

# Drought Update

## January 2006 Meeting

Nolan Doesken  
Colorado Climate Center

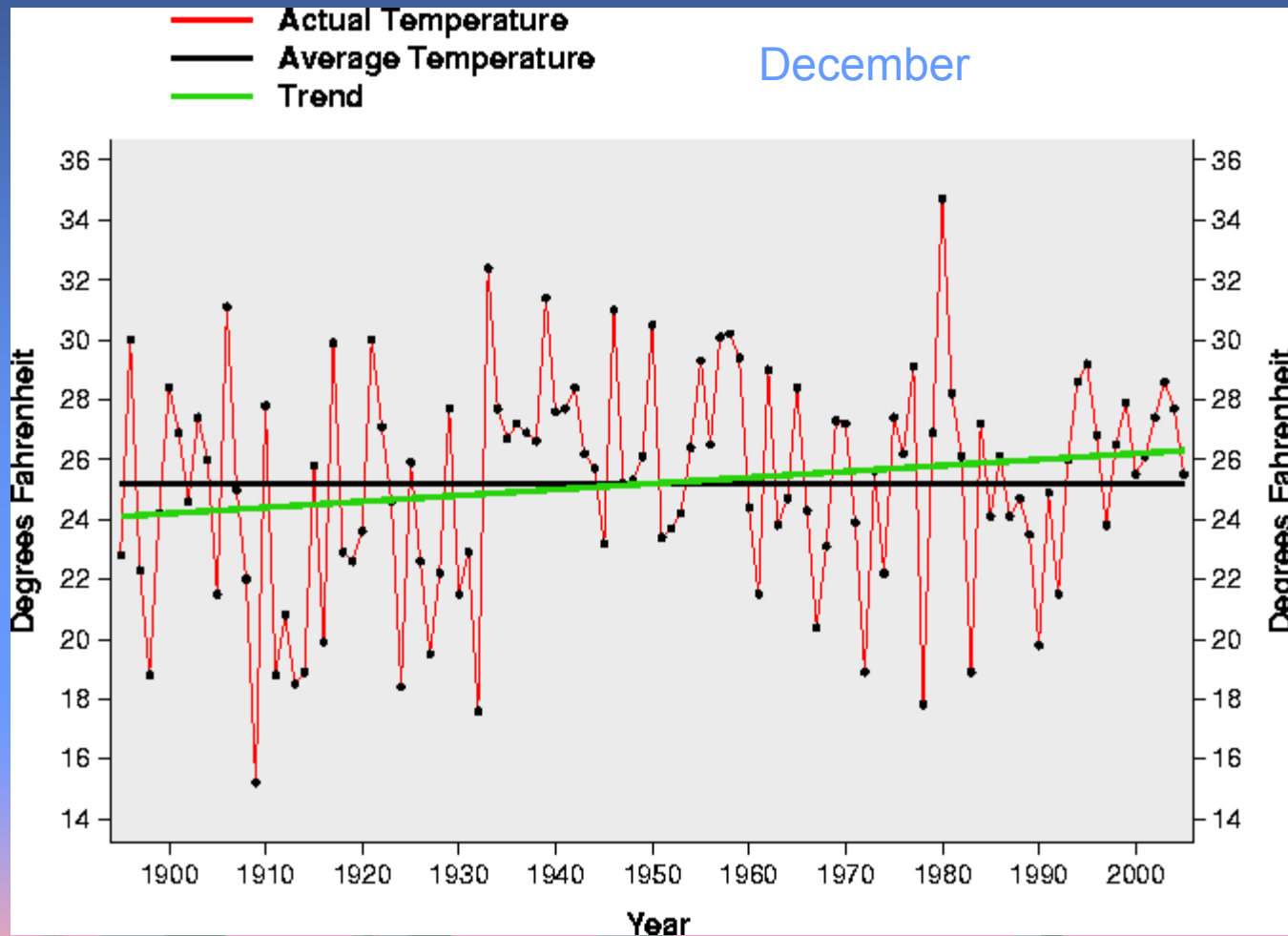
presented at the Water Availability Task Force meeting,  
Division of Wildlife, Denver, CO, January 17, 2006

Prepared by Odie Bliss

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



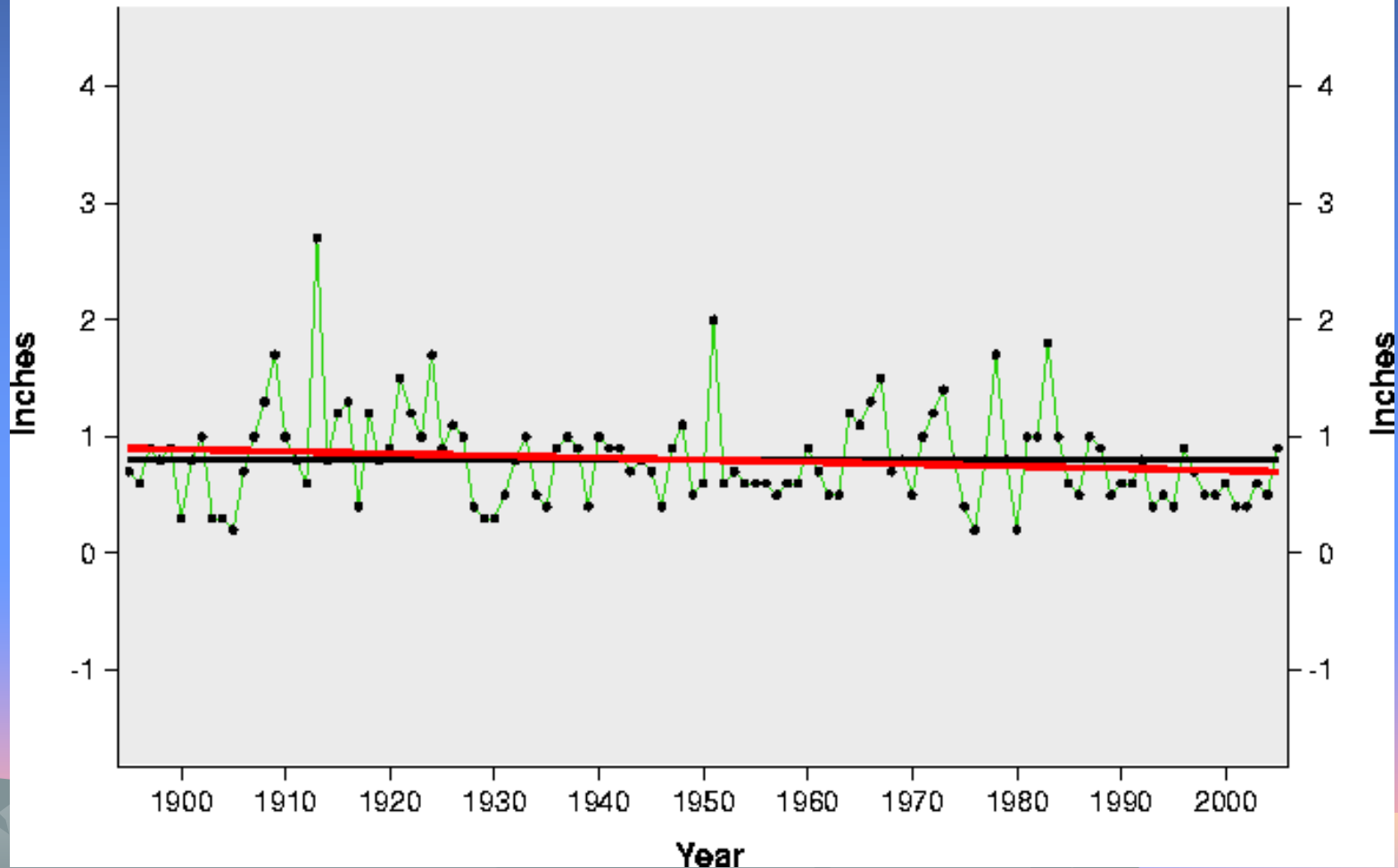
# Colorado Average Temperatures



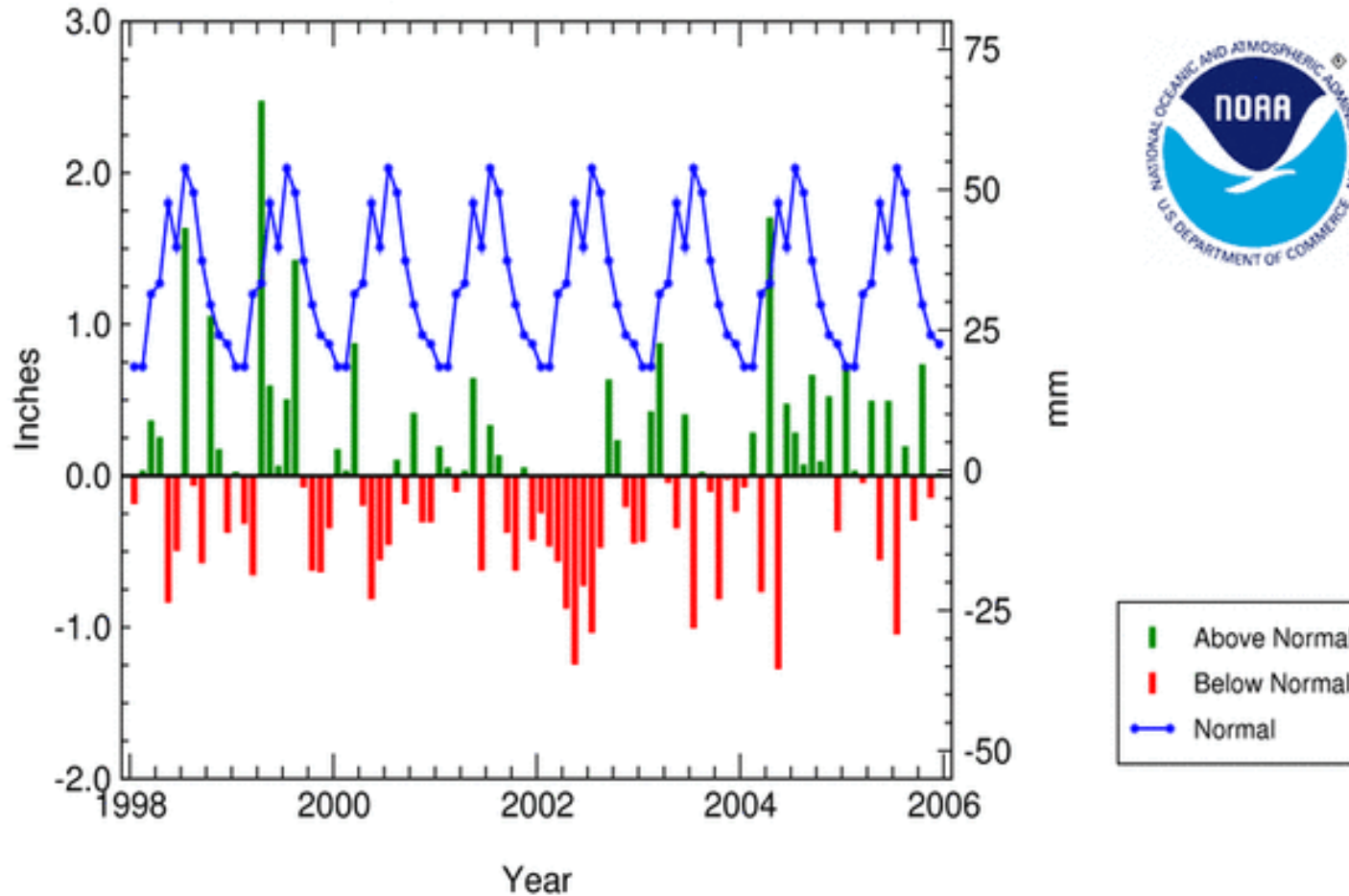
# Colorado Total Precipitation

- Actual Precipitation
- Average Precipitation
- Trend

December

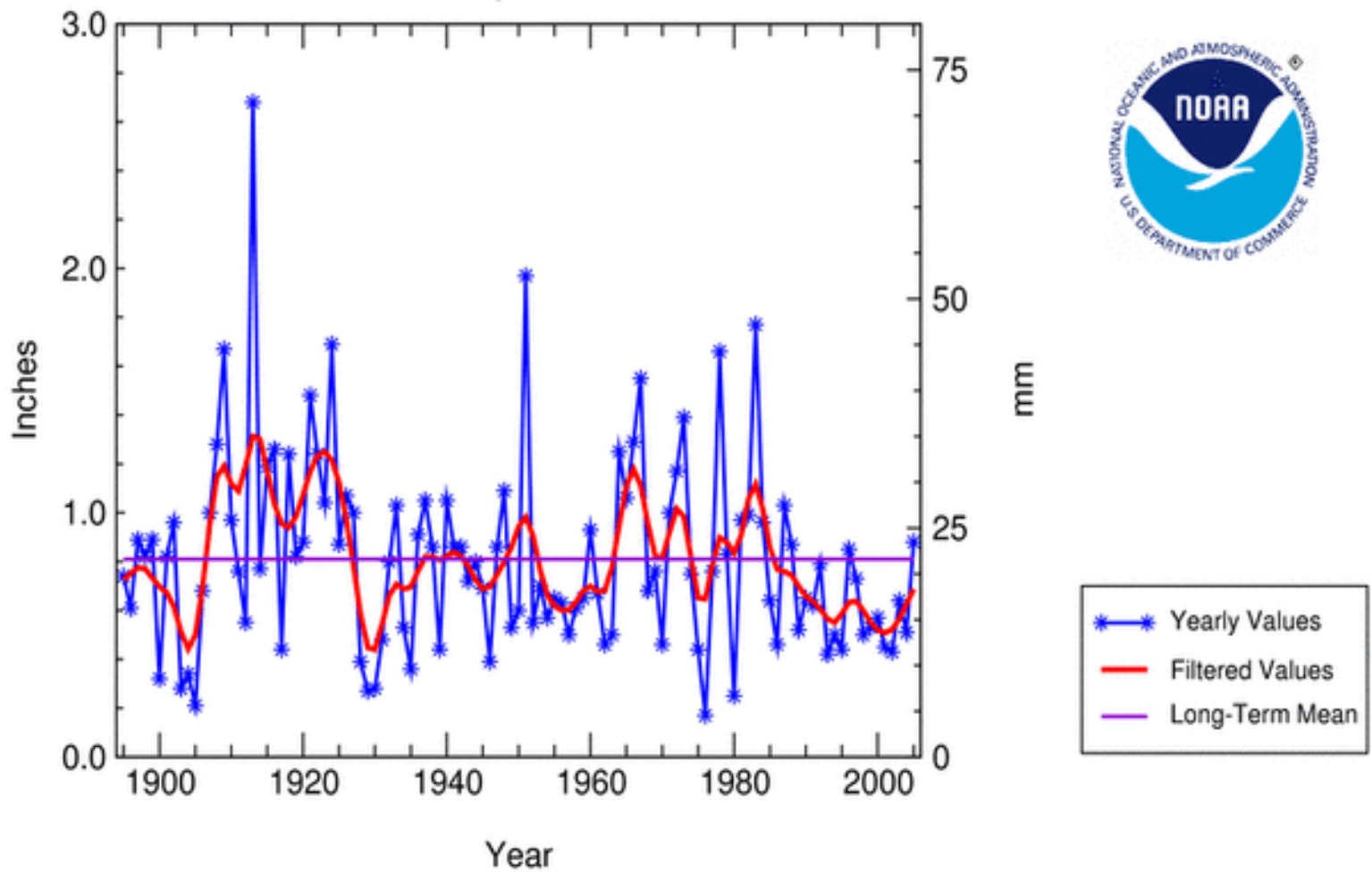


# Colorado Statewide Precipitation Normal & Departure, Jan 1998 - Dec 2005



National Climatic Data Center / NESDIS / NOAA

# Colorado Statewide Precipitation December, 1895 - 2005



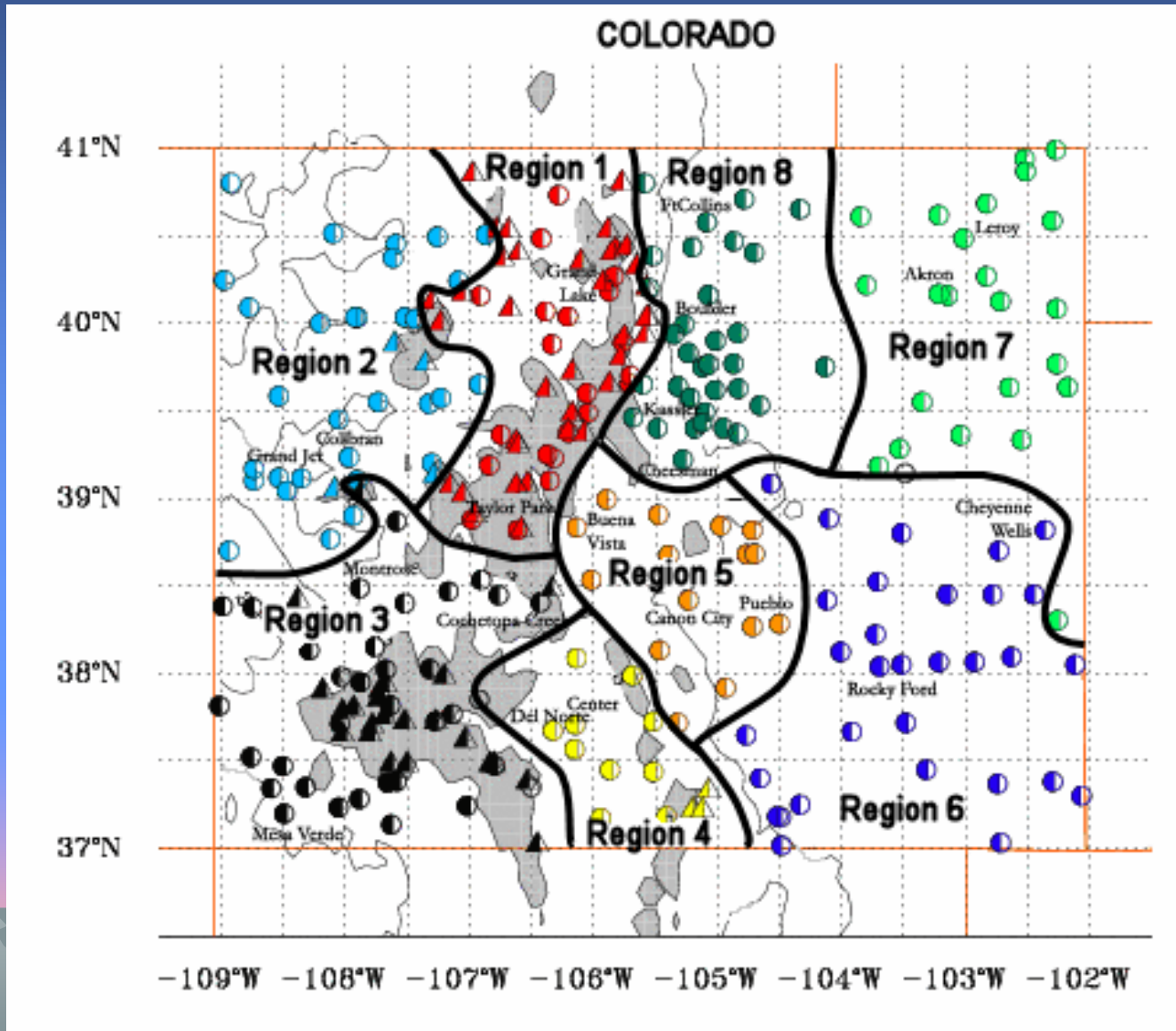
National Climatic Data Center / NESDIS / NOAA

**Statewide Precipitation Ranks  
for Colorado , 2005**

Period	Rank
<b>Dec</b>	38 <sup>th</sup> wettest (73 <sup>rd</sup> driest)
<b>Nov-Dec</b>	54 <sup>th</sup> driest
<b>Oct-Dec</b>	27 <sup>th</sup> wettest (85 <sup>th</sup> driest)
<b>Sep-Dec</b>	37 <sup>th</sup> wettest (75 <sup>th</sup> driest)
<b>Aug-Dec</b>	41 <sup>st</sup> wettest (70 <sup>th</sup> driest)
<b>Jul-Dec</b>	45 <sup>th</sup> driest
<b>Jun-Dec</b>	54 <sup>th</sup> wettest (58 <sup>th</sup> driest)
<b>May-Dec</b>	49 <sup>th</sup> driest
<b>Apr-Dec</b>	50 <sup>th</sup> driest
<b>Mar-Dec</b>	49 <sup>th</sup> driest
<b>Feb-Dec</b>	50 <sup>th</sup> driest
<b>Jan-Dec</b>	55 <sup>th</sup> driest

