



# *Climate Update*



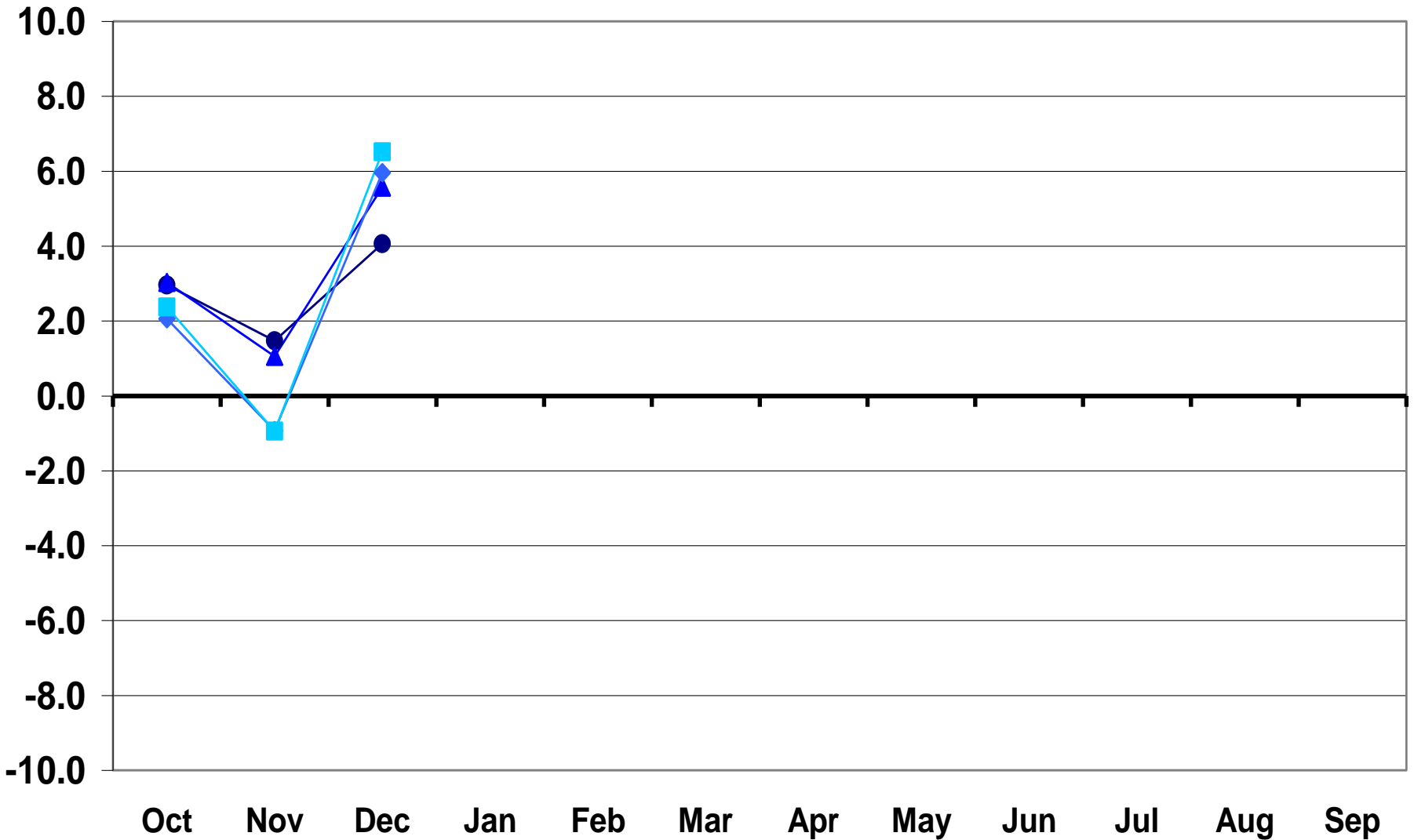
**Nolan Doesken**  
**Colorado Climate Center**

**Atmospheric Science Department**  
**Colorado State University**

Presented to  
Water Availability Task Force  
January 18<sup>th</sup>, 2011  
Denver, CO

Prepared by Wendy Ryan

# Water Year 2011 Temperature Departures



● Eastern Plains

▲ Foothills

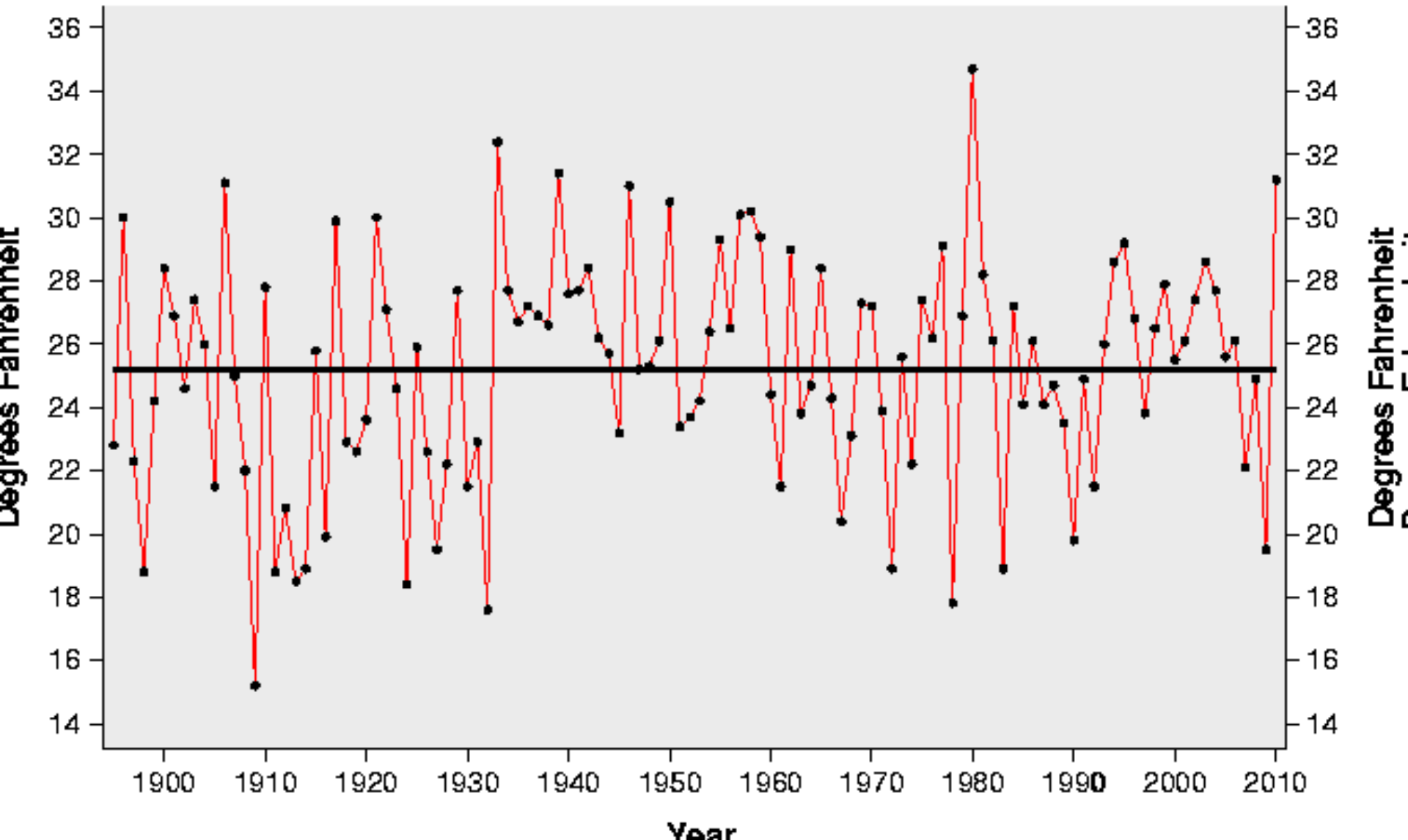
◆ Mountains

■ Western Valleys

# December Average Temperature History for Colorado (NCDC)

— Actual Temperature  
— Average Temperature

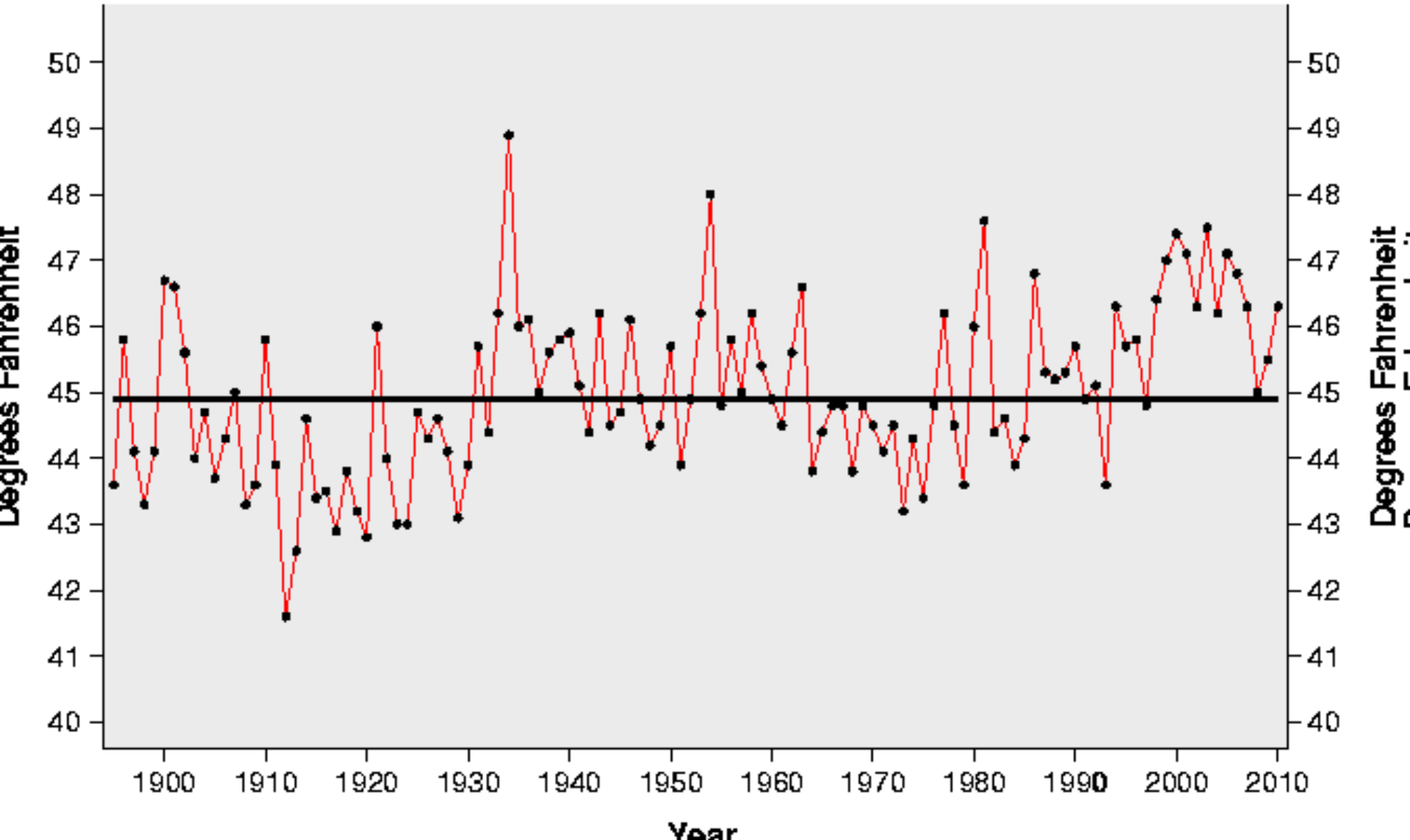
31.2 Degrees ranks 113<sup>th</sup> for the period (1895-2010)



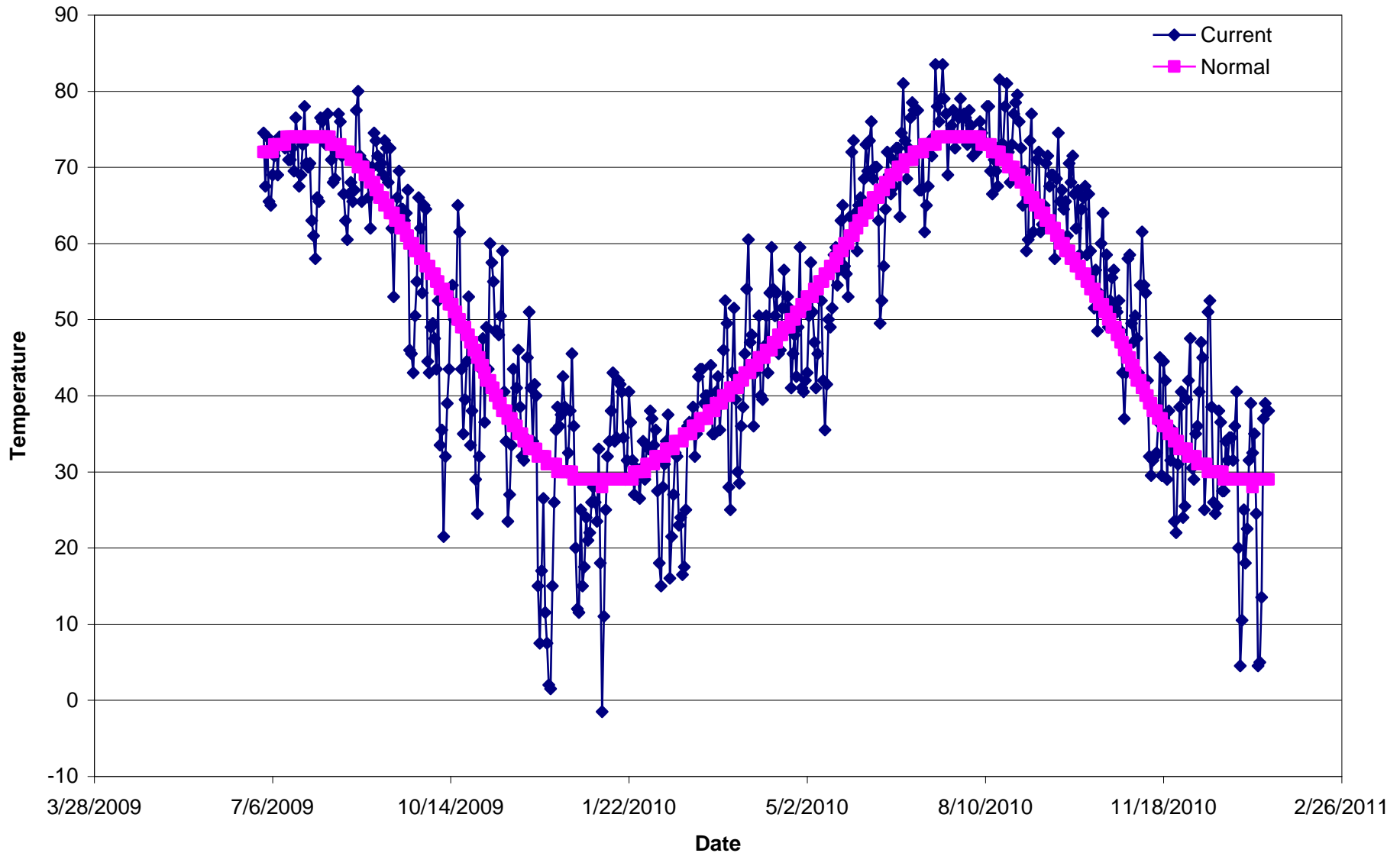
# Average Annual Temperature History for Colorado (NCDC)

