

Climate Update

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Colorado Climate Center

Atmospheric Science Department
Colorado State University

Presented to
Water Availability Task Force
July 16, 2009
Denver, CO

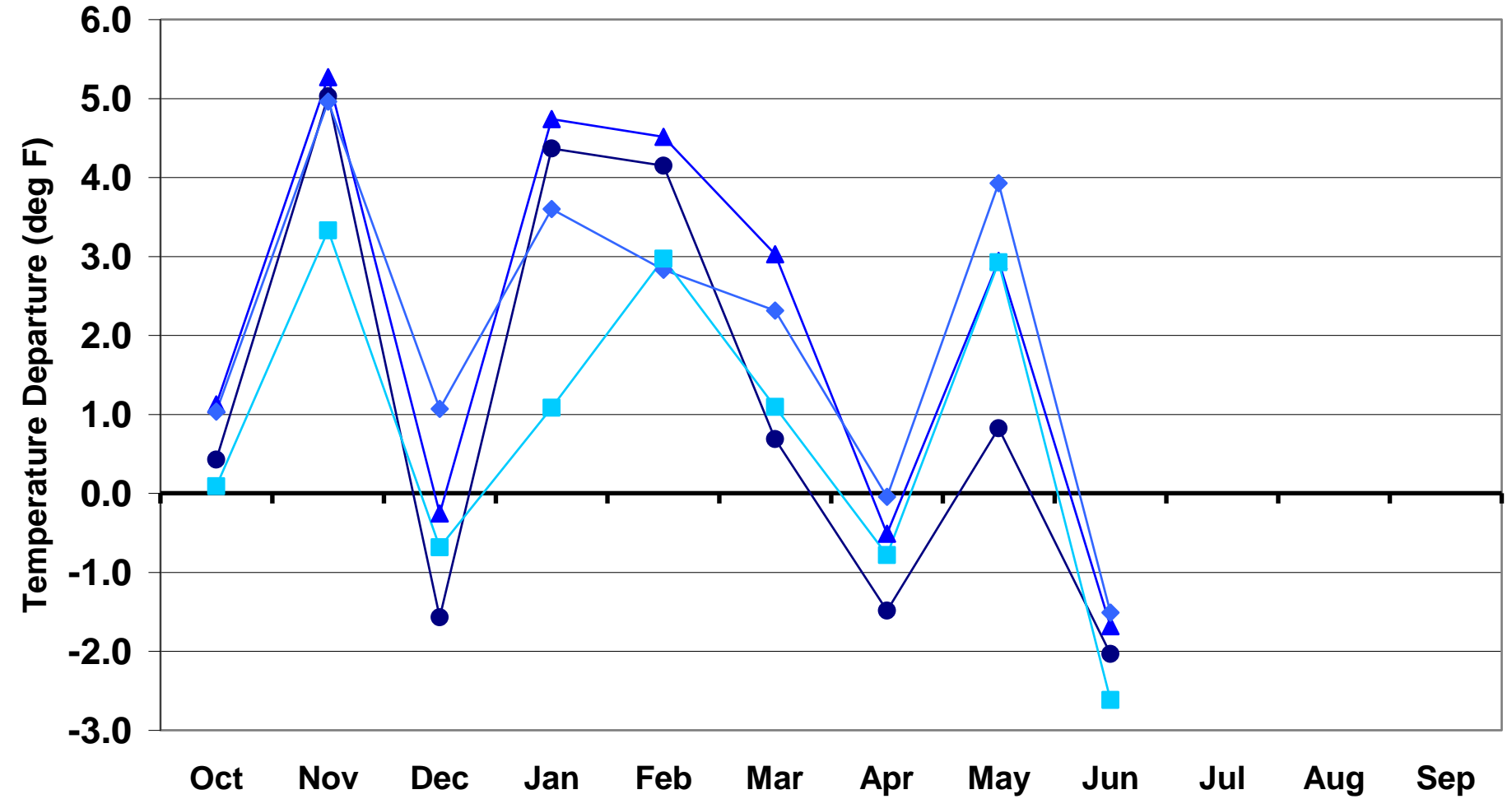
Prepared by Wendy Ryan



Colorado State University
Knowledge to Go Places

Water Year 2009 Temperature Departures

Water Year 2009



● Eastern Plains

▲ Foothills

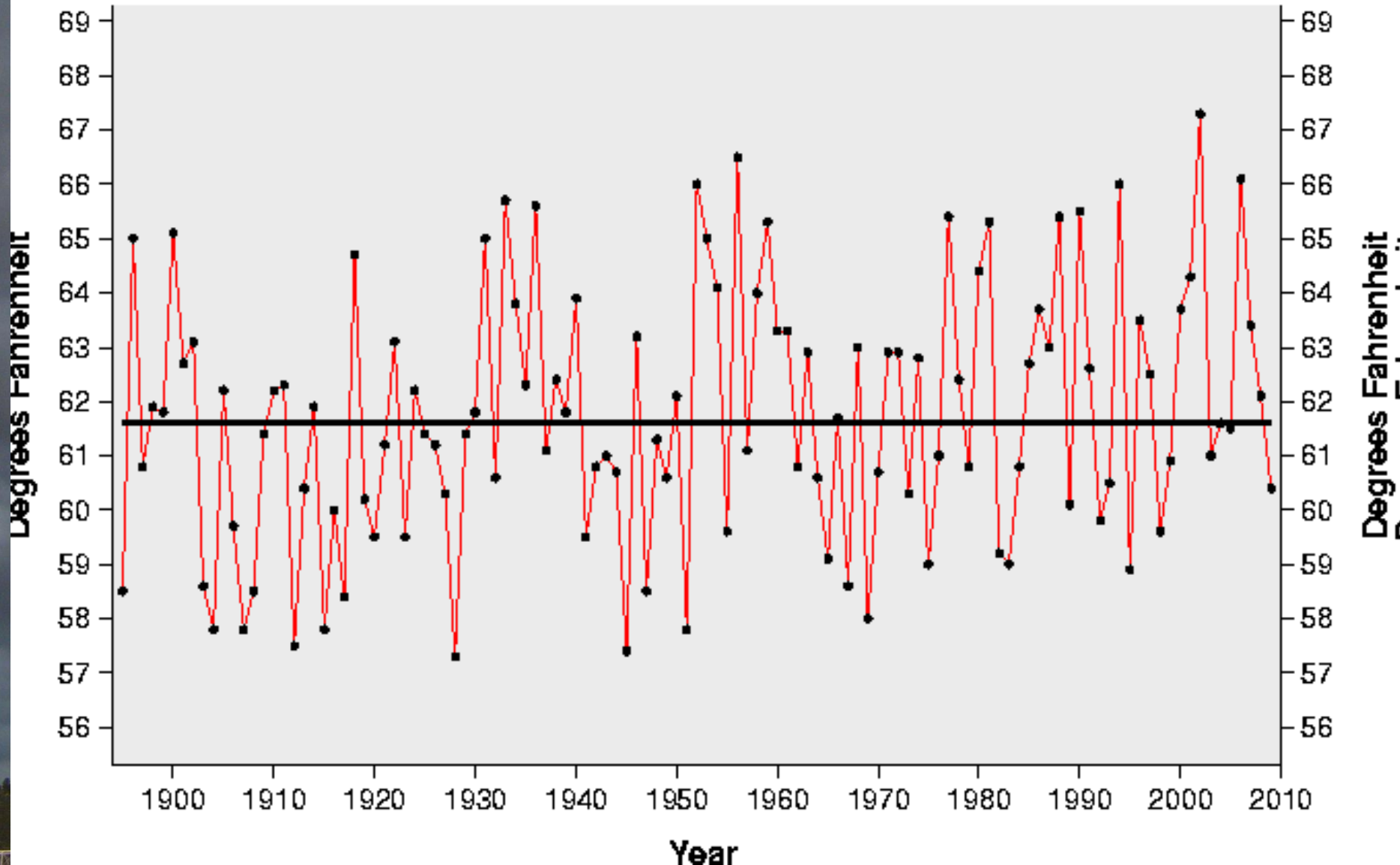
◆ Mountains

■ Western Valleys

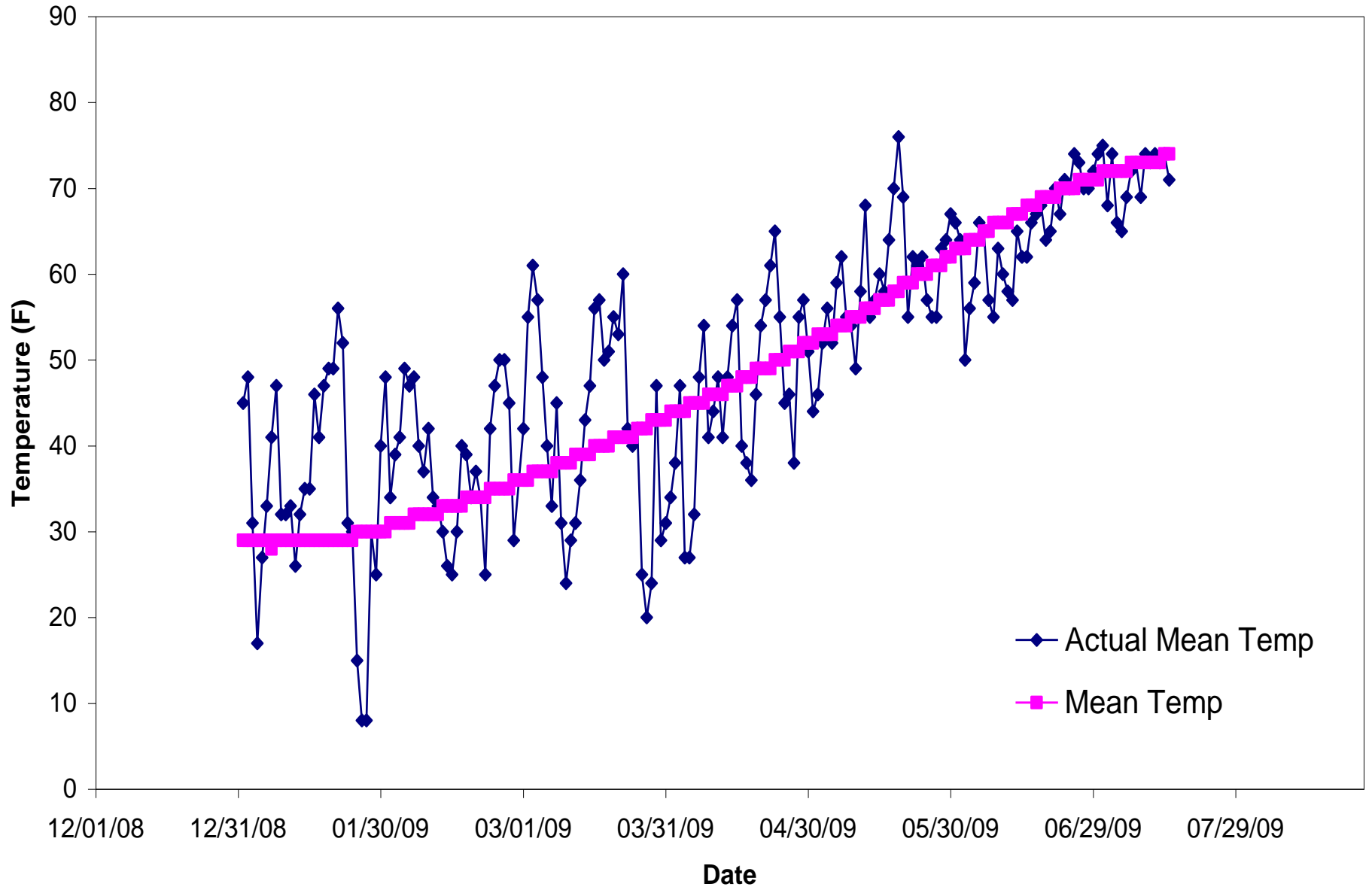
June Average Temperature History for Colorado (NCDC)

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

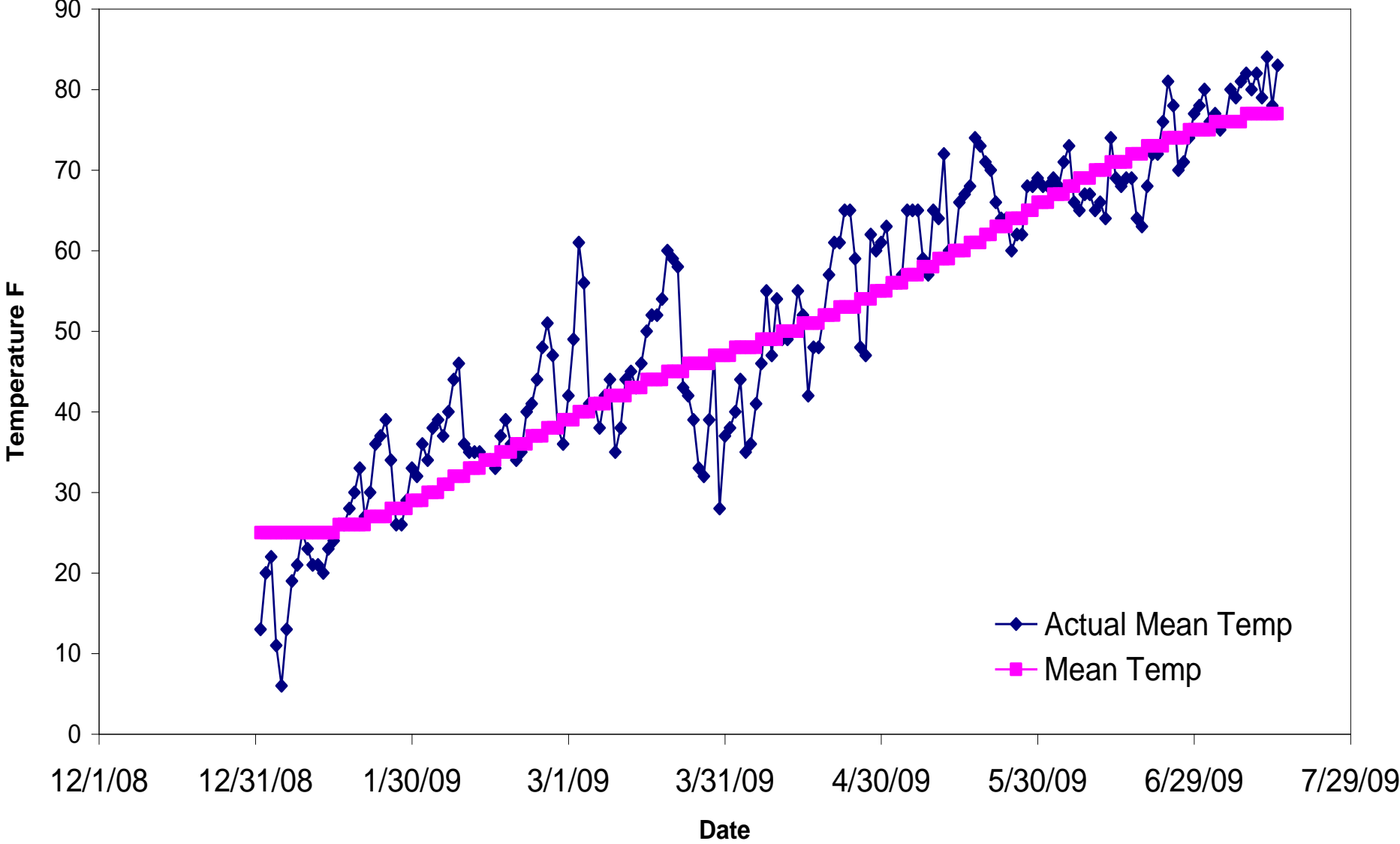
Rank: 60.4 degrees is 32nd coolest
for period of record 1895-2009



