



# *Climate Update*

**Wendy Ryan**  
**Colorado Climate Center**

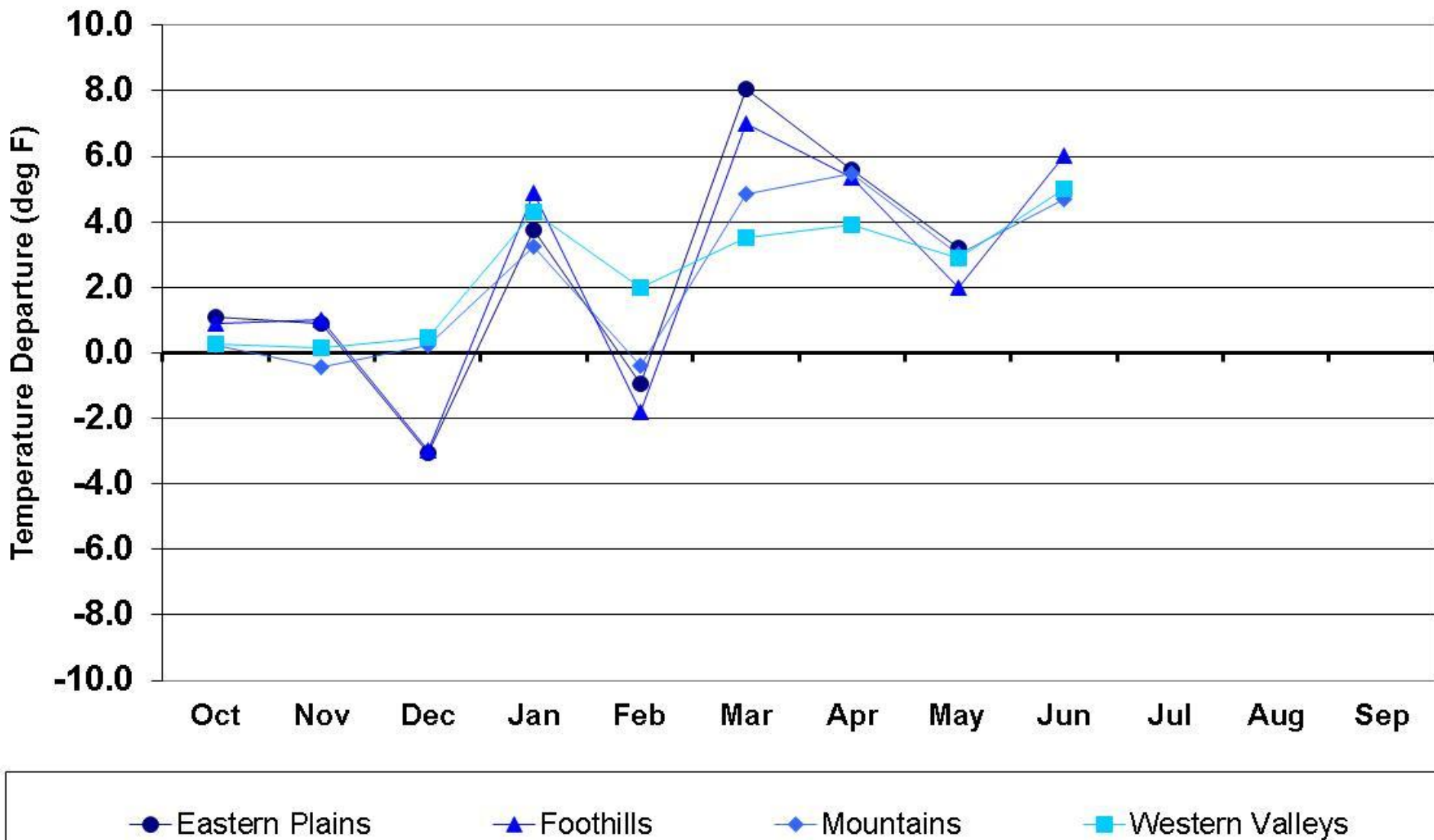
**Atmospheric Science Department**  
**Colorado State University**

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

Prepared by Wendy Ryan

# Water Year 2012 Temperature Departures

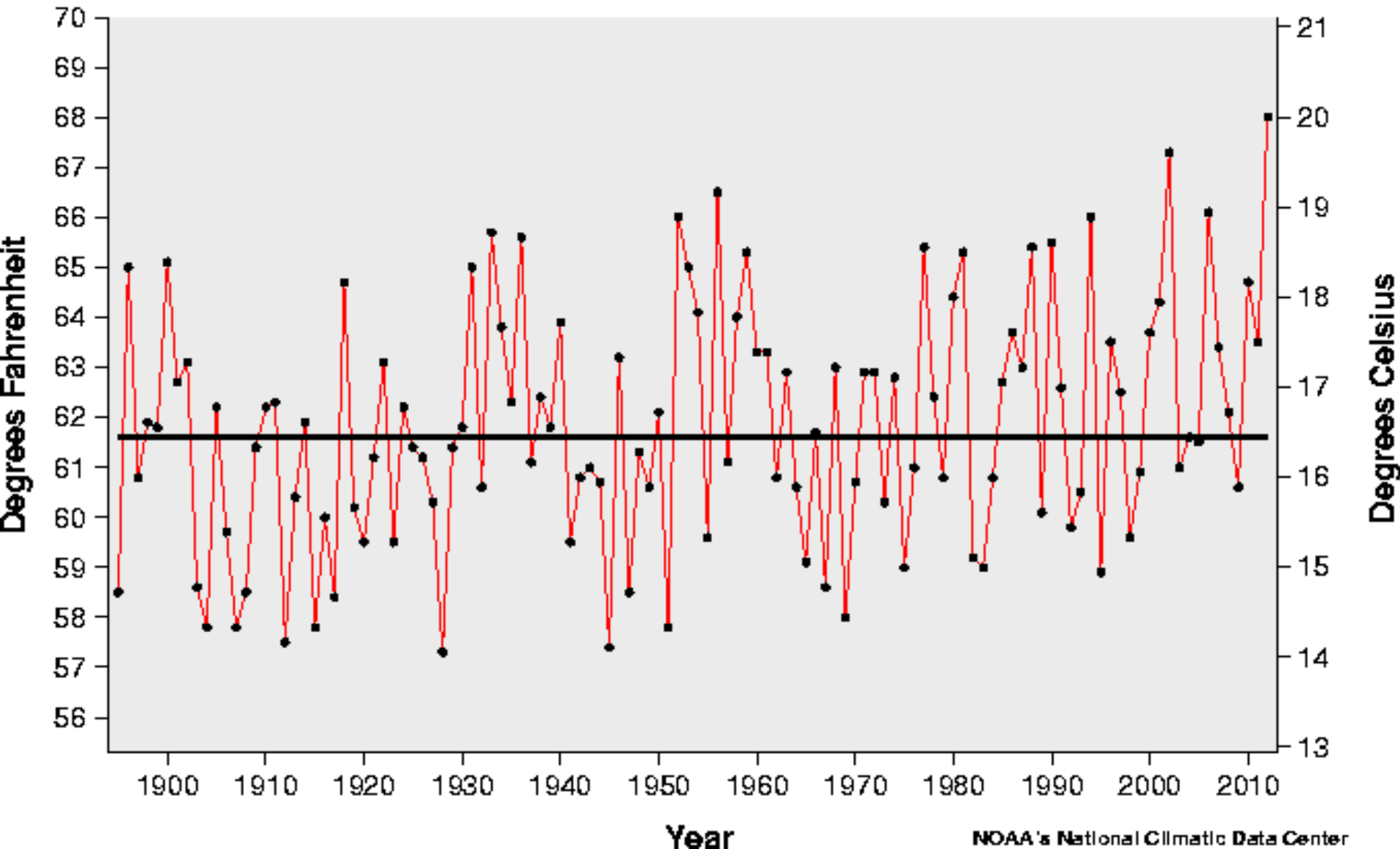
Water Year 2012



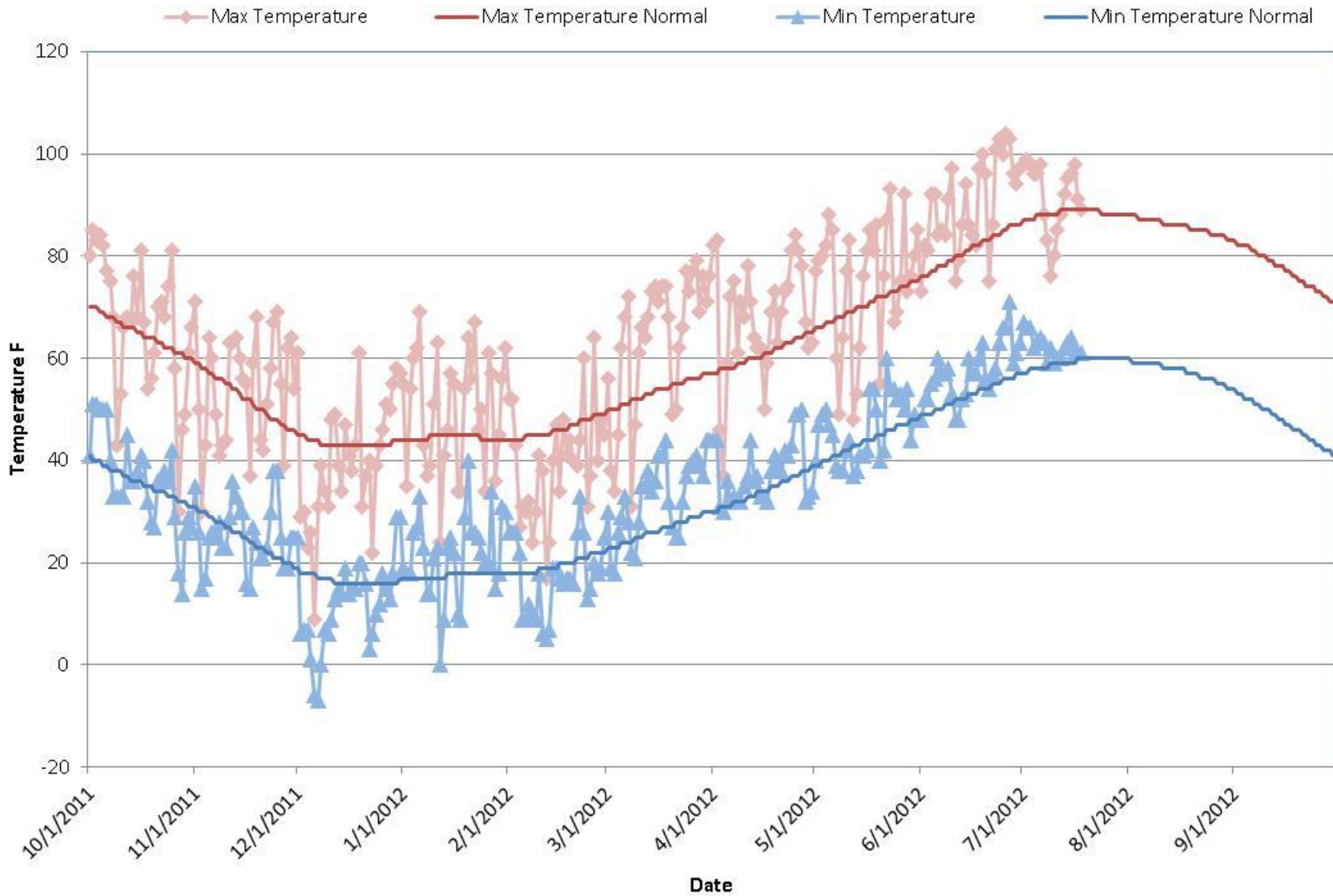
# June Average Temperature History for Colorado (NCDC)

— Actual Temperature  
— Average Temperature

68.0 Ranks as the warmest on record  
1895-2012!

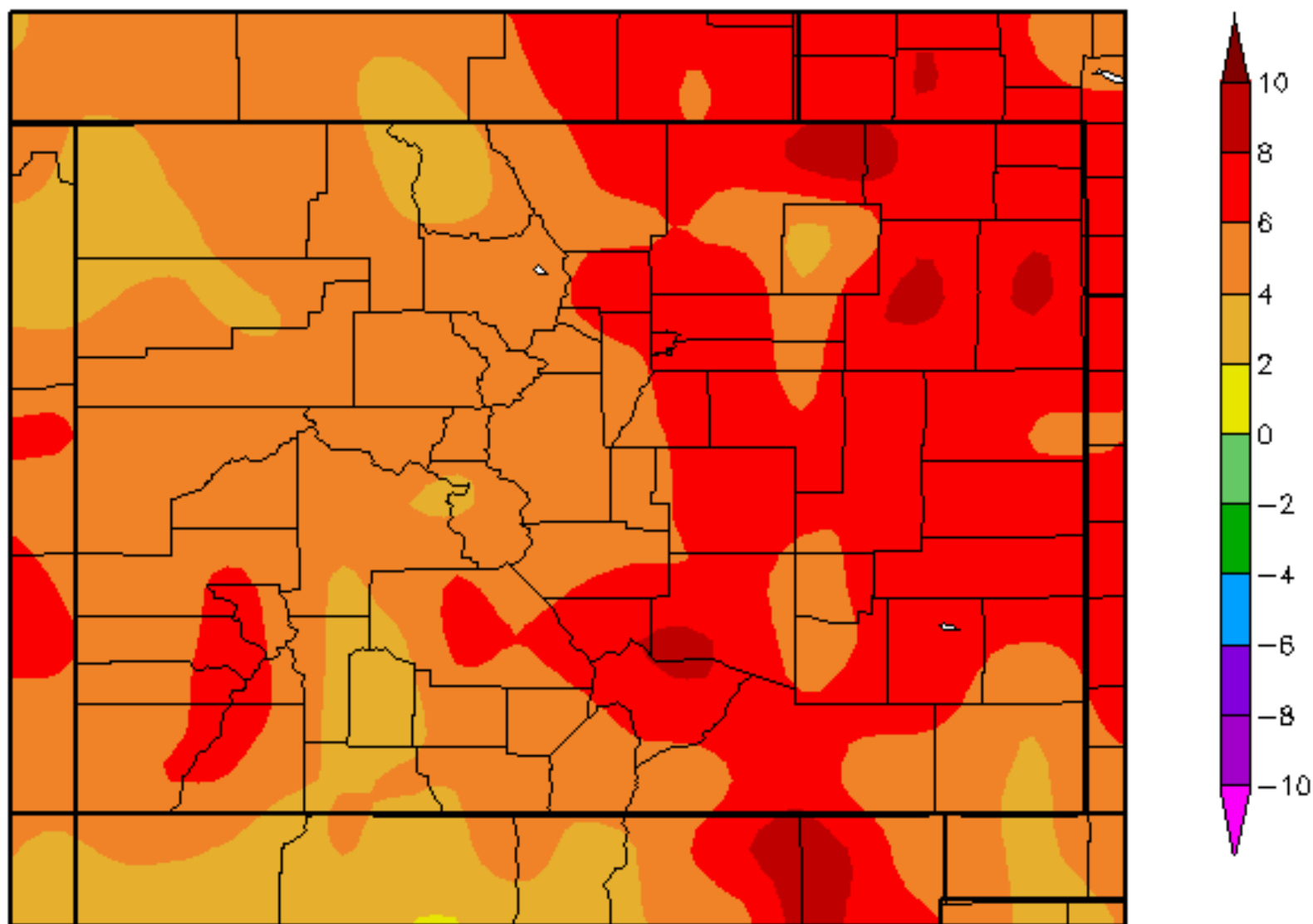


# Denver Stapleton Daily Max/Min Temperatures and Normals



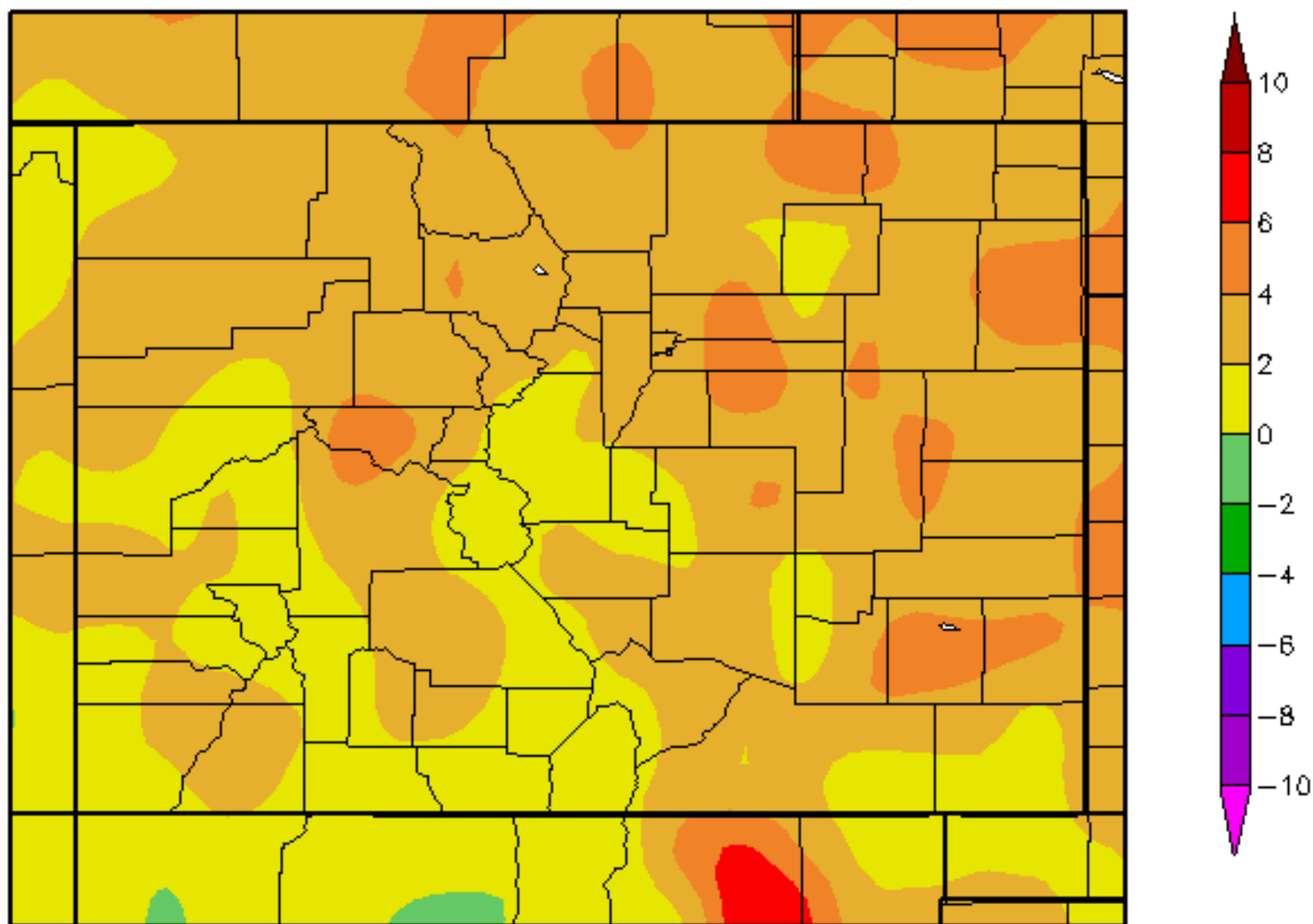
# Departure from Normal Temperature (F)

