



# *Climate Update*



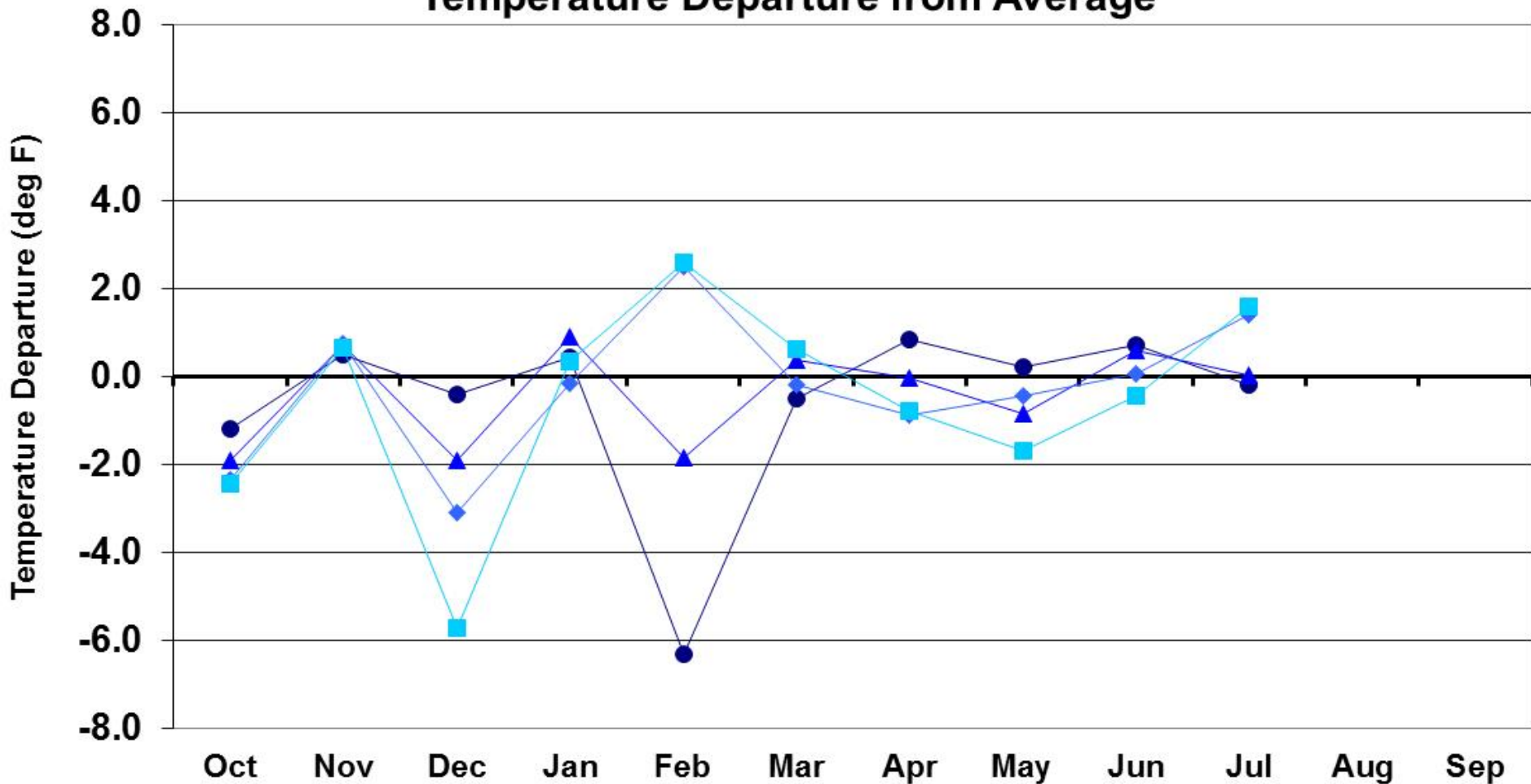
**Wendy Ryan  
Assistant State Climatologist  
Colorado Climate Center**

**Colorado State University**

Presented to  
Water Availability Task Force  
13 Aug 2014  
Denver, CO

# Water Year 2014 Temperature Departures

Water Year 2014  
Temperature Departure from Average



● Eastern Plains

▲ Foothills

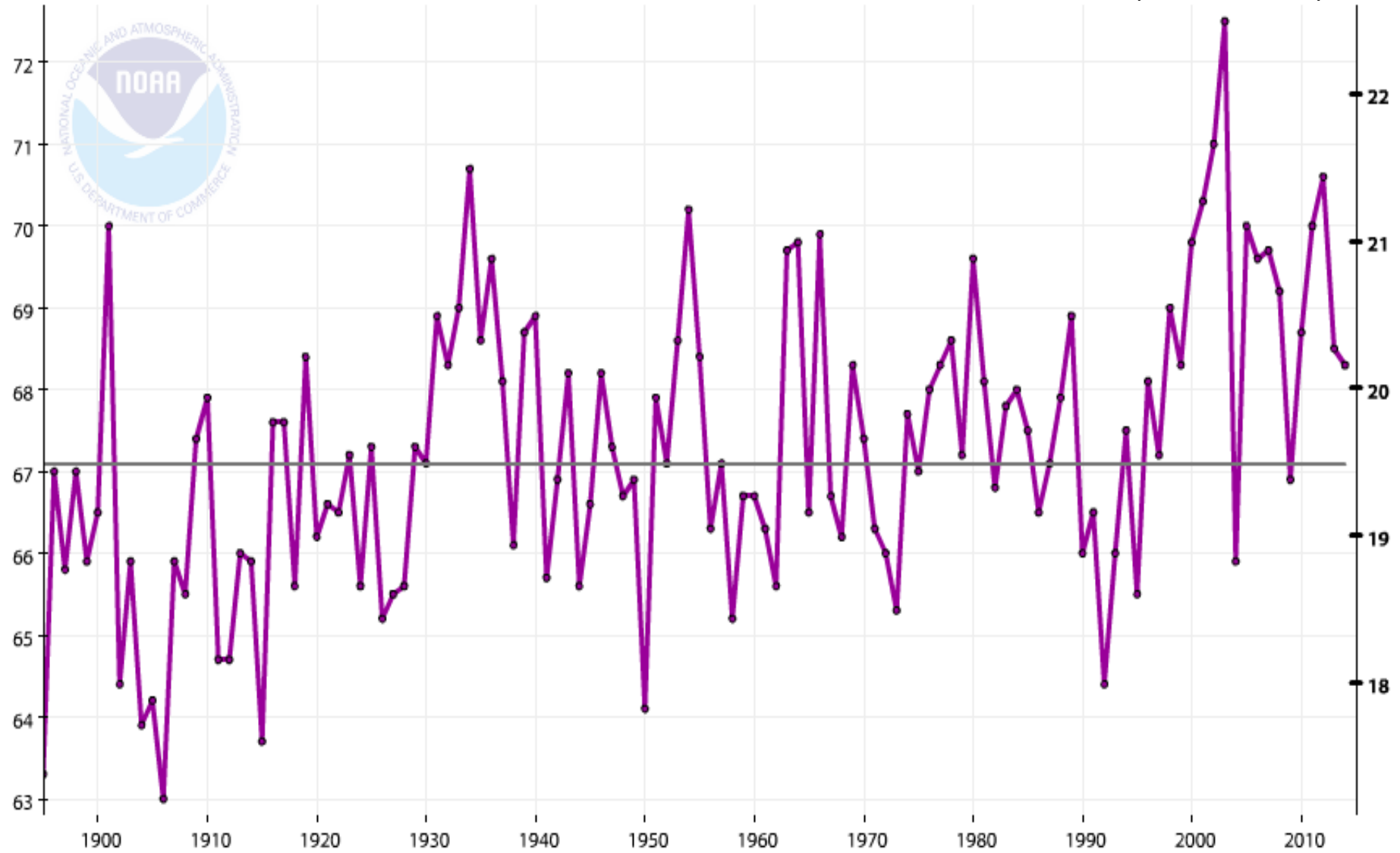
◆ Mountains

■ Western Valleys

# July Average Temperature History for Colorado (NCDC)

Colorado, Average Temperature, July  
1901-2000  
Avg: 67.1°F

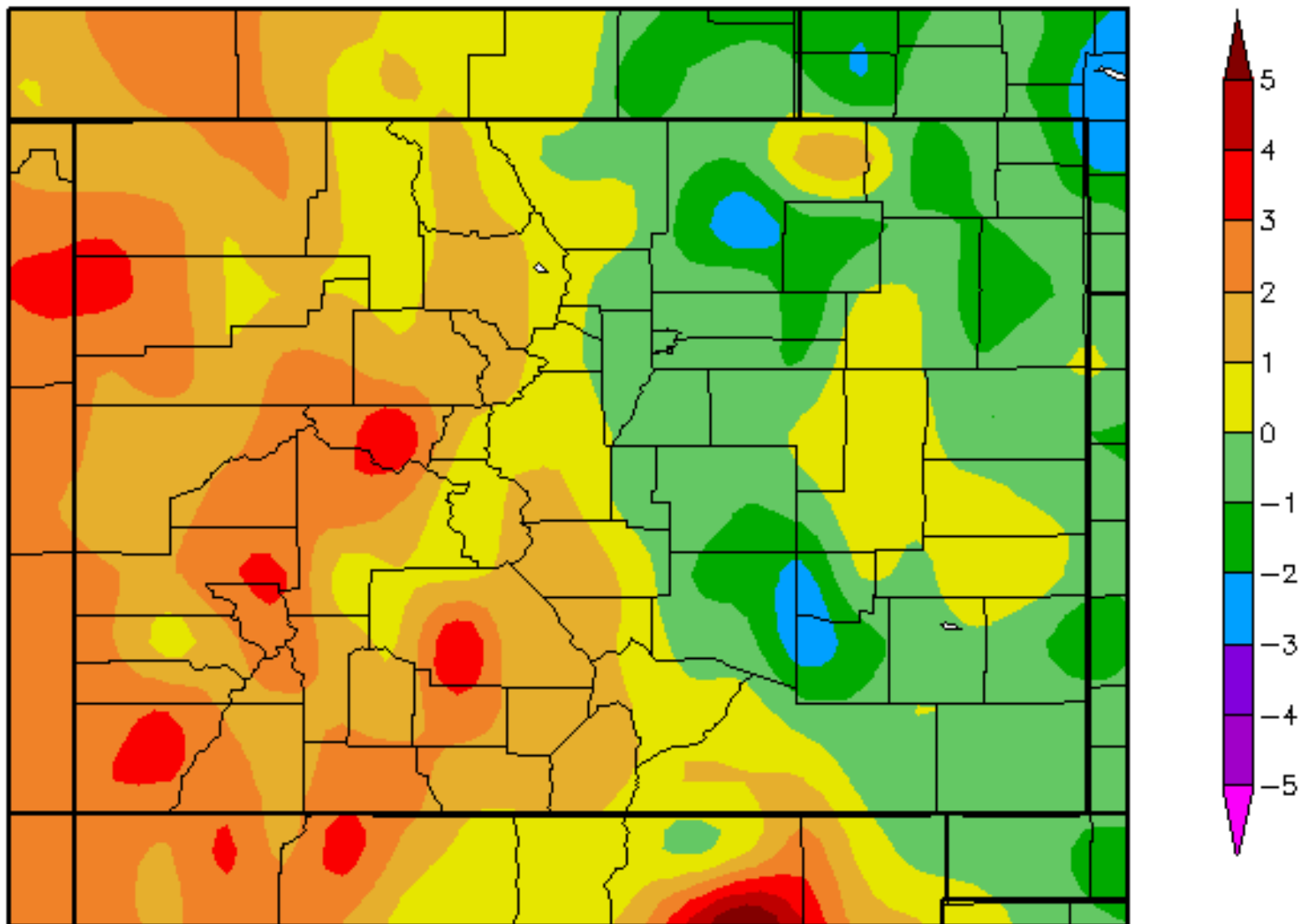
68.3F ranks as the 32<sup>nd</sup>  
warmest (1895-2014)





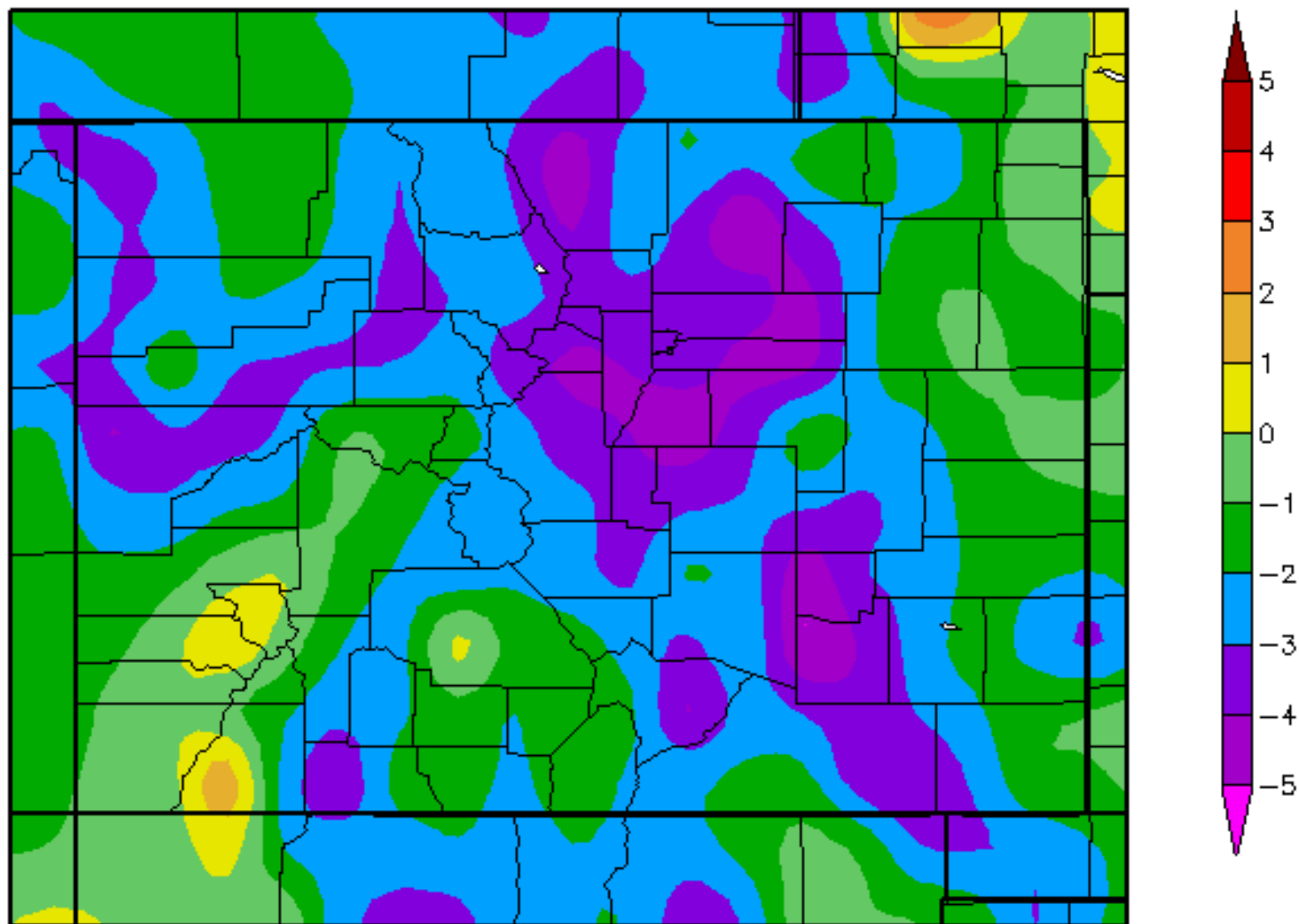
# Departure from Normal Temperature (F)

