

A Review of the 2007 Water Year in Colorado

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<http://ccc.atmos.colostate.edu>

Presented to 62st Annual Meeting of the Rocky Mountain
Hydrologic Research Center (RMHRC), held at
Allenspark, CO, September 28, 2007

Prepared by Odie Bliss



Highlights of the 2007 Water Year in Colorado

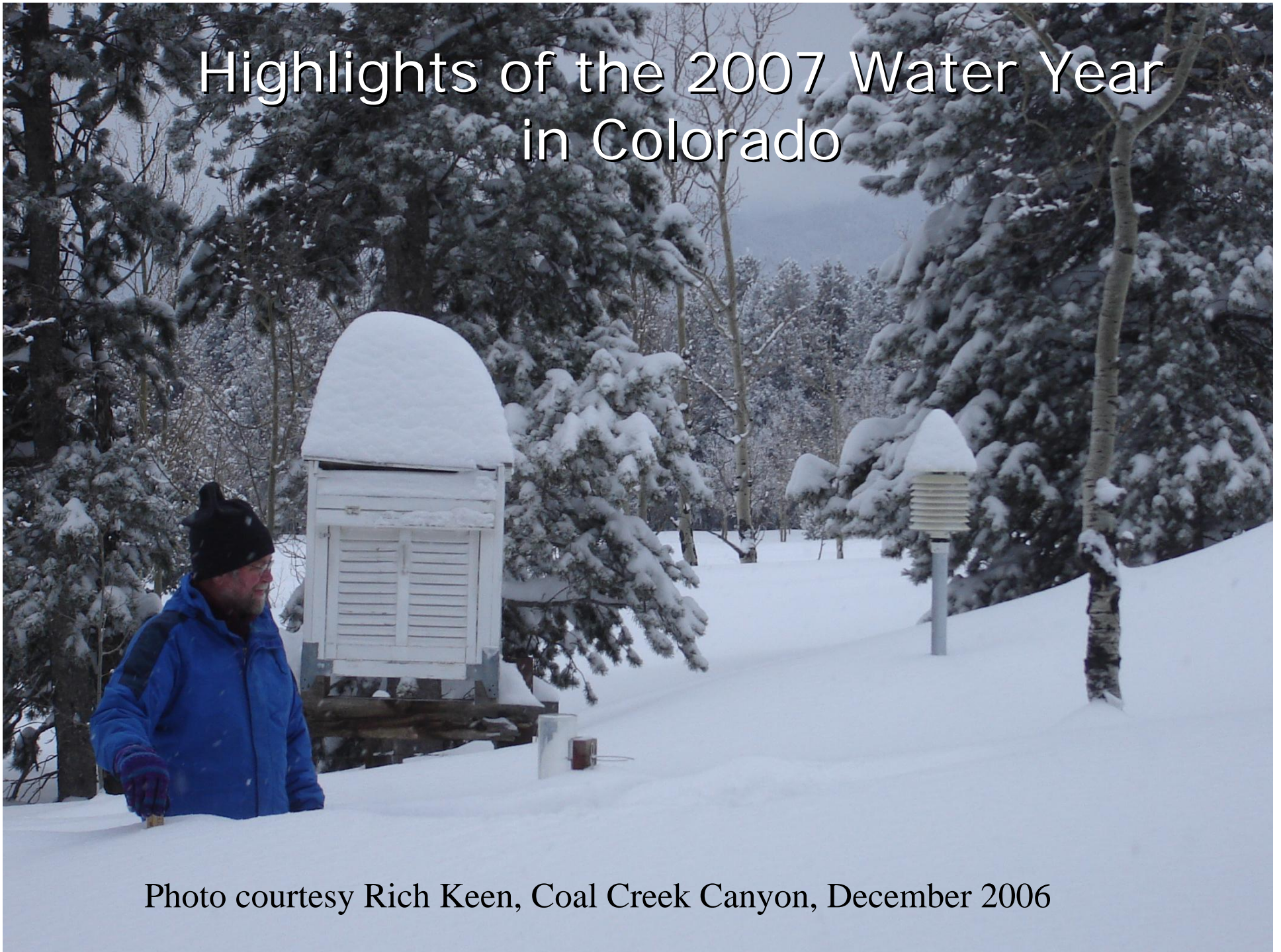


Photo courtesy Rich Keen, Coal Creek Canyon, December 2006

Colorado Snowcover

As of January 7, 2007

Wyoming

Colorado

Nebraska

— Denver

Kansas

Arkansas River

http://rapidfire.sci.gsfc.nasa.gov/subsets/?AERONET_BSRN_BAO_Boulder

50 km

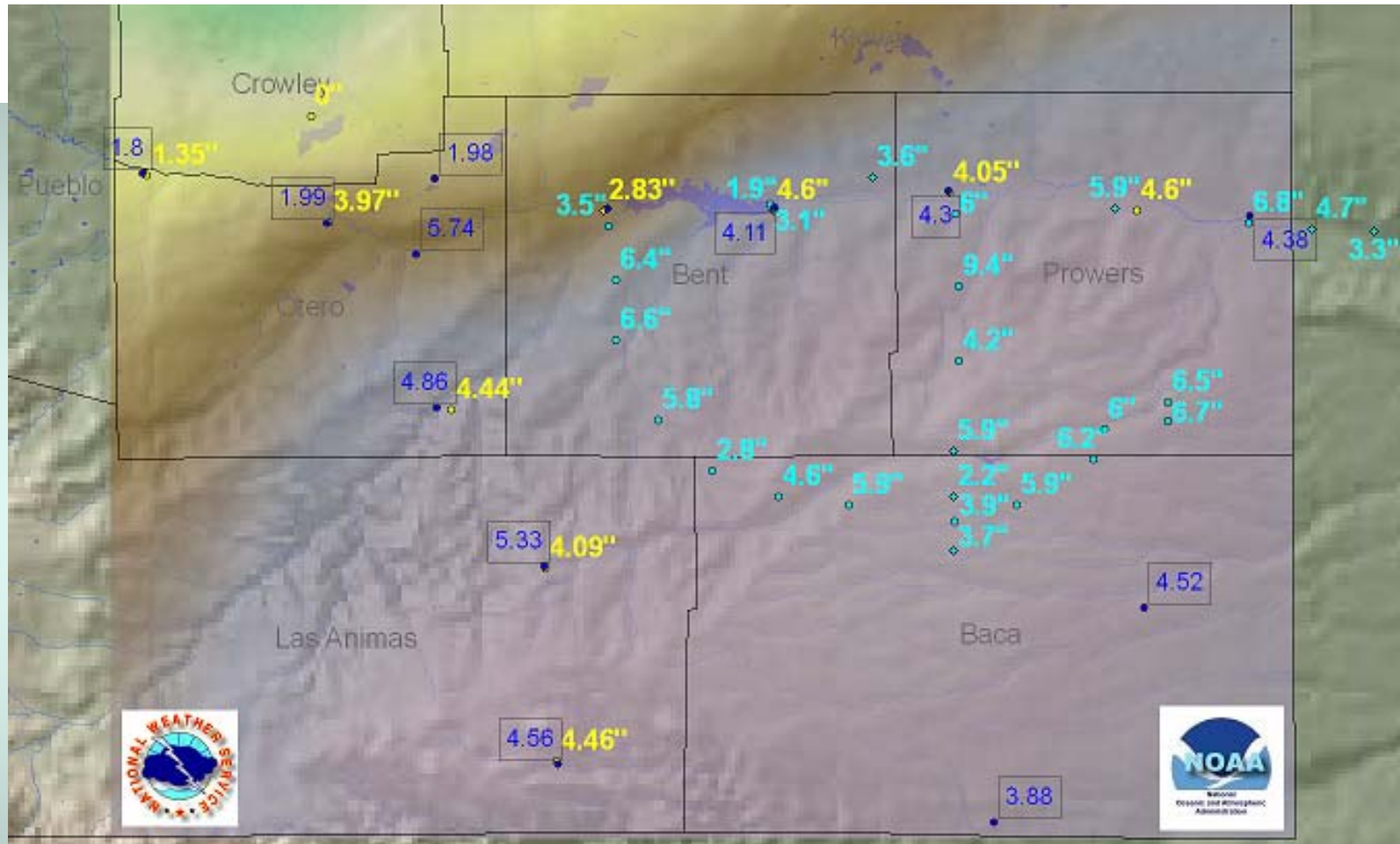


Colorado Snowcover

As of February 15, 2007

http://rapidfire.sci.gsfc.nasa.gov/subsets/?AERONET_BSRN_BAO_Boulder

Water in the Snowpack during early February and the Total Precipitation for the months of December and January



Yellow - water equivalent measured by coring/melting as reported by Cooperative Observers

Light Blue - water equivalent measured by coring/weighing as reported by NWS employees

Boxed - total precipitation for December and January as reported by Cooperative Observers

http://www.crh.noaa.gov/crnews/display_story.php?wfo=pub&storyid=5870&source=0

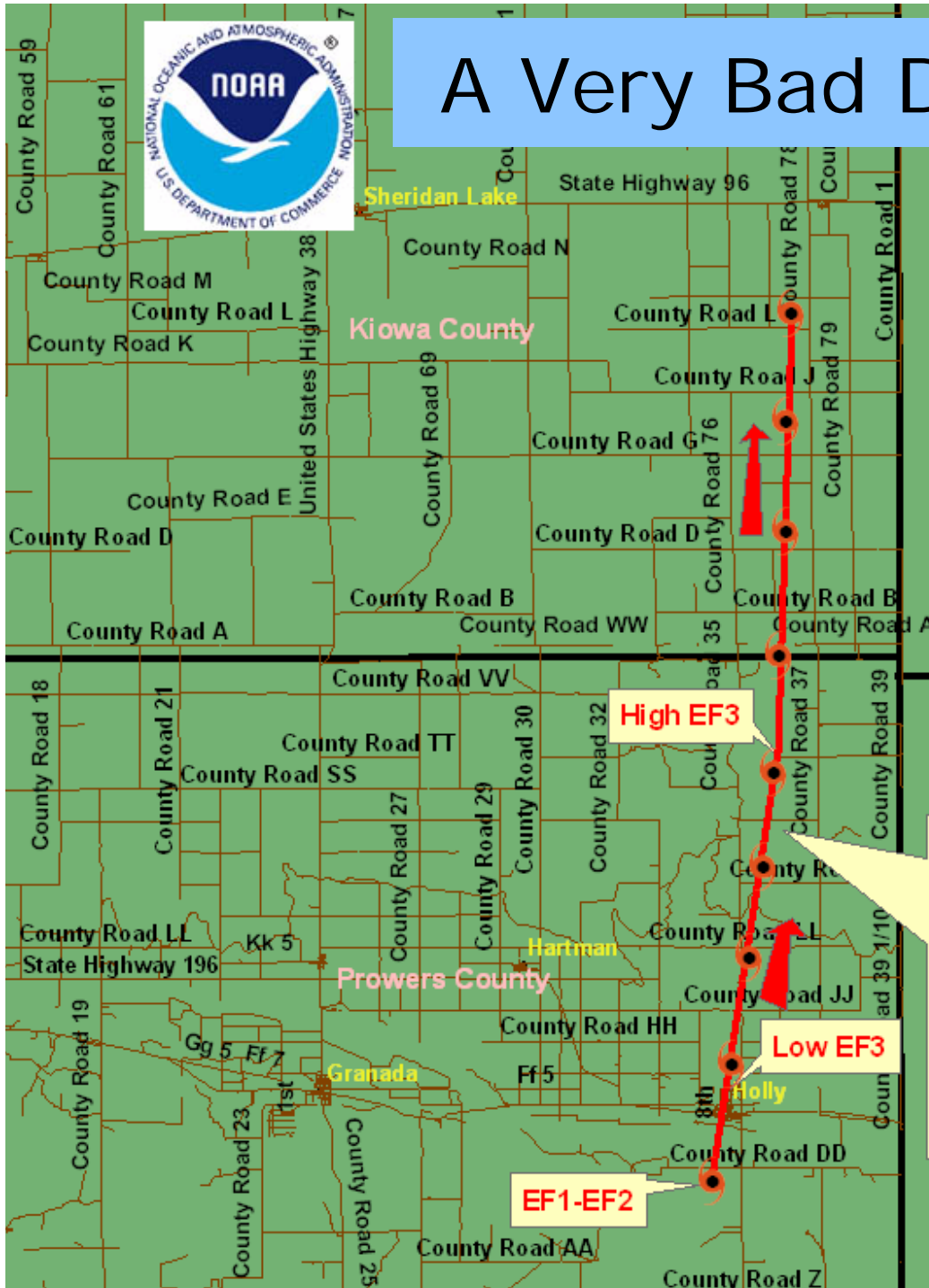


A Very Bad Day – Holly Tornado

March 28, 2007

Horace Tribune

Enhanced Fujita Scale (MPH)
EF0 = 65-85
EF1 = 86-110
EF2 = 111-135
EF3 = 136-165
EF4 = 166-200
EF5 = >200



High EF3

Low EF3

EF1-EF2

The Holly Tornado was on the ground for an estimated 25-30 minutes covering an estimated distance of 28 miles. In Holly, the tornado reached a peak Enhanced Fujita Scale rating on the low end of the EF3 range. Over the lifetime of the storm, the tornado reached a peak intensity on the high end of the EF3 range about 12 miles north of Holly.

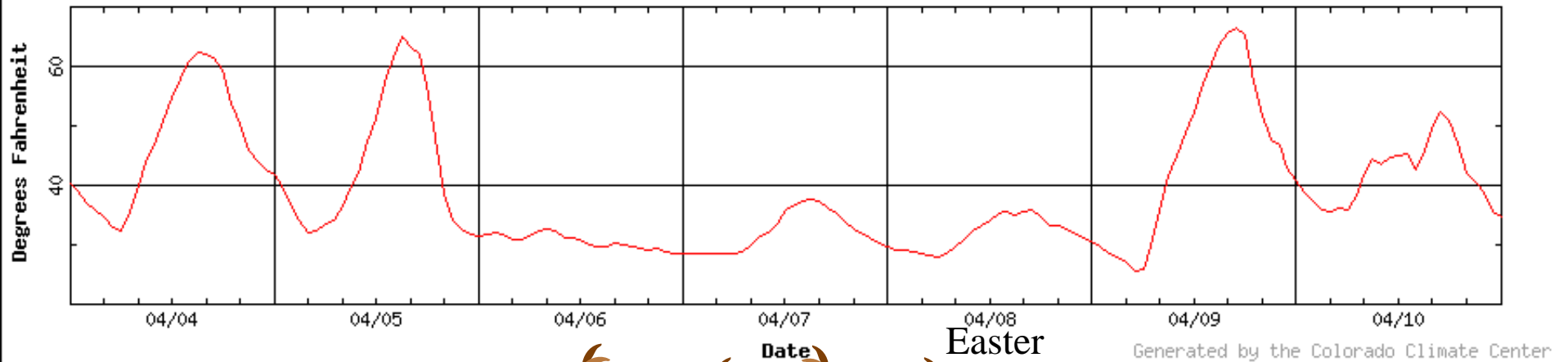
0 5 10 15 20 Miles

A Cold Easter



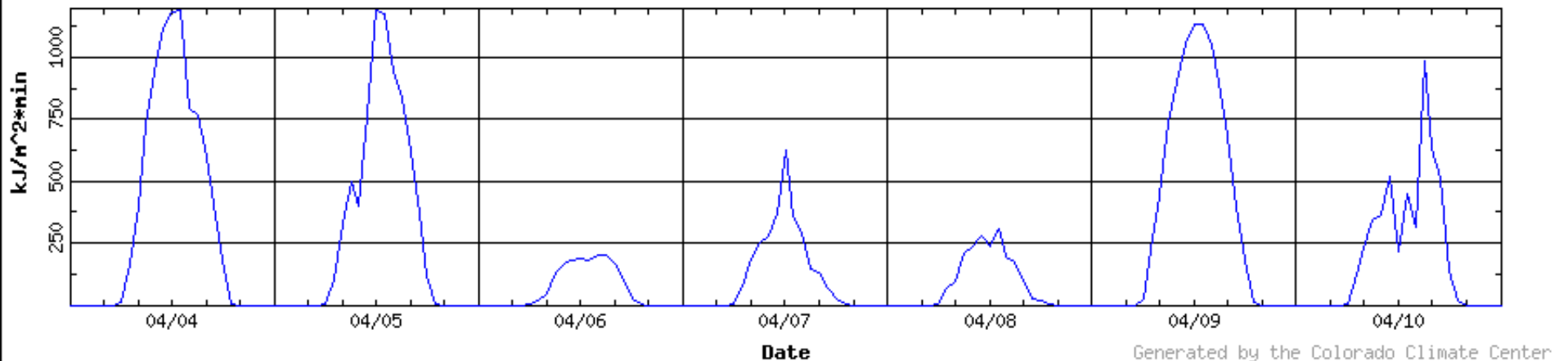
Rocky Ford COAGMET

Temperature for RFD01 (04-04-2007 - 04-11-2007)



Rocky Ford COAGMET

Solar Radiation for RFD01 (04-04-2007 - 04-11-2007)



Highlights of Water Year 2007

- Wet October 2006
- December 2006 Snowstorms
- Persisting snowcover and cold (E. Plains)
- Holly tornado March 28, 2007
- Early snowmelt and dry May 07
- Hot summer with spotty storms
- September rains especially West Slope



