

# *Climate Update*

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

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

Presented to Water Availability  
Task Force, Denver, CO, Sept 25, 2007

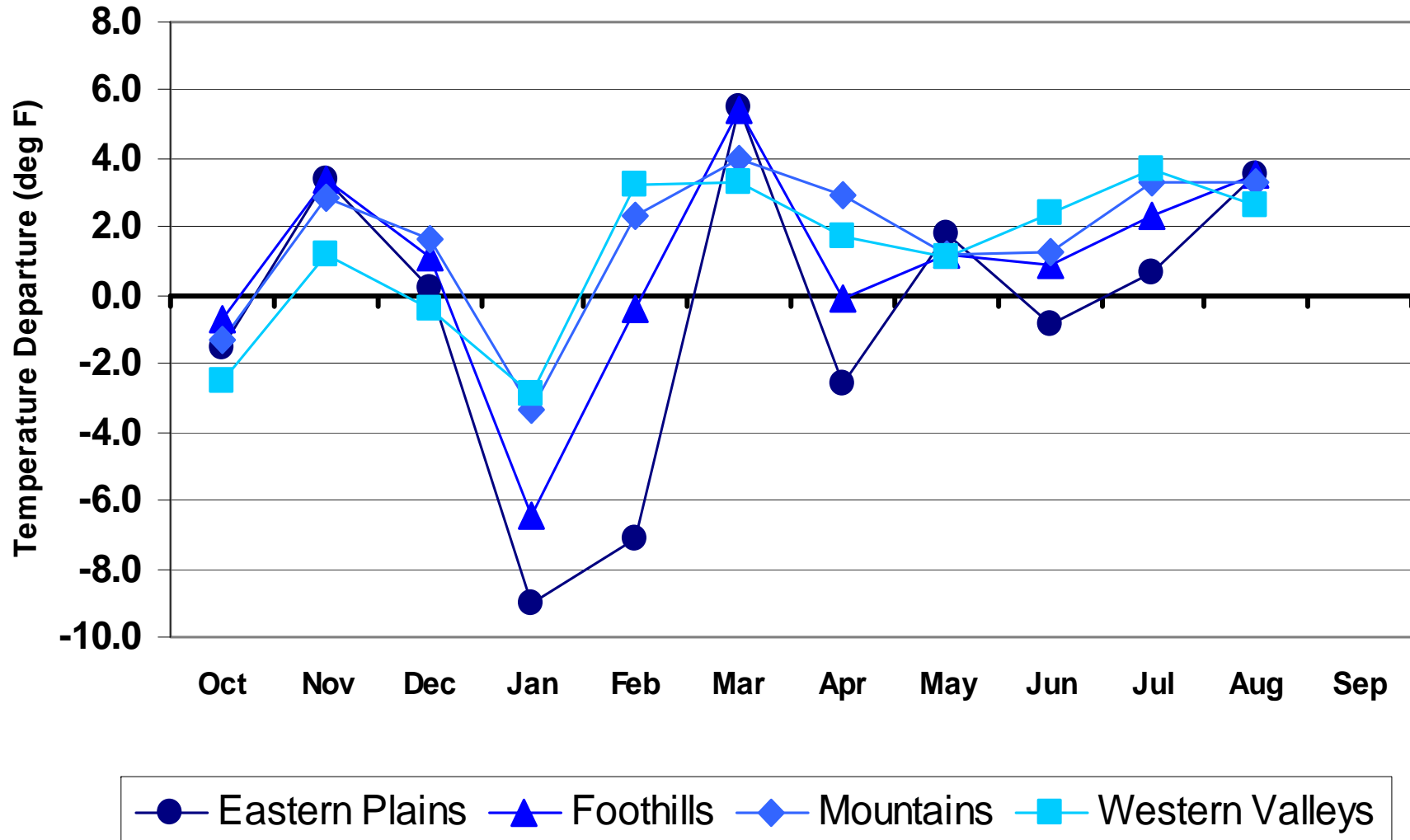
Prepared by Odie Bliss  
Photo by Wendy Ryan



**Colorado  
State  
University**  
*Knowledge to Go Places*

# Water Year 2007 Temperature Departures

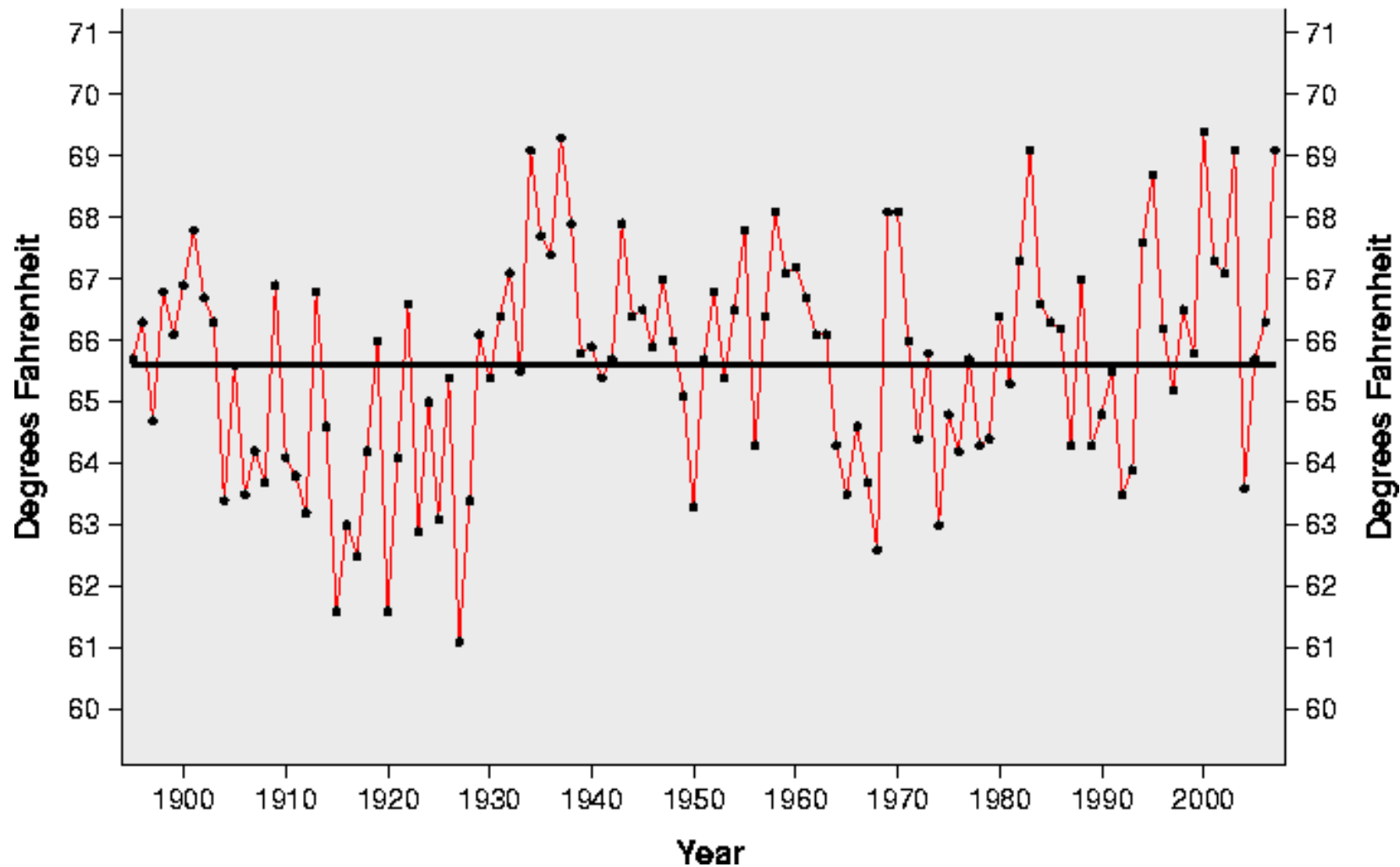
Water Year 2007 Temperature Departures



# August Average Temperature History for Colorado

— **Actual Temperature**  
— **Average Temperature**

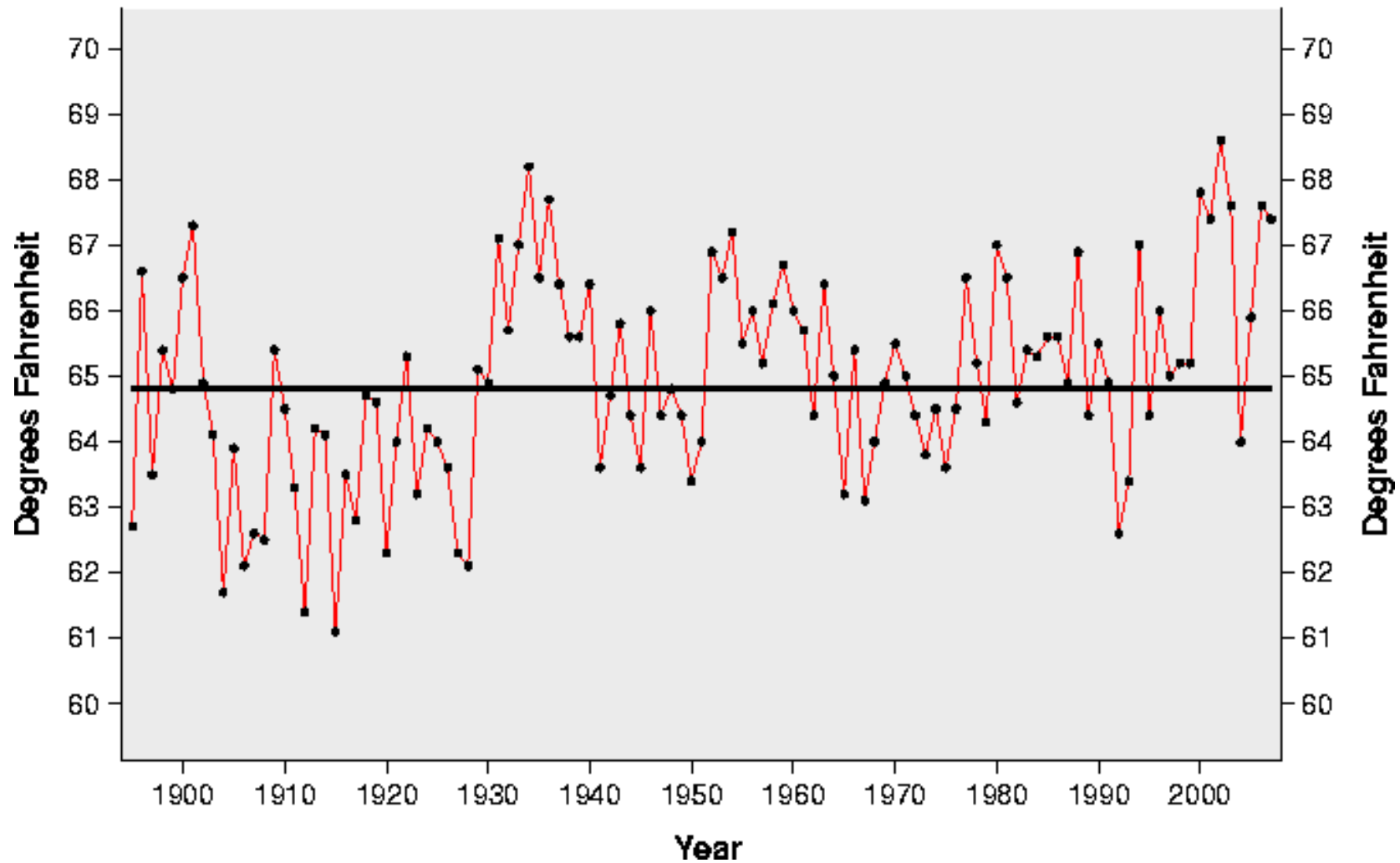
August Period of record 1895-2007



# Summer (Jun-Aug) Average Temperature History for Colorado

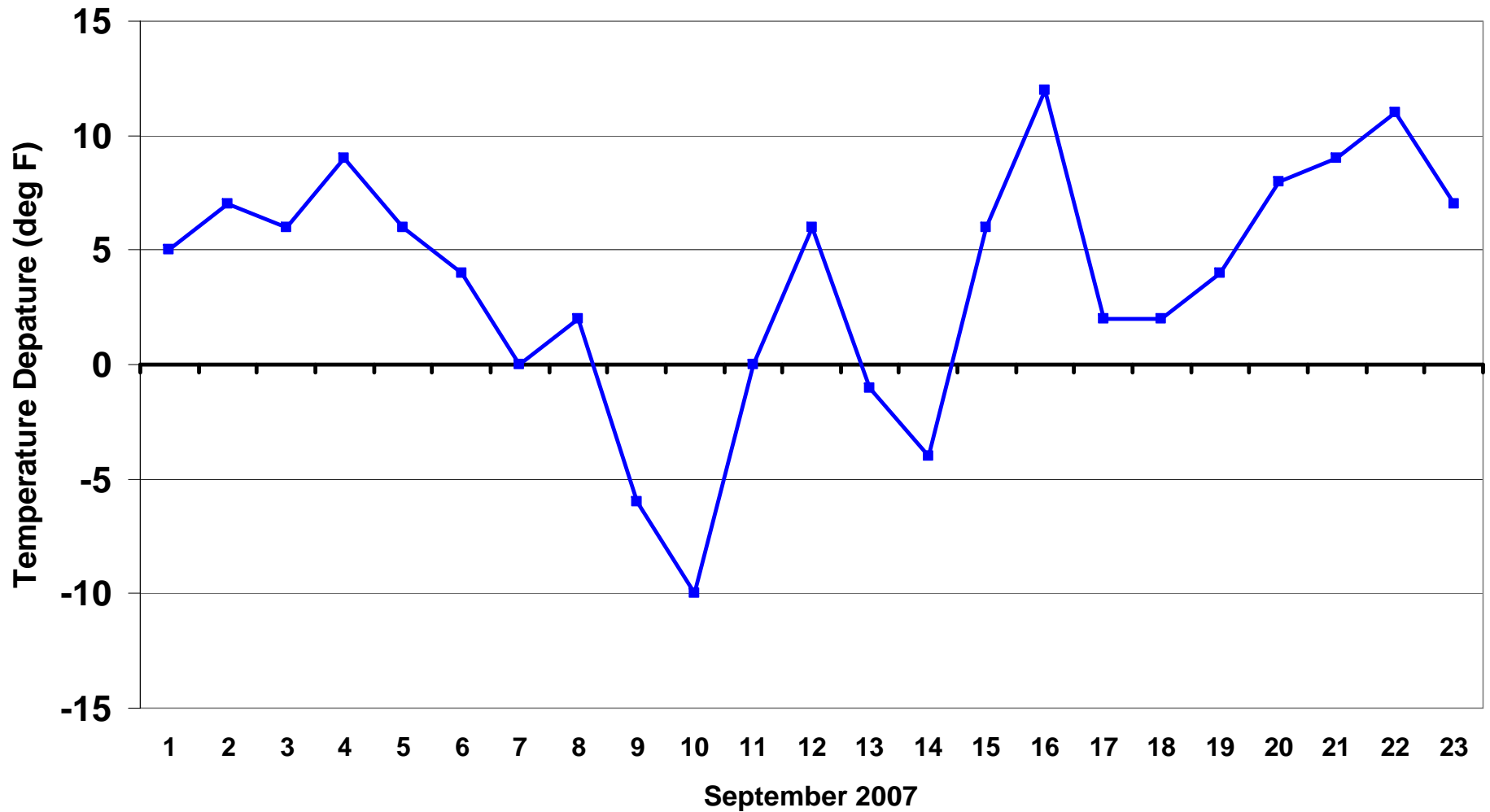
— **Actual Temperature**  
— **Average Temperature**

