Hydrologic and Climate Assessment

April 5, 2019

Photo Credit: Dan Keck @Flickr

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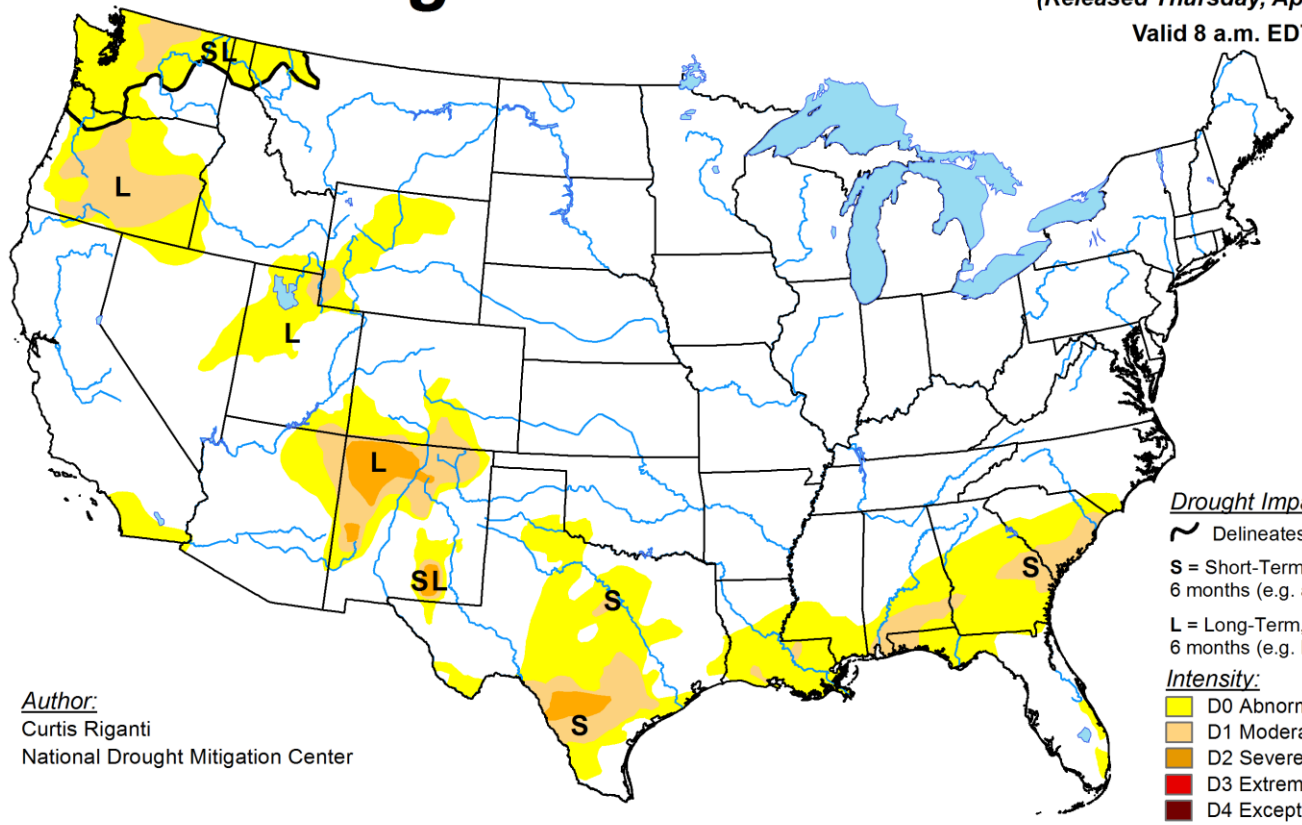
Aaron B. Wilson
STATE CLIMATE OFFICE OF OHIO (SCOO)
DEPARTMENT OF EXTENSION - CFAES
BYRD POLAR & CLIMATE RESEARCH CENTER
DEPARTMENT OF GEOGRAPHY

U.S. Drought Monitor

April 2, 2019

(Released Thursday, Apr. 4, 2019)

Valid 8 a.m. EDT



Author:
Curtis Riganti
National Drought Mitigation Center

Drought Impact Types:

~ Delineates dominant impacts

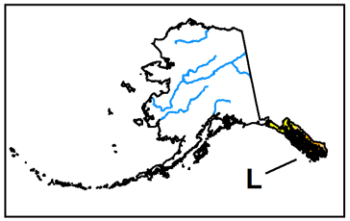
S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)

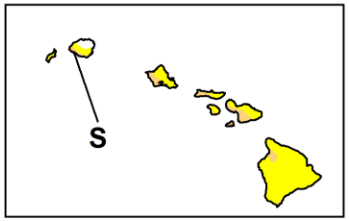
L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)

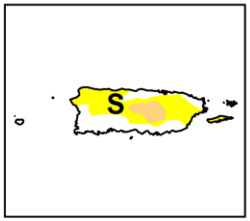
Intensity:

- 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/

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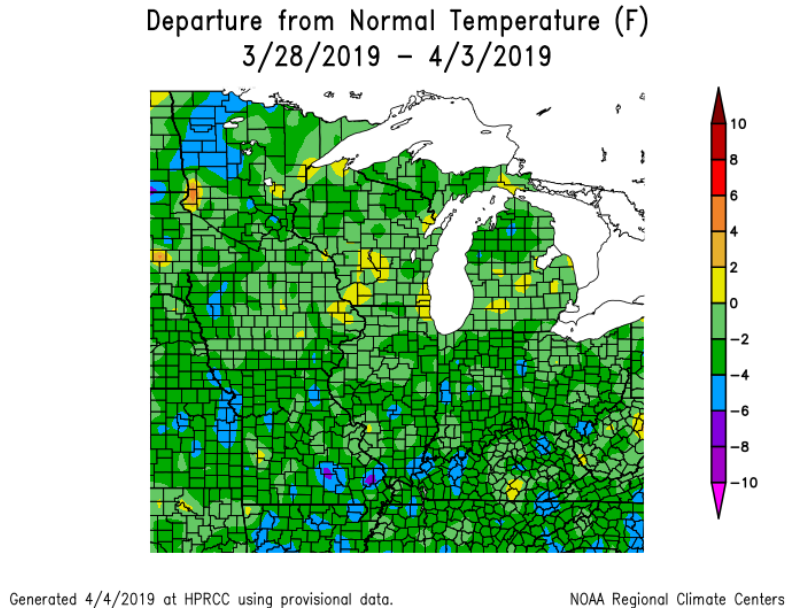
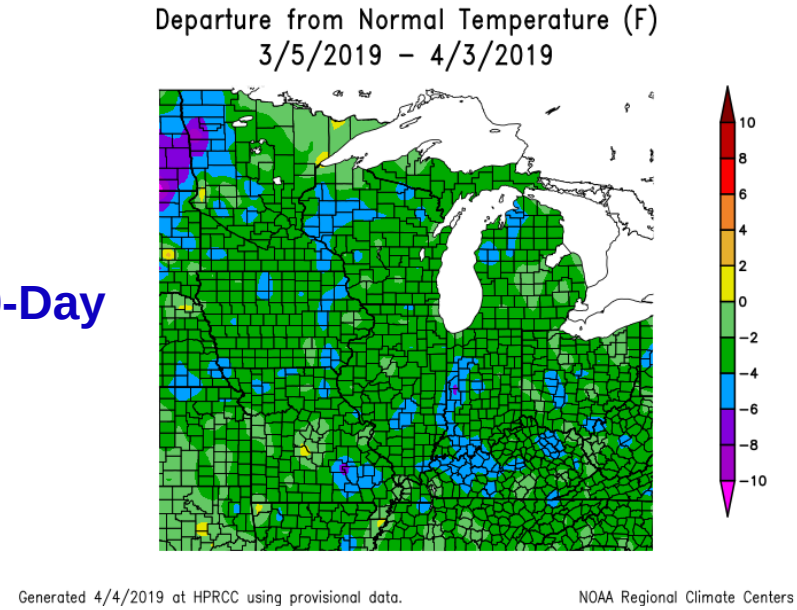
Temperature Differences Compared to Average (1981-2010)