— Actual Temperature  
— Average Temperature

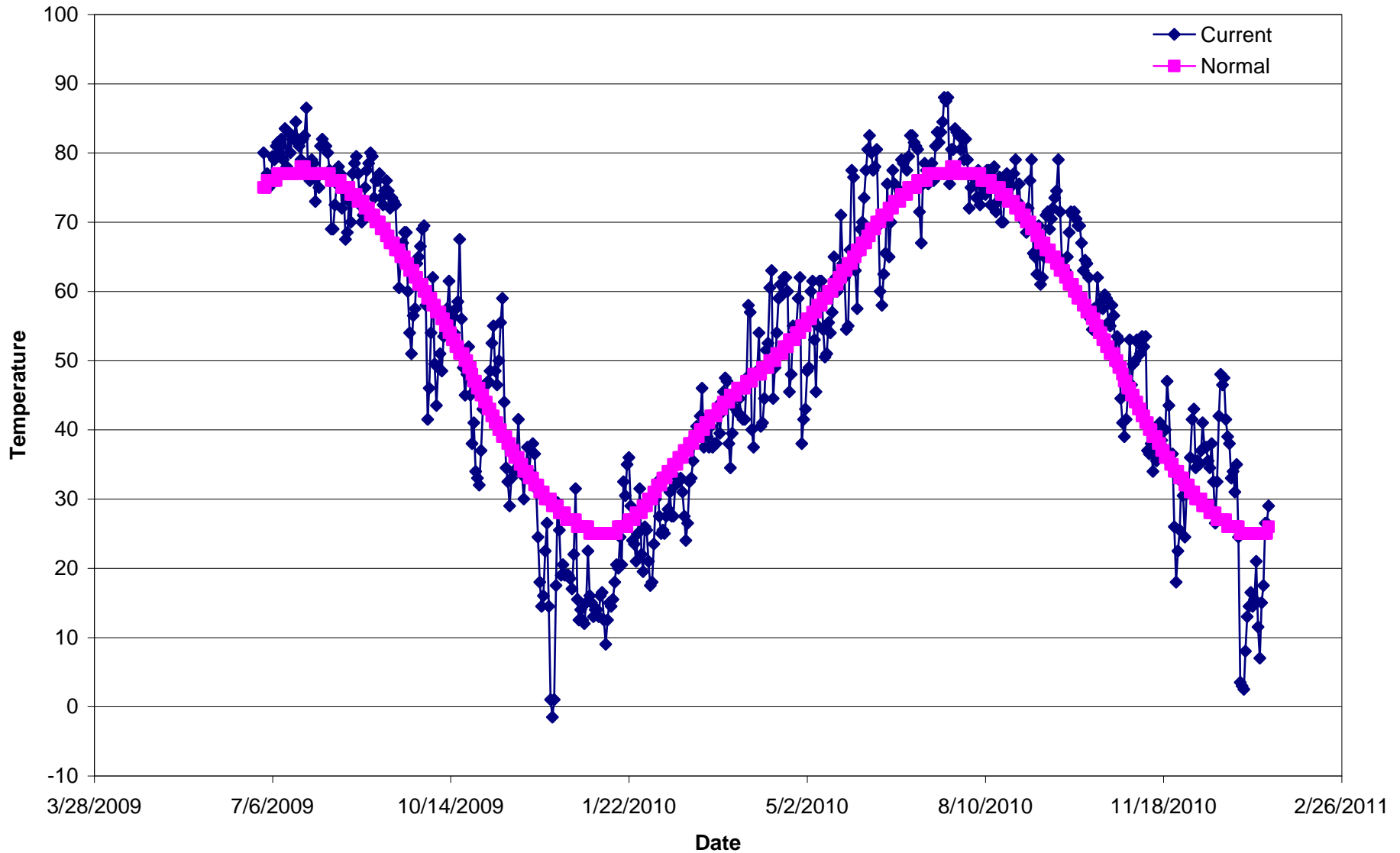
46.3 Degrees ranks 102<sup>nd</sup> for the period (1895-2010)



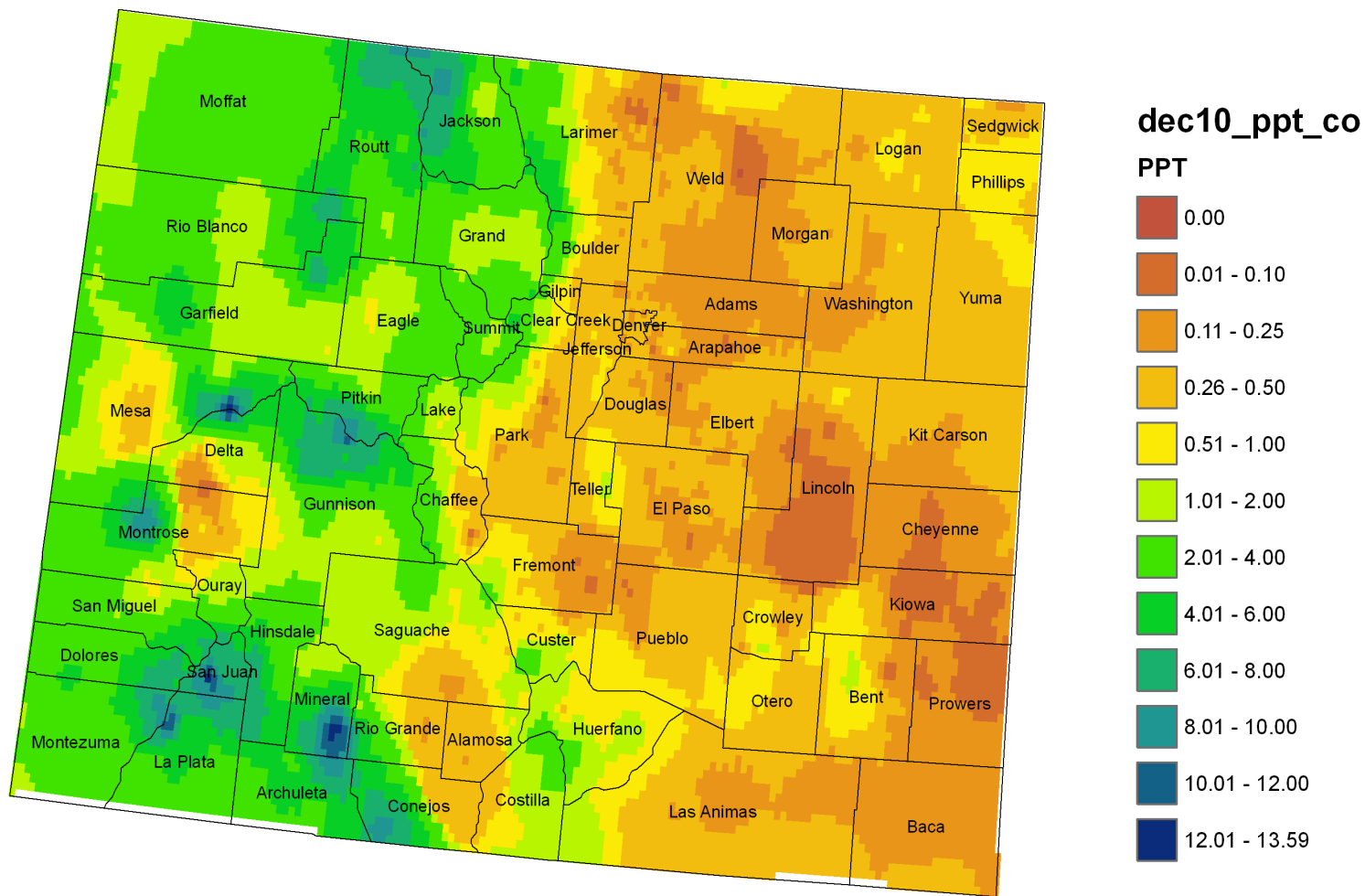
# Denver Daily Average and Normal Temperature (July 1, 2009 – January 16, 2011)



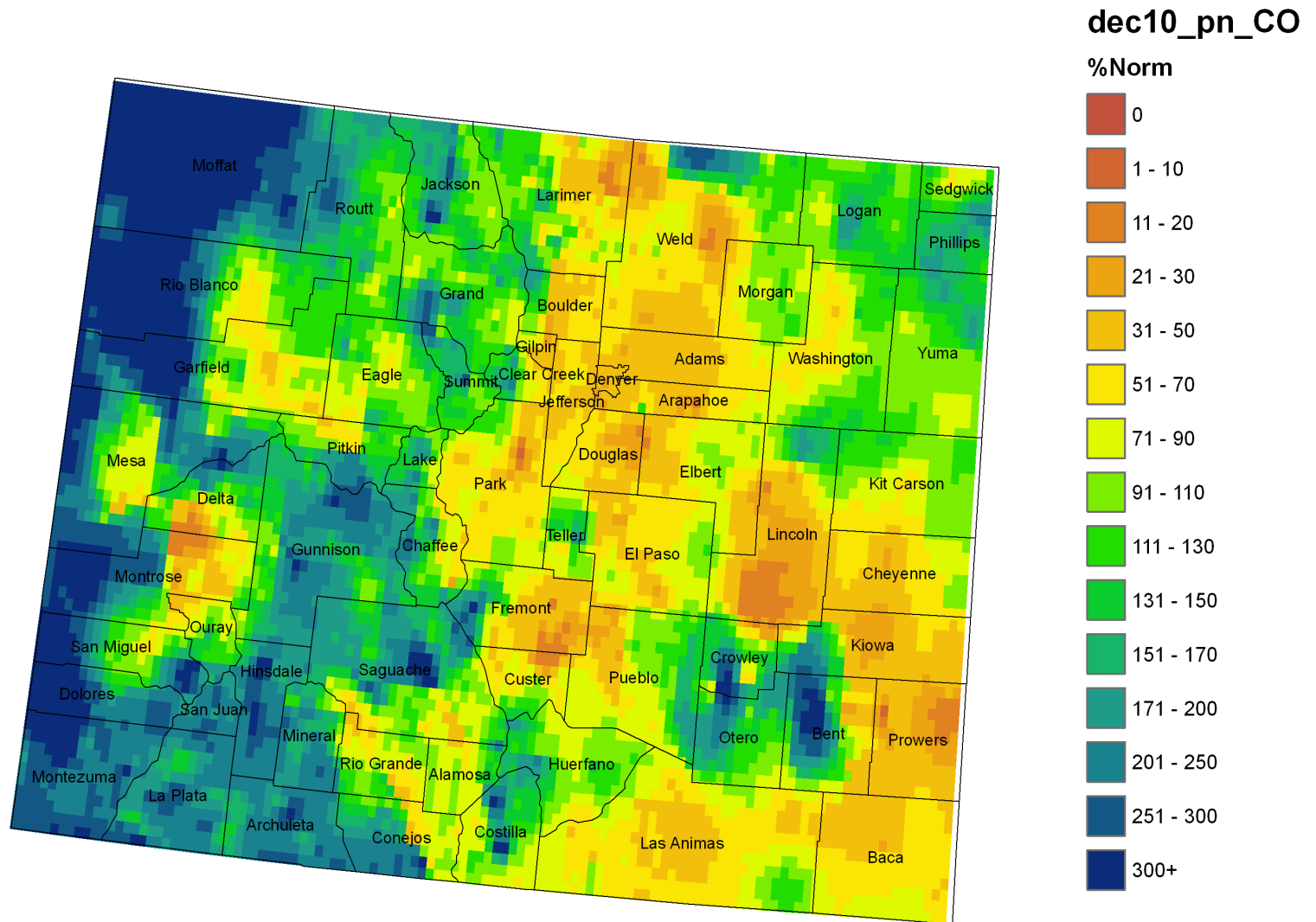
# Grand Junction Daily Average and Normal Temperature (July 1, 2009 – January 16, 2011)



