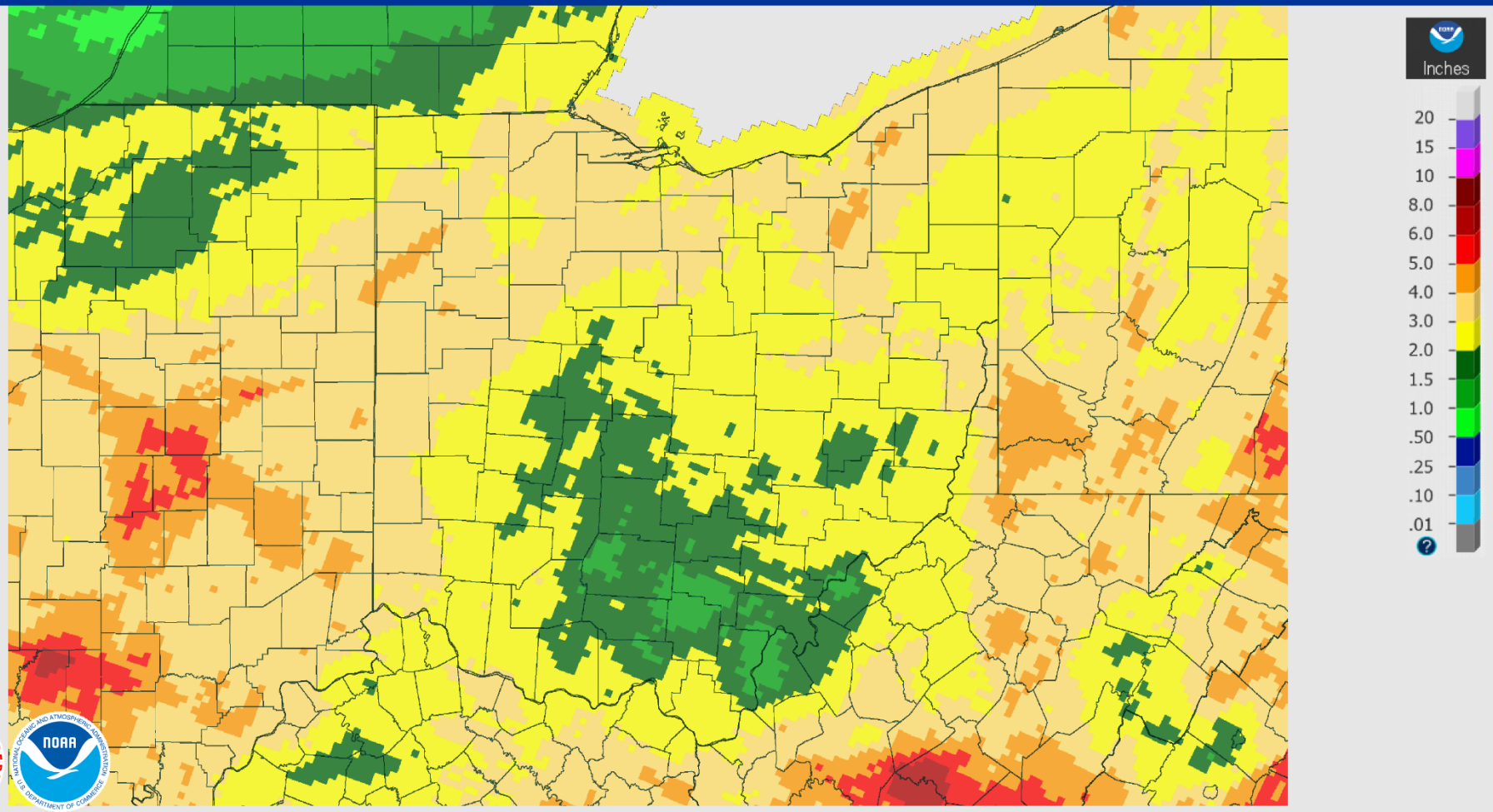


CoCoRaHS: 6 May



Previous 14-Day Precipitation

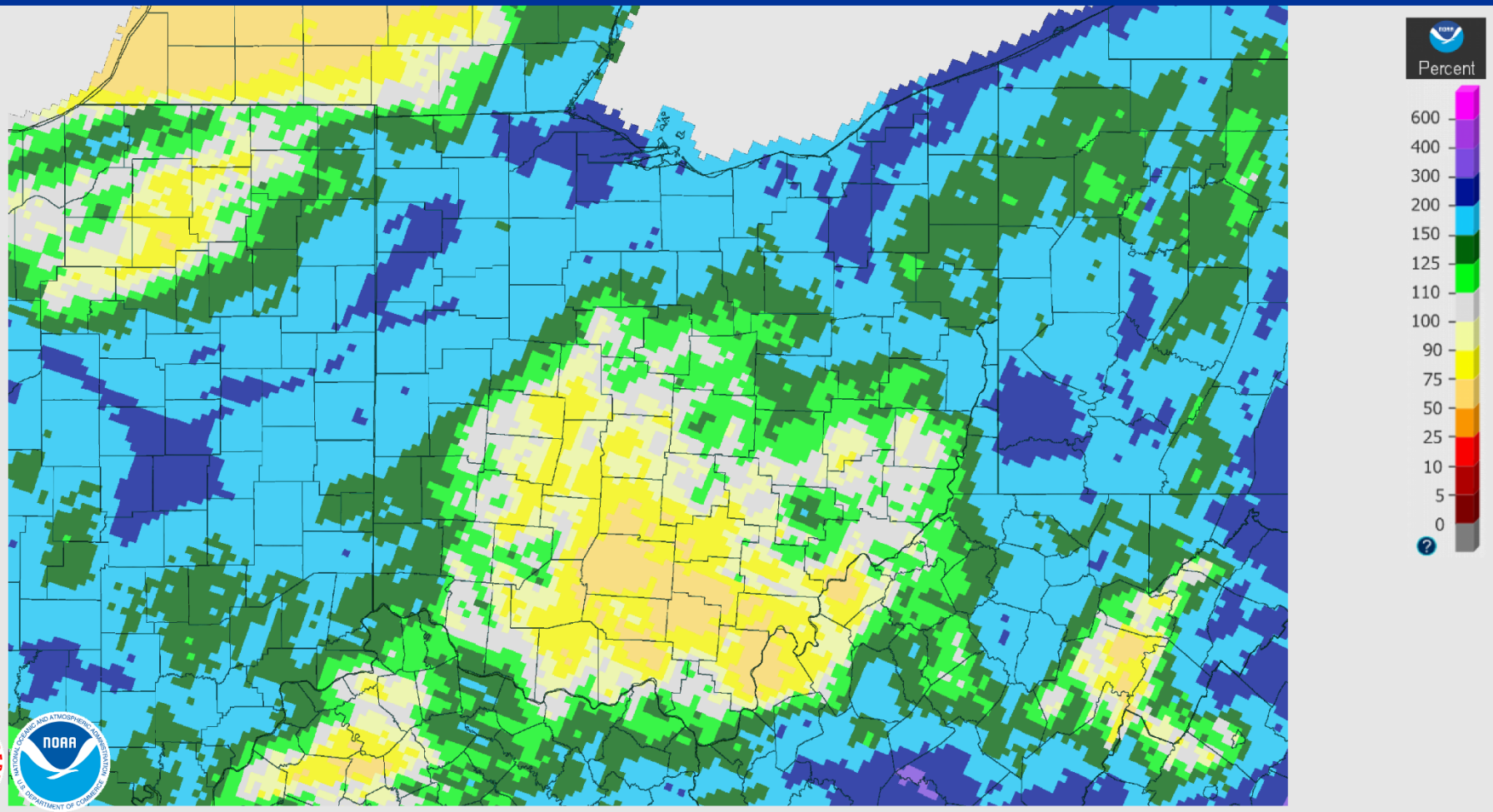
May 15, 2017 14-Day Observed Precipitation
Created on: May 16, 2017 - 11:46 UTC
Valid on: May 15, 2017 12:00 UTC



