

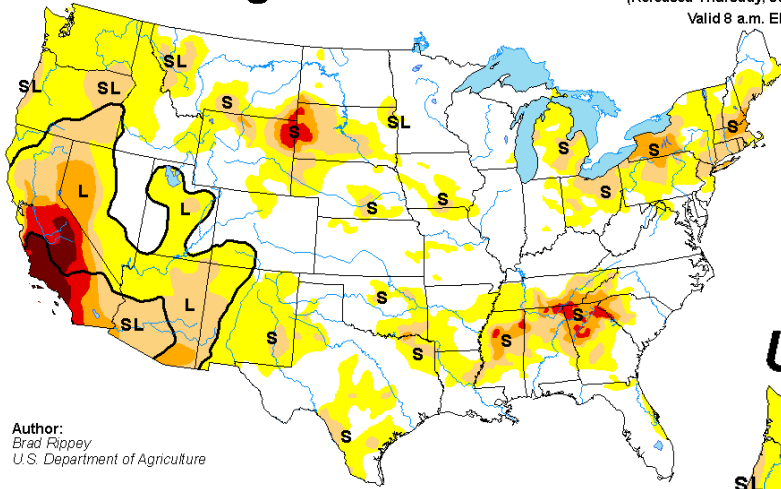
# SCOO Weekly Hydrologic Outlook

Tuesday 8 August, 2016

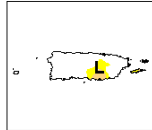
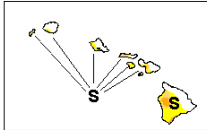
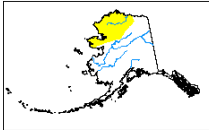


# U.S. Drought Monitor

July 26, 2016  
 (Released Thursday, Jul. 28, 2016)  
 Valid 8 a.m. EDT



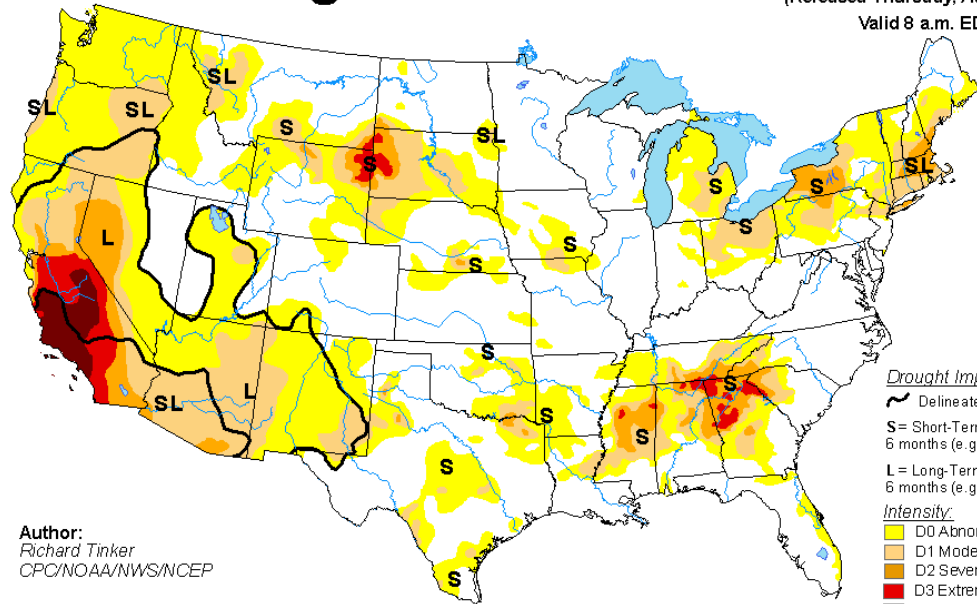
Author:  
 Brad Rippey  
 U.S. Department of Agriculture



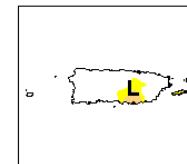
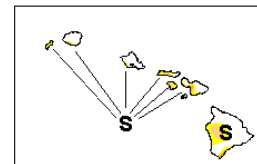
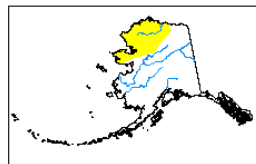
USDA  
<http://dr>

# U.S. Drought Monitor

August 2, 2016  
 (Released Thursday, Aug. 4, 2016)  
 Valid 8 a.m. EDT



Author:  
 Richard Tinker  
 CPC/NOAA/NWS/NCEP



USDA

National  
 Drought  
 Mitigation  
 Center



<http://droughtmonitor.unl.edu/>

### 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

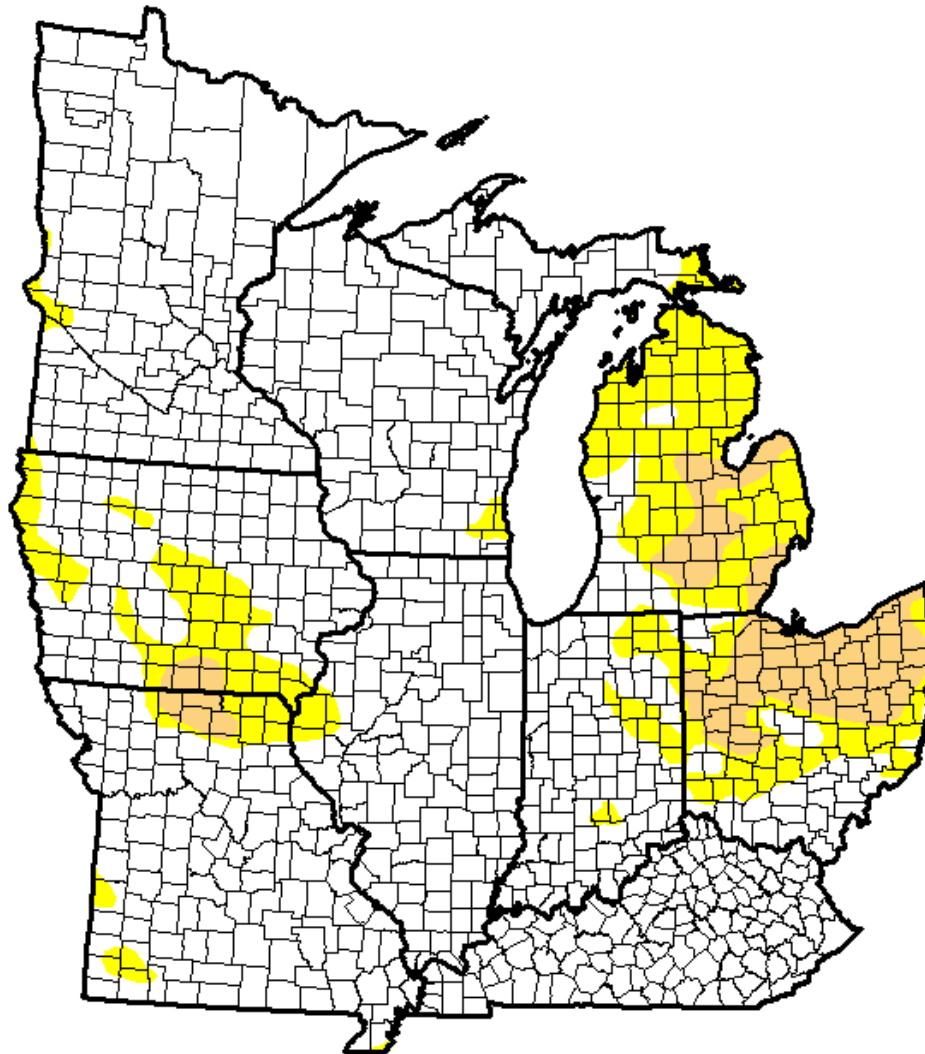
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

# U.S. Drought Monitor Midwest

**August 2, 2016**  
(Released Thursday, Aug. 4, 2016)  
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	80.64	19.36	5.86	0.00	0.00	0.00
<b>Last Week</b> 7/26/2016	79.26	20.74	5.29	0.00	0.00	0.00
<b>3 Months Ago</b> 5/3/2016	88.83	11.17	1.18	0.00	0.00	0.00
<b>Start of Calendar Year</b> 12/29/2015	88.07	11.93	2.35	0.00	0.00	0.00
<b>Start of Water Year</b> 9/29/2015	79.46	20.54	1.04	0.00	0.00	0.00
<b>One Year Ago</b> 8/4/2015	89.91	10.09	0.00	0.00	0.00	0.00



