

Colorado Climate Center – *WATF Climate Update*

Becky Bolinger

Water Availability Task Force
January 18, 2018



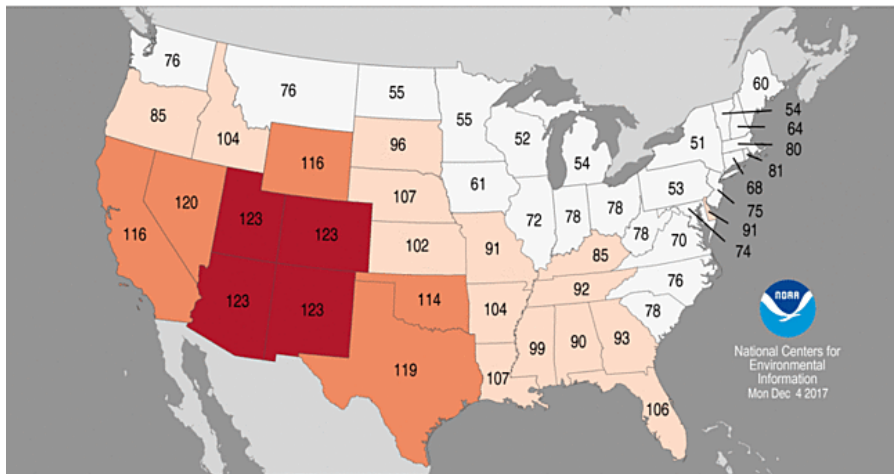
Colorado State University



Water Year 2018 – Temperature

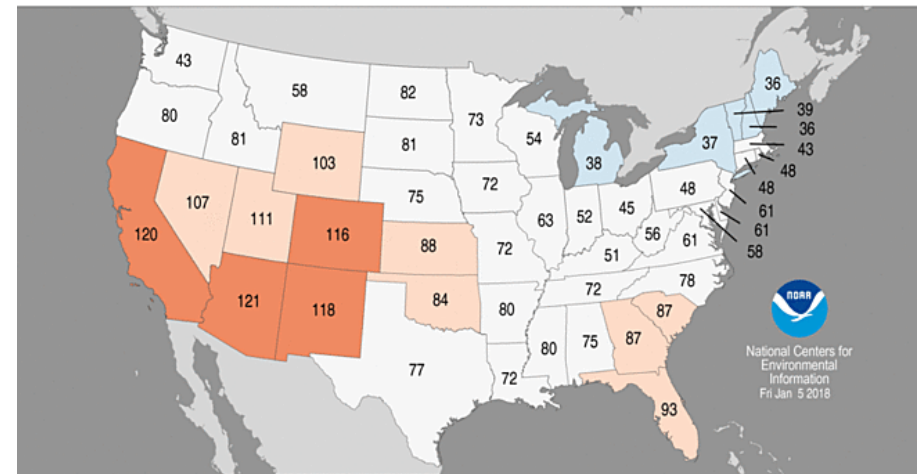


Statewide Average Temperature Ranks
November 2017
Period: 1895-2017



- Record Coldest (1)
- Much Below Average
- Below Average
- Near Average
- Above Average
- Much Above Average
- Record Warmest (123)

Statewide Average Temperature Ranks
December 2017
Period: 1895-2017

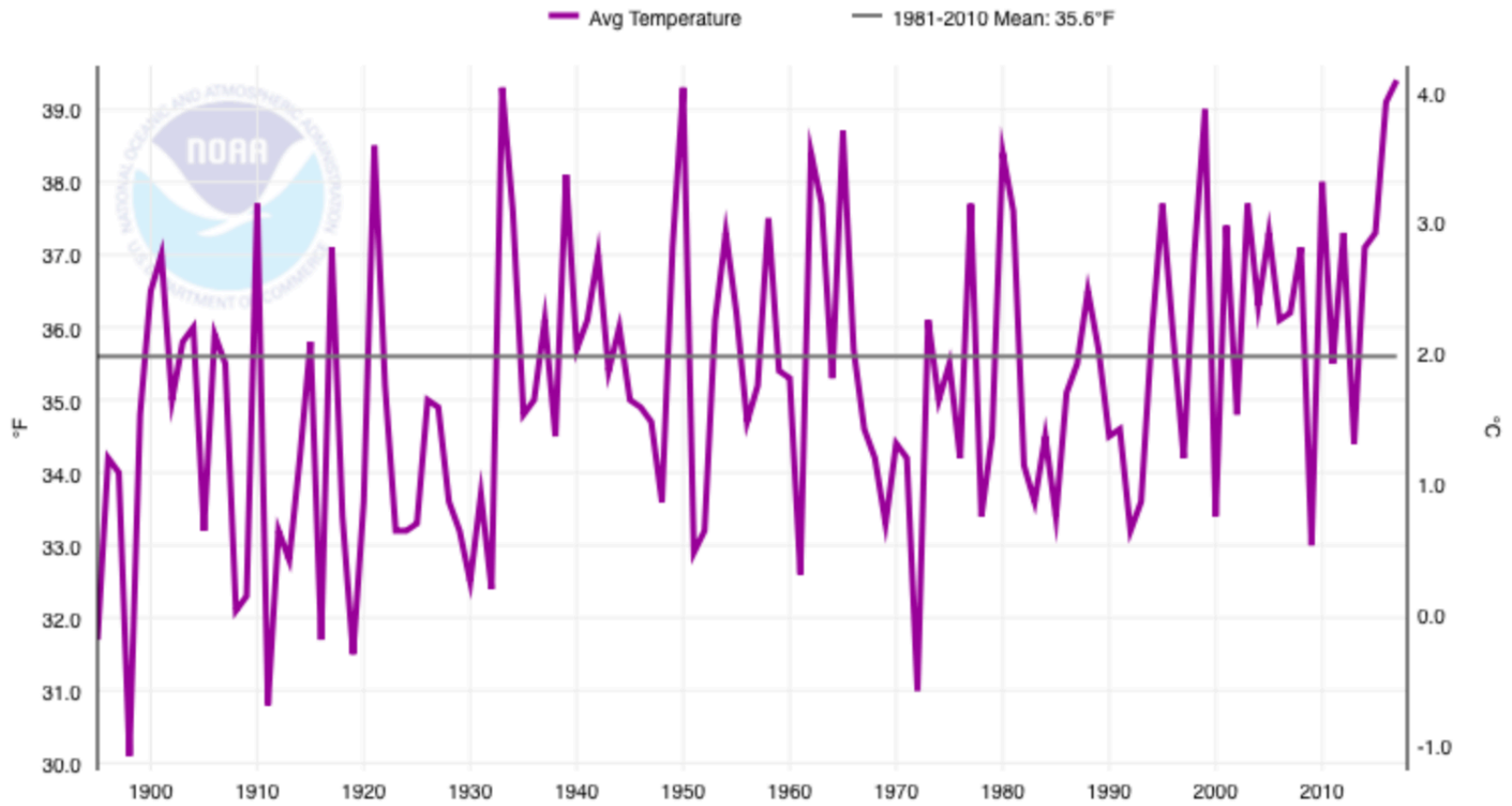


- Record Coldest (1)
- Much Below Average
- Below Average
- Near Average
- Above Average
- Much Above Average
- Record Warmest (123)

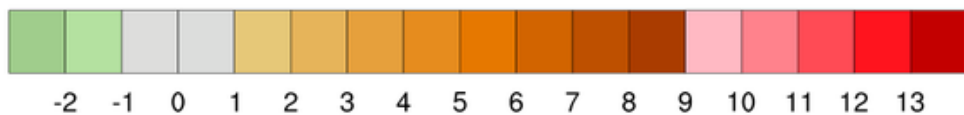
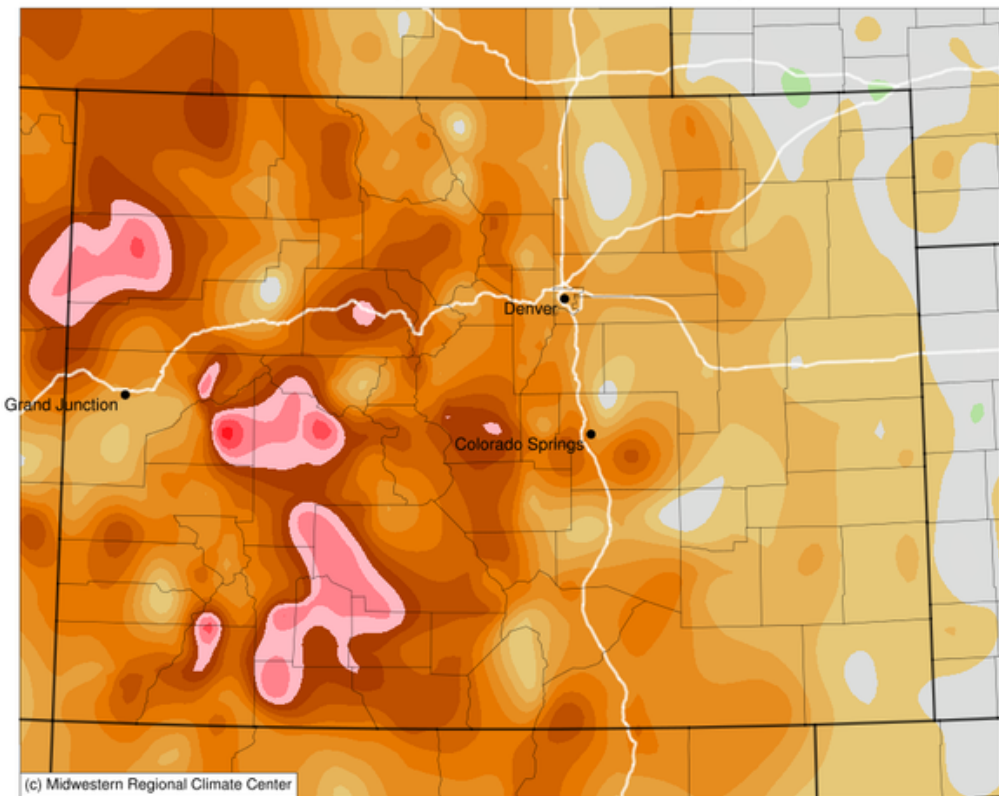


1st Warmest in 123-year record - $+3.8^{\circ}\text{F}$ above 35.6°F average

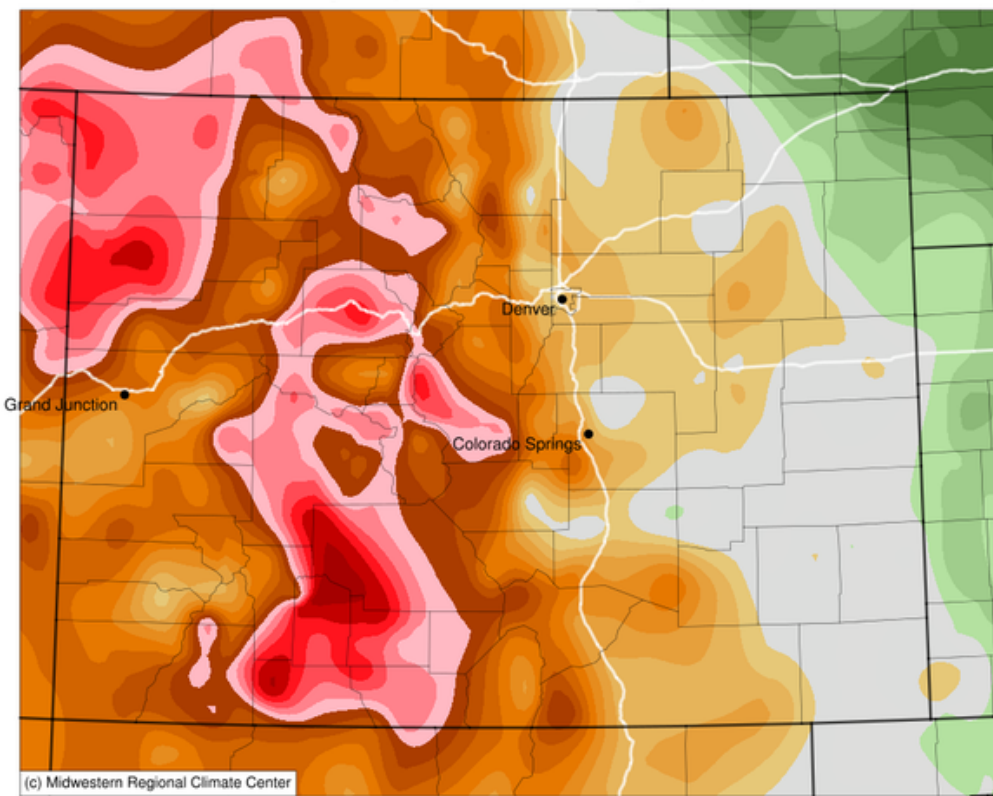
Colorado, Average Temperature, October-December



Average Temperature (°F): Departure from 1981-2010 Normals
December 01, 2017 to December 31, 2017



Average Temperature (°F): Departure from 1981-2010 Normals
January 01, 2018 to January 16, 2018

