



Climate Update

**Wendy Ryan
Colorado Climate Center**

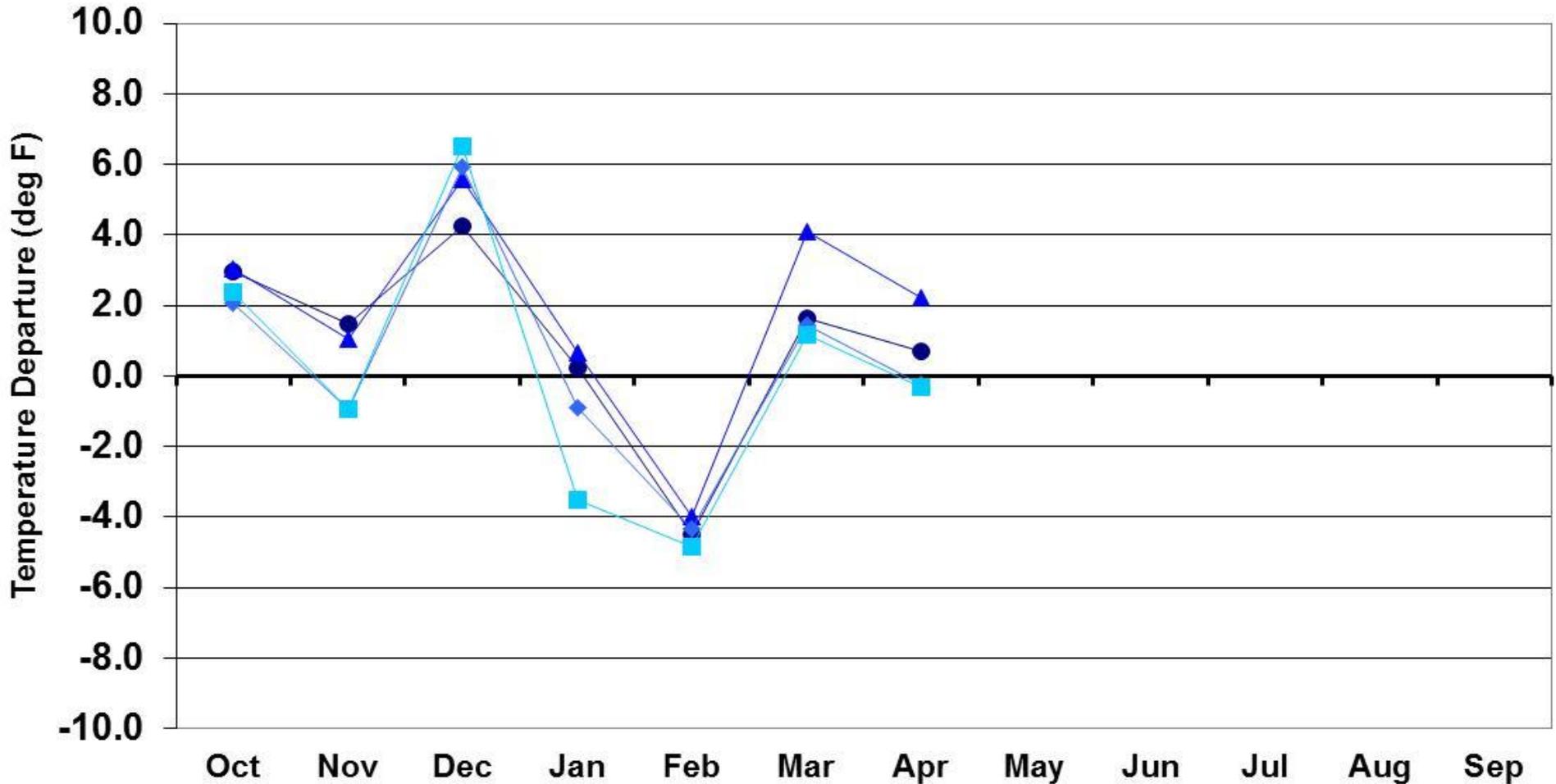
**Atmospheric Science Department
Colorado State University**

Presented to
Water Availability Task Force
May 11th, 2011
Denver, CO

Prepared by Wendy Ryan

Water Year 2011 Temperature Departures

Water Year 2011



● Eastern Plains

▲ Foothills

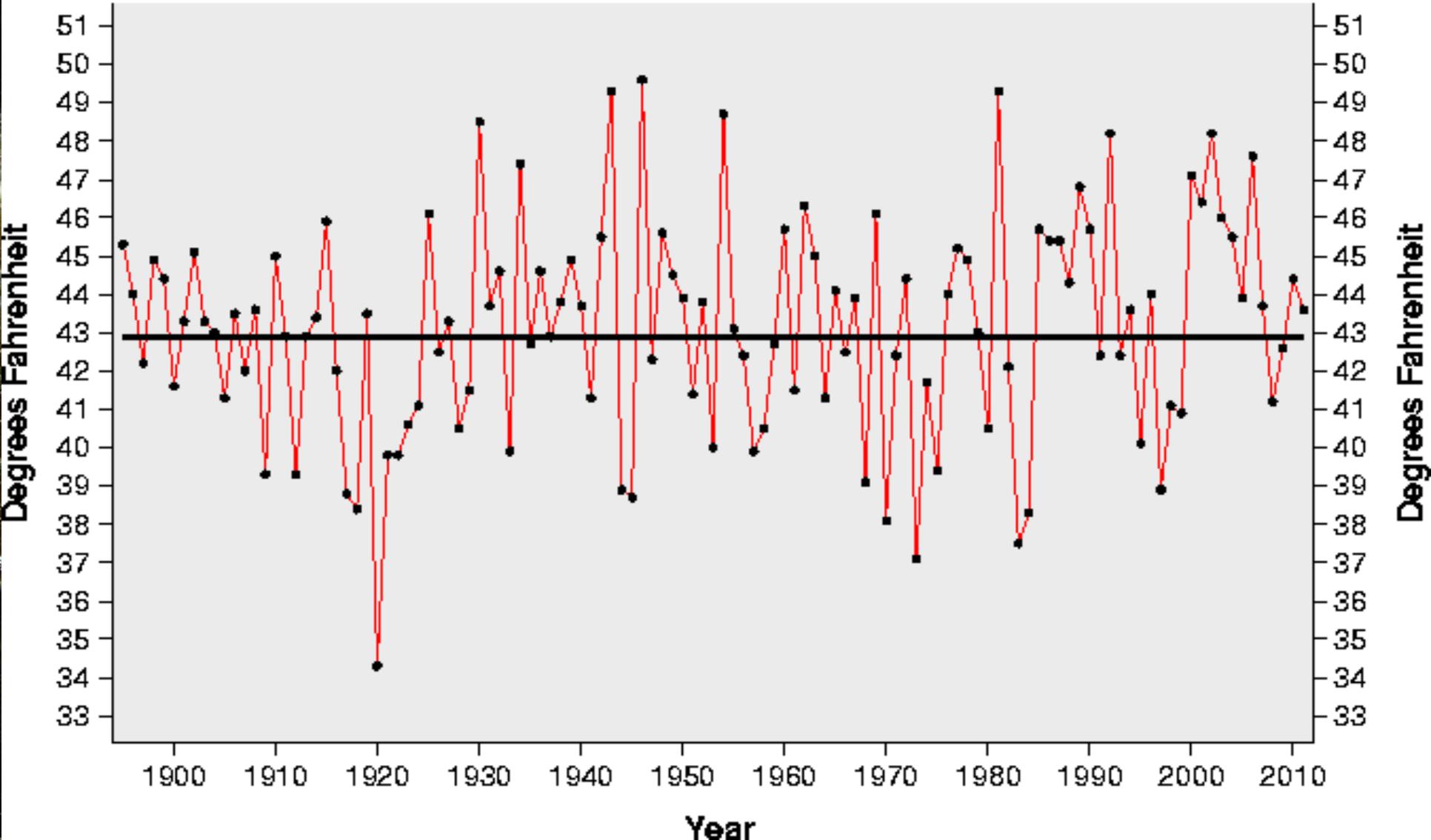
◆ Mountains

■ Western Valleys

April Average Temperature History for Colorado (NCDC)

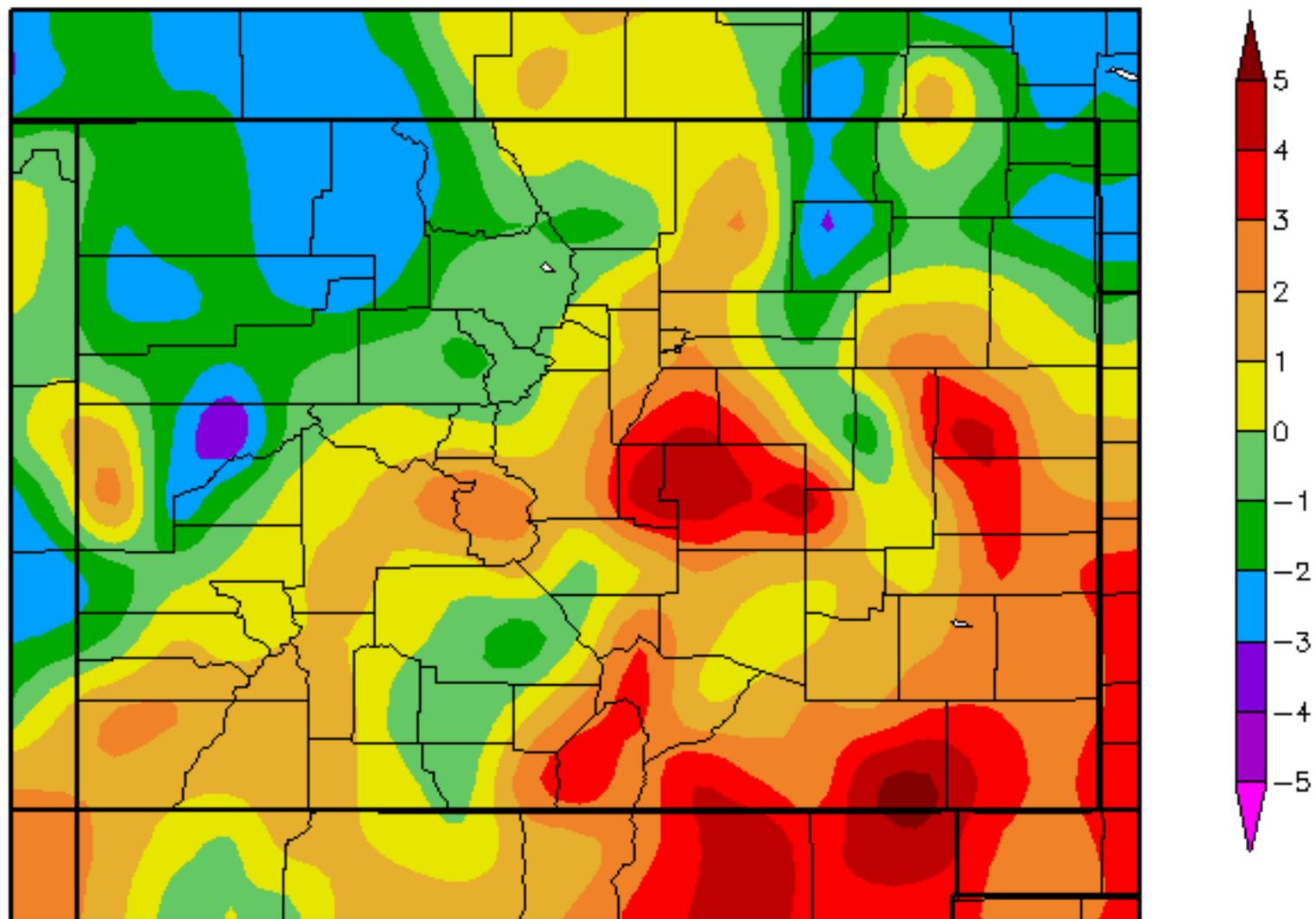
— Actual Temperature
— Average Temperature

43.6 Degrees ranks 65th coolest for the period (1895-2011)

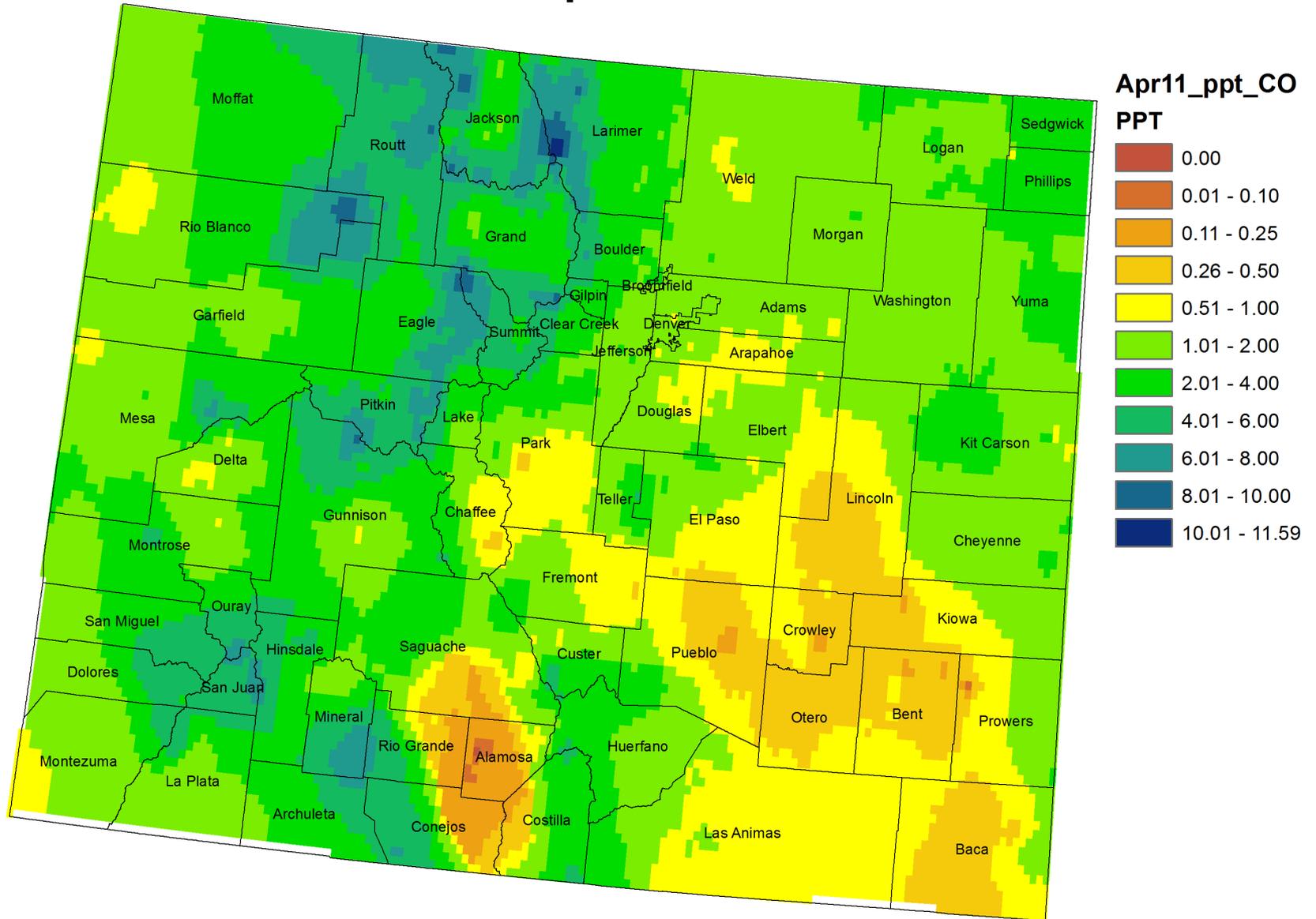


Departure from Normal Temperature (F)

