

# The Arkansas Basin Climate Report

## Part 1 -- Remembering where we've come from

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Arkansas River Basin Water Forum

11 April 2018

La Junta, CO

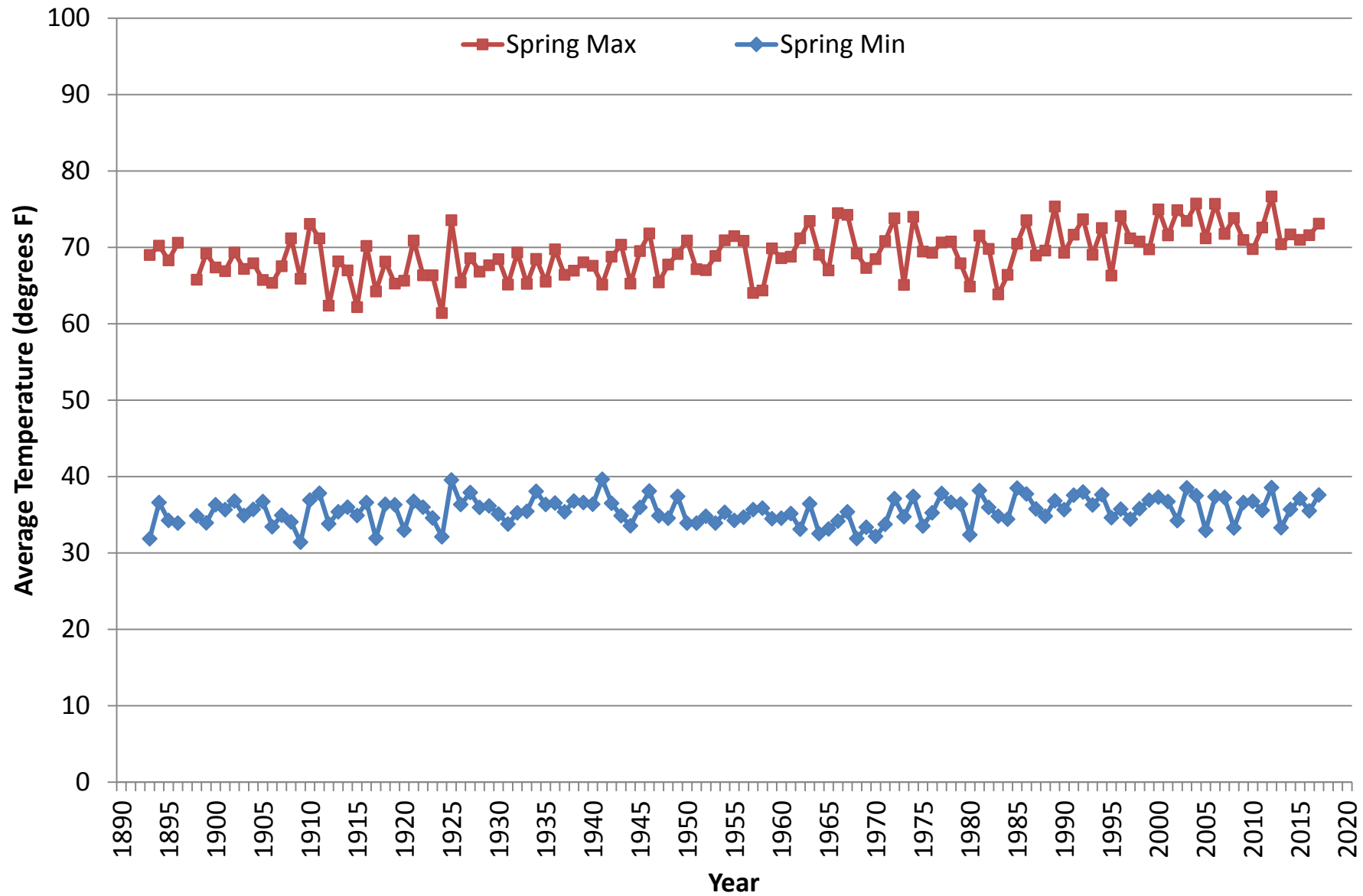


COLORADO  
**CLIMATE**  
CENTER

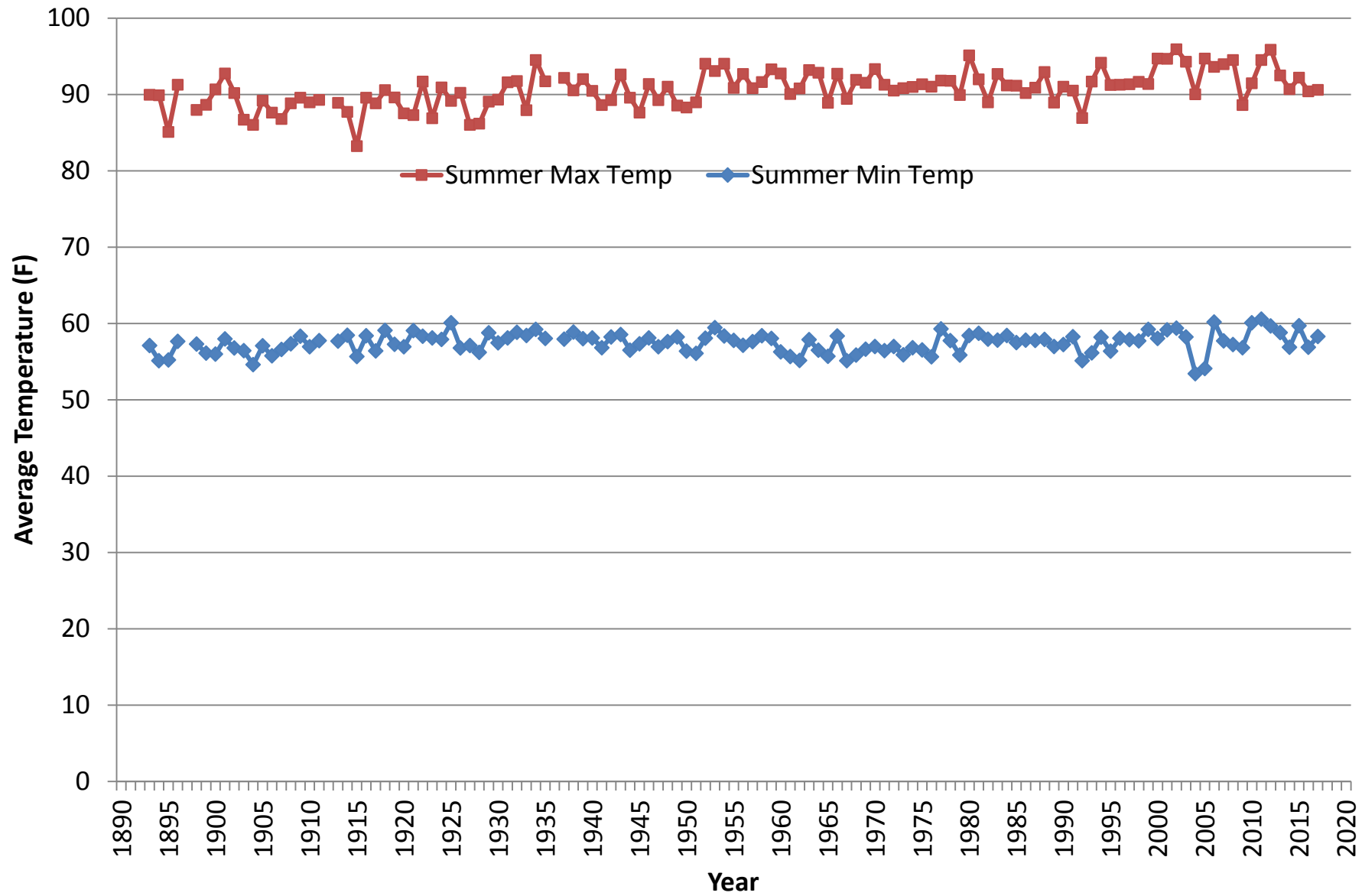
# Topics

- A quick review of our “observed” past (temps., precip., snowpack, streamflow, etc.
- An appeal for rain gauge volunteers
- An opportunity to show what you know and what you don't – and **possibly win a gauge**