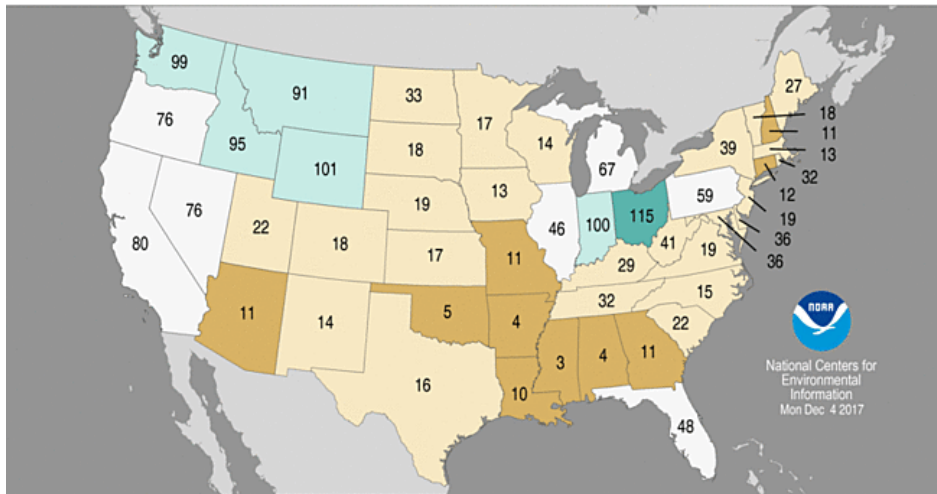




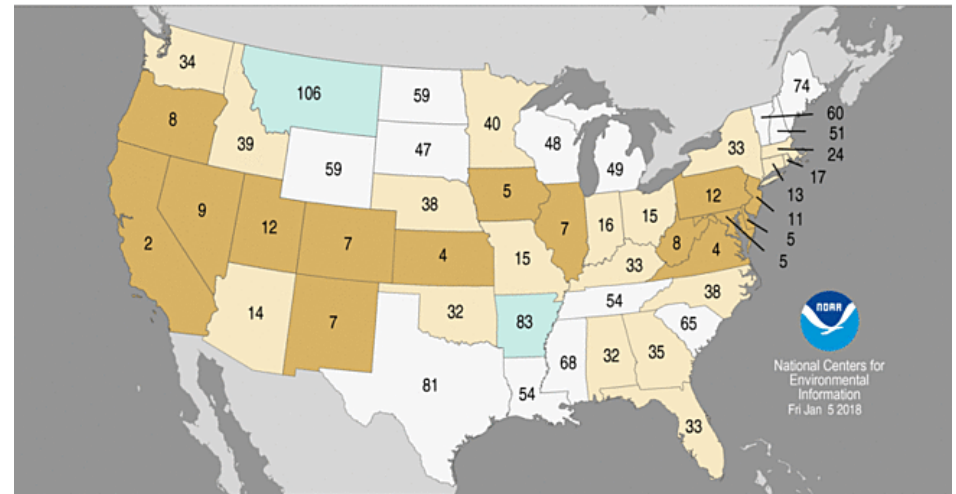
Water Year 2018 – Precipitation



Statewide Precipitation Ranks
November 2017
Period: 1895–2017



Statewide Precipitation Ranks
December 2017
Period: 1895–2017



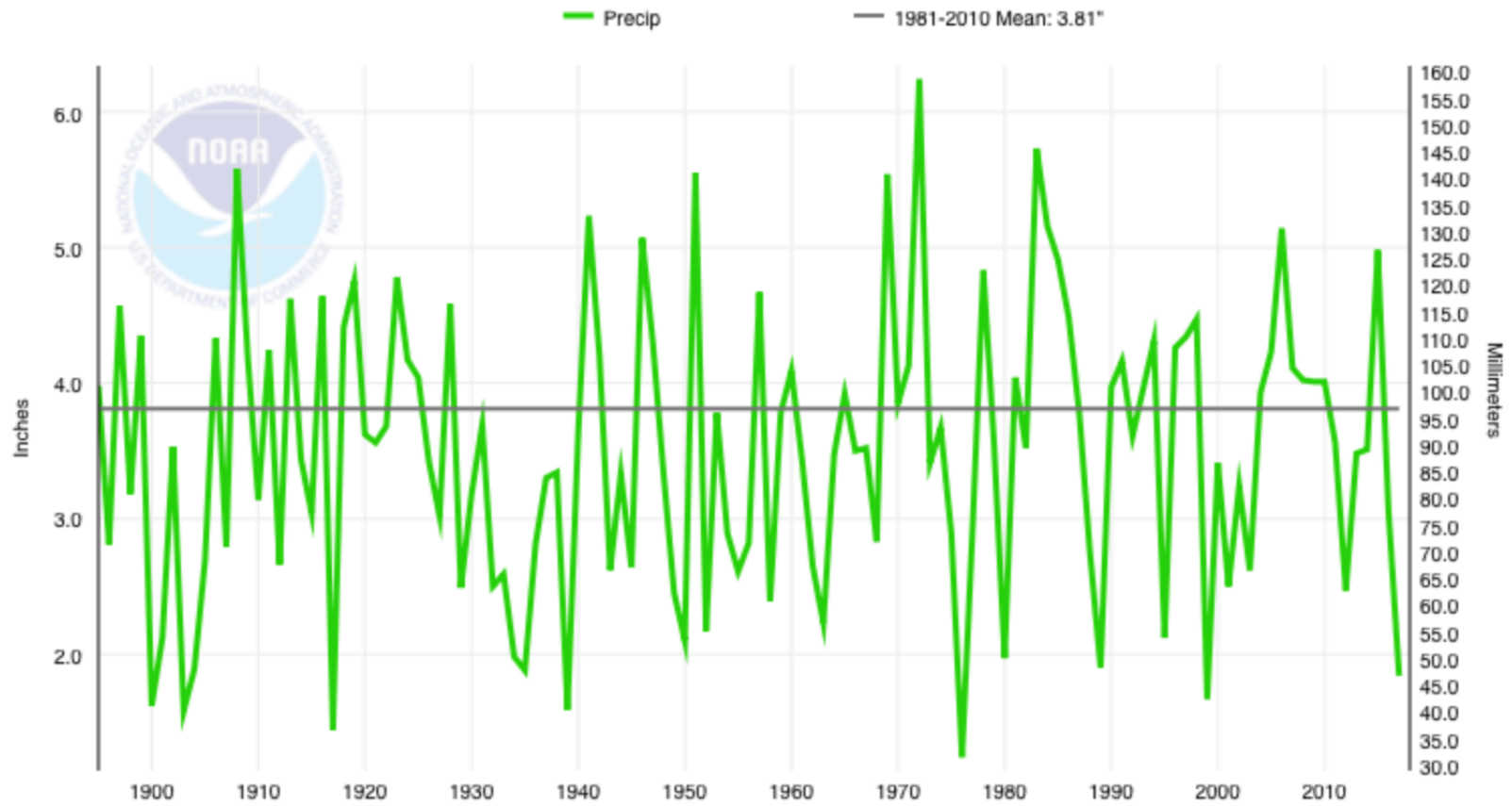
Record Driest (1) Much Below Average Below Average Near Average Above Average Much Above Average Record Wettest (123)

Record Driest (1) Much Below Average Below Average Near Average Above Average Much Above Average Record Wettest (123)

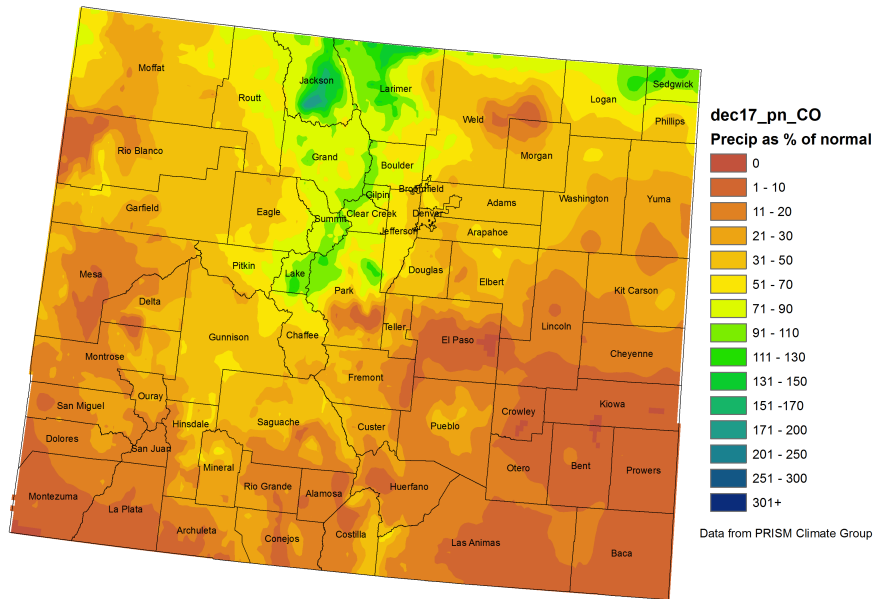


7th driest in 123-year record - -1.97" below 3.81" average

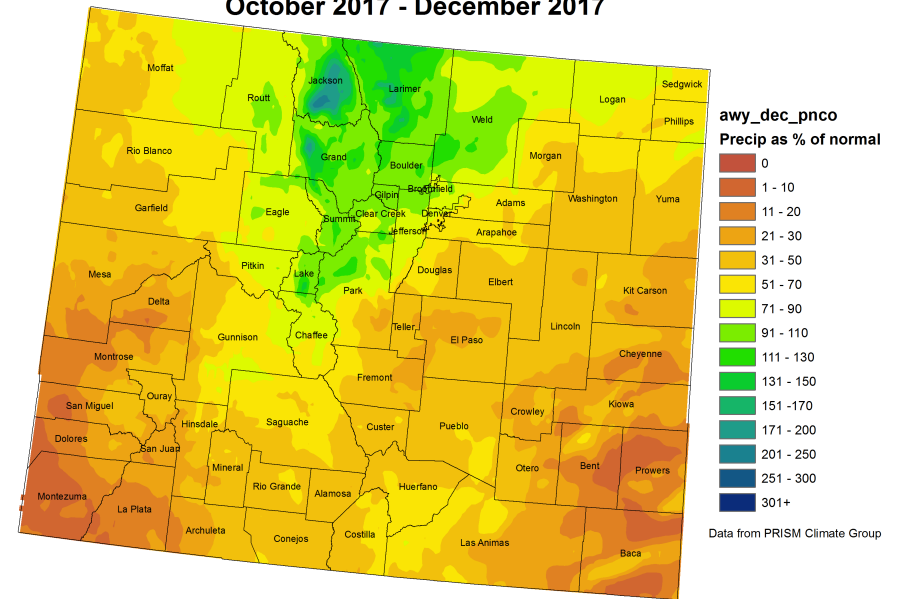
Colorado, Precipitation, October-December



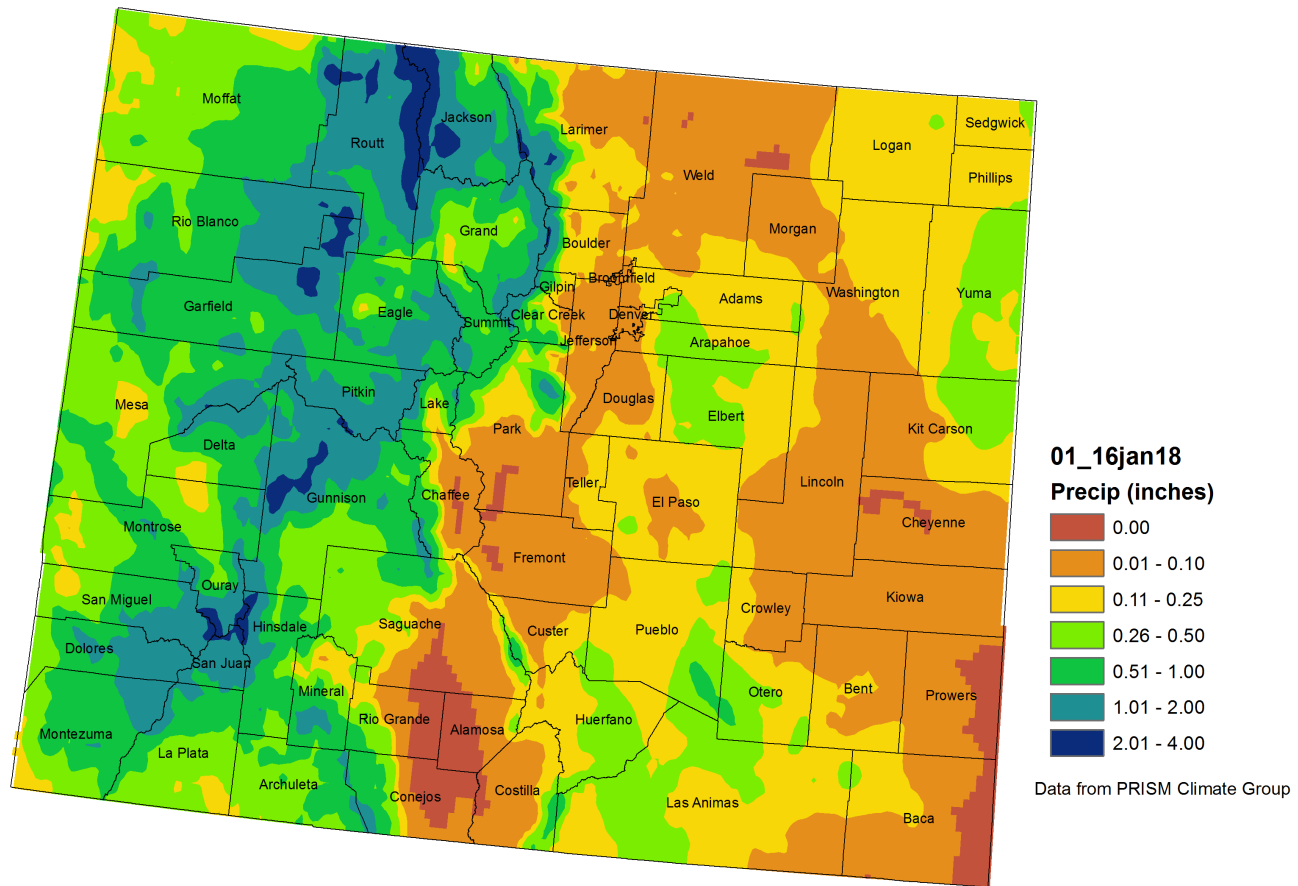
**Colorado December 2017 Precipitation
as a Percentage of Normal**