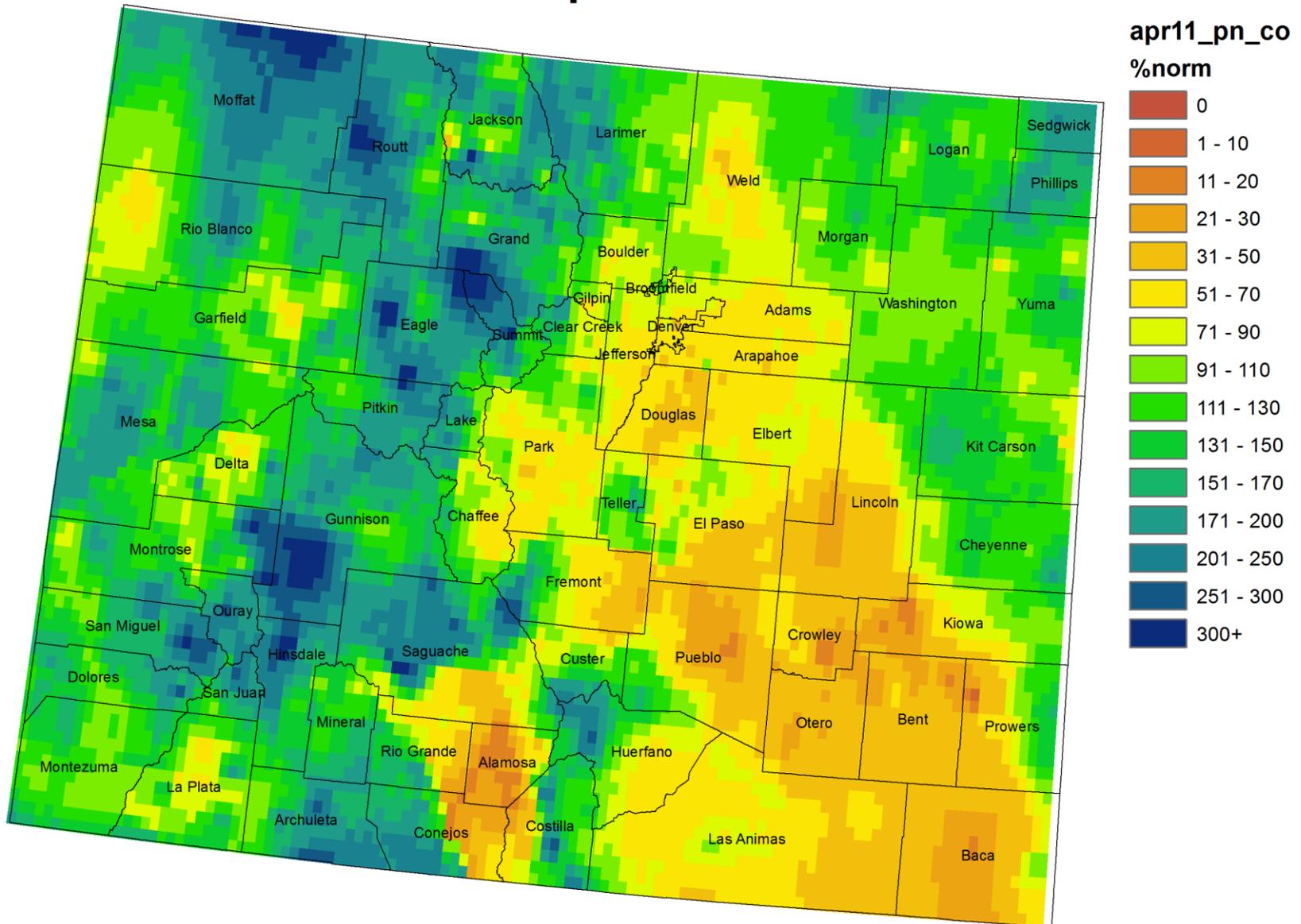
4/1/2011 - 4/30/2011



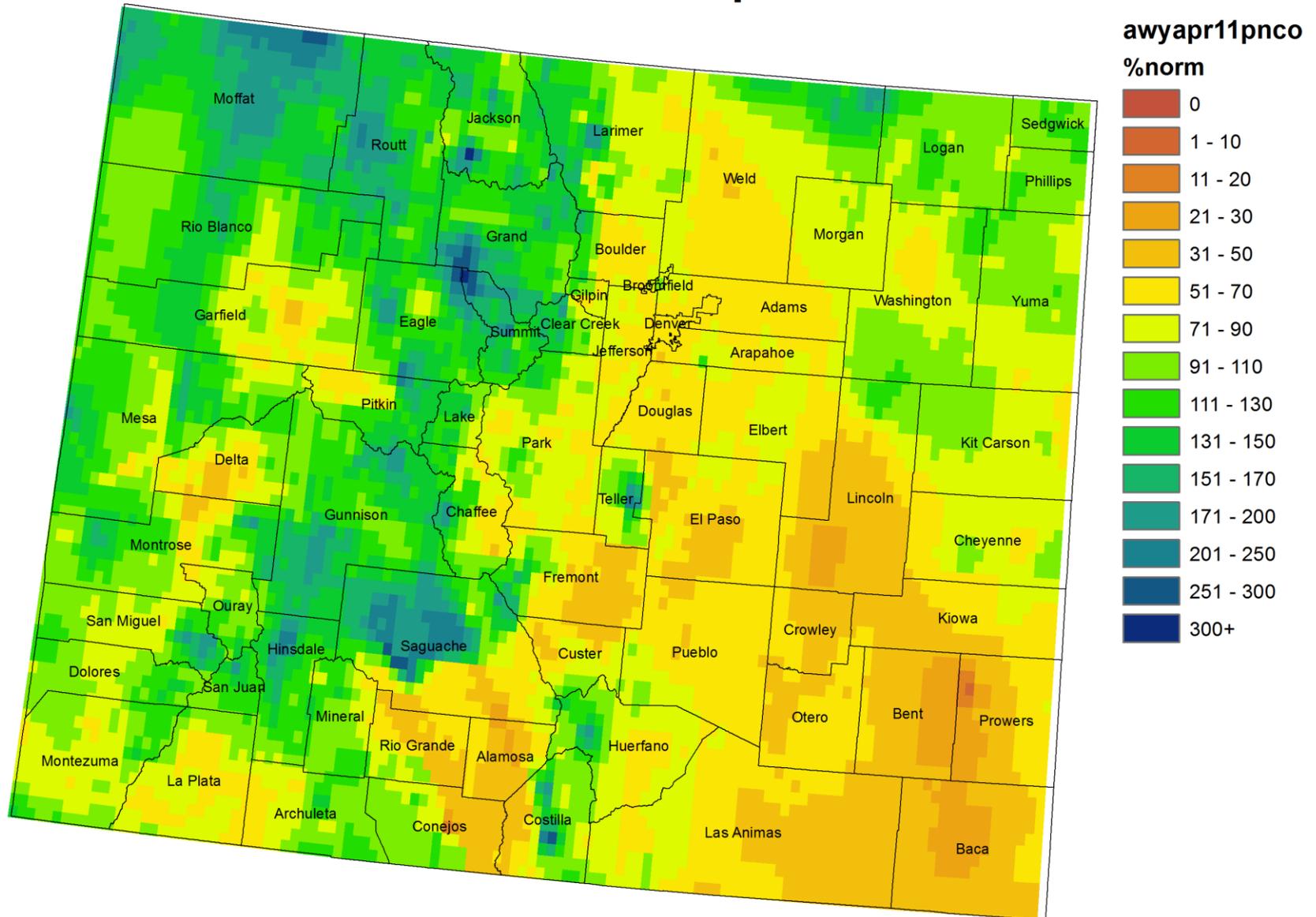
Colorado Precipitation (in) April 2011



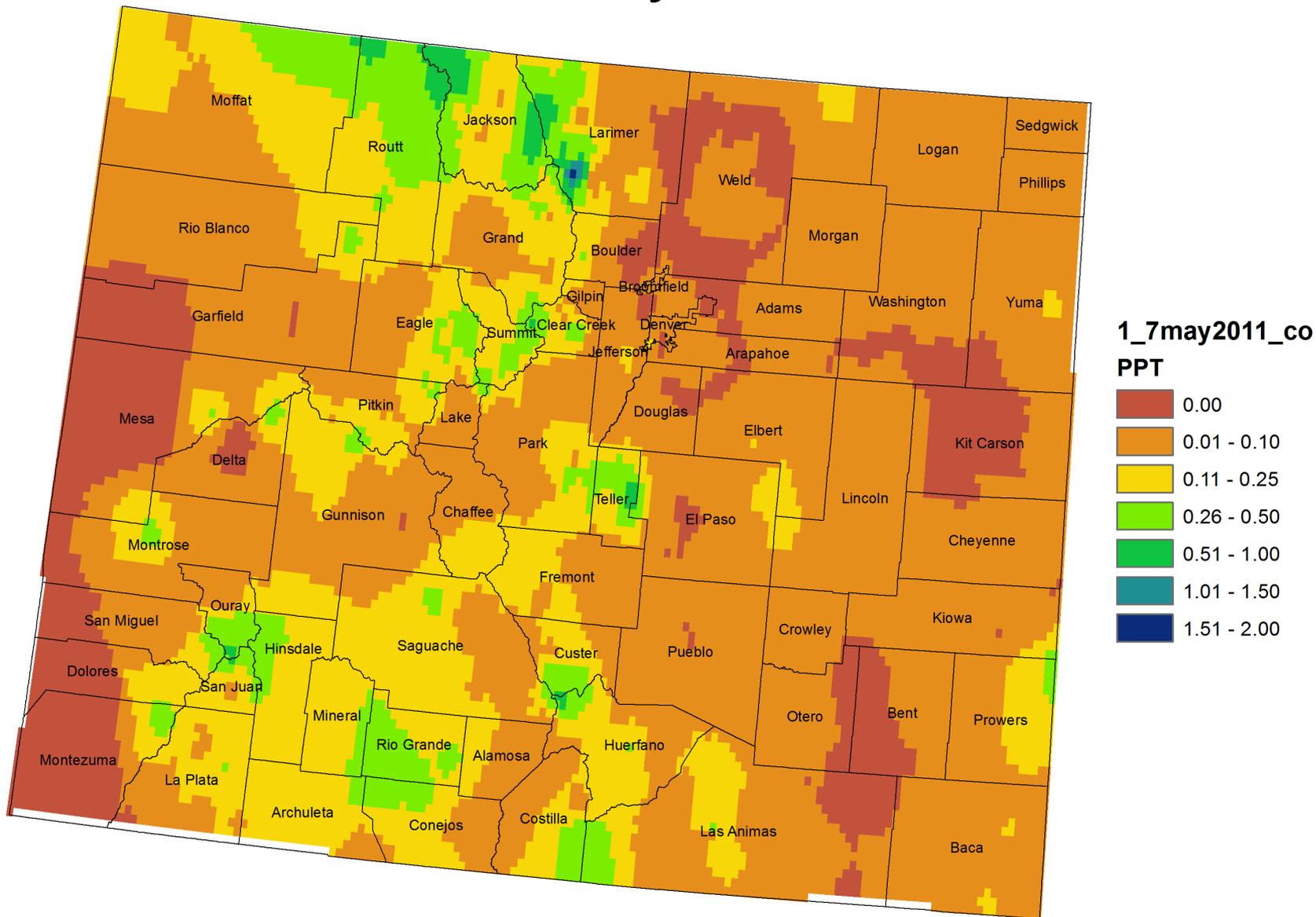
Colorado Precipitation as Percentage of Normal April 2011



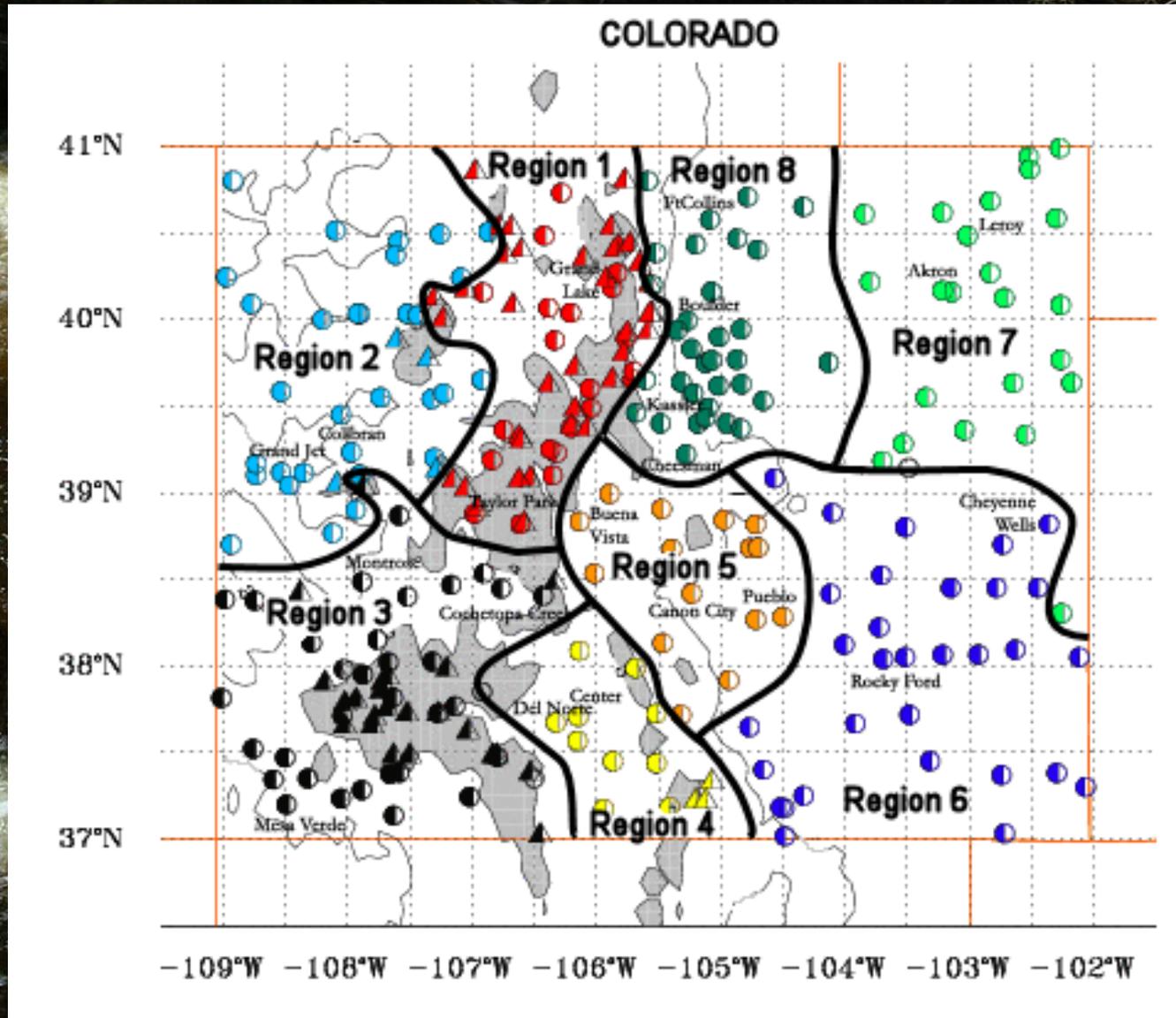
Colorado Water Year Precipitation as Percentage of Normal October 2010 - April 2011



