

Hydrologic and Climate Assessment

April 18, 2018



Aaron B. Wilson

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DEPARTMENT OF EXTENSION - CFAES

BYRD POLAR & CLIMATE RESEARCH CENTER

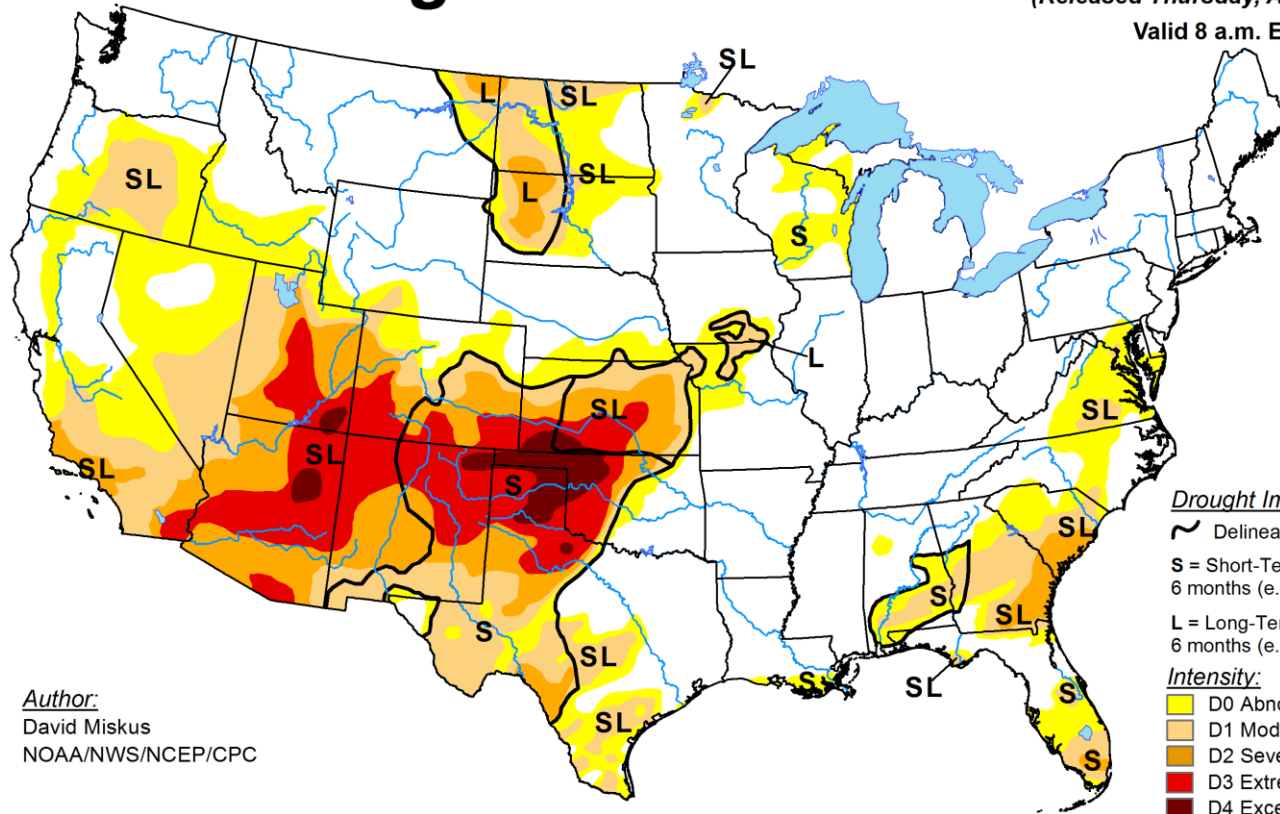
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U.S. Drought Monitor

April 10, 2018
 (Released Thursday, Apr. 12, 2018)
 Valid 8 a.m. EDT



Author:
 David Miskus
 NOAA/NWS/NCEP/CPC

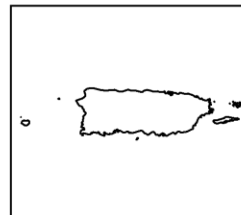
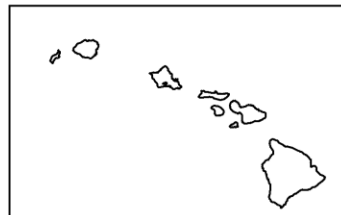
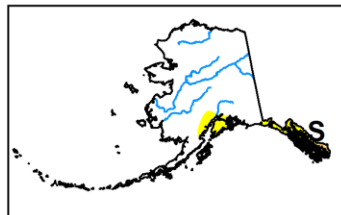
Drought Impact Types:

- ~ 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/>



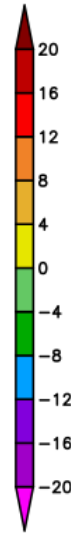
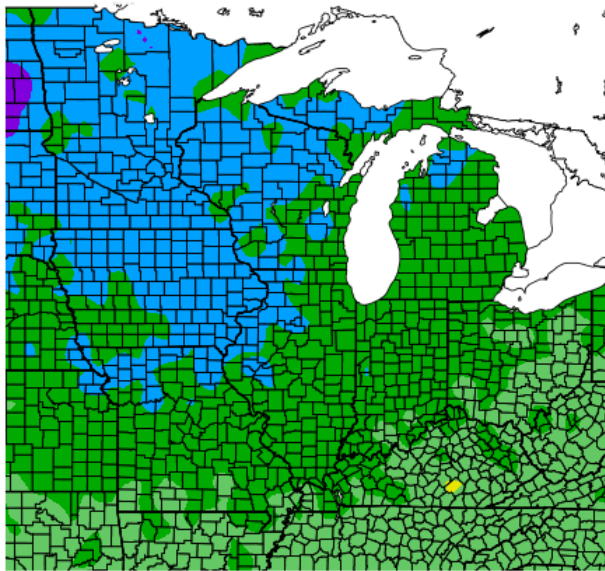
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Temperature Differences Compared to Average (1981-2010)