### Intensity:



The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

### Author:

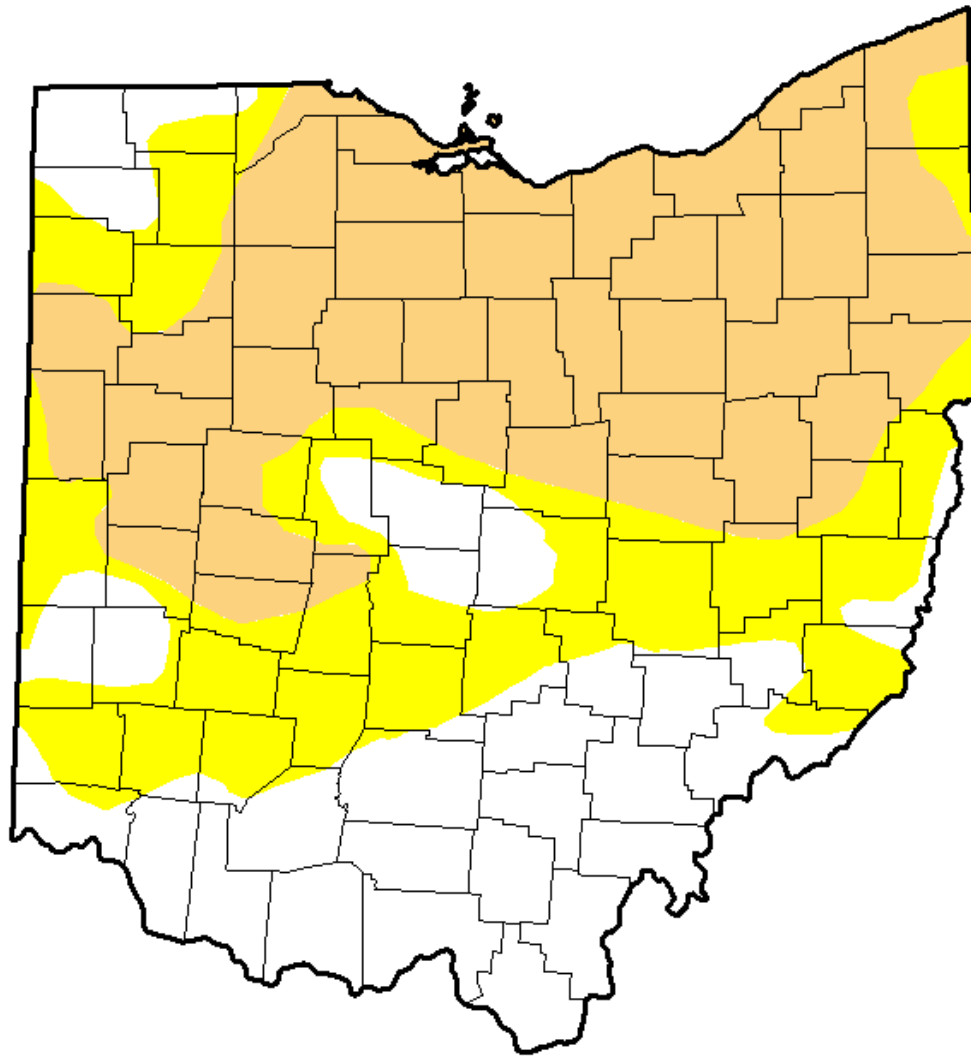
Richard Tinker  
CPC/NOAA/NWS/NCEP



# U.S. Drought Monitor

## Ohio

**August 2, 2016**  
 (Released Thursday, Aug. 4, 2016)  
 Valid 8 a.m. EDT



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	29.99	70.01	42.89	0.00	0.00	0.00
<b>Last Week</b> 7/26/2016	24.39	75.61	33.67	0.00	0.00	0.00
<b>3 Months Ago</b> 5/3/2016	100.00	0.00	0.00	0.00	0.00	0.00
<b>Start of Calendar Year</b> 12/29/2015	49.91	50.09	3.83	0.00	0.00	0.00
<b>Start of Water Year</b> 9/29/2015	77.24	22.76	0.00	0.00	0.00	0.00
<b>One Year Ago</b> 8/4/2015	100.00	0.00	0.00	0.00	0.00	0.00

Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

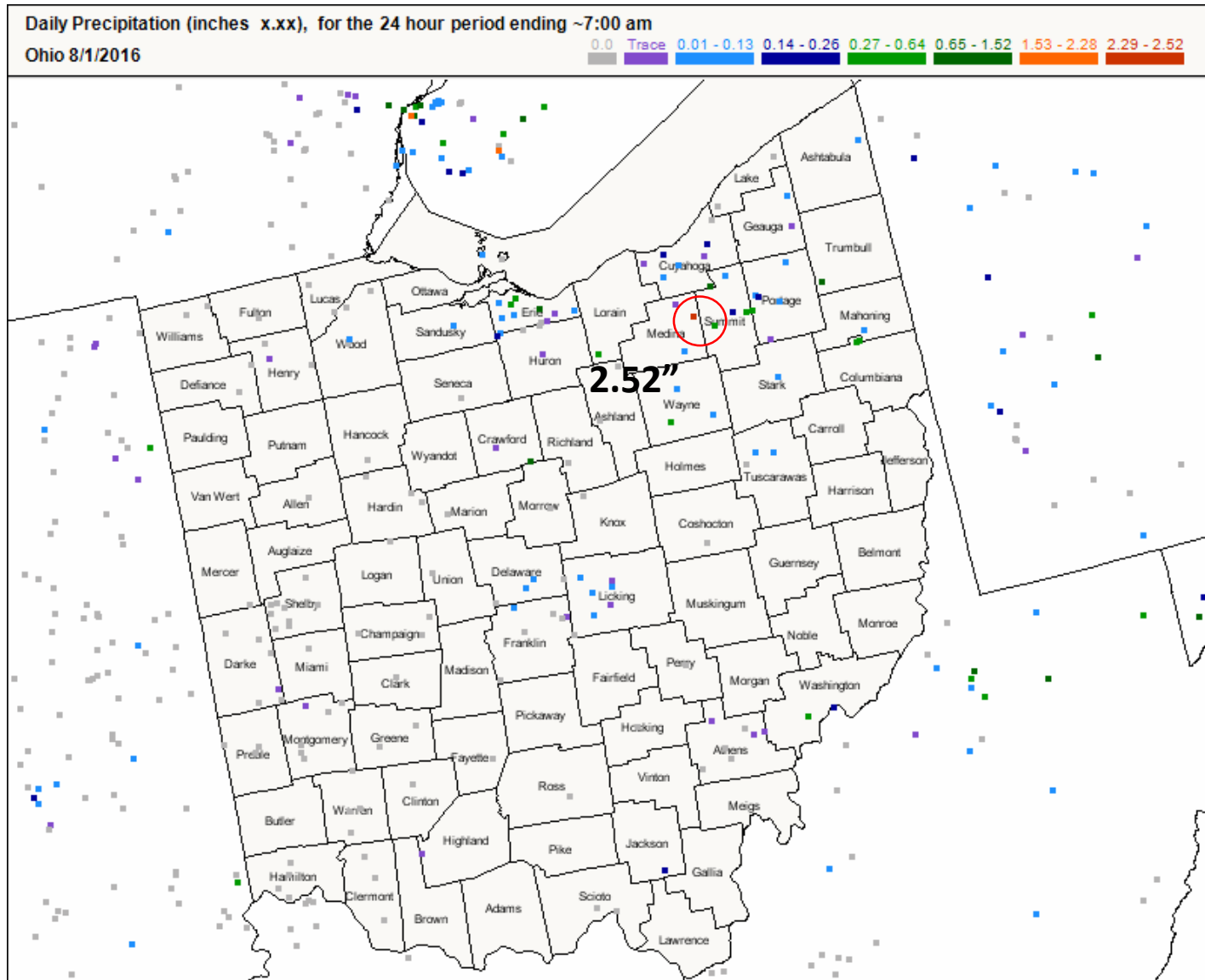
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

