

Hydrologic and Climate Assessment

April 27, 2018



Aaron B. Wilson

STATE CLIMATE OFFICE OF OHIO (SCOO)

DEPARTMENT OF EXTENSION - CFAES

BYRD POLAR & CLIMATE RESEARCH CENTER

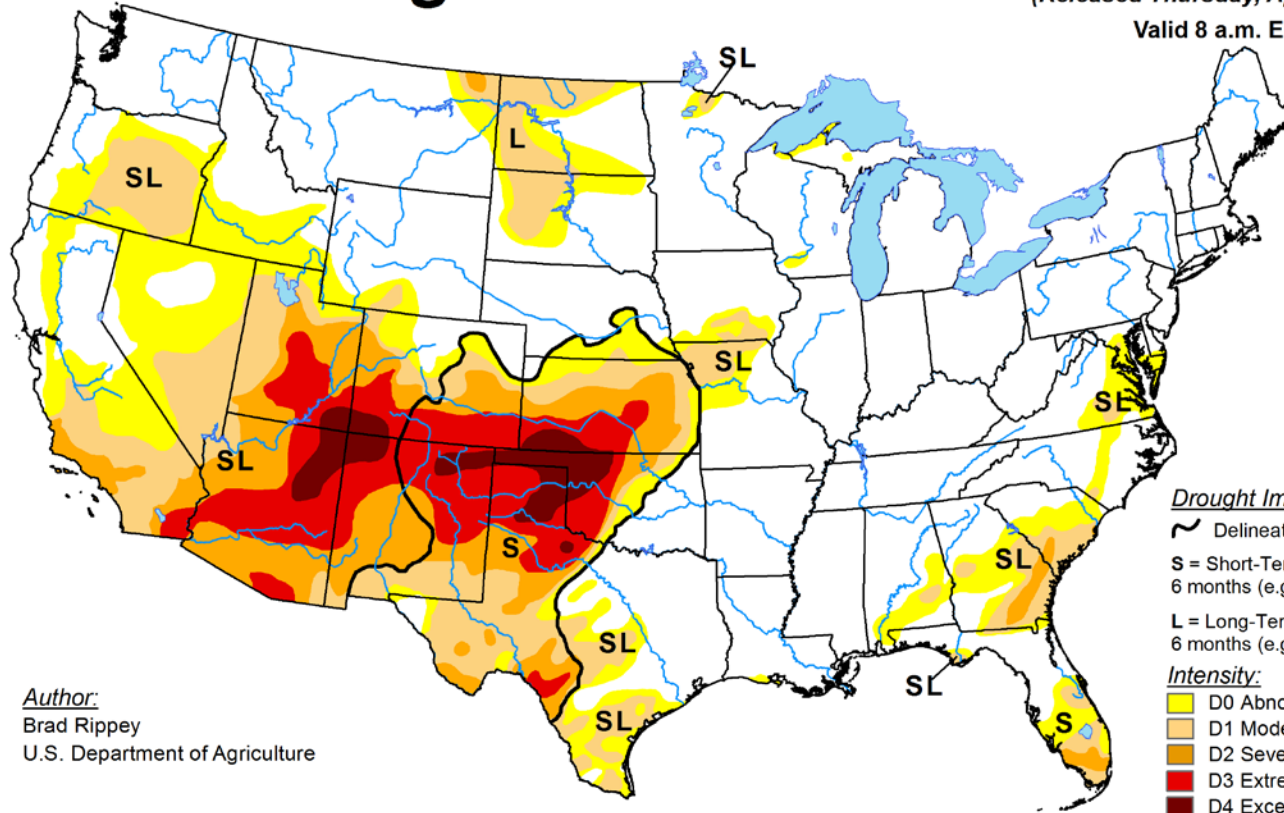
DEPARTMENT OF GEOGRAPHY



THE OHIO STATE UNIVERSITY

U.S. Drought Monitor

April 24, 2018
 (Released Thursday, Apr. 26, 2018)
 Valid 8 a.m. EDT



Author:
 Brad Rippey
 U.S. Department of Agriculture

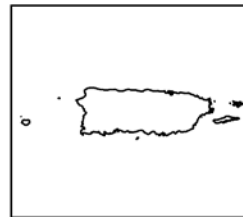
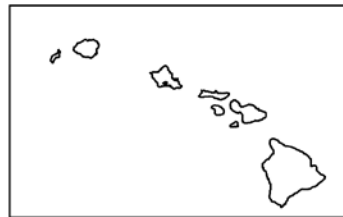
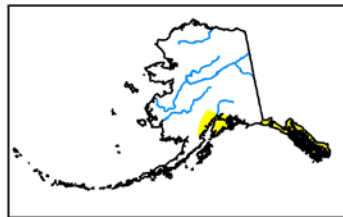
Drought Impact Types:

- ~ 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/>



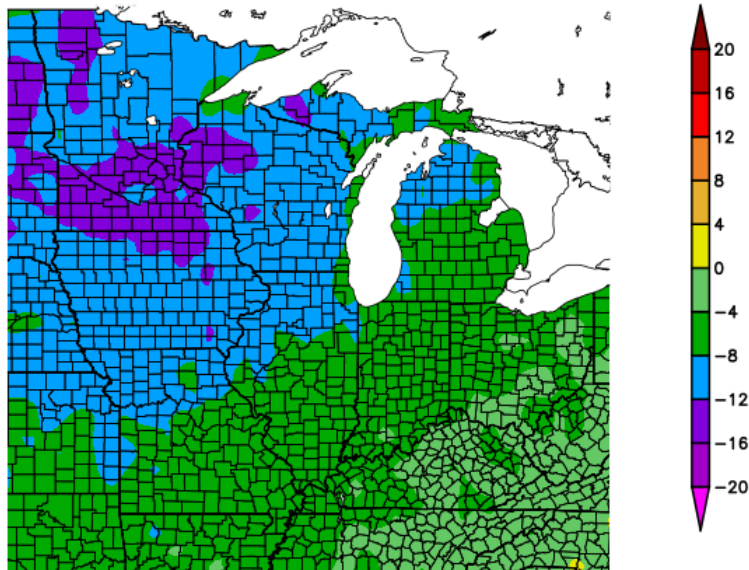
THE OHIO STATE UNIVERSITY

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

Temperature Differences Compared to Average (1981-2010)

