



Climate Update

Nolan Doesken
Colorado Climate Center

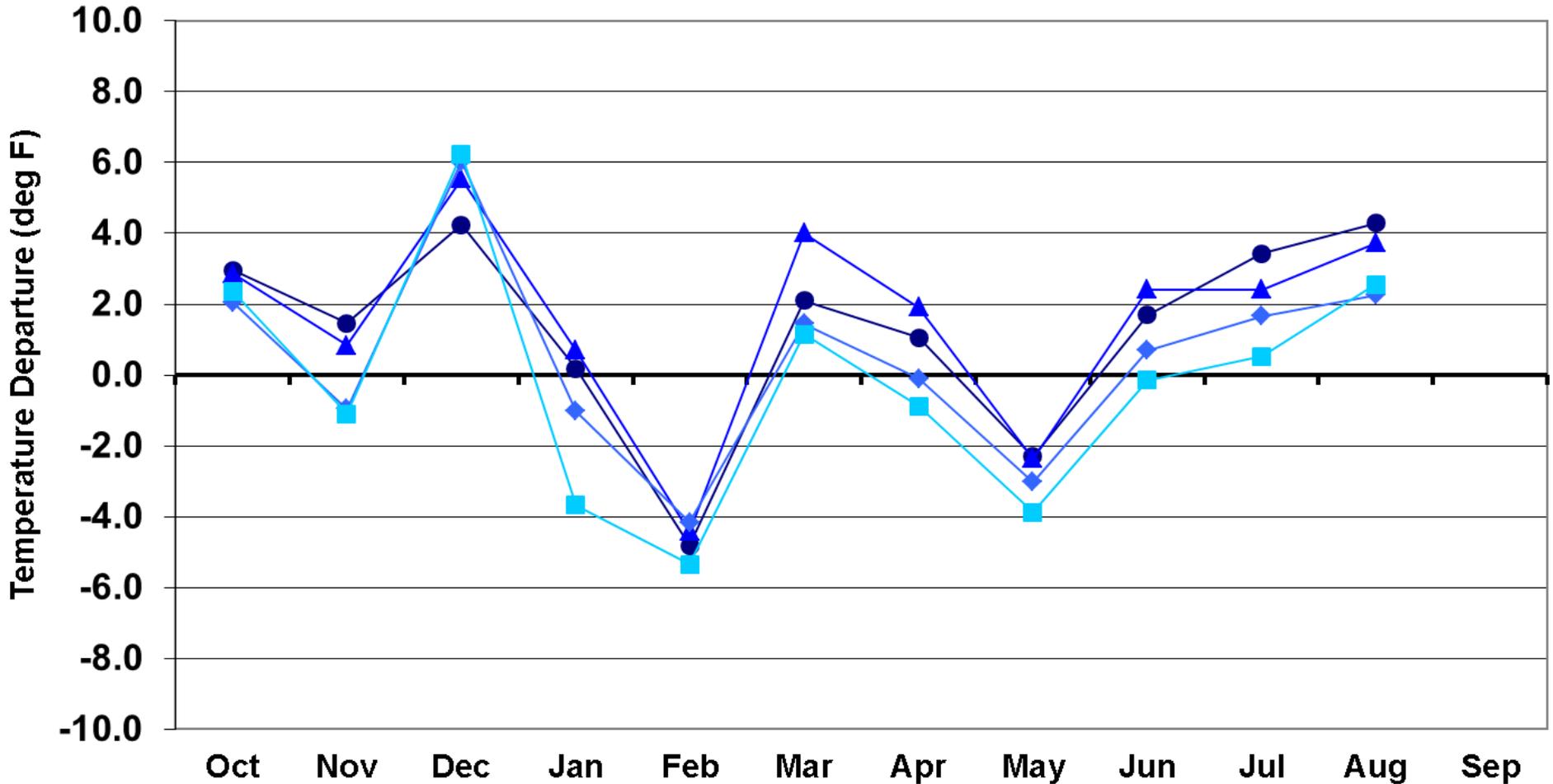
Atmospheric Science Department
Colorado State University

Presented to
Water Availability Task Force
September 22, 2011
Denver, CO

Prepared by Wendy Ryan

Water Year 2011 Temperature Departures

Water Year 2011



● Eastern Plains

▲ Foothills

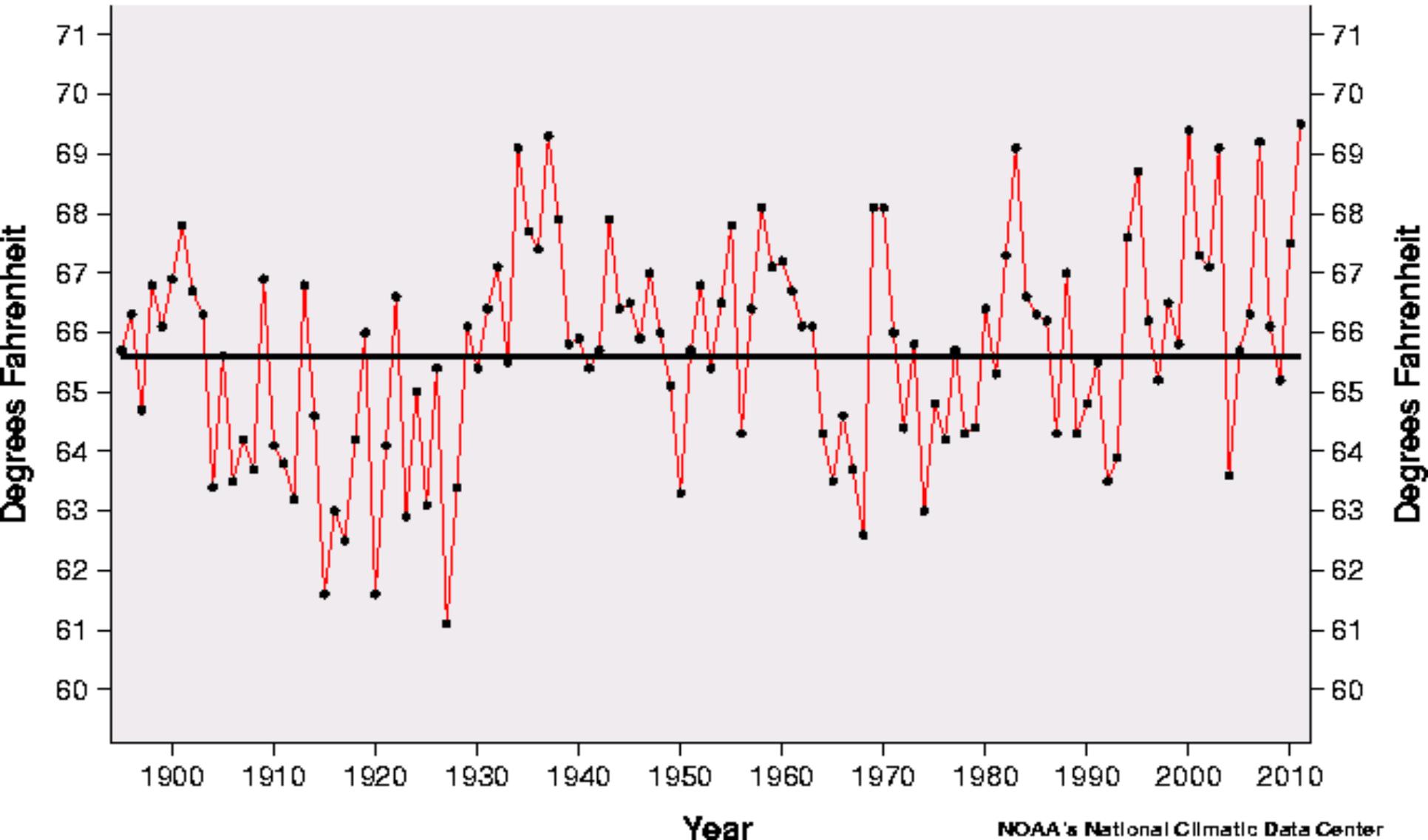
◆ Mountains

■ Western Valleys

August Average Temperature History for Colorado (NCDC)

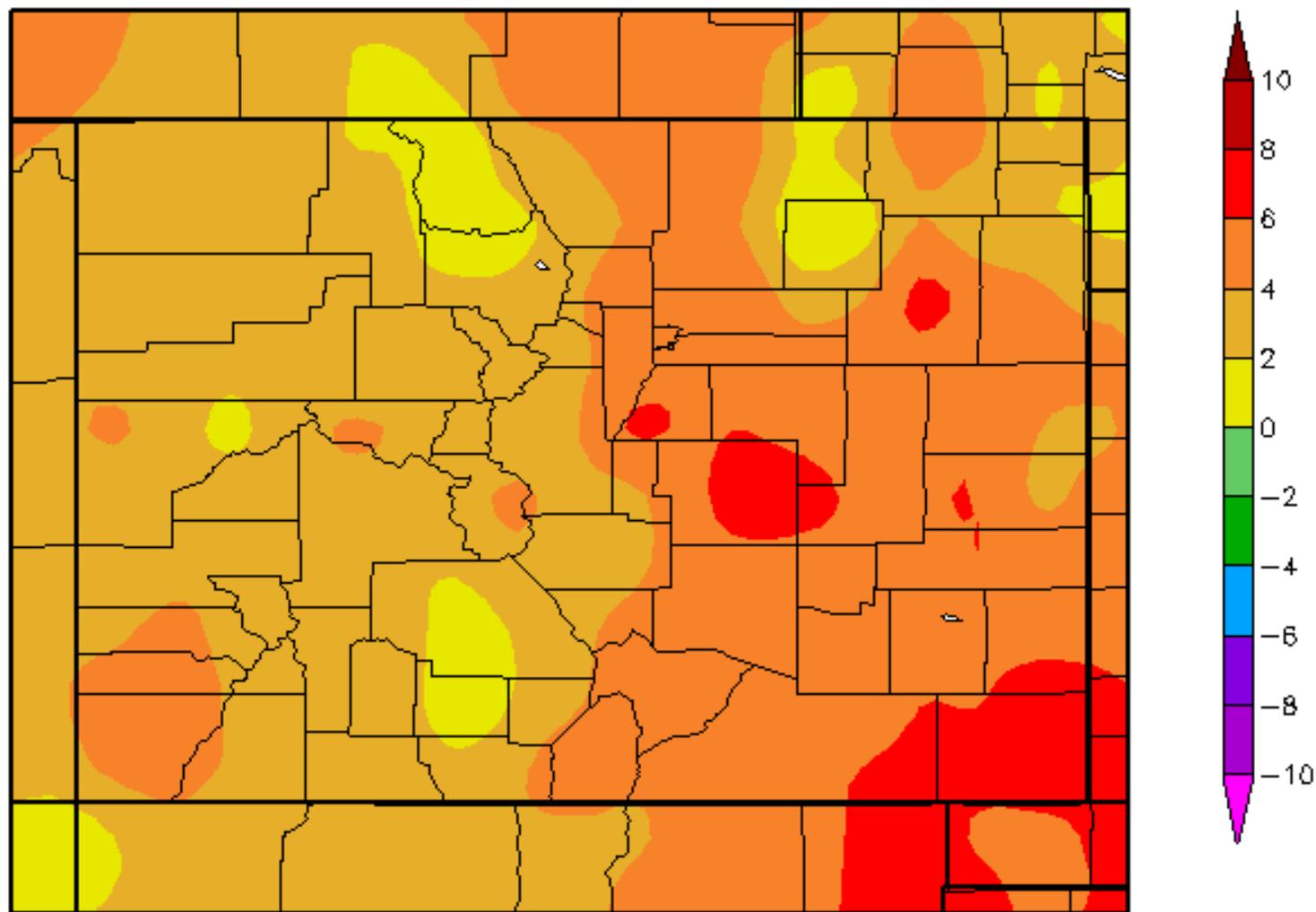
— Actual Temperature
— Average Temperature

69.5 Degrees is the hottest on record!



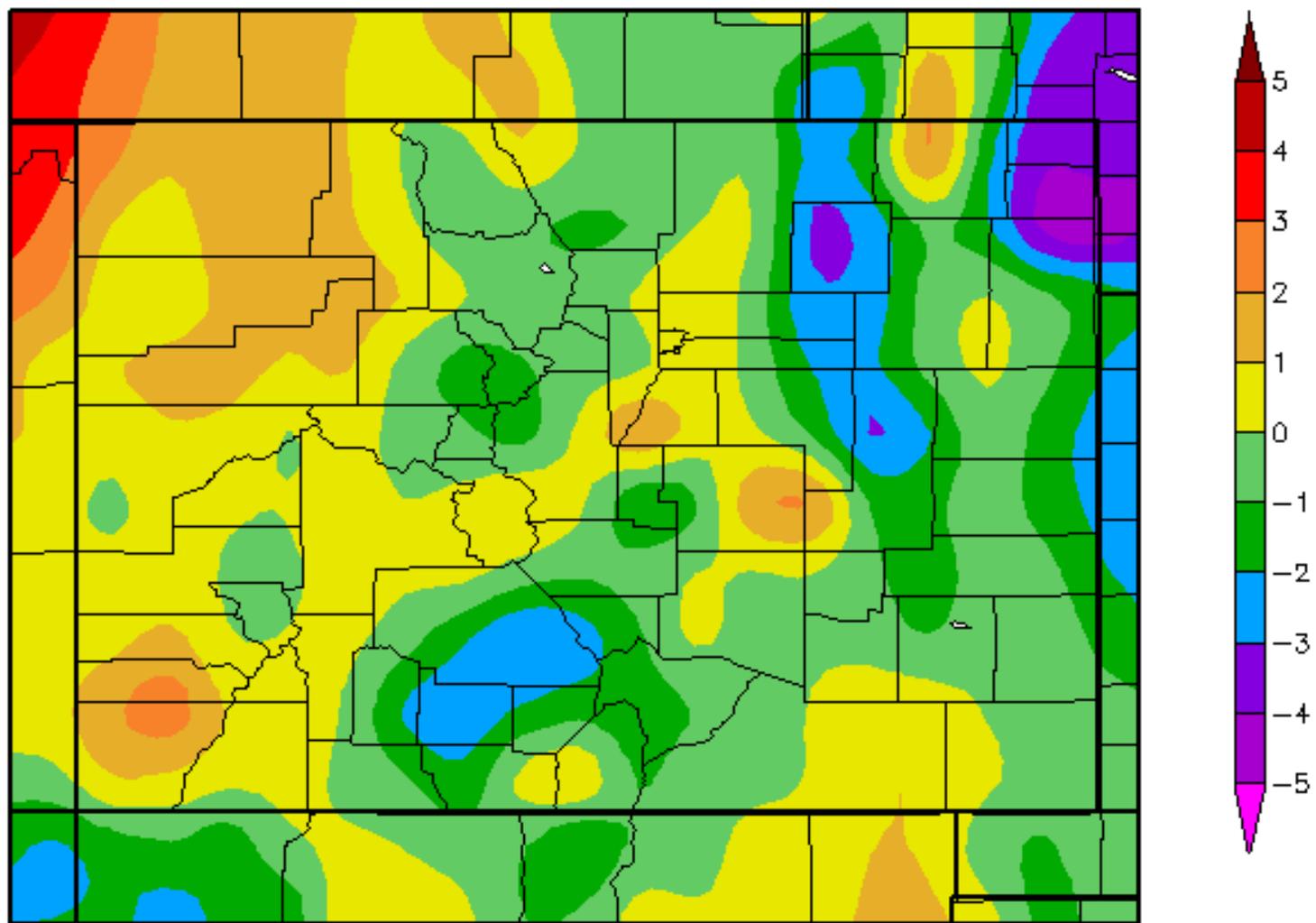
Departure from Normal Temperature (F)

