



Climate Update

**Nolan Doesken
Colorado Climate Center**

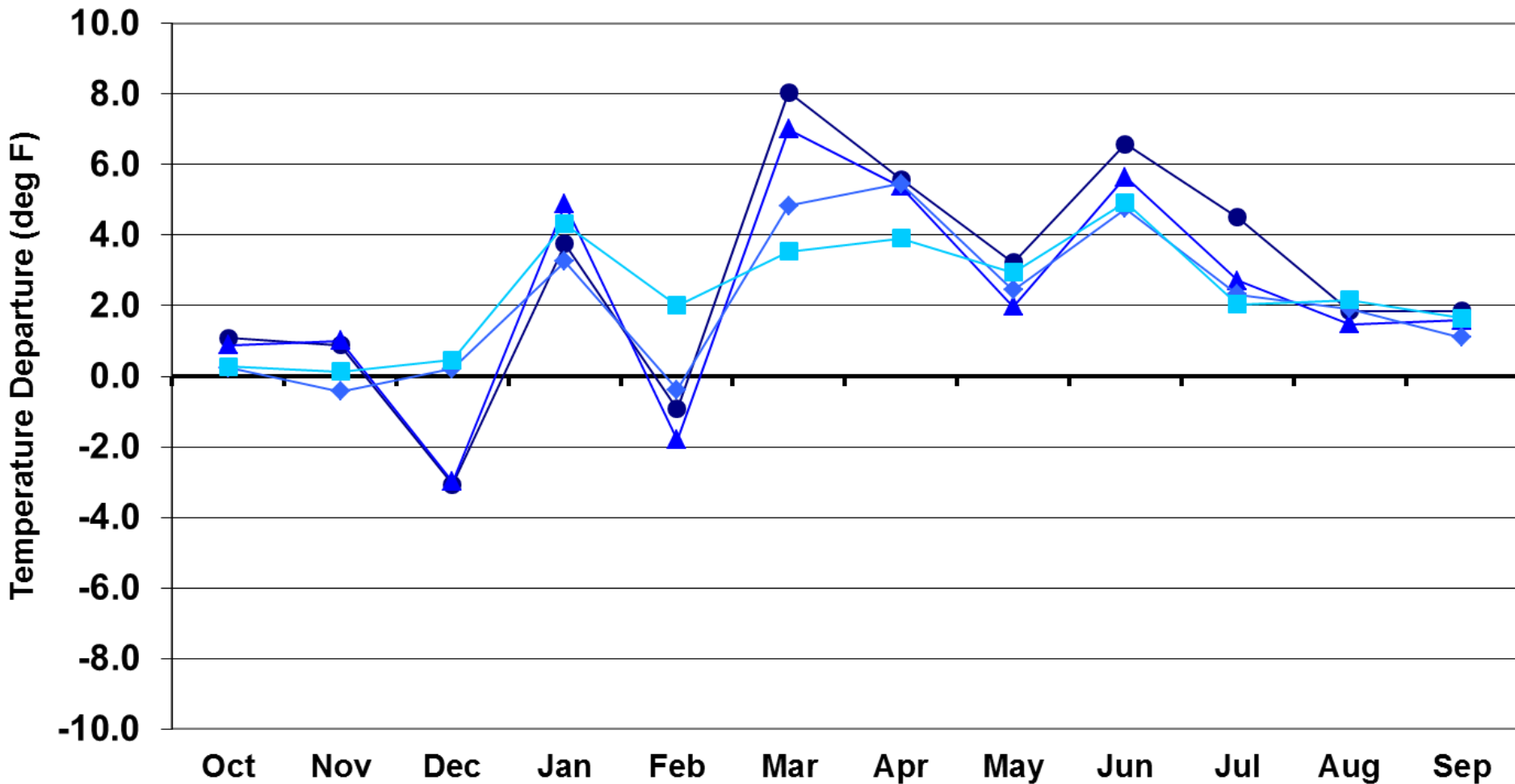
**Atmospheric Science Department
Colorado State University**

Presented to
Water Availability Task Force
November 20, 2012
Denver, CO

Prepared by Zach Schwalbe

Water Year 2012 Temperature Departures

Water Year 2012



● Eastern Plains

▲ Foothills

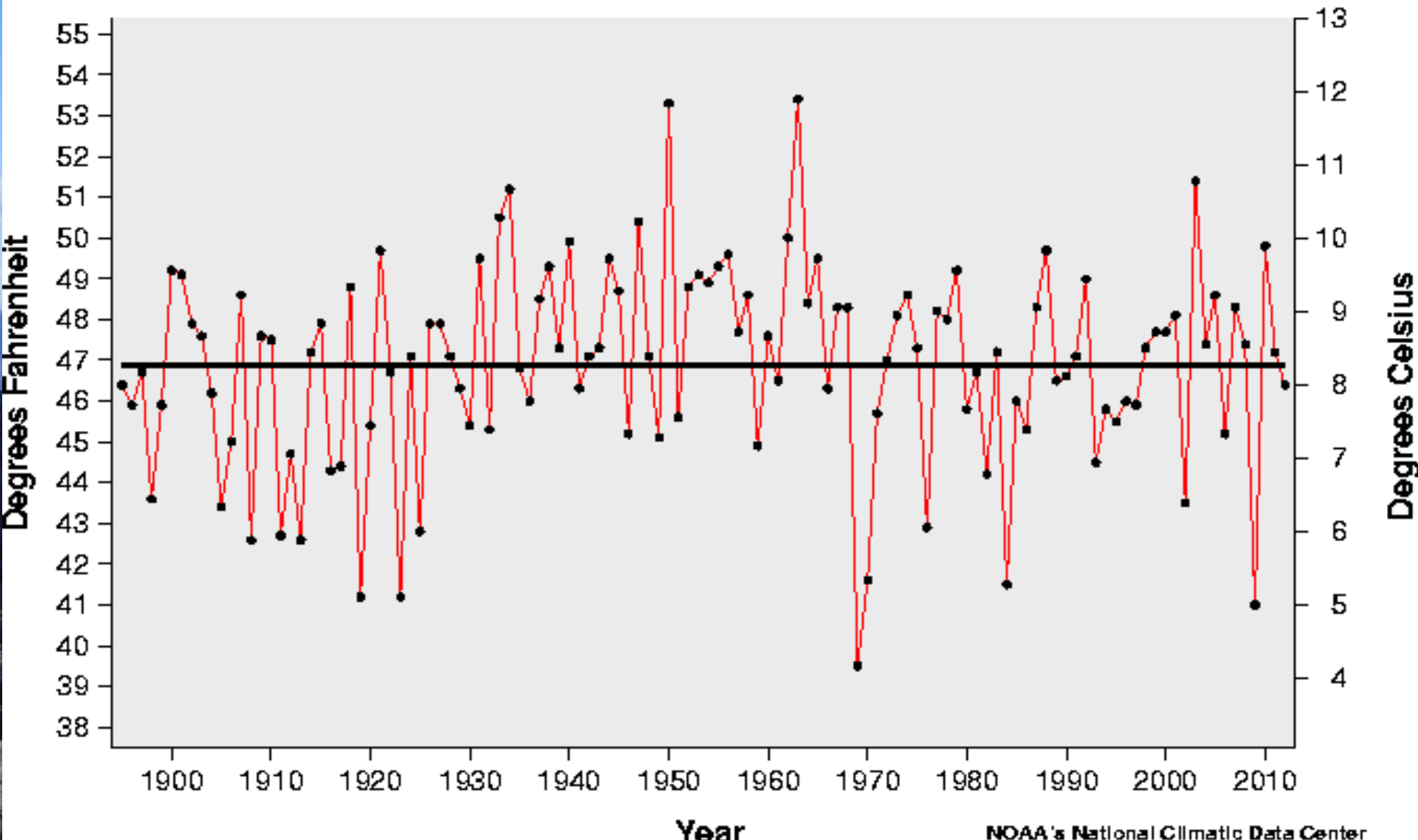
◆ Mountains

■ Western Valleys

October Average Temperature History for Colorado (NCDC)

— Actual Temperature
— Average Temperature

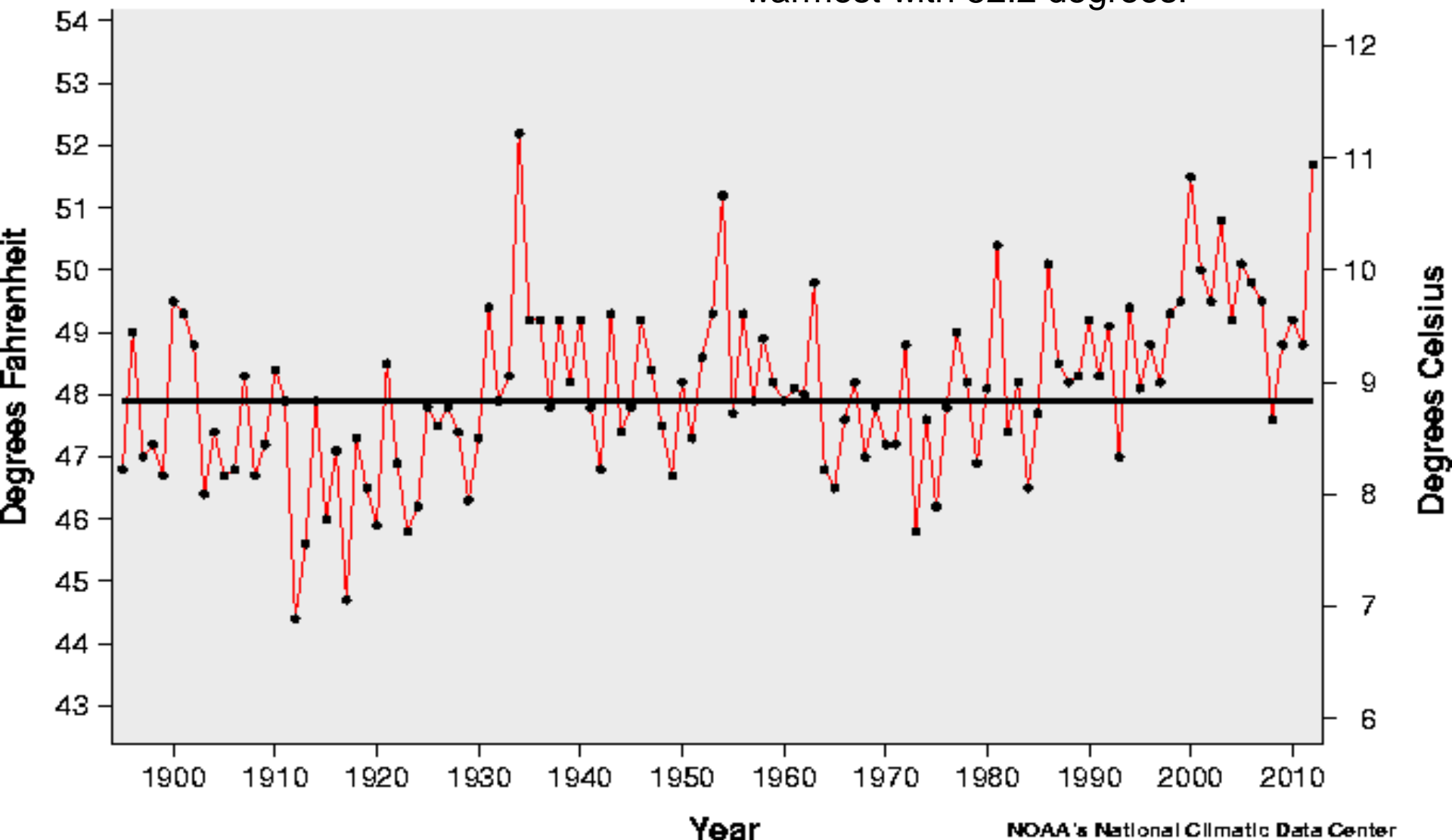
46.4 Ranks as the 44th coolest on record
1895-2012.



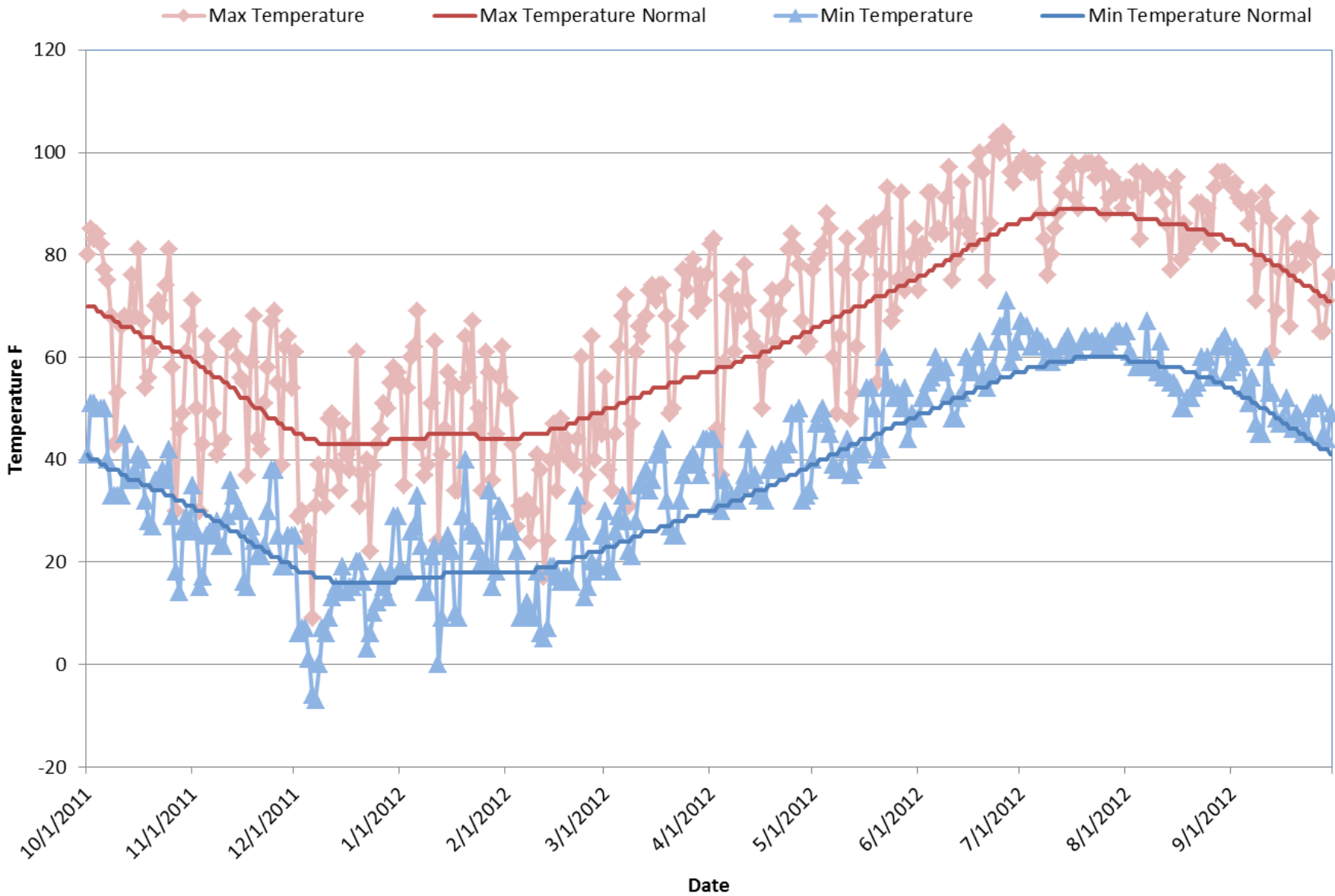
Calendar Year Average Temperature History for Colorado through October 2012 (NCDC)

