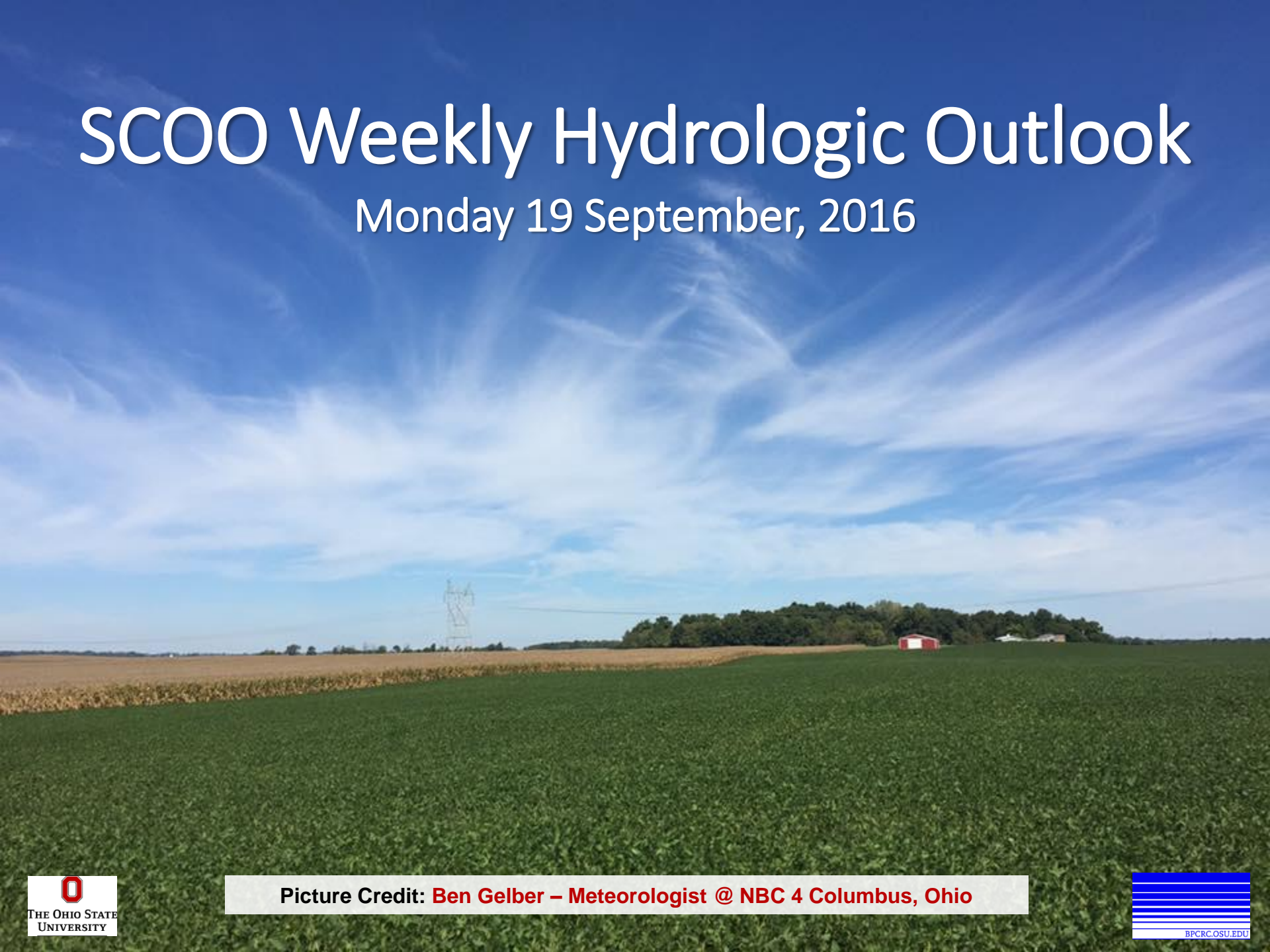


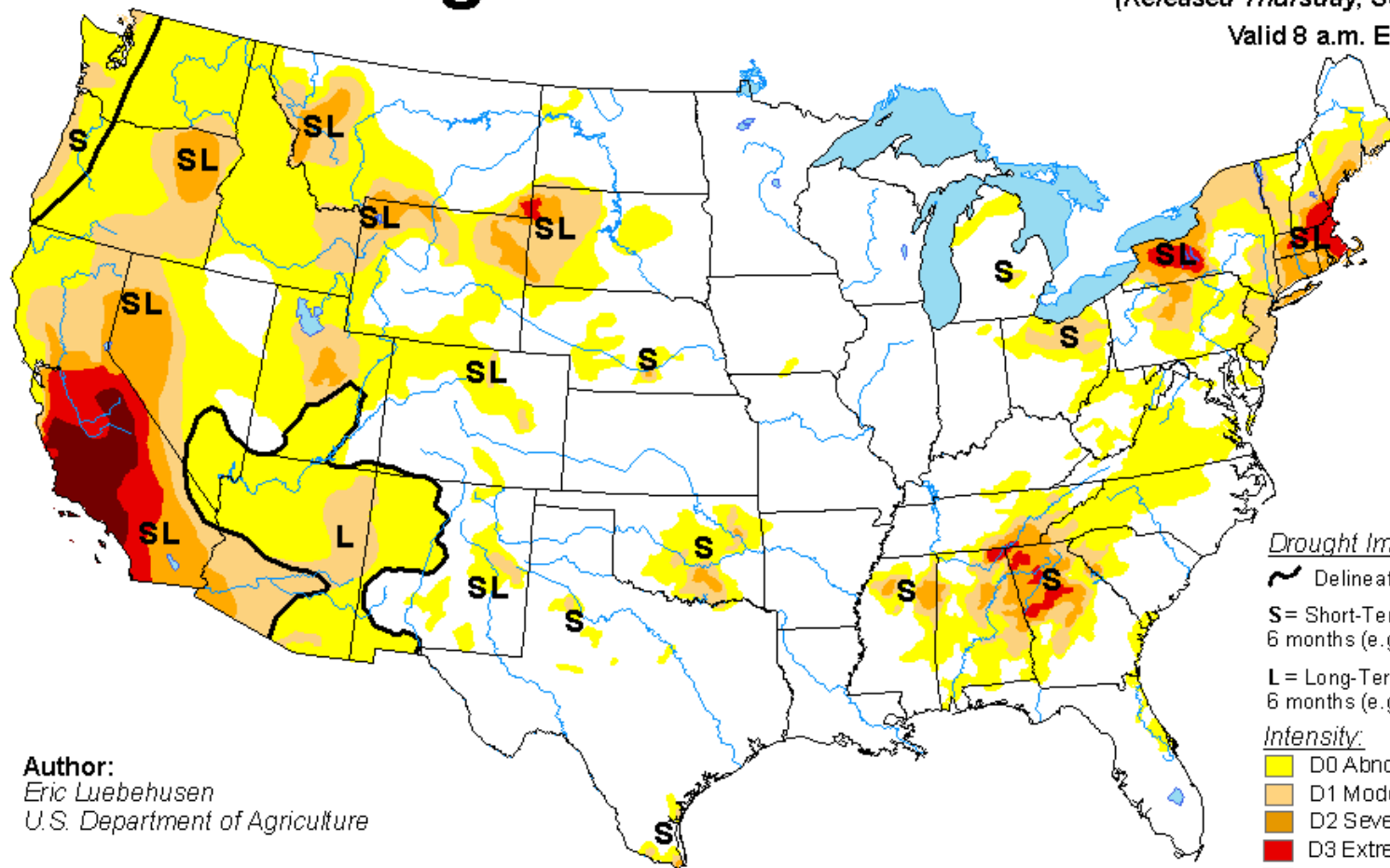
SCOO Weekly Hydrologic Outlook

Monday 19 September, 2016



U.S. Drought Monitor

September 13, 2016
(Released Thursday, Sep. 15, 2016)
Valid 8 a.m. EDT



Author:
Eric Luebbehusen
U.S. Department of Agriculture

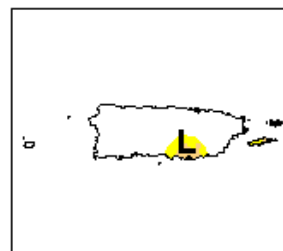
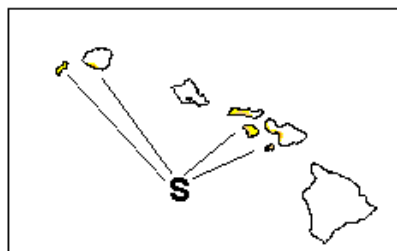
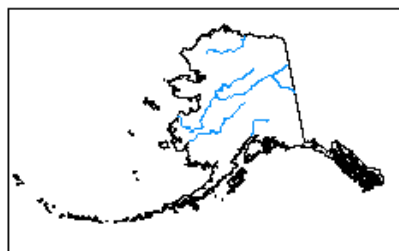
Drought Impact Types:

- ~ 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.



