



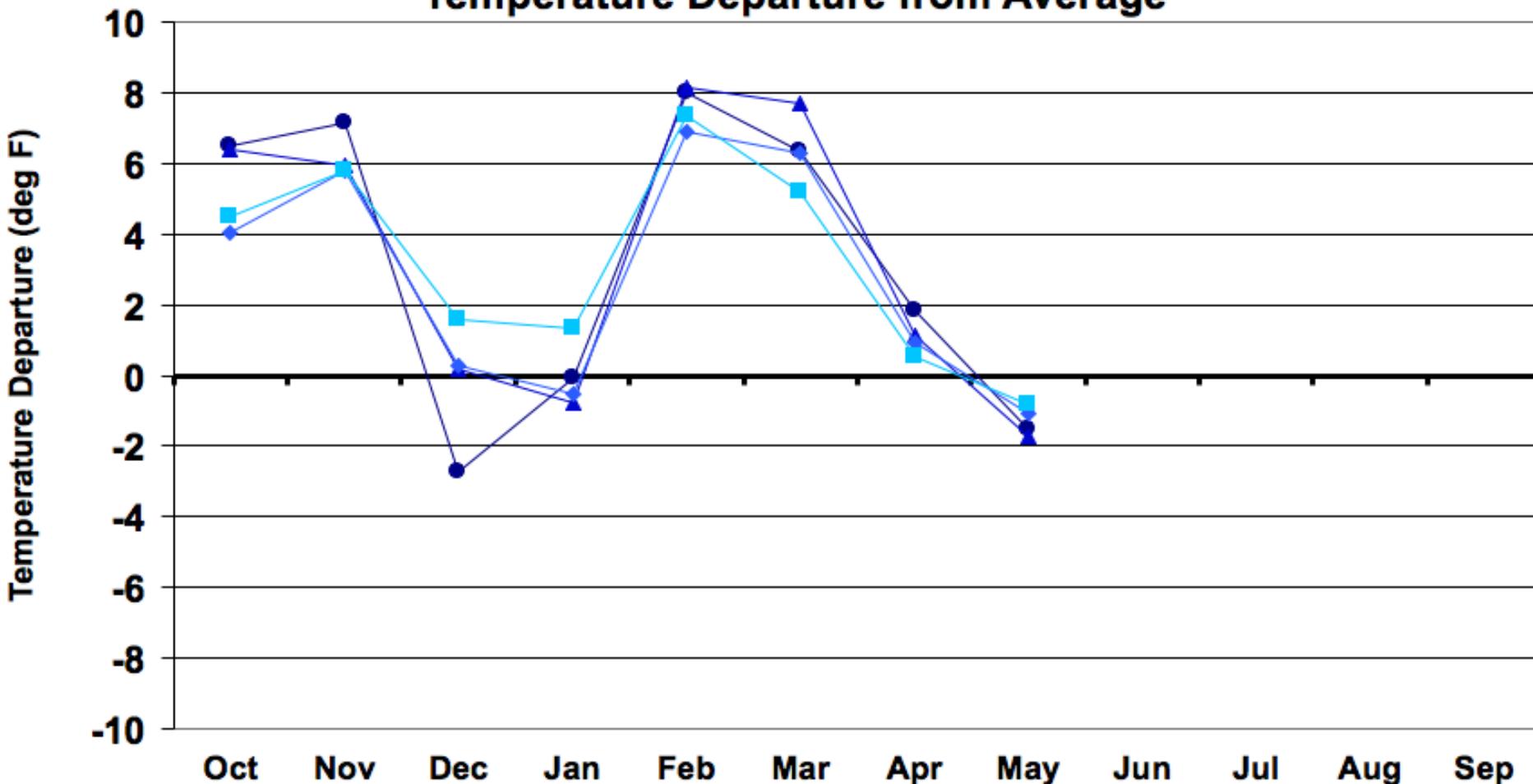
# *Climate Update*

Becky Bolinger  
Colorado Climate Center

**Presented to  
Water Availability Task Force  
June 21, 2017  
Denver, CO**

# Water Year 2017 Temperature Departures

Water Year 2017  
Temperature Departure from Average



● Eastern Plains

▲ Foothills

◆ Mountains

■ Western Valleys

# May 2017 Average Temperature History for Colorado (NCEI)

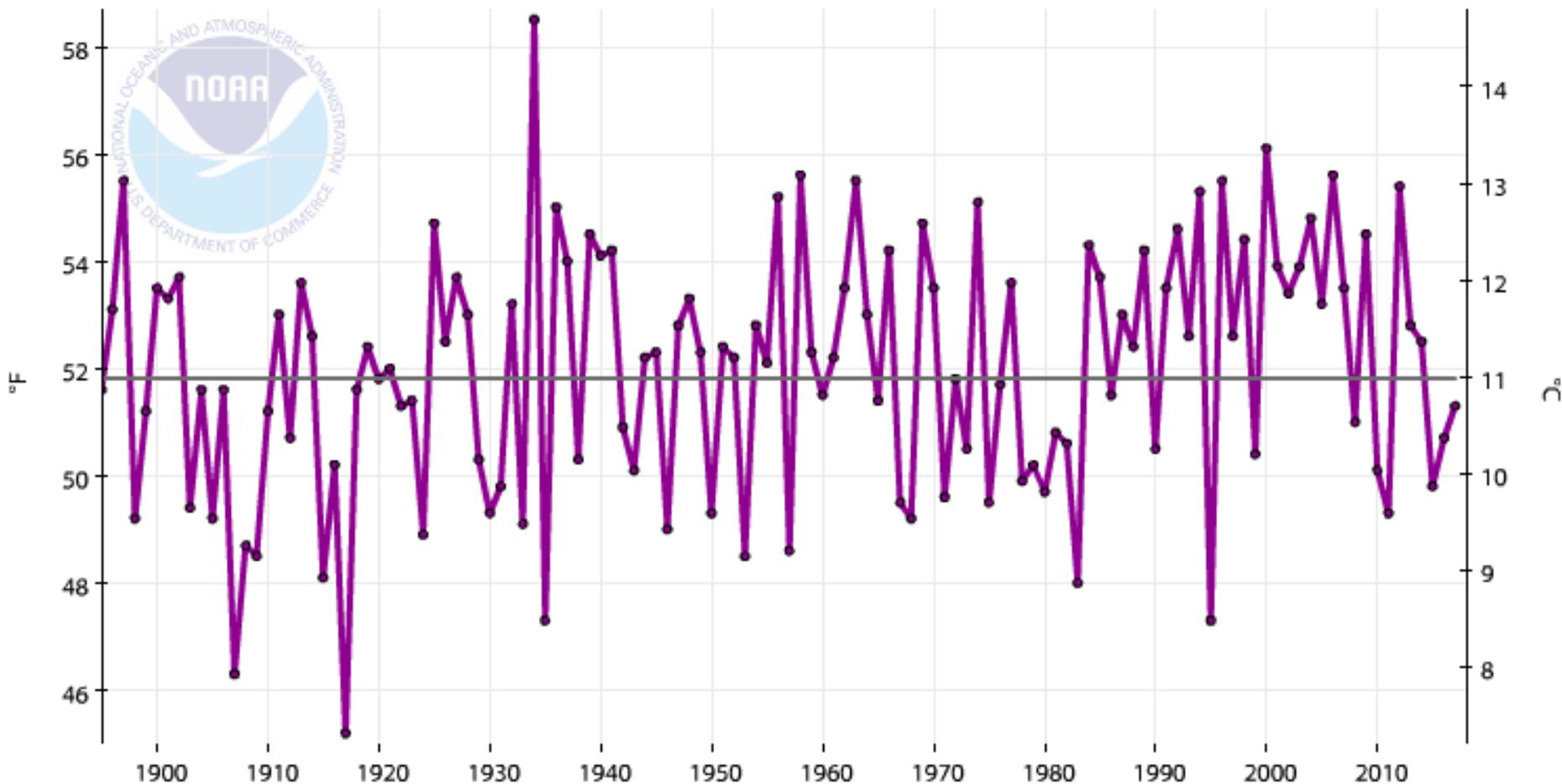
51.3 F (-0.5)

45<sup>th</sup> coolest on record

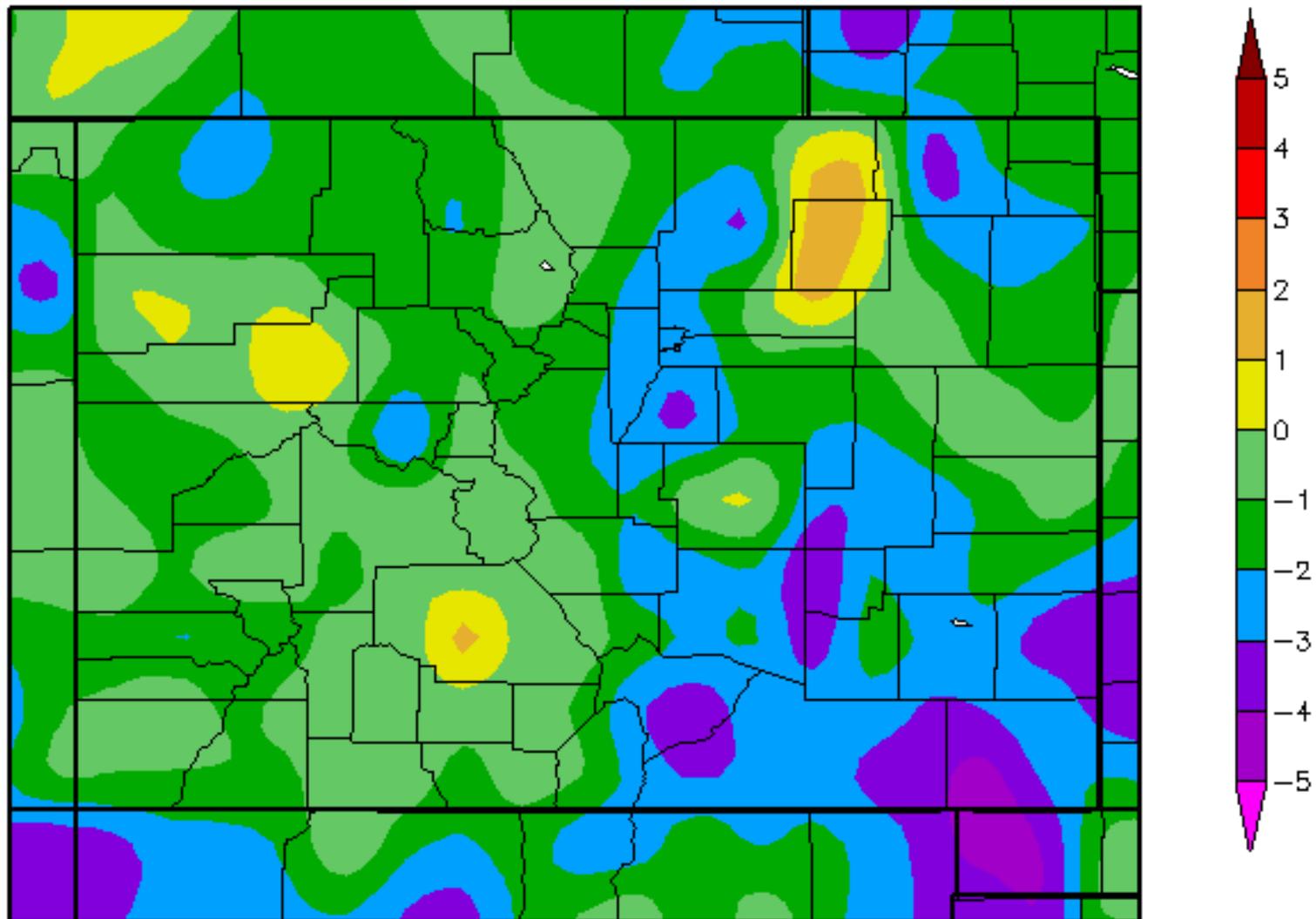
Cooler since 2016 at 50.7 F

## Colorado, Average Temperature, May

— 1901-2000 Mean: 51.8°F      —●— Avg Temperature

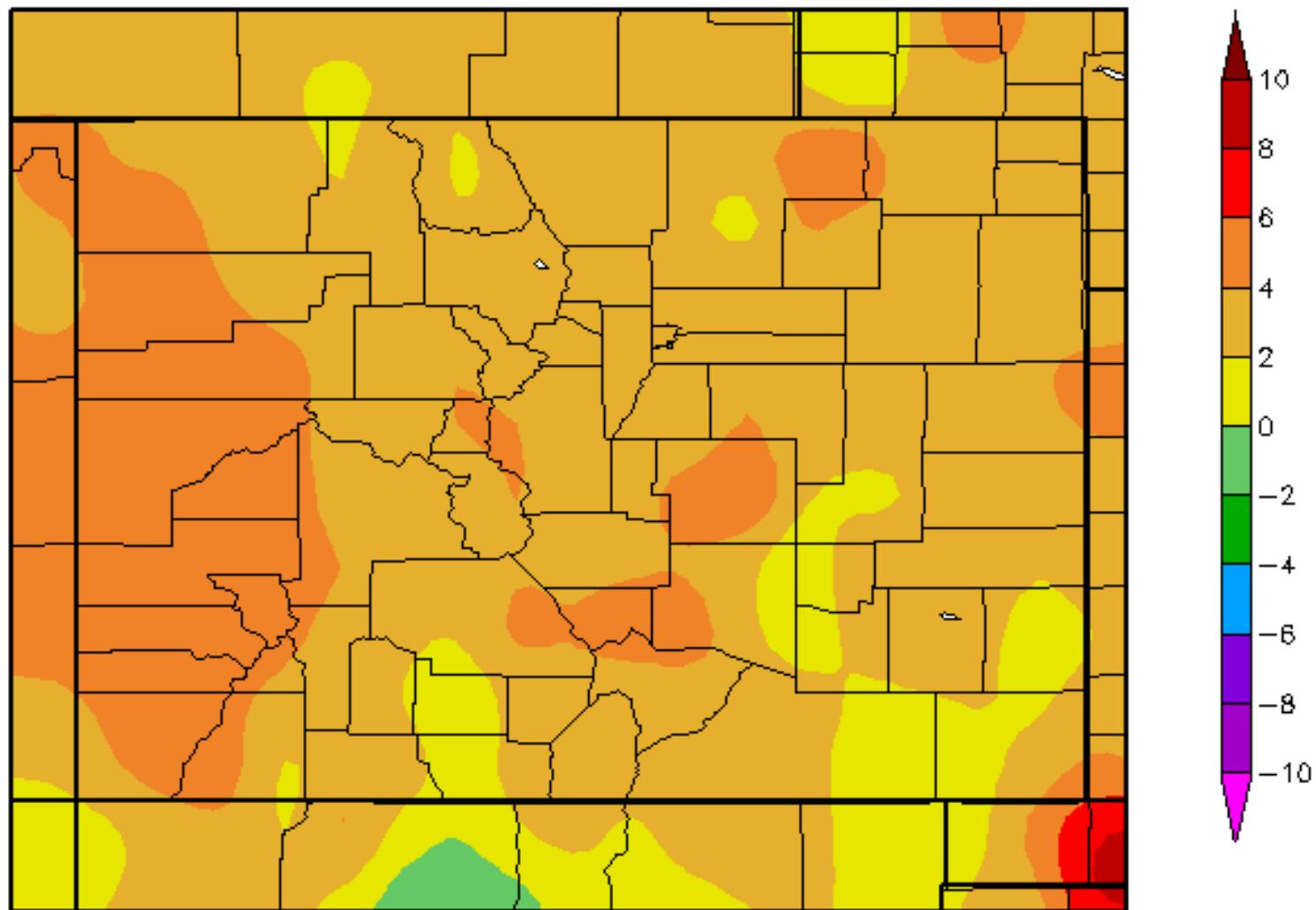


# Departure from Normal Temperature (F) 5/1/2017 – 5/31/2017



# Departure from Normal Temperature (F)

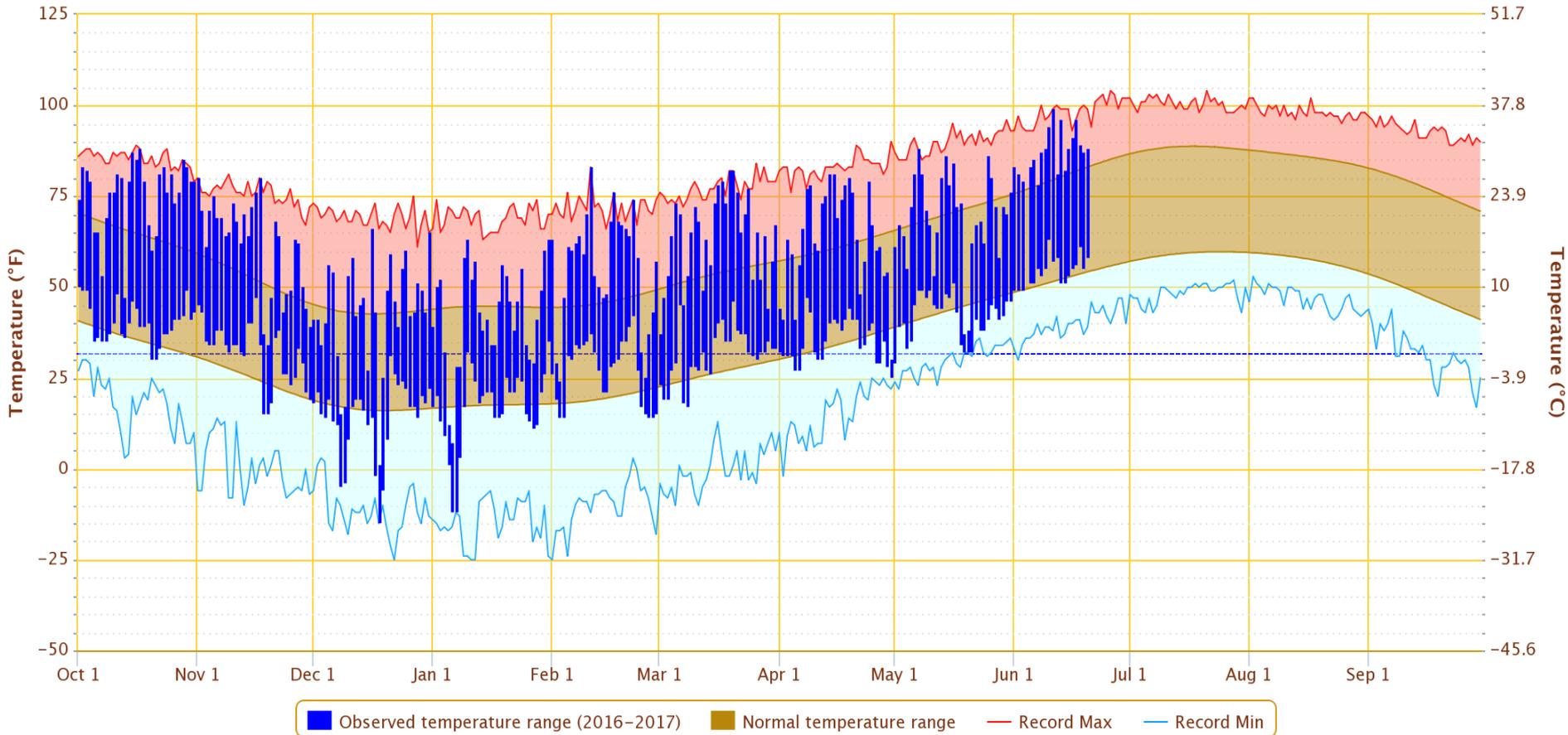
6/1/2017 - 6/19/2017



# Daily Max/Min Temperature WY2017, with normals - Denver

Daily Temperature Data – DENVER STAPLETON, CO

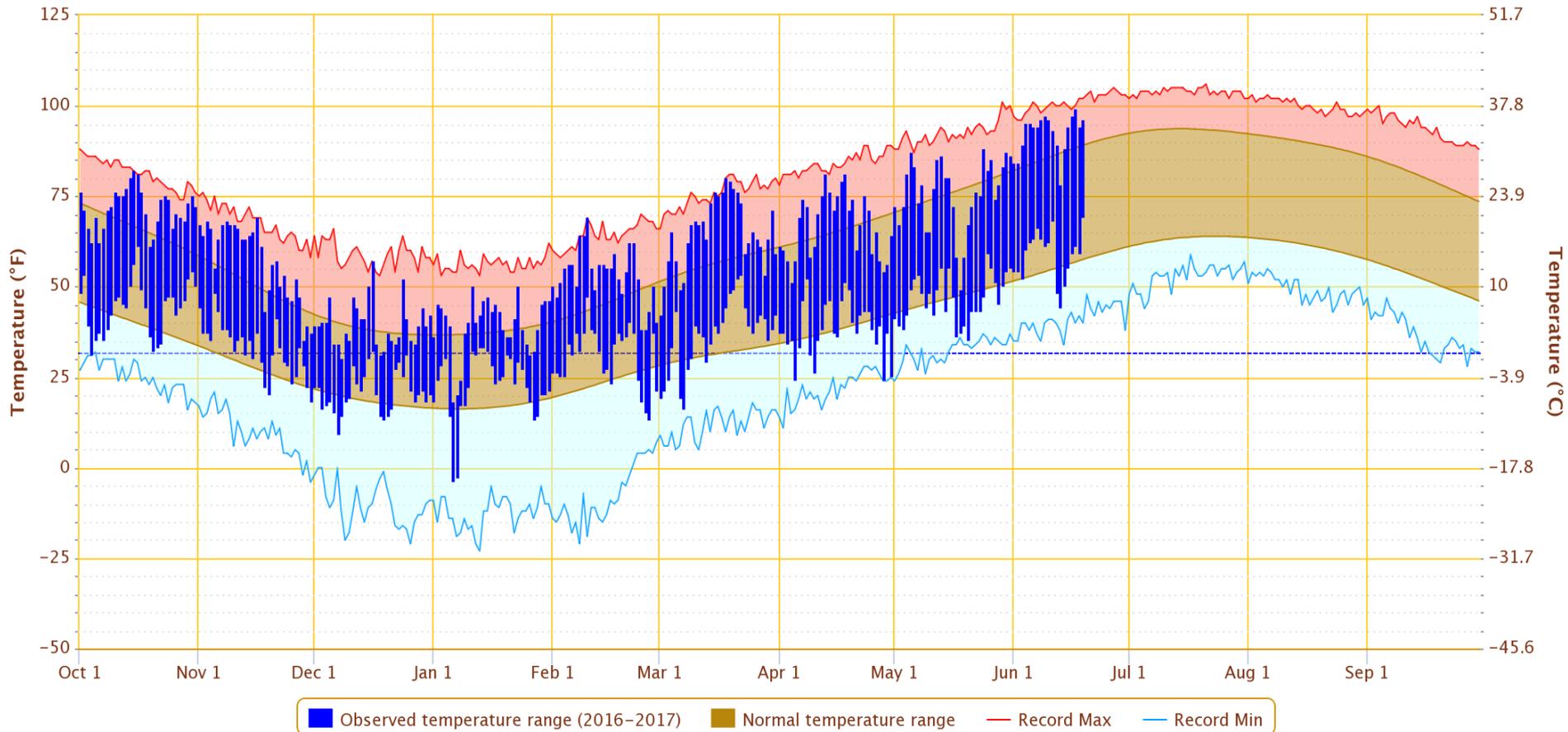
Period of Record – 1948-01-01 to 2017-06-20. Normals period: 1981-2010. Click and drag to zoom chart.