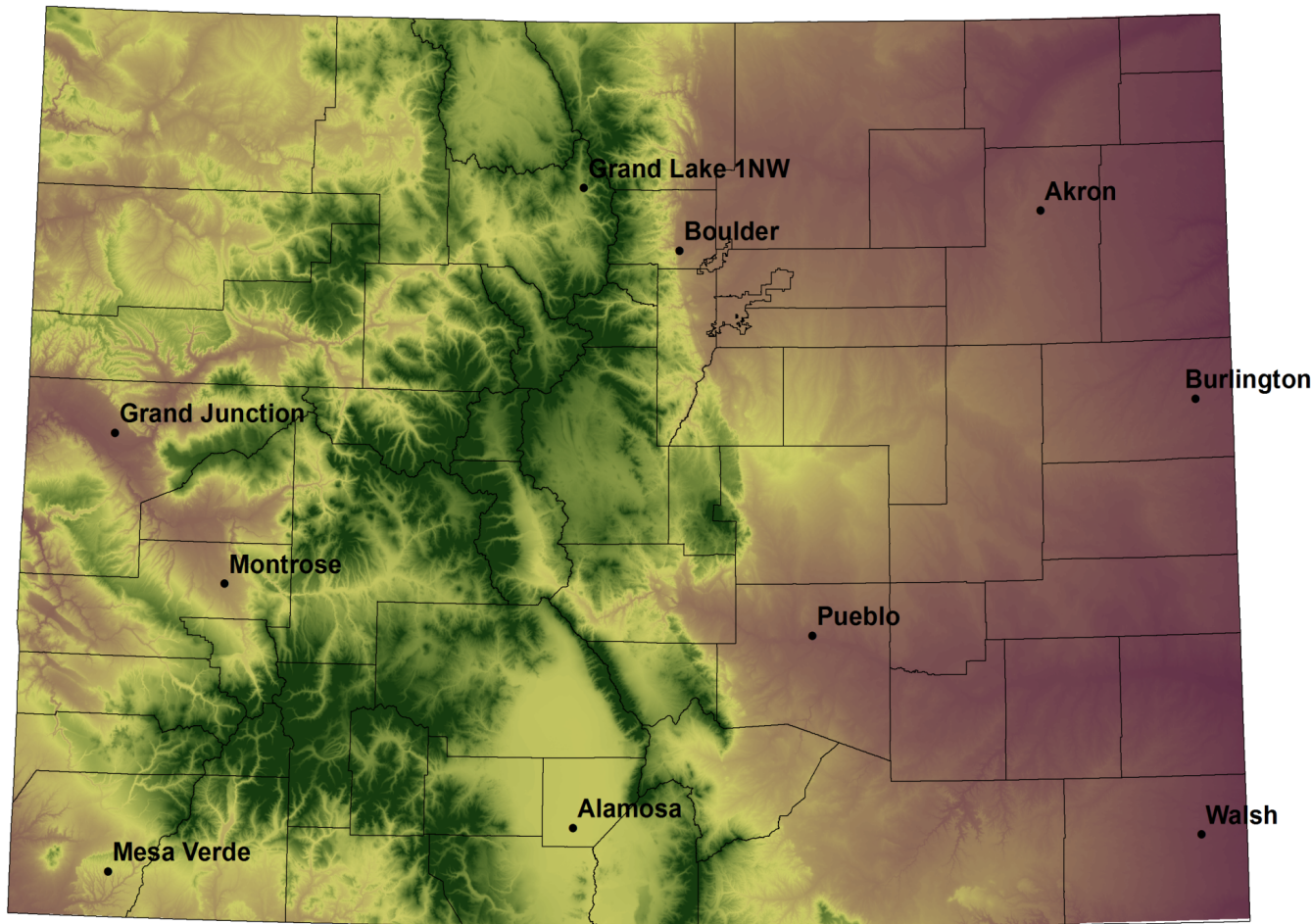
**Colorado Water Year 2018 Precipitation
as a Percentage of Normal
October 2017 - December 2017**



Colorado Month to Date Precipitation 1 - 16 January 2018



NWS Cooperative Stations for WATF

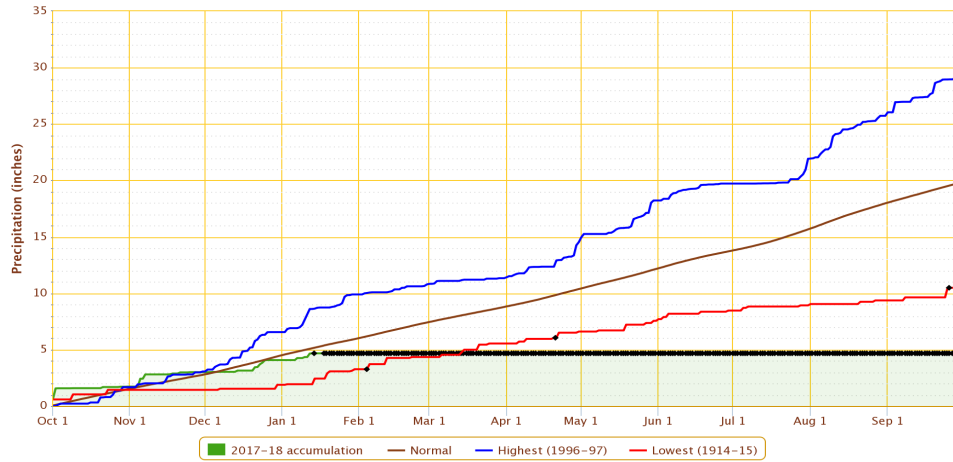


Water Year 2018 – Station Updates



Accumulated Precipitation – GRAND LAKE 1 NW, CO

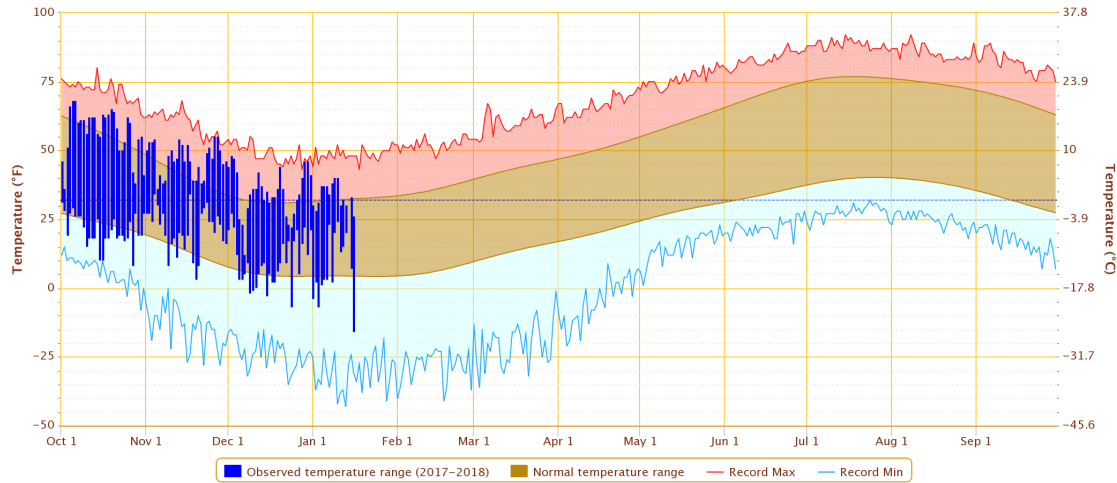
Click and drag to zoom to a shorter time interval; green/black diamonds represent subsequent/missing values



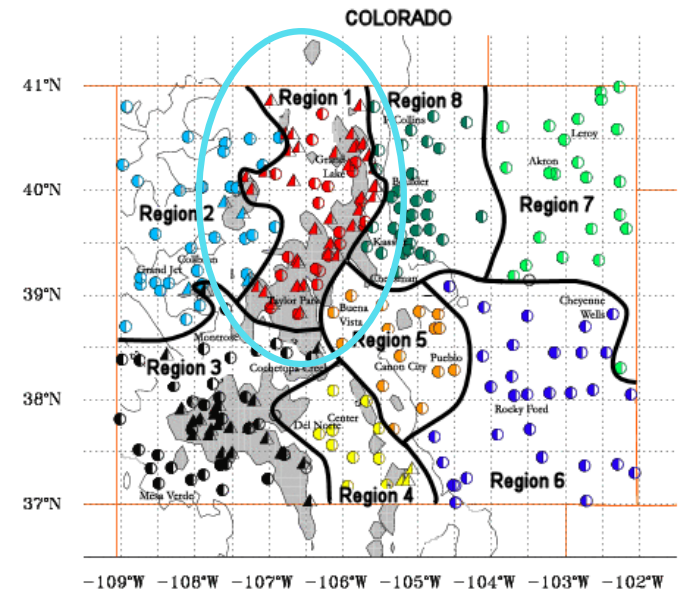
Powered by ACIS

Daily Temperature Data – GRAND LAKE 1 NW, CO

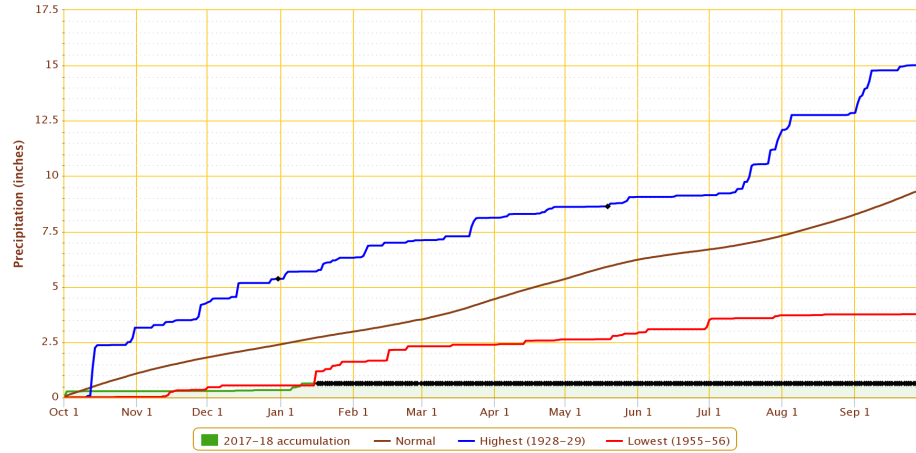
Period of Record – 1939-10-01 to 2018-01-16. Normals period: 1981-2010. Click and drag to zoom chart.



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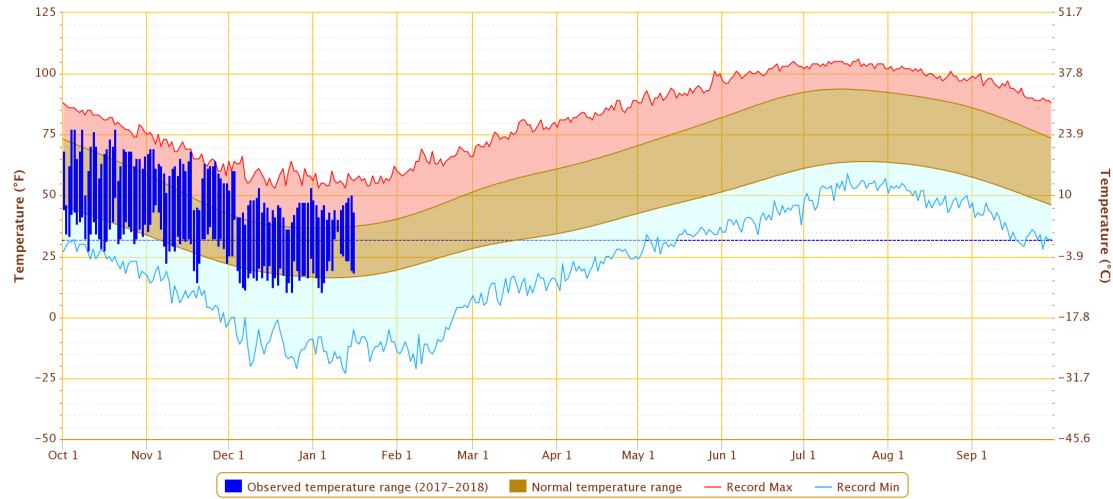
Accumulated Precipitation – GRAND JUNCTION WALKER FIELD, CO
 Click and drag to zoom to a shorter time interval; green/black diamonds represent subsequent/missing values



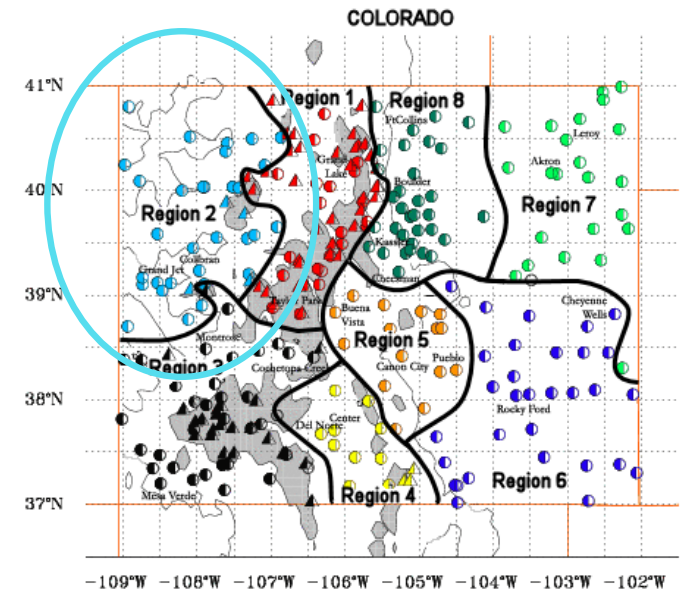
Powered by ACIS

Daily Temperature Data – GRAND JUNCTION WALKER FIELD, CO

Period of Record – 1900-01-01 to 2018-01-16. Normals period: 1981-2010. Click and drag to zoom chart.