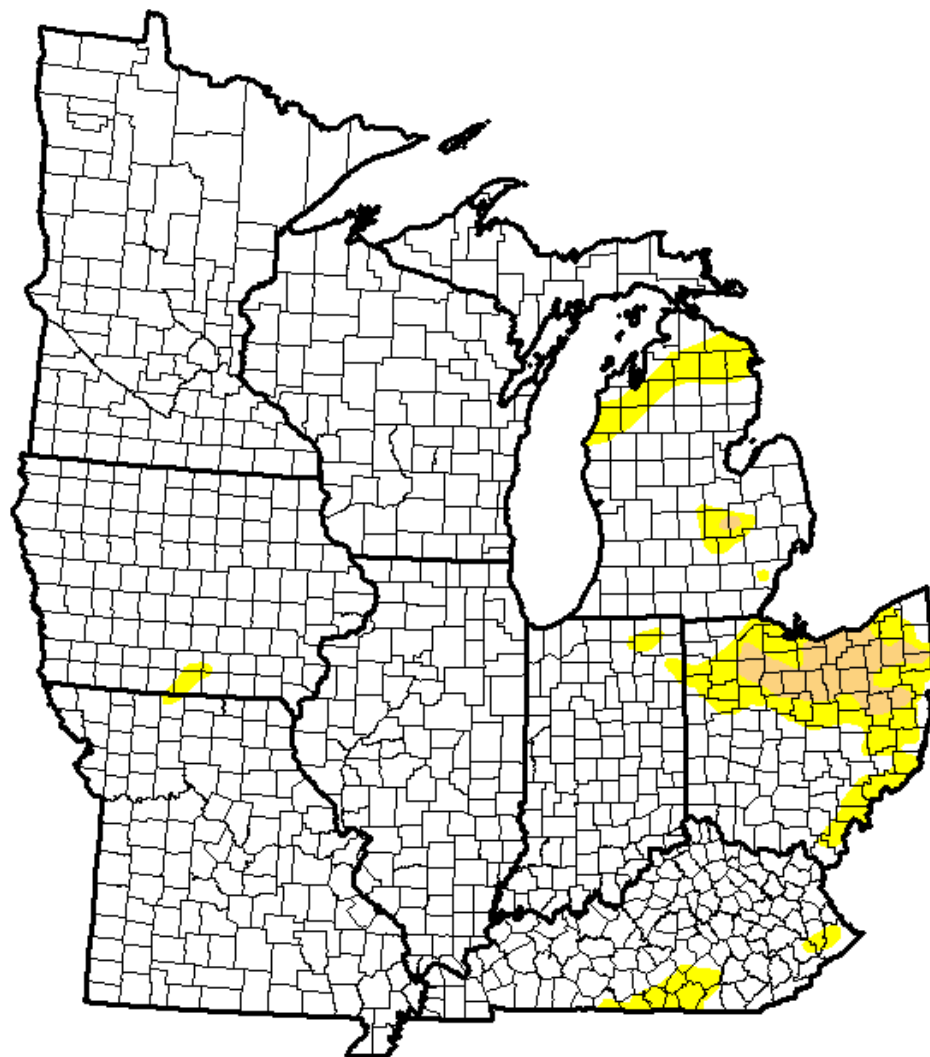
<http://droughtmonitor.unl.edu/>

U.S. Drought Monitor Midwest

September 13, 2016
(Released Thursday, Sep. 15, 2016)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	93.66	6.34	1.49	0.00	0.00	0.00
Last Week <i>9/6/2016</i>	90.62	9.38	2.14	0.00	0.00	0.00
3 Months Ago <i>6/14/2016</i>	68.73	31.27	0.03	0.00	0.00	0.00
Start of Calendar Year <i>12/29/2015</i>	88.07	11.93	2.35	0.00	0.00	0.00
Start of Water Year <i>9/29/2015</i>	79.46	20.54	1.04	0.00	0.00	0.00
One Year Ago <i>9/15/2015</i>	88.35	11.65	0.35	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:

Eric Luebehusen
U.S. Department of Agriculture

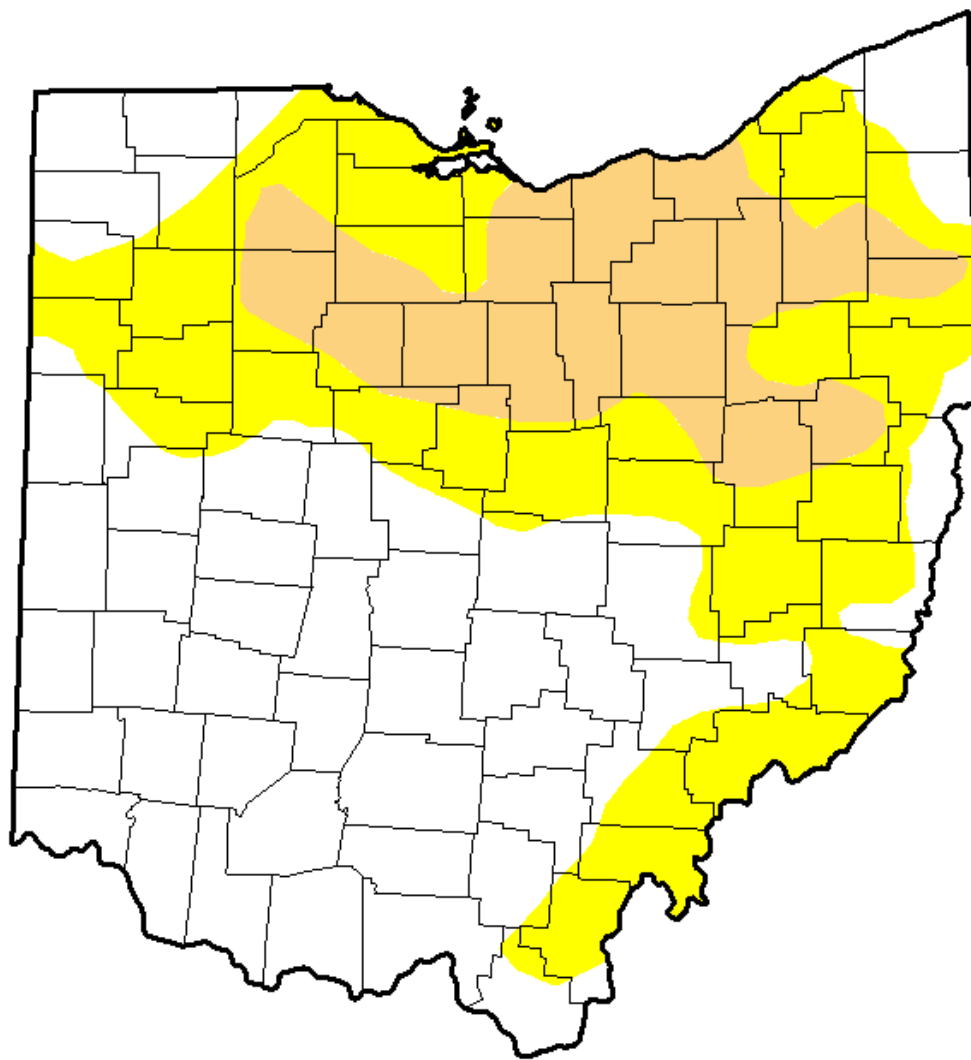


<http://droughtmonitor.unl.edu/>

U.S. Drought Monitor

Ohio

September 13, 2016
(Released Thursday, Sep. 15, 2016)
 Valid 8 a.m. EDT



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	50.97	49.03	17.53	0.00	0.00	0.00
Last Week <i>9/6/2016</i>	45.57	54.43	23.52	0.00	0.00	0.00
3 Months Ago <i>6/14/2016</i>	72.51	27.49	0.00	0.00	0.00	0.00
Start of Calendar Year <i>12/29/2015</i>	49.91	50.09	3.83	0.00	0.00	0.00
Start of Water Year <i>9/29/2015</i>	77.24	22.76	0.00	0.00	0.00	0.00
One Year Ago <i>9/15/2015</i>	79.53	20.47	0.00	0.00	0.00	0.00

Intensity:

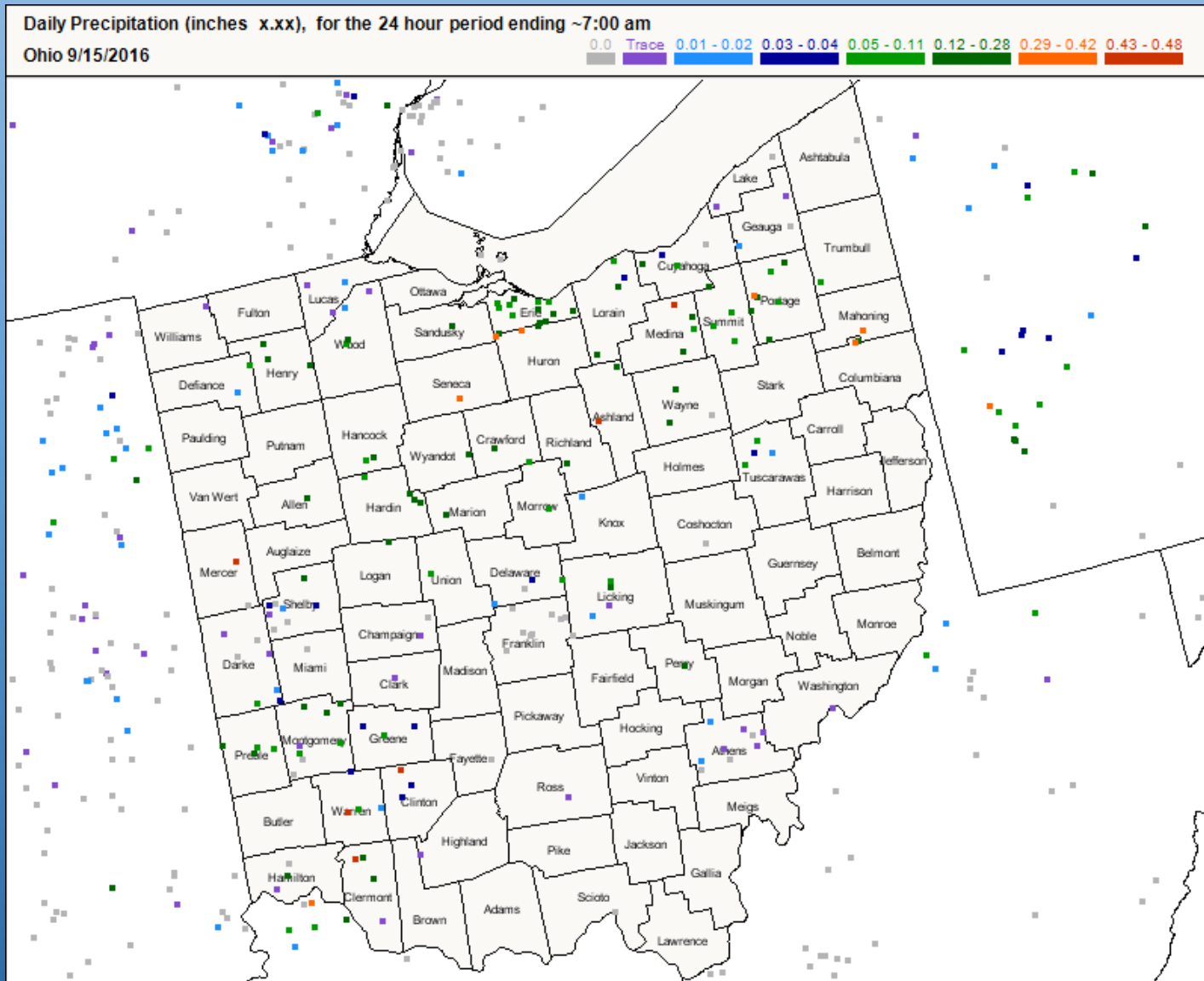
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

