



United States Department of Agriculture

Colorado Snow Surveys

Water Availability Task Force Meeting

January 18th, 2023

NRCS Snow Survey and Water Supply Forecasting Program

Karl Wetlaufer

Hydrologist

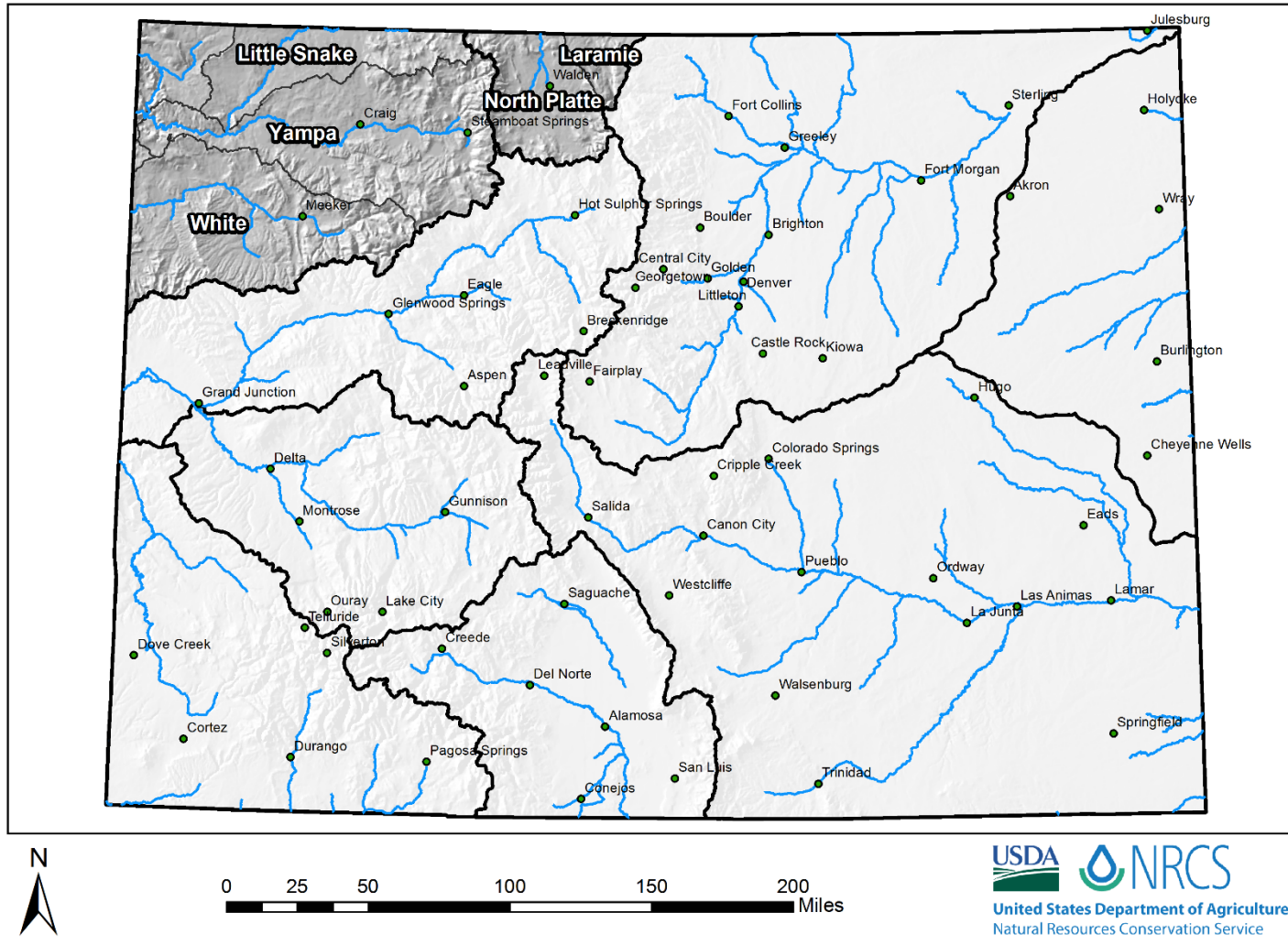
Karl.Wetlaufer@usda.gov

720-544-2853

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

Major Basin Summary

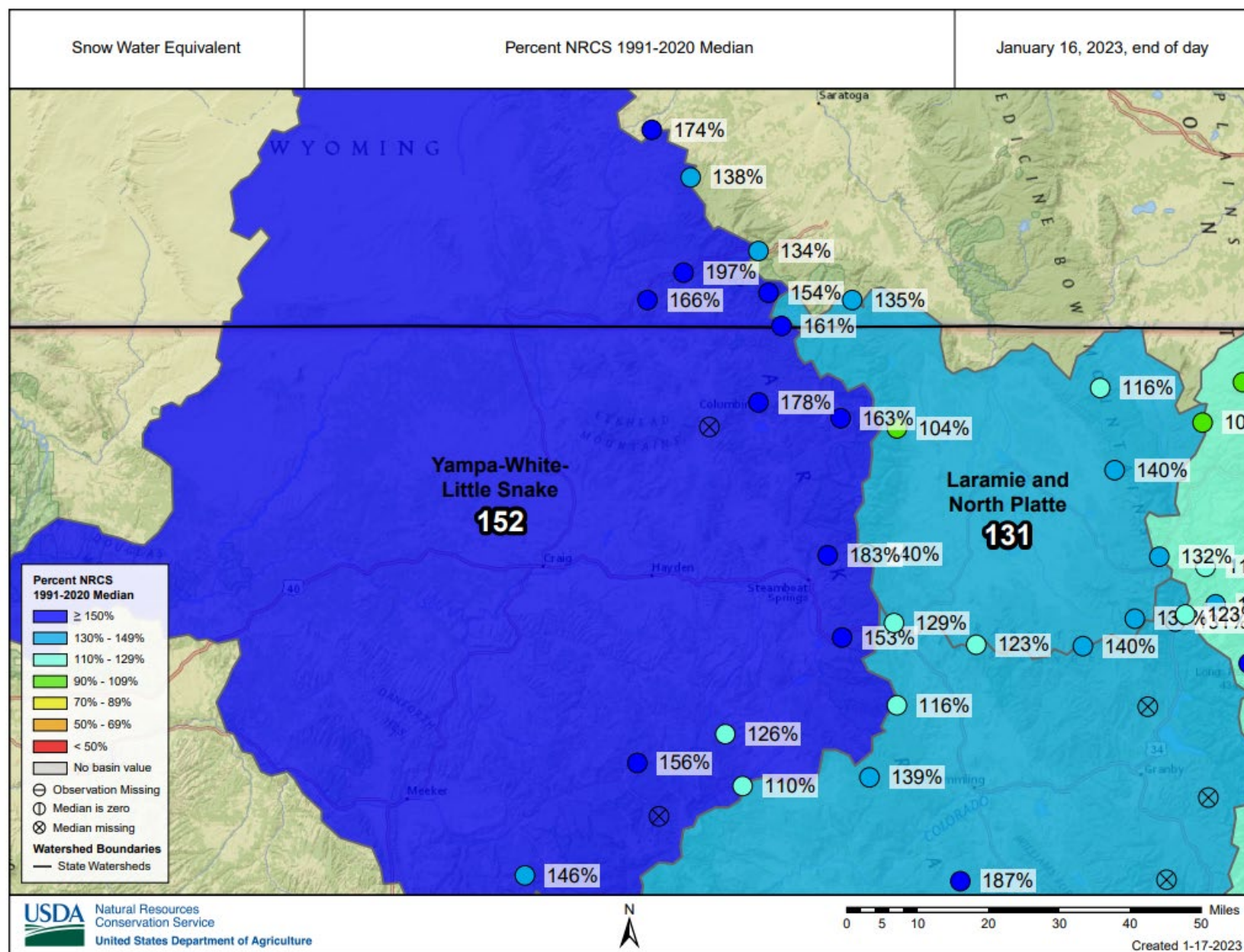
Yampa, White, and North Platte River Basins





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Colorado Snow Surveys





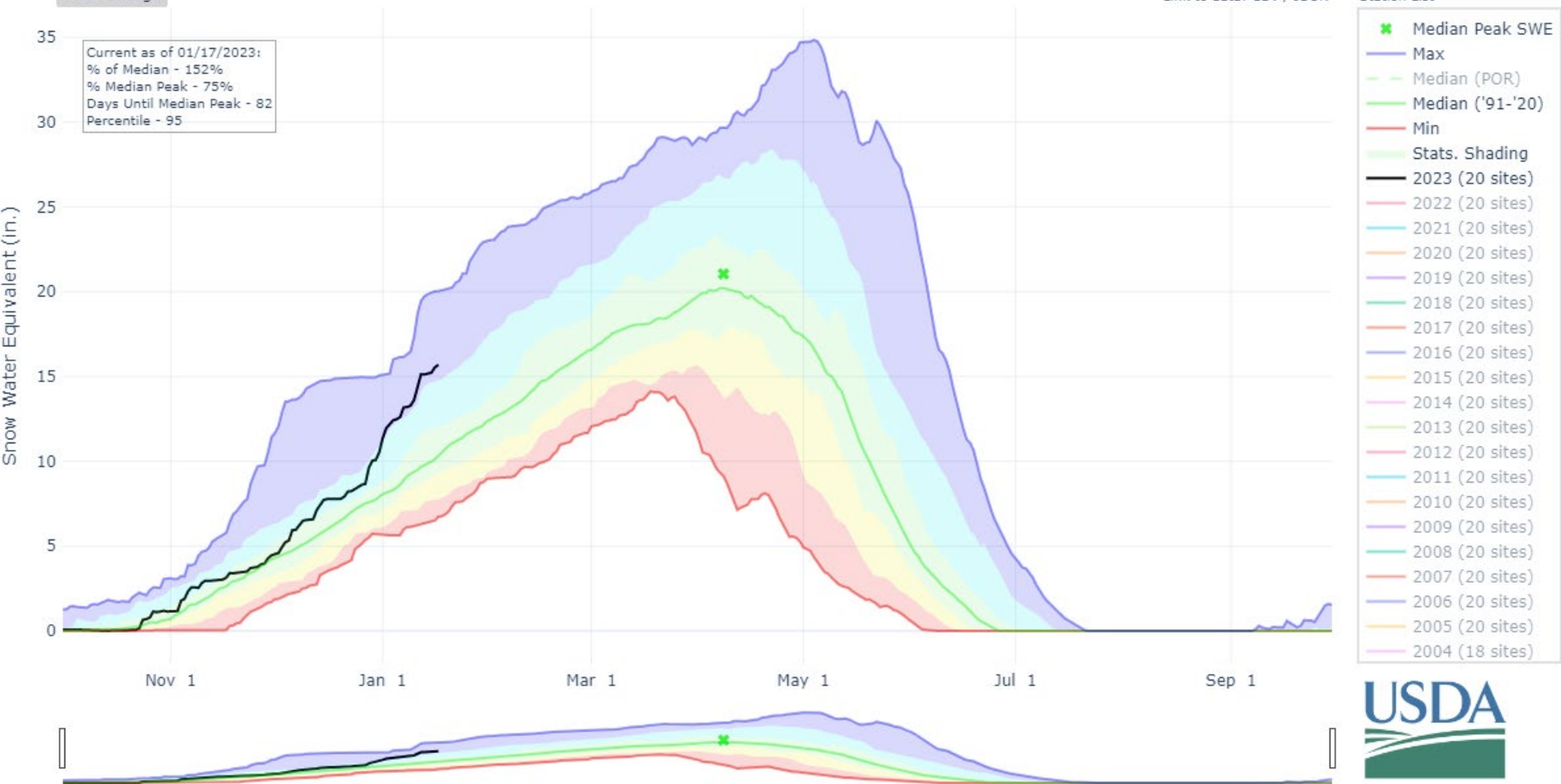
Colorado Snow Surveys

SNOW WATER EQUIVALENT IN YAMPA-WHITE-LITTLE SNAKE

Reset Range

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

Station List





Colorado Snow Surveys

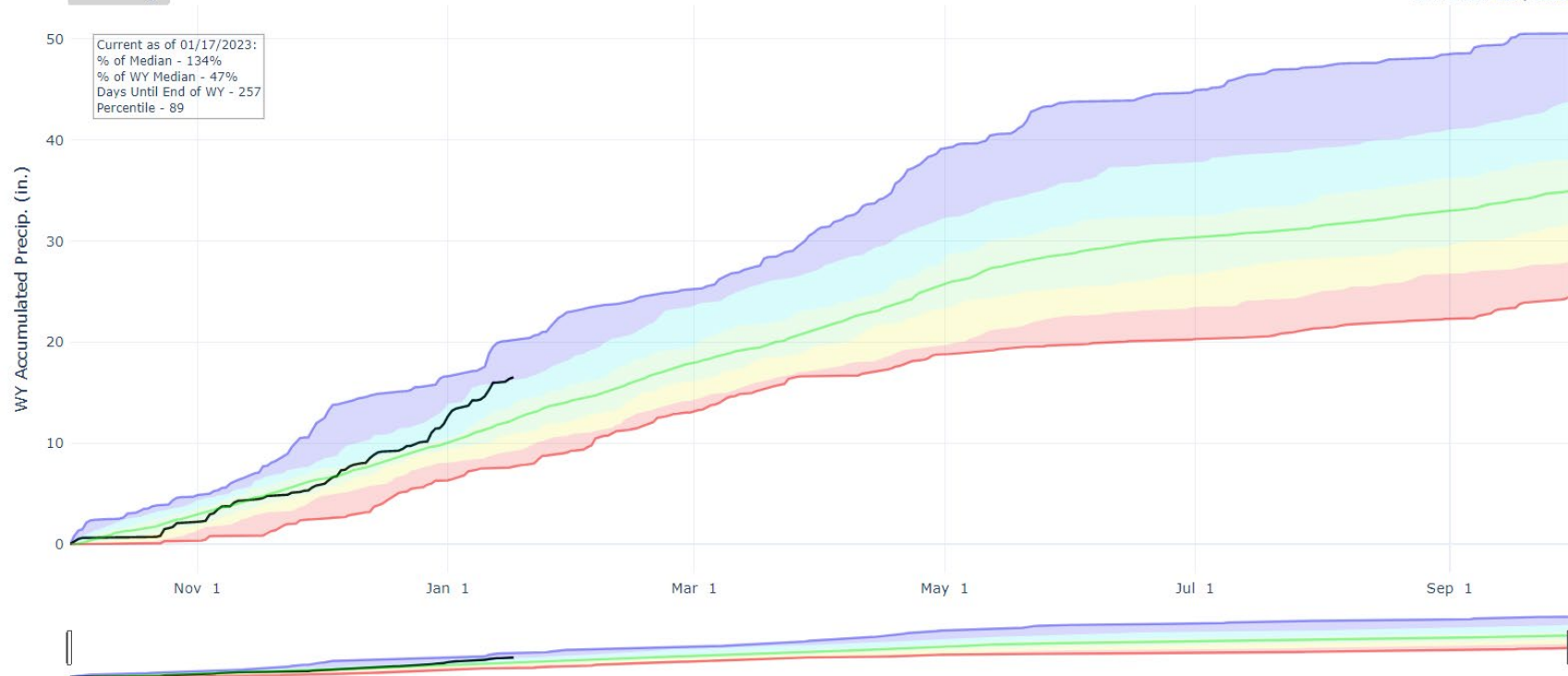
PRECIPITATION IN YAMPA-WHITE-LITTLE SNAKE

Reset Range

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

[Station List](#)

Current as of 01/17/2023:
% of Median - 134%
% of WY Median - 47%
Days Until End of WY - 257
Percentile - 89



- 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)





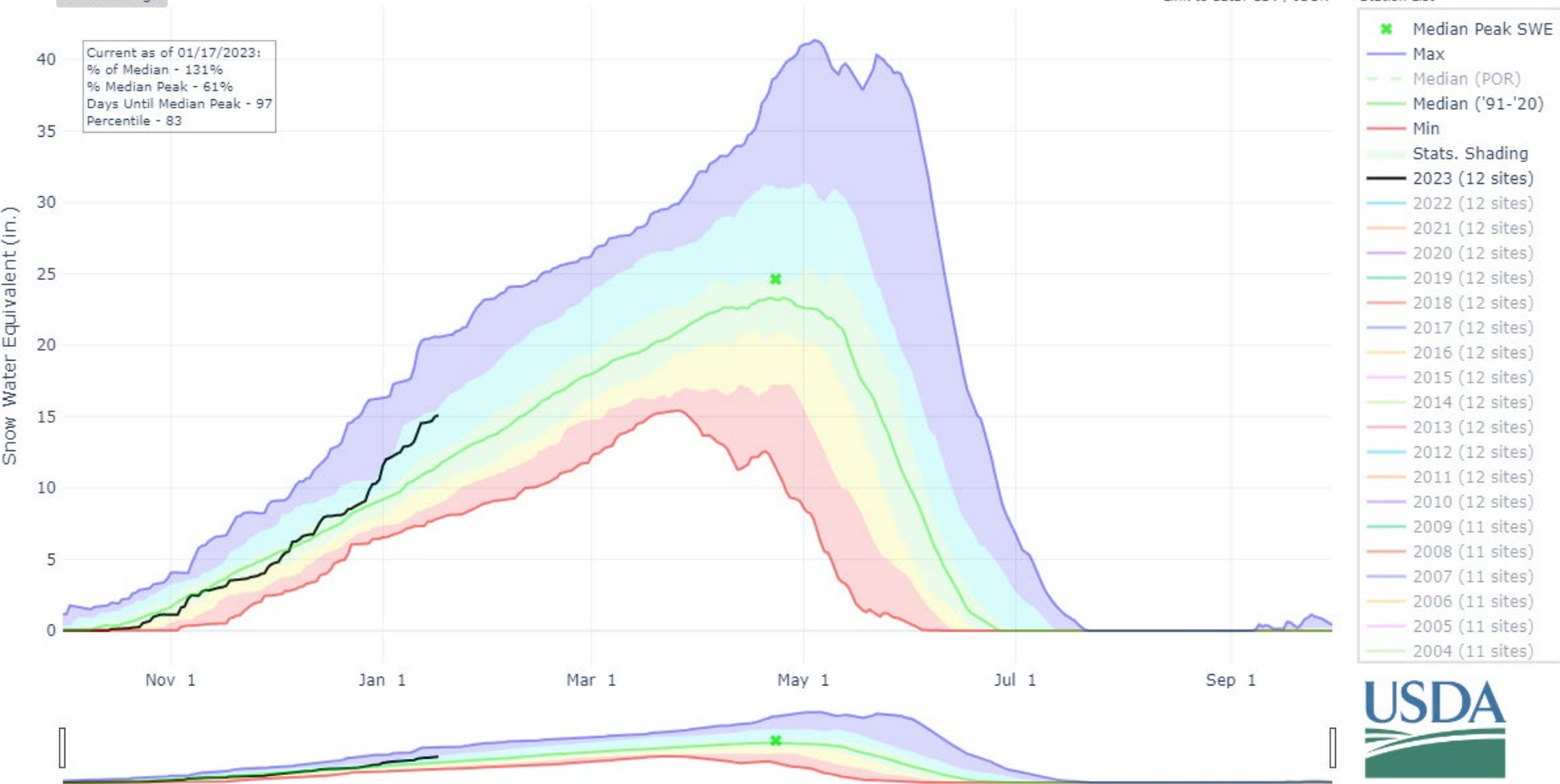
Colorado Snow Surveys

SNOW WATER EQUIVALENT IN LARAMIE AND NORTH PLATTE

Reset Range

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

Station List





Colorado Snow Surveys

PRECIPITATION IN LARAMIE AND NORTH PLATTE

Reset Range

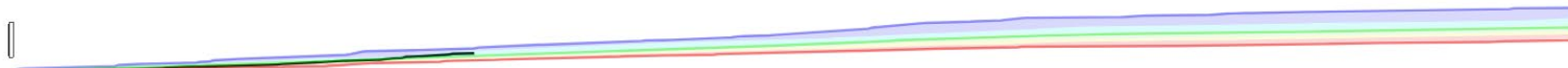
[Link to data: CSV / JSON](#)

Current as of 01/17/2023:
% of Median - 118%
% of WY Median - 40%
Days Until End of WY - 257
Percentile - 81

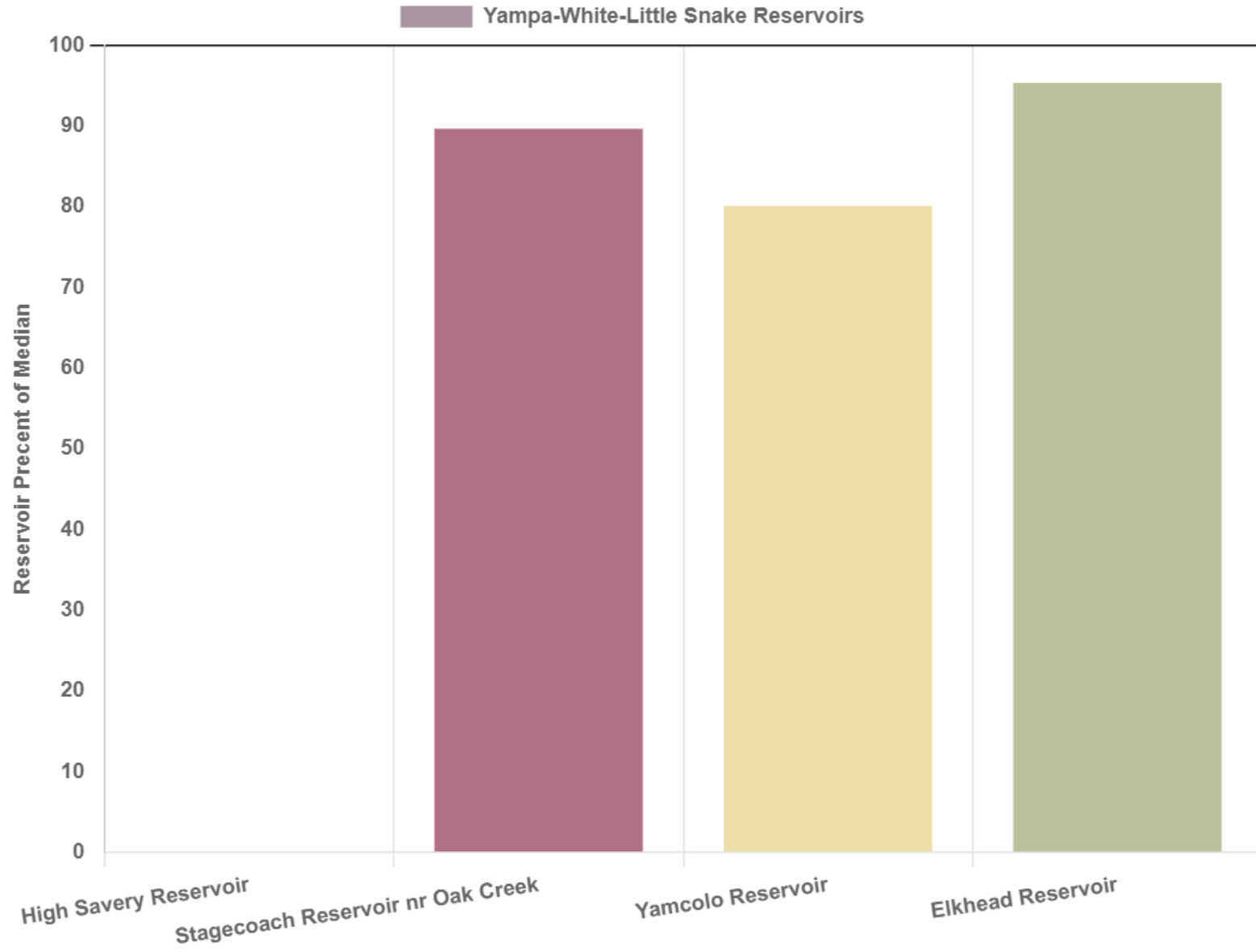
WY Accumulated Precip. (in.)

Station List

- Max
- Median (POR)
- Median ('91-'20)
- Min
- Stats, Shading
- 2023 (12 sites)
- 2022 (12 sites)
- 2021 (12 sites)
- 2020 (12 sites)
- 2019 (12 sites)
- 2018 (12 sites)
- 2017 (12 sites)
- 2016 (12 sites)
- 2015 (12 sites)
- 2014 (12 sites)
- 2013 (12 sites)
- 2012 (12 sites)
- 2011 (12 sites)
- 2010 (12 sites)
- 2009 (11 sites)
- 2008 (11 sites)
- 2007 (11 sites)
- 2006 (11 sites)
- 2005 (11 sites)