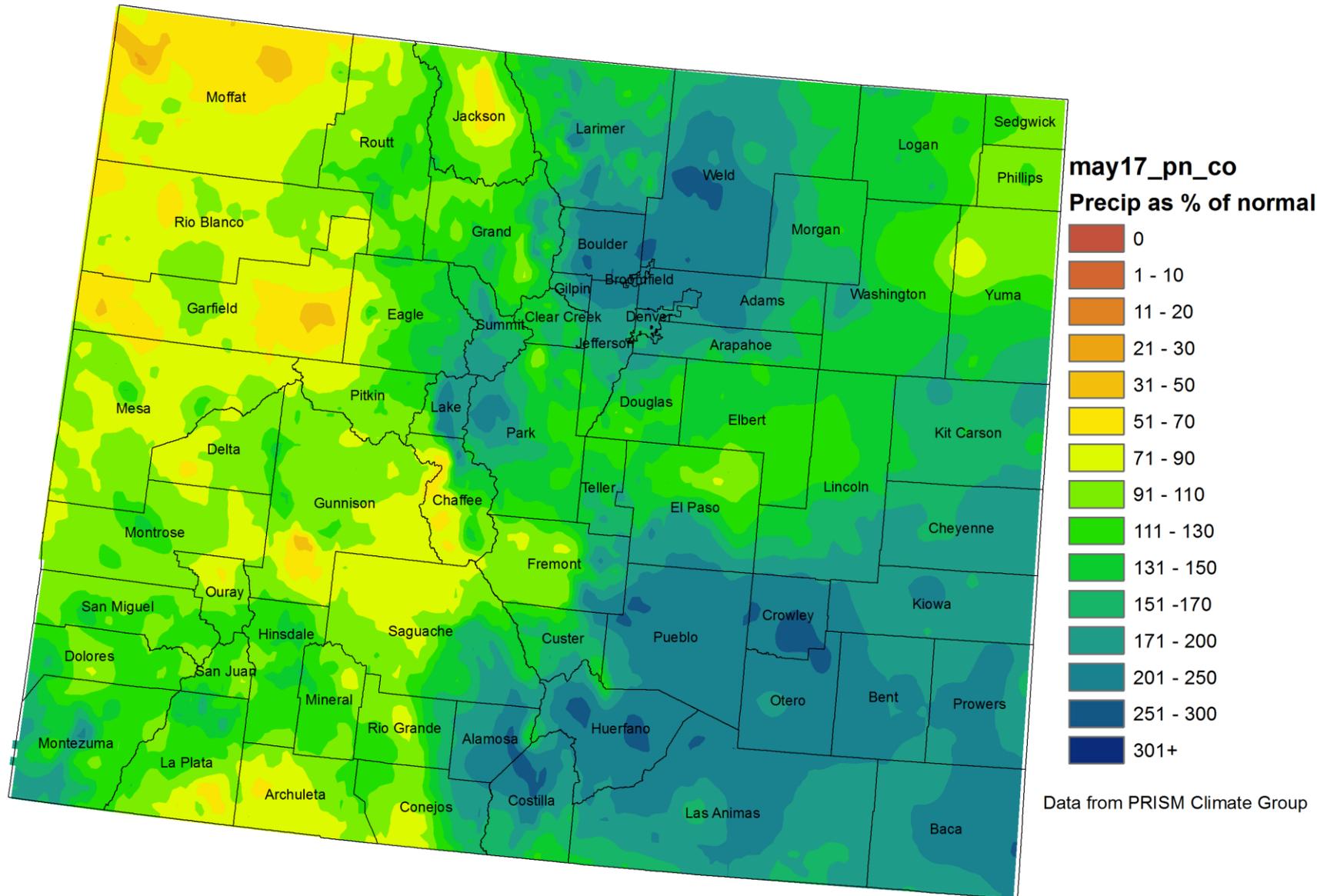
# Daily Max/Min Temperature WY2017, with normals - GJT

Daily Temperature Data – GRAND JUNCTION WALKER FLD, CO

Period of Record – 1900-01-01 to 2017-06-19. Normals period: 1981-2010. Click and drag to zoom chart.



# Colorado May 2017 Precipitation as a Percentage of Normal



# May 2017 Average Precipitation History for Colorado (NCEI)

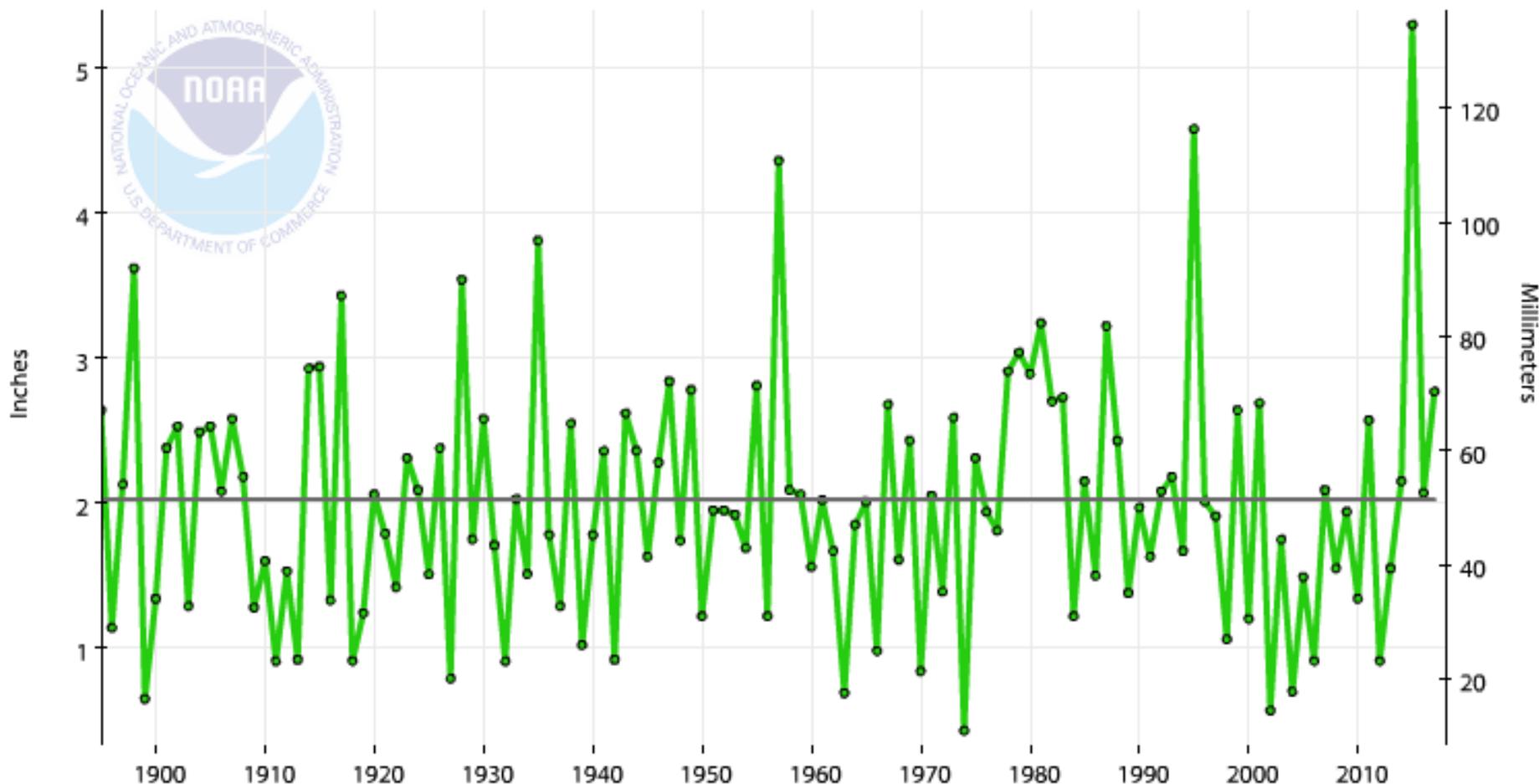
2.77" (+0.75")

18<sup>th</sup> wettest on record

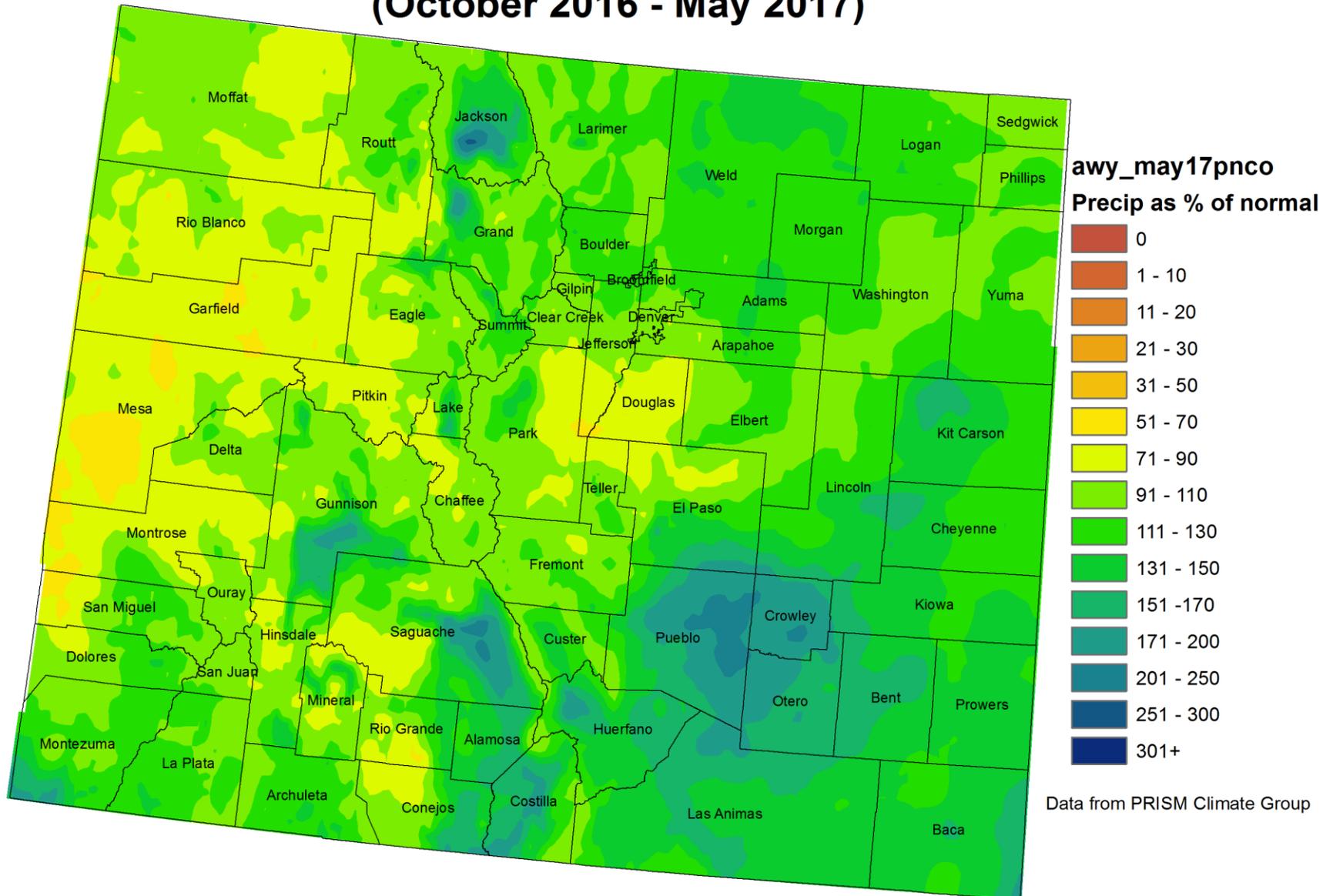
Wettest since 2015 with 5.30"