Colorado Precipitation (in) 1 - 7 May 2011

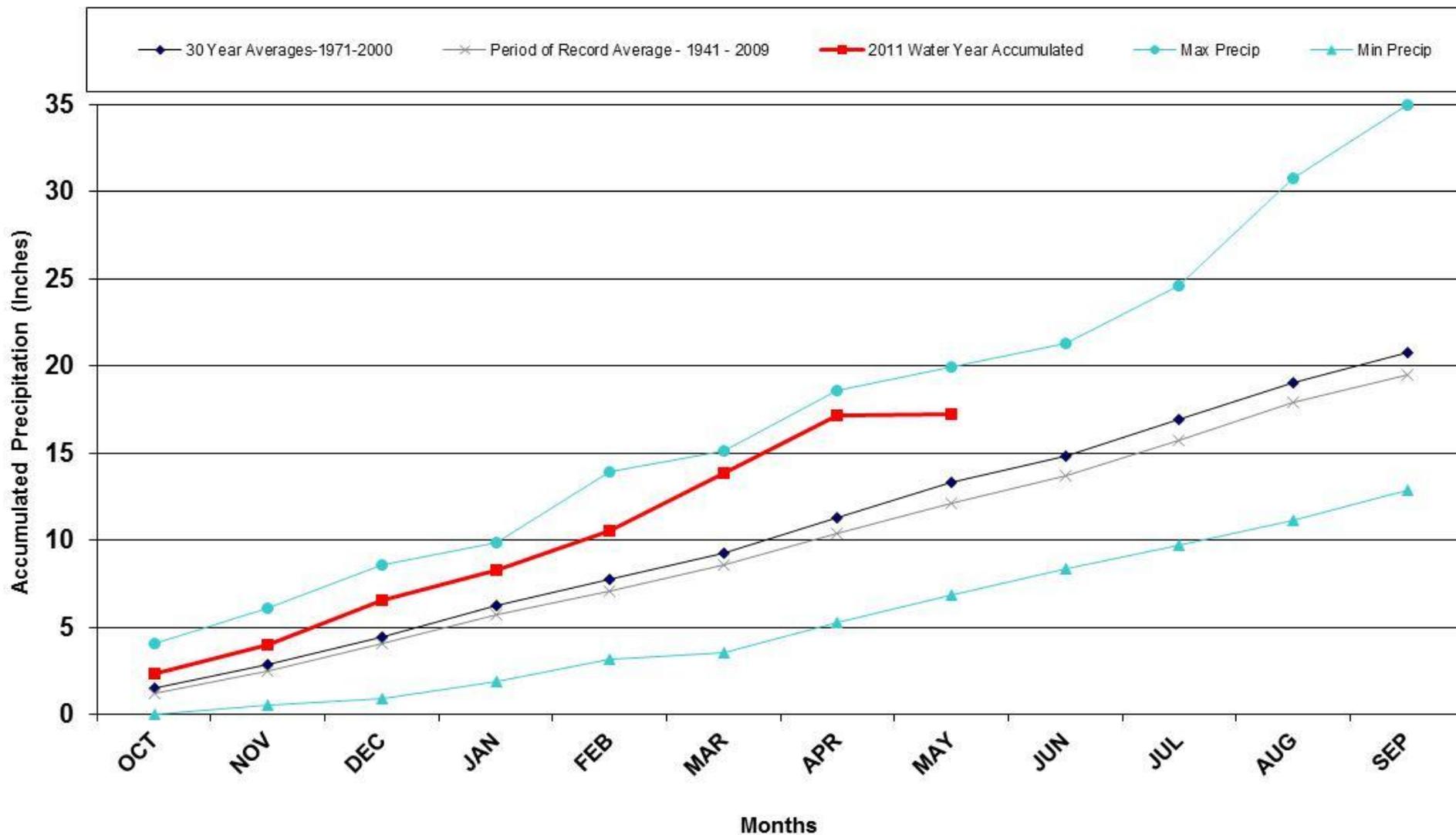


Climate divisions defined by Dr. Klaus Wolter of NOAA's Climate Diagnostic Center in Boulder, CO



