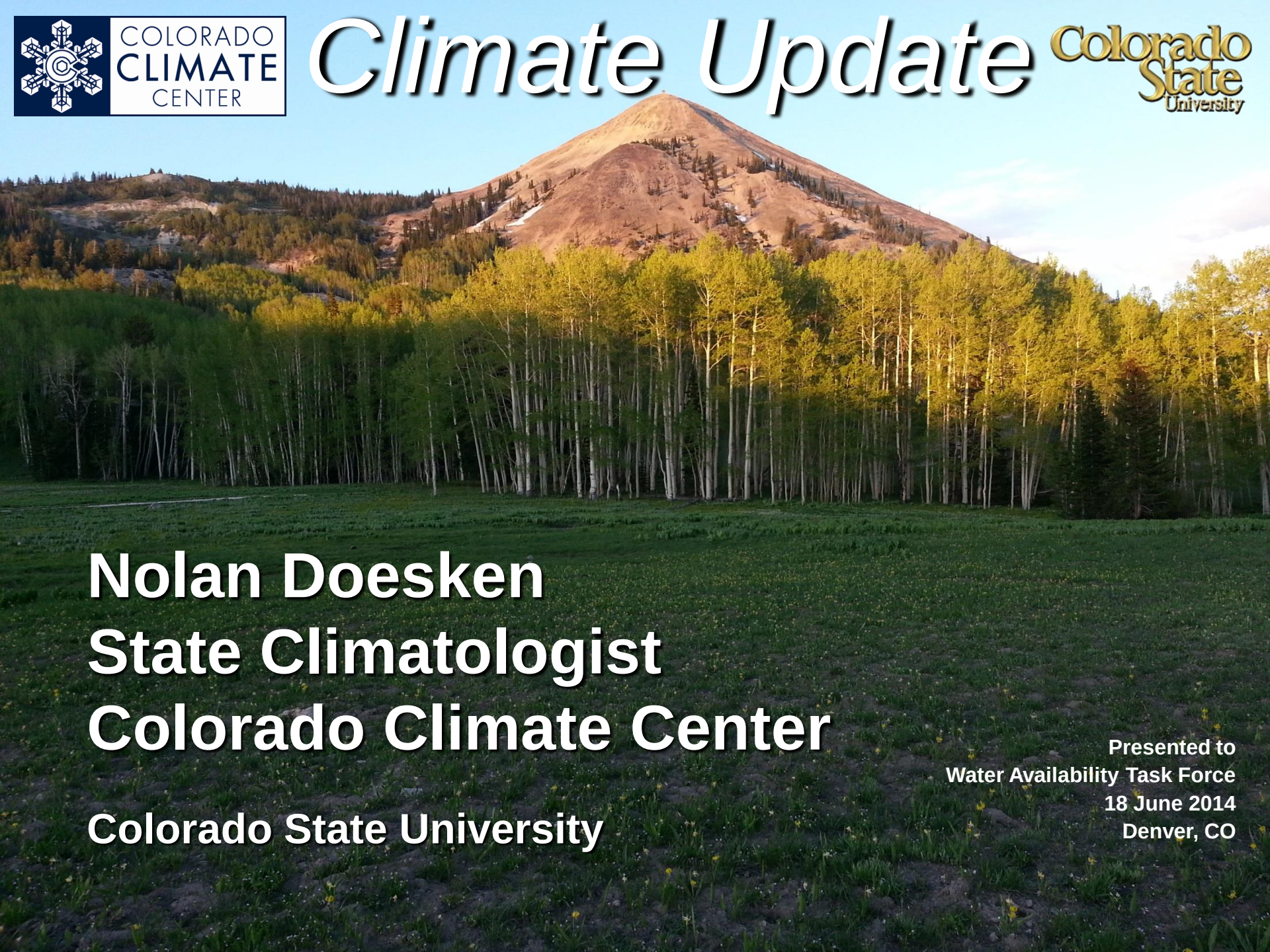


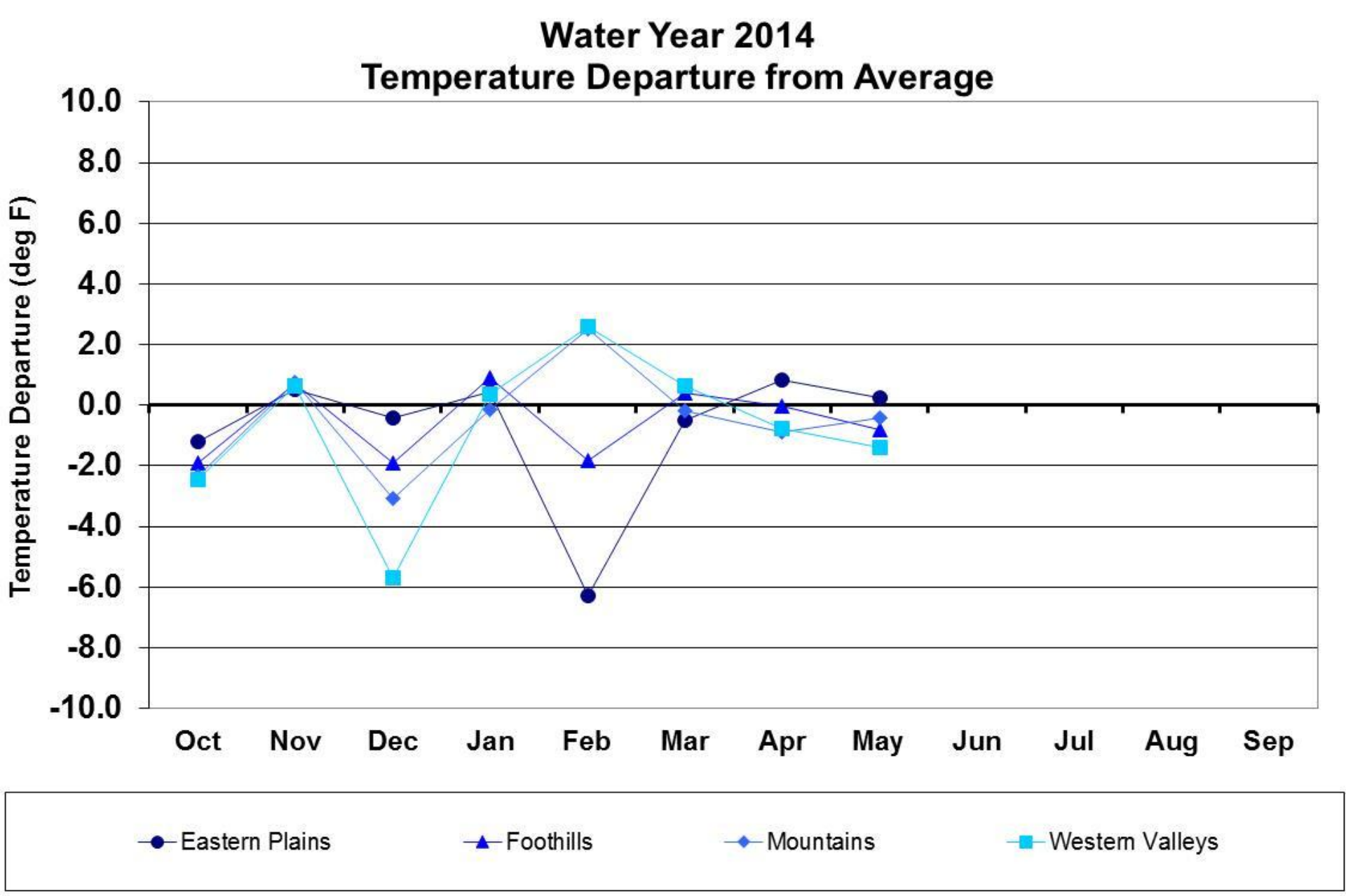
Climate Update

Nolan Doesken
State Climatologist
Colorado Climate Center

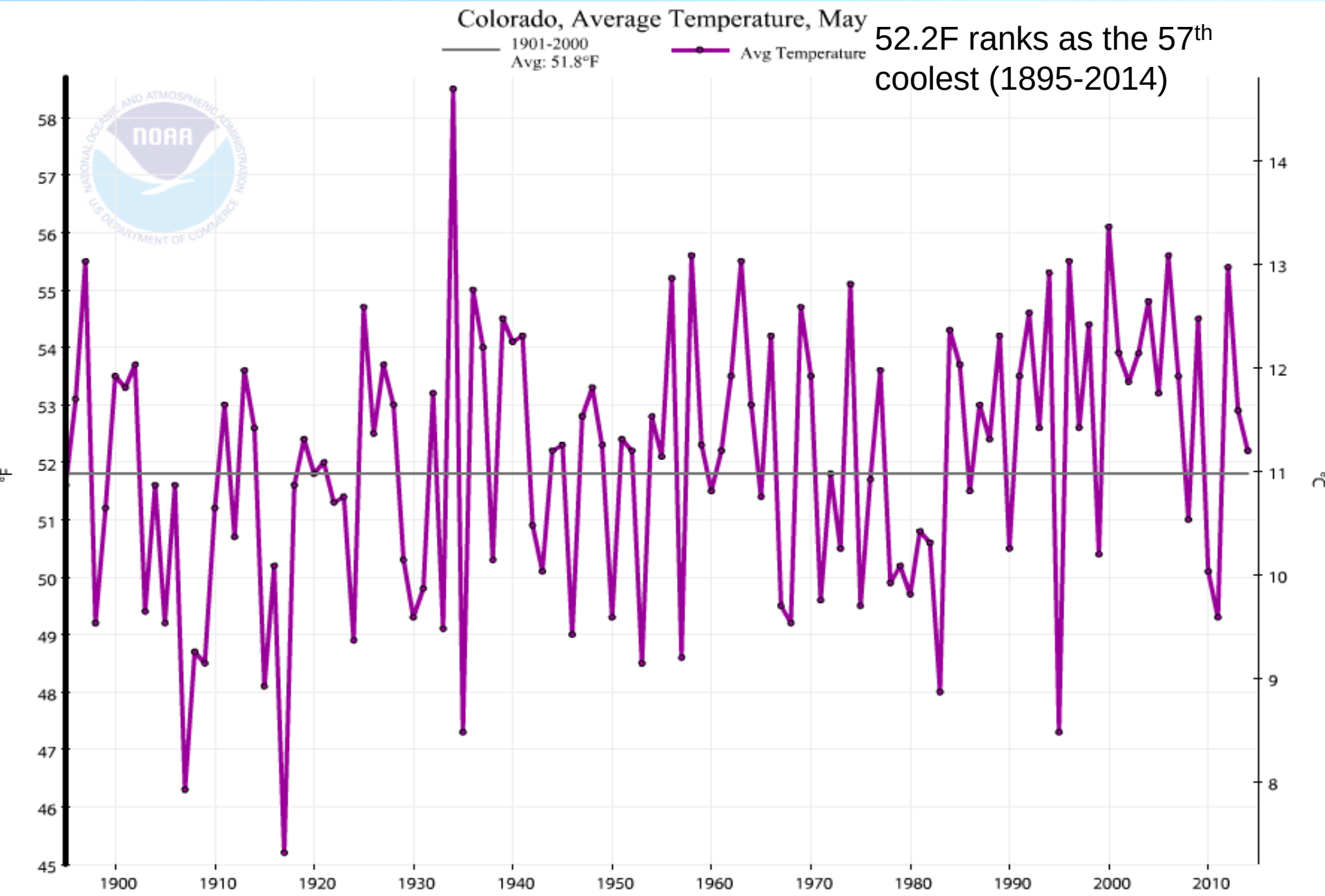
Colorado State University

Presented to
Water Availability Task Force
18 June 2014
Denver, CO

Water Year 2014 Temperature Departures

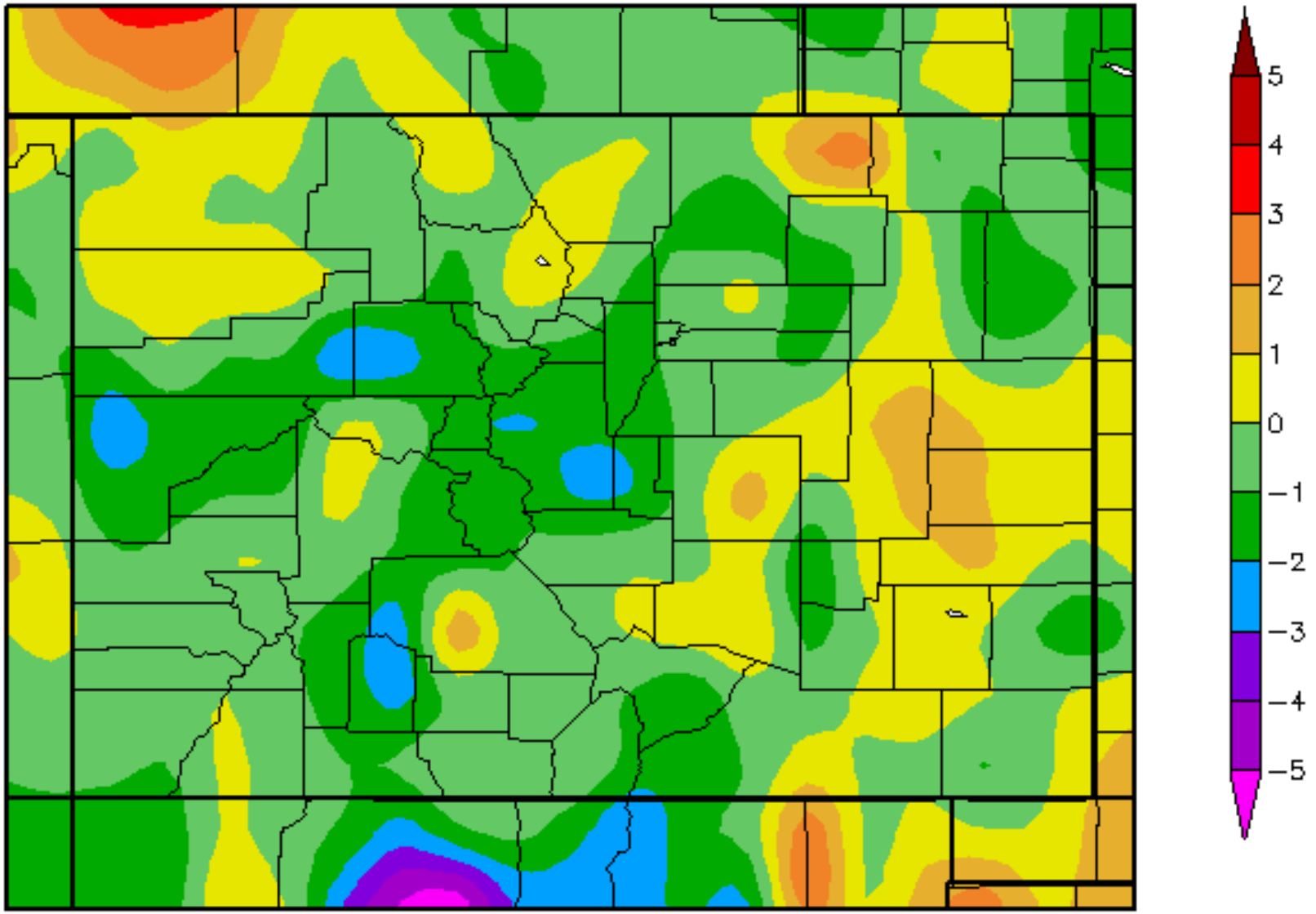


May Average Temperature History for Colorado (NCDC)



52.2F ranks as the 57th coolest (1895-2014)

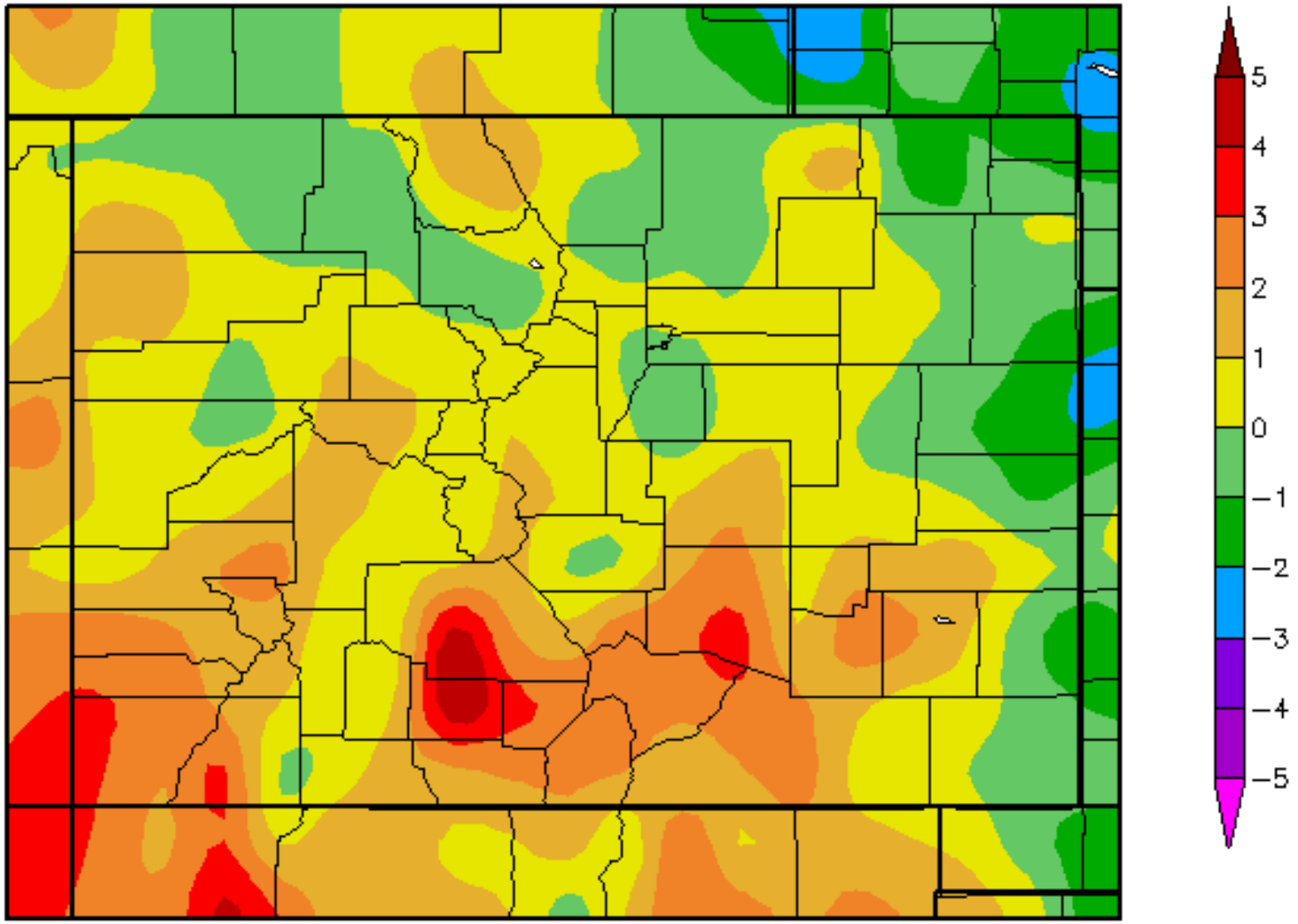
Departure from Normal Temperature (F)
5/1/2014 – 5/31/2014



Generated 6/11/2014 at HPRCC using provisional data.

Regional Climate Centers

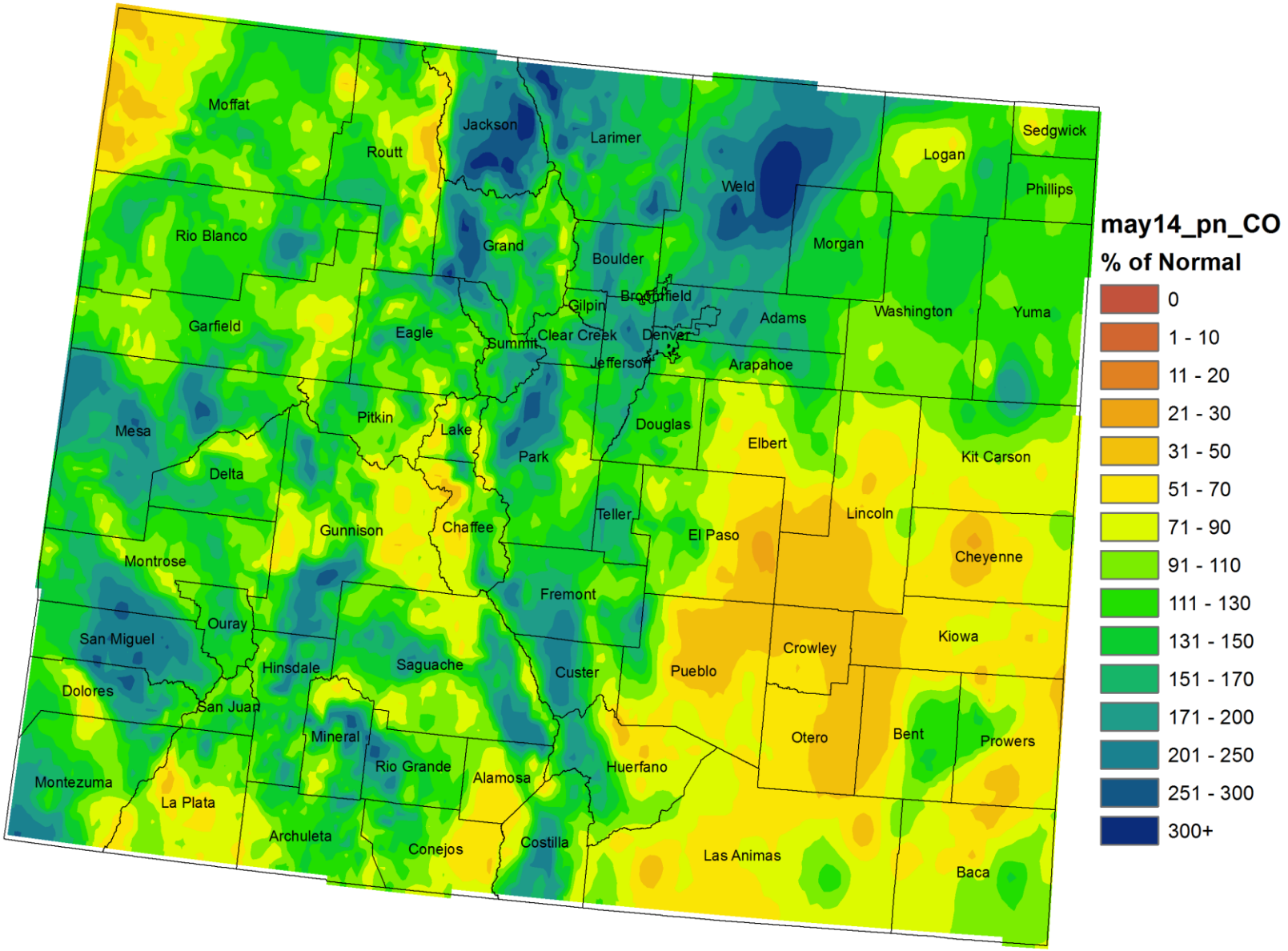
Departure from Normal Temperature (F)
6/1/2014 – 6/16/2014