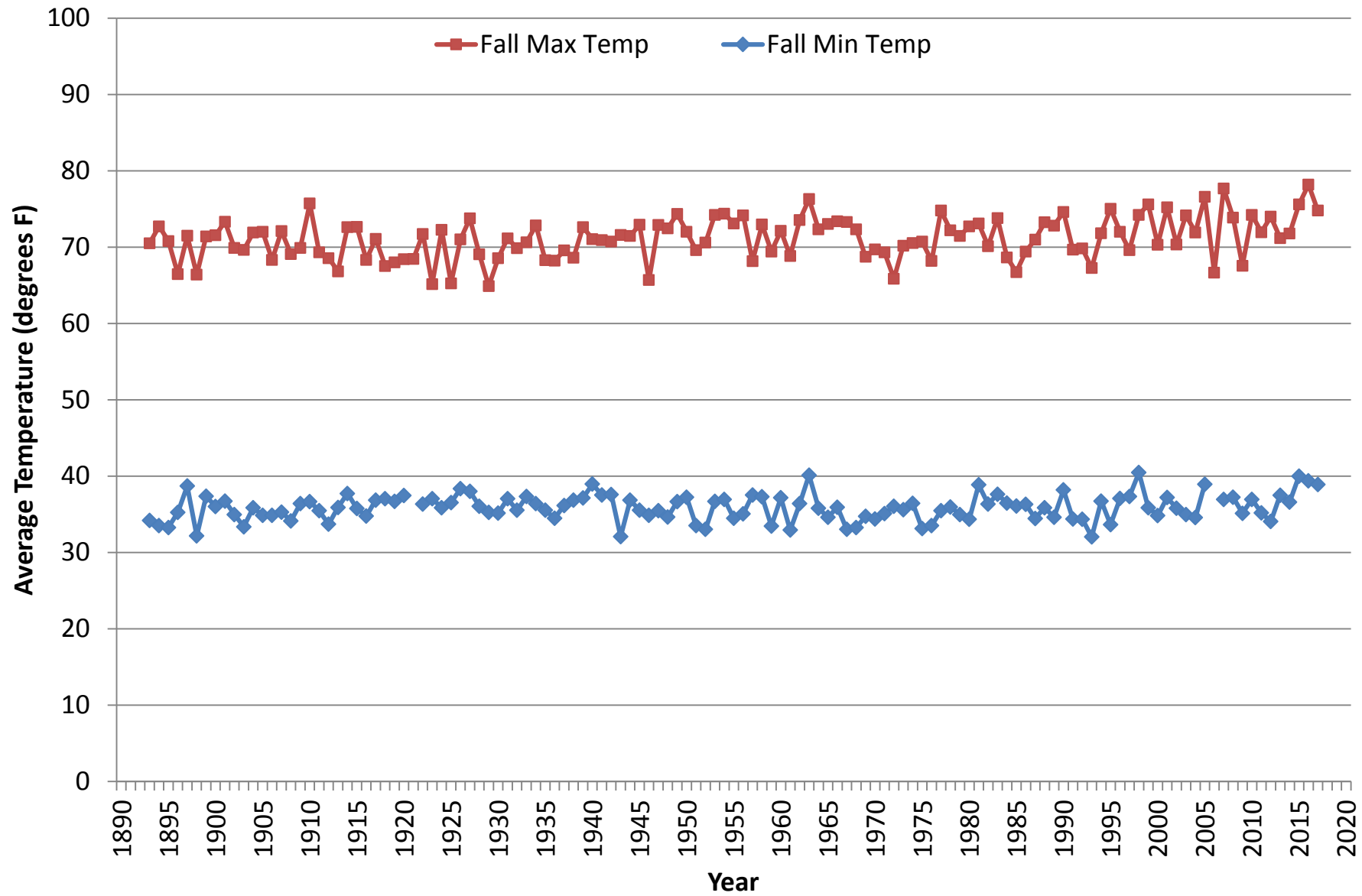
# Rocky Ford, CO Average Spring Temperature



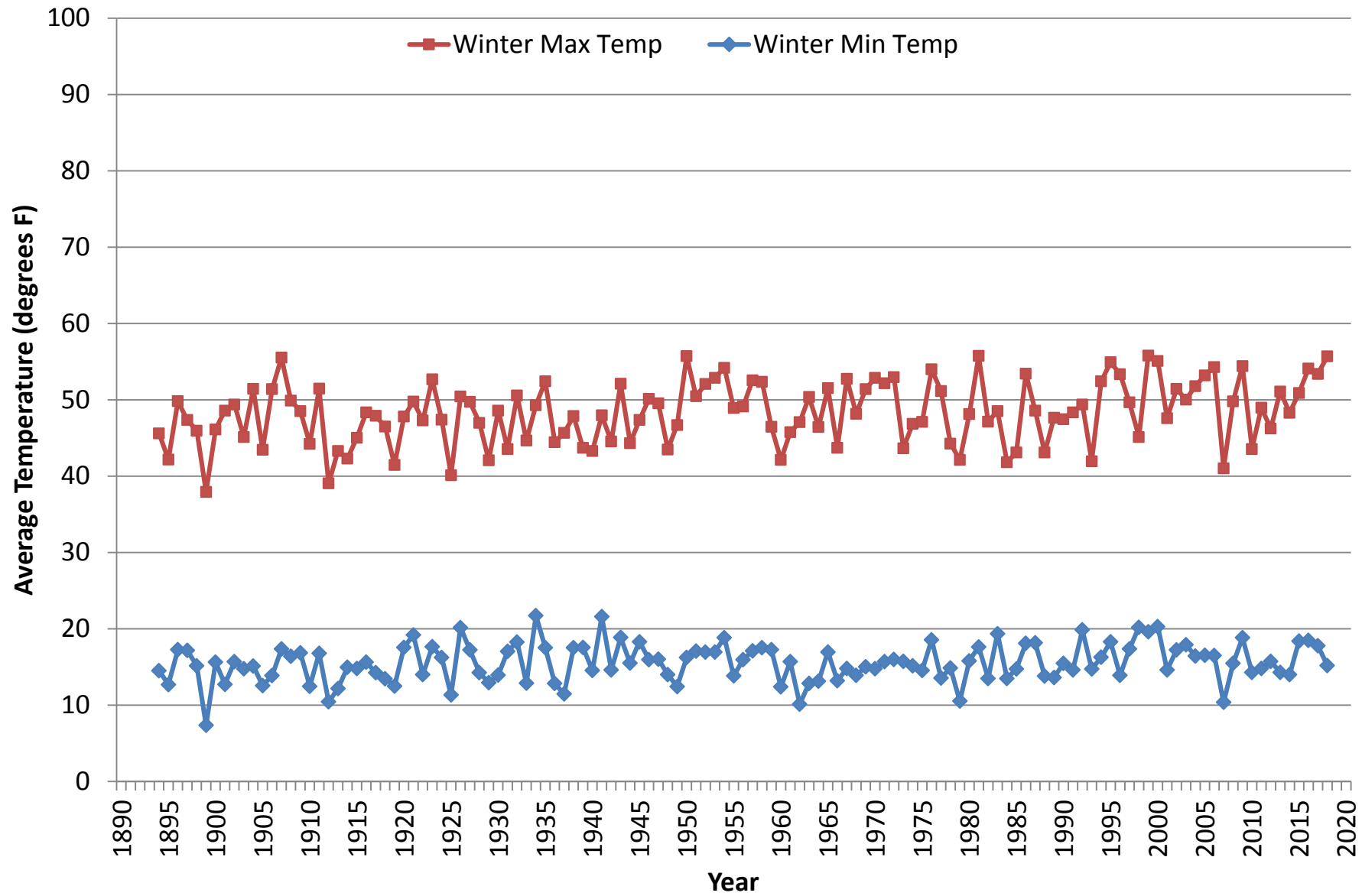
# Rocky Ford, CO Average Summer Temperature