8/1/2011 - 8/31/2011

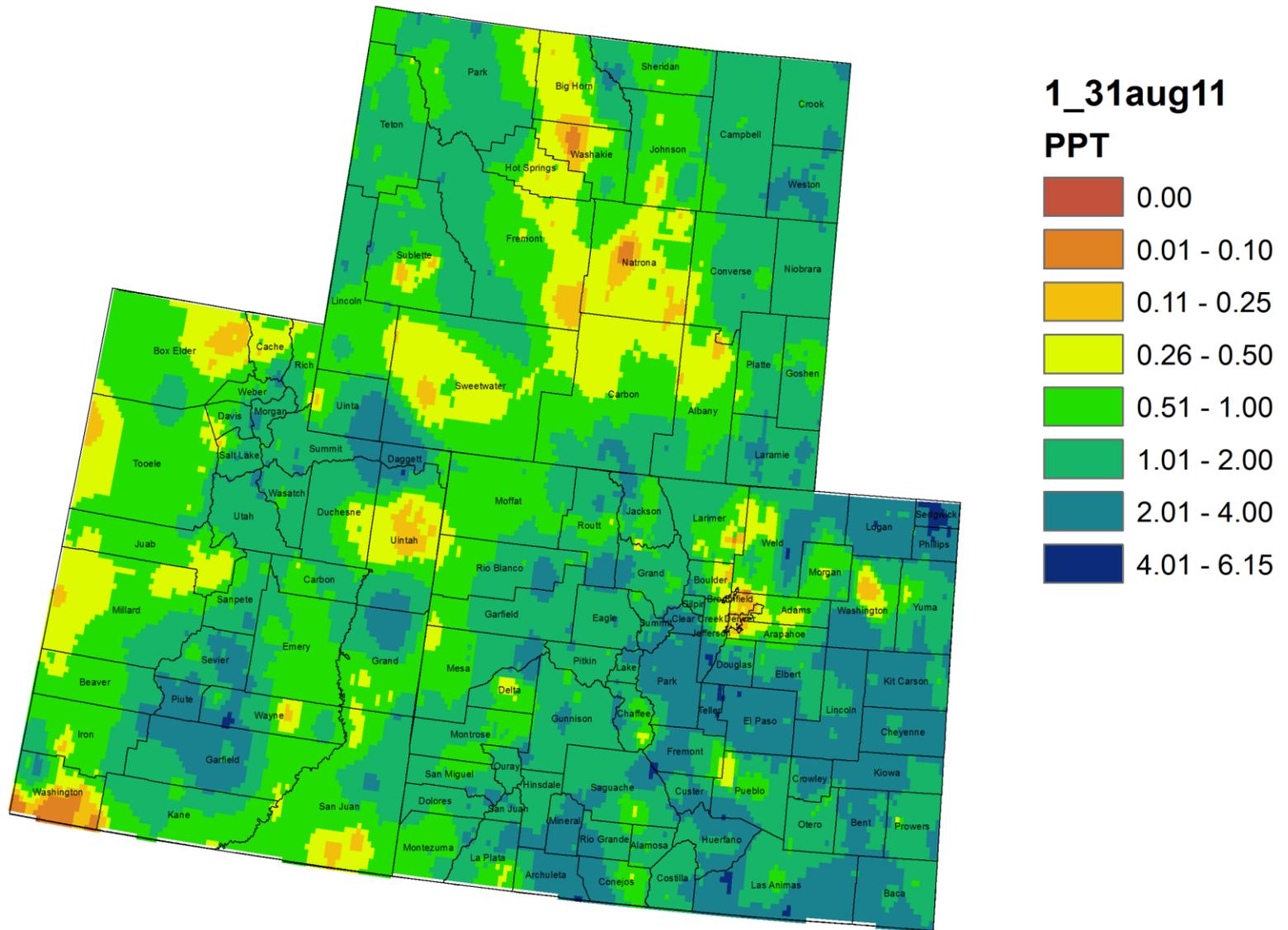


Departure from Normal Temperature (F)

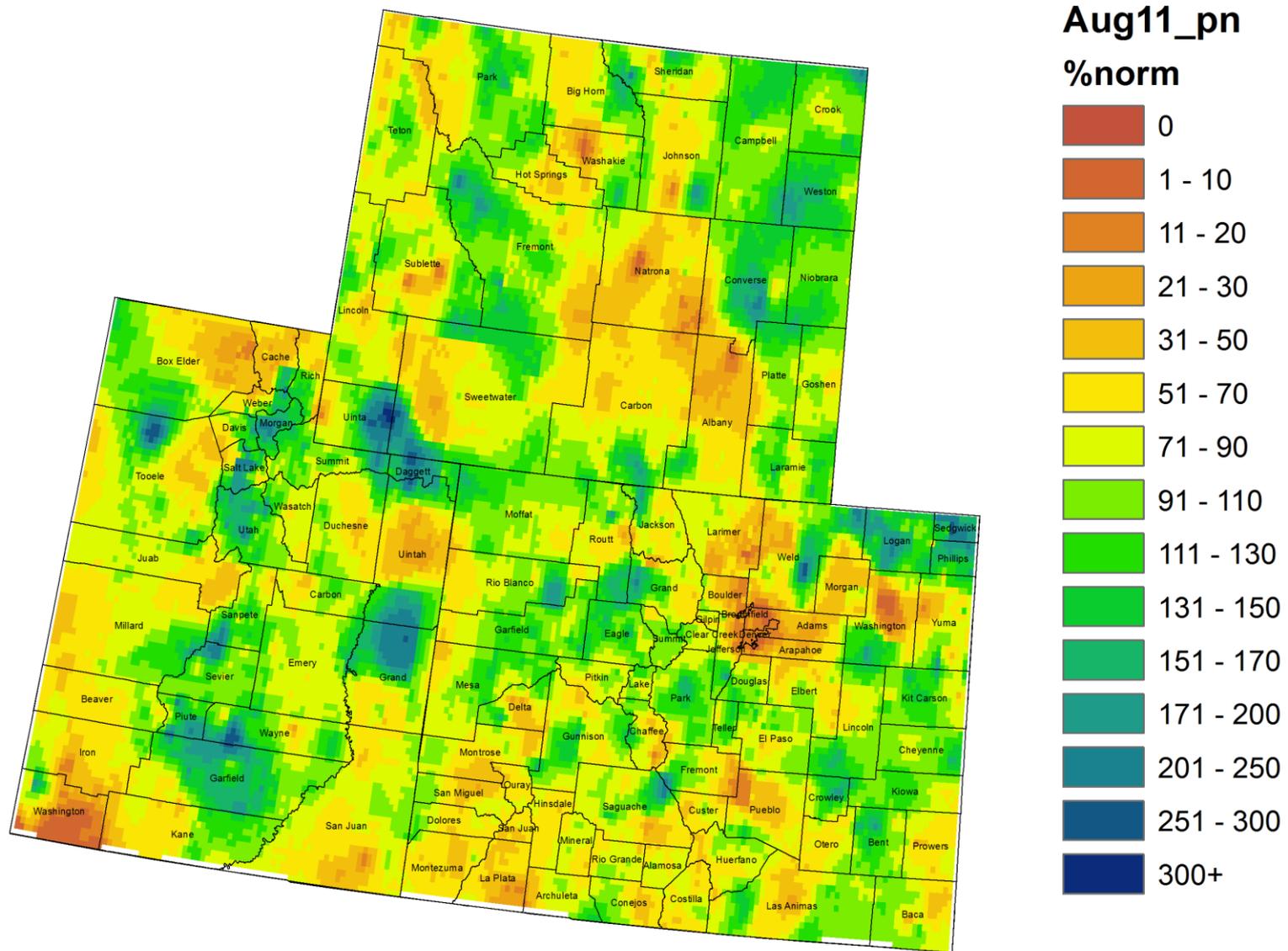
9/1/2011 - 9/19/2011



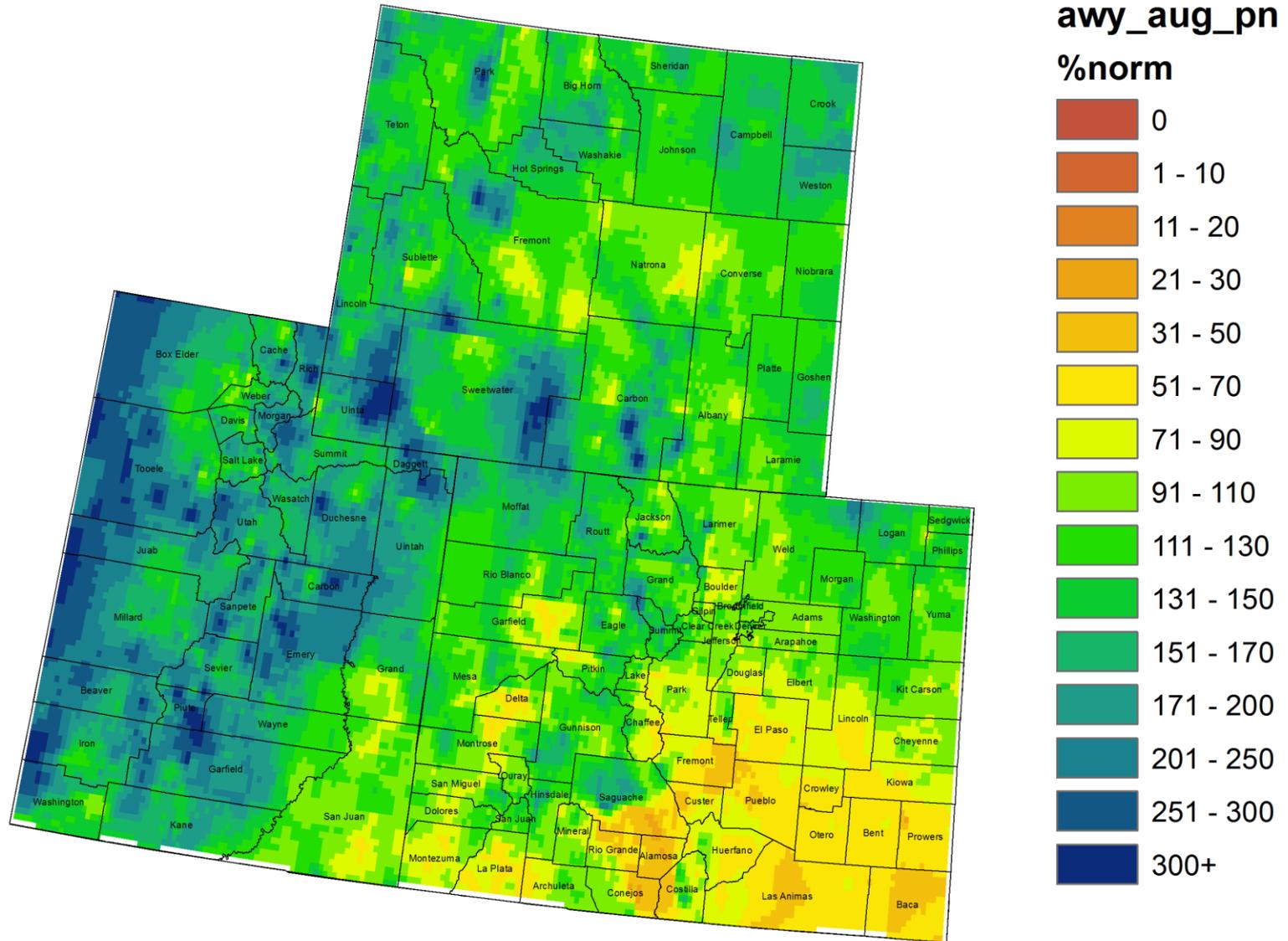
Colorado, Utah and Wyoming August 2011 Precipitation (in)



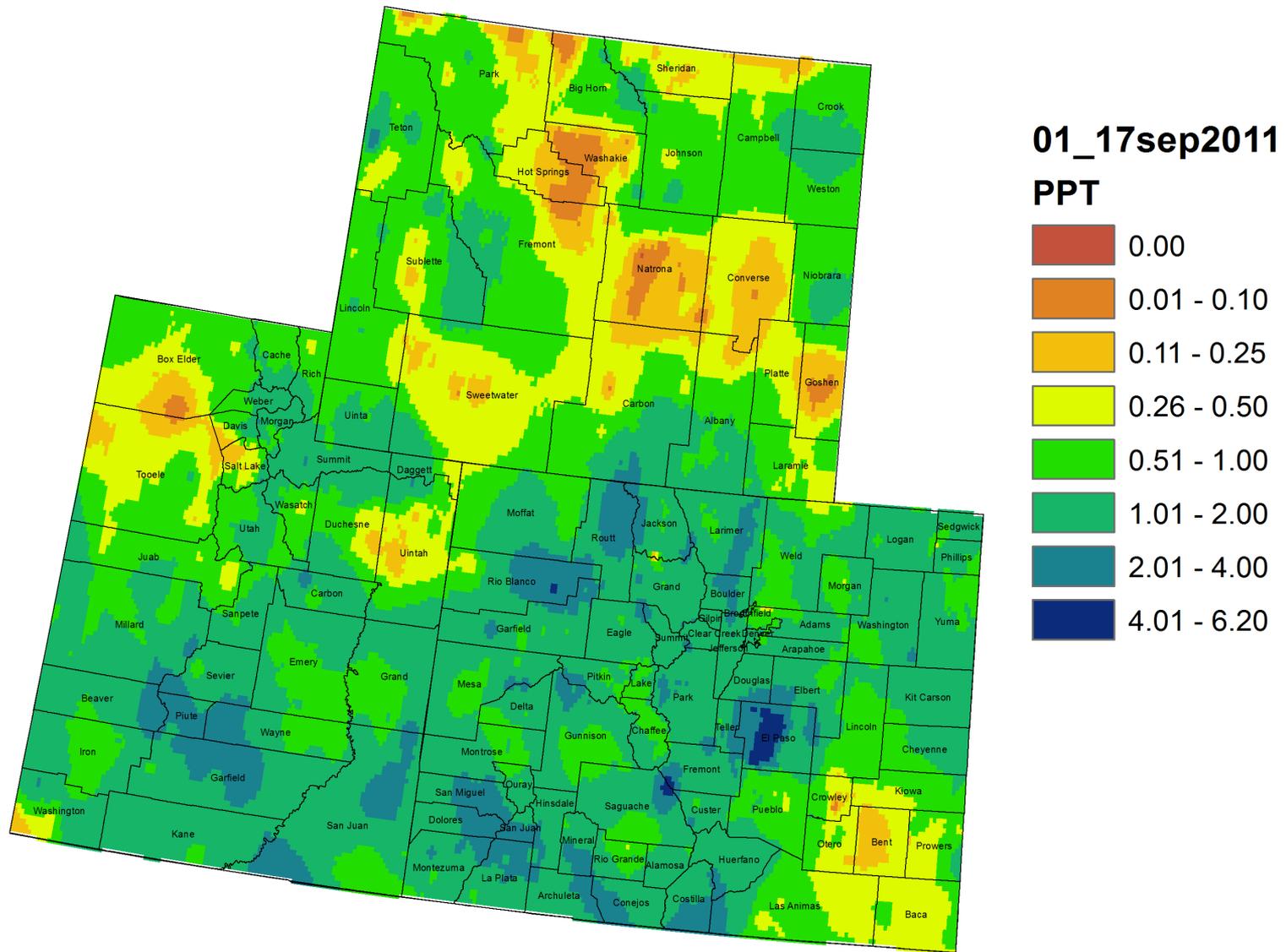
Colorado, Utah and Wyoming August 2011 Precipitation as Percentage of Normal