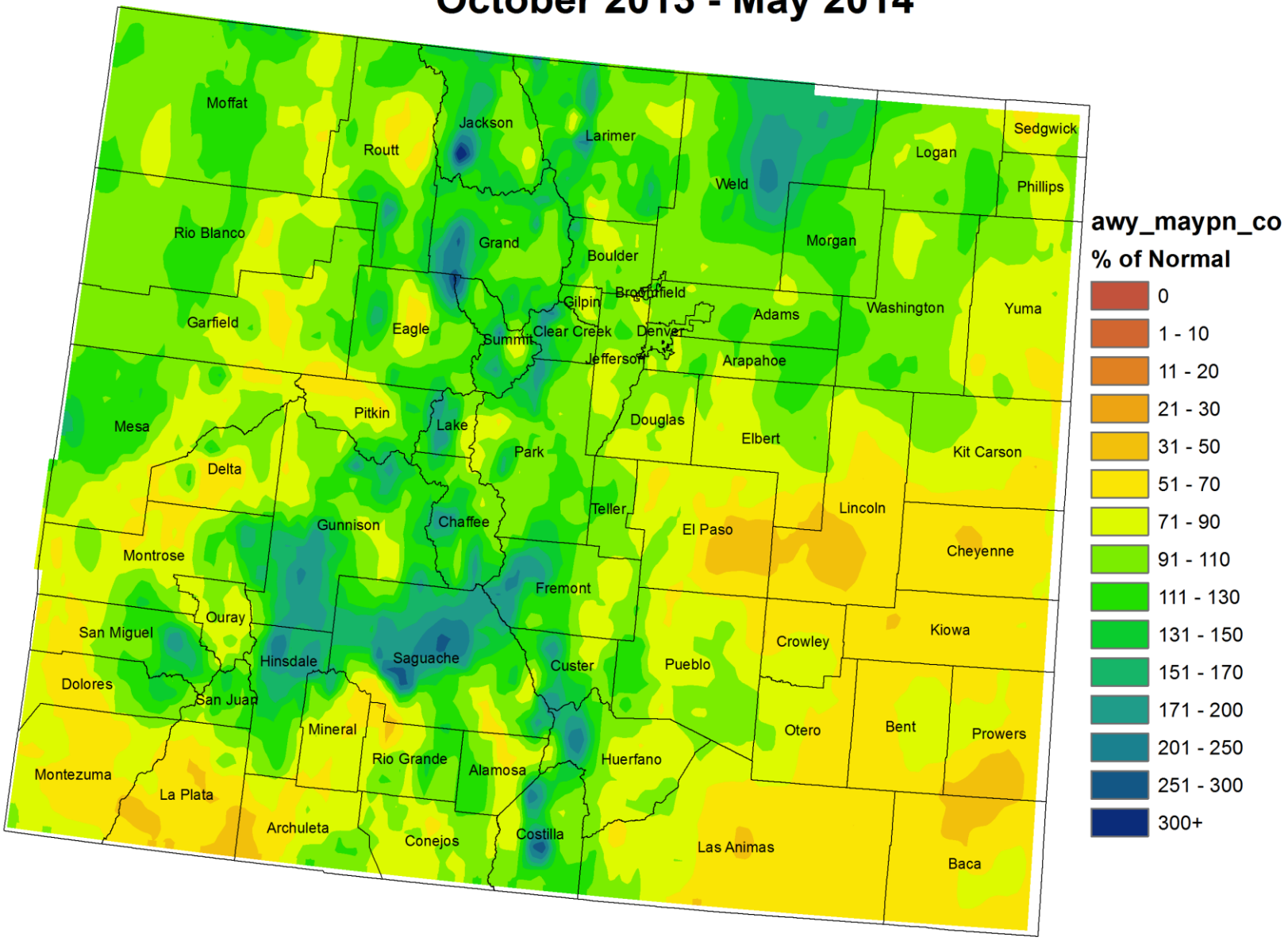
Generated 6/17/2014 at HPRCC using provisional data.

Regional Climate Centers

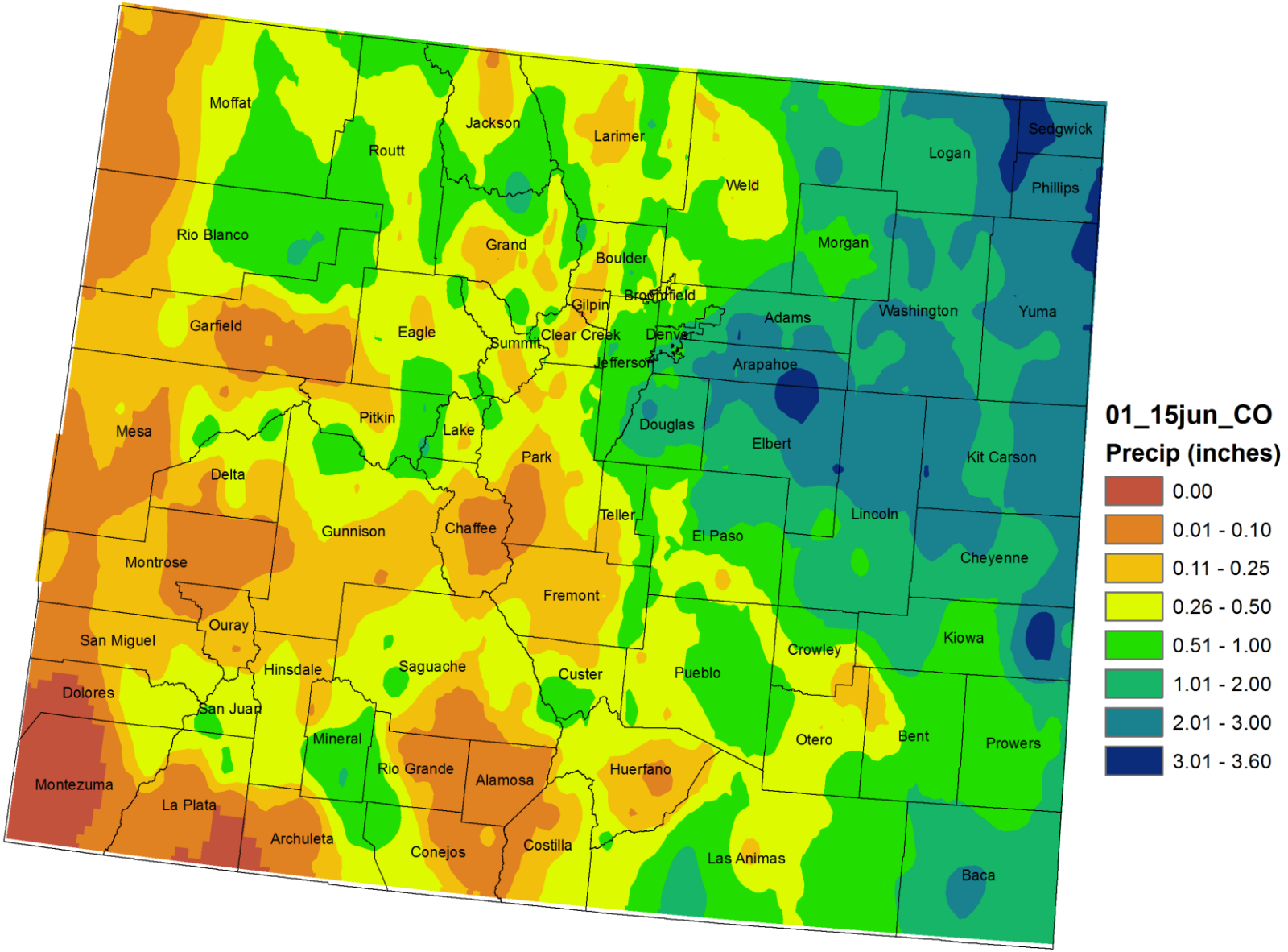
Colorado May 2014 Precipitation as a Percentage of Average



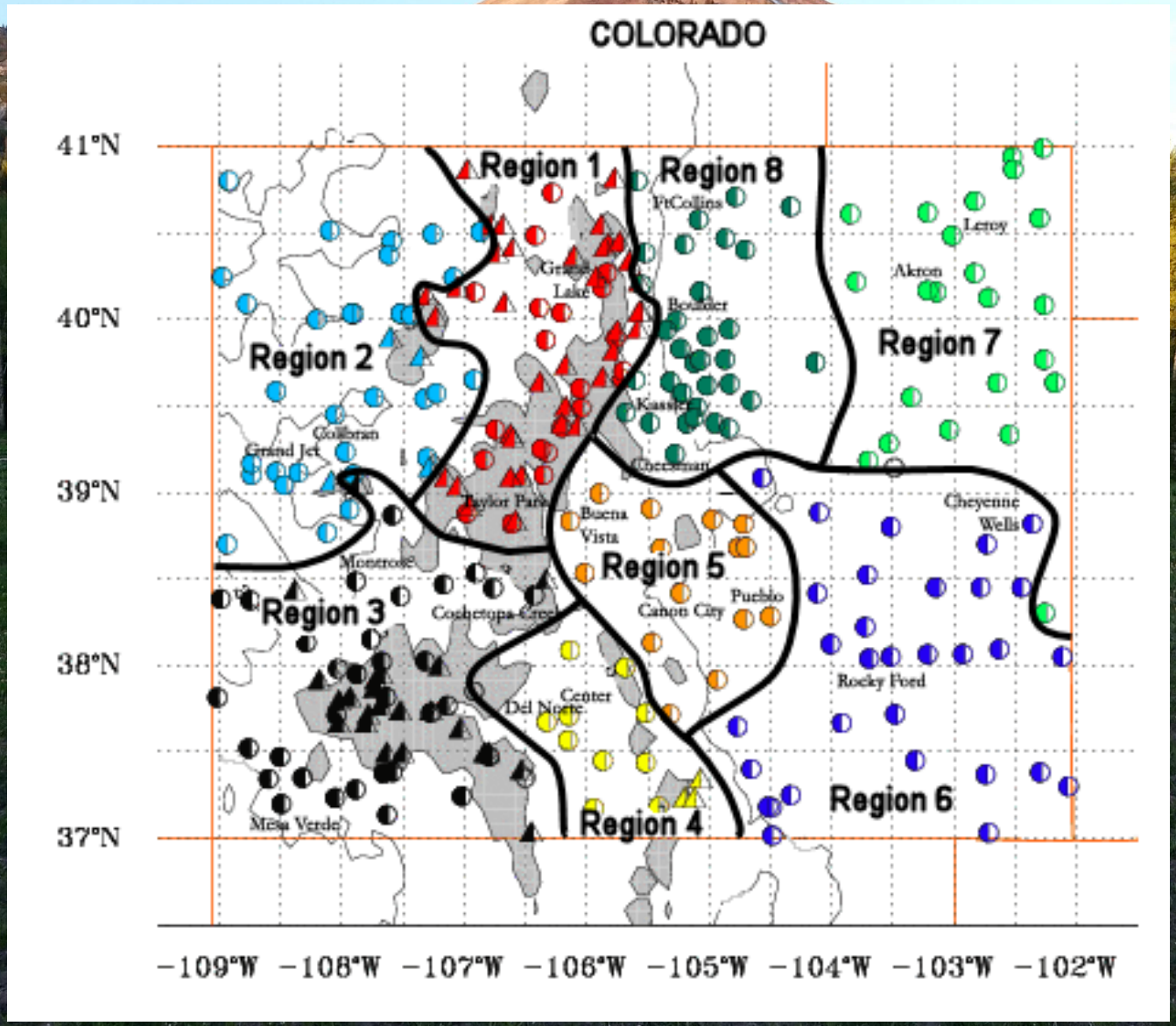
Colorado Water Year 2014 Precipitation as a Percentage of Average October 2013 - May 2014



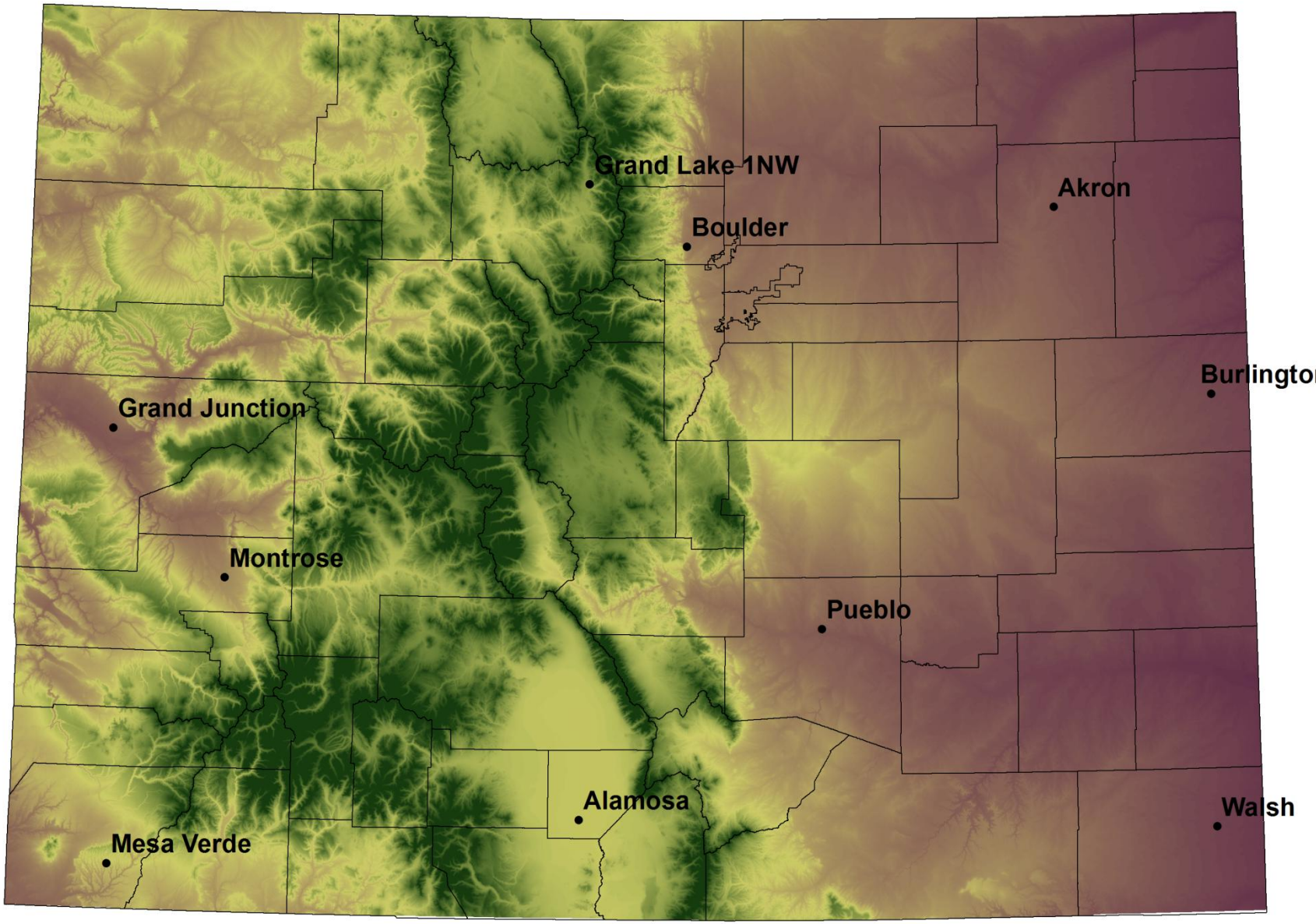
Colorado Month to Date Precipitation
1 - 15 June 2014



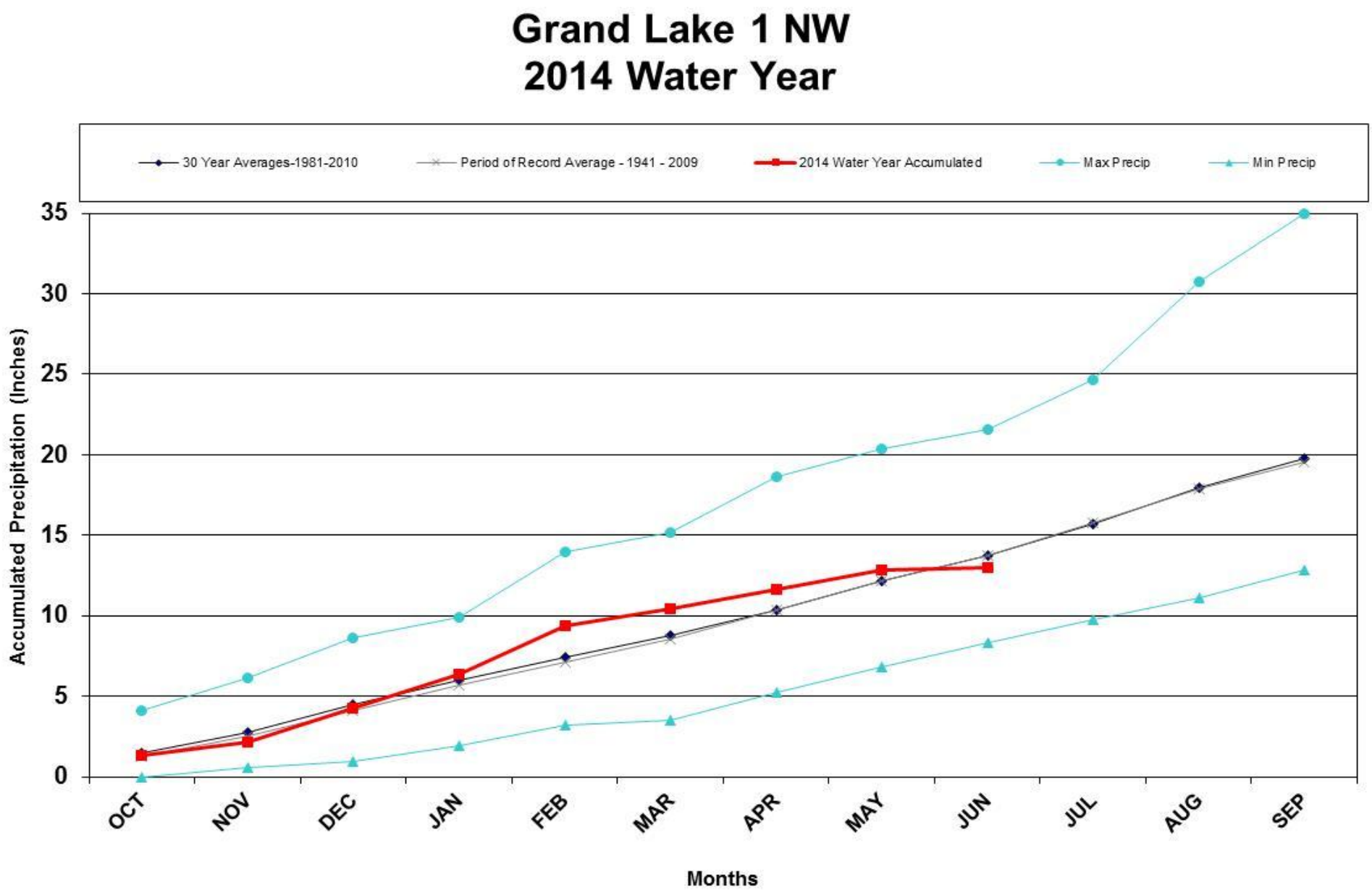
Climate divisions defined by Dr. Klaus Wolter, Boulder, CO