Summer Period of record 1895-2007



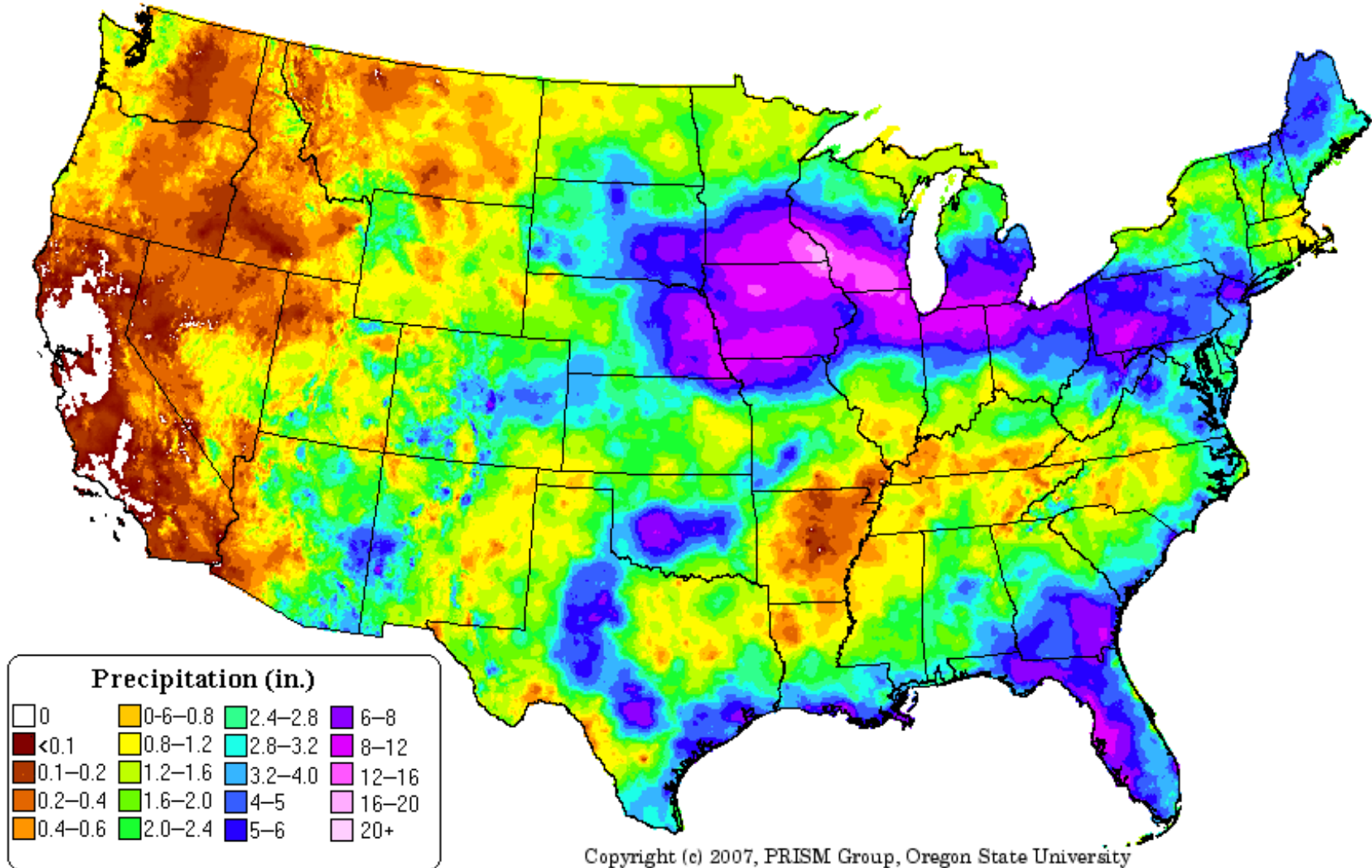
# Denver September 2007

Denver Departure from Average Temperatures  
for September 2007



# August 2007 Precipitation (Prism)

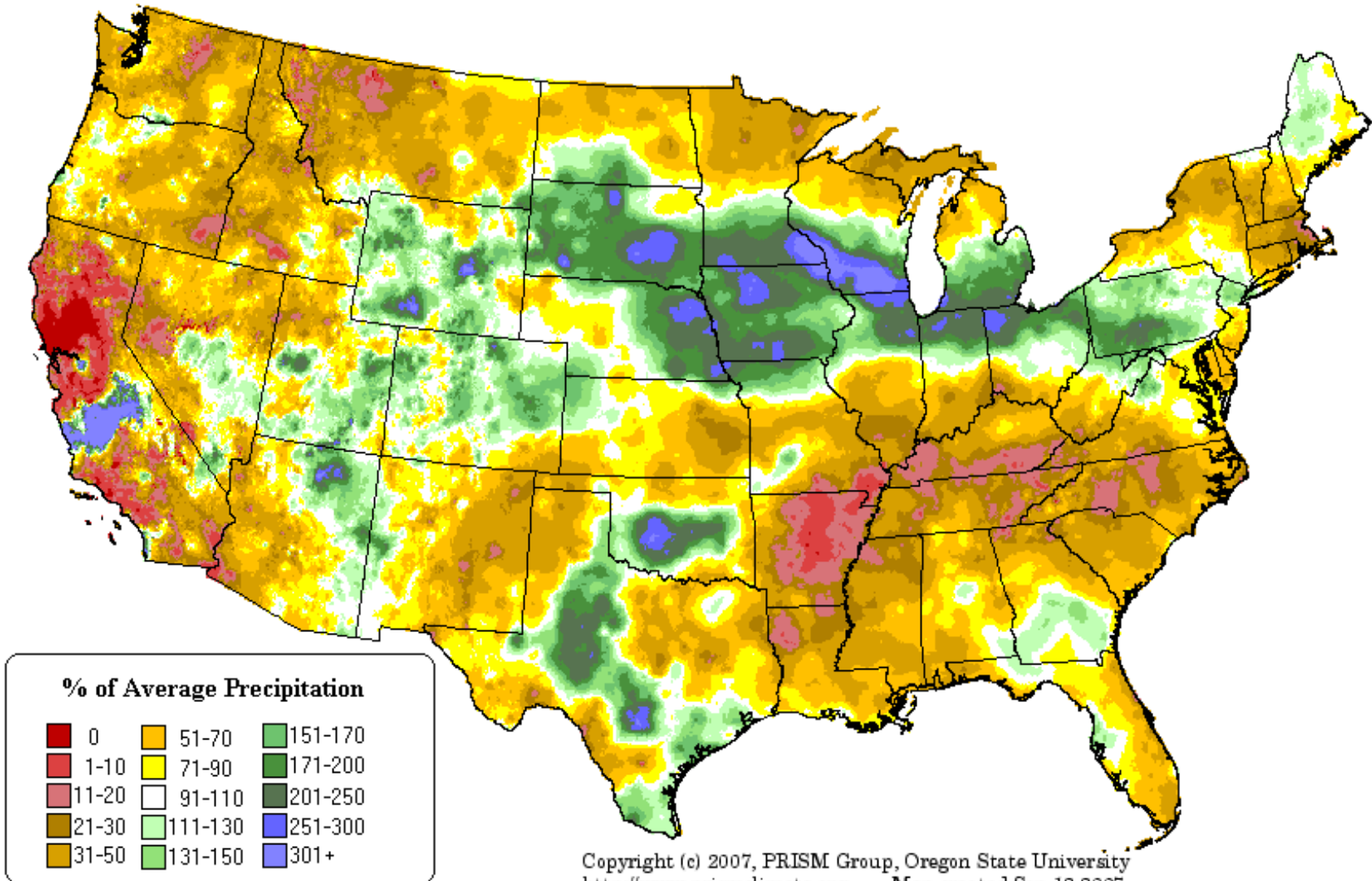
Precipitation: Aug 2007  
Provisional Data



Copyright (c) 2007, PRISM Group, Oregon State University  
<http://www.prismclimate.org> - Map created Sep 11 2007

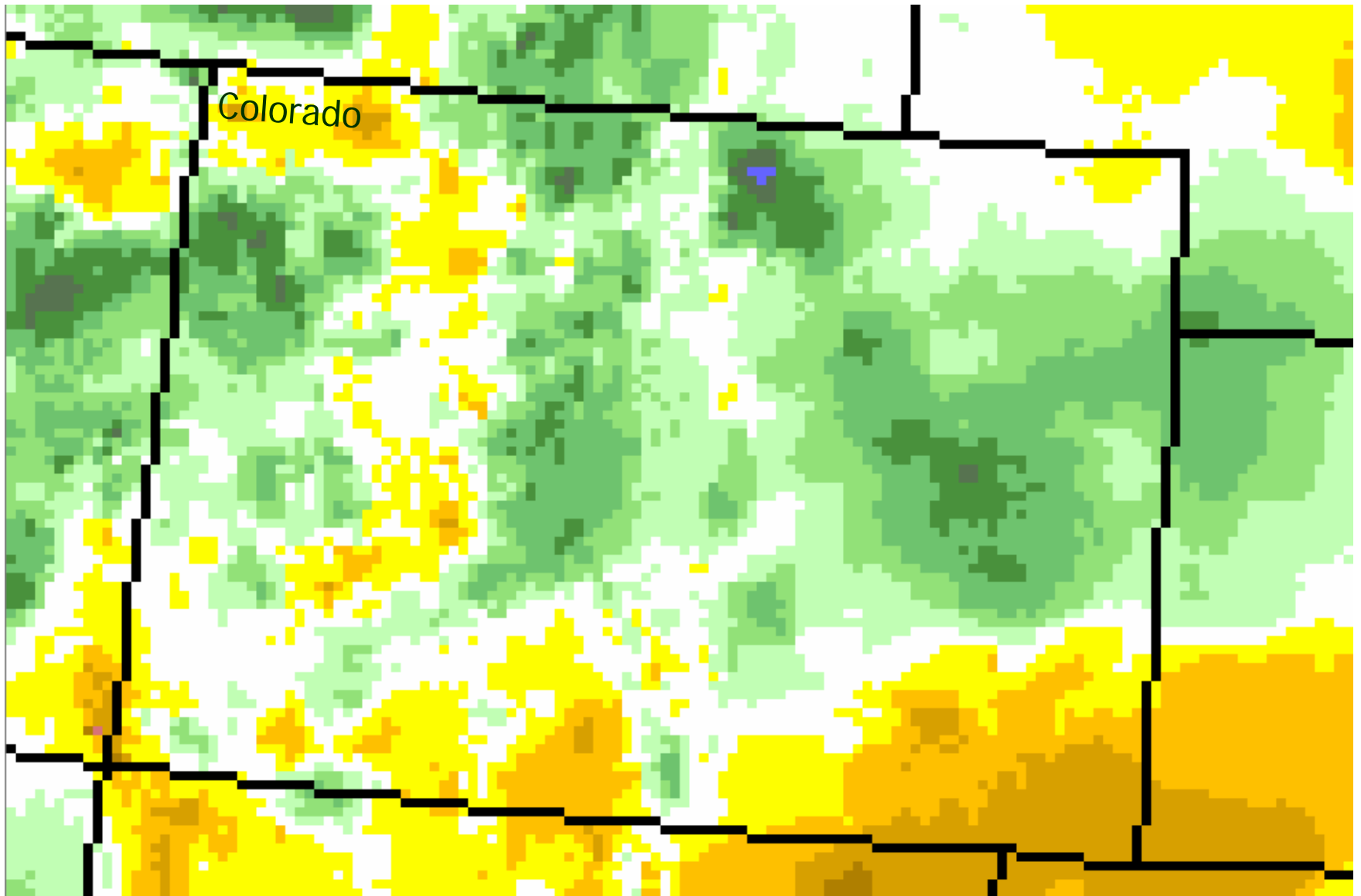
# August 2007 Percent of Average (Prism)

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



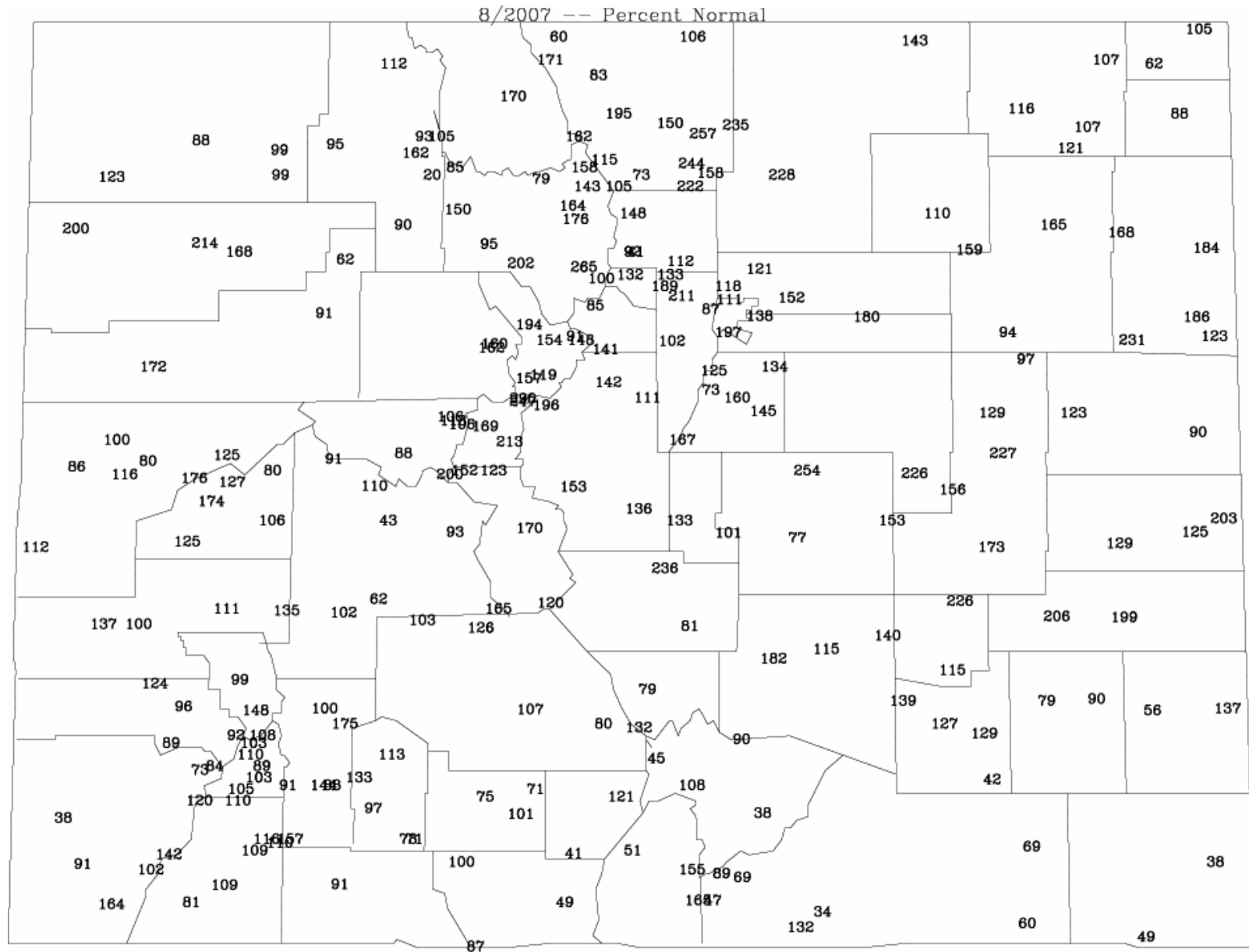
Copyright (c) 2007, PRISM Group, Oregon State University  
<http://www.prismclimate.org> - Map created Sep 12 2007