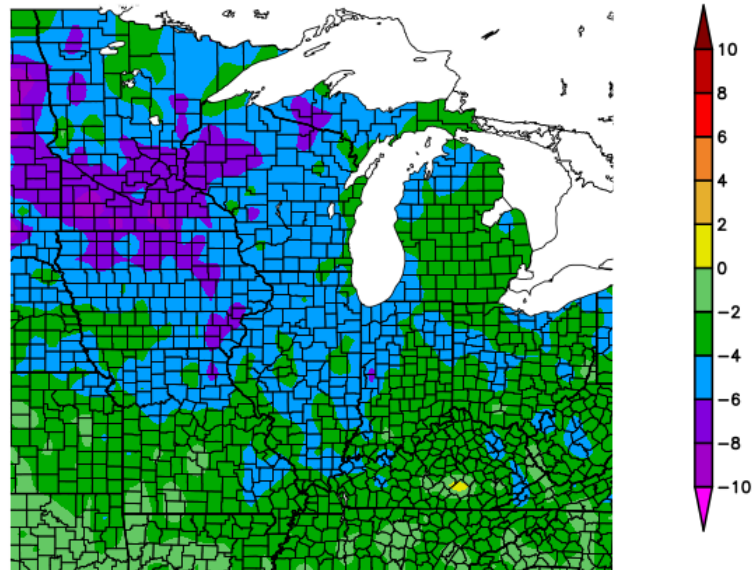
30-Day

Departure from Normal Temperature (F)
3/28/2018 – 4/26/2018



60-Day

Departure from Normal Temperature (F)
2/26/2018 – 4/26/2018



Generated 4/27/2018 at HPRCC using provisional data.

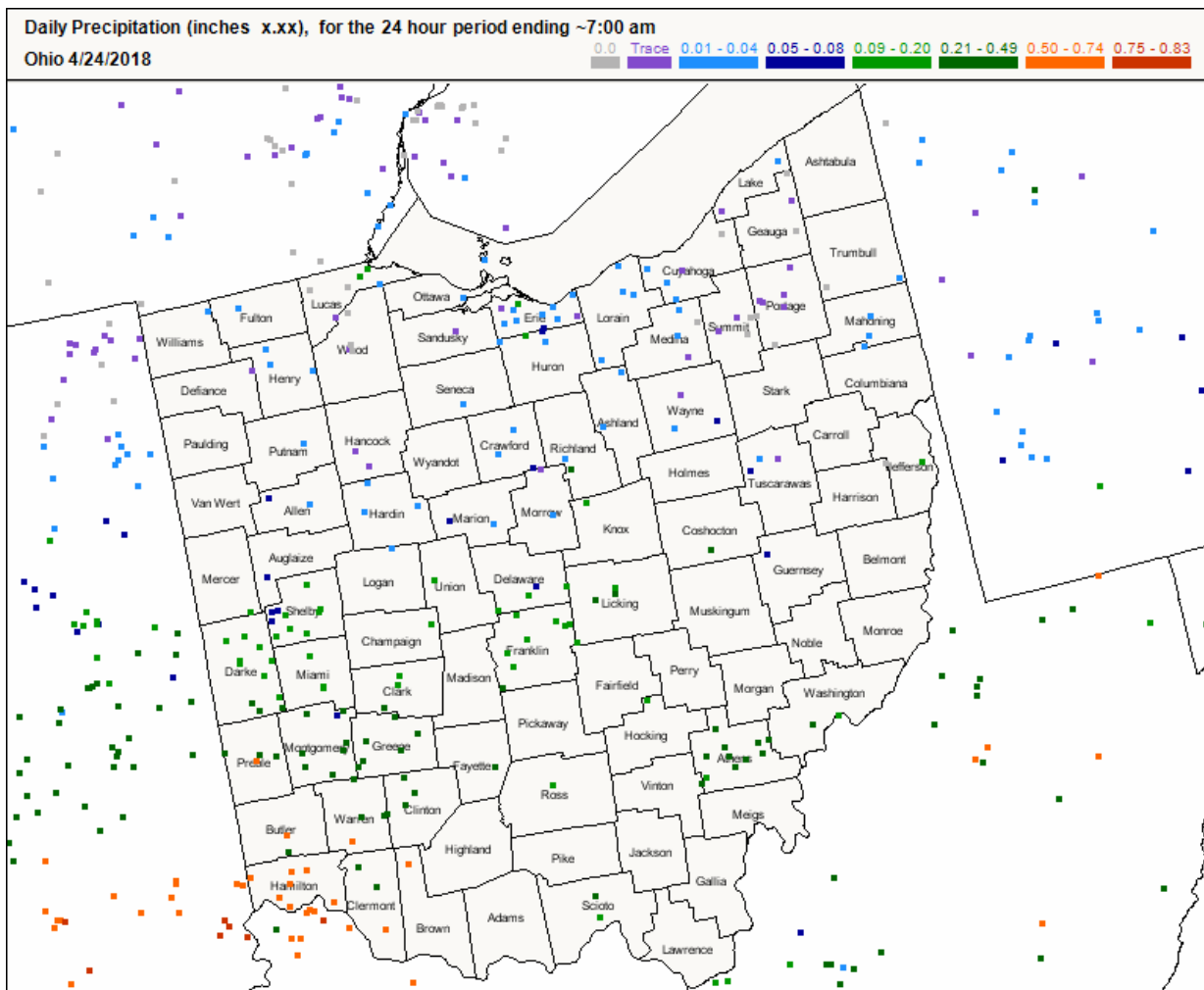
NOAA Regional Climate Centers Generated 4/27/2018 at HPRCC using provisional data.