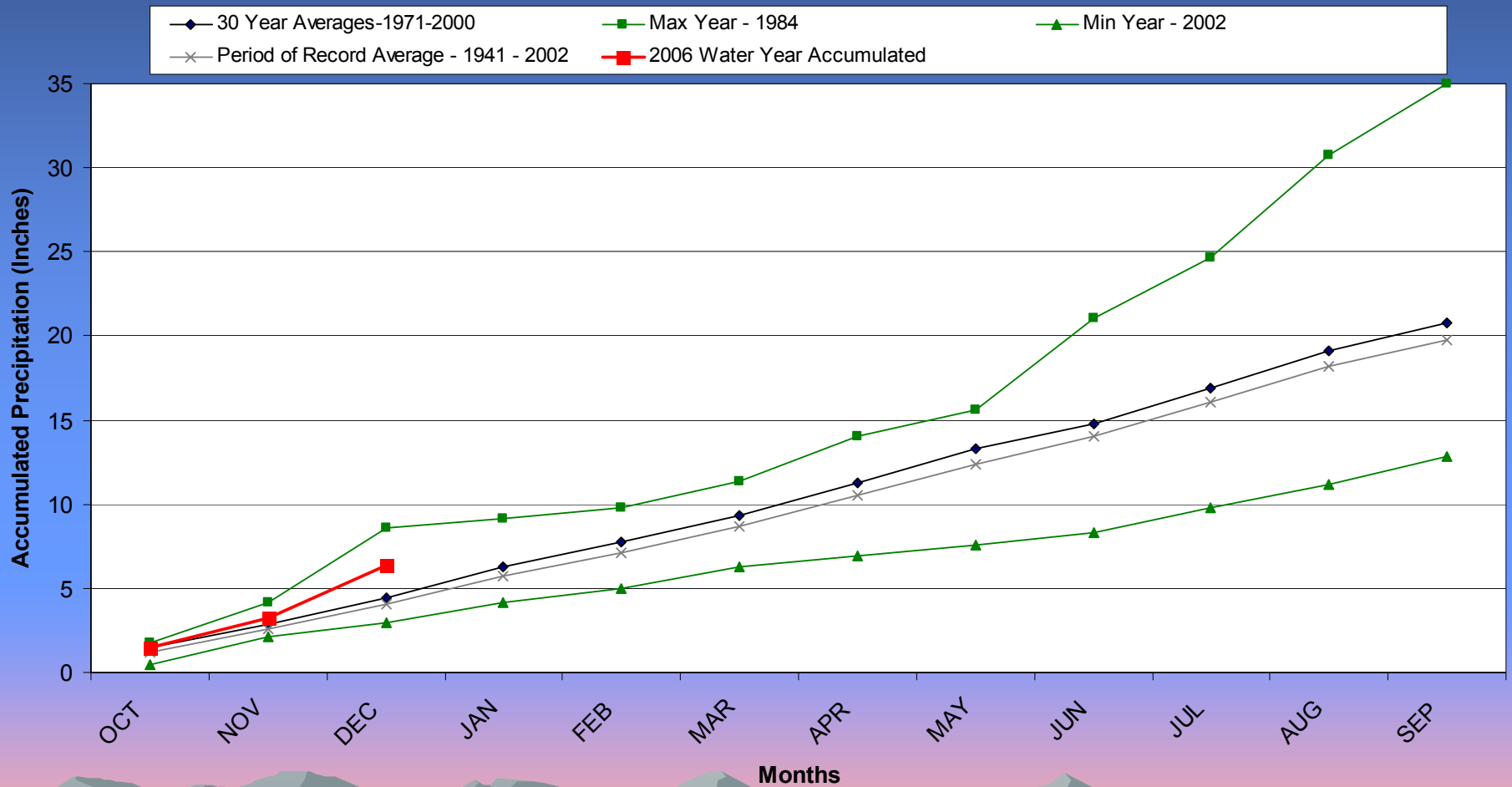
Colorado  
Precipitation  
Ranking  
1895-2005

# Climate divisions defined by Dr. Klaus Wolter of NOAA's Climate Diagnostic Center in Boulder, CO



# Division 1– Grand Lake 1NW

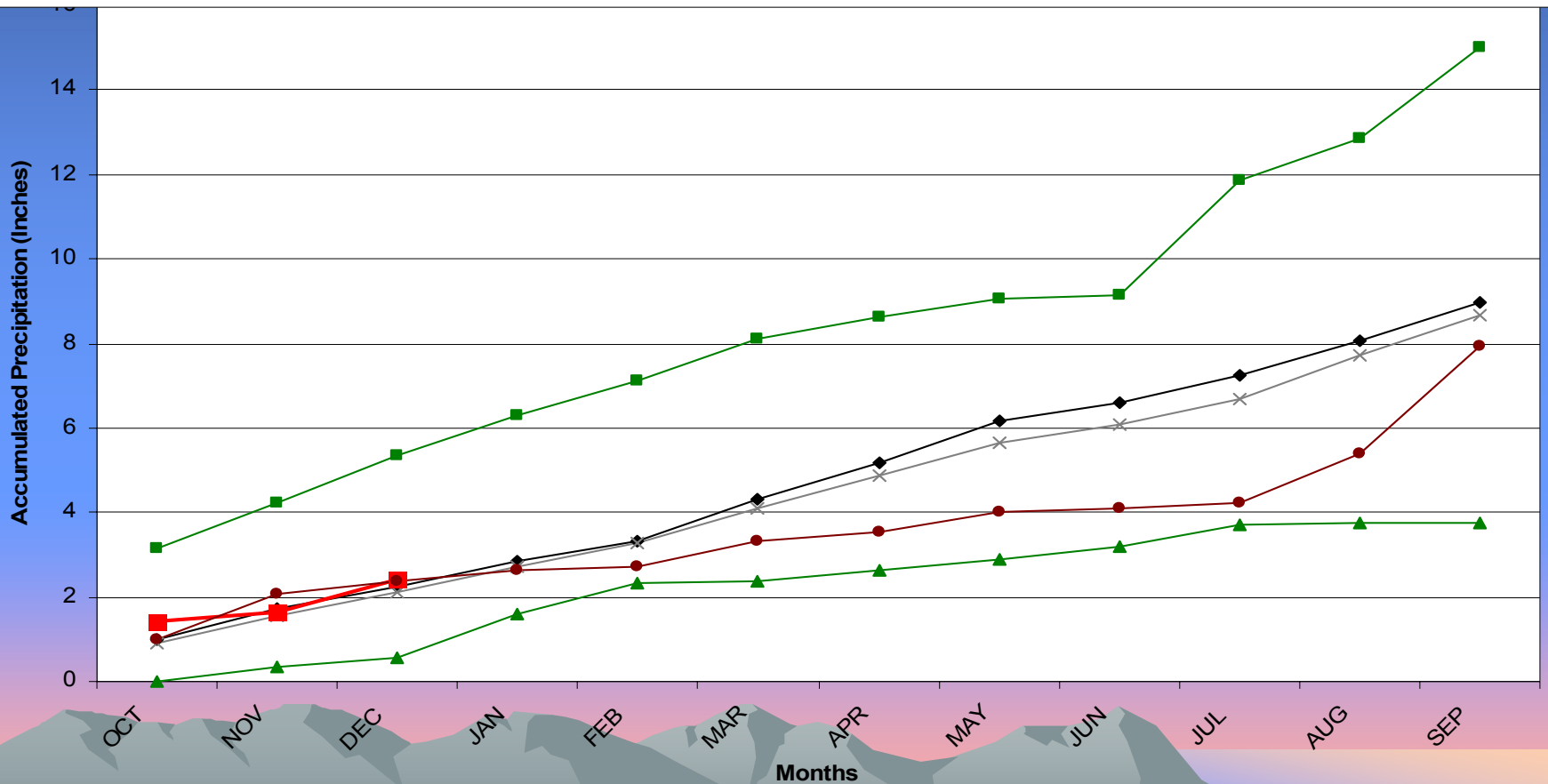
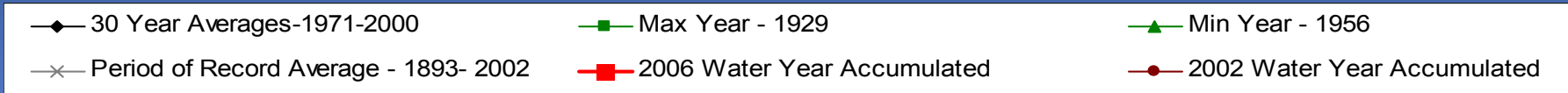
## Grand Lake 1 NW 2006 Water Year





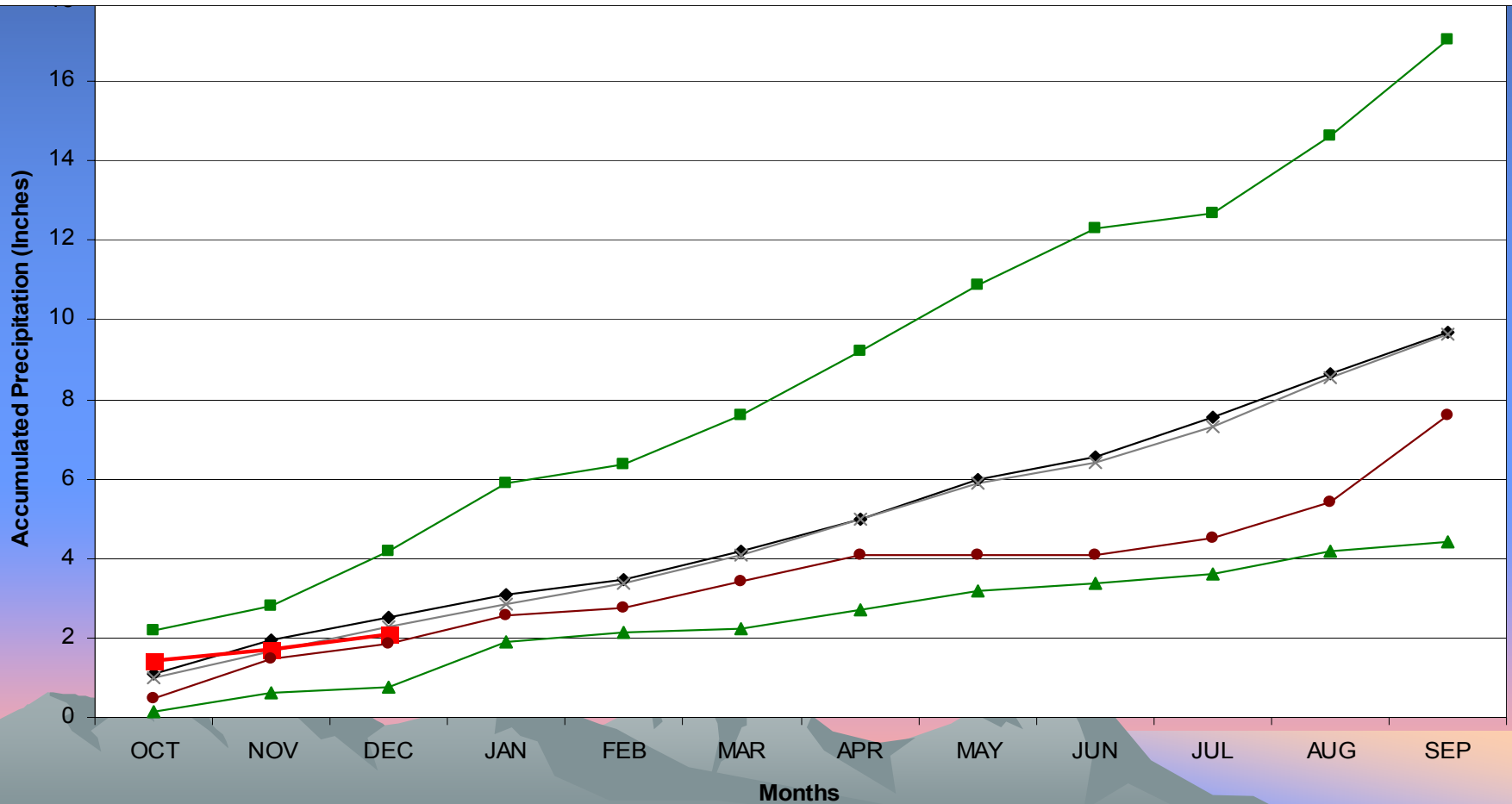
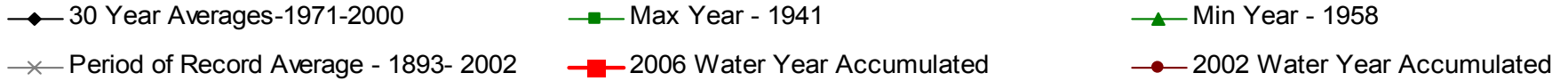
# Division 2 – Grand Junction

## Grand Junction WSFO 2006 Water Year



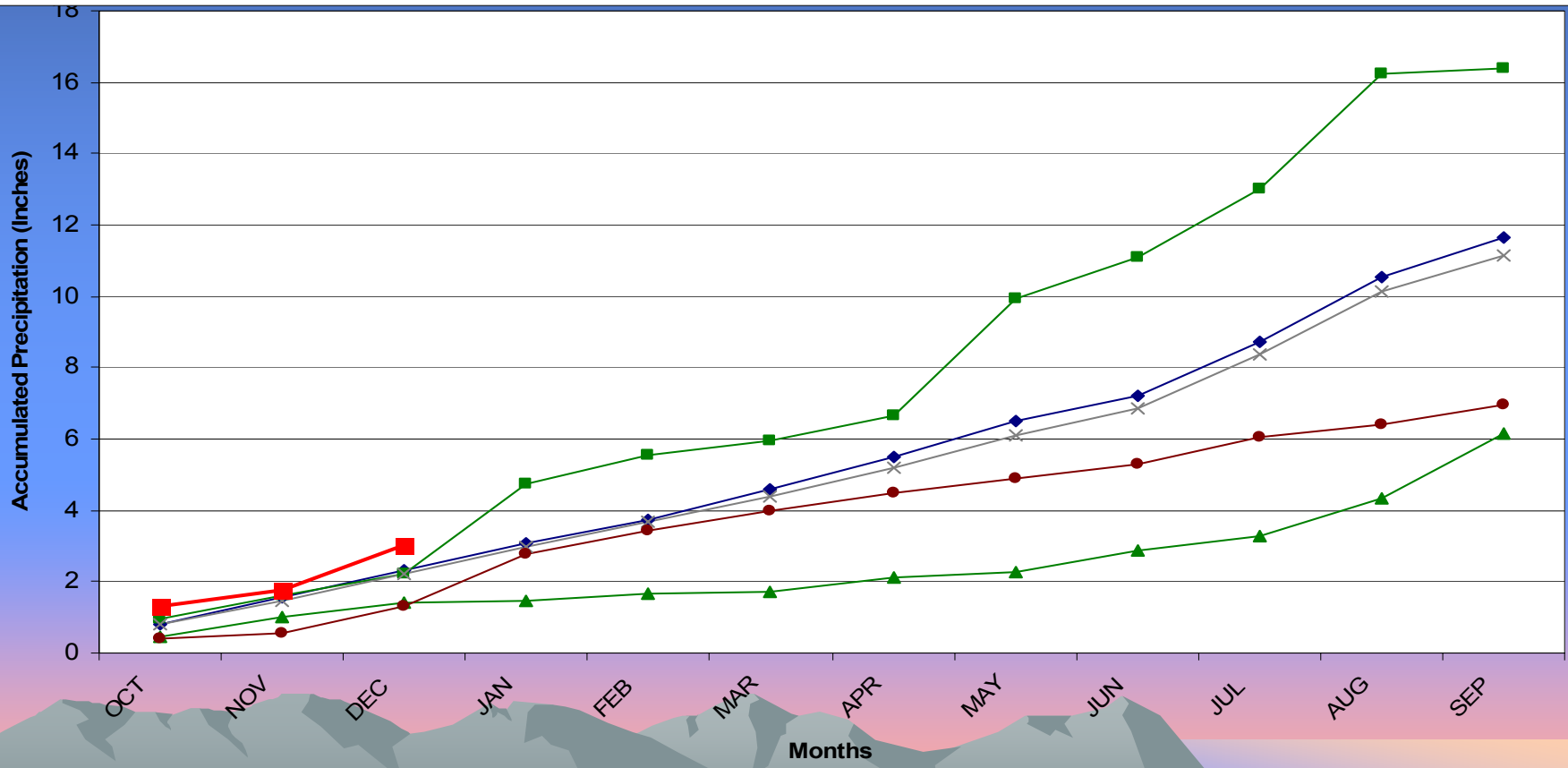
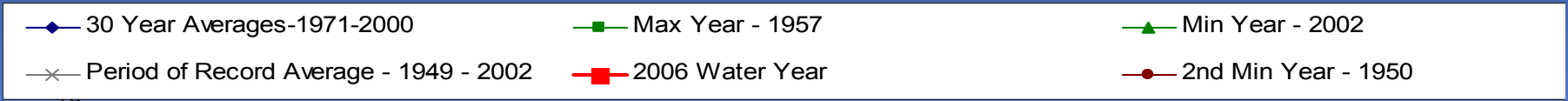
# Division 3 – Montrose

## Montrose #2 2006 Water Year



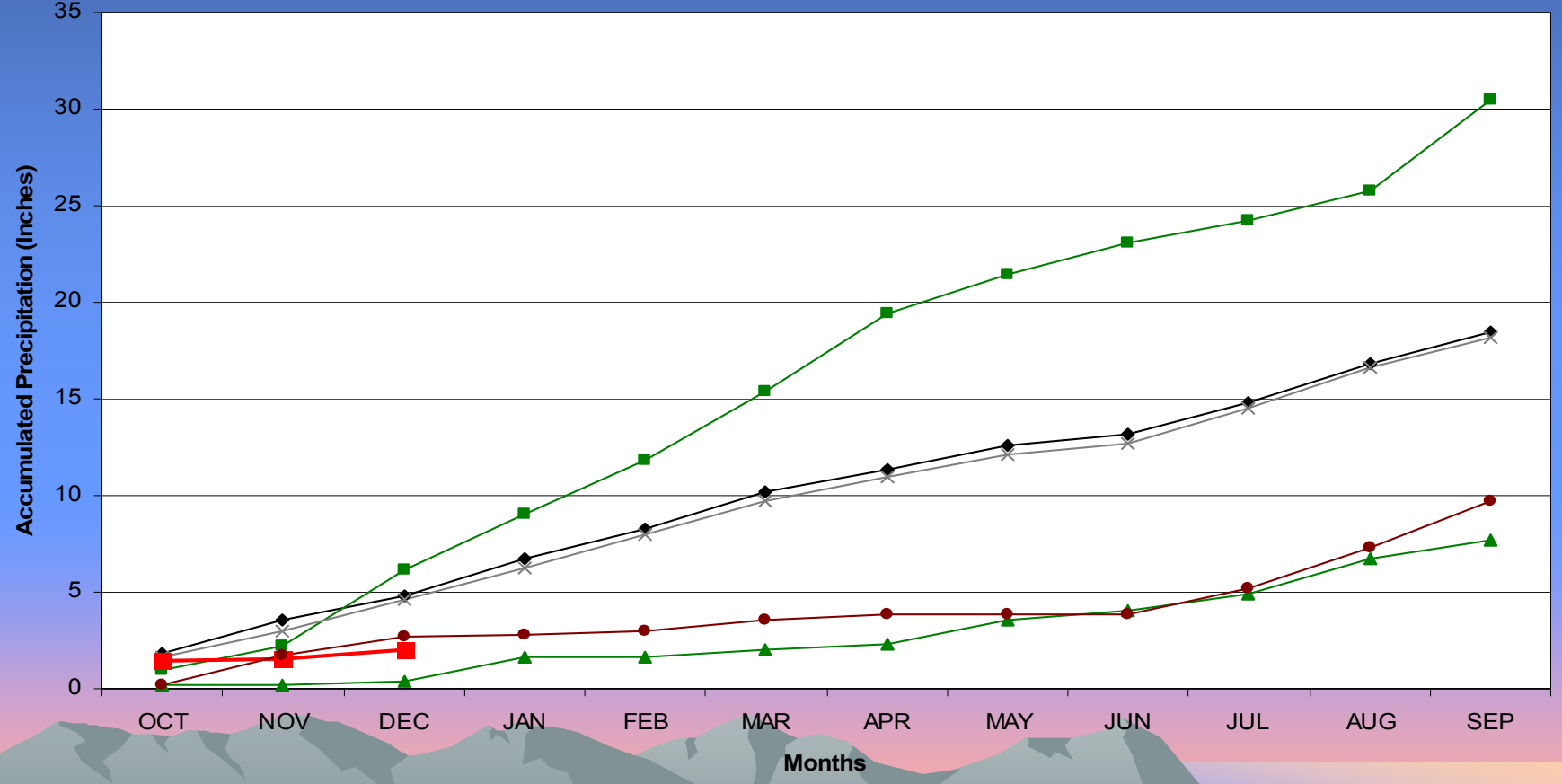
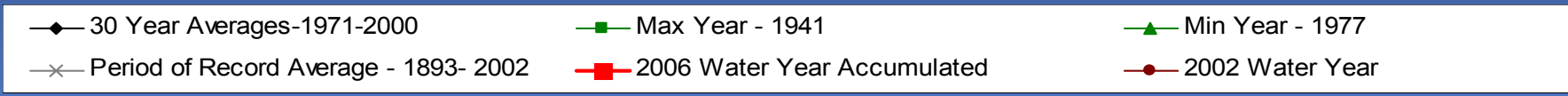
# Division 3 – Cochetopa Creek