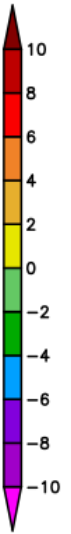
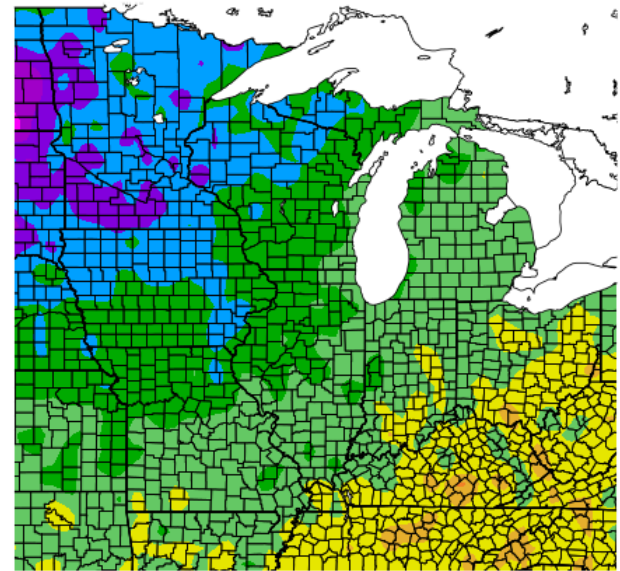
30-Day

Departure from Normal Temperature (F)
3/18/2018 – 4/16/2018



60-Day

Departure from Normal Temperature (F)
2/16/2018 – 4/16/2018



Generated 4/17/2018 at HPRCC using provisional data.

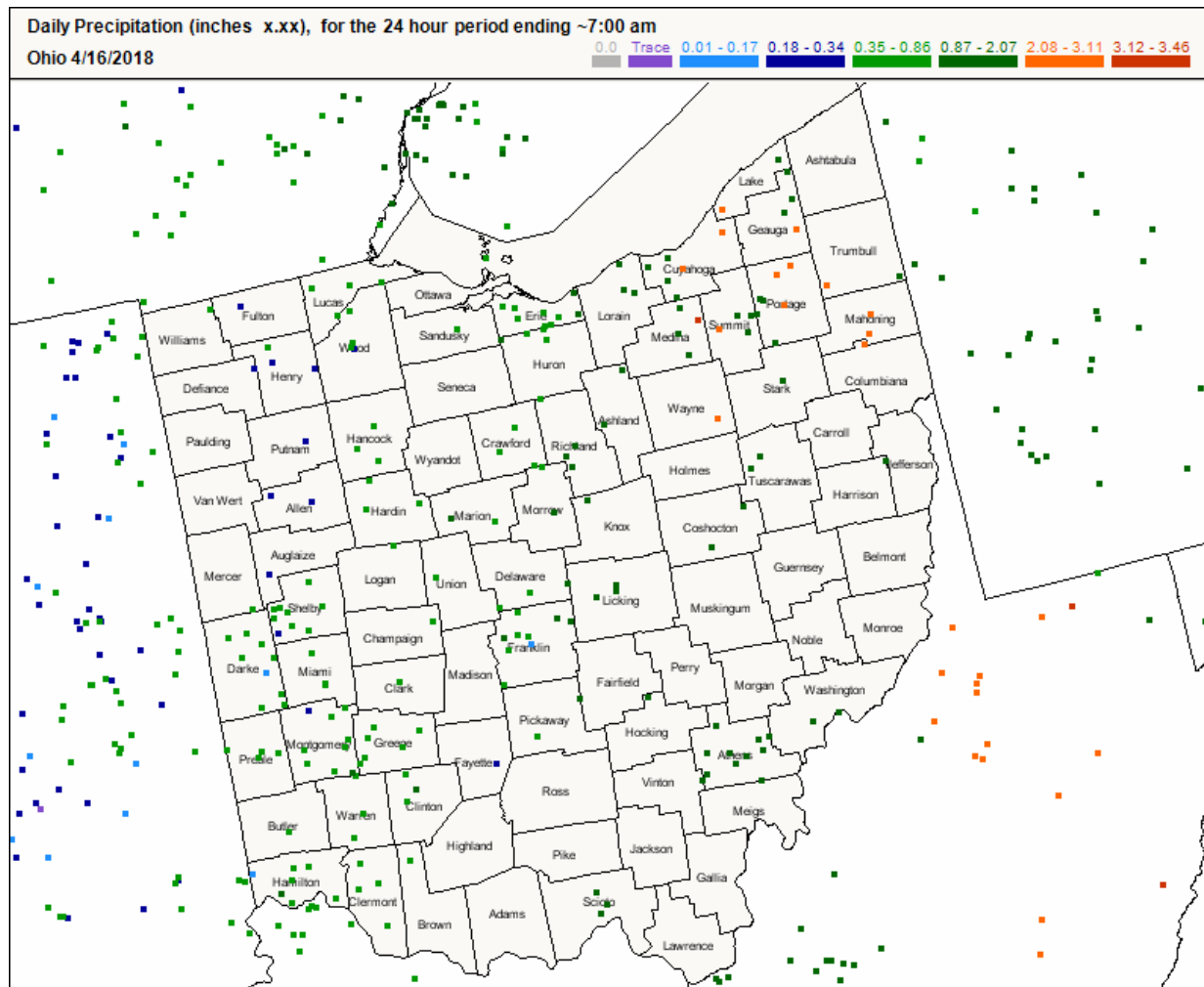
NOAA Regional Climate Centers Generated 4/17/2018 at HPRCC using provisional data.

NOAA Regional Climate Centers



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CoCoRaHS Observed Precipitation: April 16



