

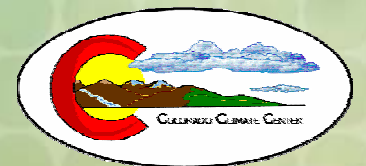
Climate Update and Highlights of the 2006 Water Year

**Nolan Doesken, State Climatologist
Atmospheric Science Department
Colorado State University**

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

Presented to Water Availability Task Force, DOW, Denver,
CO, November 20, 2006

Prepared by Odie Bliss and Wendy Ryan



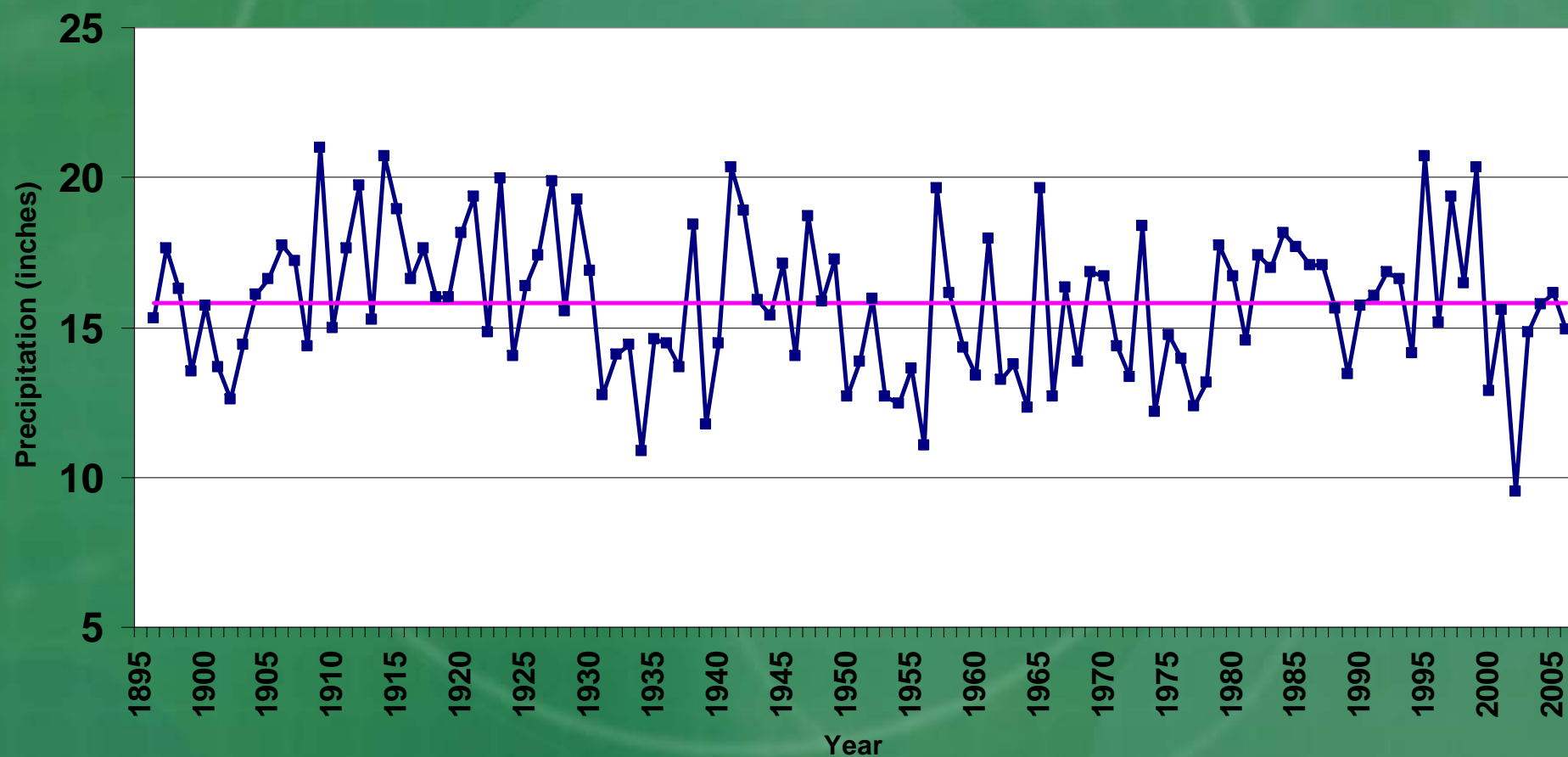
A quick review of the 2006 Water Year



Photo by Lynn Kral, Loveland, January 2006

Colorado Precipitation in Historic Perspective

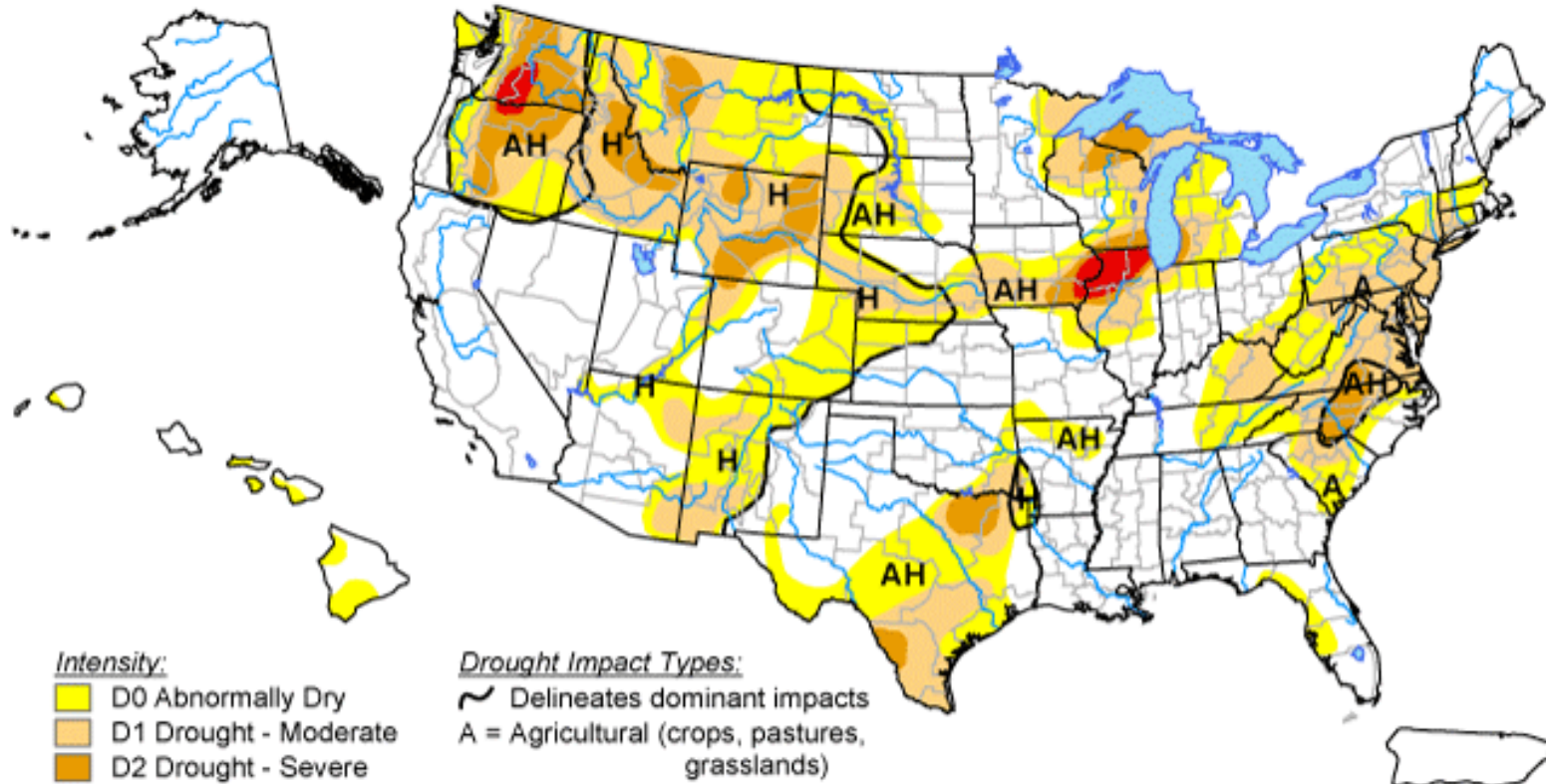
Colorado Statewide Water Year (Oct-Sep) Precipitation
from 1896 - 2006



October 2005 Drought Monitor Map

U.S. Drought Monitor

October 4, 2005
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)
- (No type = Both impacts)

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 6, 2005

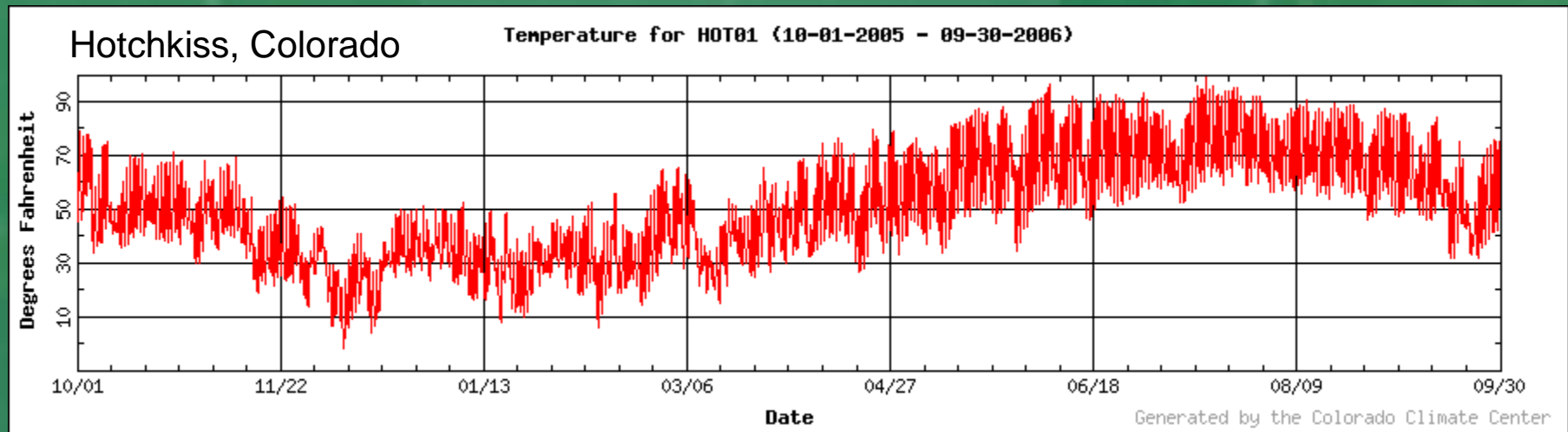
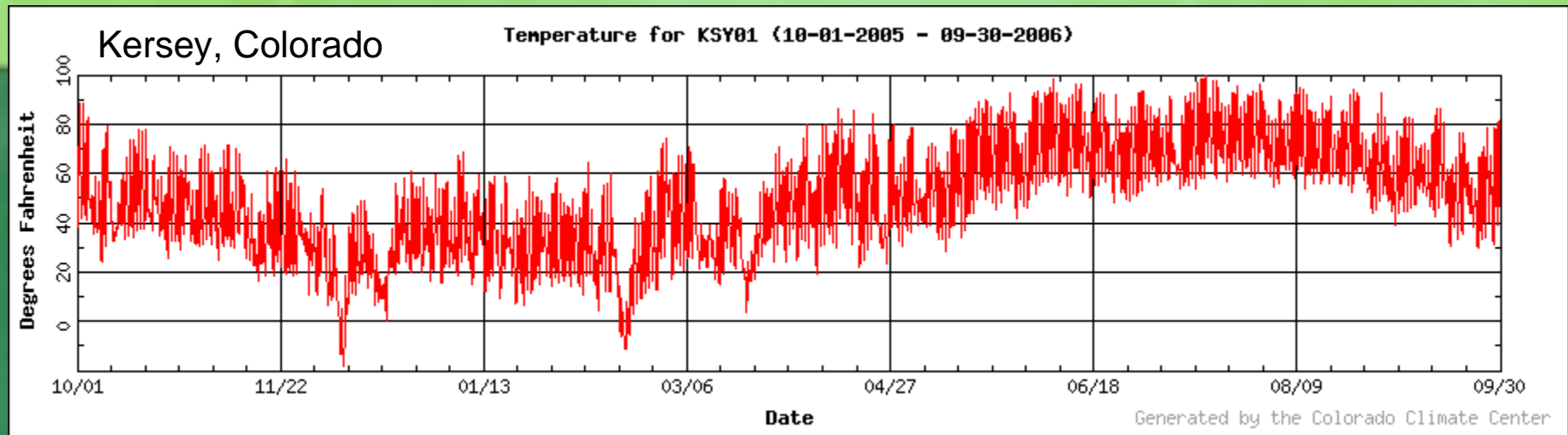
Author: RichTinker, CPC/NCEP/NWS/NOAA

What happened this past year?