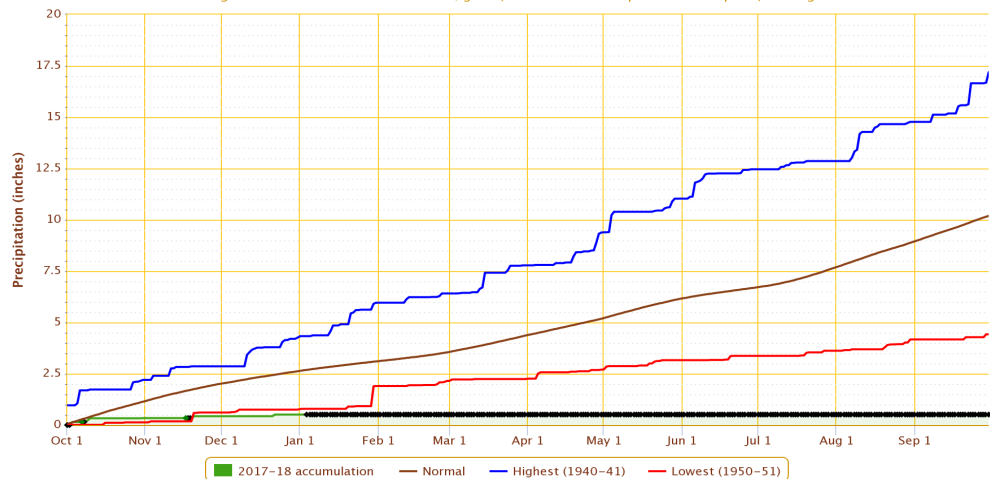


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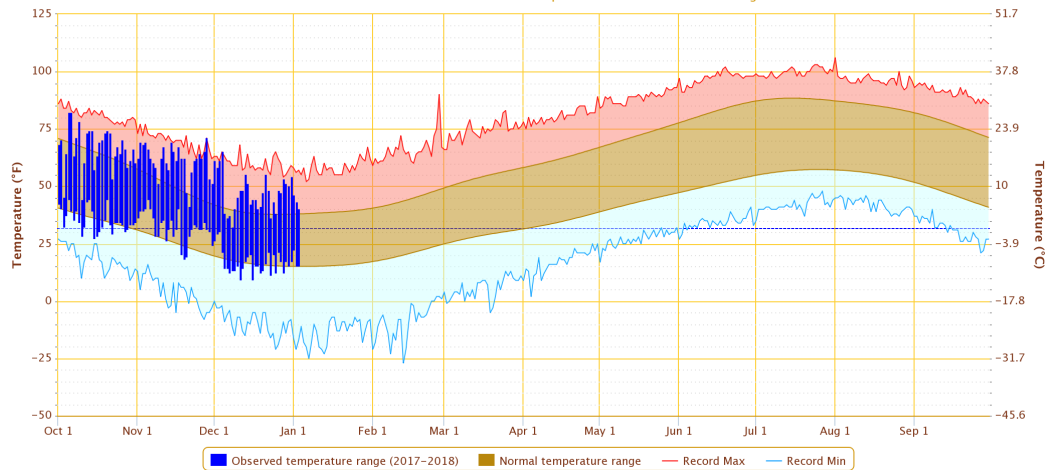
Accumulated Precipitation – MONTROSE NO 2, CO

Click and drag to zoom to a shorter time interval; green/black diamonds represent subsequent/missing values

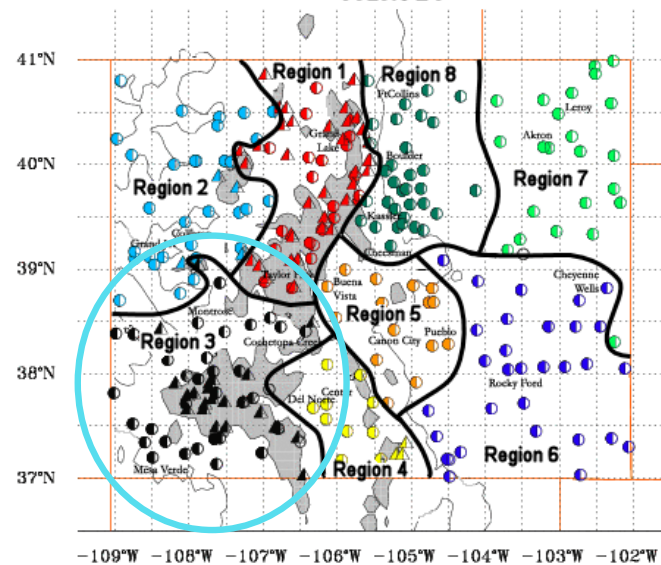


Daily Temperature Data – MONTROSE NO 2, CO

Period of Record – 1895-10-01 to 2018-01-03. Normals period: 1981-2010. Click and drag to zoom chart.

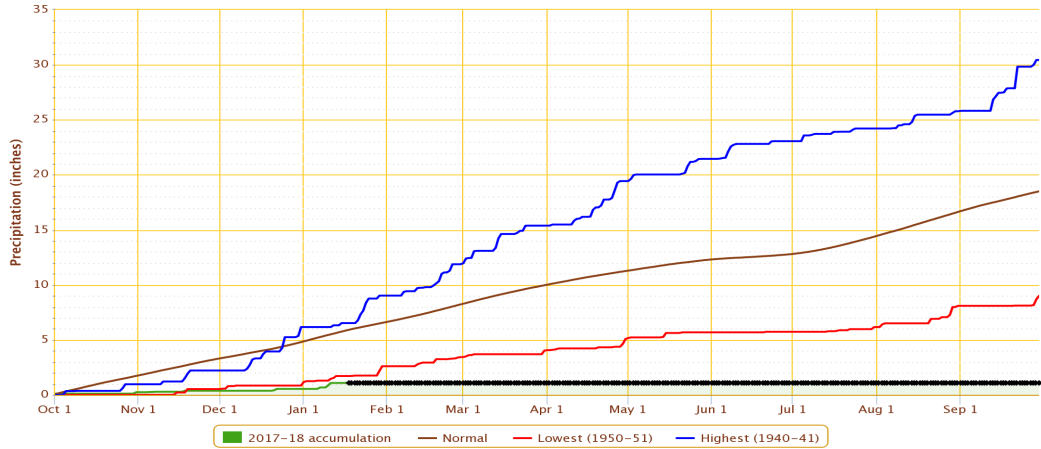


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Accumulated Precipitation – MESA VERDE NP, CO

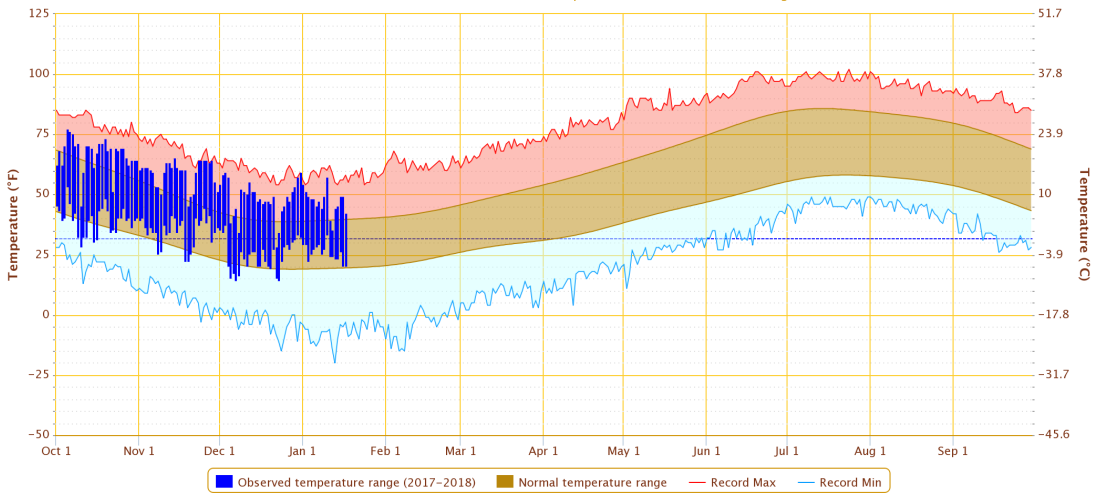
Click and drag to zoom to a shorter time interval; green/black diamonds represent subsequent/missing values



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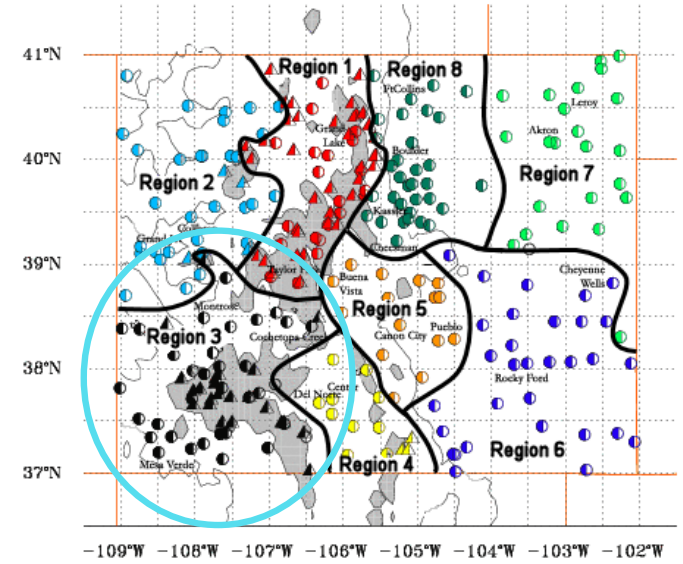
Daily Temperature Data – MESA VERDE NP, CO

Period of Record – 1922-02-16 to 2018-01-17. Normals period: 1981-2010. Click and drag to zoom chart.



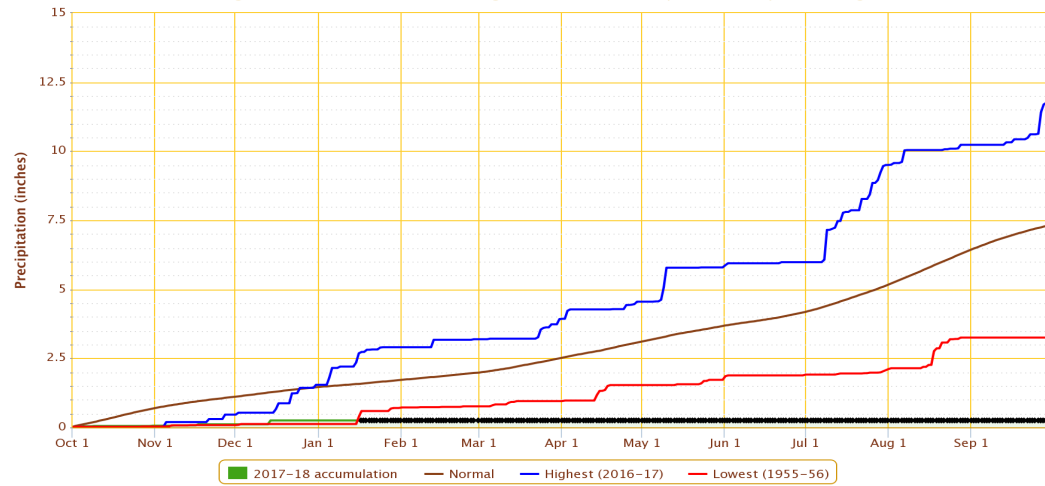
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Accumulated Precipitation – ALAMOSA SAN LUIS VALLEY REGIONAL AP, CO

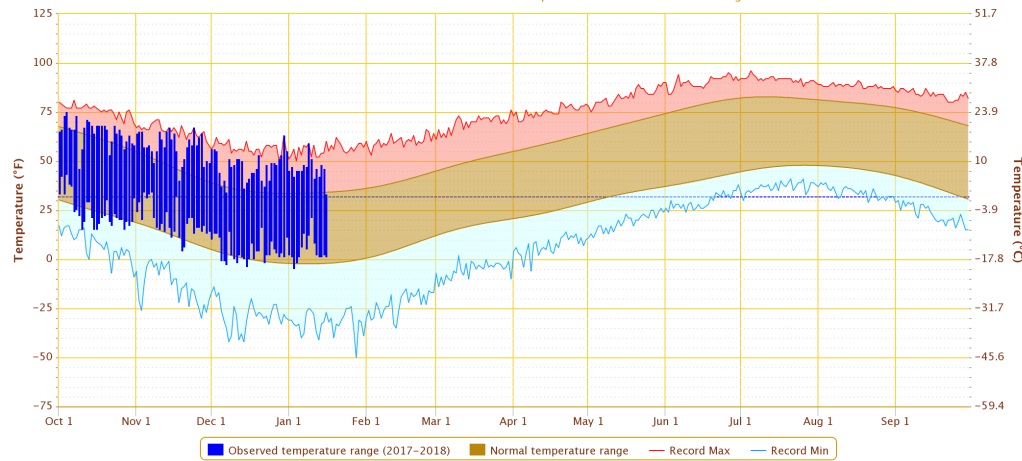
Click and drag to zoom to a shorter time interval; green/black diamonds represent subsequent/missing values



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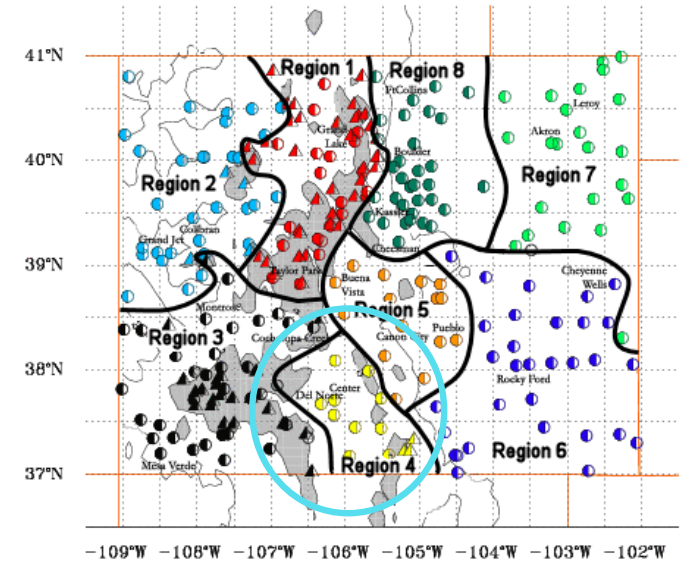
Daily Temperature Data – ALAMOSA SAN LUIS VALLEY REGIONAL AP, CO

Period of Record – 1948-01-01 to 2018-01-16. Normals period: 1981-2010. Click and drag to zoom chart.