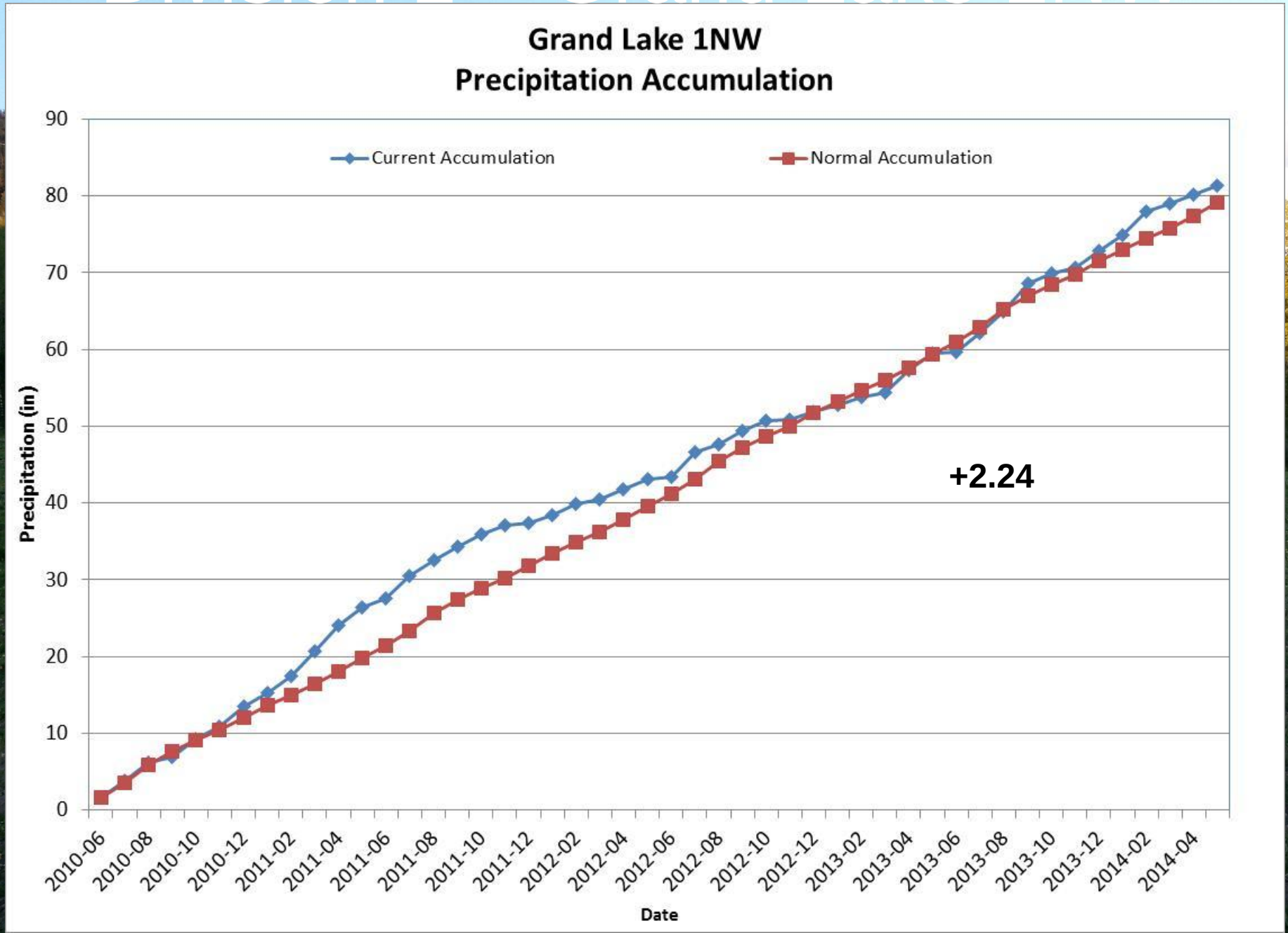
NWS Cooperative Stations for WATF



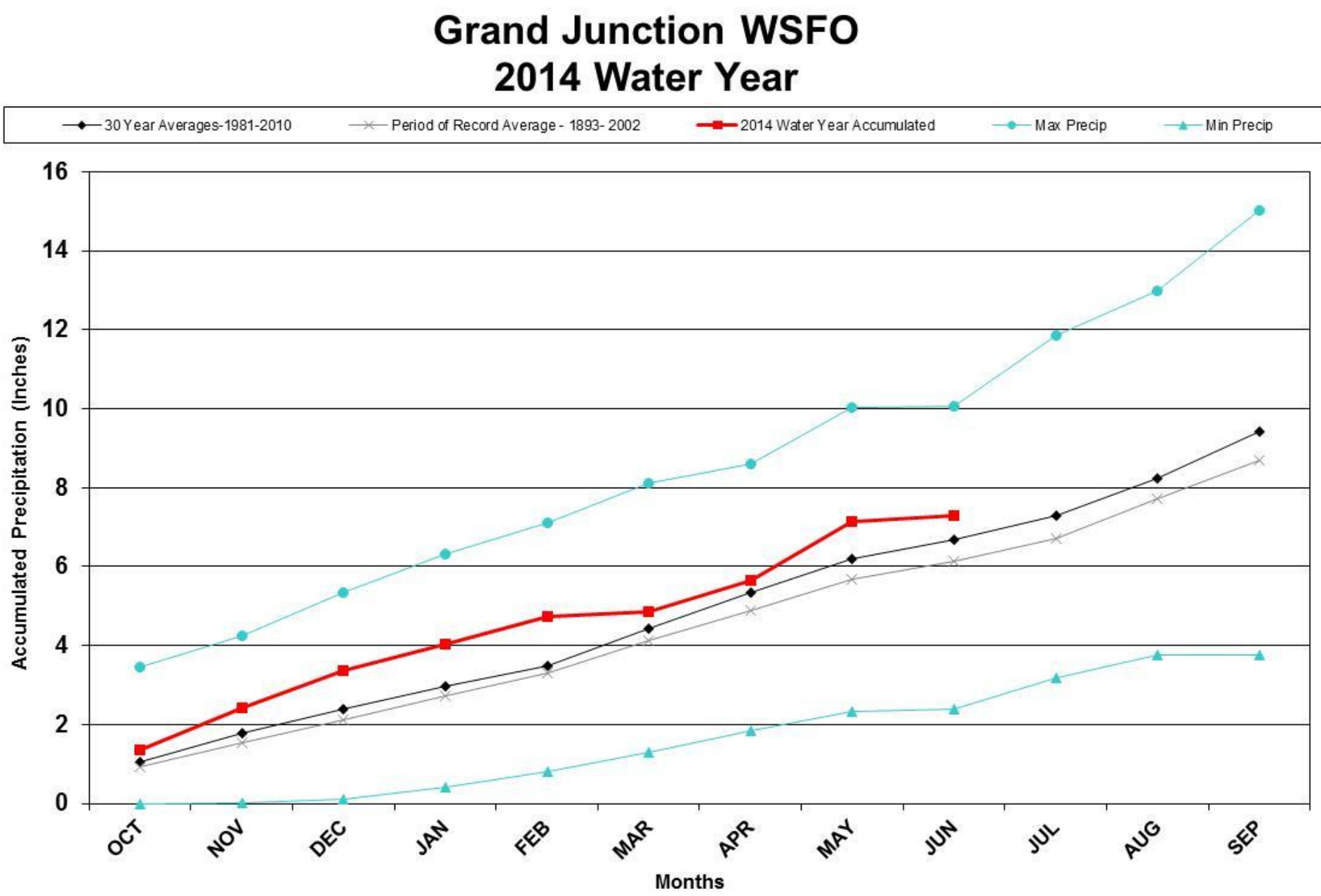
Division 1 – Grand Lake 1NW



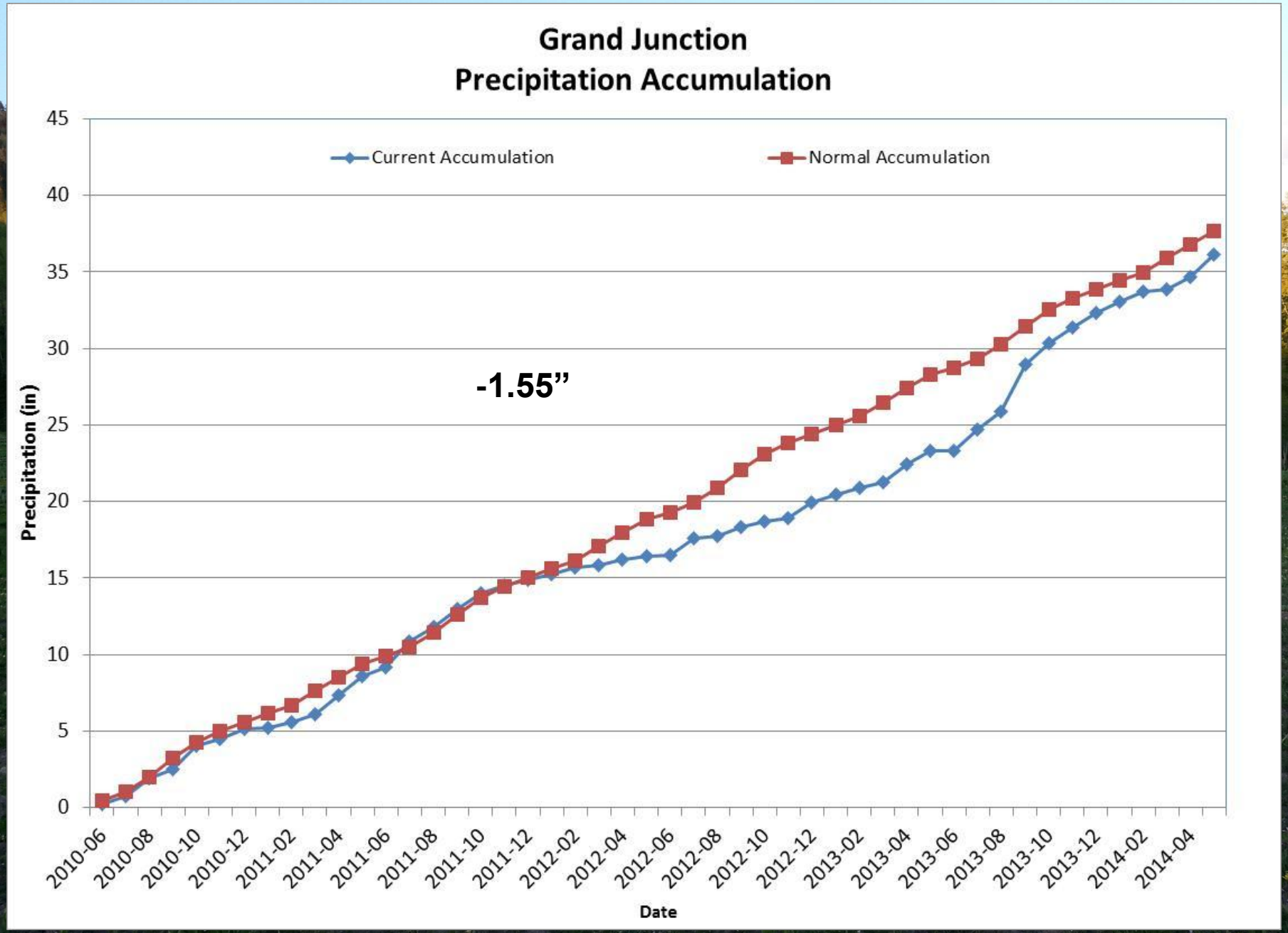
Division 1 – Grand Lake 1NW



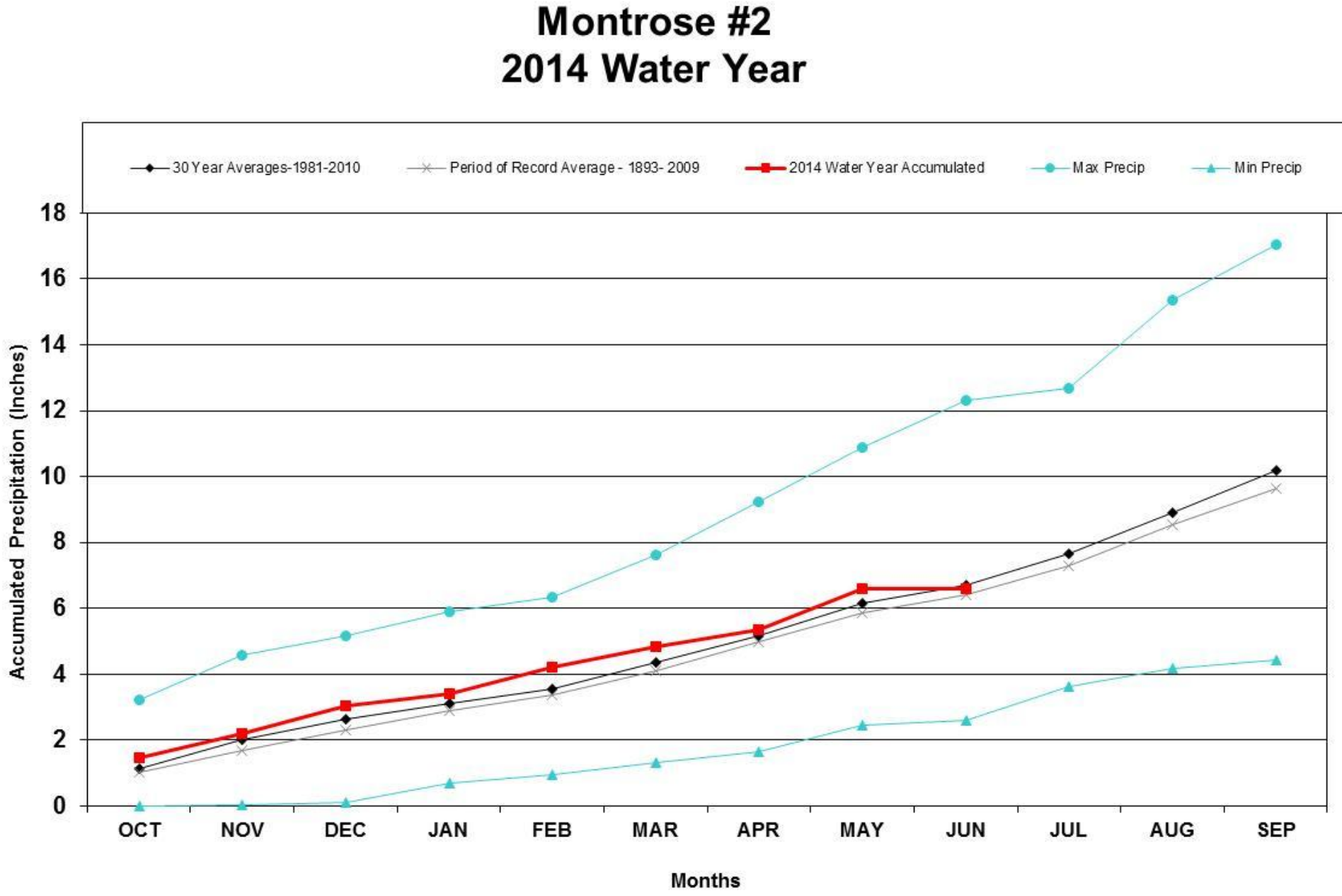
Division 2 – Grand Junction



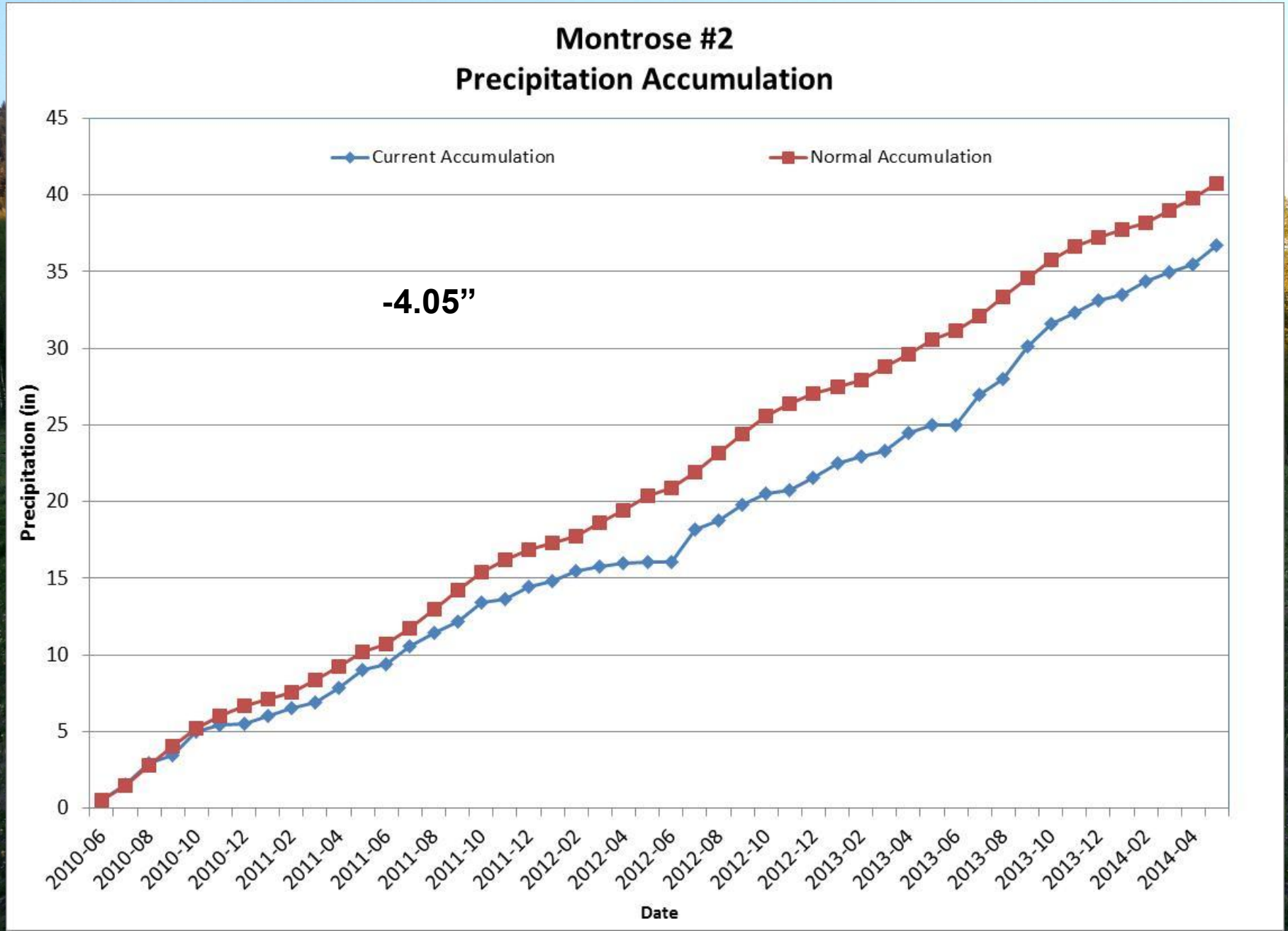
Division 2 – Grand Junction



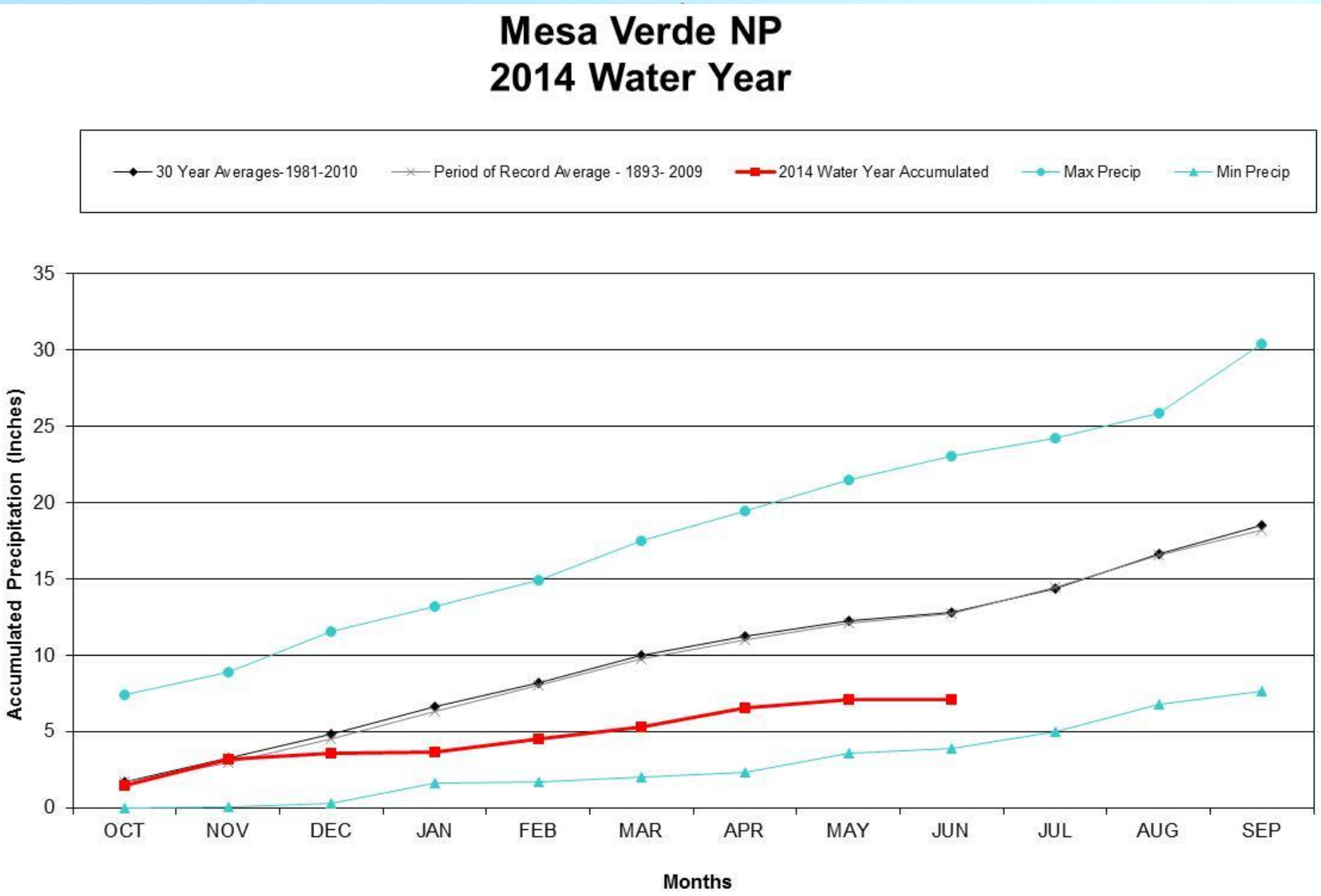
Division 3 – Montrose