# Rocky Ford, CO Average Fall Temperature



# Rocky Ford, CO Average Winter Temperature



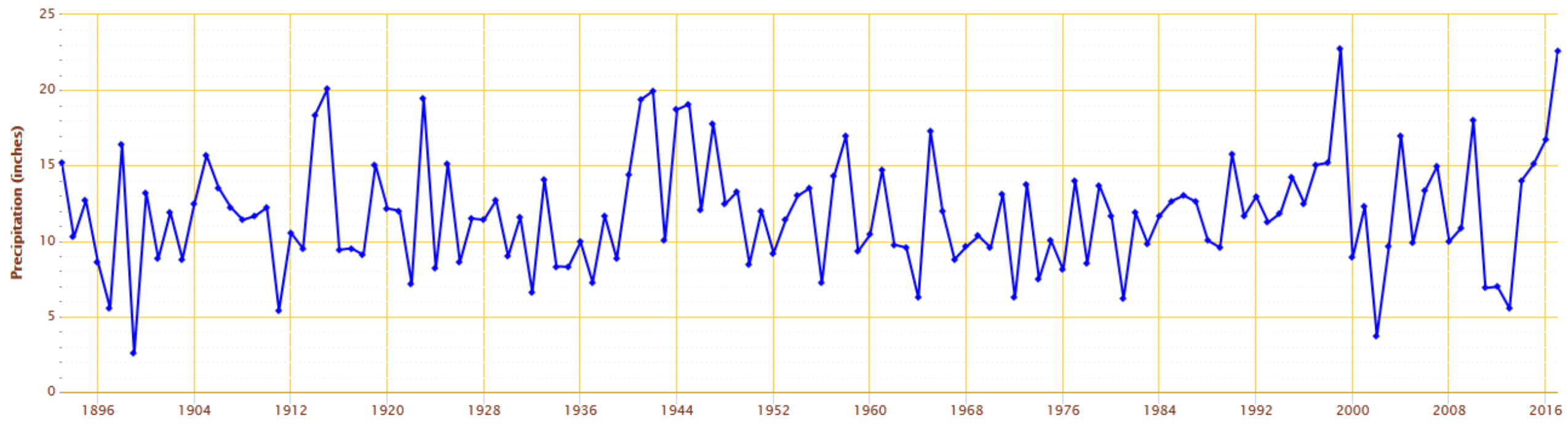
# Total Precipitation - Oct through Sep - ROCKY FORD 2 SE, CO



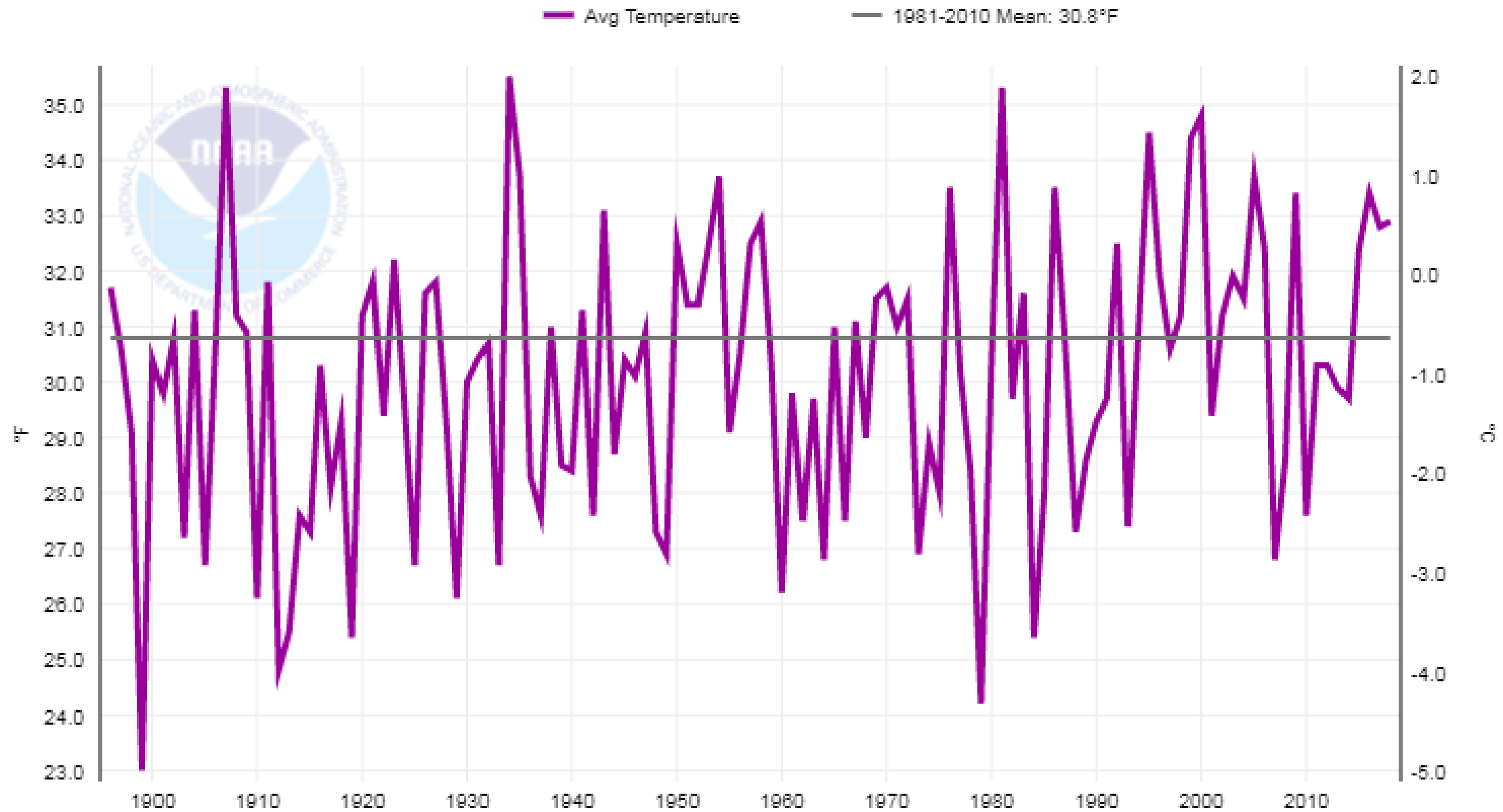
Use navigation tools above and below chart to change displayed range