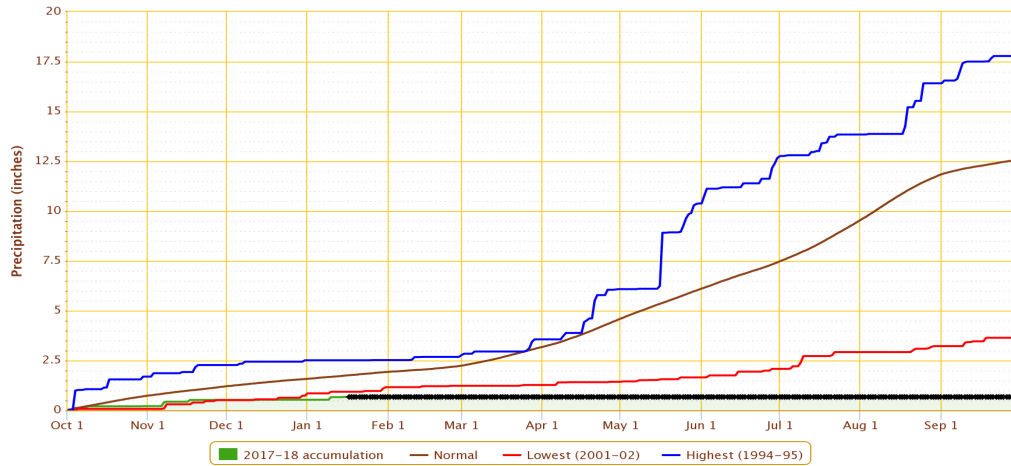
Powered by ACIS

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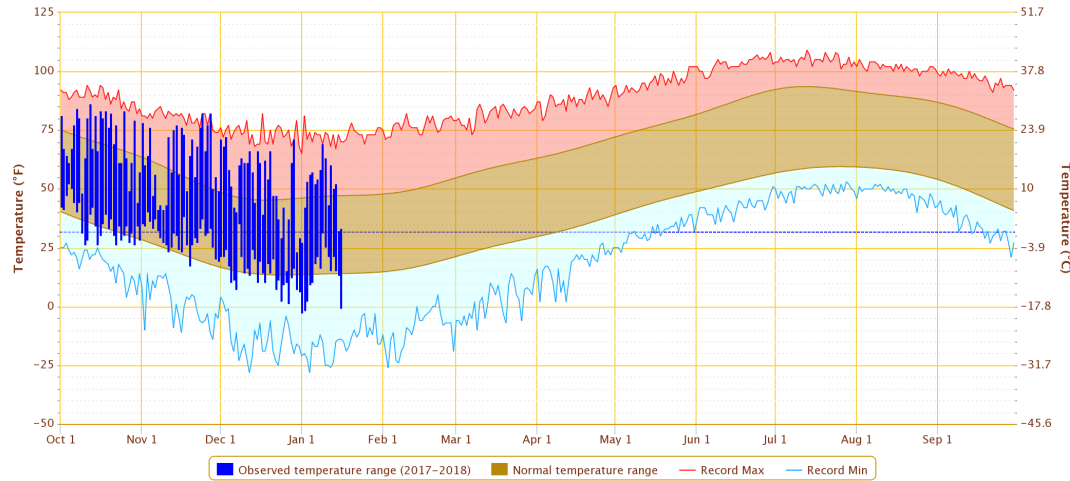
Accumulated Precipitation – PUEBLO MEMORIAL AP, CO

Click and drag to zoom to a shorter time interval; green/black diamonds represent subsequent/missing values

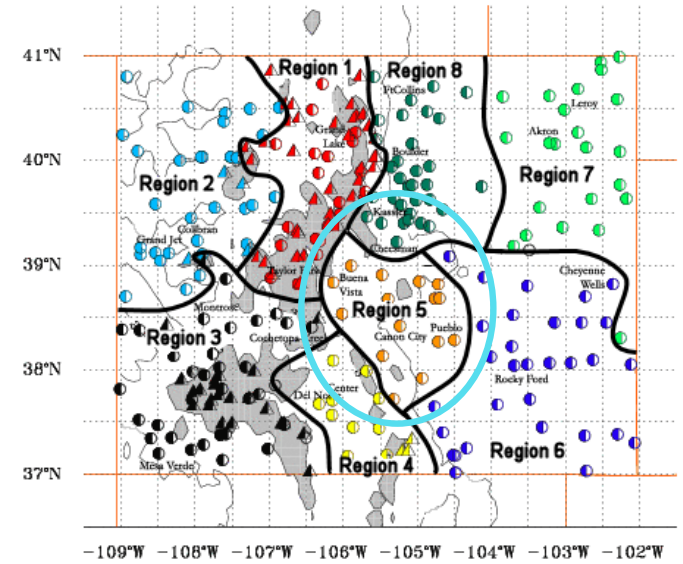


Daily Temperature Data – PUEBLO MEMORIAL AP, CO

Period of Record – 1954-06-16 to 2018-01-16. Normals period: 1981-2010. Click and drag to zoom chart.

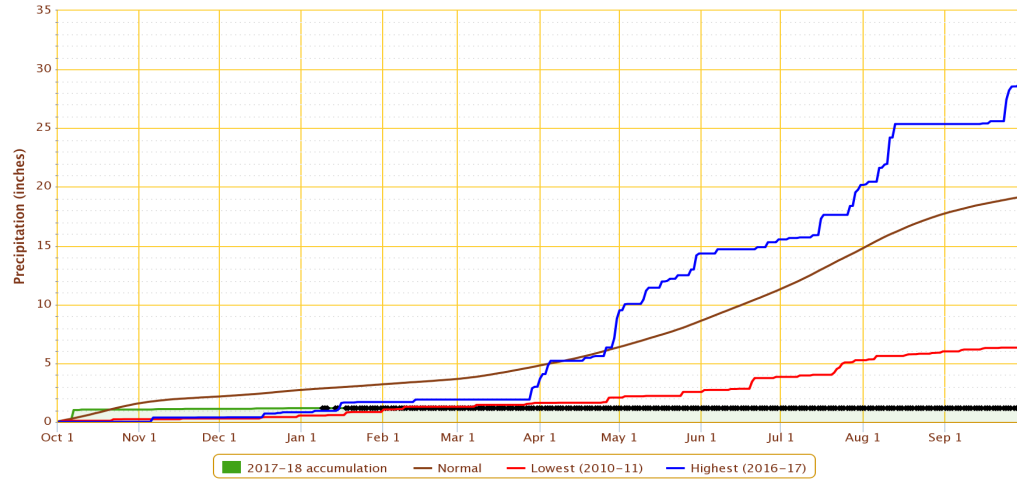


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Accumulated Precipitation – WALSH 1 W, CO

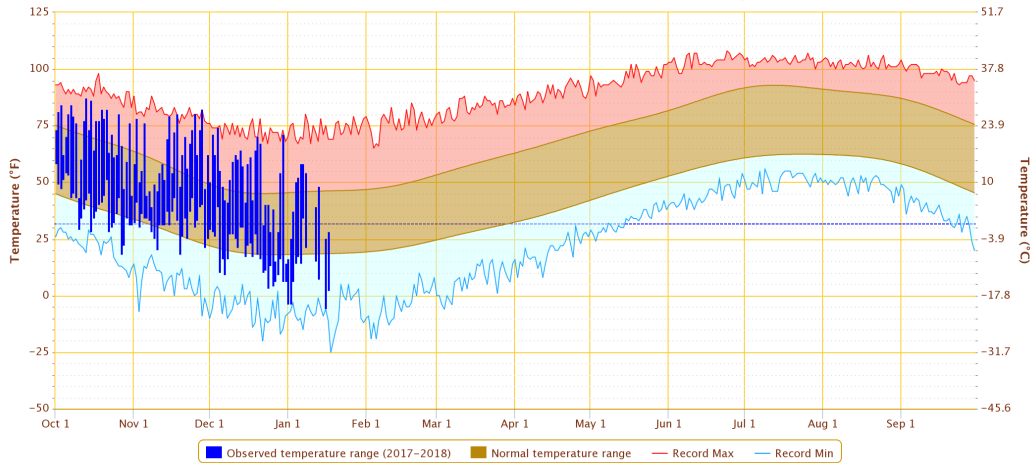
Click and drag to zoom to a shorter time interval; green/black diamonds represent subsequent/missing values



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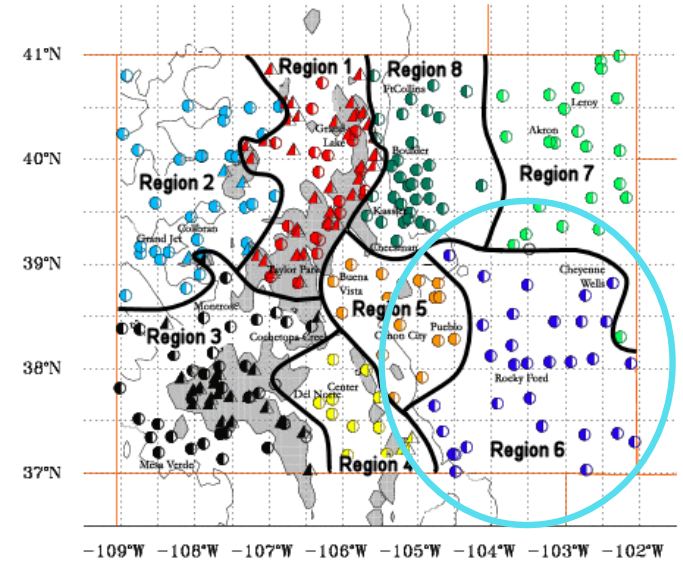
Daily Temperature Data – WALSH 1 W, CO

Period of Record – 1967-09-01 to 2018-01-17. Normals period: 1981-2010. Click and drag to zoom chart.



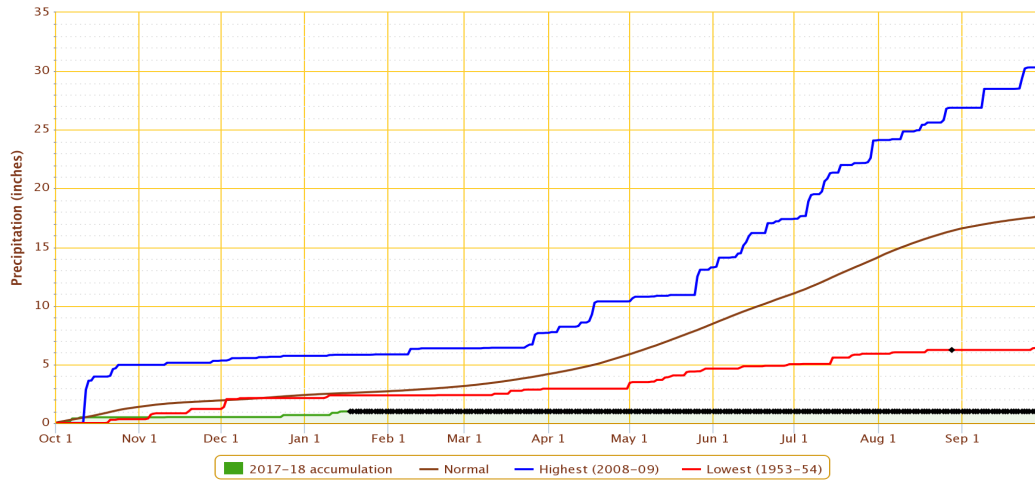
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Accumulated Precipitation – BURLINGTON, CO

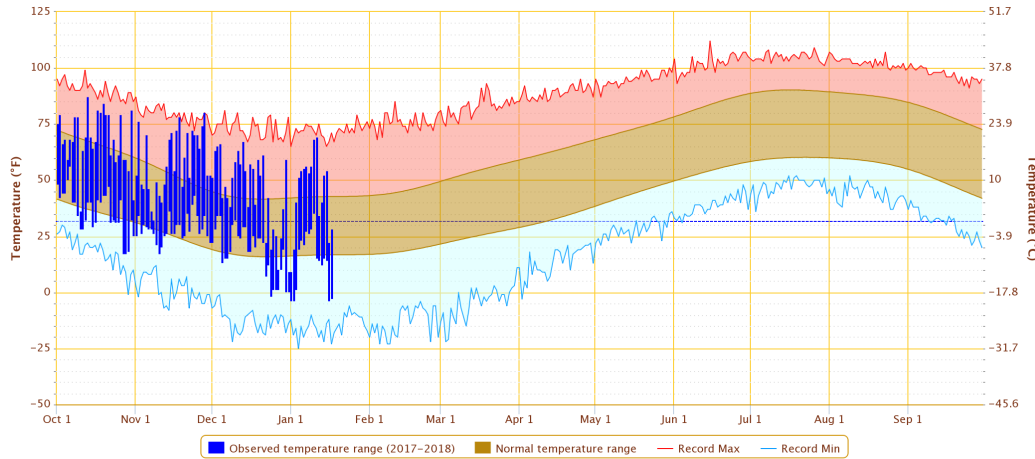
Click and drag to zoom to a shorter time interval; green/black diamonds represent subsequent/missing values



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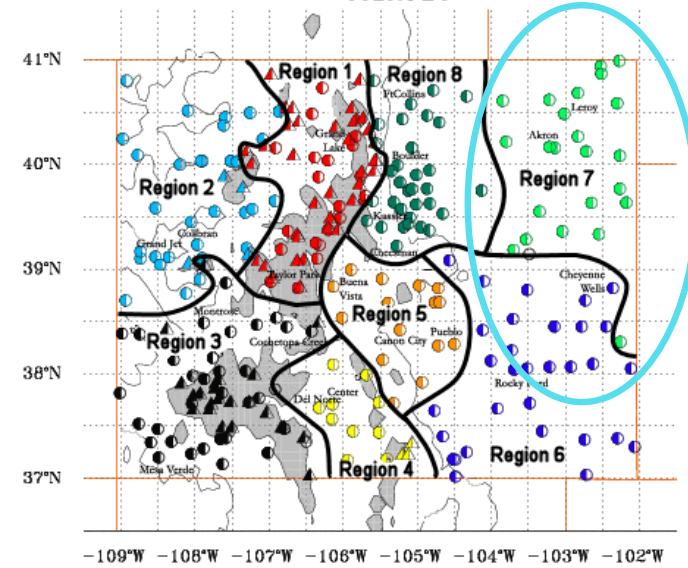
Daily Temperature Data – BURLINGTON, CO

Period of Record – 1903-12-01 to 2018-01-17. Normals period: 1981-2010. Click and drag to zoom chart.