— Actual Temperature
— Average Temperature

51.7 Ranks as the 2nd warmest on record 1895-2012. 1934 Calendar year was warmest with 52.2 degrees.

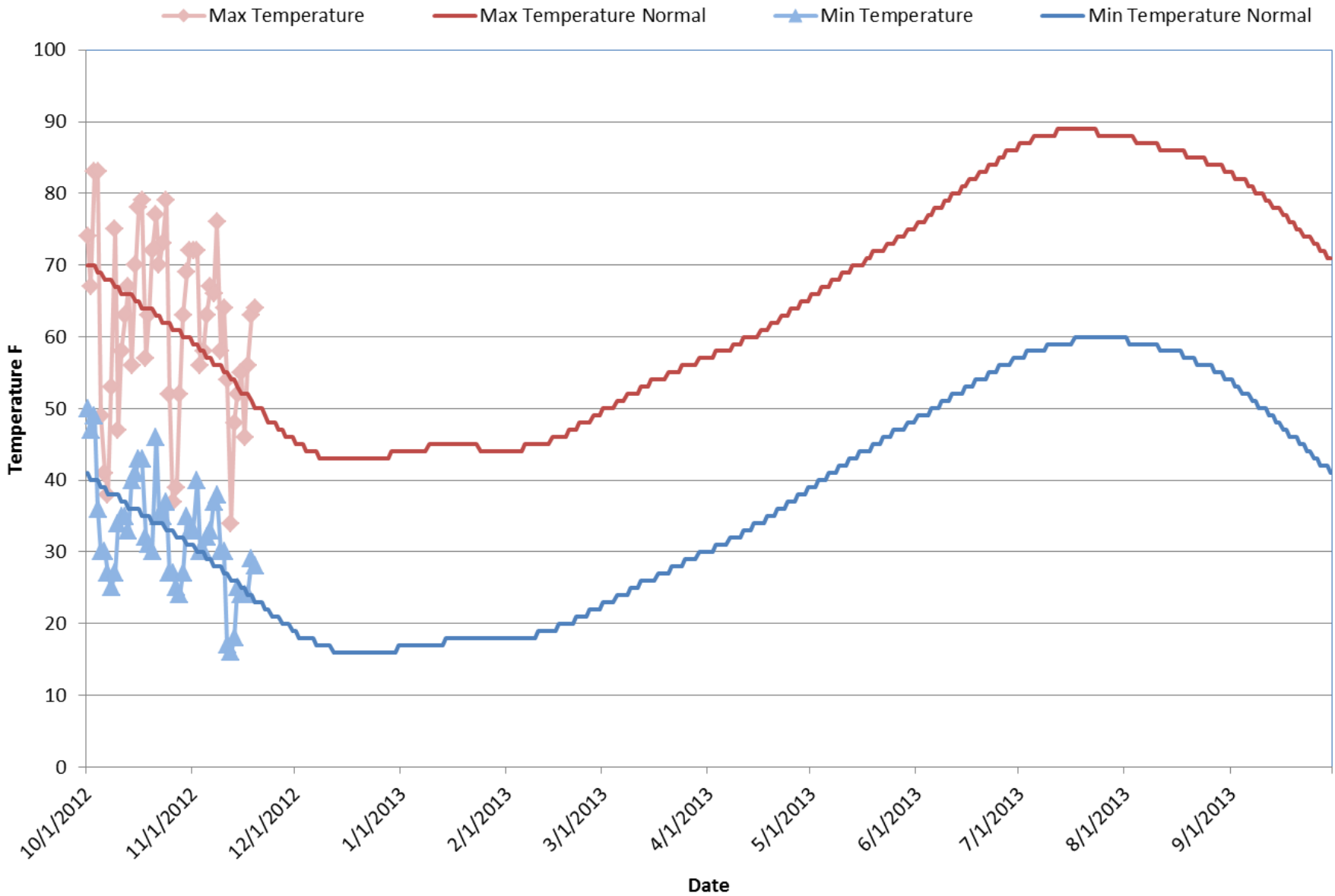


Denver Stapleton Daily Max/Min Temperatures and Normals



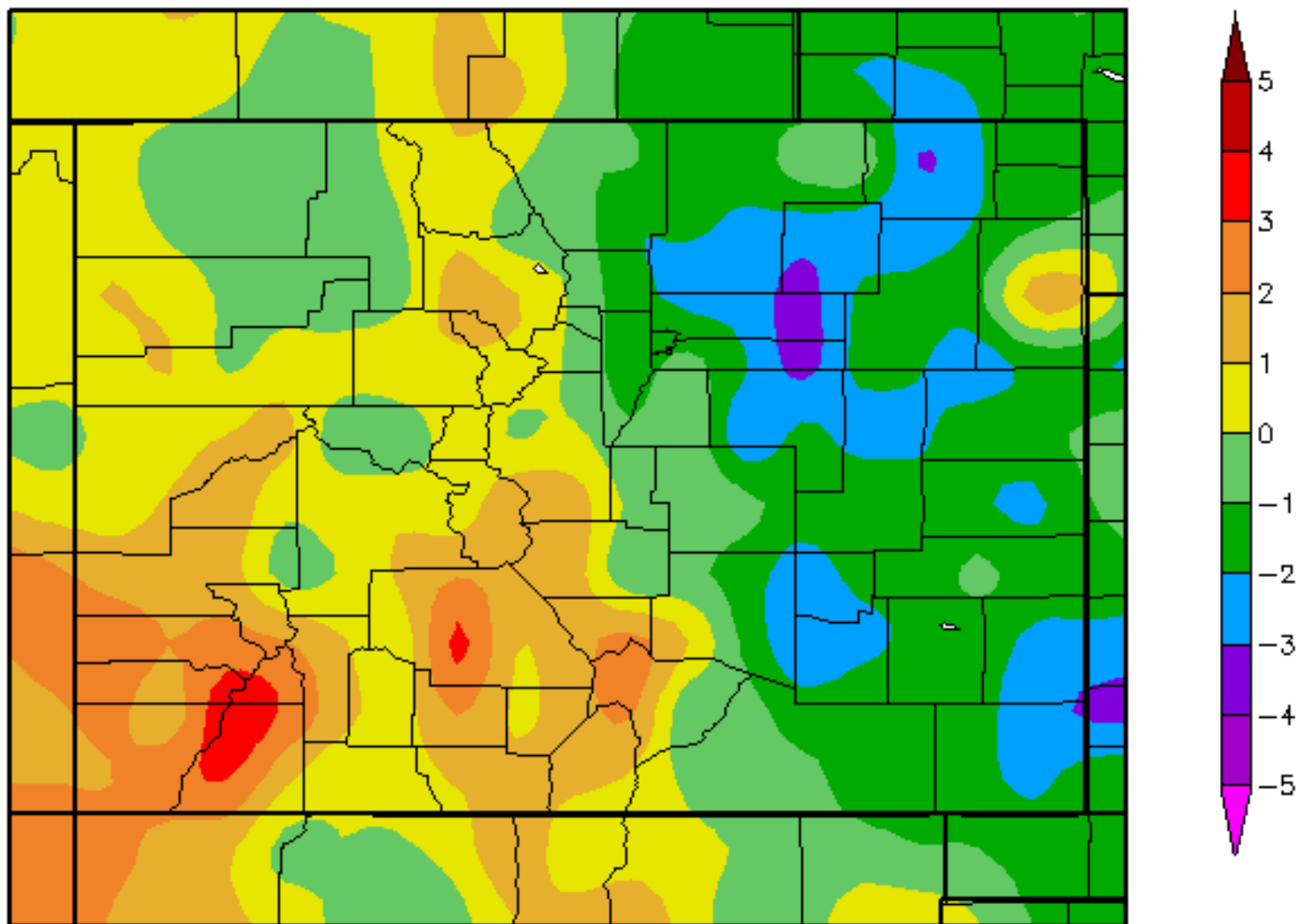
Denver Stapleton Daily Max/Min Temperatures and Normals

Water Year 2013



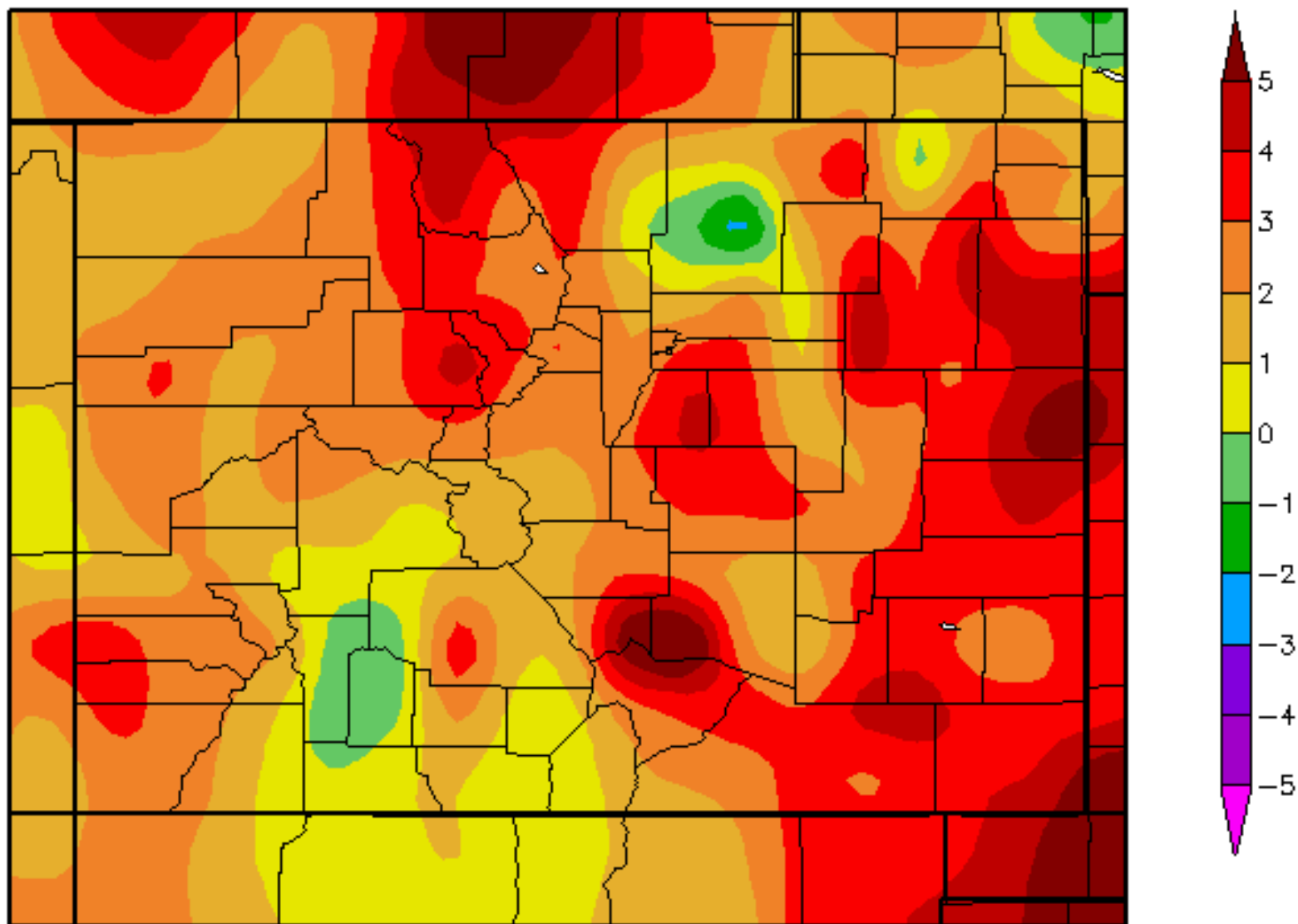
Departure from Normal Temperature (F)

10/1/2012 - 10/31/2012

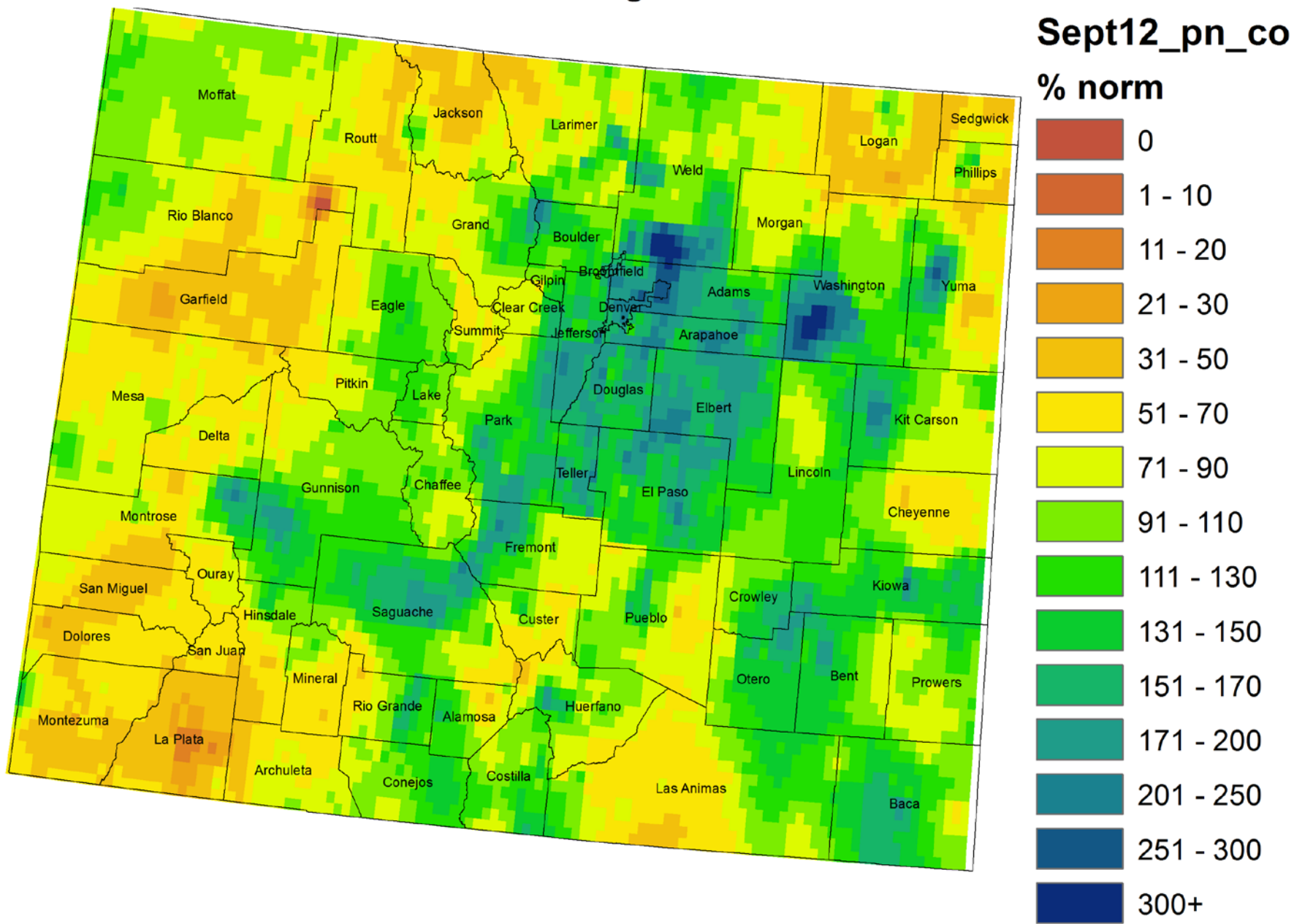


Departure from Normal Temperature (F)