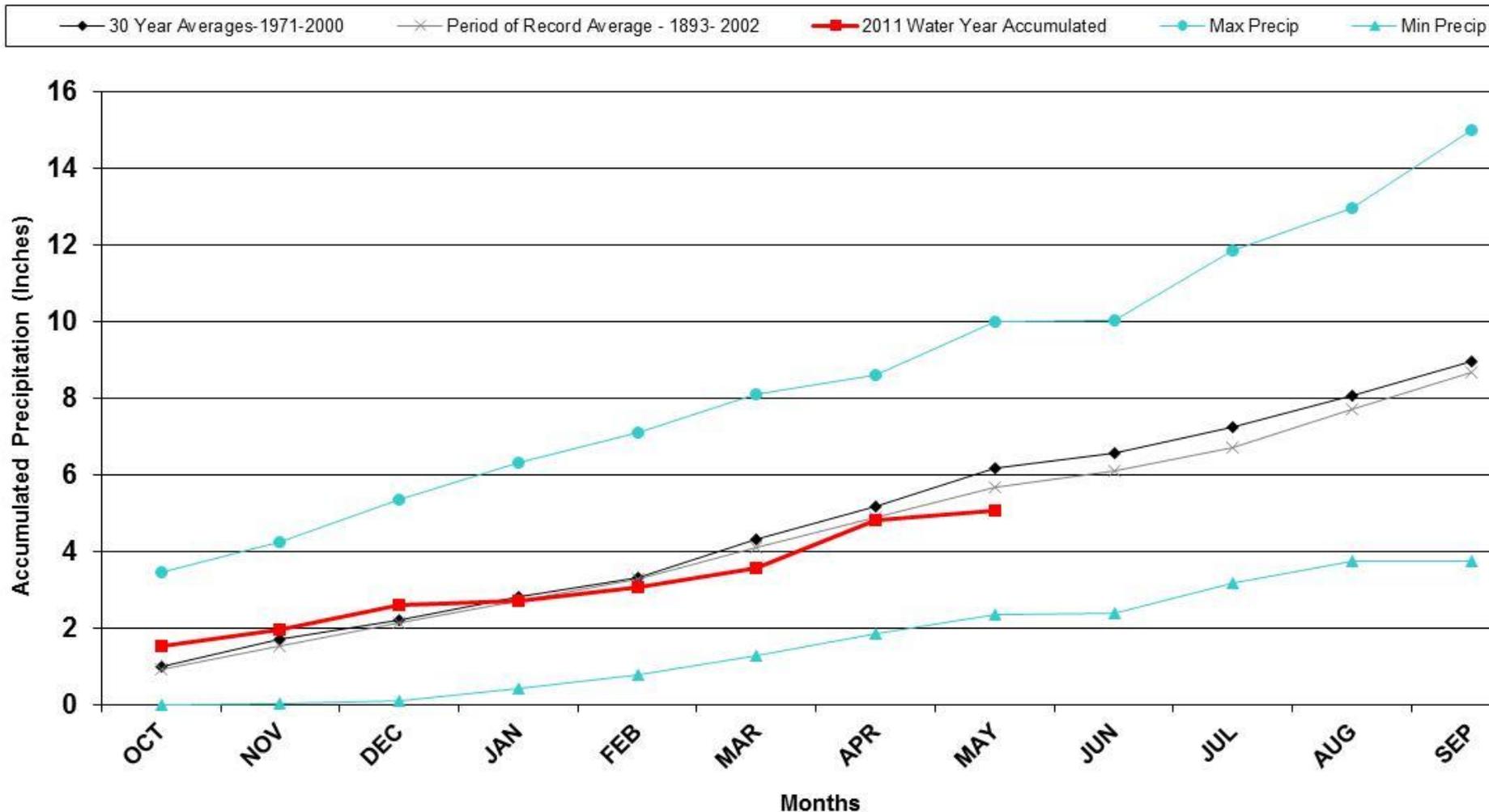
Division 1 – Grand Lake 1NW

Grand Lake 1 NW 2011 Water Year



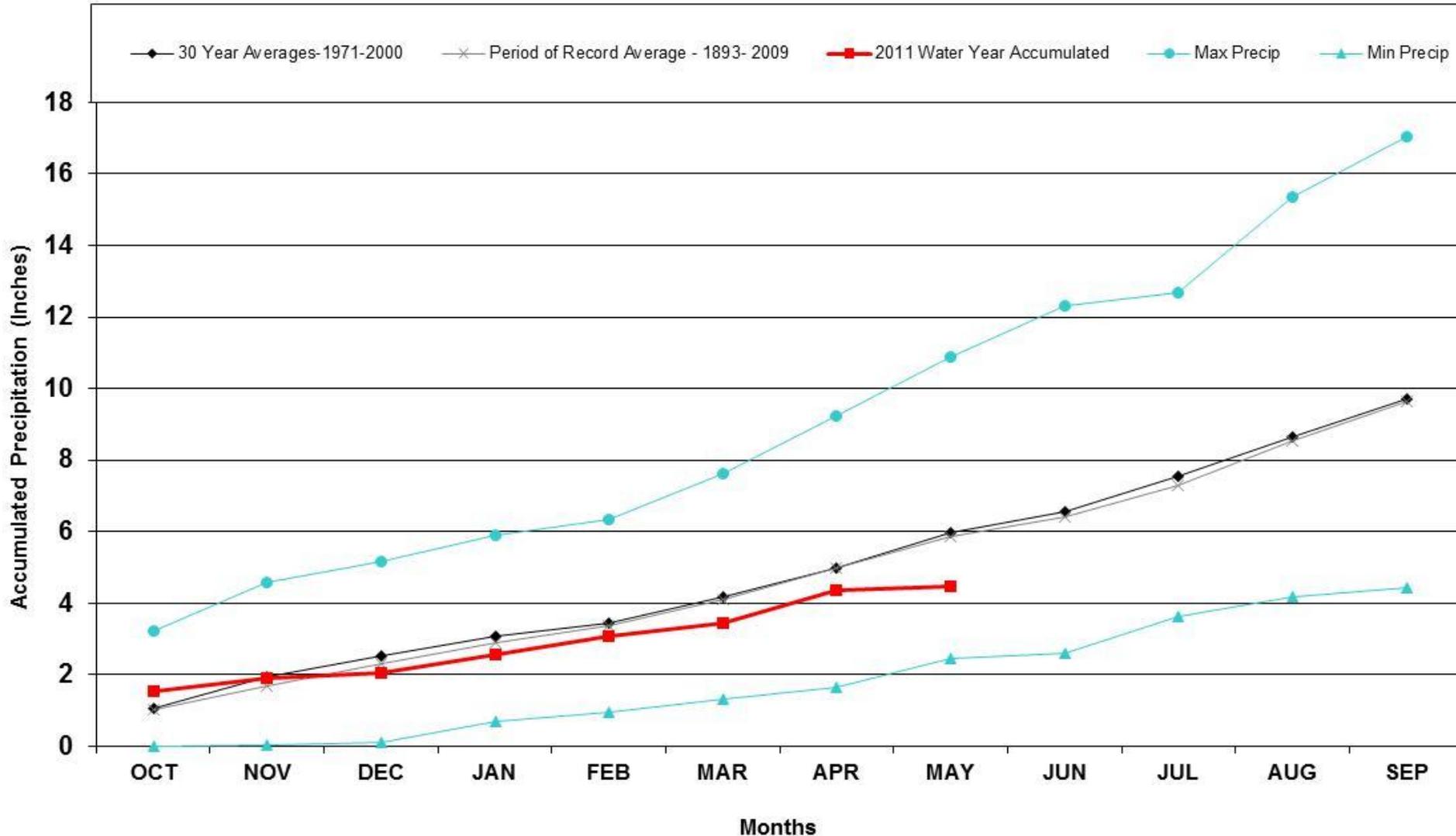
Division 2 – Grand Junction

Grand Junction WSFO 2011 Water Year



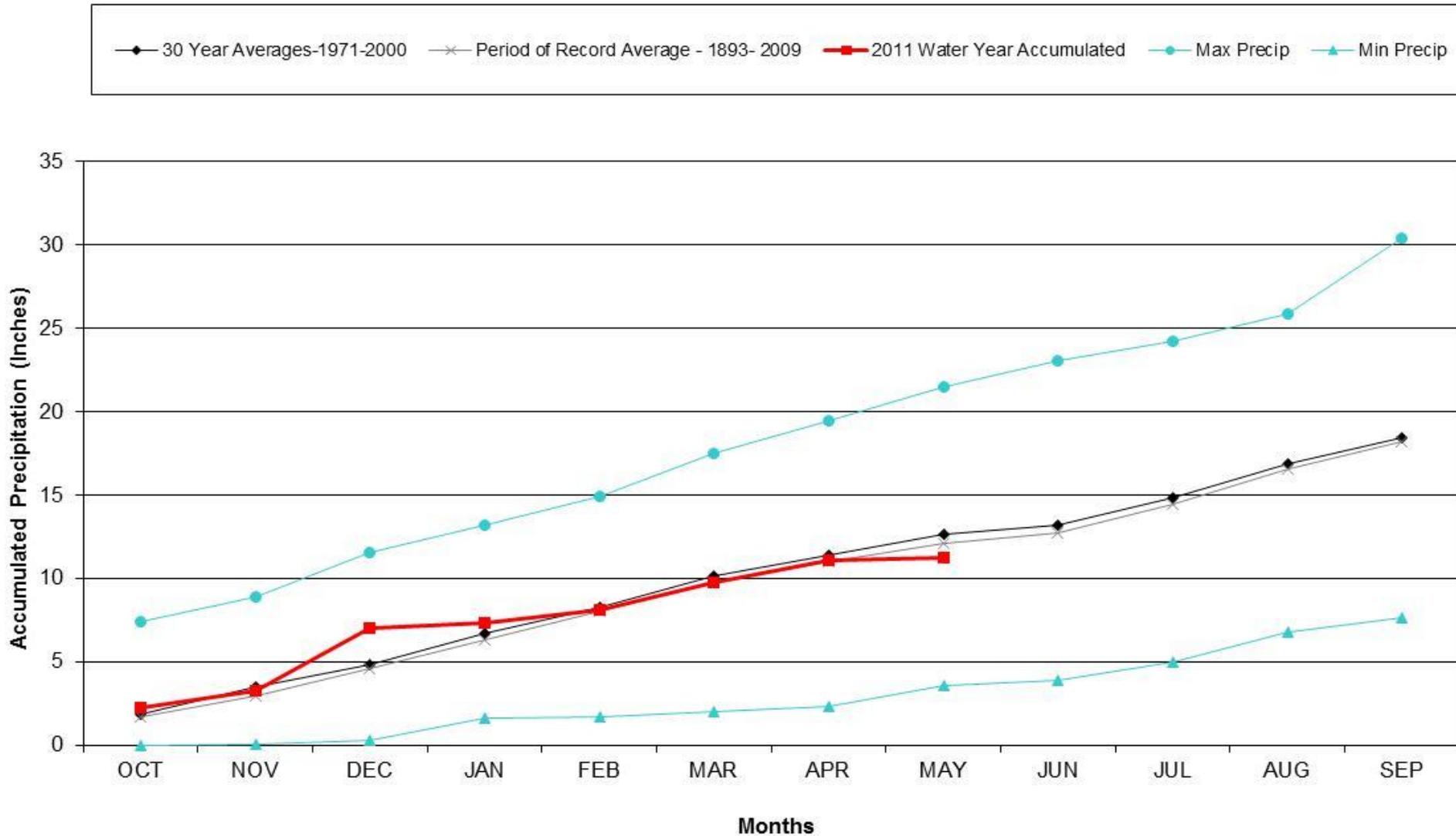
Division 3 – Montrose

Montrose #2 2011 Water Year



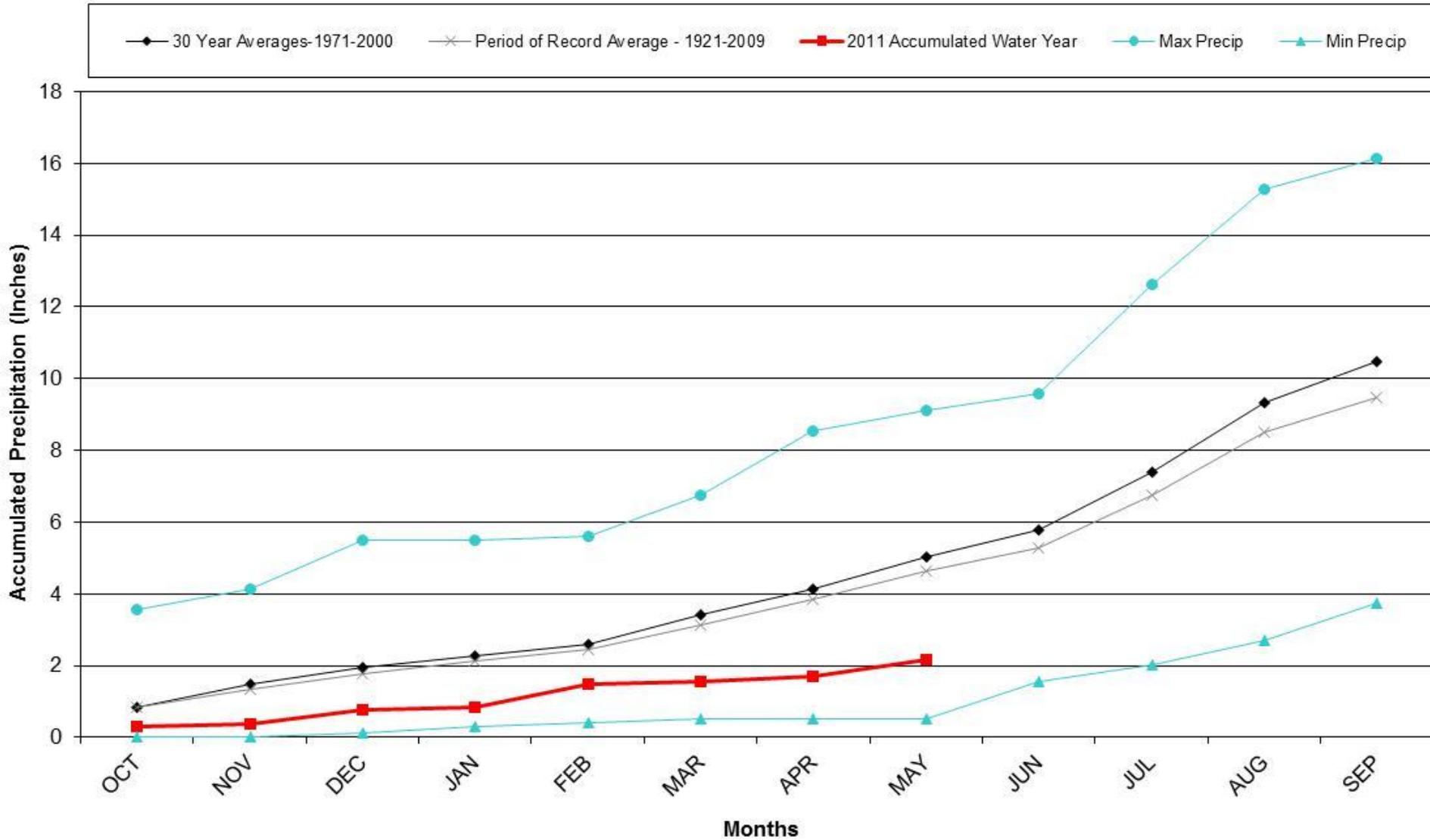
Division 3 – Mesa Verde NP

Mesa Verde NP 2011 Water Year



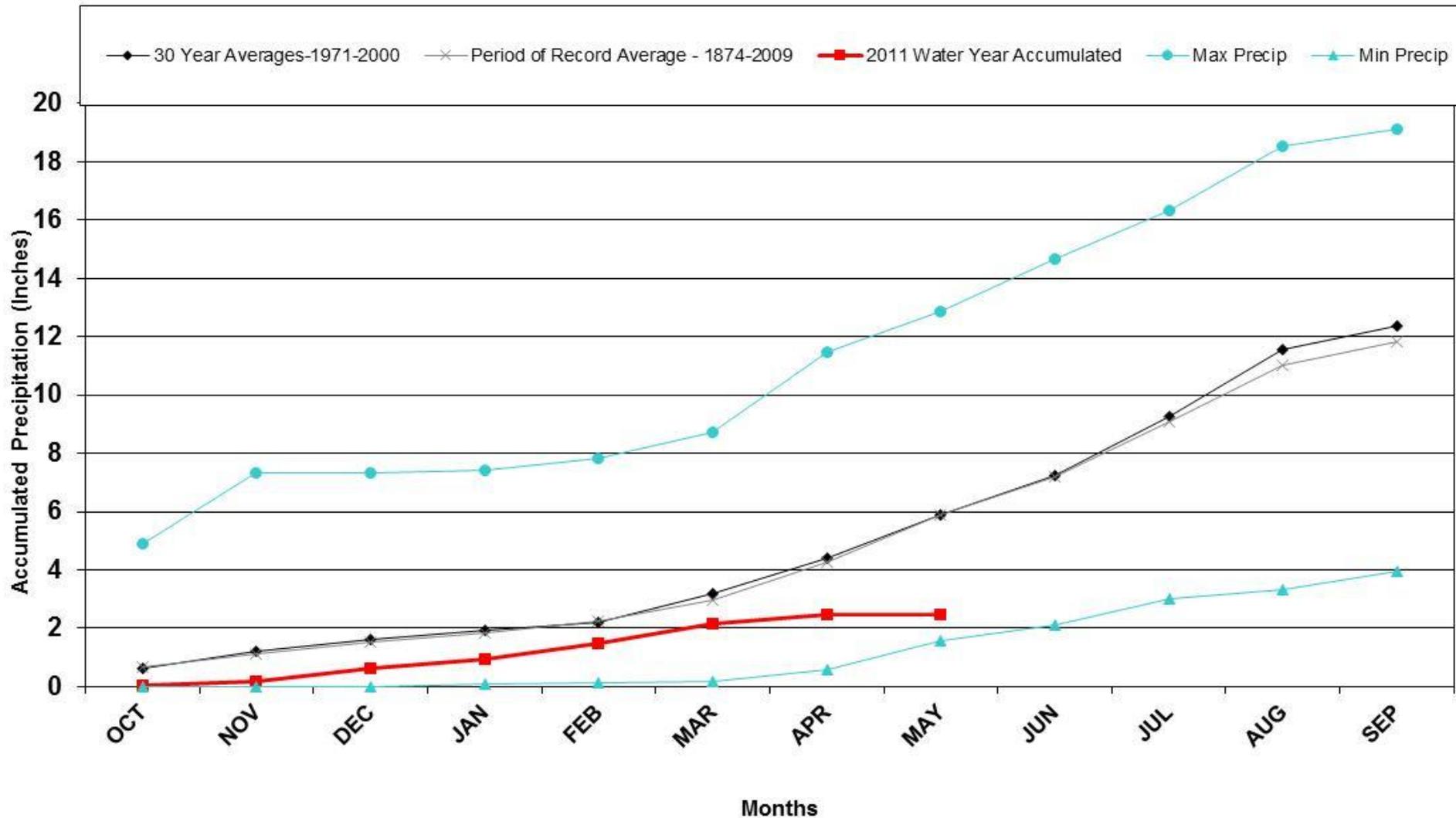
Division 4 – Del Norte

Del Norte 2011 Water Year

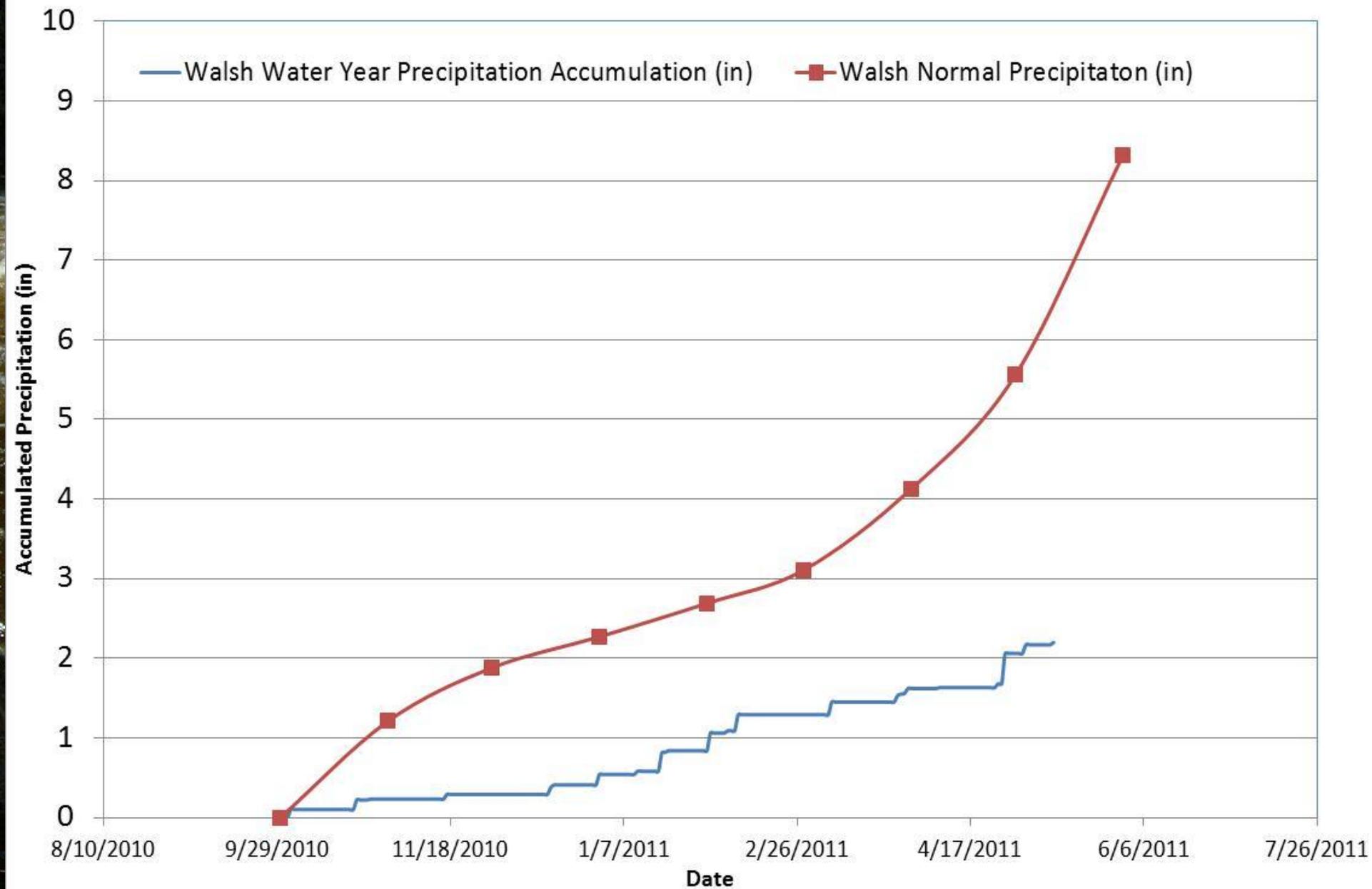


Division 5 – Pueblo

Pueblo WSO 2011 Water Year

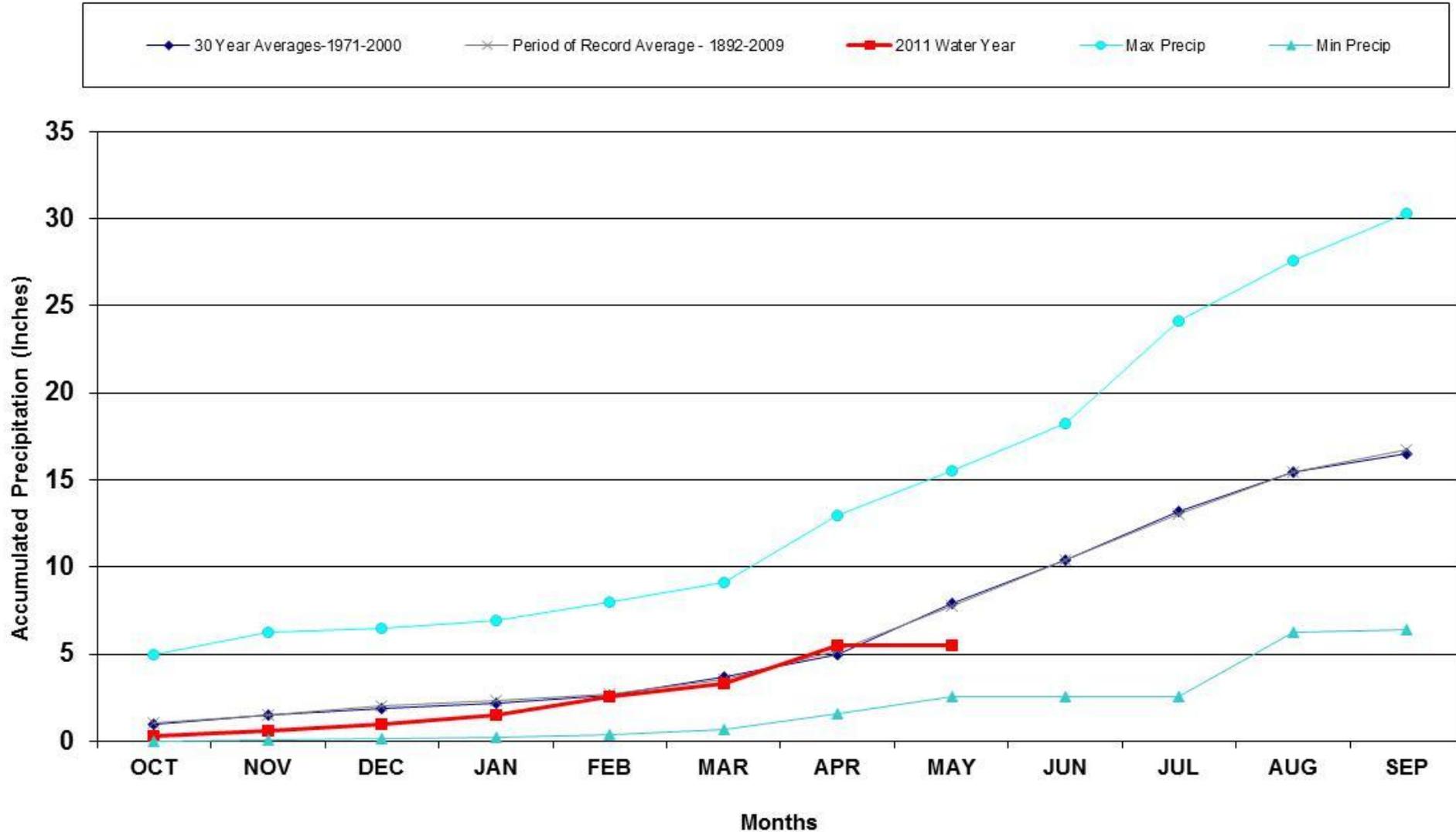


WY 2011 Walsh Precipitation compared to Normal (in)



