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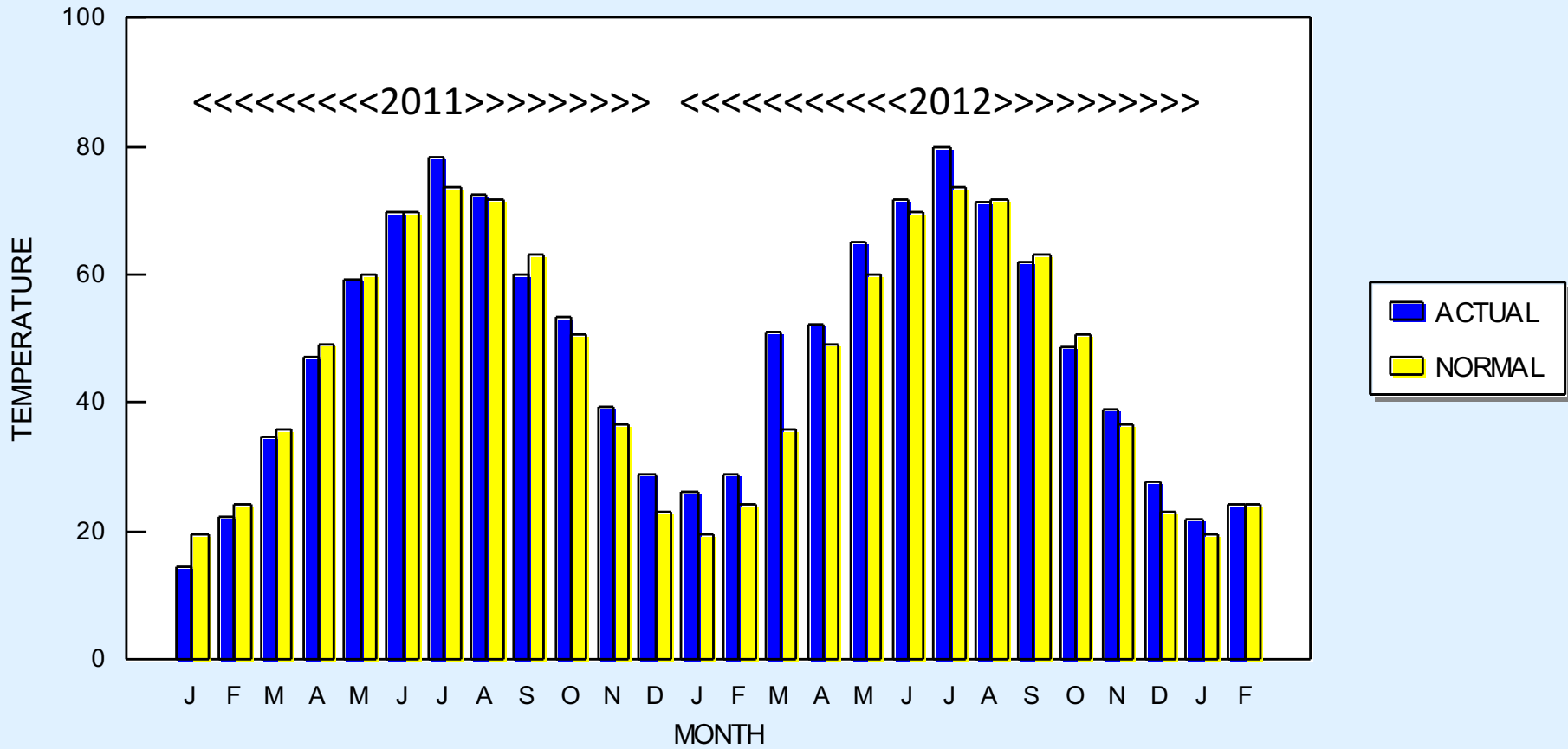
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2012 Drought...many, many impacts



