



Climate Update

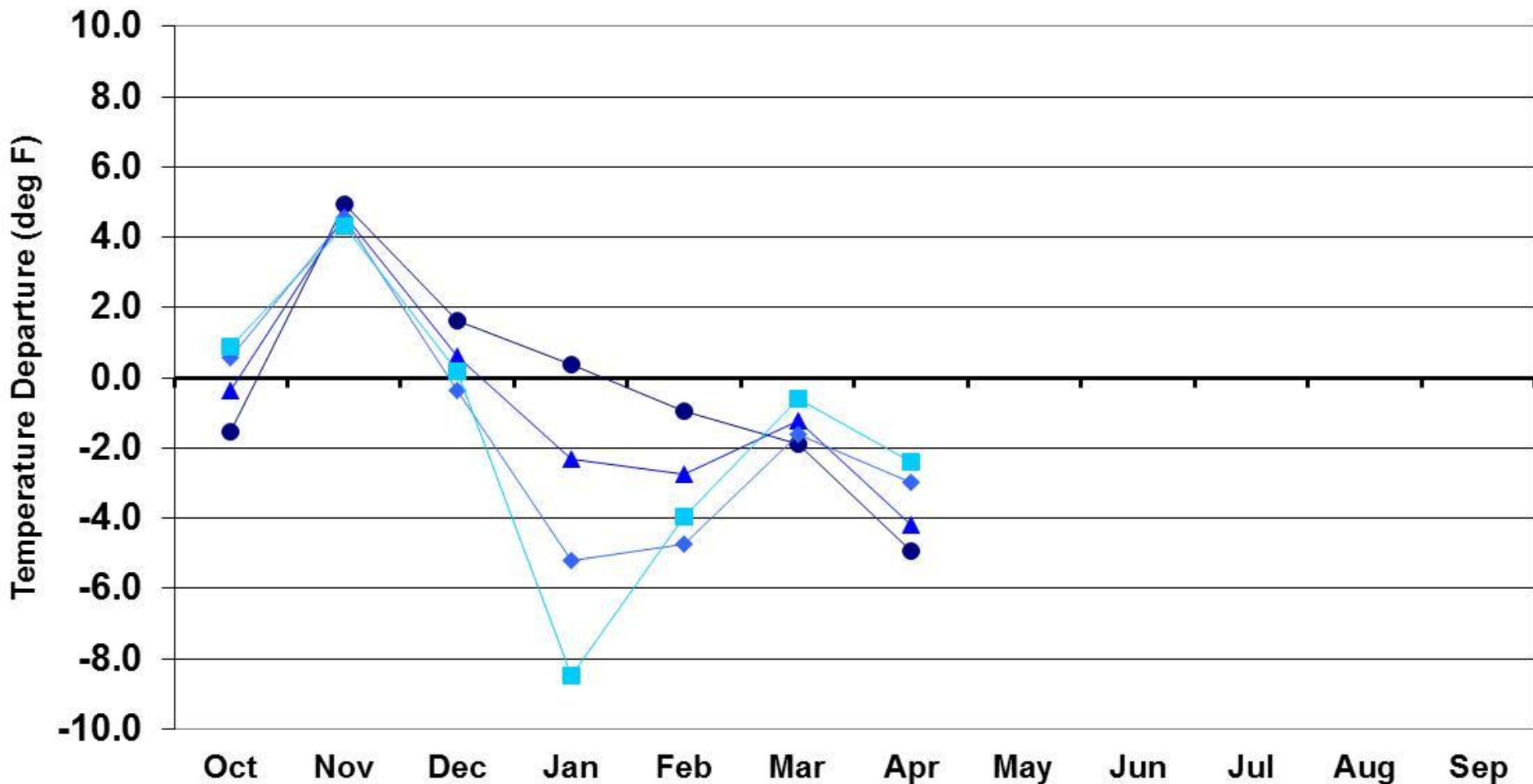
Wendy Ryan
Colorado Climate Center

Atmospheric Science Department
Colorado State University

Presented to
Water Availability Task Force
16 May 2013
Denver, CO

Water Year 2013 Temperature Departures

Water Year 2013



● Eastern Plains

▲ Foothills

◆ Mountains

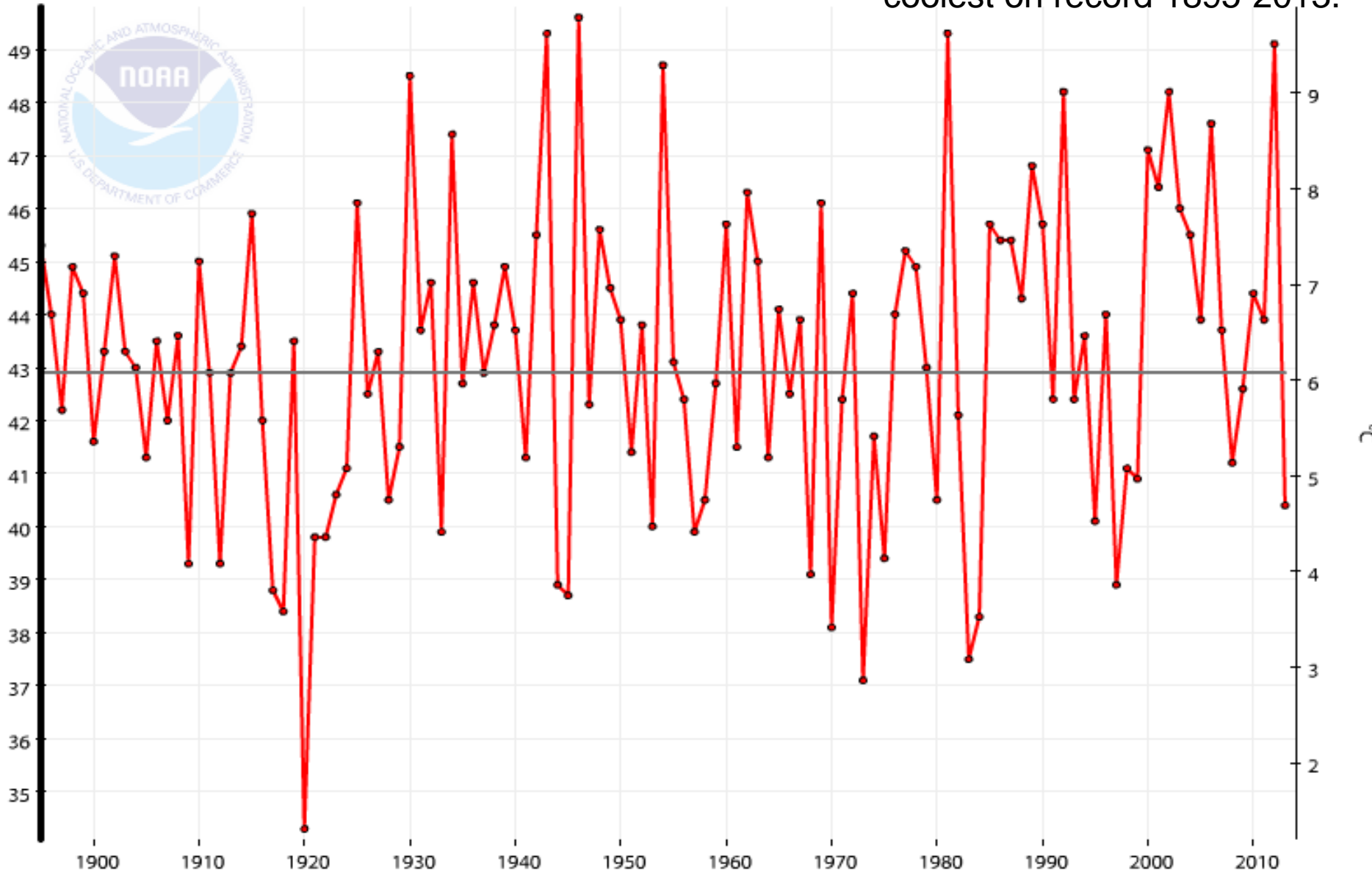
■ Western Valleys

April Average Temperature History for Colorado (NCDC)

Colorado, Temperature, April

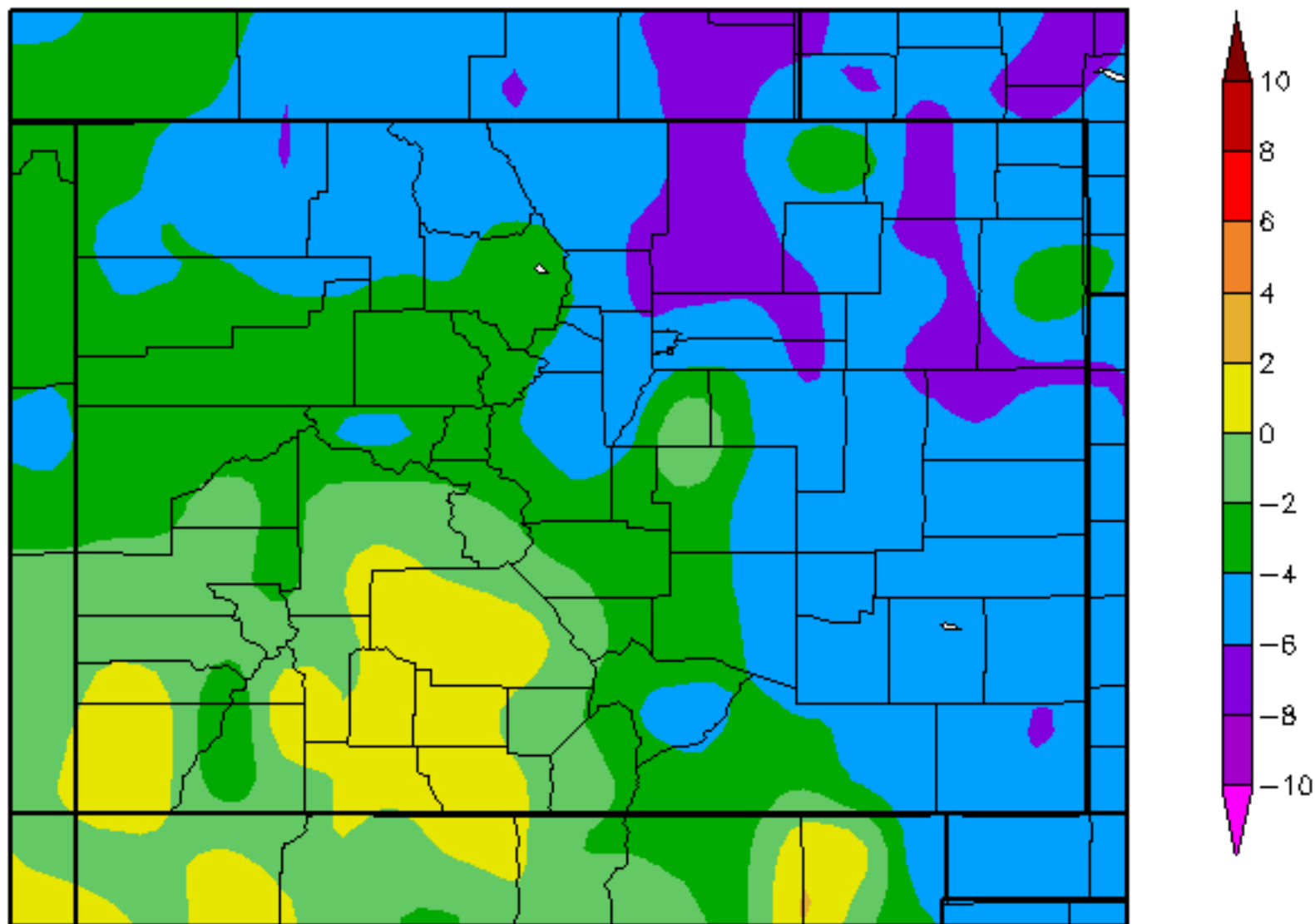
— 1901-2000 Avg: 42.9°F
—●— Temperature

40.4 Ranks as the 21st coolest on record 1895-2013.

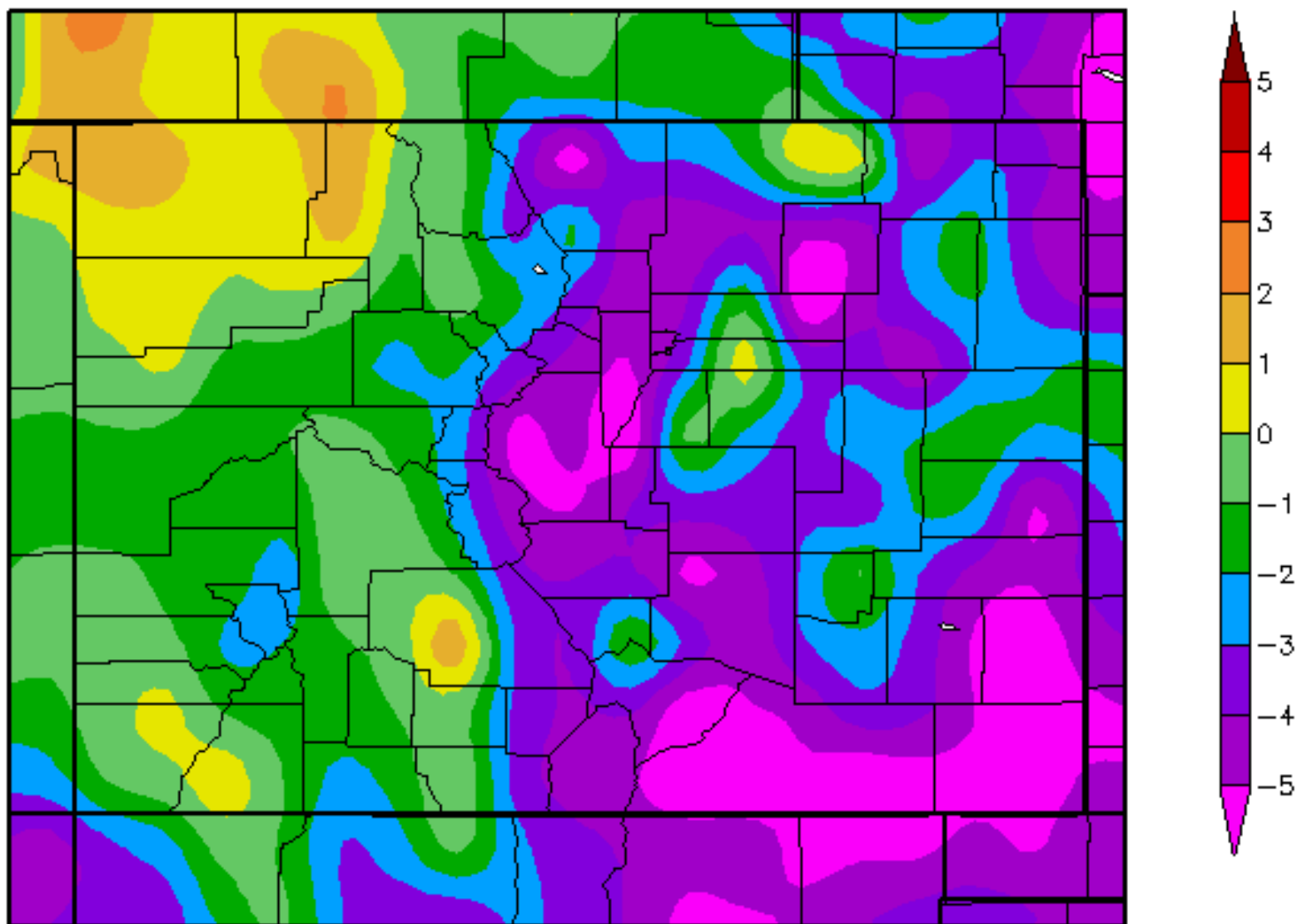


Departure from Normal Temperature (F)

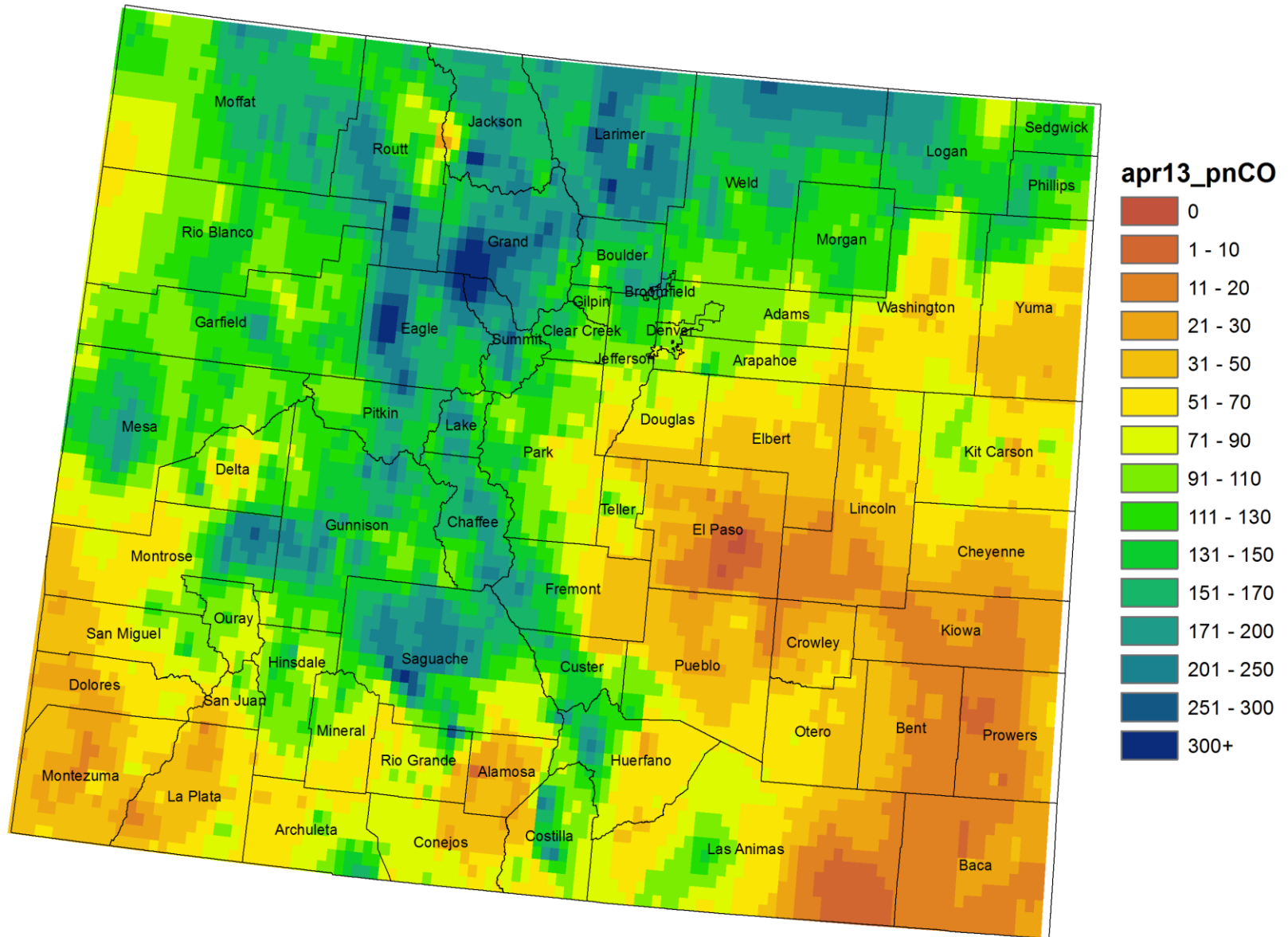
4/1/2013 - 4/30/2013



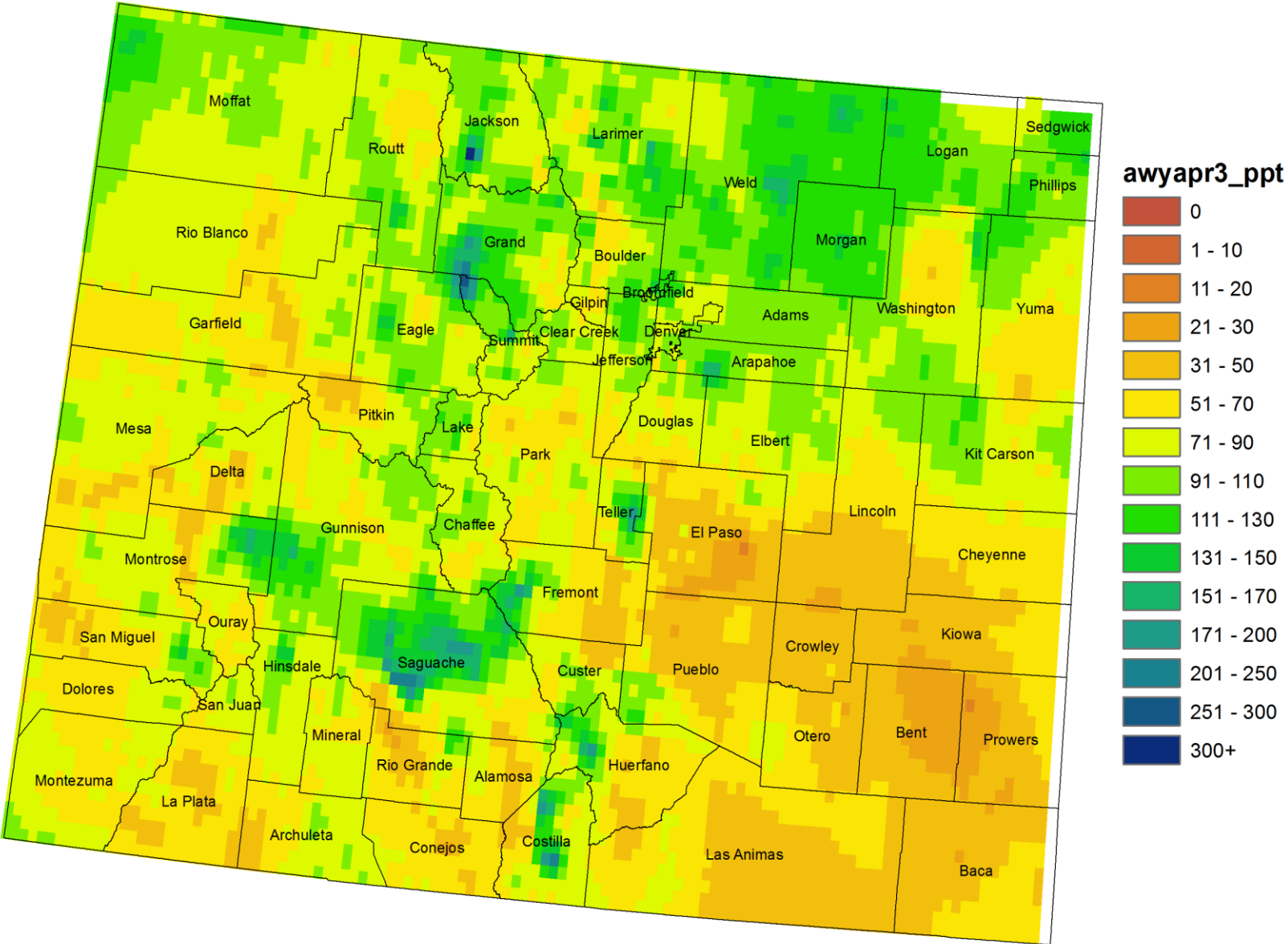
Departure from Normal Temperature (F) 5/1/2013 – 5/14/2013