**Author:**

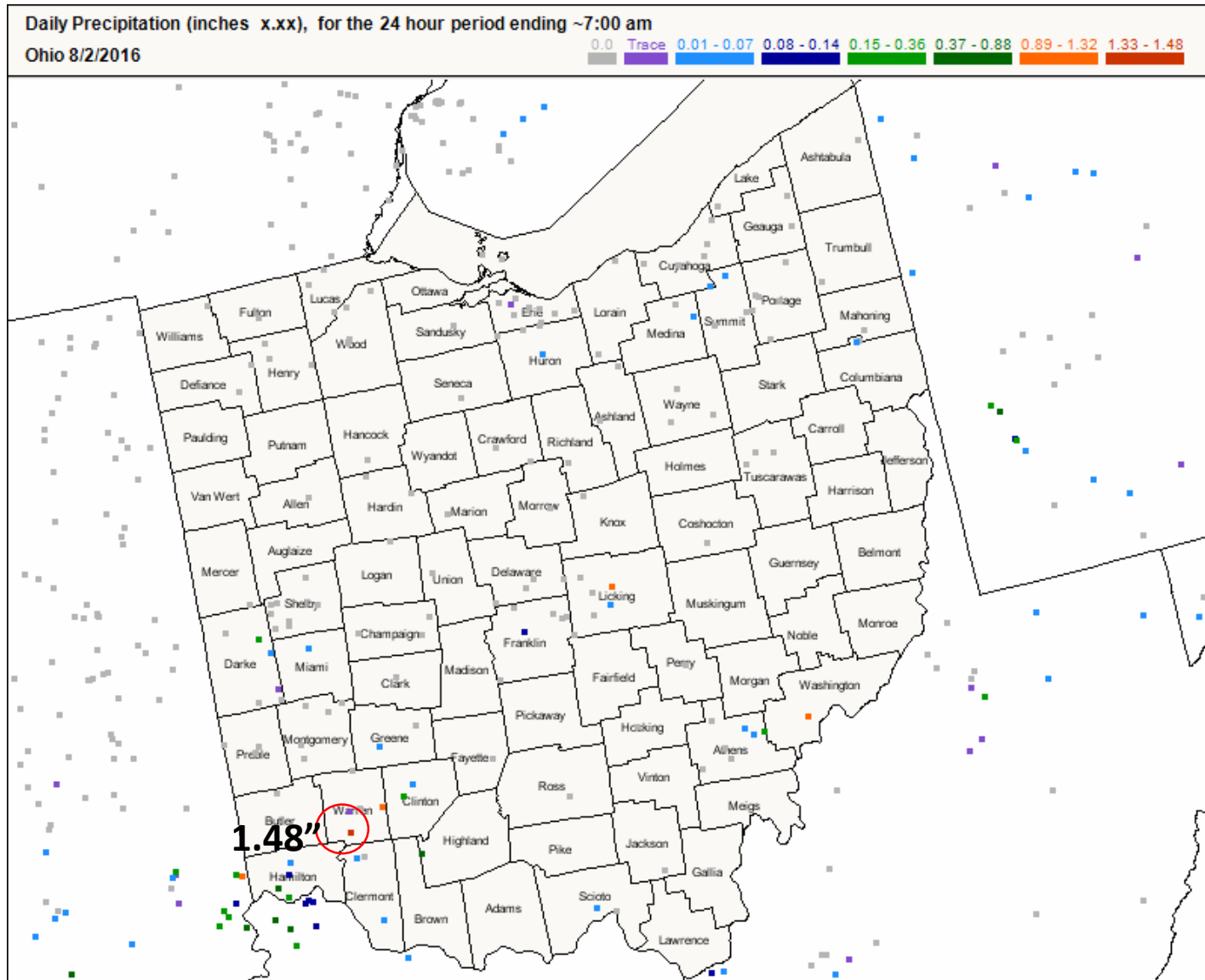
Richard Tinker  
 CPC/NOAA/NWS/NCEP



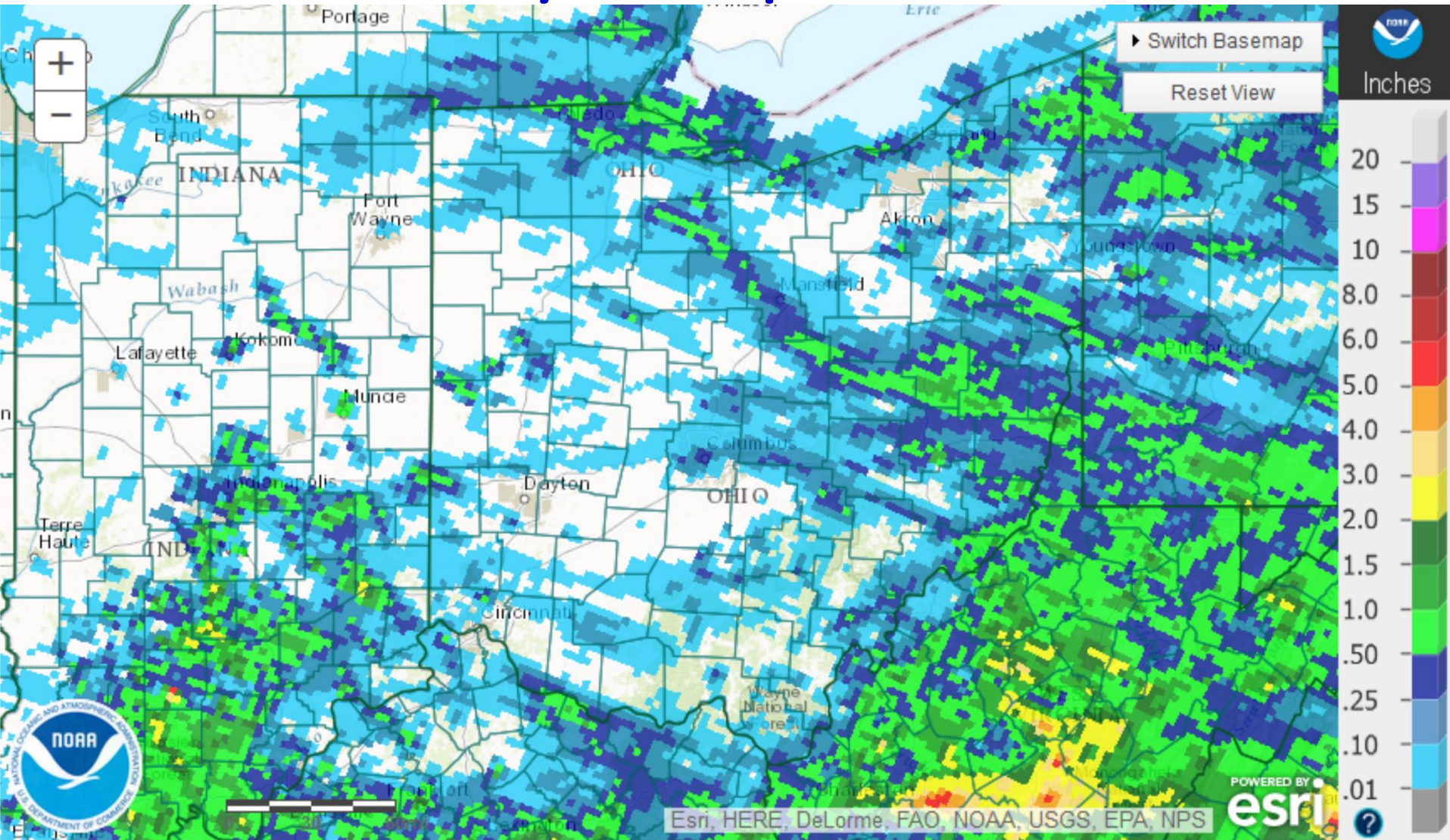
# CoCoRaHS: 1 August



# CoCoRaHS: 2 August



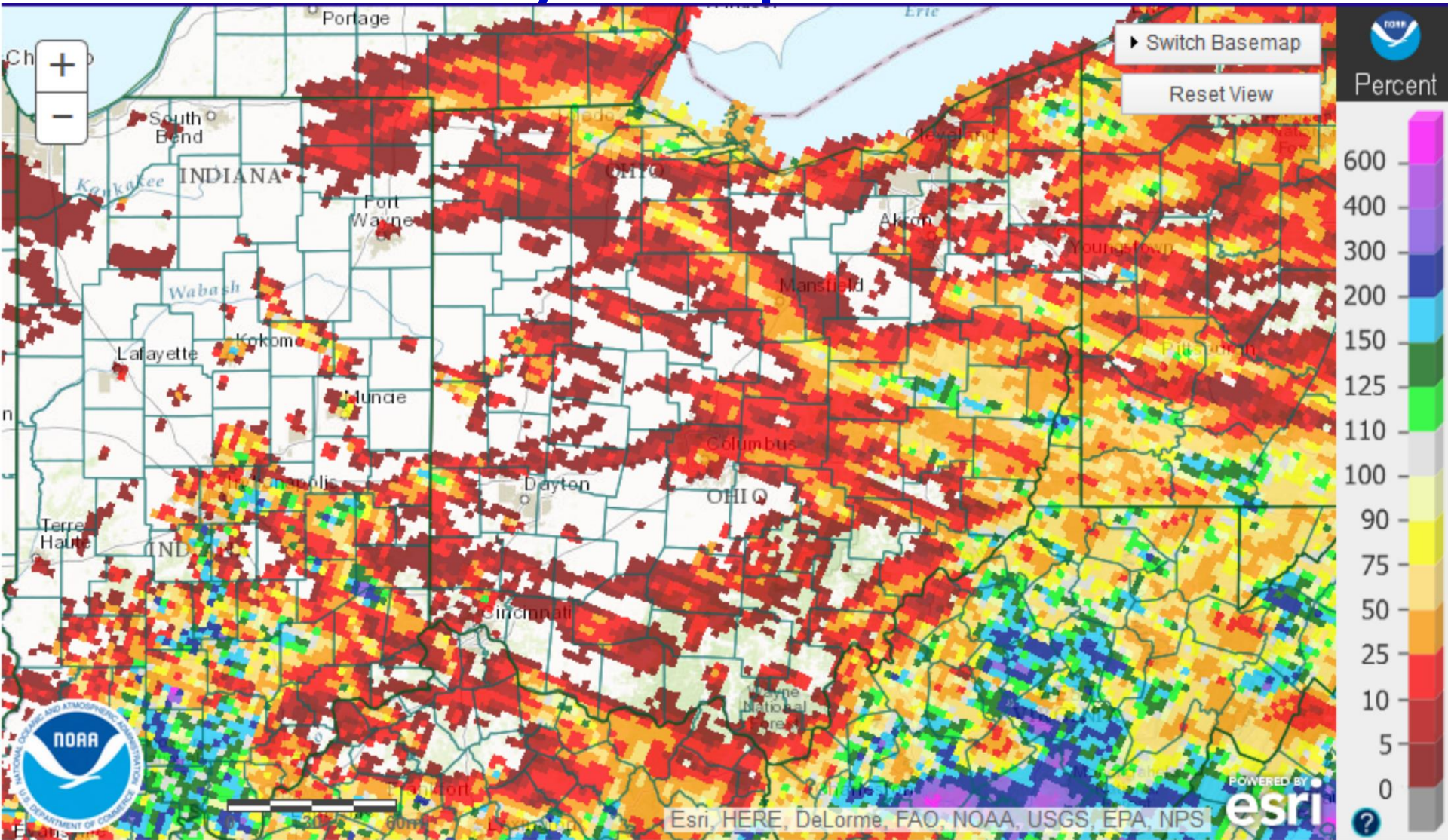
# Previous 7-Day Precipitation Estimates