NOAA Regional Climate Centers



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

CoCoRaHS Observed Precipitation: April 24



THE OHIO STATE UNIVERSITY

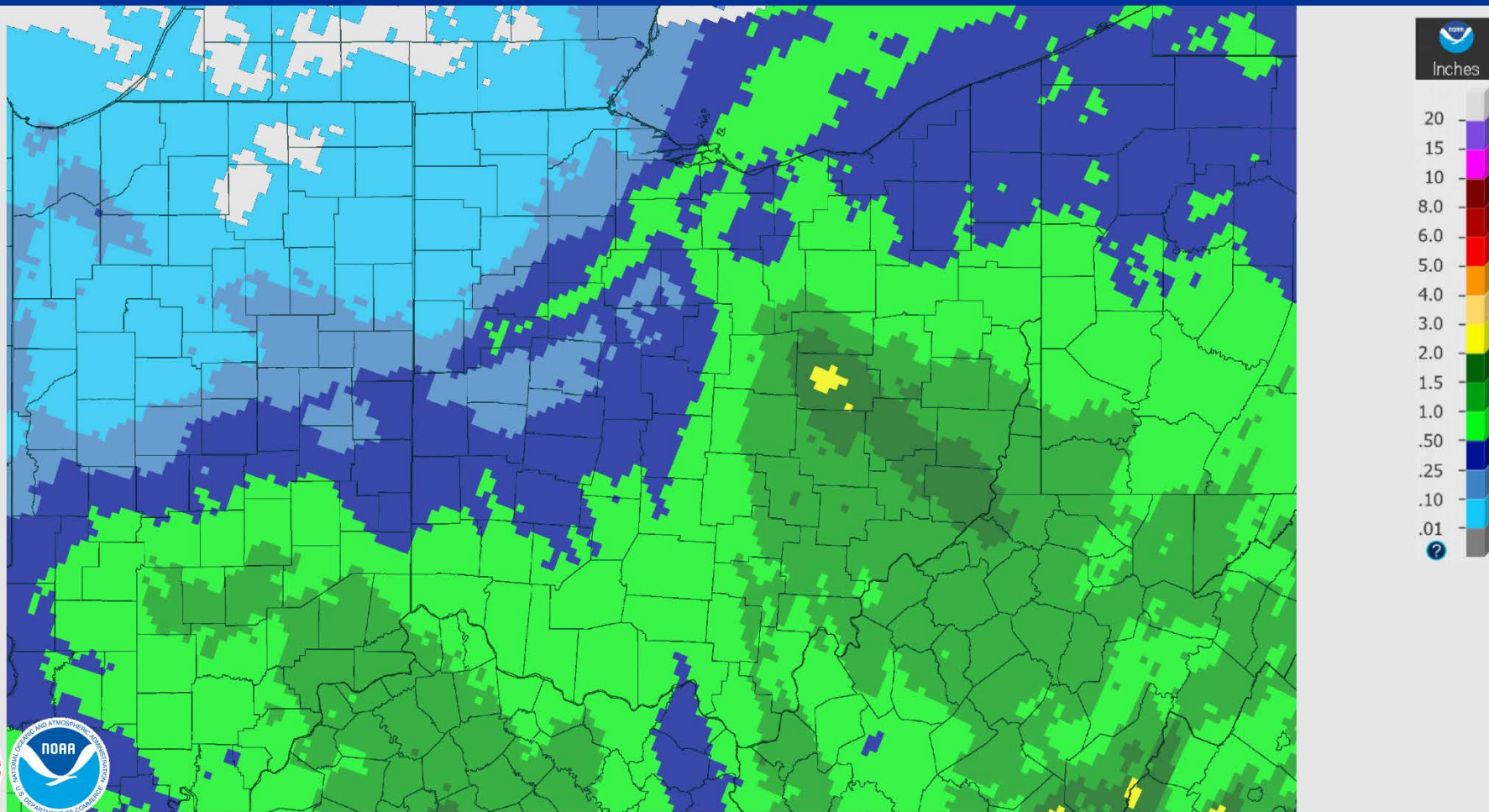
STATE CLIMATE OFFICE OF OHIO (SCOO)
COLLEGE OF FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES
DEPARTMENT OF EXTENSION
BYRD POLAR & CLIMATE RESEARCH CENTER
DEPARTMENT OF GEOGRAPHY

Previous 7-Day Precipitation: Total

April 27, 2018 7-Day Observed Precipitation

Created on: April 27, 2018 - 16:44 UTC

Valid on: April 27, 2018 12:00 UTC



THE OHIO STATE UNIVERSITY

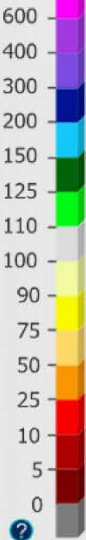
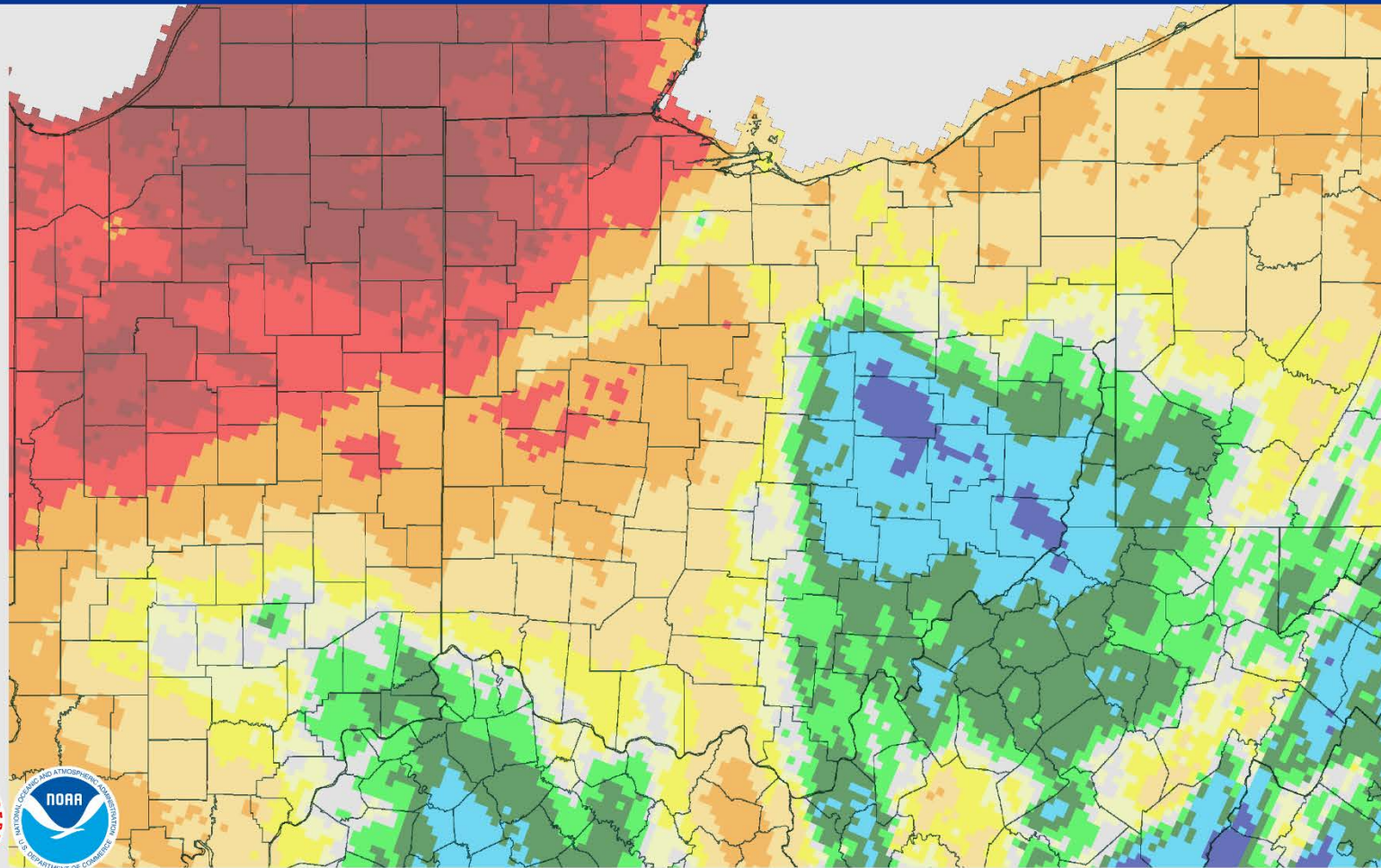
STATE CLIMATE OFFICE OF OHIO (SCOO)
COLLEGE OF FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES
DEPARTMENT OF EXTENSION
BYRD POLAR & CLIMATE RESEARCH CENTER
DEPARTMENT OF GEOGRAPHY

