Recent Drought in Colorado

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Colorado Climate Center

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http://ccc.atmos.colostate.edu

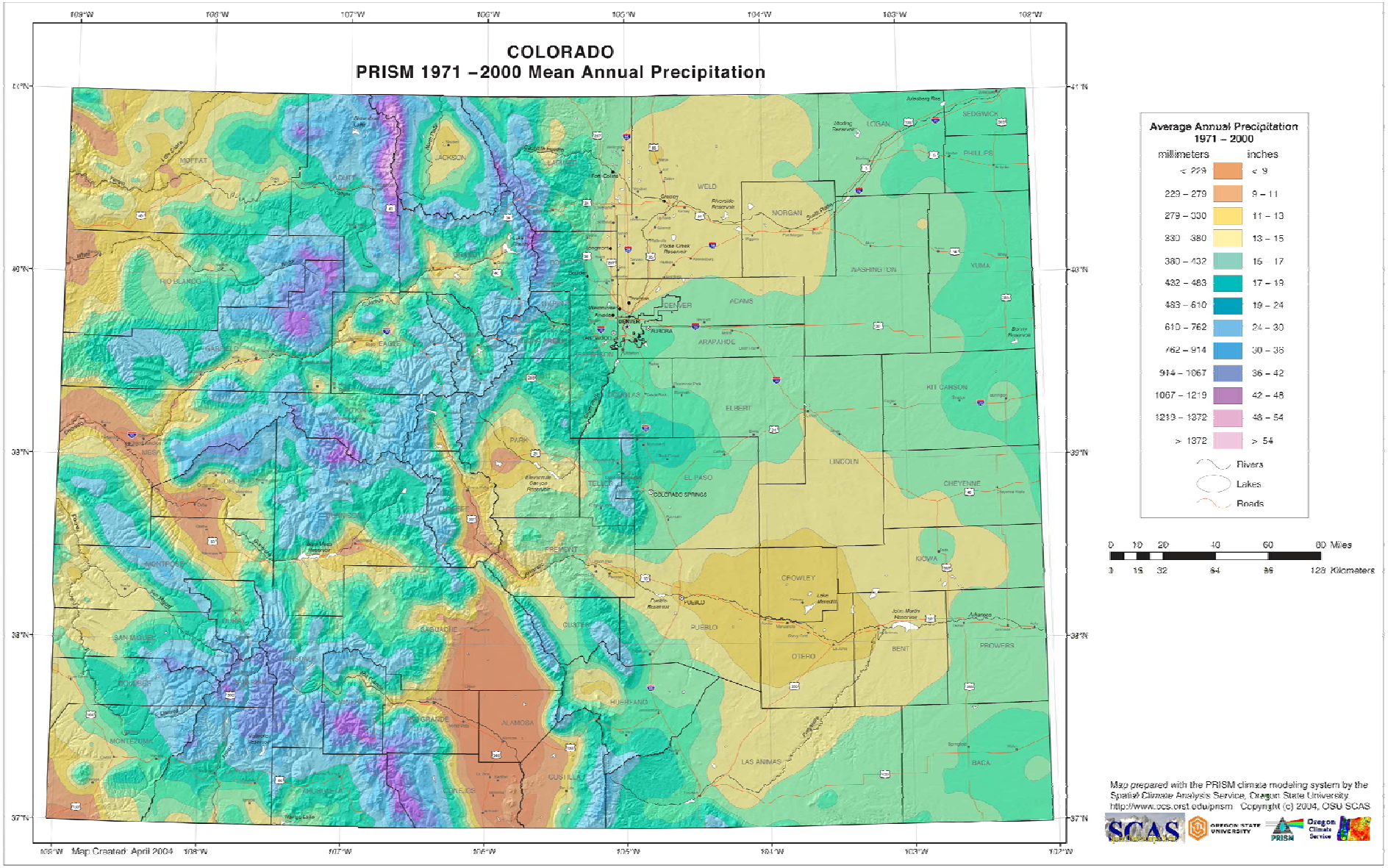
Prepared by Odie Bliss

Colorado State University
Knowledge to Go Places

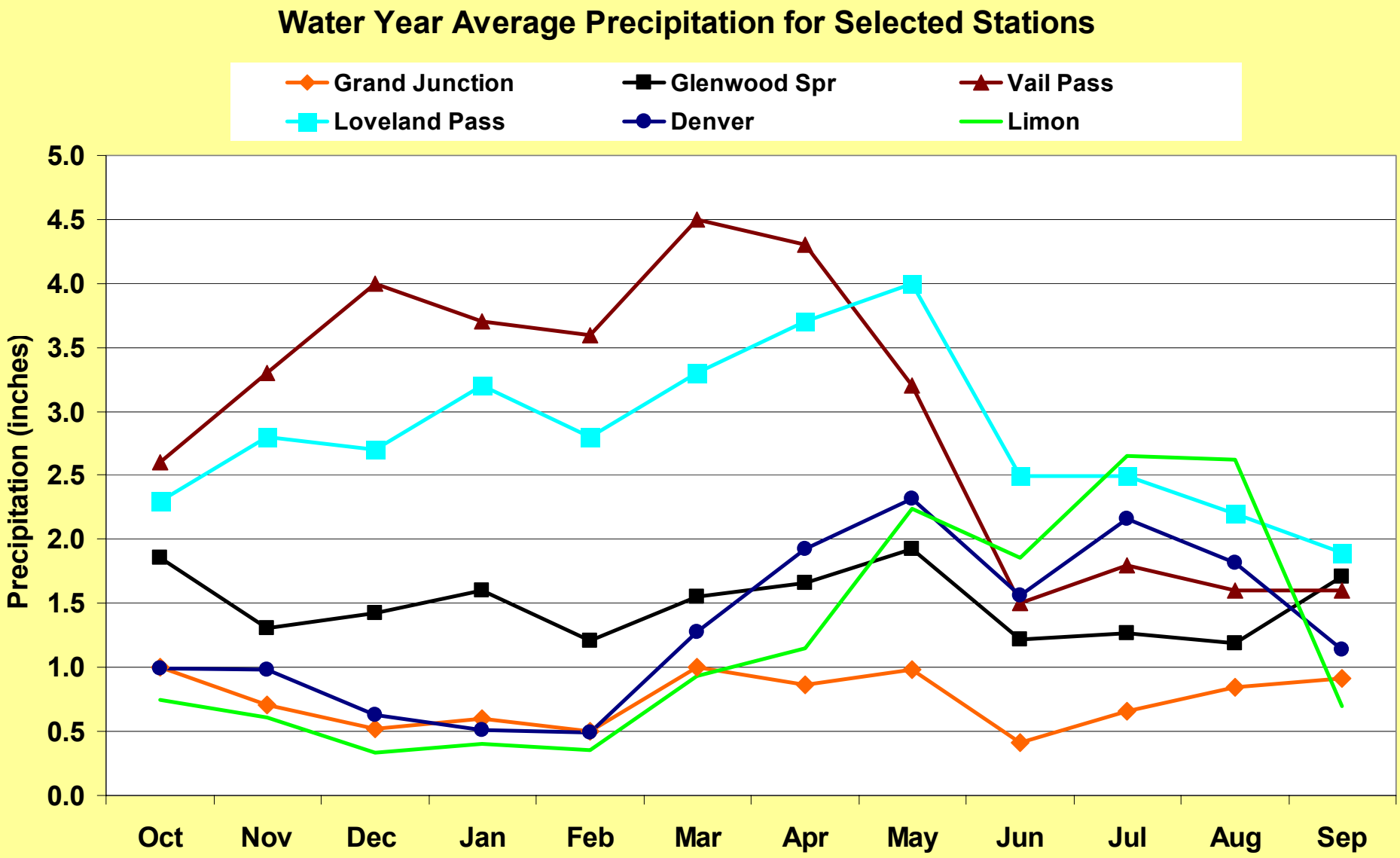
Colorado Climate in Perspective

Strasburg, Colo, Photo by Ian Wittmeyer

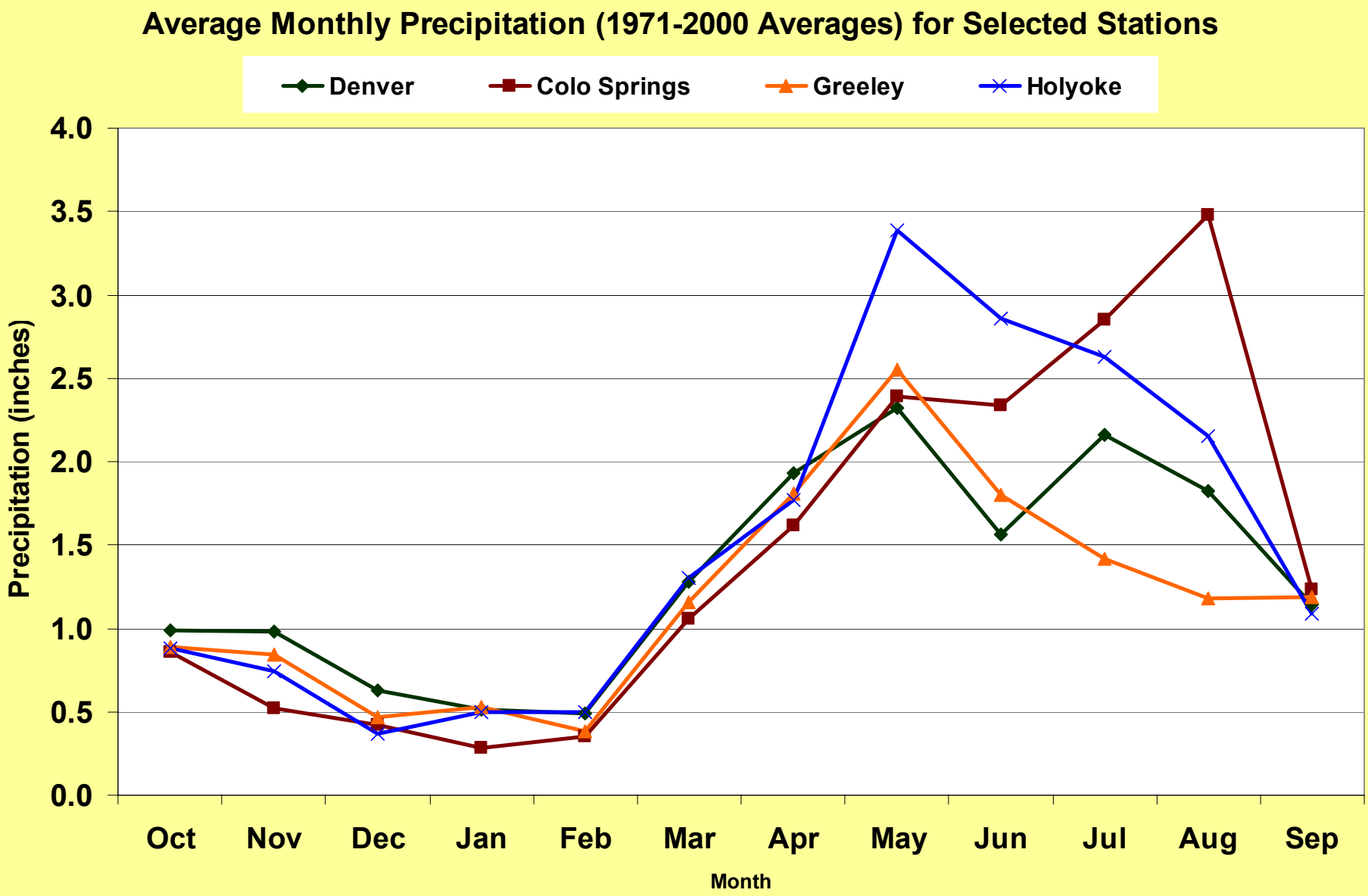
Colorado Average Annual Precipitation



I-70 Transect average monthly precipitation



Selected Colorado Average Precipitation Sites



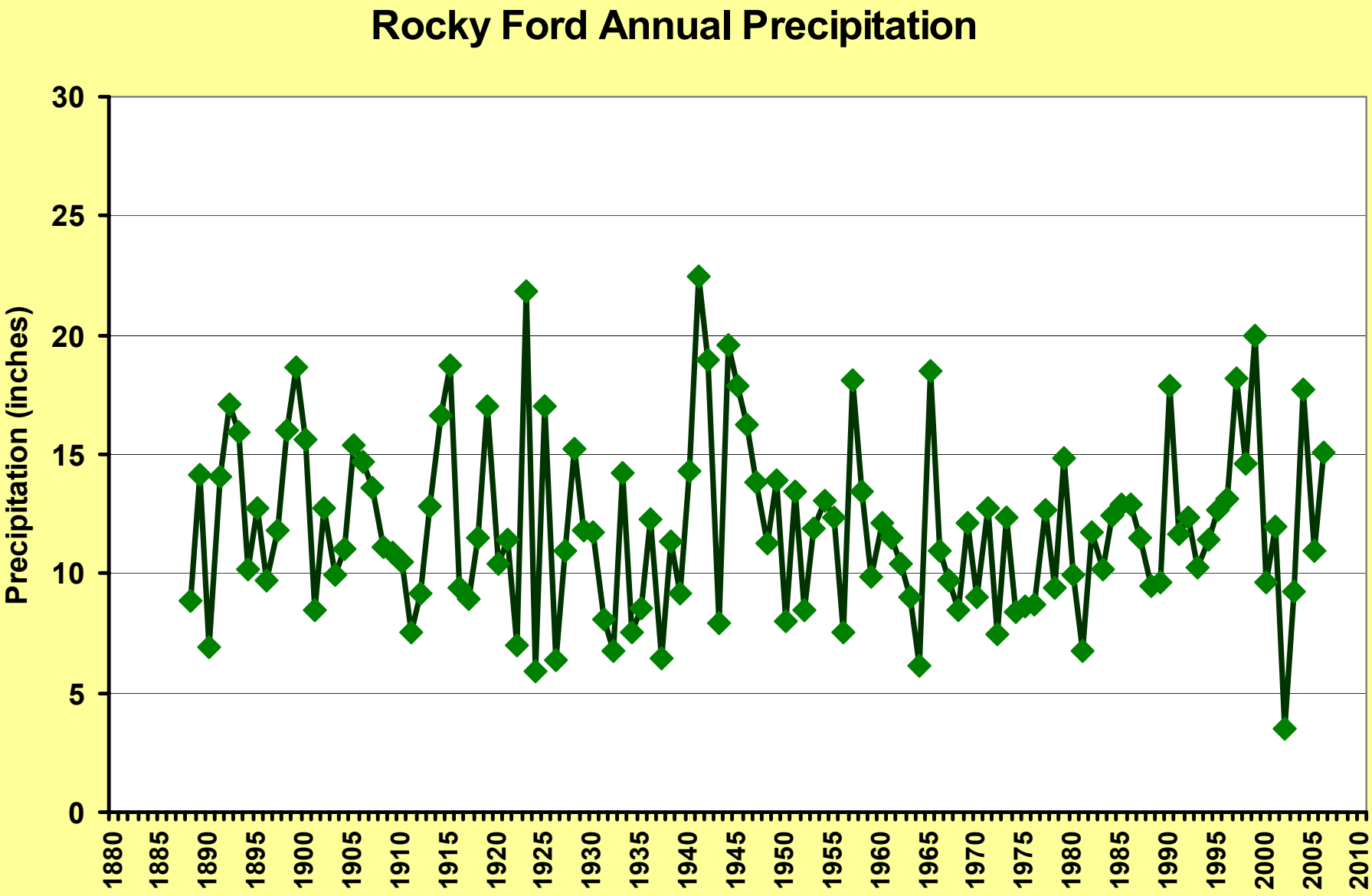
A few things to remember:

-- Precipitation is Highly Variable

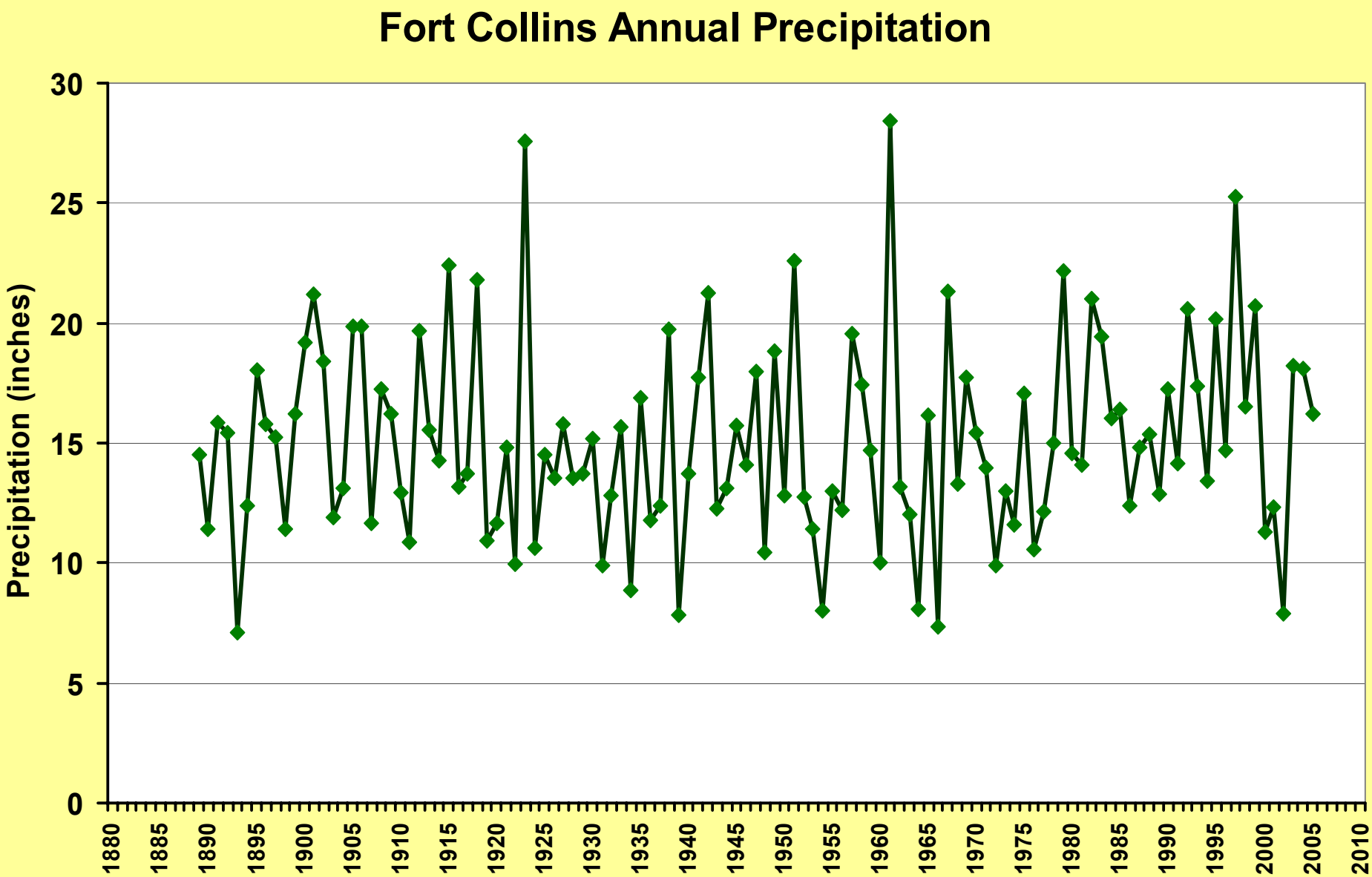
-- A few storms contribute a large percentage of annual precipitation