Colorado, Precipitation, May

— 1901-2000 Mean: 2.02"    ● Precip

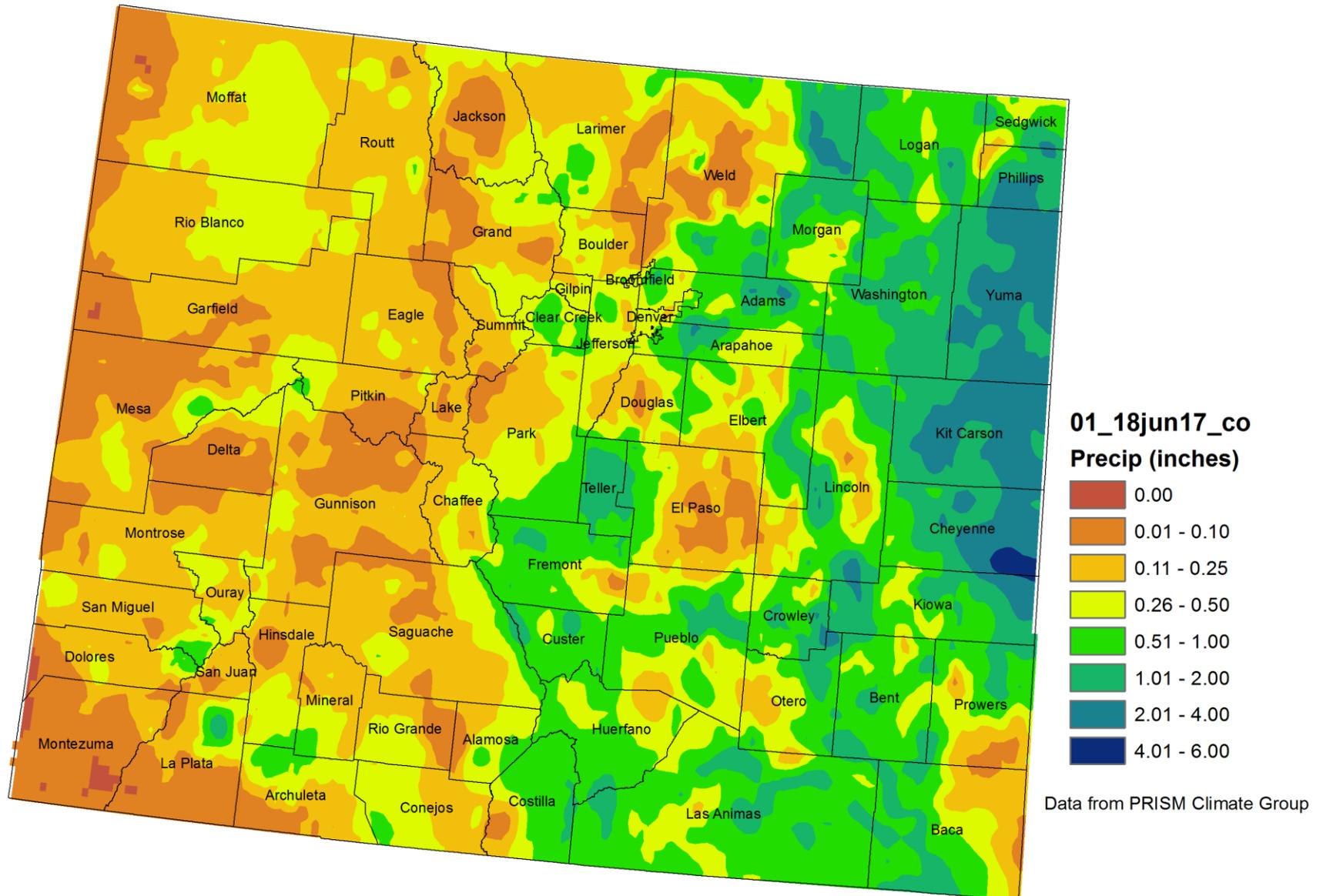


# Colorado Water Year 2017 Precipitation as a Percentage of Normal (October 2016 - May 2017)

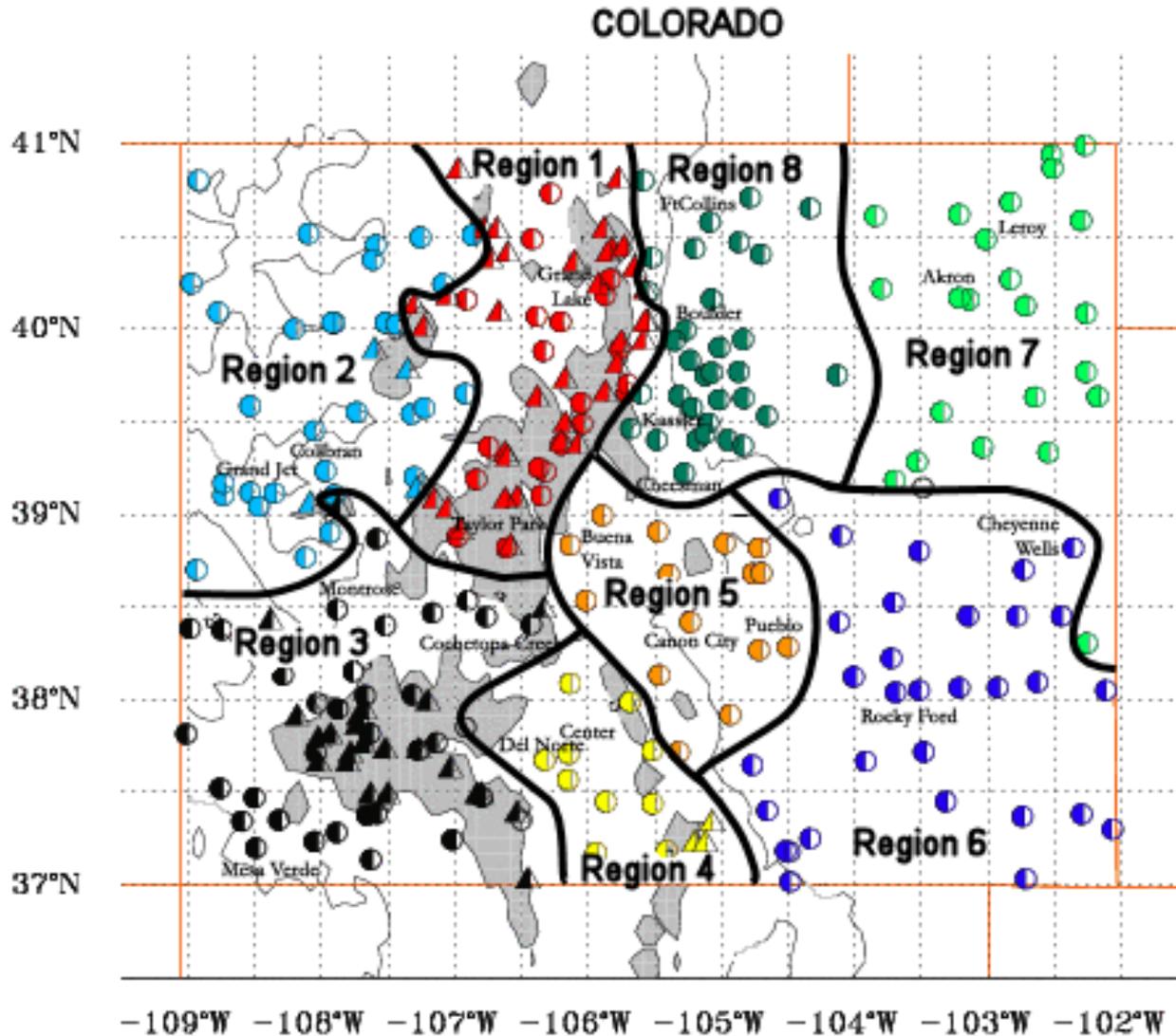


Data from PRISM Climate Group

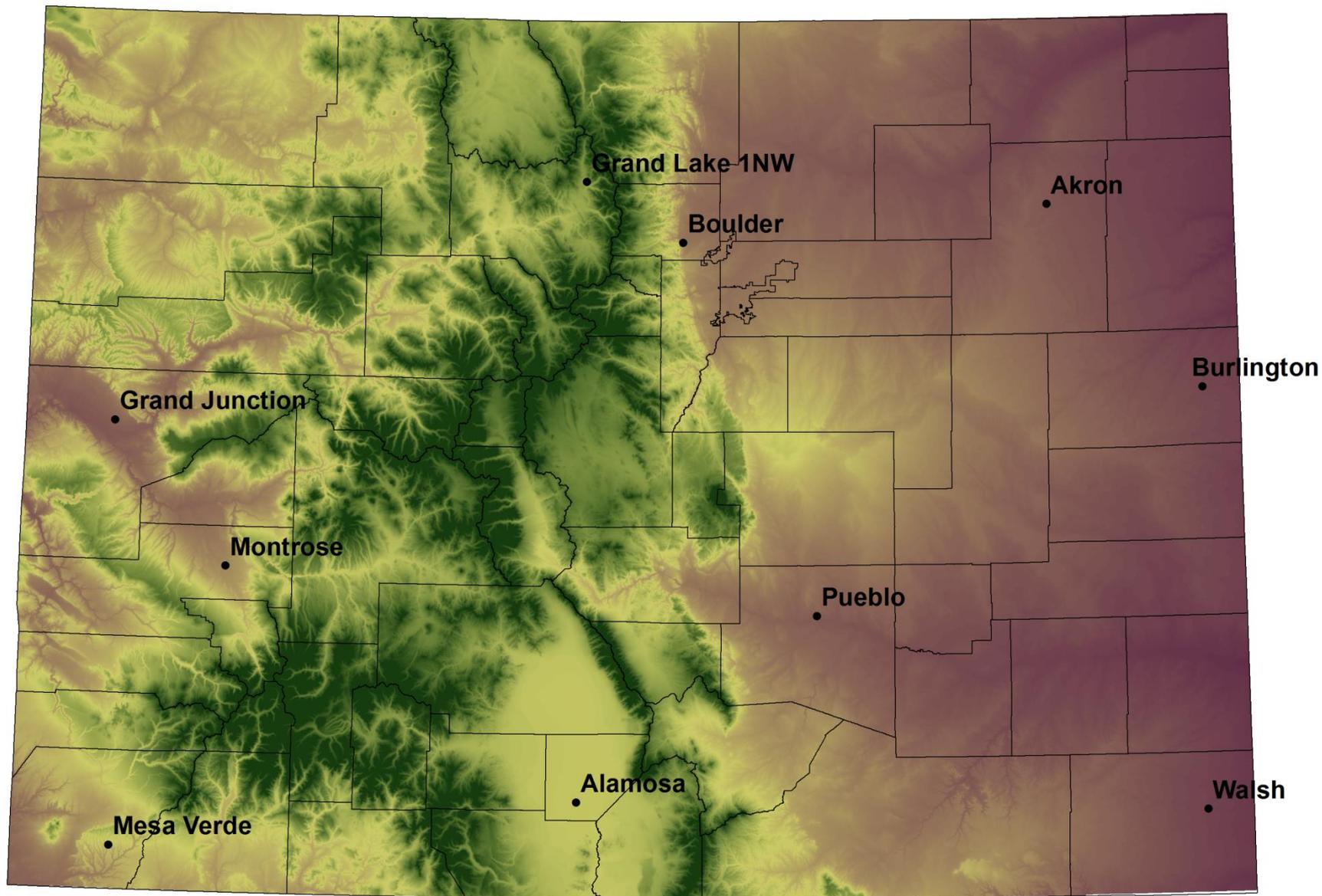
# Colorado Month to Date Precipitation 1 - 18 June 2017 7AM MDT



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

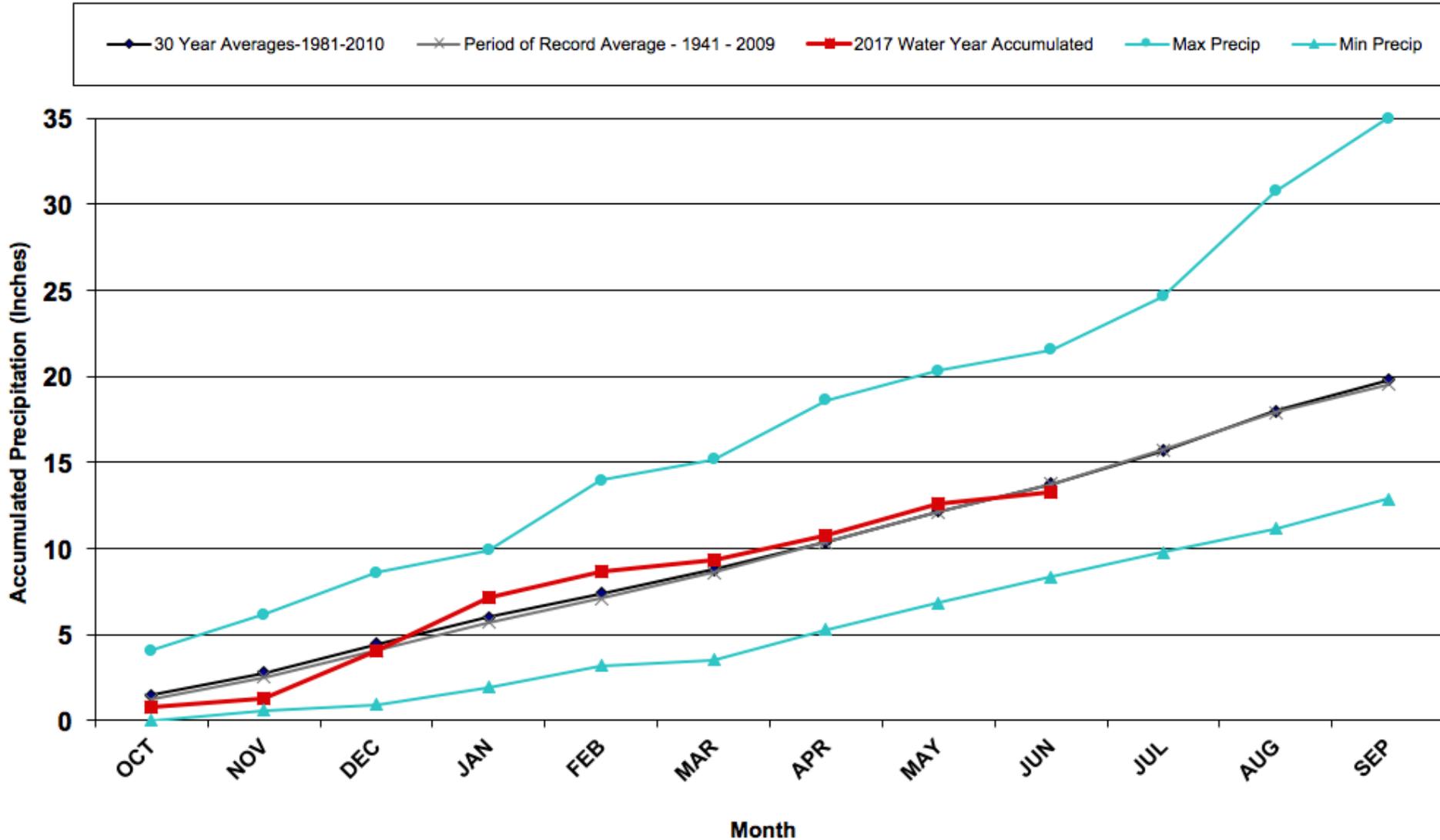


# NWS Cooperative Stations for WATF



# Division 1 – Grand Lake 1NW

## Grand Lake 1 NW 2017 Water Year



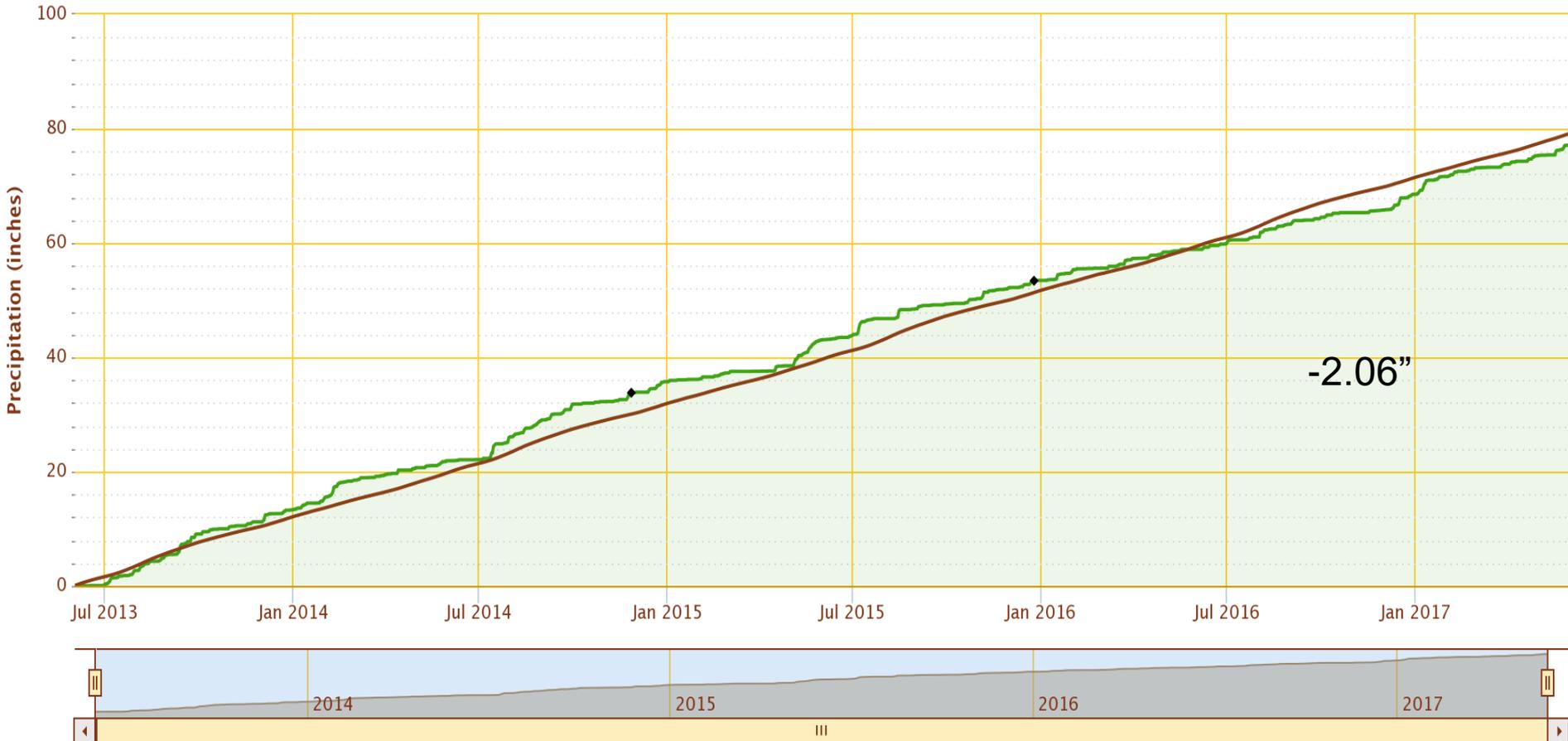
# Division 1 – Grand Lake 1NW

## Accumulated Precipitation – GRAND LAKE 1 NW, CO

Use navigation tools above and below chart to change displayed range; green/black diamonds represent subsequent/missing values

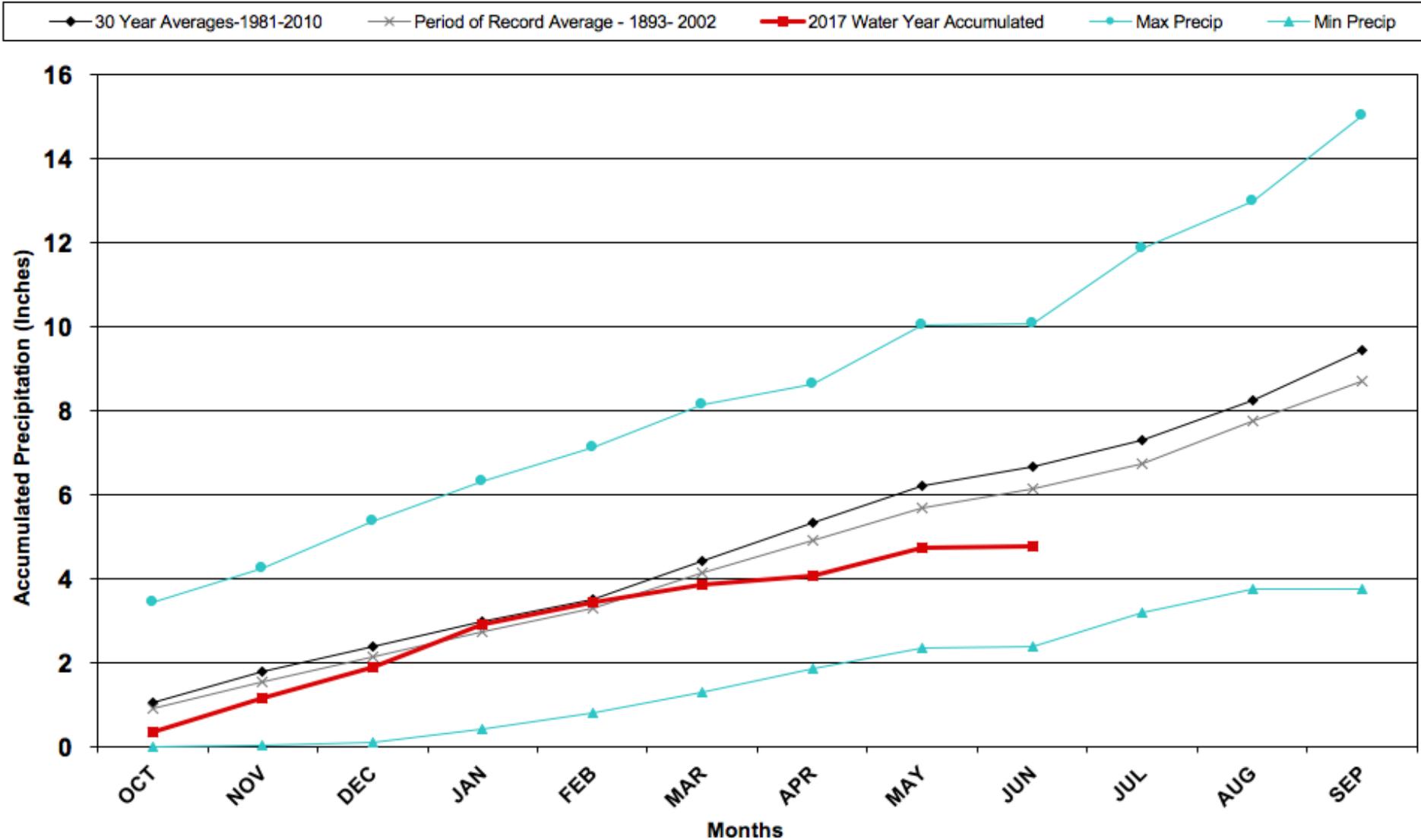
Zoom **1m** 3m 6m YTD 1y All

From 2013-06-01 To 2017-05-31



# Division 2 – Grand Junction

## Grand Junction WSFO 2017 Water Year



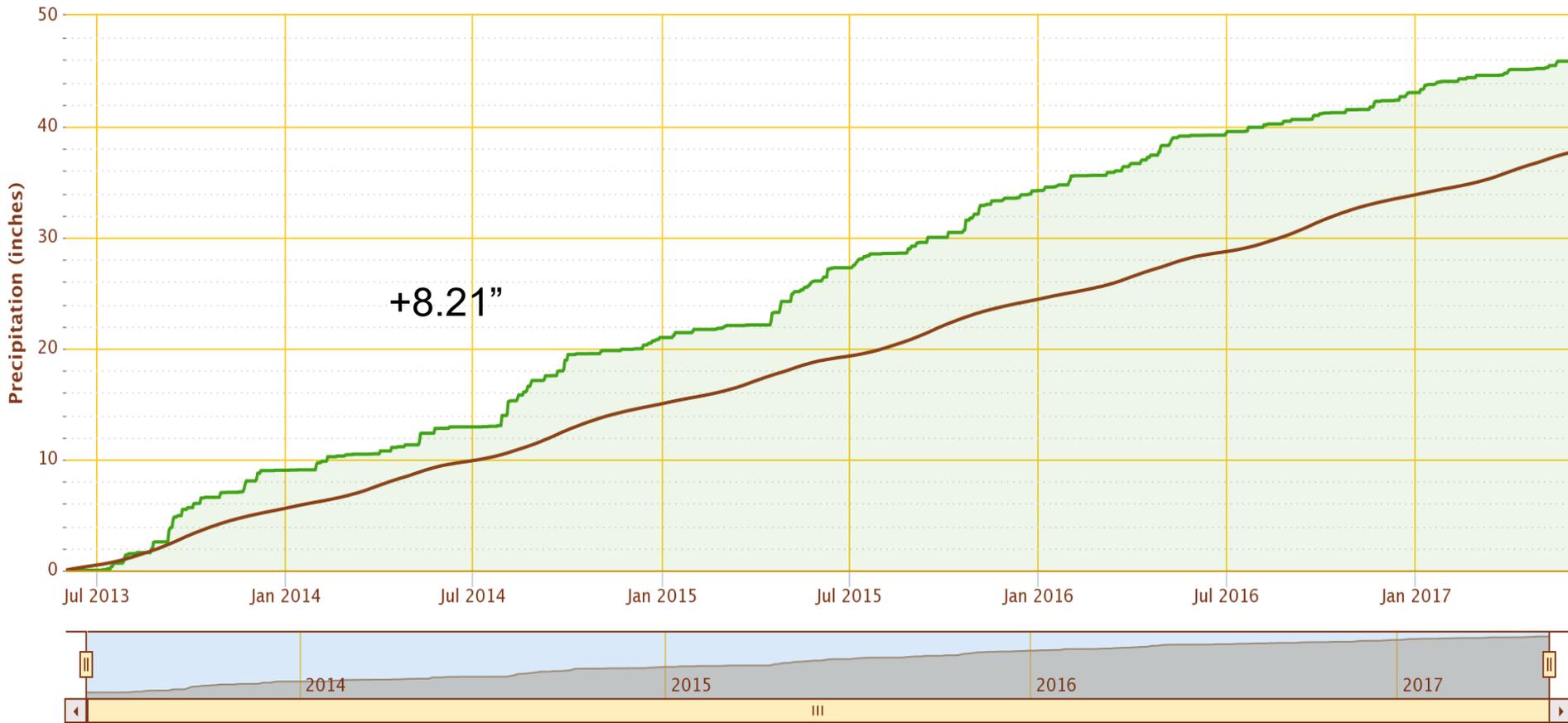
# Division 2 – Grand Junction

## Accumulated Precipitation – GRAND JUNCTION WALKER FLD, CO

Use navigation tools above and below chart to change displayed range; green/black diamonds represent subsequent/missing values