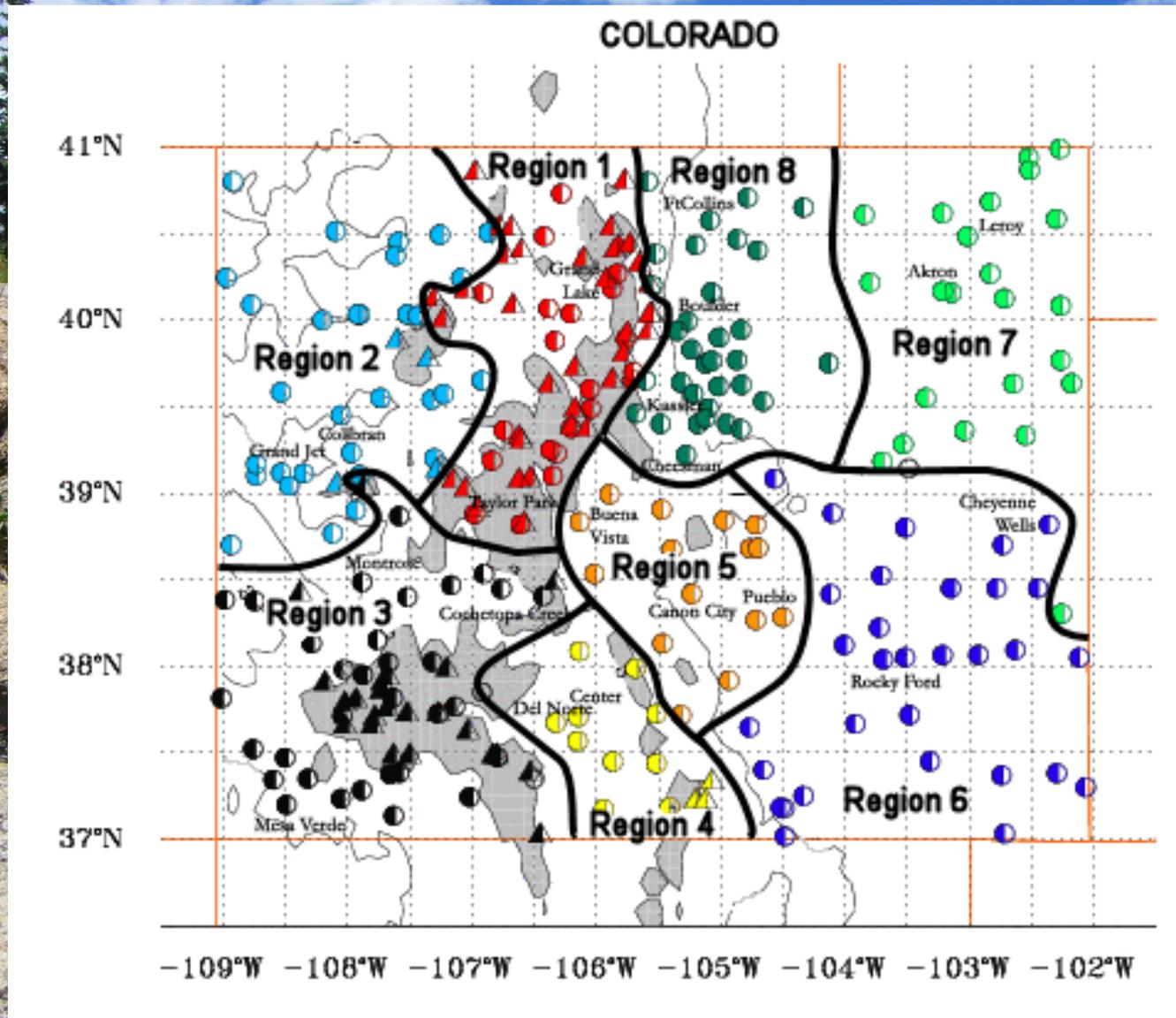
Colorado, Utah and Wyoming Water Year 2011 Precipitation as Percentage of Normal (October 10 - August 11)



Colorado, Utah and Wyoming Month to Date Precipitation (in) 1 - 17 September 2011

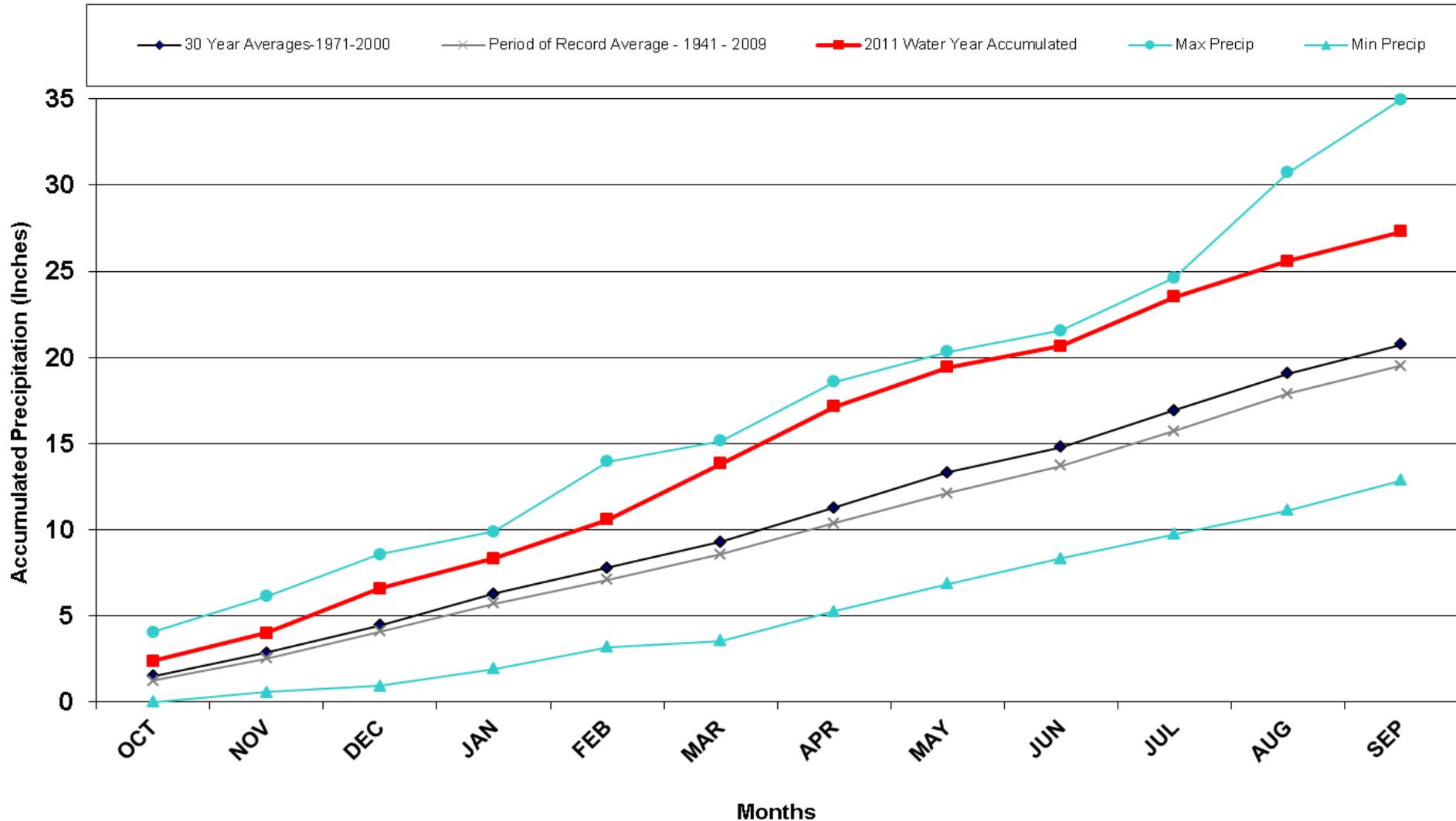


Climate divisions defined by Dr. Klaus Wolter of NOAA's Climate Diagnostic Center in Boulder, CO