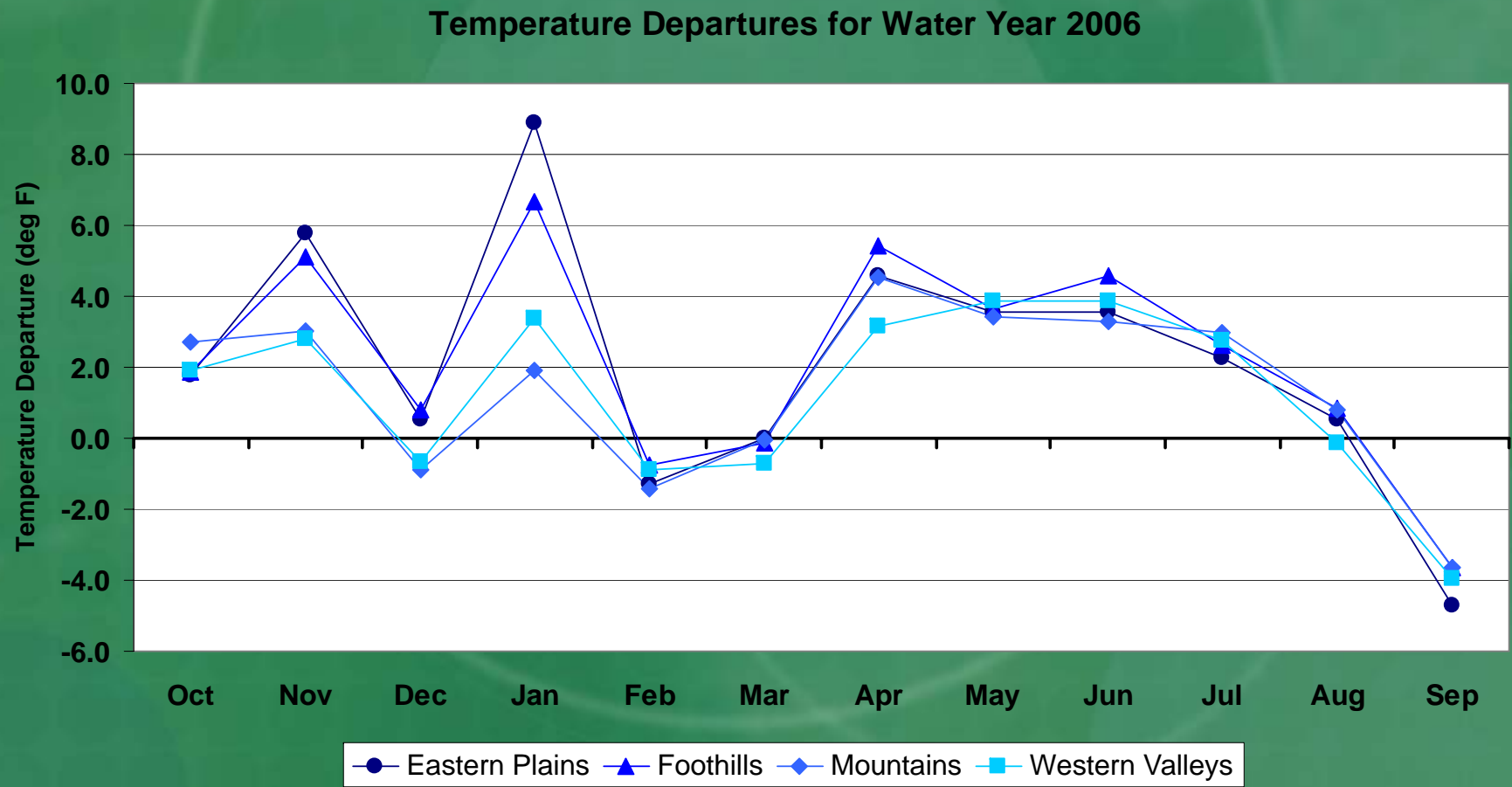
WY2006 Highlights

- Soaking October storm – especially over Eastern Colorado
- Windy, dry winter over Foothills and Eastern Plains
- Frequent midwinter snows Northern Mountains
- Very warm and dry spring (tough on Agriculture)
- Early July soaking
- Wet summer over much of southern Colorado
- A chilly ending to another warm year