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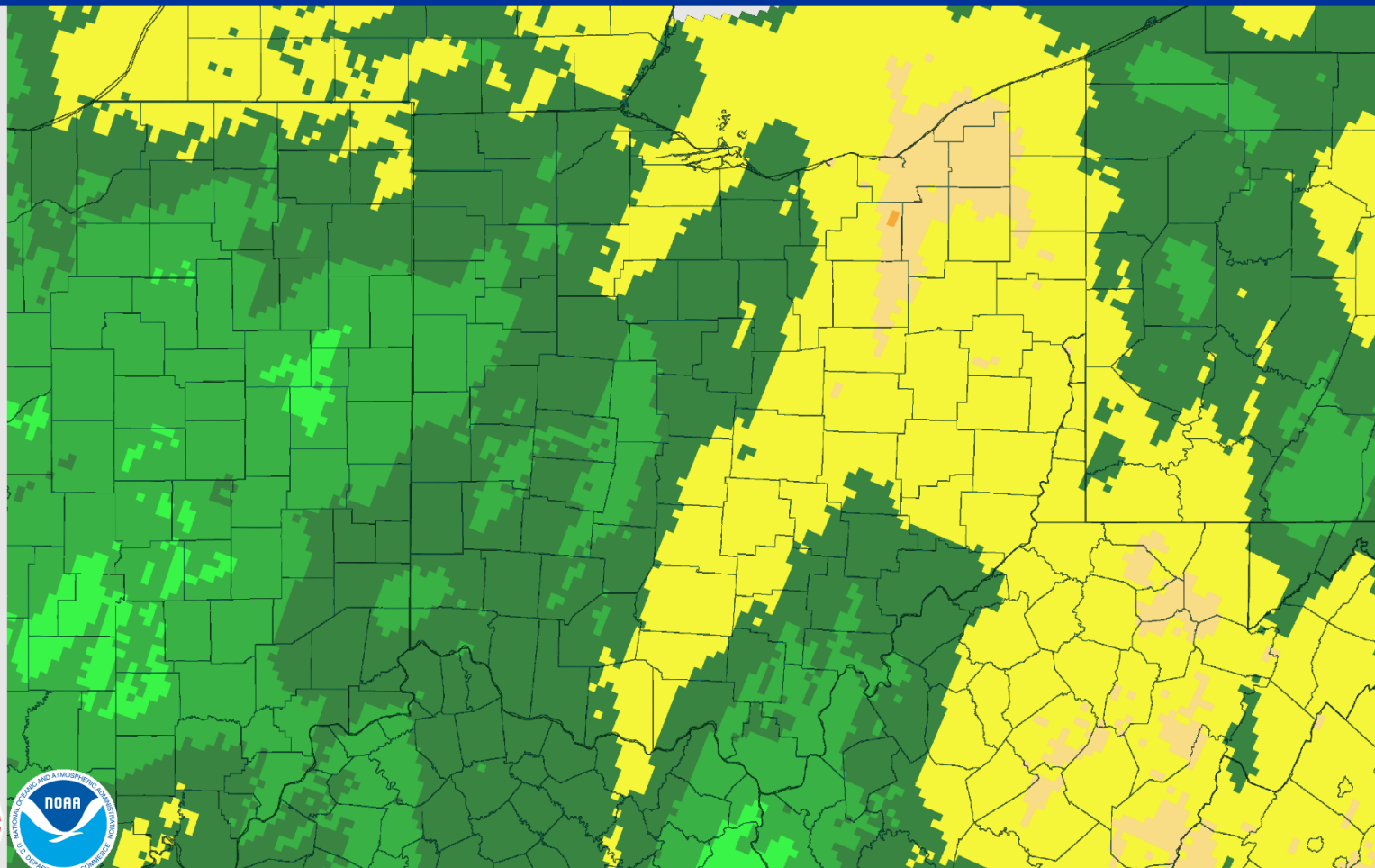
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Previous 7-Day Precipitation: Total

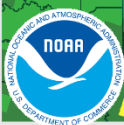
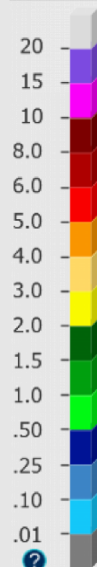
April 18, 2018 7-Day Observed Precipitation

Created on: April 18, 2018 - 14:23 UTC

Valid on: April 18, 2018 12:00 UTC



Inches



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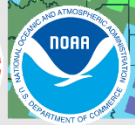
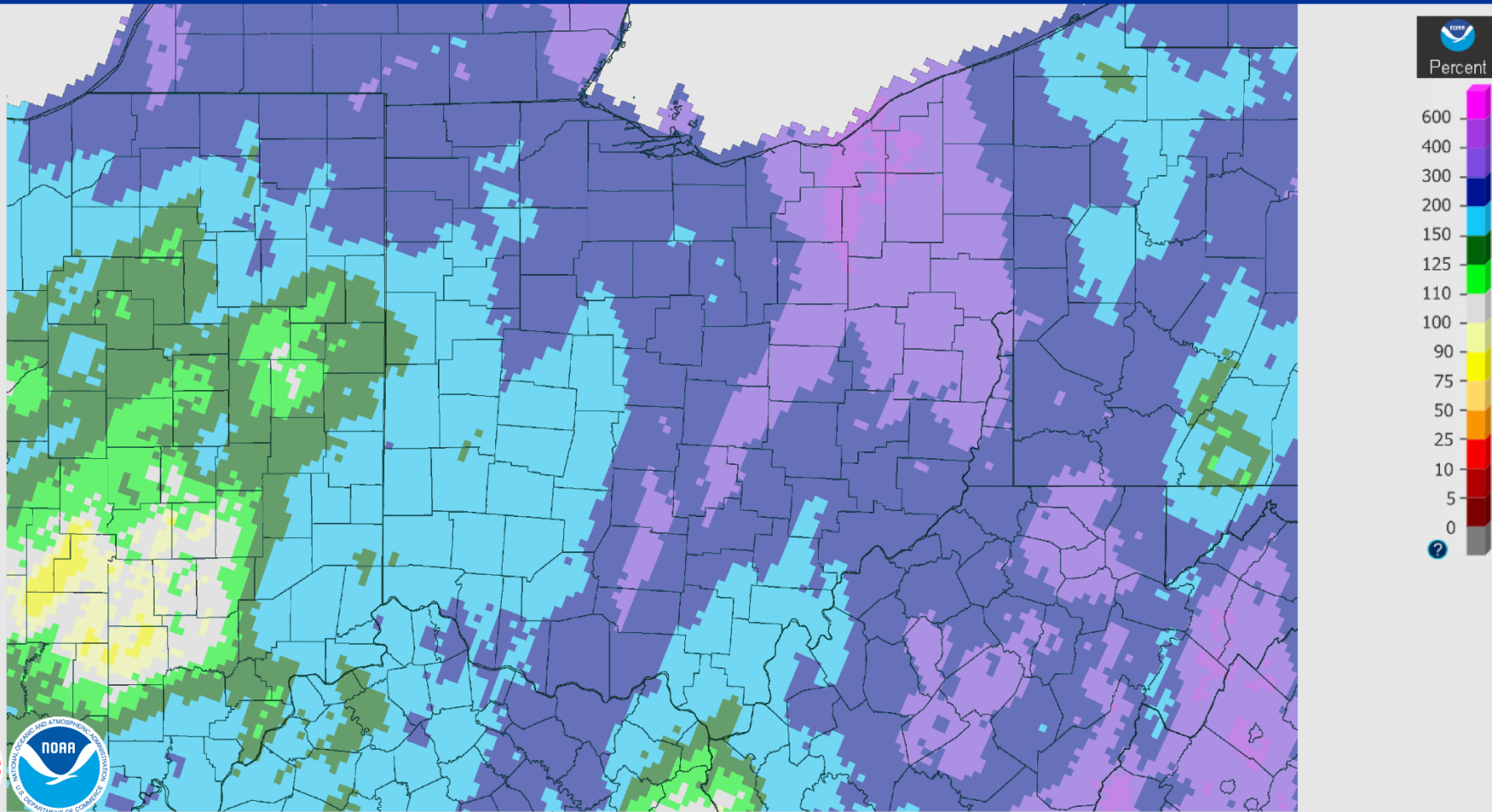
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Previous 7-Day Precipitation: Percent of Normal