6/1/2012 - 6/30/2012

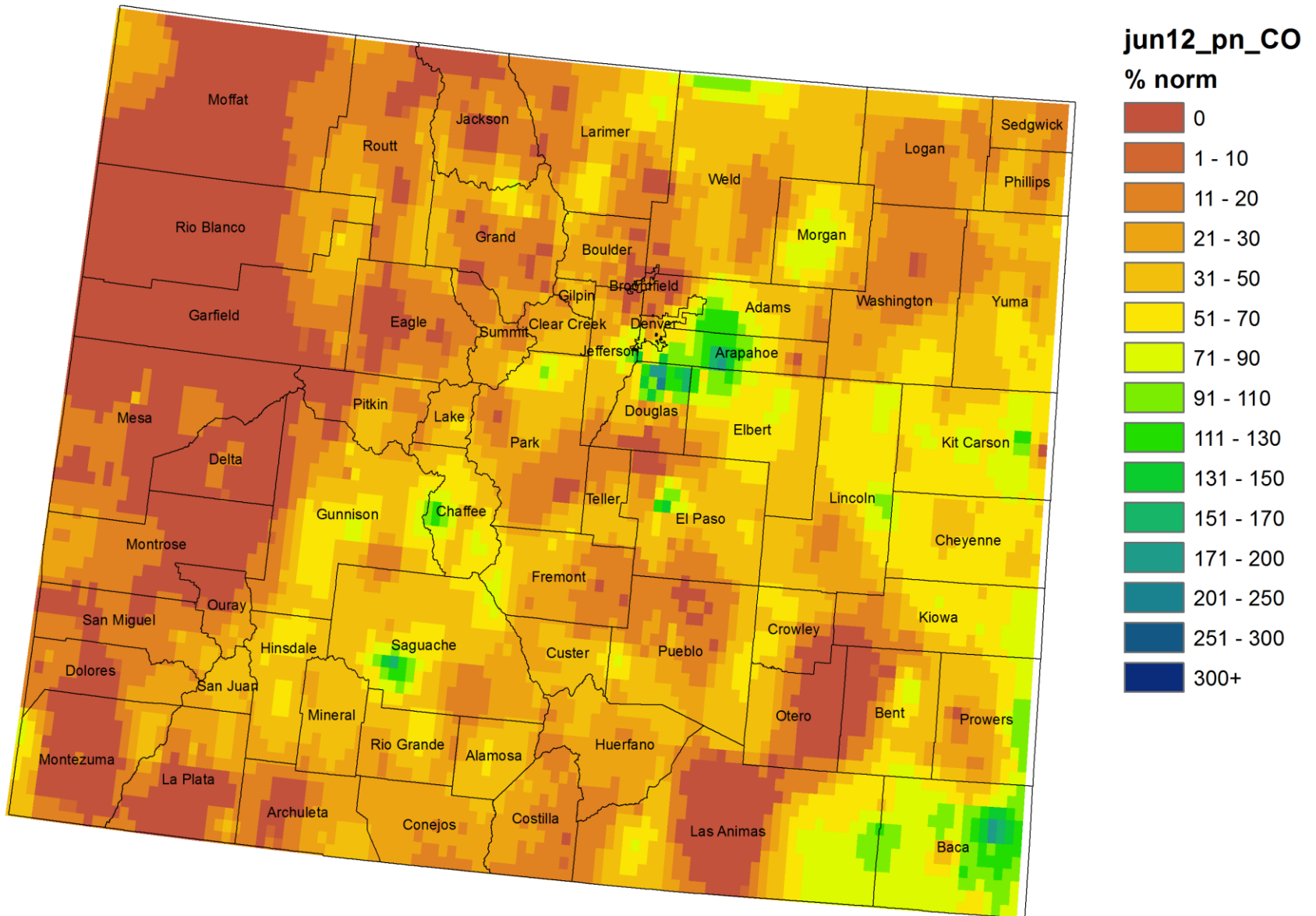


# Departure from Normal Temperature (F)

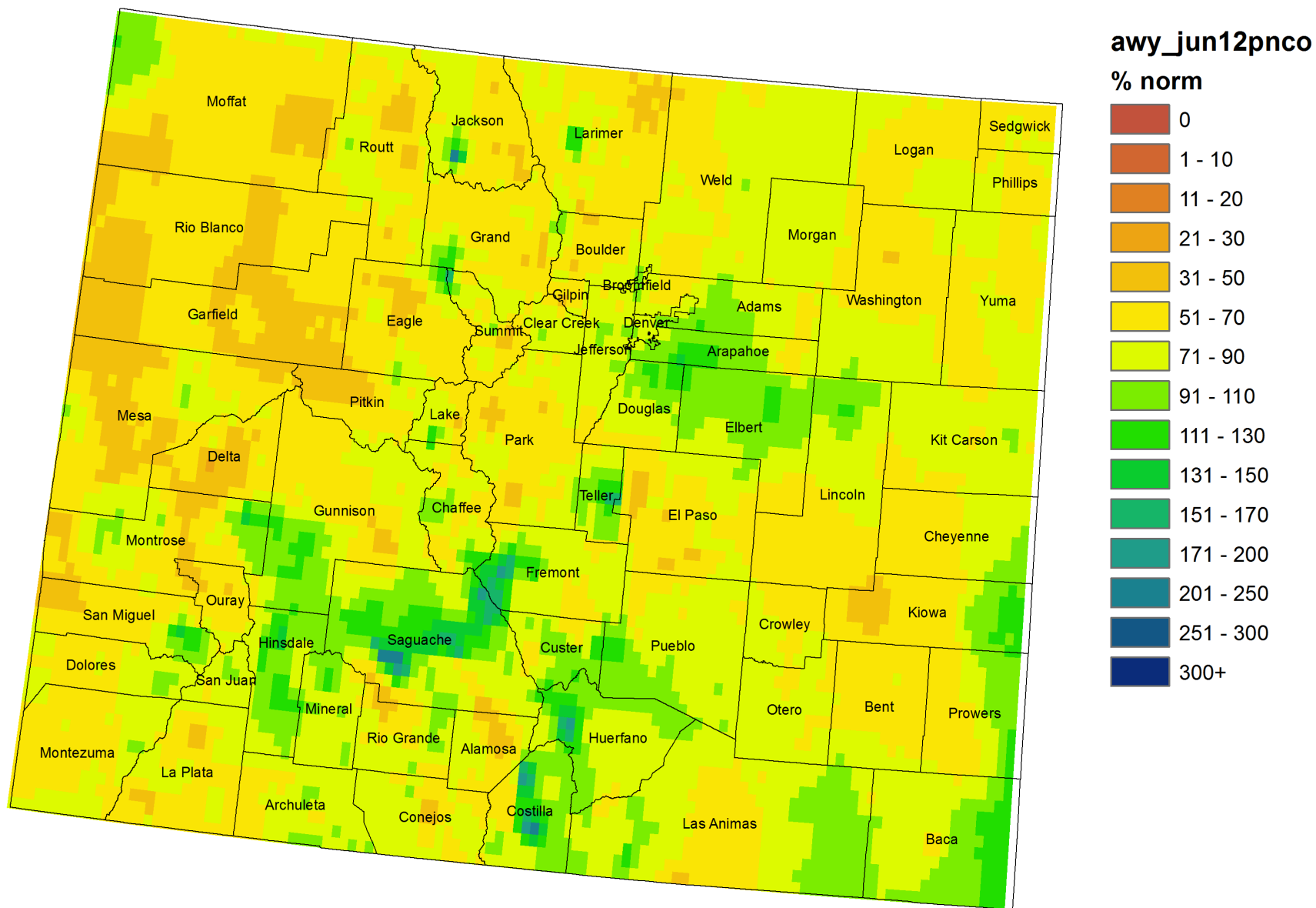
7/1/2012 - 7/17/2012



# Colorado June 2012 Precipitation as Percentage of Normal

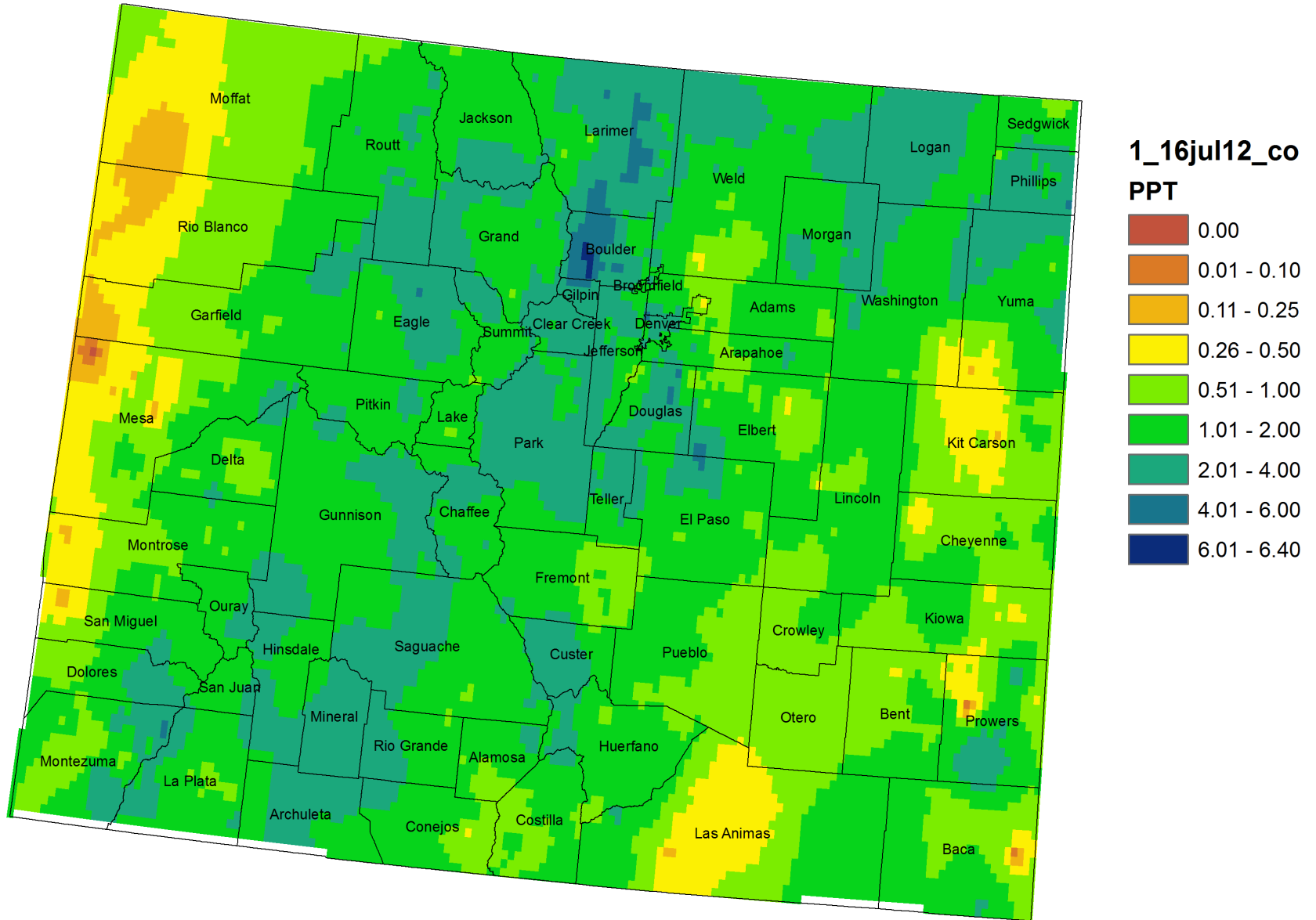


# Colorado Water Year Precipitation as Percentage of Normal October 2011 - June 2012

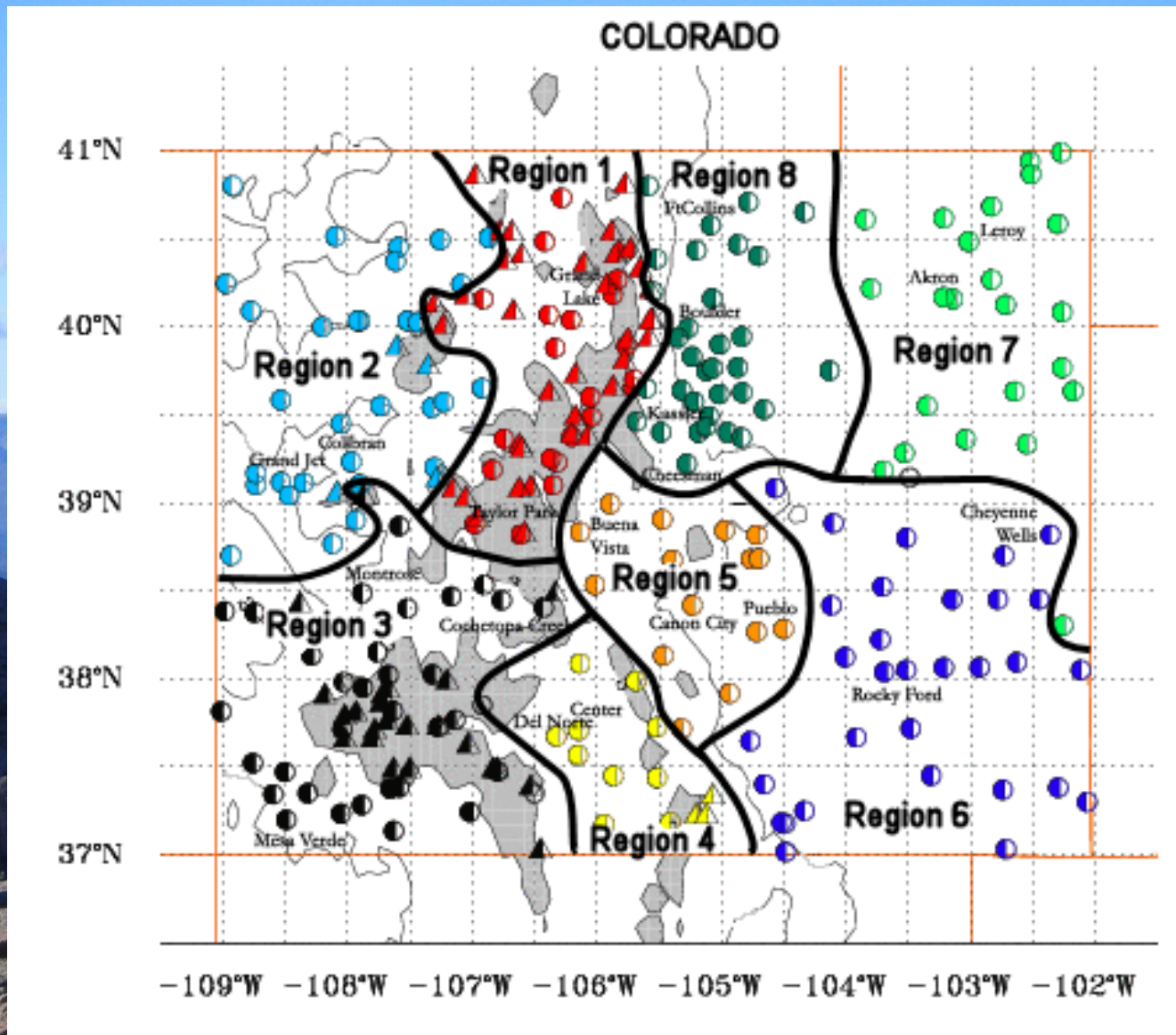




# Colorado Month to Date Precipitation (in) 1 - 16 July 2012

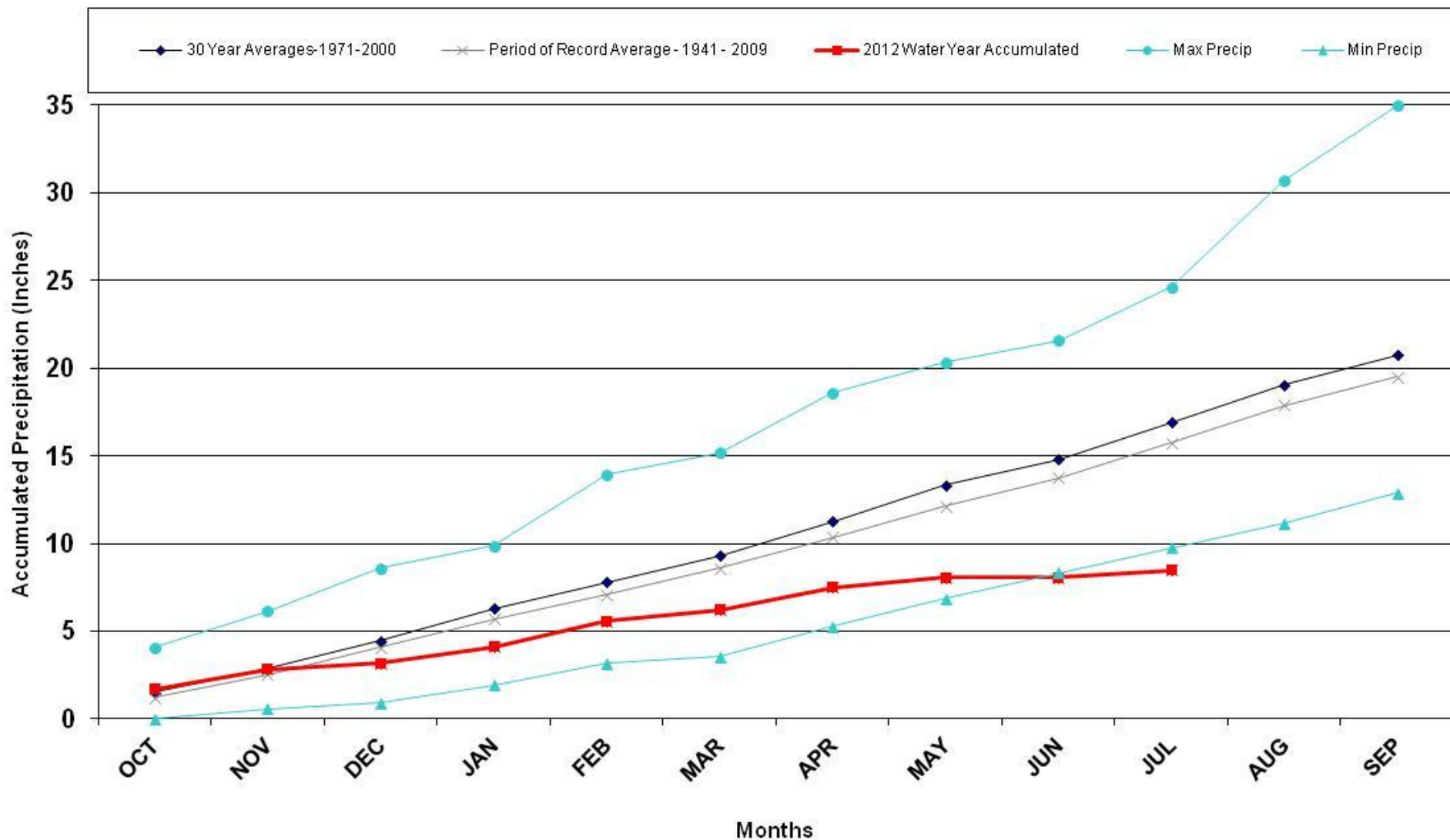


# Climate divisions defined by Dr. Klaus Wolter of NOAA's Climate Diagnostic Center in Boulder, CO



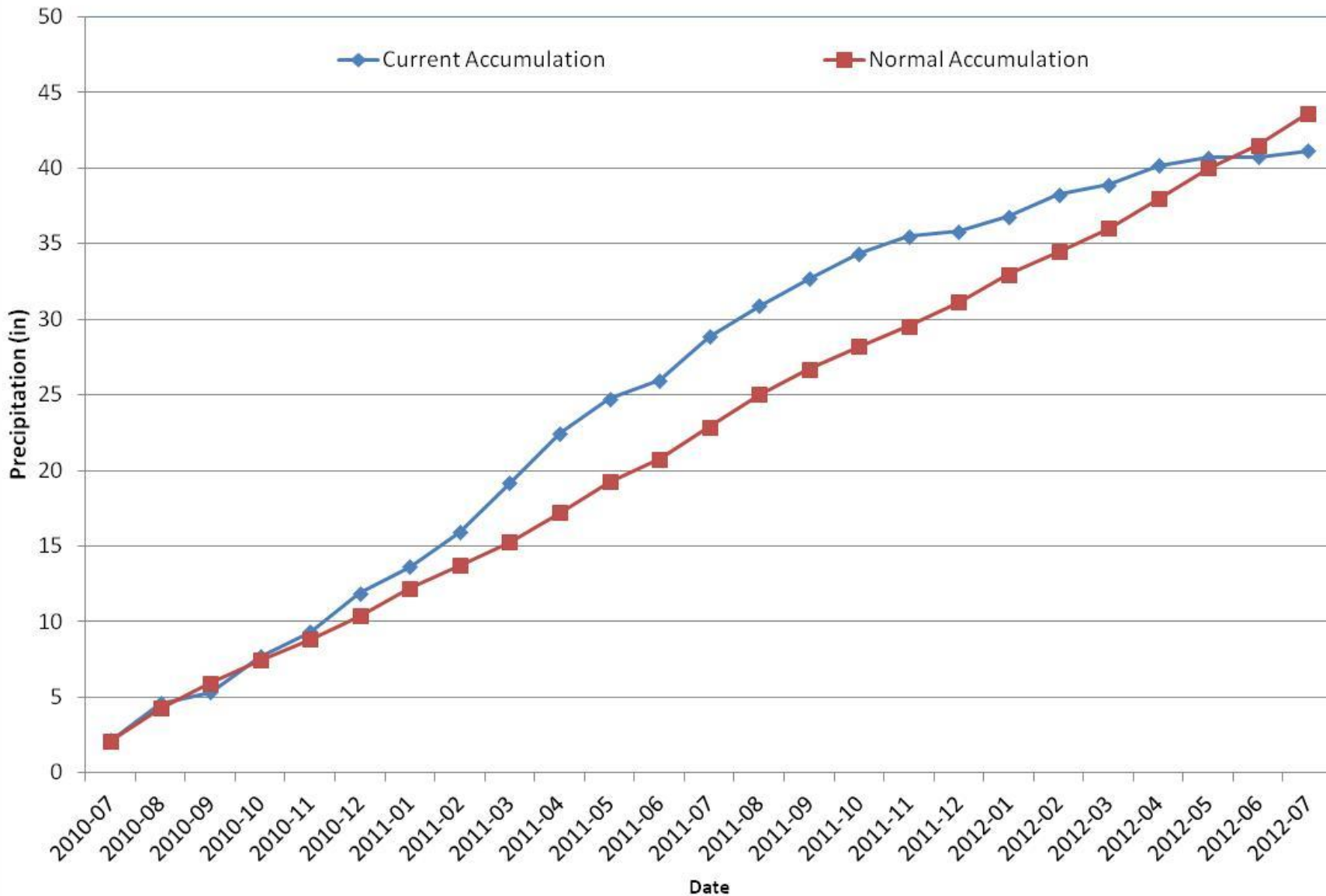