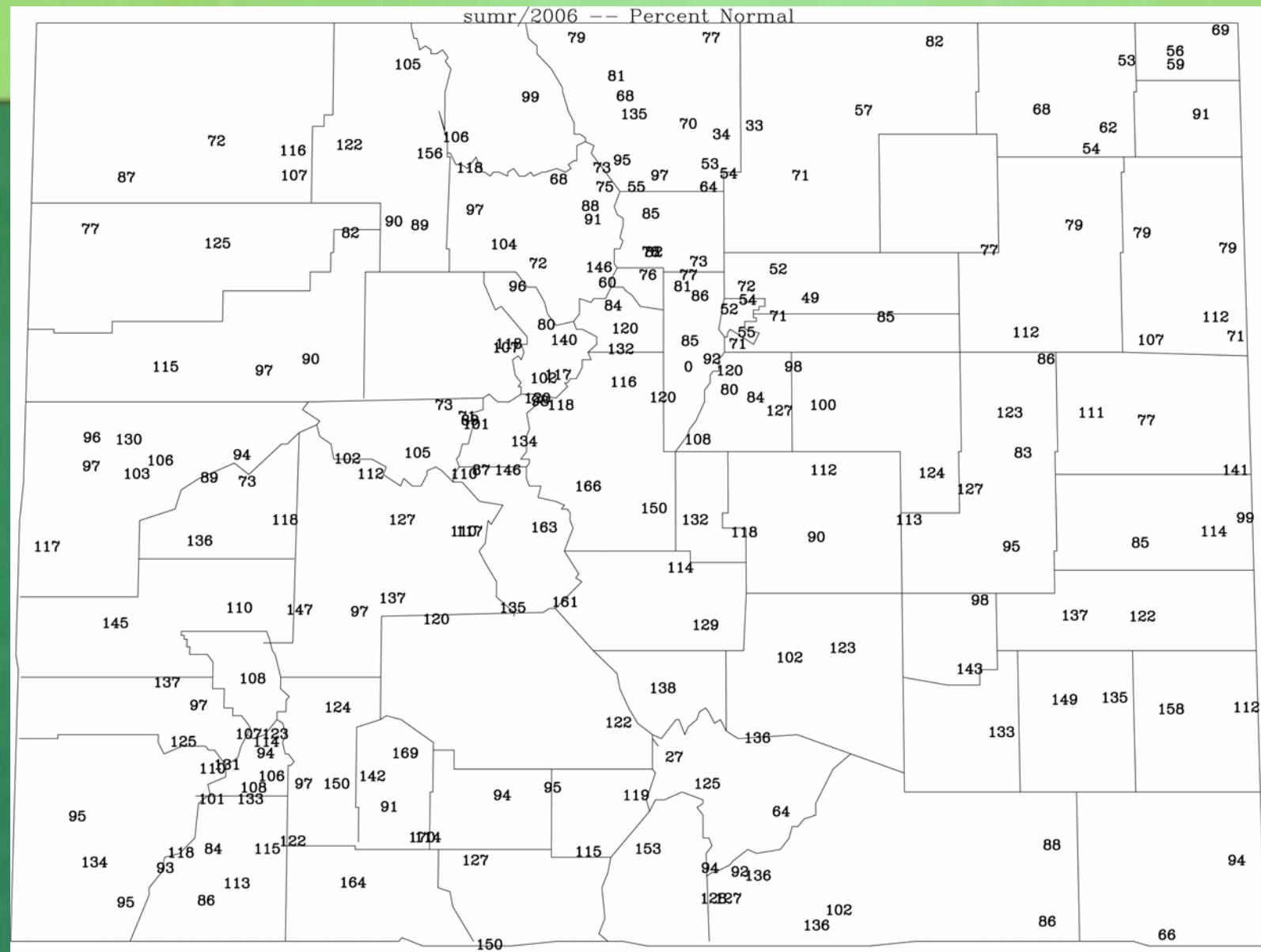
CoAgMet Temperatures



Water Year 2006 Temperature Departures

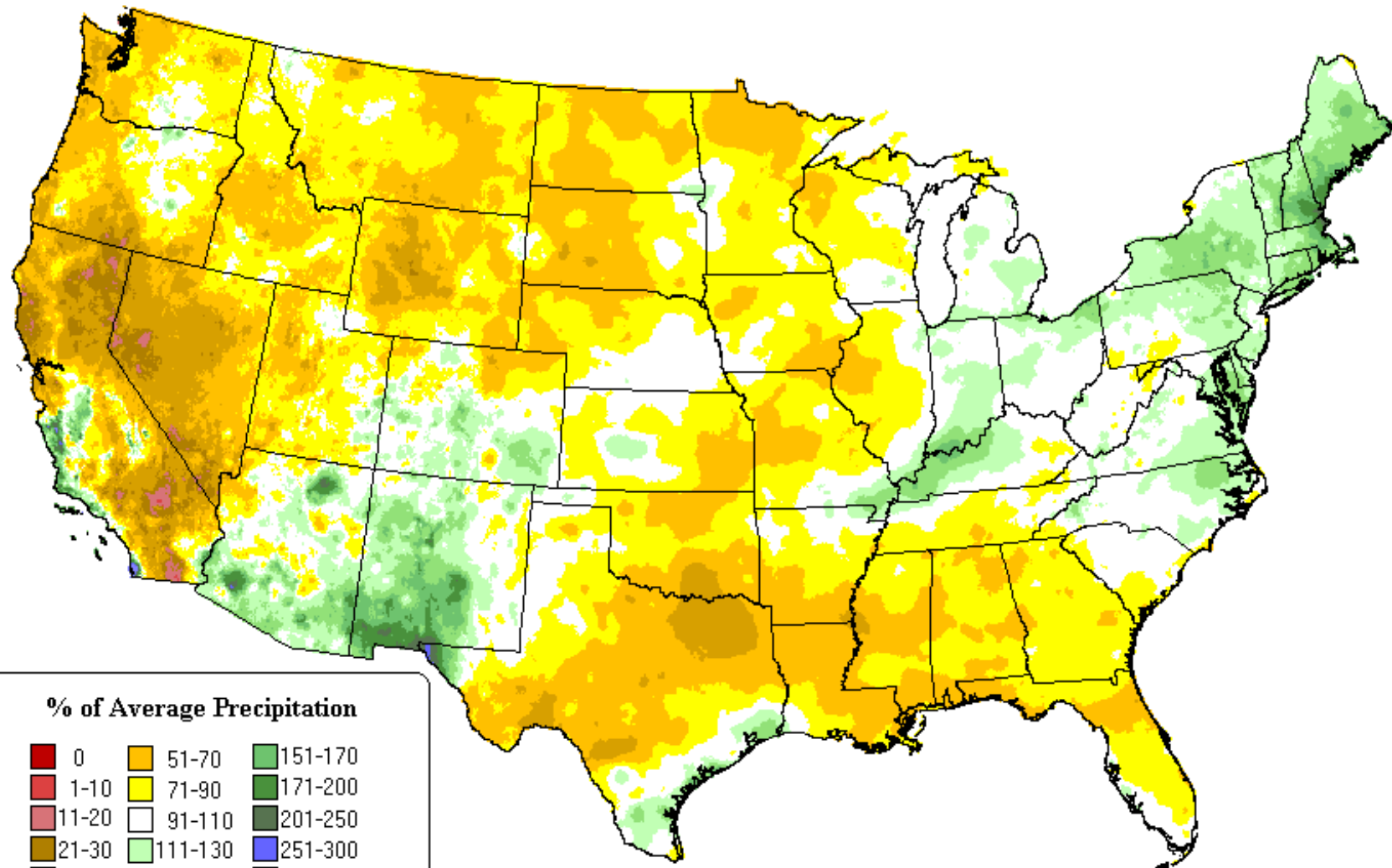


Summer 2006 (May–Sep) precipitation as a percent of the 1971-2000 average



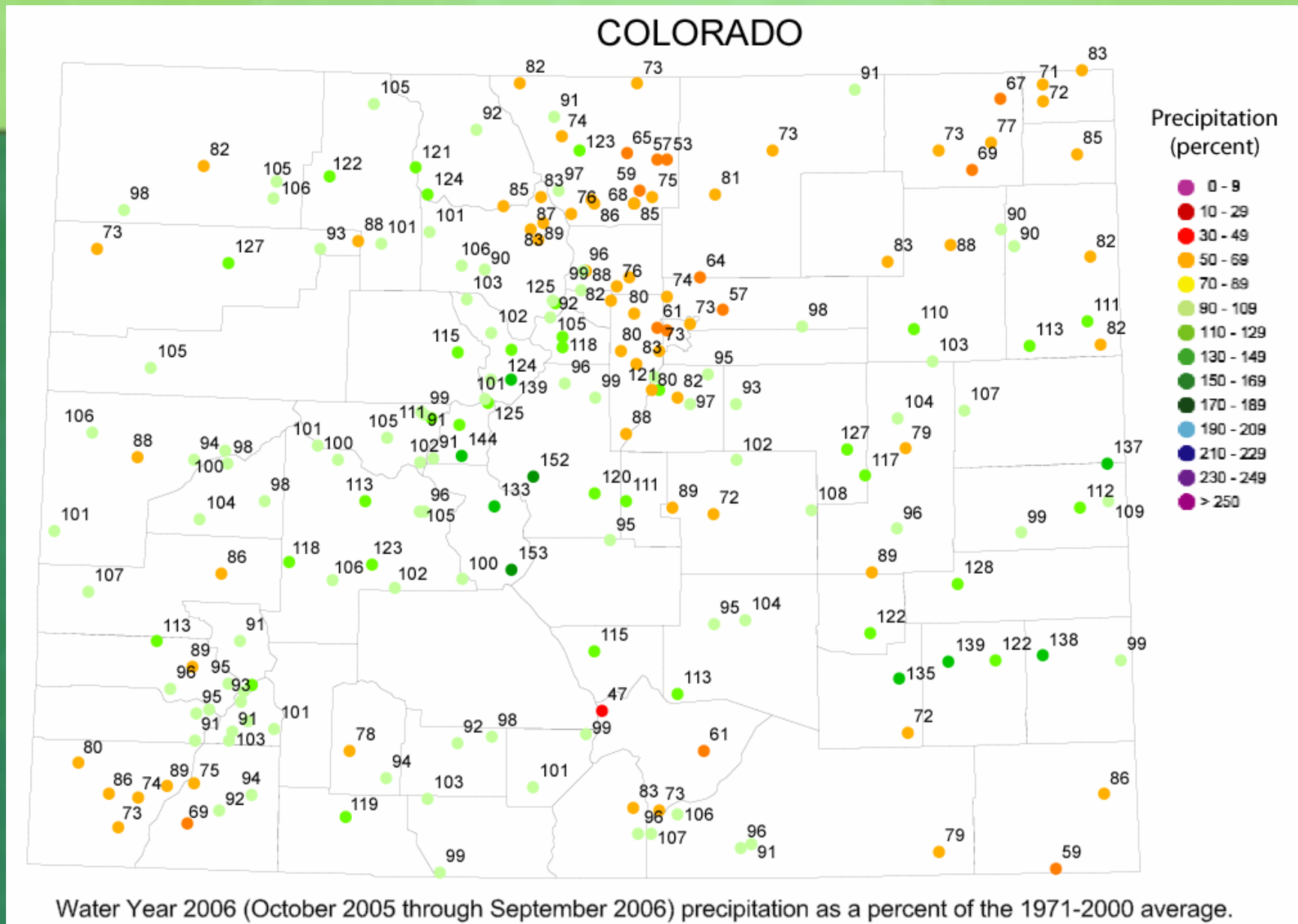
Summer 2006 (May–Sep) precipitation as a percent of average (Prism)

5-month Percent of Average Precipitation: Sep 2006
Provisional Data



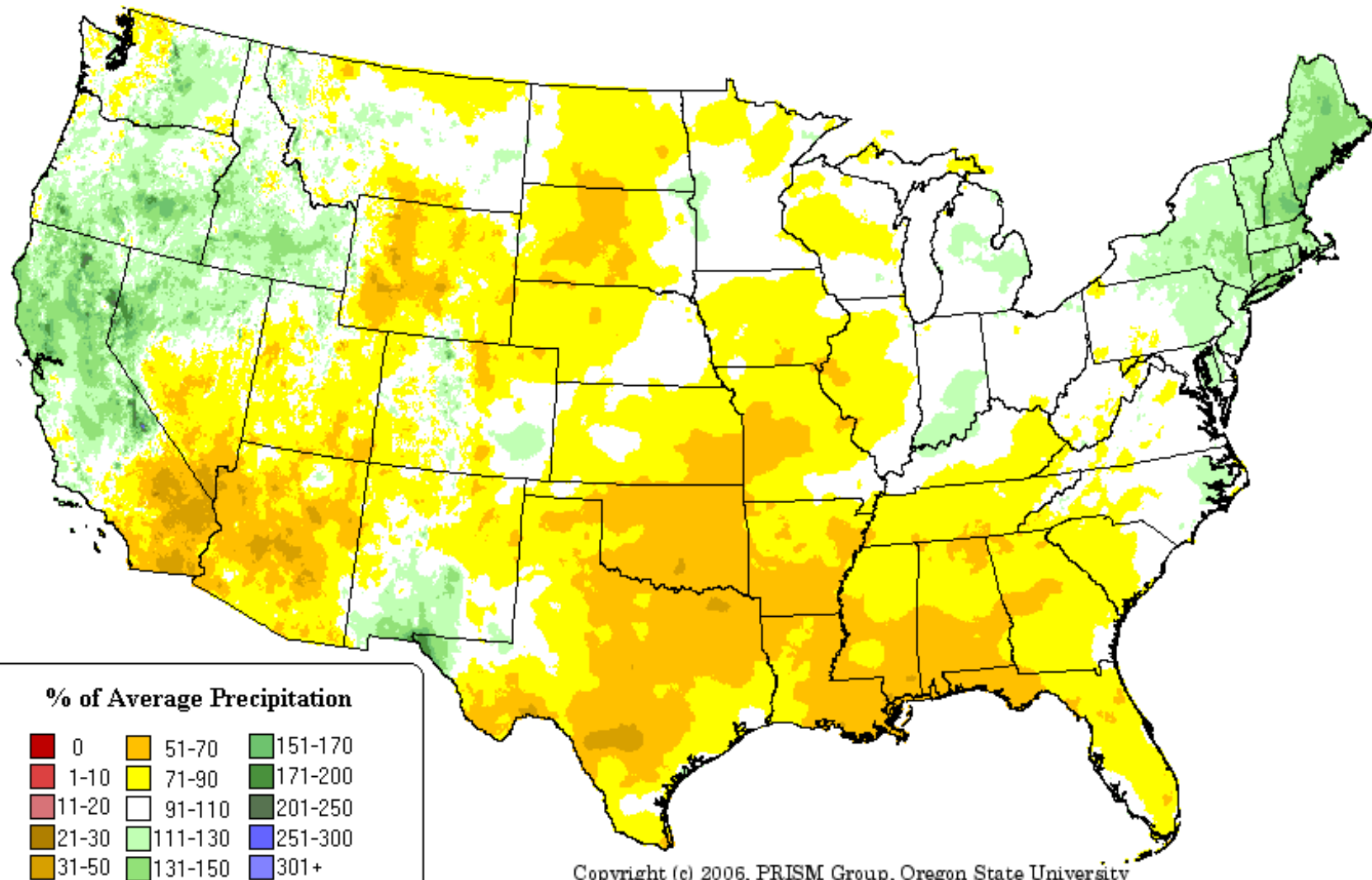
Copyright (c) 2006, PRISM Group, Oregon State University
<http://www.ocs.oregonstate.edu/prism> - Map created Oct 12 2006

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



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

12-month Percent of Average Precipitation: Sep 2006
Provisional Data

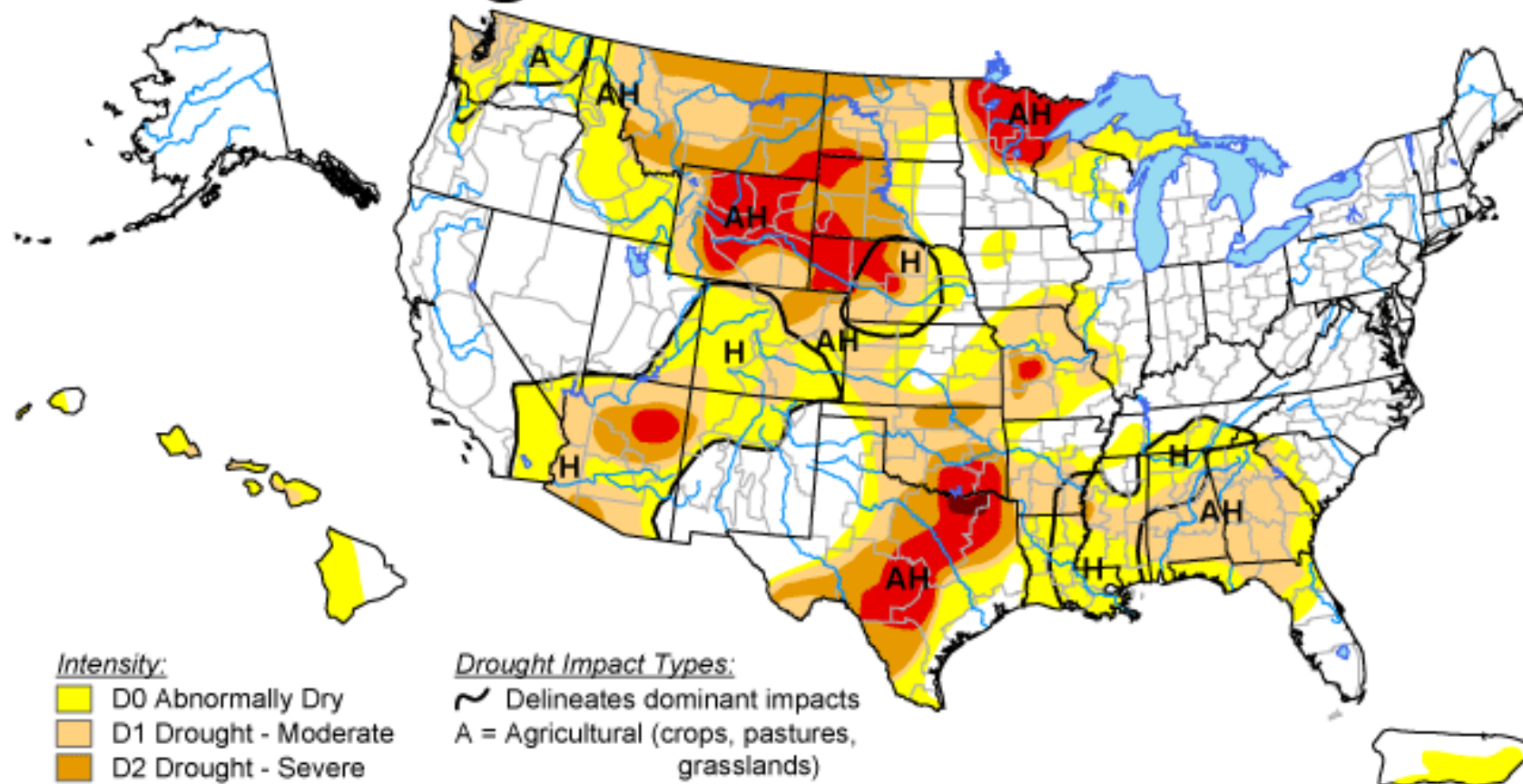


Copyright (c) 2006, PRISM Group, Oregon State University
<http://www.ocs.oregonstate.edu/prism> - Map created Oct 12 2006