## Cochetopa Creek 2006 Water Year



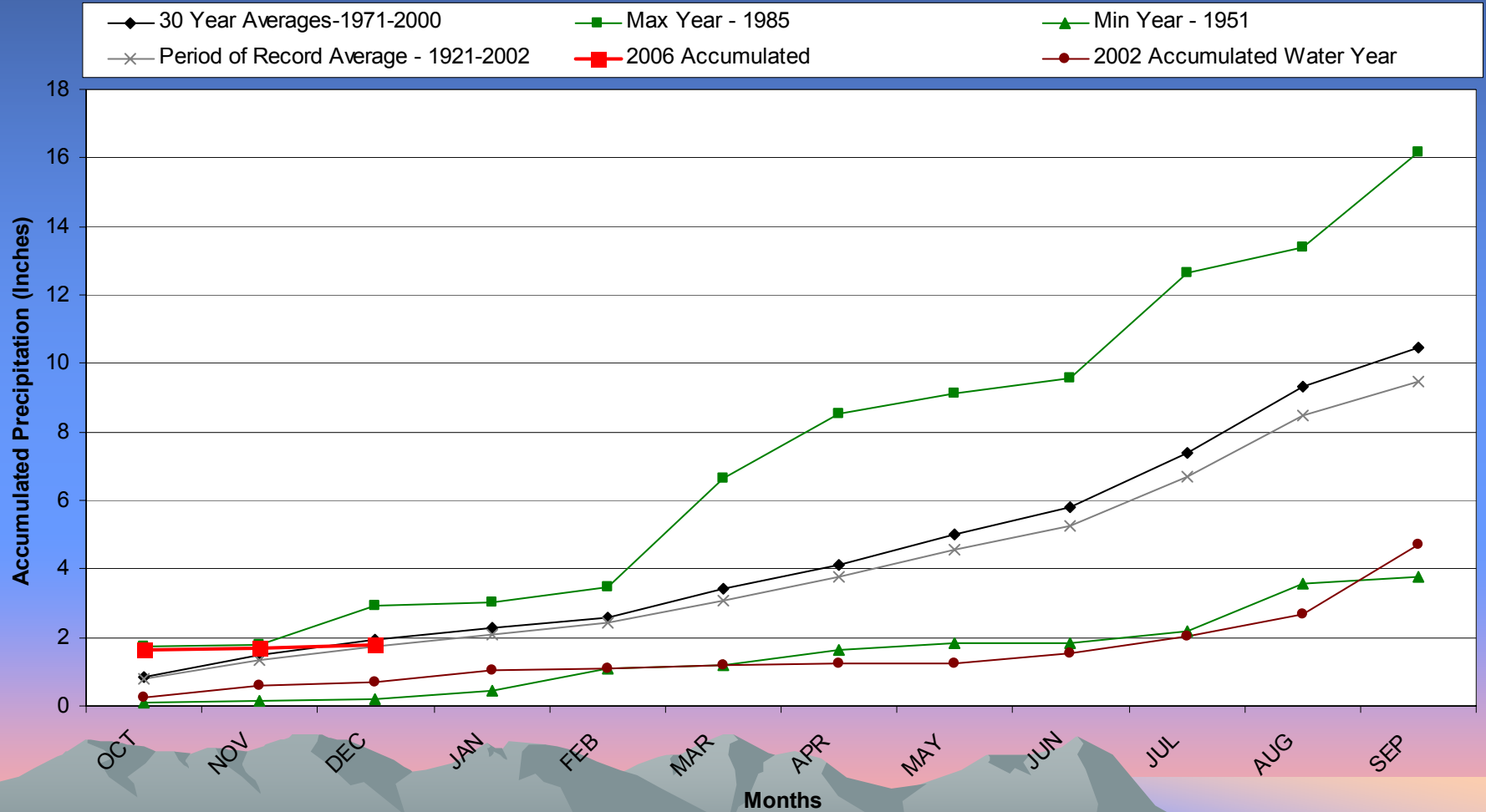
# Division 3 – Mesa Verde

## Mesa Verde NP 2006 Water Year



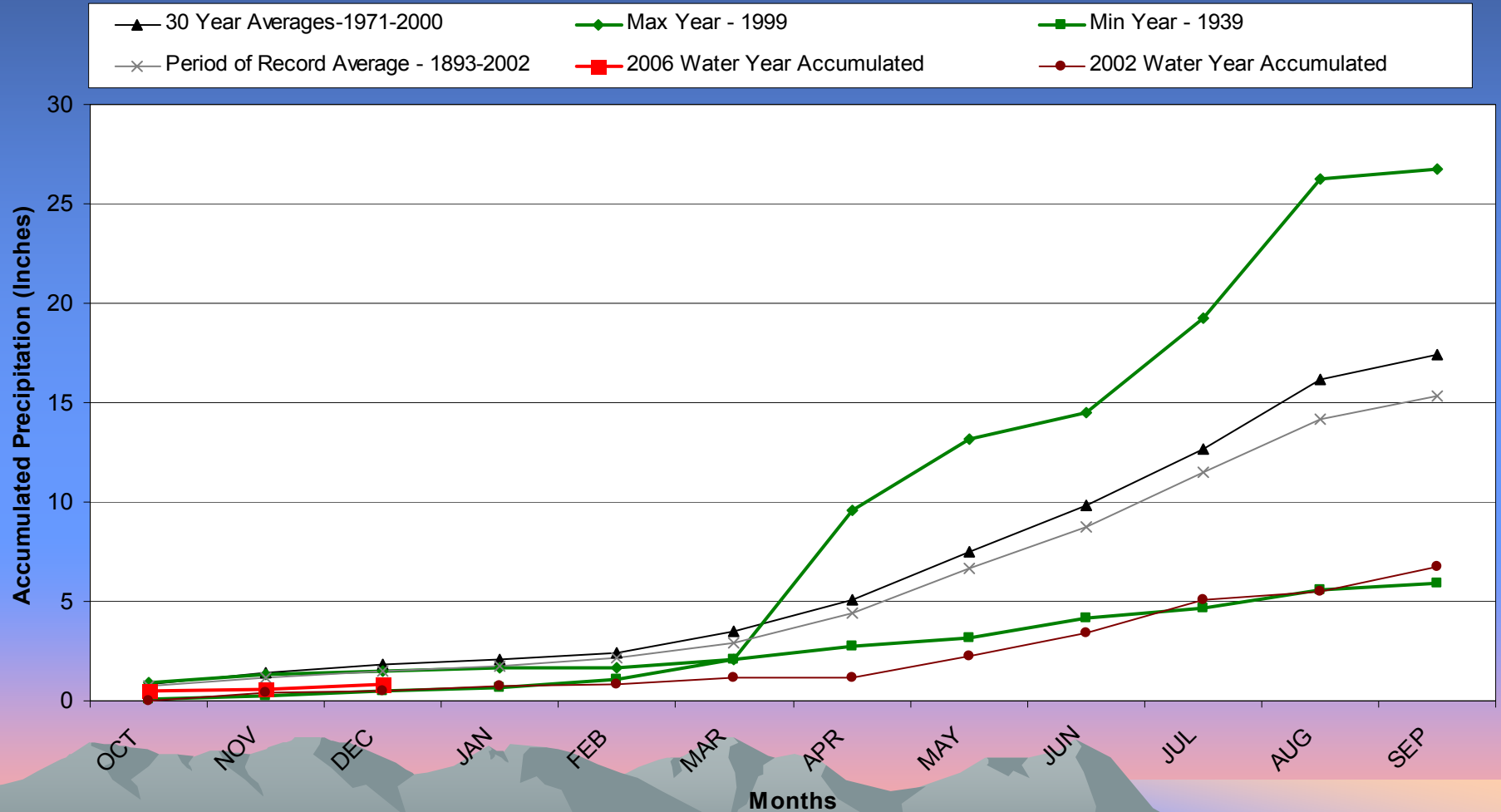
# Division 4 – Del Norte

## Del Norte 2006 Water Year



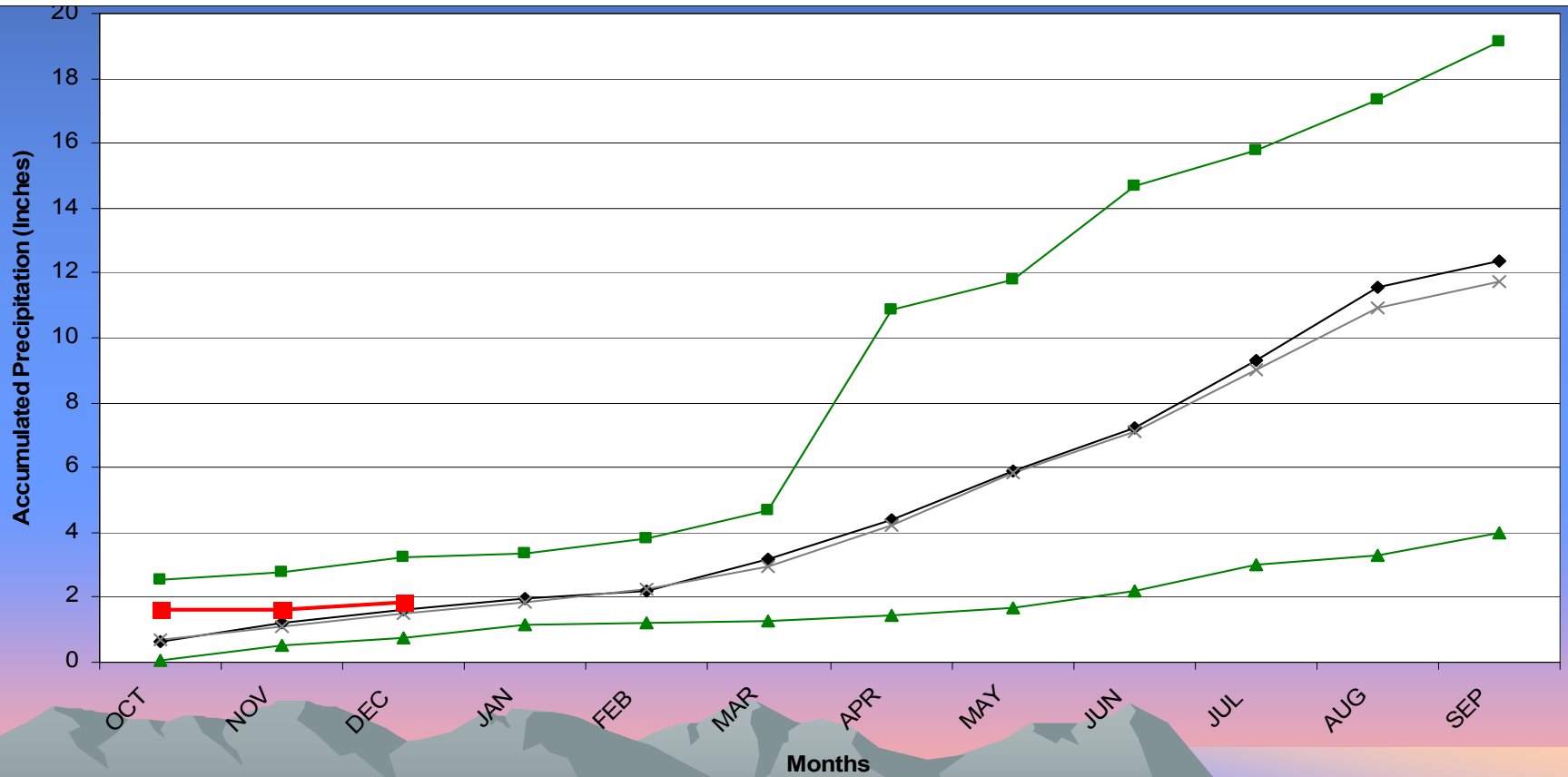
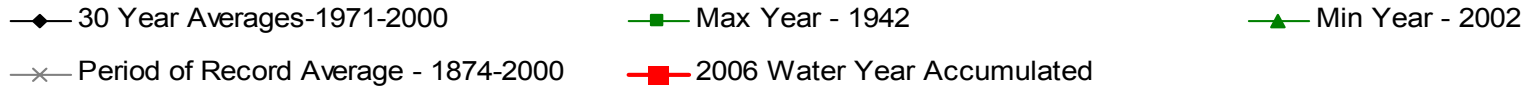
# Division 5 – Colorado Springs

## Colorado Springs 2006 Water Year



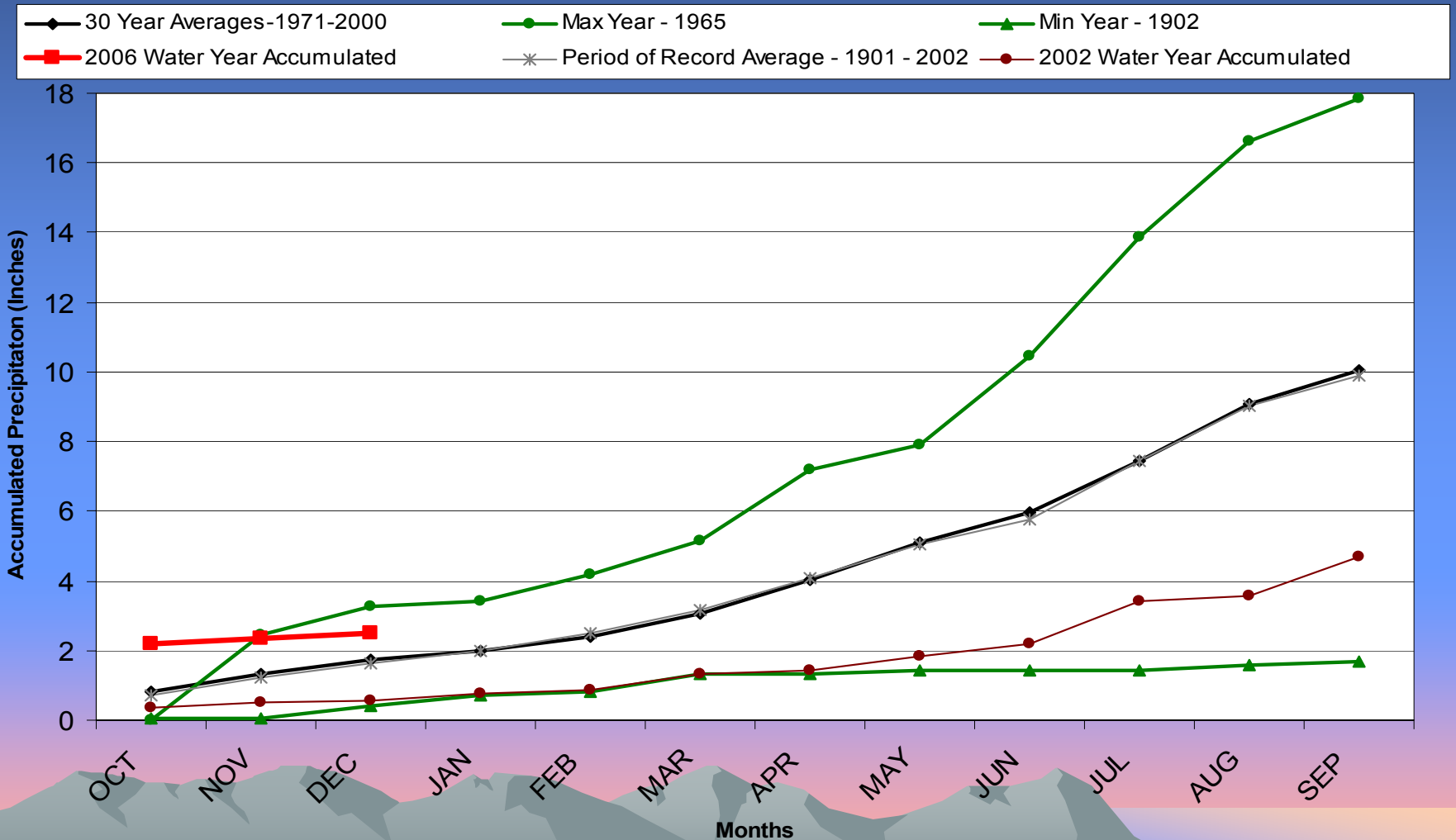
# Division 5 – Pueblo

## Pueblo WSO 2006 Water Year



# Division 5 – Buena Vista

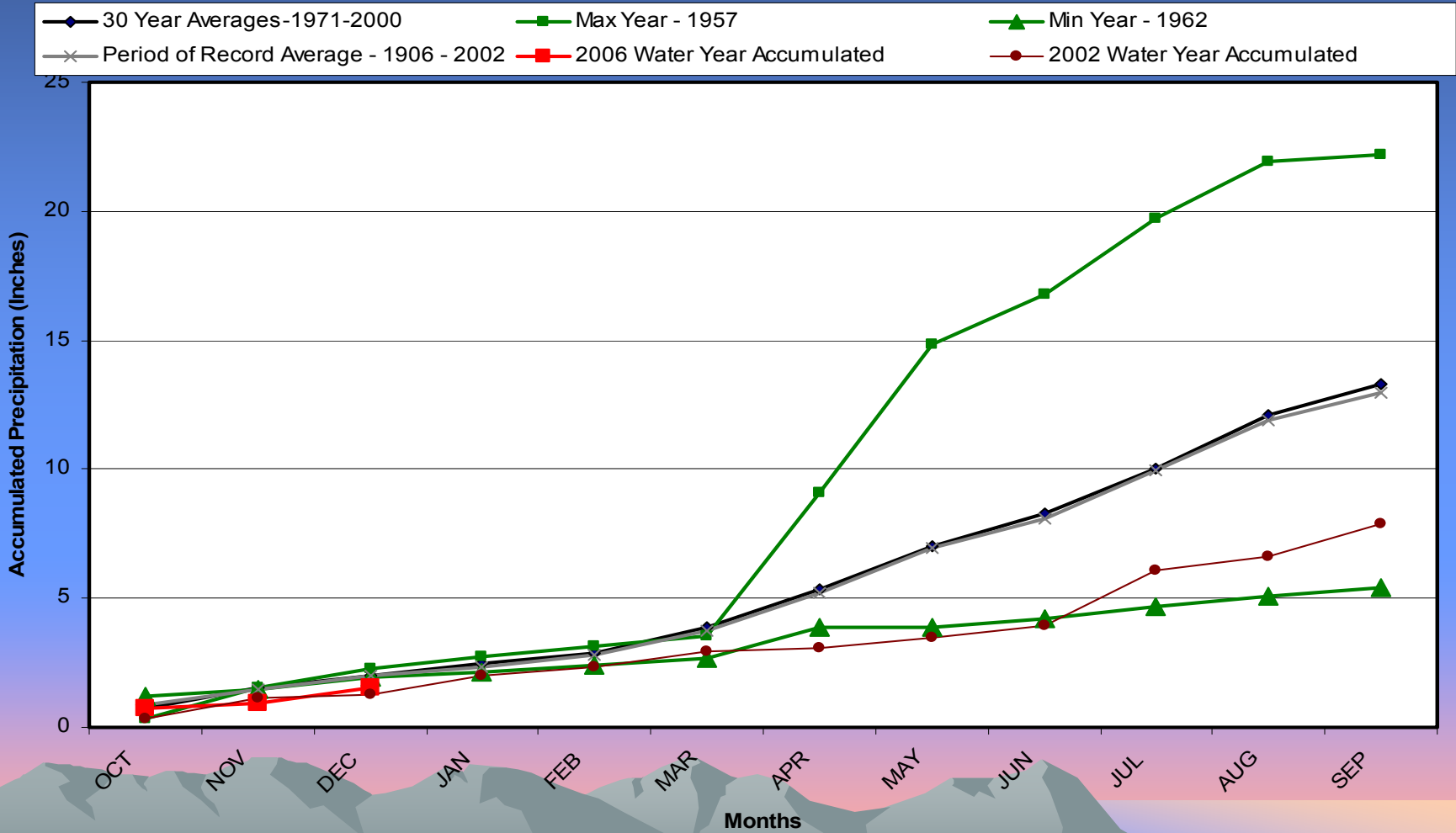
## Buena Vista 2006 Water Year





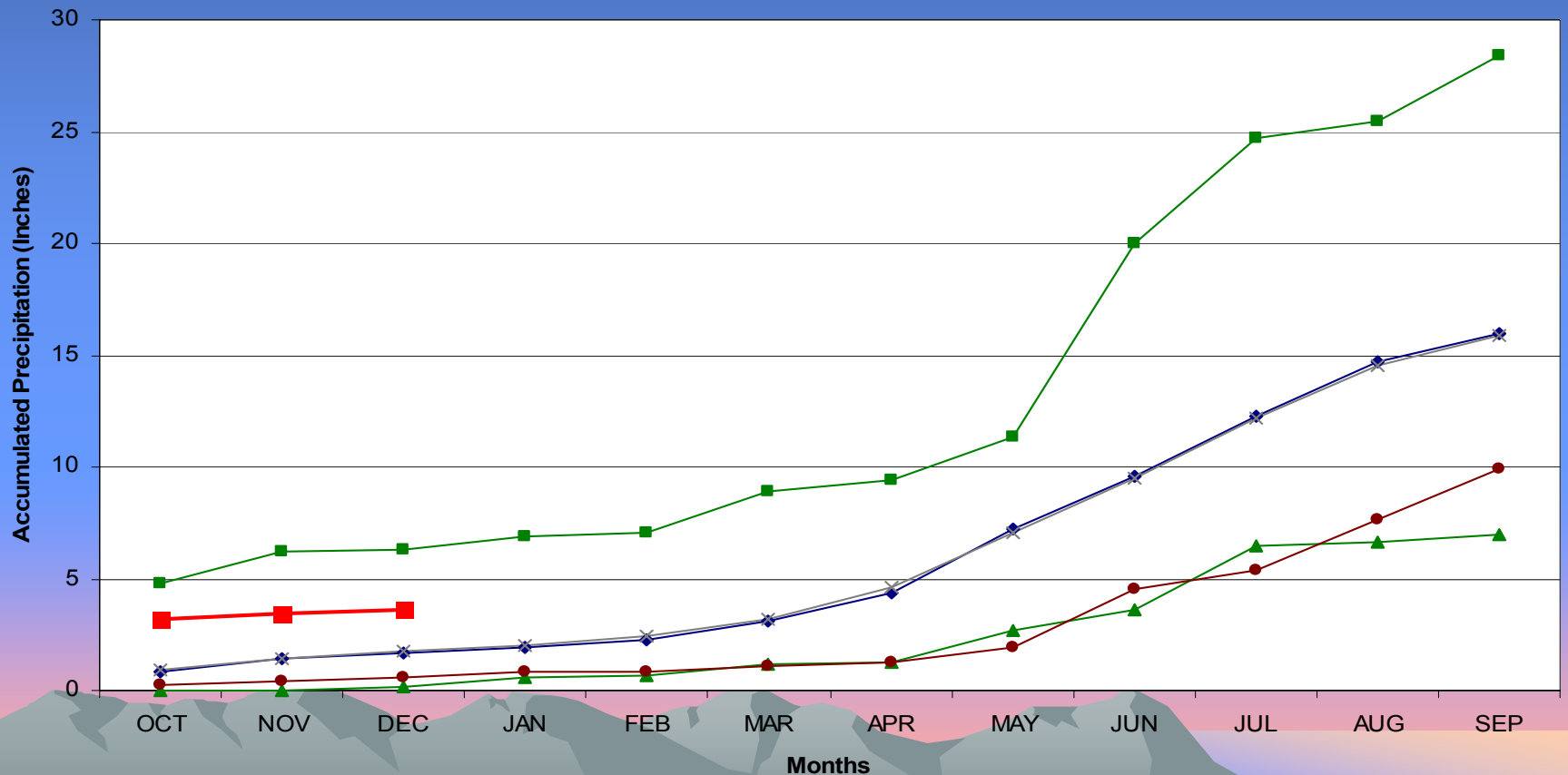
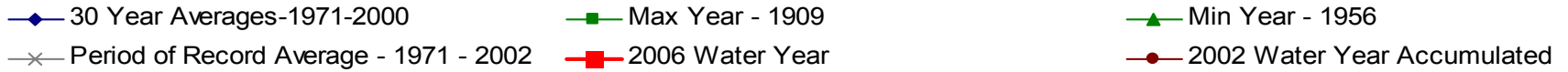
# Division 5 – Canon City

