

# *Climate Update*

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**Colorado Climate Center**

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

Presented to  
Water Availability Task Force  
March 25, 2010  
Denver, CO

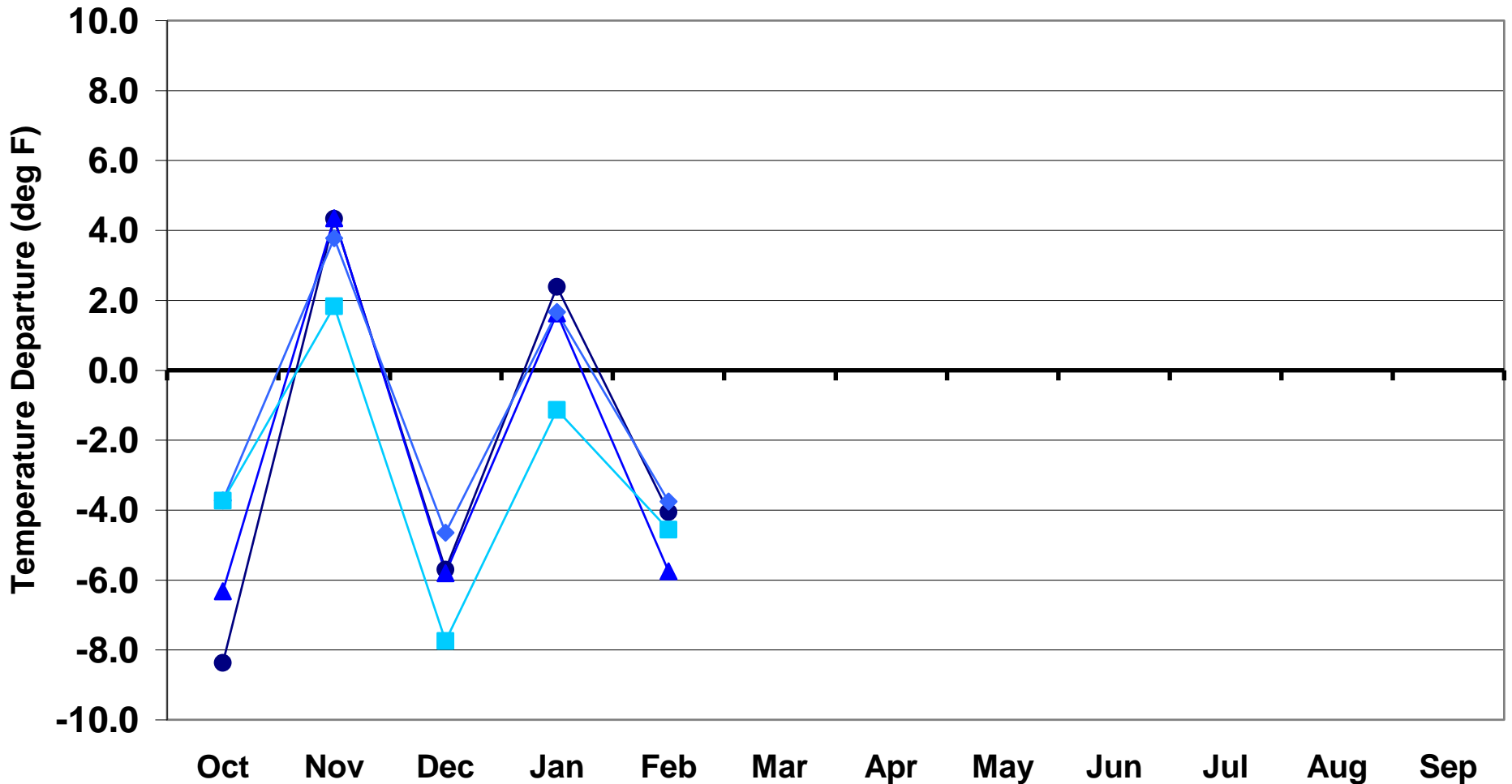
Prepared by Wendy Ryan



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

# Water Year 2010 Temperature Departures

## Water Year 2010



● Eastern Plains

▲ Foothills

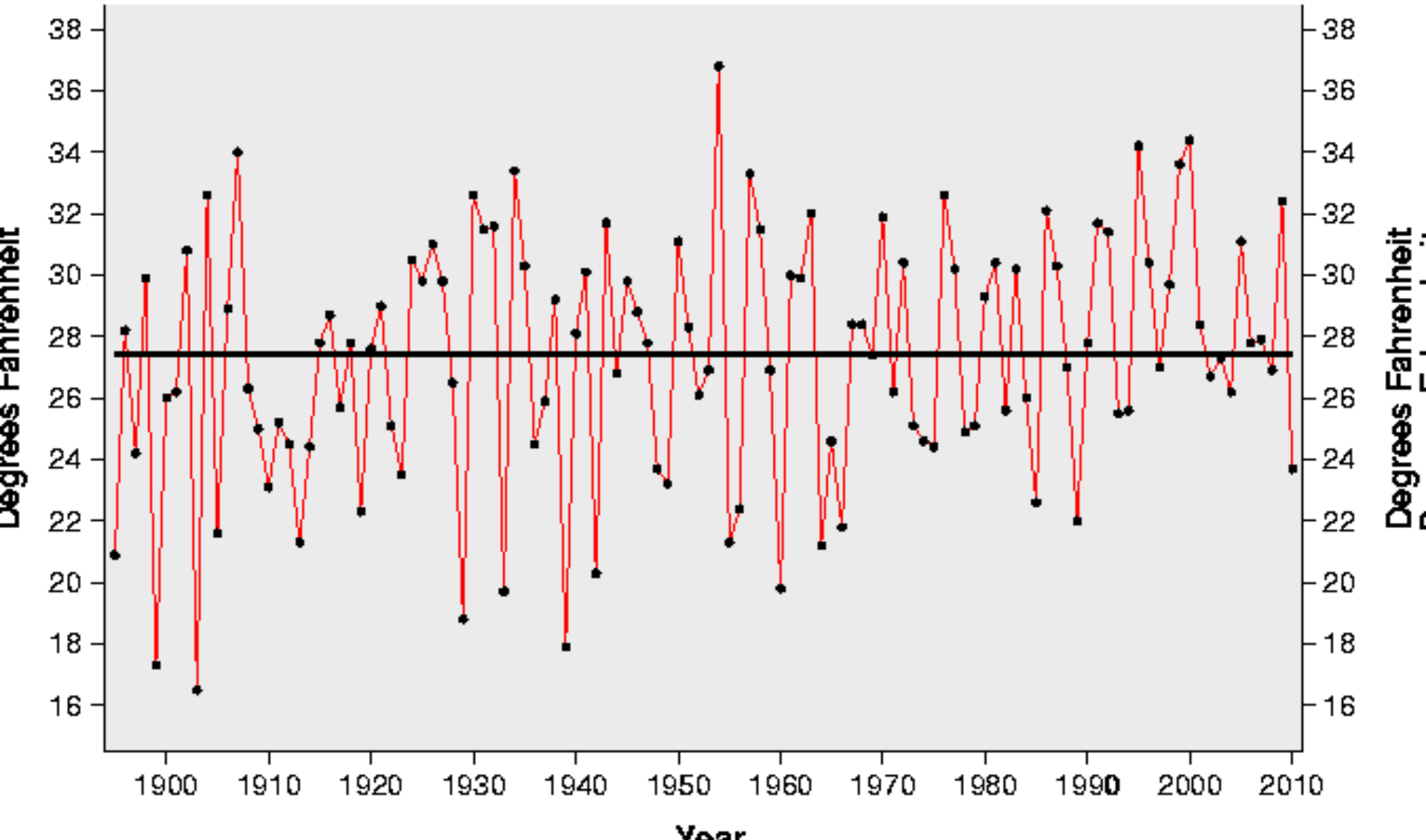
◆ Mountains

■ Western Valleys

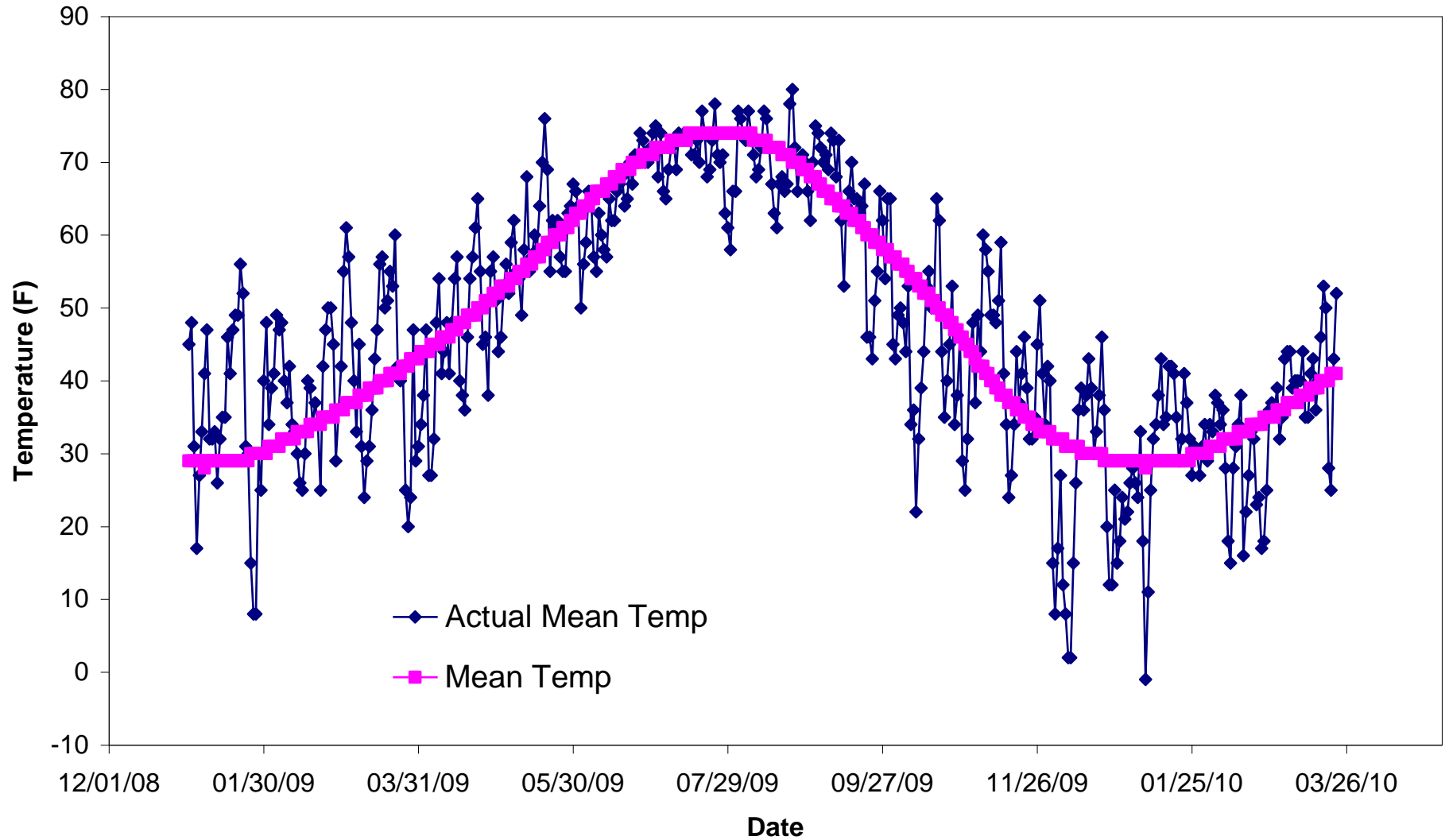
# February Average Temperature History for Colorado (NCDC)