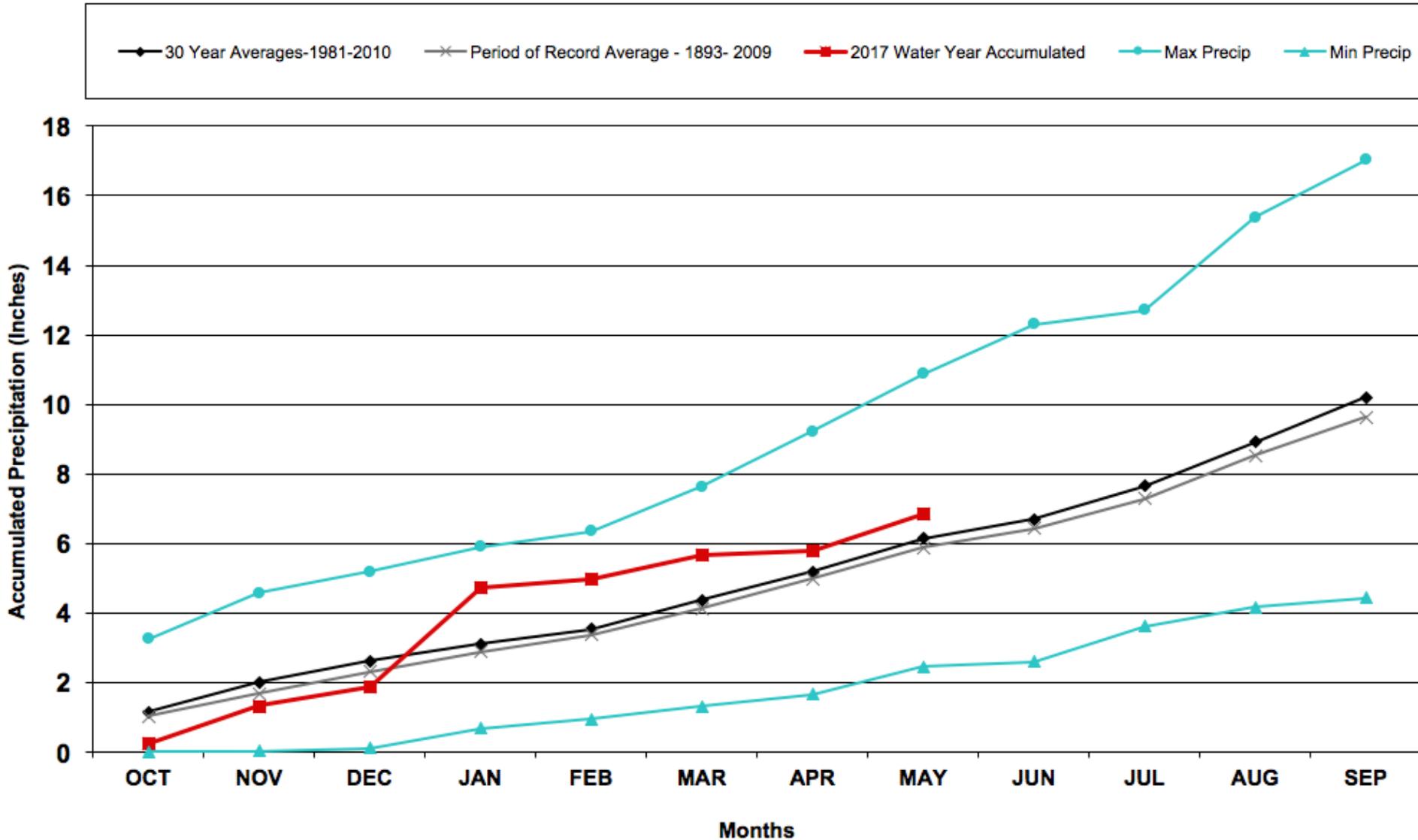
Zoom **1m** 3m 6m YTD 1y All

From 2013-06-01 To 2017-05-31



# Division 3 – Montrose

## Montrose #2 2017 Water Year



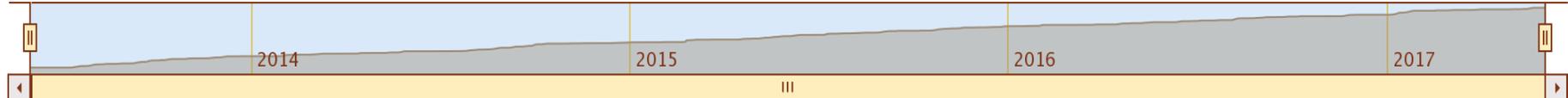
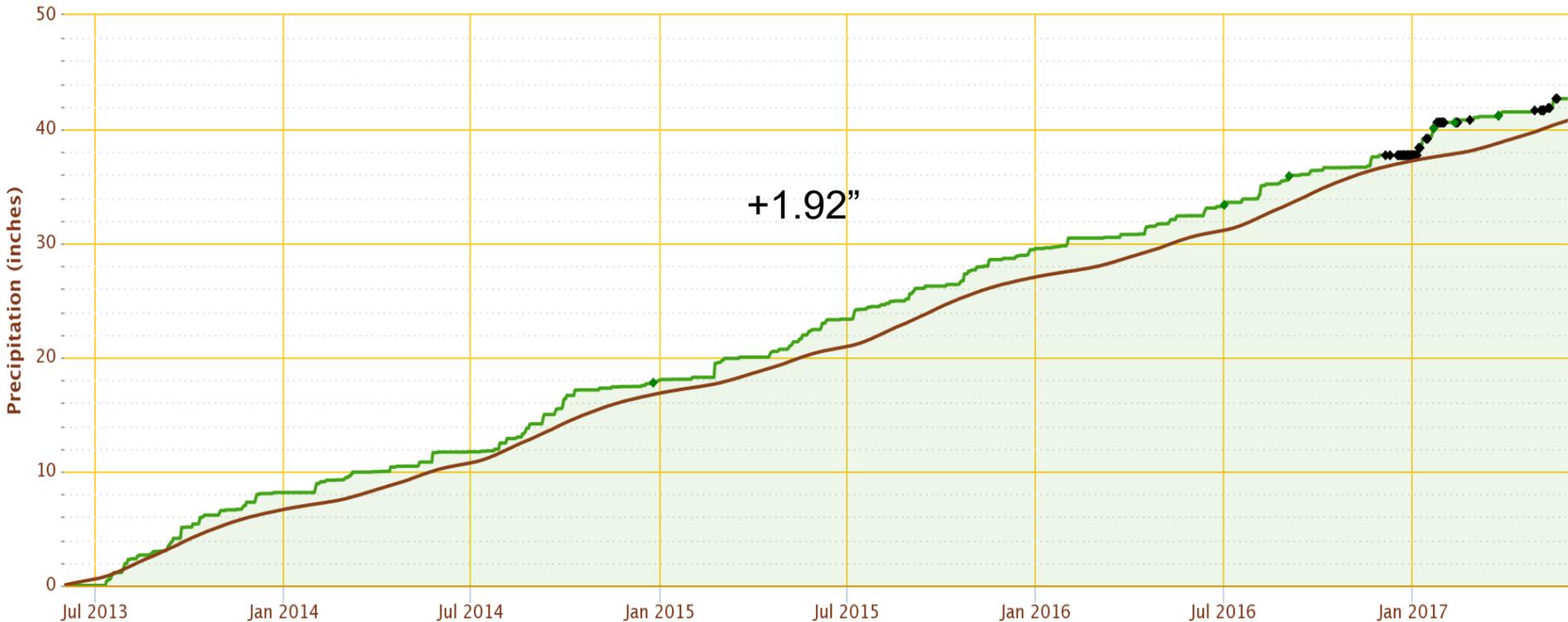
# Division 3 – Montrose

## Accumulated Precipitation – MONTROSE #2, CO

Use navigation tools above and below chart to change displayed range; green/black diamonds represent subsequent/missing values

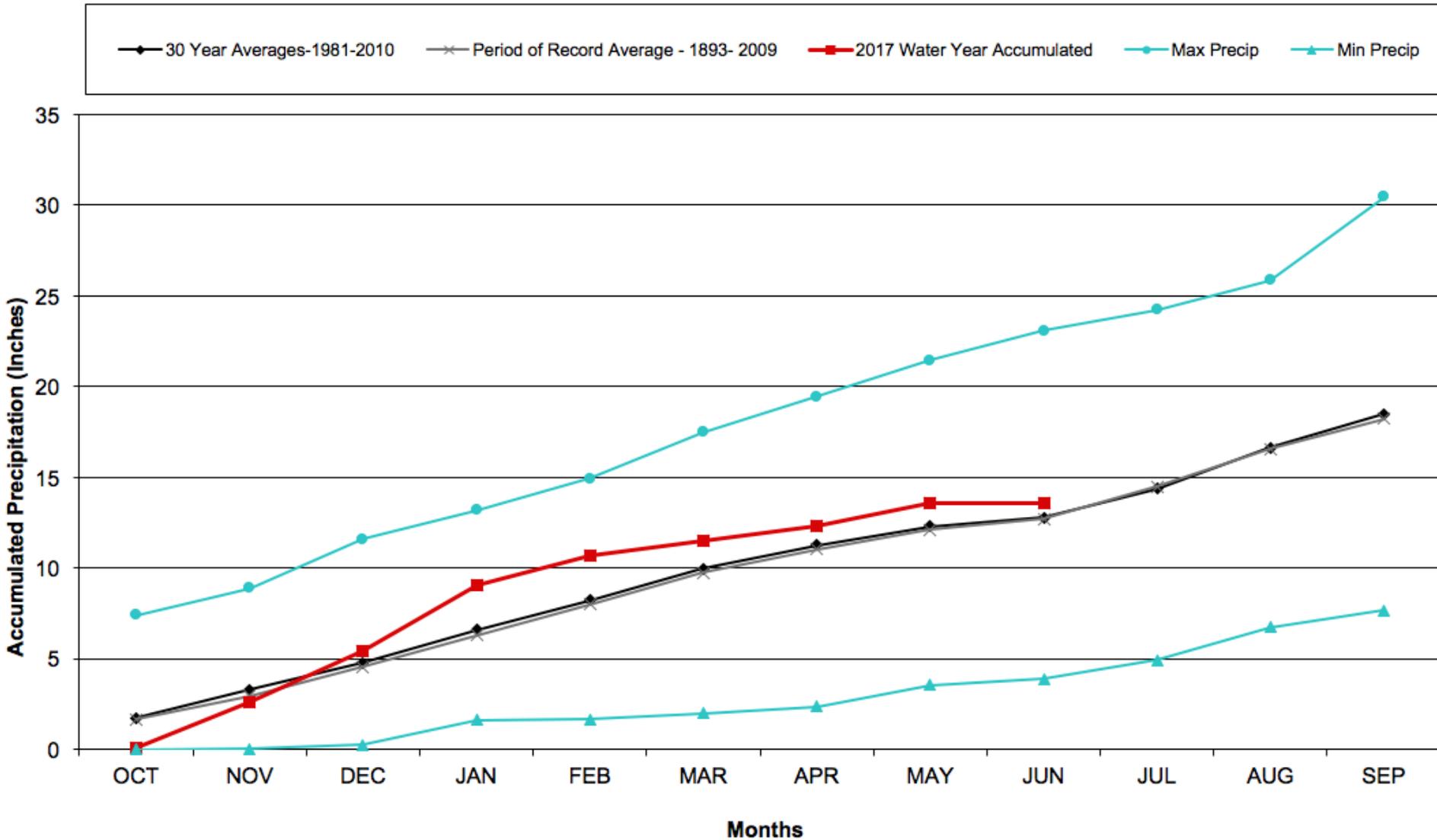
Zoom **1m** 3m 6m YTD 1y All

From 2013-06-01 To 2017-05-31



# Division 3 – Mesa Verde NP

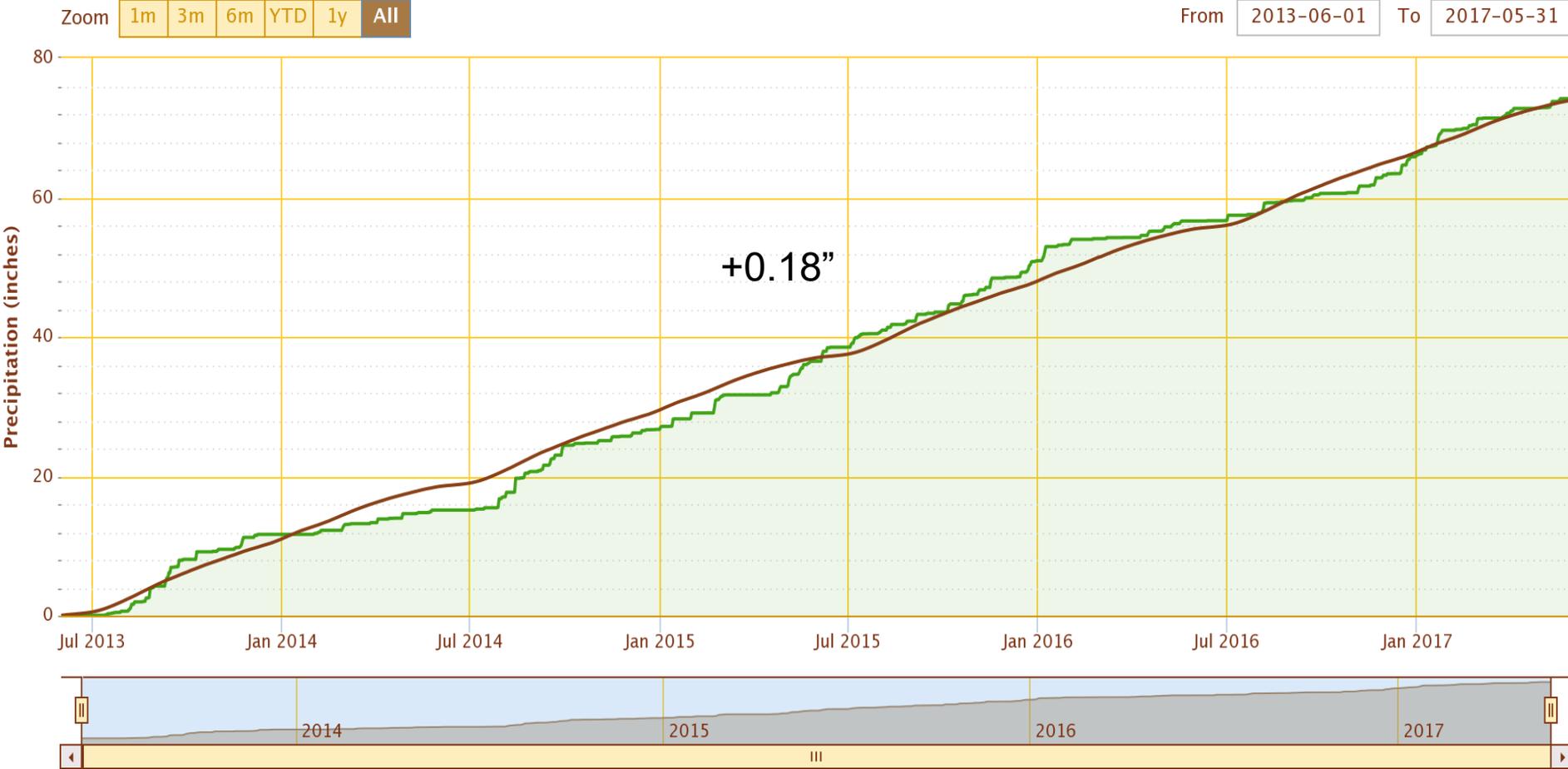
## Mesa Verde NP 2017 Water Year



# Division 3 – Mesa Verde NP

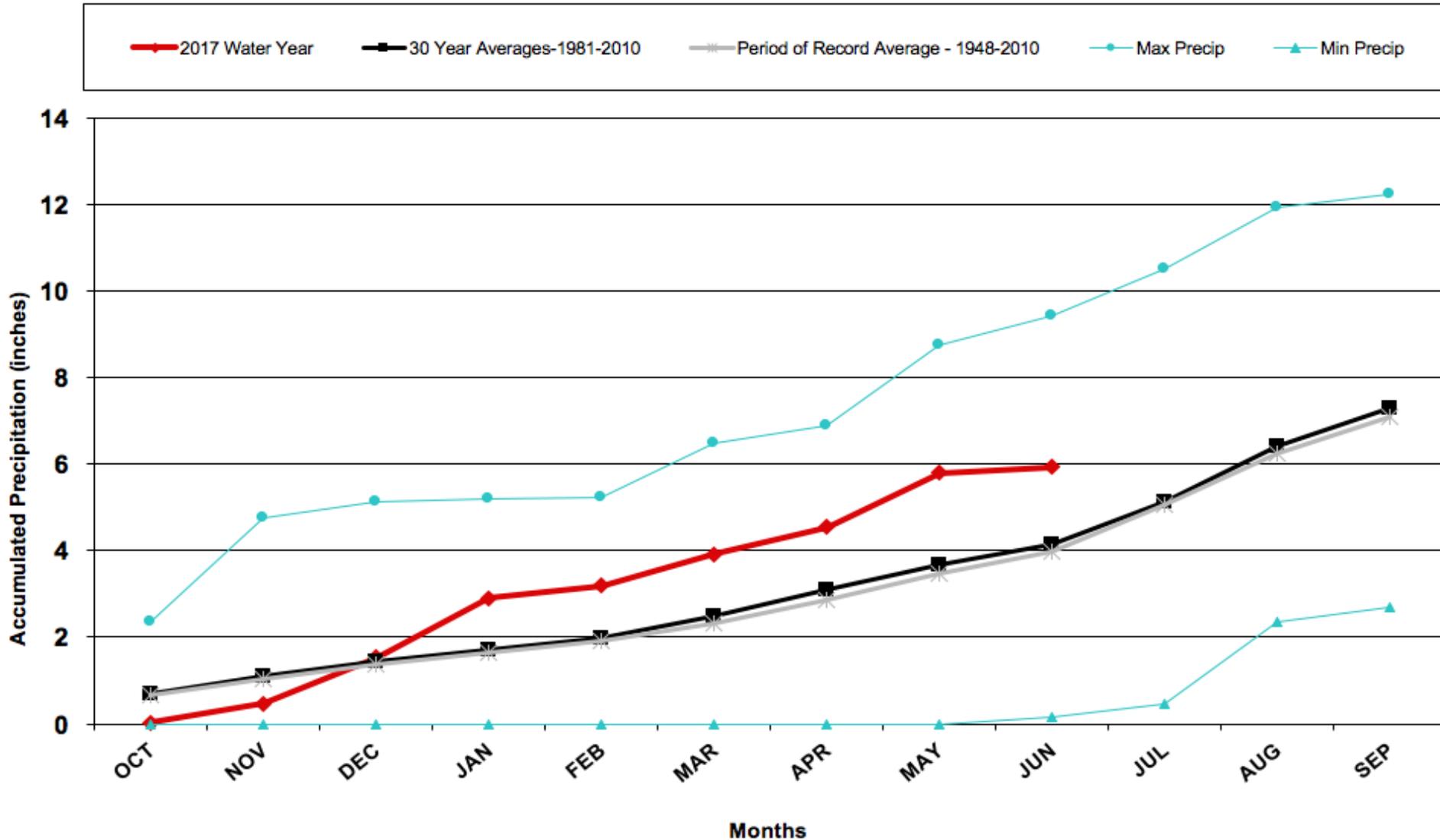
Accumulated Precipitation – MESA VERDE NP, CO

Use navigation tools above and below chart to change displayed range; green/black diamonds represent subsequent/missing values



# Division 4 – Alamosa

## Alamosa WSO 2017 Water Year



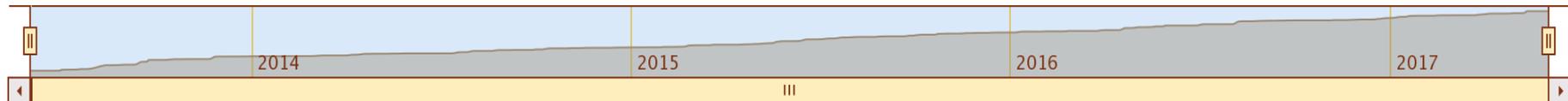
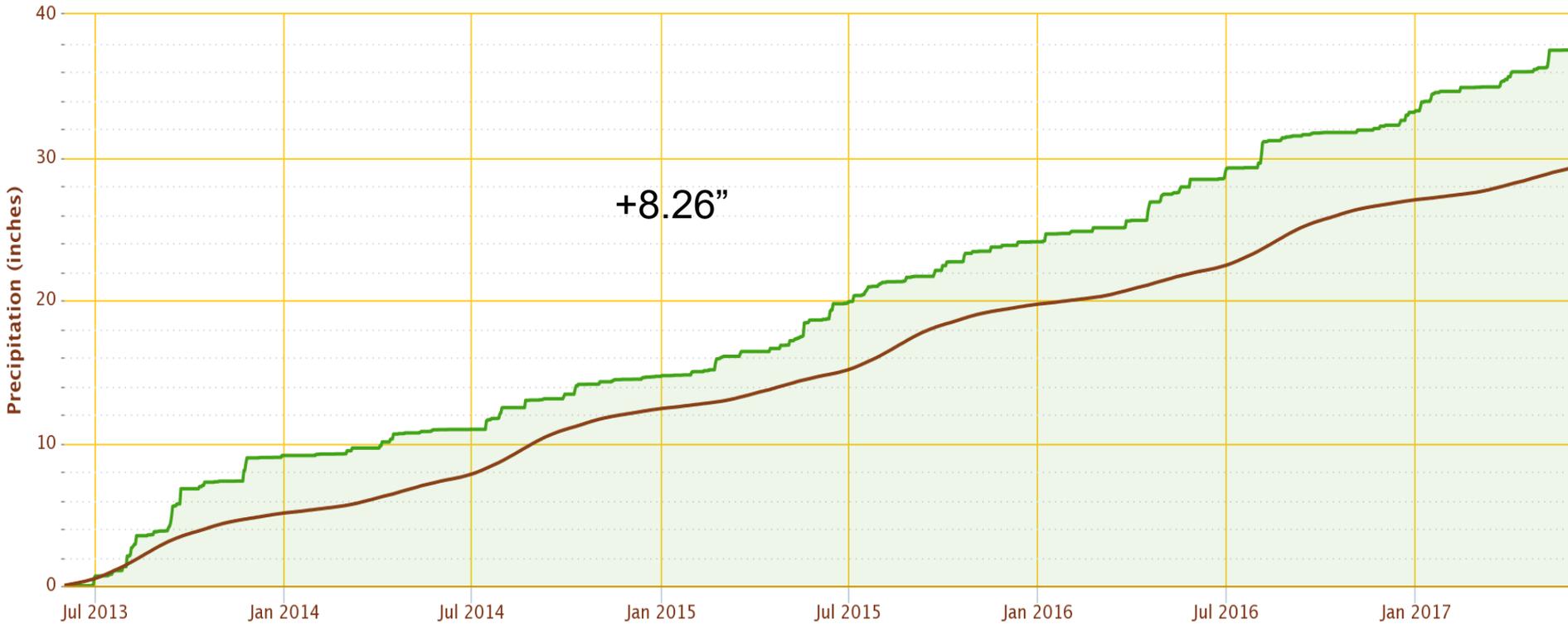
# Division 4 – Alamosa

## Accumulated Precipitation – ALAMOSA SAN LUIS AP, CO

Use navigation tools above and below chart to change displayed range; green/black diamonds represent subsequent/missing values