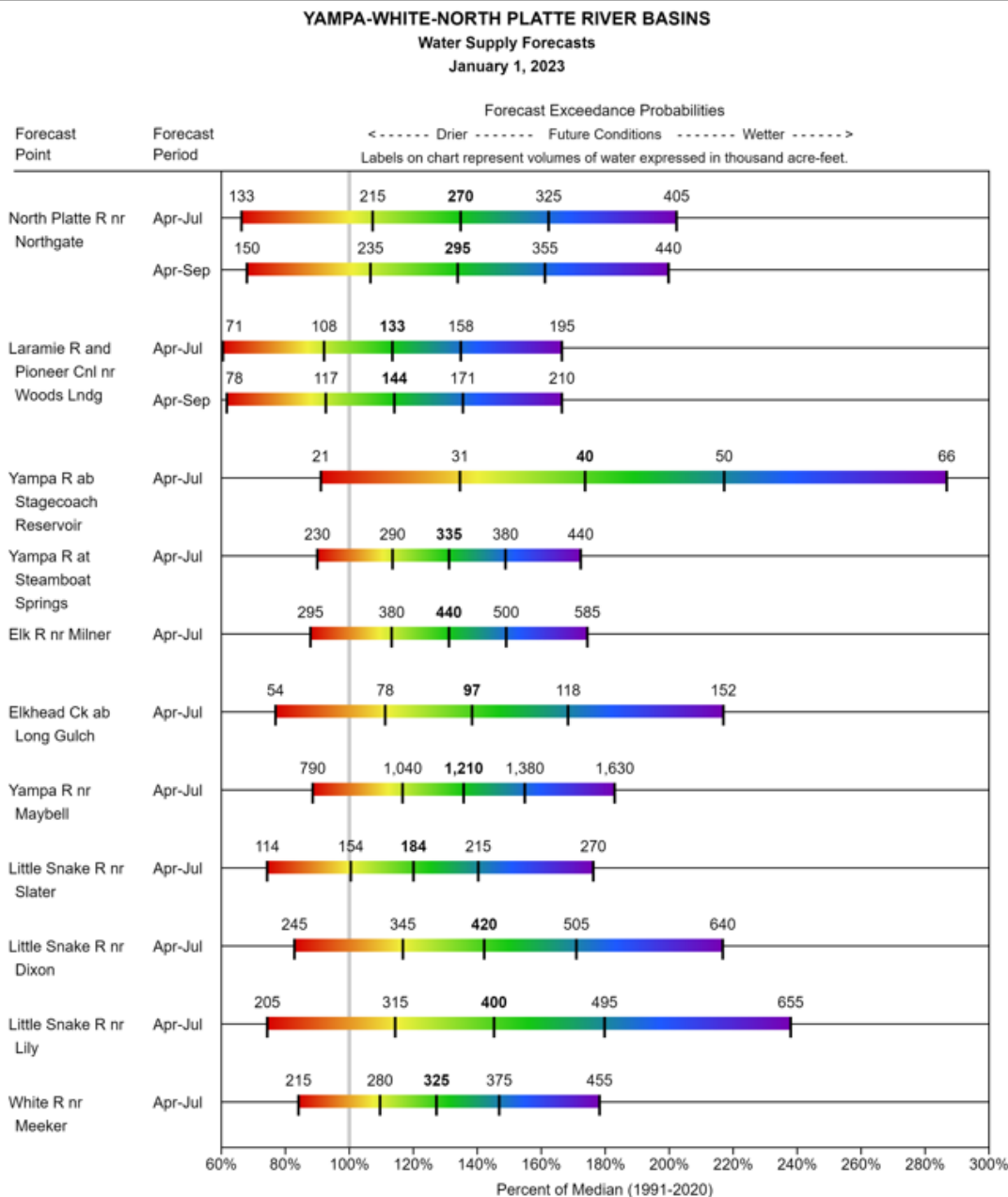


Reservoir Conditions for Yampa-White-Little Snake on January 1st 2023

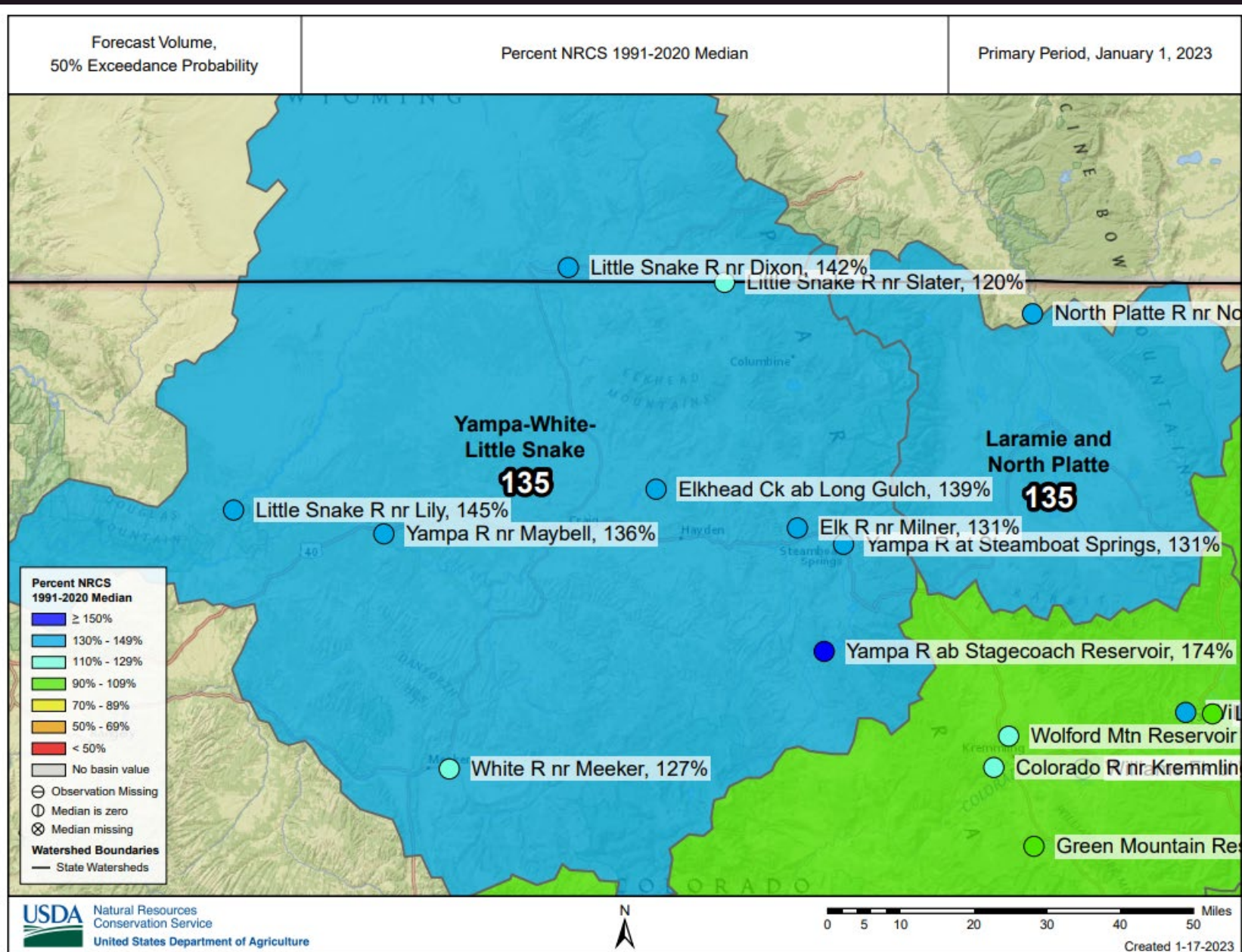




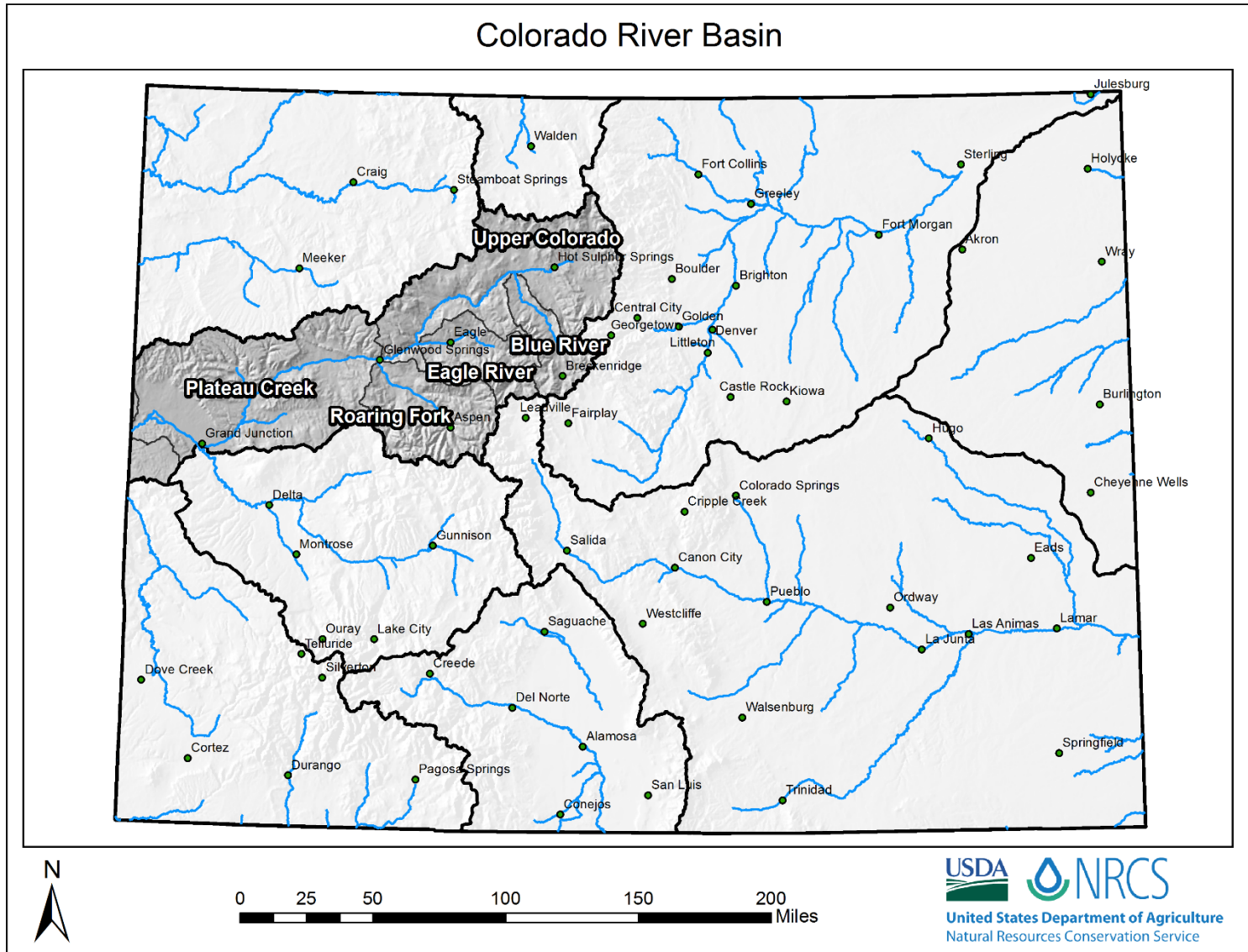
Colorado Snow Surveys



Colorado Snow Surveys



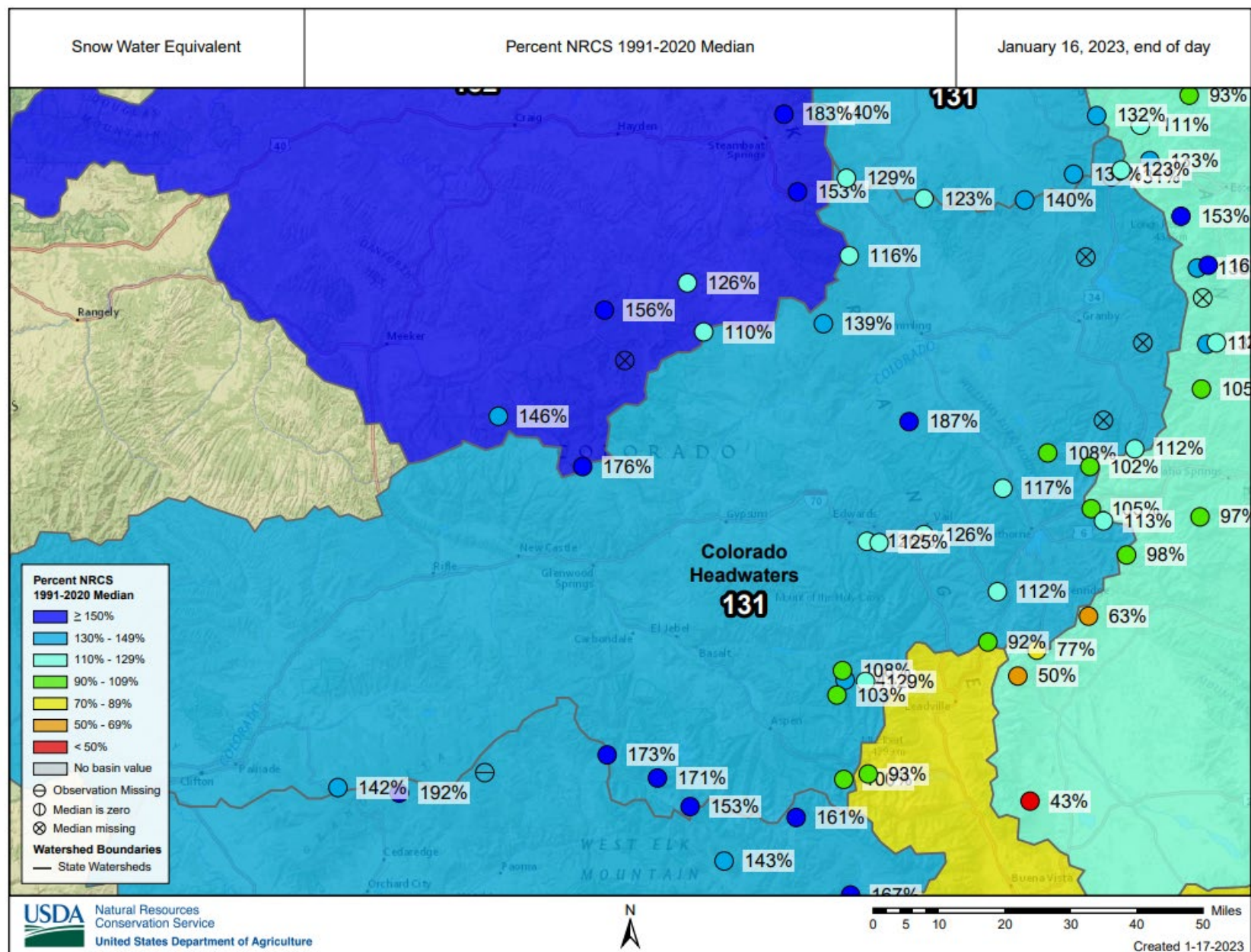
Major Basin Summary





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Colorado Snow Surveys





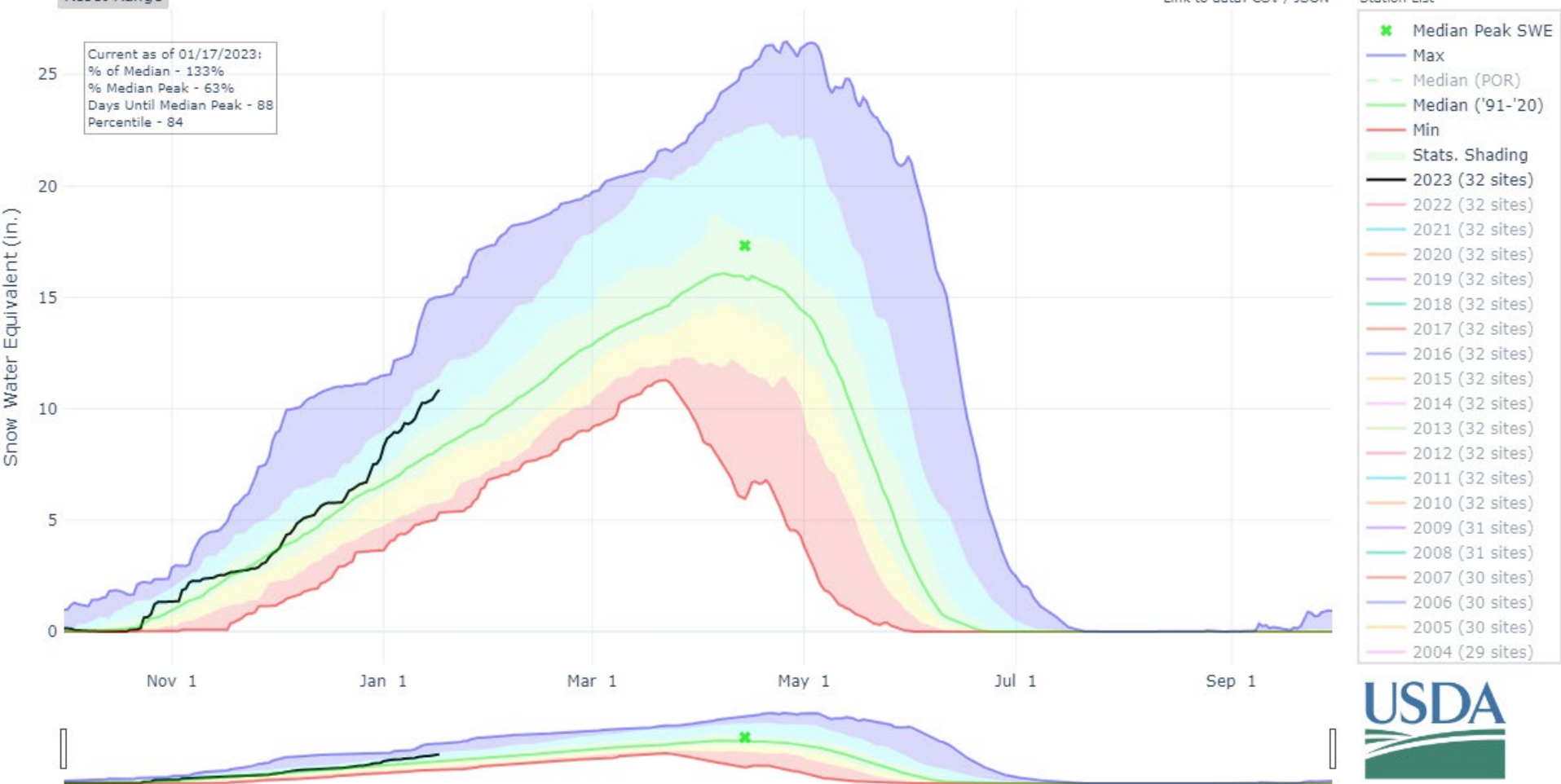
Colorado Snow Surveys

SNOW WATER EQUIVALENT IN COLORADO HEADWATERS

Reset Range

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

[Station List](#)





Colorado Snow Surveys

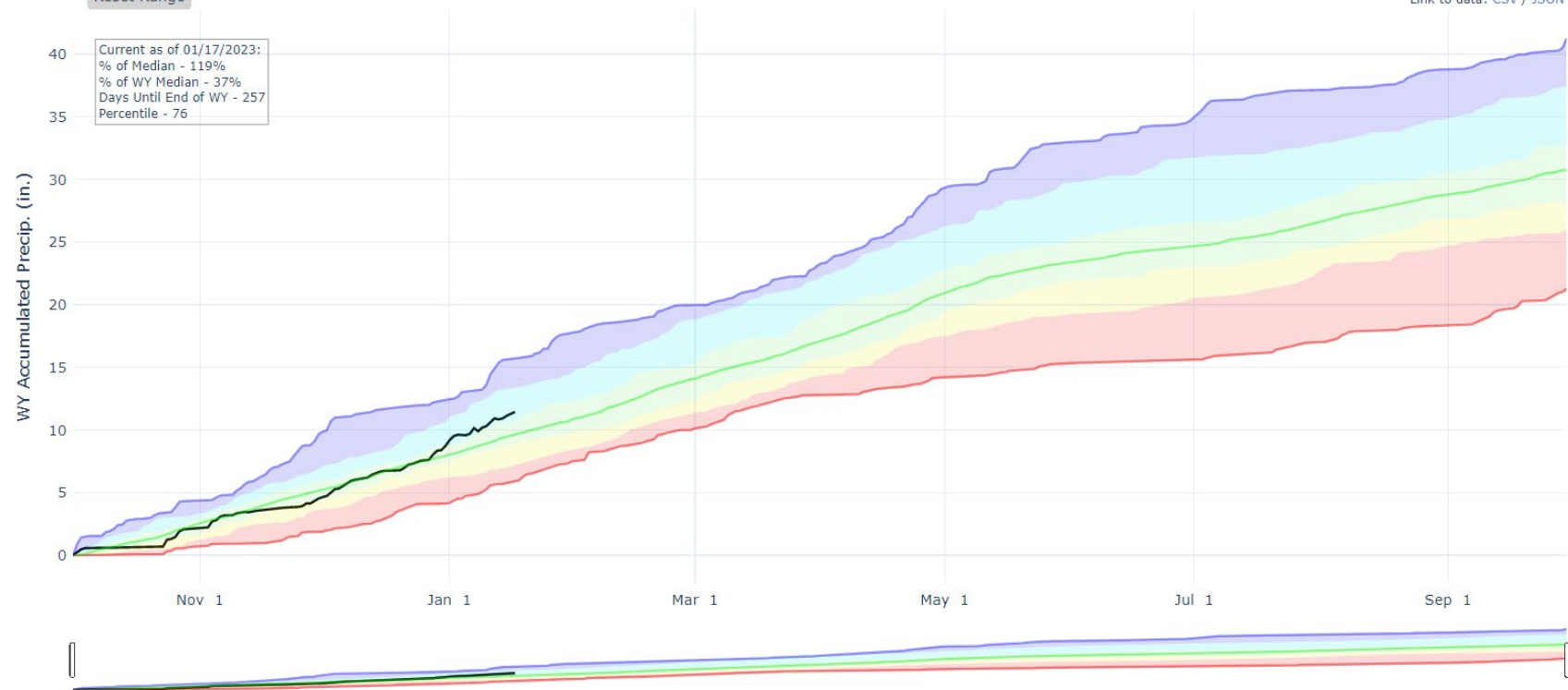
PRECIPITATION IN COLORADO HEADWATERS

Reset Range

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

Station List

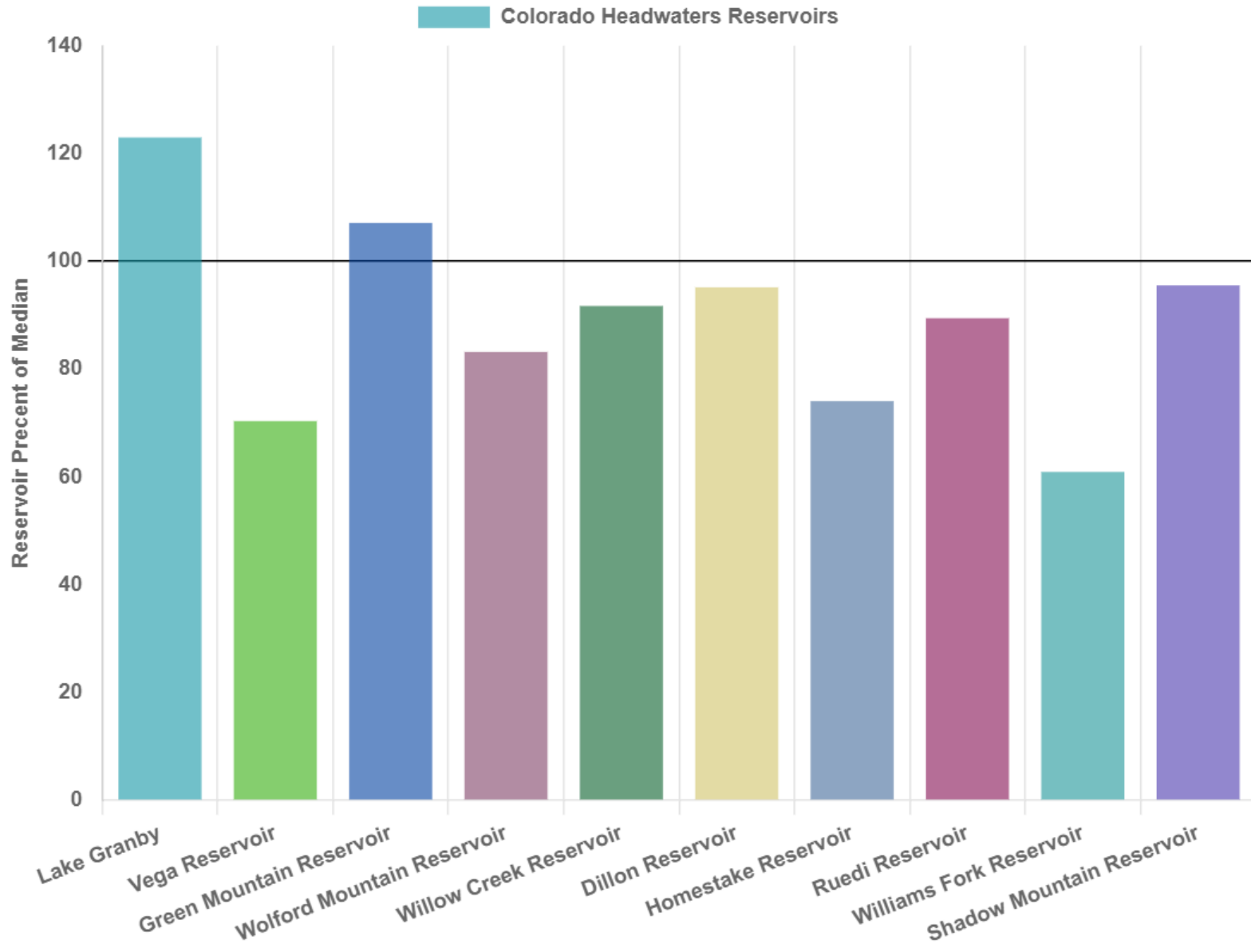
Current as of 01/17/2023:
% of Median - 119%
% of WY Median - 37%
Days Until End of WY - 257
Percentile - 76



- Max
- Median (POR)
- Median ('91-'20)
- Min
- Stats. Shading
- 2023 (32 sites)
- 2022 (32 sites)
- 2021 (32 sites)
- 2020 (32 sites)
- 2019 (32 sites)
- 2018 (32 sites)
- 2017 (32 sites)
- 2016 (32 sites)
- 2015 (32 sites)
- 2014 (32 sites)
- 2013 (32 sites)
- 2012 (32 sites)
- 2011 (32 sites)
- 2010 (32 sites)
- 2009 (32 sites)
- 2008 (32 sites)
- 2007 (31 sites)
- 2006 (31 sites)
- 2005 (31 sites)

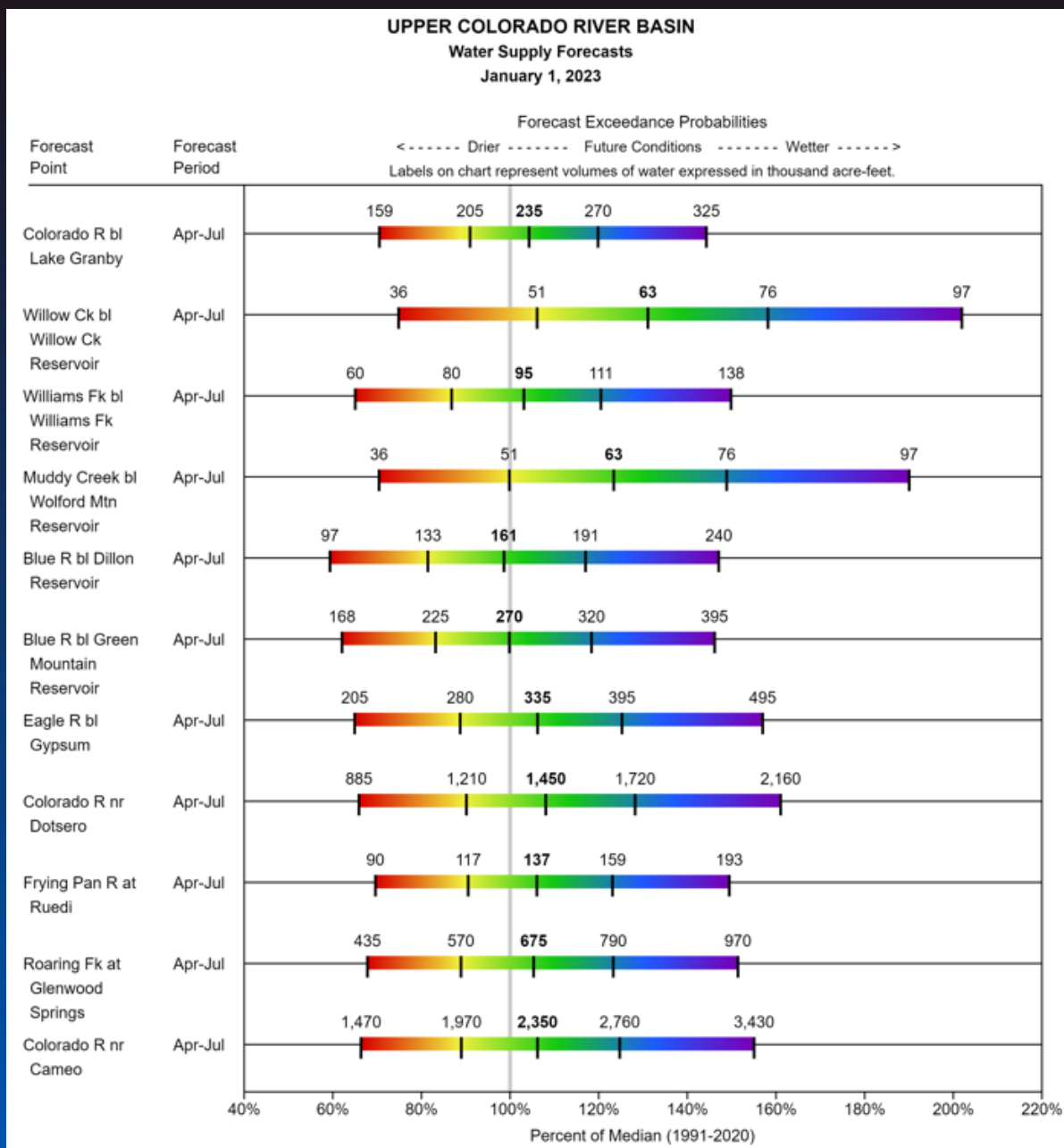


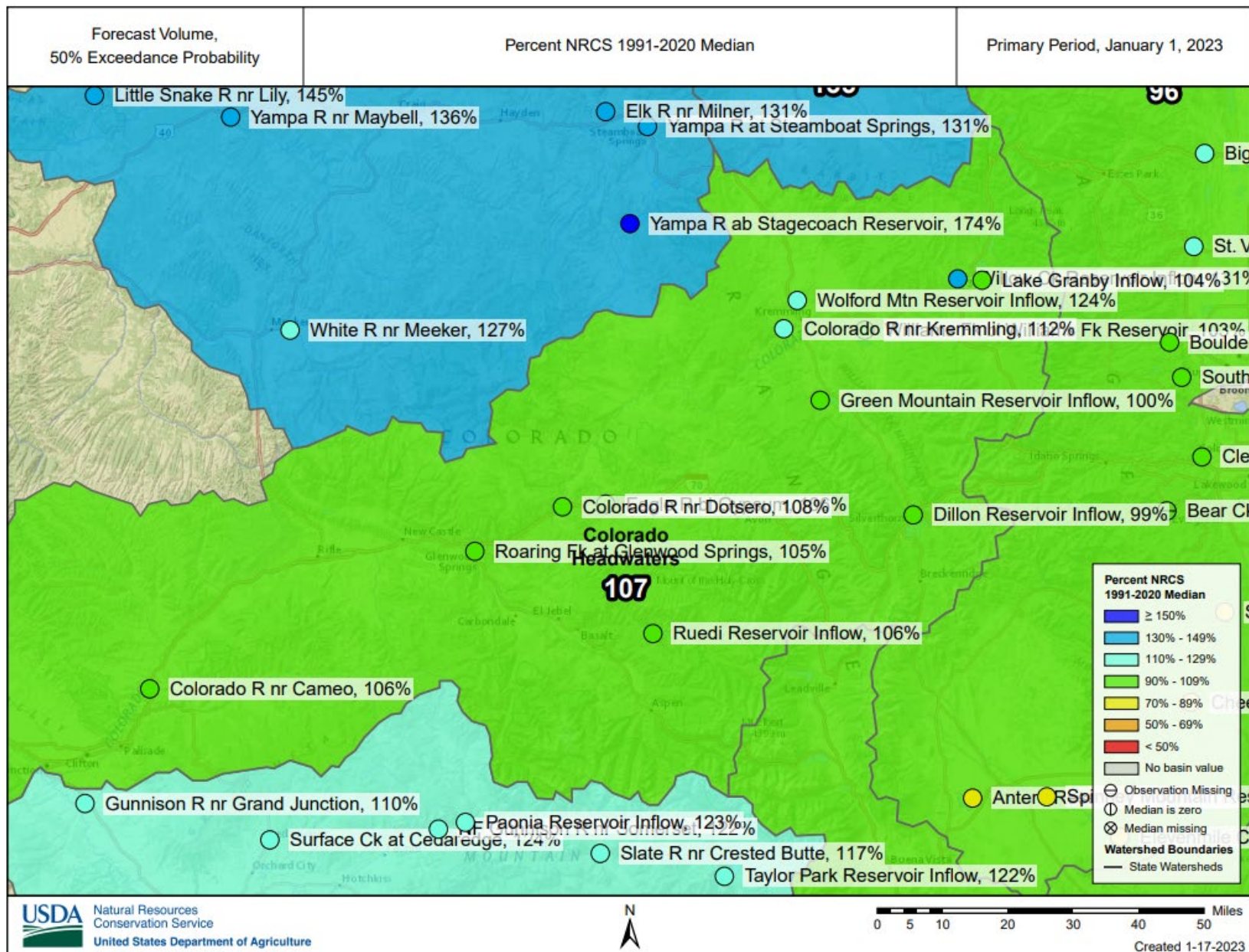
Reservoir Conditions for Colorado Headwaters on January 1st 2023