# Colorado Precipitation December 2010

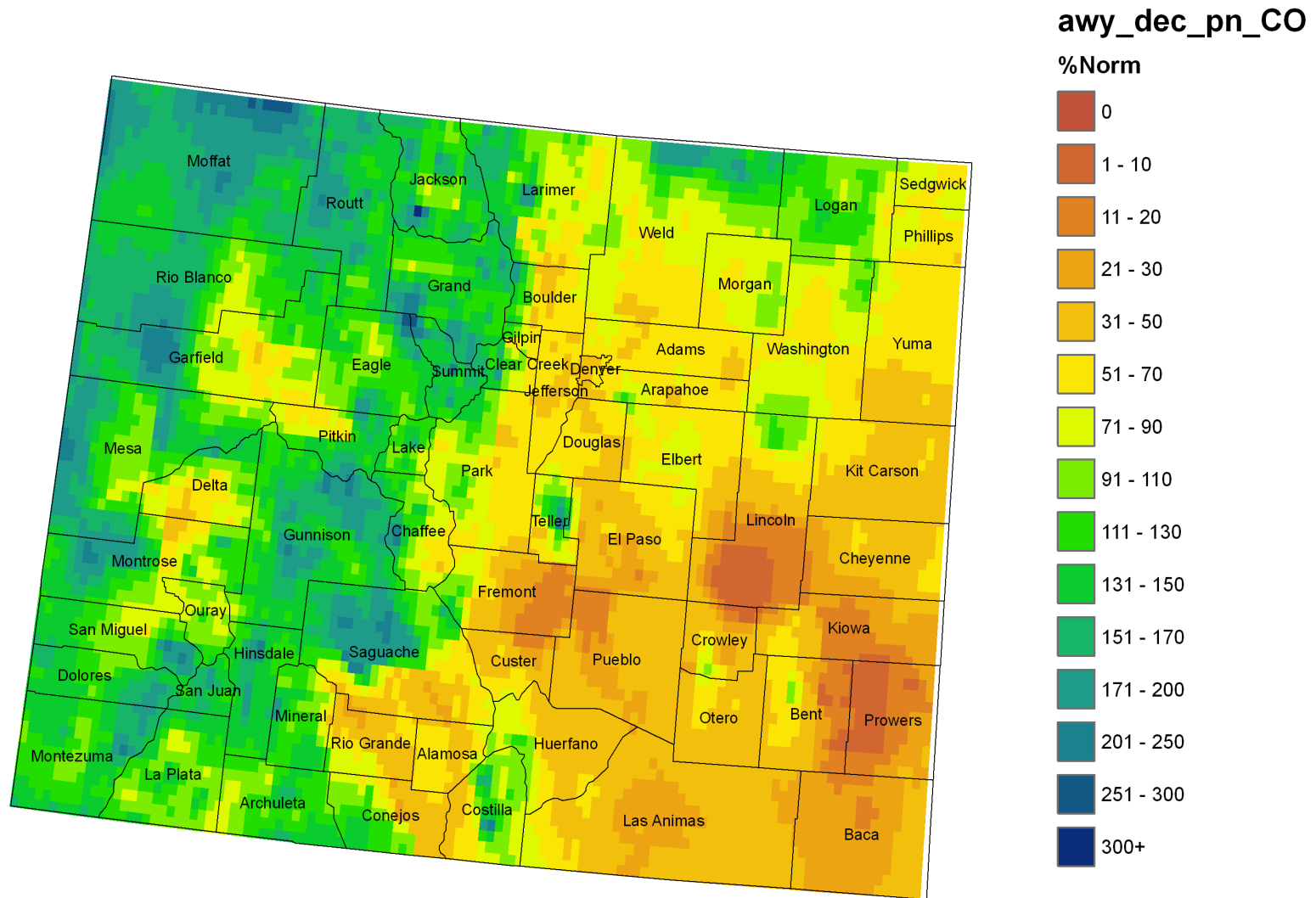


# Colorado Precipitation as Percentage of Normal December 2010

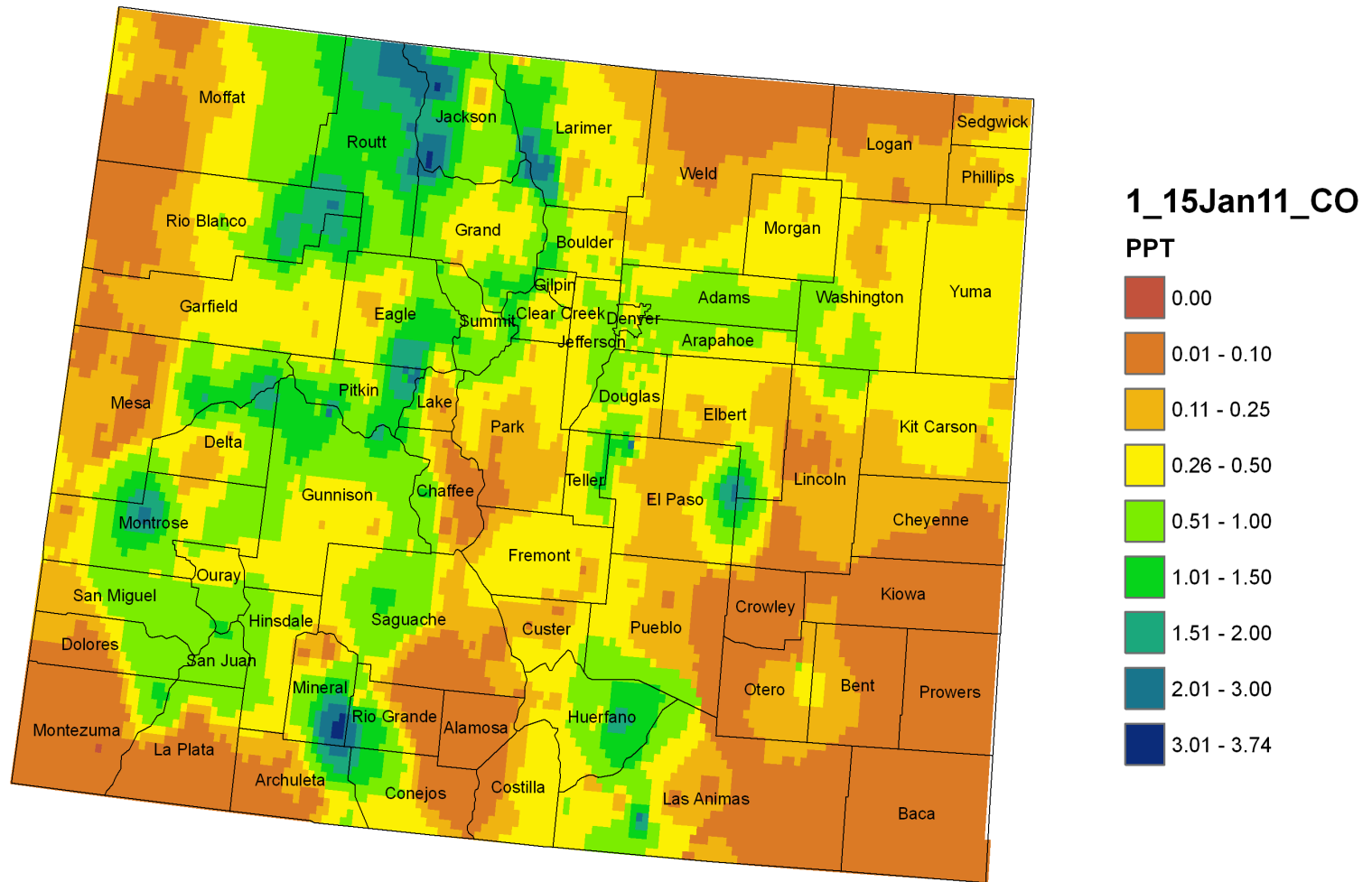




# Colorado Water Year Precipitation as Percentage of Normal (Oct 10 - Dec 10)



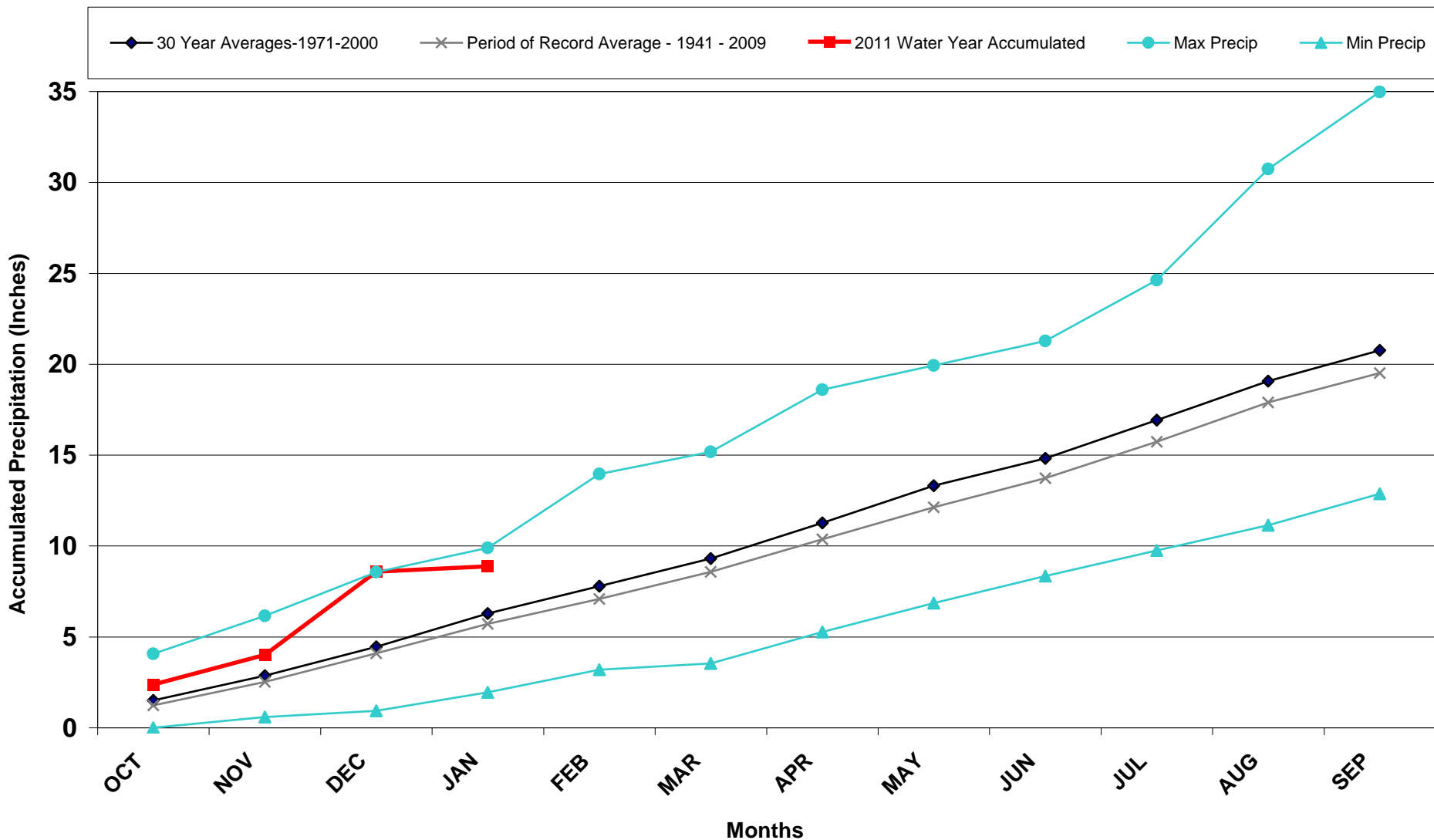
# Colorado Month to Date Precipitation 1-15 January 2011