Total Observed

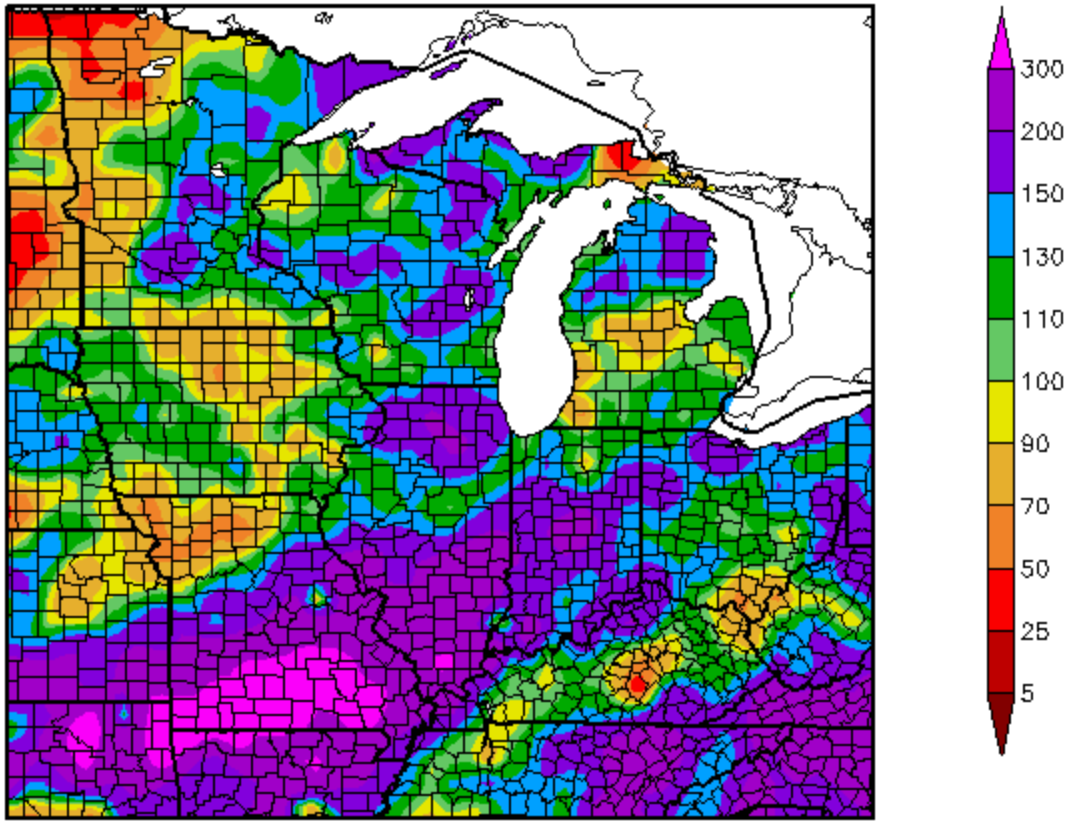
Previous 14-Day Precipitation

May 15, 2017 14-Day Percent Precipitation
Created on: May 16, 2017 - 11:47 UTC
Valid on: May 15, 2017 12:00 UTC