# Division 1 – Grand Lake 1NW

## Grand Lake 1 NW 2012 Water Year



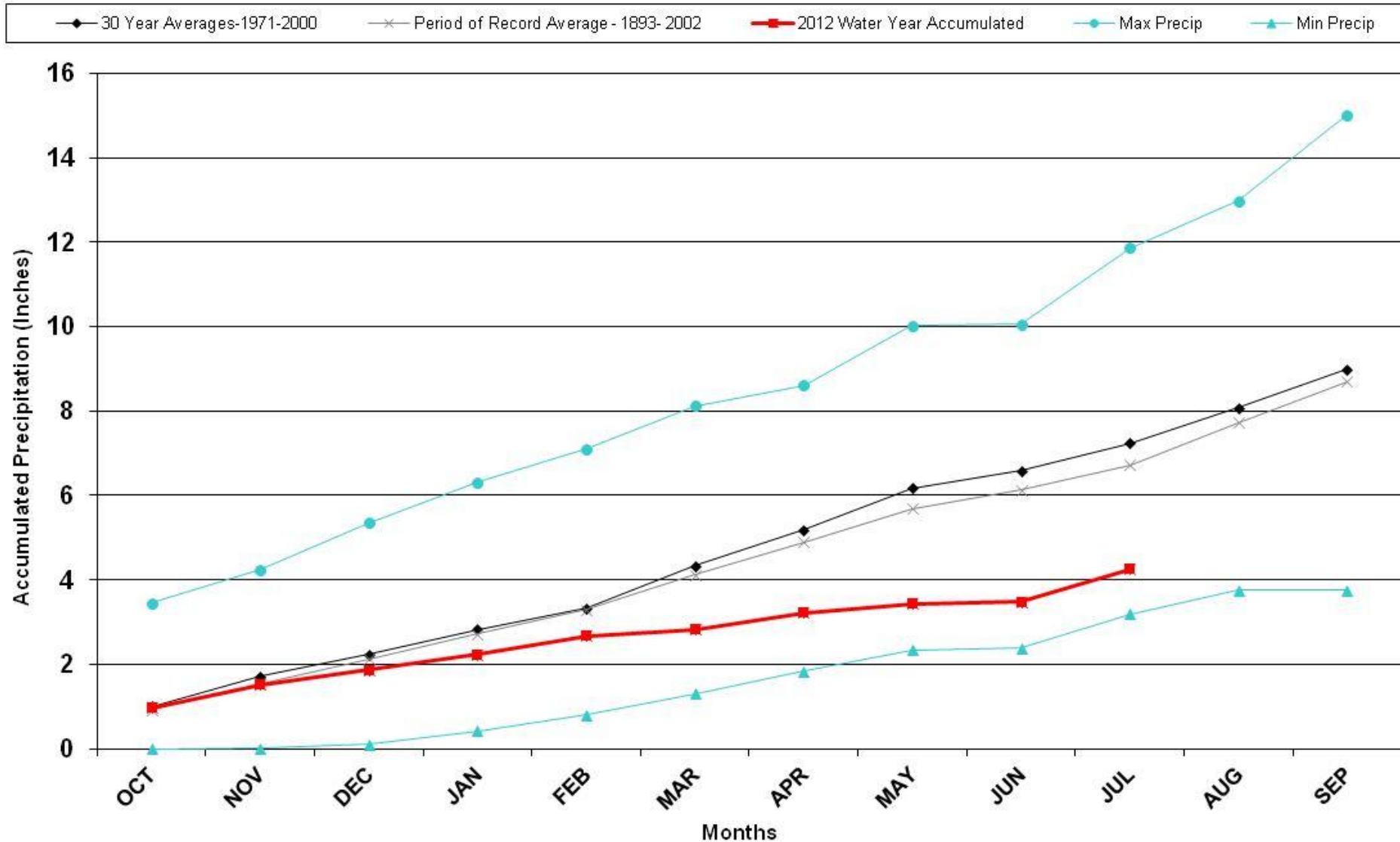
# Division 1 – Grand Lake 1NW

## Grand Lake 1NW 24 Month Precipitation Accumulation



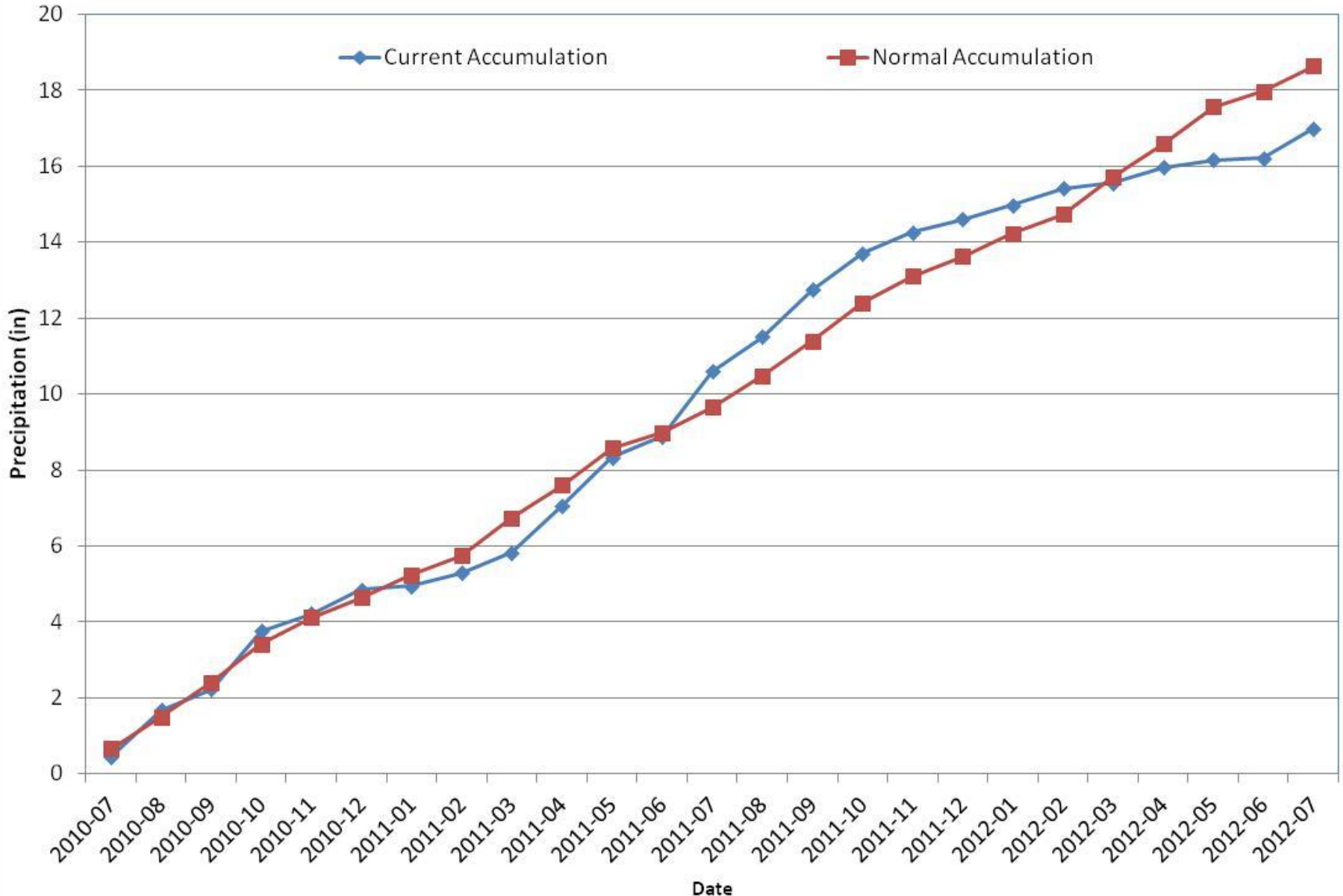
# Division 2 – Grand Junction

## Grand Junction WSFO 2012 Water Year



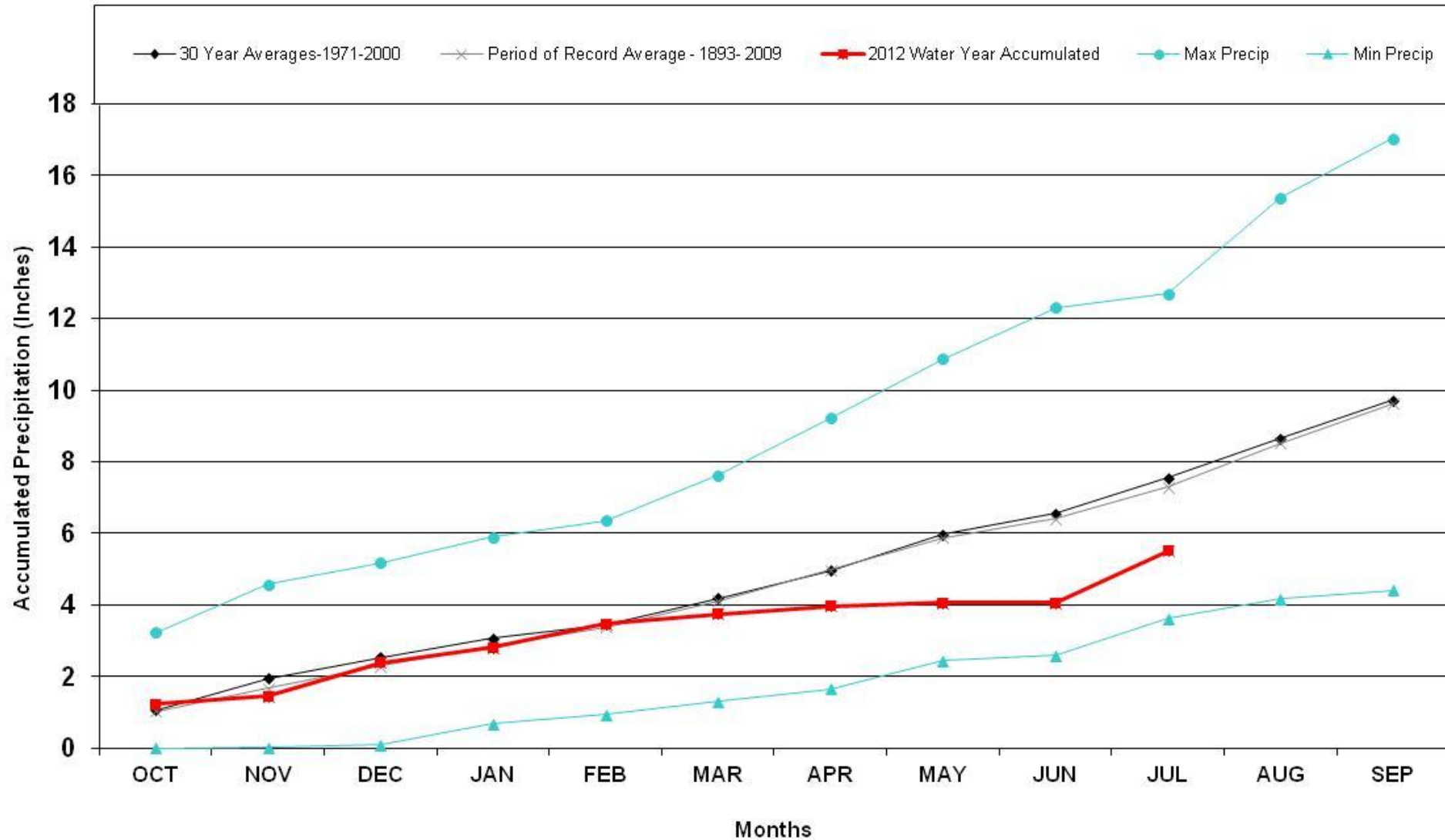
# Division 2 – Grand Junction

## Grand Junction 24 Month Precipitation Accumulation



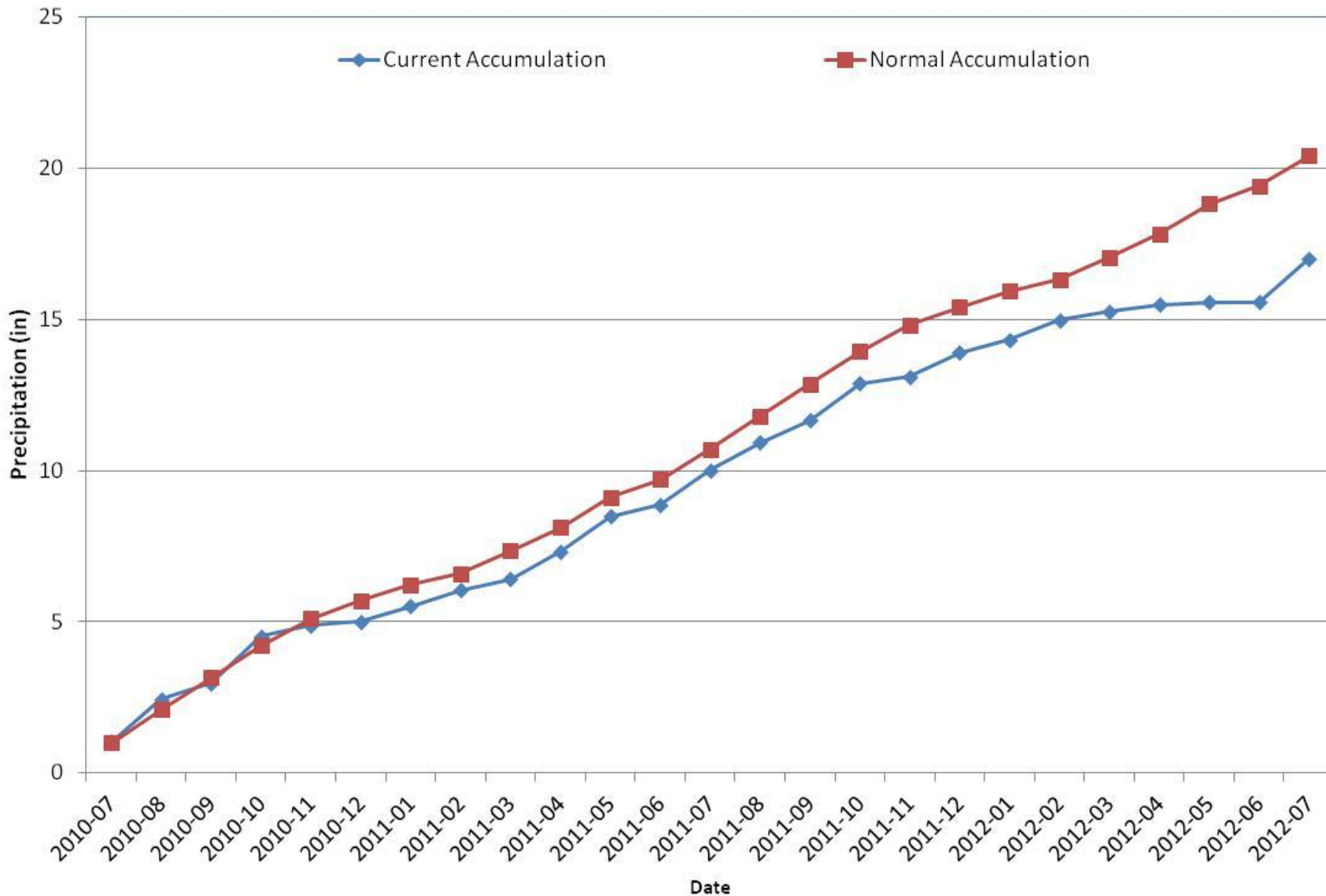
# Division 3 – Montrose

## Montrose #2 2012 Water Year



# Division 3 – Montrose

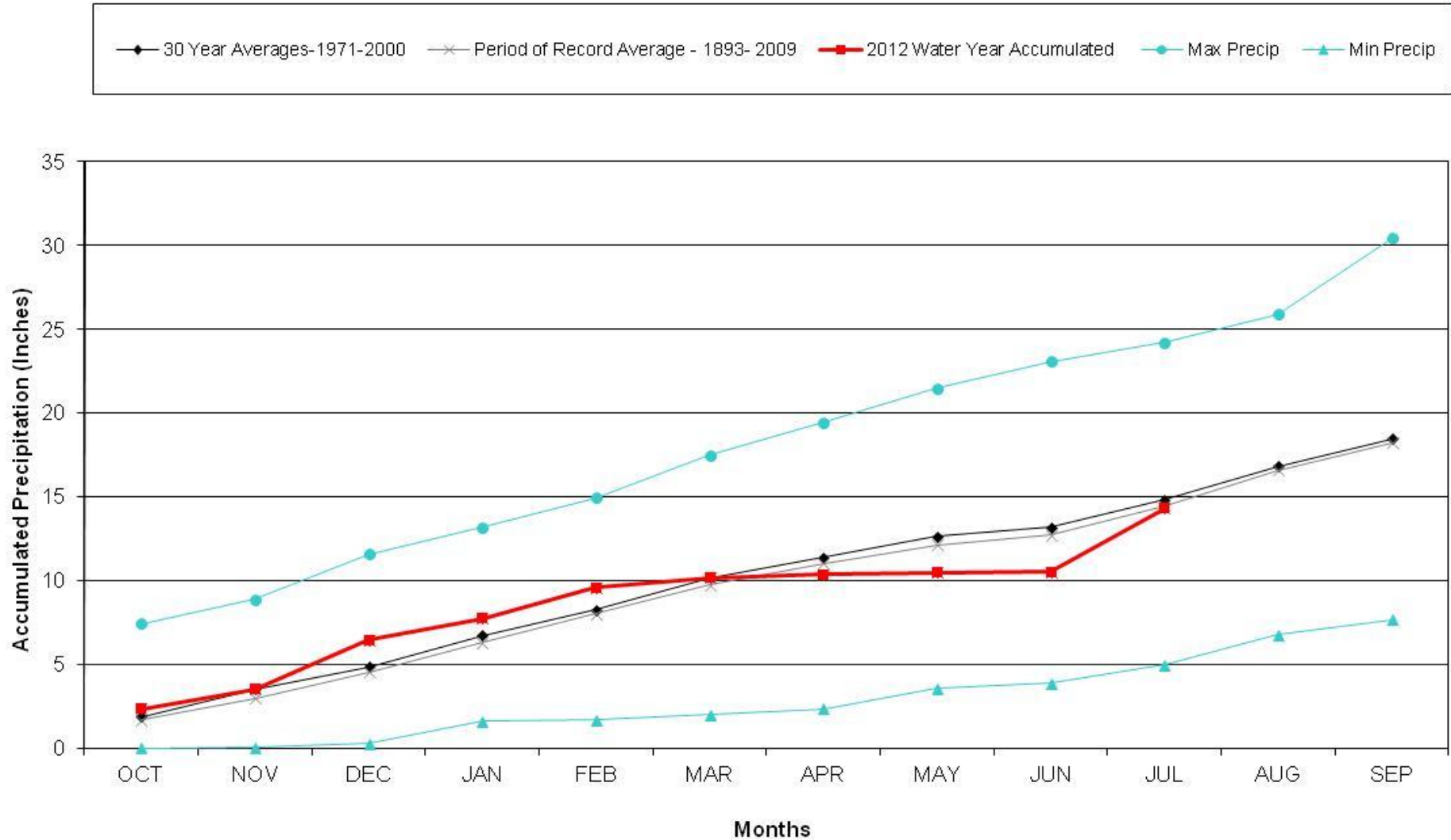
Montrose #2  
24 Month Precipitation Accumulation