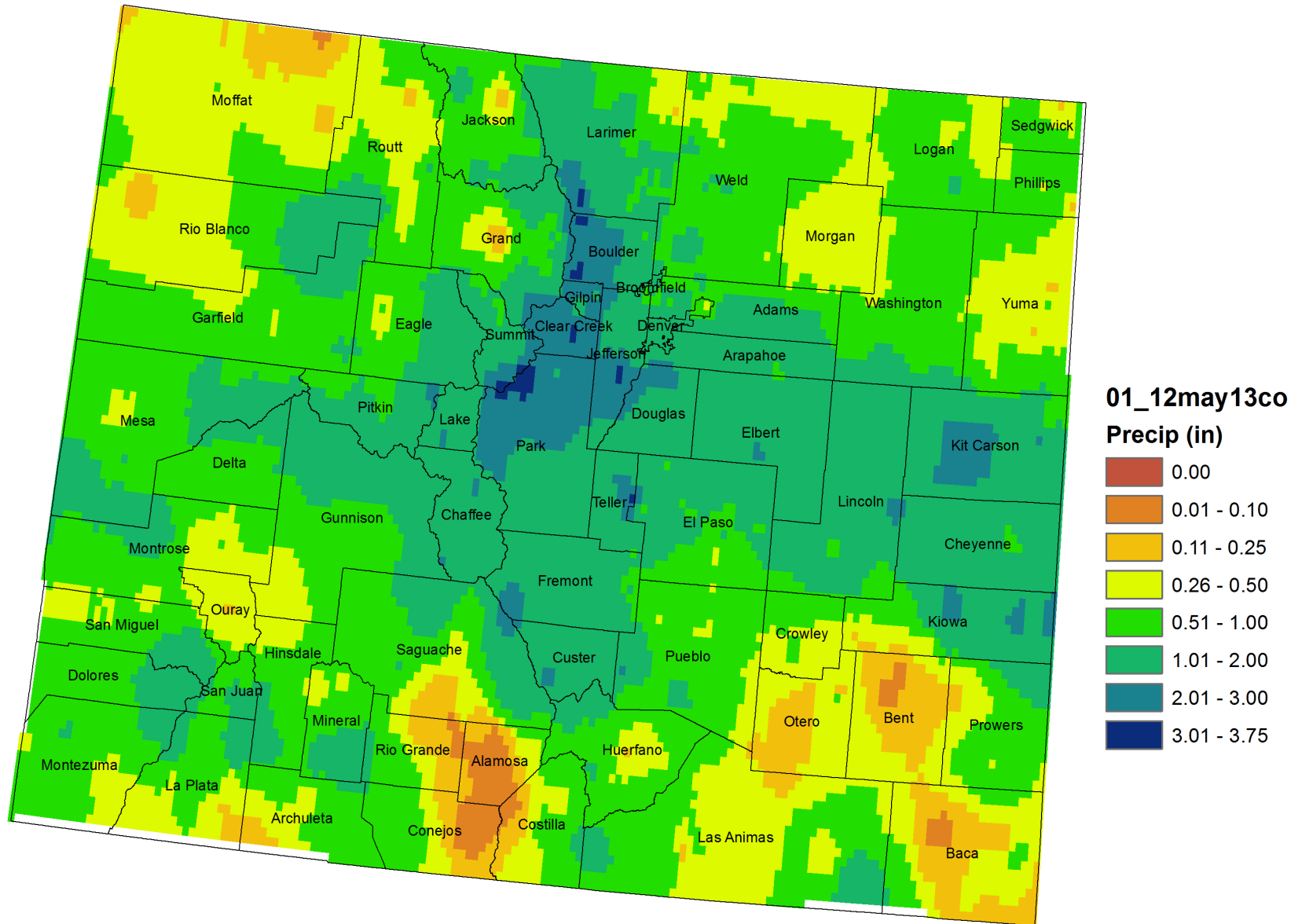
Colorado April 2013 Precipitation as Percentage of Normal



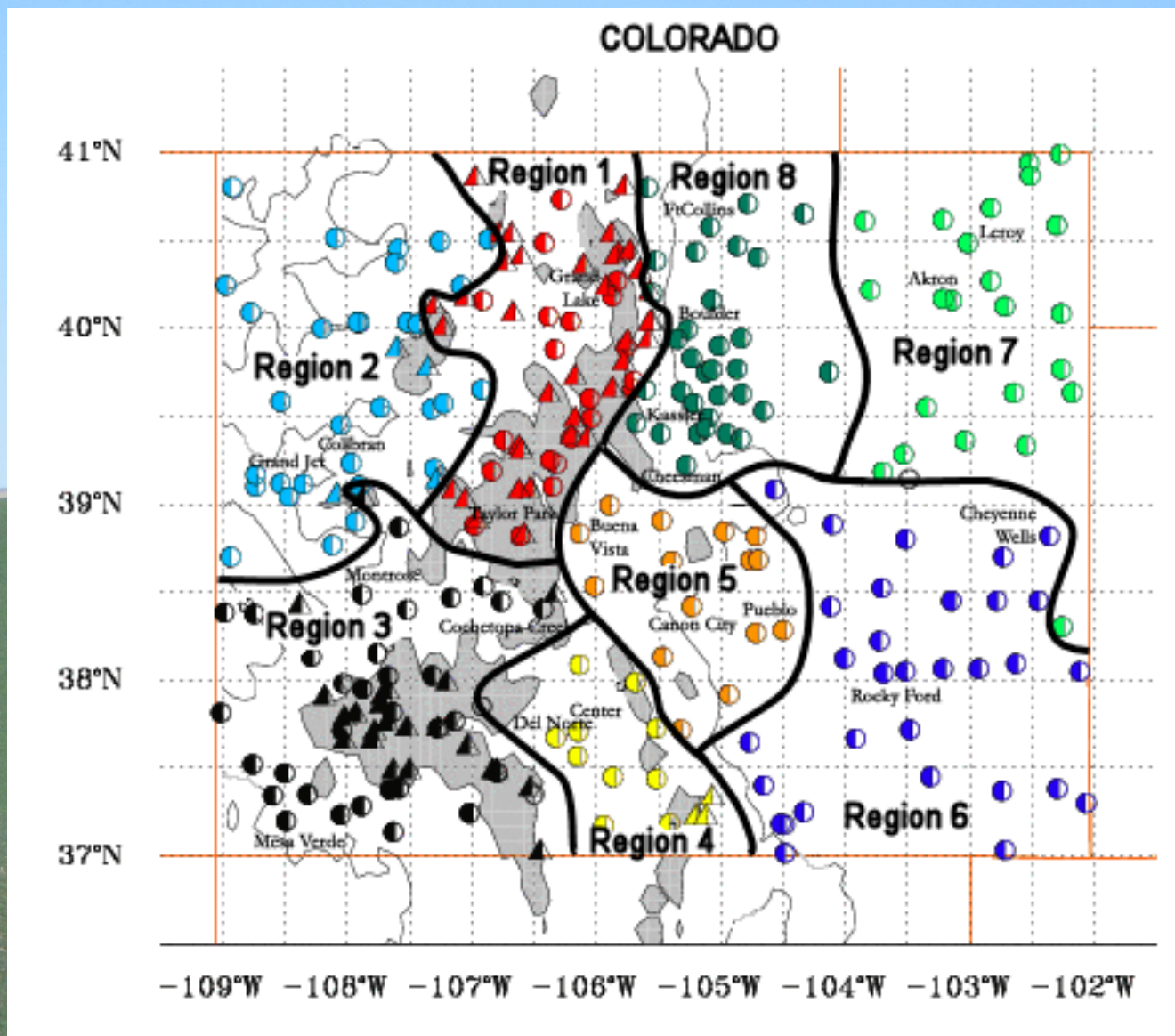
Colorado Water Year 2013 Precipitation as Percentage of Normal (Oct 12-Apr 13)



Colorado Precipitation (in) May 1-12 2013

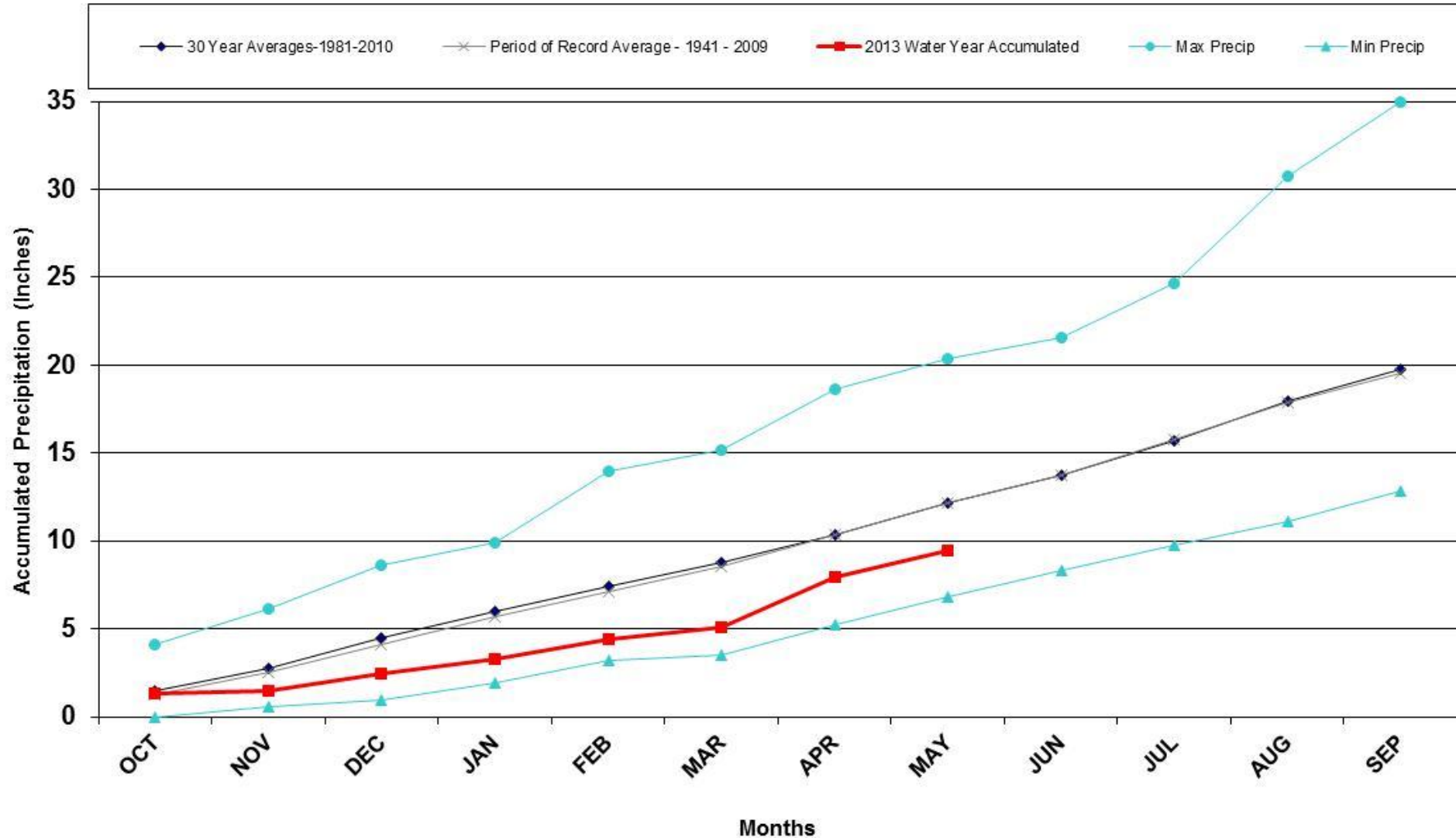


Climate divisions defined by Dr. Klaus Wolter of NOAA's Climate Diagnostic Center in Boulder, CO