April 18, 2018 7-Day Percent Precipitation

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Valid on: April 18, 2018 12:00 UTC



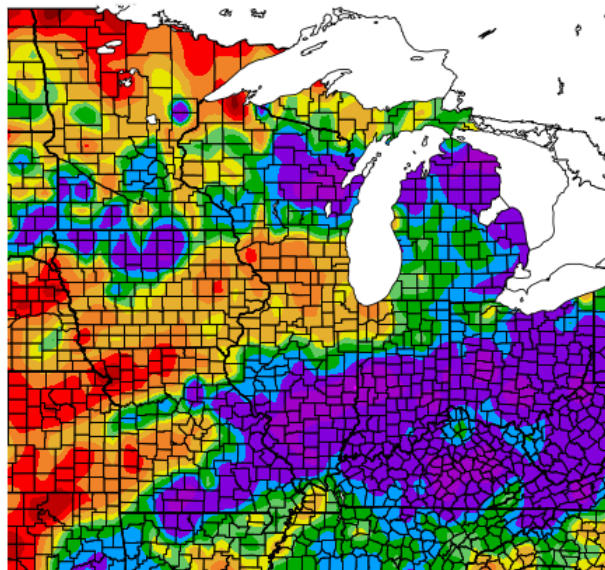
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Precipitation Differences Compared to Average (1981-2010)

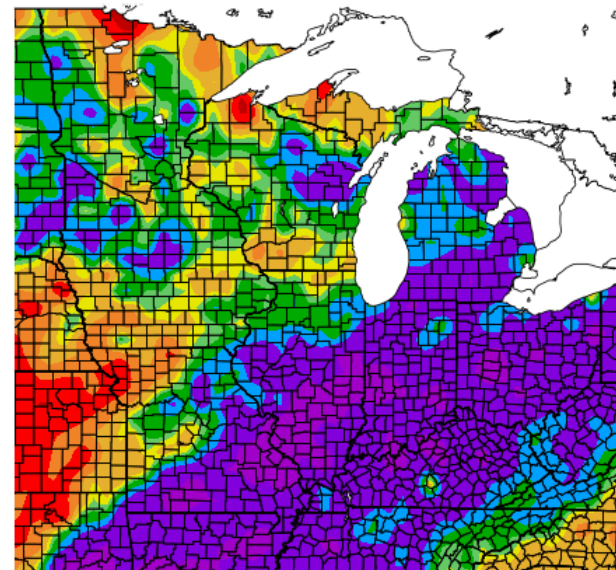
30-Day

Percent of Normal Precipitation (%)
3/18/2018 – 4/16/2018



60-Day

Percent of Normal Precipitation (%)
2/16/2018 – 4/16/2018



Generated 4/17/2018 at HPRCC using provisional data.

NOAA Regional Climate Centers Generated 4/17/2018 at HPRCC using provisional data.

NOAA Regional Climate Centers

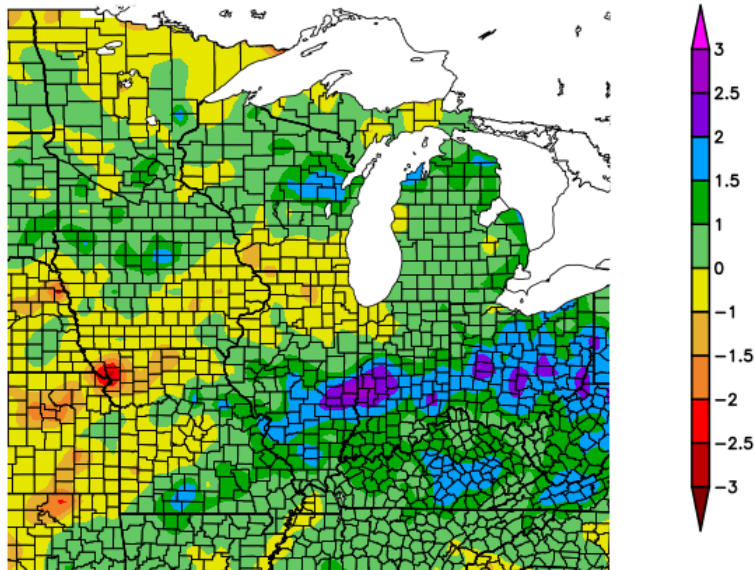


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Standard Precipitation Index (SPI)

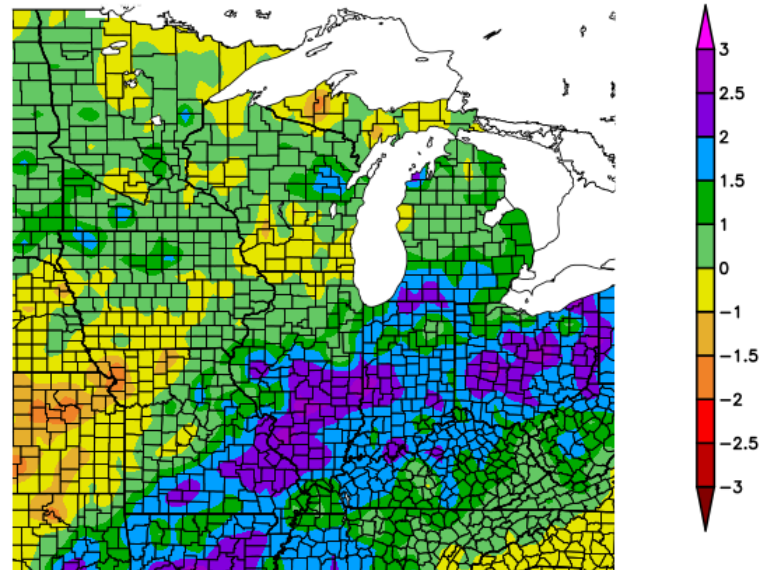
30-Day

30 Day SPI
3/18/2018 - 4/16/2018



60-Day

60 Day SPI
2/16/2018 - 4/16/2018



Generated 4/17/2018 at HPRCC using provisional data.