Colorado Snow Surveys





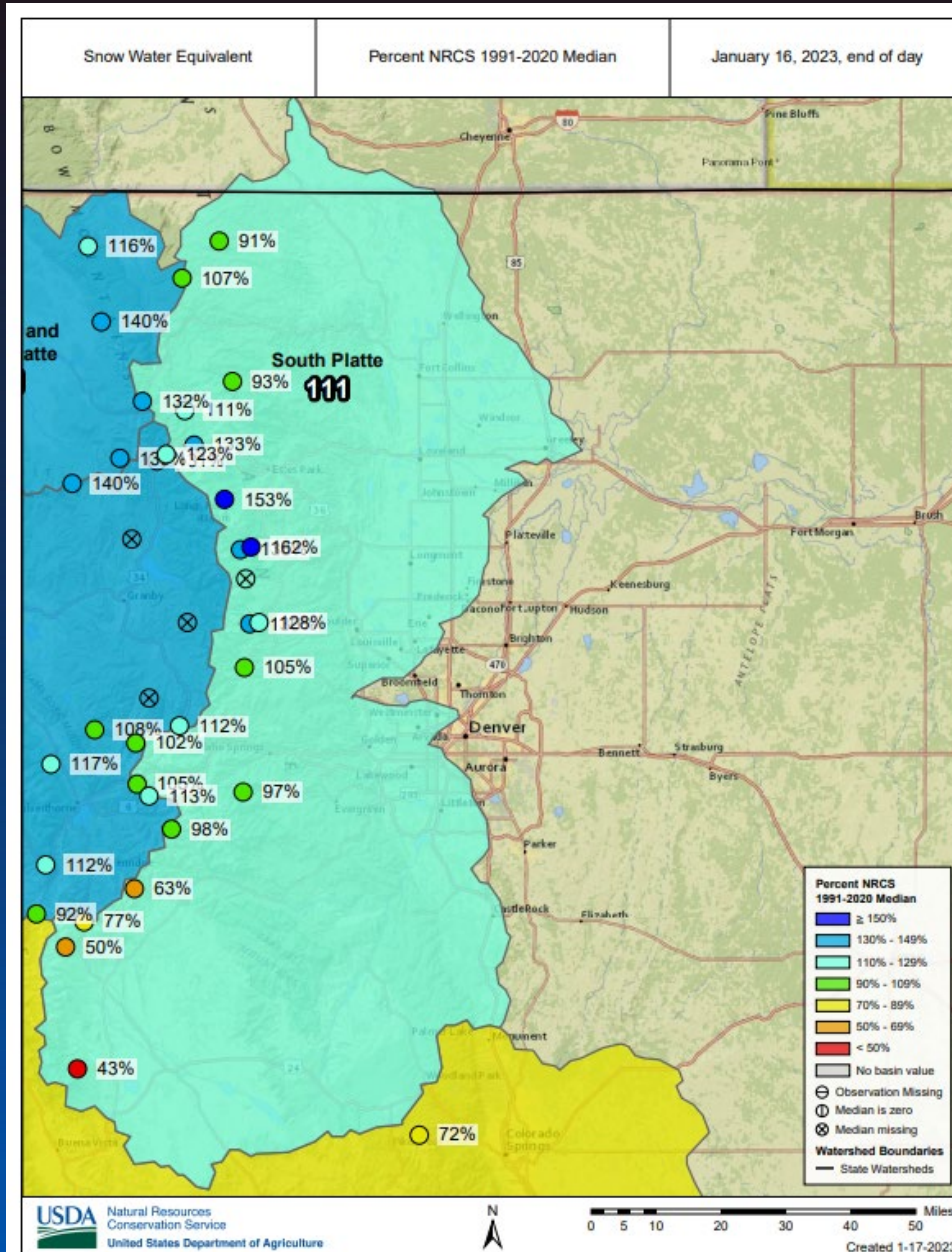
A map of Colorado illustrating the major river basins and their associated cities. The basins are labeled in bold black text: Cache La Poudre, Big Thompson, Boulder-St. Vrain, Clear Creek, and Upper South Platte. The map shows the state's boundaries, major rivers in blue, and numerous cities marked with green dots. The terrain is depicted with light gray shading to represent mountainous regions. The cities shown include Julesburg, Holyoke, Wray, Burlington, Cheyenne Wells, Eads, Las Animas, Lamar, La Junta, Ordway, Pueblo, Canon City, Cripple Creek, Colorado Springs, Hugo, Castle Rock, Kiowa, Littleton, Denver, Golden, Boulder, Brighton, Fort Morgan, Akron, Sterling, Greeley, Fort Collins, Walden, Steamboat Springs, Craig, Meeker, Hot Sulphur Springs, Eagle, Glenwood Springs, Breckenridge, Leadville, Fairplay, Aspen, Grand Junction, Delta, Montrose, Gunnison, Salida, Saguache, Westcliffe, Del Norte, Alamosa, San Luis, Trinidad, Walsenburg, Conejos, Pagosa Springs, Durango, Cortez, Dove Creek, Silverton, Telluride, Lake City, Ouray, and Grand Junction.



0 25 50 100 150 200 Miles



Colorado Snow Surveys





Colorado Snow Surveys

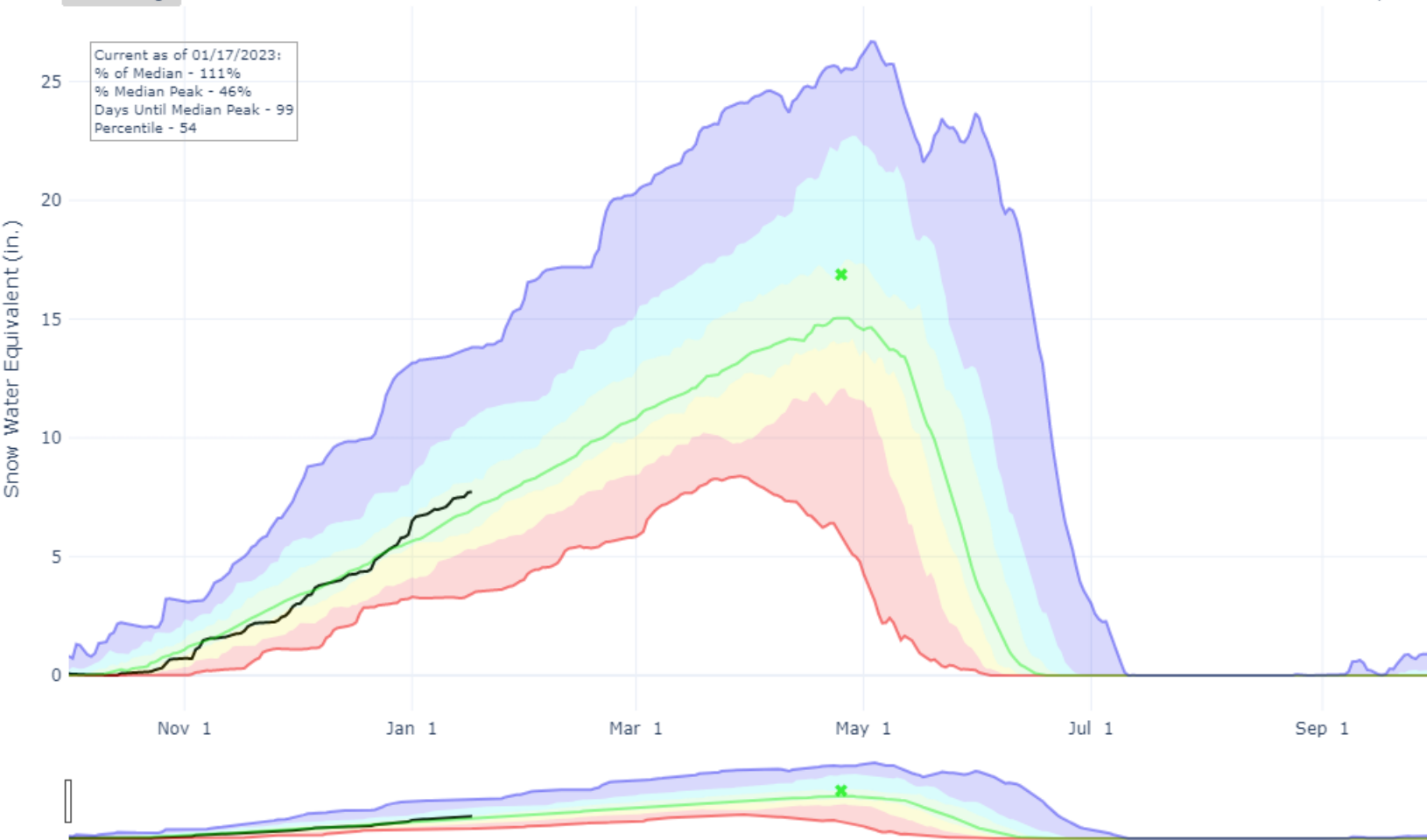
SNOW WATER EQUIVALENT IN SOUTH PLATTE

Reset Range

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

Station List

Current as of 01/17/2023:
% of Median - 111%
% Median Peak - 46%
Days Until Median Peak - 99
Percentile - 54



- ✖ Median Peak SWE
- 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)





Colorado Snow Surveys

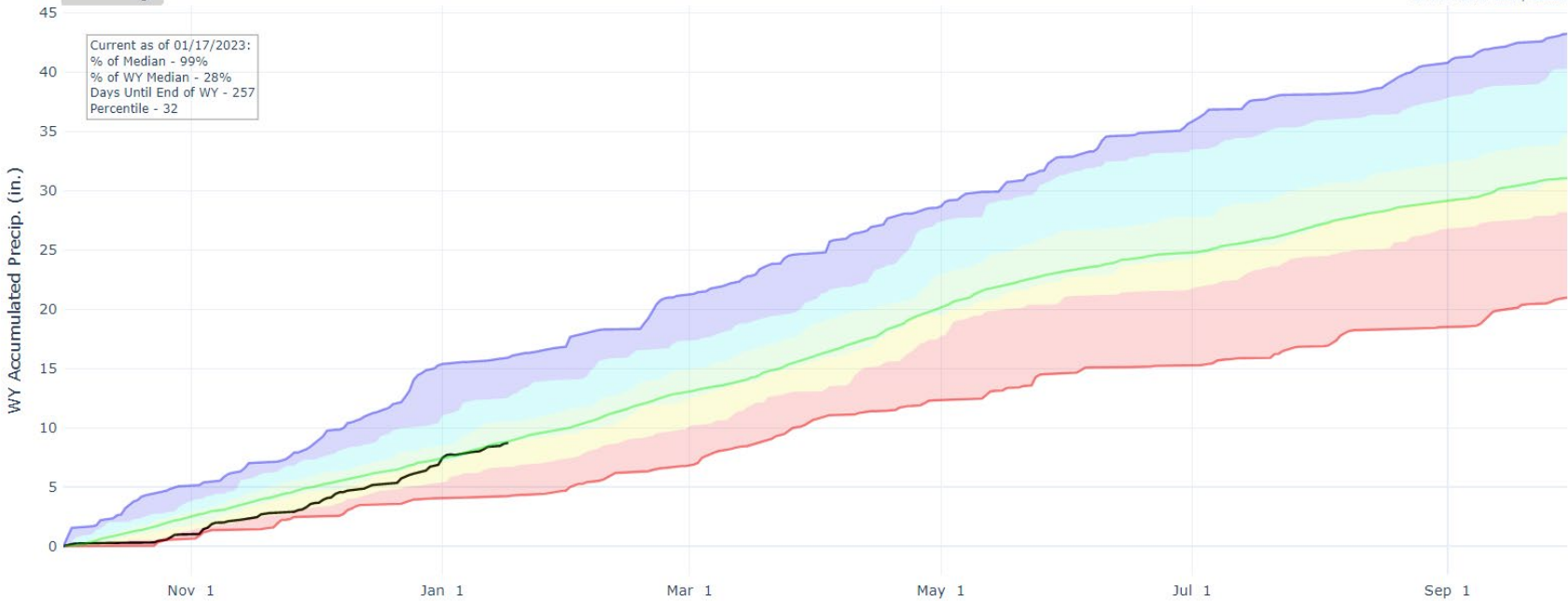
PRECIPITATION IN SOUTH PLATTE

Reset Range

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

Current as of 01/17/2023:
% of Median - 99%
% of WY Median - 28%
Days Until End of WY - 257
Percentile - 32

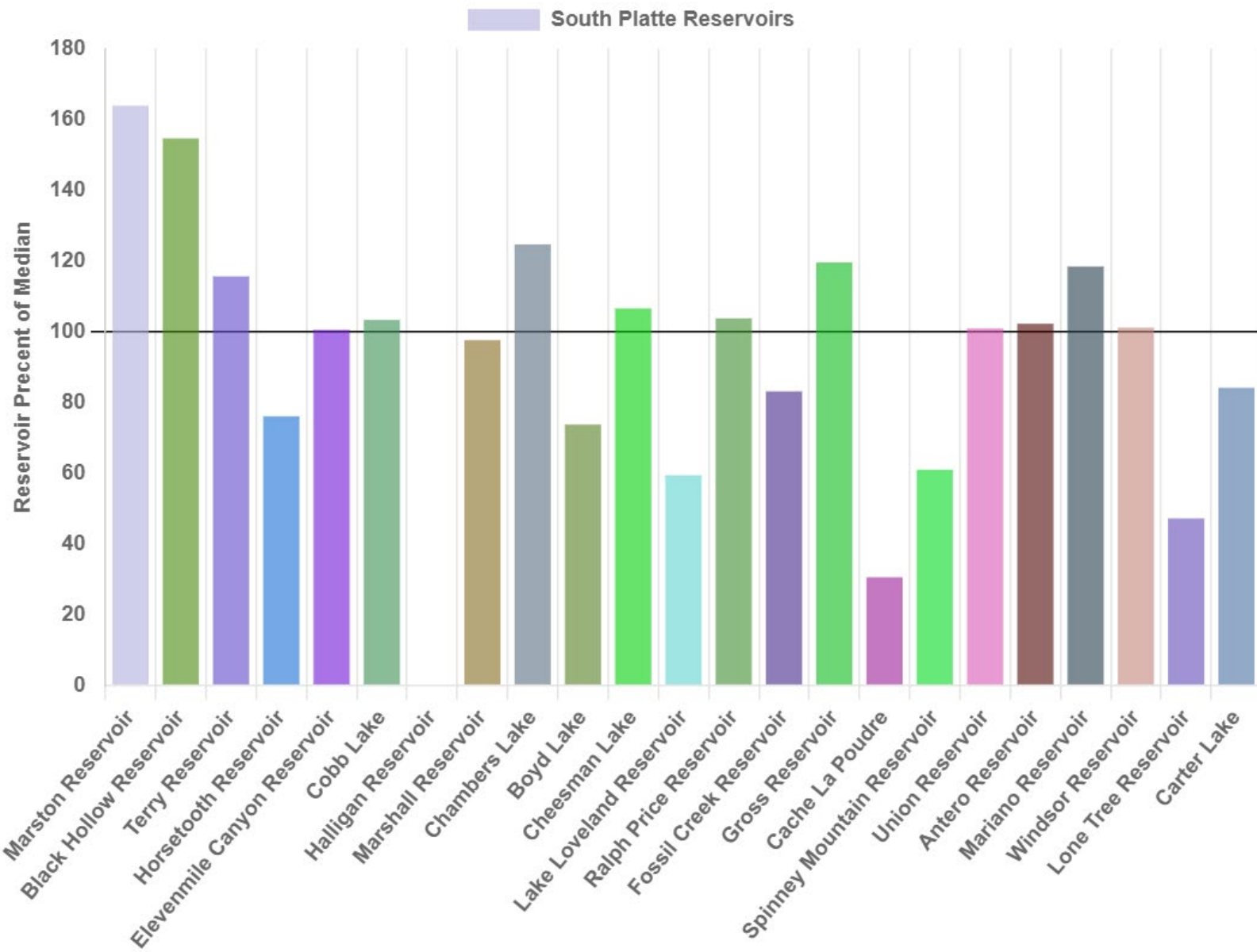
Station List



- 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)



Reservoir Conditions for South Platte on January 1st 2023



SOUTH PLATTE RIVER BASIN

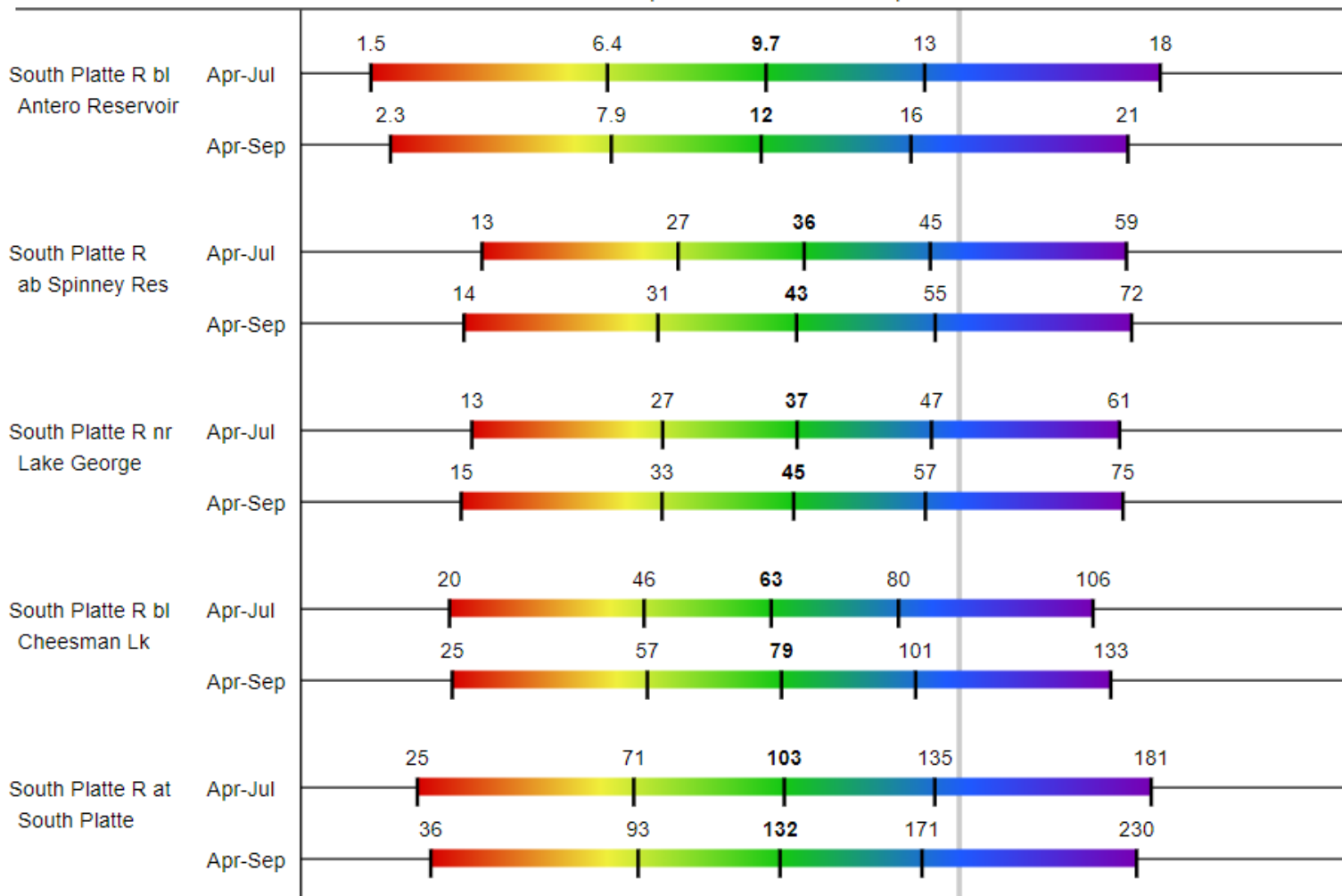
Water Supply Forecasts

January 1, 2023

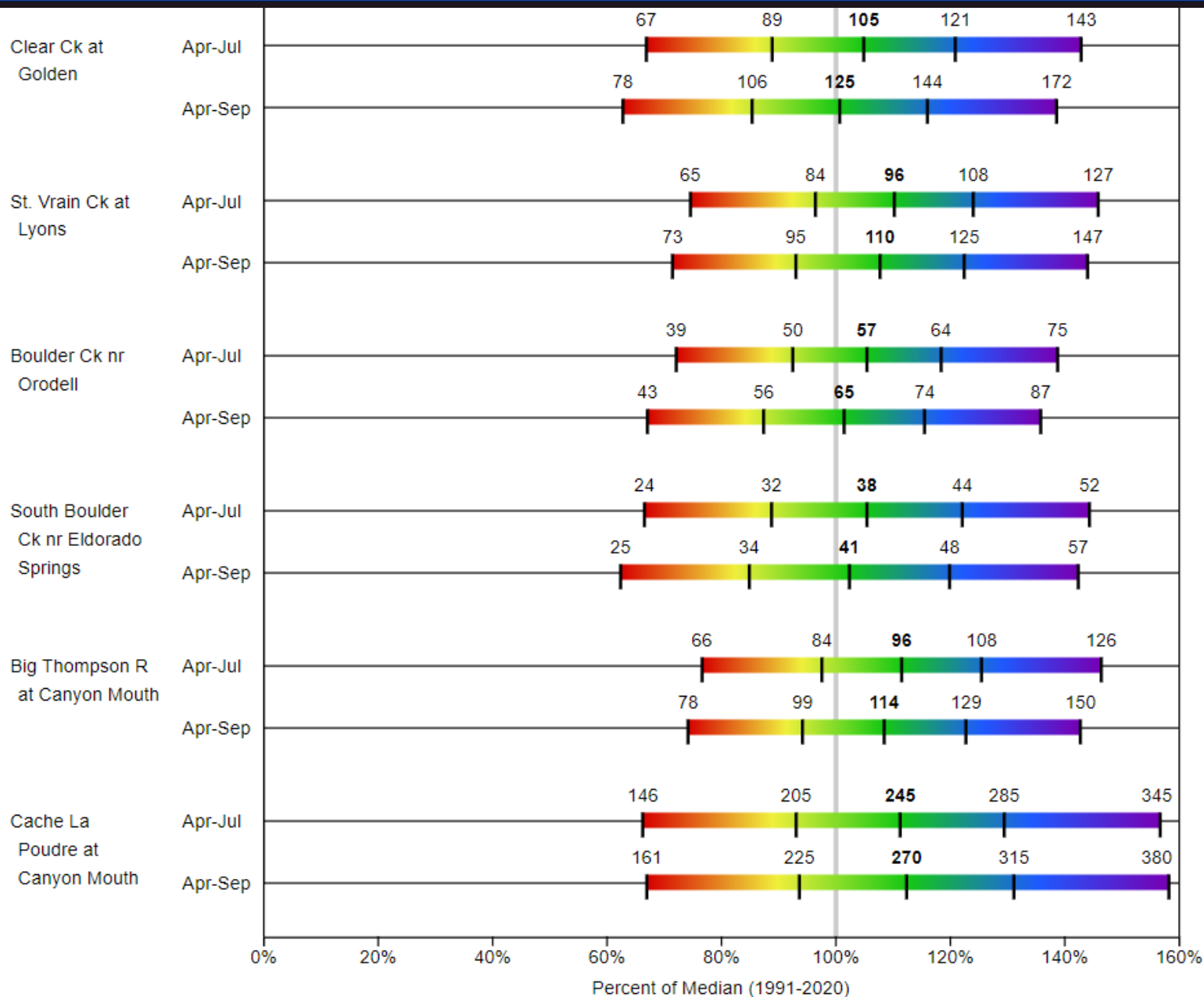
Forecast Exceedance Probabilities

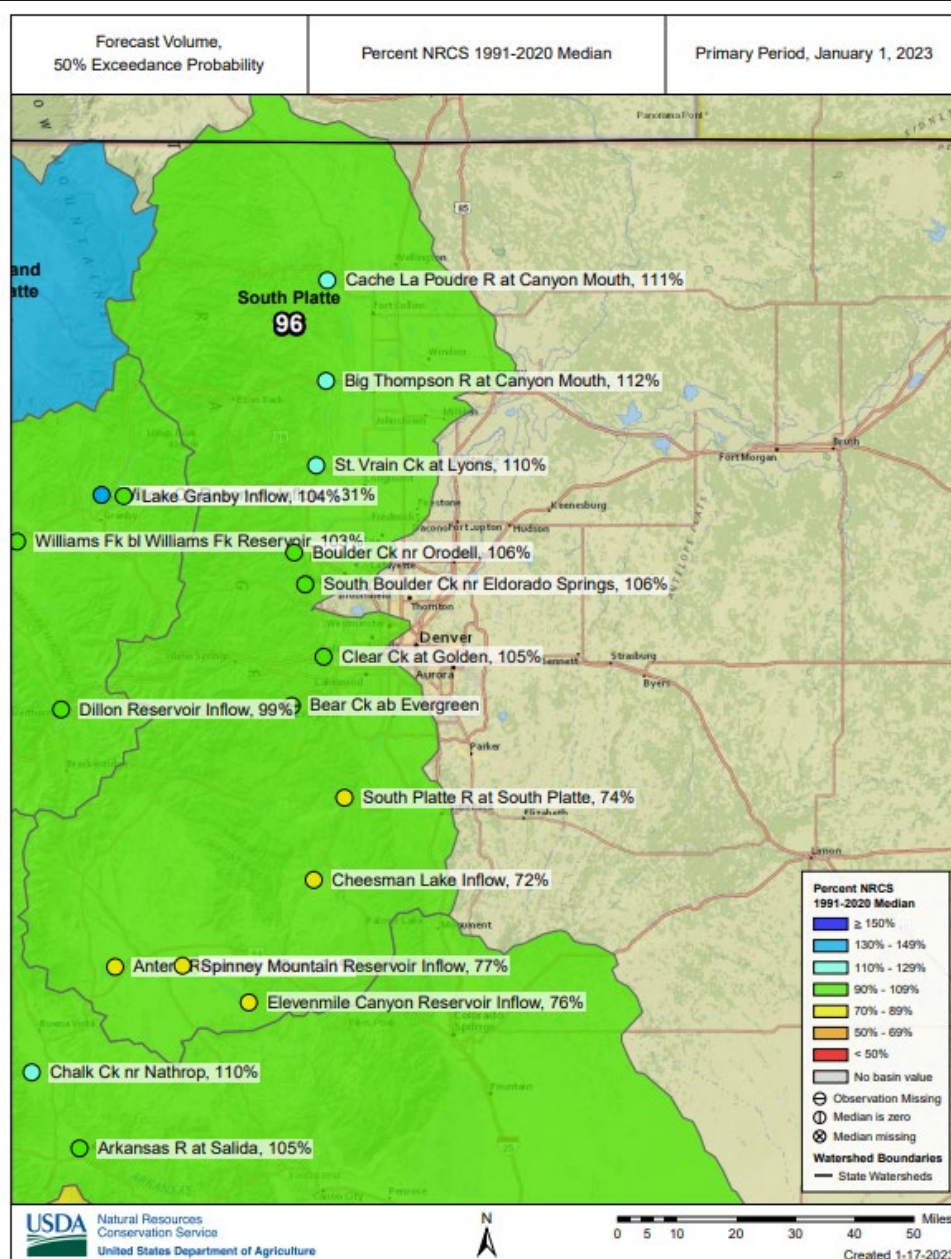
<----- Drier ----- Future Conditions ----- Wetter ----->

Labels on chart represent volumes of water expressed in thousand acre-feet.