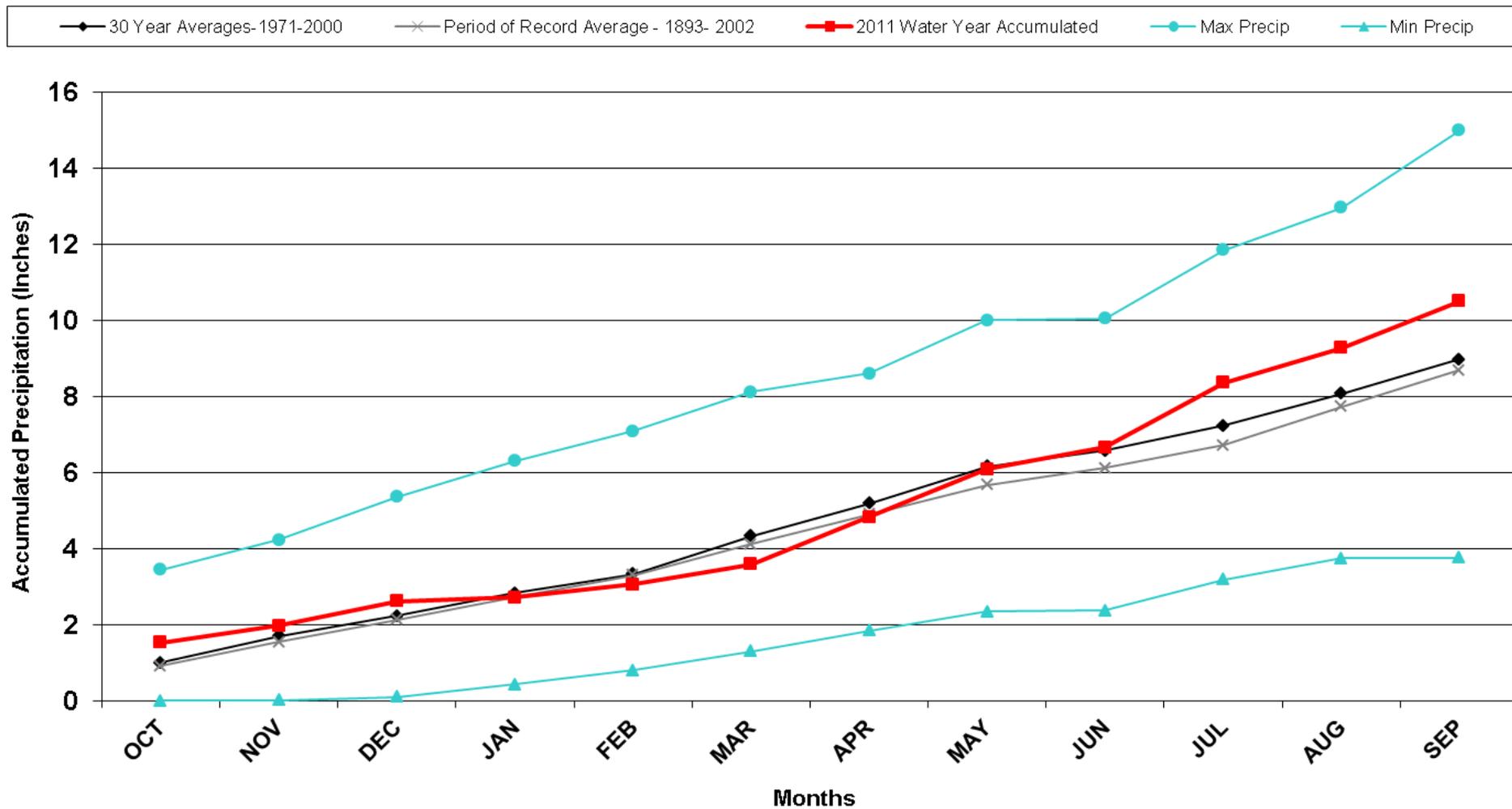
Division 1 – Grand Lake 1NW

Grand Lake 1 NW 2011 Water Year



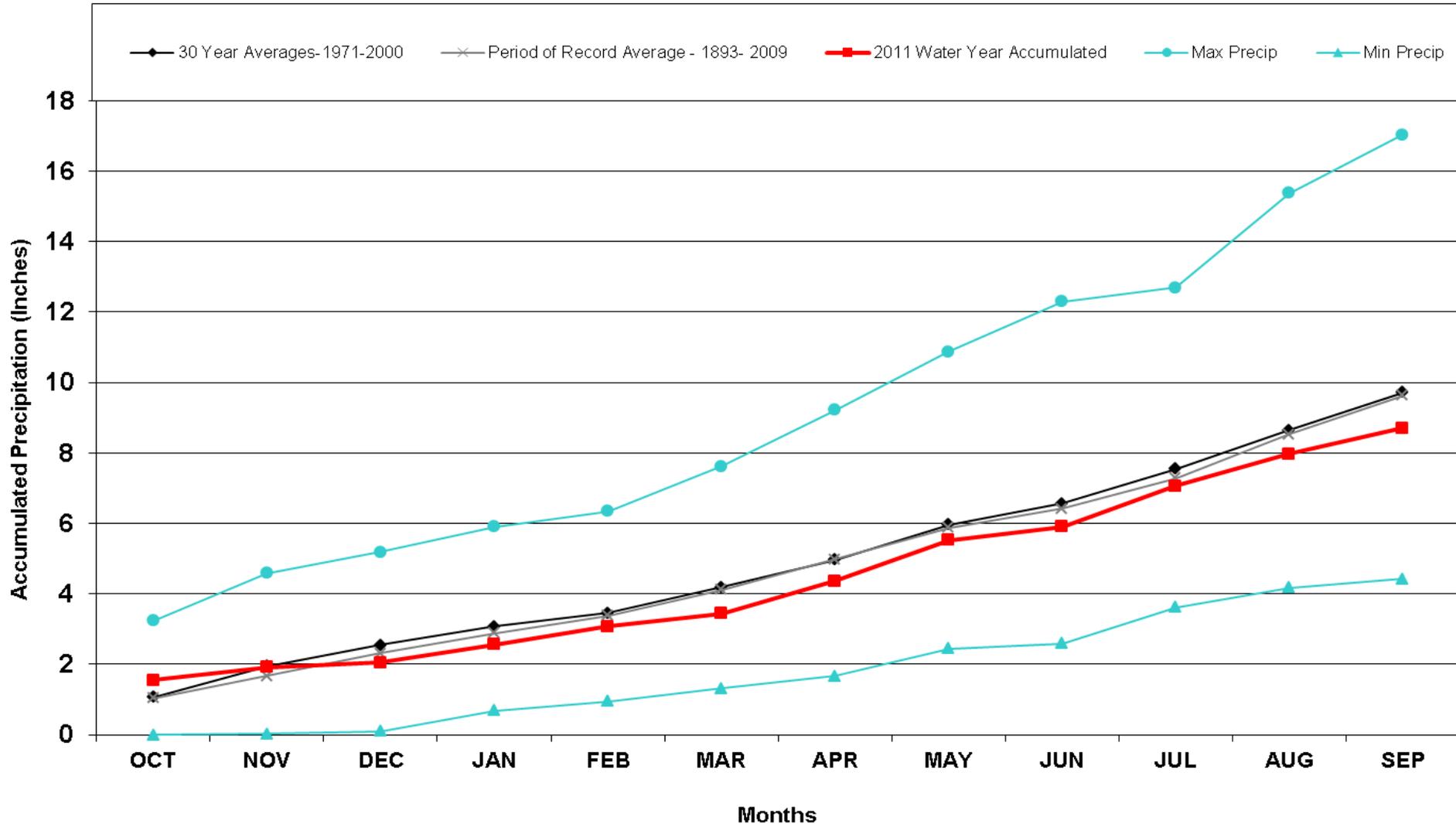
Division 2 – Grand Junction

Grand Junction WSFO 2011 Water Year



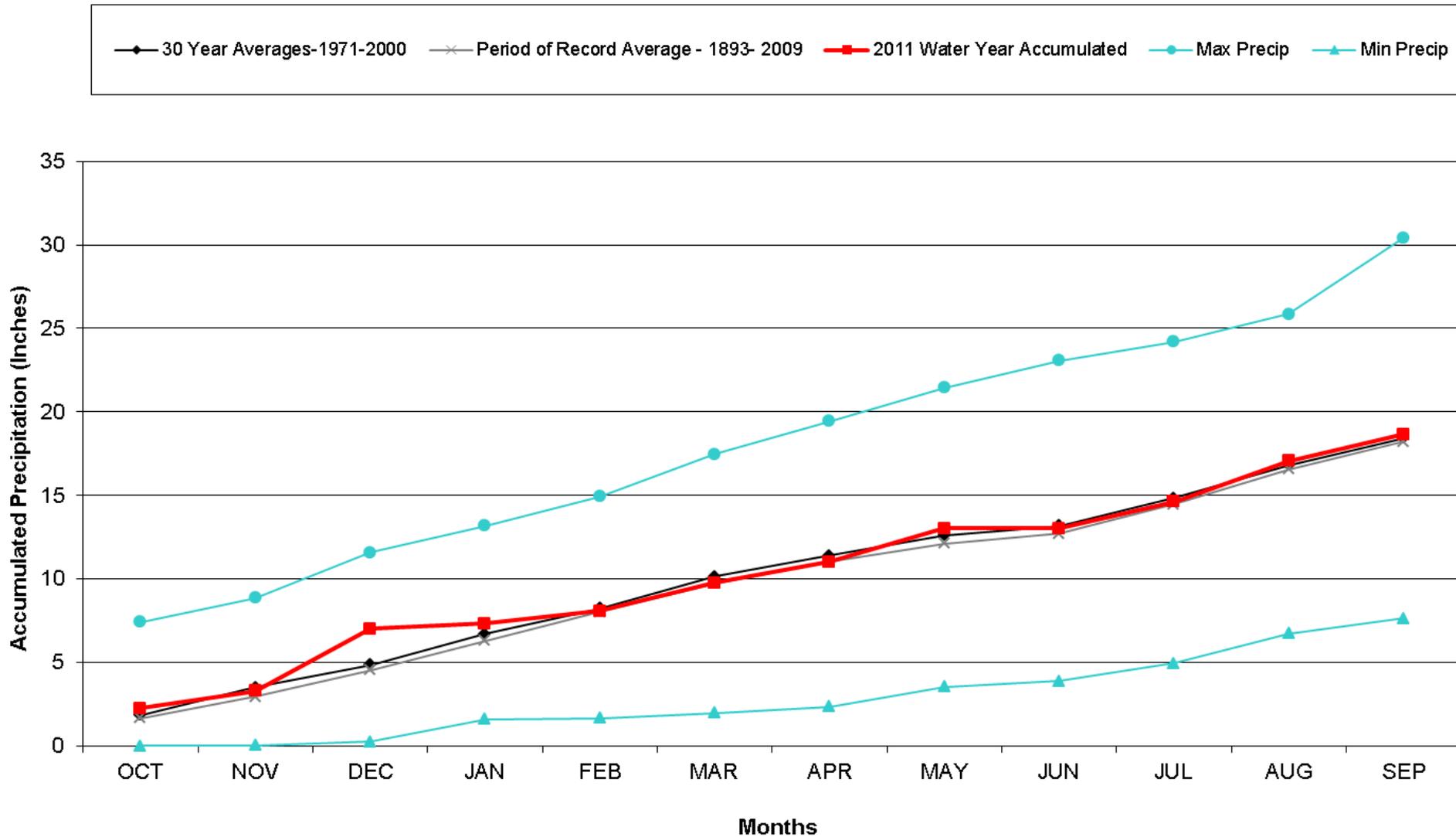
Division 3 – Montrose

Montrose #2 2011 Water Year



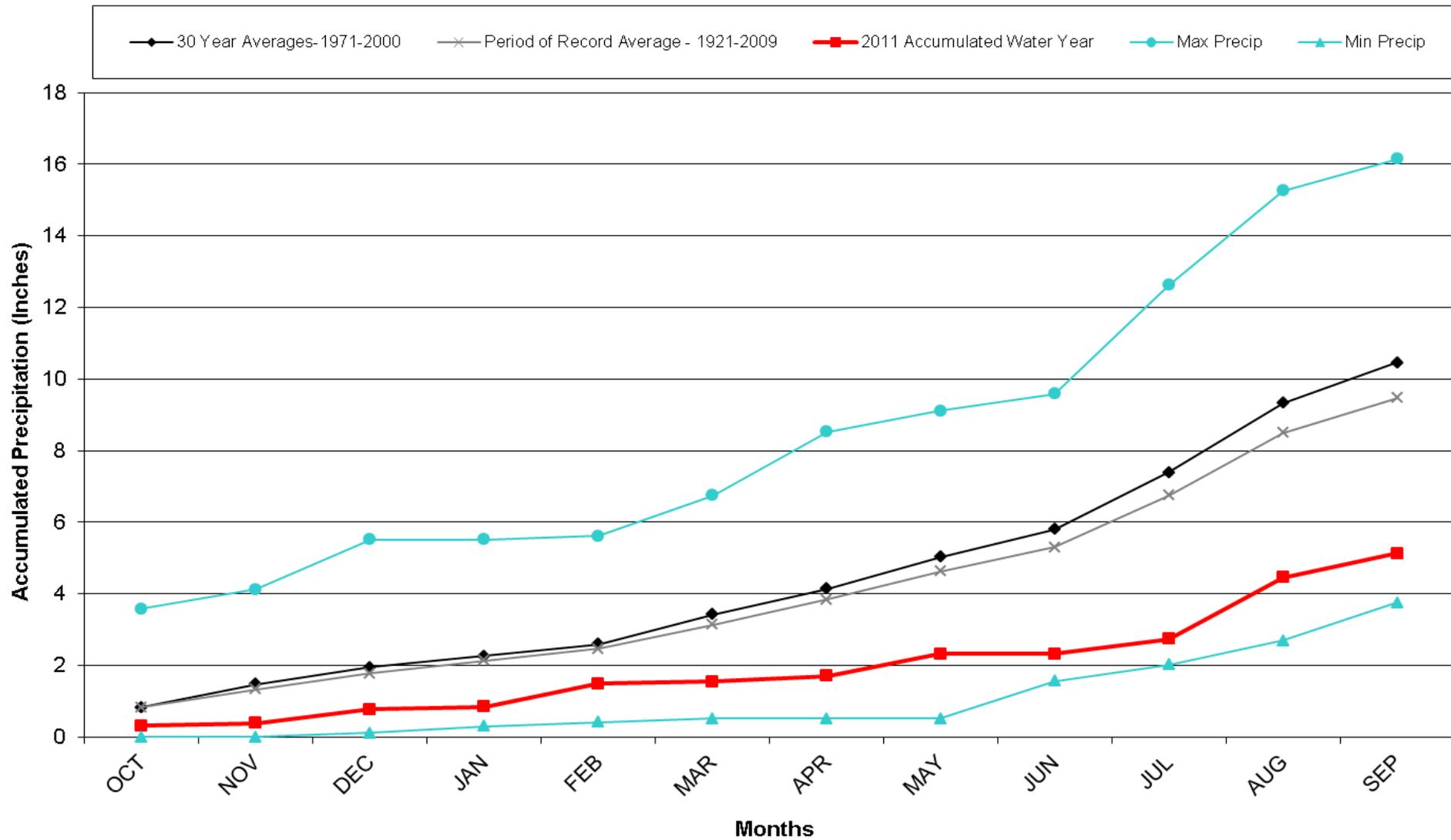
Division 3 – Mesa Verde NP

Mesa Verde NP 2011 Water Year



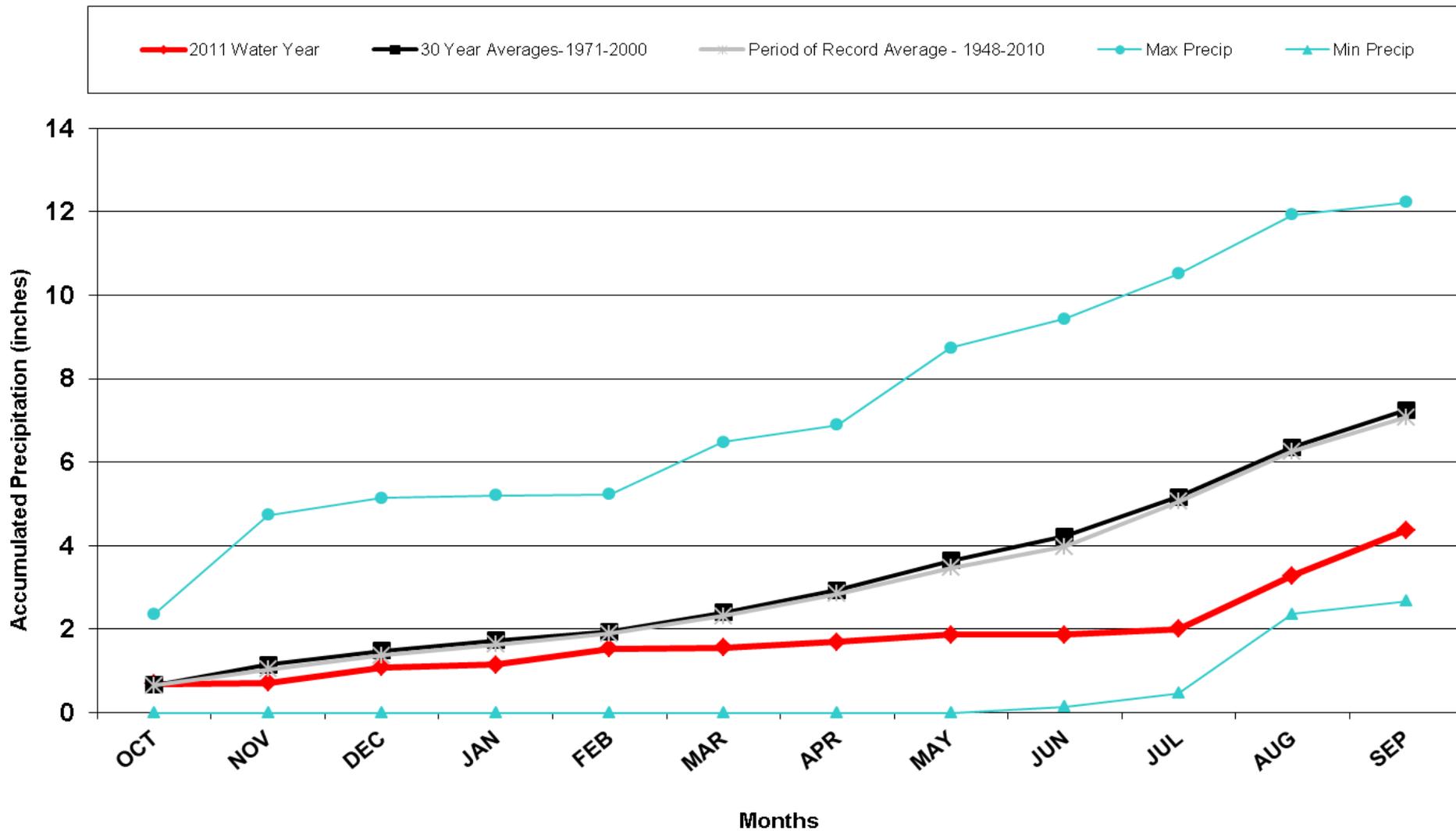