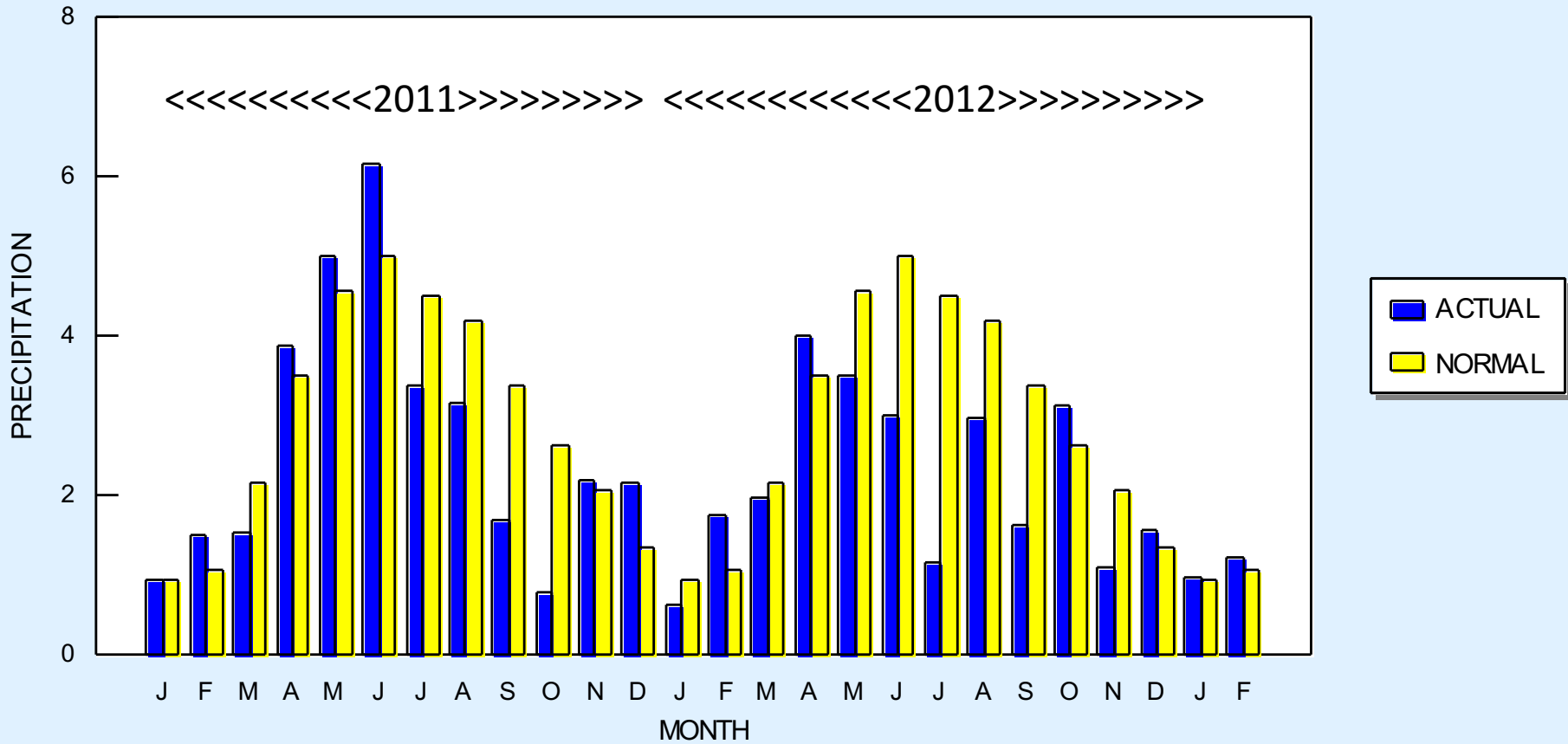
IOWA MONTHLY TEMPERATURES

JAN. 2011 TO FEB. 2013



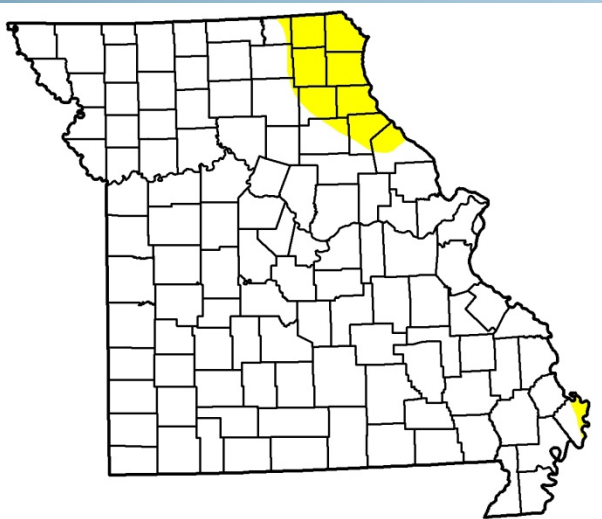
IOWA MONTHLY PRECIPITATION

JAN. 2011 TO FEB. 2013

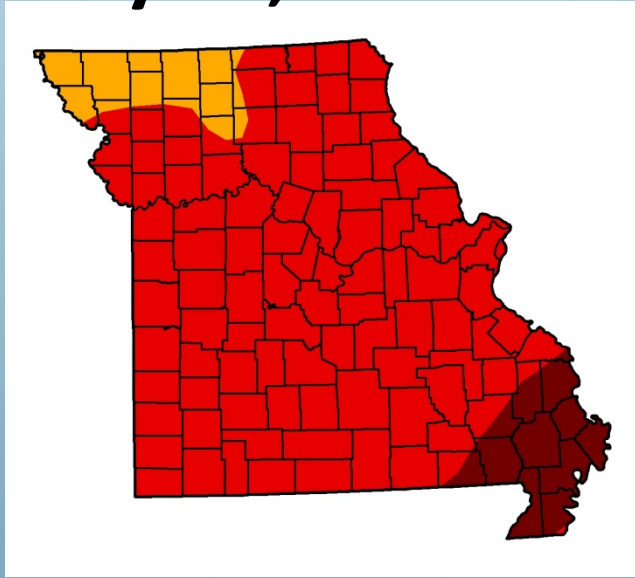


U.S. Drought Monitor, Missouri

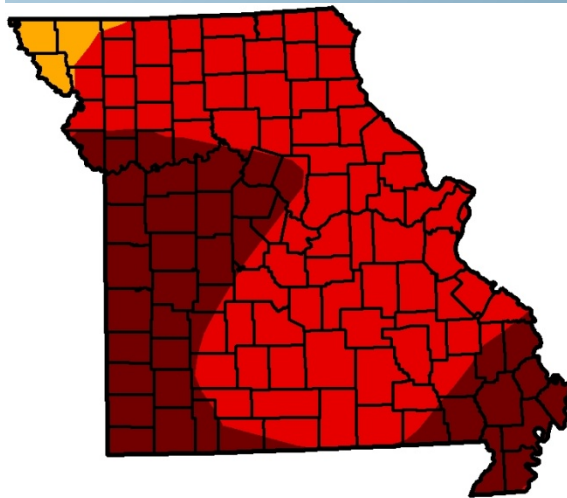
April 24, 2012



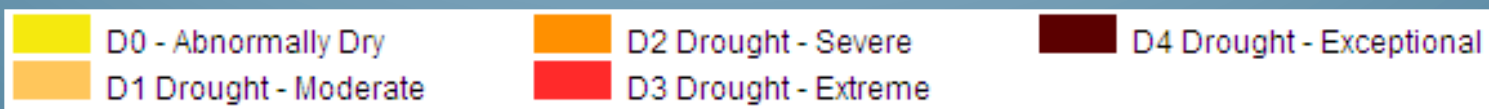
July 31, 2012



Aug 28, 2012



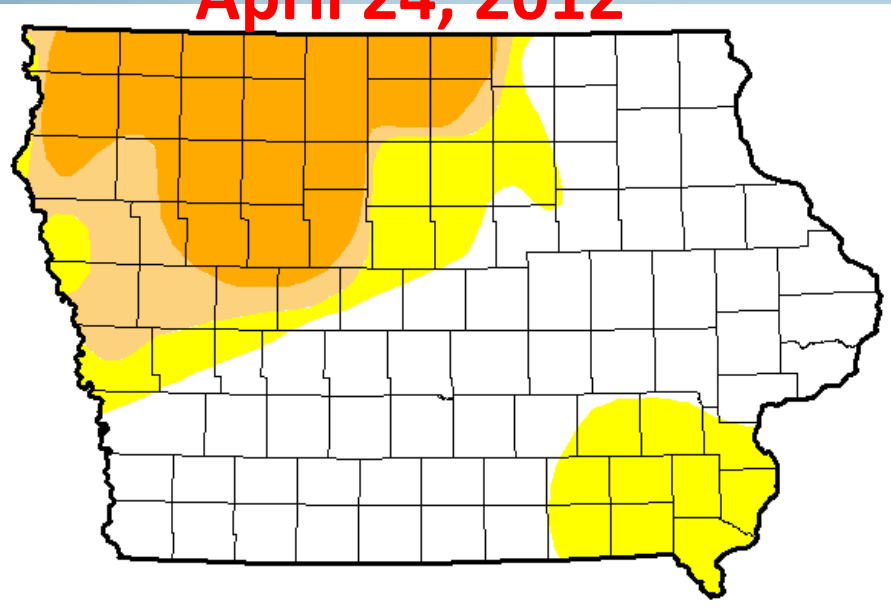
Drought Severity



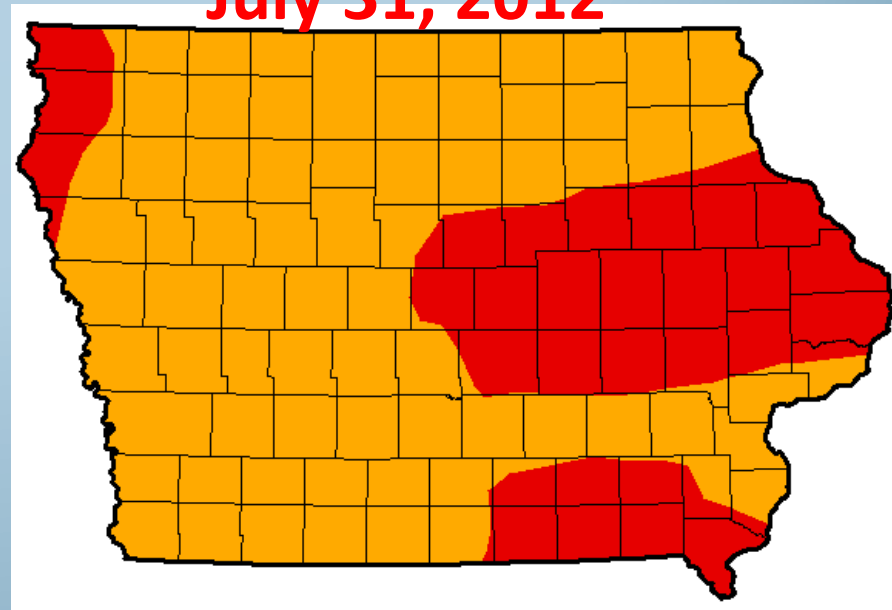
<http://droughtmonitor.unl.edu/>



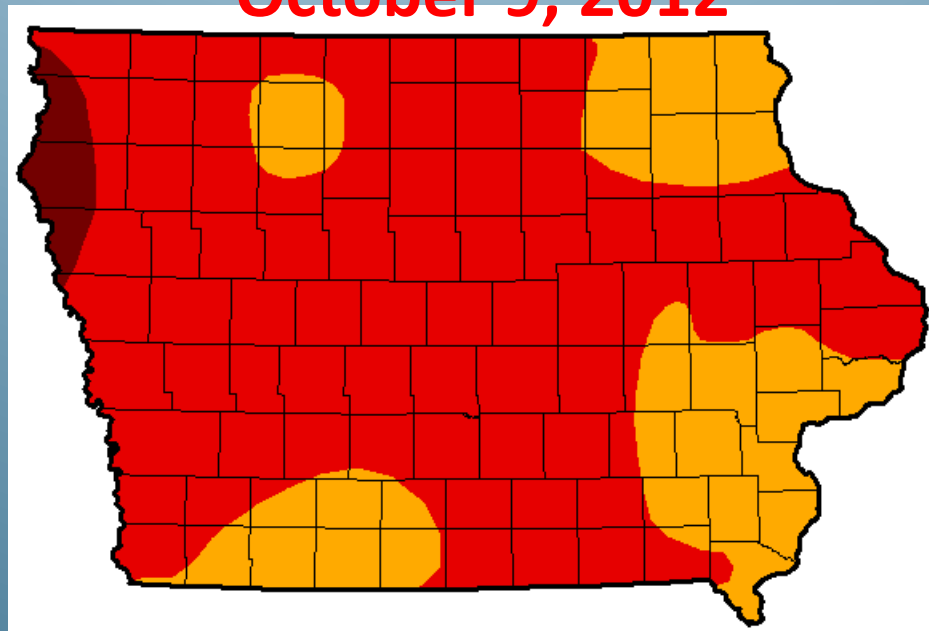
April 24, 2012



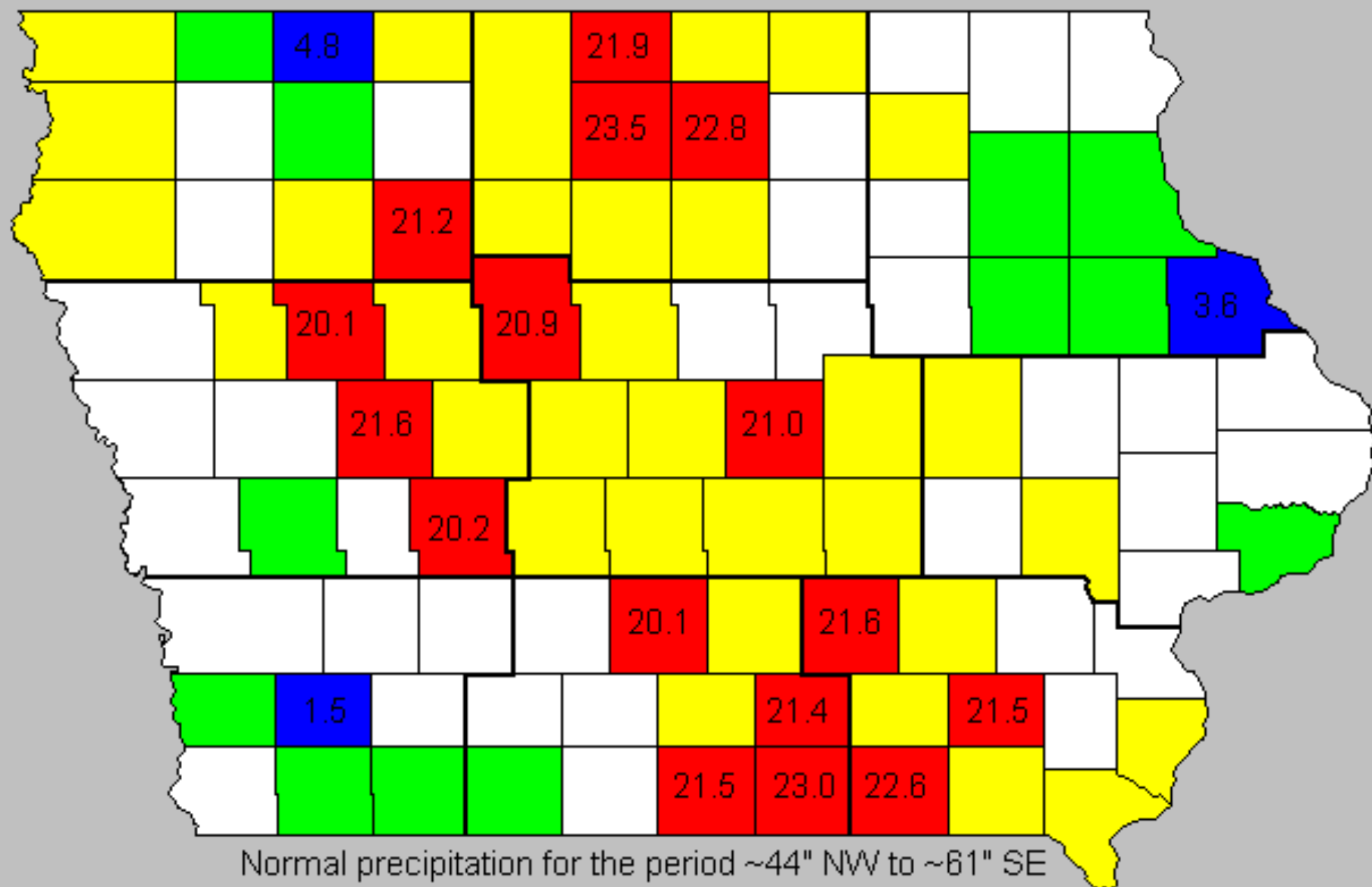
July 31, 2012



October 9, 2012

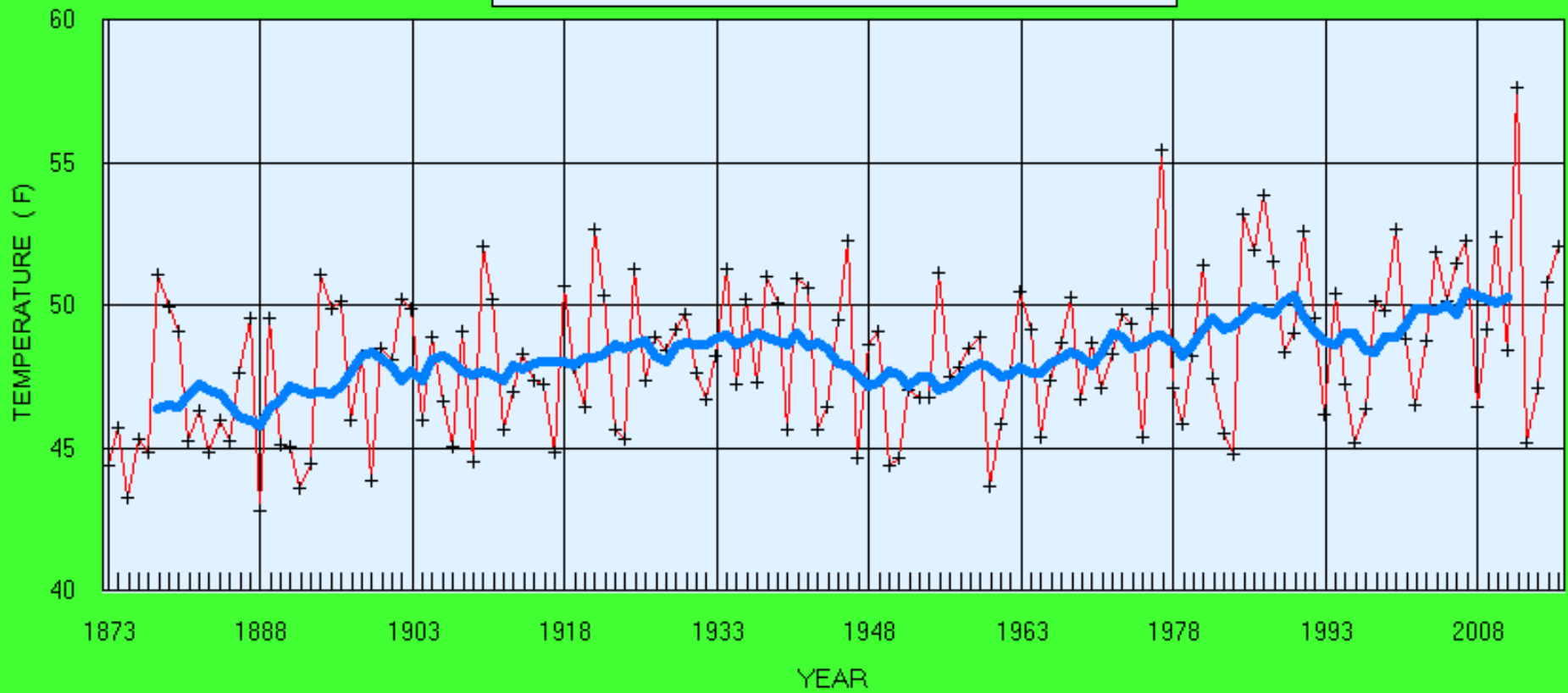


State Climatologist, Iowa Dept. of Agriculture & Land Stewardship
 PRECIPITATION DEFICIT, JUNE 28, 2011 TO JANUARY 28, 2013 (inches)



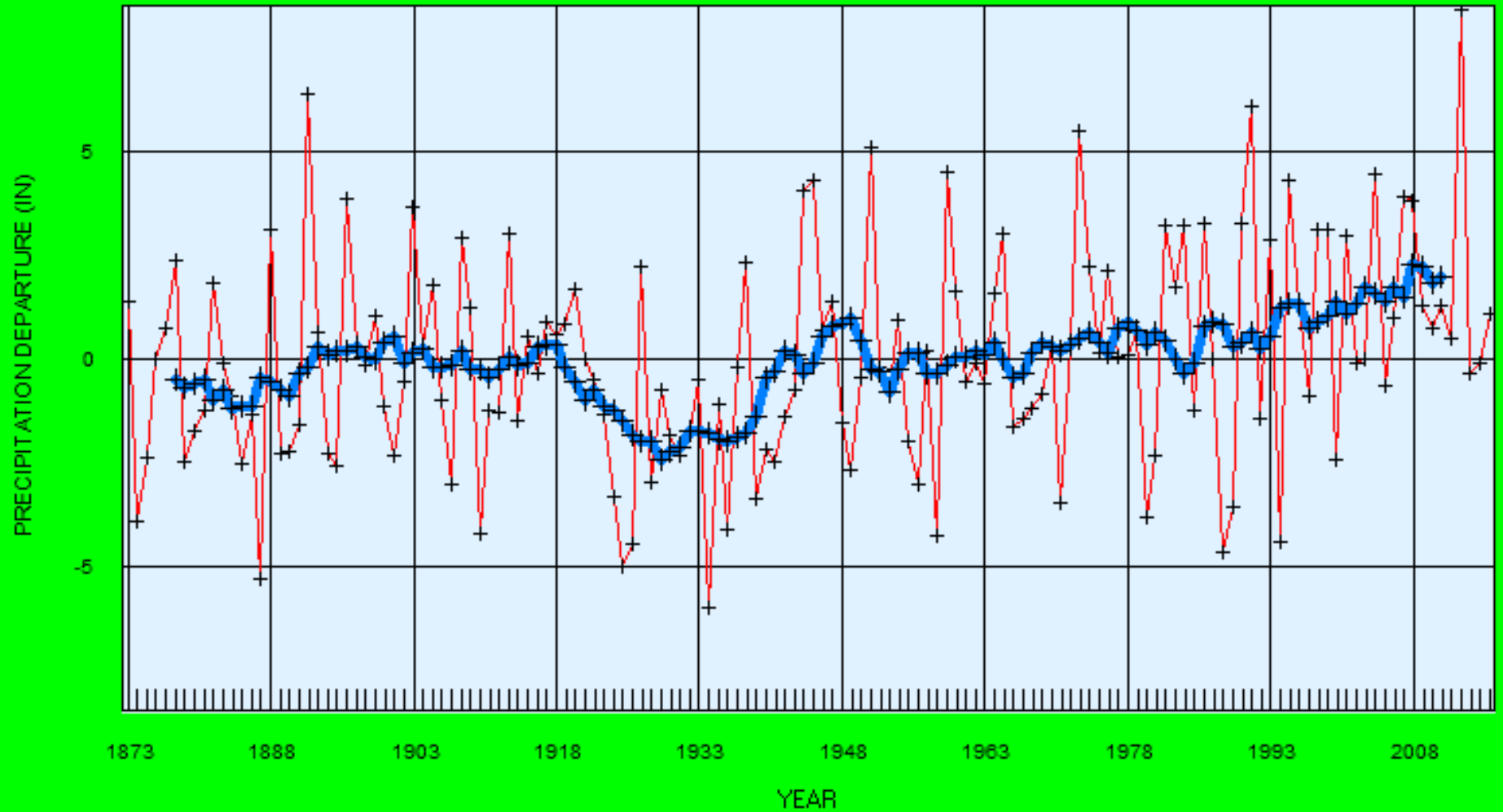
IOWA SPRING TEMPERATURES

Mar - May, 1873-2016, (AVERAGE = 48.2)



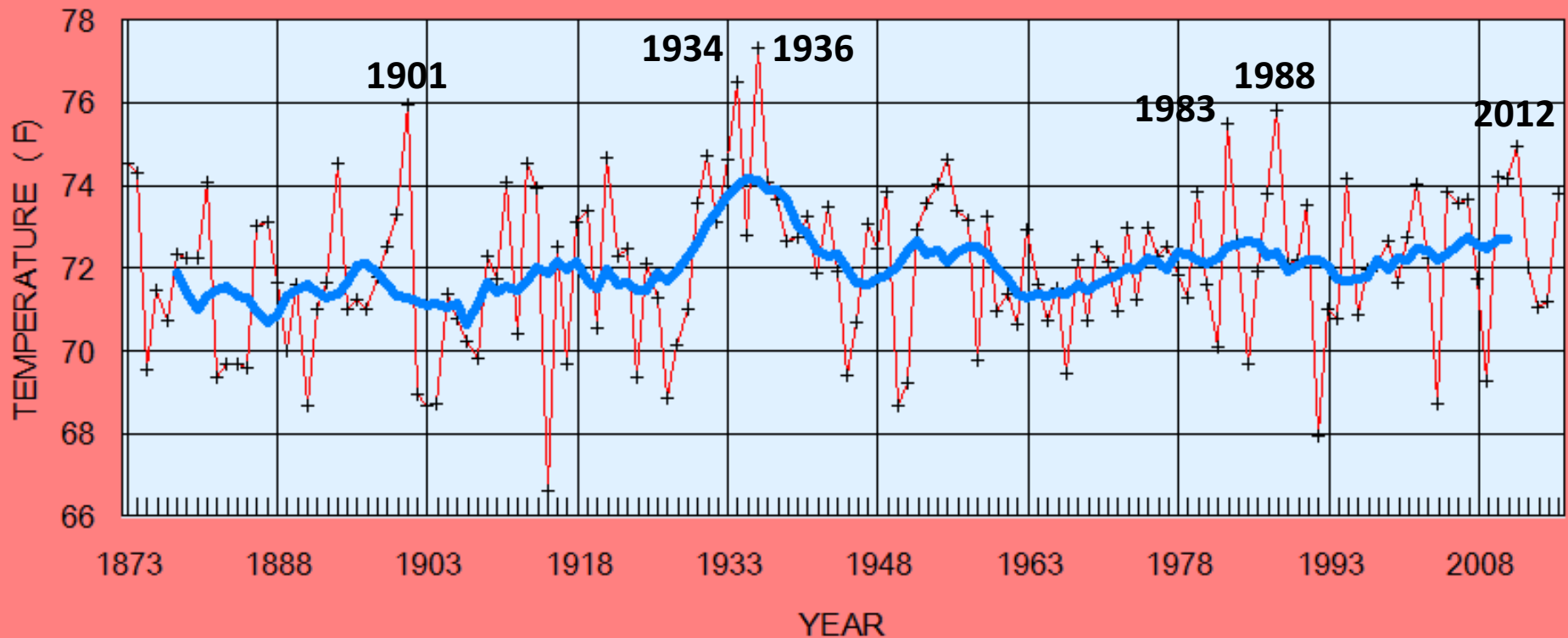
IOWA SPRING PRECIPITATION

MAR - MAY, 1873-2016 (AVERAGE 9.16")



IOWA SUMMMER TEMPERATURES

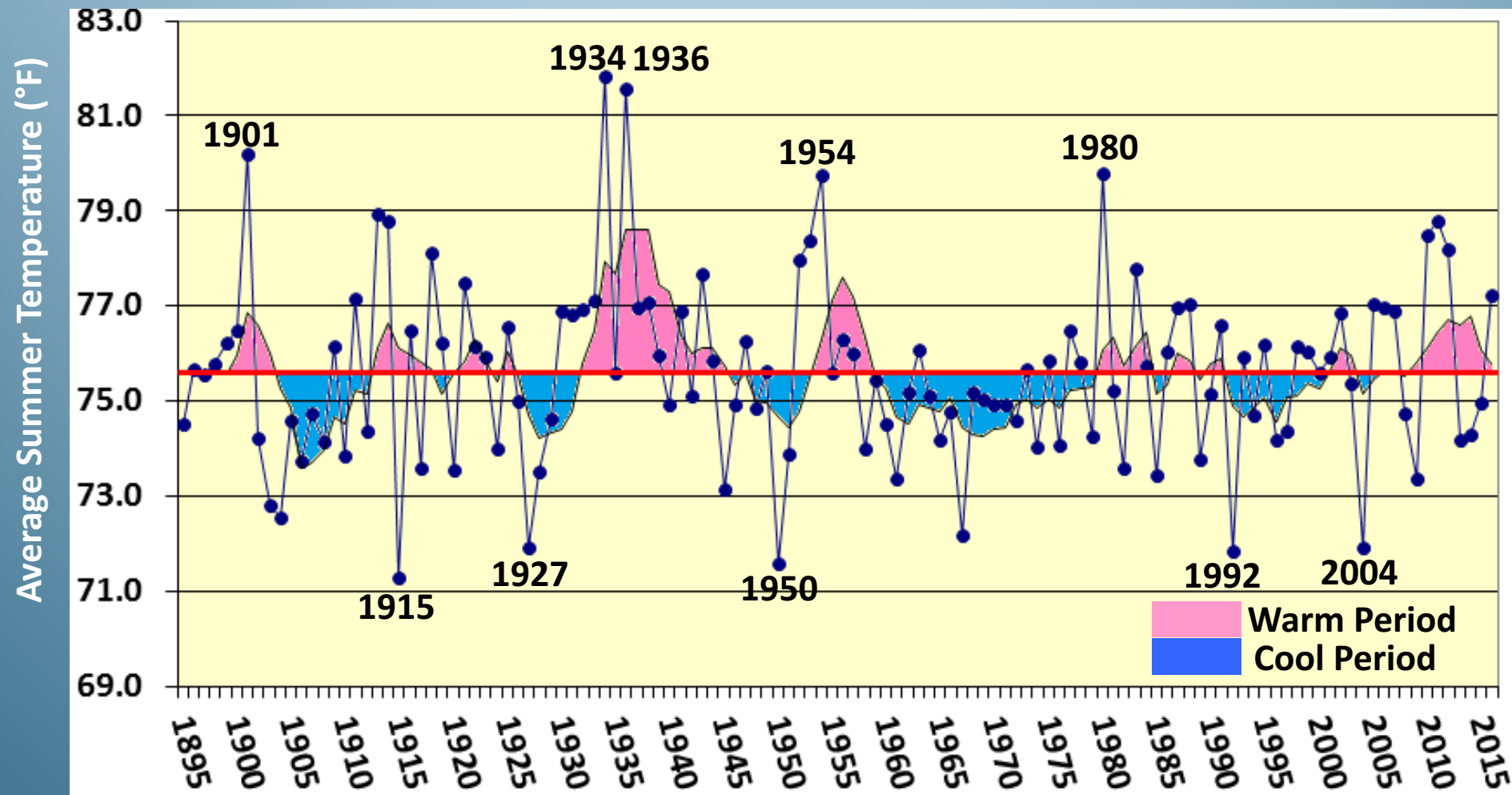
Jun - Aug, 1873-2016, (AVERAGE = 72.0)