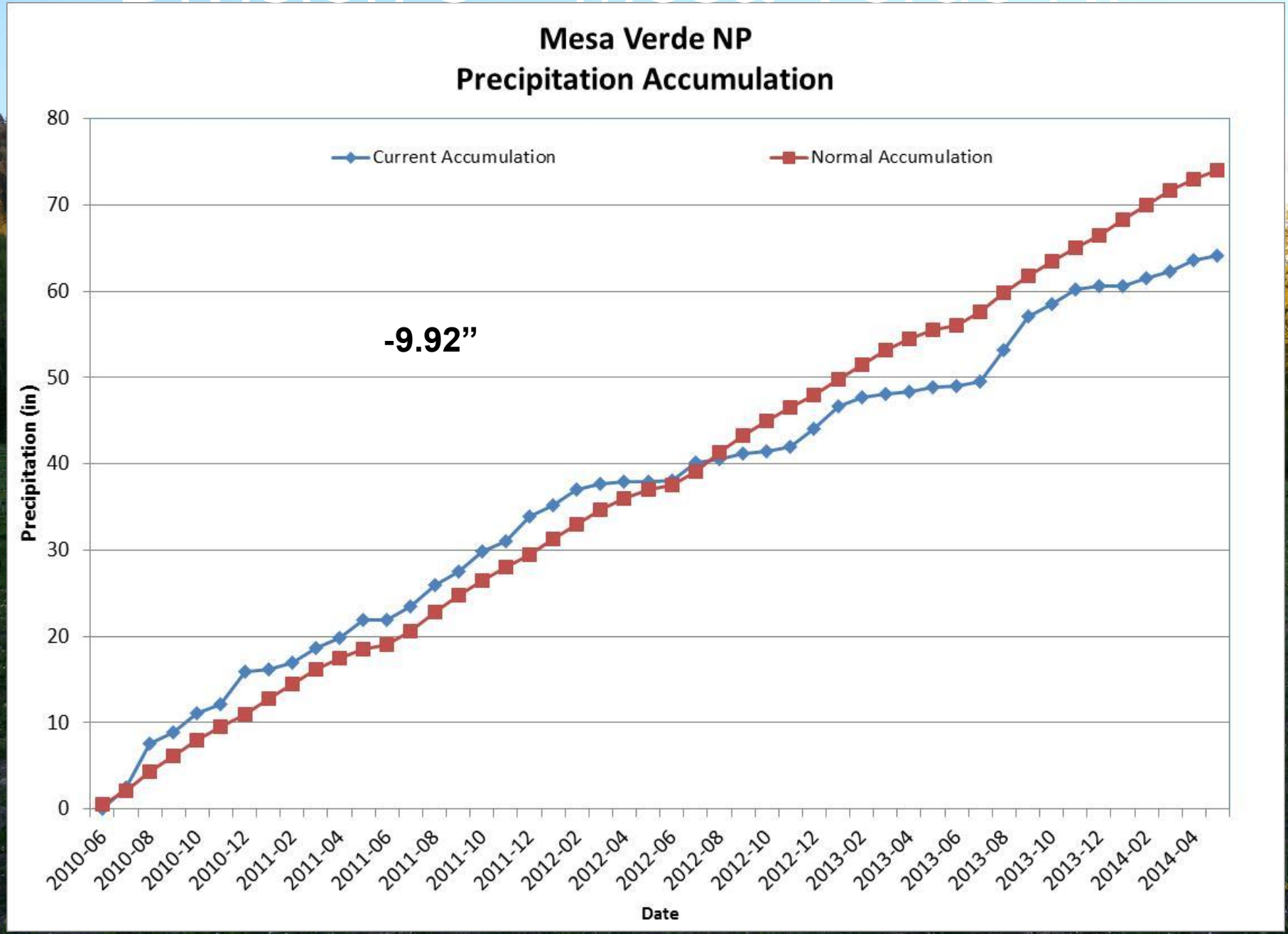
Division 3 – Montrose



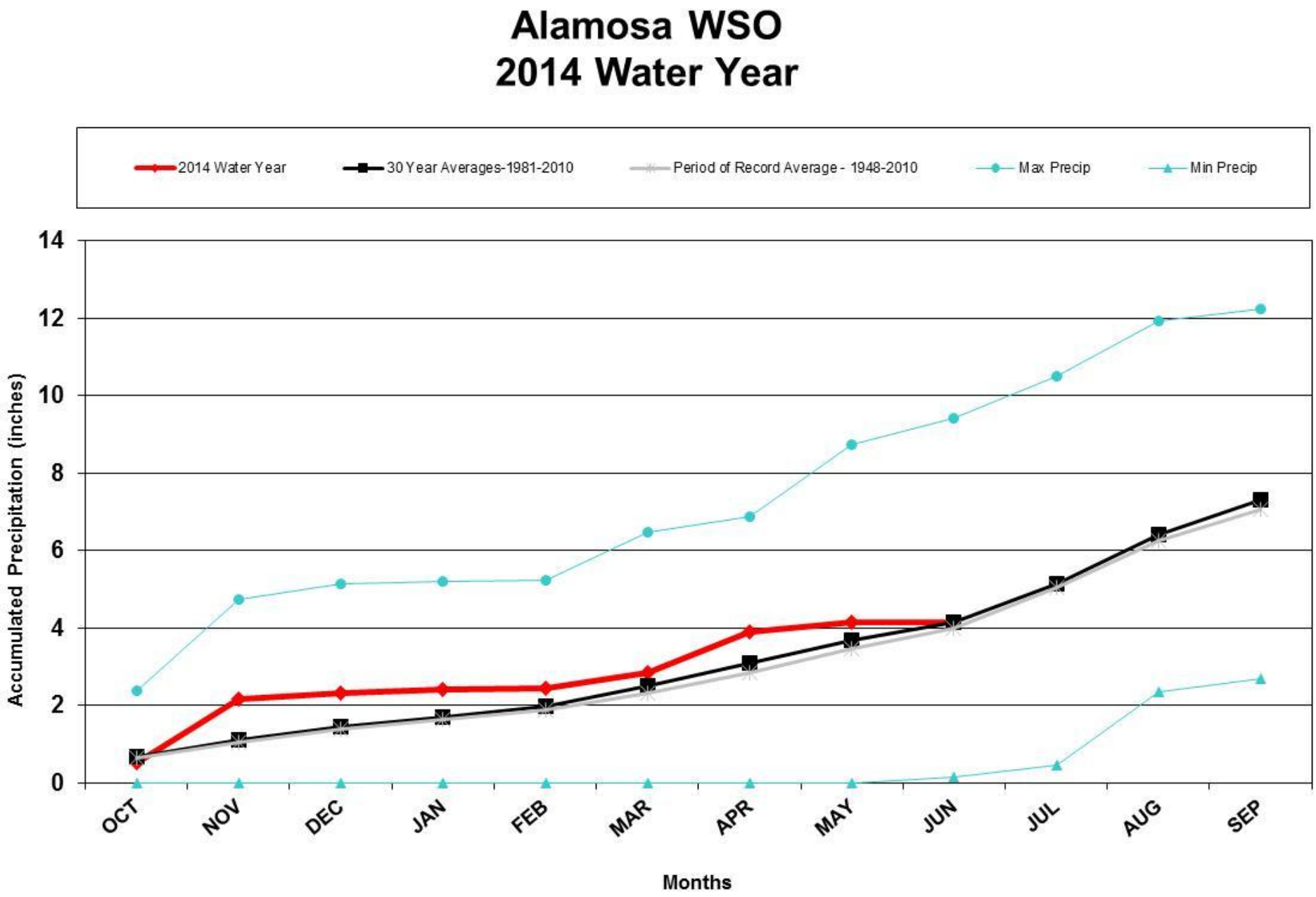
Division 3 – Mesa Verde NP



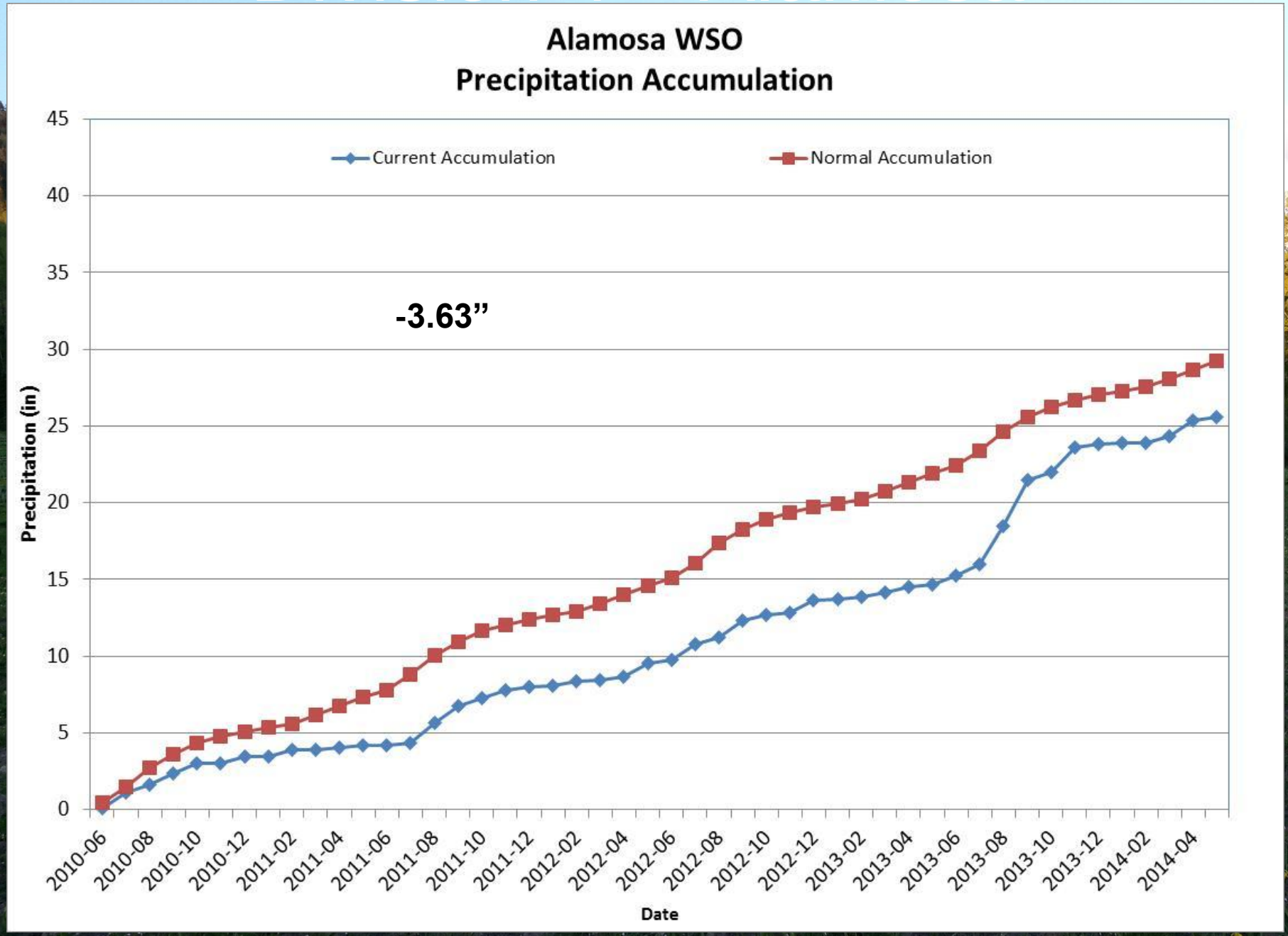
Division 3 – Mesa Verde NP



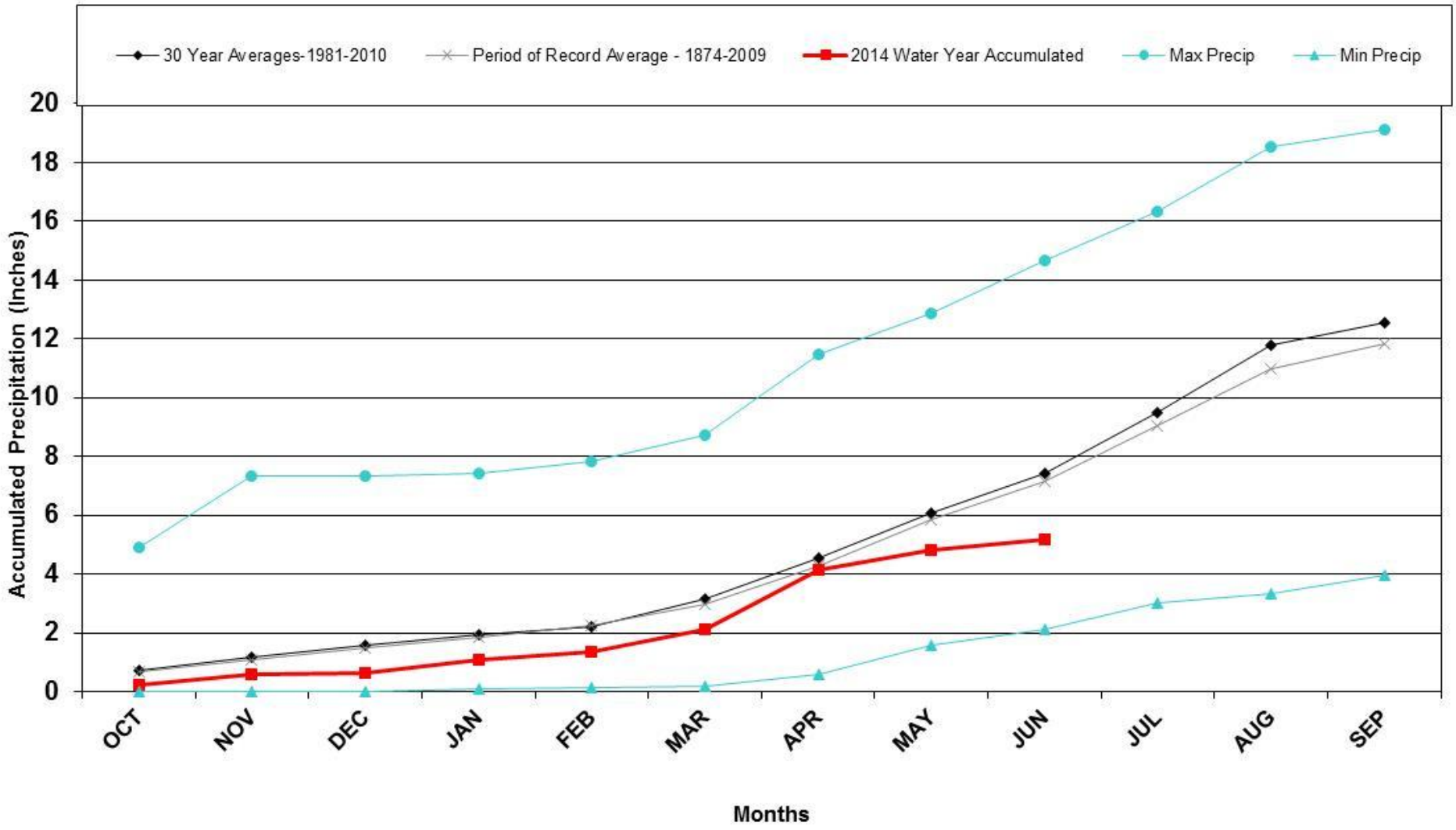
Division 4 – Alamosa



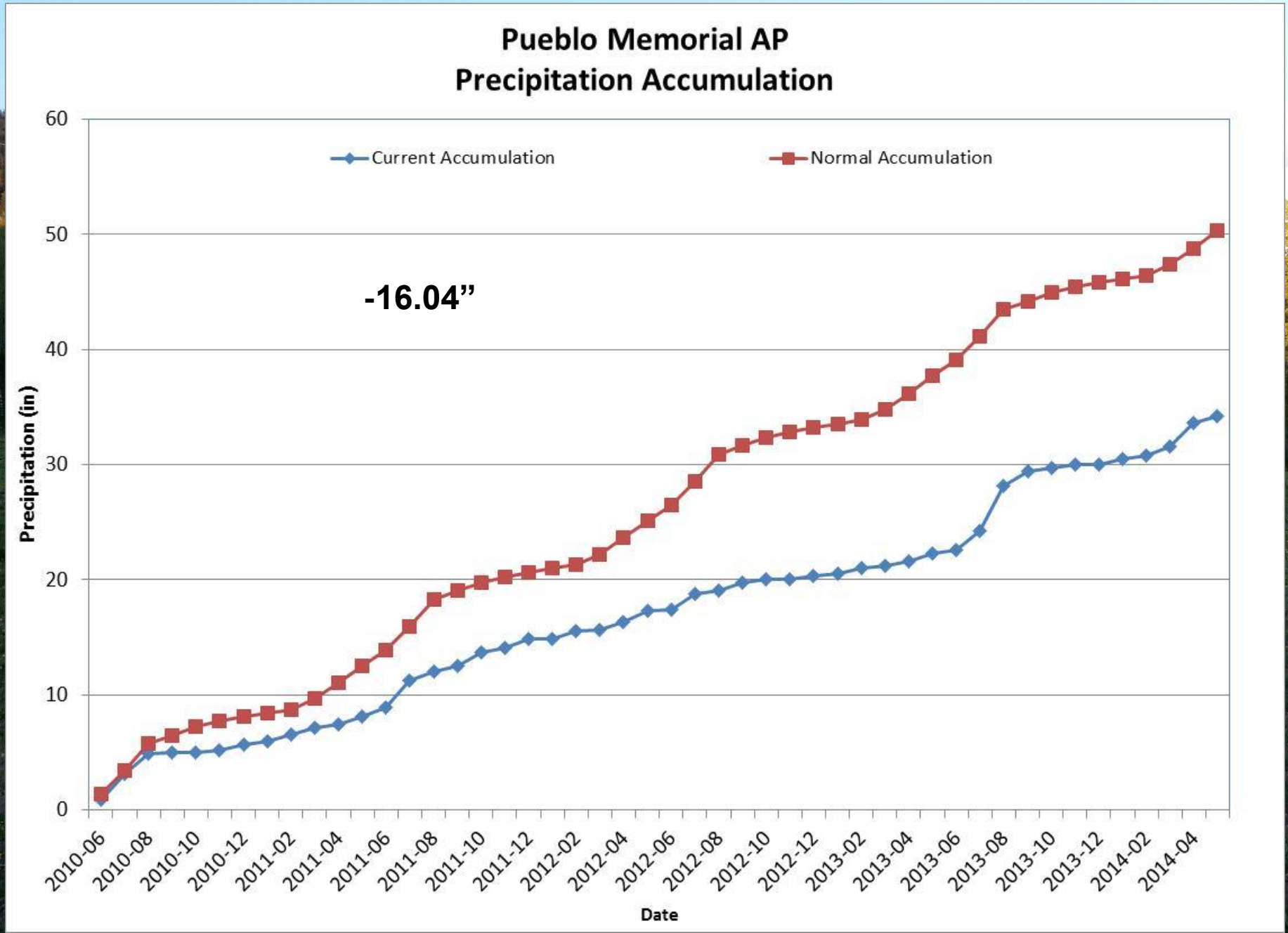
Division 4 – Alamosa



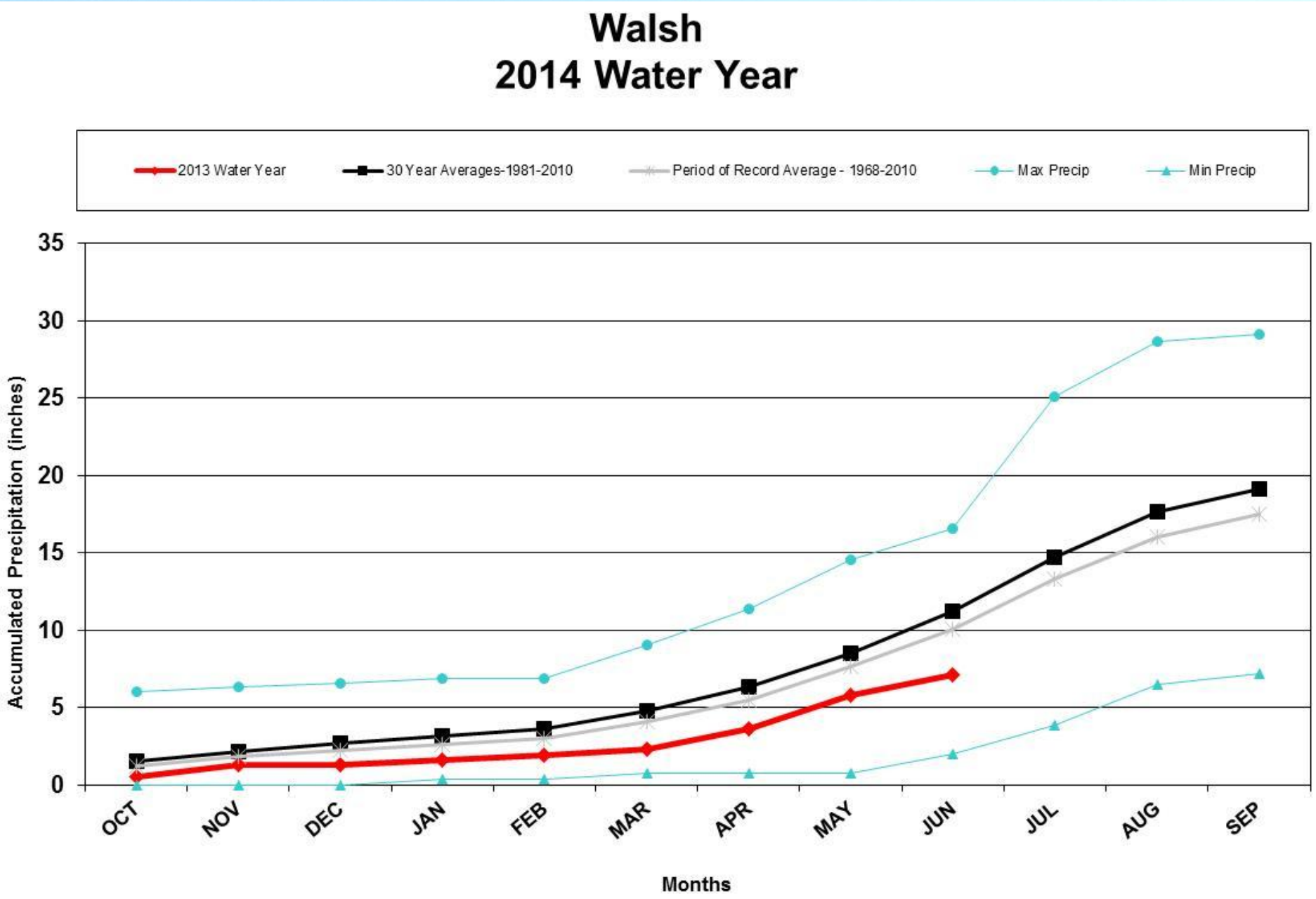
Division 5 – Pueblo



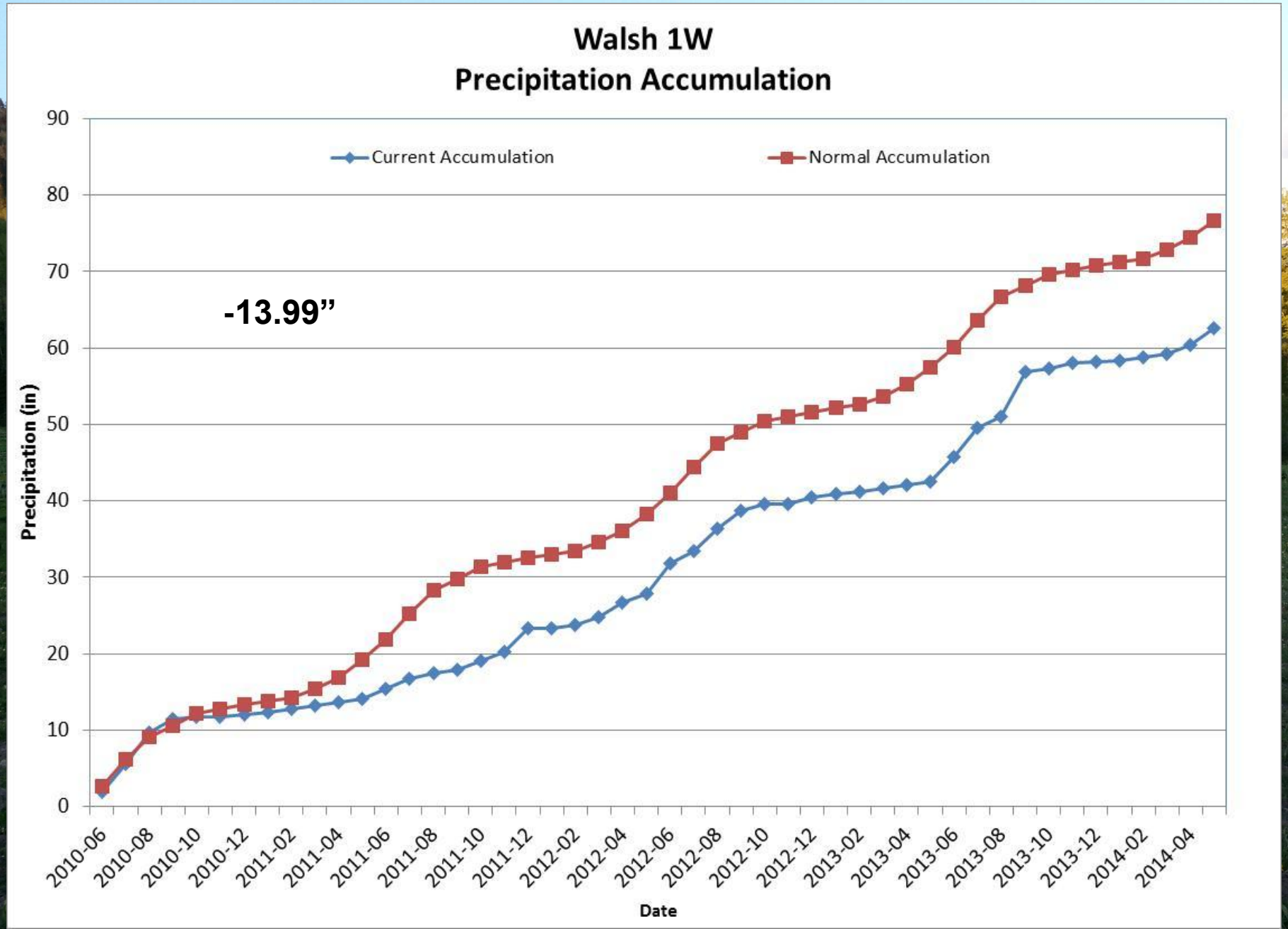
Division 5 – Pueblo