## 7/1/2014 - 7/31/2014

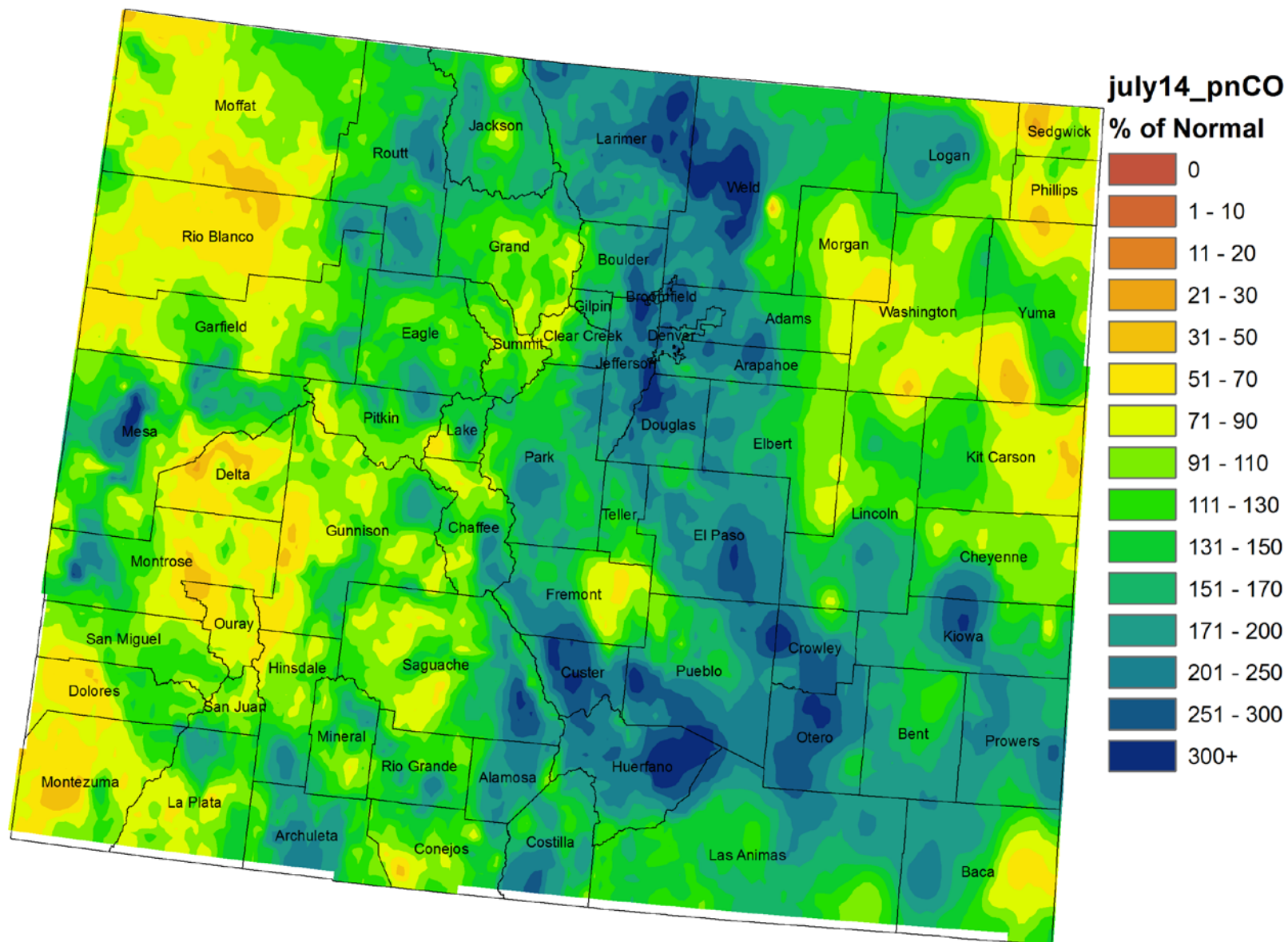


# Departure from Normal Temperature (F)

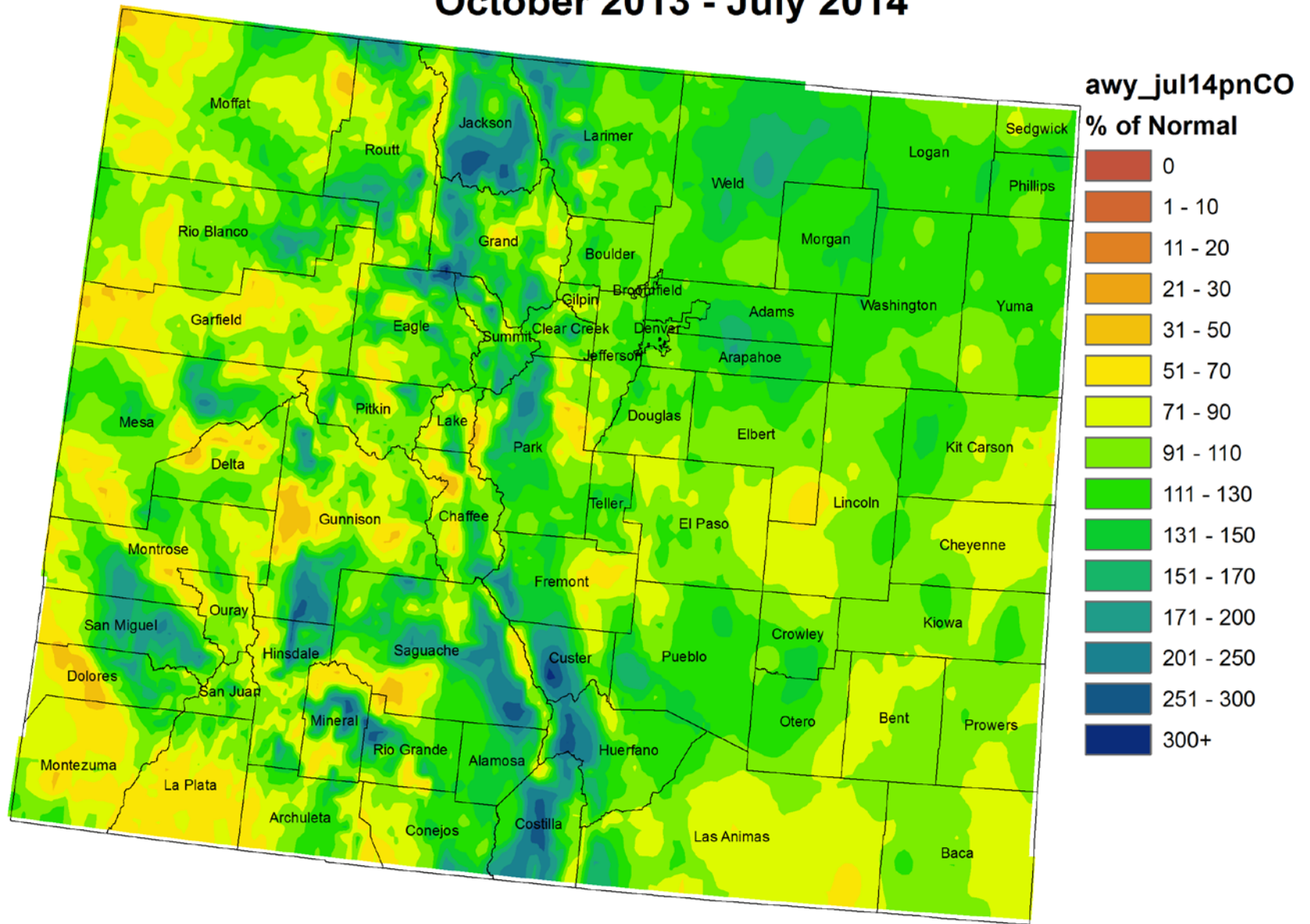
8/1/2014 - 8/11/2014



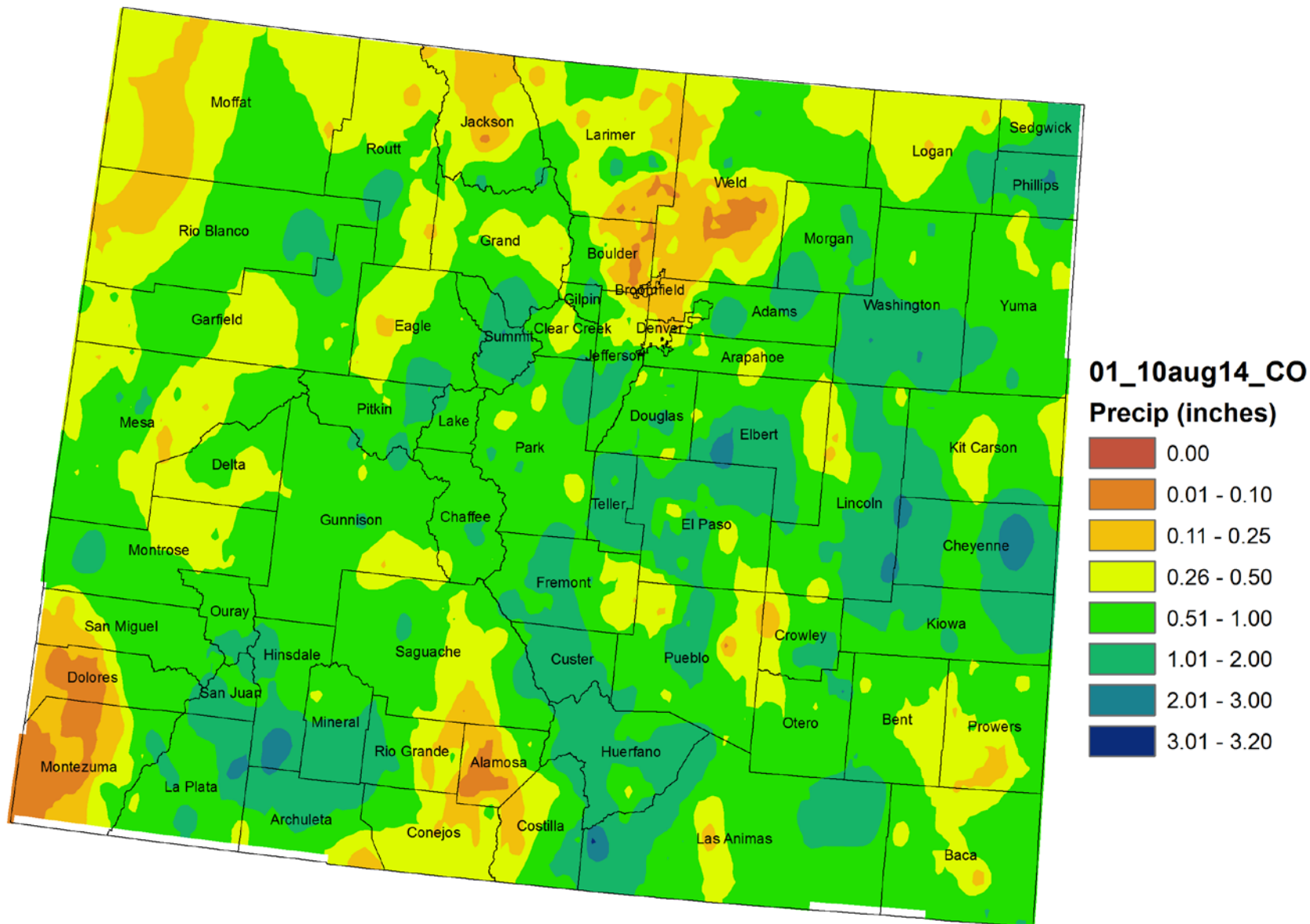
# Colorado July 2014 Precipitation as a Percentage of Average



# Colorado Water Year 2014 Precipitation as a Percentage of Average October 2013 - July 2014

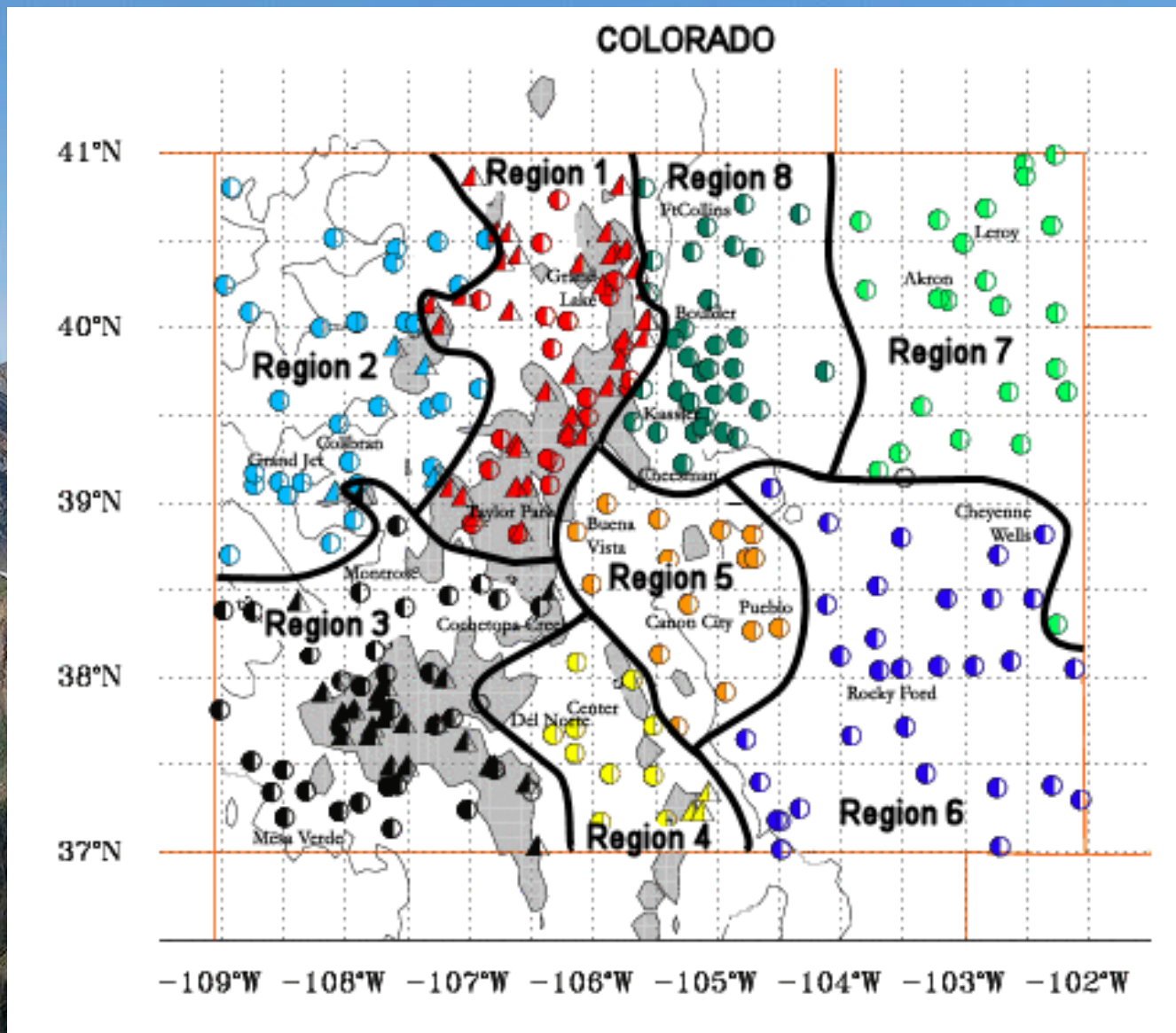


# Colorado Month to Date Precipitation 1 - 10 August 2014

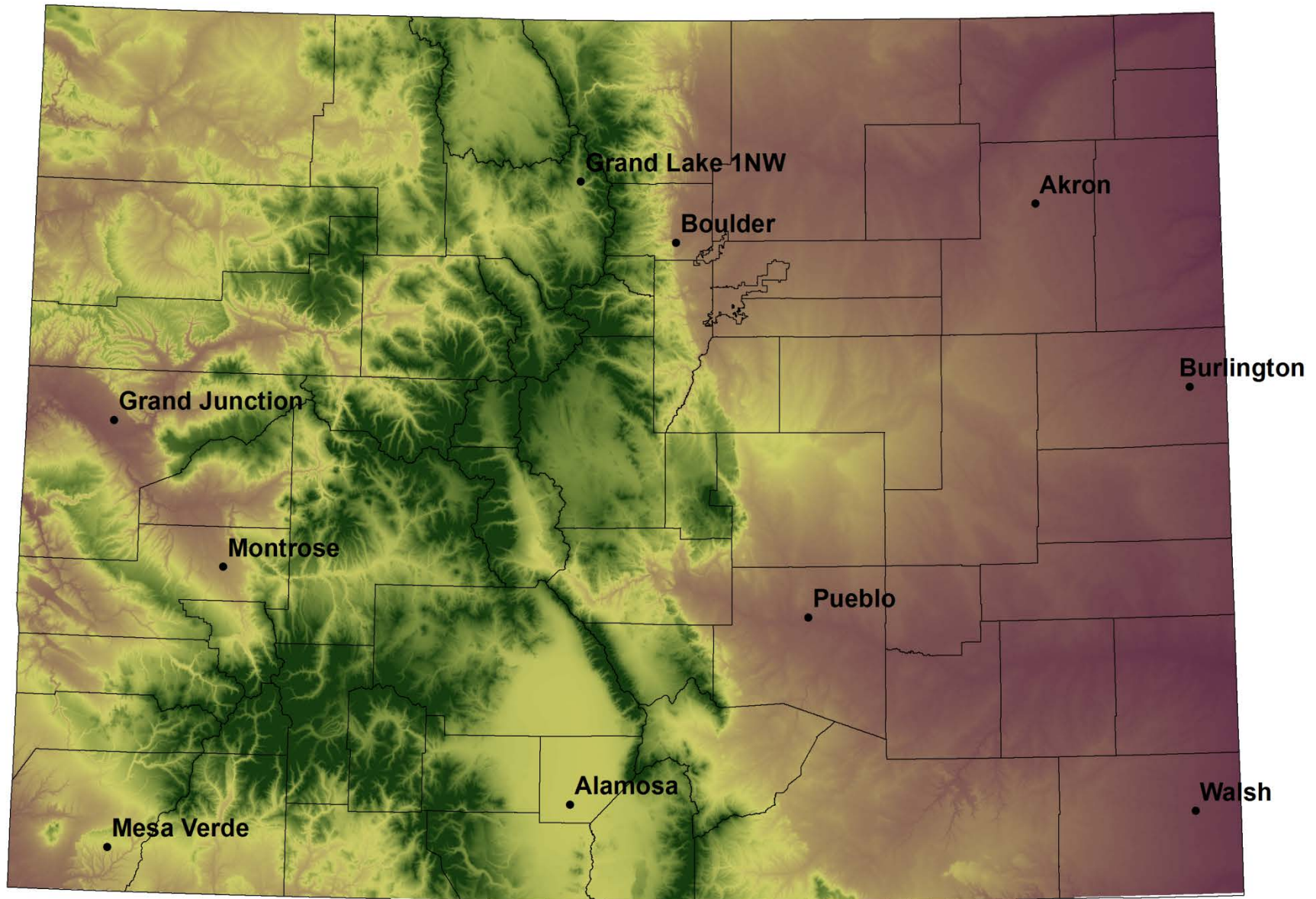




# Climate divisions defined by Dr. Klaus Wolter of NOAA's Climate Diagnostic Center in Boulder, CO



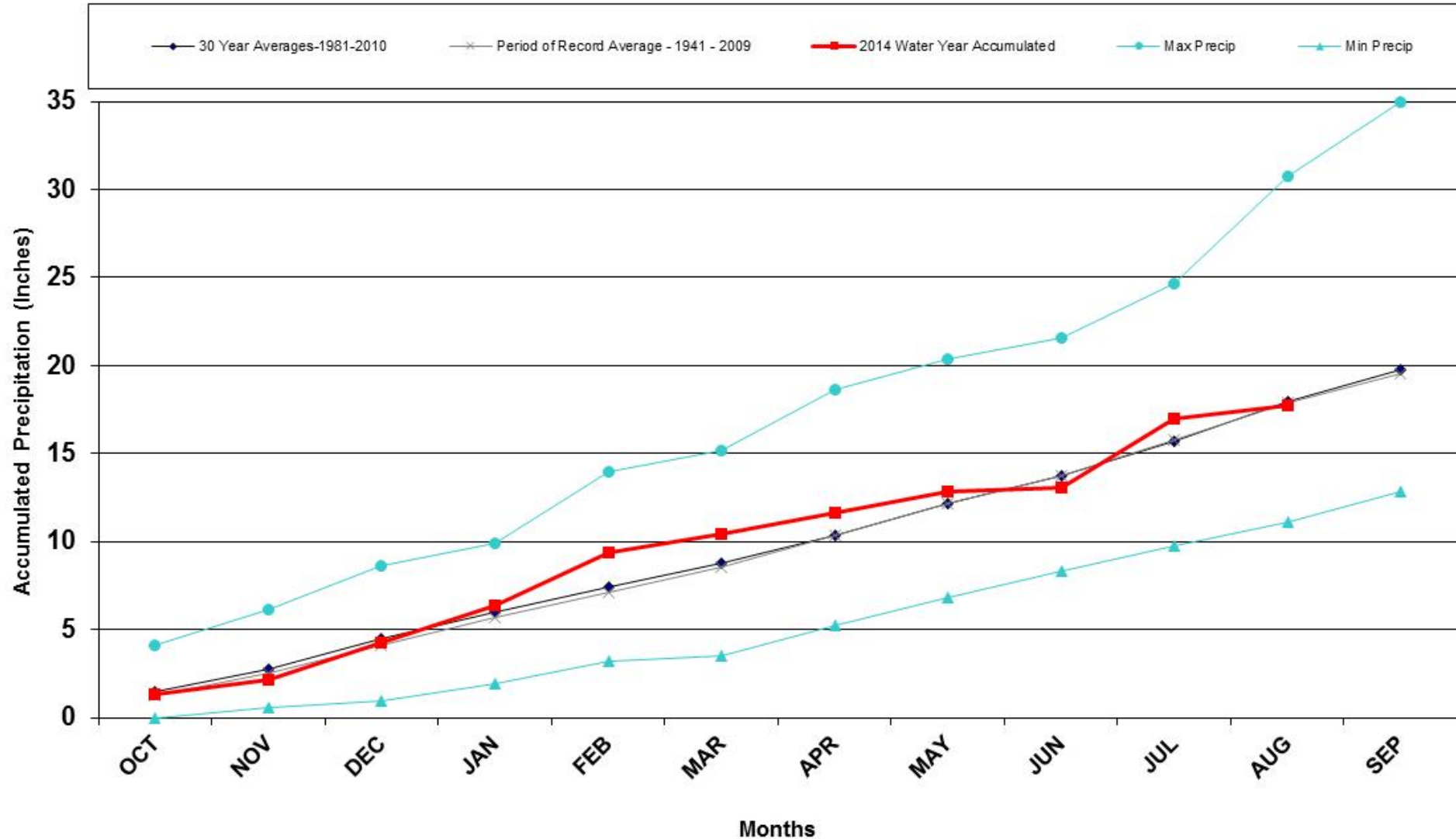
# NWS Cooperative Stations for WATF





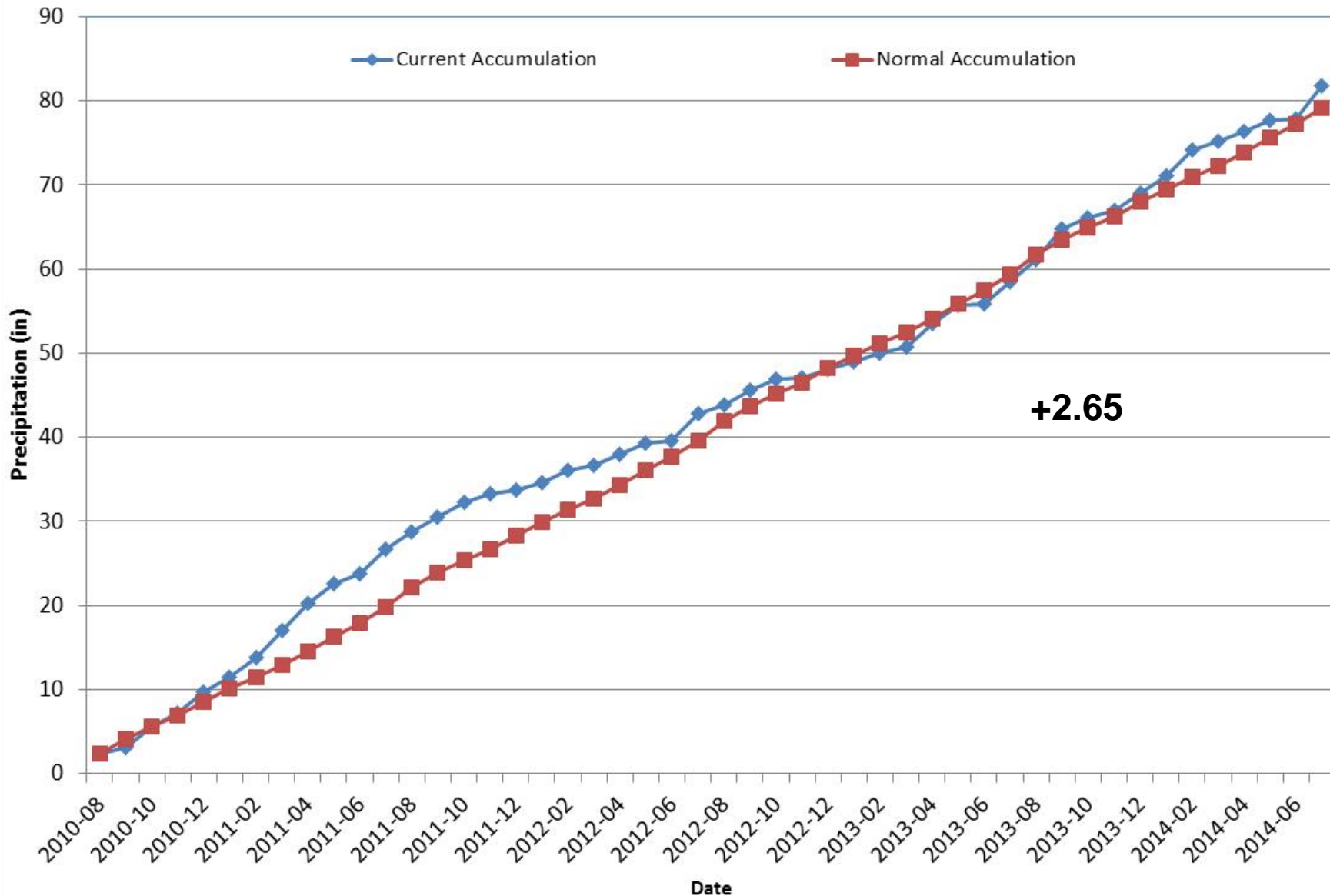
# Division 1 – Grand Lake 1NW

## Grand Lake 1 NW 2014 Water Year



# Division 1 – Grand Lake 1NW

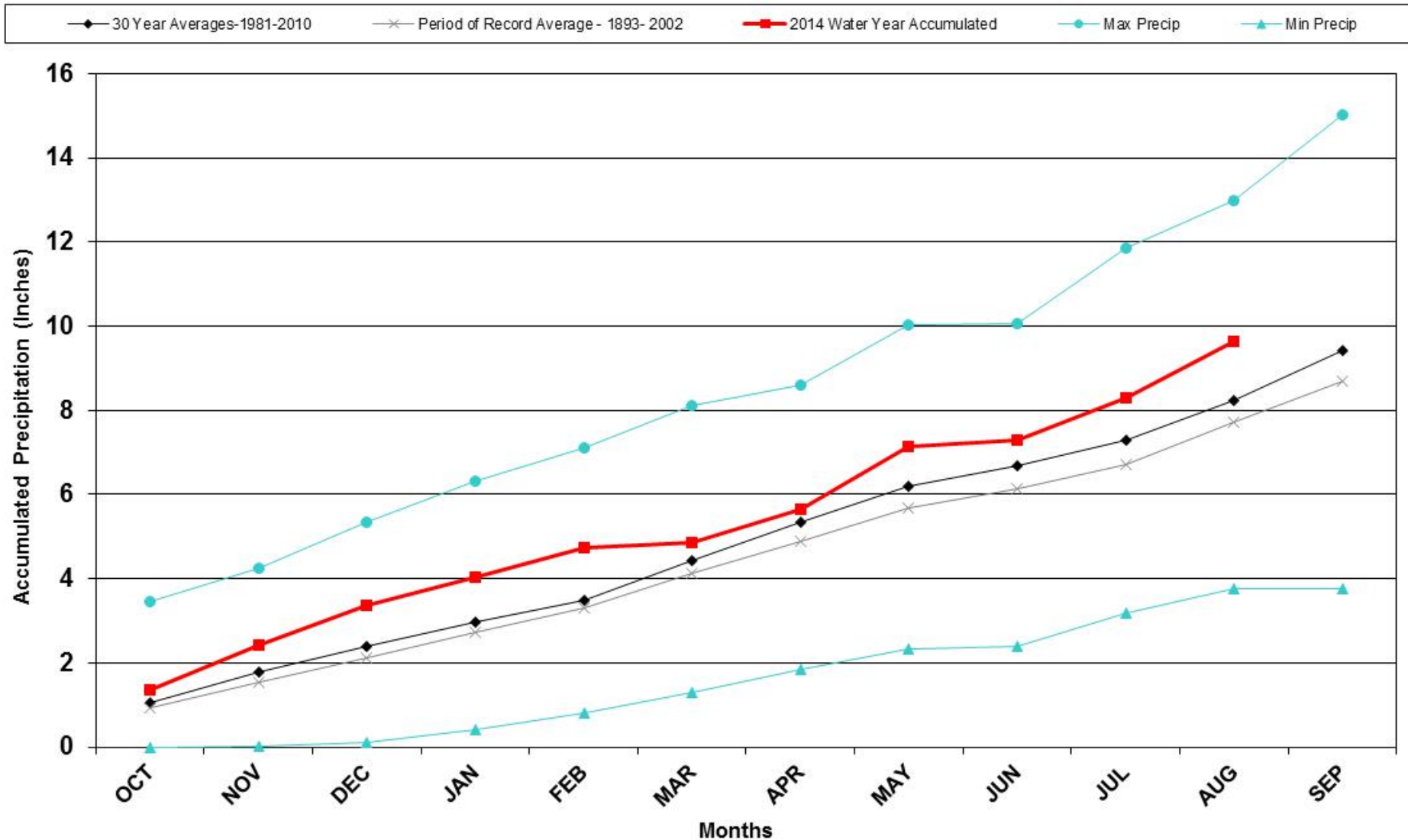
## Grand Lake 1NW Precipitation Accumulation