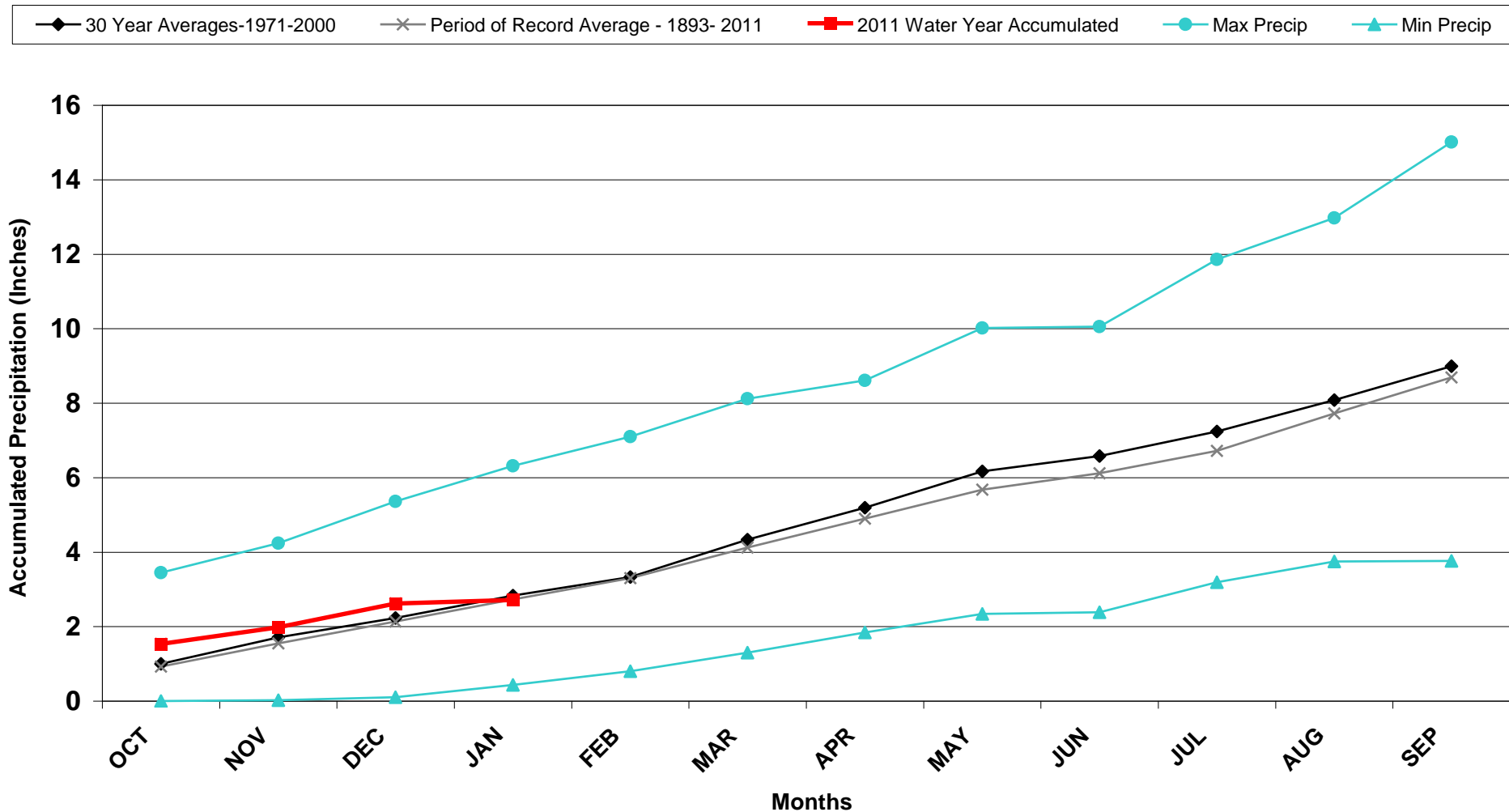
# Division 1 – Grand Lake 1NW

## Grand Lake 1 NW 2011 Water Year



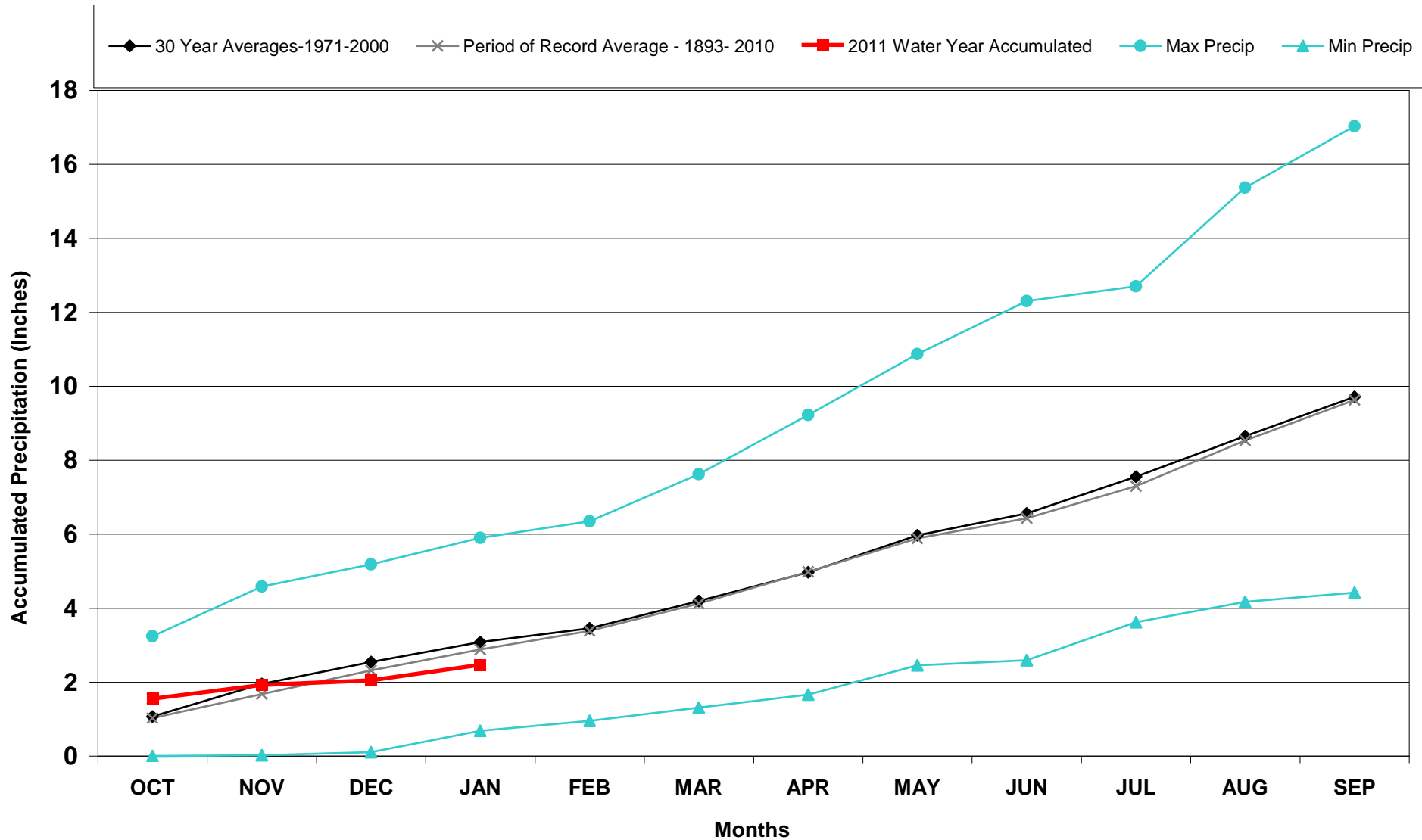
# Division 2 – Grand Junction

## Grand Junction WSFO 2011 Water Year



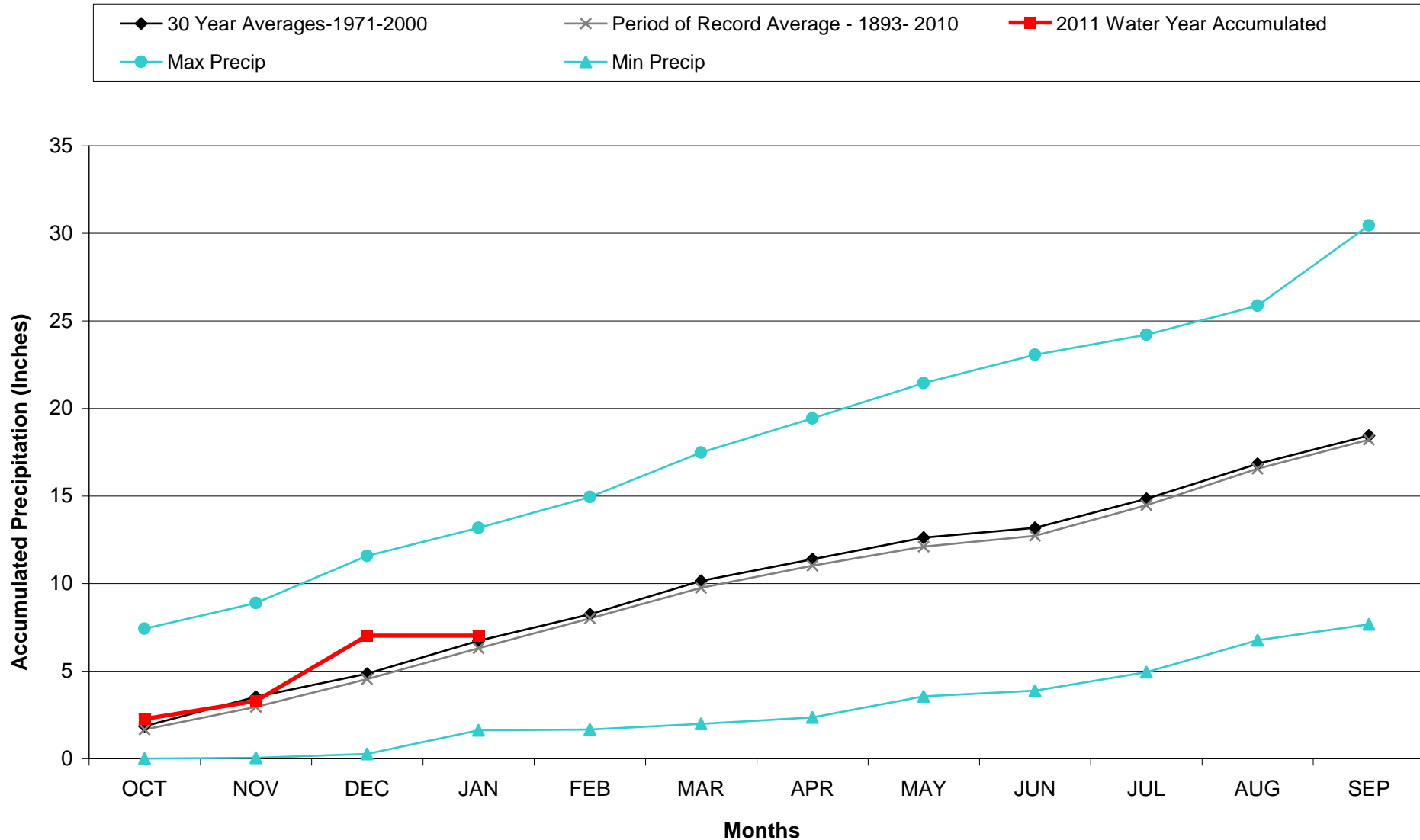
# Division 3 – Montrose

## Montrose #2 2011 Water Year



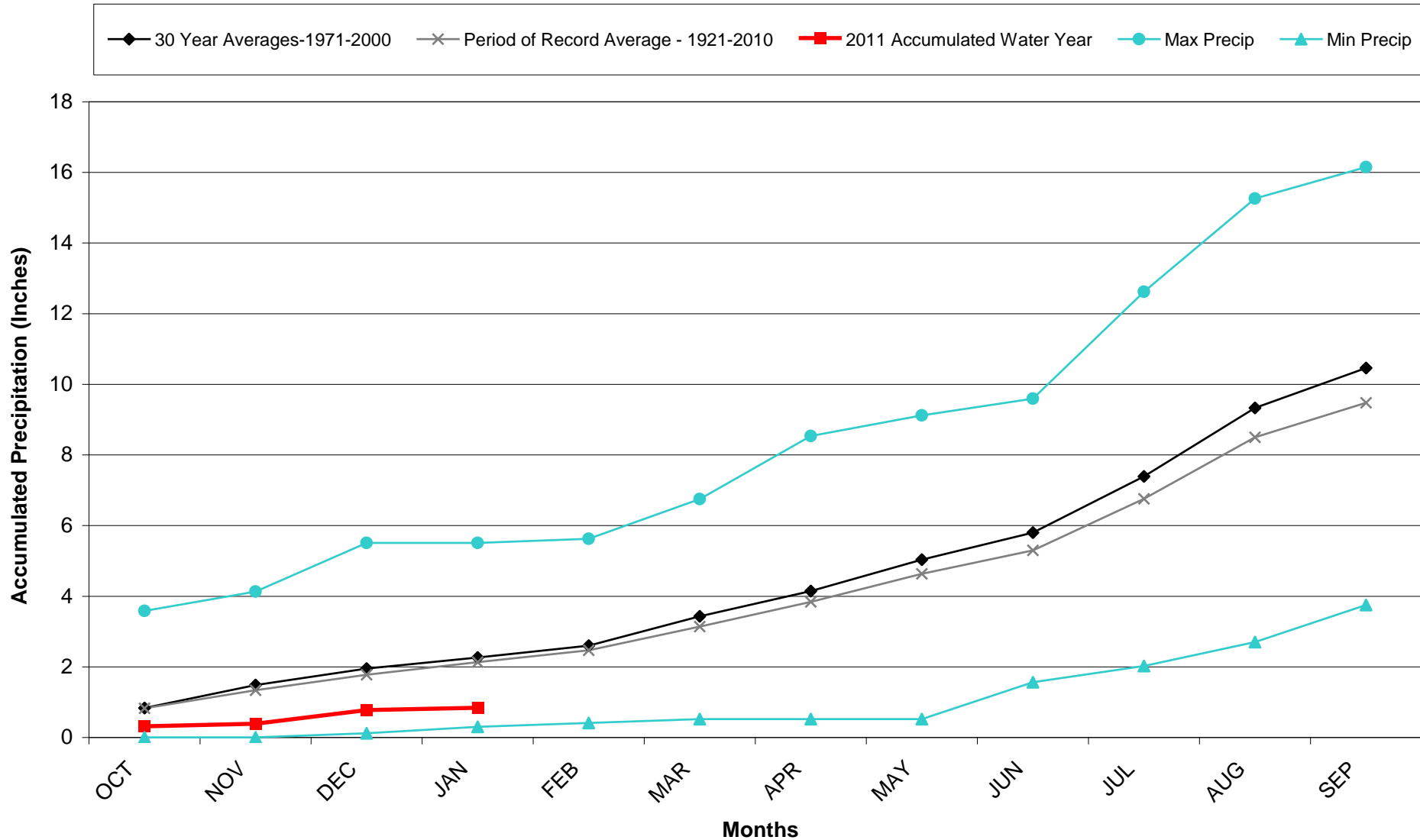
# Division 3 – Mesa Verde NP

## Mesa Verde NP 2011 Water Year



# Division 4 – Del Norte

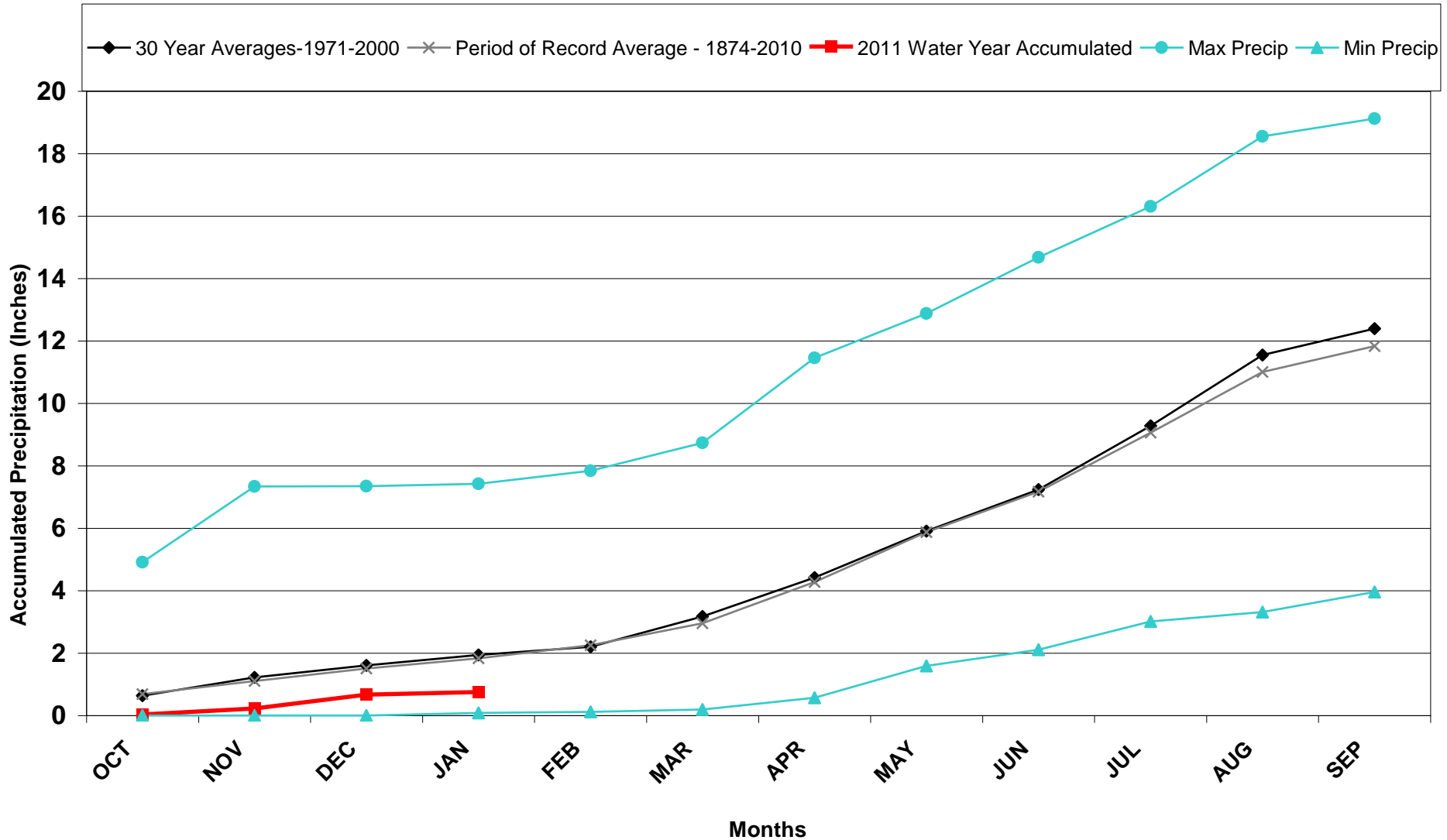
## Del Norte 2011 Water Year





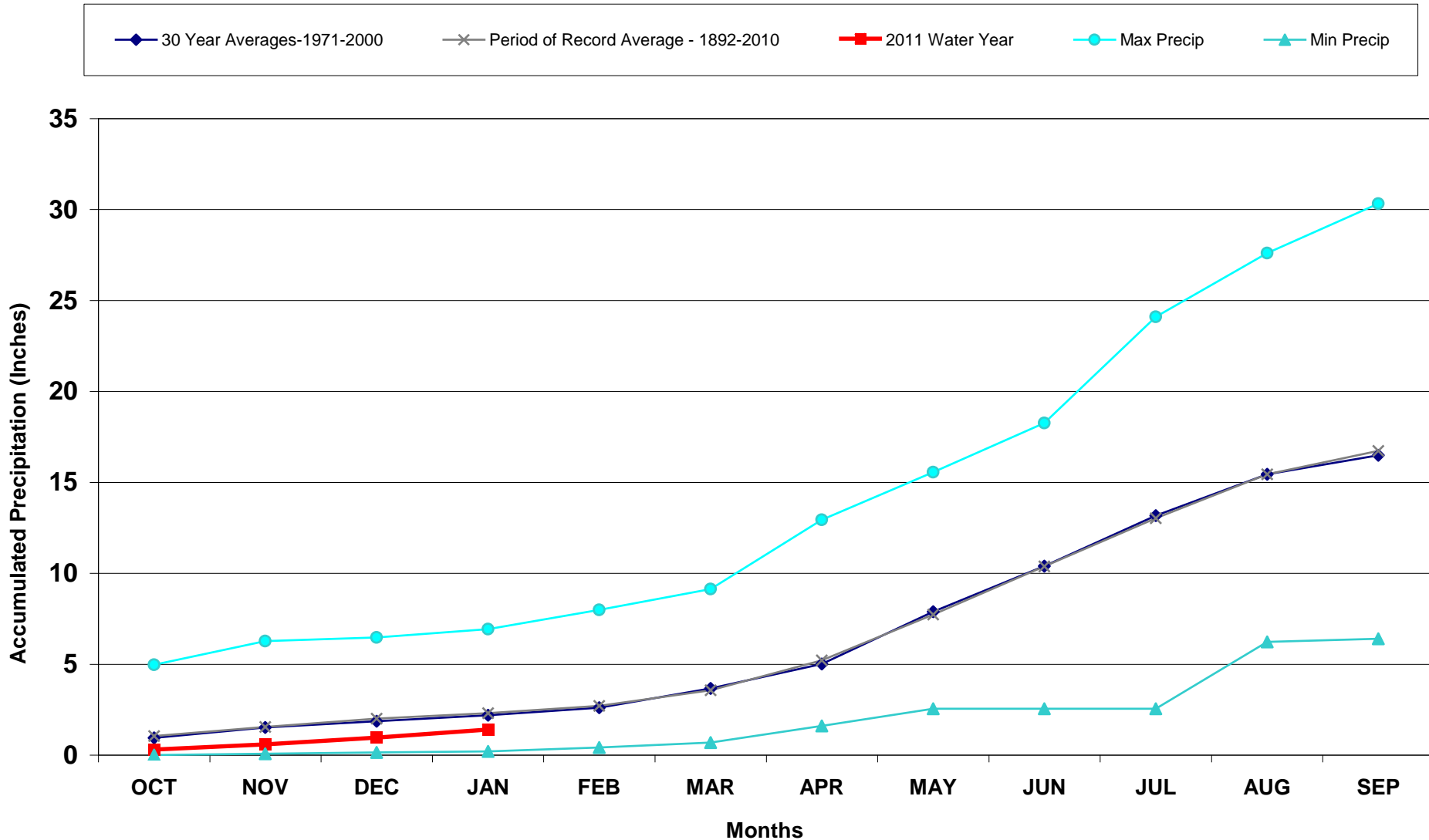