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

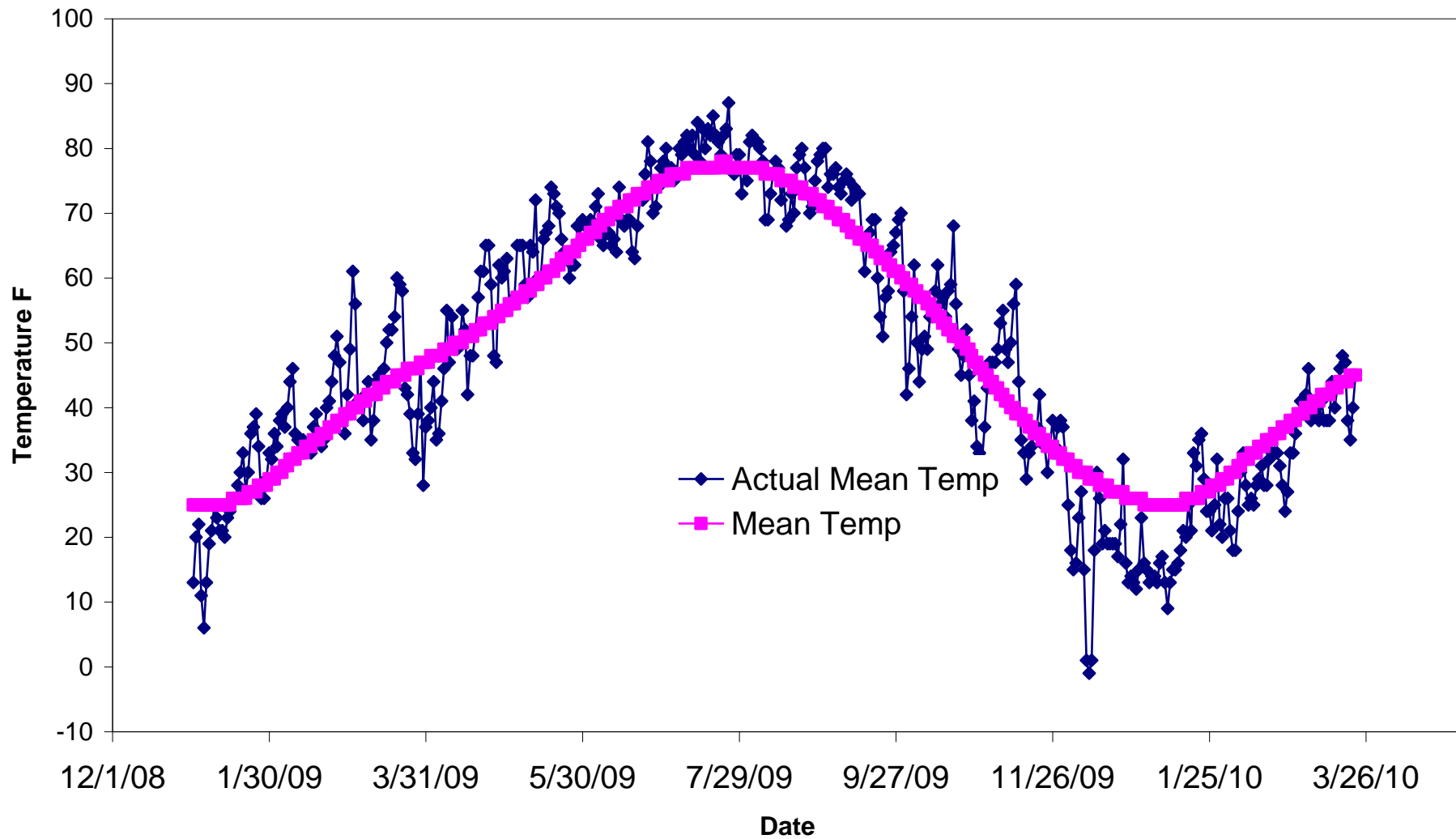
Rank: 23.7 degrees is 21<sup>th</sup> coolest for period of record 1895-2010



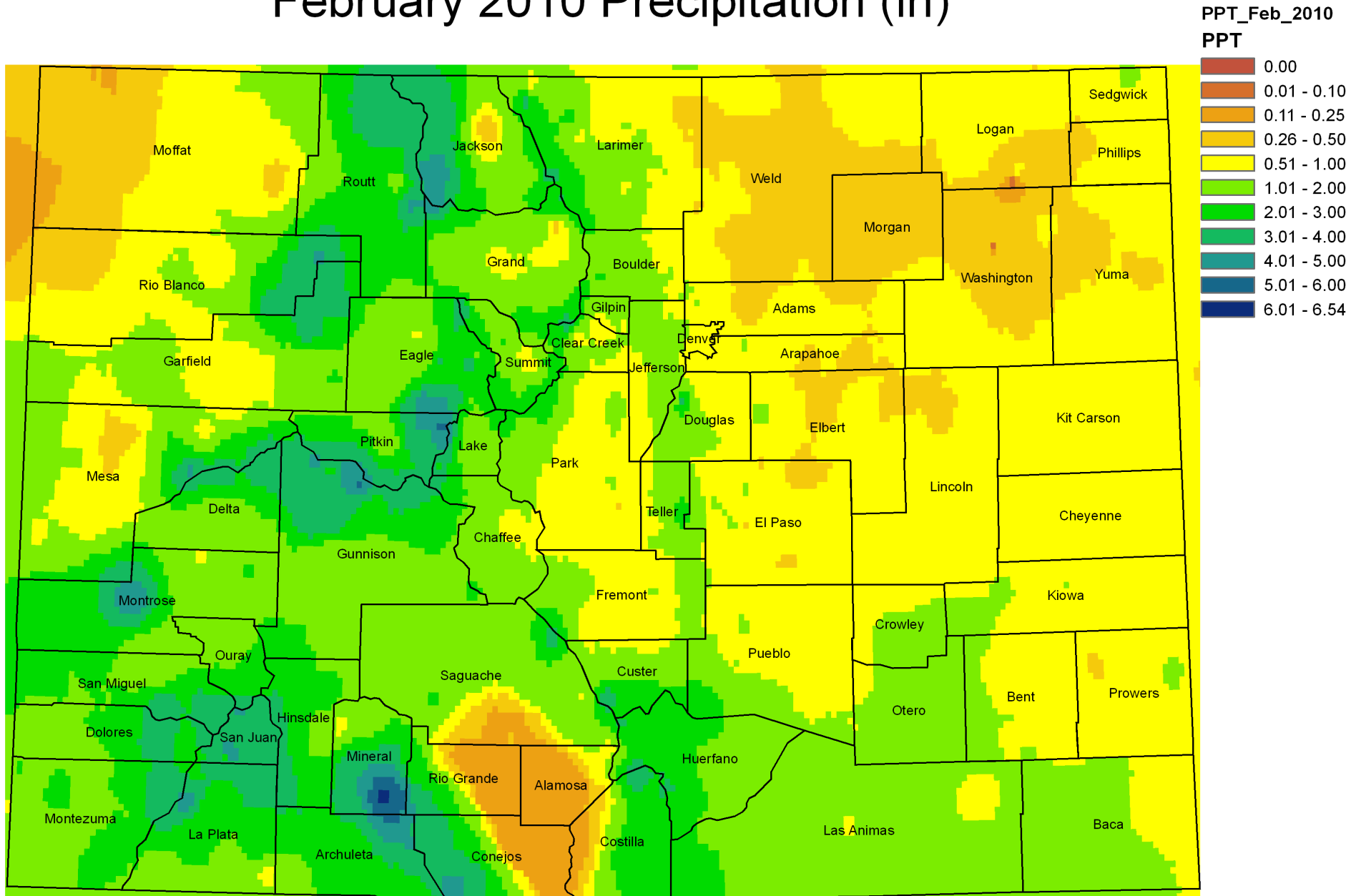
# Denver, CO Jan 1, 2009 - Mar 22, 2010 Mean and Actual Daily Temperature