Zoom 1 yr 10 yrs 30 yrs **All**

From 1893 To 2017



# Colorado, Climate Division 1, Average Temperature, December-February

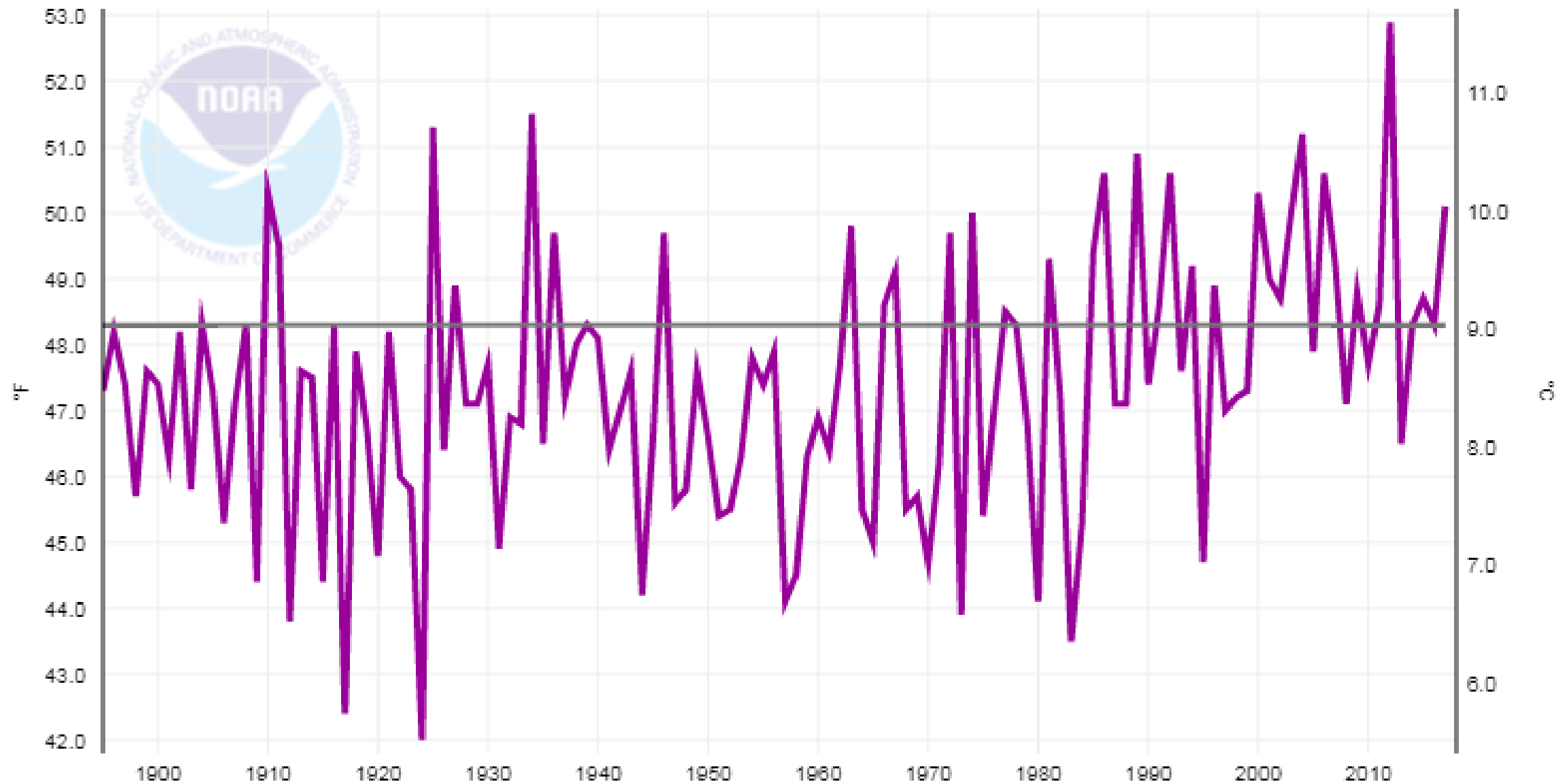




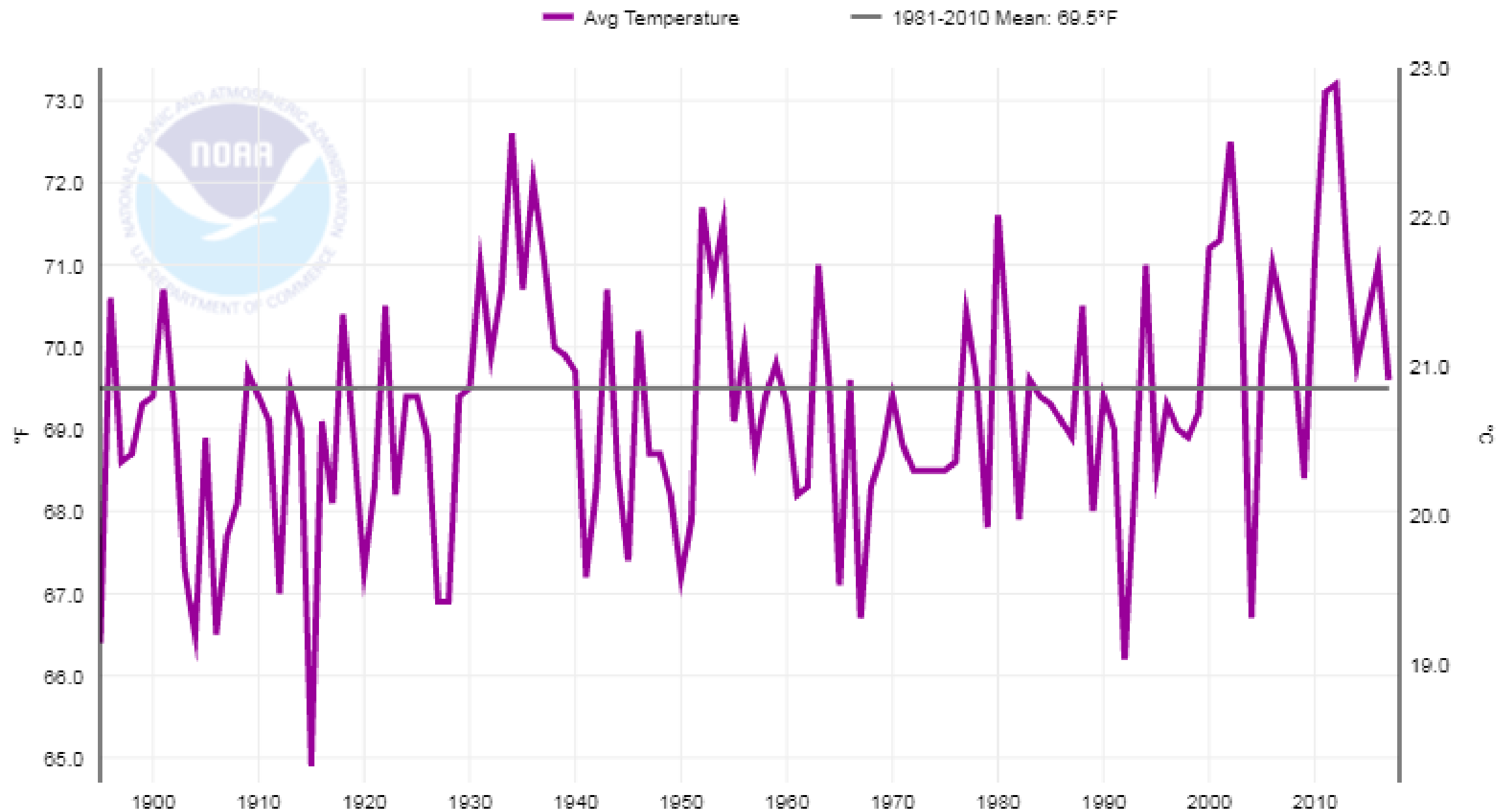
# Colorado, Climate Division 1, Average Temperature, March-May

