



Water Availability Task Force Meeting

June 20th, 2023

NRCS Snow Survey and Water Supply Forecasting Program

Karl Wetlaufer

Hydrologist

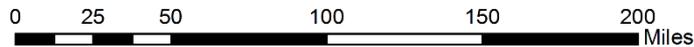
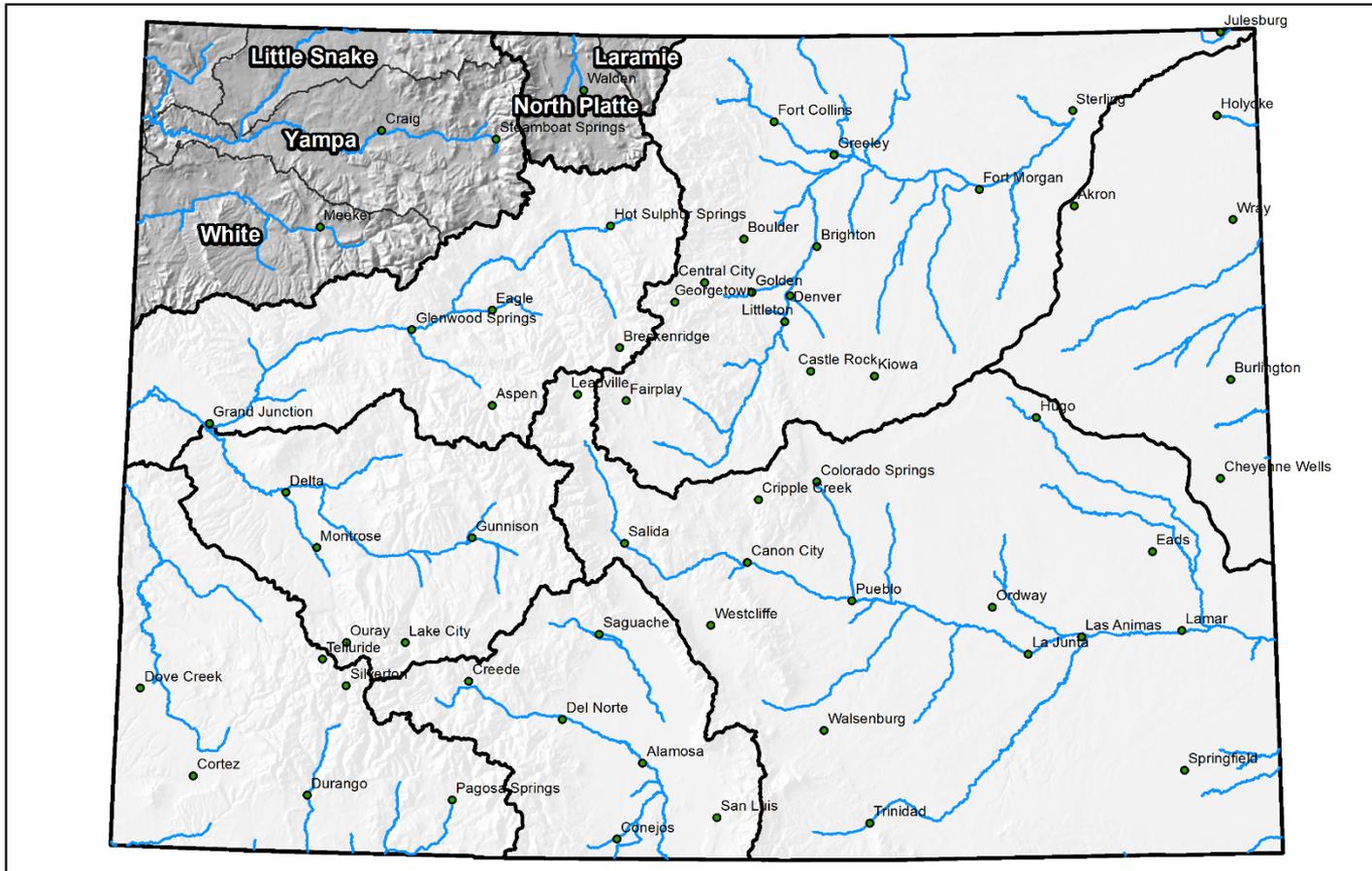
Karl.Wetlaufer@usda.gov

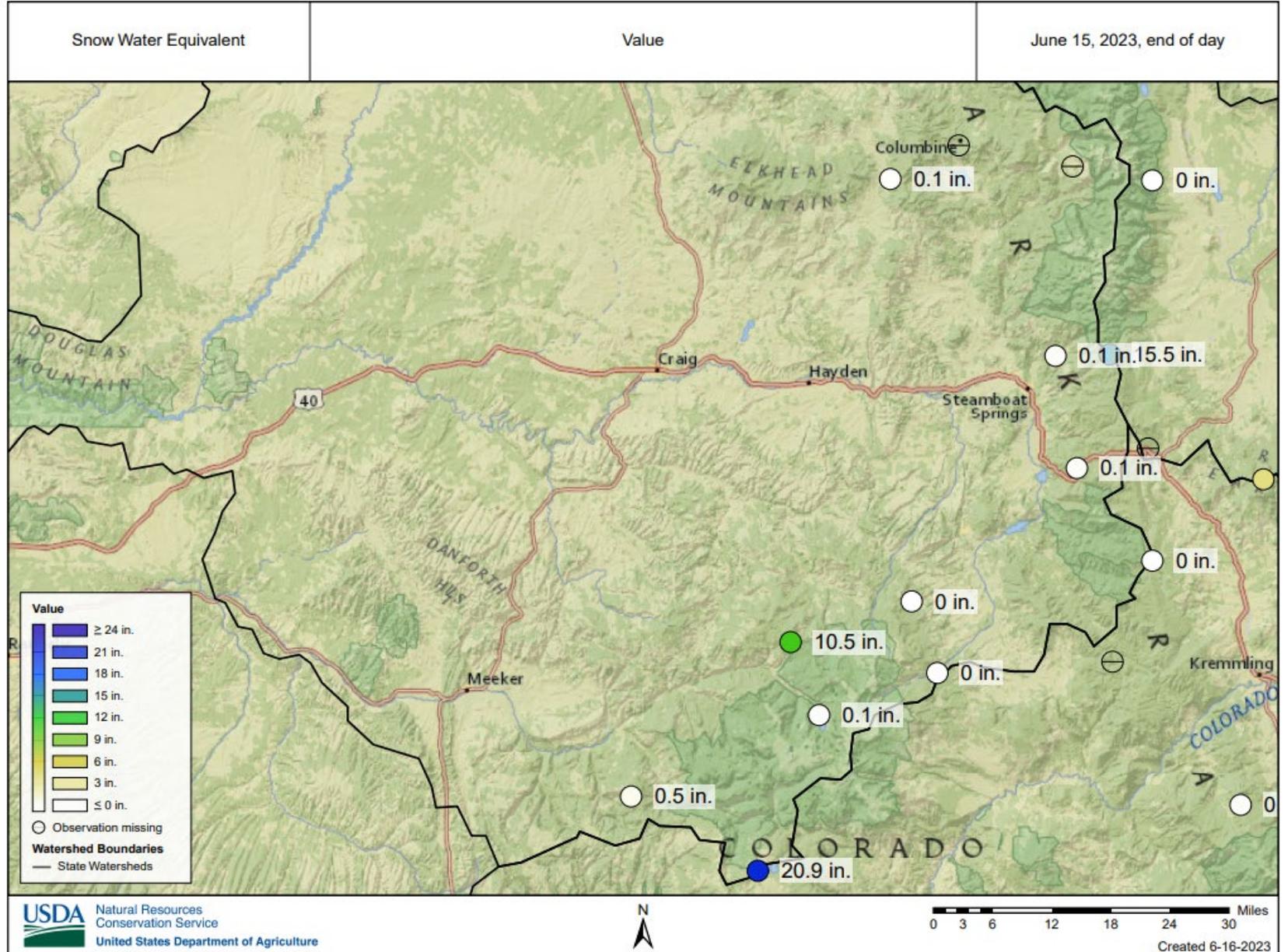
720-544-2853

<http://www.nrcs.usda.gov/wps/portal/nrcs/main/co/snow/>

Major Basin Summary

Yampa, White, and North Platte River Basins







PRECIPITATION IN WHITE-YAMPA

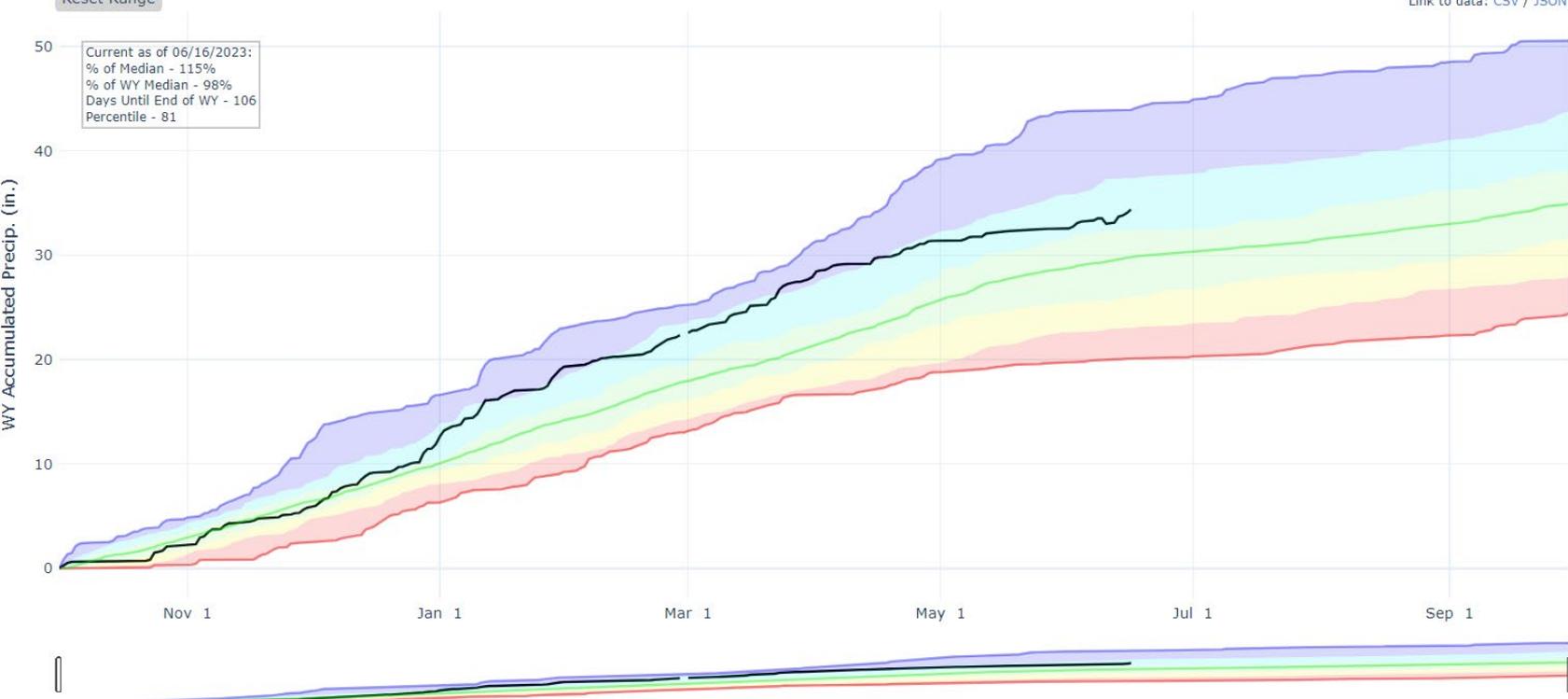
Reset Range

[Link to data: CSV / JSON](#)

Station List

Current as of 06/16/2023:
 % of Median - 115%
 % of WY Median - 98%
 Days Until End of WY - 106
 Percentile - 81

- Max
- Median (POR)
- Median ('91-'20)
- Min
- Stats. Shading
- 2023 (21 sites)
- 2022 (21 sites)
- 2021 (21 sites)
- 2020 (21 sites)
- 2019 (21 sites)
- 2018 (21 sites)
- 2017 (21 sites)
- 2016 (21 sites)
- 2015 (21 sites)
- 2014 (21 sites)
- 2013 (21 sites)
- 2012 (21 sites)
- 2011 (21 sites)
- 2010 (21 sites)
- 2009 (21 sites)
- 2008 (21 sites)
- 2007 (21 sites)
- 2006 (21 sites)
- 2005 (21 sites)
- 2004 (19 sites)





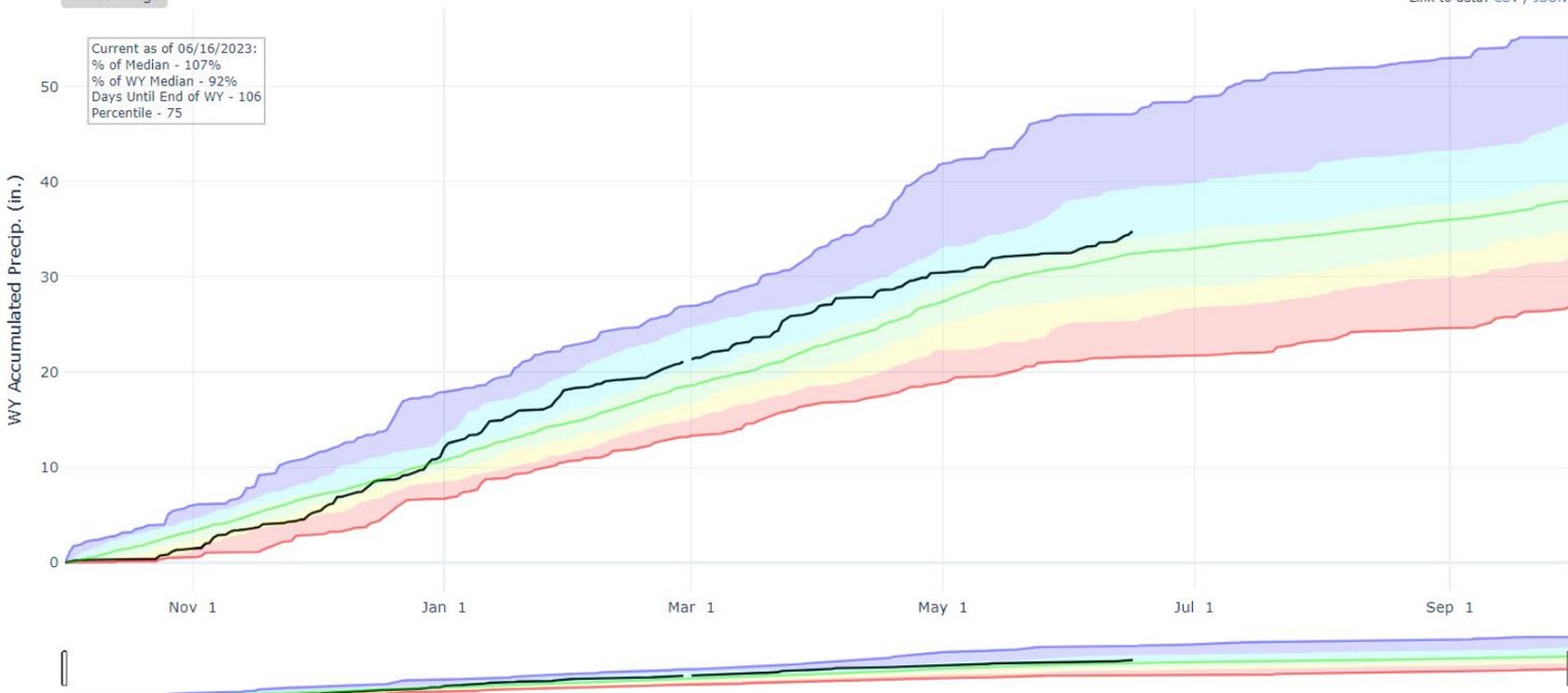
PRECIPITATION IN LARAMIE AND NORTH PLATTE

Reset Range

[Link to data: CSV / JSON](#)

Station List

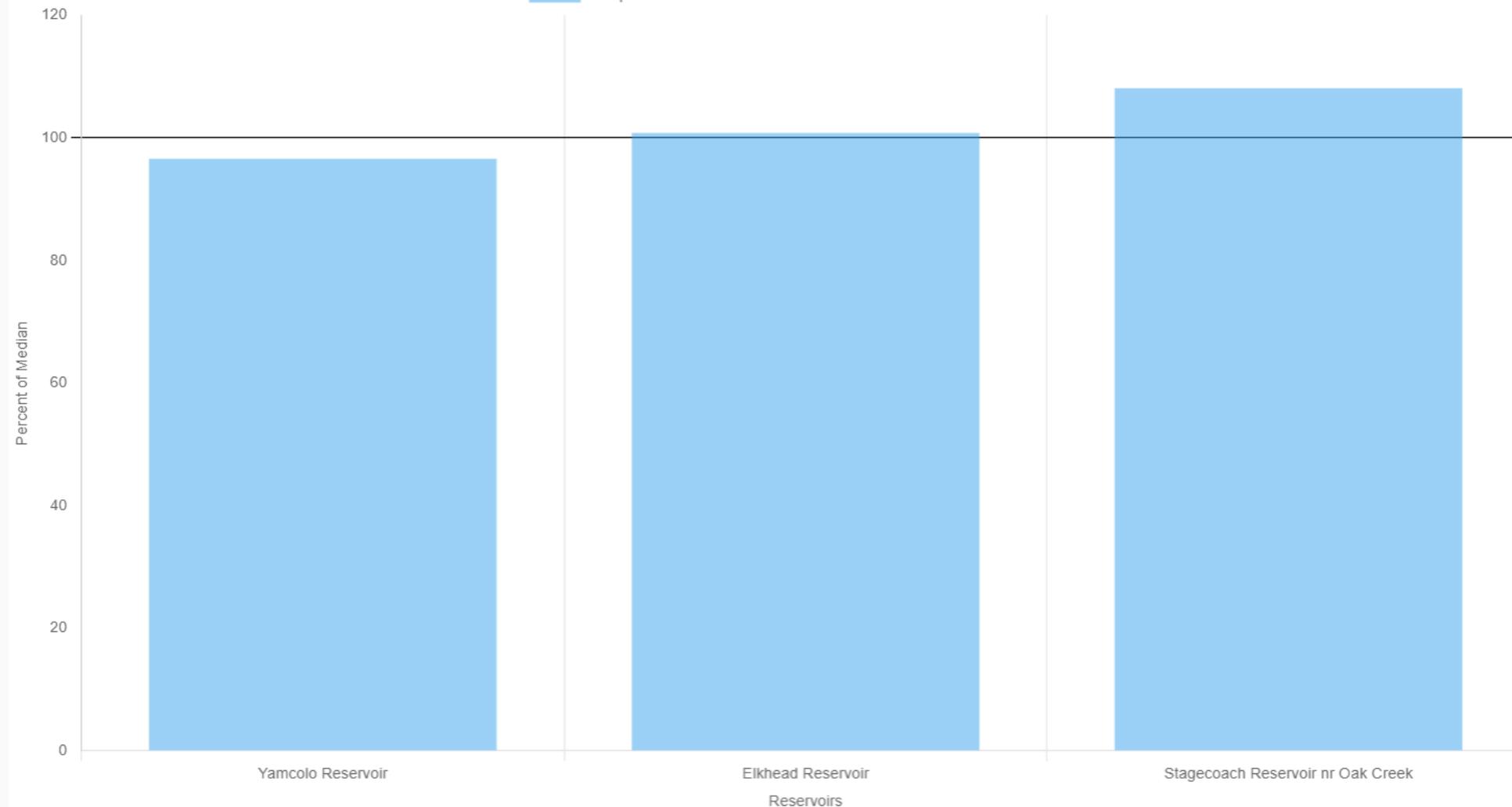
Current as of 06/16/2023:
% of Median - 107%
% of WY Median - 92%
Days Until End of WY - 106
Percentile - 75





Yampa-White-Little Snake Reservoir Storage Summary for June 1st 2023

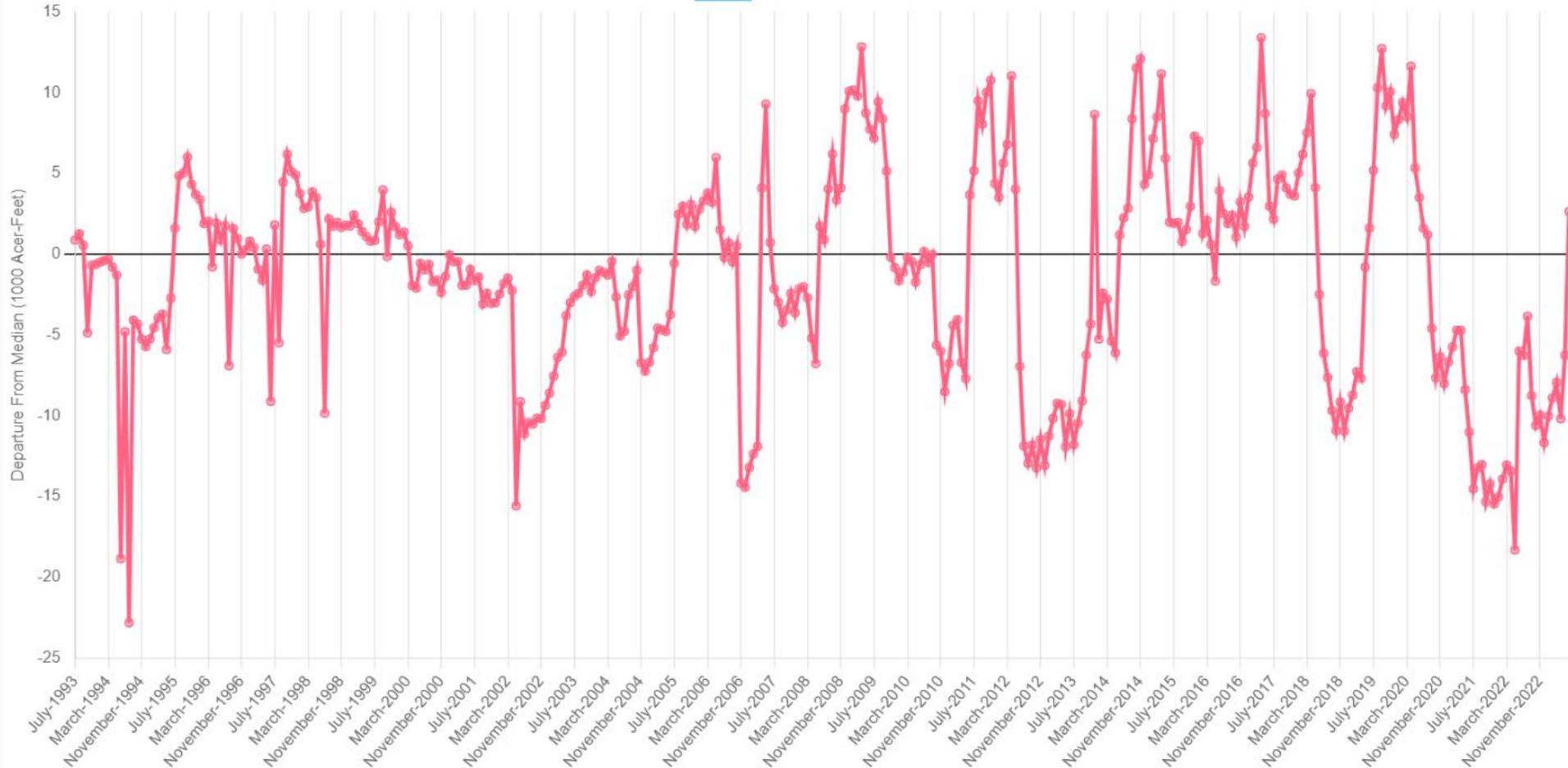
Yampa-White-Little Snake Reservoirs as a Percent of Median



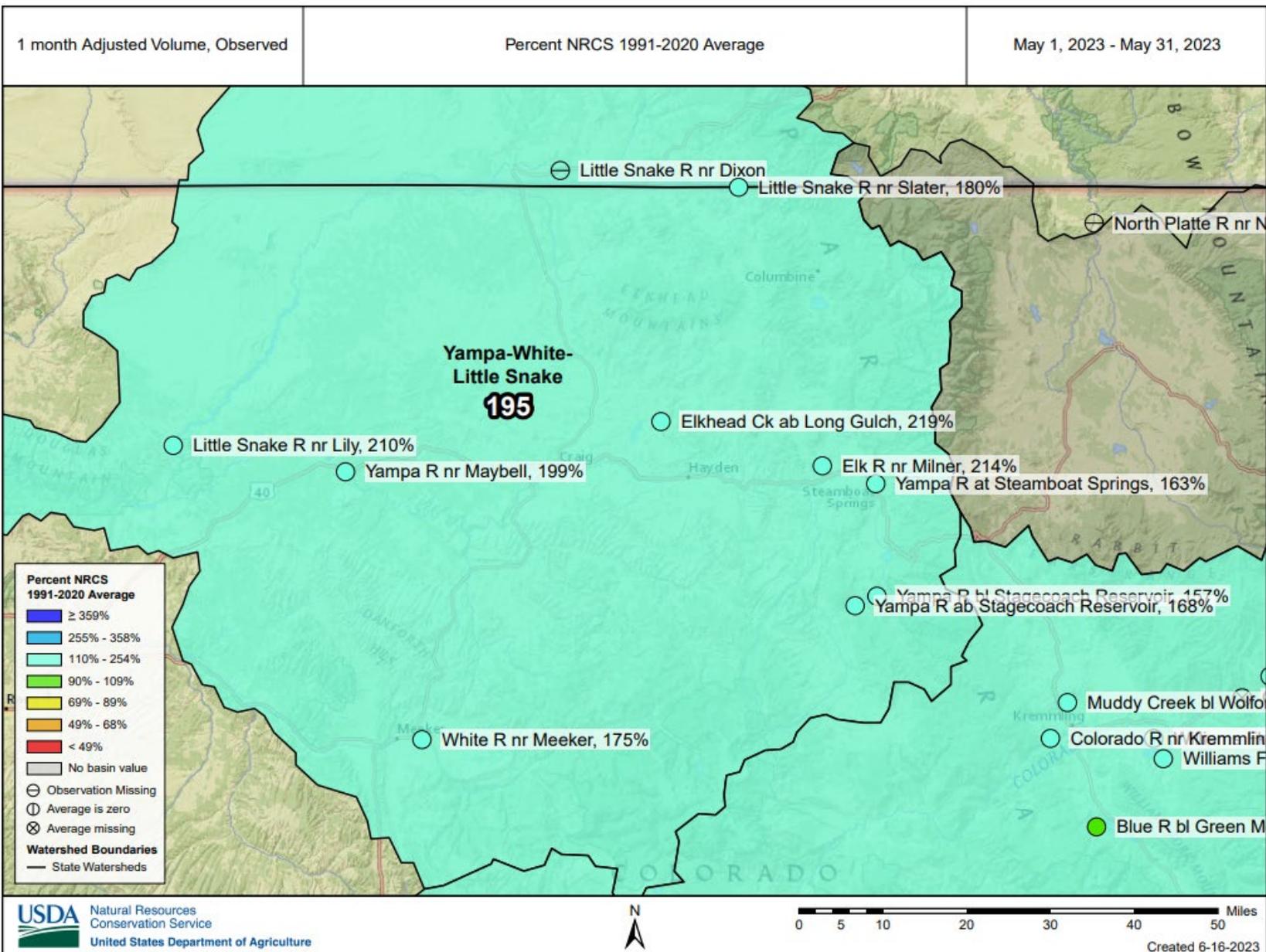


Colorado Departure From Median Timeseries Plot

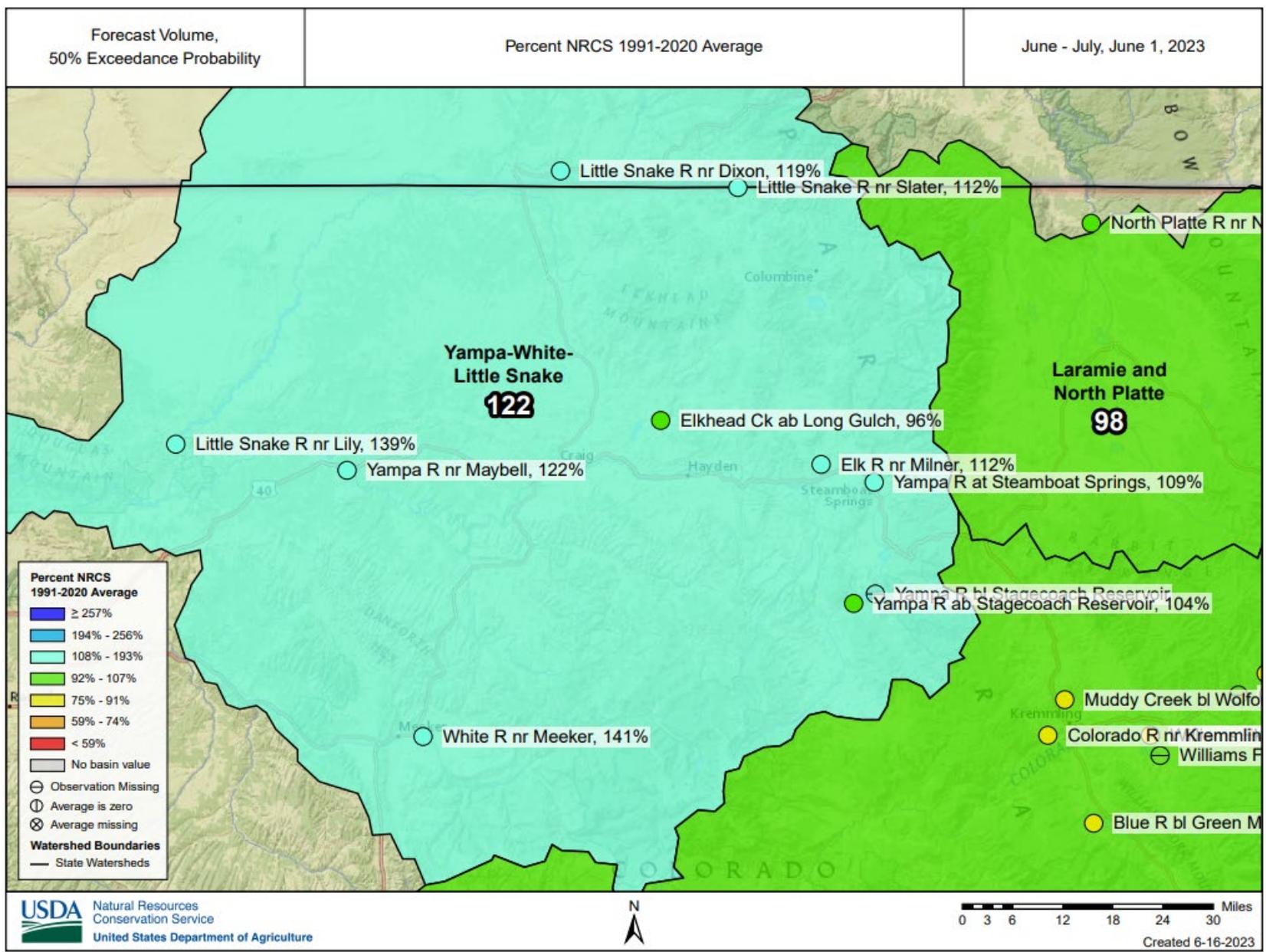
- Arkansas
- Yampa-White-Little Snake
- Upper Rio Grande
- Gunnison
- San Miguel Dolores Animas San Juan
- Colorado Headwaters
- South Platte
- State of Colorado