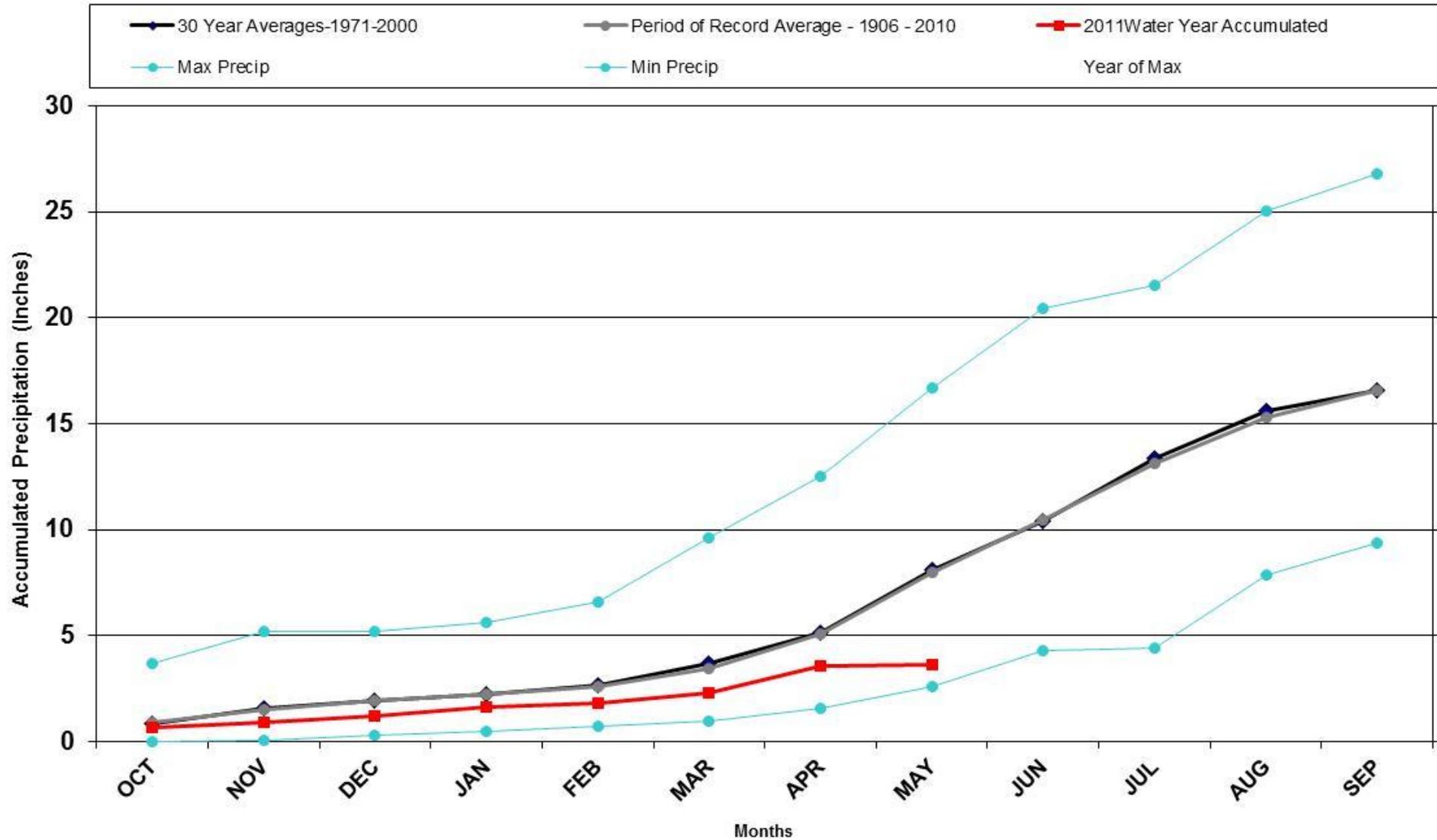
Division 6 - Burlington

Burlington 2011 Water Year



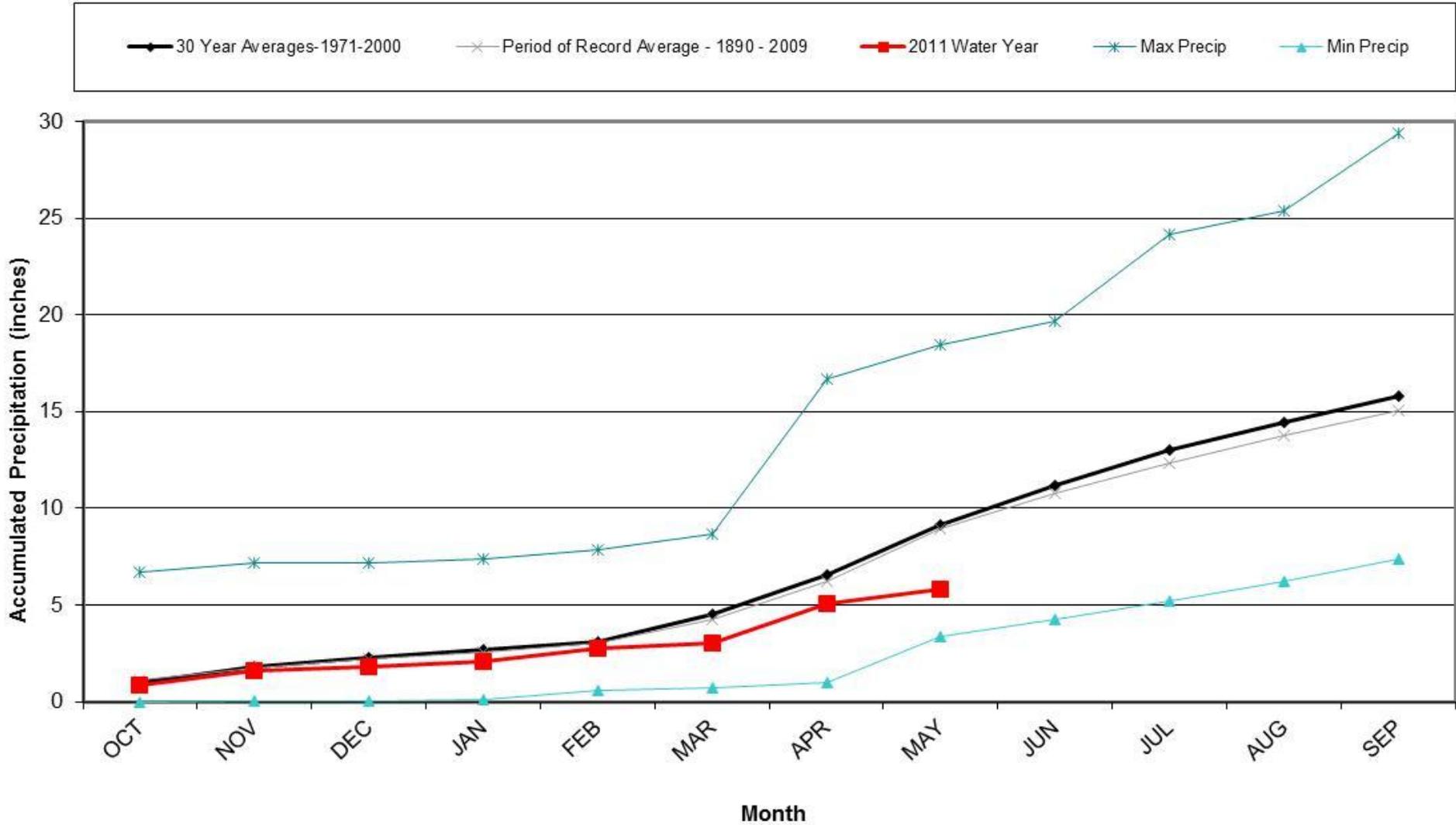
Division 7 – Akron

Akron 4E 2011 Water Year



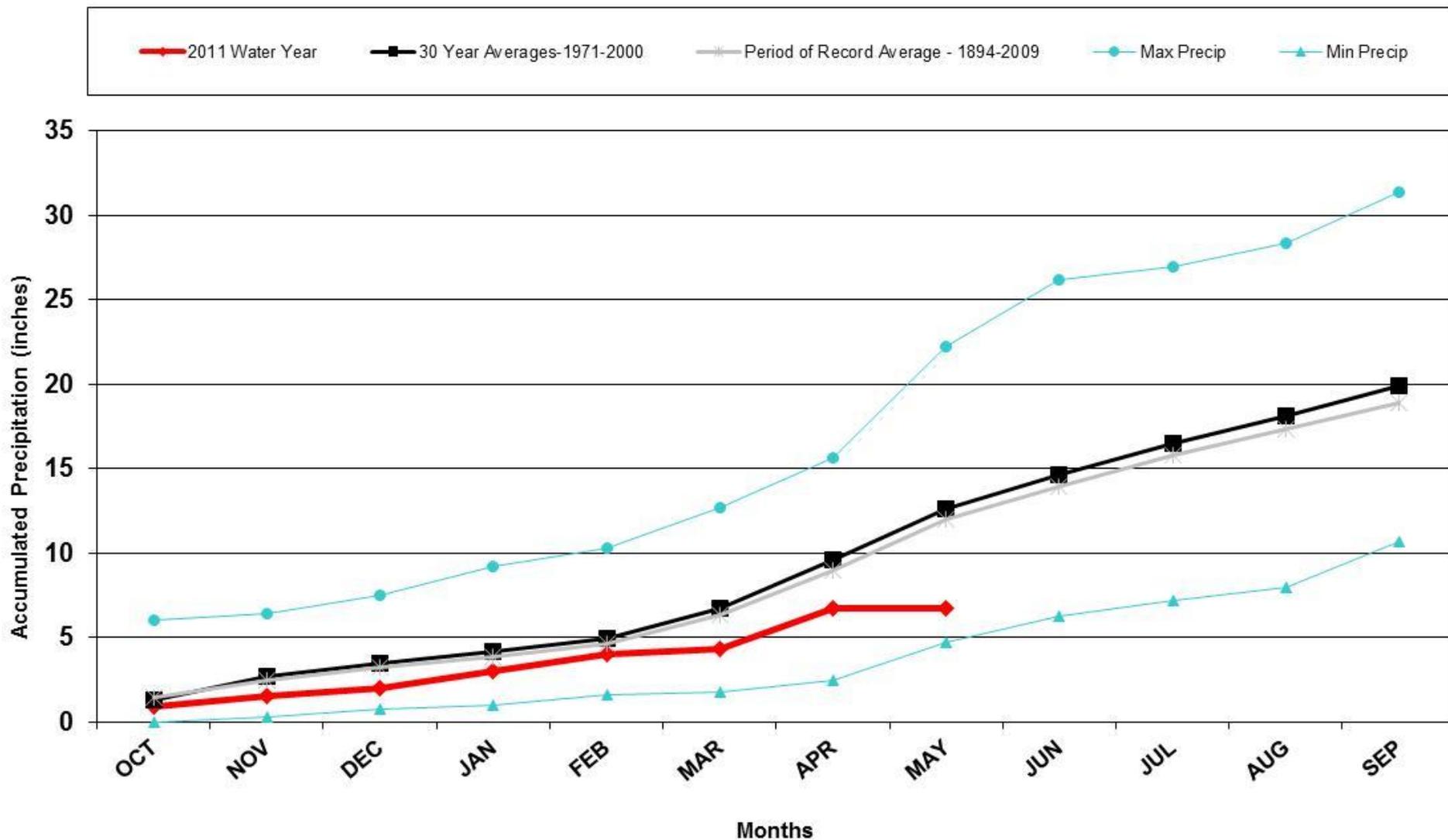
Division 8 – Fort Collins

Fort Collins 2011 Water Year



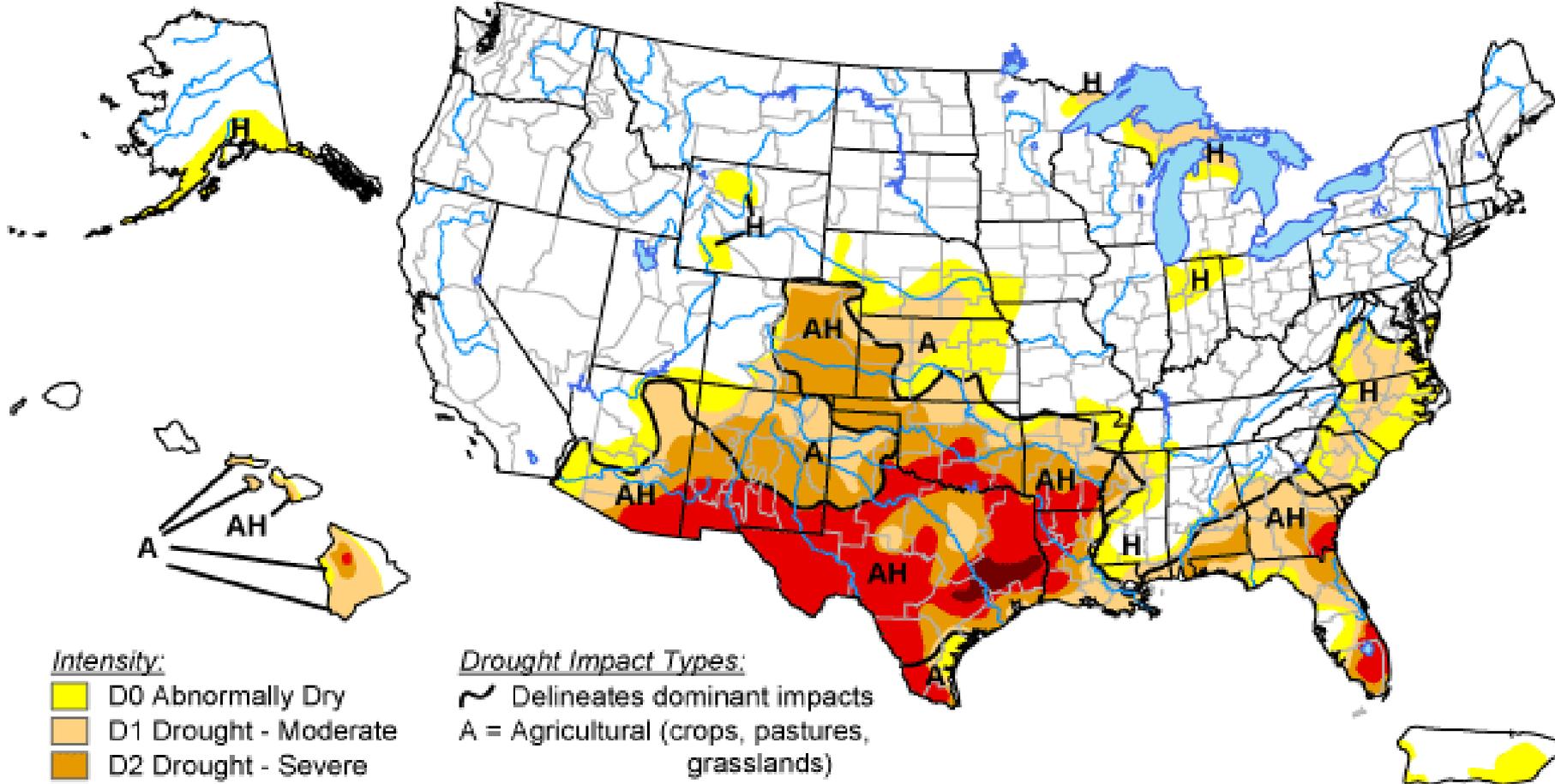
Division 8 - Boulder

Boulder 2011 Water Year



U.S. Drought Monitor

April 5, 2011
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.