Denver, CO Jan 1 - July 15 2009 Mean and Actual Daily Temperature



Grand Junction Jan 1 - July 15 2009 Mean and Actual Daily Temperatures

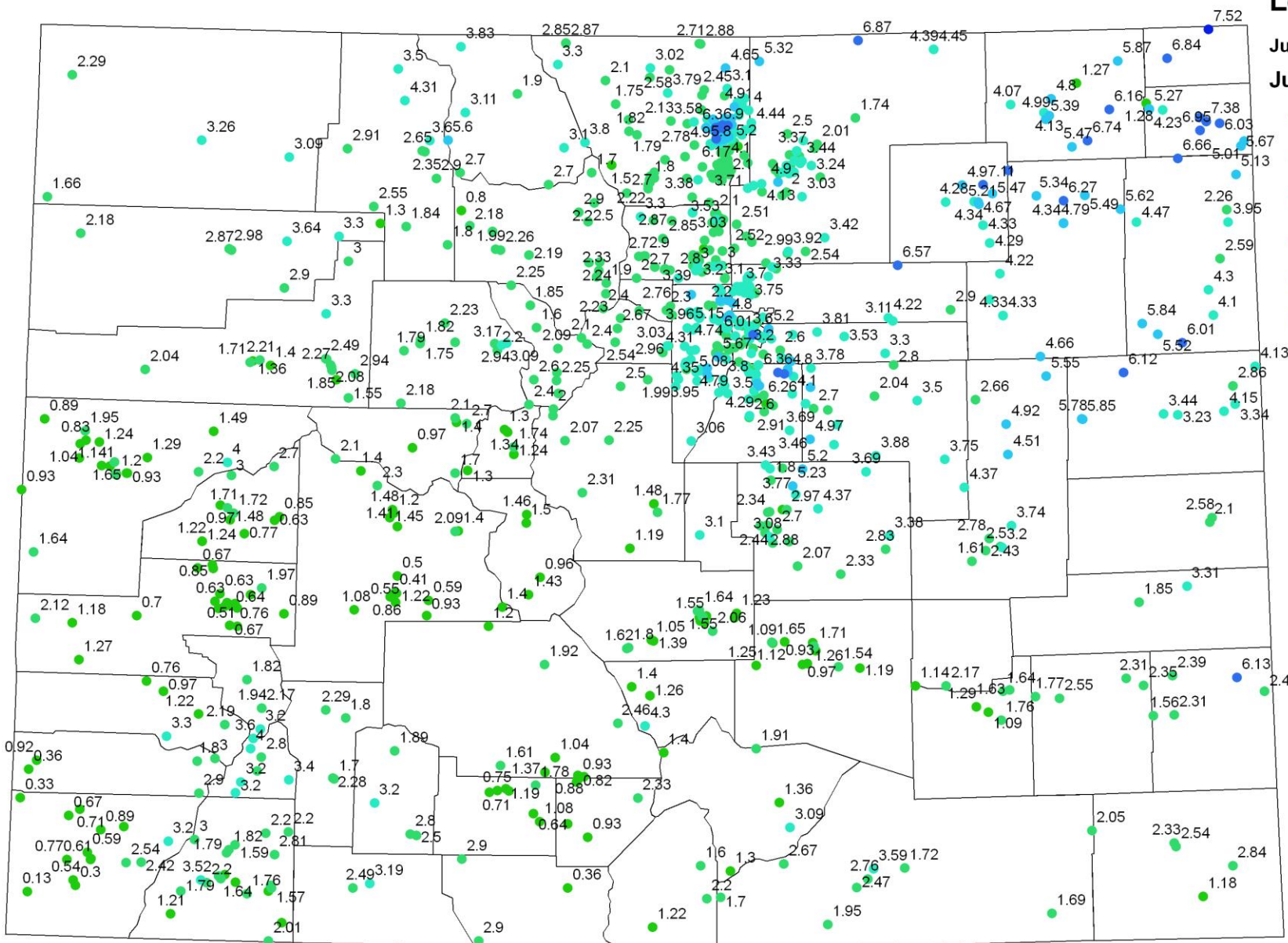


June 2009 Precipitation (in)

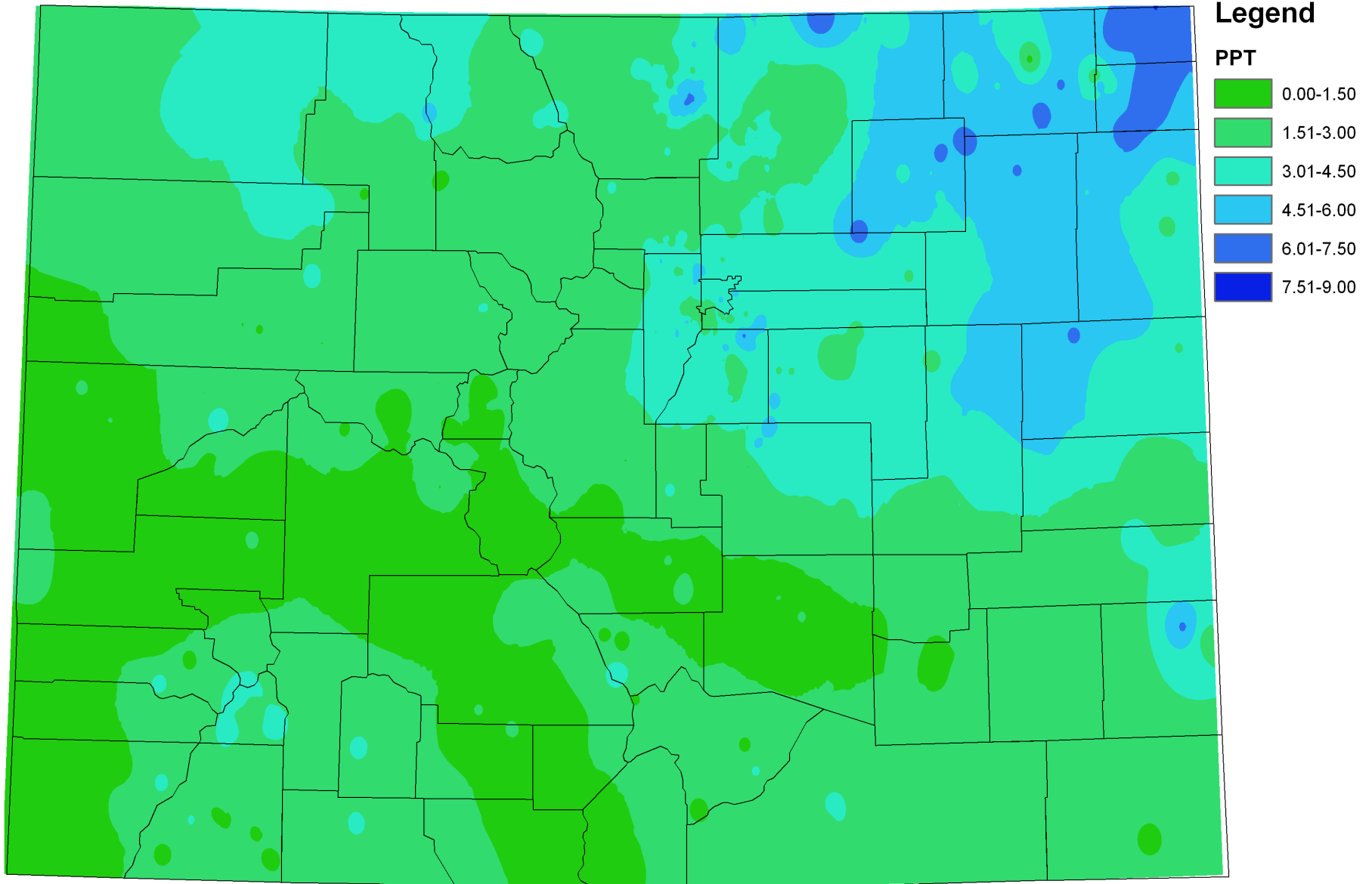
Legend

June_09
June

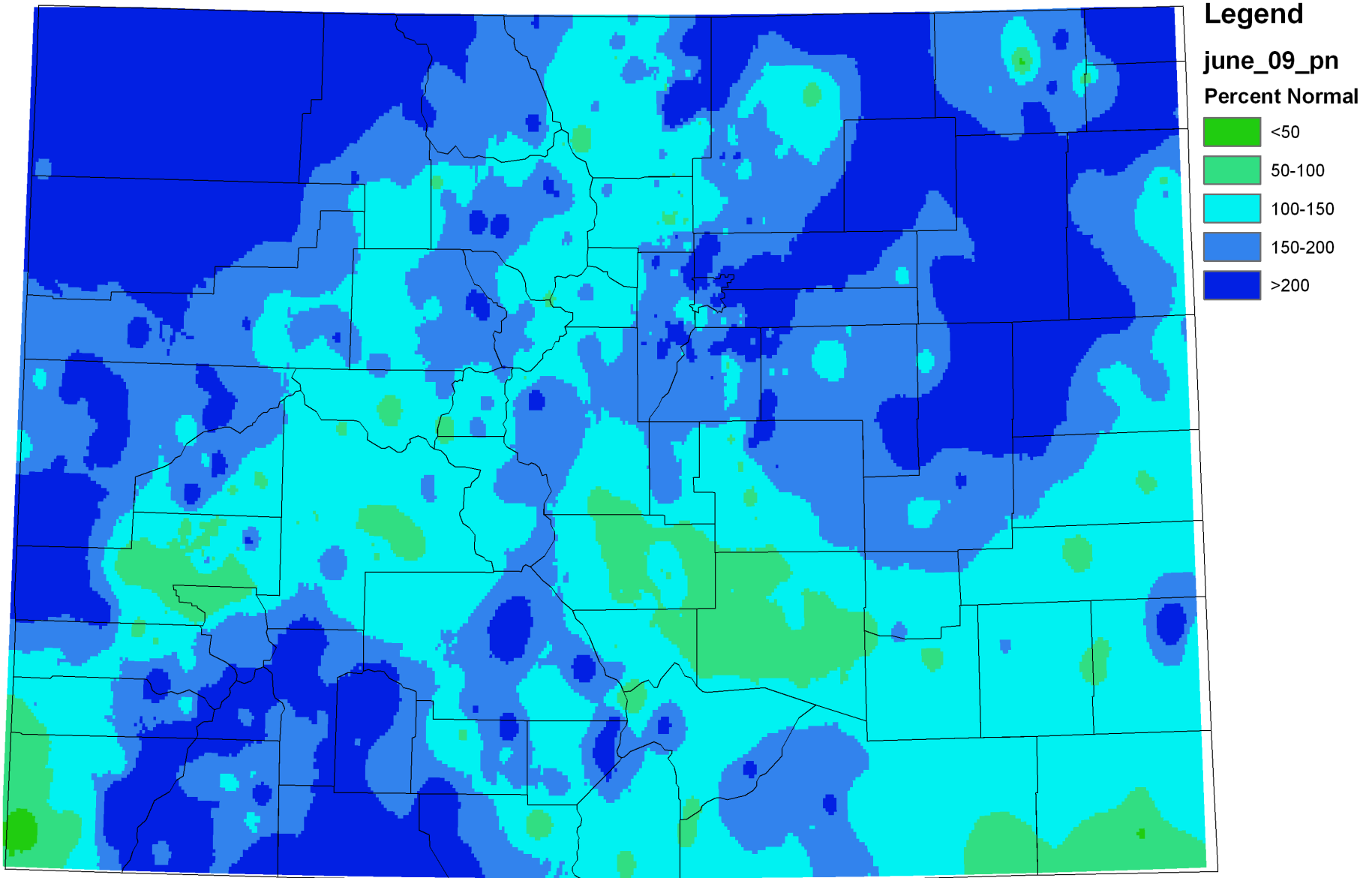
- 0.13 - 1.50
- 1.51 - 3.00
- 3.01 - 4.50
- 4.51 - 6.00
- 6.01 - 7.50
- 7.51 - 9.00