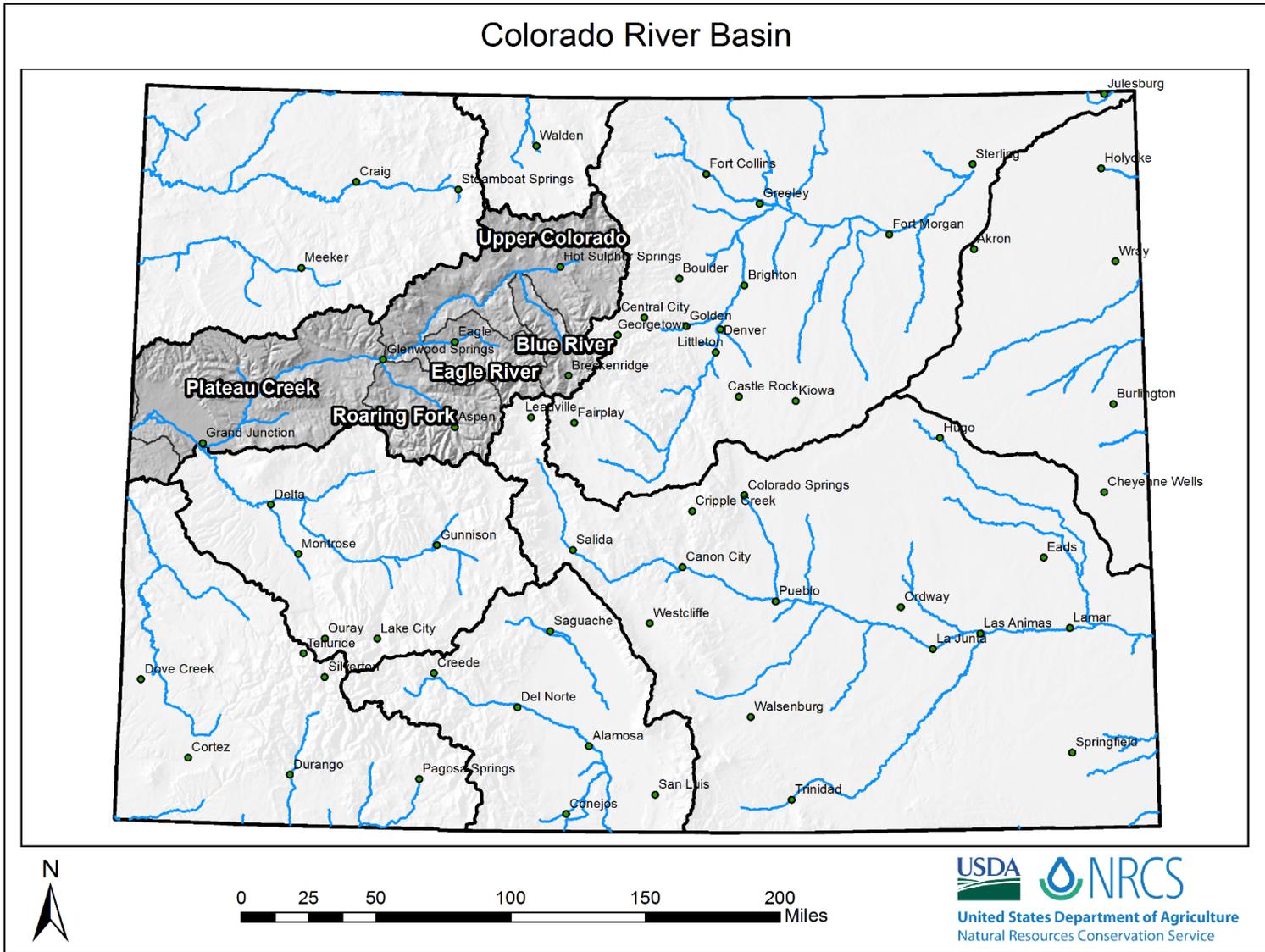
Observed Streamflow



Streamflow Forecasts



Major Basin Summary



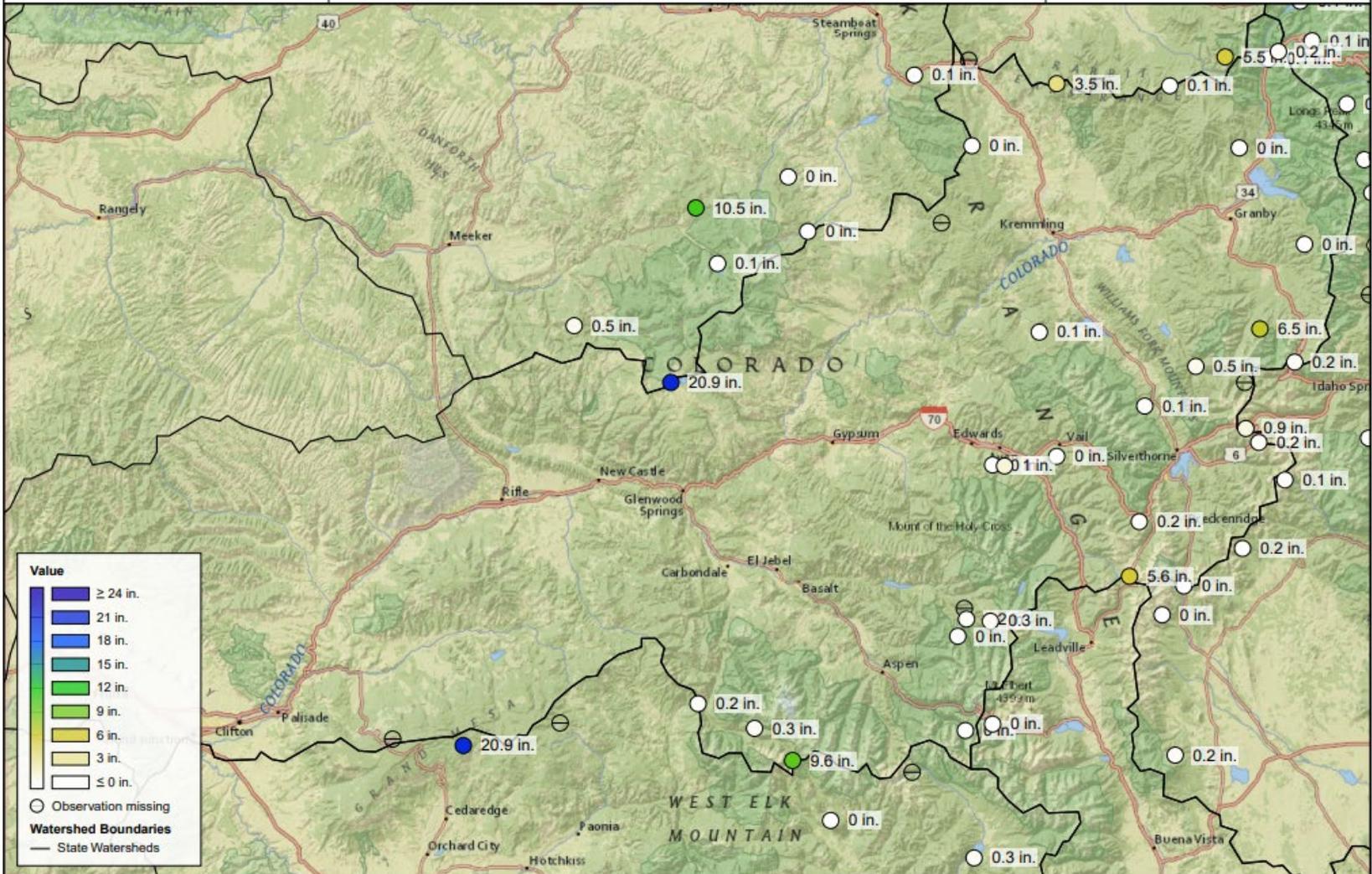


Colorado Snow Surveys

Snow Water Equivalent

Value

June 15, 2023, end of day



Value

- ≥ 24 in.
- 21 in.
- 18 in.
- 15 in.
- 12 in.
- 9 in.
- 6 in.
- 3 in.
- ≤ 0 in.

○ Observation missing

— Watershed Boundaries

— State Watersheds





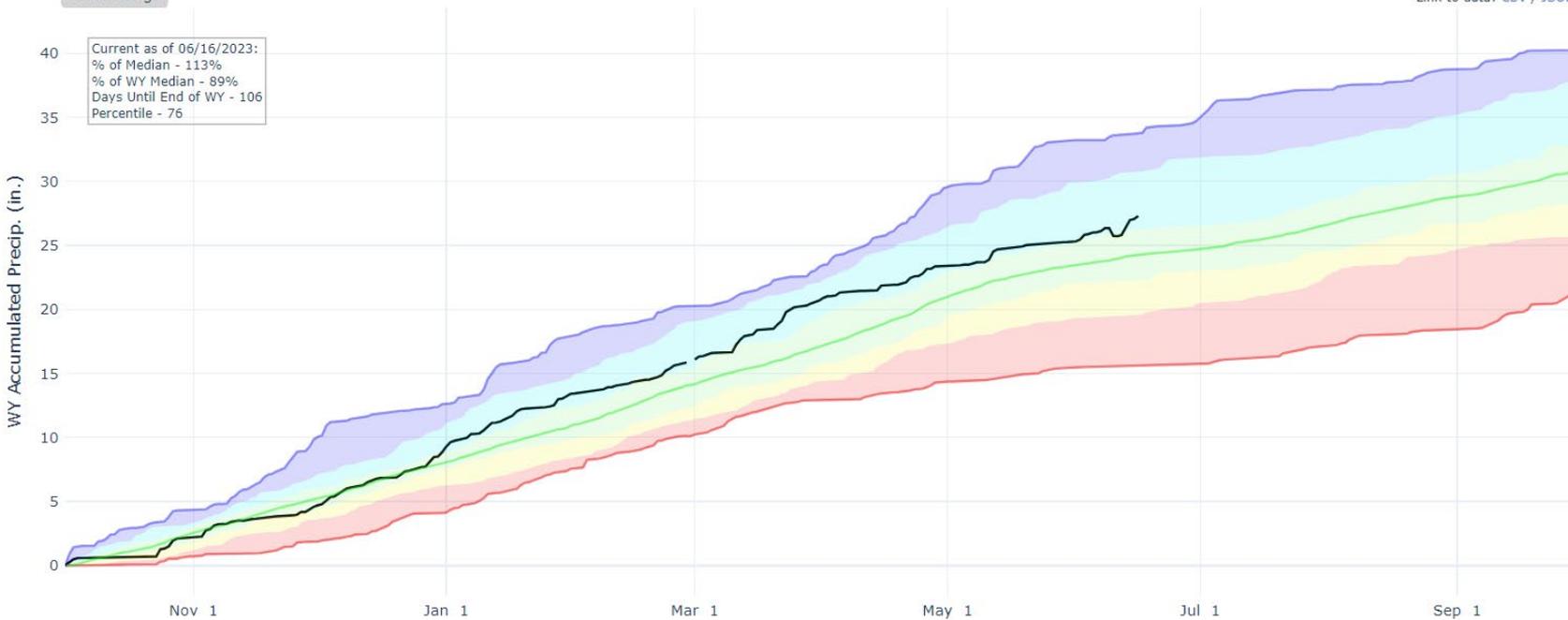
PRECIPITATION IN COLORADO HEADWATERS

Reset Range

[Link to data: CSV / JSON](#)

[Station List](#)

Current as of 06/16/2023:
% of Median - 113%
% of WY Median - 89%
Days Until End of WY - 106
Percentile - 76

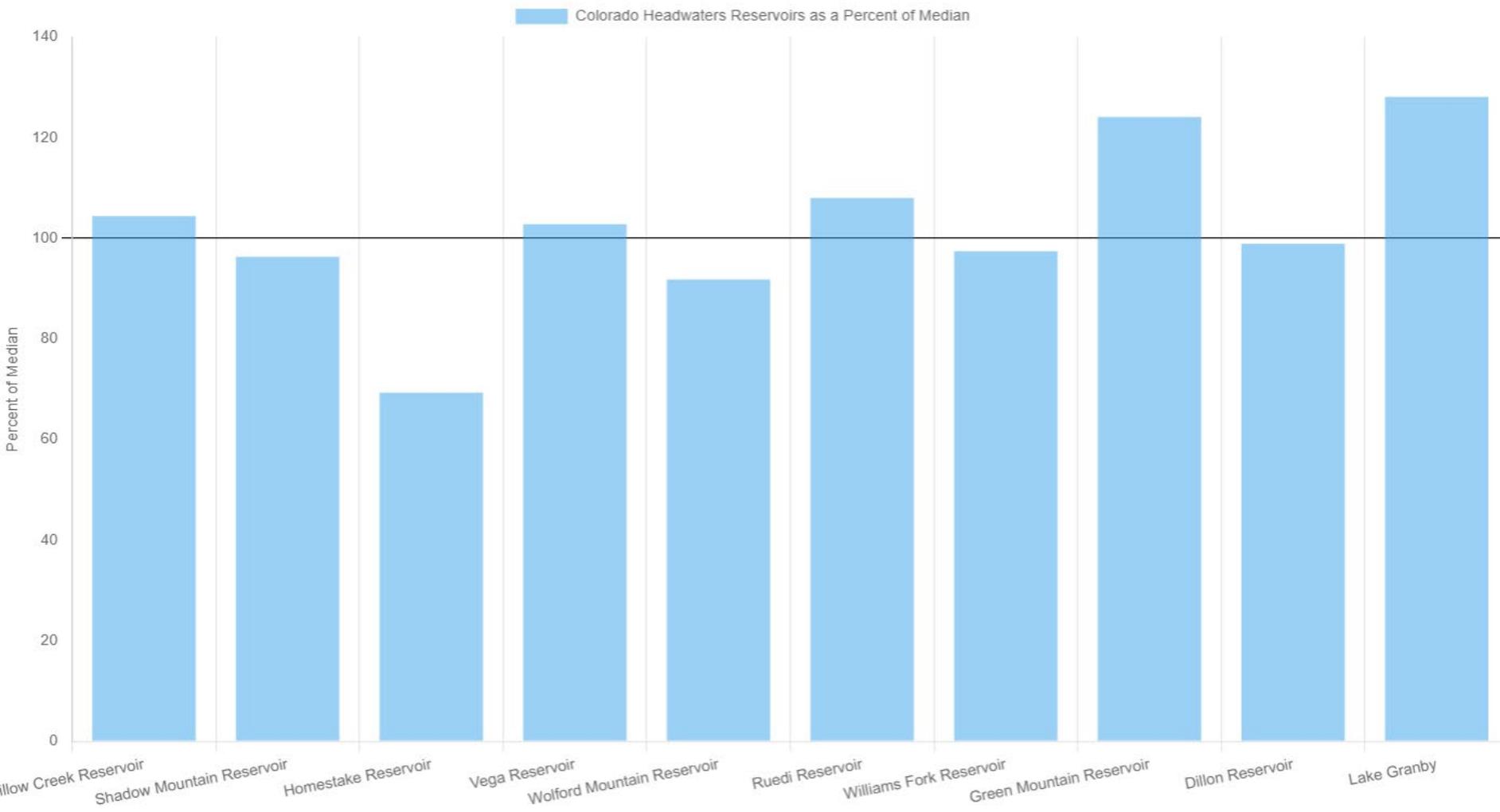


- Max
- Median (POR)
- Median ('91-'20)
- Min
- Stats. Shading
- 2023 (31 sites)
- 2022 (31 sites)
- 2021 (31 sites)
- 2020 (31 sites)
- 2019 (31 sites)
- 2018 (31 sites)
- 2017 (31 sites)
- 2016 (31 sites)
- 2015 (31 sites)
- 2014 (31 sites)
- 2013 (31 sites)
- 2012 (31 sites)
- 2011 (31 sites)
- 2010 (31 sites)
- 2009 (31 sites)
- 2008 (31 sites)
- 2007 (30 sites)
- 2006 (30 sites)
- 2005 (30 sites)
- 2004 (29 sites)

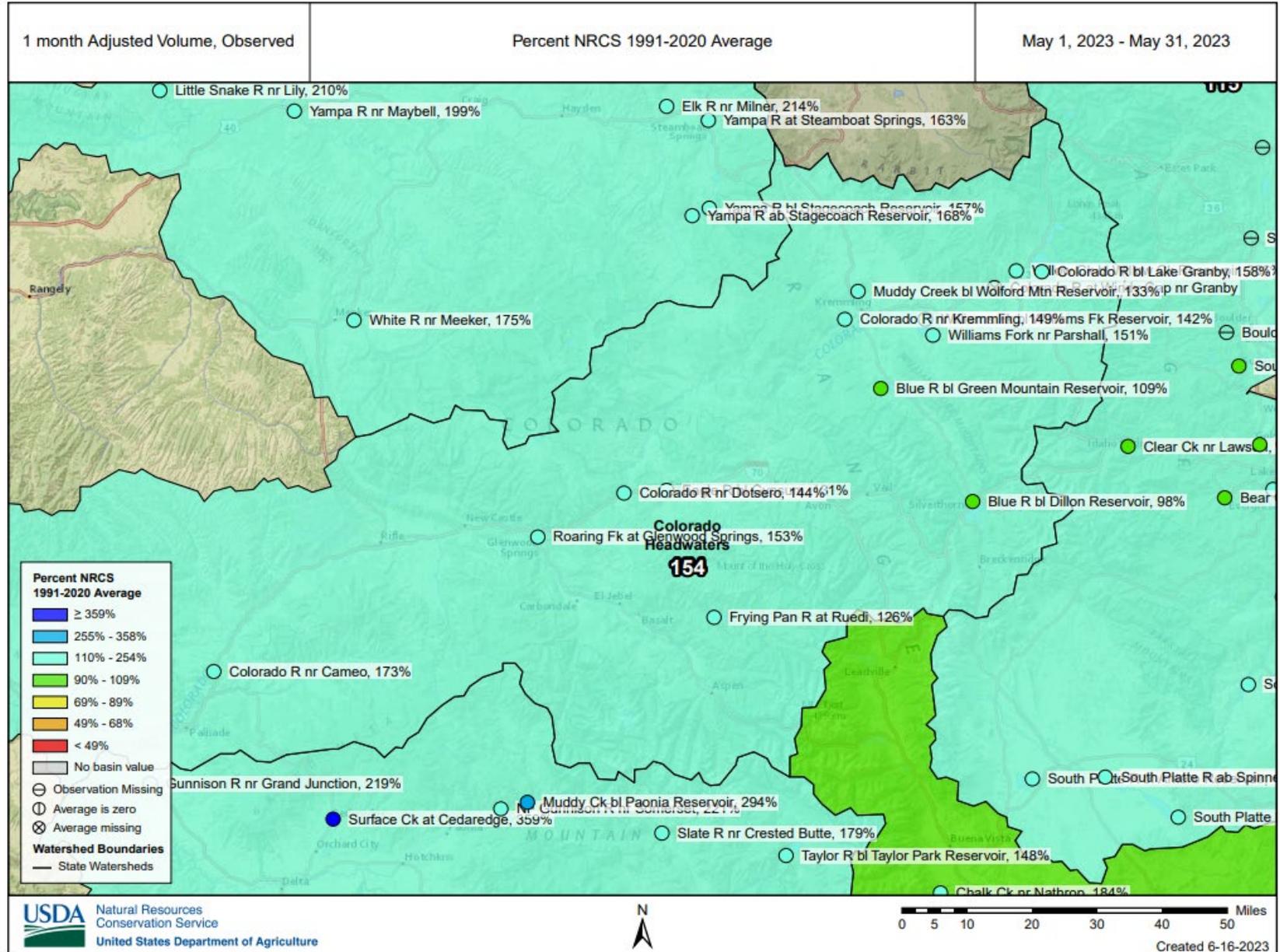




Colorado Headwaters Reservoir Storage Summary for June 1st 2023

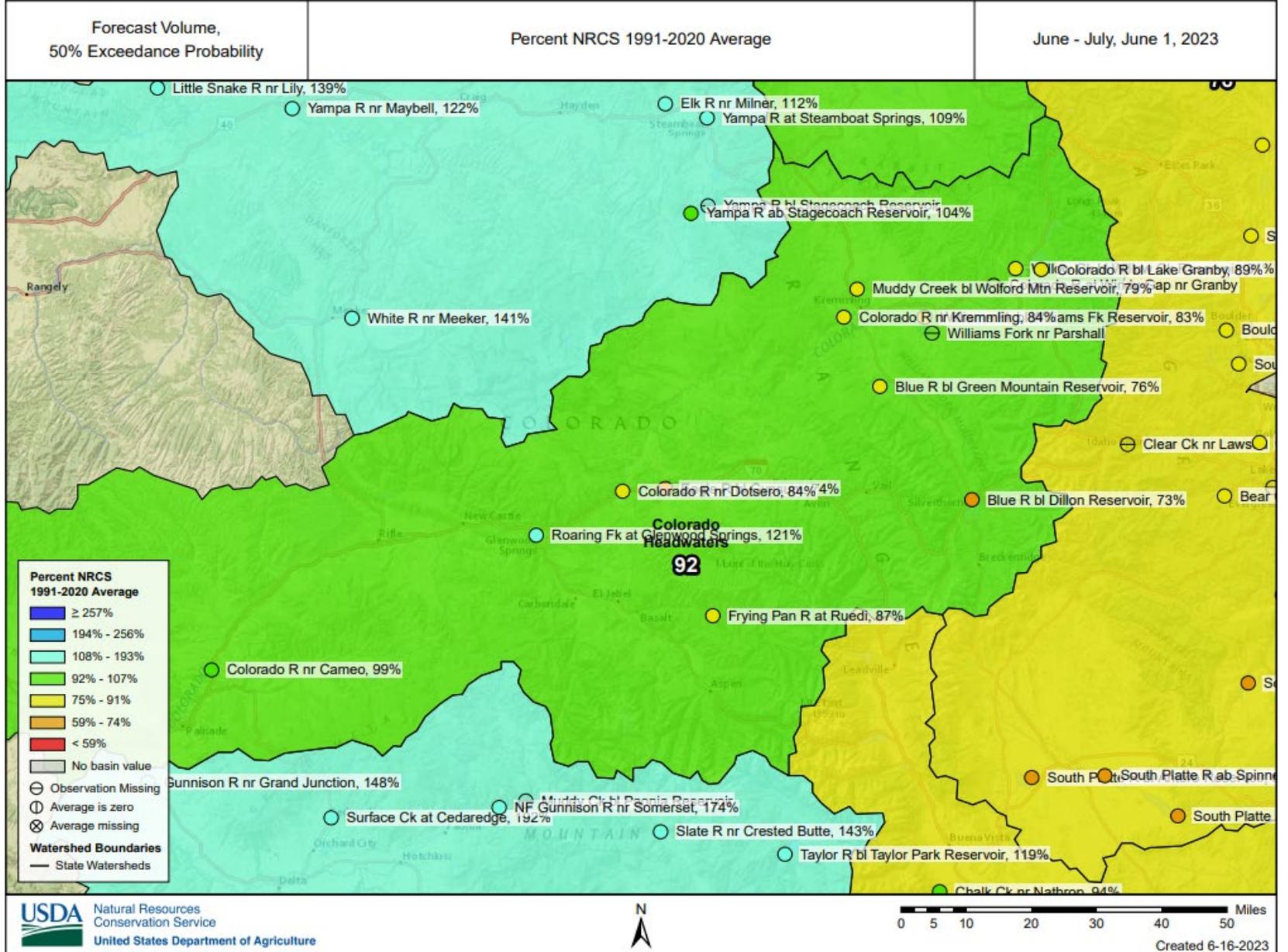


Observed Streamflow



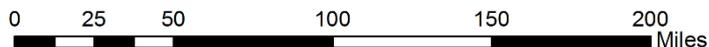
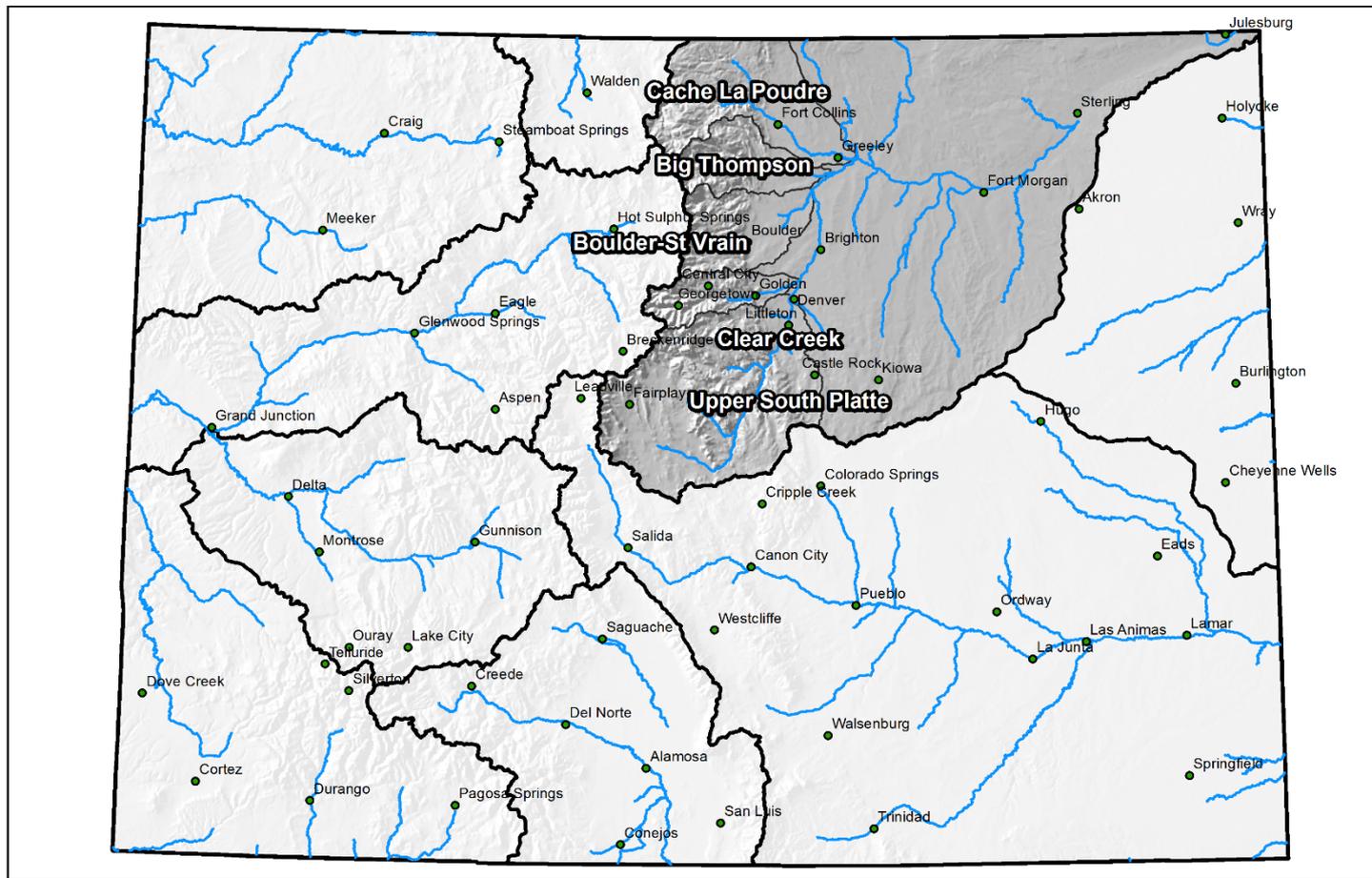