Total Observed



# Previous 7-Day Precipitation Estimates



Percent of Normal





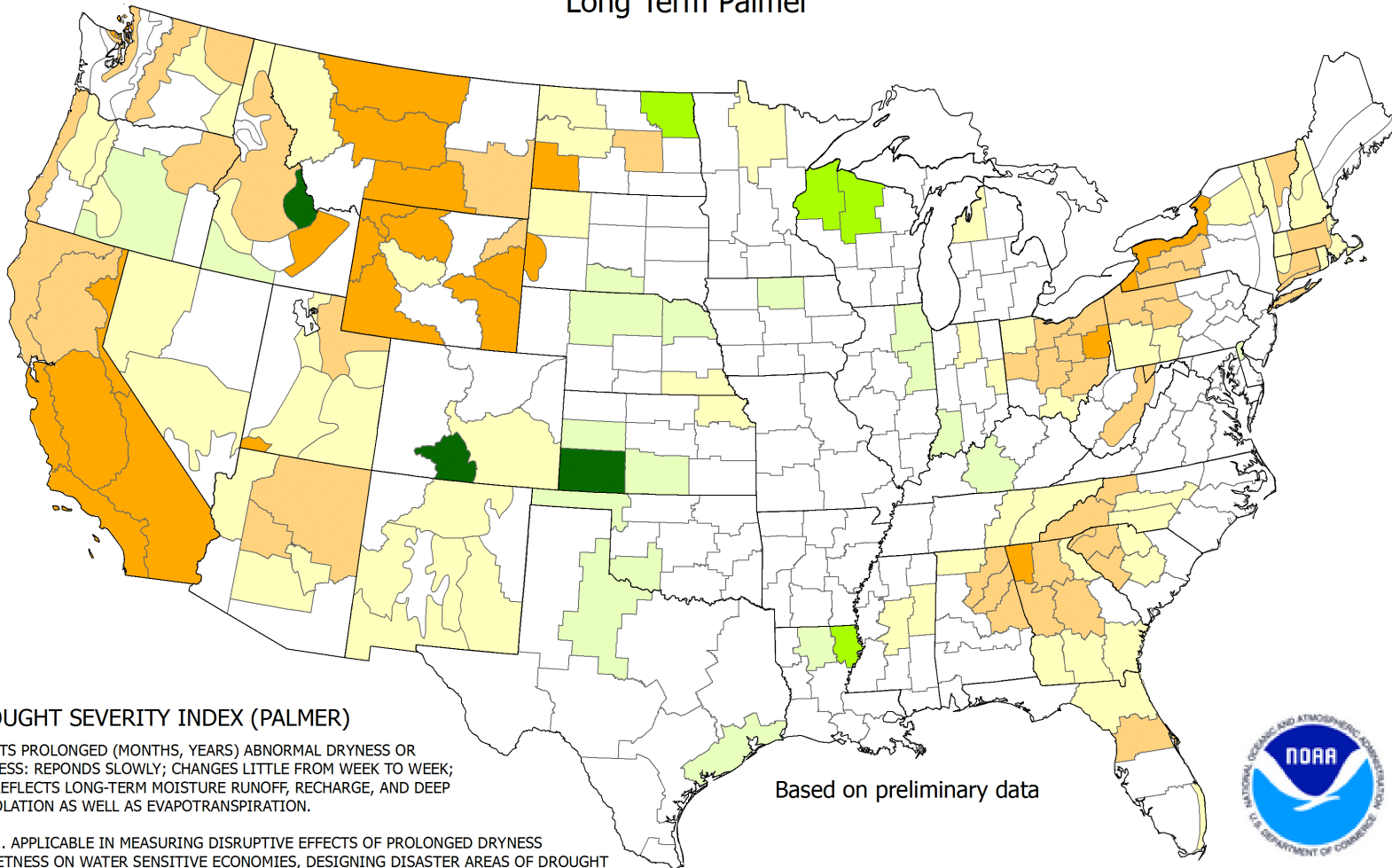


# Drought Severity Index by Division

## Weekly Value for Period Ending Aug 06, 2016

### Long Term Palmer

# PDSI



### DROUGHT SEVERITY INDEX (PALMER)

DEPICTS PROLONGED (MONTHS, YEARS) ABNORMAL DRYNESS OR WETNESS; RESPONDS 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

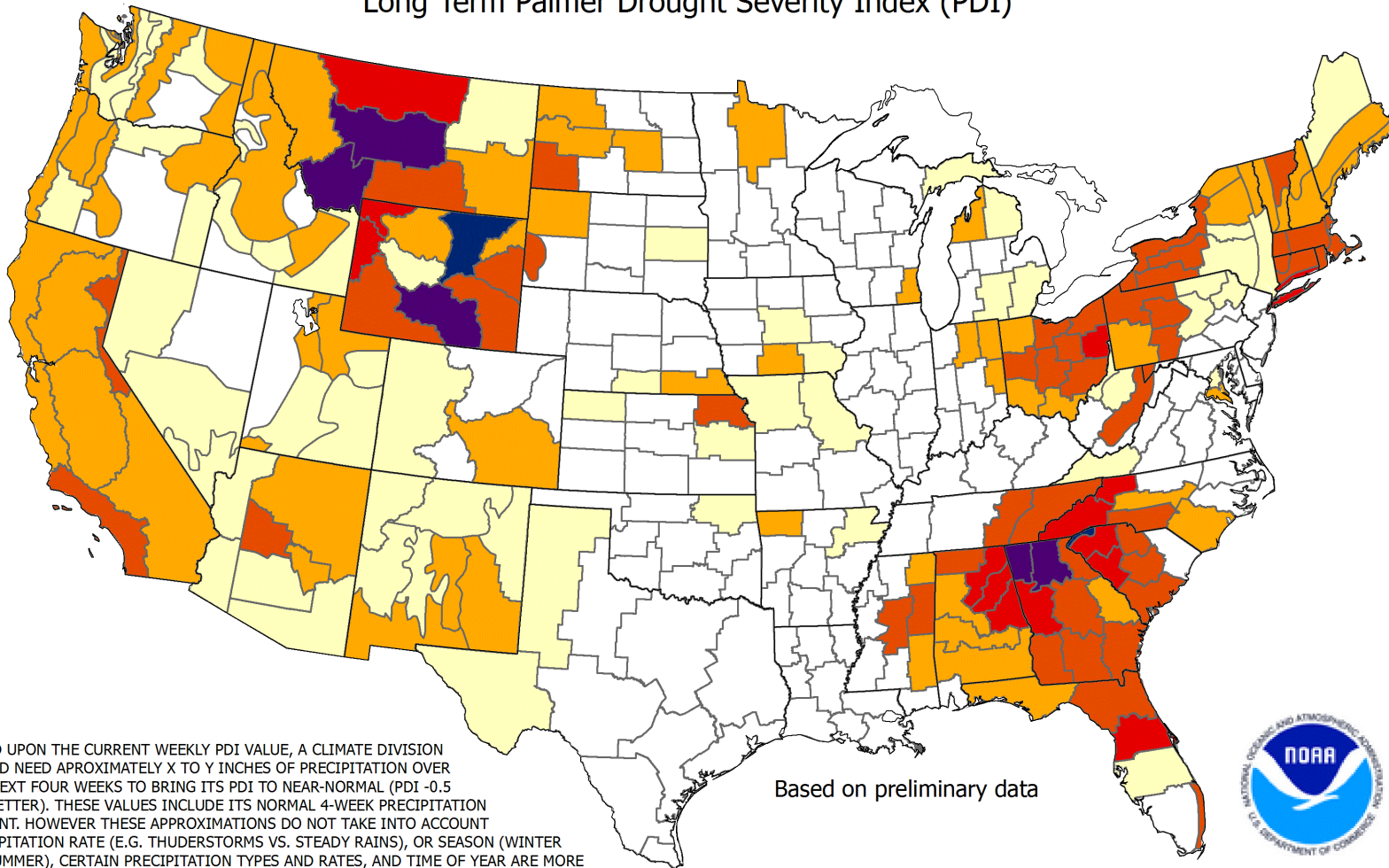


- |                                 |                                    |
|---------------------------------|------------------------------------|
| -4.0 or less (Extreme Drought)  | +2.0 to +2.9 (Unusual Moist Spell) |
| -3.0 to -3.9 (Severe Drought)   | +3.0 to +3.9 (Very Moist Spell)    |
| -2.0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