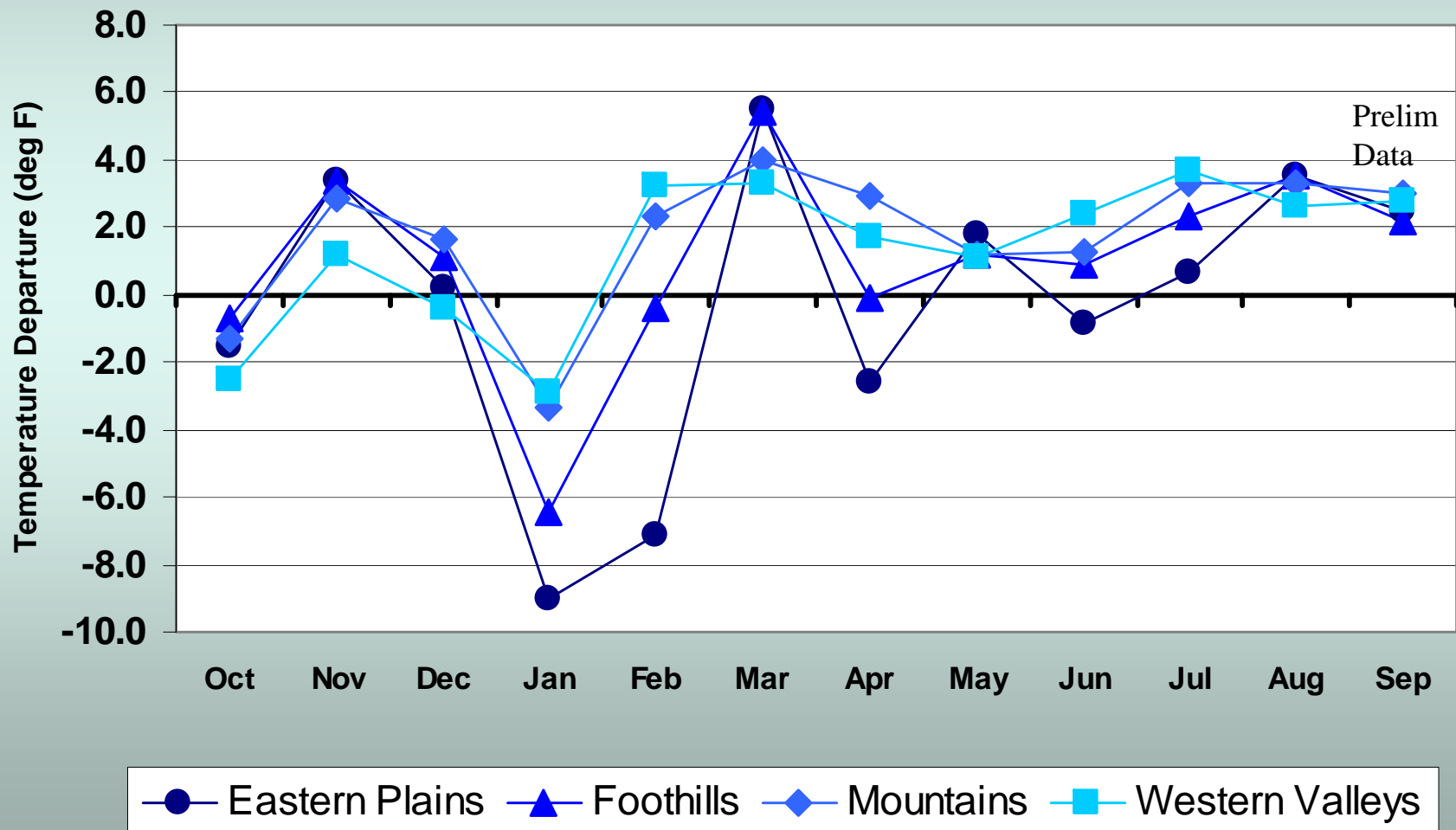
A closer look at the climate of the 2007 Water Year in Colorado



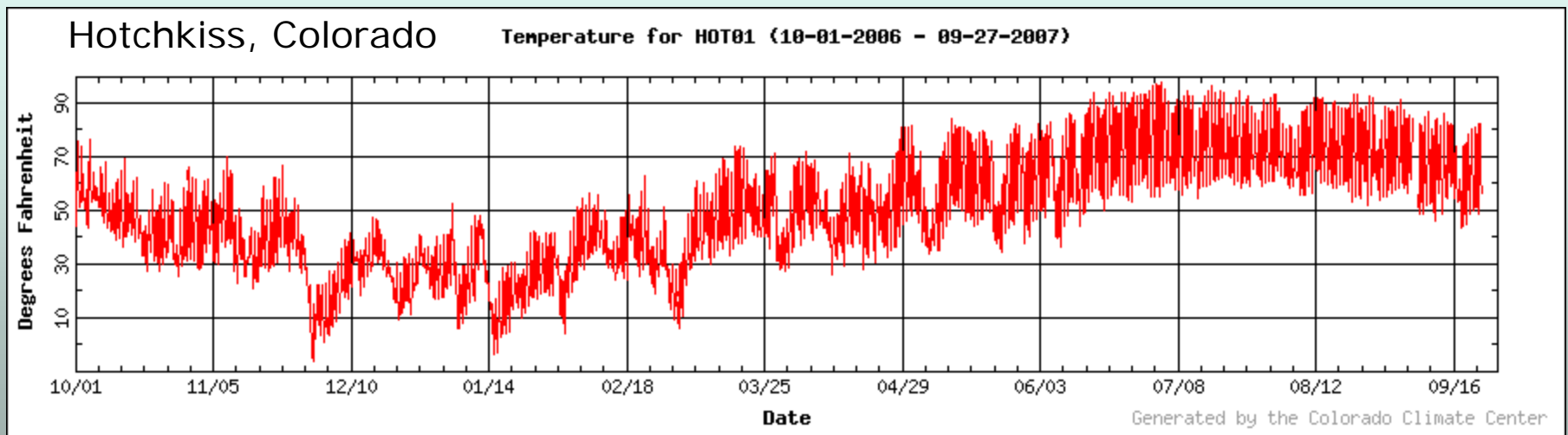
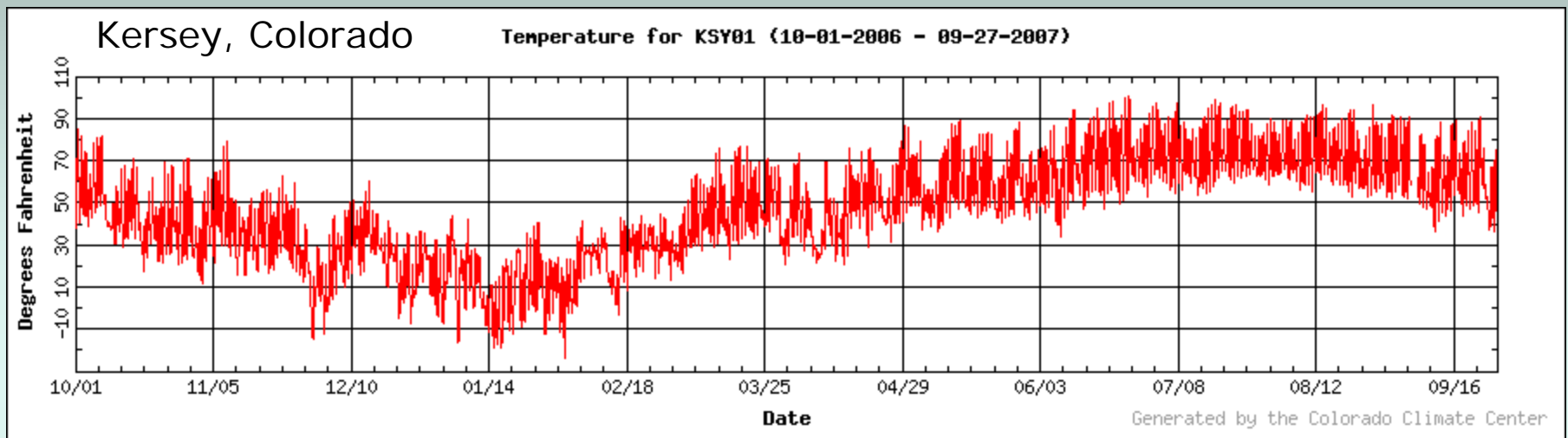
Sunset, November 2006

Water Year 2007 Temperature Departures from 1971-2000 average

Water Year 2007 Temperature Departures

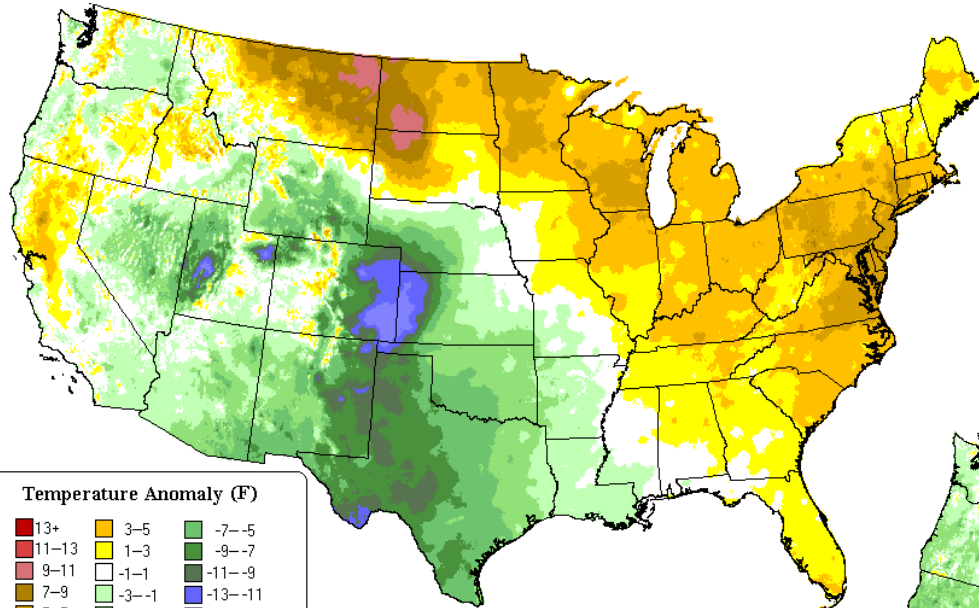


CoAgMet Temperatures



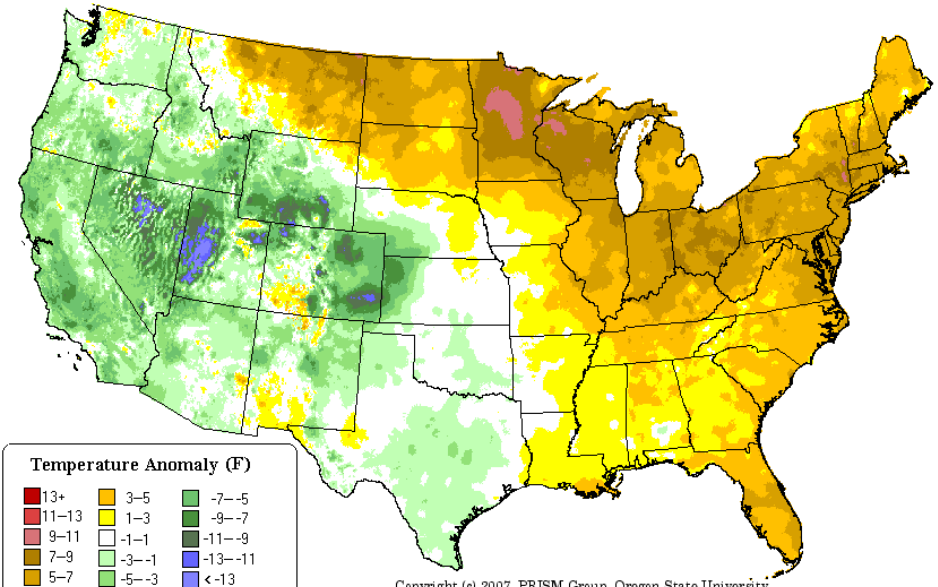
January 2007 temperature departure from average (Prism)

Maximum Temperature Anomaly: Jan 2007
Final Data



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<http://www.prismclimate.org> - Map created Jun 12 2007

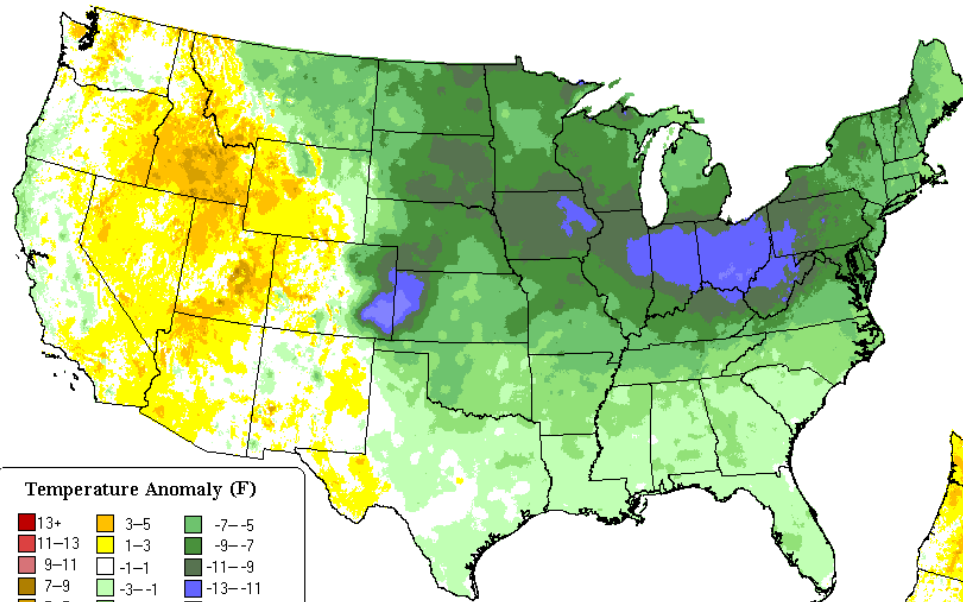
Minimum Temperature Anomaly: Jan 2007
Final Data



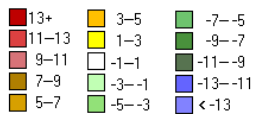
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<http://www.prismclimate.org> - Map created Jun 12 2007

February 2007 temperature departure from average (Prism)

Maximum Temperature Anomaly: Feb 2007
Final Data

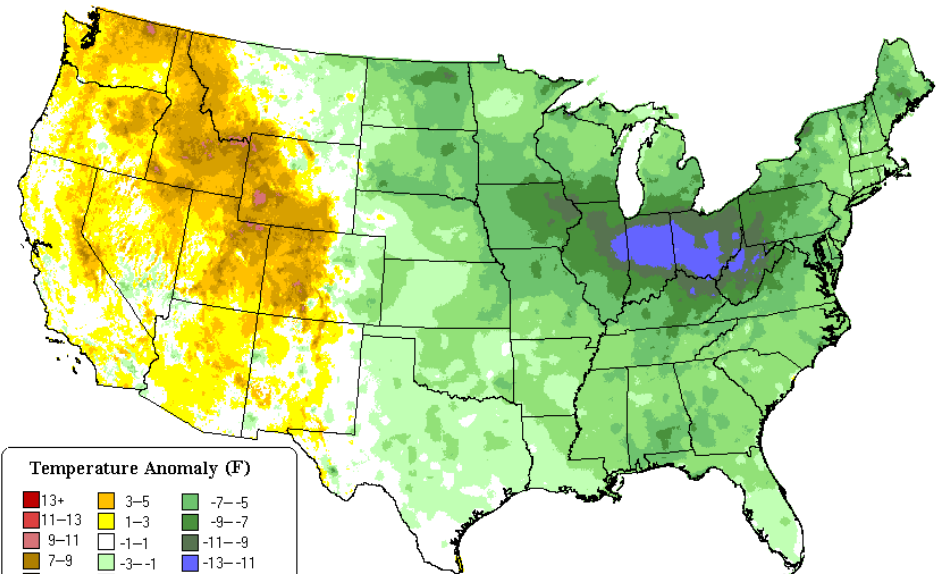


Temperature Anomaly (F)

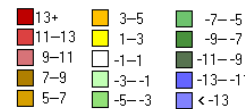


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Minimum Temperature Anomaly: Feb 2007
Final Data



Temperature Anomaly (F)



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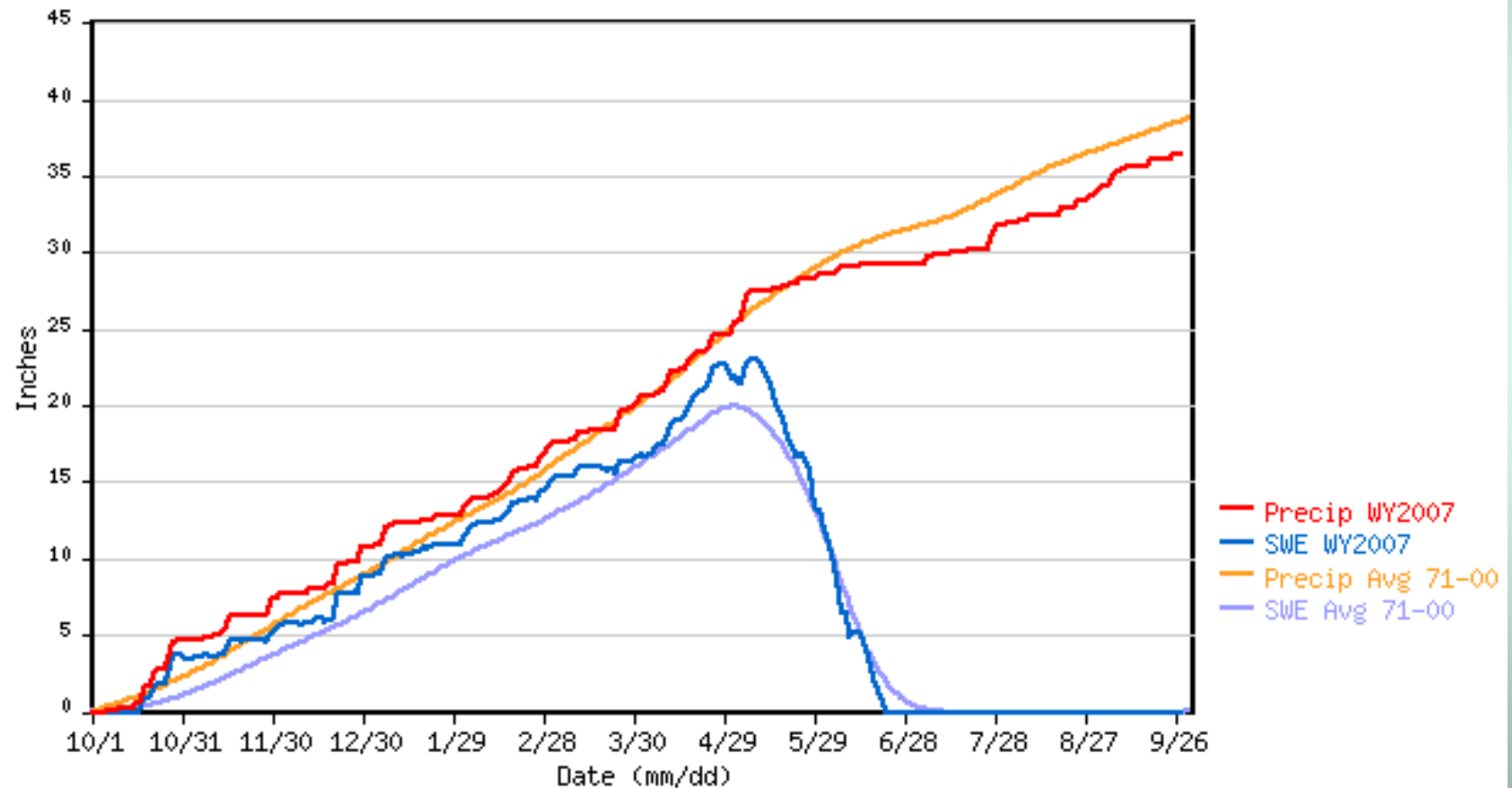
WY2007 Snowpack Accumulation and Meltout



