



United States Department of Agriculture

Colorado Snow Surveys

# Water Availability Task Force Meeting

## July 19<sup>th</sup>, 2022

### NRCS Snow Survey and Water Supply Forecasting Program

Karl Wetlaufer

Hydrologist

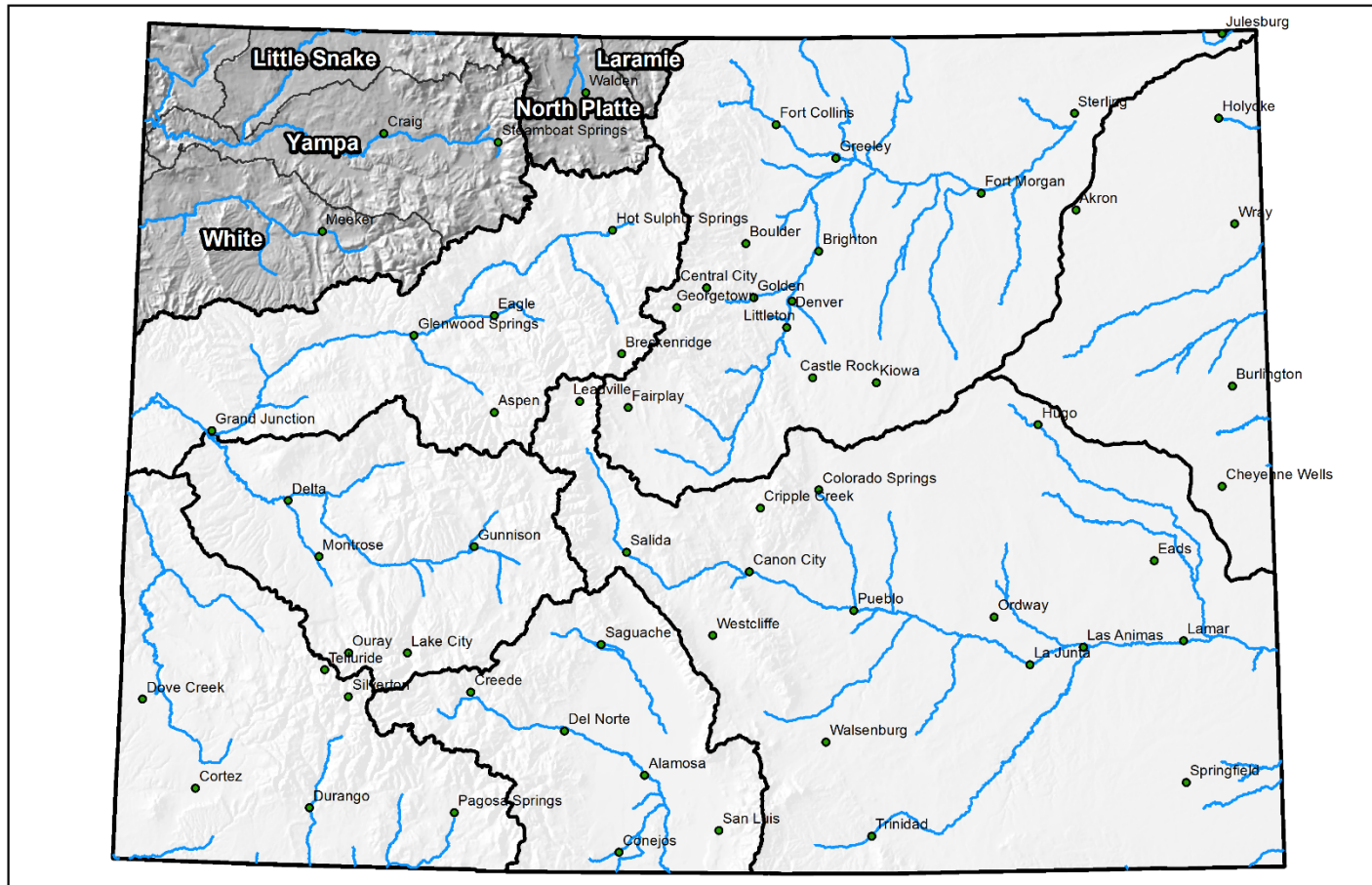
Karl.Wetlaufer@usda.gov

720-544-2853