# Additional Precip. Needed (In.) to bring PDI to -0.5 Weekly Value for Period Ending Aug 06, 2016 Long Term Palmer Drought Severity Index (PDI)

# PDSI



Based on preliminary data



BASED UPON THE CURRENT WEEKLY PDI VALUE, A CLIMATE DIVISION WOULD NEED APPROXIMATELY X TO Y INCHES OF PRECIPITATION OVER THE NEXT FOUR WEEKS TO BRING ITS PDI TO NEAR-NORMAL (PDI -0.5 OR WETTER). THESE VALUES INCLUDE ITS NORMAL 4-WEEK PRECIPITATION AMOUNT. HOWEVER THESE APPROXIMATIONS DO NOT TAKE INTO ACCOUNT PRECIPITATION RATE (E.G. THUNDERSTORMS VS. STEADY RAINS), OR SEASON (WINTER VS. SUMMER), CERTAIN PRECIPITATION TYPES AND RATES, AND TIME OF YEAR ARE MORE CONDUCTIVE FOR AMELIORATING DROUGHT WHILE OTHERS MAY PRODUCE LESS DROUGHT REDUCTION (E.G. RUNOFF OR FROZEN GROUND).

UNCOLORED CLIMATE DIVISIONS ARE CURRENTLY AT NEAR-NORMAL TO MOIST PDI CONDITIONS. (EXAMPLE - IF 4-WEEK NORMAL PRECIPITATION IS 3 INCHES AND PDI DEFICIT TO BRING TO -0.5 IS 4 INCHES, THE VALUE IS 7)

- |                   |                 |
|-------------------|-----------------|
| Zero Inches       | 9 to 12 Inches  |
| Trace to 3 Inches | 12 to 15 Inches |
| 3 to 6 Inches     | Over 15 Inches  |
| 6 to 9 Inches     |                 |

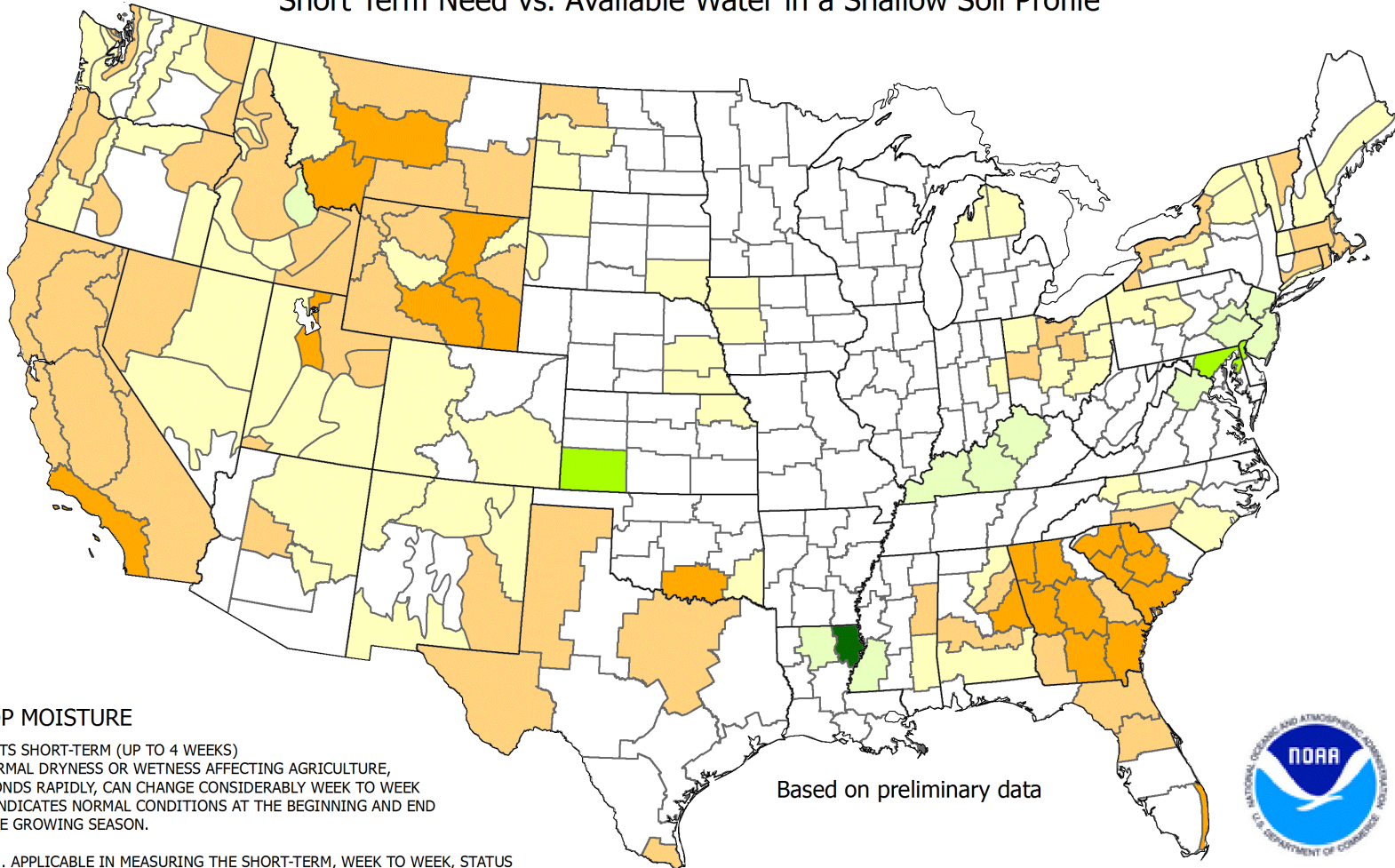


# Crop Moisture Index by Division

## Weekly Value for Period Ending Aug 06, 2016

### Short Term Need vs. Available Water in a Shallow Soil Profile

# CMI



### CROP MOISTURE

DEPICTS SHORT-TERM (UP TO 4 WEEKS) ABNORMAL DRYNESS OR WETNESS AFFECTING AGRICULTURE, RESPONDS RAPIDLY, CAN CHANGE CONSIDERABLY WEEK TO WEEK AND INDICATES NORMAL CONDITIONS AT THE BEGINNING AND END OF THE GROWING SEASON.

USES... APPLICABLE IN MEASURING THE SHORT-TERM, WEEK TO WEEK, STATUS OF DRYNESS OR WETNESS AFFECTING WARM SEASON CROPS AND FIELD OPERATIONS

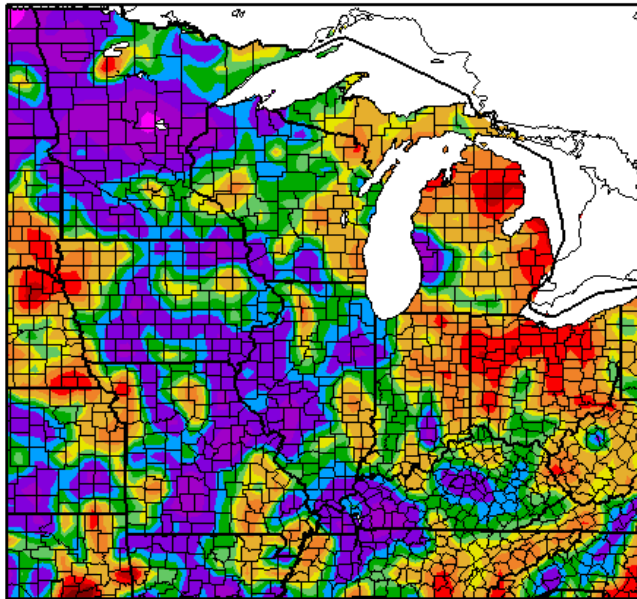
LIMITATIONS... MAY NOT BE APPLICABLE TO GERMINATING AND SHALLOW ROOTED CROPS WHICH ARE UNABLE TO EXTRACT THE DEEP OR SUBSOIL MOISTURE FROM A SHALLOW SOIL PROFILE, OR FOR COOL SEASON CROPS GROWING WHEN TEMPERATURES ARE AVERAGING BELOW ABOUT 55F. IT IS NOT GENERALLY INDICATIVE OF THE LONG-TERM (MONTHS, YEARS) DROUGHT OR WET SPELLS WHICH ARE DEPICTED BY THE DROUGHT SEVERITY INDEX.