# Division 5 – Pueblo

## Pueblo WSO 2011 Water Year



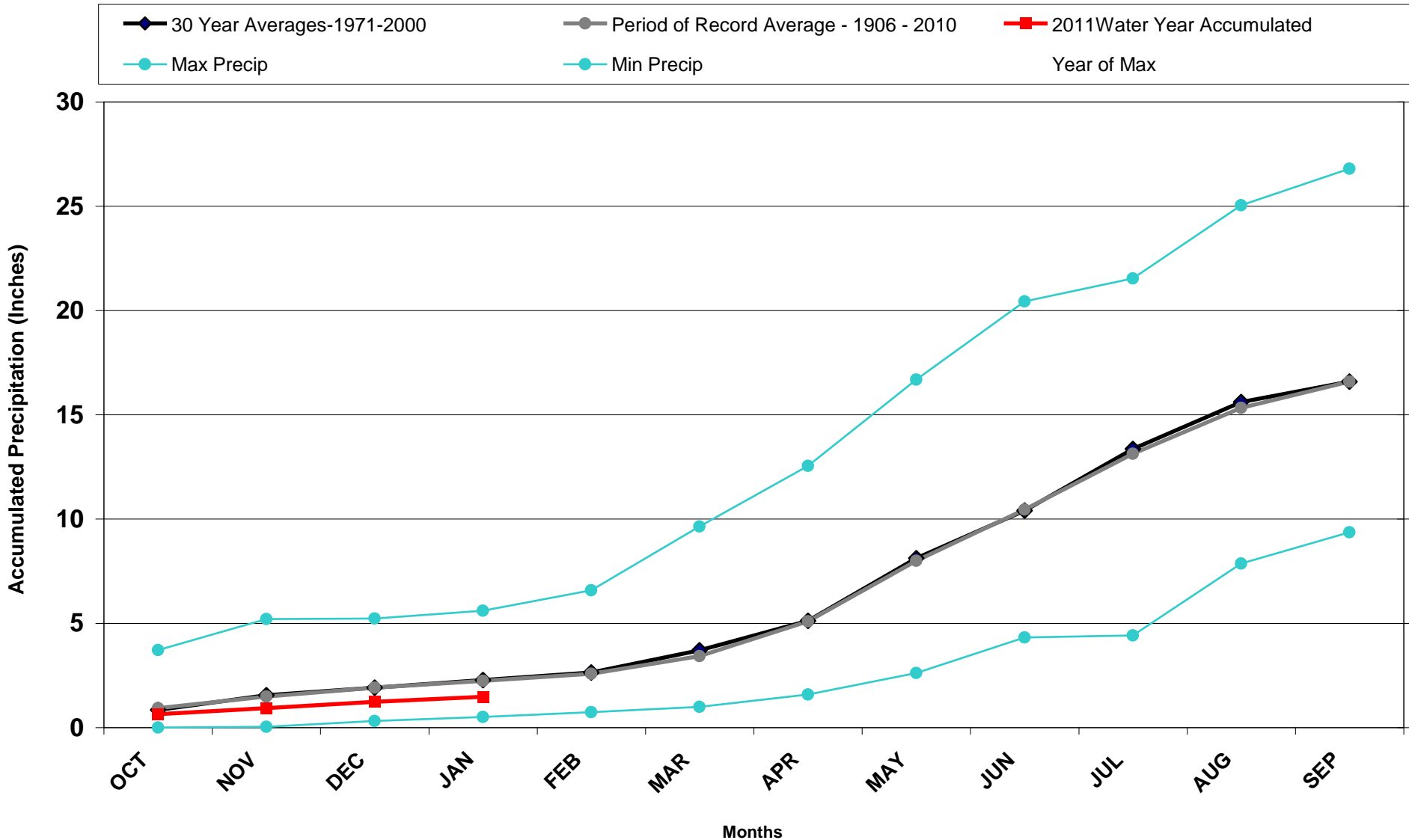
# Division 6 - Burlington

## Burlington 2011 Water Year



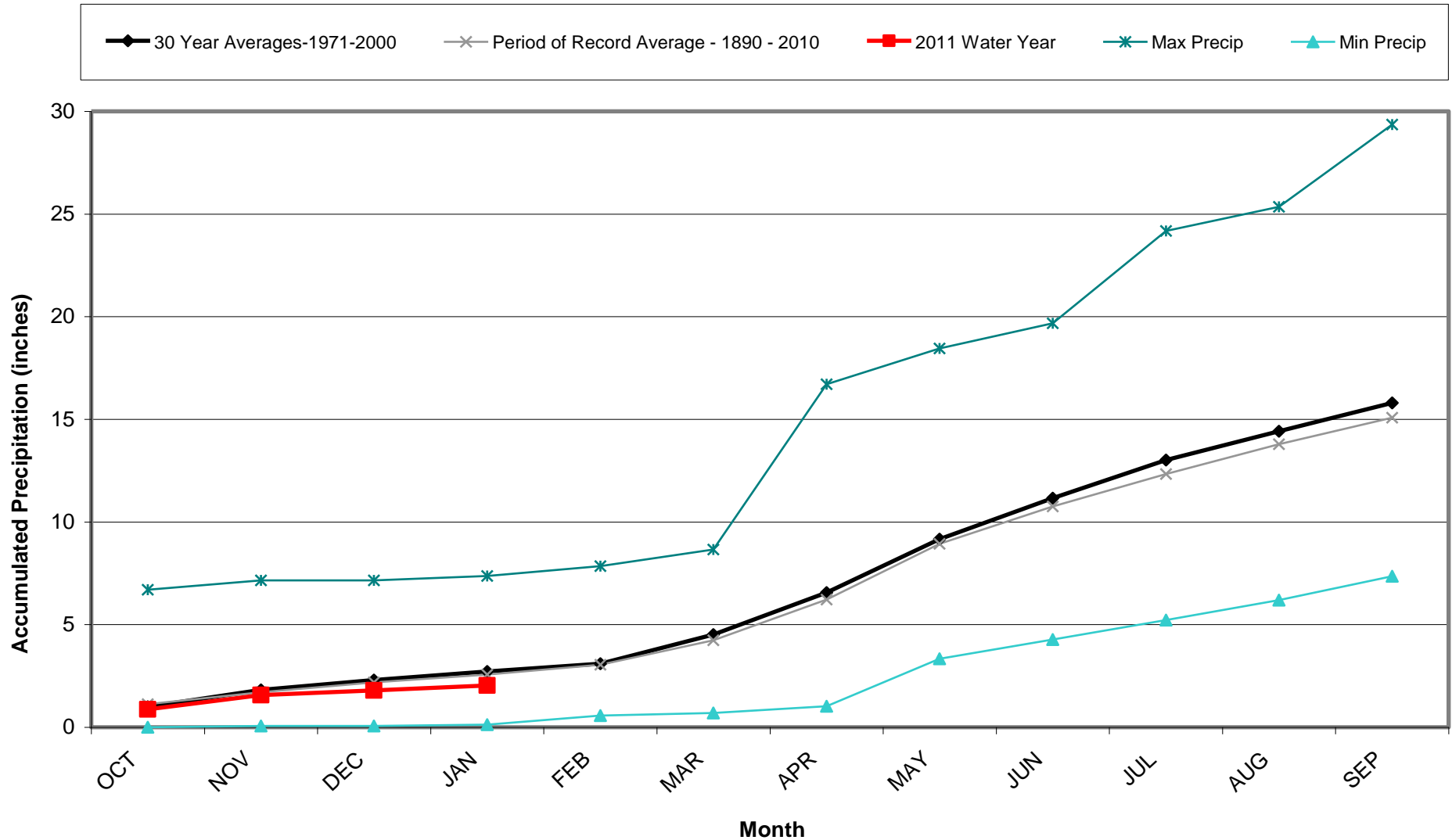
# Division 7 – Akron

## Akron 4E 2011 Water Year



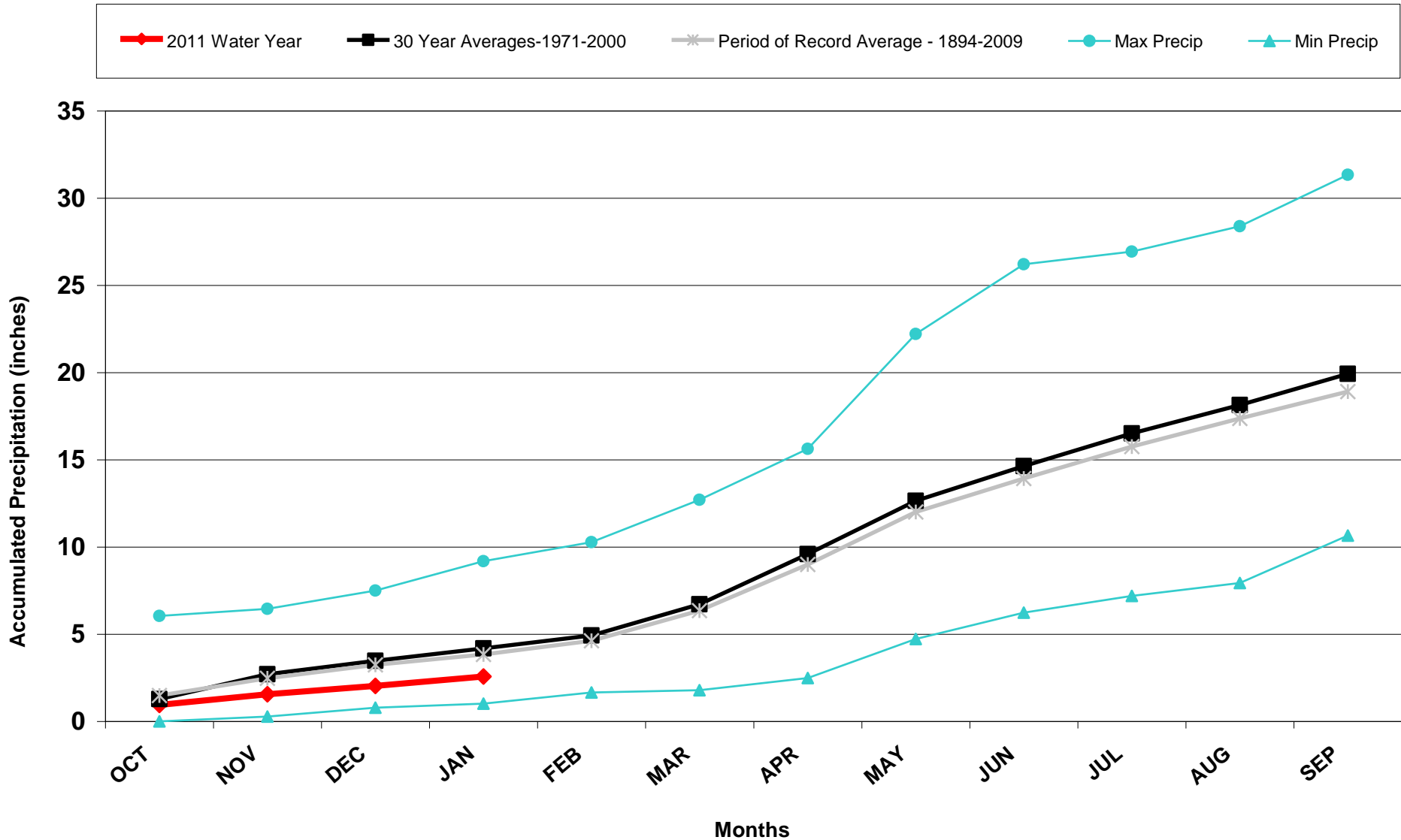
# Division 8 – Fort Collins

## Fort Collins 2011 Water Year



# Division 8 - Boulder

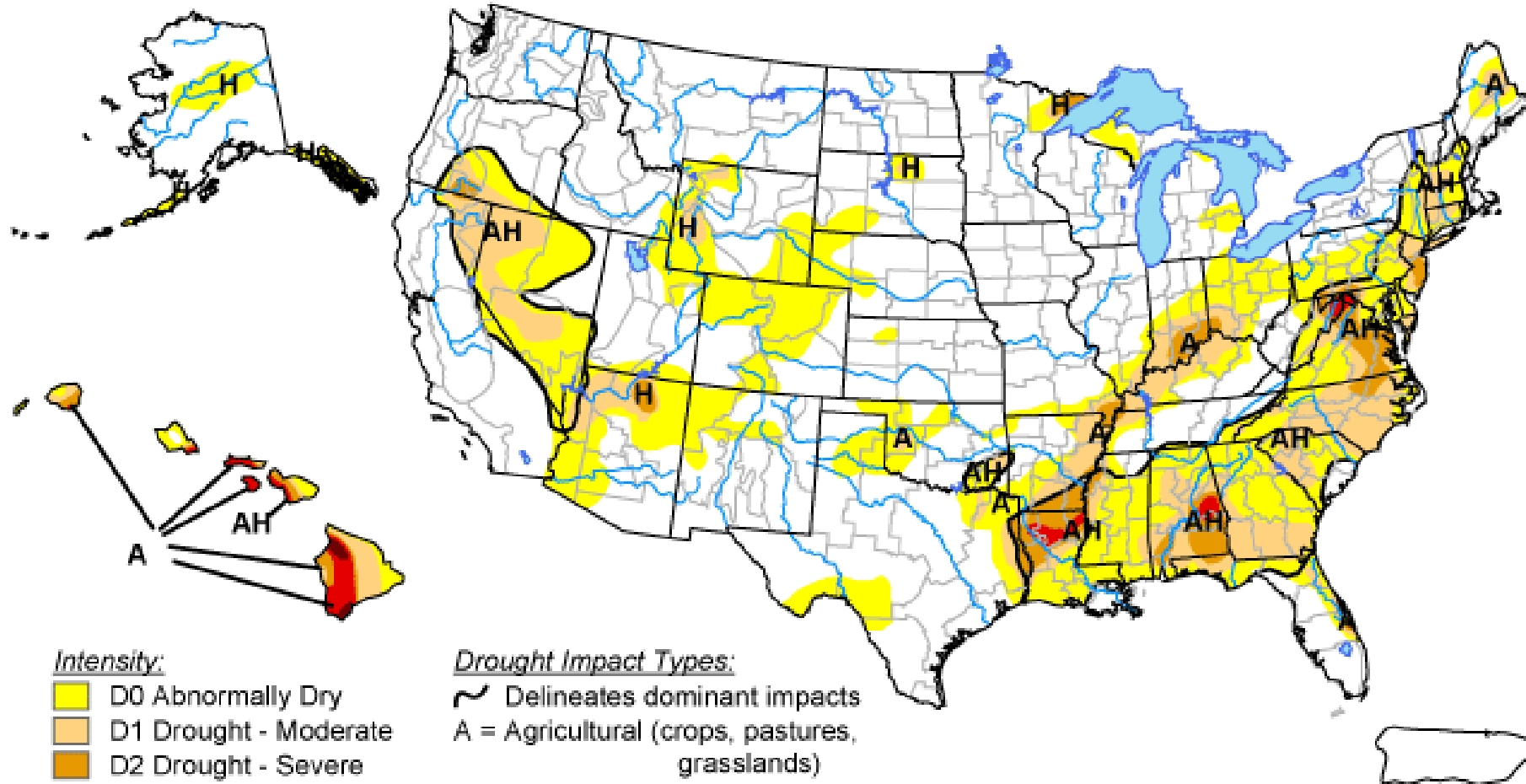
## Boulder 2011 Water Year








# U.S. Drought Monitor

September 21, 2010

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.



