



Climate Update

Wendy Ryan
Colorado Climate Center

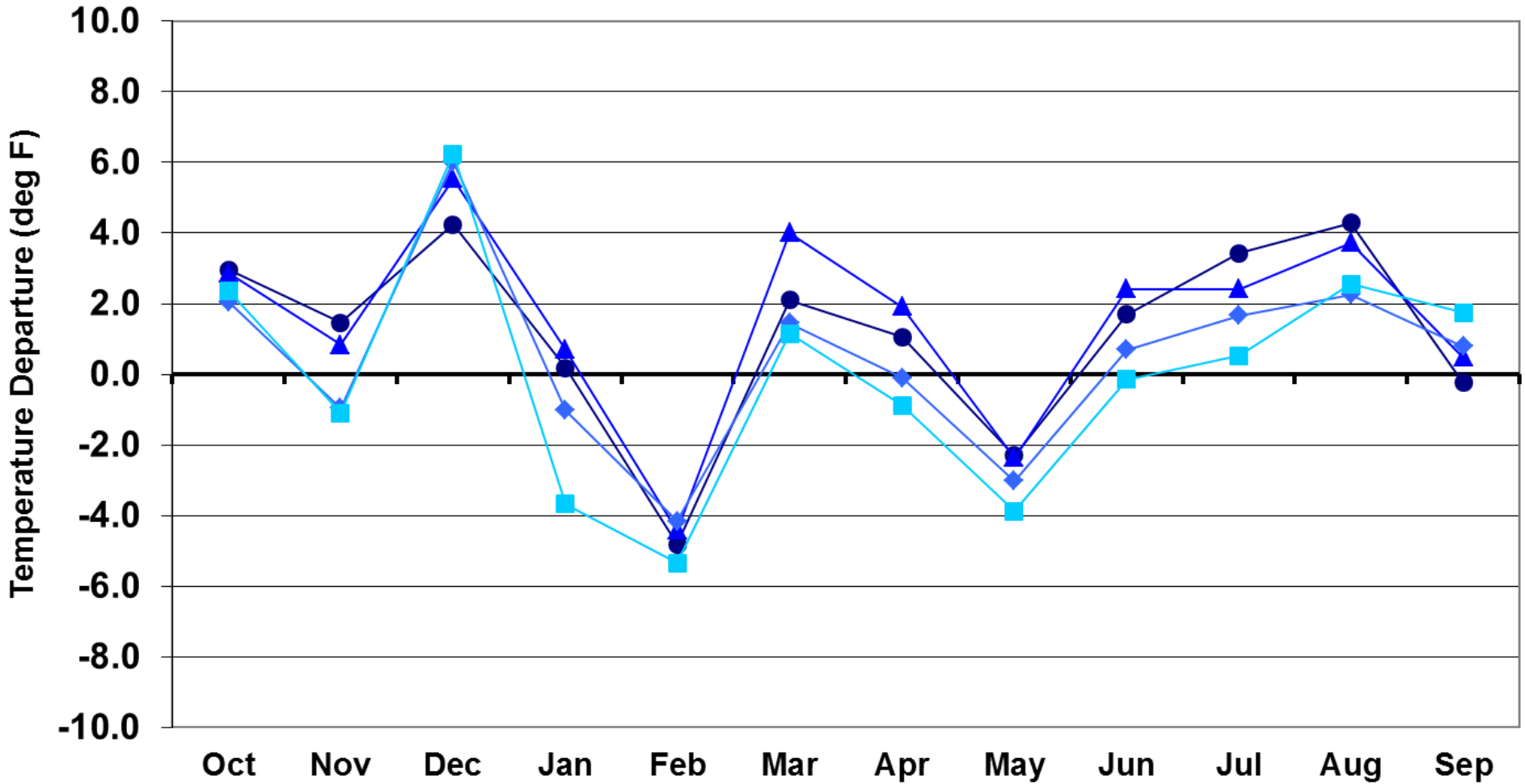
Atmospheric Science Department
Colorado State University

Presented to
Water Availability Task Force
November 21, 2011
Denver, CO

Prepared by Wendy Ryan

Water Year 2011 Temperature Departures

Water Year 2011



● Eastern Plains

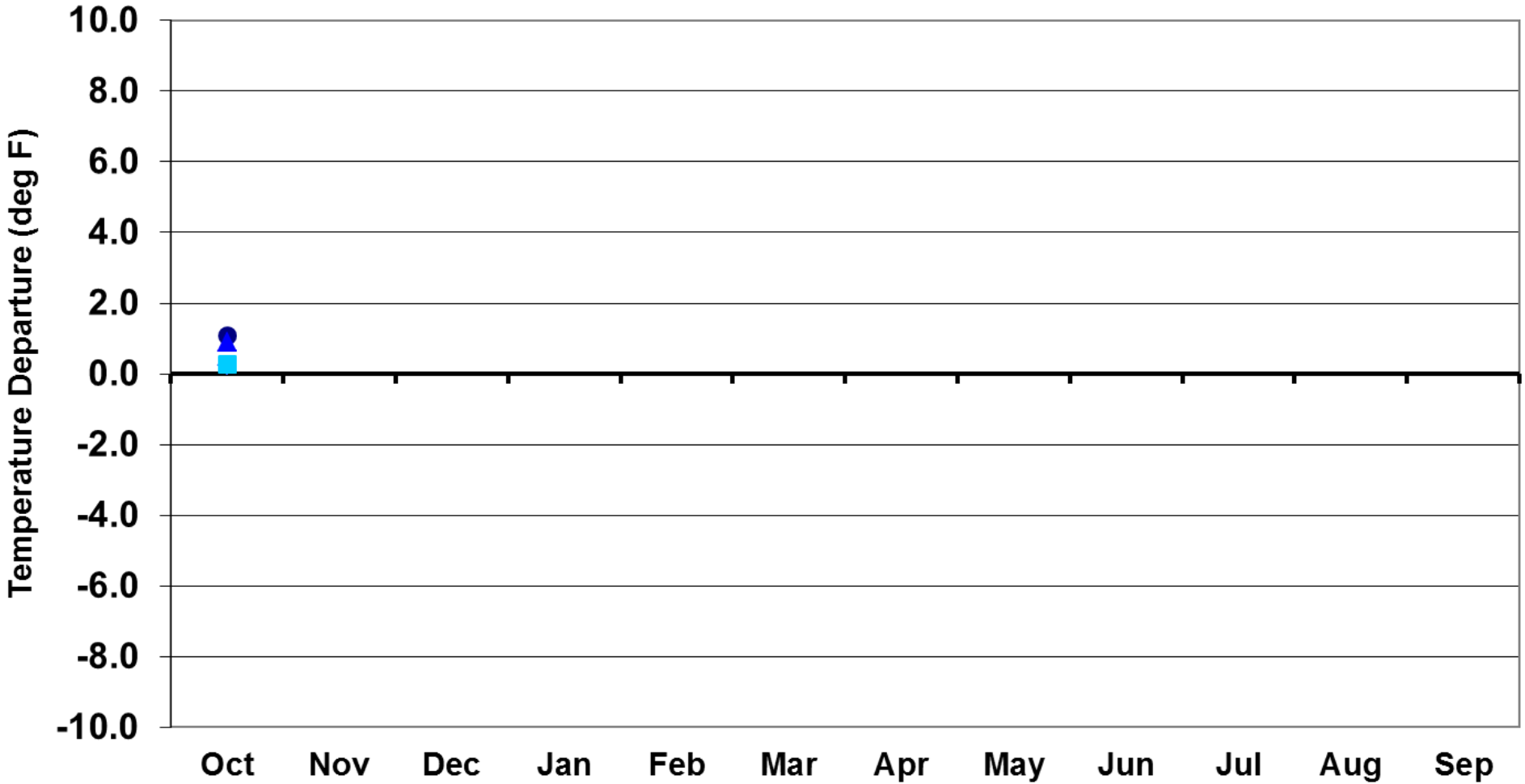
▲ Foothills

◆ Mountains

■ Western Valleys

Water Year 2012 Temperature Departures

Water Year 2012



● Eastern Plains

▲ Foothills

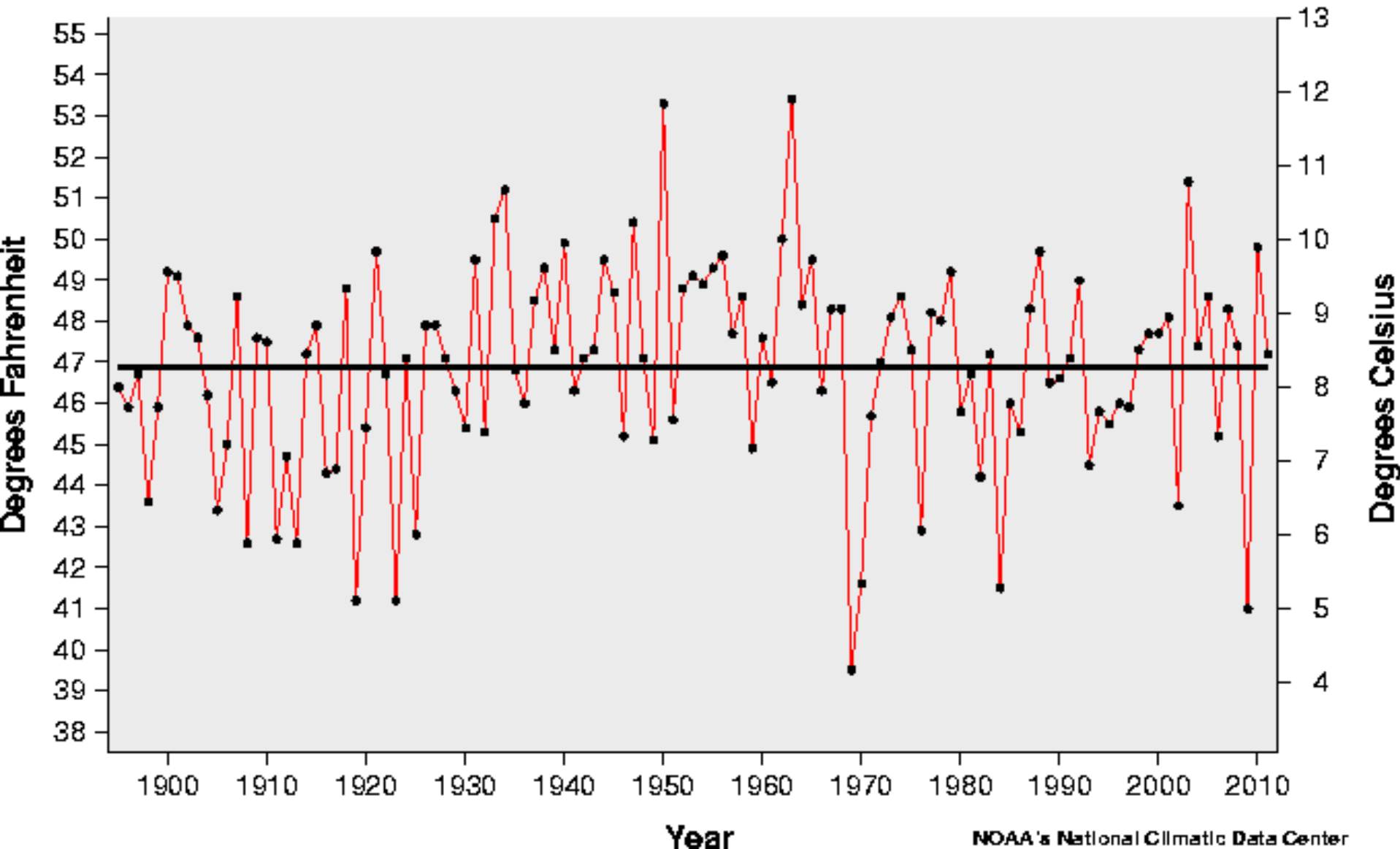
◆ Mountains

■ Western Valleys

October Average Temperature History for Colorado (NCDC)

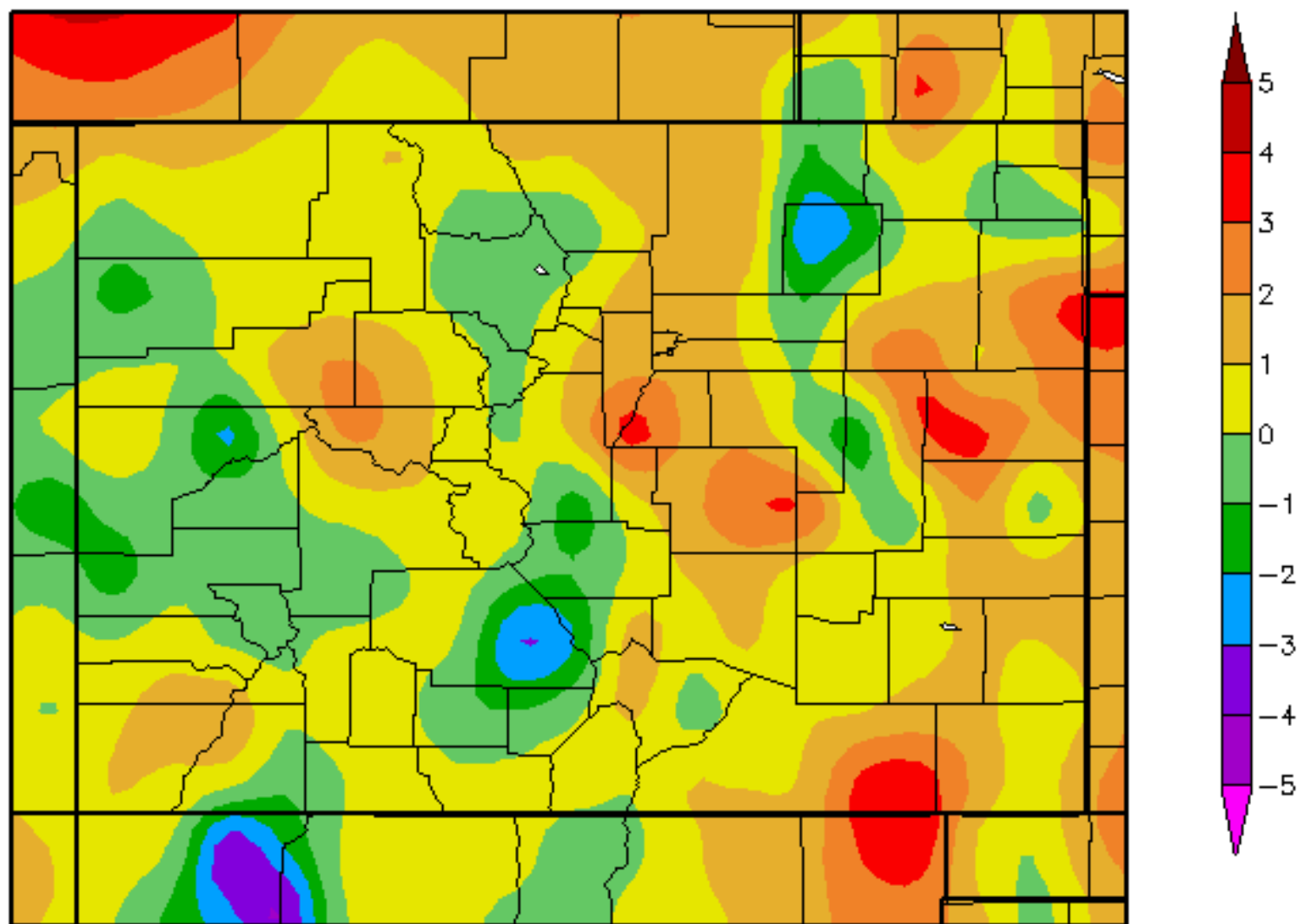
— Actual Temperature
— Average Temperature

47.2 Ranks as the 58th coldest
on record 1895-2011



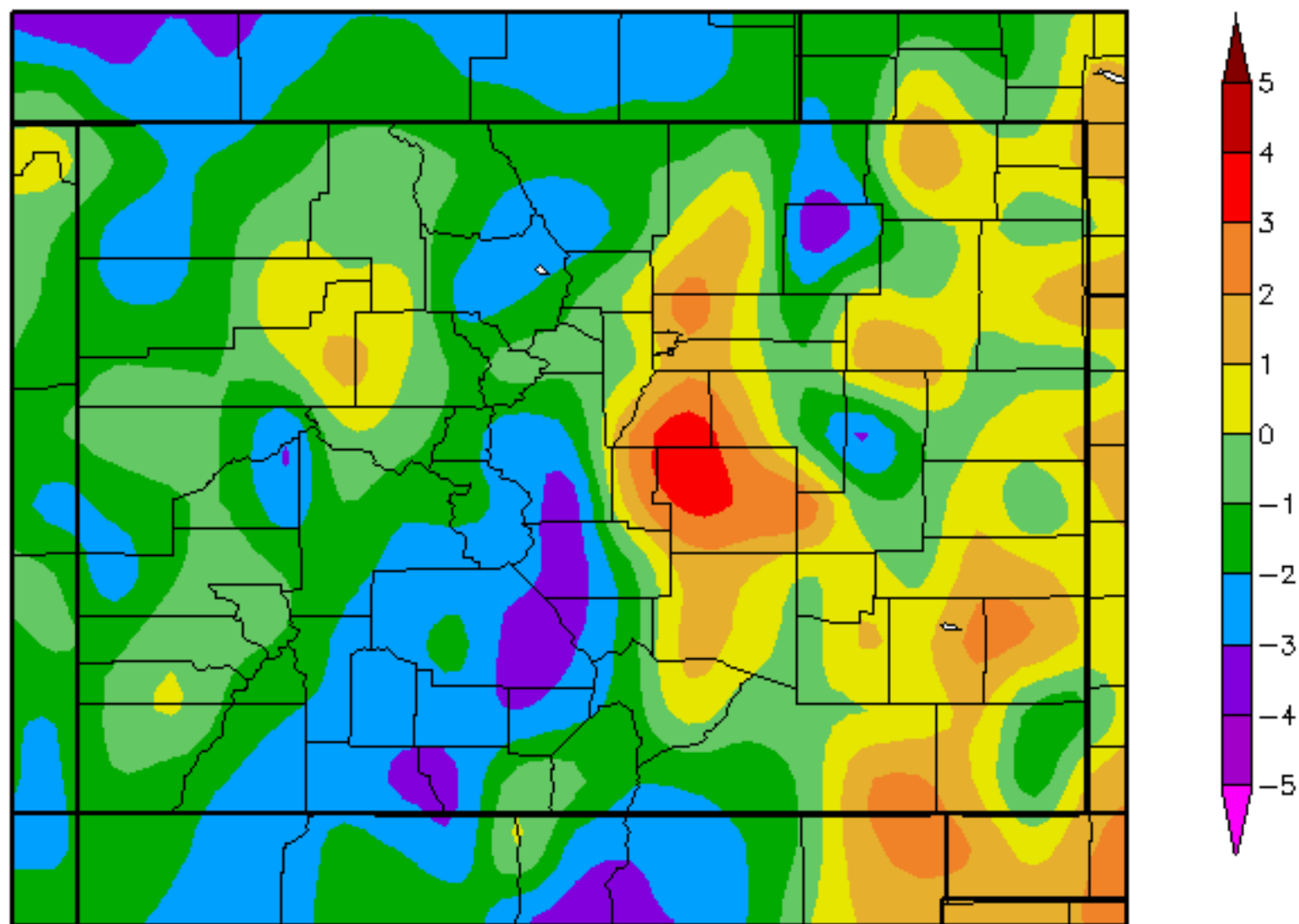
Departure from Normal Temperature (F)