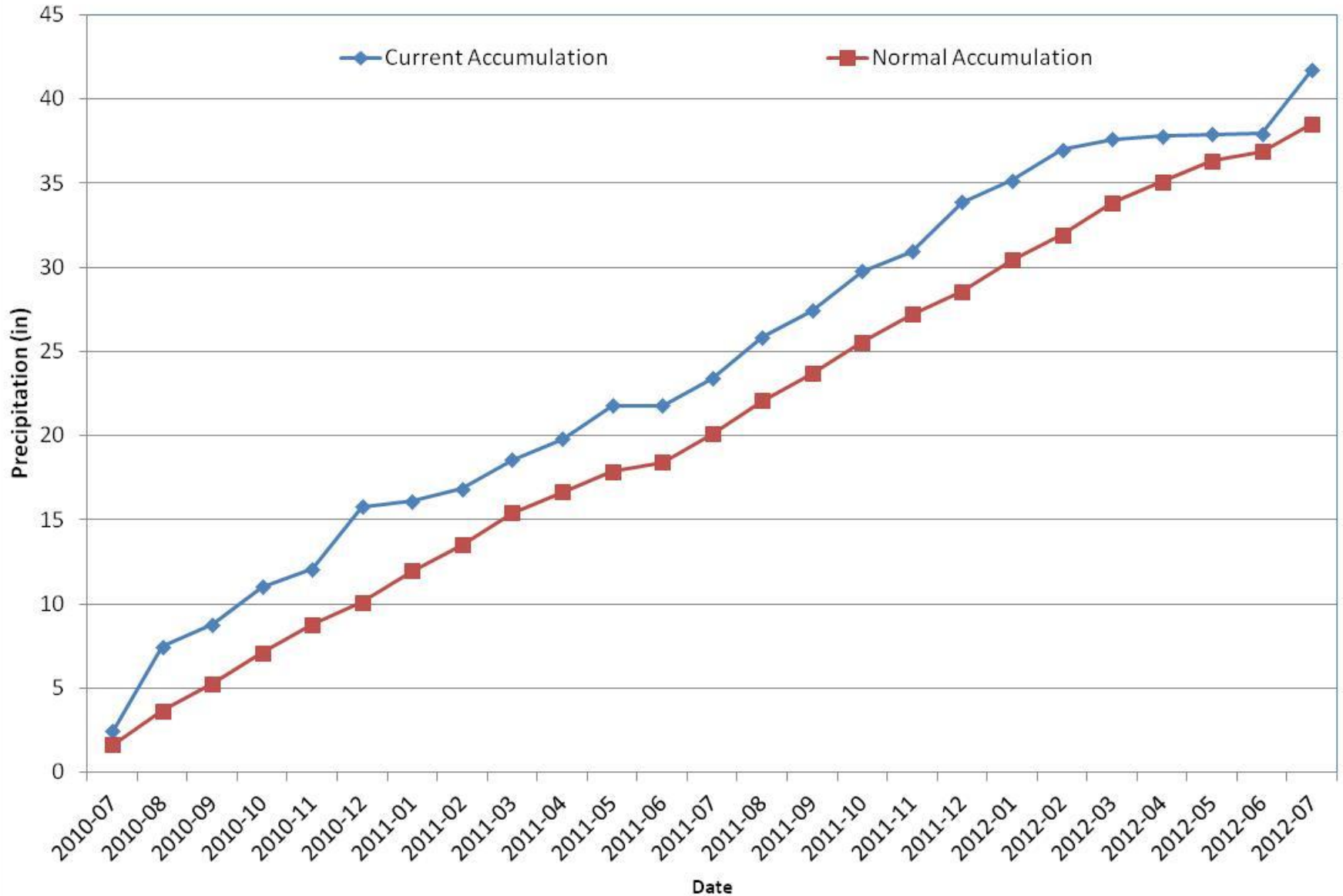
# Division 3 – Mesa Verde NP

## Mesa Verde NP 2012 Water Year



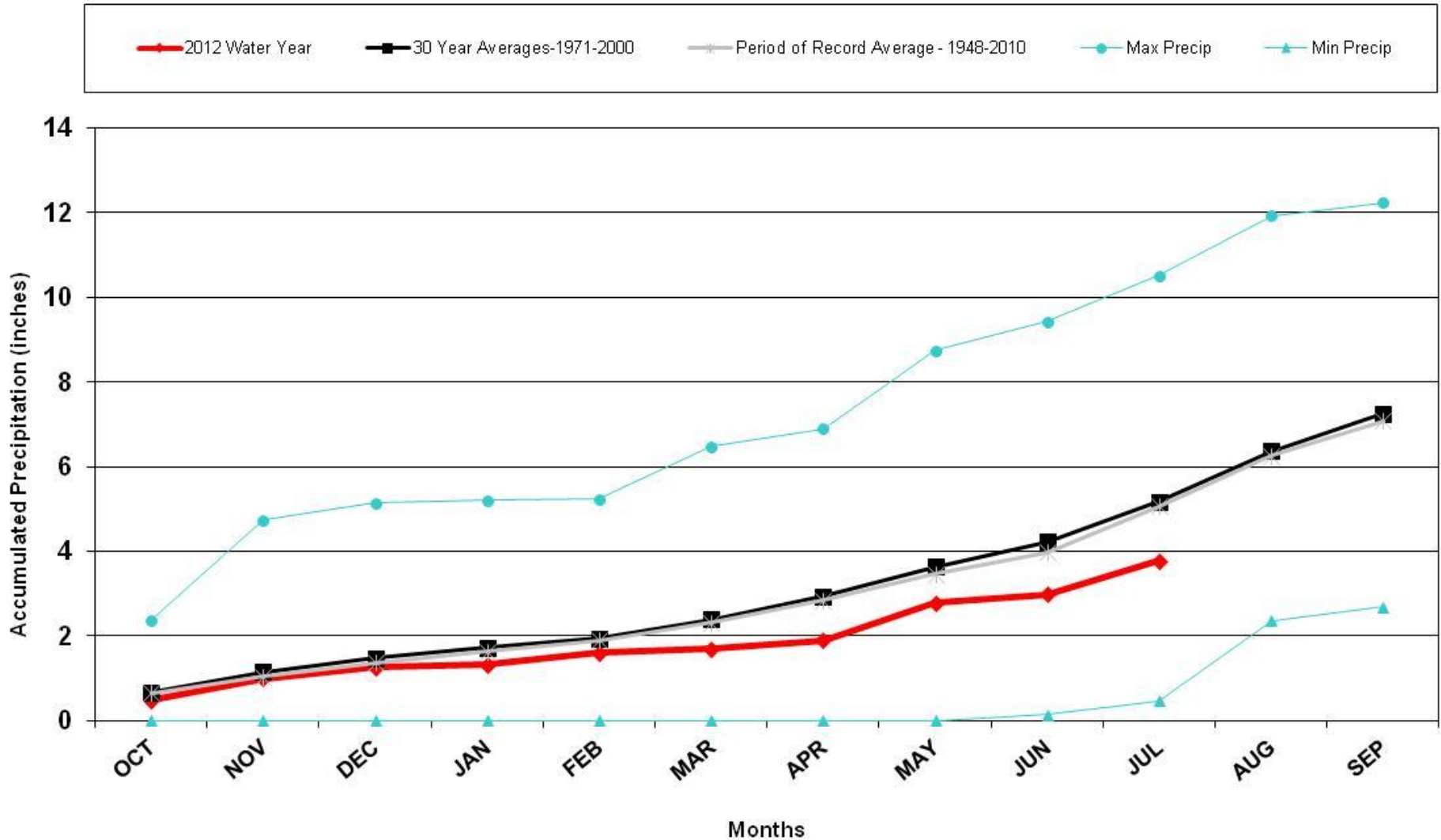
# Division 3 – Mesa Verde NP

## Mesa Verde NP 24 Month Precipitation Accumulation



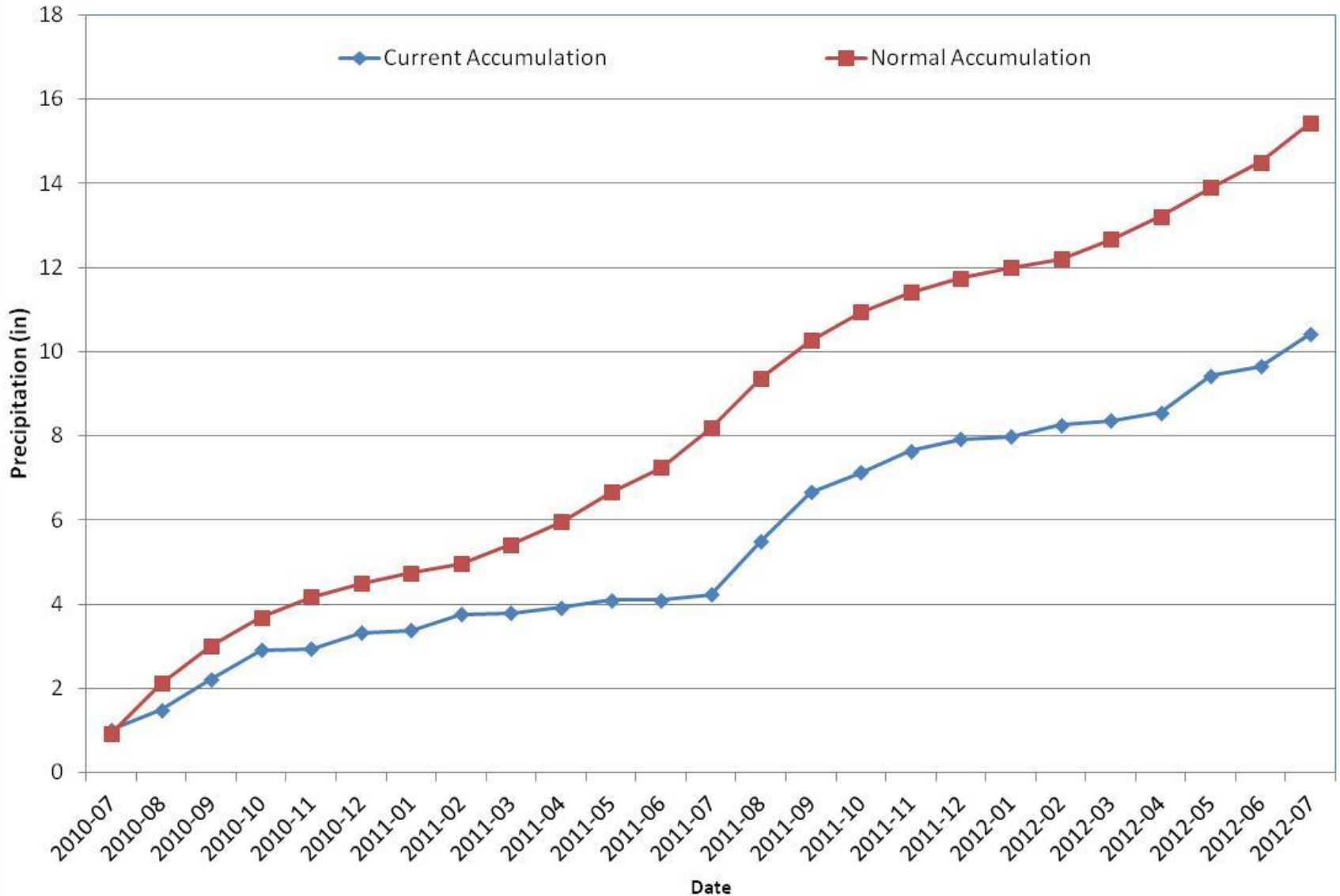
# Division 4 – Alamosa

## Alamosa WSO 2012 Water Year



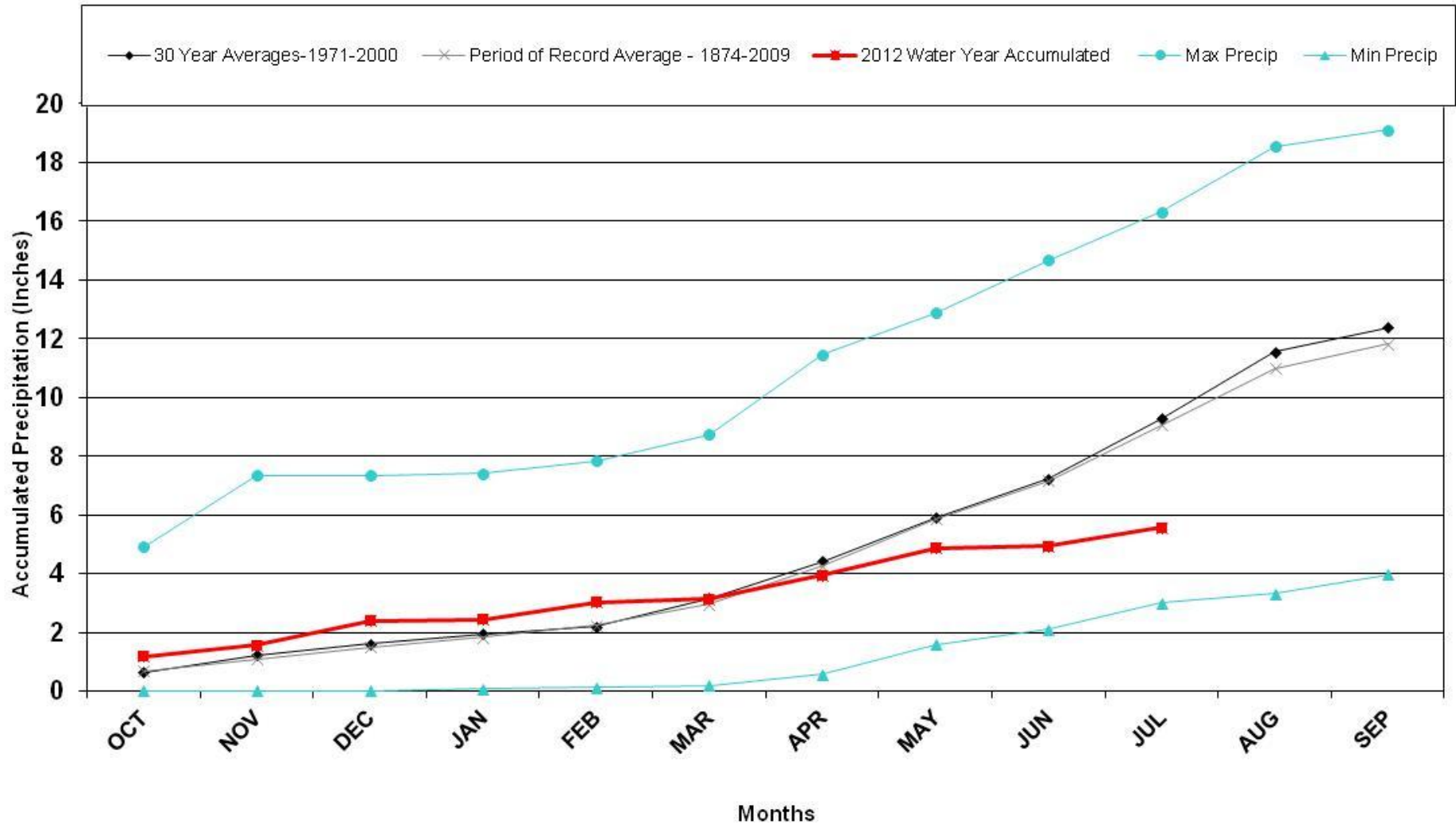
# Division 4 – Alamosa

## Alamosa WSO 24 Month Precipitation Accumulation



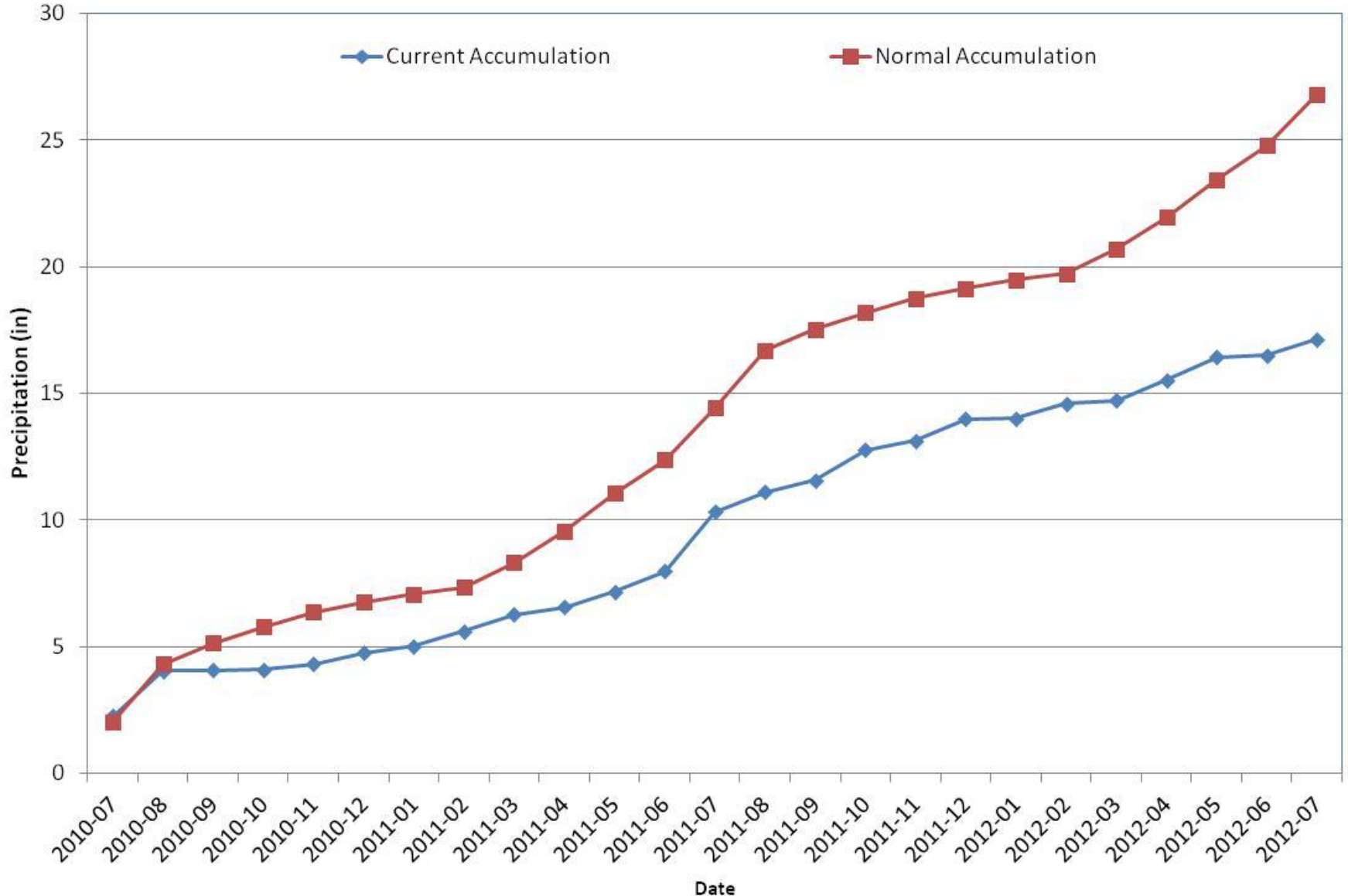