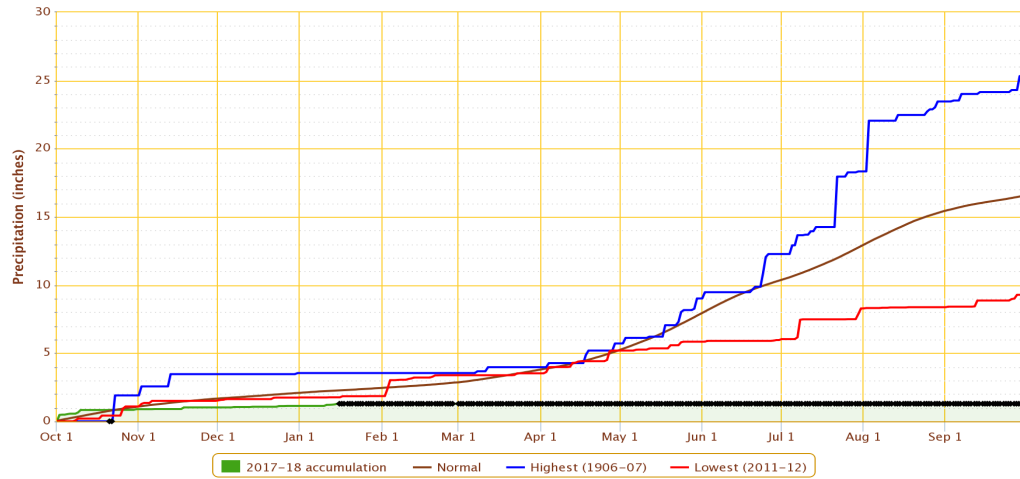
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Accumulated Precipitation – AKRON 4 E, CO

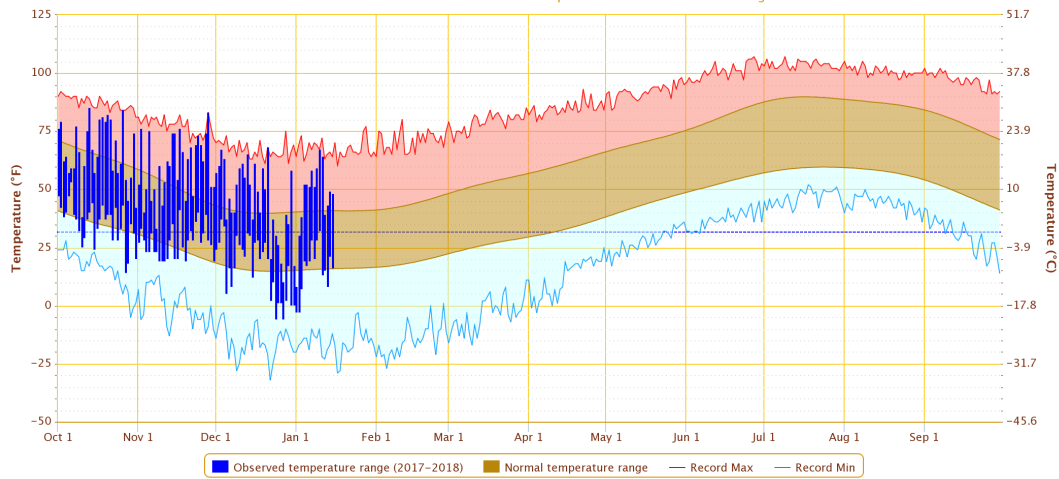
Click and drag to zoom to a shorter time interval; green/black diamonds represent subsequent/missing values



Daily Temperature Data – AKRON 4 E, CO

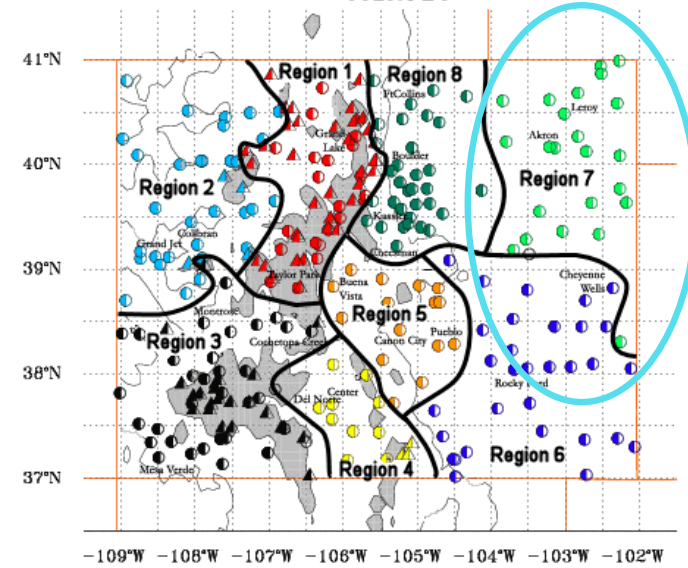
Period of Record – 1893-06-01 to 2018-01-15. Normals period: 1981-2010. Click and drag to zoom chart.

Powered by ACIS



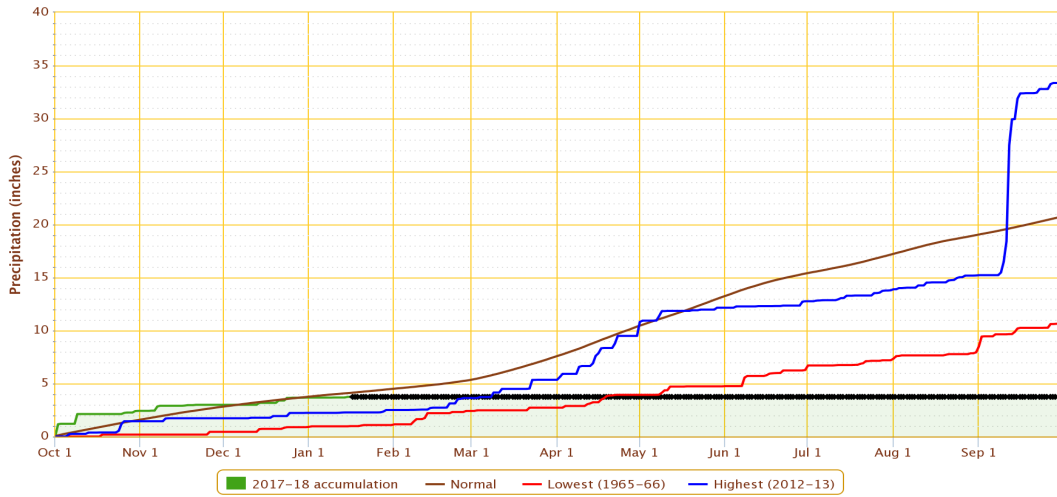
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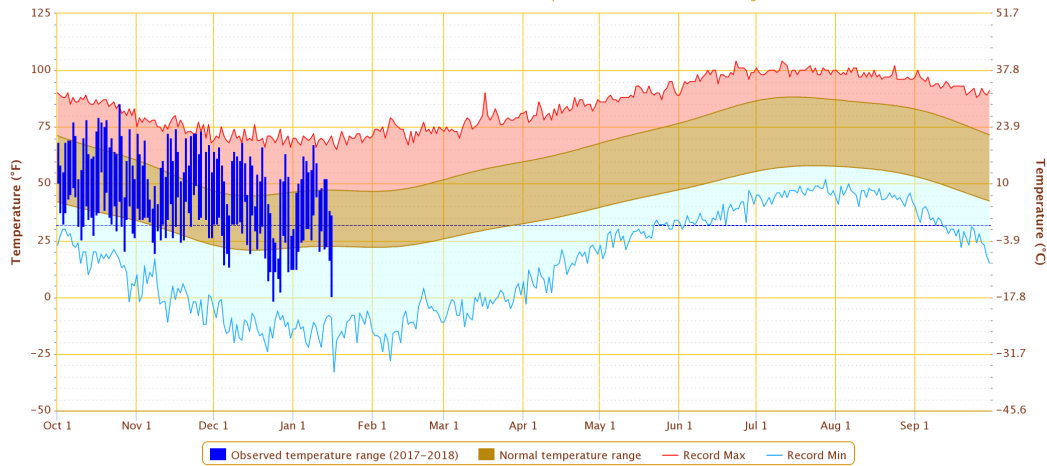
Accumulated Precipitation – BOULDER, CO

Click and drag to zoom to a shorter time interval; green/black diamonds represent subsequent/missing values



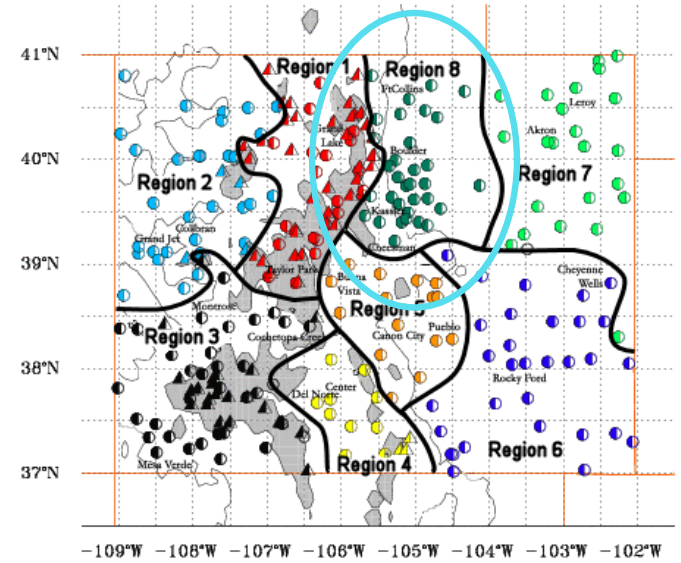
Daily Temperature Data – BOULDER, CO

Period of Record – 1893-10-01 to 2018-01-16. Normals period: 1981-2010. Click and drag to zoom chart.



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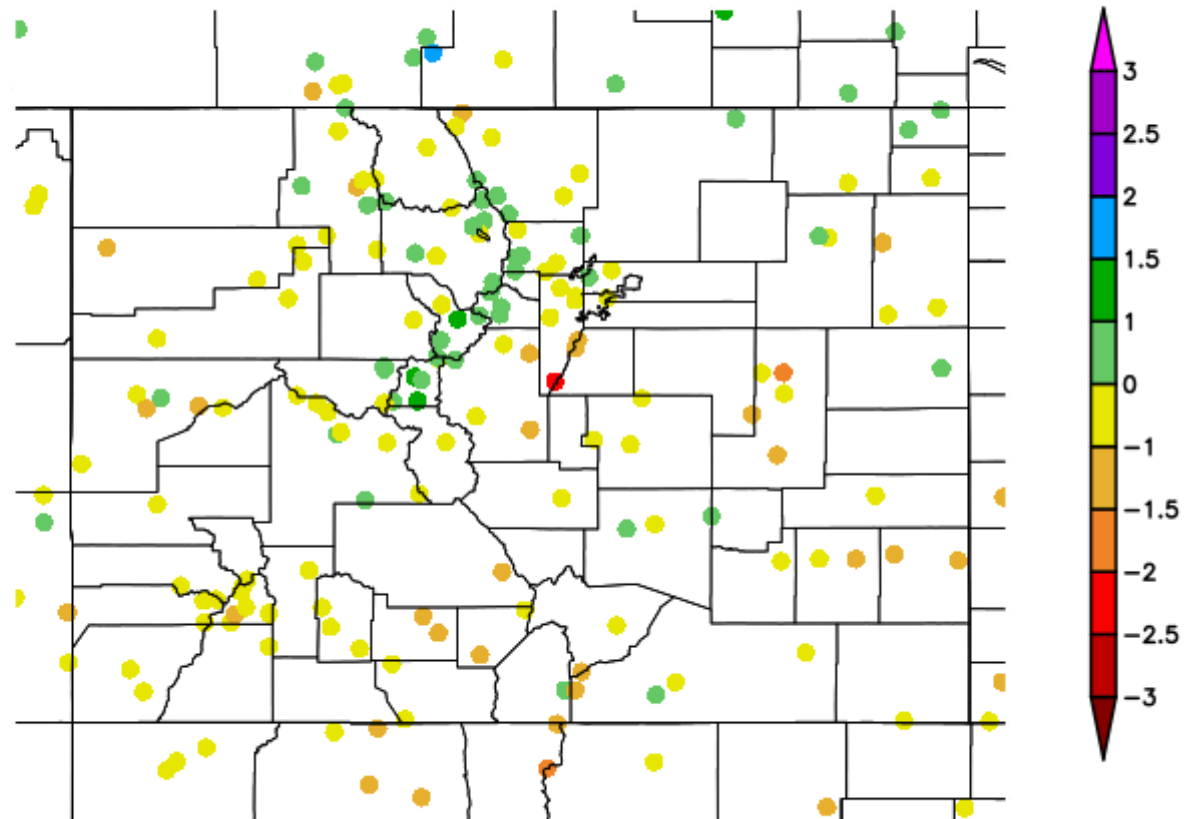