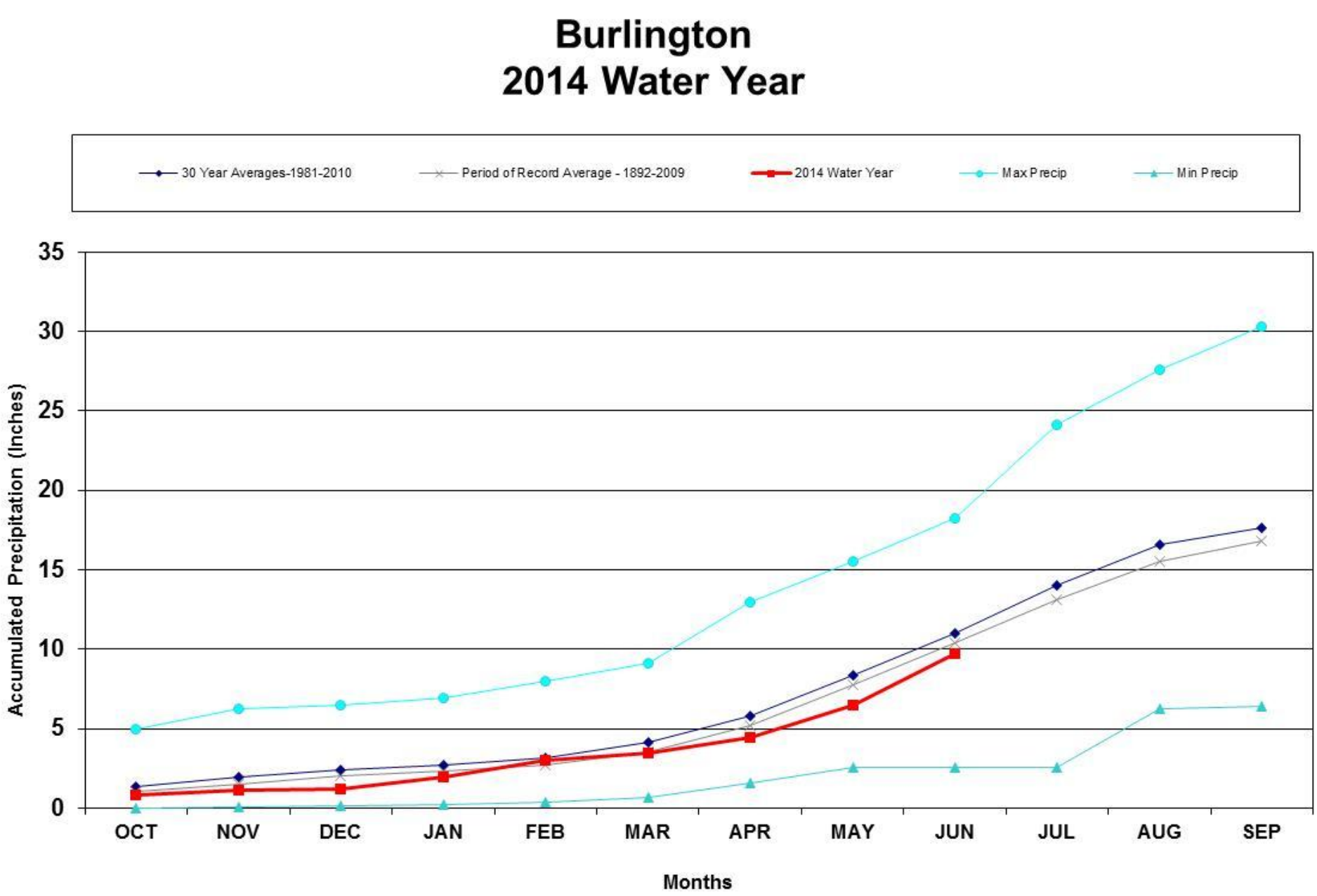
Division 6 - Walsh



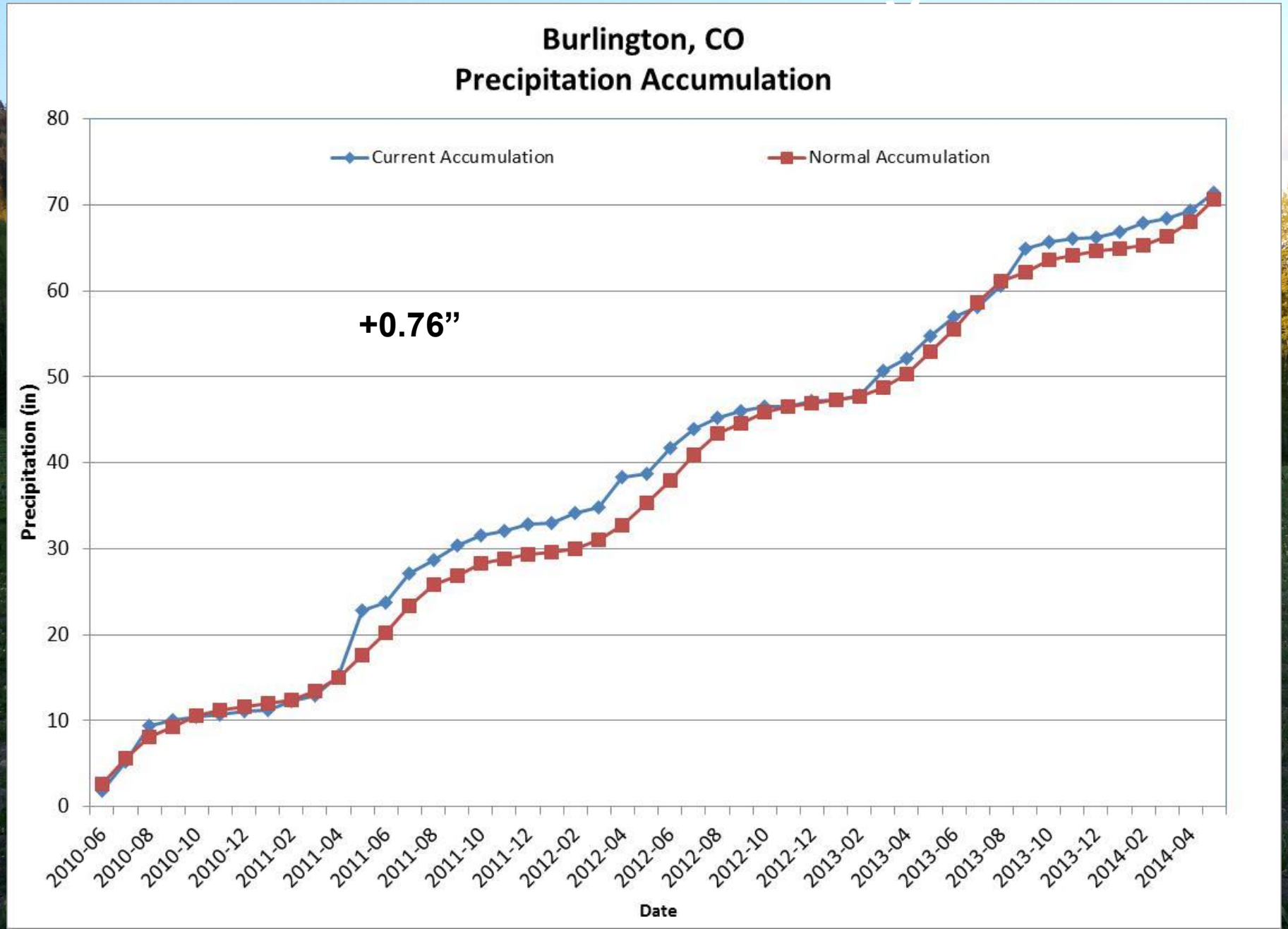
Division 6 - Walsh



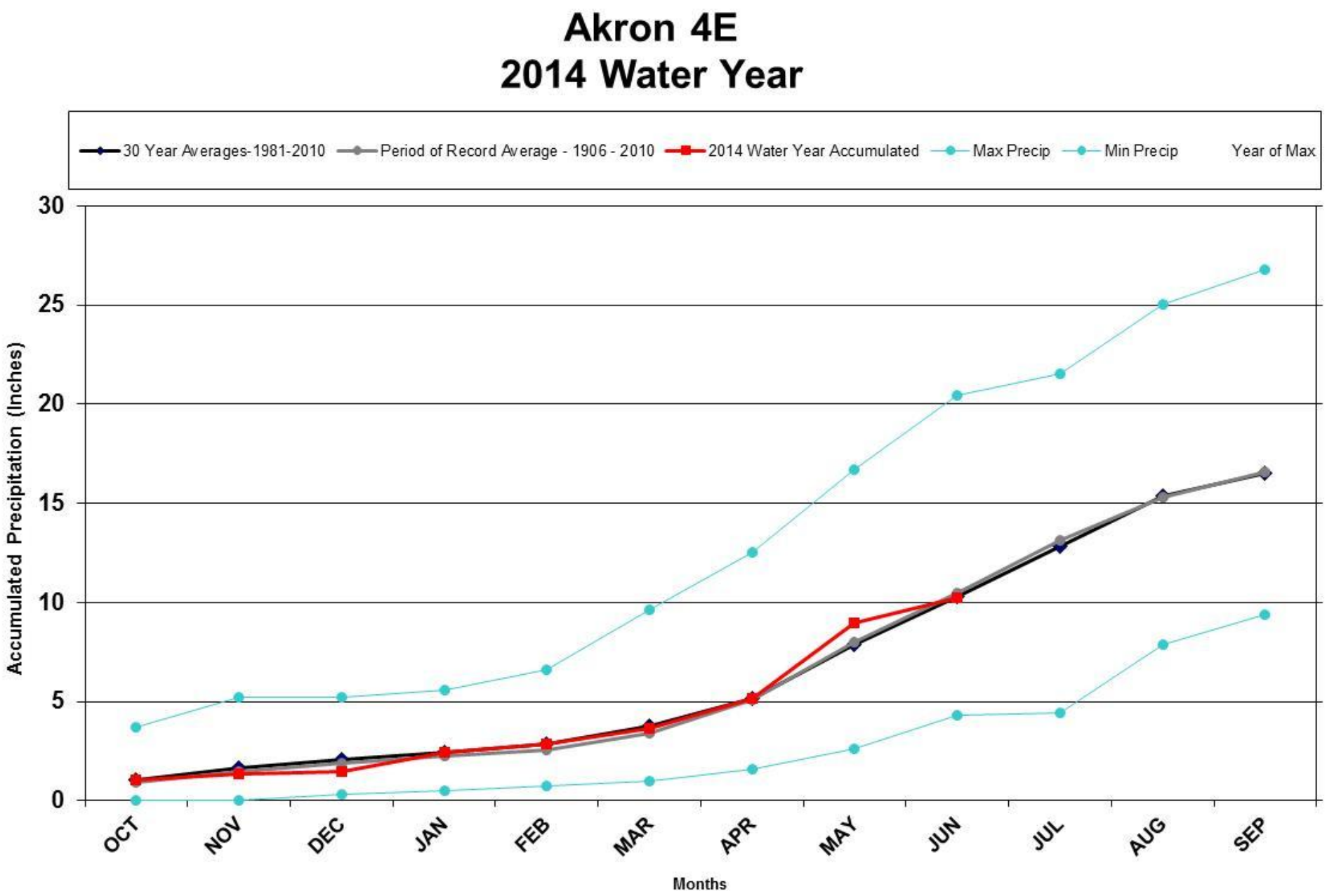
Division 6 - Burlington



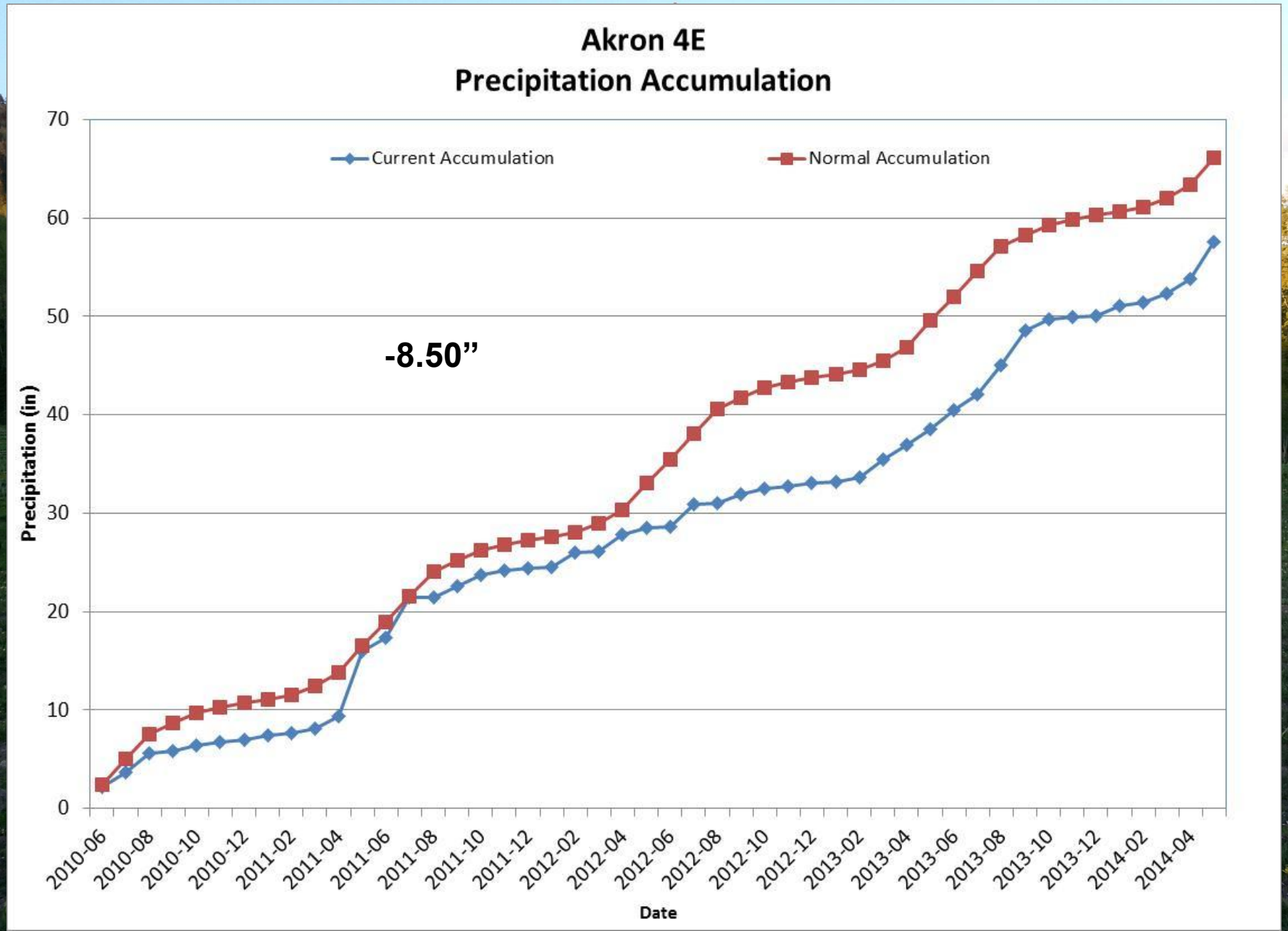
Division 6 - Burlington



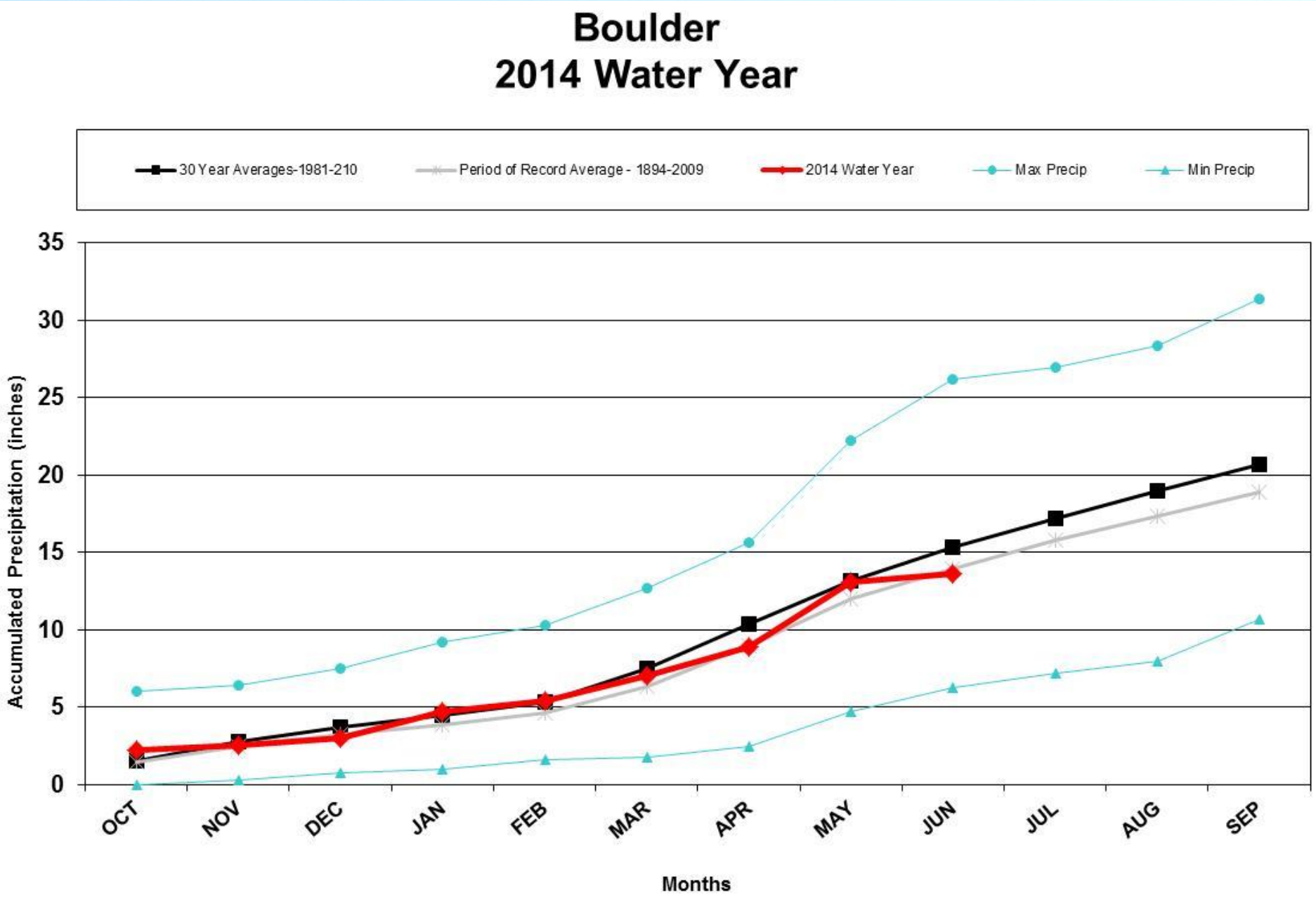
Division 7 – Akron



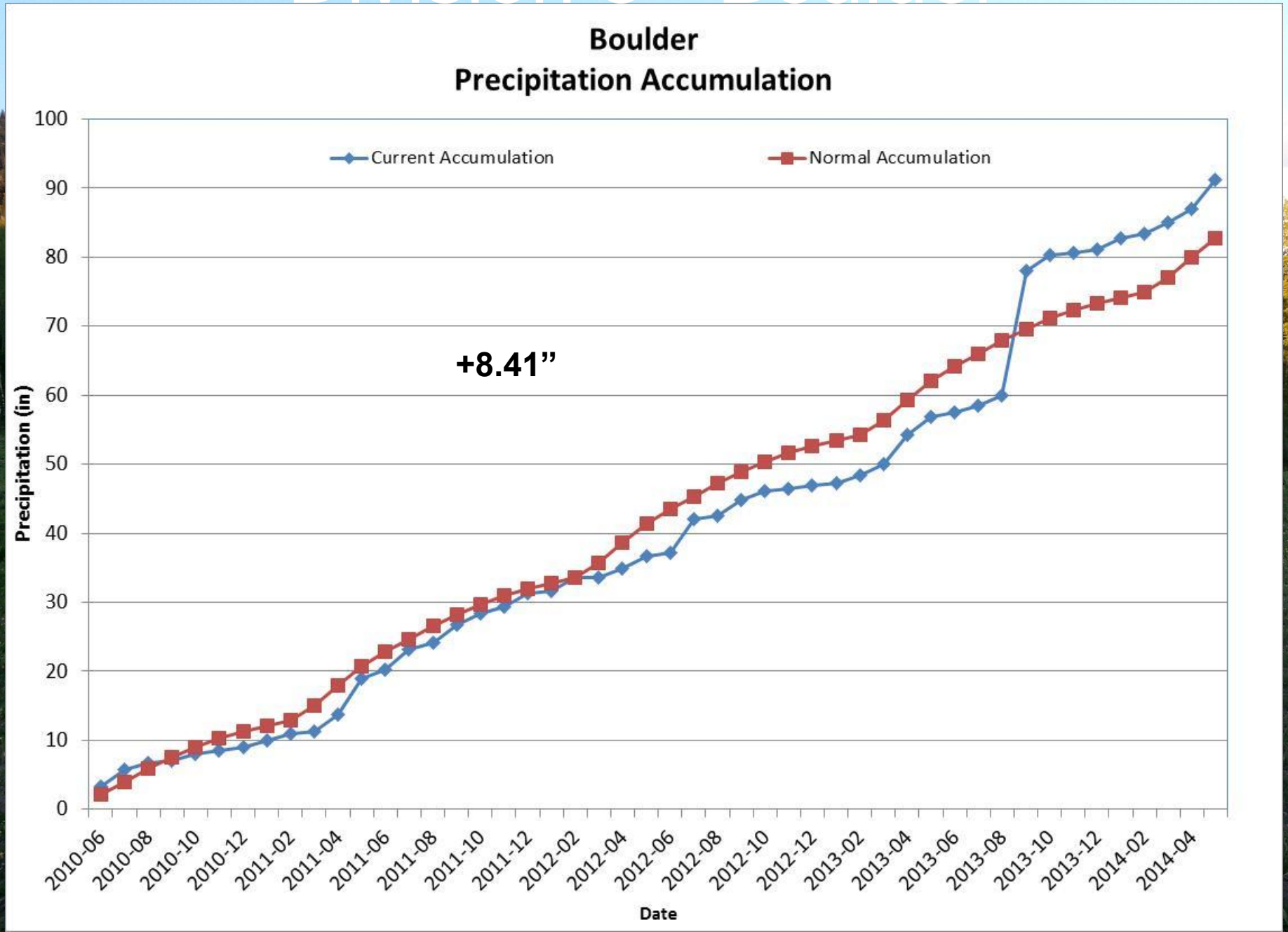
Division 7 – Akron



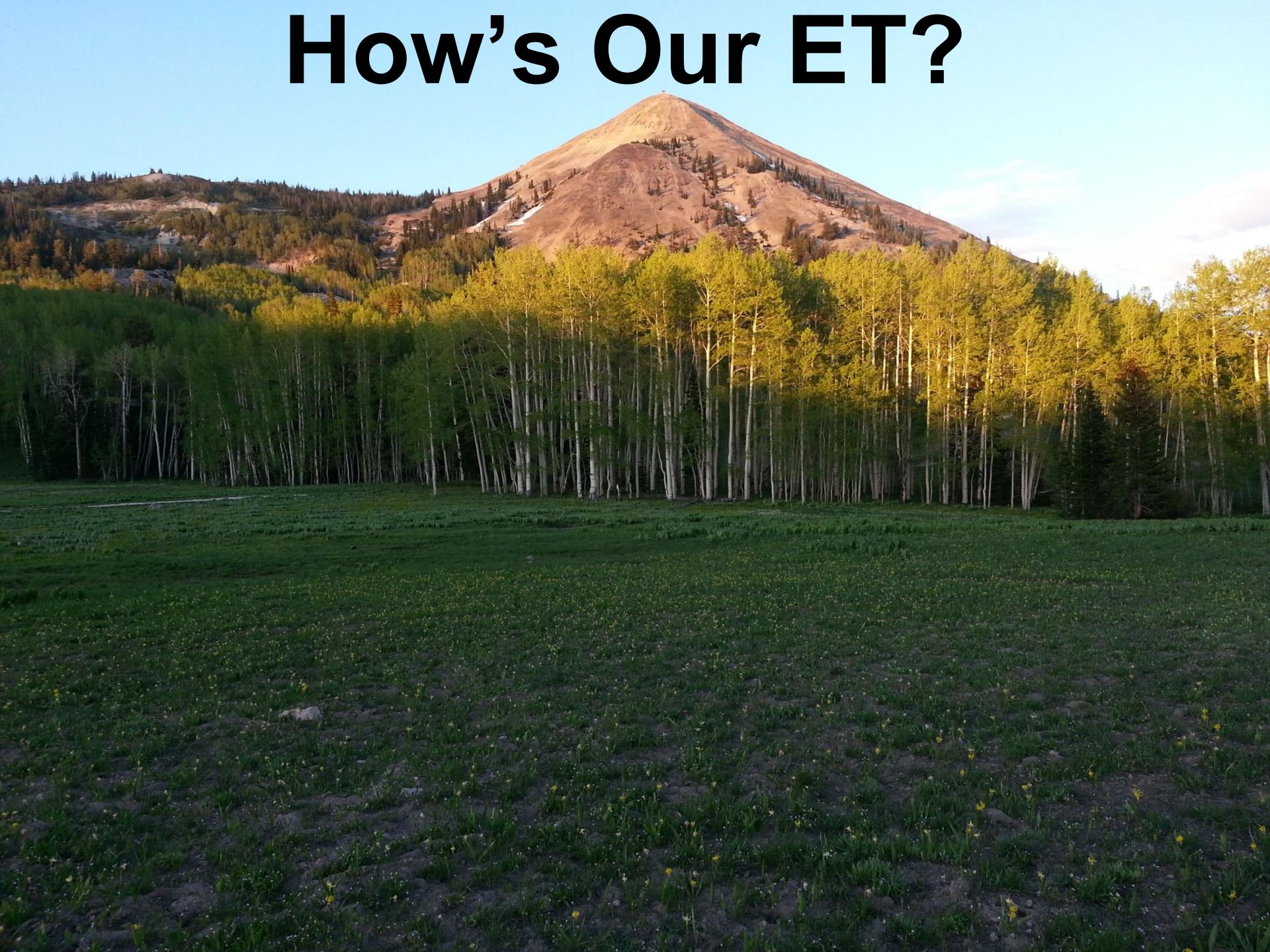
Division 8 - Boulder