# Division 5 – Pueblo

## Pueblo WSO 2012 Water Year



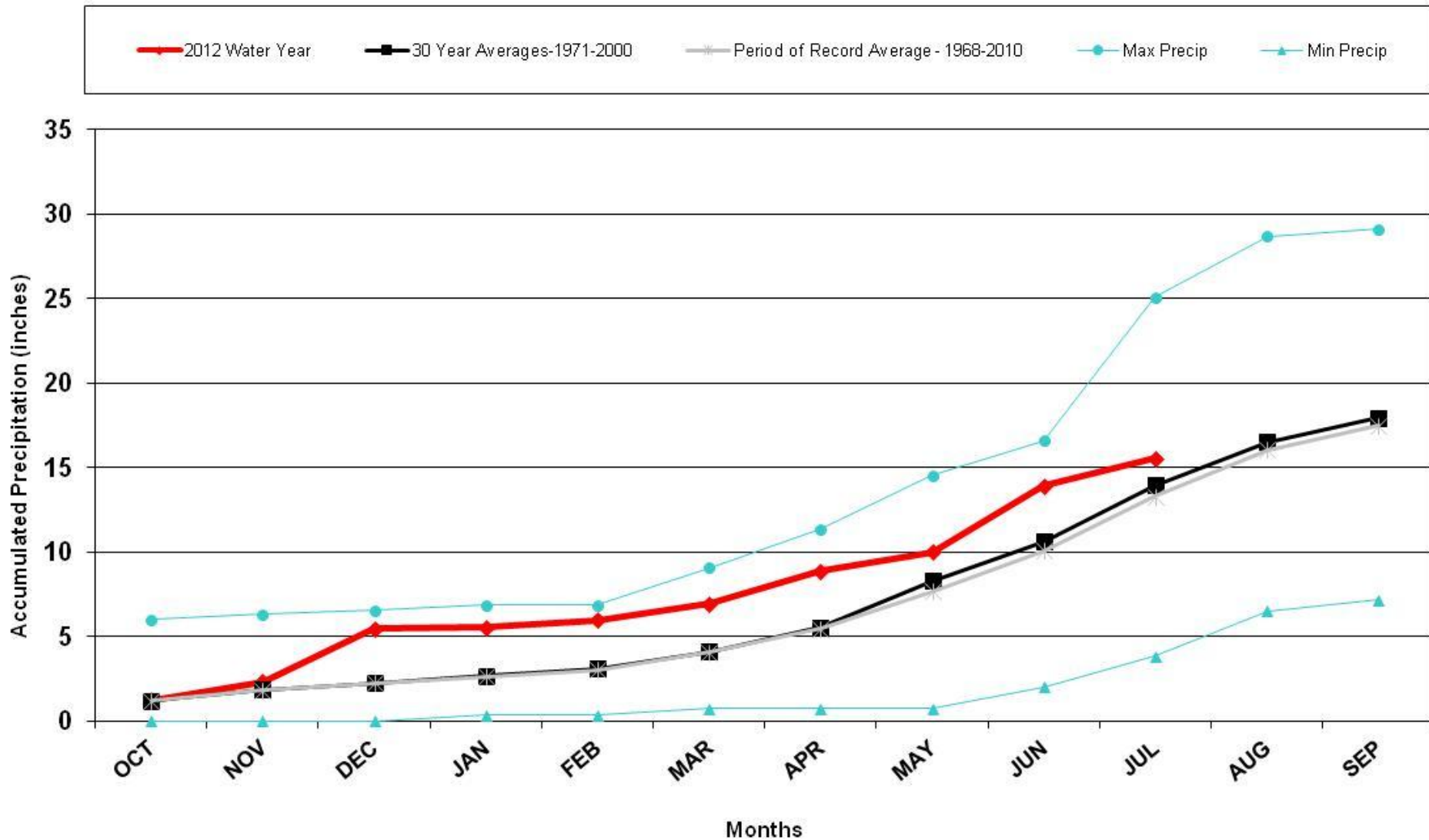
# Division 5 – Pueblo

## Pueblo Memorial AP 24 Month Precipitation Accumulation



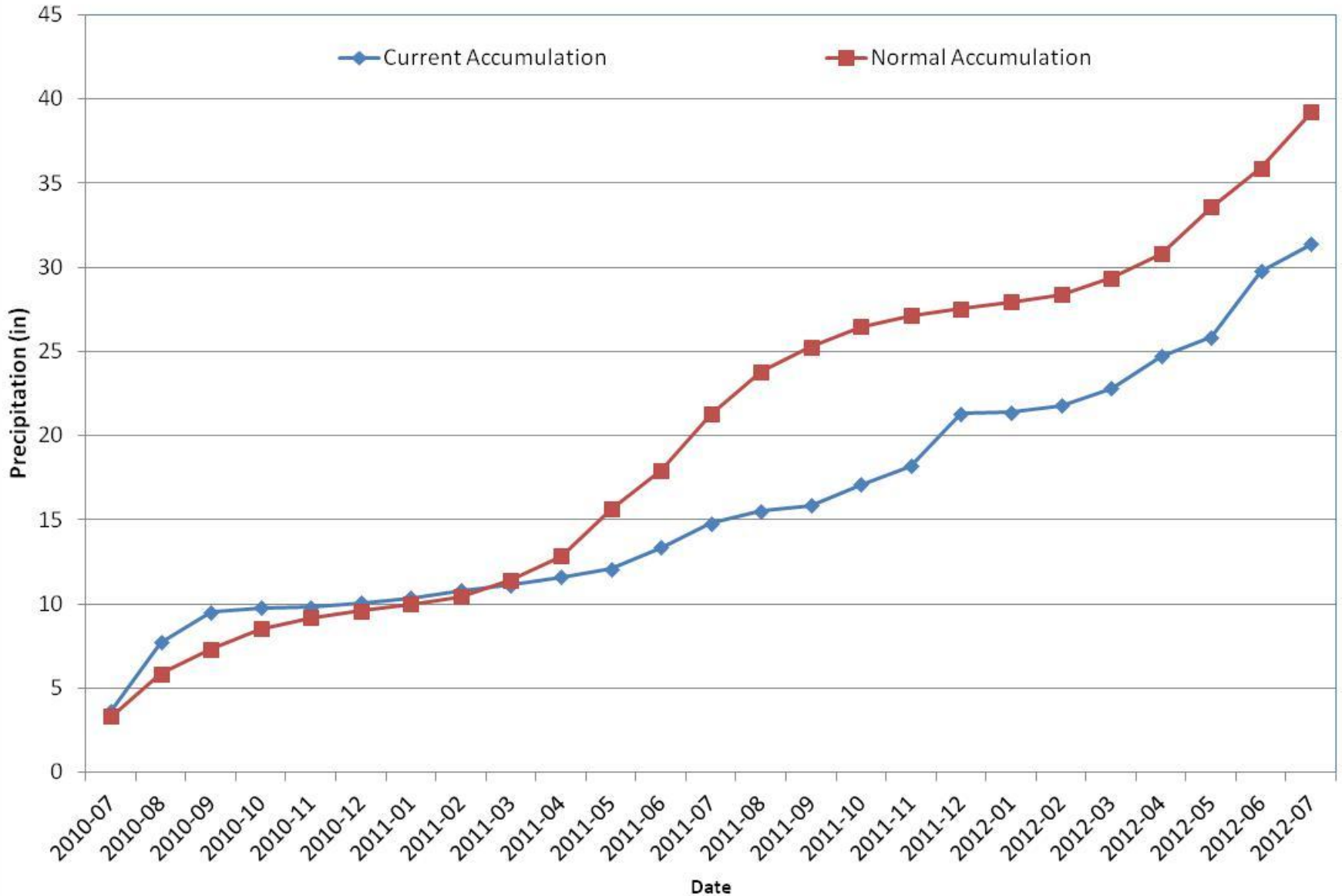
# Division 6 - Walsh

## Walsh 2012 Water Year



# Division 6 - Walsh

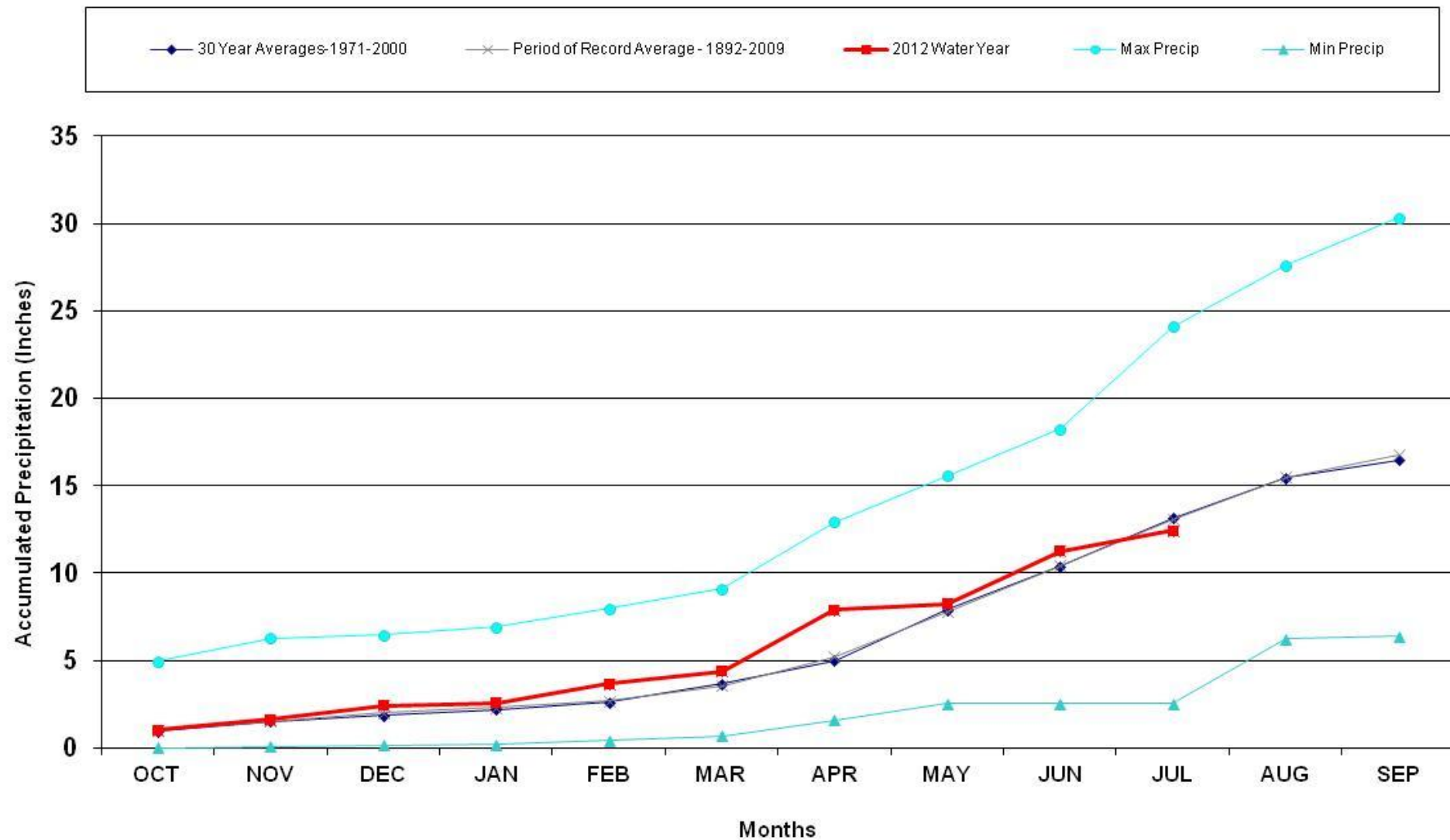
## Walsh 1W 24 Month Precipitation Accumulation