Colorado Snow Surveys



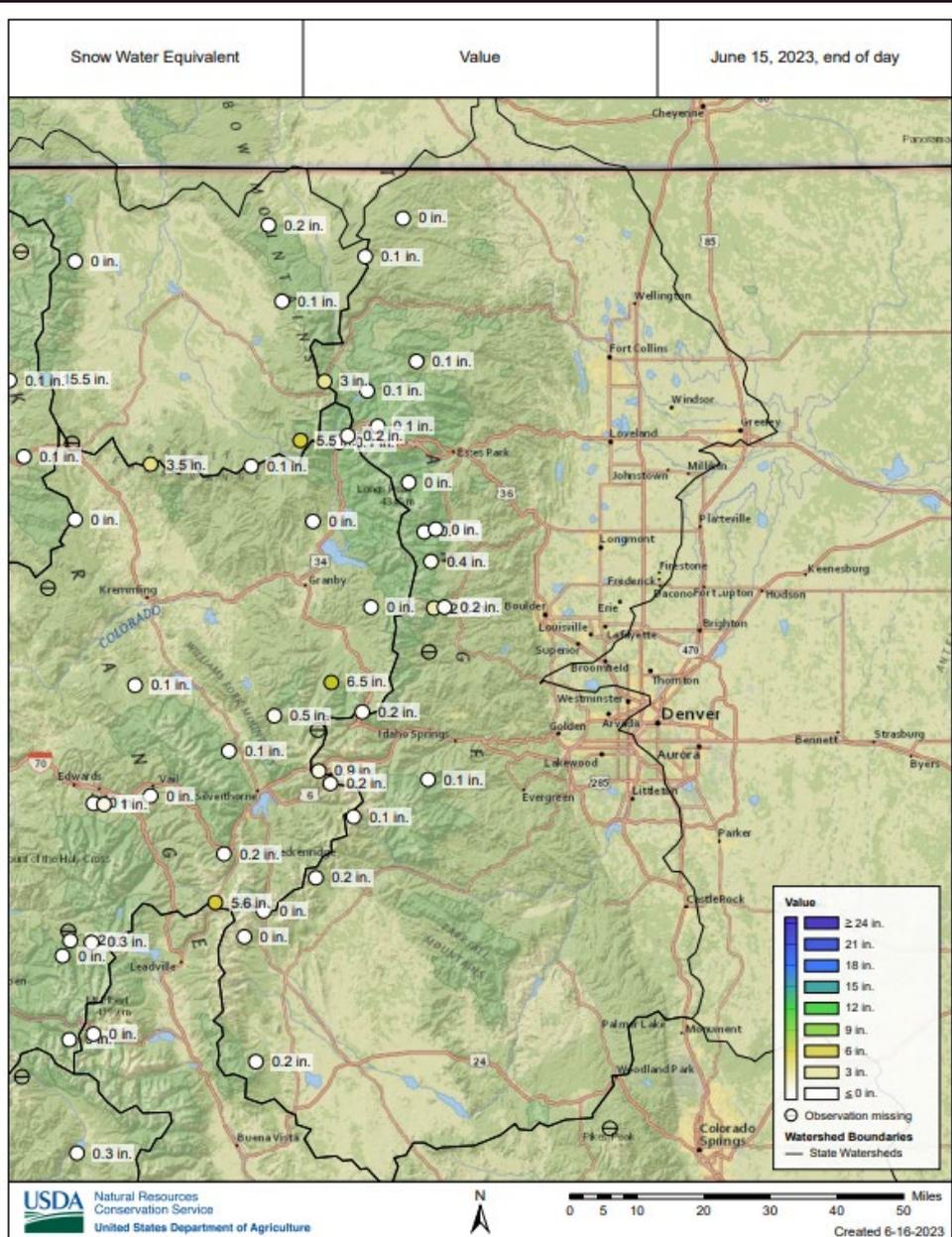
Major Basin Summary

South Platte River Basin





Colorado Snow Surveys





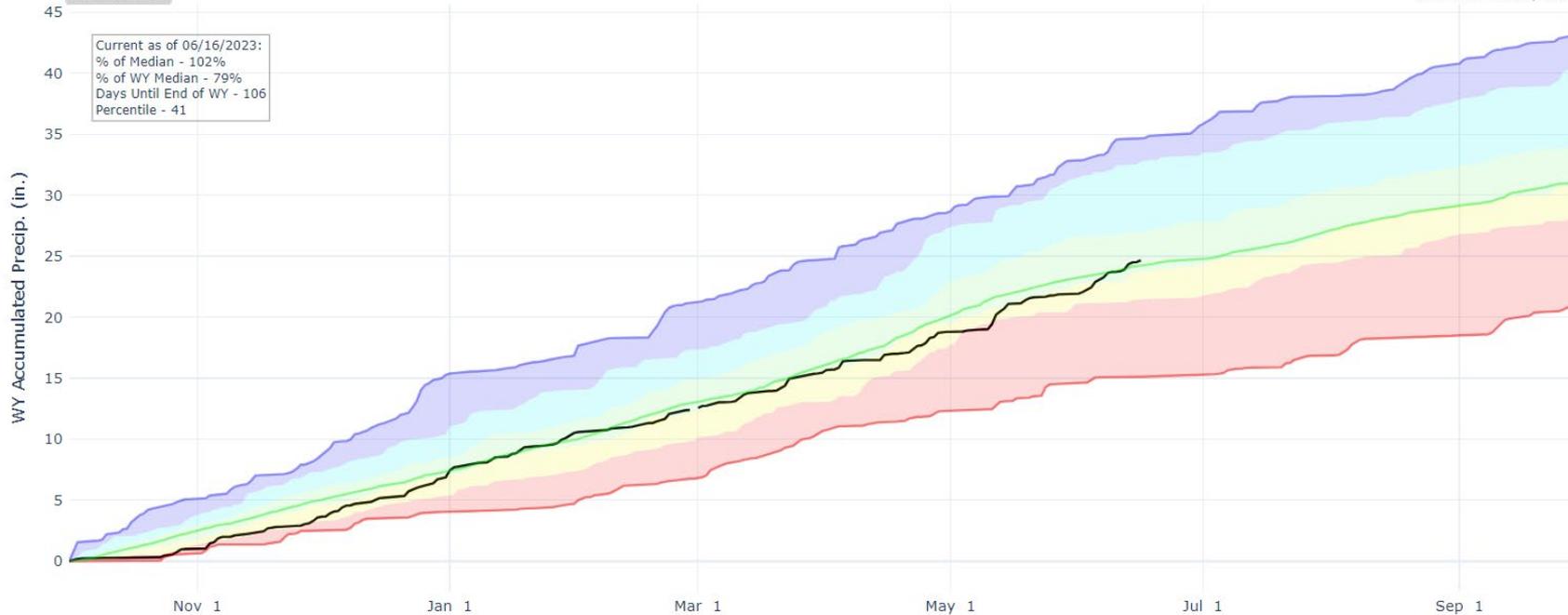
PRECIPITATION IN SOUTH PLATTE

Reset Range

[Link to data: CSV / JSON](#)

Station List

Current as of 06/16/2023:
 % of Median - 102%
 % of WY Median - 79%
 Days Until End of WY - 106
 Percentile - 41



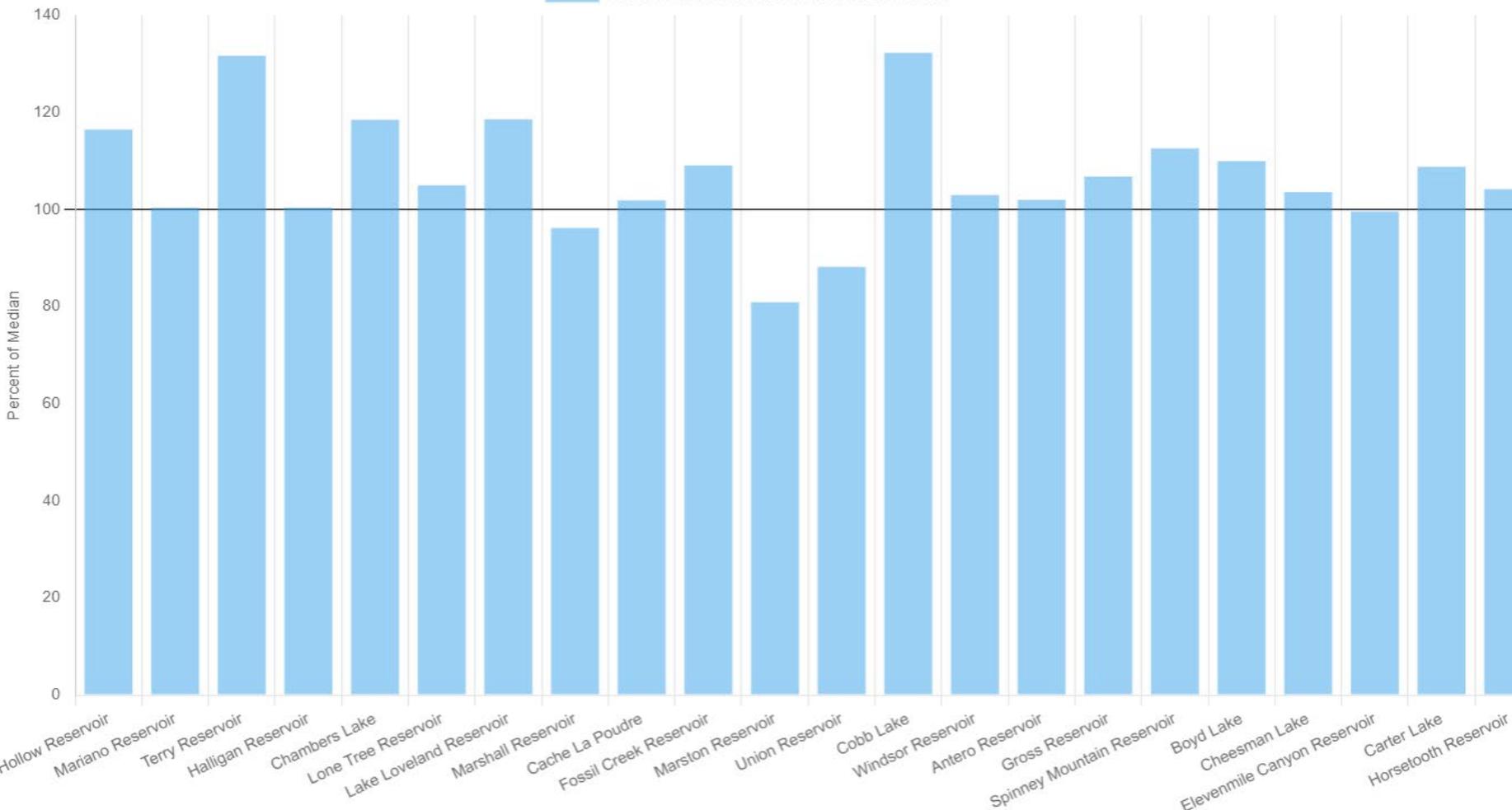
- Max
- Median (POR)
- Median ('91-'20)
- Min
- Stats. Shading
- 2023 (21 sites)
- 2022 (21 sites)
- 2021 (21 sites)
- 2020 (21 sites)
- 2019 (21 sites)
- 2018 (21 sites)
- 2017 (21 sites)
- 2016 (21 sites)
- 2015 (21 sites)
- 2014 (21 sites)
- 2013 (21 sites)
- 2012 (21 sites)
- 2011 (21 sites)
- 2010 (20 sites)
- 2009 (19 sites)
- 2008 (18 sites)
- 2007 (18 sites)
- 2006 (18 sites)
- 2005 (17 sites)
- 2004 (17 sites)





South Platte Reservoir Storage Summary for June 1st 2023

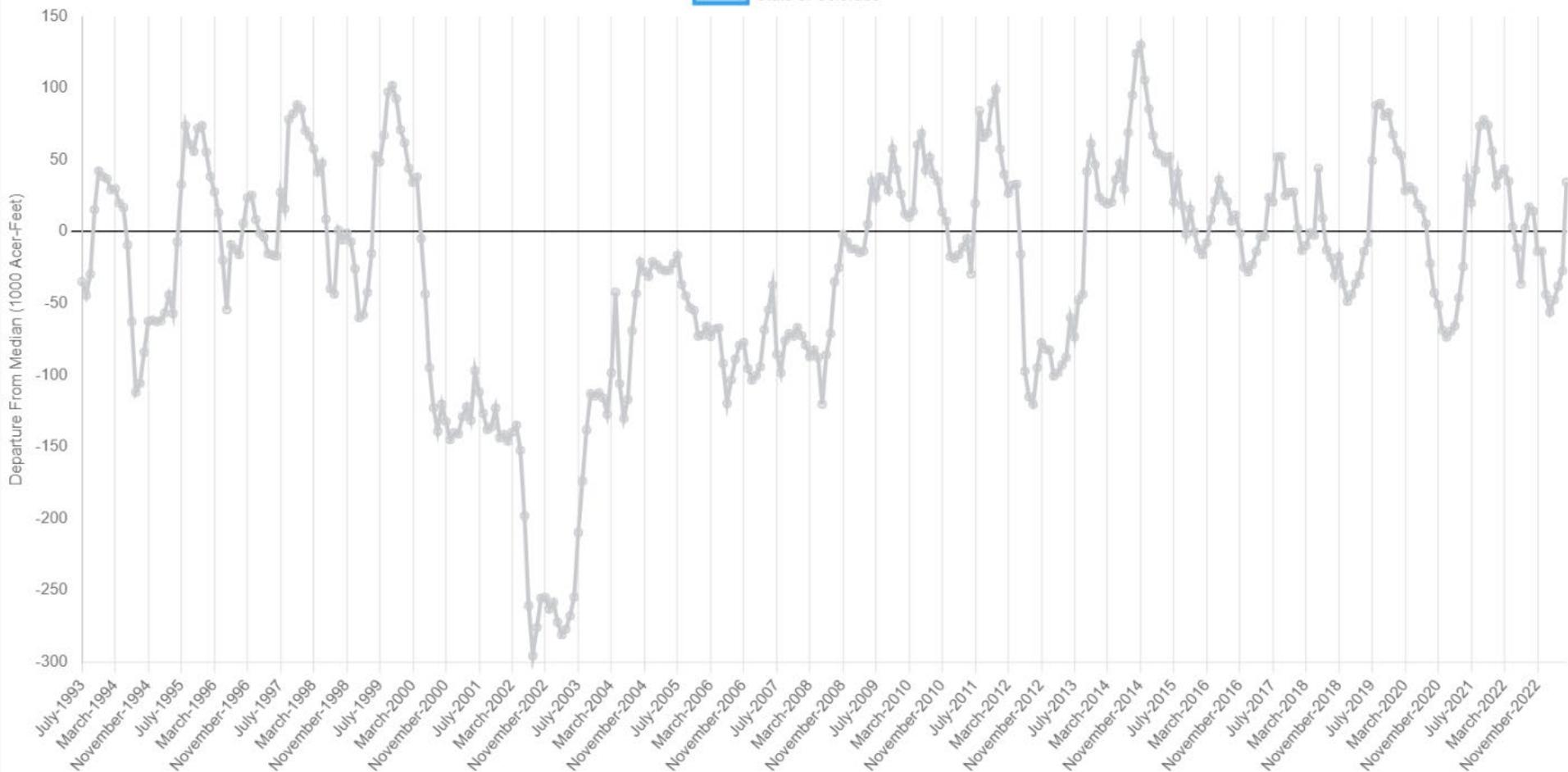
South Platte Reservoirs as a Percent of Median



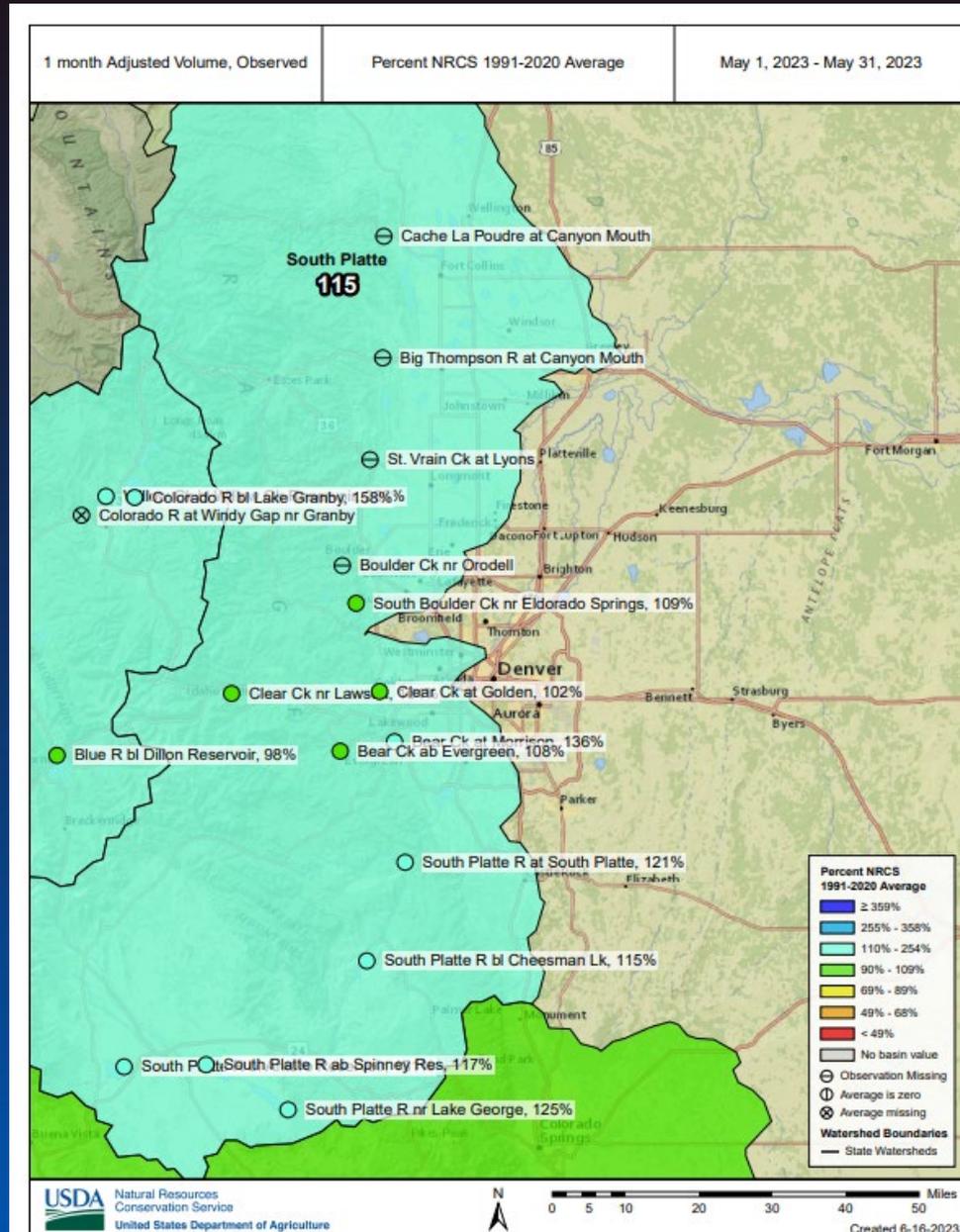


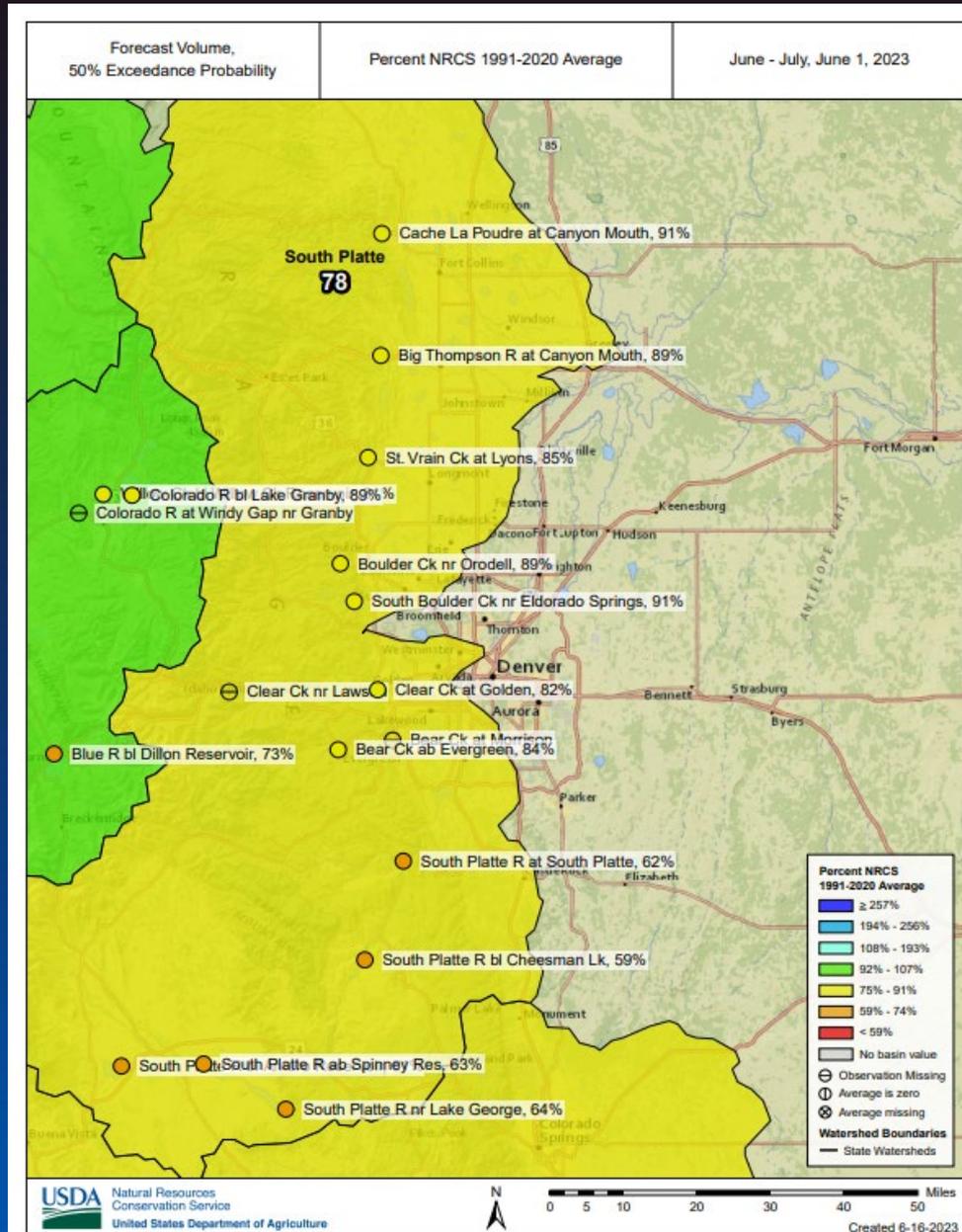
Colorado Departure From Median Timeseries Plot

- Arkansas
- Yampa-White-Little-Snake
- Upper-Rio-Grande
- Gunnison
- San-Miguel-Dolores-Animas-San-Juan
- Colorado-Headwaters
- South-Platte
- State-of-Colorado



Observed Streamflow







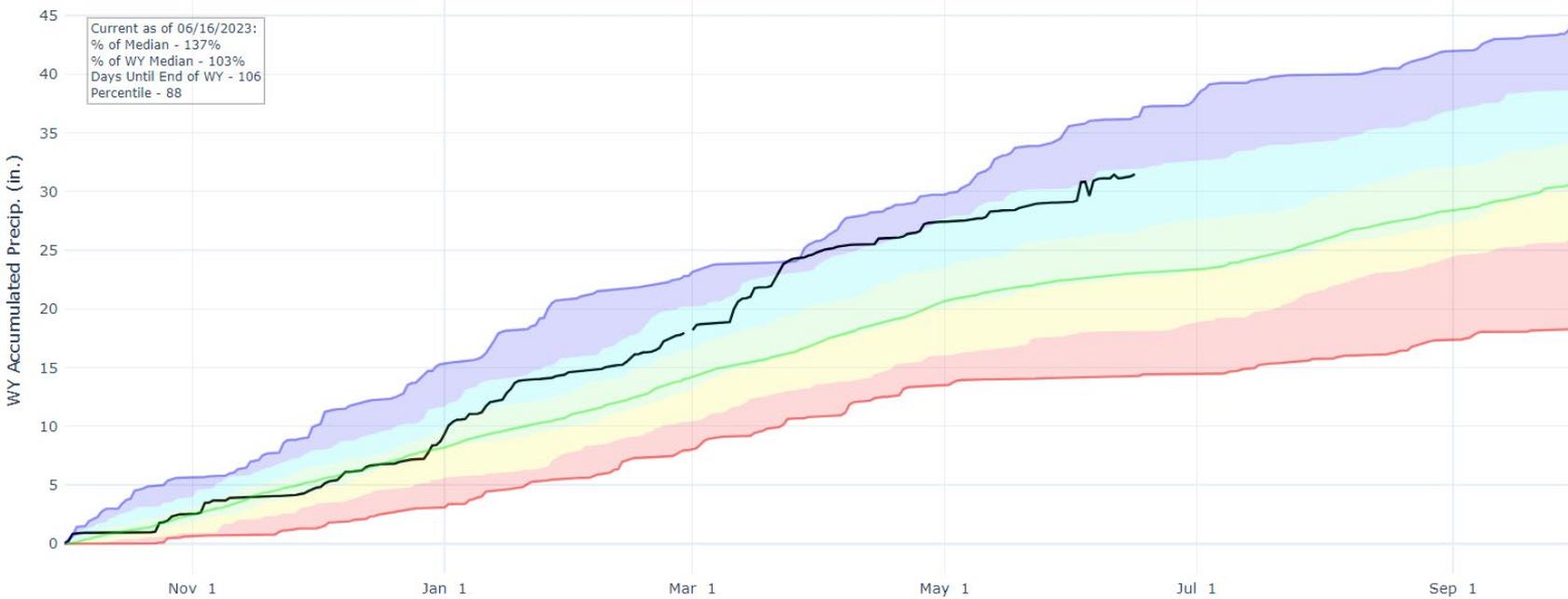
PRECIPITATION IN GUNNISON

Reset Range

[Link to data: CSV / JSON](#)