Released Thursday, September 23, 2010

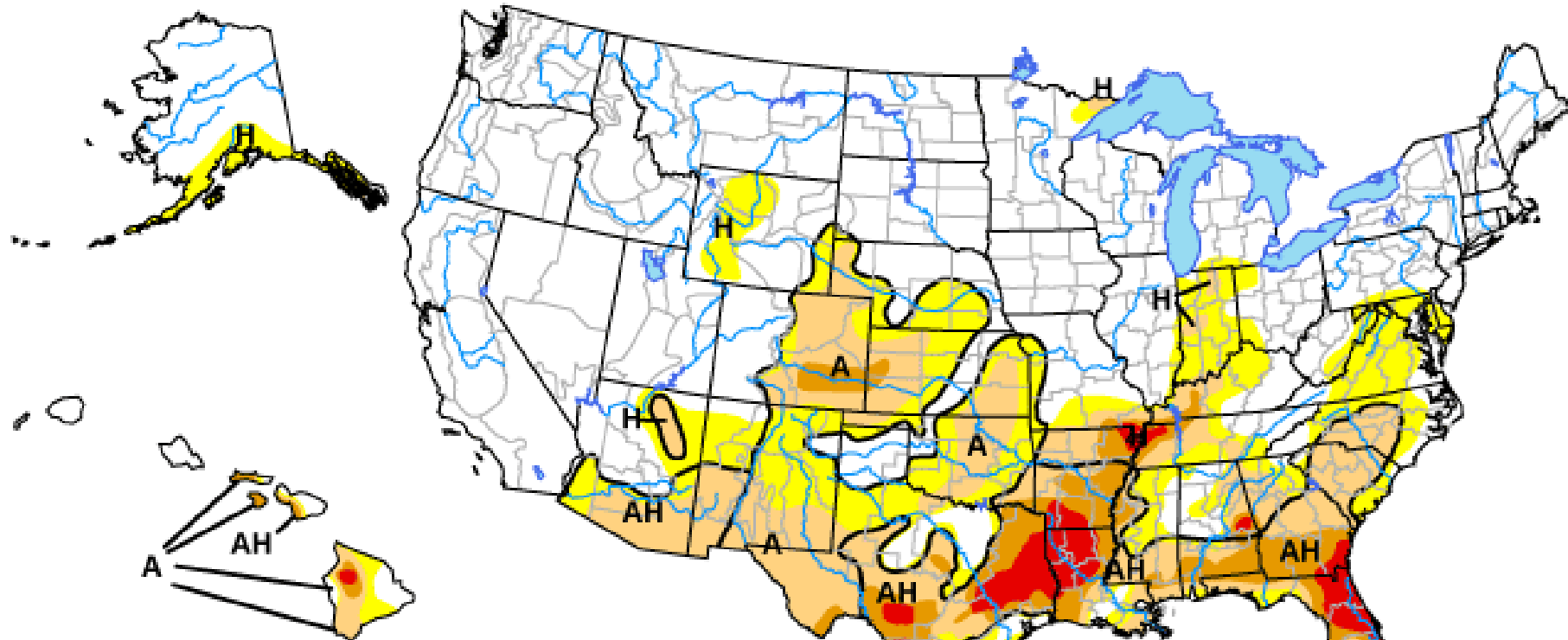
Author: Richard Heim/Liz Love-Brotak, NOAA/NESDIS/NCDC

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






# U.S. Drought Monitor

January 11, 2011

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 13, 2011

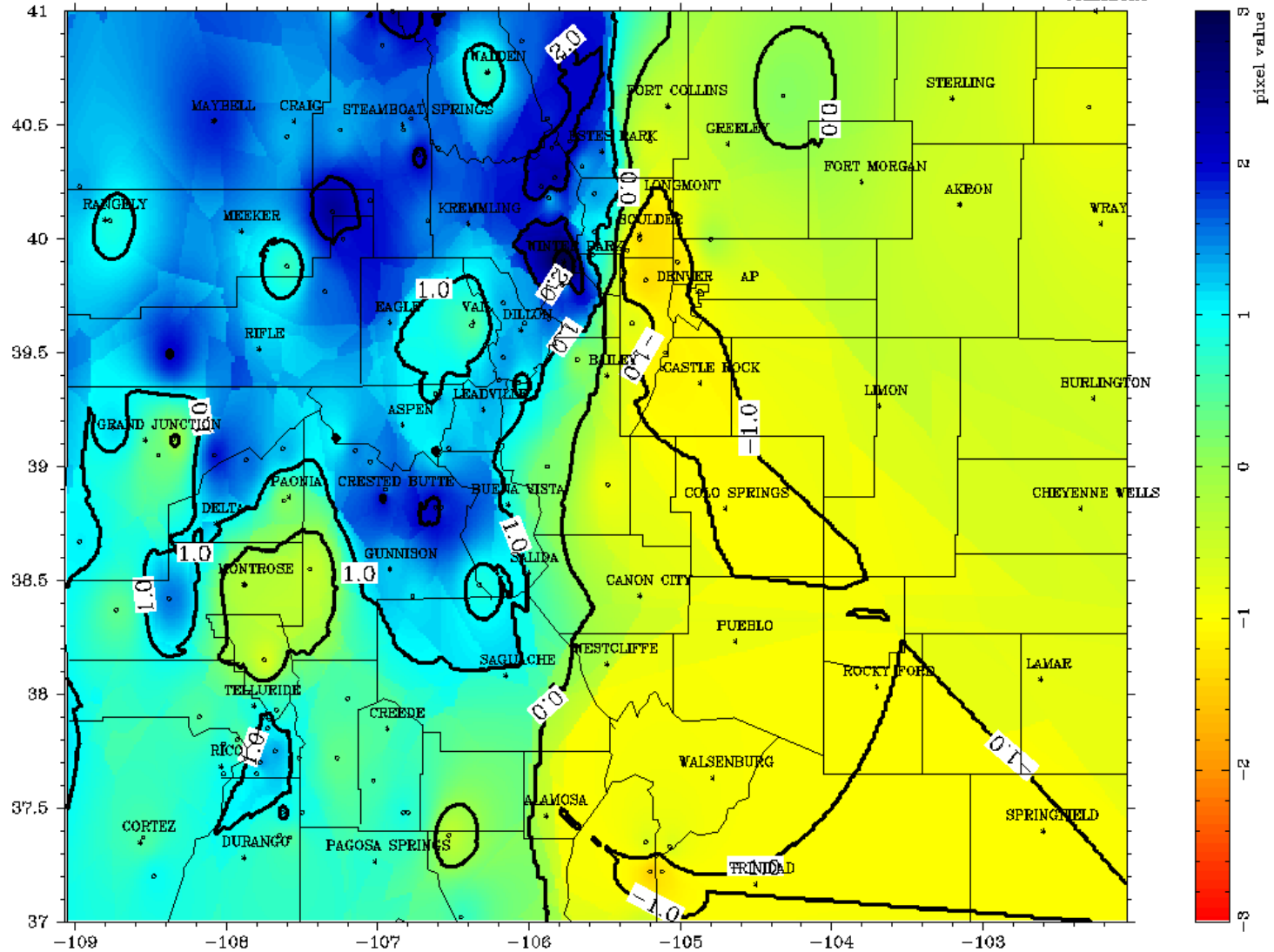
Author: Brian Fuchs, National Drought Mitigation Center

# 3 Month SPI

Colorado

12/2010 3 mon. SPI

JULESBURG



99 % < 2.0	9 % < -1.0
73 % < 1.0	0 % < -2.0
52 % < 0.0	0 % < -3.0

Produced by:  
Colorado Climate Center  
Fort Collins, CO

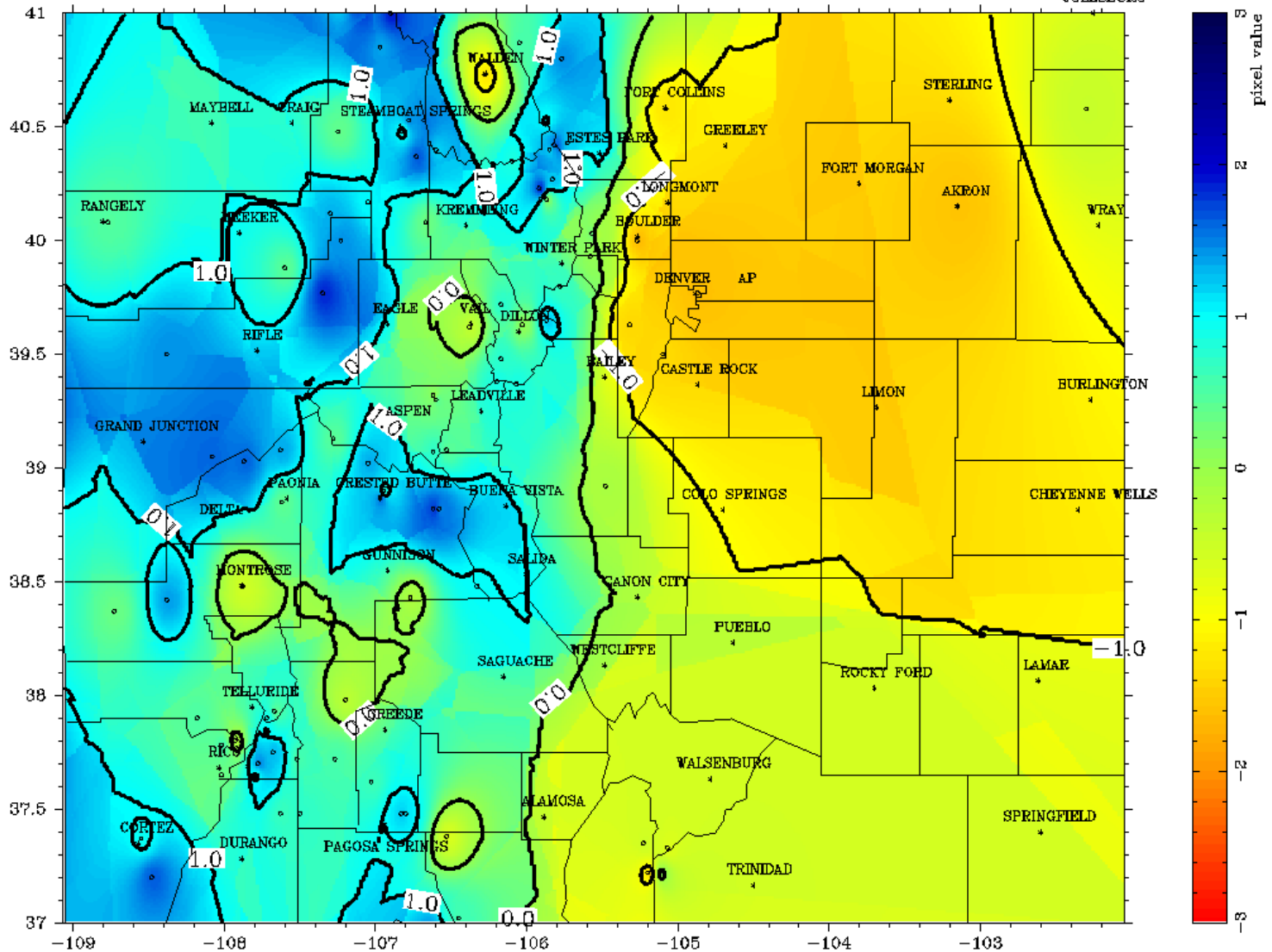


# 6 Month SPI

## Colorado

12/2010 6 mon. SPI

JULESBURG



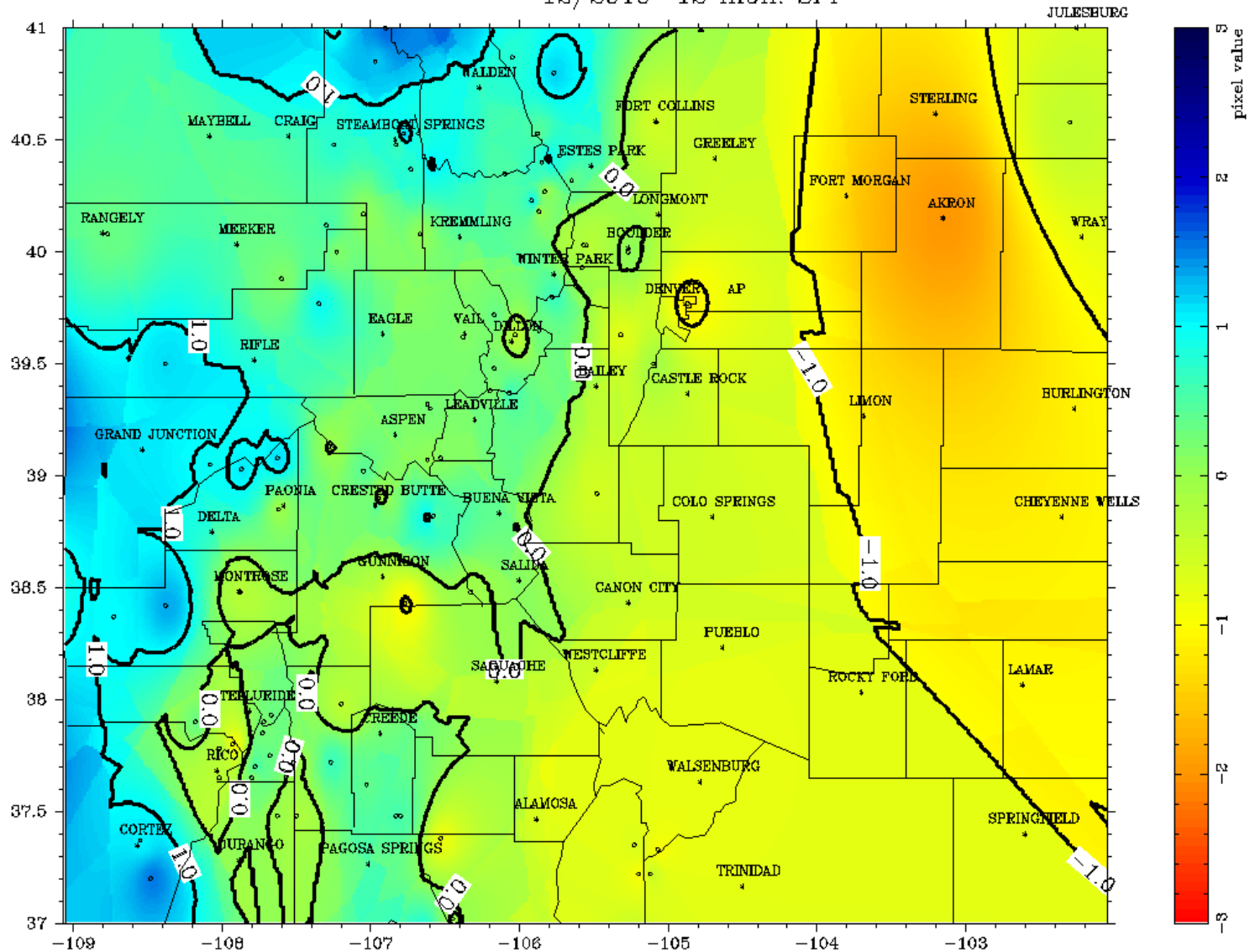
100 % < 2.0    25 % < -1.0  
83 % < 1.0    0 % < -2.0  
53 % < 0.0    0 % < -3.0