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>



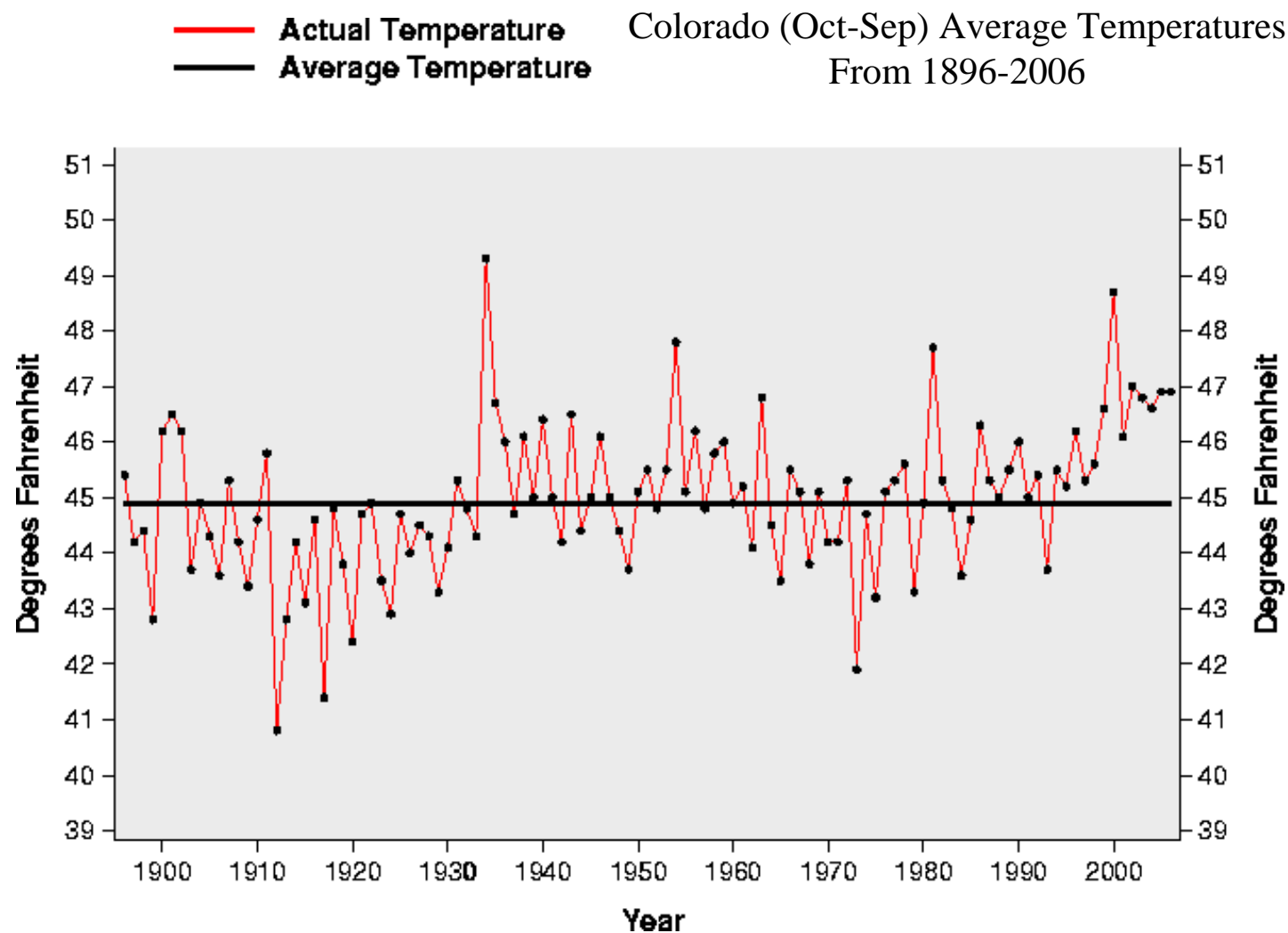
Released Thursday, October 5, 2006

Author: Rich Tinker, Climate Prediction Center, NOAA

Summary

- Soaking October storm – especially over Eastern Colorado
- Windy, dry winter over Foothills and Eastern Plains
- Frequent midwinter snows Northern Mountains
- Very warm and dry spring (tough on Agriculture)
- Early July soaking
- Wet summer over much of southern Colorado
- A chilly ending to another warm year

Overall, 2006 Water Year warmer than average – again!