-- When those storms are not present, drought emerges quickly

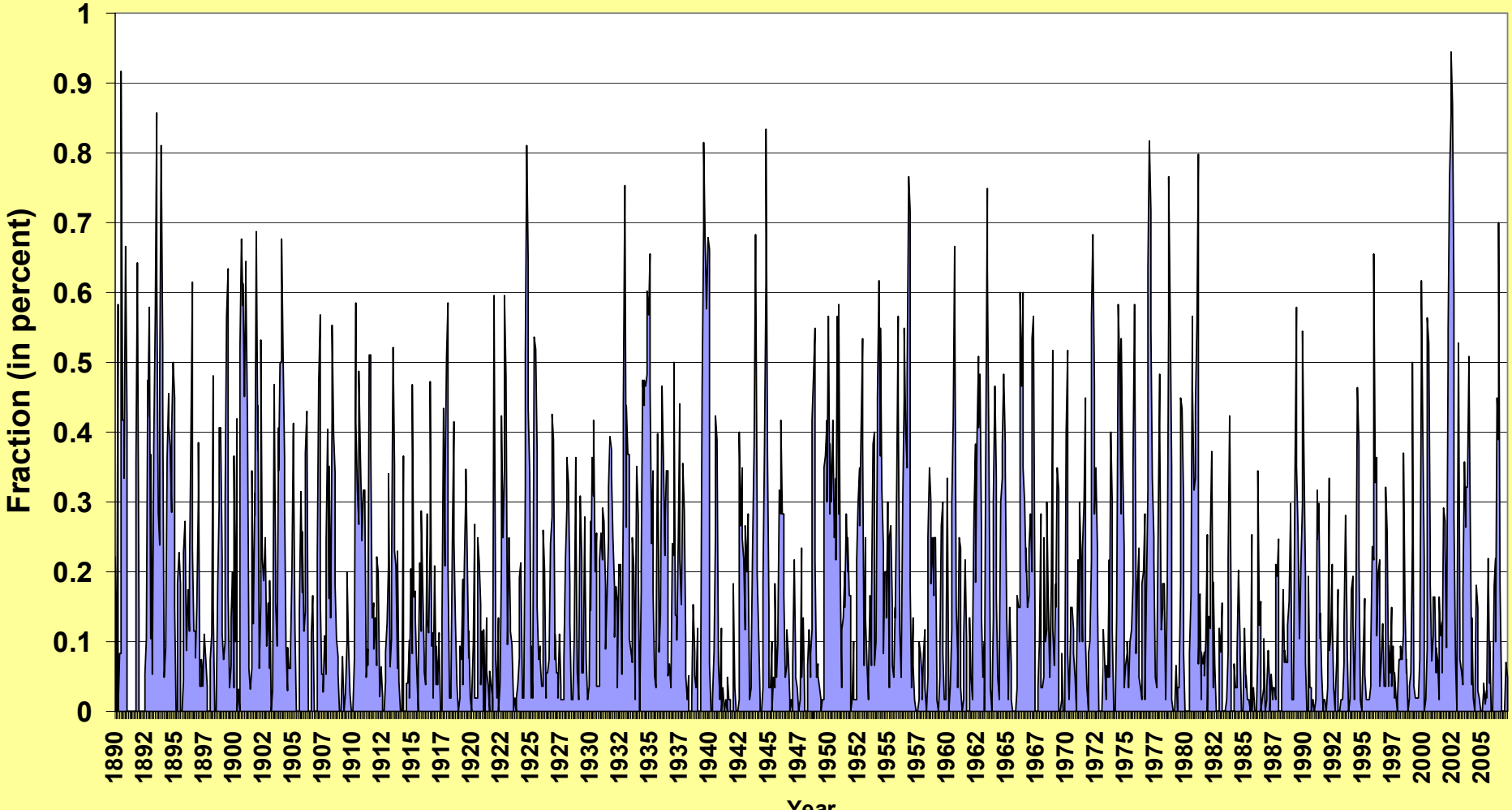
Rocky Ford Precipitation



Fort Collins



3-Month SPI


Fraction of Colorado in Drought
Based on 3 month SPI
(1890 - Feb 2007)
Fraction (in percent)
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
1890
1892
1895
1897
1900
1902
1905
1907
1910
1912
1915
1917
1920
1922
1925
1927
1930
1932
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1960
1962
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1975
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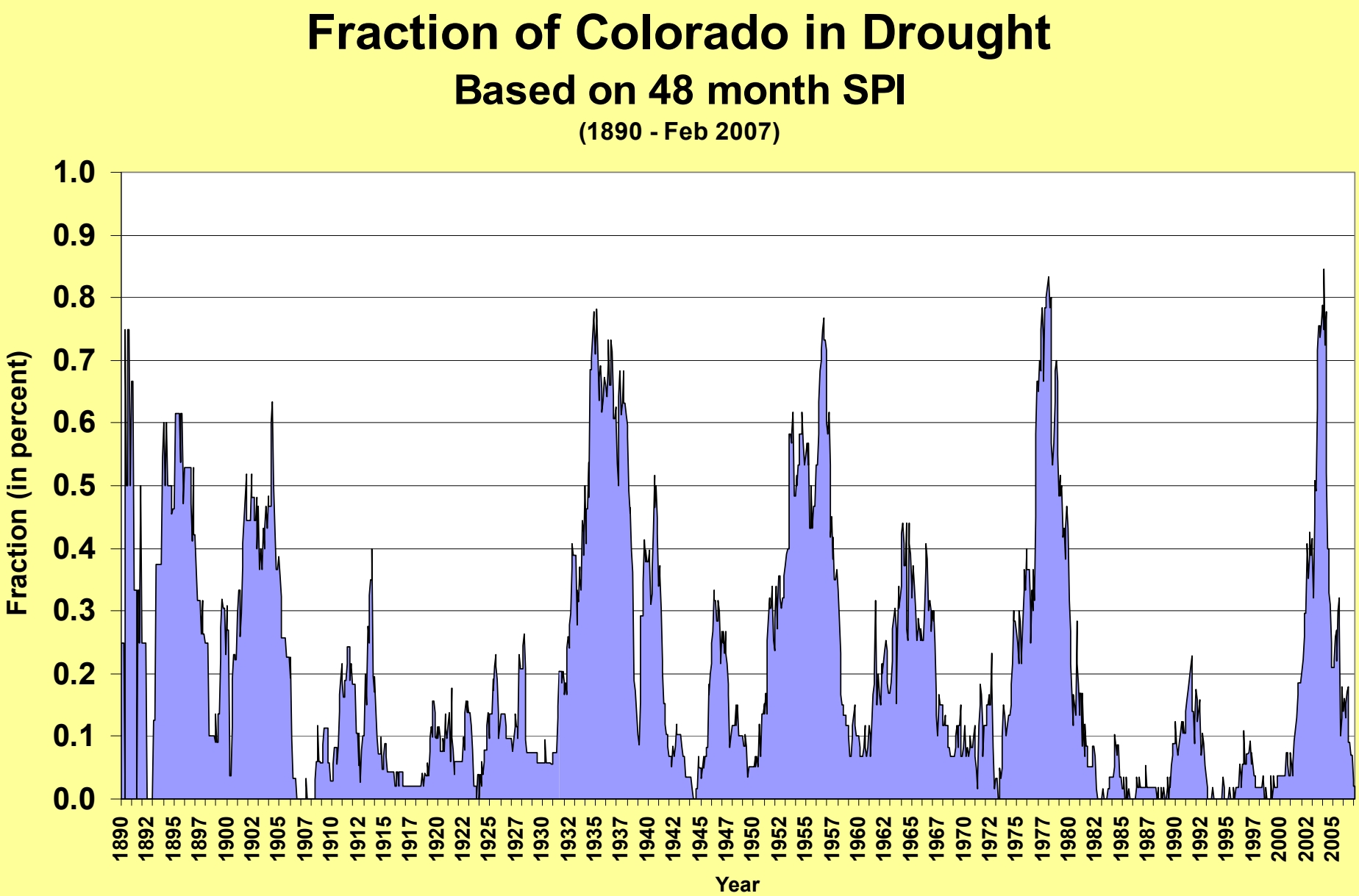
1982
1985
1987
1990
1992
1995
1997
2000
2002
2005
Year

48-Month SPI


Fraction of Colorado in Drought
Based on 48 month SPI
(1890 - Feb 2007)
Fraction (in percent)
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
1890
1892
1895
1897
1900
1902
1905
1907
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1912
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1982
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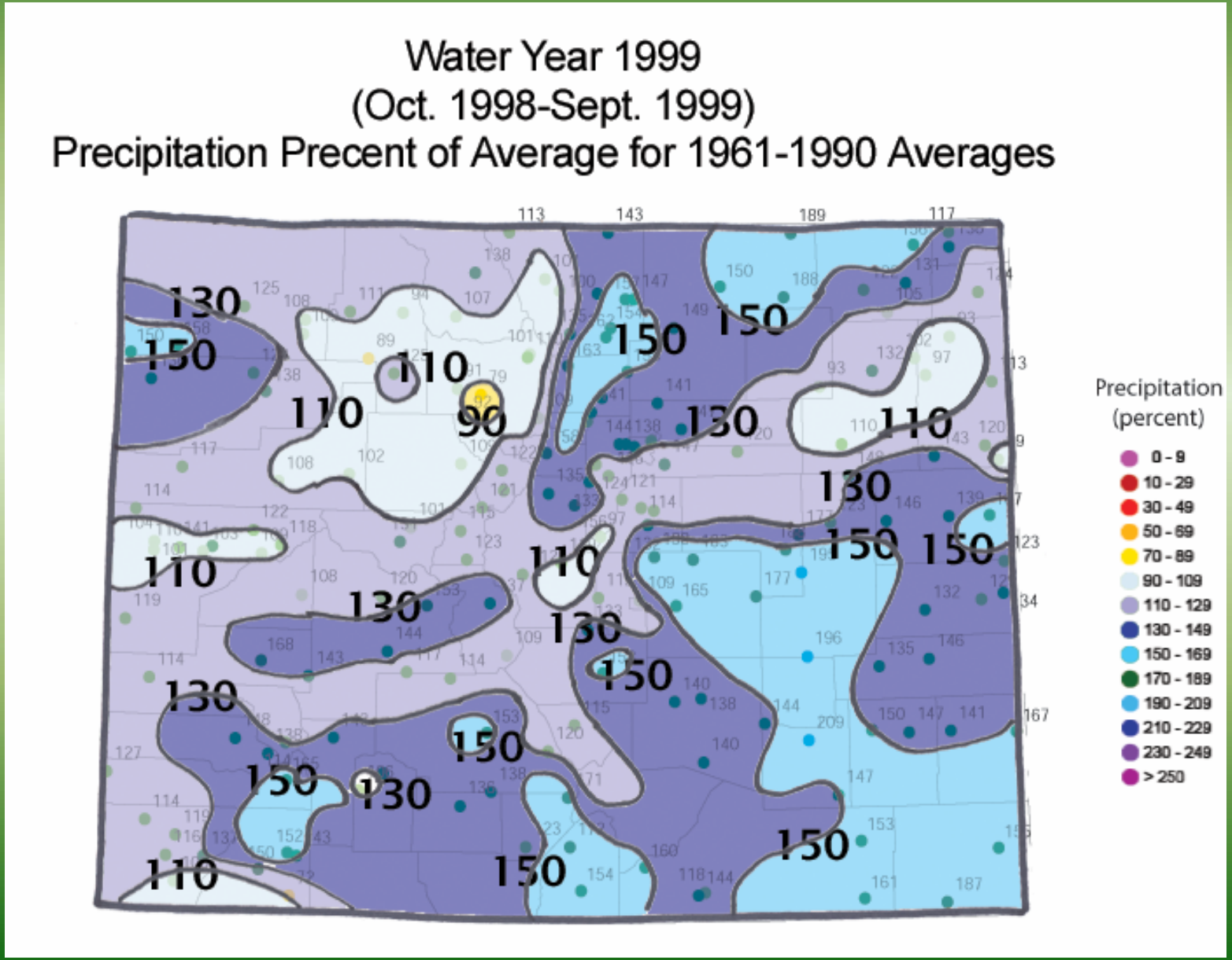
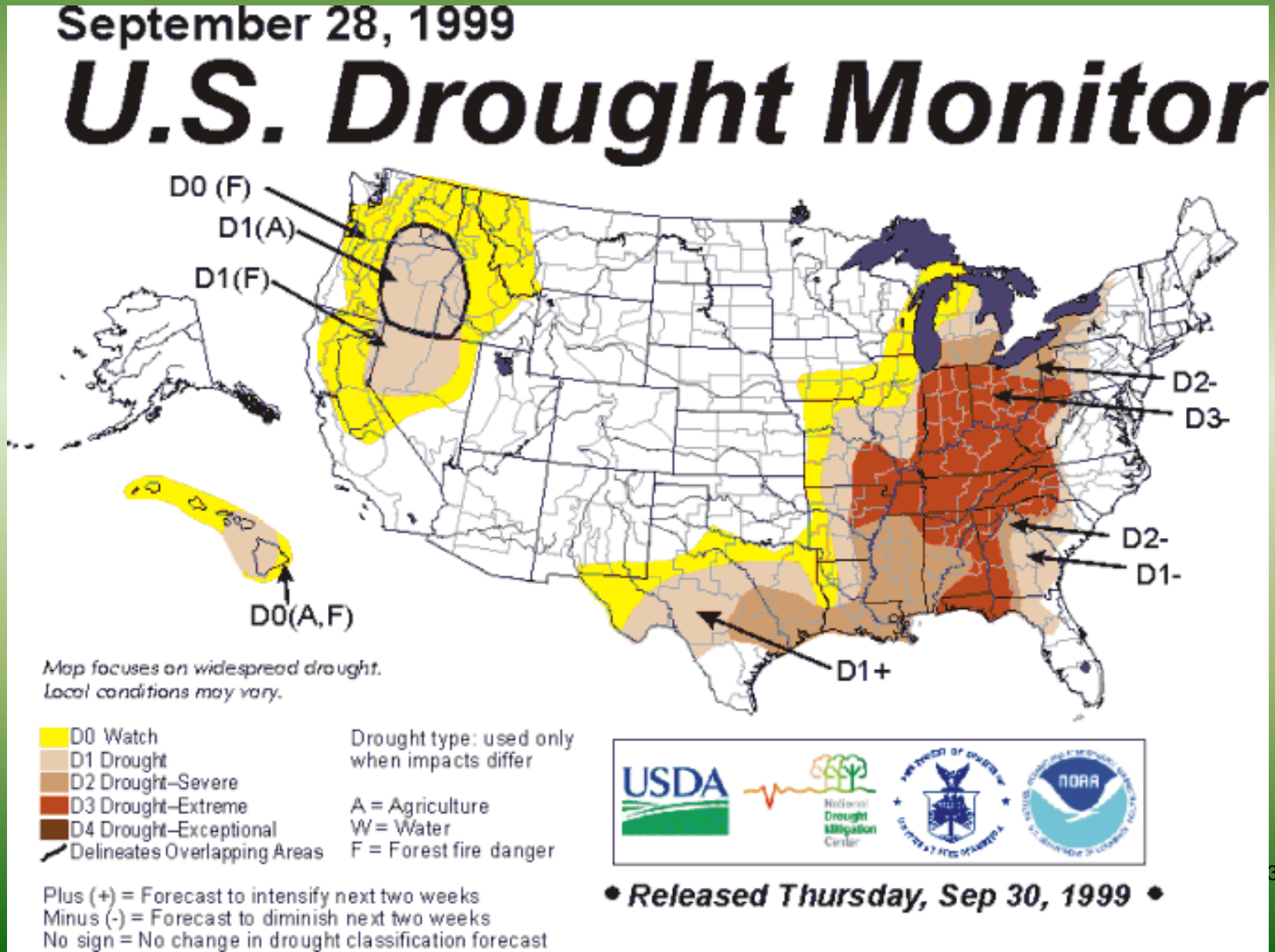
1992
1995
1997
2000
2002
2005
Year

Can you remember the past few years?