Missouri Average Summer Temperature (Jun-Jul-Aug, 1895-2016)

Long-term average: 75.6°F

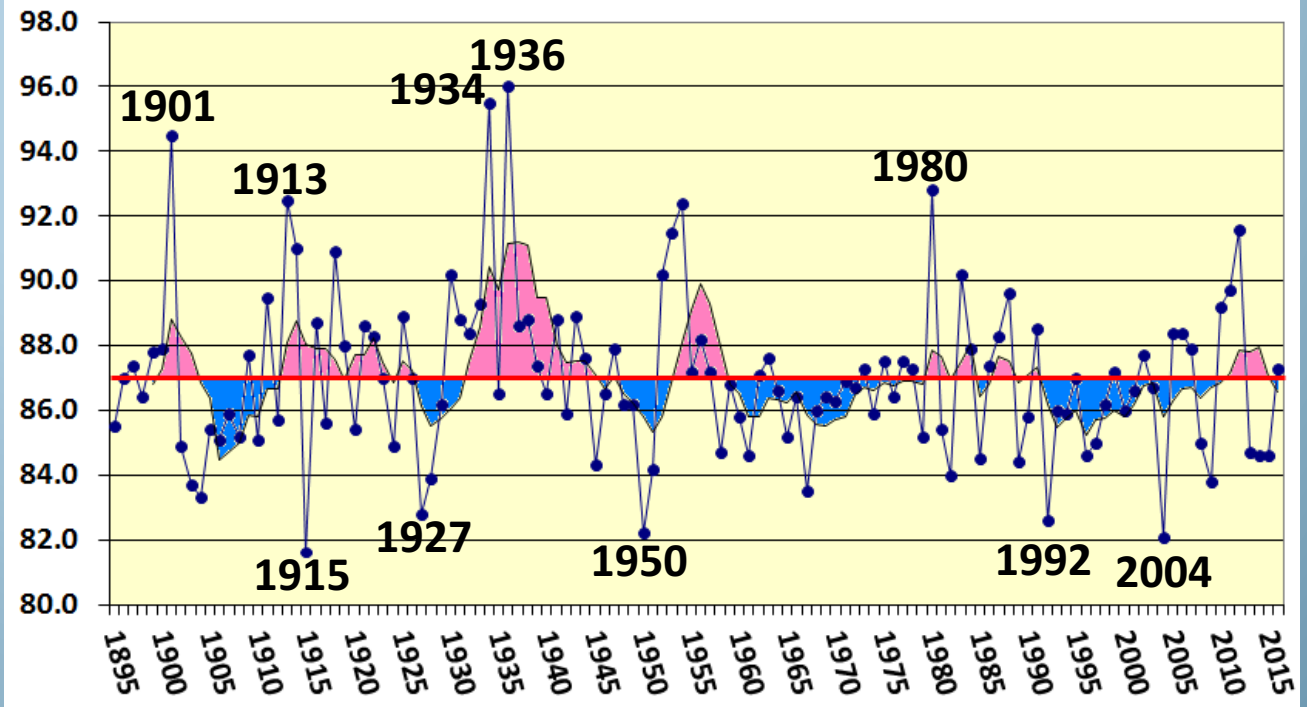
5 yr. running mean



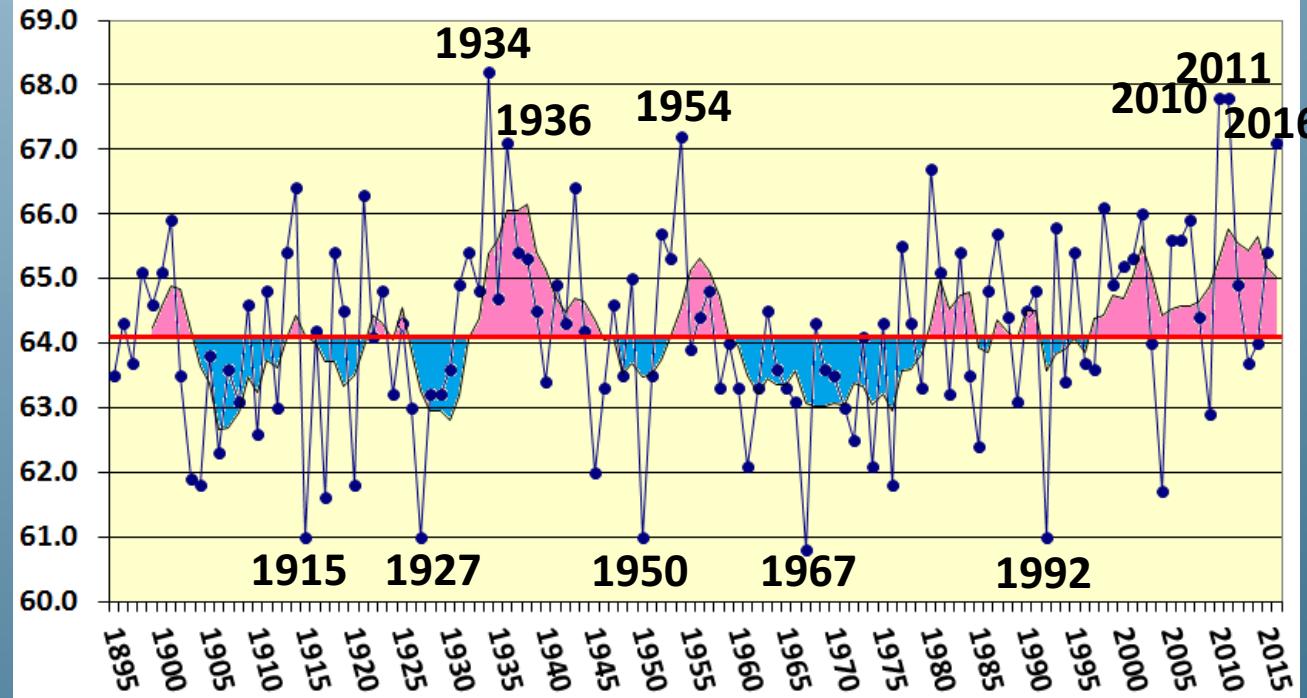
Missouri Average Summer Maximum Temperature (Jun-Jul-Aug, 1895-2016)



Warm Period
 Cool Period

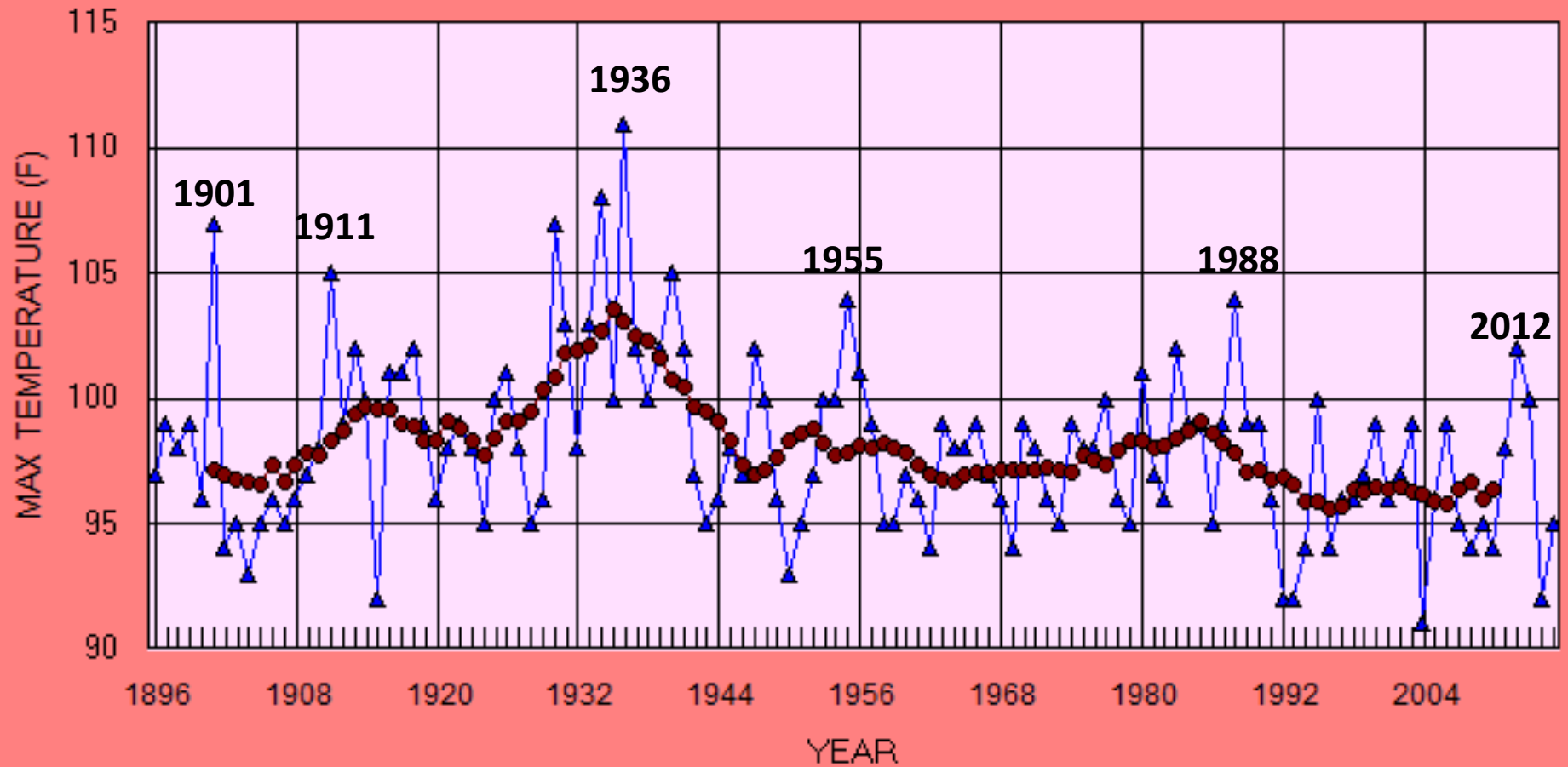


Missouri Average Summer Minimum Temperature (Jun-Jul-Aug, 1895-2016)



ANNUAL MAX TEMPERATURE

IOWA AVERAGE (1896-2015 = 98 DEGREES)

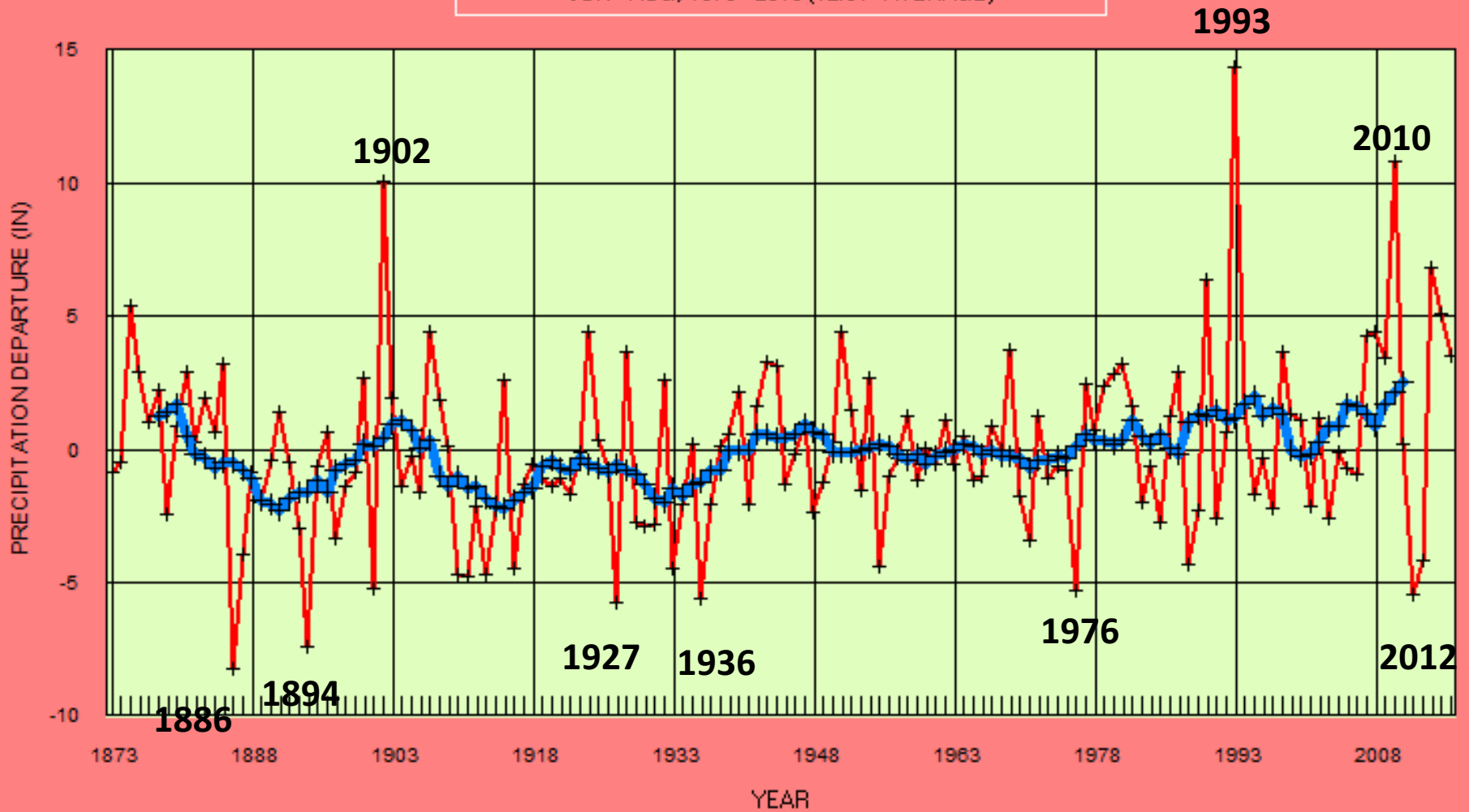


What's the Big Deal about Heat?

- 90° 13% greater drying potential than at 86°.
- 96° 37% greater.
- 100° 54% greater.
- 104° 74% greater.
- 108° 95% greater.