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

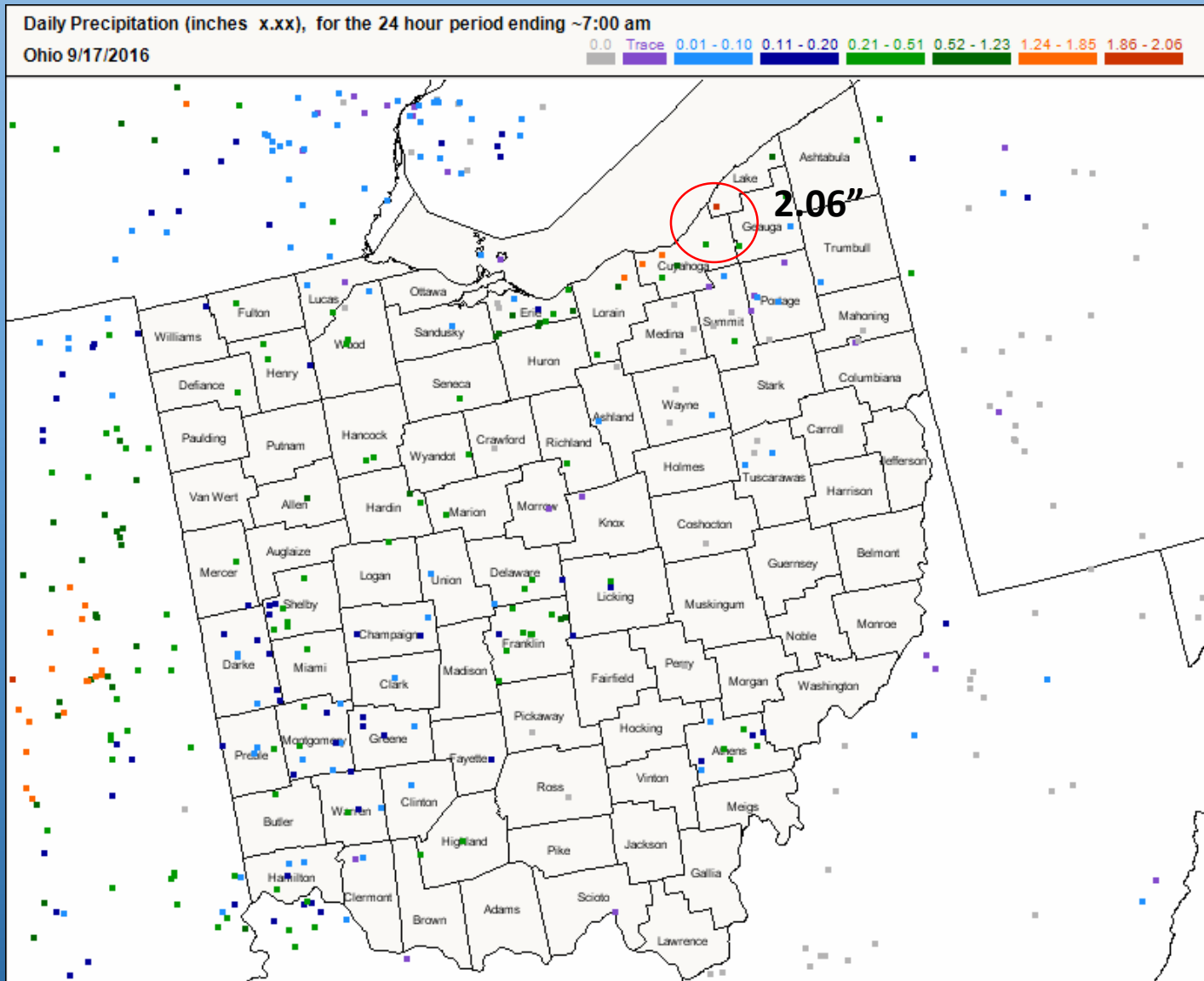
Author:
 Eric Luebehusen
 U.S. Department of Agriculture