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

## Major Basin Summary

Yampa, White, and North Platte River Basins



0 25 50 100 150 200 Miles



# Colorado Snow Surveys

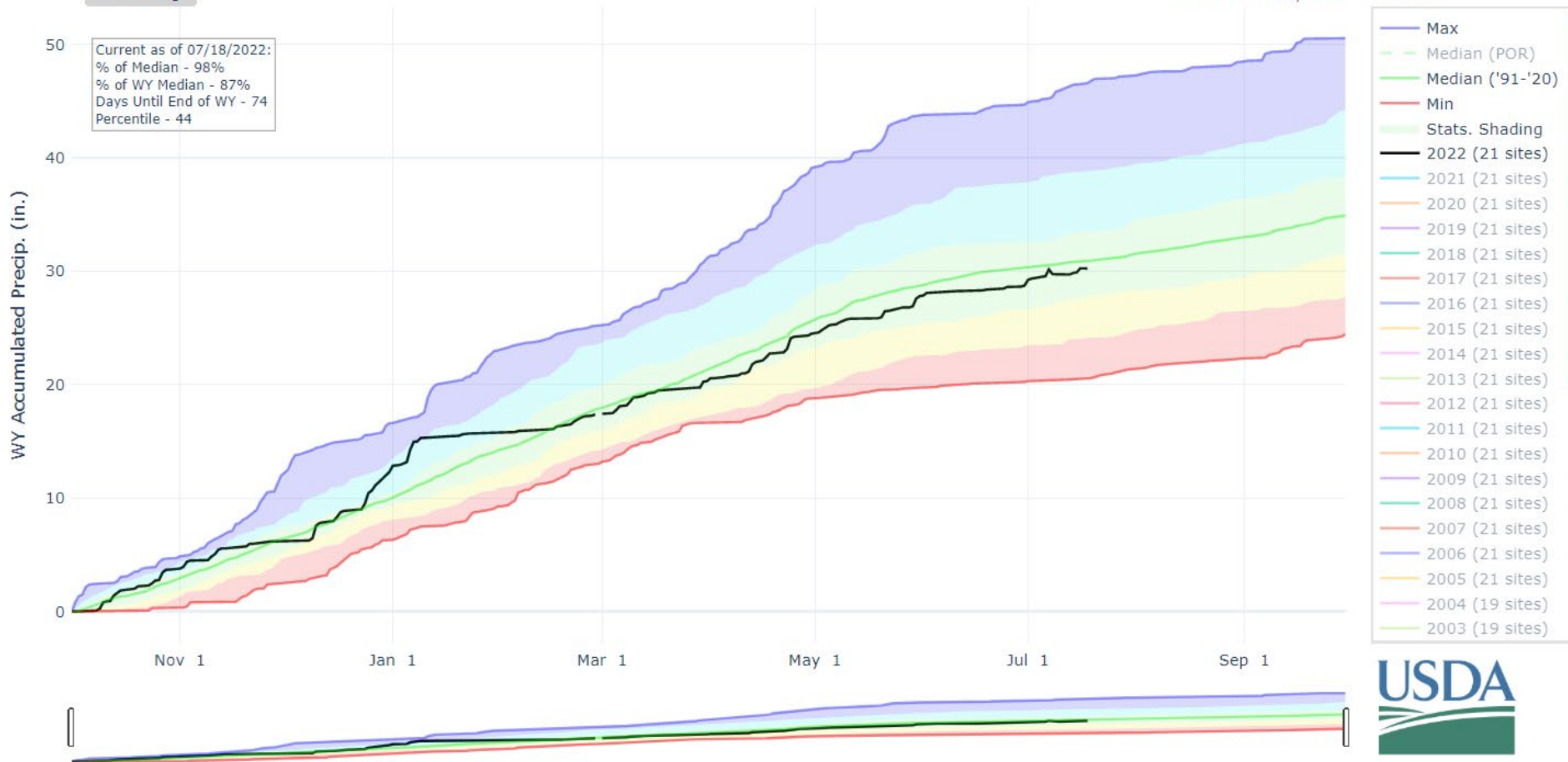
## PRECIPITATION IN YAMPA-WHITE-LITTLE SNAKE

Reset Range

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

[Station List](#)