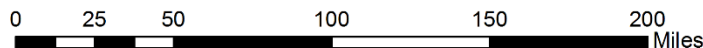
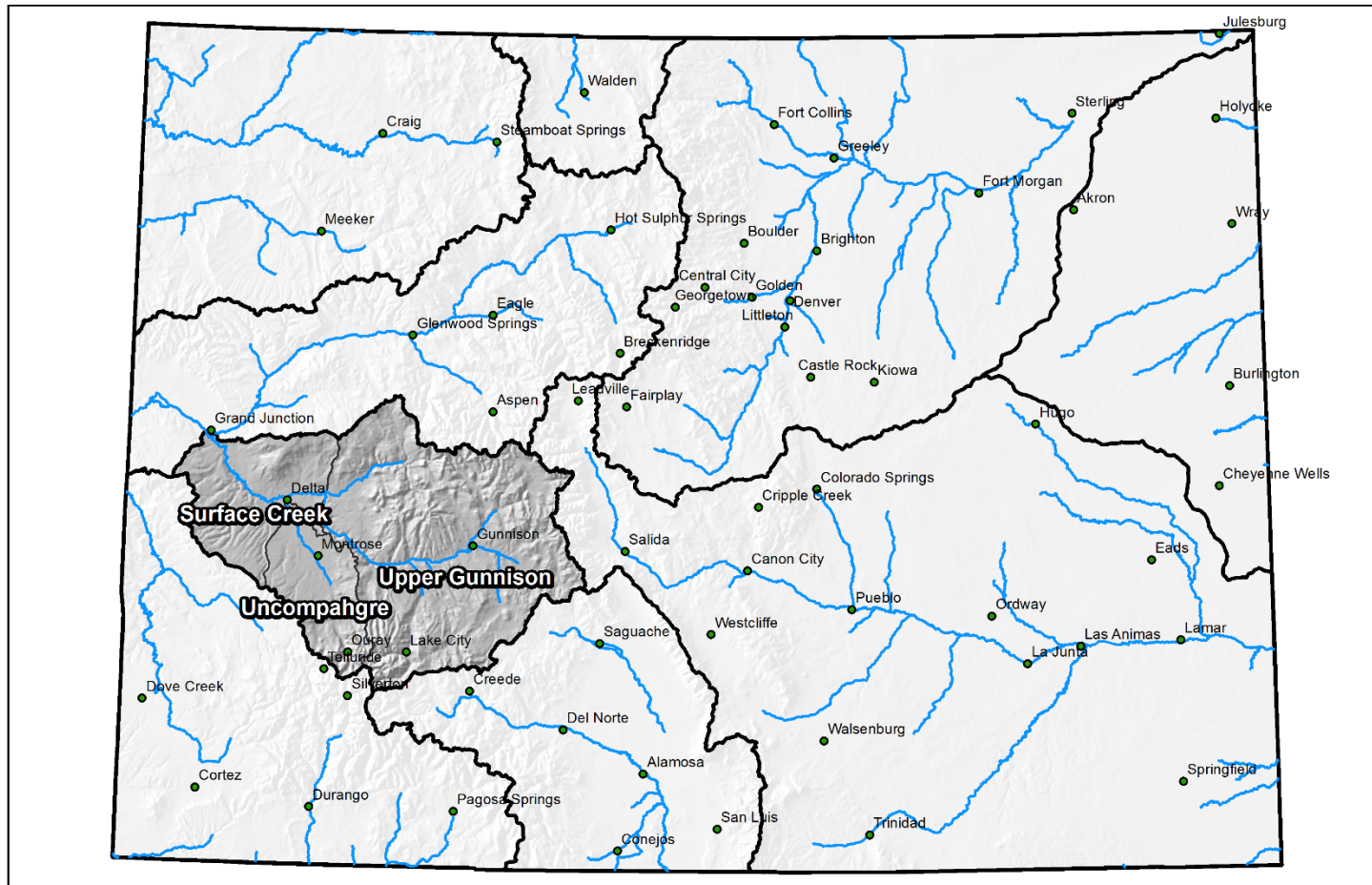
Colorado Snow Surveys





Major Basin Summary

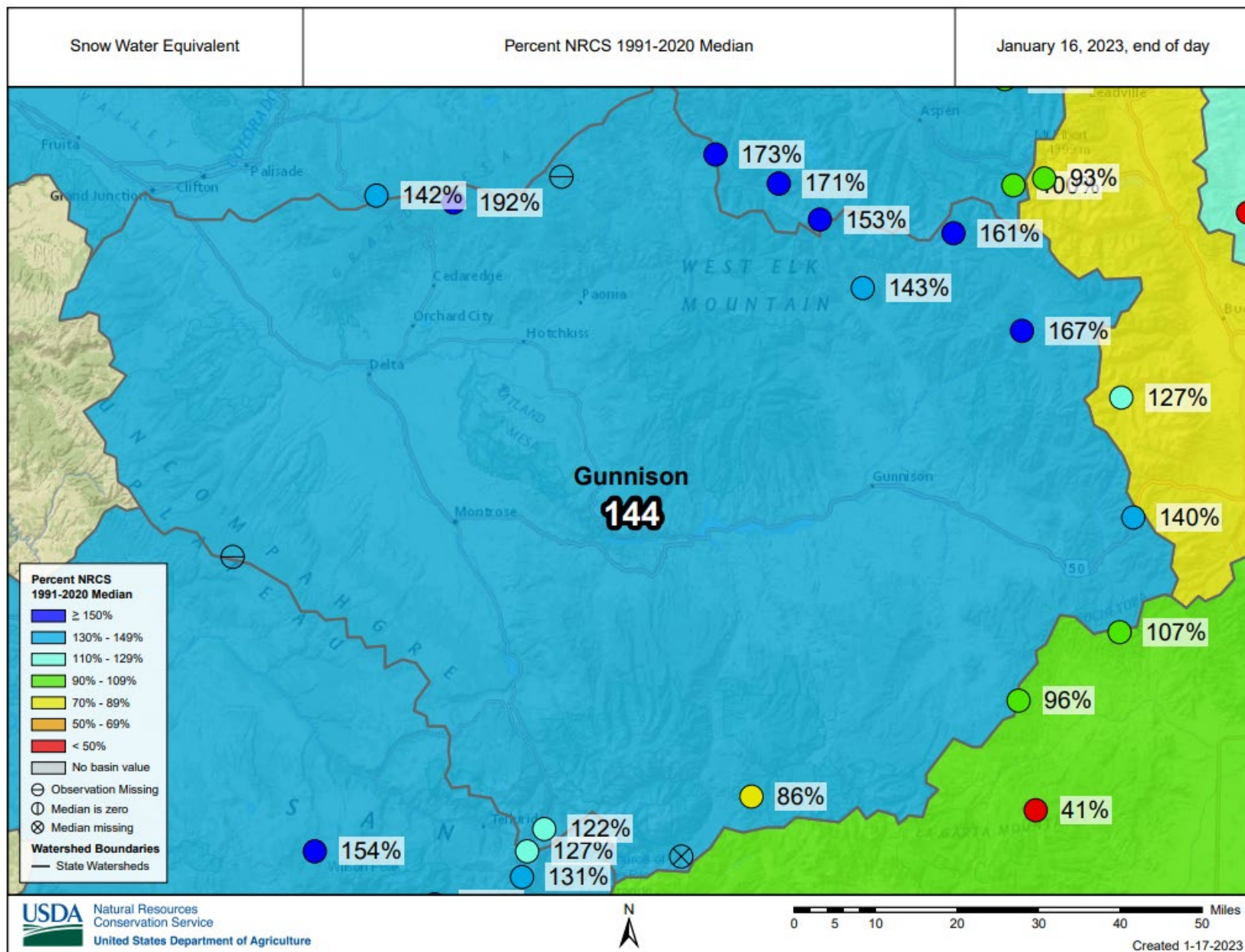
Gunnison River Basin





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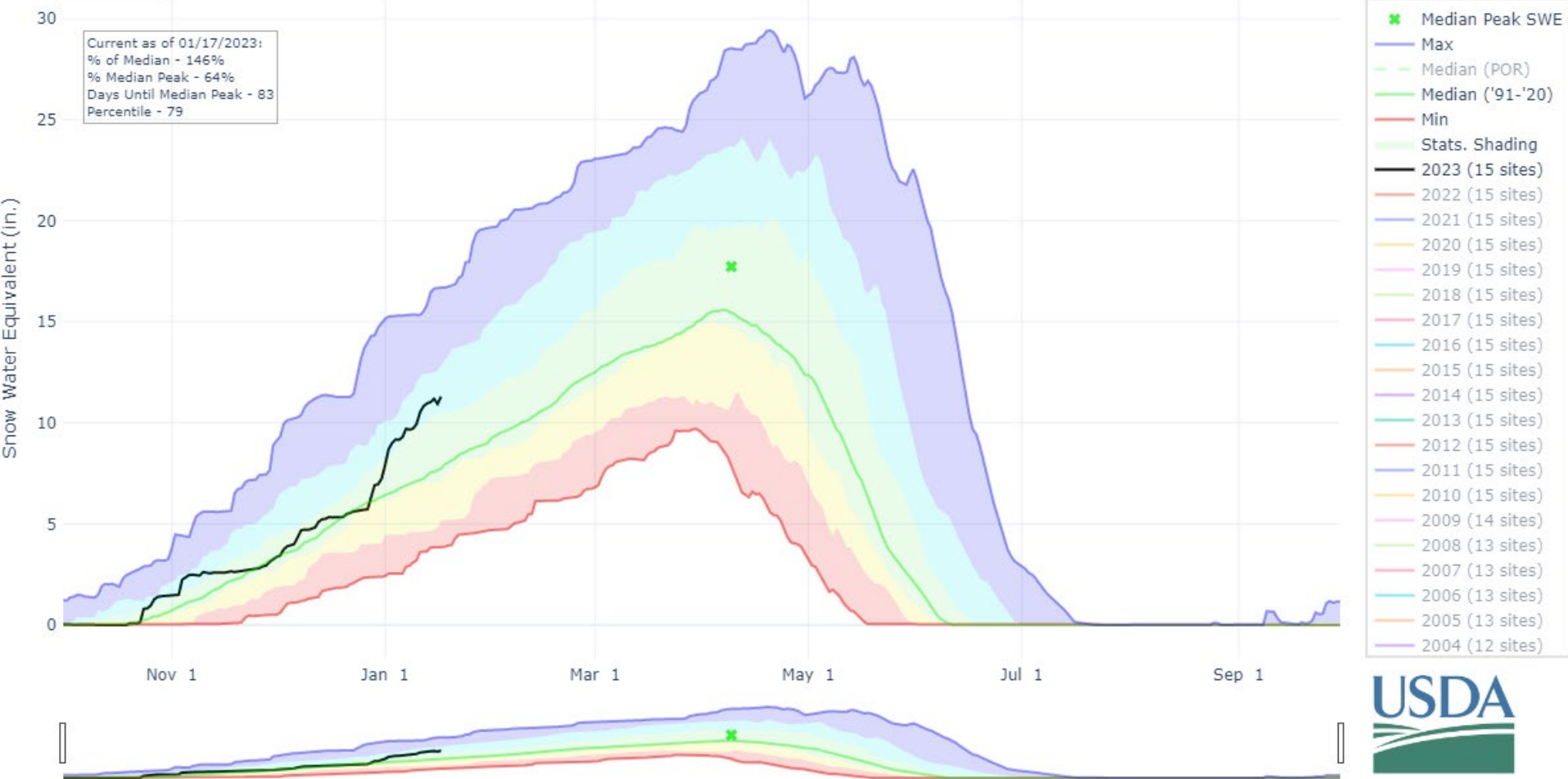
Colorado Snow Surveys

SNOW WATER EQUIVALENT IN GUNNISON

Reset Range

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

Station List





Colorado Snow Surveys

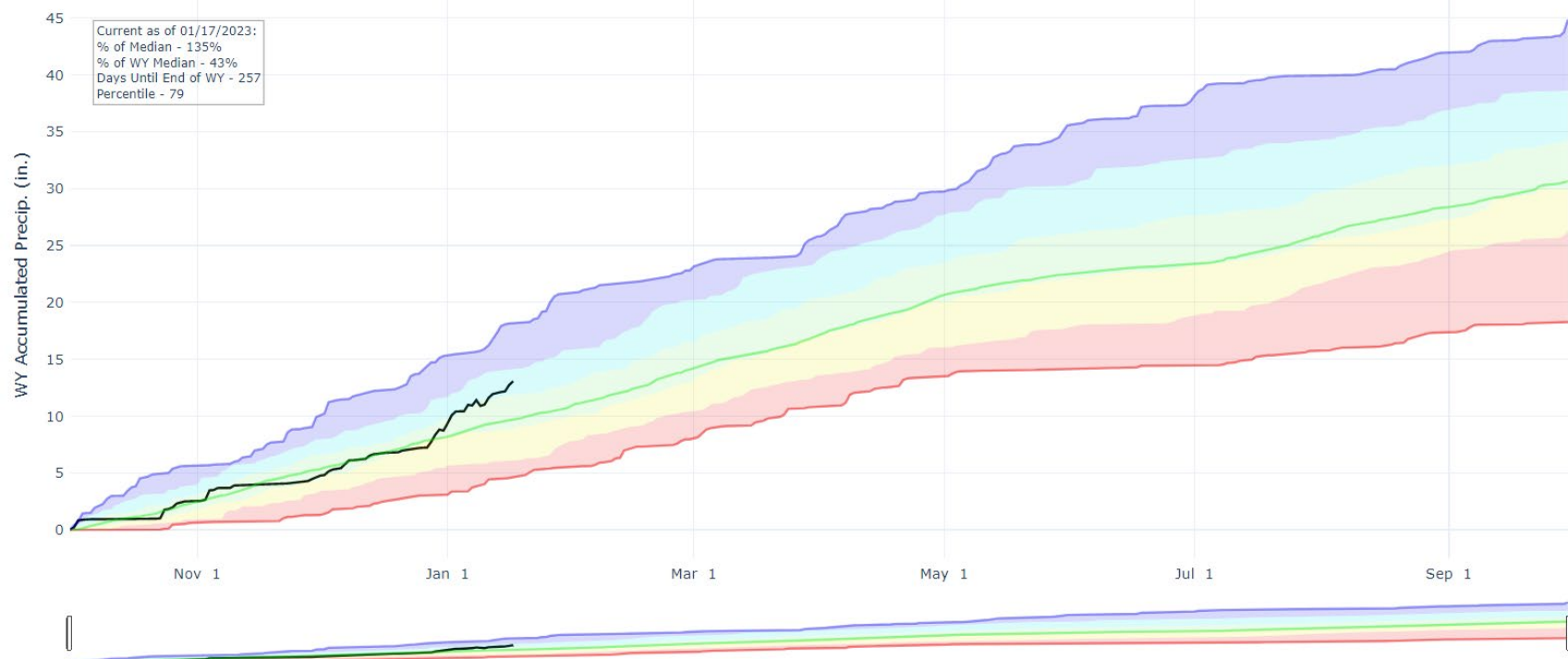
PRECIPITATION IN GUNNISON

Reset Range

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

Current as of 01/17/2023:
% of Median - 135%
% of WY Median - 43%
Days Until End of WY - 257
Percentile - 79

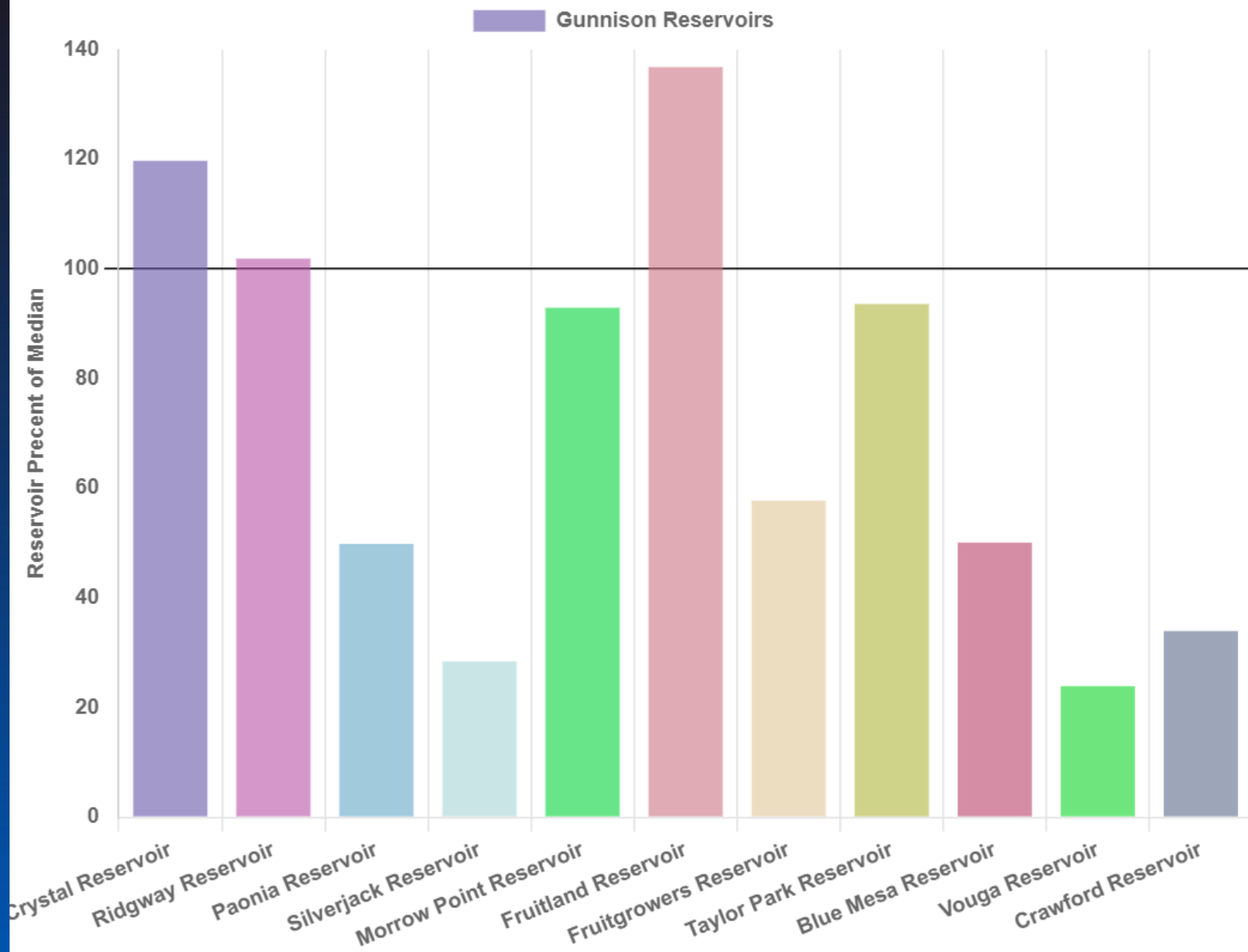
Station List



- 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)



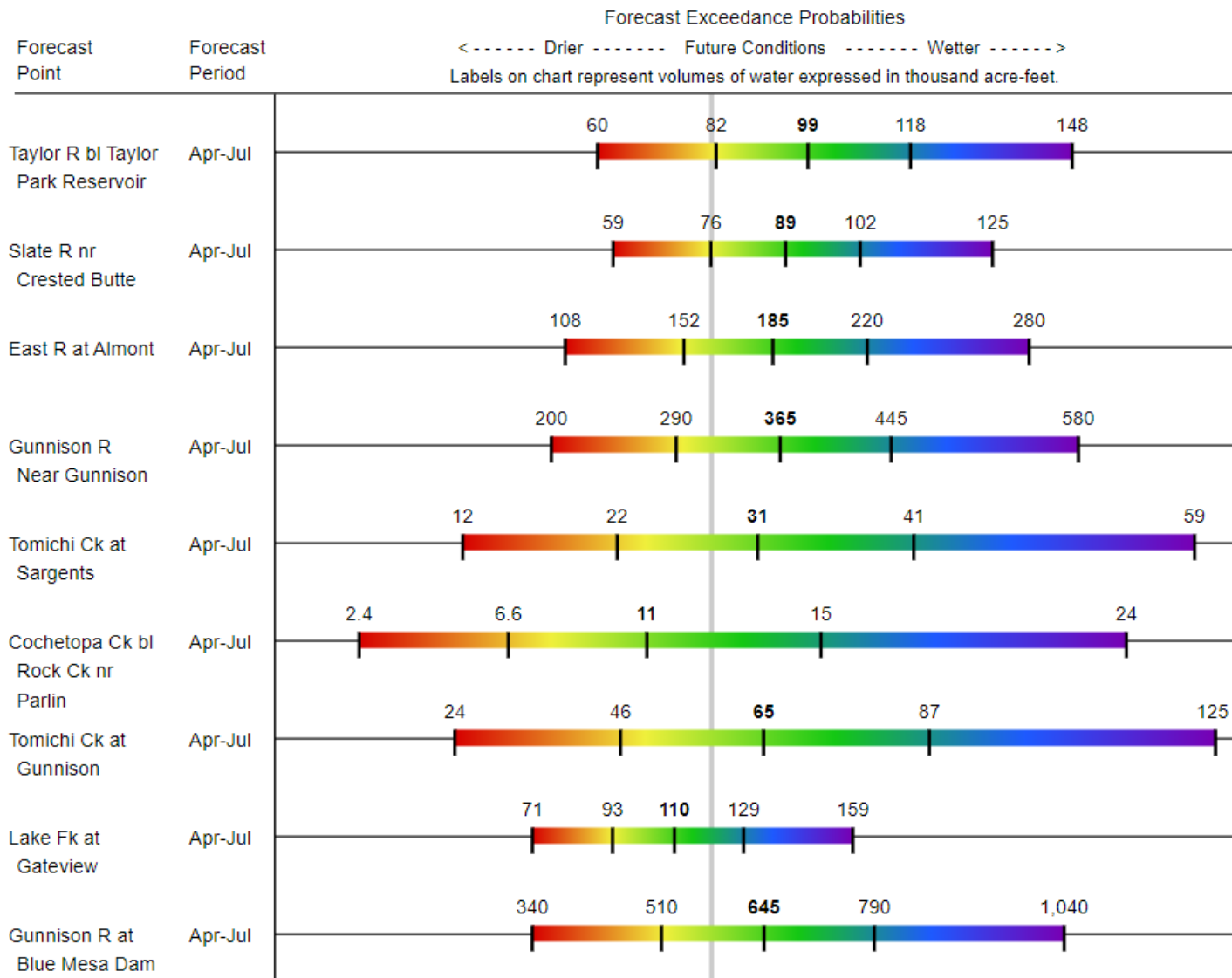
Reservoir Conditions for Gunnison on January 1st 2023