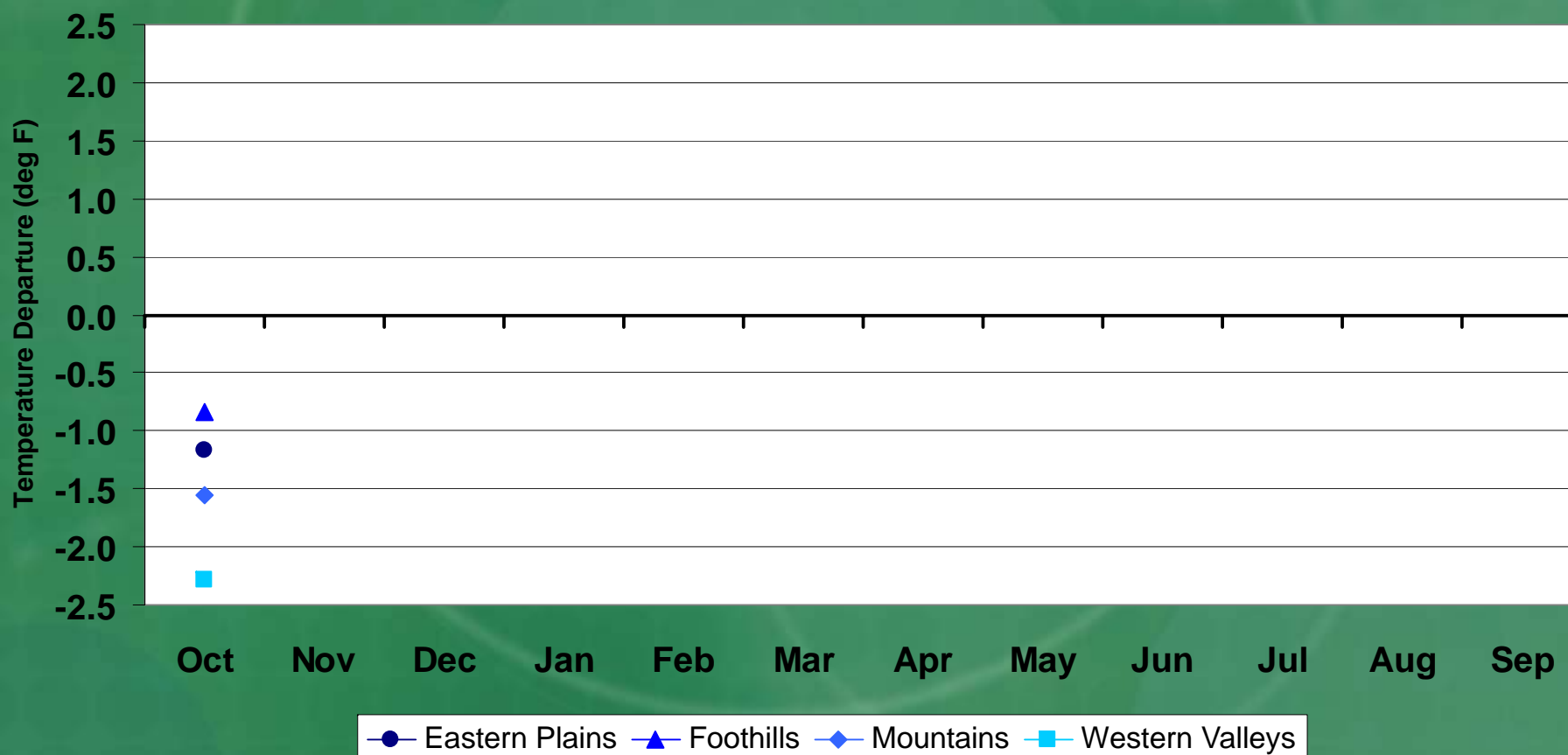
2007 Water Year Progress Report



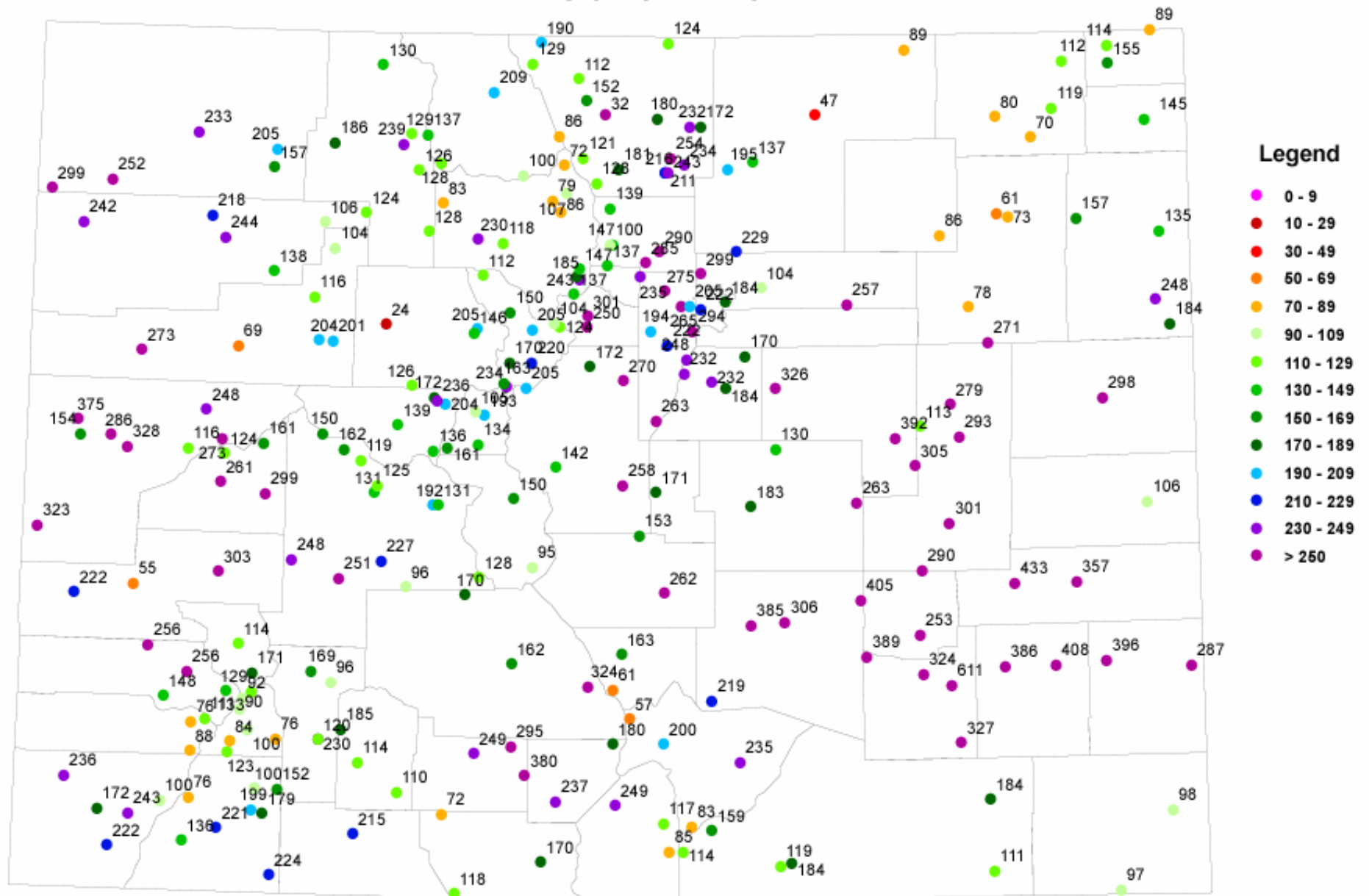
Photo by Art Judson

October 2006 Temperature Departures

Temperature Departures for Water Year 2007

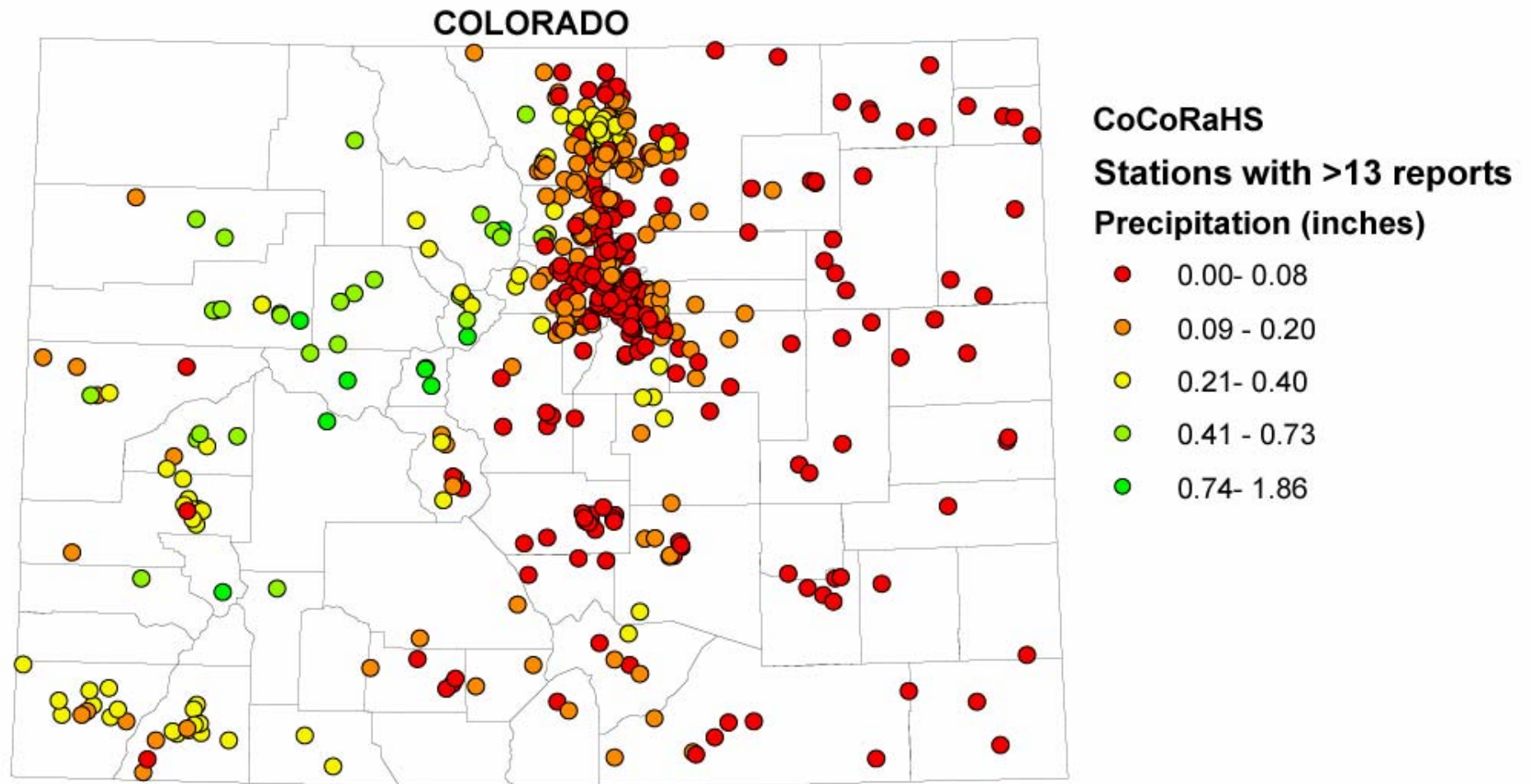


COLORADO



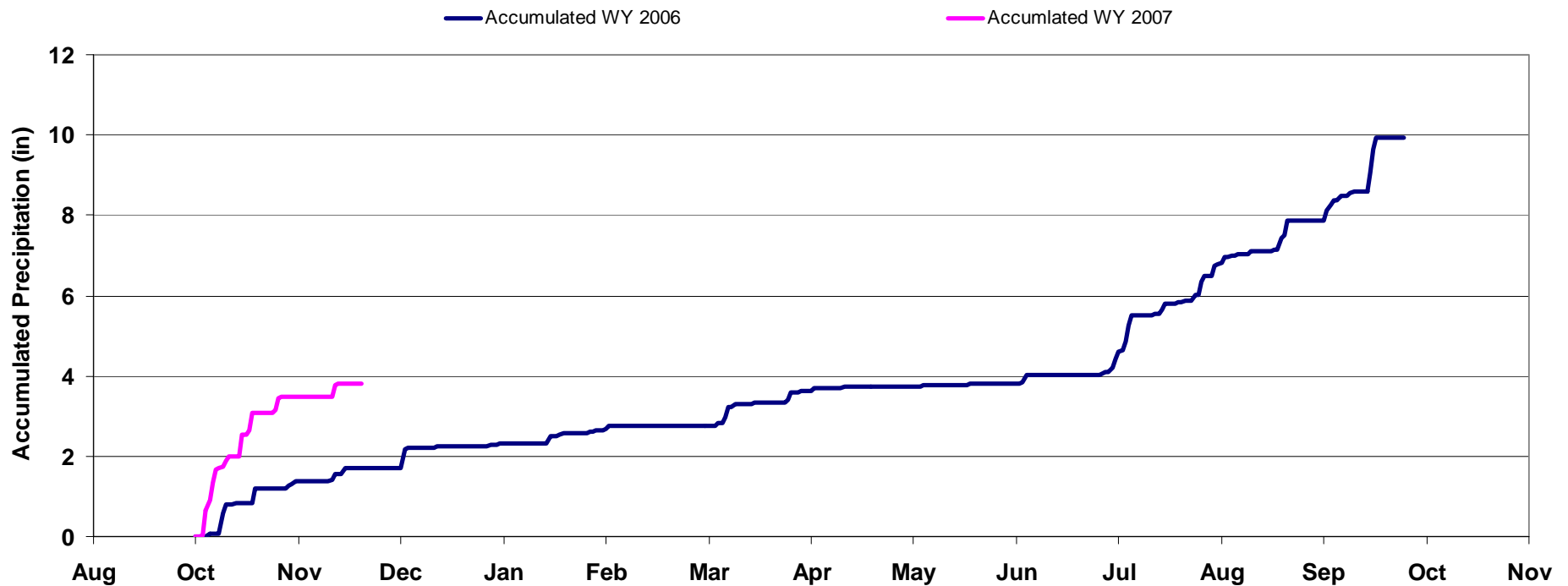
October 2006 Precipitation as a percent of the 1971-2000 average.