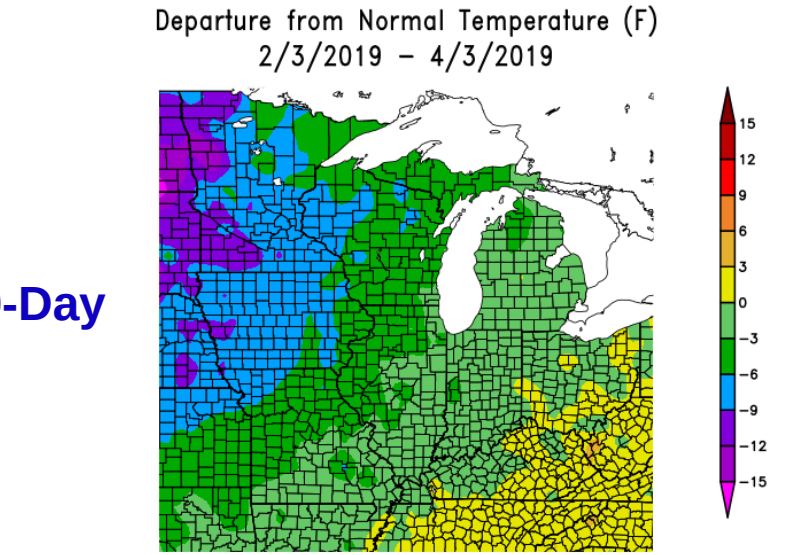
7-Day



30-Day



60-Day



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

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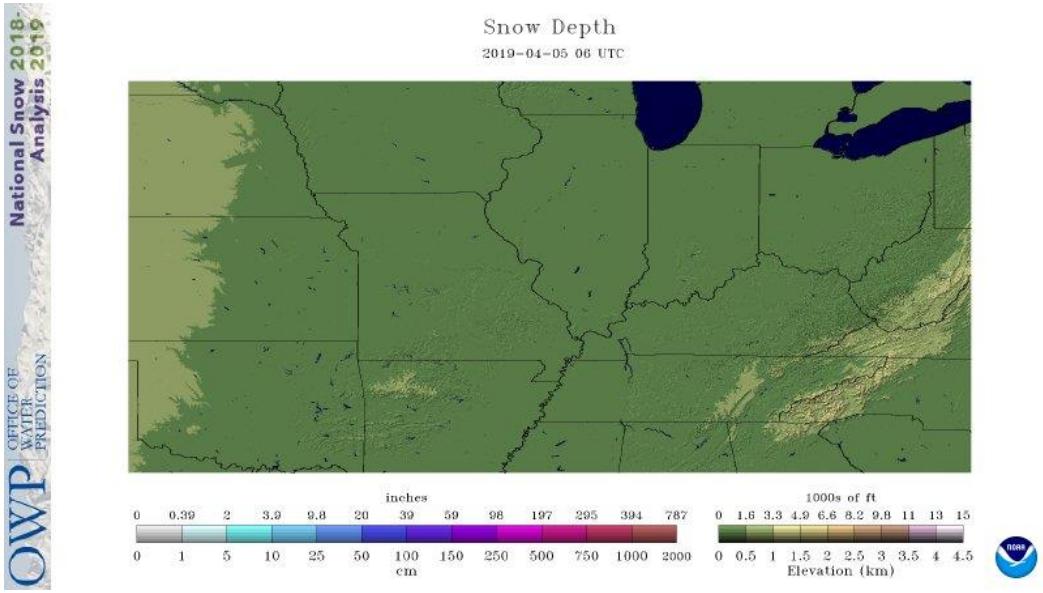
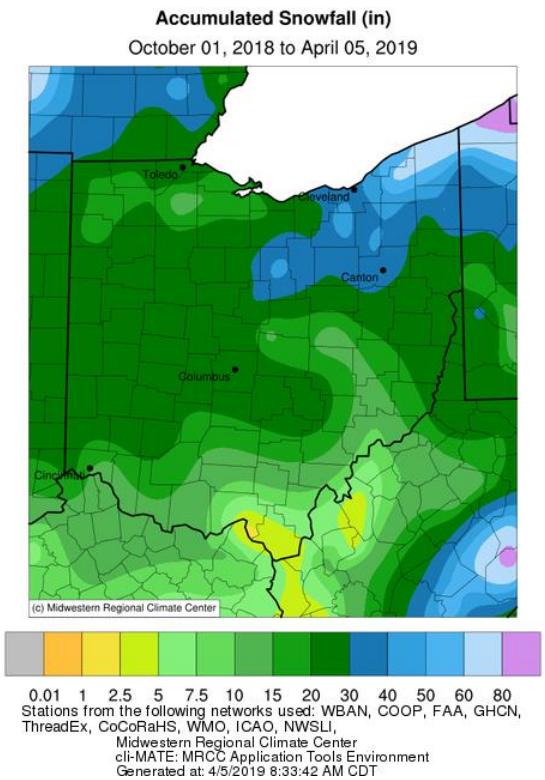
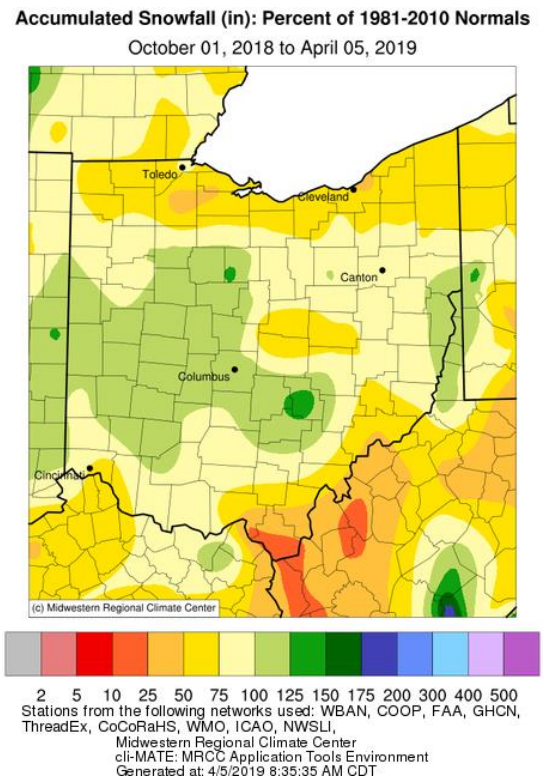
Final Snow Analysis