# August 2007 Percent of Average (Prism)

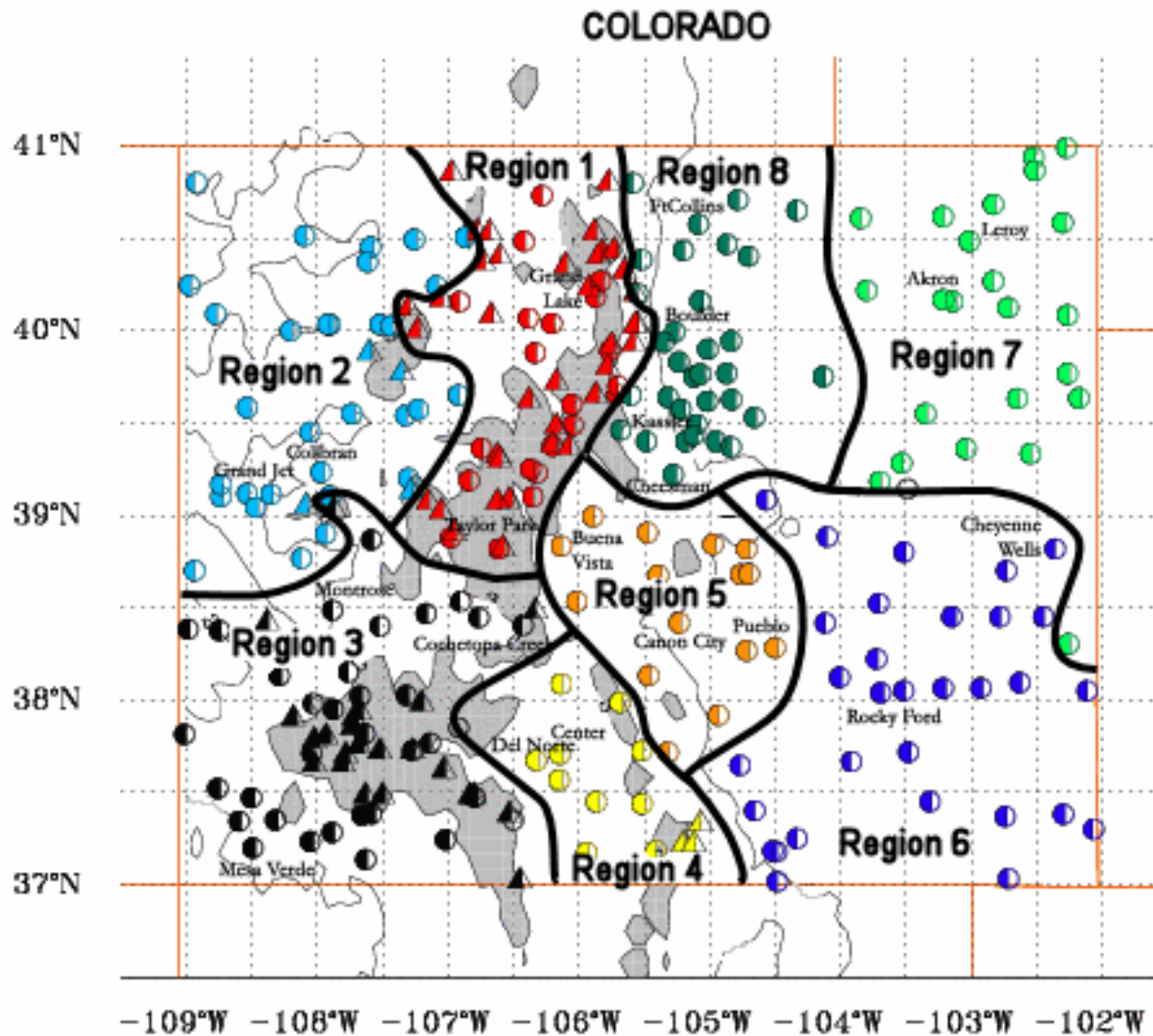




# August 2007 Precipitation Percent of Average

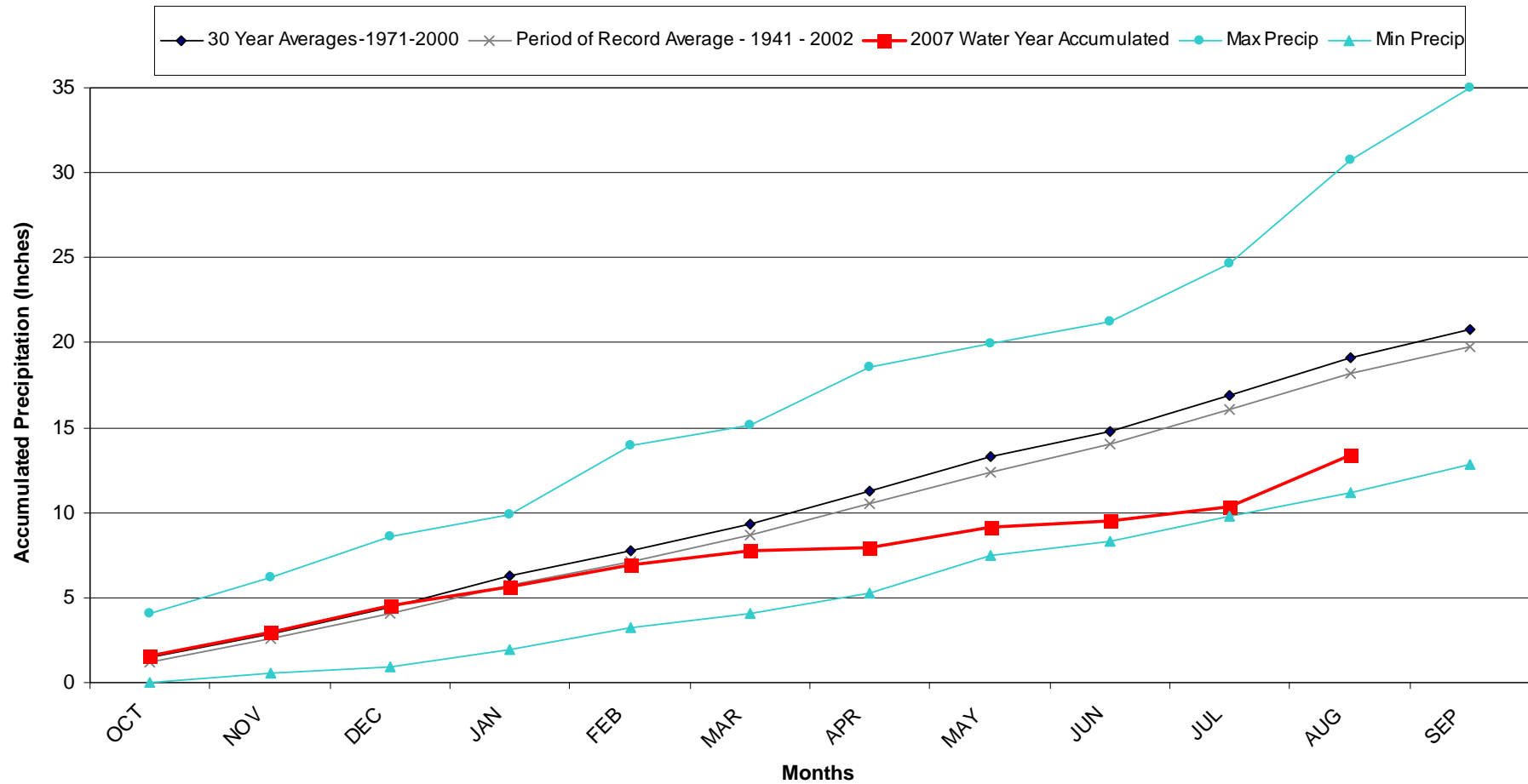


# Climate divisions defined by Dr. Klaus Wolter of NOAA's Climate Diagnostic Center in Boulder, CO



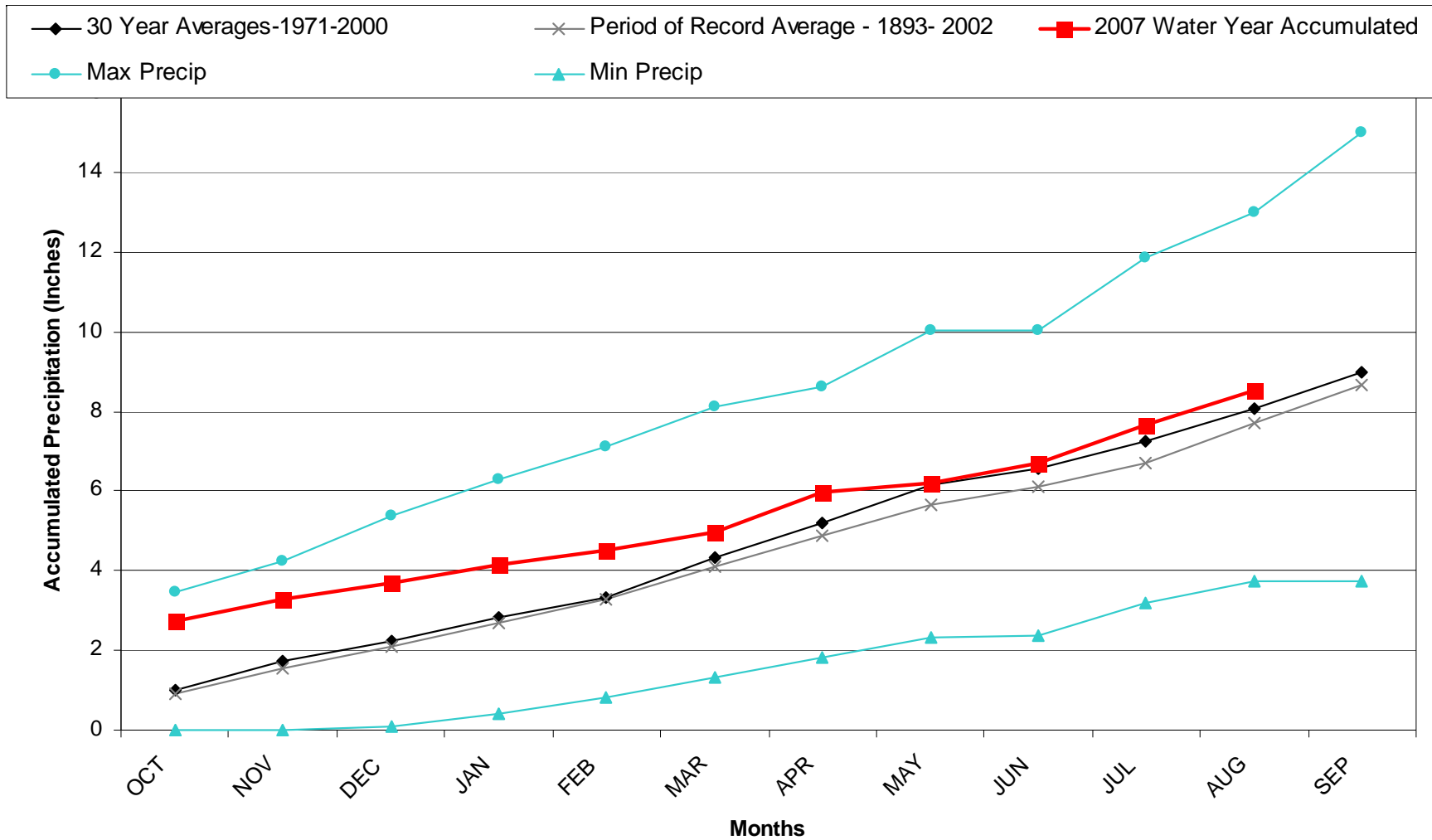
# Division 1– Grand Lake 1NW

## Grand Lake 1 NW 2007 Water Year



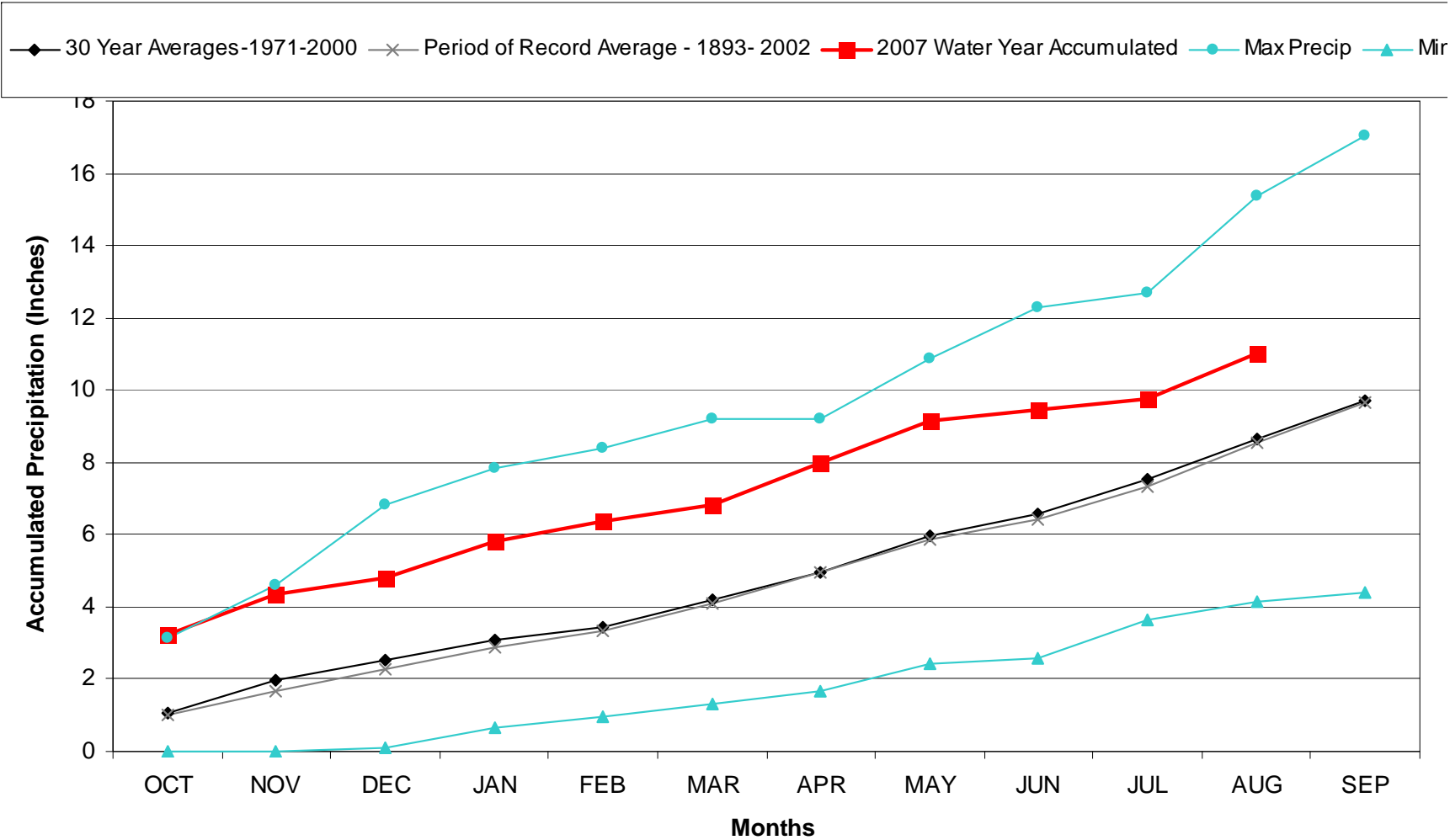
# Division 2 – Grand Junction

## Grand Junction WSFO 2007 Water Year



# Division 3 – Montrose

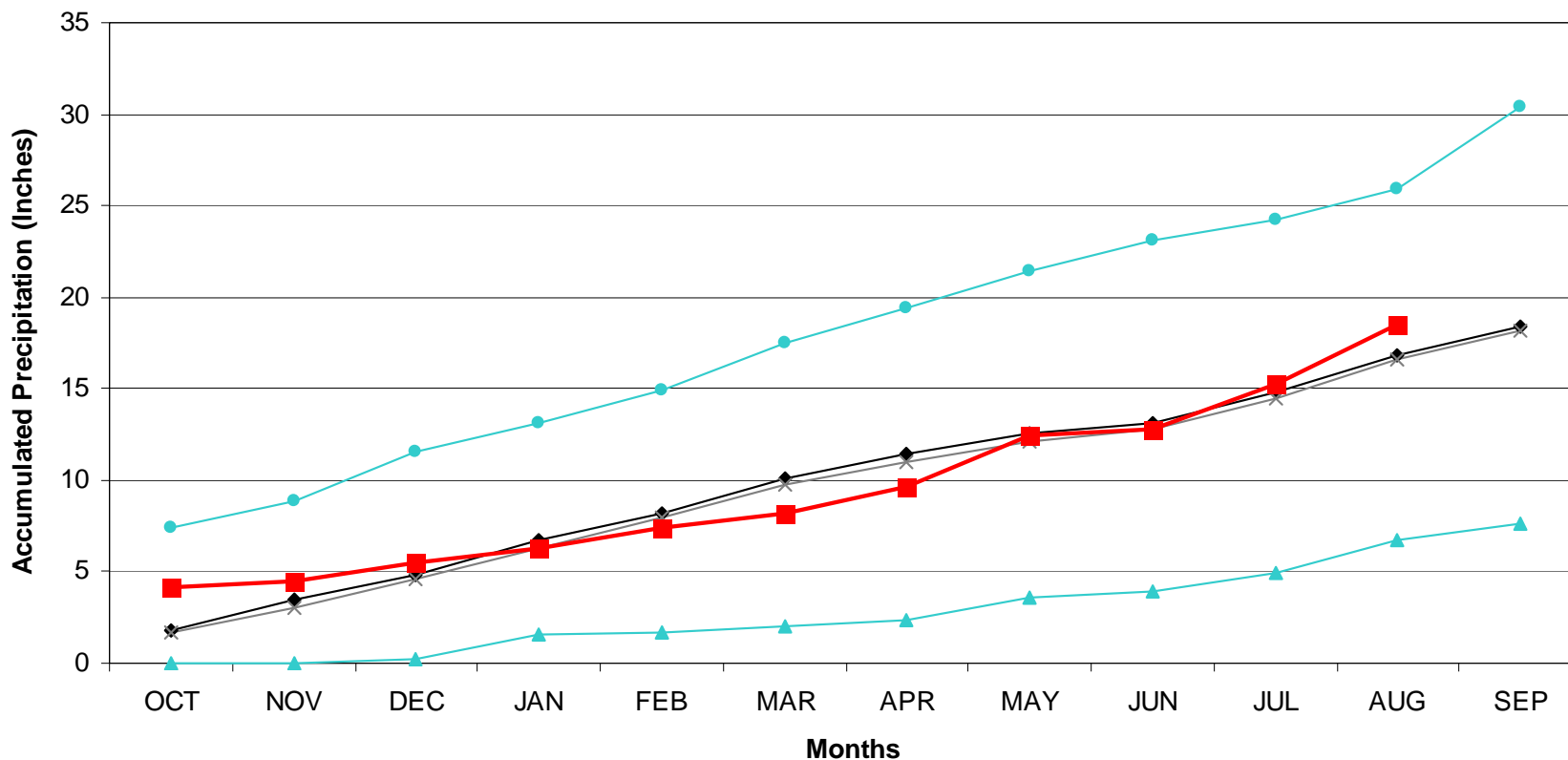
## Montrose #2 2007 Water Year



# Division 3 – Mesa Verde

## Mesa Verde NP 2007 Water Year

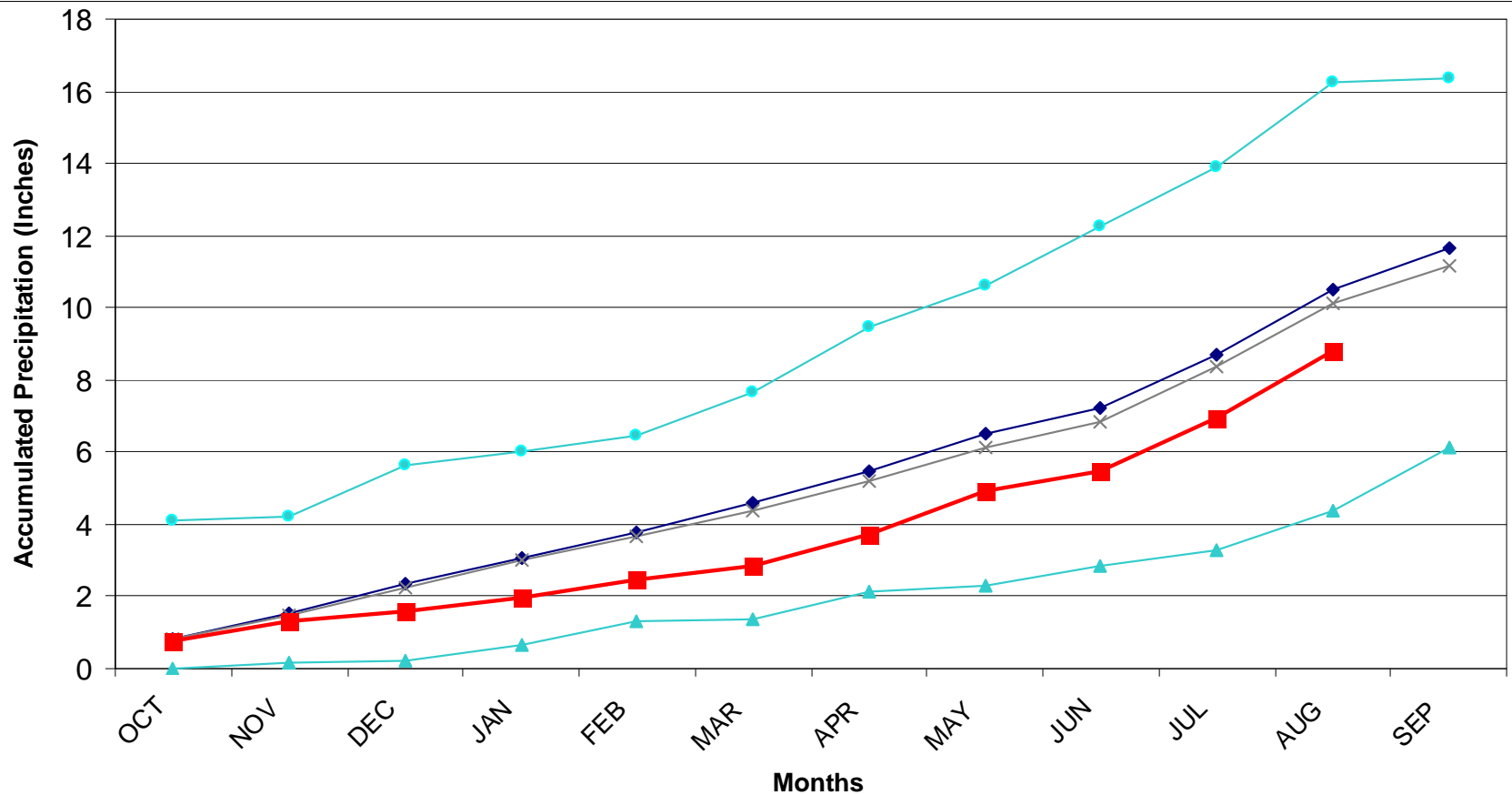
◆ 30 Year Averages-1971-2000    ✕ Period of Record Average - 1893- 2002    ■ 2007 Water Year Accumulated    ● Max Precip    ▲ Min