Based on preliminary data



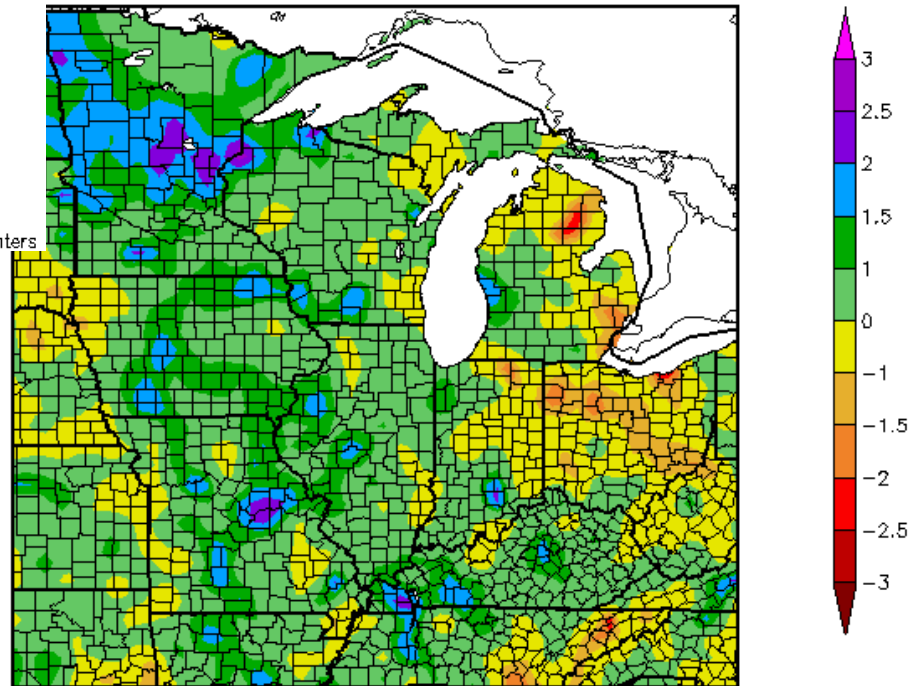
- |   |                                 |
|---|---------------------------------|
| -3.0 or less (Severely Dry)                 | +1.0 to +1.9 (Abnormally Moist) |
| -2.0 to -2.9 (Excessively Dry)              | +2.0 to +3.0 (Wet)              |
| -1.0 to -1.9 (Abnormally Dry)               | 3.0 and above (Excessively Wet) |
| -0.9 to +0.9 (Slightly Dry/Favorably Moist) |                                 |

Percent of Normal Precipitation (%)  
7/10/2016 – 8/8/2016



# Previous 30-Days

30 Day SPI  
7/10/2016 – 8/8/2016

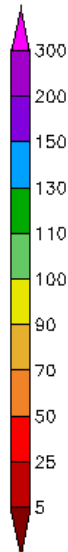
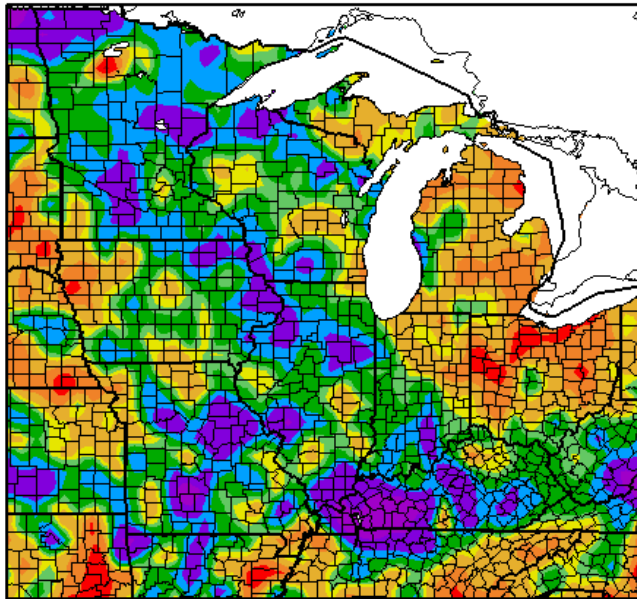


Generated 8/9/2016 at HPRCC using provisional data.

Regional Climate Centers

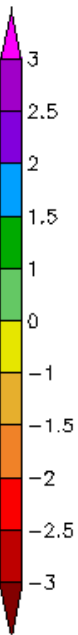
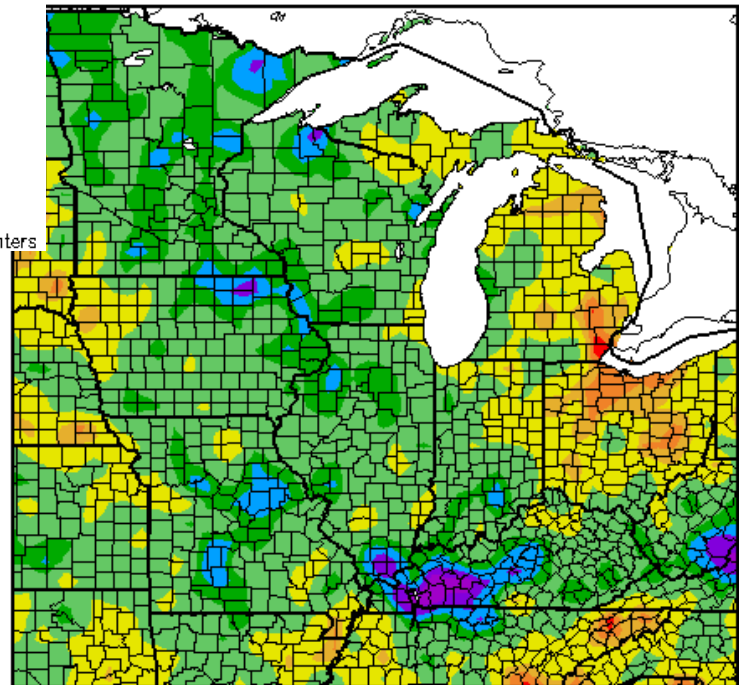
**The Standardized Precipitation Index (SPI)** indicates how unusual the amount of accumulated precipitation is, compared to the historical record over a given time scale.

Percent of Normal Precipitation (%)  
6/10/2016 - 8/8/2016



# Previous 60-Days

60 Day SPI  
6/10/2016 - 8/8/2016



Generated 8/9/2016 at HPRCC using provisional data.

Regional Climate Centers

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



**Drought.gov**  
U.S. Drought Portal

Generated 8/9/2016 at HPRCC using provisional data.

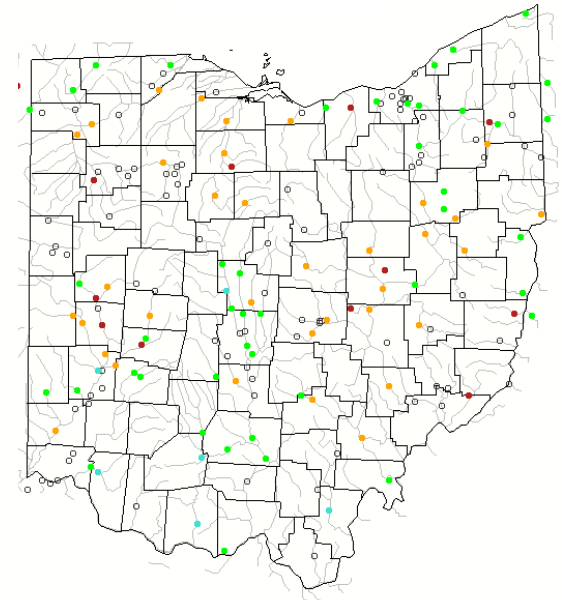
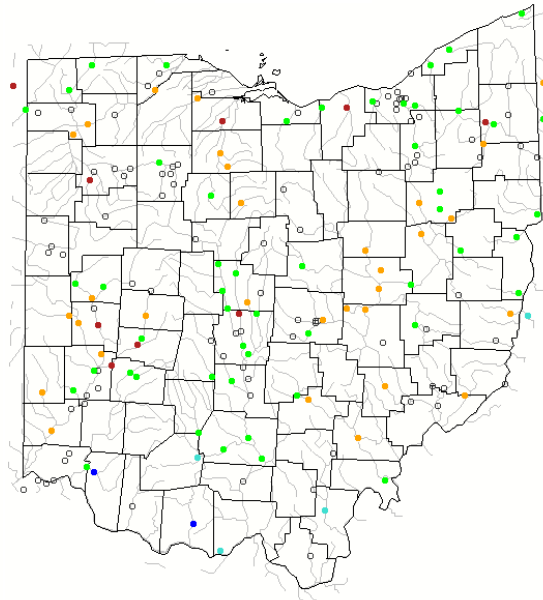
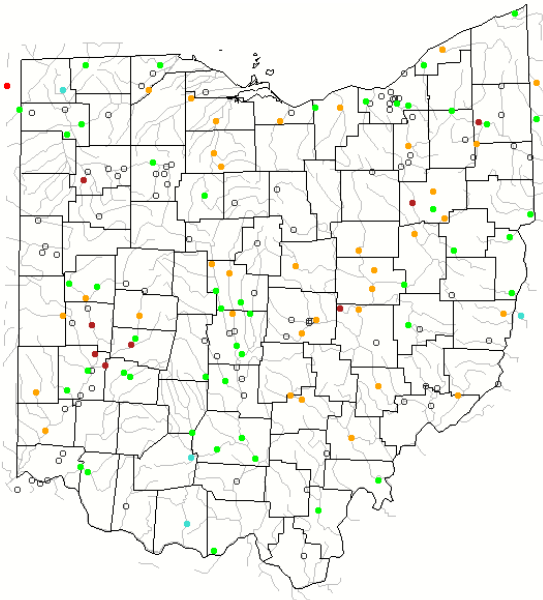
Regional Climate Centers