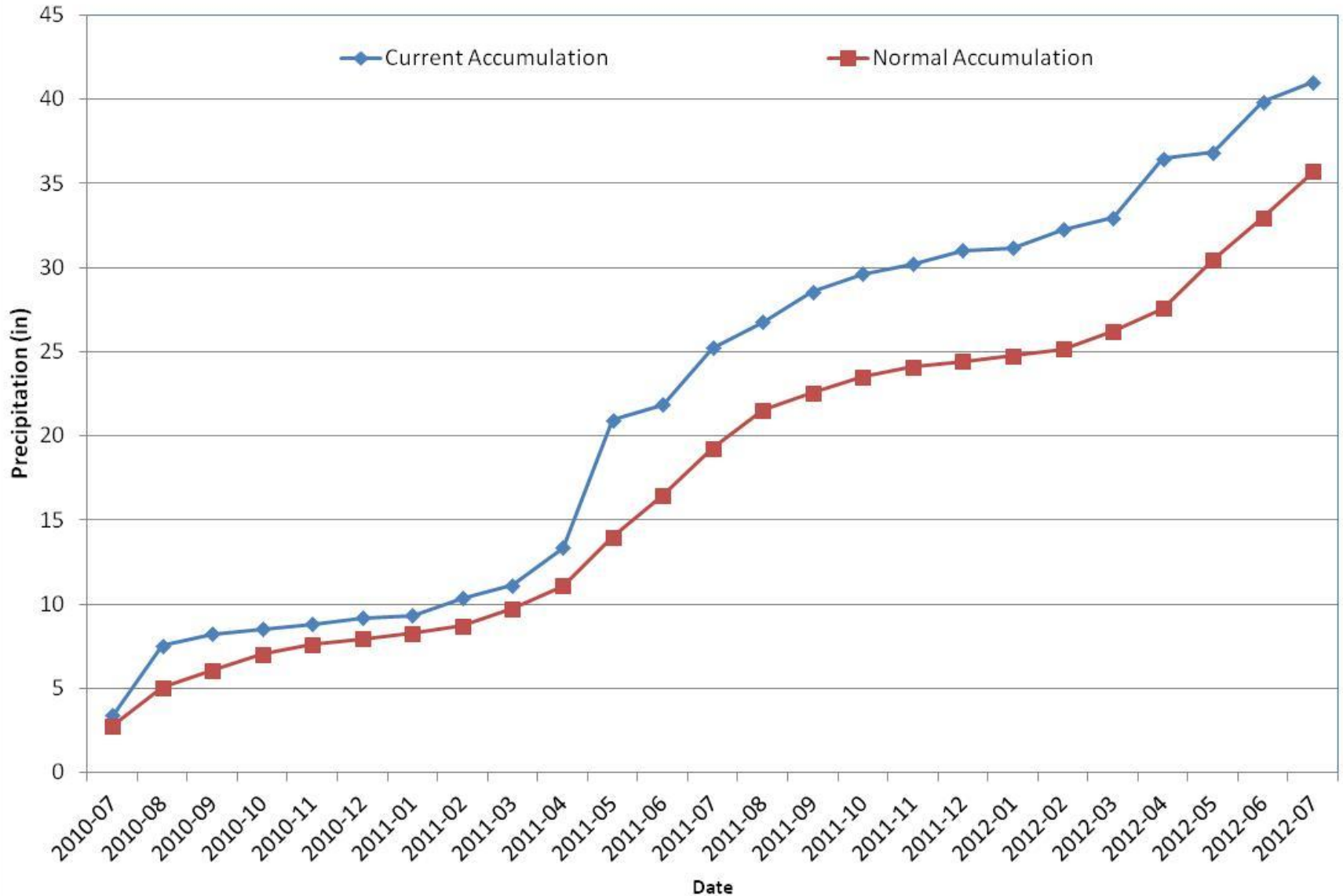
# Division 6 - Burlington

## Burlington 2012 Water Year



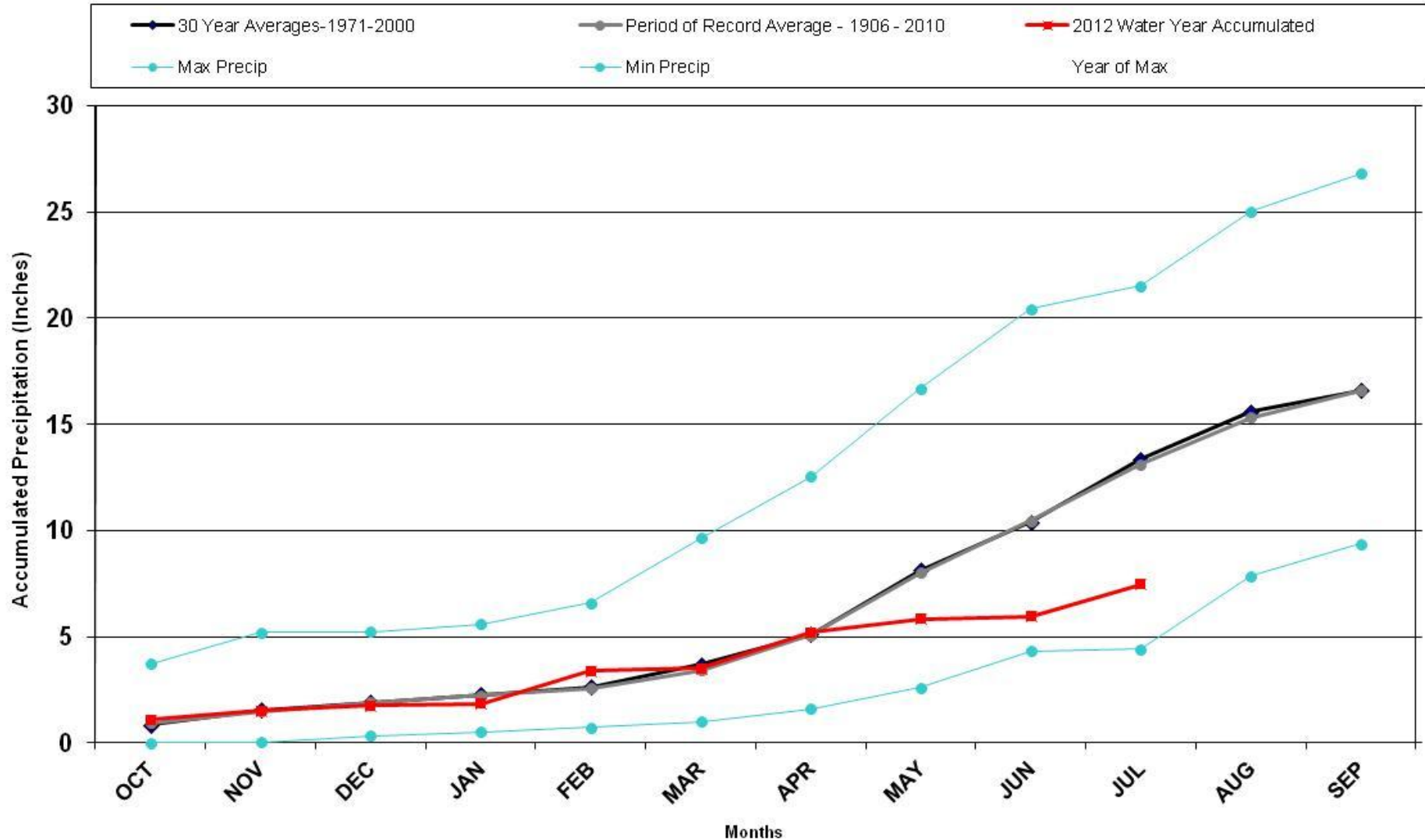
# Division 6 - Burlington

**Burlington, CO**  
**24 Month Precipitation Accumulation**



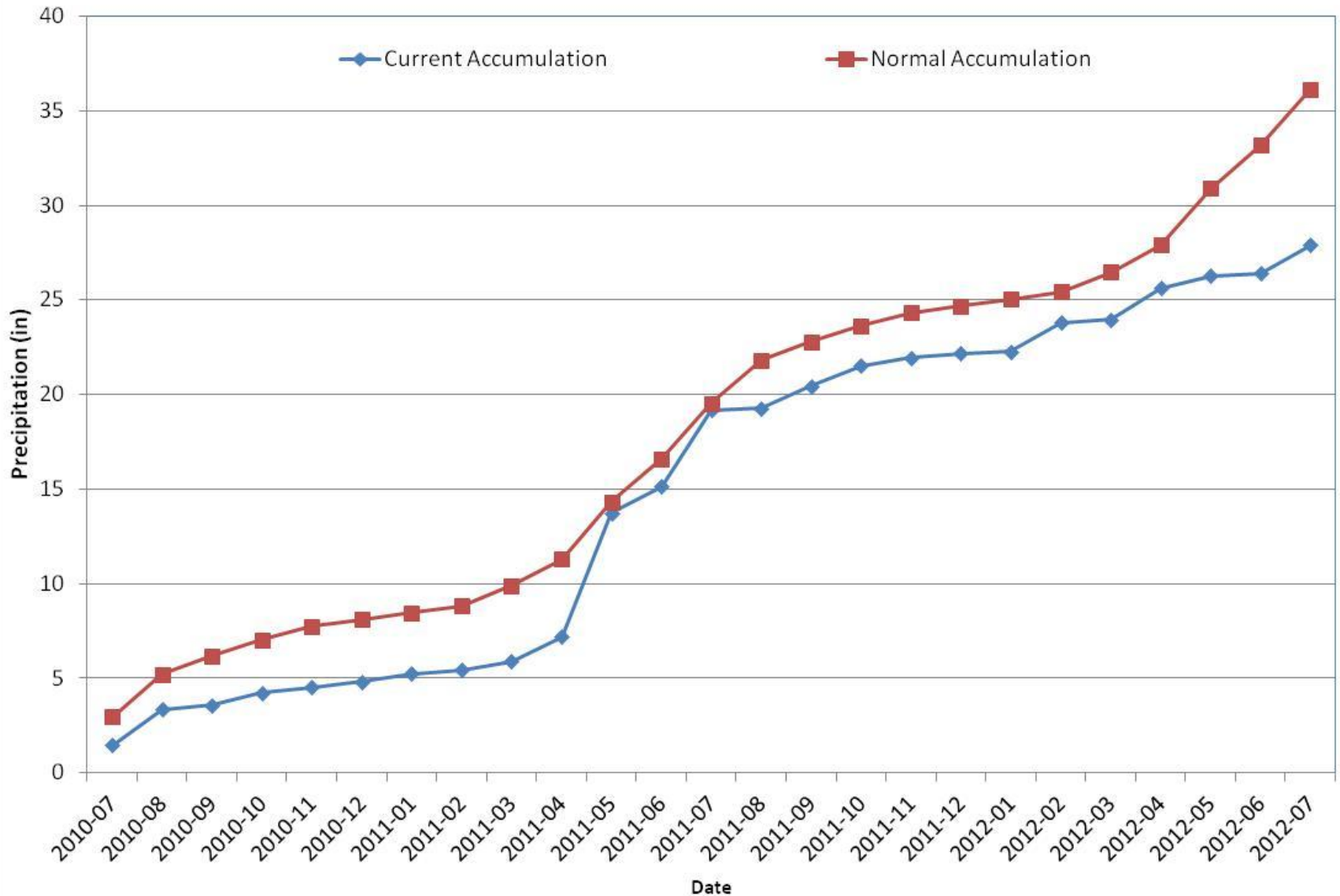
# Division 7 – Akron

## Akron 4E 2012 Water Year



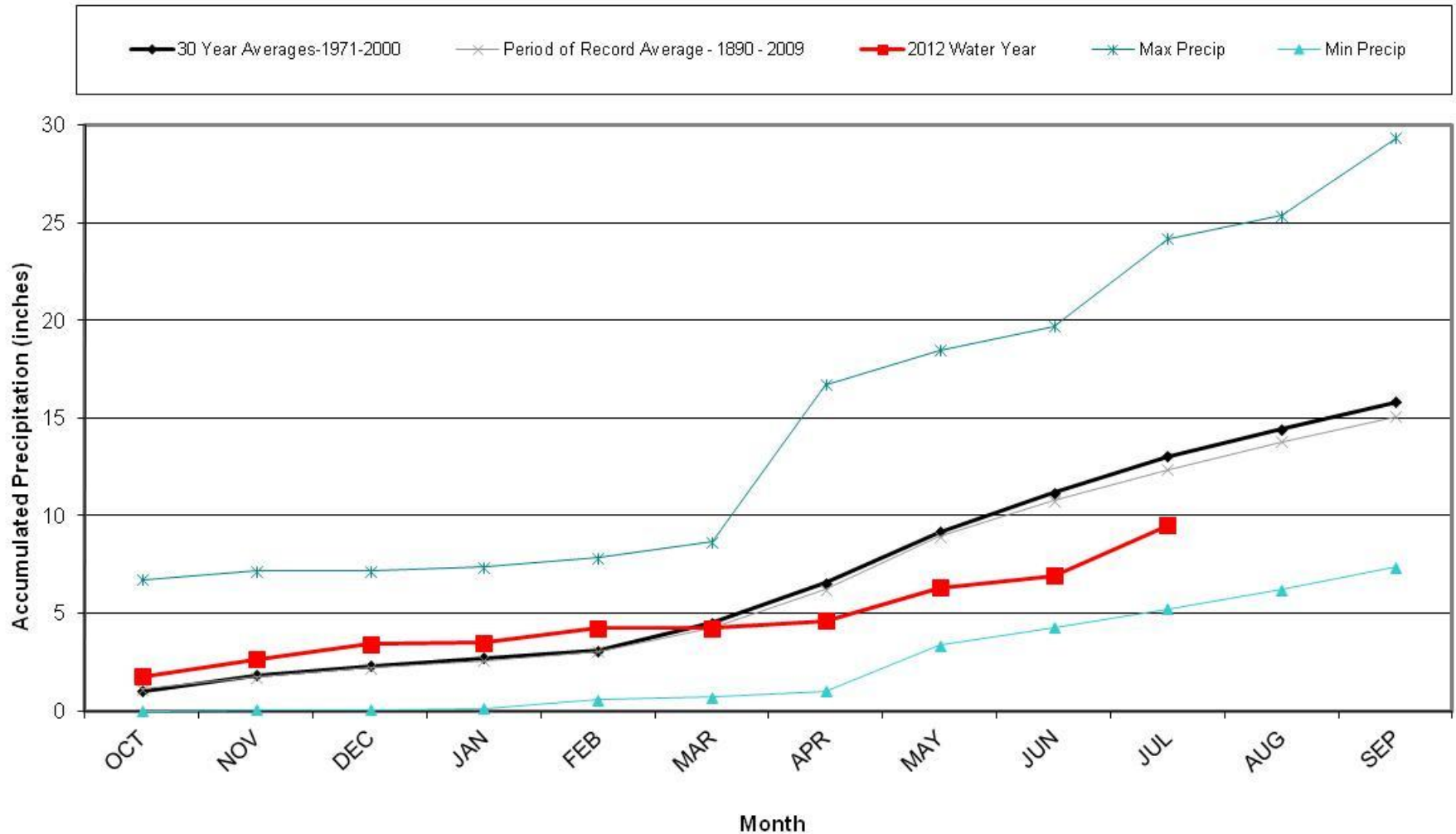
# Division 7 – Akron

Akron 4E  
24 Month Precipitation Accumulation



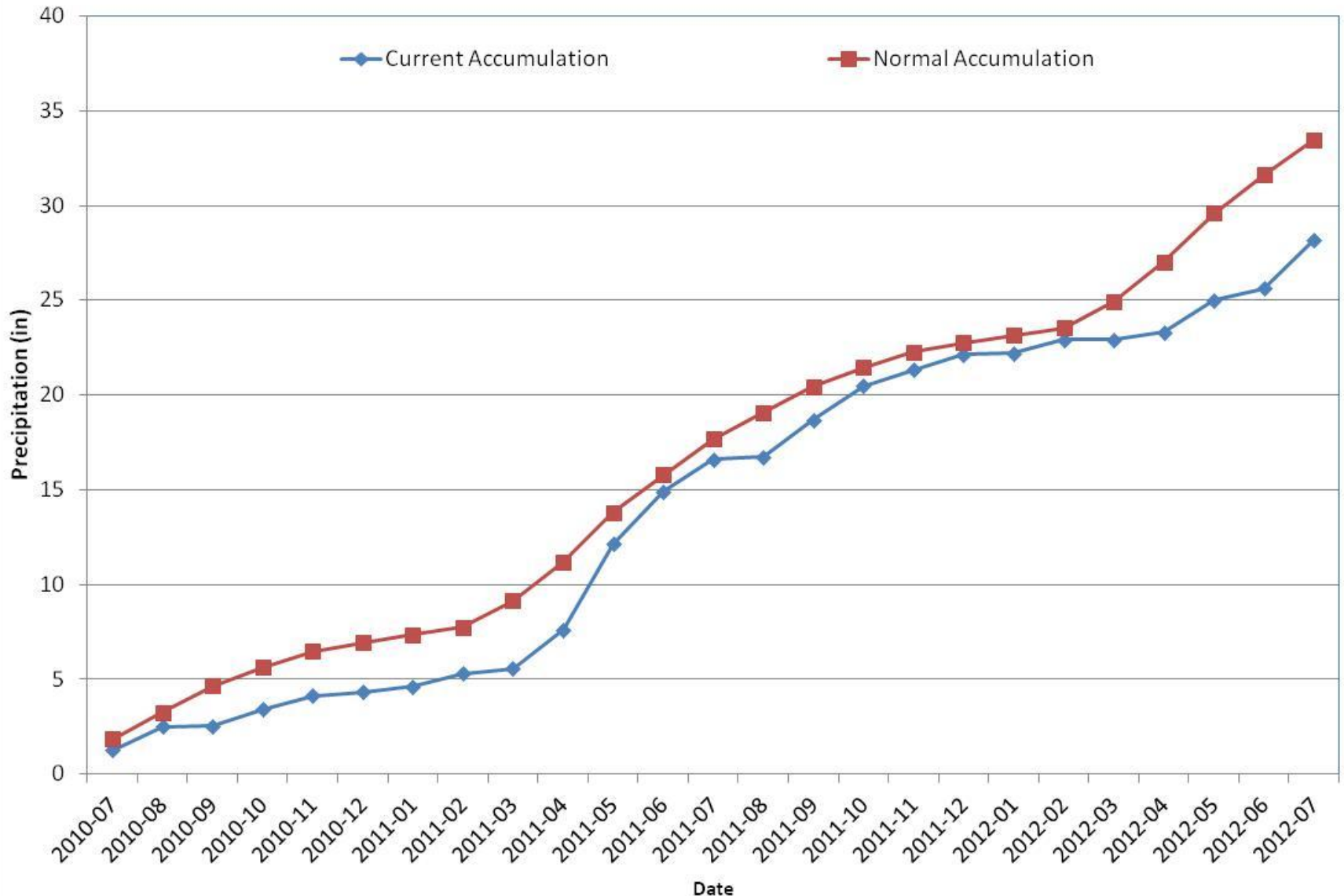
# Division 8 – Fort Collins

## Fort Collins 2012 Water Year



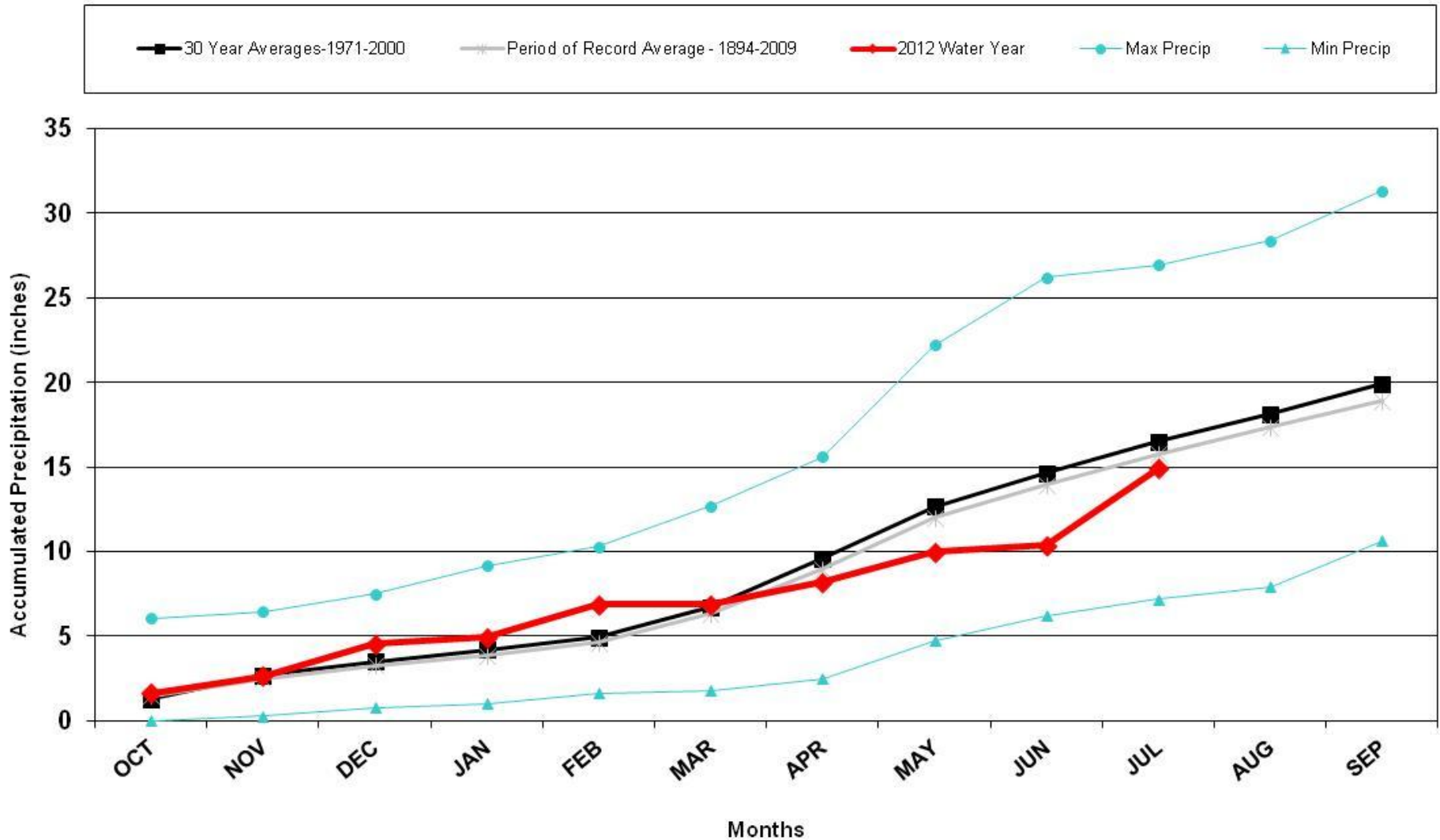
# Division 8 – Fort Collins

## Fort Collins 24 Month Precipitation Accumulation



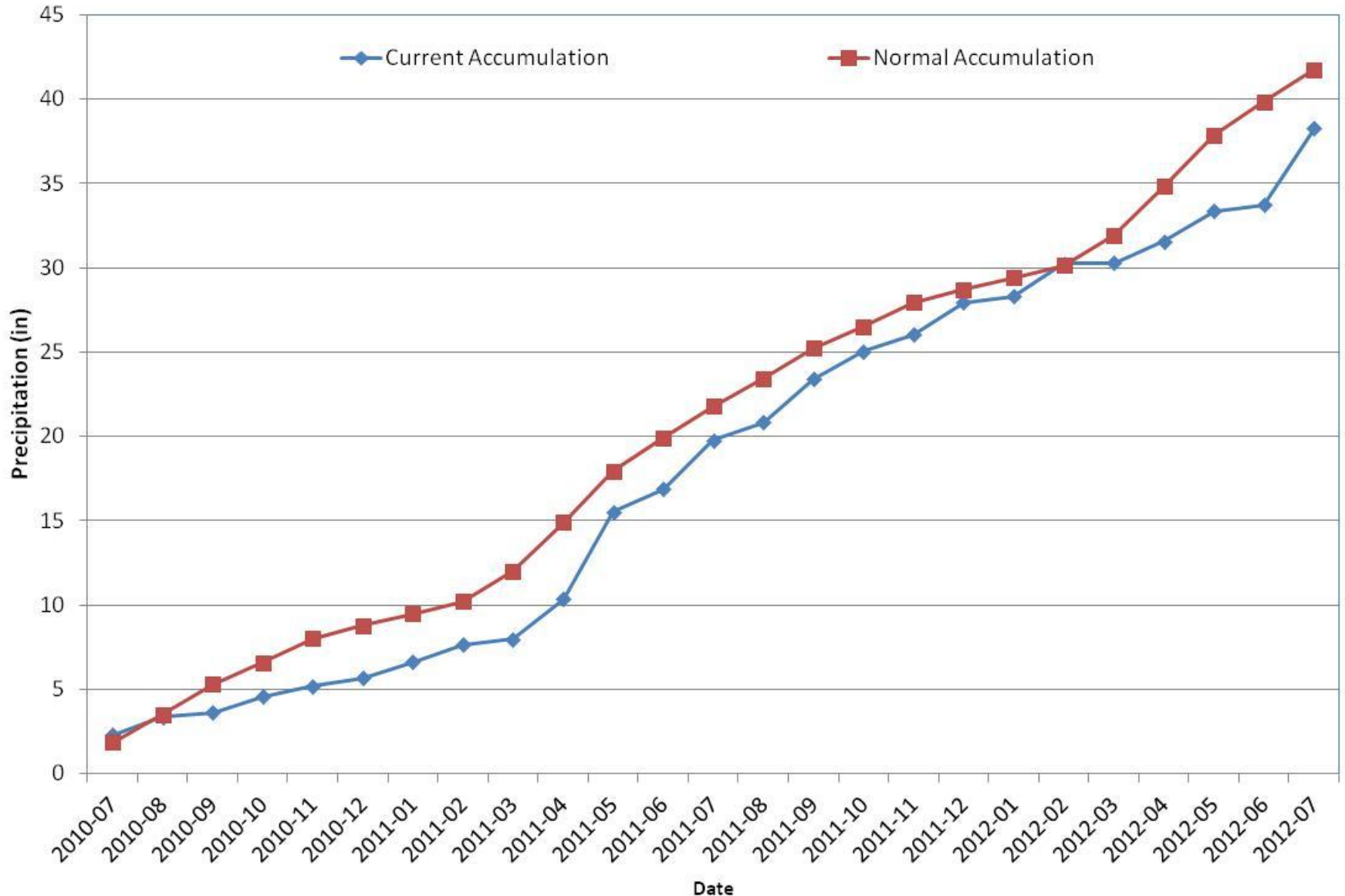
# Division 8 - Boulder

## Boulder 2012 Water Year



# Division 8 - Boulder

## Boulder 24 Month Precipitation Accumulation

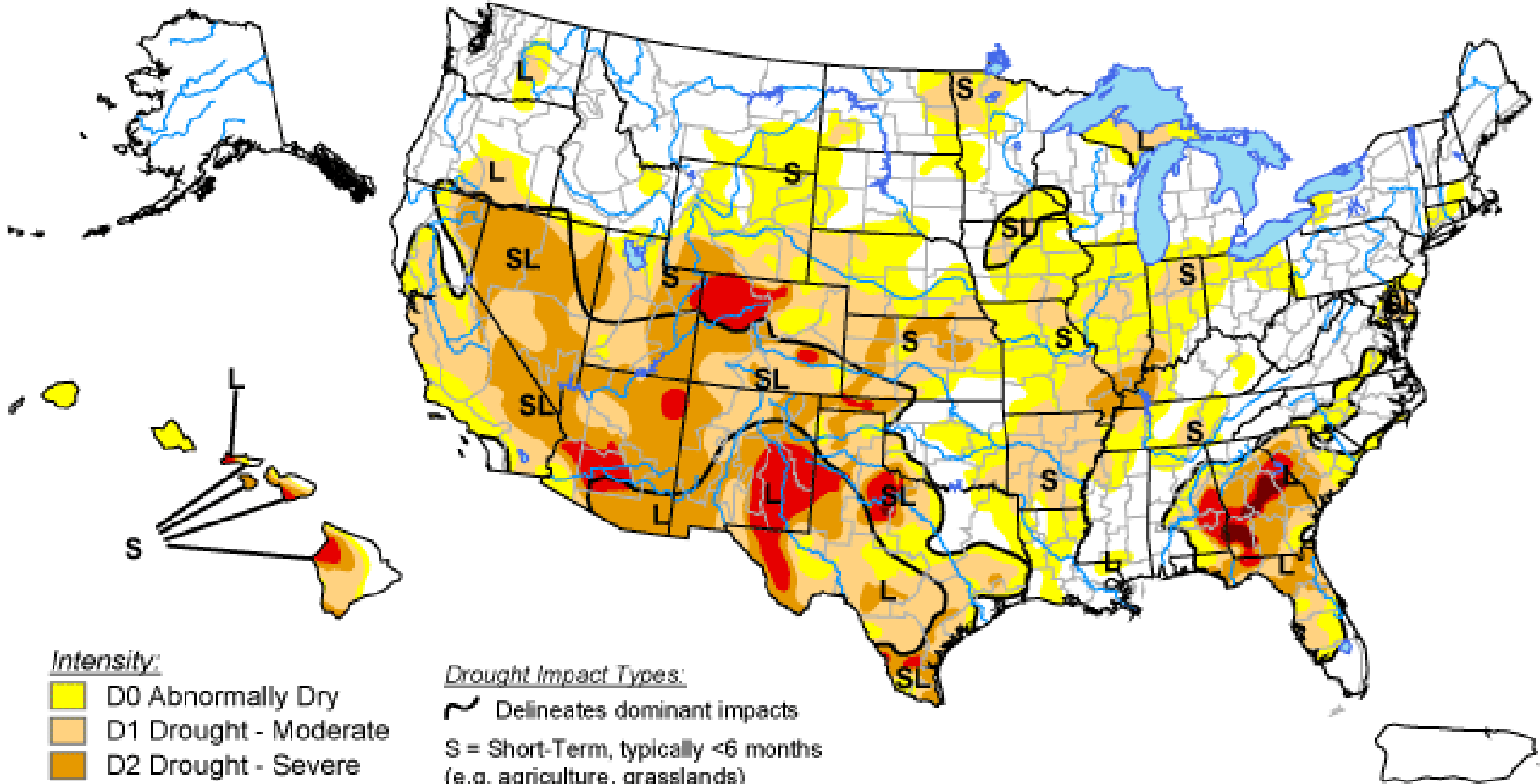









# U.S. Drought Monitor

June 12, 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.