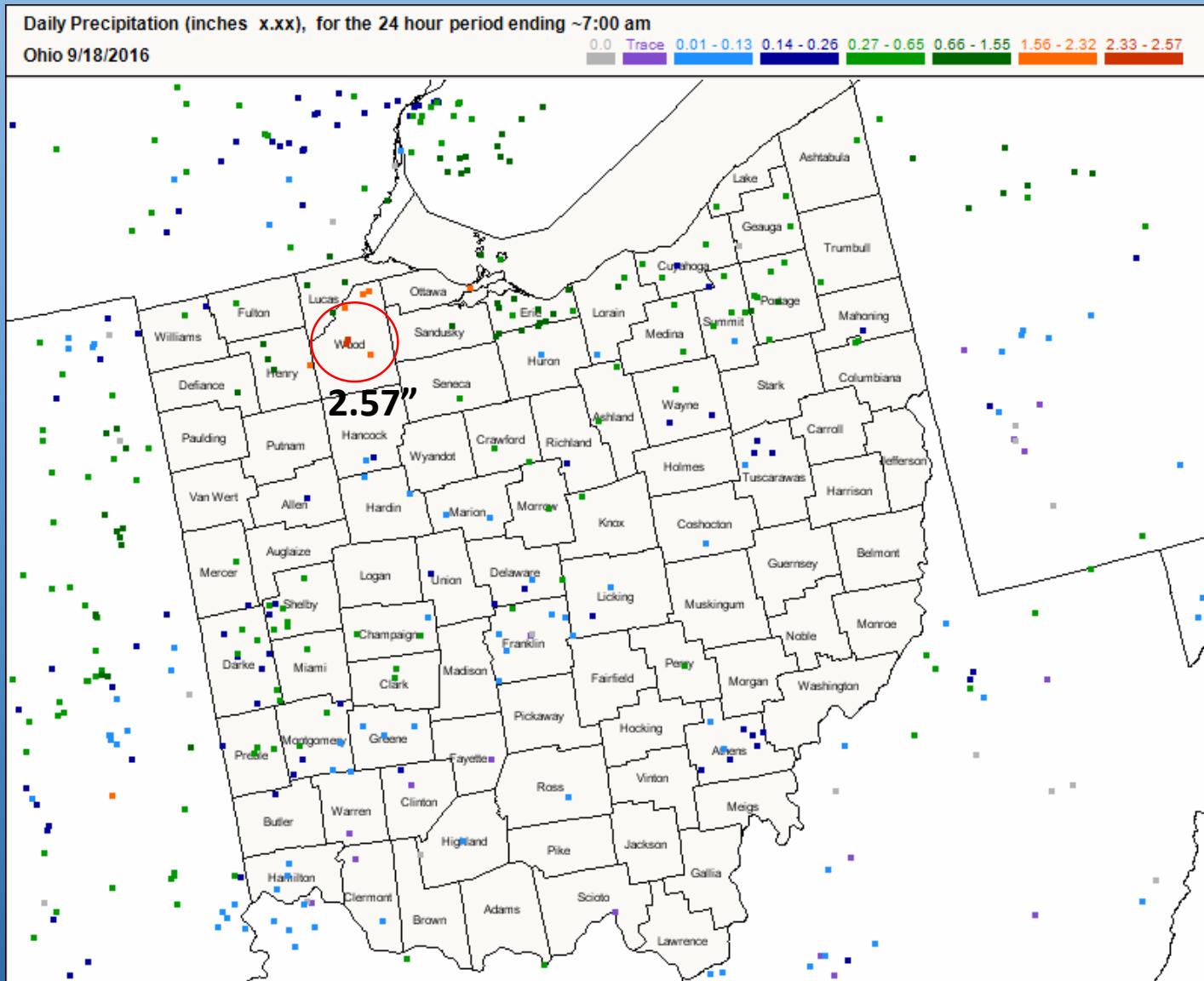
CoCoRaHS: 15 September



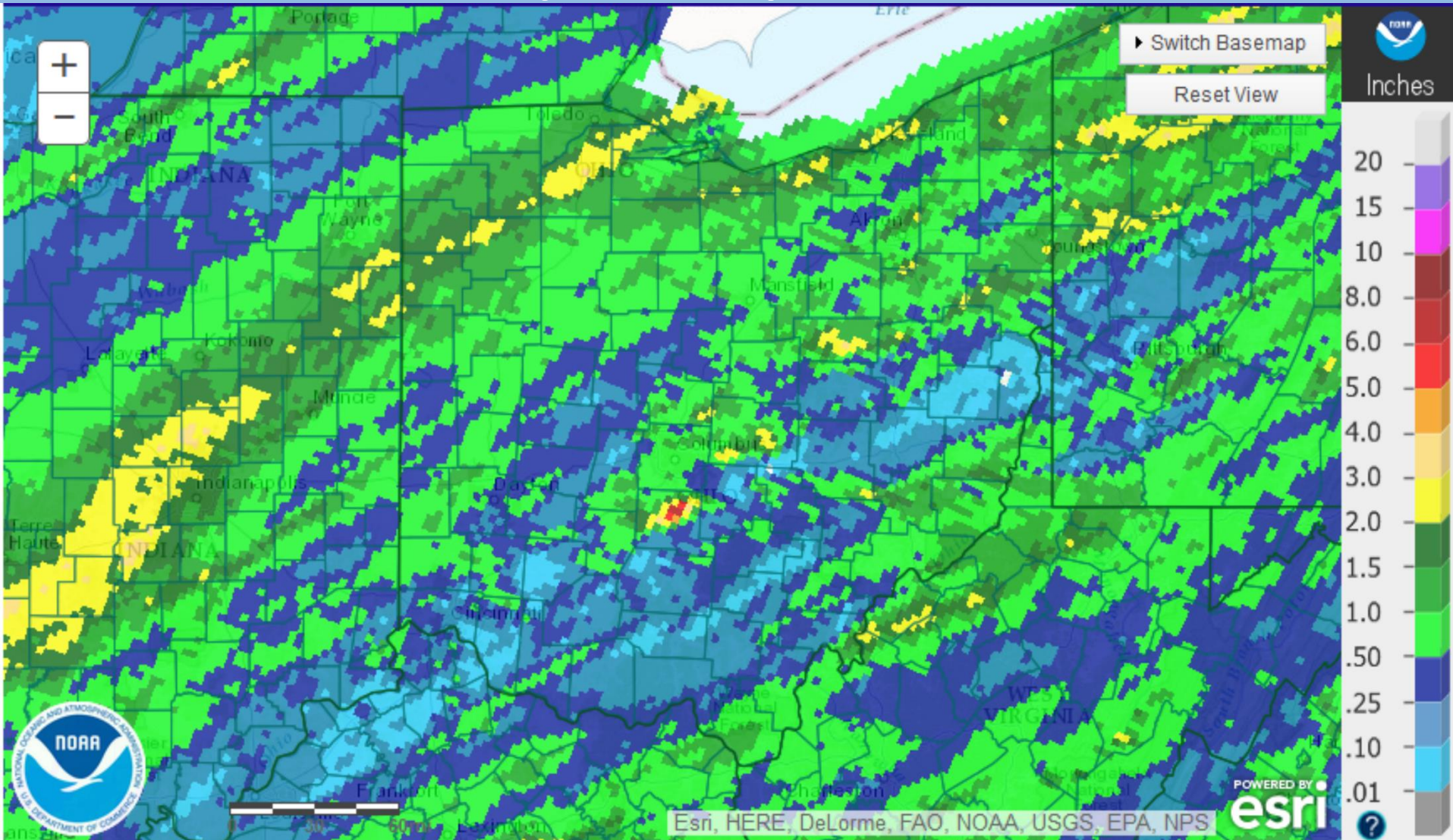
CoCoRaHS: 17 September



CoCoRaHS: 18 September



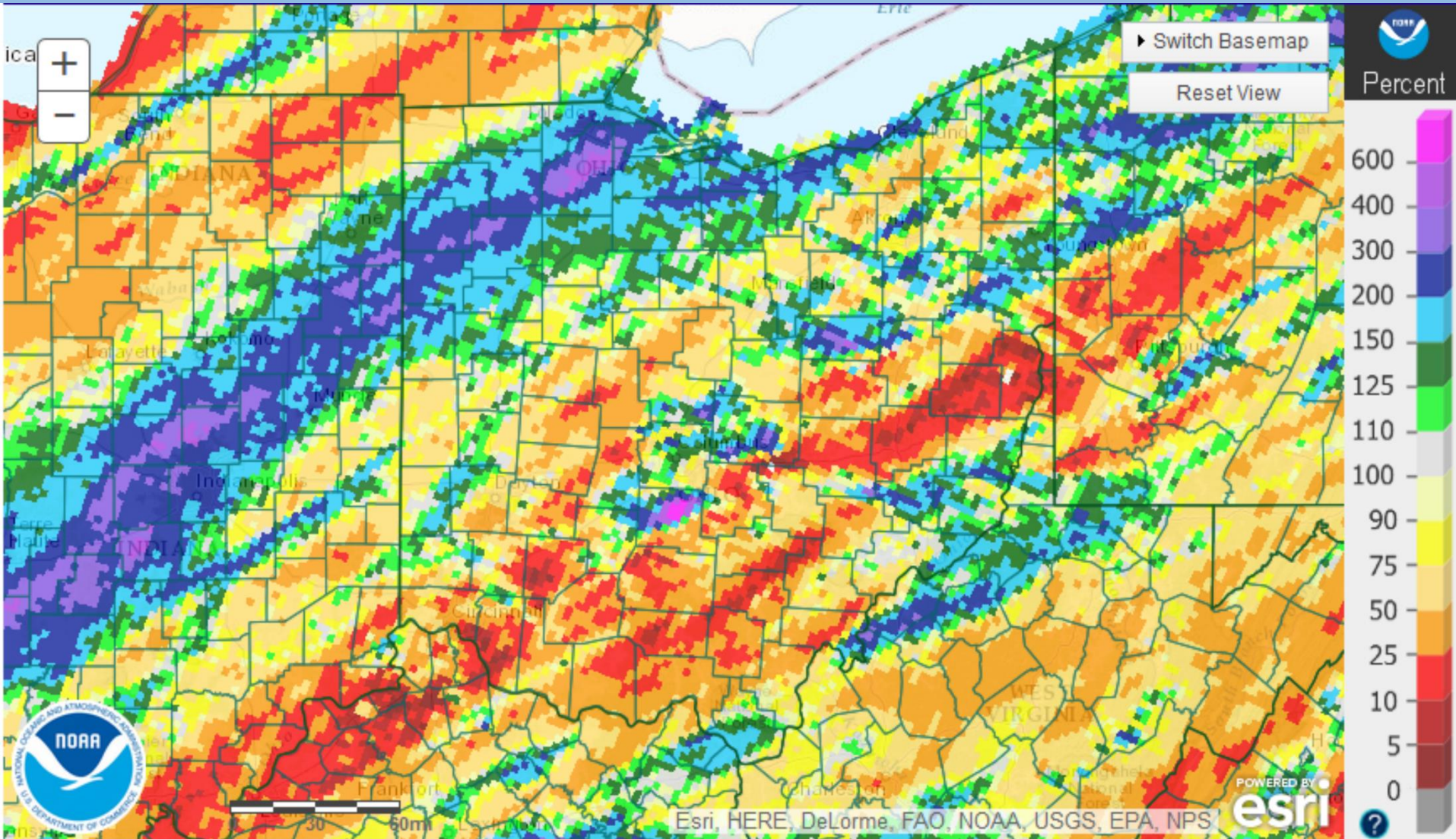
Previous 7-Day Precipitation Estimates



Total Observed



Previous 7-Day Precipitation Estimates

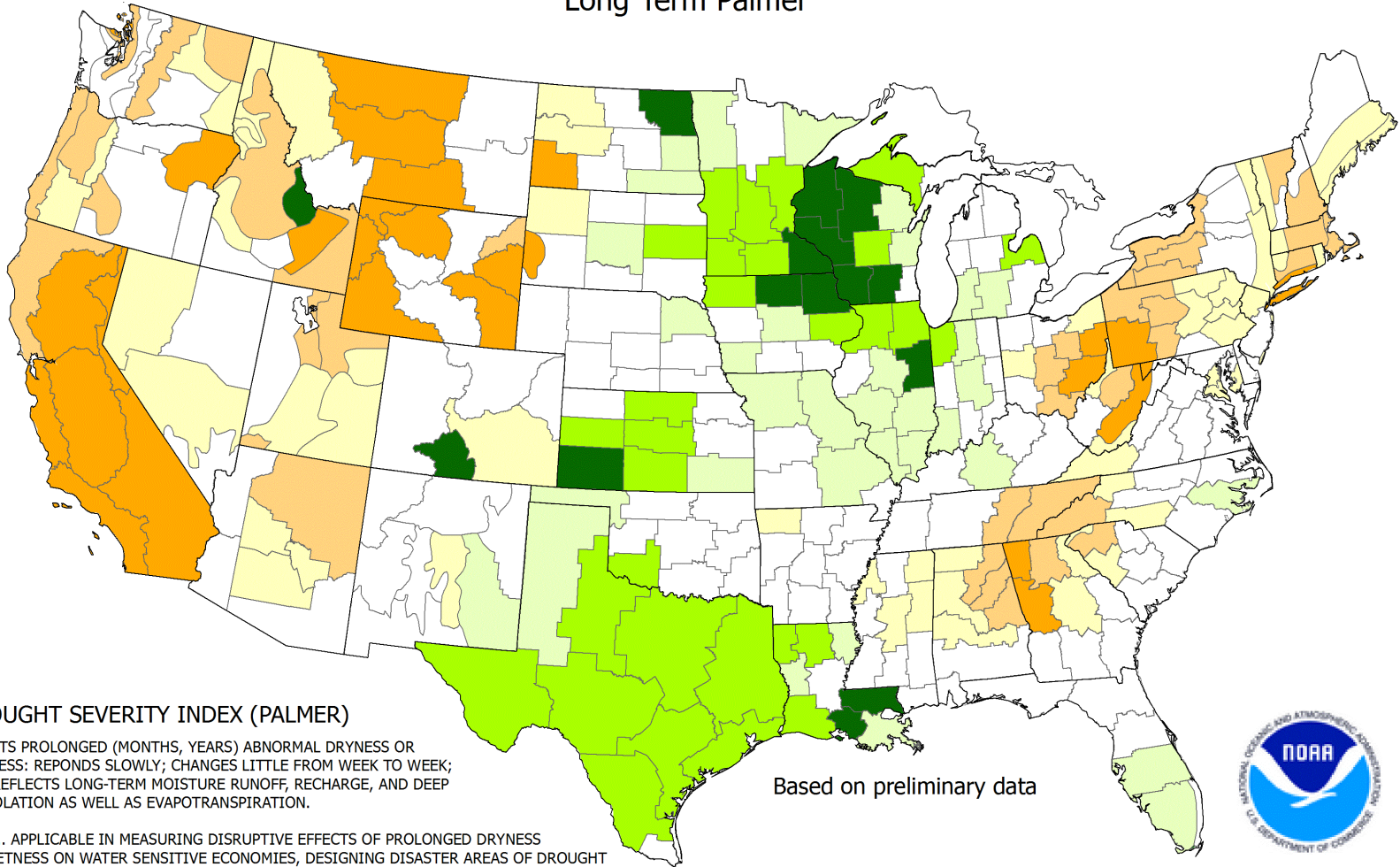


Percent of Normal



Drought Severity Index by Division
 Weekly Value for Period Ending Sep 10, 2016
 Long Term Palmer

PDSI



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).