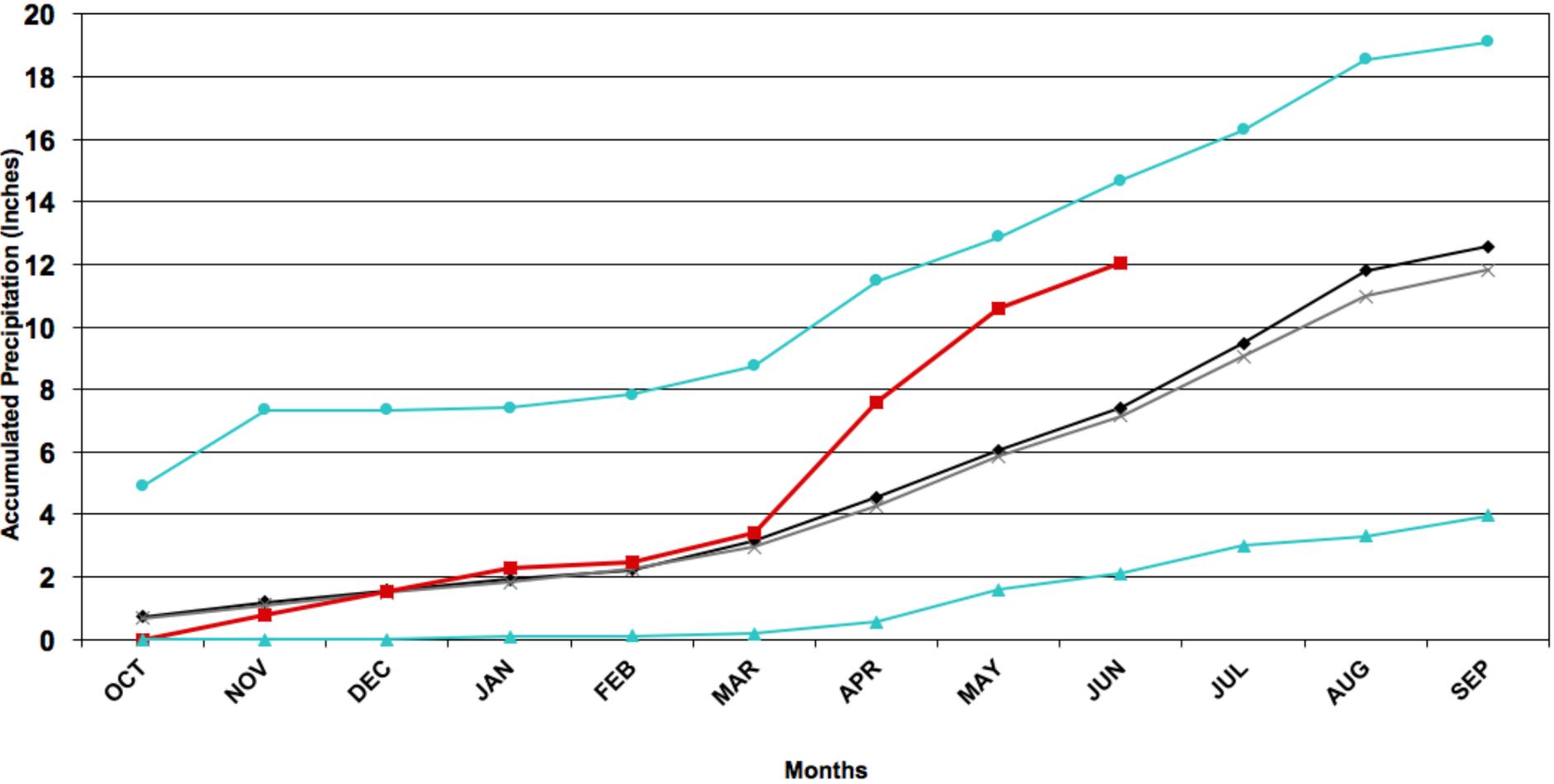
Zoom **1m** 3m 6m YTD 1y All

From 2013-06-01 To 2017-05-31



# Division 5 – Pueblo

## Pueblo WSO 2017 Water Year



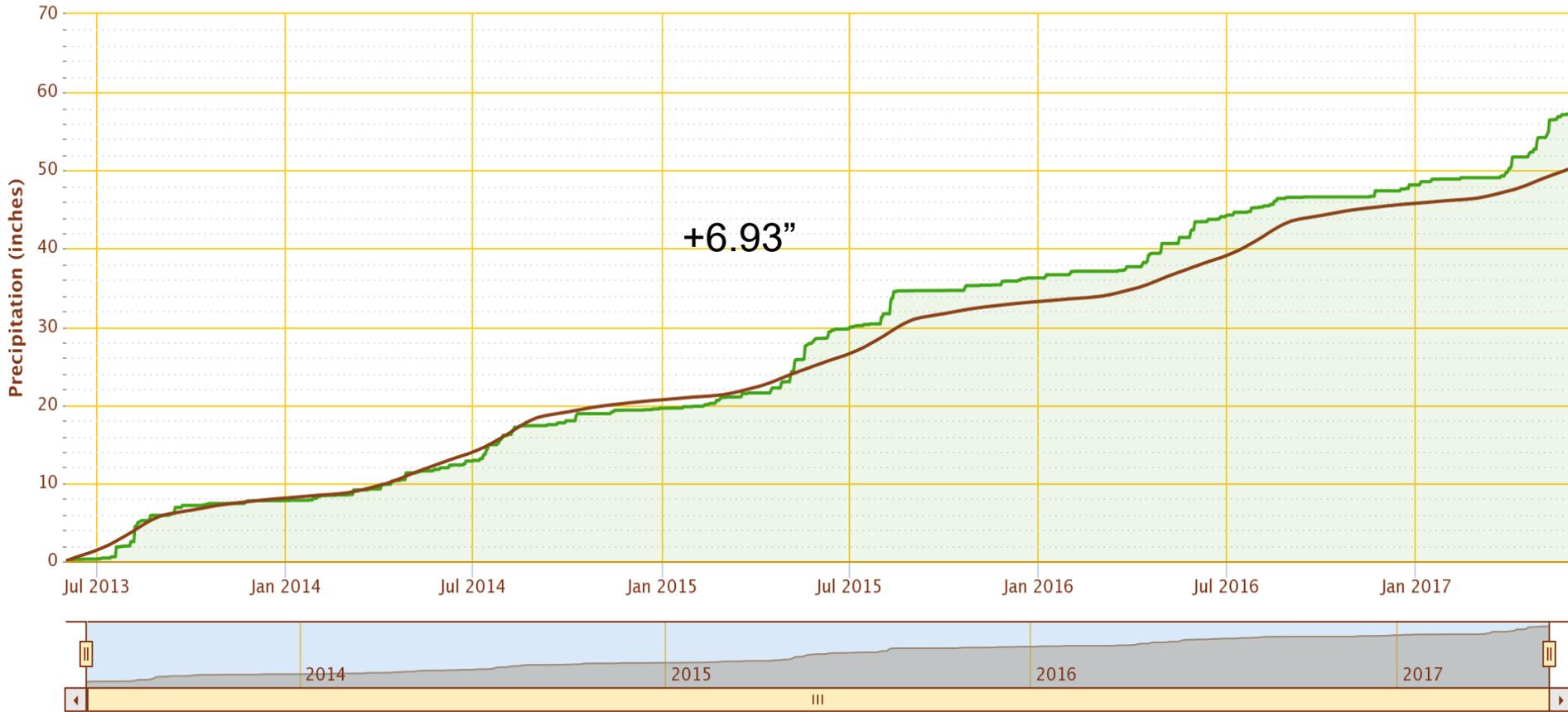
# Division 5 – Pueblo

## Accumulated Precipitation – PUEBLO MEM AP, CO

Use navigation tools above and below chart to change displayed range; green/black diamonds represent subsequent/missing values

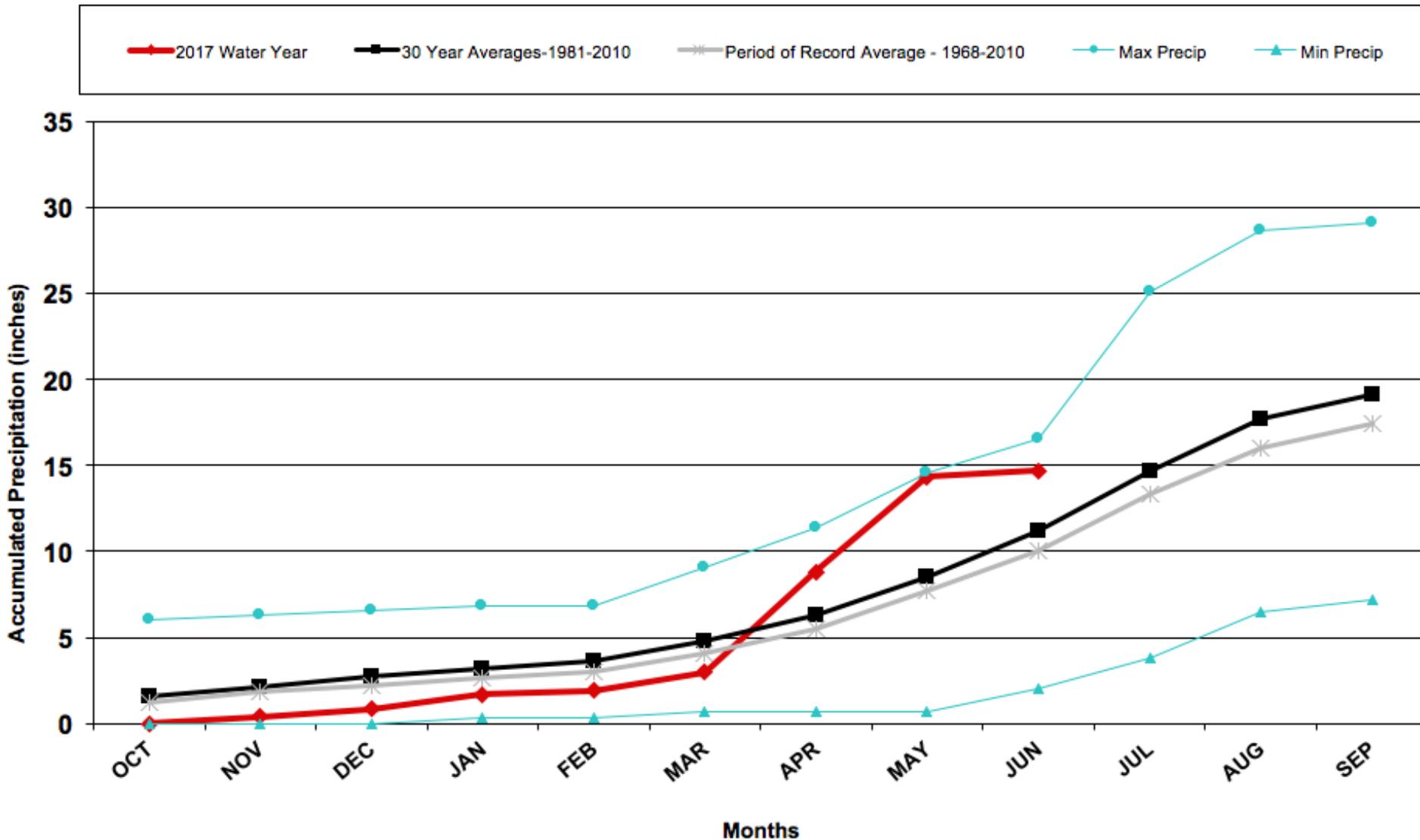
Zoom **1m** 3m 6m YTD 1y All

From **2013-06-01** To **2017-05-31**



# Division 6 - Walsh

## Walsh 2017 Water Year



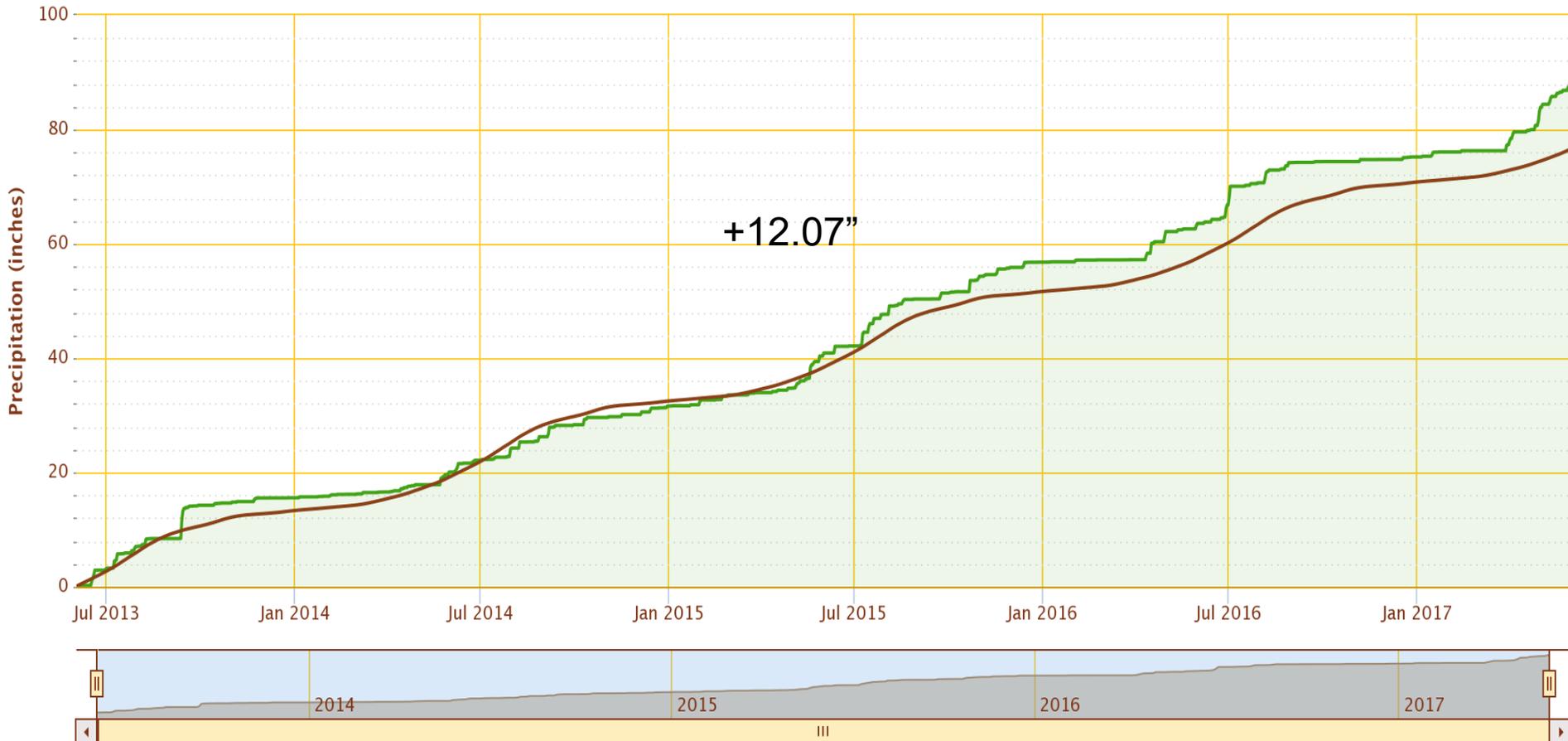
# Division 6 - Walsh

## Accumulated Precipitation - WALSH 1 W, CO

Use navigation tools above and below chart to change displayed range; green/black diamonds represent subsequent/missing values

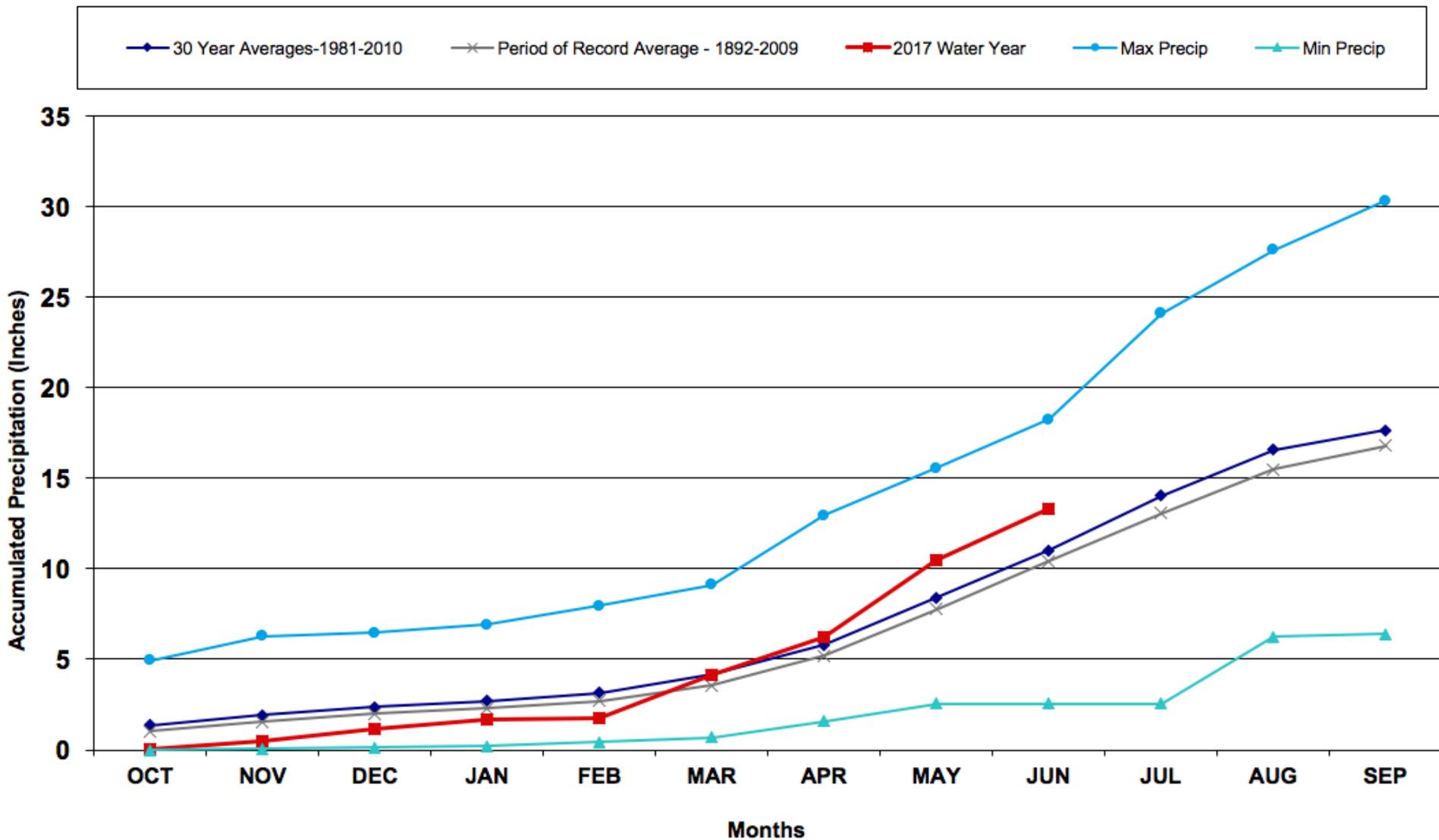
Zoom **1m** 3m 6m YTD 1y All

From 2013-06-01 To 2017-05-31



# Division 6 - Burlington

## Burlington 2017 Water Year



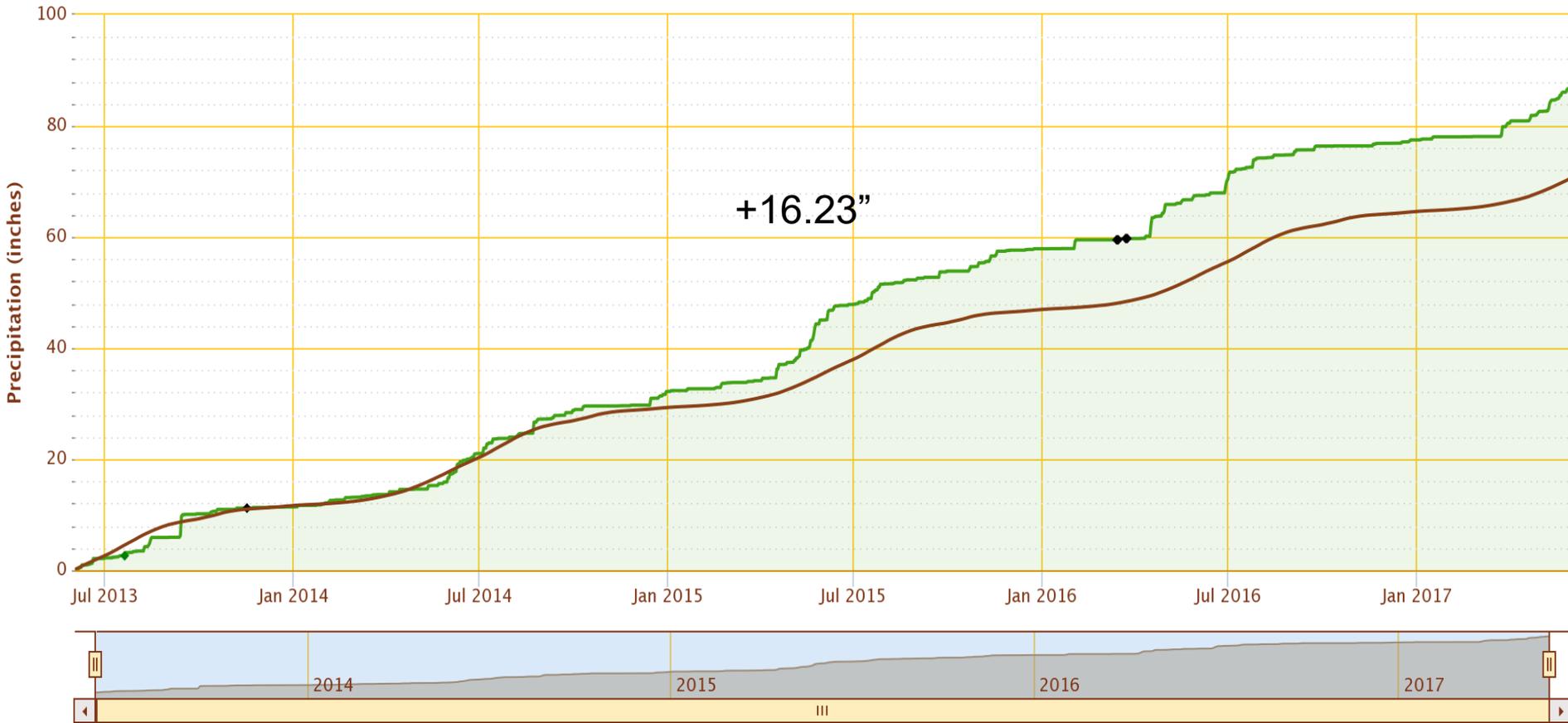
# Division 6 - Burlington

## Accumulated Precipitation - BURLINGTON, CO

Use navigation tools above and below chart to change displayed range; green/black diamonds represent subsequent/missing values