Percent of Normal

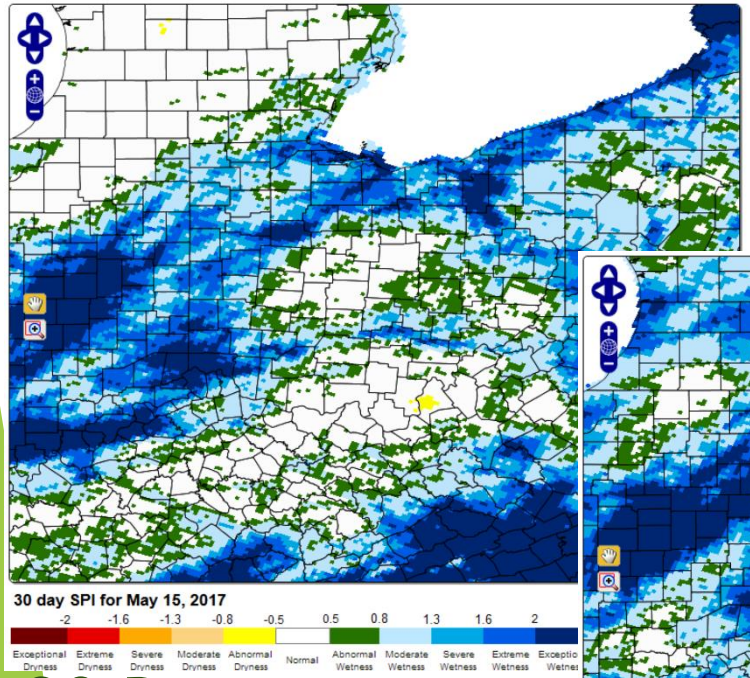
Previous 30-Day Precipitation



NATIONAL INTEGRATED DROUGHT INFORMATION SYSTEM

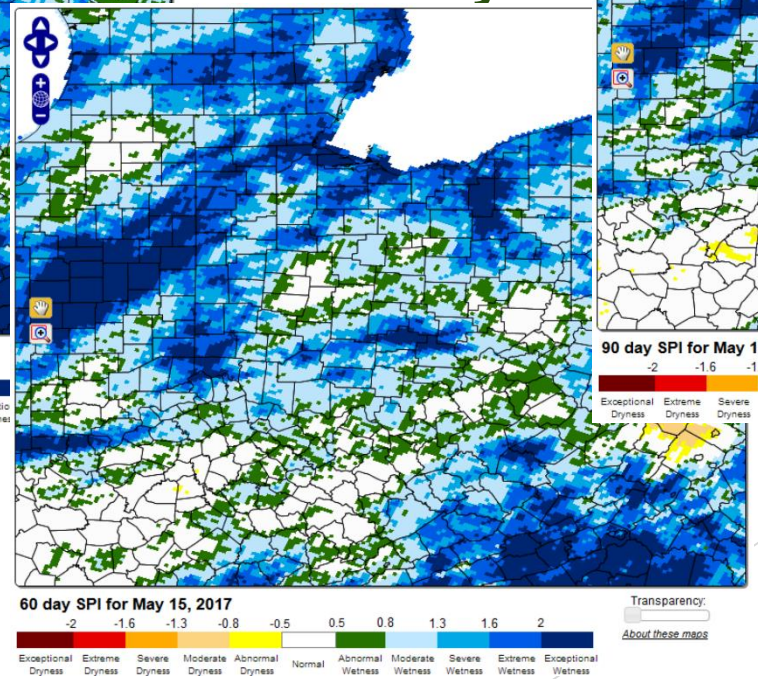
NIDIS Drought.gov
U.S. Drought Portal

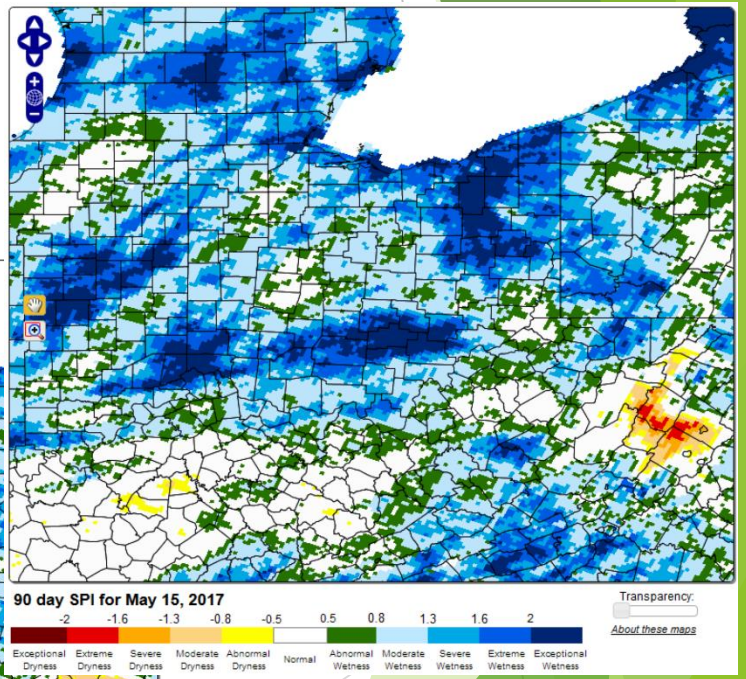
SPI: The Standardized Precipitation Index (SPI) indicates