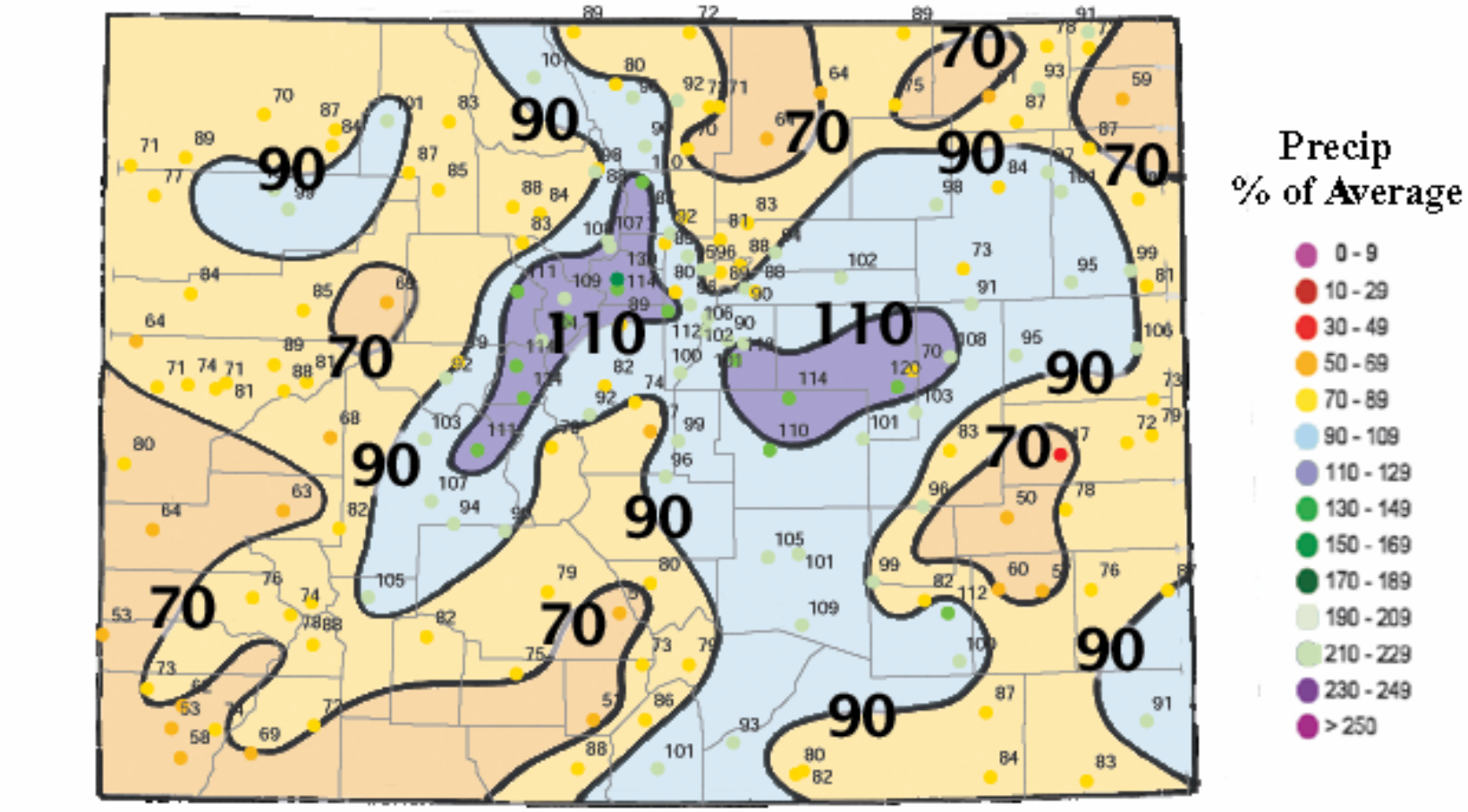
1999 Water Year Precipitation



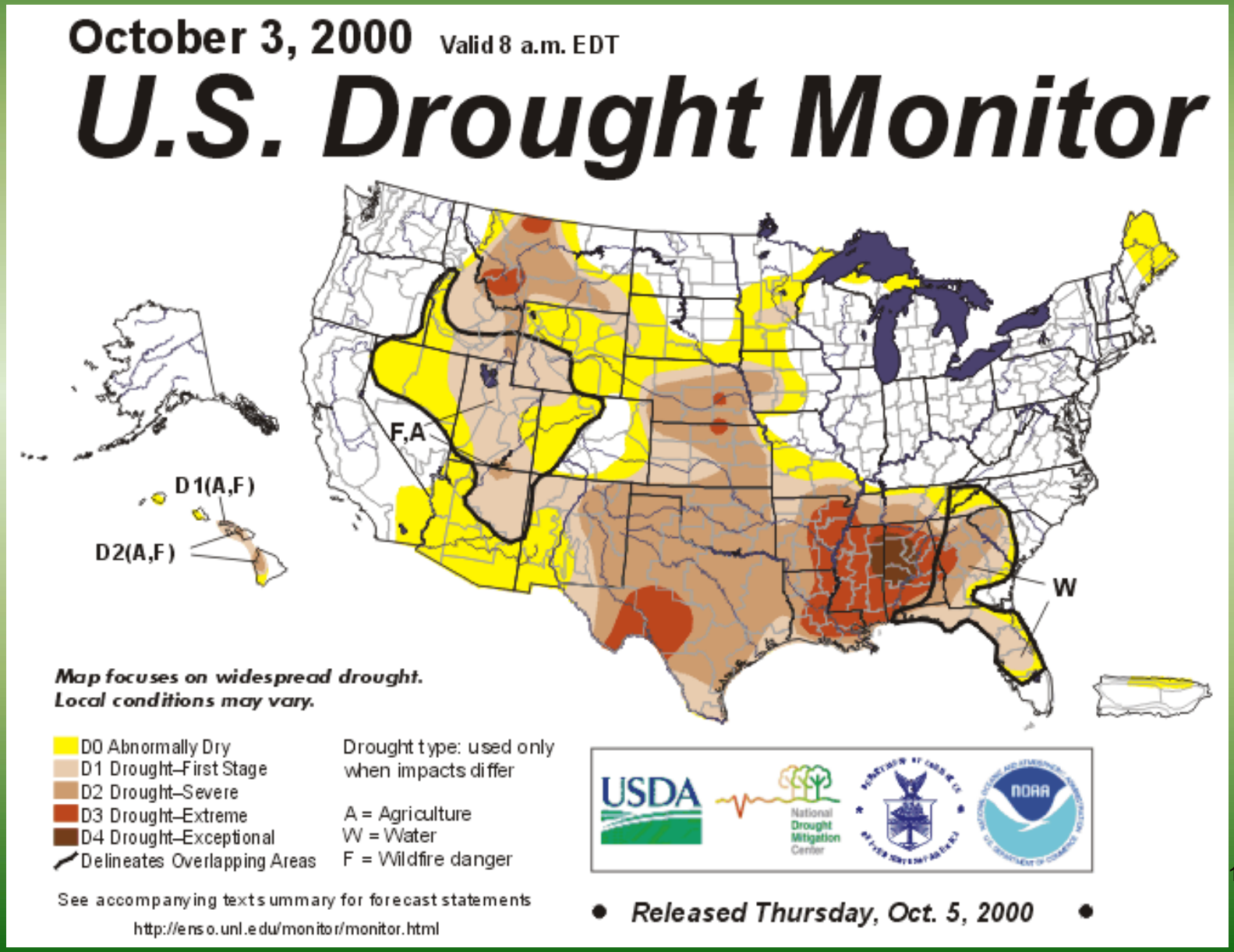
Sept 1999 Drought Monitor Map



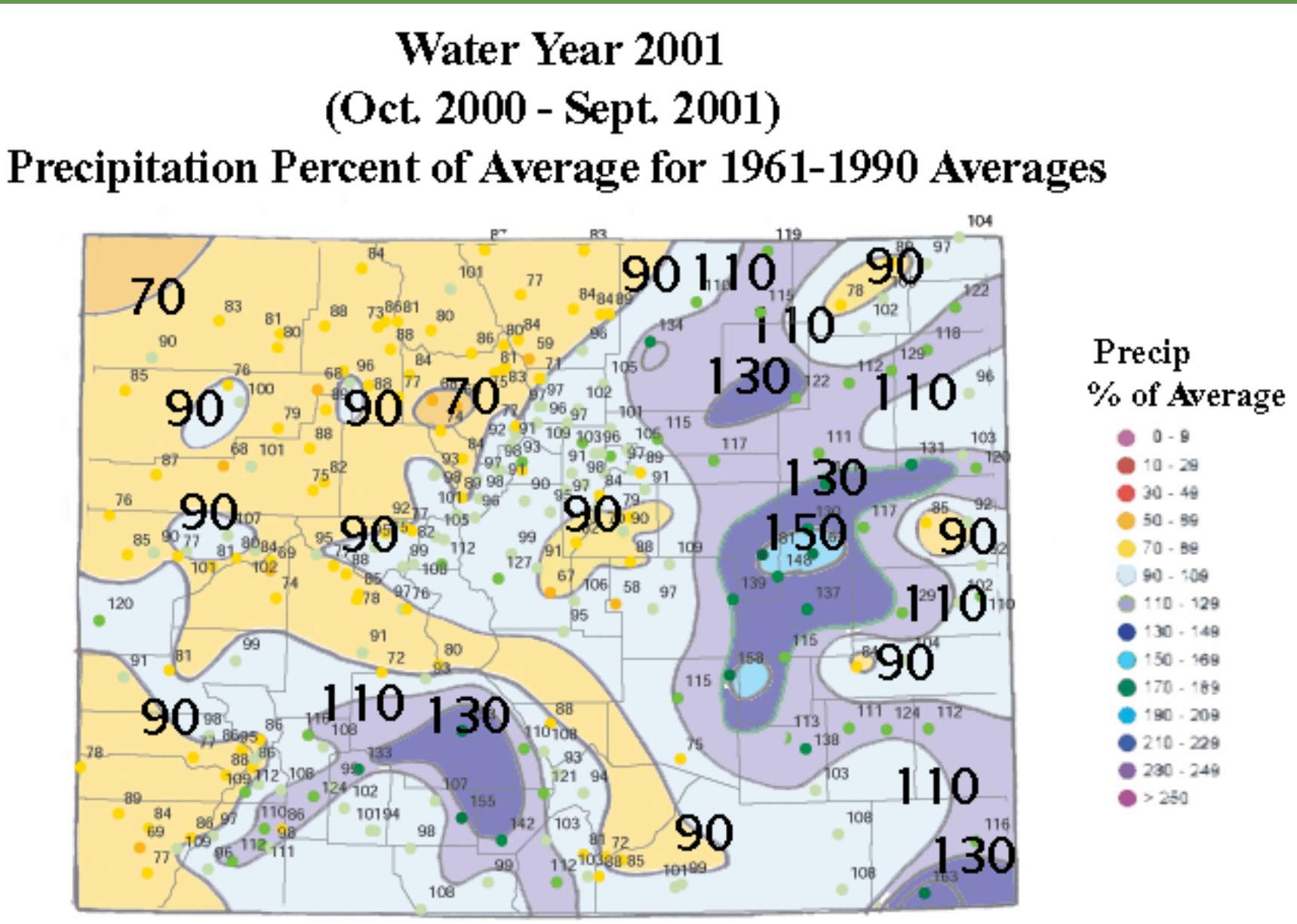
2000 Water Year Precipitation



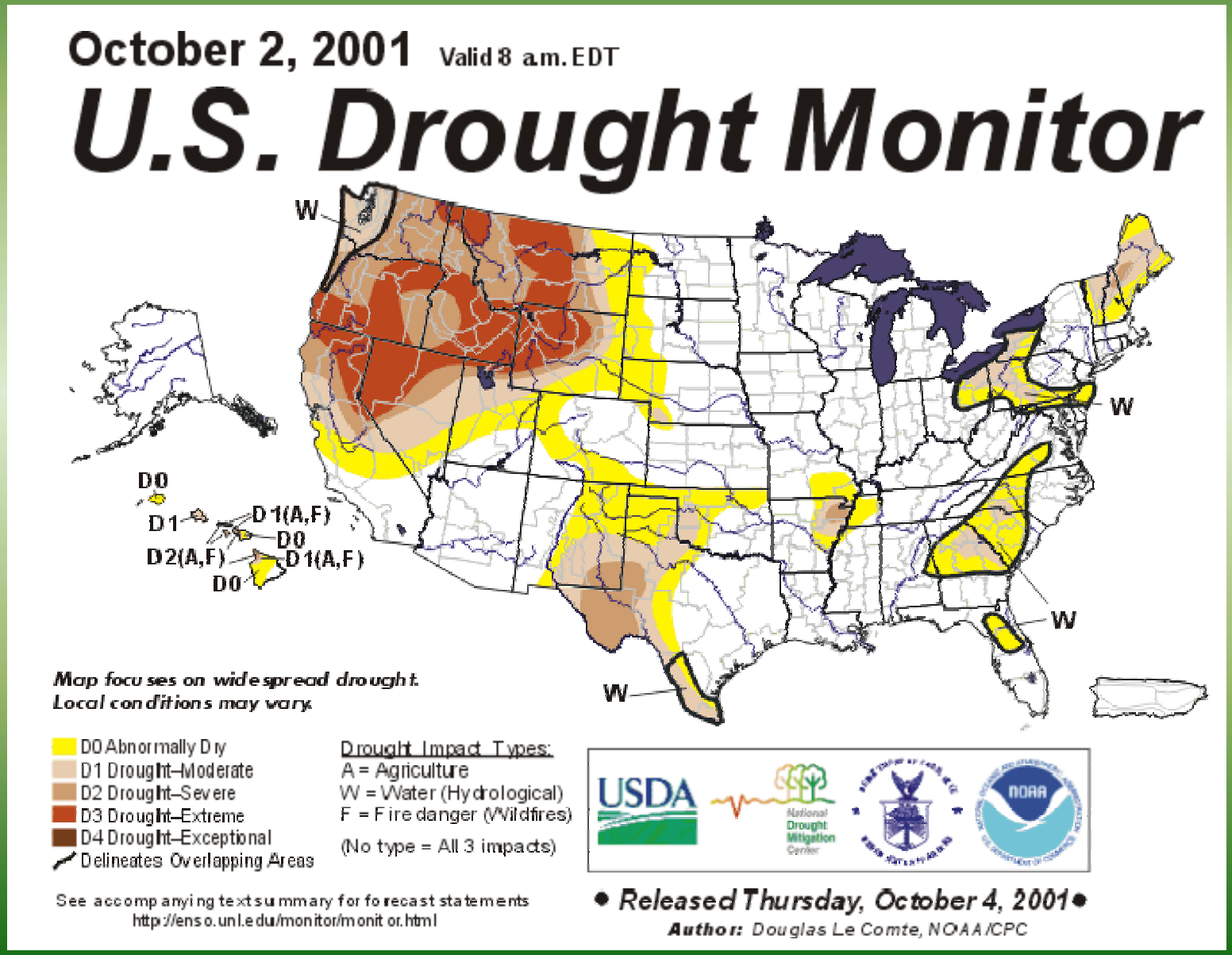
October 2000 Drought Monitor Map



2001 Water Year Precipitation

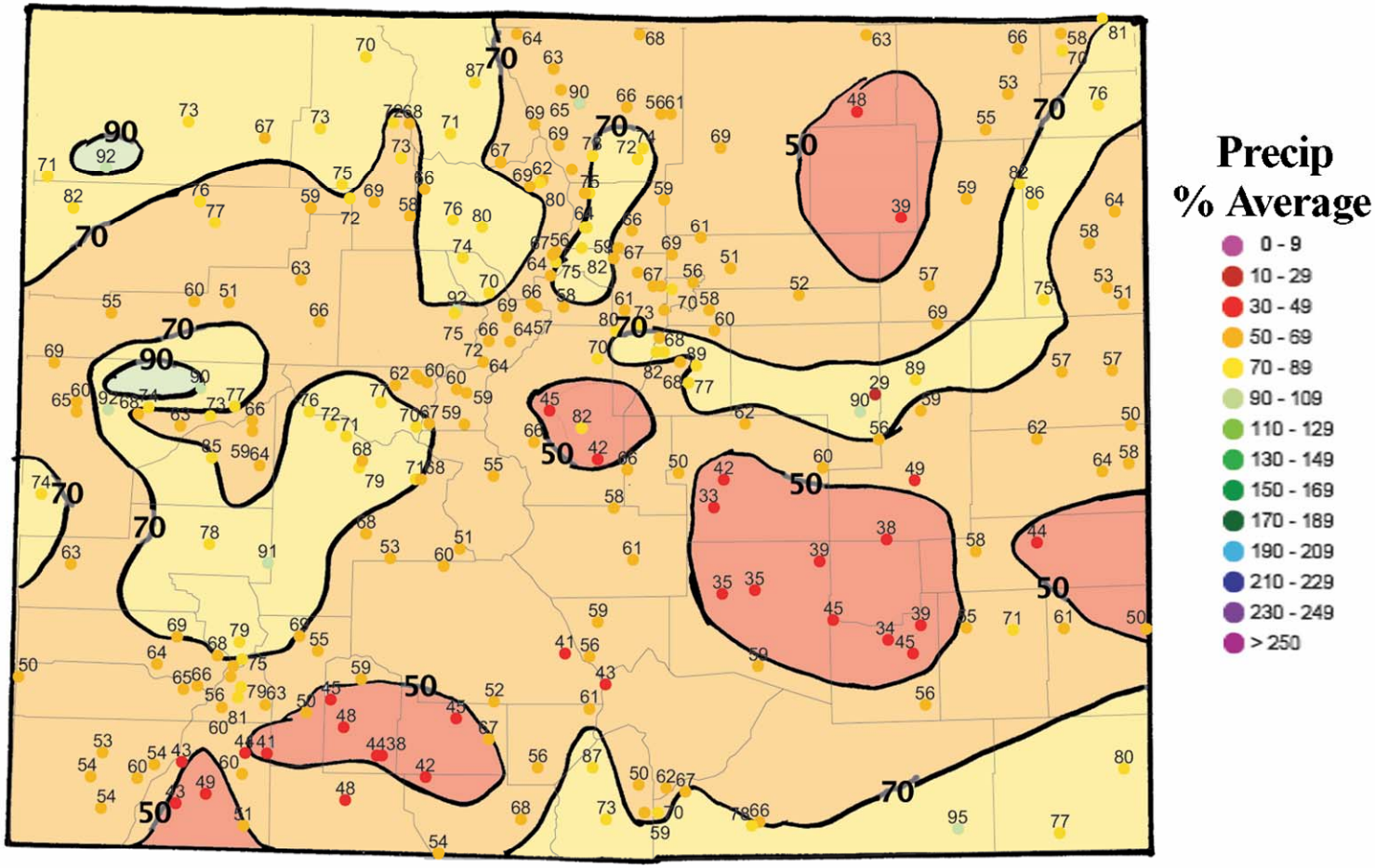


October 2001 Drought Monitor Map

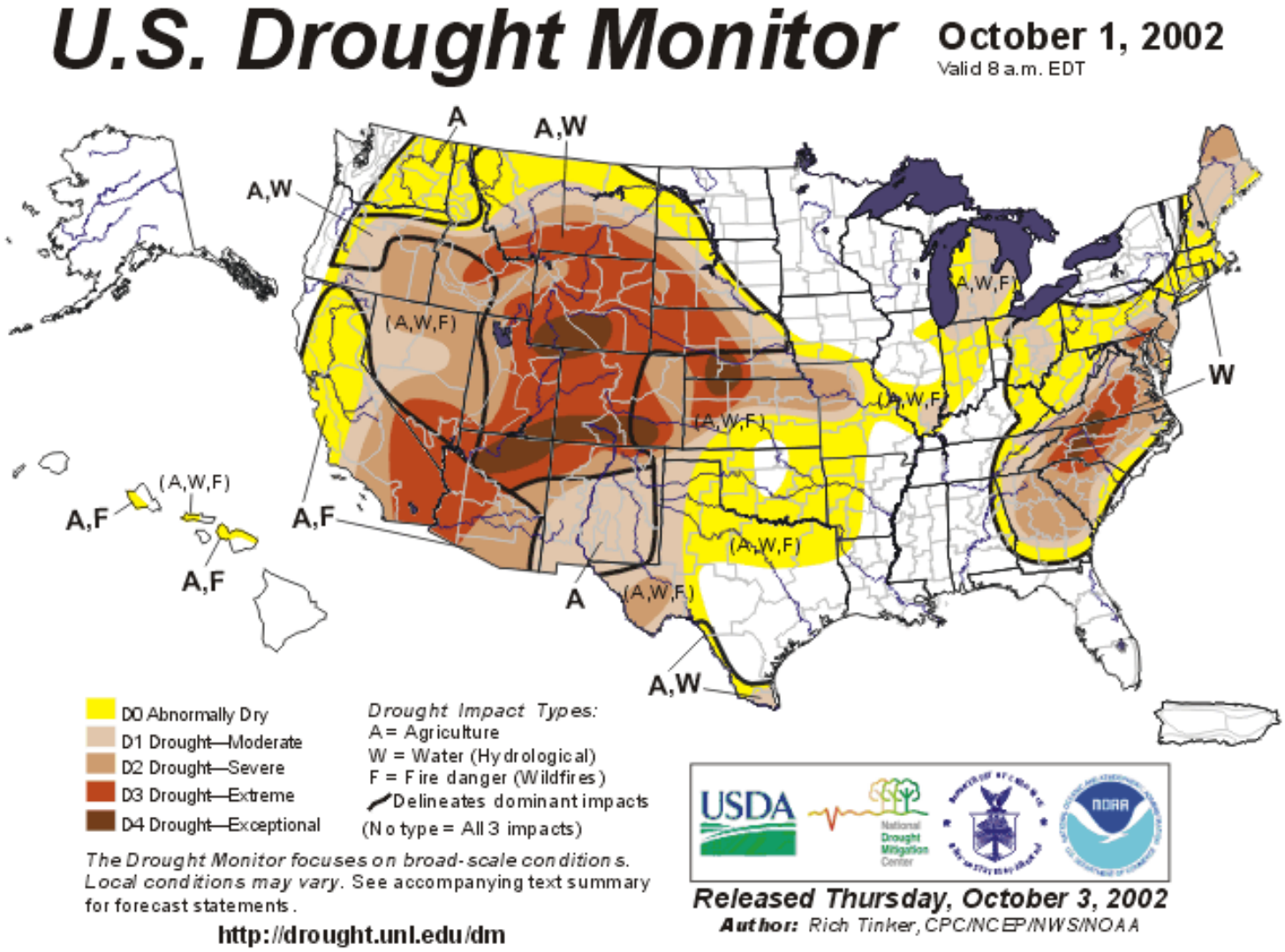


2002 Water Year Precipitation

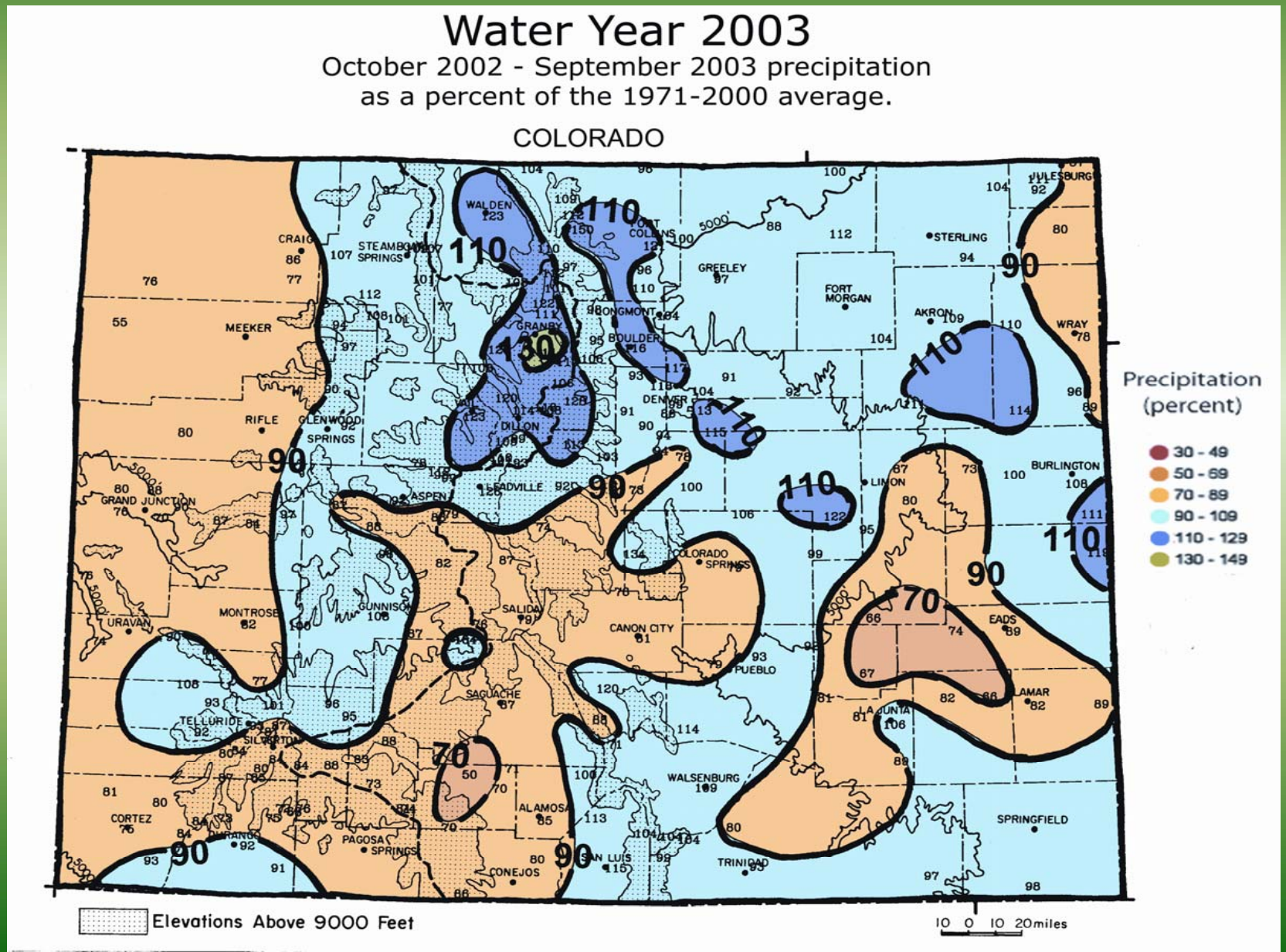
Water Year 2002
(Oct. 2001 - Sept. 2002)
Precipitation Percent of Average for 1961-1990 Averages