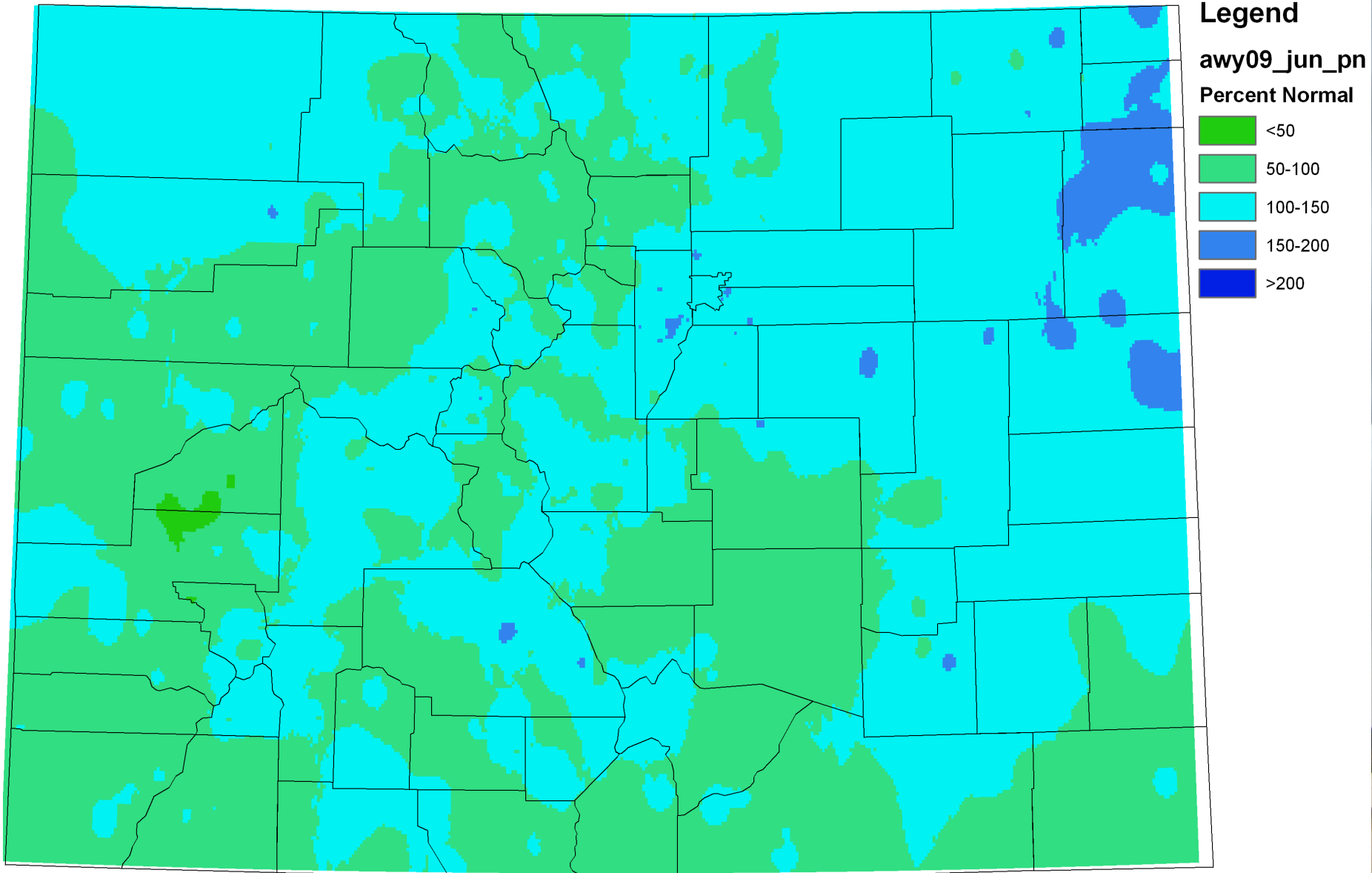
June 2009 Precipitation (in)



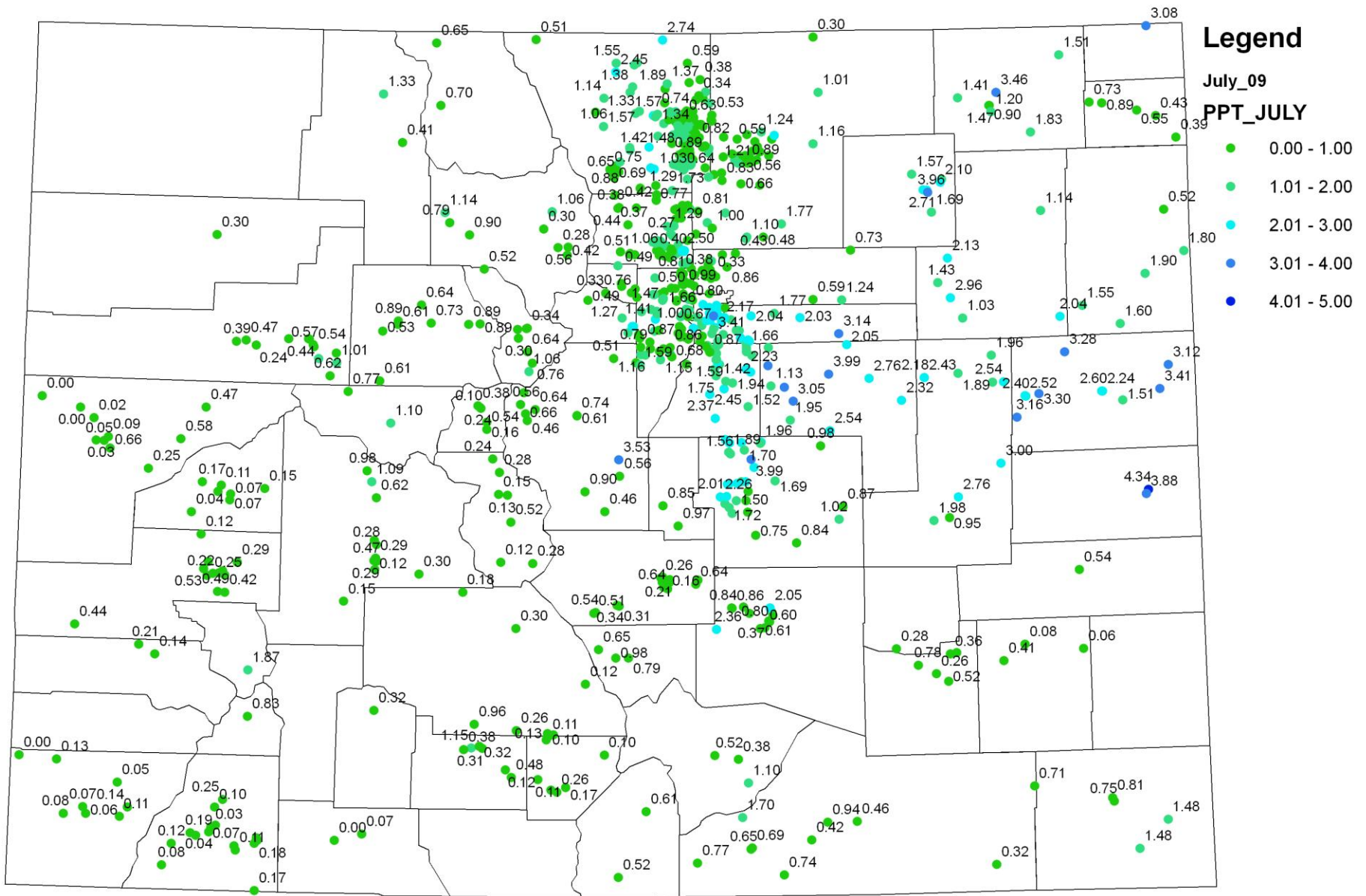
June 2009 Precipitation as Percent of Normal



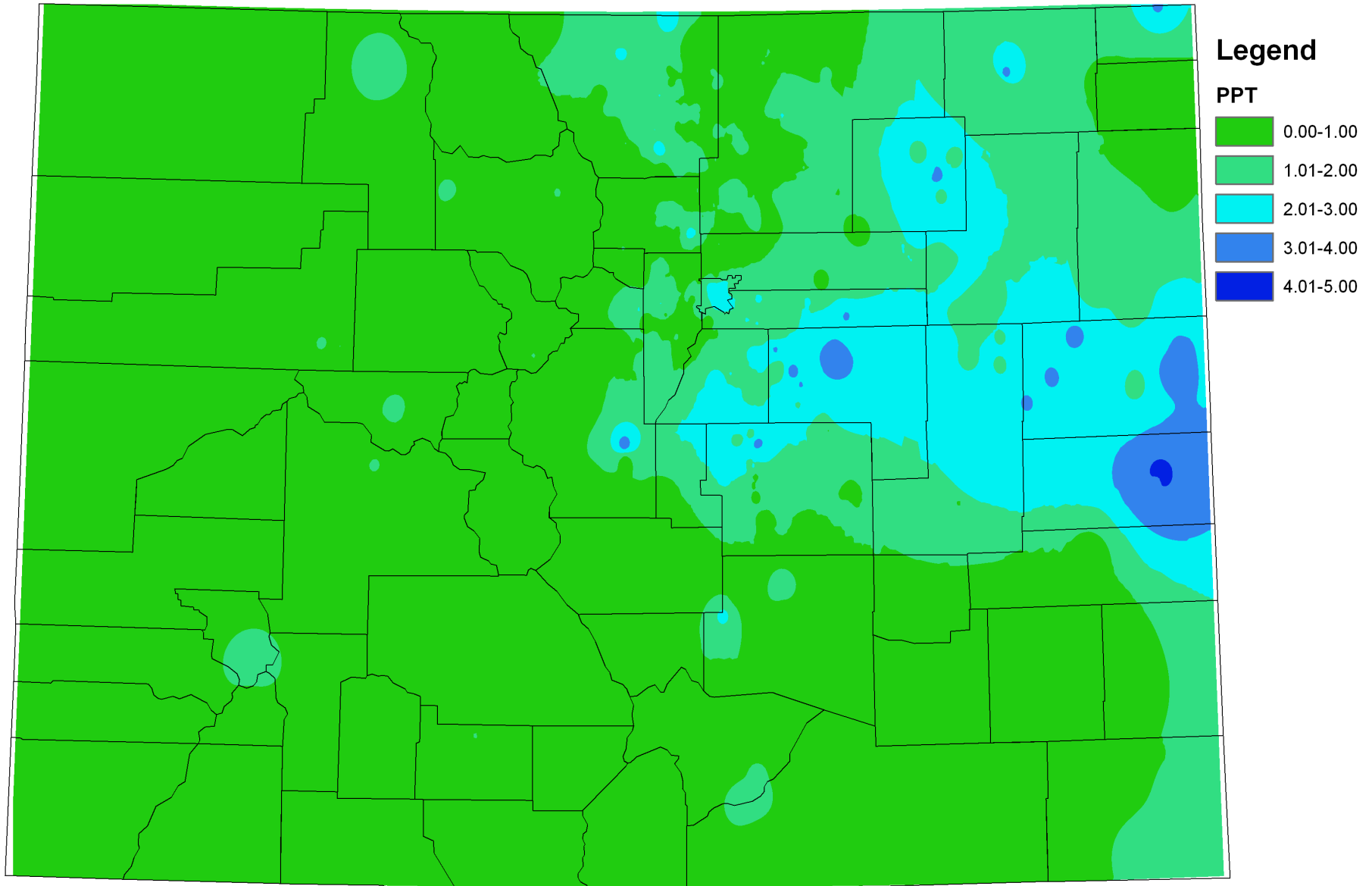
Water Year 2009 Precipitation as Percent of Normal (Oct 08 - June 09)



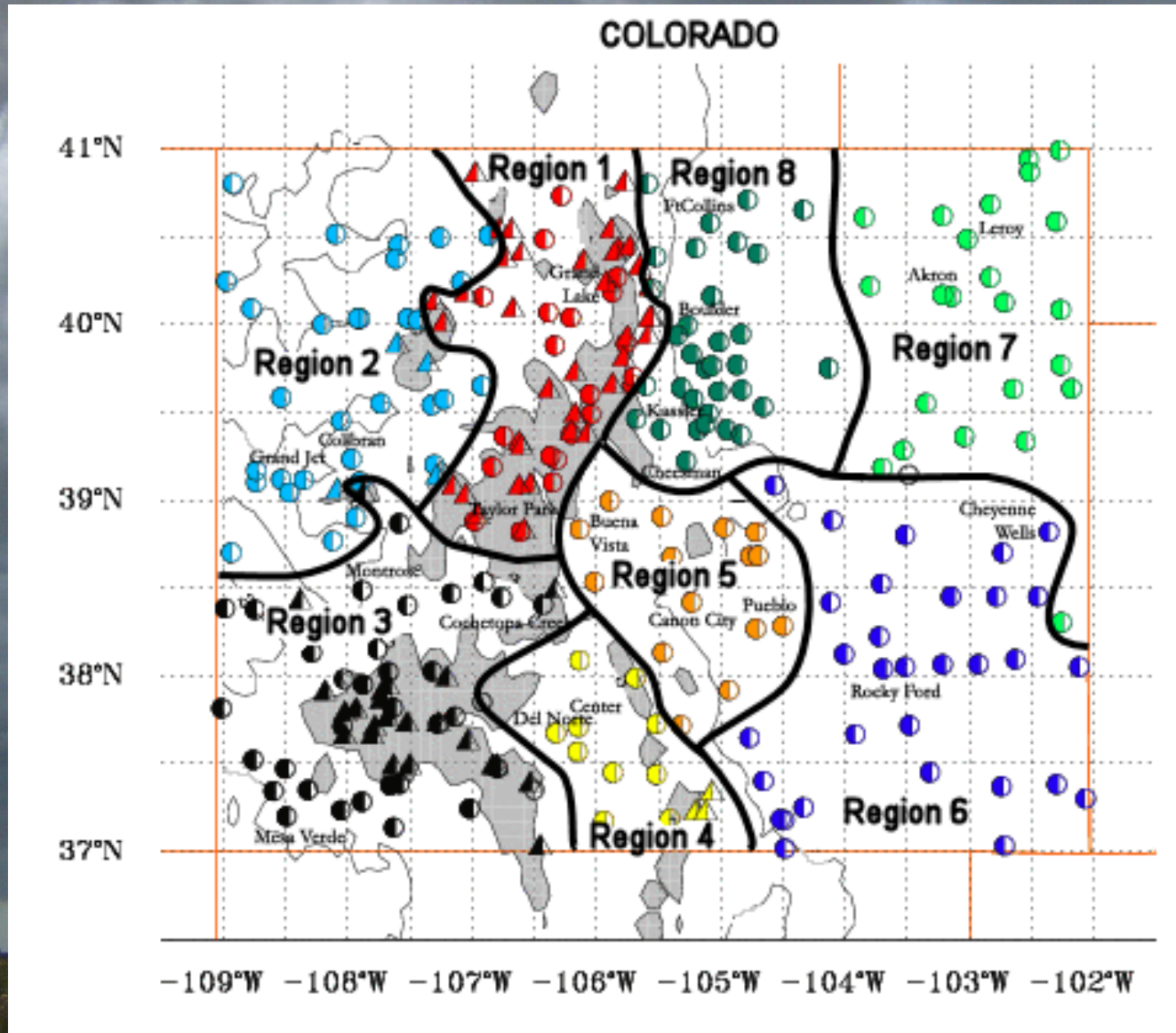
July 2009 Precipitation (Preliminary through July 13)