10/1/2011 - 10/31/2011

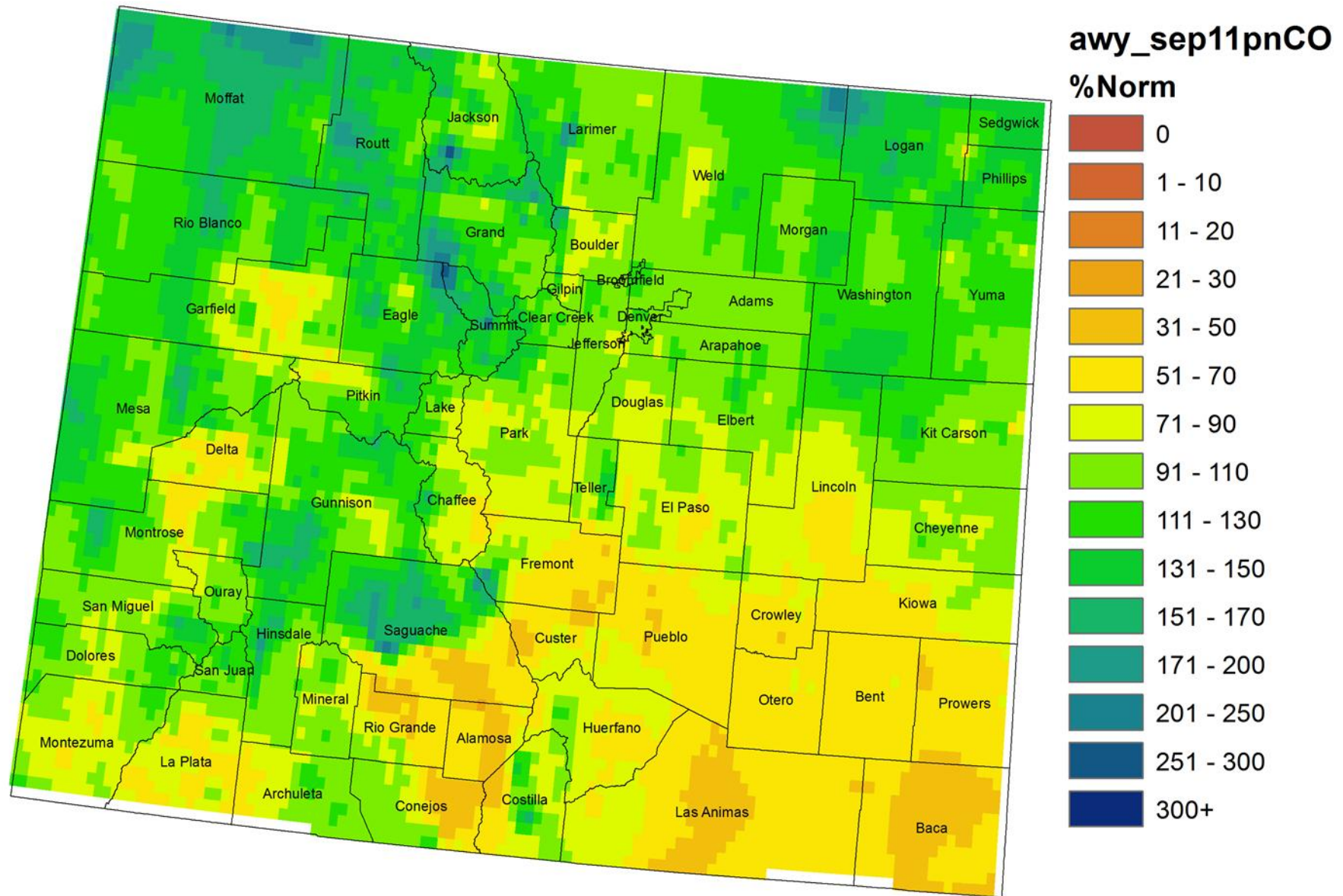


Departure from Normal Temperature (F)

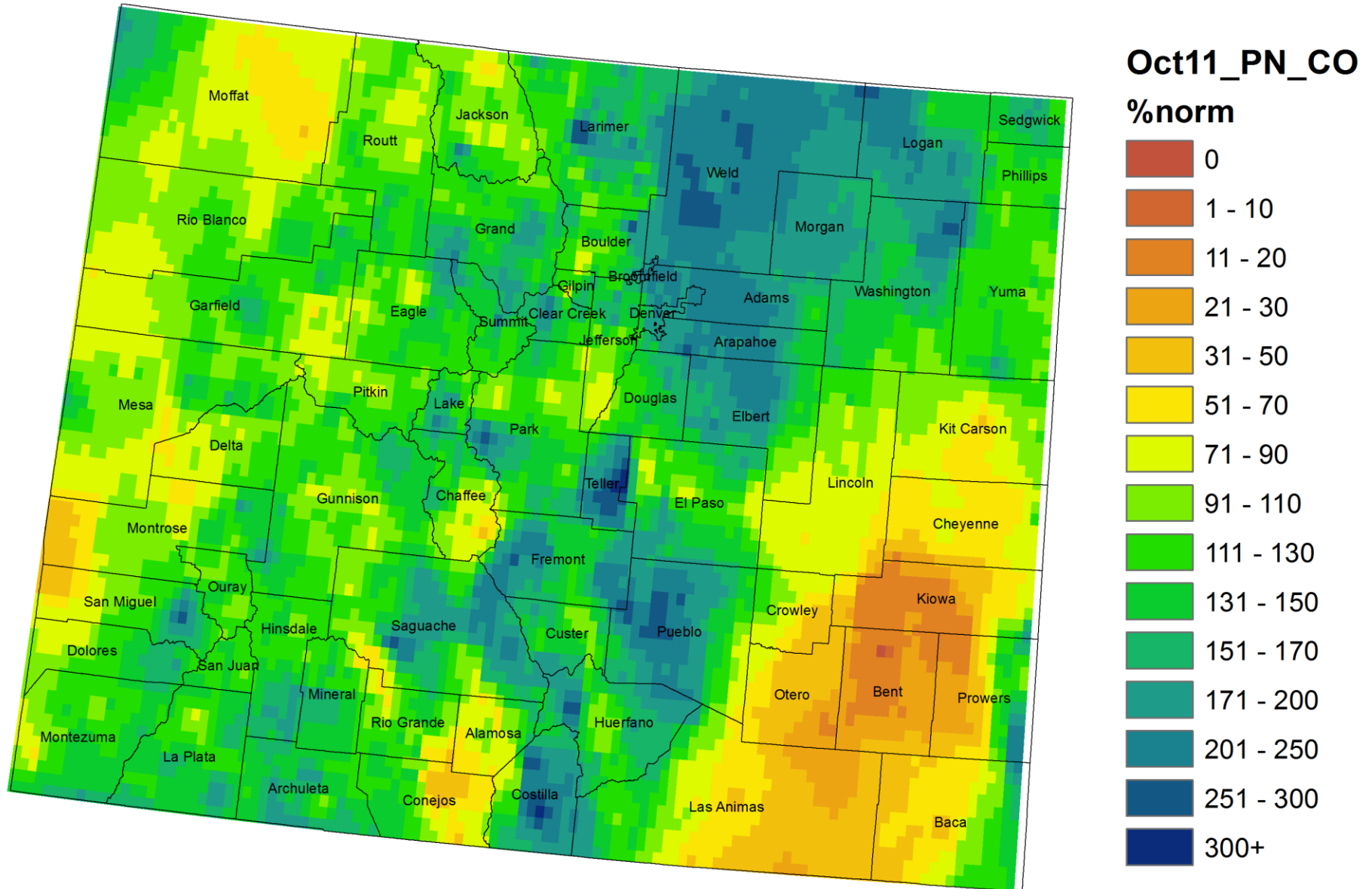
11/1/2011 – 11/20/2011



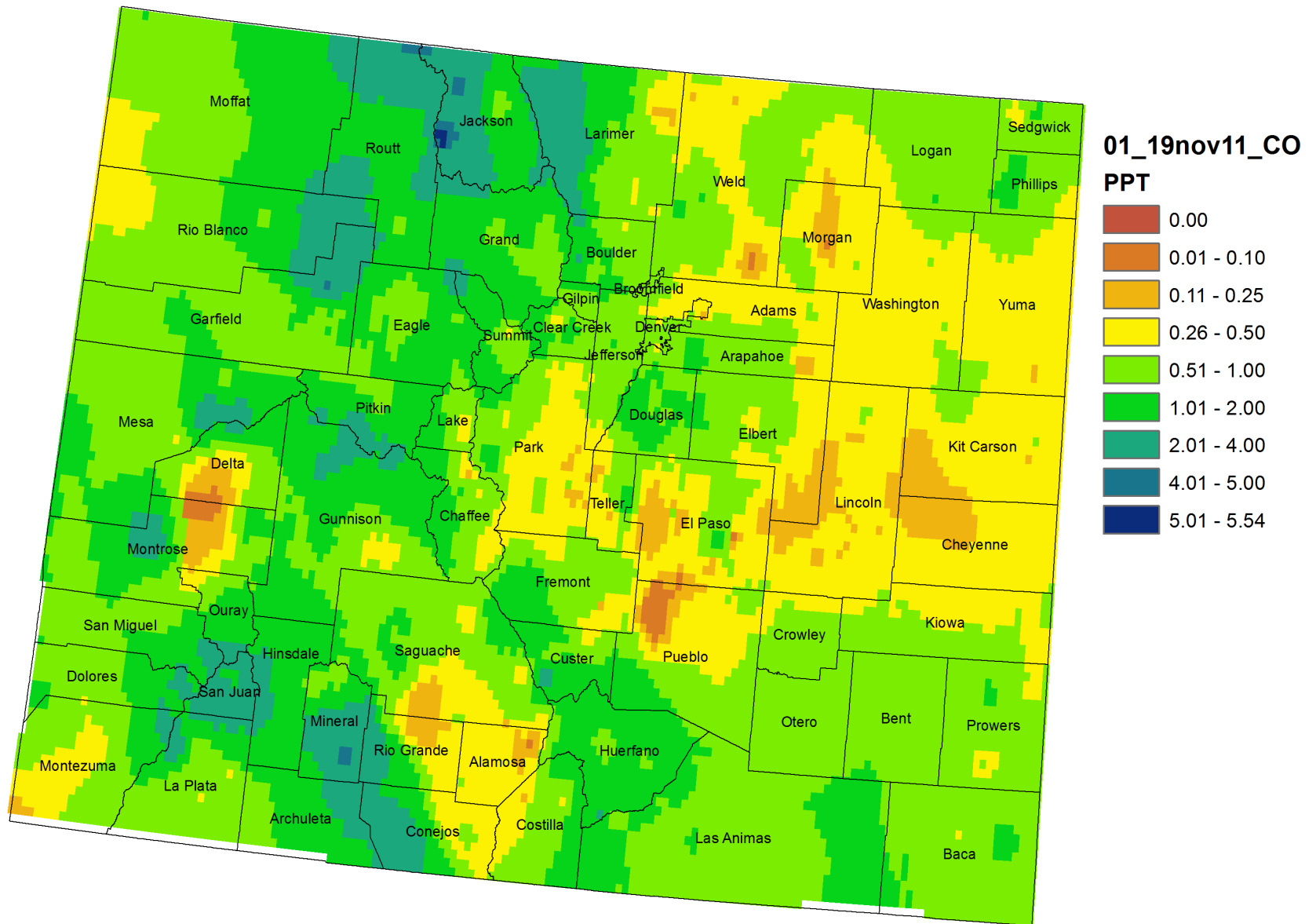
Colorado Water Year 2011 Precipitation as Percentage of Normal (Oct 10 - Sept 11)



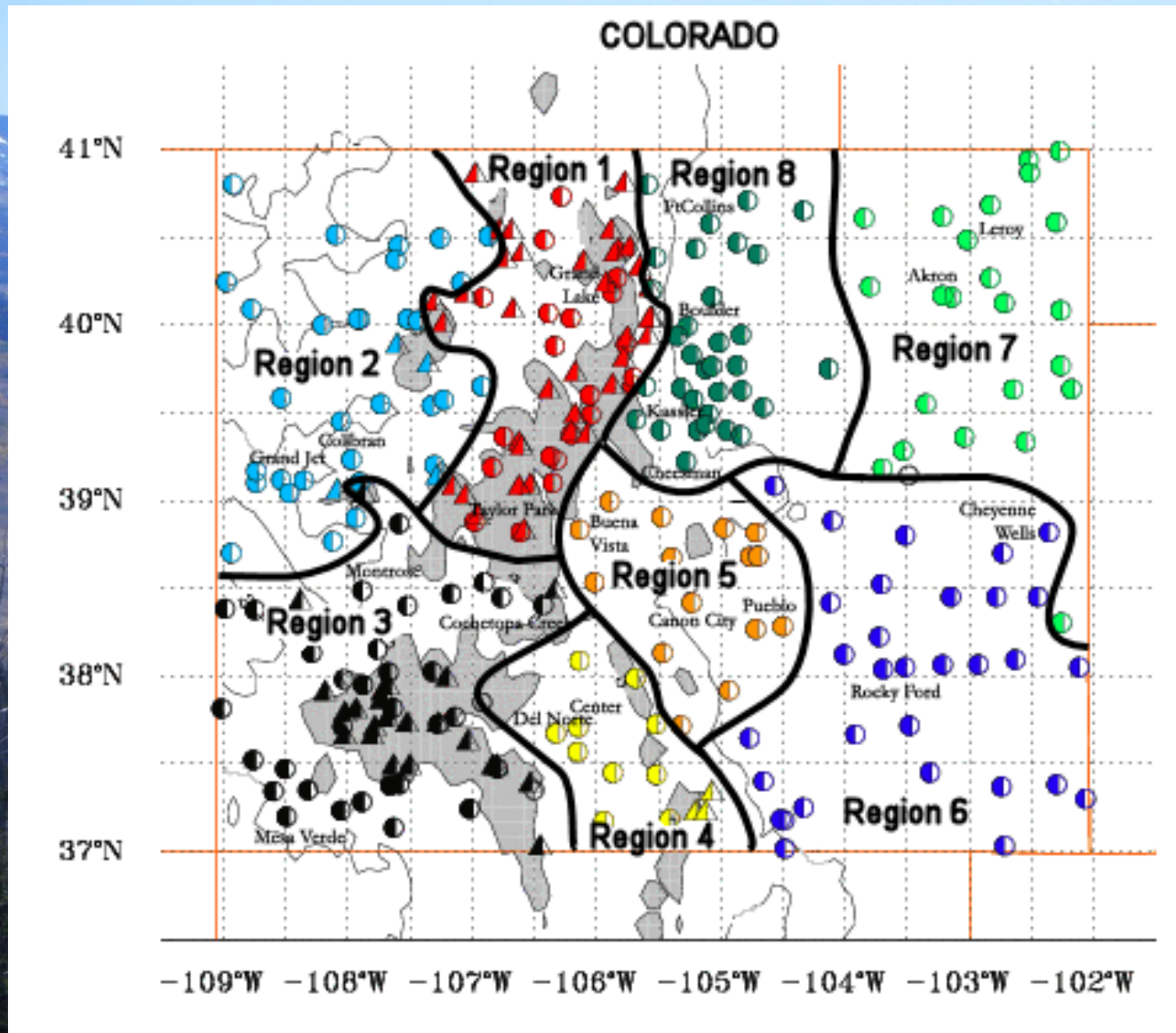
Colorado October 2011 Precipitation as Percentage of Normal



Colorado Precipitation (in) 1 - 19 November 2011

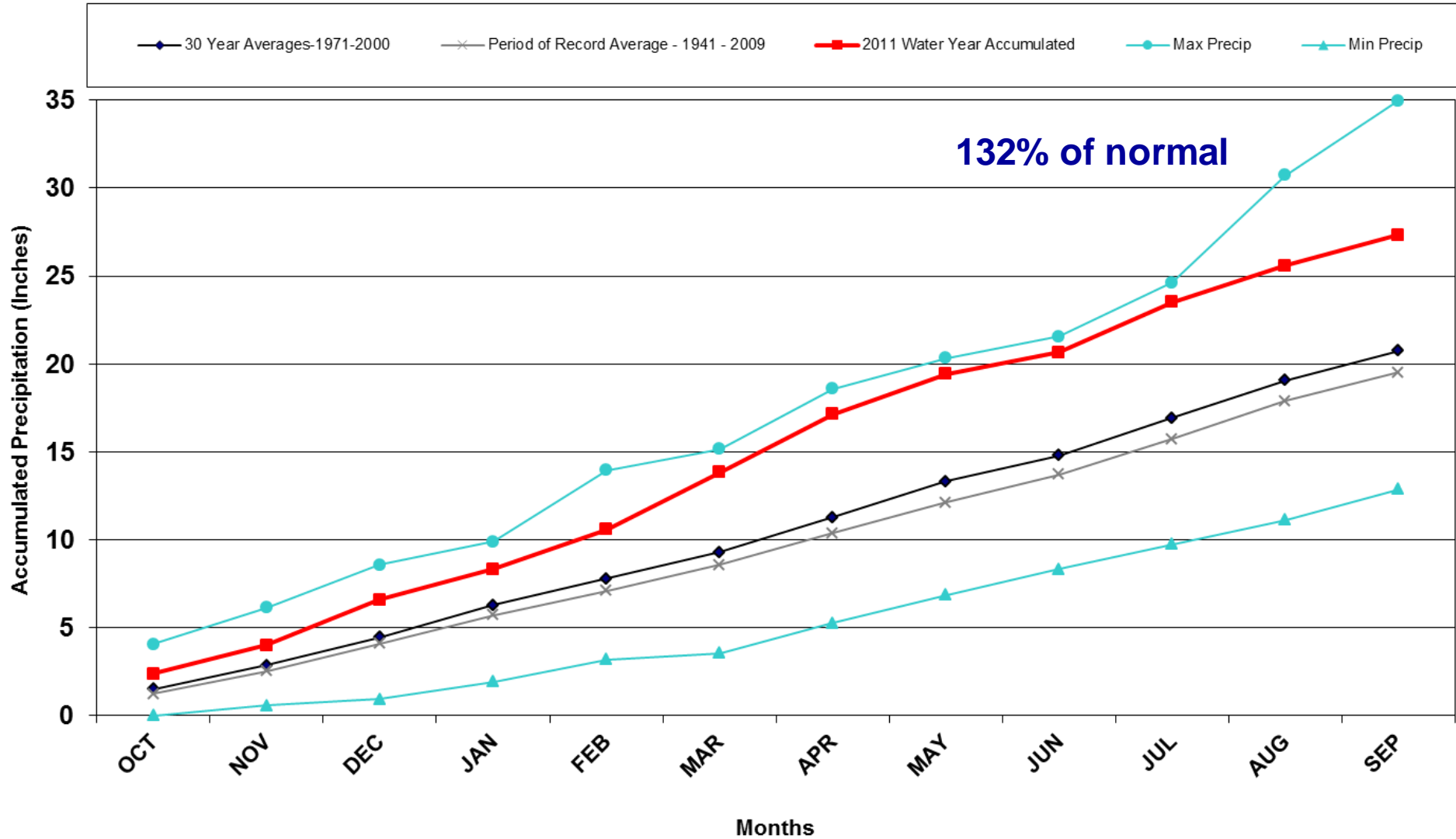


Climate divisions defined by Dr. Klaus Wolter of NOAA's Climate Diagnostic Center in Boulder, CO