Division 4 – Del Norte

Del Norte 2011 Water Year



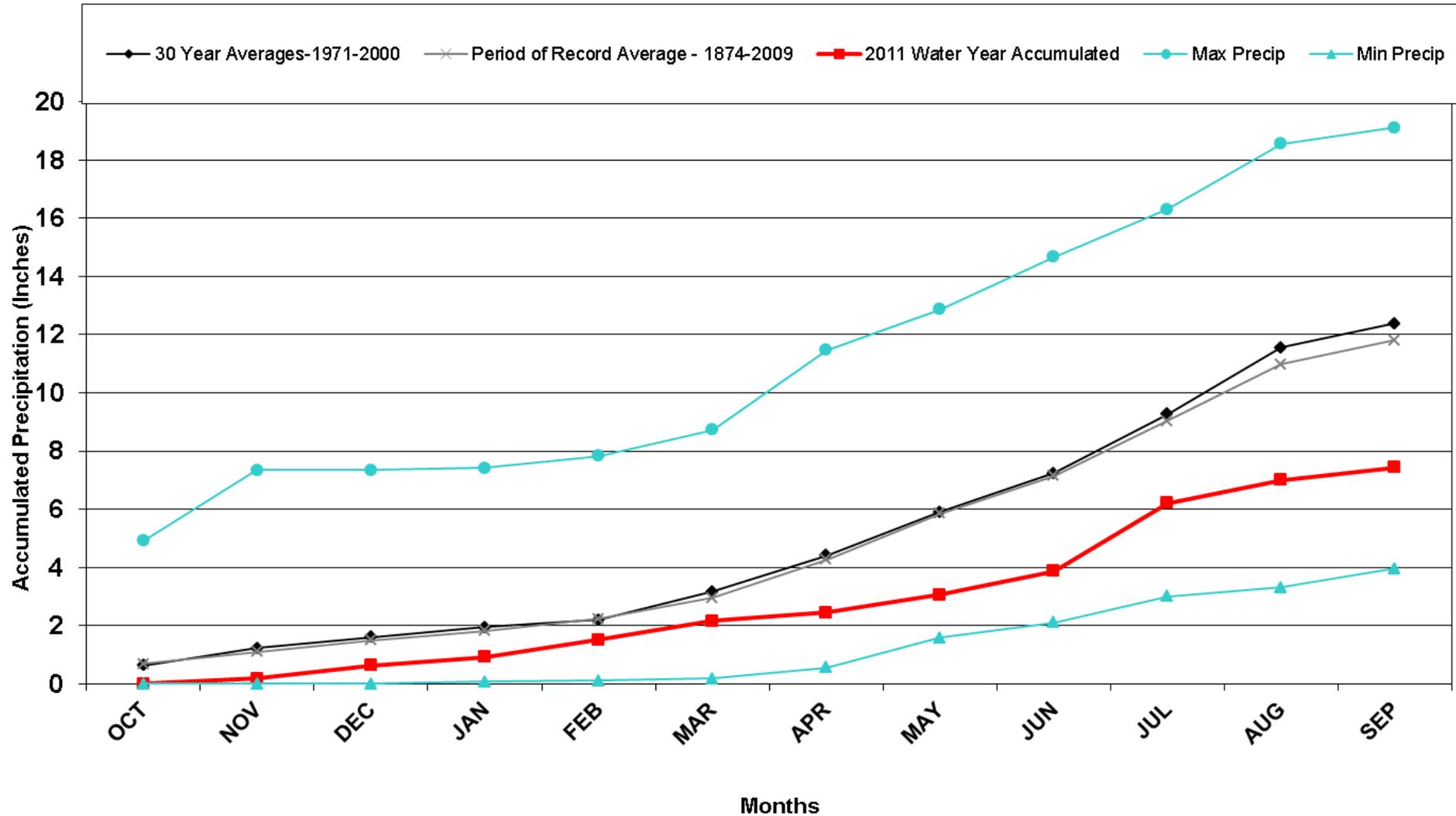
Division 4 – Alamosa

Alamosa 2011 Water Year



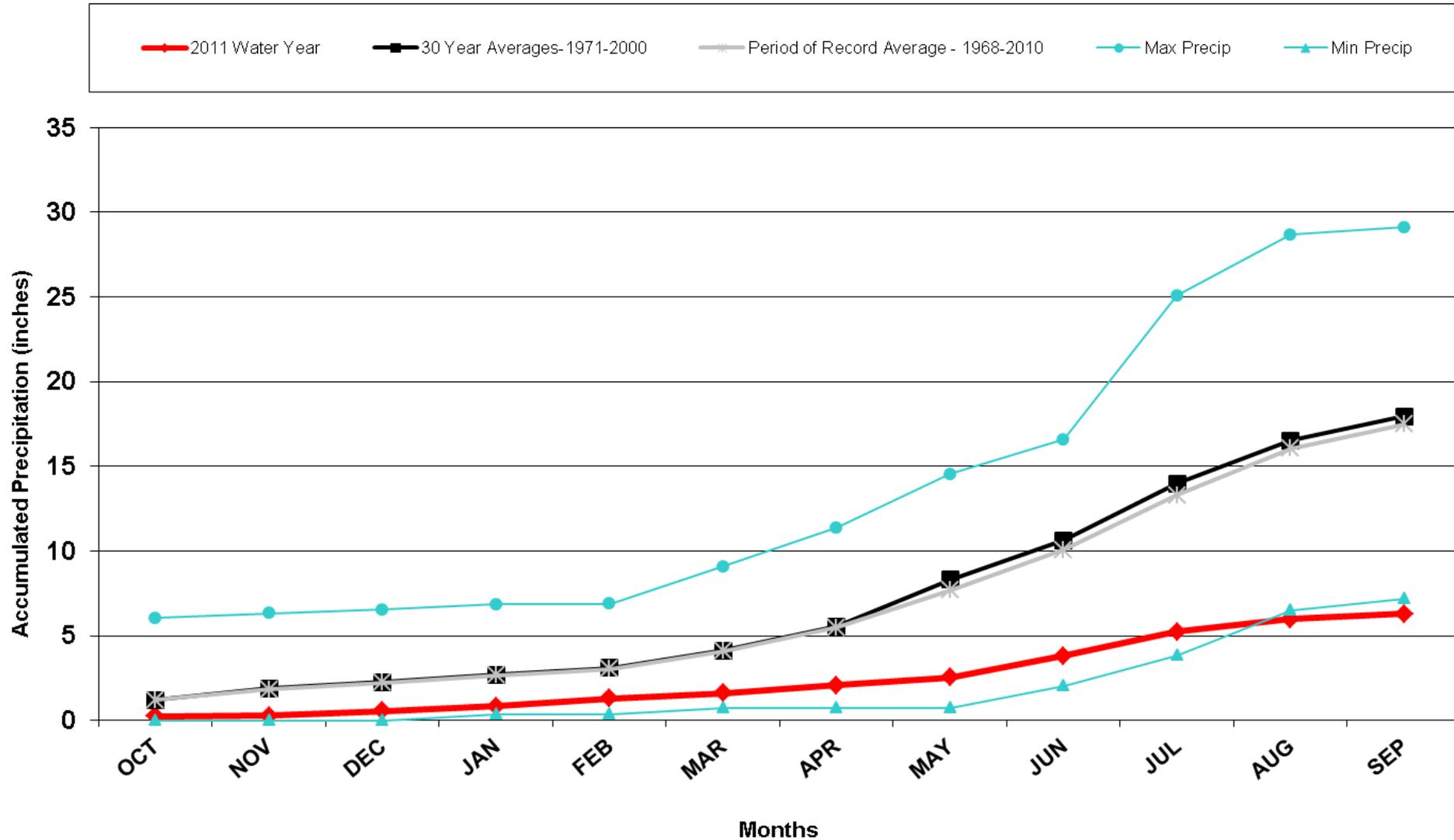
Division 5 – Pueblo

Pueblo WSO 2011 Water Year



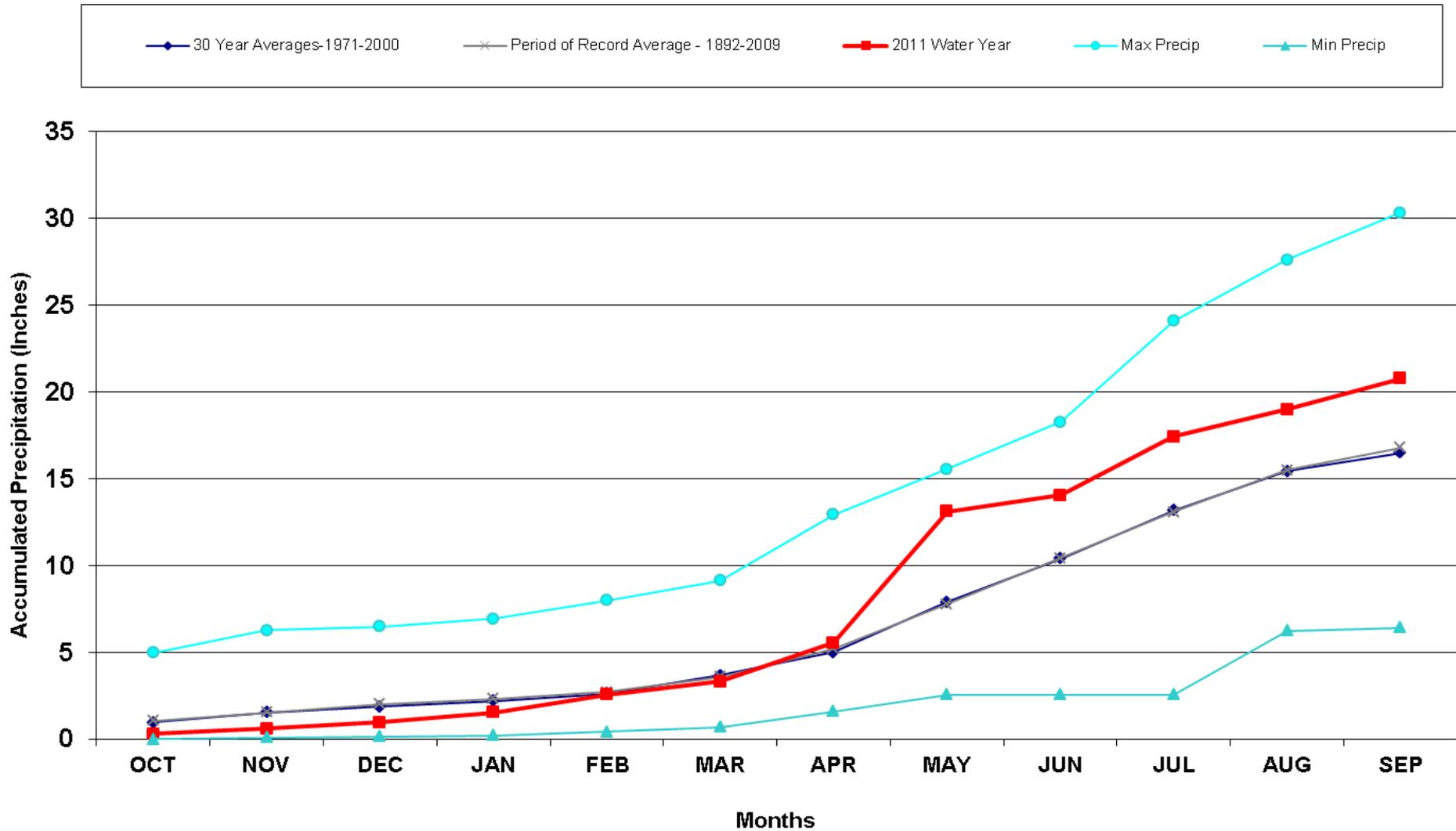
Division 6 - Walsh

Walsh 2011 Water Year



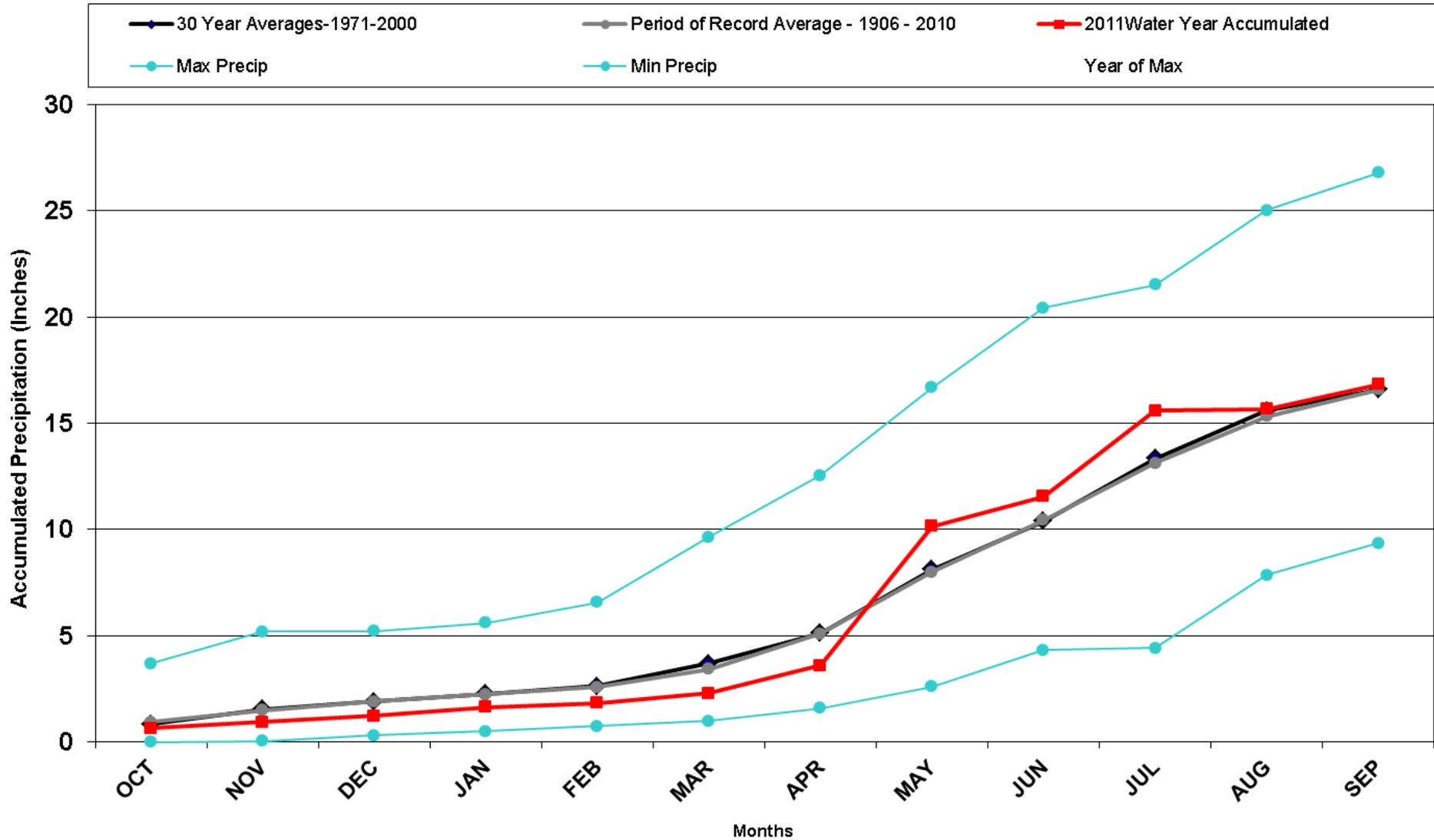
Division 6 - Burlington

Burlington 2011 Water Year



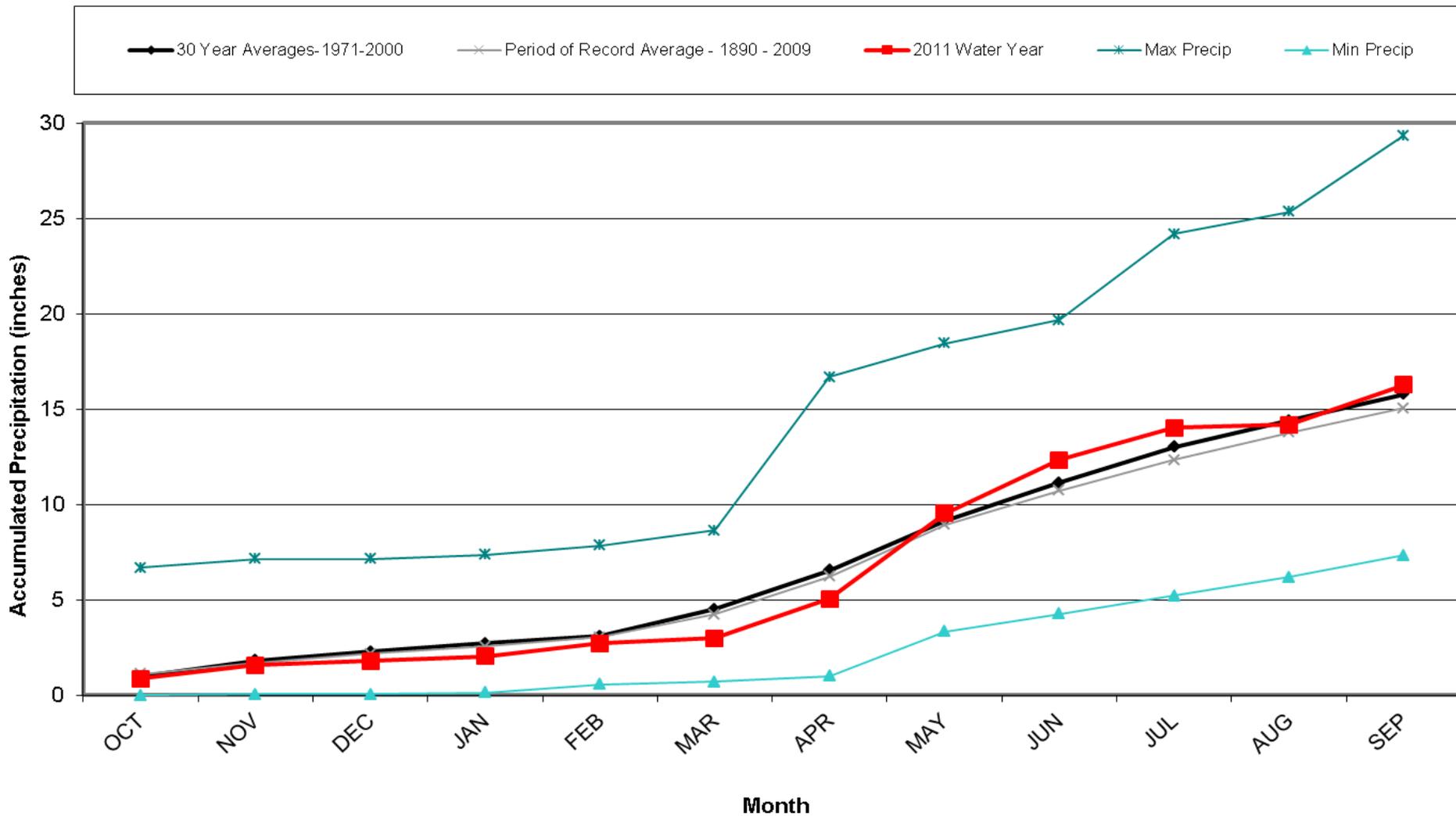
Division 7 – Akron