https://www.nohrsc.noaa.gov/nsa/



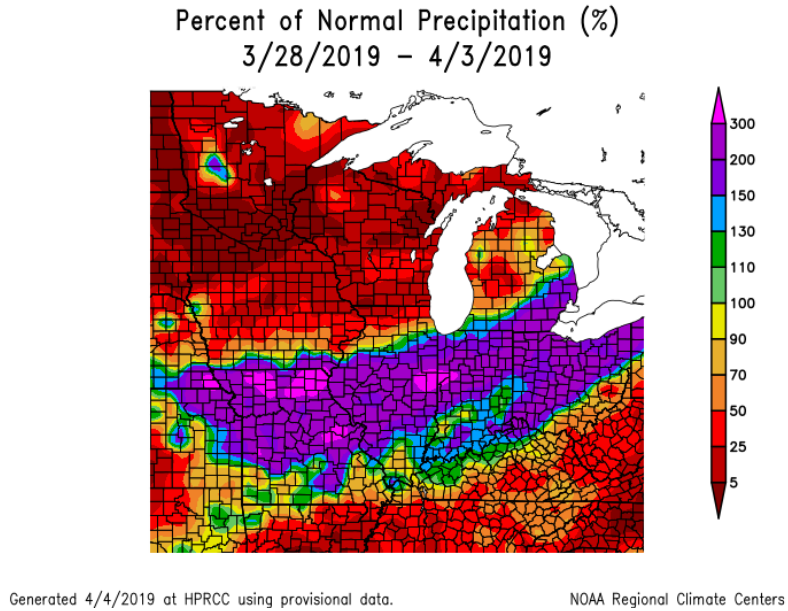


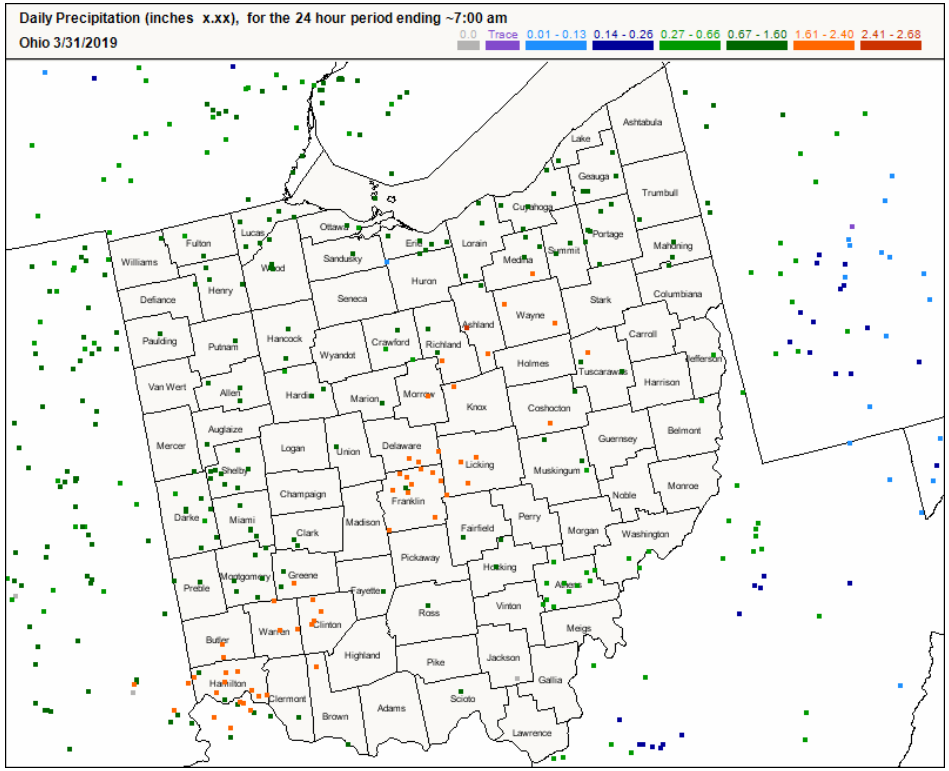


MRCC

Precipitation Differences Compared to Average (1981-2010)

7-Day





CoCoRaHS Observed Rainfall

March 31

http://cocorahs.com/

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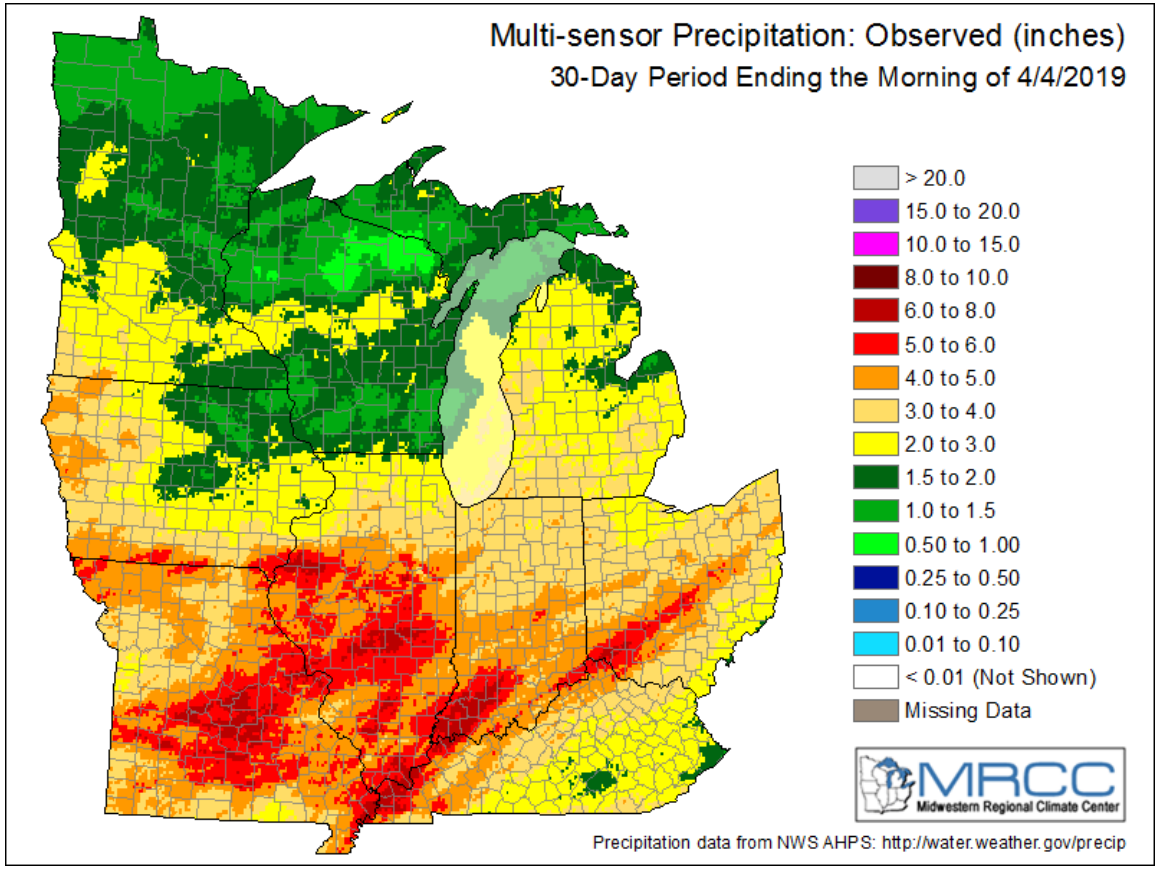
Long-term Precipitation Totals

~42% of the normal annual rainfall in the first three months of the year (dry season)