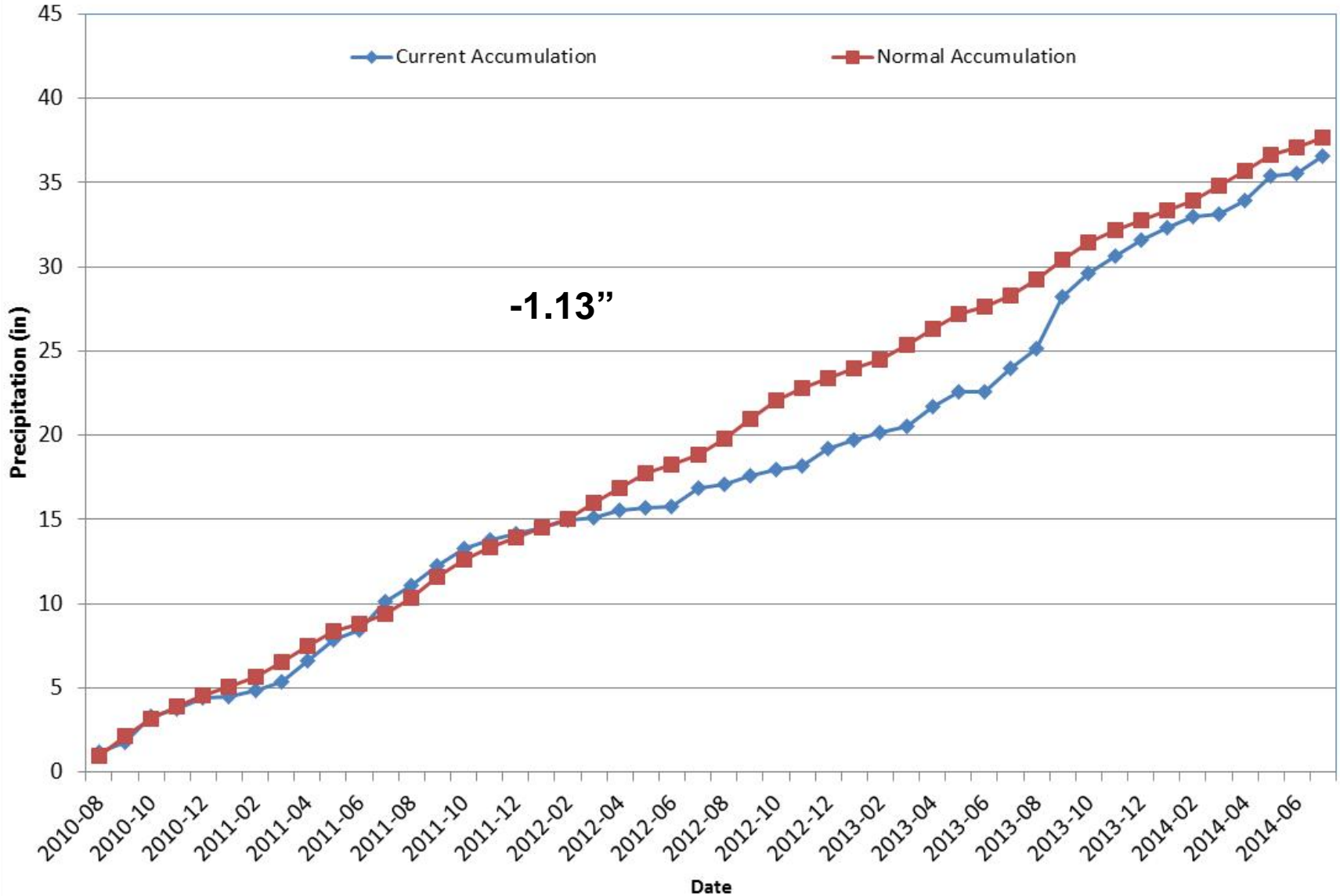
# Division 2 – Grand Junction

## Grand Junction WSFO 2014 Water Year



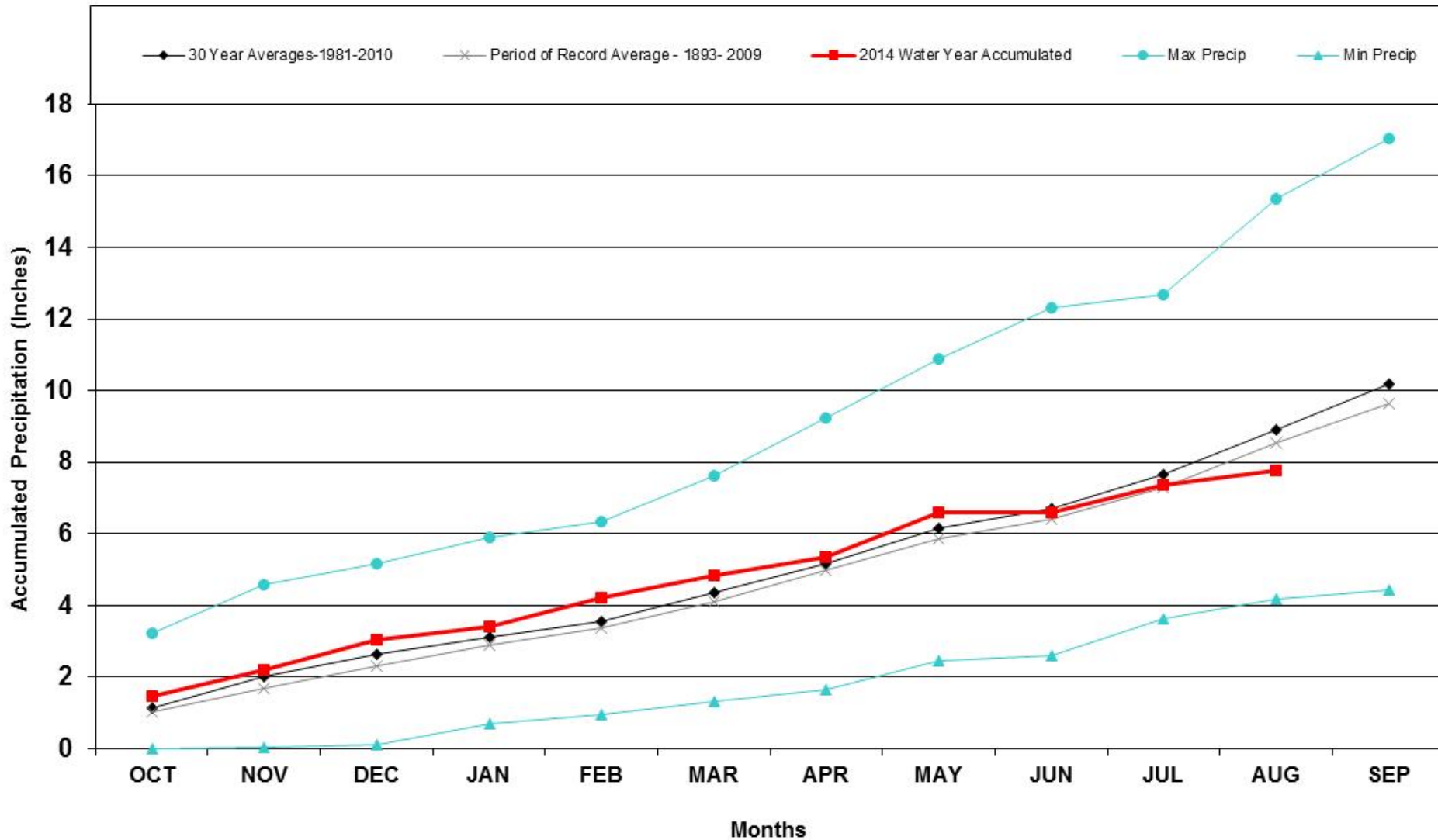
# Division 2 – Grand Junction

## Grand Junction Precipitation Accumulation



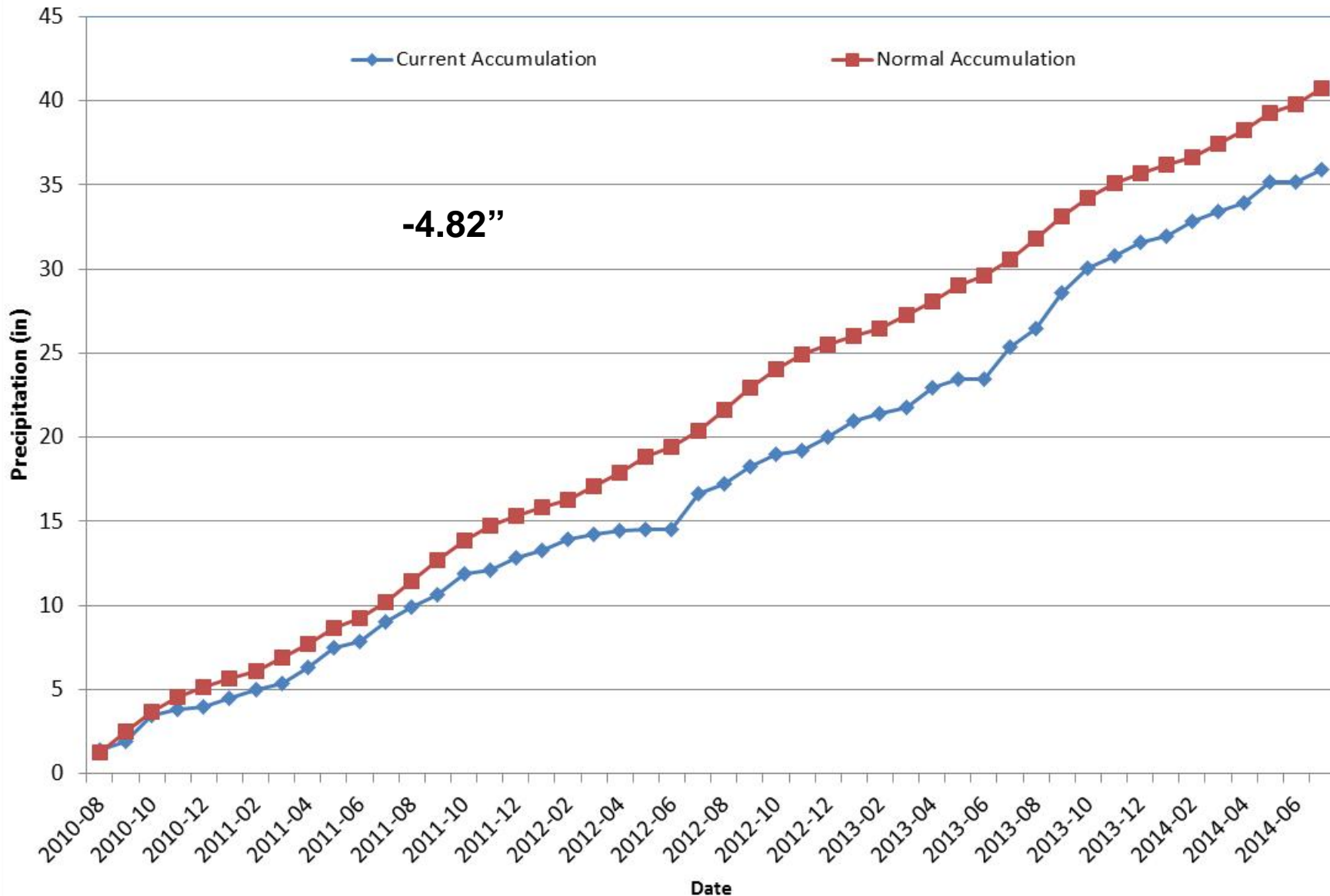
# Division 3 – Montrose

## Montrose #2 2014 Water Year



# Division 3 – Montrose

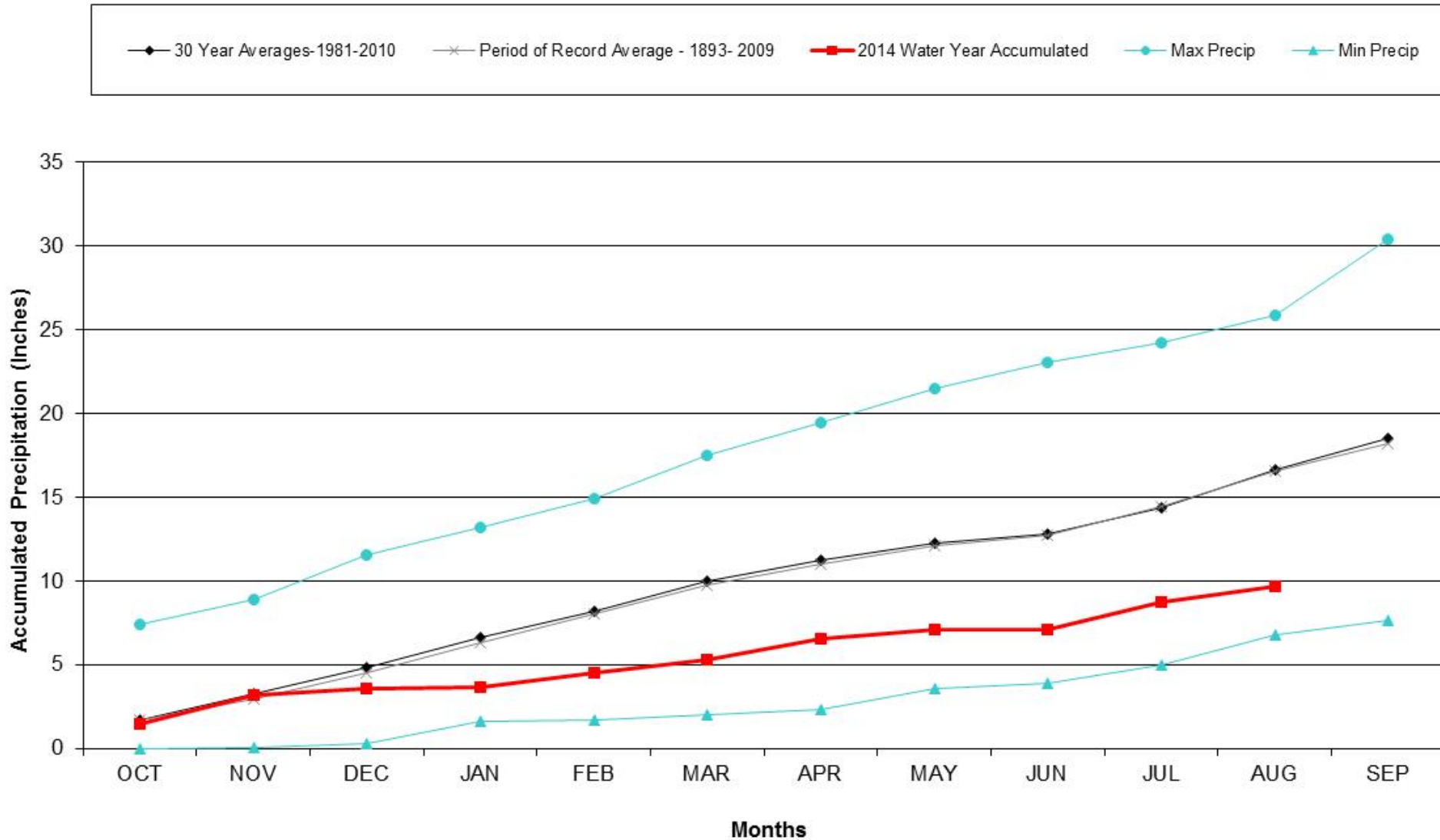
## Montrose #2 Precipitation Accumulation