University Camp Snotel

UNIVERSITY CAMP SNOTEL for Water Year 2007

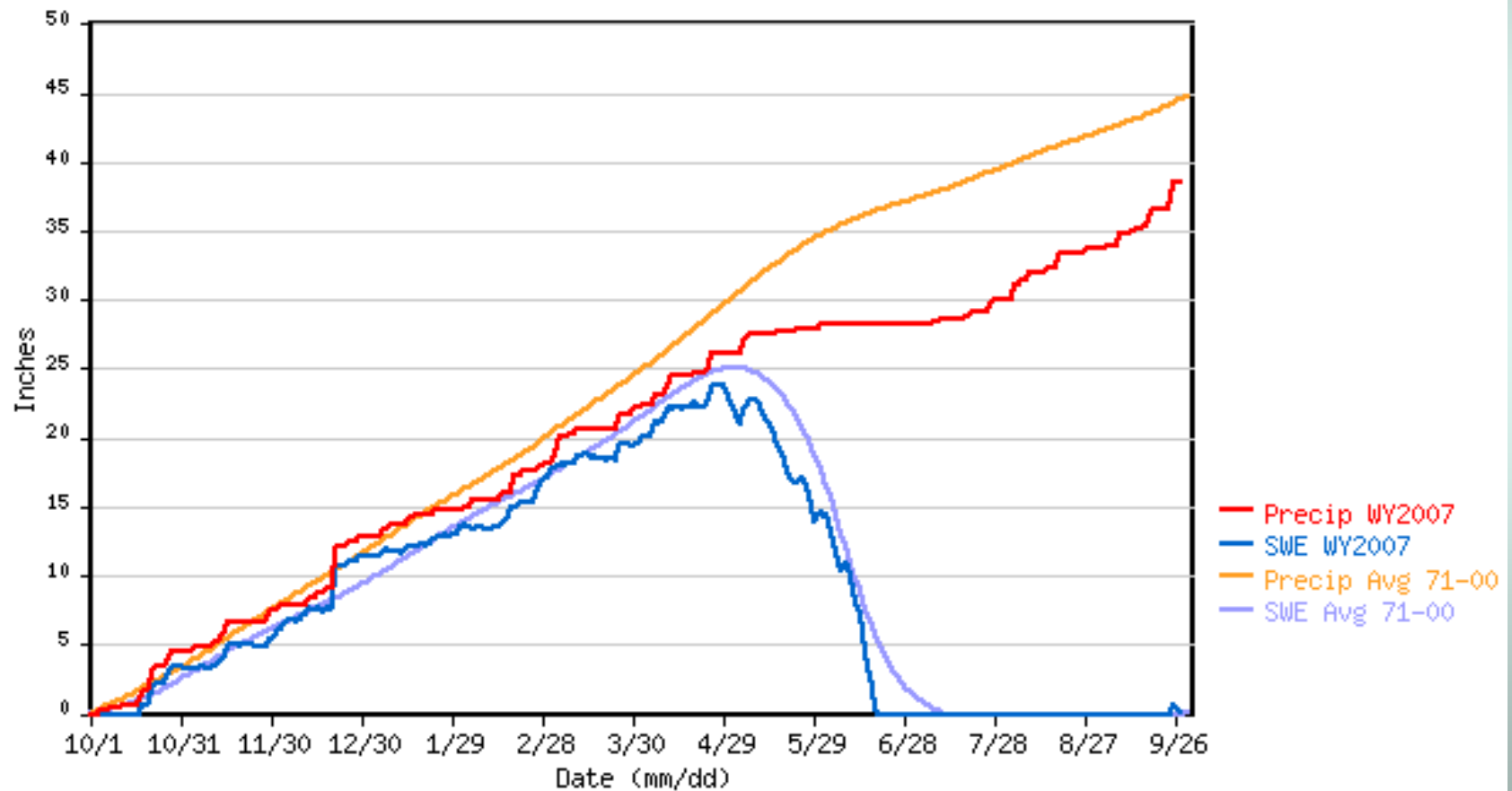
*** Provisional Data, Subject to Change ***



Joe Wright Reservoir Snotel

JOE WRIGHT SNOTEL for Water Year 2007

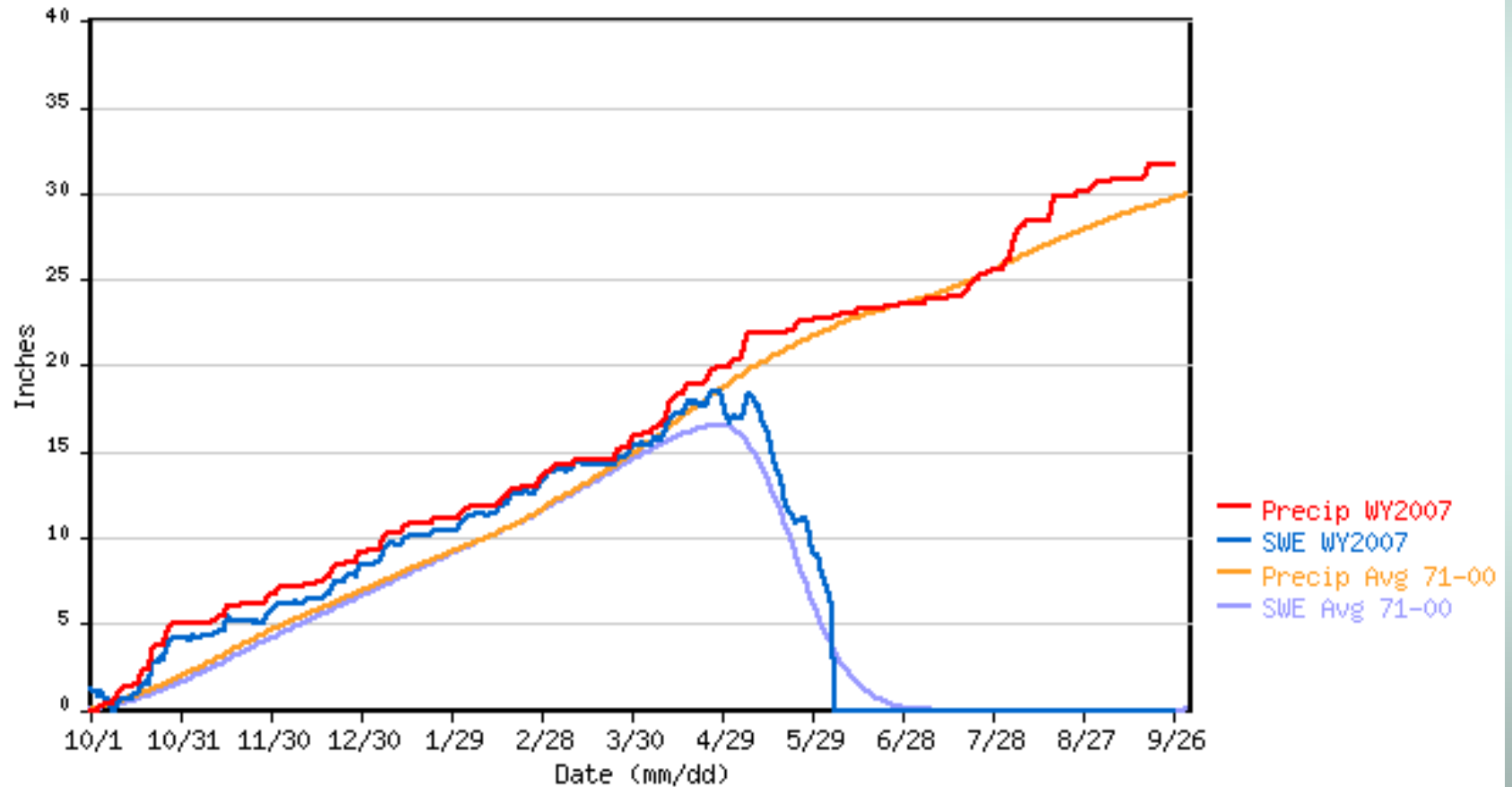
*** Provisional Data, Subject to Change ***



Hoosier Pass Snotel

HOOSIER PASS SNOTEL for Water Year 2007

*** Provisional Data, Subject to Change ***

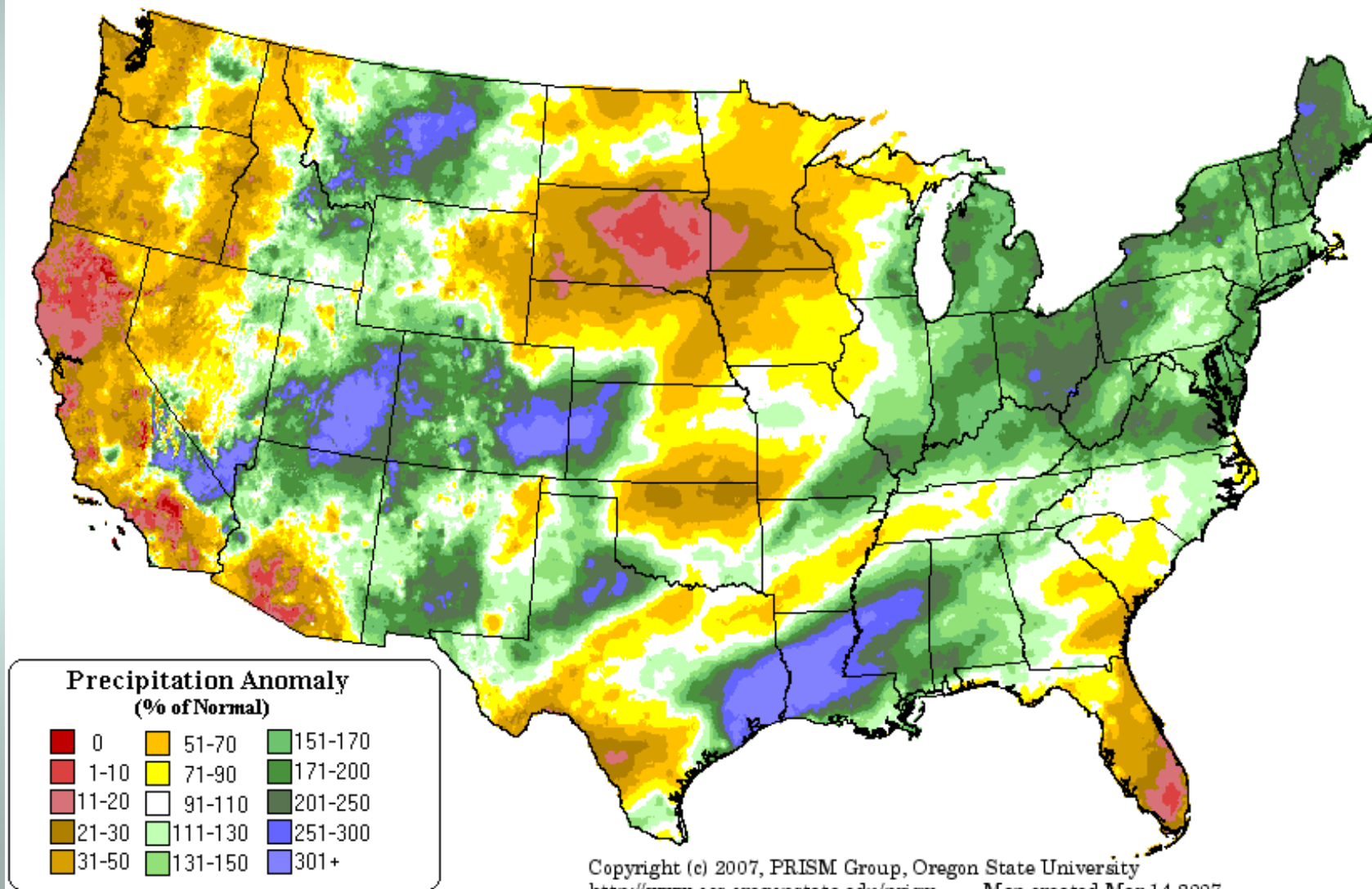


Month by Month Precipitation



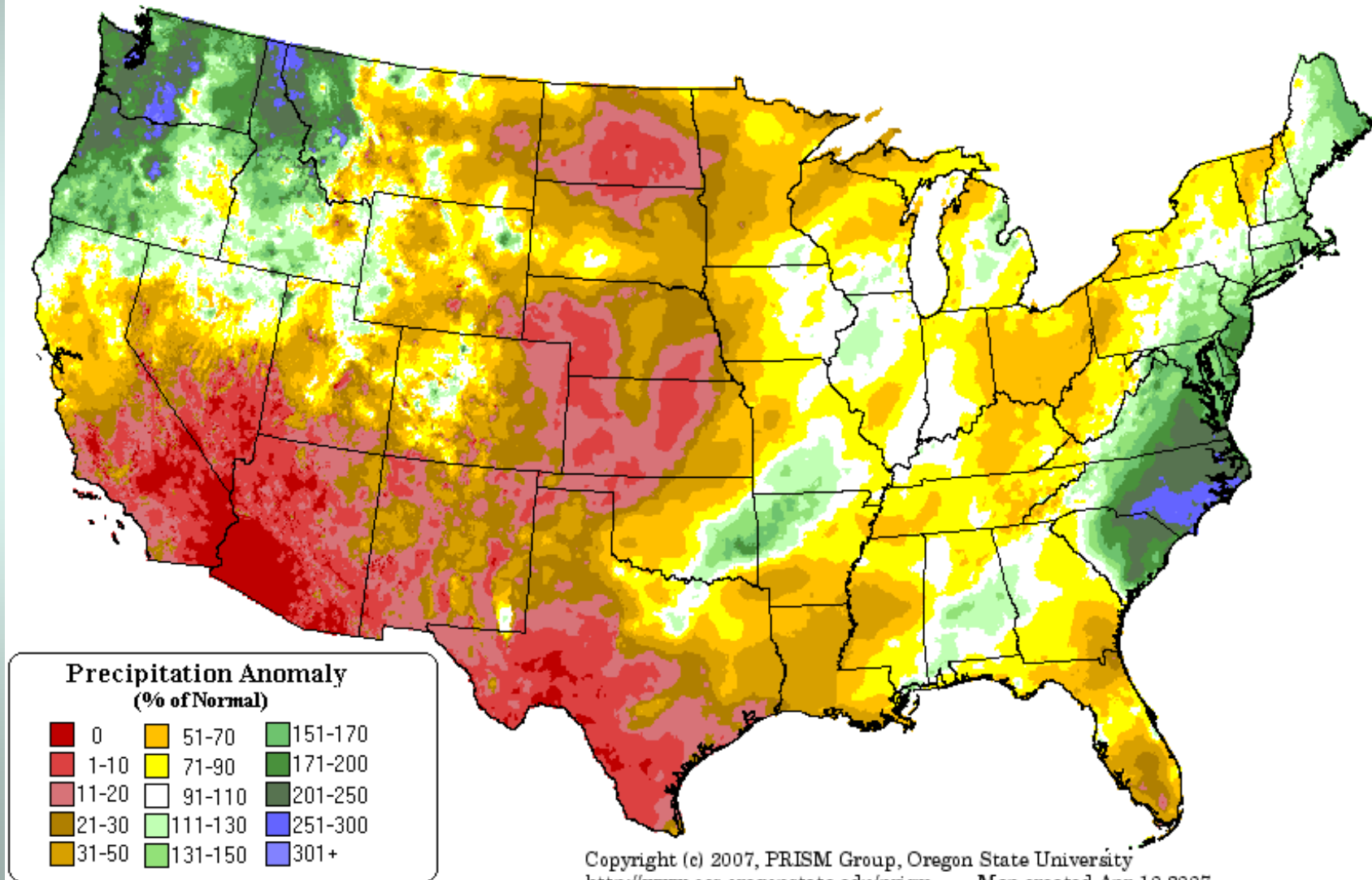
October 2006 precipitation as percent of average (Prism)