Station List

Current as of 06/16/2023:
% of Median - 137%
% of WY Median - 103%
Days Until End of WY - 106
Percentile - 88

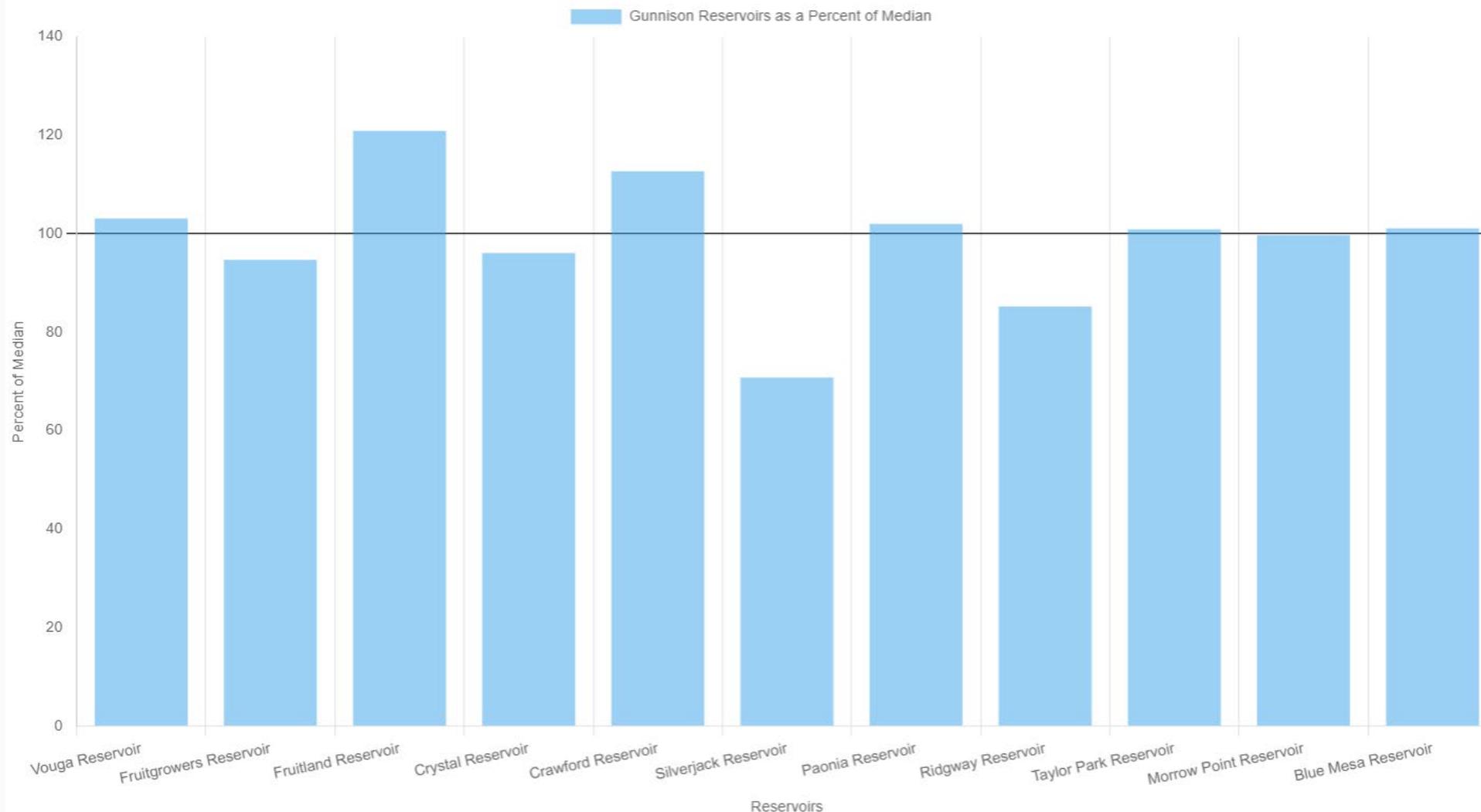


- Max
- Median (POR)
- Median ('91-'20)
- Min
- Stats. Shading
- 2023 (15 sites)
- 2022 (15 sites)
- 2021 (15 sites)
- 2020 (15 sites)
- 2019 (15 sites)
- 2018 (15 sites)
- 2017 (15 sites)
- 2016 (15 sites)
- 2015 (15 sites)
- 2014 (15 sites)
- 2013 (15 sites)
- 2012 (15 sites)
- 2011 (15 sites)
- 2010 (15 sites)
- 2009 (14 sites)
- 2008 (13 sites)
- 2007 (13 sites)
- 2006 (13 sites)
- 2005 (13 sites)
- 2004 (12 sites)



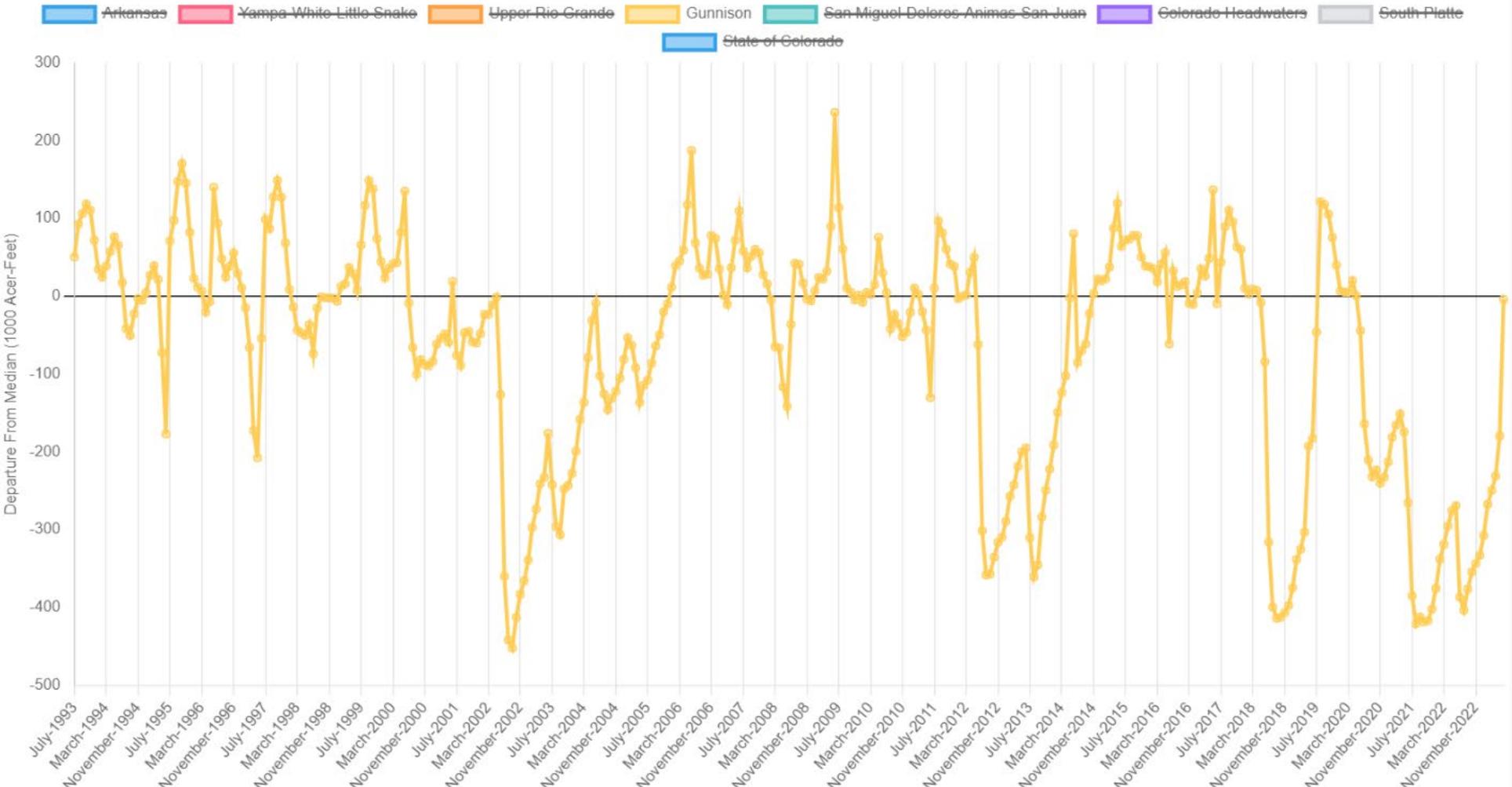


Gunnison Reservoir Storage Summary for June 1st 2023



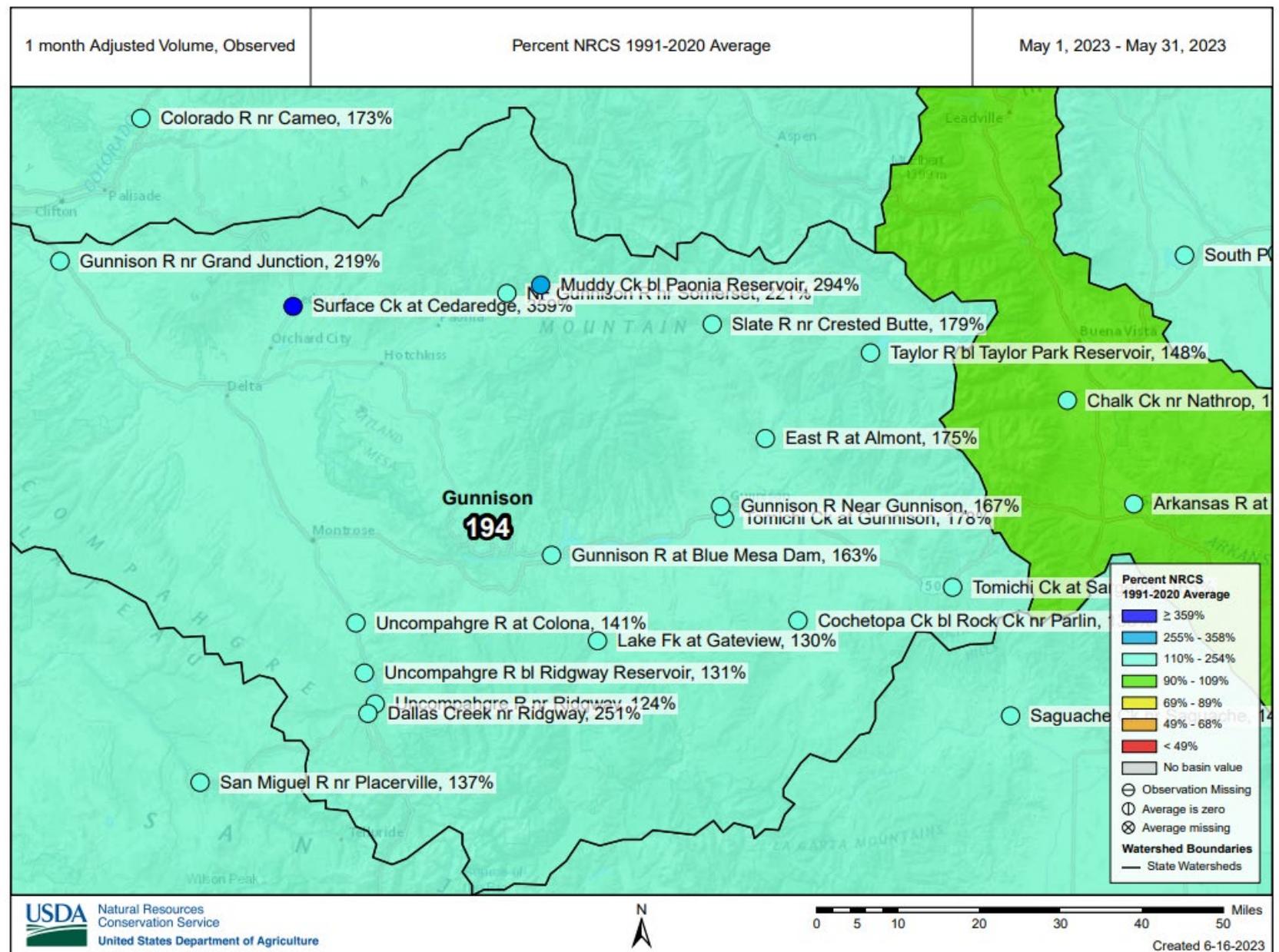


Colorado Departure From Median Timeseries Plot





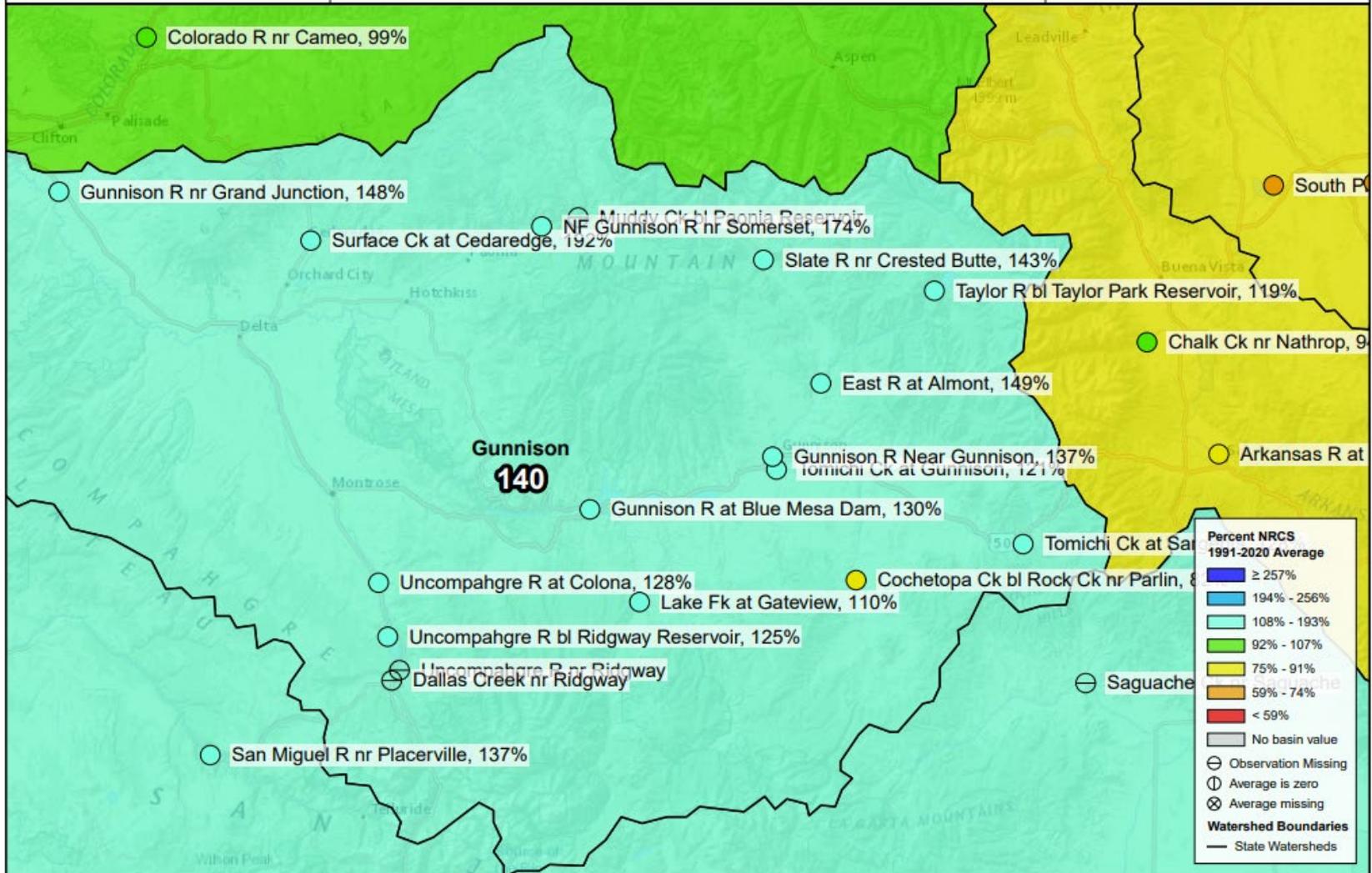
Observed Streamflow



Forecast Volume,
50% Exceedance Probability

Percent NRCS 1991-2020 Average

June - July, June 1, 2023



Percent NRCS 1991-2020 Average

- ≥ 257%
- 194% - 256%
- 108% - 193%
- 92% - 107%
- 75% - 91%
- 59% - 74%
- < 59%
- No basin value
- ⊖ Observation Missing
- ⊕ Average is zero
- ⊗ Average missing

Watershed Boundaries

- State Watersheds





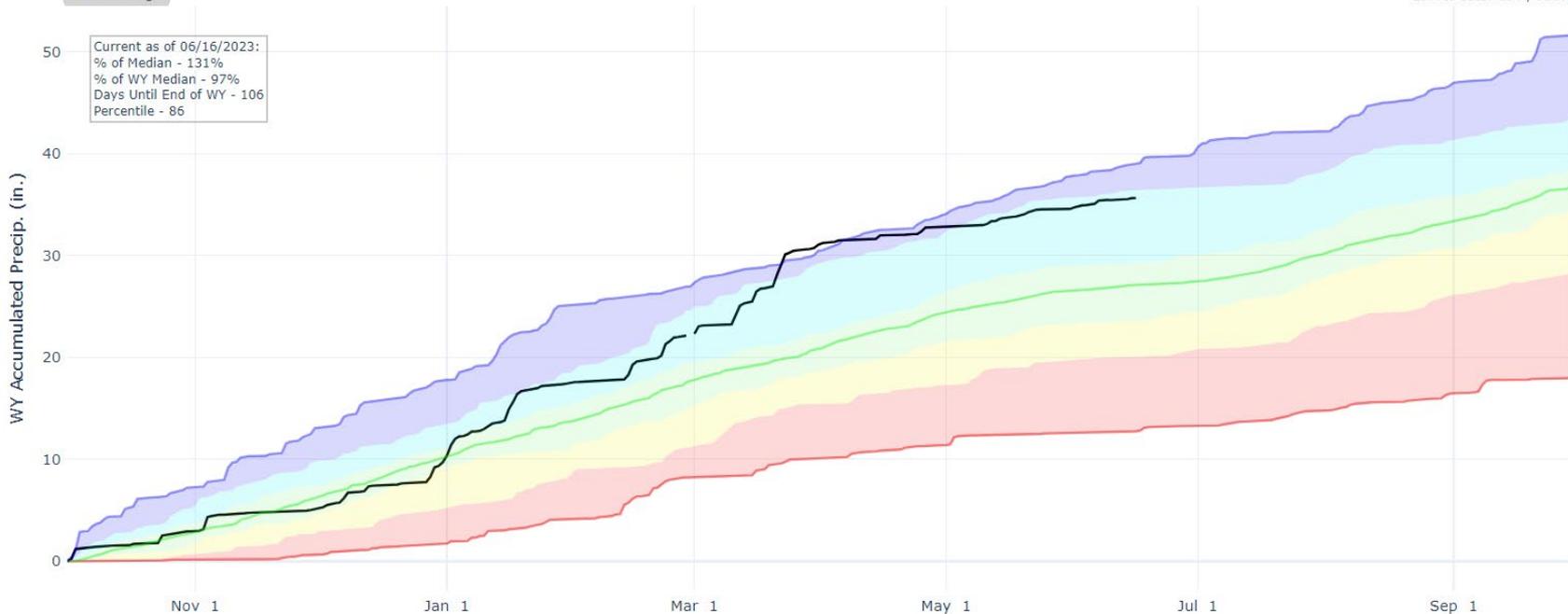
PRECIPITATION IN SAN MIGUEL-DOLORES-ANIMAS-SAN JUAN

Reset Range

[Link to data: CSV / JSON](#)

Station List

Current as of 06/16/2023:
 % of Median - 131%
 % of WY Median - 97%
 Days Until End of WY - 106
 Percentile - 86

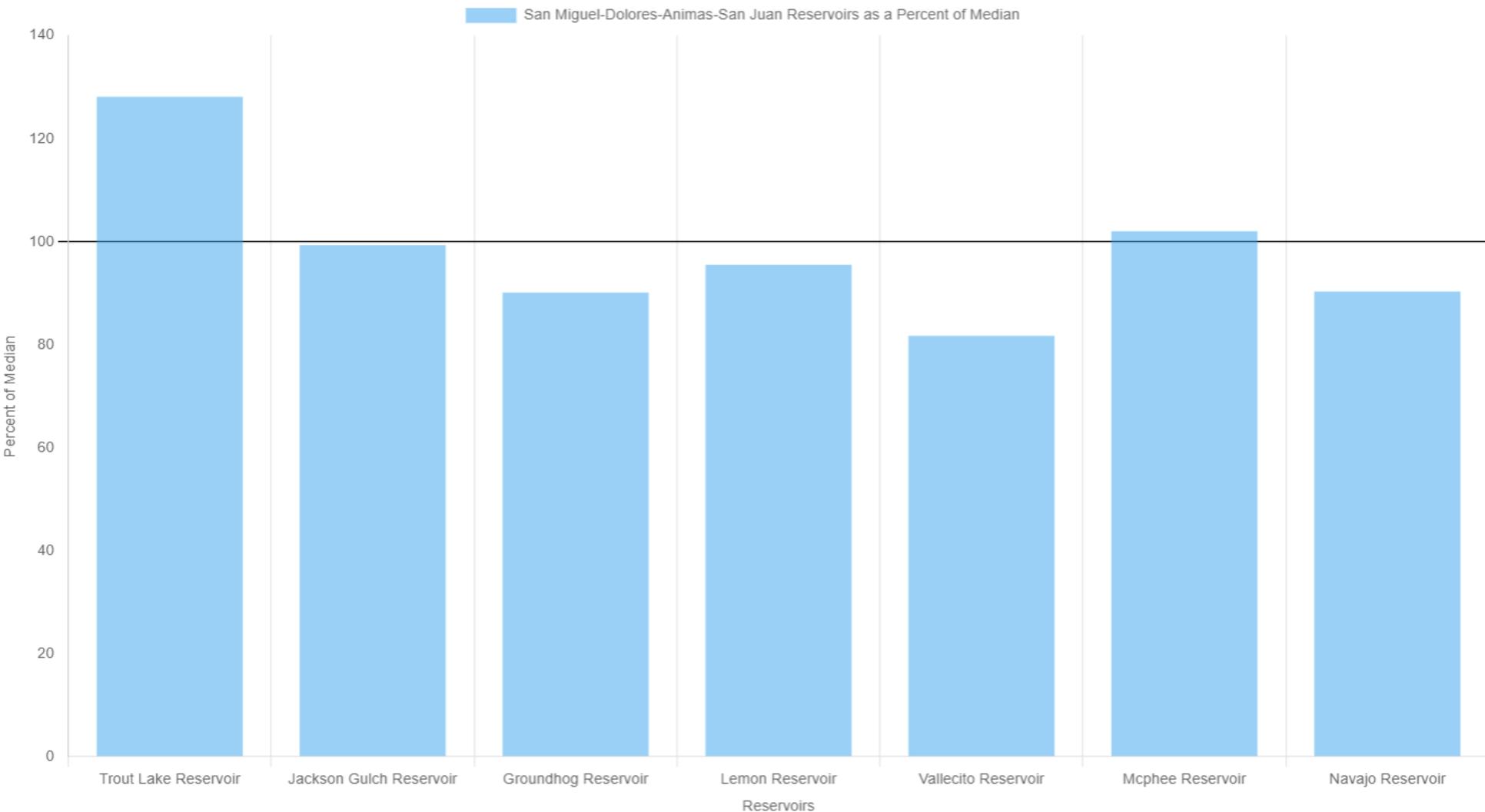


- Max
- Median (POR)
- Median ('91-'20)
- Min
- Stats. Shading
- 2023 (19 sites)
- 2022 (19 sites)
- 2021 (19 sites)
- 2020 (19 sites)
- 2019 (19 sites)
- 2018 (19 sites)
- 2017 (19 sites)
- 2016 (19 sites)
- 2015 (19 sites)
- 2014 (19 sites)
- 2013 (19 sites)
- 2012 (19 sites)
- 2011 (19 sites)
- 2010 (18 sites)
- 2009 (18 sites)
- 2008 (18 sites)
- 2007 (18 sites)
- 2006 (18 sites)
- 2005 (18 sites)
- 2004 (17 sites)