# Grand Junction Jan 1, 2009 - Mar 22, 2010 Mean and Actual Daily Temperature

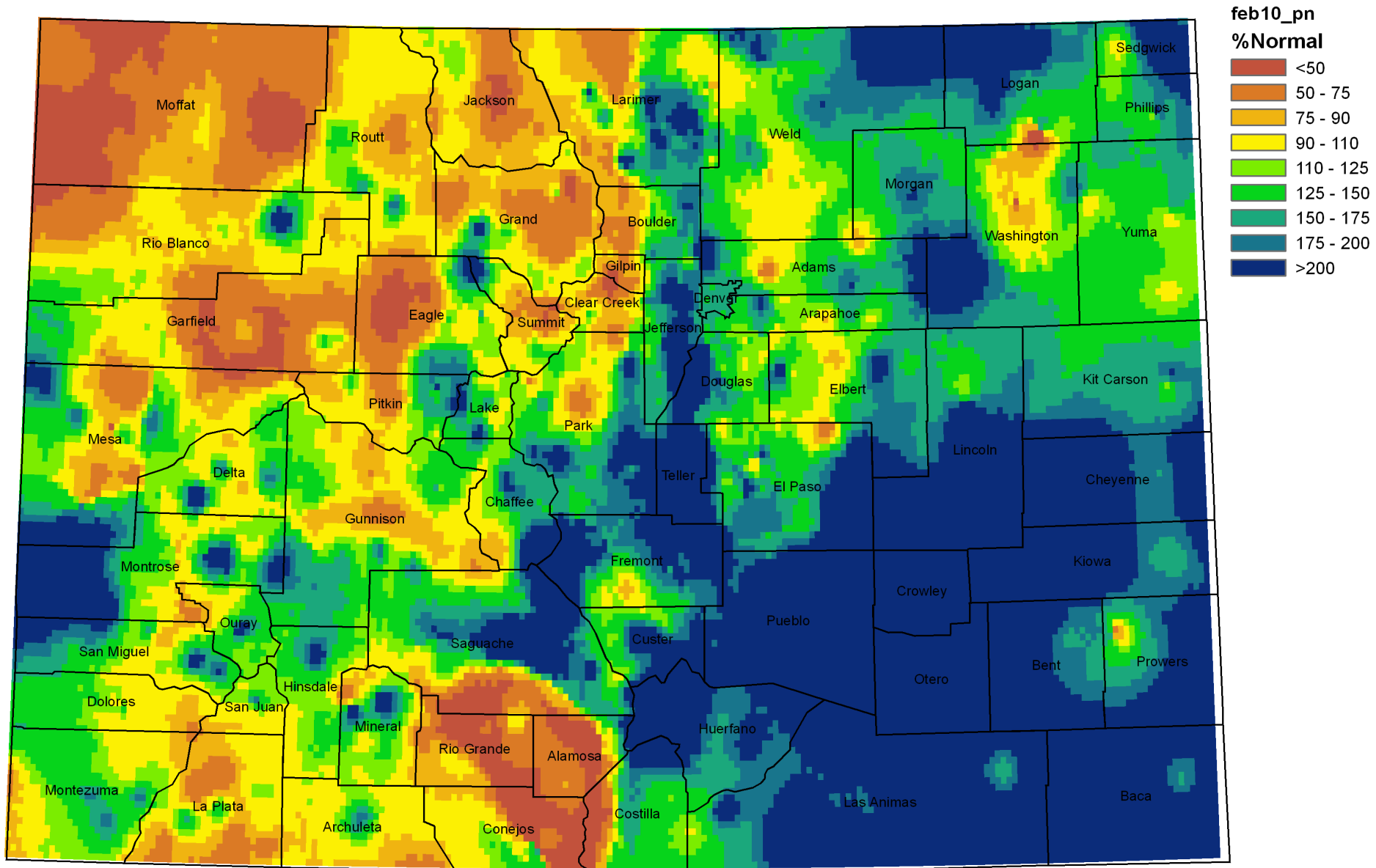


# February 2010 Precipitation (in)



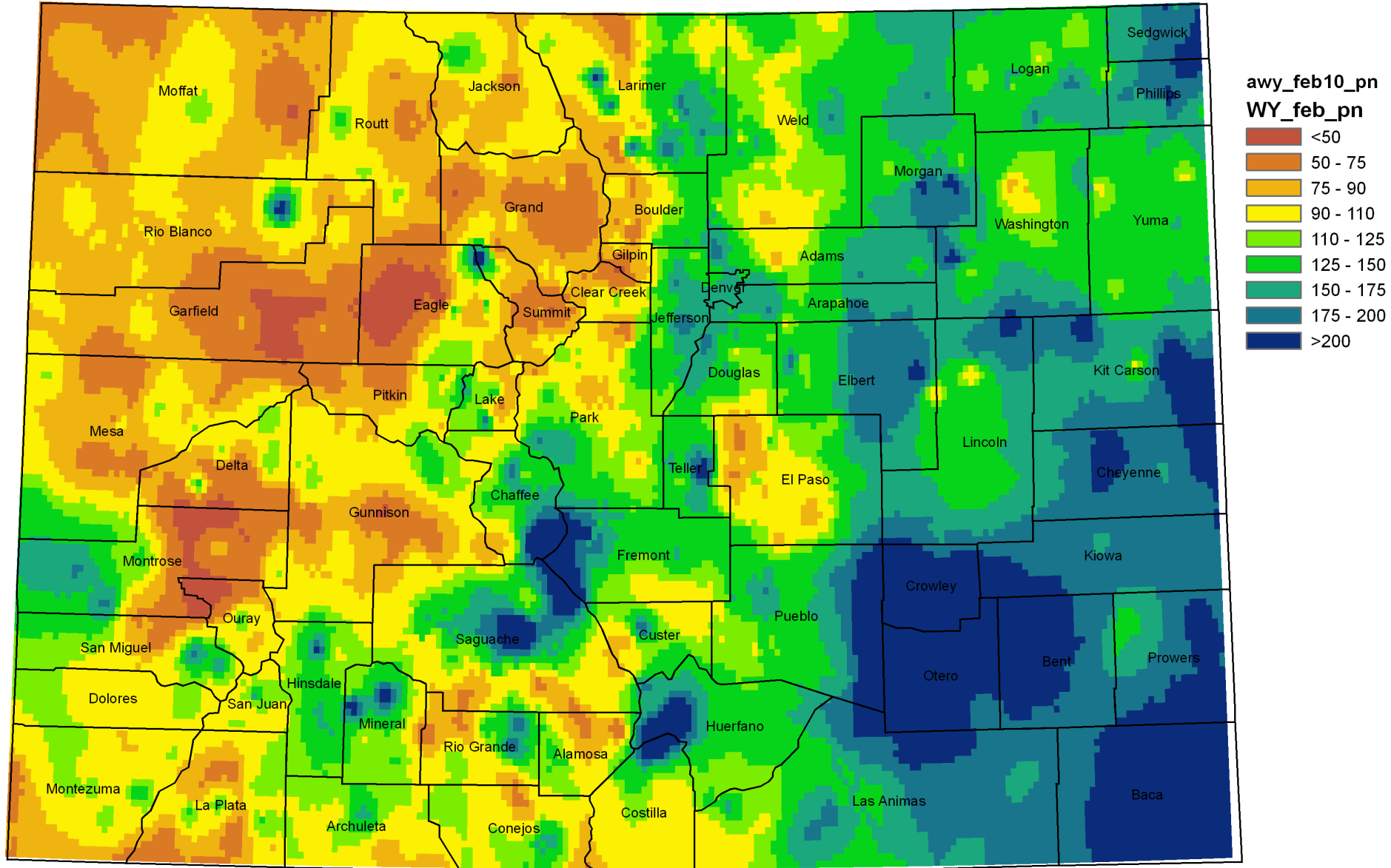
Produced by the Colorado Climate Center utilizing Snotel, NWS, CoCoRaHS and CoAgMet\* Preliminary Precipitation Data  
Analysis: Inverse Distance Weighting  
\*Summer only

# February 2010 Precipitation as Percent of Average



Produced by the Colorado Climate Center utilizing Snotel, NWS, CoCoRaHS and CoAgMet\* Preliminary Precipitation Data Analysis: Inverse Distance Weighting  
\*Summer only

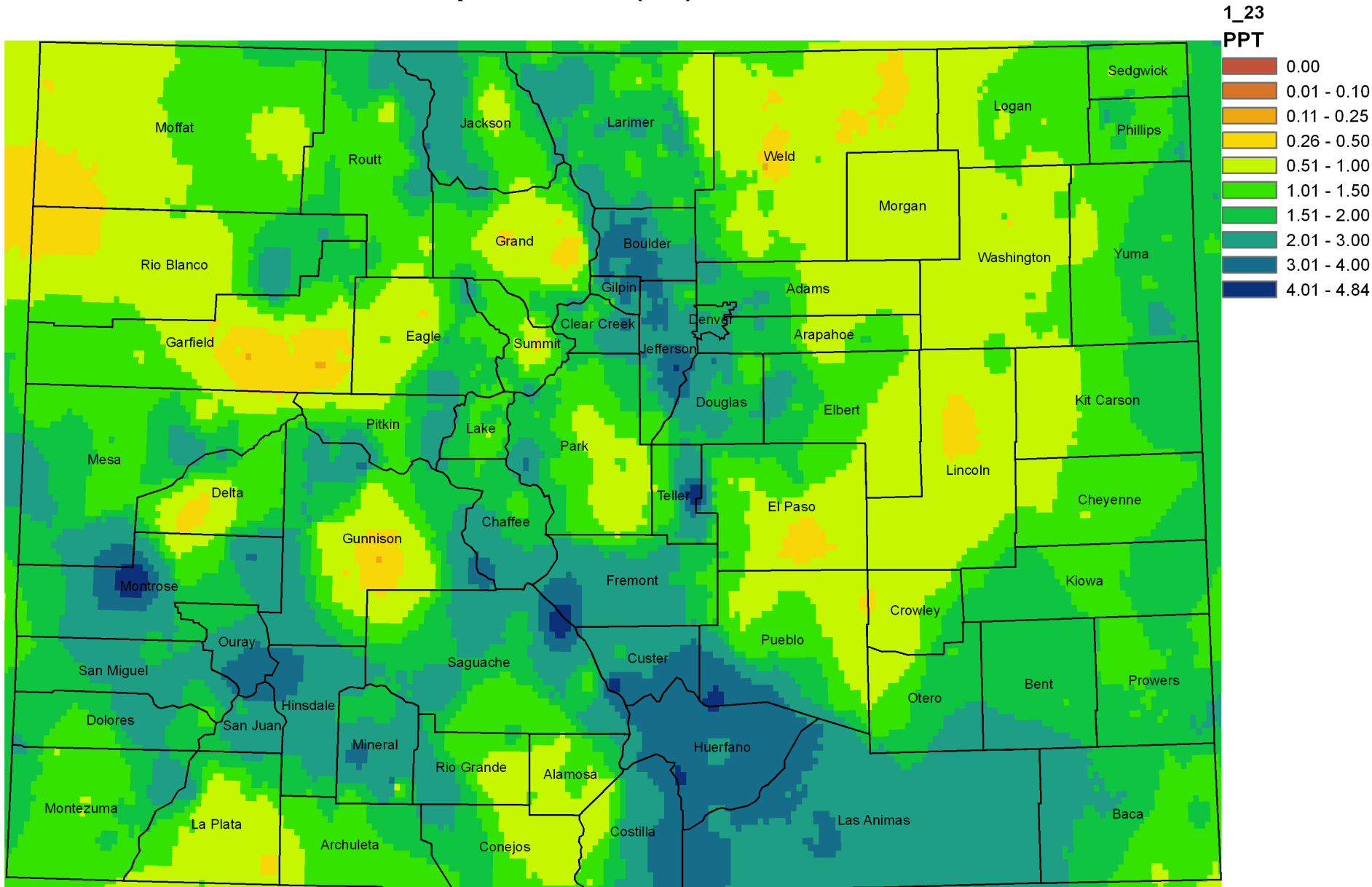
# Colorado Water Year 2010 Precipitation as Percent of Normal Oct 2009 - Feb 2010



Produced by the Colorado Climate Center utilizing Snotel, NWS, CoCoRaHS and CoAgMet\* Preliminary Precipitation Data  
Analysis: Inverse Distance Weighting  
\*Summer only