how unusual the amount of accumulated precipitation is, compared to the historical record over a given time scale.



30-Day

60-Day

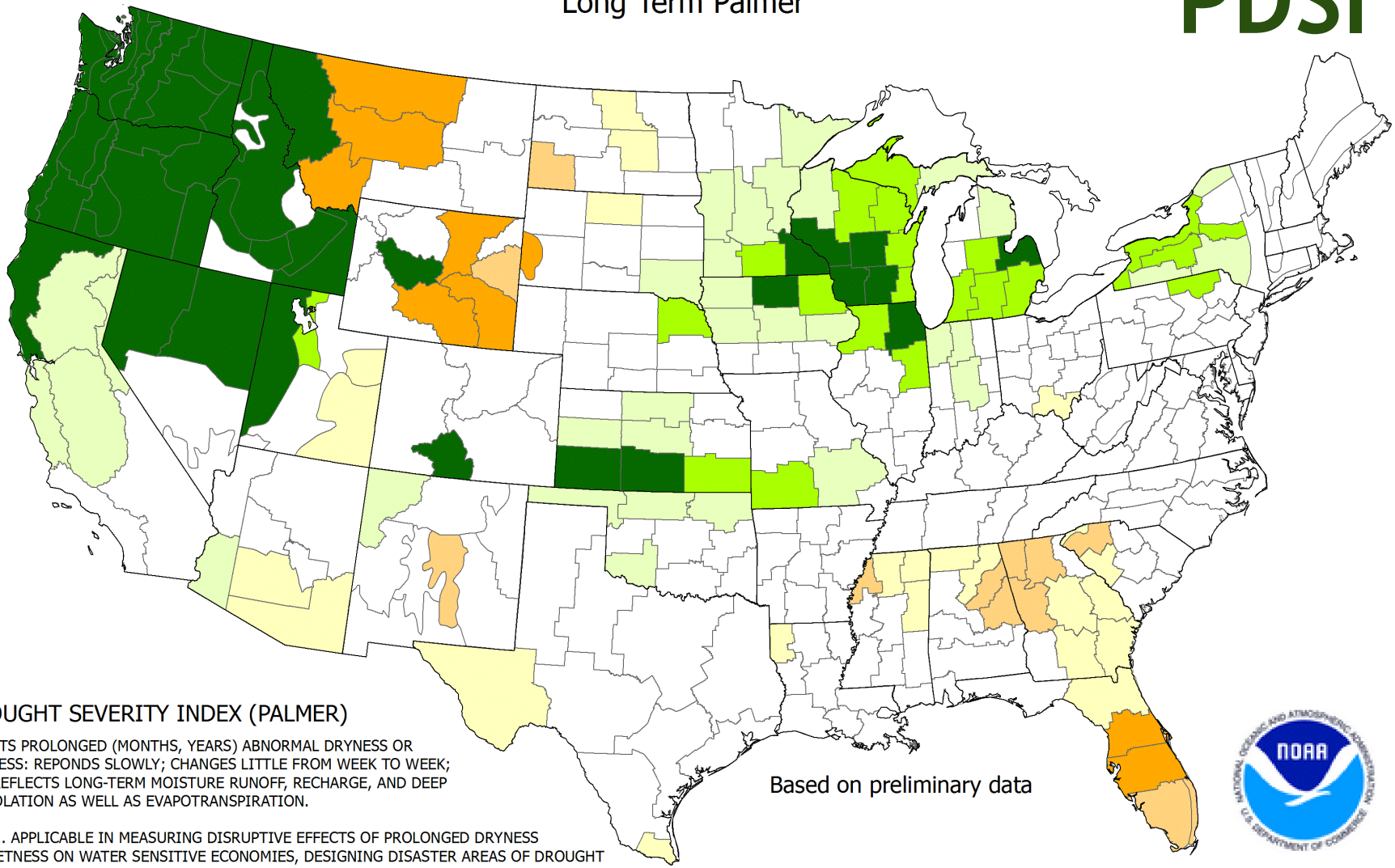




90-Day

PDSI

Drought Severity Index by Division
Weekly Value for Period Ending May 13, 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.