GUNNISON RIVER BASIN

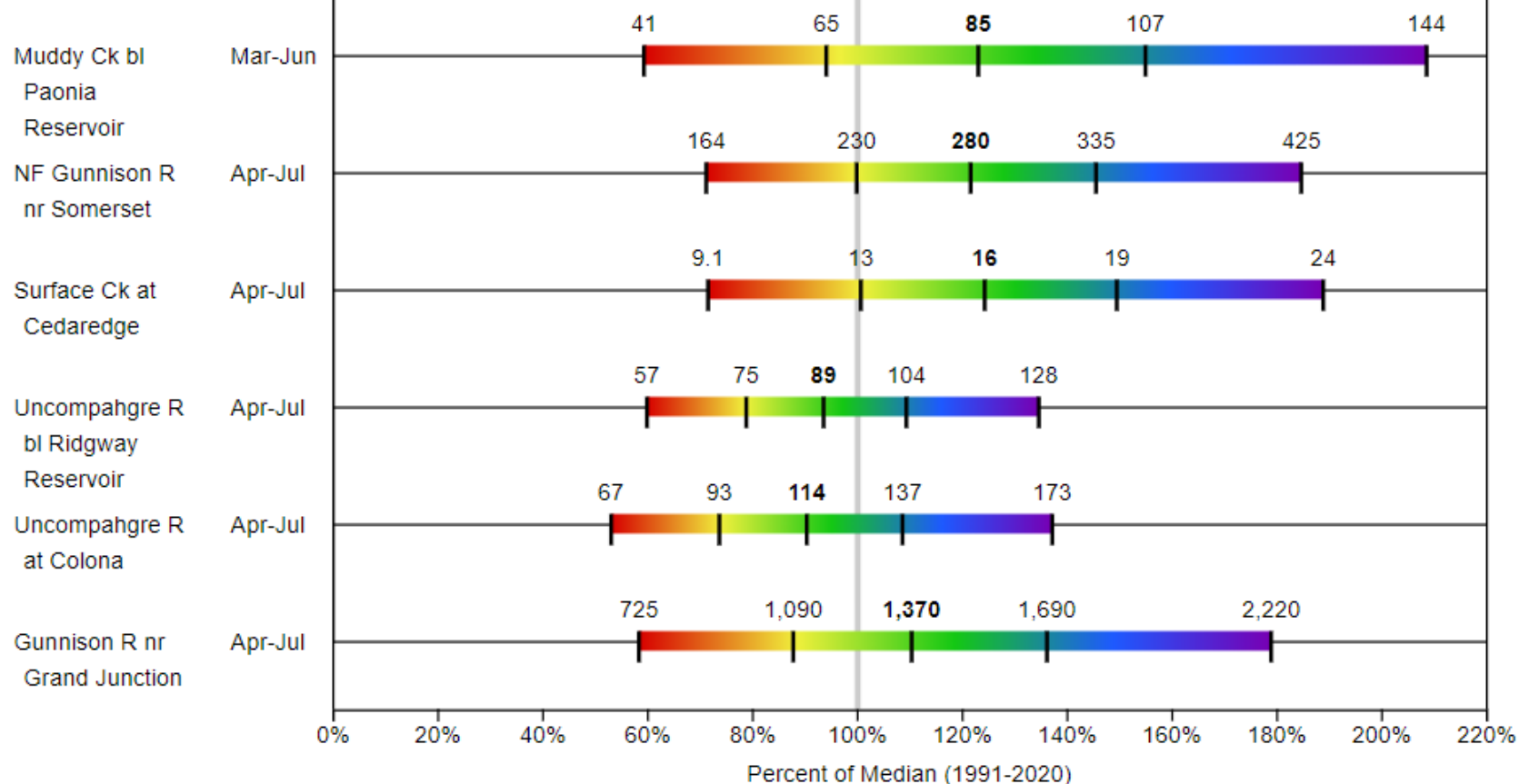
Water Supply Forecasts

January 1, 2023

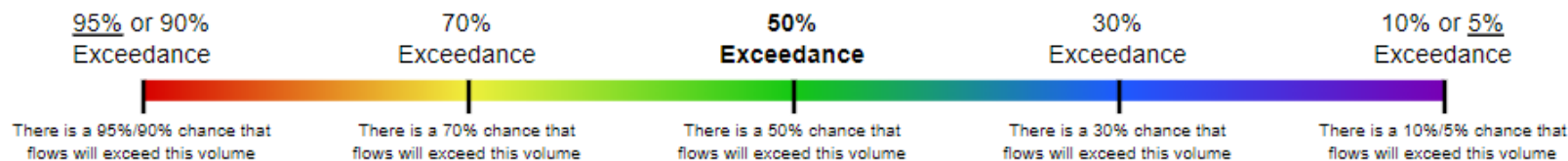




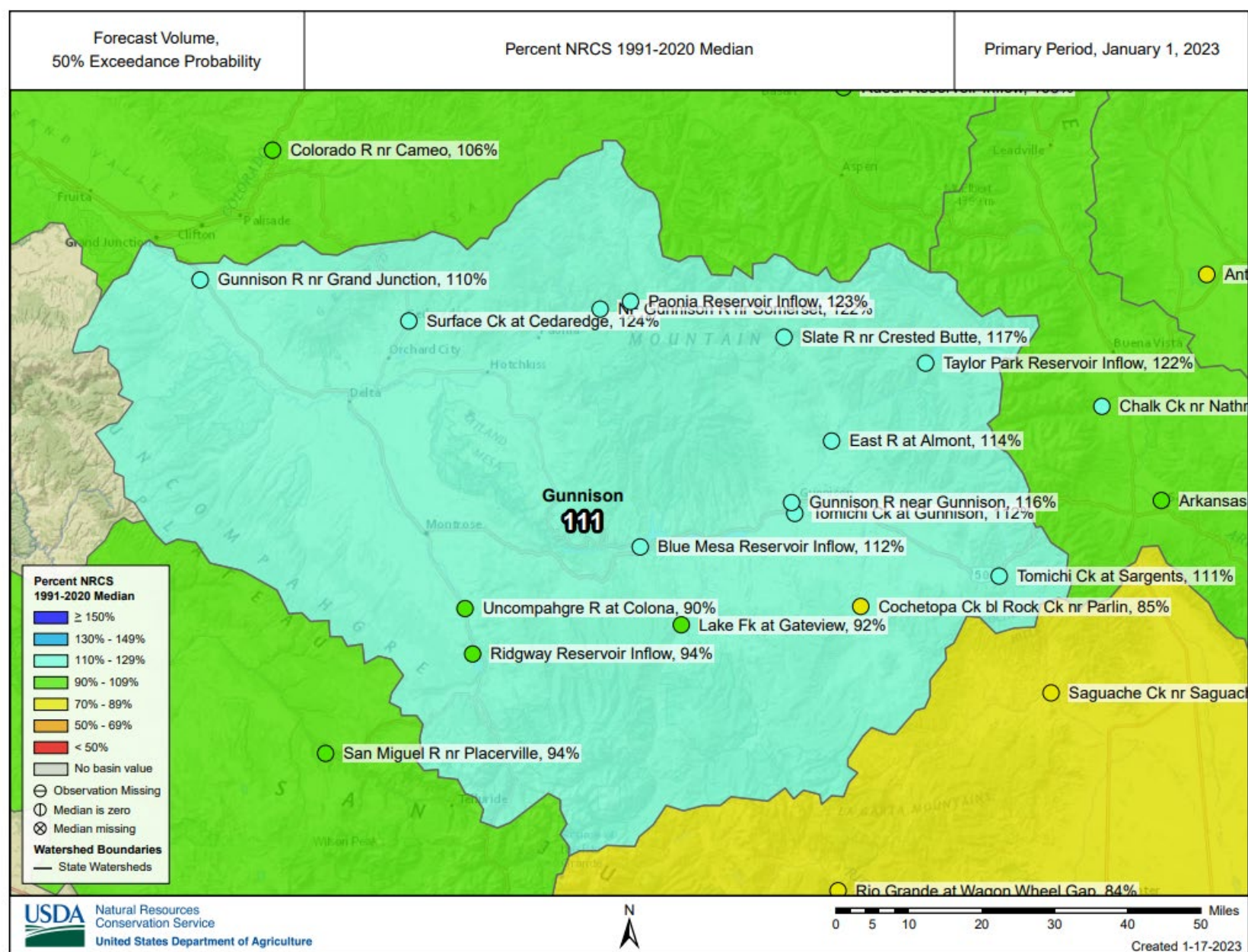
Colorado Snow Surveys



Legend

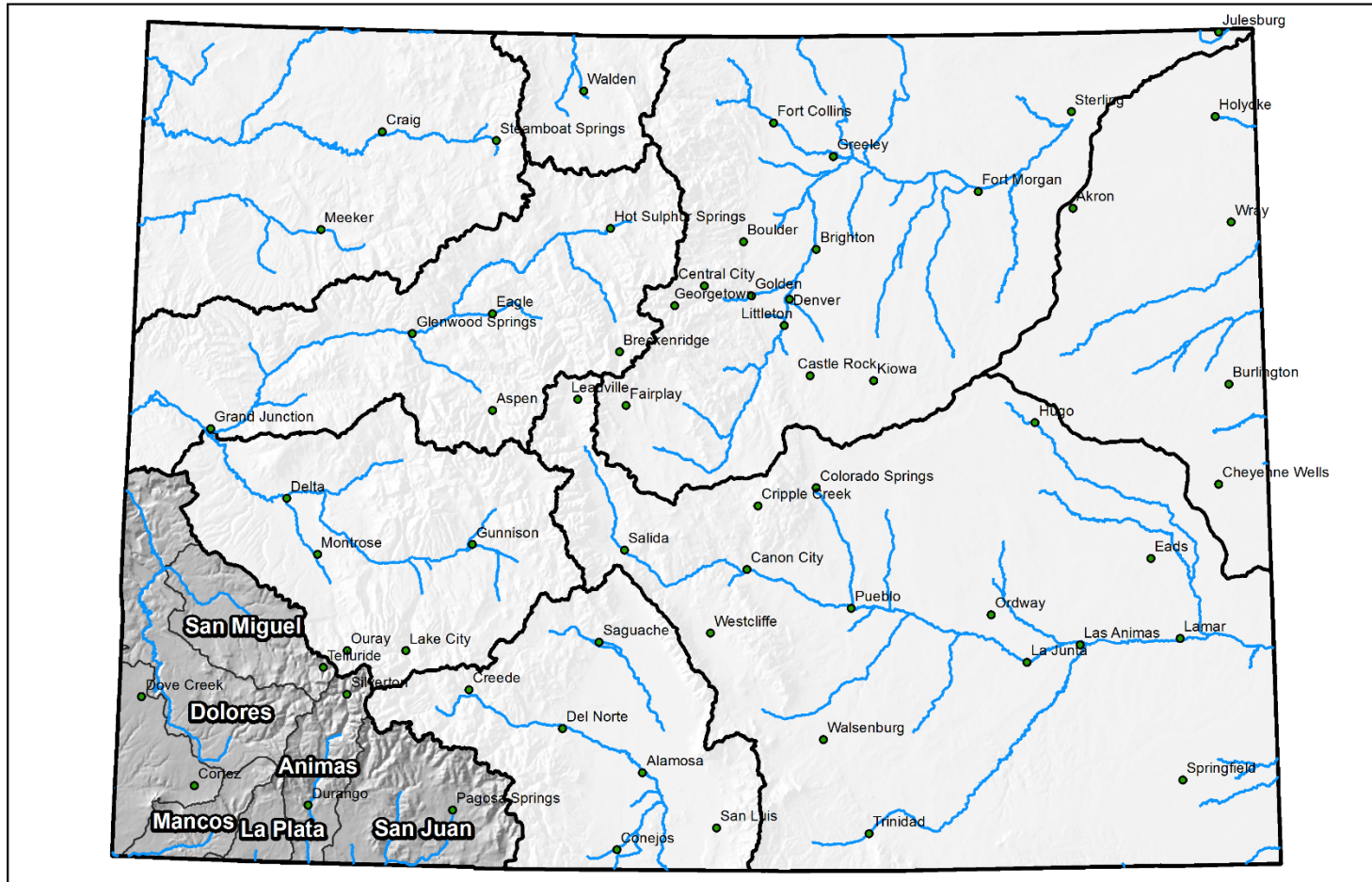


Colorado Snow Surveys



Major Basin Summary

San Miguel, Dolores, Animas, and San Juan River Basins

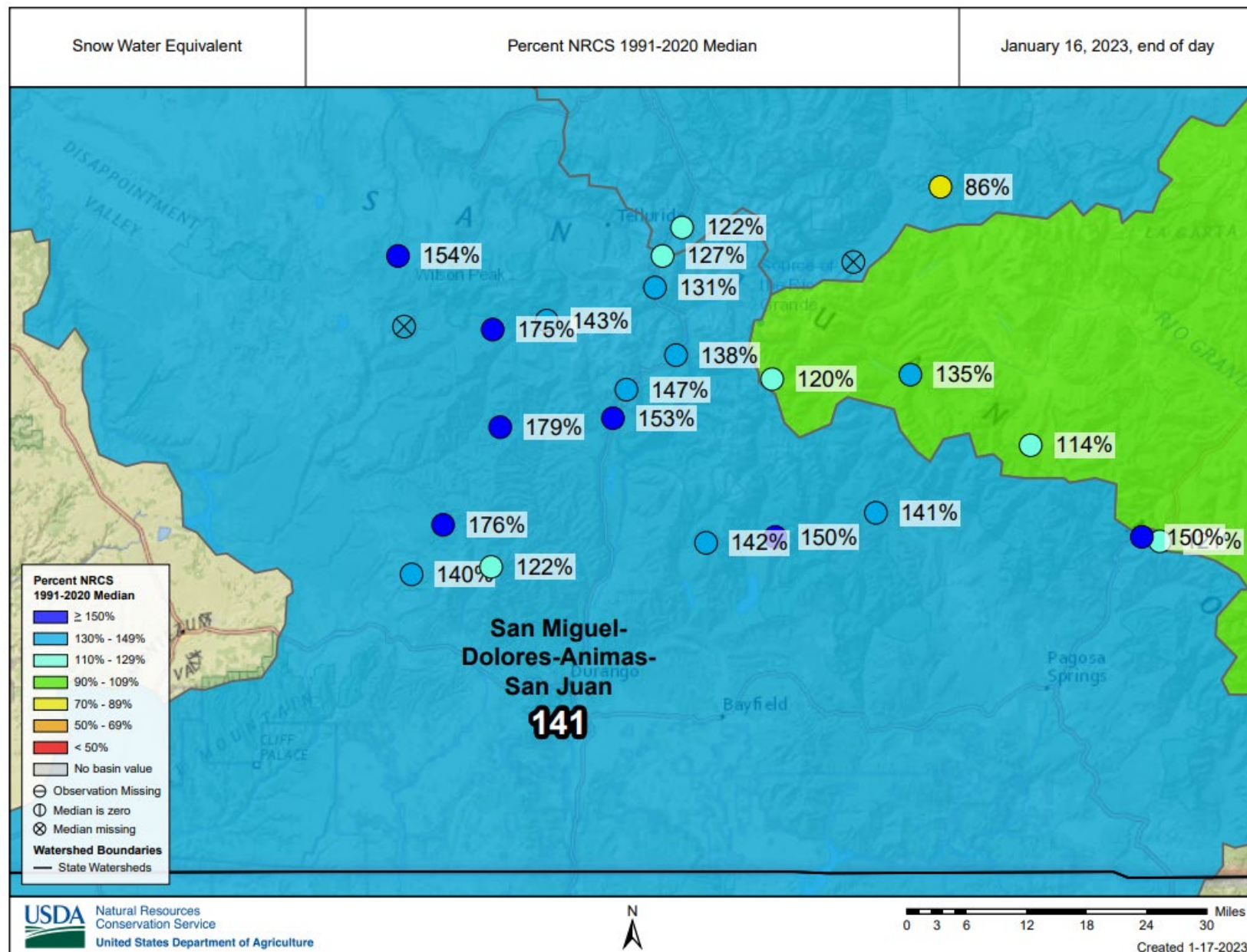


0 25 50 100 150 200 Miles



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Colorado Snow Surveys





SNOW WATER EQUIVALENT IN SAN MIGUEL-DOLORES-ANIMAS-SAN JUAN

Reset Range

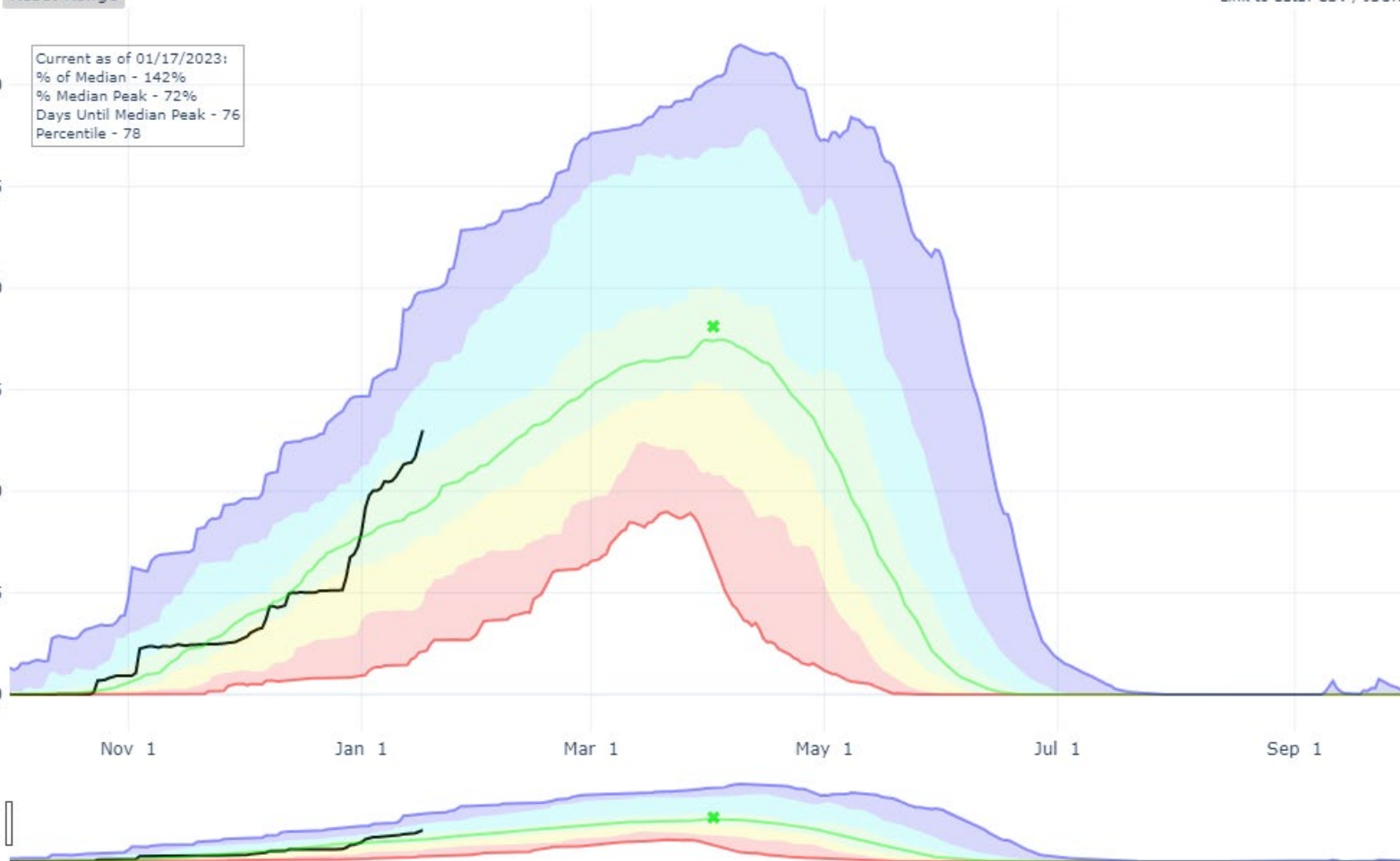
[Link to data: CSV / JSON](#)

Station List

Current as of 01/17/2023:
% of Median - 142%
% Median Peak - 72%
Days Until Median Peak - 76
Percentile - 78

Snow Water Equivalent (in.)

- ✱ Median Peak SWE
- 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)





Colorado Snow Surveys

PRECIPITATION IN SAN MIGUEL-DOLORES-ANIMAS-SAN JUAN

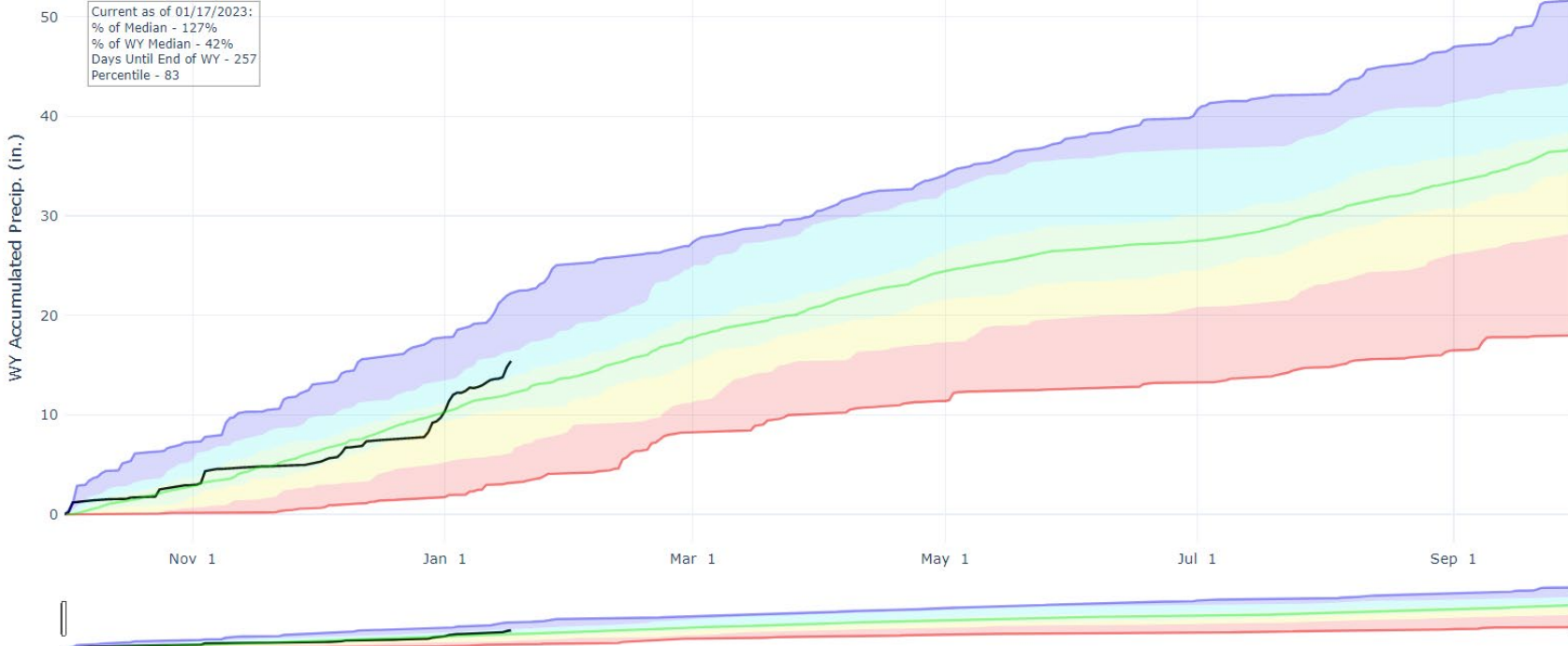
Reset Range

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

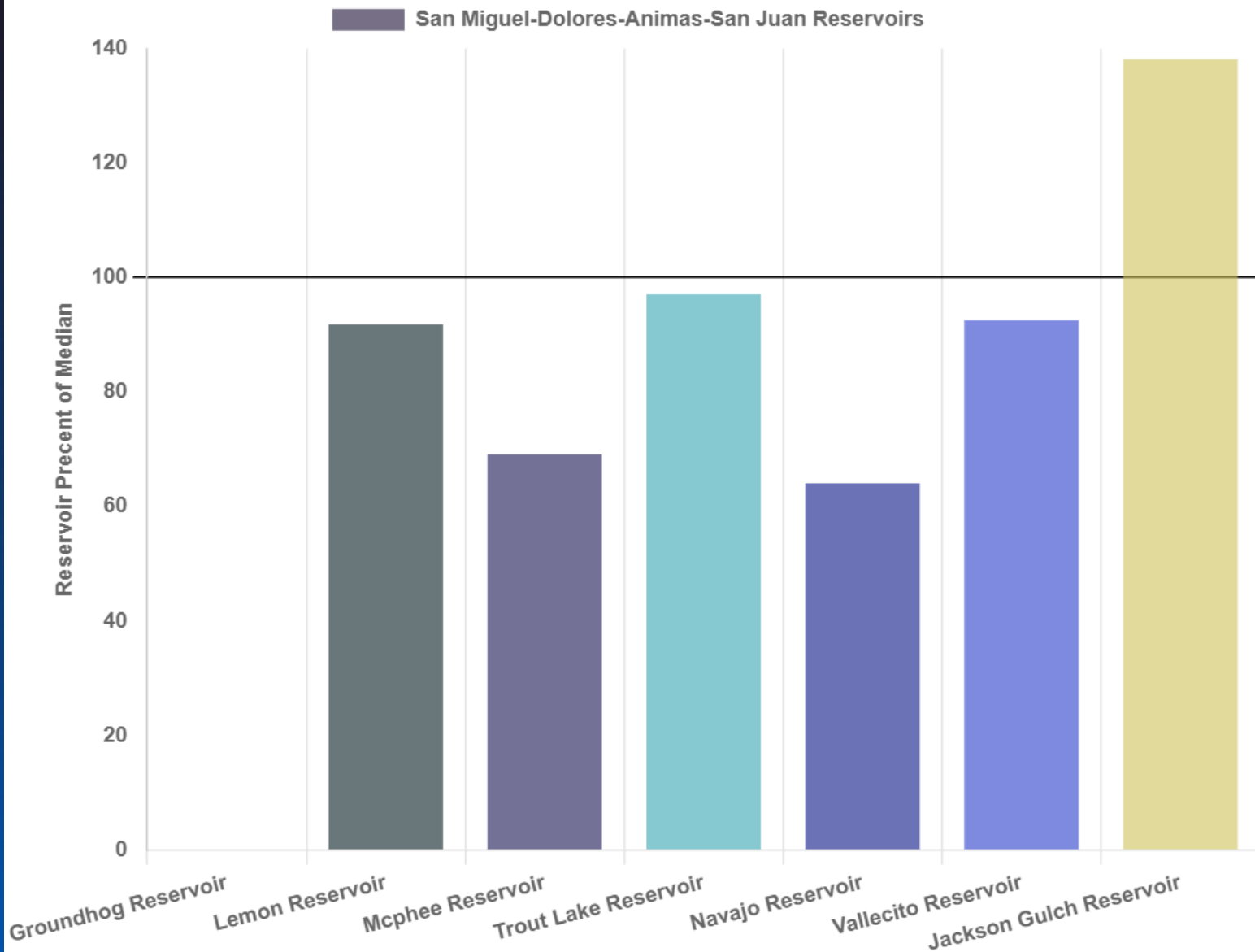
Station List

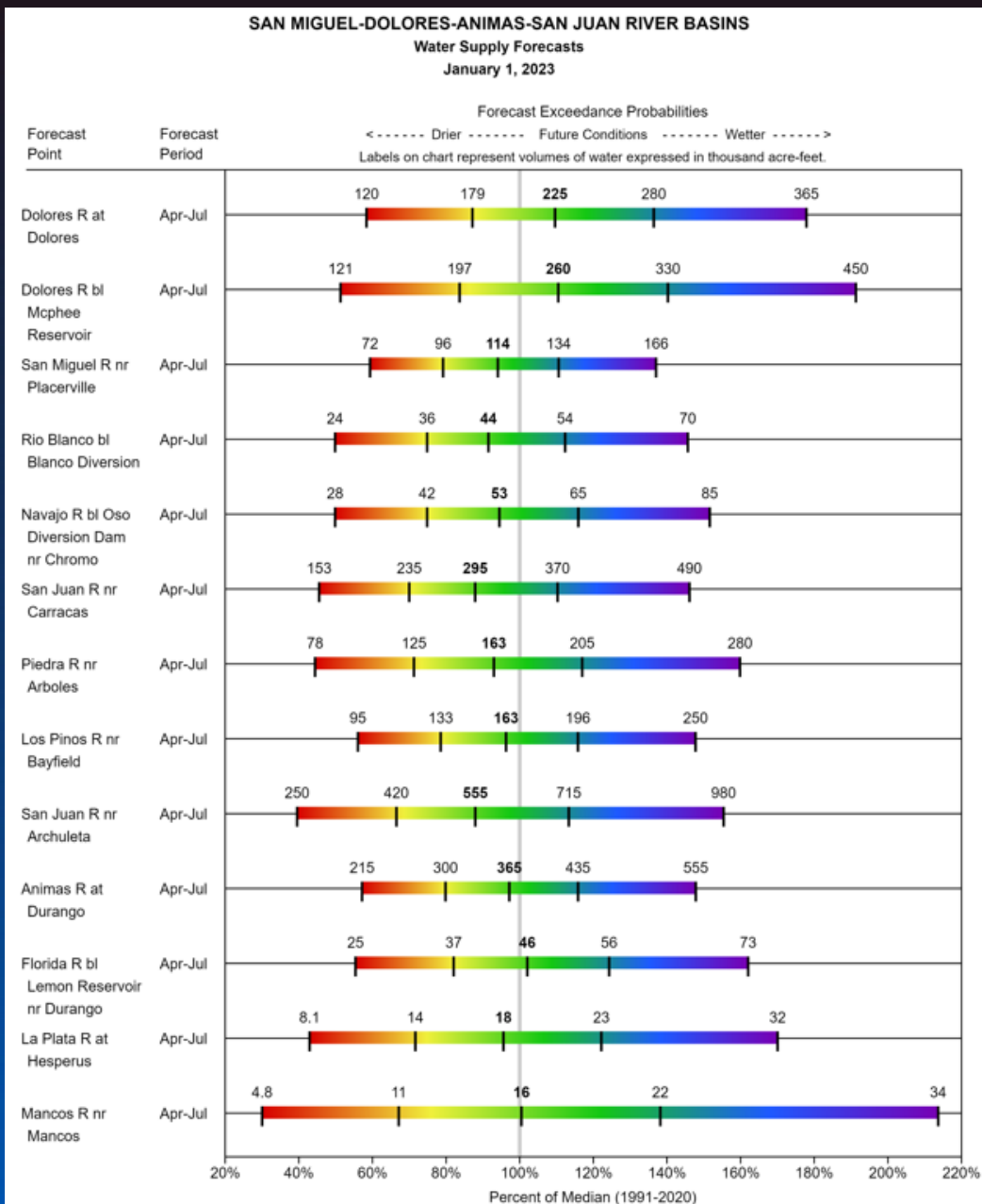
Current as of 01/17/2023:
% of Median - 127%
% of WY Median - 42%
Days Until End of WY - 257
Percentile - 83

- 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)



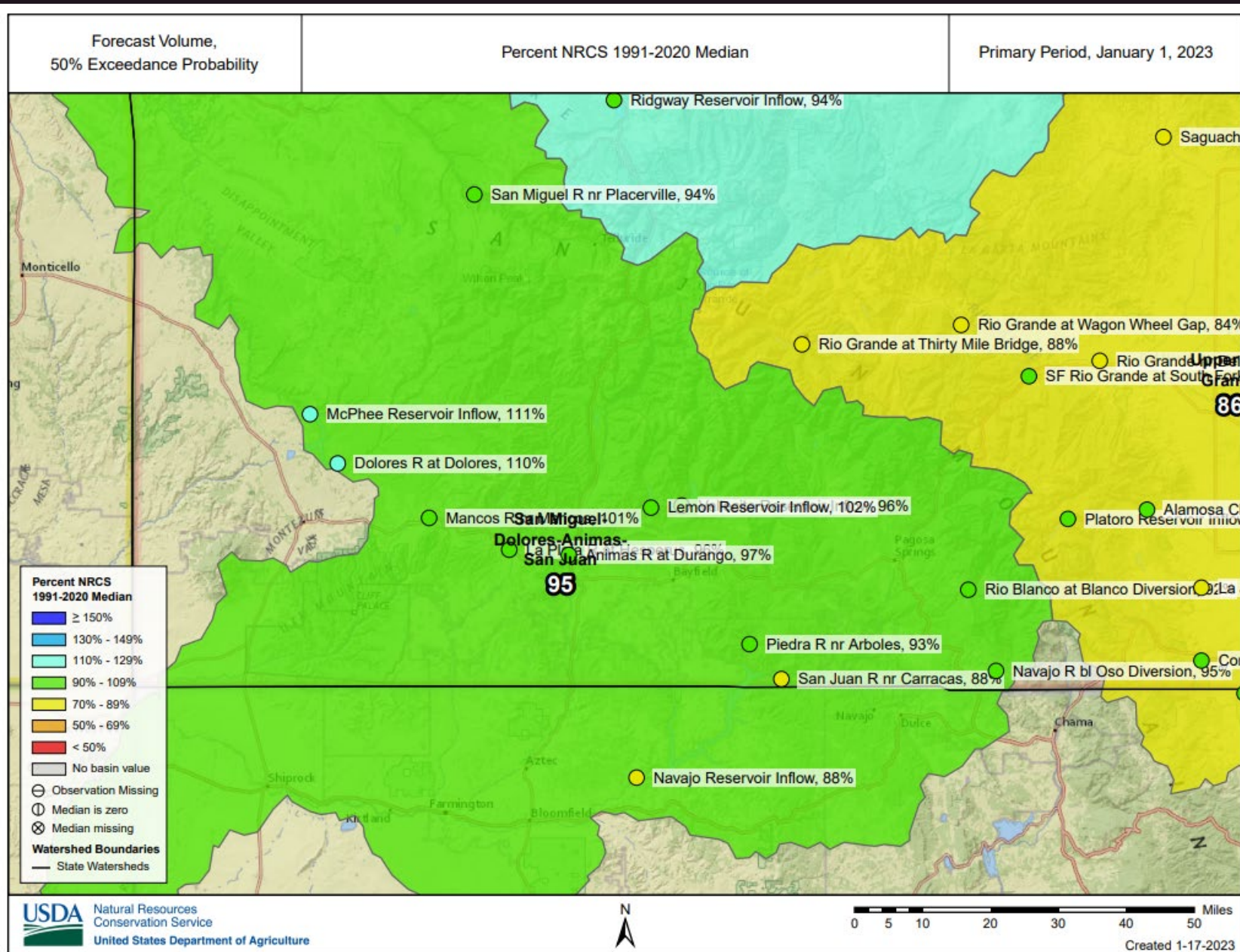
Reservoir Conditions for San Miguel-Dolores-Animas-San Juan on January 1st 2023