## Canon City 2006 Water Year



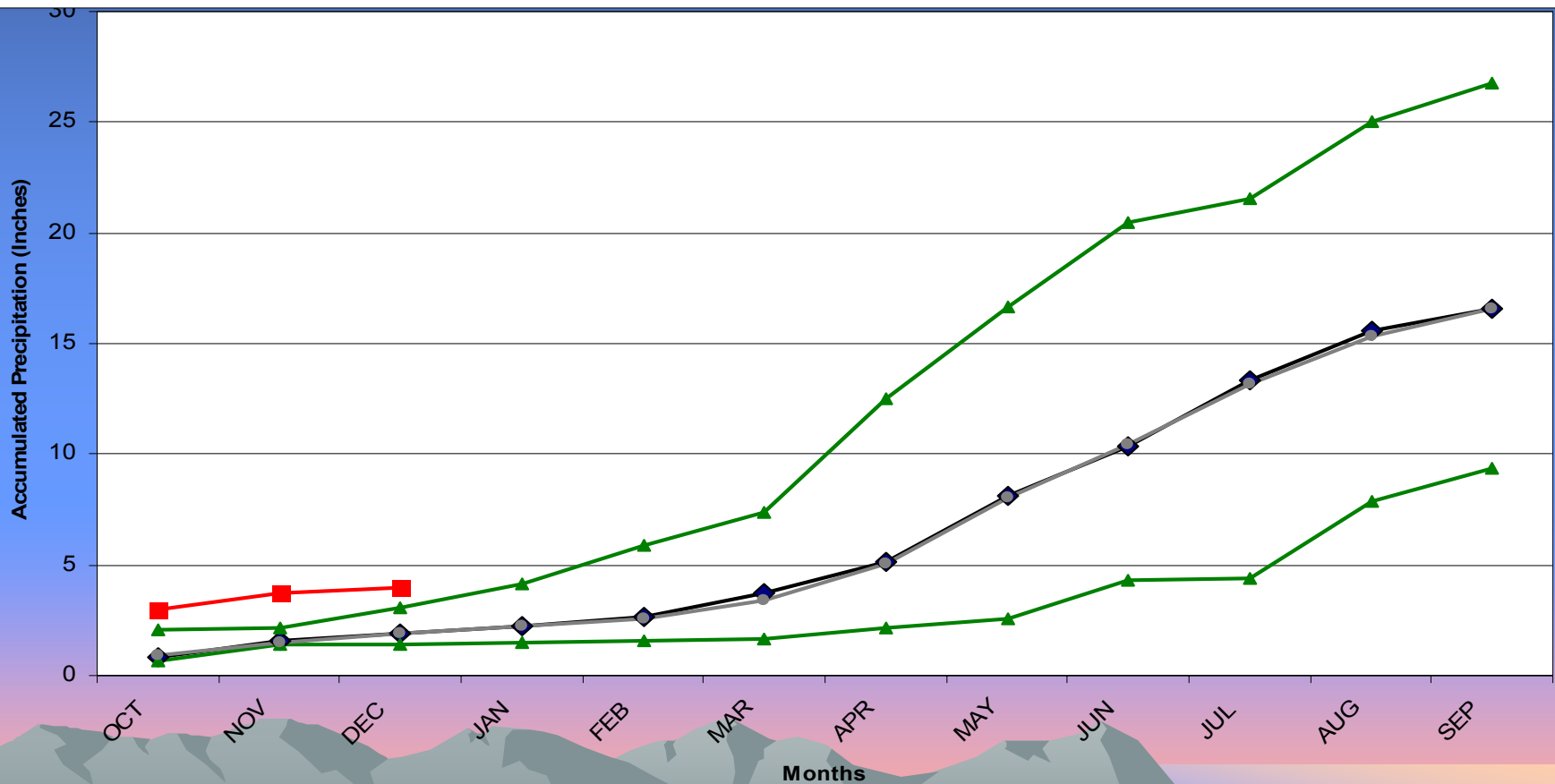
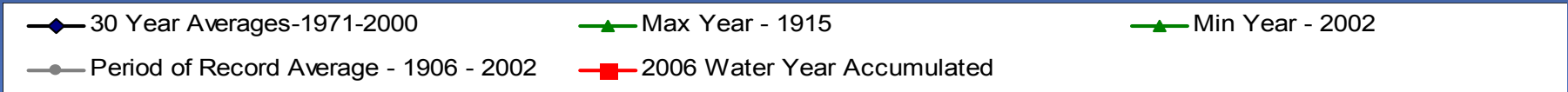
# Division 6 – Cheyenne Wells

## Cheyenne Wells 2006 Water Year



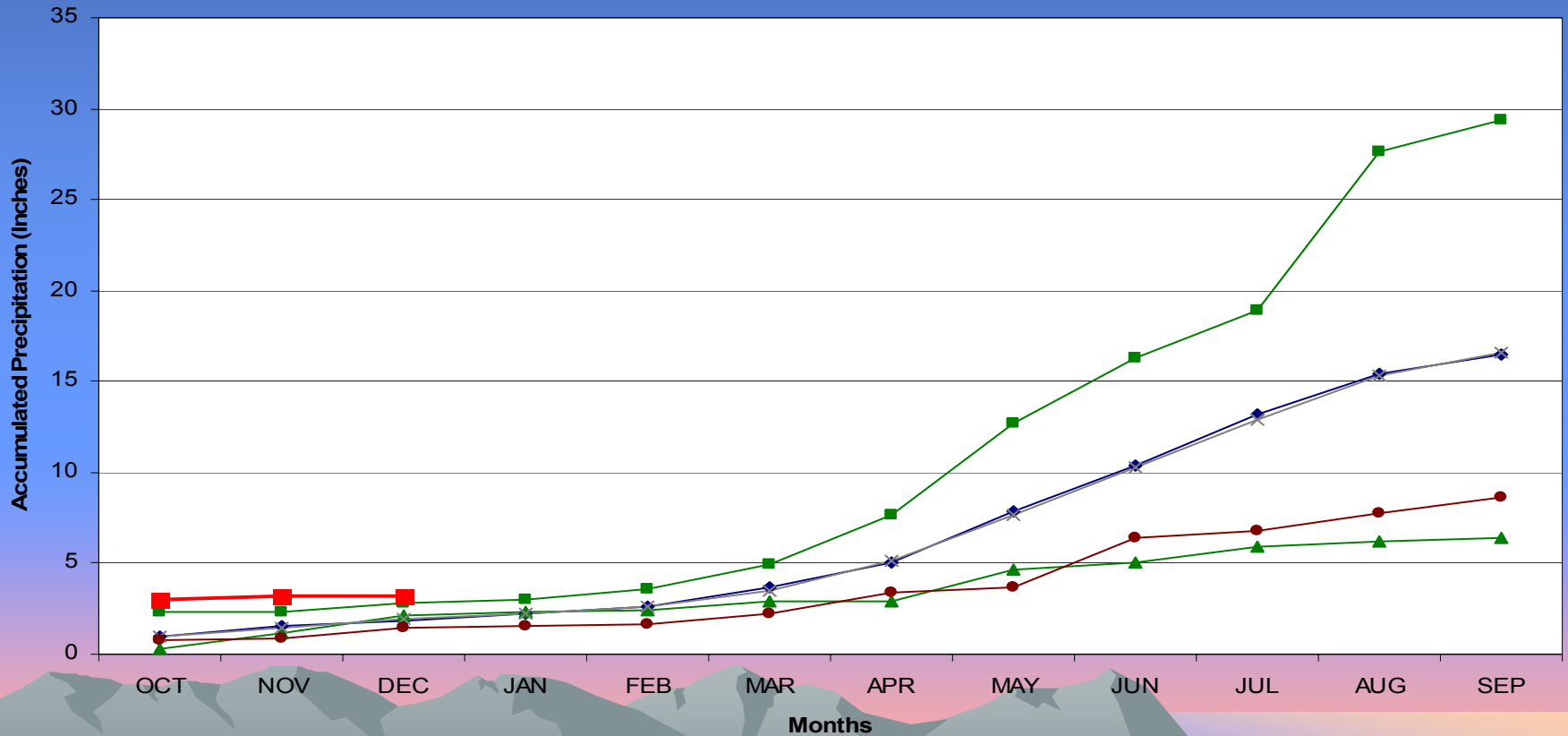
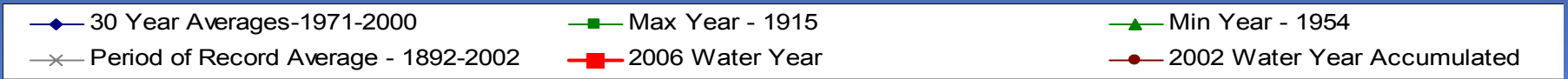
# Division 7 – Akron

## Akron 4E 2006 Water Year



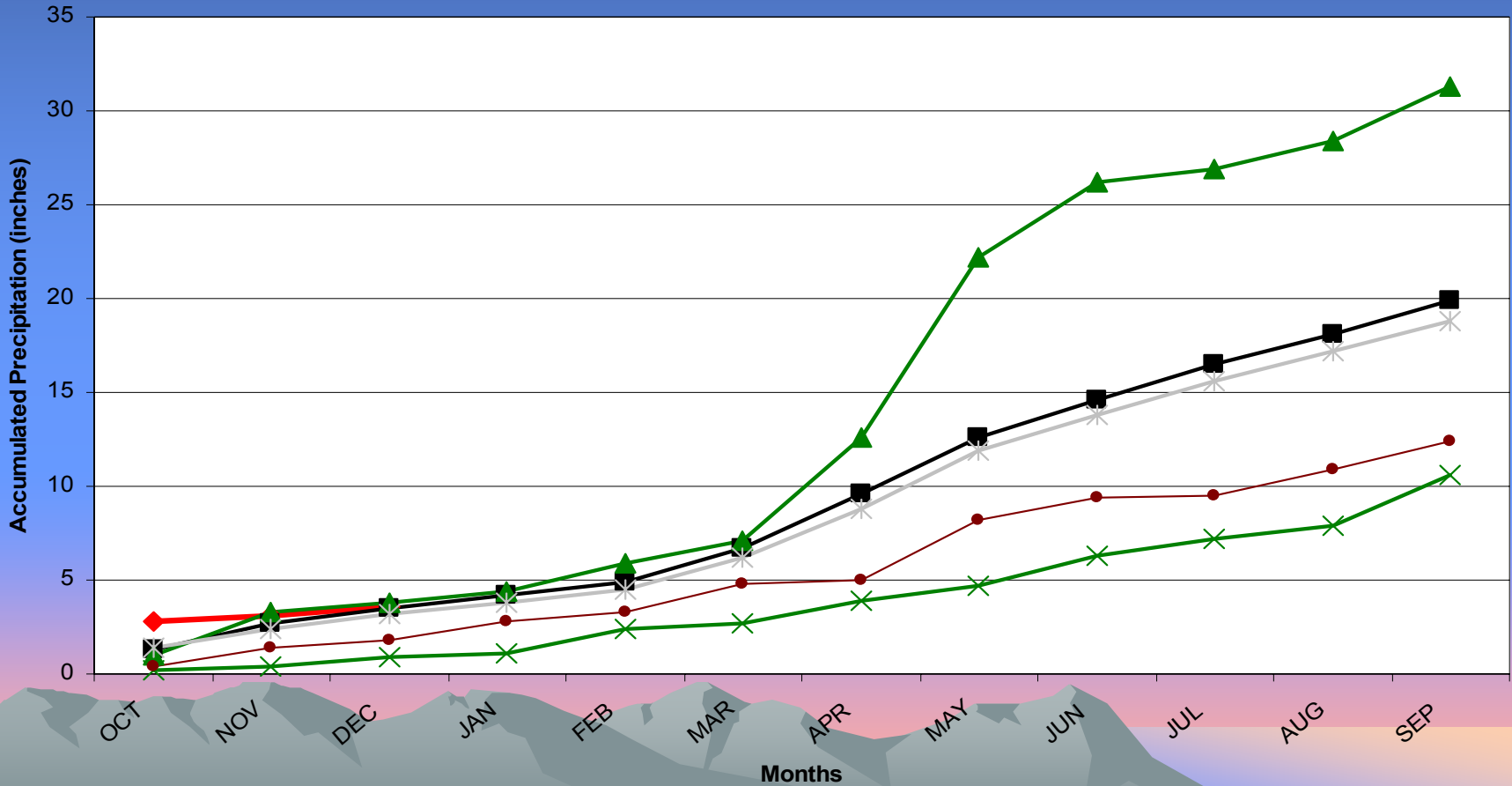
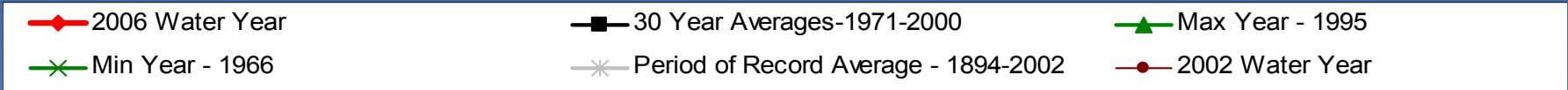
# Division 7 – Burlington

## Burlington 2006 Water Year



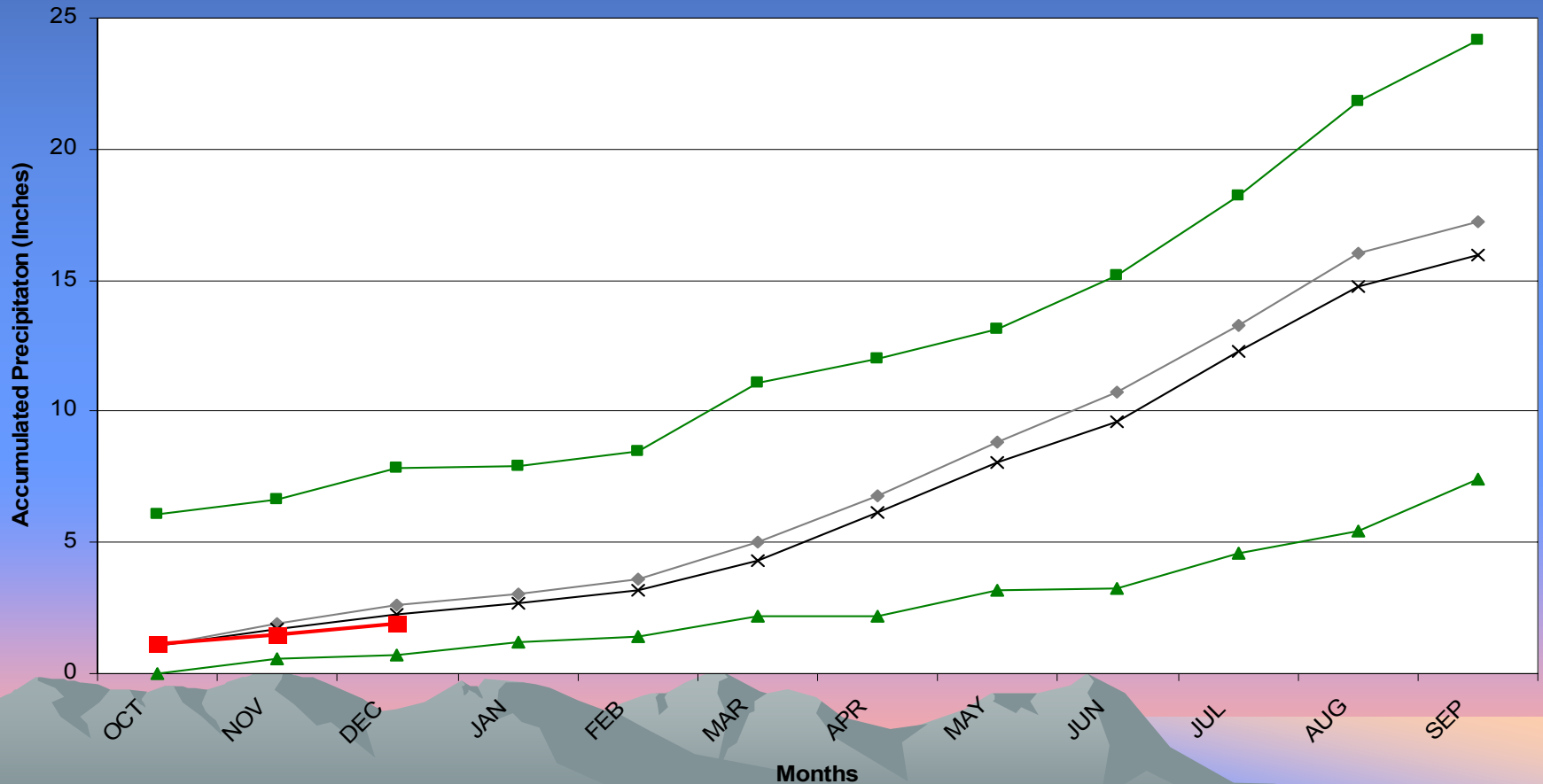
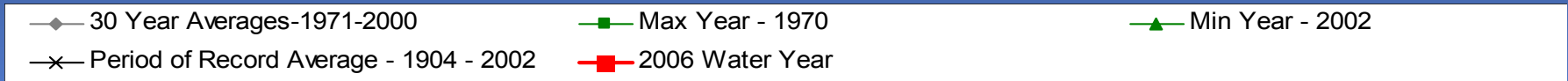
# Division 8 – Boulder