# Division 3 – Cochetopa Creek

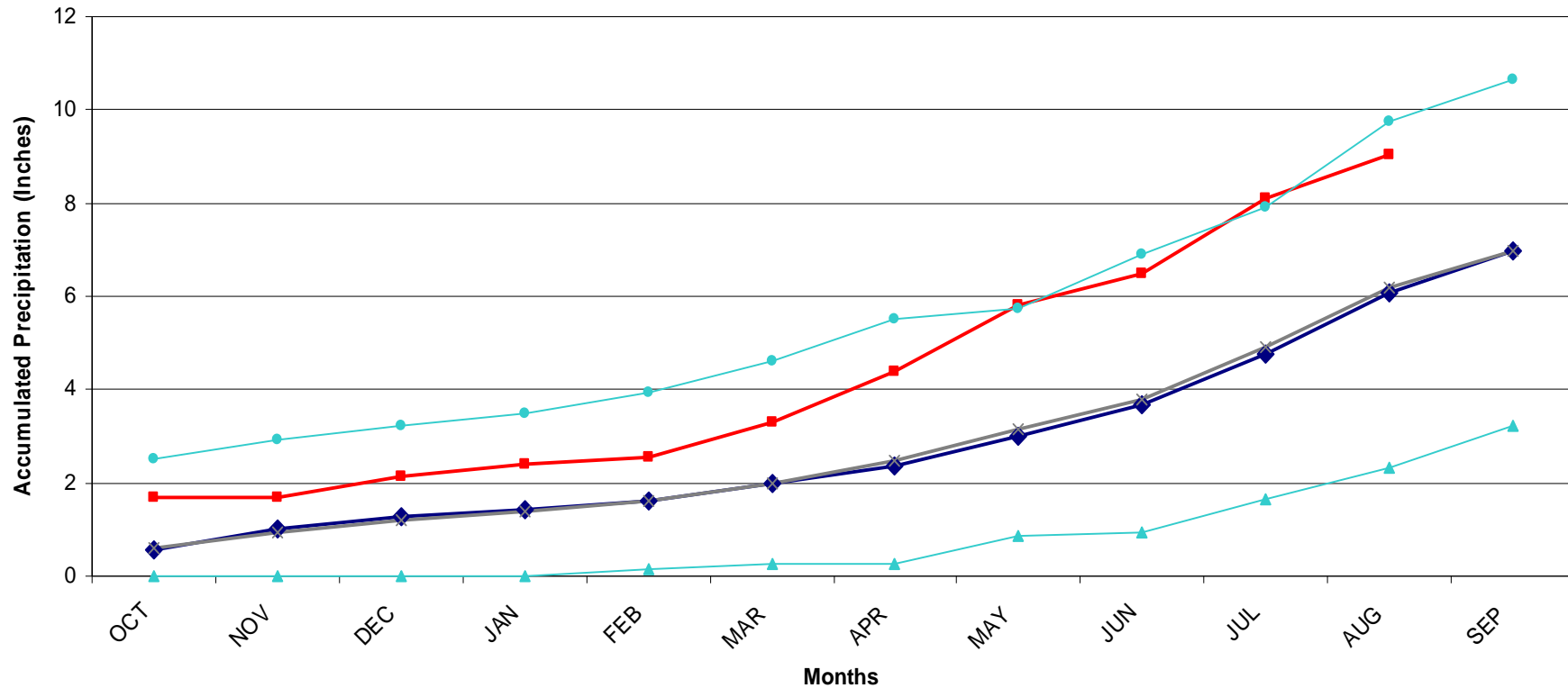
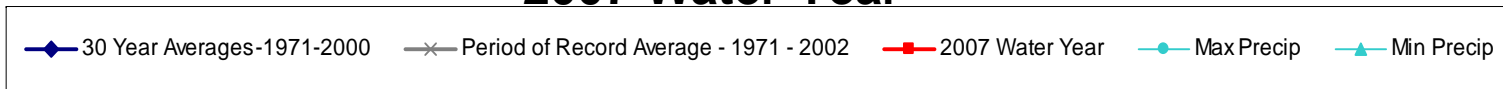
## Cochetopa Creek 2007 Water Year

◆ 30 Year Averages-1971-2000    ✕ Period of Record Average - 1949 - 2002    ■ 2007 Water Year    ● Max Precip    ▲ Min I



# Division 4 – Center

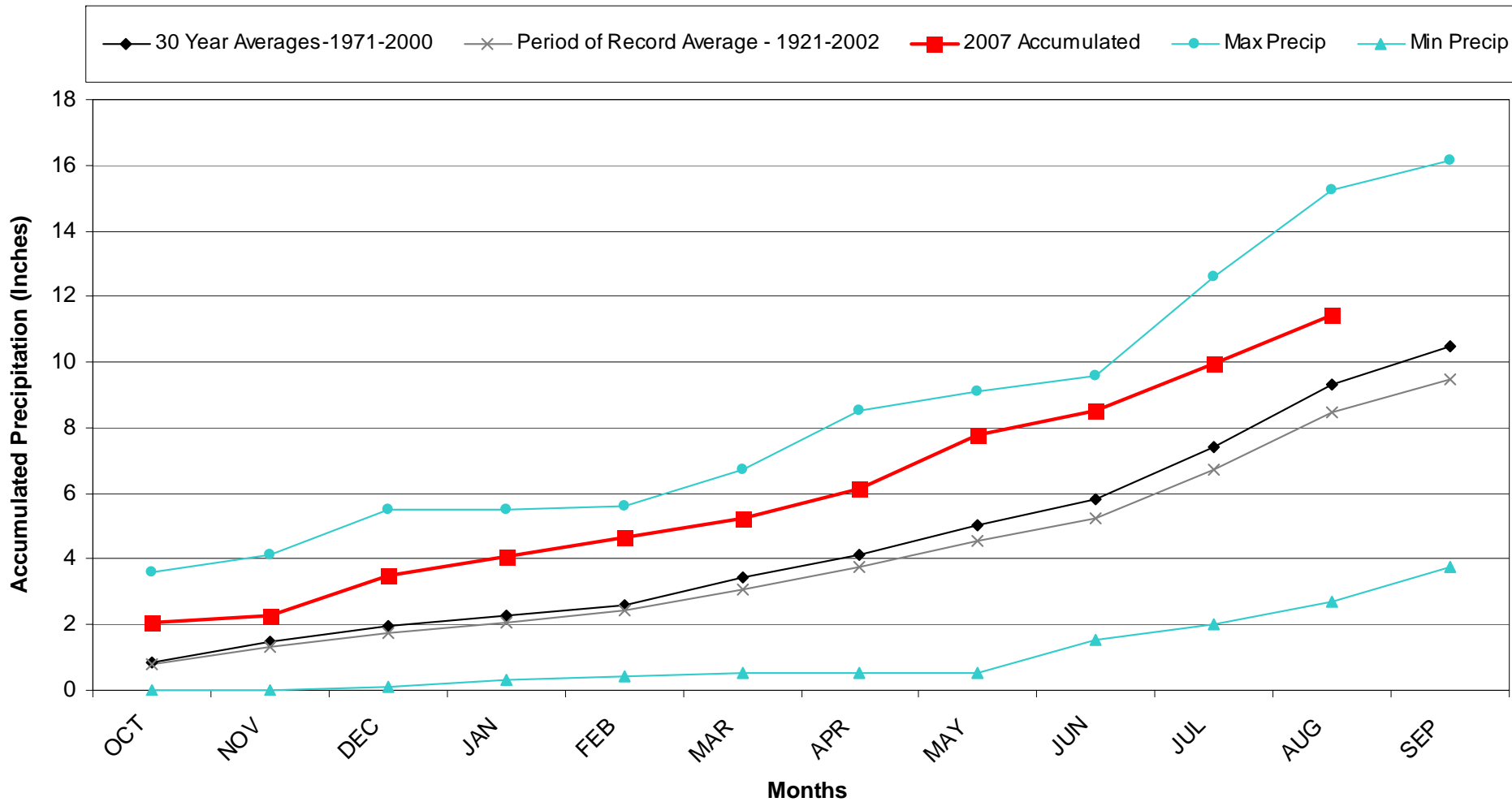
## Center 4SSW 2007 Water Year





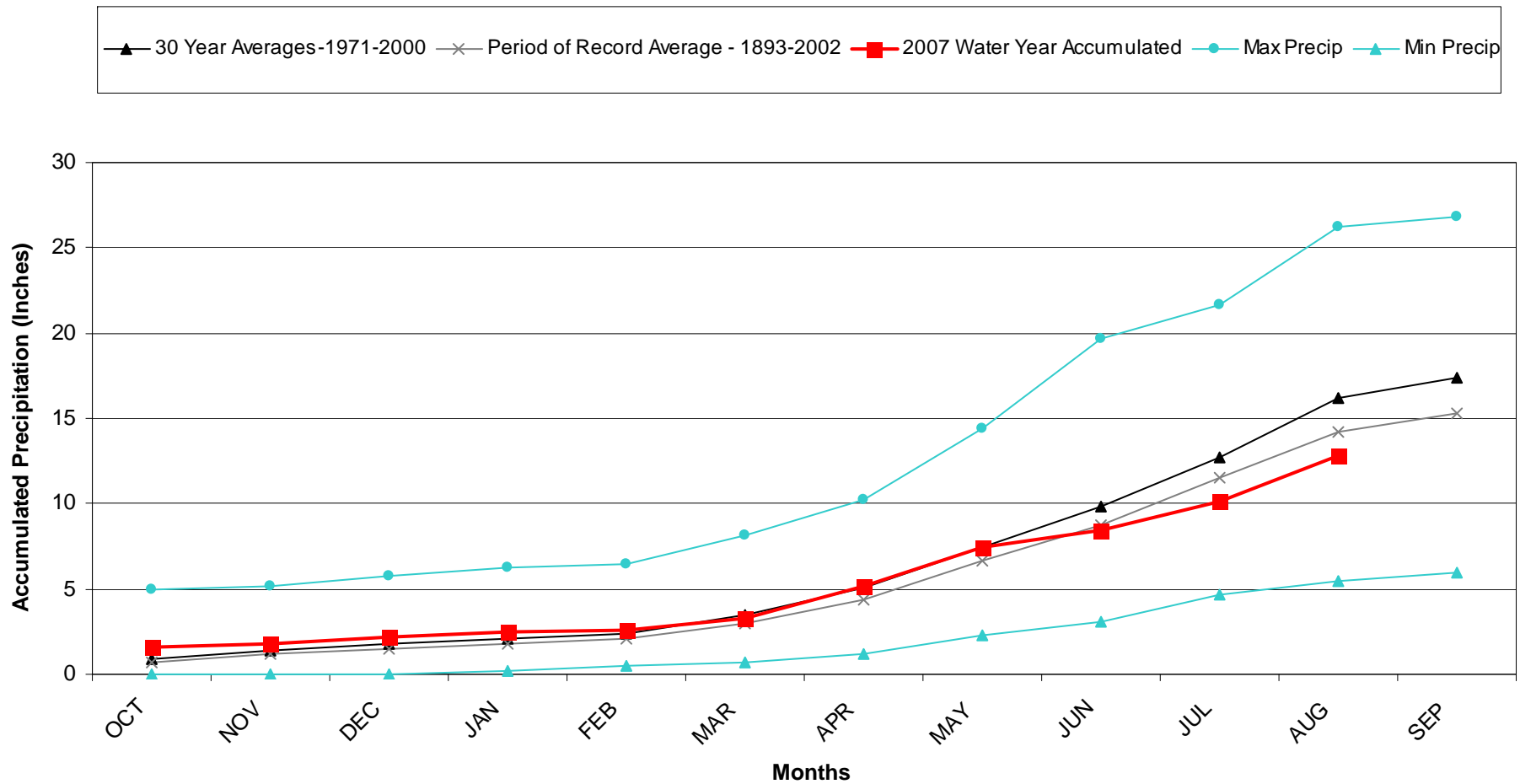
# Division 4 – Del Norte

## Del Norte 2007 Water Year



# Division 5 – Colorado Springs

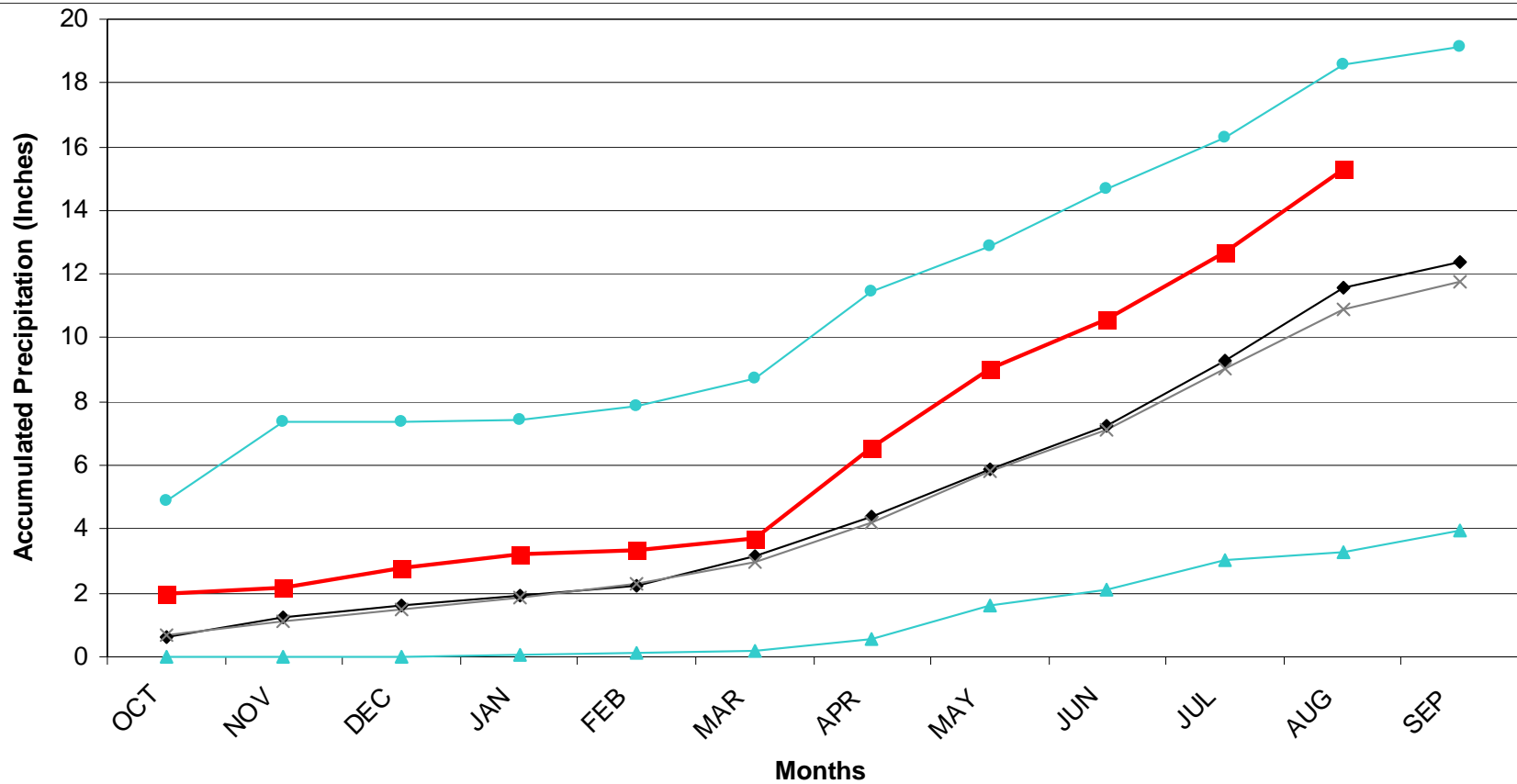
## Colorado Springs 2007 Water Year



# Division 5 – Pueblo

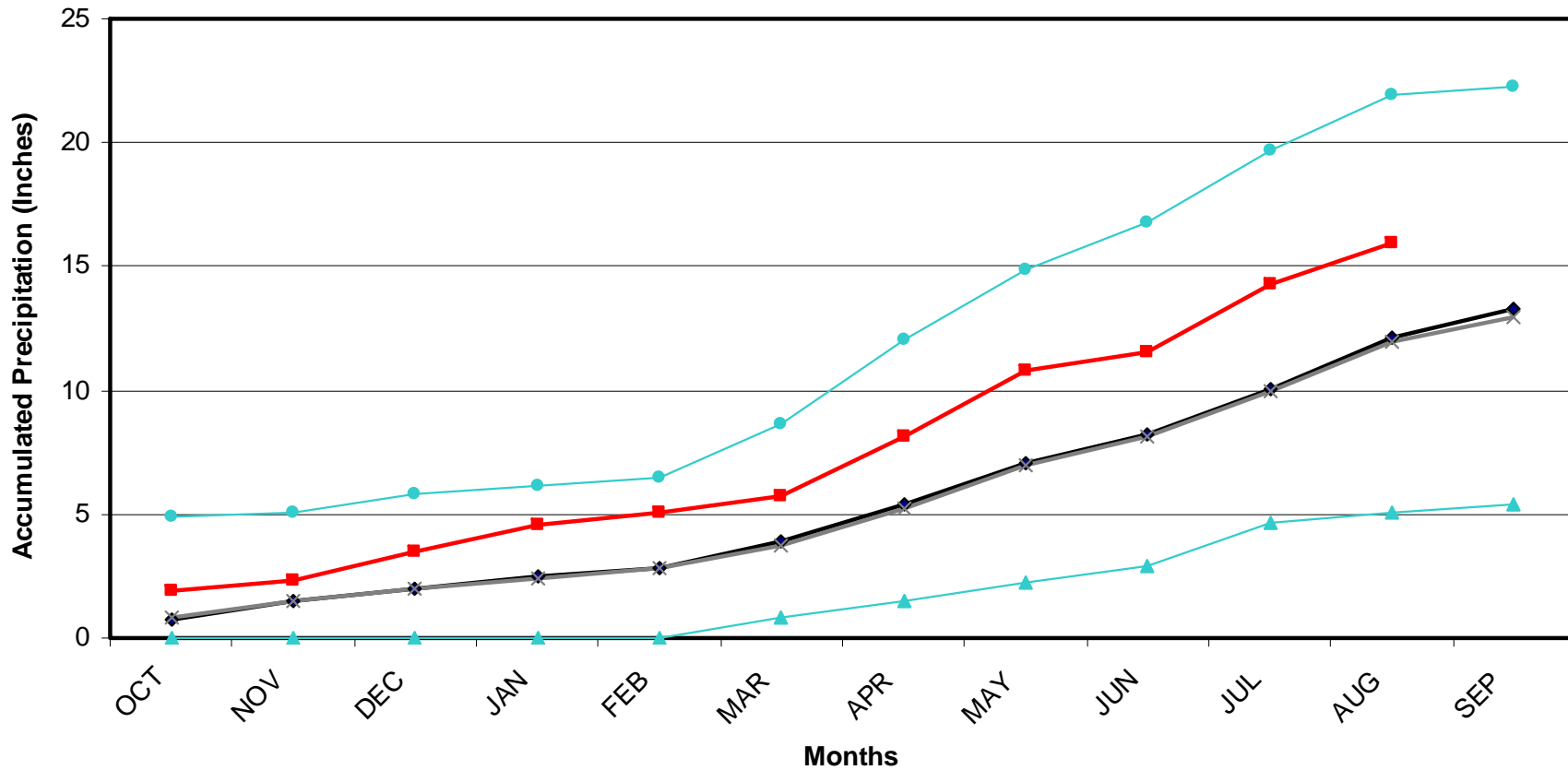
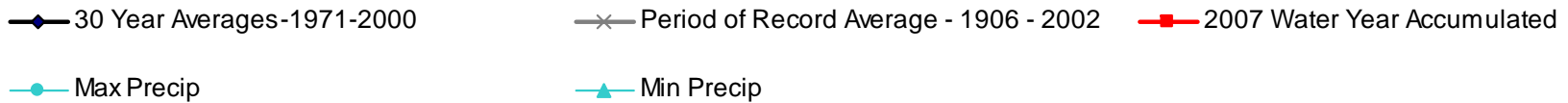
## Pueblo WSO 2007 Water Year