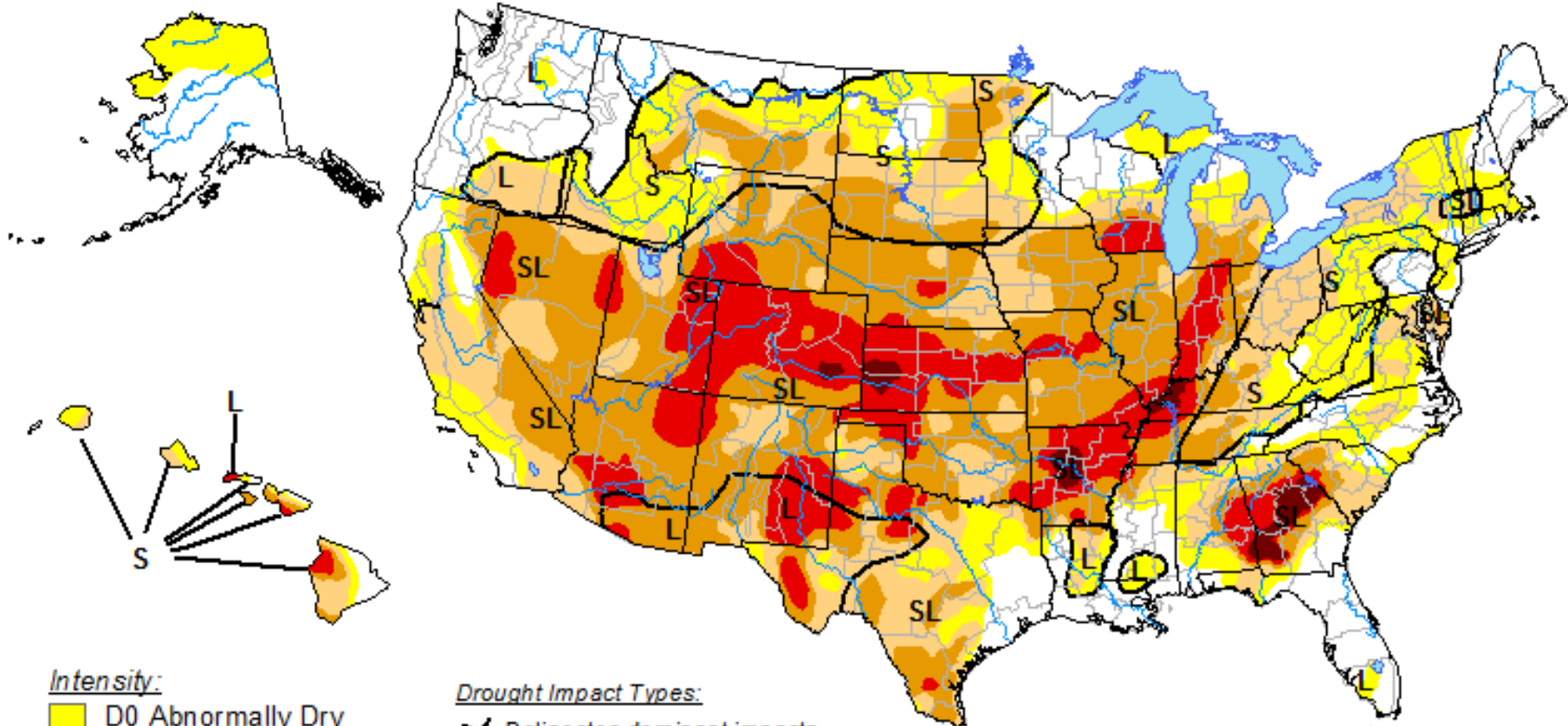
<http://droughtmonitor.unl.edu/>








Released Thursday, June 14, 2012  
Author: David Miskus, NOAA/NWS/NCEP/CPC

# 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.*



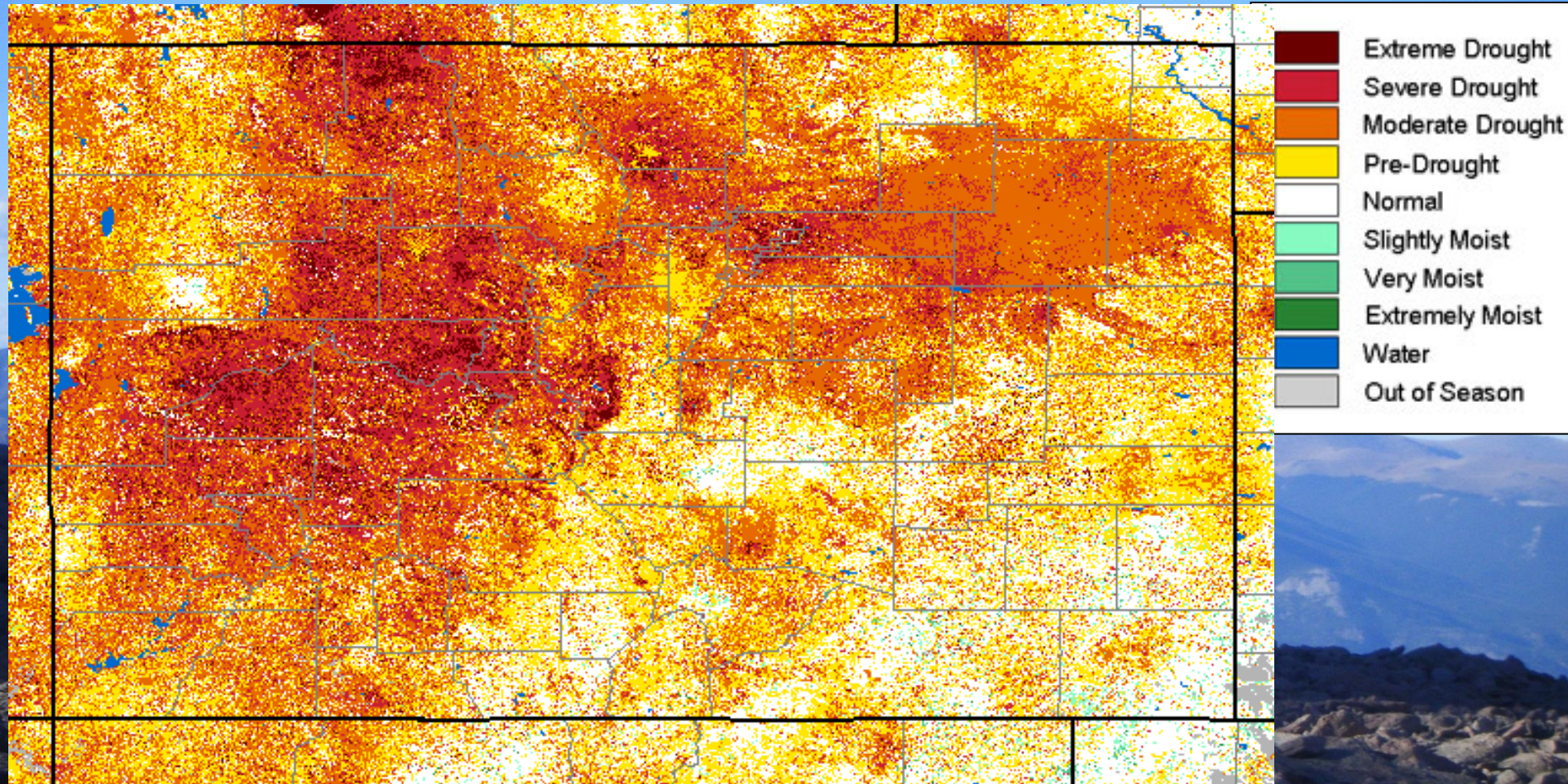
**Released Thursday, July 19, 2012**

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

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

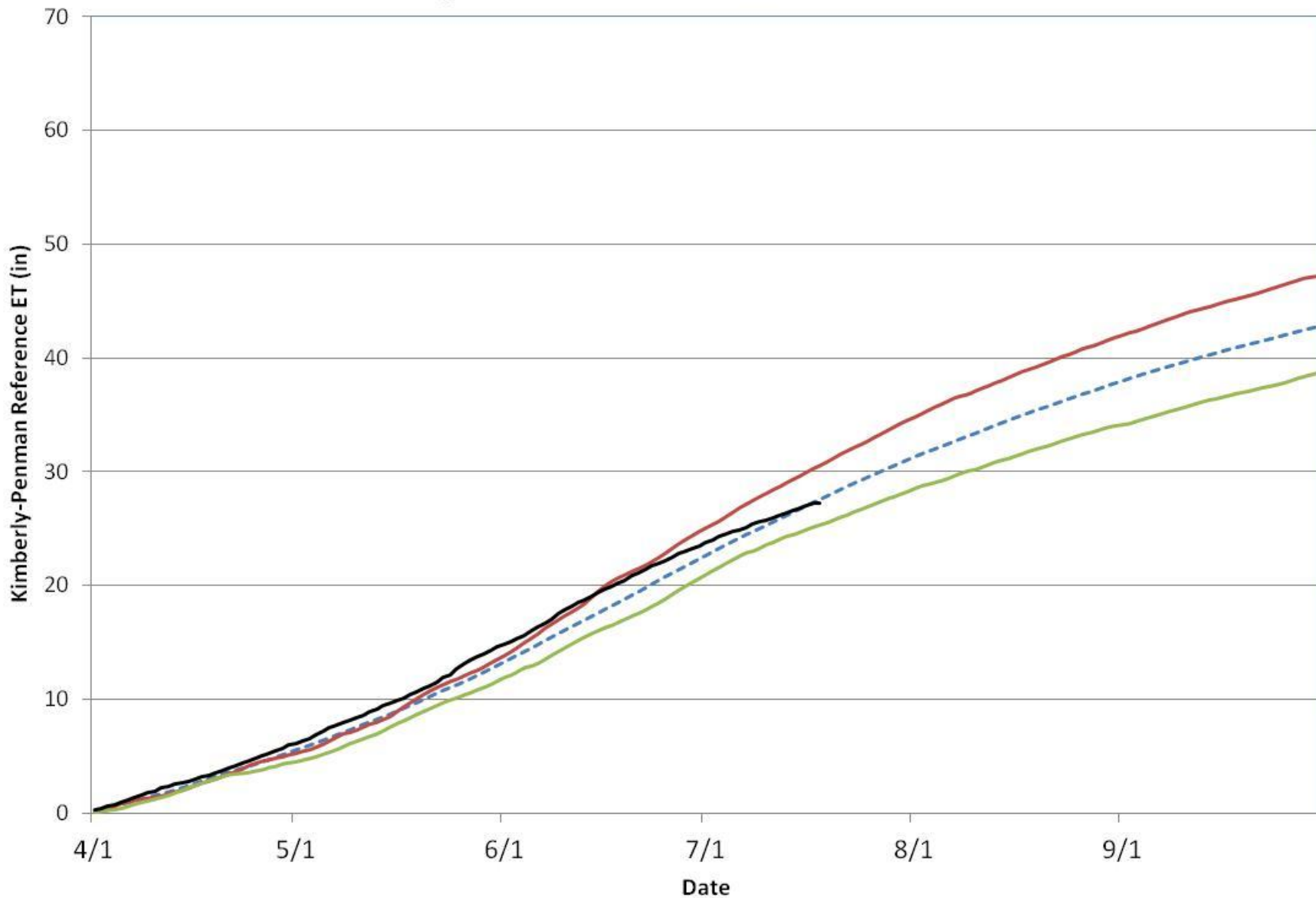
# eMODIS VegDRI Vegetation

## 15 July 2012



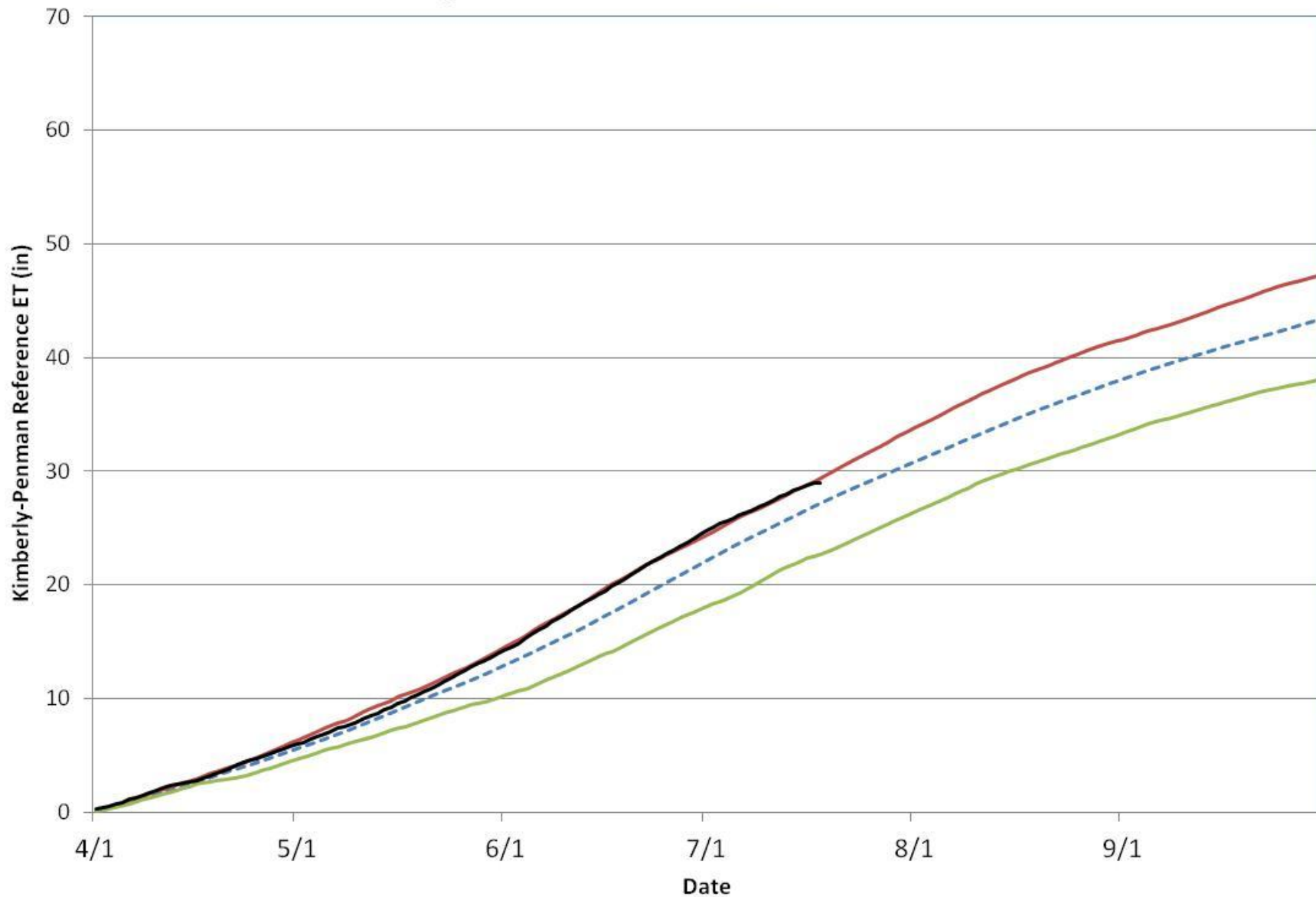
# Olathe Kimberly-Penman Reference ET (1993 - 2012)

--- Average    — 1994    — 1999    — 2012



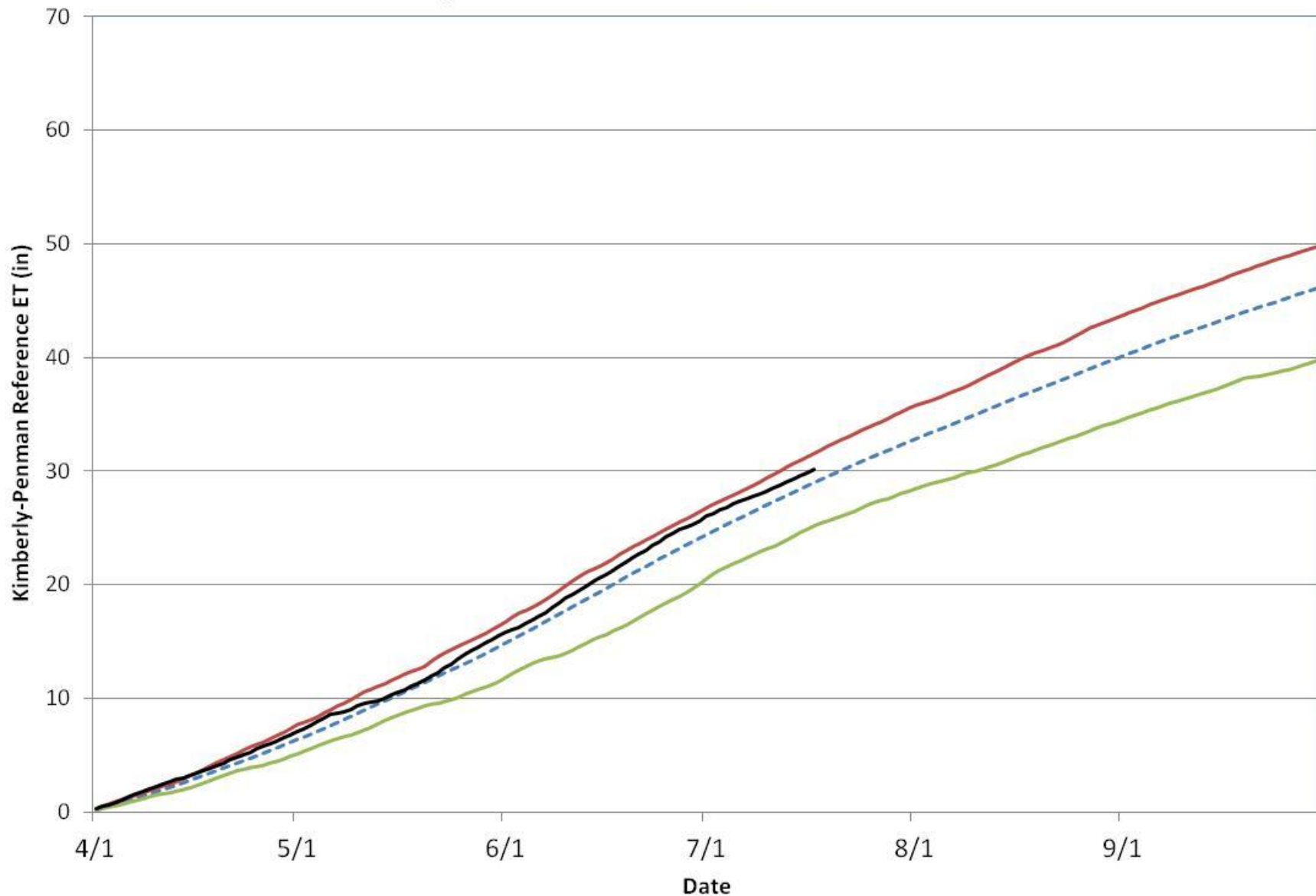
# Cortez Kimberly-Penman Reference ET (1992 - 2012)

--- Average    — 2000    — 1995    — 2012



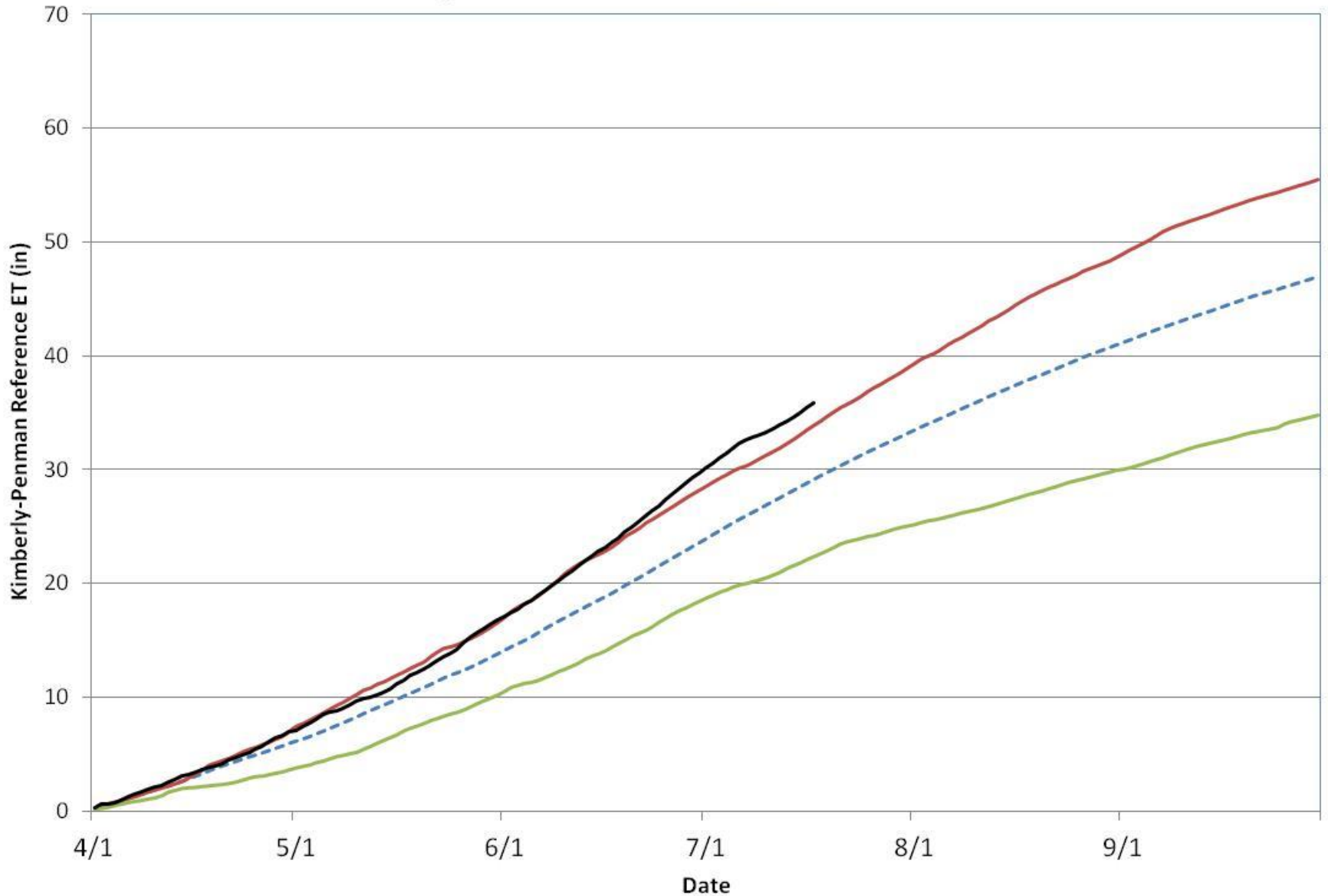
# Center Kimberly-Penman Reference ET (1994 - 2012)

--- Average    — 2002    — 1997    — 2012



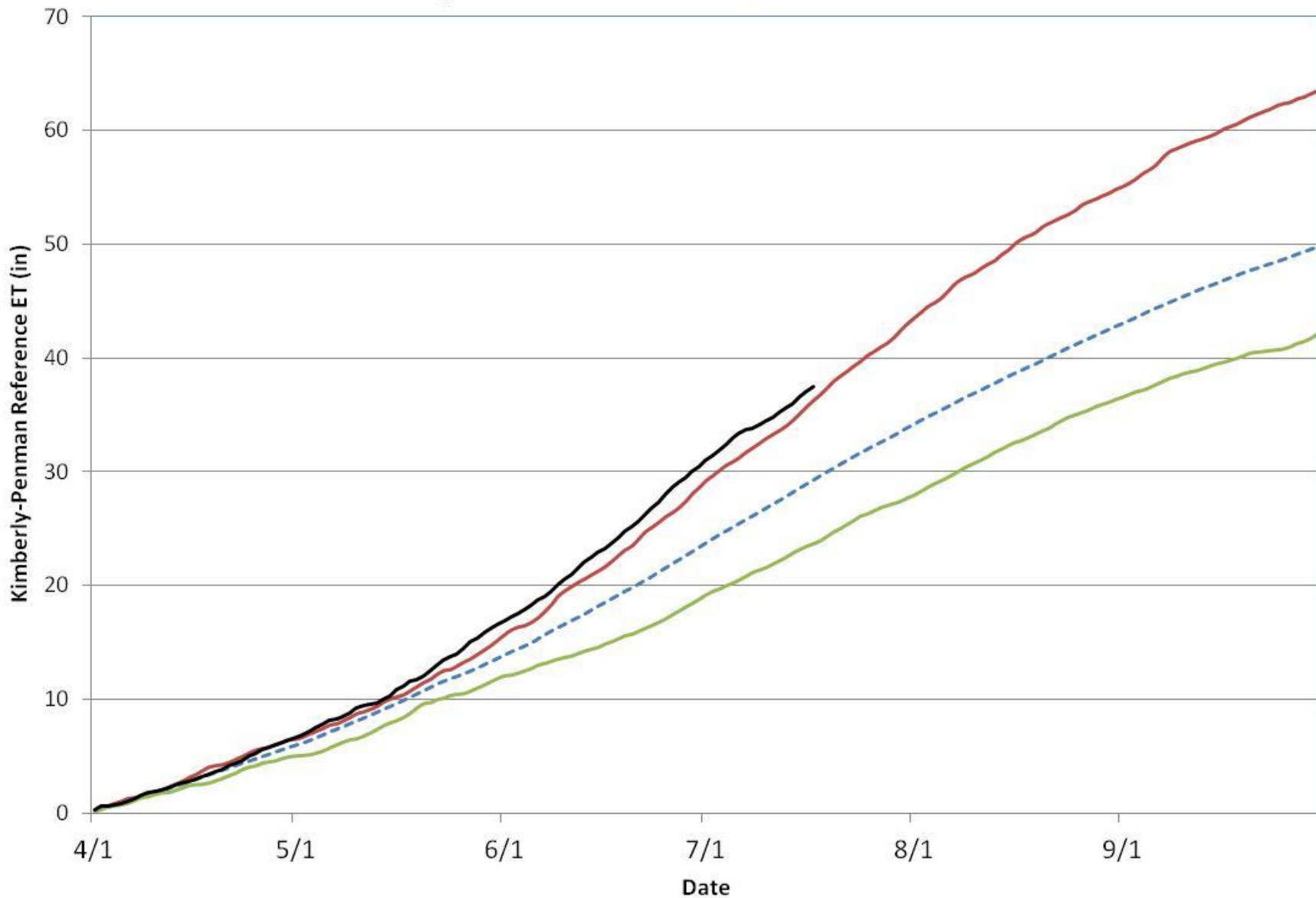
# Avondale Kimberly-Penman Reference ET (1993 - 2012)

--- Average    — 2002    — 1998    — 2012



# Idalia Kimberly-Penman Reference ET (1992 - 2012)

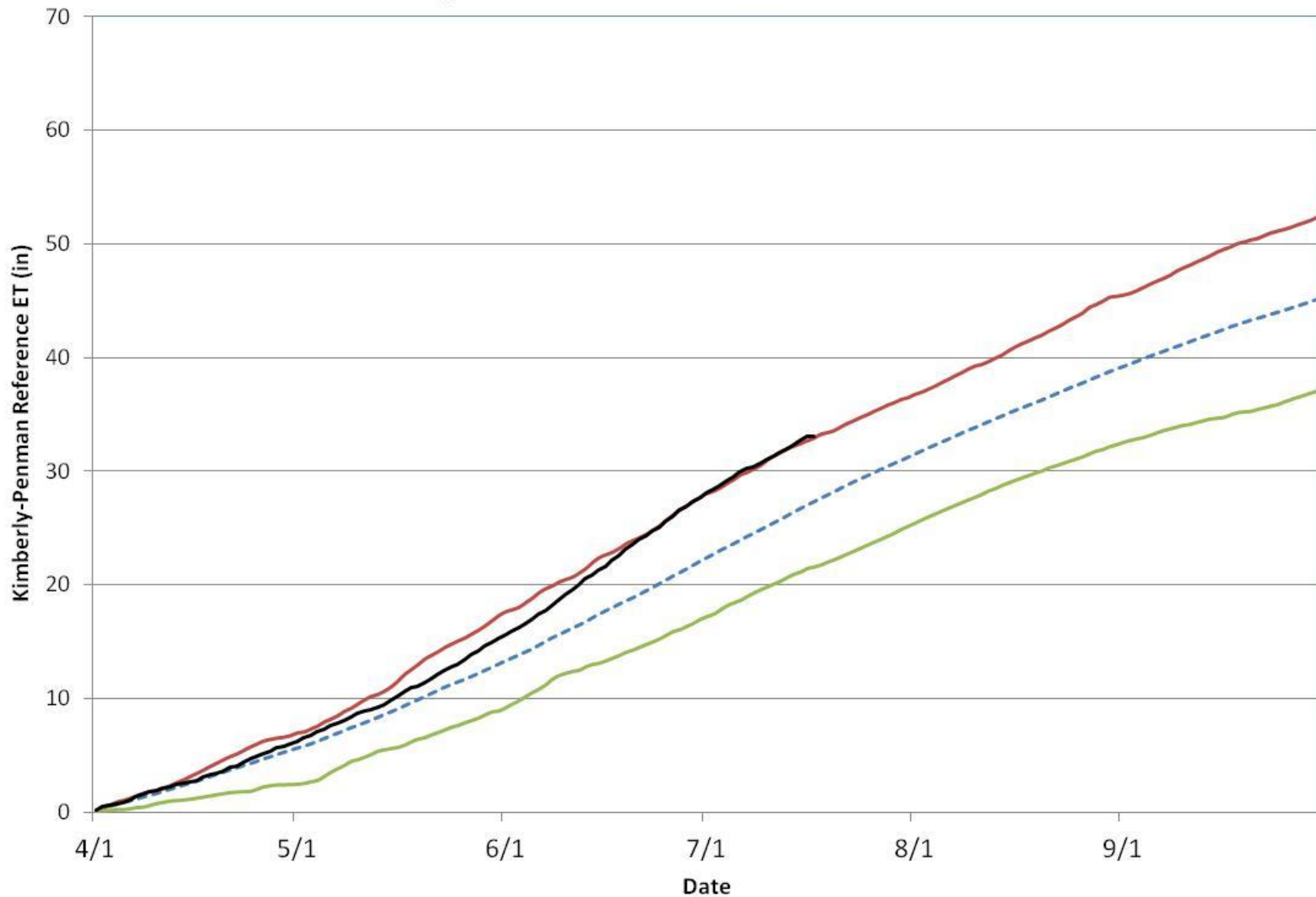
--- Average    — 2002    — 2009    — 2012