Precipitation Anomaly: Oct 2006 Final Data



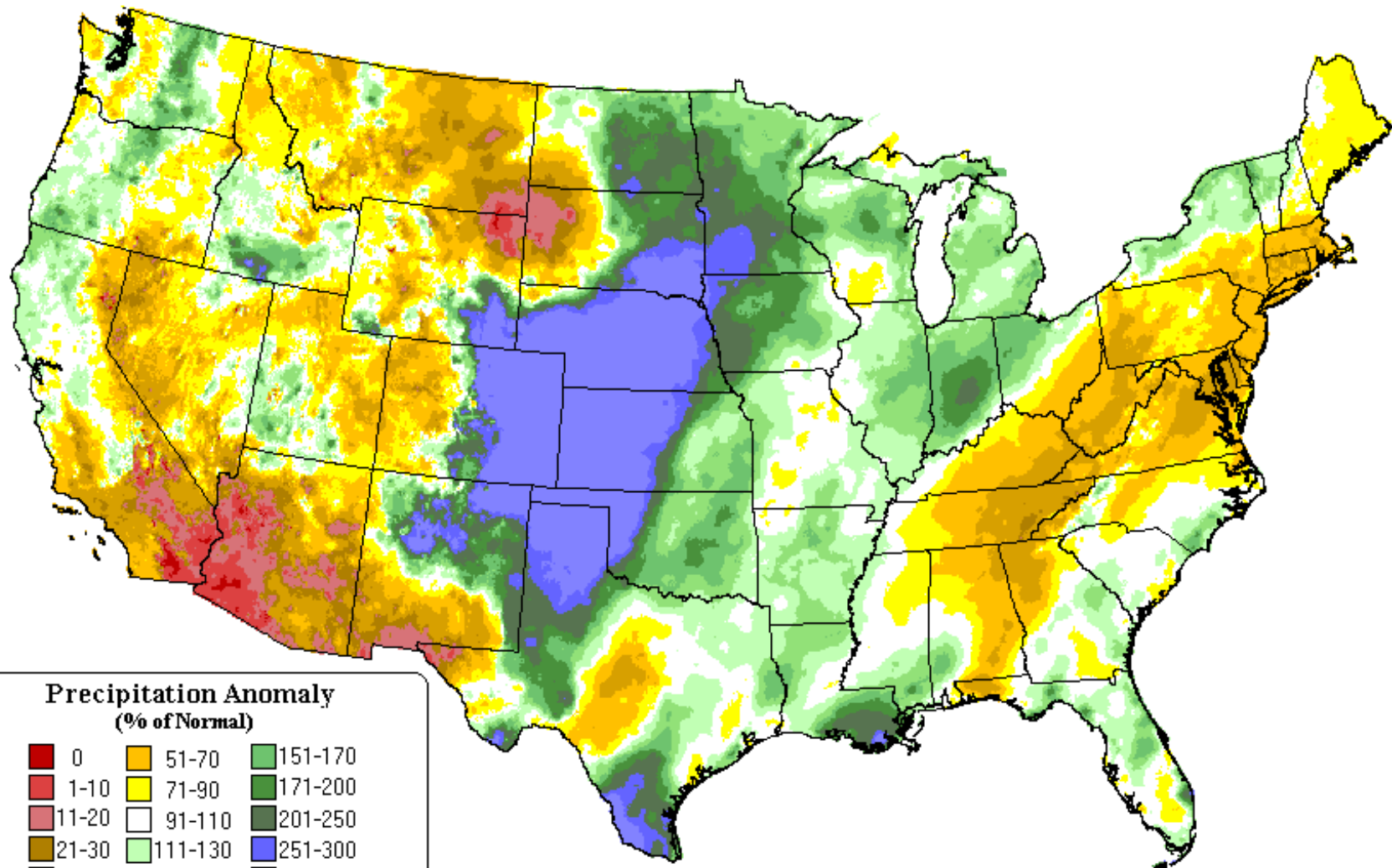
November 2006 precipitation as percent of average (Prism)

Precipitation Anomaly: Nov 2006 Final Data

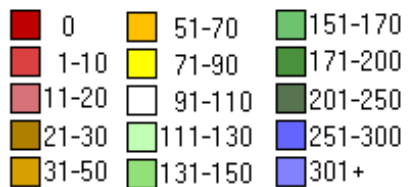


December 2006 precipitation as a percent of average (Prism)

Precipitation Anomaly: Dec 2006 Final Data



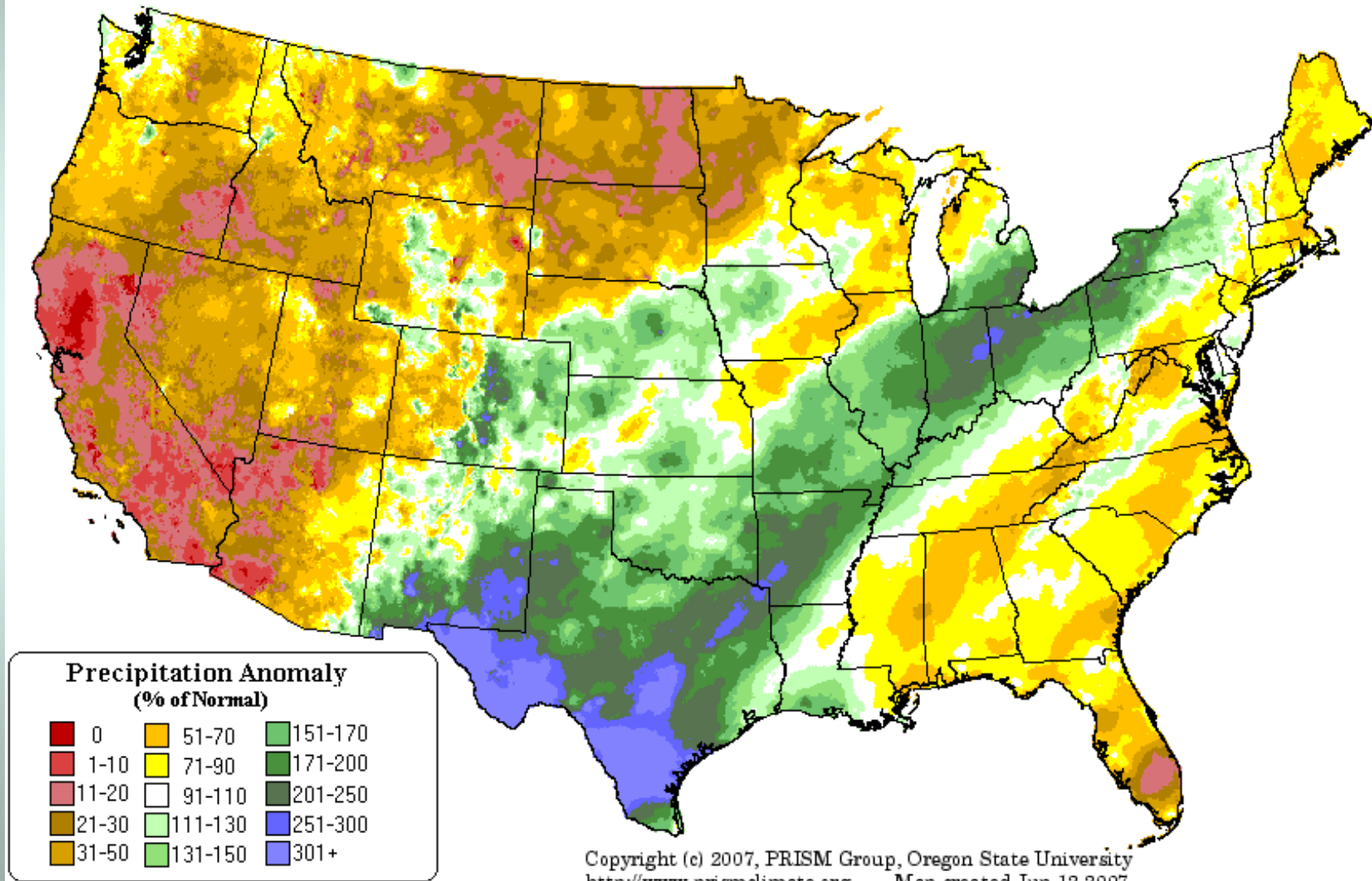
Precipitation Anomaly (% of Normal)



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<http://www.ocs.oregonstate.edu/prism> - Map created May 11 2007

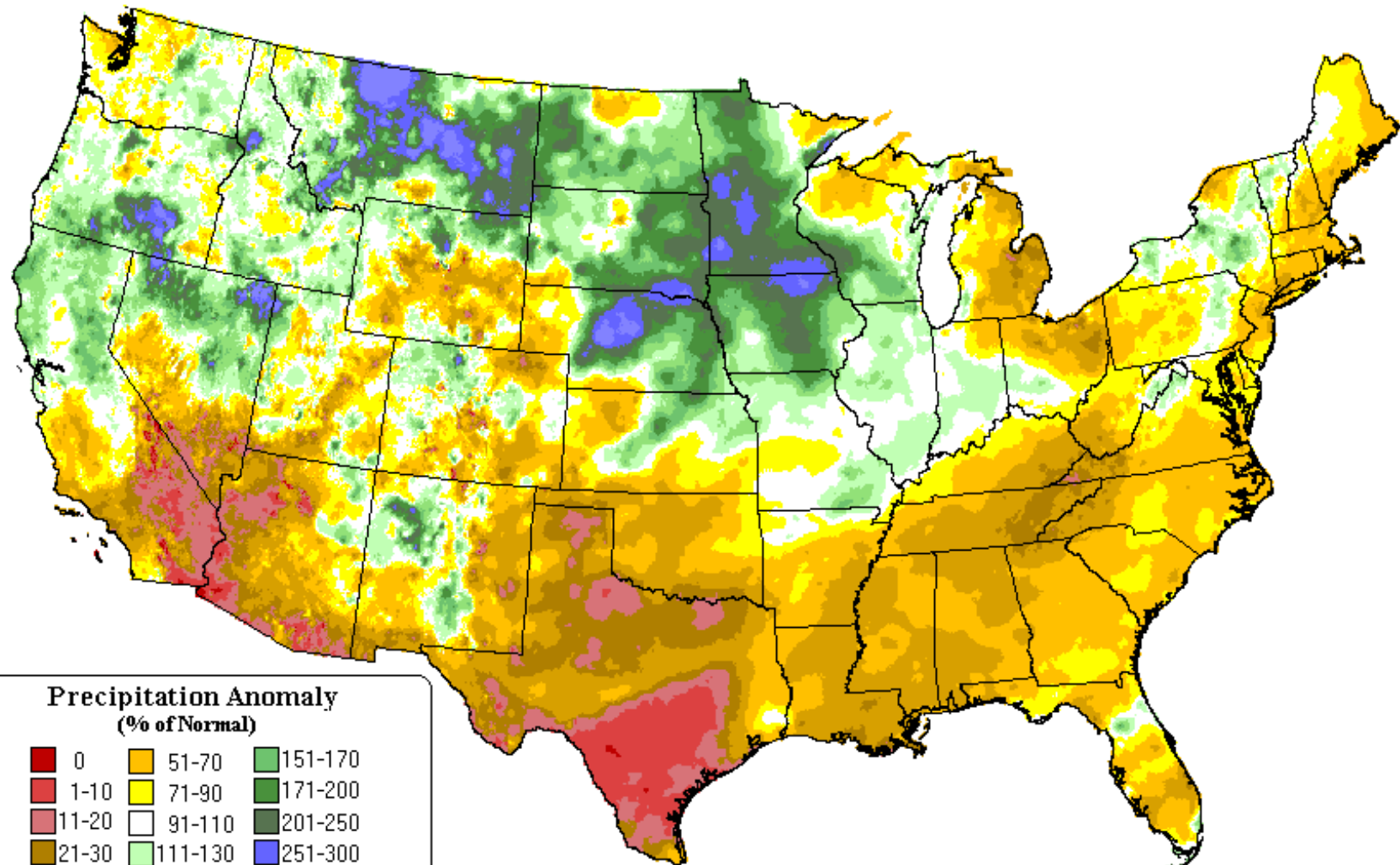
January 2007 precipitation as a percent of average (Prism)

Precipitation Anomaly: Jan 2007 Final Data



February 2007 precipitation as a percent of average (Prism)

Precipitation Anomaly: Feb 2007 Final Data



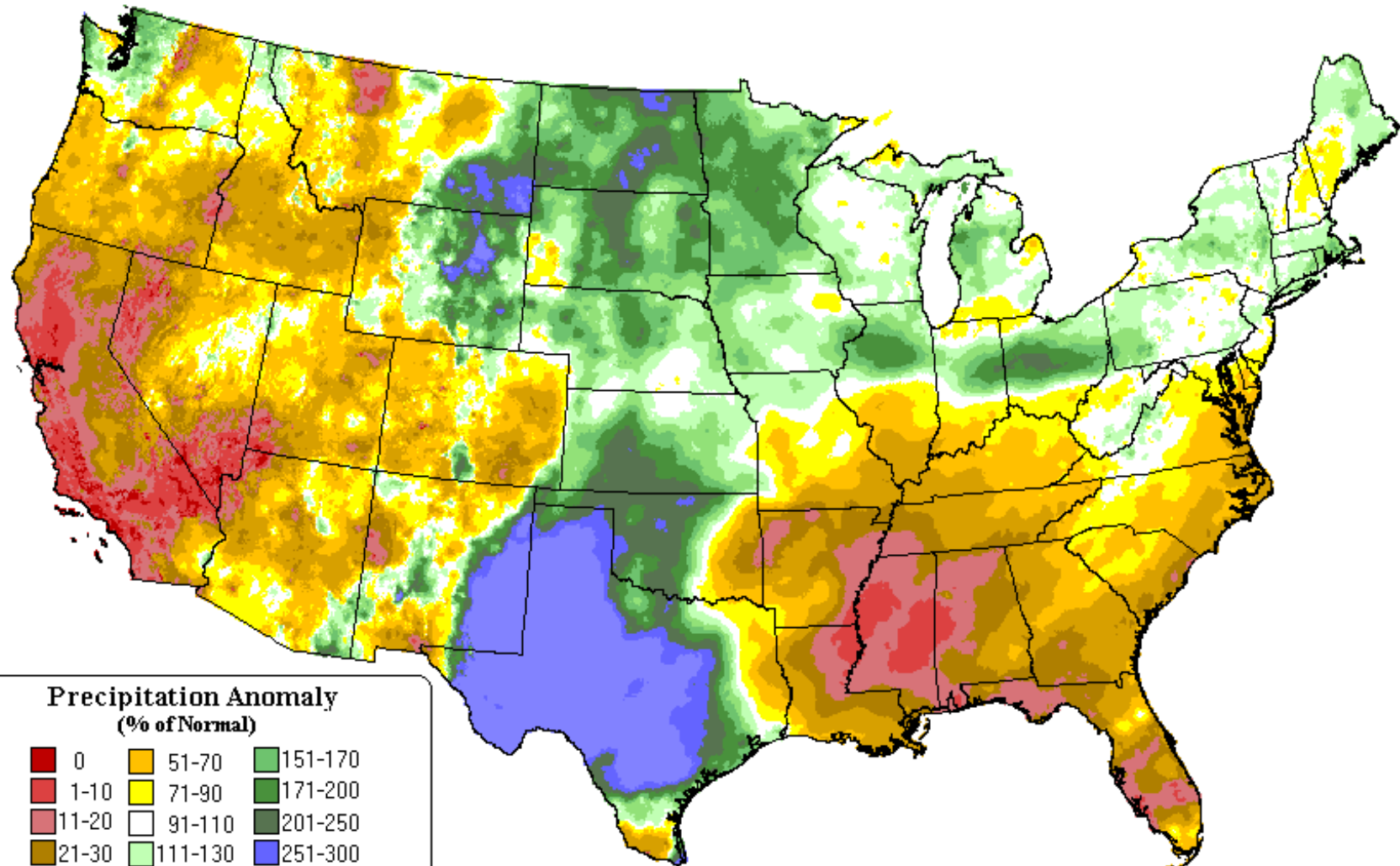
Precipitation Anomaly (% of Normal)

0	51-70	151-170
1-10	71-90	171-200
11-20	91-110	201-250
21-30	111-130	251-300
31-50	131-150	301+

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<http://www.prismclimate.org> - Map created Jul 12 2007

March 2007 precipitation as a percent of average (Prism)

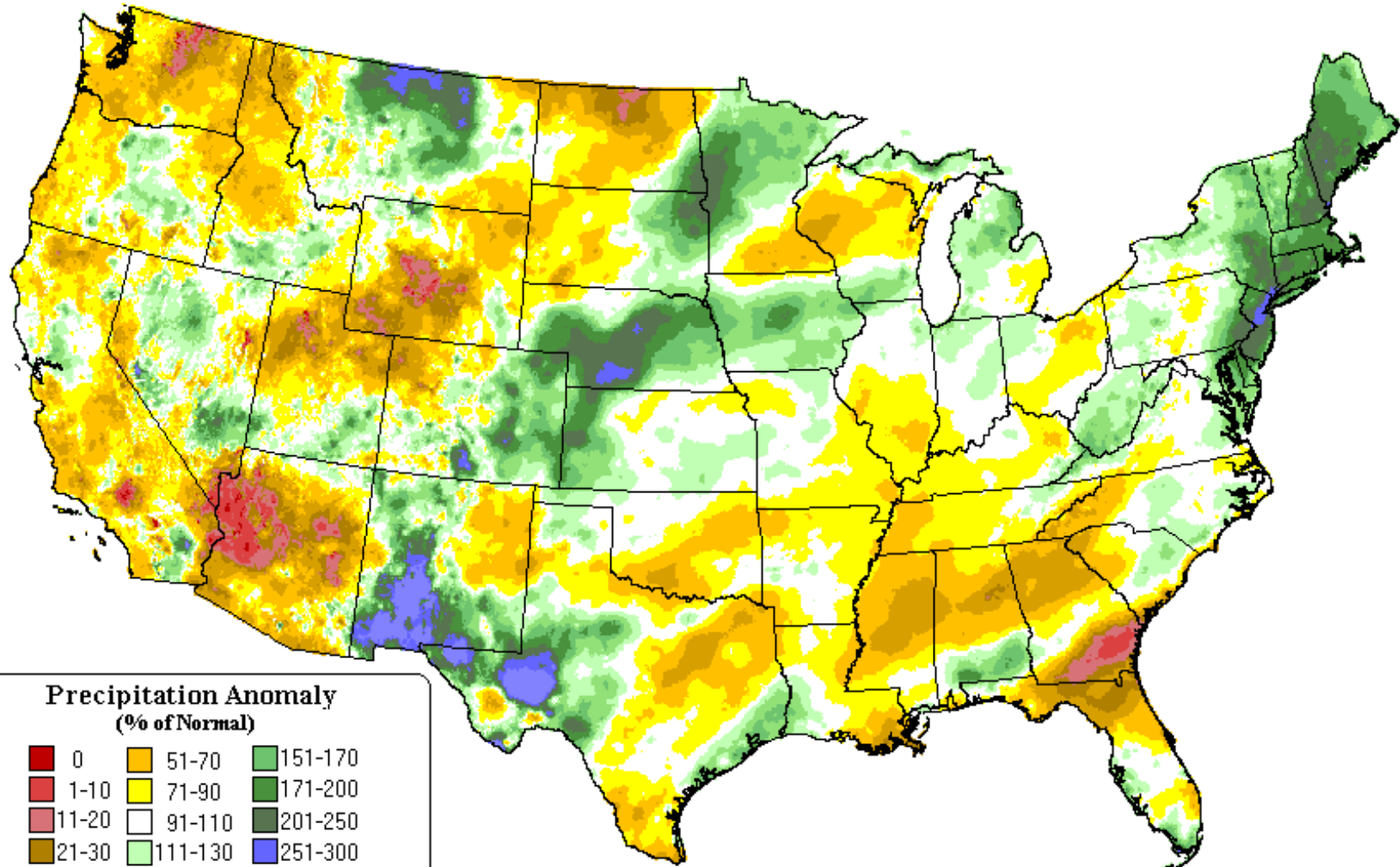
Precipitation Anomaly: Mar 2007 Final Data



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<http://www.prismclimate.org> - Map created Aug 09 2007

April 2007 precipitation as a percent of average (Prism)