Avg Temperature

1981-2010 Mean: 48.3°F



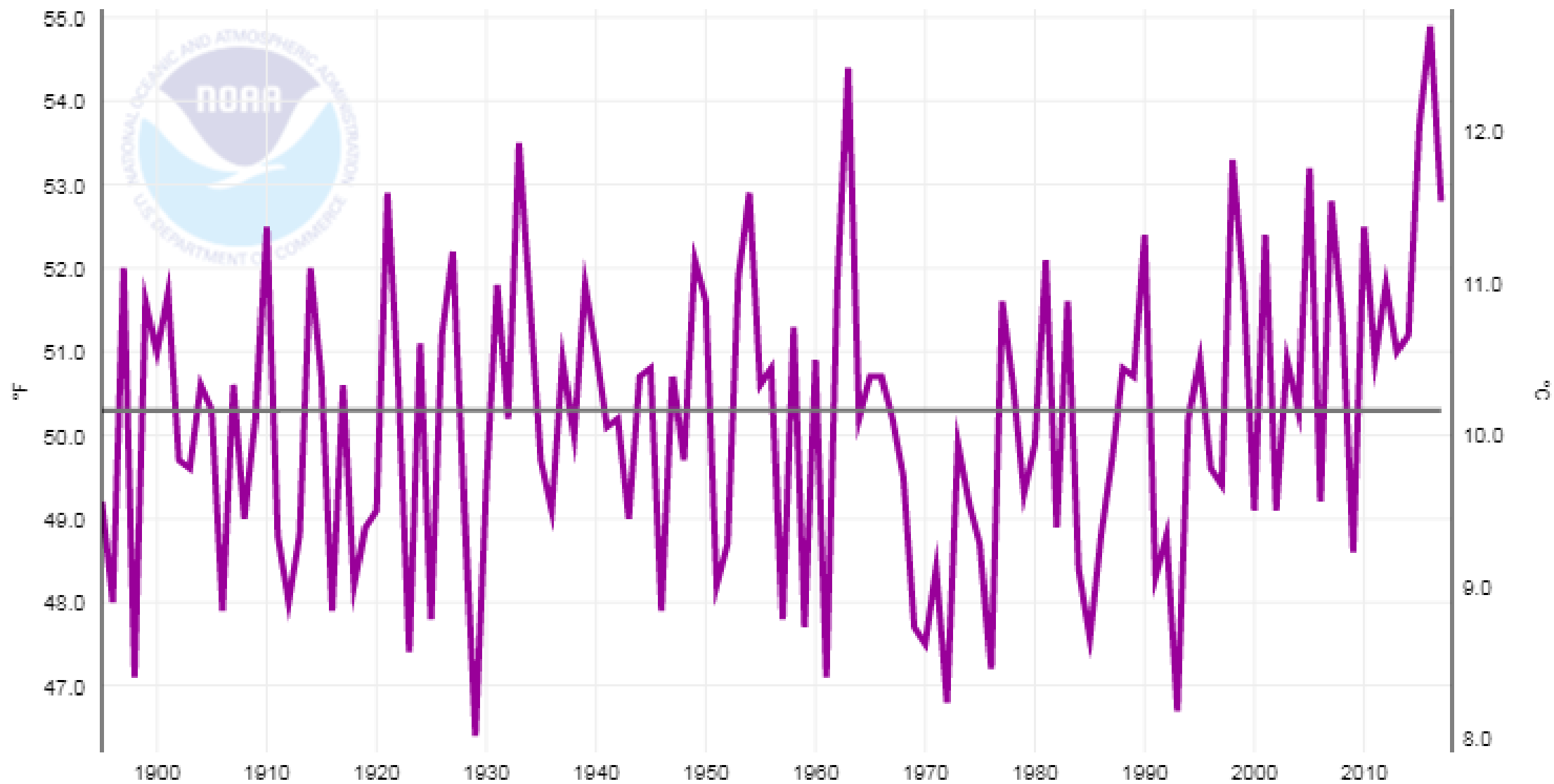
# Colorado, Climate Division 1, Average Temperature, June-August



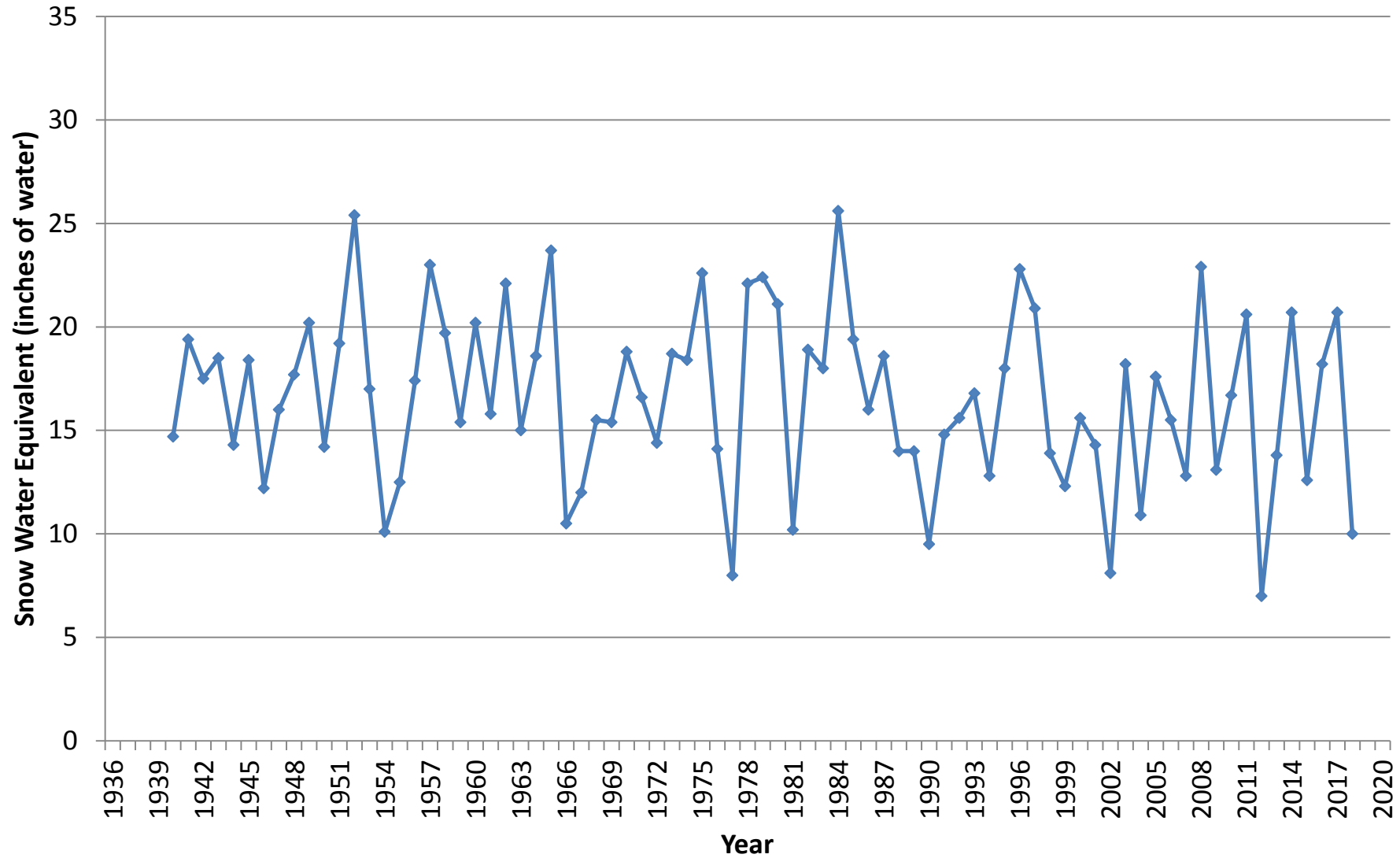
# Colorado, Climate Division 1, Average Temperature, September-November