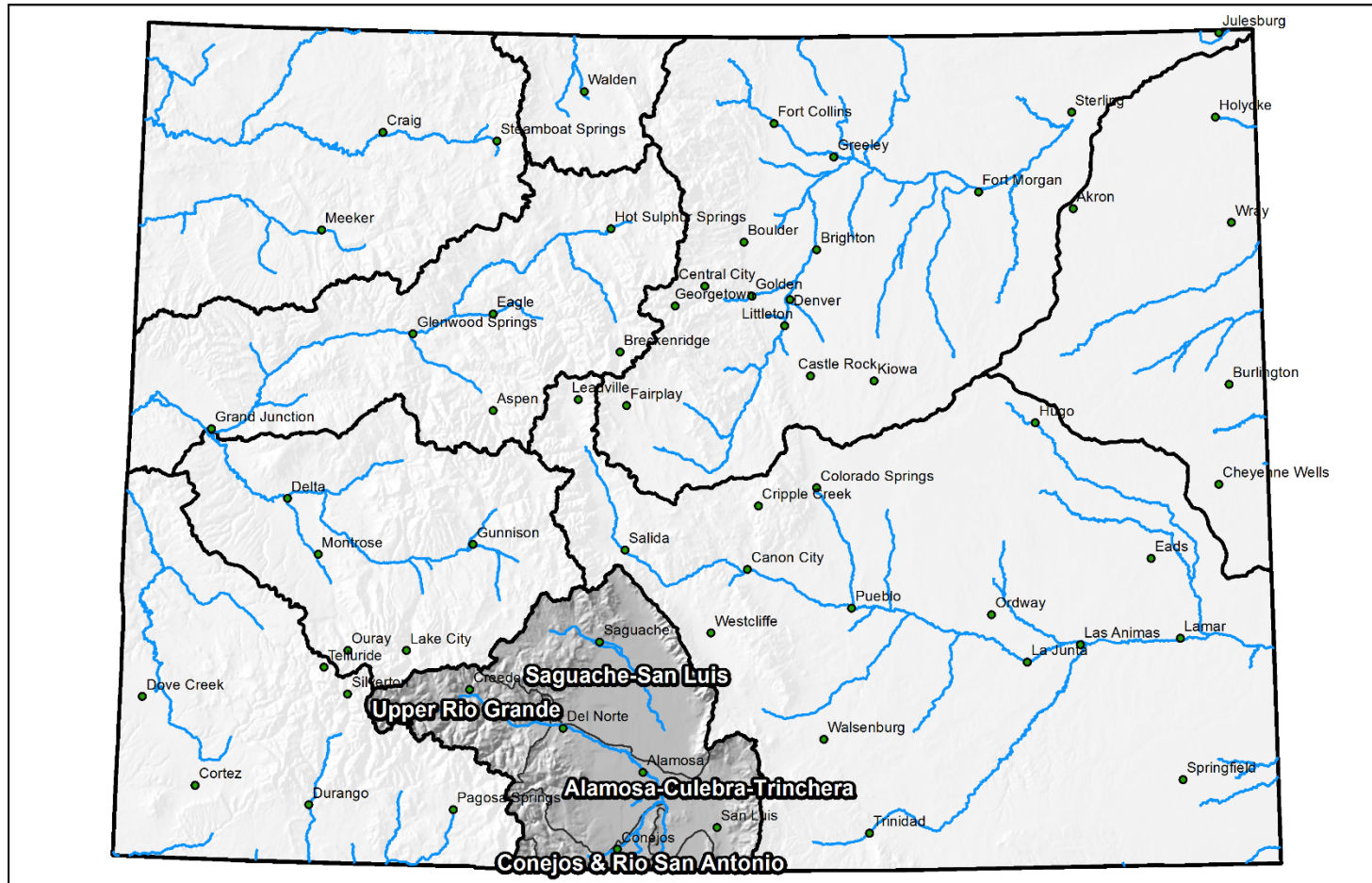


Colorado Snow Surveys



Major Basin Summary

Upper Rio Grande River Basin

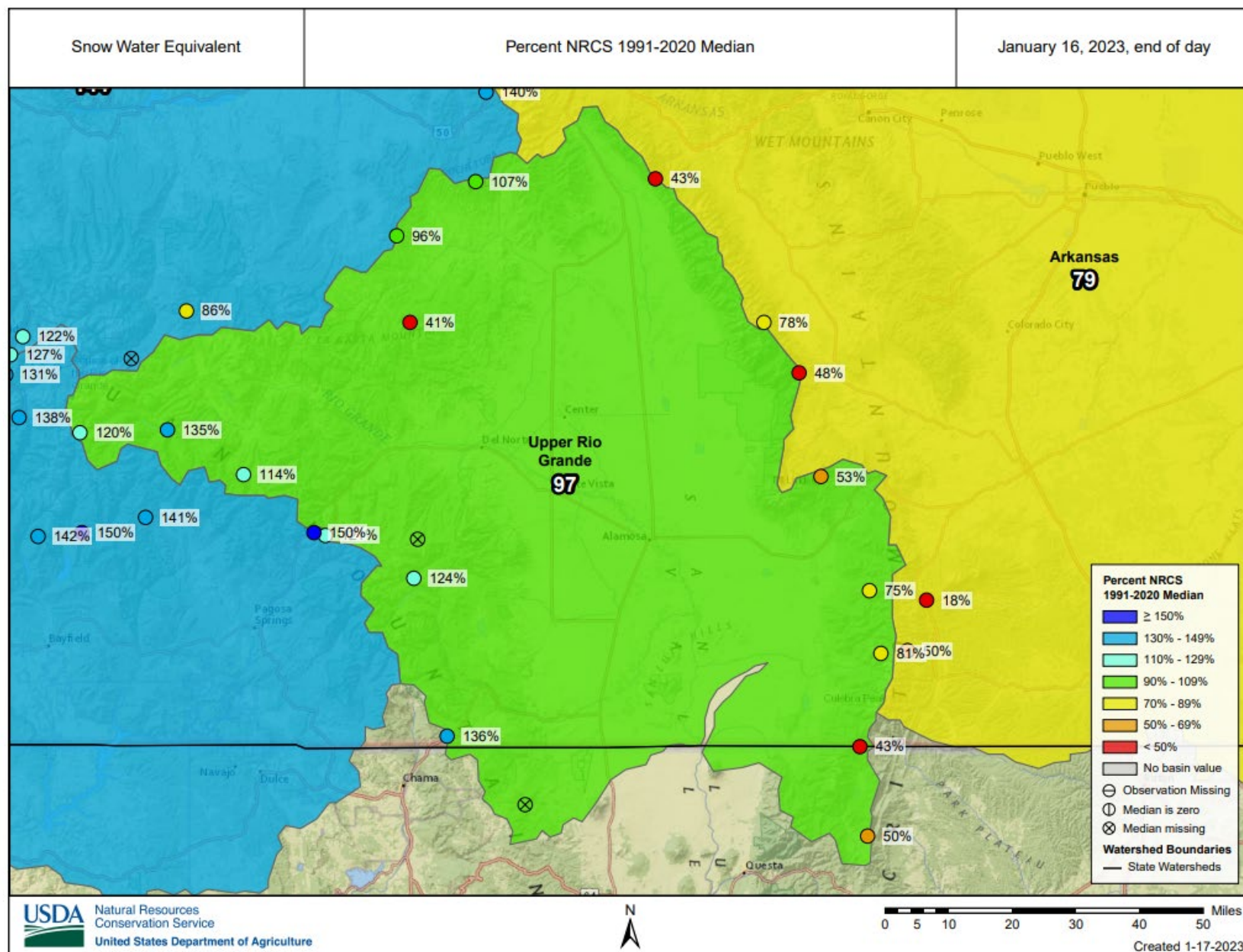


0 25 50 100 150 200 Miles



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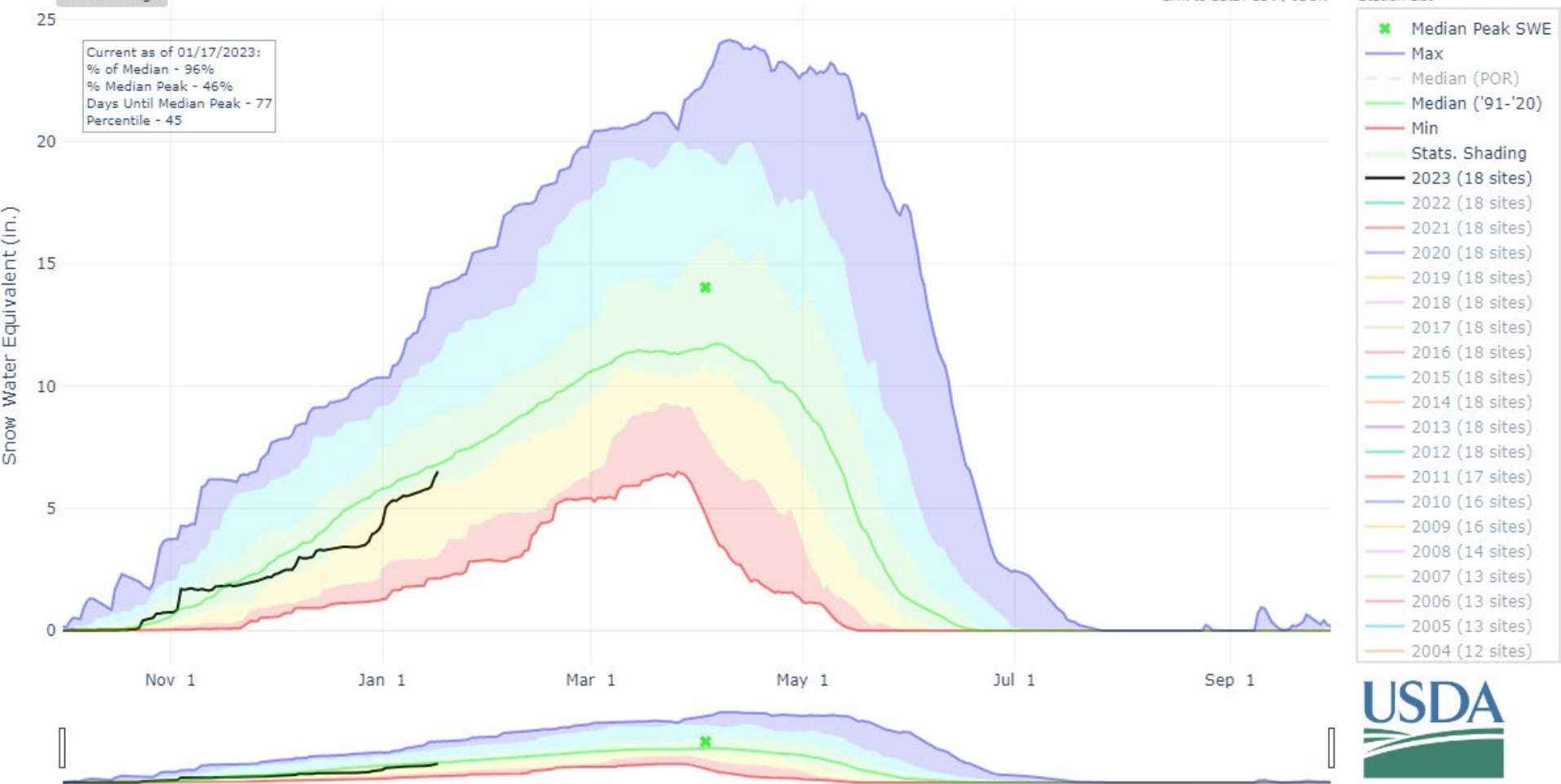
Colorado Snow Surveys

SNOW WATER EQUIVALENT IN UPPER RIO GRANDE

Reset Range

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

Station List





Colorado Snow Surveys

PRECIPITATION IN UPPER RIO GRANDE

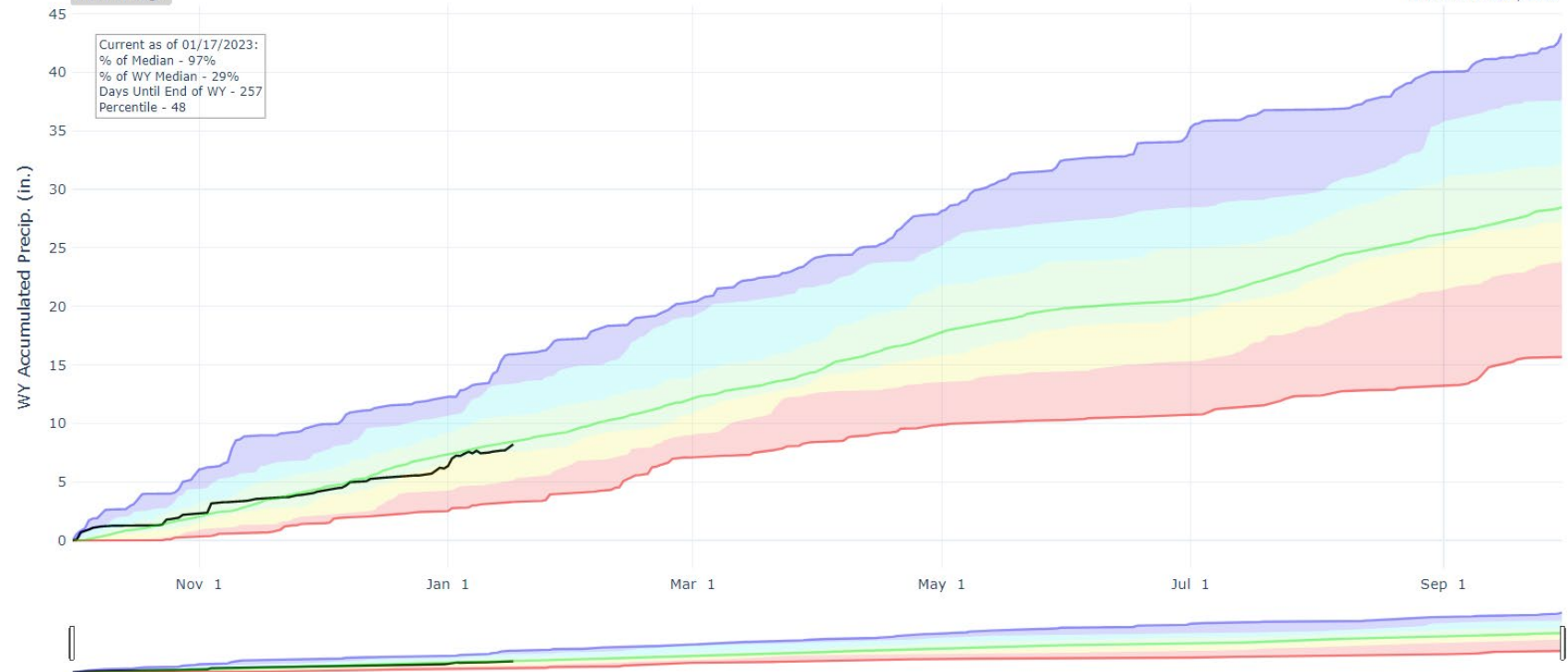
Reset Range

Link to data: CSV / JSON

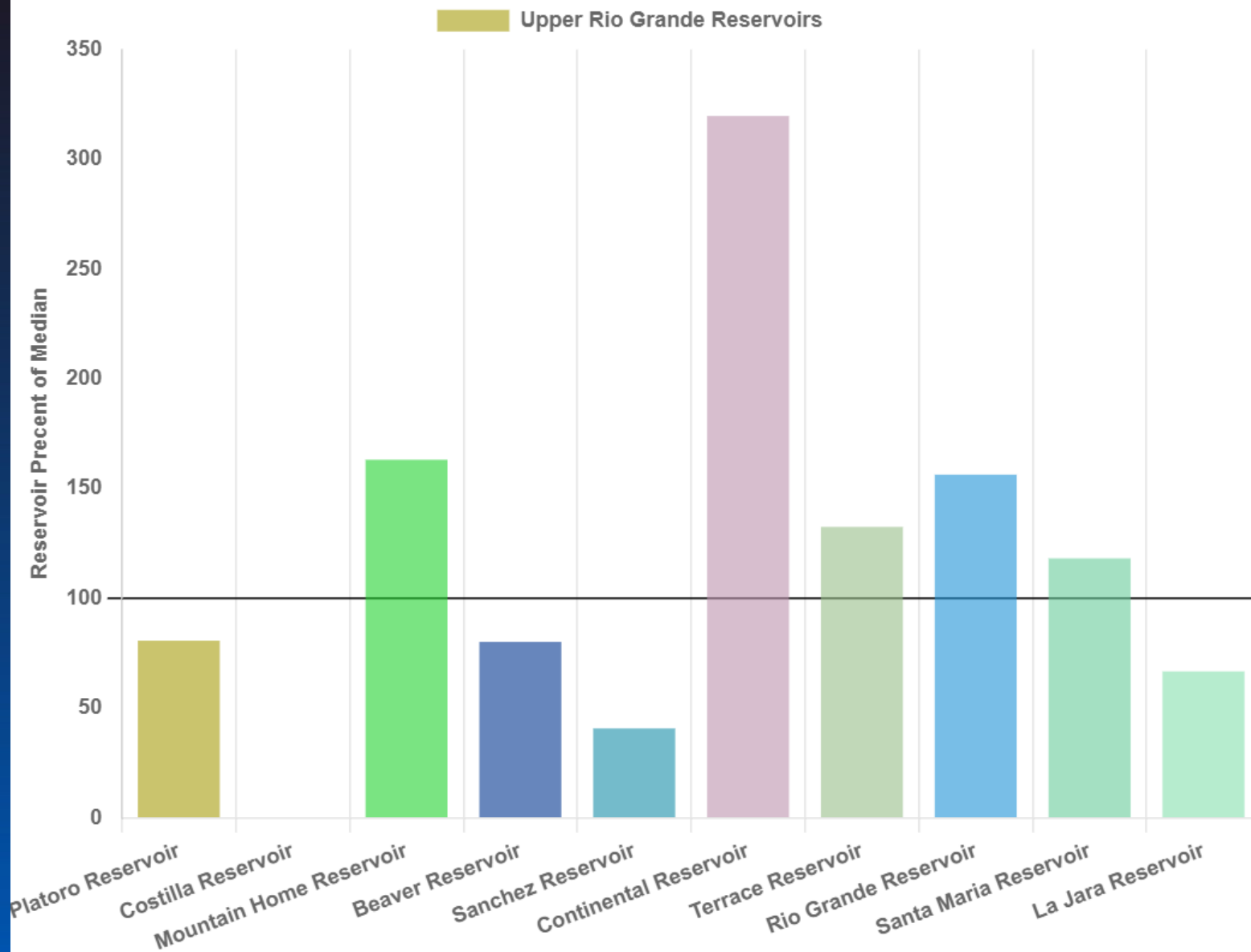
Station List

Current as of 01/17/2023:
% of Median - 97%
% of WY Median - 29%
Days Until End of WY - 257
Percentile - 48

- 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)



Reservoir Conditions for Upper Rio Grande on January 1st 2023





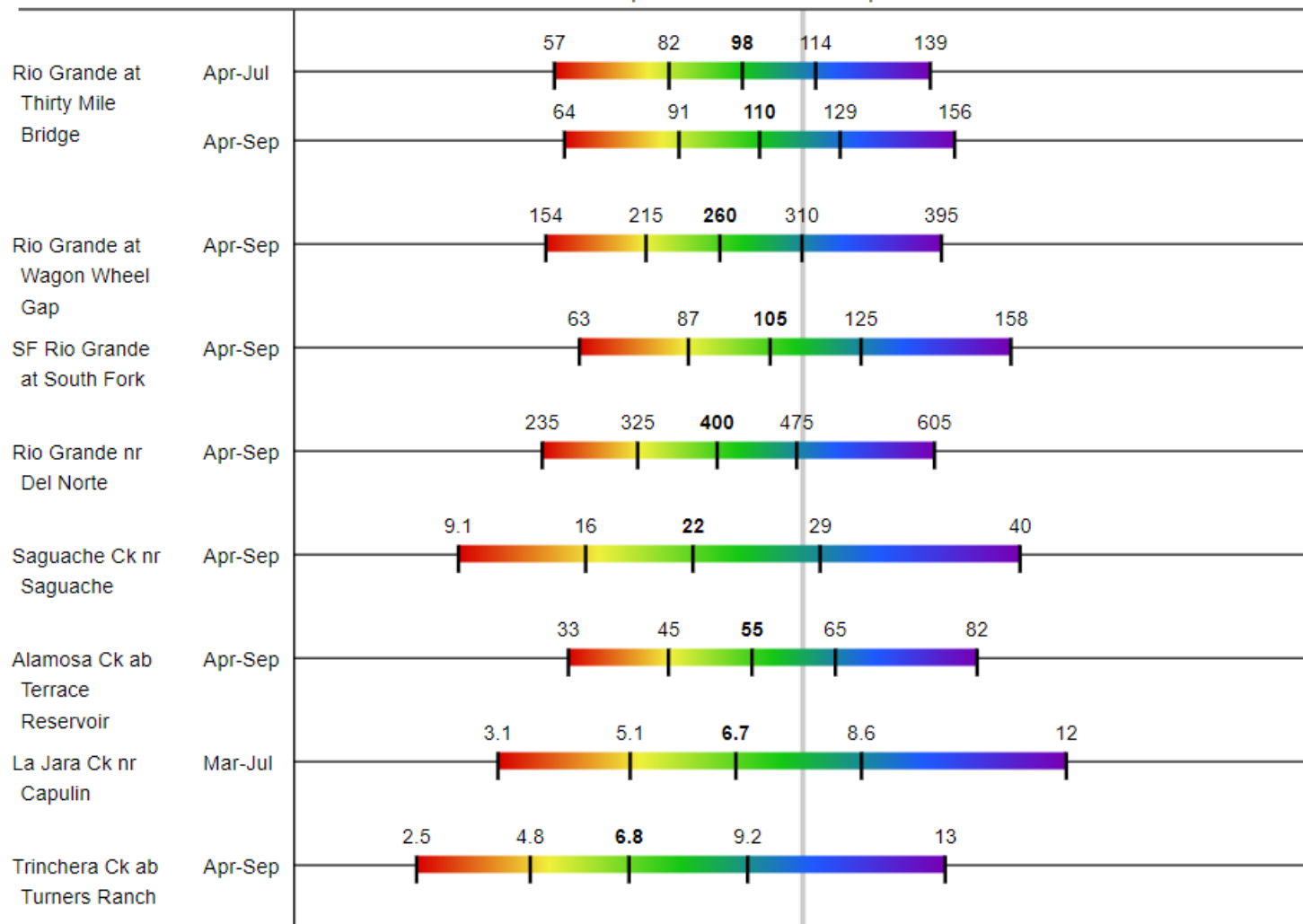
UPPER RIO GRANDE BASIN

Water Supply Forecasts

January 1, 2023

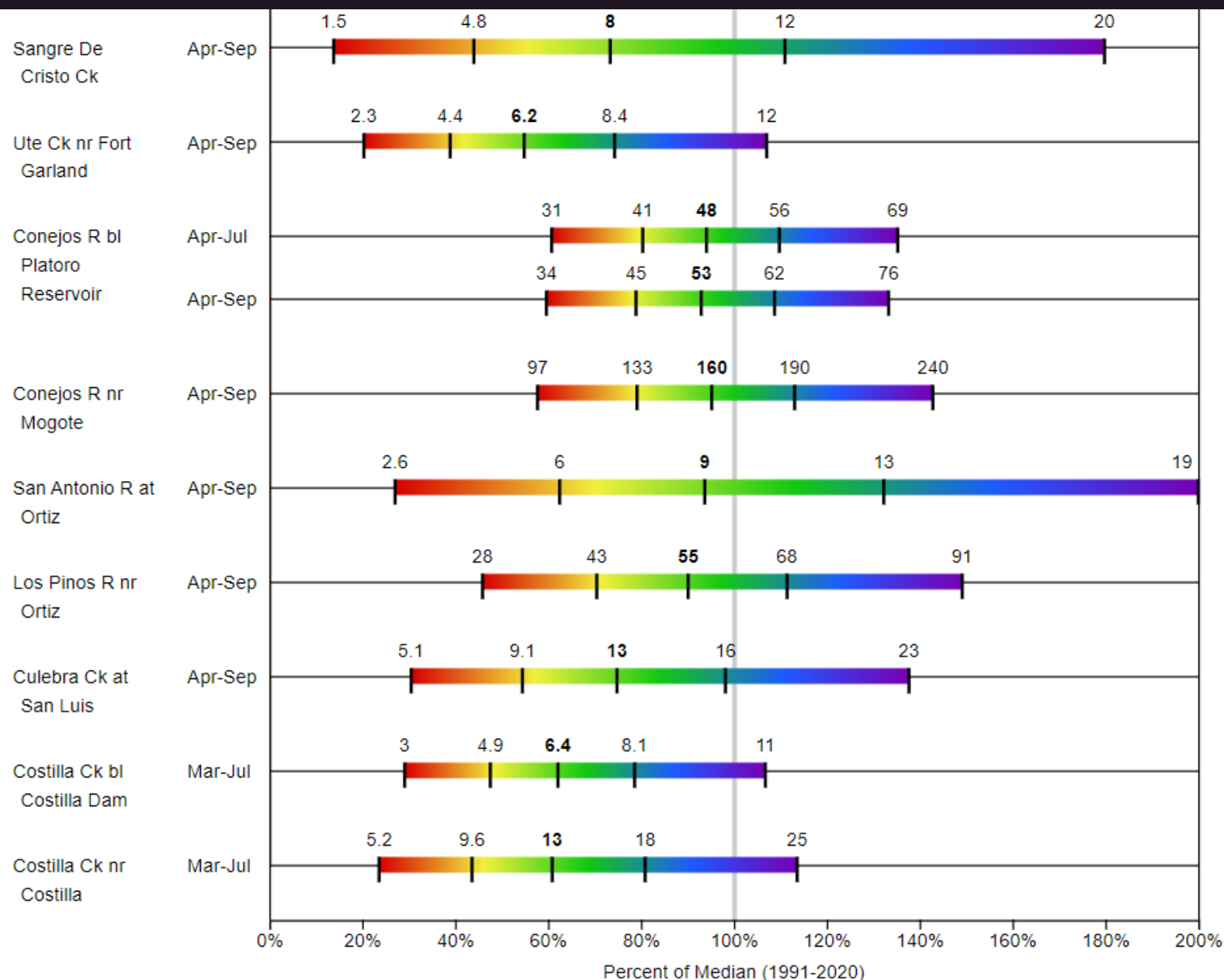
Forecast Exceedance Probabilities

<----- Drier ----- Future Conditions ----- Wetter ----->
 Labels on chart represent volumes of water expressed in thousand acre-feet.