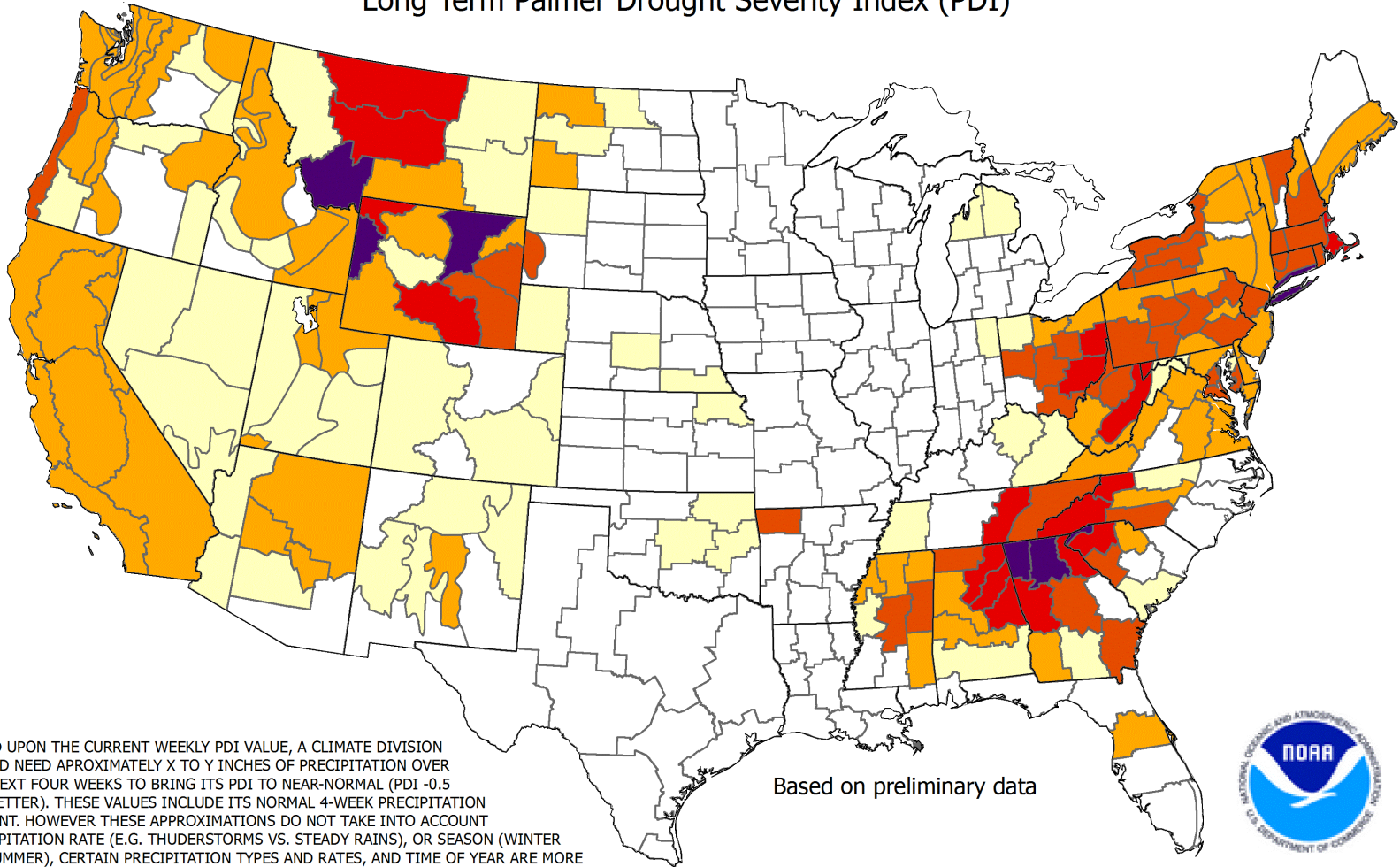
Based on preliminary data



- | | |
|---------------------------------|------------------------------------|
| -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 Sep 10, 2016
 Long Term Palmer Drought Severity Index (PDI)








PDSI



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)

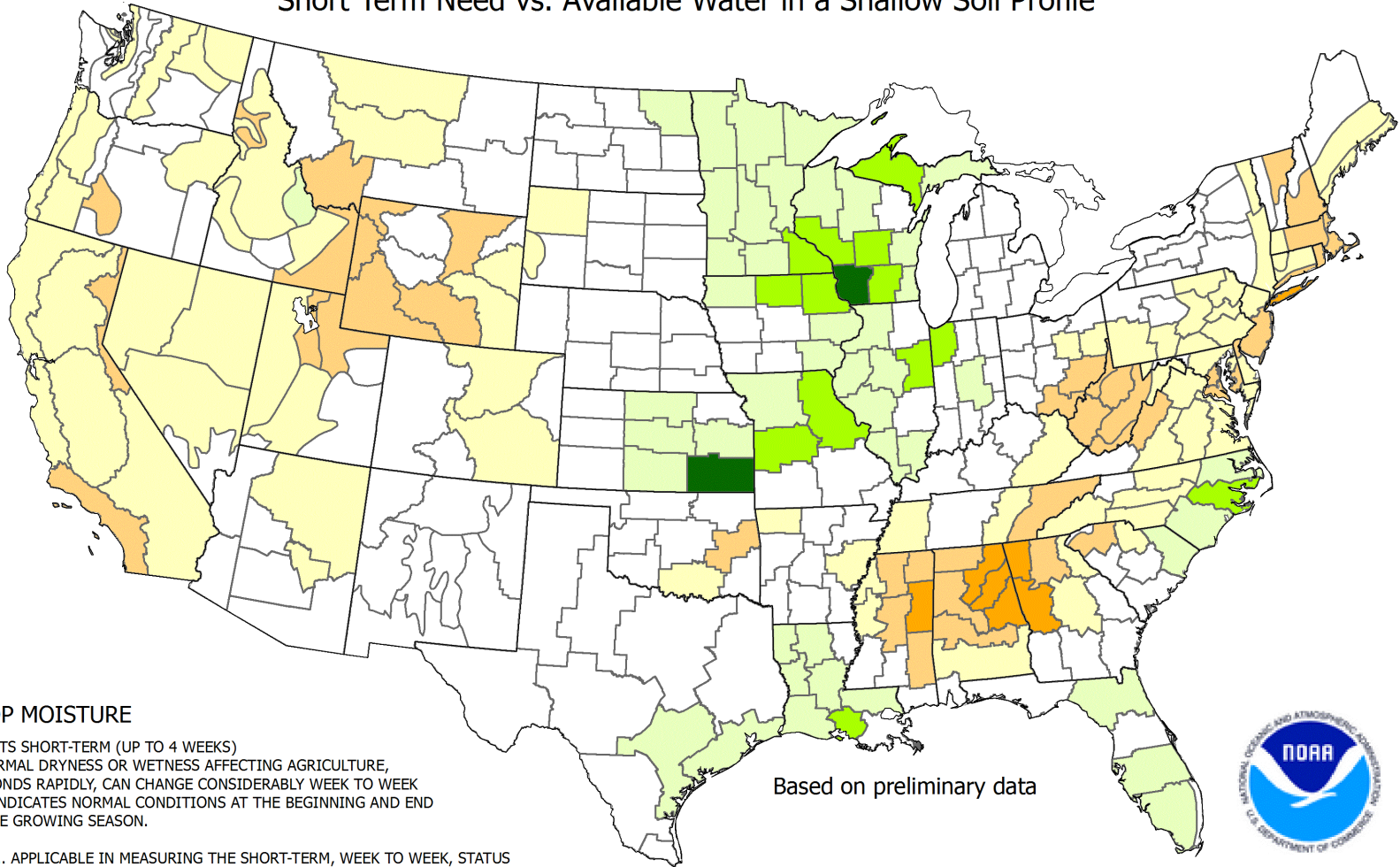
Based on preliminary data

- | | |
|--|---|
|  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 Sep 10, 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