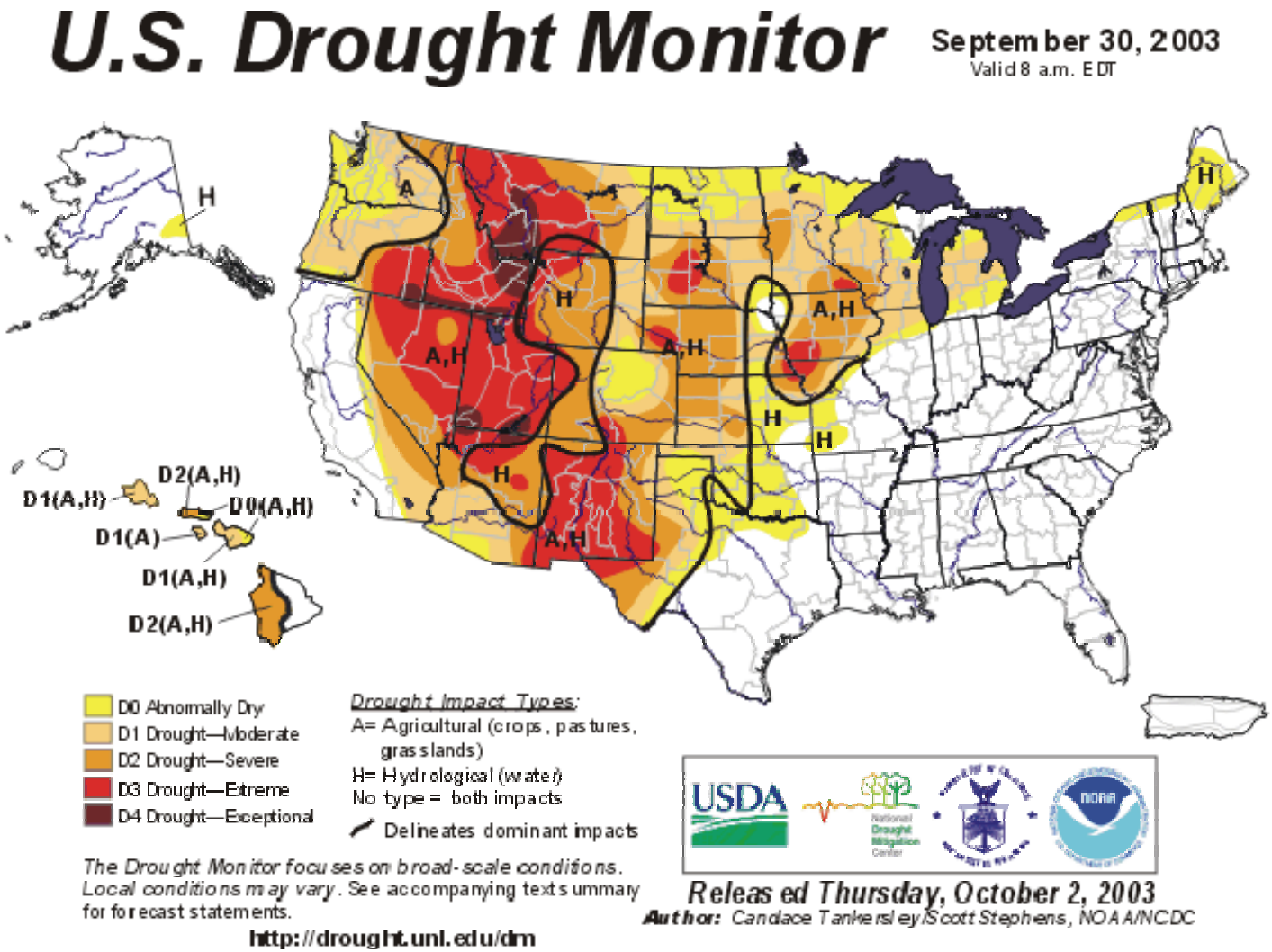
October 2002 Drought Monitor Map



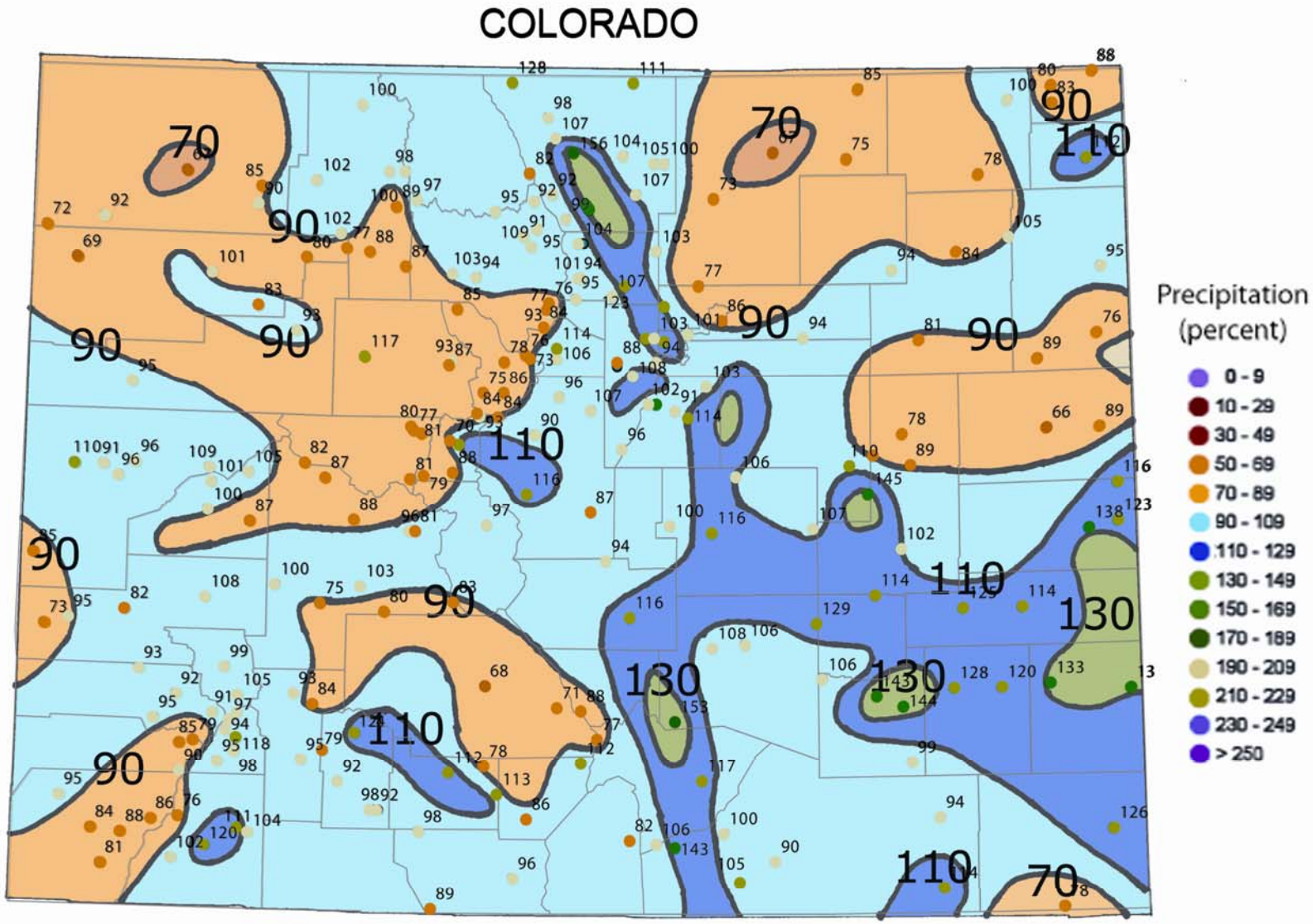
2003 Water Year Precipitation



September 2003 Drought Monitor Map

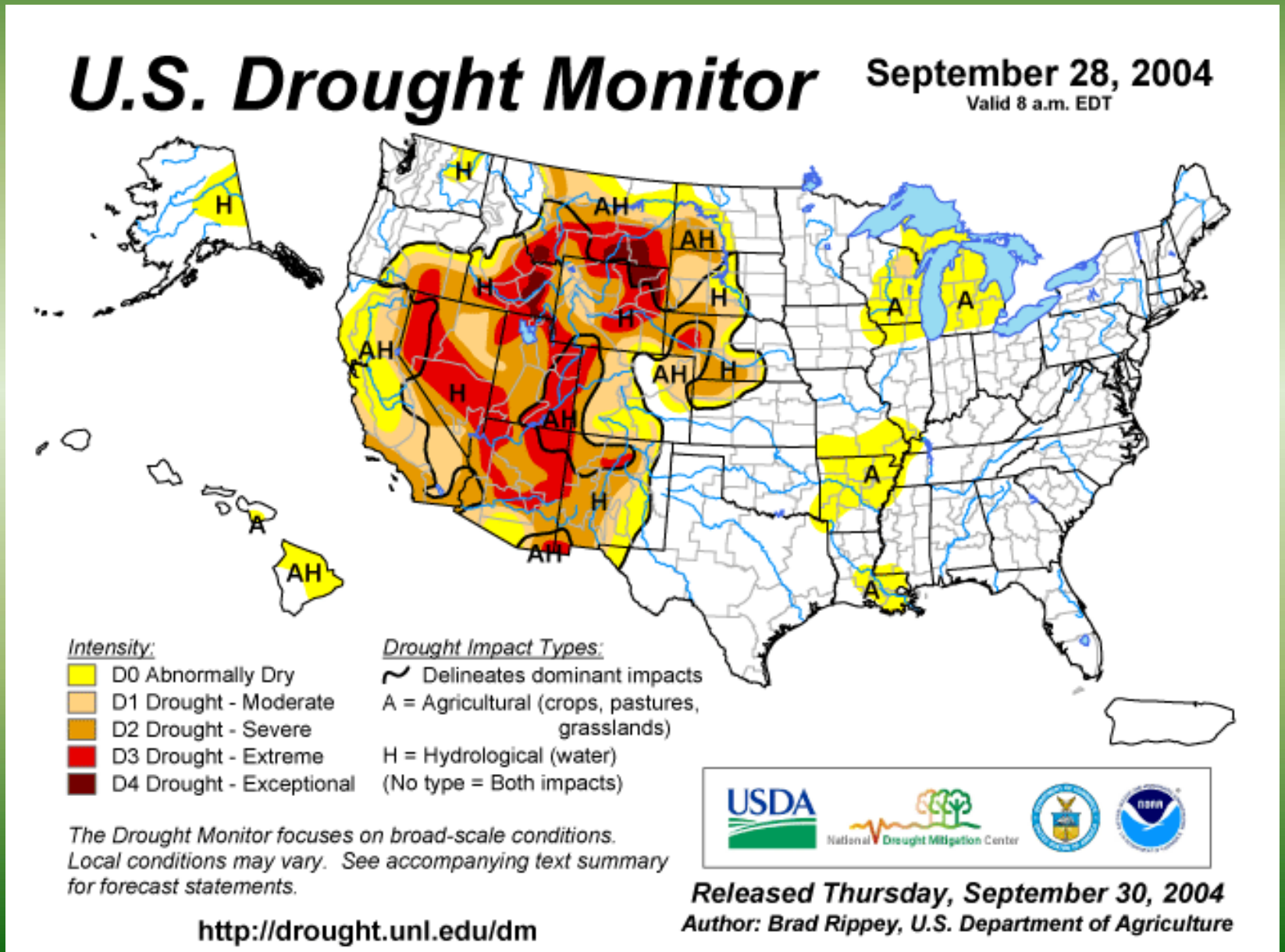


2004 Water Year Precipitation

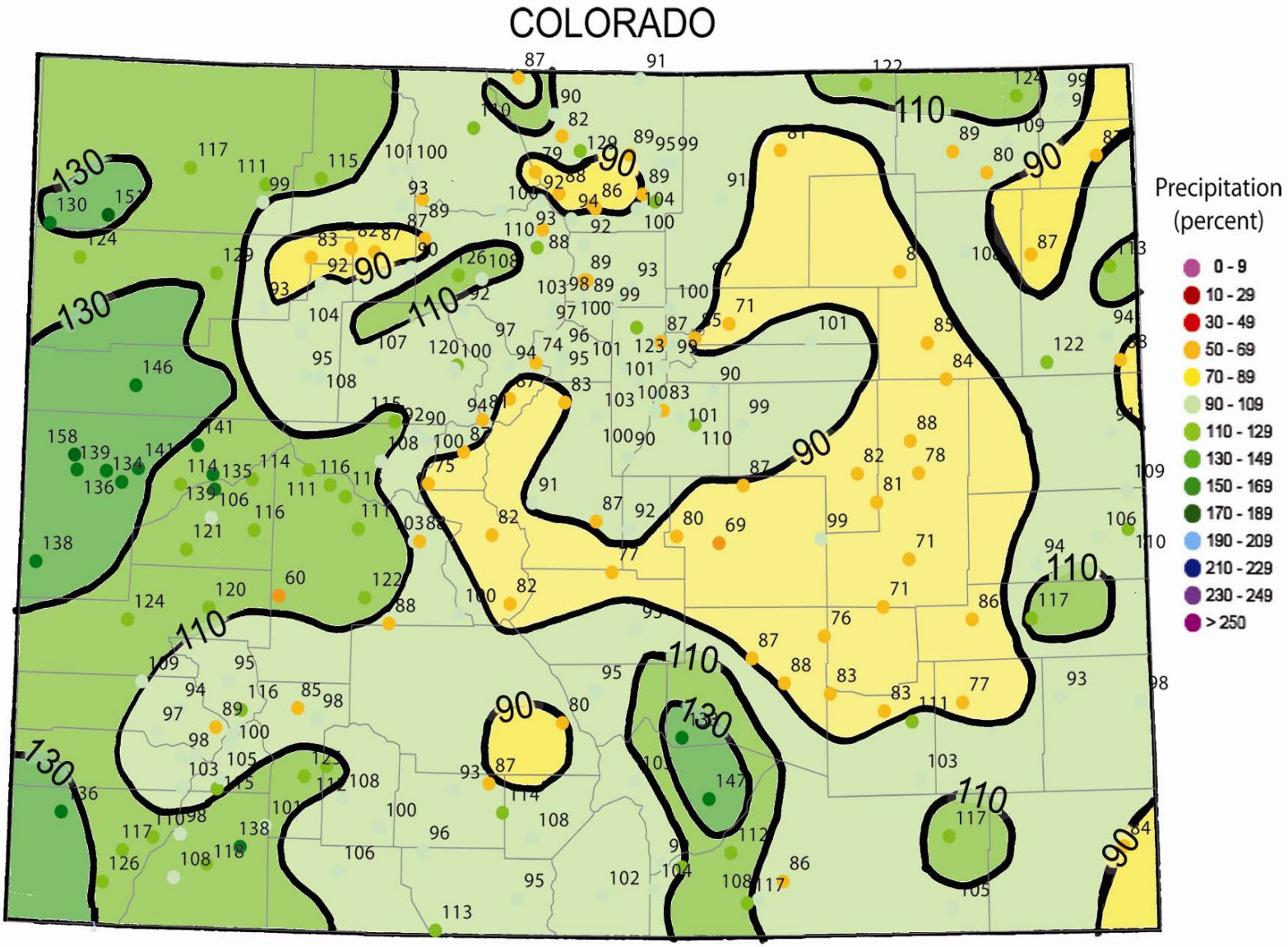


Water Year 2004 (October 2003 through September 2004) precipitation as a percent of the 1971-2000 average.