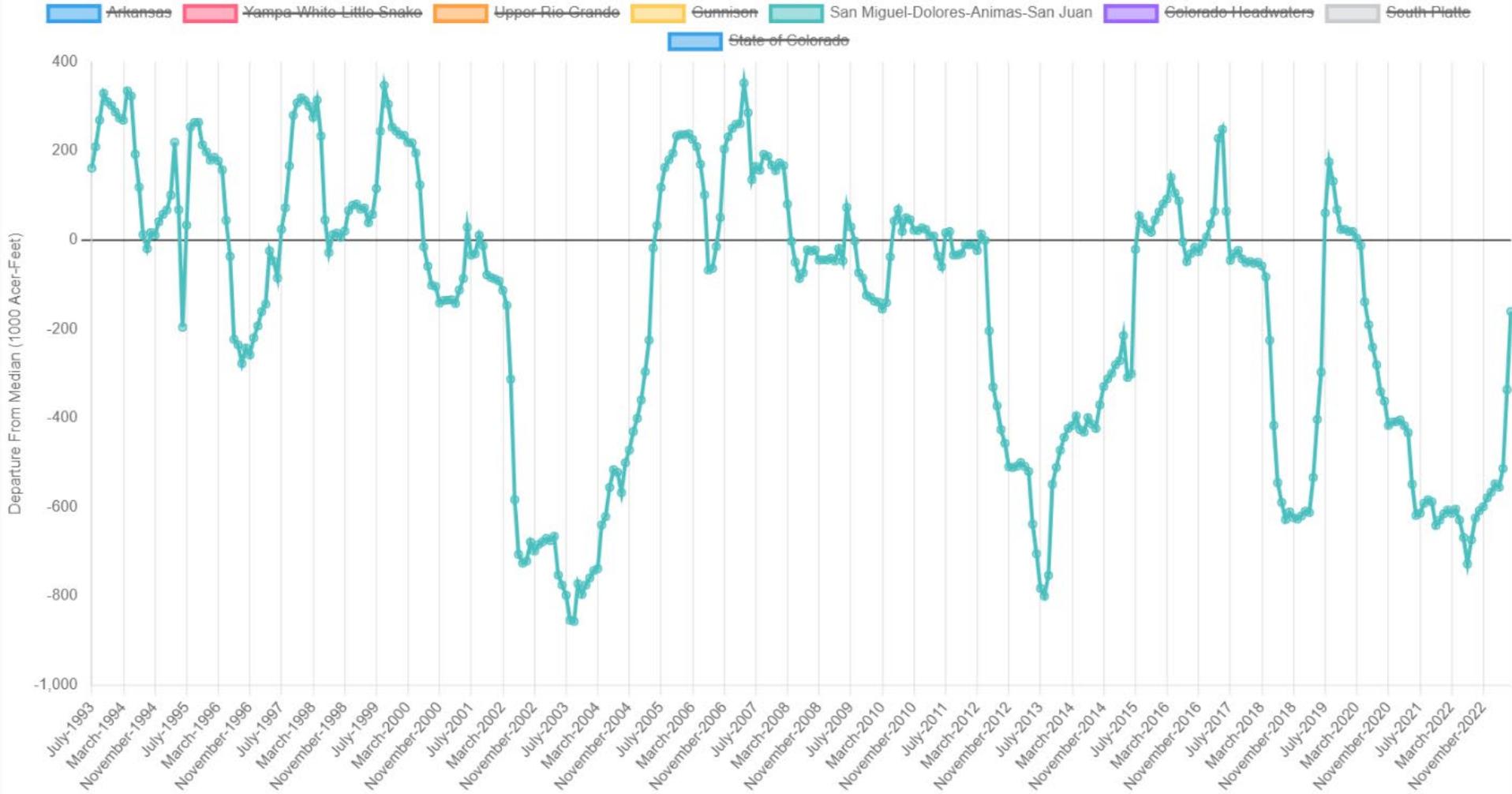


San Miguel-Dolores-Animas-San Juan Reservoir Storage Summary for June 1st 2023

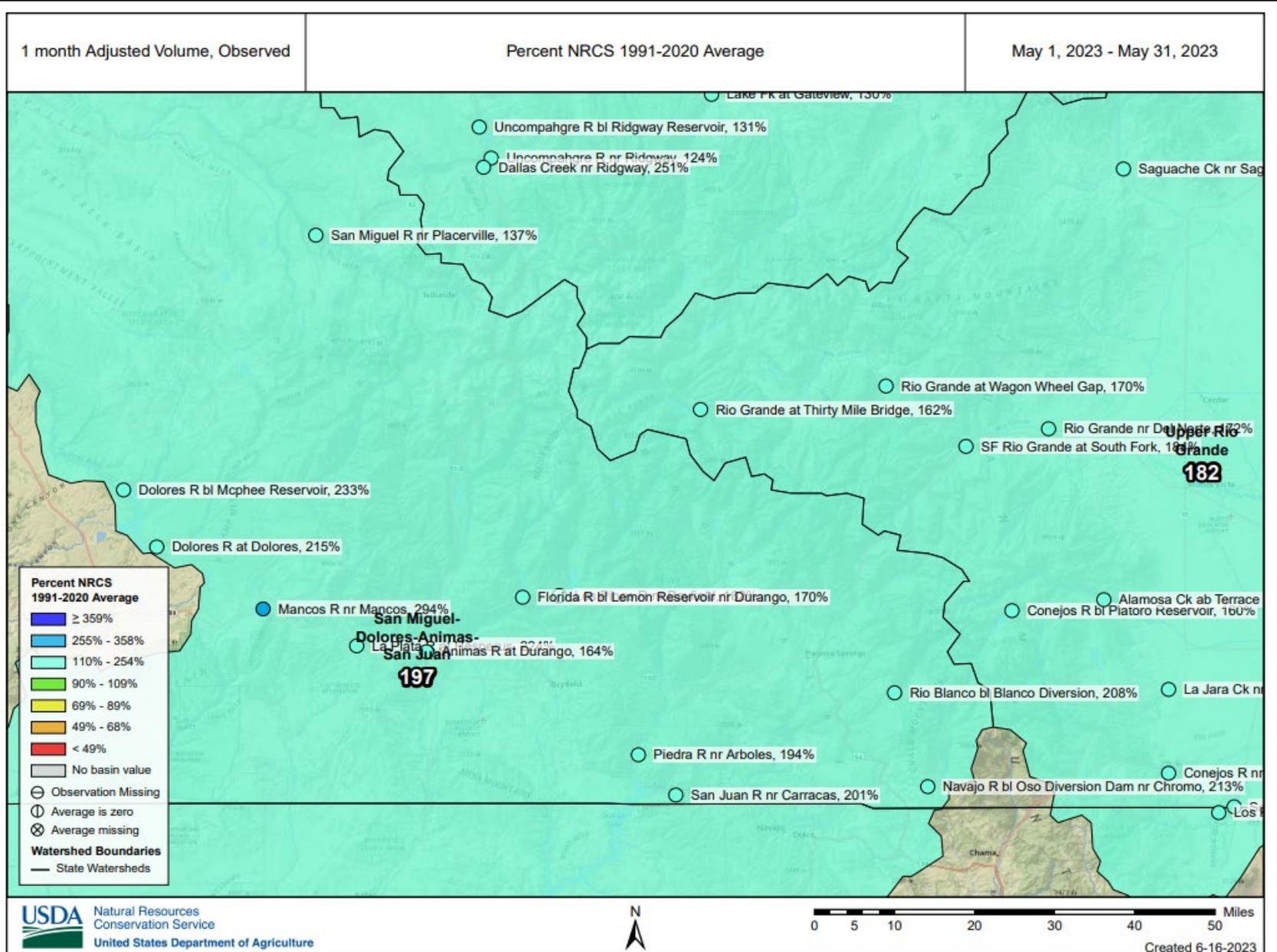




Colorado Departure From Median Timeseries Plot



Observed Streamflow



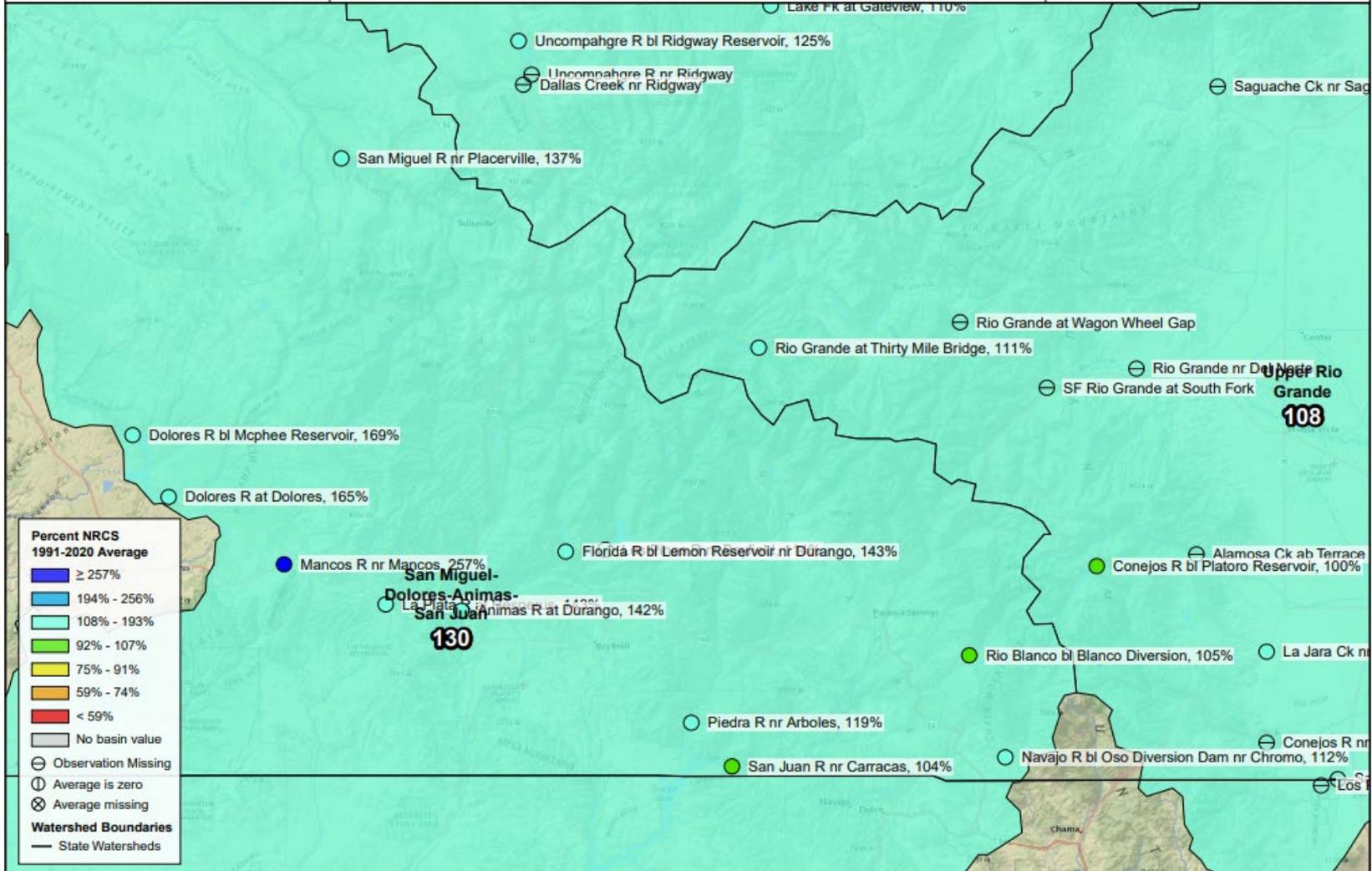


Colorado Snow Surveys

Forecast Volume,
50% Exceedance Probability

Percent NRCS 1991-2020 Average

June - July, June 1, 2023



Percent NRCS 1991-2020 Average

- ≥ 257%
- 194% - 256%
- 108% - 193%
- 92% - 107%
- 75% - 91%
- 59% - 74%
- < 59%
- No basin value

⊖ Observation Missing
⊕ Average is zero
⊗ Average missing

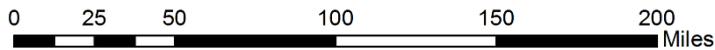
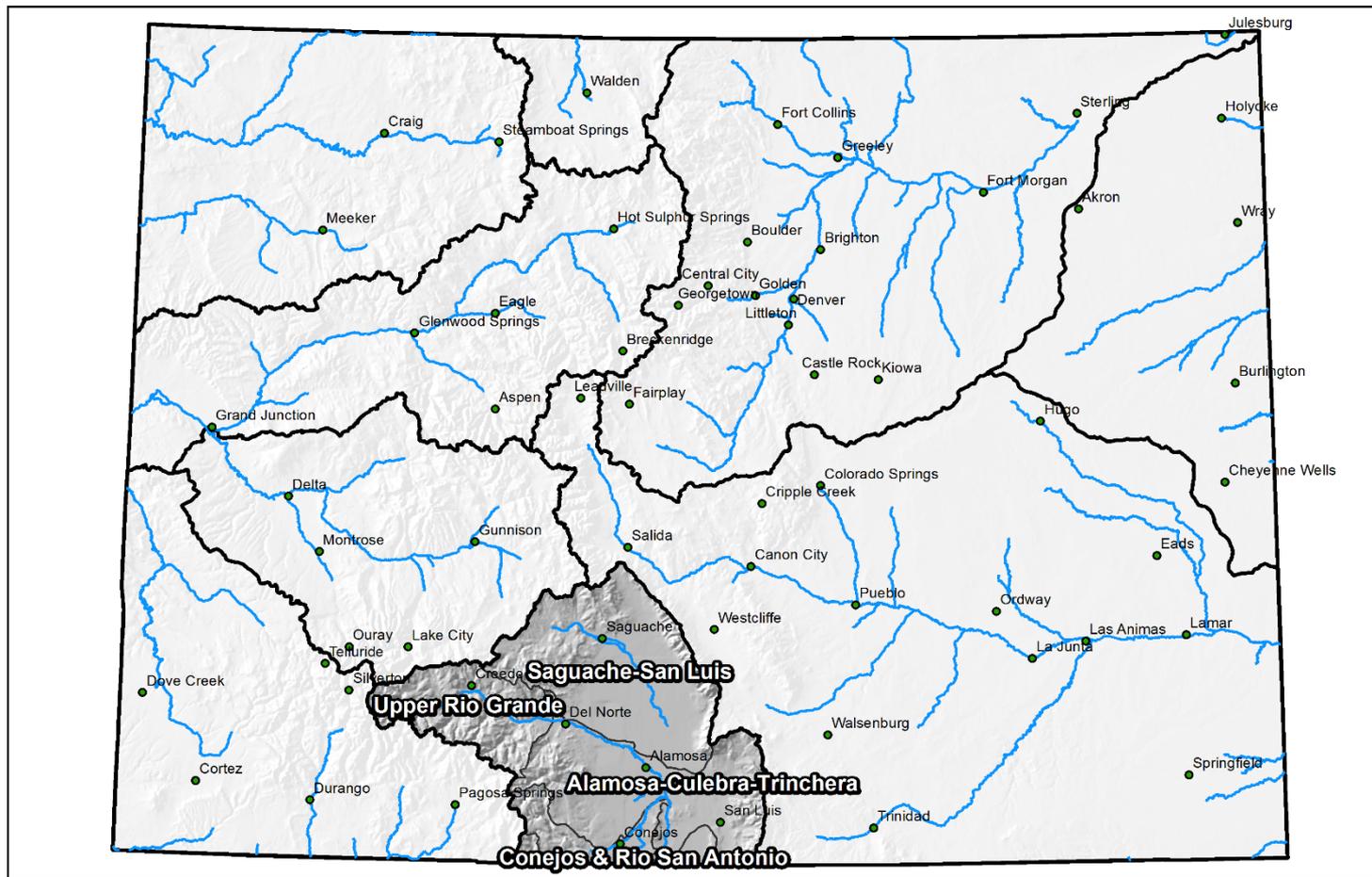
Watershed Boundaries

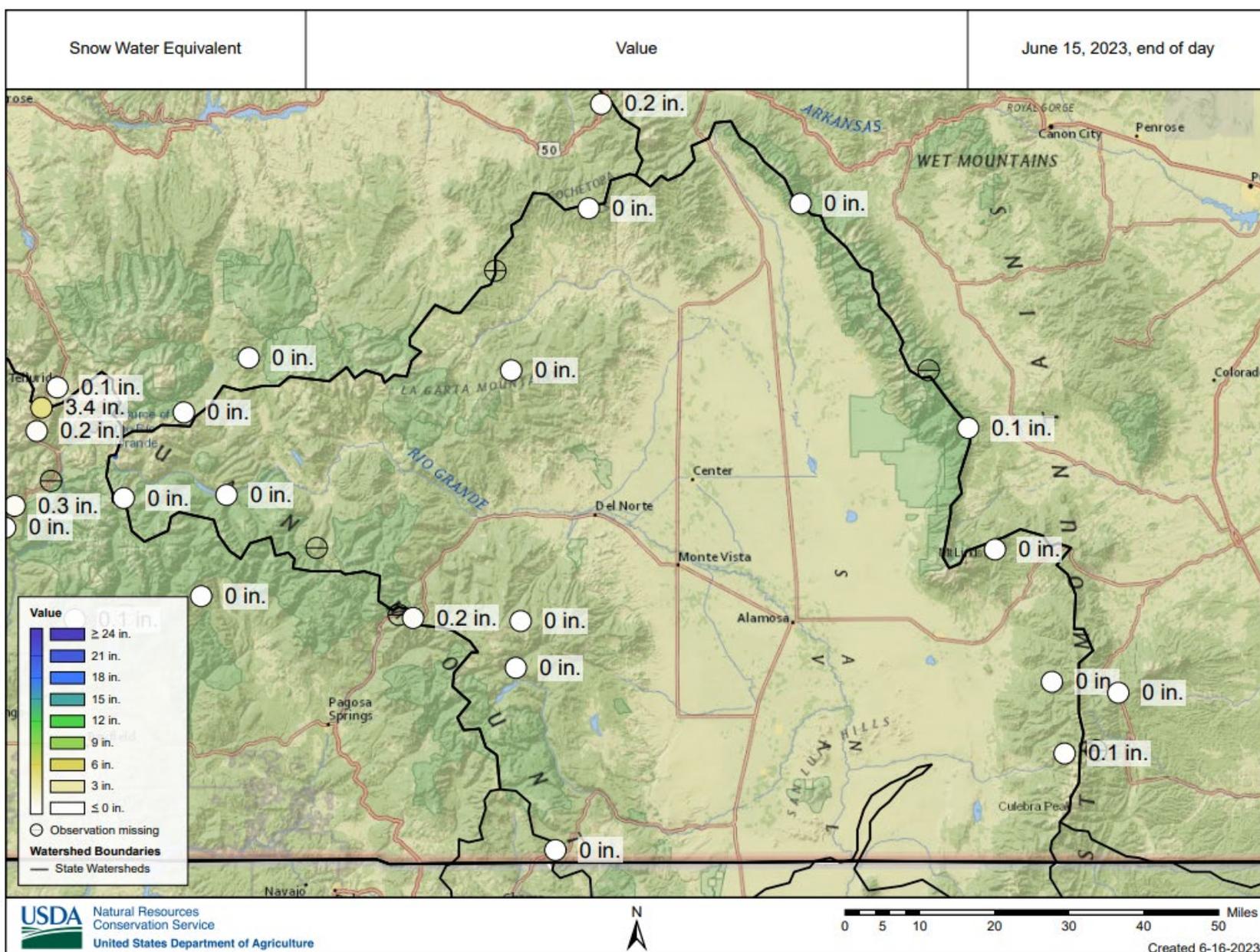
- State Watersheds



Major Basin Summary

Upper Rio Grande River Basin







Colorado Snow Surveys

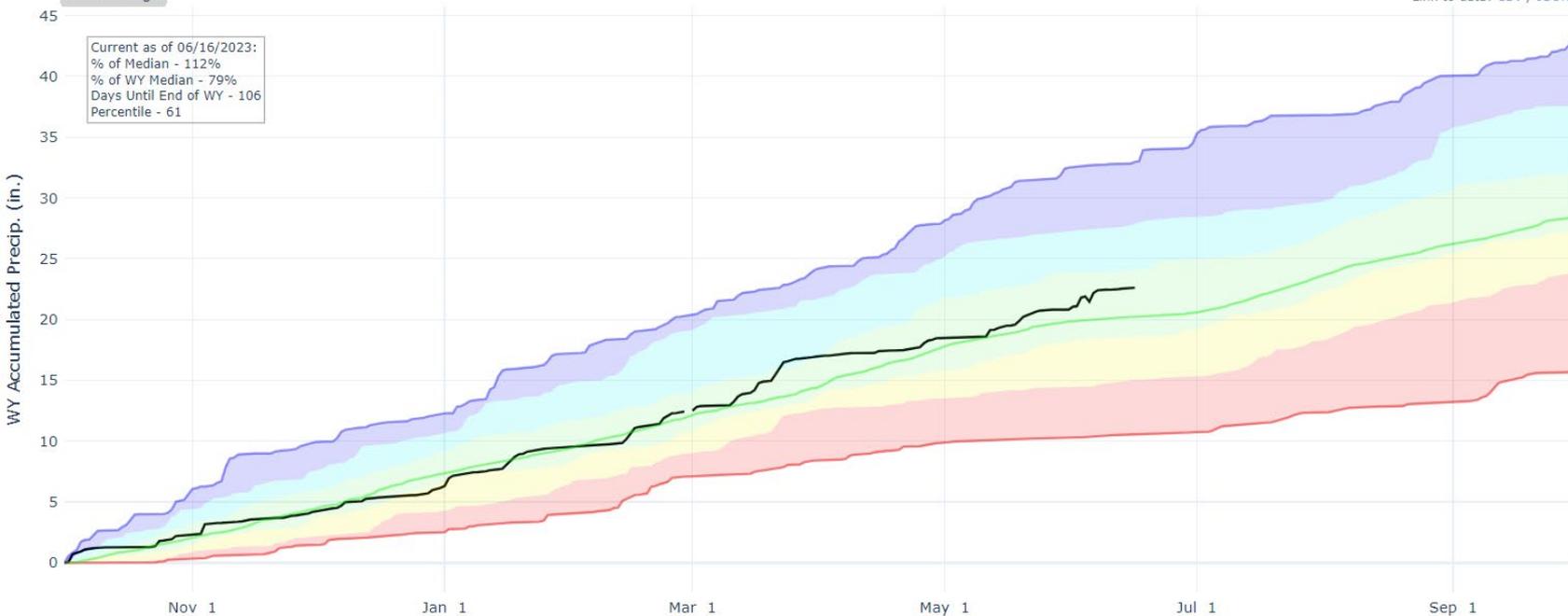
PRECIPITATION IN UPPER RIO GRANDE

Reset Range

[Link to data: CSV / JSON](#)

Current as of 06/16/2023:
% of Median - 112%
% of WY Median - 79%
Days Until End of WY - 106
Percentile - 61

Station List

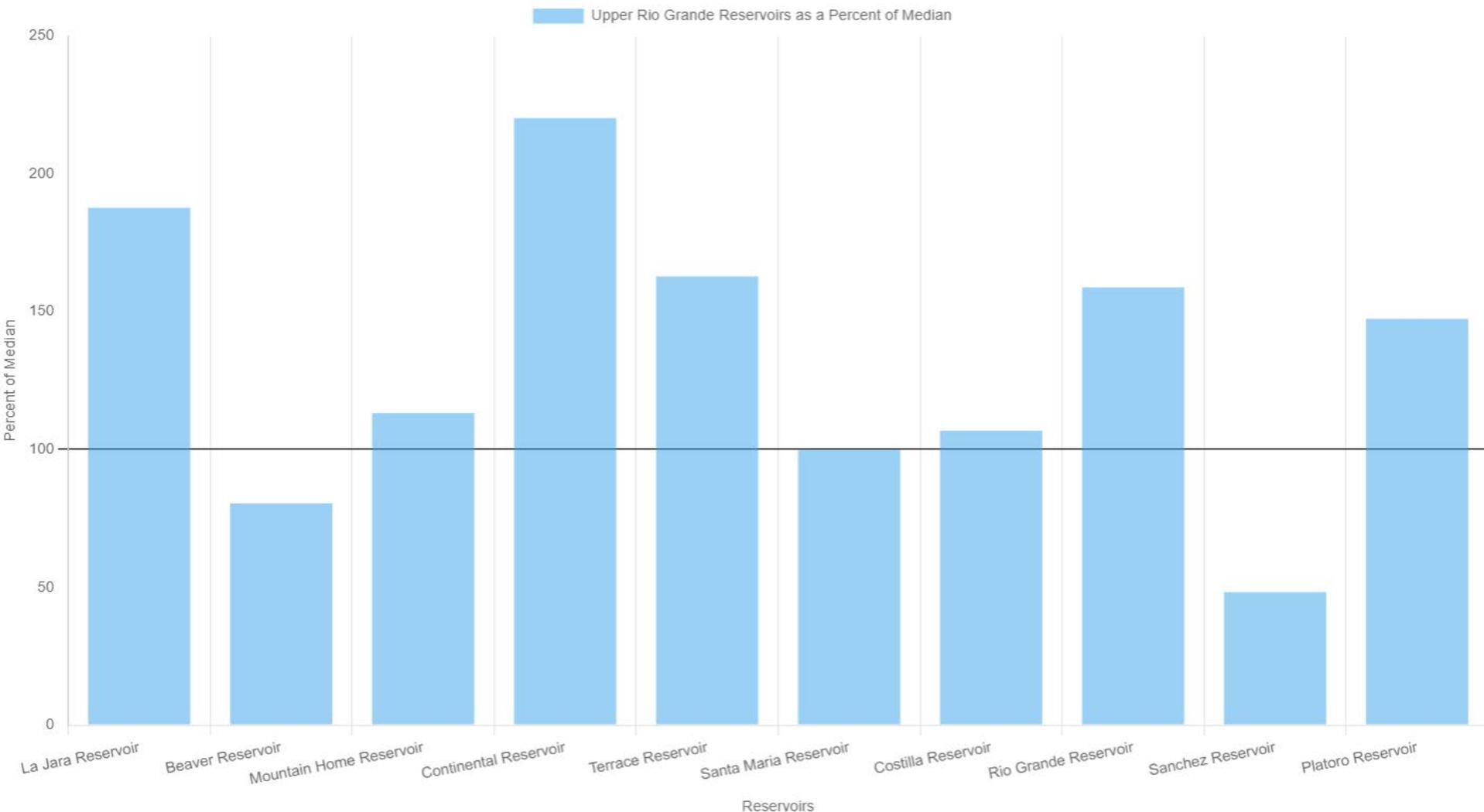


- Max
- Median (POR)
- Median ('91-'20)
- Min
- Stats. Shading
- 2023 (18 sites)
- 2022 (18 sites)
- 2021 (18 sites)
- 2020 (18 sites)
- 2019 (18 sites)
- 2018 (18 sites)
- 2017 (18 sites)
- 2016 (18 sites)
- 2015 (18 sites)
- 2014 (18 sites)
- 2013 (18 sites)
- 2012 (18 sites)
- 2011 (18 sites)
- 2010 (17 sites)
- 2009 (17 sites)
- 2008 (15 sites)
- 2007 (14 sites)
- 2006 (14 sites)
- 2005 (14 sites)
- 2004 (12 sites)