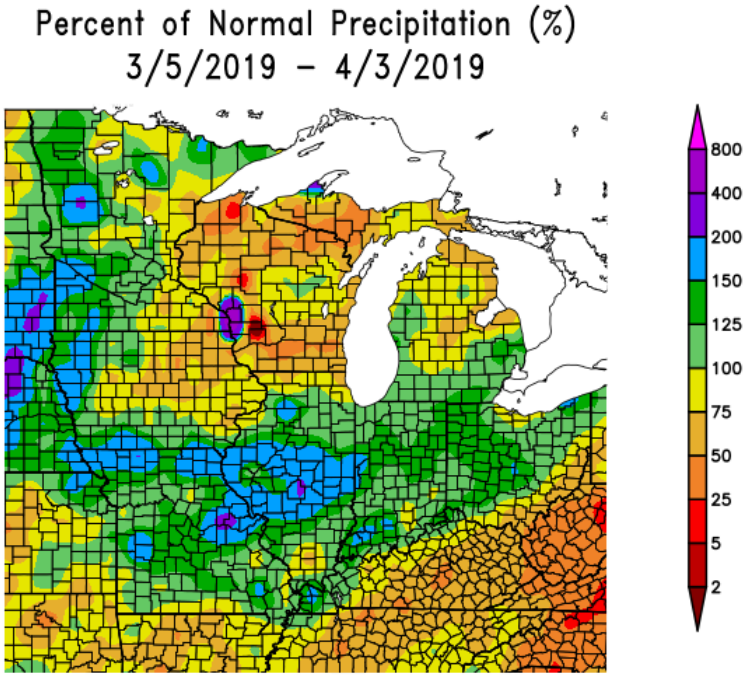


CoCoRaHS Name	Total Precip (inches)
Cheviot 3.4 W	19.17
Cincinnati 8.4 NW	19.05
Fayetteville 0.5 W	18.72
Wilmington 2.2 N	18.67
Wilmington 3.6 W	18.47
Wyoming 1.2 NW	18.36
Cincinnati 8.9 NW	18.36
Clarksville 3.9 ENE	18.21
Clarksville 2.3 WNW	18.11
Bethel 3.8 SW	17.91

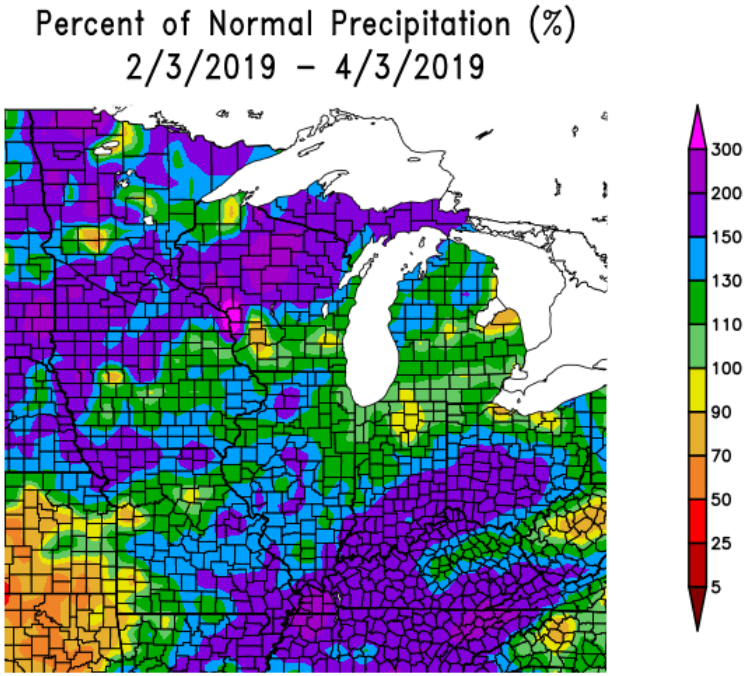
https://cocorahs.org/

Precipitation Differences Compared to Average (1981-2010)

30-Day



60-Day



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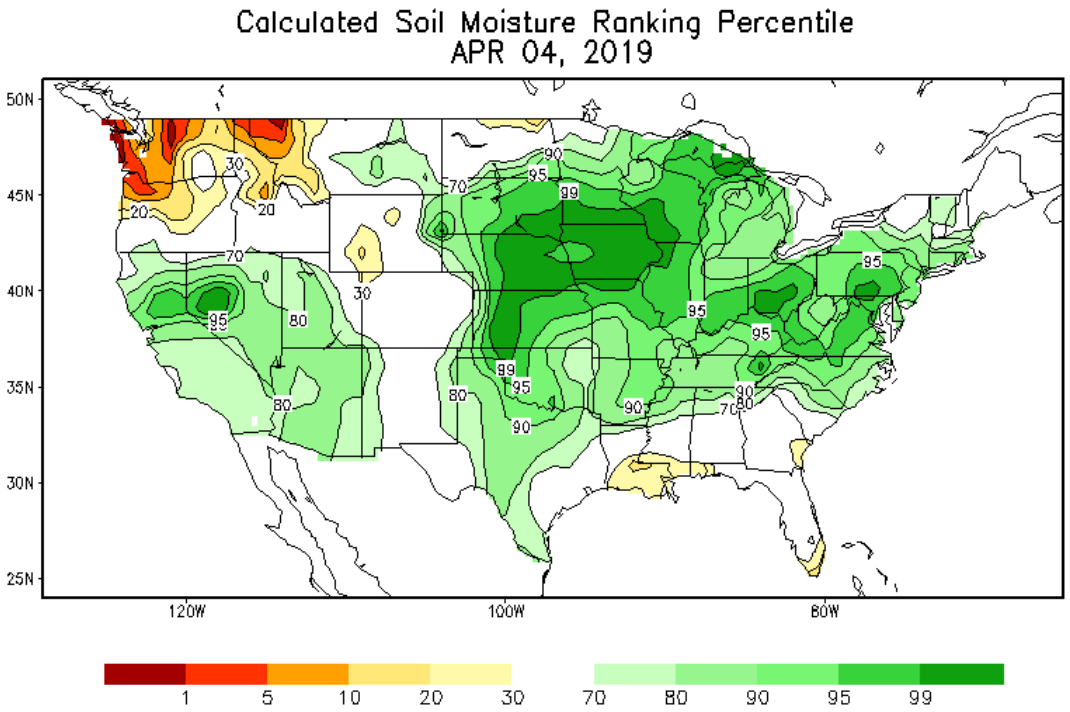
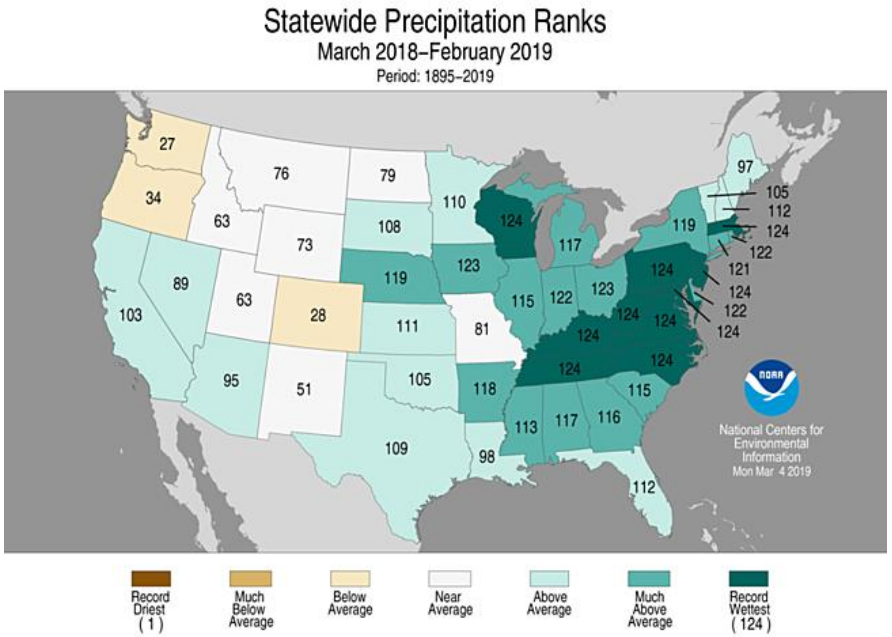
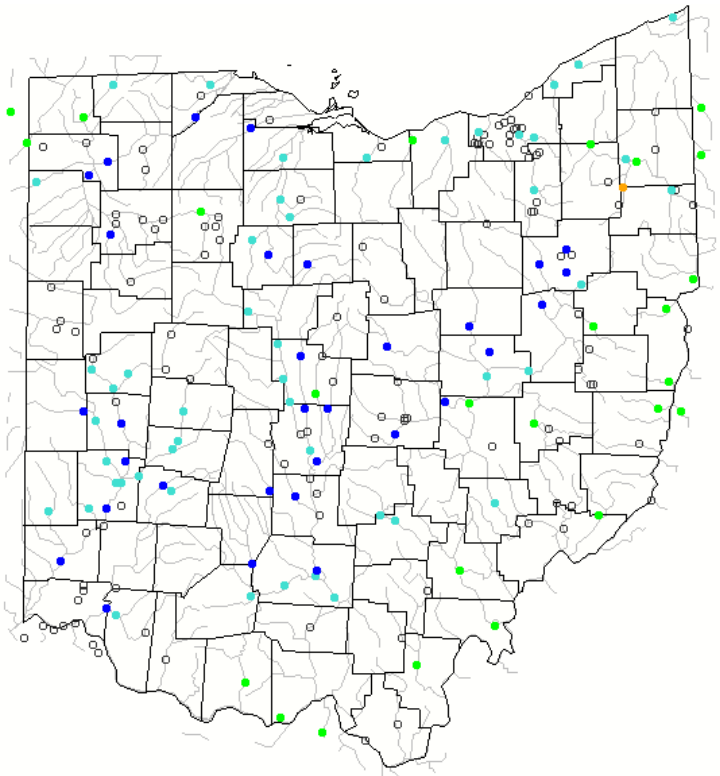
Soil Moisture