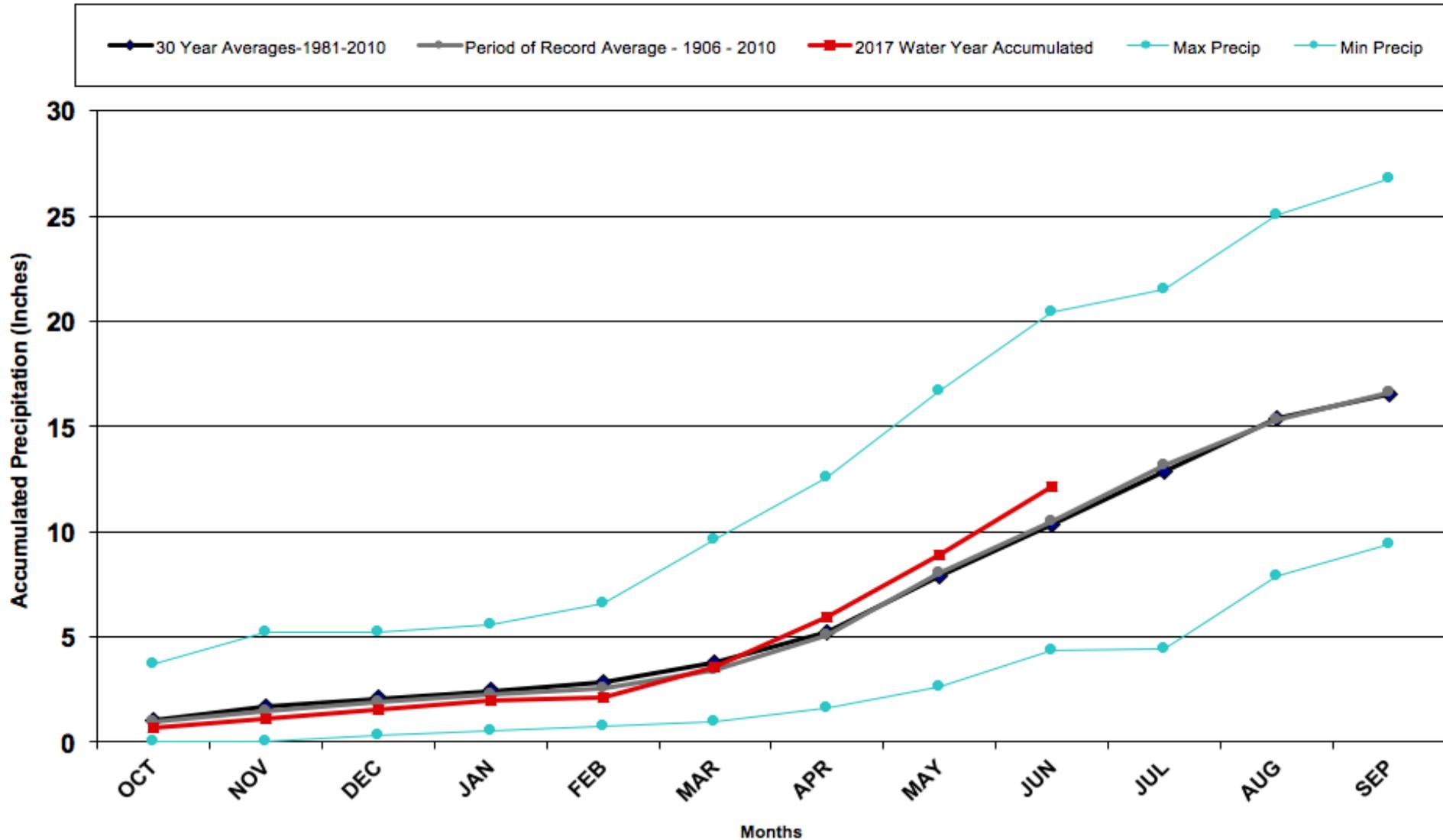
Zoom **1m** 3m 6m YTD 1y All

From 2013-06-01 To 2017-05-31



# Division 7 – Akron

## Akron 4E 2016 Water Year



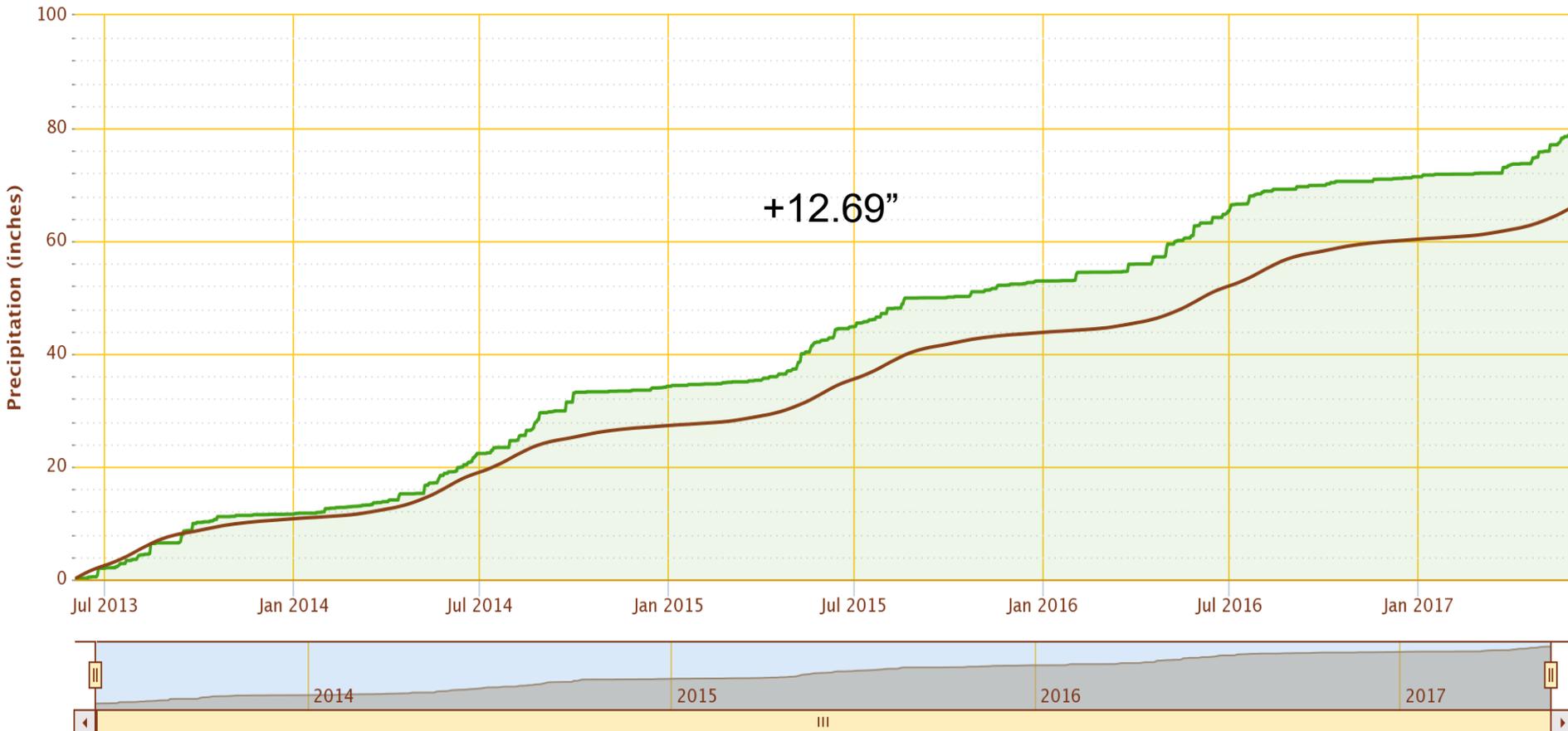
# Division 7 – Akron

## Accumulated Precipitation – AKRON 4 E, CO

Use navigation tools above and below chart to change displayed range; green/black diamonds represent subsequent/missing values

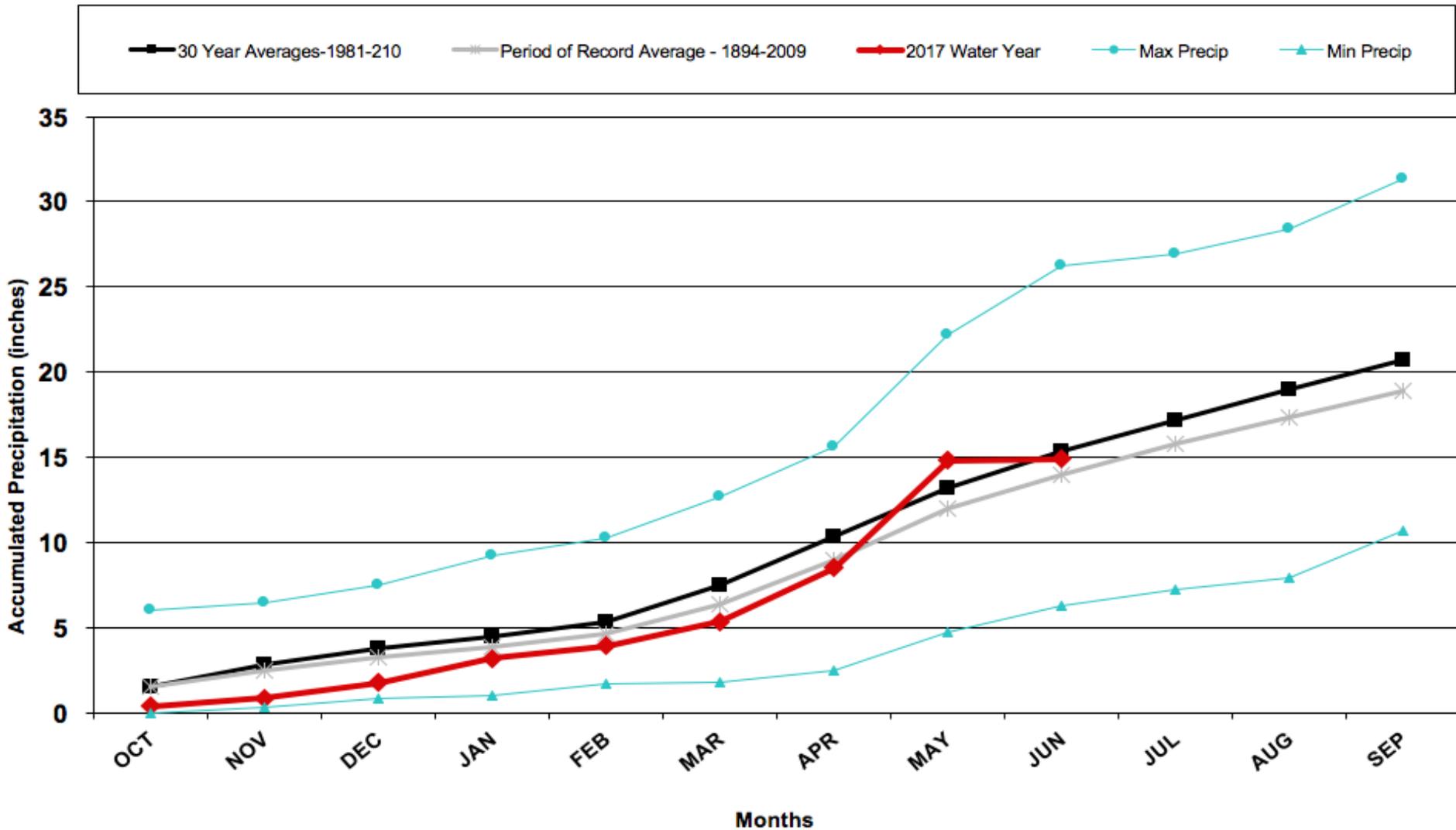
Zoom **1m** 3m 6m YTD 1y All

From  To



# Division 8 - Boulder

## Boulder 2017 Water Year



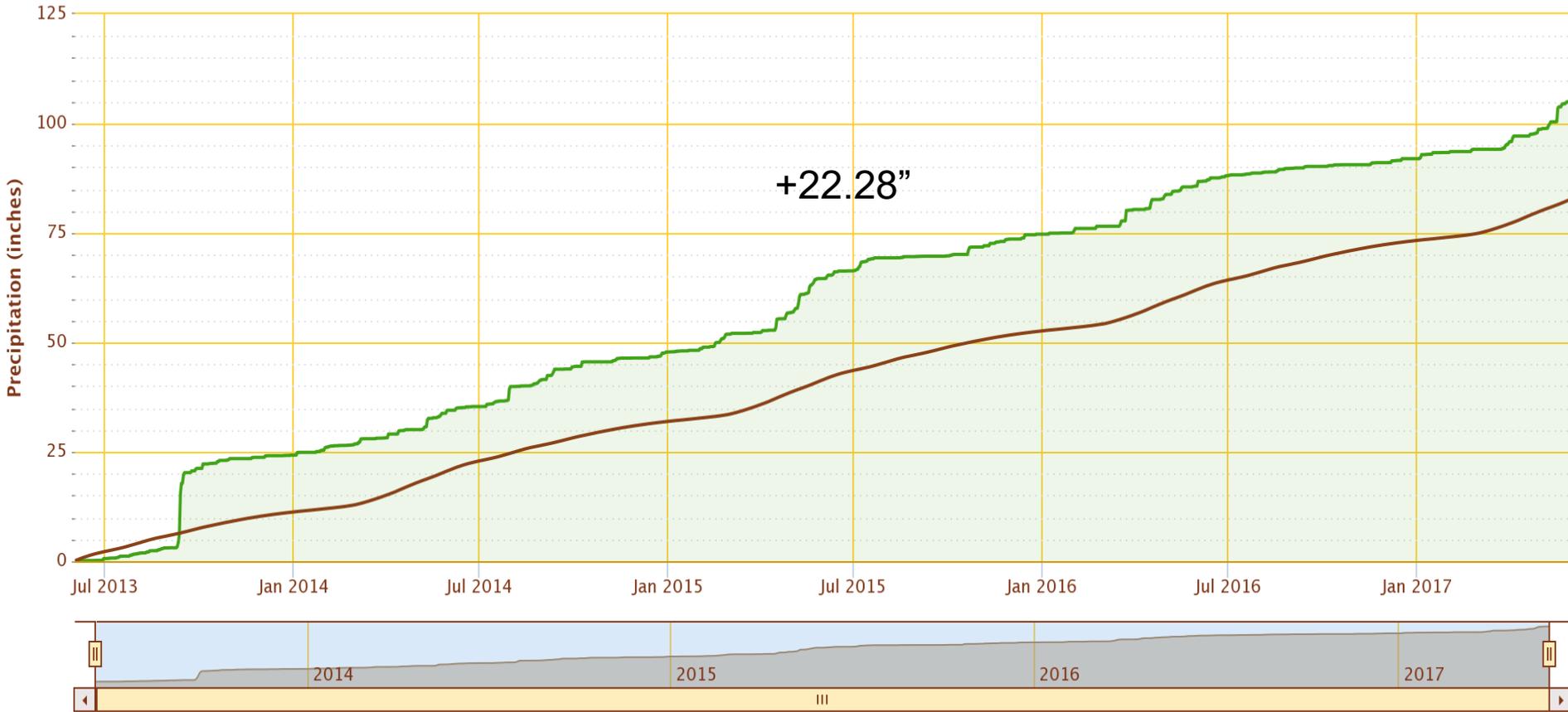
# Division 8 - Boulder

## Accumulated Precipitation – BOULDER, CO

Use navigation tools above and below chart to change displayed range; green/black diamonds represent subsequent/missing values

Zoom **1m** 3m 6m YTD 1y All

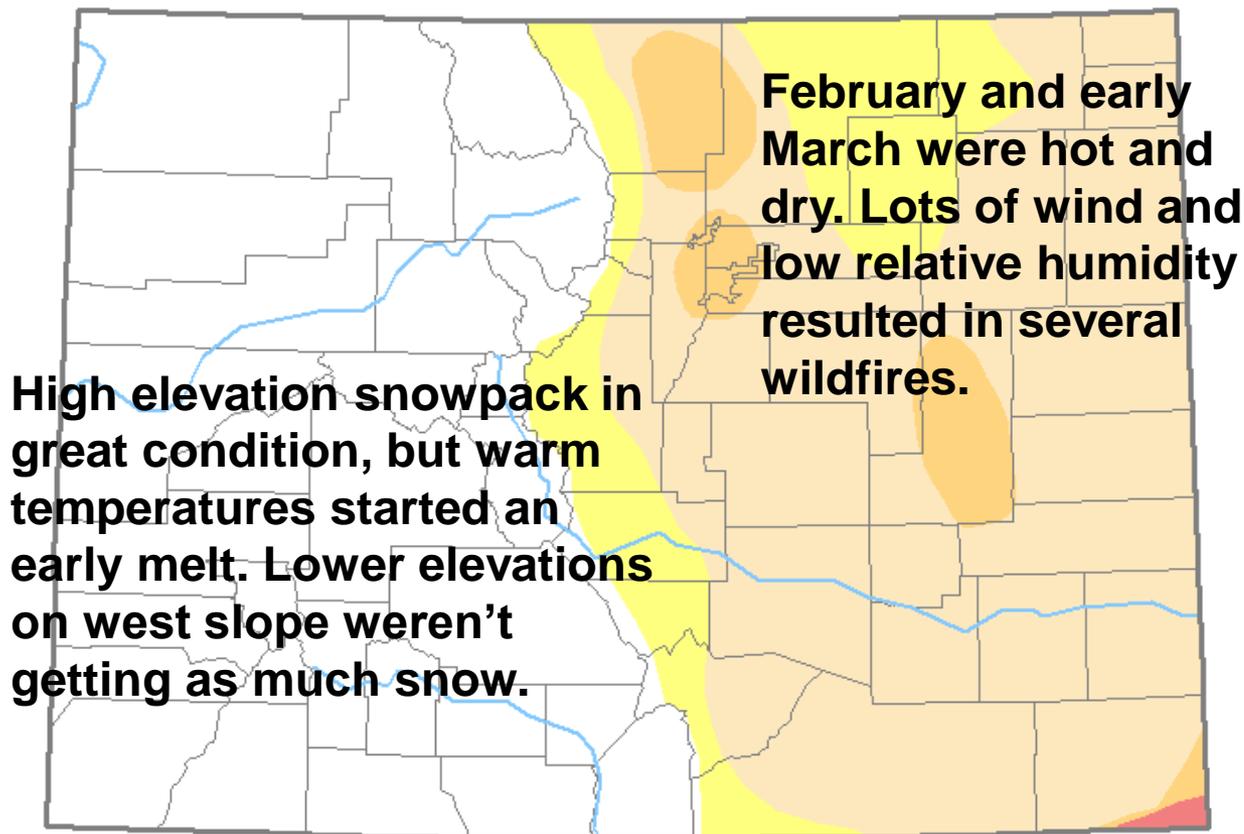
From 2013-06-01 To 2017-05-31



# U.S. Drought Monitor

## Colorado

**March 14, 2017**  
(Released Thursday, Mar. 16, 2017)  
Valid 8 a.m. EDT



### 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.*

### Author:

Brian Fuchs  
National Drought Mitigation Center



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

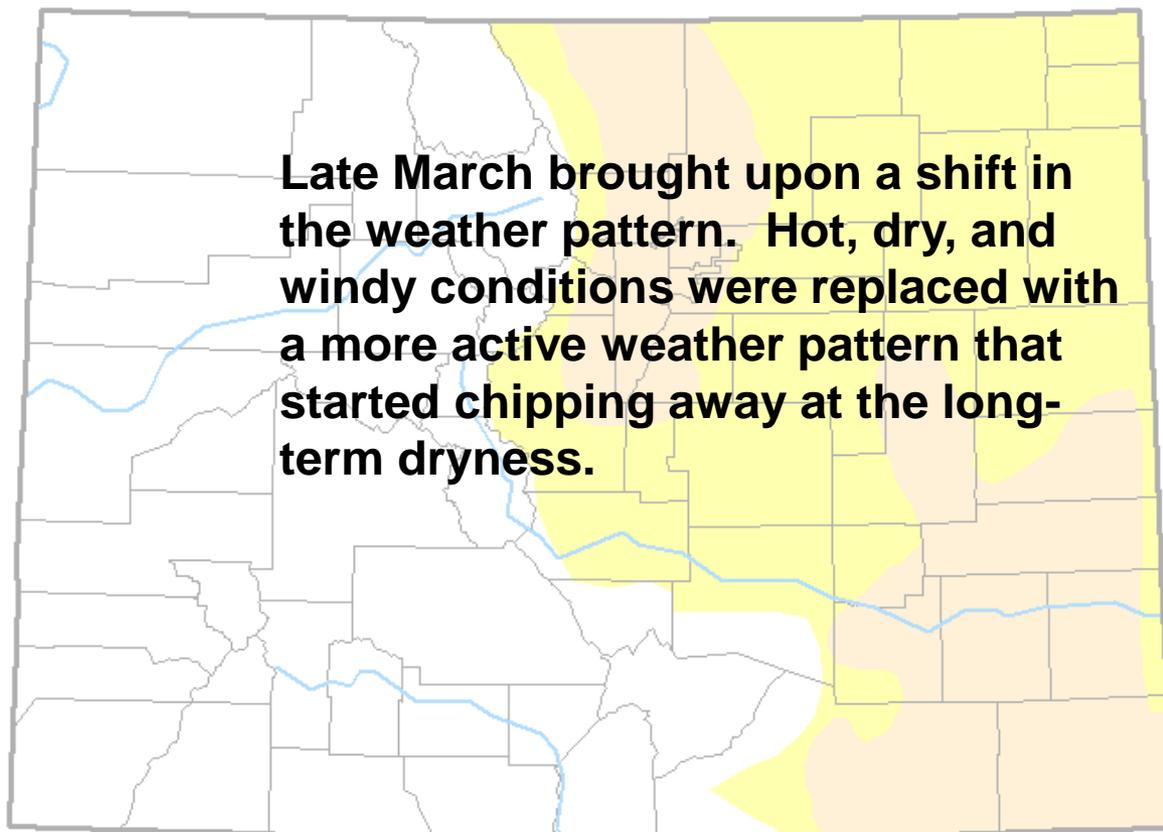
# U.S. Drought Monitor

## Colorado

April 11, 2017

(Released Thursday, Apr. 13, 2017)