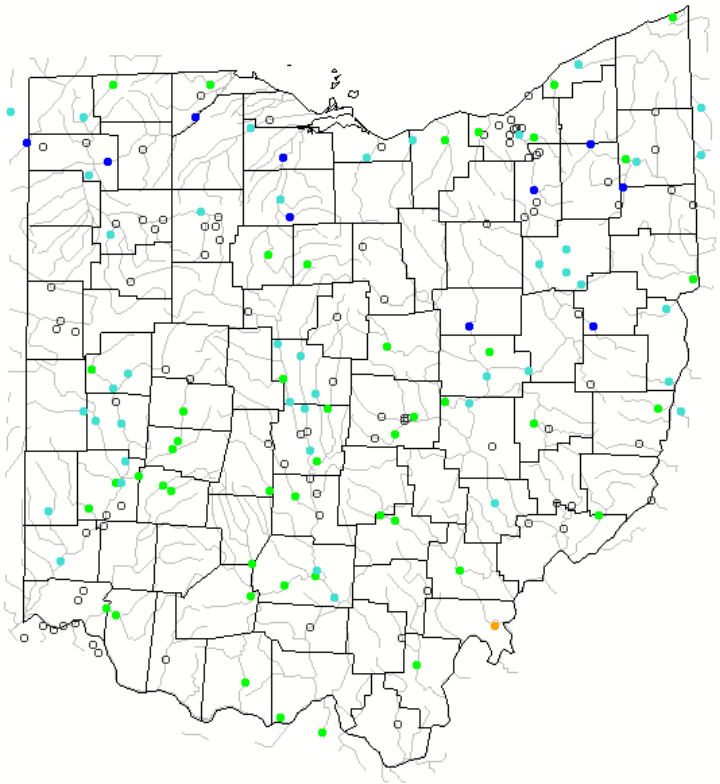
USES... APPLICABLE IN MEASURING DISRUPTIVE EFFECTS OF PROLONGED DRYNESS OR WETNESS ON WATER SENSITIVE ECONOMIES, DESIGNING DISASTER AREAS OF DROUGHT OR WETNESS; AND REFLECTING THE GENERAL LONG-TERM STATUS OF WATER SUPPLIES IN AQUIFERS, RESERVOIRS AND STREAMS.

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).

- -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)

USGS Streamflow

7-DAY

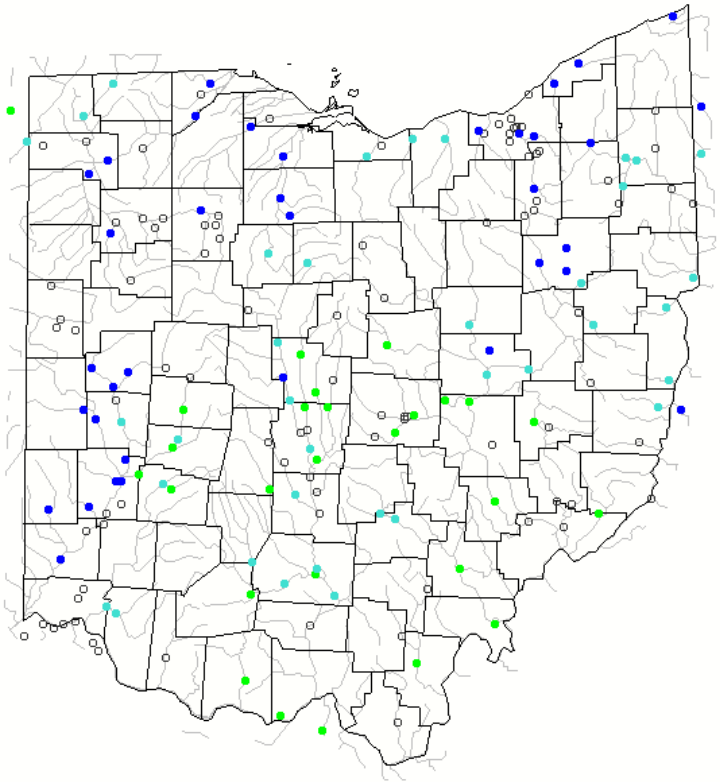


USGS

Explanation - Percentile classes							
Low	<10	10-24	25-75	76-90	>90	High	Not-ranked
	Much below normal	Below normal	Normal	Above normal	Much above normal		