IOWA SUMMER PRECIPITATION

JUN - AUG, 1873 - 2016 (12.51" AVERAGE)

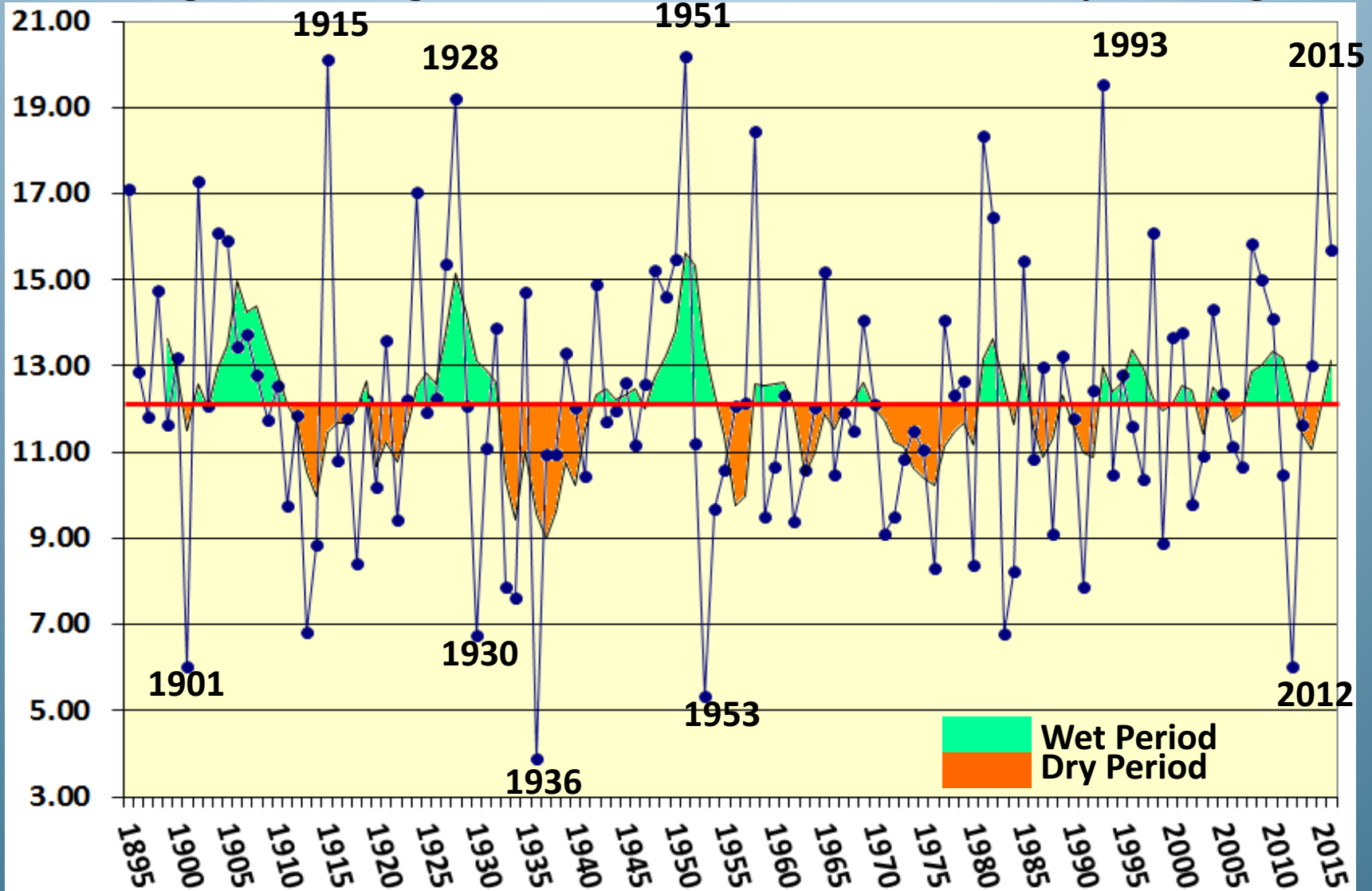


Missouri Average Summer Precipitation (Jun-Jul-Aug, 1895-2016)

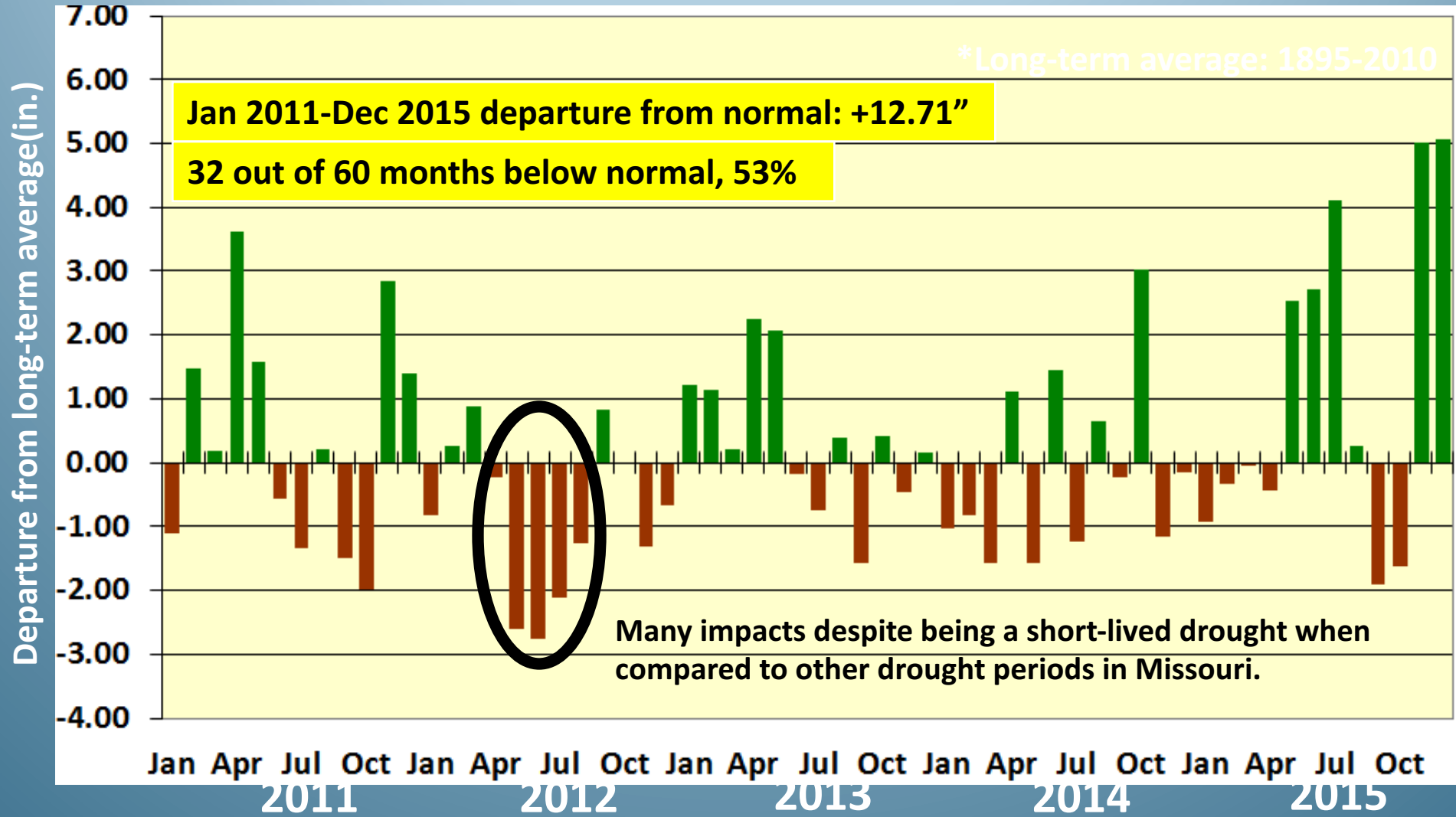
Long-term average: 12.18" 

 5 yr. running mean

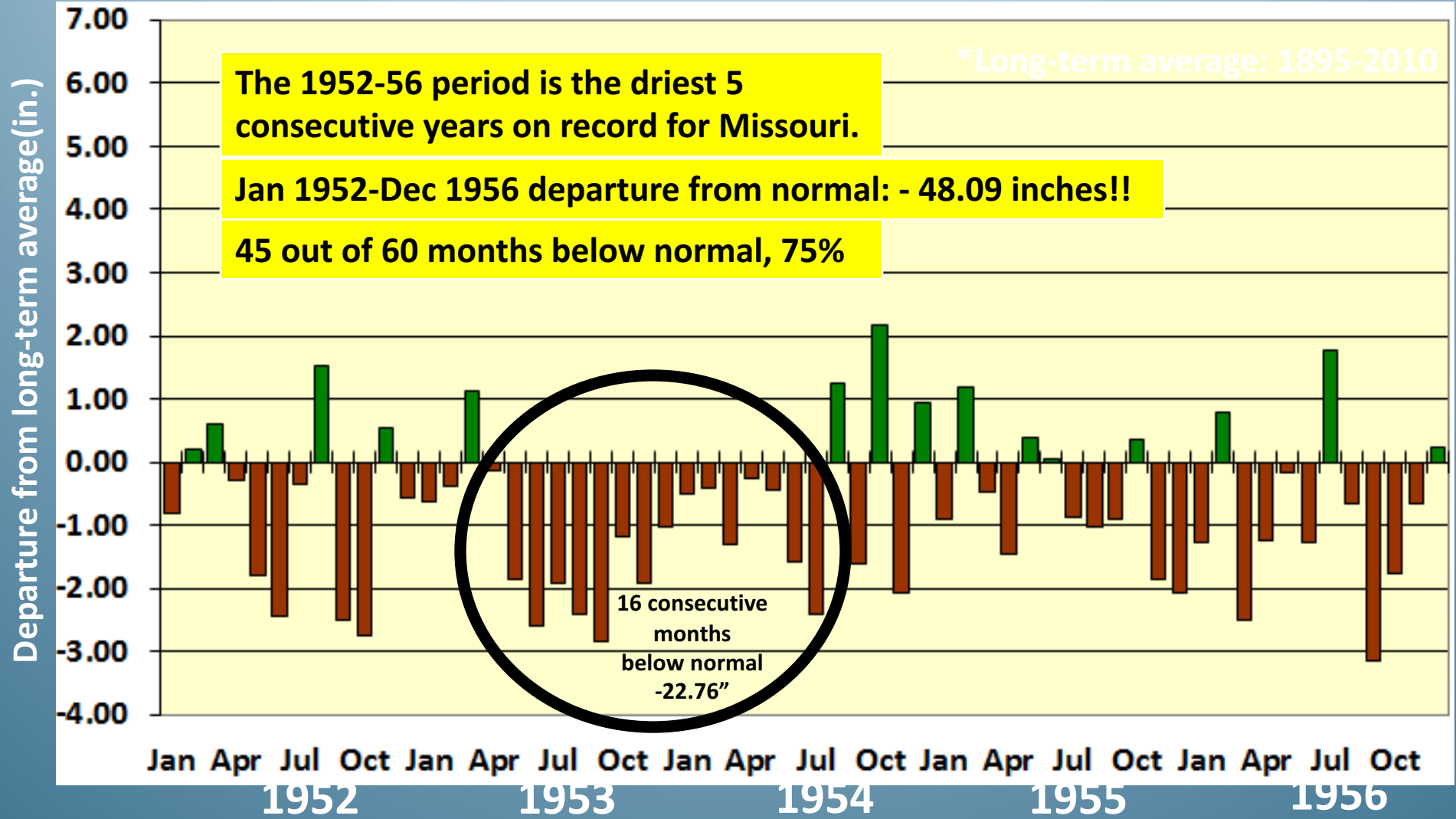
Average Summer Precipitation (in.)



Missouri Monthly Precipitation Departure From Average* Jan 2011 – Dec 2015



Missouri Monthly Precipitation Departure From Average* Jan 1952 – Dec 1956

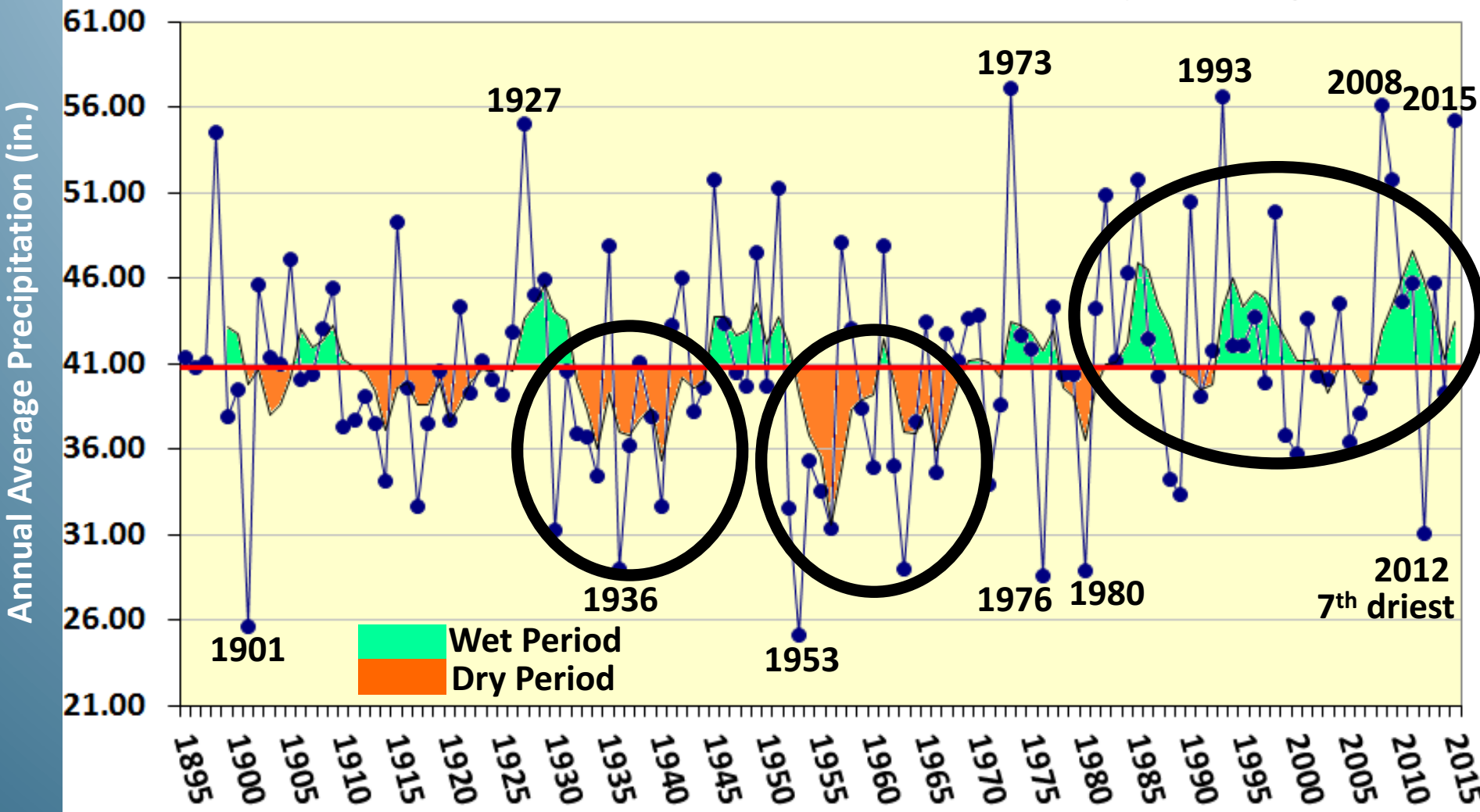


Missouri's biggest climatic vulnerability is drought...