Division 8 - Boulder

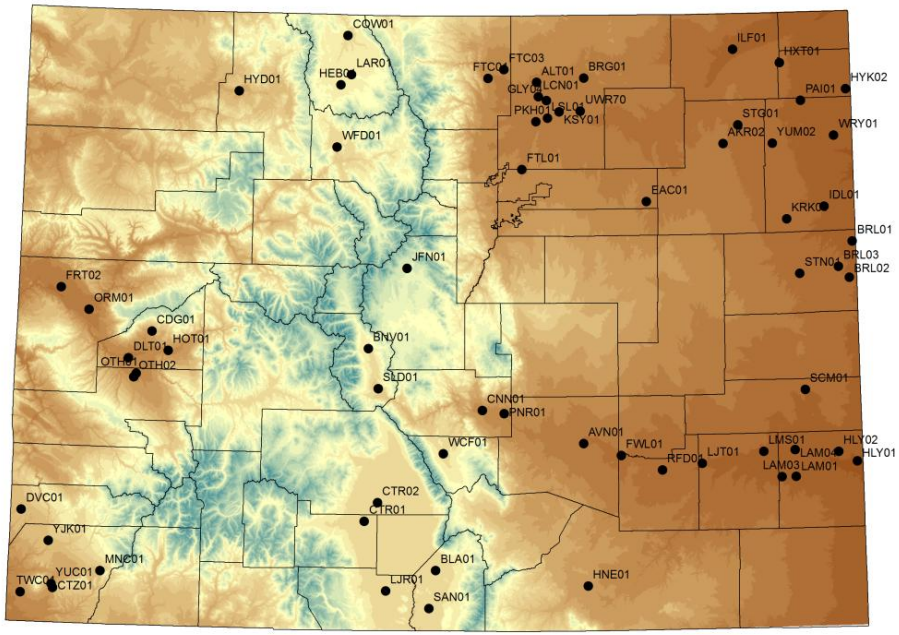


How's Our ET?

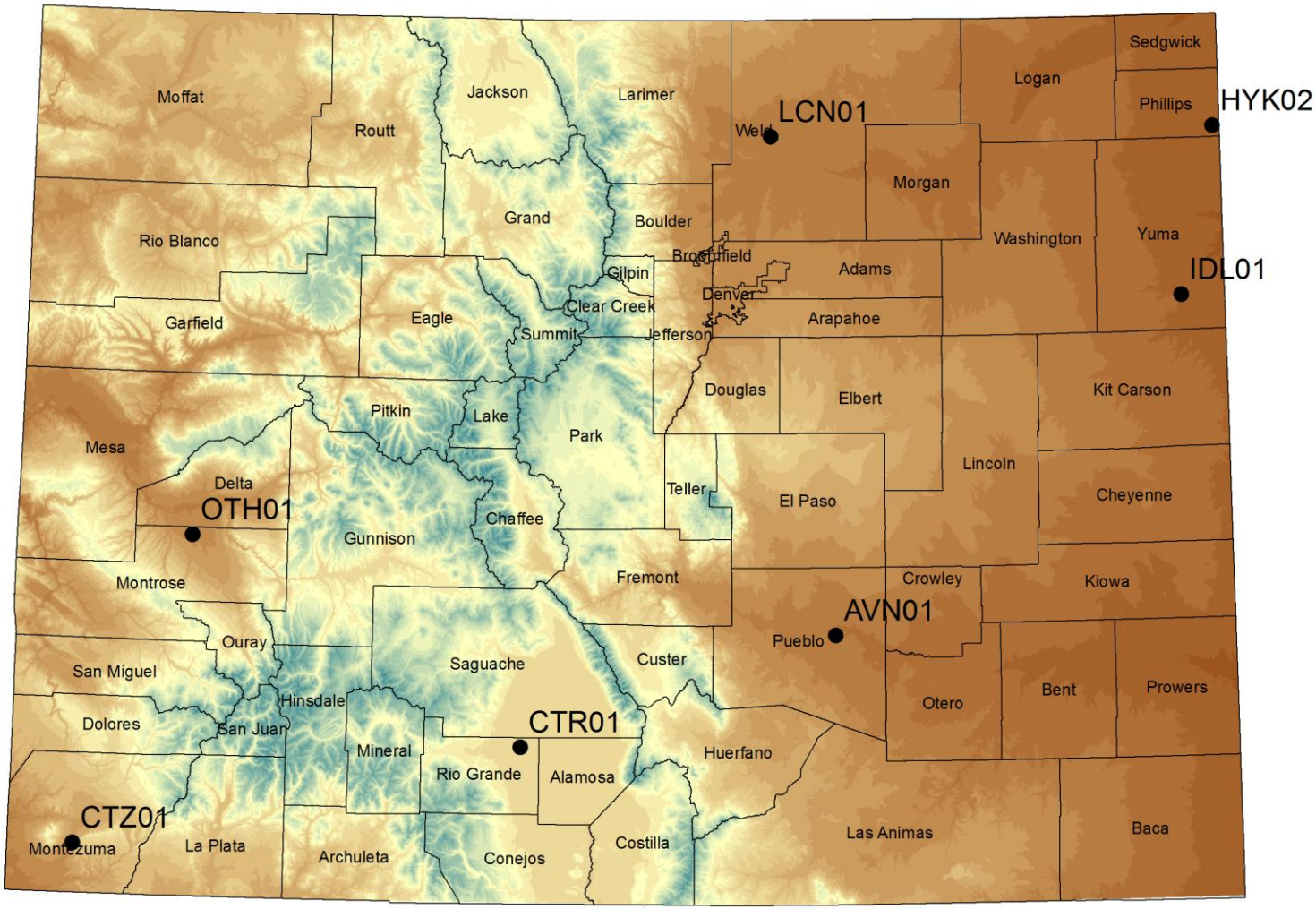


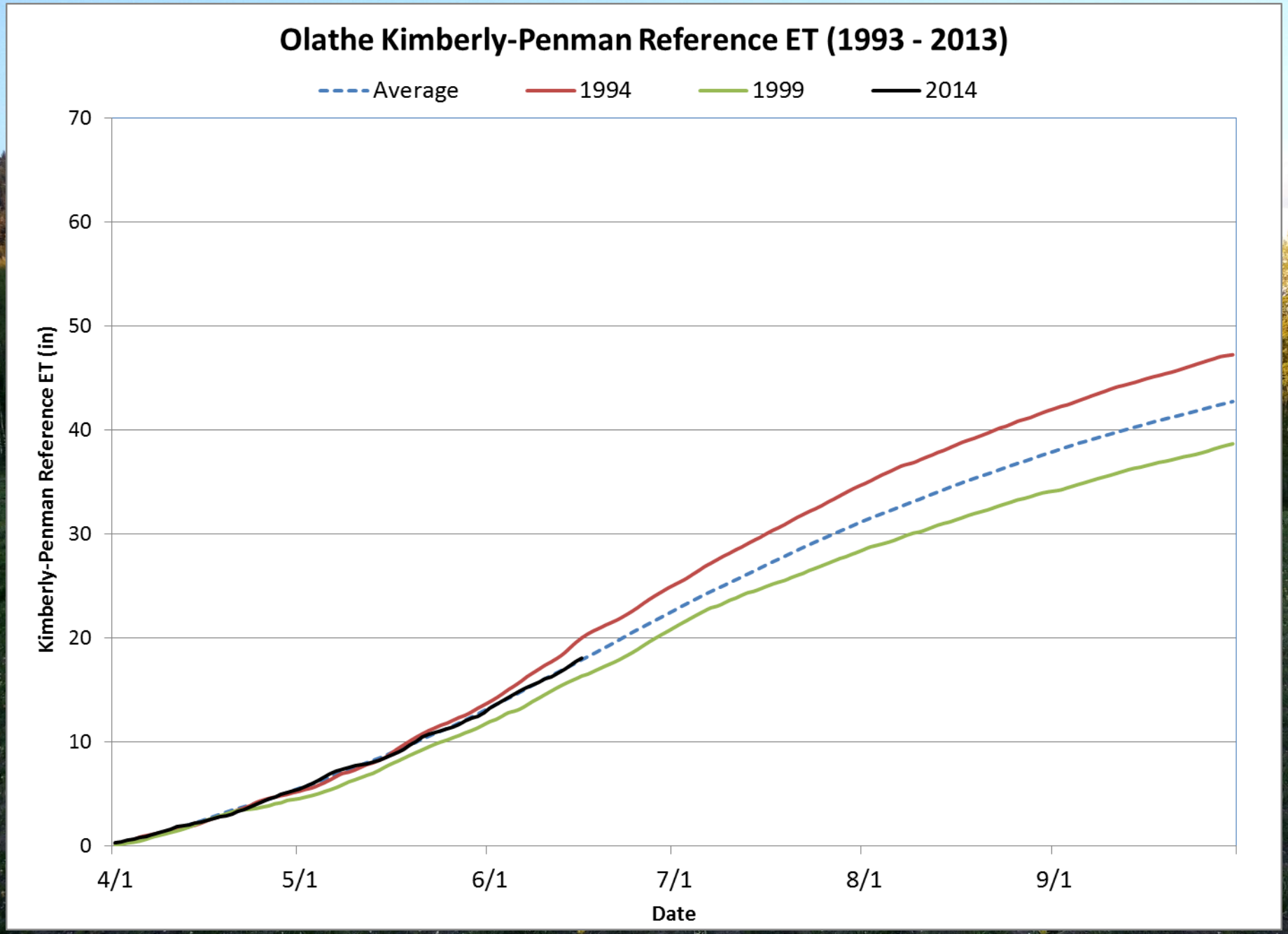
CoAgMet: the Colorado Agricultural Meteorological Network "CoAgMet"

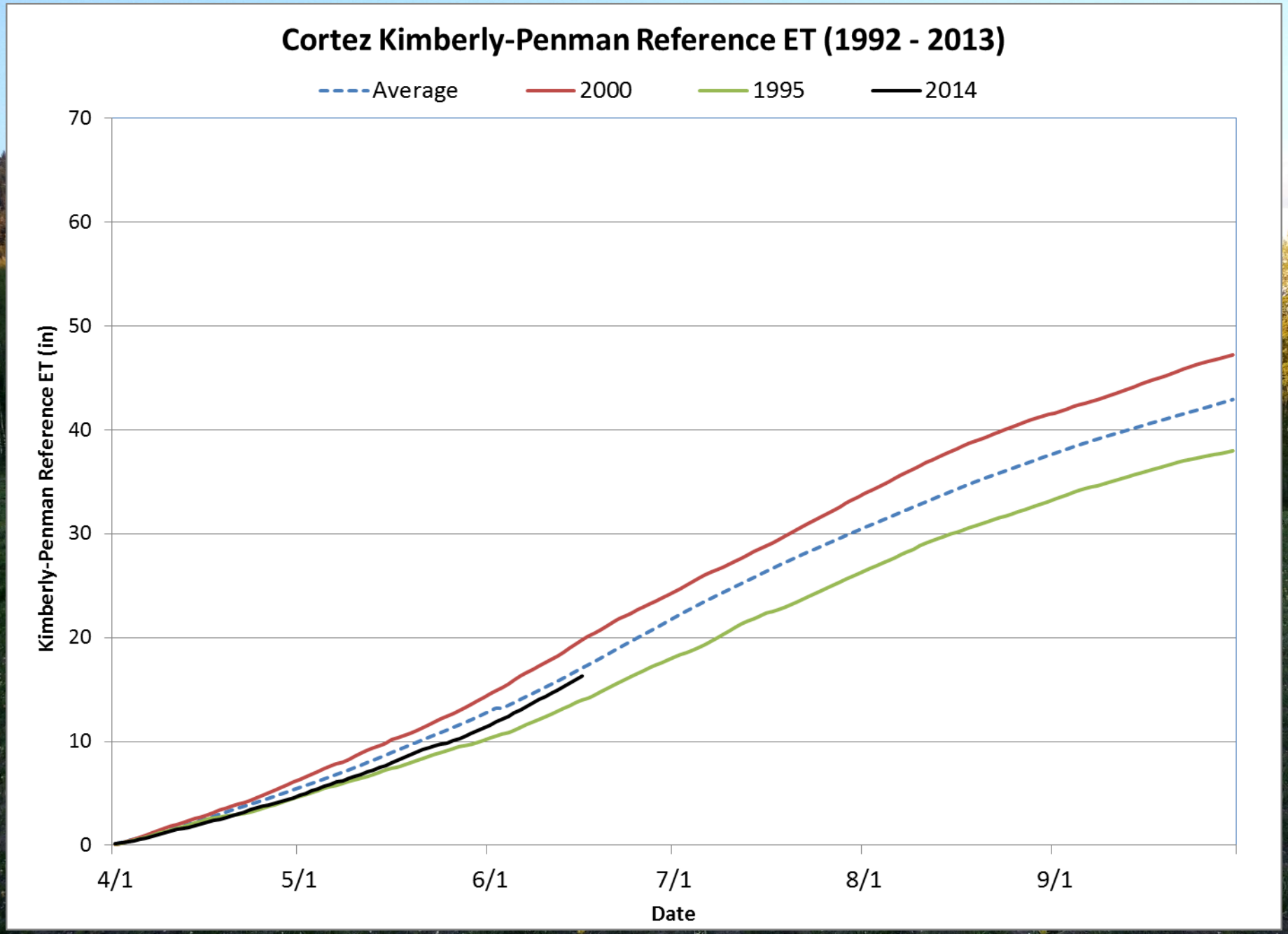
Current CoAgMet Station Locations - July 2012

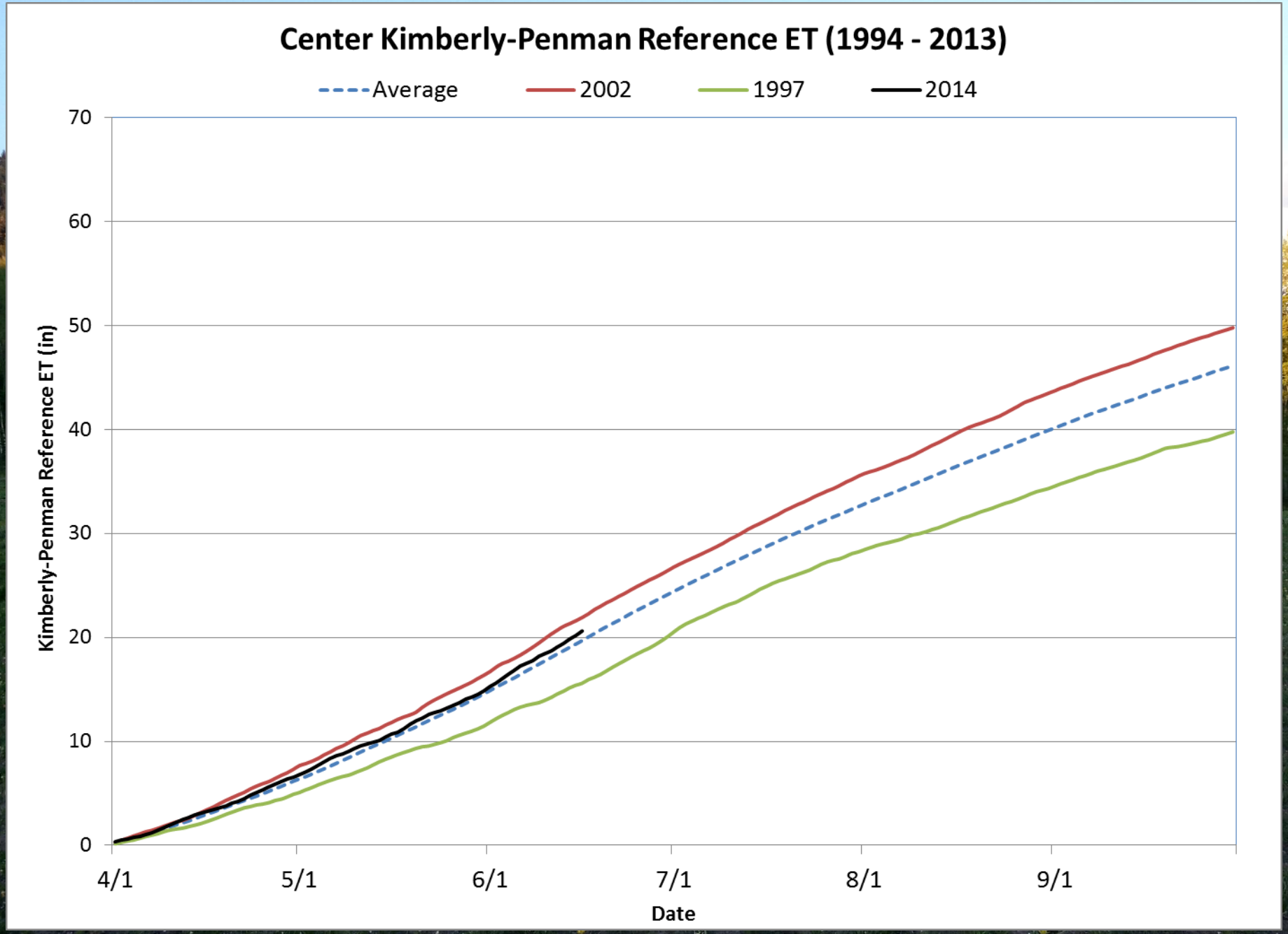


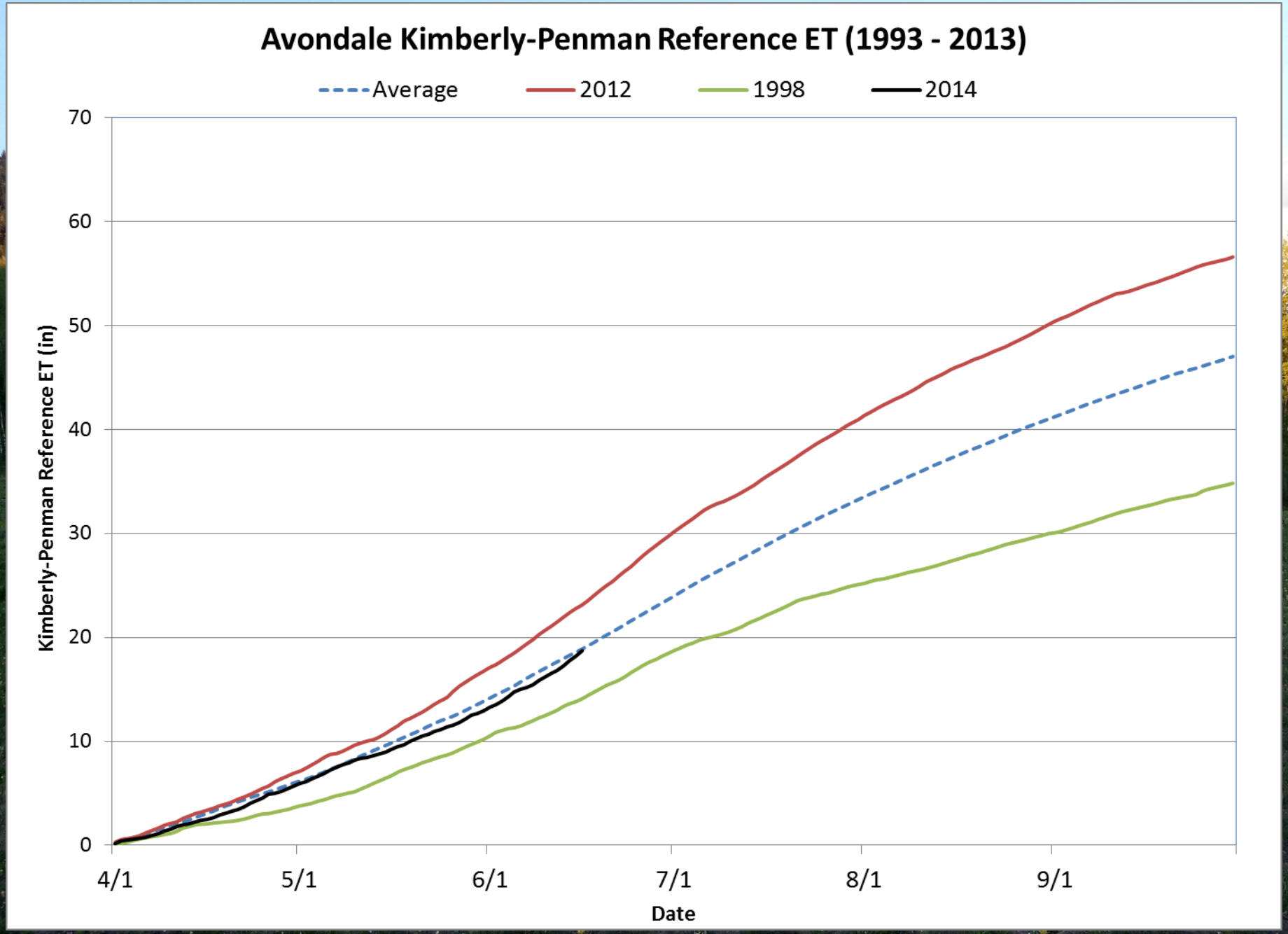
Selected Reference Evapotranspiration Stations