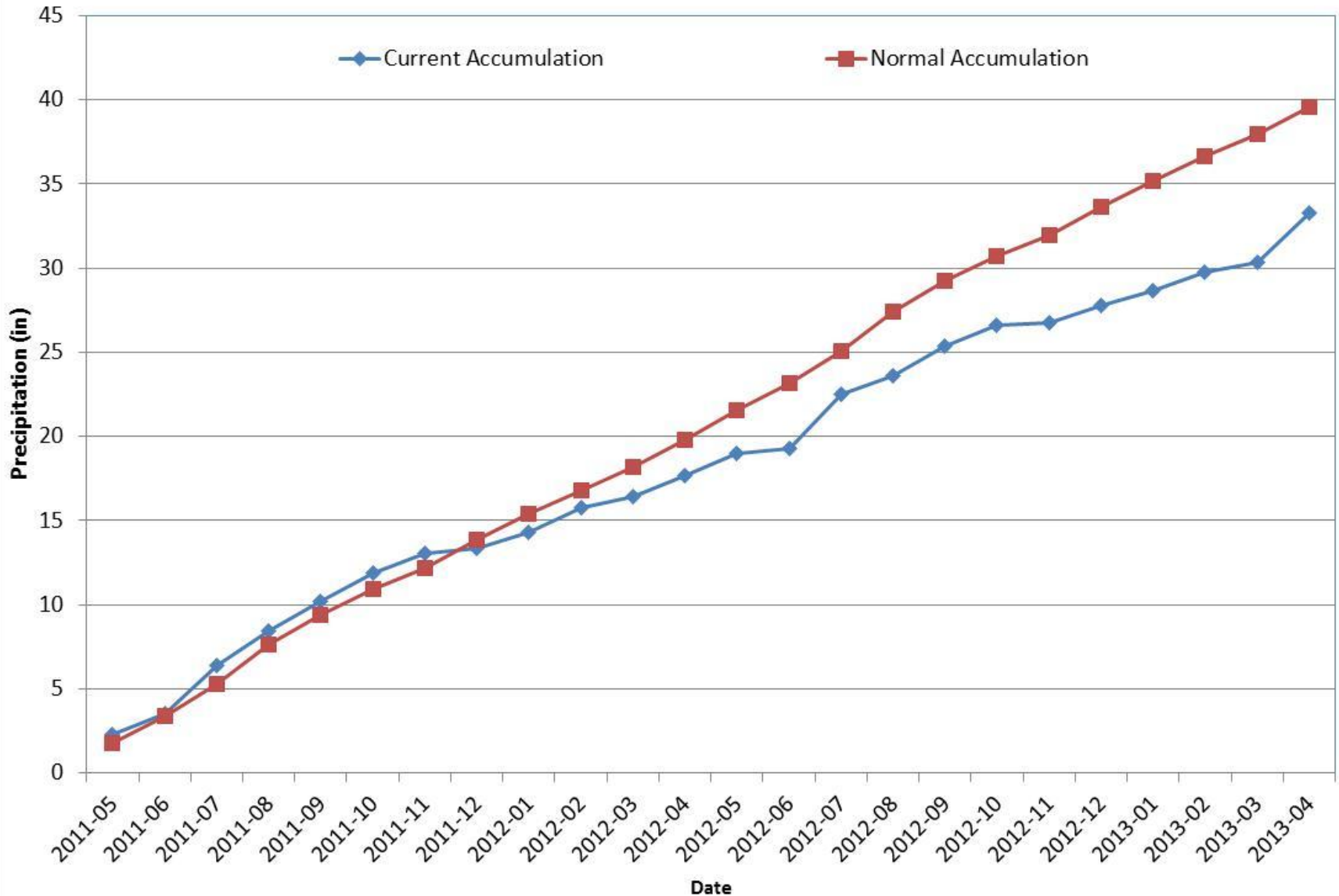
Division 1 – Grand Lake 1NW

Grand Lake 1 NW 2013 Water Year



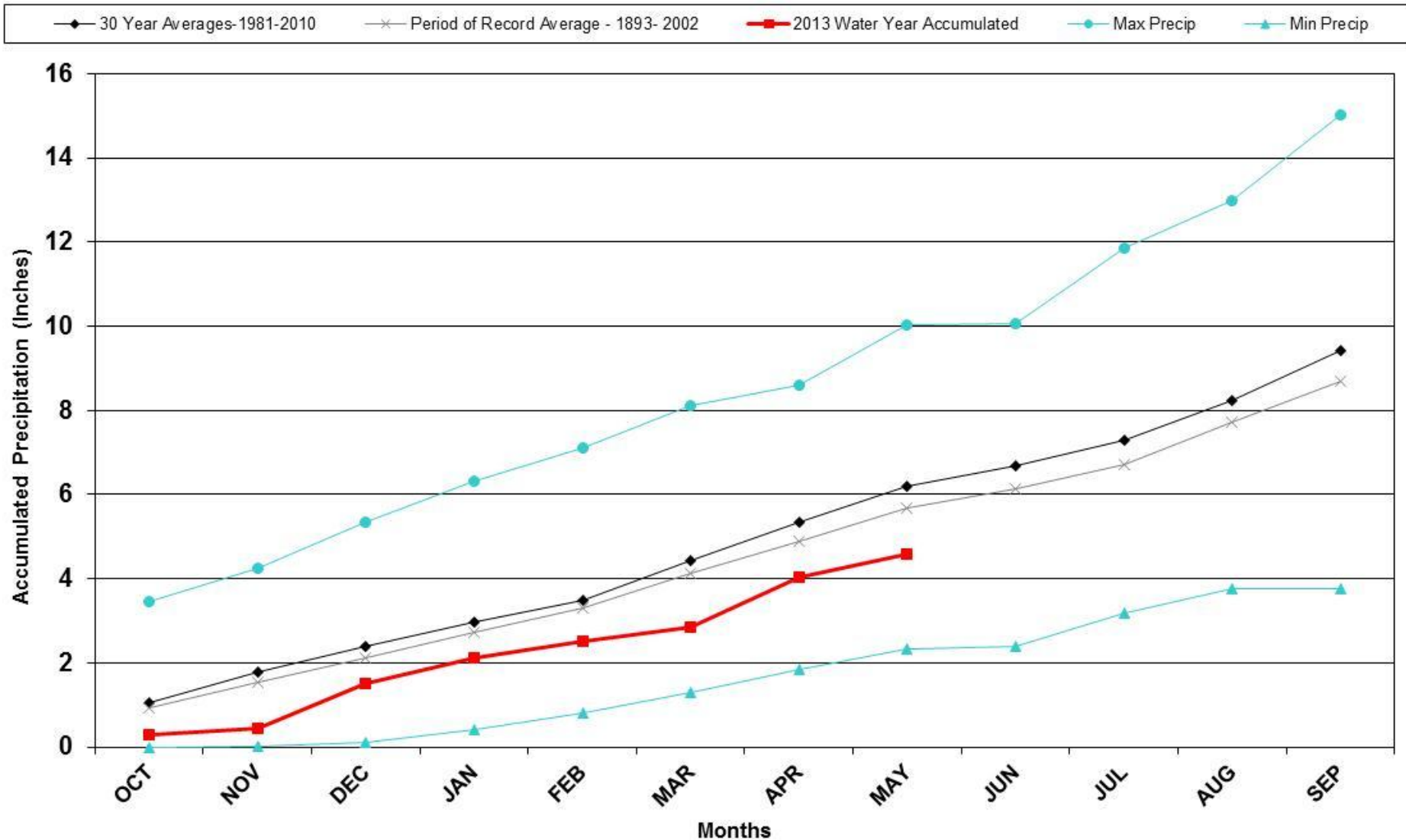
Division 1 – Grand Lake 1NW

Grand Lake 1NW 24 Month Precipitation Accumulation



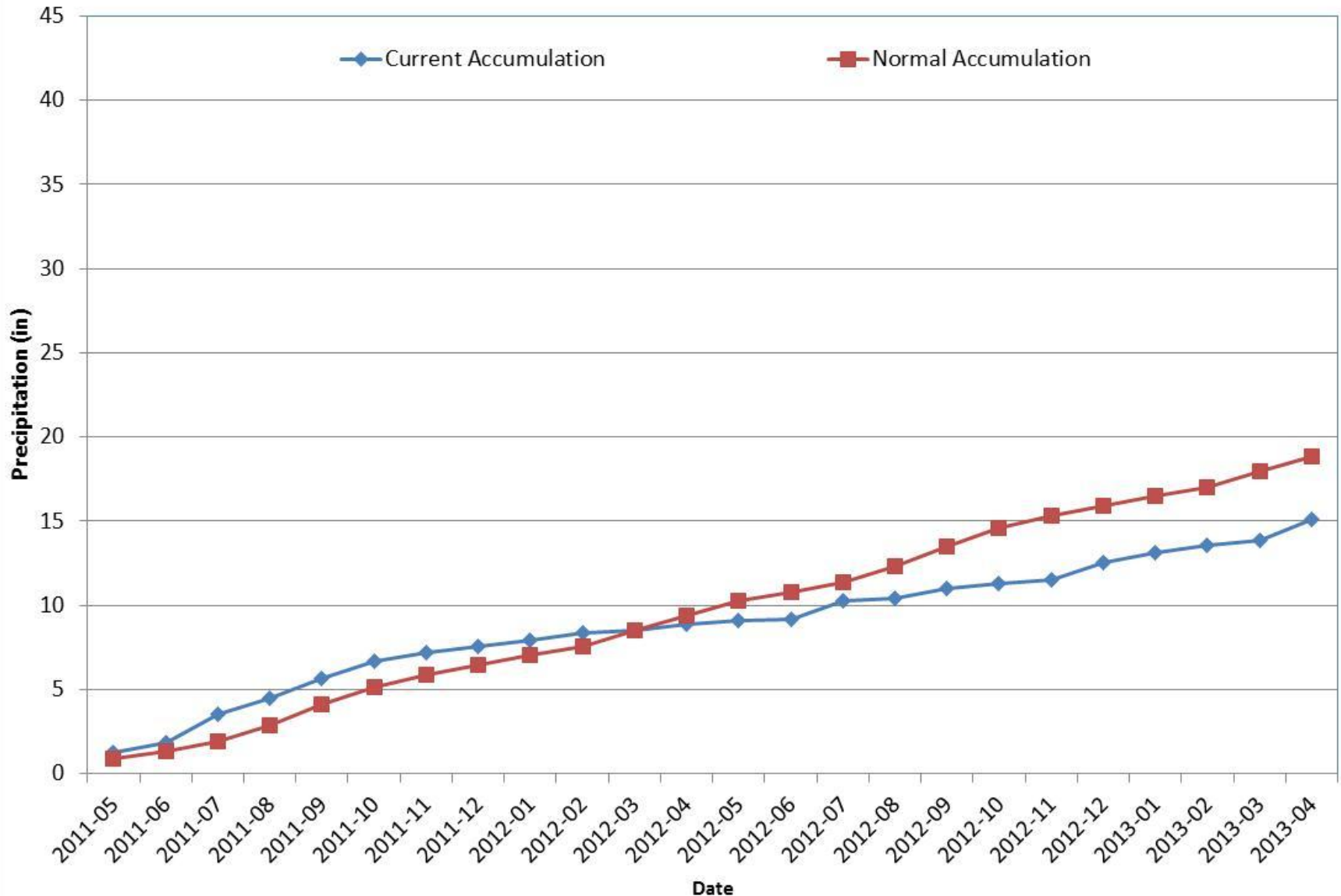
Division 2 – Grand Junction

Grand Junction Walker Field 2013 Water Year



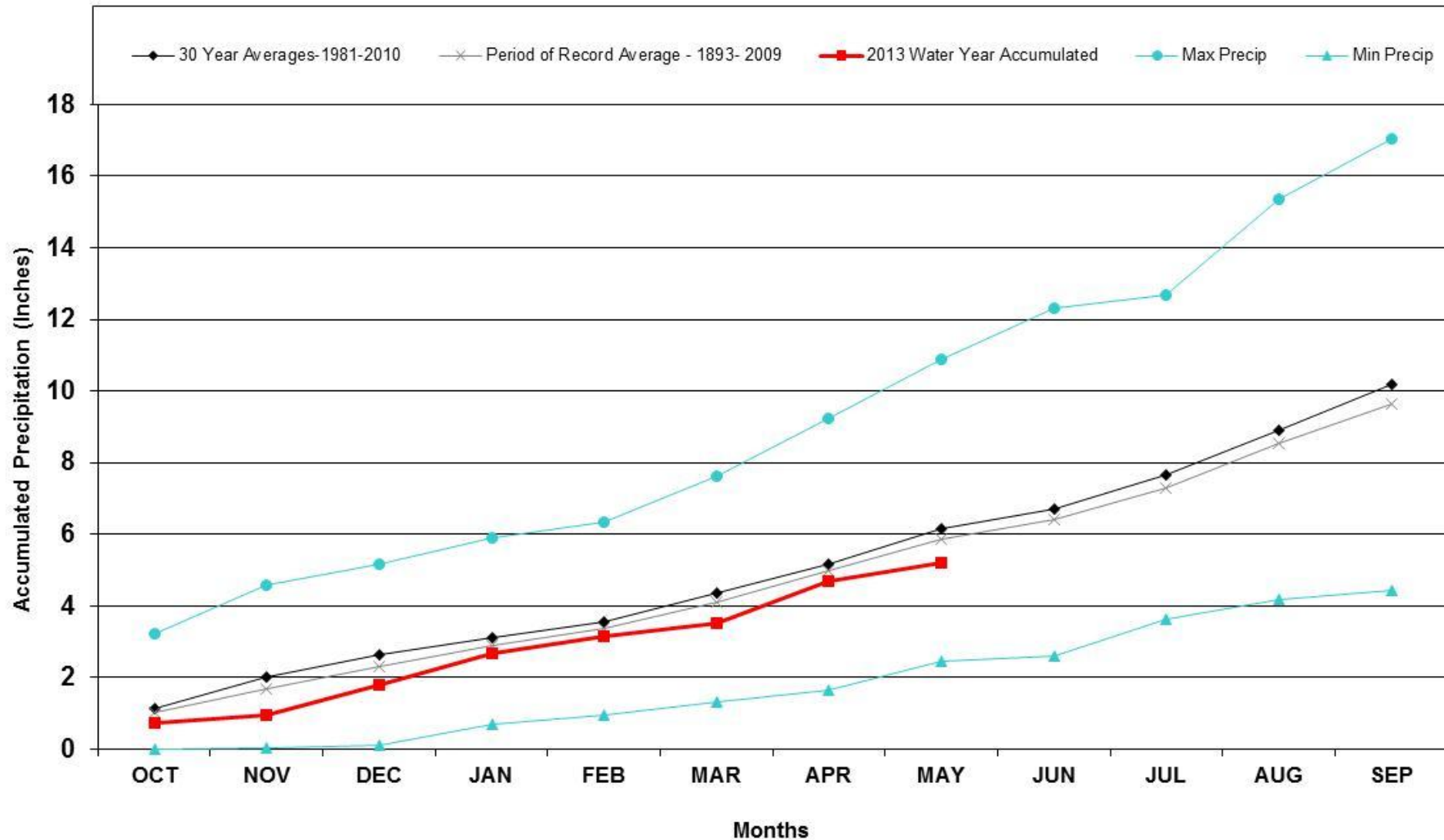
Division 2 – Grand Junction

Grand Junction 24 Month Precipitation Accumulation



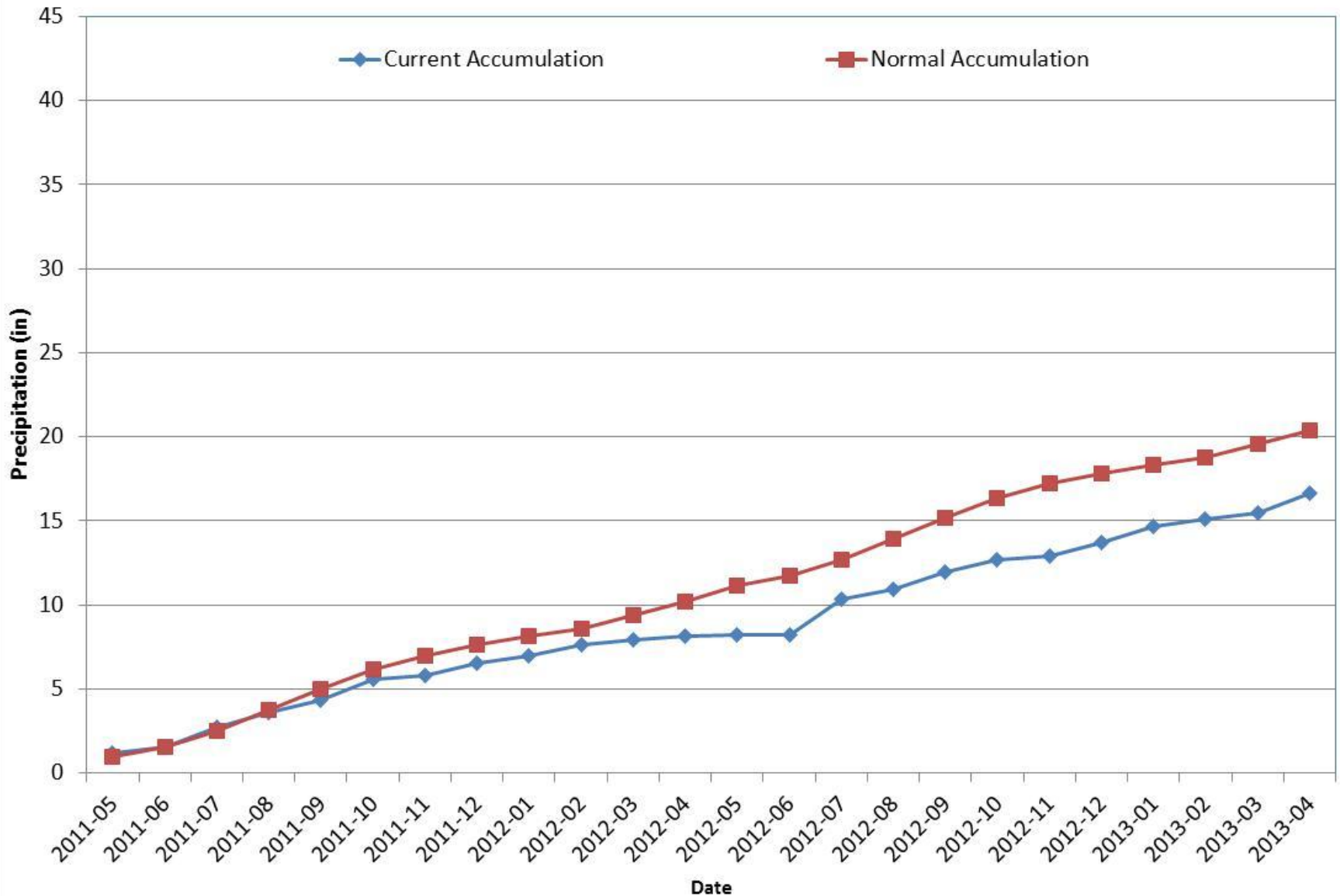
Division 3 – Montrose

Montrose #2 2013 Water Year



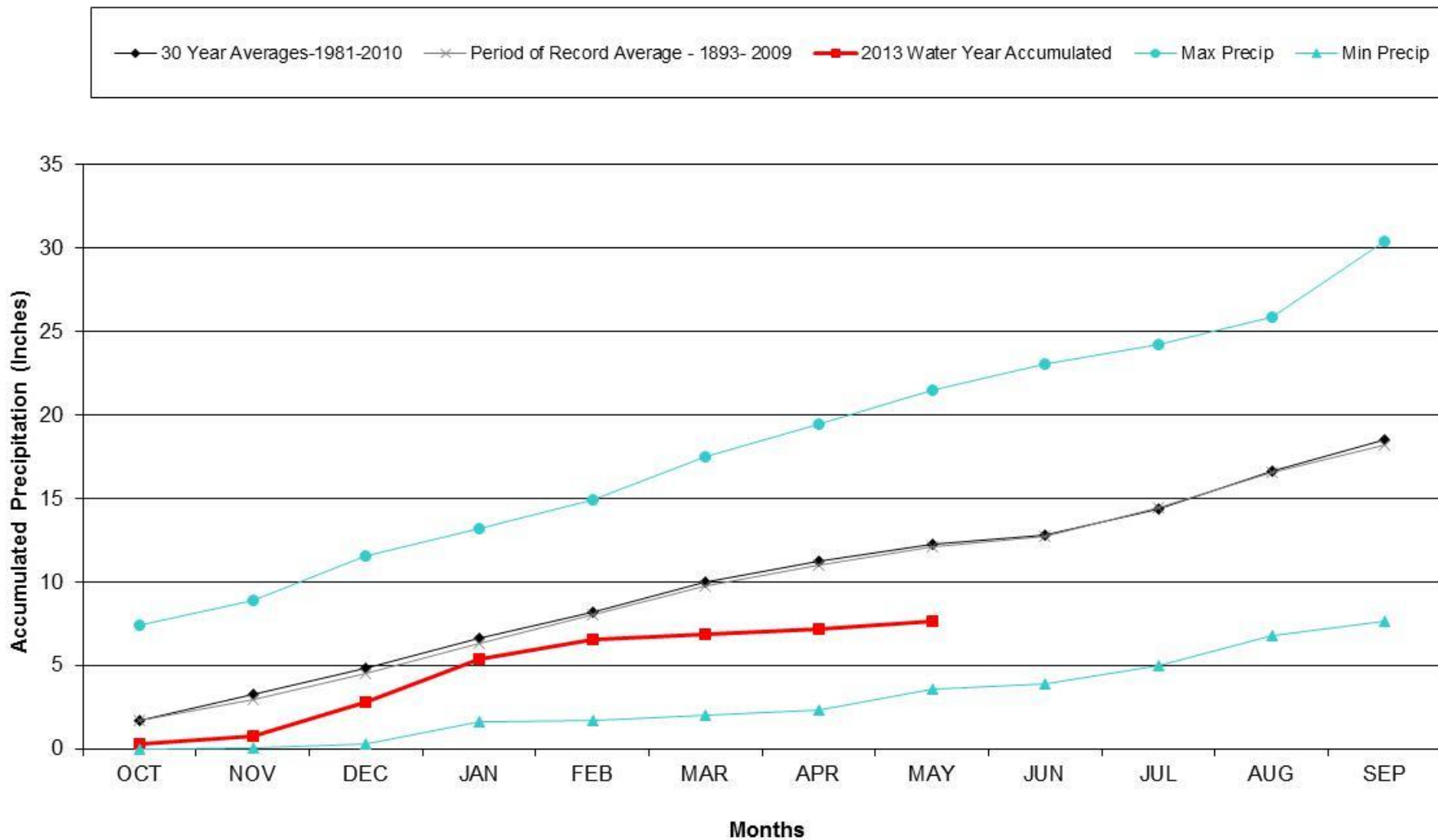
Division 3 – Montrose