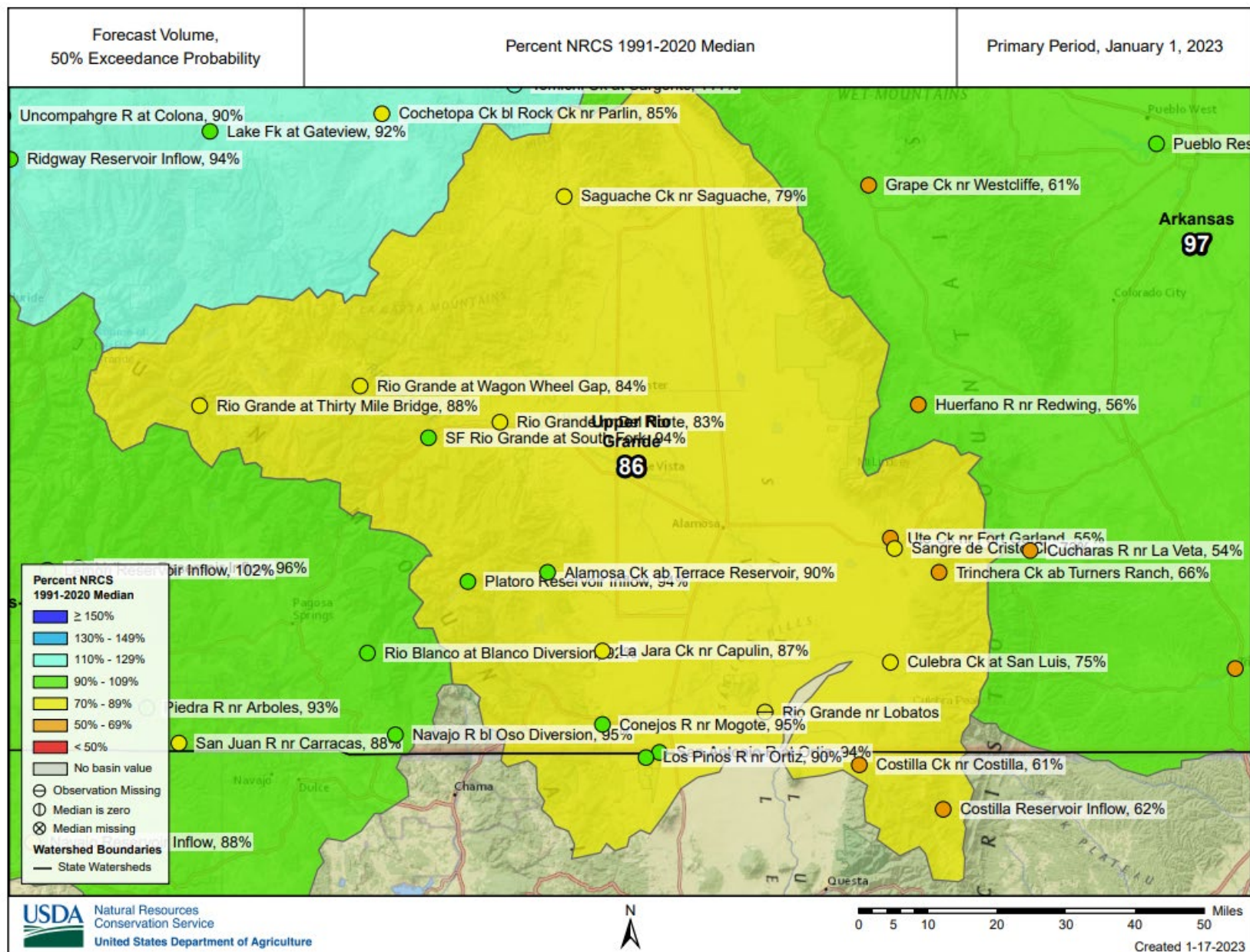


Colorado Snow Surveys



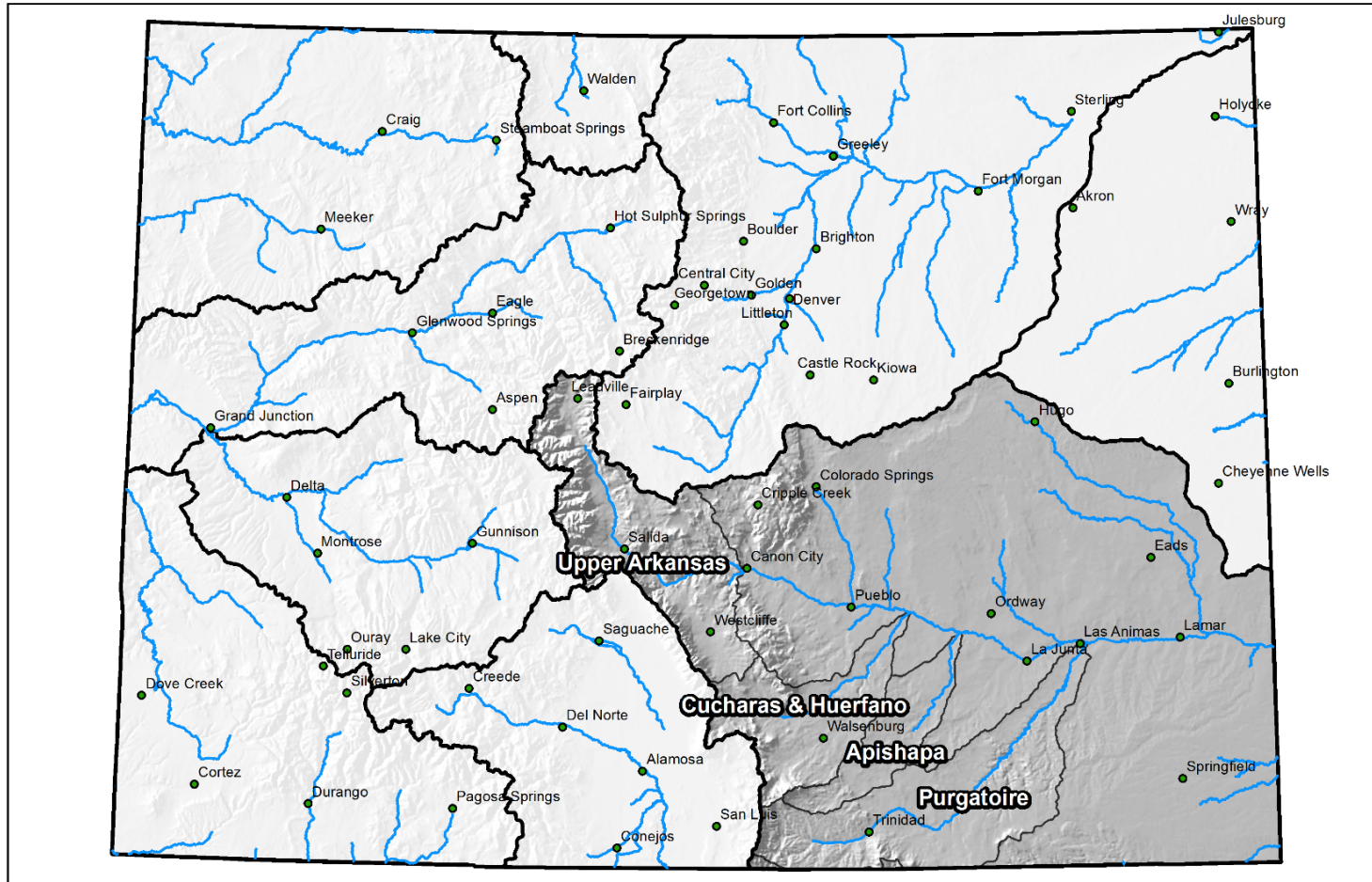


Colorado Snow Surveys



Major Basin Summary

Arkansas River Basin

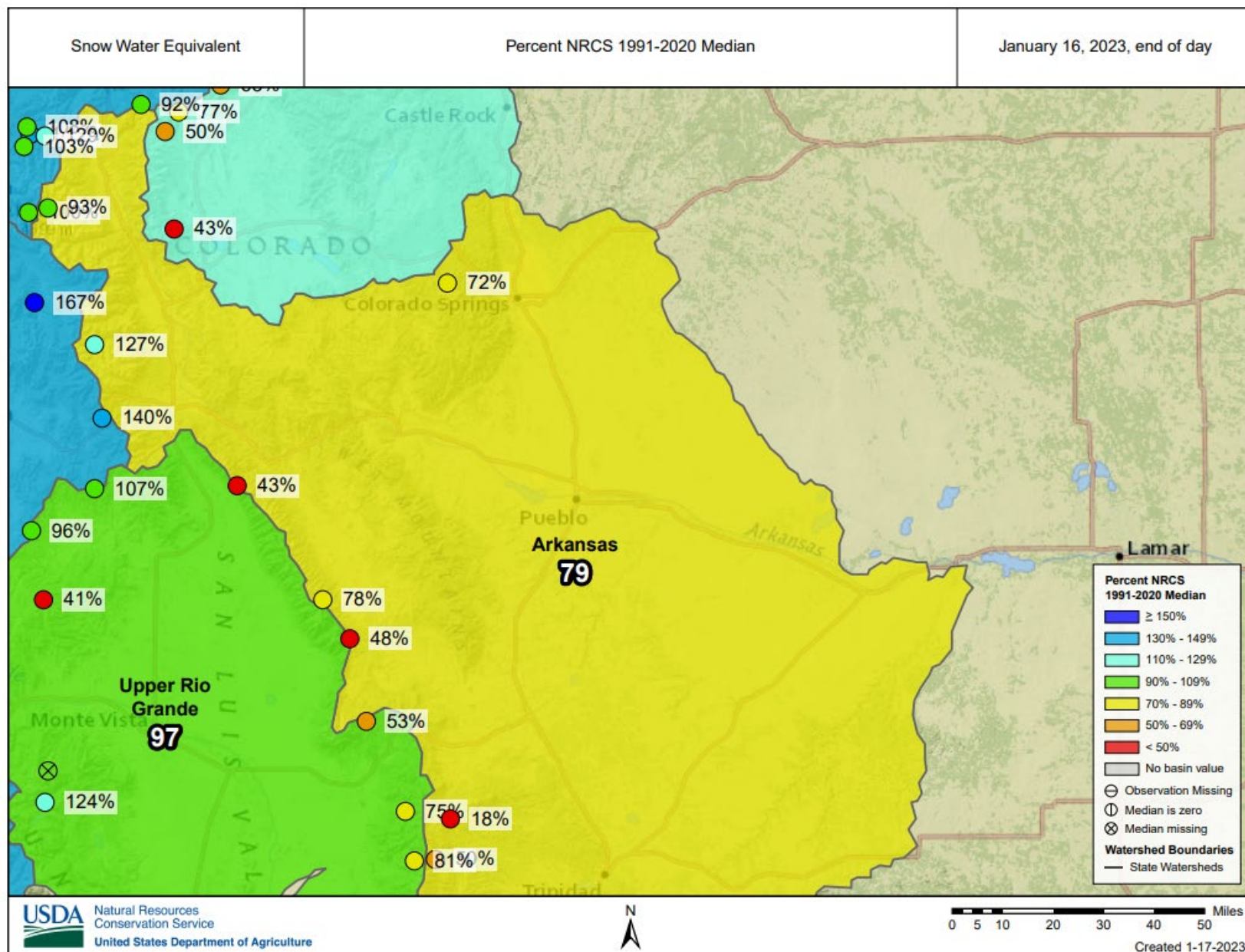


0 25 50 100 150 200 Miles



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Colorado Snow Surveys

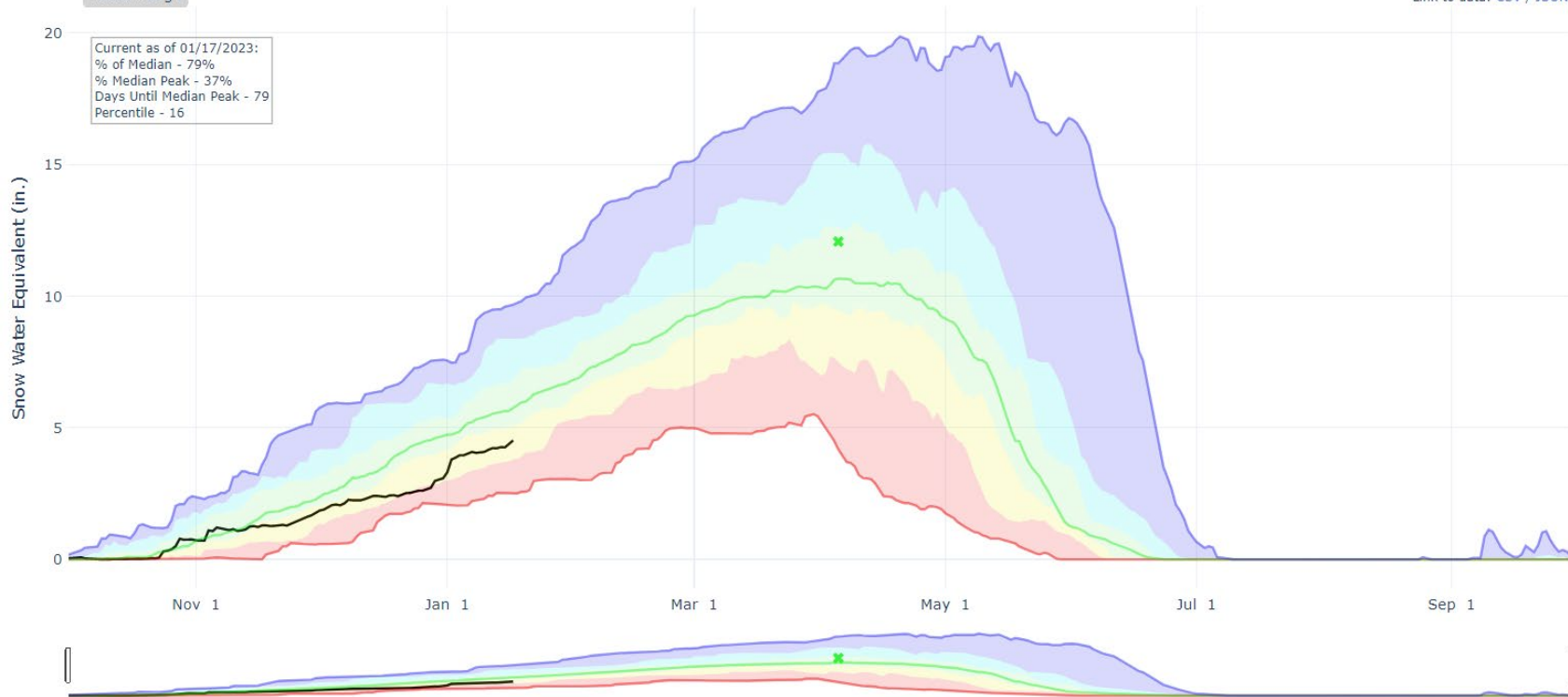
SNOW WATER EQUIVALENT IN ARKANSAS

Reset Range

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

[Station List](#)

Current as of 01/17/2023:
% of Median - 79%
% Median Peak - 37%
Days Until Median Peak - 79
Percentile - 16



- ✖ Median Peak SWE
- 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)





Colorado Snow Surveys

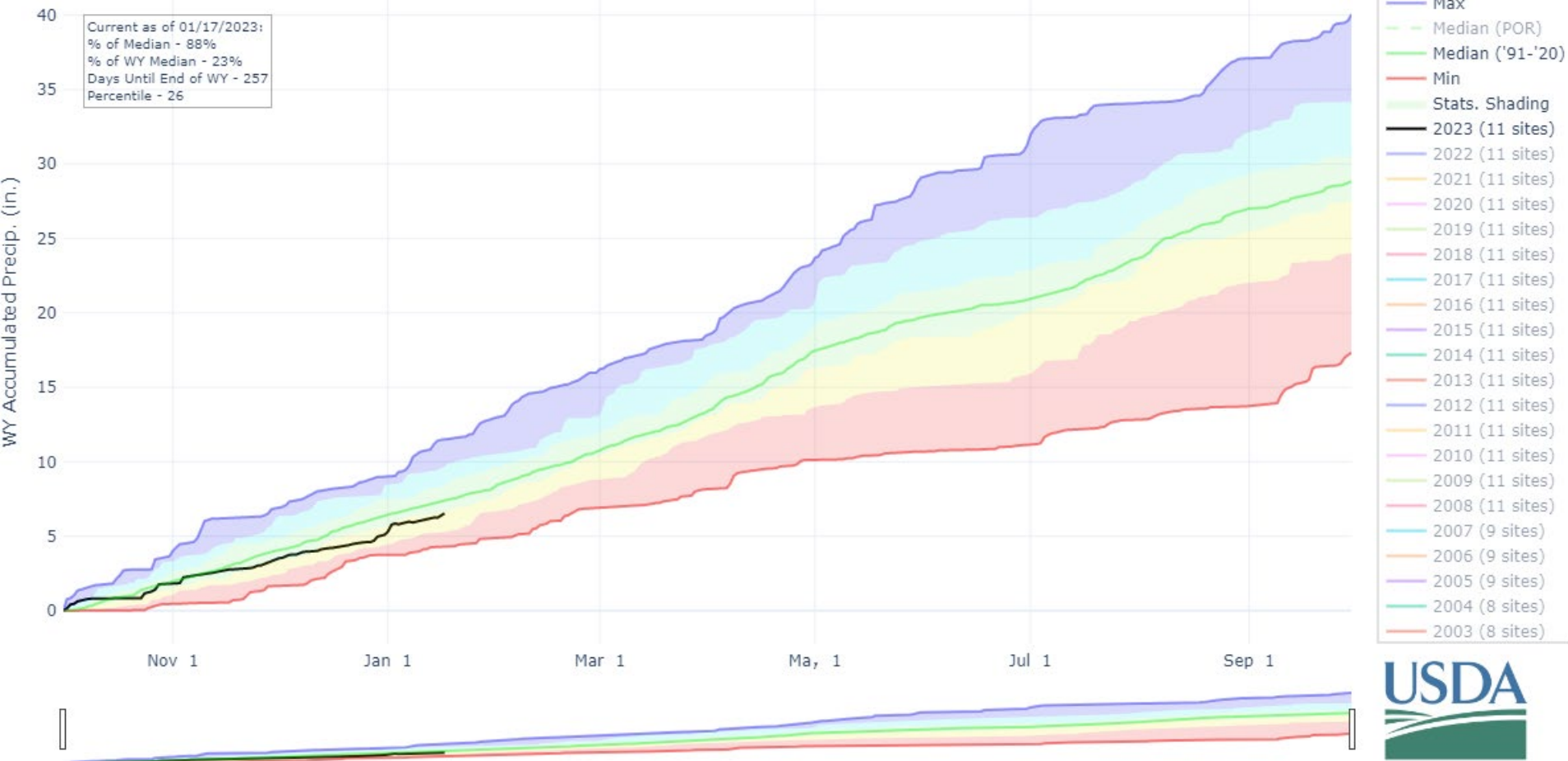
PRECIPITATION IN ARKANSAS

Reset Range

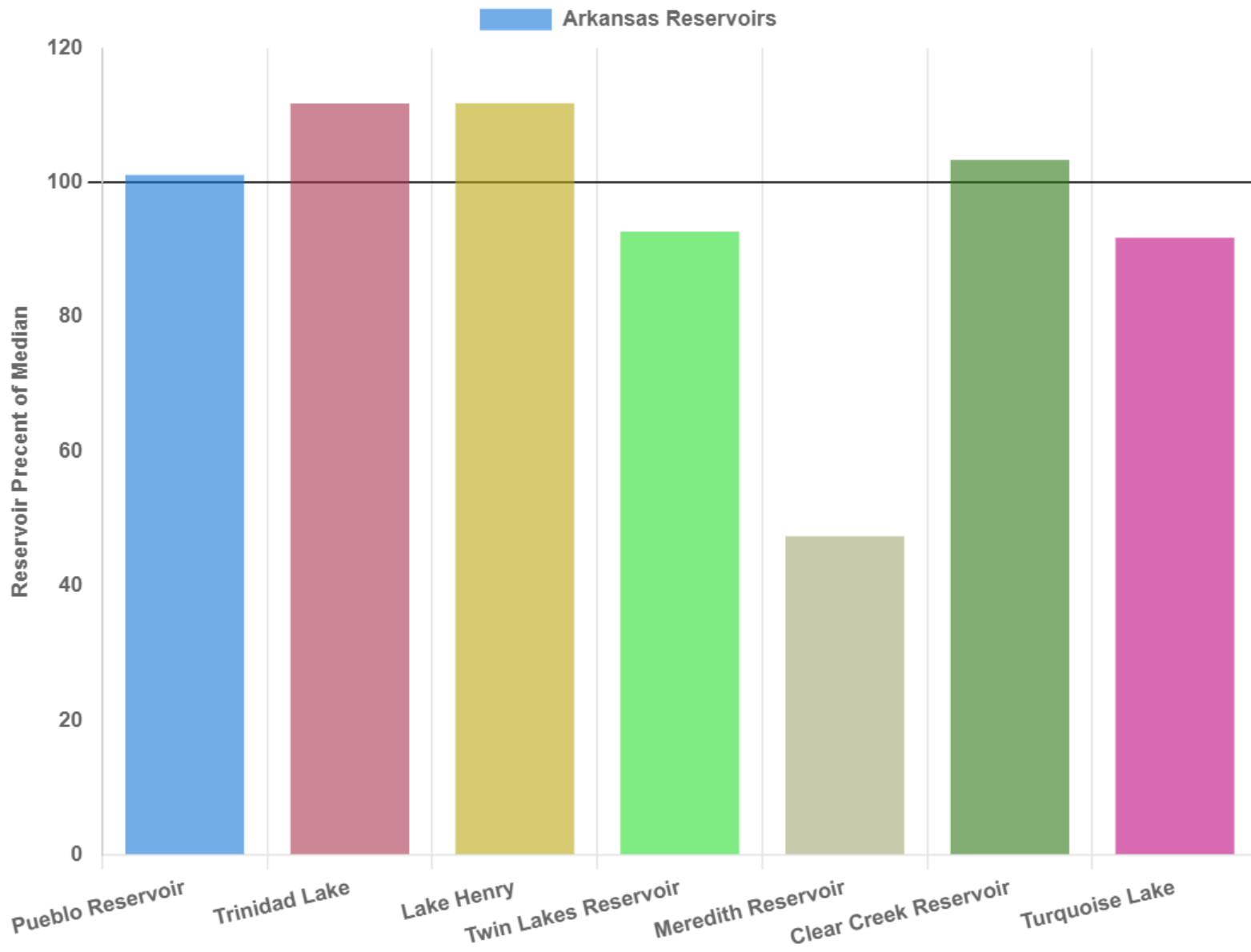
[Link to data: CSV / JSON](#)

Station List

Current as of 01/17/2023:
% of Median - 88%
% of WY Median - 23%
Days Until End of WY - 257
Percentile - 26