July 2009 Precipitation (Preliminary through July 13)

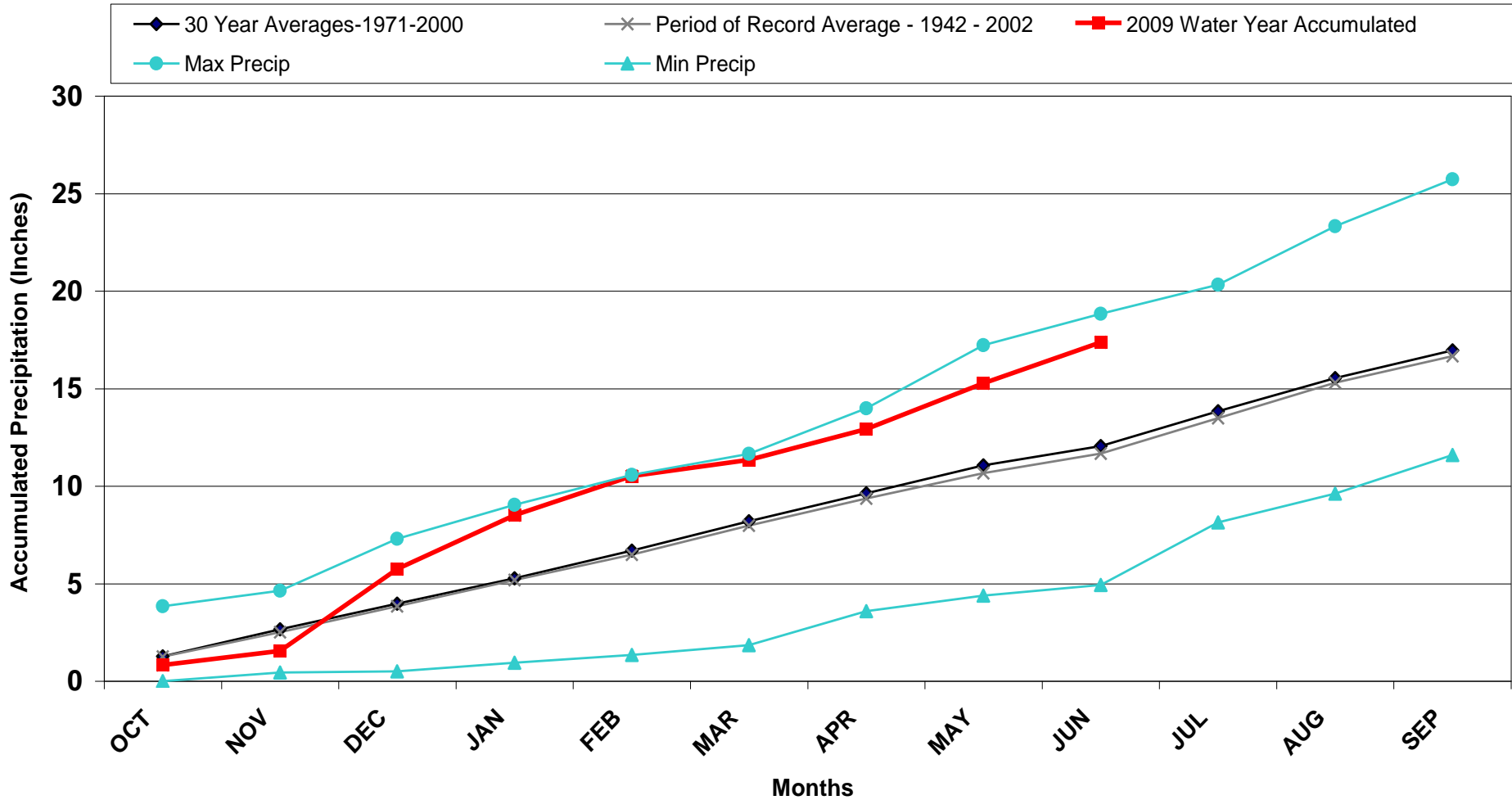


Climate divisions defined by Dr. Klaus Wolter of NOAA's Climate Diagnostic Center in Boulder, CO