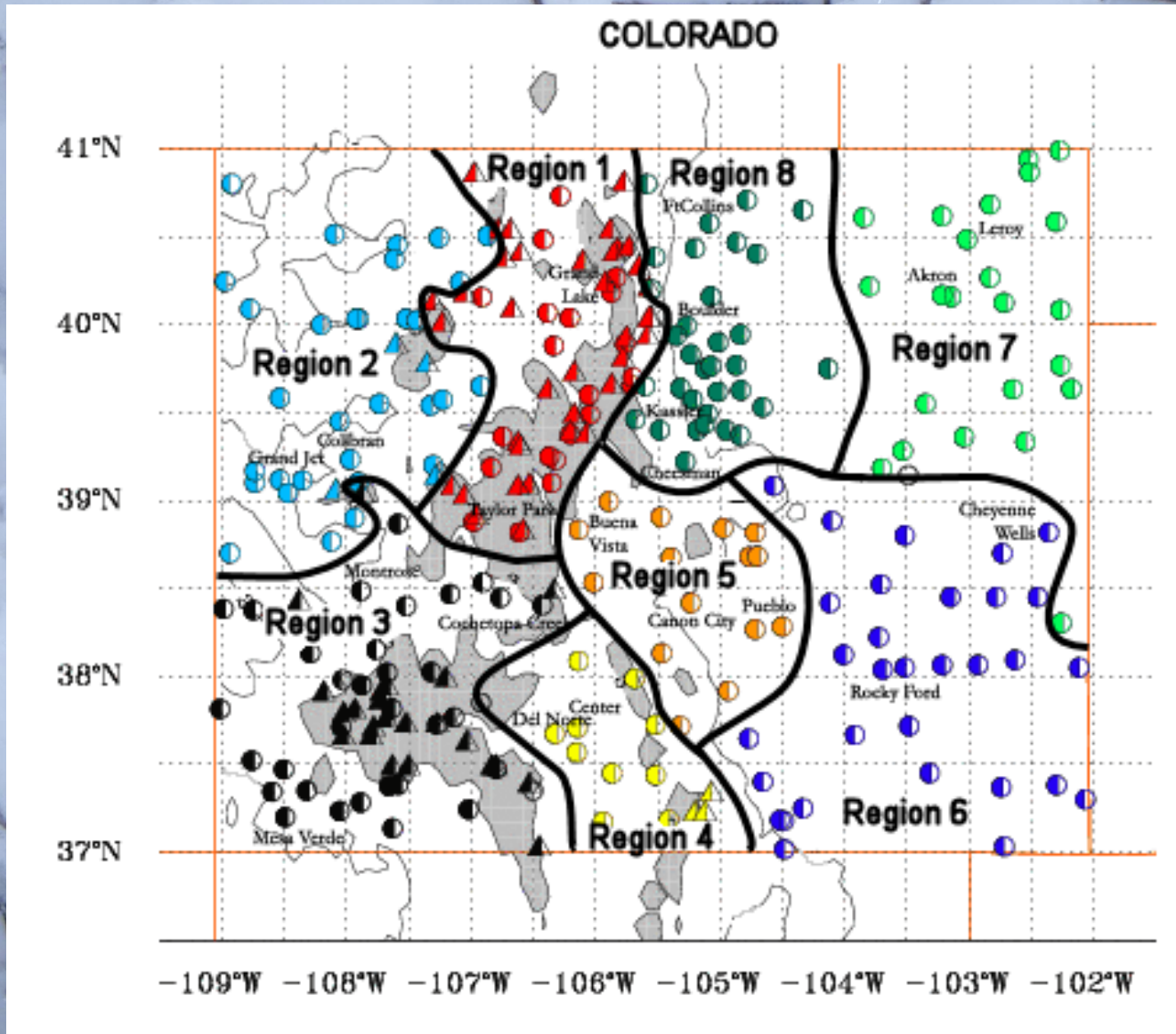


# Colorado Precipitation (in) 1 - 23 March 2010



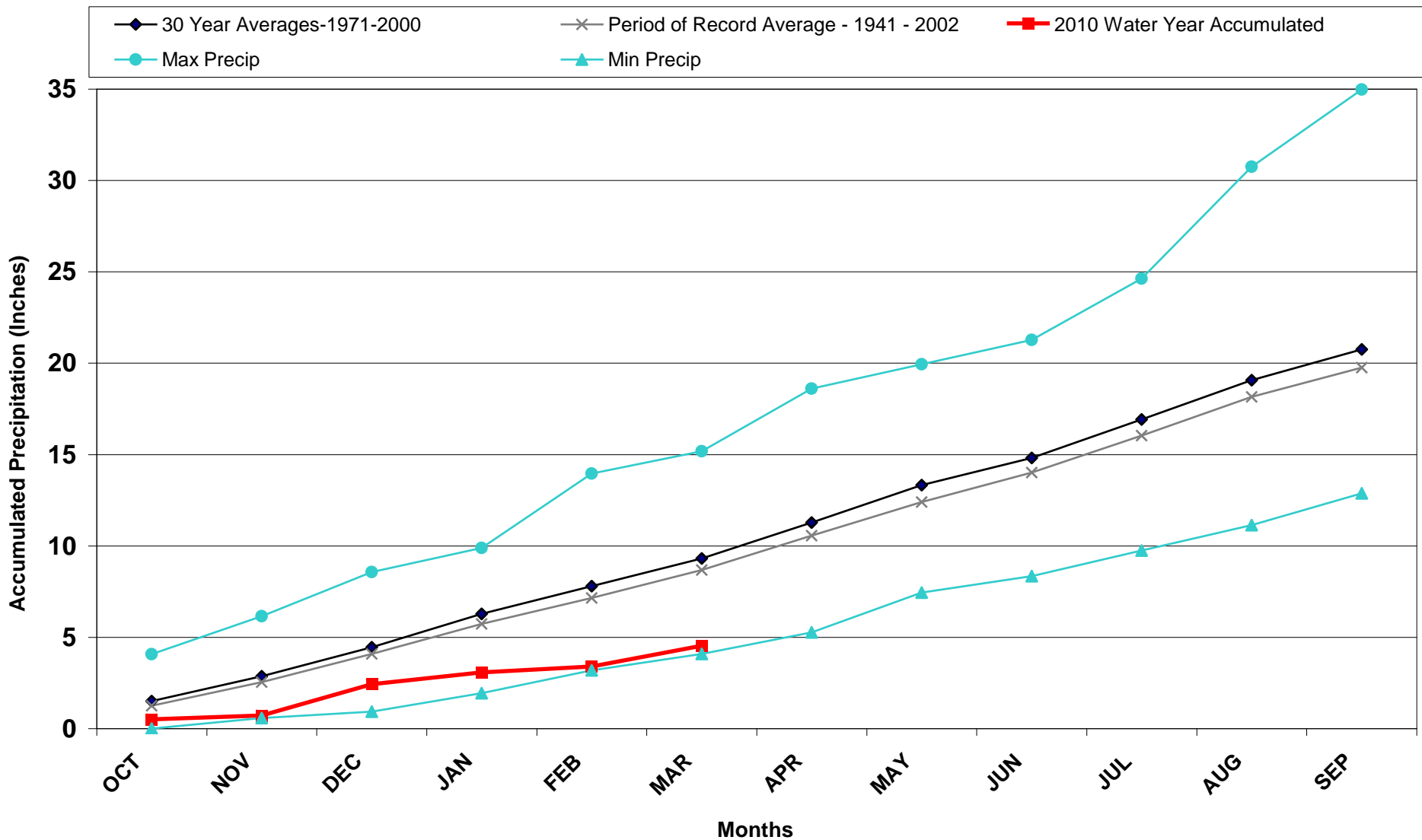
Produced by the Colorado Climate Center utilizing Snotel, NWS, CoCoRaHS and CoAgMet\* Preliminary Precipitation Data  
Analysis: Inverse Distance Weighting  
\*Summer only