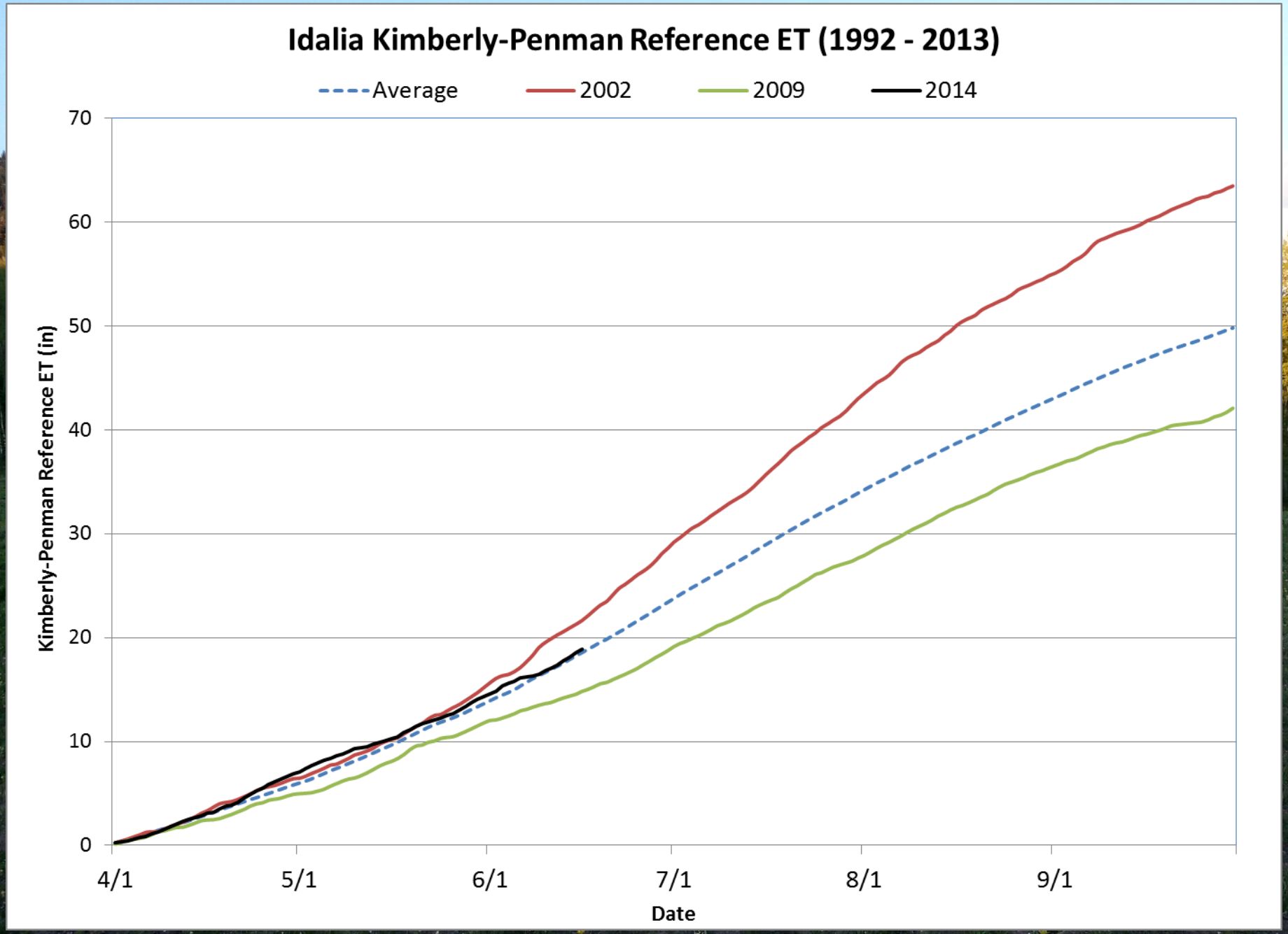


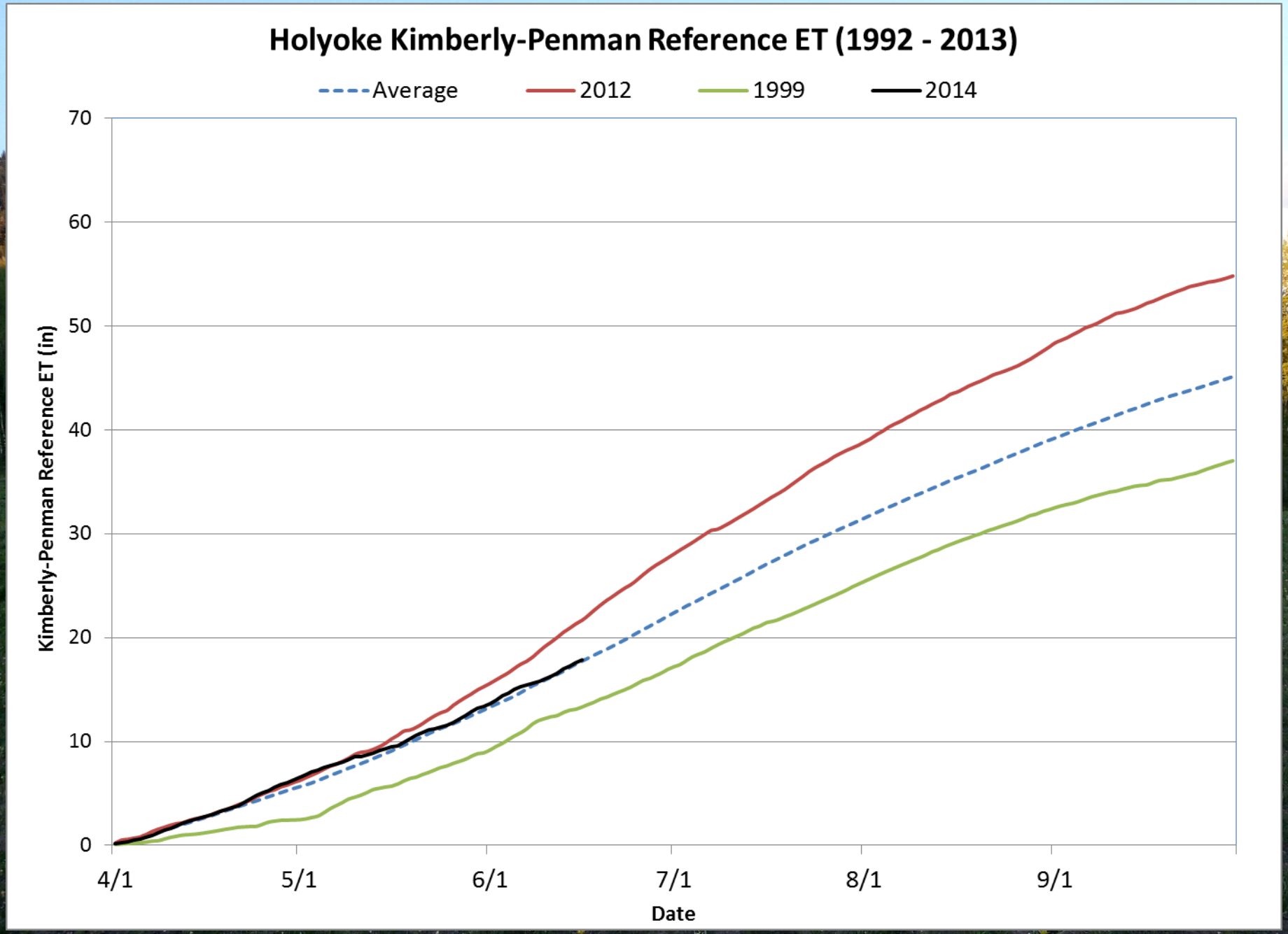

Olathe Kimberly-Penman Reference ET (1993 - 2013)
Average
1994
1999
2014
70
60
50
40
30
20
10
0
Kimberly-Penman Reference ET (in)
4/1
5/1
6/1
7/1
8/1
9/1
Date

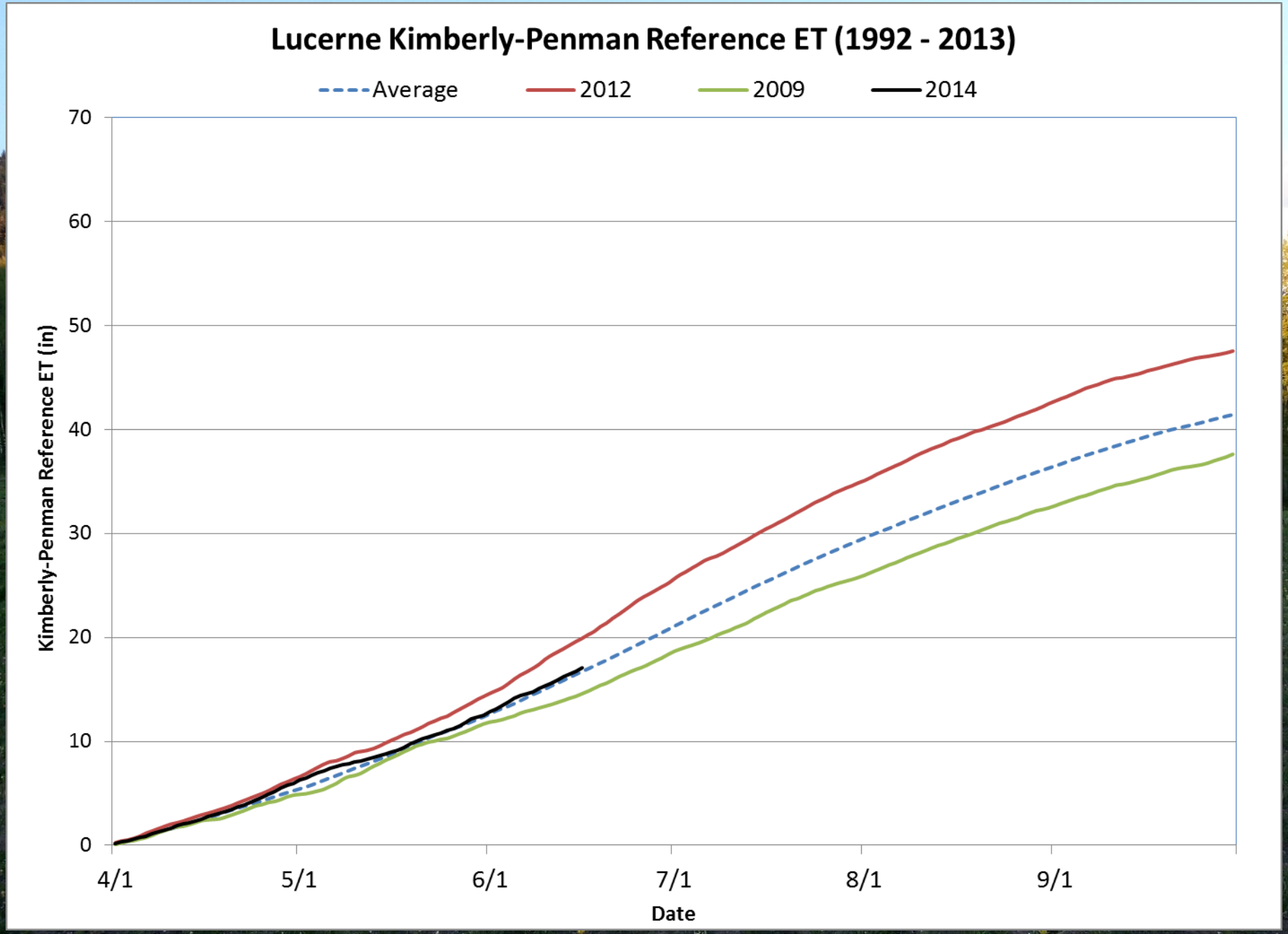

Cortez Kimberly-Penman Reference ET (1992 - 2013)
Average
2000
1995
2014
Kimberly-Penman Reference ET (in)
70
60
50
40
30
20
10
0
4/1
5/1
6/1
7/1
8/1
9/1
Date


Center Kimberly-Penman Reference ET (1994 - 2013)
Average
2002
1997
2014
70
60
50
40
30
20
10
0
Kimberly-Penman Reference ET (in)
4/1
5/1
6/1
7/1
8/1
9/1
Date


Avondale Kimberly-Penman Reference ET (1993 - 2013)
Average
2012
1998
2014
70
60
50
40
30
20
10
0
Kimberly-Penman Reference ET (in)
4/1
5/1
6/1
7/1
8/1
9/1
Date


Idalia Kimberly-Penman Reference ET (1992 - 2013)
Average
2002
2009
2014
70
60
50
40
30
20
10
0
Kimberly-Penman Reference ET (in)
4/1
5/1
6/1
7/1
8/1
9/1
Date


Holyoke Kimberly-Penman Reference ET (1992 - 2013)
Average
2012
1999
2014
70
60
50
40
30
20
10
0
Kimberly-Penman Reference ET (in)
4/1
5/1
6/1
7/1
8/1
9/1
Date

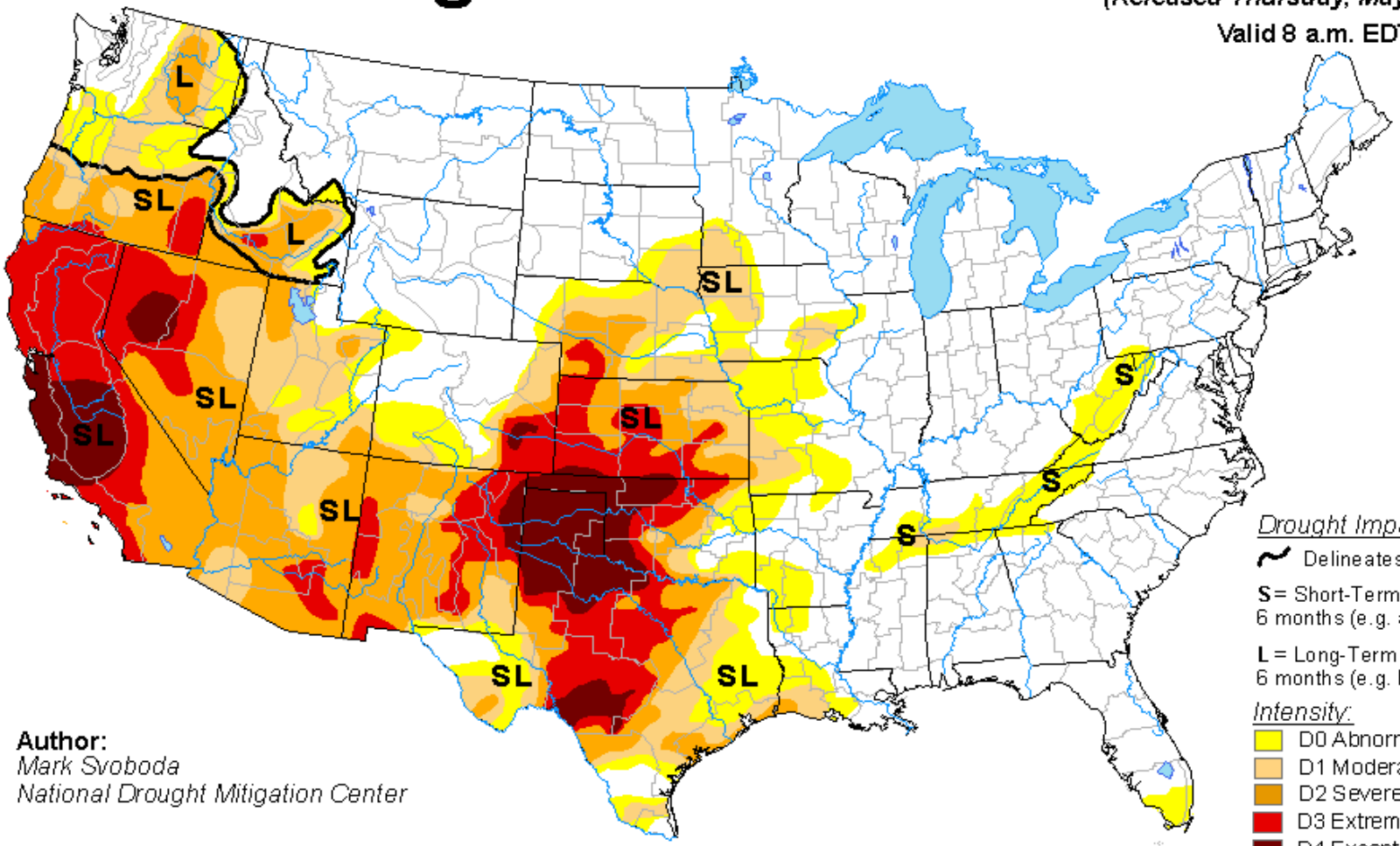

Lucerne Kimberly-Penman Reference ET (1992 - 2013)
Average
2012
2009
2014
70
60
50
40
30
20
10
0
Kimberly-Penman Reference ET (in)
4/1
5/1
6/1
7/1
8/1
9/1
Date

U.S. Drought Monitor

May 13, 2014

(Released Thursday, May. 15, 2014)

Valid 8 a.m. EDT



Author:
Mark Svoboda
National Drought Mitigation Center

Drought Impact Types:

Delineates dominant impacts

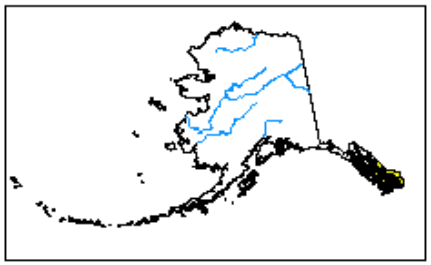
S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)

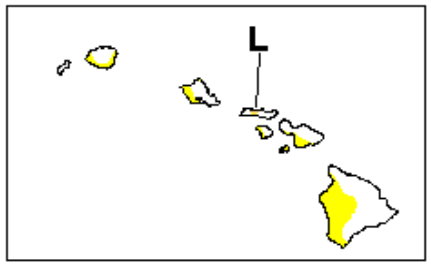
L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)

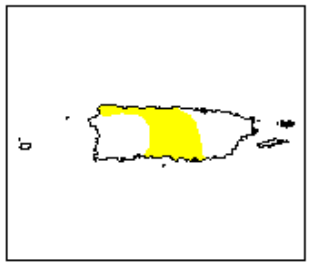
Intensity:

- 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.