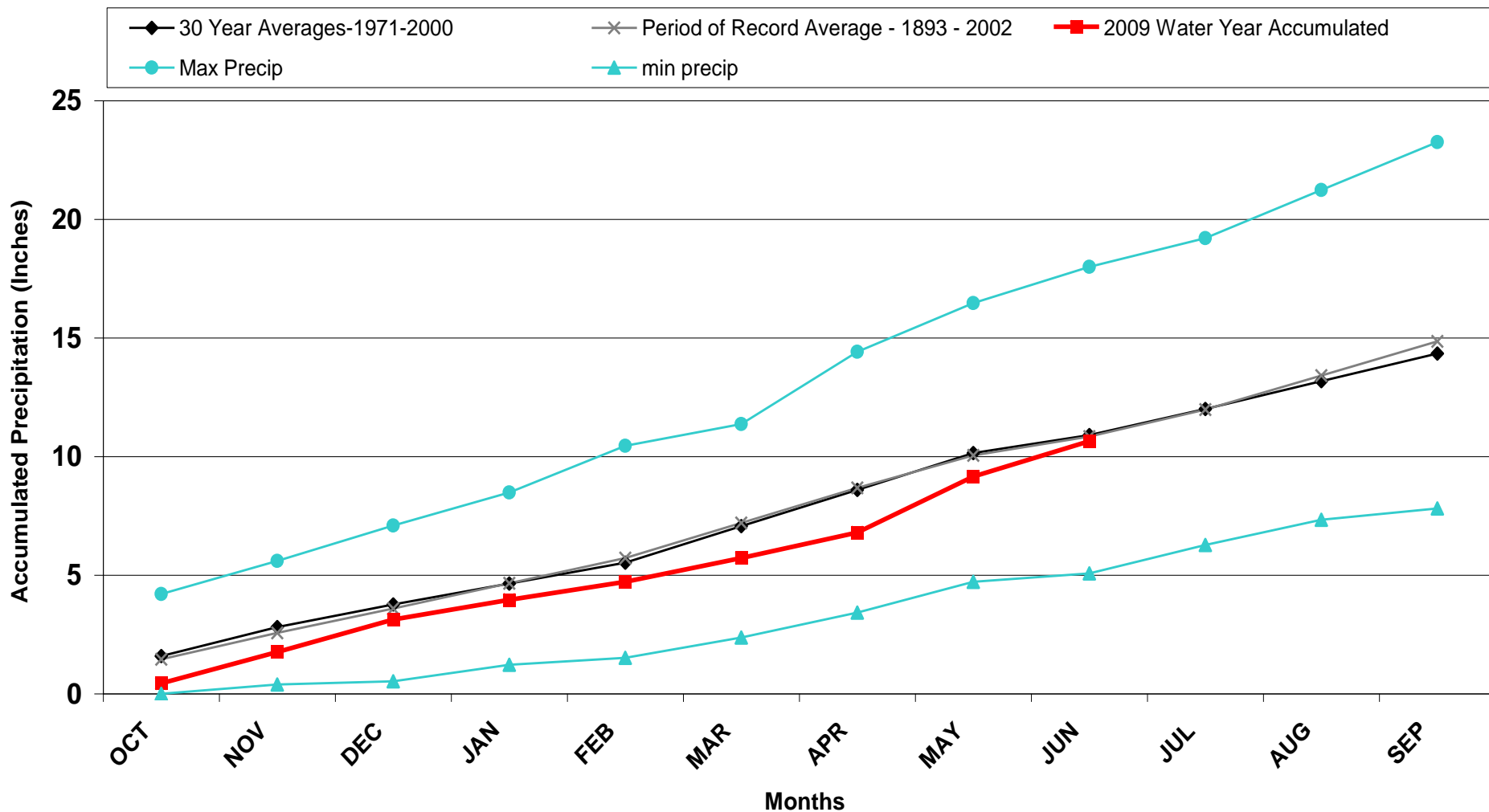
Division 1 – Taylor Park

Taylor Park 2009 Water Year



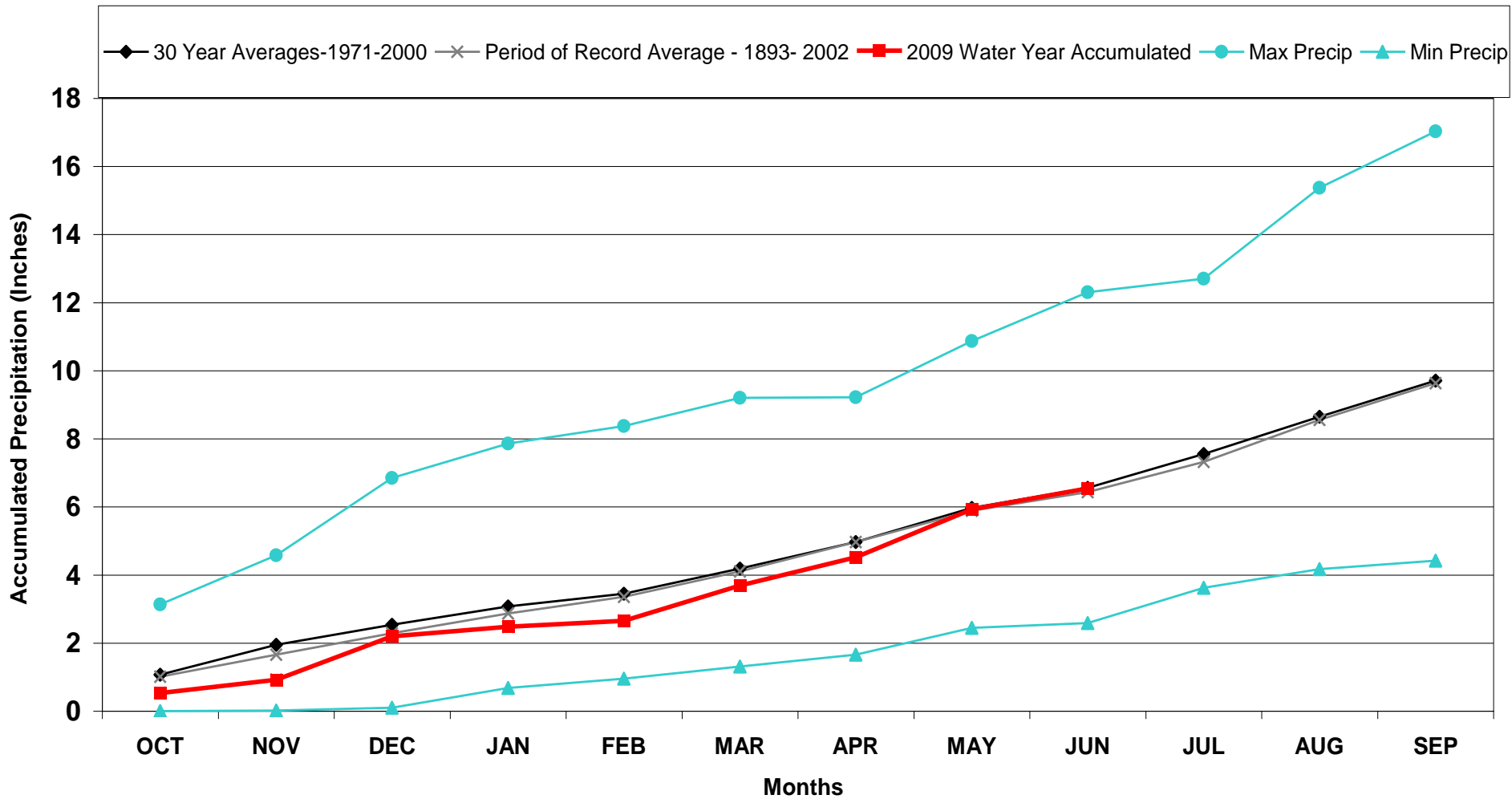
Division 2 – Collbran

Collbran 2SW 2009 Water Year



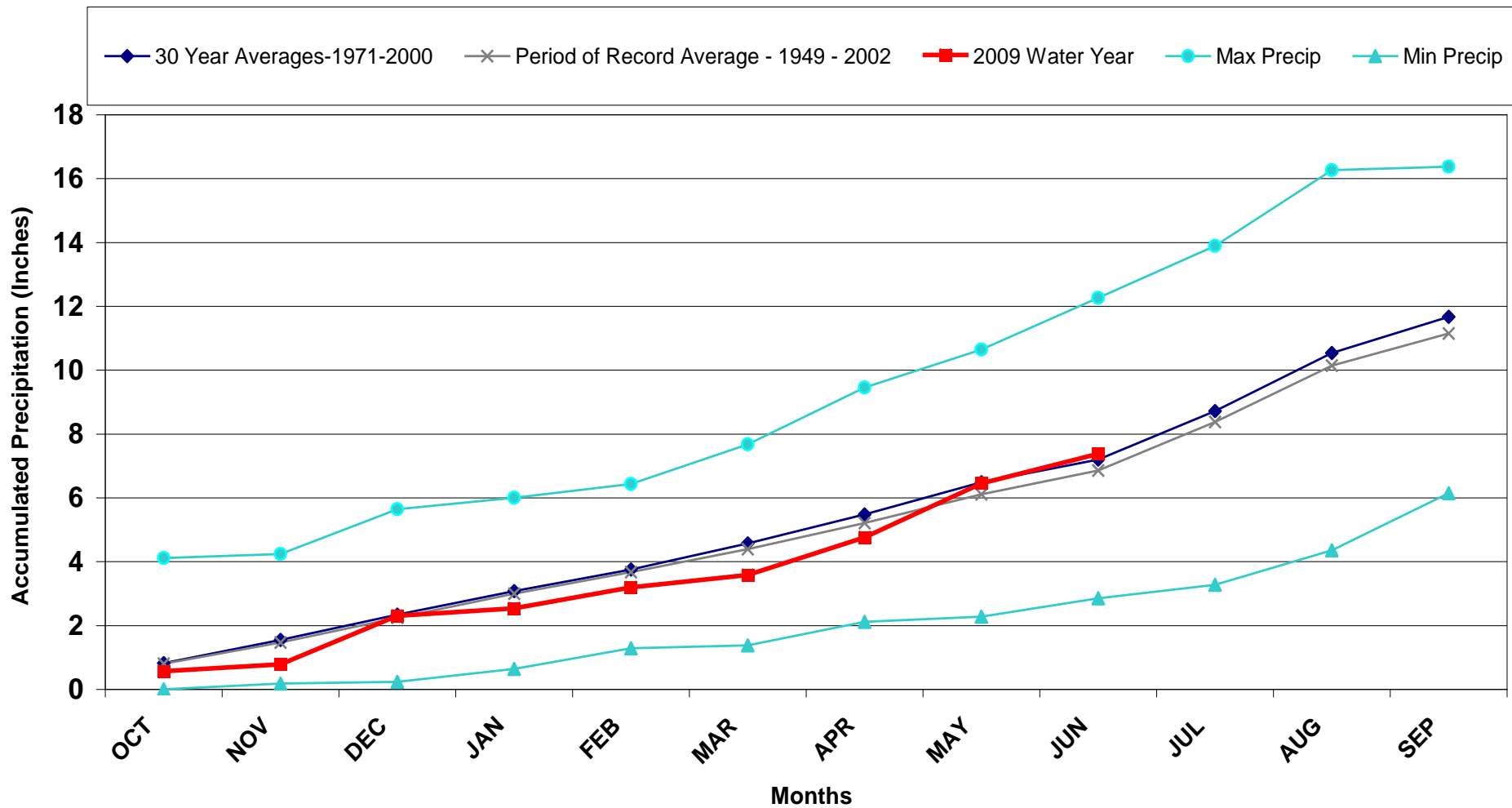
Division 3 – Montrose

Montrose #2 2009 Water Year



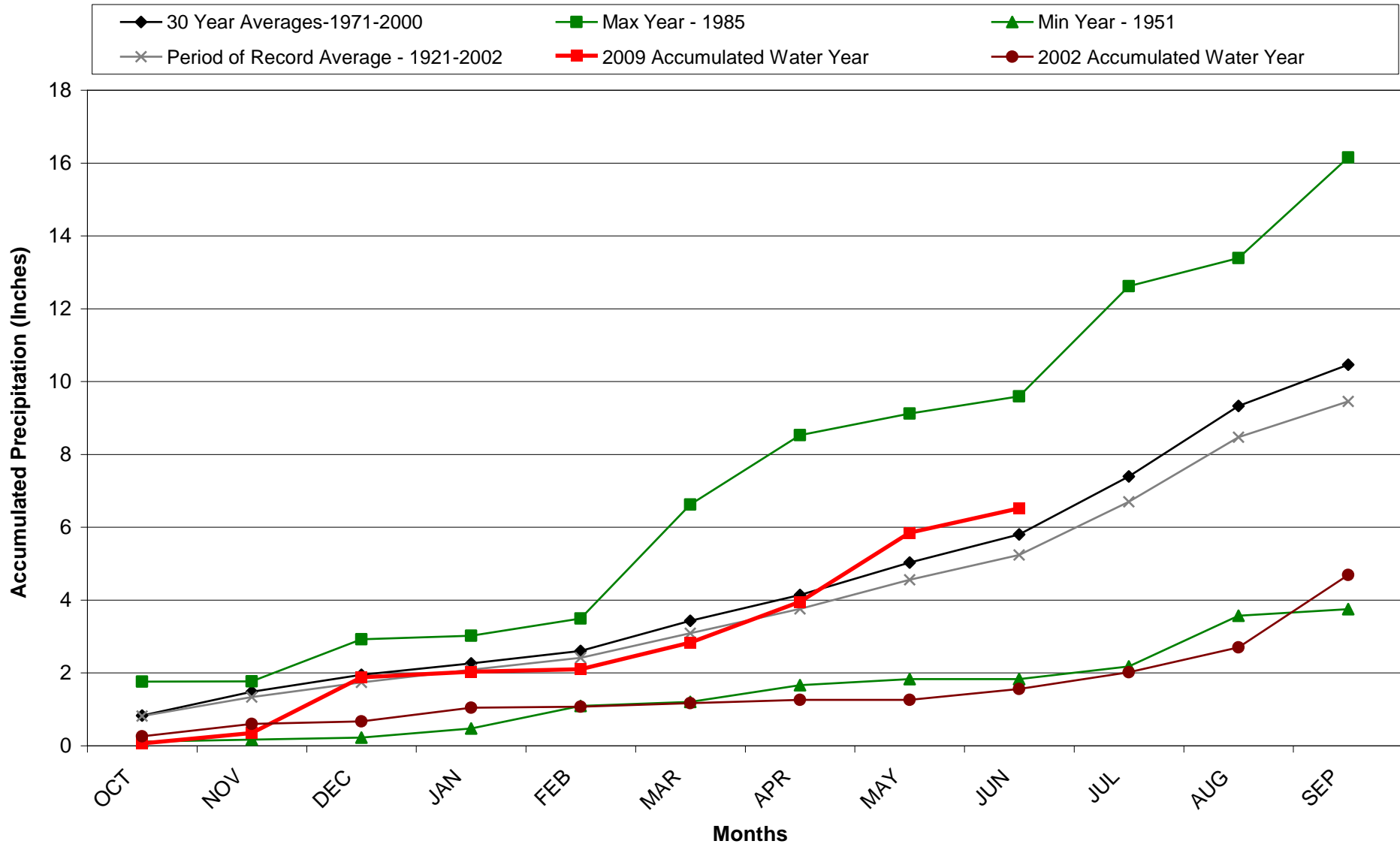
Division 3 – Cochetopa Creek

Cochetopa Creek 2009 Water Year



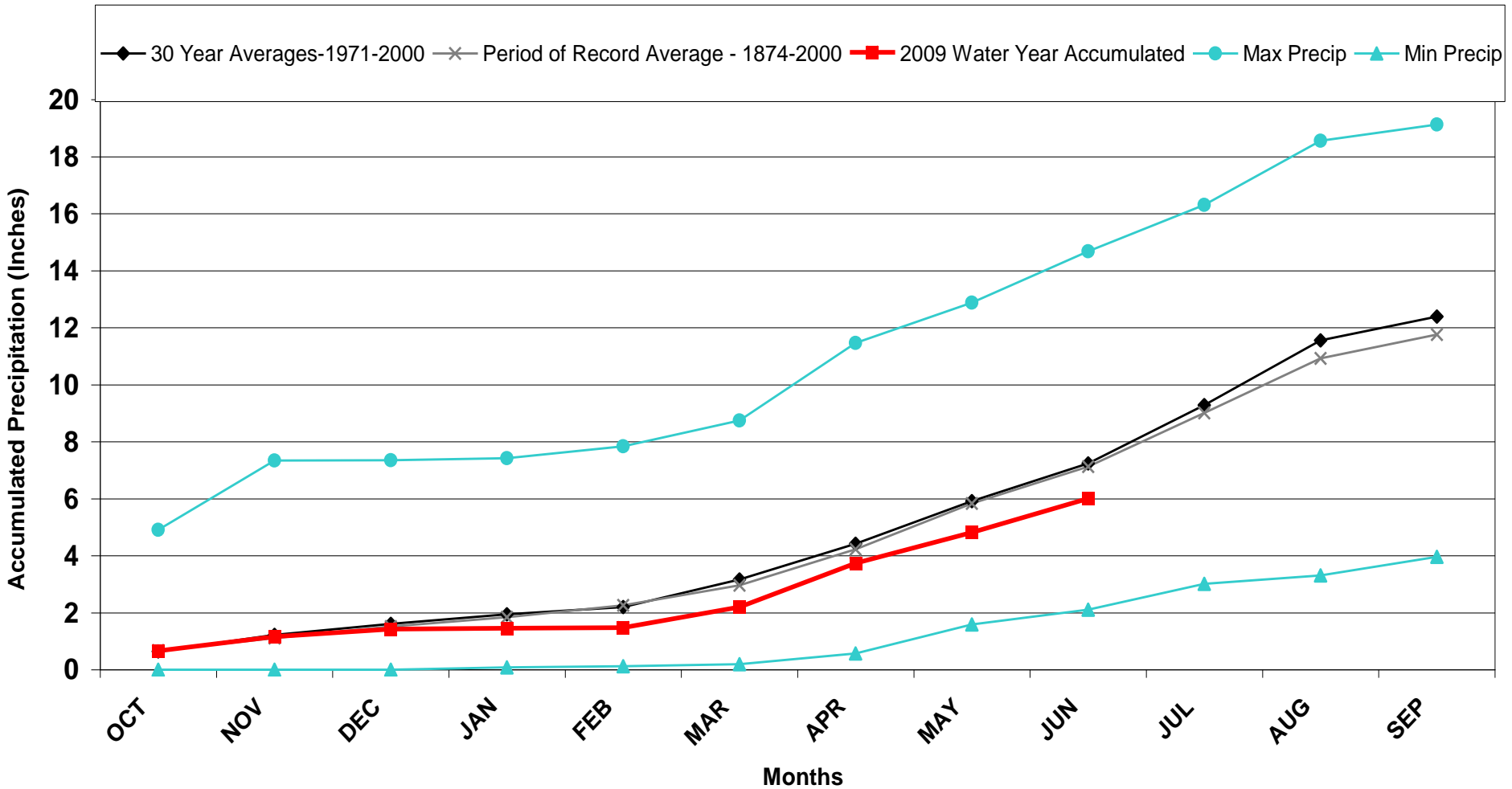
Division 4 – Del Norte

Del Norte 2009 Water Year



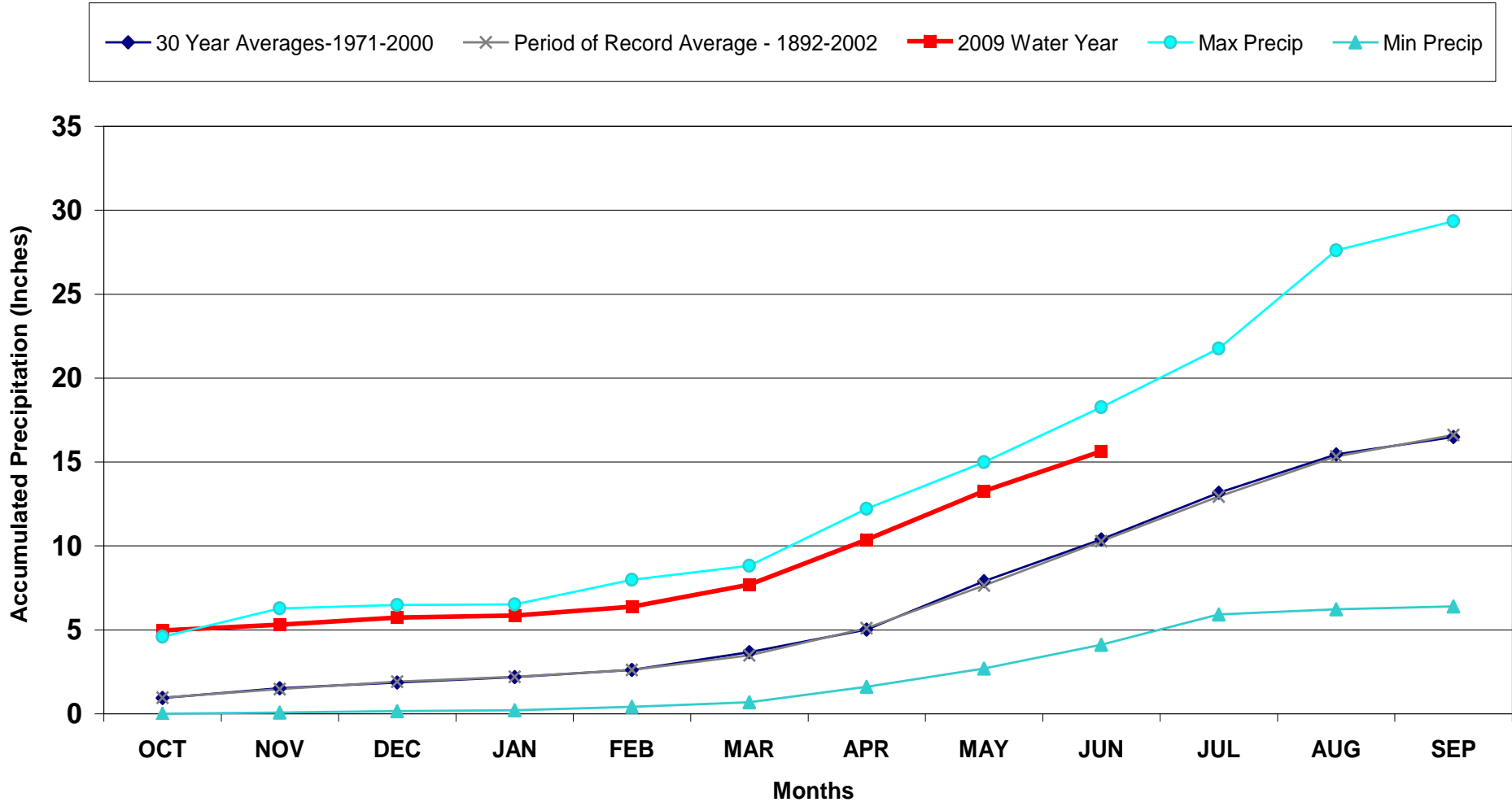
Division 5 – Pueblo

Pueblo WSO 2009 Water Year



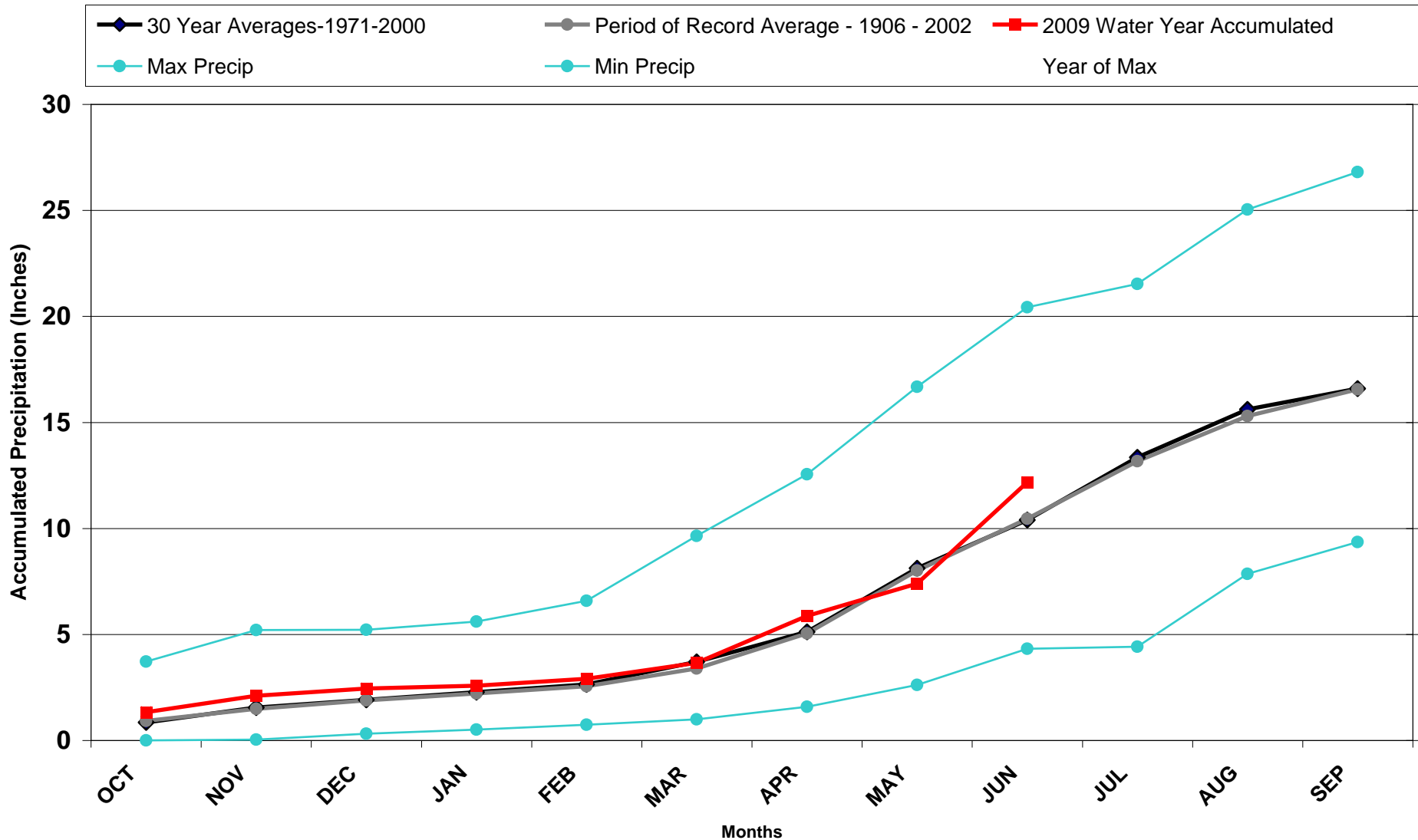
Division 6 - Burlington