USGS Streamflow

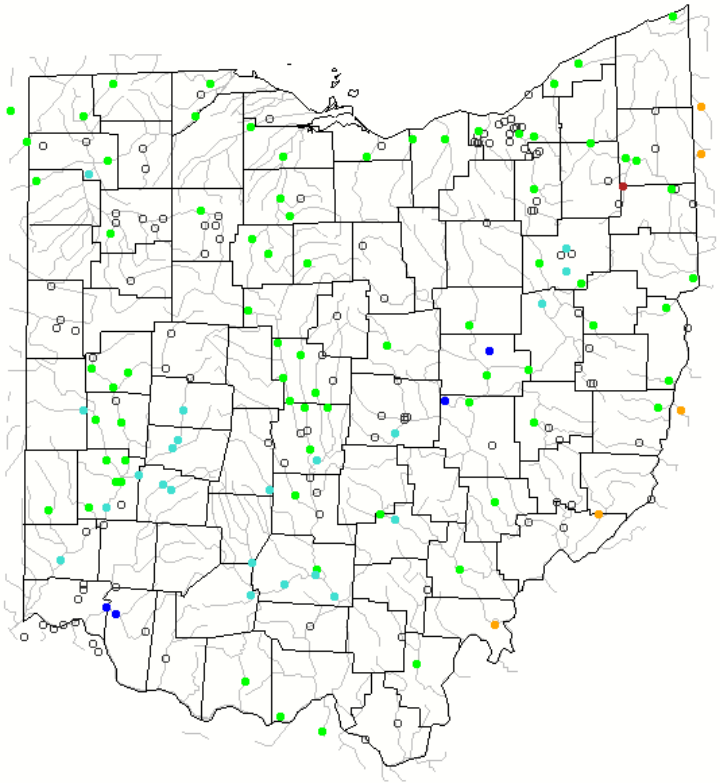
7-DAY



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		

28-DAY



USGS

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

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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.

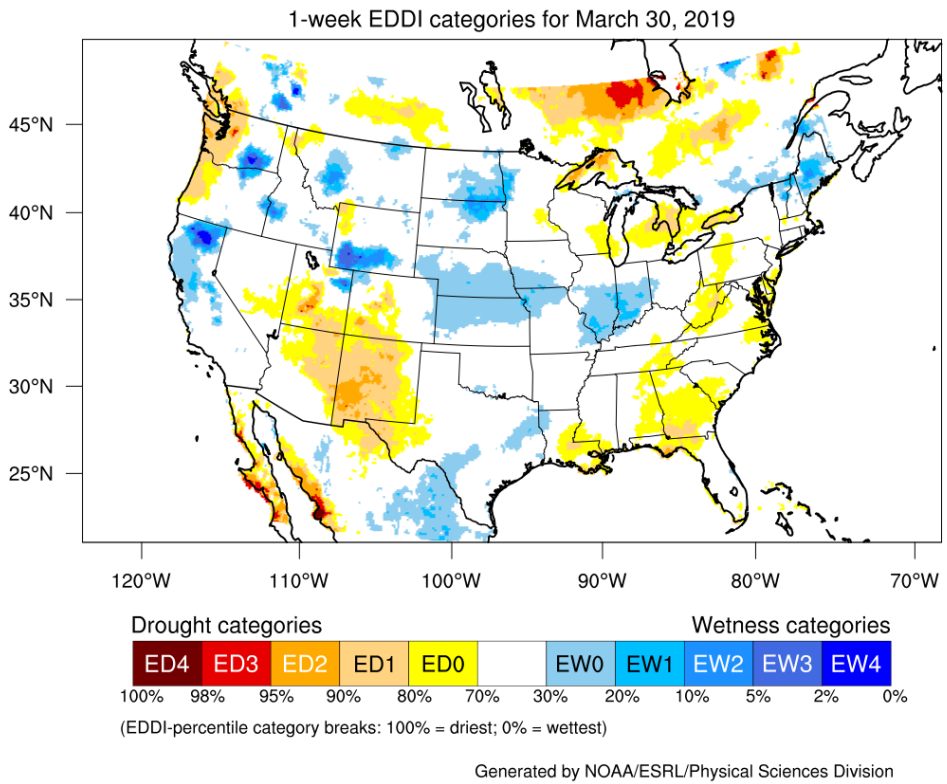
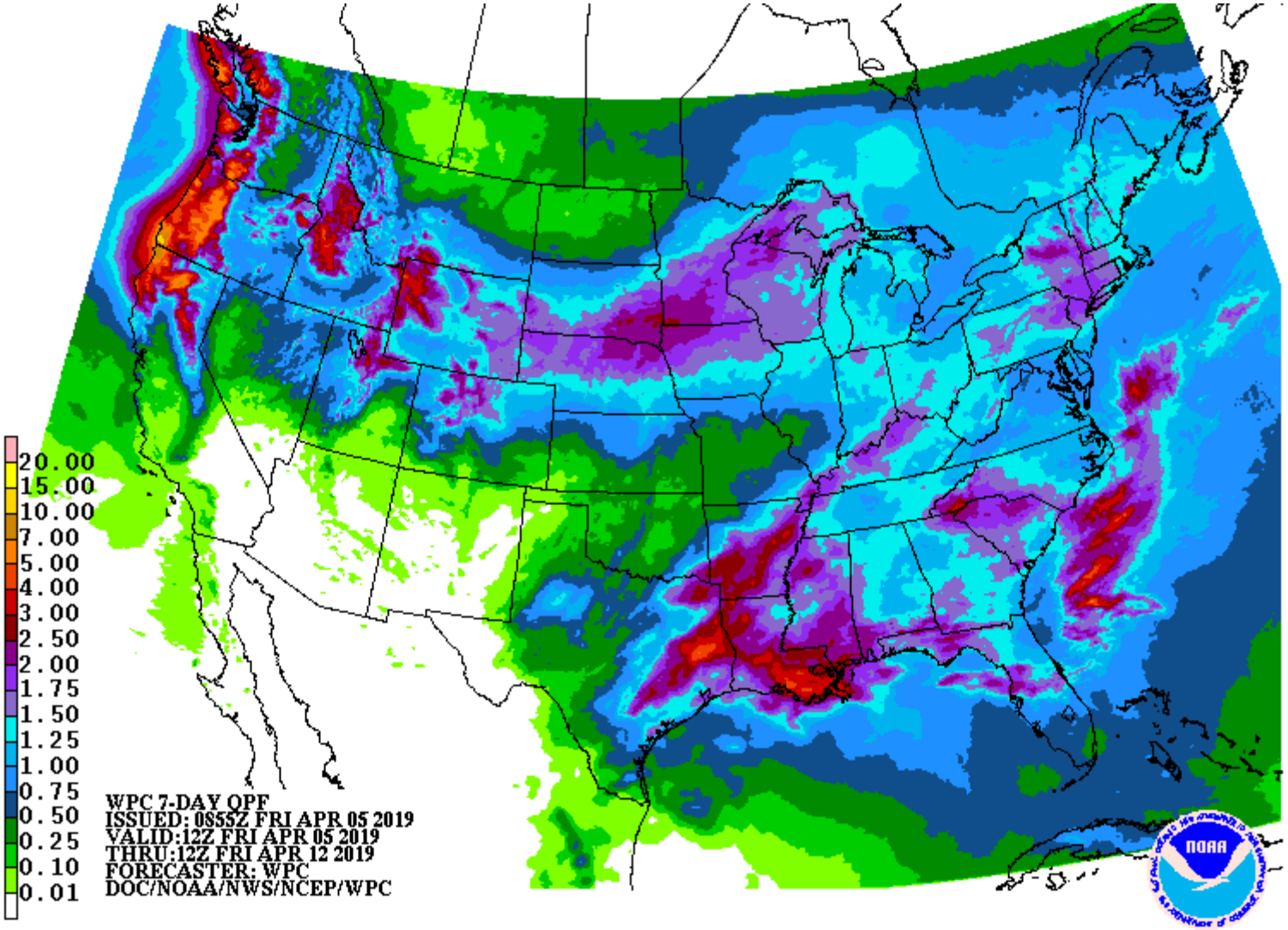