Montrose #2 24 Month Precipitation Accumulation



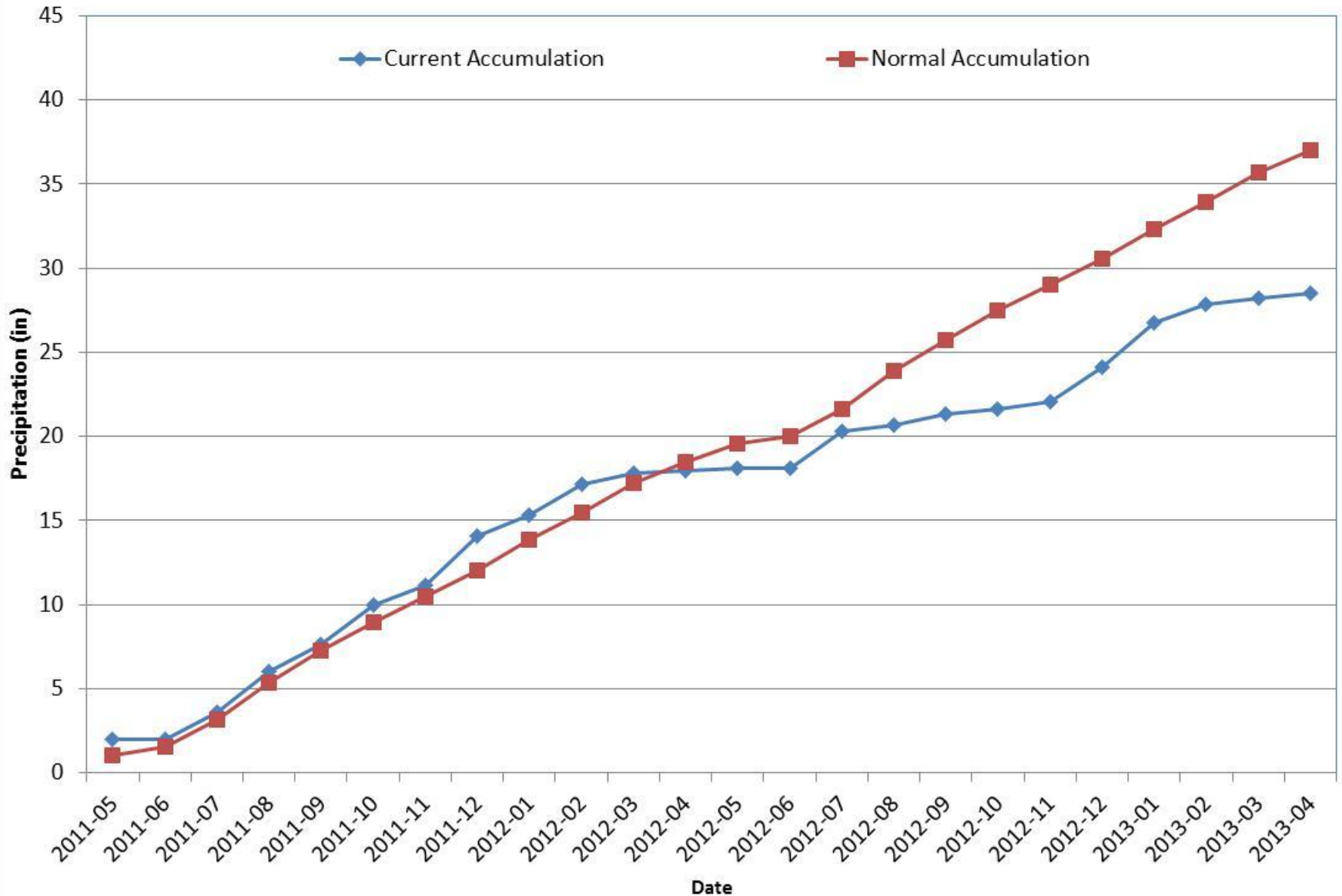
Division 3 – Mesa Verde NP

Mesa Verde NP 2013 Water Year



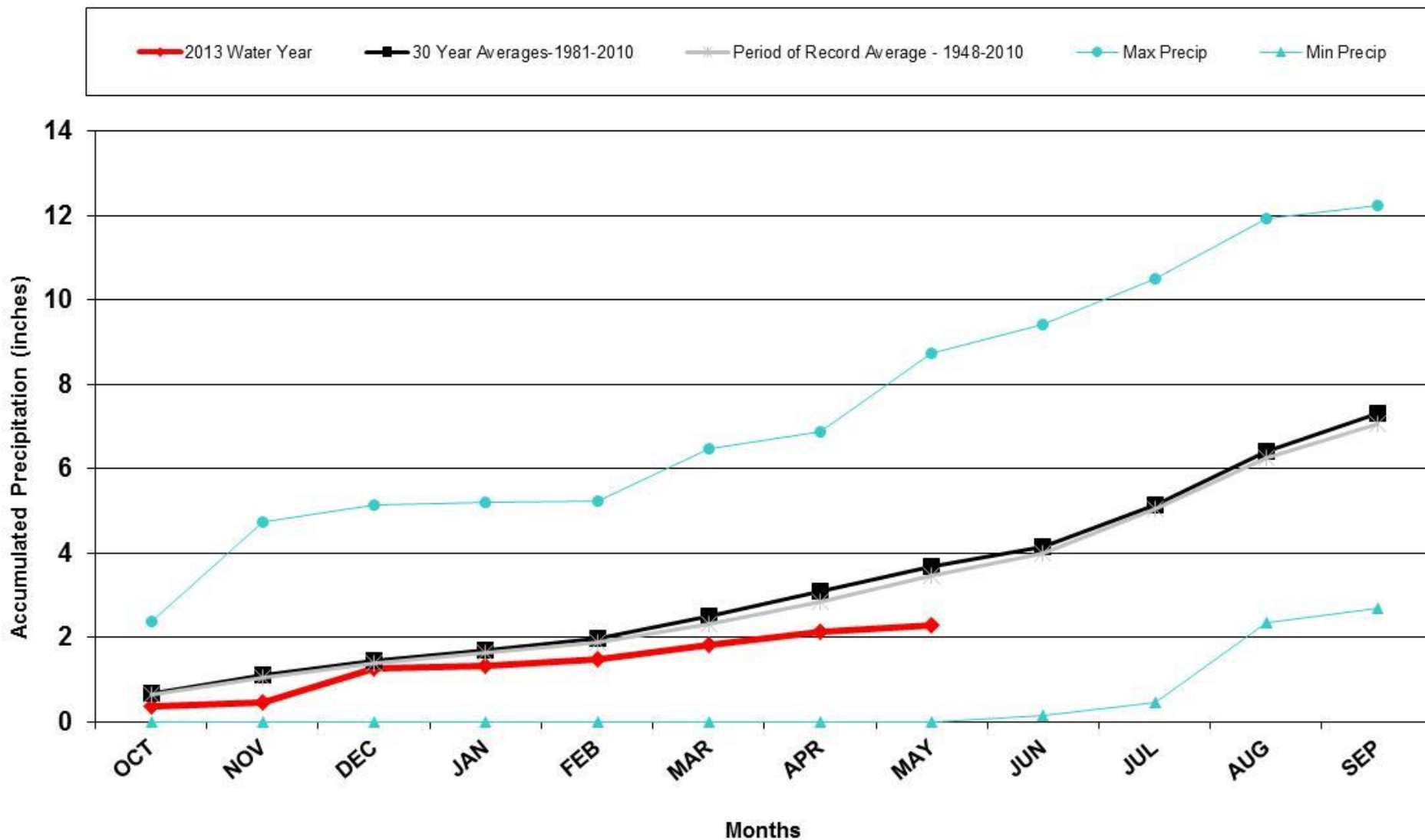
Division 3 – Mesa Verde NP

Mesa Verde NP 24 Month Precipitation Accumulation



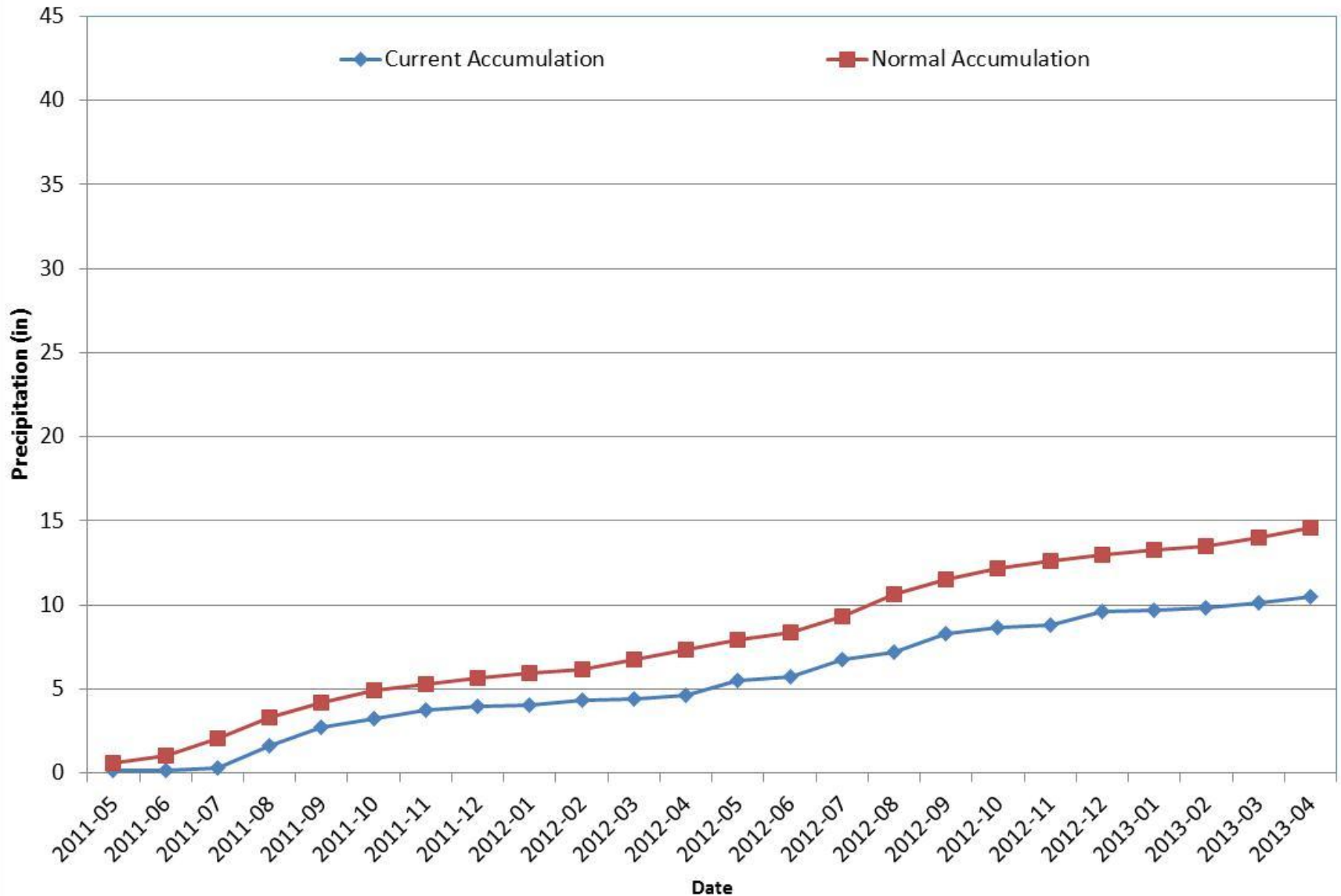
Division 4 – Alamosa

Alamosa WSO 2013 Water Year



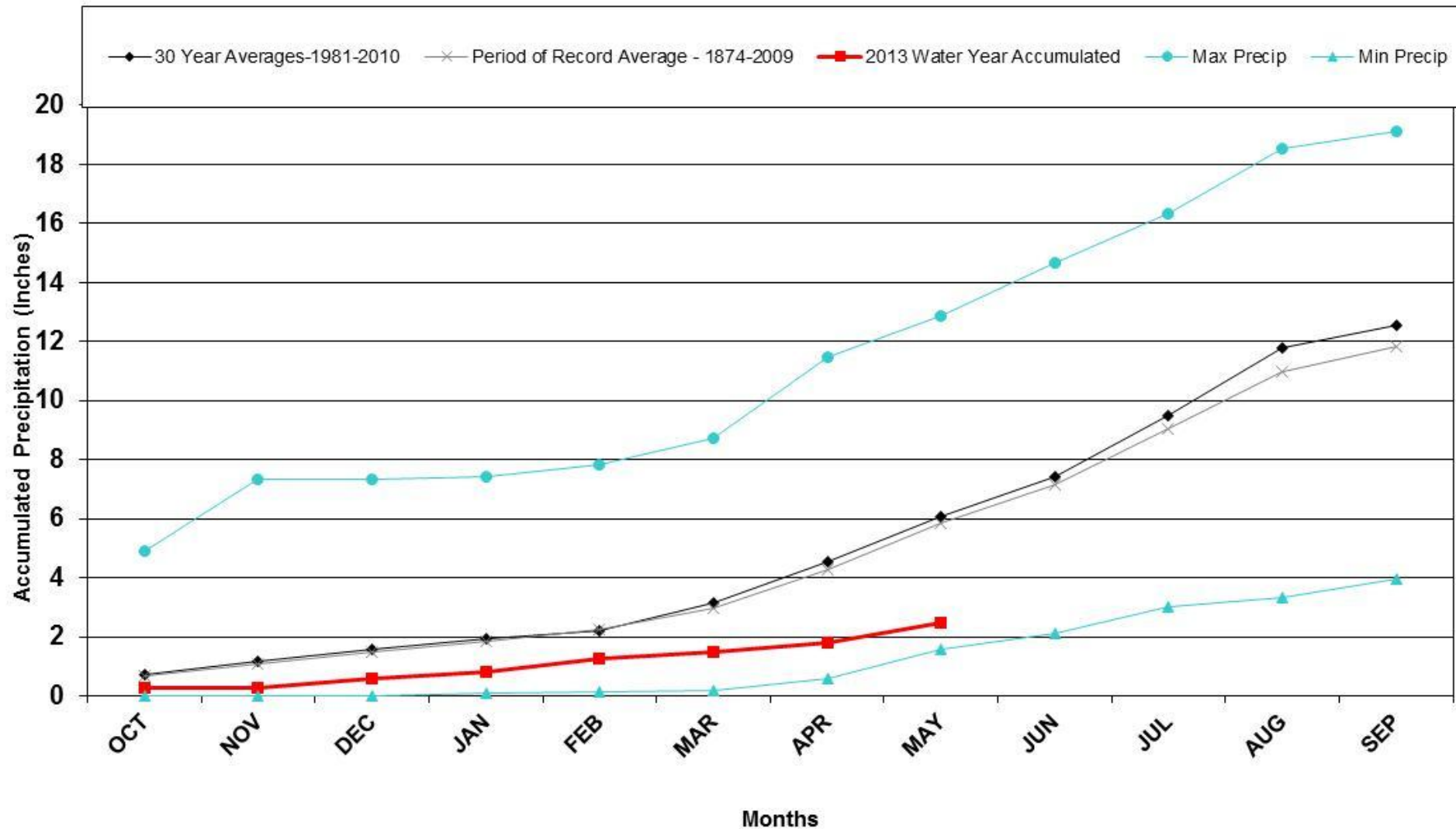
Division 4 – Alamosa

Alamosa WSO 24 Month Precipitation Accumulation



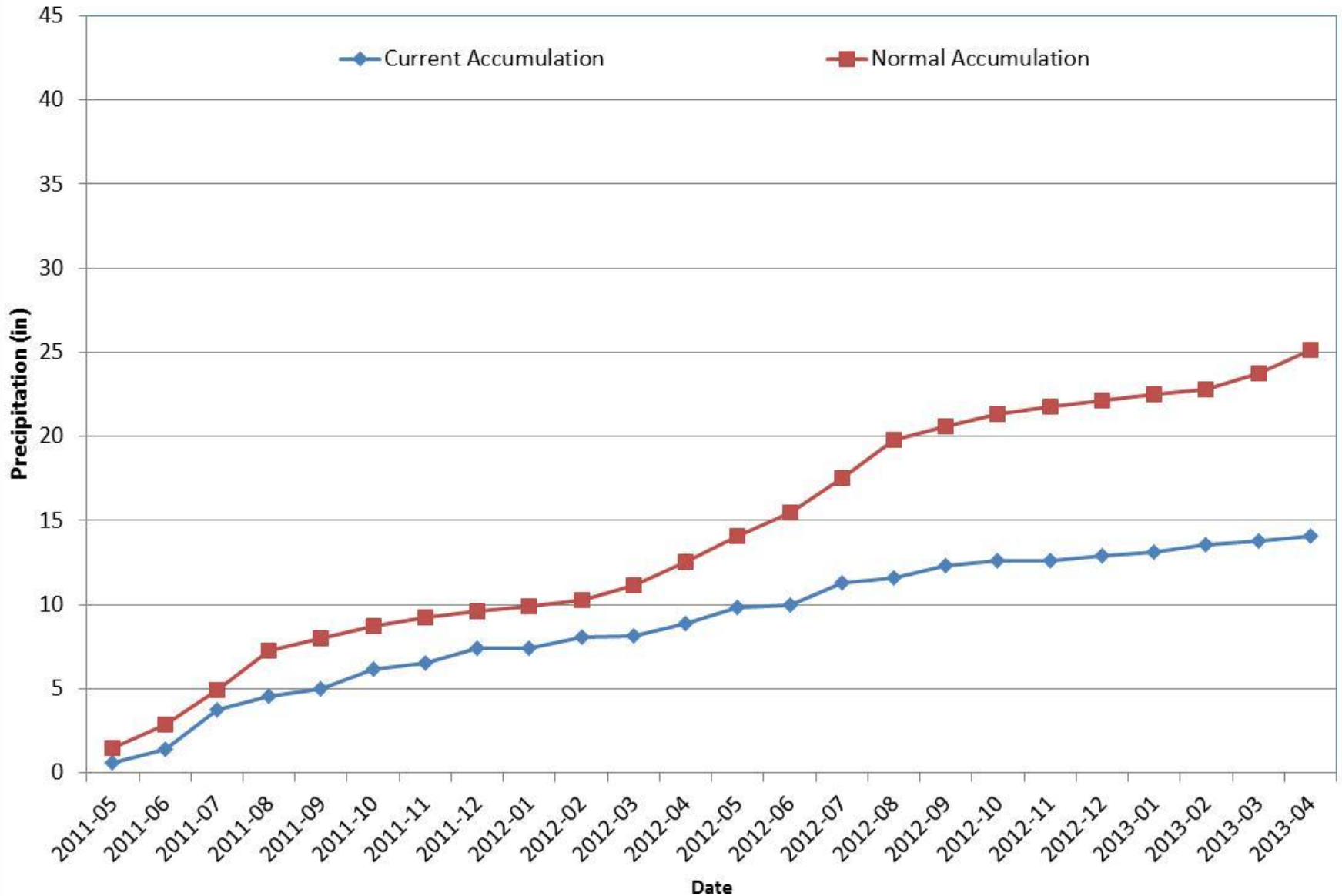
Division 5 – Pueblo

Pueblo WSO 2013 Water Year



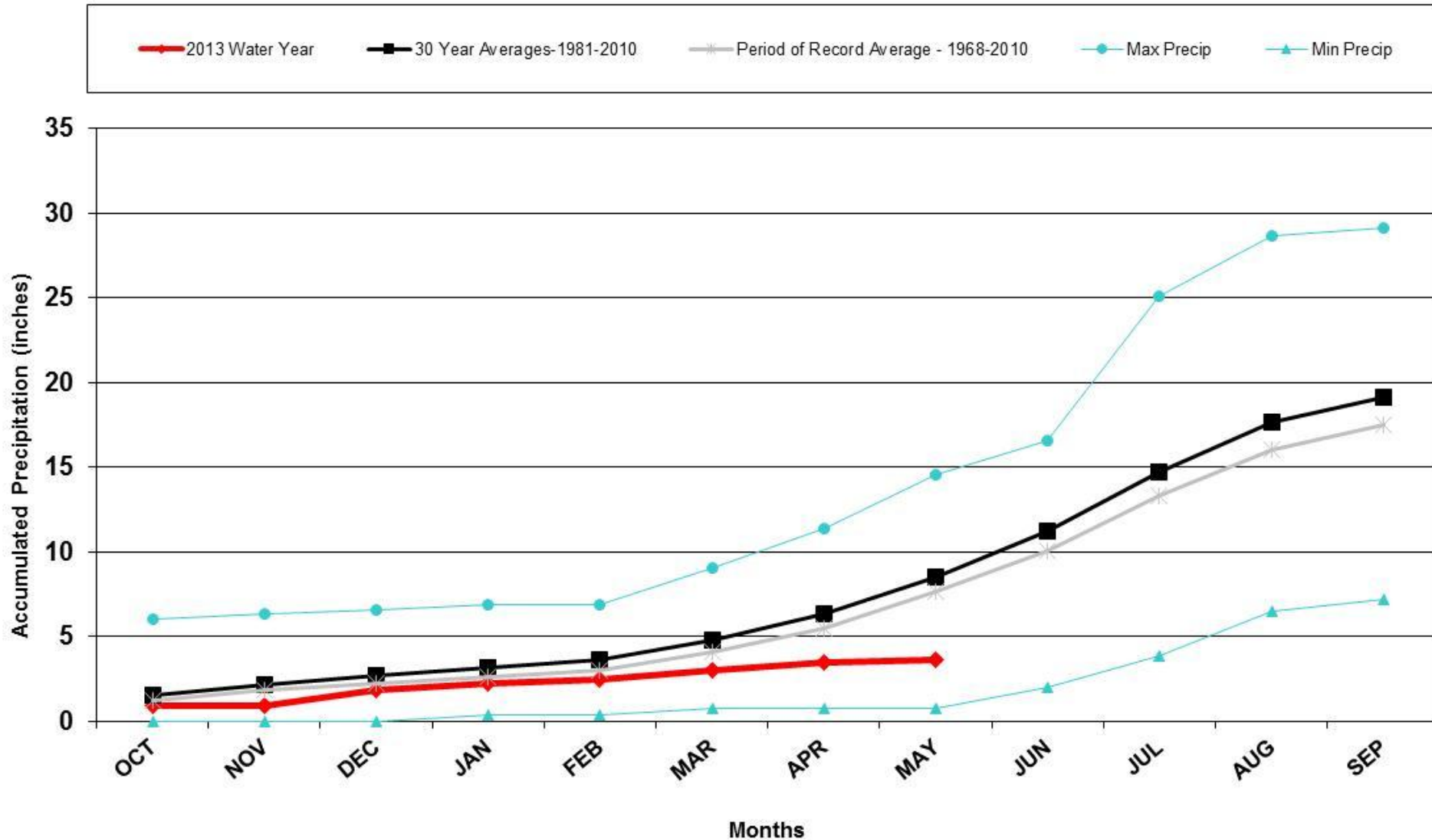
Division 5 – Pueblo