Produced by:  
Colorado Climate Center  
Fort Collins, CO

# 12 Month SPI

Colorado

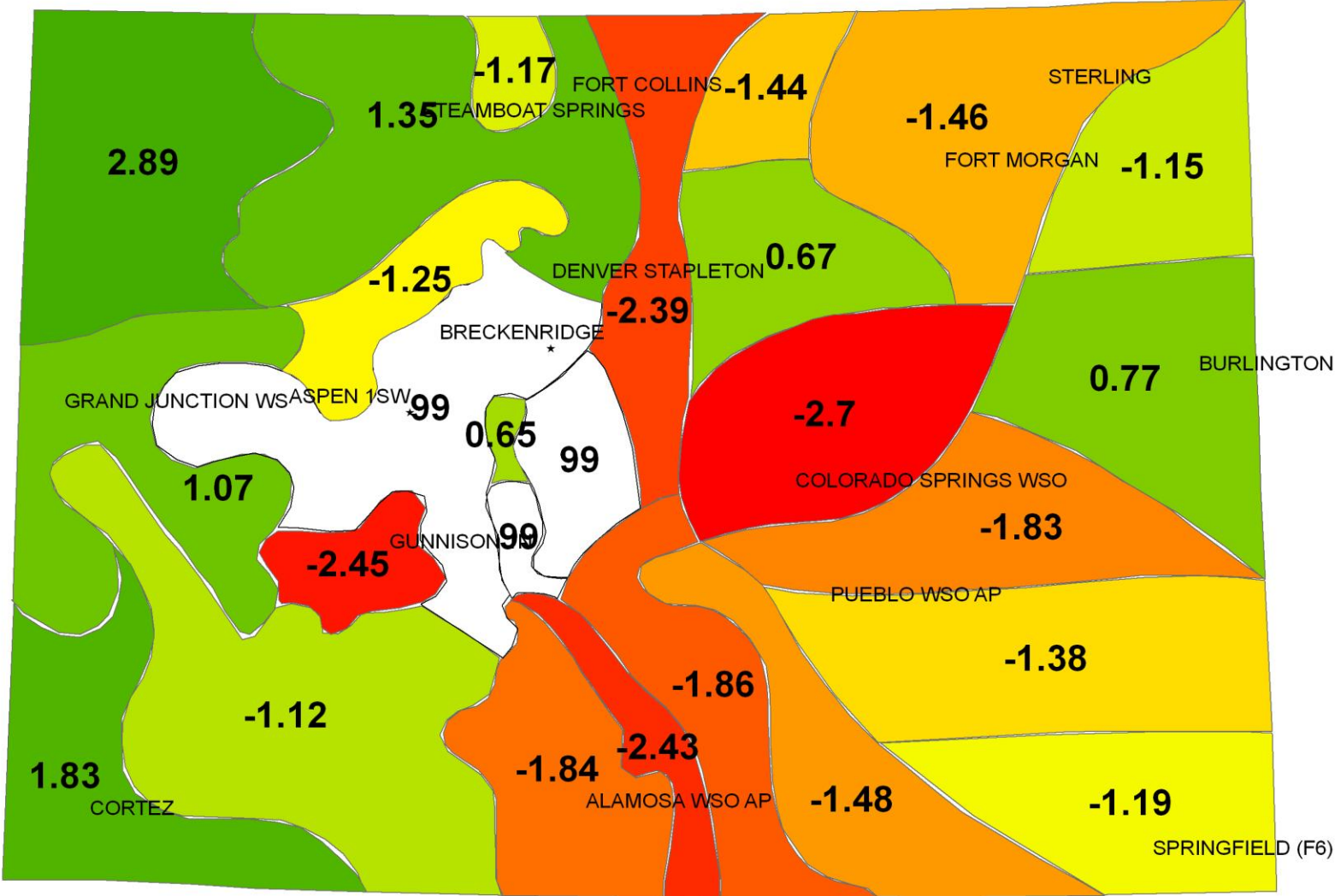
12/2010 12 mon. SPI



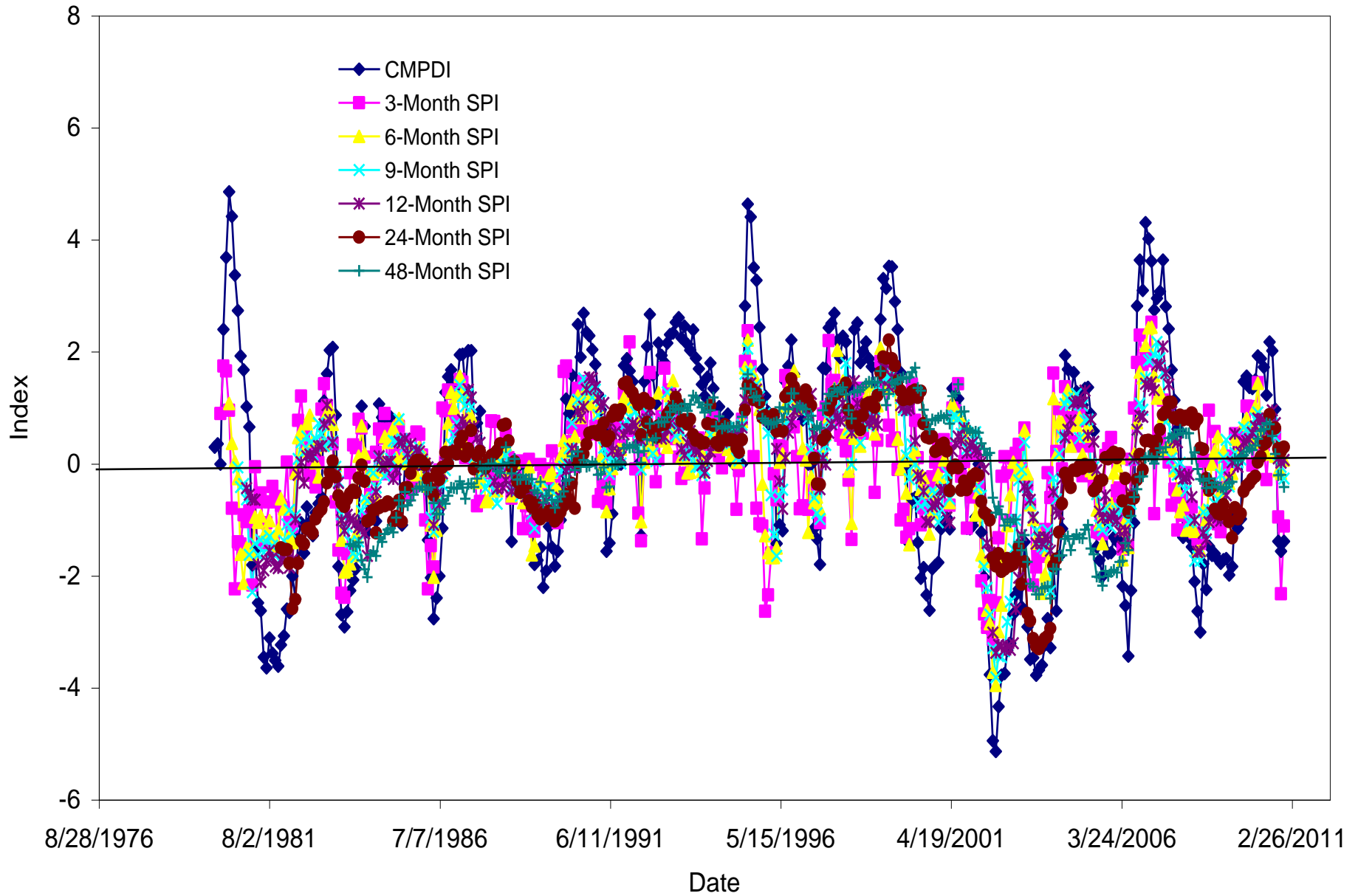
100 % < 2.0	19 % < -1.0
91 % < 1.0	0 % < -2.0
58 % < 0.0	0 % < -3.0

Produced by:  
Colorado Climate Center  
Fort Collins, CO

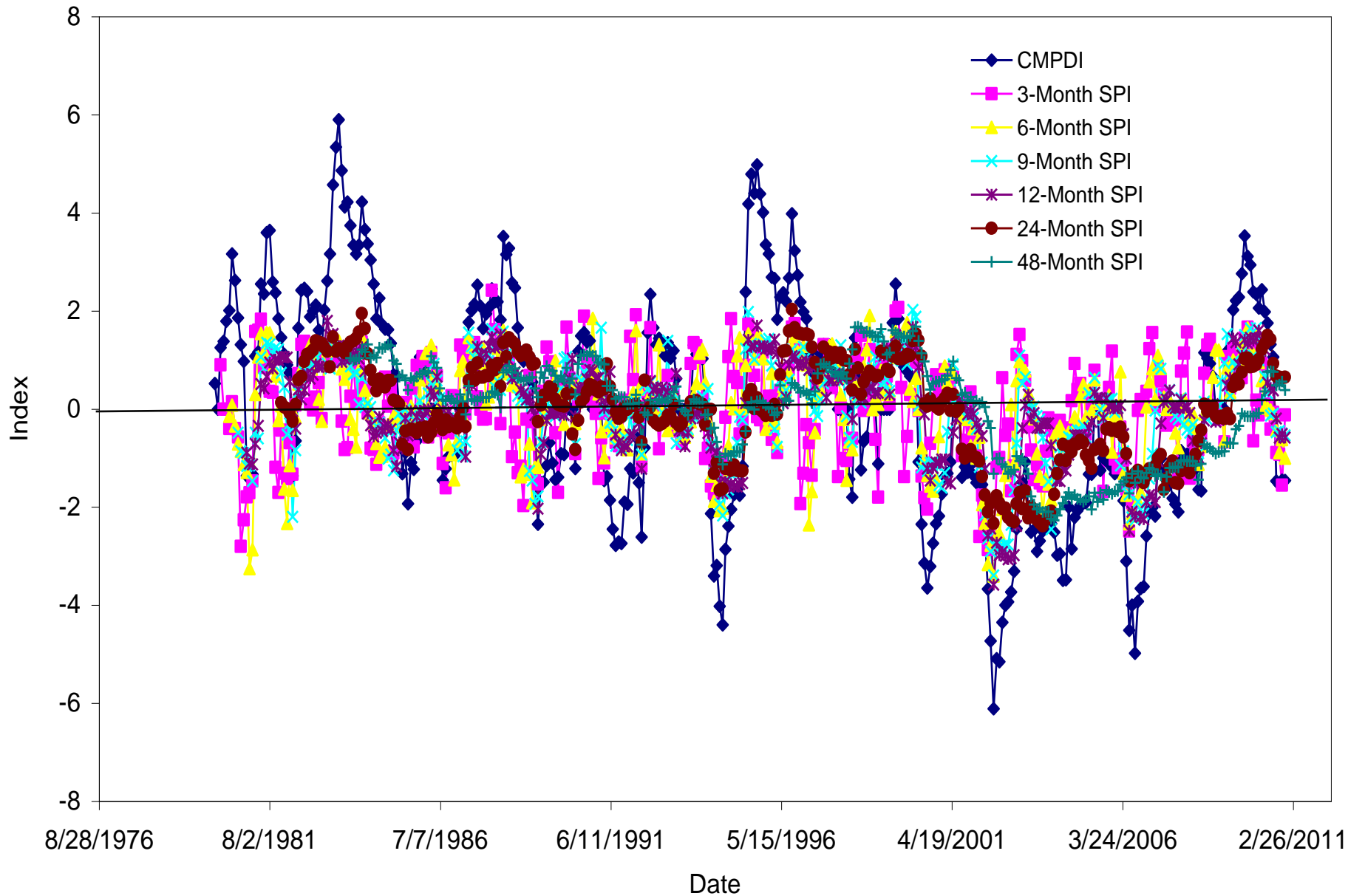
# Modified Palmer Drought Severity Index for Colorado December 2010