Burlington 2009 Water Year



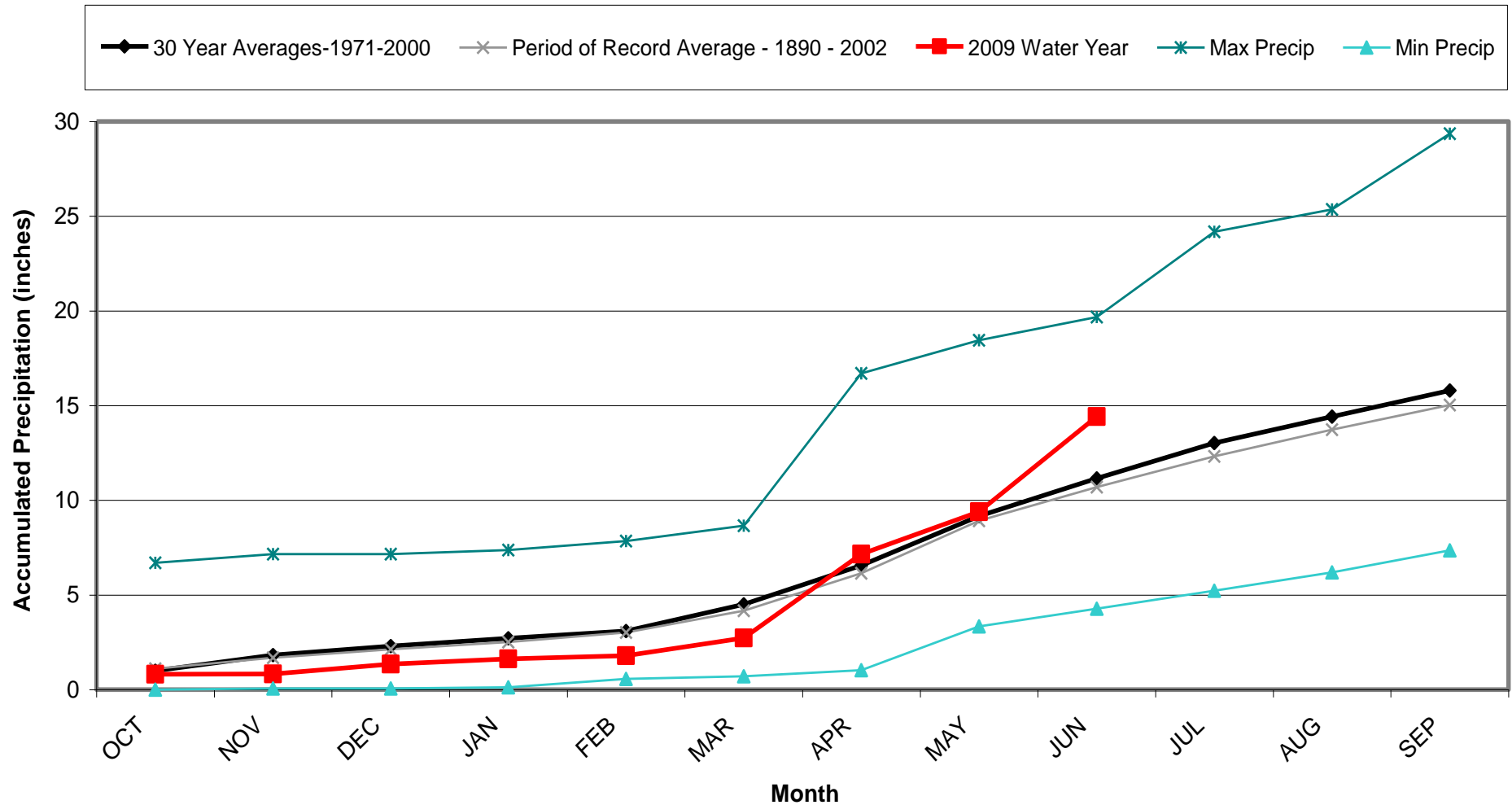
Division 7 – Akron

Akron 4E 2009 Water Year



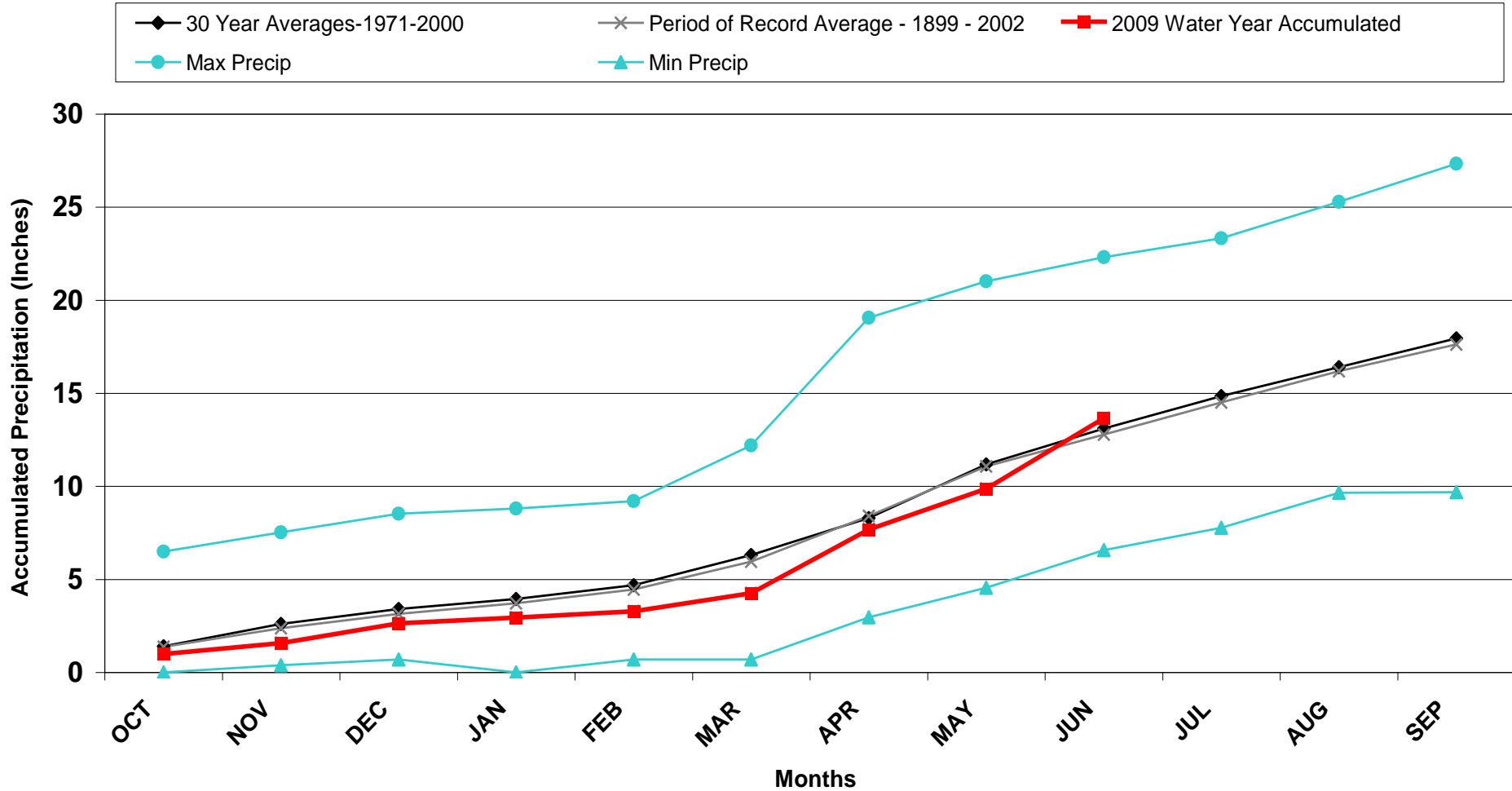
Division 8 – Fort Collins

Fort Collins 2009 Water Year



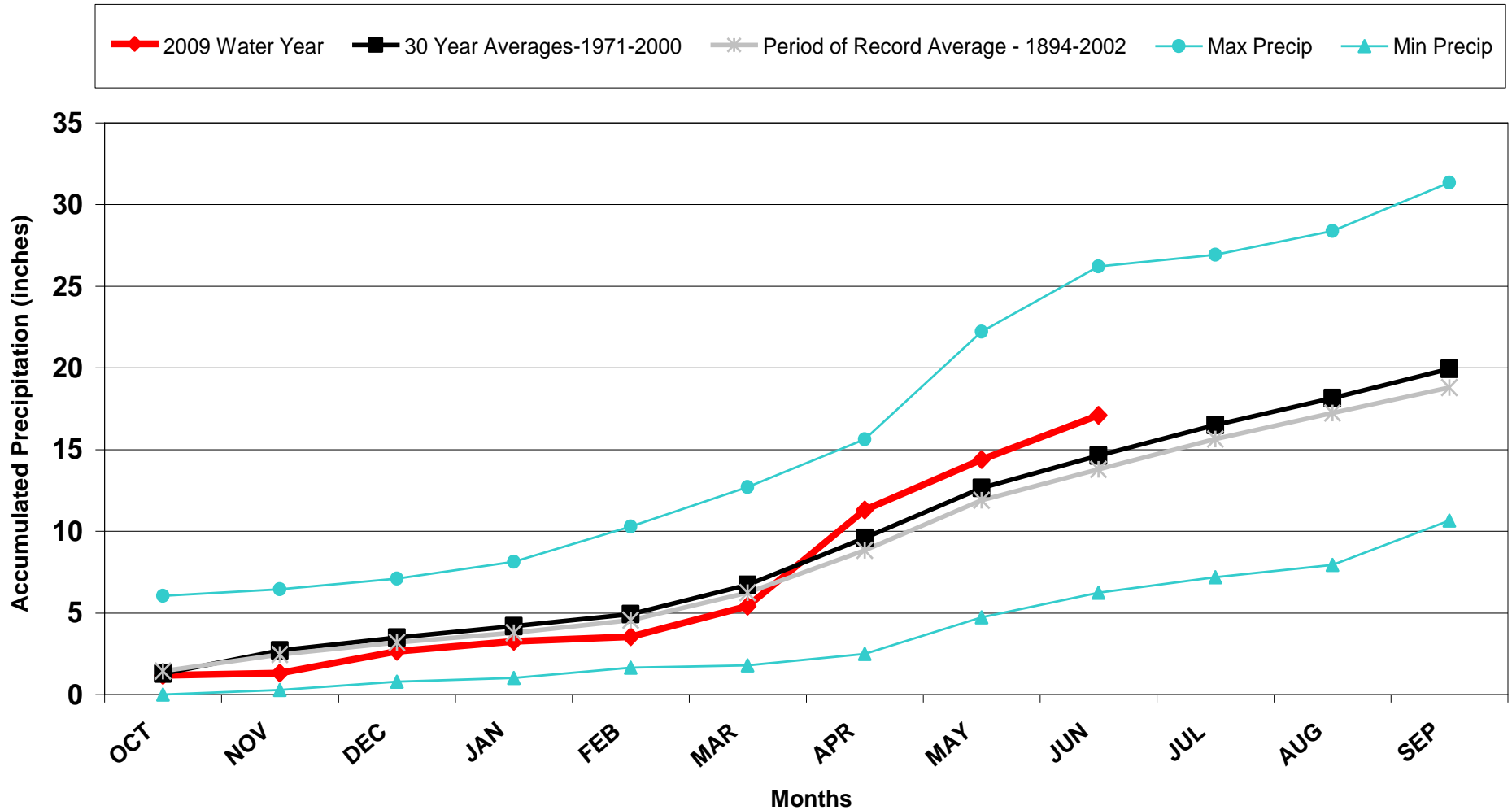
Division 8 – Kassler

Kassler 2009 Water Year



Division 8 - Boulder

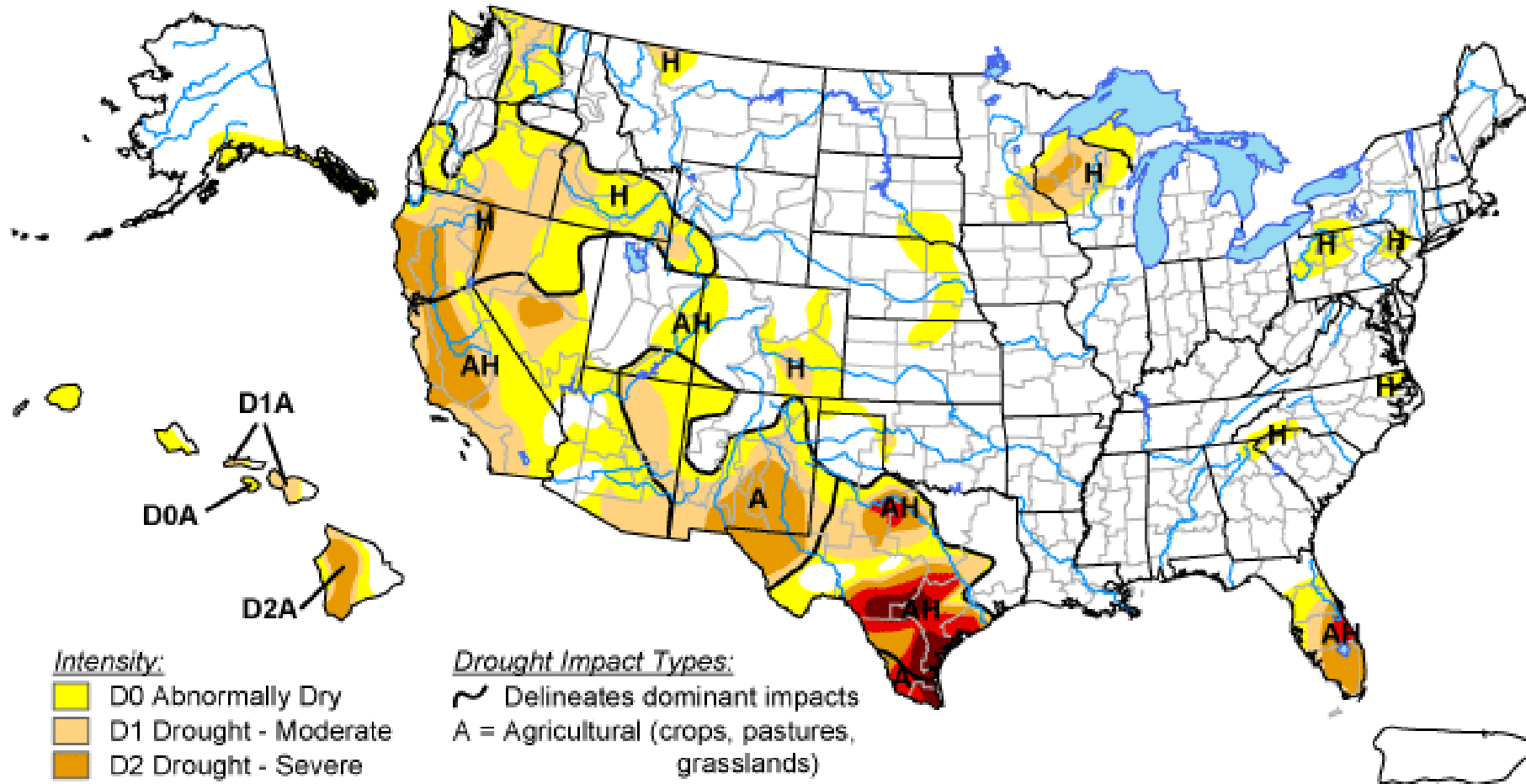
Boulder 2009 Water Year








U.S. Drought Monitor

May 19, 2009


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.



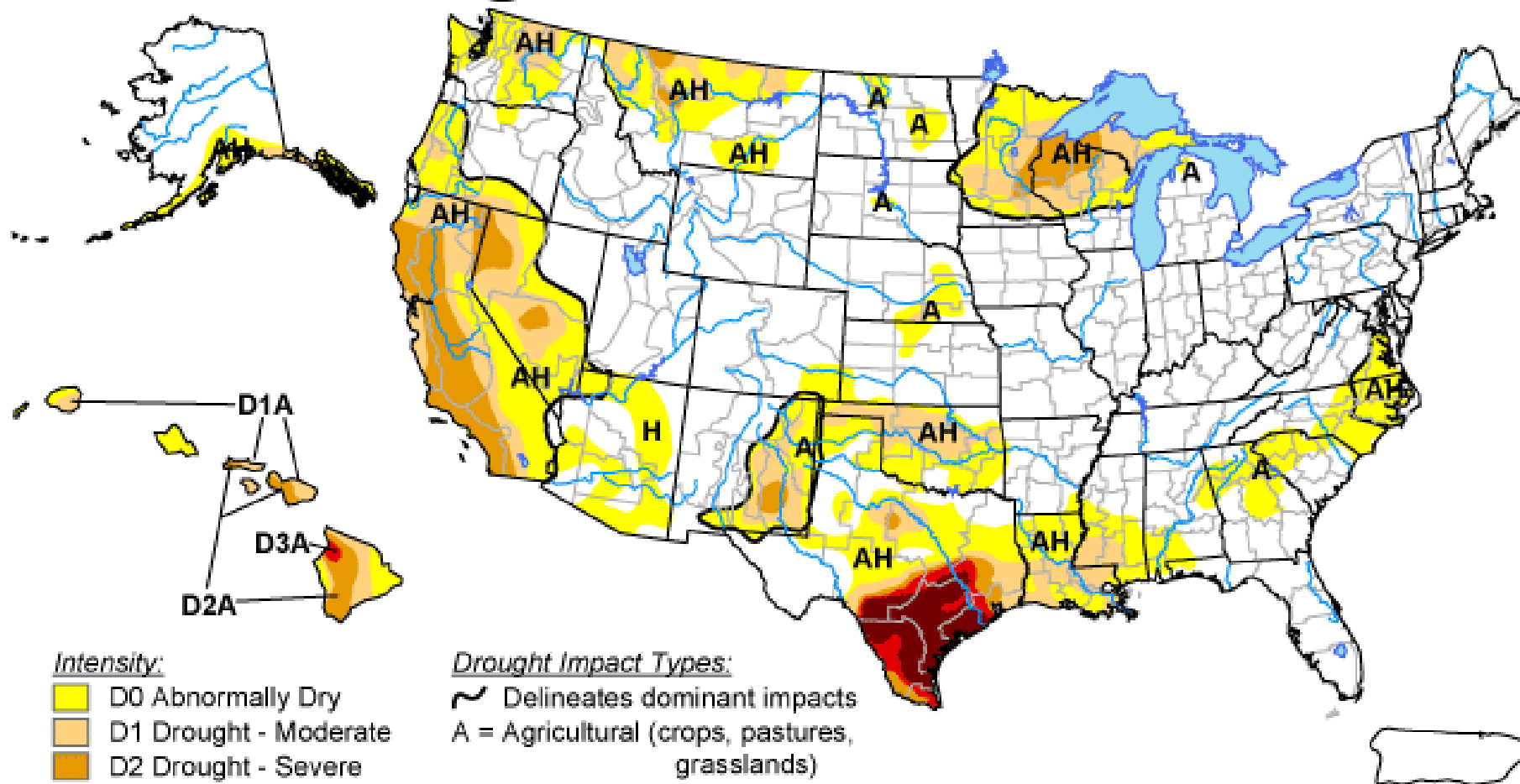
Released Thursday, May 21, 2009

Authors: M. Rosencrans, D. Miskus, A. Artusa, CPC/NOAA






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