Pueblo Memorial AP 24 Month Precipitation Accumulation



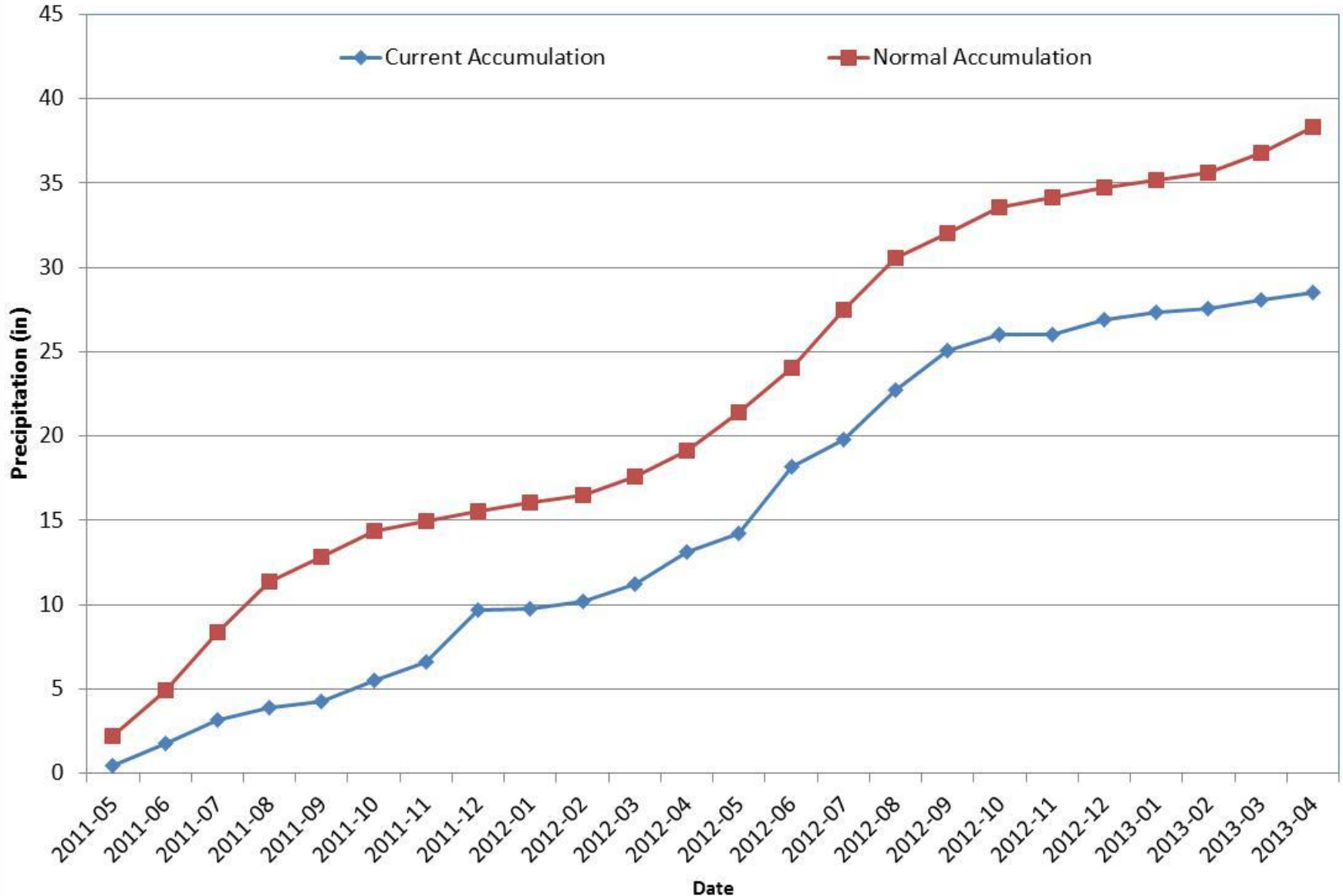
Division 6 - Walsh

Walsh 2013 Water Year



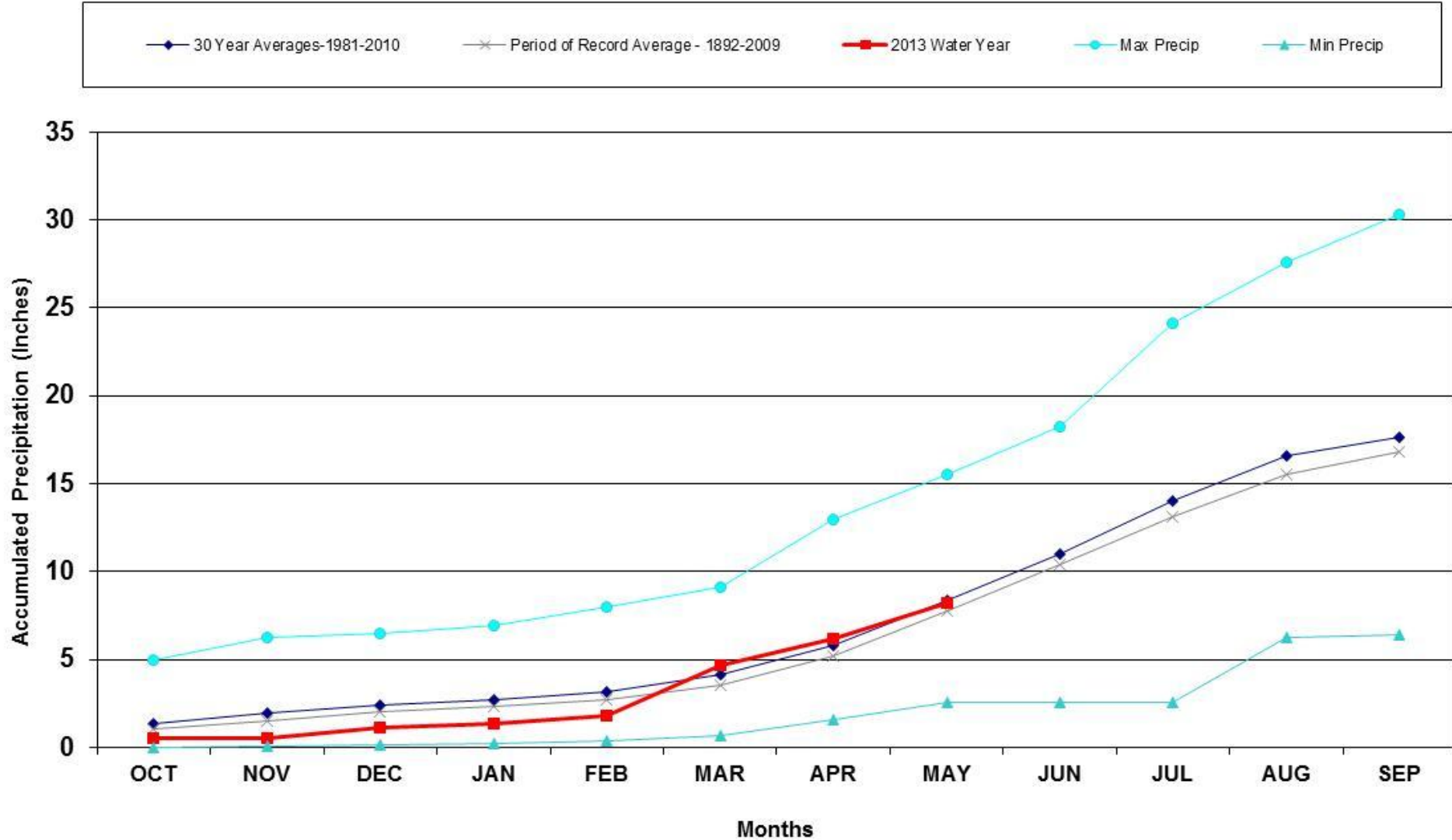
Division 6 - Walsh

Walsh 1W 24 Month Precipitation Accumulation



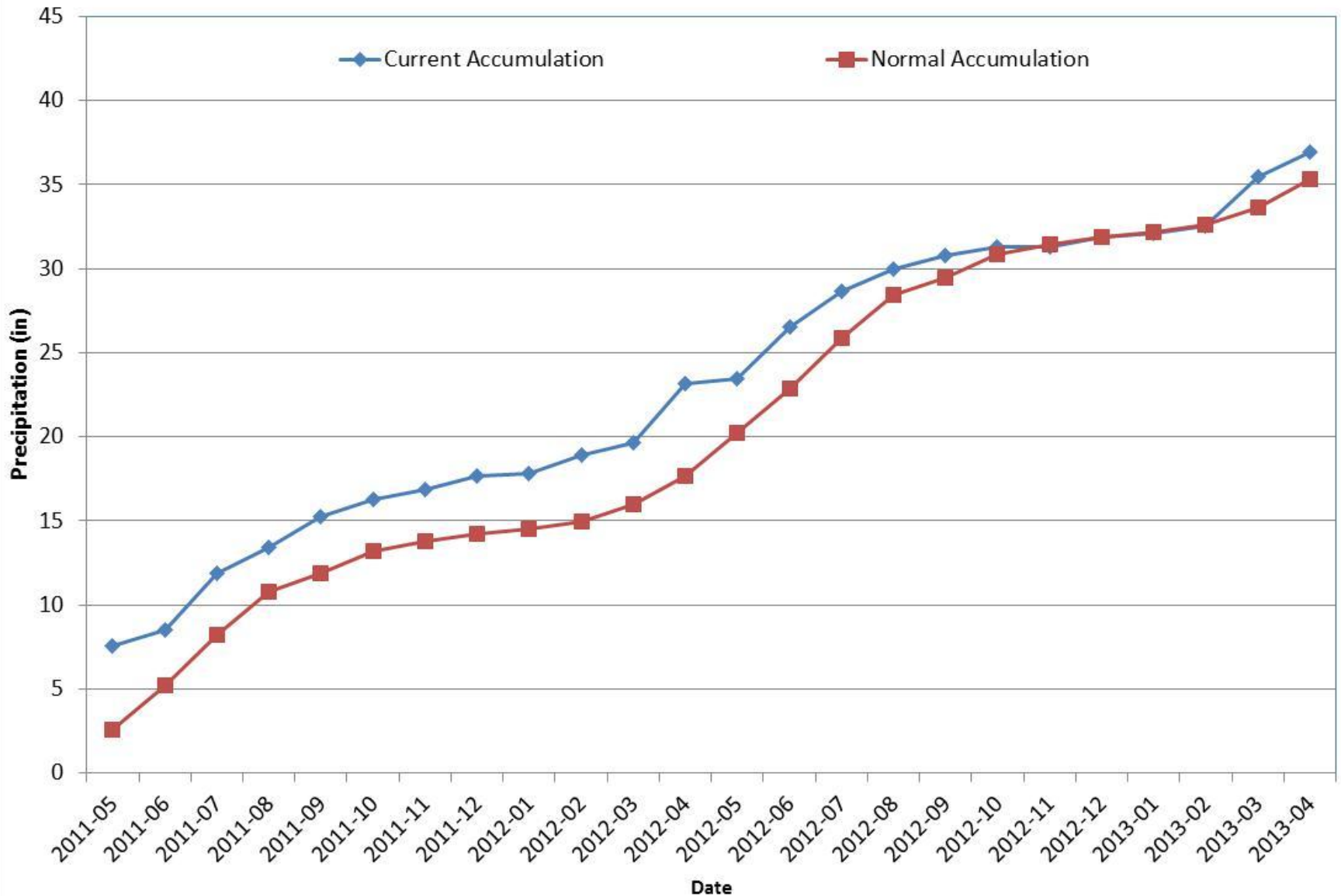
Division 6 - Burlington

Burlington 2013 Water Year



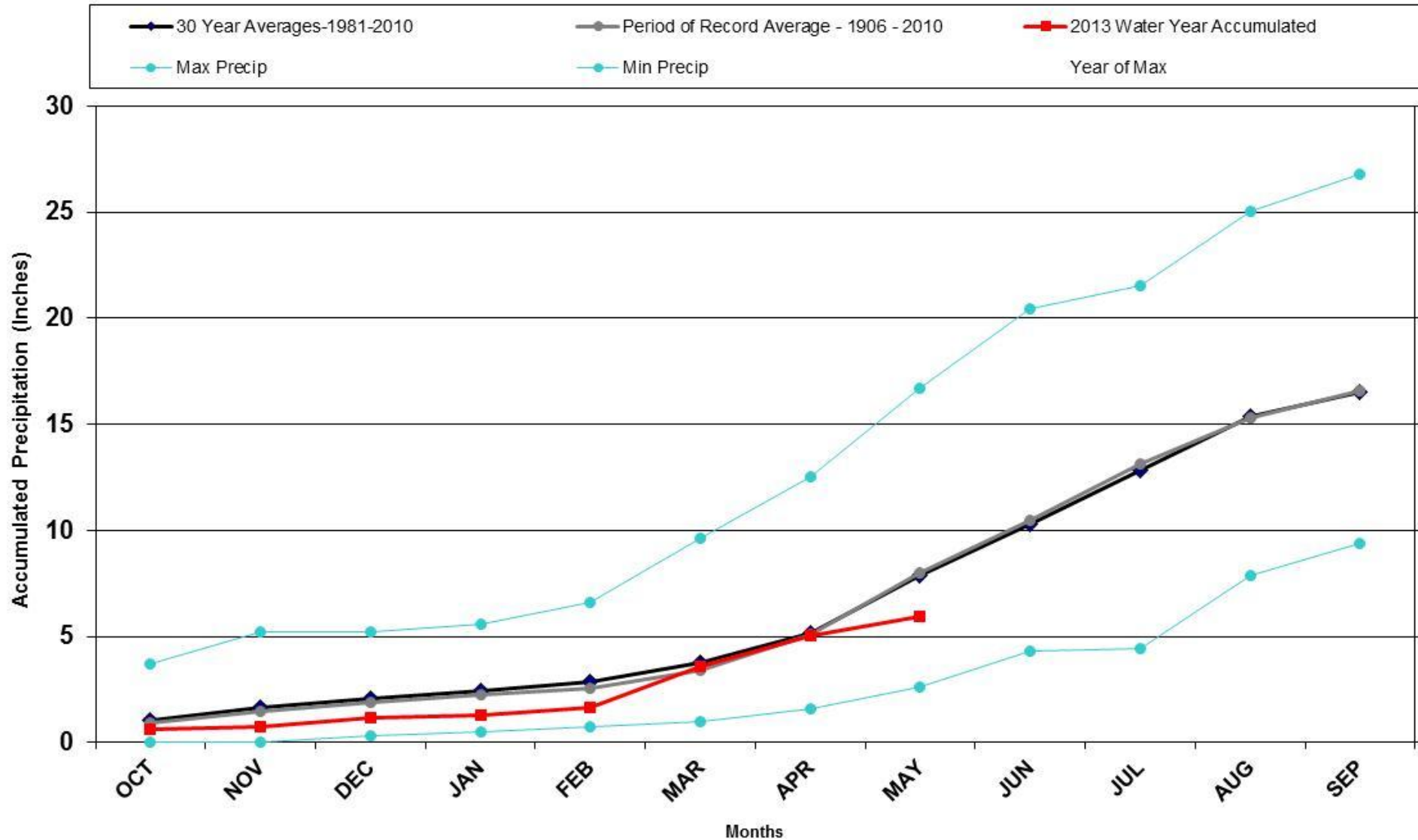
Division 6 - Burlington

Burlington, CO 24 Month Precipitation Accumulation



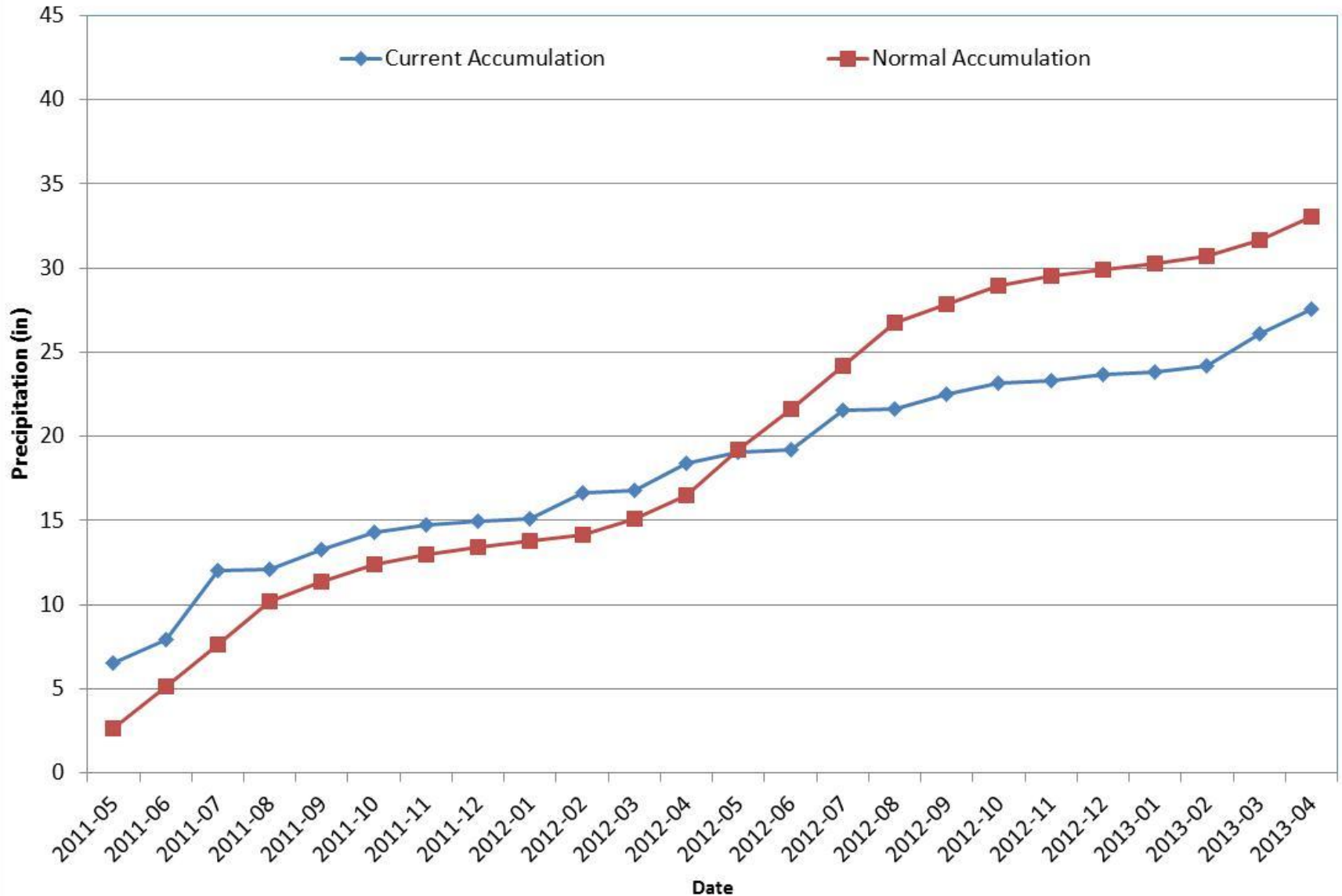
Division 7 – Akron

Akron 4E 2013 Water Year



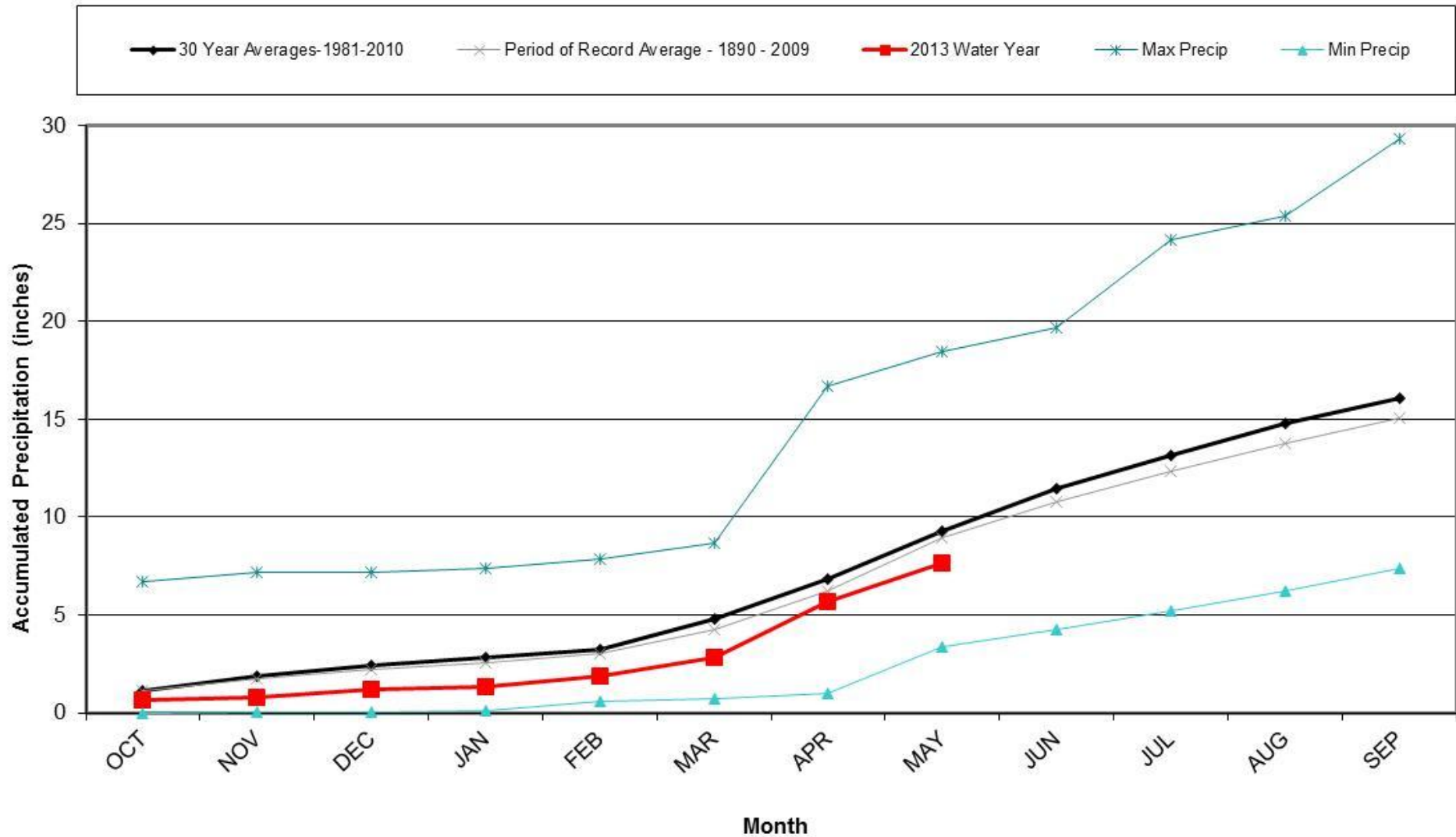
Division 7 – Akron