Missouri Annual Average Precipitation (1895-2015)

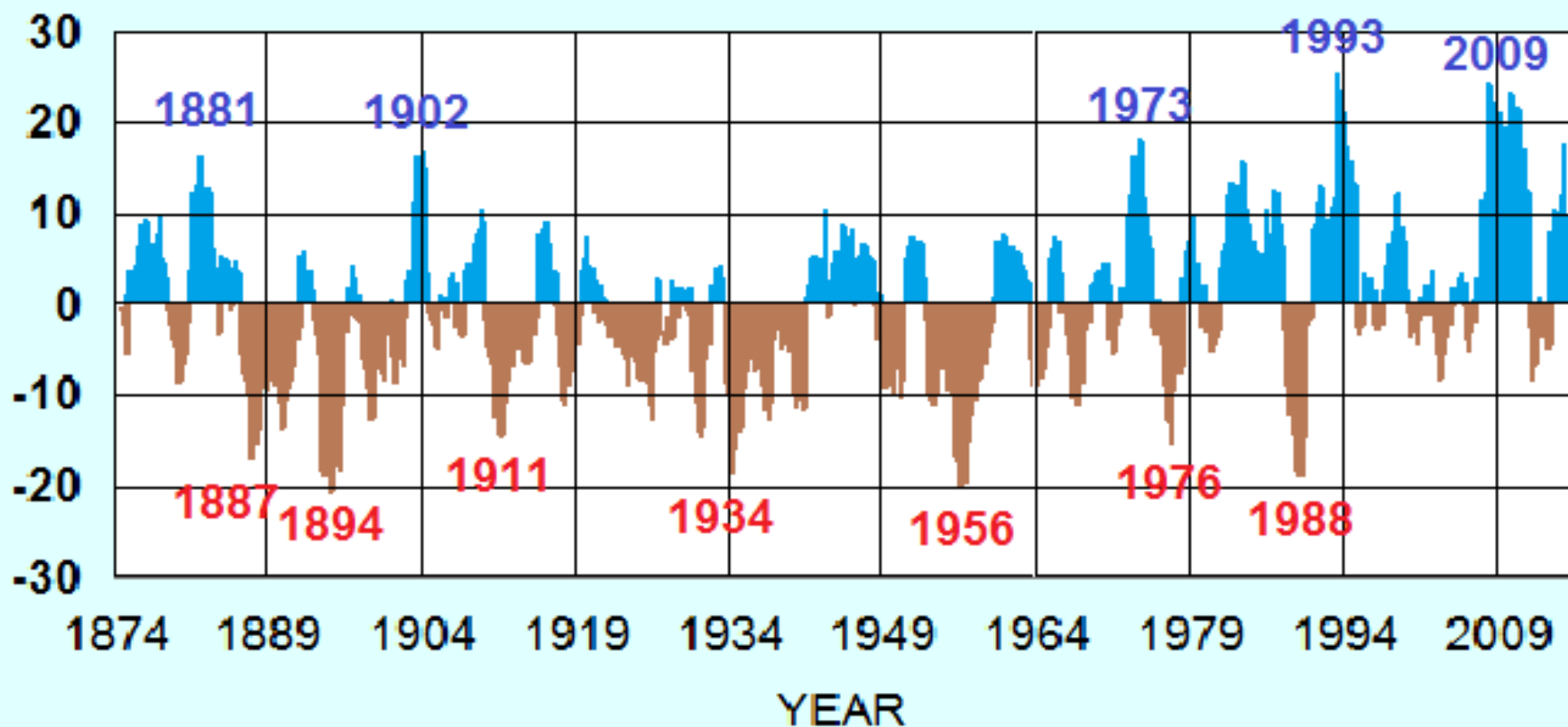
Long-term average: 40.86" —

~ 5 yr. running mean



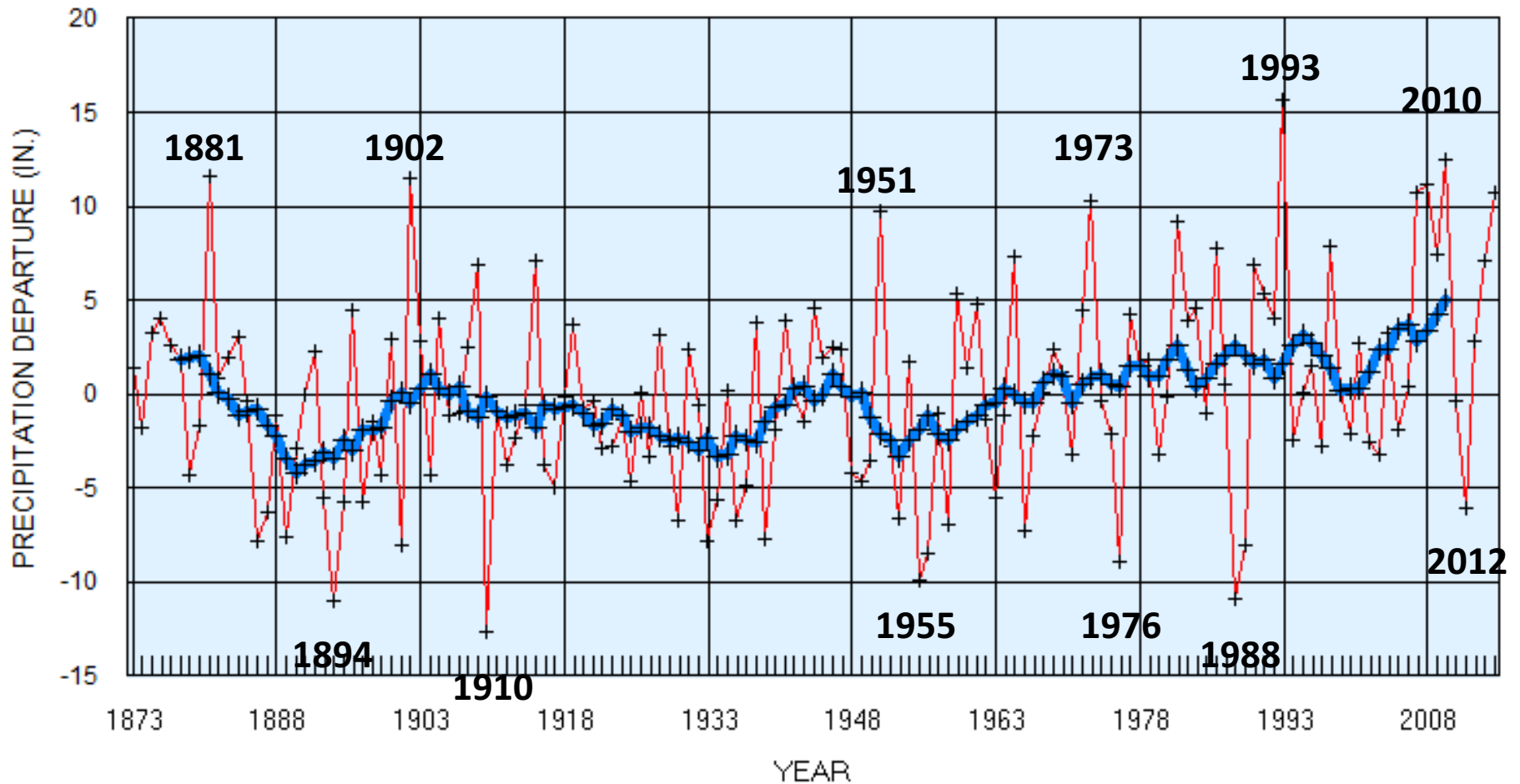
IOWA PRECIPITATION 24-MONTH RUNNING AVERAGE

DEPARTURE FROM NORMAL (inches)



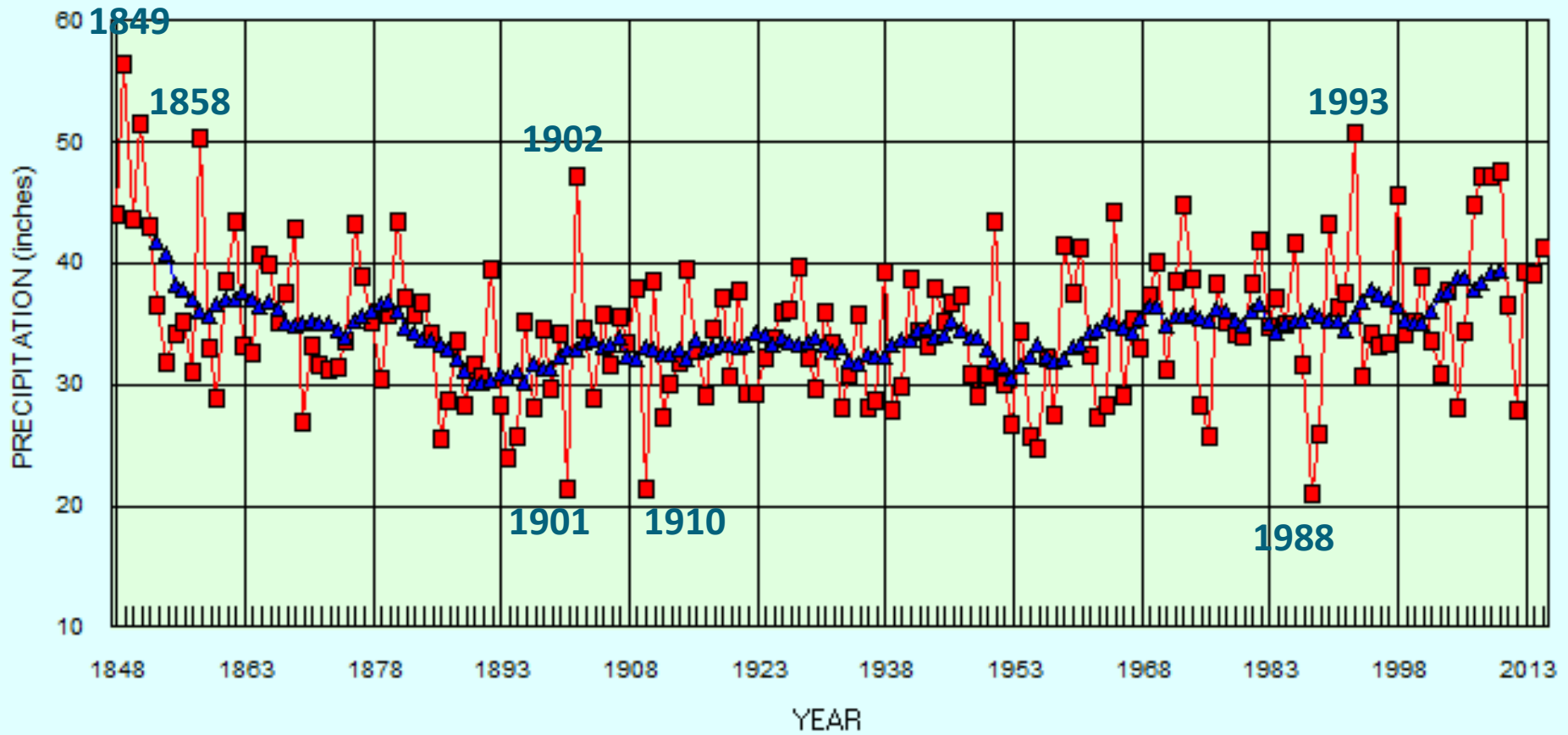
IOWA ANNUAL PRECIPITATION

1873 - 2015 (32.57" AVERAGE)