Akron 4E 2011 Water Year



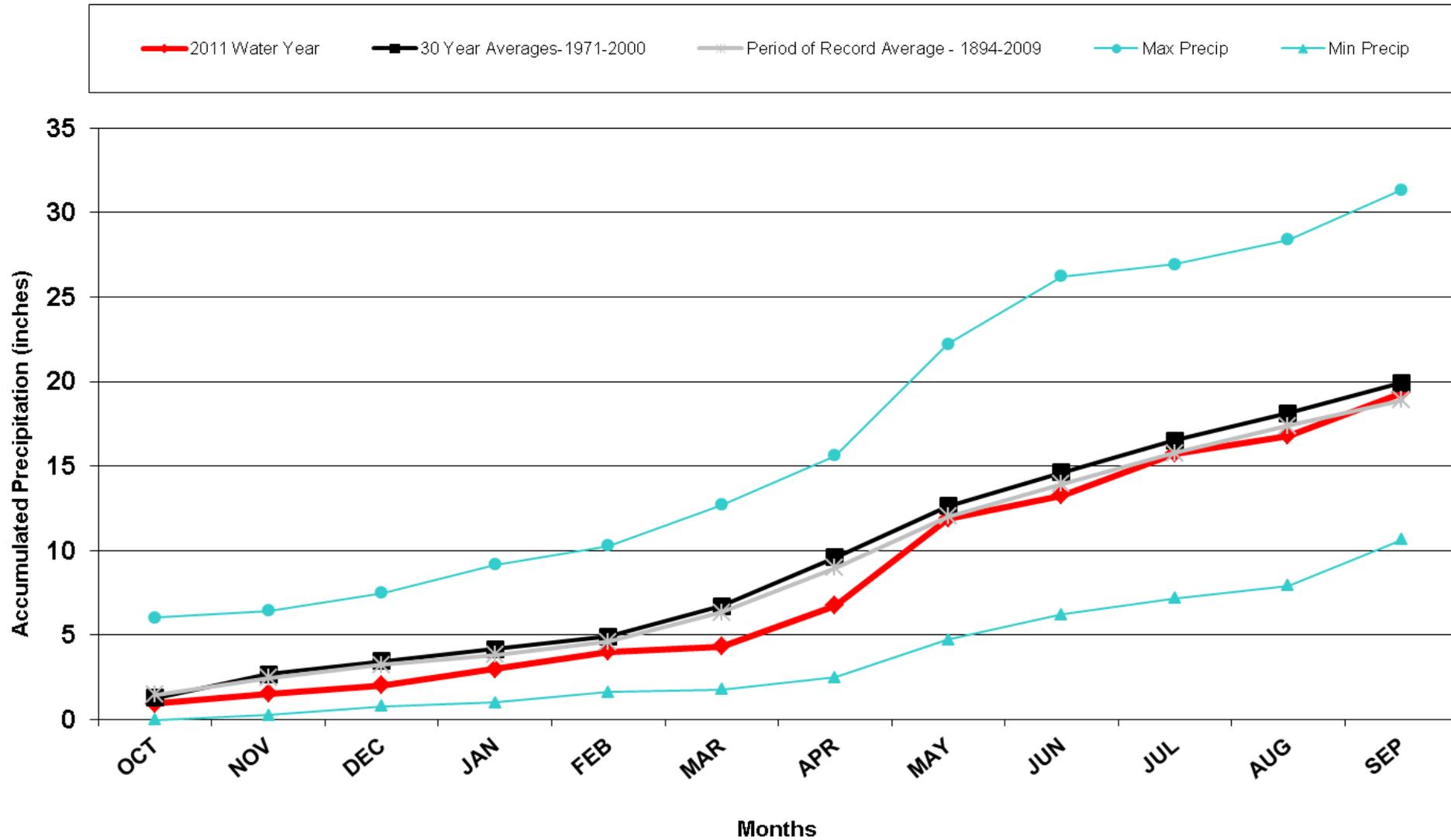
Division 8 – Fort Collins

Fort Collins 2011 Water Year



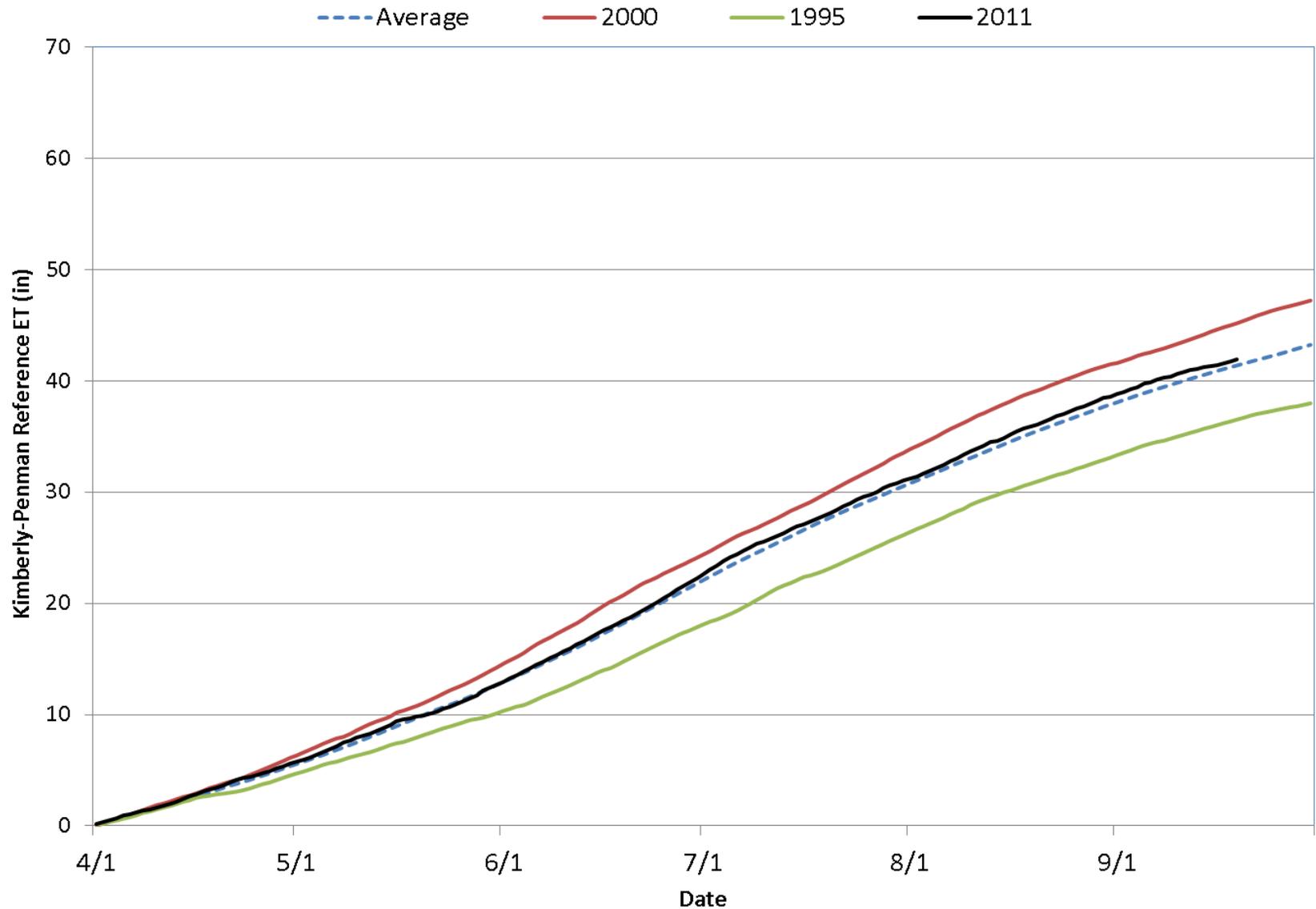
Division 8 - Boulder

Boulder 2011 Water Year



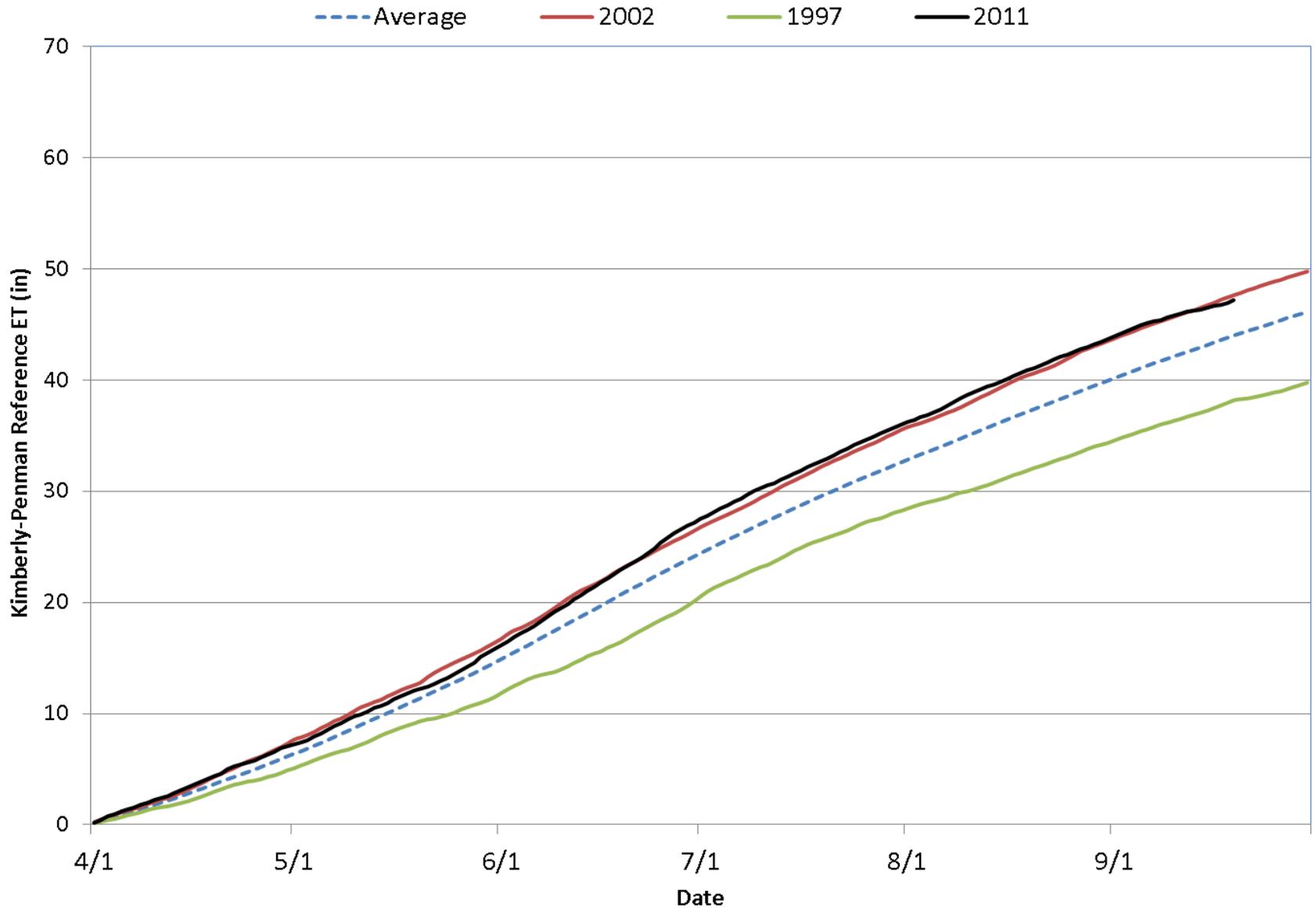
Cortez Reference ET – SW CO

CTZ01 Kimberly-Penman Reference ET (1992 - 2011)



Center Reference ET - SLV

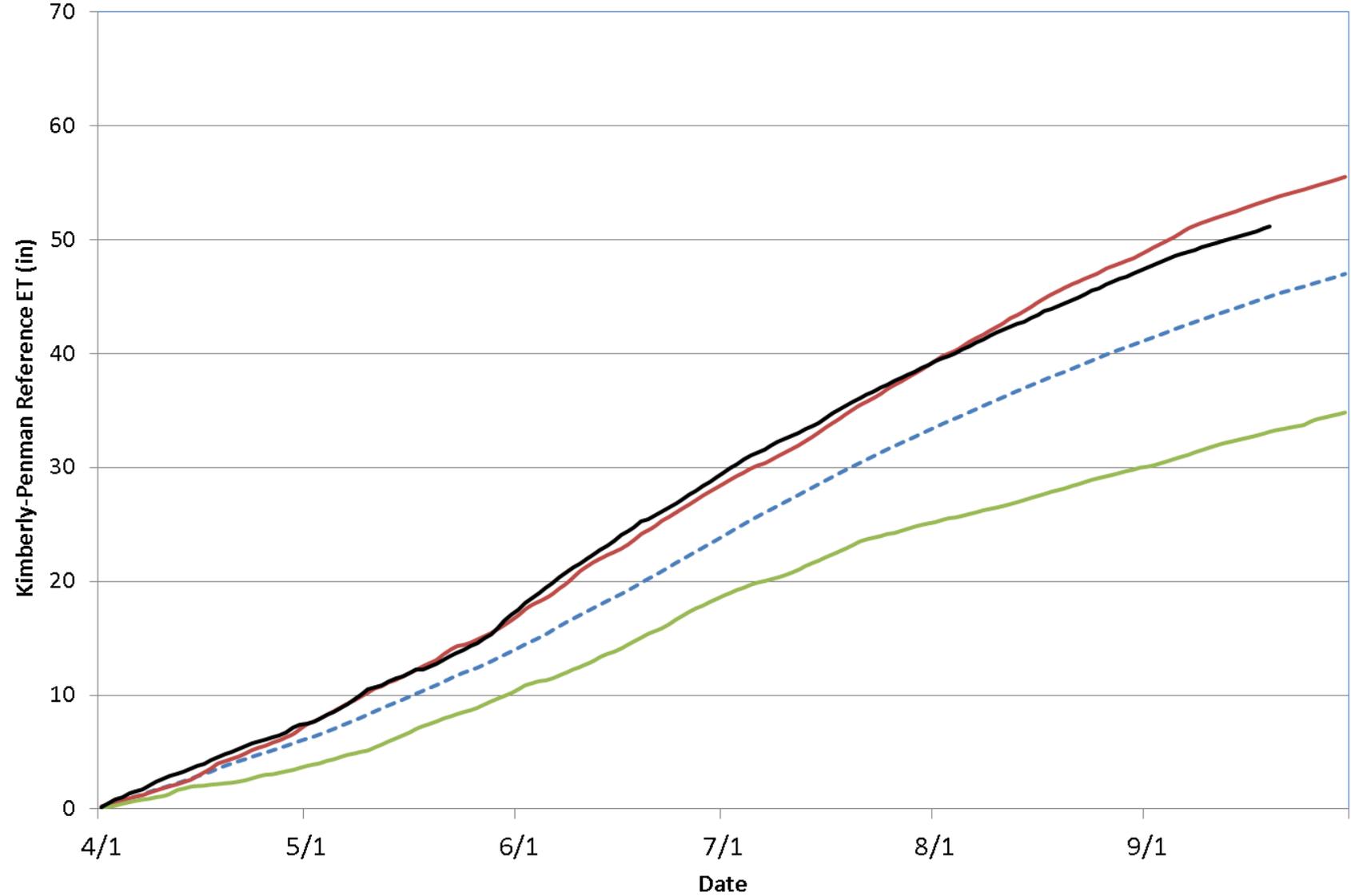
CTR01 Kimberly-Penman Reference ET (1994 - 2011)