Avg Temperature

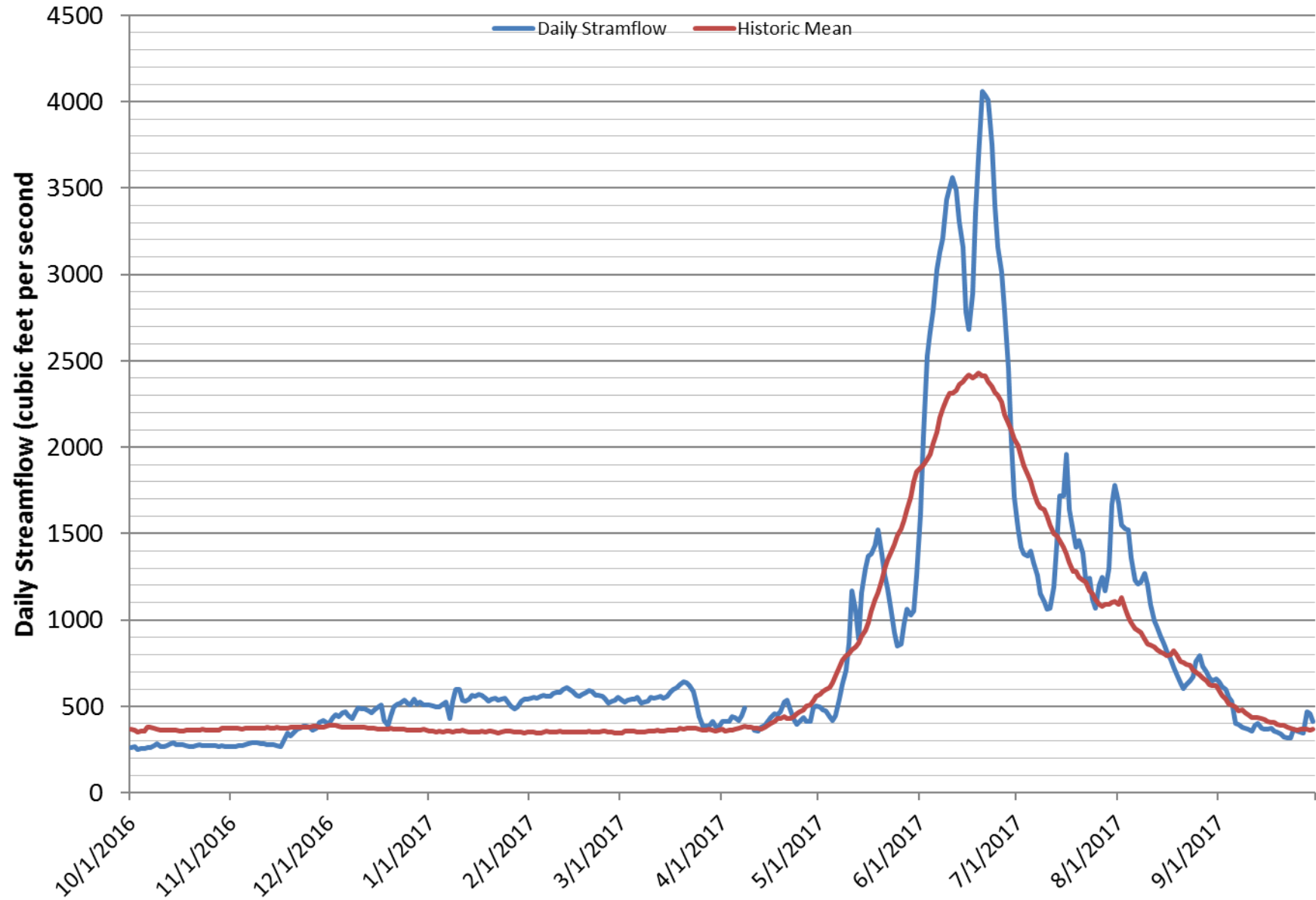
1981-2010 Mean: 50.3°F



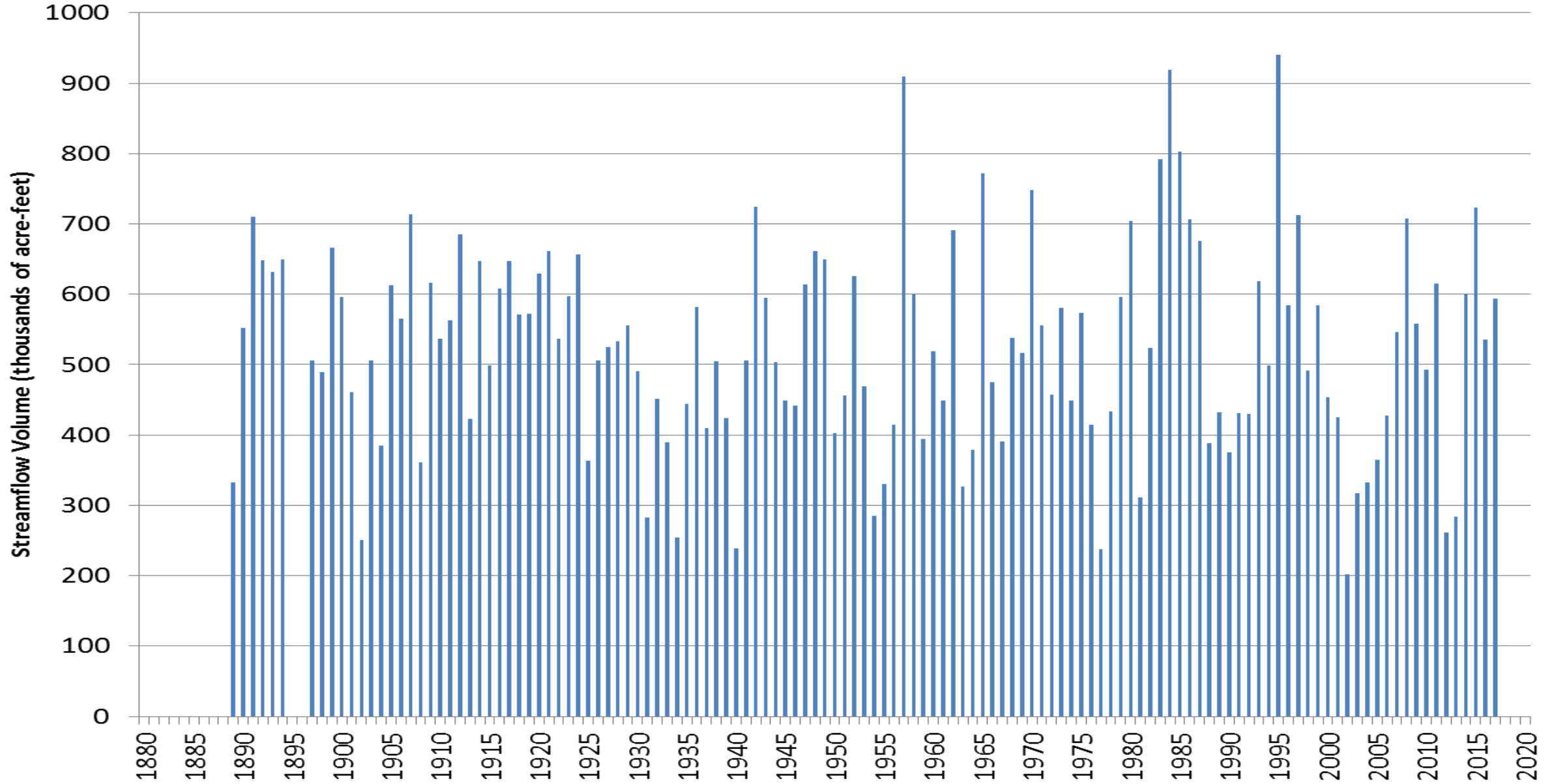
# Porphyry Creek Snow Course April 1 Snow Water Equivalent



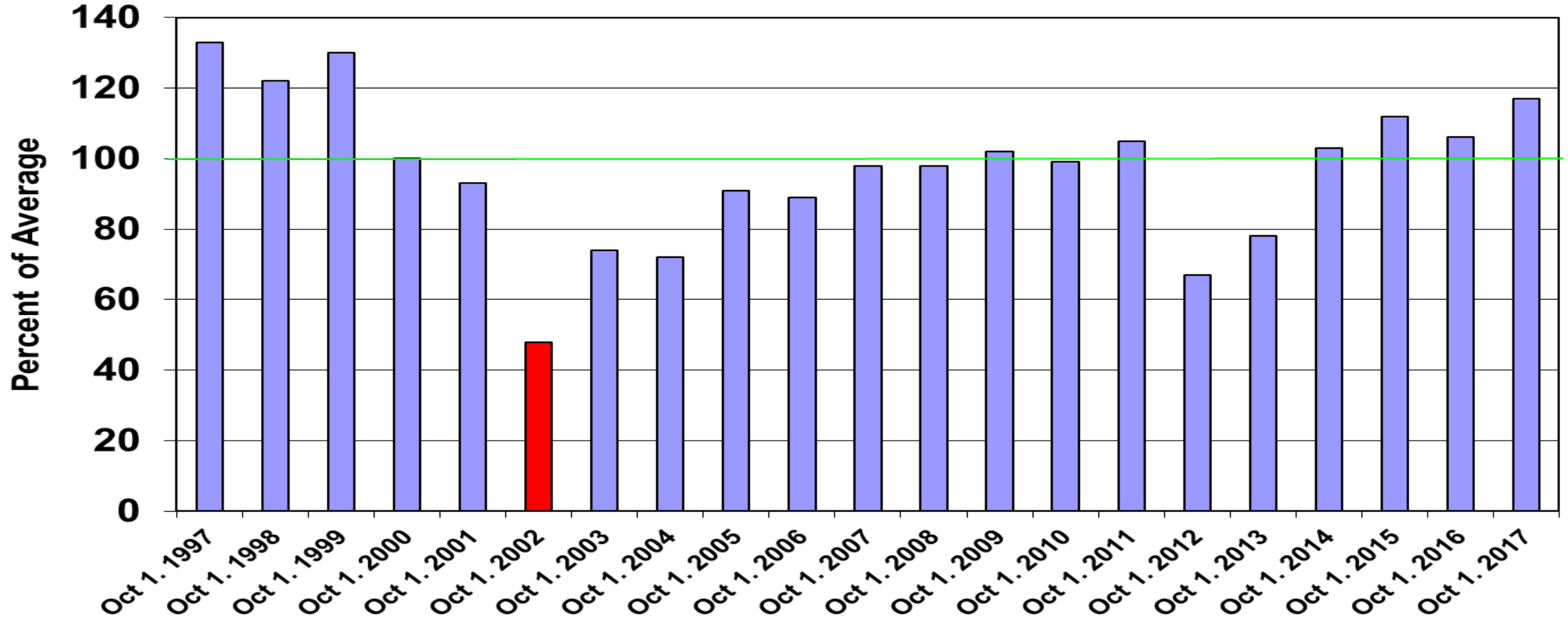
# Arkansas River at Canon City Daily Streamflow, WY 2017