## Boulder 2006 Water Year



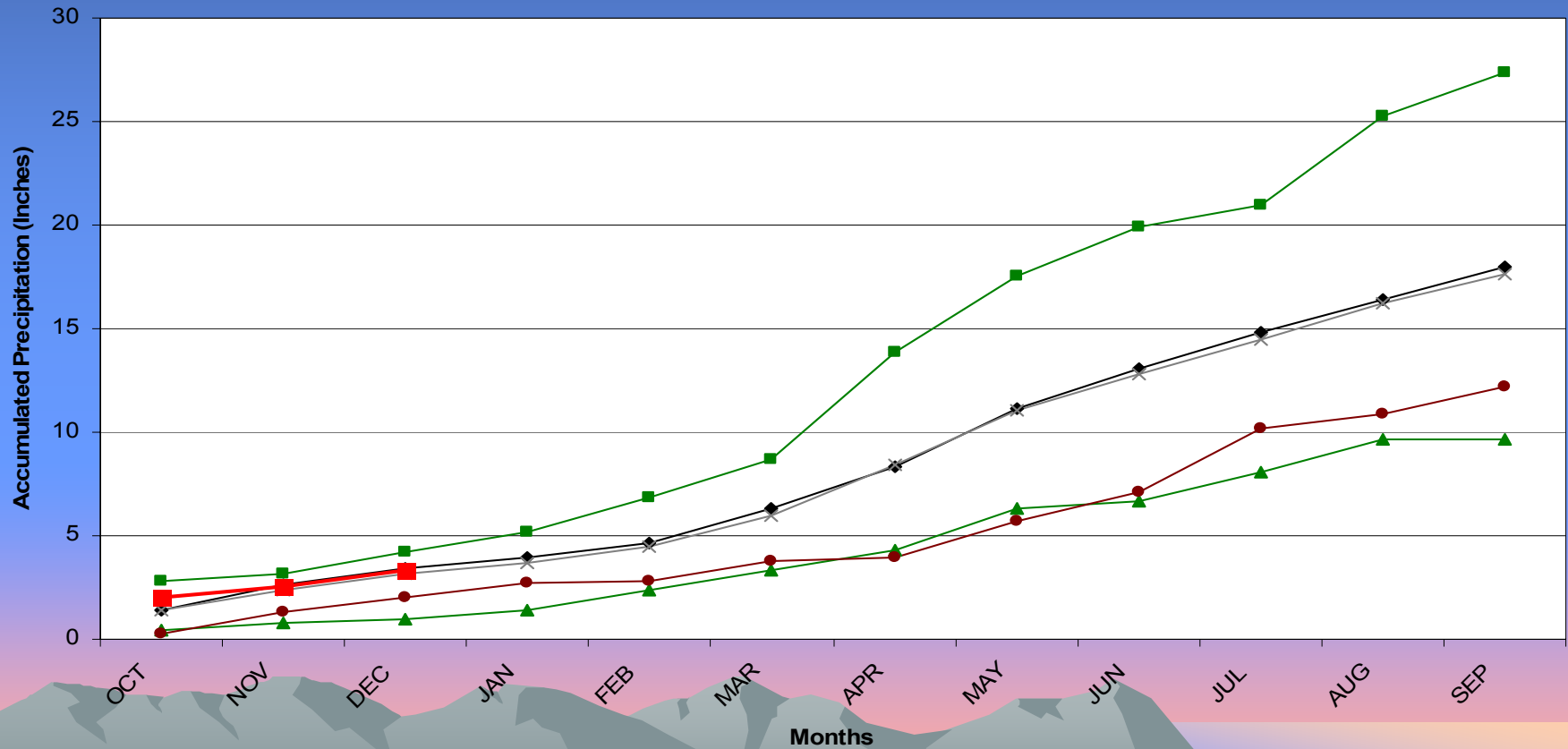
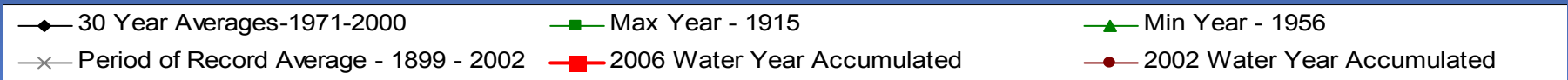
# Division 8 – Cheesman

## Cheesman 2006 Water Year



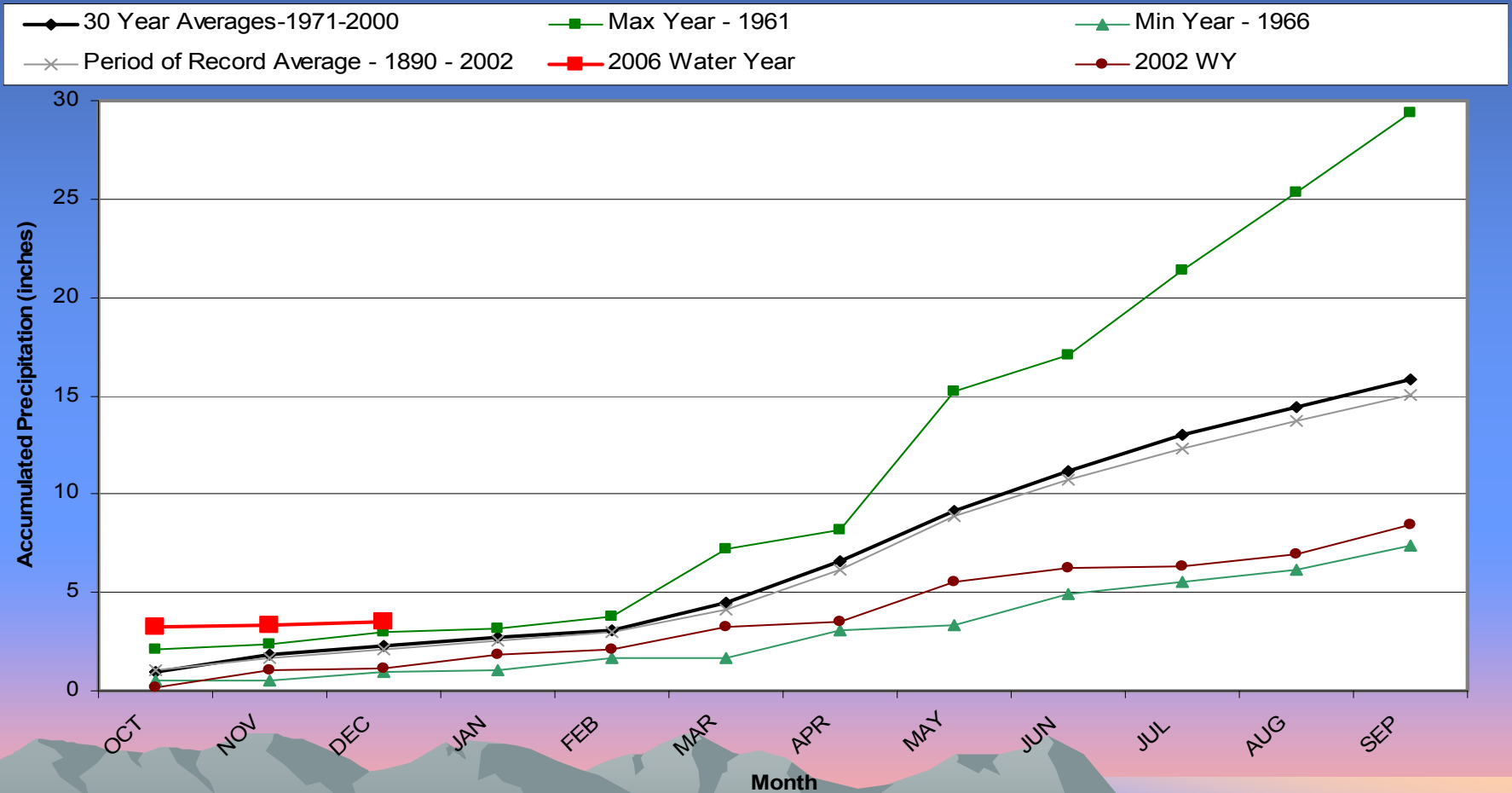
# Division 8 – Kassler

## Kassler 2006 Water Year



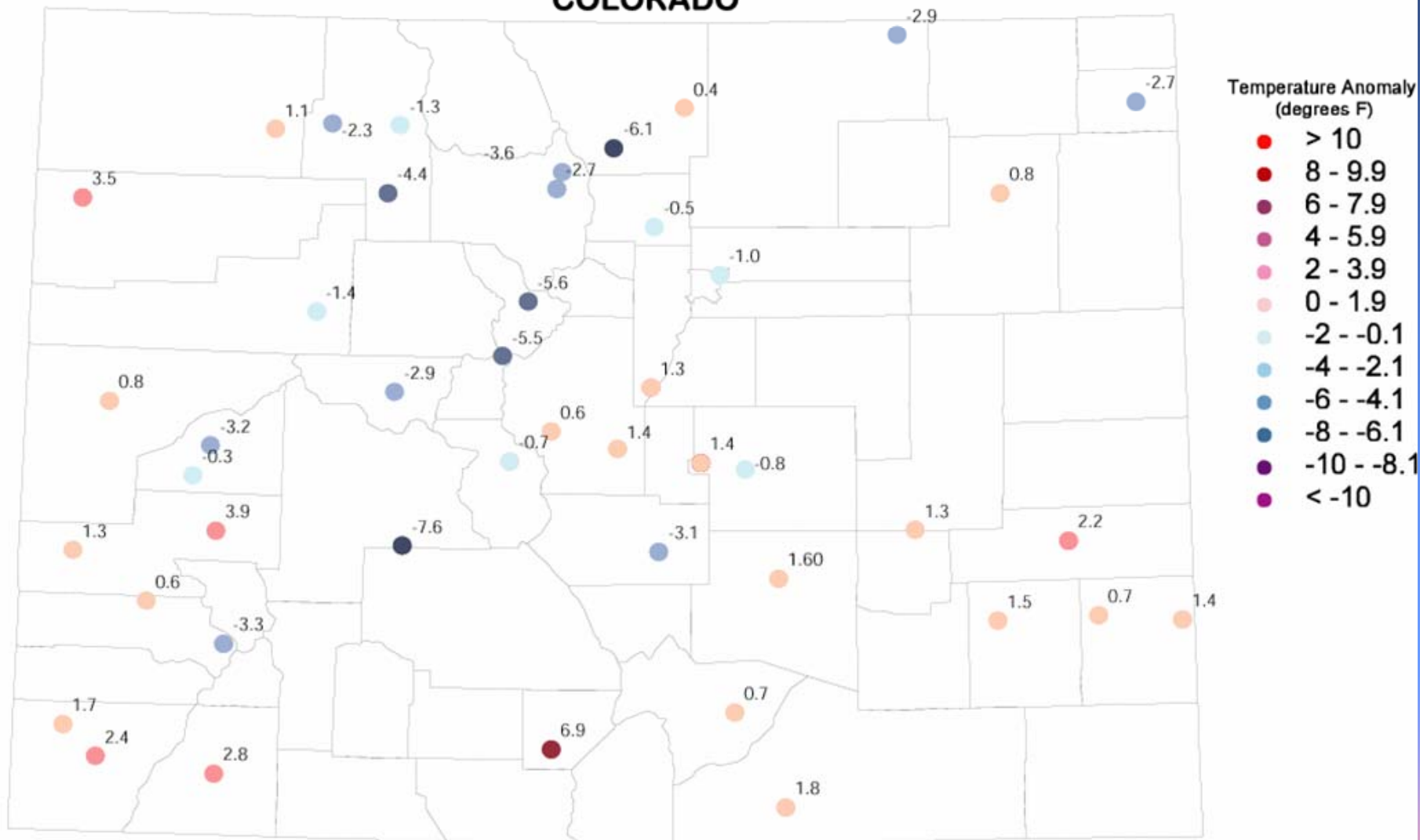
# Division 8 – Fort Collins

## Fort Collins 2006 Water Year



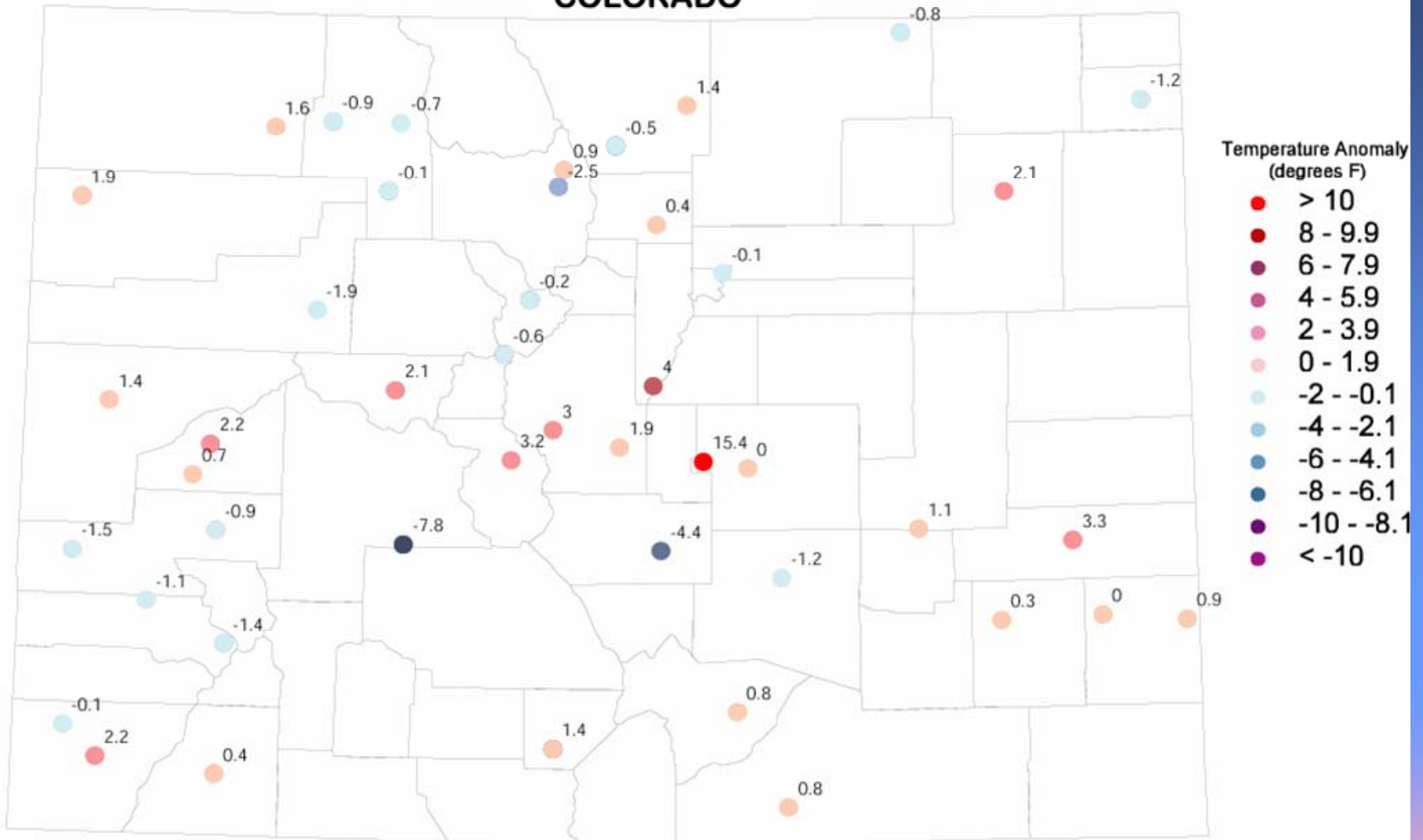


# COLORADO



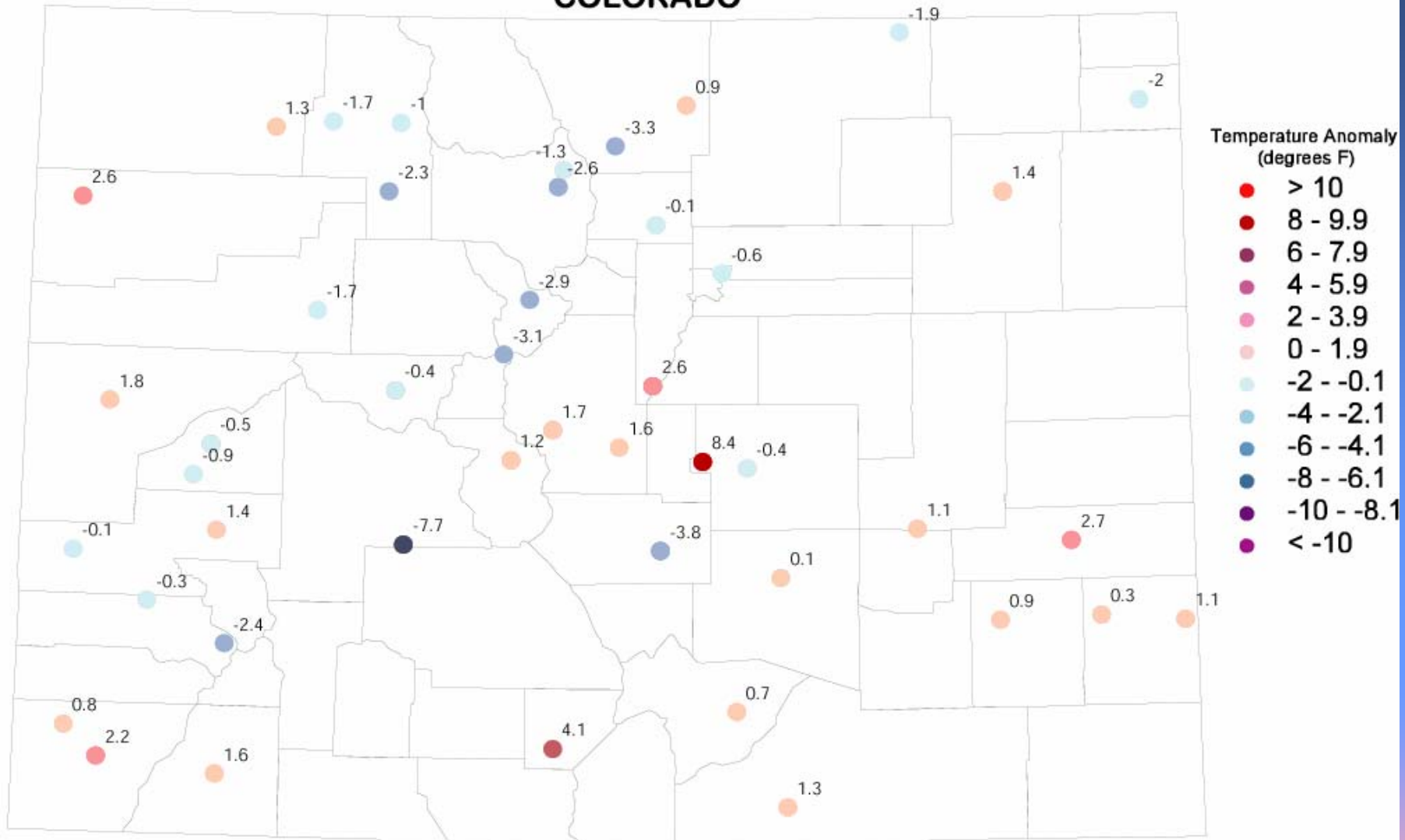
December 2005 average maximum temperature departures from the 1971-2000 averages.

# COLORADO



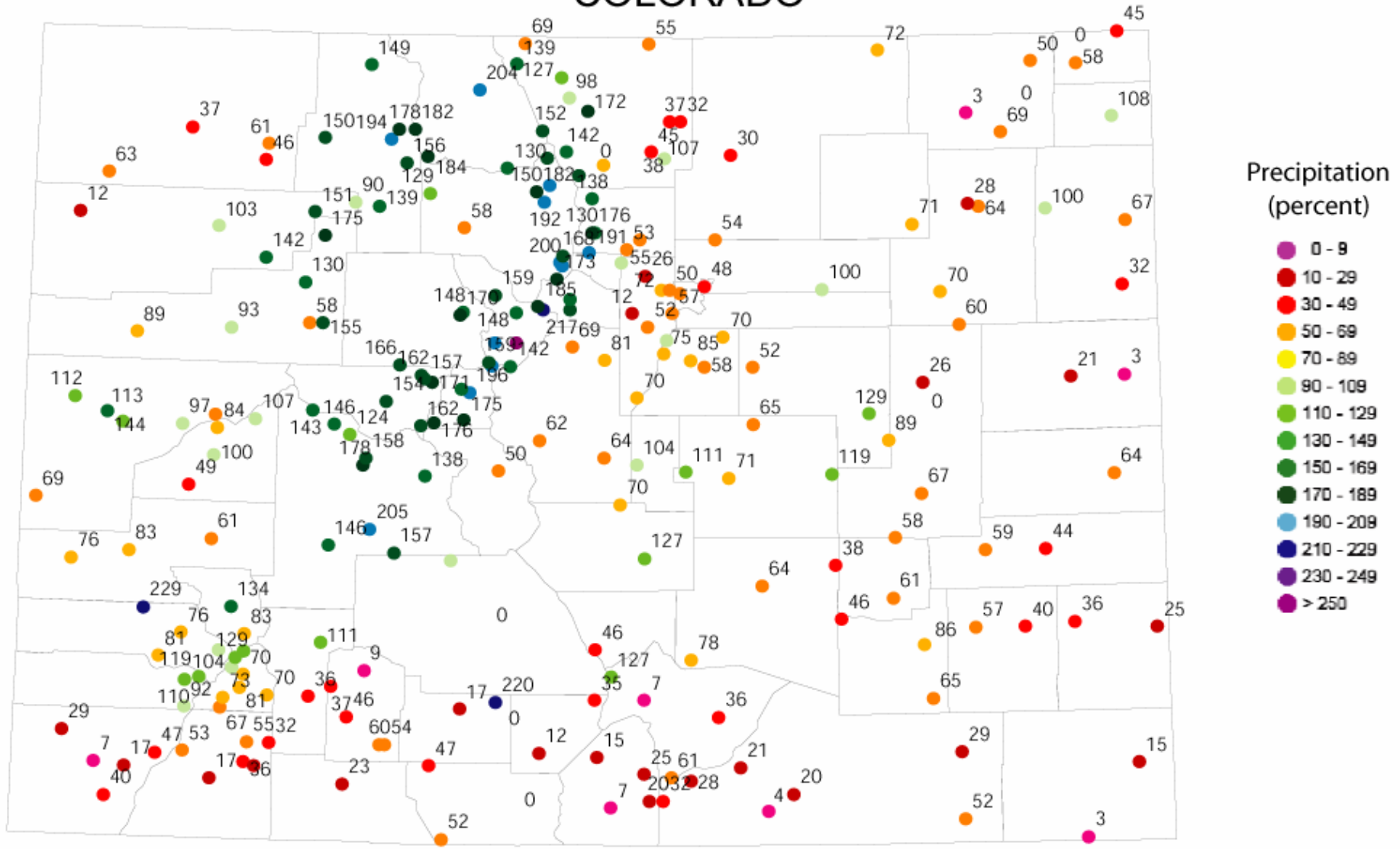
December 2005 average minimum temperature departures from the 1971-2000 averages.