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



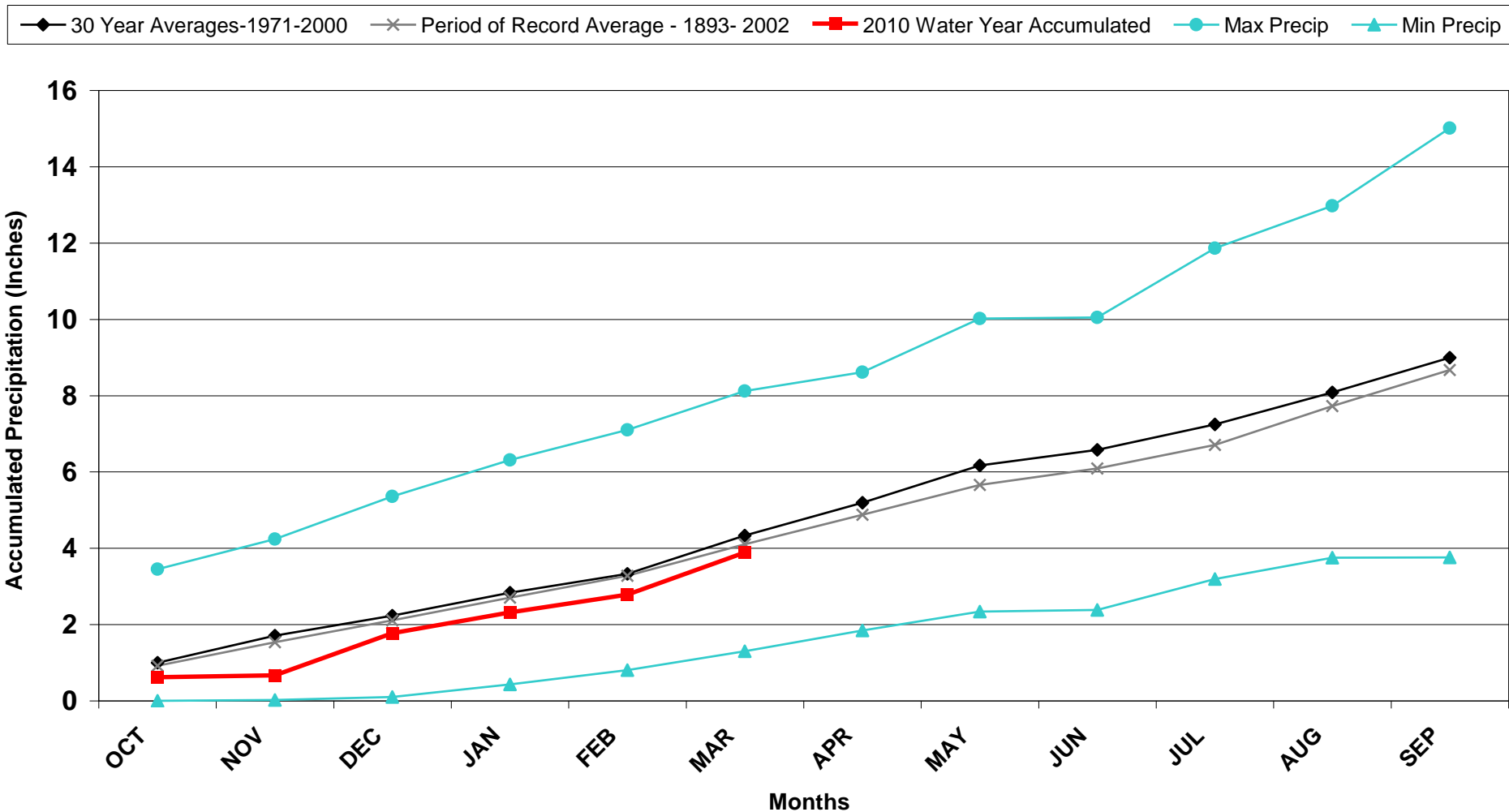
# Division 1 – Grand Lake 1NW

## Grand Lake 1 NW 2010 Water Year



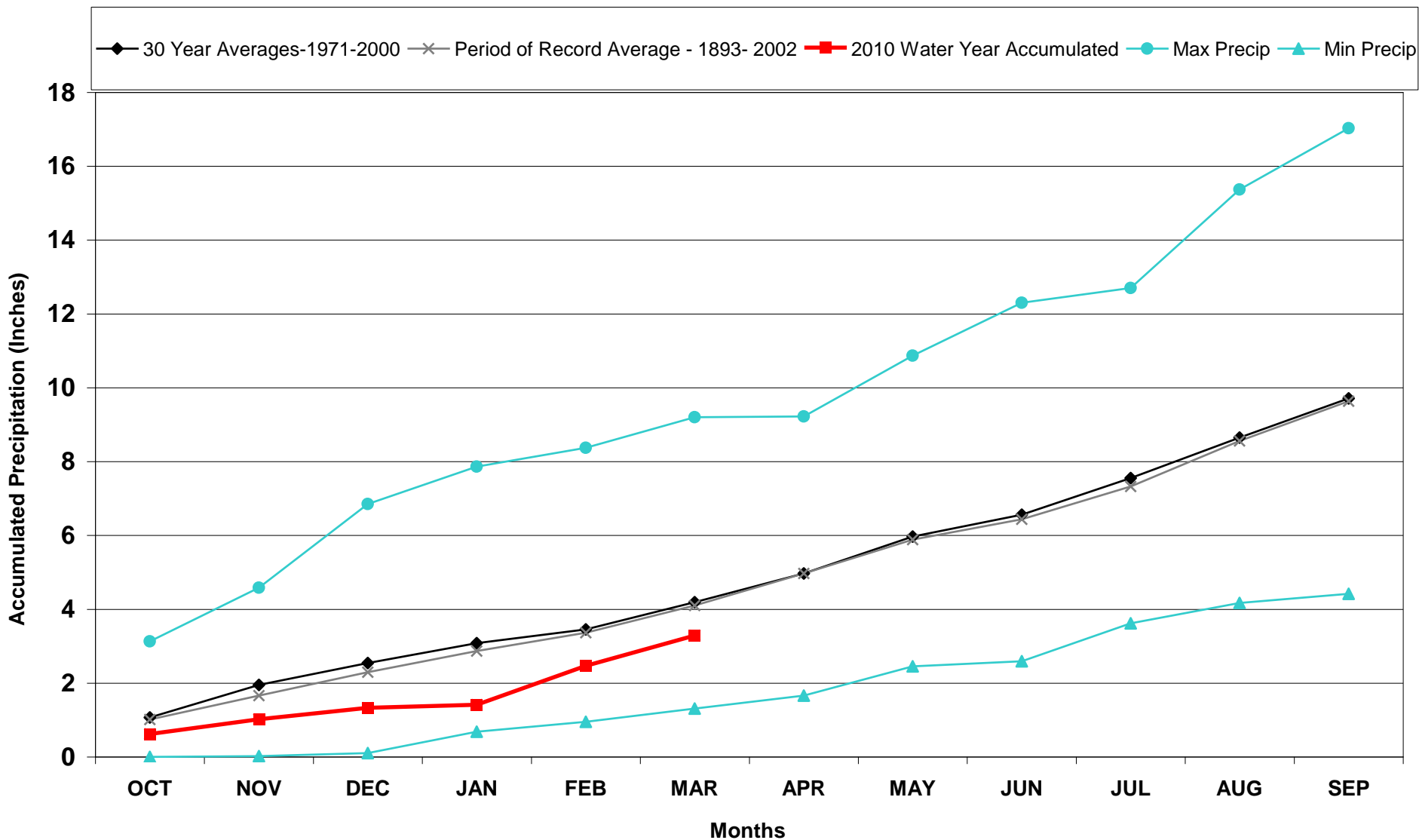
# Division 2 – Grand Junction

## Grand Junction WSFO 2010 Water Year



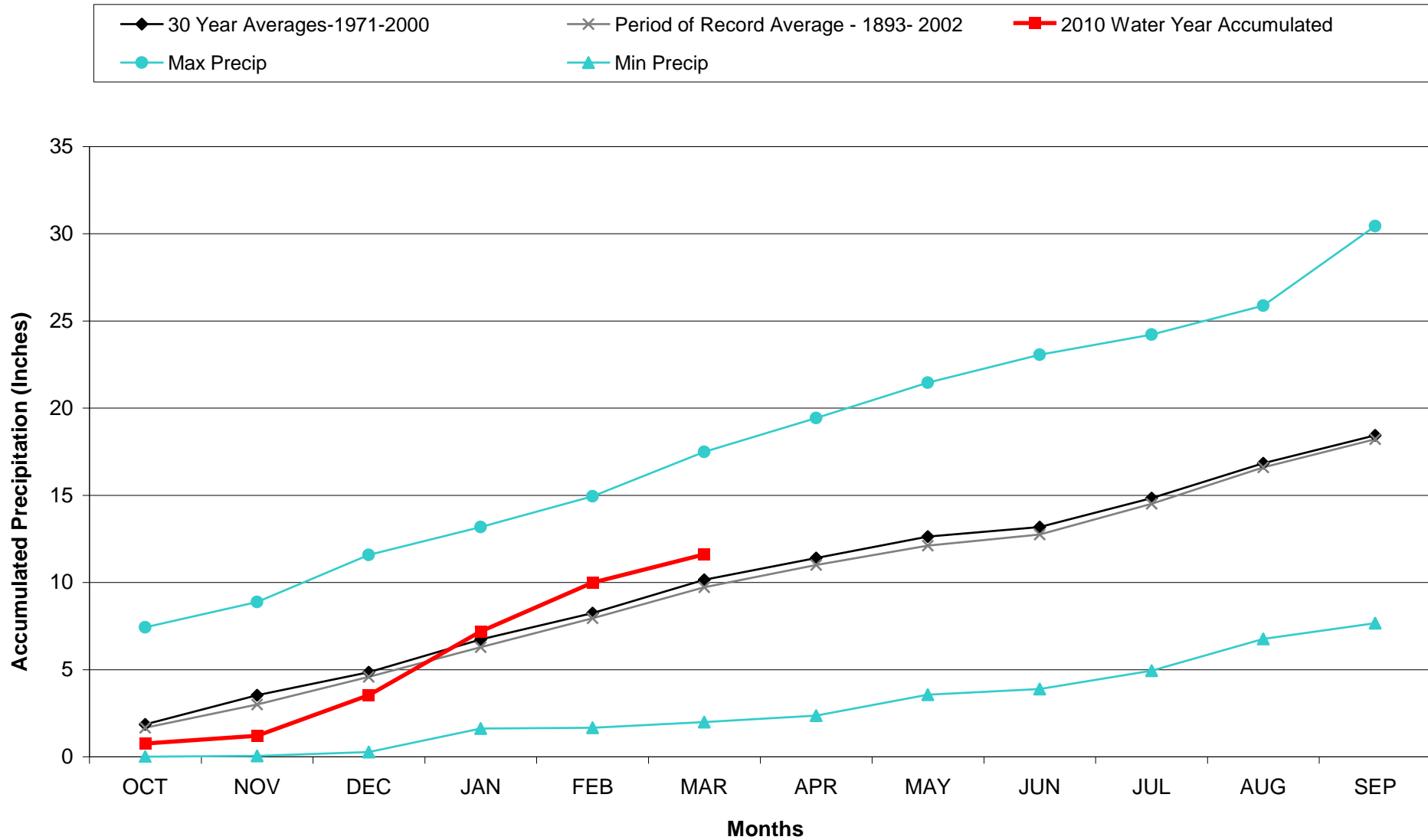
# Division 3 – Montrose

## Montrose #2 2010 Water Year



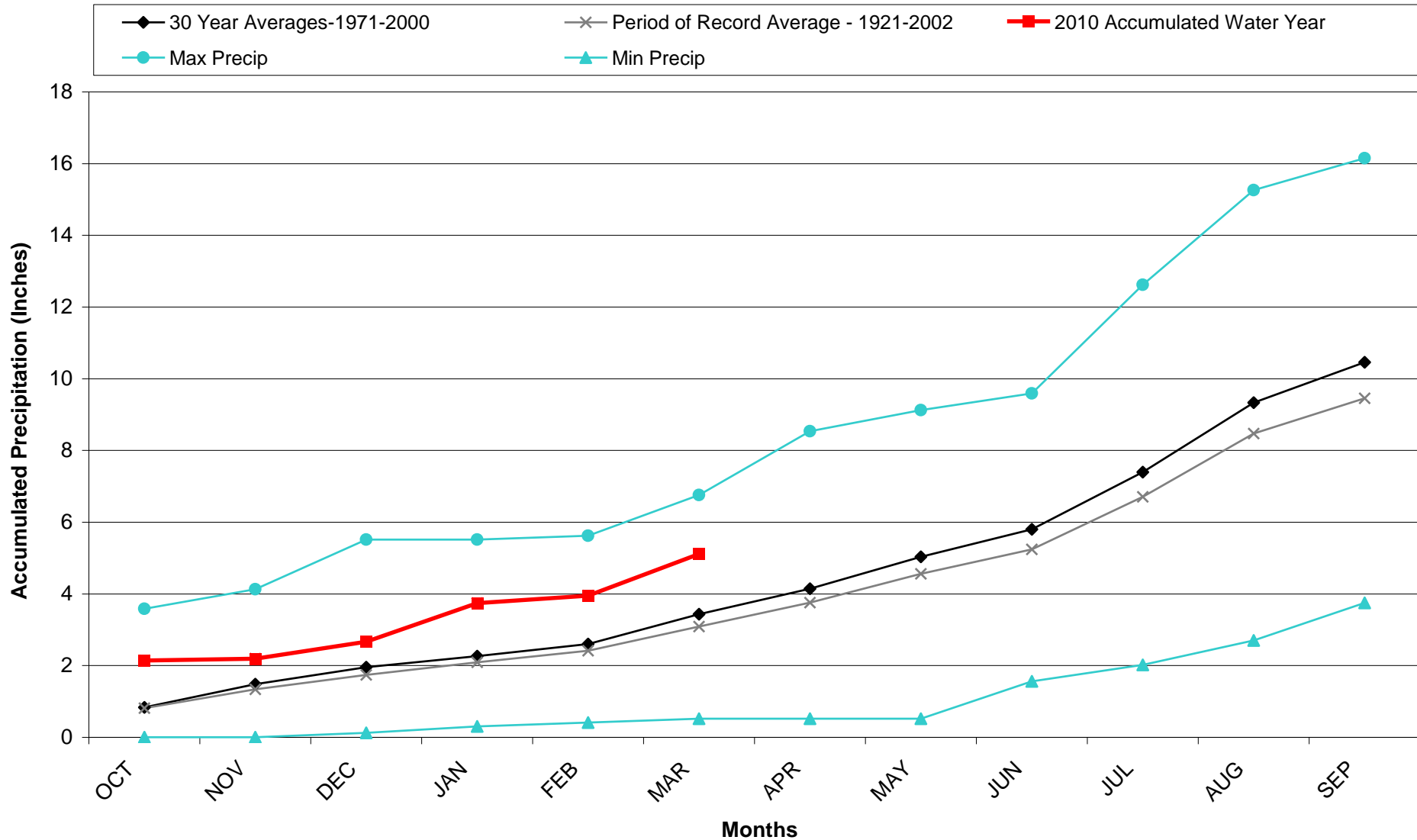
# Division 3 – Mesa Verde NP

## Mesa Verde NP 2010 Water Year



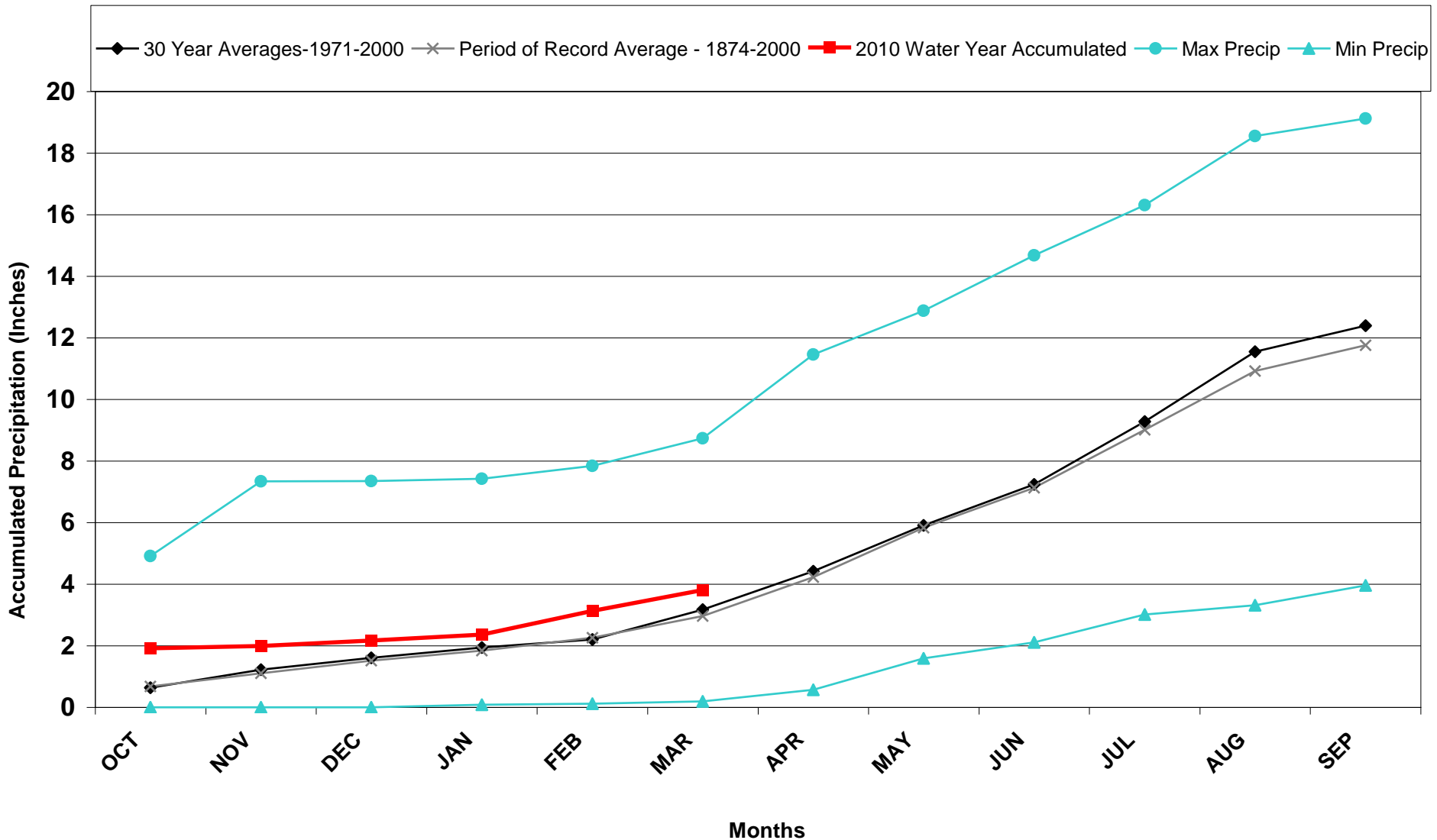
# Division 4 – Del Norte

## Del Norte 2010 Water Year



# Division 5 – Pueblo

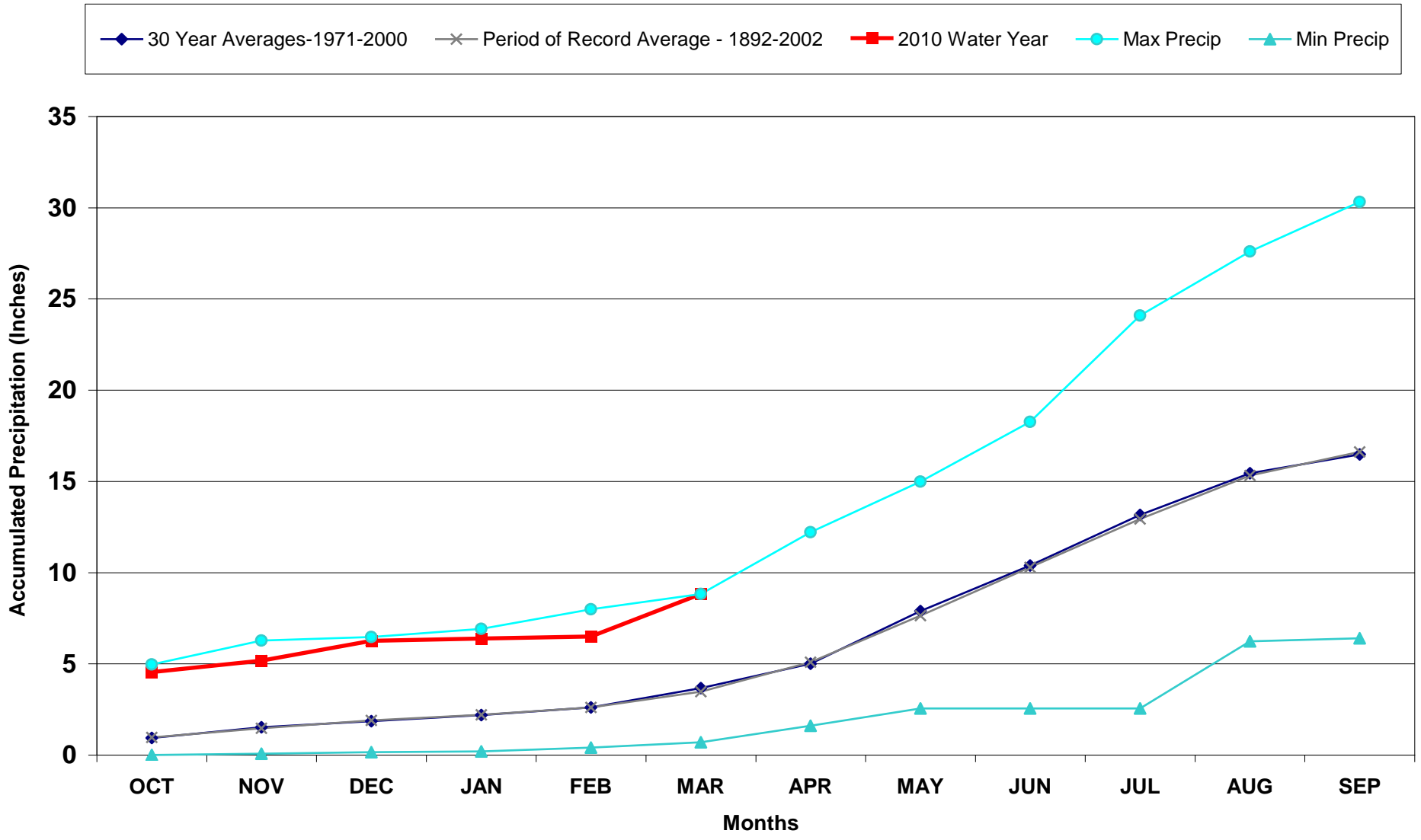
## Pueblo WSO 2010 Water Year





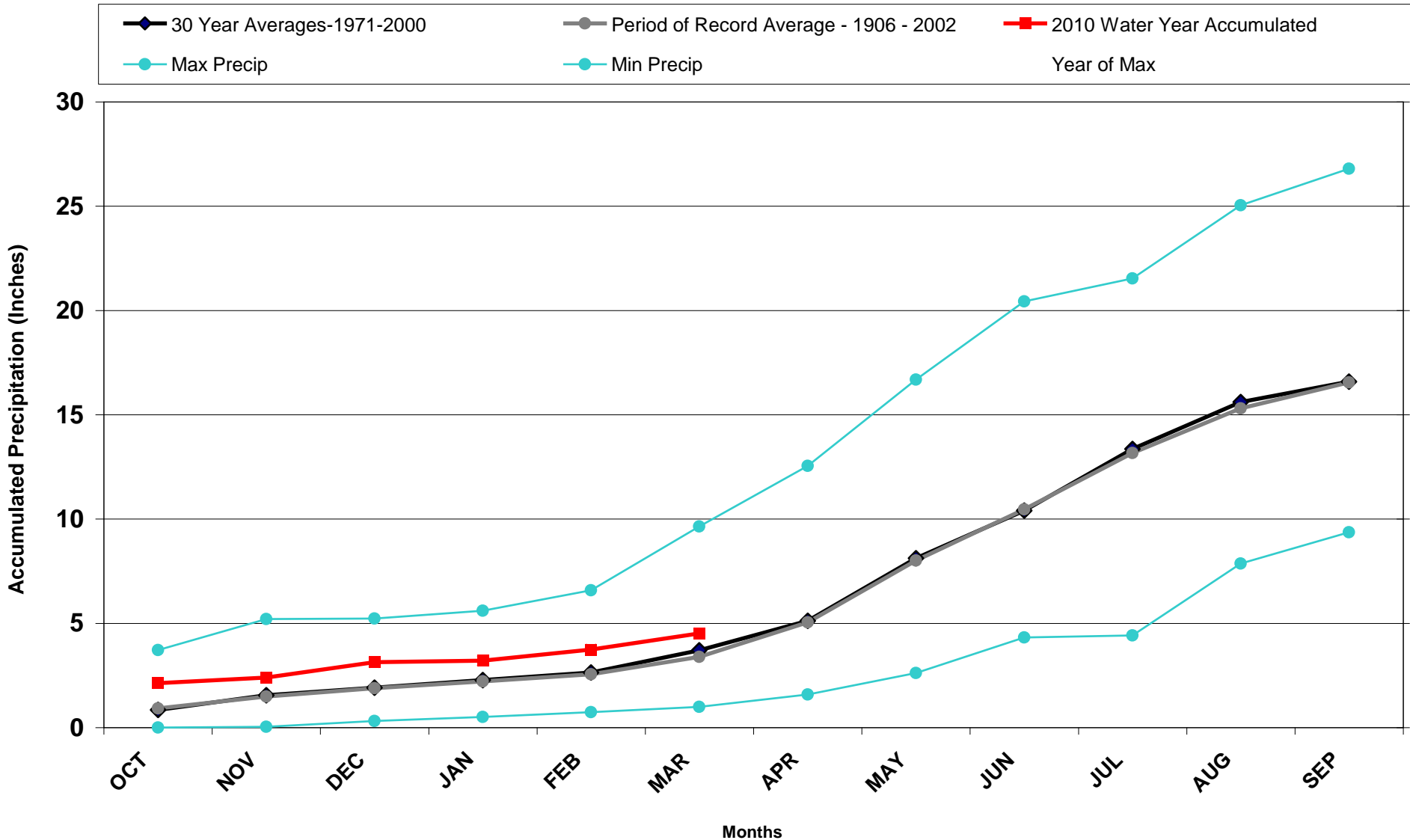