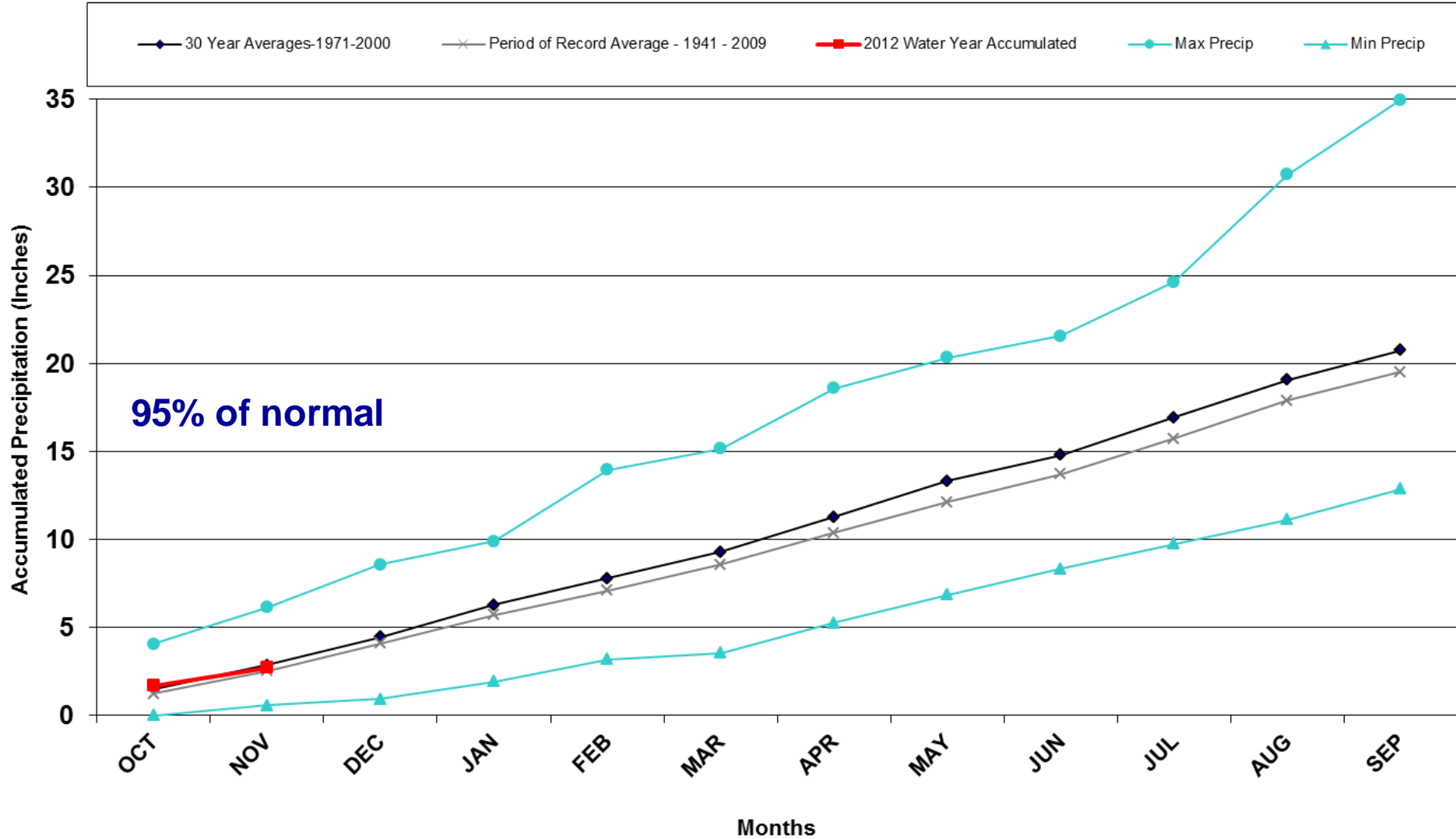
Division 1 – Grand Lake 1NW

Grand Lake 1 NW 2011 Water Year



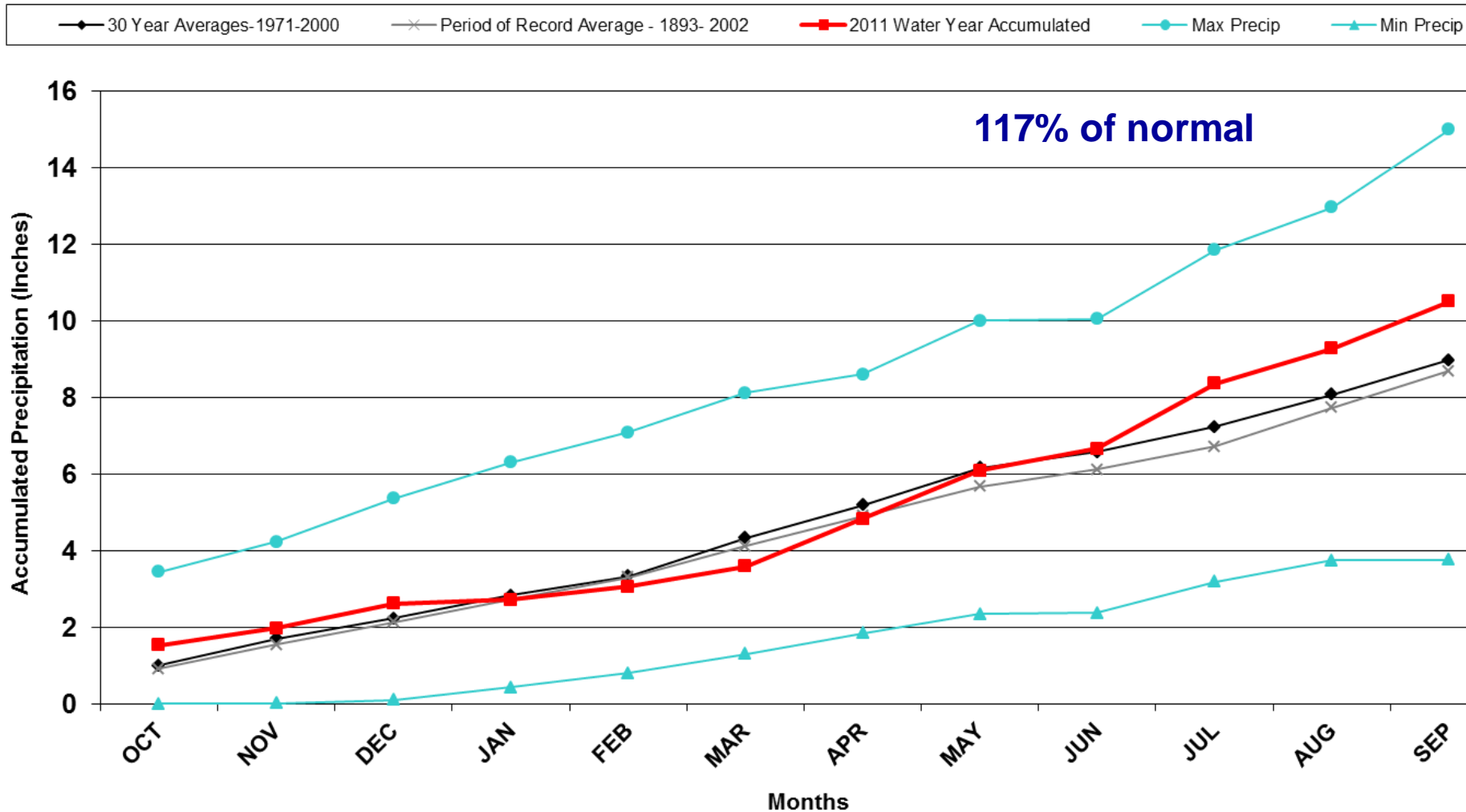
Division 1 – Grand Lake 1NW

Grand Lake 1 NW 2012 Water Year



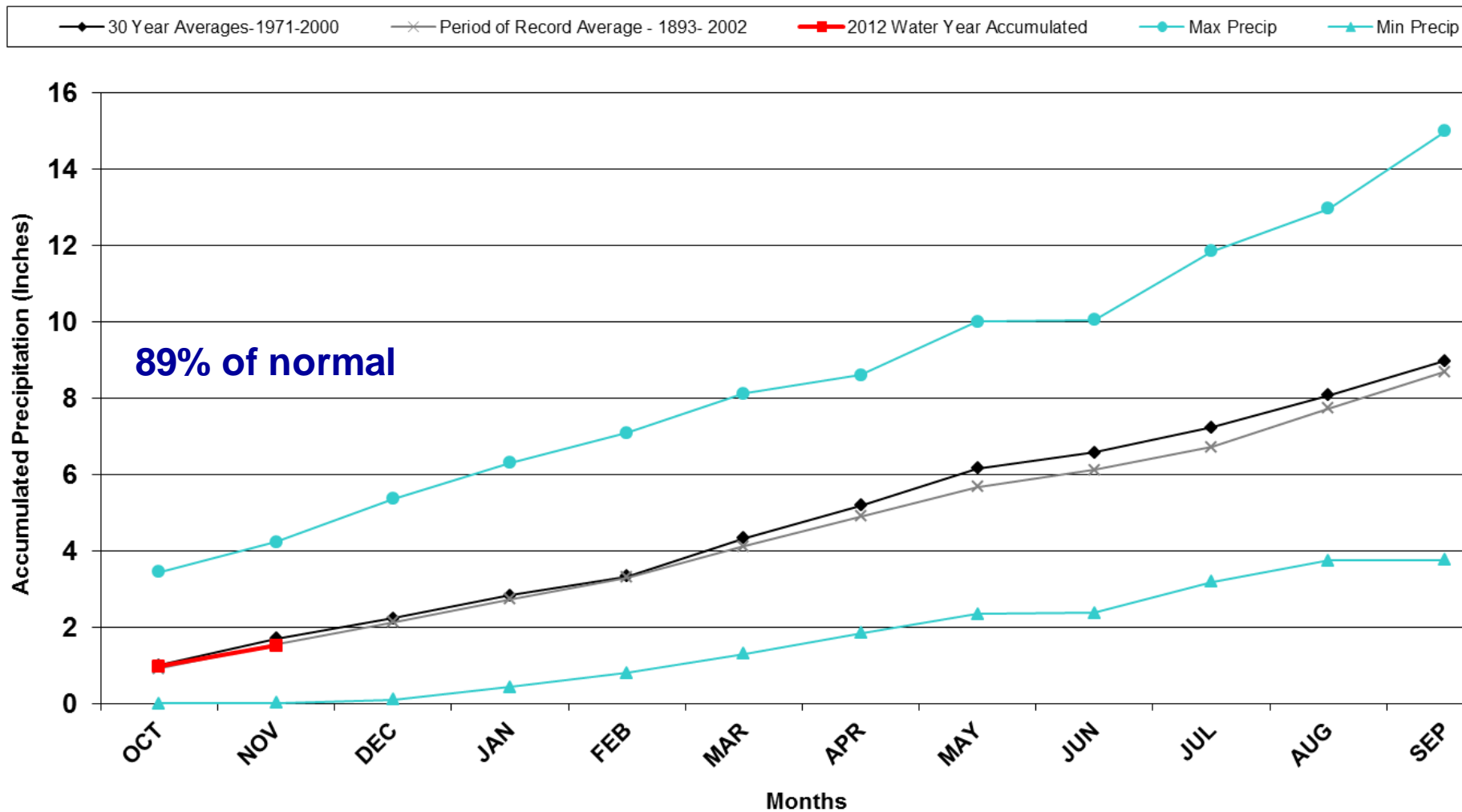
Division 2 – Grand Junction

Grand Junction WSFO 2011 Water Year



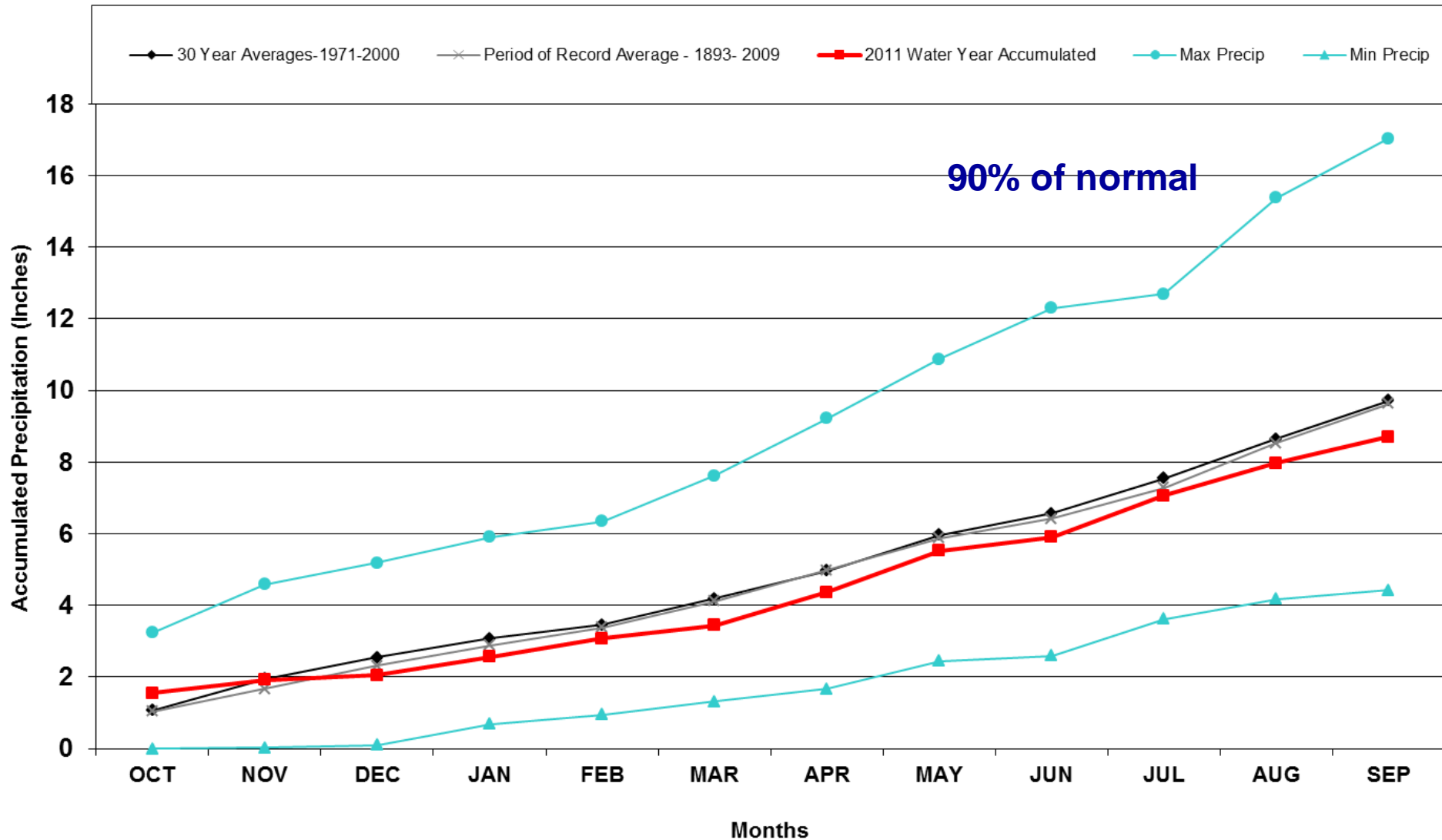
Division 2 – Grand Junction

Grand Junction WSFO 2012 Water Year



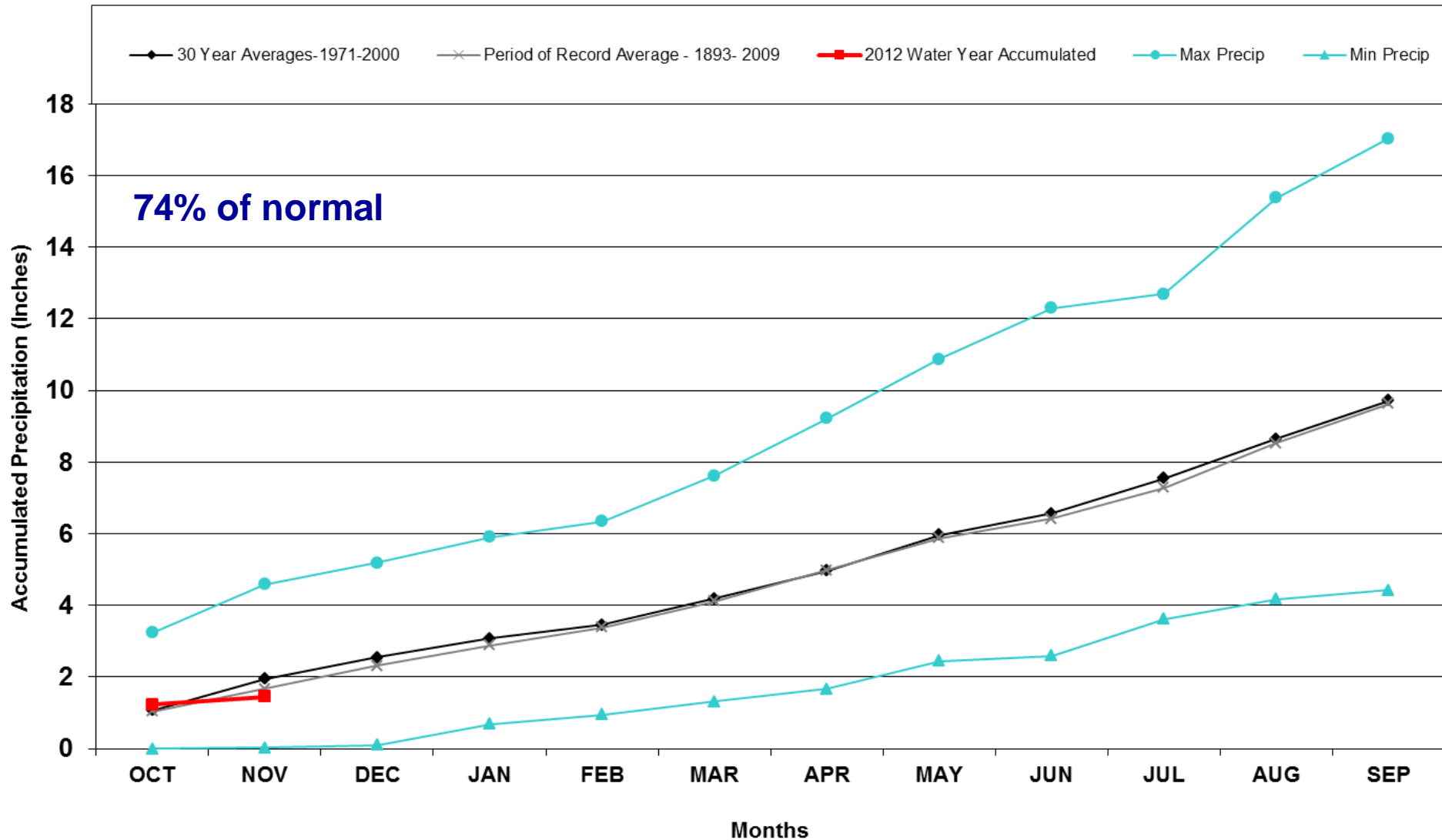
Division 3 – Montrose

Montrose #2 2011 Water Year



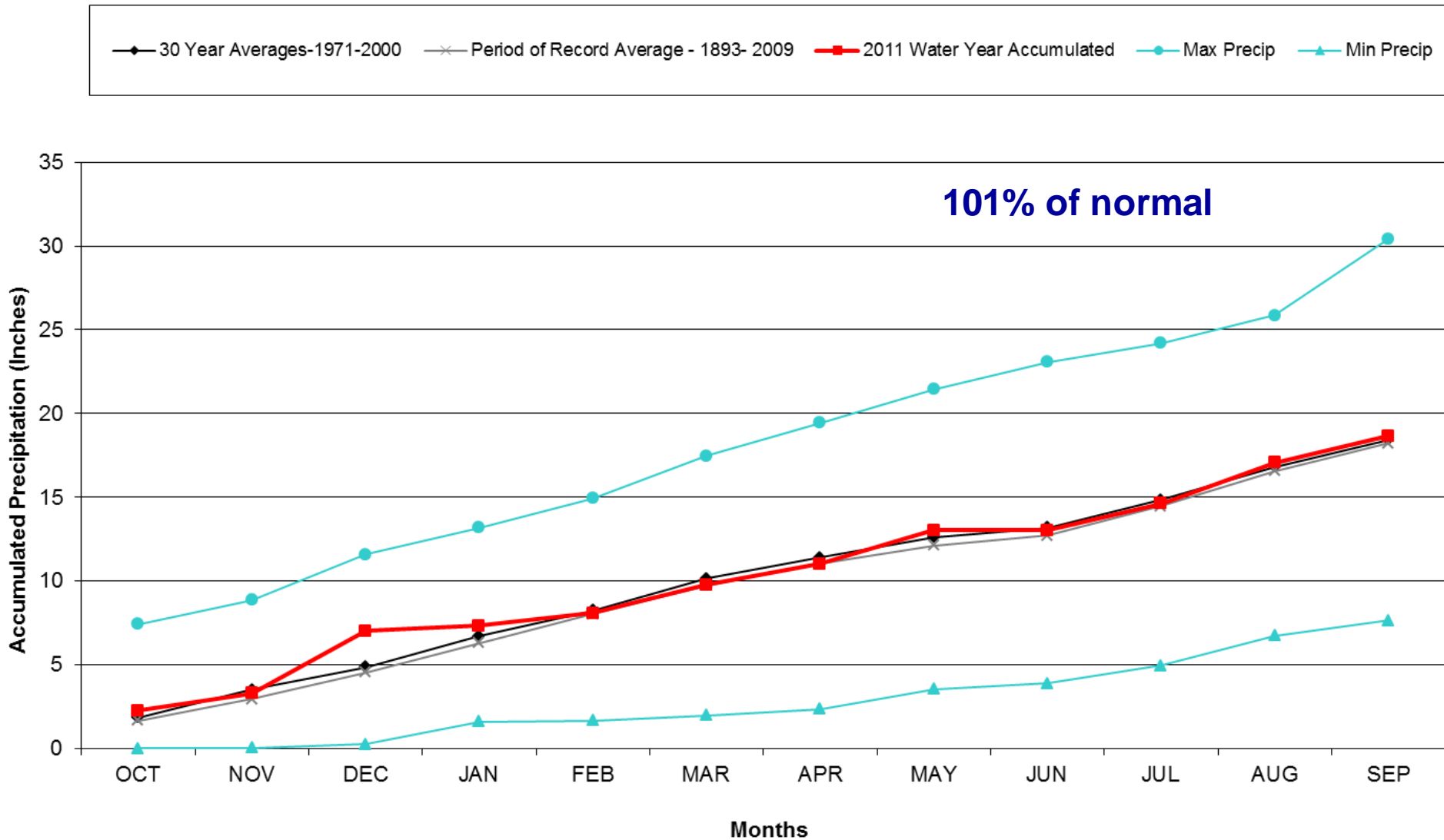