Previous 7-Day Precipitation: Percent of Normal

April 27, 2018 7-Day Percent Precipitation

Created on: April 27, 2018 - 16:44 UTC

Valid on: April 27, 2018 12:00 UTC



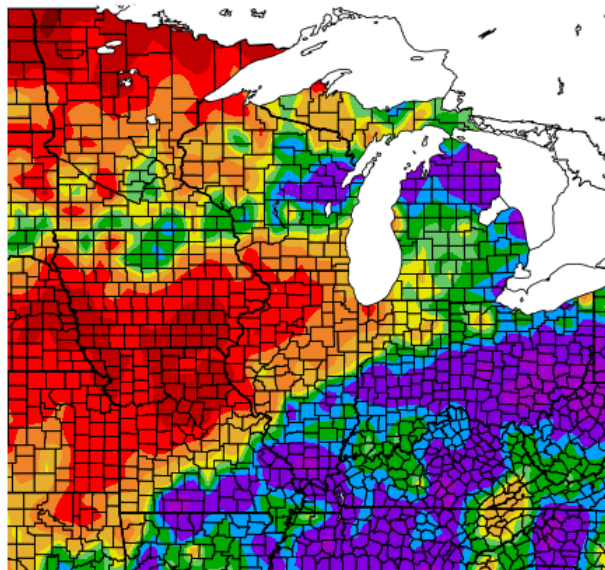
THE OHIO STATE UNIVERSITY

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)

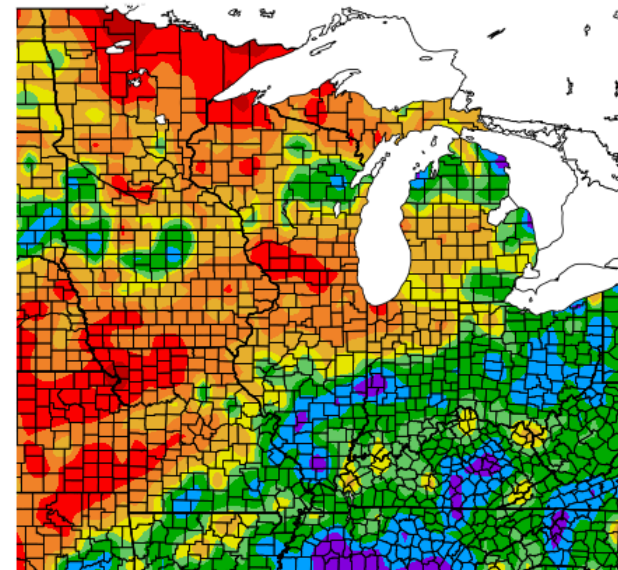
30-Day

Percent of Normal Precipitation (%)
3/28/2018 – 4/26/2018



60-Day

Percent of Normal Precipitation (%)
2/26/2018 – 4/26/2018



Generated 4/27/2018 at HPRCC using provisional data.

NOAA Regional Climate Centers Generated 4/27/2018 at HPRCC using provisional data.

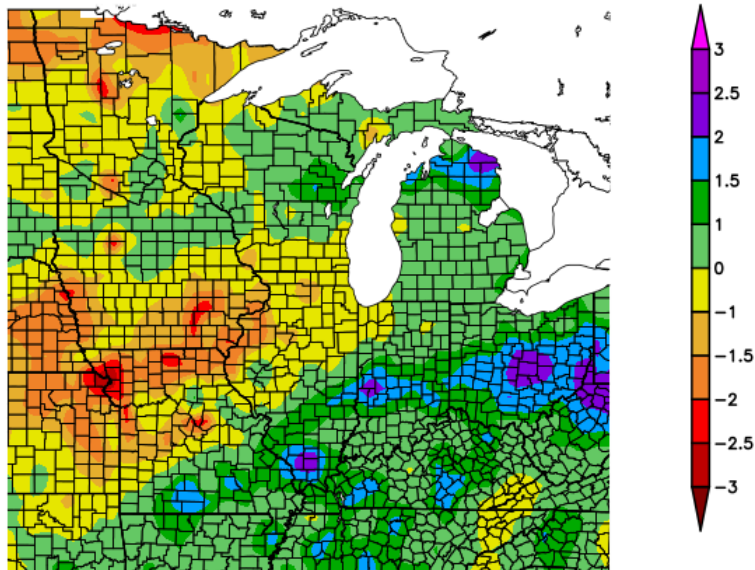
NOAA Regional Climate Centers



Standard Precipitation Index (SPI)

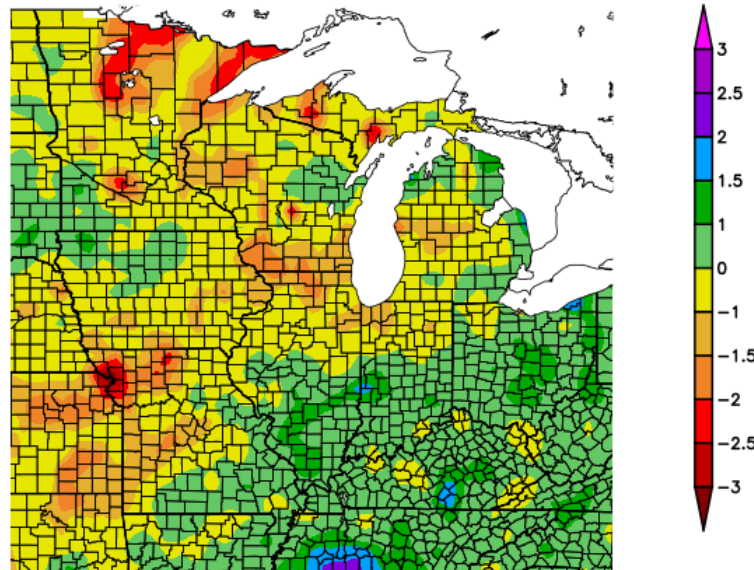
30-Day

30 Day SPI
3/27/2018 - 4/25/2018



60-Day

60 Day SPI
2/26/2018 - 4/26/2018



Generated 4/26/2018 at HPRCC using provisional data.