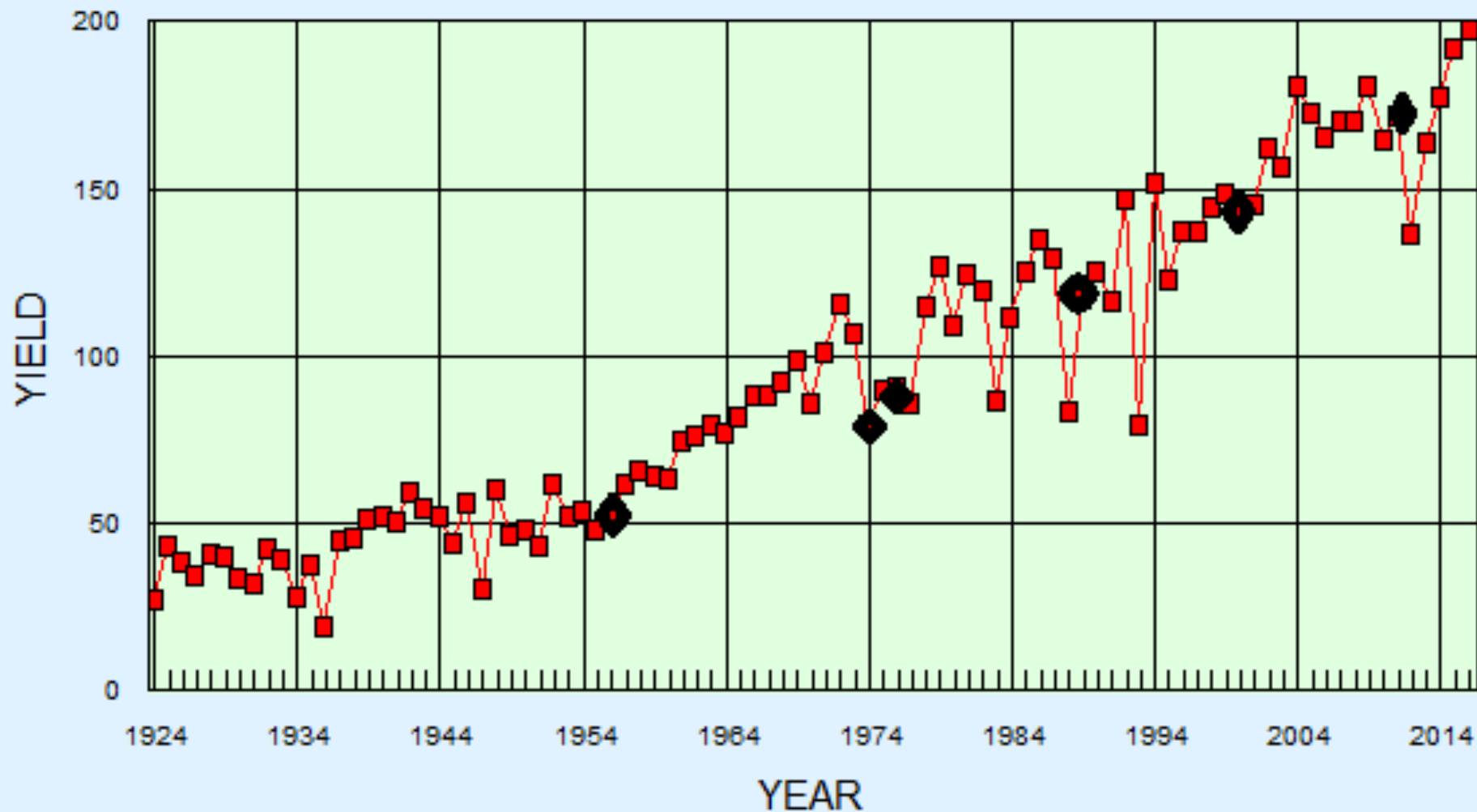
EASTERN IOWA ANNUAL PRECIPITATION

1848 TO 2015 (AVG = 34.97")



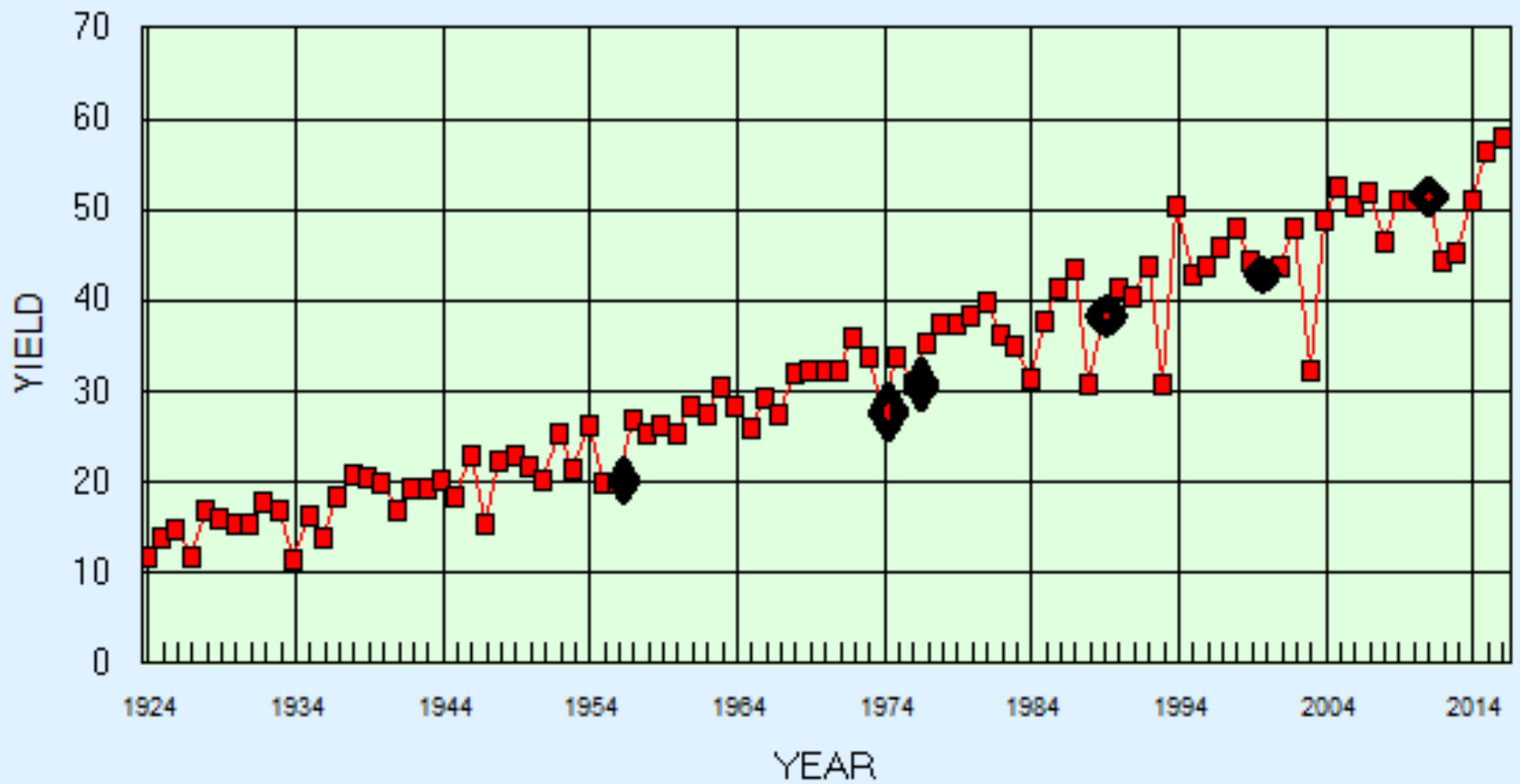
IOWA CORN YIELD

BUSHELS PER ACRE, 1924-2016

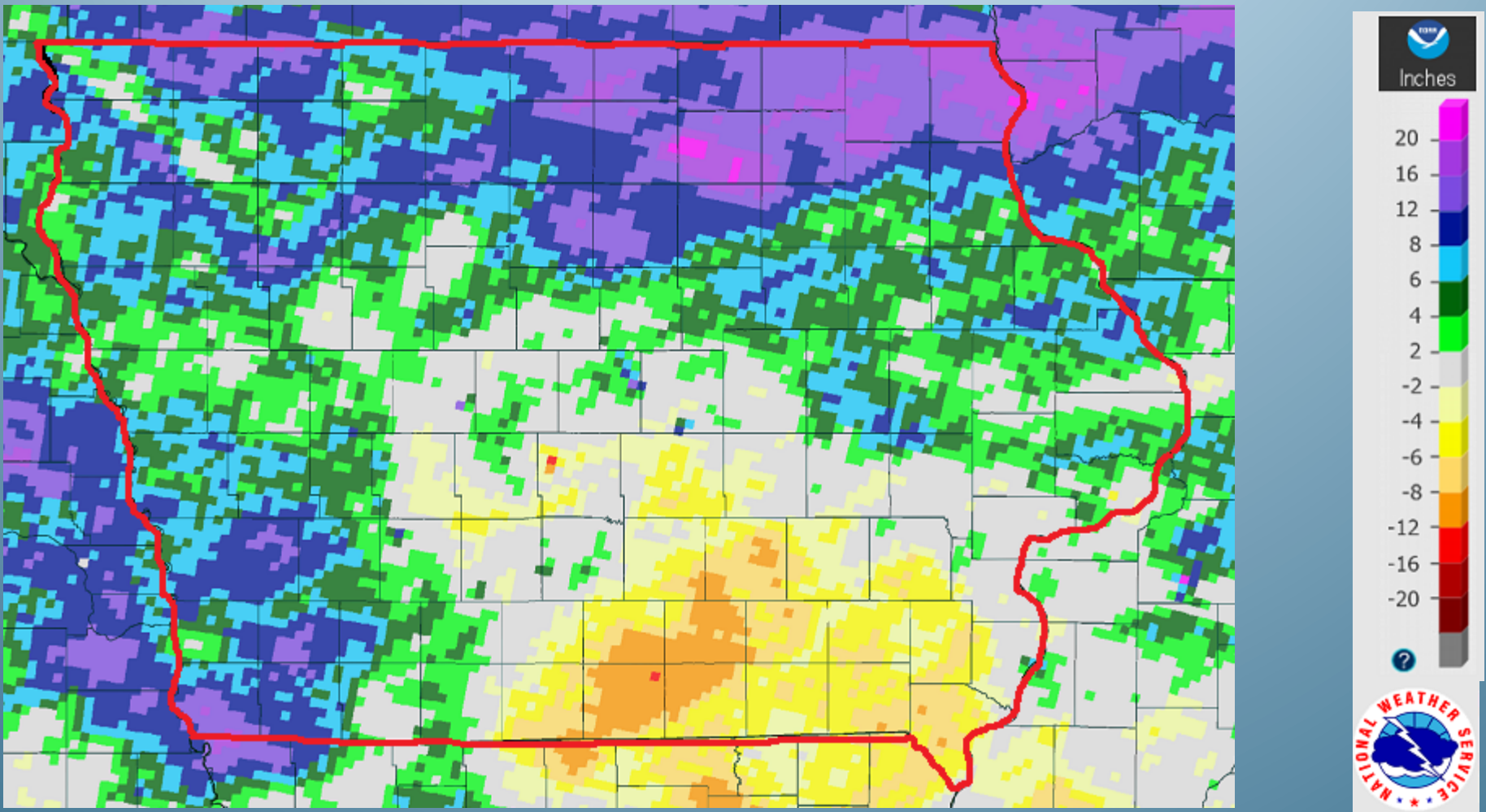


IOWA SOYBEAN YIELD

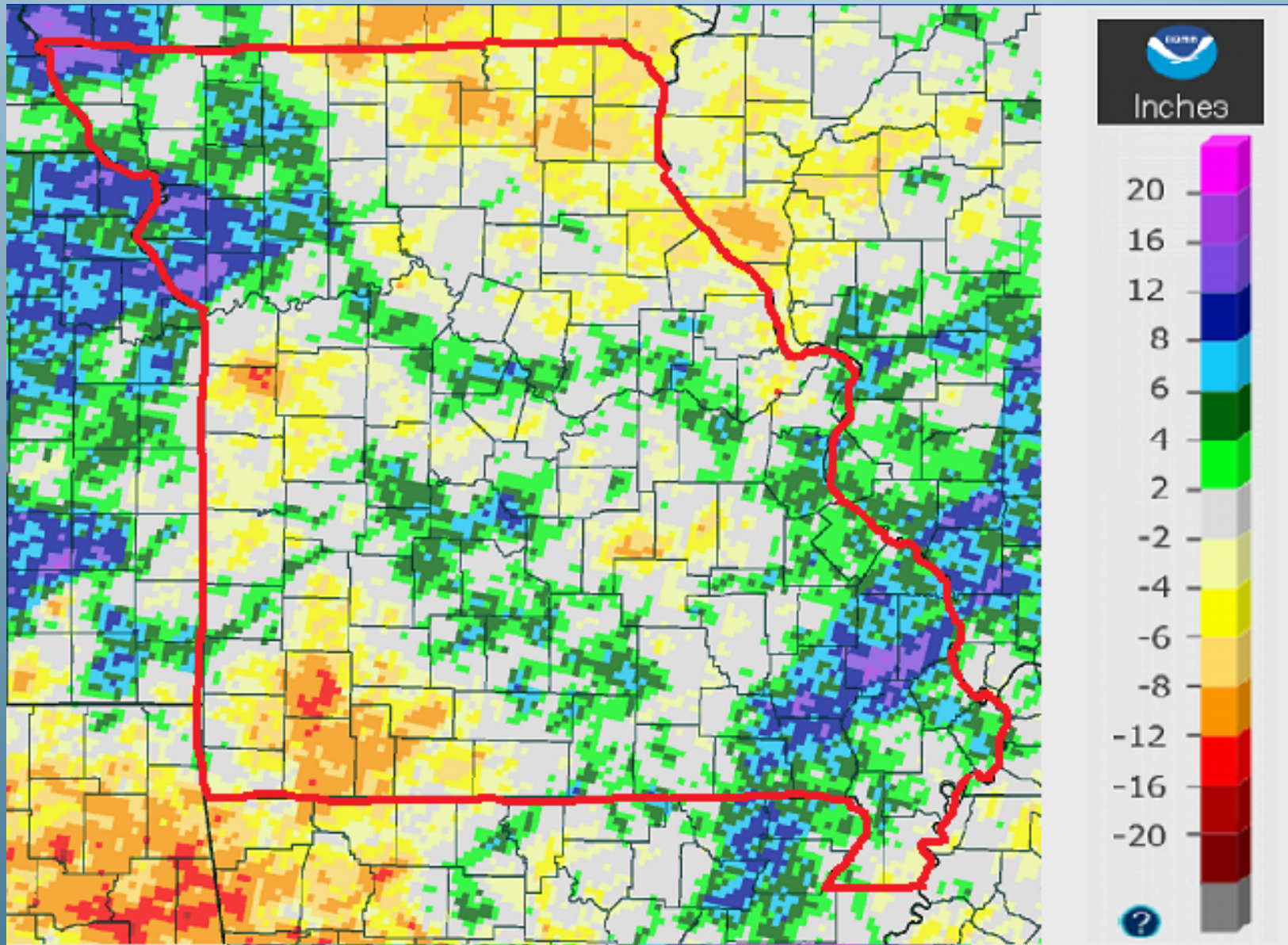
BUSHELS PER ACRE, 1924-2016



Iowa Year-to-Date Precipitation

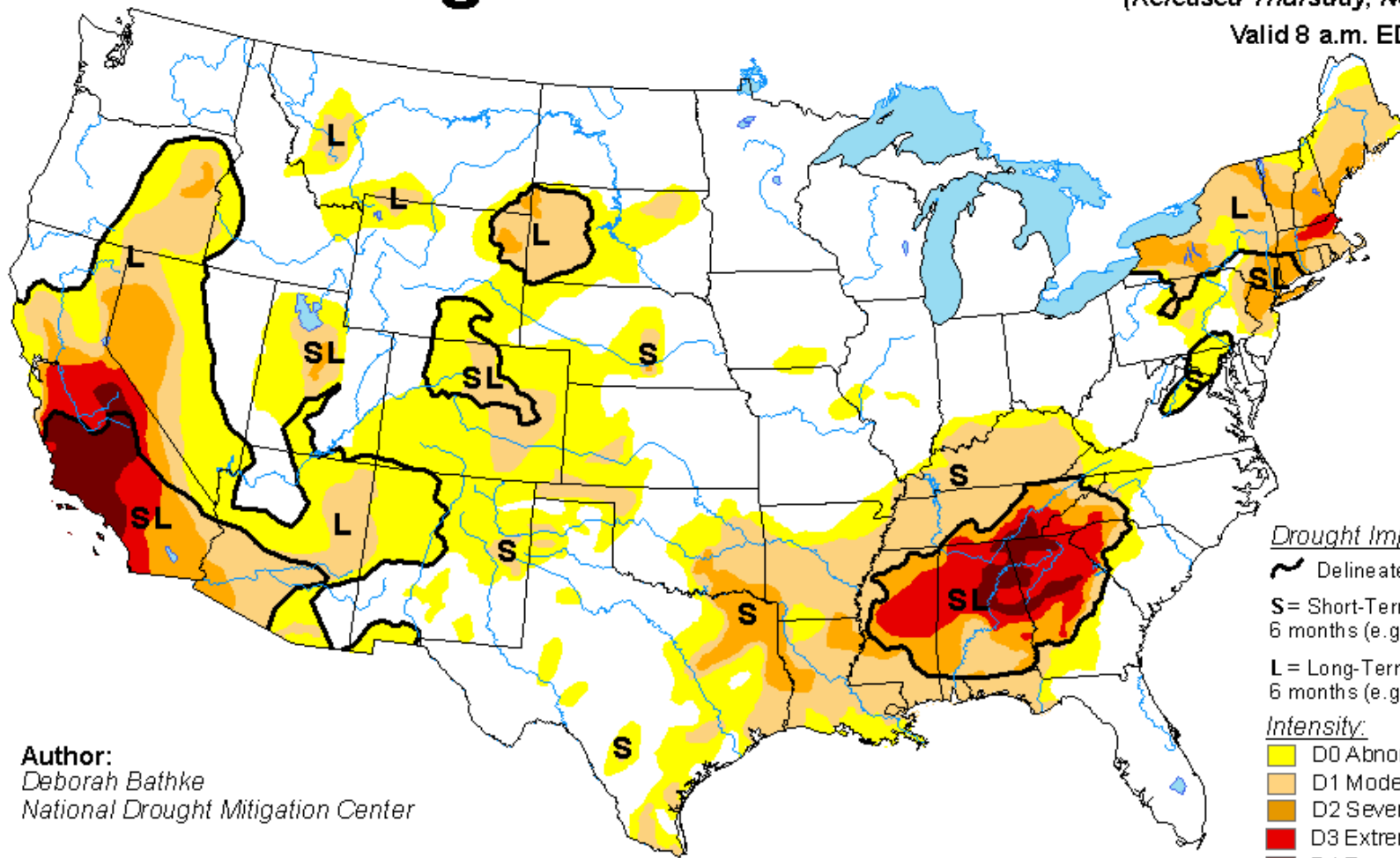


Missouri YTD Precipitation



U.S. Drought Monitor

November 1, 2016
(Released Thursday, Nov. 3, 2016)
Valid 8 a.m. EDT



Author:
Deborah Bathke
National Drought Mitigation Center

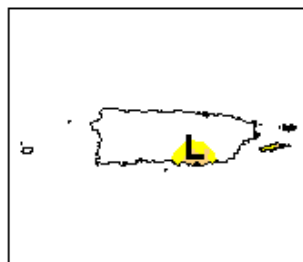
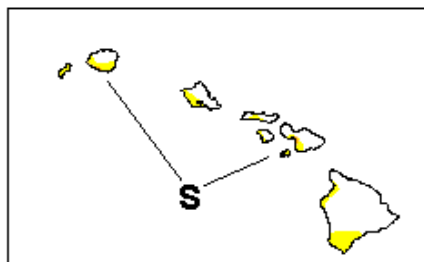
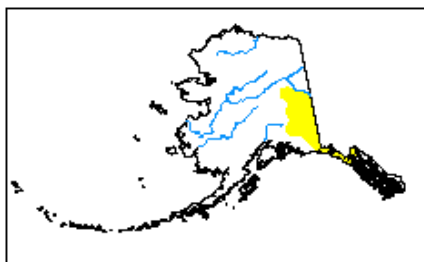
Drought Impact Types:

- ~ 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:

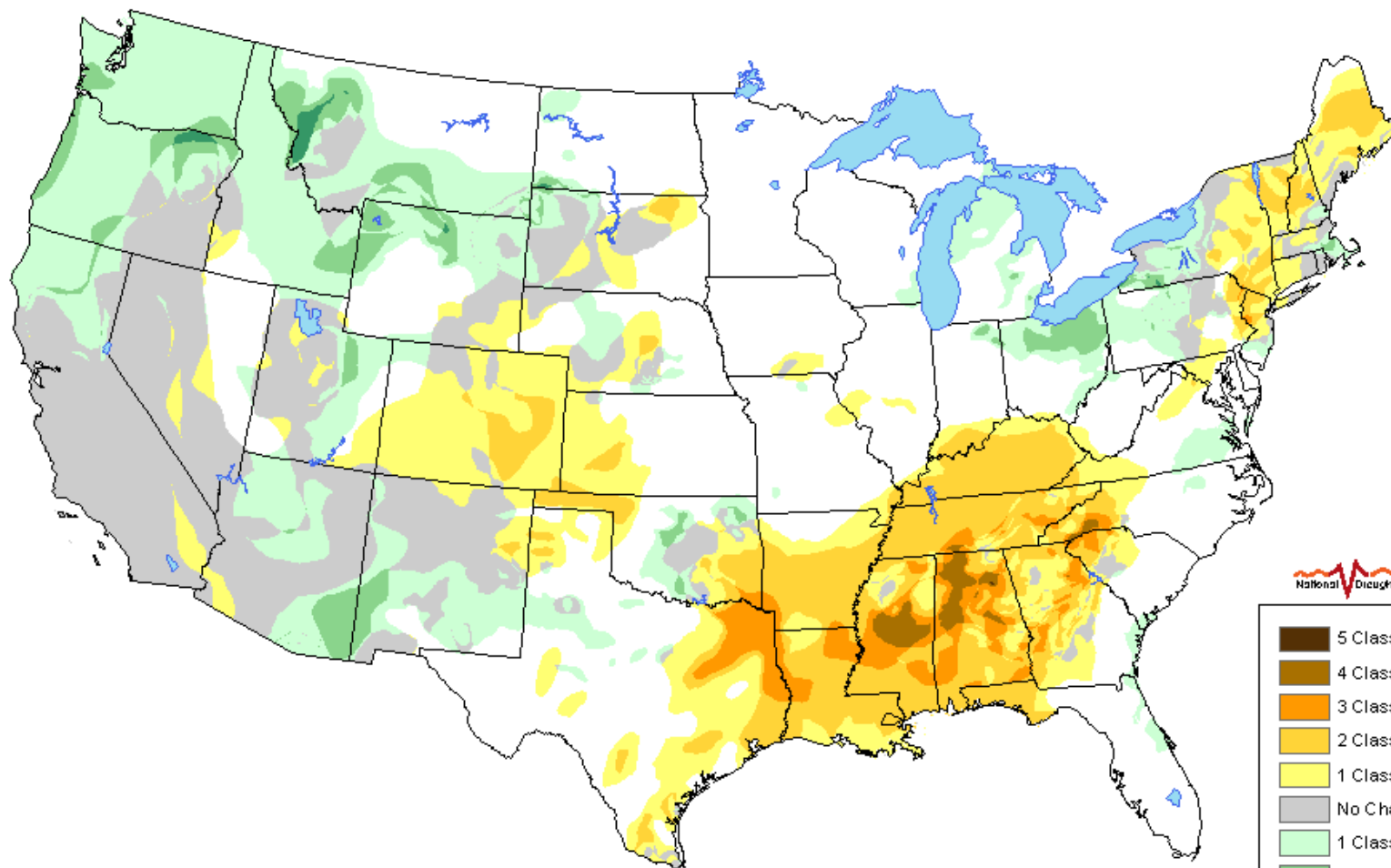
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