Image provided by the NOAA/ESRL Physical Sciences Division, Boulder, Colorado, from their web site at: https://www.esrl.noaa.gov/psd/.

Weather for the Week Ahead



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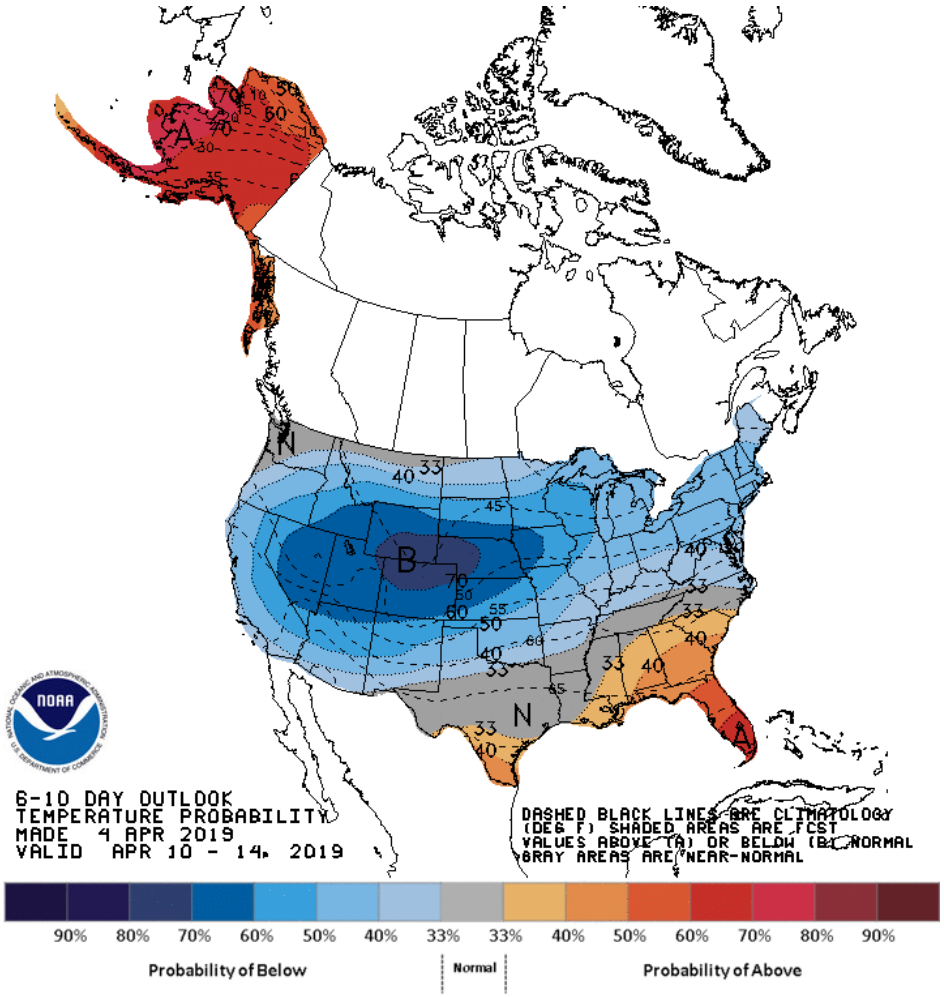
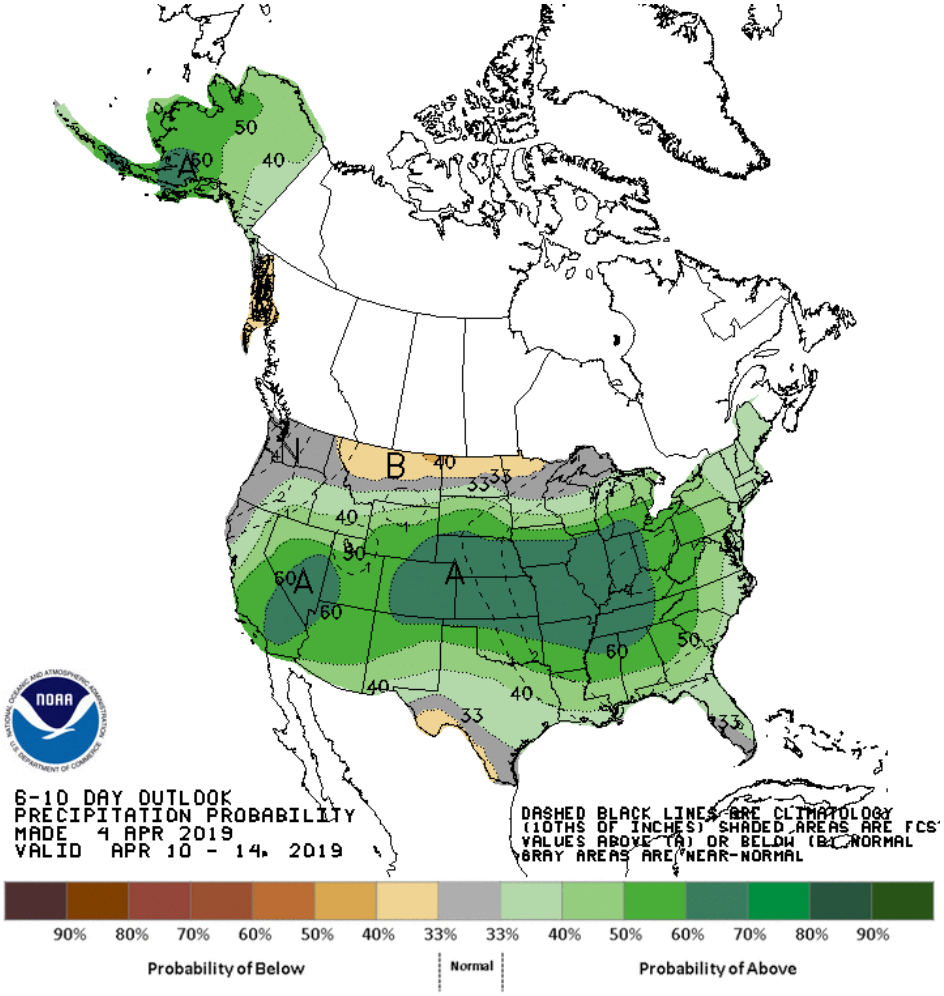
6-10 Day Outlook