Precipitation Anomaly: Apr 2007 Final Data



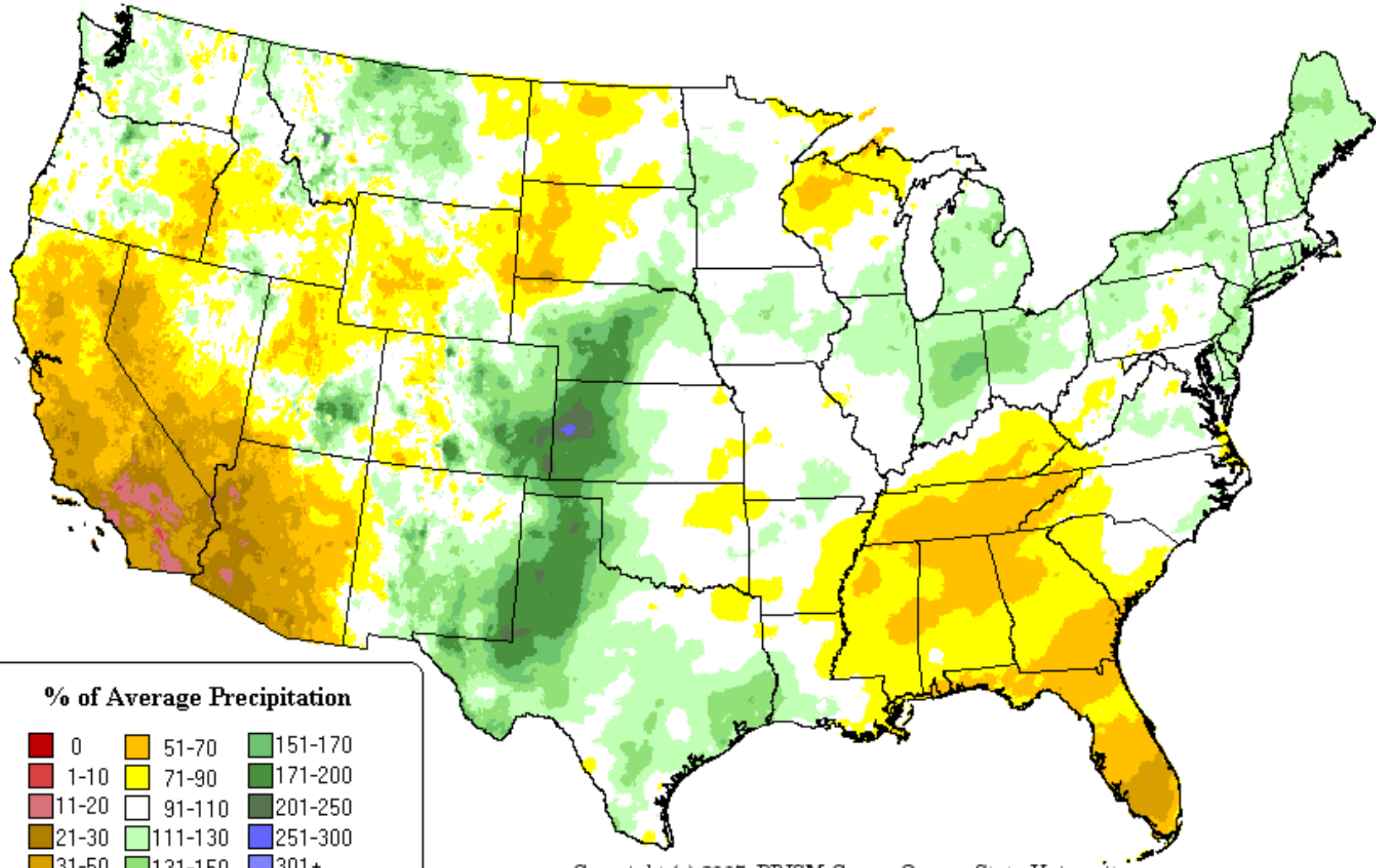
Precipitation Anomaly (% of Normal)

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1-10	71-90	171-200
11-20	91-110	201-250
21-30	111-130	251-300
31-50	131-150	301+

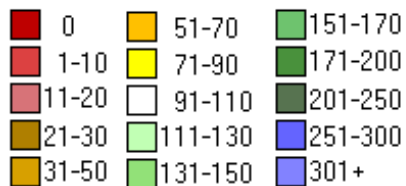
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<http://www.prismclimate.org> - Map created Sep 11 2007

Winter (Oct 2006 - April 2007) precipitation as percent of average

7-month Percent of Average Precipitation: Apr 2007
Provisional Data



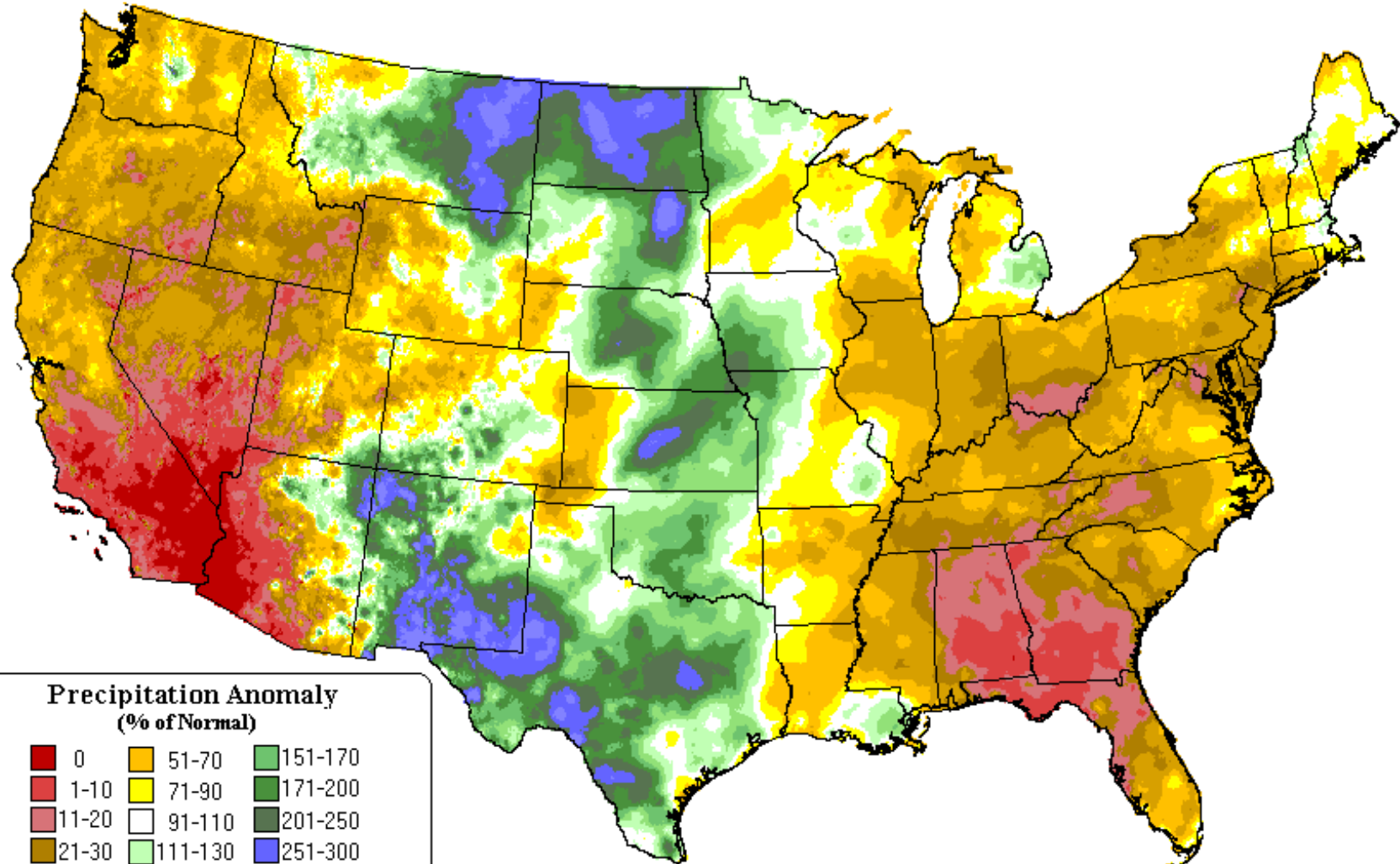
% of Average Precipitation



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<http://www.ocs.oregonstate.edu/prism> - Map created May 14 2007

May 2007 precipitation as a percent of average (Prism)

Precipitation Anomaly: May 2007 Preliminary Data



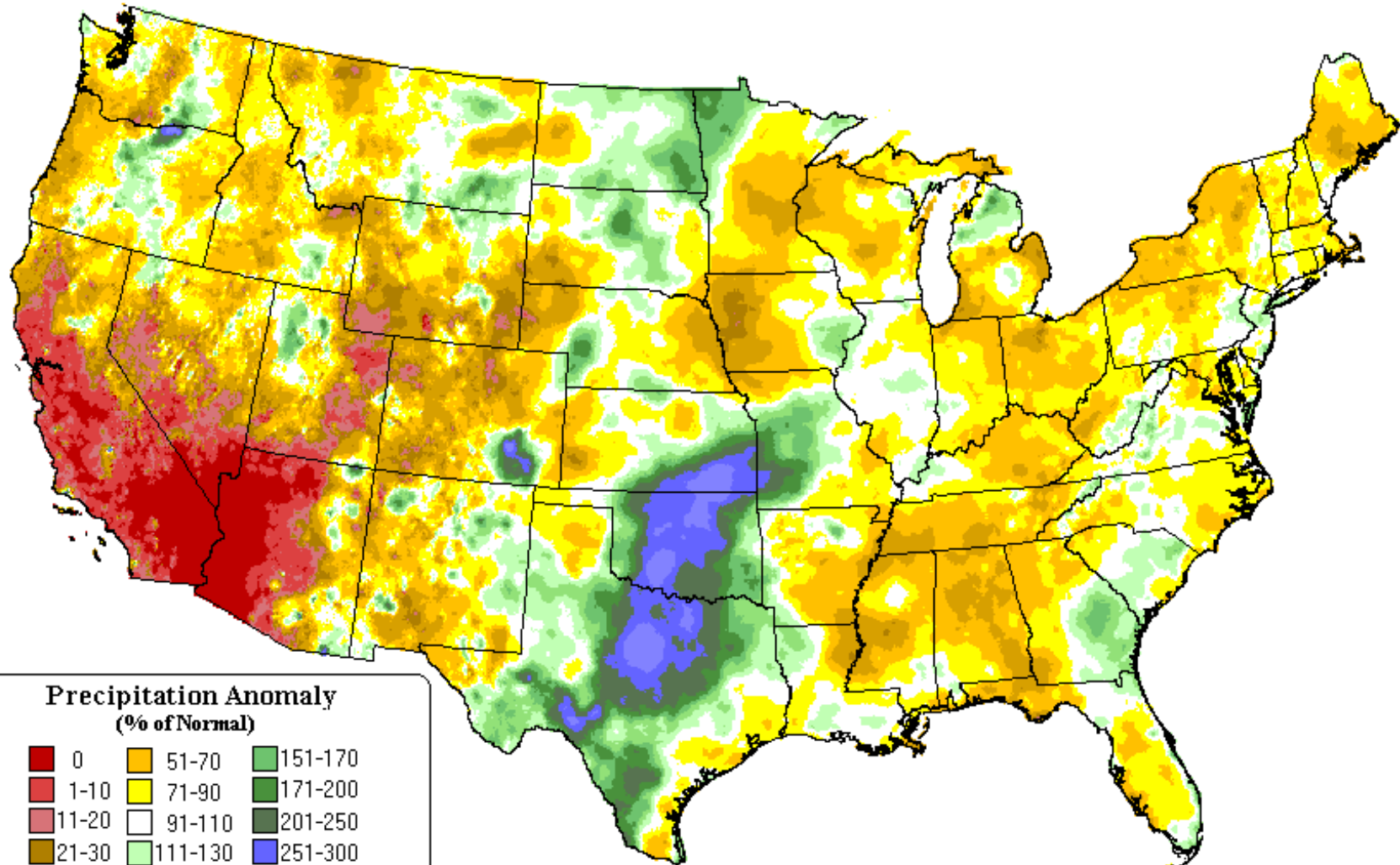
Precipitation Anomaly (% of Normal)

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1-10	71-90	171-200
11-20	91-110	201-250
21-30	111-130	251-300
31-50	131-150	301+

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June 2007 precipitation as a percent of average (Prism)

Precipitation Anomaly: Jun 2007 Provisional Data



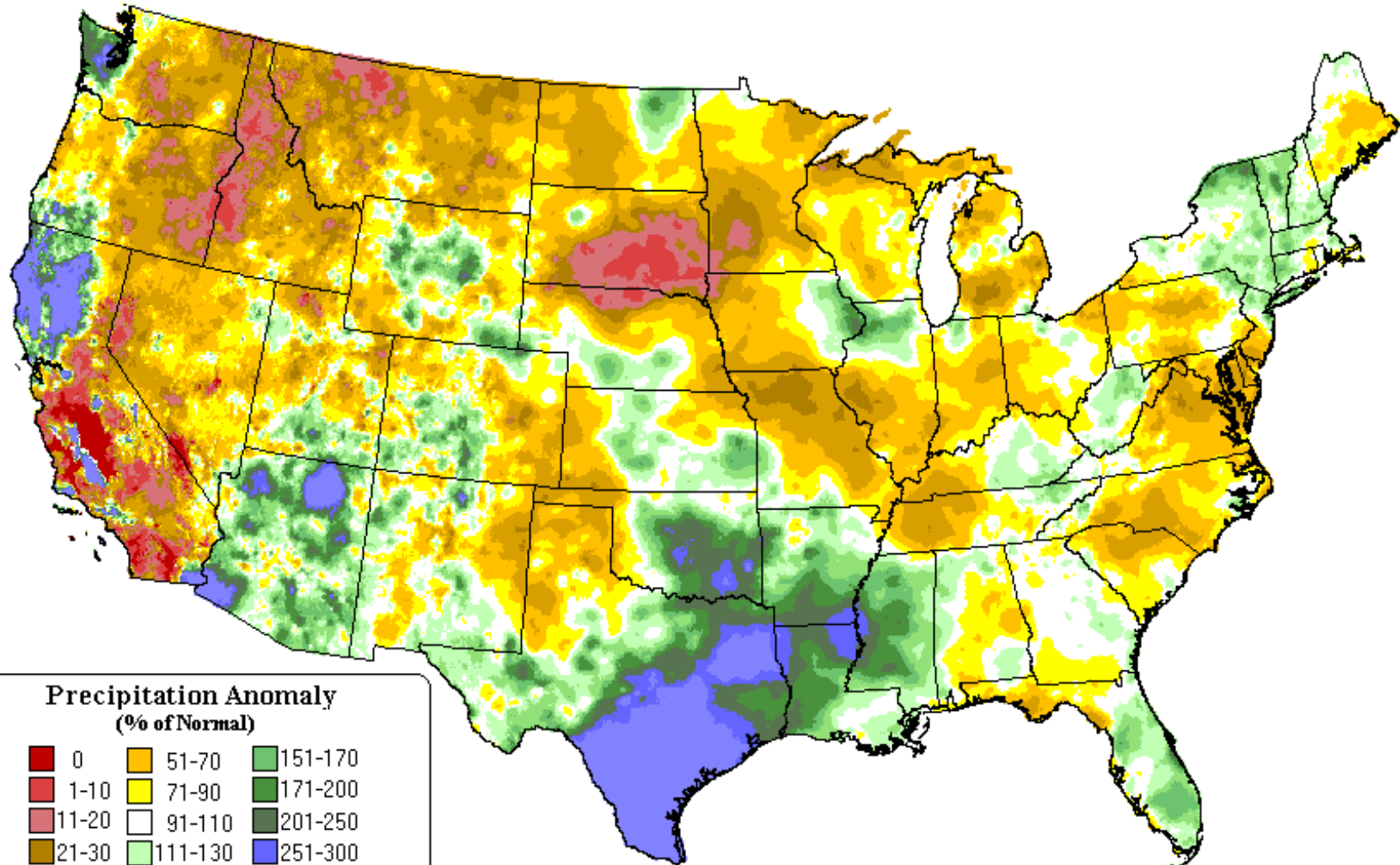
Precipitation Anomaly (% of Normal)

0	51-70	151-170
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11-20	91-110	201-250
21-30	111-130	251-300
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July 2007 precipitation as a percent of average (Prism)