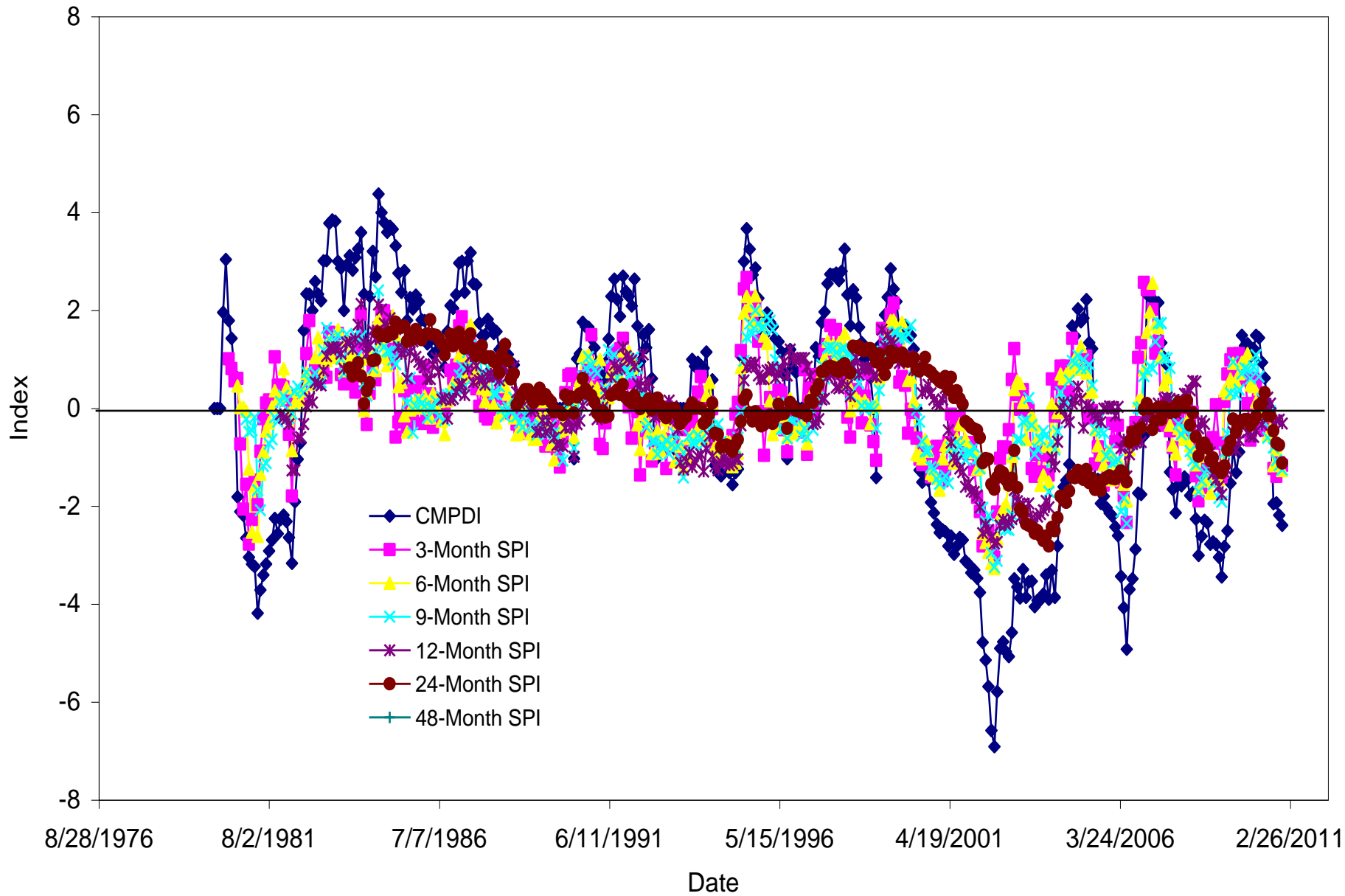
# Region 2: Arkansas Drainage - Valley Bottom Drought Indices Time Series



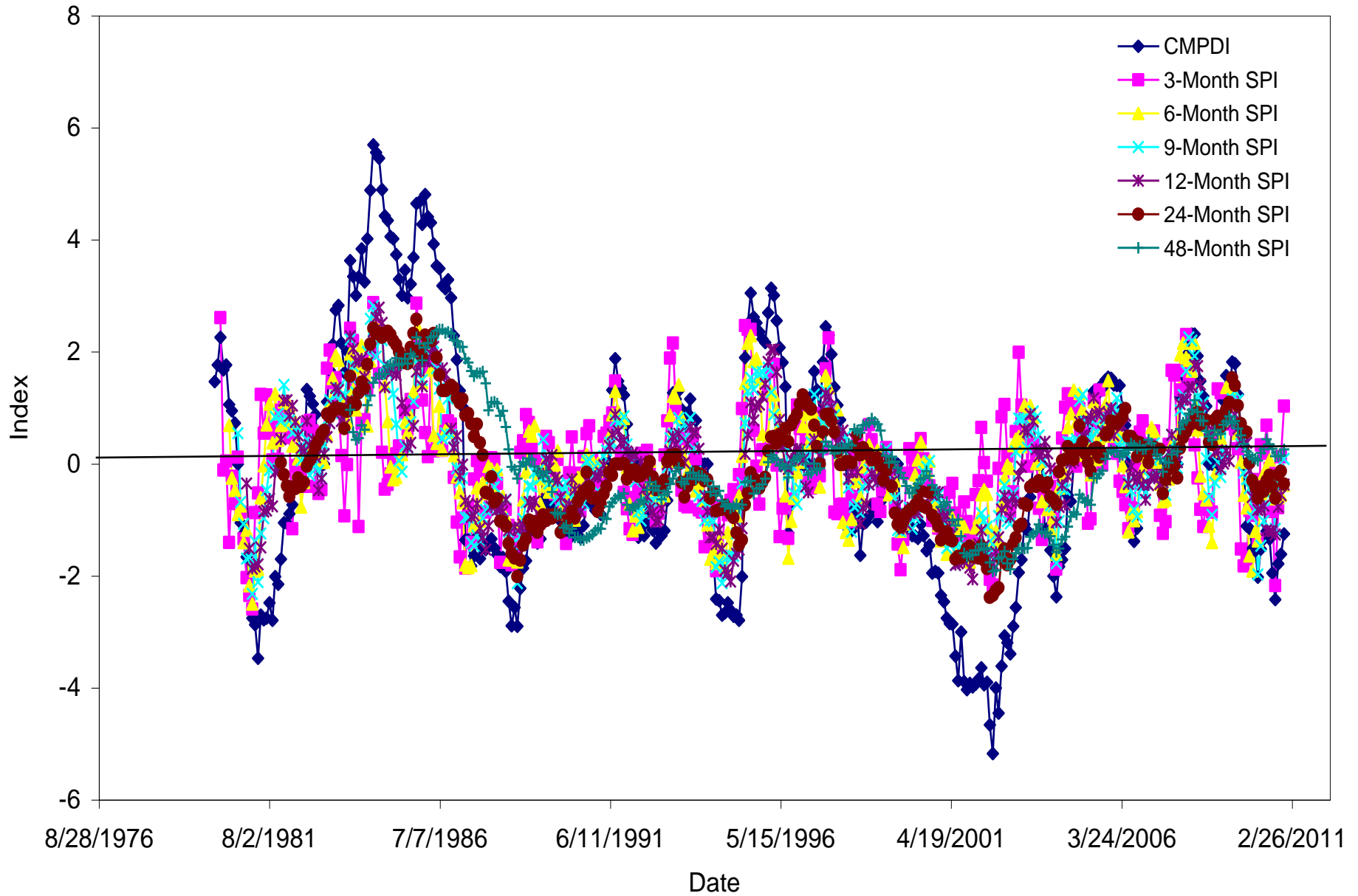
# Region 10: Platte Drainage - Lower Plains Drought Indices Time Series



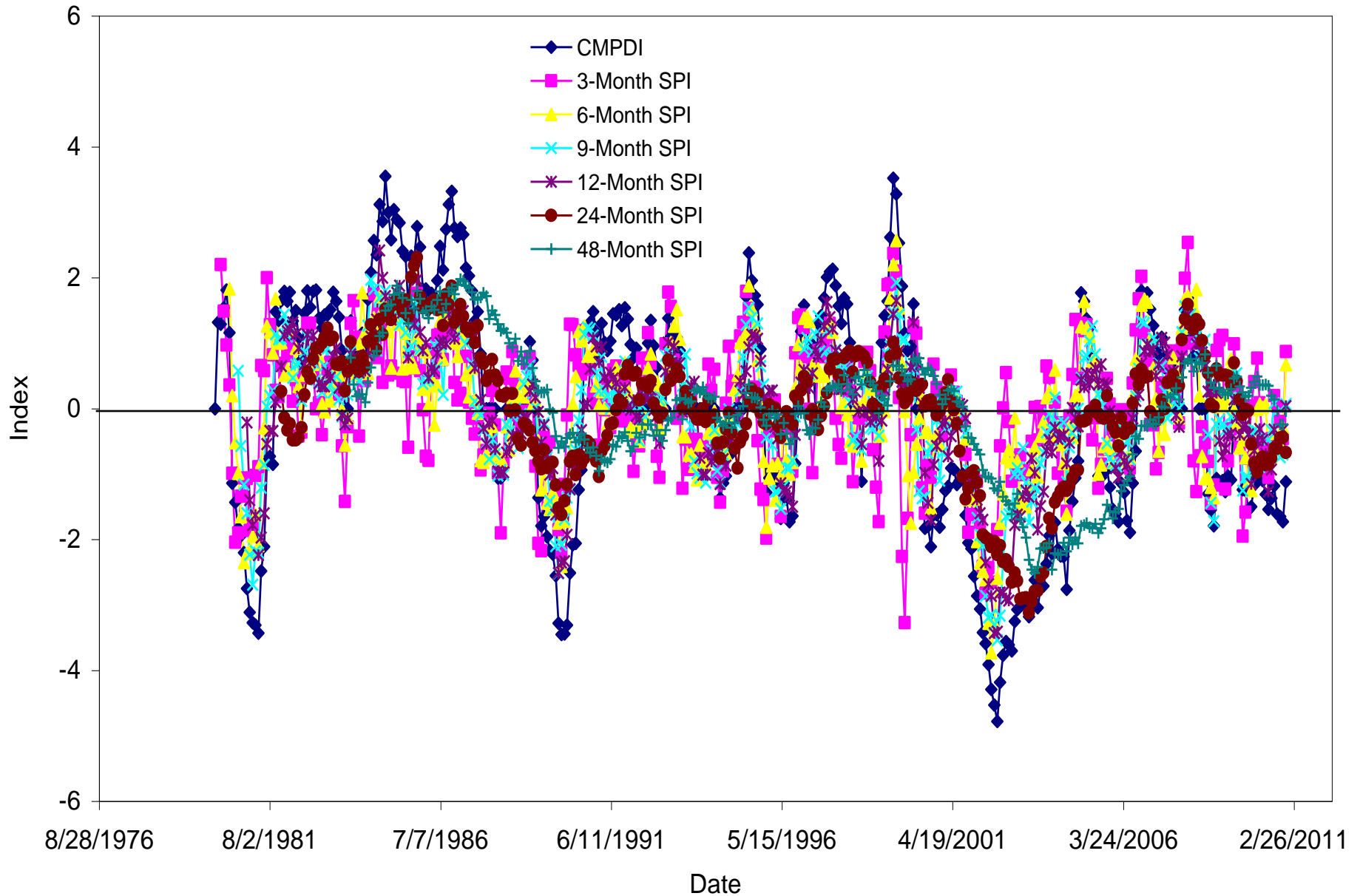
# Region 14: Platte Drainage - Front Range Foothills Drought Indices Time Series



# Region 22: Colorado Drainage-Upper Valley Drought Indices Time Series

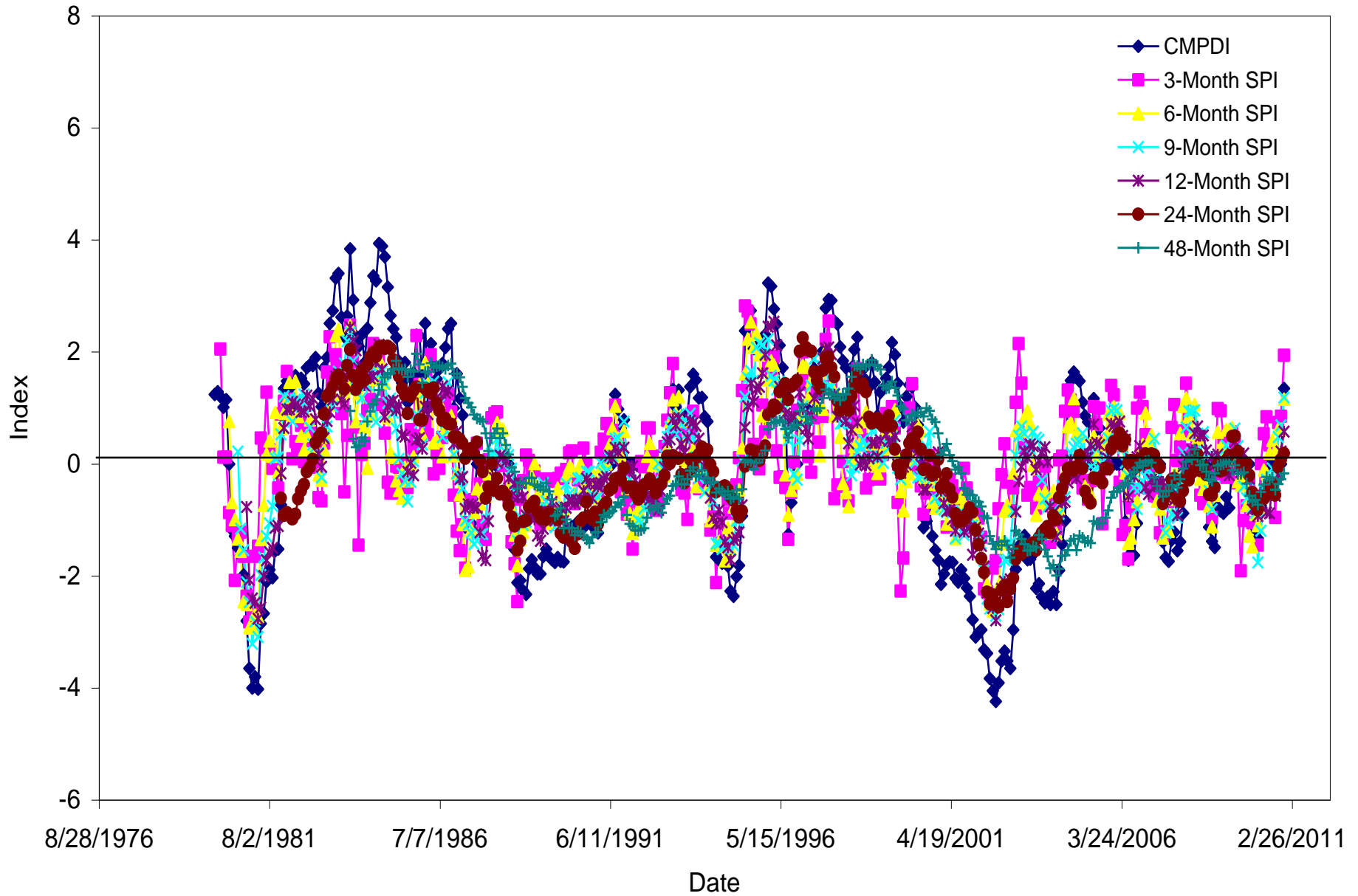


# Region 23: Colorado Drainage - San Juans Drought Indices Time Series





# Region 25: Northern Mountains Drought Indices Time Series



# NIDIS UCRB Weekly Webinars

- Weekly Briefings begin Tuesday, February 15<sup>th</sup> at 10AM.
- To Register:
- [http://ccc.atmos.colostate.edu/drought\\_webinar\\_registration.php](http://ccc.atmos.colostate.edu/drought_webinar_registration.php)

# Colorado Climate Center



Data and Power Point Presentations available for downloading

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