◆ 30 Year Averages-1971-2000    × Period of Record Average - 1874-2000    ■ 2007 Water Year Accumulated    ● Max Precip    ▲ Min



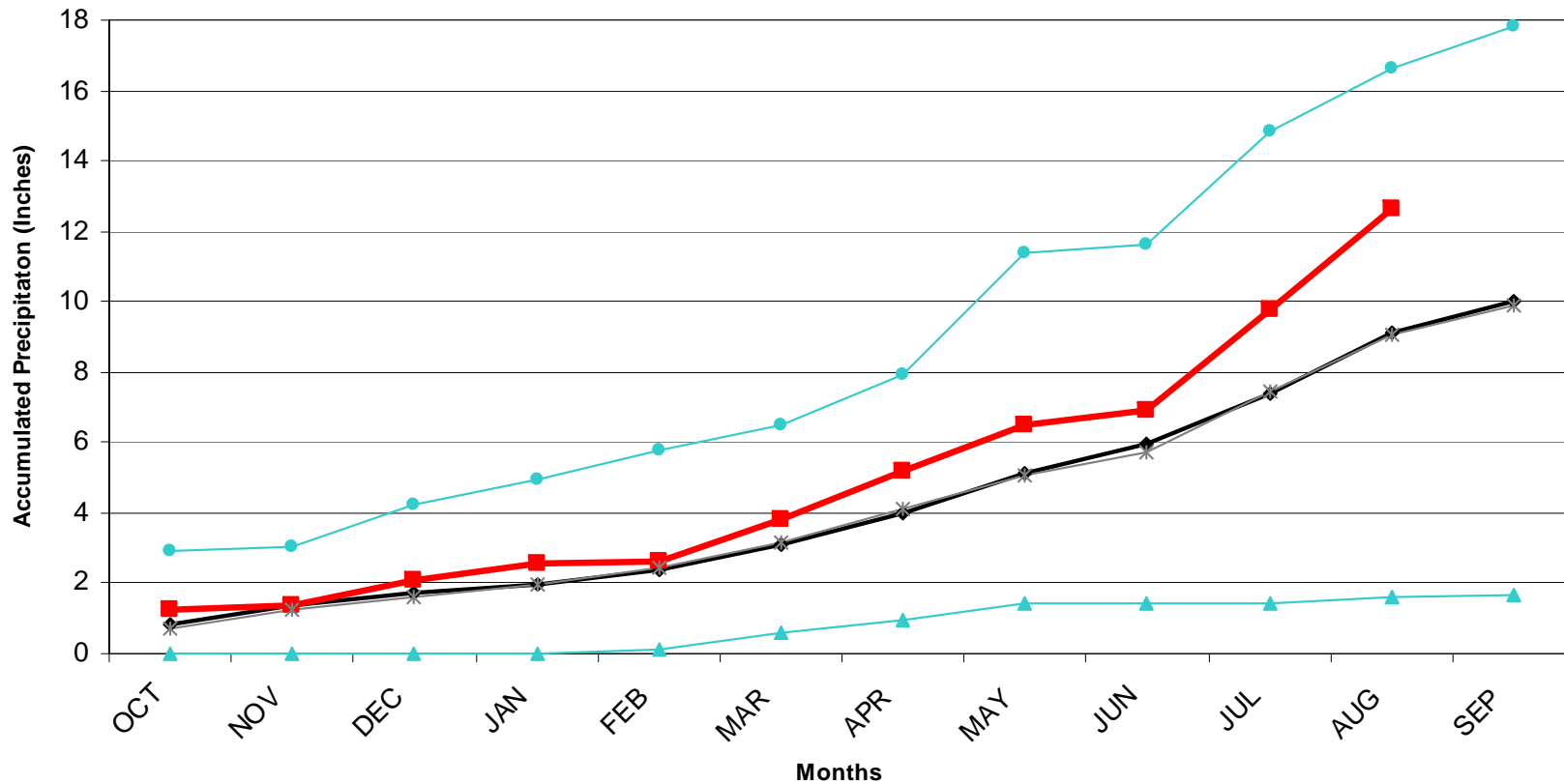
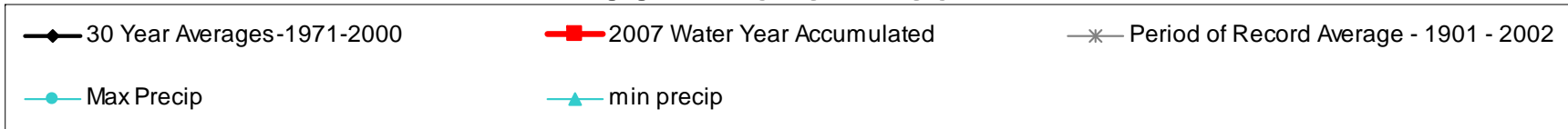
# Division 5 – Canon City

## Canon City 2007 Water Year



# Division 5 – Buena Vista

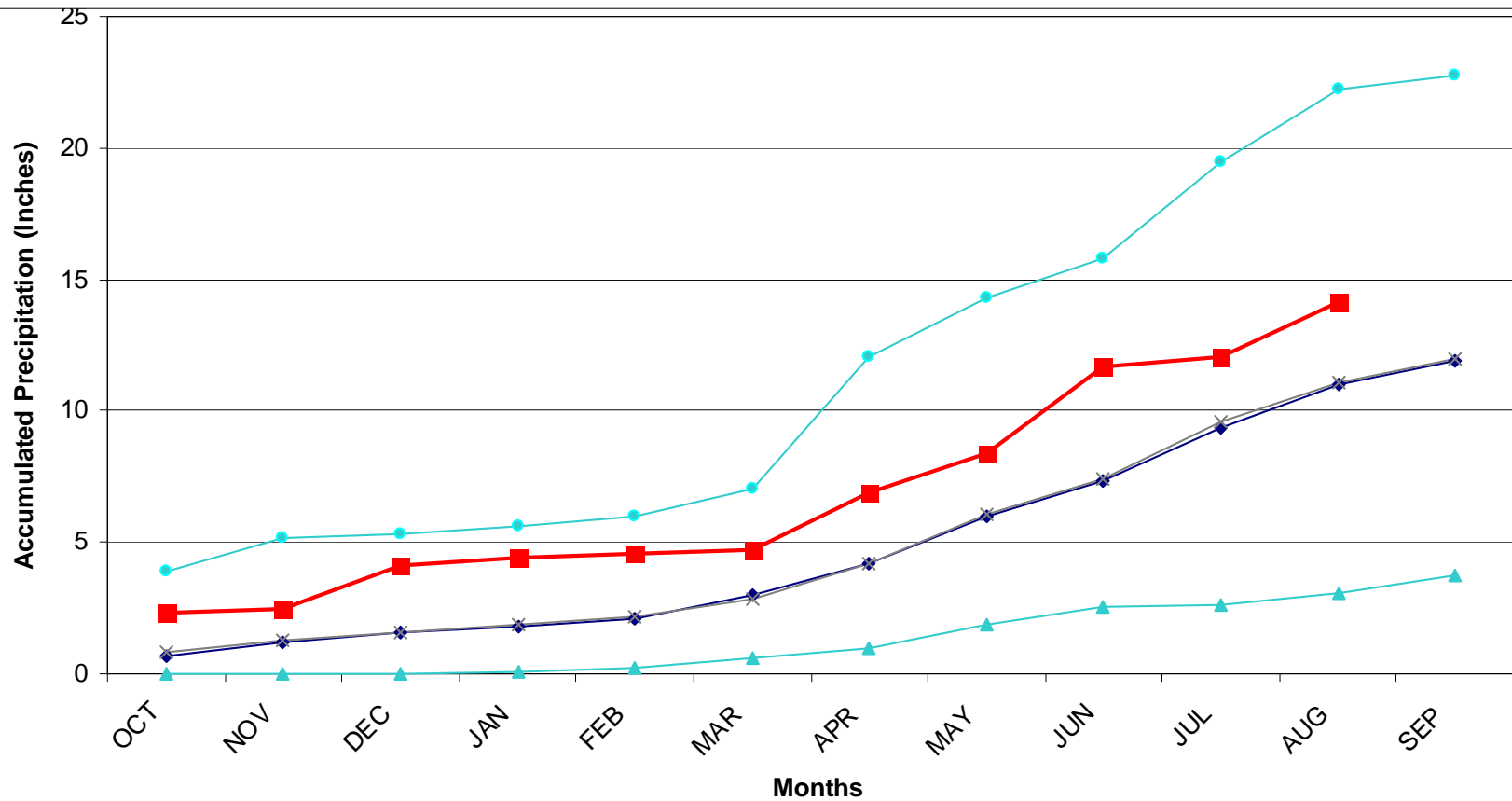
## Buena Vista 2007 Water Year



# Division 6 – Rocky Ford

## Rocky Ford 2007 Water Year

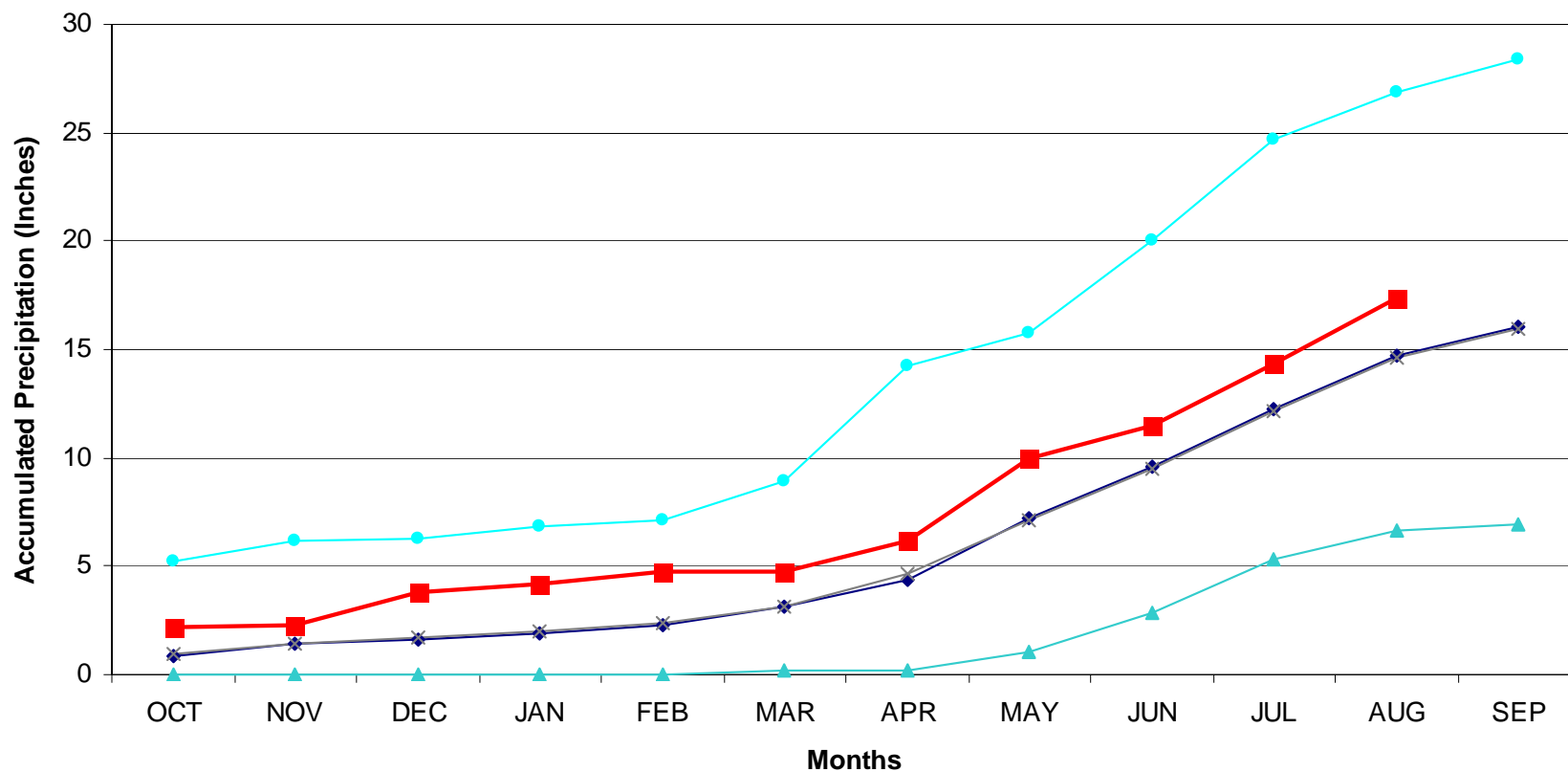
◆ 30 Year Averages-1971-2000    ✕ Period of Record Average - 1889-2002    ■ 2007 Water Year Accumulated    ● Max Precip    ▲ mi



# Division 6 – Cheyenne Wells

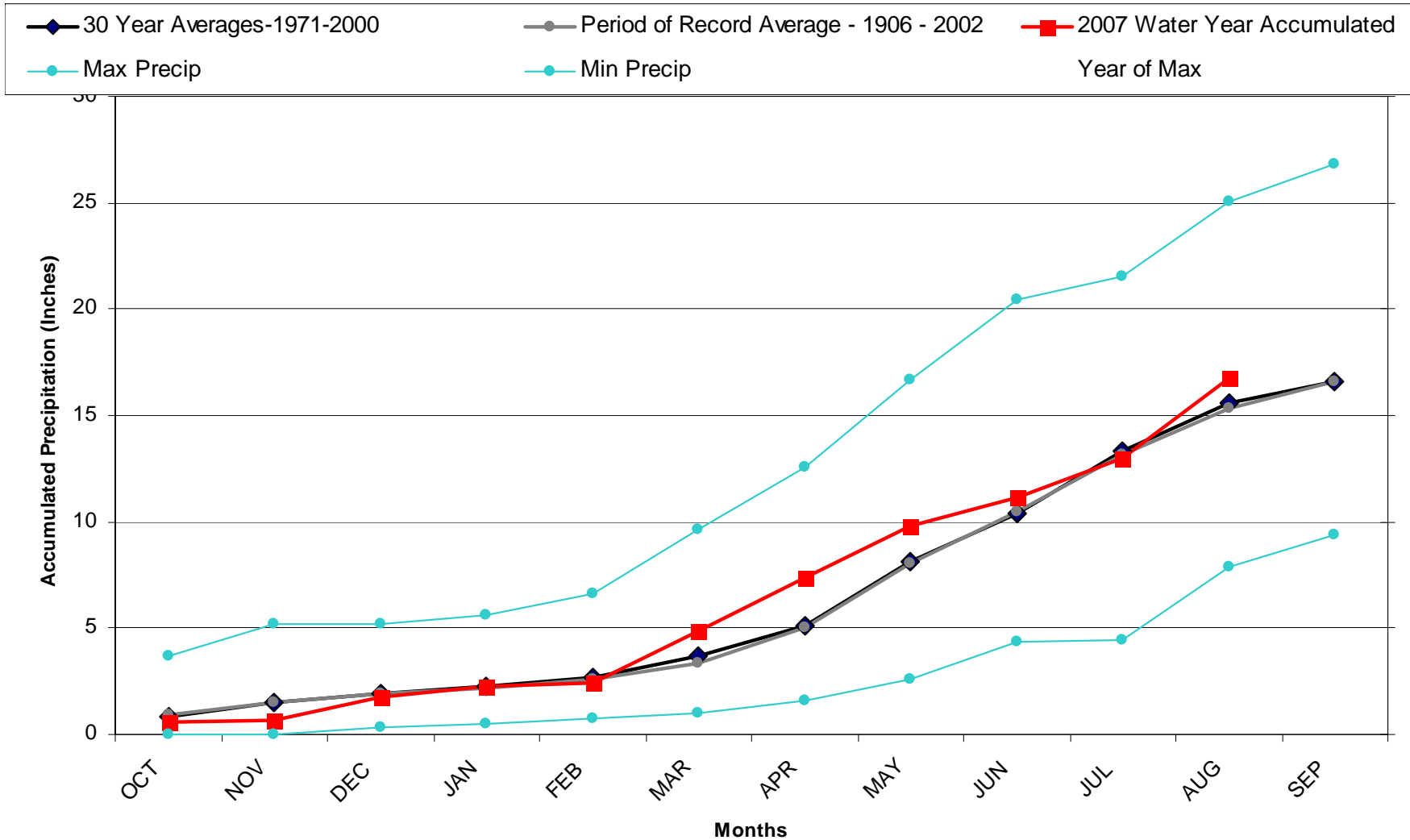
## Cheyenne Wells 2007 Water Year

◆ 30 Year Averages-1971-2000    ✕ Period of Record Average - 1971 - 2002    ■ 2007 Water Year    ● Max\_Precip    ▲ Min pr