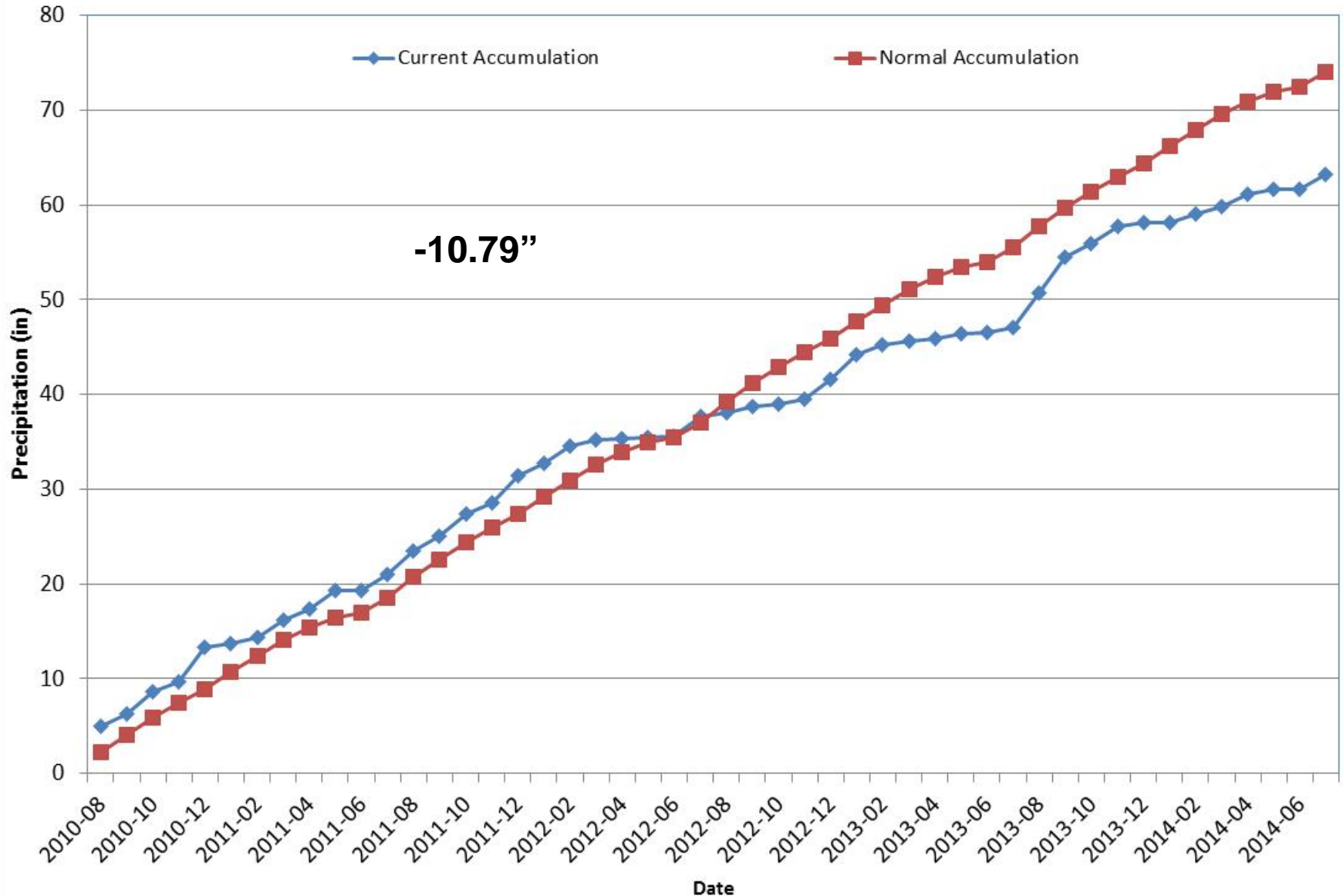
# Division 3 – Mesa Verde NP

## Mesa Verde NP 2014 Water Year



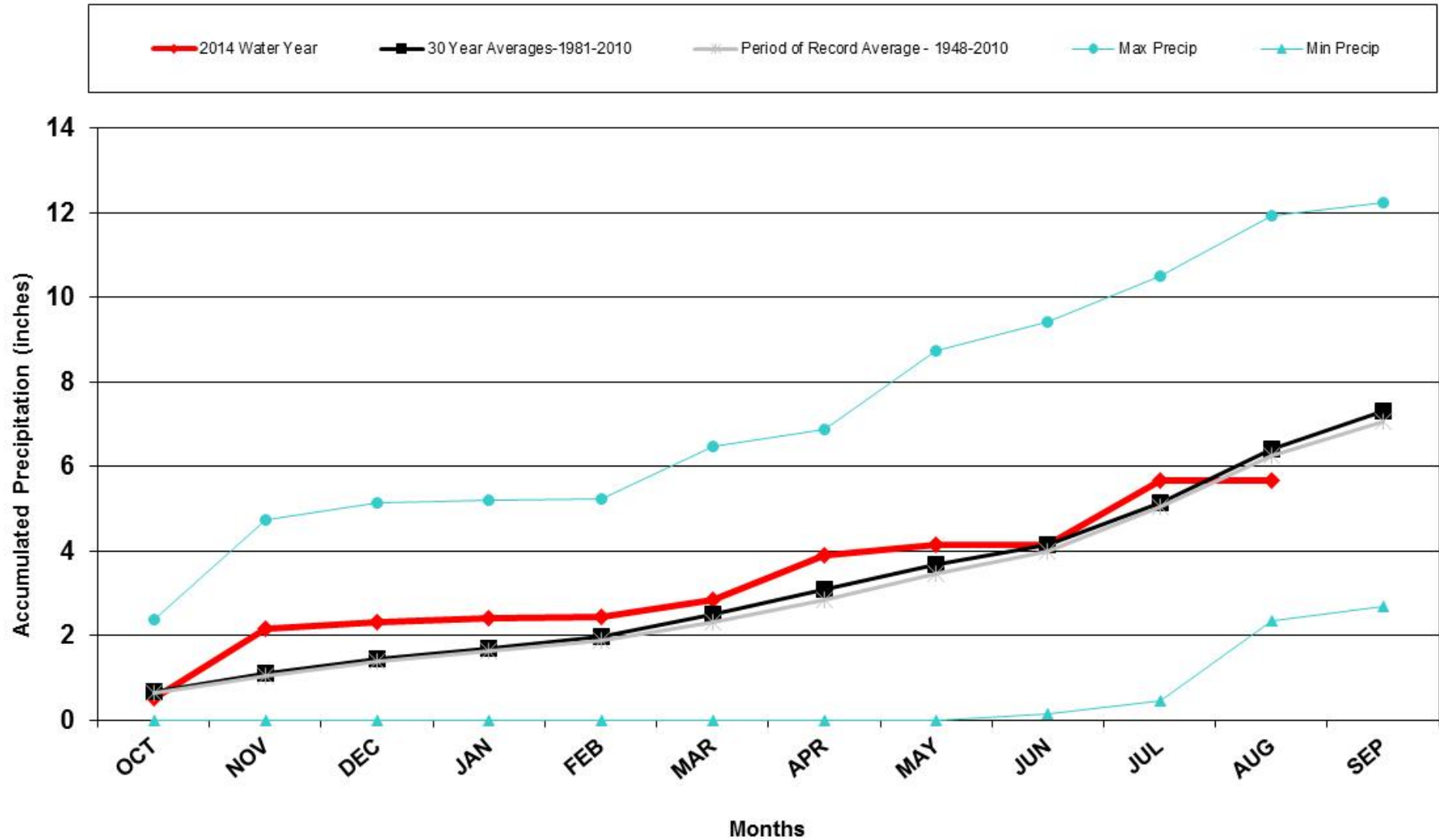
# Division 3 – Mesa Verde NP

## Mesa Verde NP Precipitation Accumulation



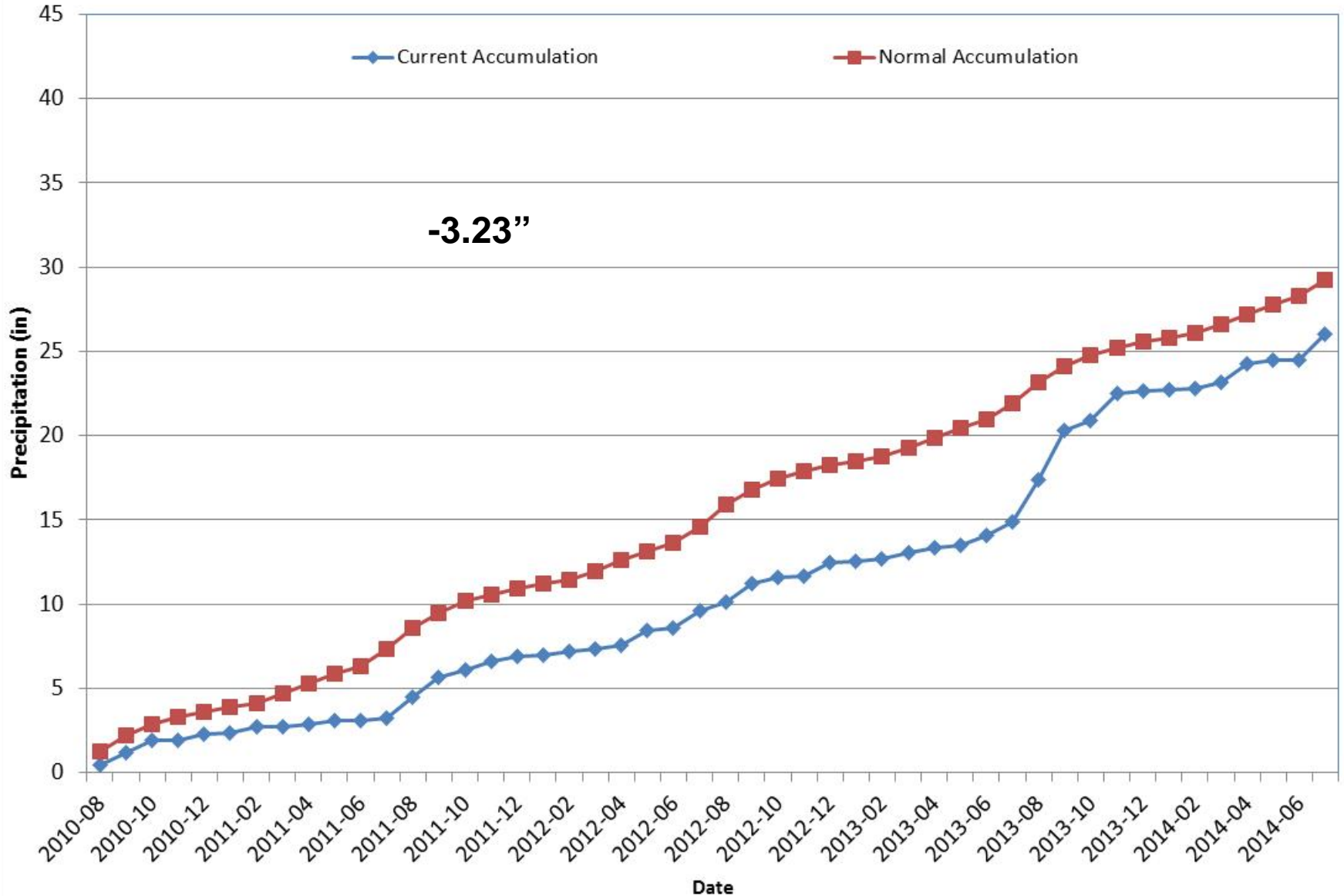
# Division 4 – Alamosa

## Alamosa WSO 2014 Water Year



# Division 4 – Alamosa

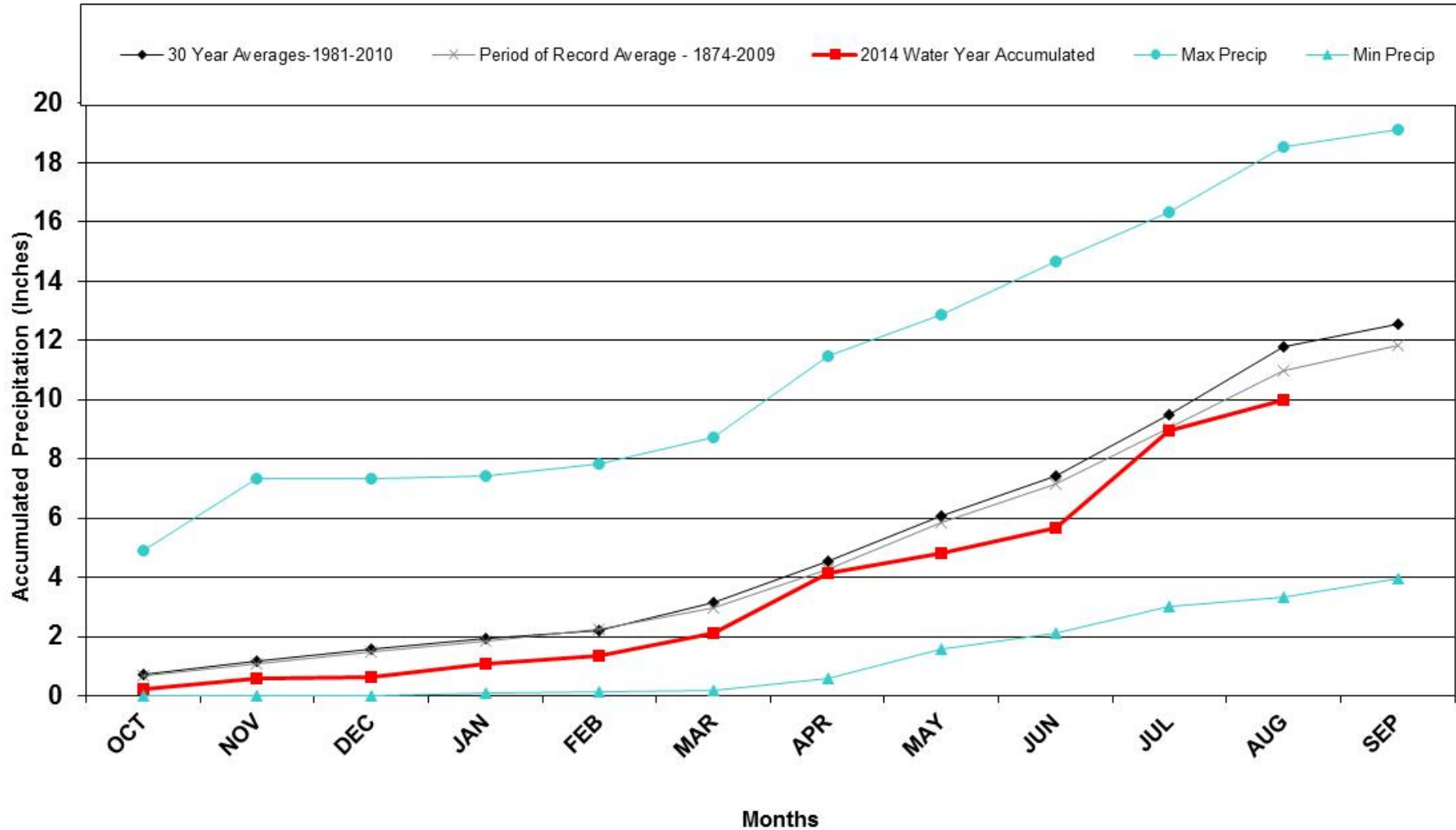
## Alamosa WSO Precipitation Accumulation