Akron 4E 24 Month Precipitation Accumulation



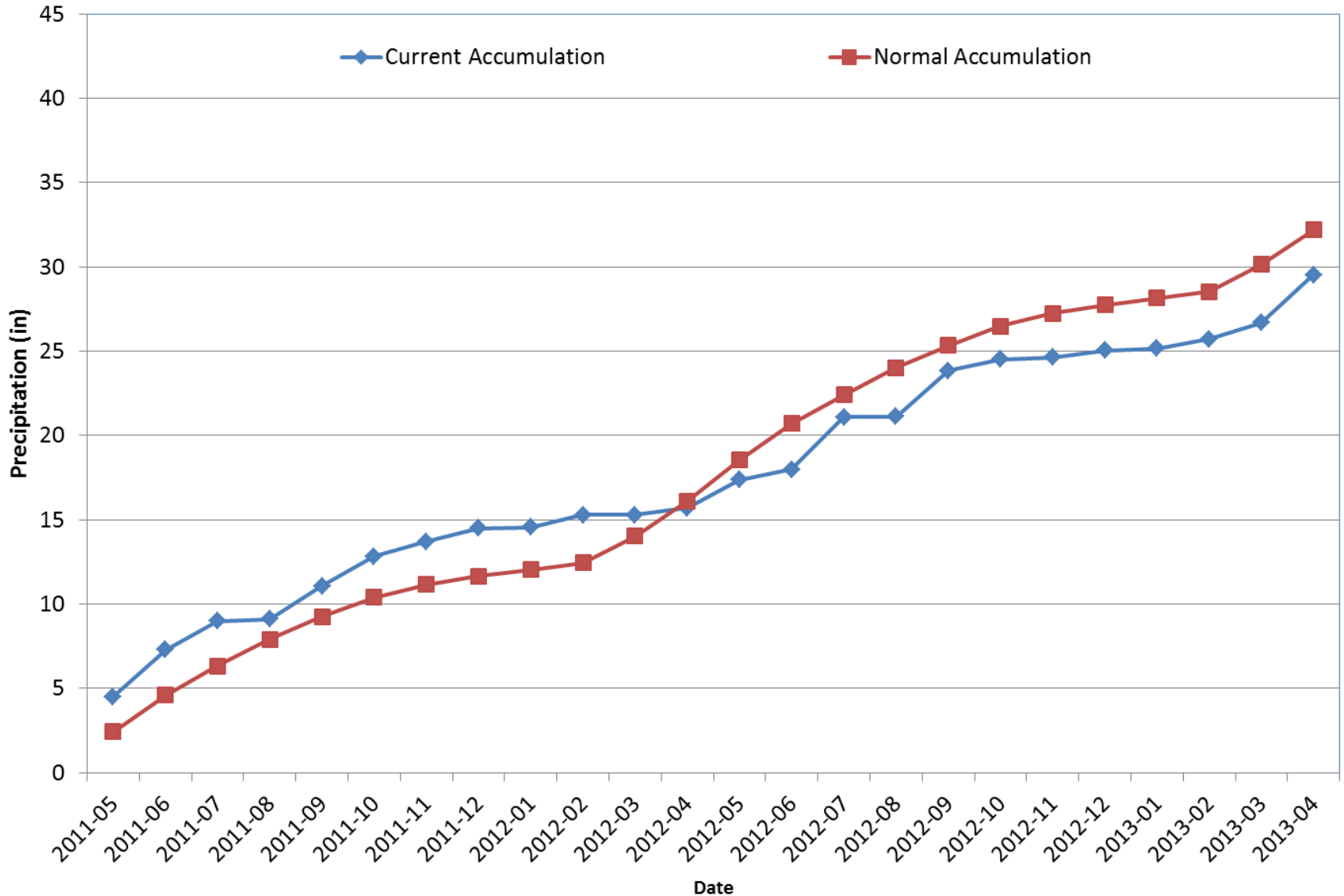
Division 8 – Fort Collins

Fort Collins 2013 Water Year



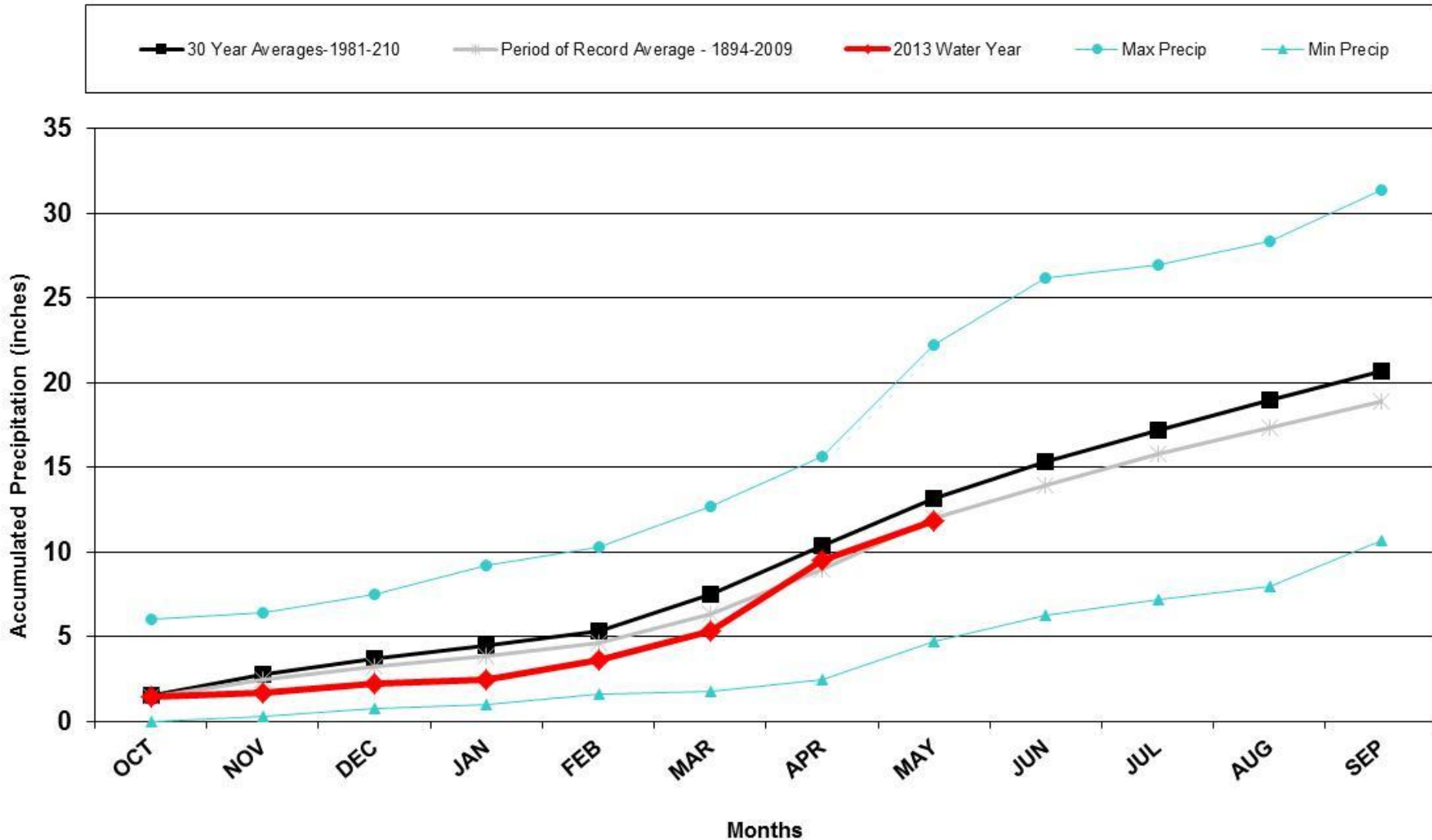
Division 8 – Fort Collins

Fort Collins 24 Month Precipitation Accumulation



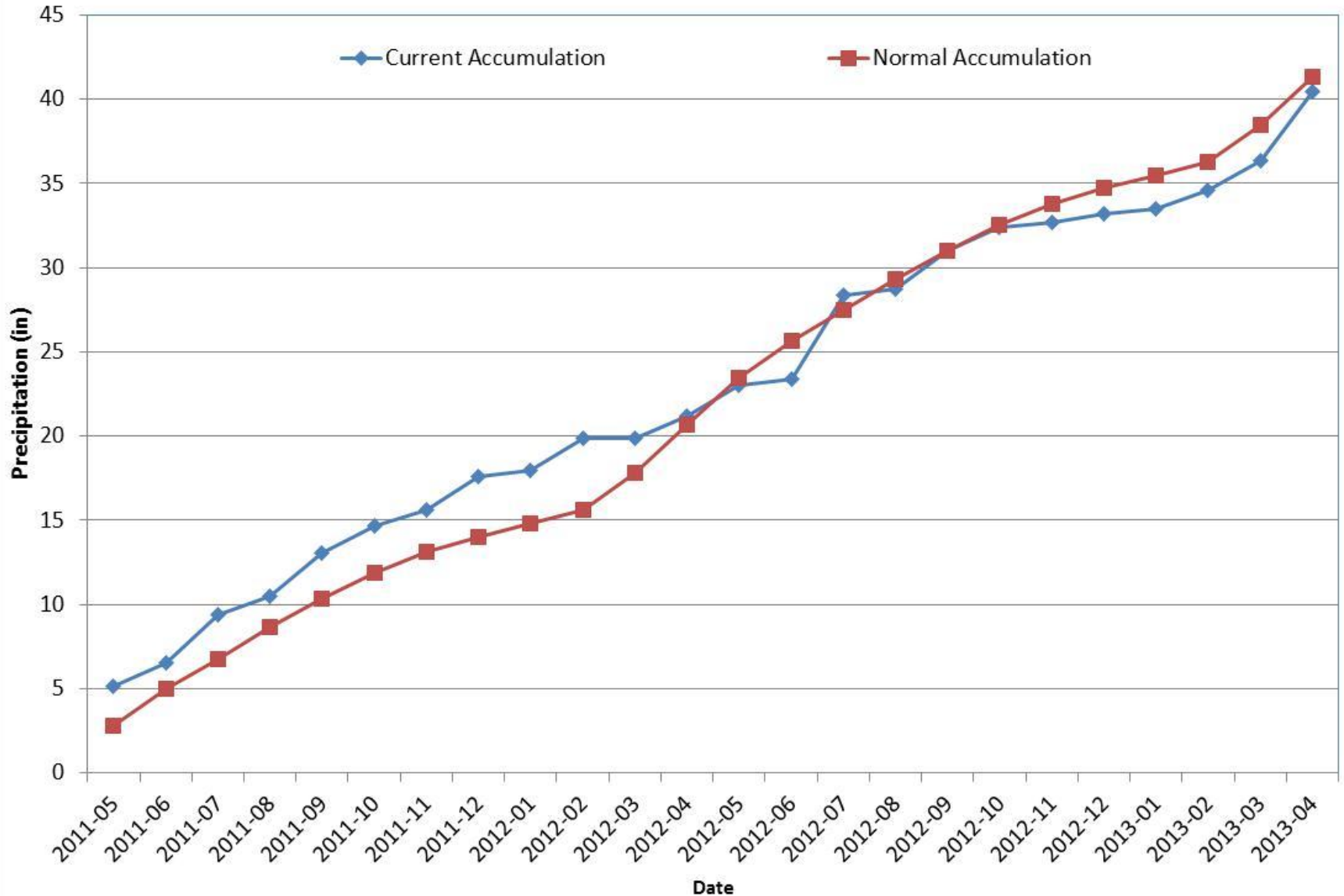
Division 8 - Boulder

Boulder 2013 Water Year

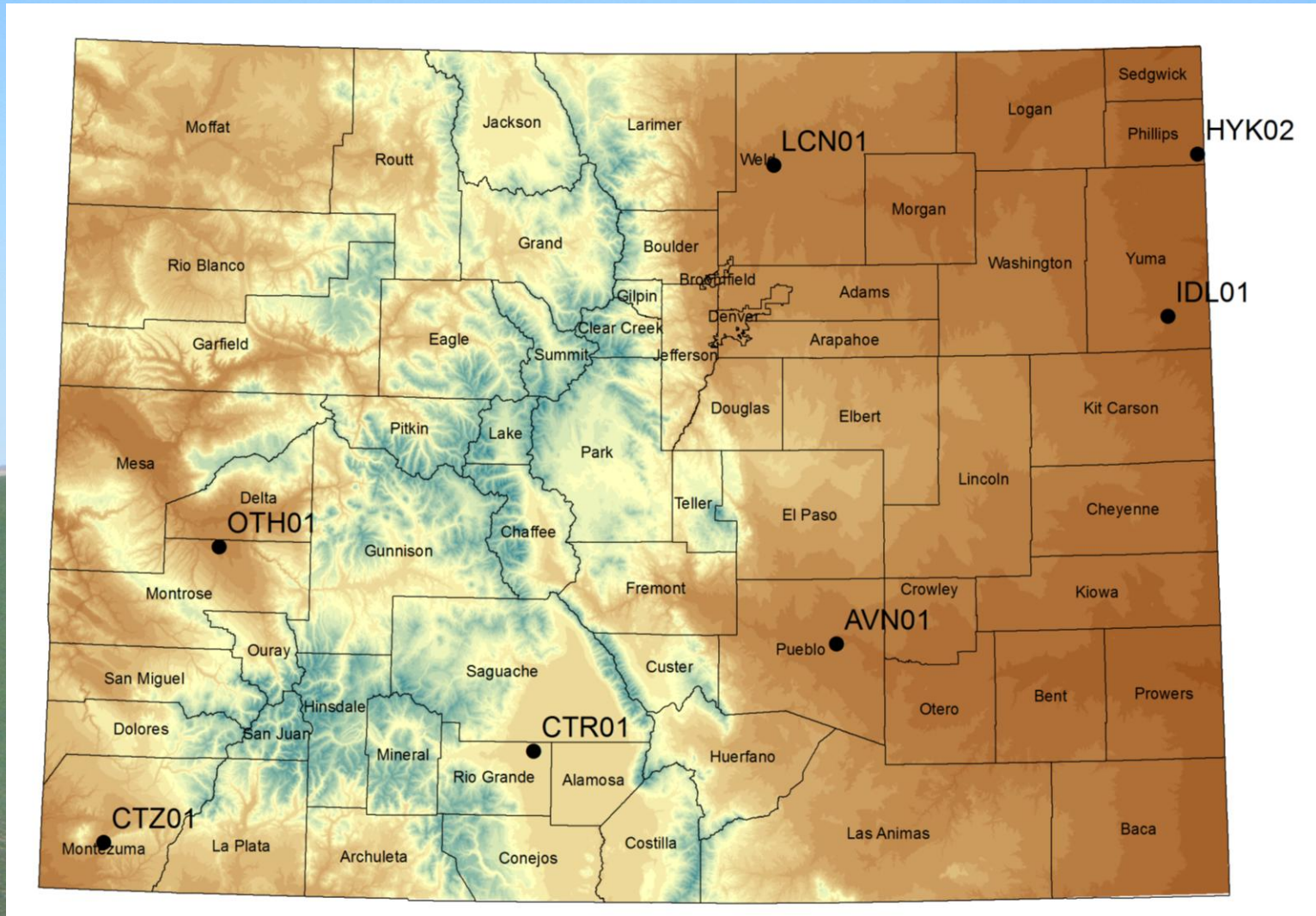


Division 8 - Boulder

Boulder 24 Month Precipitation Accumulation

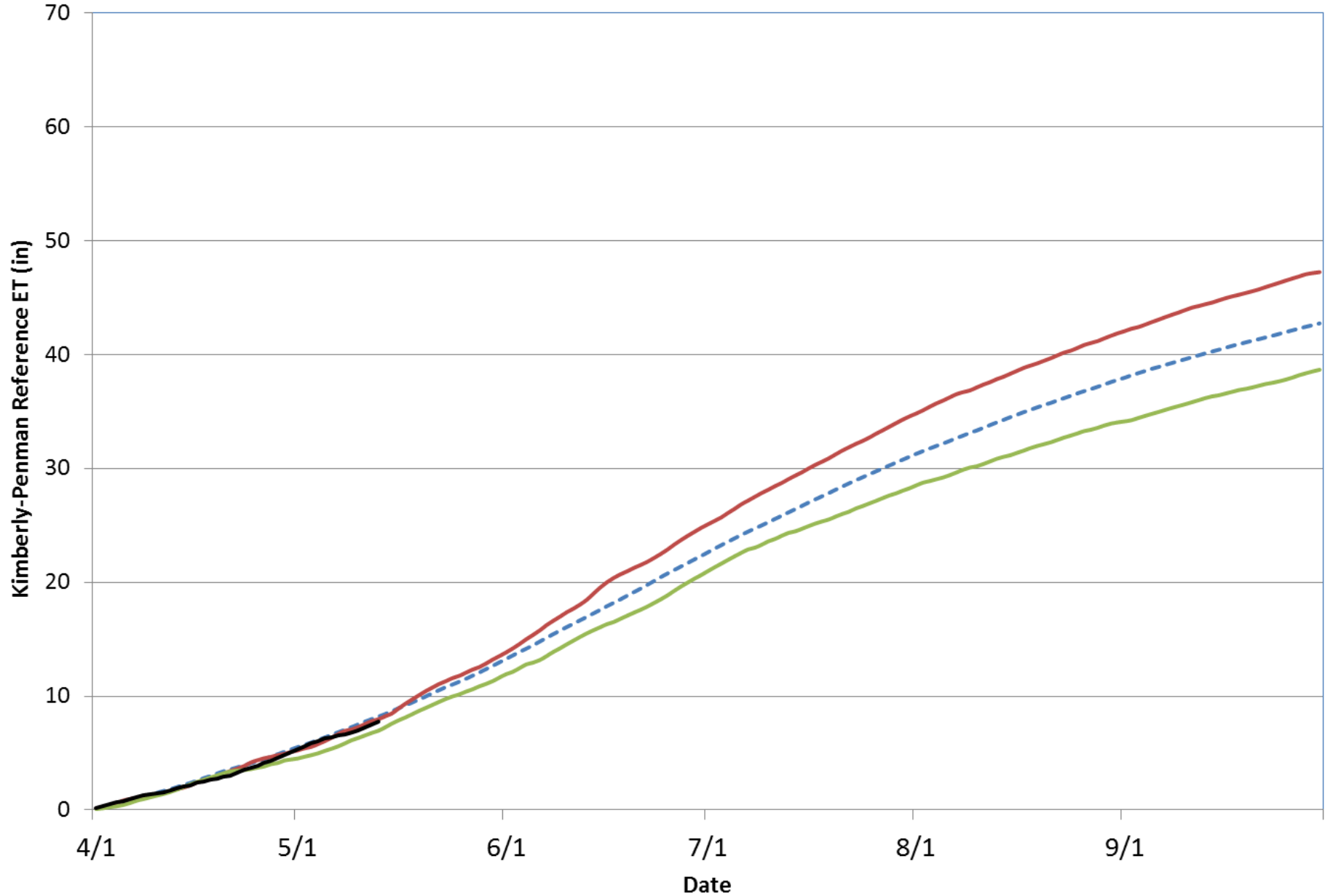


CoAgMet Reference Evapotranspiration Stations



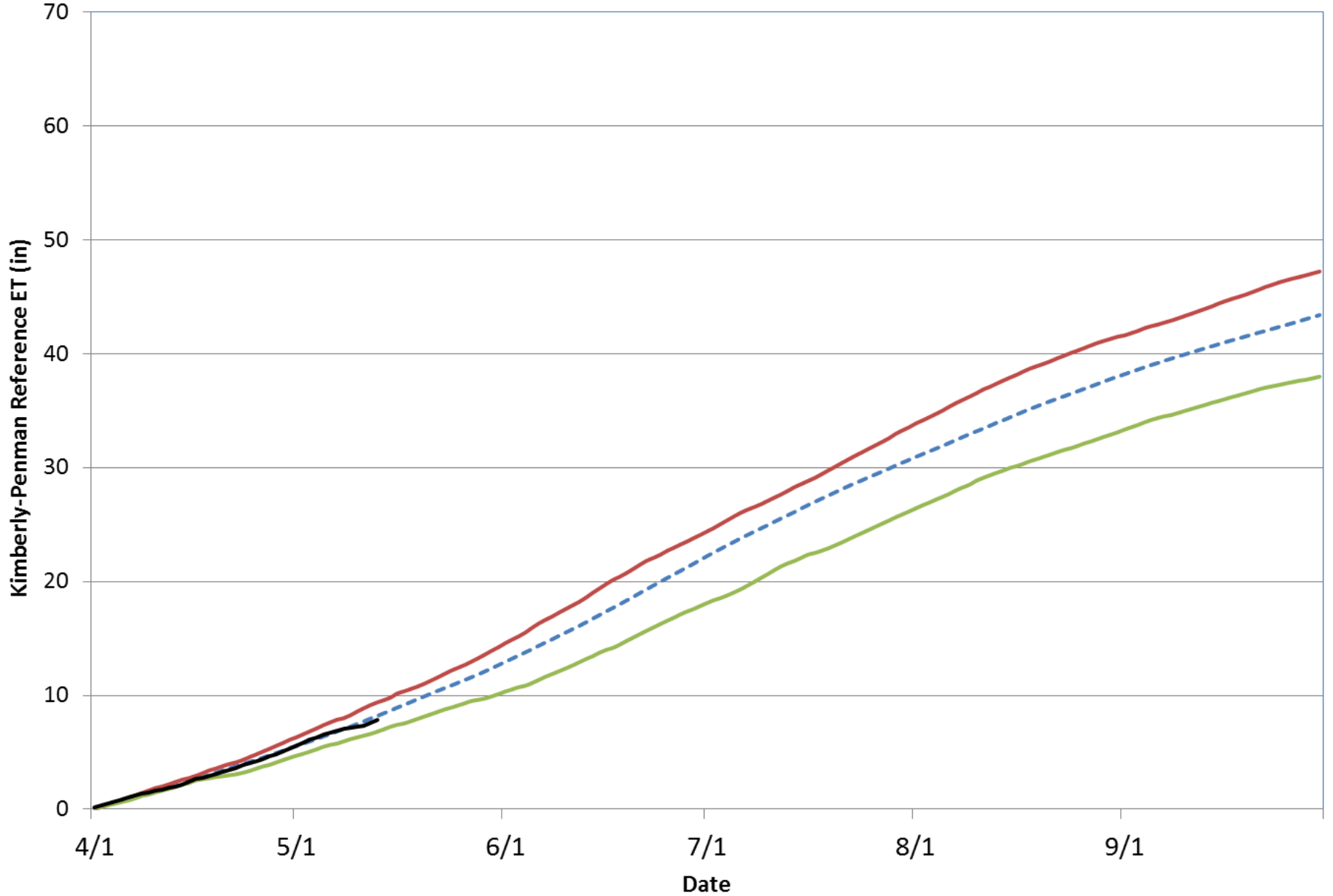
Olathe Kimberly-Penman Reference ET (1993 - 2013)