Precipitation Anomaly: Jul 2007 Provisional Data



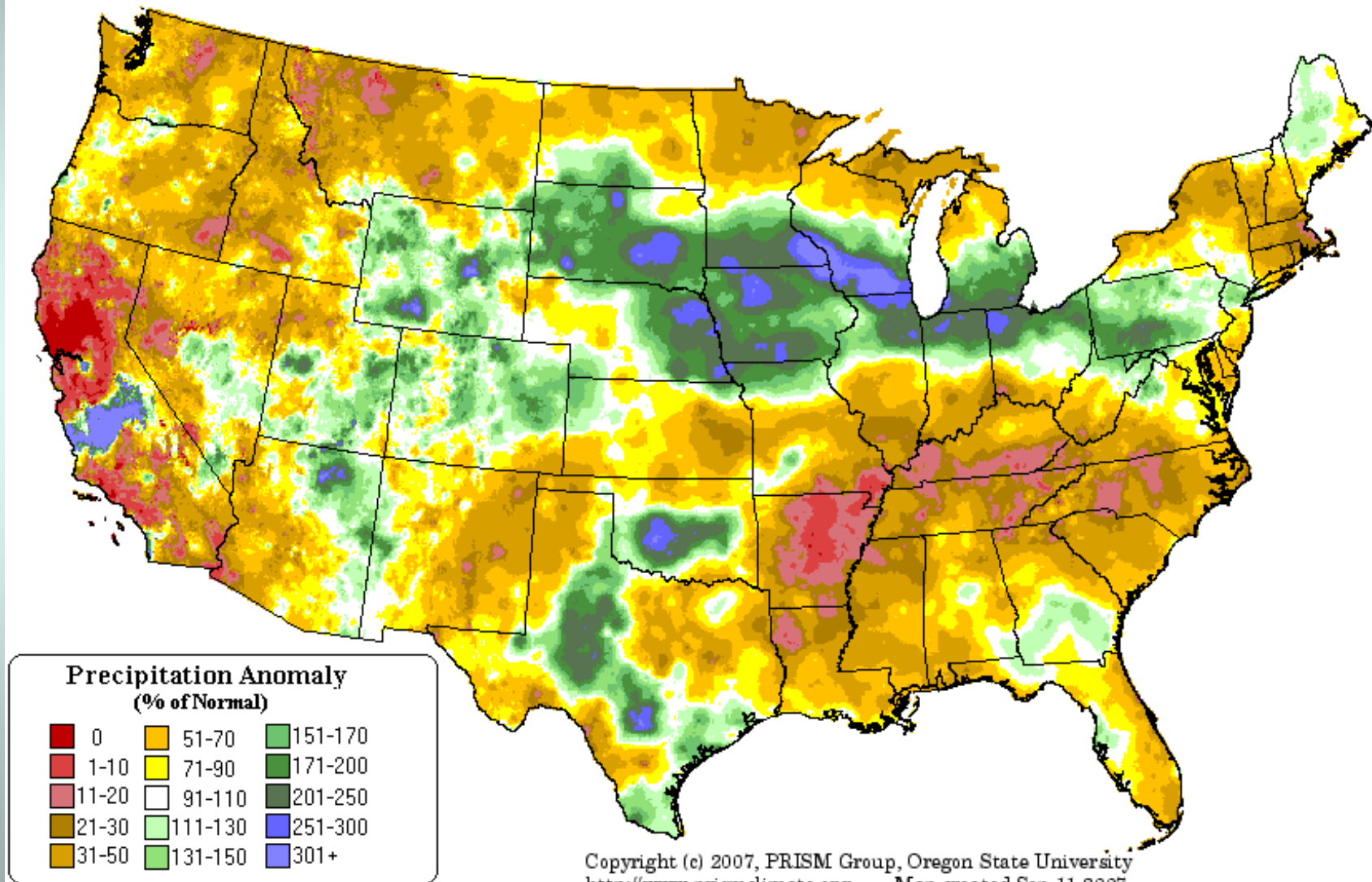
Precipitation Anomaly (% of Normal)

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11-20	91-110	201-250
21-30	111-130	251-300
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<http://www.prismclimate.org> - Map created Sep 11 2007

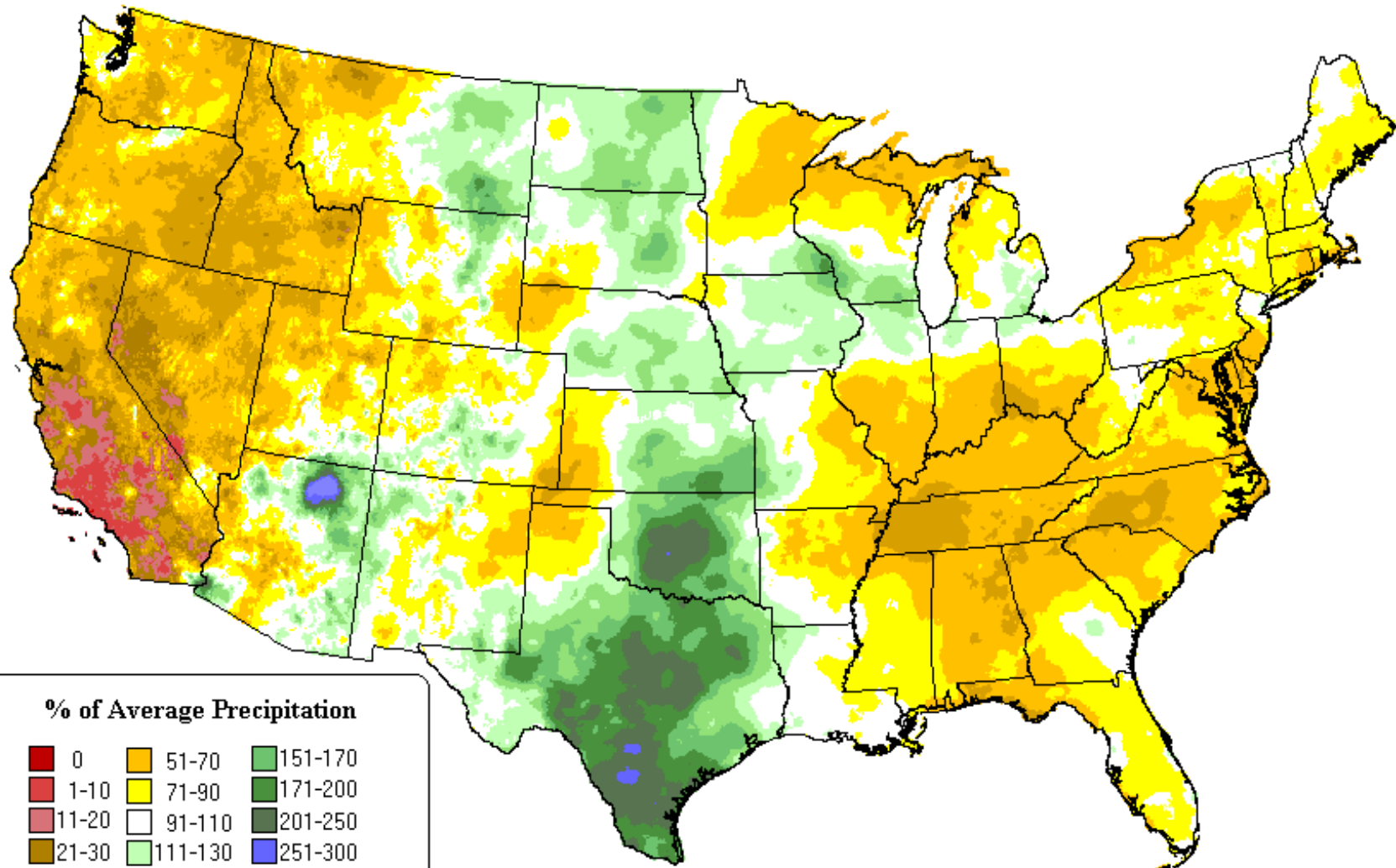
August 2007 precipitation as a percent of average (Prism)

Precipitation Anomaly: Aug 2007 Provisional Data

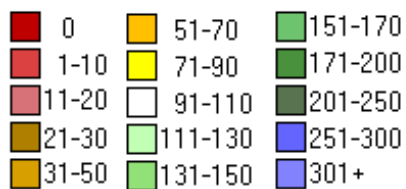


Summer 2007 (May–Aug) precipitation as a percent of average (Prism)

4-month Percent of Average Precipitation: Aug 2007
Provisional Data

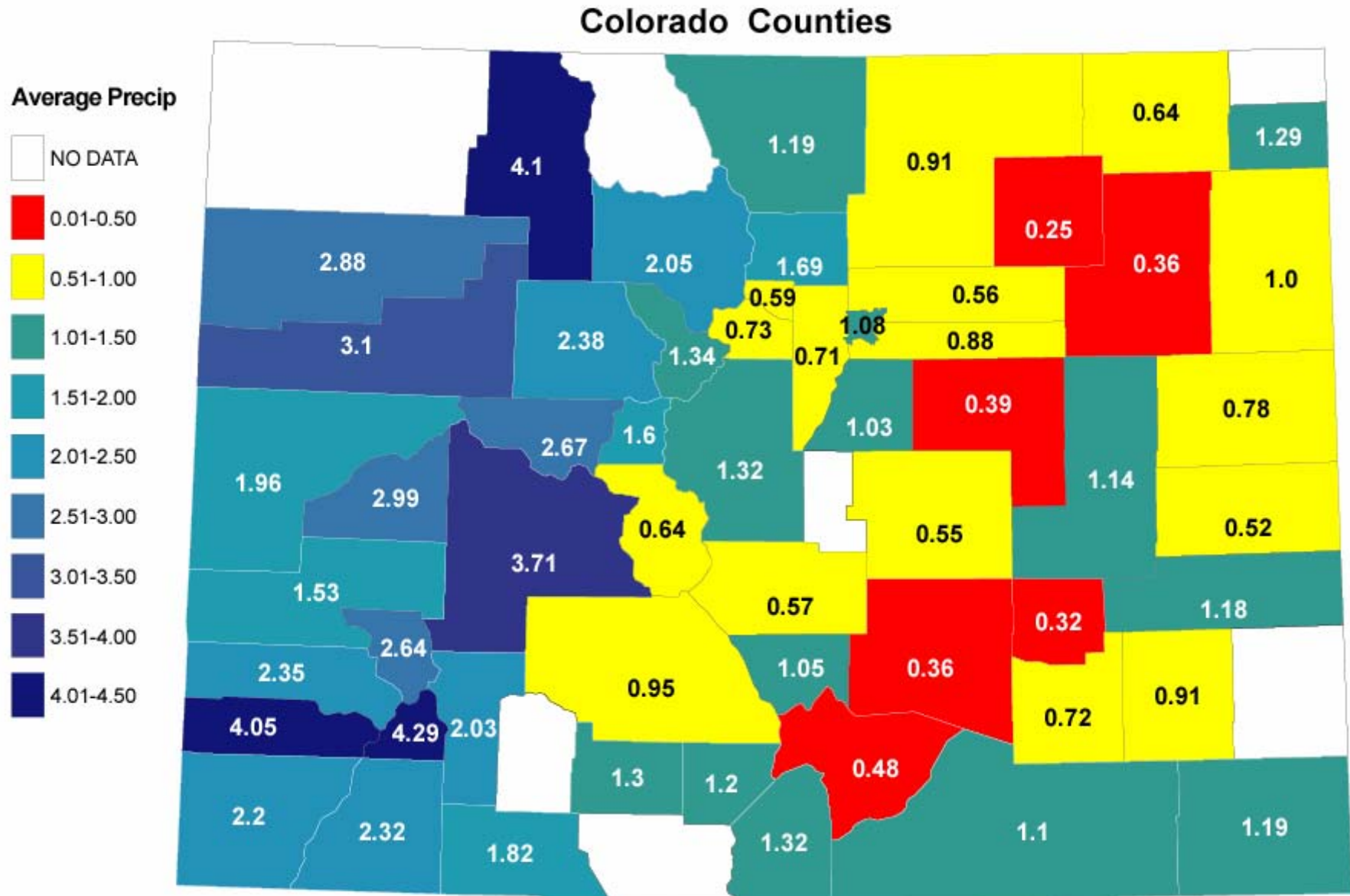


% of Average Precipitation



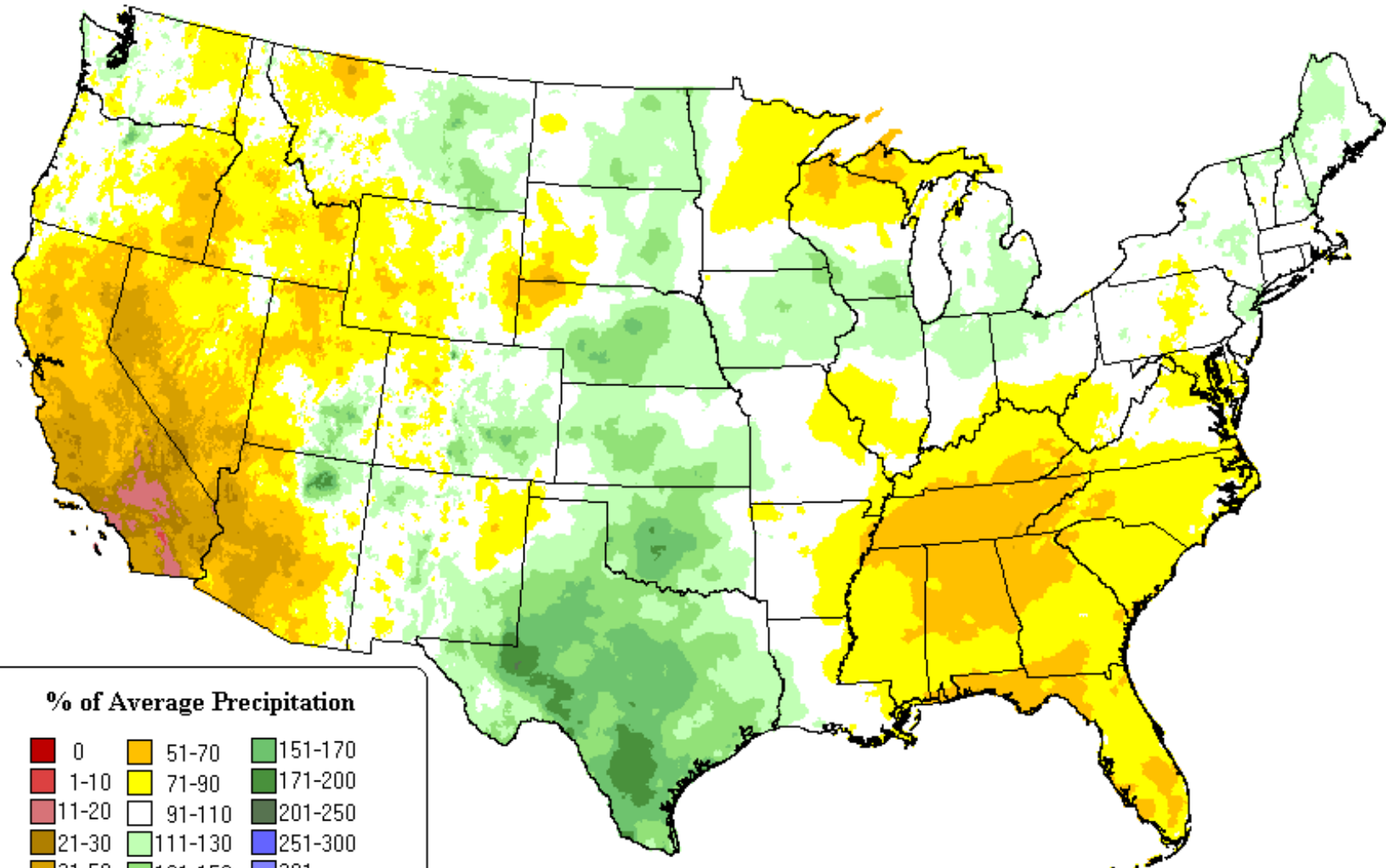
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CoCoRaHS September 1-25, 2007 precipitation by County



Water Year 2007 (through August 2007) precipitation as a percent of average (Prism)

**11-month Percent of Average Precipitation: Aug 2007
Provisional Data**



% of Average Precipitation

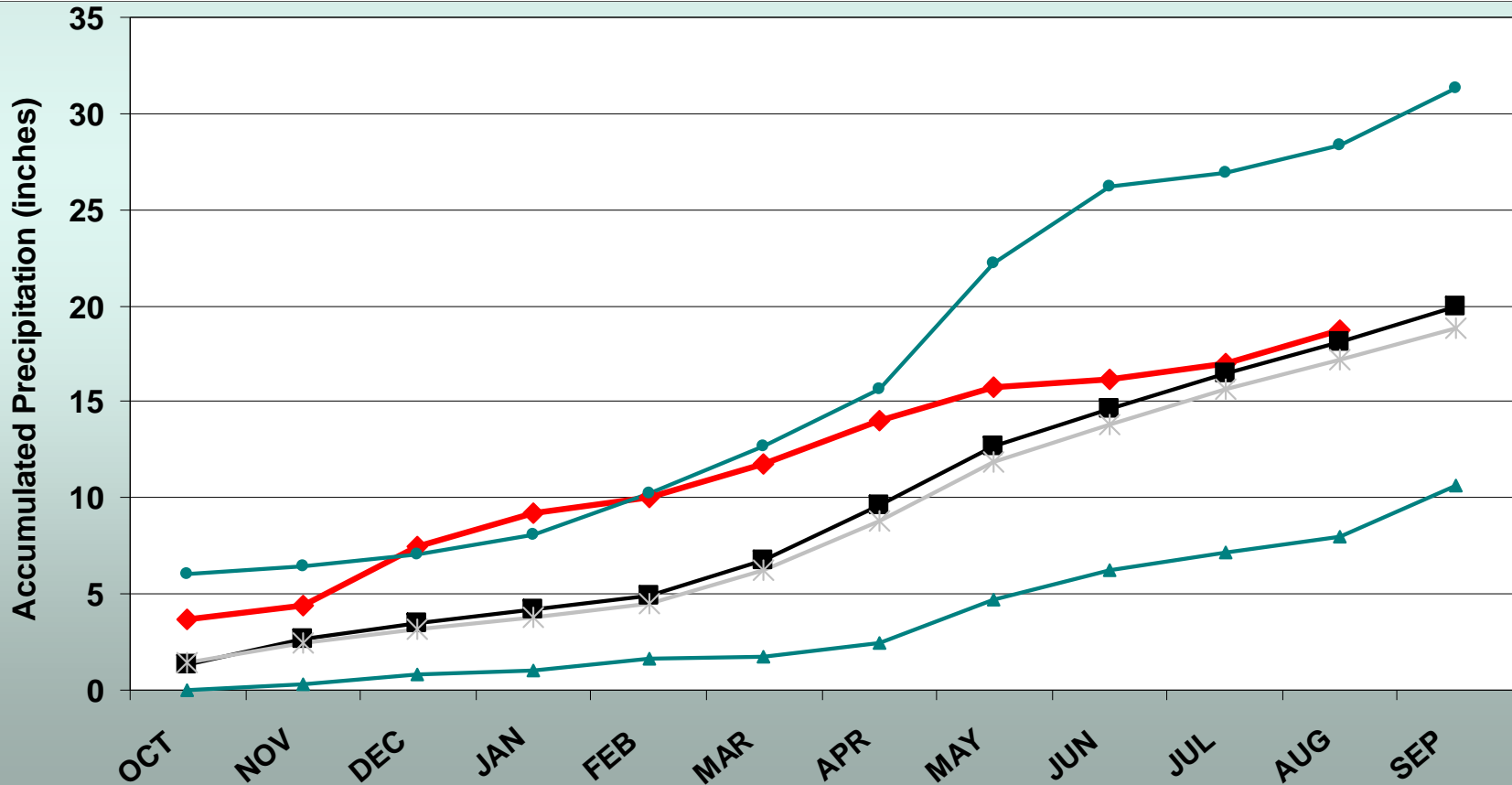
0	51-70	151-170
1-10	71-90	171-200
11-20	91-110	201-250
21-30	111-130	251-300
31-50	131-150	301+

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<http://www.prismclimate.org> - Map created Sep 12 2007

Boulder Water Year 2007 (through August 2007)