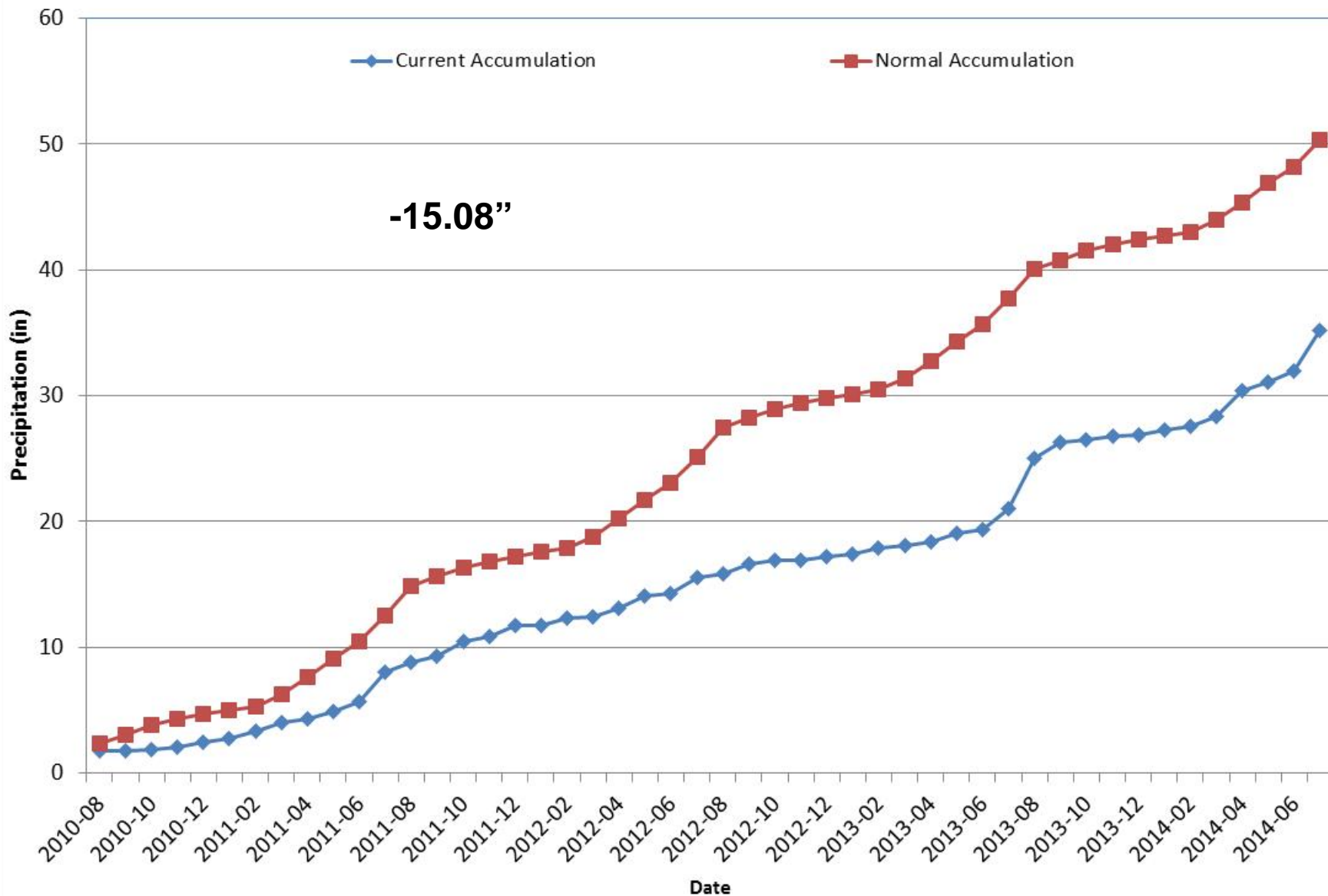
# Division 5 – Pueblo

## Pueblo WSO 2014 Water Year



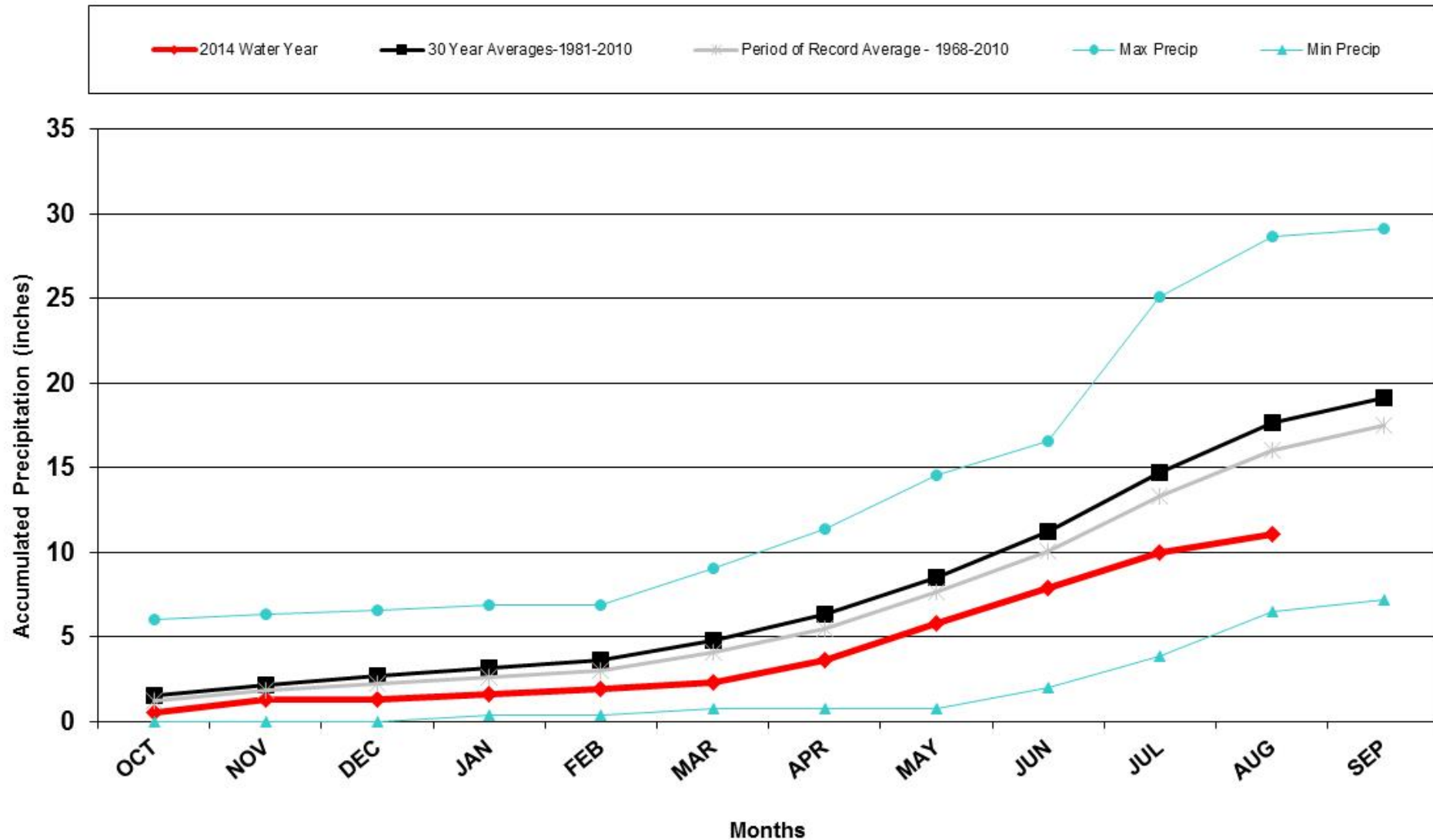
# Division 5 – Pueblo

## Pueblo Memorial AP Precipitation Accumulation



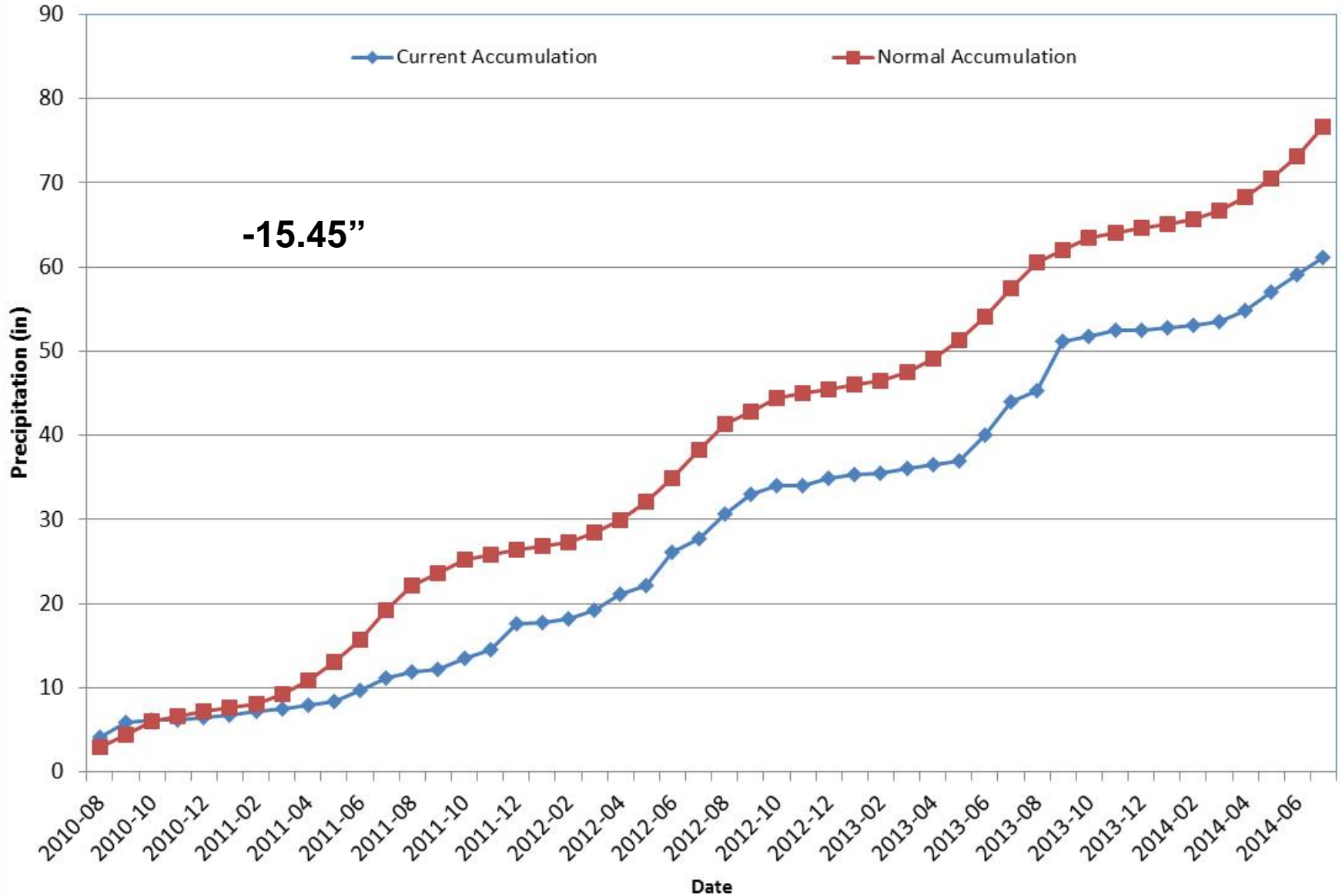
# Division 6 - Walsh

## Walsh 2014 Water Year



# Division 6 - Walsh

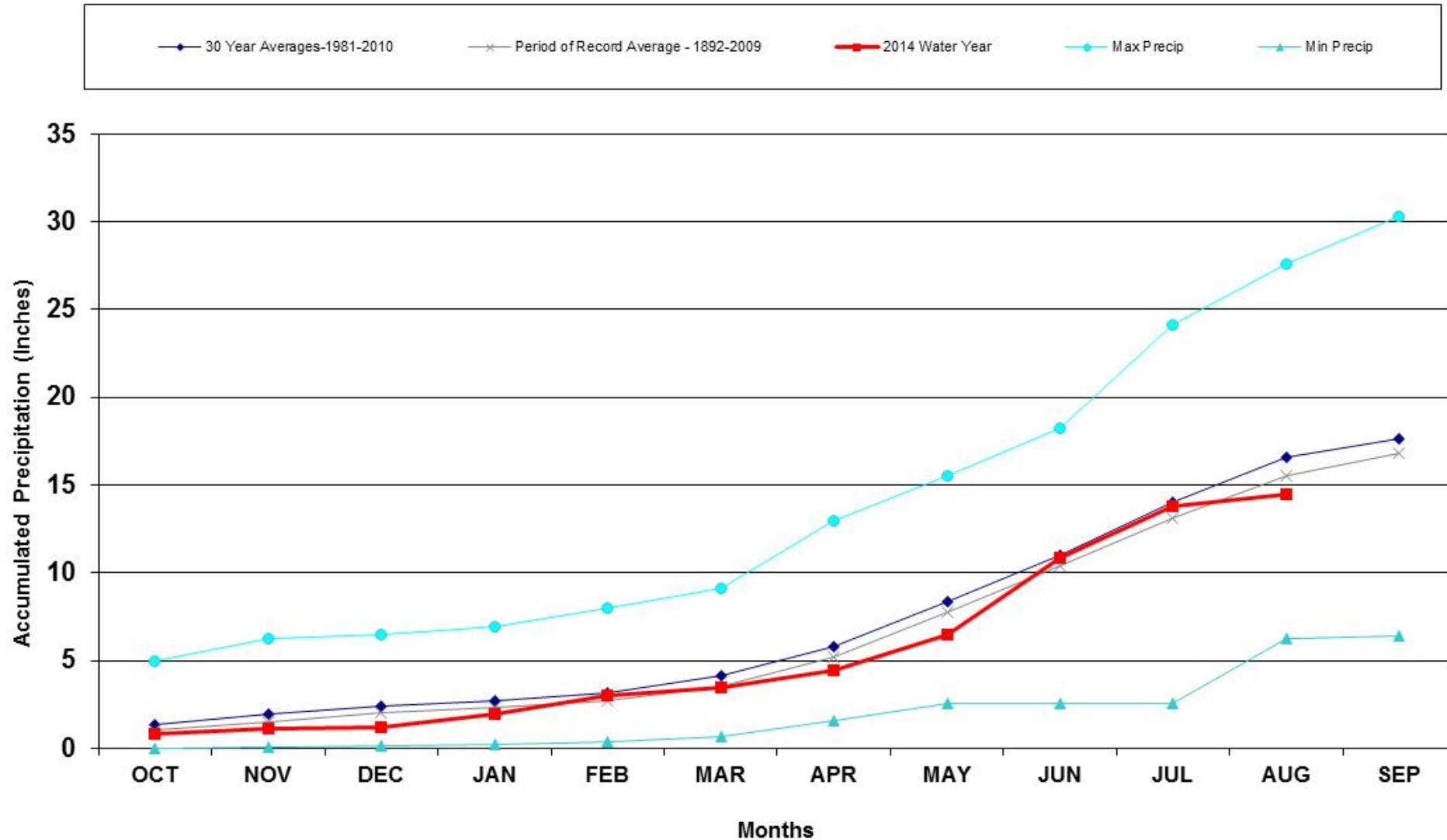
## Walsh 1W Precipitation Accumulation





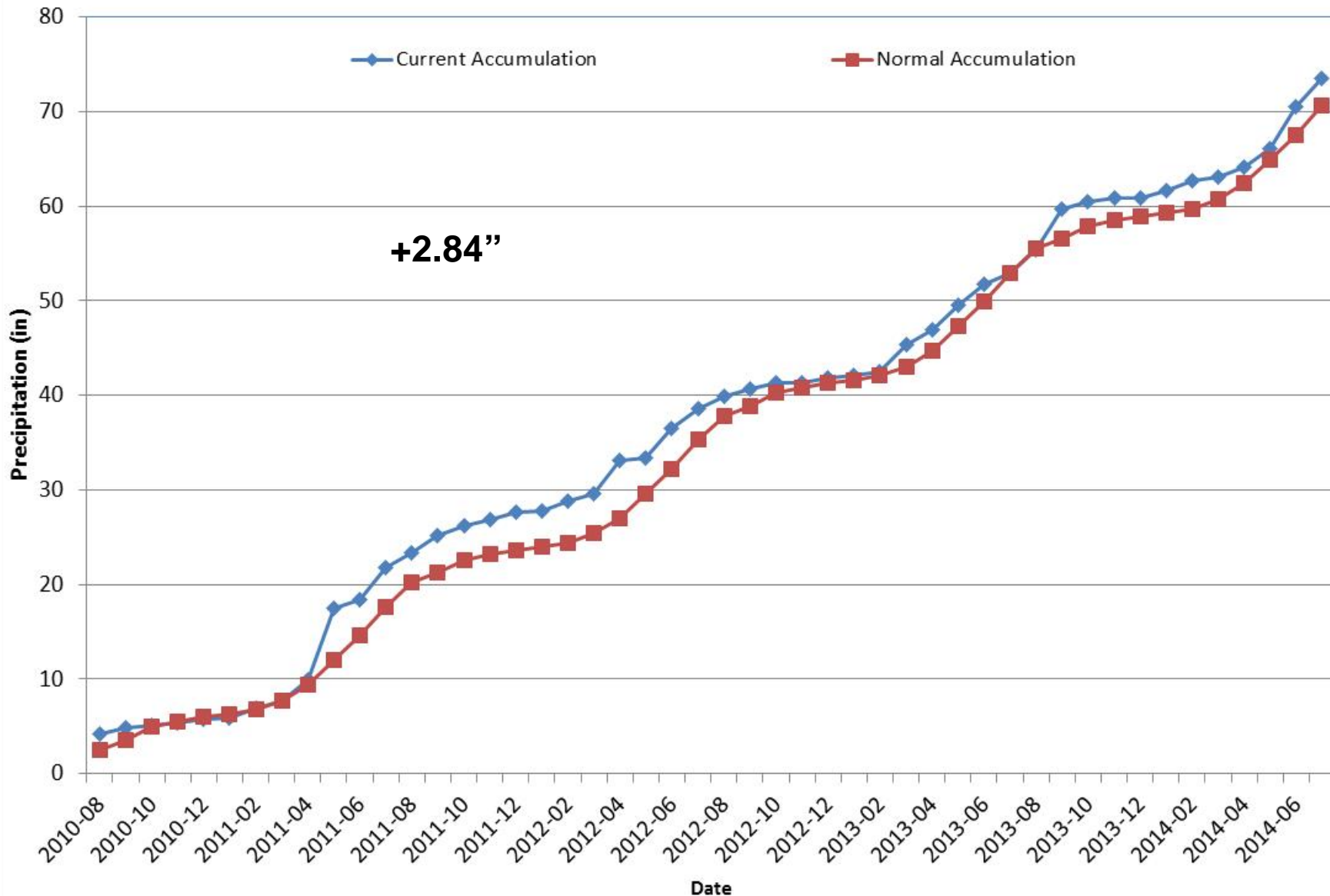
# Division 6 - Burlington

## Burlington 2014 Water Year



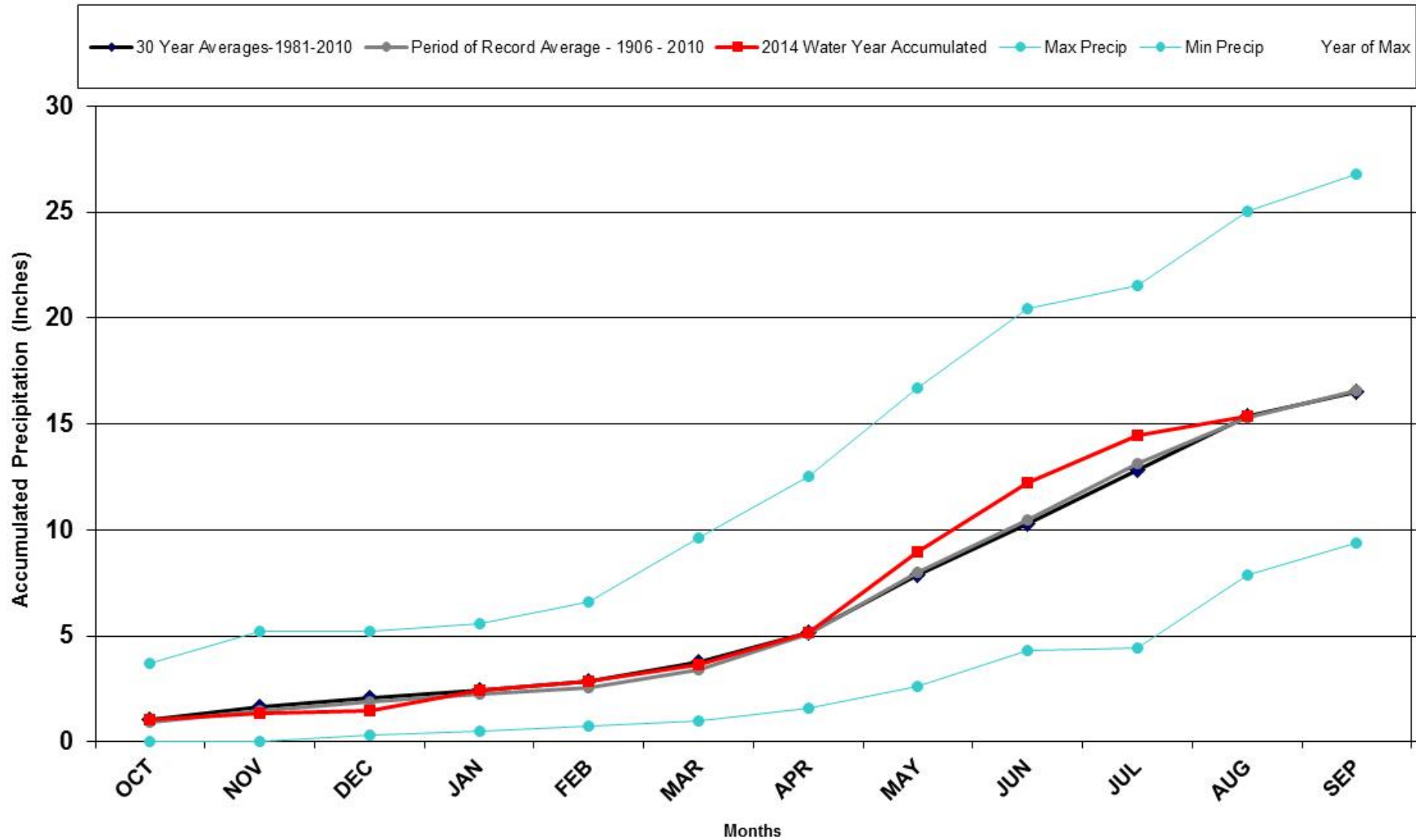
# Division 6 - Burlington

## Burlington, CO Precipitation Accumulation



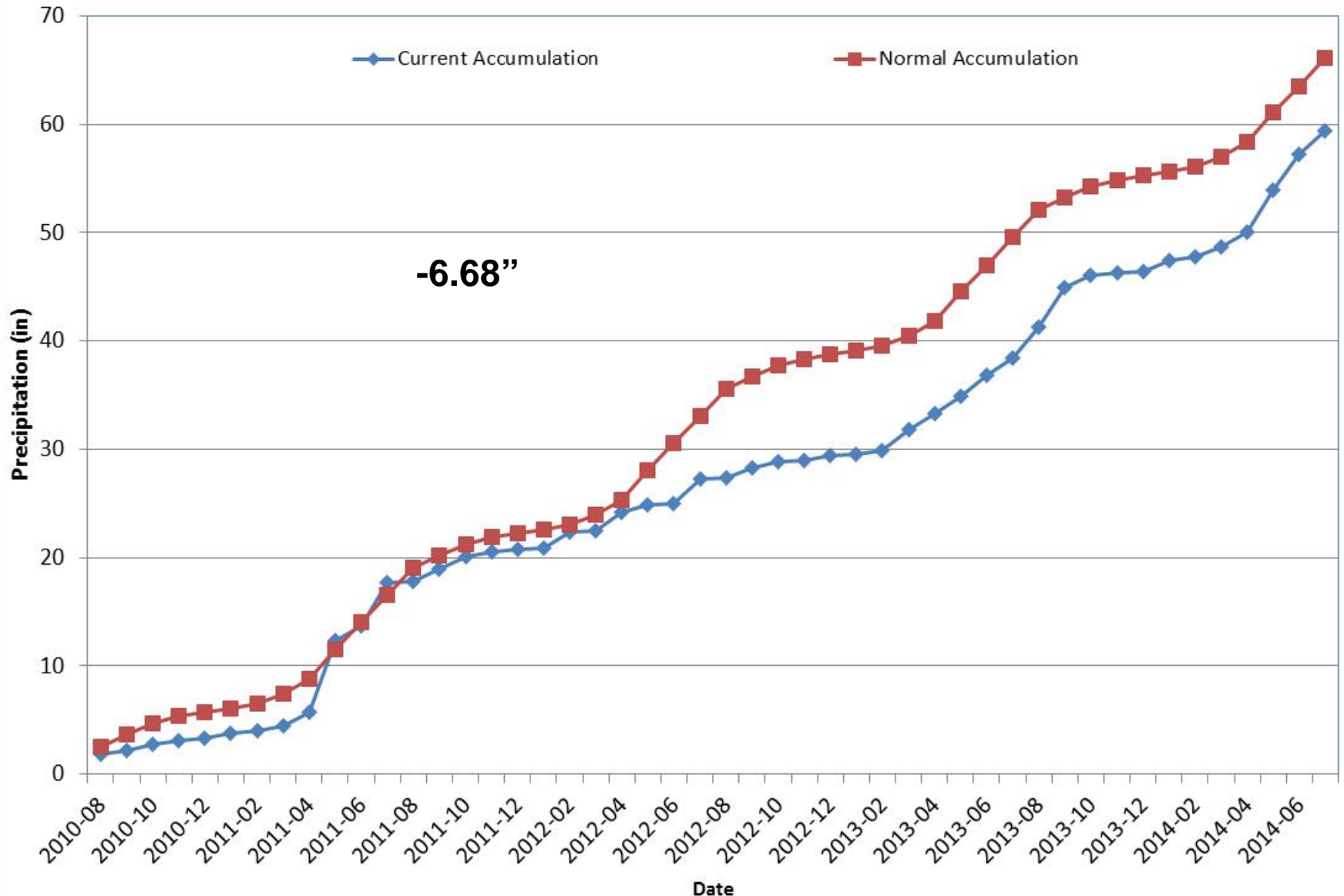
# Division 7 – Akron

## Akron 4E 2014 Water Year



# Division 7 – Akron

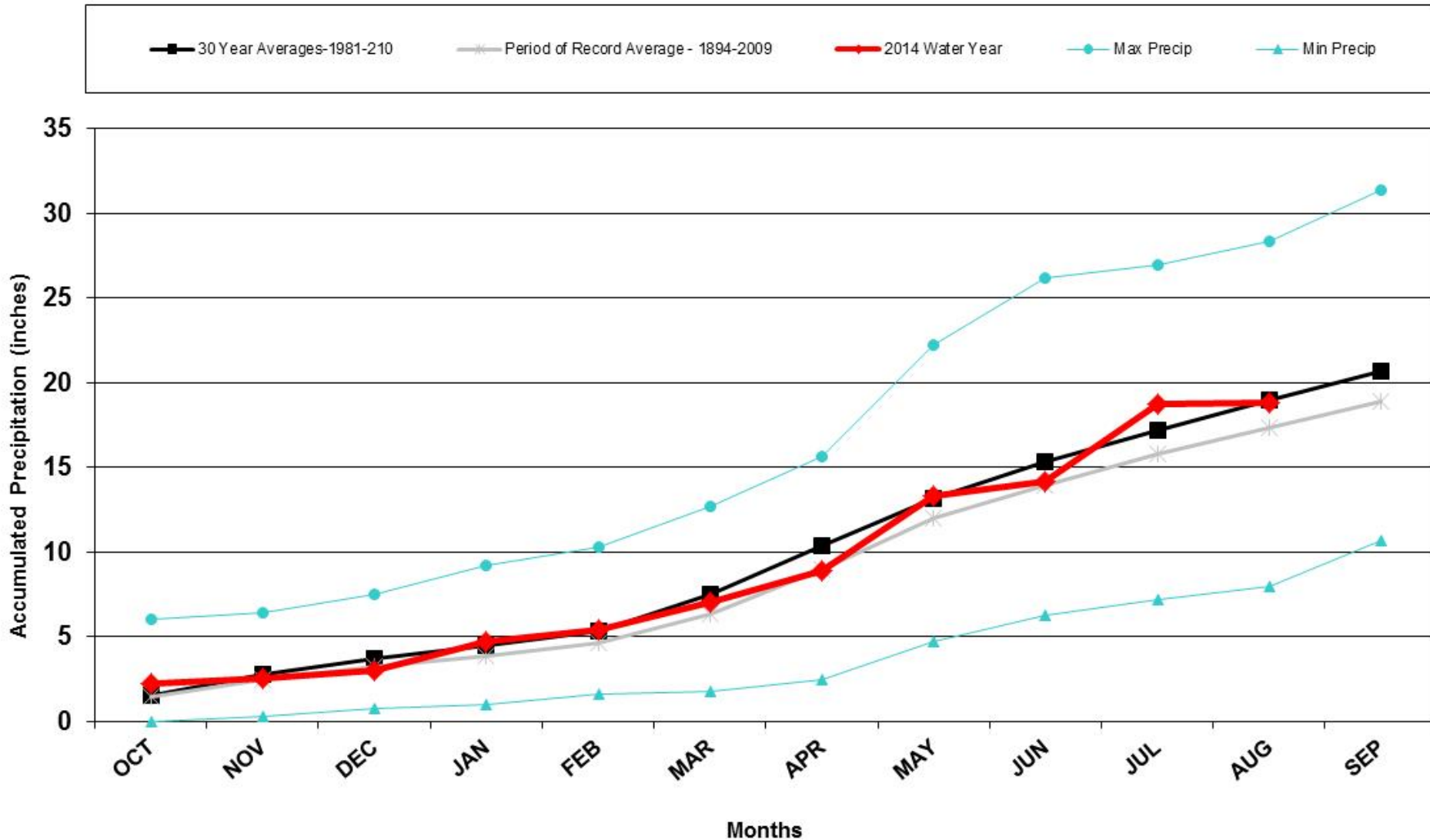
## Akron 4E Precipitation Accumulation





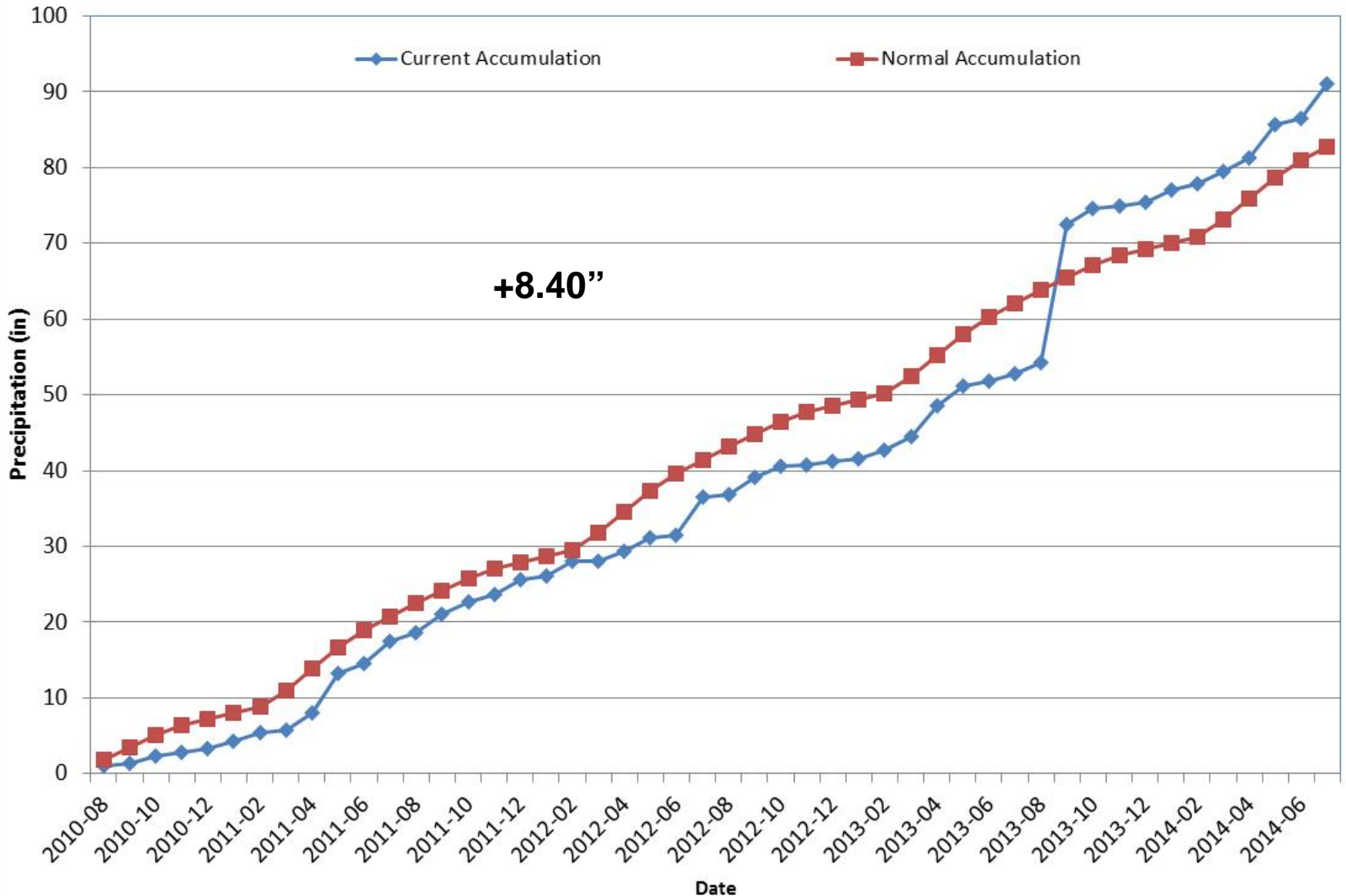
# Division 8 - Boulder

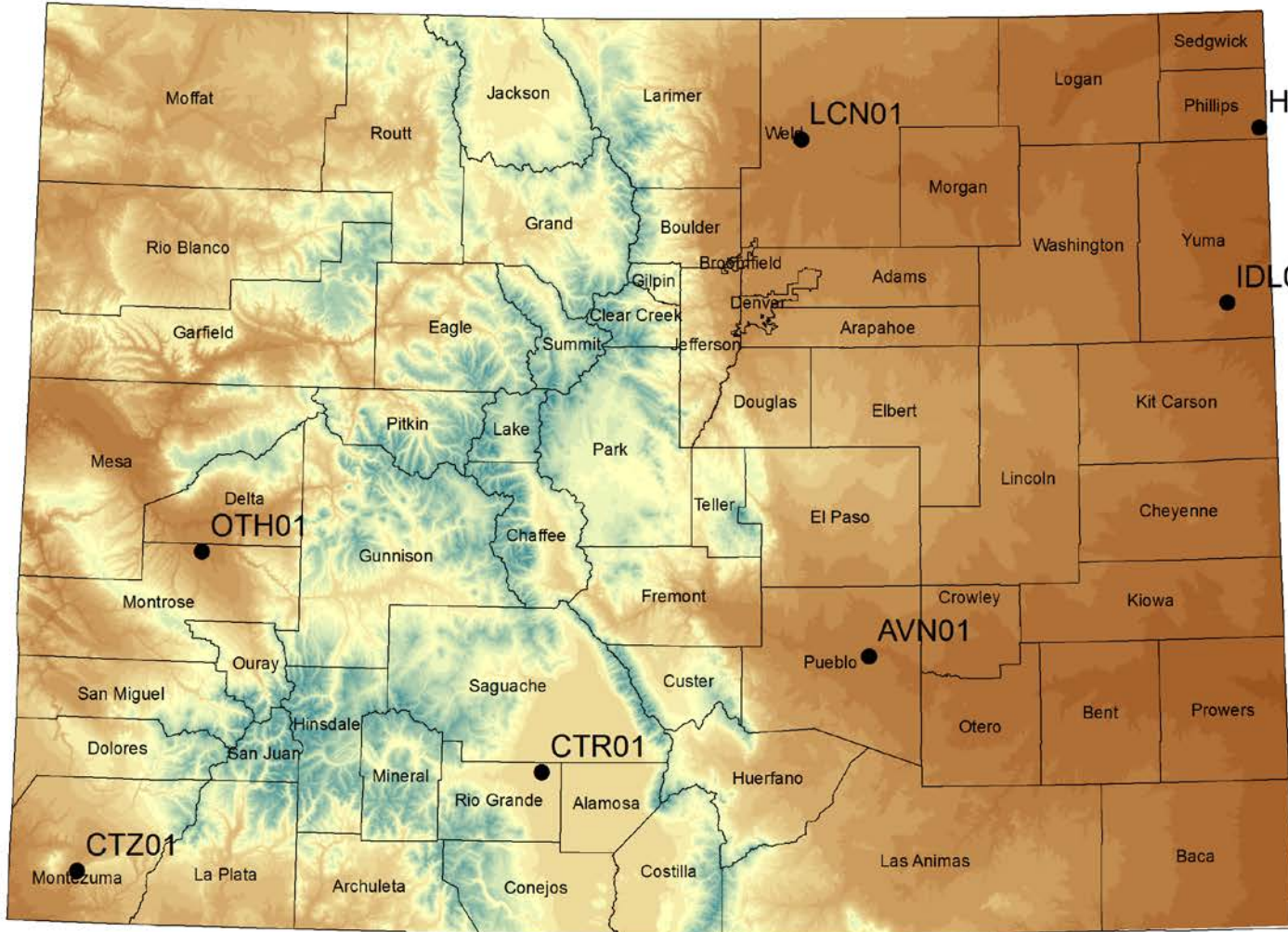
## Boulder 2014 Water Year



# Division 8 - Boulder

## Boulder Precipitation Accumulation





Moffat