11/1/2012 – 11/18/2012

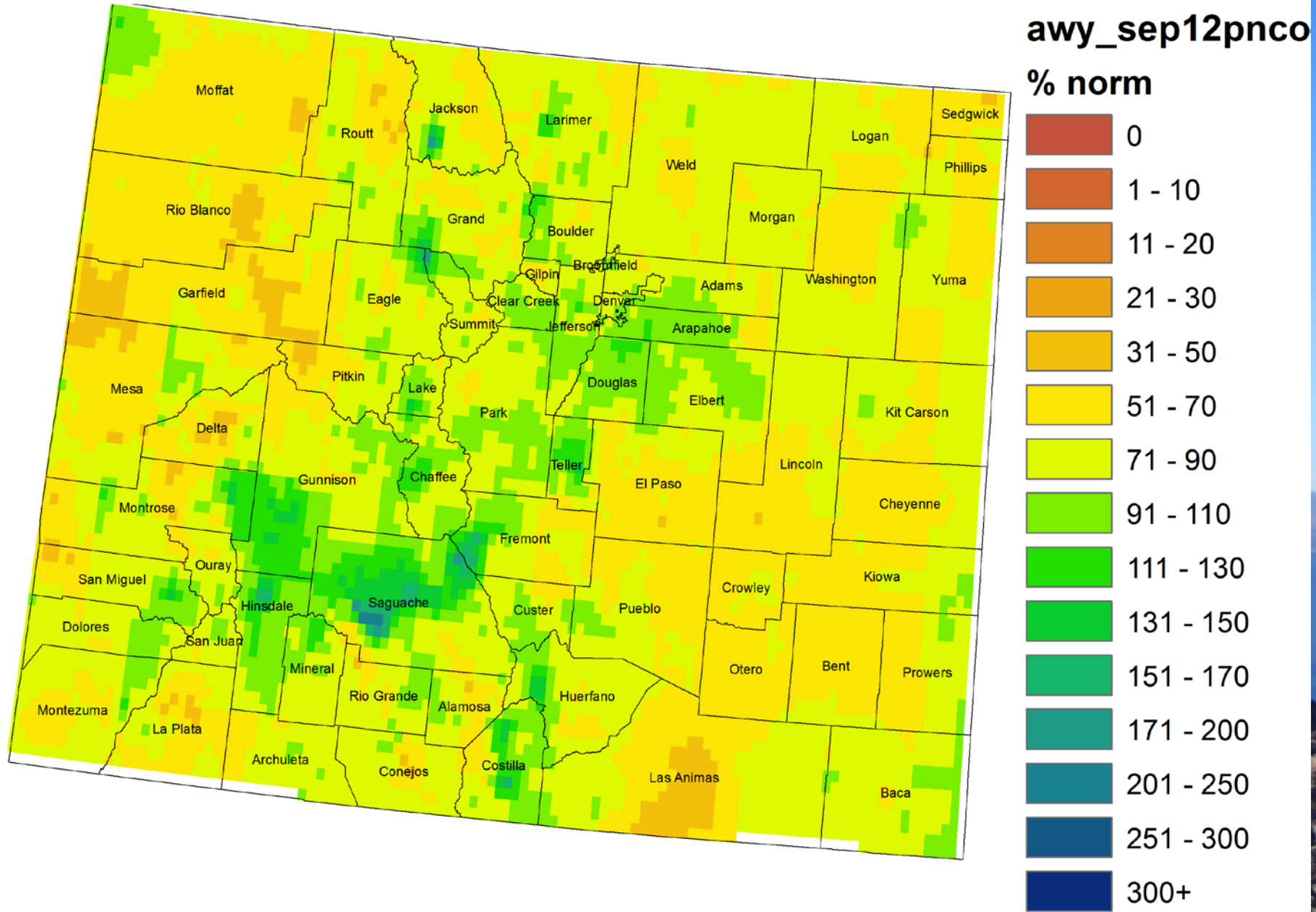


Colorado September 2012 Precipitation as Percentage of Normal

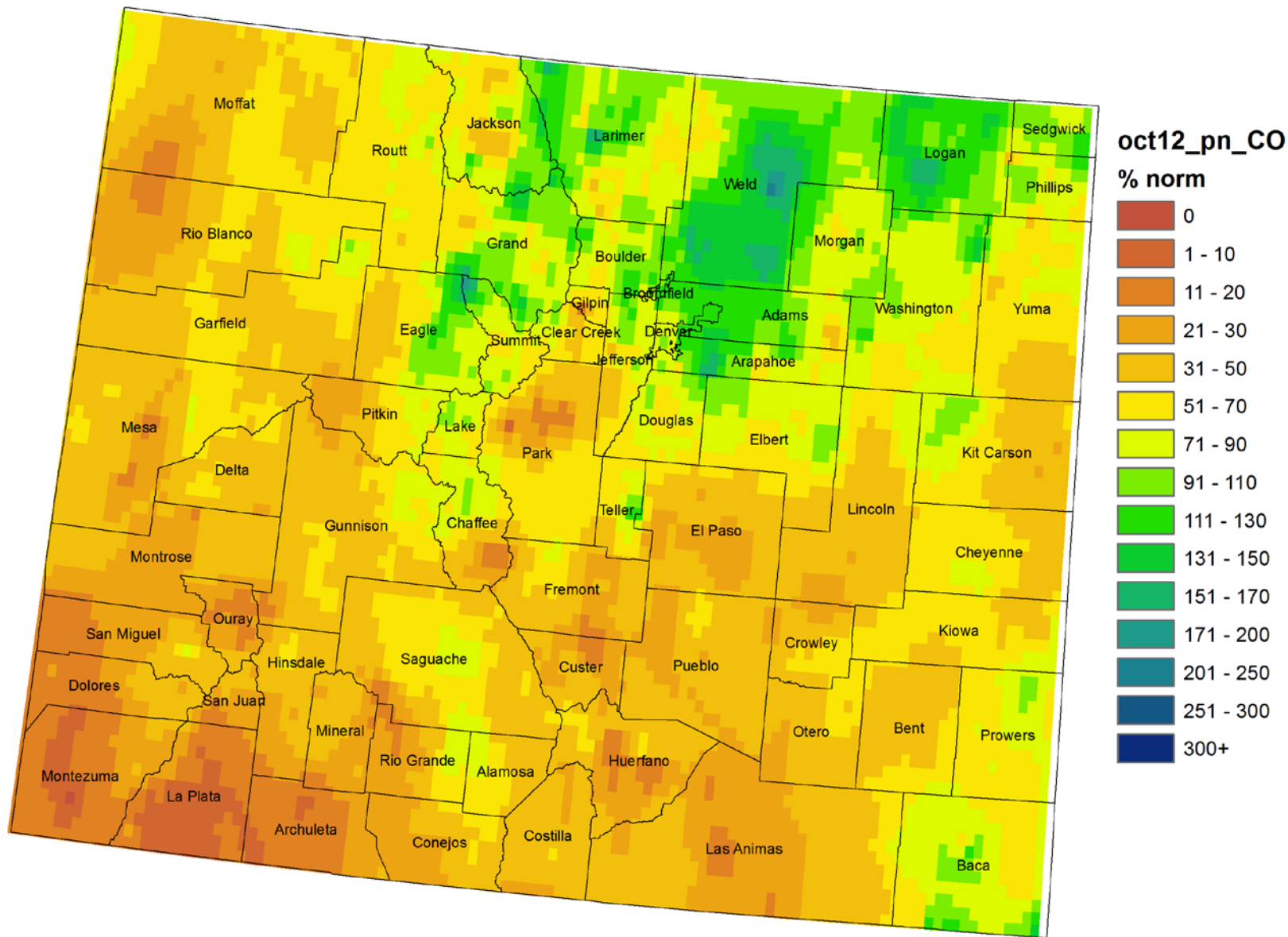


Colorado Water Year 2012

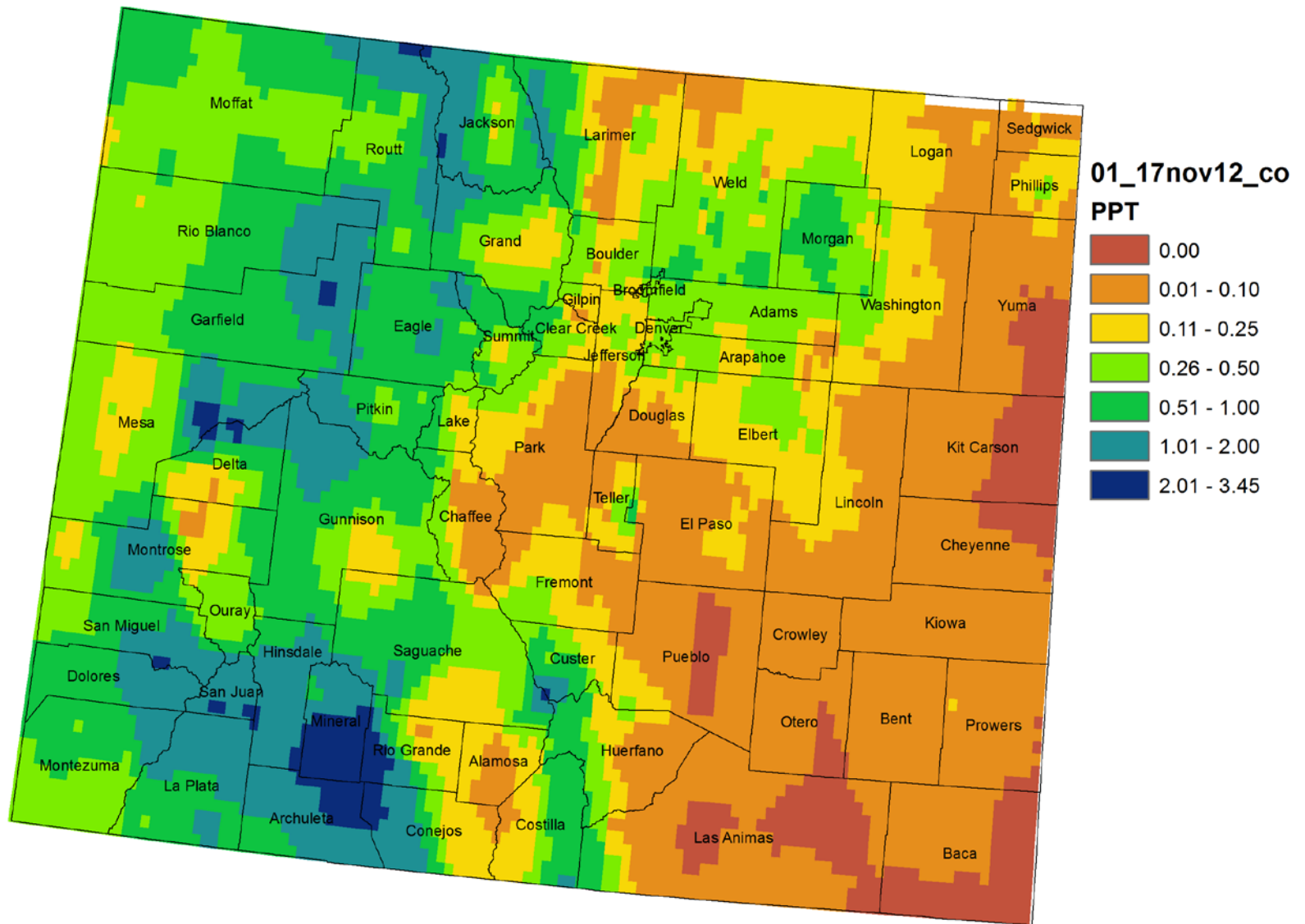
Precipitation as Percentage of Normal (Oct 2011 - Sep 2012)



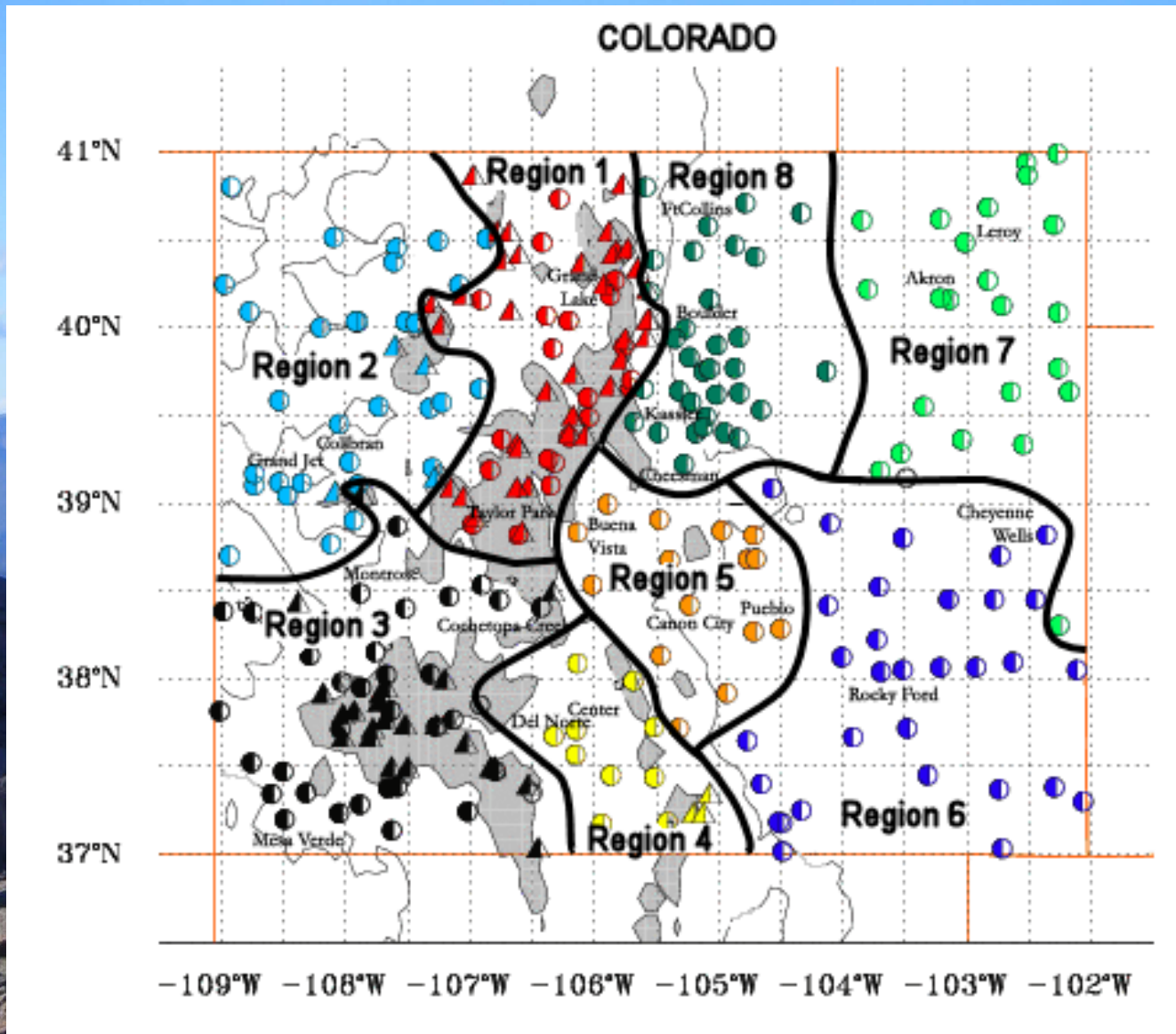
Colorado October 2012 Precipitation as Percentage of Normal