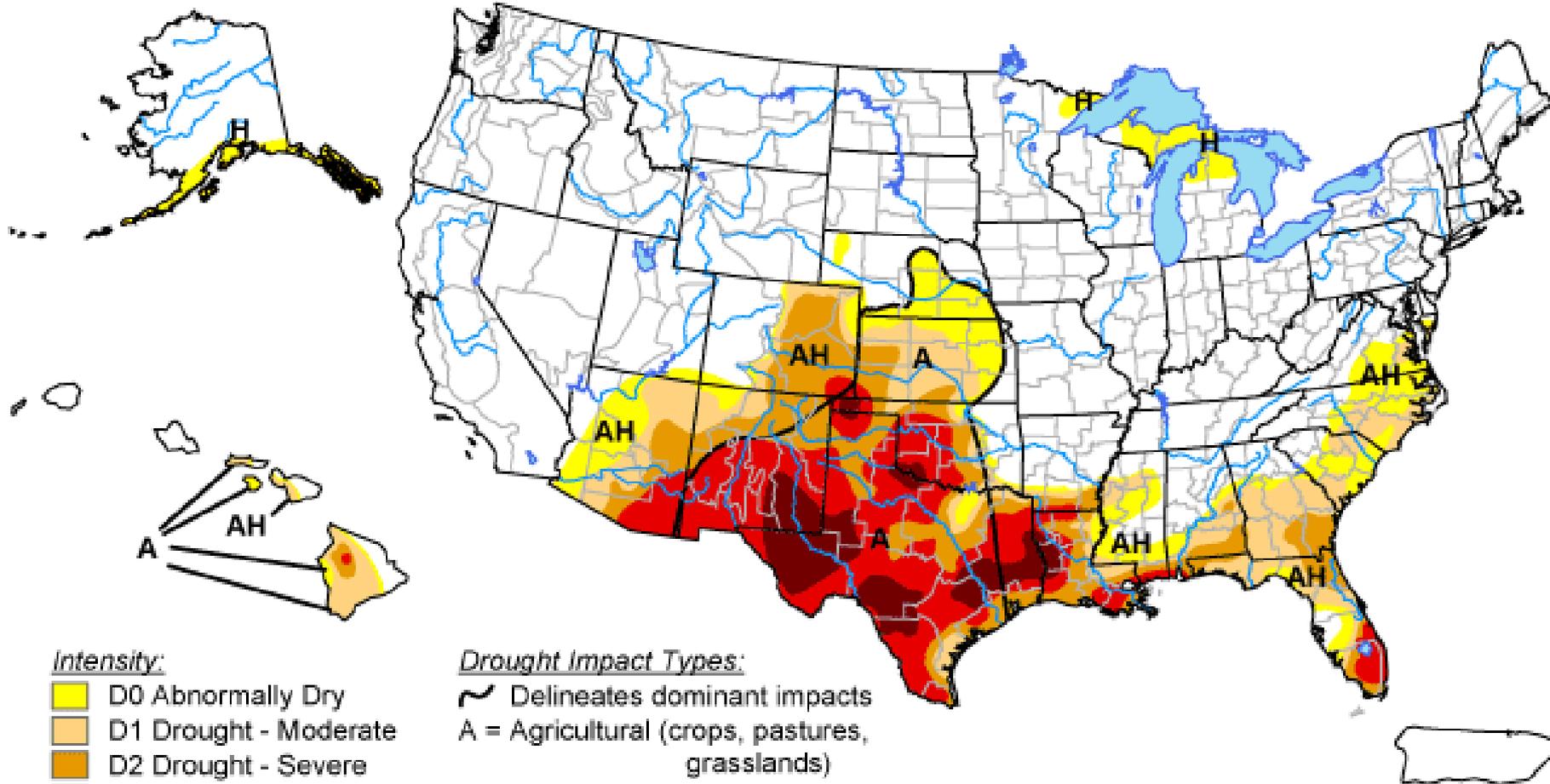
Released Thursday, April 7, 2011

Author: Mark Svoboda, National Drought Mitigation Center

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

U.S. Drought Monitor

May 3, 2011
Valid 8 a.m. EDT



Intensity:

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

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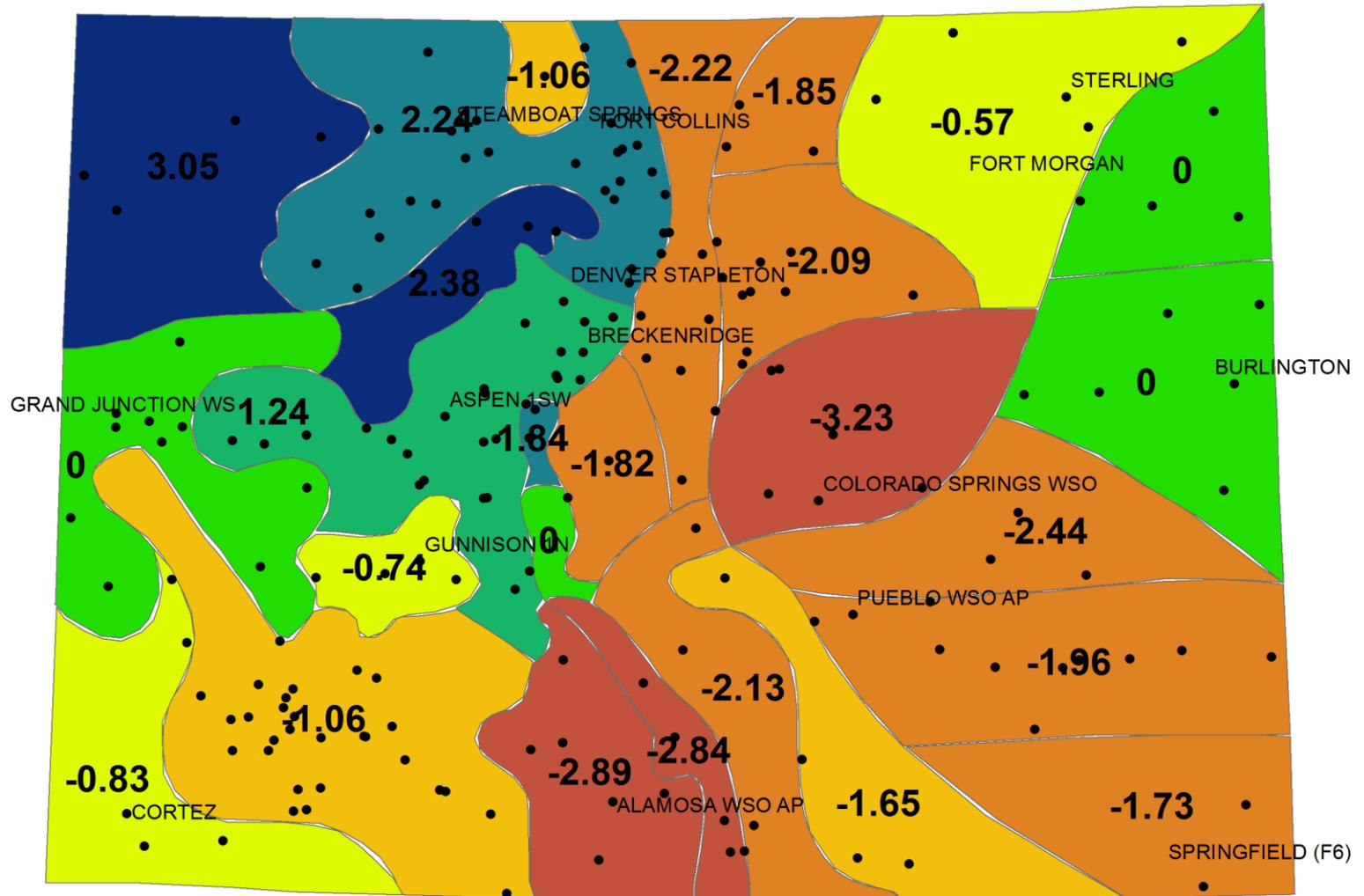
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

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



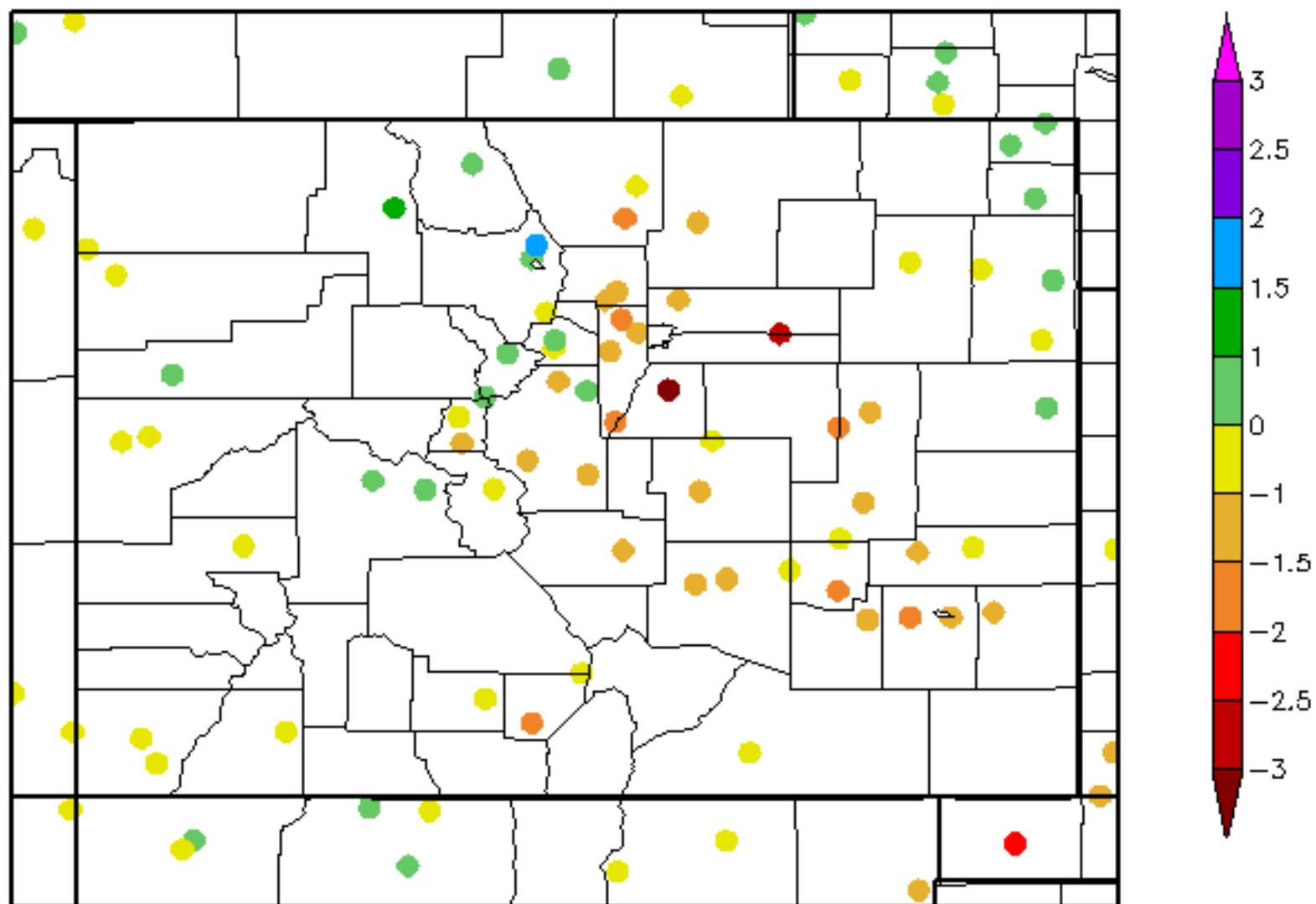
Released Thursday, May 5, 2011
Author: Rich Tinker, NOAA/NWS/NCEP/CPC