# COLORADO



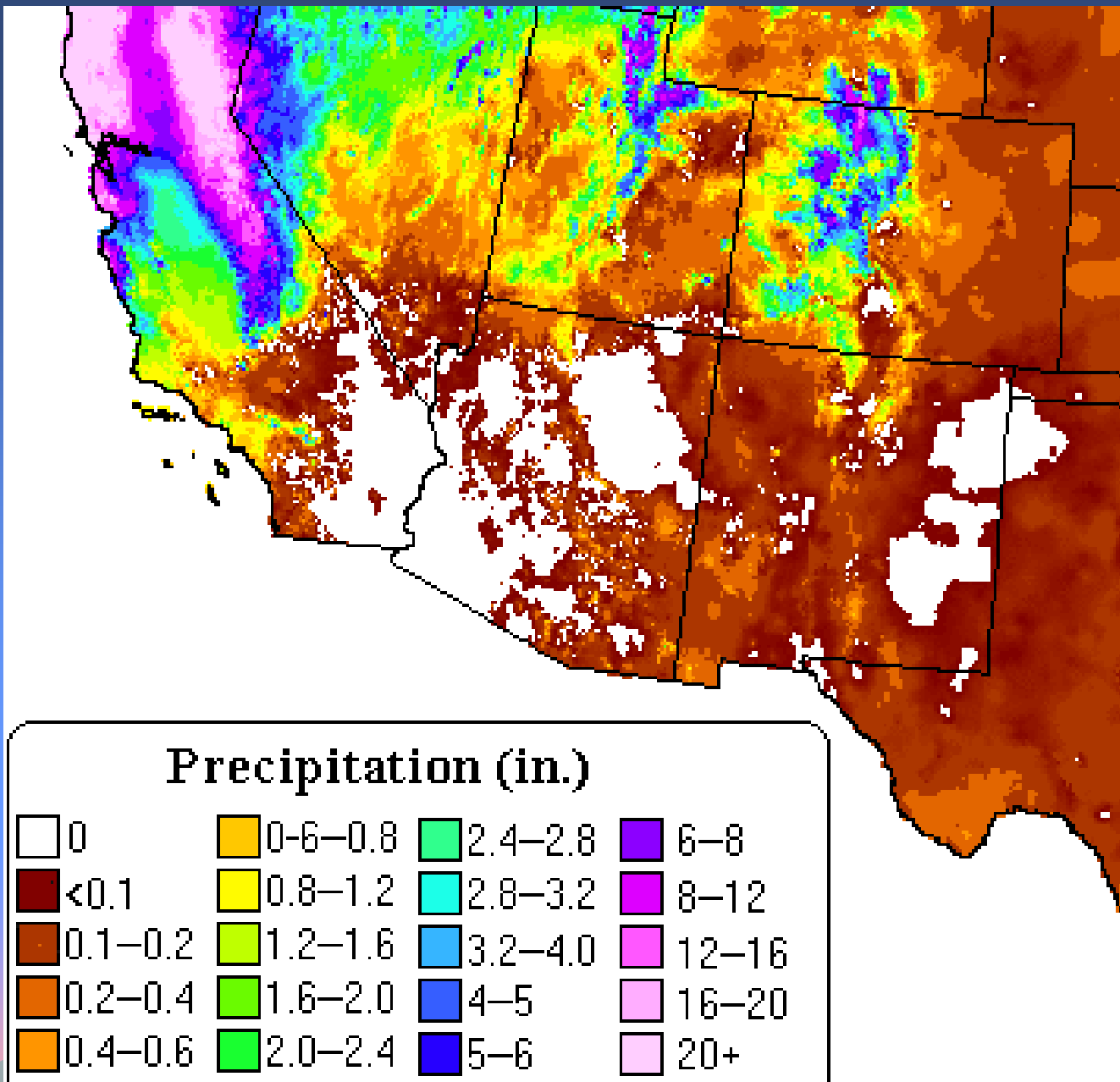
December 2005 average temperature departures from the 1971-2000 averages.

# COLORADO

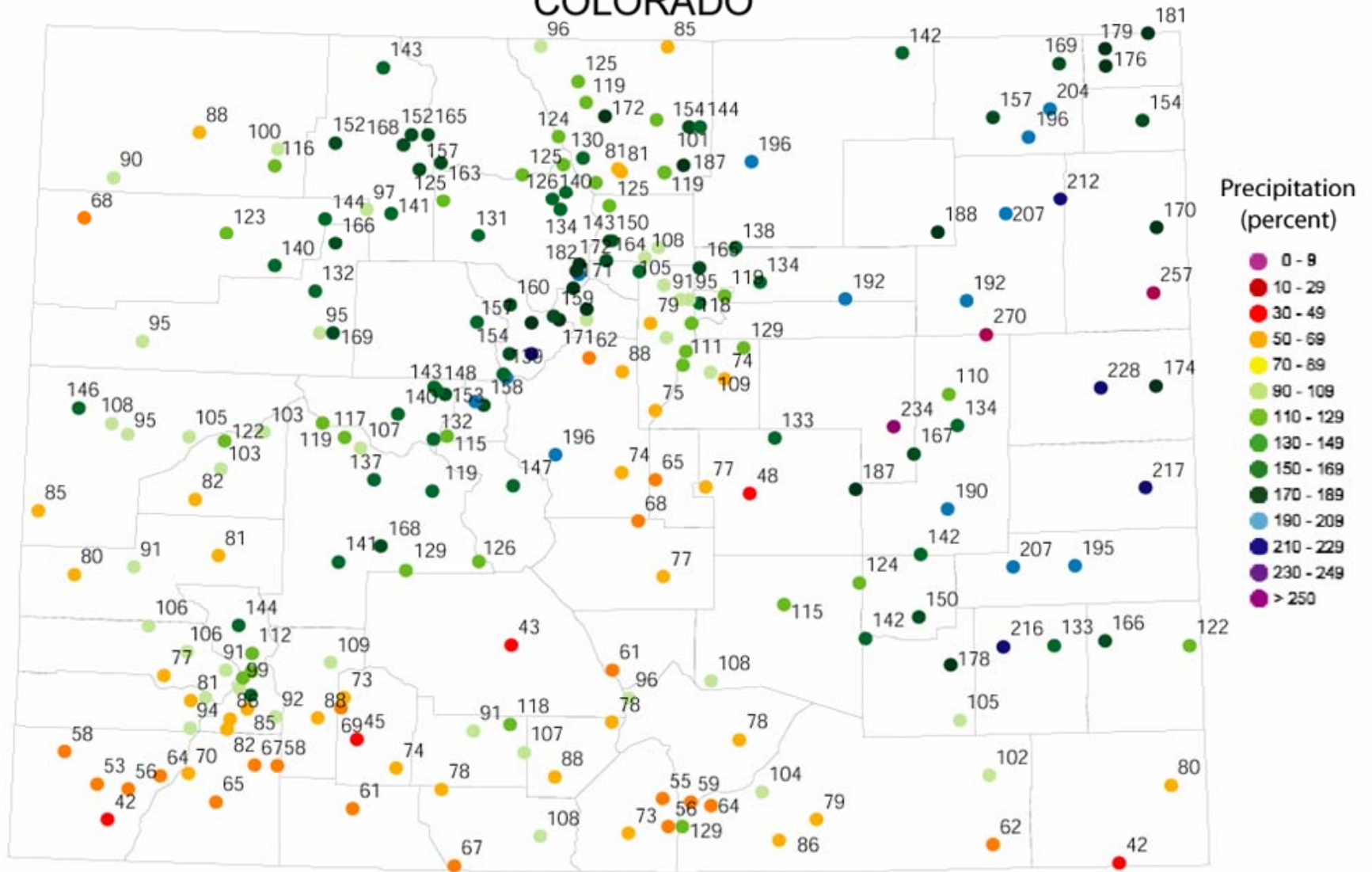


December 2005 precipitation as a percent of the 1971-2000 average.

December 2005  
Precipitation



# COLORADO

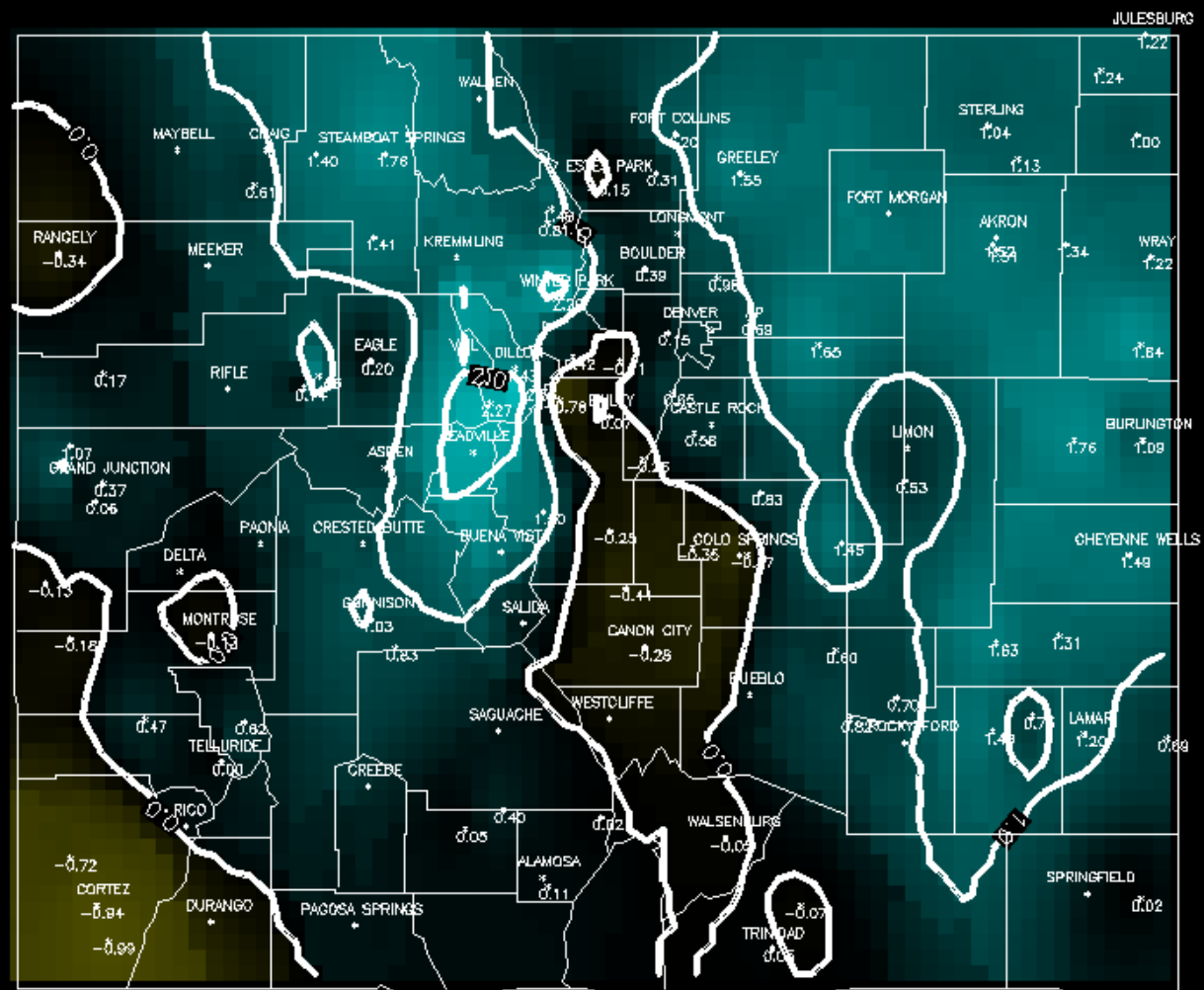


Water Year 2005 (October 2005 through December 2005) precipitation as a percent of the 1971-2000 average.

# 3 Month SPI

Colorado

12/2005 3 mon. SPI

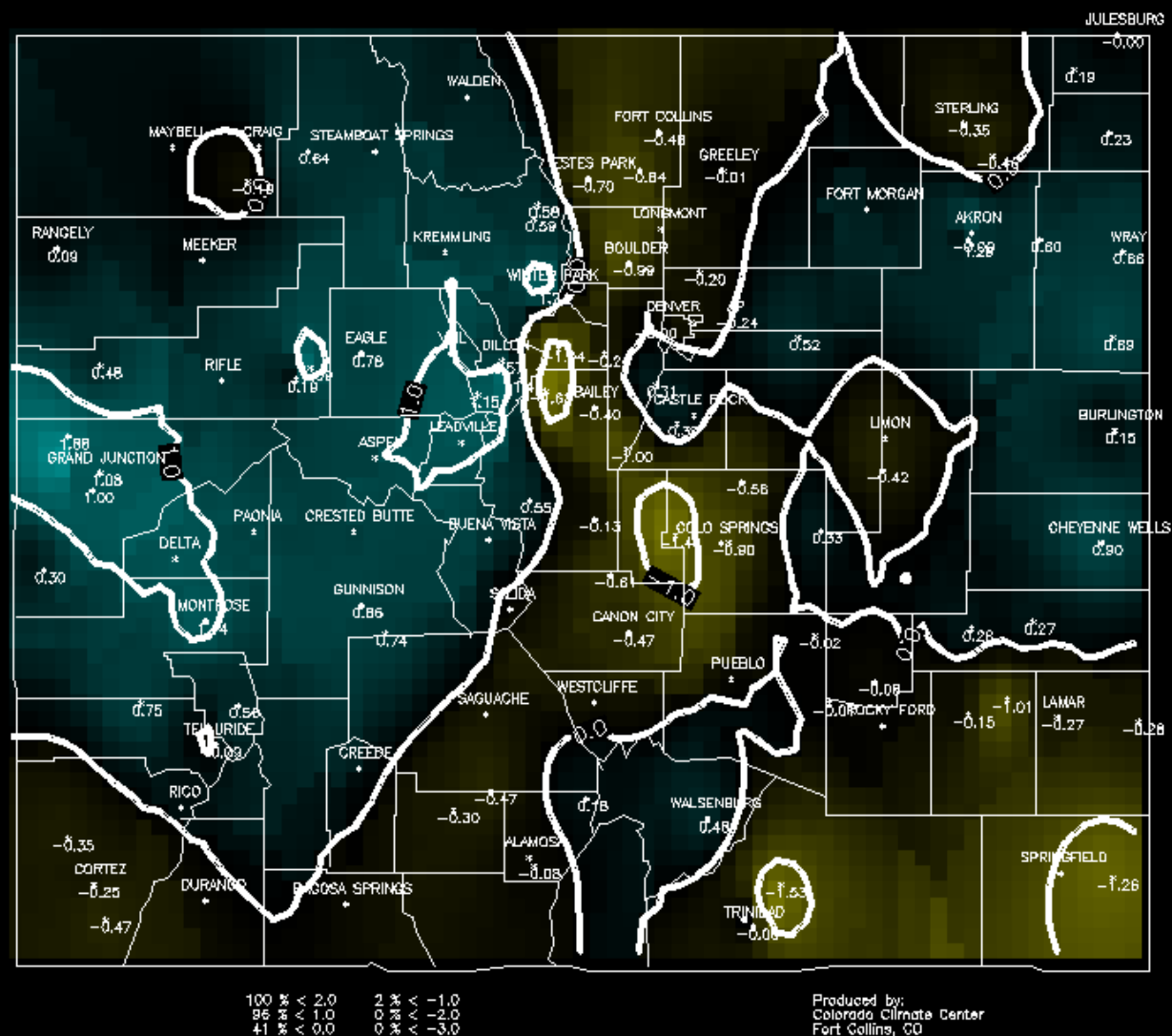




# 6 Month SPI

Colorado

12/2005 6 mon. SPI



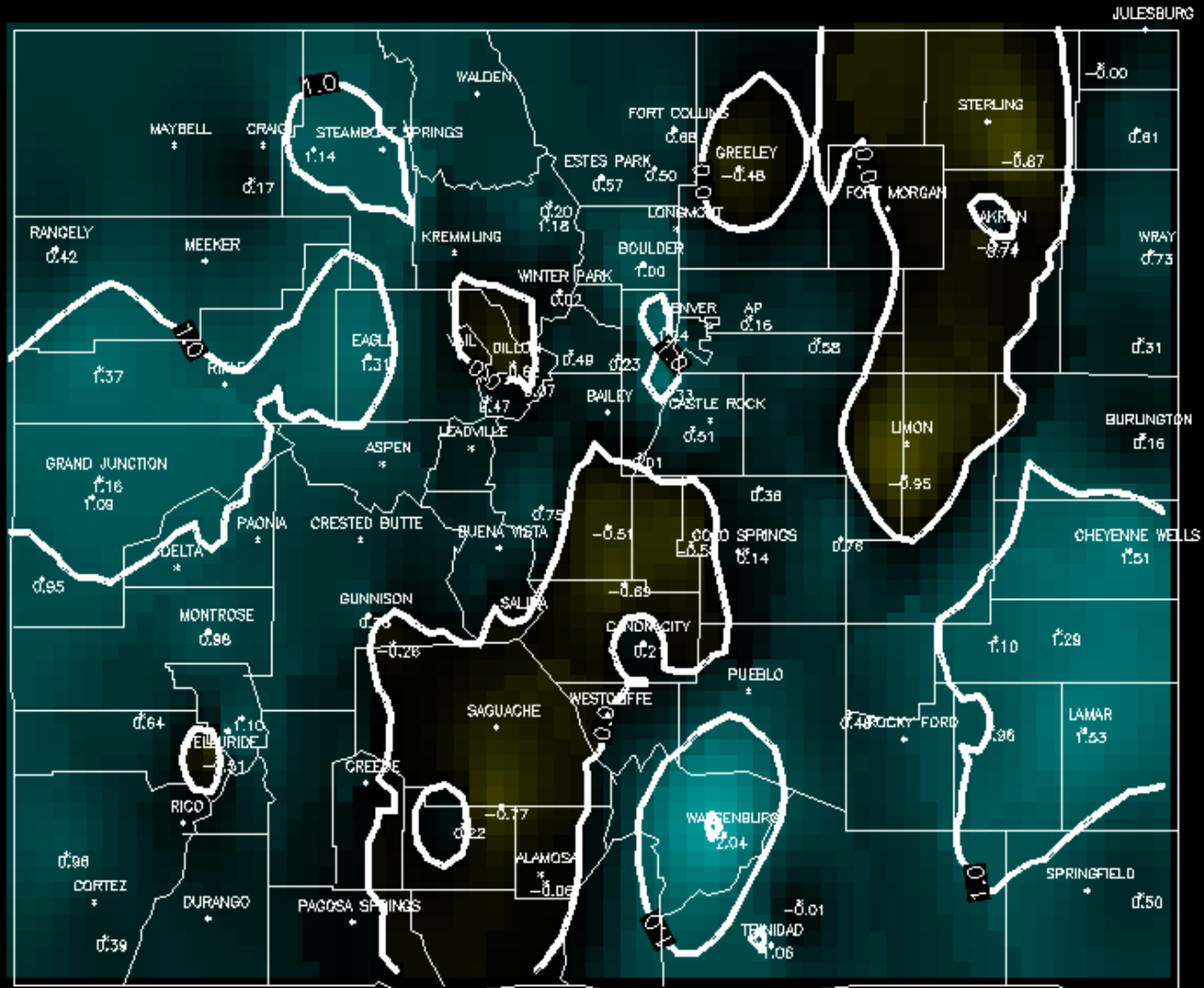




# 24 Month SPI

Colorado

12/2005 24 mon. SPI



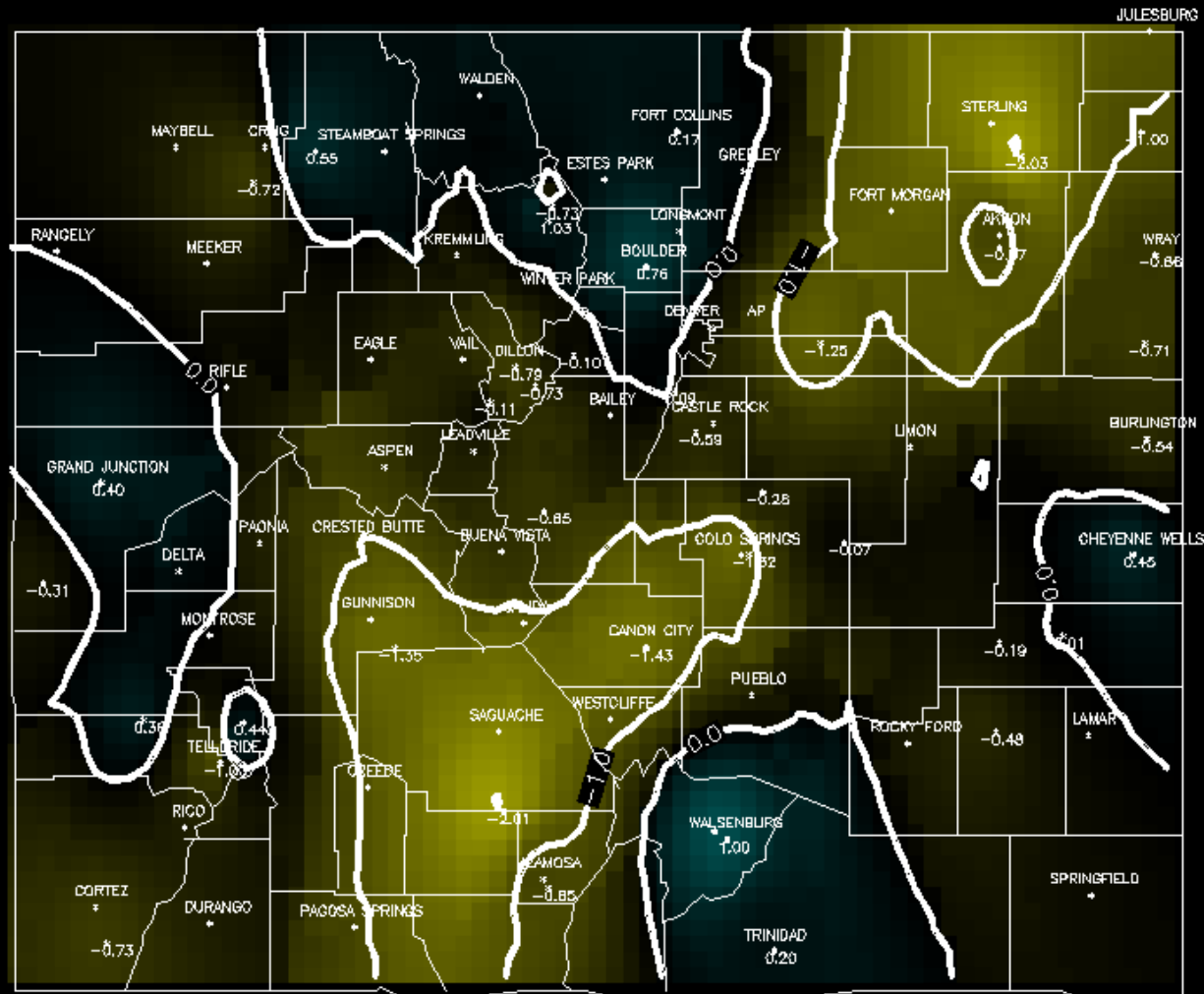
100% < 2.0	0% < -1.0
84% < 1.0	0% < -2.0
18% < 0.0	0% < -3.0