--- Average — 1994 — 1999 — 2013



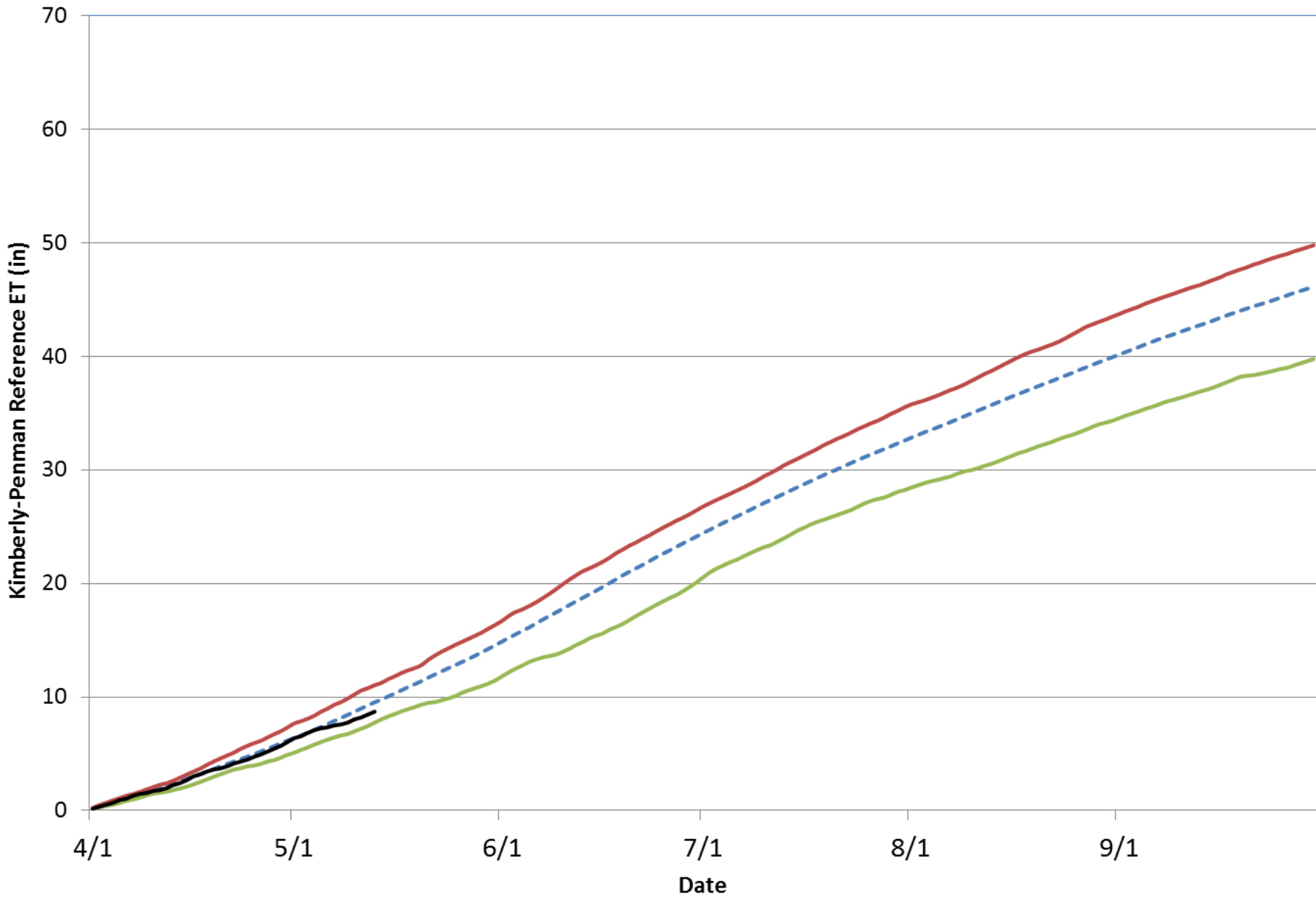
Cortez Kimberly-Penman Reference ET (1992 - 2013)

--- Average — 2000 — 1995 — 2013



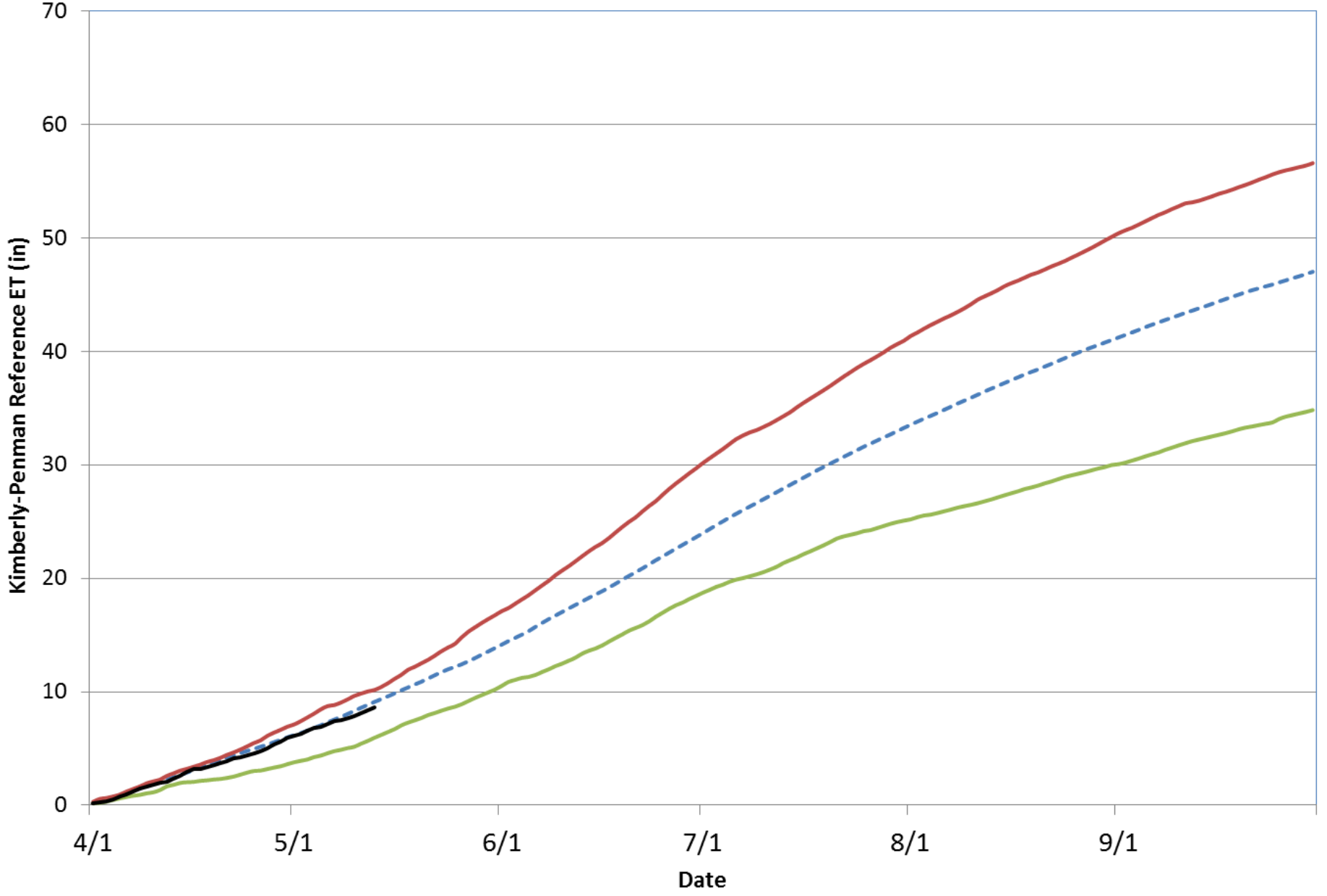
Center Kimberly-Penman Reference ET (1994 - 2013)

--- Average — 2002 — 1997 — 2013



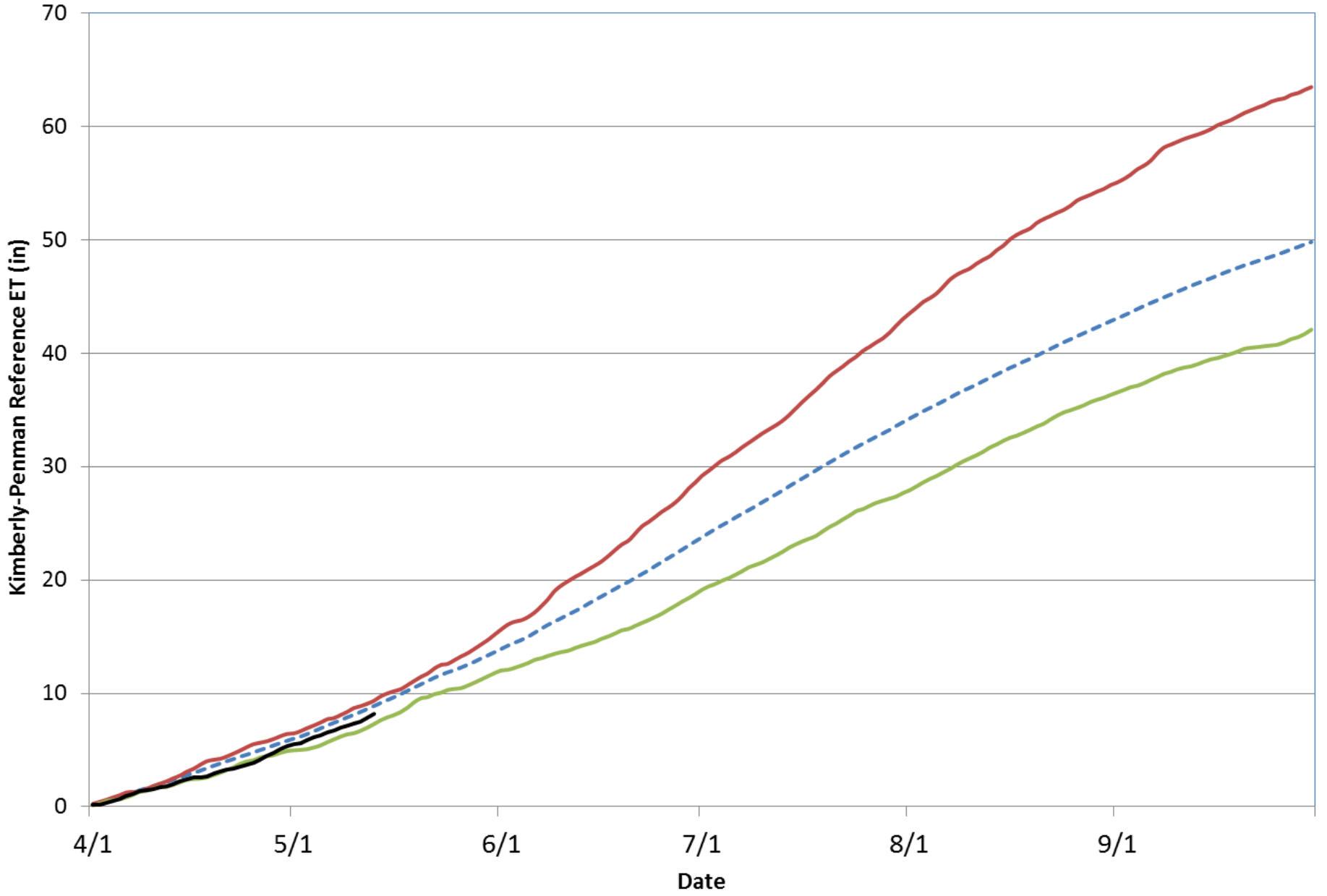
Avondale Kimberly-Penman Reference ET (1993 - 2013)

--- Average — 2012 — 1998 — 2013



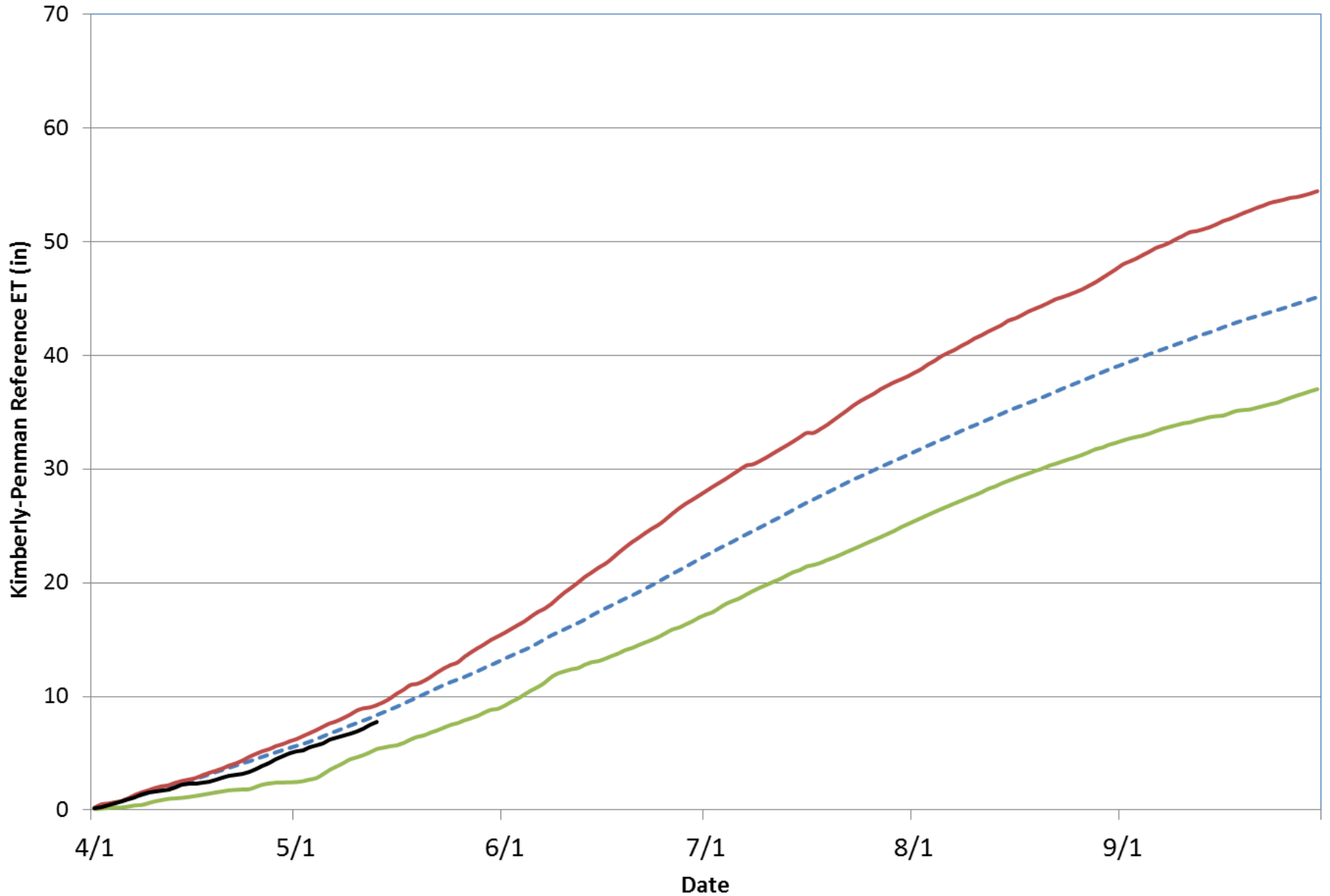
Idalia Kimberly-Penman Reference ET (1992 - 2013)

--- Average — 2002 — 2009 — 2013



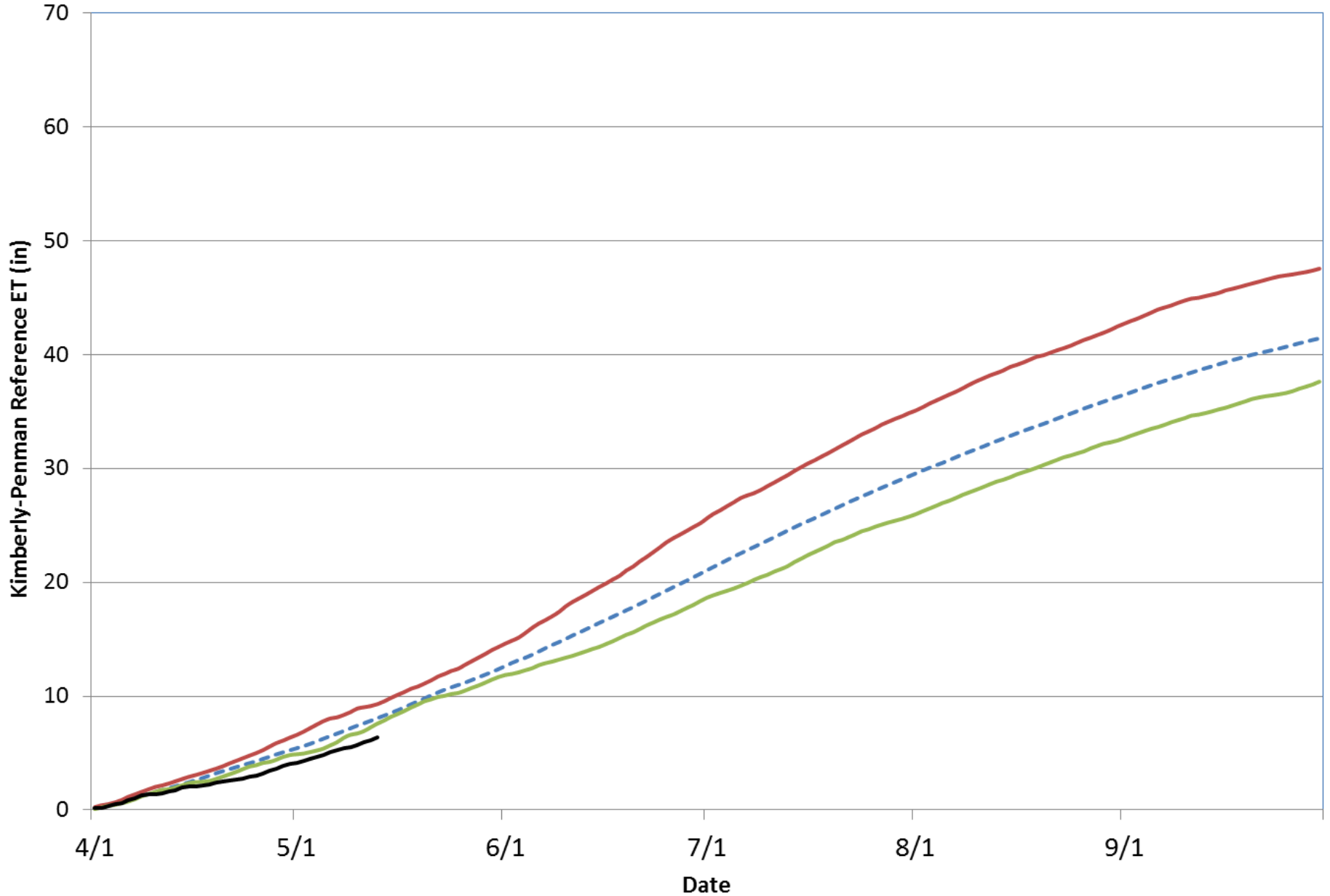
Holyoke Kimberly-Penman Reference ET (1992 - 2013)

--- Average — 2012 — 1999 — 2013



Lucerne Kimberly-Penman Reference ET (1992 - 2013)

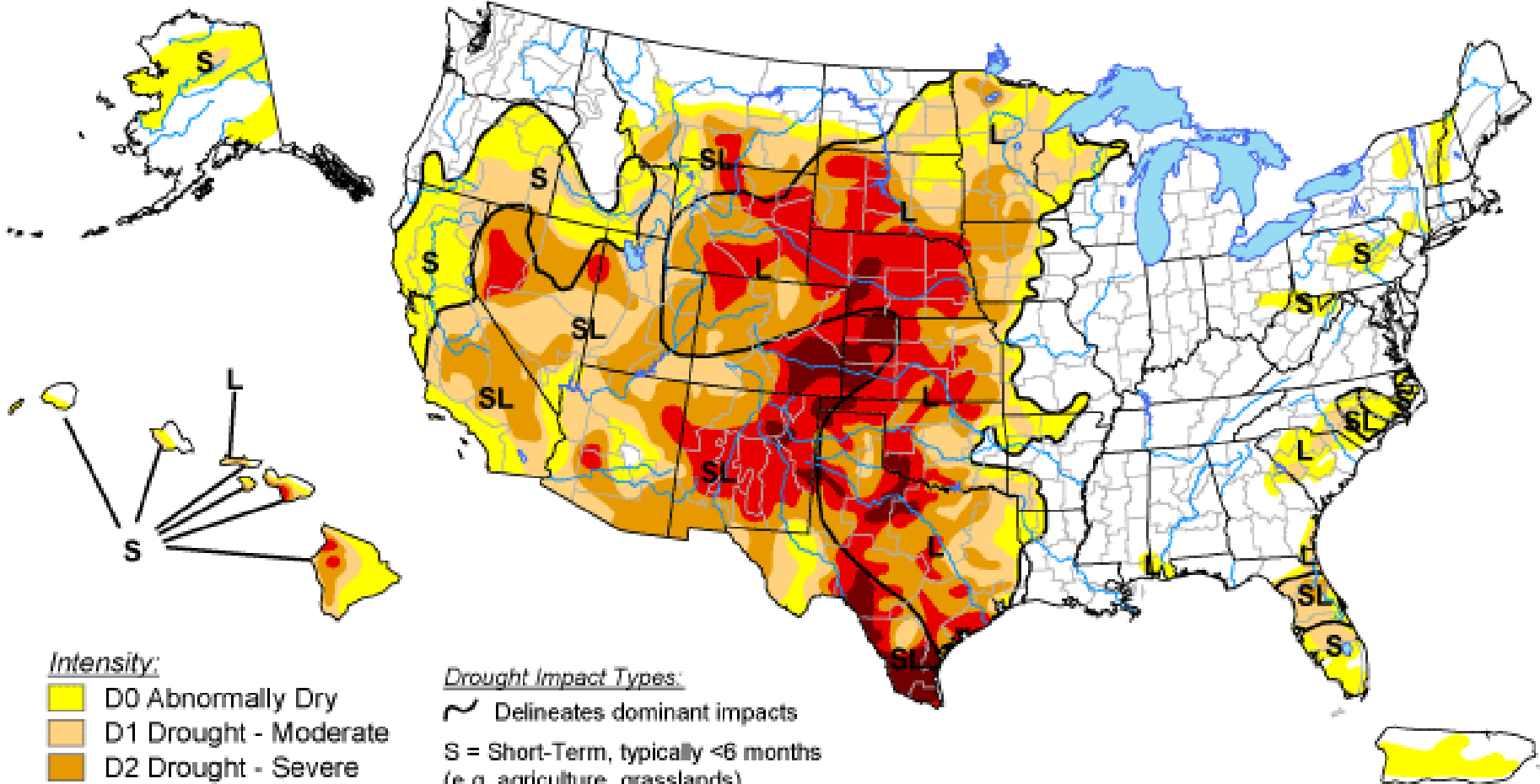
--- Average — 2012 — 2009 — 2013








U.S. Drought Monitor

April 16, 2013


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.