NOAA Regional Climate Centers Generated 4/27/2018 at HPRCC using provisional data.

NOAA Regional Climate Centers



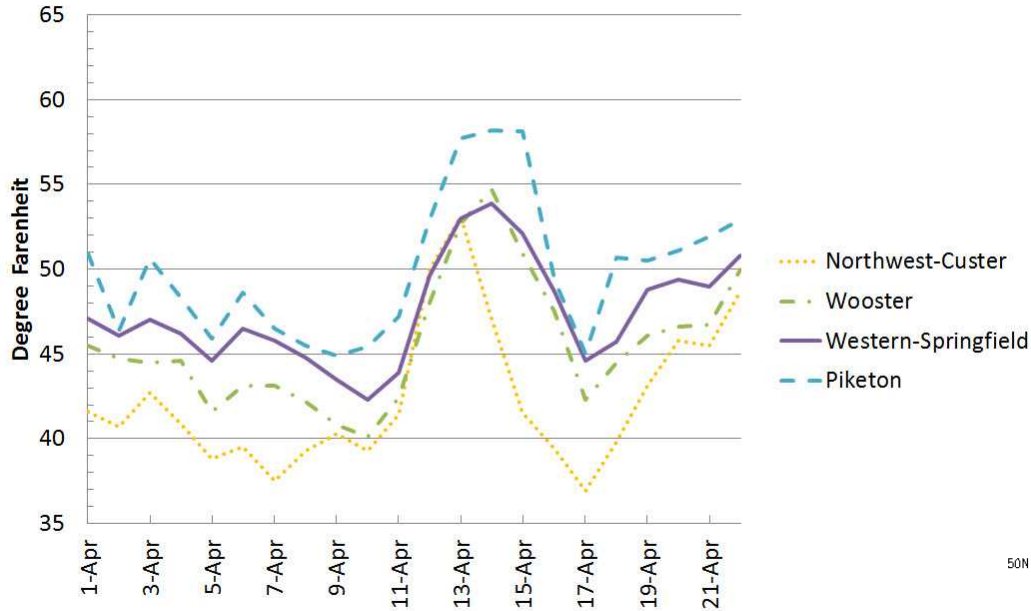
THE OHIO STATE UNIVERSITY

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

Soil Temperature/Moisture

Two-inch Bare Surface Soil Temperature-Daily Average

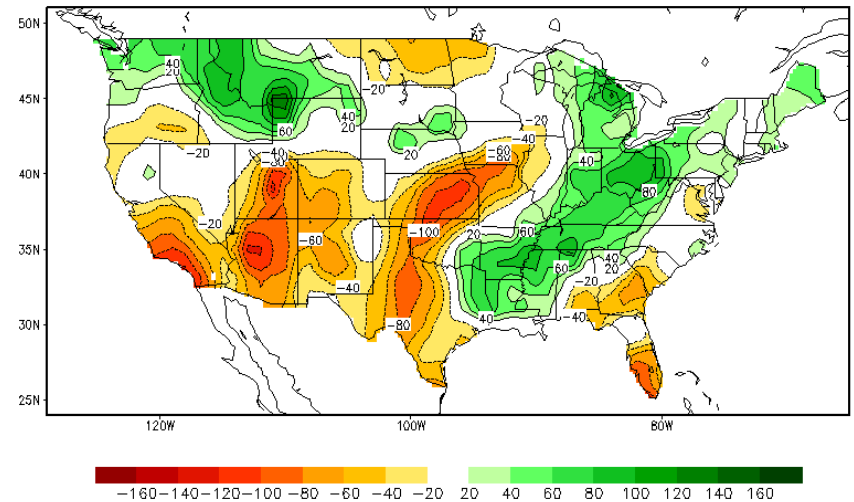
April 1, 2018 to present
OARDC Weather Stations



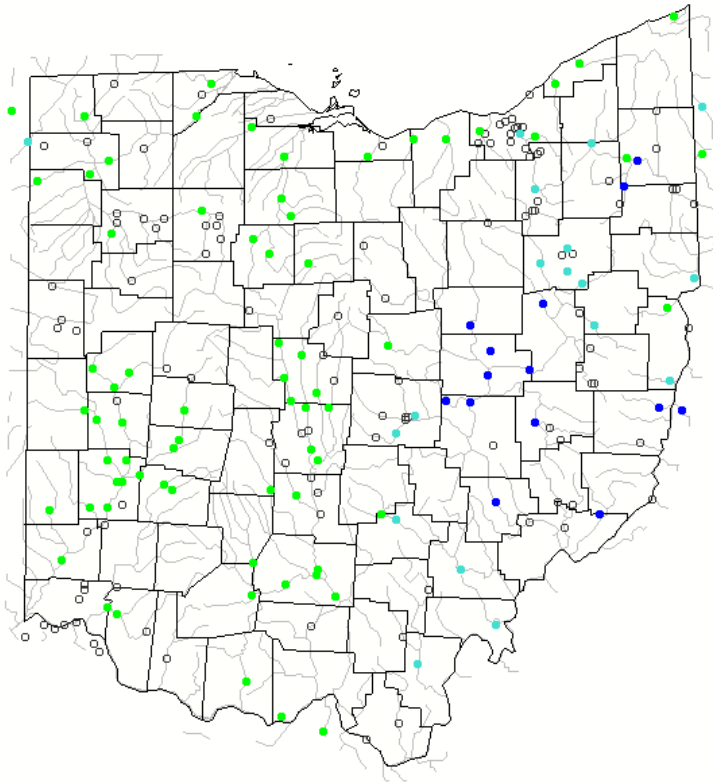
<http://www.oardc.ohio-state.edu/weather1/>

From C.O.R.N. (Greg Labarge, Peter Thomison)
<https://agcrops.osu.edu/newsletter/corn-newsletter/2018-10/soil-temperatures-accumulated-gdd-and-corn-emergence>