NOAA Regional Climate Centers Generated 4/17/2018 at HPRCC using provisional data.

NOAA Regional Climate Centers



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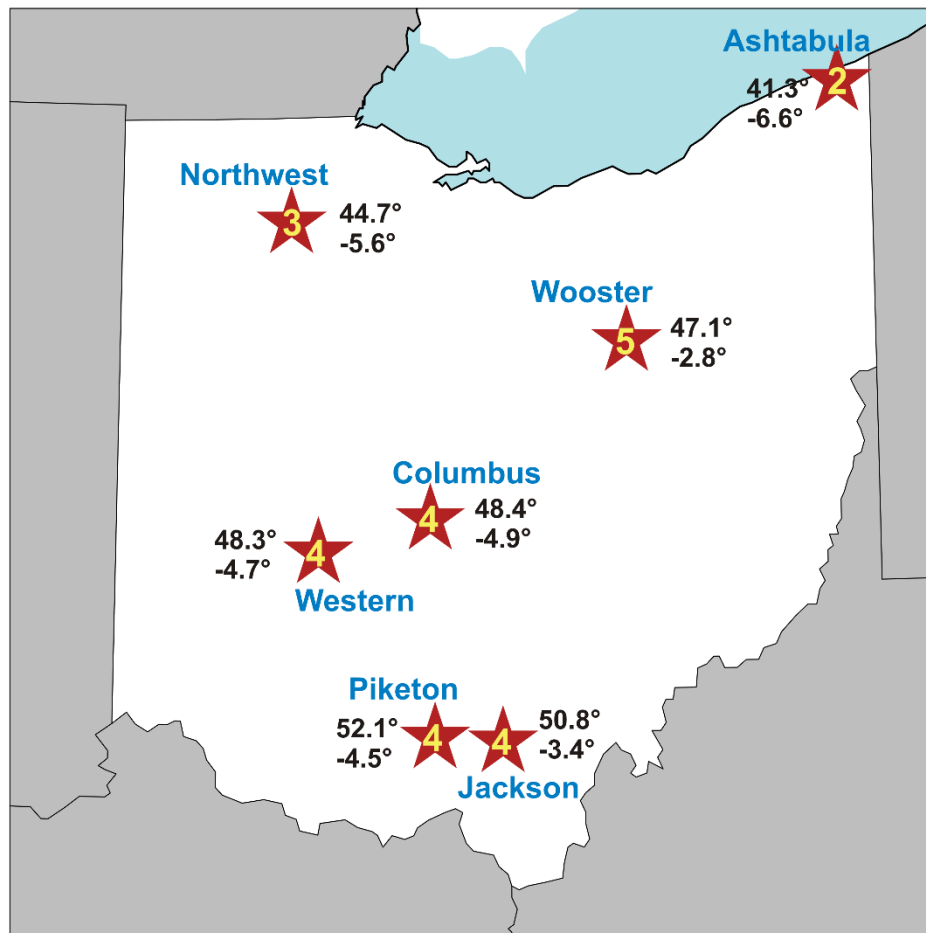
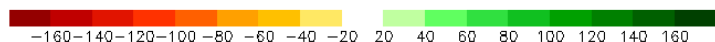
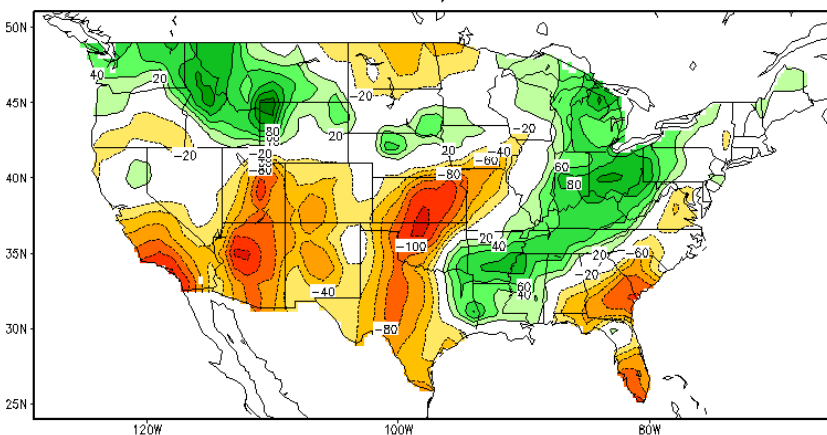
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Soil Temperature/Moisture

Location	Min Soil T (°F)	Max Soil T (°F)	2018 Soil T (°F)	2018 Rank
Ashtabula	41.2 (2016)	53.3 (2017)	41.3	2
Columbus	47.8 (2016)	59.9 (2001)	48.4	4
Jackson	45.6 (2007)	61.8 (2001)	50.8	4
NW	43.0 (2009)	57.8 (2006)	44.7	3
Piketon	48.9 (2016)	66.3 (2001)	52.1	4
Western	47.4 (2009)	60.4 (2001)	48.3	4
Wooster	40.6 (2007)	57.4 (2001)	47.1	5

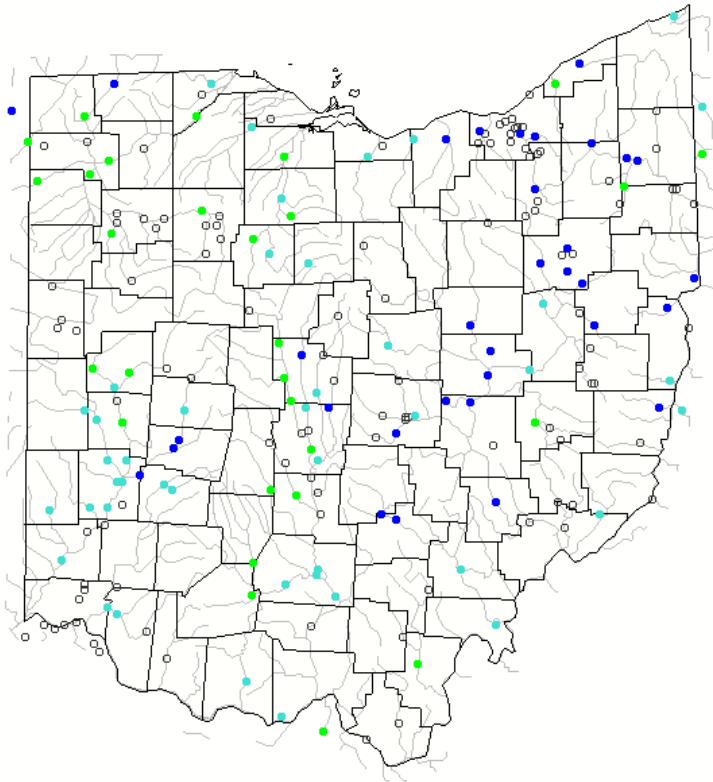
* Soil temperatures are based on weekly averages from April 9-15