# Arkansas River at Cañon City Water Year Streamflow



## Colorado Statewide Reservoir Levels on October 1st for Years 1997- 2017



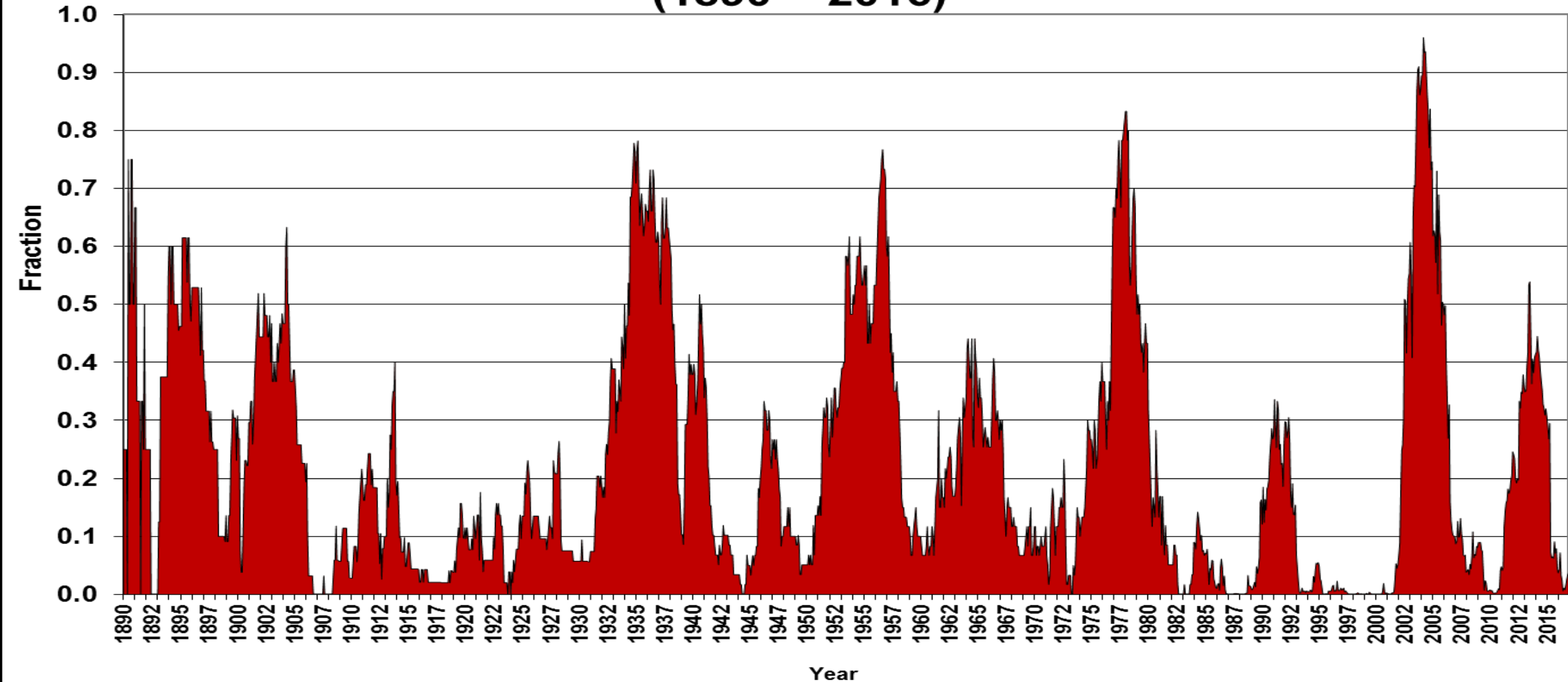


Drought never leaves us  
alone for long

Photo by Lyric Lucero  
2013 Manzanola, CO



# Fraction of Colorado in Drought Based on 48 month SPI (SPI < -1) (1890 - 2016)

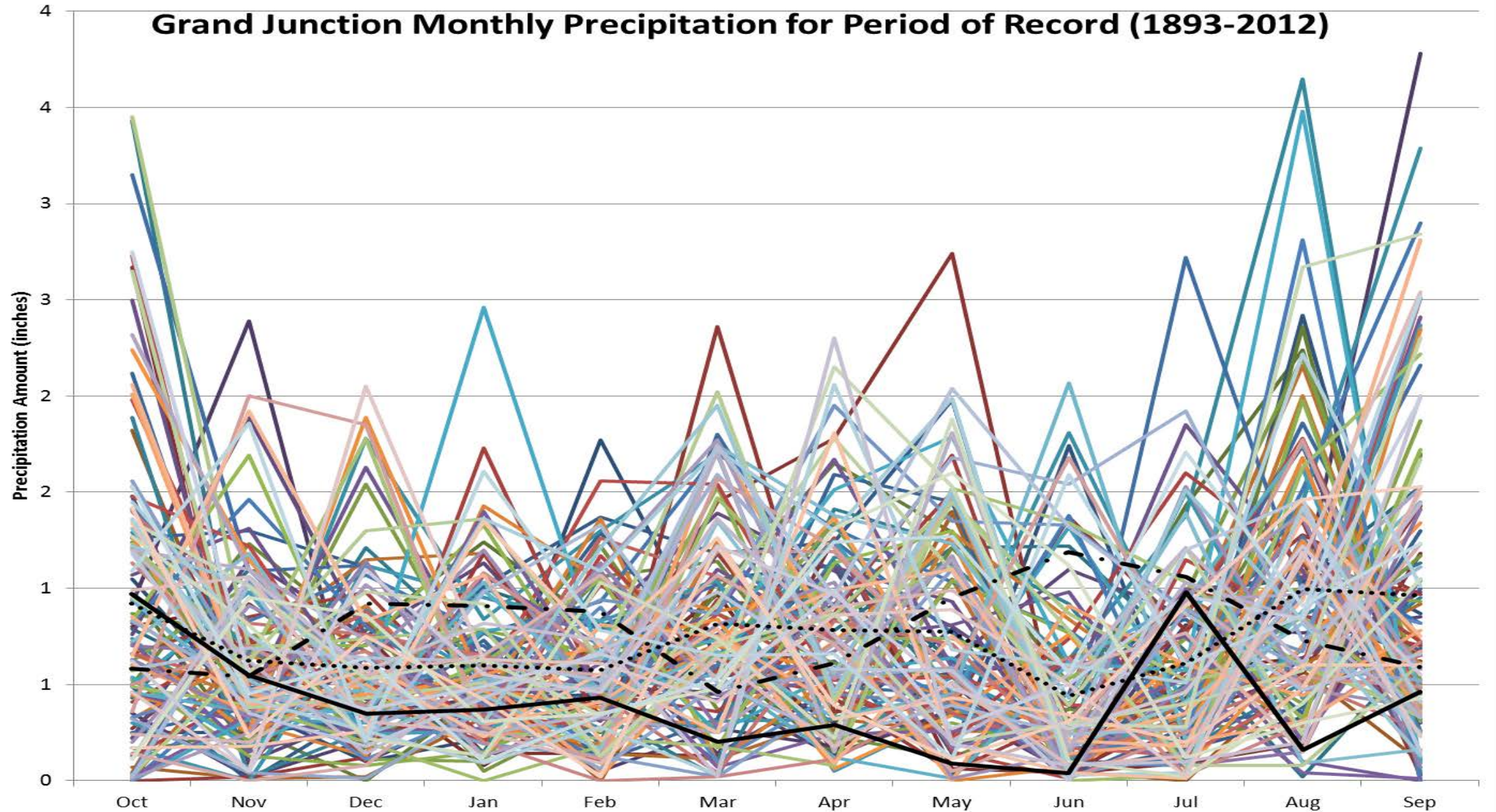


# Precipitation is incredibly important and perplexingly variable



Photo Credit: Henry Reges

# No two years are ever the same



**And we could use your help!**



CoCoRaHS

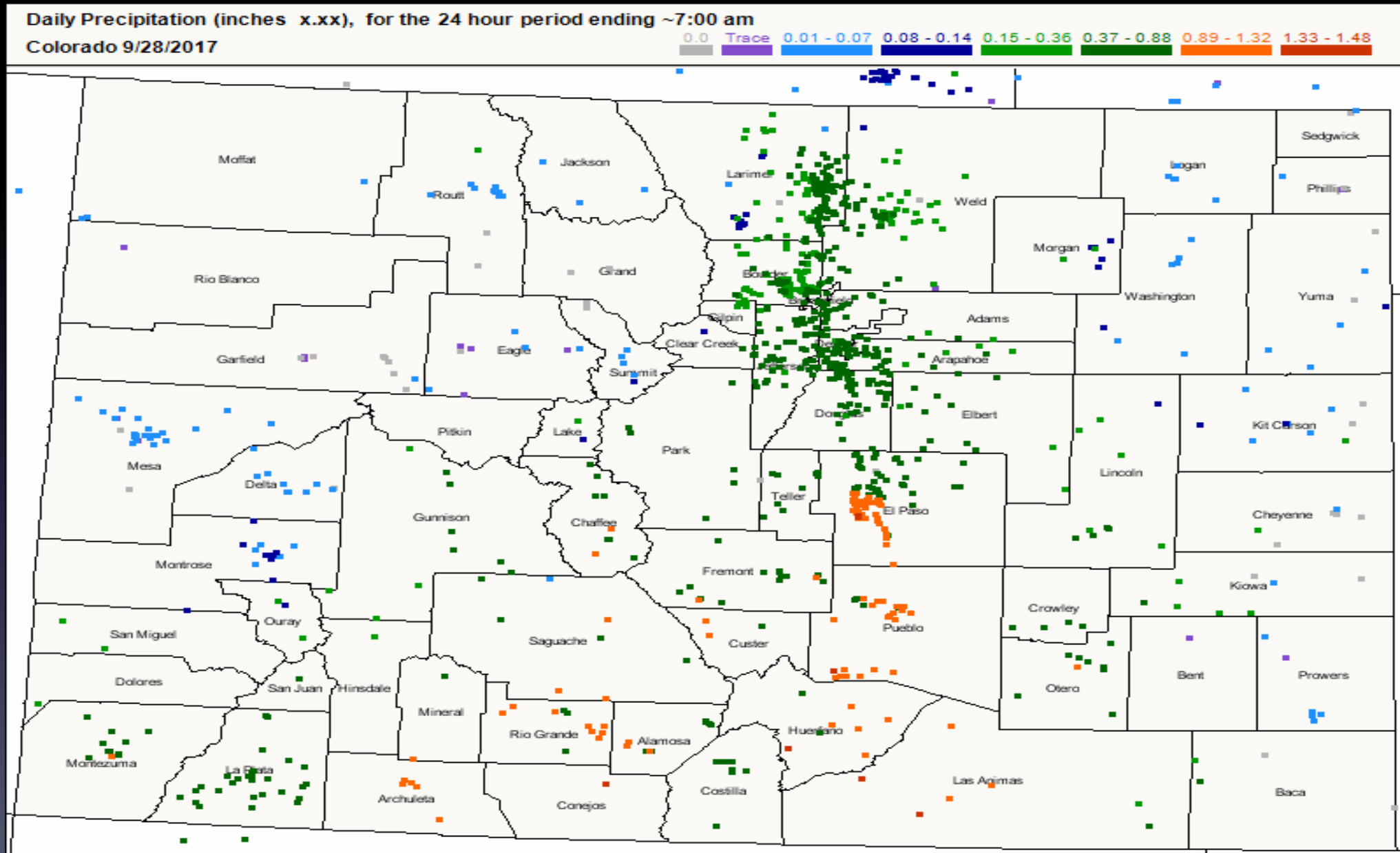
If you are interested in contributing your DOT ON THE MAP,  
please join  
the Community Collaborative Rain, Hail and Snow Network

<http://www.cocorahs.org>

or see me today



# 28 Sep 2017 Our last really wet day Is your data point on this map?



# ARBWF Climate Trivia Quiz Time (your chance to win -- or NOT)



[www.cocorahs.org](http://www.cocorahs.org)



Support for this project provided by  
NSF Informal Science Education Program,  
NOAA Environmental Literacy Program  
and  
many local charter sponsors.

# Question 1

Of the following Arkansas River Basin weather stations – which is the driest and which is the wettest based on 1981-2010 averages

Leadville  
Canon City  
Fowler  
Las Animass  
Holly

Buena Vista  
Pueblo Res.  
Rocky Ford  
John Martin Res.

Salida  
Pueblo airport  
La Junta  
Lamar



## Question 2

What was the highest temperature measured in 2017 here at the La Junta airport

- a) 98F      b) 100F      c) 102 F      d) 104F      e) 106F      f) 108F

## Question 3

- During the past 5 months of “winter” (Nov – Mar ) Salida lived up to its reputation for being the Rocky Mountain “banana belt” How many days out of this 151-day season did the temperature climb to 50F or higher at the Salida CoAgMET weathe station?  
  