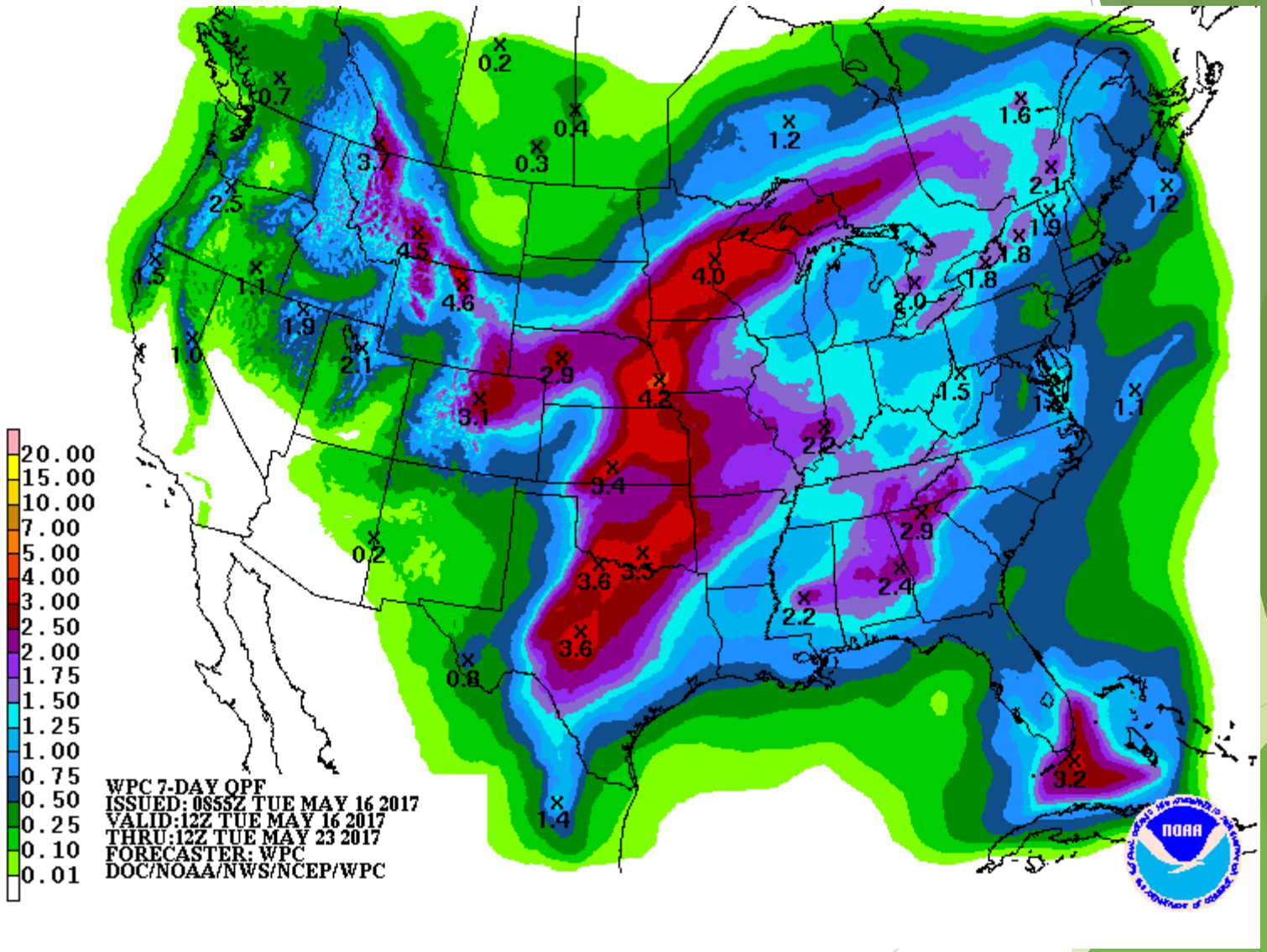
Average streamflow compared to historical streamflow for the day of the year