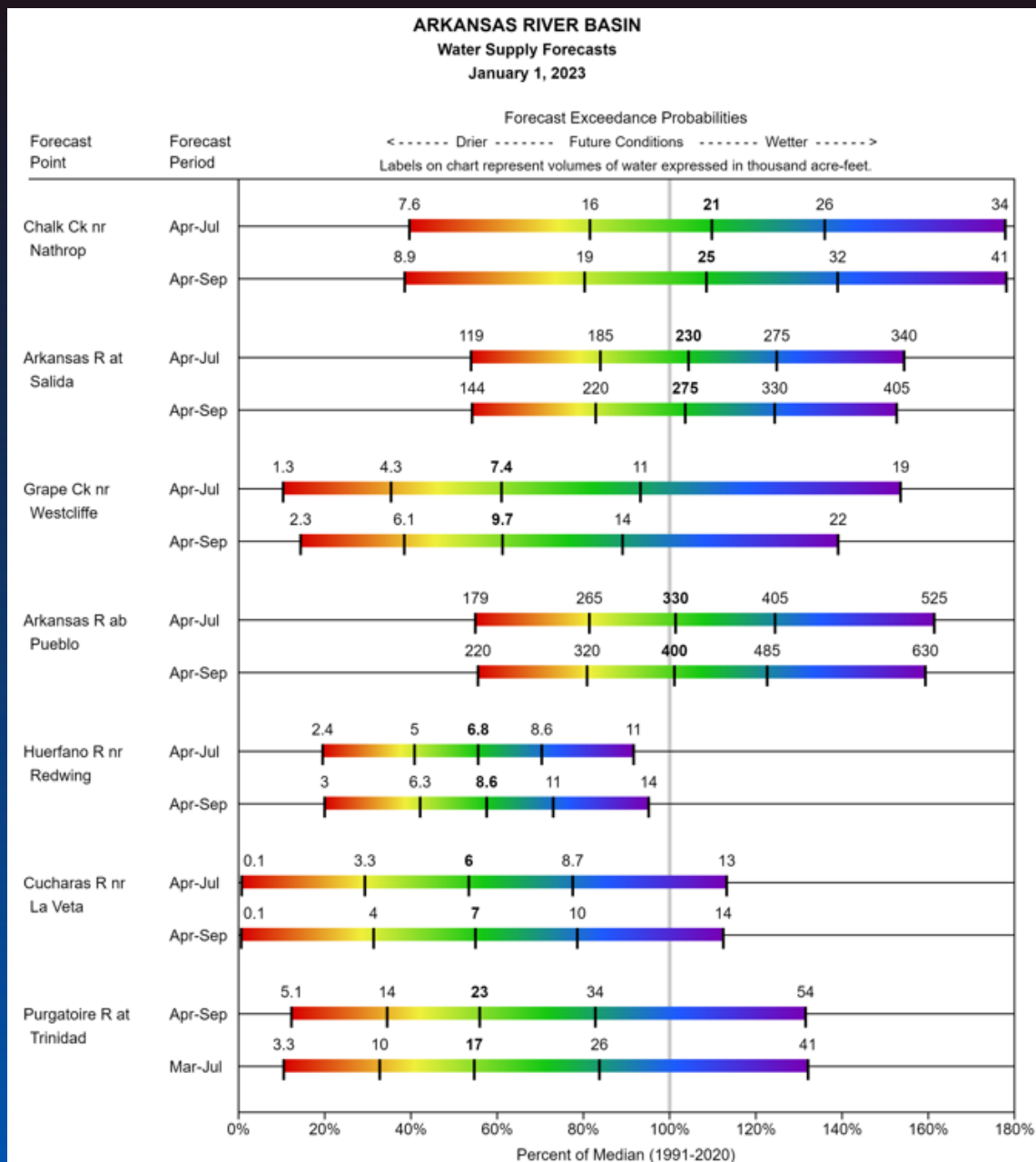


Reservoir Conditions for Arkansas on January 1st 2023



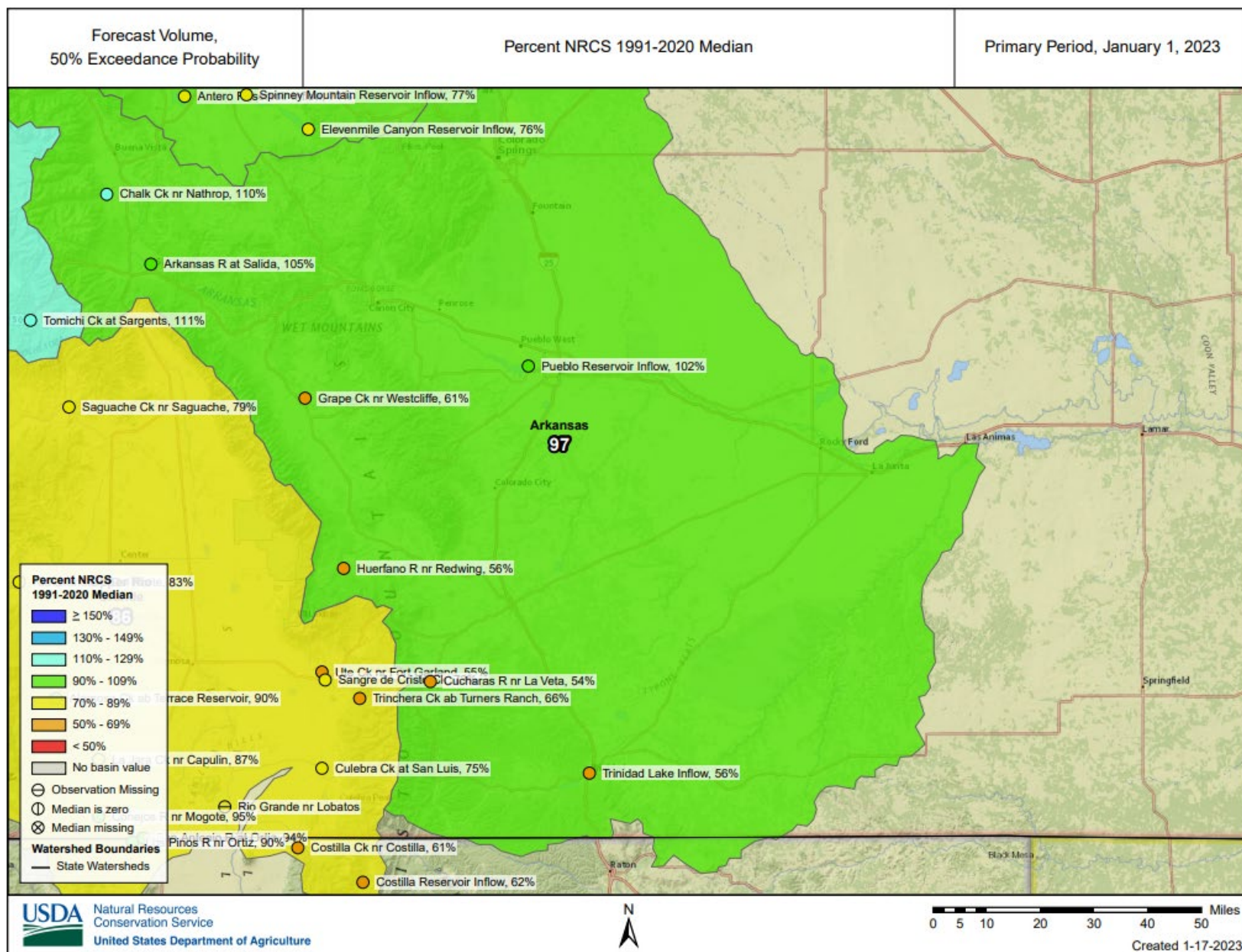


Colorado Snow Surveys



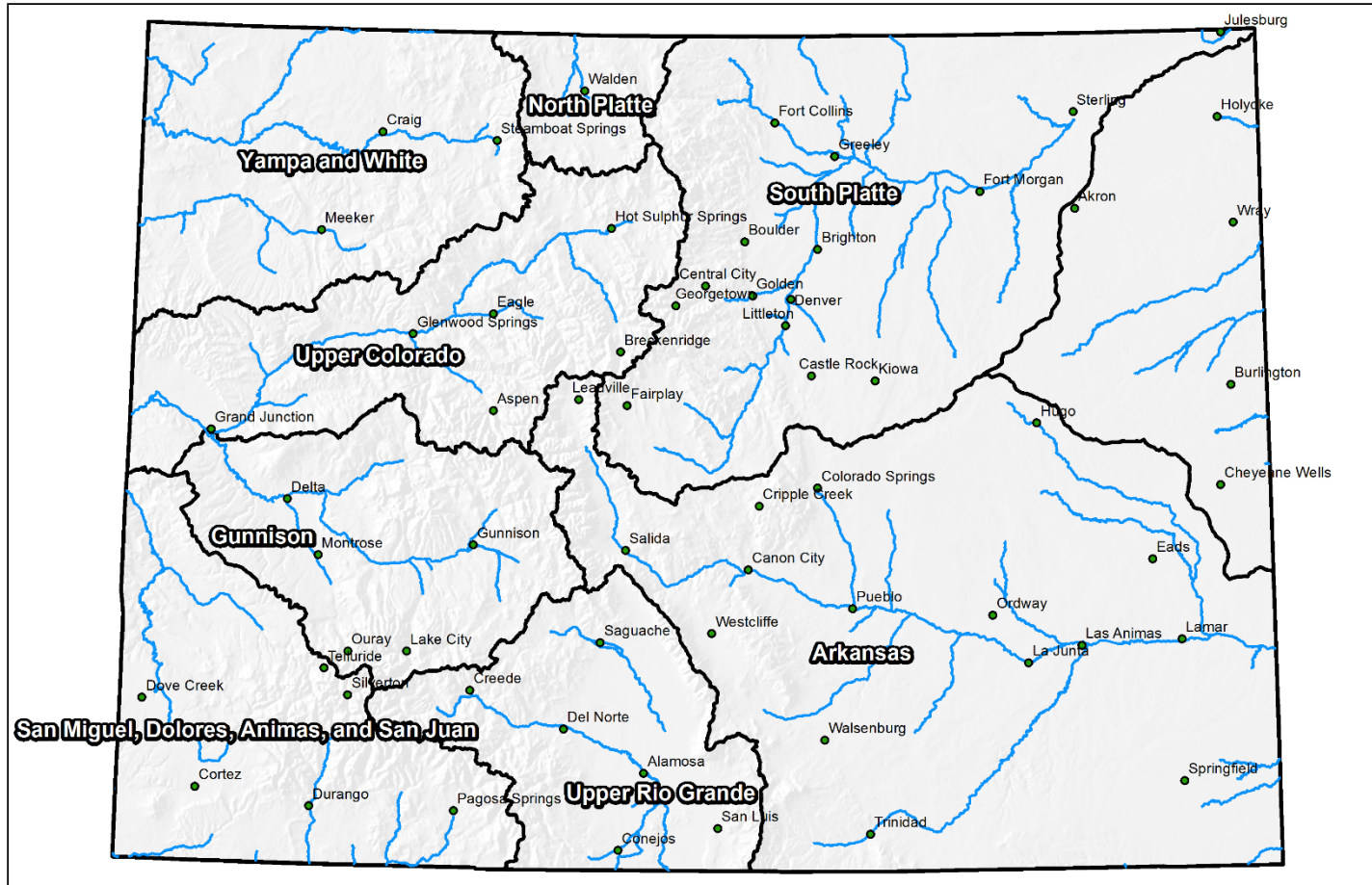


Colorado Snow Surveys



Colorado Statewide Summary

Colorado Major Basins



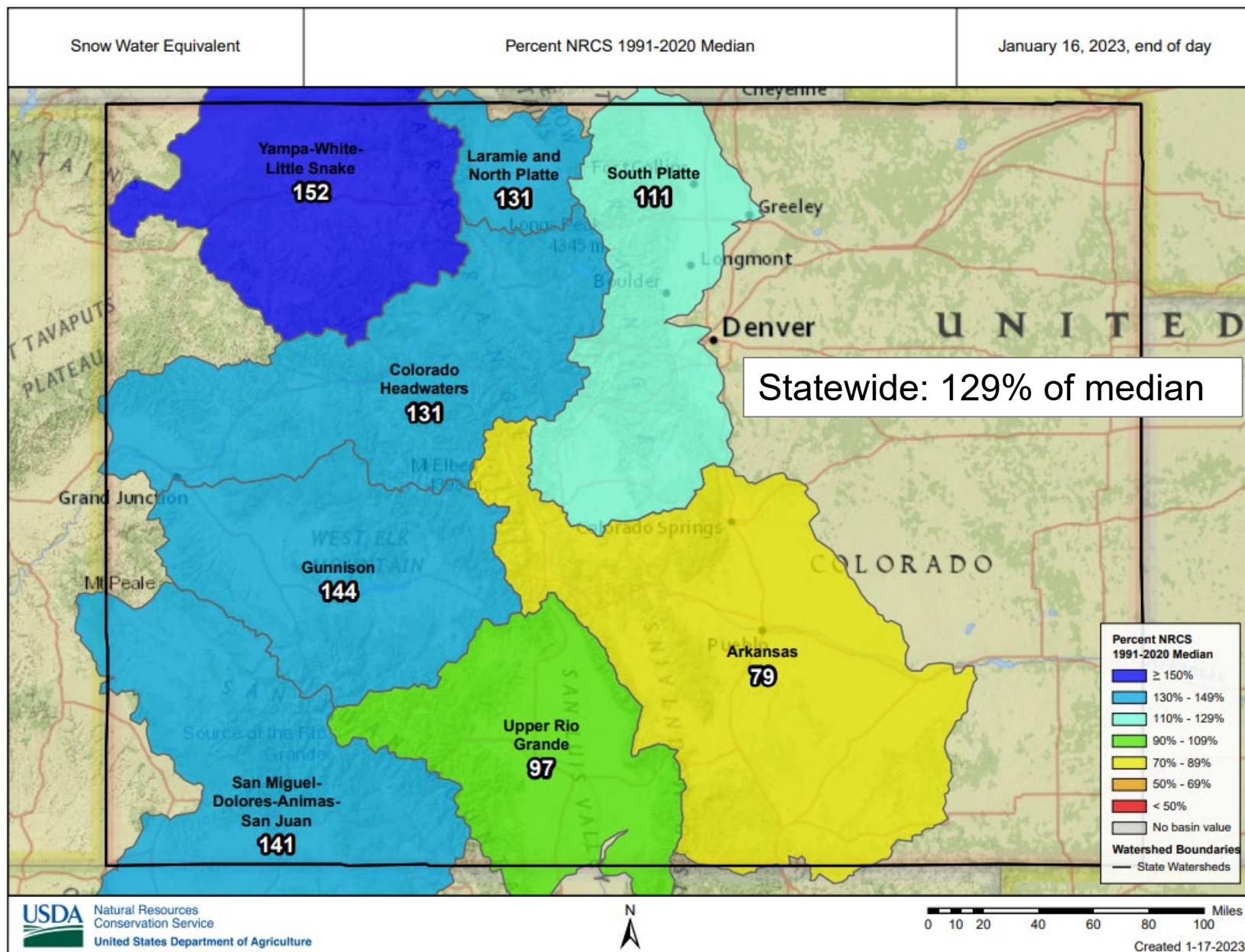
0 25 50 100 150 200 Miles



United States Department of Agriculture

Colorado Snow Surveys

Snowpack





Colorado Snow Surveys

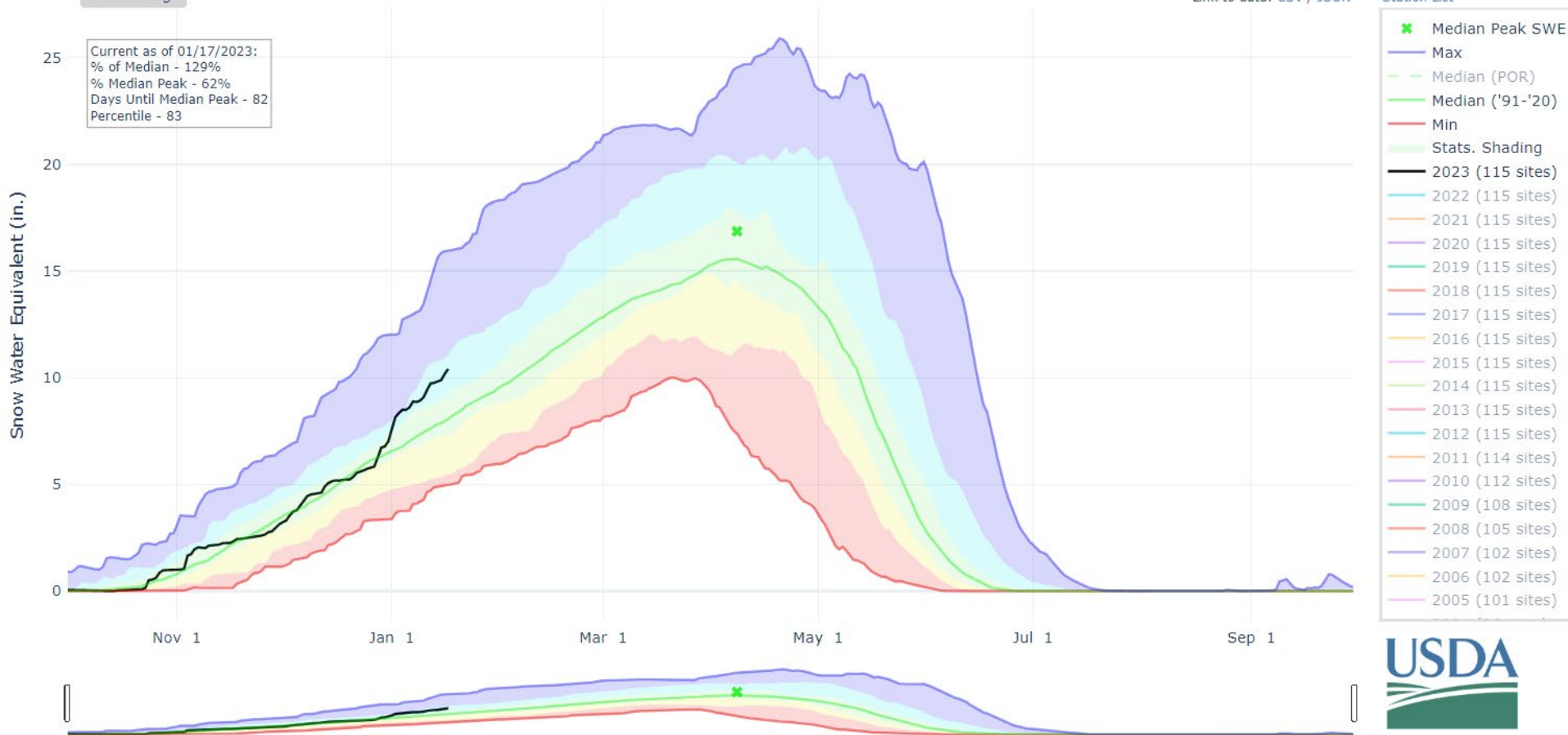
SNOW WATER EQUIVALENT IN STATE OF COLORADO

Reset Range

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

[Station List](#)

Current as of 01/17/2023:
% of Median - 129%
% Median Peak - 62%
Days Until Median Peak - 82
Percentile - 83

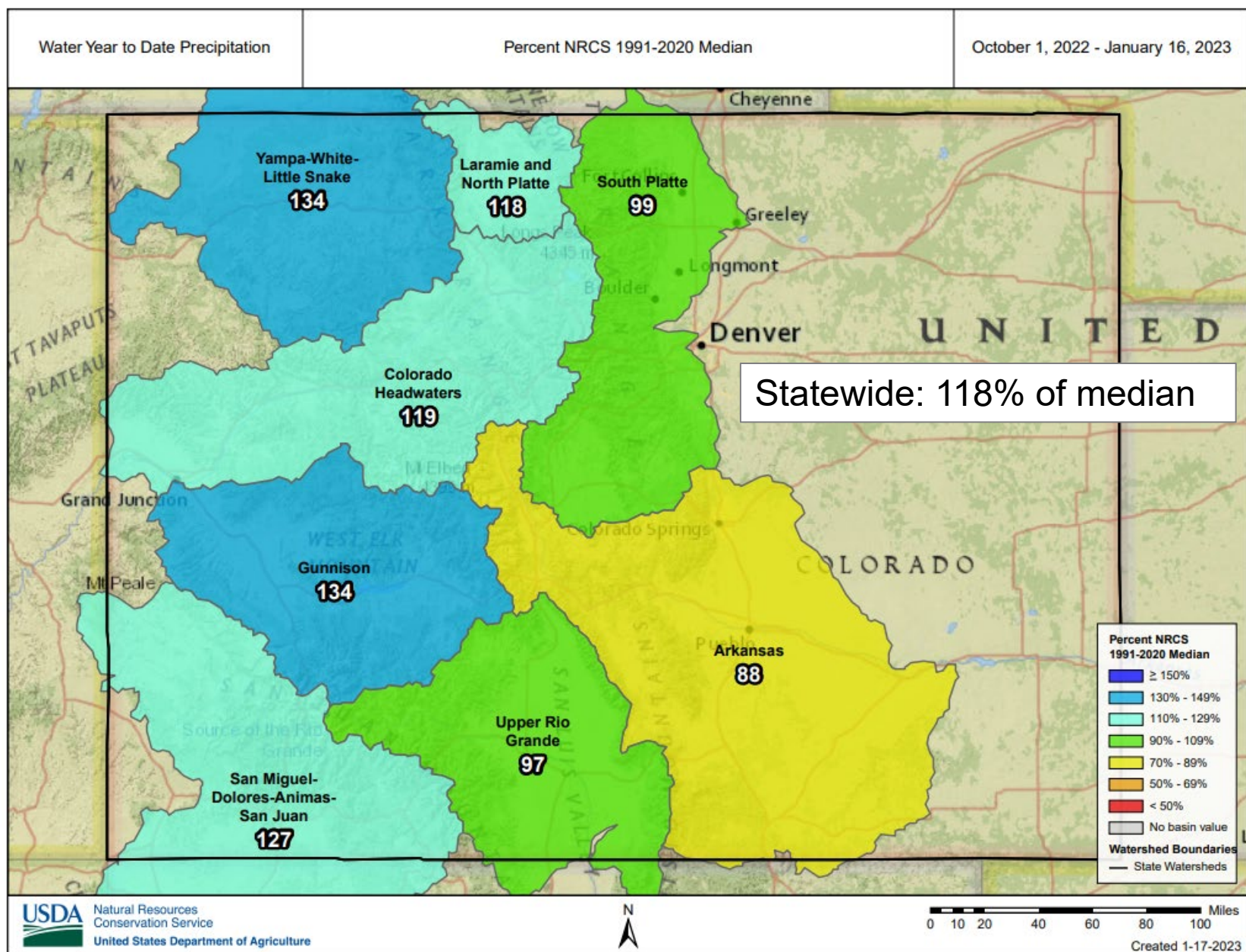




United States Department of Agriculture

Colorado Snow Surveys

WY Precipitation

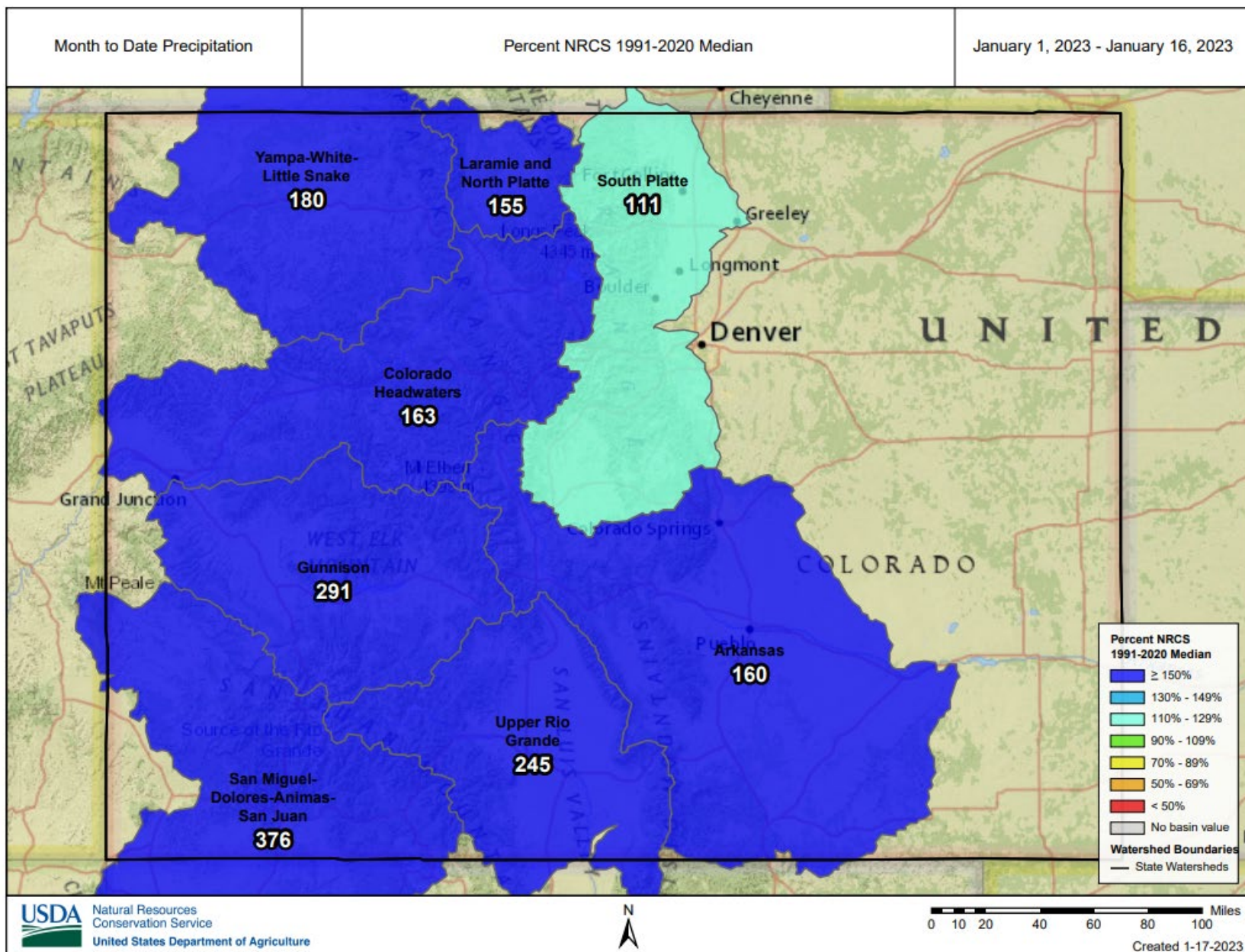




United States Department of Agriculture

Colorado Snow Surveys

MTD Precipitation





Colorado Snow Surveys

PRECIPITATION IN STATE OF COLORADO

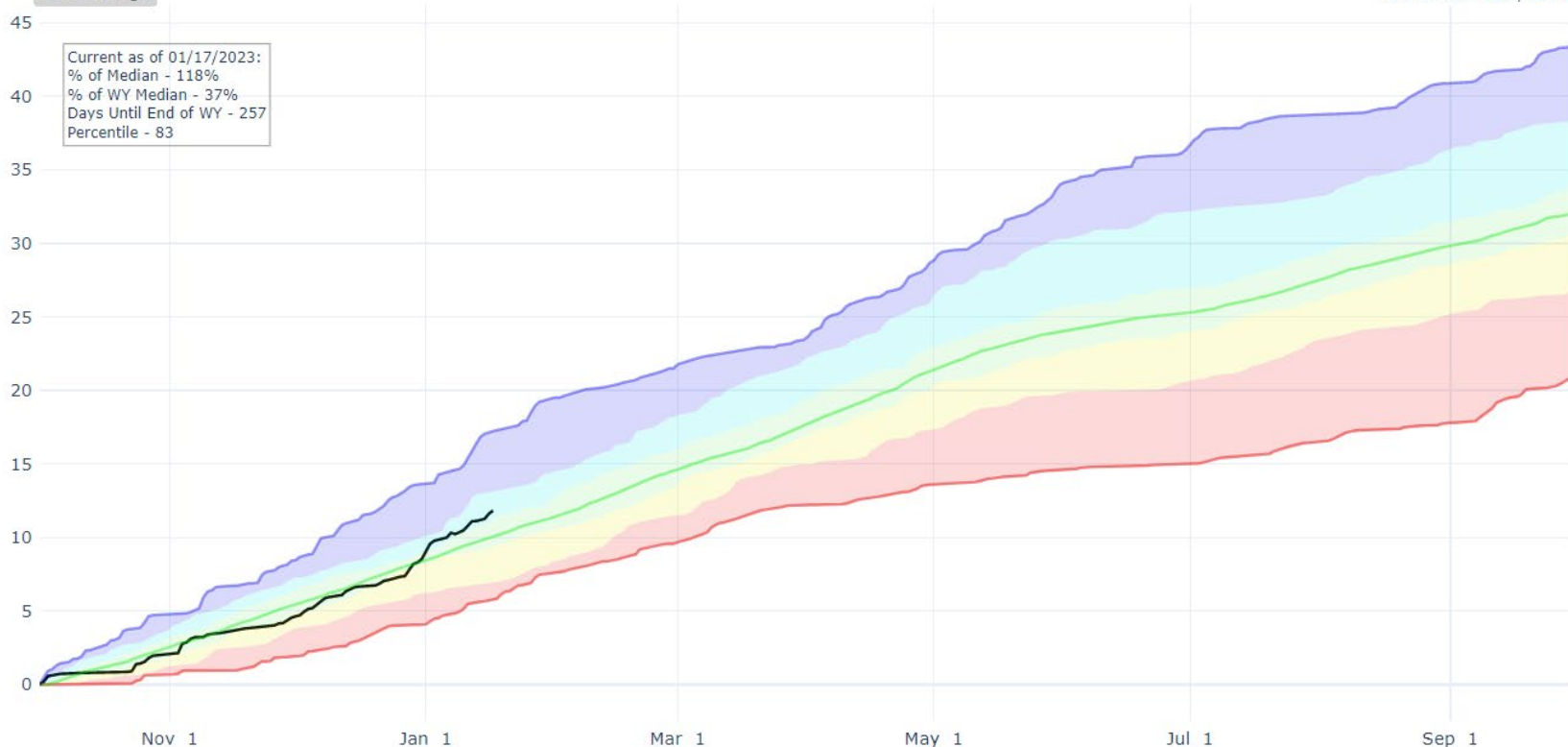
Reset Range

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

Station List

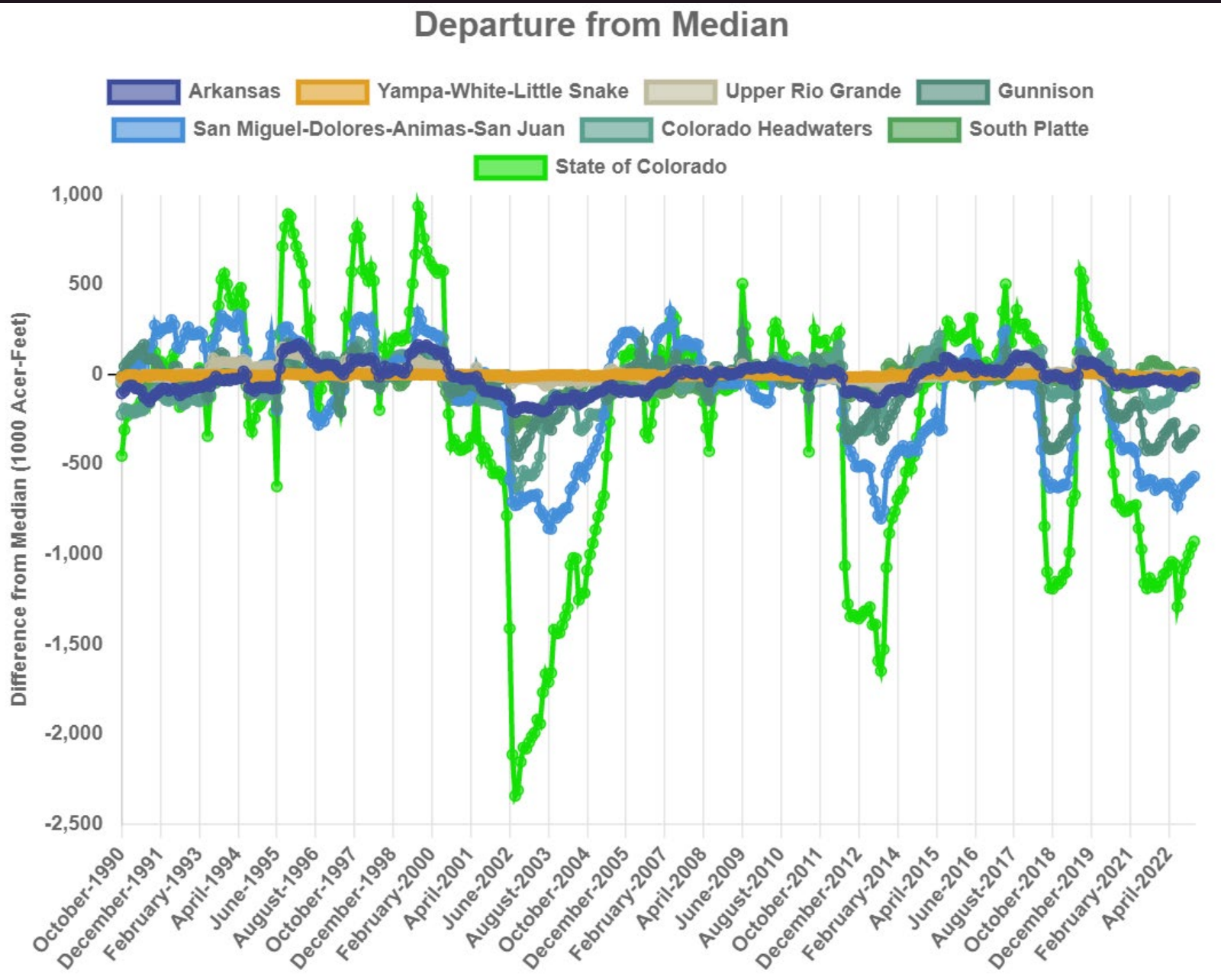
Current as of 01/17/2023:
% of Median - 118%
% of WY Median - 37%
Days Until End of WY - 257
Percentile - 83

WY Accumulated Precip. (in.)



- Max
- Median (POR)
- Median ('91-'20)
- Min
- Stats. Shading
- 2023 (116 sites)
- 2022 (115 sites)
- 2021 (116 sites)
- 2020 (116 sites)
- 2019 (116 sites)
- 2018 (116 sites)
- 2017 (116 sites)
- 2016 (116 sites)
- 2015 (116 sites)
- 2014 (116 sites)
- 2013 (116 sites)
- 2012 (116 sites)
- 2011 (116 sites)
- 2010 (114 sites)
- 2009 (111 sites)
- 2008 (108 sites)
- 2007 (105 sites)
- 2006 (105 sites)
- 2005 (104 sites)
- 2004 (98 sites)



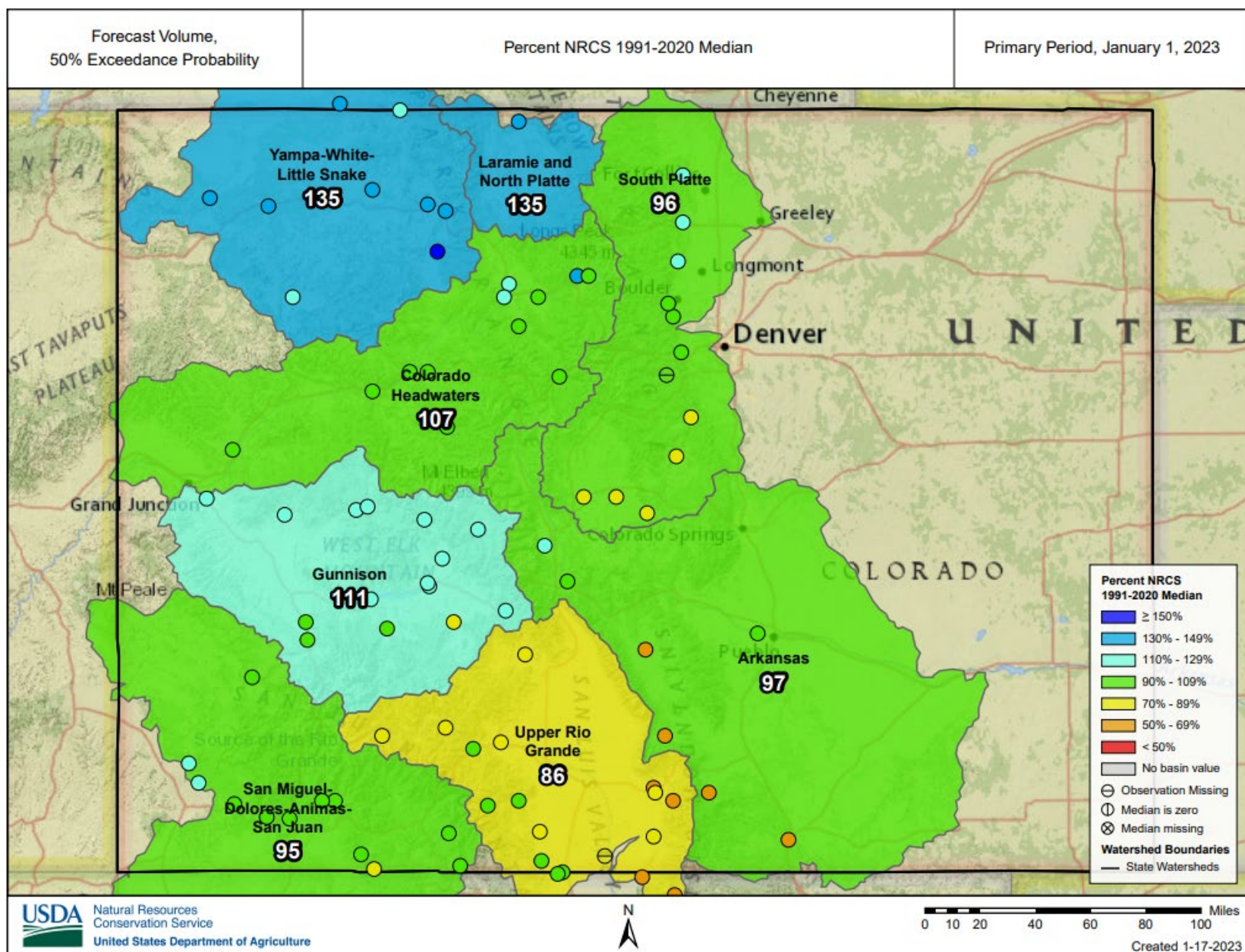




United States Department of Agriculture

Colorado Snow Surveys

Streamflow Forecasts



Summary

- Snowpack is well above normal across all of Western Colorado and near normal in other basins except the Arkansas which is lower.
 - The Sangre de Cristo mountains, feeding water into both the Rio Grande and Arkansas basins, have the most meager snowpack in Colorado.
- A series of storms since the end of December have provided substantial increases to the snowpack statewide.
- February 1st streamflow forecasts are anticipated to be significantly improved over the previous month in most parts of the state.
- Above normal summer precipitation improved soil moisture conditions going into winter which could increase the efficiency of snowmelt runoff over previous years.
- Reservoir storage remains highly variable across Colorado with the Gunnison and combined Southwest Basins holding substantially less water than any other basins.



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