Routt

Jackson

Larimer

LCN01

Logan

Sedgwick

Phillips

HYK02

Rio Blanco

Grand

Boulder

Morgan

Washington

Yuma

IDL01

Garfield

Eagle

Clear Creek

Broomfield

Adams

Arapahoe

Jefferson

Douglas

Elbert

Kit Carson

Mesa

Delta

OTH01

Gunnison

Lake

Park

Teller

El Paso

Lincoln

Cheyenne

Montrose

Fremont

AVN01

Crowley

Kiowa

San Miguel

Ouray

Saguache

Custer

Pueblo

Otero

Bent

Prowers

Dolores

San Juan

Hinsdale

CTR01

Mineral

Rio Grande

Alamosa

Huerfano

Otero

CTZ01

Montezuma

La Plata

Archuleta

Conejos

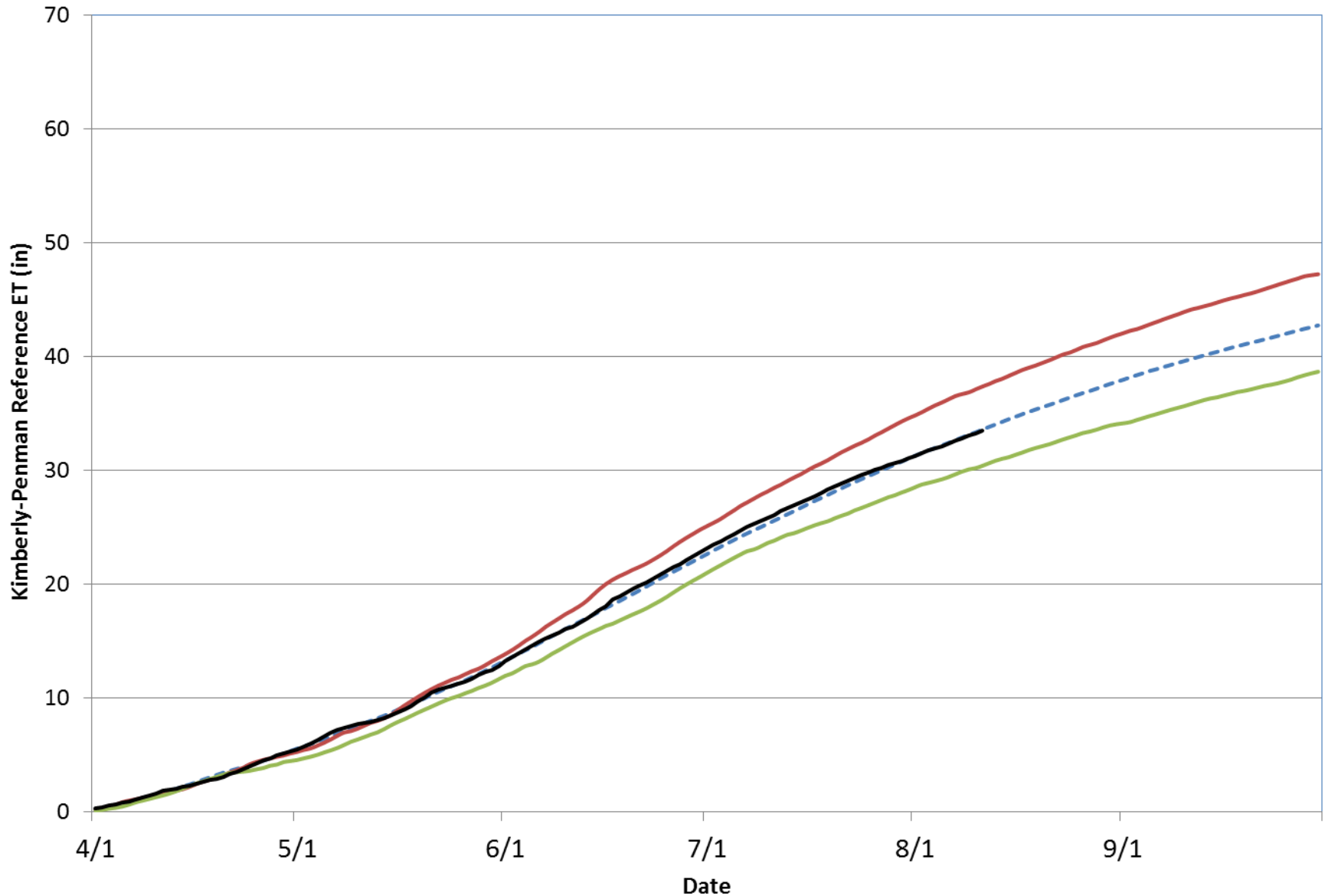
Costilla

Las Animas

Baca

# Olathe Kimberly-Penman Reference ET (1993 - 2013)

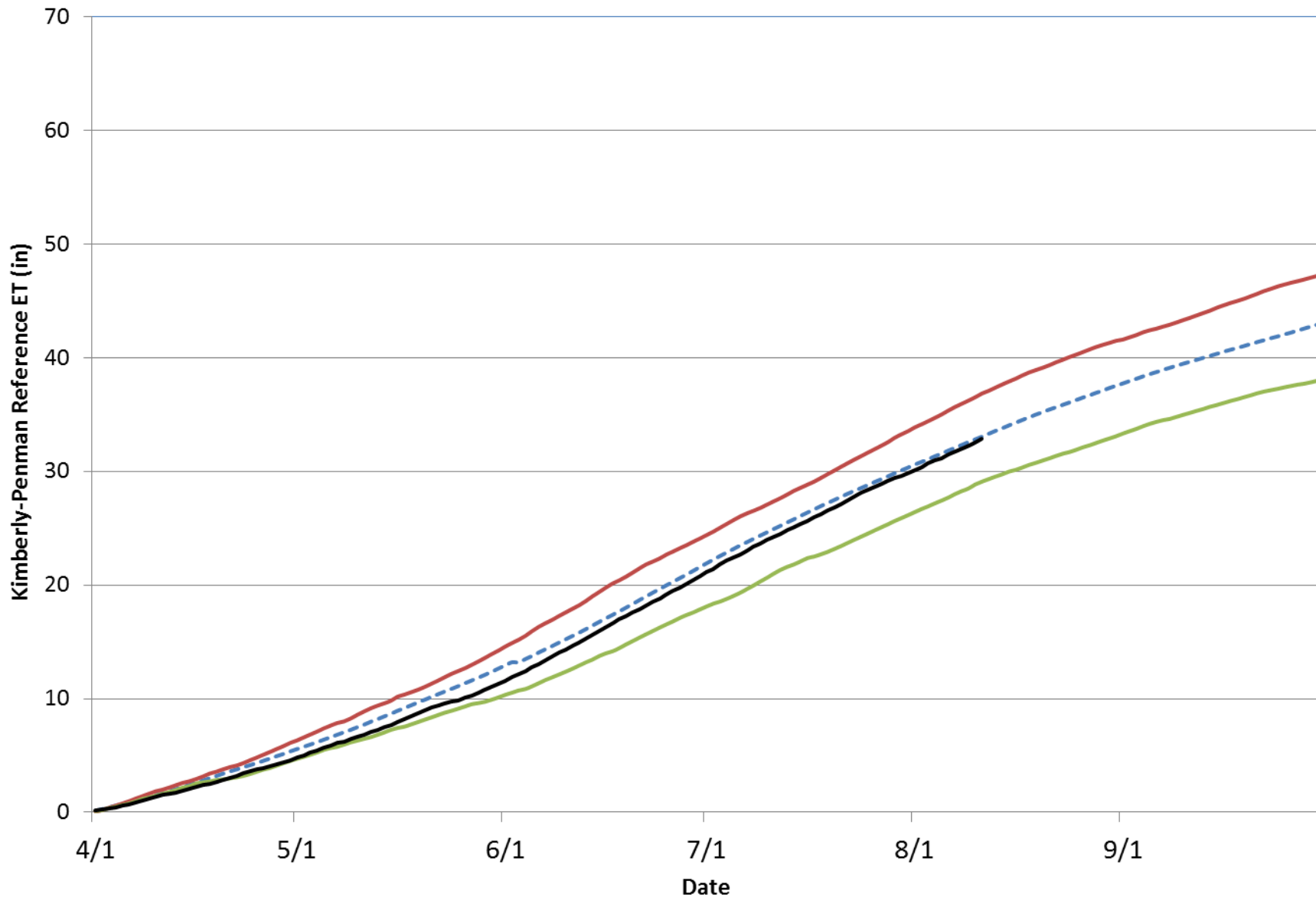
--- Average    — 1994    — 1999    — 2014





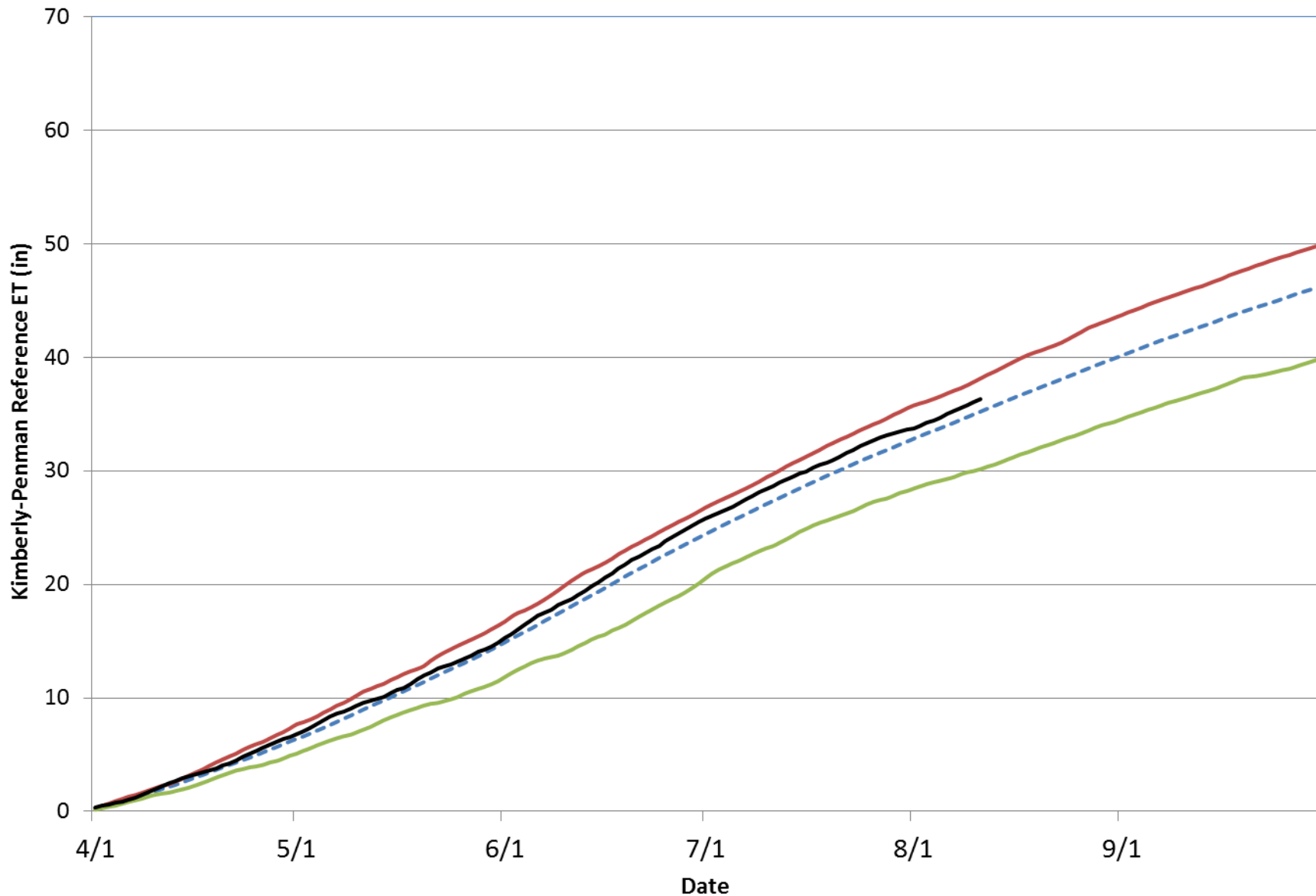
# Cortez Kimberly-Penman Reference ET (1992 - 2013)

--- Average    — 2000    — 1995    — 2014



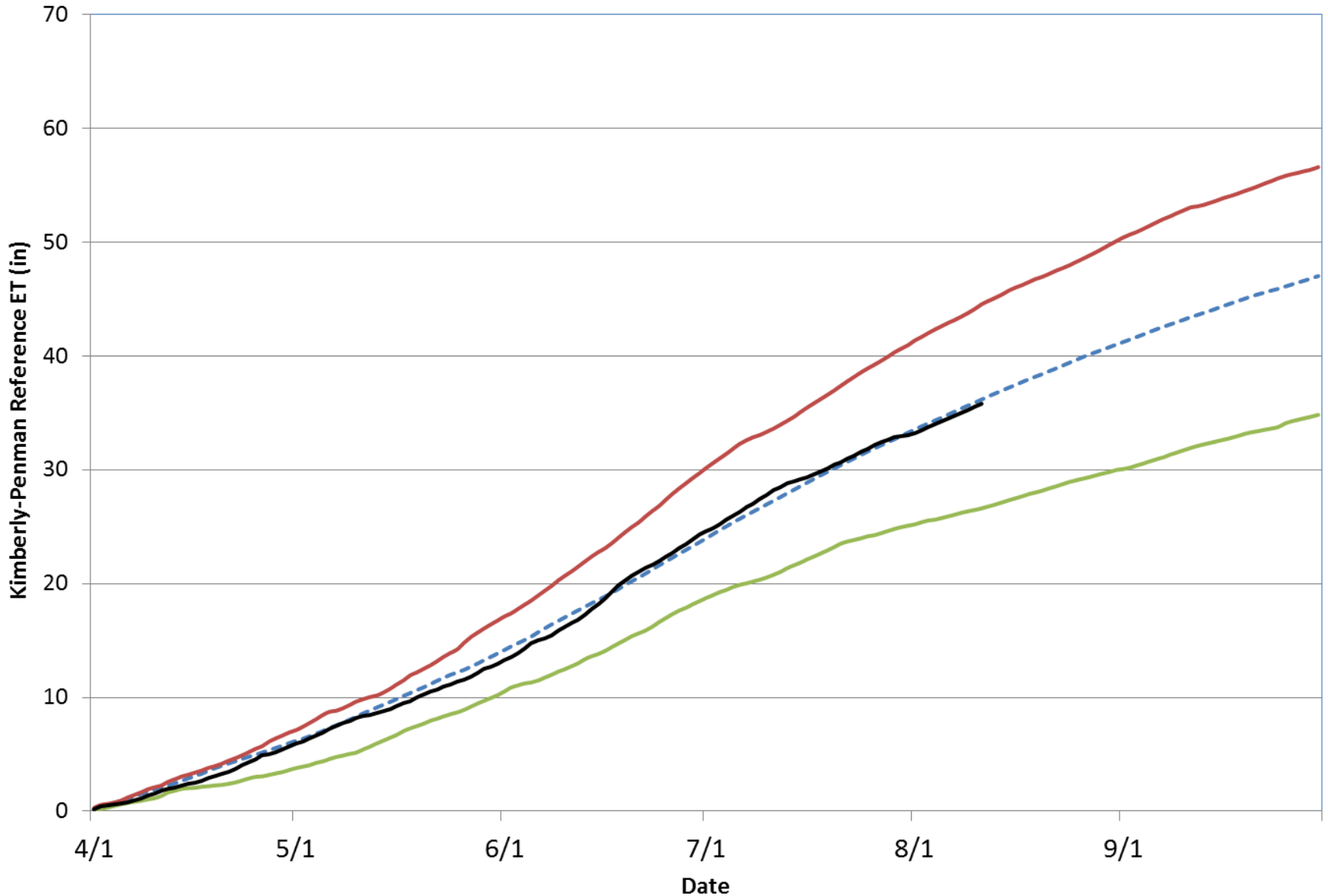
# Center Kimberly-Penman Reference ET (1994 - 2013)