Colorado Month to Date Precipitation (in) 1 - 17 November 2012

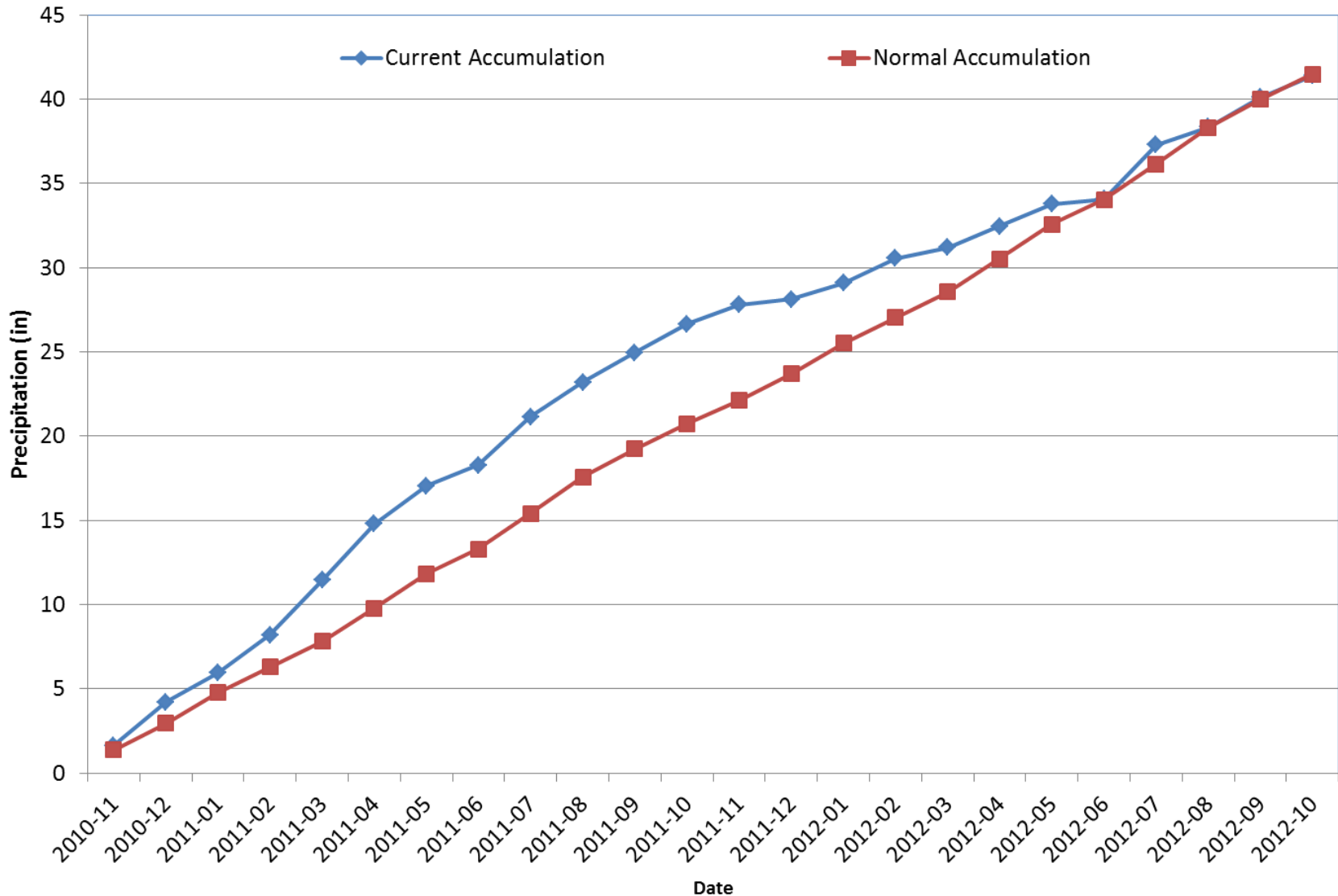


Climate divisions defined by Dr. Klaus Wolter of NOAA's Climate Diagnostic Center in Boulder, CO