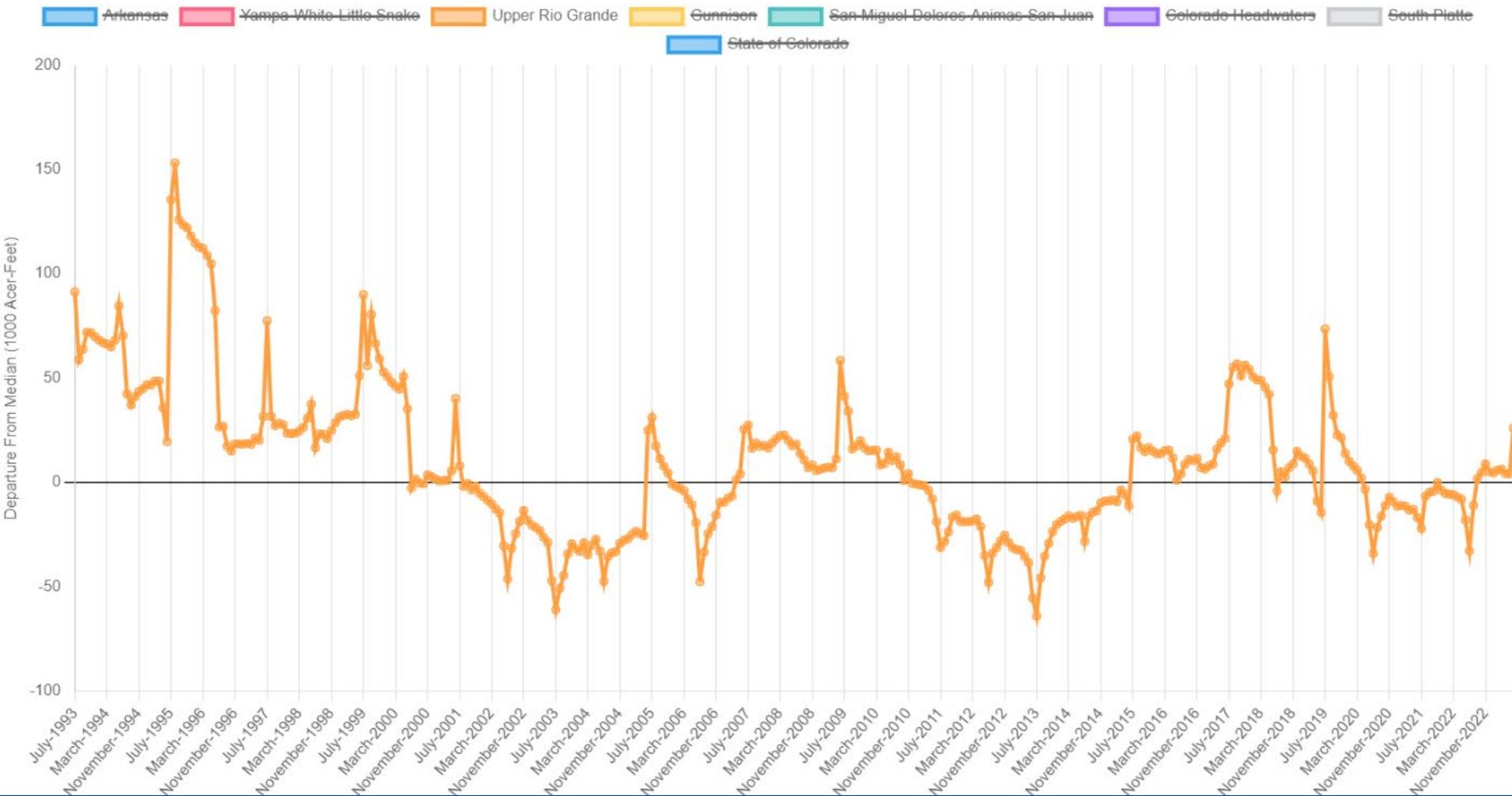


Upper Rio Grande Reservoir Storage Summary for June 1st 2023

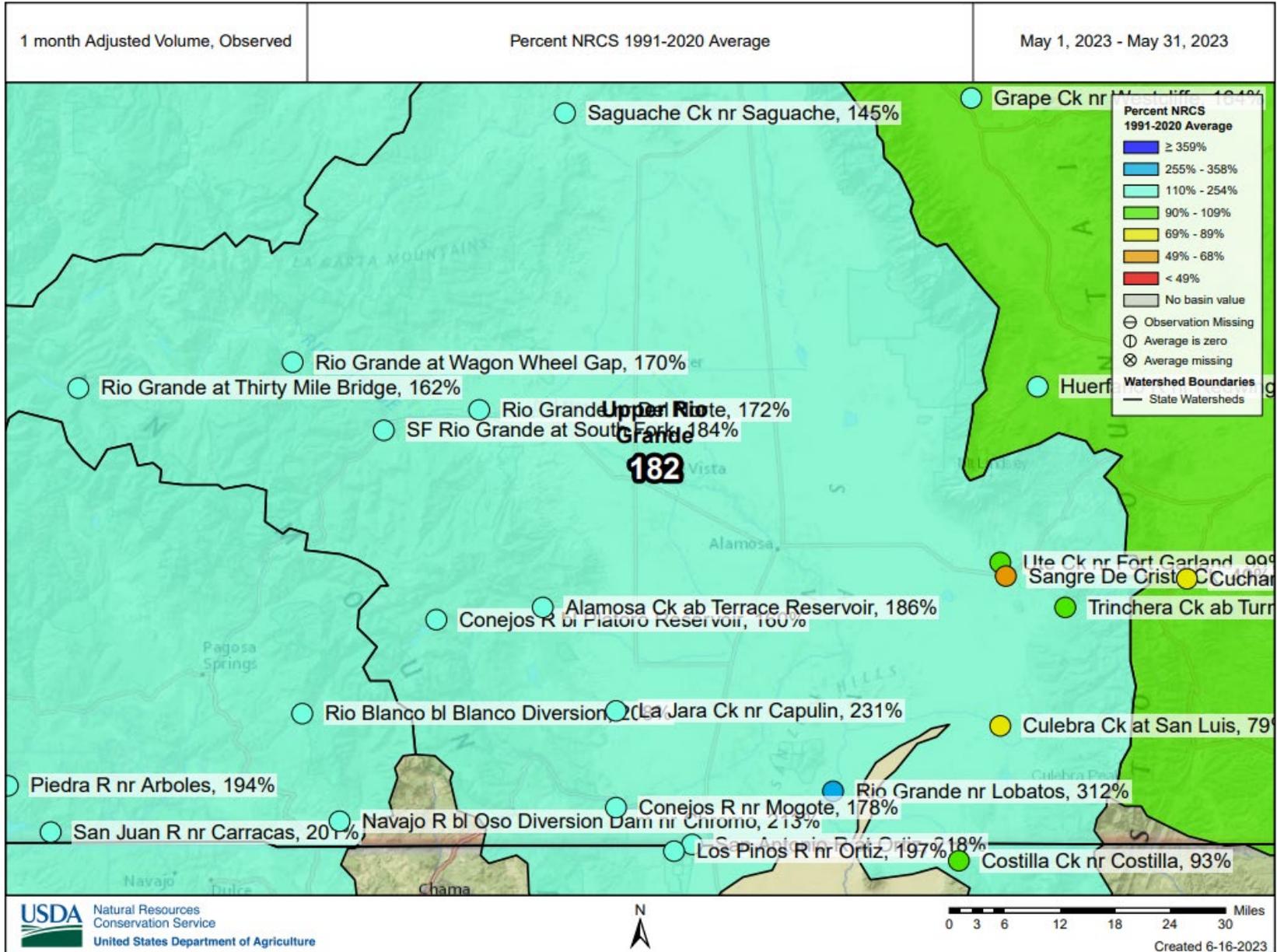




Colorado Departure From Median Timeseries Plot



Observed Streamflow



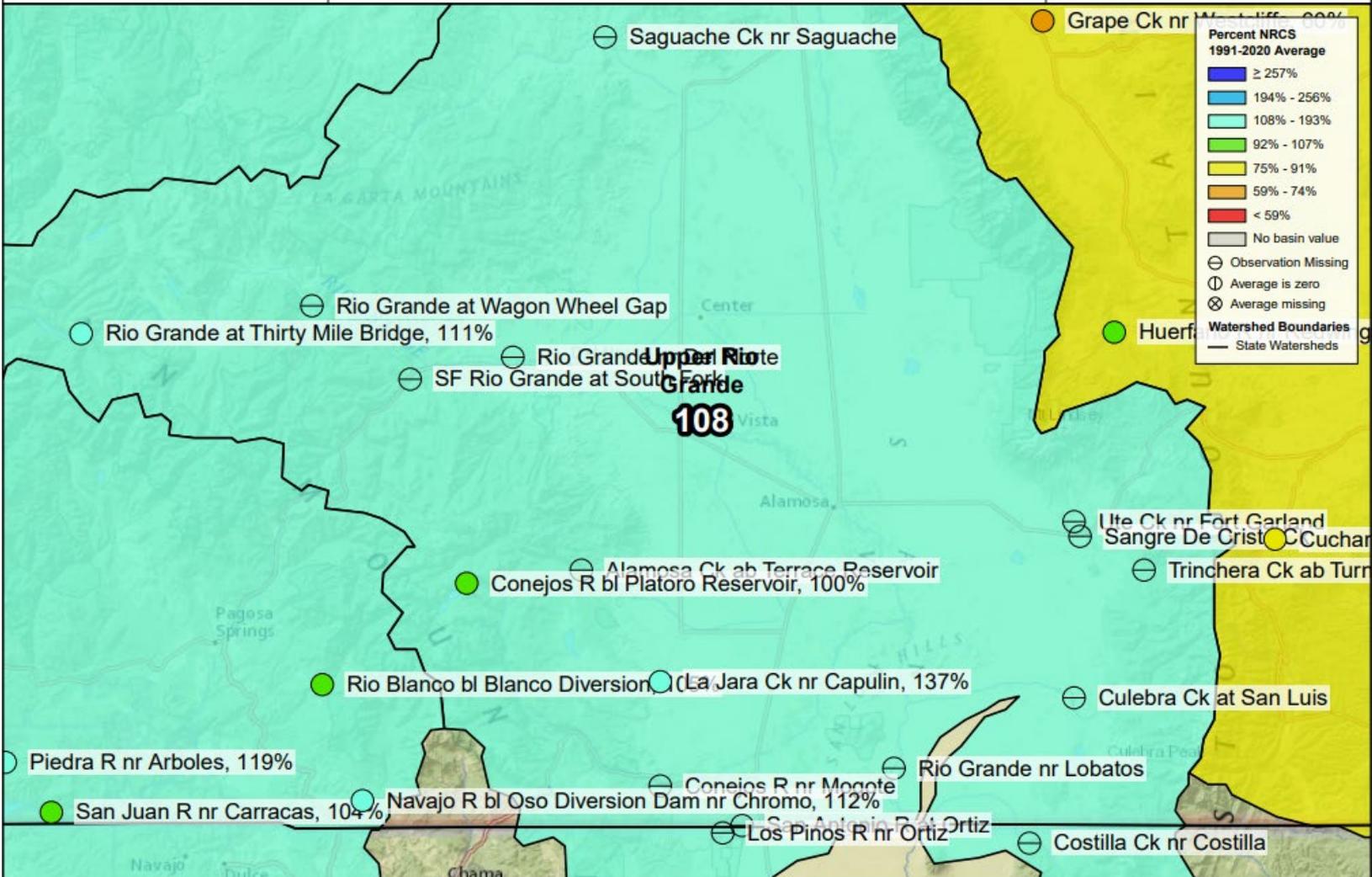


Colorado Snow Surveys

Forecast Volume,
50% Exceedance Probability

Percent NRCS 1991-2020 Average

June - July, June 1, 2023



Percent NRCS 1991-2020 Average

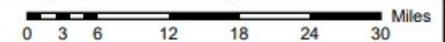
- ≥ 257%
- 194% - 256%
- 108% - 193%
- 92% - 107%
- 75% - 91%
- 59% - 74%
- < 59%
- No basin value

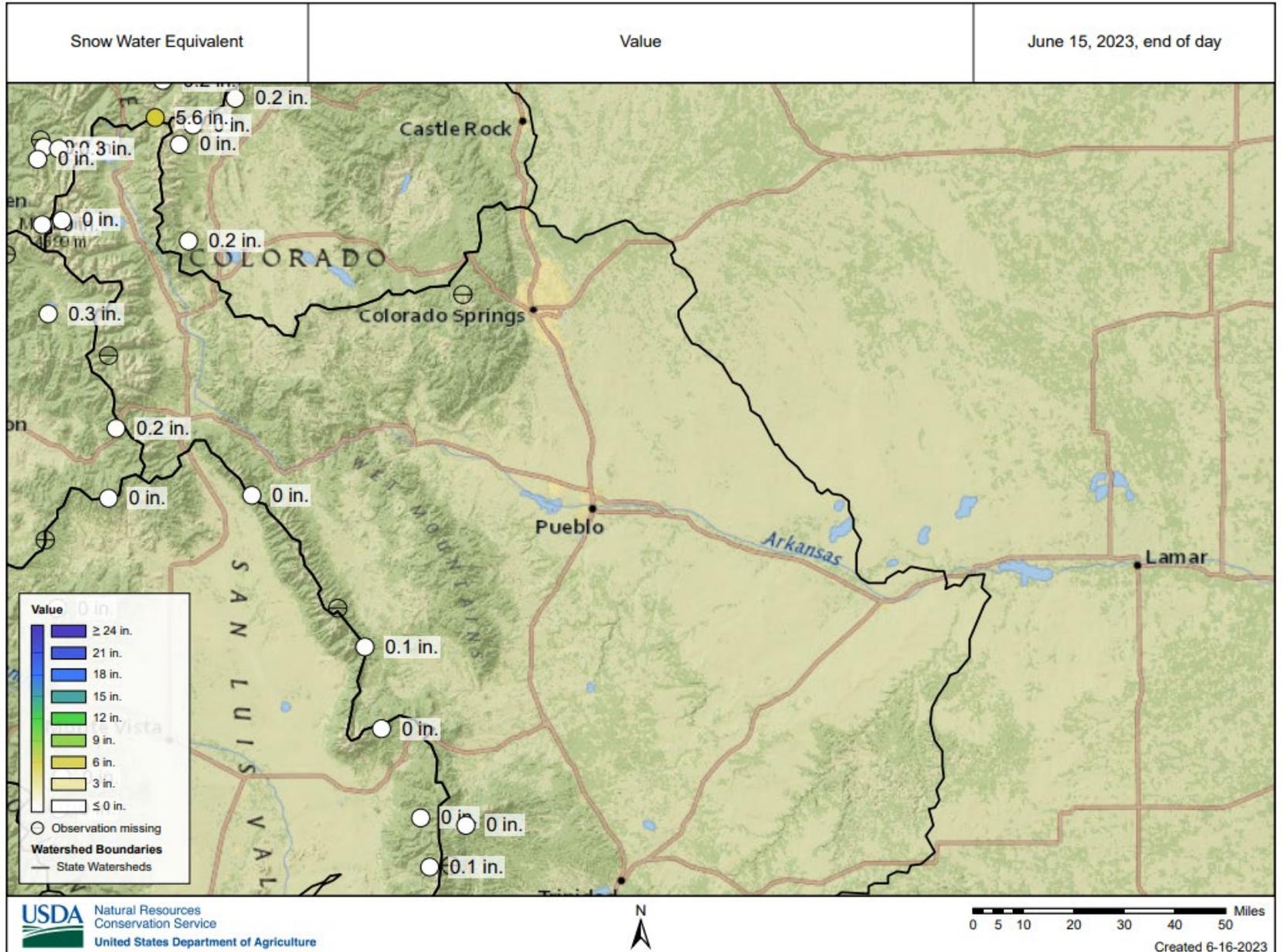
Observation Status

- ⊖ Observation Missing
- ⊕ Average is zero
- ⊗ Average missing

Watershed Boundaries

- State Watersheds







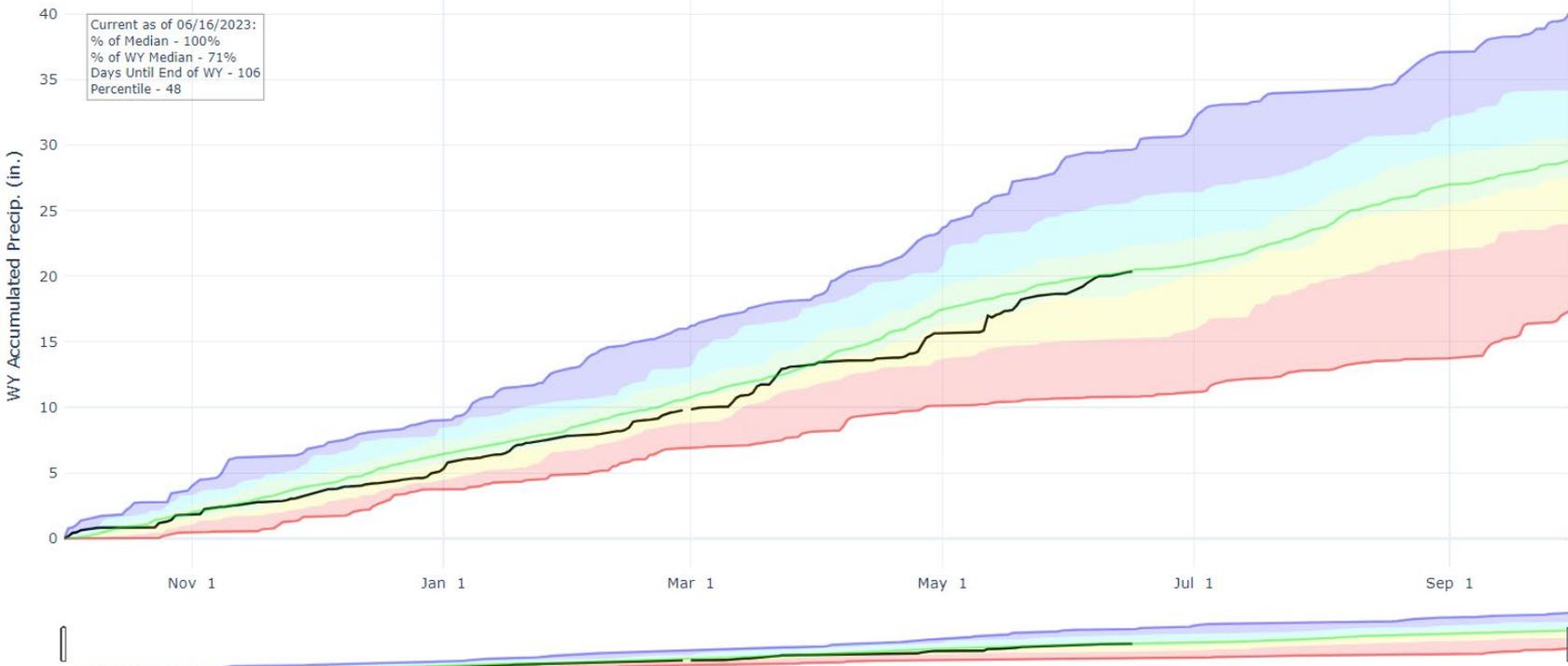
PRECIPITATION IN ARKANSAS

Reset Range

[Link to data: CSV / JSON](#)

Station List

Current as of 06/16/2023:
% of Median - 100%
% of WY Median - 71%
Days Until End of WY - 106
Percentile - 48



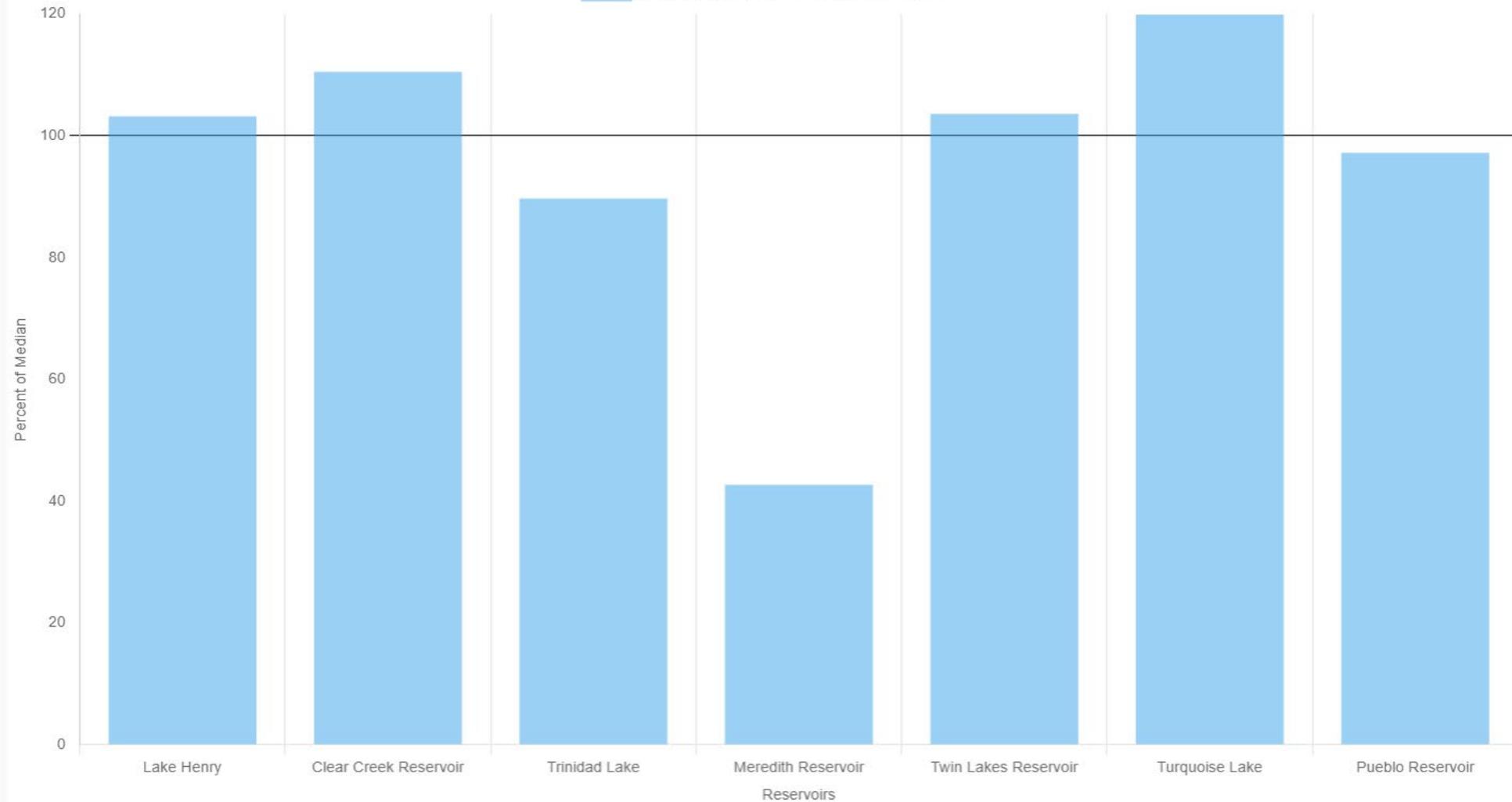
- Max
- Median (POR)
- Median ('91-'20)
- Min
- Stats. Shading
- 2023 (11 sites)
- 2022 (11 sites)
- 2021 (11 sites)
- 2020 (11 sites)
- 2019 (11 sites)
- 2018 (11 sites)
- 2017 (11 sites)
- 2016 (11 sites)
- 2015 (11 sites)
- 2014 (11 sites)
- 2013 (11 sites)
- 2012 (11 sites)
- 2011 (11 sites)
- 2010 (11 sites)
- 2009 (11 sites)
- 2008 (11 sites)
- 2007 (9 sites)
- 2006 (9 sites)
- 2005 (9 sites)
- 2004 (8 sites)





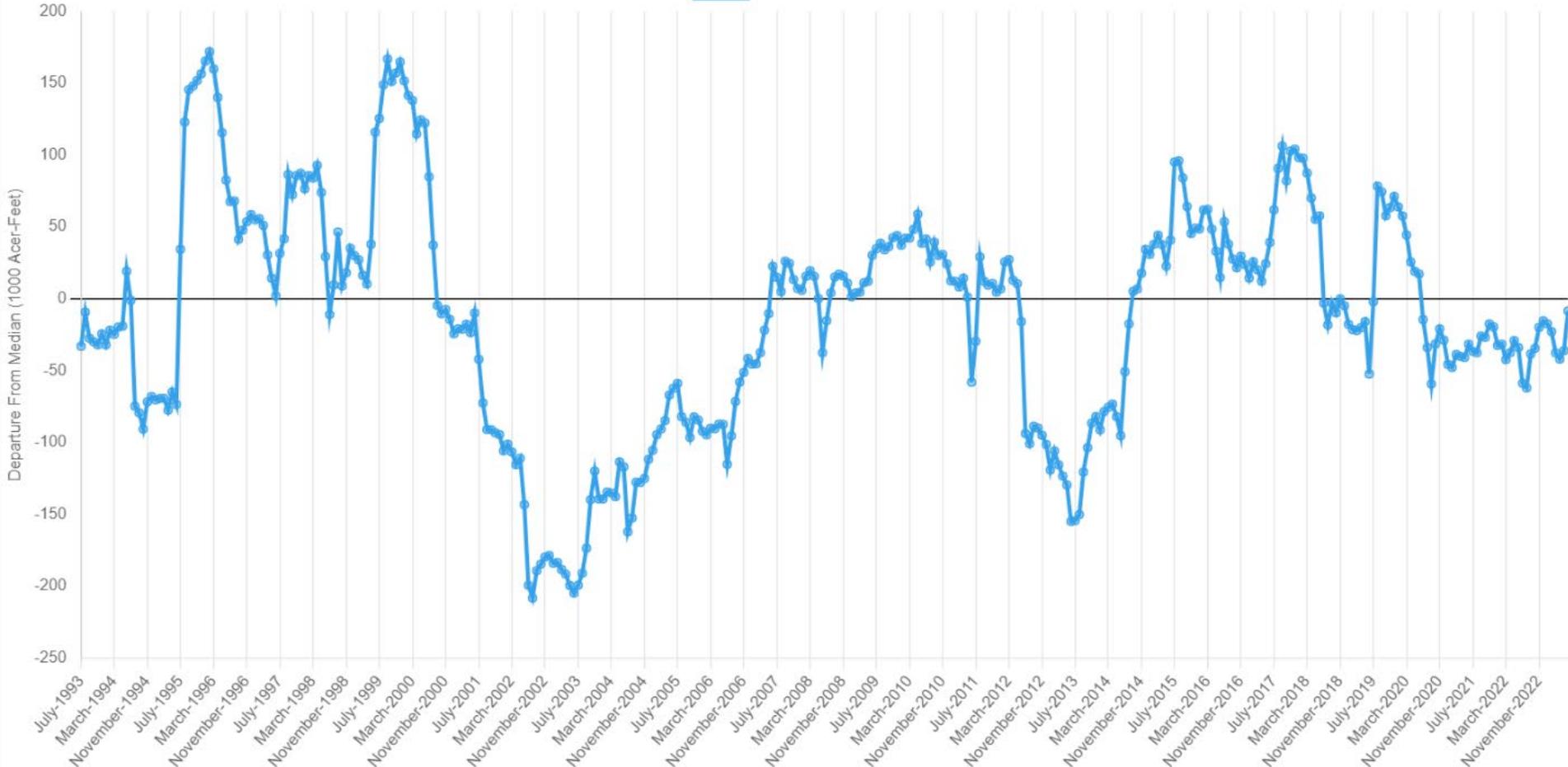
Arkansas Reservoir Storage Summary for June 1st 2023

Arkansas Reservoirs as a Percent of Median



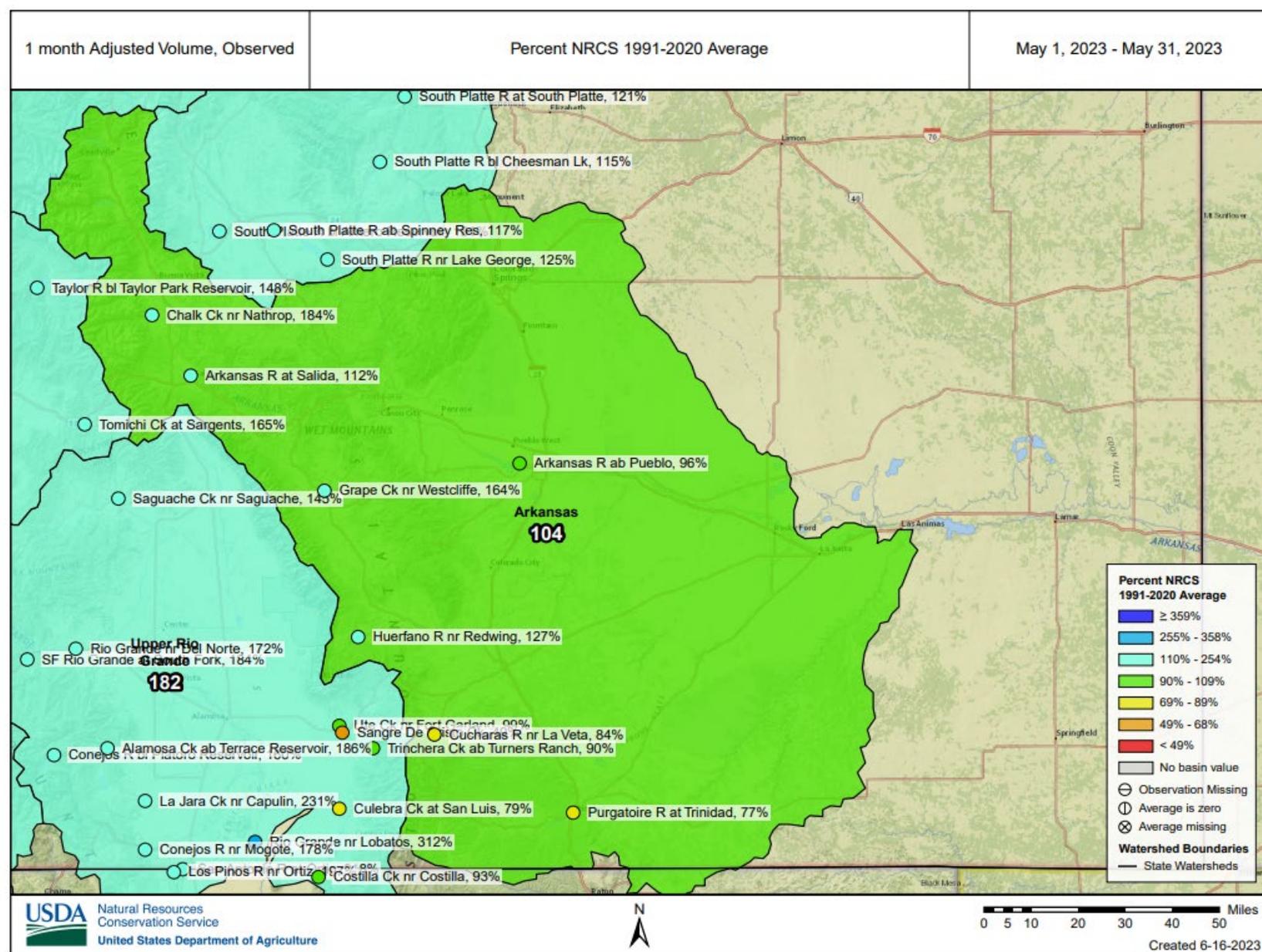
Colorado Departure From Median Timeseries Plot

- Arkansas
- Yampa-White-Little-Snake
- Upper-Rio-Grande
- Gunnison
- San-Miguel-Delores-Animas-San-Juan
- Colorado-Headwaters
- South-Platte
- State-of-Colorado