CoCoRaHS Stations for November 1-17, 2006 precipitation totals



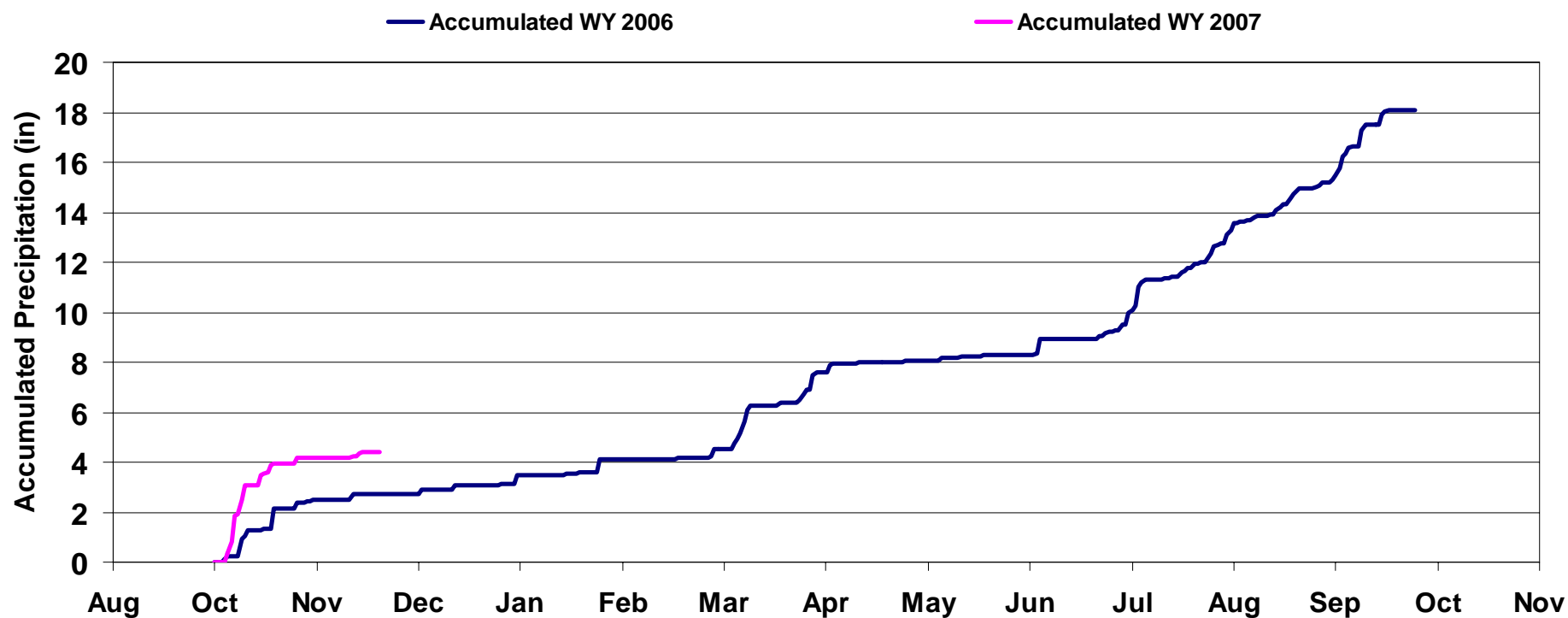
CoCoRaHS Accumulated Precipitation

Montrose County, CO

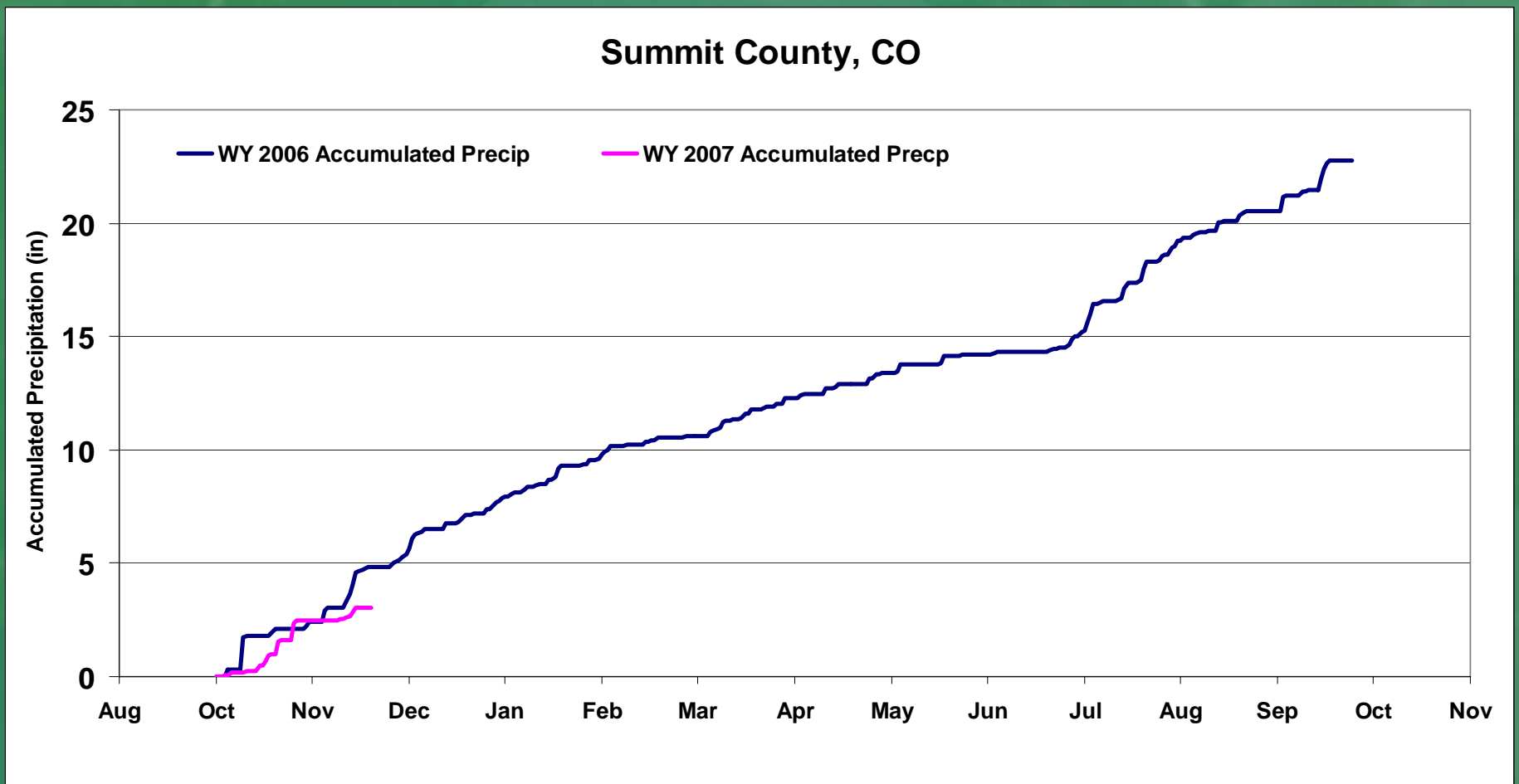


CoCoRaHS Accumulated Precipitation

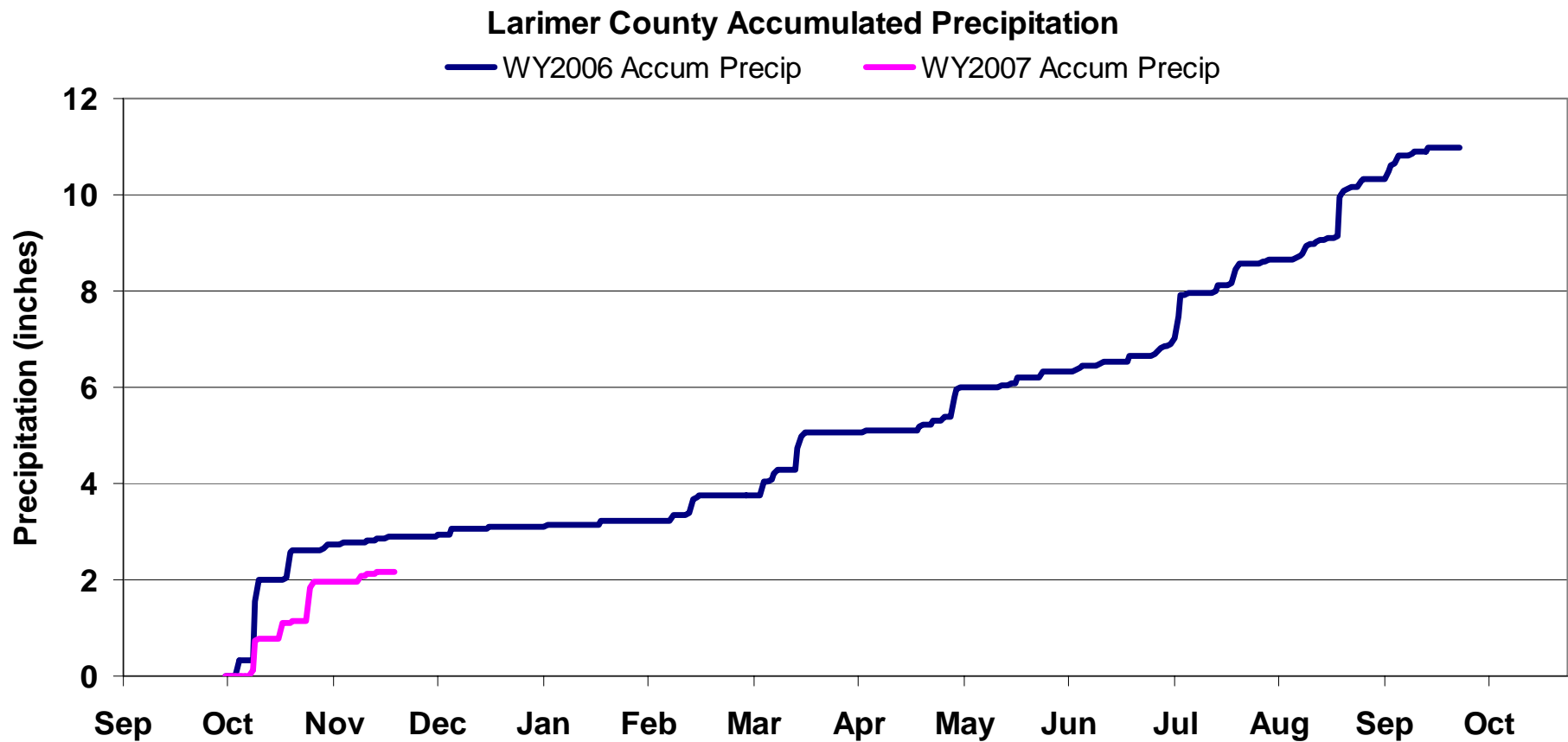
La Plata, CO



CoCoRaHS Accumulated Precipitation

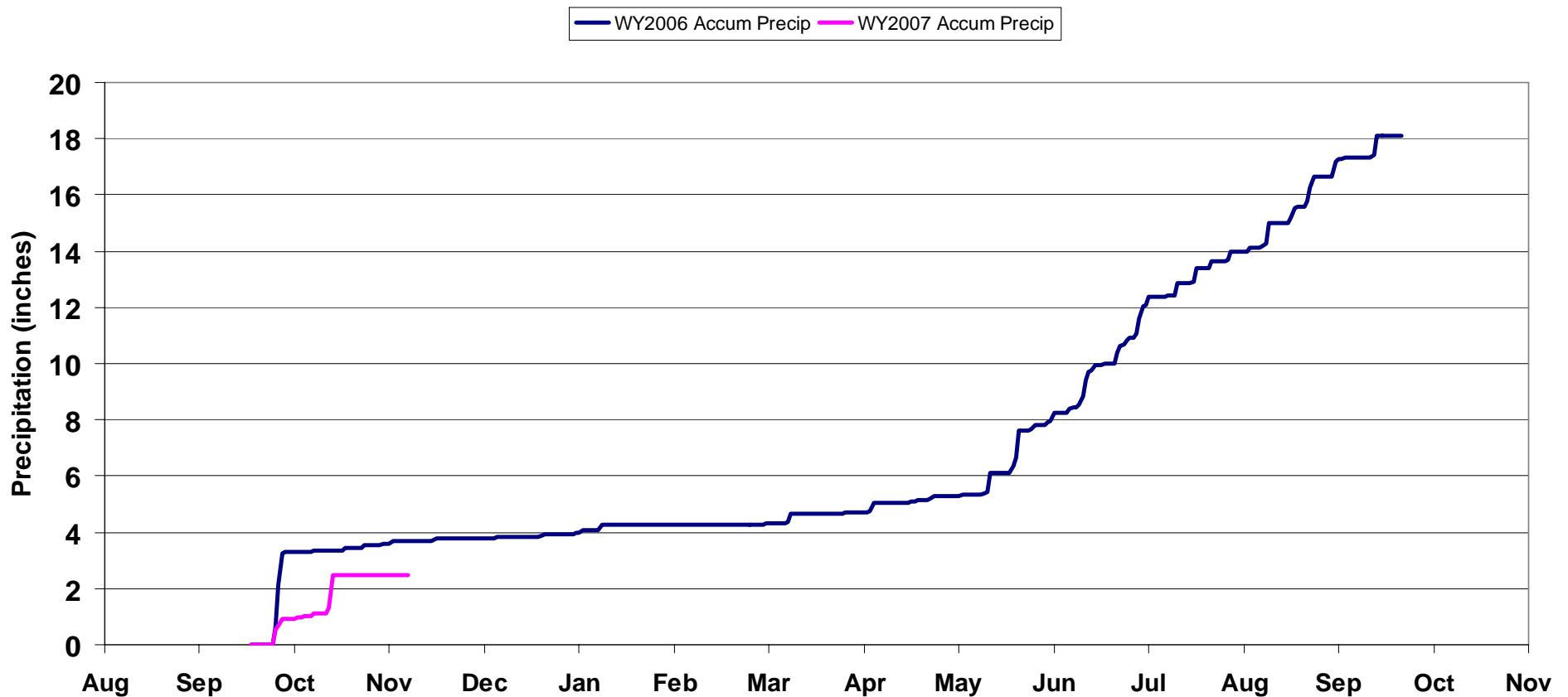


CoCoRaHS Accumulated Precipitation



CoCoRaHS Accumulated Precipitation

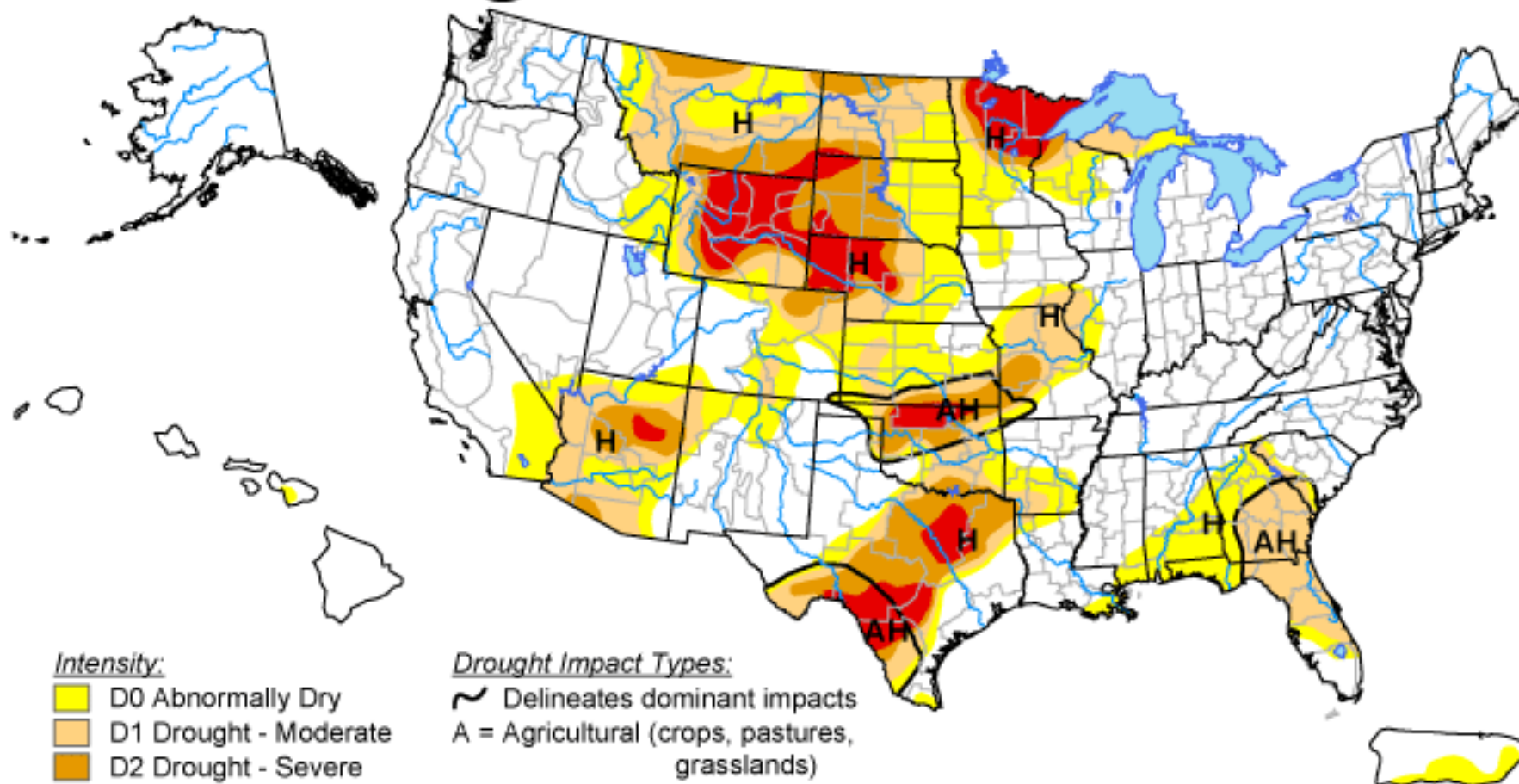
Kit Carson County Accumulated Precipitation