Calculated Soil Moisture Anomaly (mm)
APR 17, 2018



From C.O.R.N.: Differences and Ranks based on 2000-2018 data. <https://agcrops.osu.edu/newsletter/corn-newsletter/2018-09/spring-warm-how-does-2018-soil-temperature-compare>

7-DAY



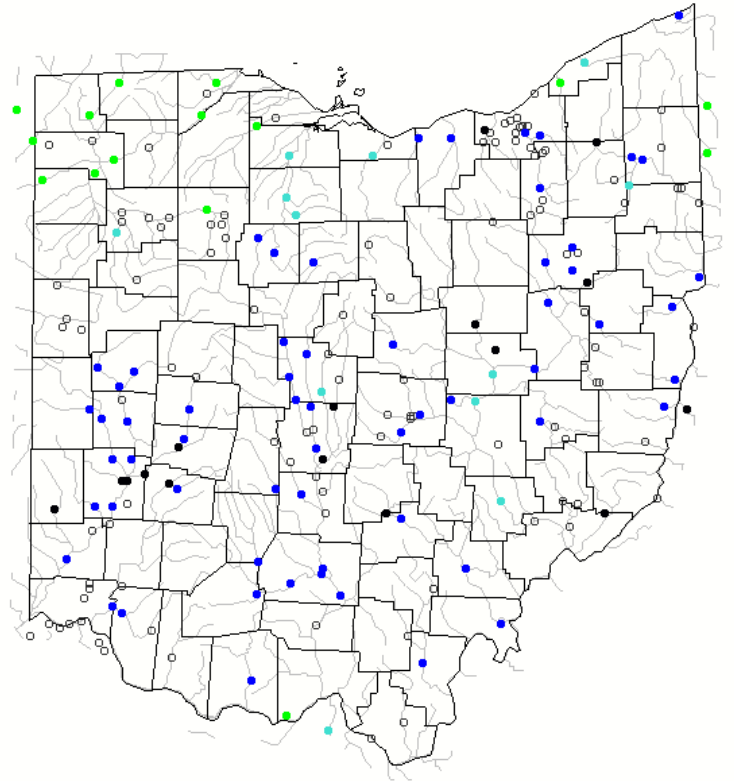
Explanation - Percentile classes