Division 3 – Montrose

Montrose #2 2012 Water Year



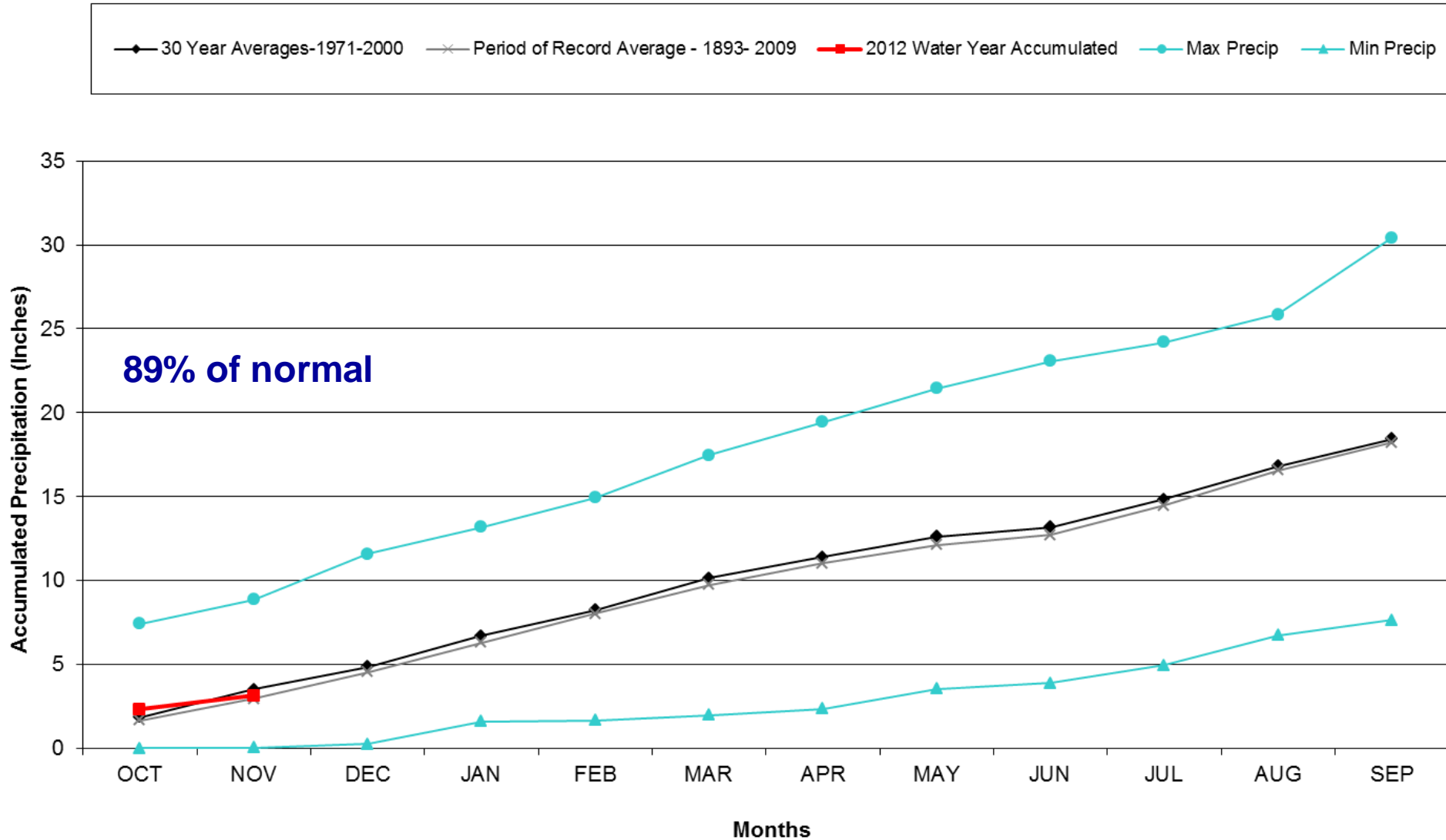
Division 3 – Mesa Verde NP

Mesa Verde NP 2011 Water Year



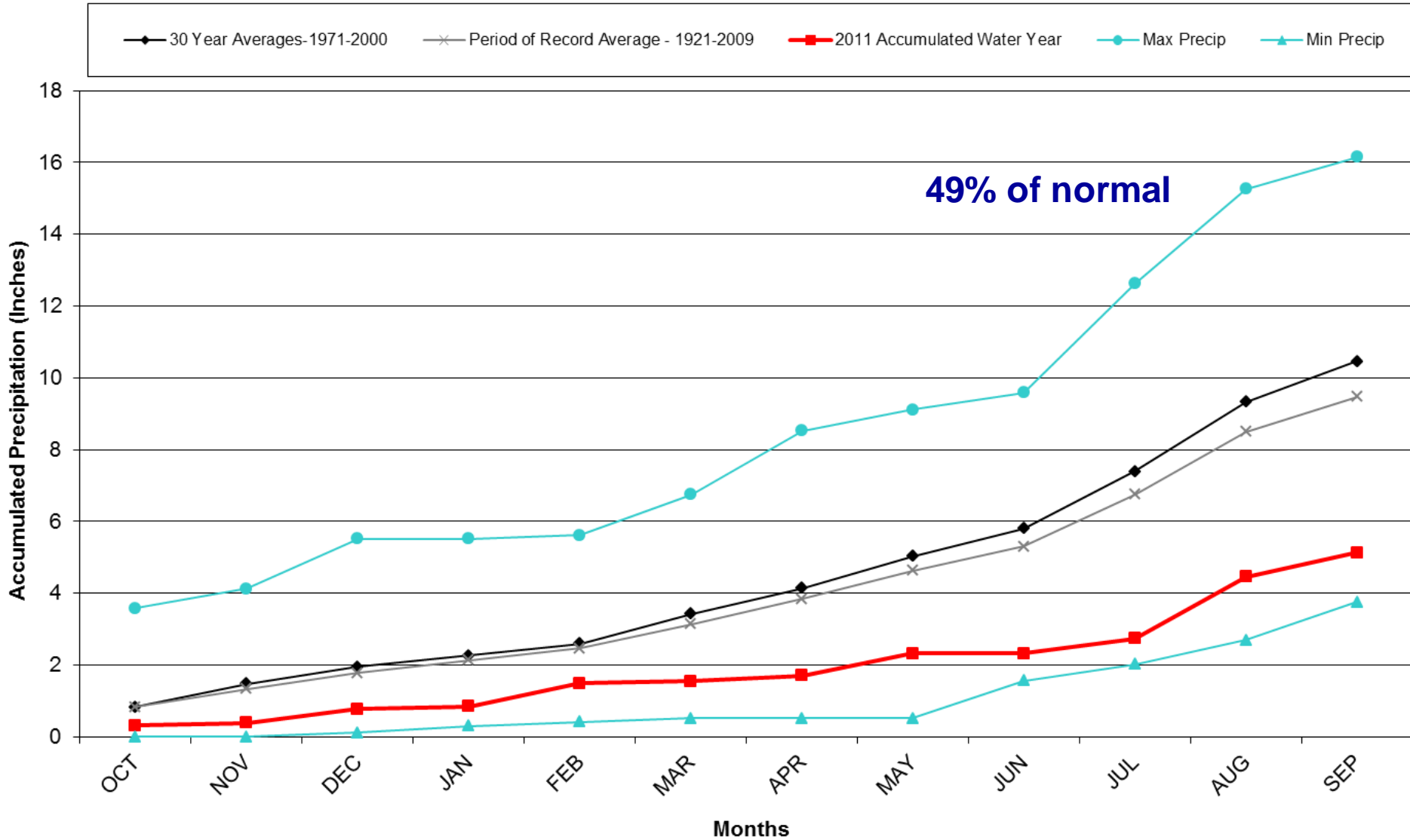
Division 3 – Mesa Verde NP

Mesa Verde NP 2012 Water Year



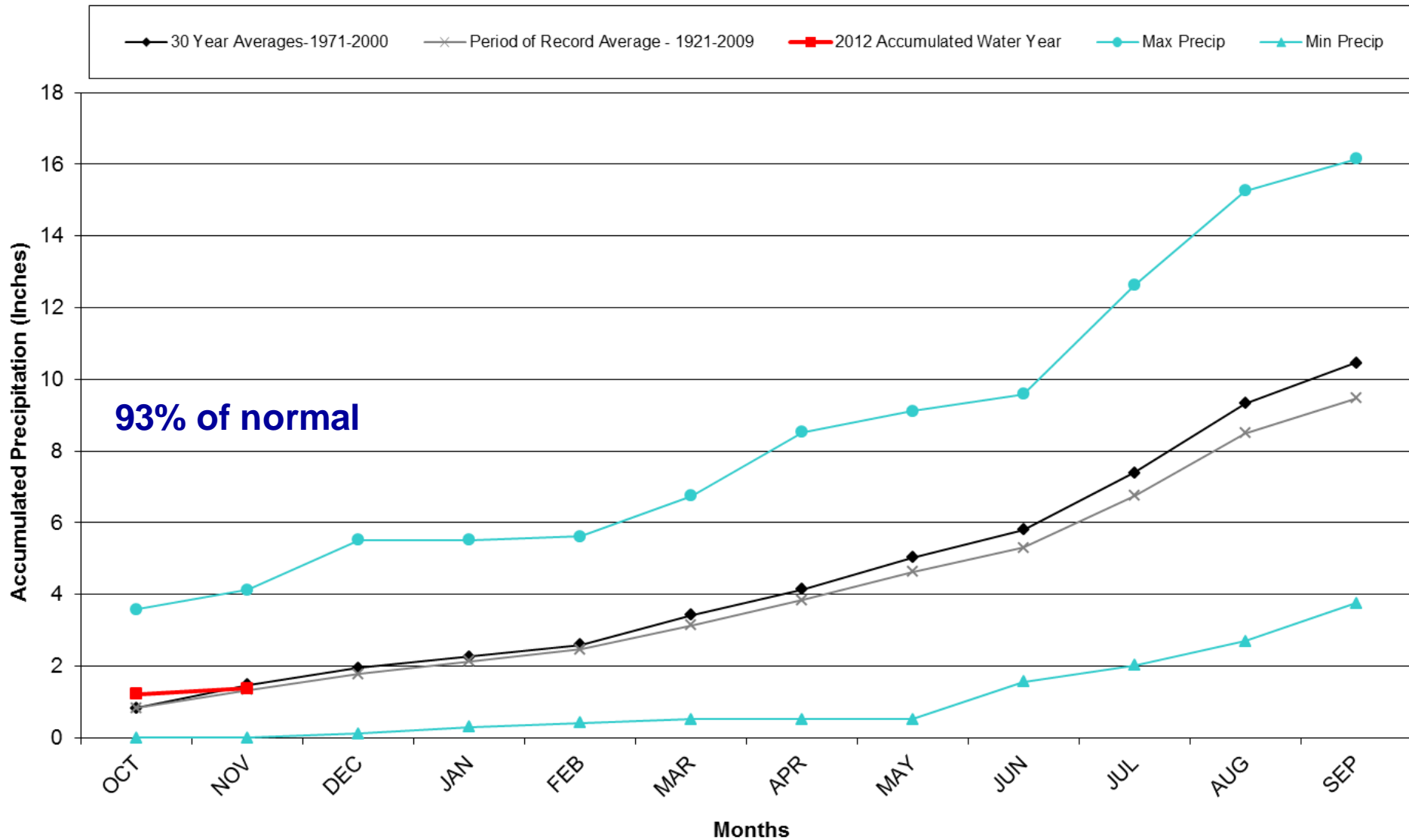
Division 4 – Del Norte

Del Norte 2011 Water Year



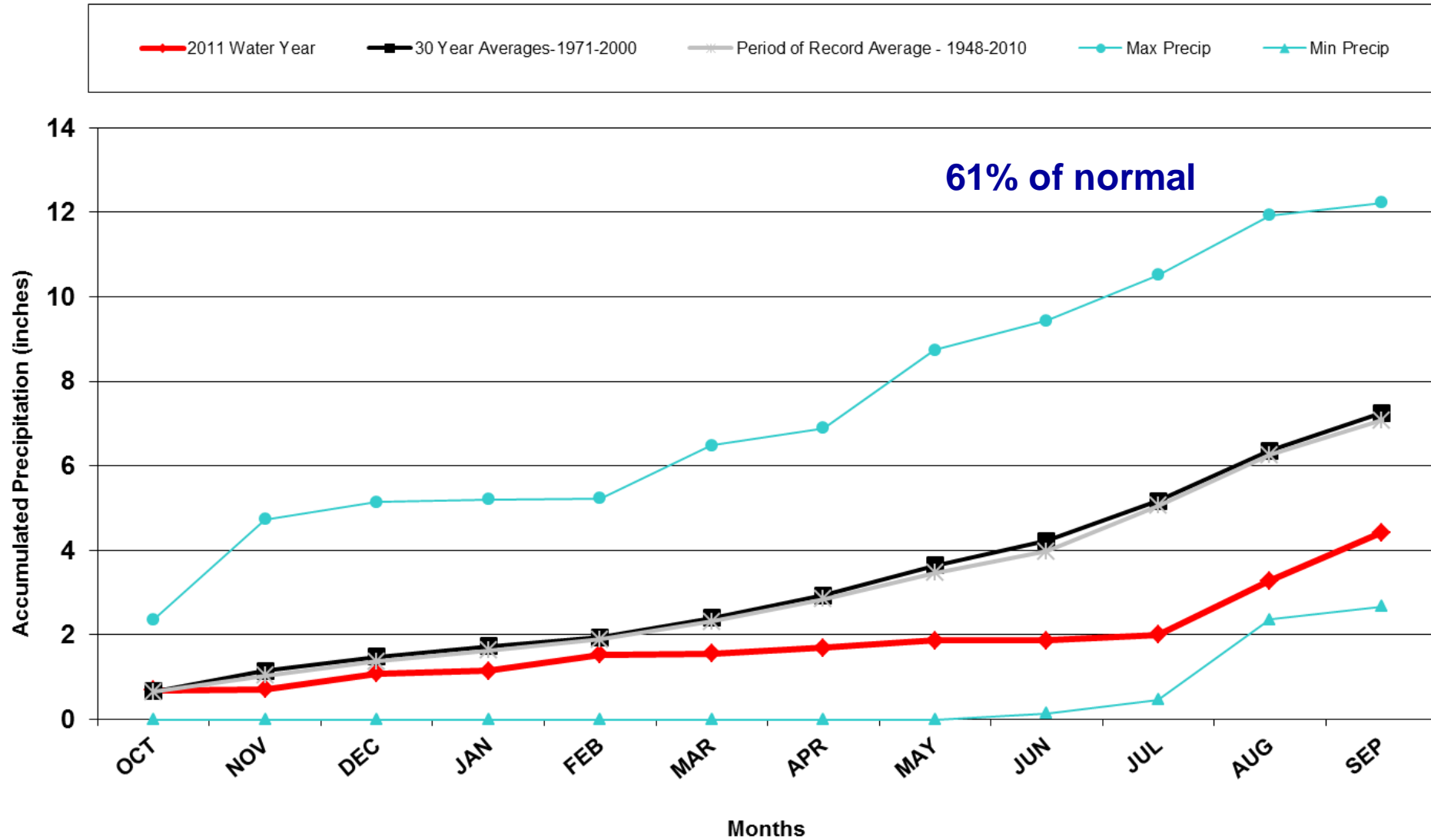
Division 4 – Del Norte

Del Norte 2012 Water Year



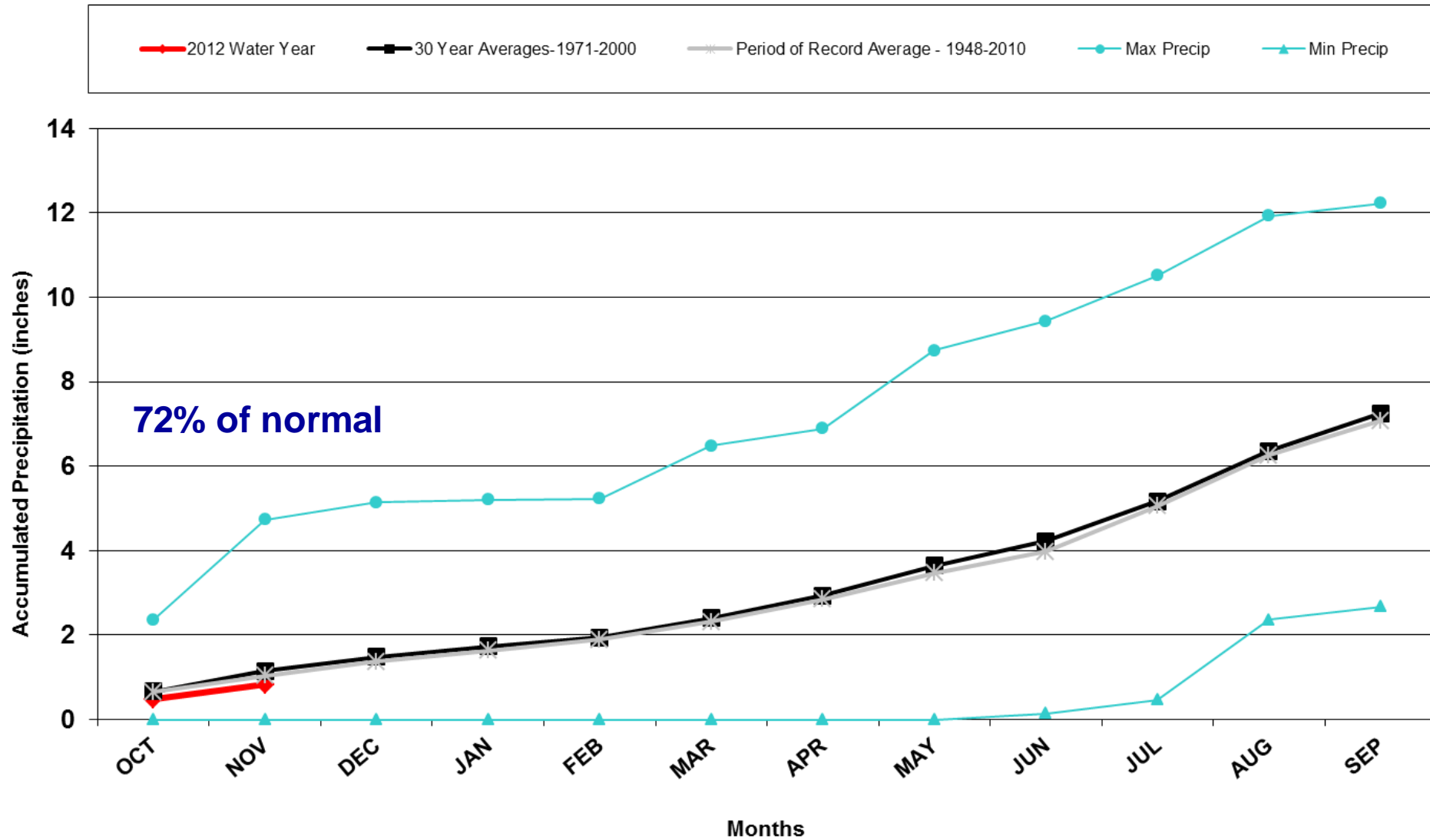
Division 4 – Alamosa

Alamosa 2011 Water Year