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



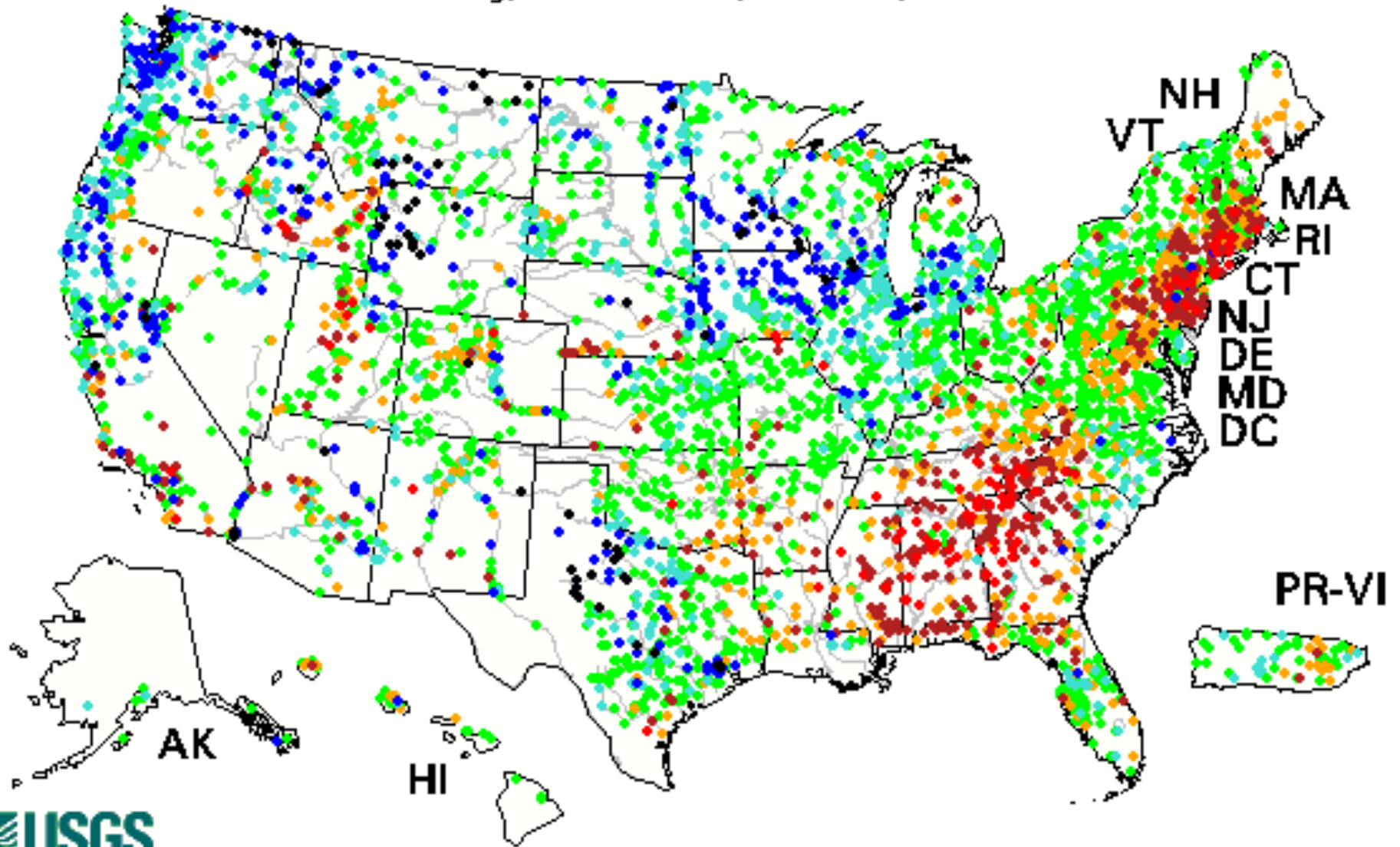
<http://droughtmonitor.unl.edu/>

U.S. Drought Monitor Class Change 2 Months

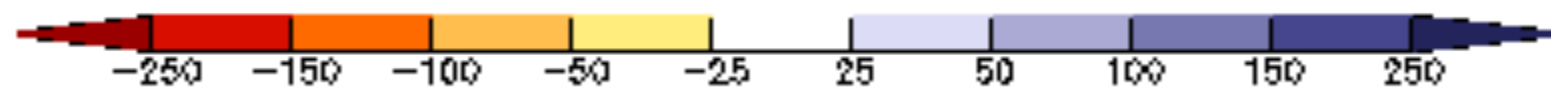
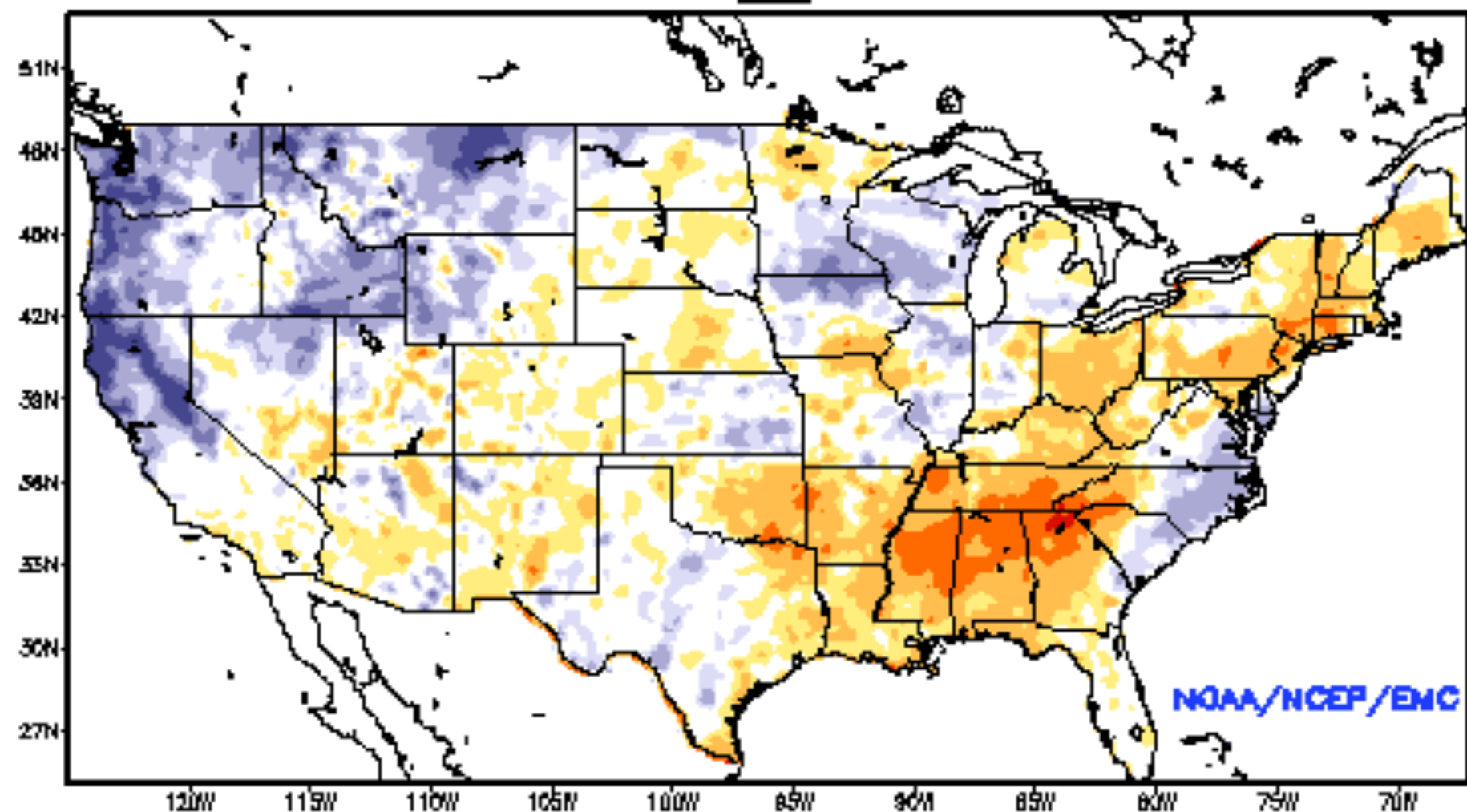


November 1, 2016
compared to
September 6, 2016

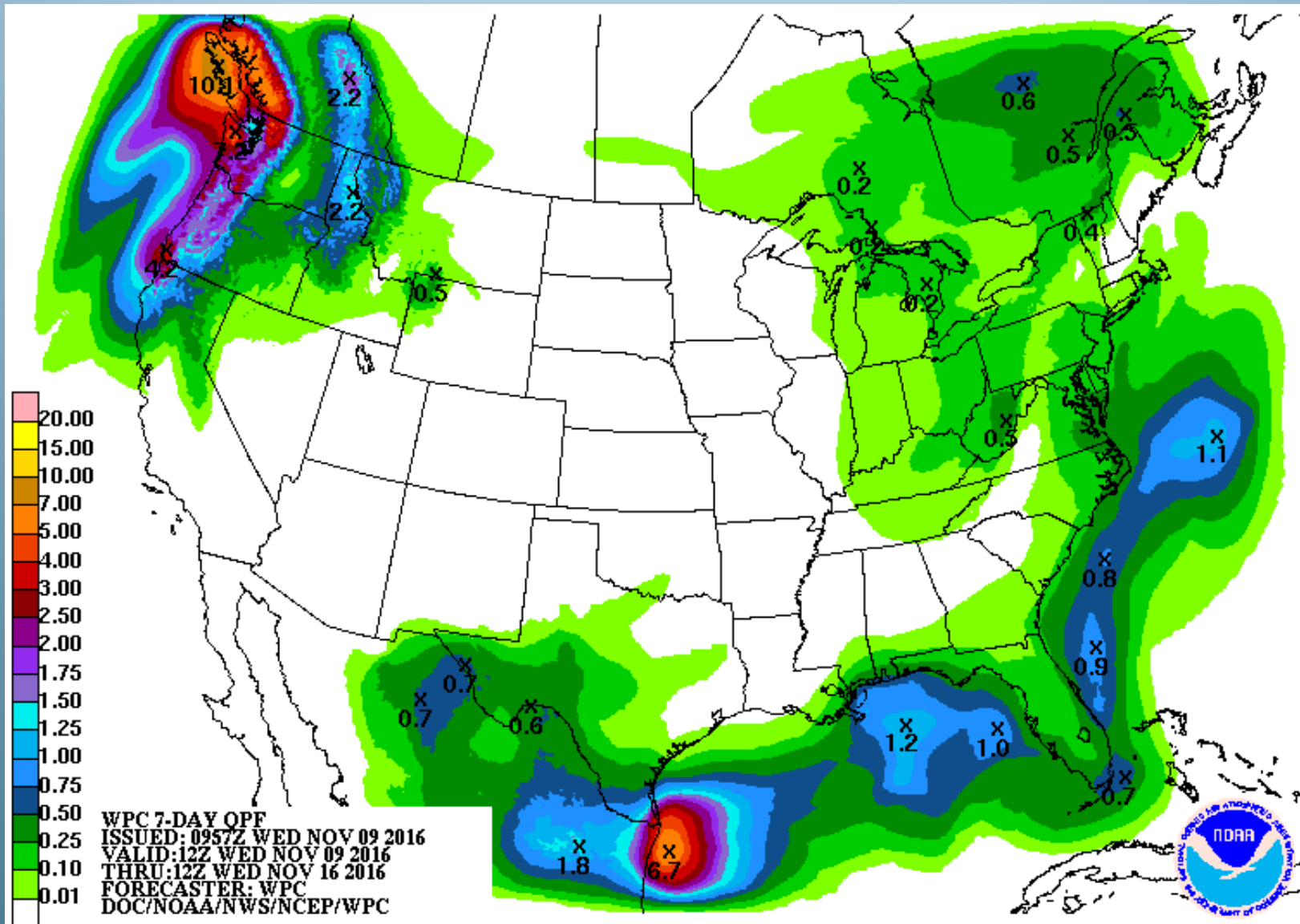
Monday, November 07, 2016 10:30ET



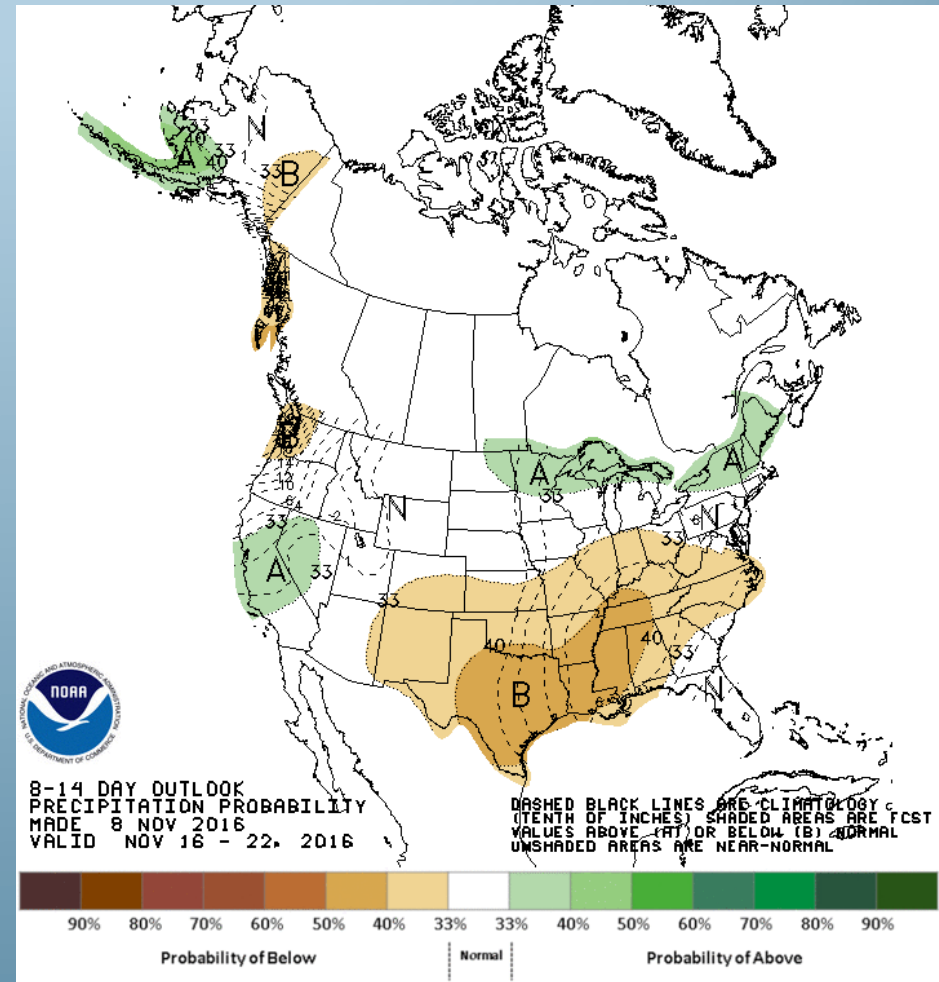
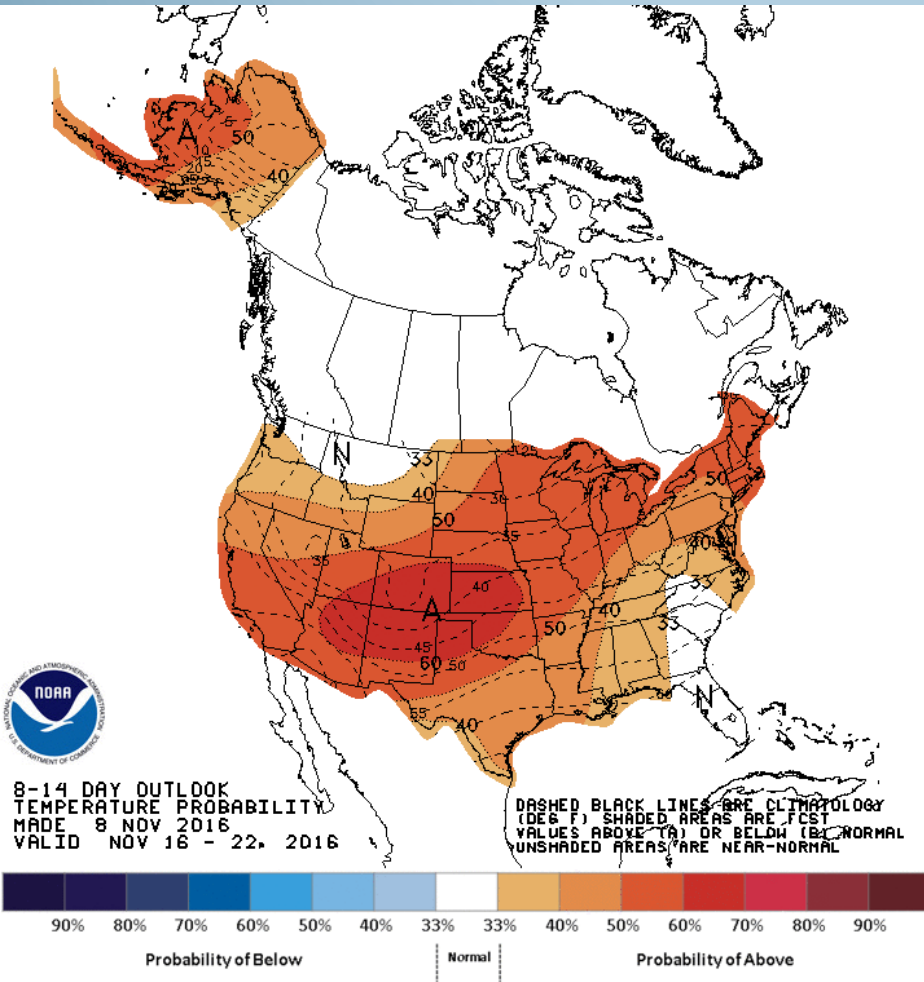
Ensemble-Mean - Current Total Column Soil Moisture Anomaly (mm)
NCEP NLDAS Products Valid: NOV 02, 2016