--- Average    — 2002    — 1997    — 2014



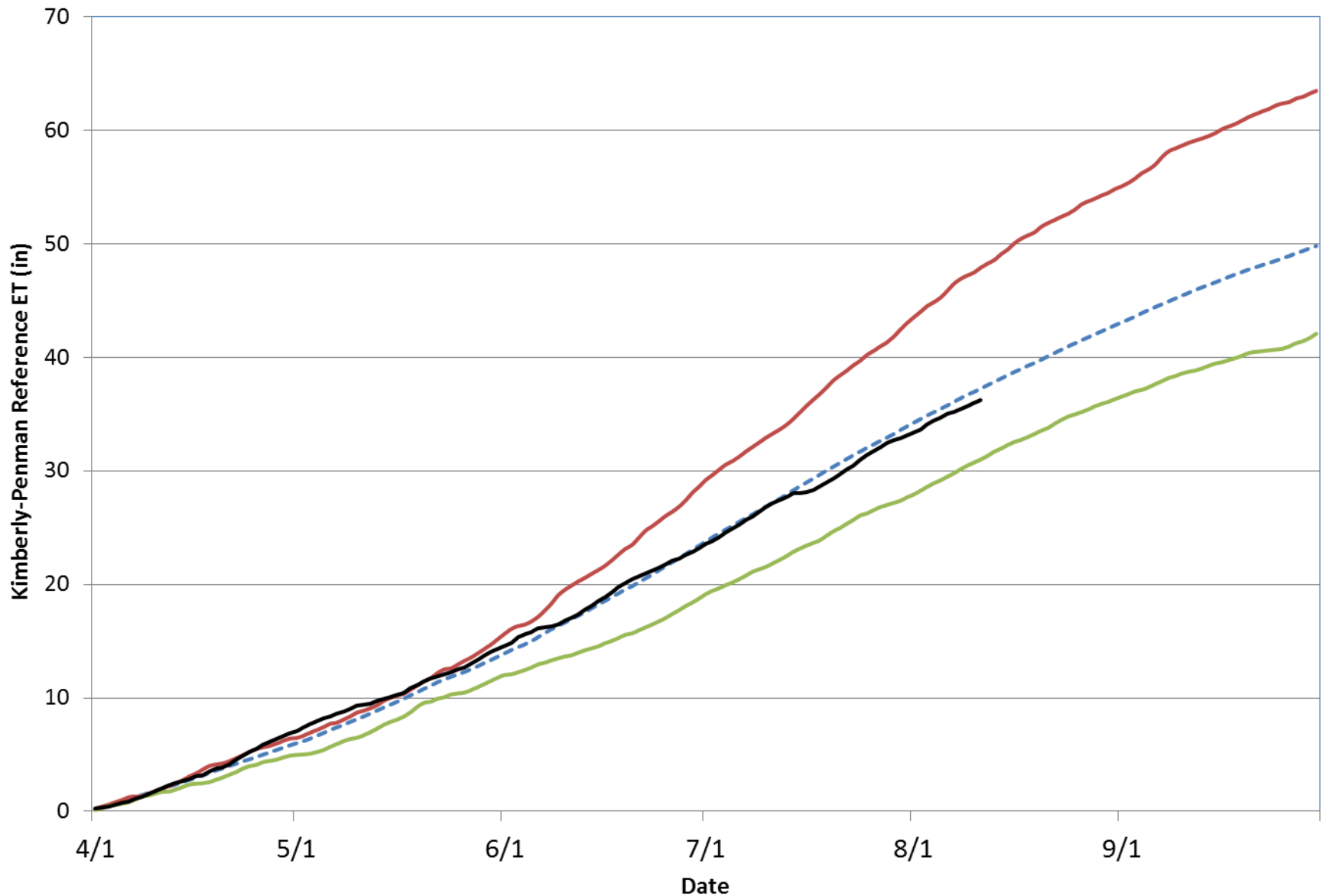
# Avondale Kimberly-Penman Reference ET (1993 - 2013)

--- Average    — 2012    — 1998    — 2014



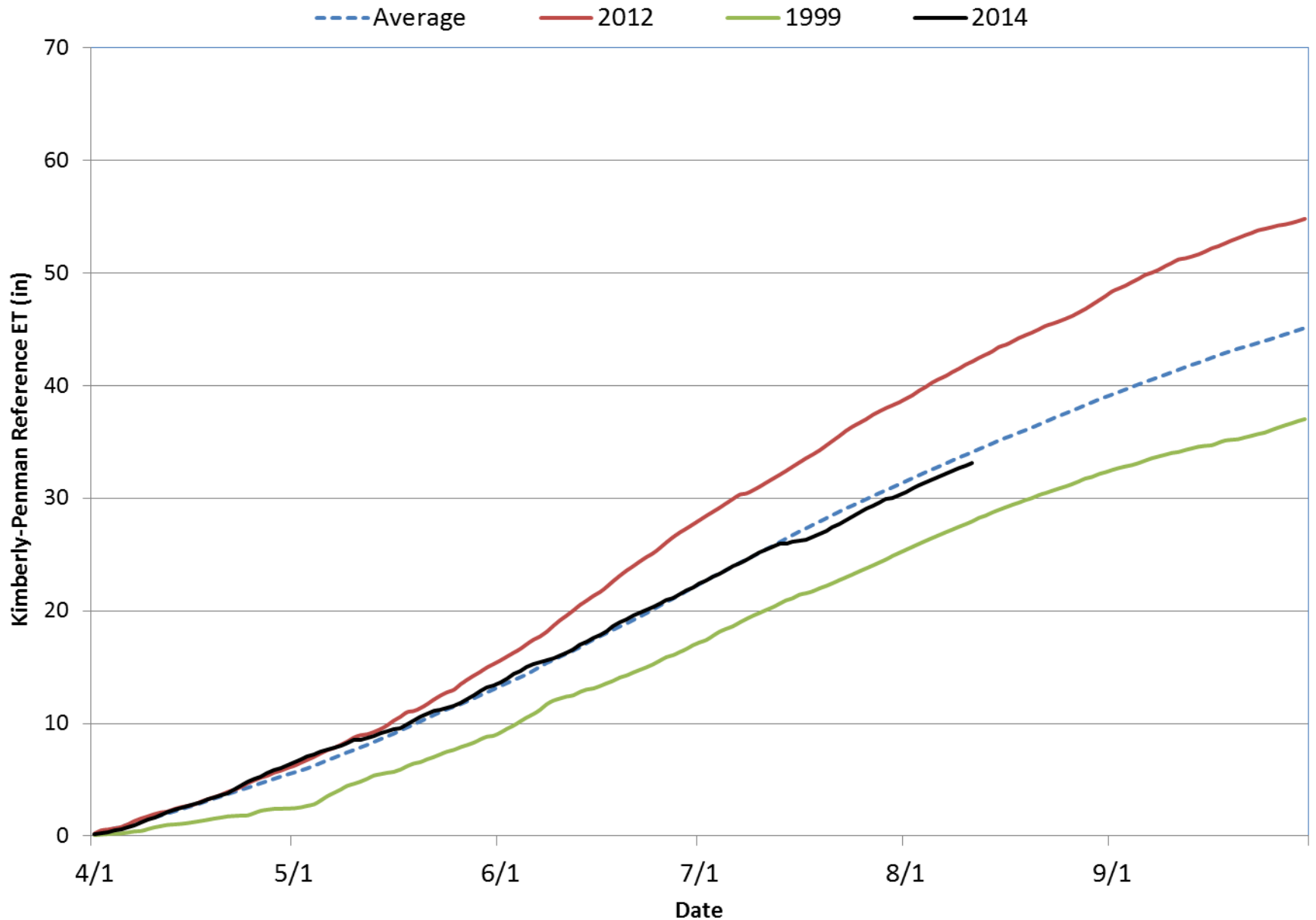
# Idalia Kimberly-Penman Reference ET (1992 - 2013)

--- Average    — 2002    — 2009    — 2014



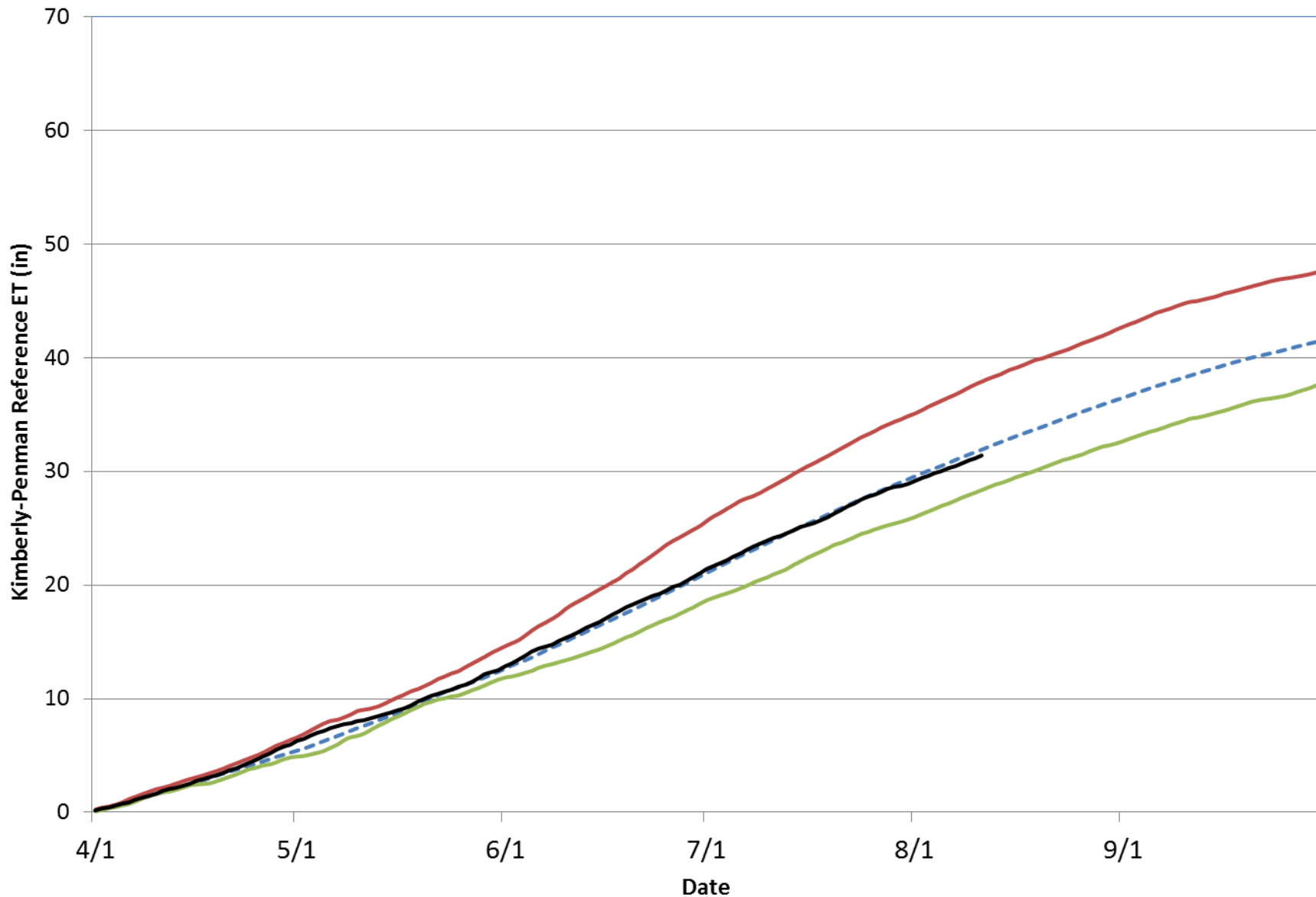


# Holyoke Kimberly-Penman Reference ET (1992 - 2013)



# Lucerne Kimberly-Penman Reference ET (1992 - 2013)

--- Average    — 2012    — 2009    — 2014

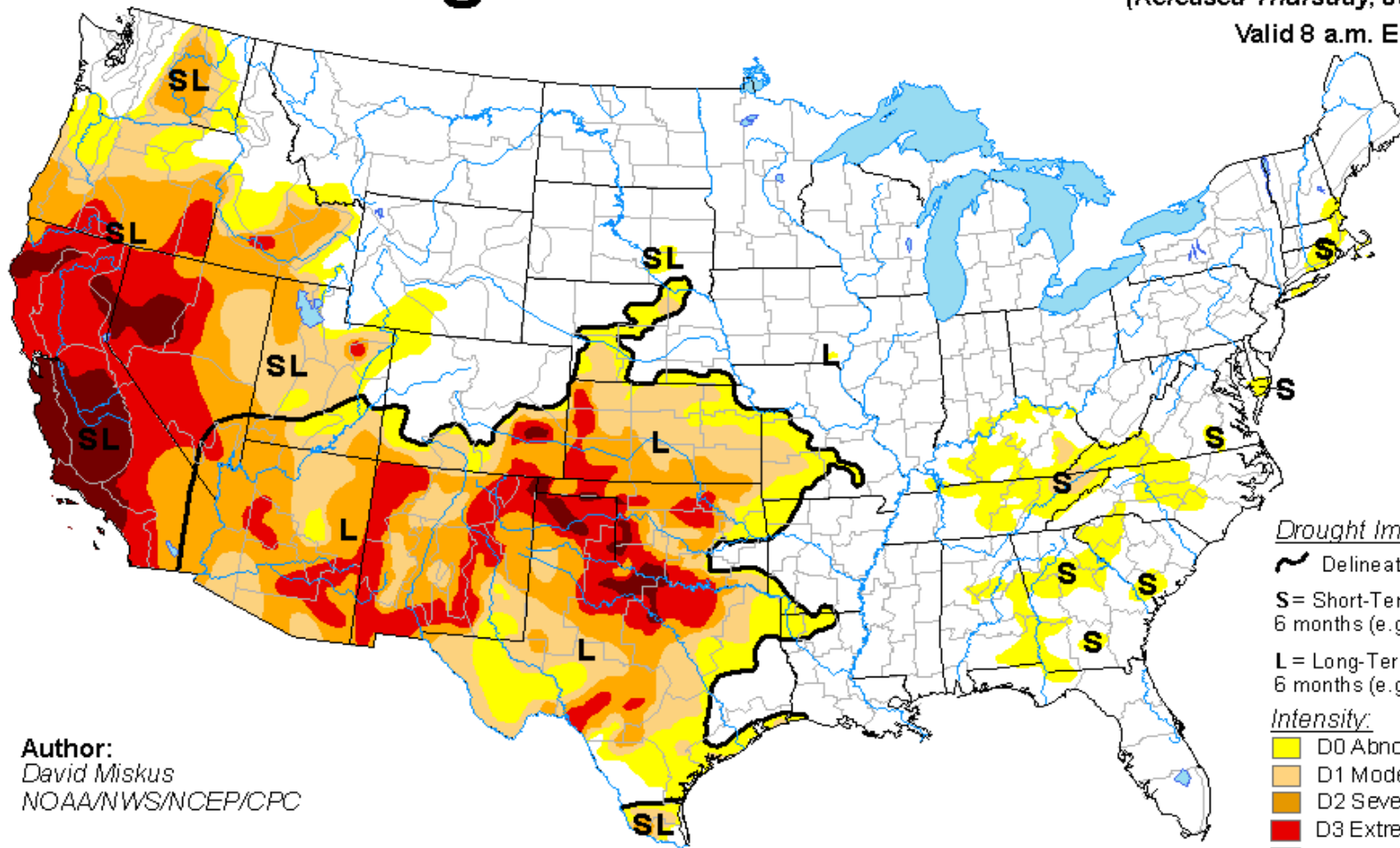


# U.S. Drought Monitor

July 15, 2014

(Released Thursday, Jul. 17, 2014)

Valid 8 a.m. EDT



Author:  
David Miskus  
NOAA/NWS/NCEP/CPC

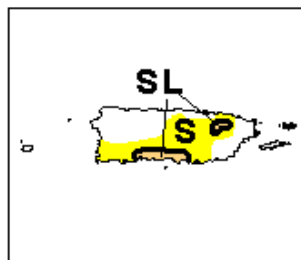
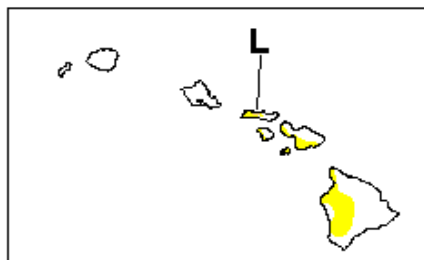
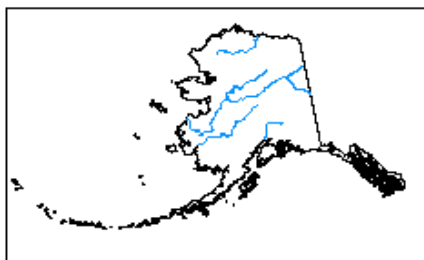
### Drought Impact Types:

- ~ Delineates dominant impacts
- S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)
- L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)

### Intensity:

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

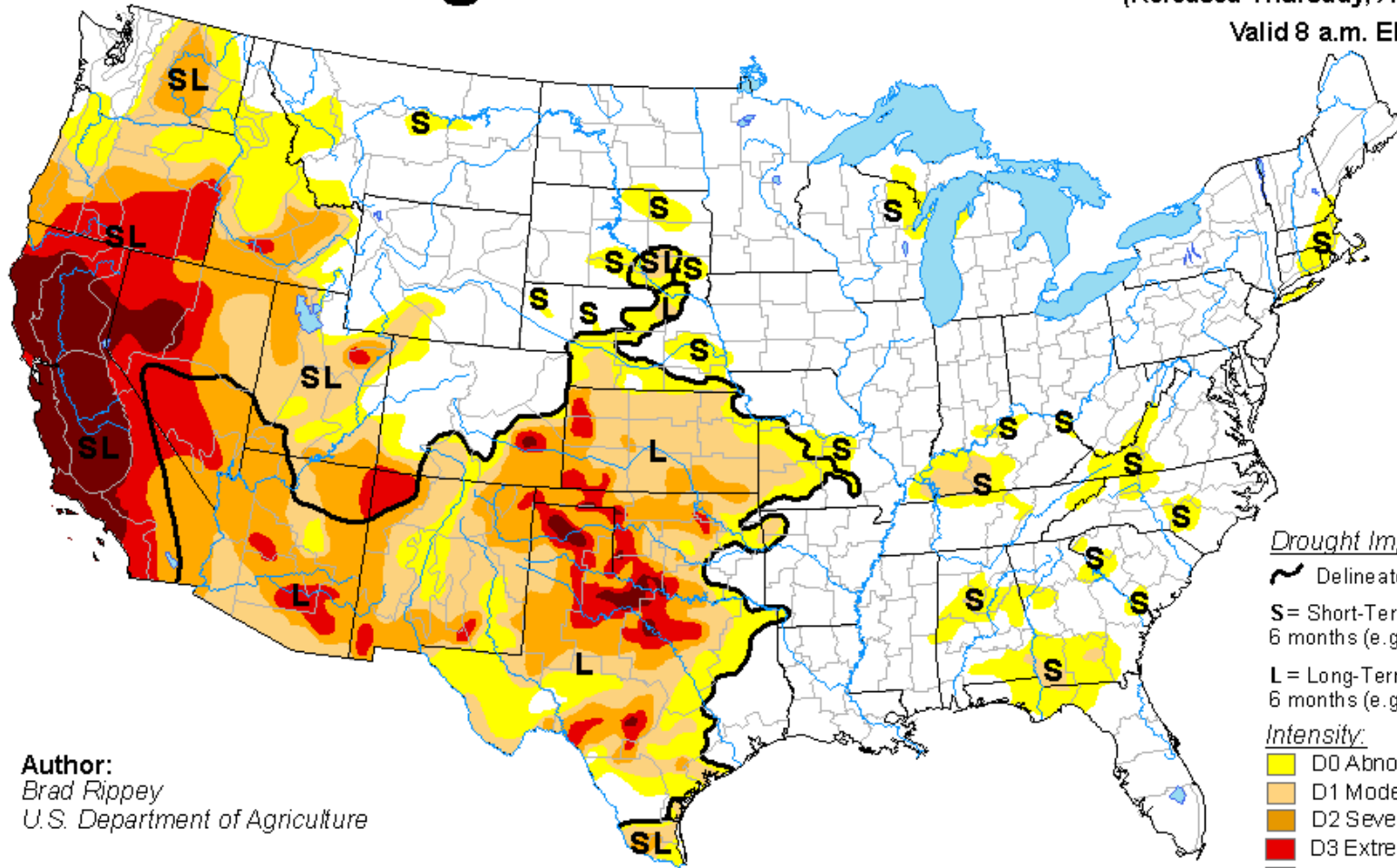
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.