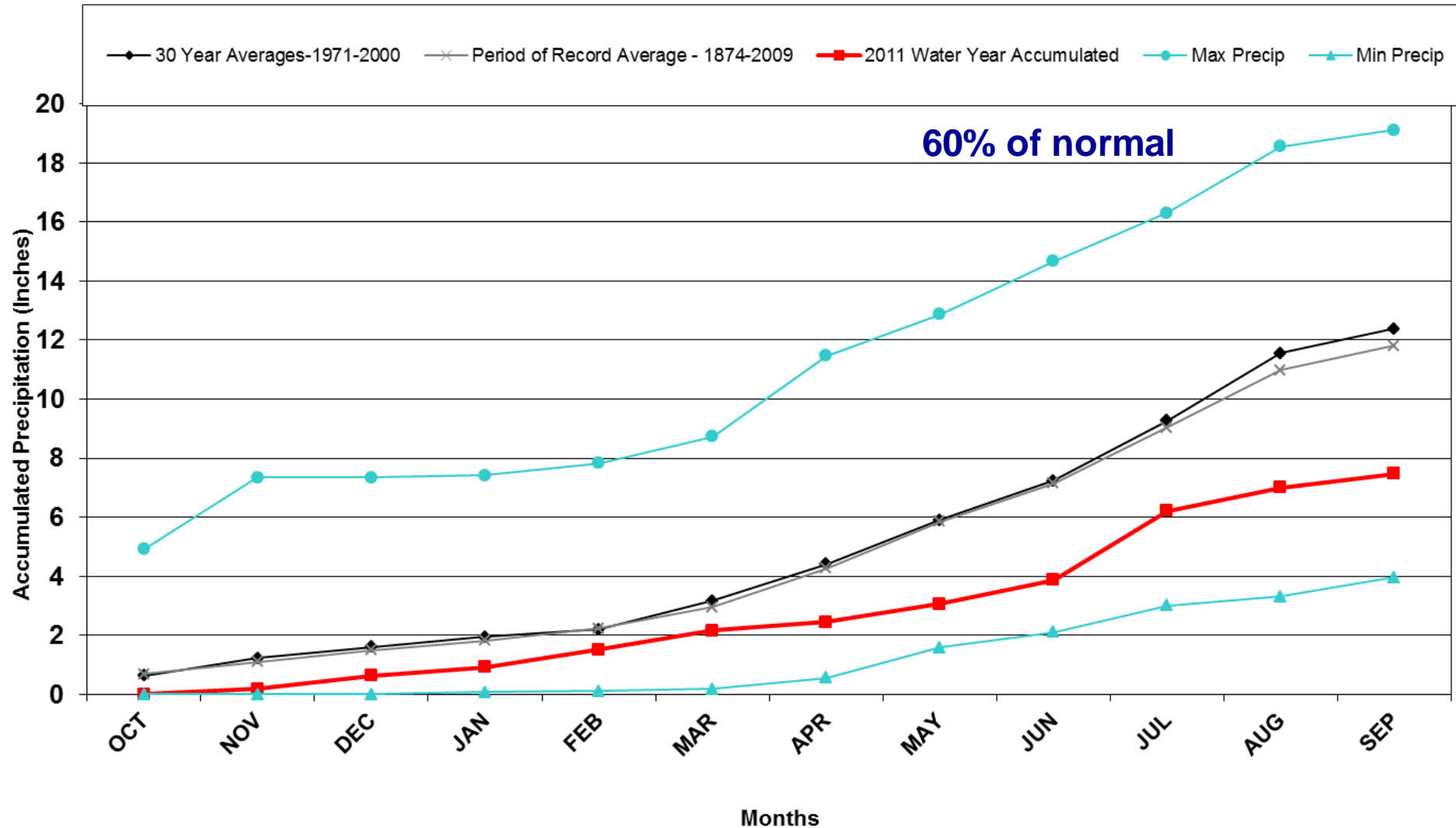
Division 4 – Alamosa

Alamosa WSO 2012 Water Year



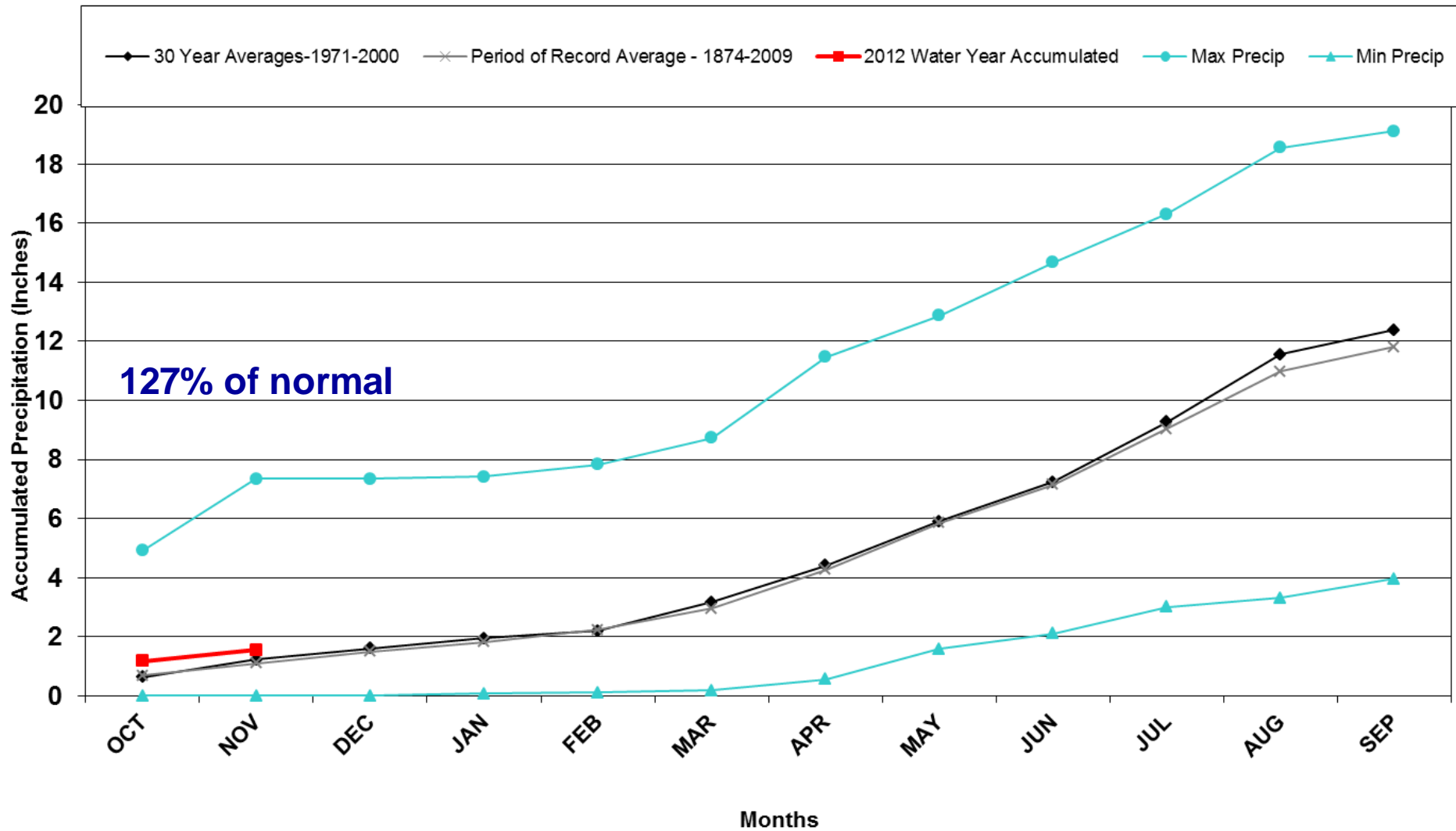
Division 5 – Pueblo

Pueblo WSO 2011 Water Year



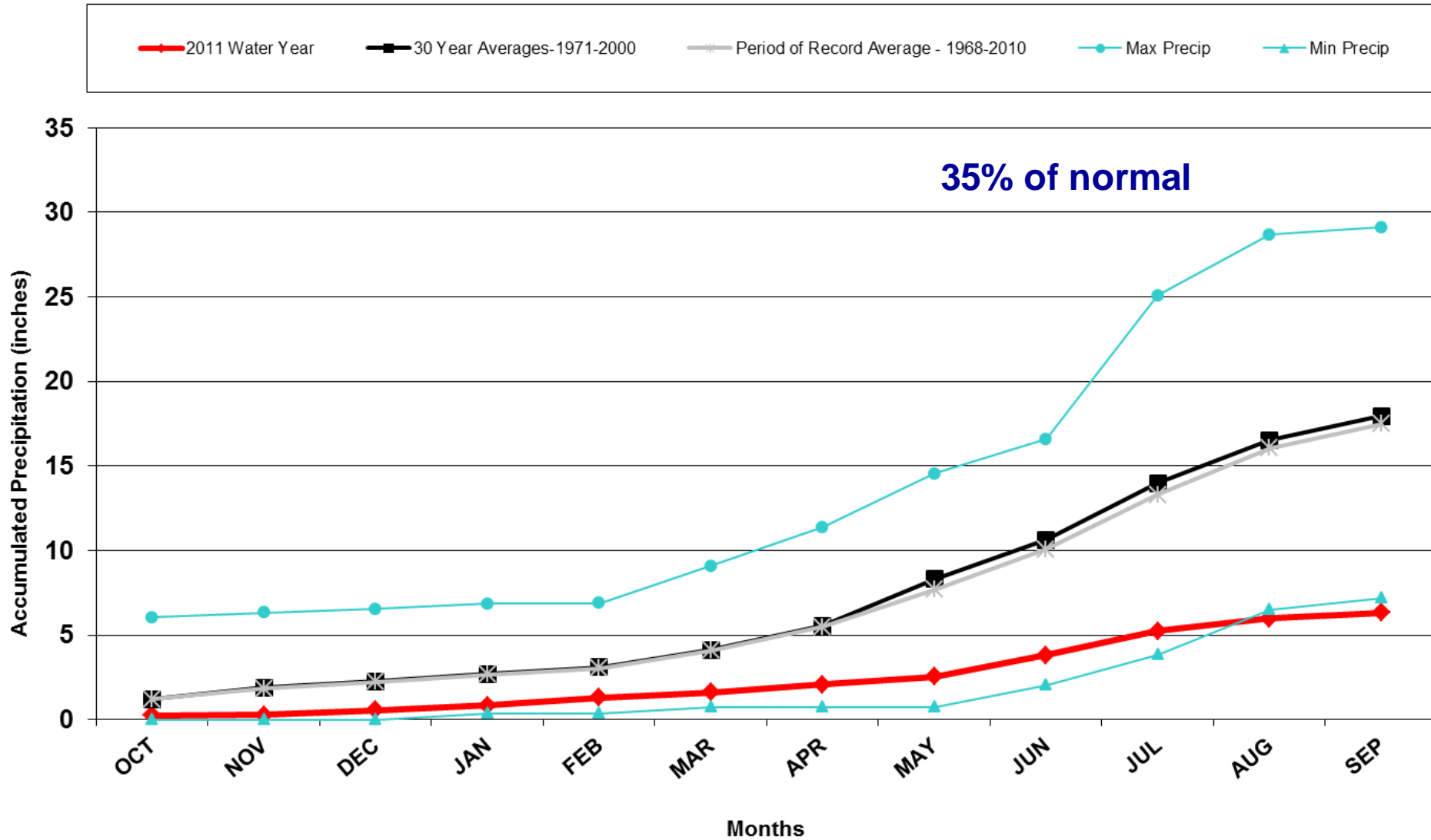
Division 5 – Pueblo

Pueblo WSO 2012 Water Year



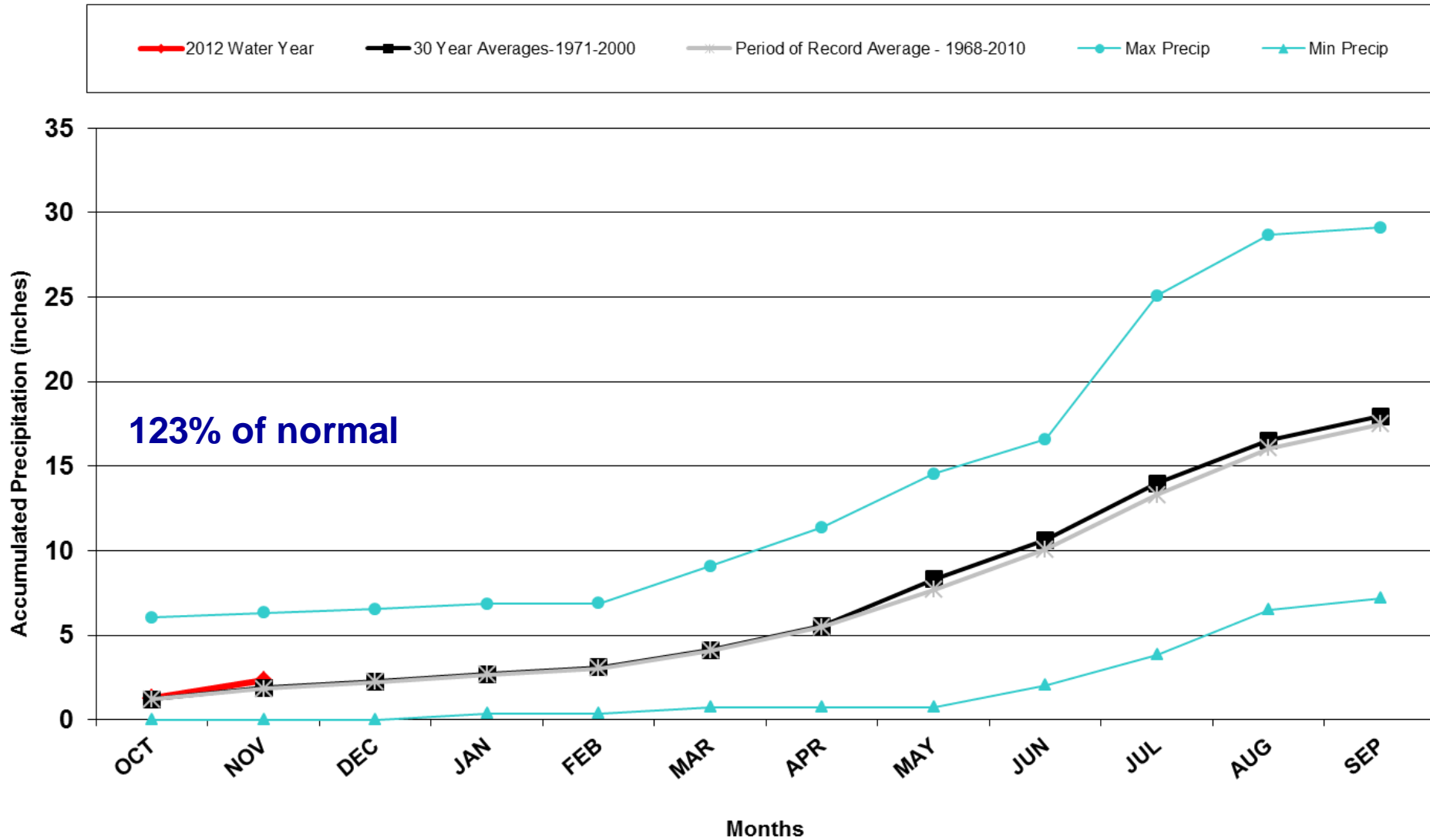
Division 6 - Walsh

Walsh 2011 Water Year



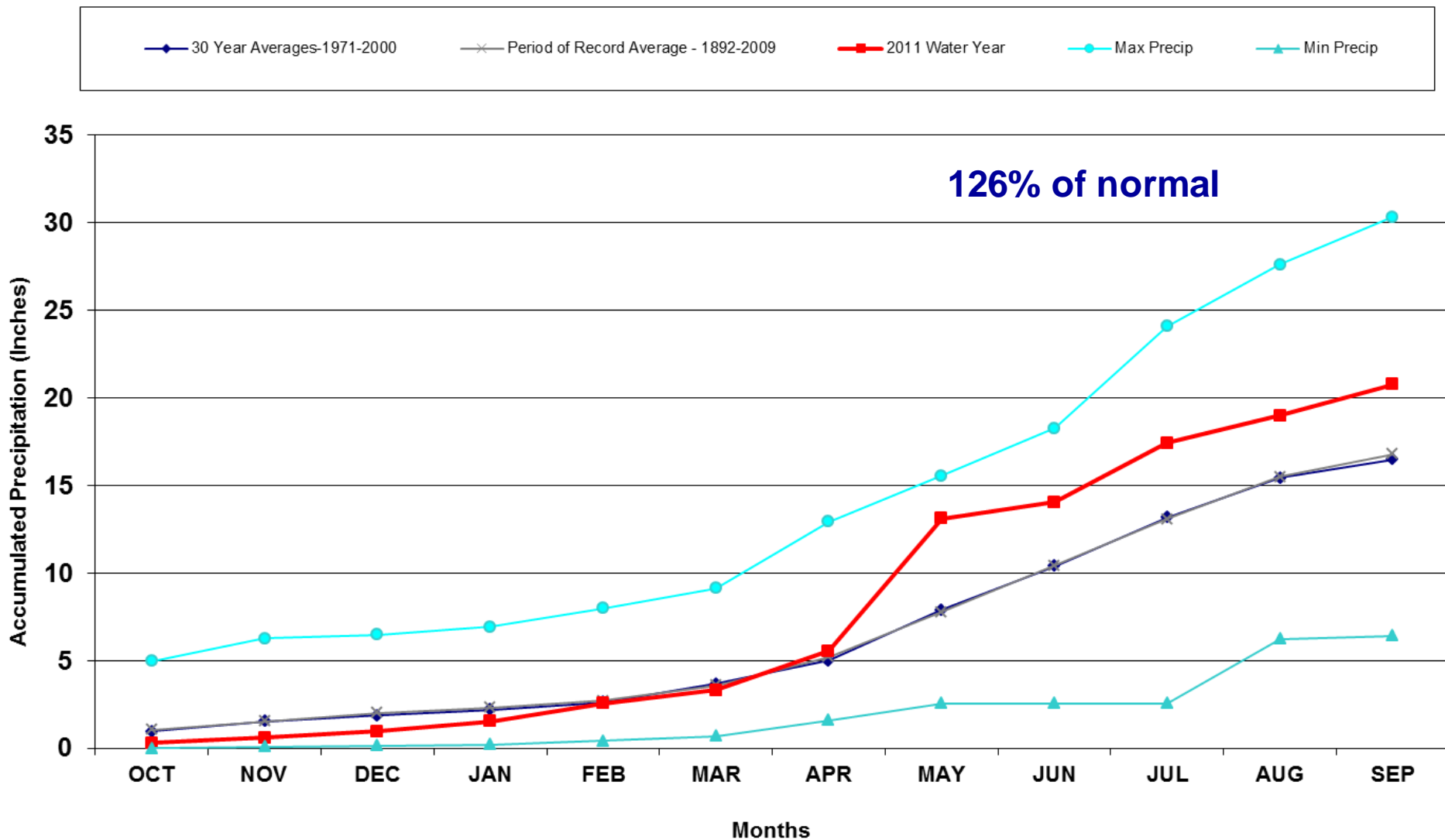
Division 6 - Walsh

Walsh 2012 Water Year



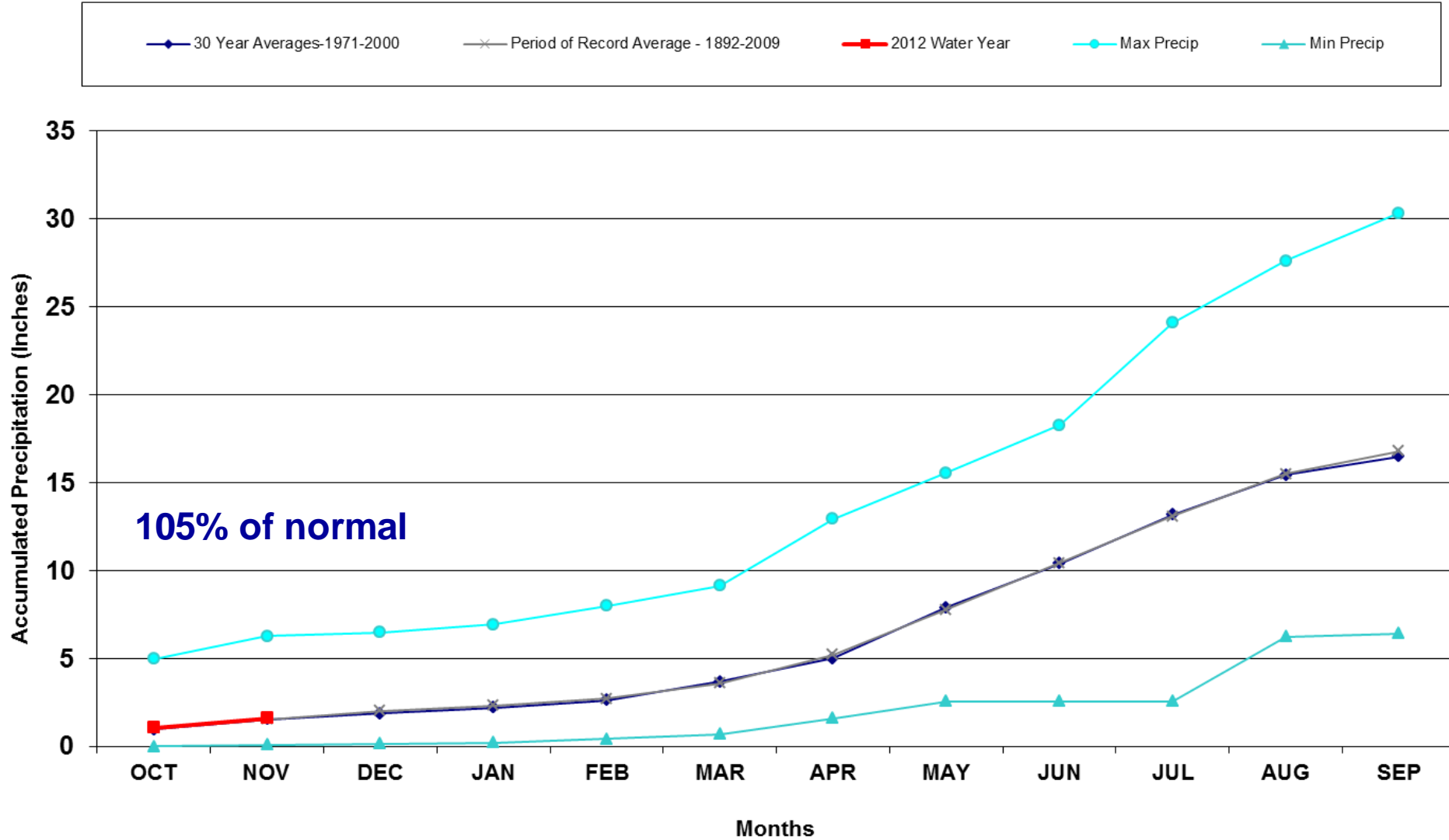
Division 6 - Burlington

Burlington 2011 Water Year