Calculated Soil Moisture Anomaly (mm)
APR 26, 2018



7-DAY



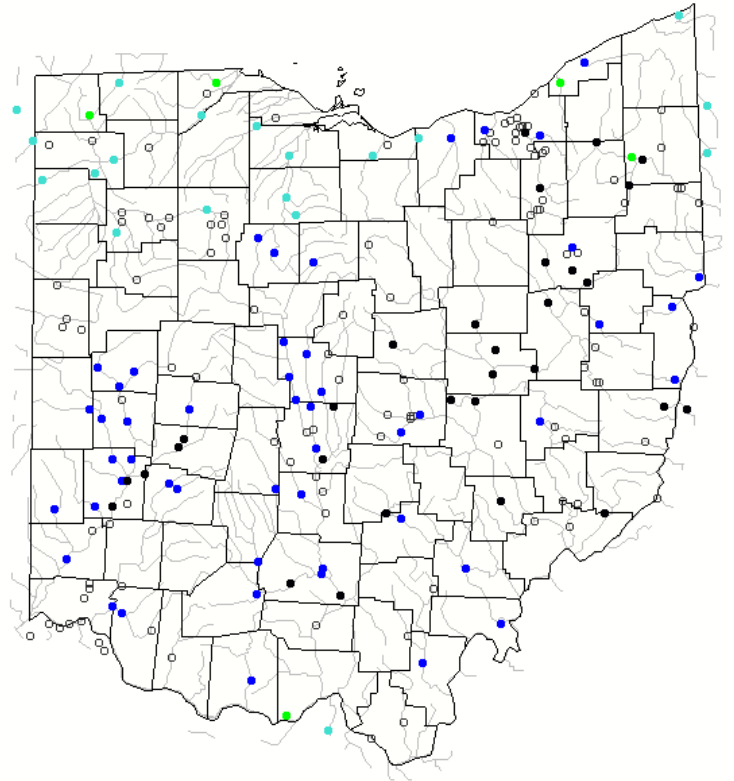
Explanation - Percentile classes

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



STATE CLIMATE OFFICE OF OHIO (SCOO)