Valid 8 a.m. EDT



### 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.*

### Author:

Anthony Artusa  
NOAA/NWS/NCEP/CPC



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

# U.S. Drought Monitor

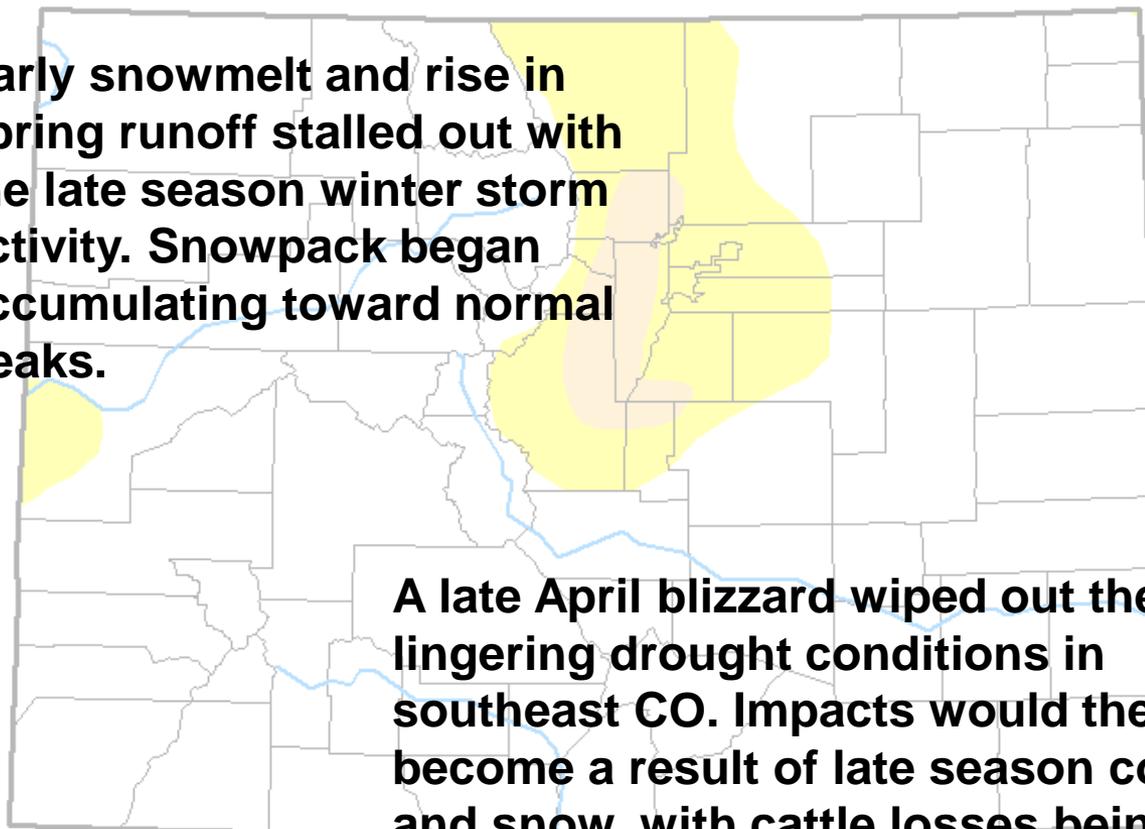
## Colorado

May 9, 2017

(Released Thursday, May. 11, 2017)

Valid 8 a.m. EDT

**Early snowmelt and rise in spring runoff stalled out with the late season winter storm activity. Snowpack began accumulating toward normal peaks.**



**A late April blizzard wiped out the lingering drought conditions in southeast CO. Impacts would then become a result of late season cold and snow, with cattle losses being the largest reported impact.**

### 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.*

### Author:

Brian Fuchs  
National Drought Mitigation Center

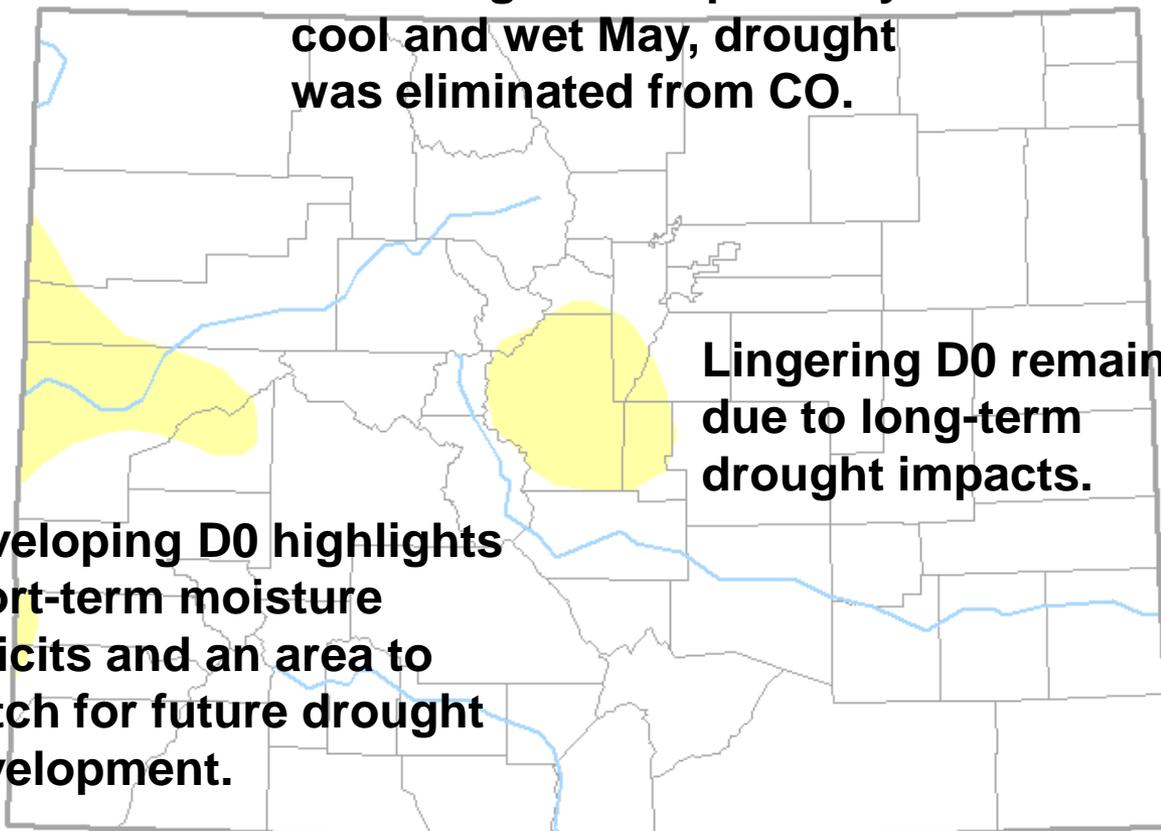


<http://droughtmonitor.unl.edu/>

# U.S. Drought Monitor Colorado

June 13, 2017  
(Released Thursday, Jun. 15, 2017)  
Valid 8 a.m. EDT

Following an exceptionally cool and wet May, drought was eliminated from CO.



Lingering D0 remains due to long-term drought impacts.

Developing D0 highlights short-term moisture deficits and an area to watch for future drought development.