# Division 7 – Akron

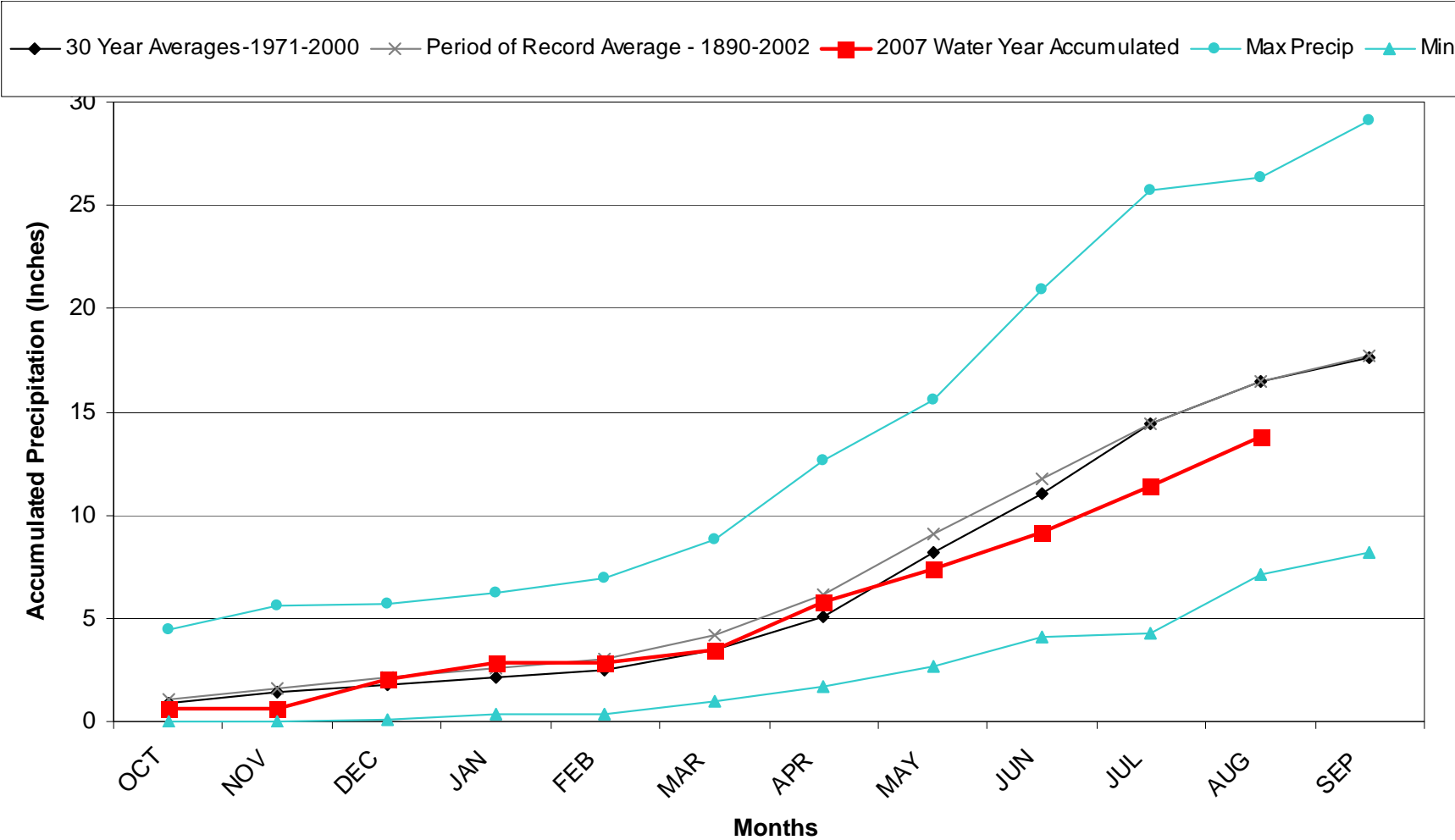
## Akron 4E 2007 Water Year





# Division 7 – Leroy

## Leroy 5SW 2007 Water Year

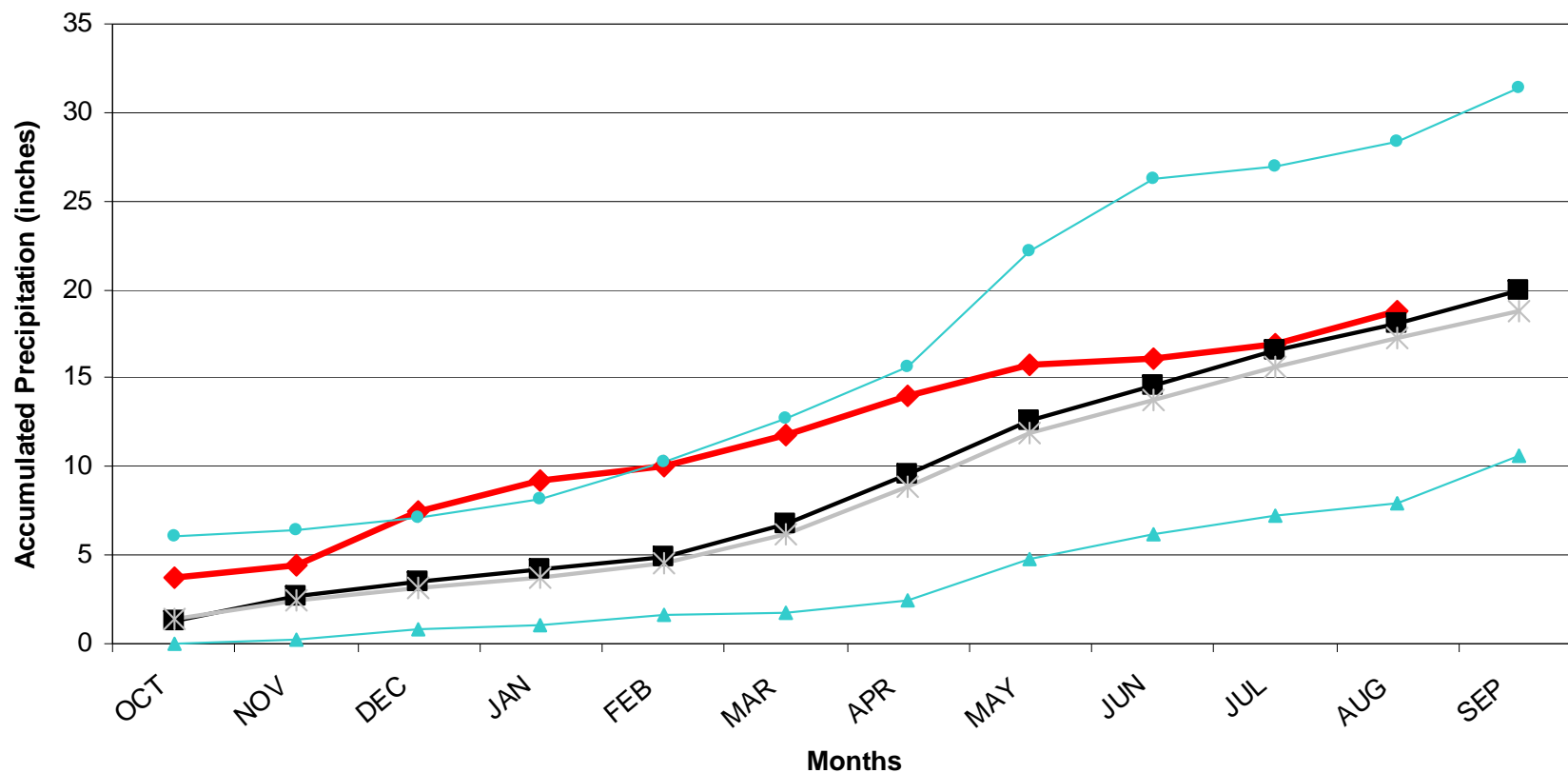


# Division 8 – Boulder

## Boulder

### 2007 Water Year

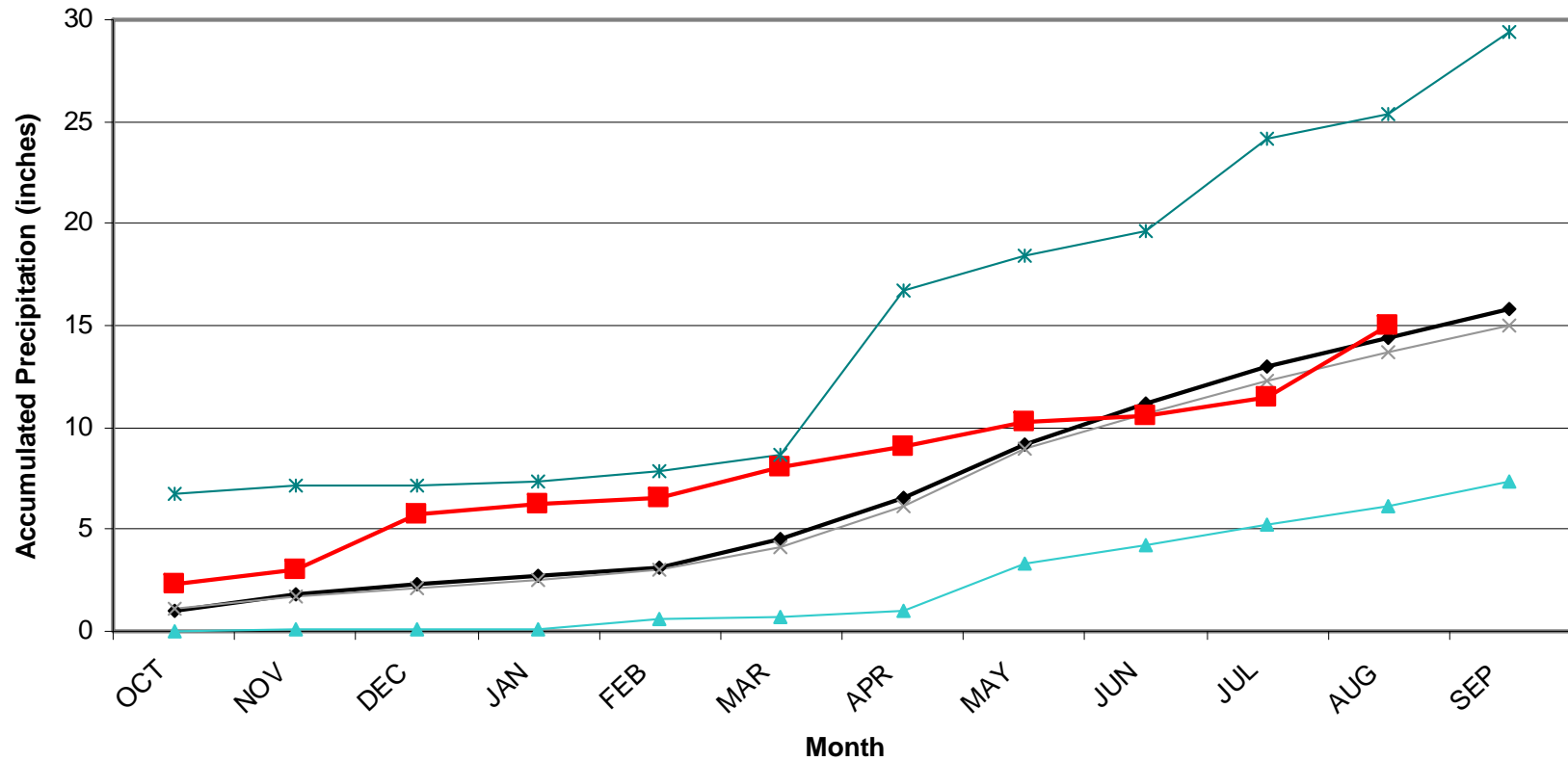
2007 Water Year    30 Year Averages-1971-2000    Period of Record Average - 1894-2002    Max Precip    Min Pr



# Division 8 – Fort Collins

## Fort Collins 2007 Water Year

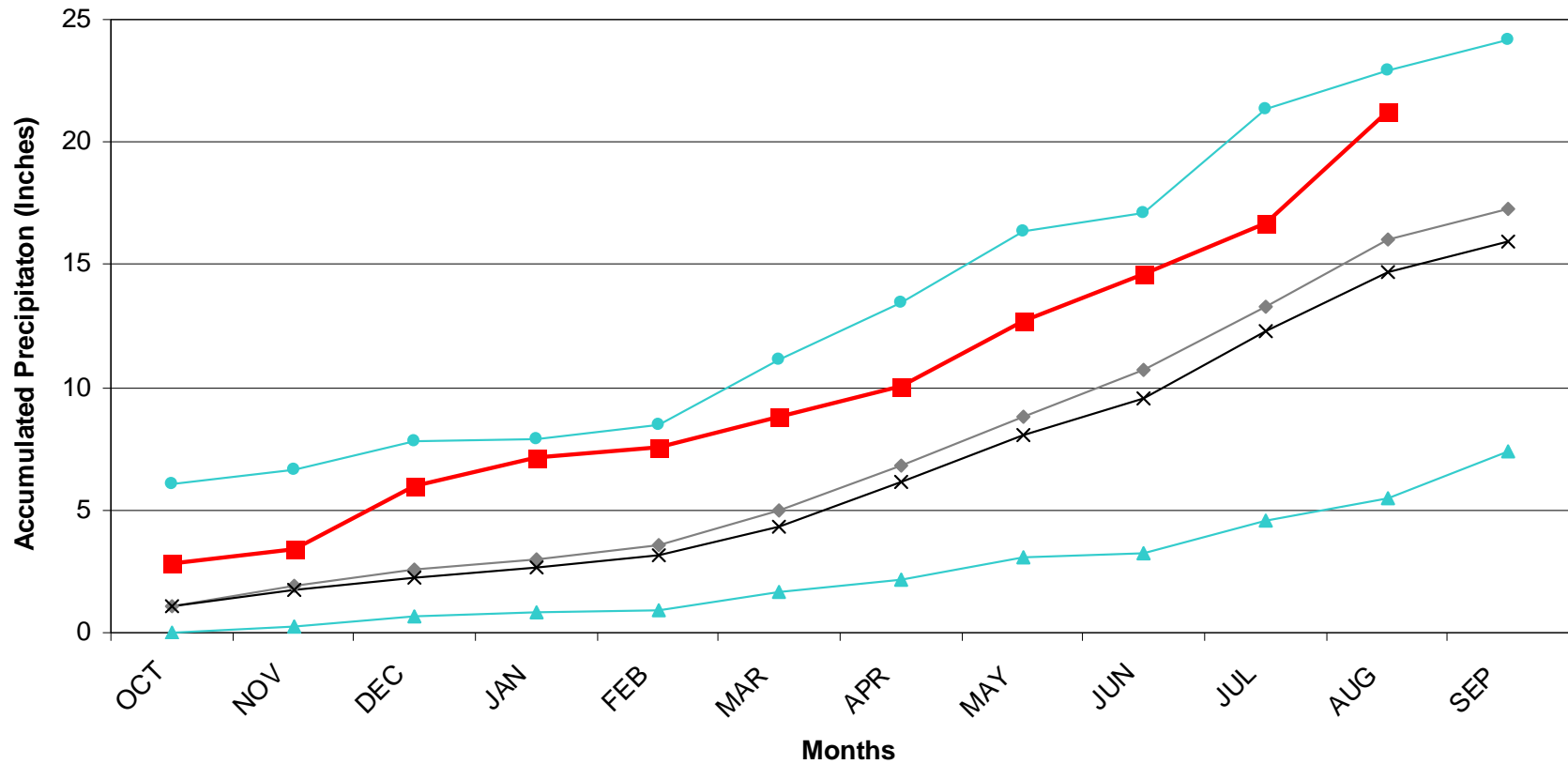
◆ 30 Year Averages-1971-2000    ✕ Period of Record Average - 1890 - 2002    ■ 2007 Water Year    \* Max Precip    ▲ Min F



# Division 8 – Cheesman

## Cheesman 2007 Water Year

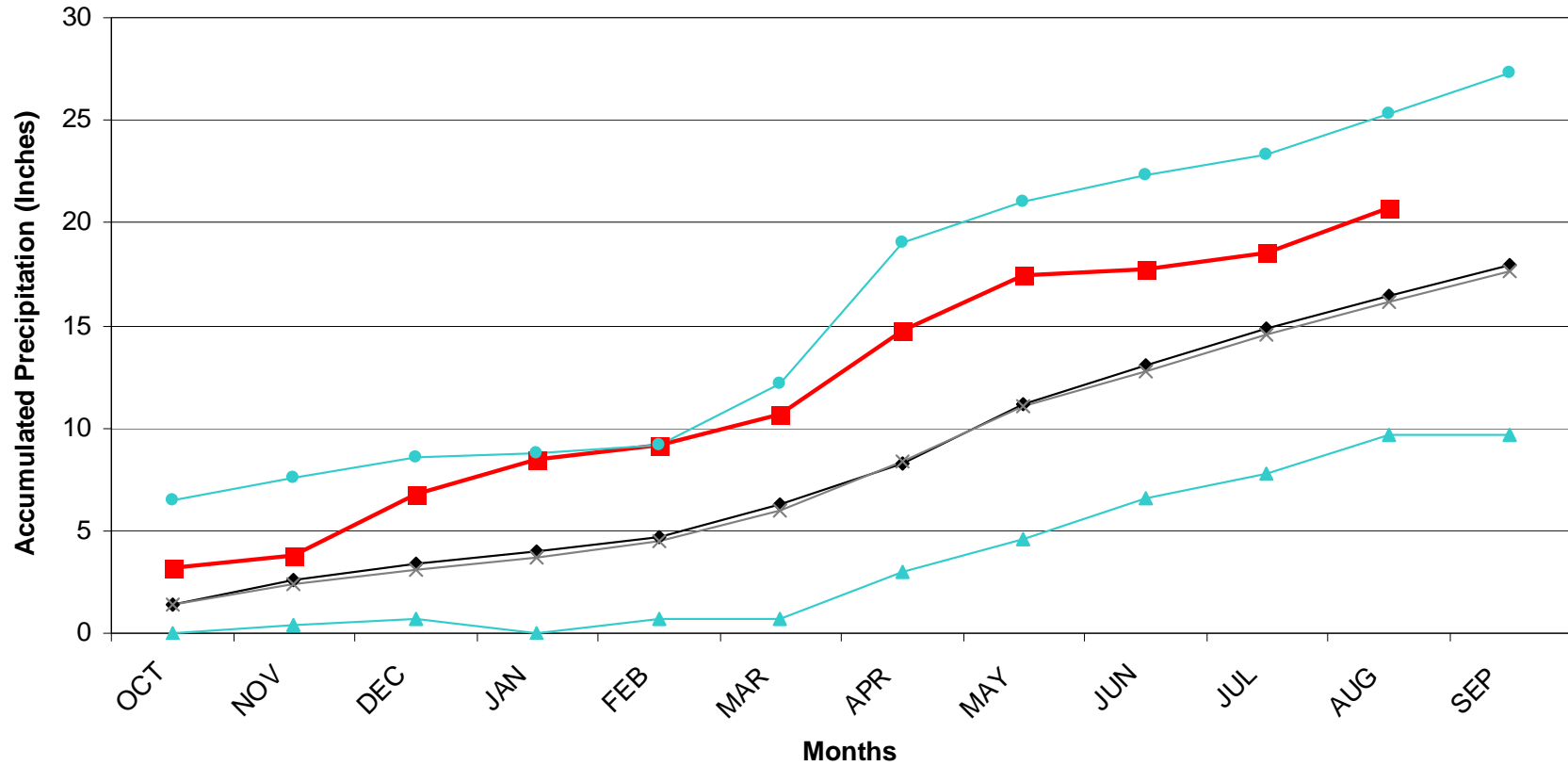
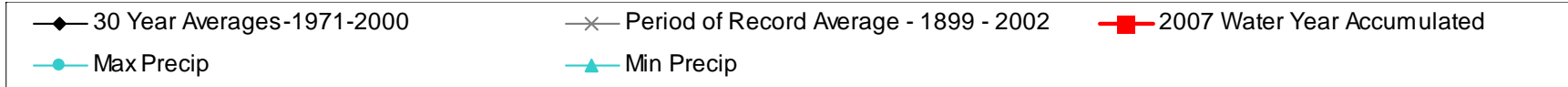
◆ 30 Year Averages-1971-2000    ✕ Period of Record Average - 1904 - 2002    ■ 2007 Water Year    ● Max Precip    ▲ Min