COLLEGE OF FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES

DEPARTMENT OF EXTENSION

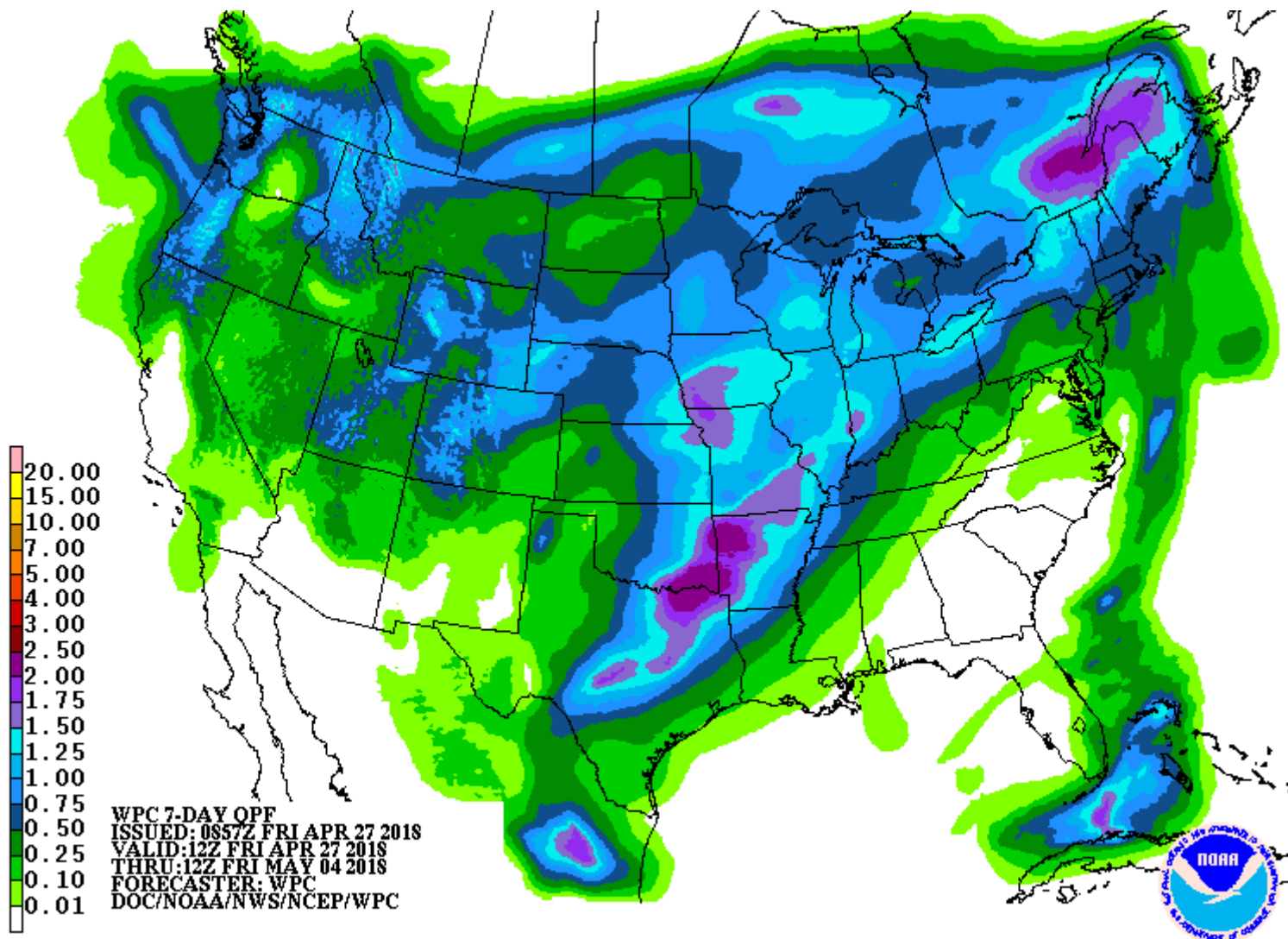
BYRD POLAR & CLIMATE RESEARCH CENTER

DEPARTMENT OF GEOGRAPHY



THE OHIO STATE UNIVERSITY

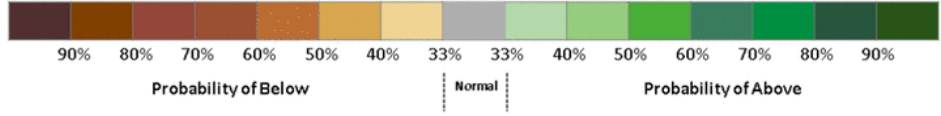
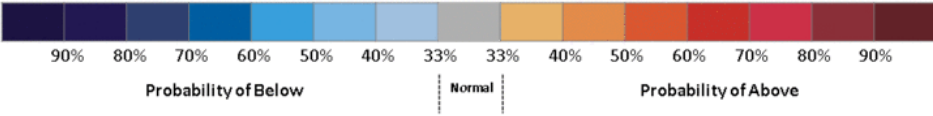
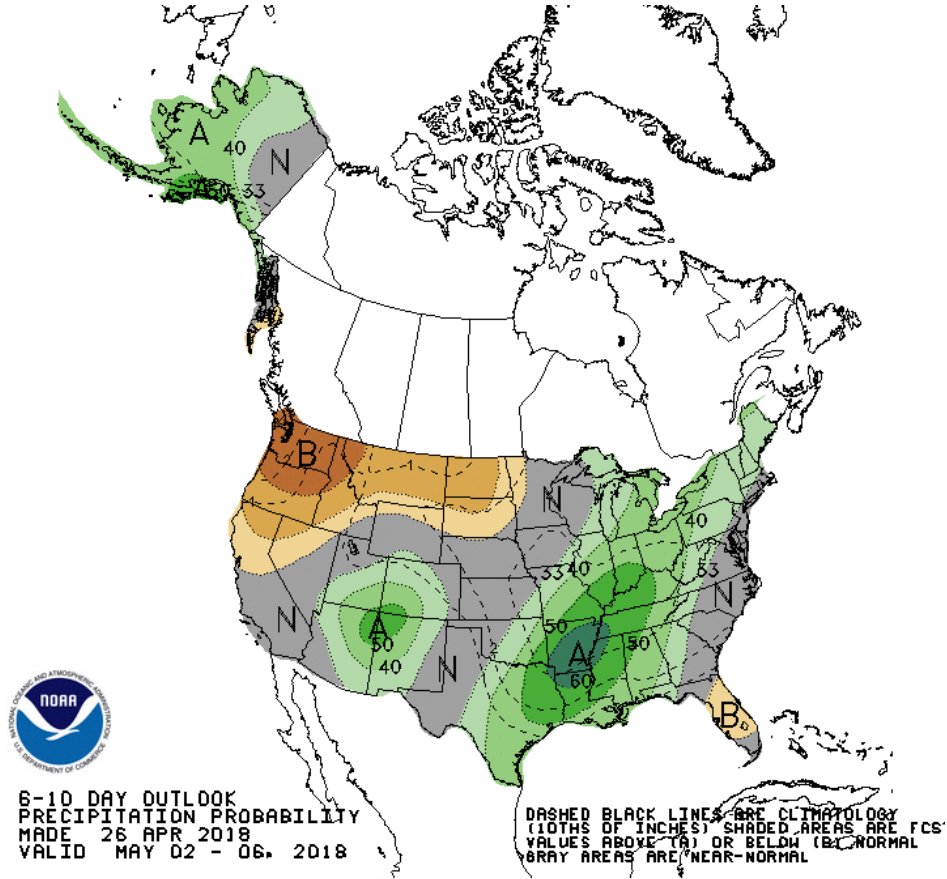
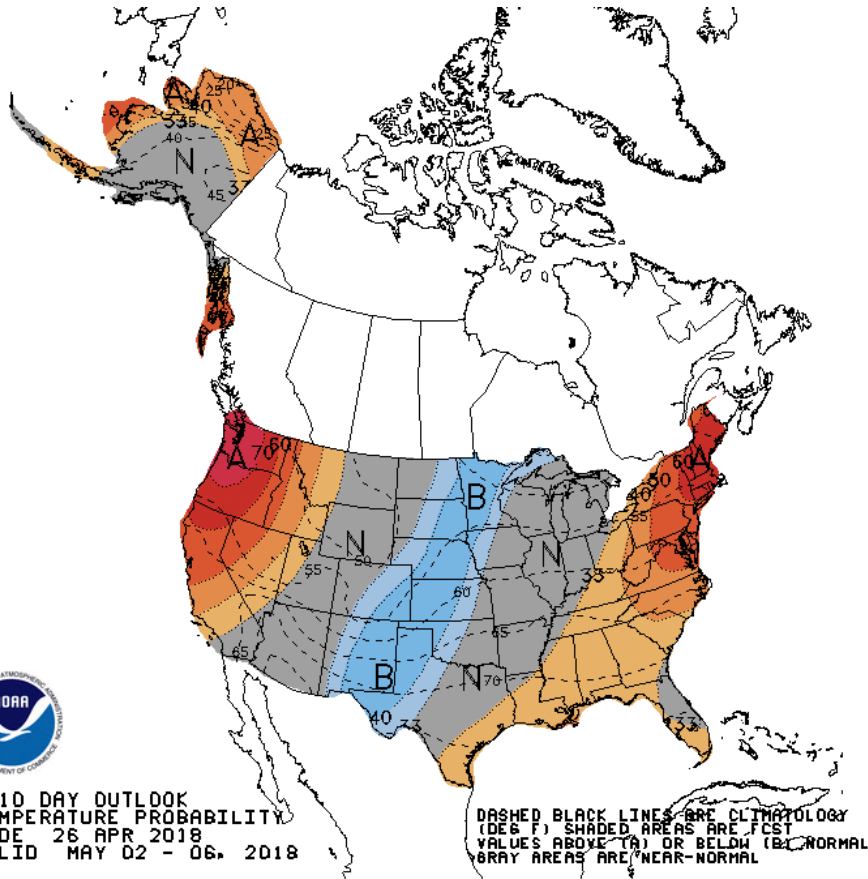
Weather for the Week Ahead