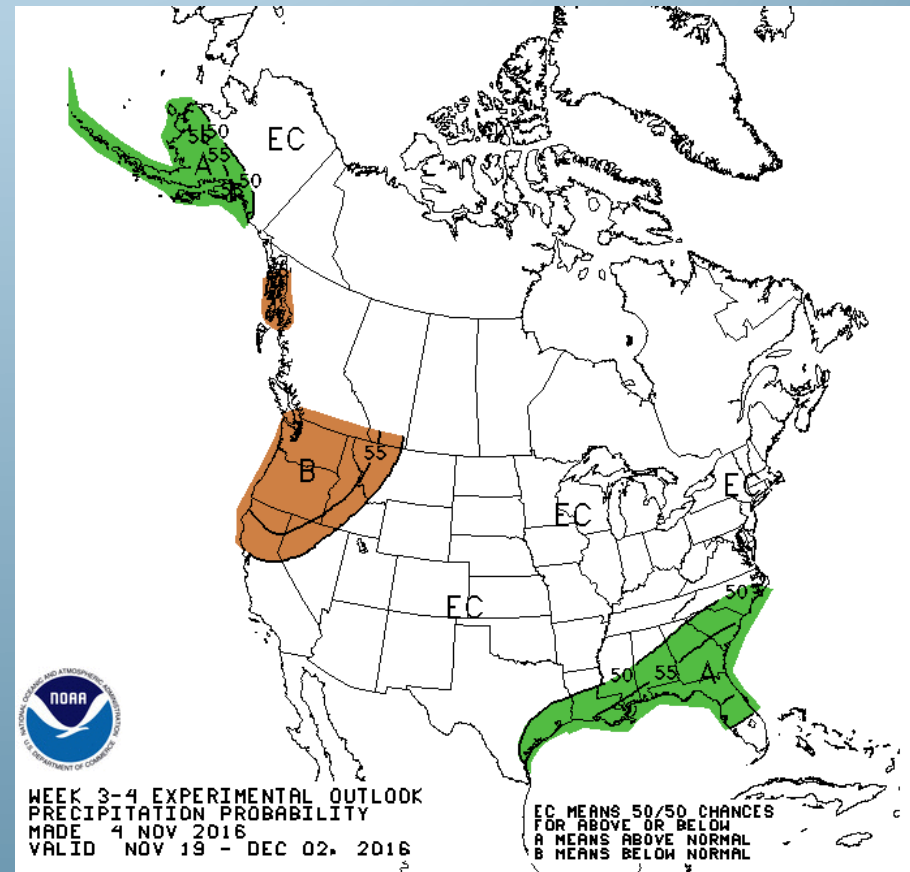
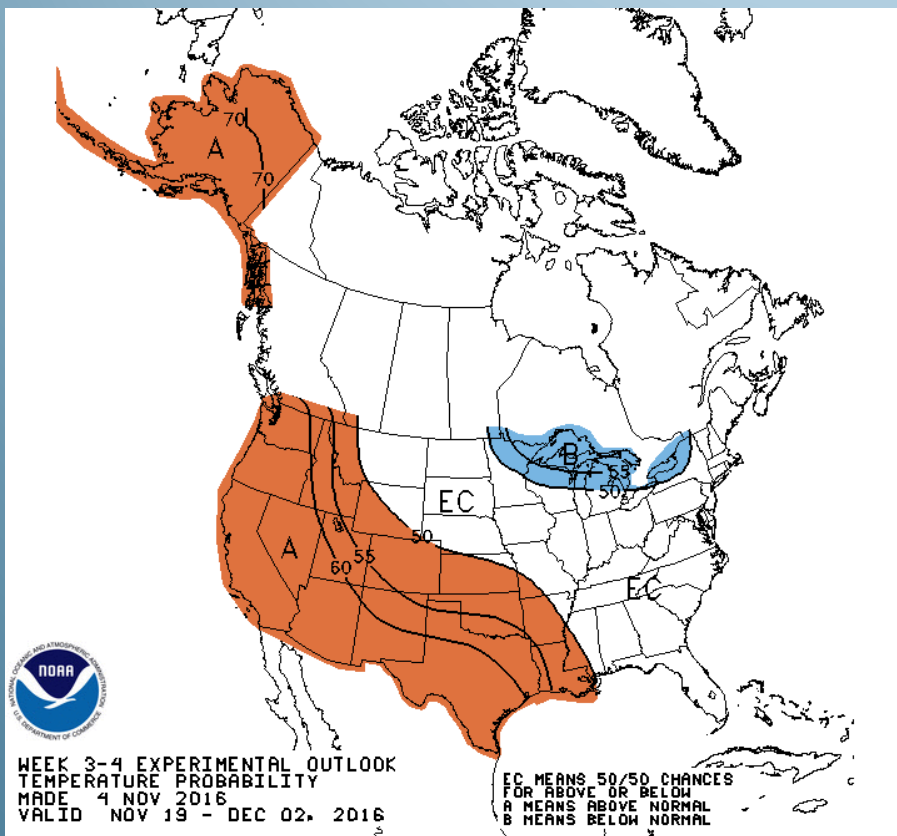
NWS 7-Day Precipitation Forecast



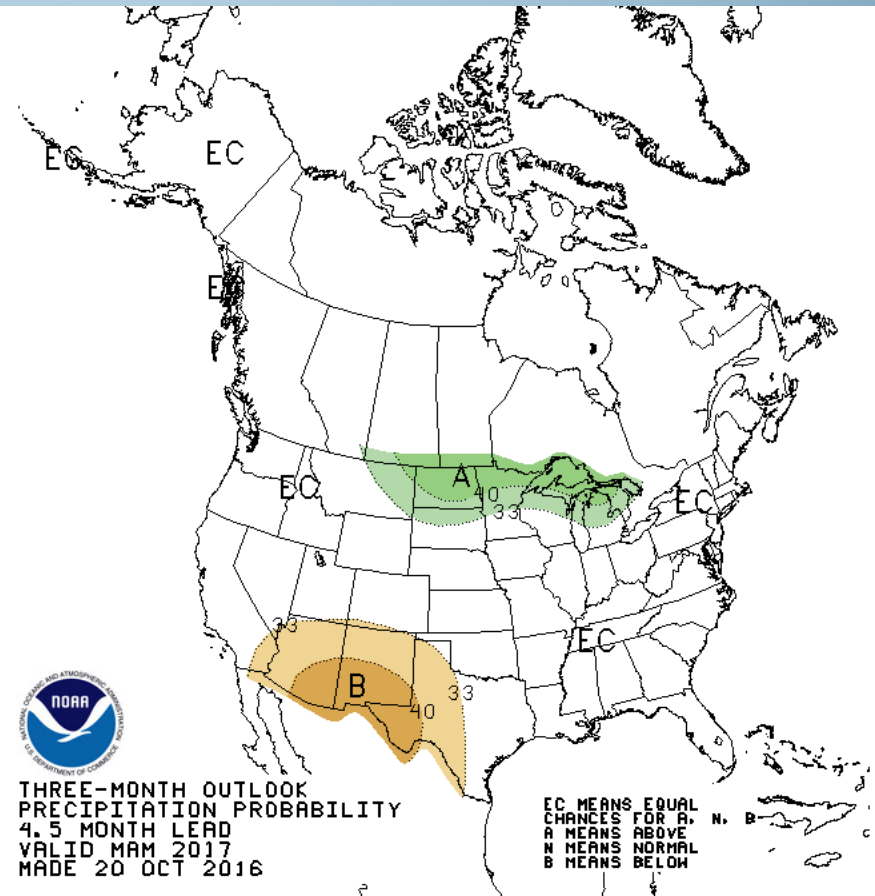
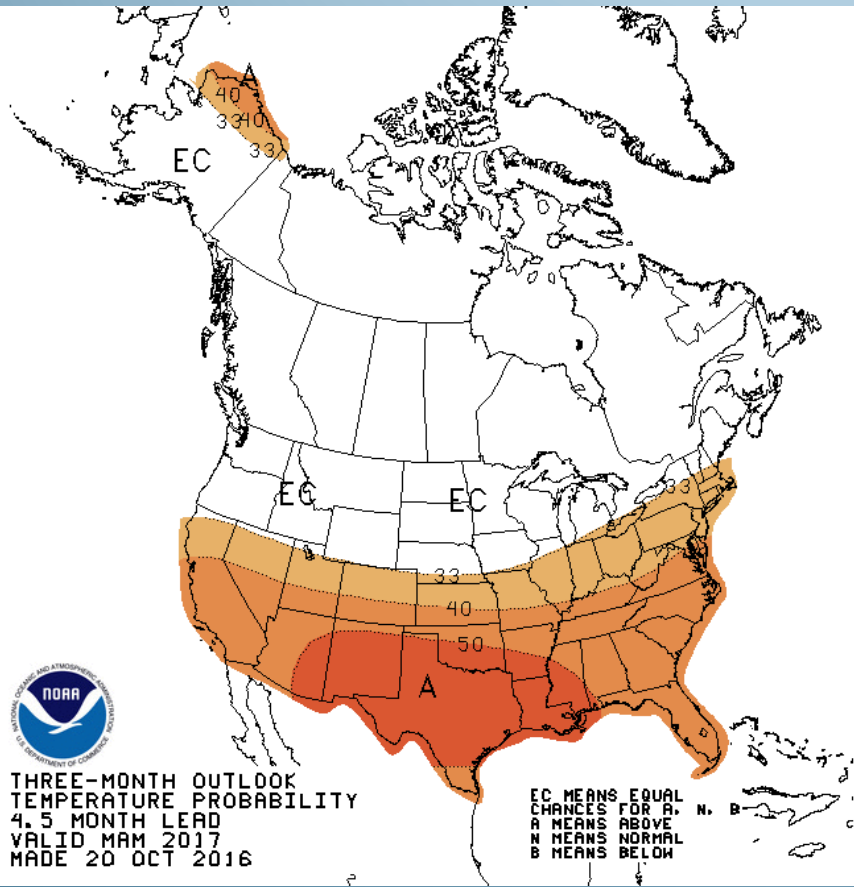
NWS 8 to 14 Day Outlook (Nov 16-22)



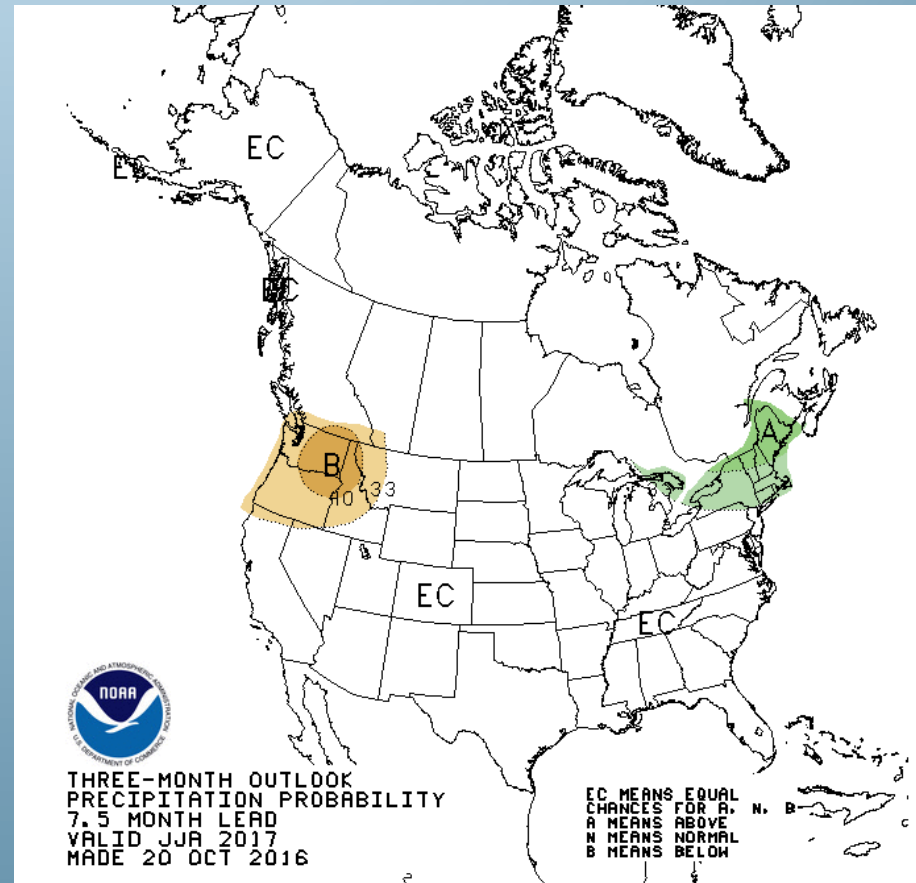
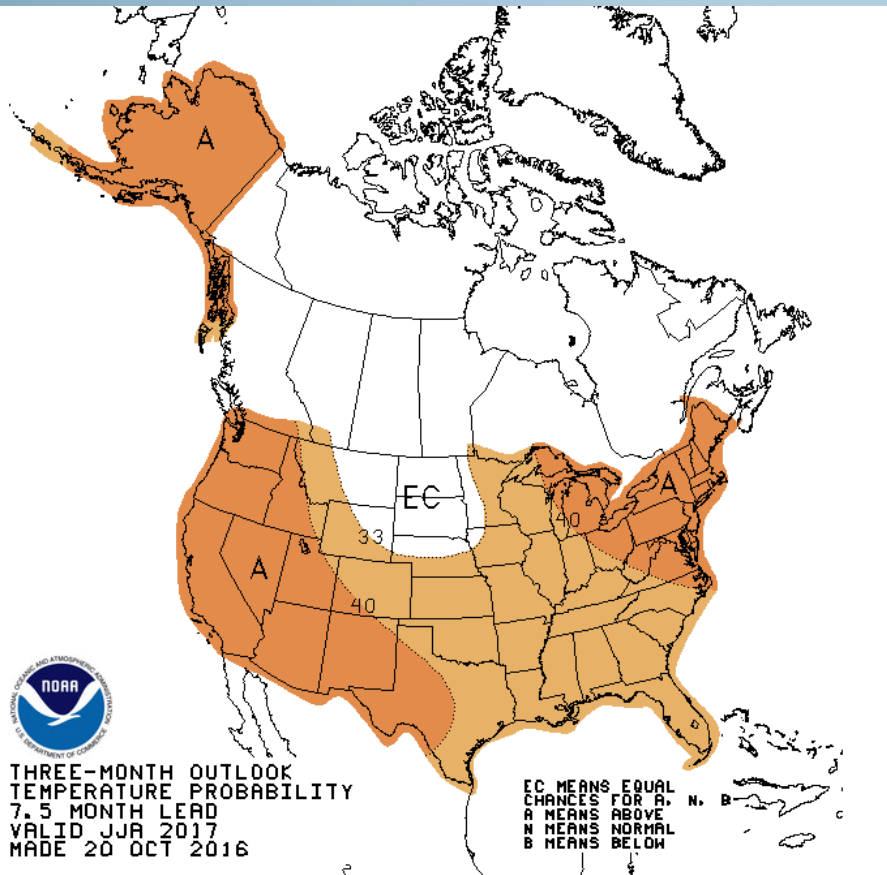
NWS Outlook (Nov 19 – Dec 2)



NWS Spring 2017 Outlook



NWS Summer 2017 Outlook



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