# Division 8 – Kassler

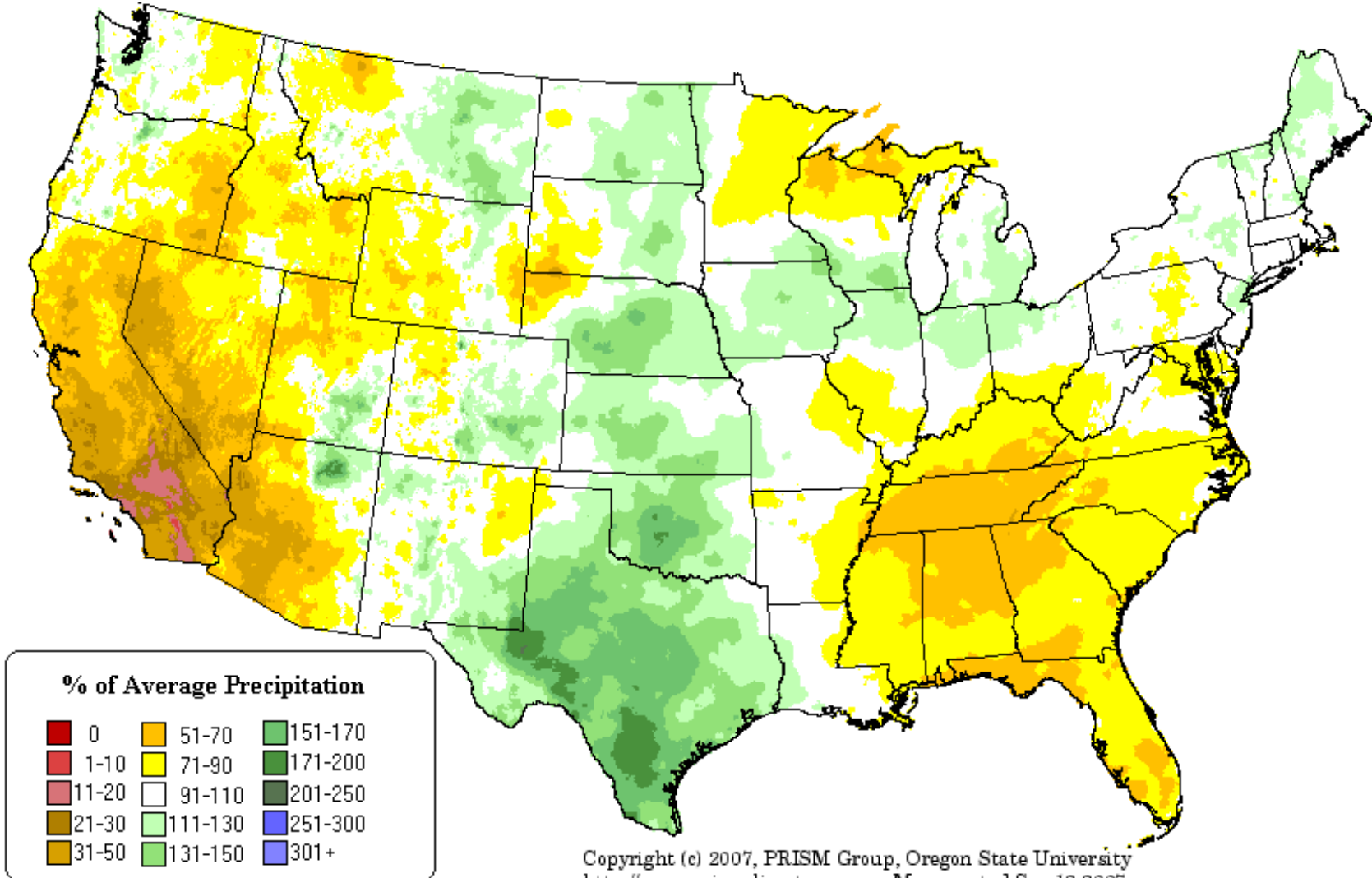
## Kassler

### 2007 Water Year

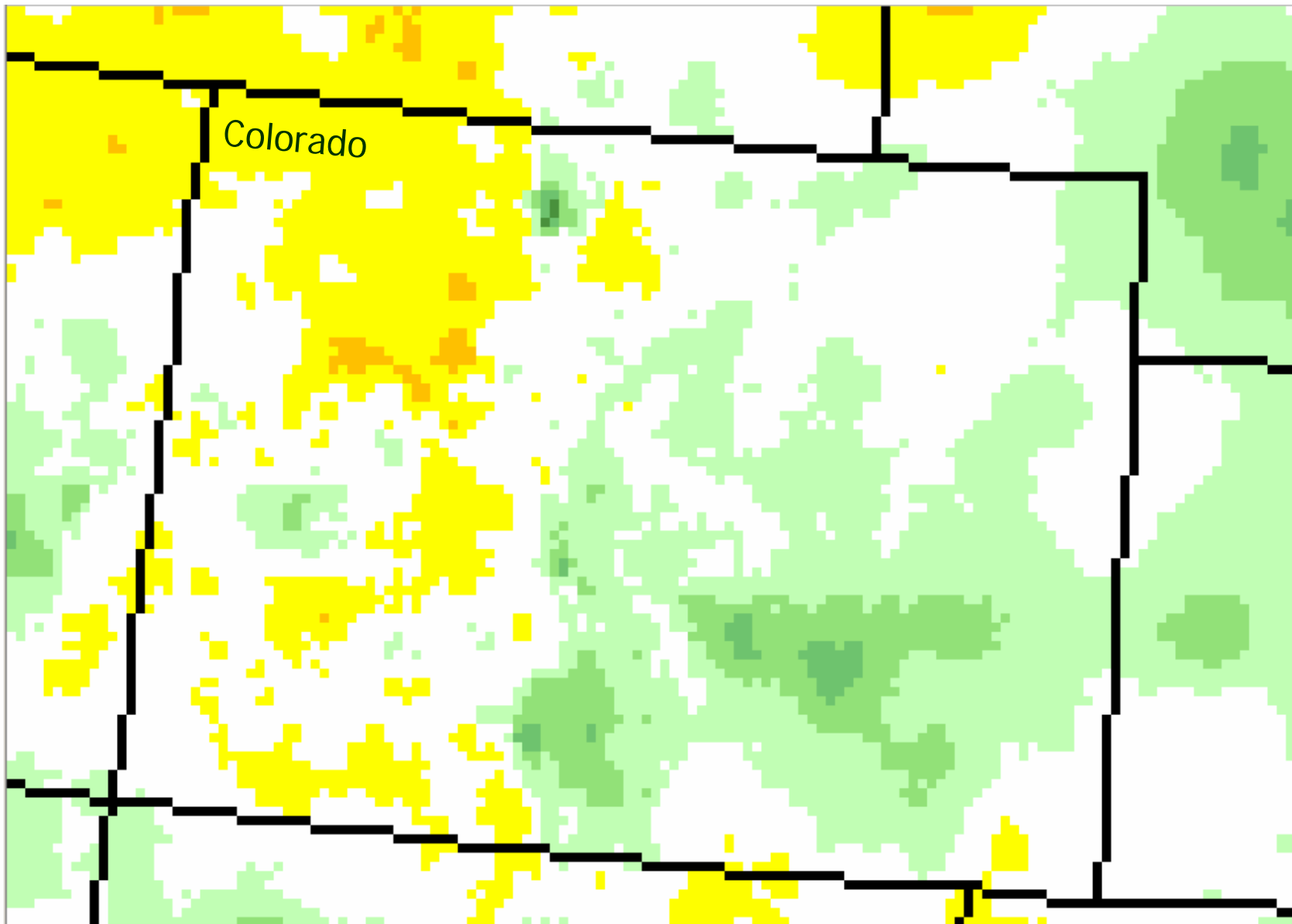


# Water Year 2007 (Oct-Aug) Prism

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



# Water Year 2007 (Oct-Aug) Prism



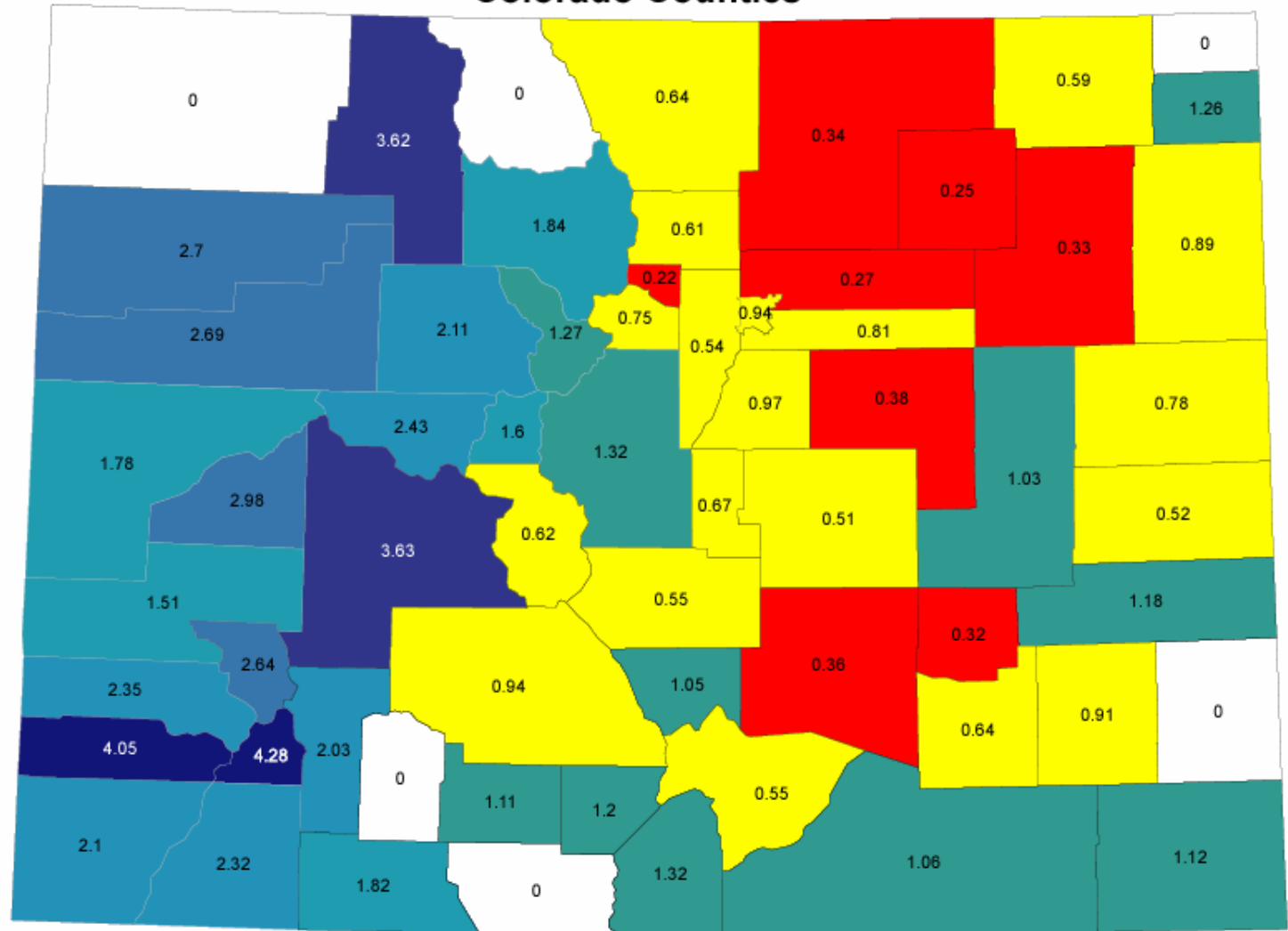
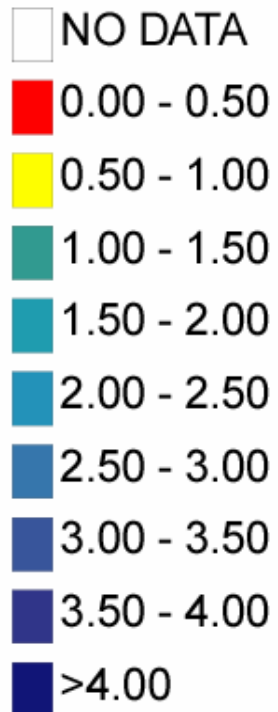




# CoCoRaHS, Statewide precipitation for Sep 1-24, 2007

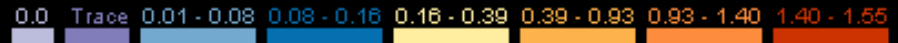
Average CoCoRaHS Precipitation for Sept 1-24, 2007