U.S. Drought Monitor


July 14, 2009
Valid 8 a.m. EDT



Intensity:

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-  D1 Drought - Moderate
-  D2 Drought - Severe
-  D3 Drought - Extreme
-  D4 Drought - Exceptional

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Released Thursday, July 16, 2009

Author: Eric Luebehusen, U.S. Department of Agriculture

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

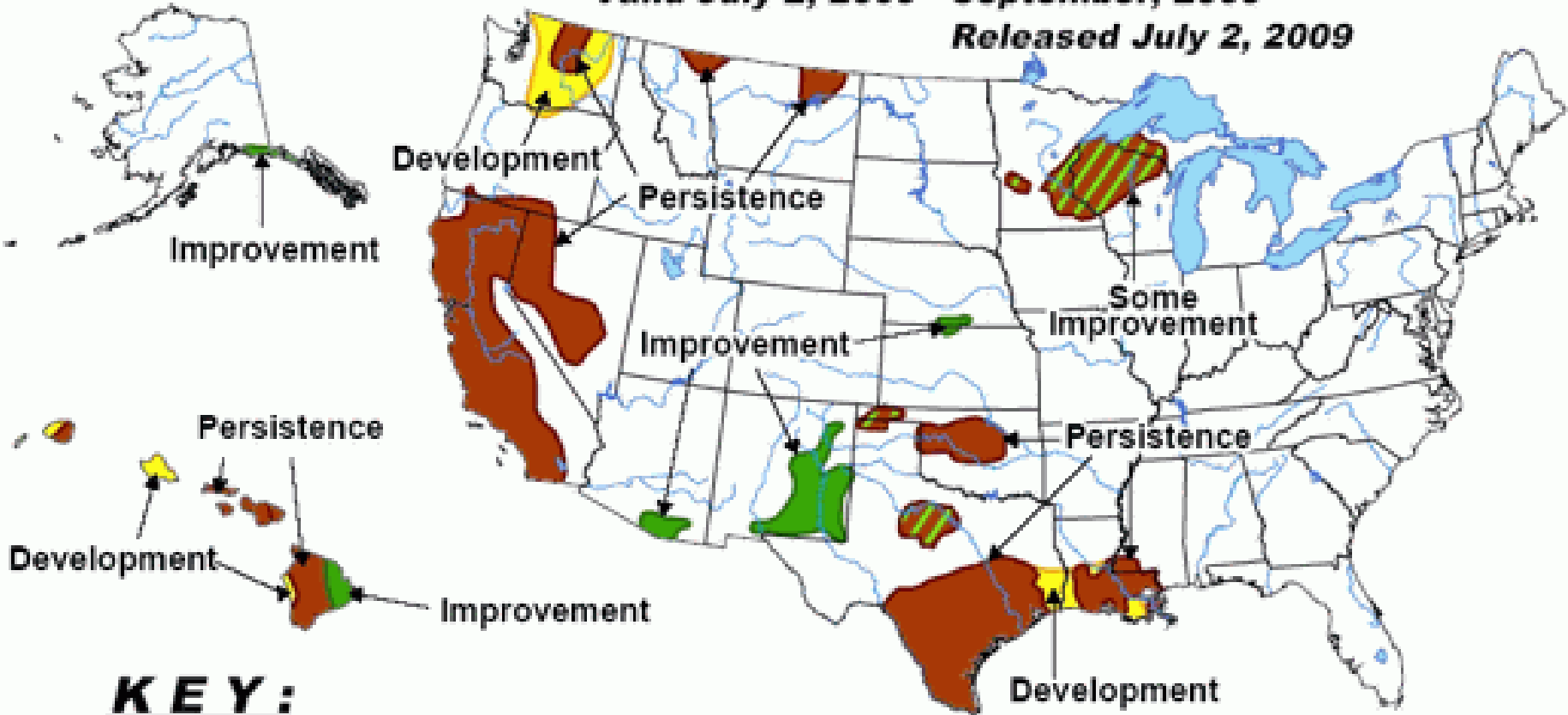


U.S. Seasonal Drought Outlook

Drought Tendency During the Valid Period

Valid July 2, 2009 - September, 2009

Released July 2, 2009

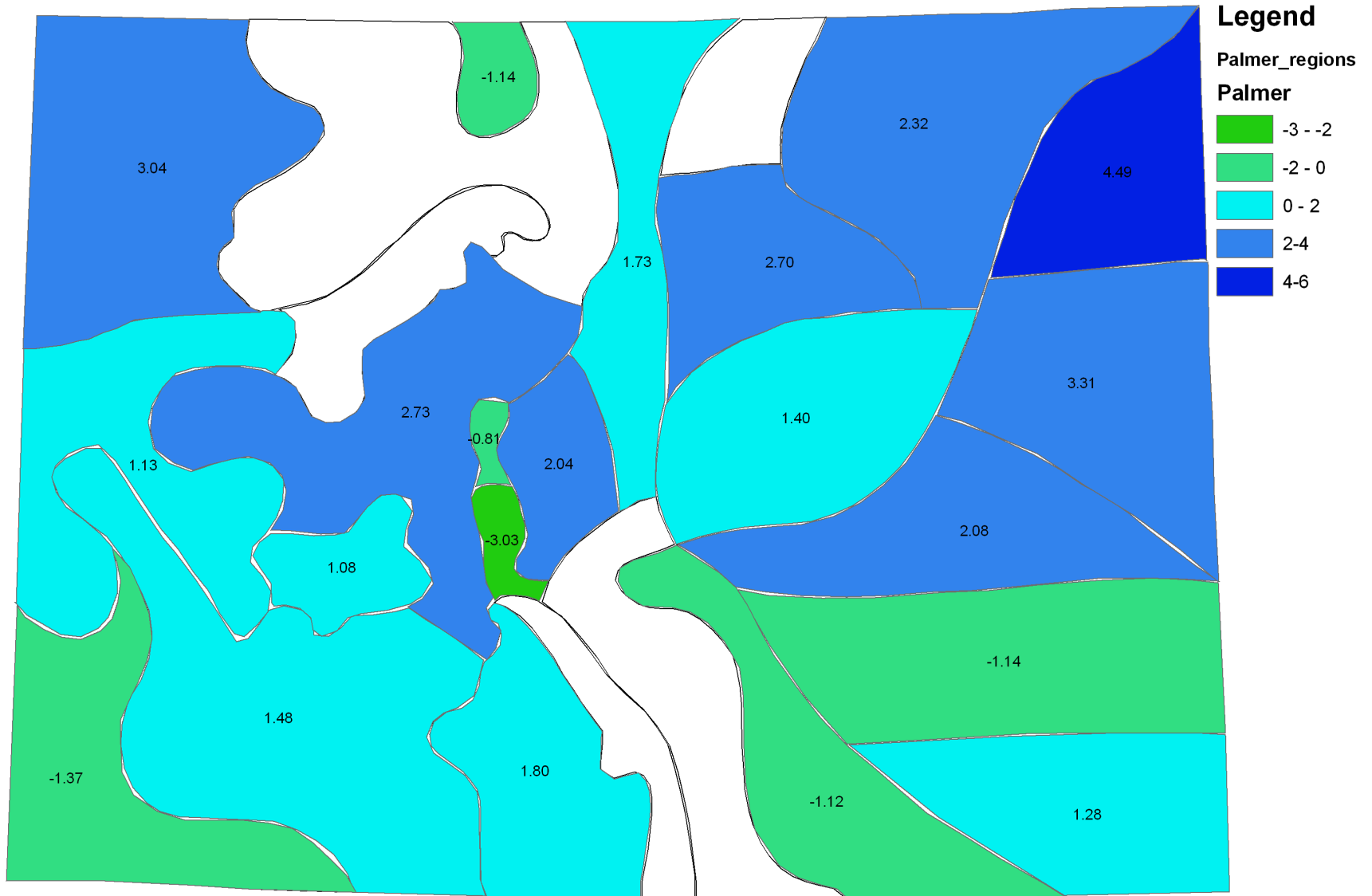


KEY:

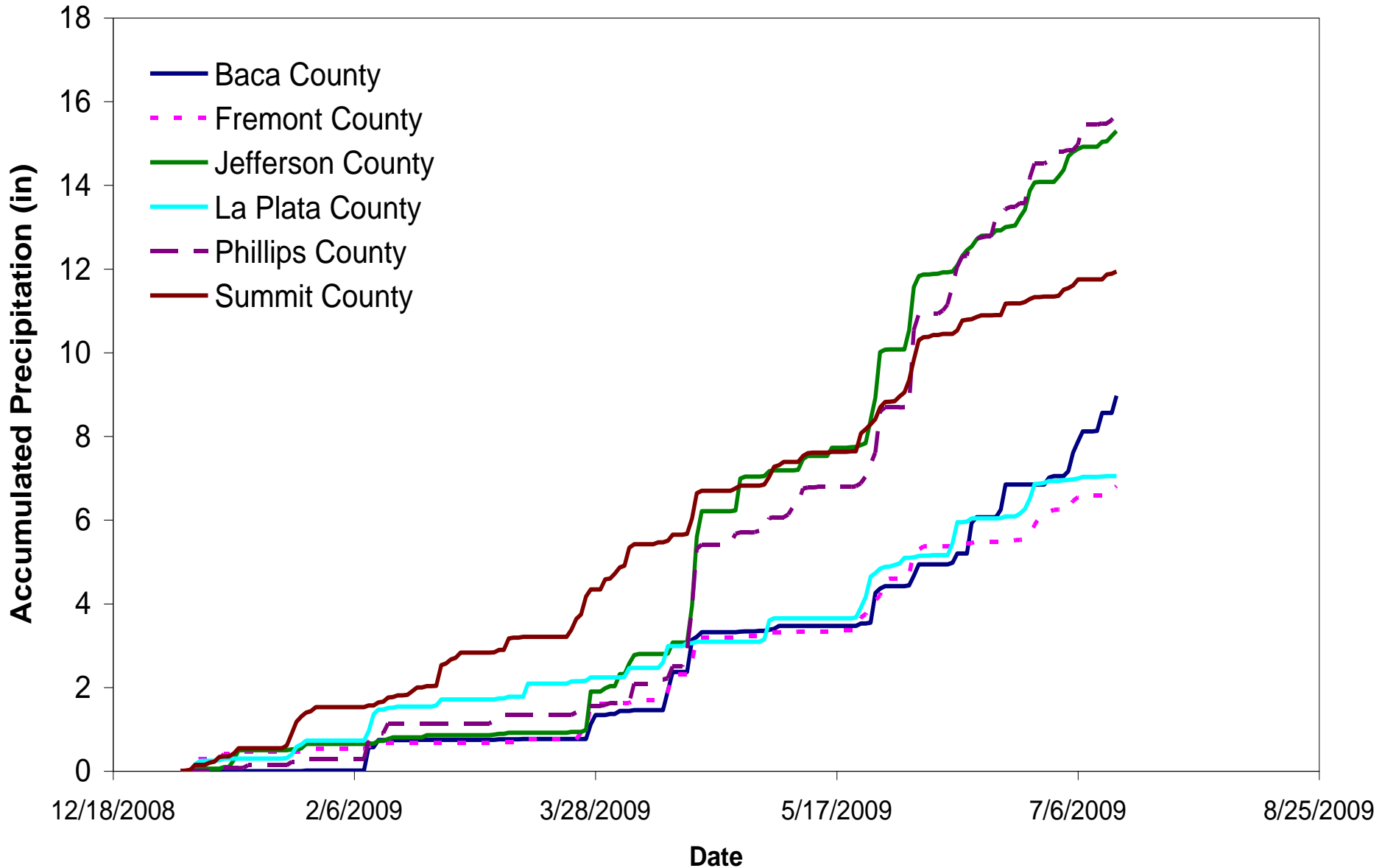
-  Drought to persist or intensify
-  Drought ongoing, some improvement
-  Drought likely to improve, impacts ease
-  Drought development likely

Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Short-term events – such as individual storms – cannot be accurately forecast more than a few days in advance. Use caution for applications – such as crops – that can be affected by such events. "Ongoing" drought areas are approximated from the Drought Monitor (D1 to D4 intensity). For weekly drought updates, see the latest U.S. Drought Monitor. NOTE: the green improvement areas imply at least a 1-category improvement in the Drought Monitor intensity levels, but do not necessarily imply drought elimination.

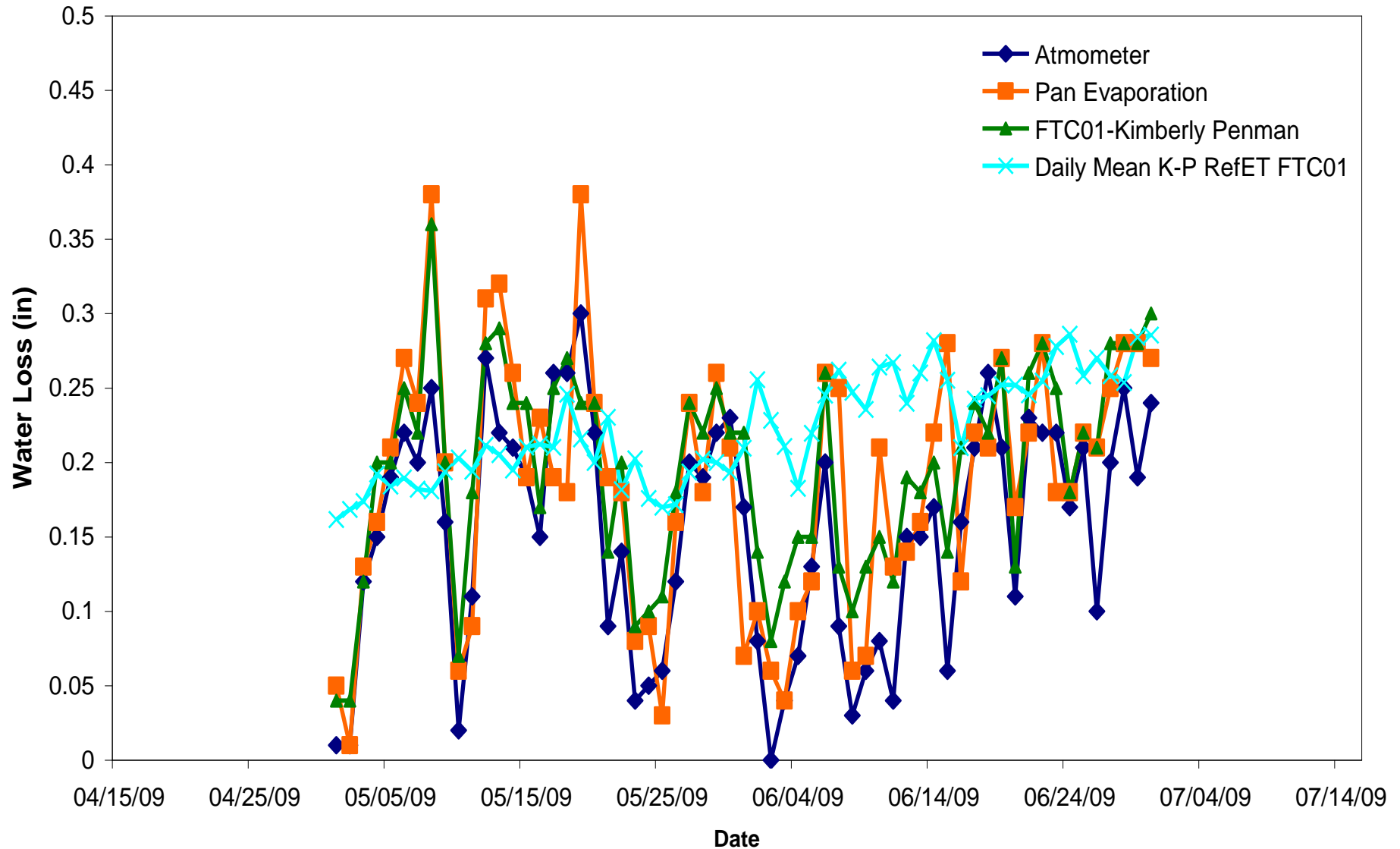
Modified Palmer Drought Index -- Preliminary June 2009



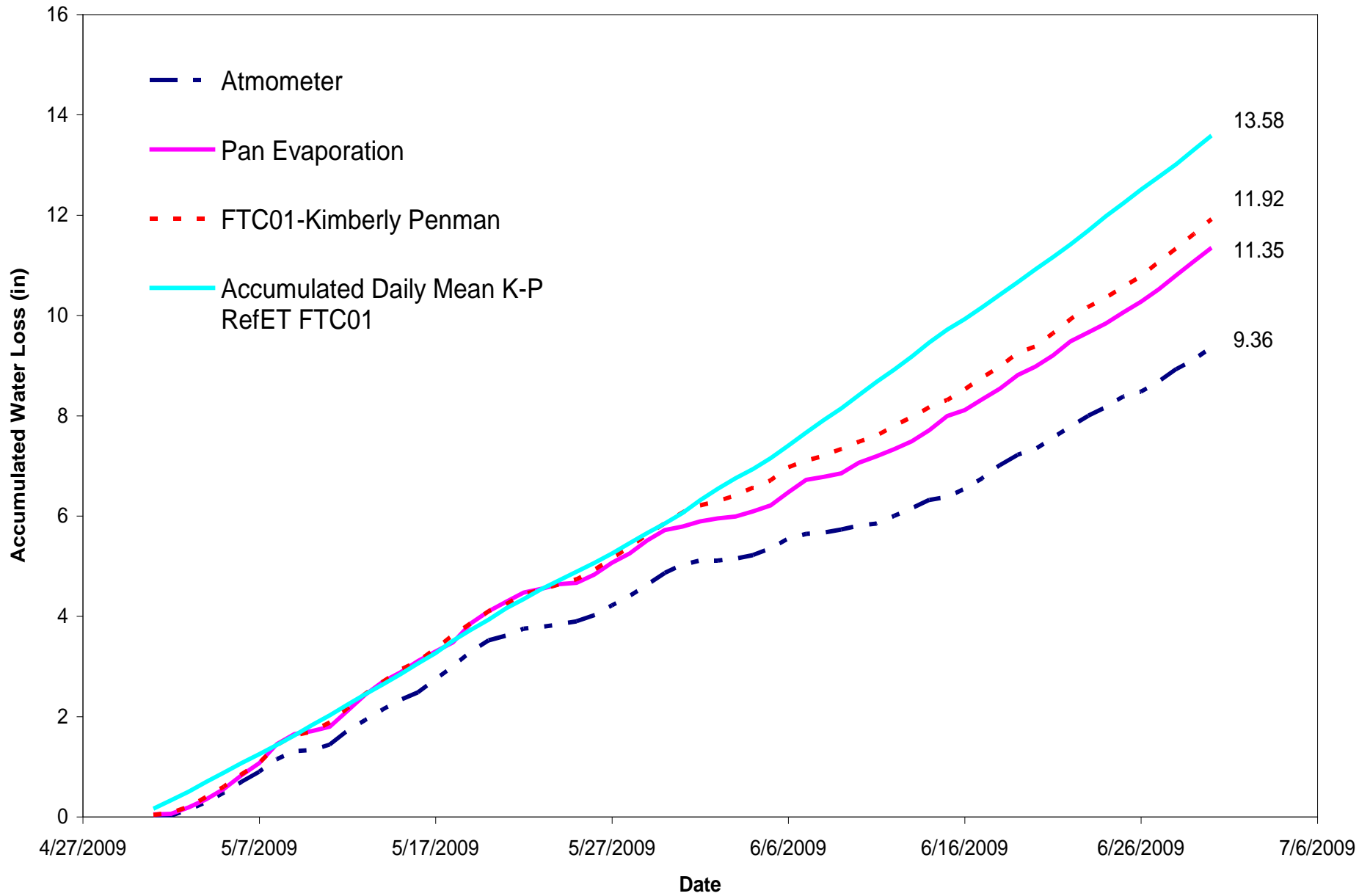
CoCoRaHS Accumulated Daily Precipitation for Selected Counties (Jan 1 - July 14, 2009)



Evapotranspiration/Pan Evaporation Comparison Fort Collins, CO



Accumulated Water Loss Comparison



Colorado Climate Center

Data and Power Point Presentations
available for downloading

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

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

**Colorado
State
University**
Knowledge to Go Places