Highs: 55-61°F; **Lows:** 34-40°F; **Precip:** 0.9-1.0” (per week)

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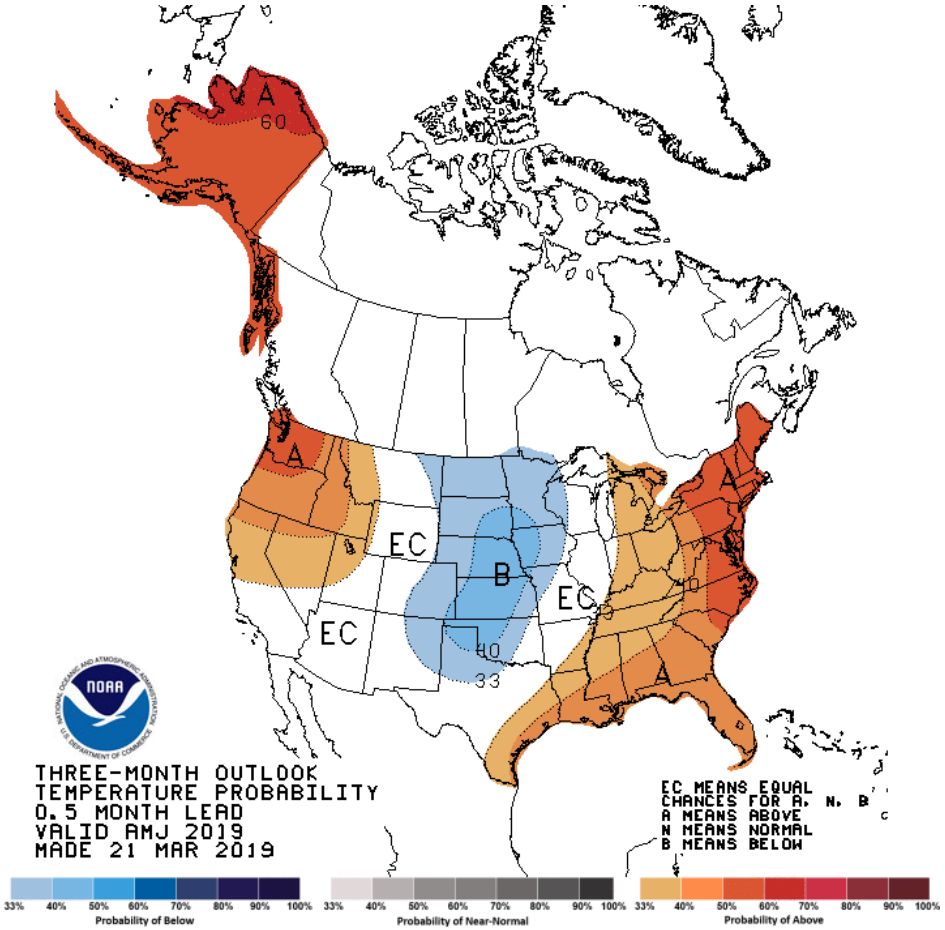
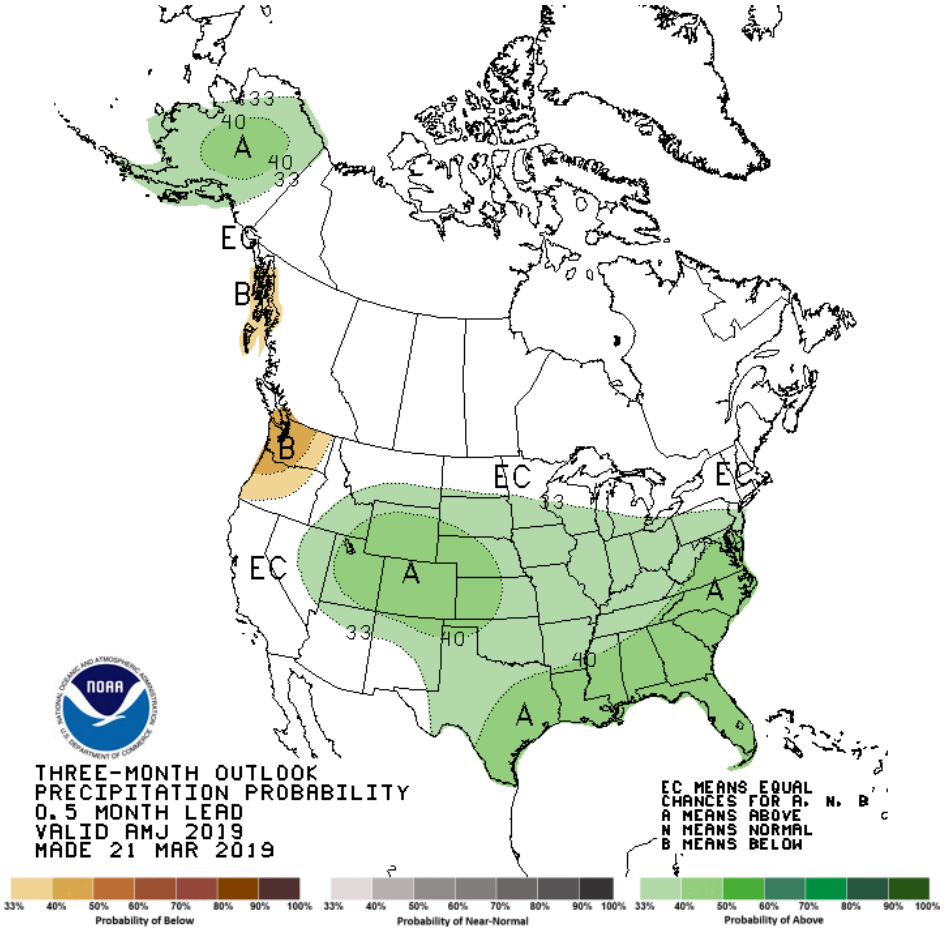
April – June Outlook