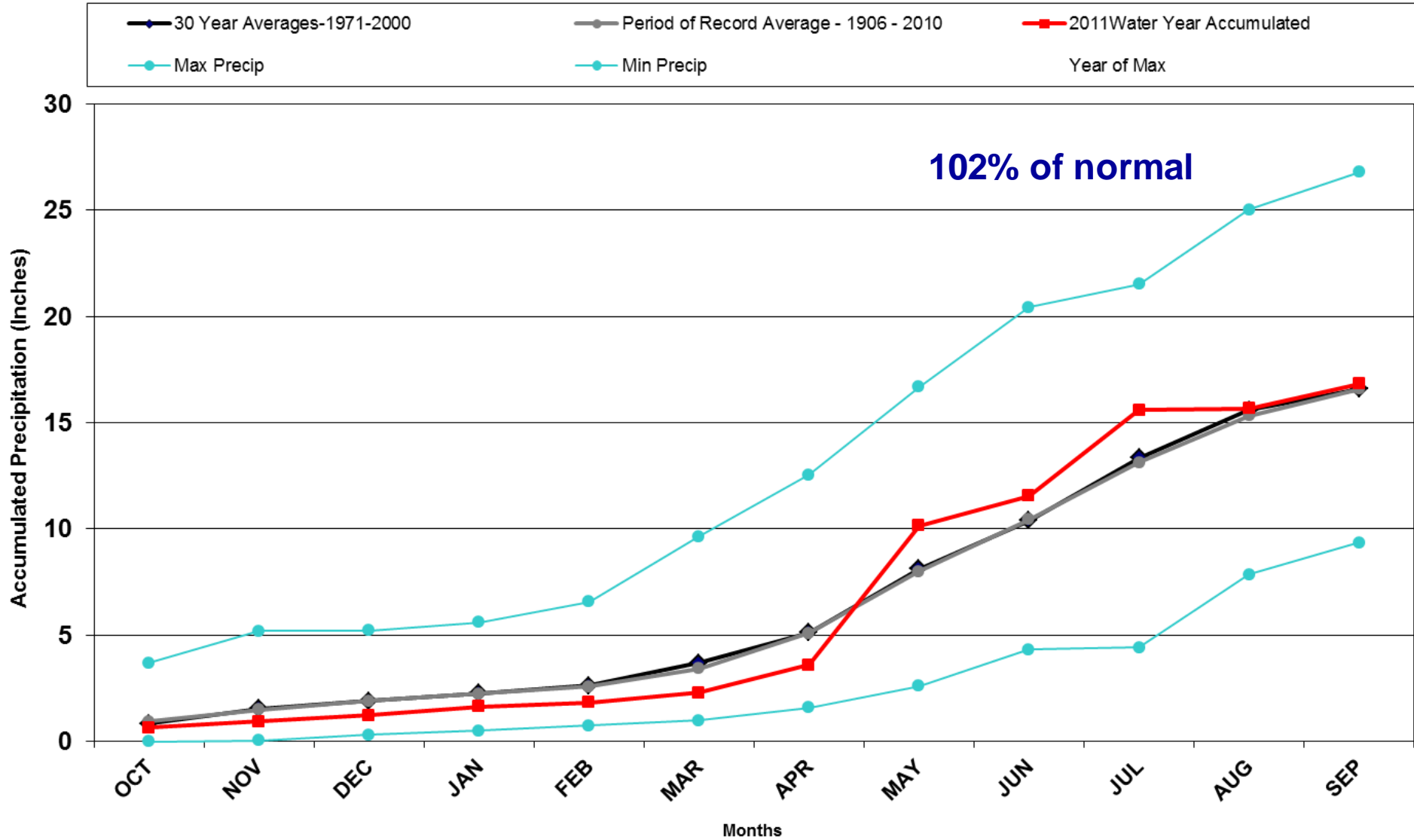
Division 6 - Burlington

Burlington 2012 Water Year



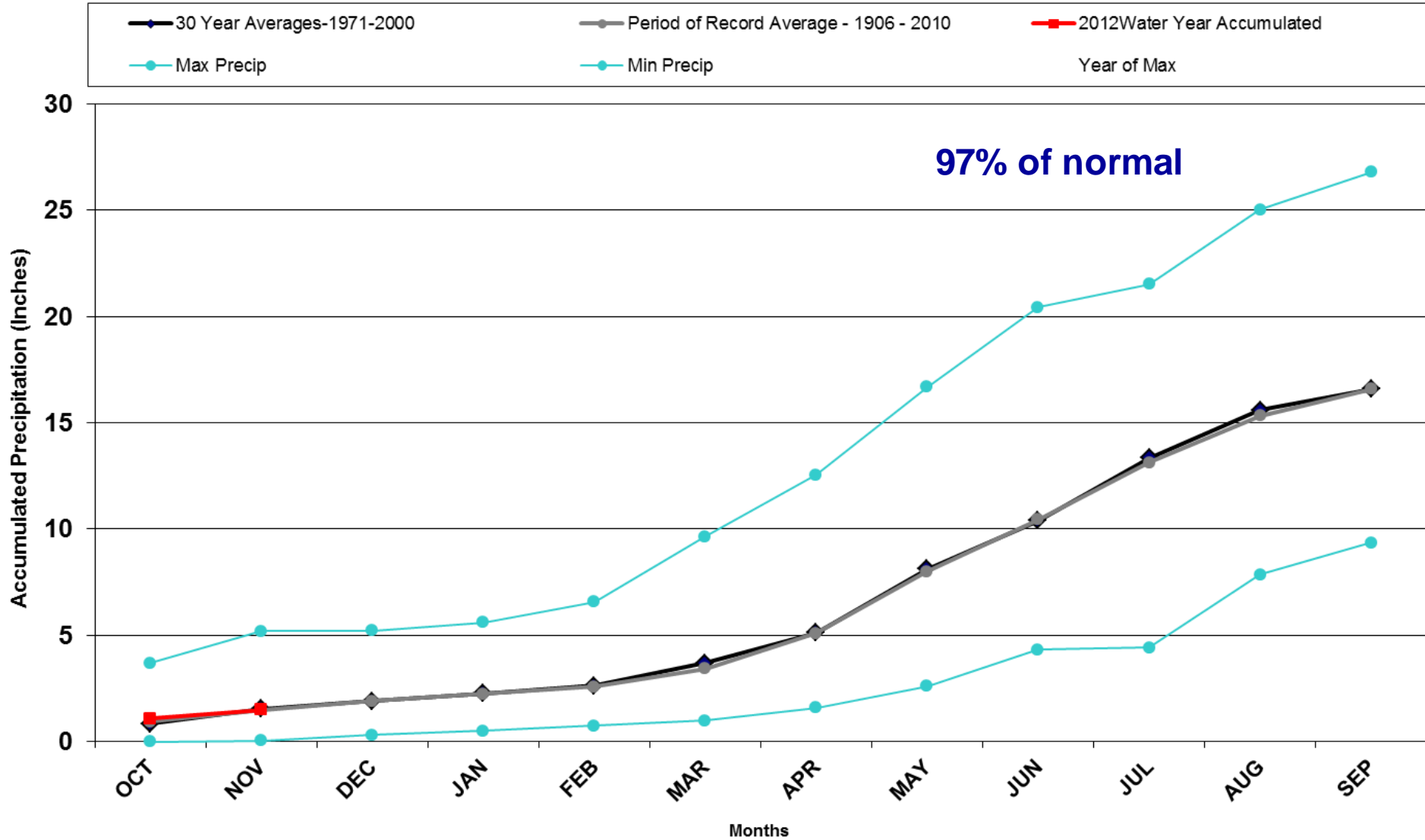
Division 7 – Akron

Akron 4E 2011 Water Year



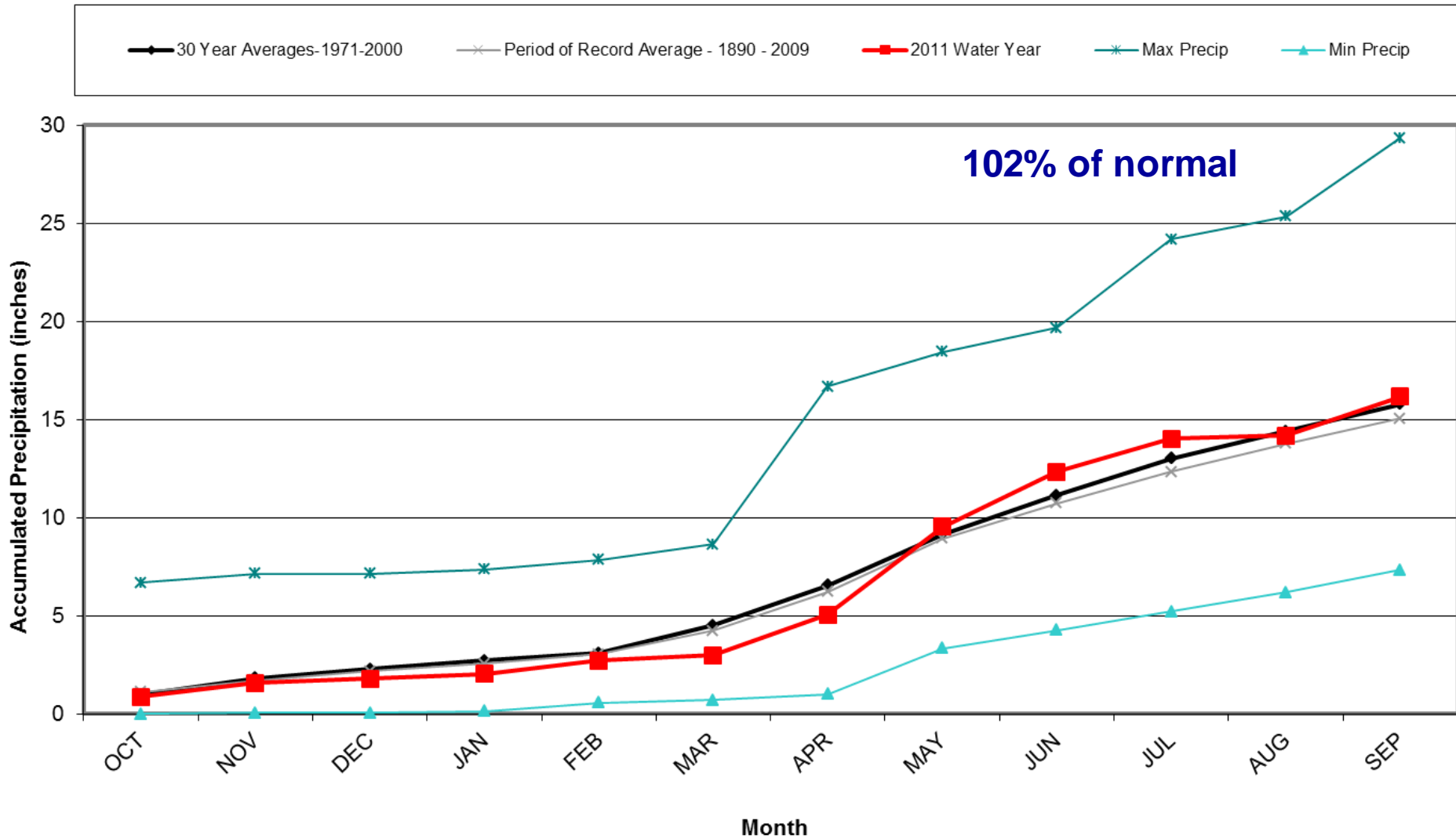
Division 7 – Akron

Akron 4E 2012 Water Year



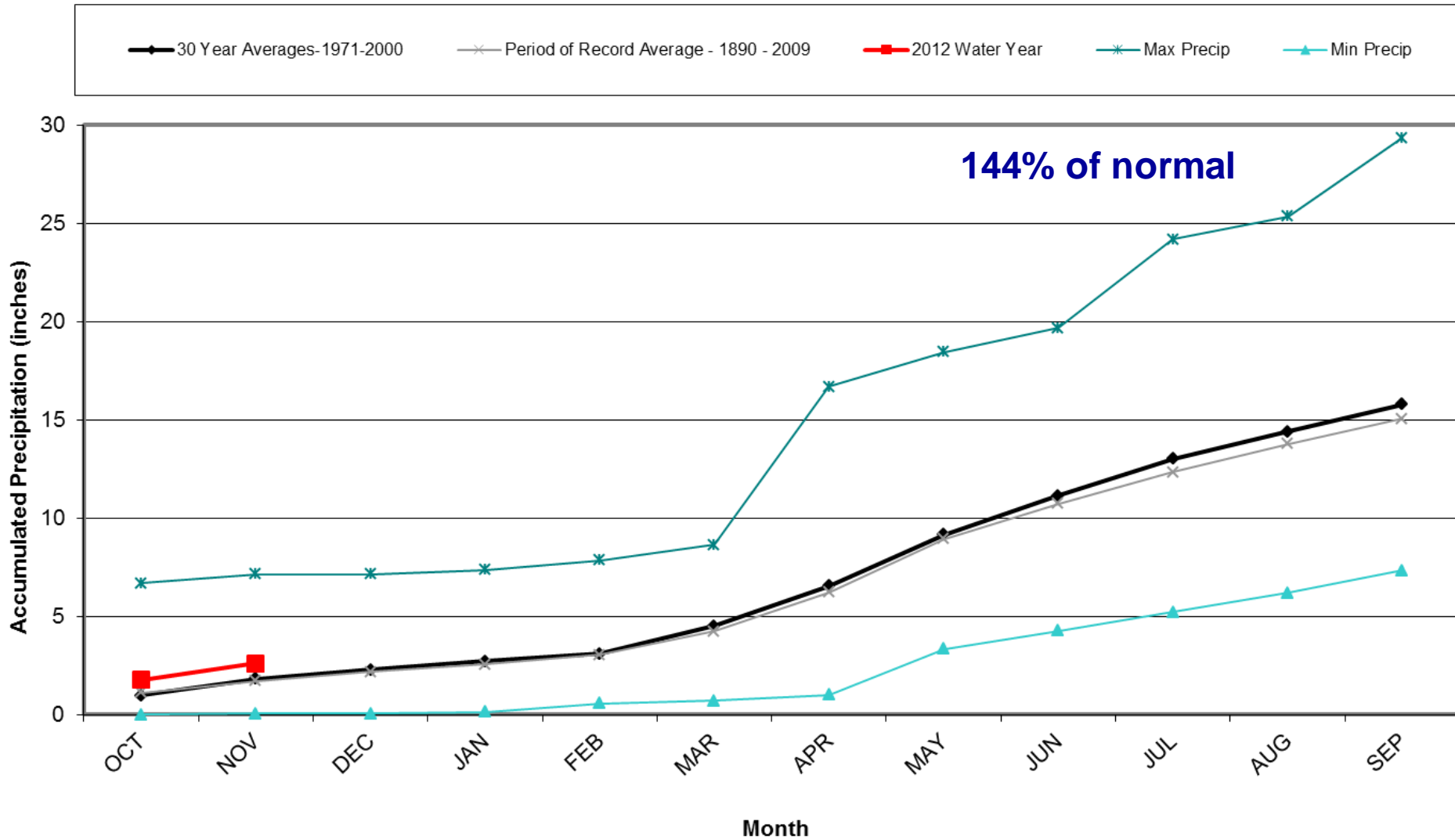
Division 8 – Fort Collins

Fort Collins 2011 Water Year



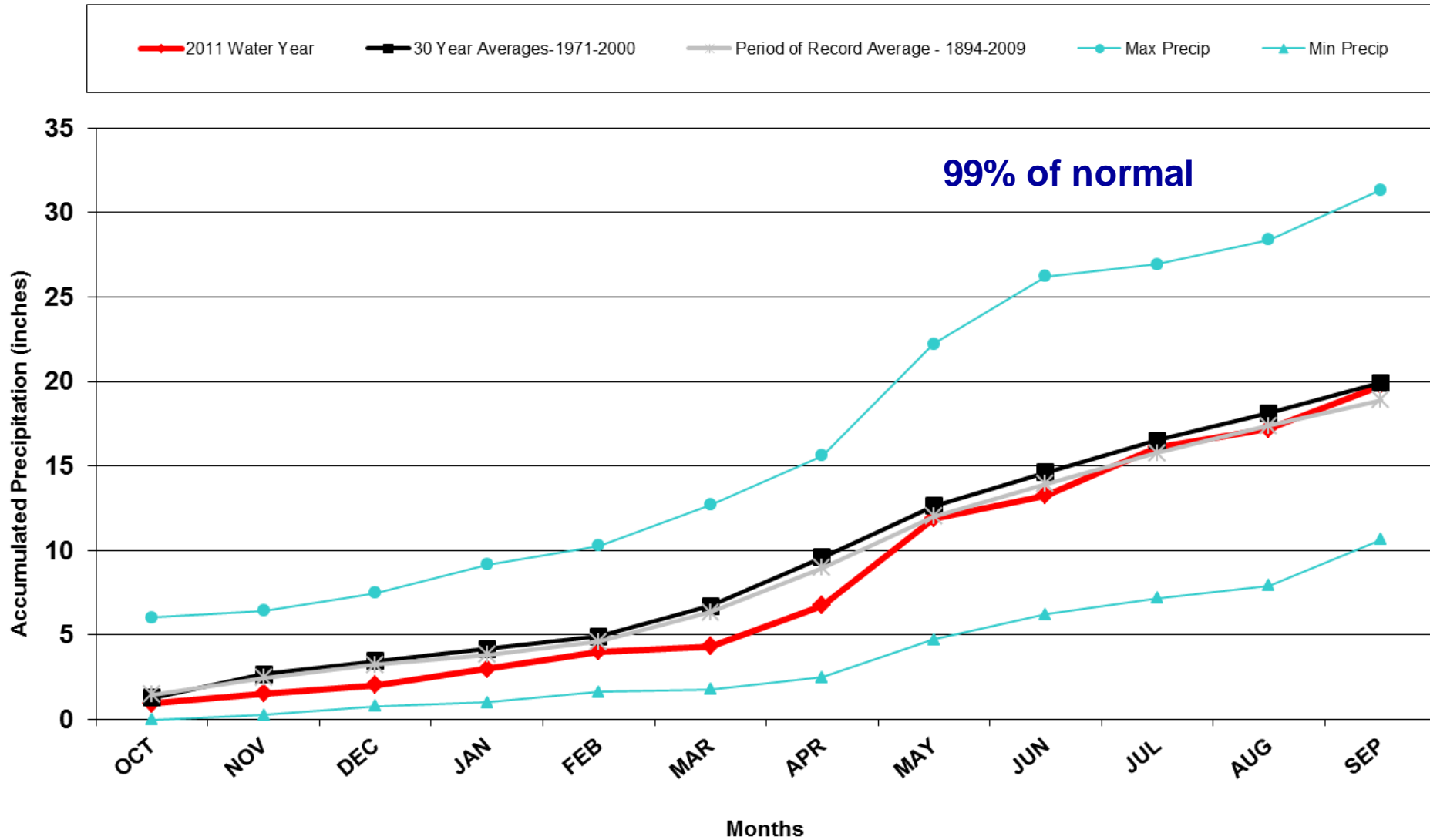
Division 8 – Fort Collins

Fort Collins 2012 Water Year



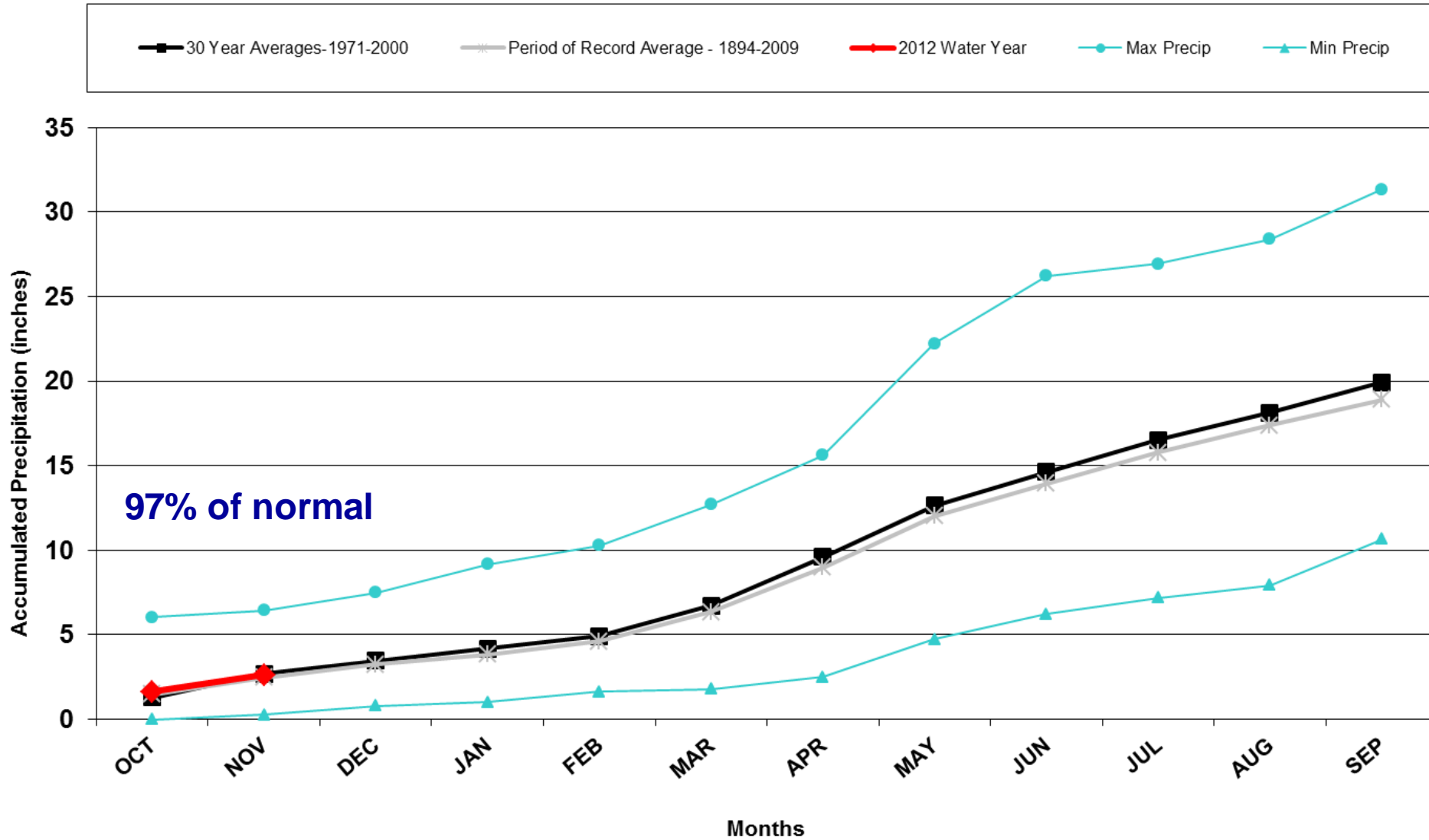
Division 8 - Boulder