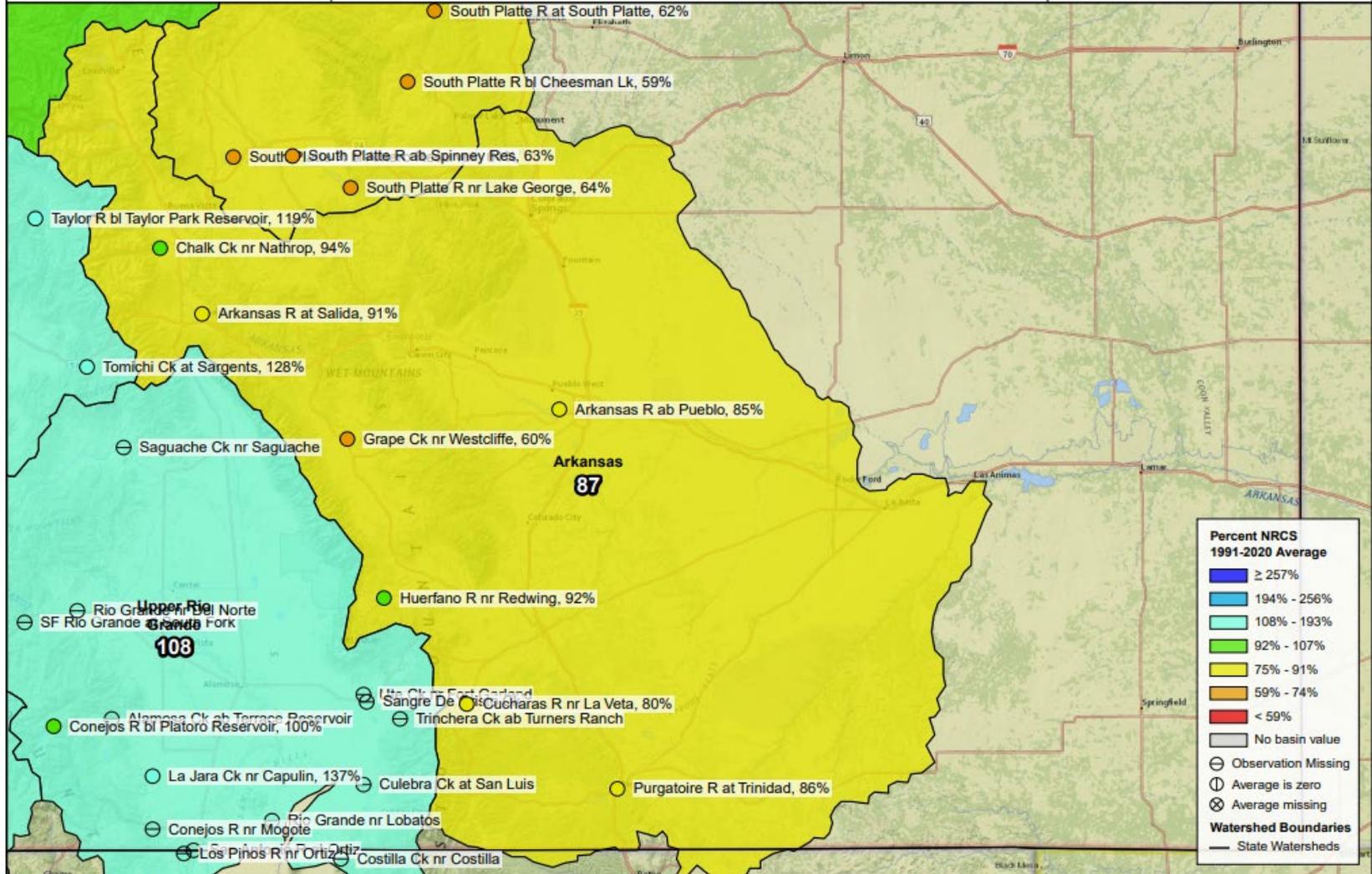
Observed Streamflow



Forecast Volume,
50% Exceedance Probability

Percent NRCS 1991-2020 Average

June - July, June 1, 2023

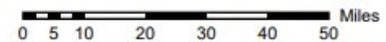


Percent NRCS 1991-2020 Average

- ≥ 257%
- 194% - 256%
- 108% - 193%
- 92% - 107%
- 75% - 91%
- 59% - 74%
- < 59%
- No basin value
- ⊖ Observation Missing
- ⊕ Average is zero
- ⊗ Average missing

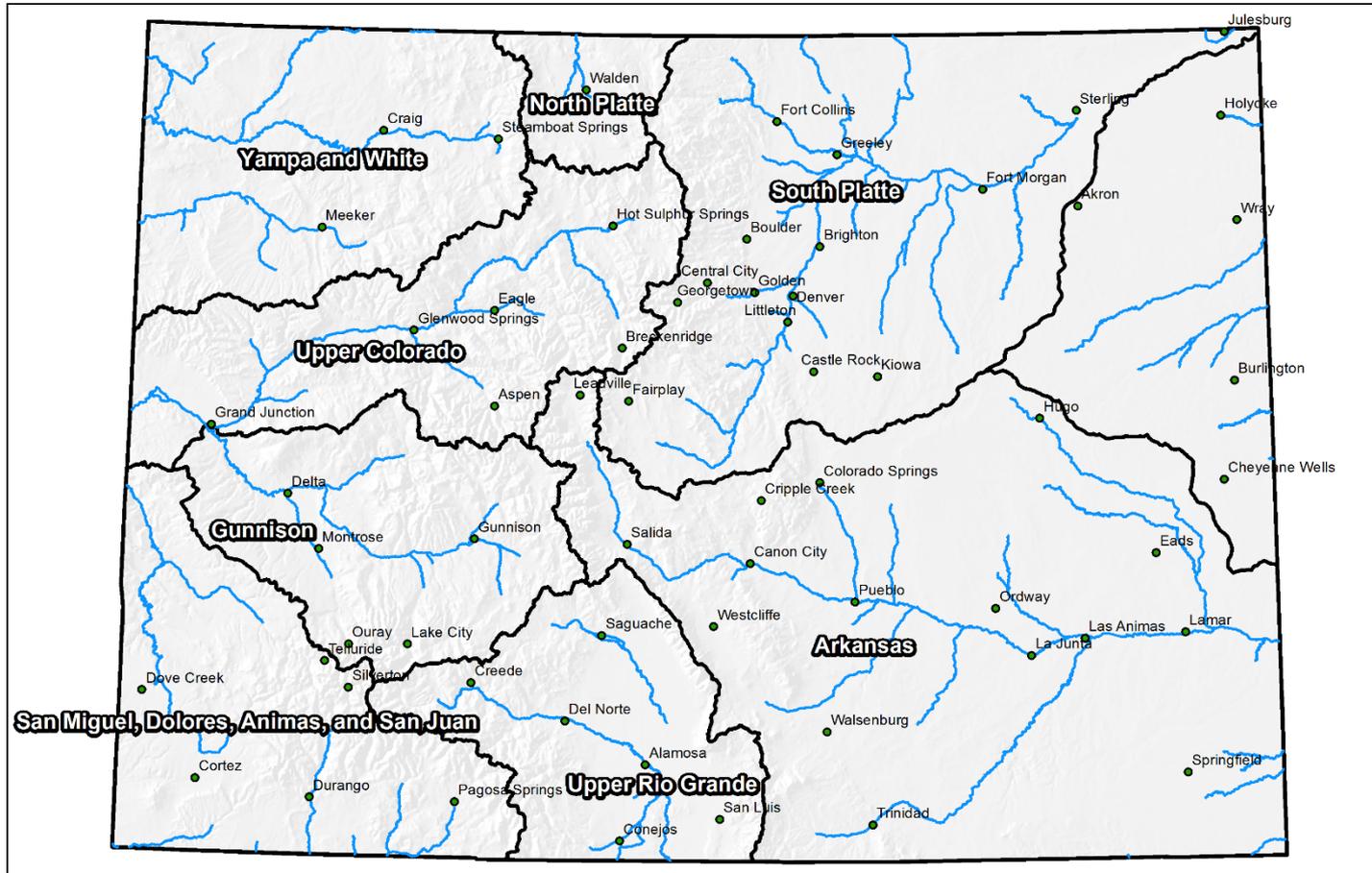
Watershed Boundaries

- State Watersheds



Colorado Statewide Summary

Colorado Major Basins

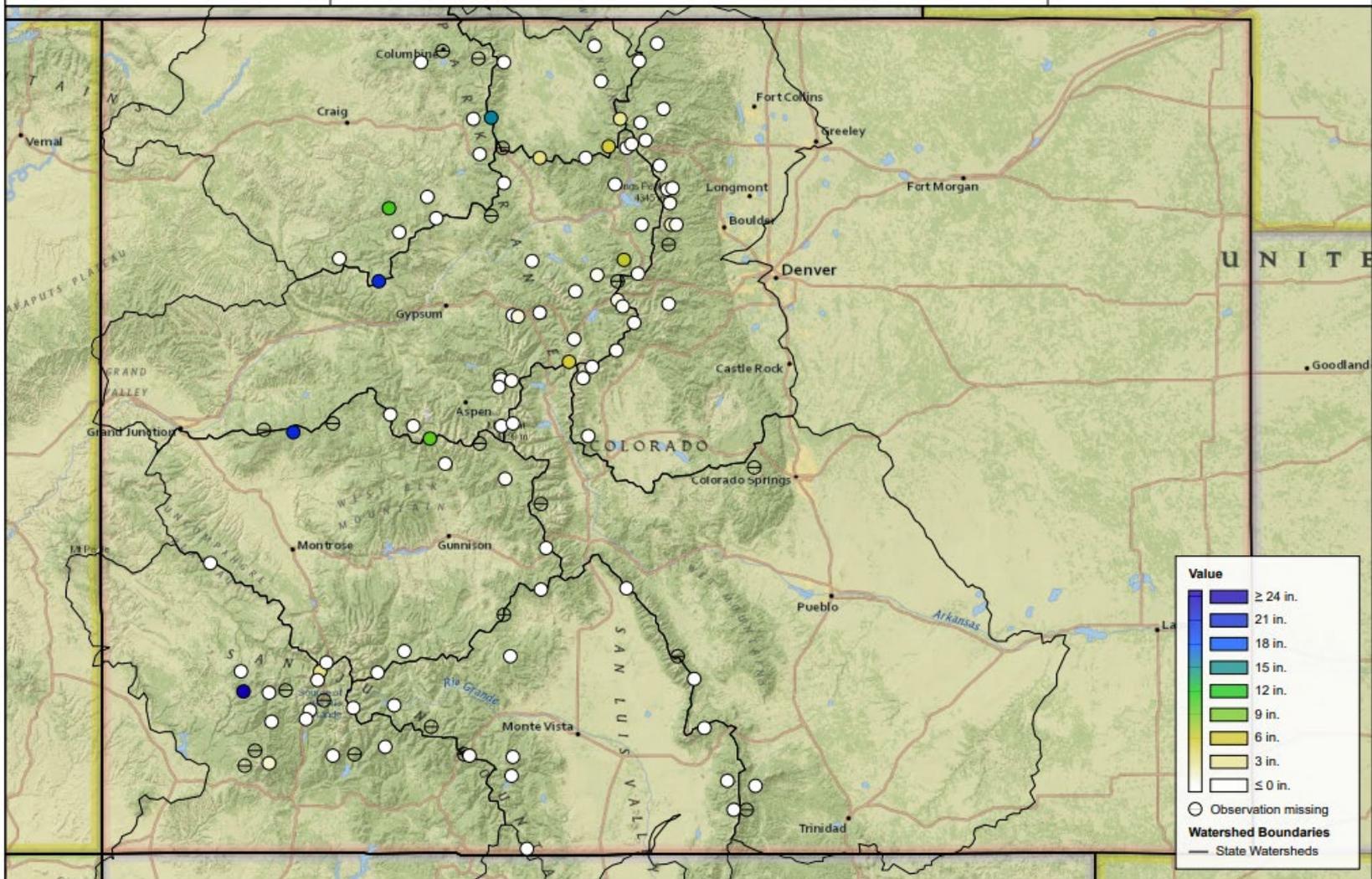




Snow Water Equivalent

Value

June 15, 2023, end of day





SNOW WATER EQUIVALENT IN STATE OF COLORADO

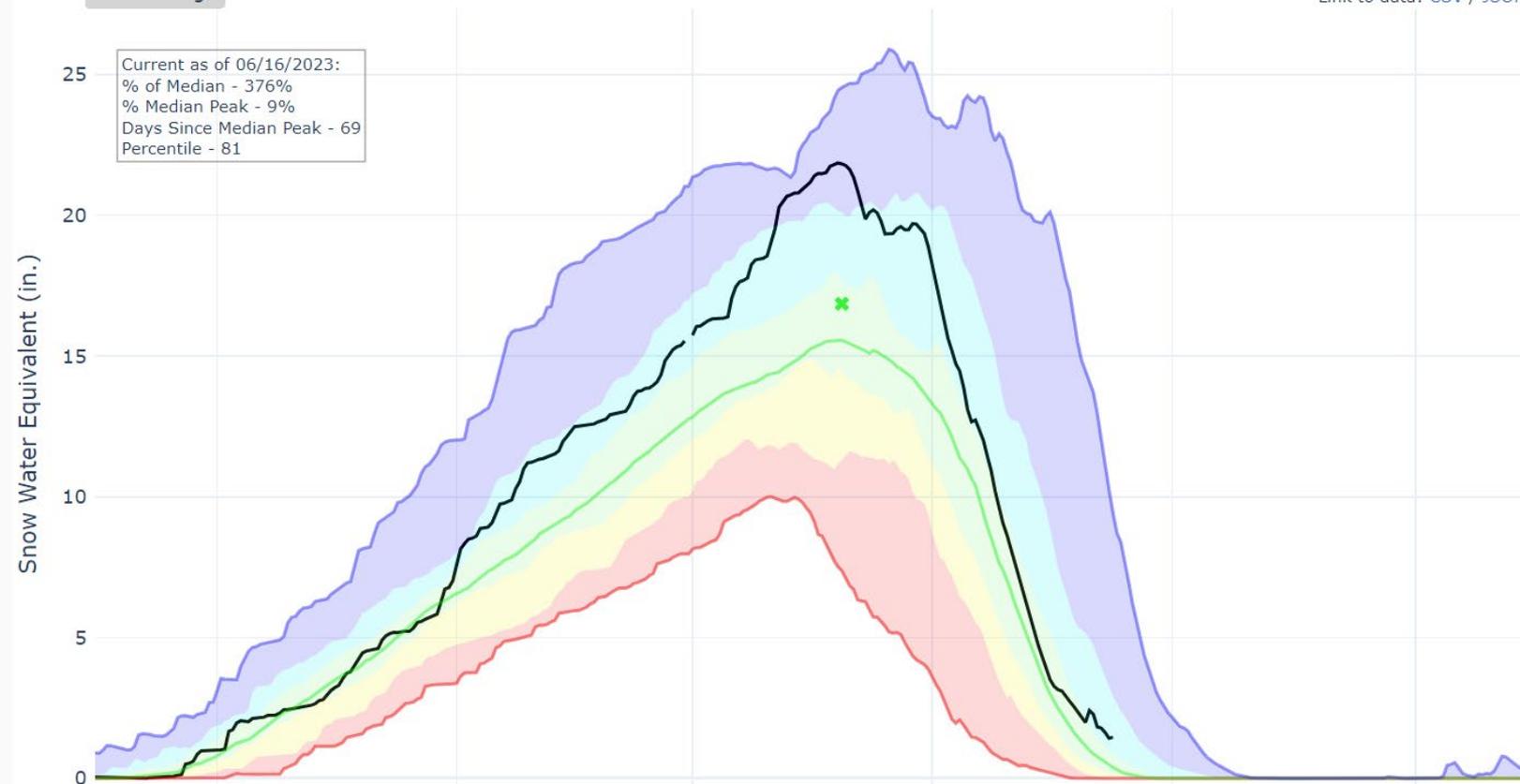
Reset Range

[Link to data: CSV / JSON](#)

[Station List](#)

Current as of 06/16/2023:
% of Median - 376%
% Median Peak - 9%
Days Since Median Peak - 69
Percentile - 81

- ✖ Median Peak SWE
- Max
- Median (POR)
- Median ('91-'20)
- Min
- Stats. Shading
- 2023 (115 sites)
- 2022 (115 sites)
- 2021 (115 sites)
- 2020 (115 sites)
- 2019 (115 sites)
- 2018 (115 sites)
- 2017 (115 sites)
- 2016 (115 sites)
- 2015 (115 sites)
- 2014 (115 sites)
- 2013 (115 sites)
- 2012 (115 sites)
- 2011 (114 sites)
- 2010 (112 sites)
- 2009 (108 sites)
- 2008 (105 sites)
- 2007 (102 sites)
- 2006 (102 sites)
- 2005 (101 sites)



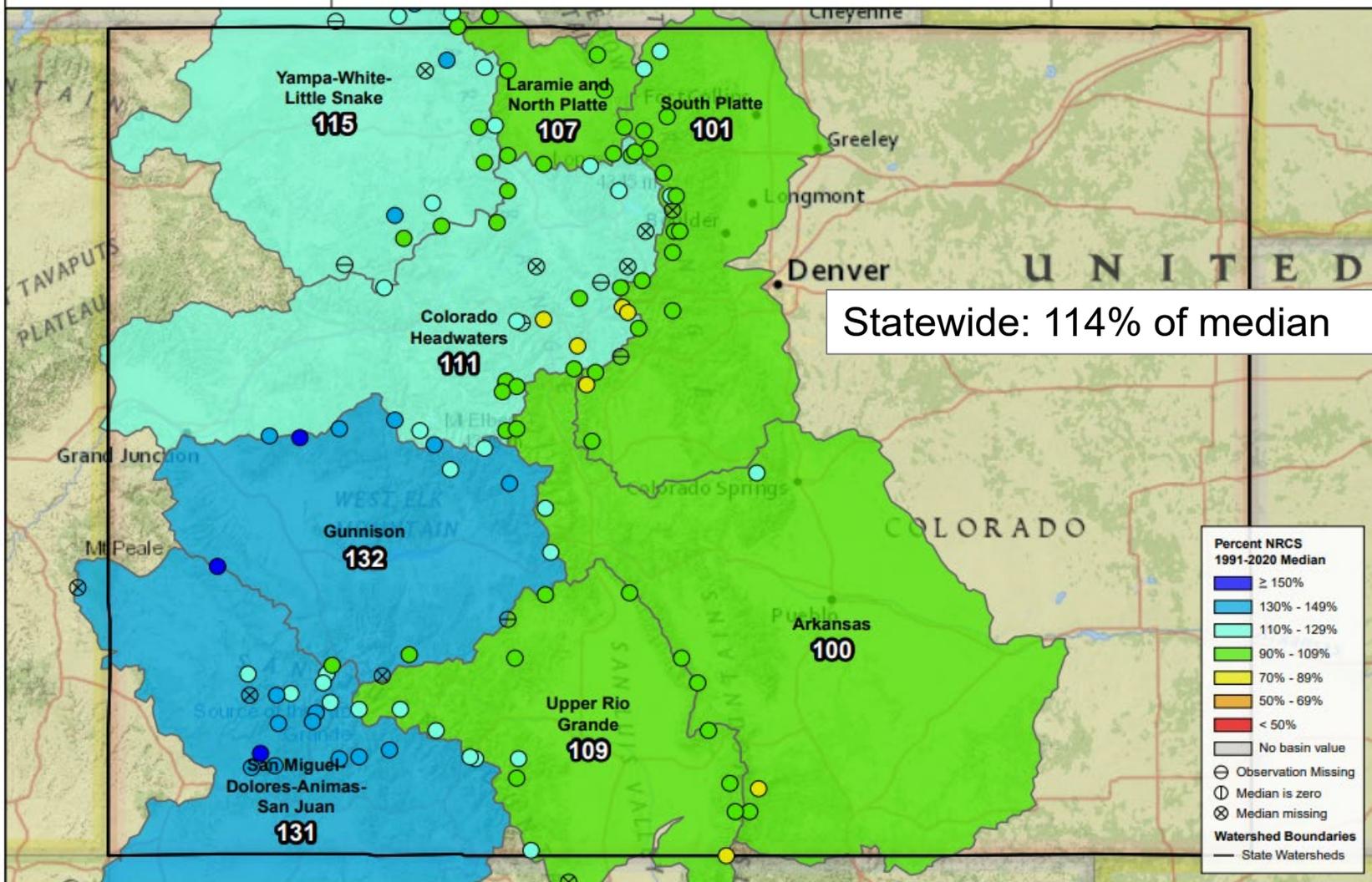


WY Precipitation

Water Year to Date Precipitation

Percent NRCS 1991-2020 Median

October 1, 2022 - June 15, 2023



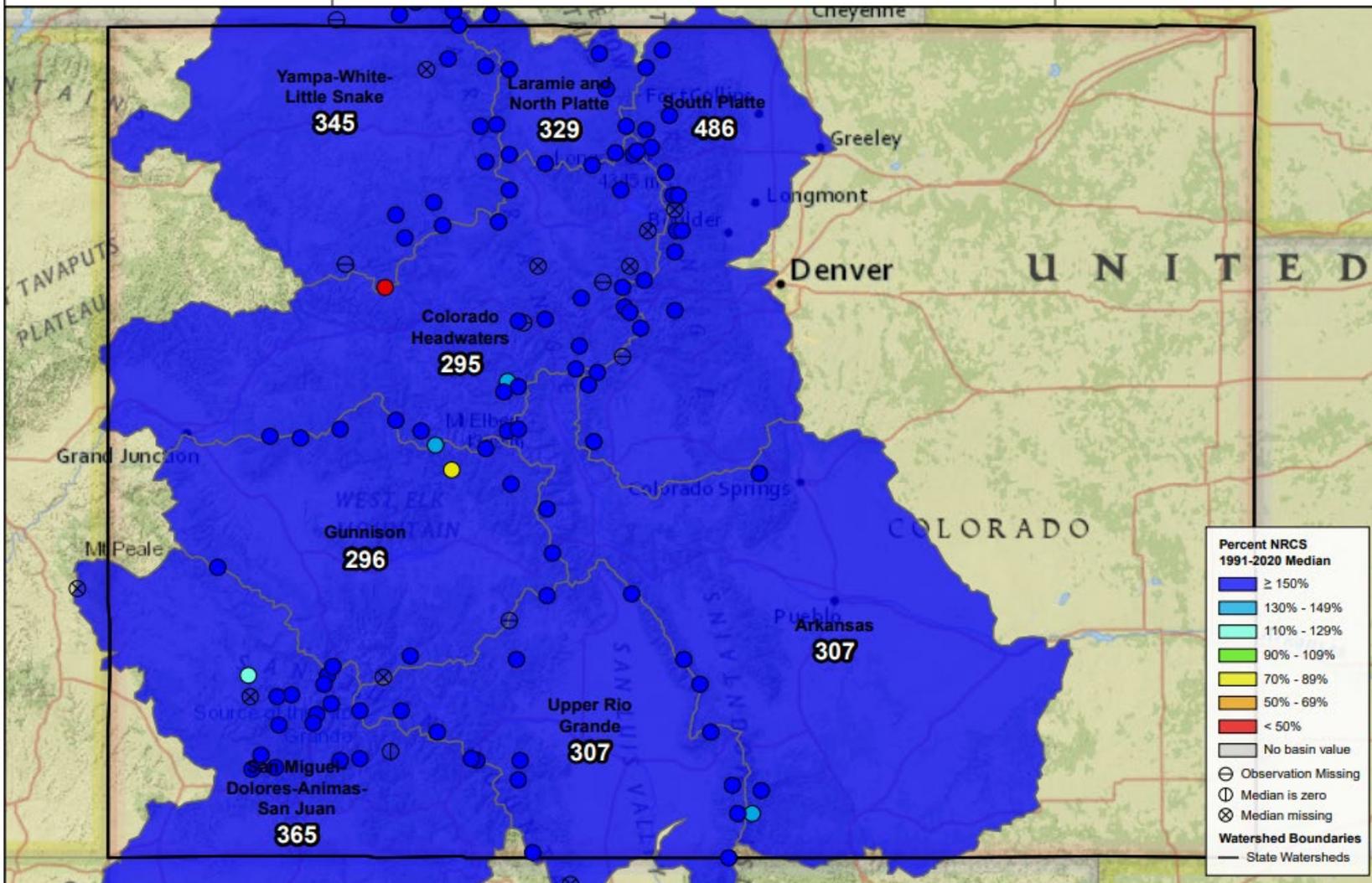


MTD Precipitation

Month to Date Precipitation

Percent NRCS 1991-2020 Median

June 1, 2023 - June 15, 2023



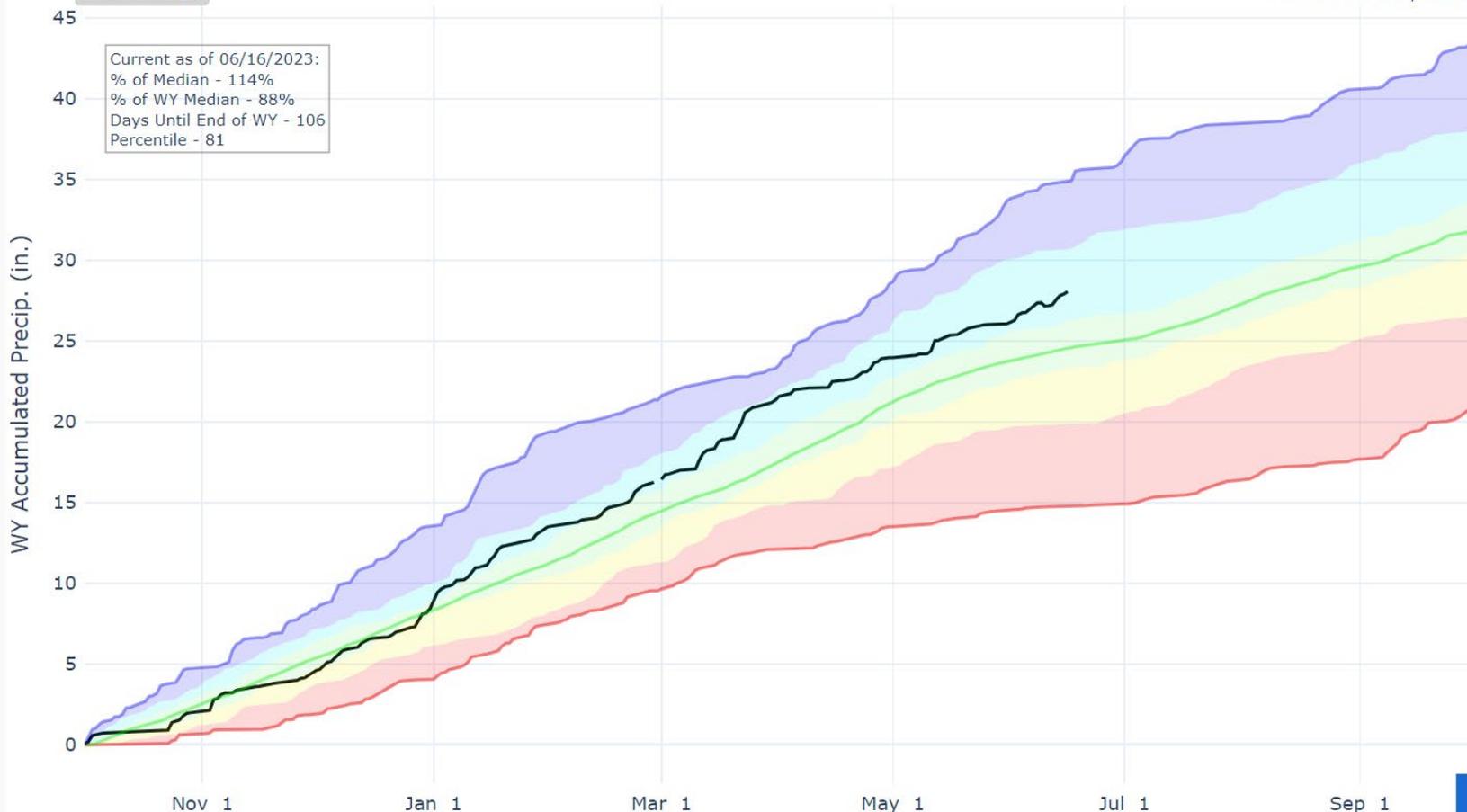


PRECIPITATION IN STATE OF COLORADO

Reset Range

Link to data: CSV / JSON

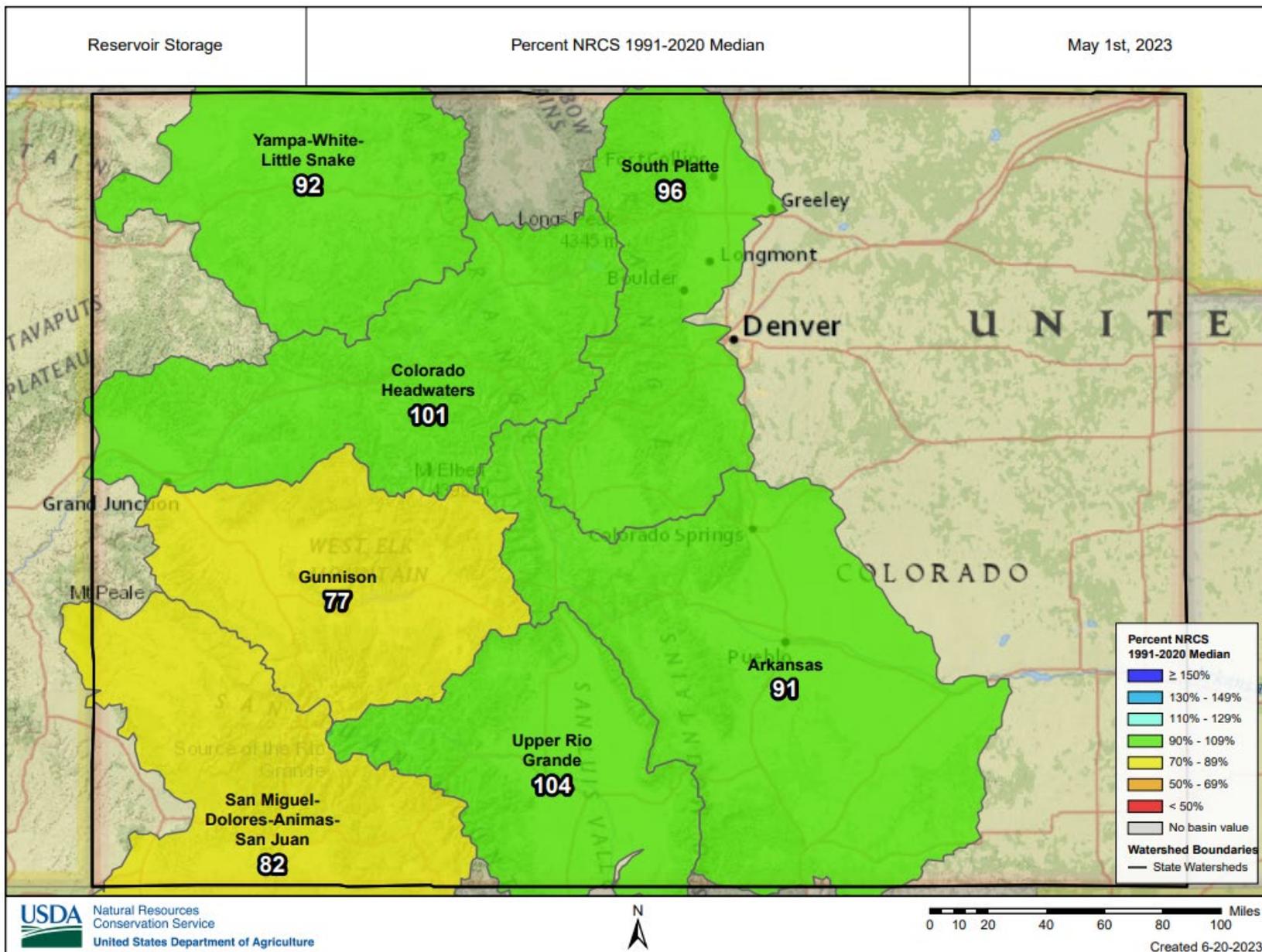
Station List



- Max
- Median (POR)
- Median ('91-'20)
- Min
- Stats. Shading
- 2023 (111 sites)
- 2022 (110 sites)
- 2021 (111 sites)
- 2020 (111 sites)
- 2019 (111 sites)
- 2018 (111 sites)
- 2017 (111 sites)
- 2016 (111 sites)
- 2015 (111 sites)
- 2014 (111 sites)
- 2013 (111 sites)
- 2012 (111 sites)
- 2011 (111 sites)
- 2010 (109 sites)
- 2009 (107 sites)
- 2008 (104 sites)
- 2007 (101 sites)
- 2006 (101 sites)
- 2005 (100 sites)
- 2004 (94 sites)
- 2003 (93 sites)