# USGS Streamflow

7-DAY

14-DAY

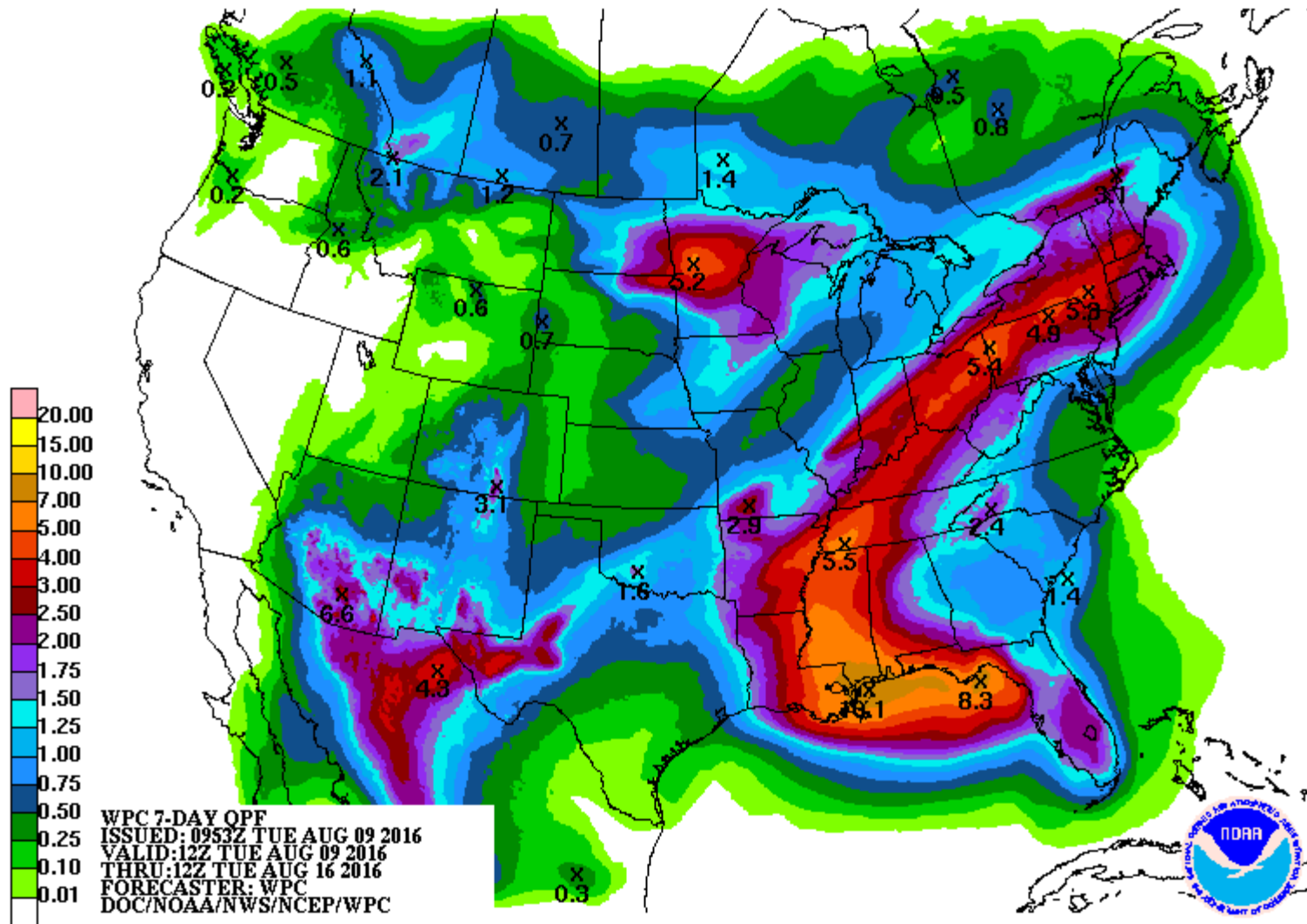
28-DAY



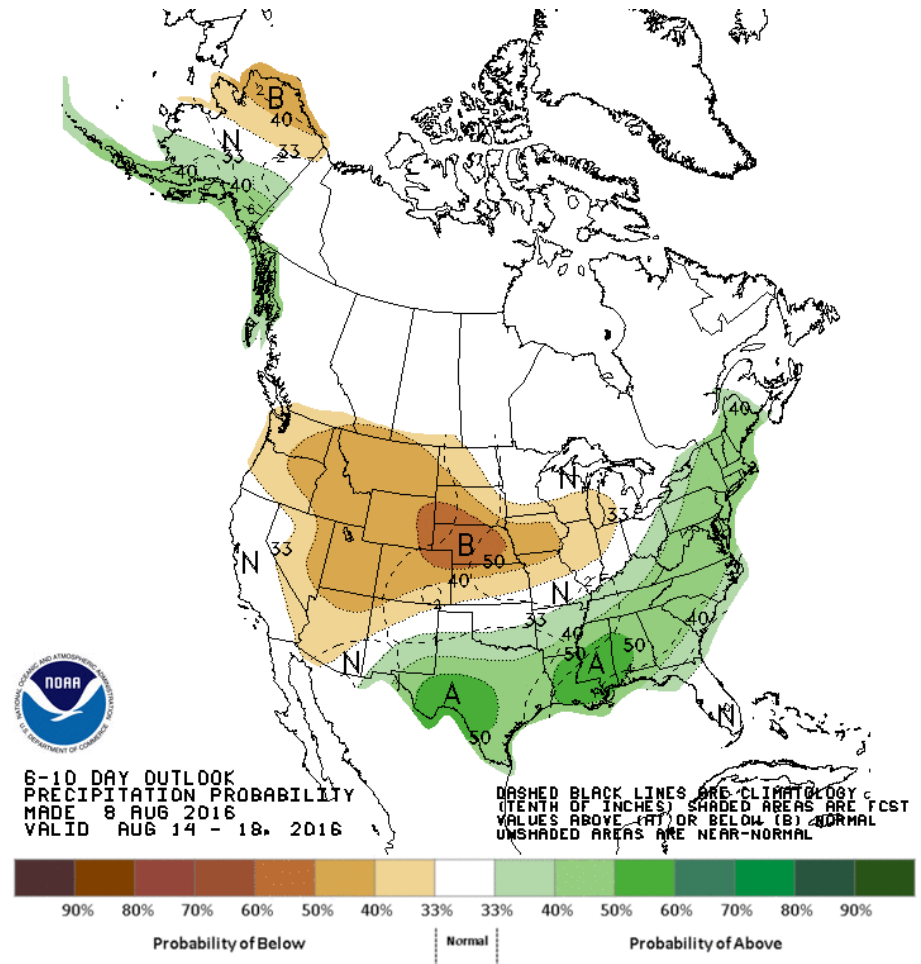
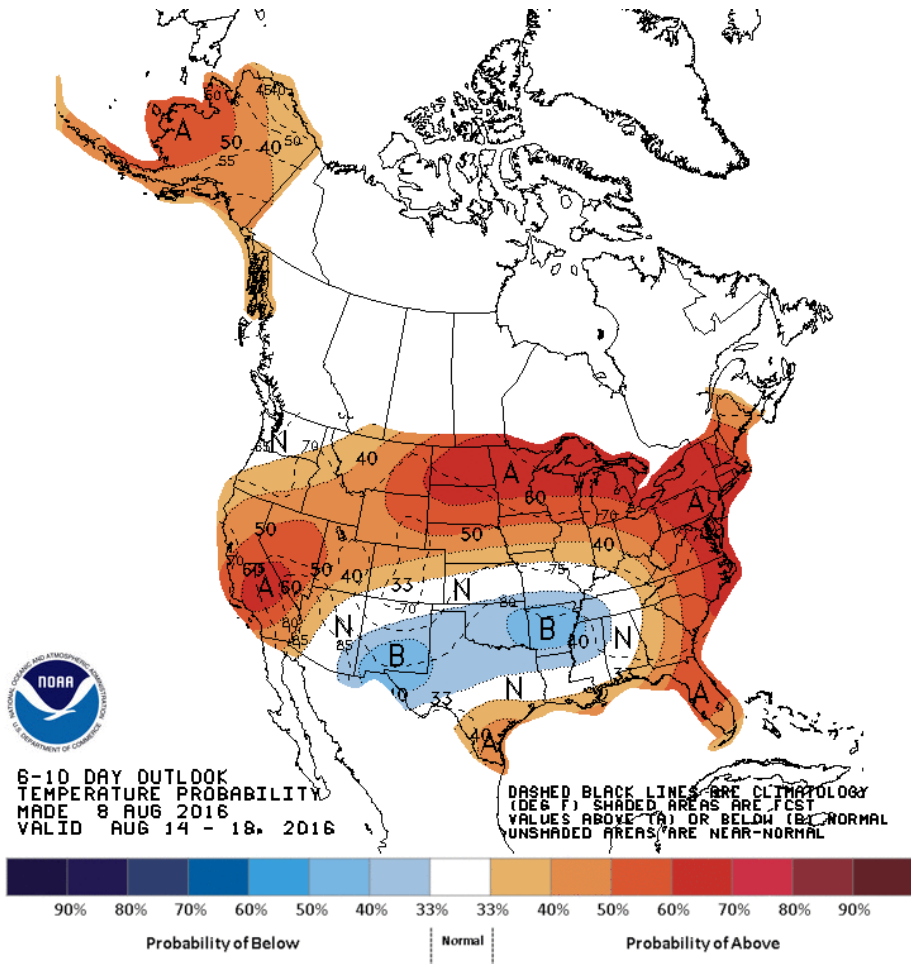
Explanation - Percentile classes							
Low	<10	10-24	25-75	76-90	>90	High	Not-ranked
	Much below normal	Below normal	Normal	Above normal	Much above normal		