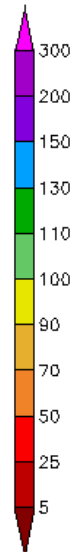
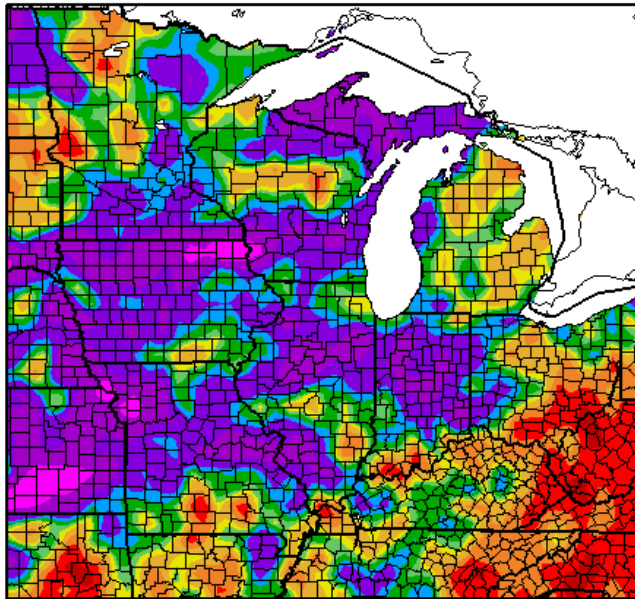
LIMITATIONS... MAY NOT BE APPLICABLE TO GERMINATING AND SHALLOW ROOTED CROPS WHICH ARE UNABLE TO EXTRACT THE DEEP OR SUBSOIL MOISTURE FROM A SHALLOW SOIL PROFILE, OR FOR COOL SEASON CROPS GROWING WHEN TEMPERATURES ARE AVERAGING BELOW ABOUT 55F. IT IS NOT GENERALLY INDICATIVE OF THE LONG-TERM (MONTHS,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

Based on preliminary data



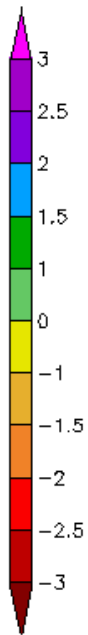
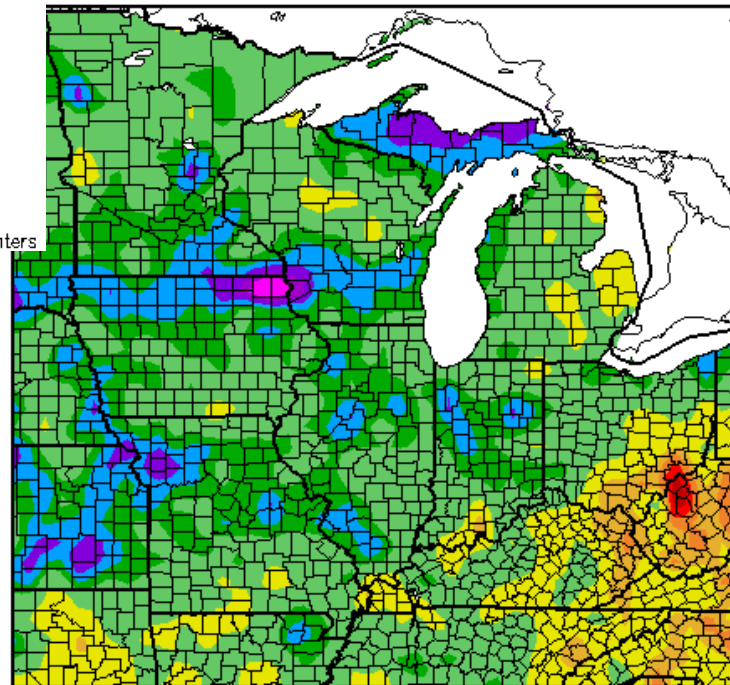
- | | |
|---|---------------------------------|
| -3.0 or less (Severly Dry) | +1.0 to +1.9 (Abnormally Moist) |
| -2.0 to -2.9 (Excessively Dry) | +2.0 to +3.0 (Wet) |
| -1.0 to -1.9 (Abnormally Dry) | 3.0 and above (Excessively Wet) |
| -0.9 to +0.9 (Slightly Dry/Favorably Moist) | |

Percent of Normal Precipitation (%)
8/20/2016 – 9/18/2016



Previous 30-Days

30 Day SPI
8/20/2016 – 9/18/2016



Generated 9/19/2016 at HPRCC using provisional data.

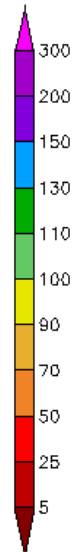
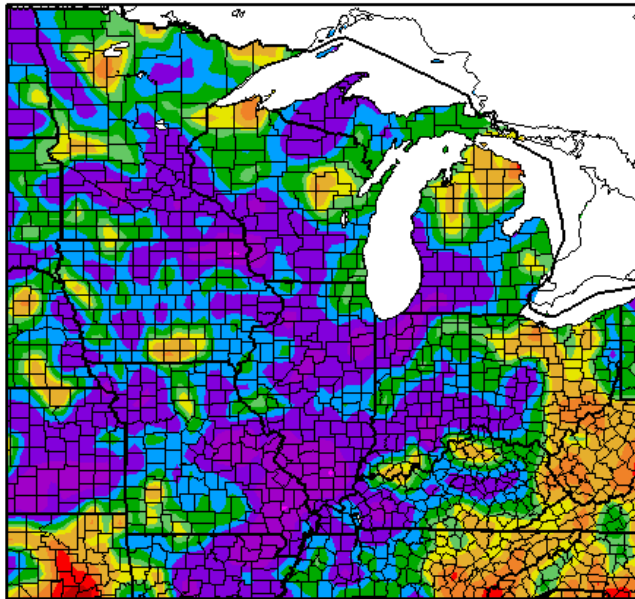
Regional Climate Centers

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

Generated 9/19/2016 at HPRCC using provisional data.

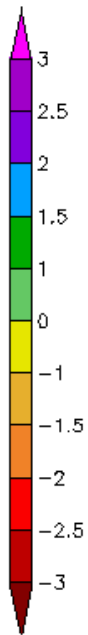
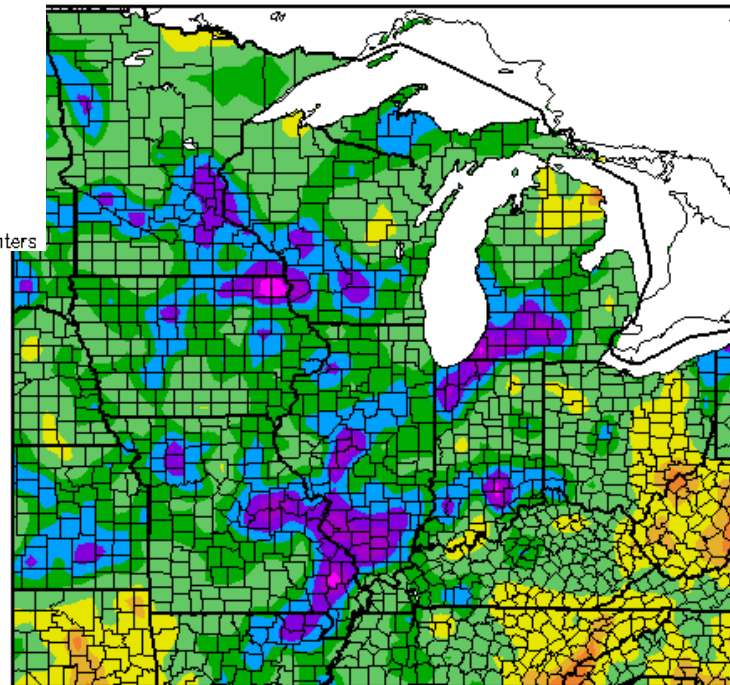
Regional Climate Centers

Percent of Normal Precipitation (%)
7/21/2016 – 9/18/2016



Previous 60-Days

60 Day SPI
7/21/2016 – 9/18/2016



Generated 9/19/2016 at HPRCC using provisional data.

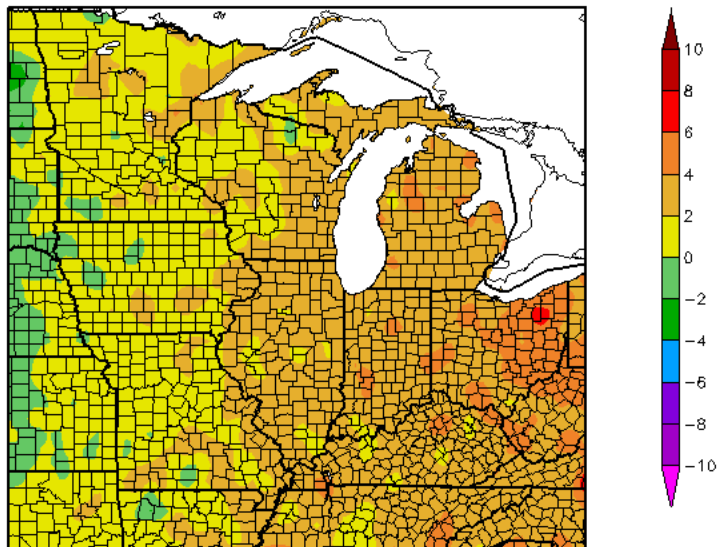
Regional Climate Centers

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

Generated 9/19/2016 at HPRCC using provisional data.