September 2004 Drought Monitor Map

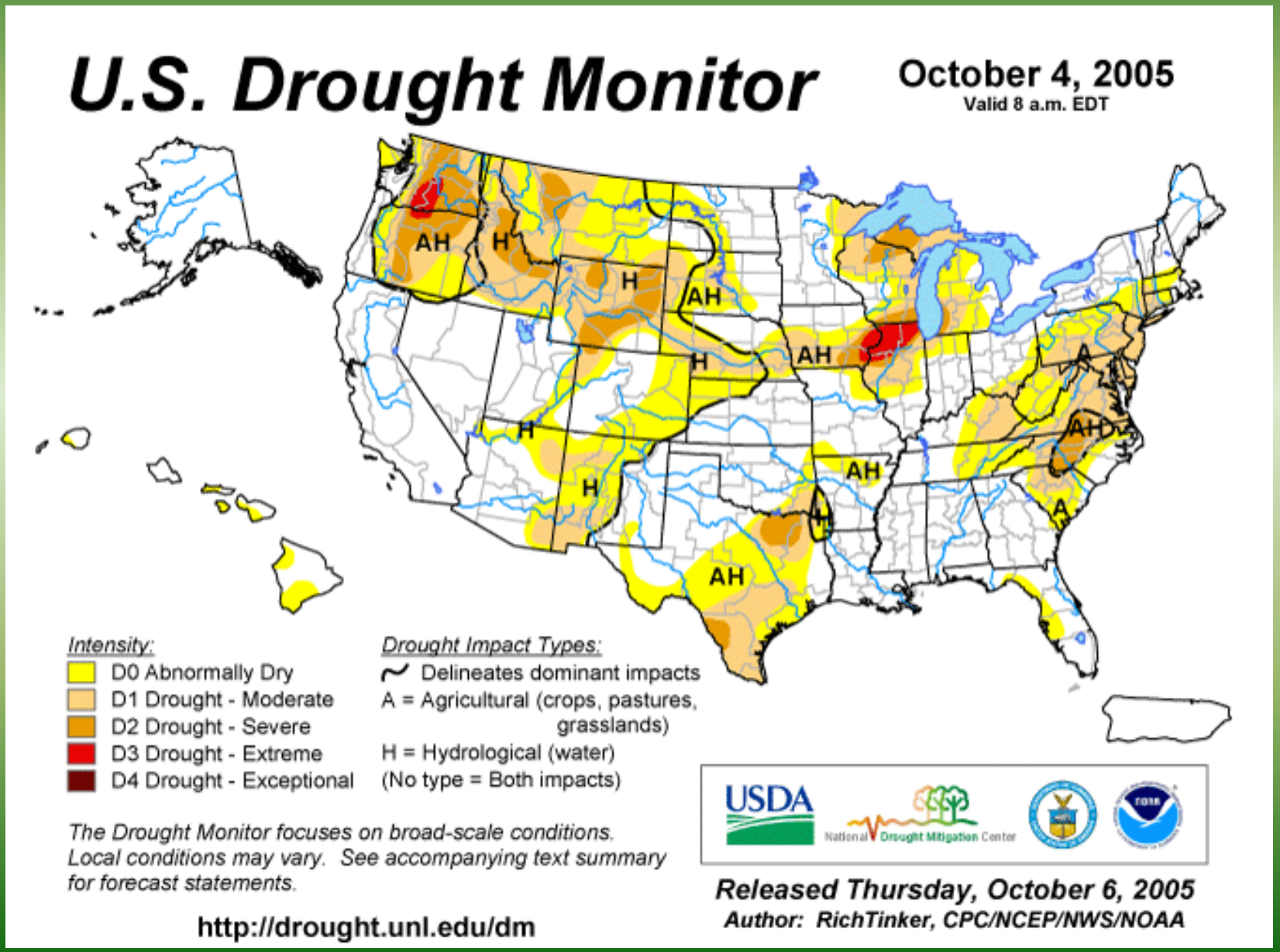


2005 Water Year Precipitation

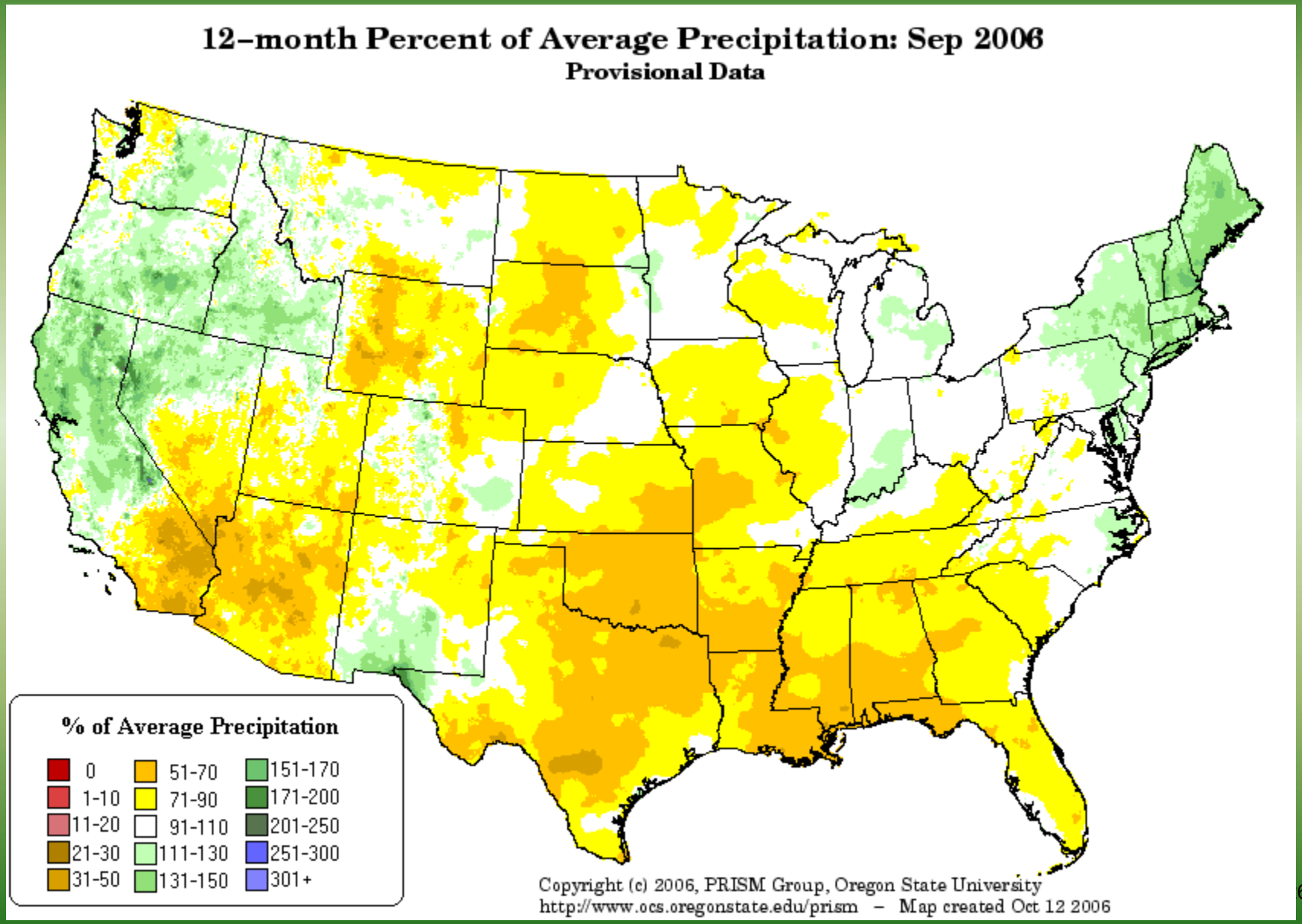


Water Year 2005 (Oct 04 - Sep 05) precipitation as a percent of the 1971-2000 average.

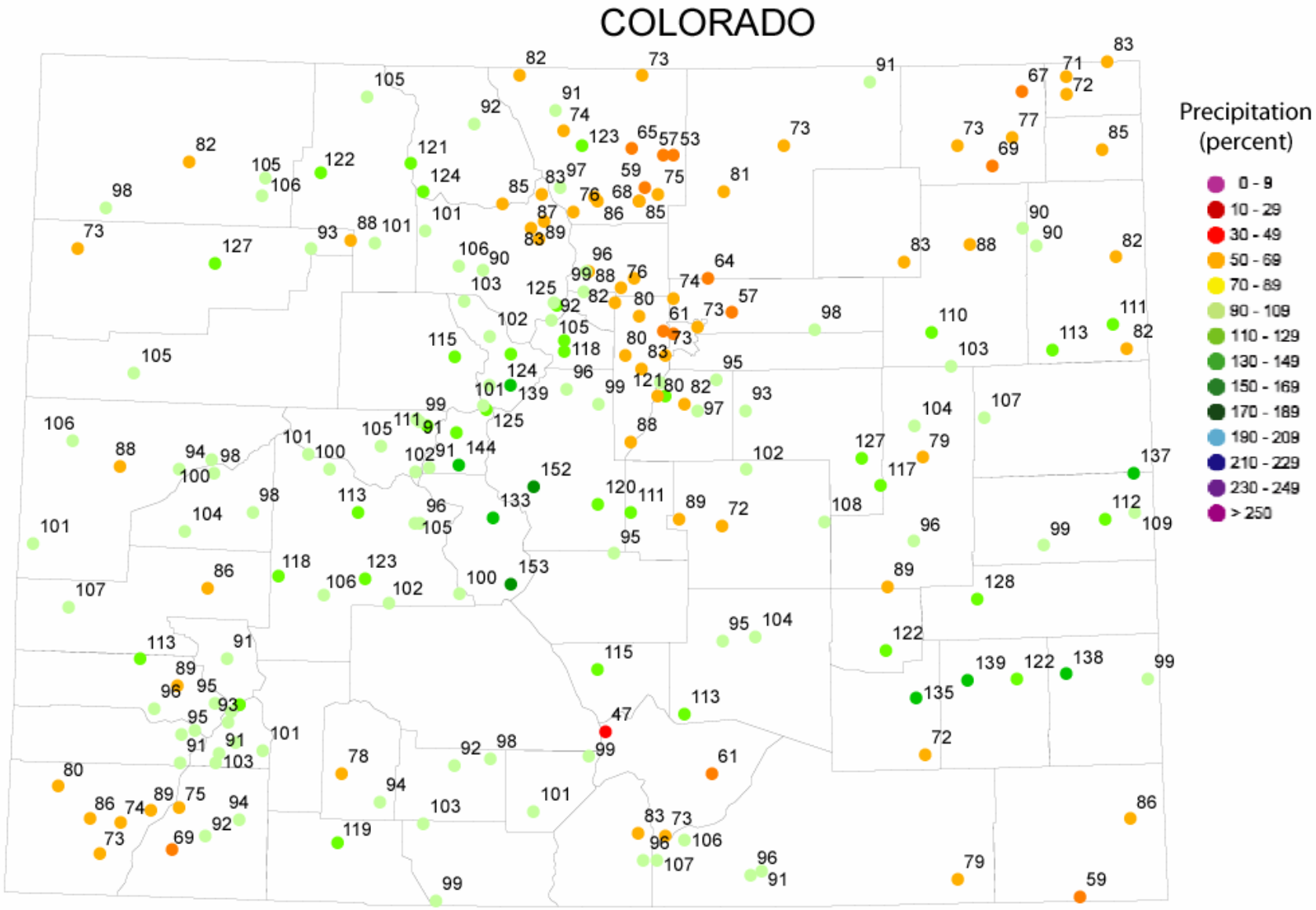
October 2005 Drought Monitor Map



Water Year 2006 precipitation as a percent of average (Prism)



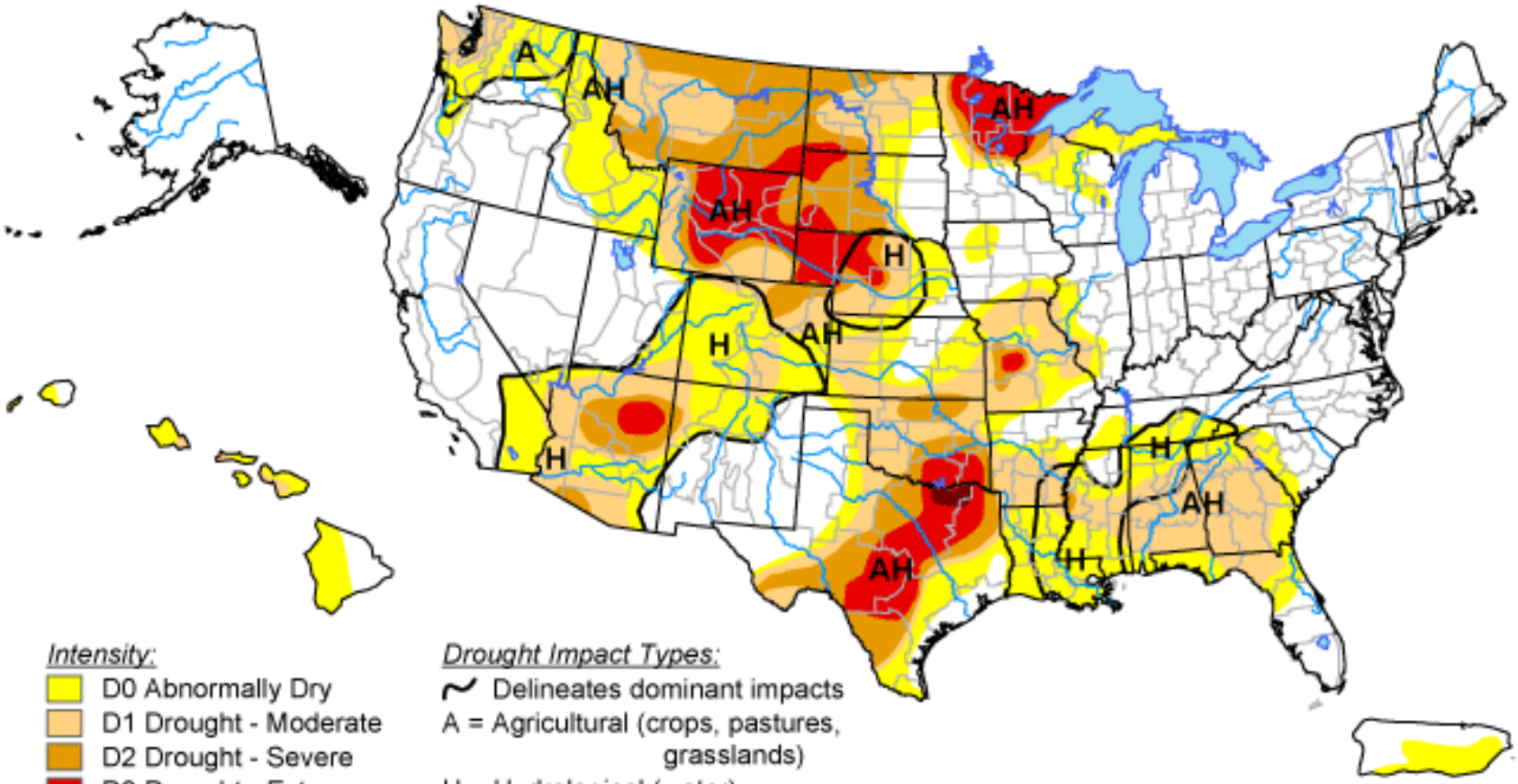
Water Year 2006 precipitation as a percent of the 1971-2000 average



Water Year 2006 (October 2005 through September 2006) precipitation as a percent of the 1971-2000 average.

U.S. Drought Monitor

October 3, 2006
Valid 8 a.m. EDT



Intensity:

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

Drought Impact Types:

~ Delineates dominant impacts
A = Agricultural (crops, pastures, grasslands)
H = Hydrological (water)

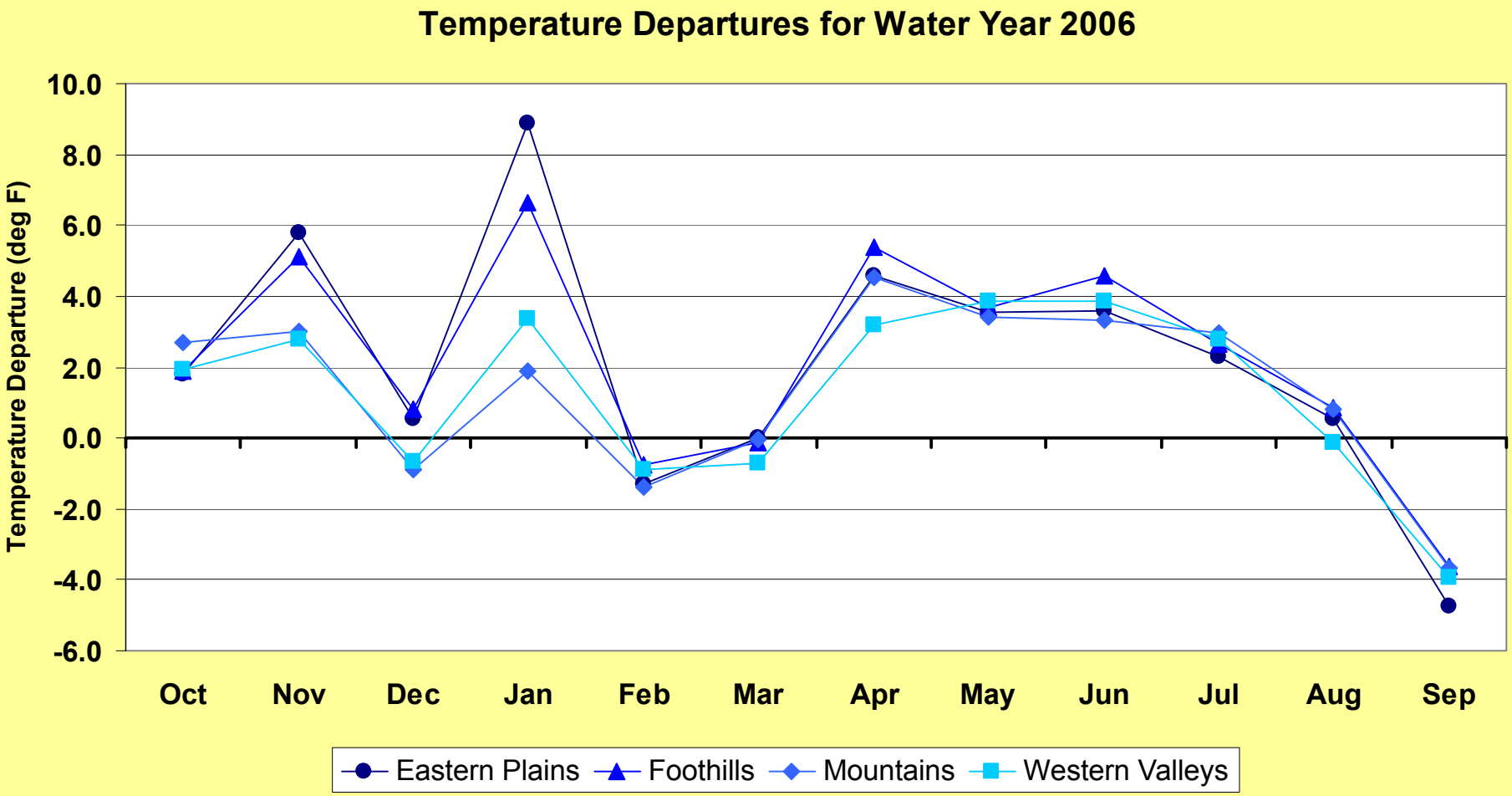
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

http://drought.unl.edu/dm

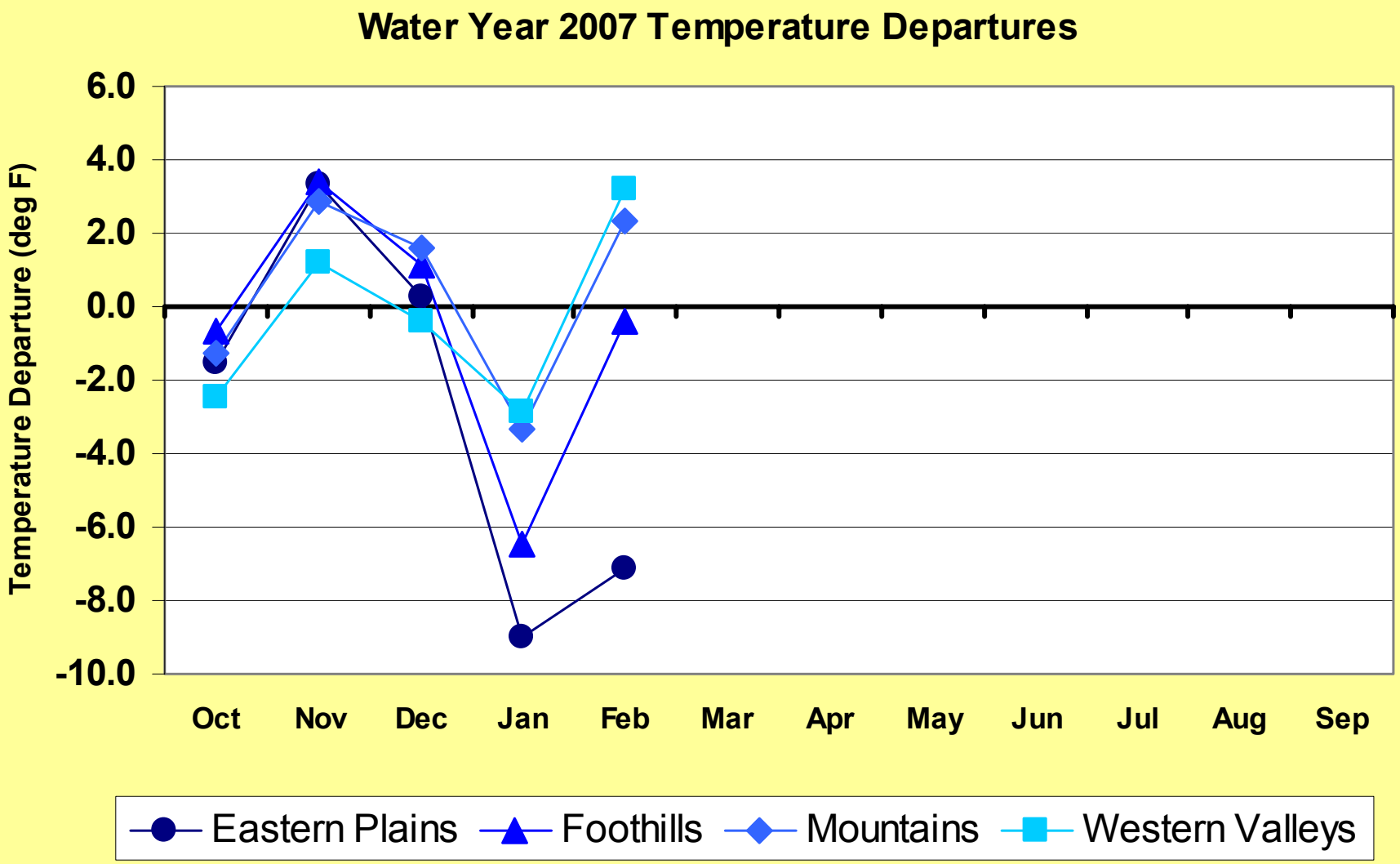
Released Thursday, October 5, 2006
Author: Rich Tinker, Climate Prediction Center, NOAA