Colorado Drought



30 Day SPI 12/18/2017 - 1/16/2018

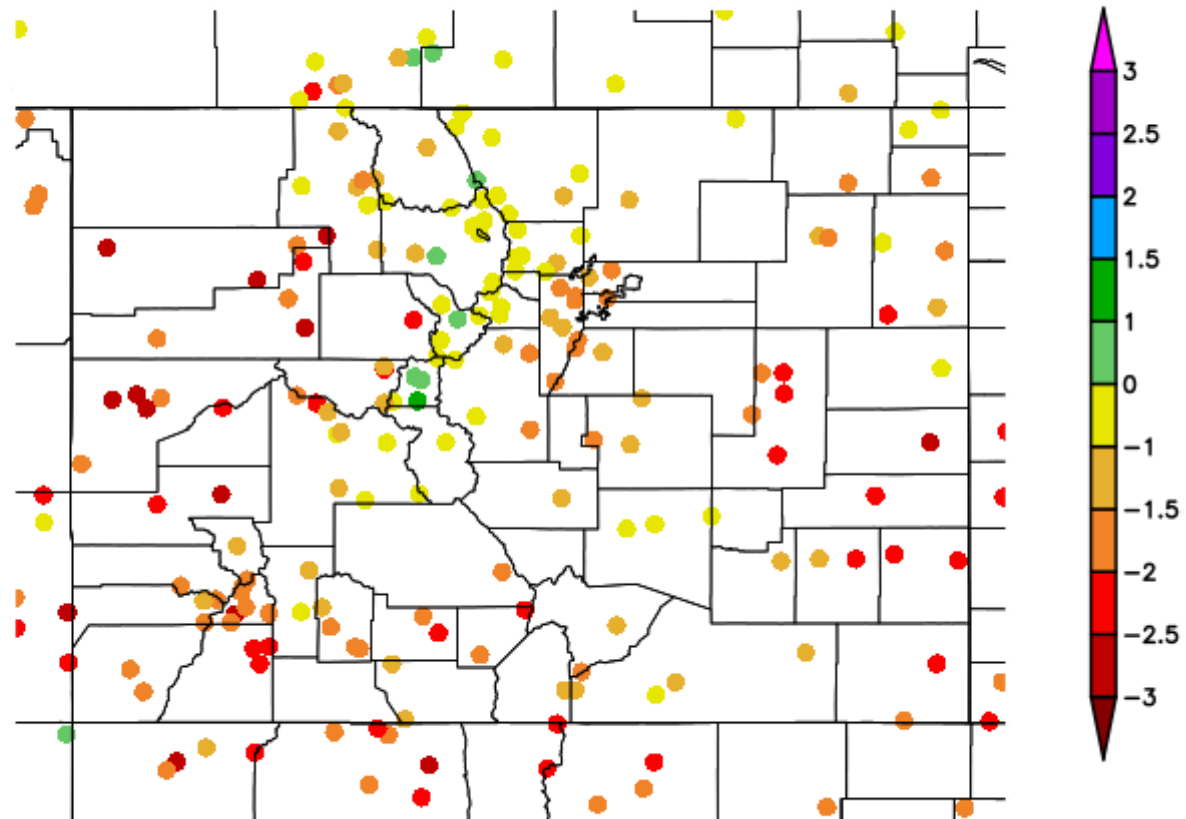


Generated 1/17/2018 at HPRCC using provisional data.

NOAA Regional Climate Centers



90 Day SPI 10/19/2017 - 1/16/2018

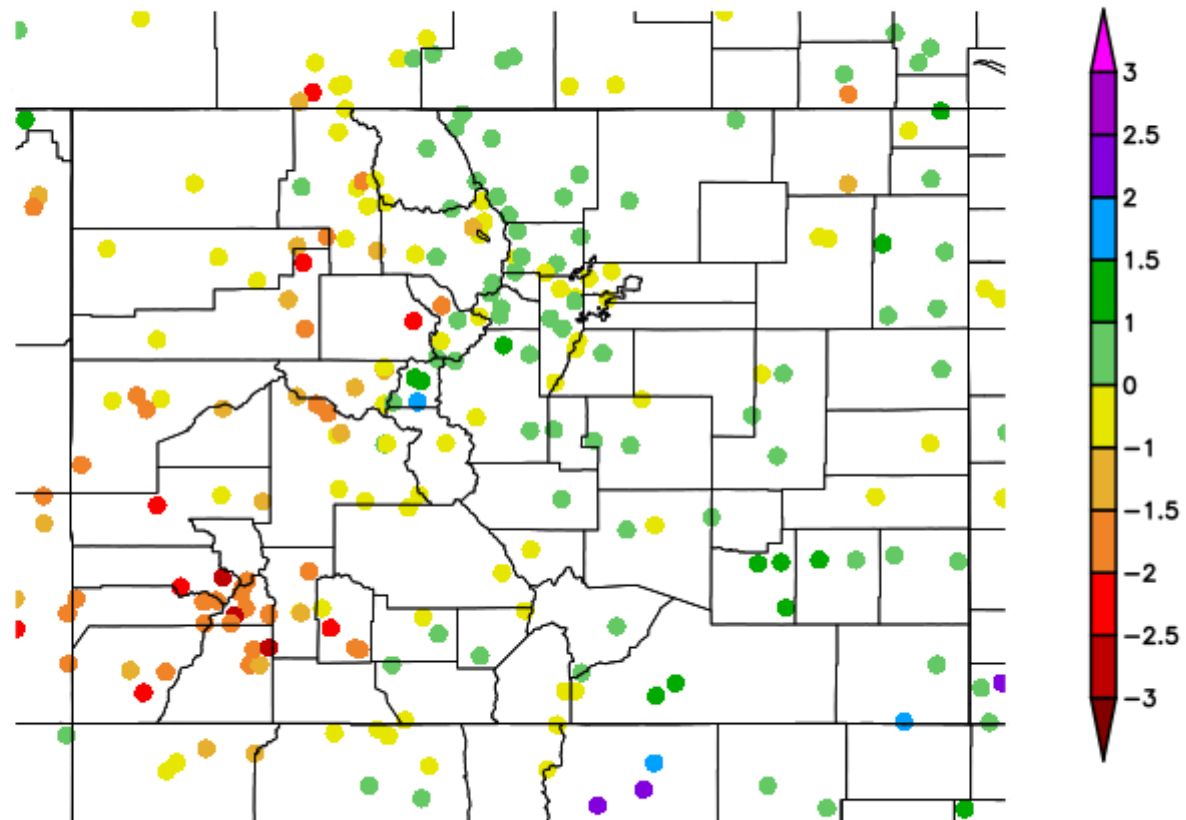


Generated 1/17/2018 at HPRCC using provisional data.

NOAA Regional Climate Centers



6 Month SPI 7/17/2017 - 1/16/2018

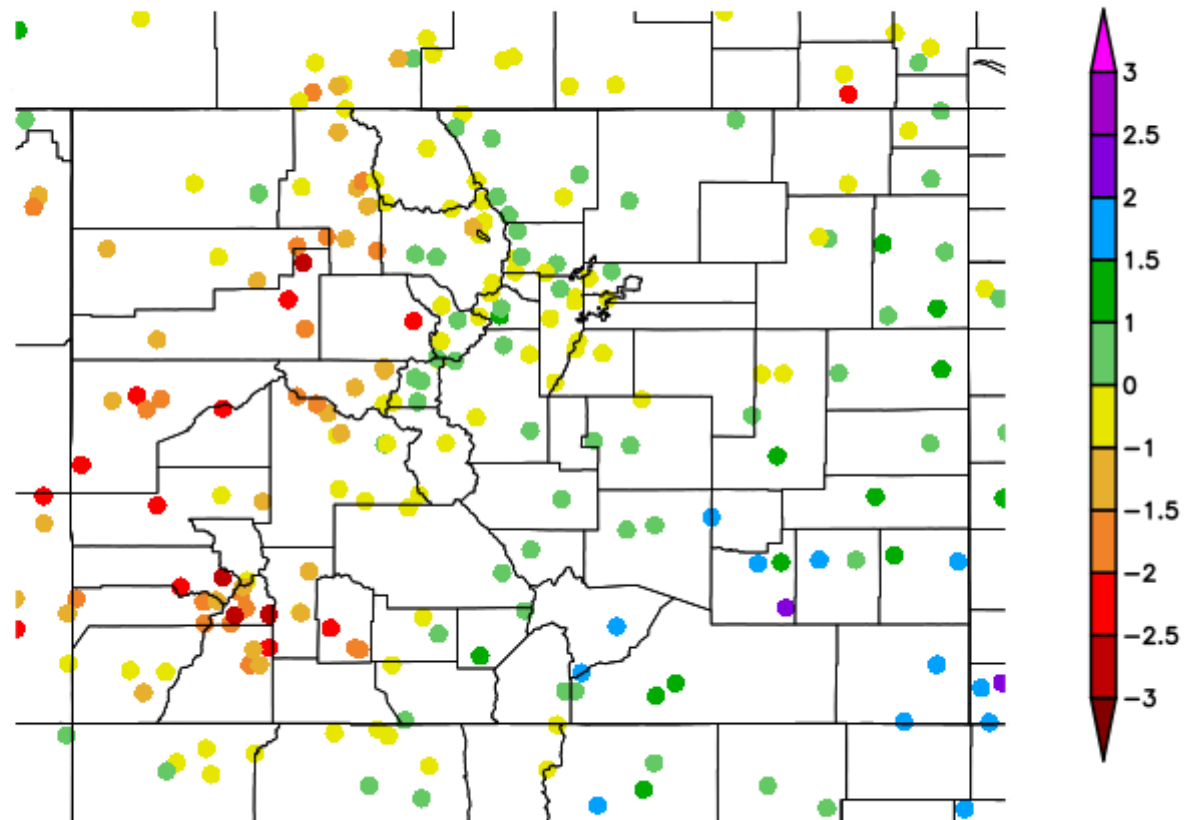


Generated 1/17/2018 at HPRCC using provisional data.

NOAA Regional Climate Centers



12 Month SPI 1/17/2017 - 1/16/2018



Generated 1/17/2018 at HPRCC using provisional data.