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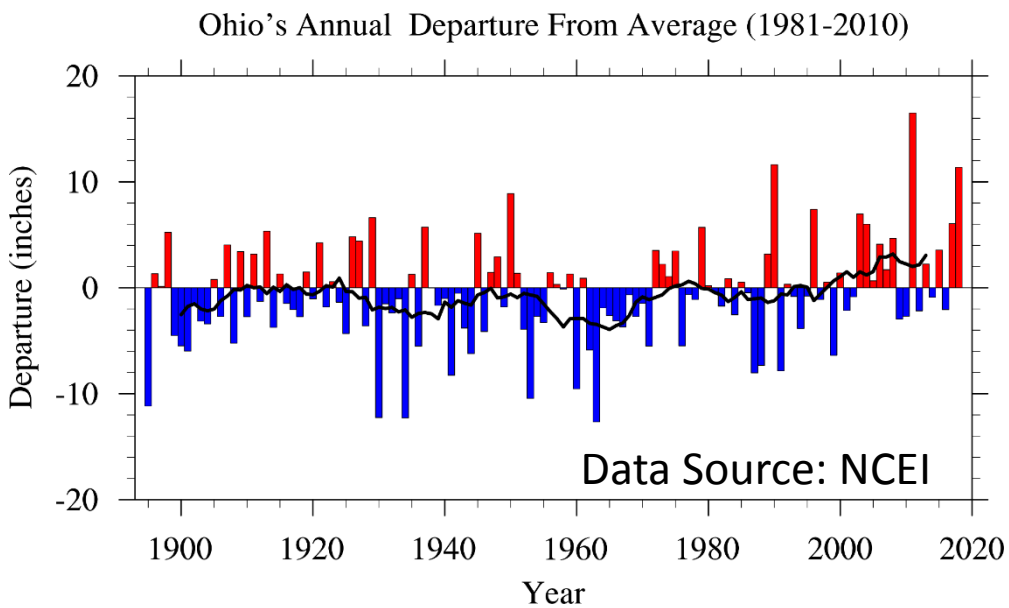
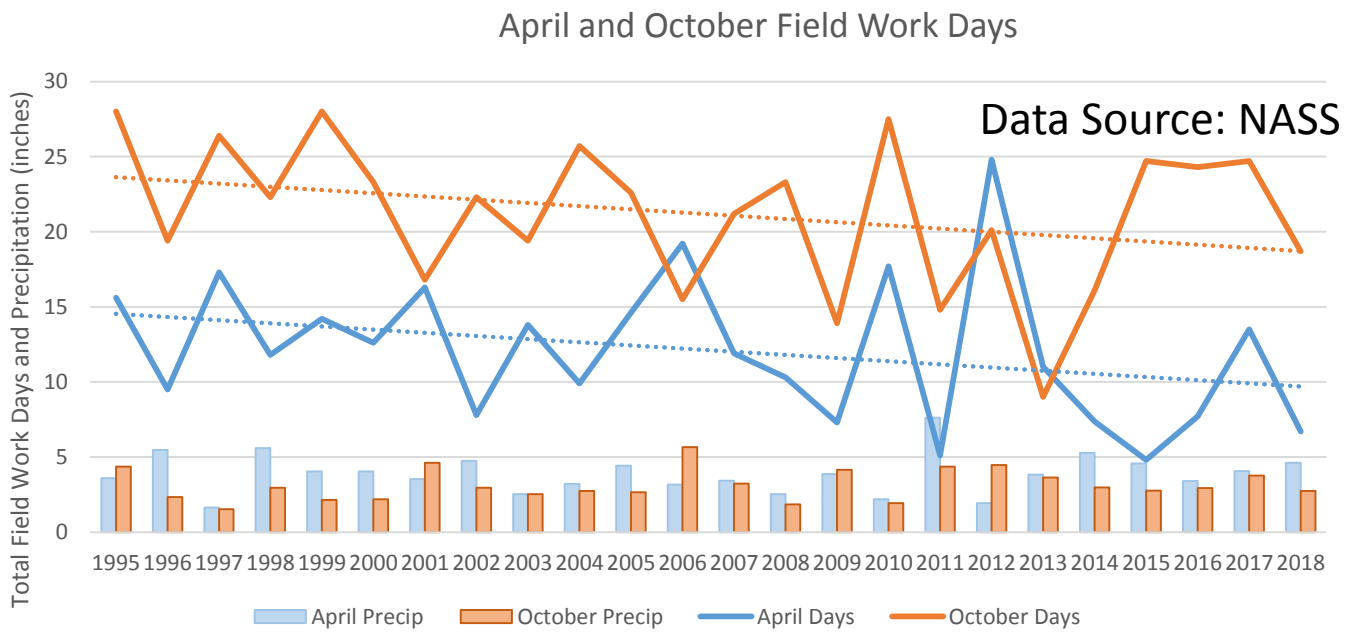
Long-term Precipitation Trends and Impacts



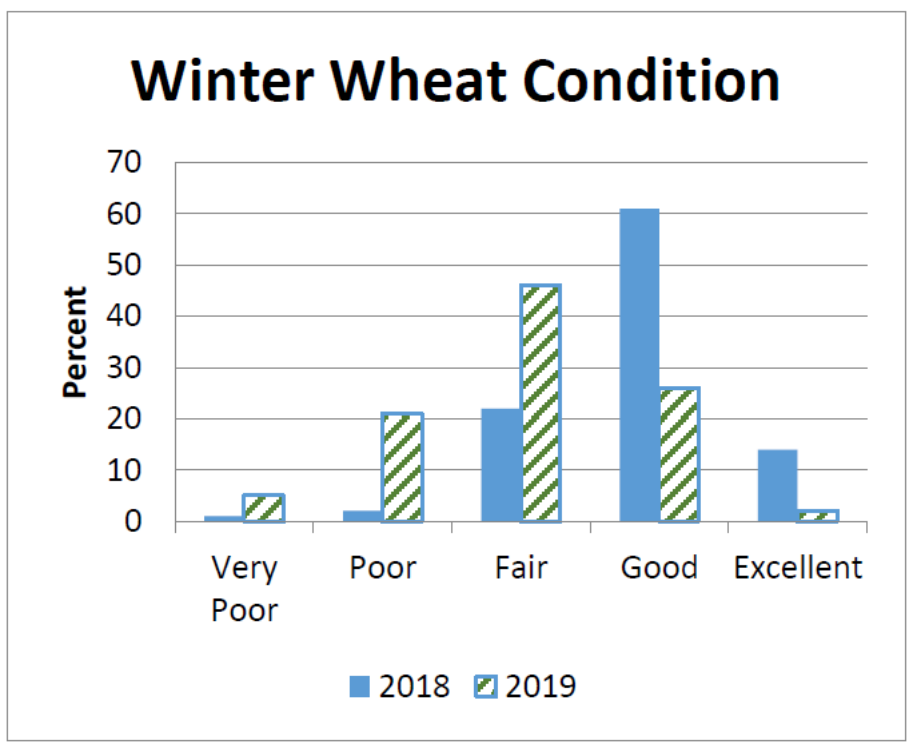
Trend = -0.2 days per year

~5 days loss in both April and October since 1995



Ag Highlights

- < 1 day suitable for fieldwork
- Forage crops (rye, barley and winter wheat) appear stressed due to saturated soils.
- Winter wheat crop was rated 28 percent good to excellent condition.



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

Summary of Conditions

Photo Credit: Dan Keck @Flickr

Drought Monitor: None

Climate Recap: Cool and wet this past week

The week ahead: Warmer conditions expected overall but multiple chances for soaking rainfall

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