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

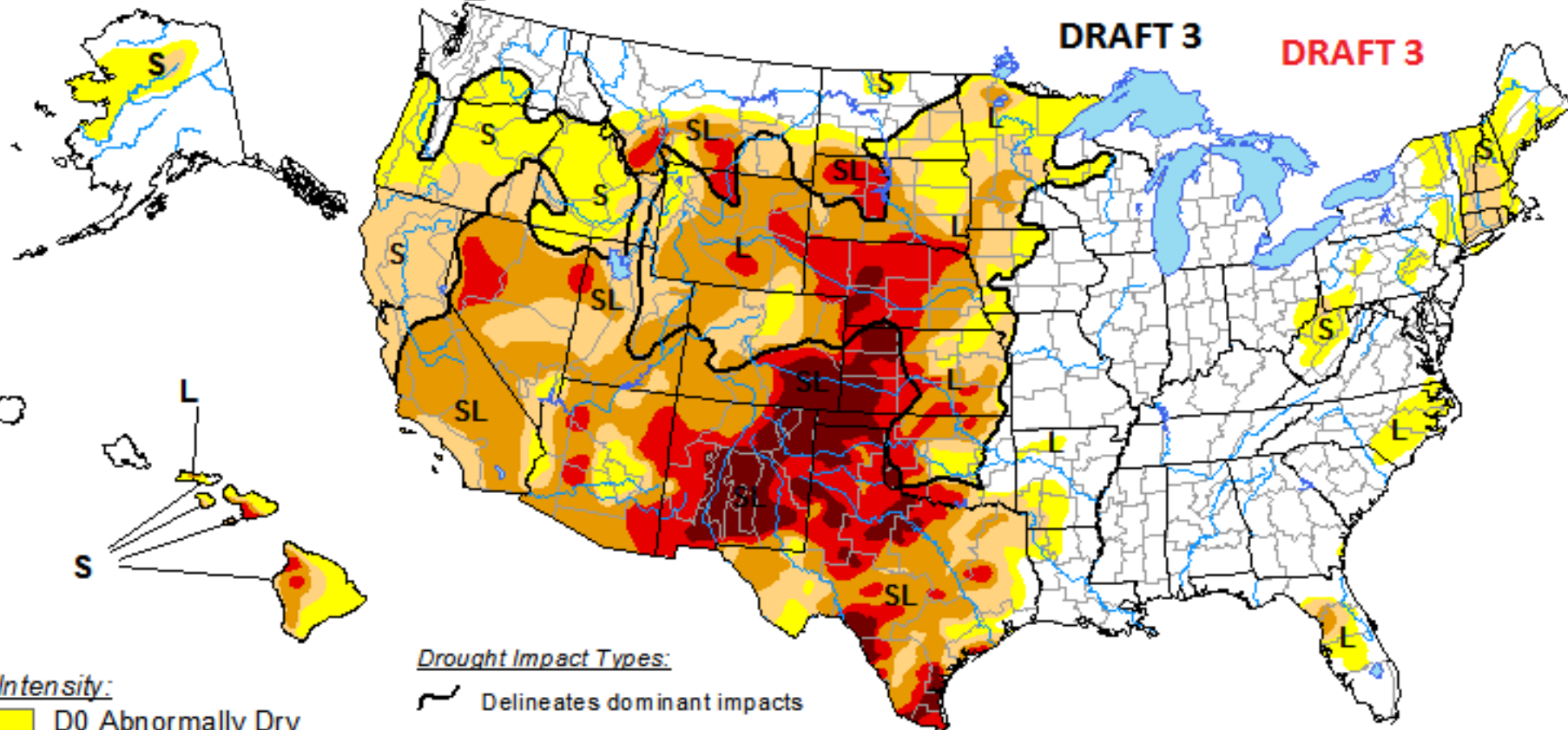


Released Thursday, April 18, 2013
Author: David Miskus, NOAA/NWS/NCEP/CPC

U.S. Drought Monitor

May 14, 2013

Valid 8 a.m. EDT



Intensity:

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

Drought Impact Types:

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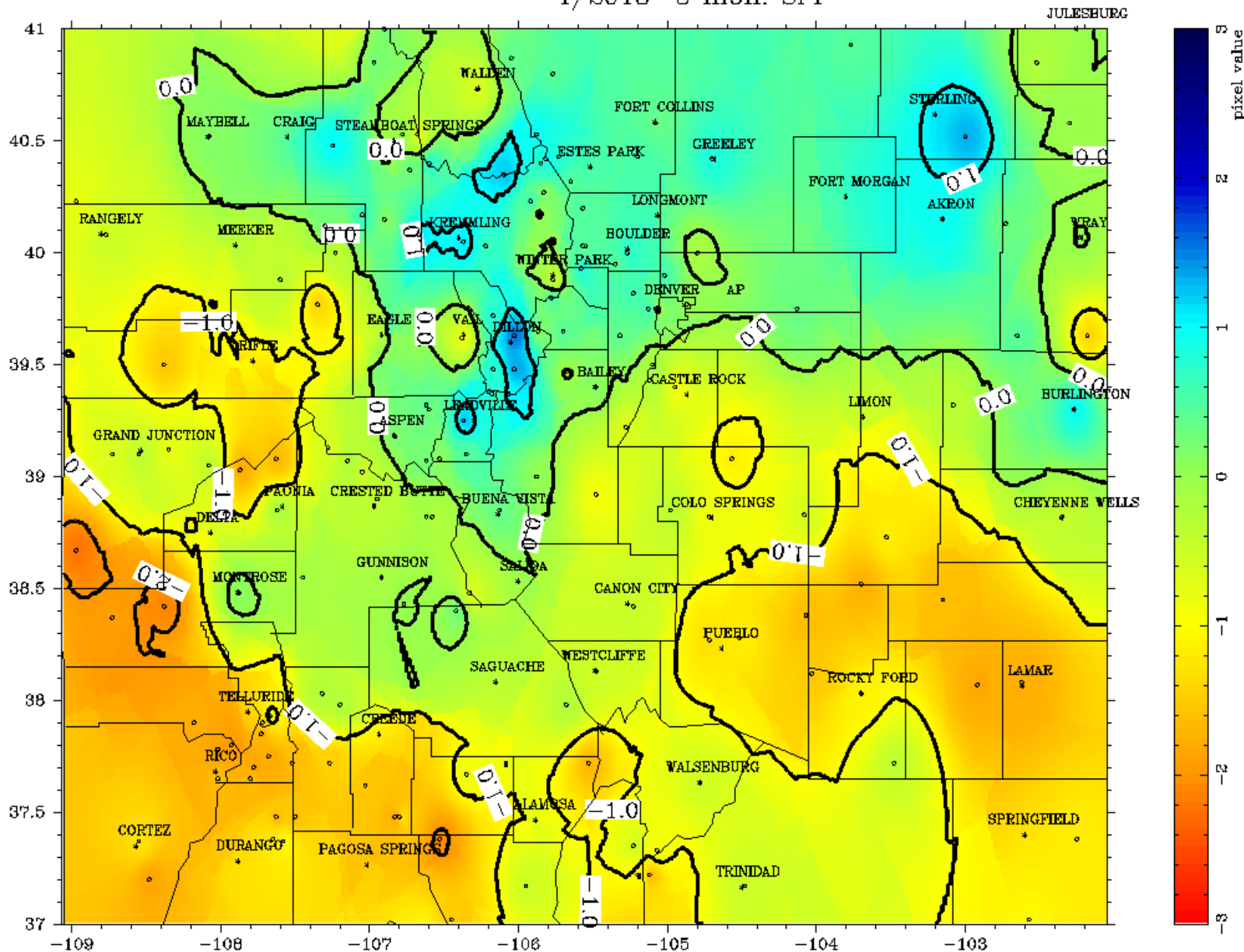
<http://droughtmonitor.unl.edu/>



Released Thursday, May 16, 2013
Author: Rich Tinker, NOAA/NWS/NCEP/CPC

Colorado

4/2013 3 mon. SPI

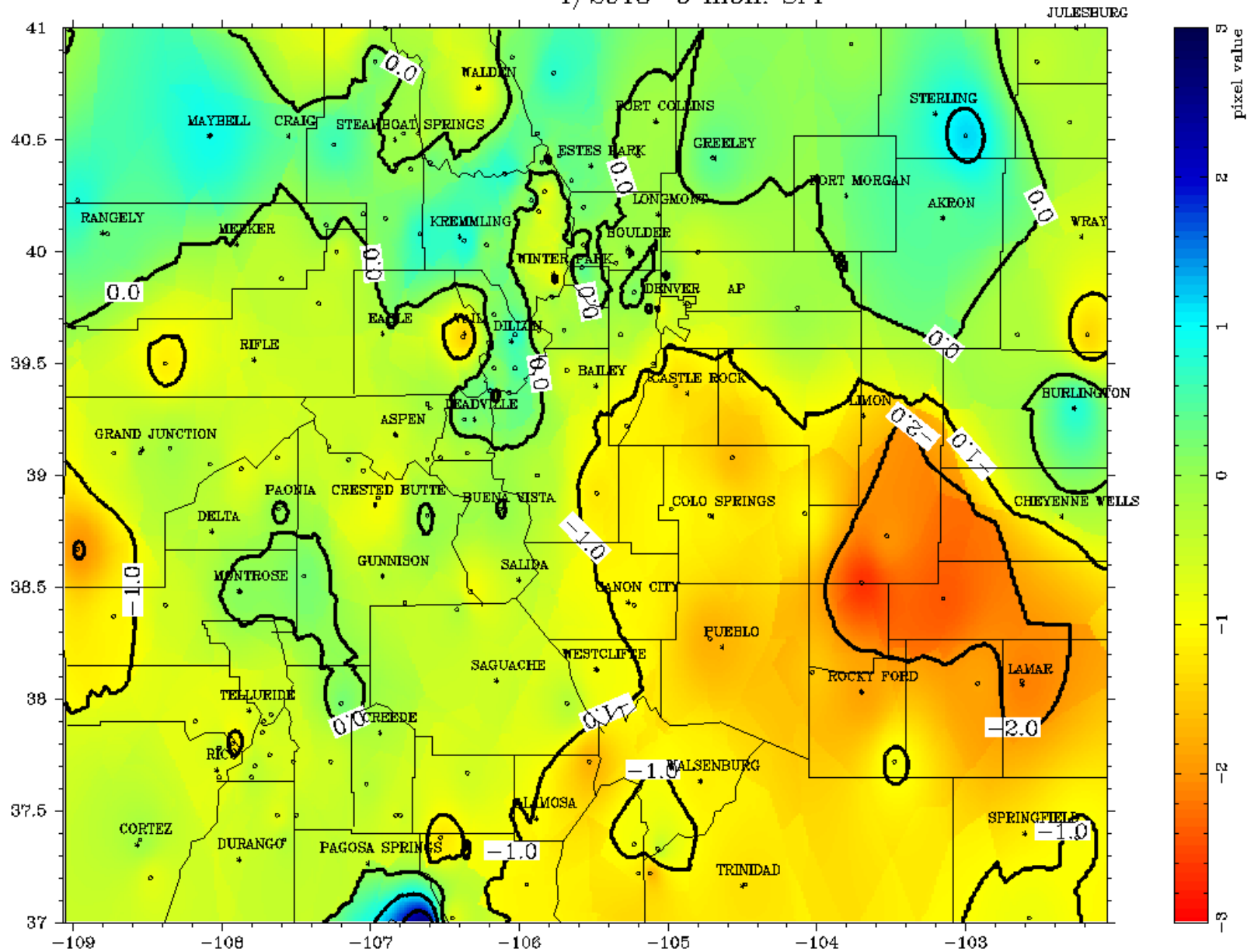


100 % < 2.0 30 % < -1.0
 99 % < 1.0 1 % < -2.0
 70 % < 0.0 0 % < -3.0

Produced by:
 Colorado Climate Center
 Fort Collins, CO

Colorado

4/2013 6 mon. SPI



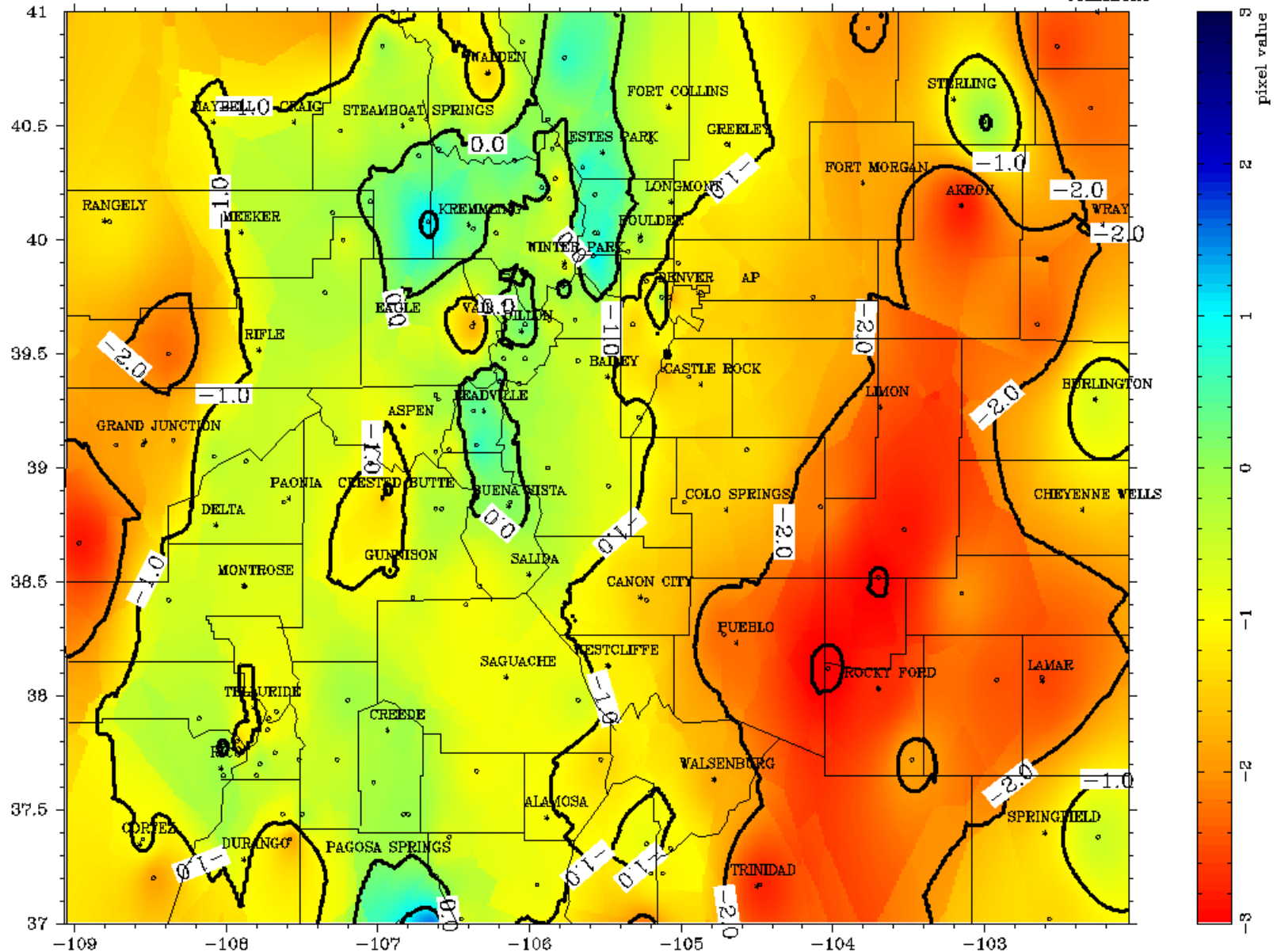
100 % < 2.0	29 % < -1.0
100 % < 1.0	4 % < -2.0
76 % < 0.0	0 % < -3.0

Produced by:
Colorado Climate Center
Fort Collins, CO

Colorado

4/2013 12 mon. SPI

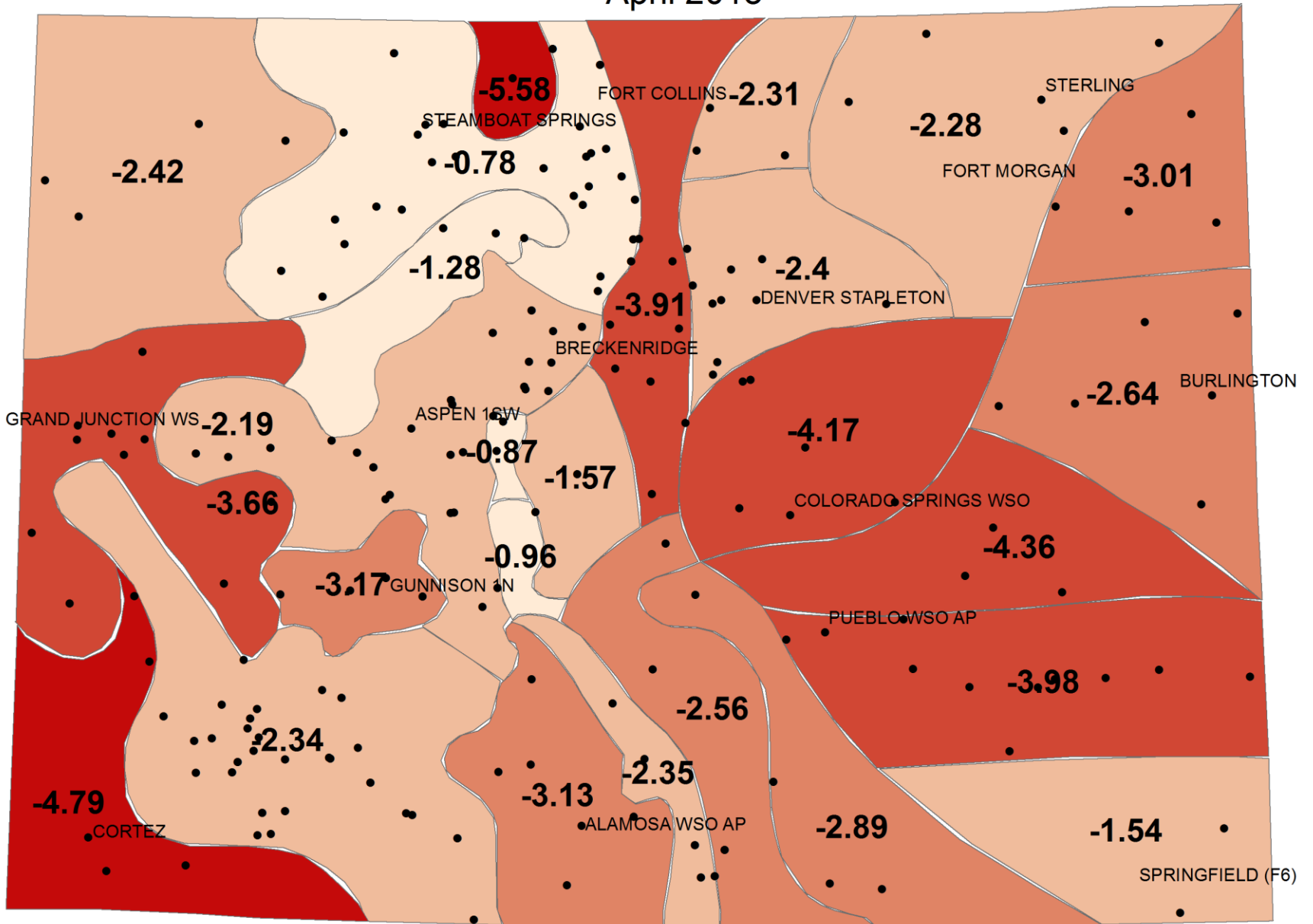
JULESBURG



100 % < 2.0	59 % < -1.0
100 % < 1.0	22 % < -2.0
95 % < 0.0	0 % < -3.0

Produced by:
Colorado Climate Center
Fort Collins, CO

Modified Palmer Drought Severity Index for Colorado April 2013



Colorado Climate Center

Data and Power Point Presentations available for downloading

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