28-DAY

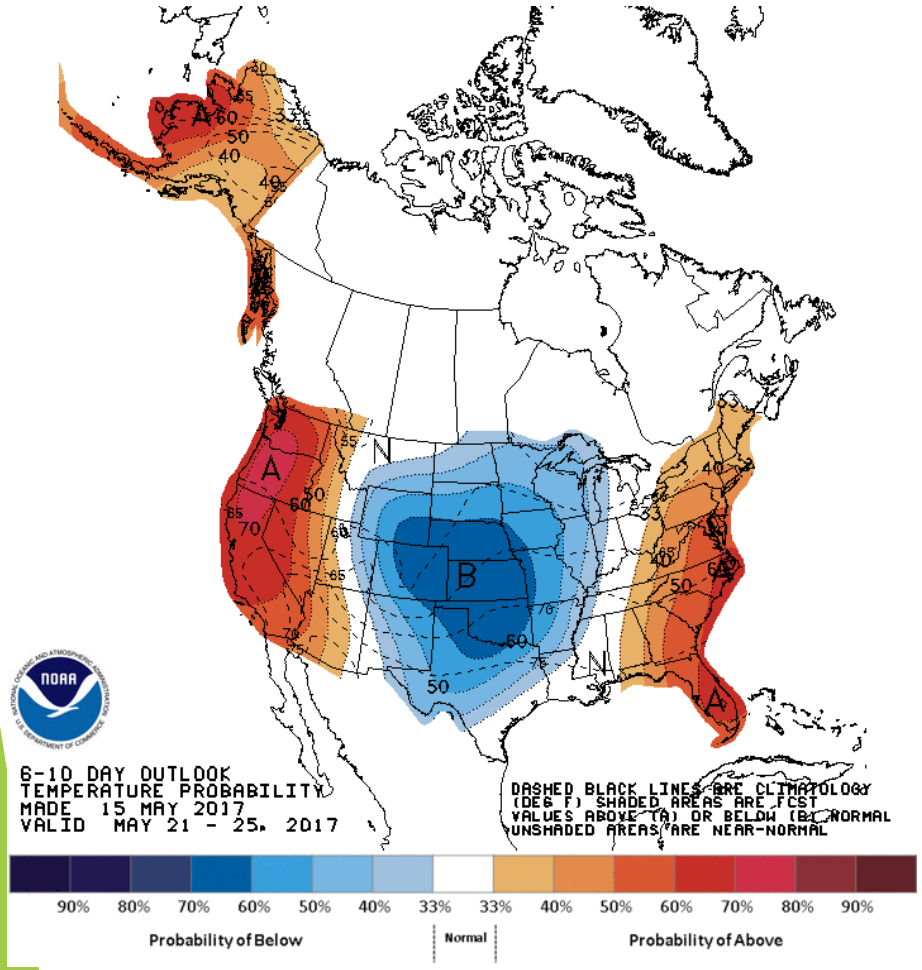


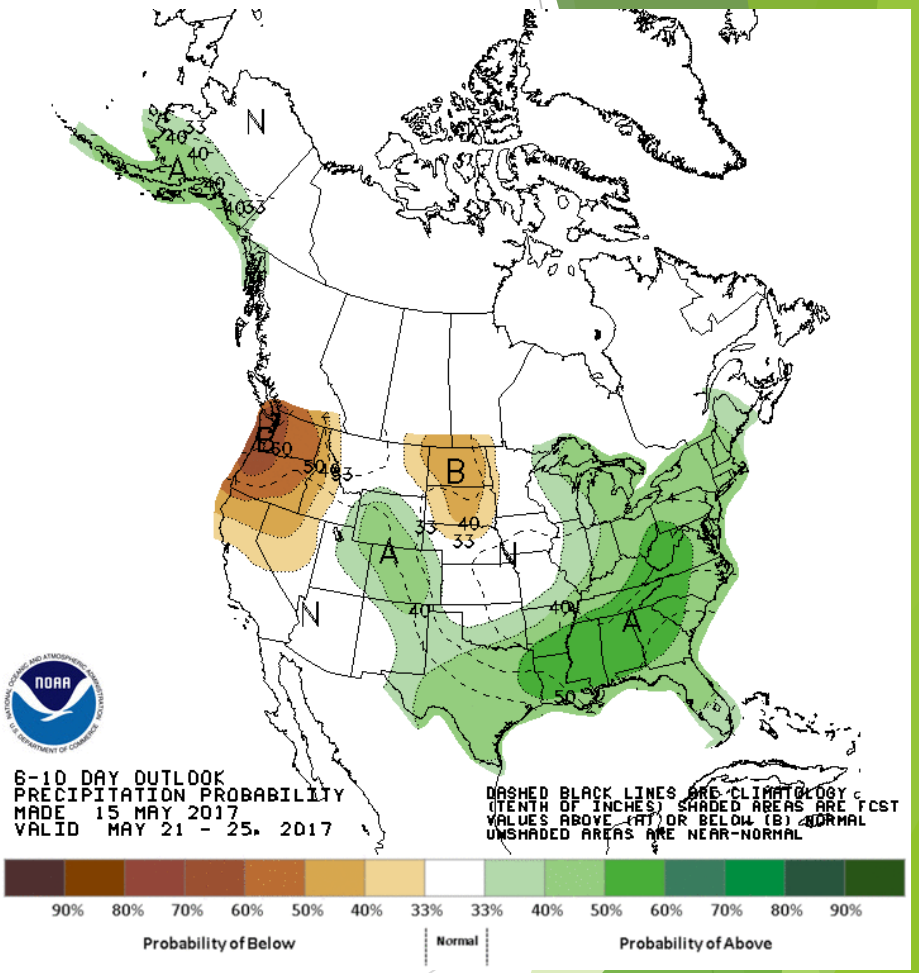
USGS

Weather for the Week Ahead



6-10 Day Outlook





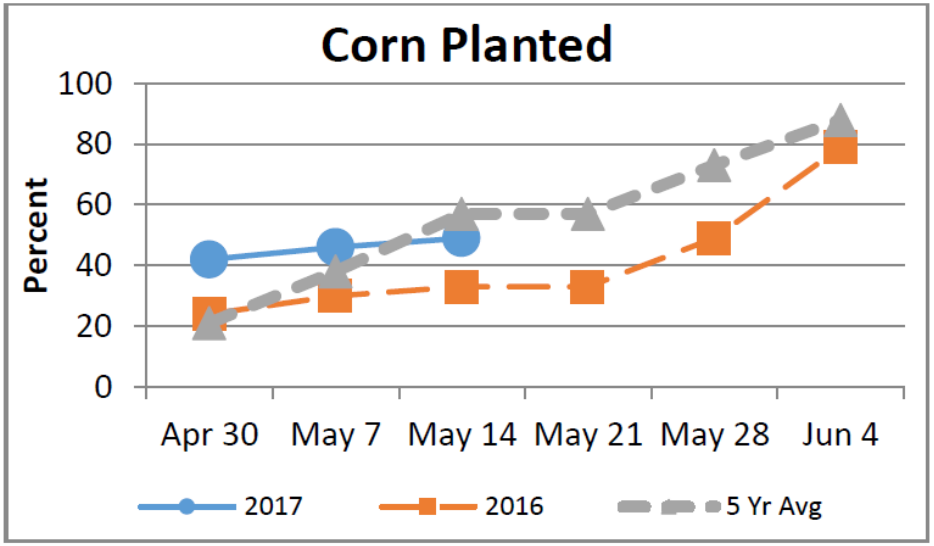
Highs: Low to mid 70s

Lows: Upper 40s to low 50s

Ag Highlights

- Very difficult planting weather the last two weeks
- Corn and soybean planting behind 5-yr average
- Some frost/freeze damage

Corkscrewed mesocotyls in corn. Source: J. McLaughlin



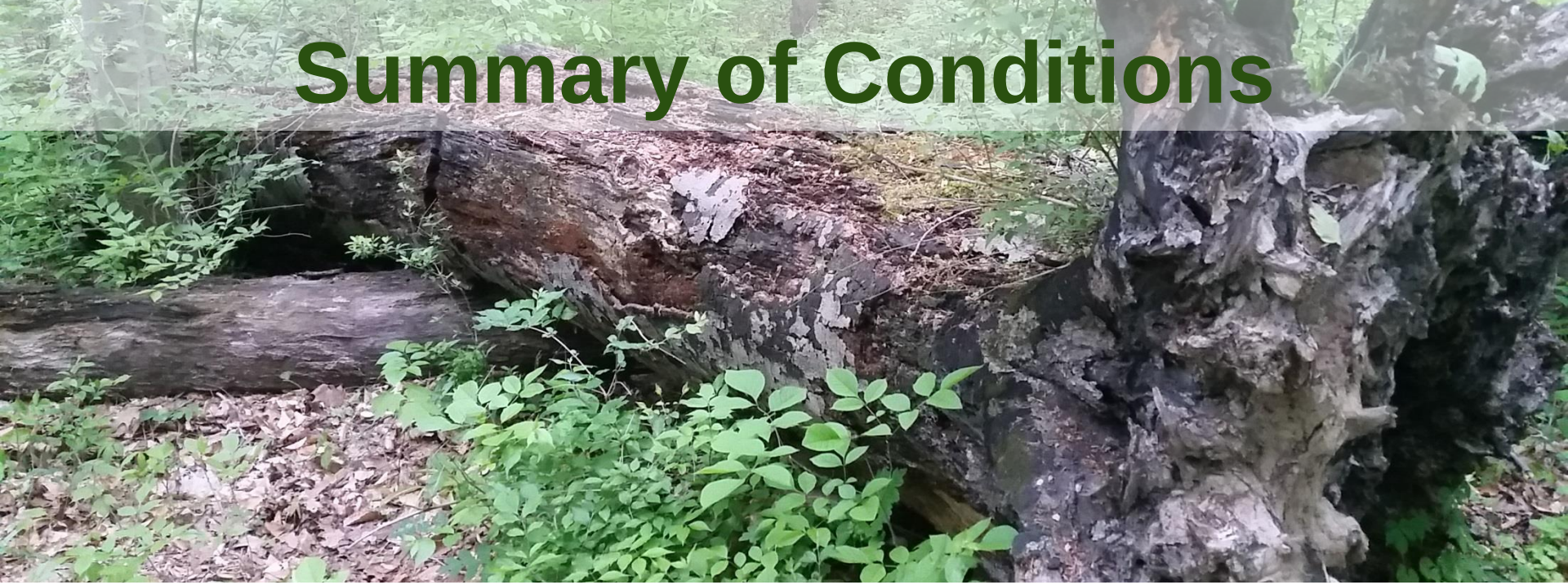
Source: Anne Dorrance and Mark Loux

NASS: Cheryl Turner – Ohio's State Statistician with USDA's National Agricultural Statistics Service

https://www.nass.usda.gov/Statistics_by_State/Ohio/Publications/Crop_Progress_&_Condition/2017/cw2017oh.pdf

https://cfaes.osu.edu/news/articles/rain-and-frost-leave-farmers-pondering-replanting

Summary of Conditions



- **Drought Monitor:** No classification in Ohio
- **30-Day and 60-Day:** Wet across the state; Exceptionally so in West/North; a little drier than normal in south central Ohio
- **30-Day temperatures:** Cooler lately; though above normal this week
- **Precipitation:** Another 1-2” of rain this weekly likely