USDA National Drought Mitigation Center

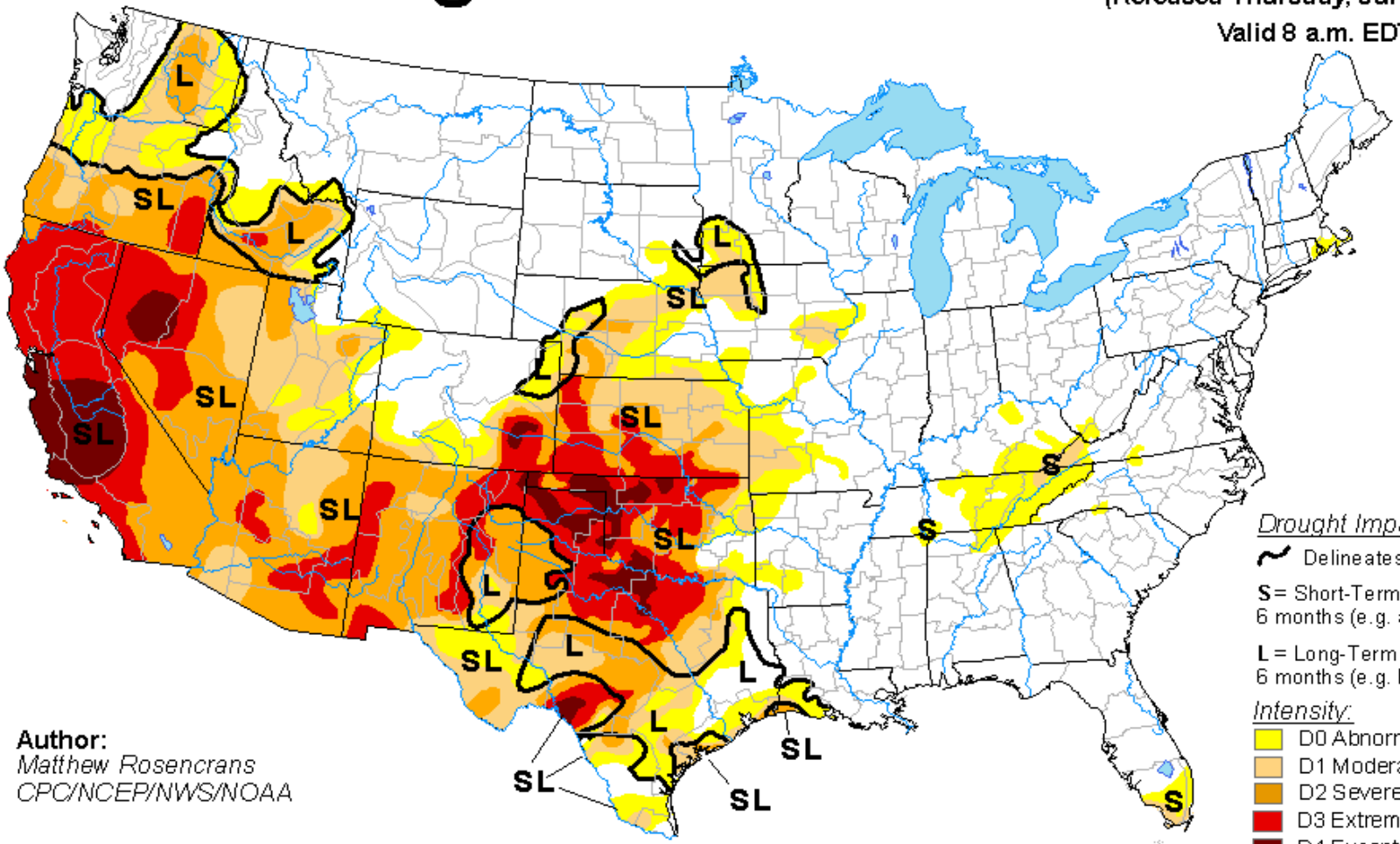
http://droughtmonitor.unl.edu/

U.S. Drought Monitor

June 10, 2014

(Released Thursday, Jun. 12, 2014)

Valid 8 a.m. EDT



Author:
Matthew Rosencrans
CPC/NCEP/NWS/NOAA

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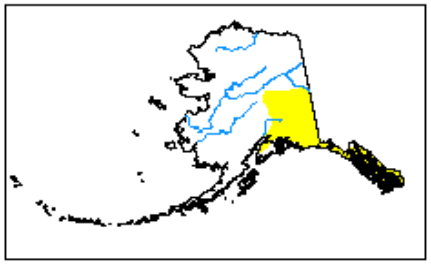
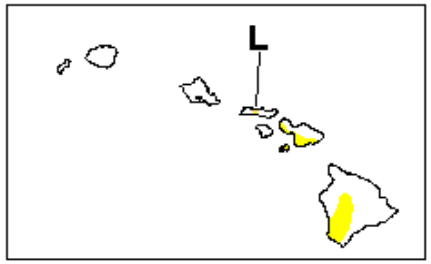
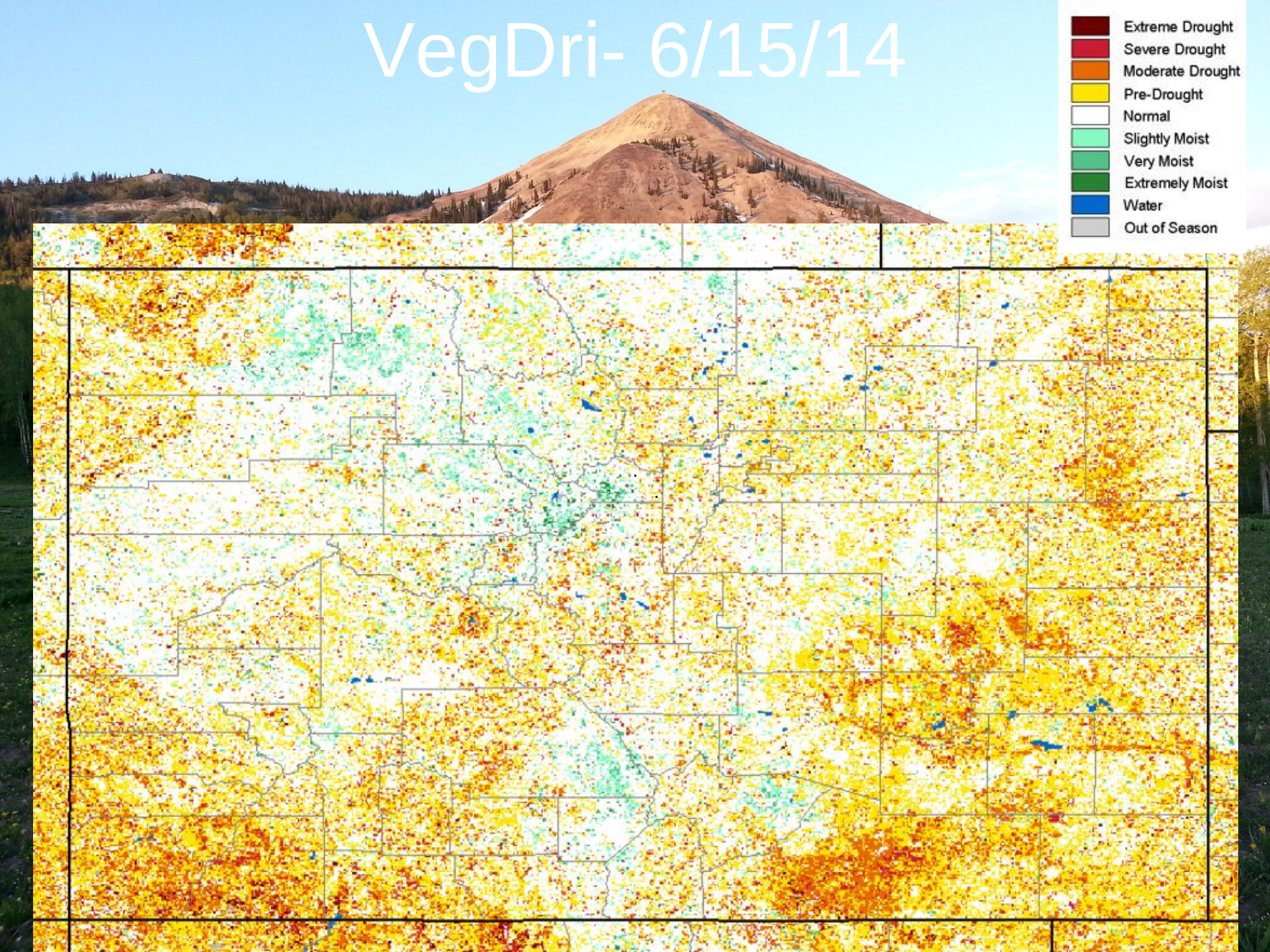




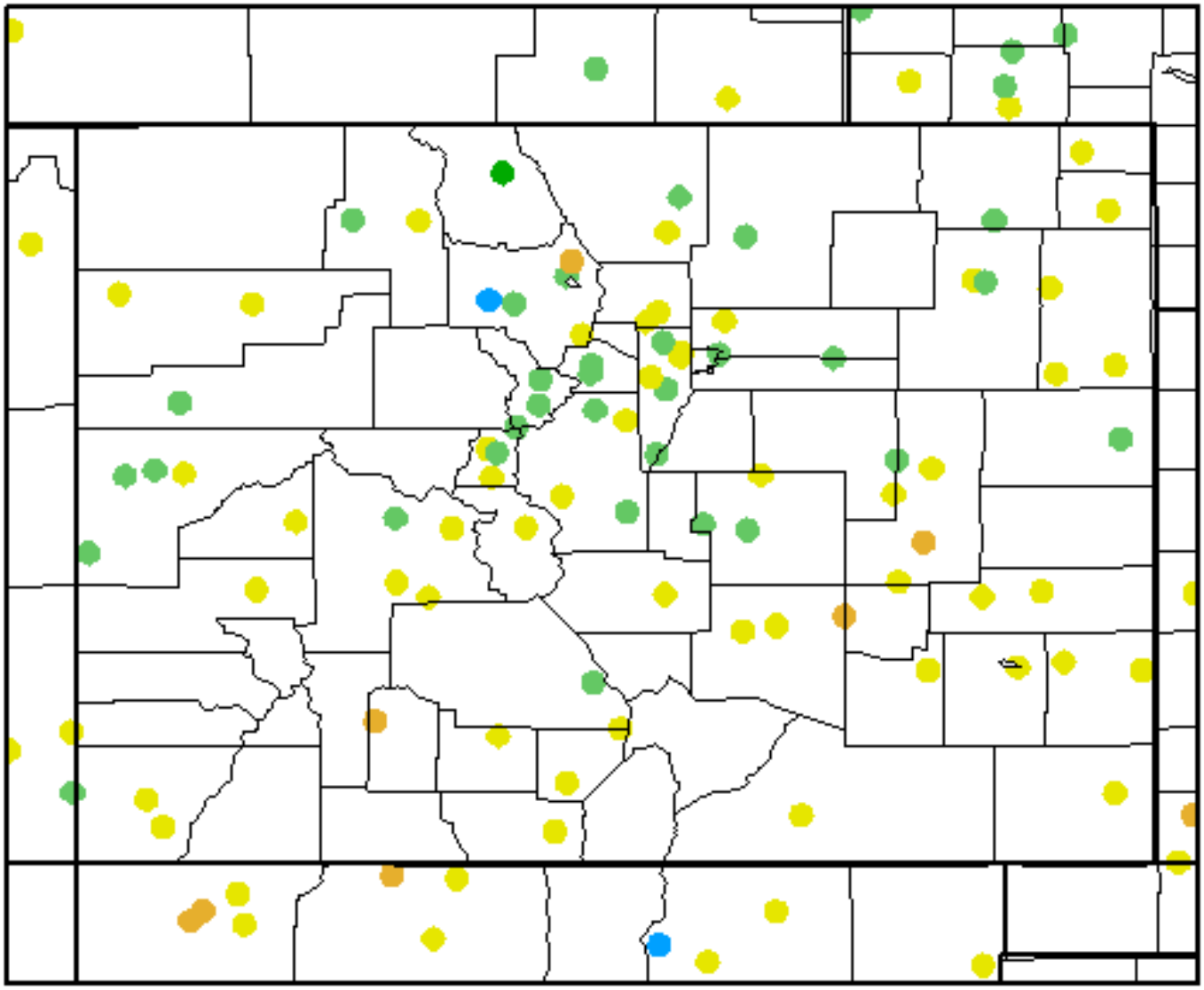
USDA National Drought Mitigation Center

http://droughtmonitor.unl.edu/

VegDri- 6/15/14



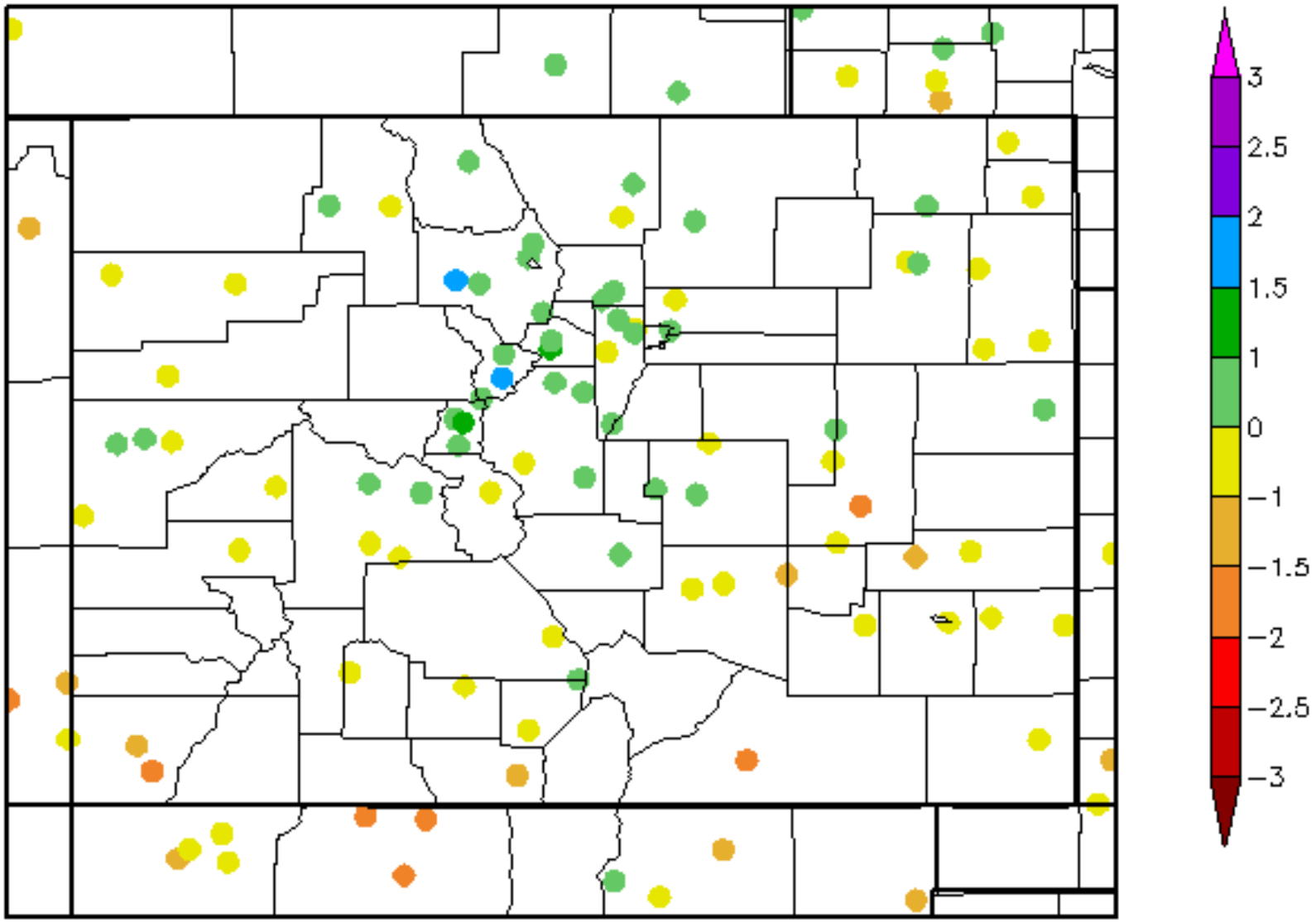
90 Day SPI
3/19/2014 – 6/16/2014



Generated 6/17/2014 at HPRCC using provisional data.

Regional Climate Centers

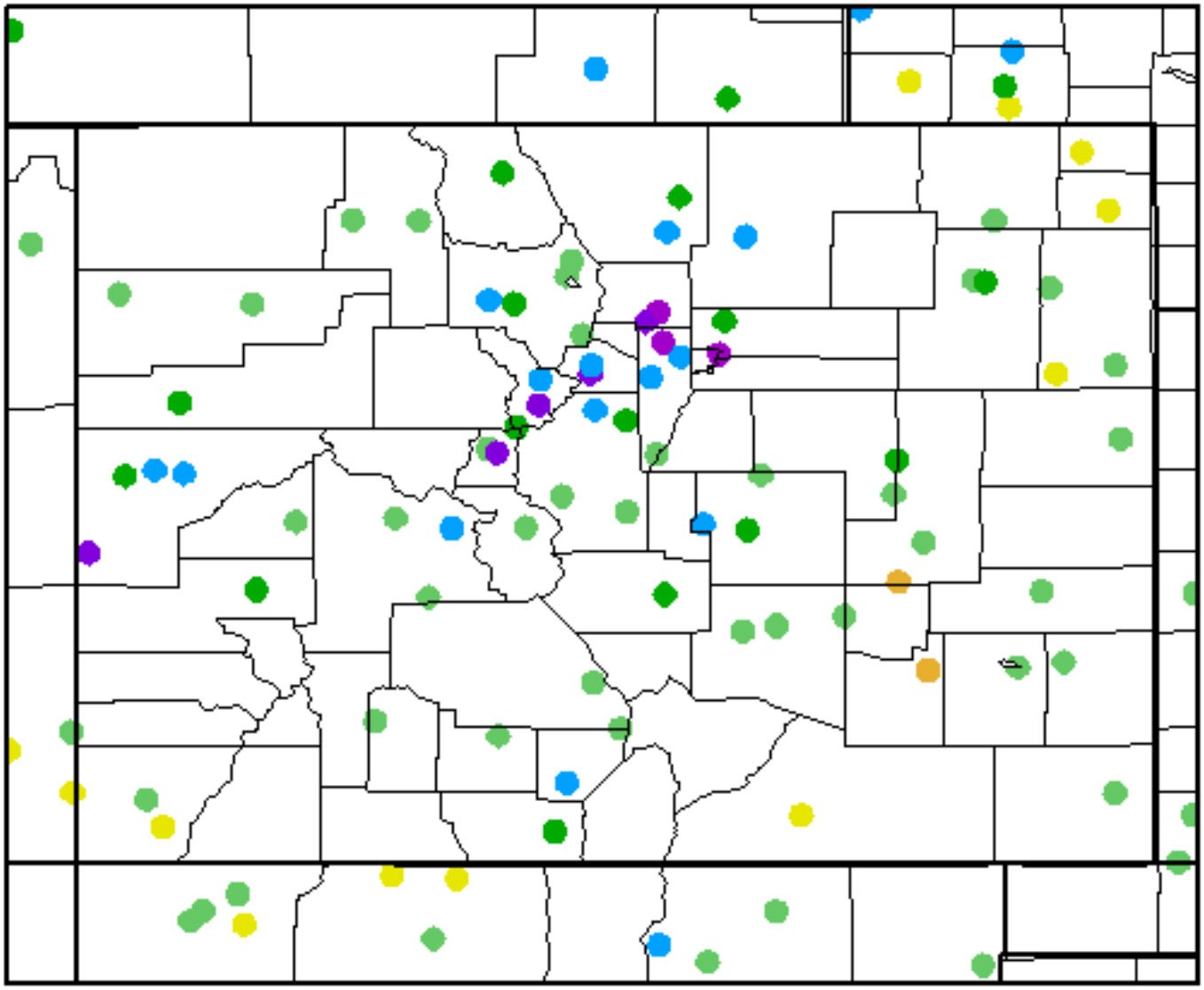
6 Month SPI
12/17/2013 – 6/16/2014



Generated 6/17/2014 at HPRCC using provisional data.

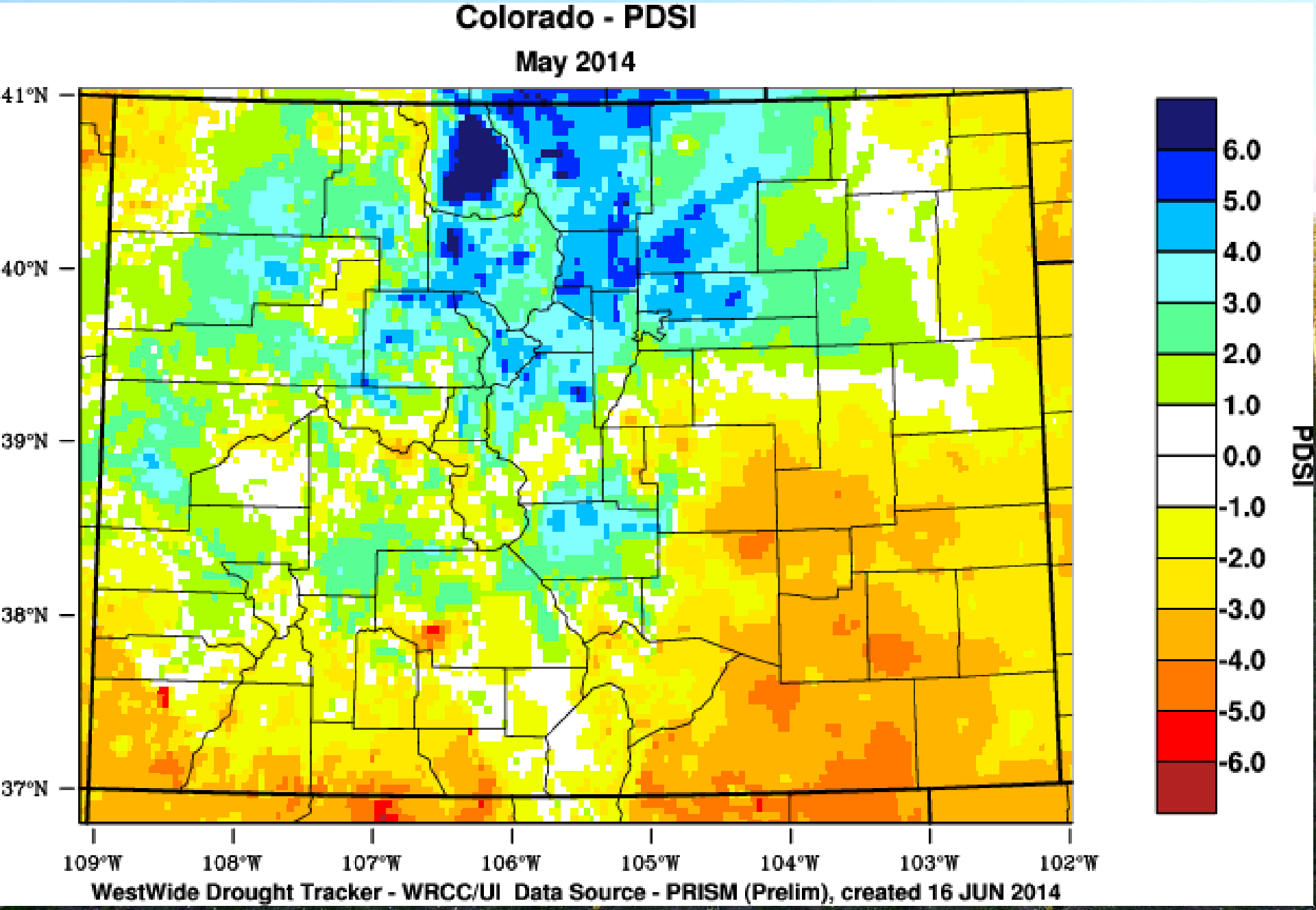
Regional Climate Centers

12 Month SPI
6/17/2013 – 6/16/2014



Generated 6/17/2014 at HPRCC using provisional data.

Regional Climate Centers


Colorado - PDSI
May 2014
41°N
40°N
39°N
38°N
37°N
109°W
108°W
107°W
106°W
105°W
104°W
103°W
102°W
6.0
5.0
4.0
3.0
2.0
1.0
0.0
-1.0
-2.0
-3.0
-4.0
-5.0
-6.0
PDSI
WestWide Drought Tracker - WRCC/UI Data Source - PRISM (Prelim), created 16 JUN 2014

Colorado Climate Center

Data and Power Point Presentations available for downloading

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

COLORADO CLIMATE CENTER

Colorado State University
Knowledge to Go Places