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

# U.S. Drought Monitor

**August 5, 2014**  
(Released Thursday, Aug. 7, 2014)  
Valid 8 a.m. EDT



**Author:**  
Brad Rippey  
U.S. Department of Agriculture

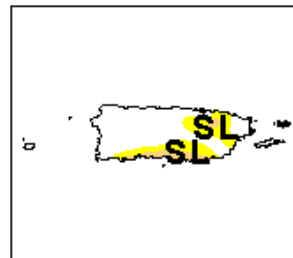
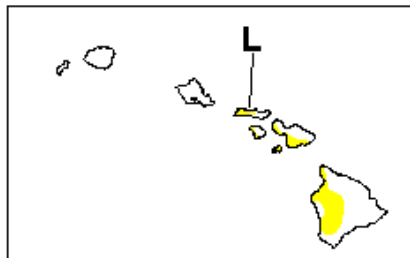
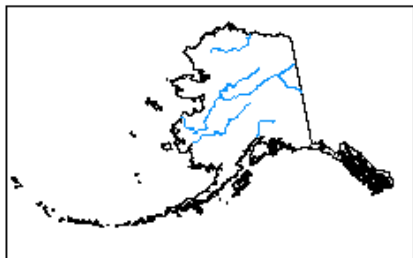
### Drought Impact Types:

- ~ Delineates dominant impacts
- S= Short-Term, typically less than 6 months (e.g. agriculture, grasslands)
- L= Long-Term, typically greater than 6 months (e.g. hydrology, ecology)

### Intensity:

- Yellow: D0 Abnormally Dry
- Light Orange: D1 Moderate Drought
- Orange: D2 Severe Drought
- Red: D3 Extreme Drought
- Dark Red: D4 Exceptional Drought

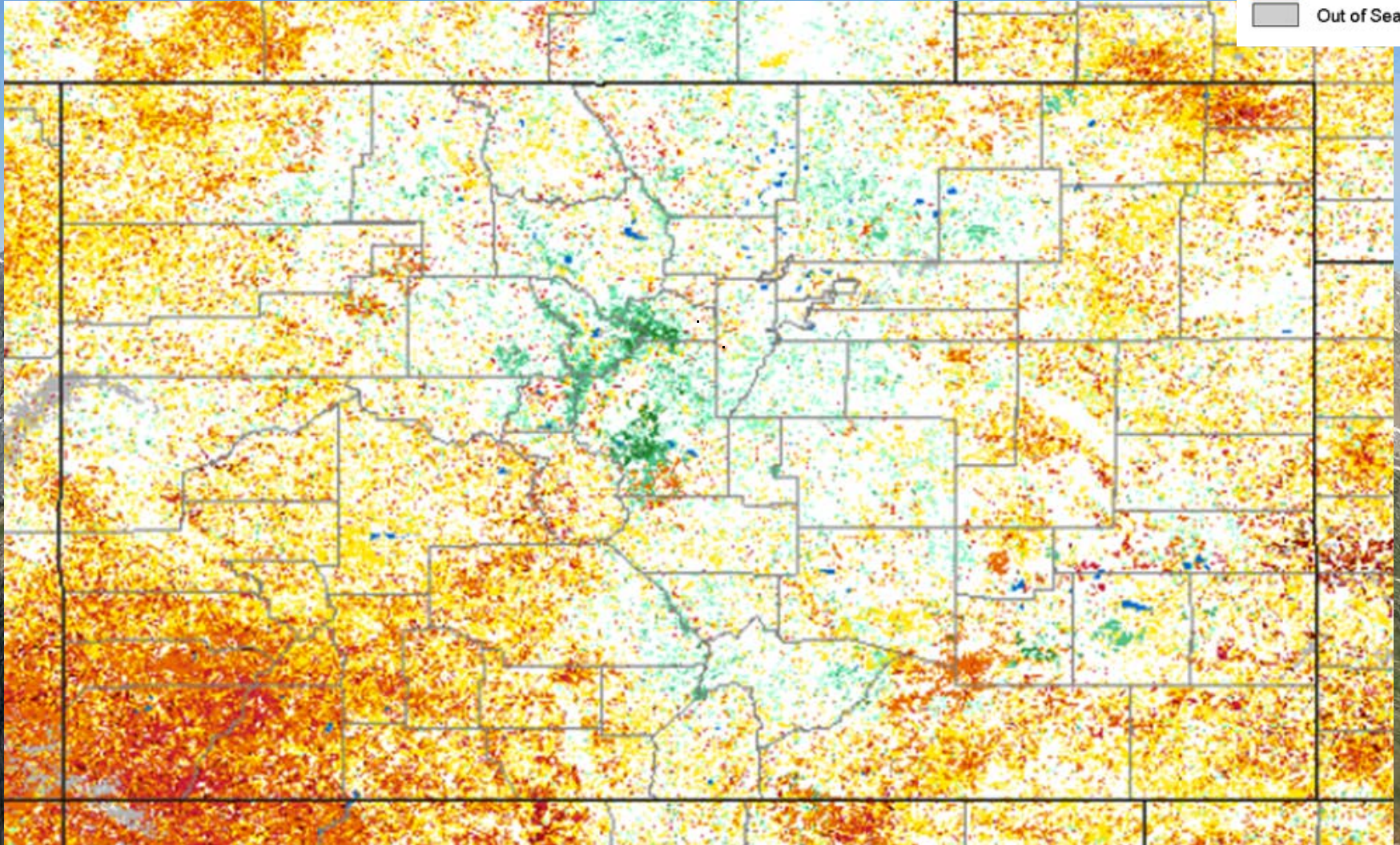
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.



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

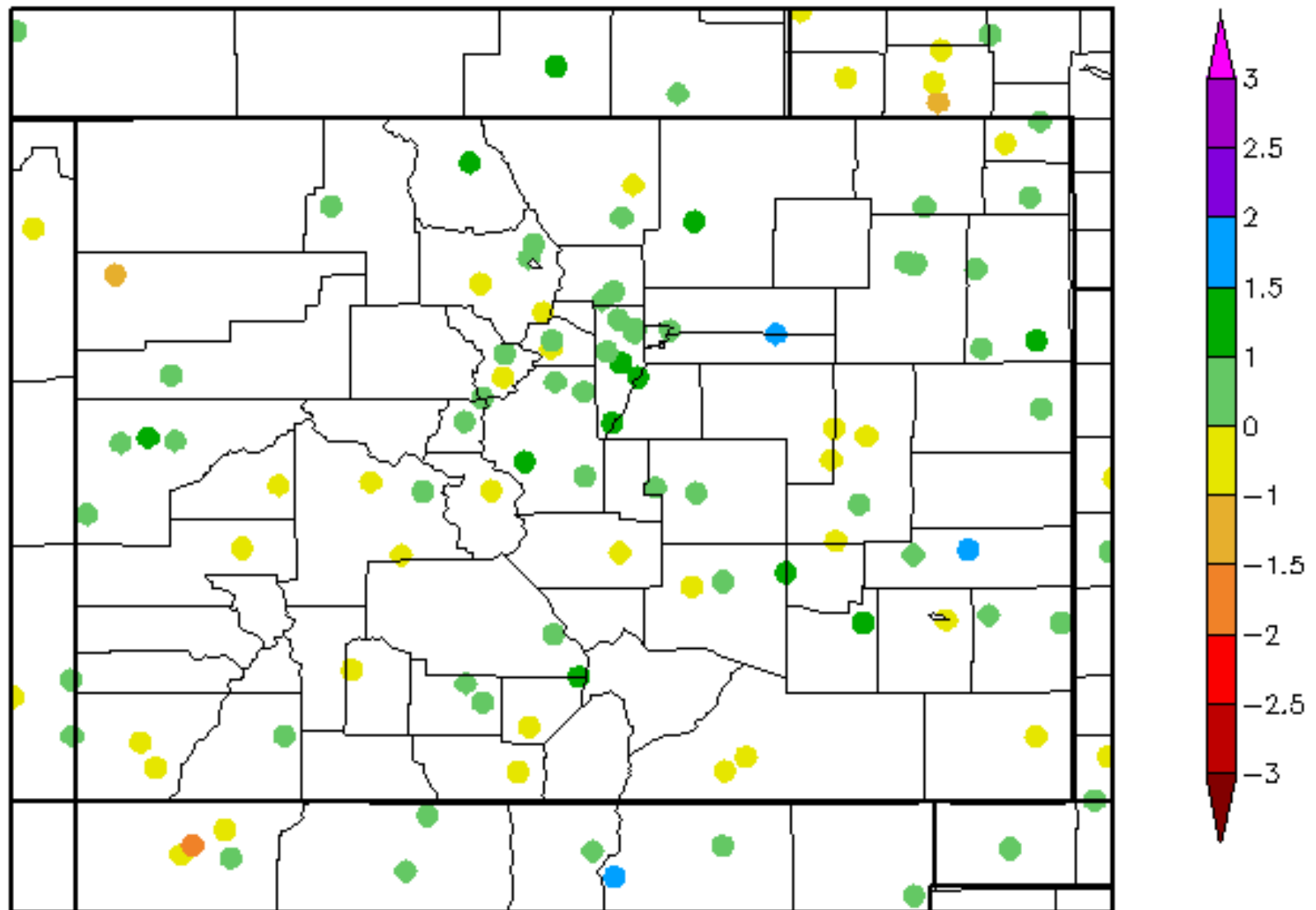


# VegDri- 10 Aug 2014



# 90 Day SPI

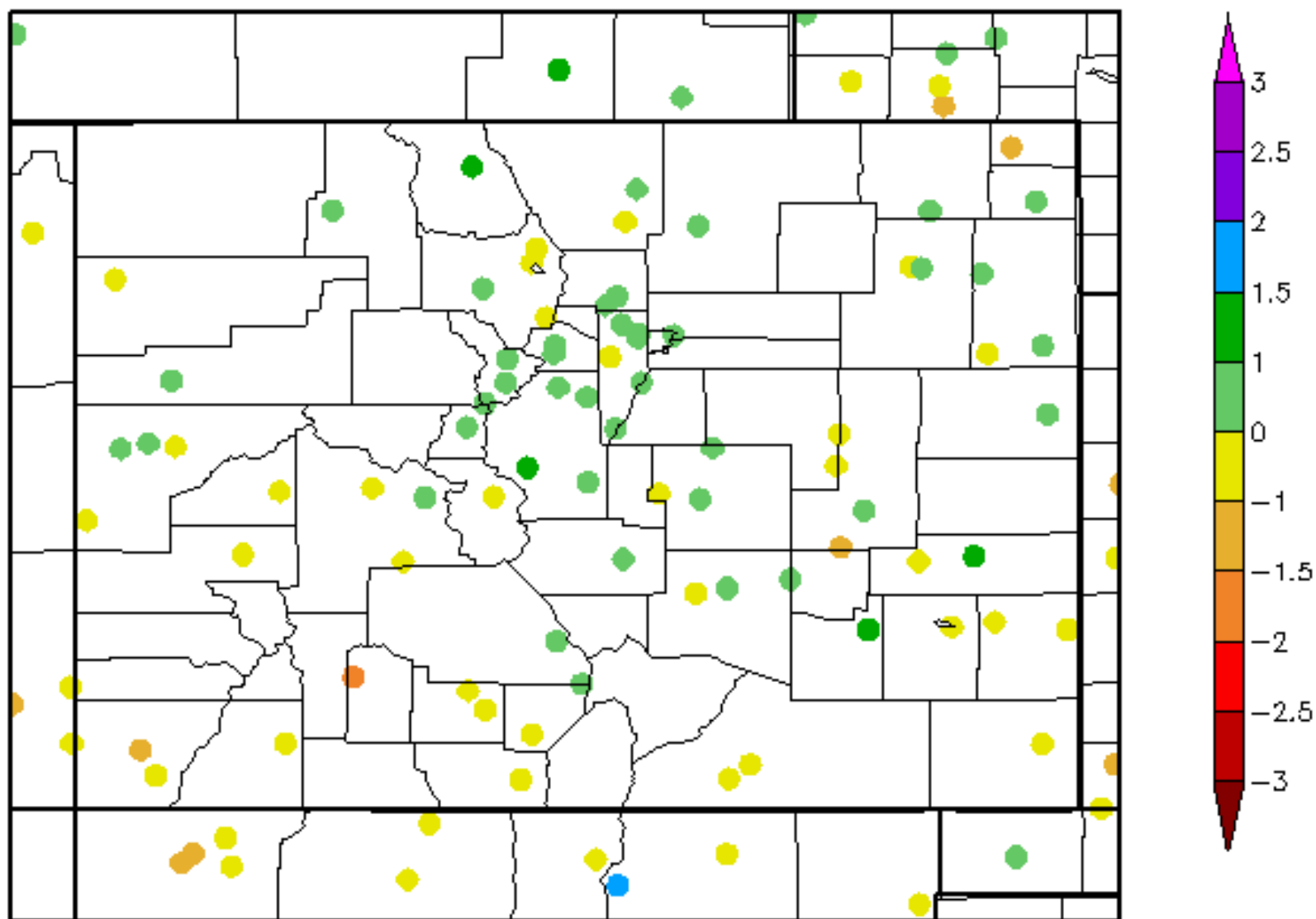
5/14/2014 - 8/11/2014





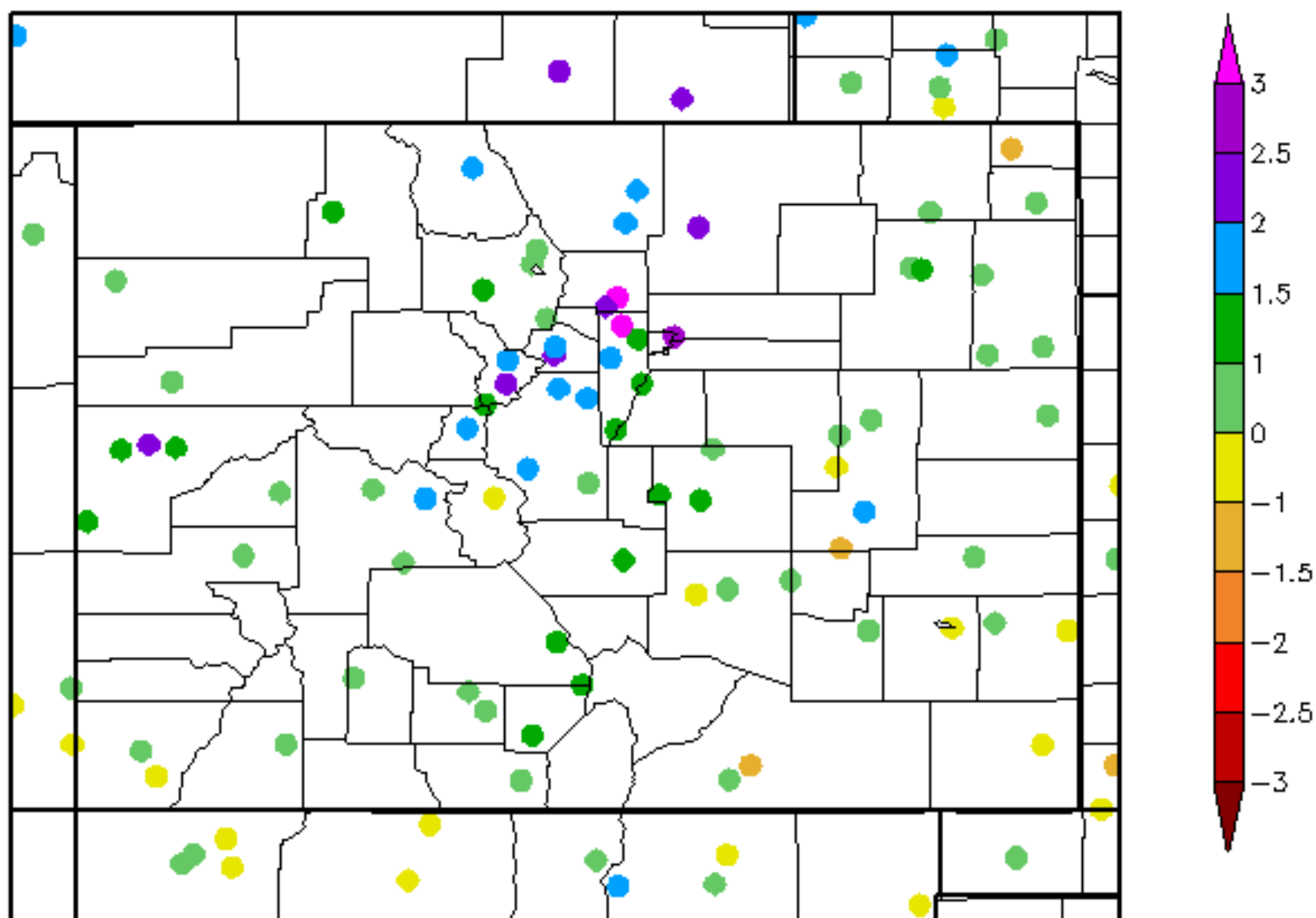
# 6 Month SPI

2/12/2014 - 8/11/2014



# 12 Month SPI

8/12/2013 - 8/11/2014

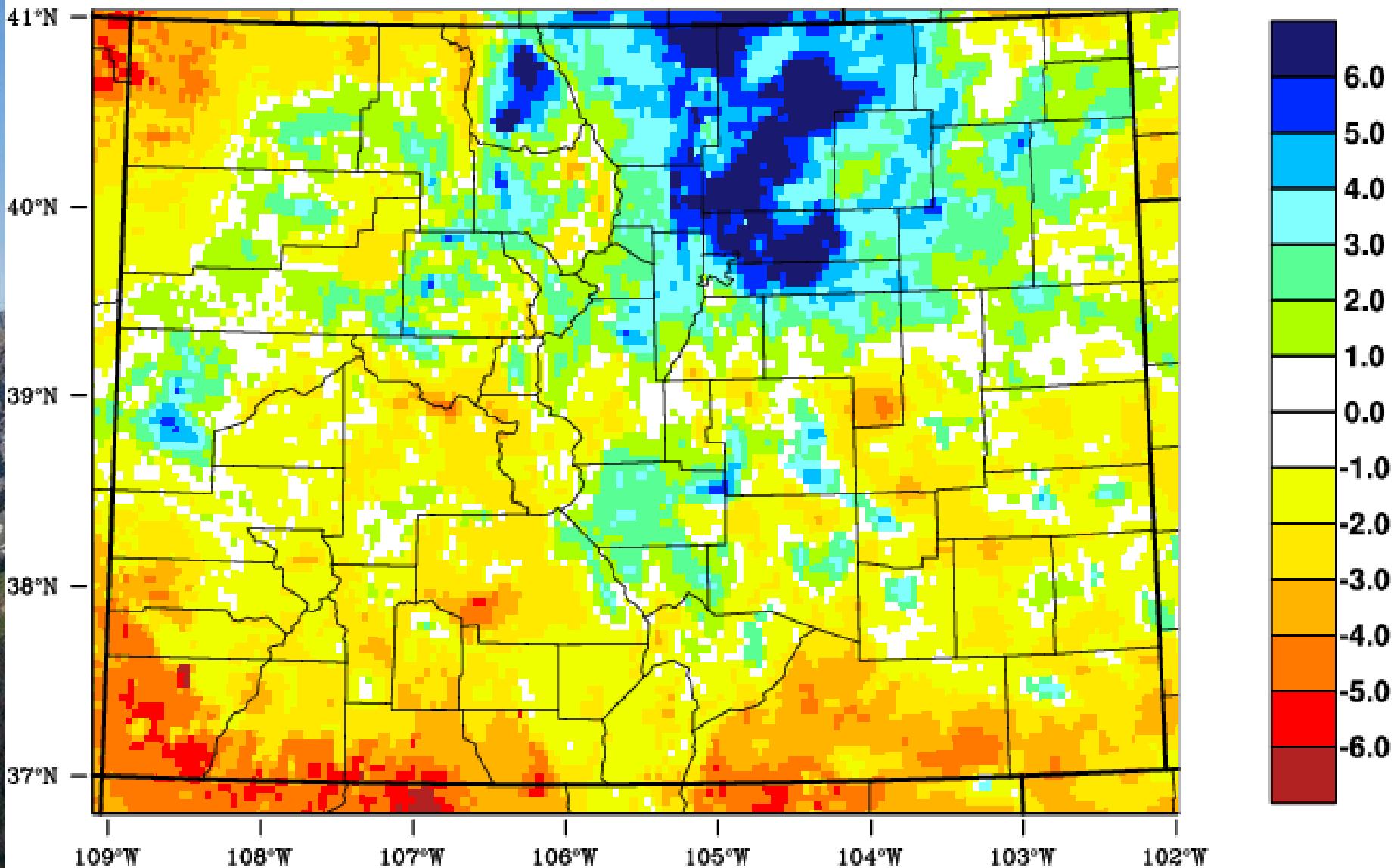




# Palmer

Colorado - PDSI

July 2014



WestWide Drought Tracker - WRCC/UI Data Source - PRISM (Prelim), created 11 AUG 2014

# Colorado Climate Center

Data and Power Point Presentations available for downloading

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



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Colorado  
State  
University  
*Knowledge to Go Places*