Avondale Reference ET – AR Basin

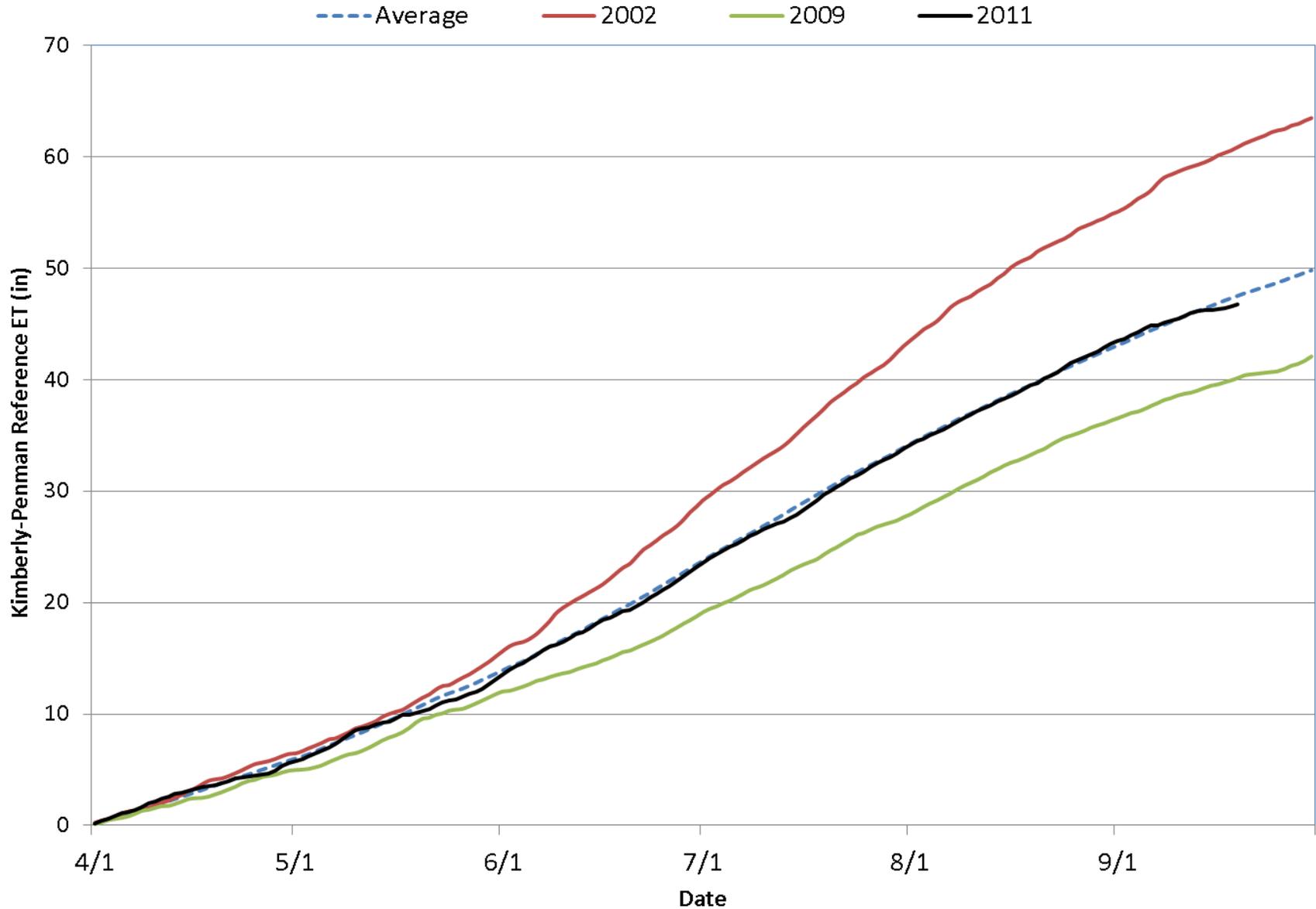
AVN01 Kimberly-Penman Reference ET (1993 - 2011)

--- Average — 2002 — 1998 — 2011



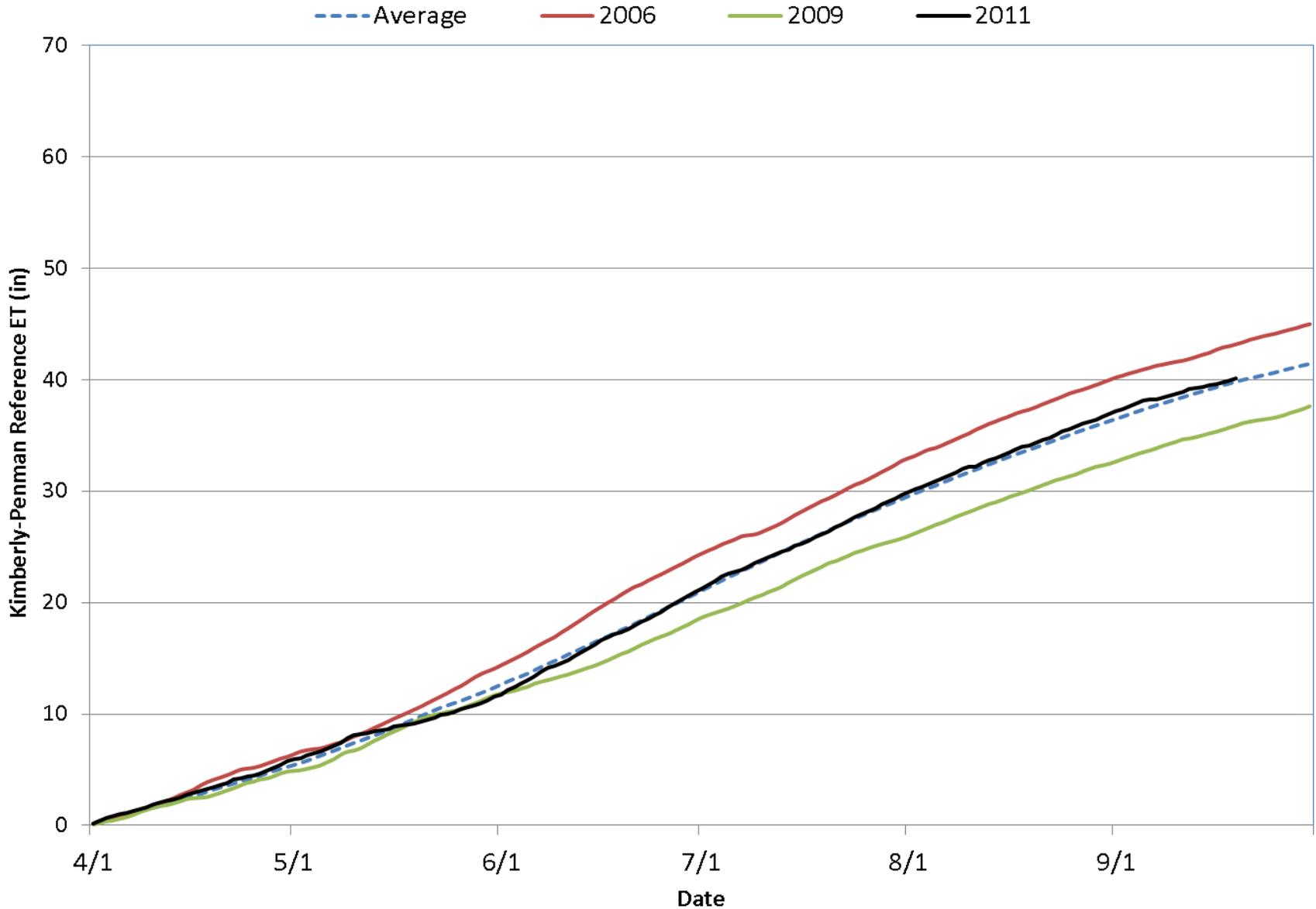
Idalia Reference ET – Eastern CO

IDL01 Kimberly-Penman Reference ET (1992 - 2011)



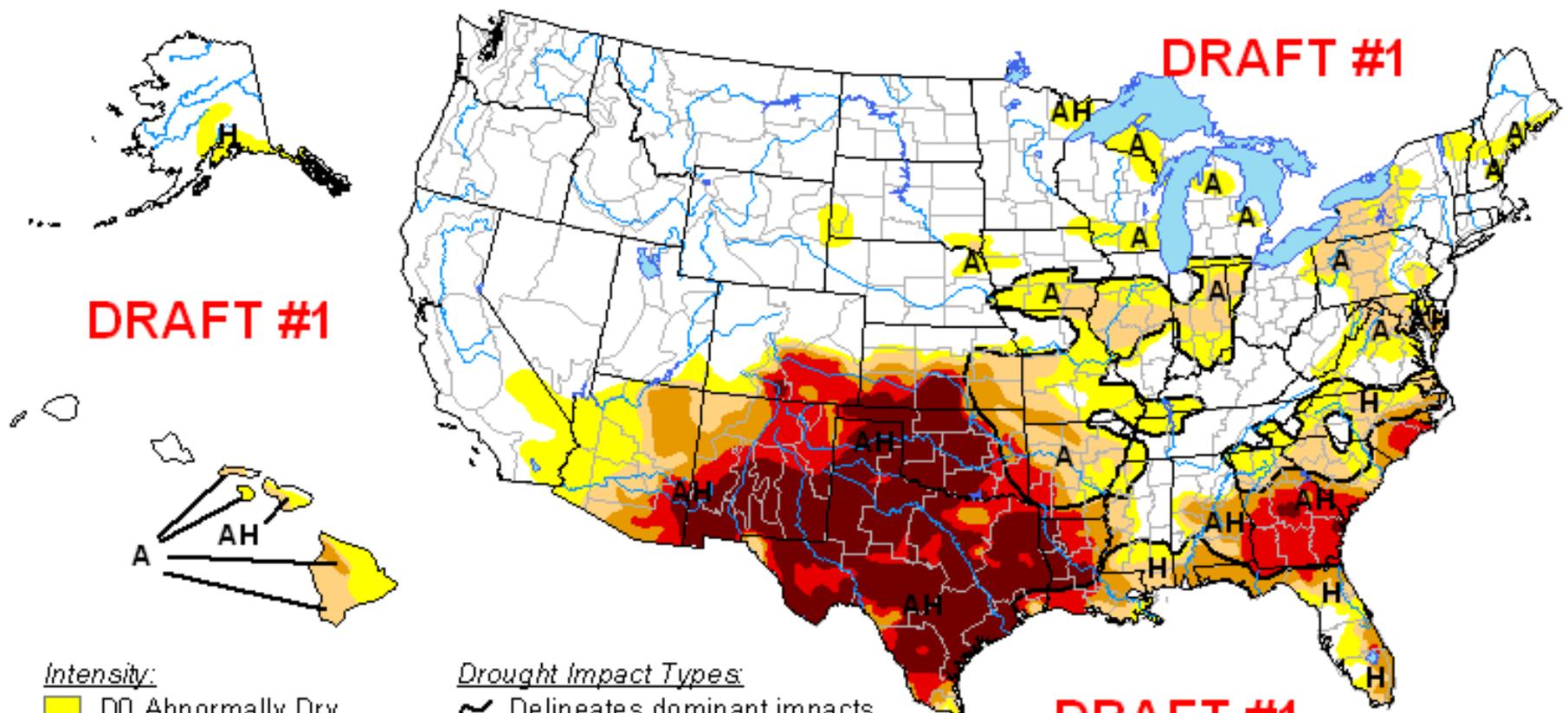
Lucerne Reference ET – N. Front Range

LCN01 Kimberly-Penman Reference ET (1992 - 2011)



U.S. Drought Monitor

August 16, 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.

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

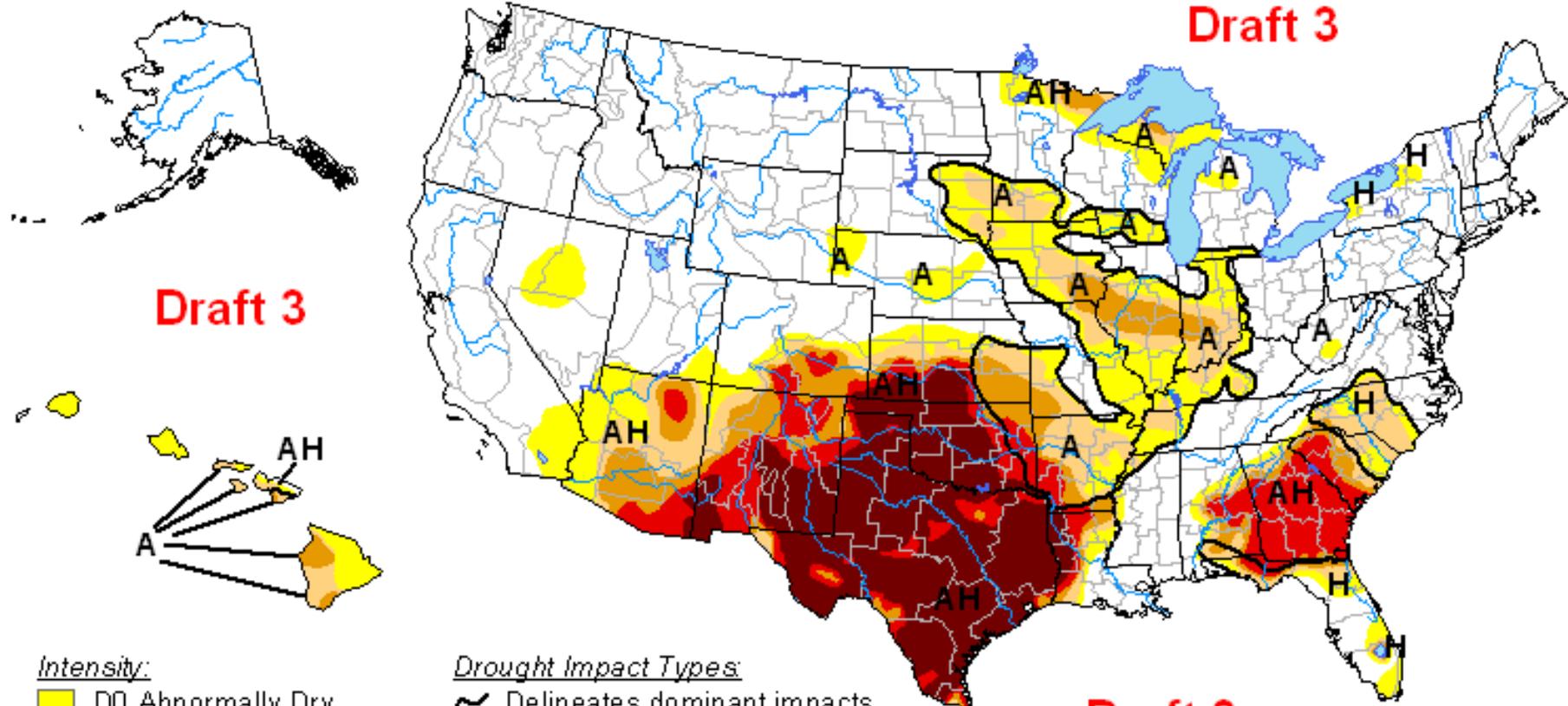


Released Thursday, August 18, 2011
Author: Laura Edwards, Western Regional Climate Center

U.S. Drought Monitor

September 20, 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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<http://drought.unl.edu/dm>