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



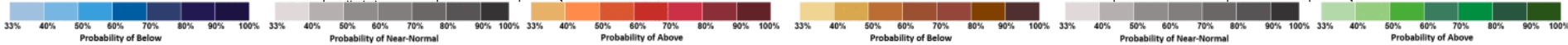
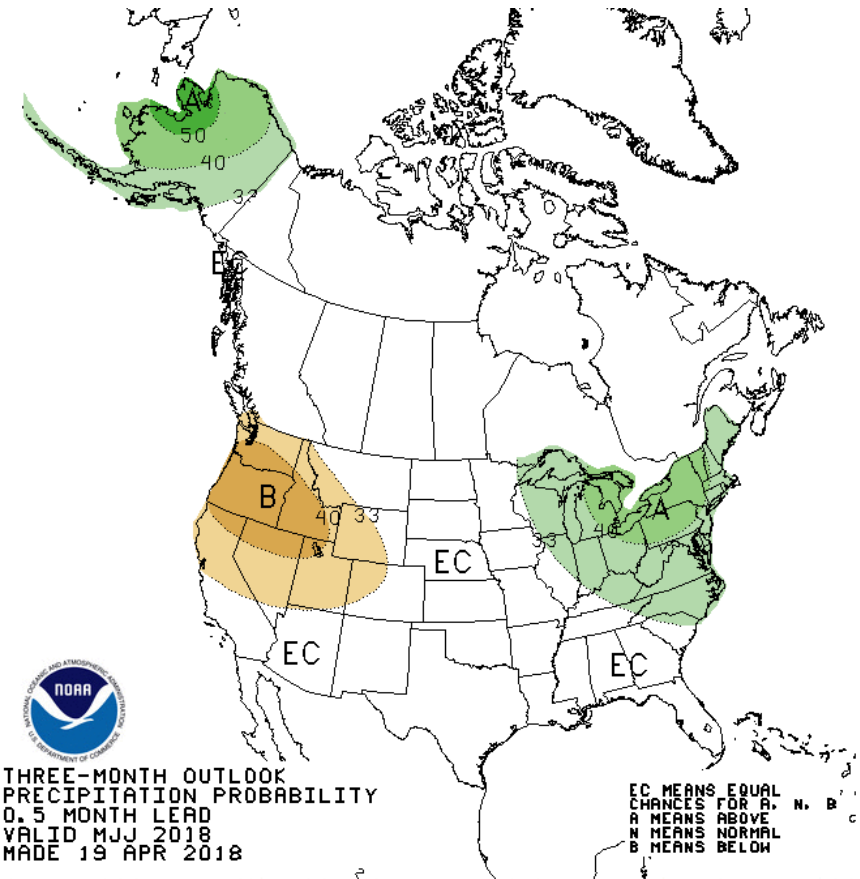
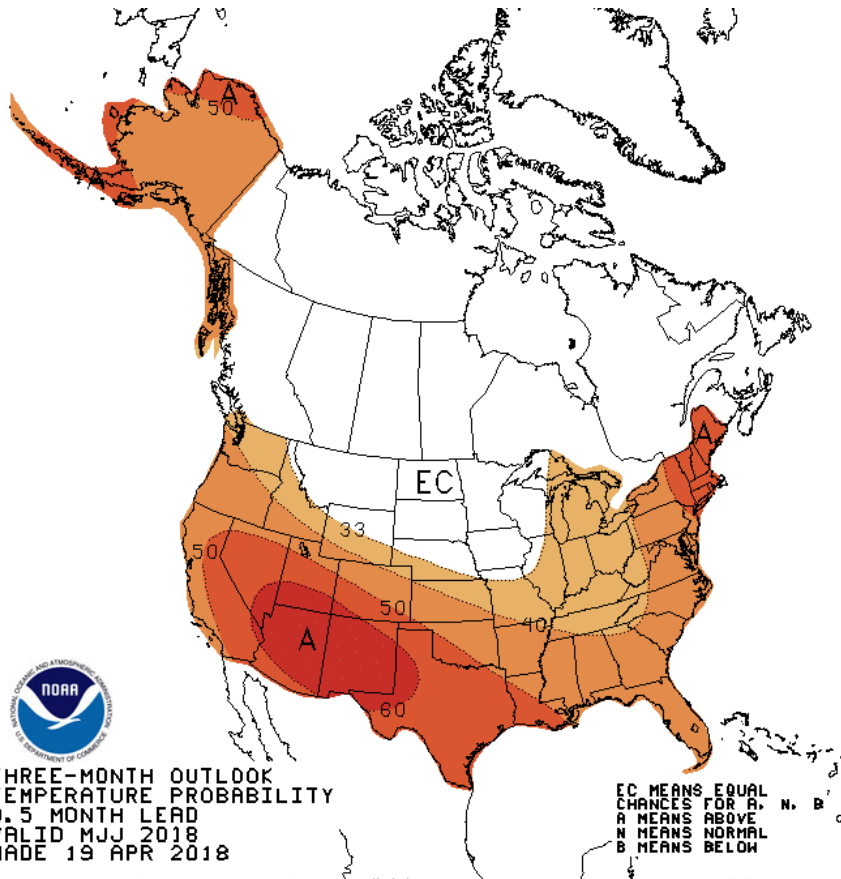
Highs: Mid to upper 60s Lows: Mid to upper 40s



THE OHIO STATE UNIVERSITY

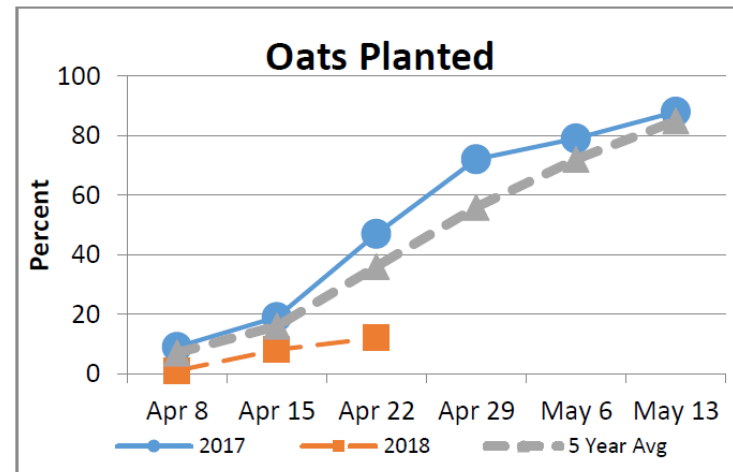
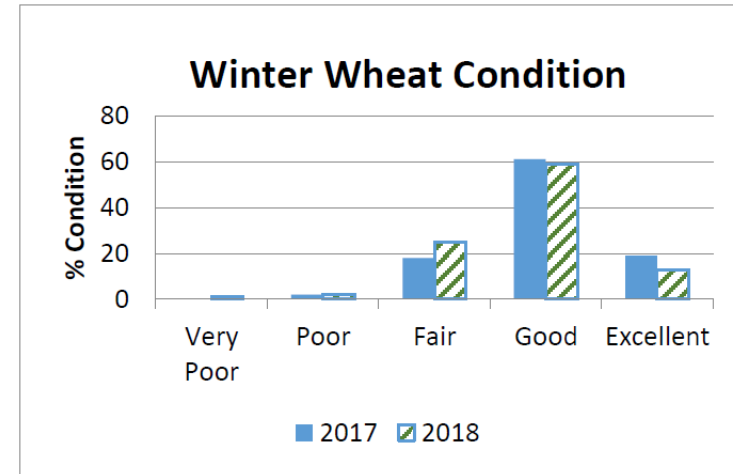
STATE CLIMATE OFFICE OF OHIO (SCOO)
COLLEGE OF FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES
DEPARTMENT OF EXTENSION
BYRD POLAR & CLIMATE RESEARCH CENTER
DEPARTMENT OF GEOGRAPHY

May-July Outlook



Ag Highlights

- 1.4 days suitable for work
- Wet conditions delaying activities
- Some fertilizer and spring herbicide applications
- Wheat jointing and Oats planted behind 5-year average



NASS: Cheryl Turner –

https://www.nass.usda.gov/Statistics_by_State/Ohio/Publications/Crop_Progress_&_Condition/2017/cw3017oh.pdf



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

Summary of Conditions



Drought Monitor: No Drought in Ohio

30-Day and 60-Day: Substantially to Significantly Wet

The week ahead: A cool weekend followed by a big warm up and drying conditions Sunday-Tuesday. Next round of rain comes mid-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