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

# Weather for the Week Ahead

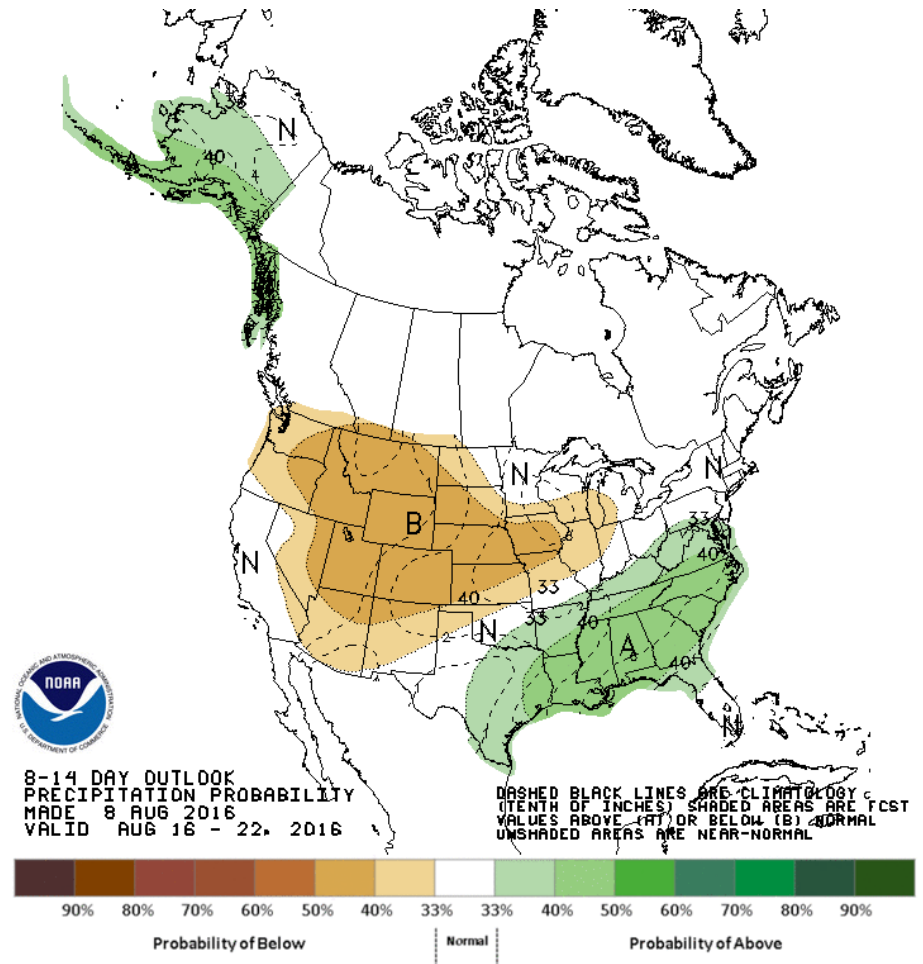
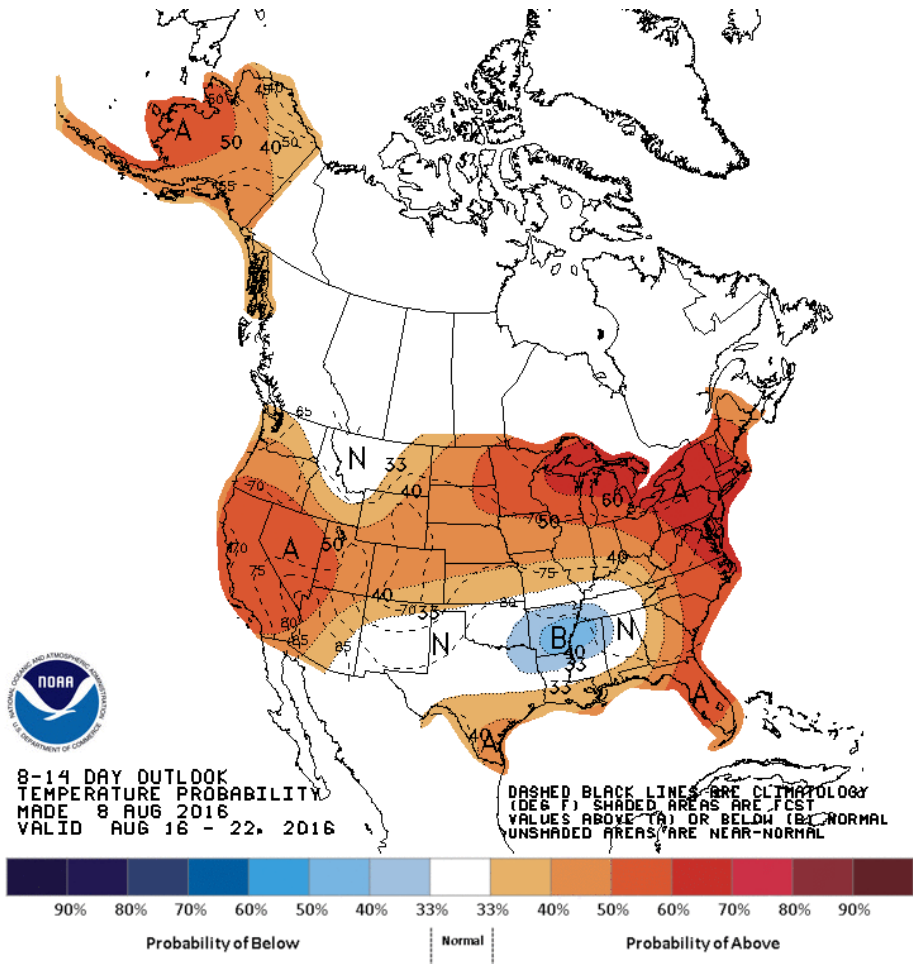


# 6-10 Day Outlook





# 8-14 Day Outlook



# SUMMARY OF CONDITIONS

## • Current

- Drought Monitor: D1 was expanded a little farther south across the eastern portion of the state
- 7-day Precipitation: Only locally heavy rain across the state this week; overall very dry
- Weekly Palmer Drought Severity Index: All but SW division in drought, Extreme status for Climate Divisions 7 (NE Hills)
  - More than 6" of precipitation needed to bring the PDSI to -0.5 across much of Ohio, 9"+ needed for Central and Eastern Divisions
- Crop Moisture Index: Northern 2/3 of the state is abnormally dry; particularly in N. Miami Valley and Upper Scioto Basin
- 30-Day precipitation: 5-25% of normal for west, north, and east
- Standard Precipitation Index: Lowest values in W. Central, E. Central, and Northern Ohio – values as low as -2; -2.5 in Cuyahoga County
- **D2 conditions added to N. Miami and Scioto Basins; D1 conditions added in SE Miami Valley**