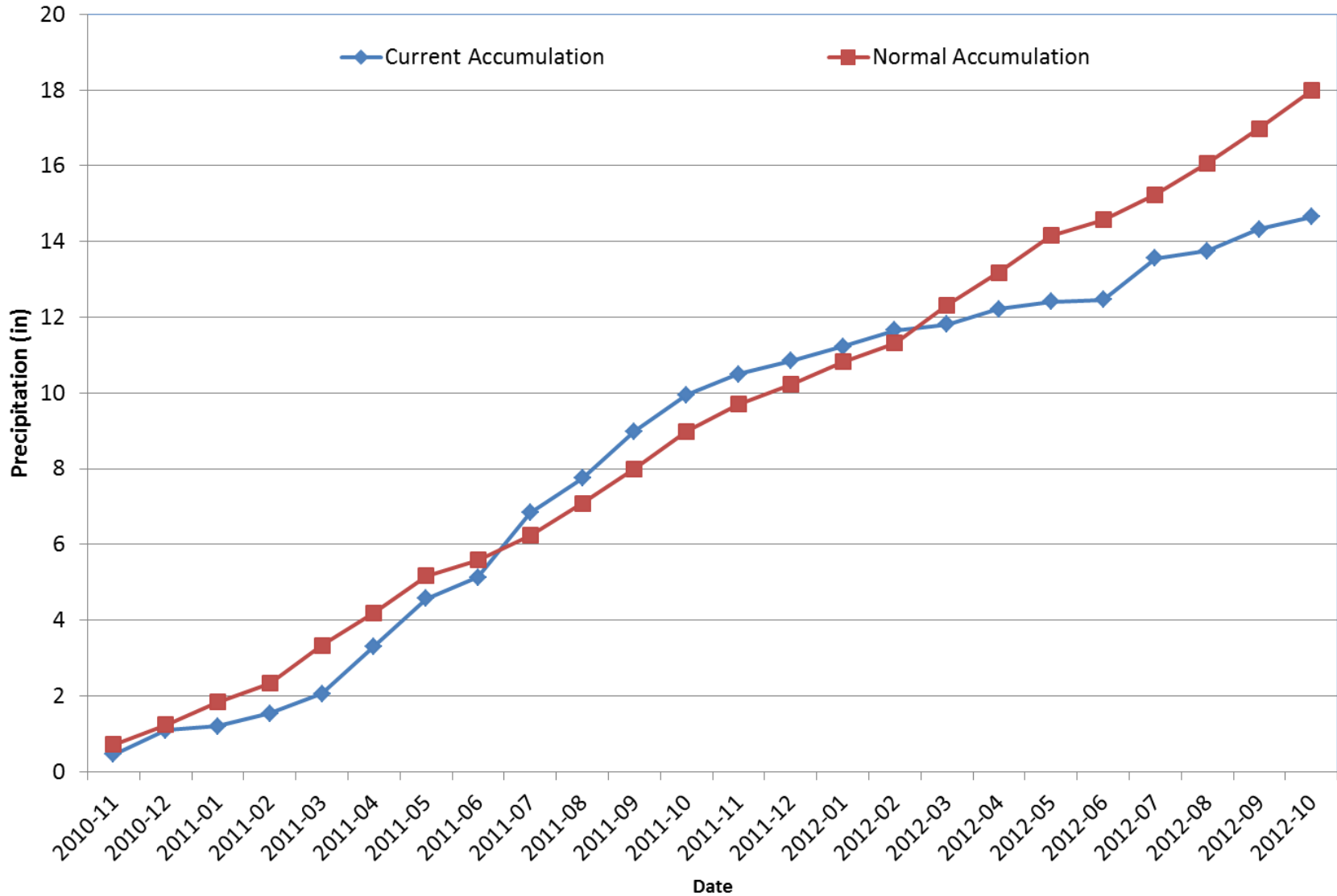
Division 1 – Grand Lake 1NW

Grand Lake 1NW 24 Month Precipitation Accumulation



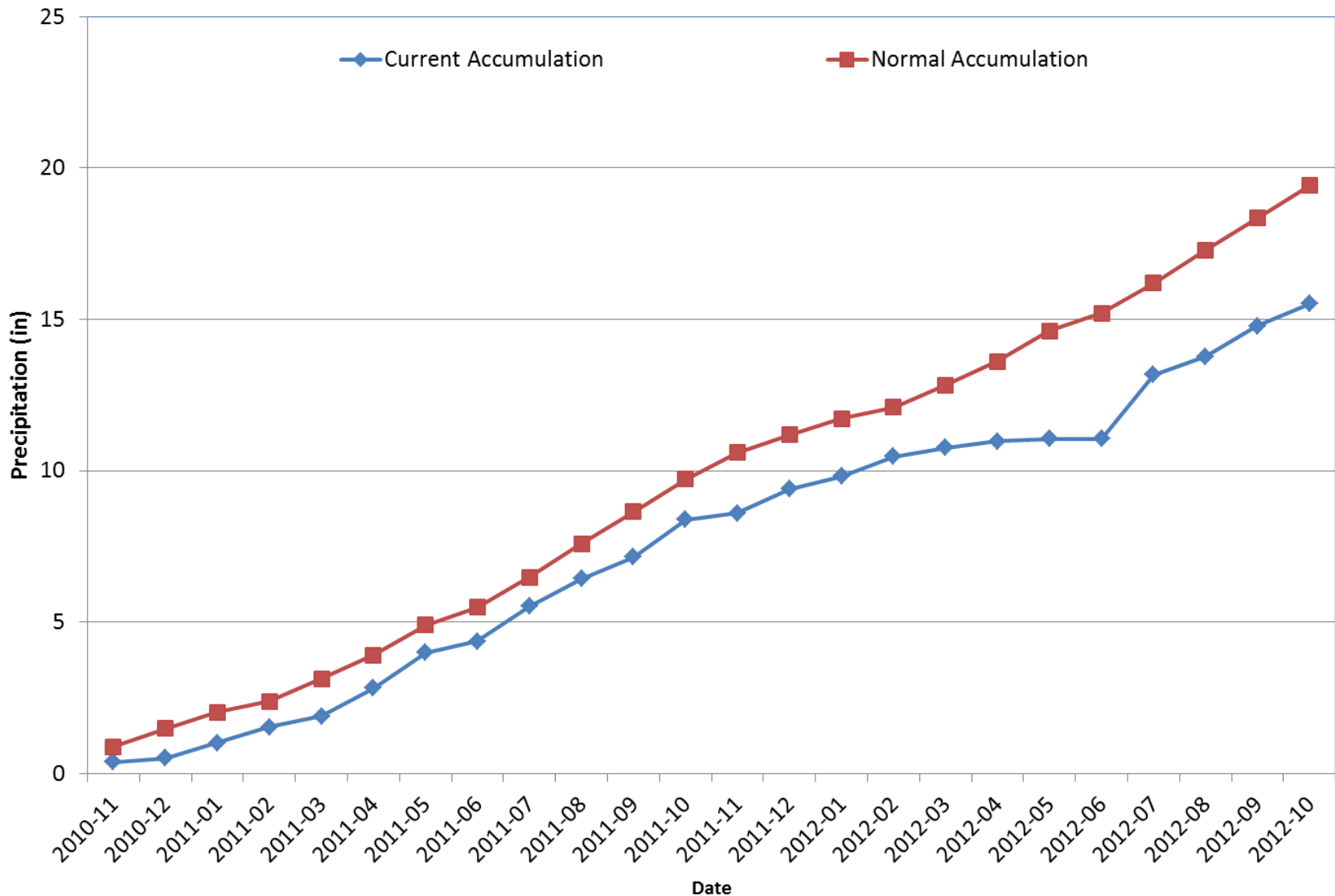
Division 2 – Grand Junction

Grand Junction 24 Month Precipitation Accumulation



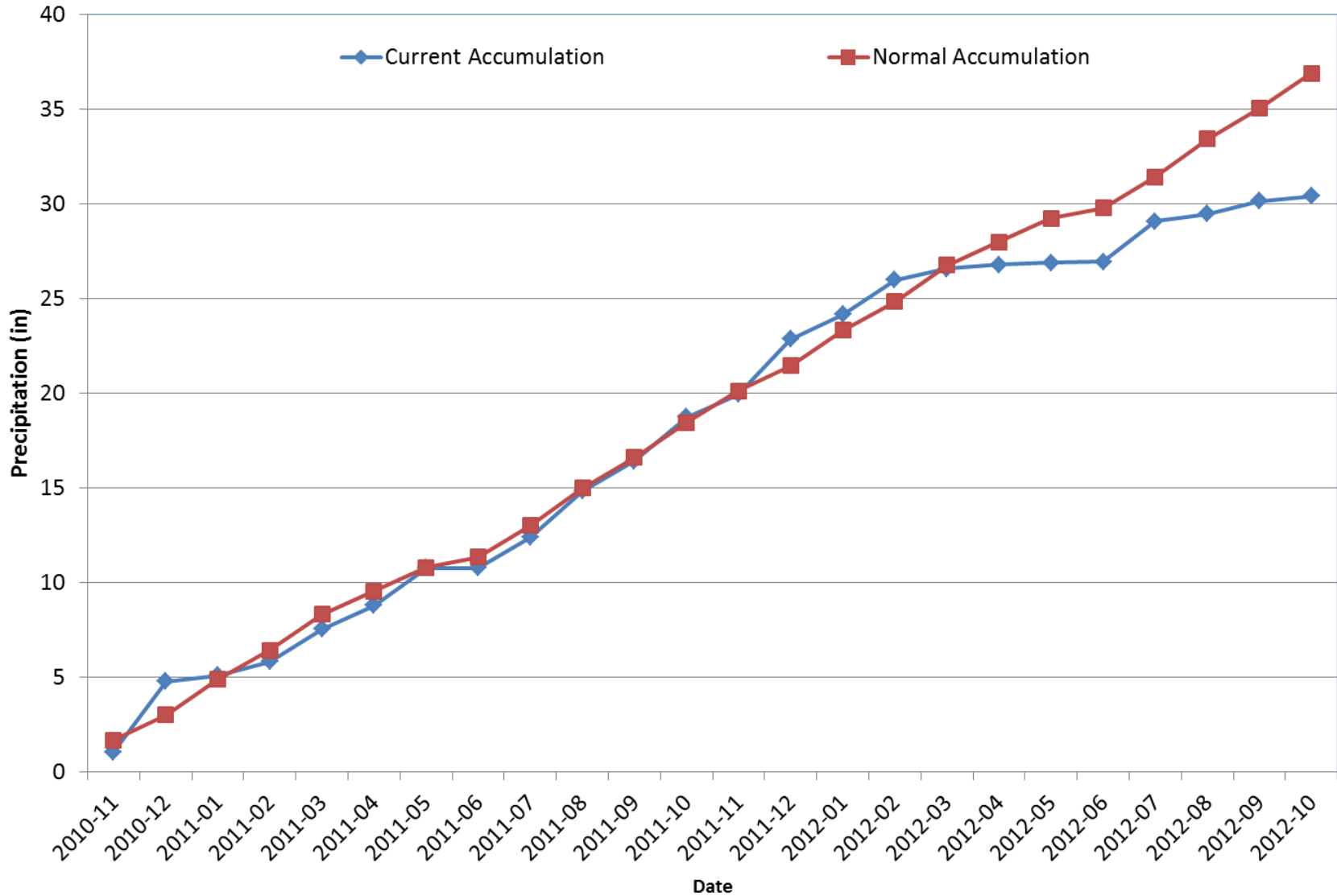
Division 3 – Montrose

Montrose #2 24 Month Precipitation Accumulation



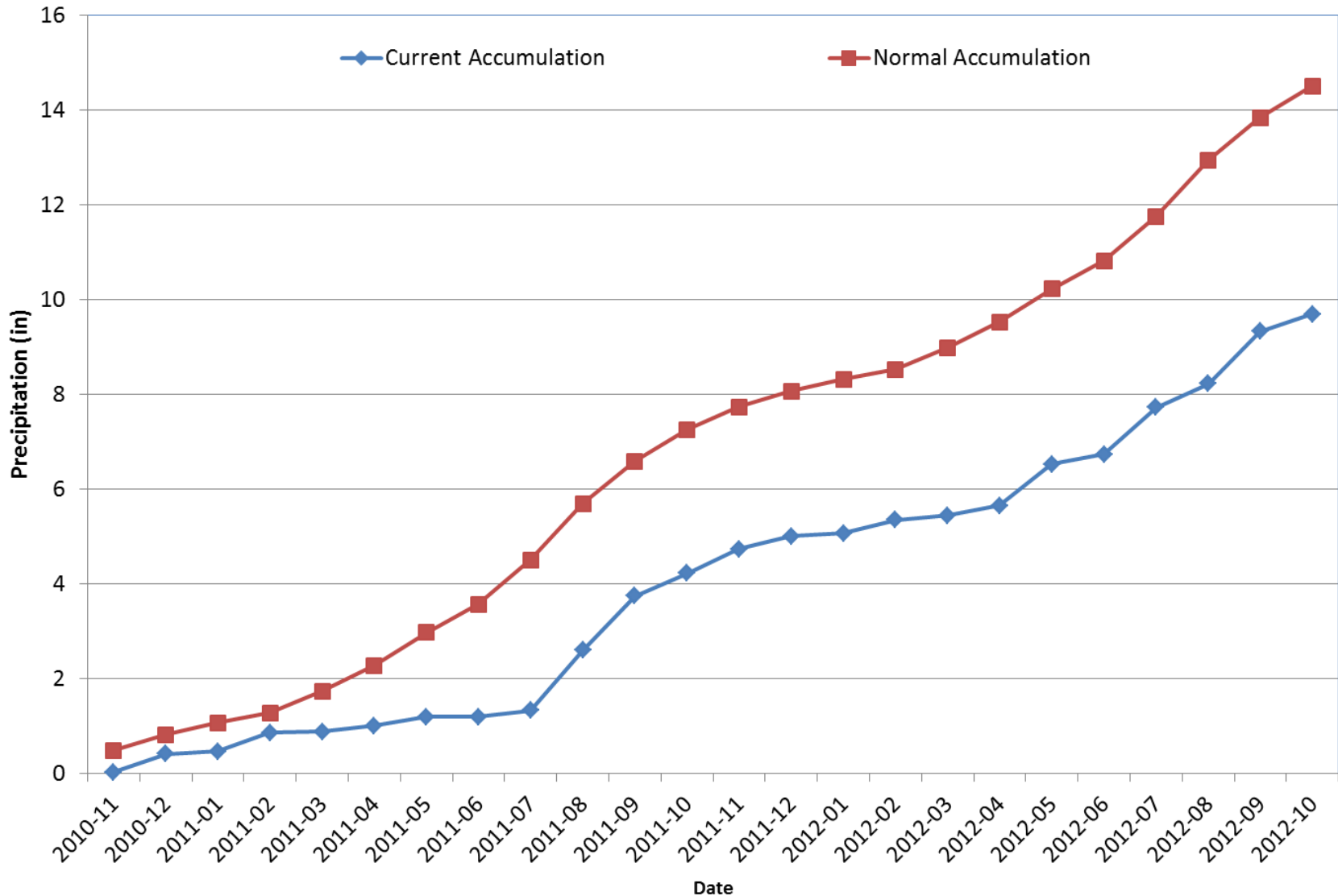
Division 3 – Mesa Verde NP

Mesa Verde NP 24 Month Precipitation Accumulation



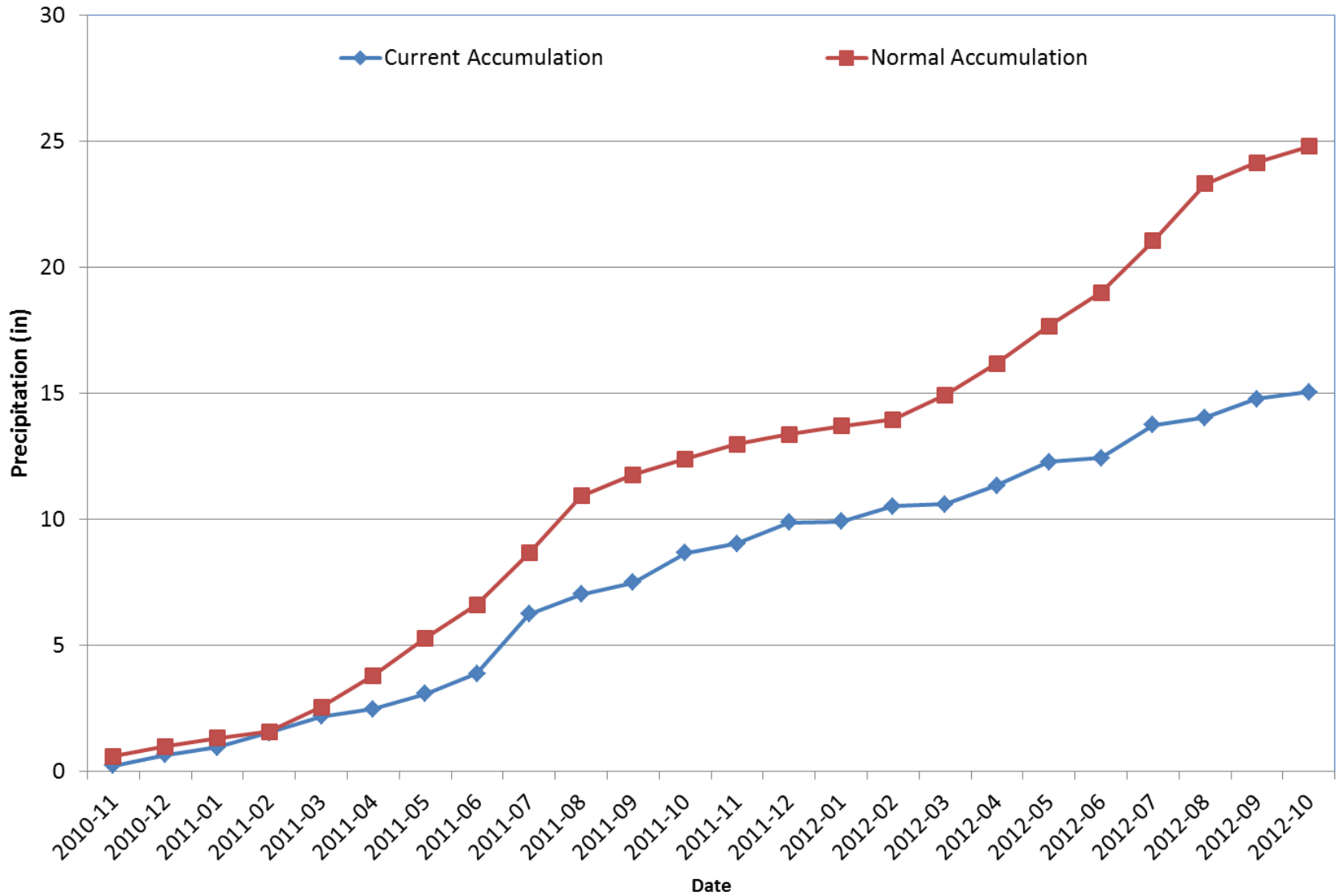
Division 4 – Alamosa

Alamosa WSO 24 Month Precipitation Accumulation



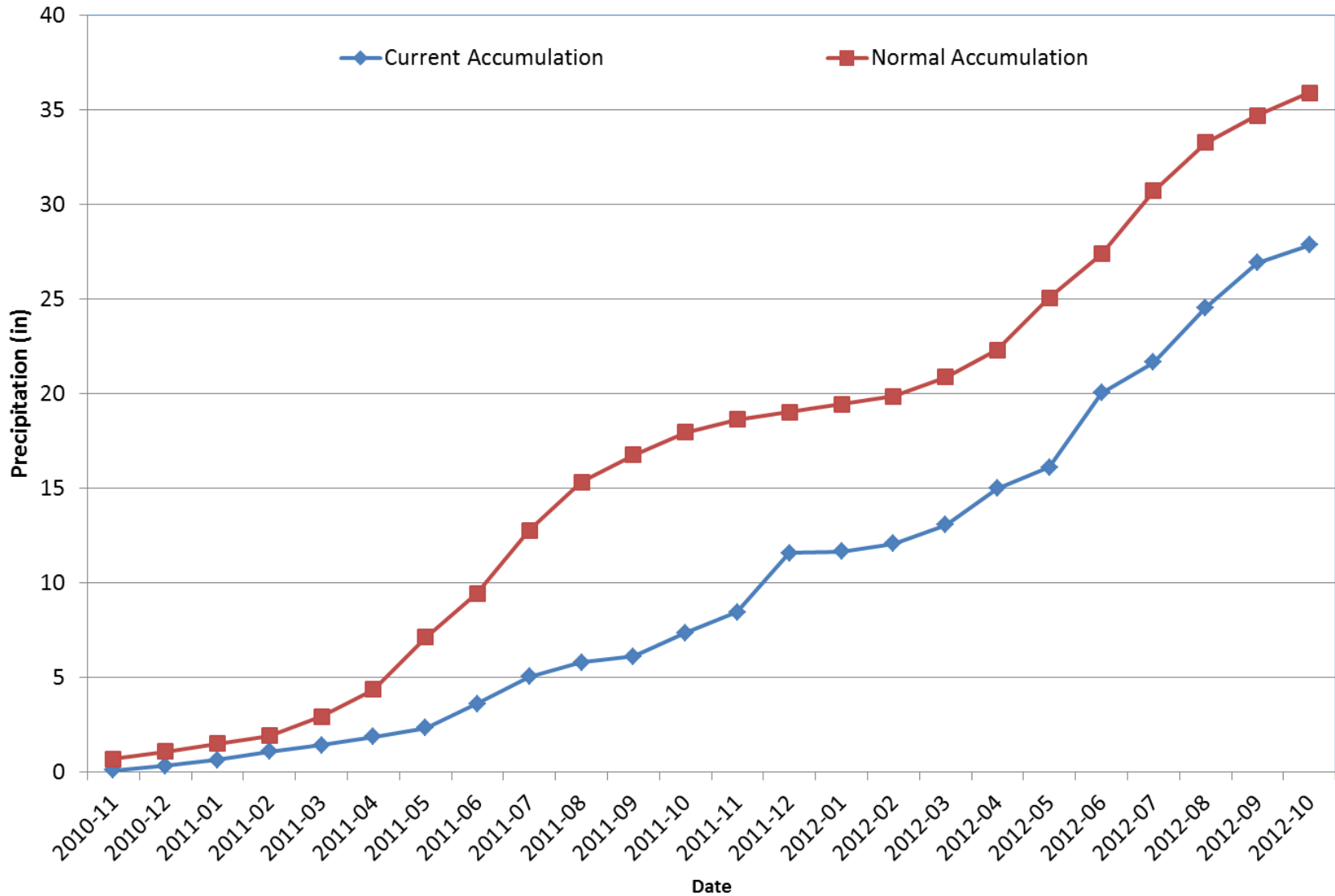