Produced by:  
Colorado Climate Center  
Fort Collins, CO

# 48 Month SPI

Colorado

12/2005 48 mon. SPI



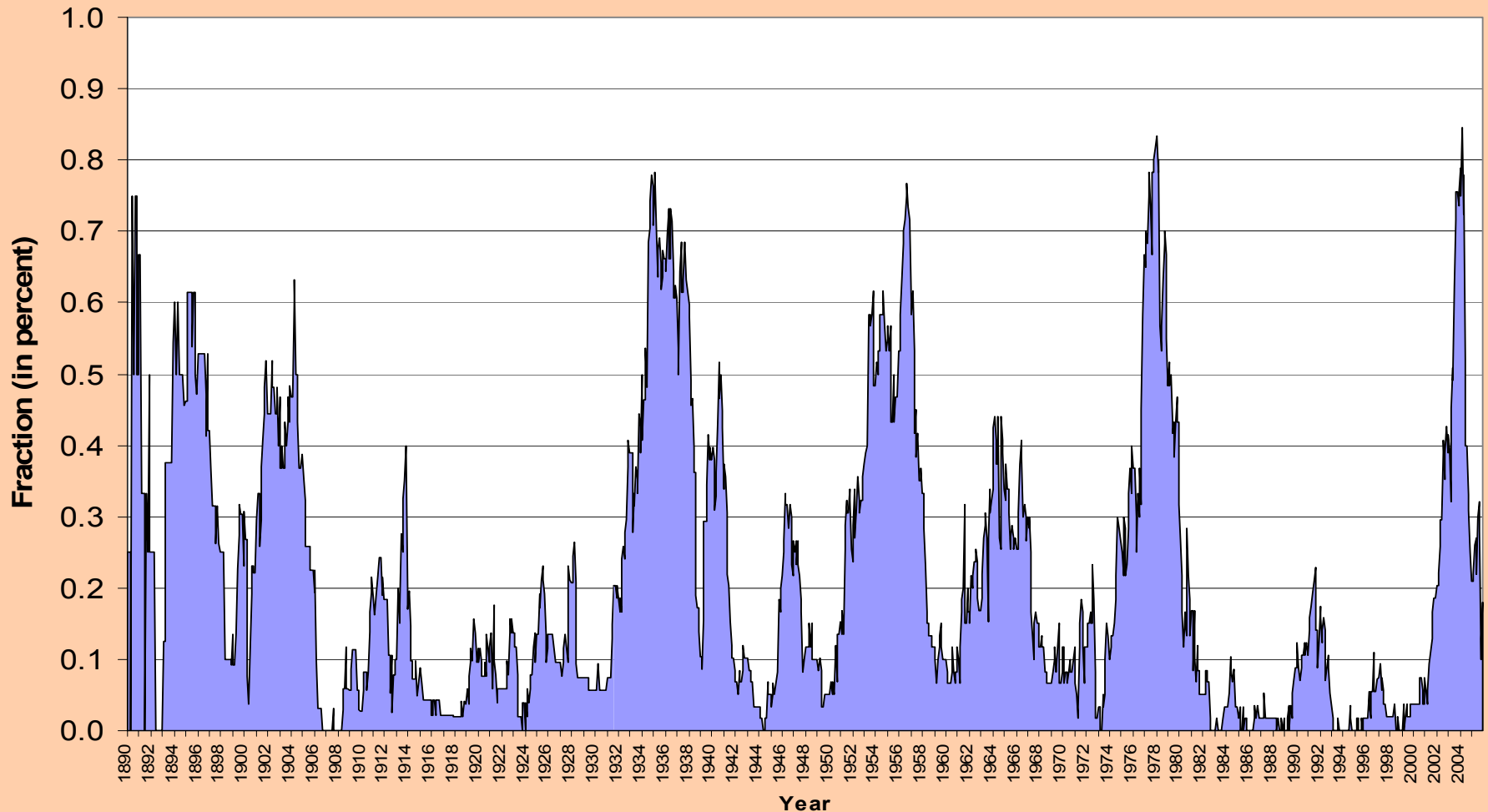
100% < 2.0  
100% < 1.0  
74% < 0.0

18% < -1.0  
0% < -2.0  
0% < -3.0

Produced by:  
Colorado Climate Center  
Fort Collins, CO

# Fraction of Colorado in Drought

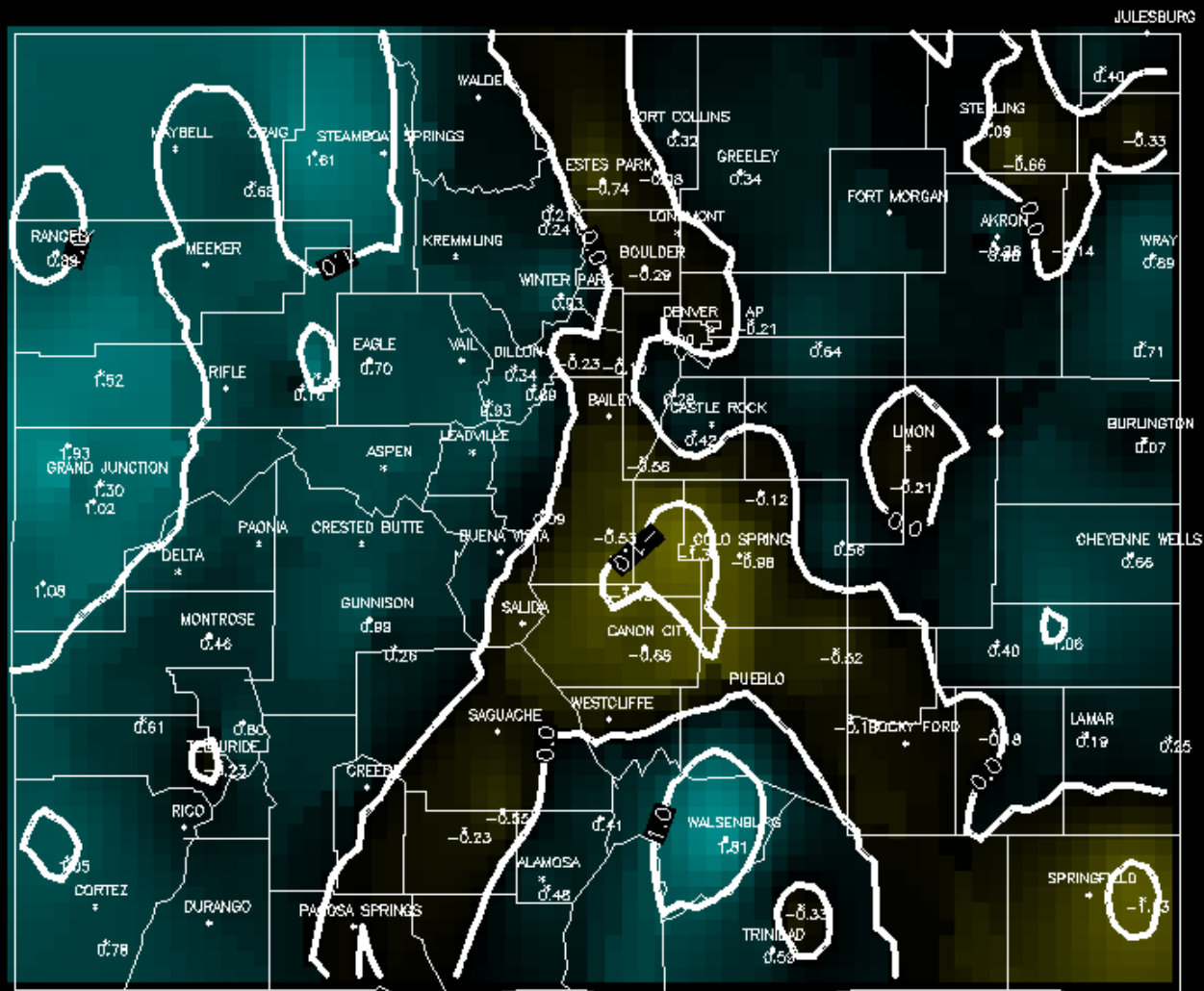
**Fraction of Colorado in Drought**  
**Based on 48 month SPI**  
(1890 - December 2005)



# 12 Month SPI

Colorado

12/2005 12 mon. SPI



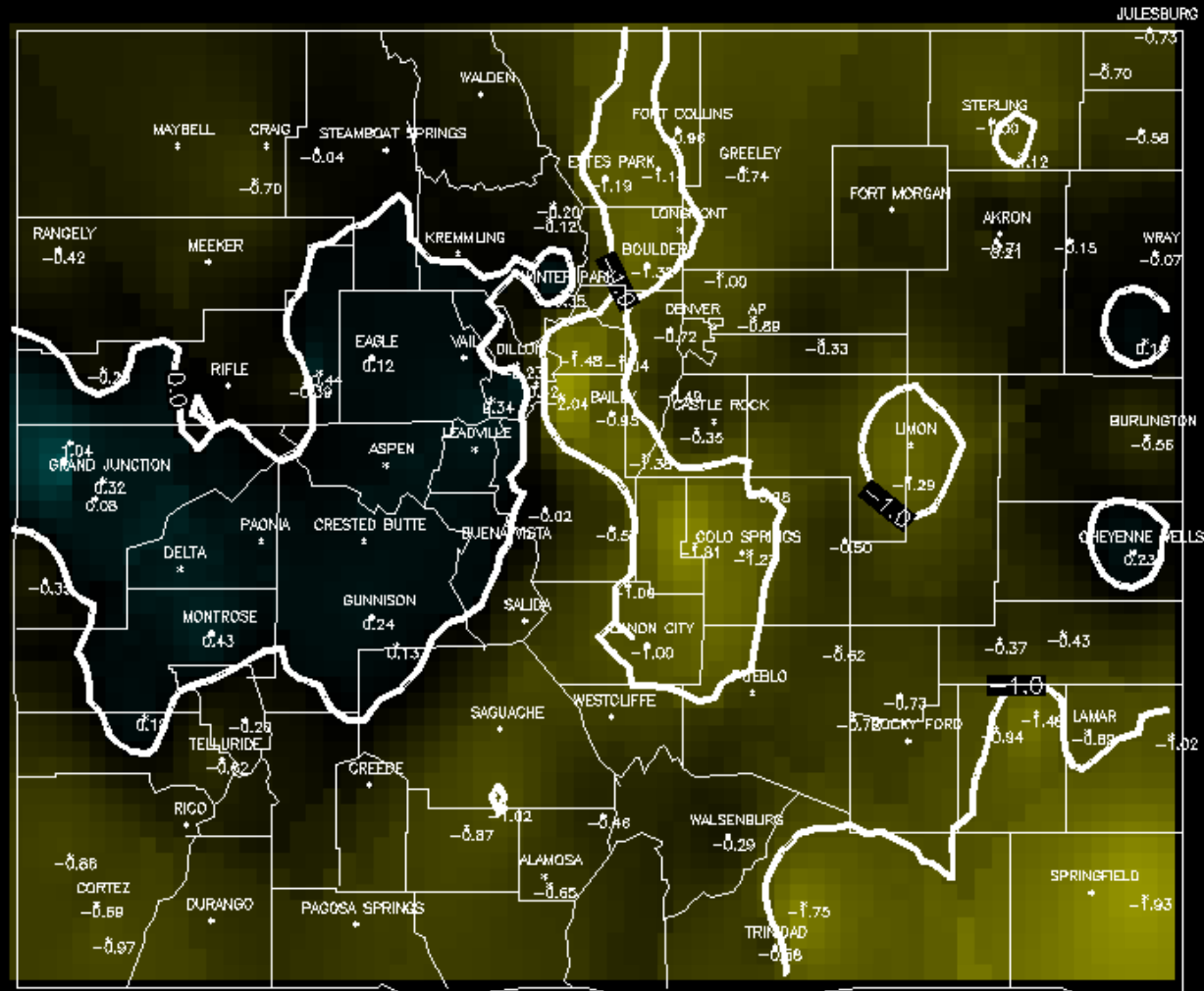
100 % << 2.0	1 % << -1.0
87 % << 1.0	0 % << -2.0
28 % << 0.0	0 % << -3.0

Produced by:  
Colorado Climate Center  
Fort Collins, CO

# Projected Conditions at 0.2 Probability Level 12 Month SPI at 6 months

Colorado

12/2005 12 mon. SPI – Projected 6 mon. at P=0.20



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

13 % < -1.0  
0 % < -2.0  
0 % < -3.0

Produced by:  
Colorado Climate Center  
Fort Collins, CO

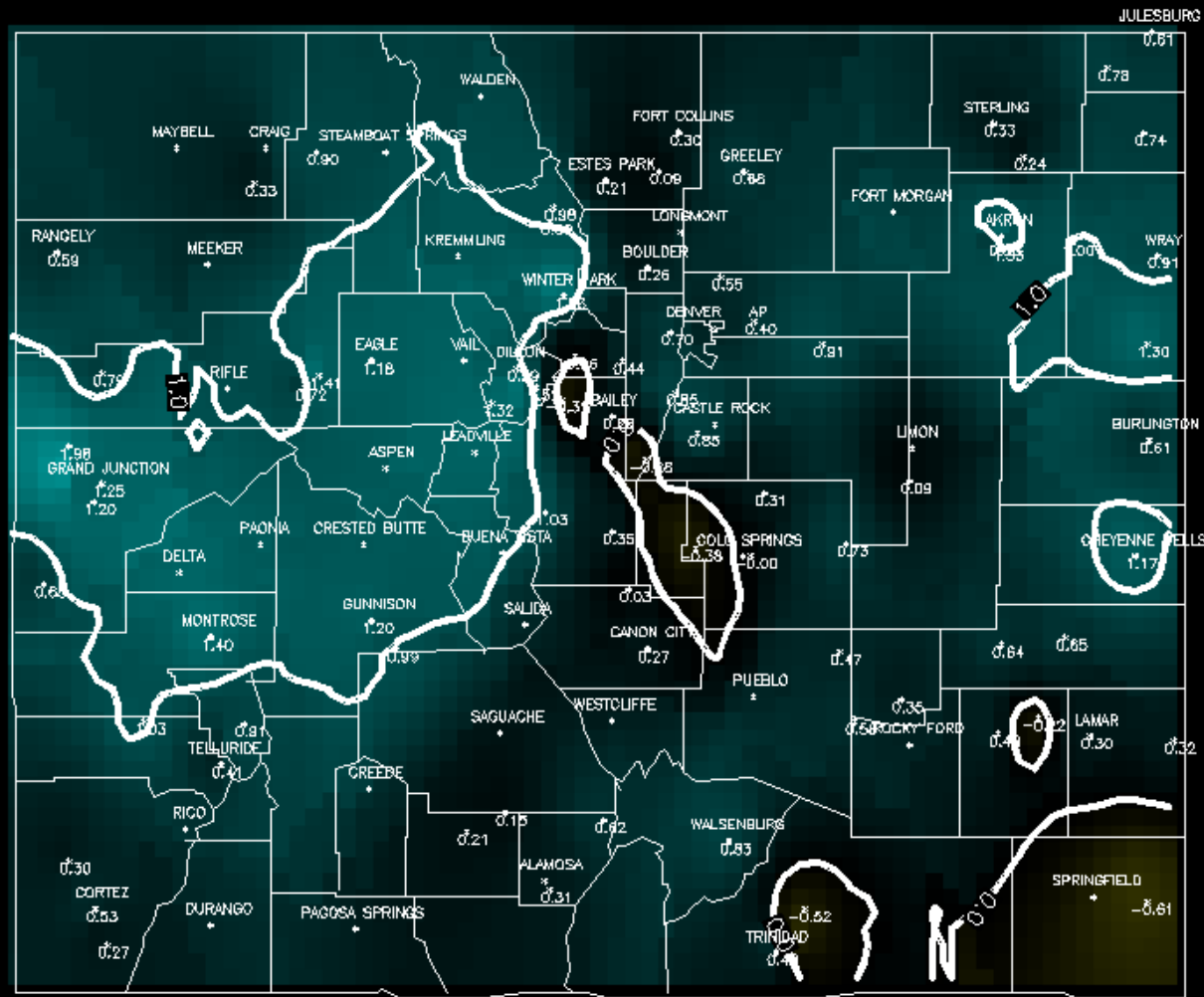


# Projected Conditions at 0.8 Probability Level

## 12 Month SPI at 6 months

Colorado

12/2005 12 mon. SPI – Projected 6 mon. at P=0.80



100 % < 2.0  
 81 % < 1.0  
 5 % < 0.0

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

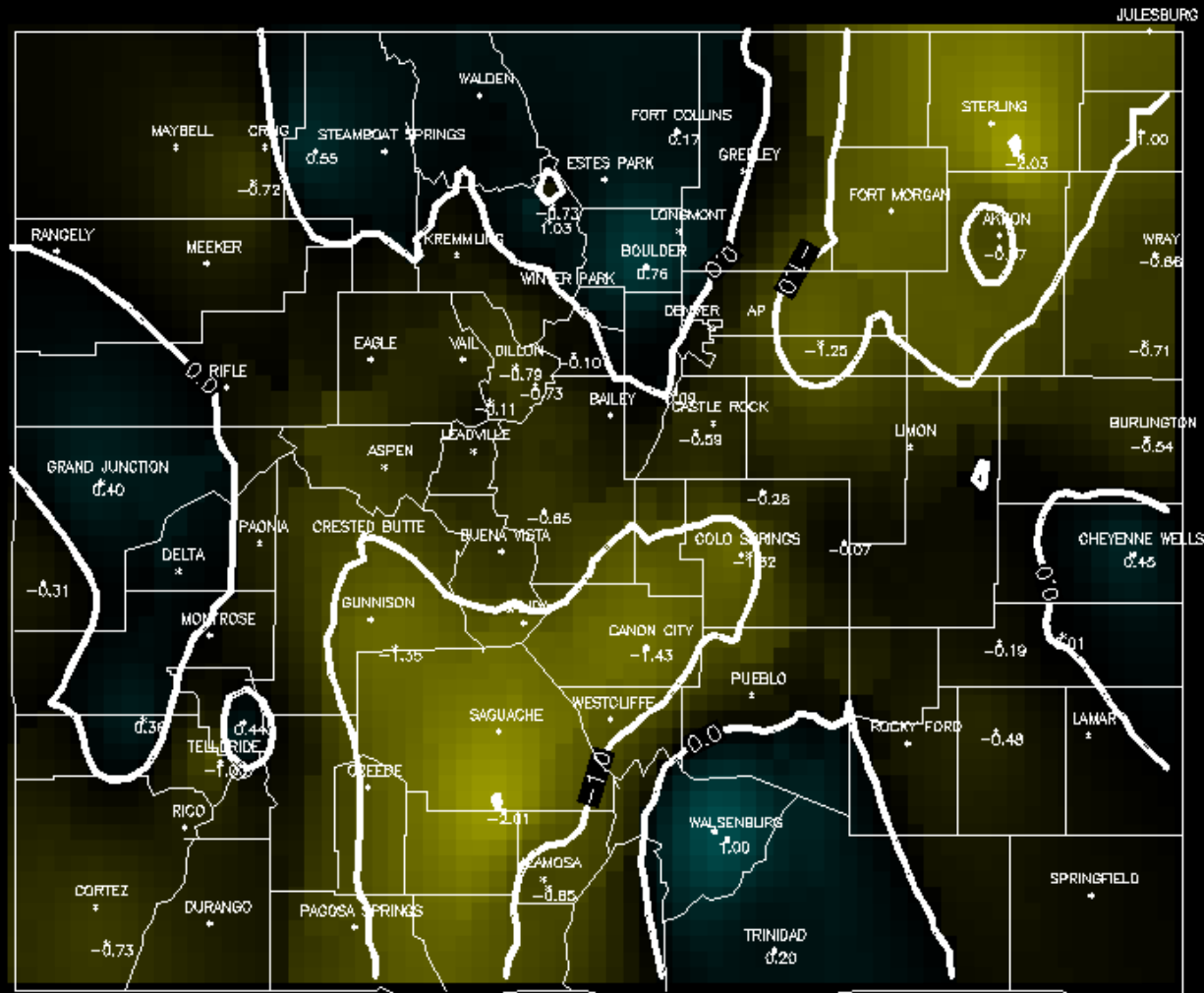
Produced by:  
 Colorado Climate Center  
 Fort Collins, CO