Colorado Counties

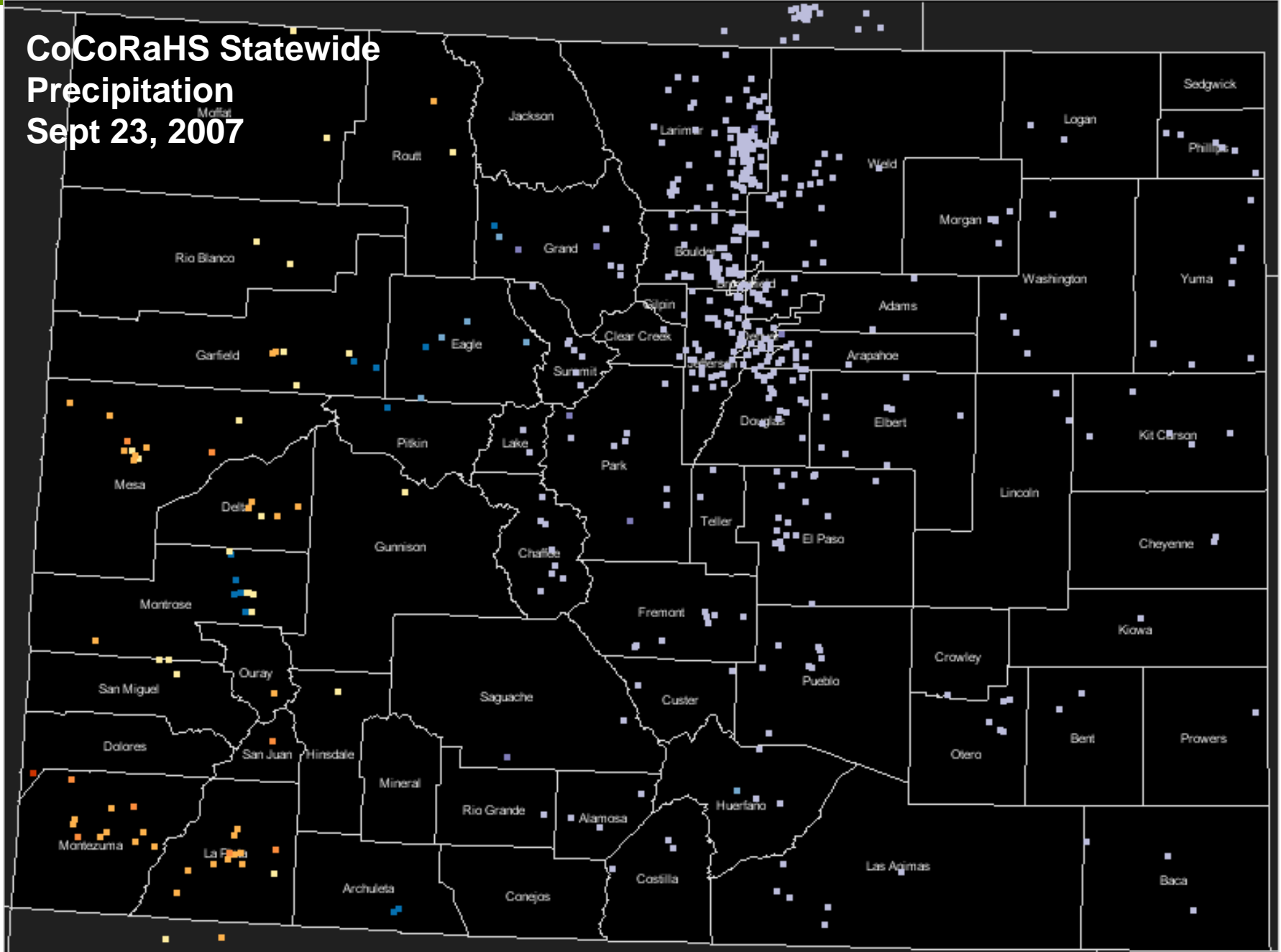


Daily Precipitation (inches x.xx), for the 24 hour period ending ~7:00 am

Colorado 9/23/2007



# CoCoRaHS Statewide Precipitation Sept 23, 2007

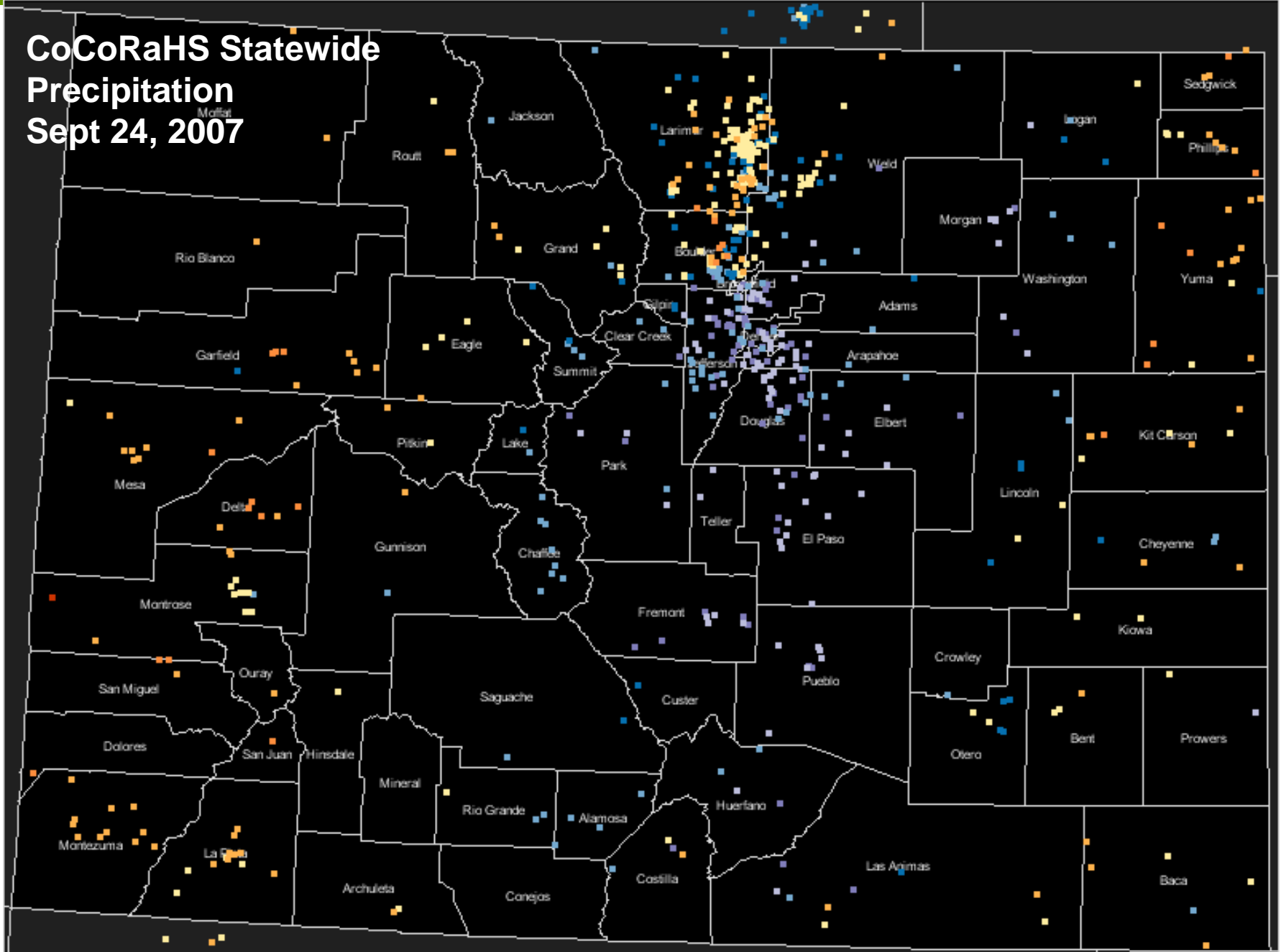


Daily Precipitation (inches x.xx), for the 24 hour period ending ~7:00 am

Colorado 9/24/2007

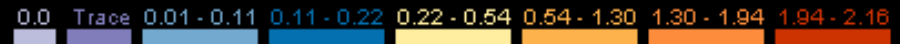


# CoCoRaHS Statewide Precipitation Sept 24, 2007

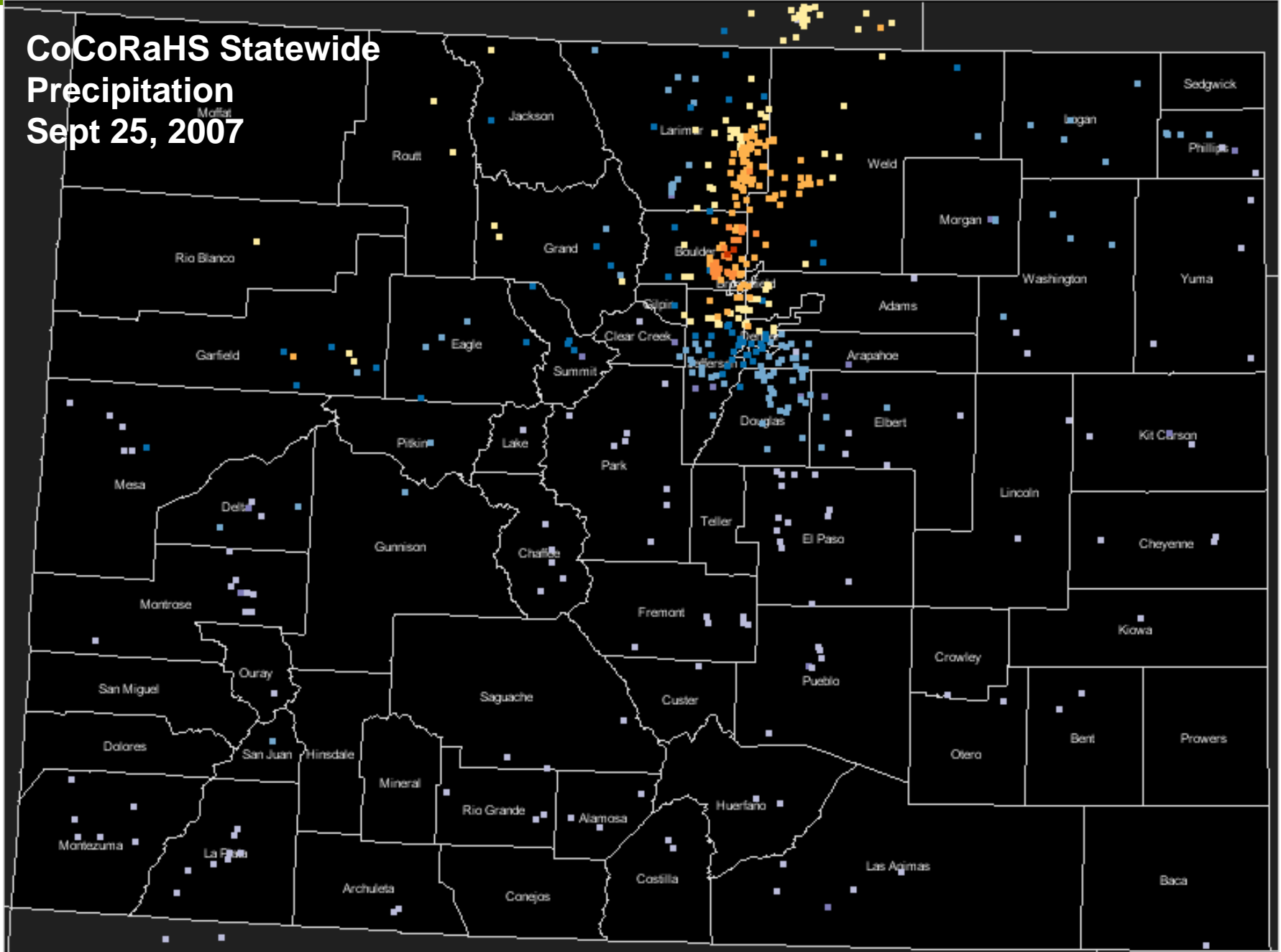


Daily Precipitation (inches x.xx), for the 24 hour period ending ~7:00 am

Colorado 9/25/2007



# CoCoRaHS Statewide Precipitation Sept 25, 2007



# 3 Month SPI

Colorado

8/2007 3 mon. SPI



100% < 2.0	2% < -1.0
96% < 1.0	0% < -2.0
37% < 0.0	0% < -3.0

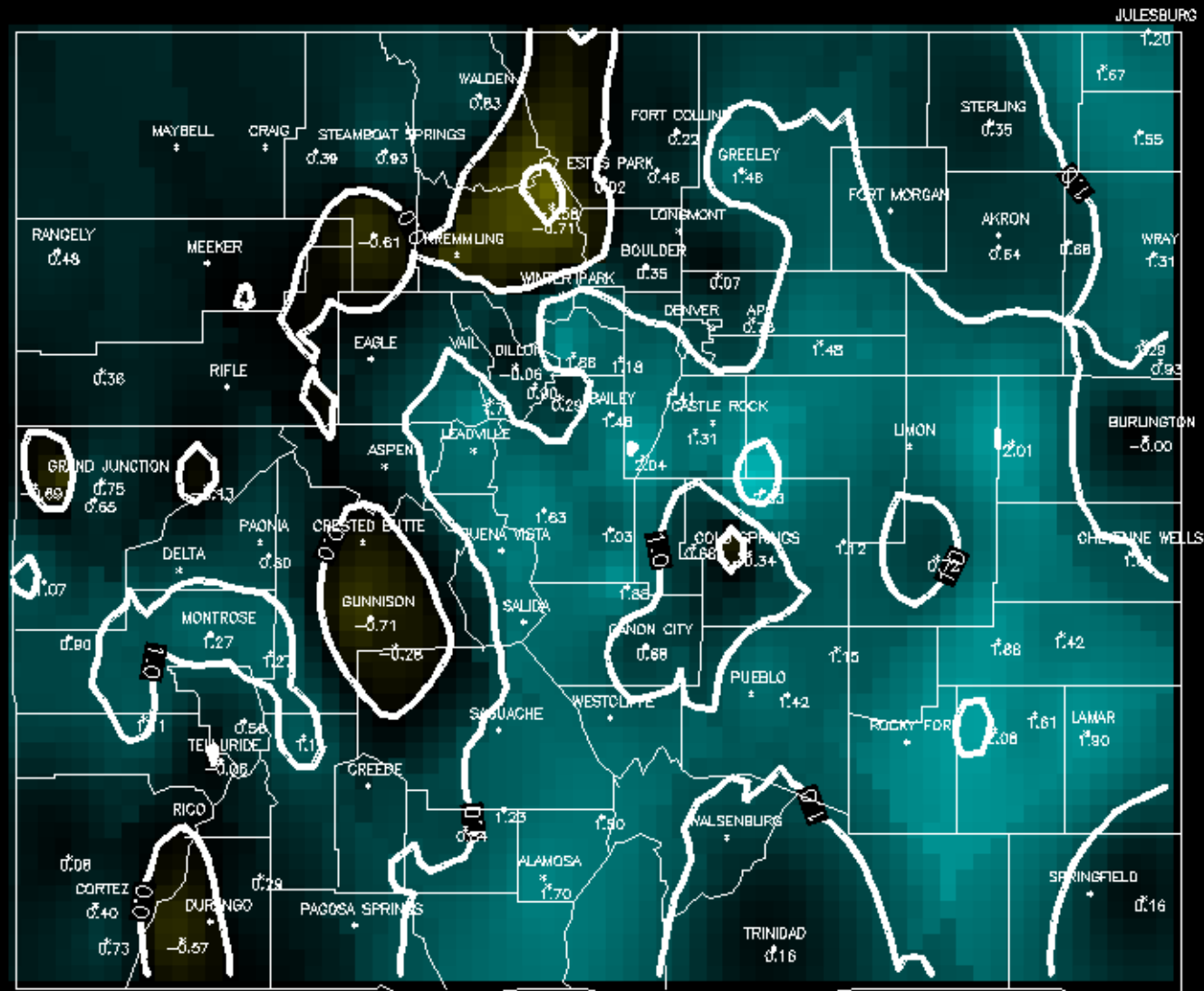
Produced by:  
Colorado Climate Center  
Fort Collins, CO



# 12 Month SPI

Colorado

8/2007 12 mon. SPI



100% < 2.0  
60% < 1.0  
7% < 0.0

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

Produced by:  
Colorado Climate Center  
Fort Collins, CO



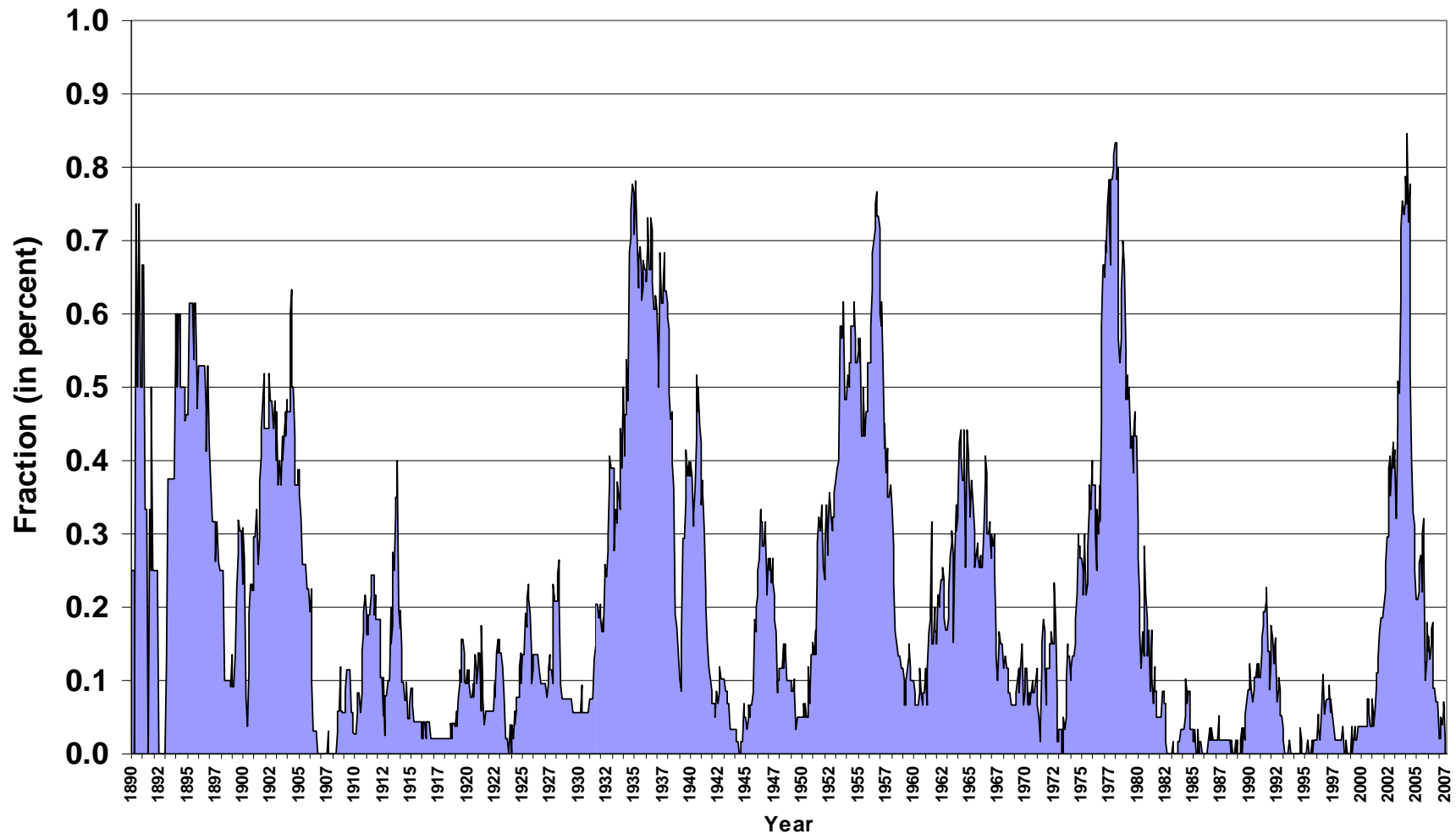




# Standardized Precipitation Index

## Fraction of Colorado in Drought Based on 48 month SPI

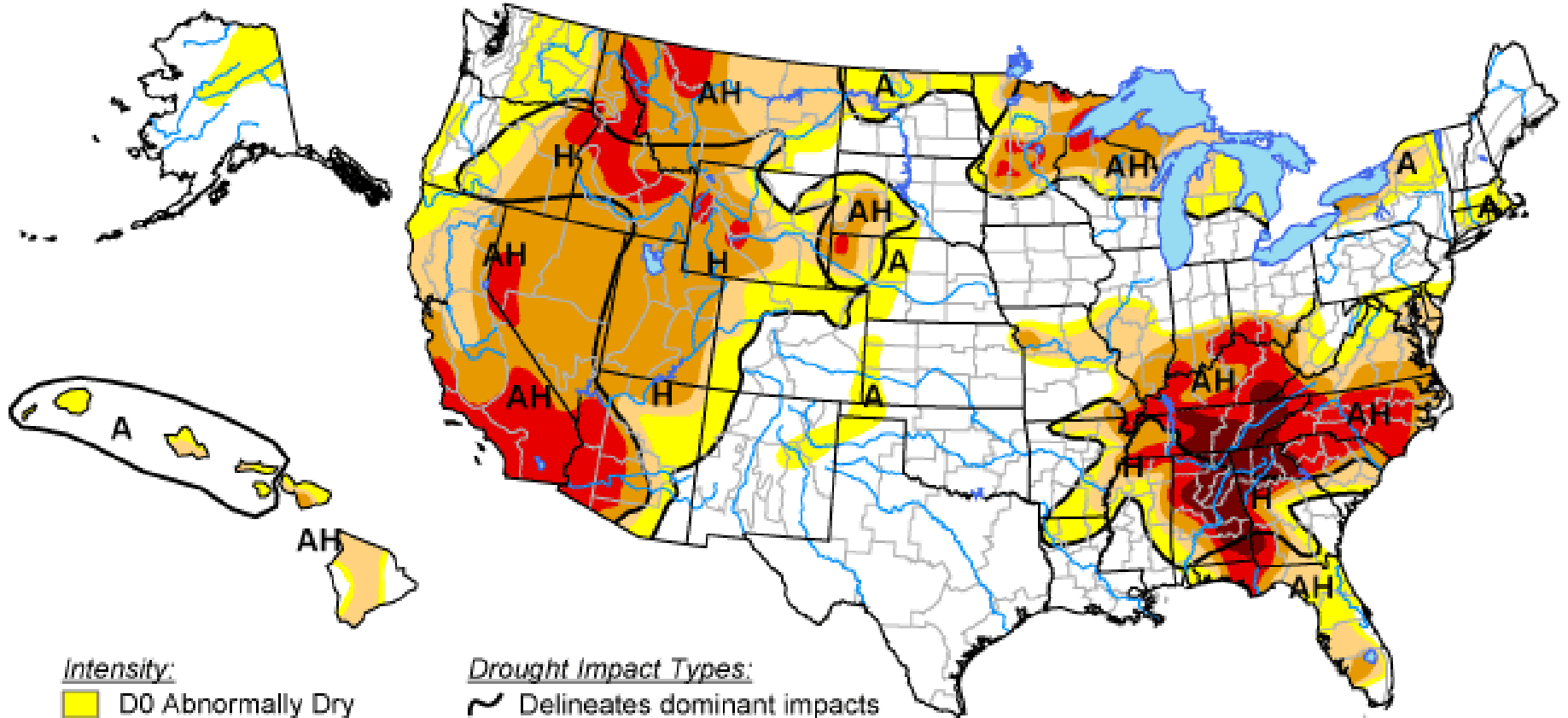
(1890 - August 2007)







# U.S. Drought Monitor

September 18, 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 20, 2007

Author: David Miskus, JAWF/CPC/NOAA



# Colorado Climate Center

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

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