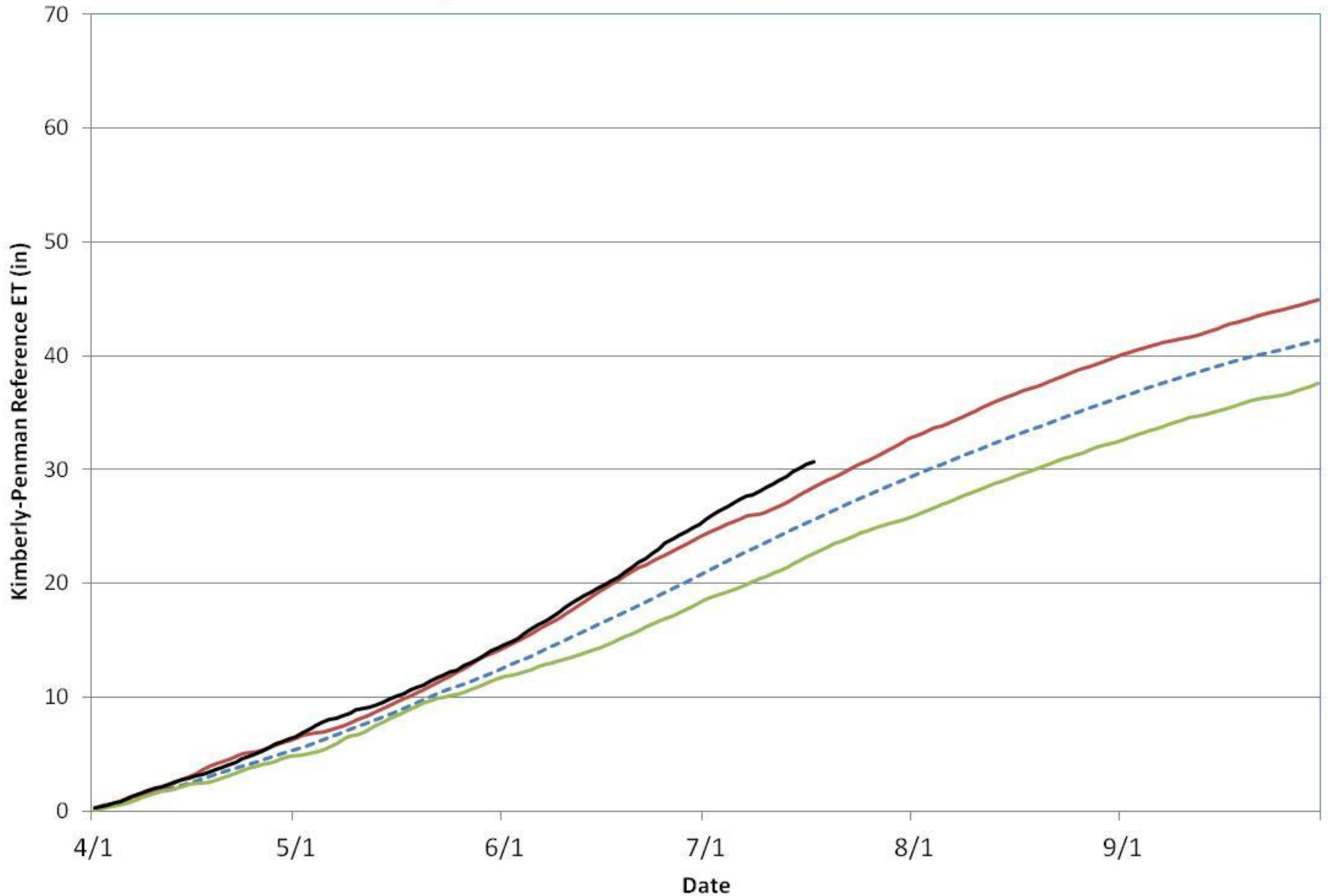
# Holyoke Kimberly-Penman Reference ET (1992 - 2012)

--- Average    — 1994    — 1999    — 2012



# Lucerne Kimberly-Penman Reference ET (1992 - 2012)

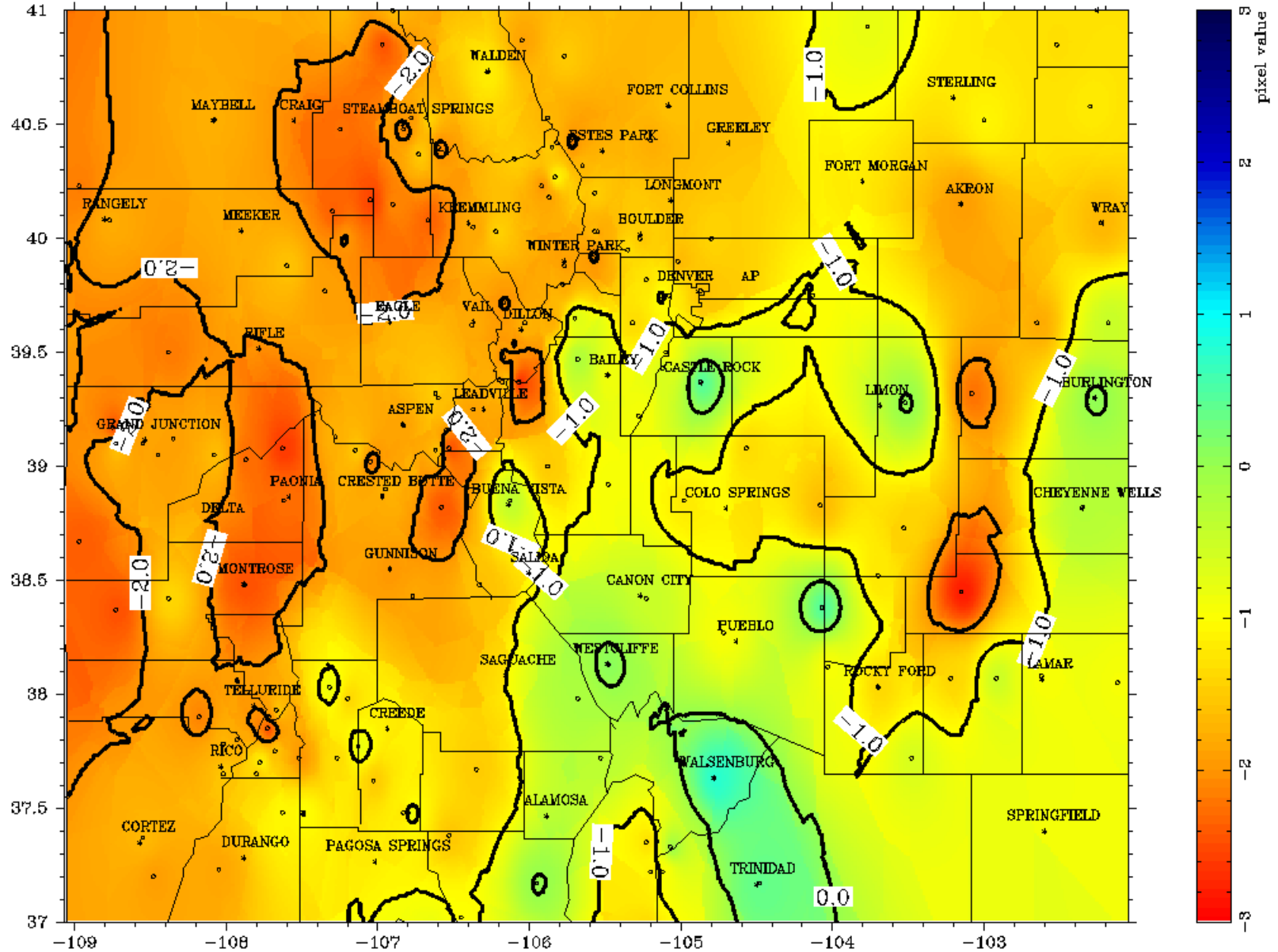
--- Average    — 2006    — 2009    — 2012



# Colorado

6/2012 3 mon. SPI

JULESBURG

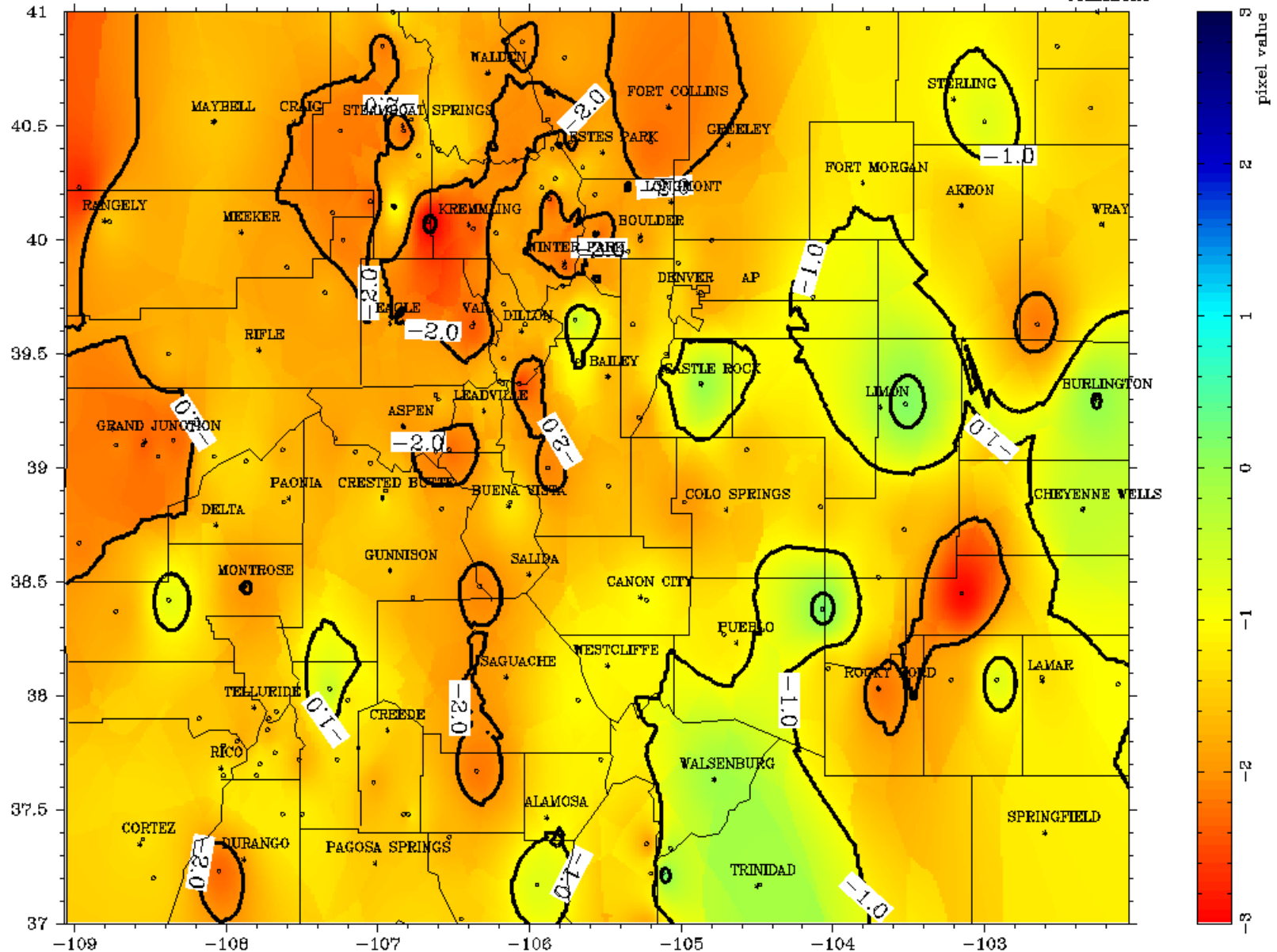


Produced by:  
Colorado Climate Center  
Fort Collins, CO

# Colorado

6/2012 6 mon. SPI

JULESBURG



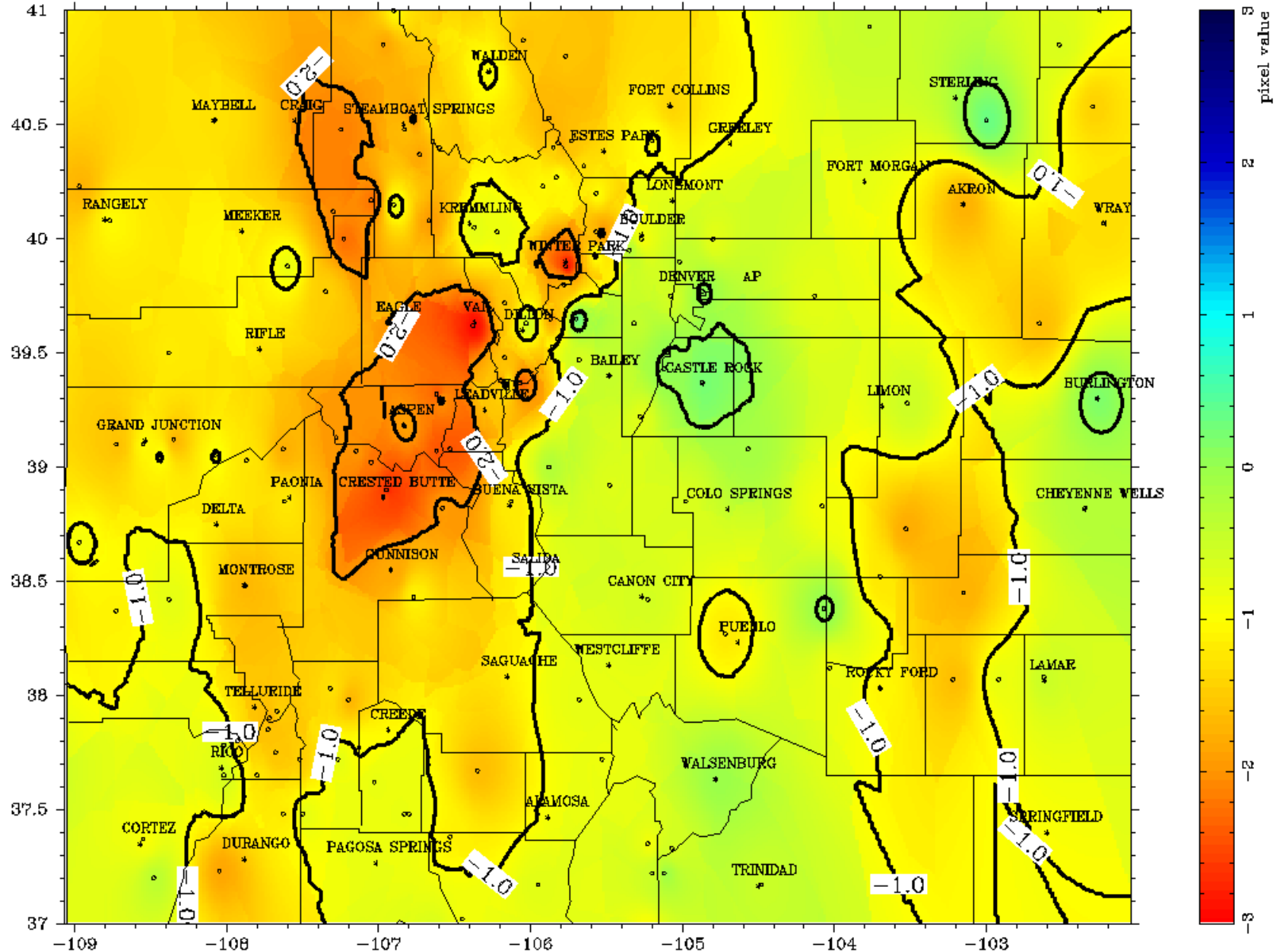
100 % < 2.0	86 % < -1.0
100 % < 1.0	13 % < -2.0
100 % < 0.0	0 % < -3.0

Produced by:  
Colorado Climate Center  
Fort Collins, CO

# Colorado

6/2012 12 mon. SPI

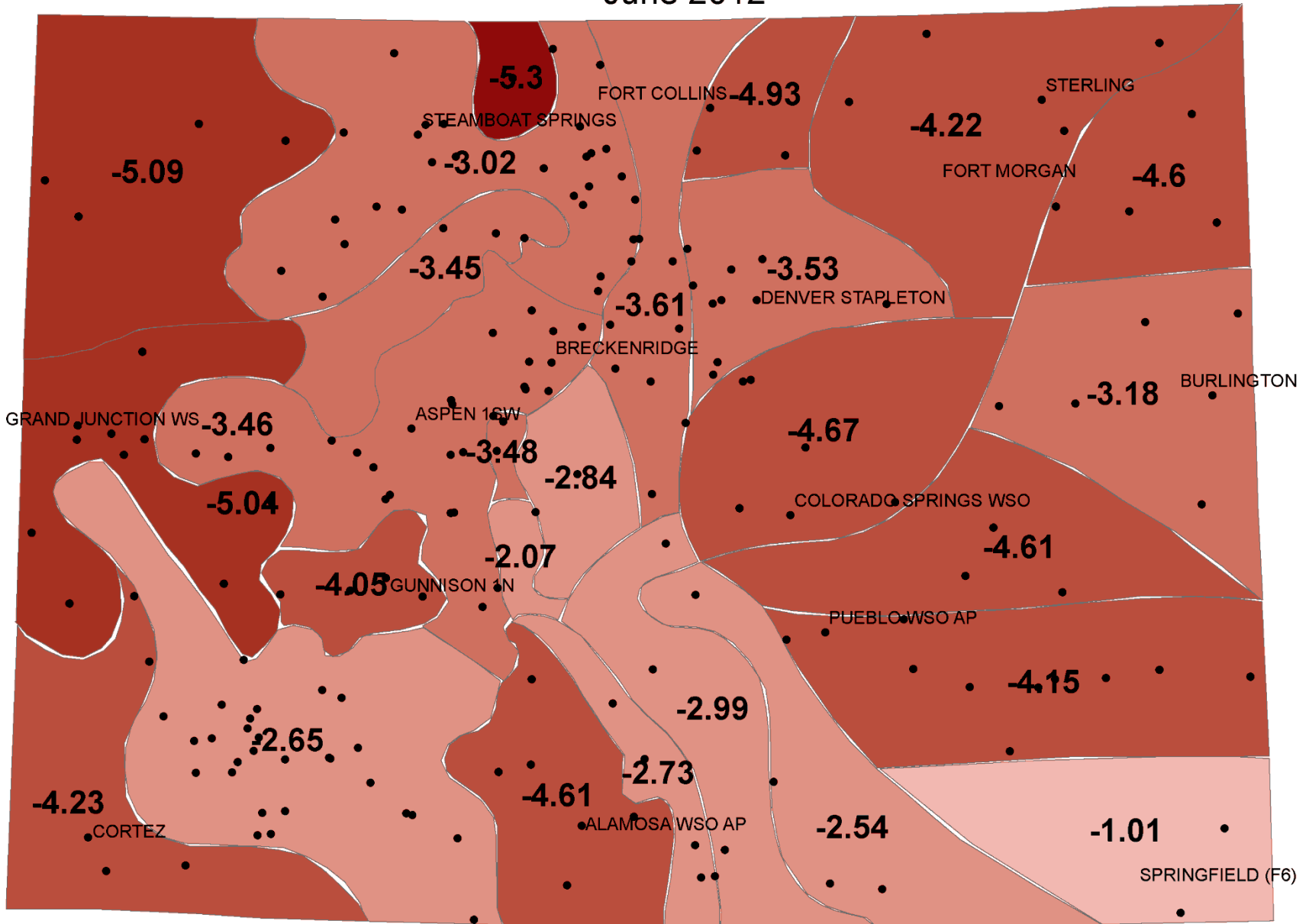
JULESBURG



100 % < 2.0    53 % < -1.0  
 100 % < 1.0    4 % < -2.0  
 99 % < 0.0    0 % < -3.0

Produced by:  
 Colorado Climate Center  
 Fort Collins, CO

# Modified Palmer Drought Severity Index for Colorado June 2012



# Colorado Climate Center

Data and Power Point Presentations available for downloading

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



COLORADO  
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CENTER

**Colorado  
State**  
University  
*Knowledge to Go Places*