A closer look at the past year

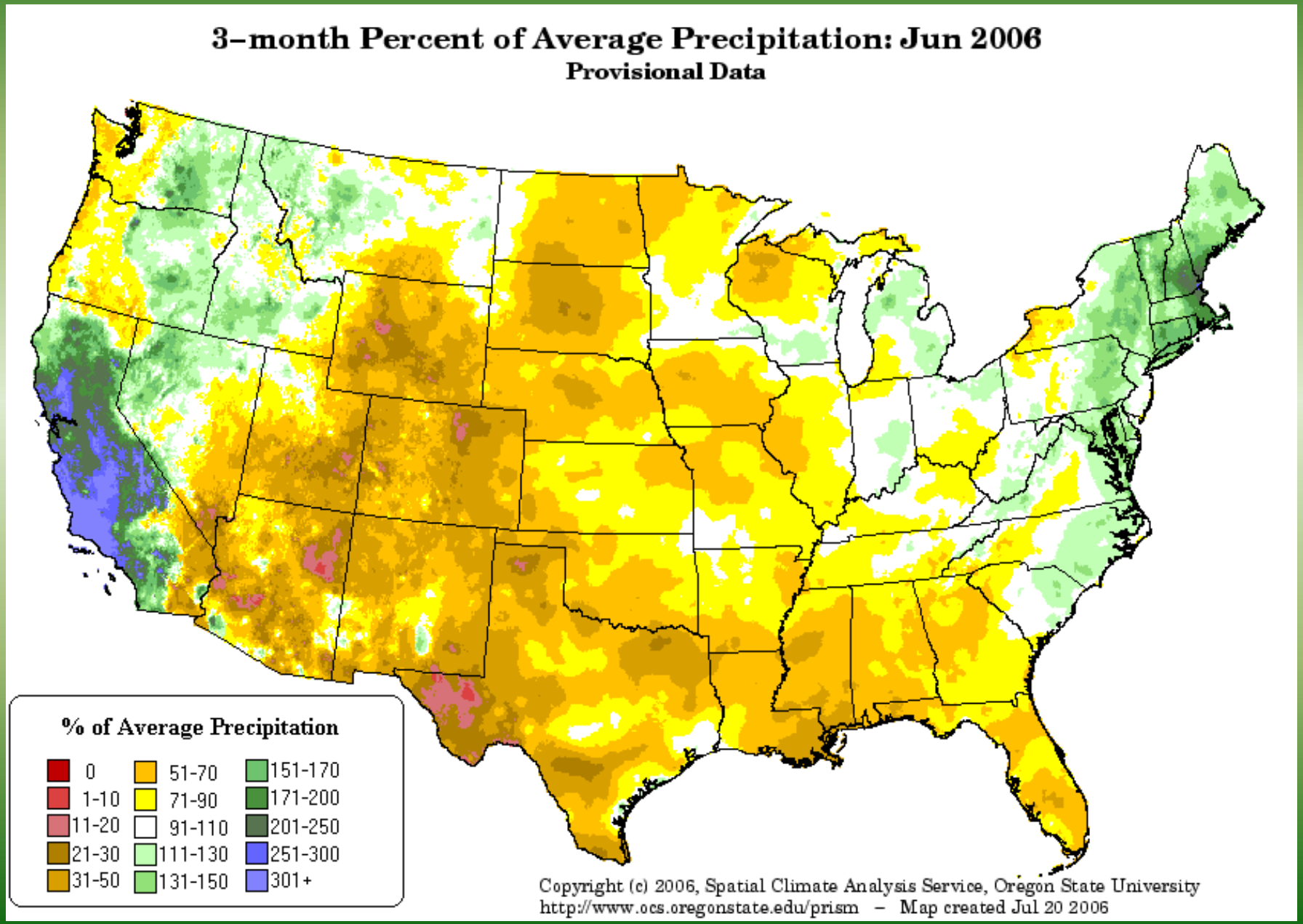
WY2006 Temperature Departures



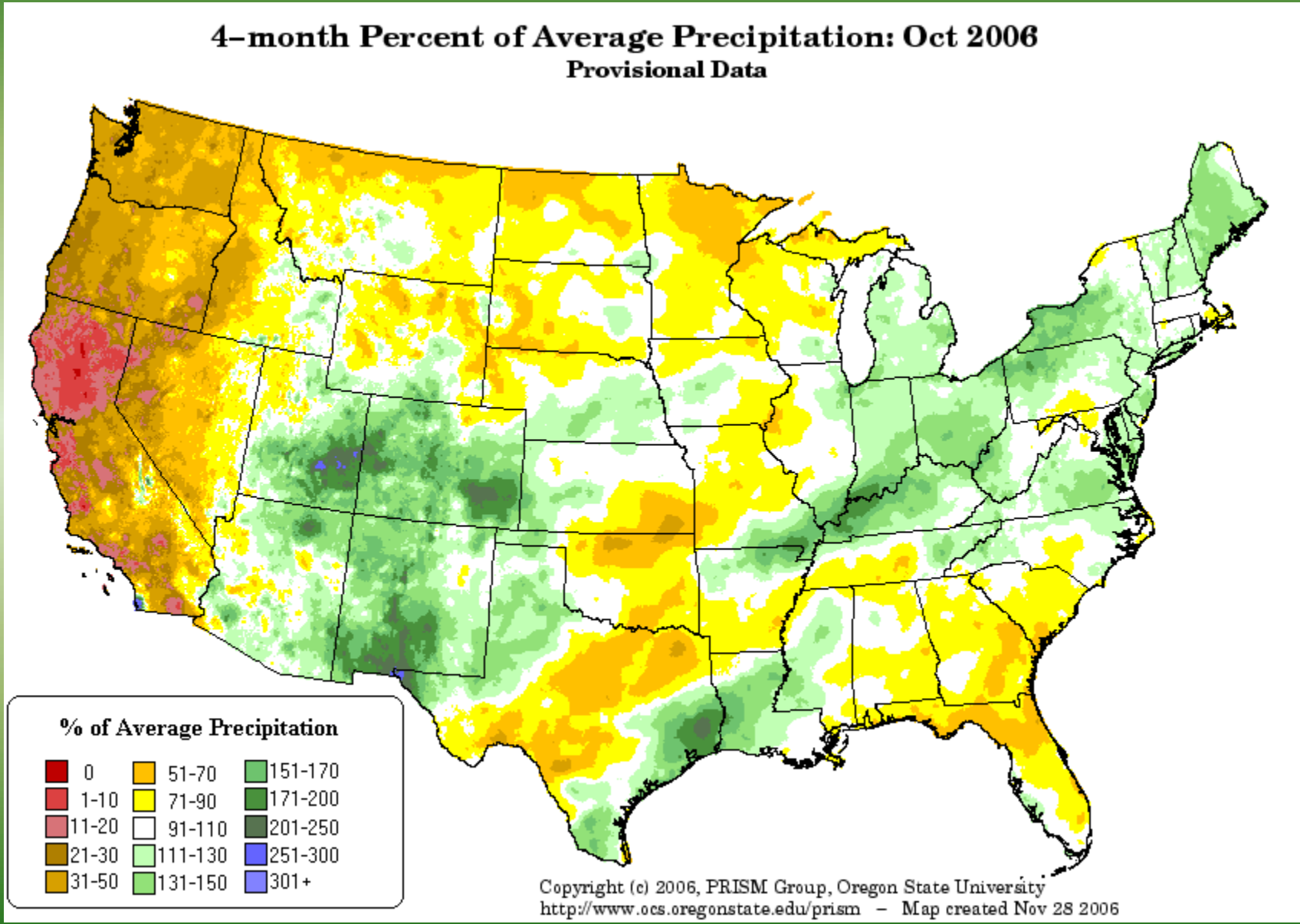
WY2007 Temperature Departures



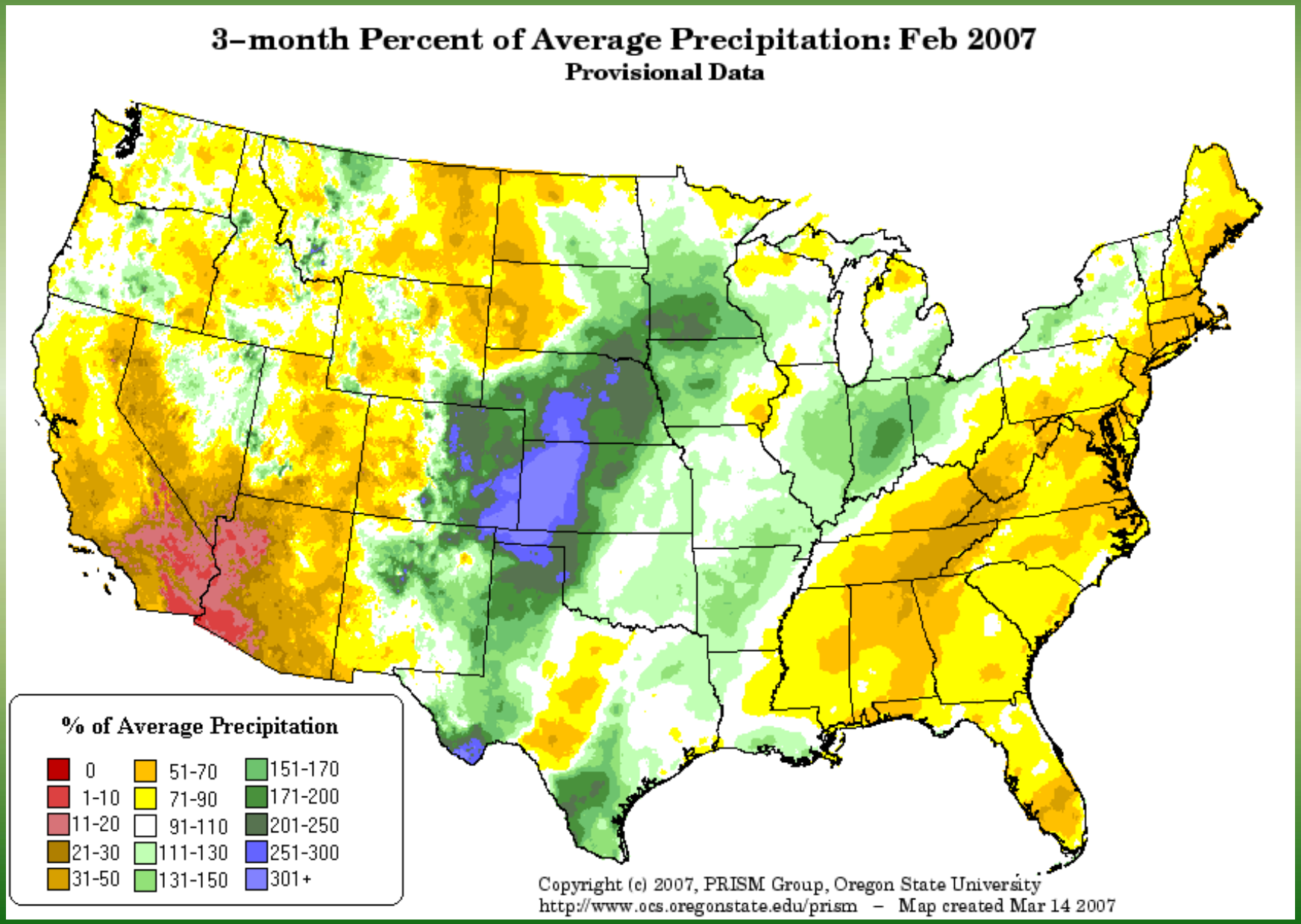
April-June 2006 Drought



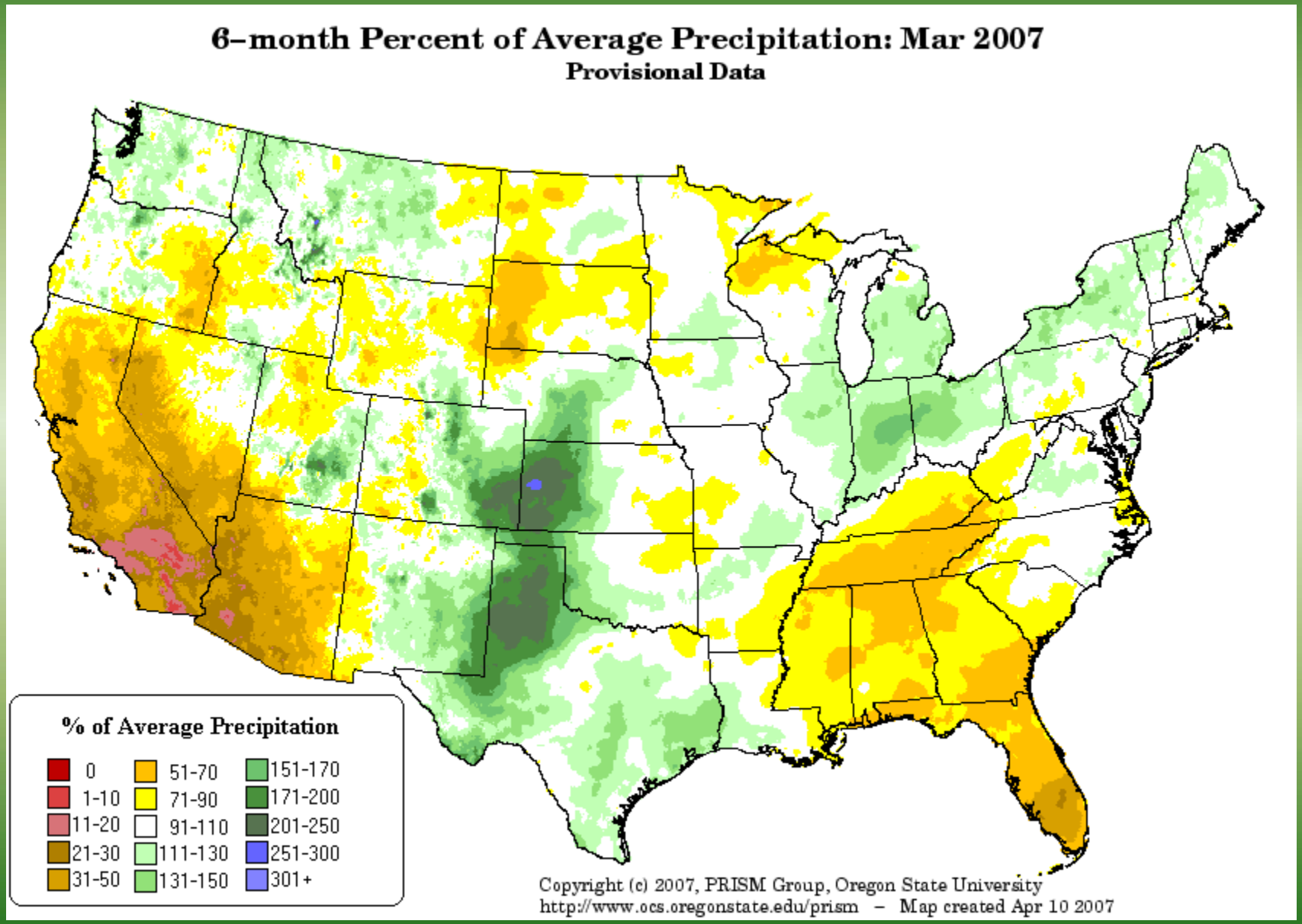
July-October 2006



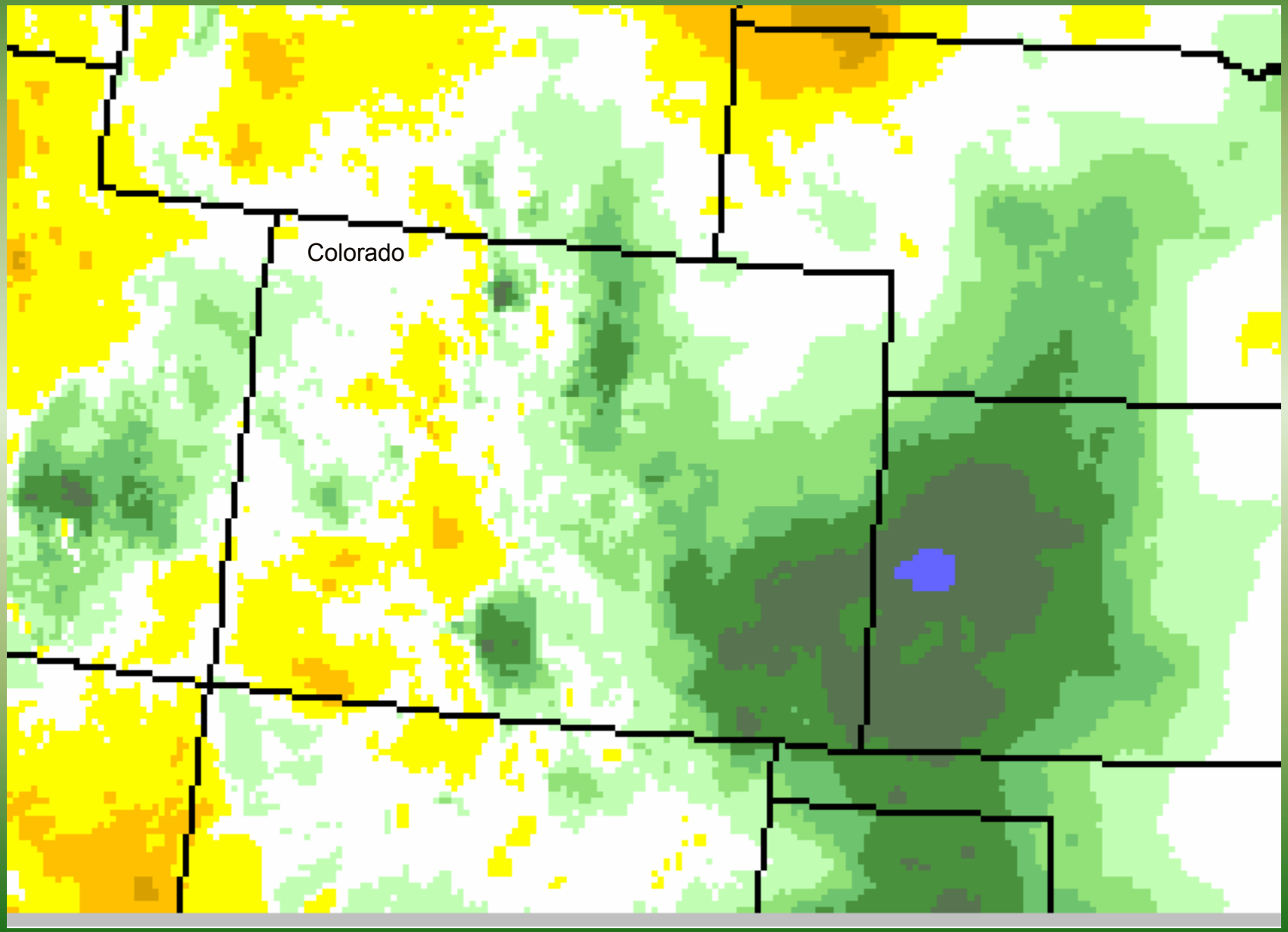
Winter Precipitation (Dec-Feb)