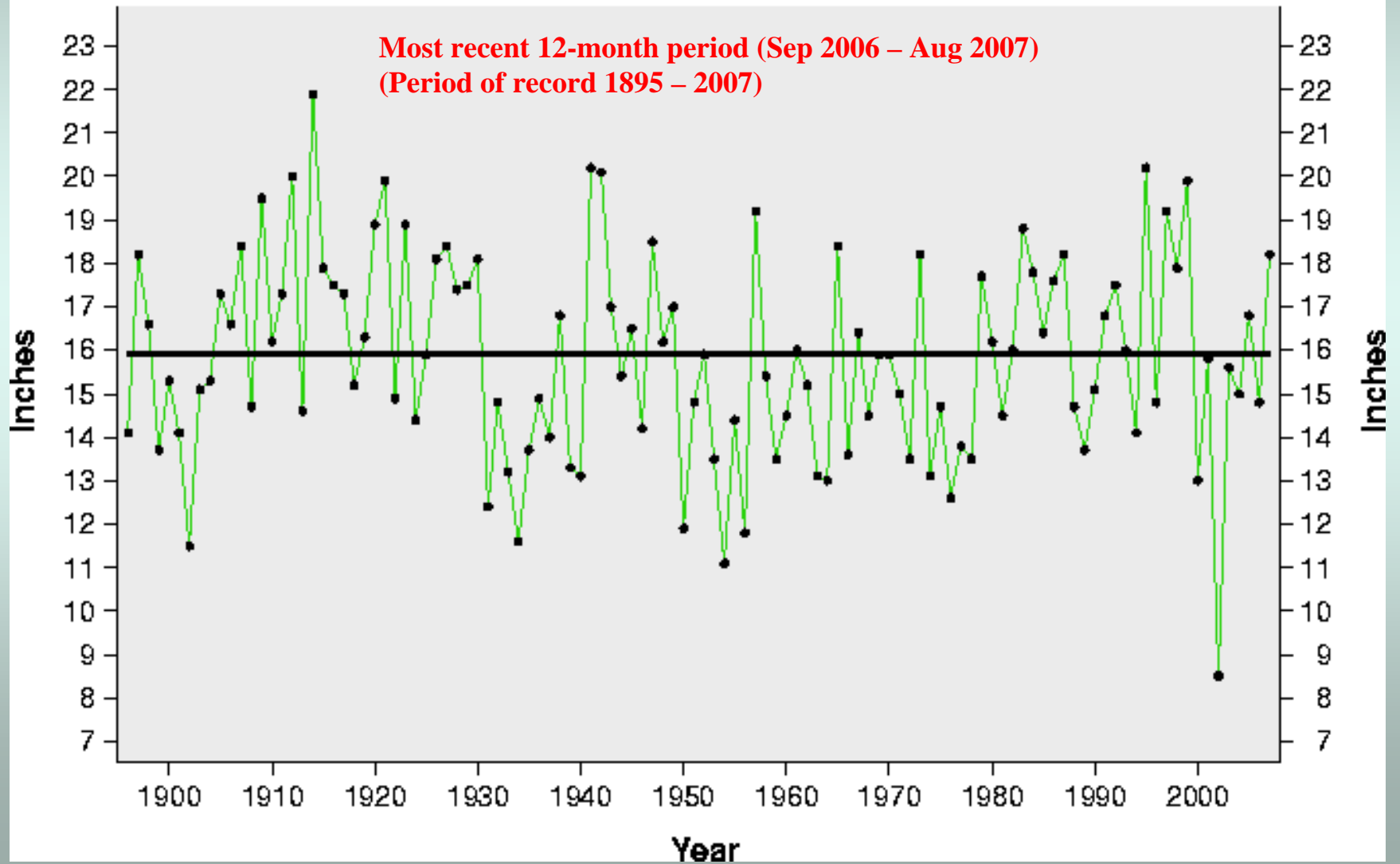
Boulder 2007 Water Year

2007 Water Year 30 Year Averages-1971-2000 Period of Record Average - 1894-2002 Max Precip Min Pr



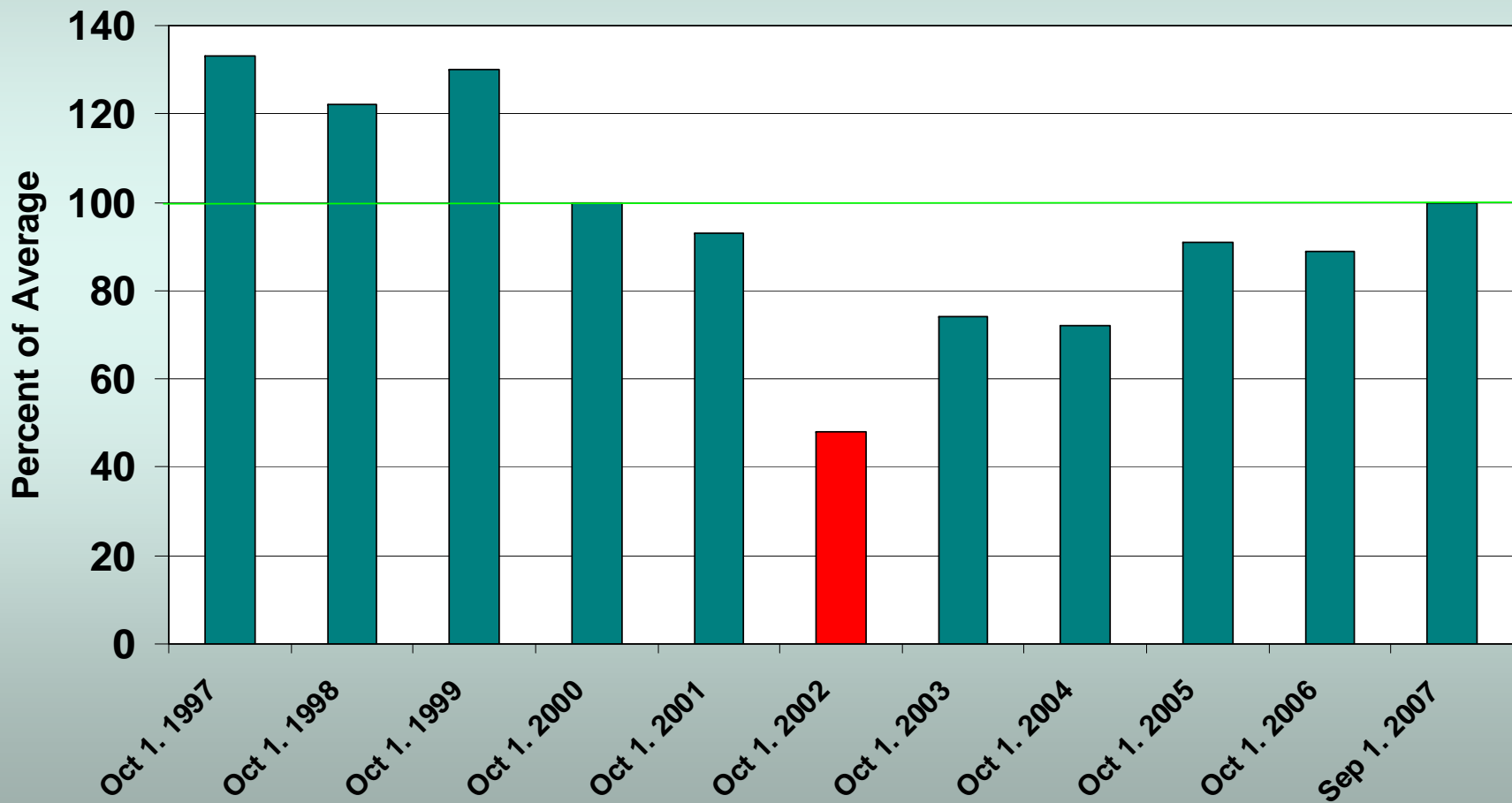
Colorado Precipitation in Historic Perspective

- Actual Precipitation
- Average Precipitation



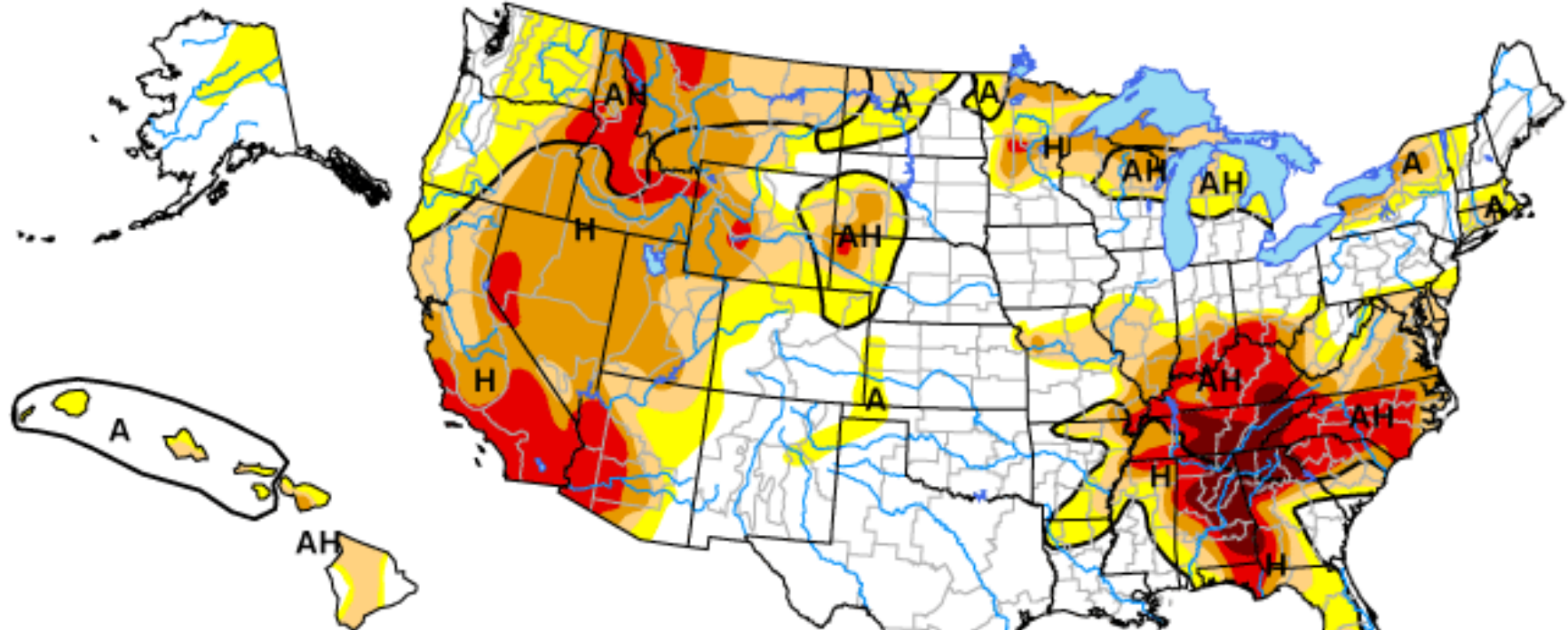
Reservoir Storage Levels

Colorado Statewide Reservoir Levels on October 1st
for Years 1997- 2006 and Sept 1, 2007








U.S. Drought Monitor


September 25, 2007
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.

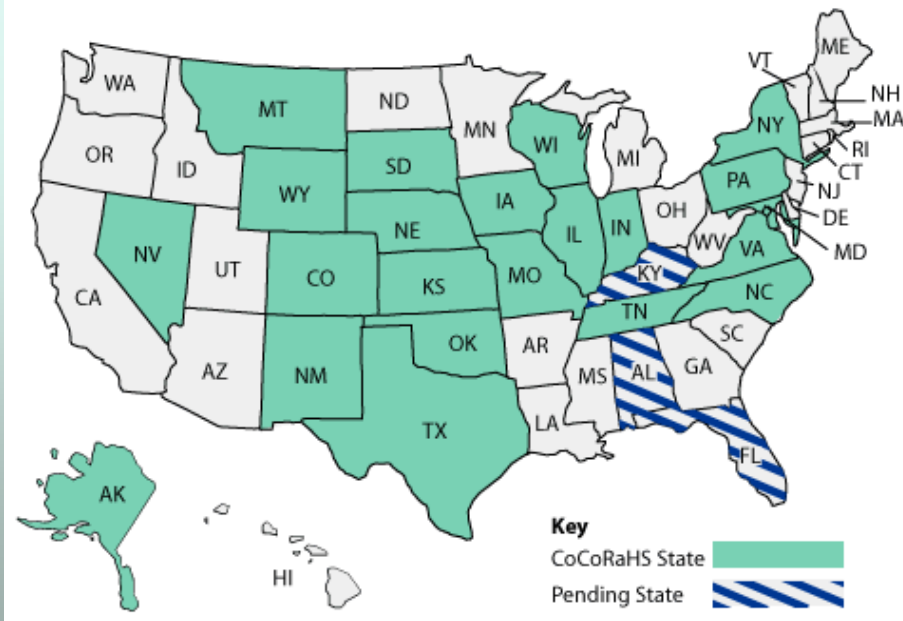
<http://drought.unl.edu/dm>



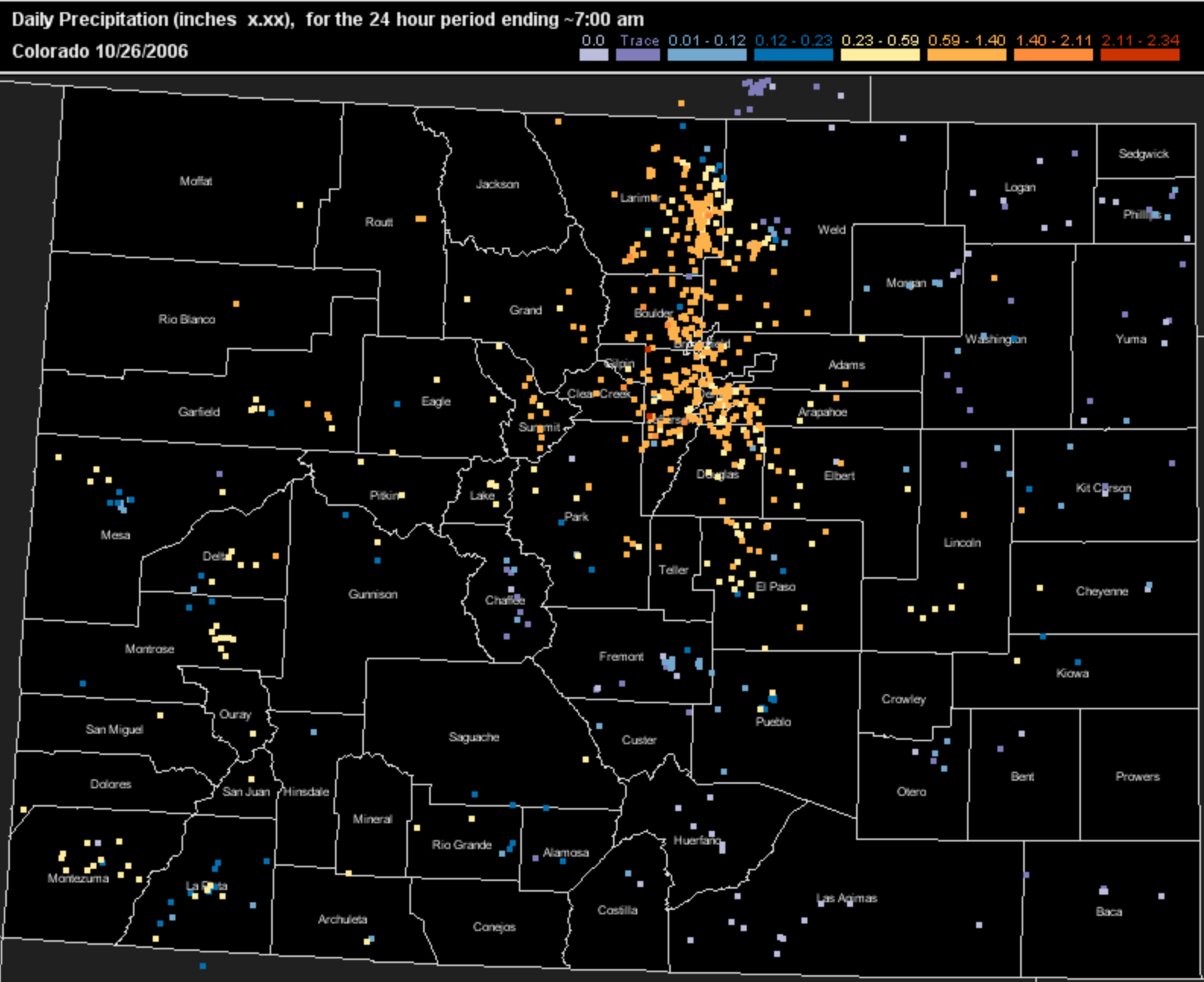
Released Thursday, September 27, 2007
Author: David Miskus, JAWF/CPC/NOAA

And How About CoCoRaHS?