a) 42    b) 67    c) 92    d) 117    e) 148

## Question 4

It has been observed that all areas of Colorado are warmer now than prior to 1980

Which major watershed has shown the least warming based on National Weather Service weather station data

- a) Arkansas
- b) Colorado
- c) Platte
- d) Republican
- e) Rio Grande

## Question 5

In recent years, which season of the year has shown the greatest warming trend

- a) Winter
- b) Spring
- c) Summer
- d) Fall
- e) other

## Question 6

- Based on standard linear regression statistical techniques, has precipitation in the Arkansas River Basin been trending
  - a) Higher
  - b) Lower
  - c) No significant Trend observed

## Question 7

What is the largest (based on cross section diameter) hail stone you have ever witnessed live and in person?

(The official CO state record is 4.5” If you ever see a larger stone, please document carefully, freeze and REPORT IT to the NWS Office in Pueblo ASAP

# Question 8

Tie Breaker – if needed

In Water Year 2017 (Oct 2016 – Sep 2017) the Ordway NWS Cooperative Weather station was how many inches above or below their long-term climatological average precipitation

## Question 9 OK, not a question, just a statement

- A few months ago, NOAA's National Center for Environmental Information (NCEI) finally confirmed the new record 24-hour precipitation total for Colorado

The old record was 11.08" set in Holly Colorado June 17, 1965

The new record is 12.46" set at a USGS gauge at Fort Carson Sep 12, 2013

Oh, btw, the Arkansas Basin also holds the records for most dry days in a year and the least precipitation in a year (1939 and 2002)



**So, How did you do on the  
2018 ARBWF Climate Trivia Quiz ?**

**Add up your correct answers and let's see who won**