Regional Climate Centers

Departure from Normal Temperature (F)
8/20/2016 - 9/18/2016

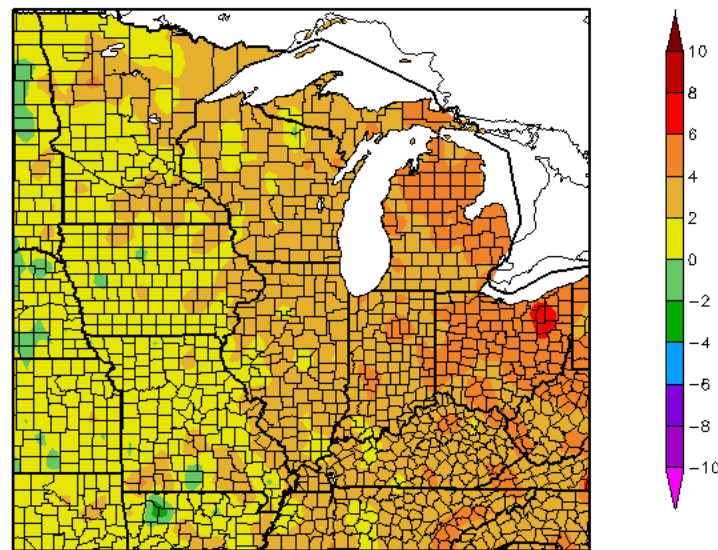


Generated 9/19/2016 at HPRCC using provisional data.

Regional Climate Centers

30 Day Departure from Normal Temperature

Departure from Normal Temperature (F)
7/21/2016 - 9/18/2016



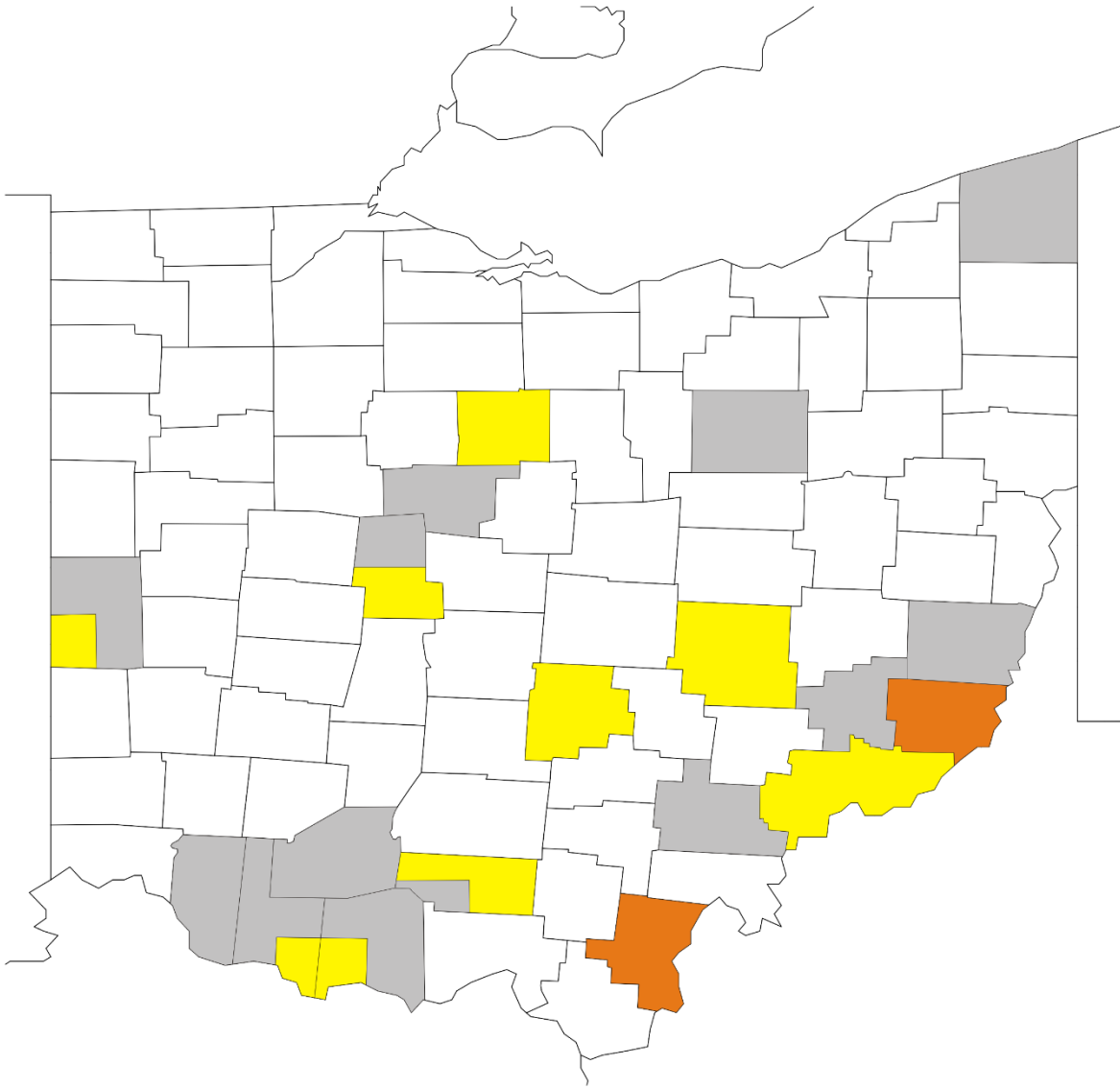
Generated 9/19/2016 at HPRCC using provisional data.