Division 5 – Pueblo

Pueblo Memorial AP 24 Month Precipitation Accumulation



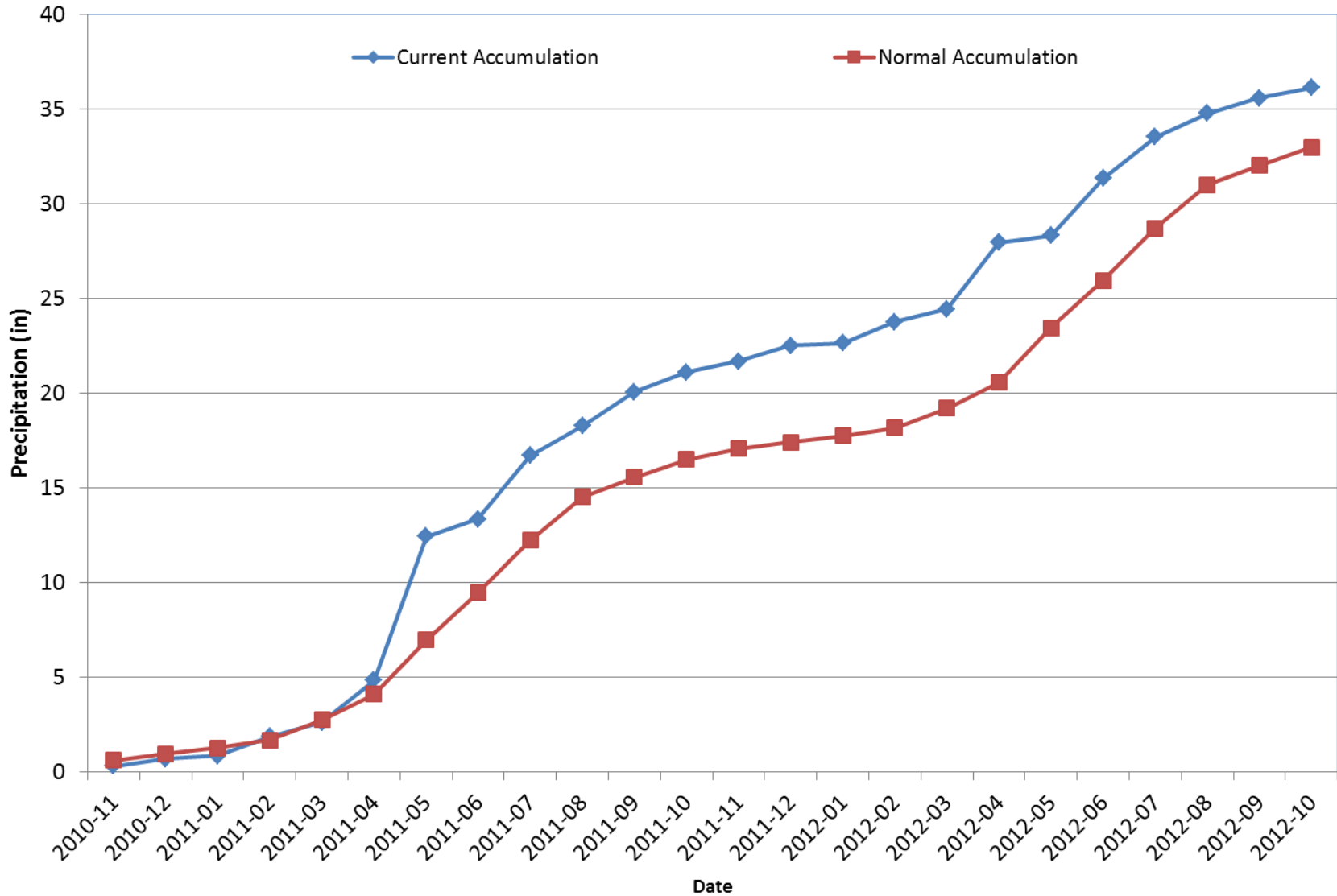
Division 6 - Walsh

Walsh 1W 24 Month Precipitation Accumulation



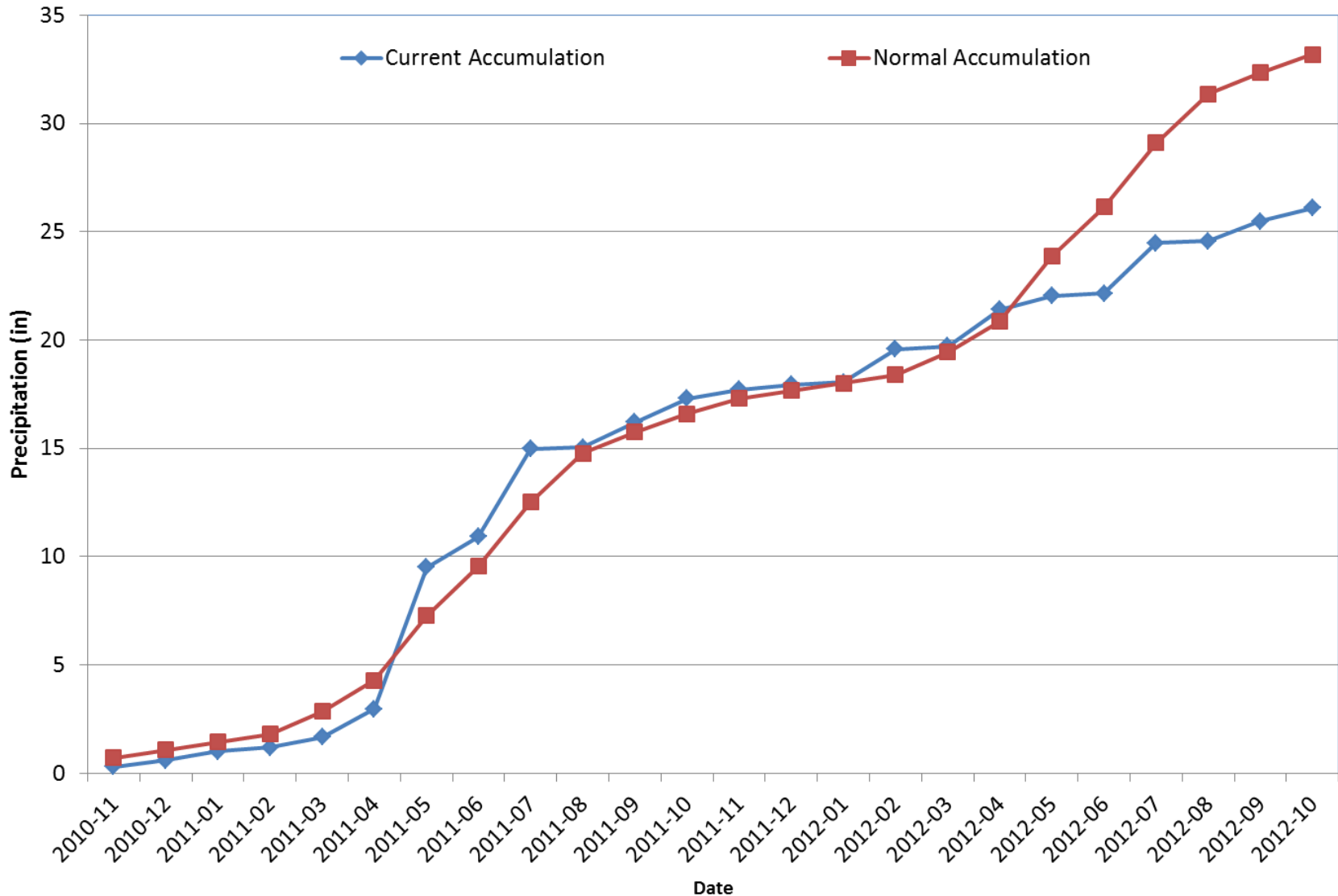
Division 6 - Burlington

Burlington, CO
24 Month Precipitation Accumulation



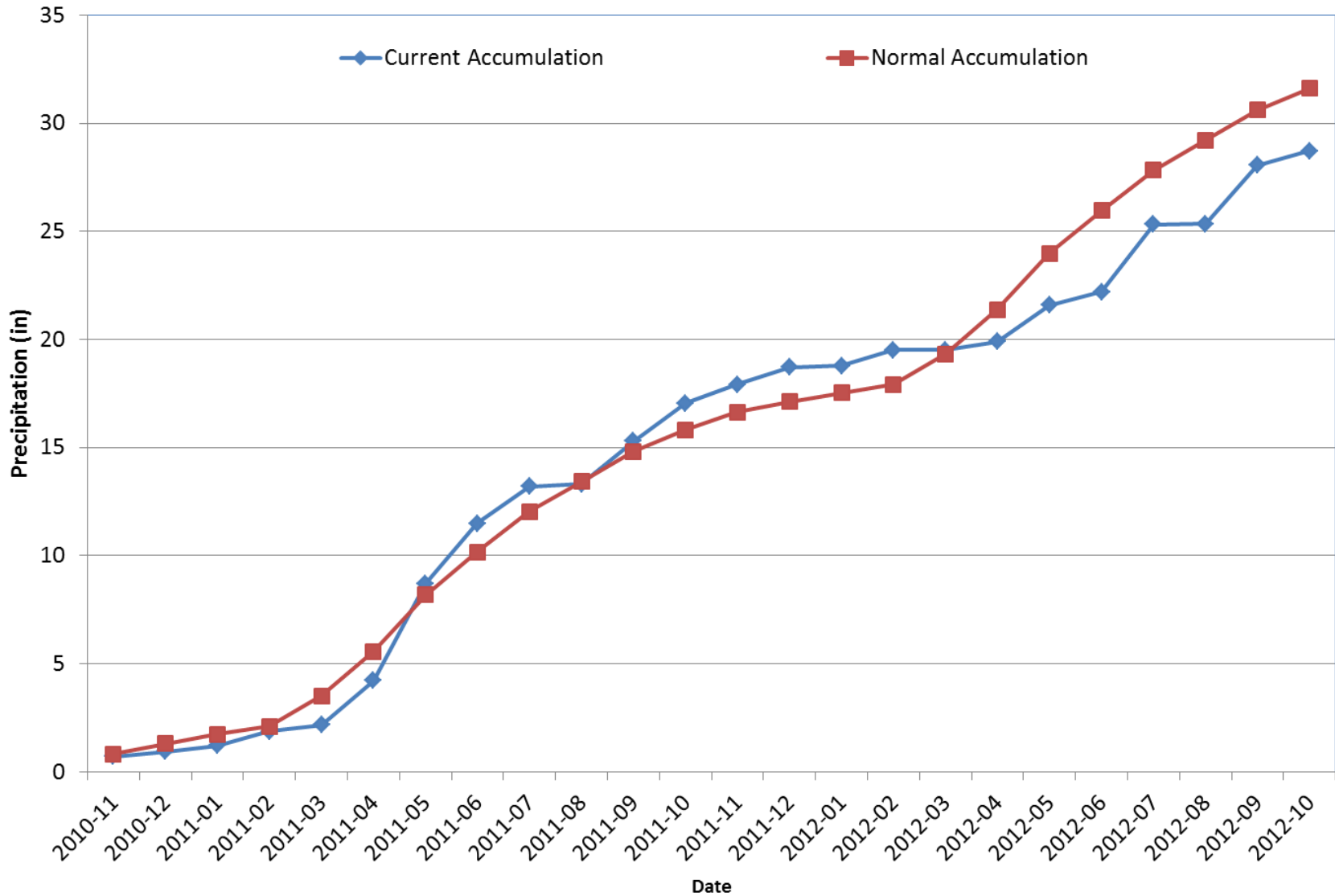
Division 7 – Akron

Akron 4E 24 Month Precipitation Accumulation



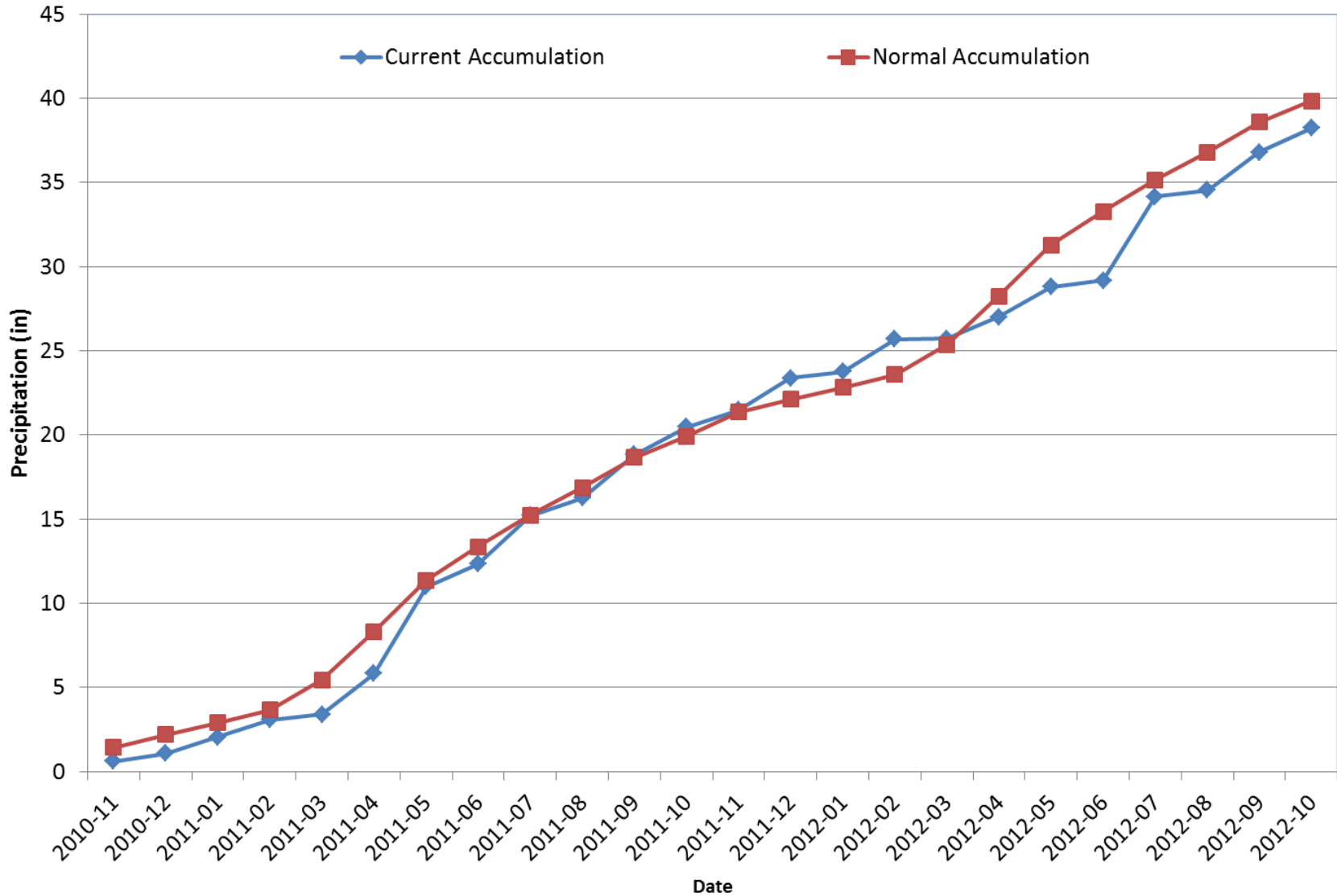
Division 8 – Fort Collins

Fort Collins 24 Month Precipitation Accumulation



Division 8 - Boulder

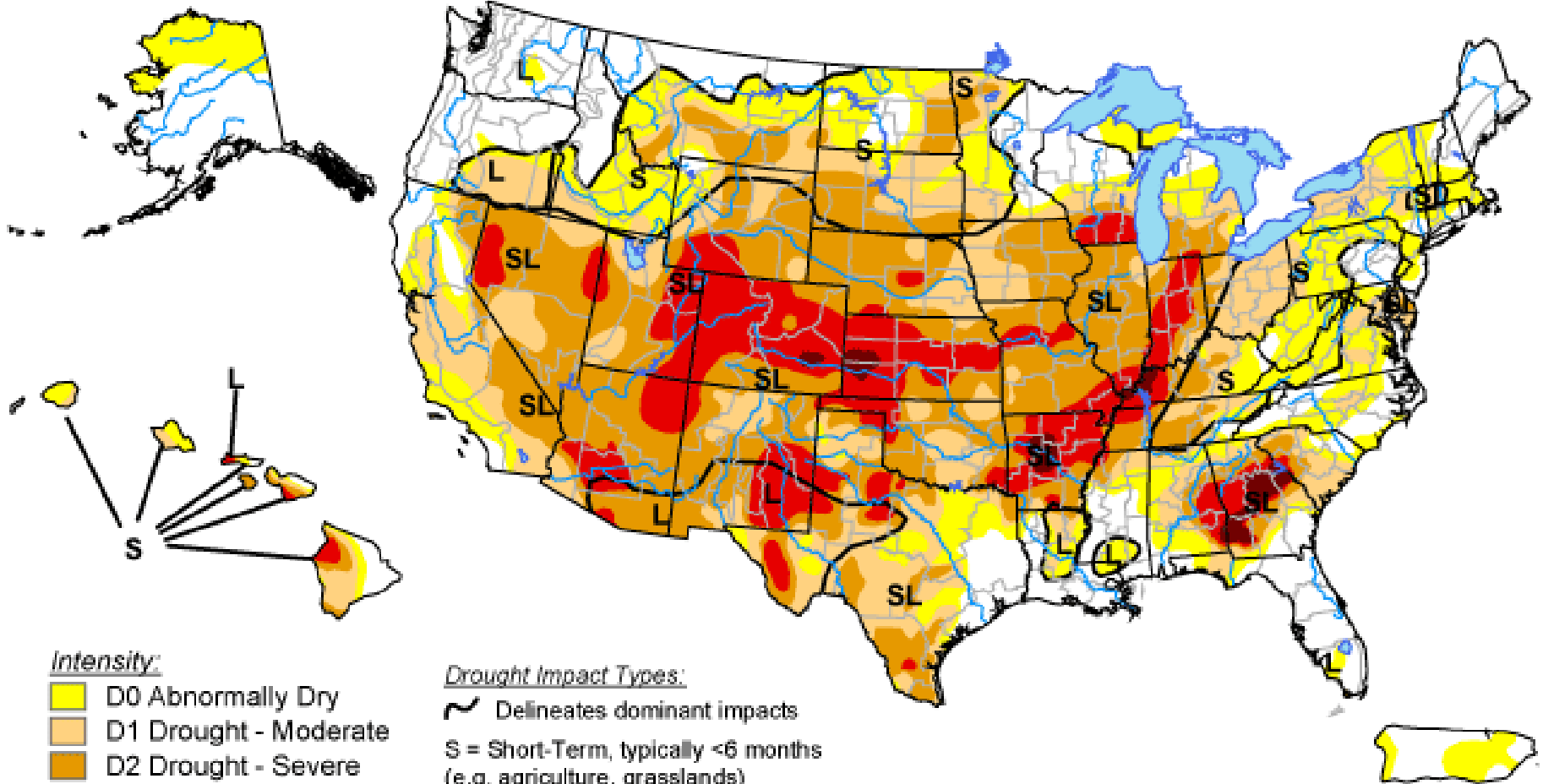
Boulder 24 Month Precipitation Accumulation