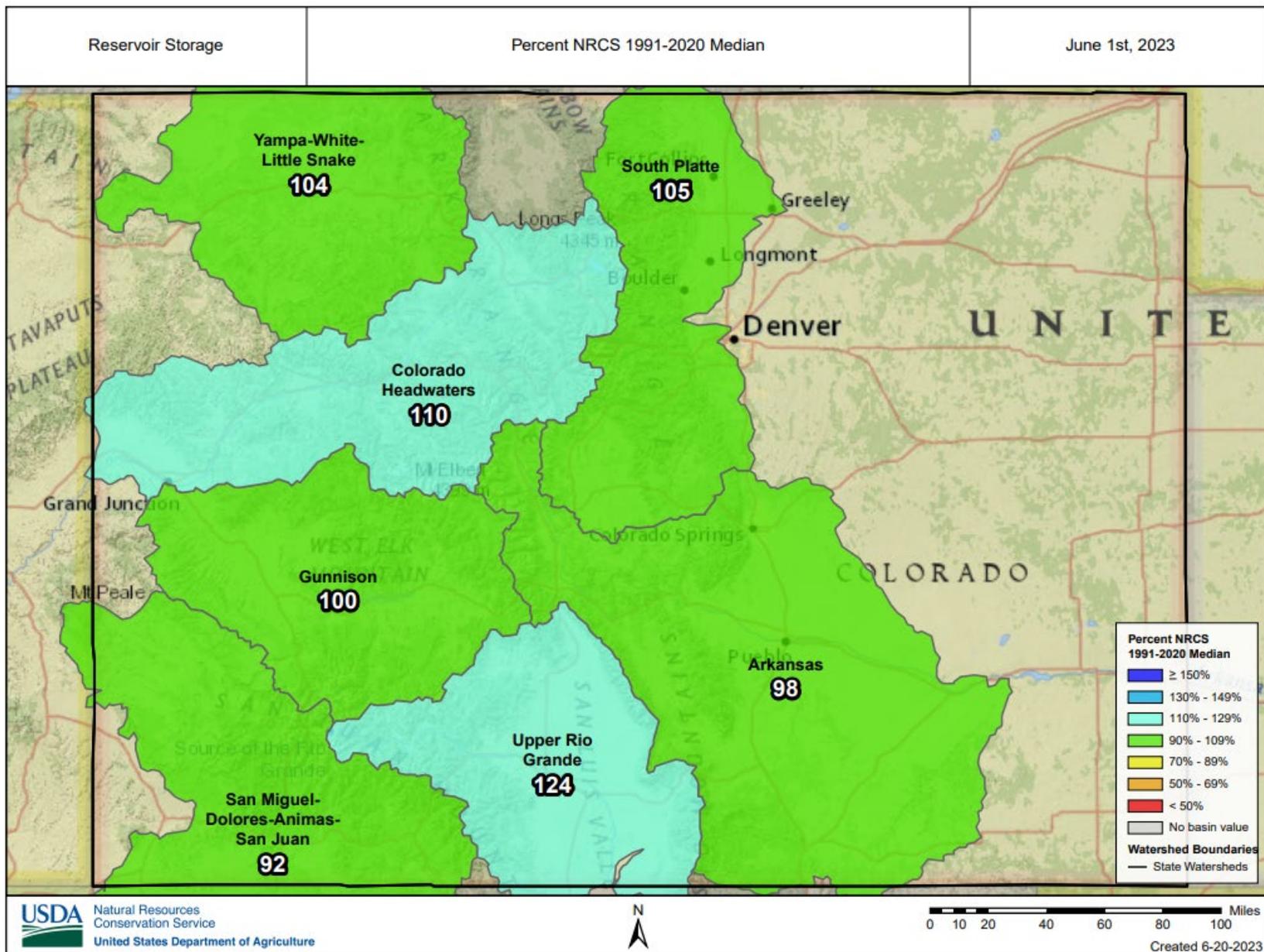
Feedback

Reservoir Storage: May 1st



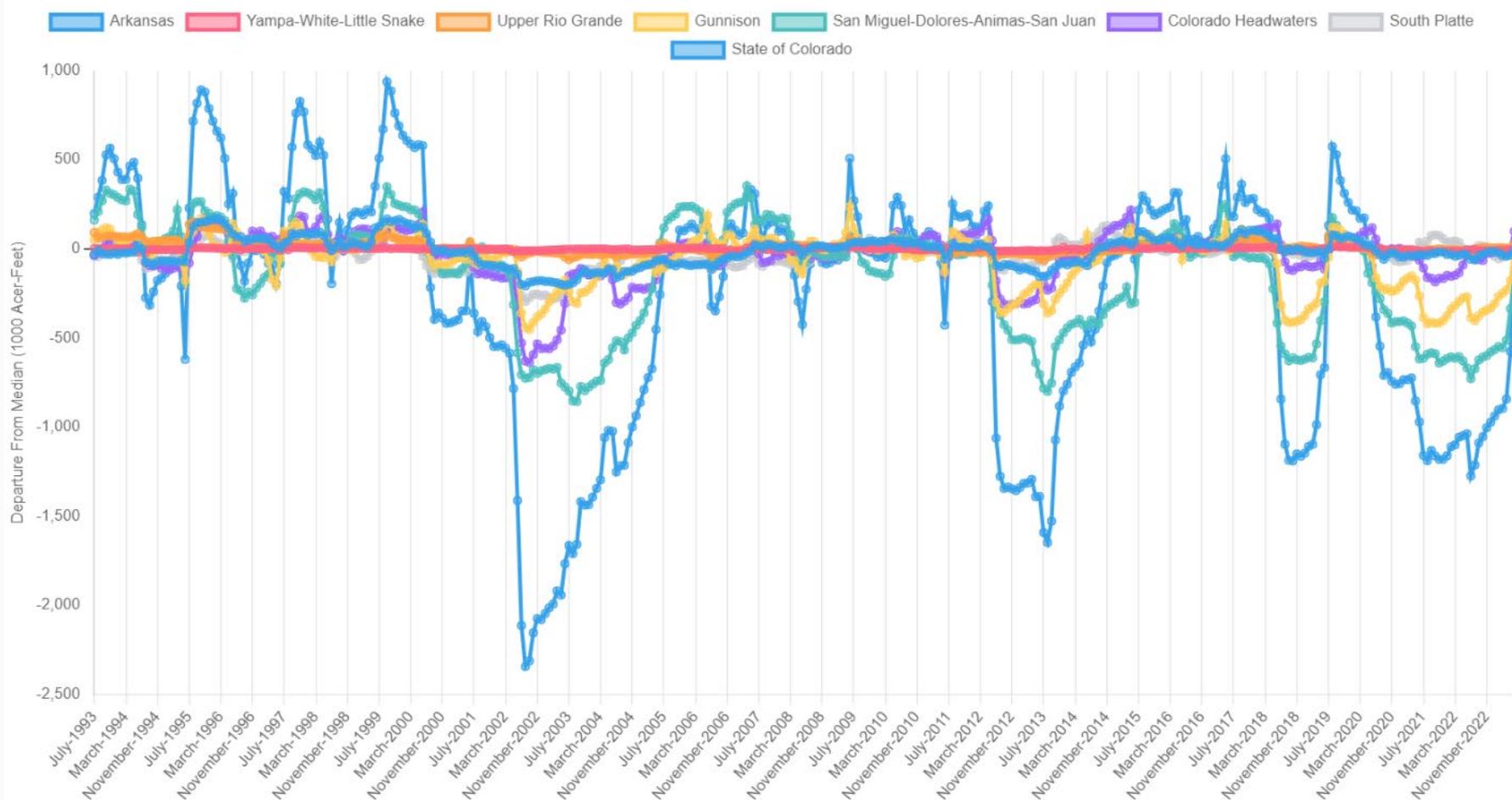


Reservoir Storage: June 1st

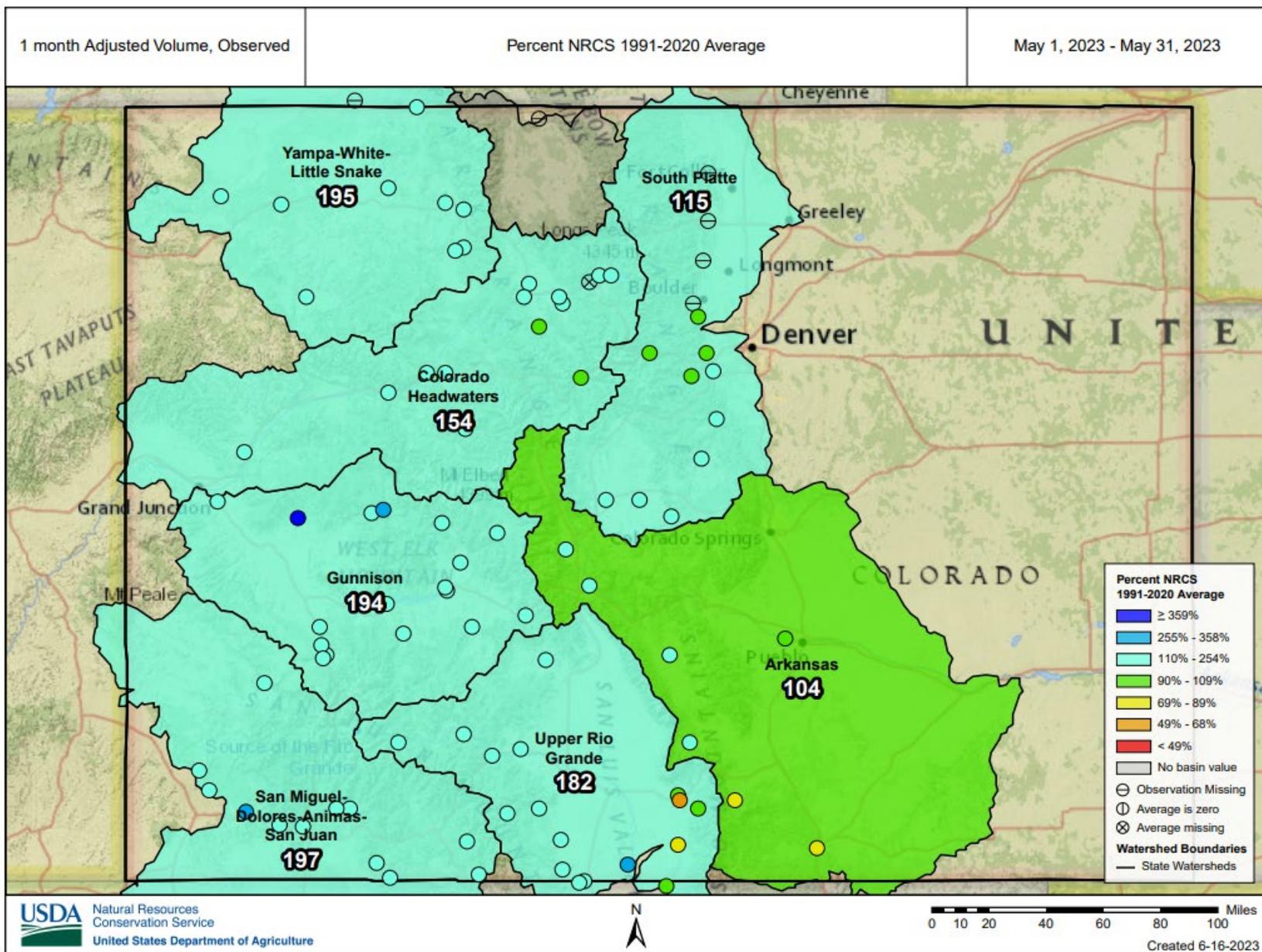




Colorado Departure From Median Timeseries Plot



May Observed Streamflow



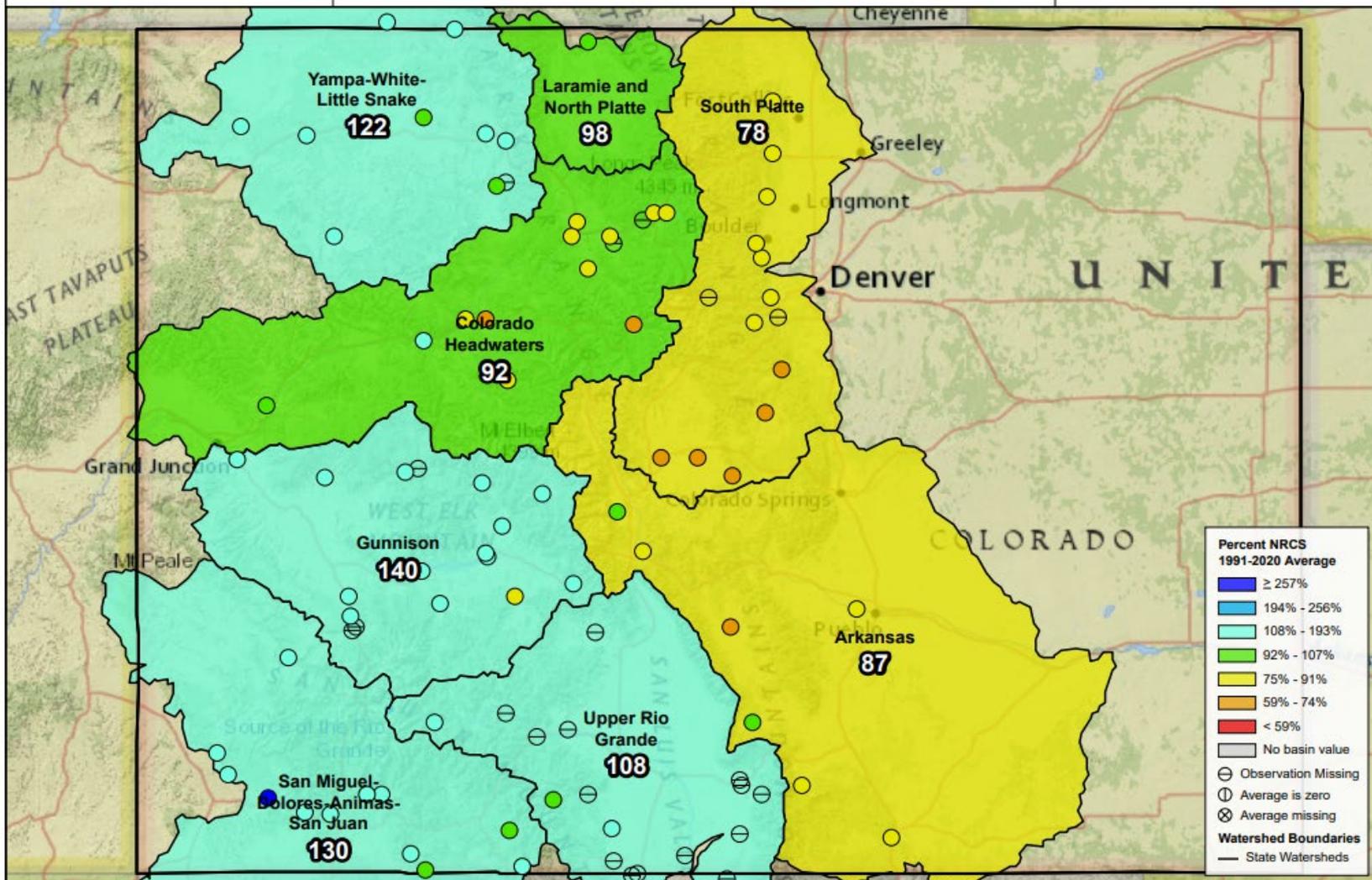


Streamflow Forecasts

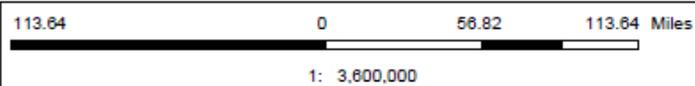
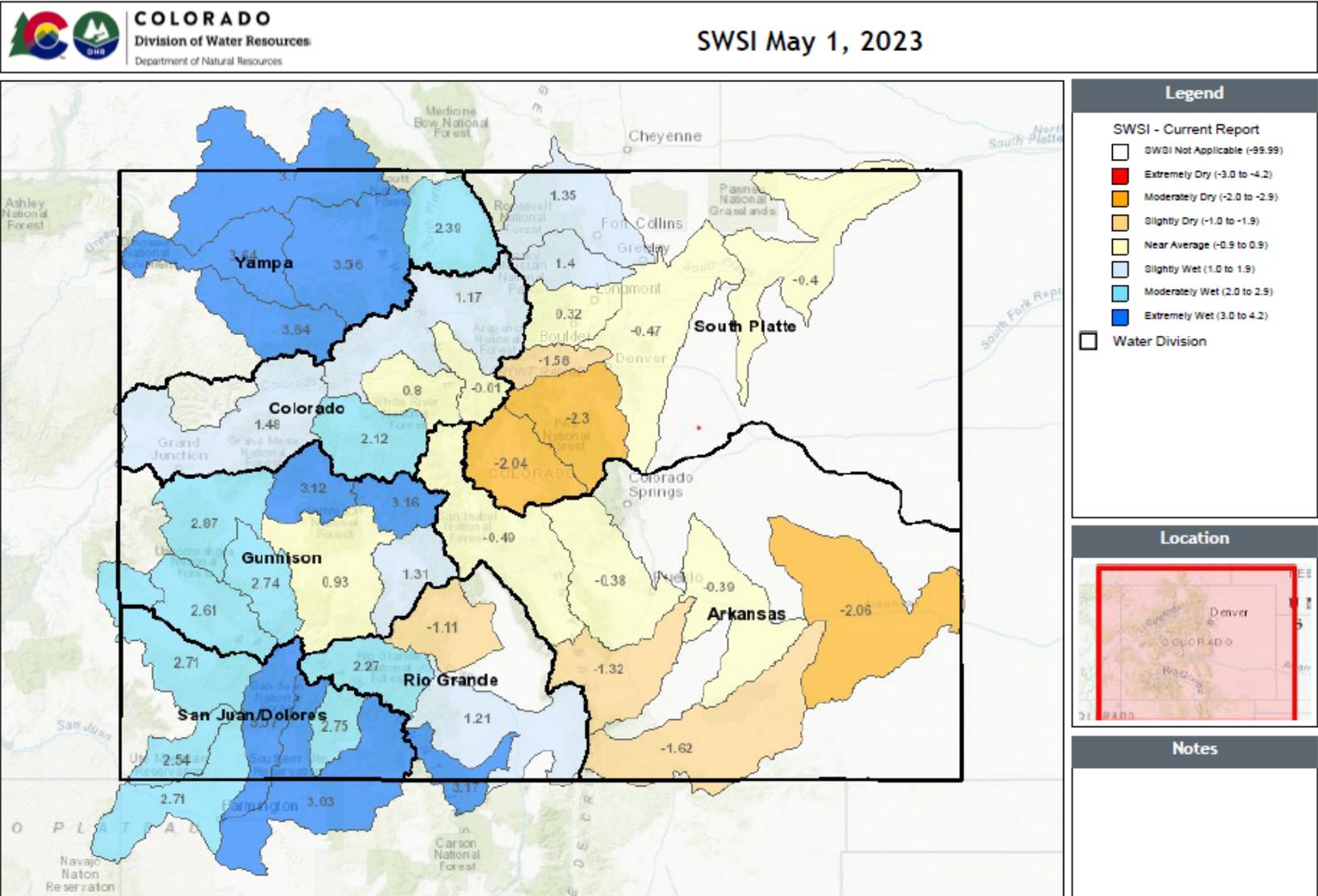
Forecast Volume,
50% Exceedance Probability

Percent NRCS 1991-2020 Average

June - July, June 1, 2023



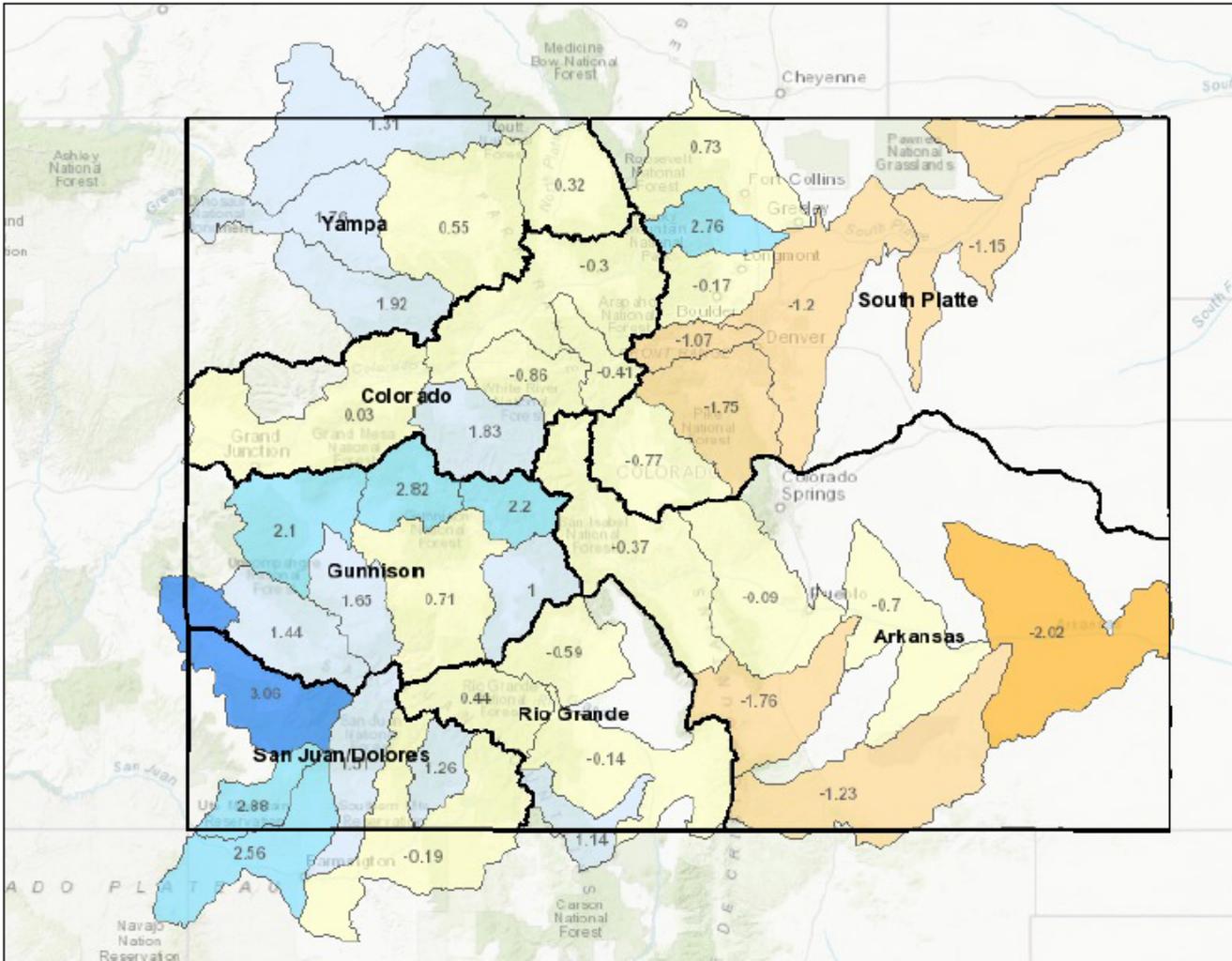
May 1, 2023 SWSI



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Date Prepared: 5/16/2023 9:54:42 AM

June 1, 2023 SWSI



Legend

SWSI - Current Report

- SWSI Not Applicable (-99.99)
- Extremely Dry (-3.0 to -4.2)
- Moderately Dry (-2.0 to -2.9)
- Slightly Dry (-1.0 to -1.9)
- Near Average (-0.9 to 0.9)
- Slightly Wet (1.0 to 1.9)
- Moderately Wet (2.0 to 2.9)
- Extremely Wet (3.0 to 4.2)

Water Division

Location

Notes

Summary

- Snowpack has melted out most SNOTEL sites in Colorado.
- Water Year to date precipitation is near to well above normal in all major basins of Colorado.
 - June-to-date precipitation has been well above normal in the mountains of Colorado.
- May observed streamflow volumes were well above normal across the state and nearly twice the normal volumes in much of Western Colorado.
- Following significant runoff in May the streamflow forecasts for the June-July period are lower with respect to normal than the full April-July period.
- Reservoir storage volumes have been swiftly increasing across the Western Slope where they have been the lowest in the state for several years. All major basins are now holding near to well above normal reservoir storage volumes.



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