U.S. Drought Monitor

November 14, 2006

Valid 7 a.m. EST



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, November 16, 2006

Author: Ned Guttman/Liz Love-Brotak, NOAA/NESDIS/NCDC

U.S. Drought Monitor

Colorado

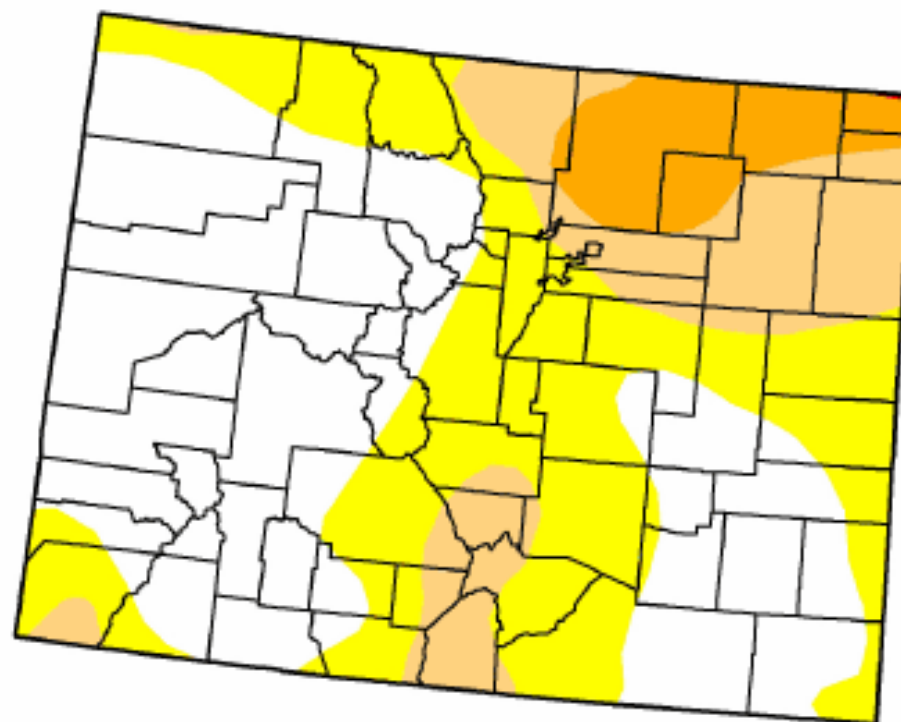
November 14, 2006
Valid 8 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	46.4	53.6	21.6	6.9	0.0	0.0
Last Week (11/7/2006 map)	46.4	53.6	21.6	6.9	0.0	0.0
3 Months Ago (8/22/2006 map)	0.0	100.0	82.1	29.9	4.1	0.0
Start of Calendar Year (1/3/2006 map)	59.1	40.9	3.4	0.0	0.0	0.0
Start of Water Year (10/3/2006 map)	0.0	100.0	36.5	8.6	0.0	0.0
One Year Ago (11/15/2005 map)	69.9	30.1	5.8	0.0	0.0	0.0

Intensity:

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



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

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

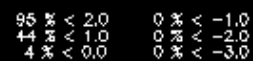


Released Thursday, November 16, 2006

Author: Ned Guttman/Liz Love-Brotak, NOAA/NESDIS/NCDC

Apparent data problem at Eagle

10/2006 3 mon. SPI



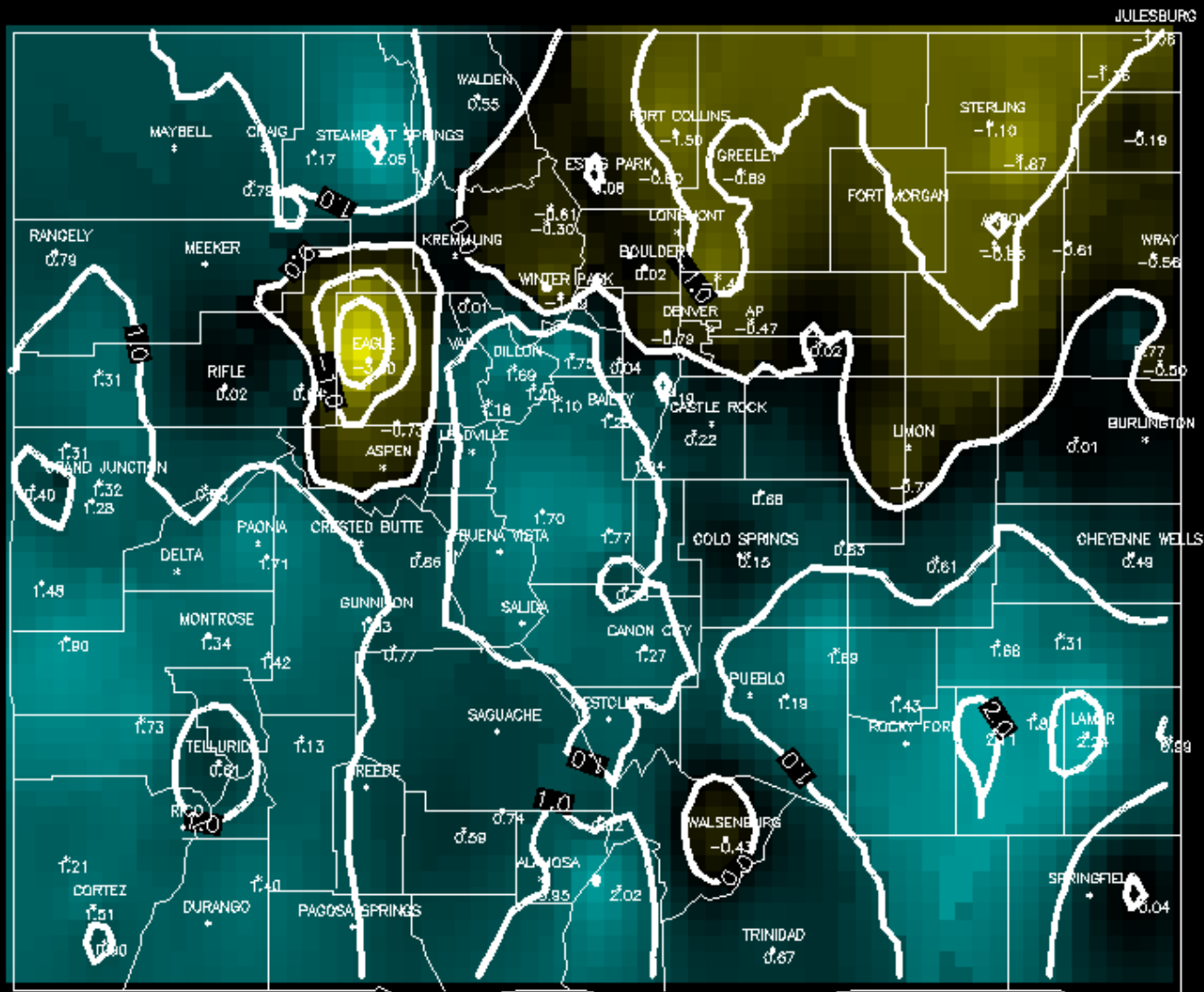
Produced by:
Colorado Climate Center
Fort Collins, CO