U.S. Drought Monitor

July 17, 2012


Valid 7 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
- S = Short-Term, typically <6 months
(e.g. agriculture, grasslands)
- L = Long-Term, typically >6 months
(e.g. hydrology, ecology)

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



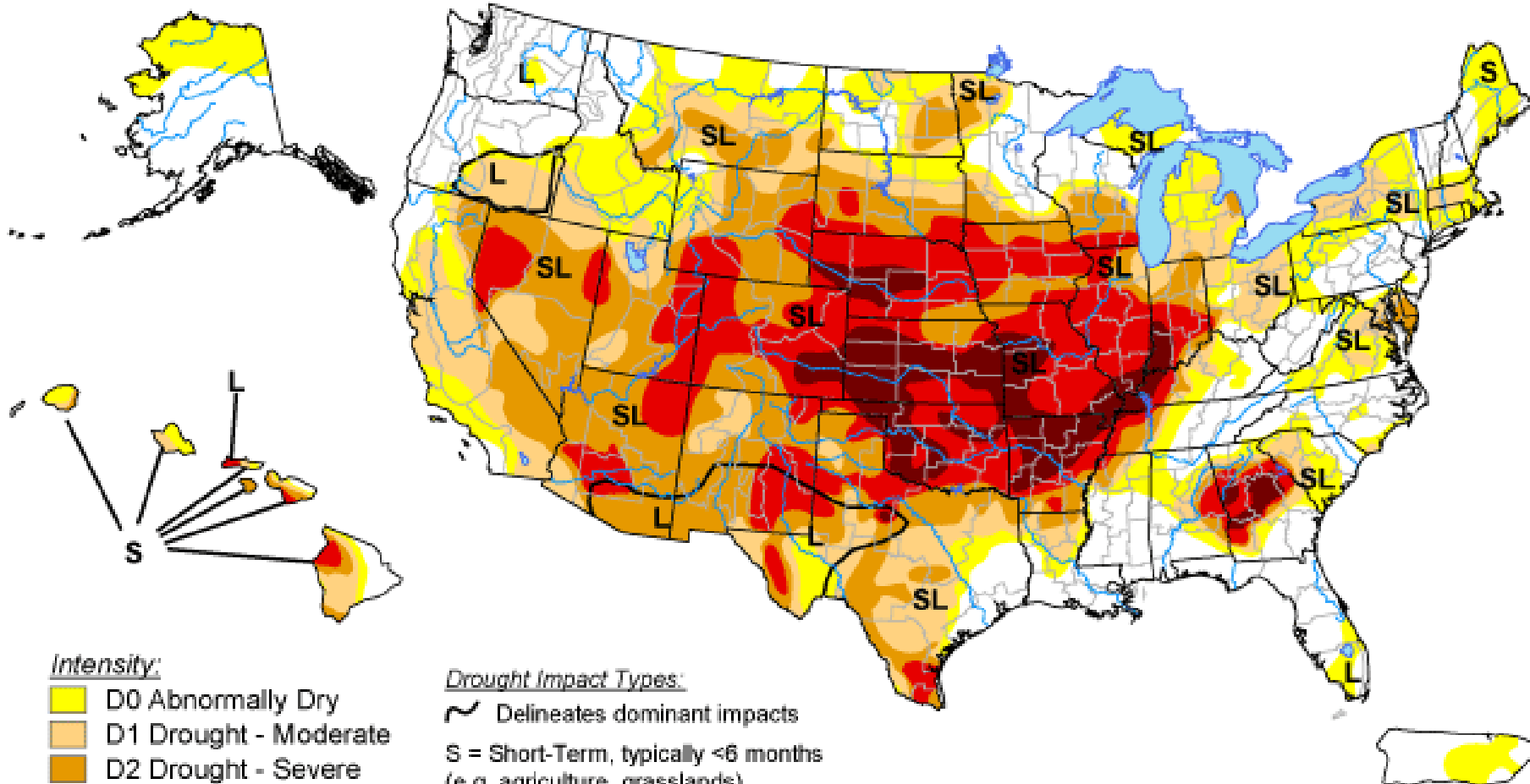
Released Thursday, July 19, 2012

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

<http://droughtmonitor.unl.edu/>

U.S. Drought Monitor

August 14, 2012
Valid 7 a.m. EDT



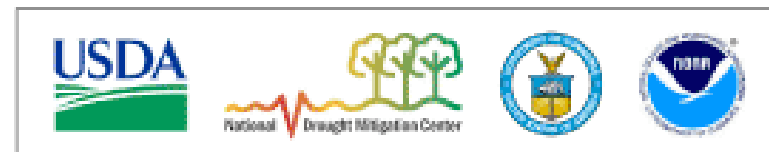
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Released Thursday, August 16, 2012

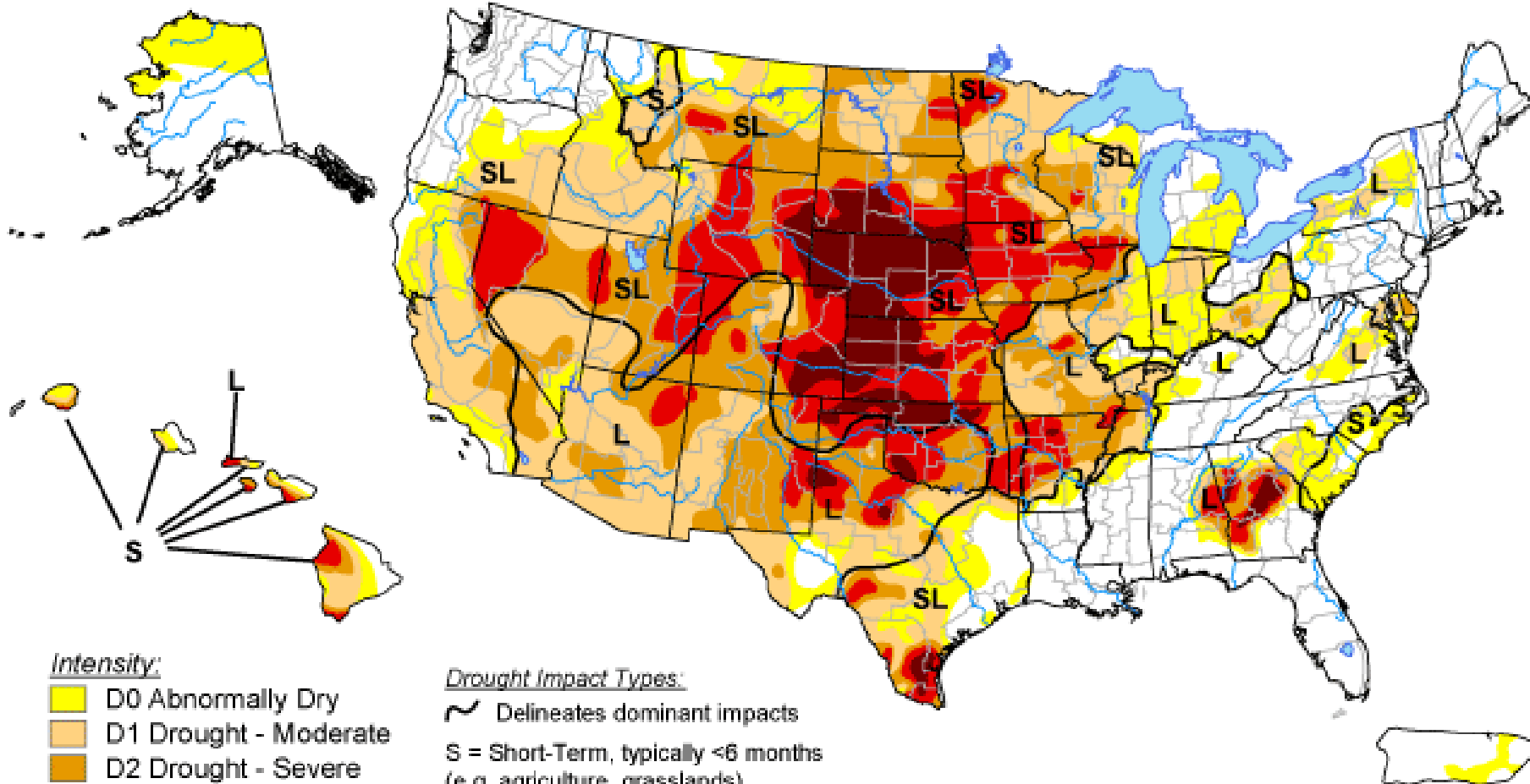
Author: Michael Brewer/Liz Love-Brotak, NOAA/NESDIS/NCDC

<http://droughtmonitor.unl.edu/>






U.S. Drought Monitor

October 16, 2012


Valid 7 a.m. EDT



Intensity:

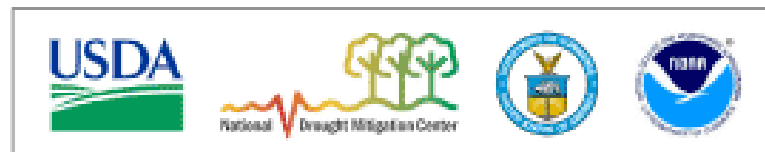
-  D0 Abnormally Dry
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<http://droughtmonitor.unl.edu/>