# Division 6 - Burlington

## Burlington 2010 Water Year



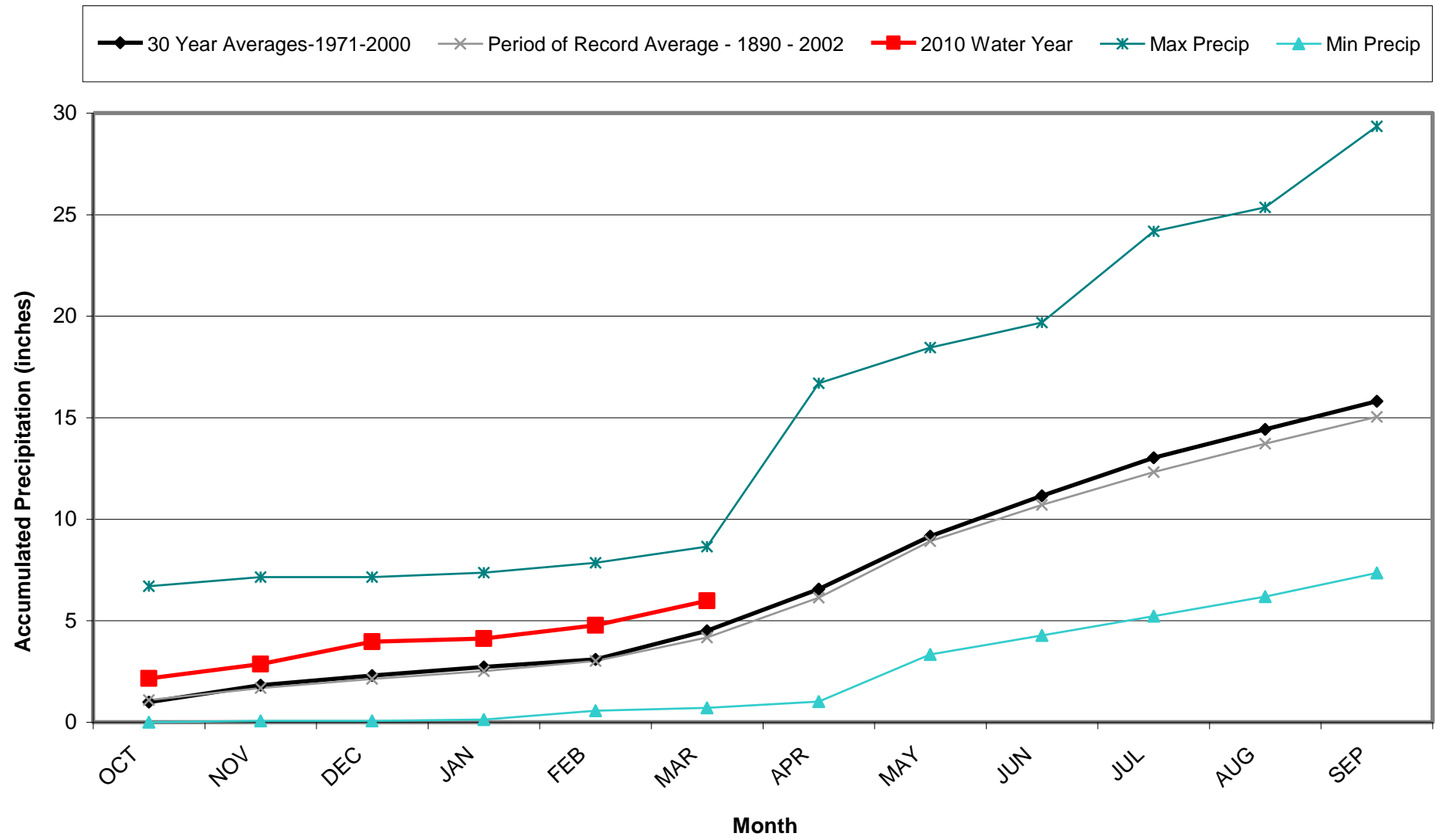
# Division 7 – Akron

## Akron 4E 2010 Water Year



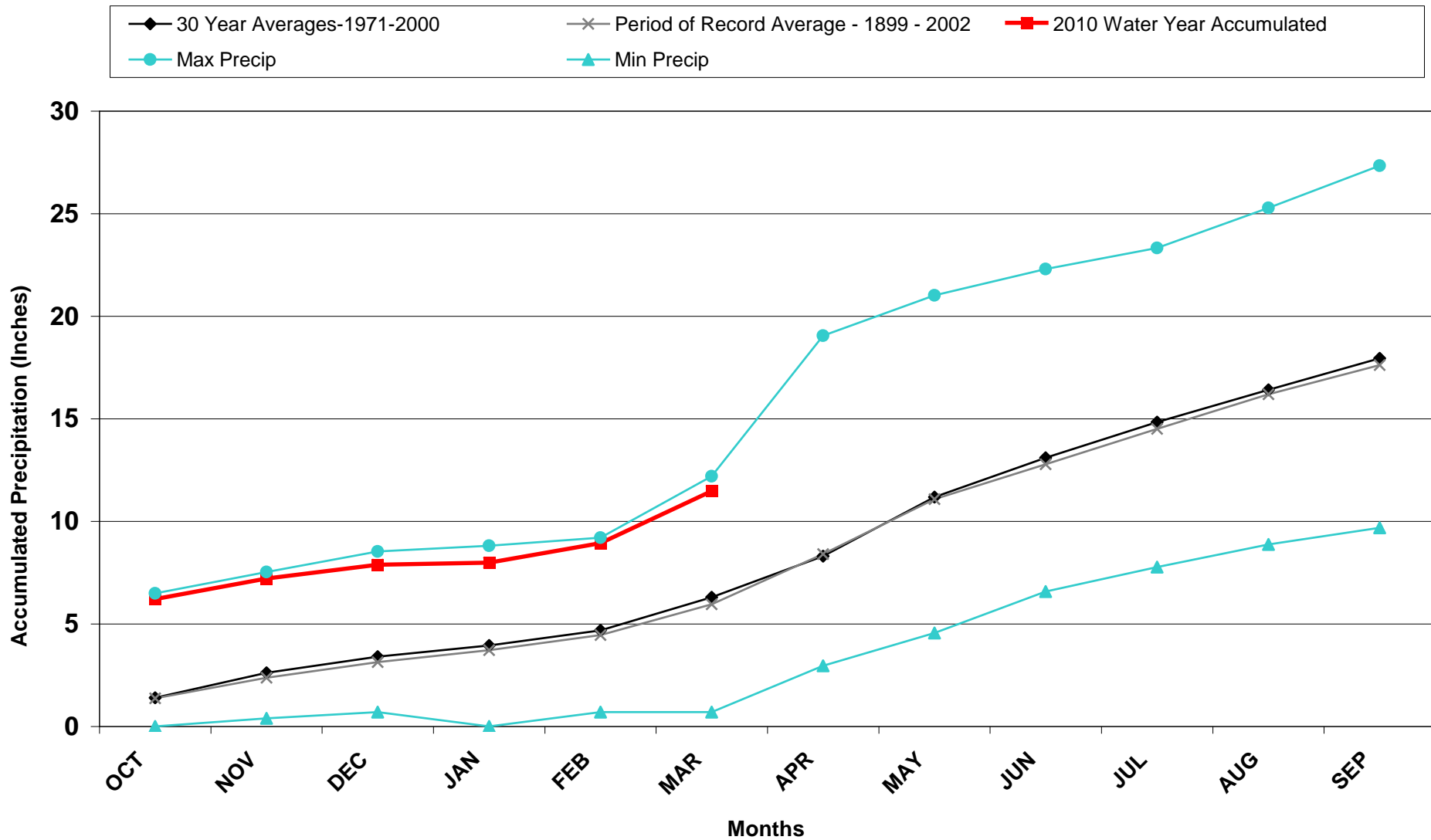
# Division 8 – Fort Collins

## Fort Collins 2010 Water Year



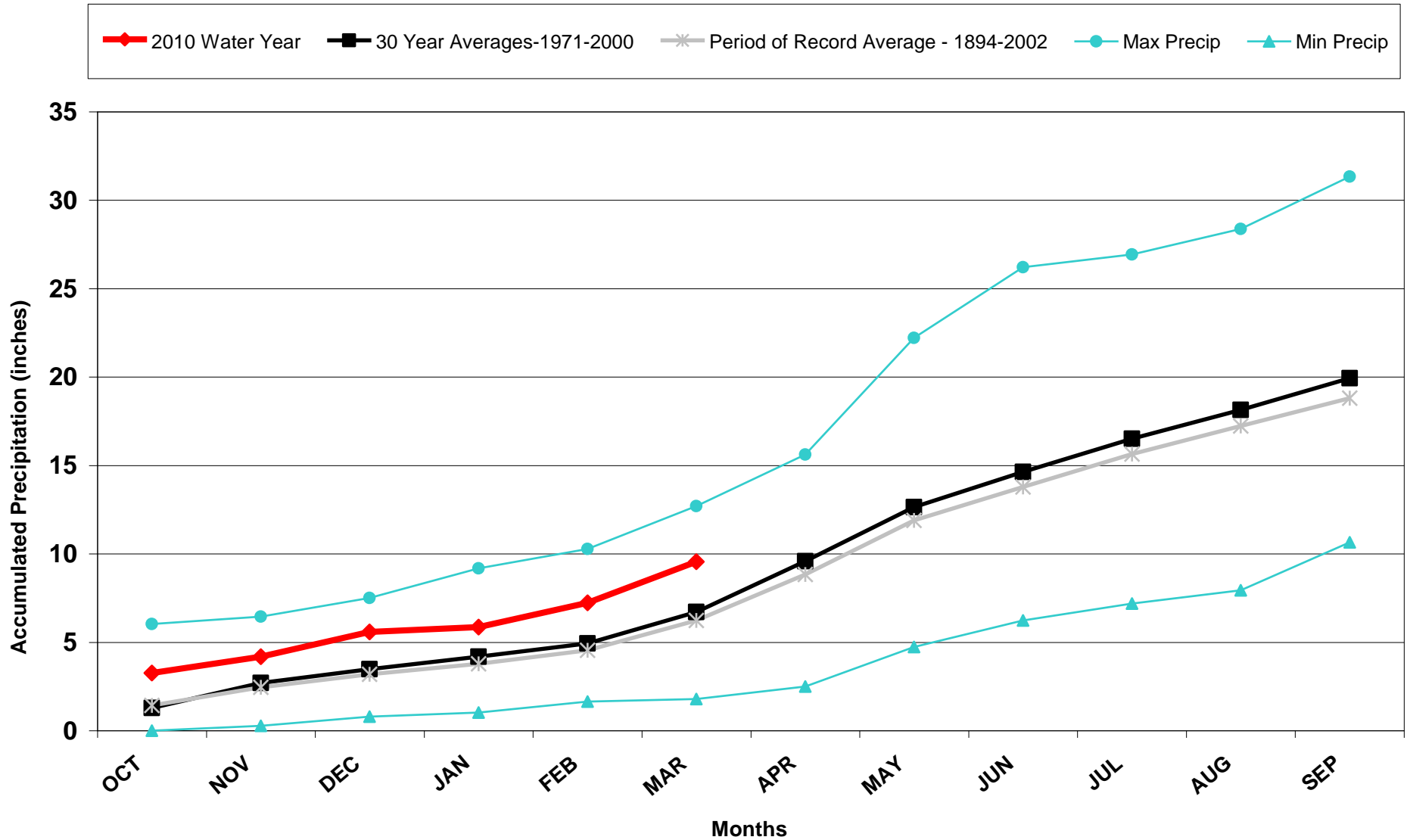
# Division 8 – Kassler

## Kassler 2010 Water Year



# Division 8 - Boulder

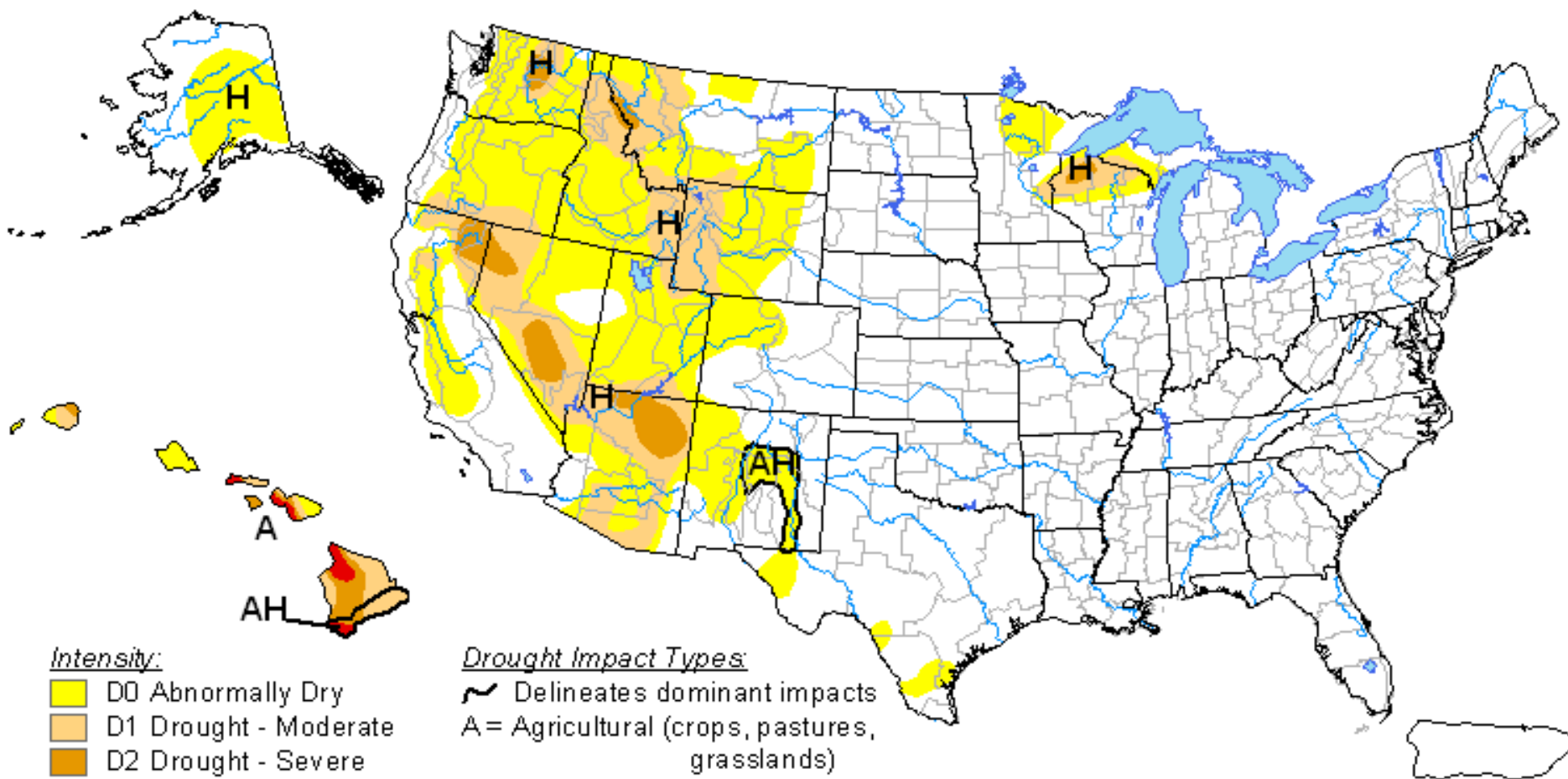
## Boulder 2010 Water Year








# U.S. Drought Monitor

February 23, 2010


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>



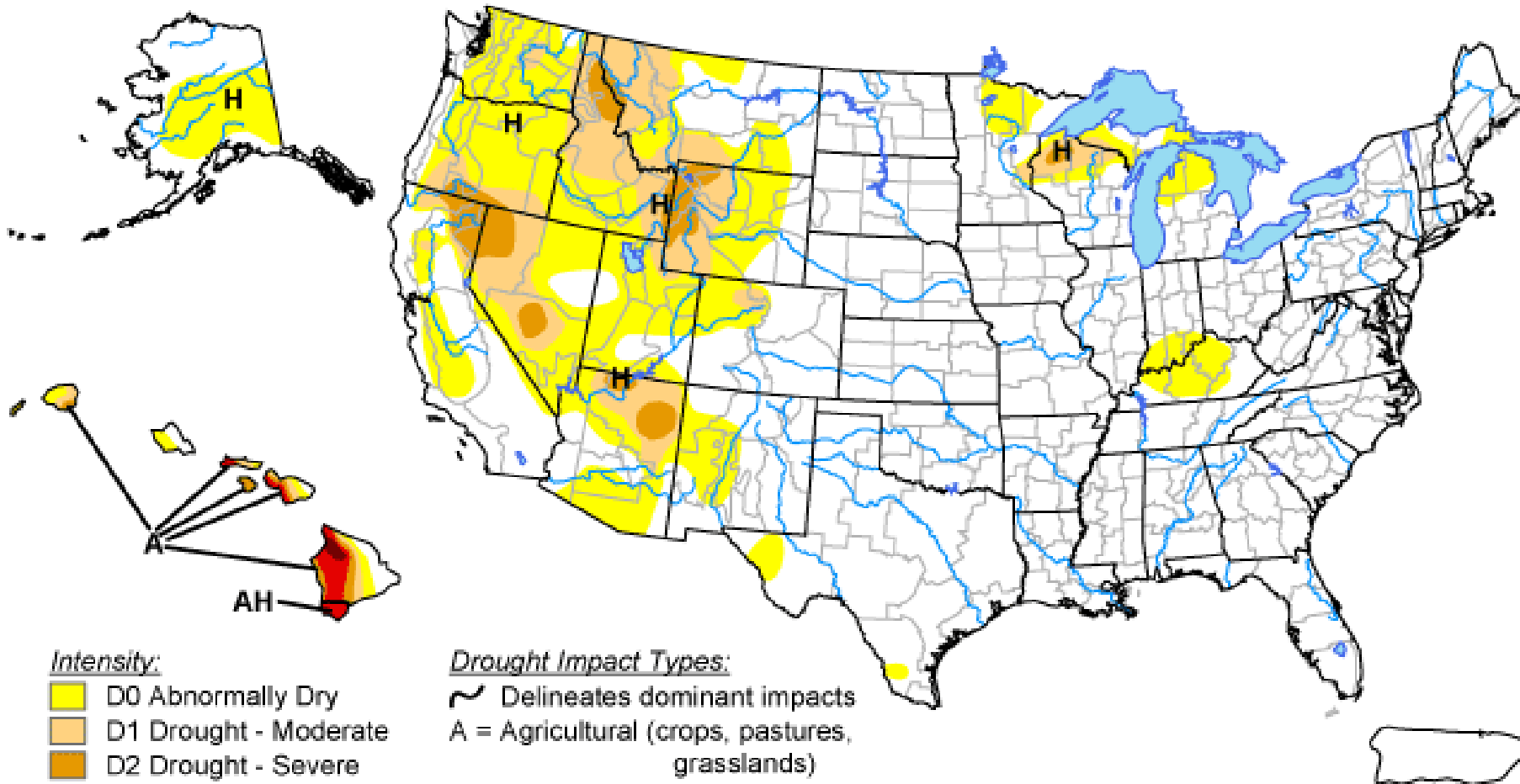
Released Thursday, February 25, 2010

Author: Brad Rippey, U.S. Department of Agriculture






# U.S. Drought Monitor

March 16, 2010


Valid 7 a.m. EST