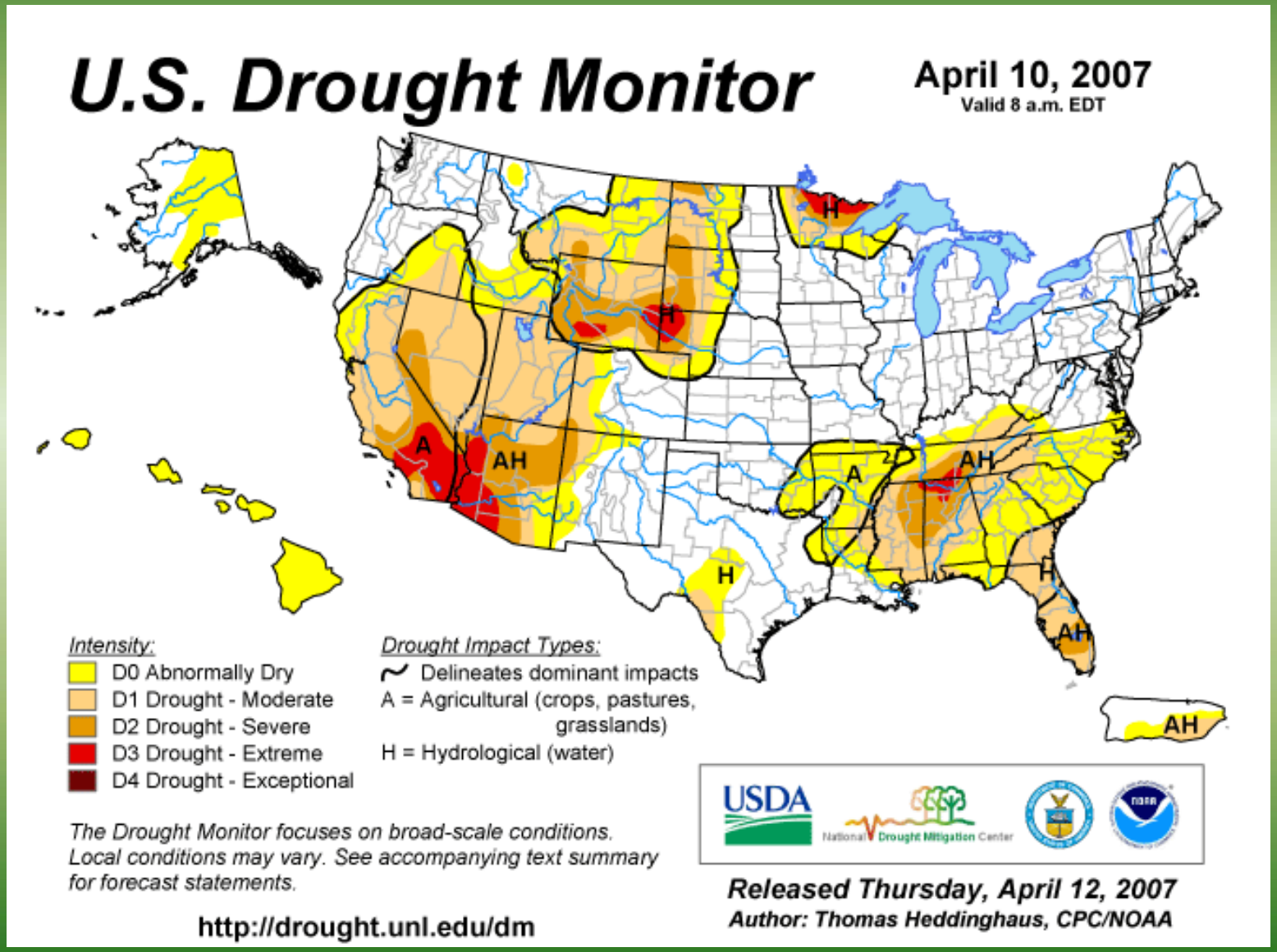
Water Year 2007 (October – March) to Date



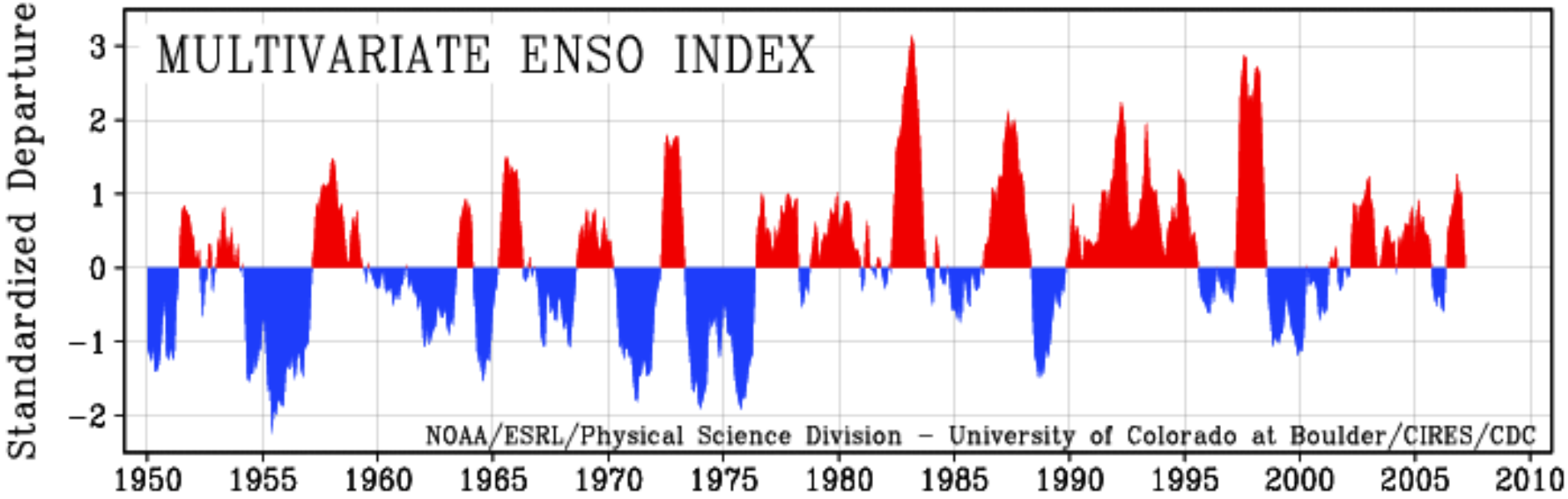
Water Year 2007 (October – March)



What Comes Next?



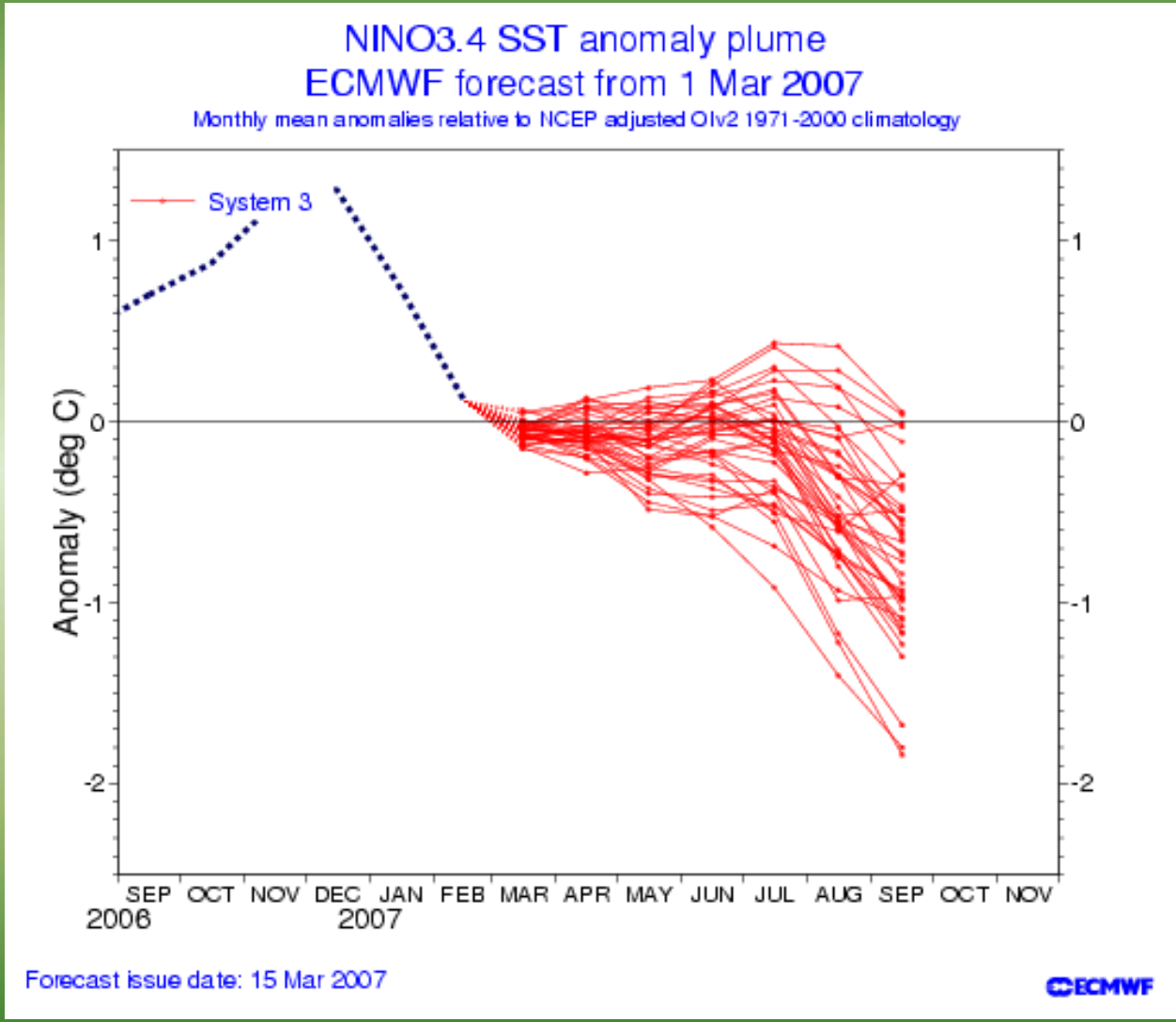
Multivariate ENSO Index (MEI)



Last update: April 5, 2007

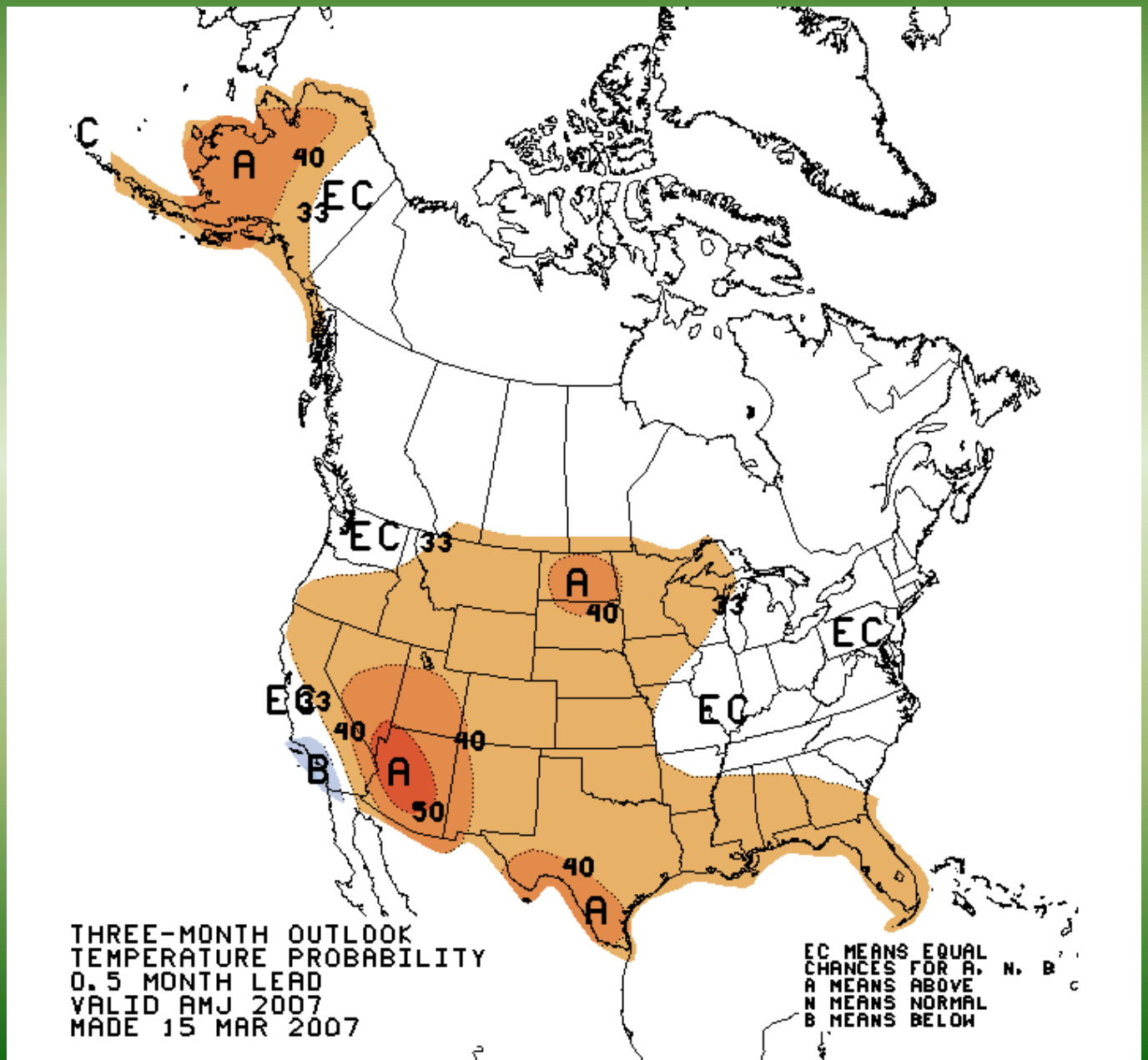
http://www.cdc.noaa.gov/people/klaus.wolter/MEI/