Boulder 2011 Water Year



Division 8 - Boulder

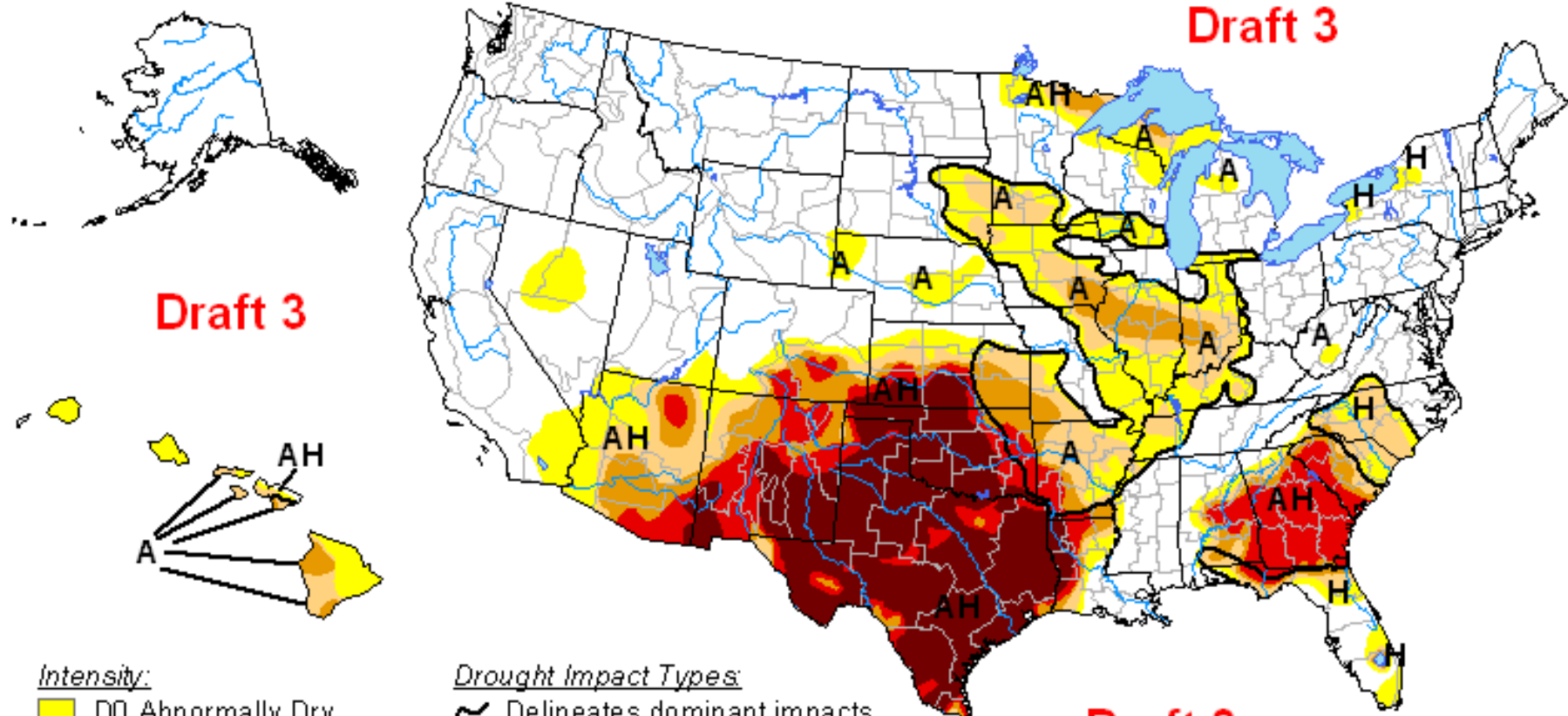
Boulder 2012 Water Year



U.S. Drought Monitor

September 20, 2011

Valid 8 a.m. EDT








Draft 3


Draft 3

Draft 3

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>

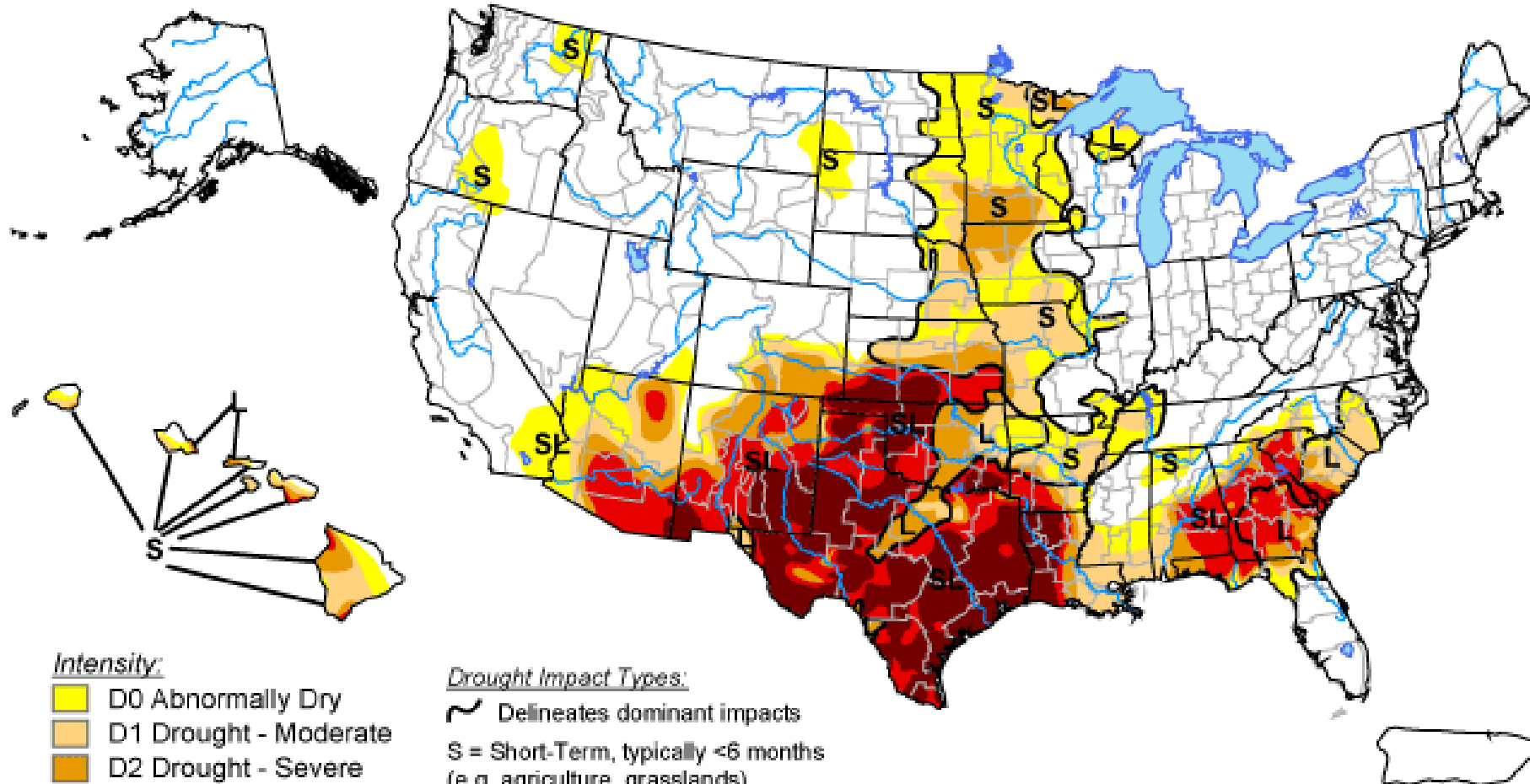
Released Thursday, September 22, 2011

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






U.S. Drought Monitor

November 15, 2011


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
- 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.