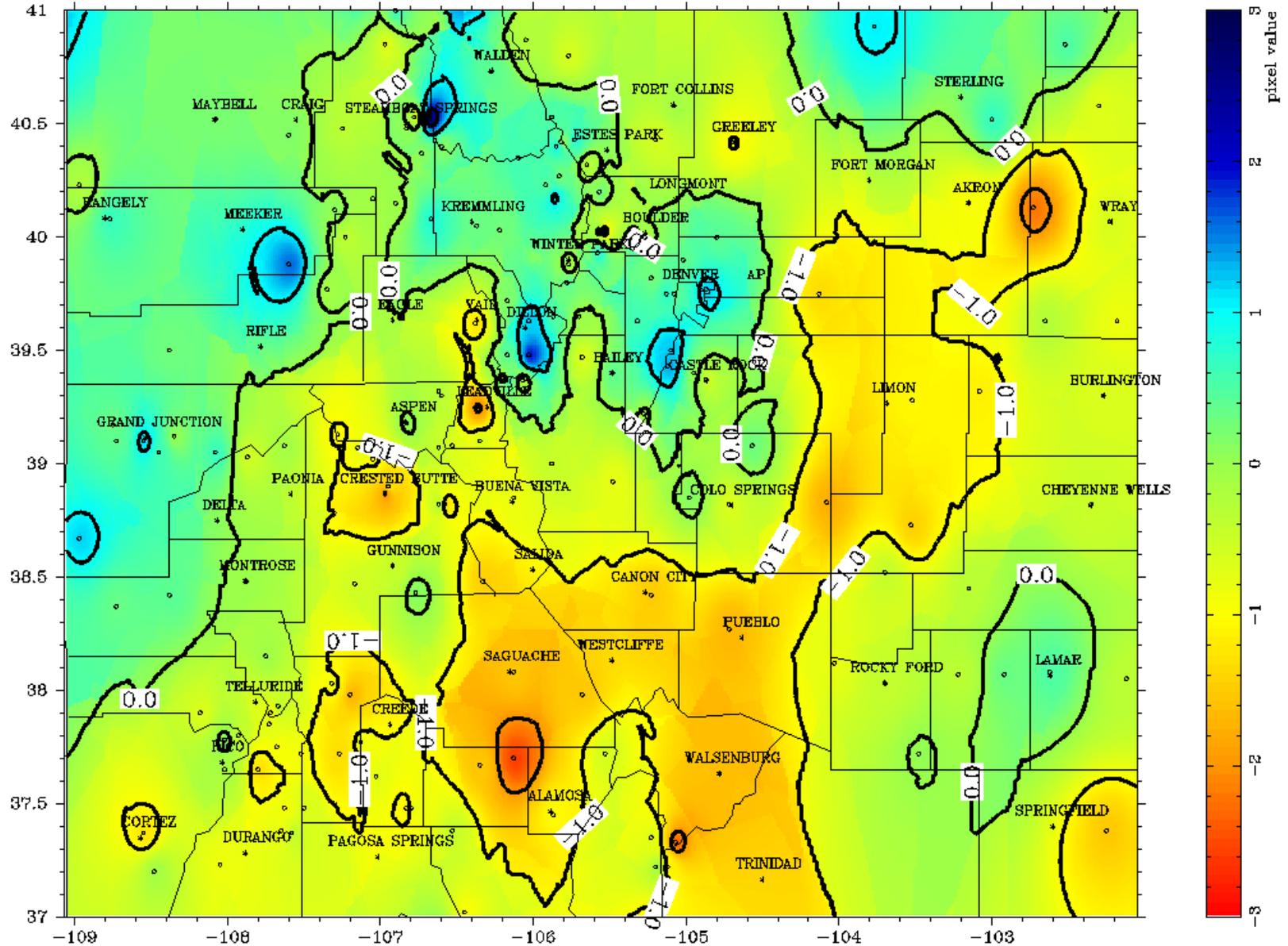
Released Thursday, September 22, 2011

Author: Michael Brewer/Liz Love-Brotak, NOAA/NESDIS/NCDC

Colorado

8/2011 3 mon. SPI

JULESBURG



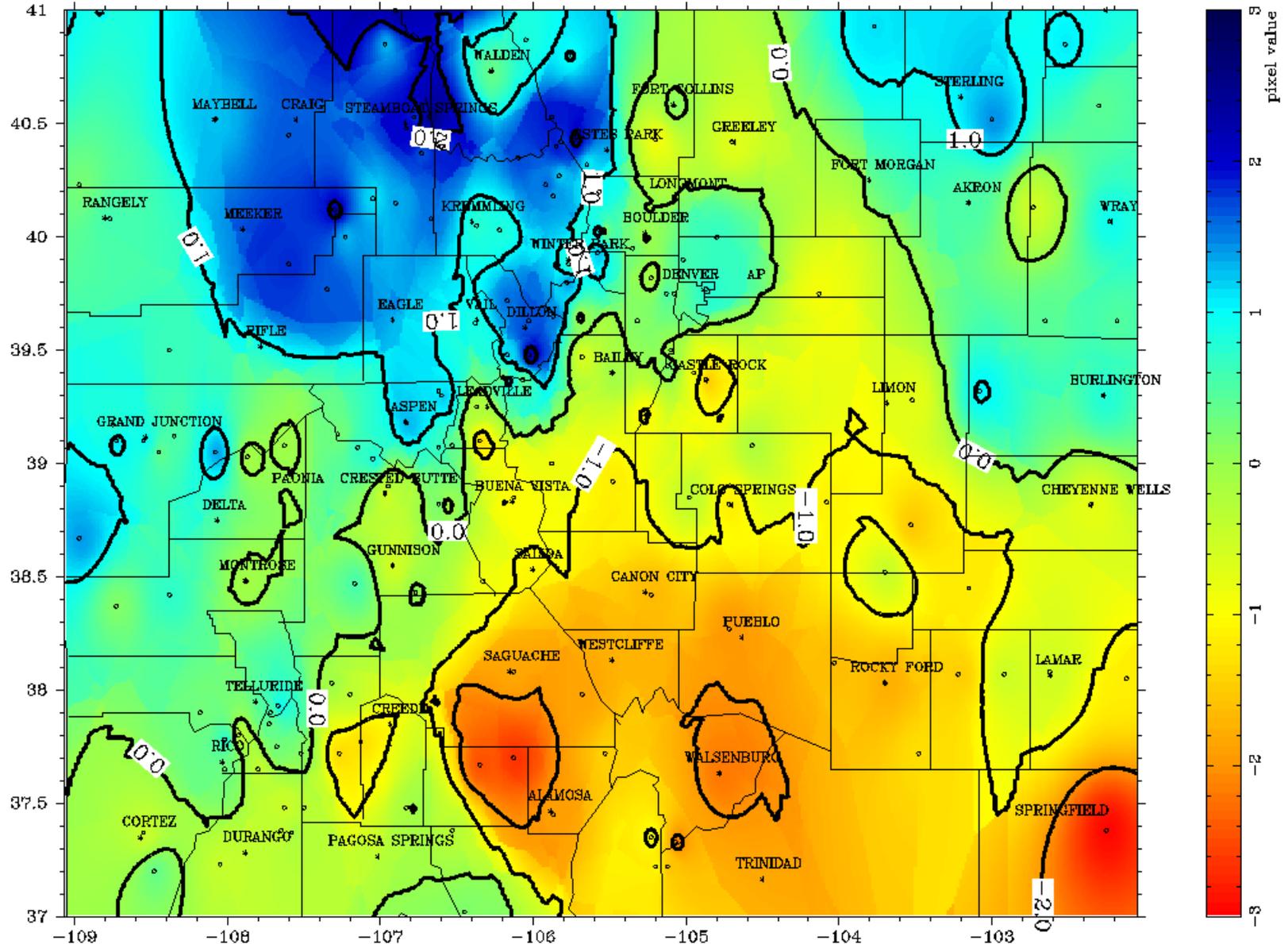
100 % < 2.0	21 % < -1.0
99 % < 1.0	0 % < -2.0
70 % < 0.0	0 % < -3.0

Produced by:
Colorado Climate Center
Fort Collins, CO

Colorado

8/2011 6 mon. SPI

JULESBURG



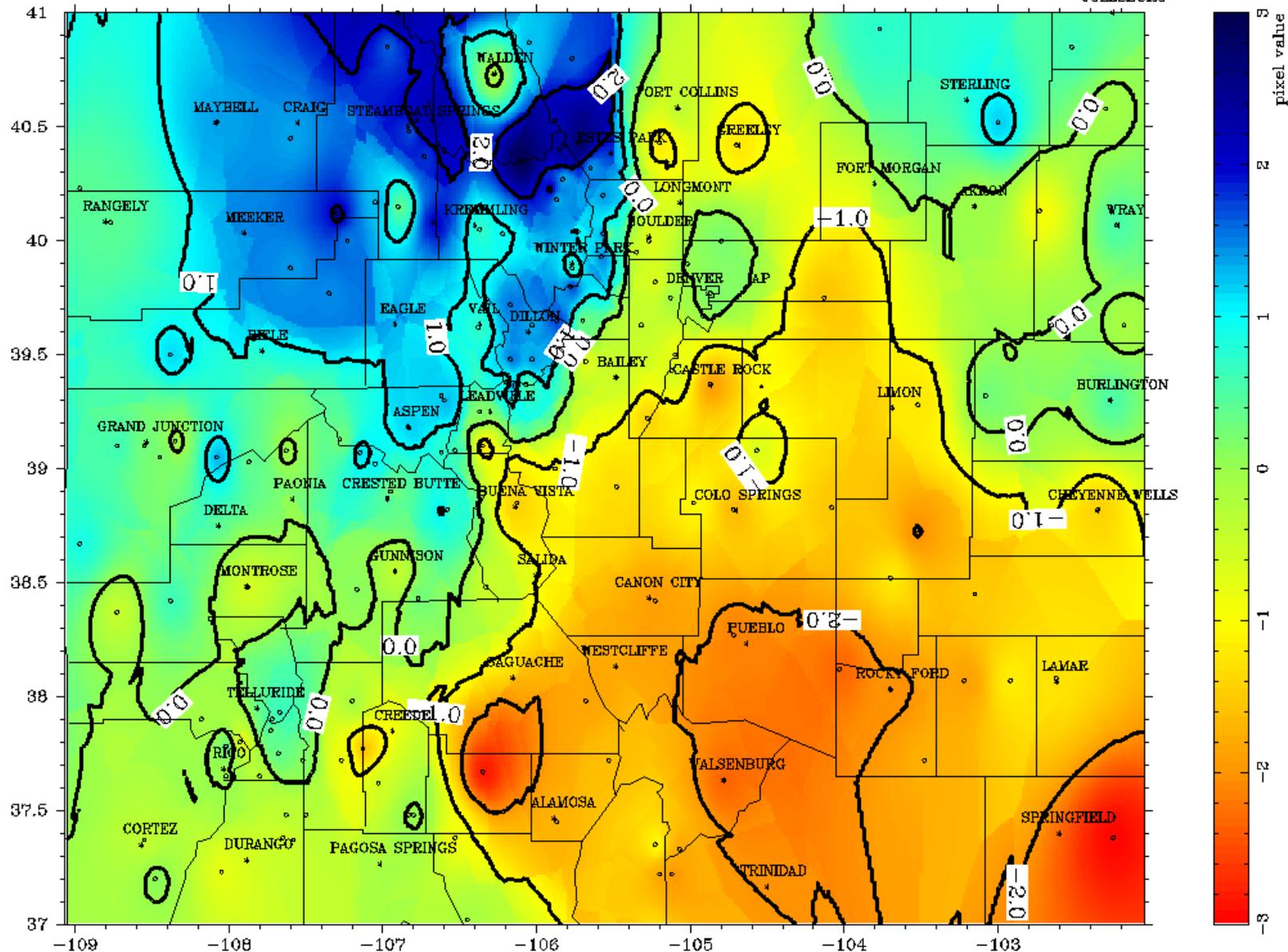
99 % < 2.0	25 % < -1.0
84 % < 1.0	3 % < -2.0
51 % < 0.0	0 % < -3.0

Produced by:
Colorado Climate Center
Fort Collins, CO

Colorado

8/2011 12 mon. SPI

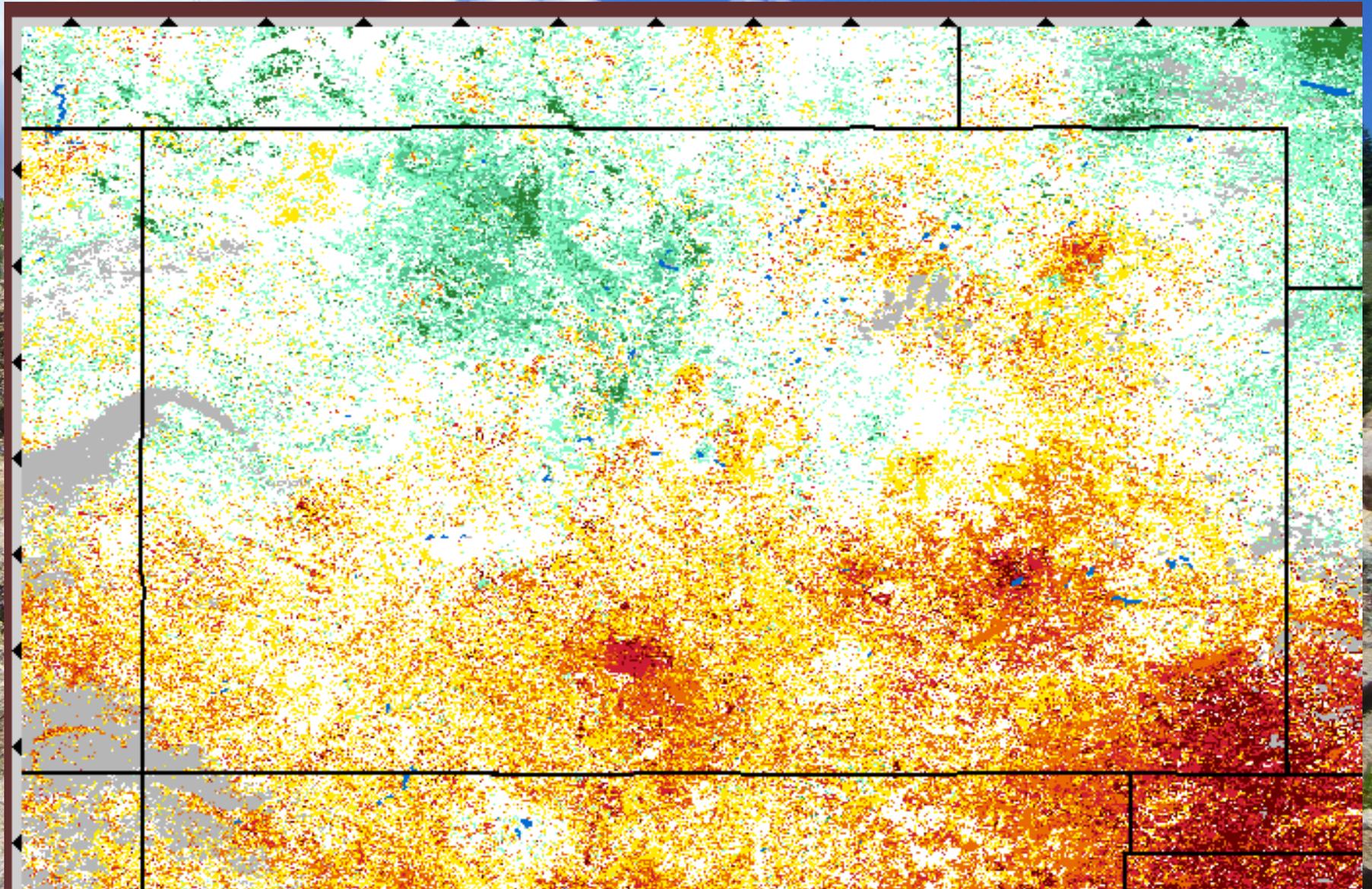
JULESBURG



98 % < 2.0	35 % < -1.0
85 % < 1.0	8 % < -2.0
60 % < 0.0	0 % < -3.0

Produced by:
Colorado Climate Center
Fort Collins, CO

eModis VegDRI: 9/18/11



Colorado Climate Center



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>