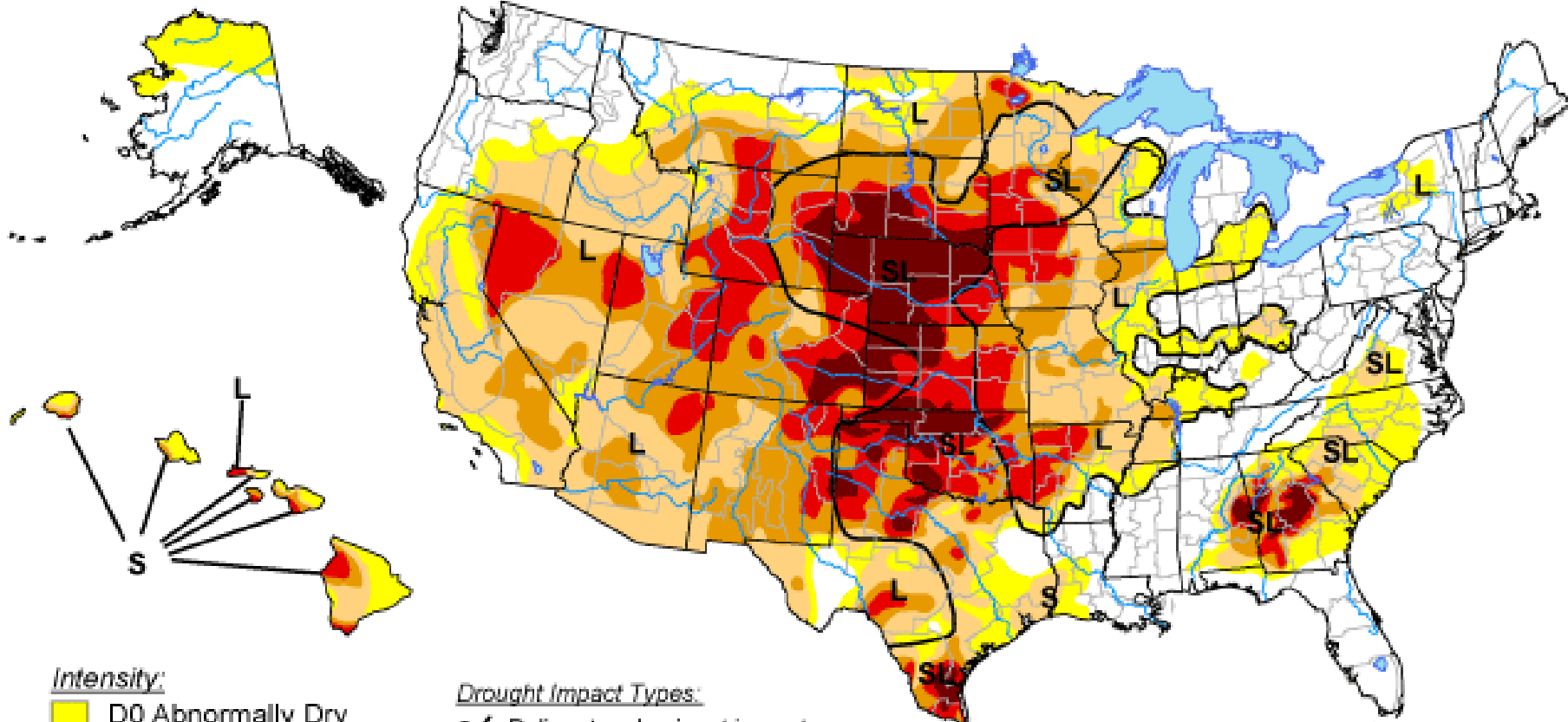
Released Thursday, October 18, 2012

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






U.S. Drought Monitor

November 13, 2012


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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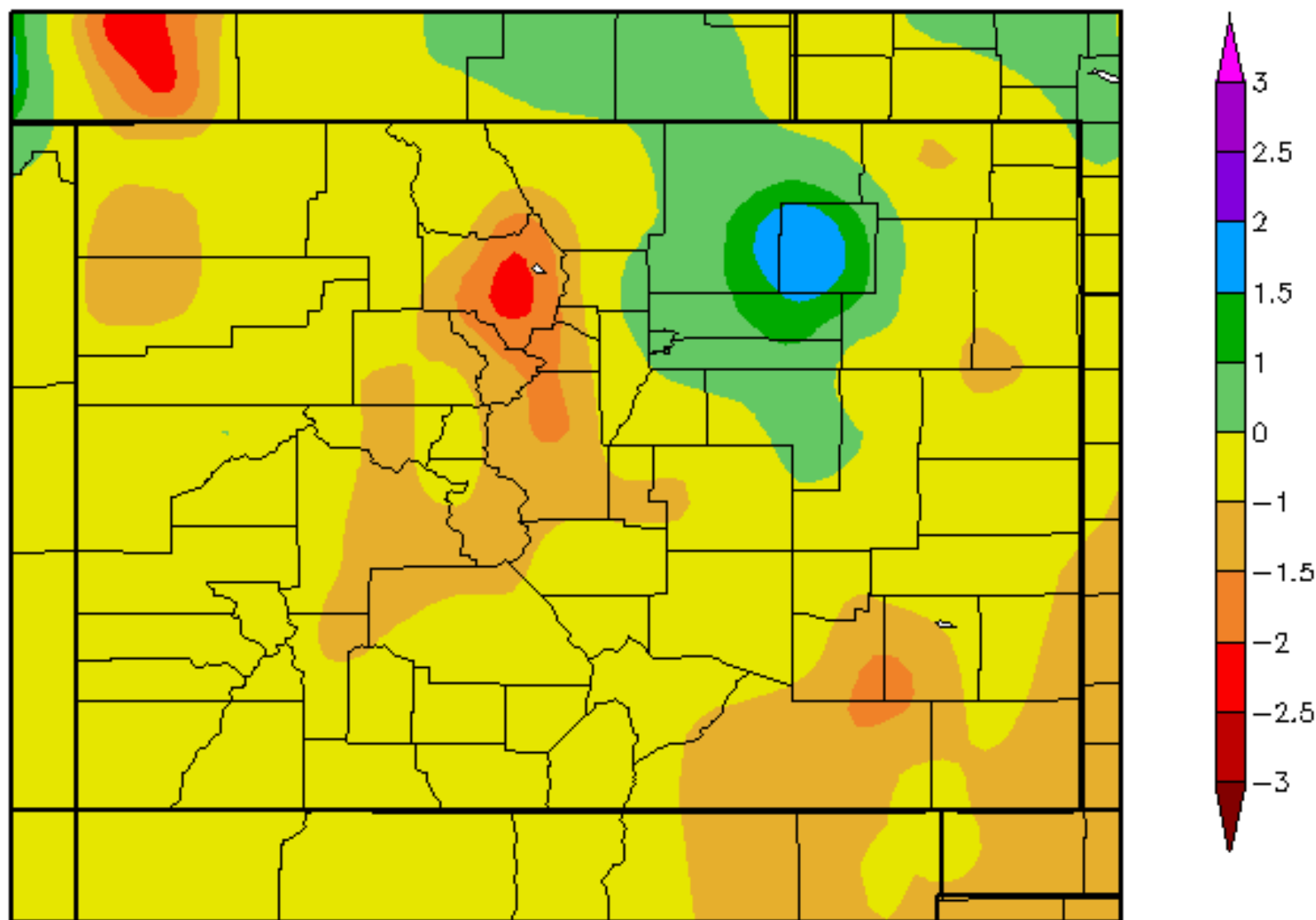


Released Thursday, November 15, 2012

Author: David Miskus, NOAA/NWS/NCEP/CPC

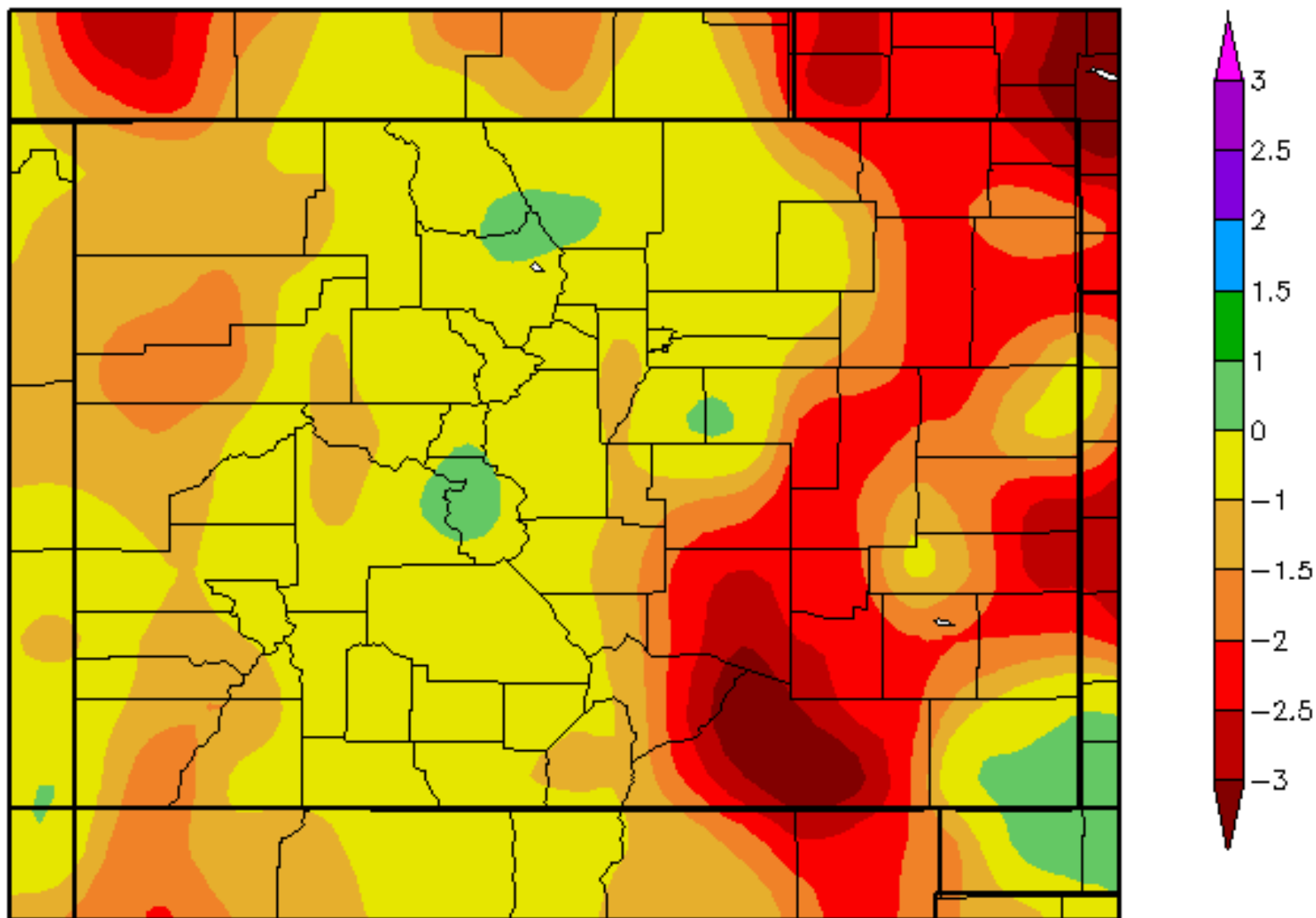
30 Day SPI

10/20/2012 - 11/18/2012



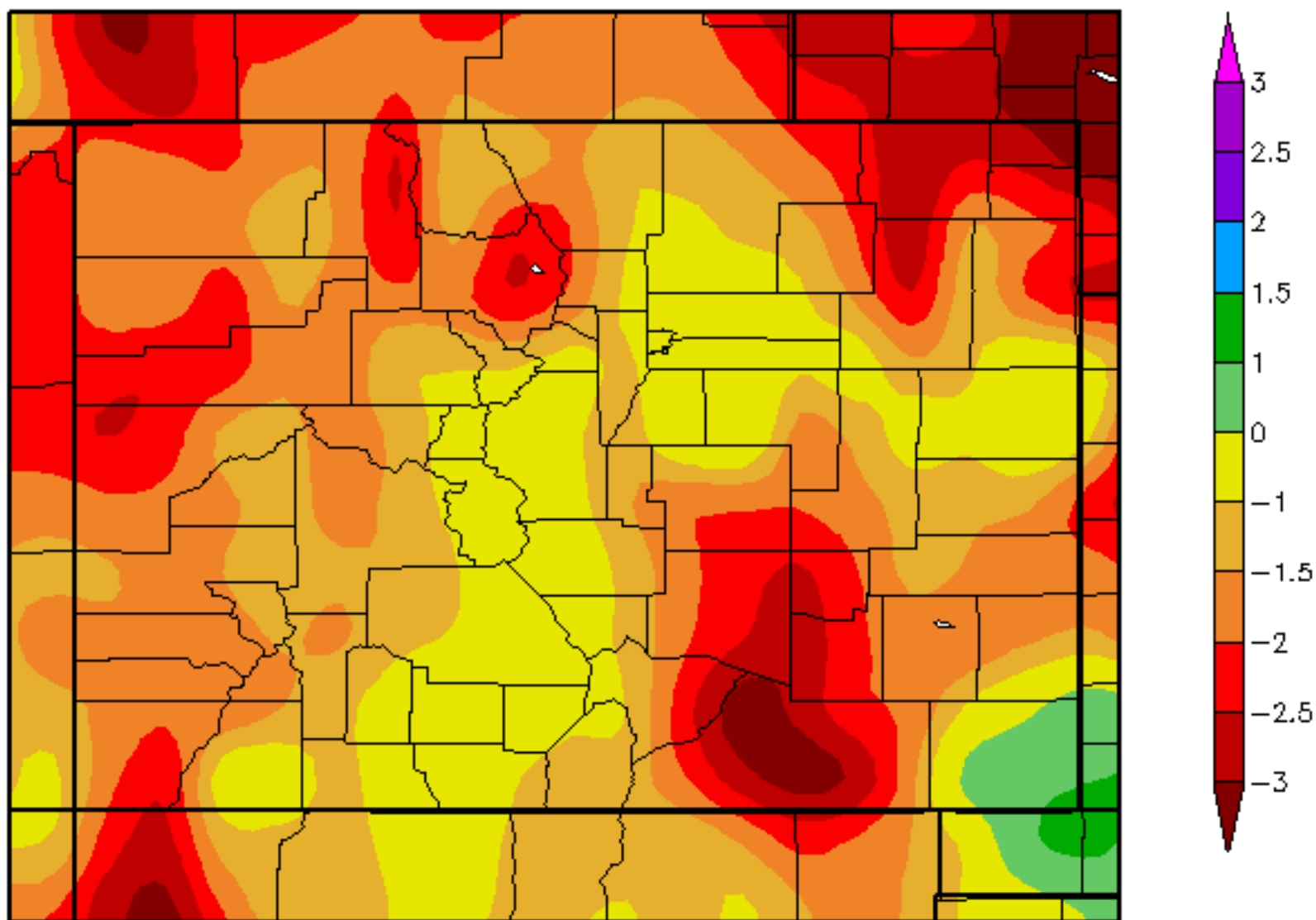
6 Month SPI

5/19/2012 - 11/18/2012

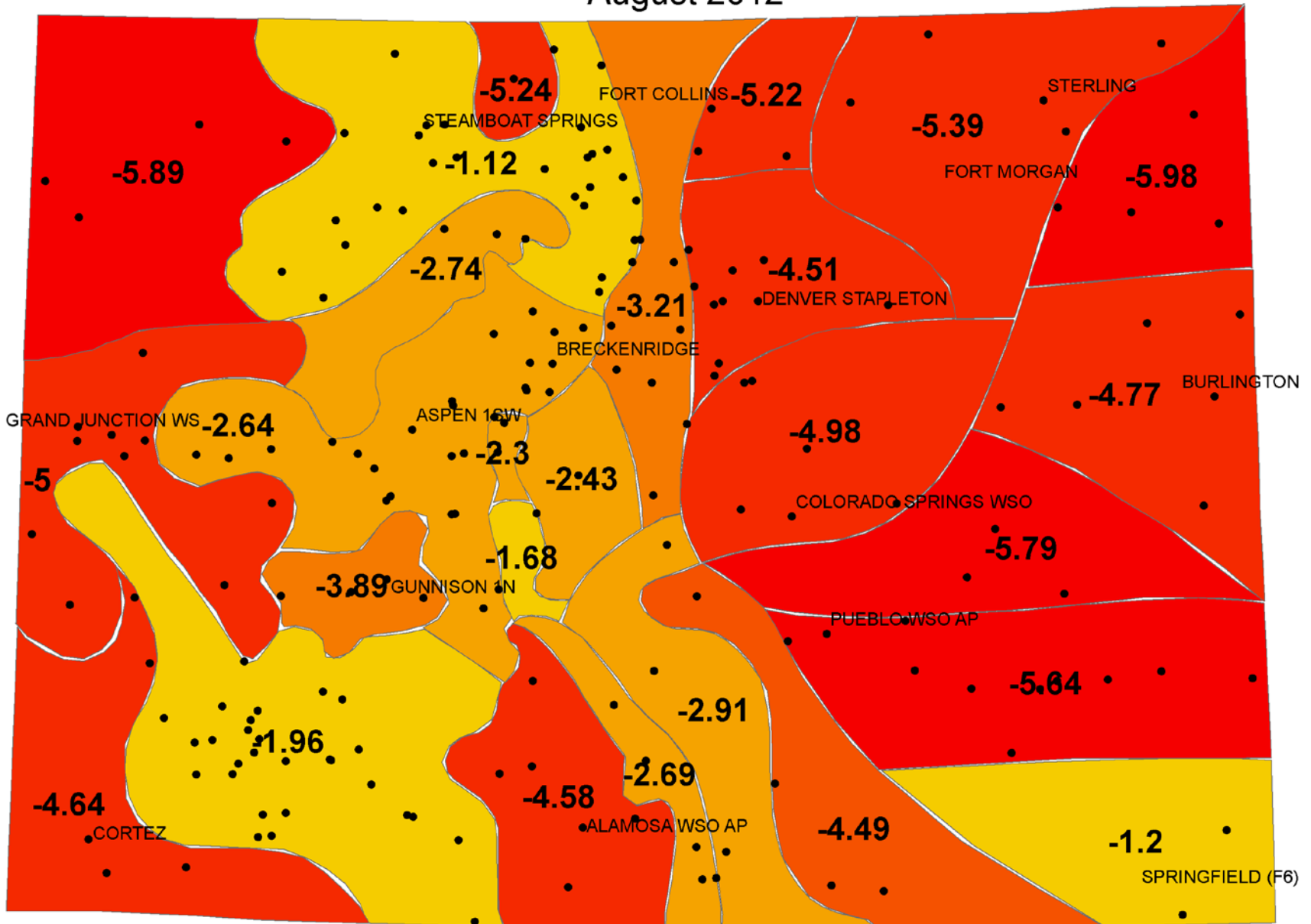


12 Month SPI

11/19/2011 - 11/18/2012



Modified Palmer Drought Severity Index for Colorado August 2012



Colorado Climate Center

Data and Power Point Presentations available for downloading

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



COLORADO
CLIMATE
CENTER

**Colorado
State
University**
Knowledge to Go Places