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



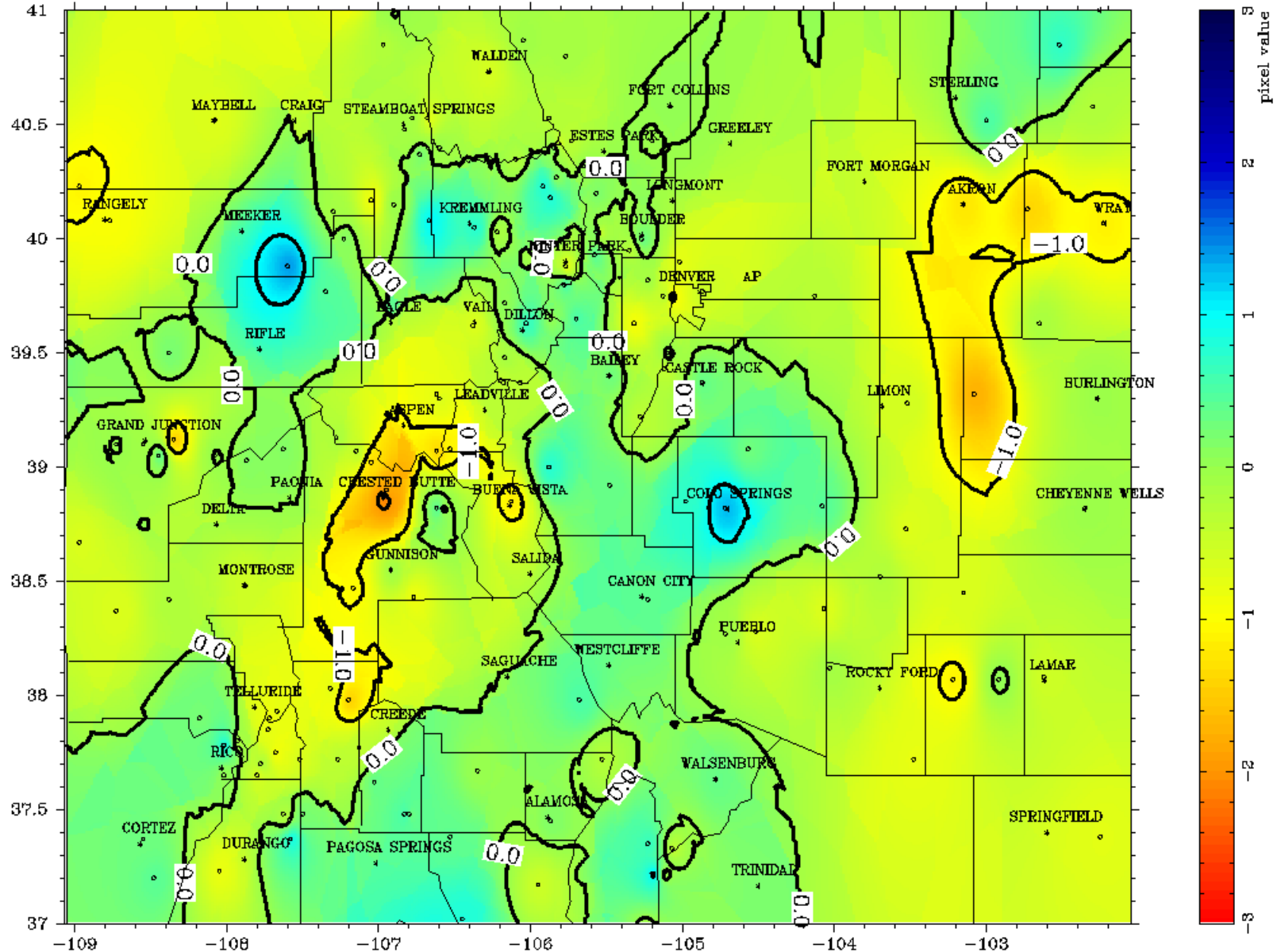
Released Thursday, November 17, 2011

Author: Anthony Artusa, NOAA/NWS/NCEP/CPC

Colorado

10/2011 3 mon. SPI

JULESBURG



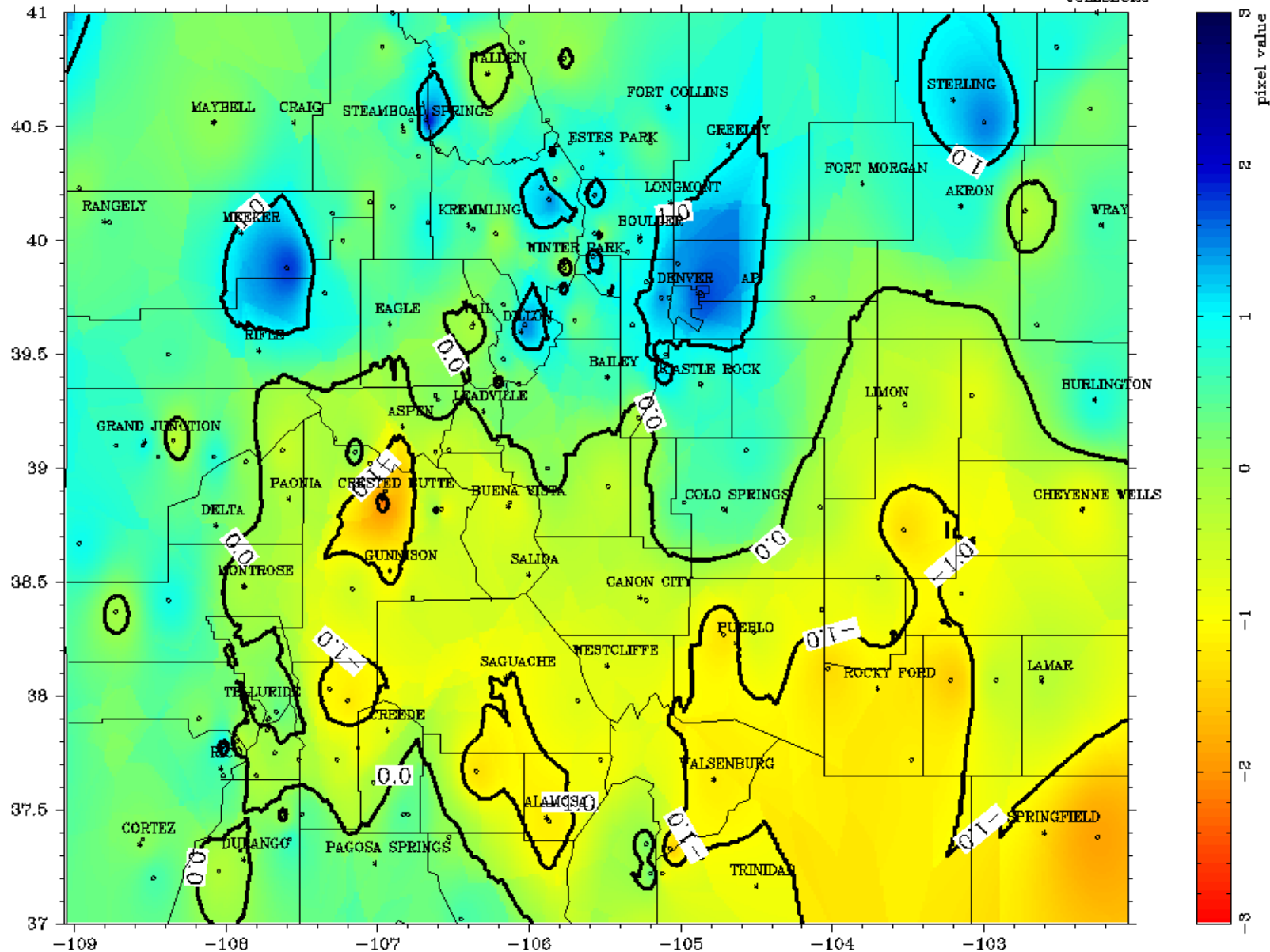
100 % < 2.0	5 % < -1.0
100 % < 1.0	0 % < -2.0
68 % < 0.0	0 % < -3.0

Produced by:
Colorado Climate Center
Fort Collins, CO

Colorado

10/2011 6 mon. SPI

JULESBURG

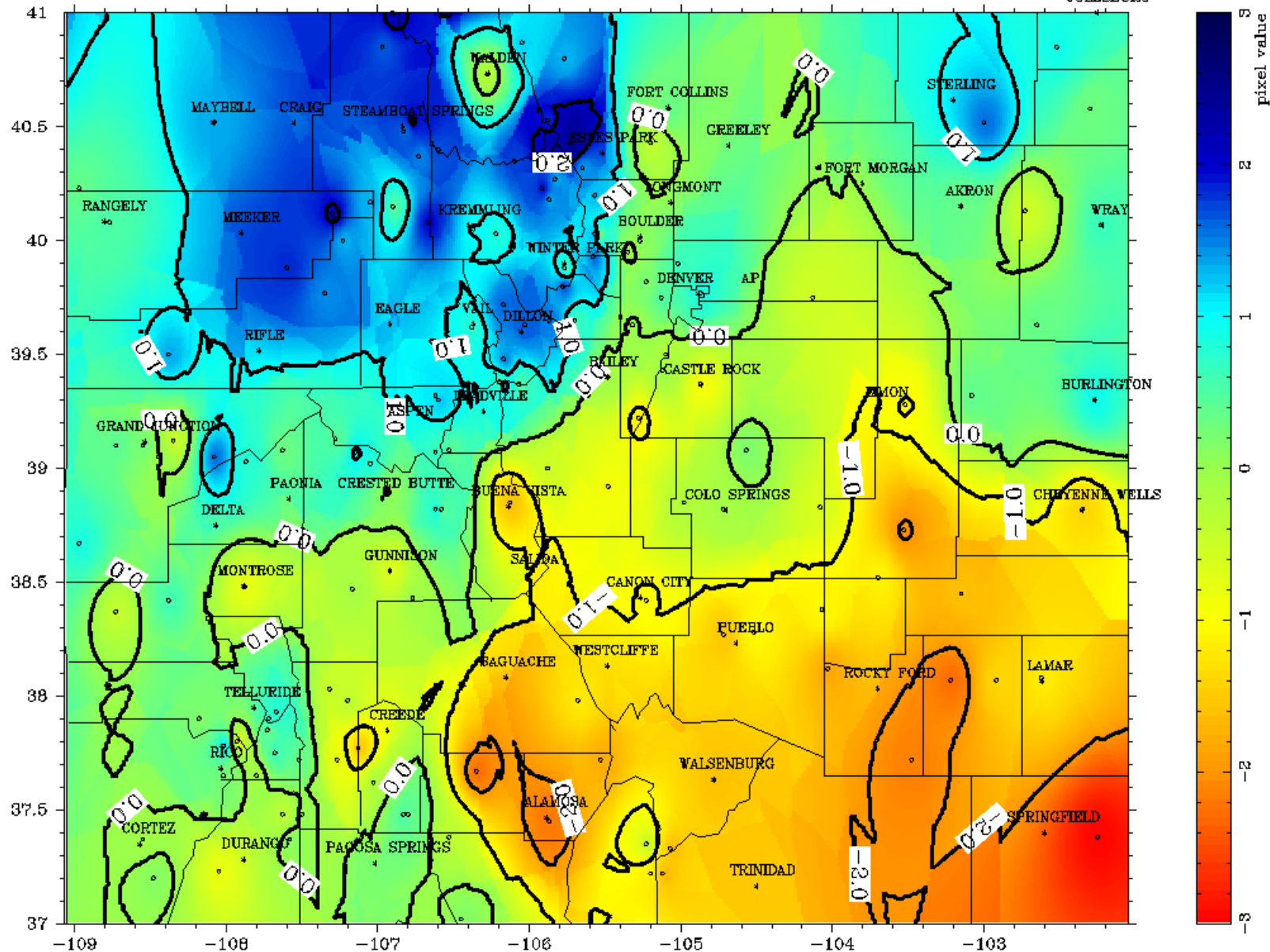


Produced by:
Colorado Climate Center
Fort Collins, CO

Colorado

10/2011 12 mon. SPI

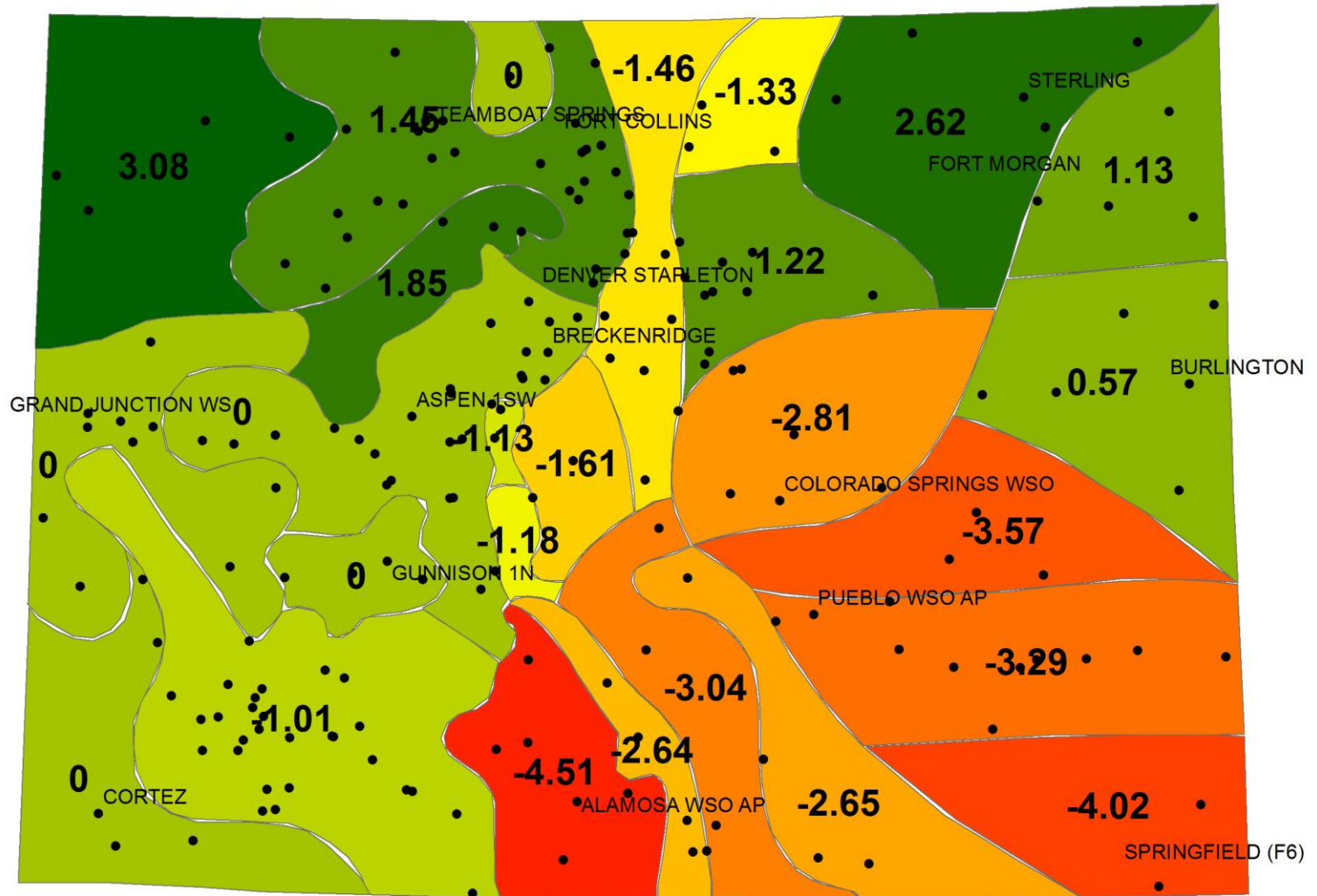
JULESBURG



100 % < 2.0	26 % < -1.0
84 % < 1.0	5 % < -2.0
48 % < 0.0	0 % < -3.0

Produced by:
Colorado Climate Center
Fort Collins, CO

Preliminary Modified Palmer Drought Severity Index for Colorado October 2011



Colorado Climate Center



Data and Power Point Presentations available for downloading

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