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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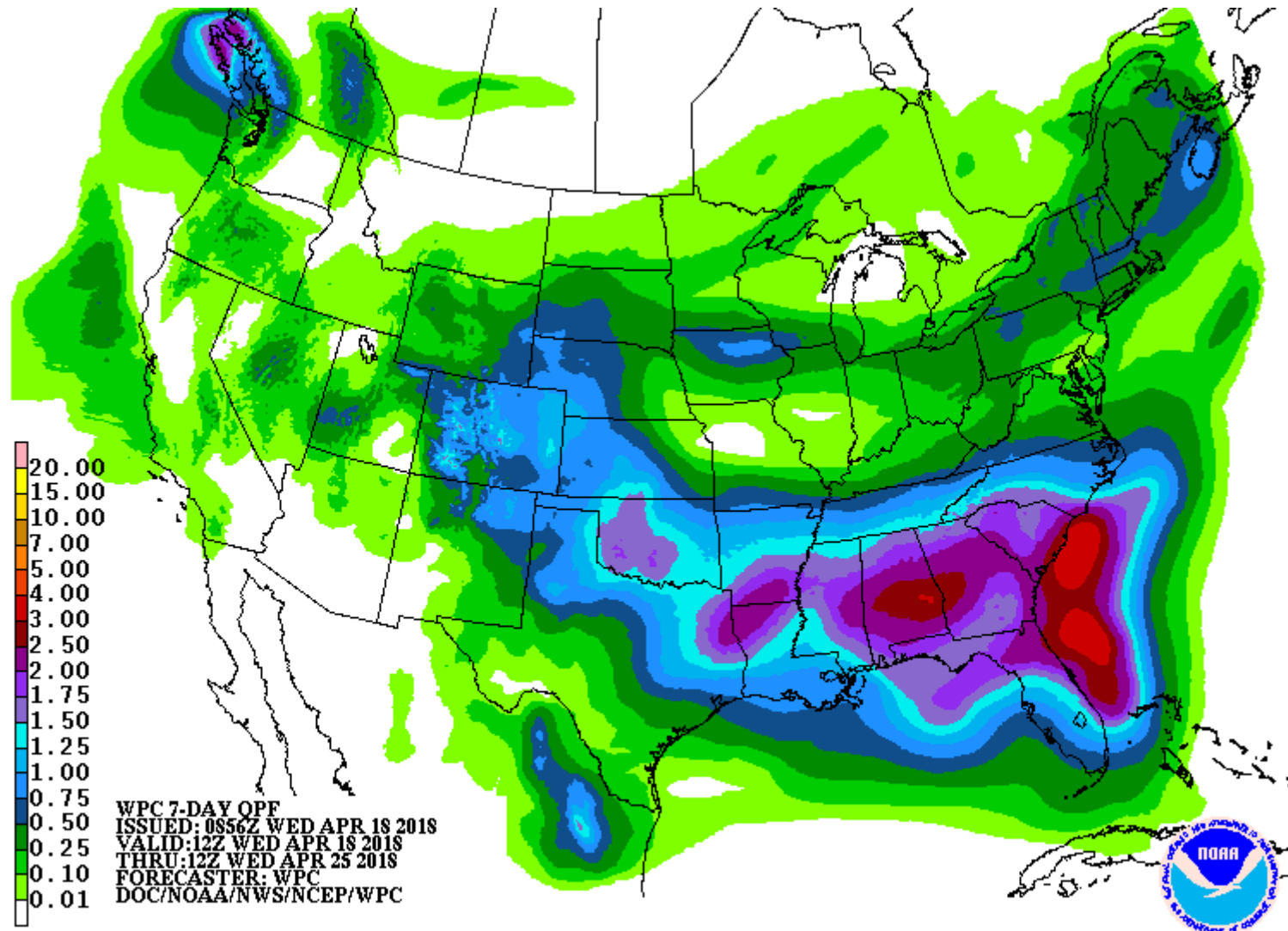
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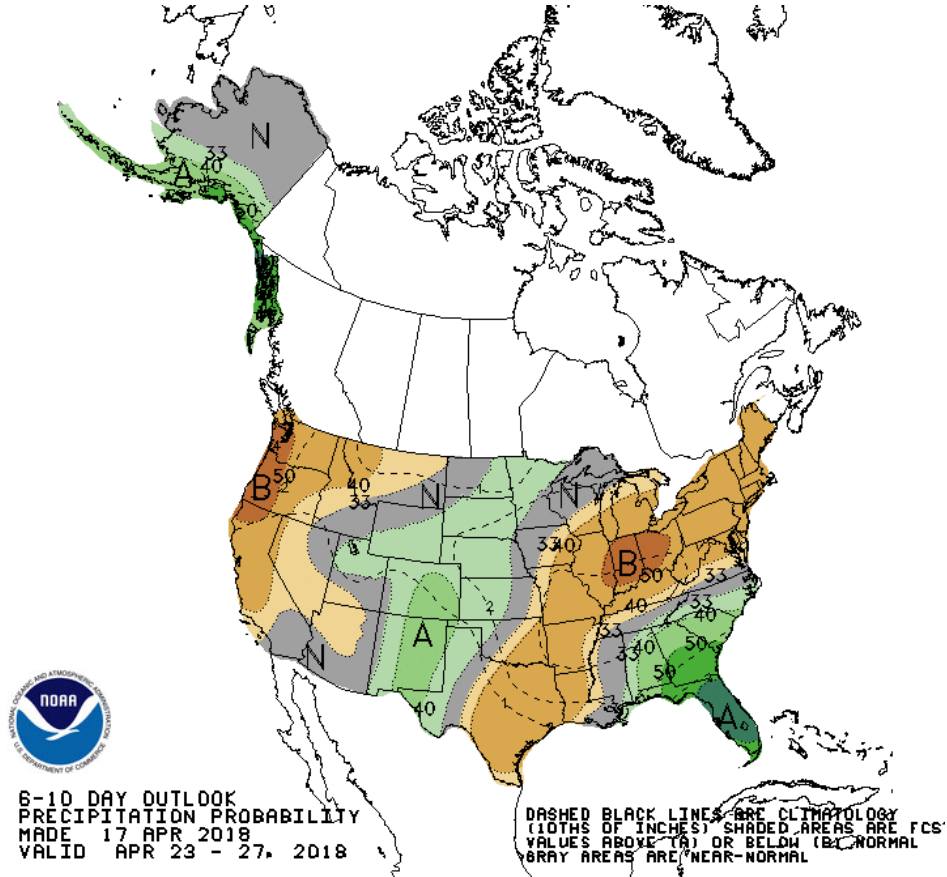
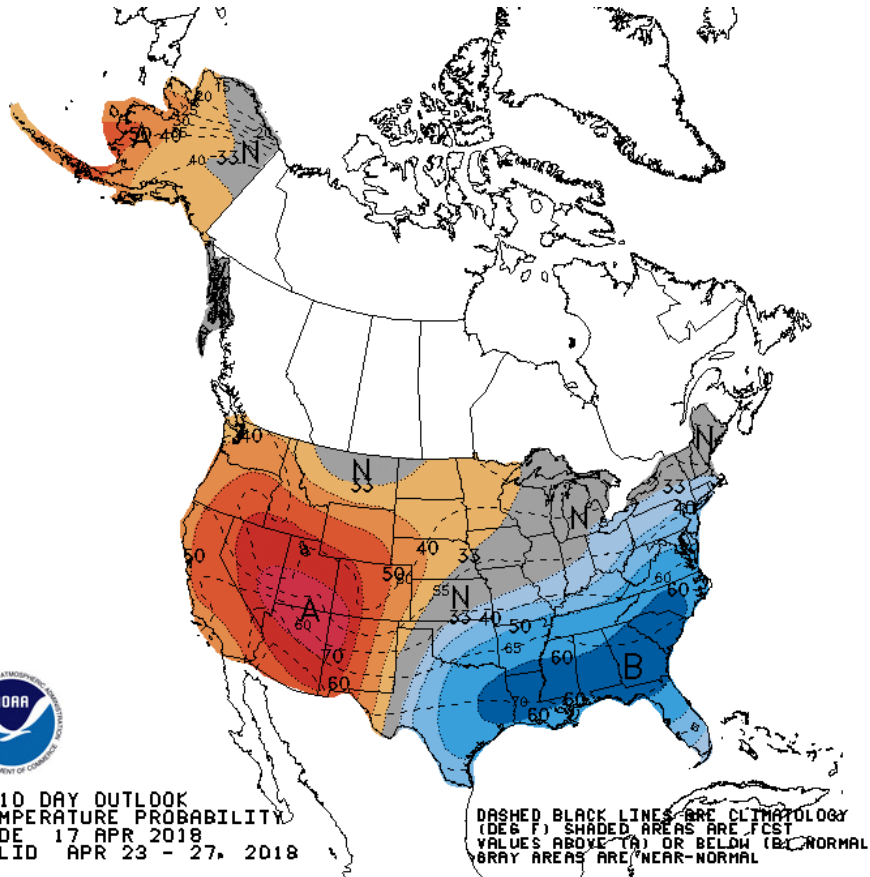
Weather for the Week Ahead