NOAA Regional Climate Centers

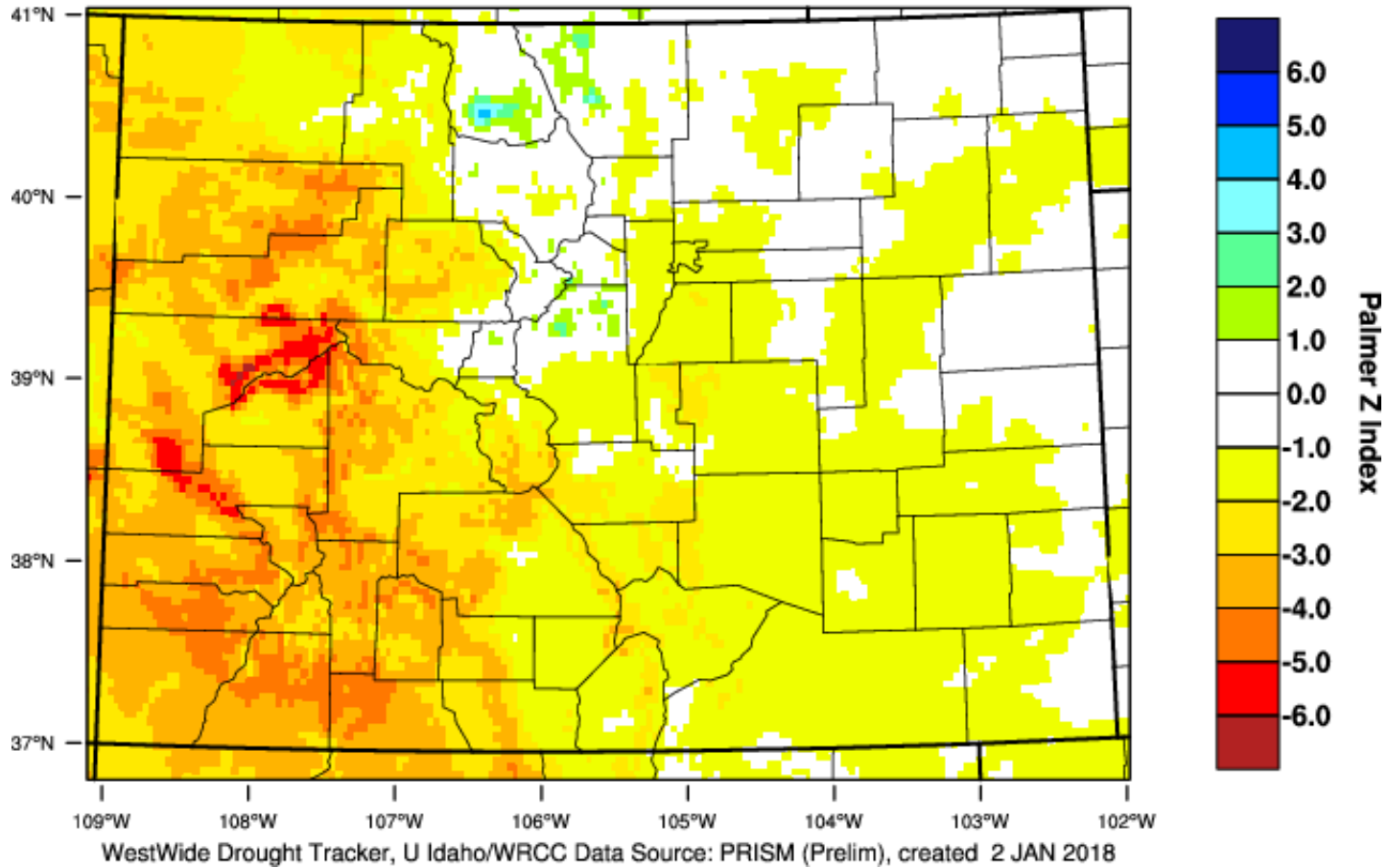


COLORADO CLIMATE CENTER

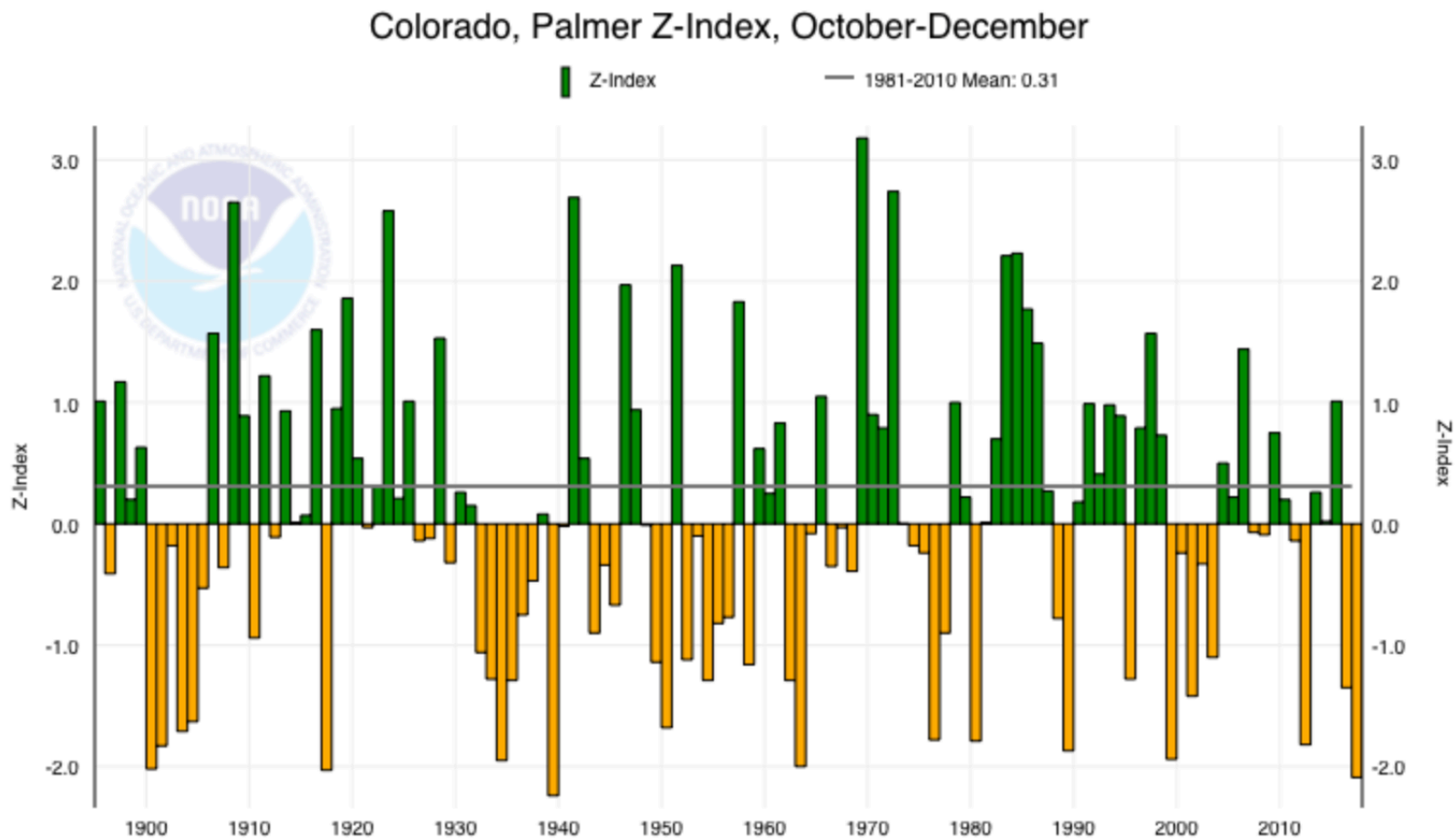


Colorado - Palmer Z-Index

December 2017

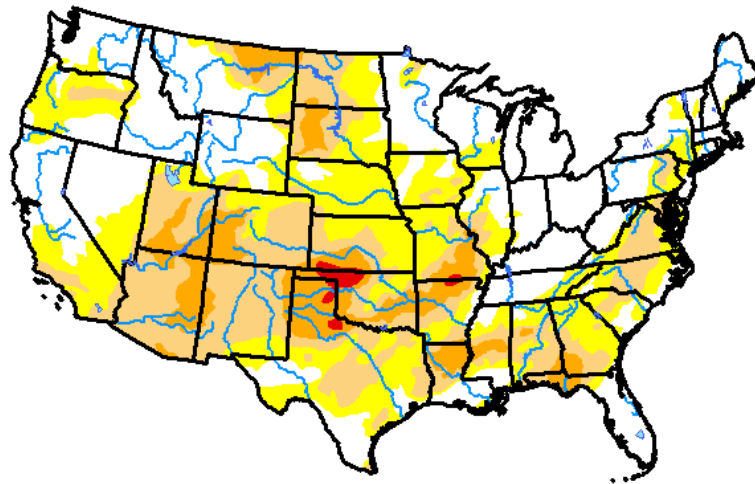


2nd lowest in 123-year record - -2.40 below 0.31 average



U.S. Drought Monitor Continental U.S. (CONUS)

January 16, 2018
(Released Thursday, Jan. 18, 2018)
Valid 7 a.m. EST



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	39.07	60.93	33.04	10.03	0.64	0.00
Last Week <i>01-09-2018</i>	42.20	57.80	32.07	8.70	0.46	0.00
3 Months Ago <i>10-17-2017</i>	62.25	37.75	12.48	2.98	0.82	0.00
Start of Calendar Year <i>01-02-2018</i>	44.46	55.54	27.70	7.46	0.83	0.00
Start of Water Year <i>09-26-2017</i>	63.07	36.93	13.81	4.99	2.36	0.87
One Year Ago <i>01-17-2017</i>	60.50	39.50	19.26	6.77	2.39	0.11

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

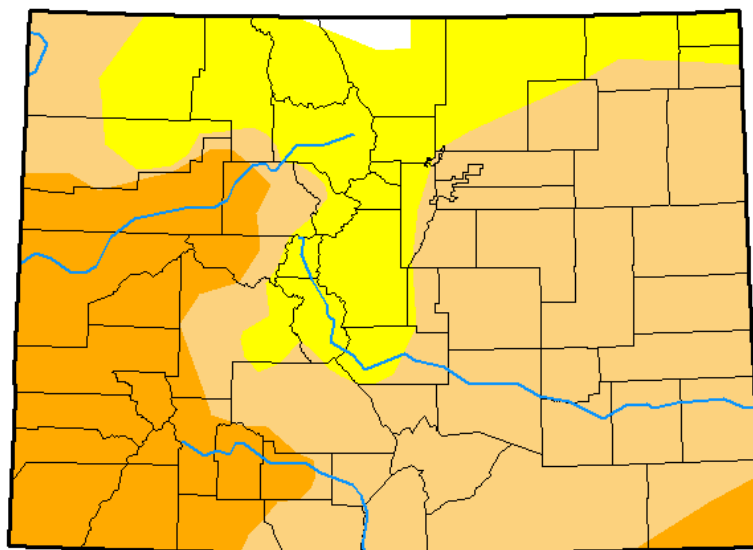


<http://droughtmonitor.unl.edu/>



U.S. Drought Monitor Colorado

January 16, 2018
(Released Thursday, Jan. 18, 2018)
Valid 7 a.m. EST



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.59	99.41	75.90	23.23	0.00	0.00
Last Week <i>01-09-2018</i>	0.59	99.41	75.90	22.02	0.00	0.00
3 Months Ago <i>10-17-2017</i>	71.71	28.29	1.12	0.00	0.00	0.00
Start of Calendar Year <i>01-02-2018</i>	6.57	93.43	33.53	7.27	0.00	0.00
Start of Water Year <i>09-26-2017</i>	67.63	32.37	3.72	0.00	0.00	0.00
One Year Ago <i>01-17-2017</i>	44.17	55.83	35.34	0.75	0.00	0.00

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.

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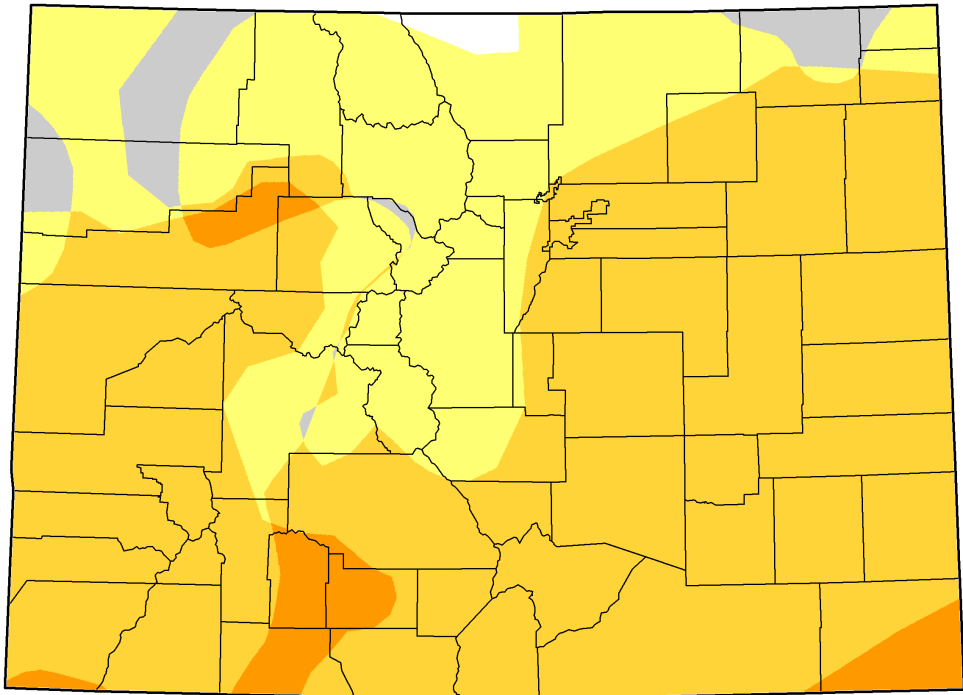
Brian Fuchs
National Drought Mitigation Center



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



U.S. Drought Monitor Class Change - Colorado 3 Months

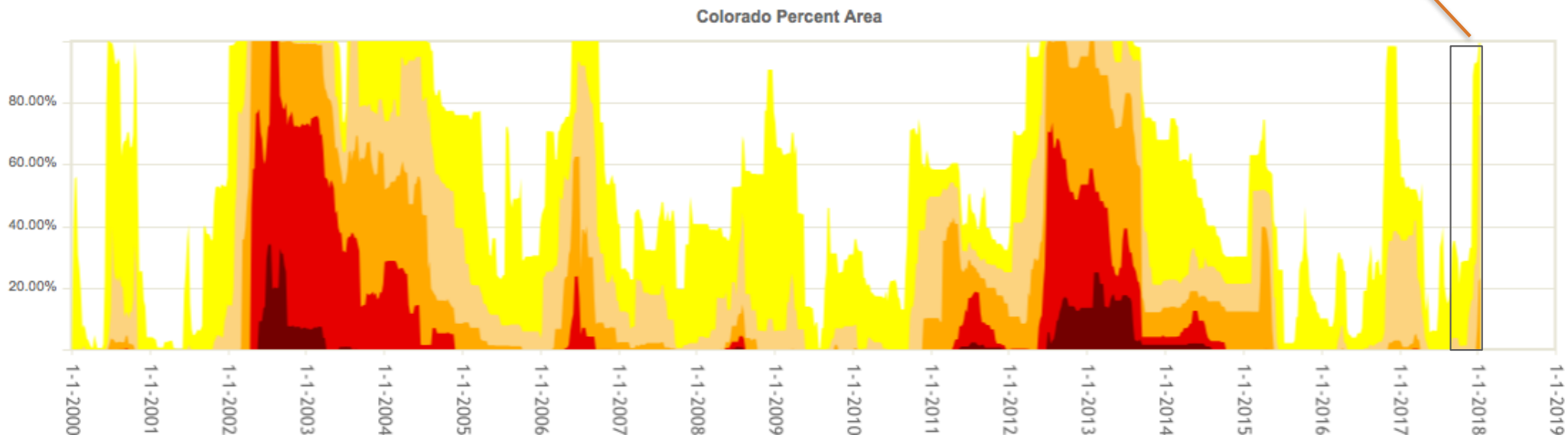
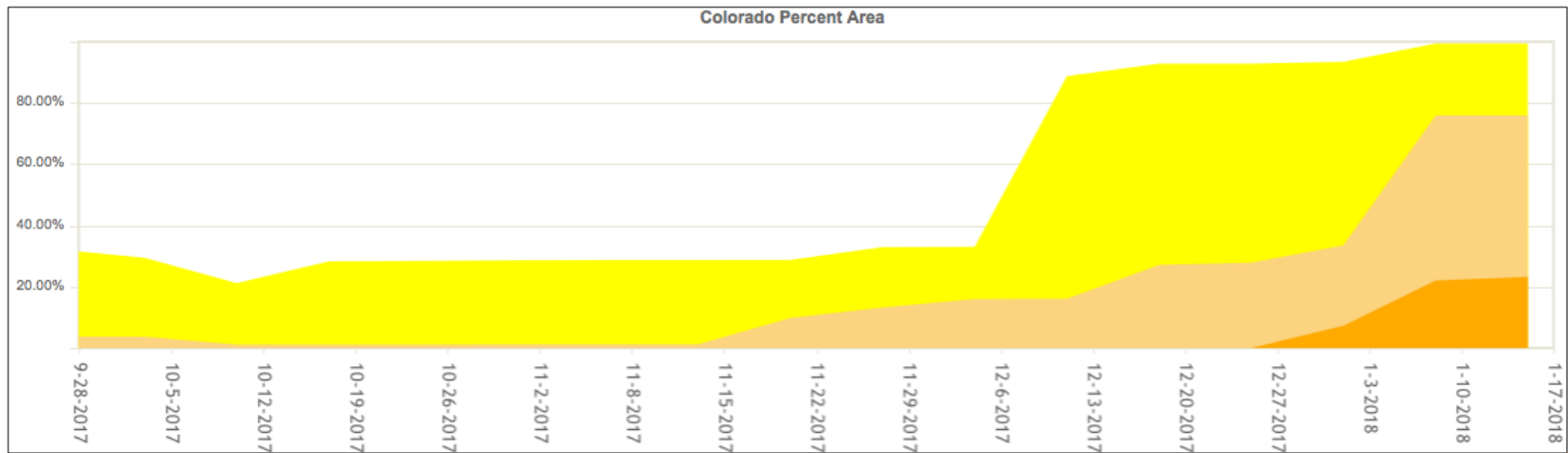


January 16, 2018
compared to
October 24, 2017

<http://droughtmonitor.unl.edu>



- 5 Class Degradation
- 4 Class Degradation
- 3 Class Degradation
- 2 Class Degradation
- 1 Class Degradation
- No Change
- 1 Class Improvement
- 2 Class Improvement
- 3 Class Improvement
- 4 Class Improvement
- 5 Class Improvement



Becky.Bolinger@colostate.edu

**To view this and other presentations:
http://climate.colostate.edu/ccc_archive.html**

Thank you



Colorado State University