# 48 Month SPI

Colorado

12/2005 48 mon. SPI



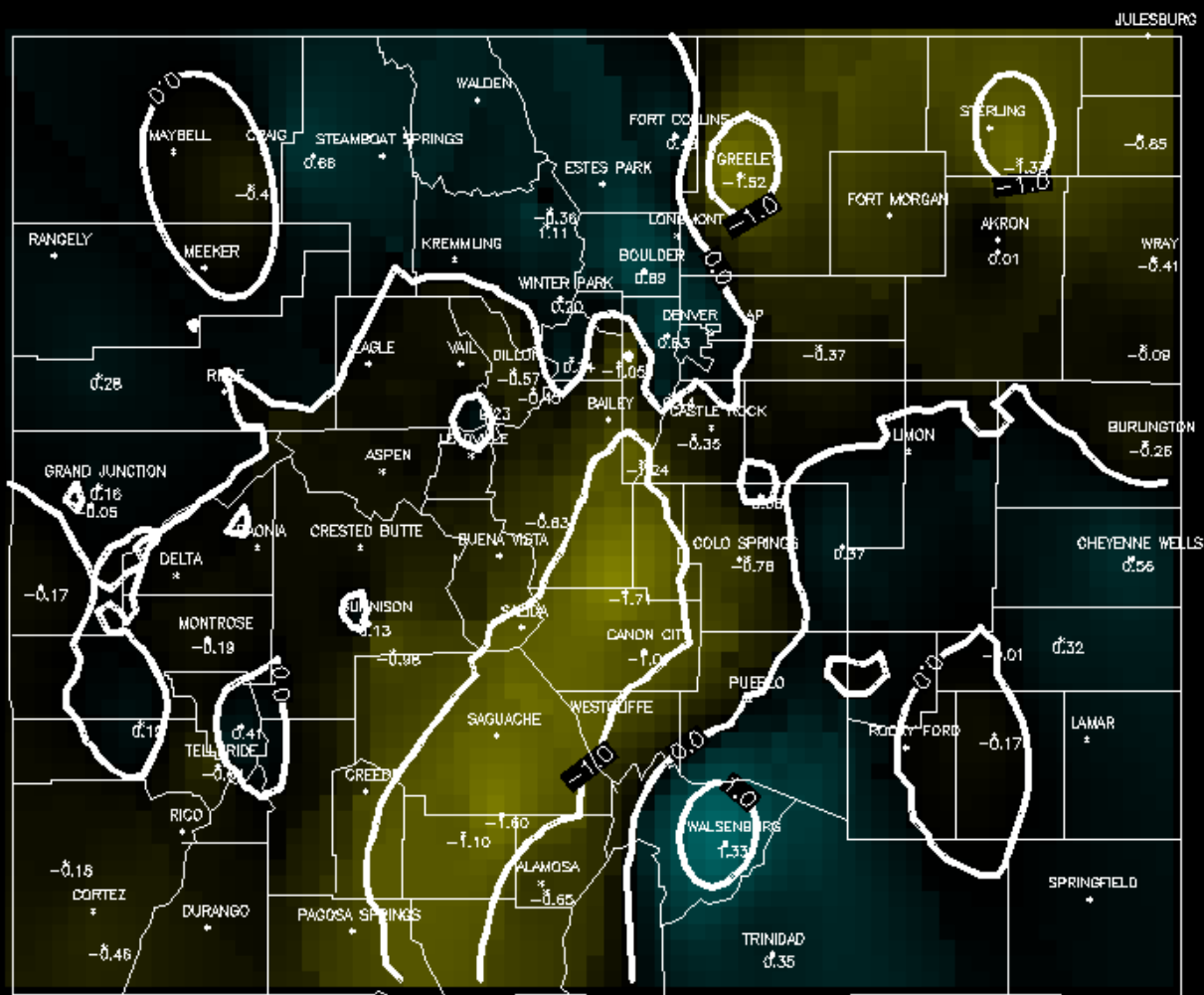
100 % < 2.0  
100 % < 1.0  
74 % < 0.0  
18 % < -1.0  
0 % < -2.0  
0 % < -3.0

Produced by:  
Colorado Climate Center  
Fort Collins, CO

# Projected Conditions at 0.2 Probability Level 48 Month SPI at 12 months

Colorado

12/2005 48 mon. SPI – Projected 12 mon. at P=0.20



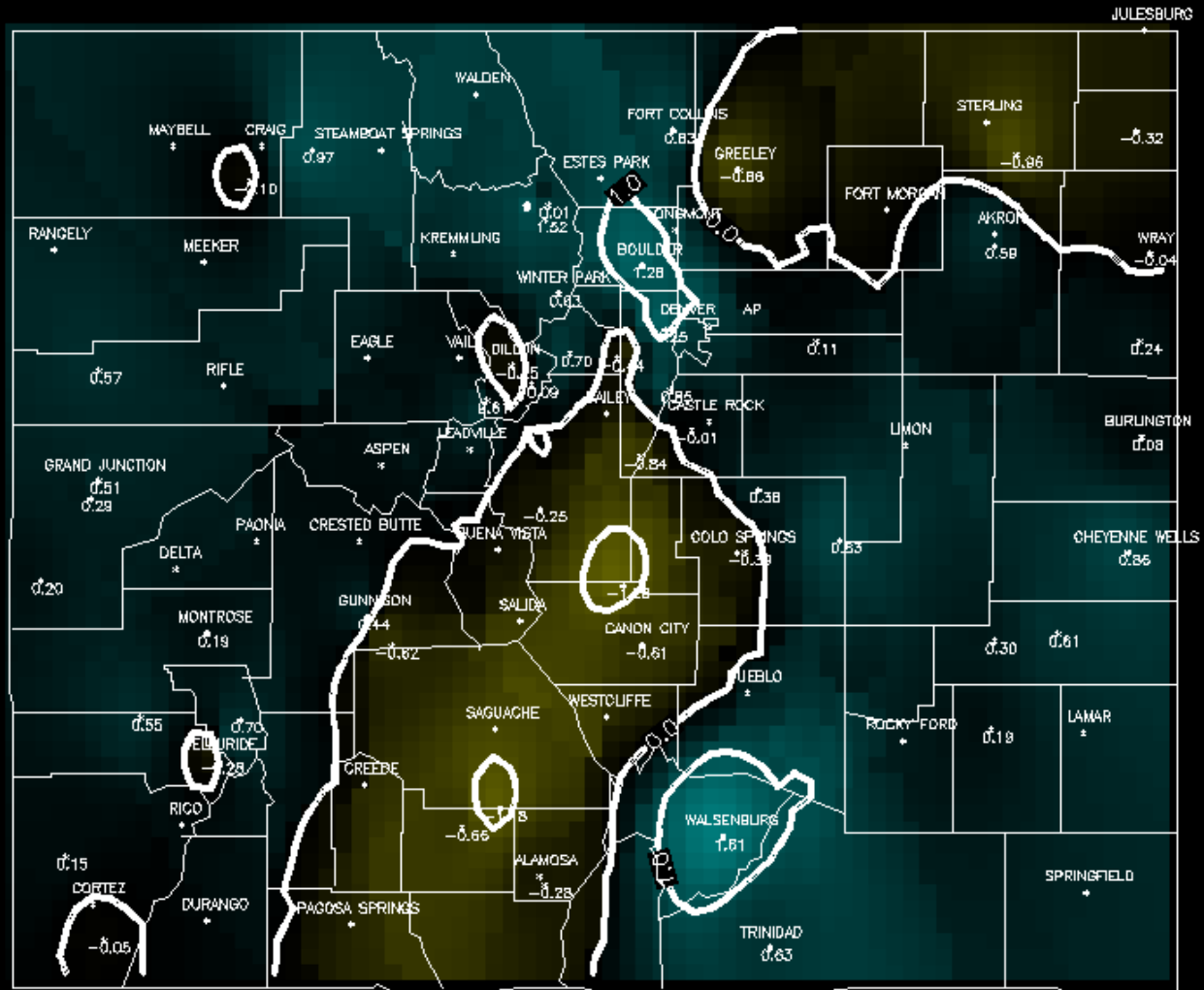
100	0.0	0.0	-1.0
95	0.5	0.5	-1.5
90	1.0	1.0	-2.0
85	1.5	1.5	-2.5
80	2.0	2.0	-3.0

Produced by:  
Colorado Climate Center  
Fort Collins, CO

# Projected Conditions at 0.5 Probability Level 48 Month SPI at 12 months

Colorado

12/2005 48 mon. SPI – Projected 12 mon. at P=0.50



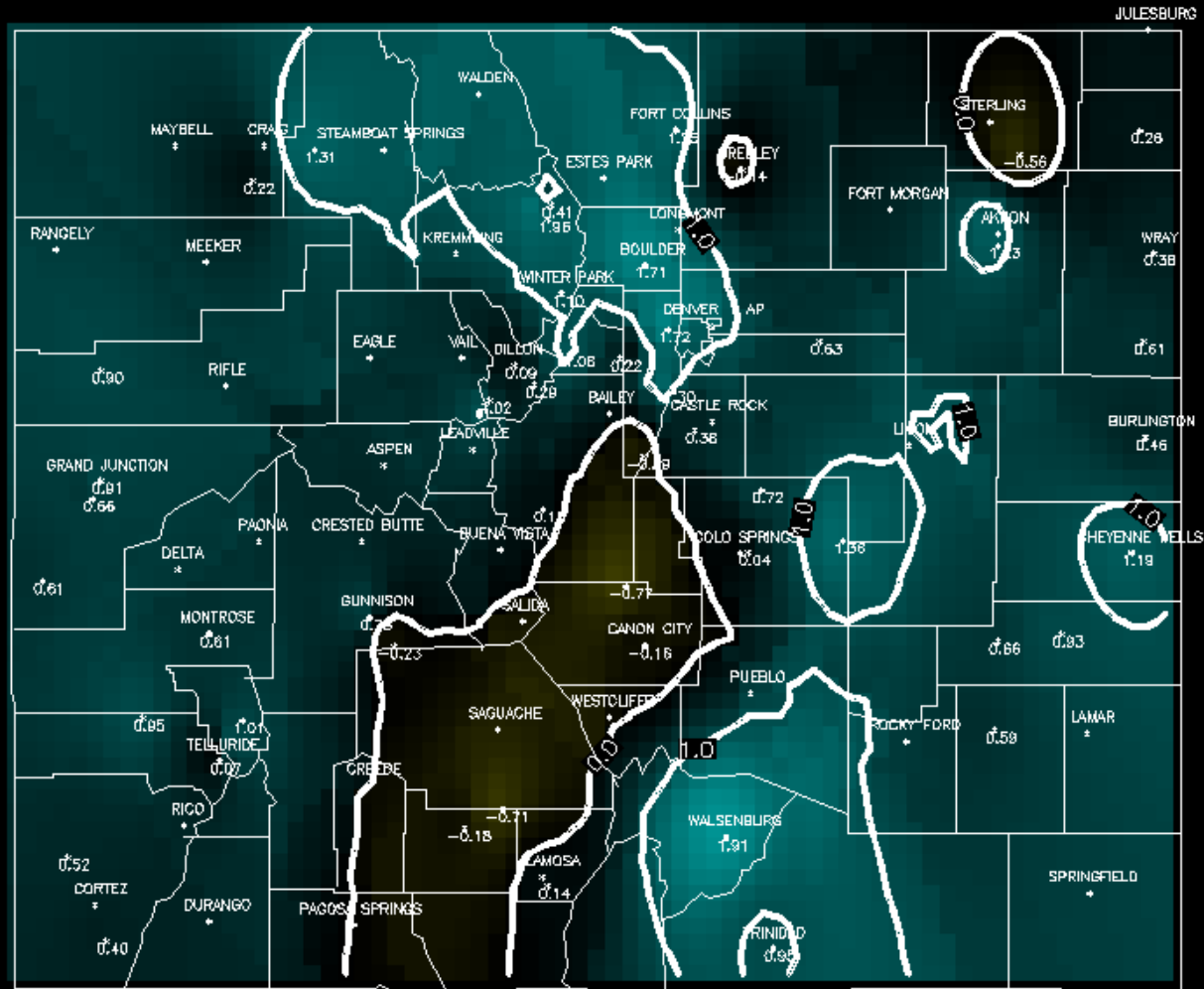
100 % < 2.0	1 % < -1.0
98 % < 1.0	0.5 % < -2.0
50 % < 0.0	0.5 % < -3.0

Produced by  
Colorado Climate Center  
Fort Collins, CO

# Projected Conditions at 0.8 Probability Level 48 Month SPI at 12 months

Colorado

12/2005 48 mon. SPI – Projected 12 mon. at P=0.80



100 % 2.0  
83 % 1.0  
10 % 0.0

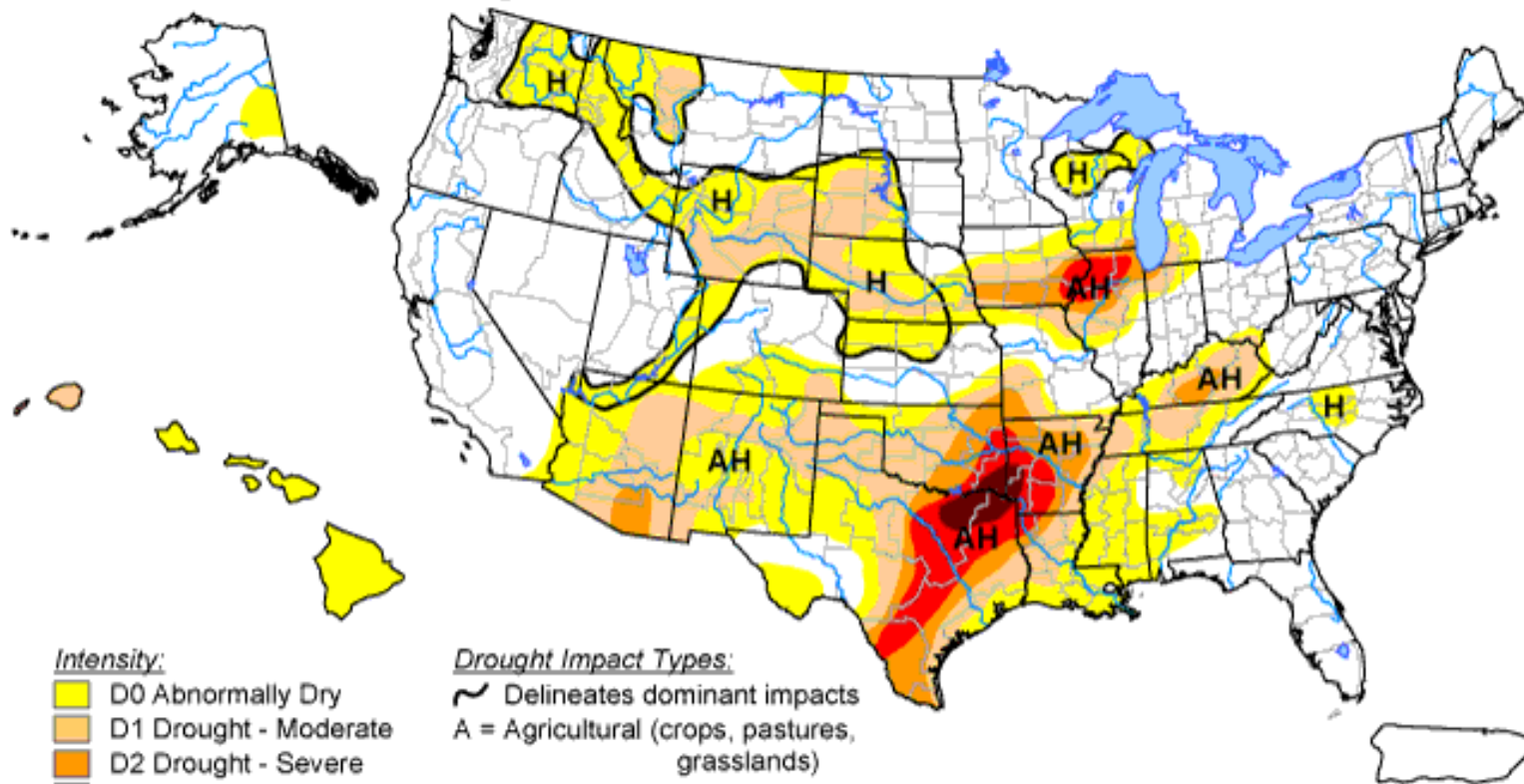
0.0  
-1.0  
-2.0  
-3.0

Produced by:  
Colorado Climate Center  
Fort Collins, CO






# Drought Monitor Map

## U.S. Drought Monitor


January 10, 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>

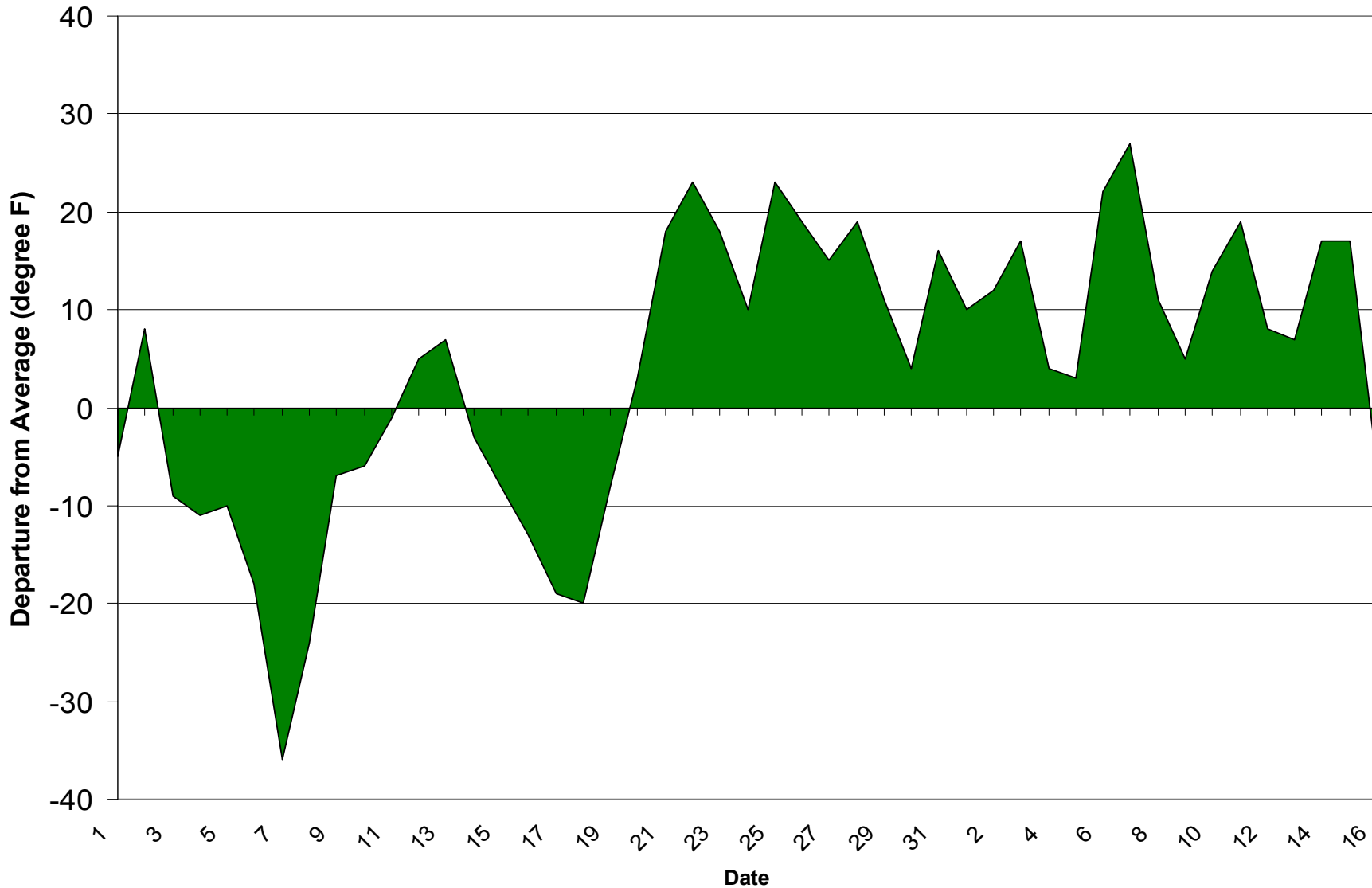


Released Thursday, January 12, 2006

Author: Douglas Le Comte, CPC/NOAA

# Denver Intl Airport

Daily Temperature Departure from Average  
from December 1, 2005 through January 16, 2006



# 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”