6 Month SPI

Apparent data problem at Eagle

Colorado

10/2006 6 mon. SPI



98 % < 2.0
60 % < 1.0
24 % < 0.0

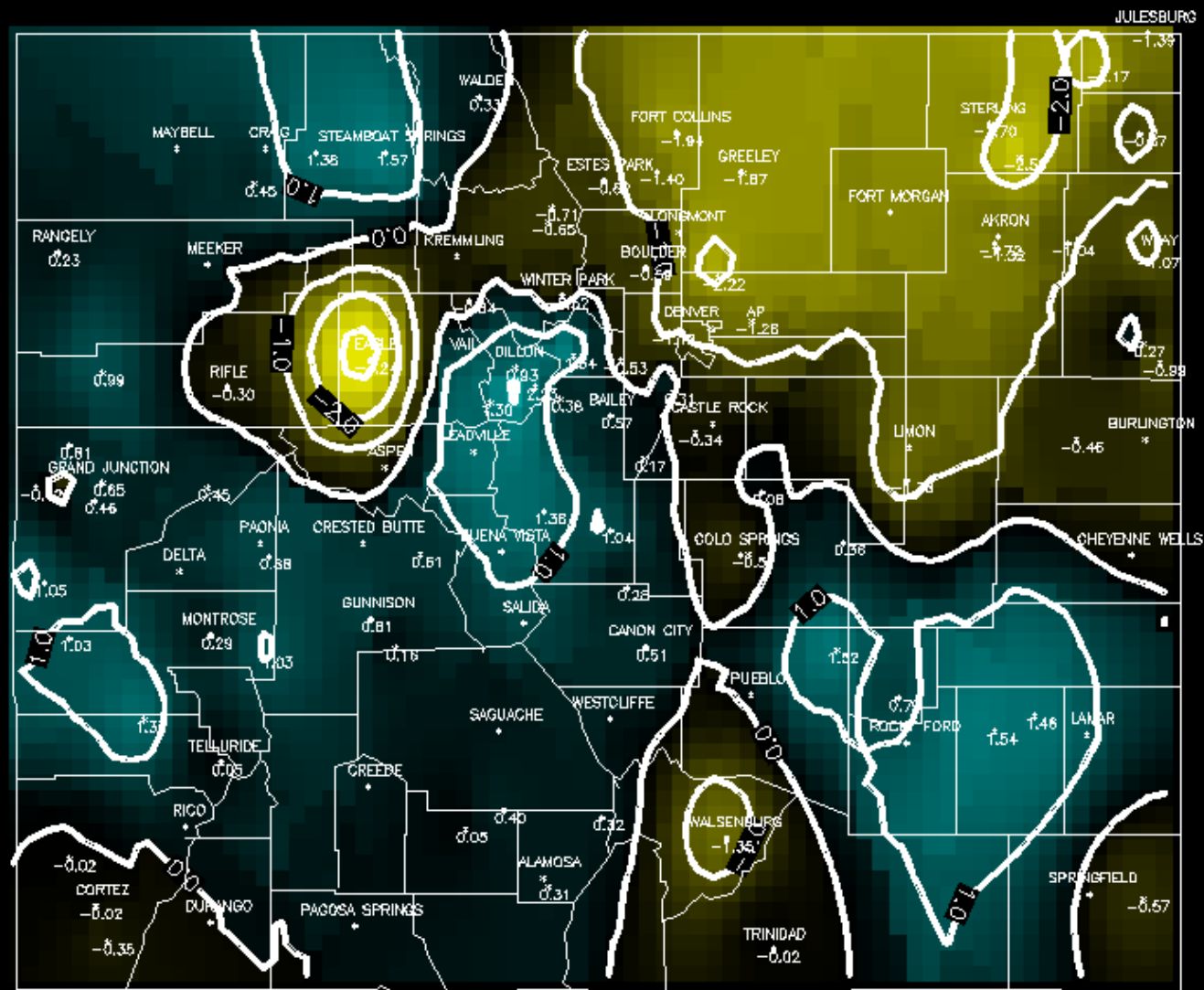
8 % < -1.0
0.2 % < -2.0
0.2 % < -3.0

Produced by:
Colorado Climate Center
Fort Collins, CO

Apparent data problem at Eagle

Colorado

10/2006 12 mon. SPI



100 % < 2.0	18 % < -1.0
89 % < 1.0	2 % < -2.0
42 % < 0.0	0 % < -3.0

Produced by:
Colorado Climate Center
Fort Collins, CO

24 Month SPI

Apparent data problem at Eagle

Colorado

10/2006 24 mon. SPI



100 % < 2.0
84 % < 1.0
34 % < 0.0

7 % < -1.0
0 % < -2.0
0 % < -3.0

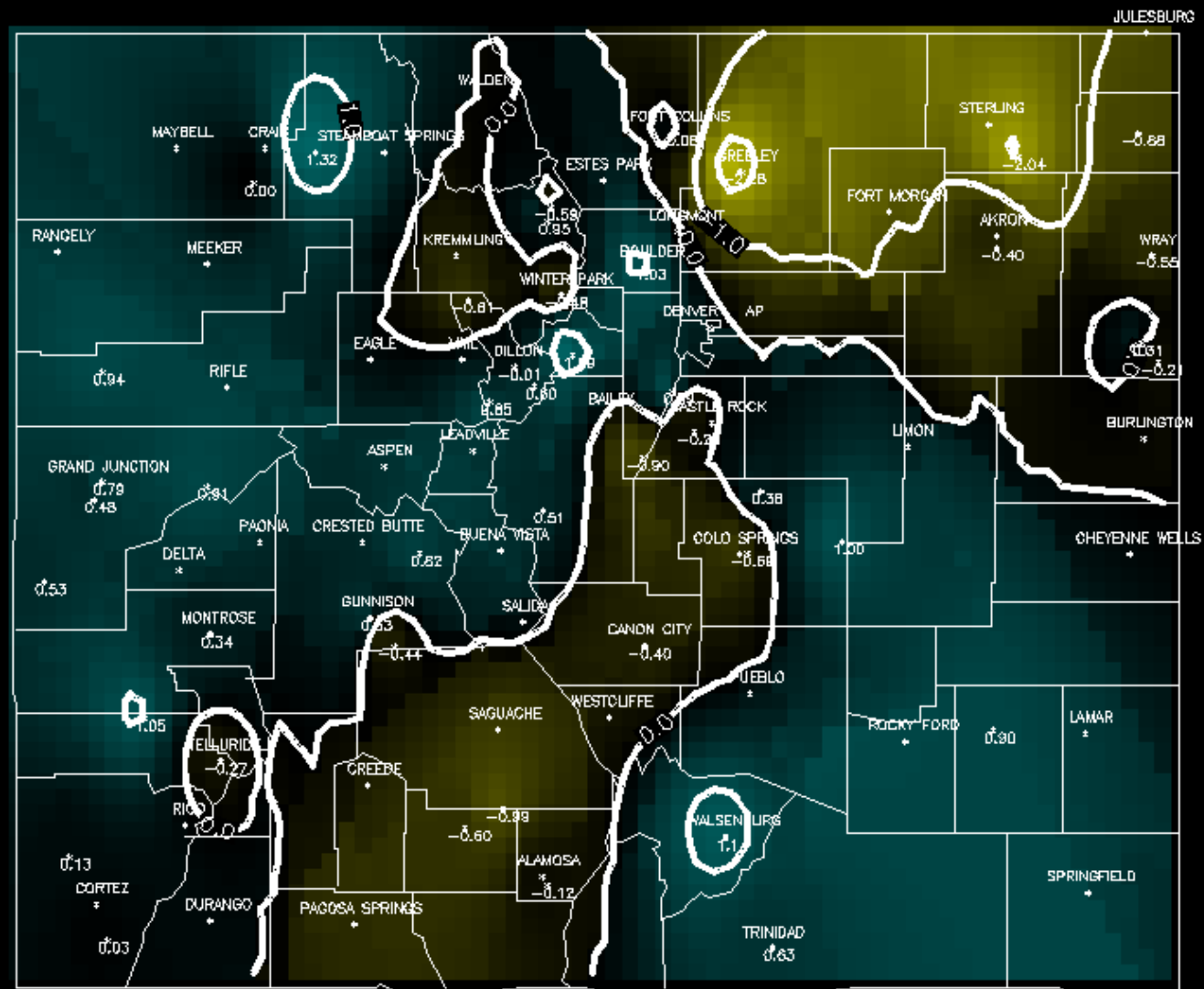
Produced by:
Colorado Climate Center
Fort Collins, CO

48 Month SPI

Apparent data problem at Eagle

Colorado

10/2006 48 mon. SPI



100 % < 2.0
99 % < 1.0
34 % < 0.0

7 % < -1.0
0 % < -2.0
0 % < -3.0

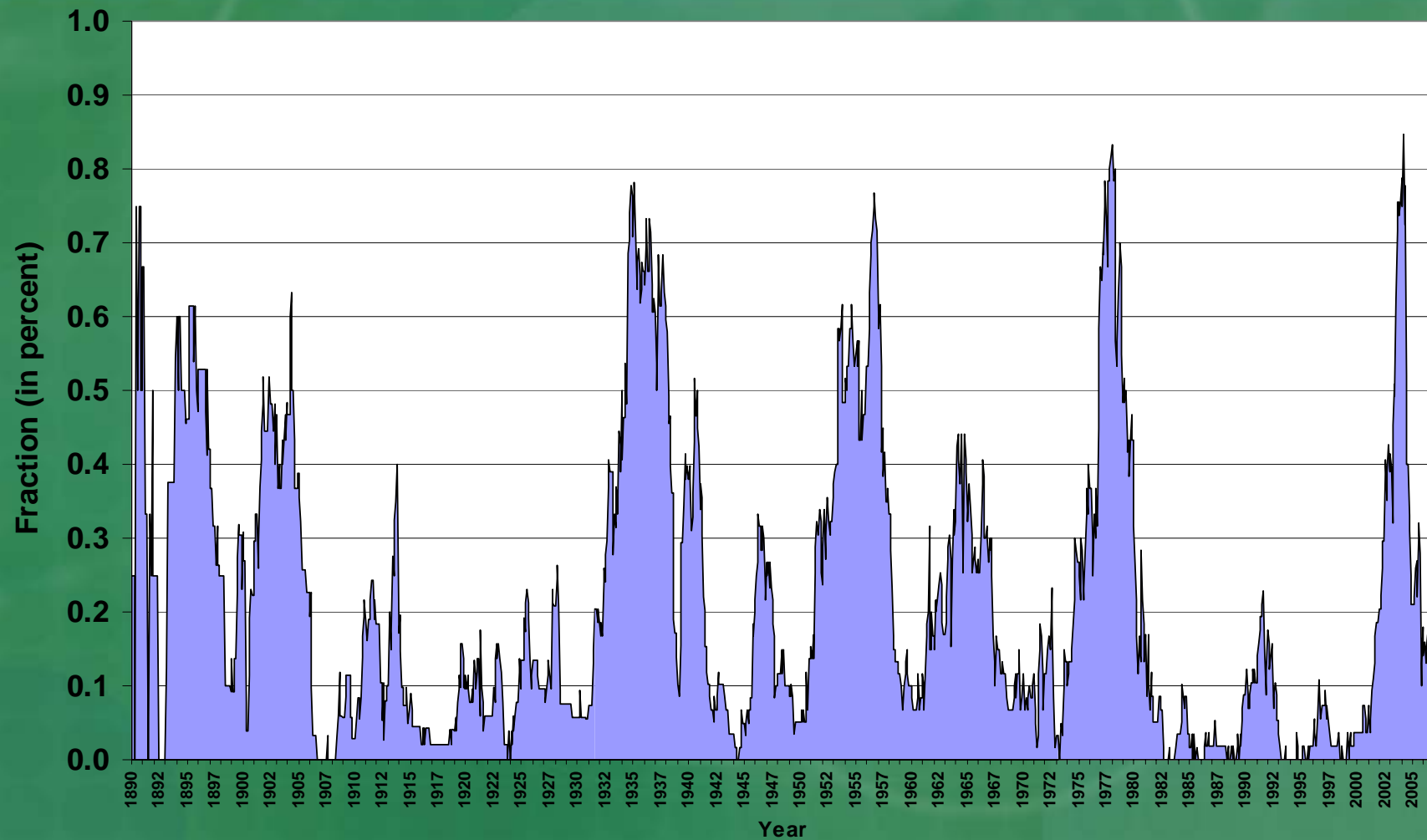
Produced by:
Colorado Climate Center
Fort Collins, CO

Standardized Precipitation Index

Fraction of Colorado in Drought

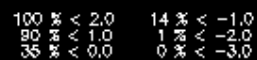
Based on 48 month SPI

(1890 - Oct 2006)



Apparent data problem at Eagle

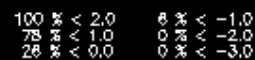
10/2006 12 mon. SPI – Projected 6 mon. at P=0.20



Produced by:
Colorado Climate Center
Fort Collins, CO

Apparent data problem at Eagle

10/2006 12 mon. SPI – Projected 6 mon. at P=0.50



Produced by:
Colorado Climate Center
Fort Collins, CO

Projected Conditions at 0.8 Probability Level

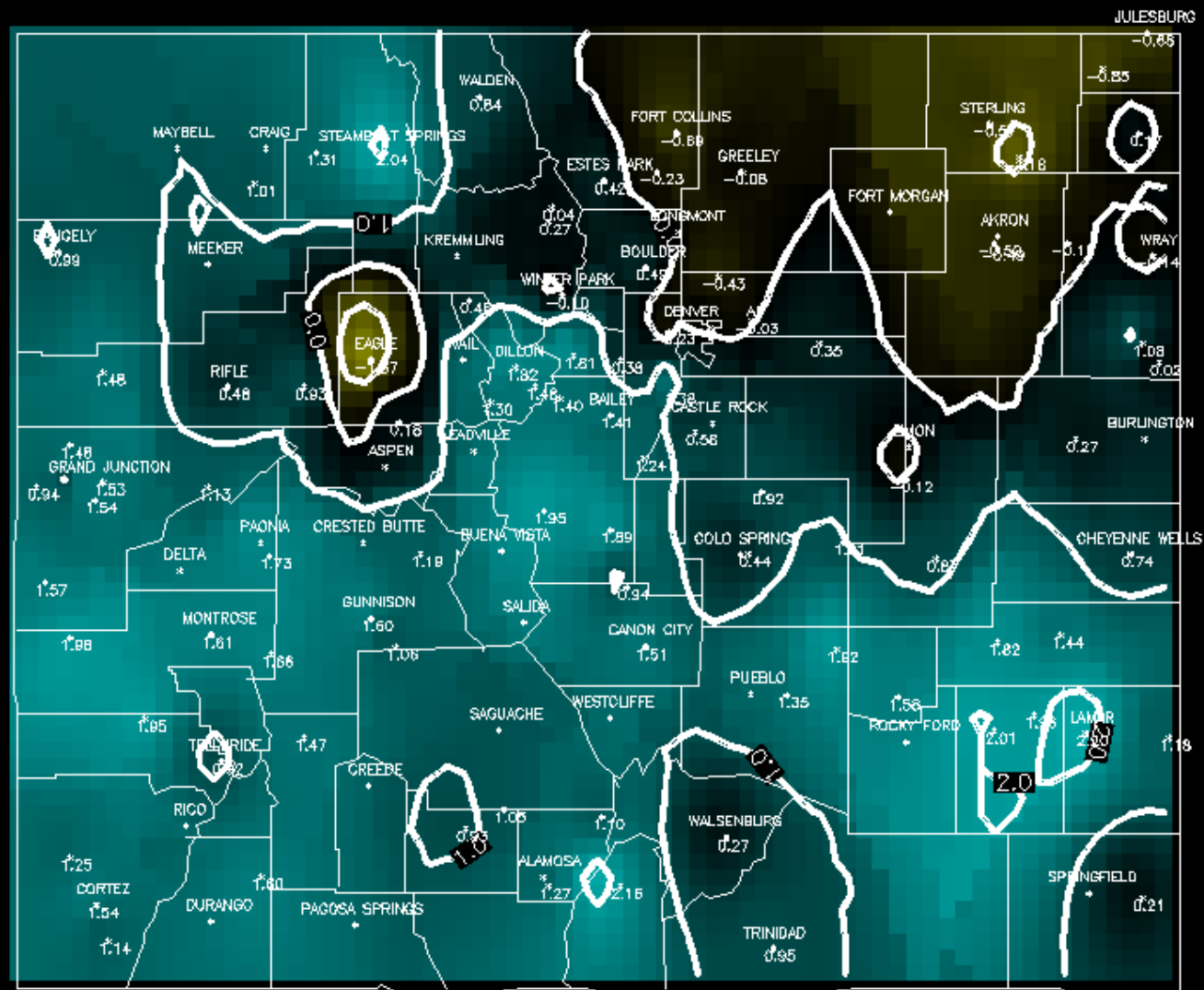
12 Month SPI at 6 months

Apparent data problem

Apparent data problem at Eagle

Colorado

10/2006 12 mon. SPI – Projected 6 mon. at P=0.80



99 % < 2.0	0 % < -1.0
42 % < 1.0	0 % < -2.0
15 % < 0.0	0 % < -3.0

Produced by:
Colorado Climate Center
Fort Collins, CO

Colorado Climate Center

Data and Power Point Presentations available for downloading

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

- click on “Drought”
- then click on “Presentations”