Preliminary Modified Palmer Drought Severity Index for Colorado April 2011



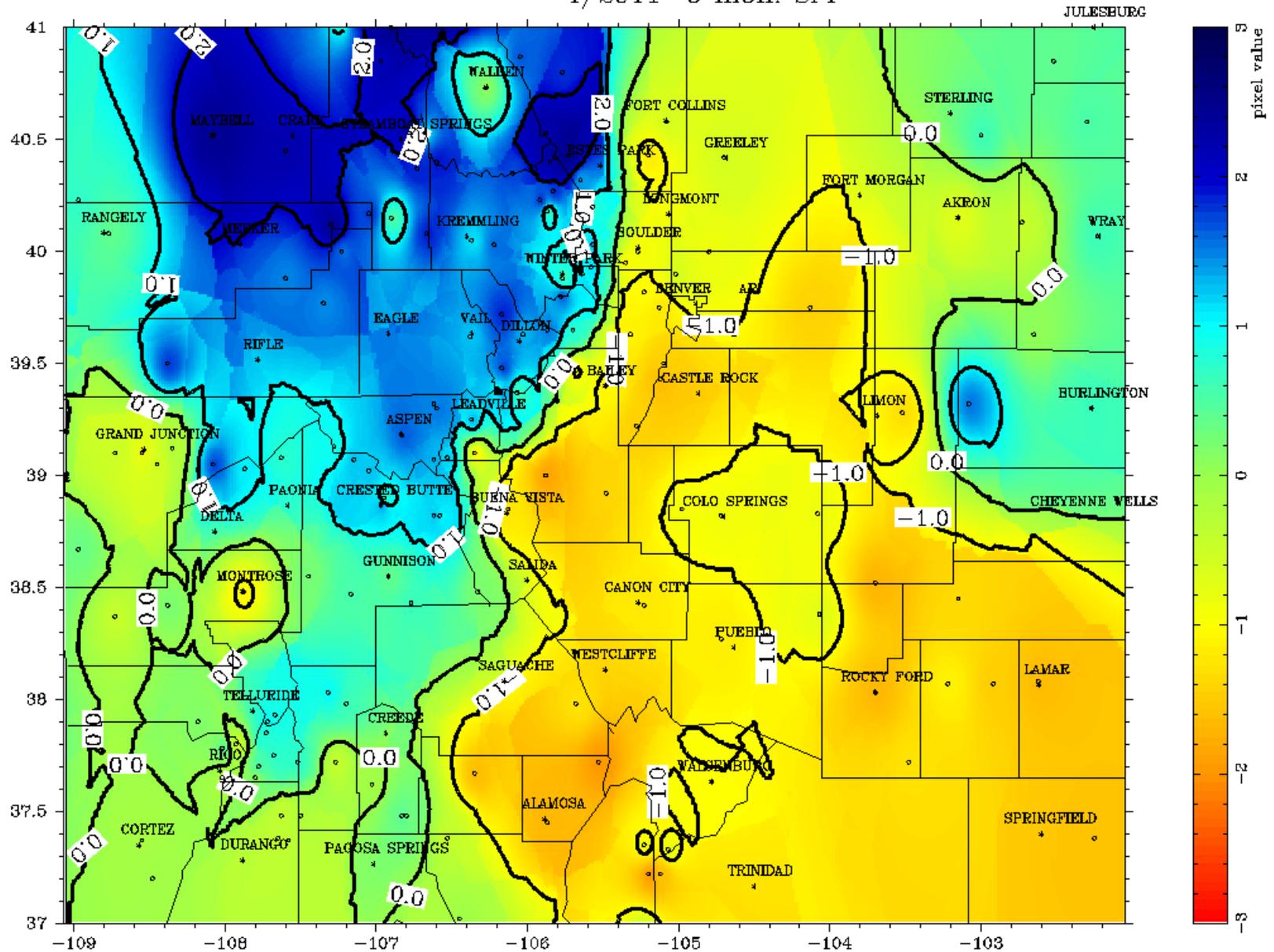
90 Day SPI

2/10/2011 - 5/10/2011



Colorado

4/2011 6 mon. SPI

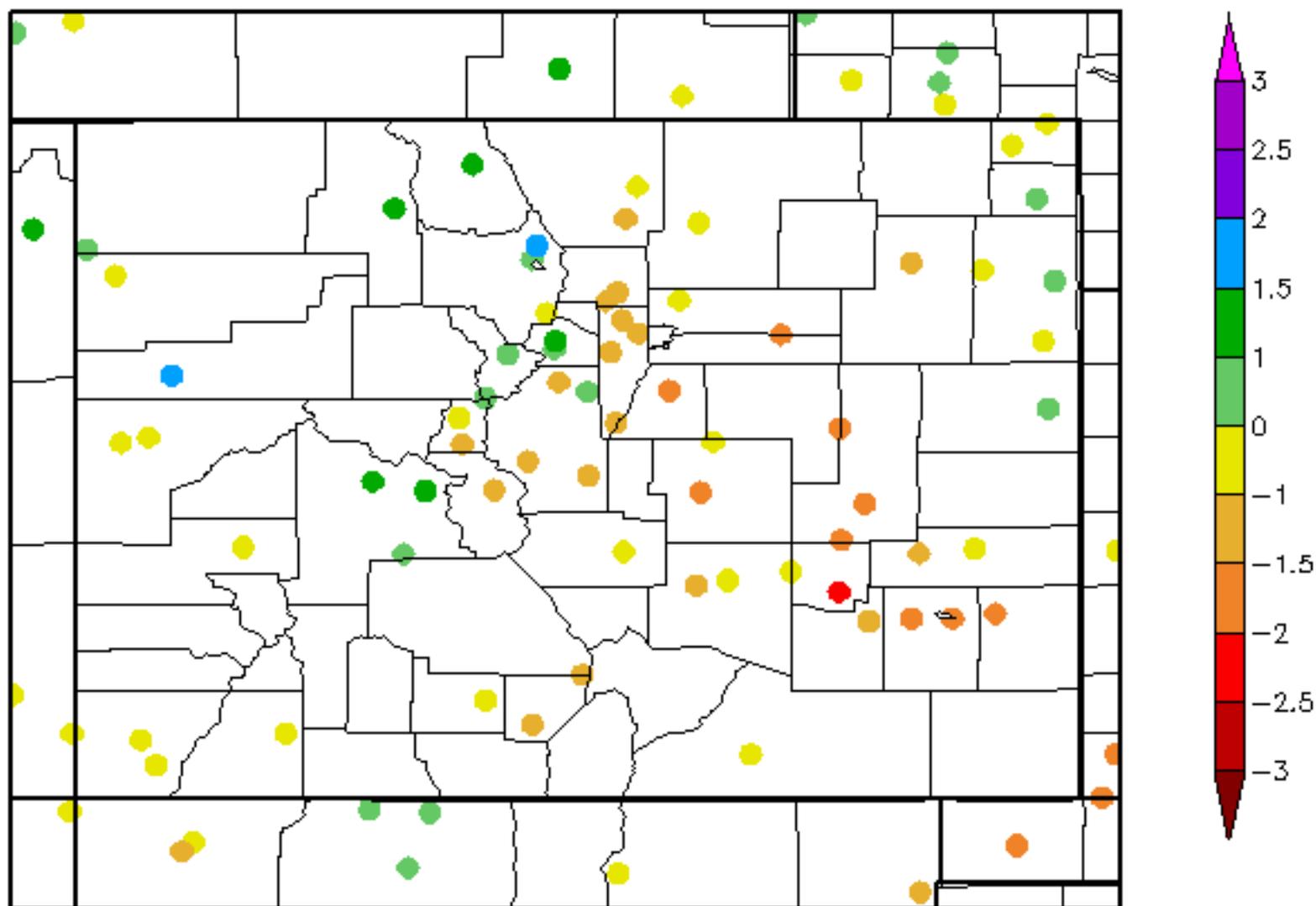


96 % < 2.0	31 % < -1.0
80 % < 1.0	0 % < -2.0
57 % < 0.0	0 % < -3.0

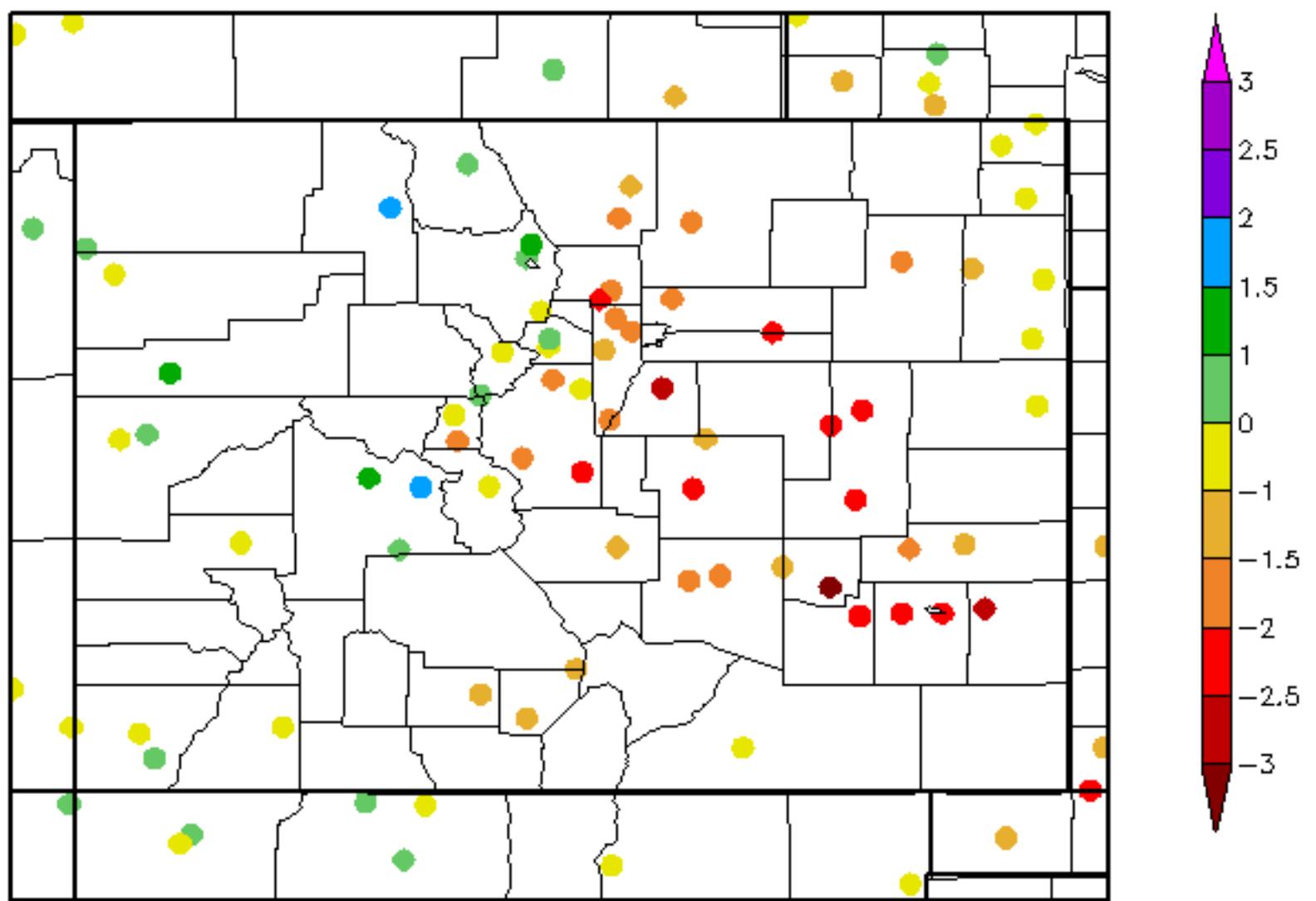
Produced by:
Colorado Climate Center
Fort Collins, CO