Regional Climate Centers

60 Day Departure from Normal Temperature

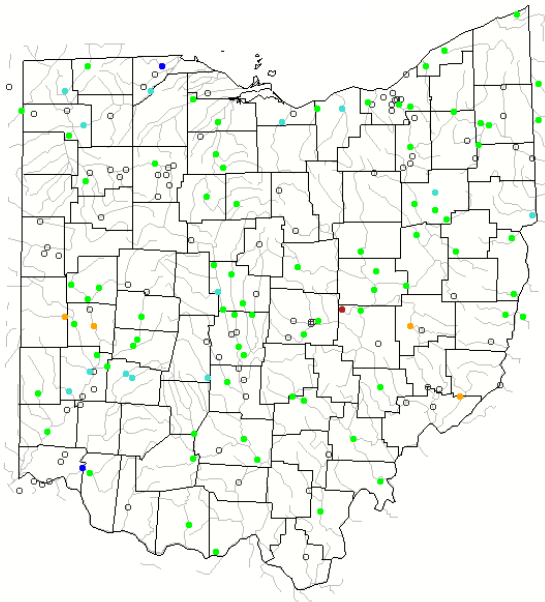
OSU Extension Educator Field Reports

19 September 2016

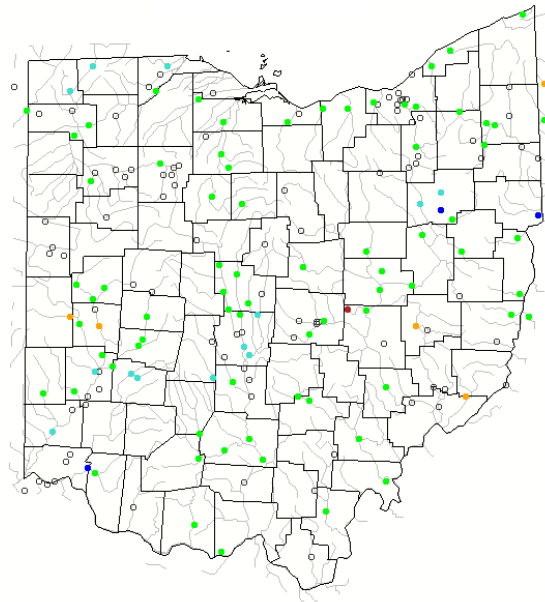


USGS Streamflow

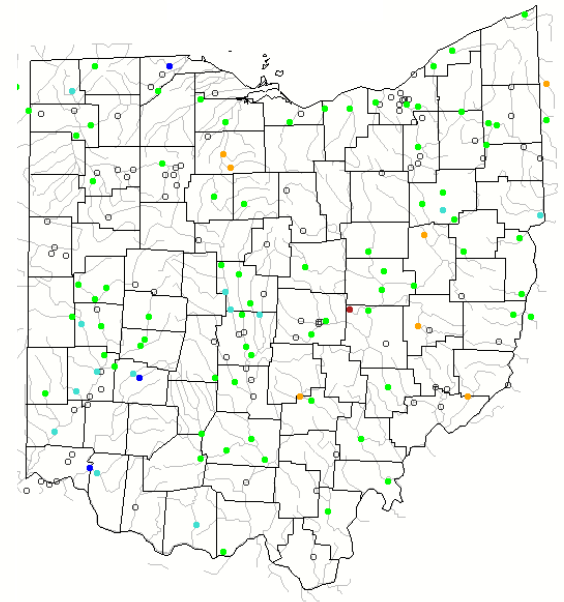
7-DAY



14-DAY



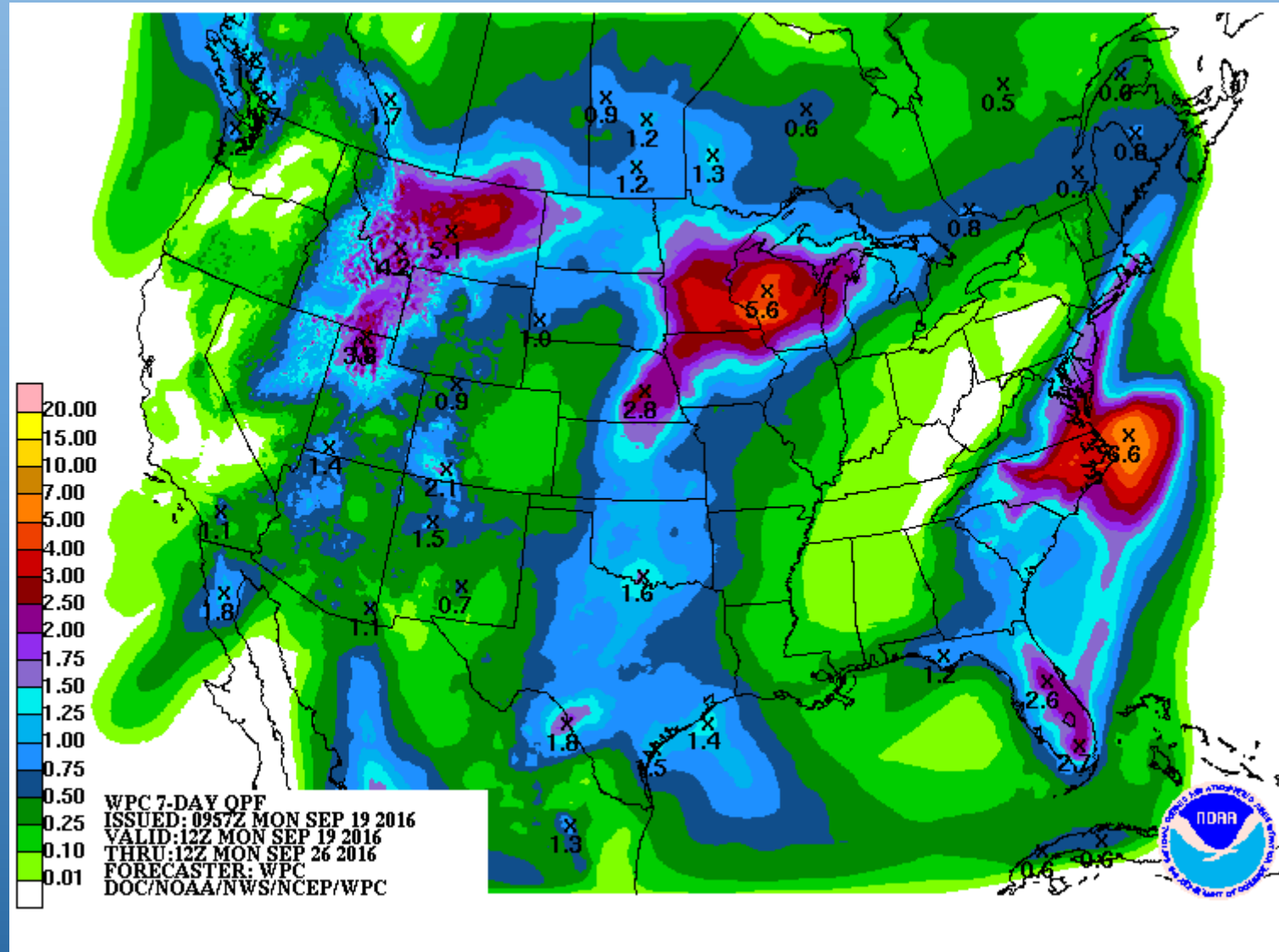
28-DAY



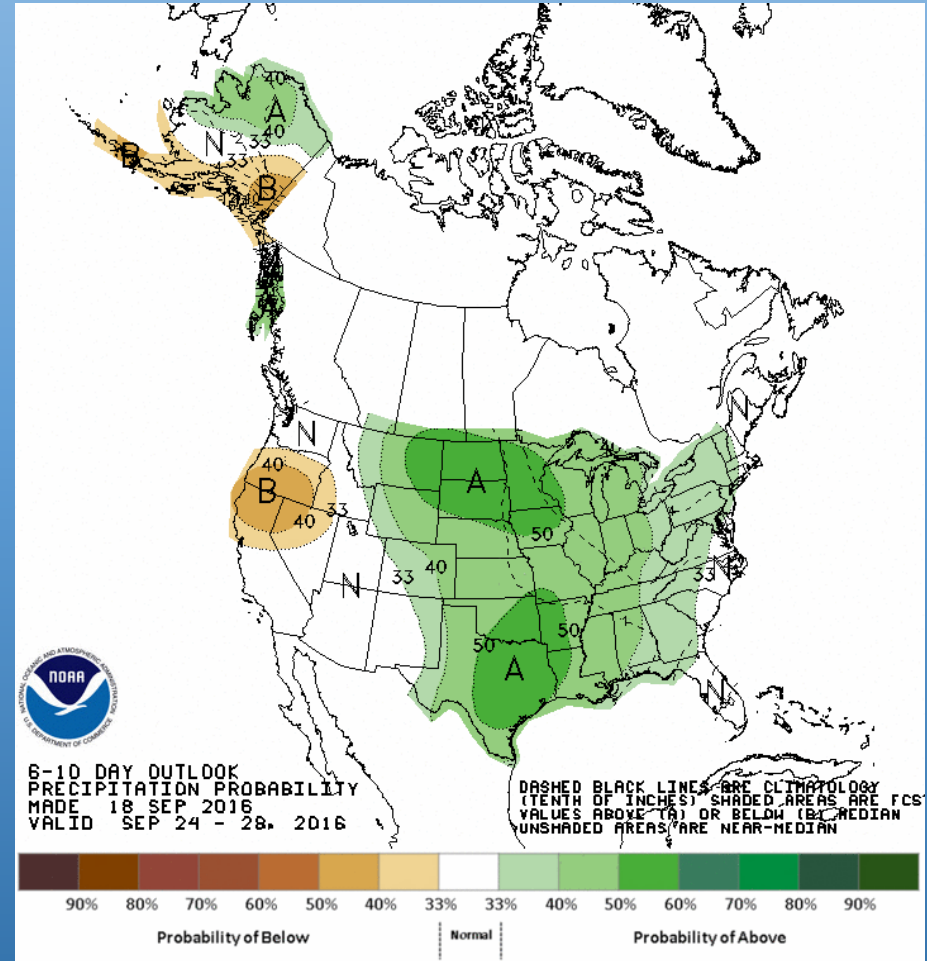
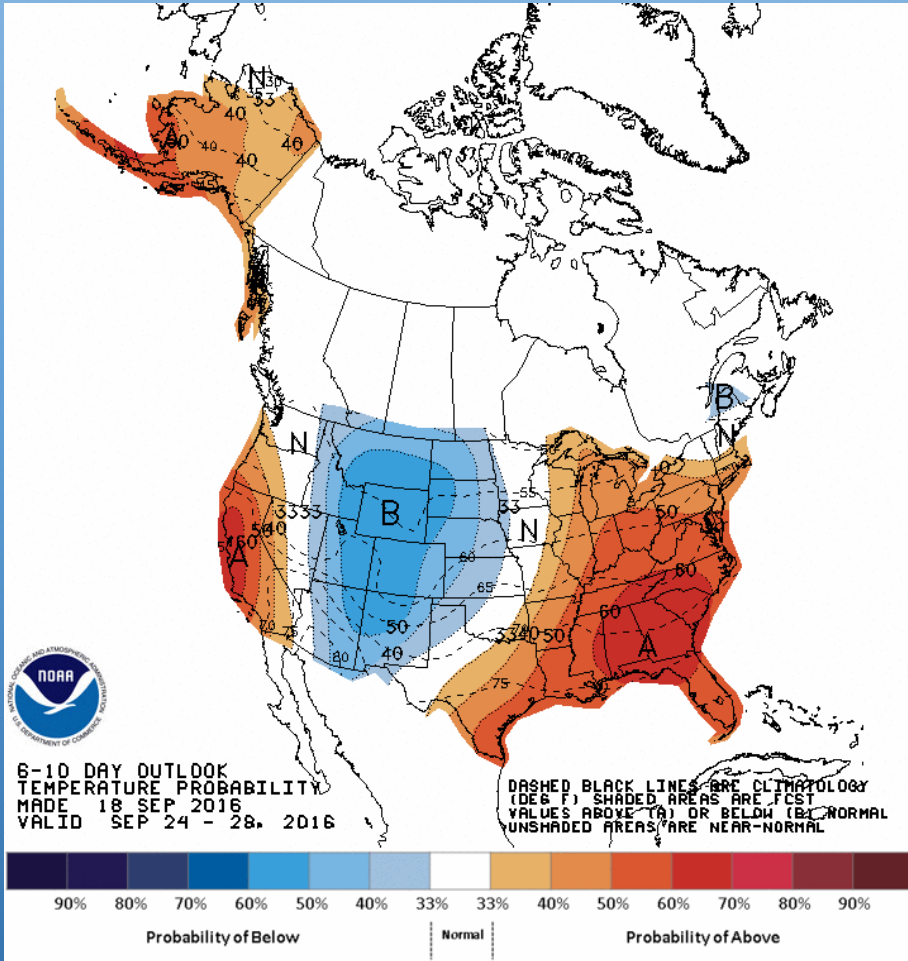
Explanation - Percentile classes							
Low	<10	10-24	25-75	76-90	>90	High	Not-ranked
	Much below normal	Below normal	Normal	Above normal	Much above normal		

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

Weather for the Week Ahead



6-10 Day Outlook



SUMMARY OF CONDITIONS

- **Current**

- Drought Monitor: Small improvements last week across the North
- 7-day Precipitation: Localized heavy rain this week, most of the state below normal
- 30-Day precipitation: SW Ohio still above normal; North/E/SE still below normal with low stream flows in the SE
- SPI very low in the far SE

- **Continued improvements in the NW and along the lake front in the NE**

- **Downgrade conditions in portions of the far SE**