### 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.*

### Author:

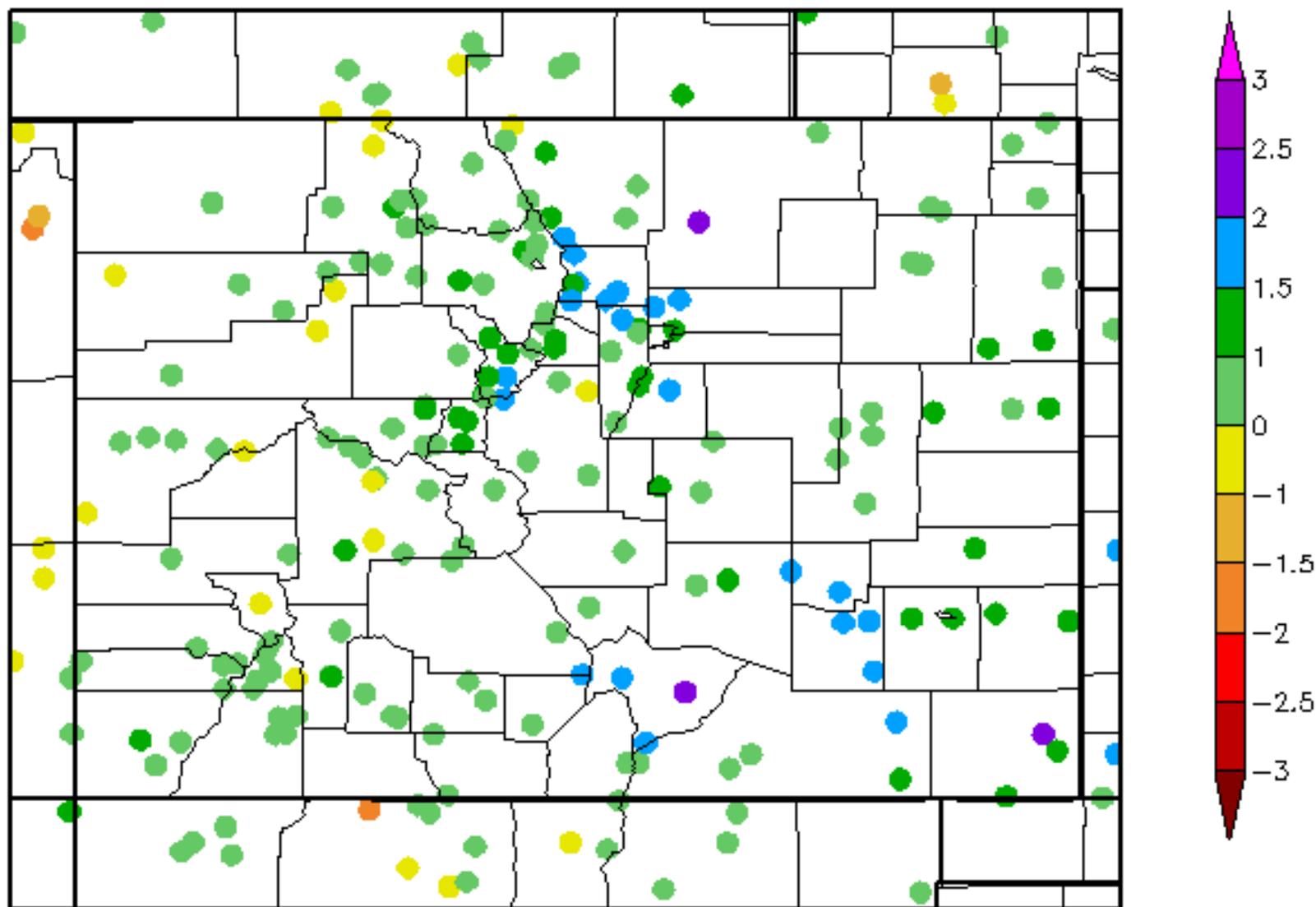
David Miskus  
NOAA/NWS/NCEP/CPC



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

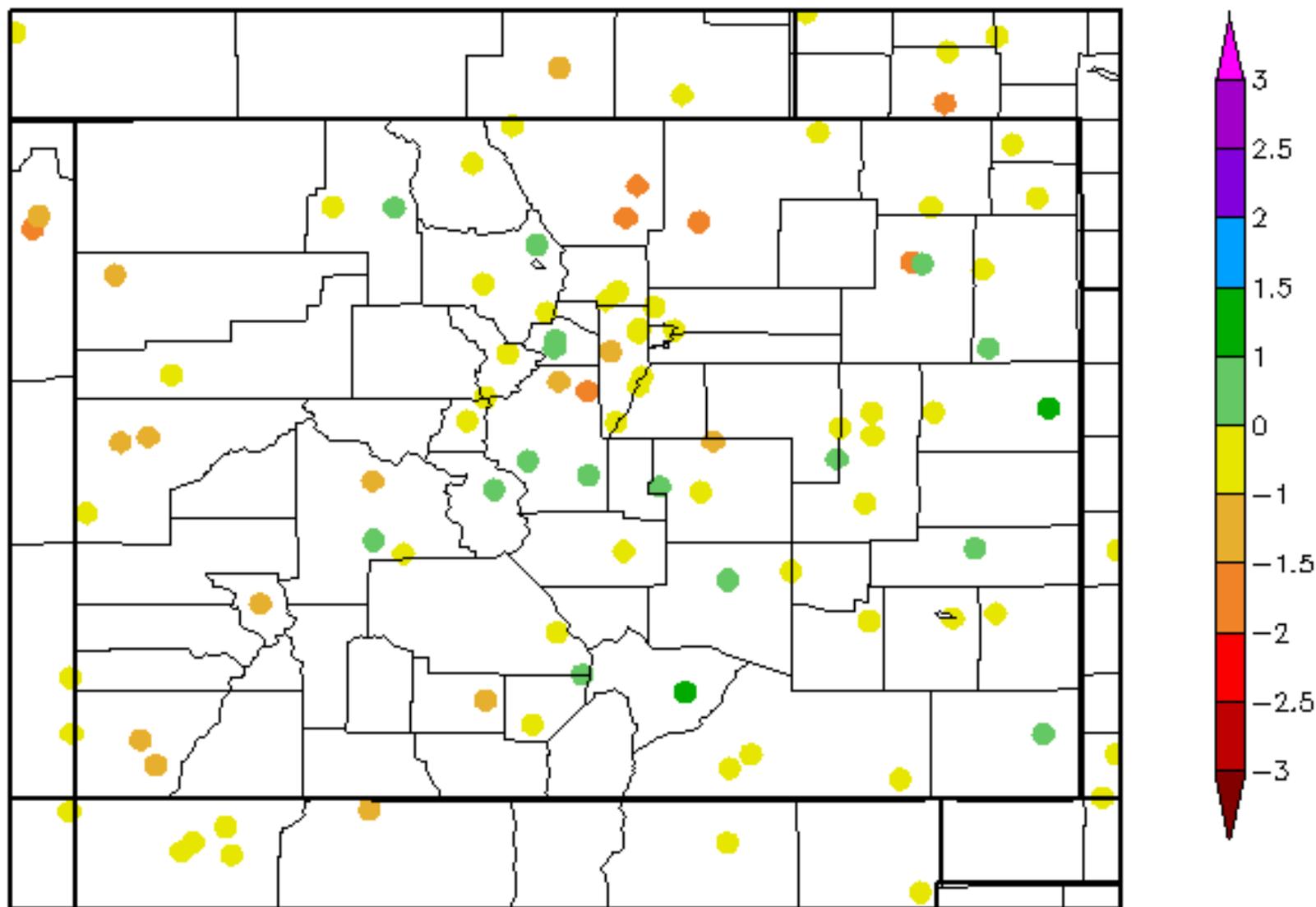
# Monthly SPI

5/1/2017 - 5/31/2017



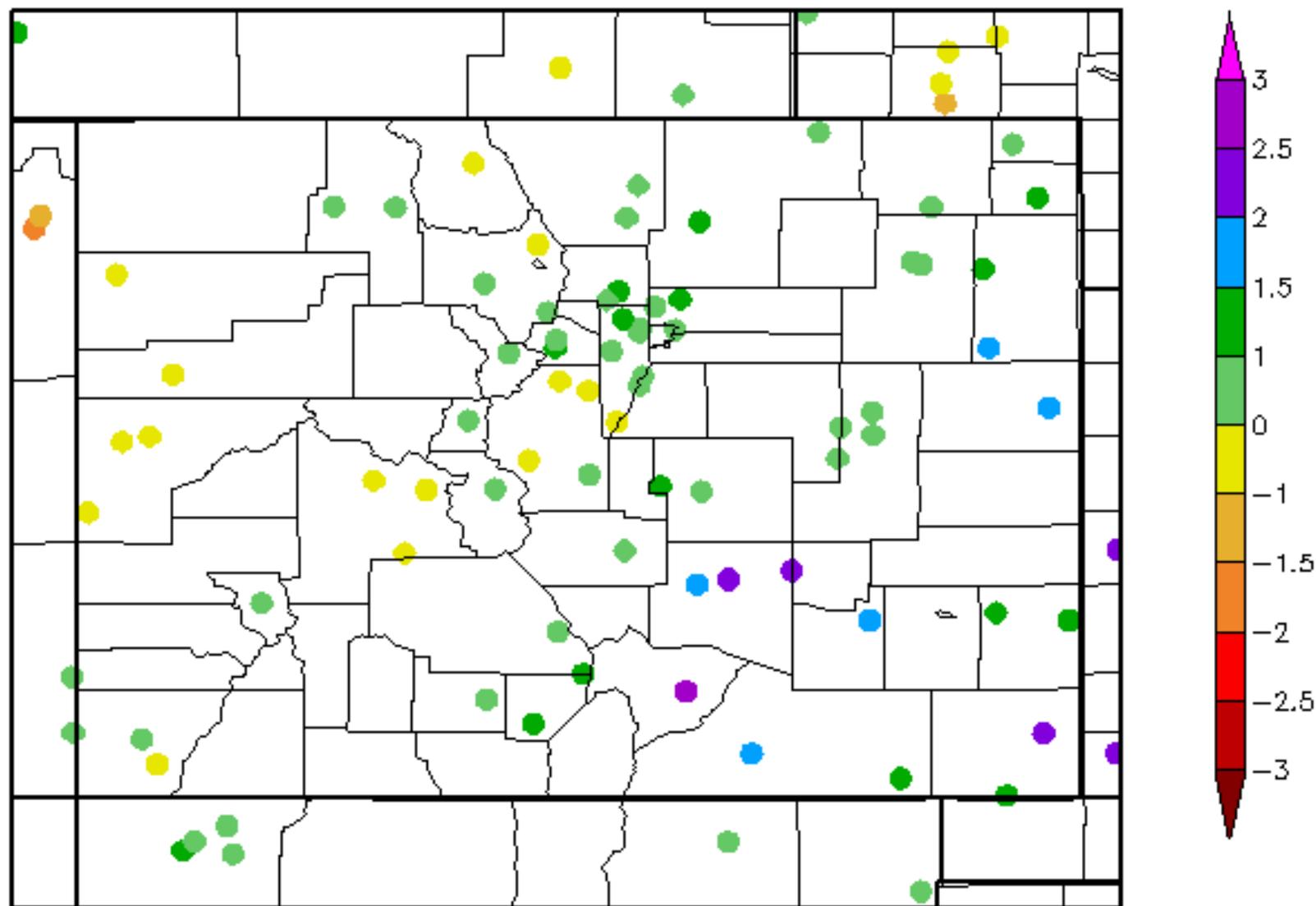
# 30 Day SPI

5/21/2017 - 6/19/2017



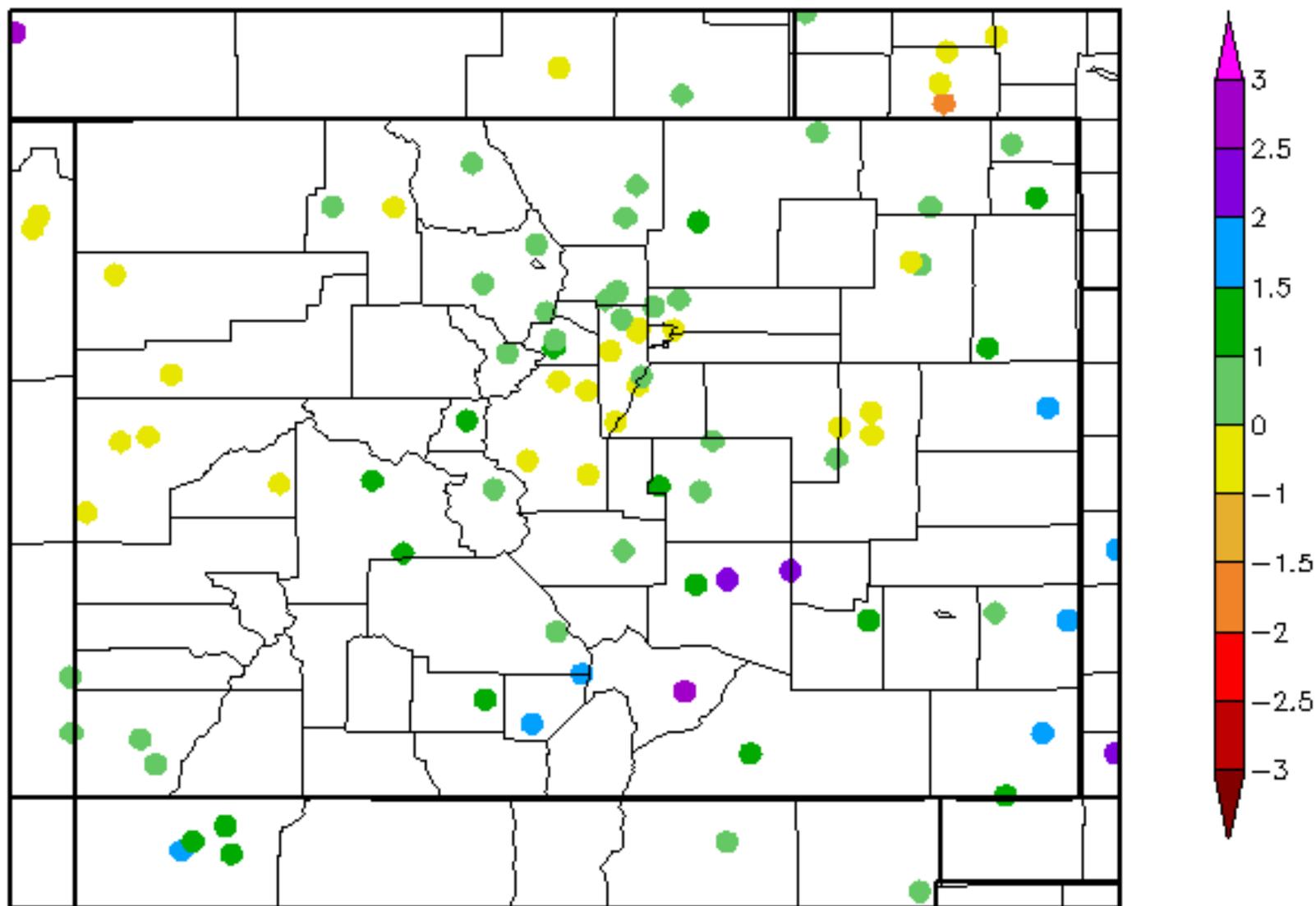
# 90 Day SPI

3/21/2017 - 6/18/2017



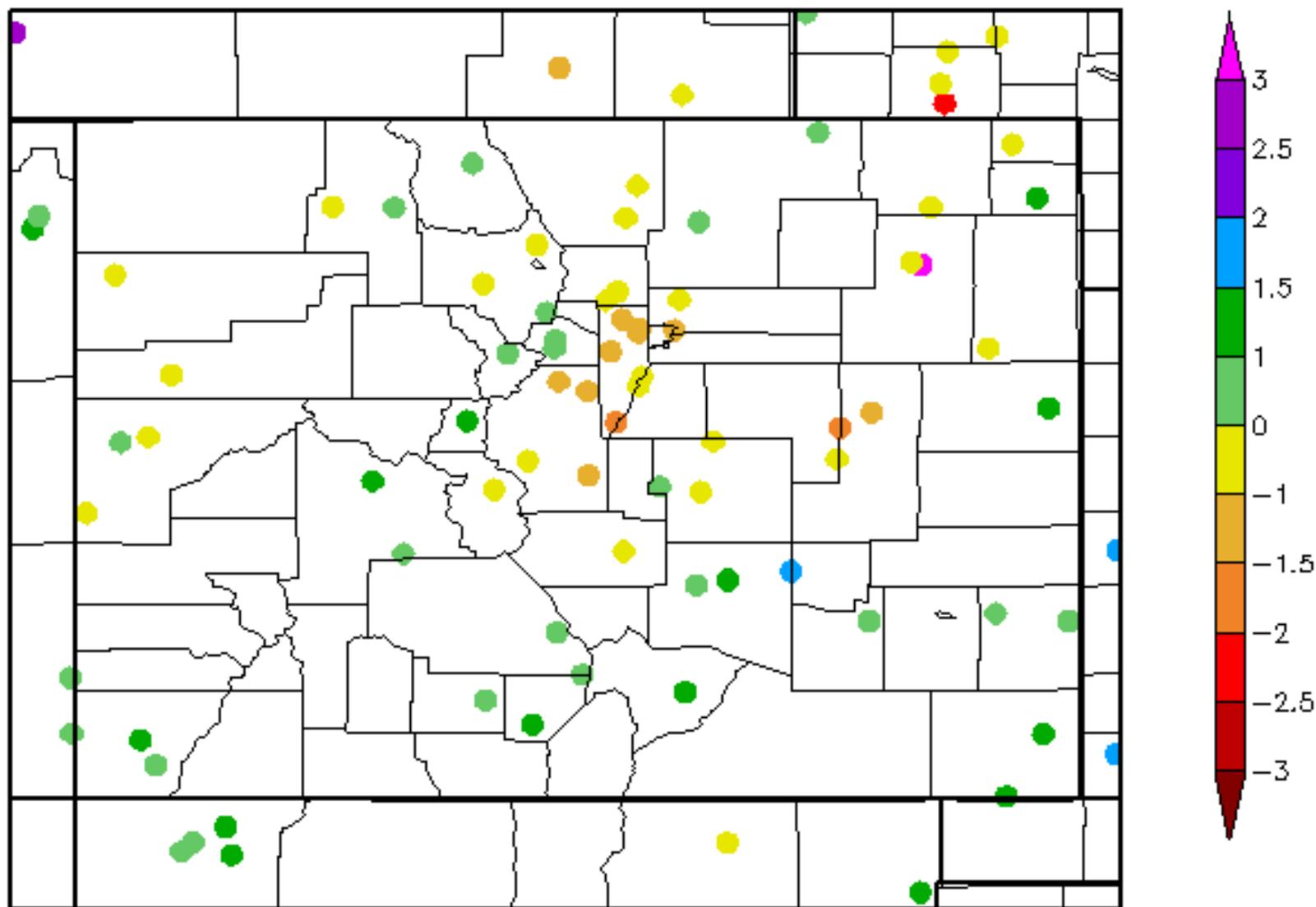
# 6 Month SPI

12/19/2016 - 6/18/2017



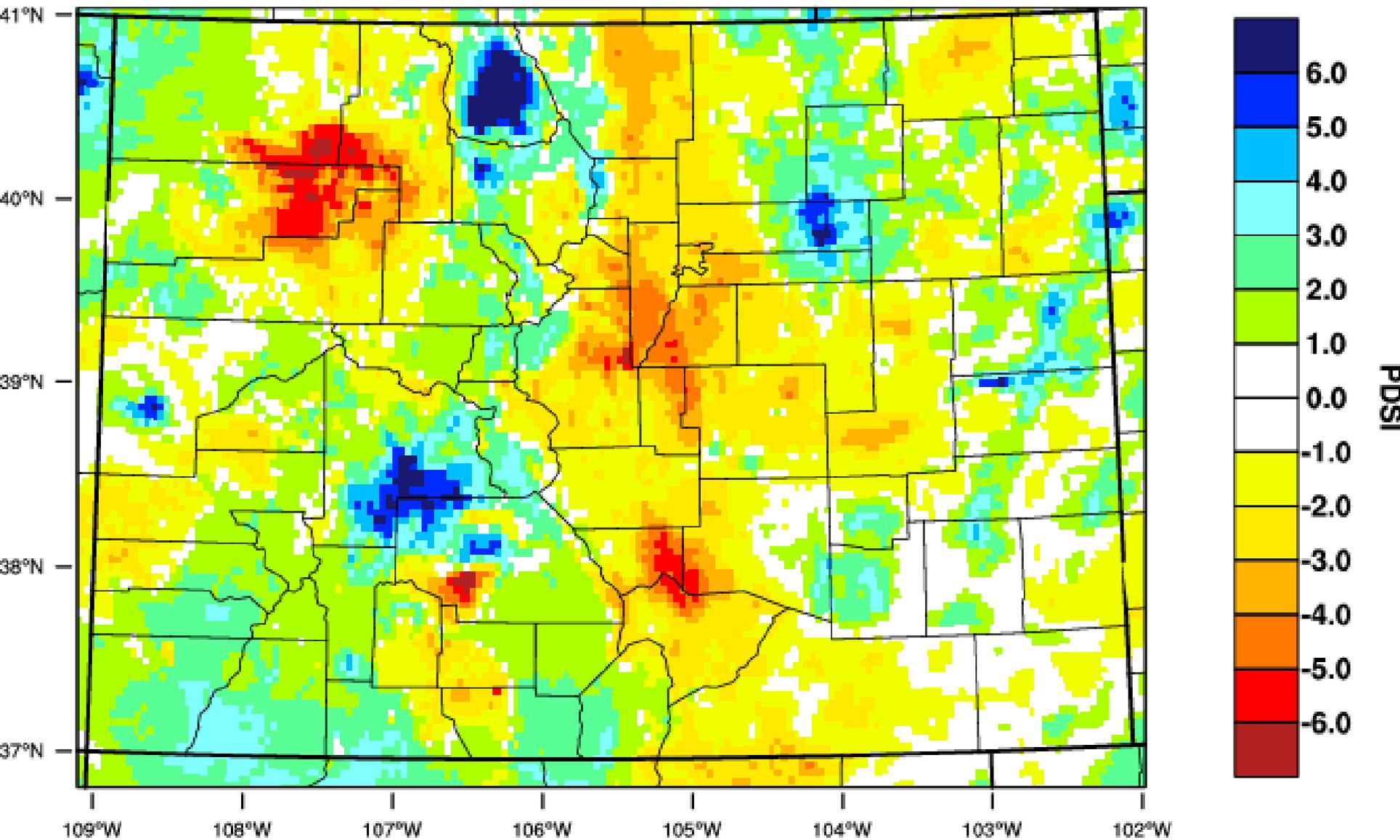
# 12 Month SPI

6/19/2016 - 6/18/2017



# Colorado - PDSI

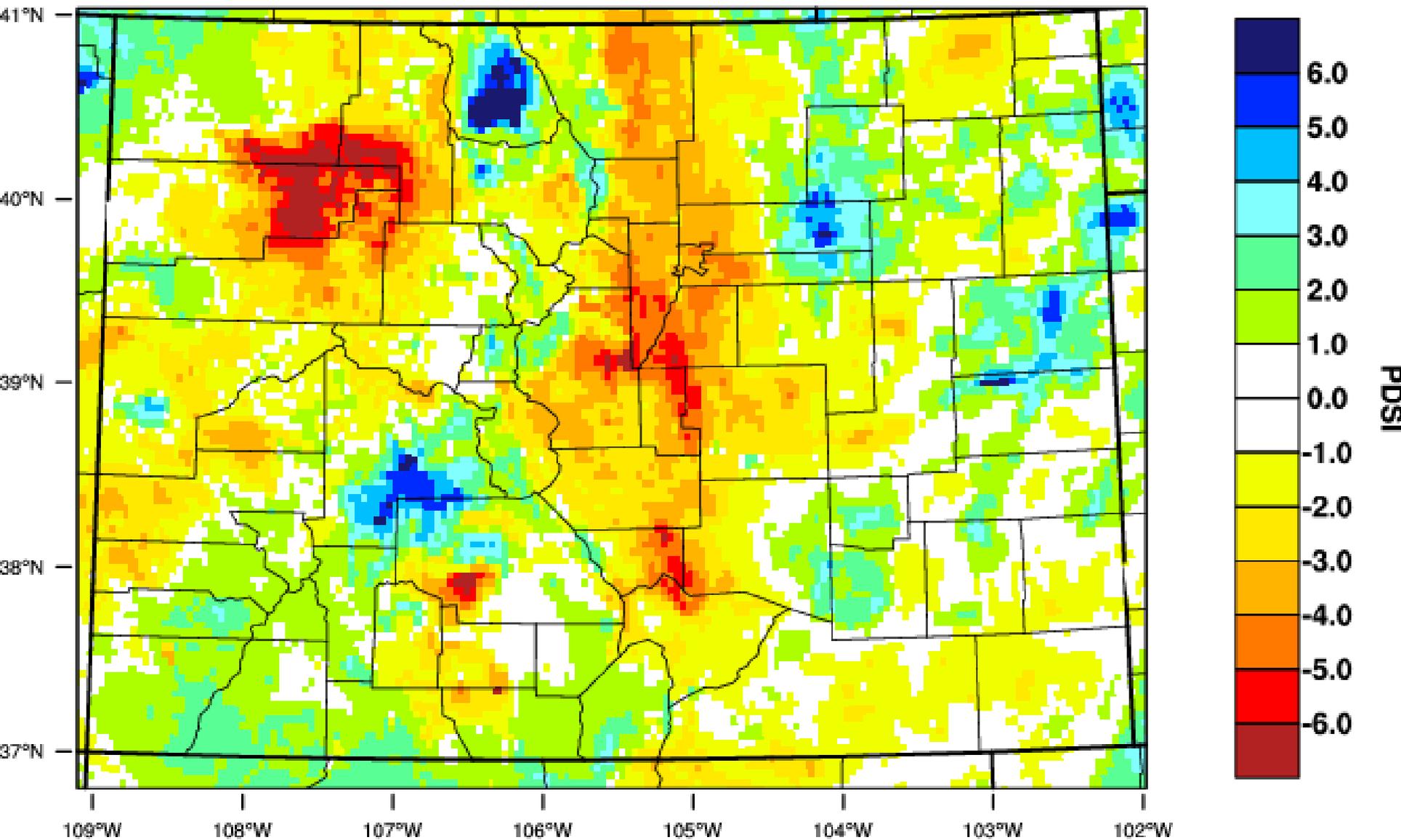
February 2017



WestWide Drought Tracker, U Idaho/WRCC Data Source: PRISM (Prelim), created 16 MAR 2017

# Colorado - PDSI

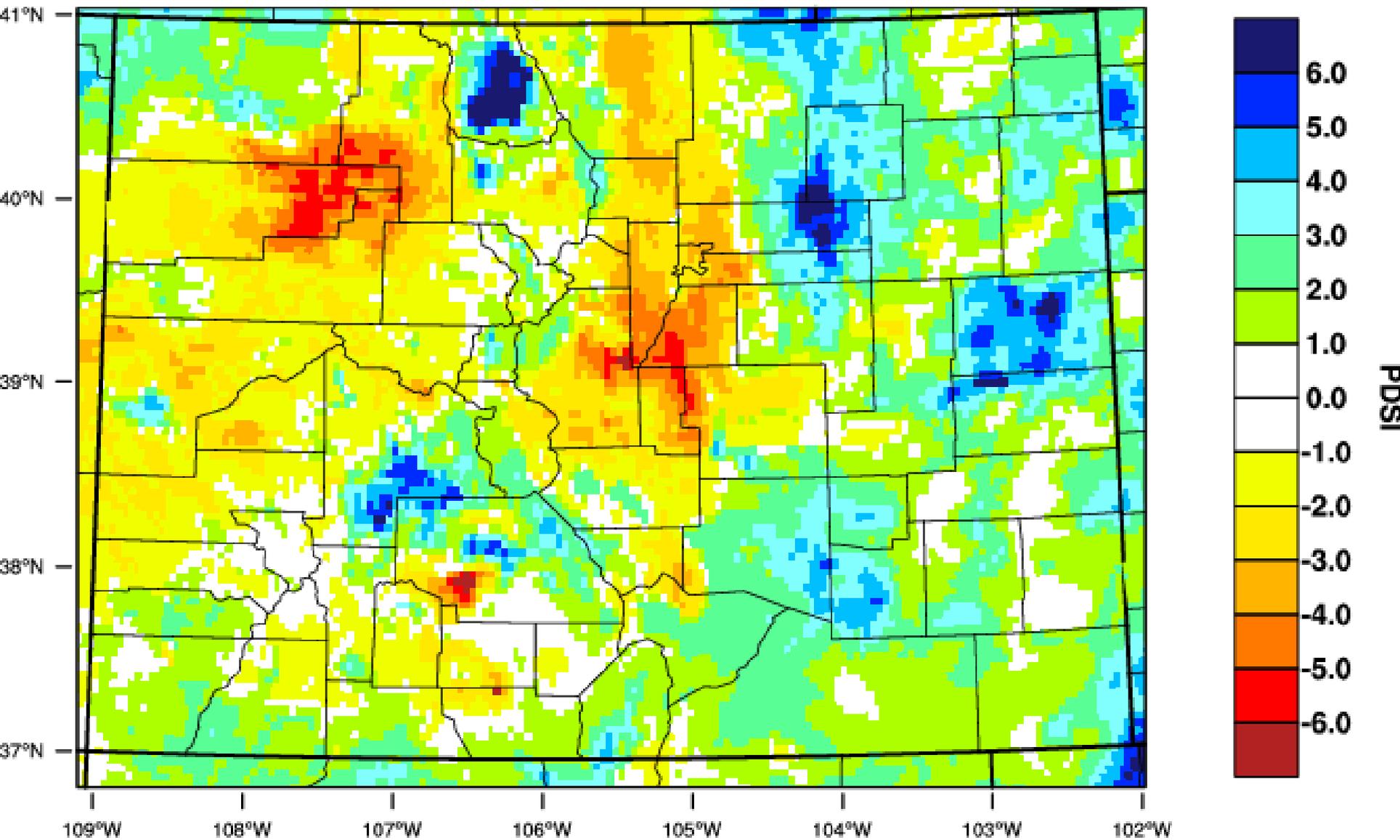
March 2017



WestWide Drought Tracker, U Idaho/WRCC Data Source: PRISM (Prelim), created 16 APR 2017

# Colorado - PDSI

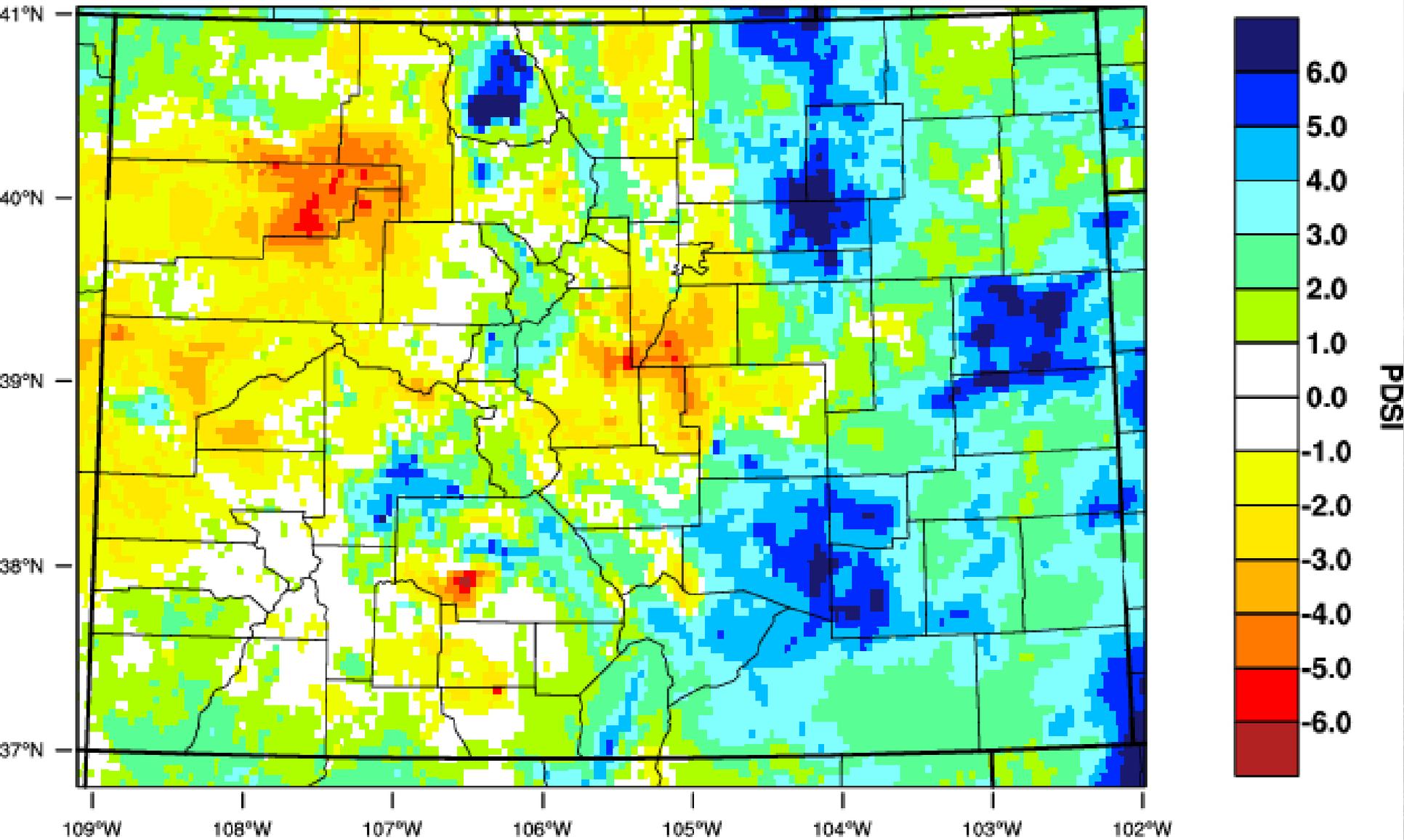
April 2017



WestWide Drought Tracker, U Idaho/WRCC Data Source: PRISM (Prelim), created 7 MAY 2017

# Colorado - PDSI

May 2017



WestWide Drought Tracker, U Idaho/WRCC Data Source: PRISM (Prelim), created 16 JUN 2017

# Colorado Climate Center

Archived WATF presentations can be found at:  
[http://climate.colostate.edu/ccc\\_archive.html](http://climate.colostate.edu/ccc_archive.html)