## Intensity:

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

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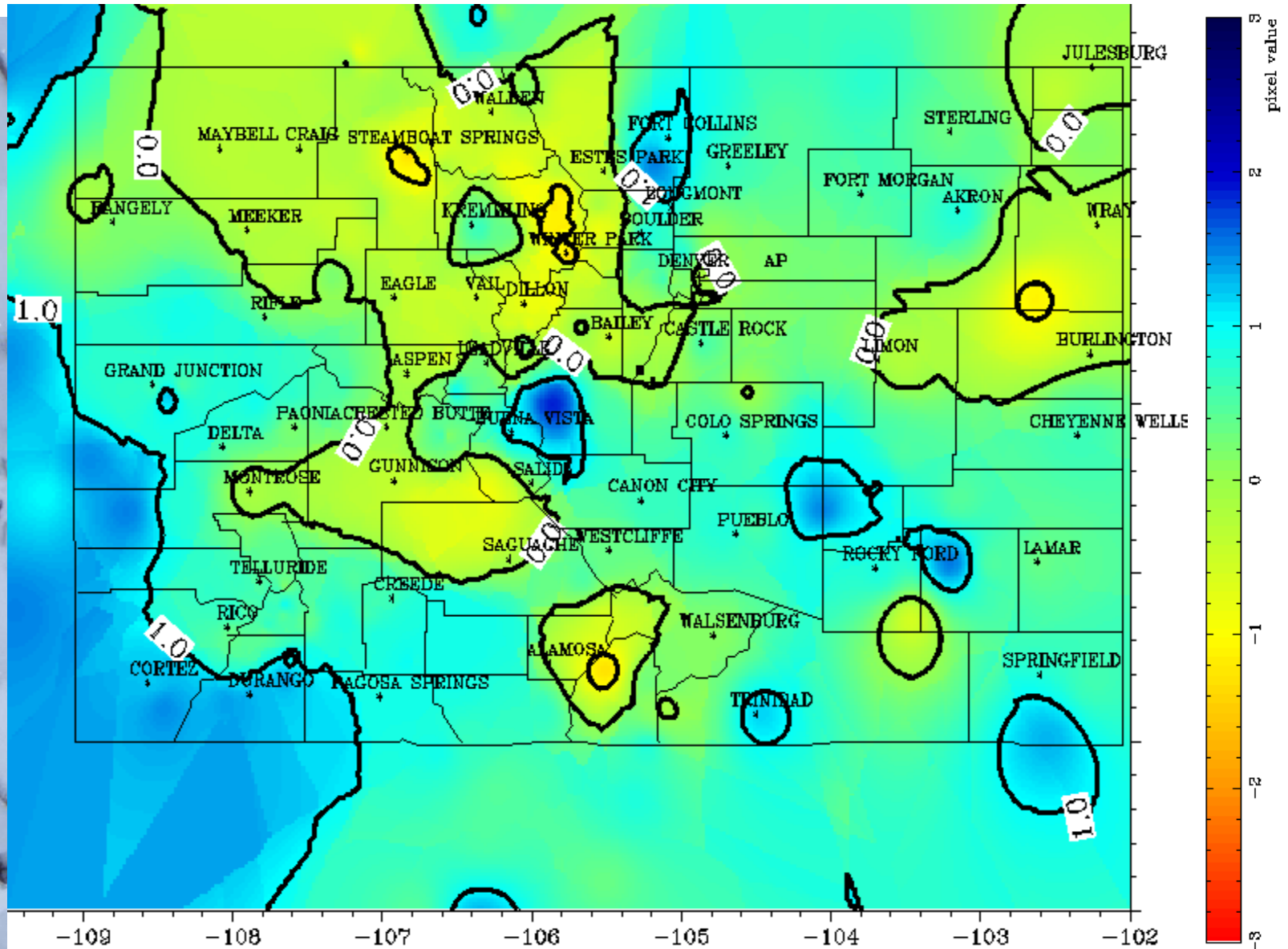
<http://drought.unl.edu/dm>



Released Thursday, March 18, 2010

Author: Matthew Rosencrans, NOAA/NWS/NCEP/CPC

# 3-month SPI

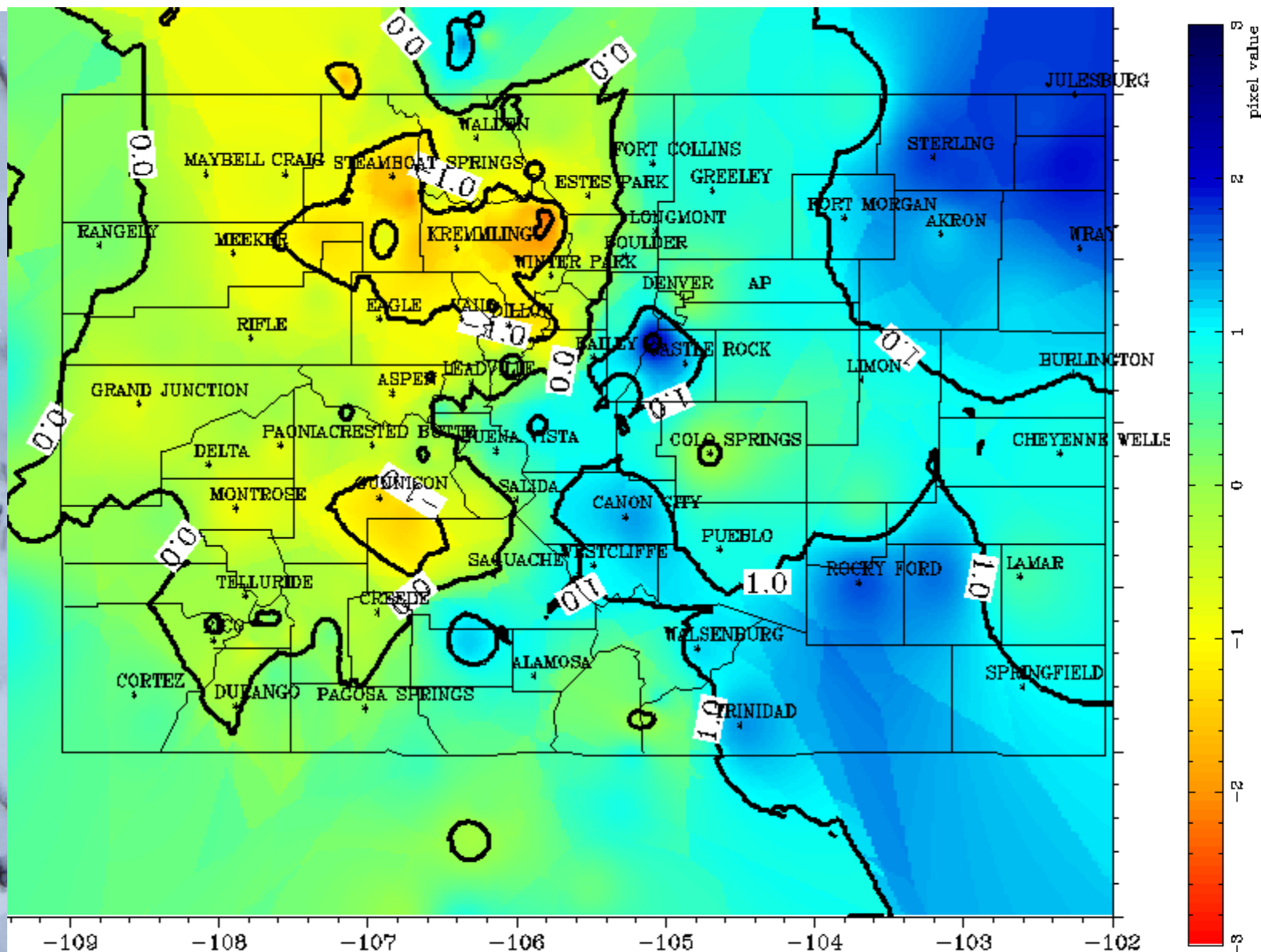


100 % < 2.0	4 % < -1.0
82 % < 1.0	0 % < -2.0
32 % < 0.0	0 % < -3.0

Produced by:  
Colorado Climate Center  
Fort Collins, CO



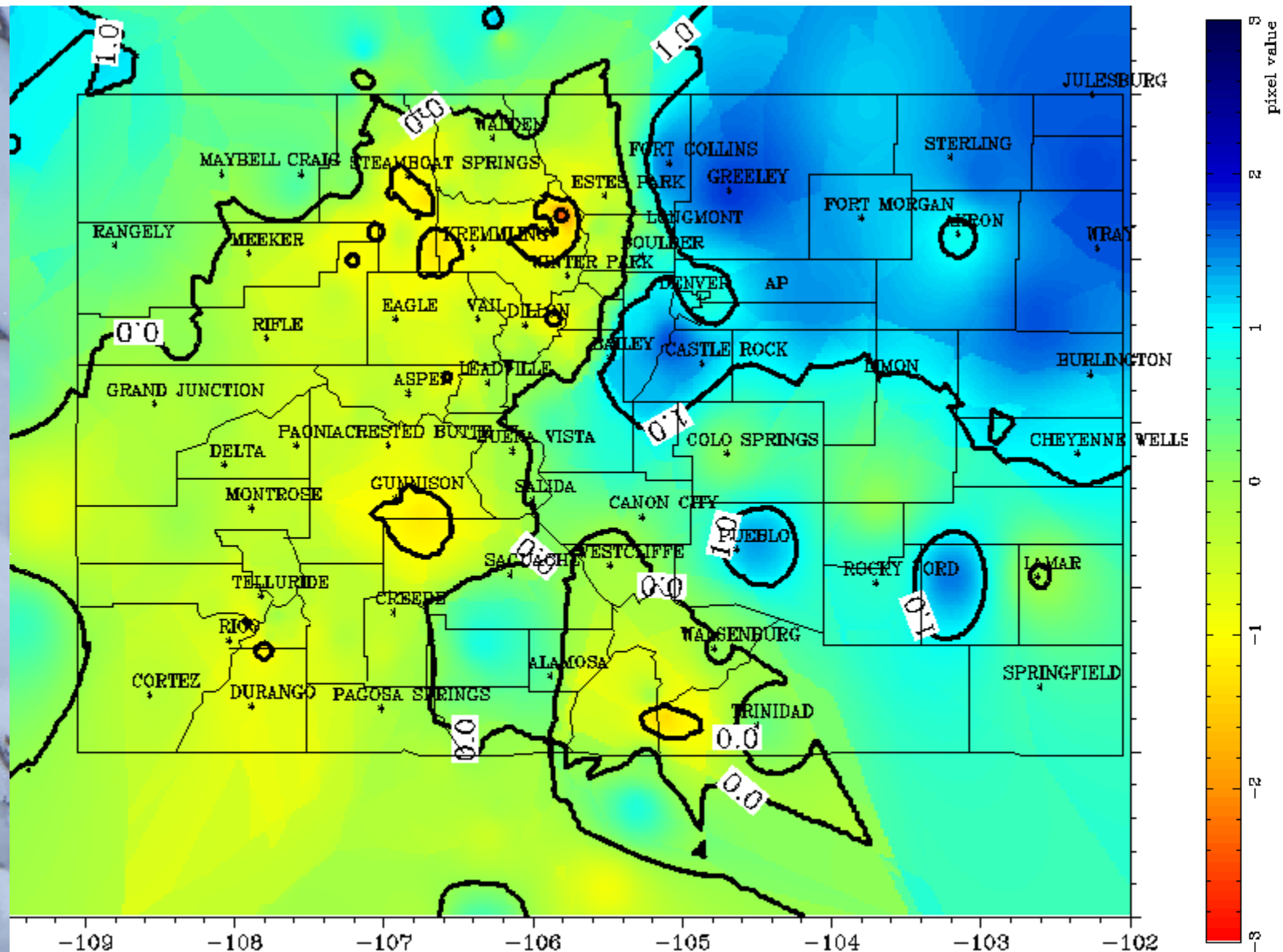
# 6-month SPI



100 % < 2.0	7 % < -1.0
80 % < 1.0	0 % < -2.0
35 % < 0.0	0 % < -3.0

Produced by:  
Colorado Climate Center  
Fort Collins, CO

# 12-month SPI



100 % < 2.0	1 % < -1.0
81 % < 1.0	0 % < -2.0
35 % < 0.0	0 % < -3.0

Produced by:  
Colorado Climate Center  
Fort Collins, CO

# What About Flood Potential?



- Melting snow is usually not a big problem
  - but that doesn't mean it is never a problem
- Current conditions don't tell us much about our major flood potential for the coming months
- The next 12 weeks offer the greatest potential, climatologically, for large-area, long duration storms that produce “volume” floods -- example – April 1999
- We begin the transition from volume flood to flash flood potential as we move into late May and June

# Colorado Climate Center

Data and Power Point Presentations  
available for downloading

- <http://ccc.atmos.colostate.edu>
- then click on “Presentations”

**Colorado  
State  
University**

*Knowledge to Go Places*