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6-10 Day Outlook



Highs: Low to mid 60s

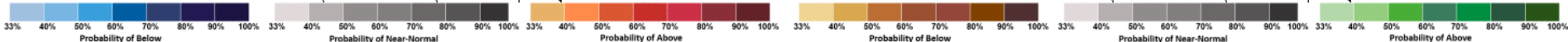
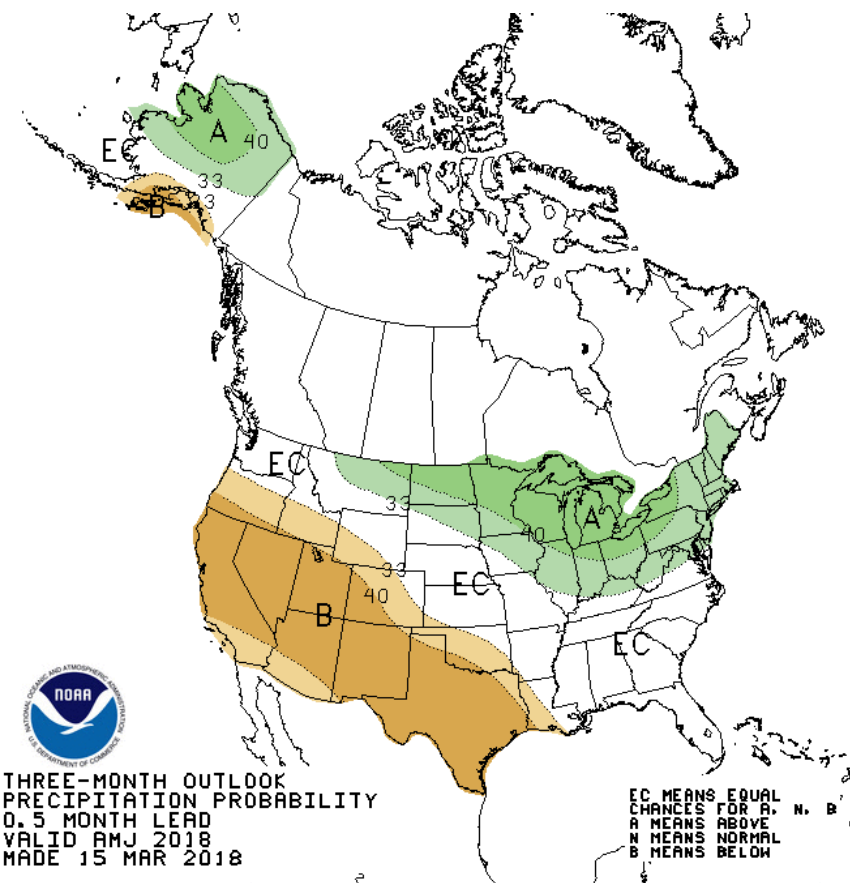
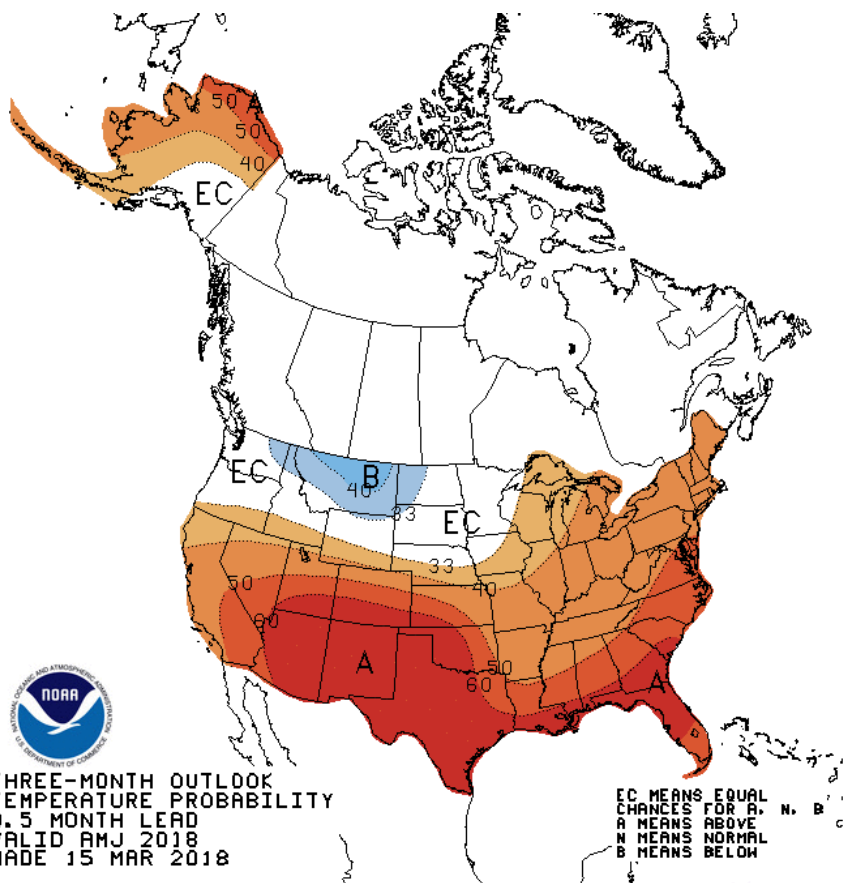
Lows: Low to mid 40s



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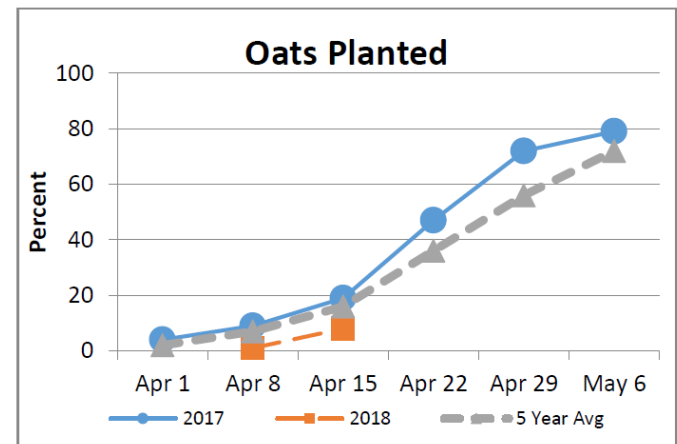
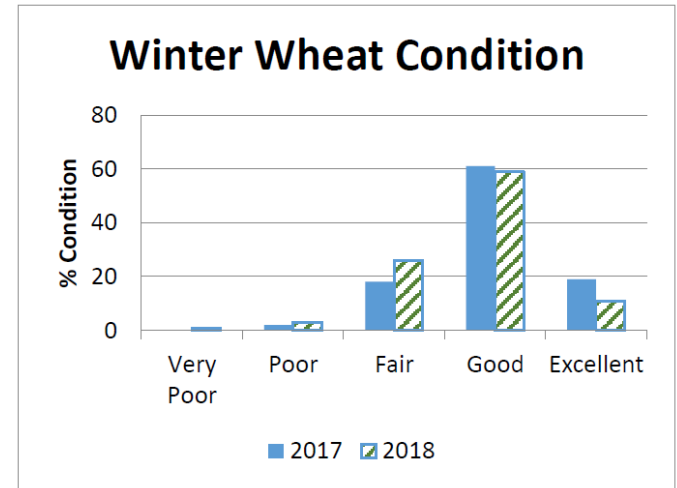
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April-June Outlook



Ag Highlights

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



NASS: Cheryl Turner –

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



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Summary of Conditions



Drought Monitor: No Drought in Ohio

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

The week ahead: Drier week ahead. Warmer temperatures by the weekend into next week.



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