El Nino Forecast

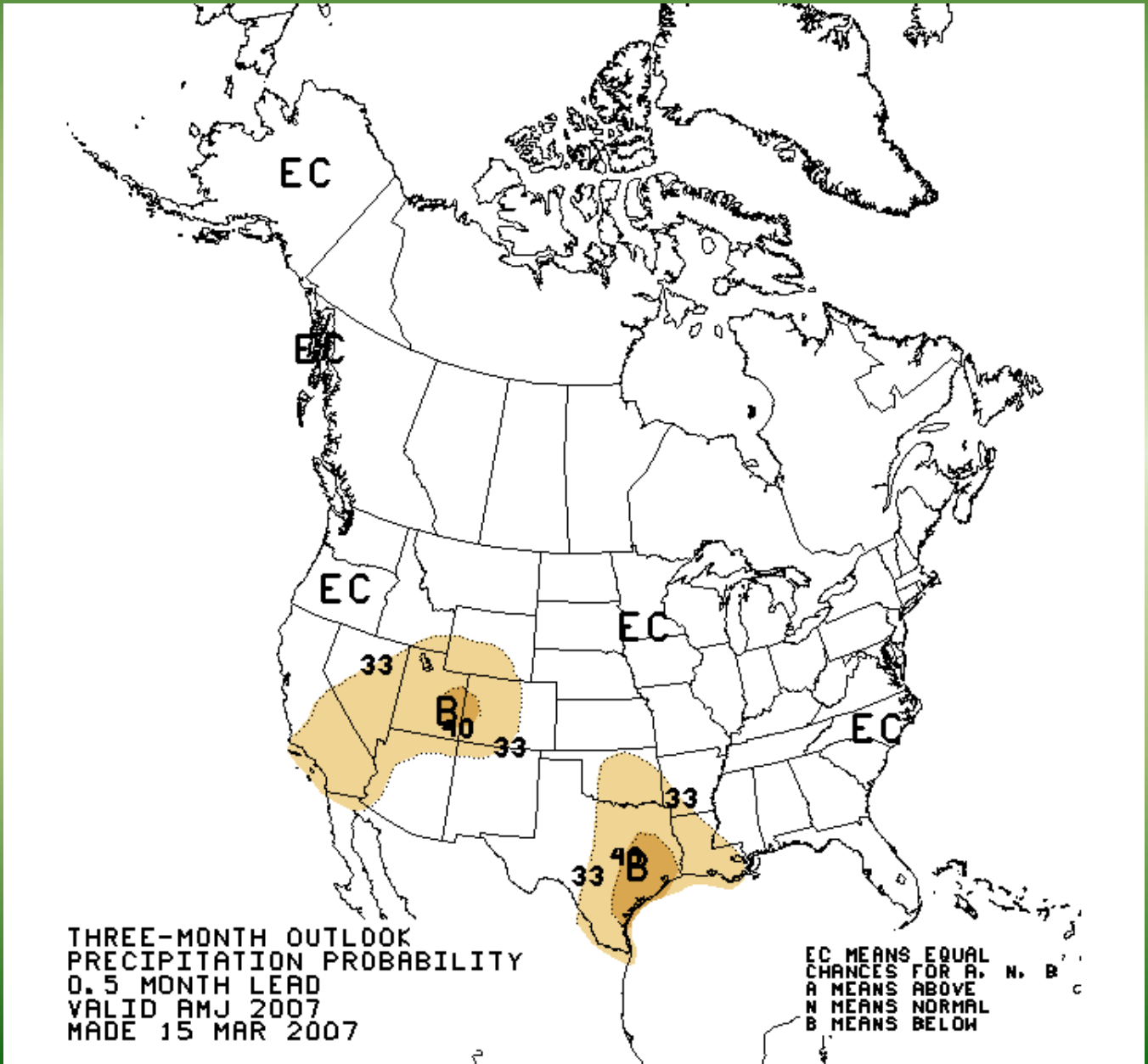


http://www.cdc.noaa.gov/people/klaus.wolter/SWcasts/

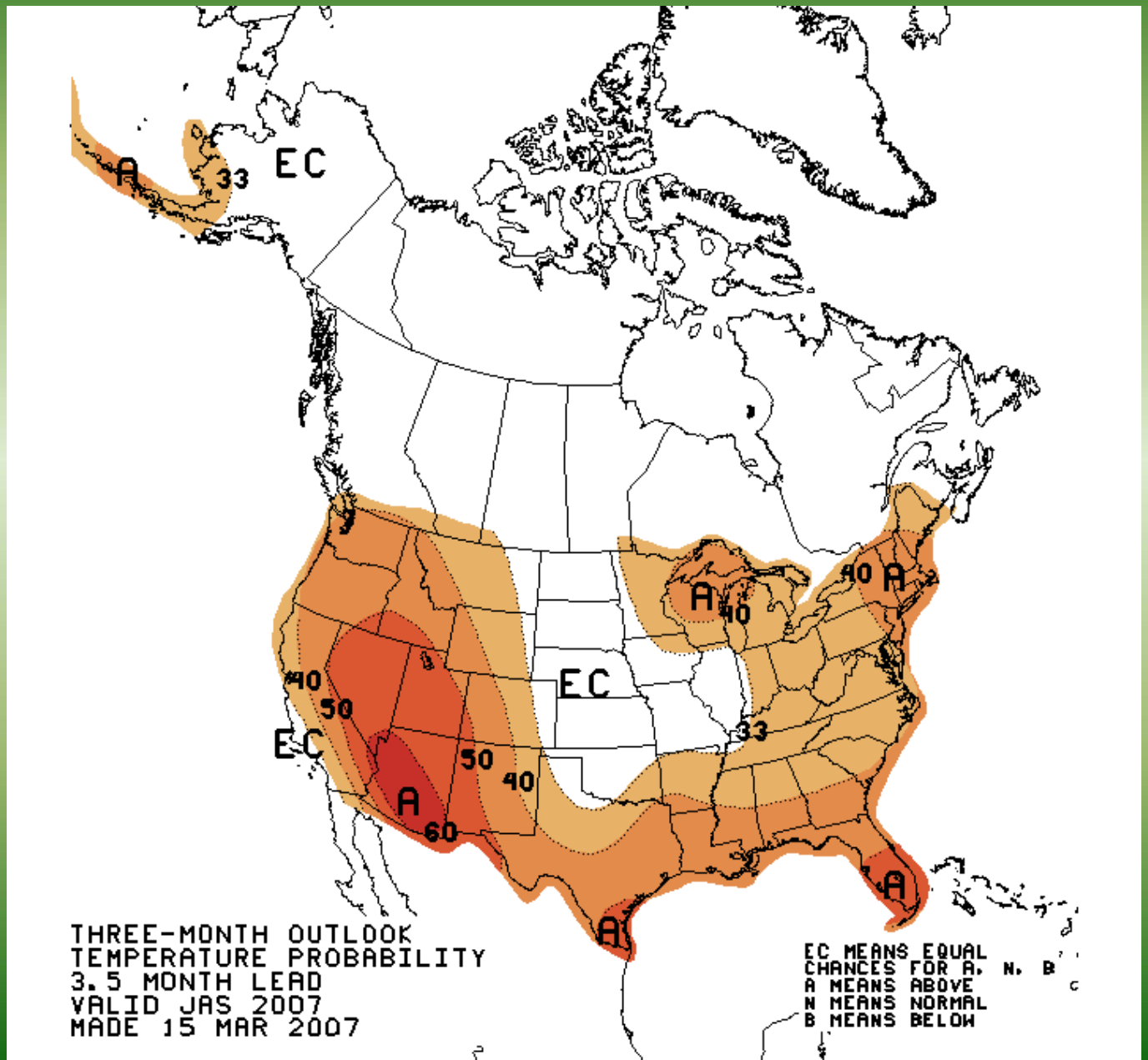
Apr-Jun Temperature



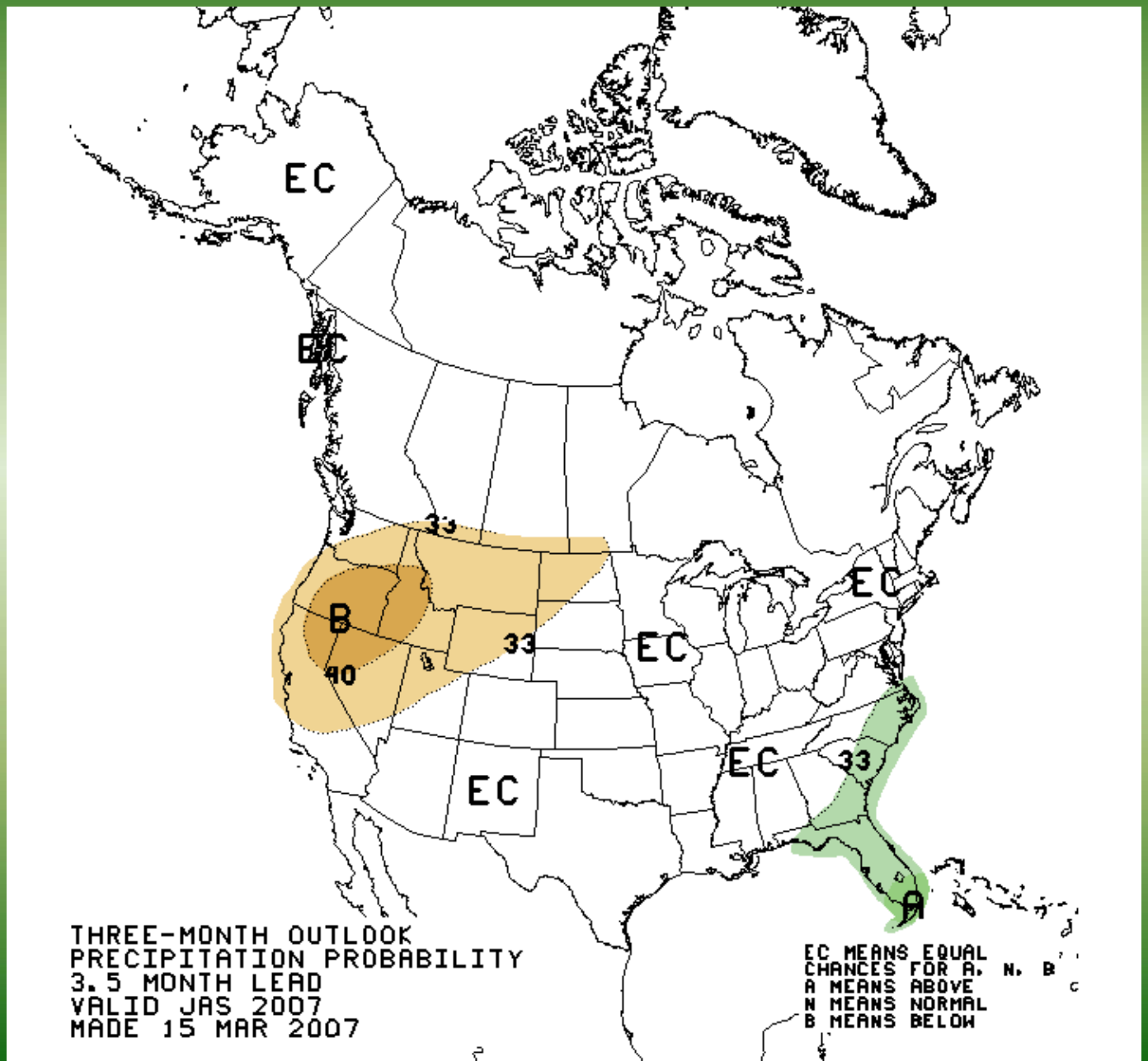
Apr-Jun Precipitation



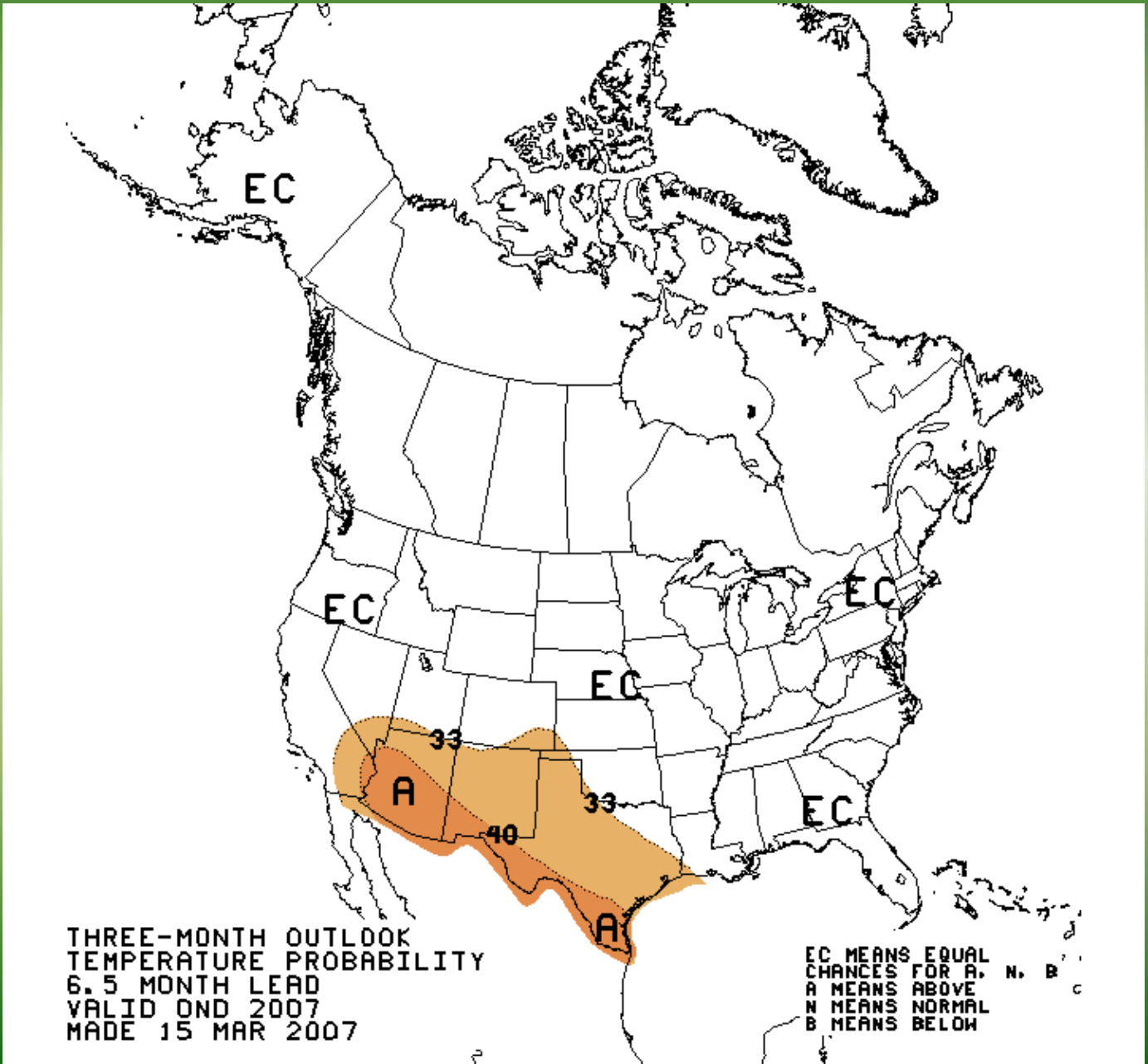
Jul-Sep Temperature



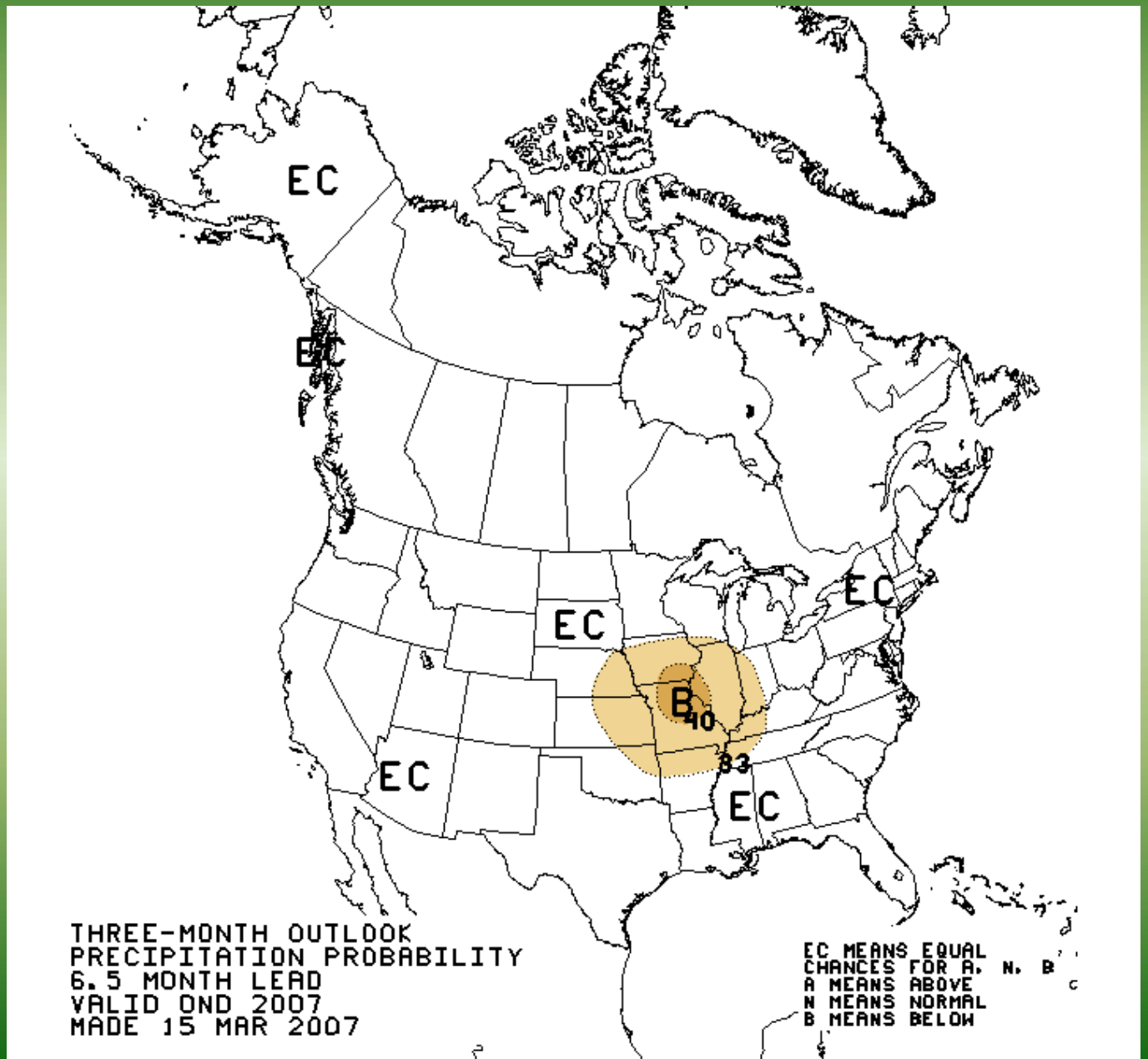
Jul-Sep Precipitation



Oct-Dec Temperatures



Oct-Dec Precipitation



Working together to monitor drought --

Join CoCoRaHS!

CoCoRaHS

Community Collaborative Rain, Hail & Snow Network

http://www.cocorahs.org

CoCoRaHS

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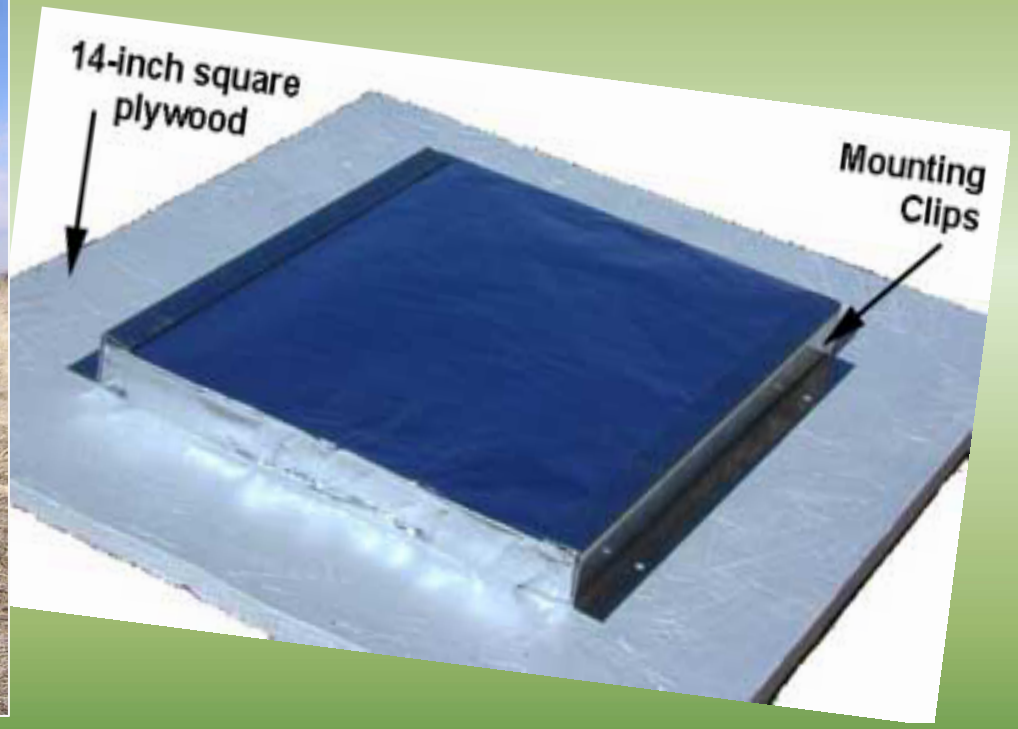
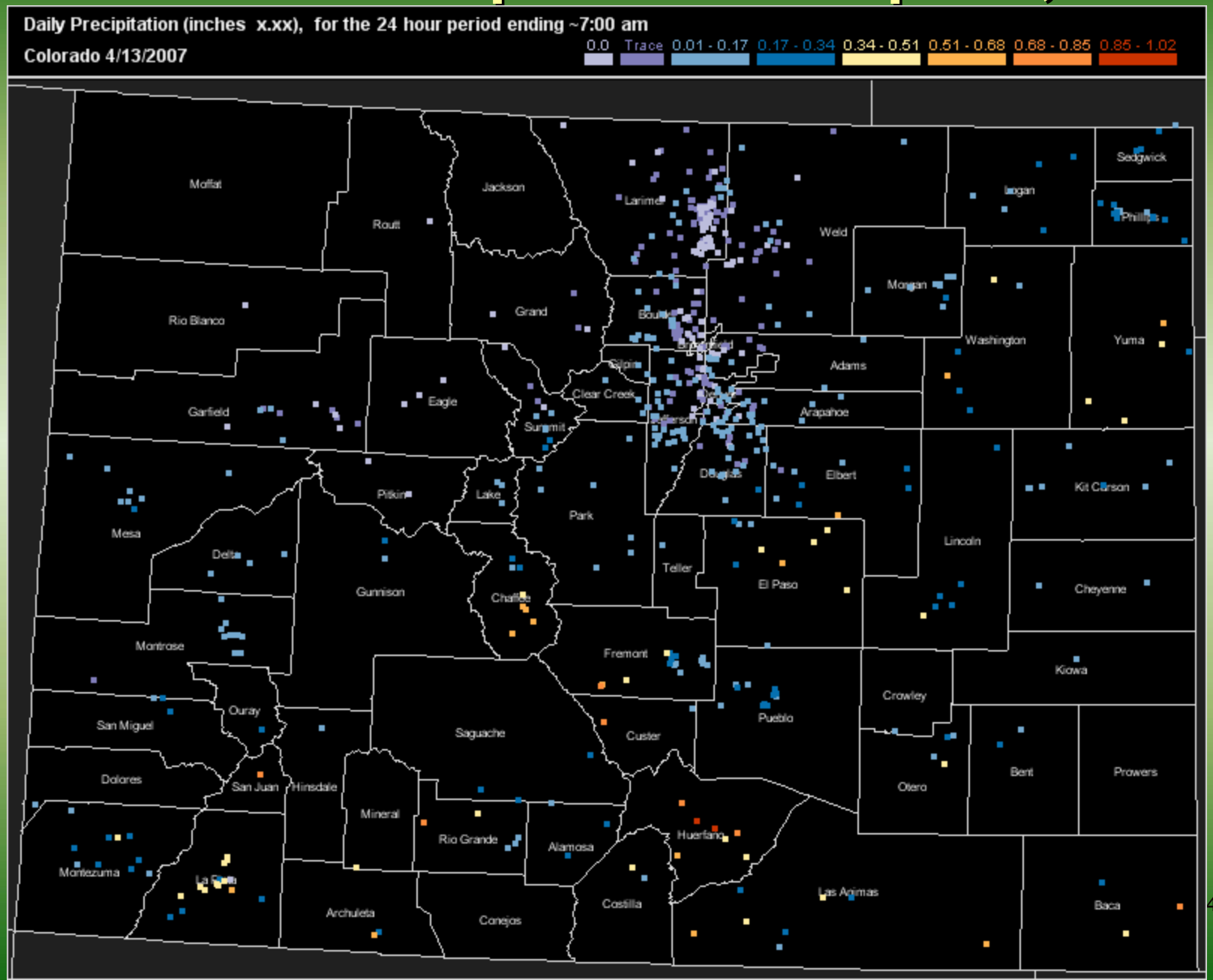


Support for this project provided by NOAA Office of Educations and *many* local charter sponsors.

CoCoRaHS Precipitation for Apr 13, 2007



Colorado Climate Center
Colorado State University

- ***Data and Power Point Presentations available for downloading***
- ***http://ccc.atmos.colostate.edu***

  click on "Drought"

  then click on "Presentations"