6 Month SPI

11/11/2010 - 5/10/2011



9 Month SPI 8/11/2010 - 5/10/2011



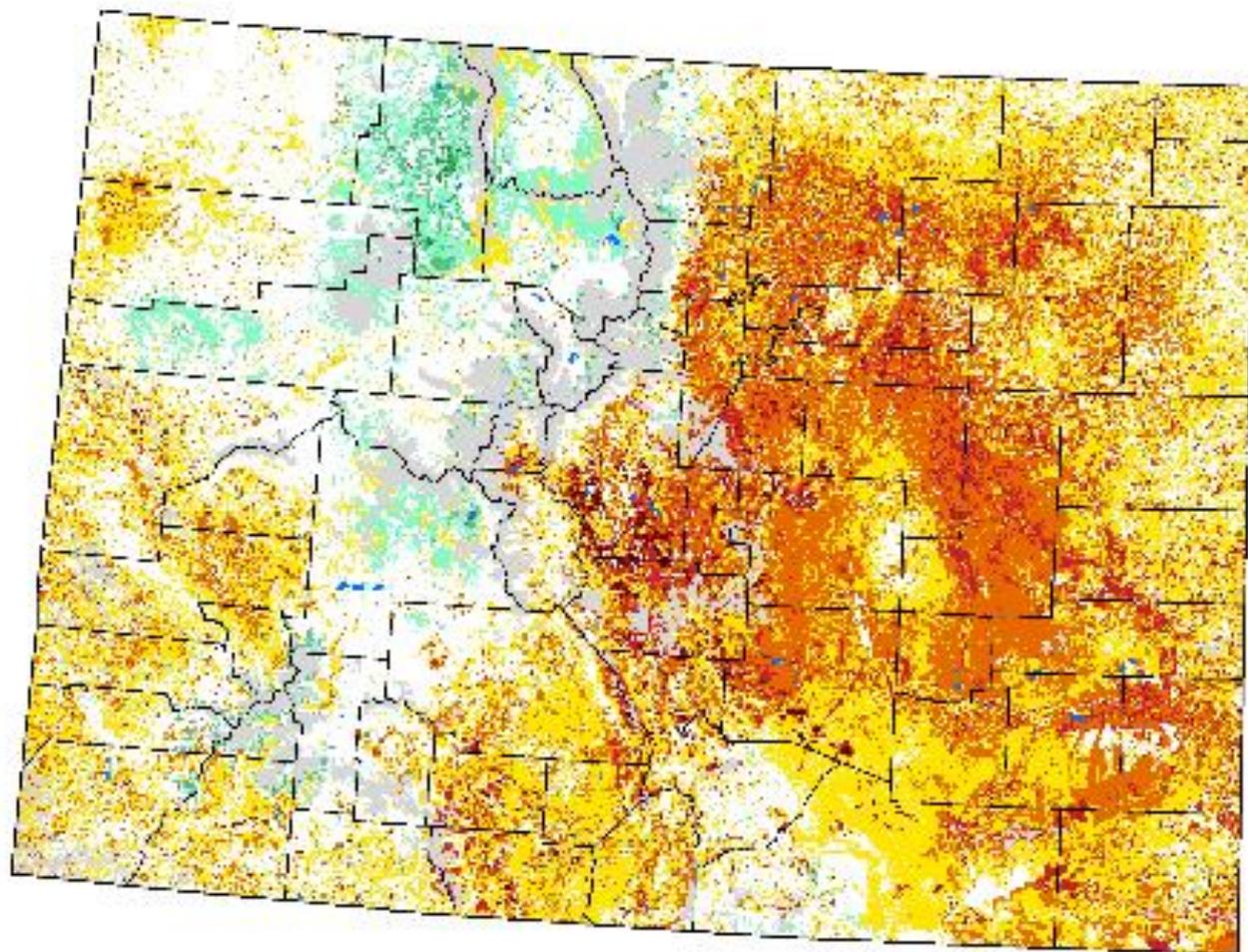
Vegetation Drought Response Index

Complete: Colorado

May 2, 2011

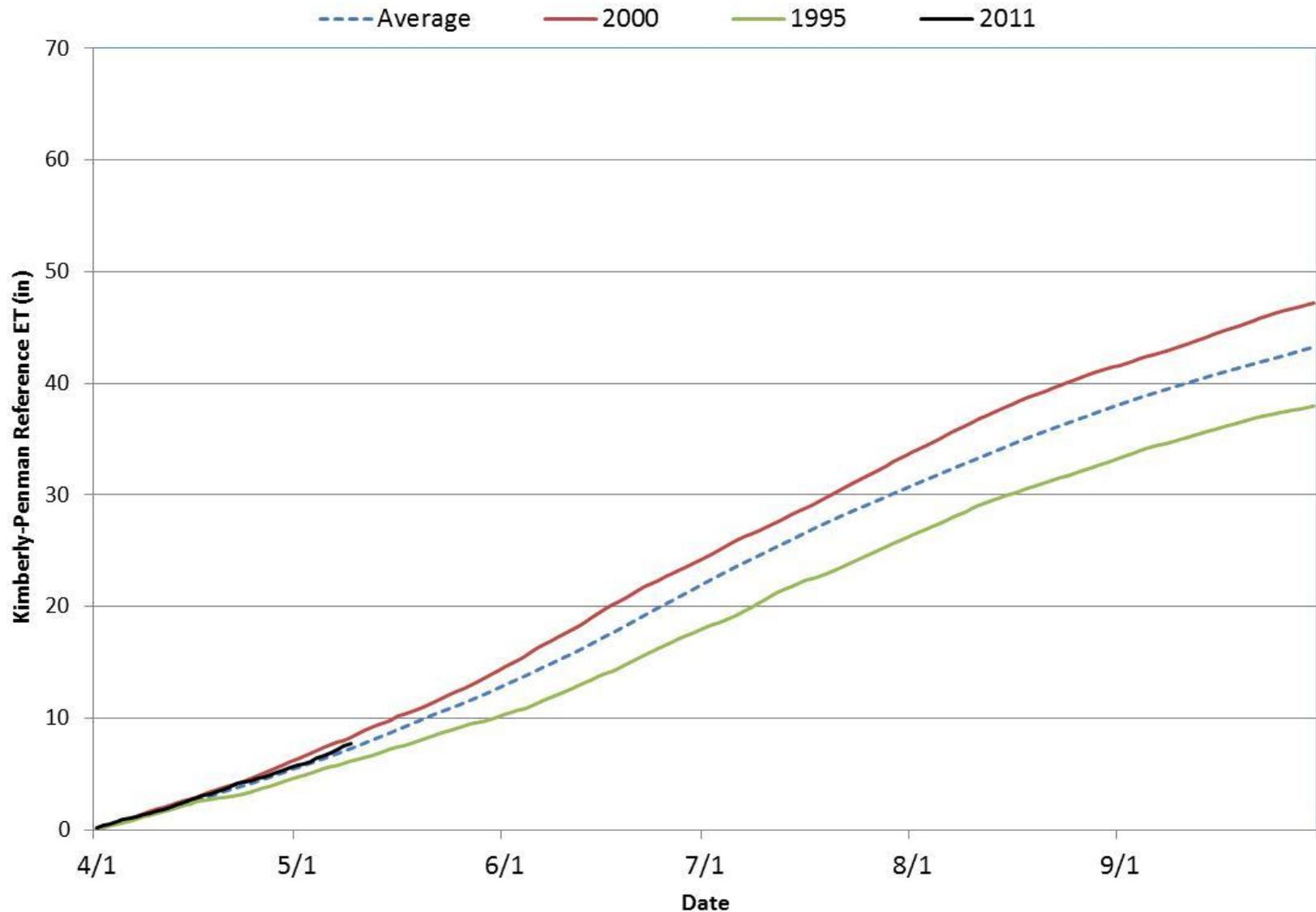
Vegetation Condition

-  Extreme Drought
-  Severe Drought
-  Moderate Drought
-  Pre-Drought
-  Near Normal
-  Unusually Moist
-  Very Moist
-  Extremely Moist
-  Out of Season
-  Water



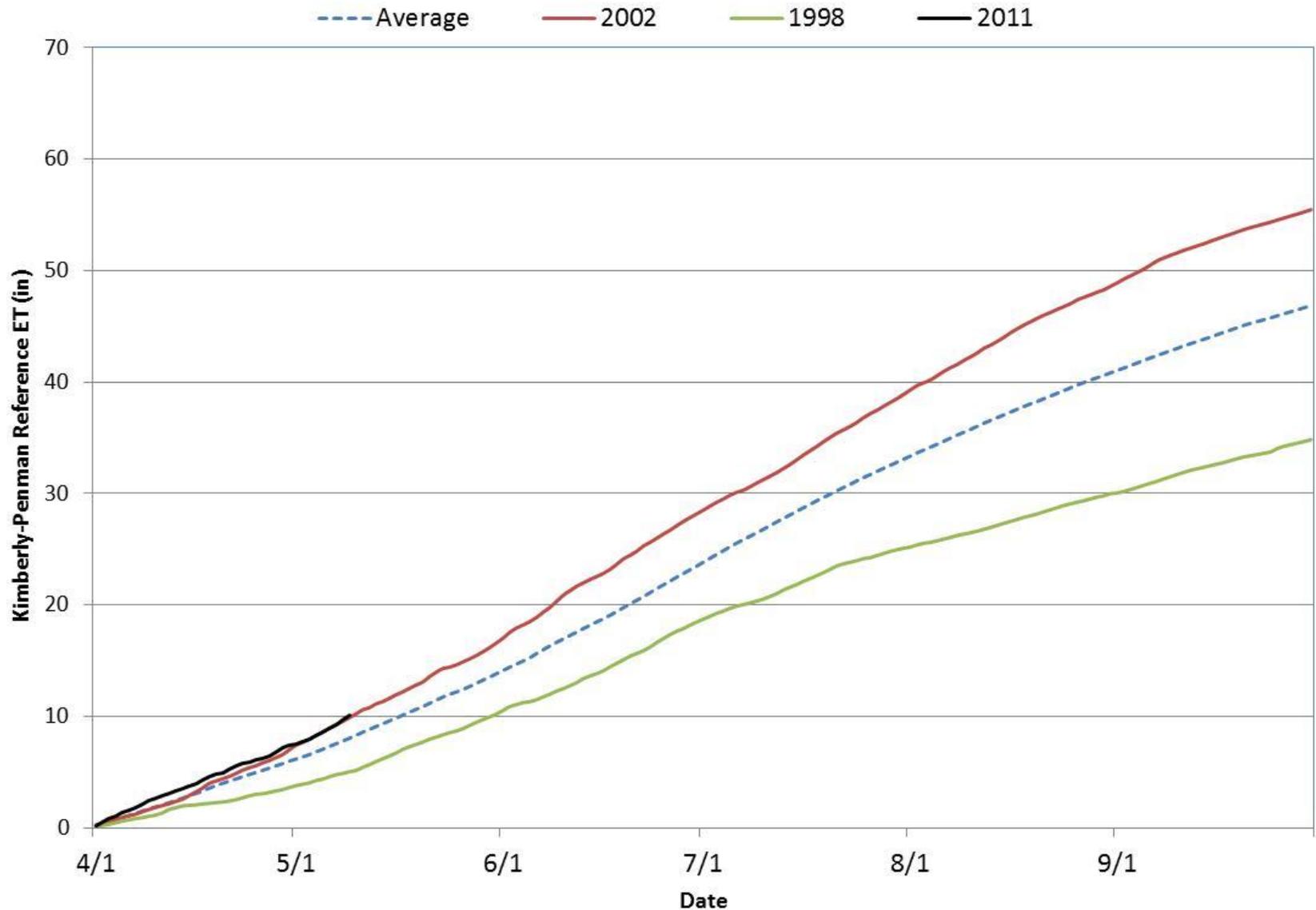
Cortez Reference ET

CTZ01 Kimberly-Penman Reference ET (1992 - 2011)



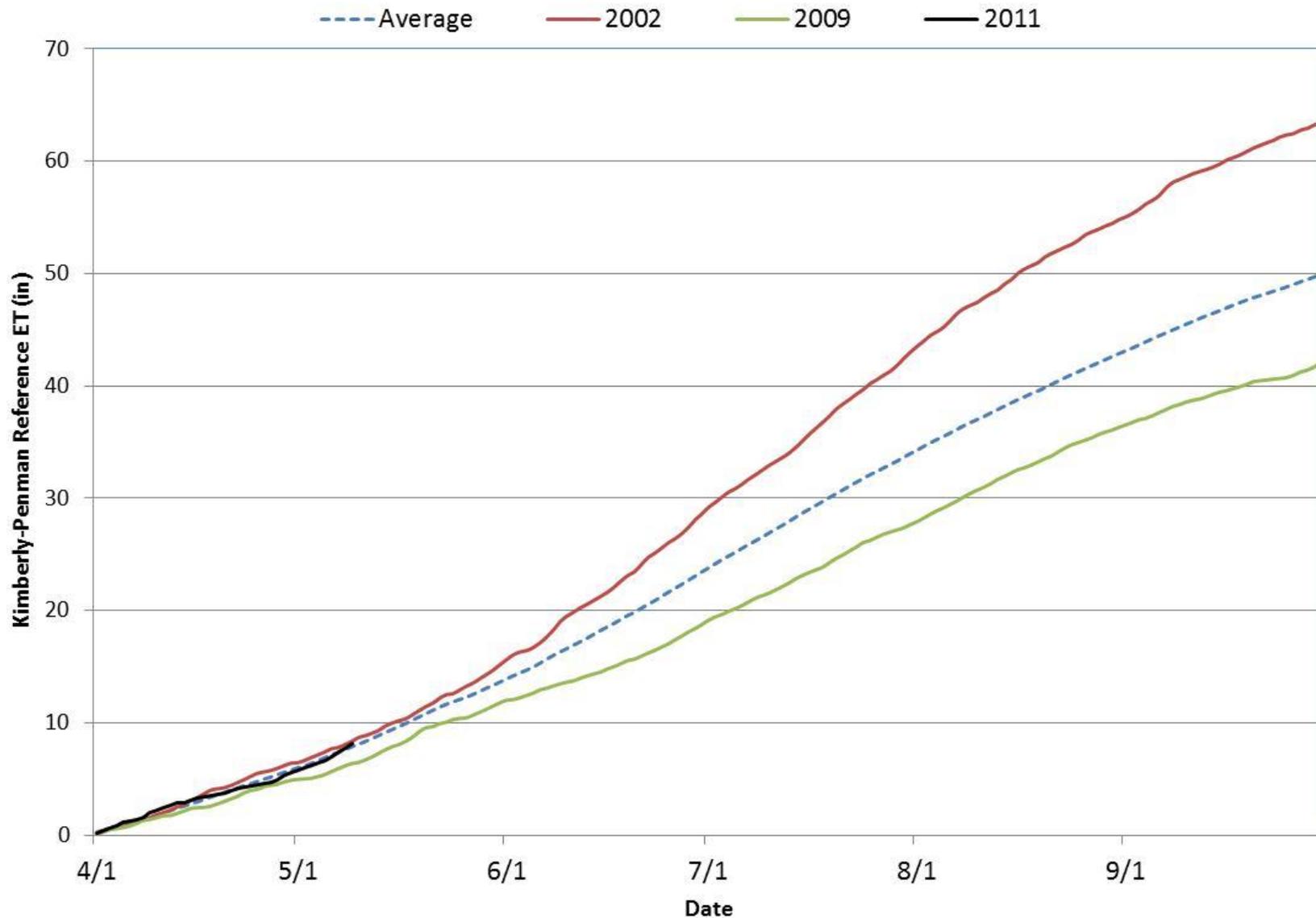
Avondale Reference ET

AVN01 Kimberly-Penman Reference ET (1993 - 2011)



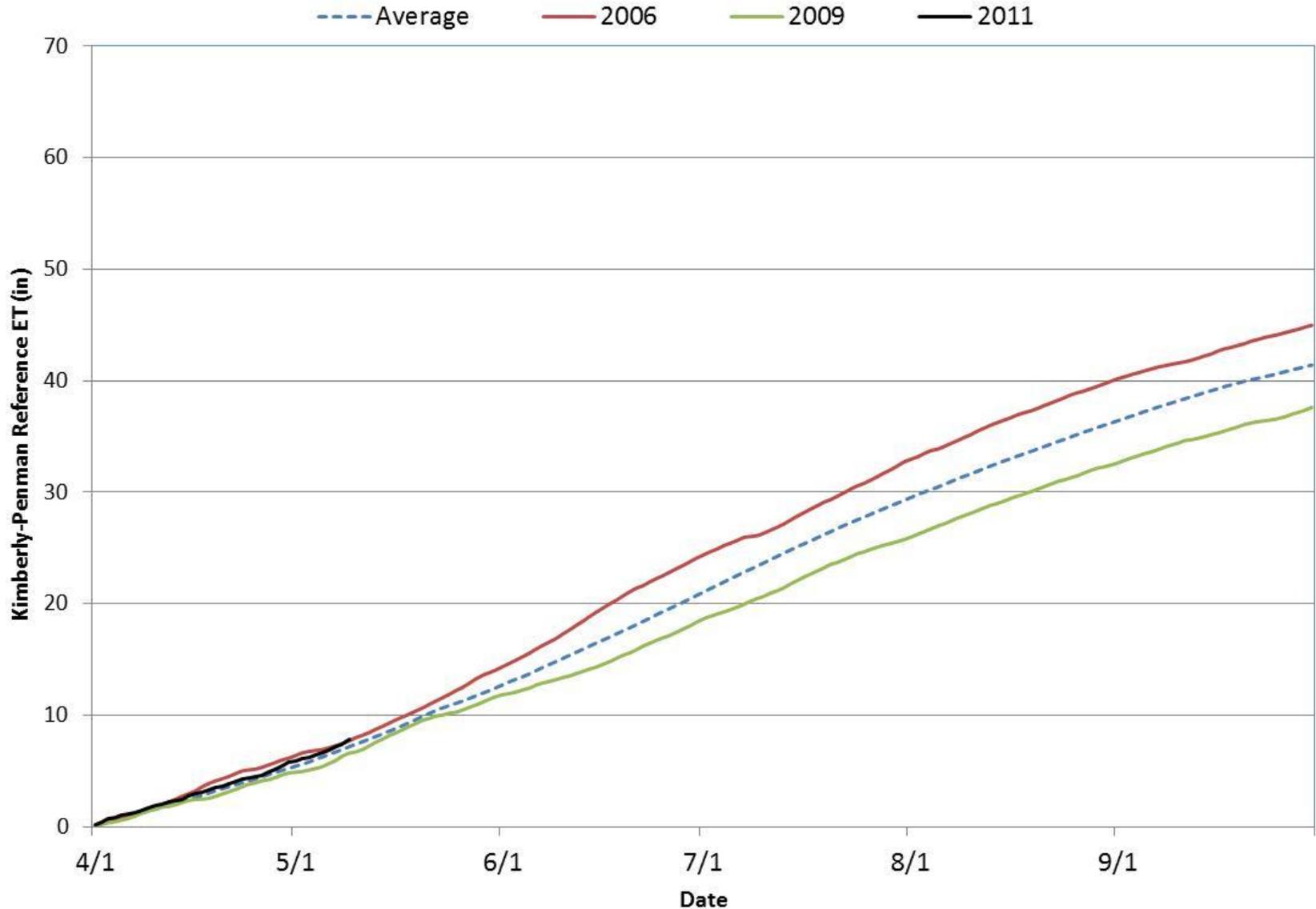
Idalia Reference ET

IDL01 Kimberly-Penman Reference ET (1992 - 2011)



Lucerne Reference ET

LCN01 Kimberly-Penman Reference ET (1992 - 2011)



Colorado Climate Center



**Colorado
State
University**
Knowledge to Go Places

Data and Power Point Presentations available for downloading

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