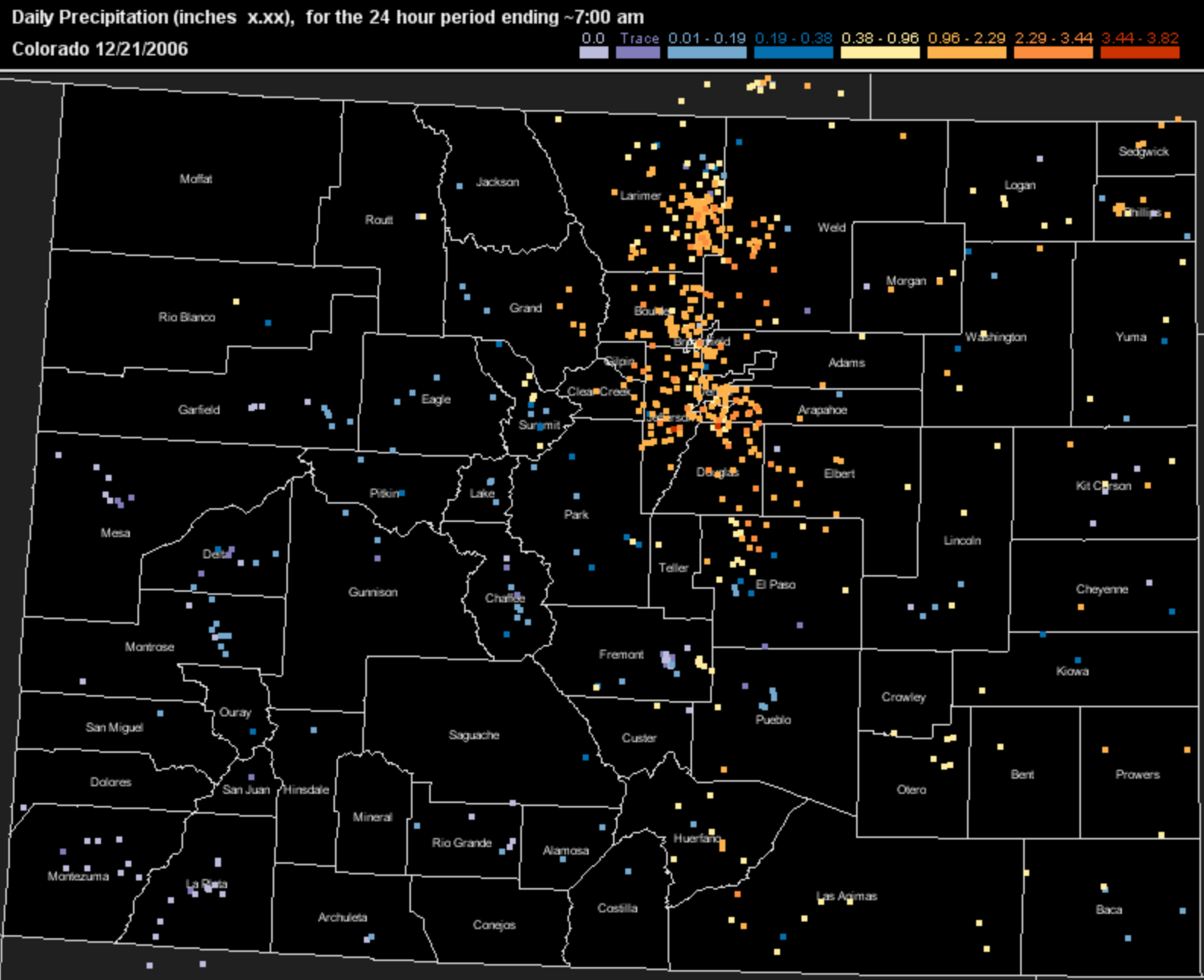
- Hundreds of new observers, especially from other states
- Added 10 new states to the program since we last met



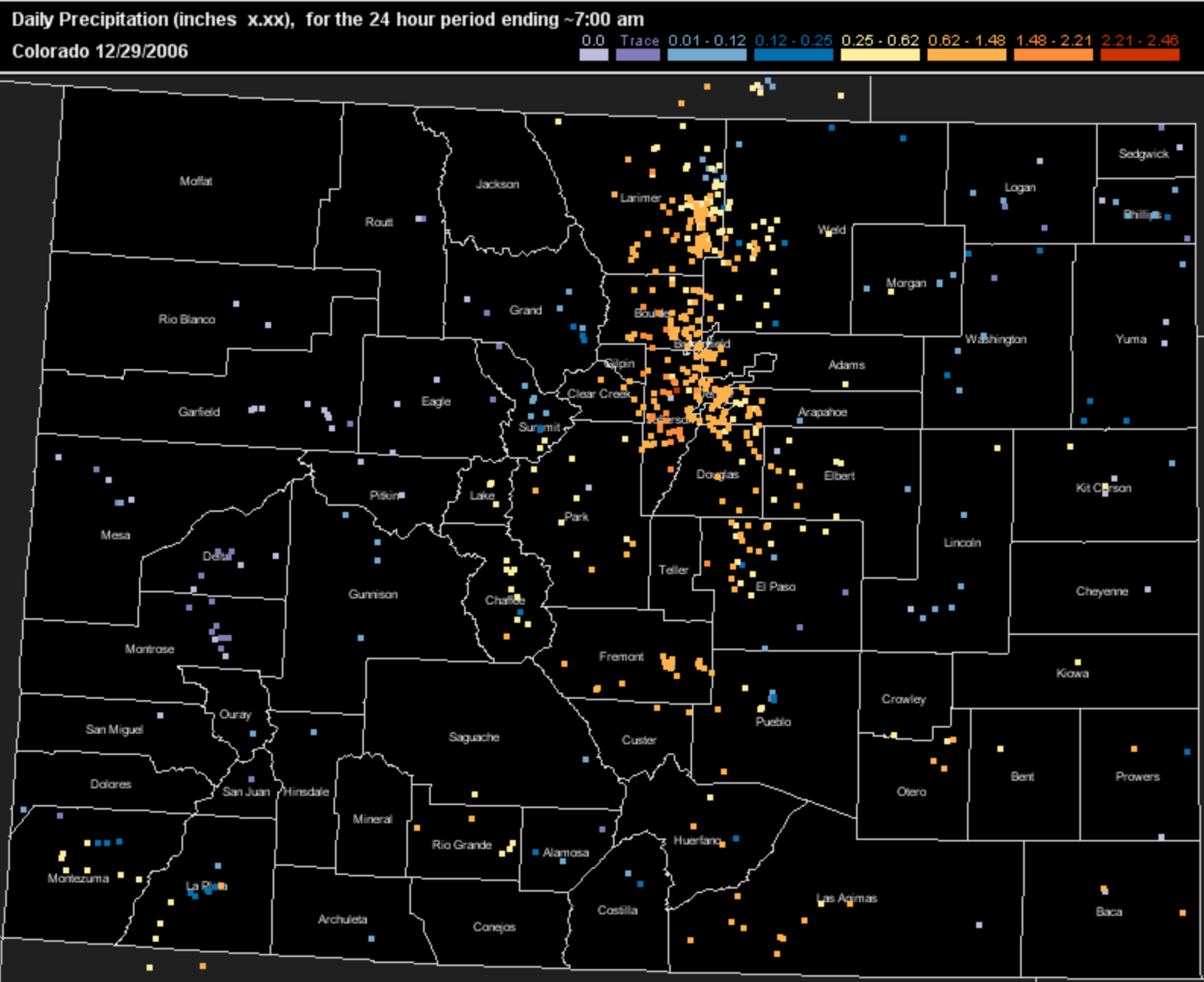
CoCoRaHS Precipitation map for Oct 26, 2006



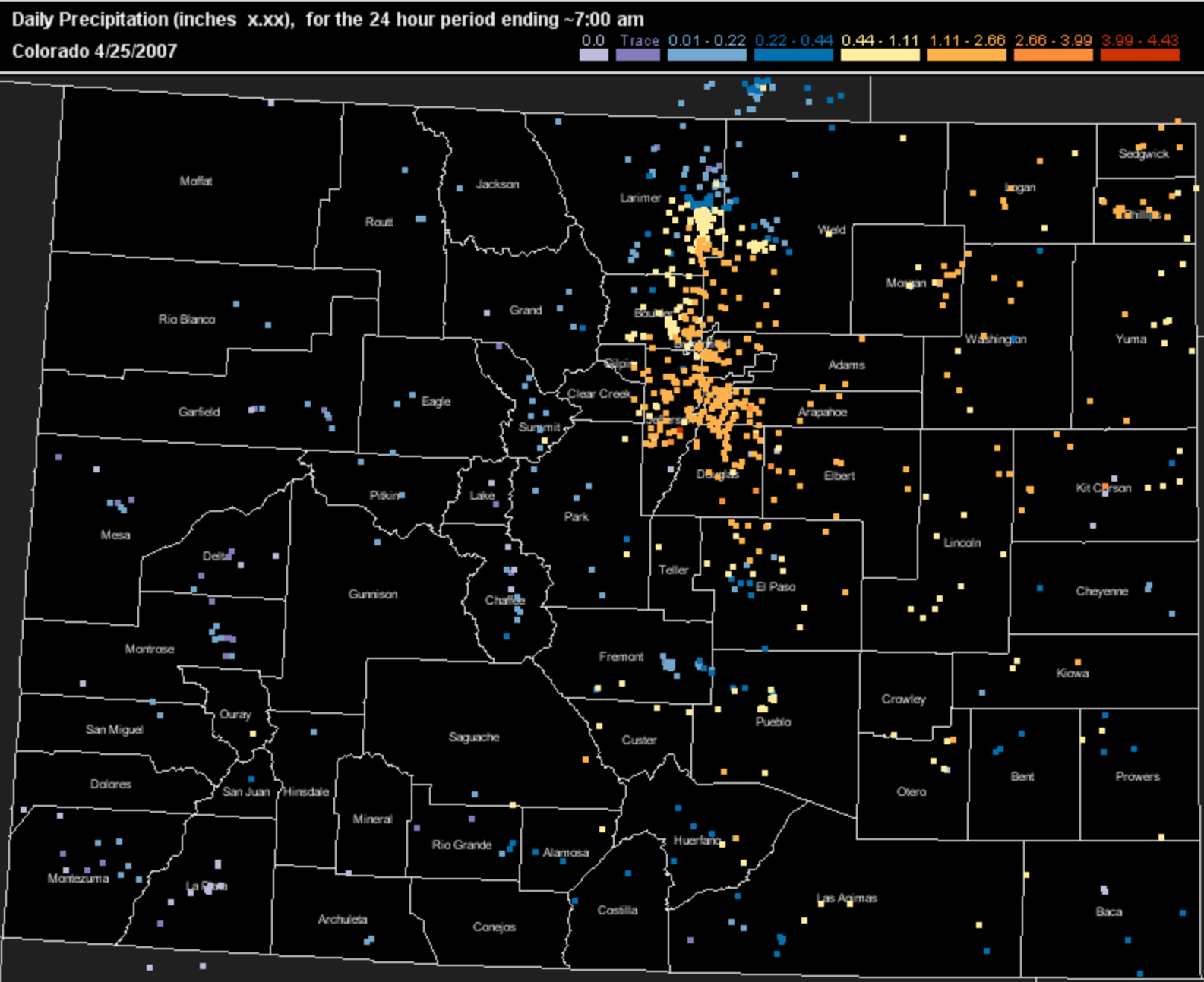
CoCoRaH Precipitation map for Dec 21, 2006



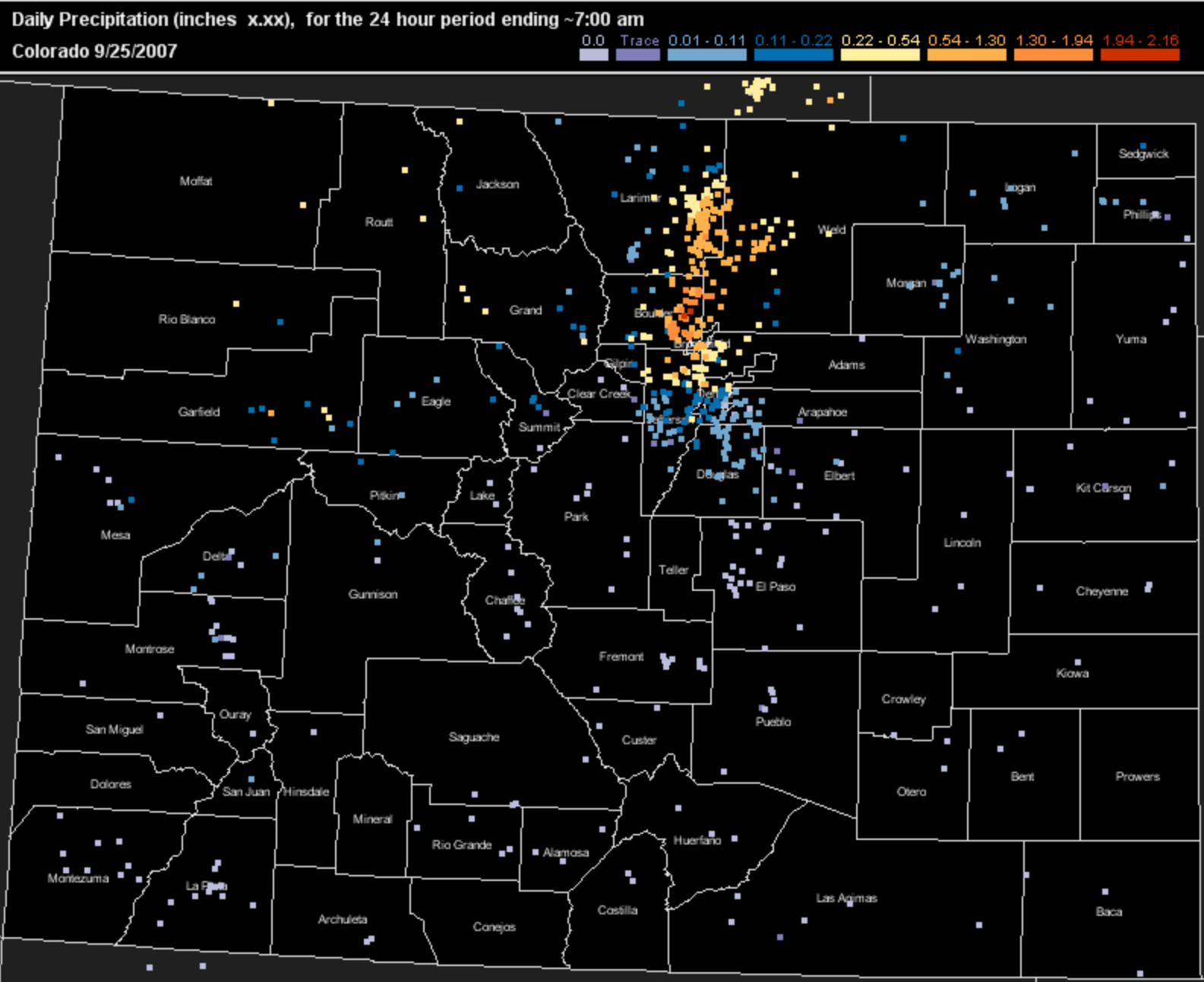
CoCoRaH Precipitation map for Dec 29, 2006



CoCoRaHS Precipitation map for April 25, 2007

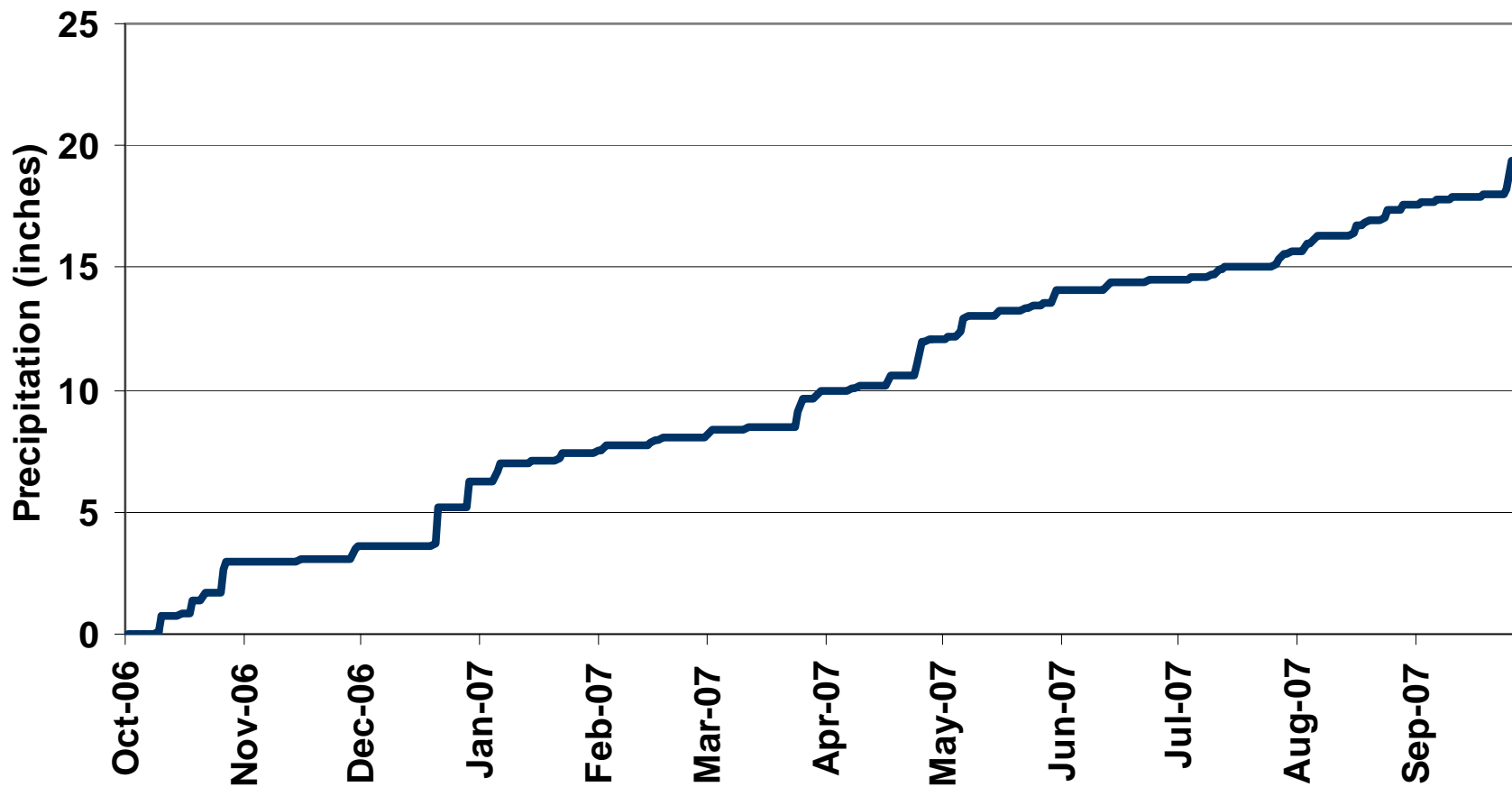


CoCoRAHS Precipitation map for Sept 25, 2007



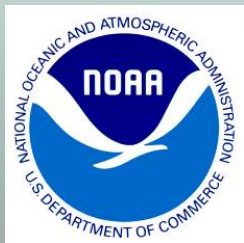
Boulder County CoCoRaHS Accumulation for Water Year 2007

CoCo RaHS Accumulated Precipitation
for Boulder County



For More Information, Visit the
CoCoRaHS Web Site

<http://www.cocorahs.org>



Support for this project provided by
NSF Informal Science Education Program,
NOAA Environmental Literacy Program
and
many local charter sponsors.

Colorado Climate Center

Data and Power Point Presentations
available for downloading

<http://ccc.atmos.colostate.edu>

- click on "Drought"
- then click on "Presentations"