Current as of 07/18/2022:  
% of Median - 98%  
% of WY Median - 87%  
Days Until End of WY - 74  
Percentile - 44





# Colorado Snow Surveys

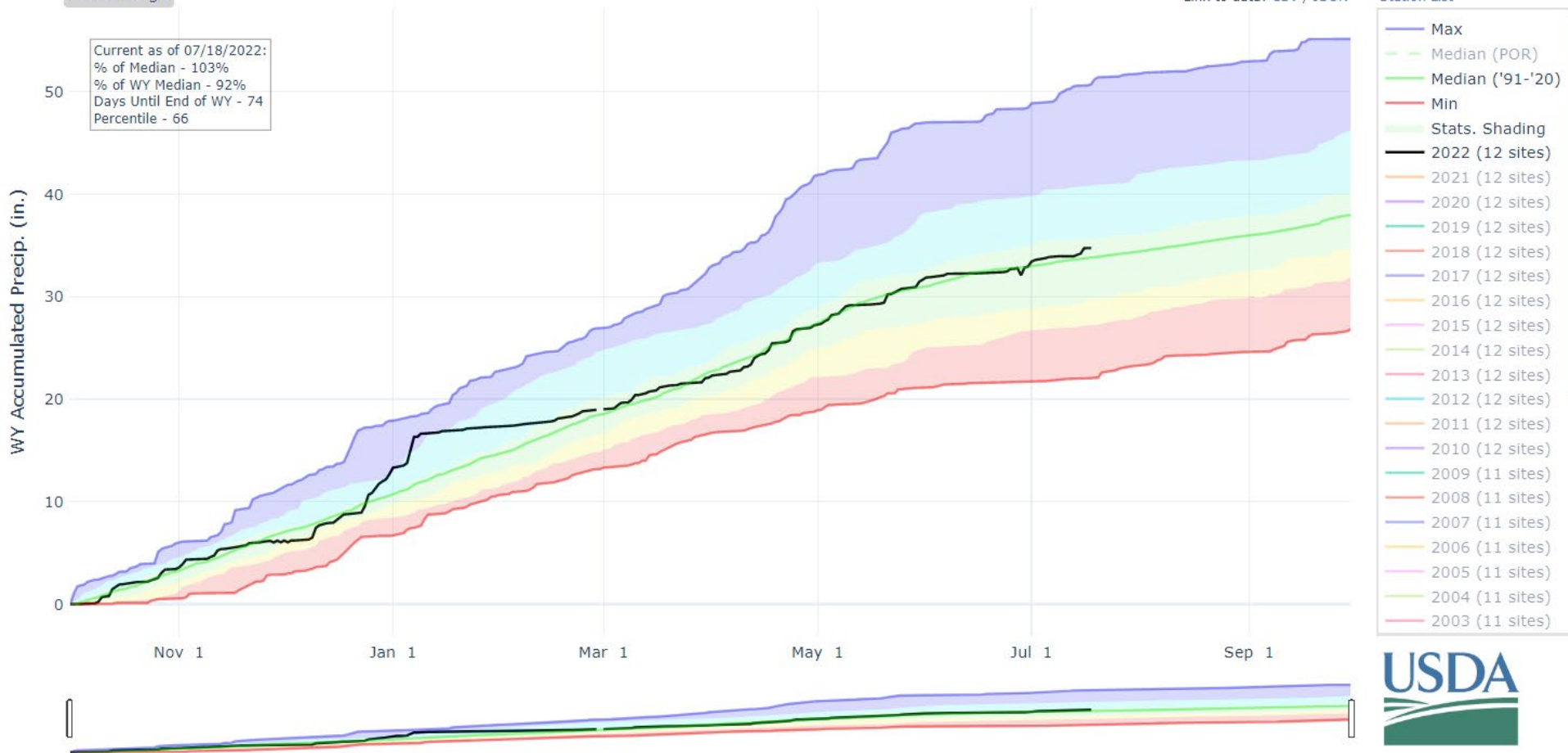
## PRECIPITATION IN LARAMIE AND NORTH PLATTE

Reset Range

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

[Station List](#)

Current as of 07/18/2022:  
% of Median - 103%  
% of WY Median - 92%  
Days Until End of WY - 74  
Percentile - 66

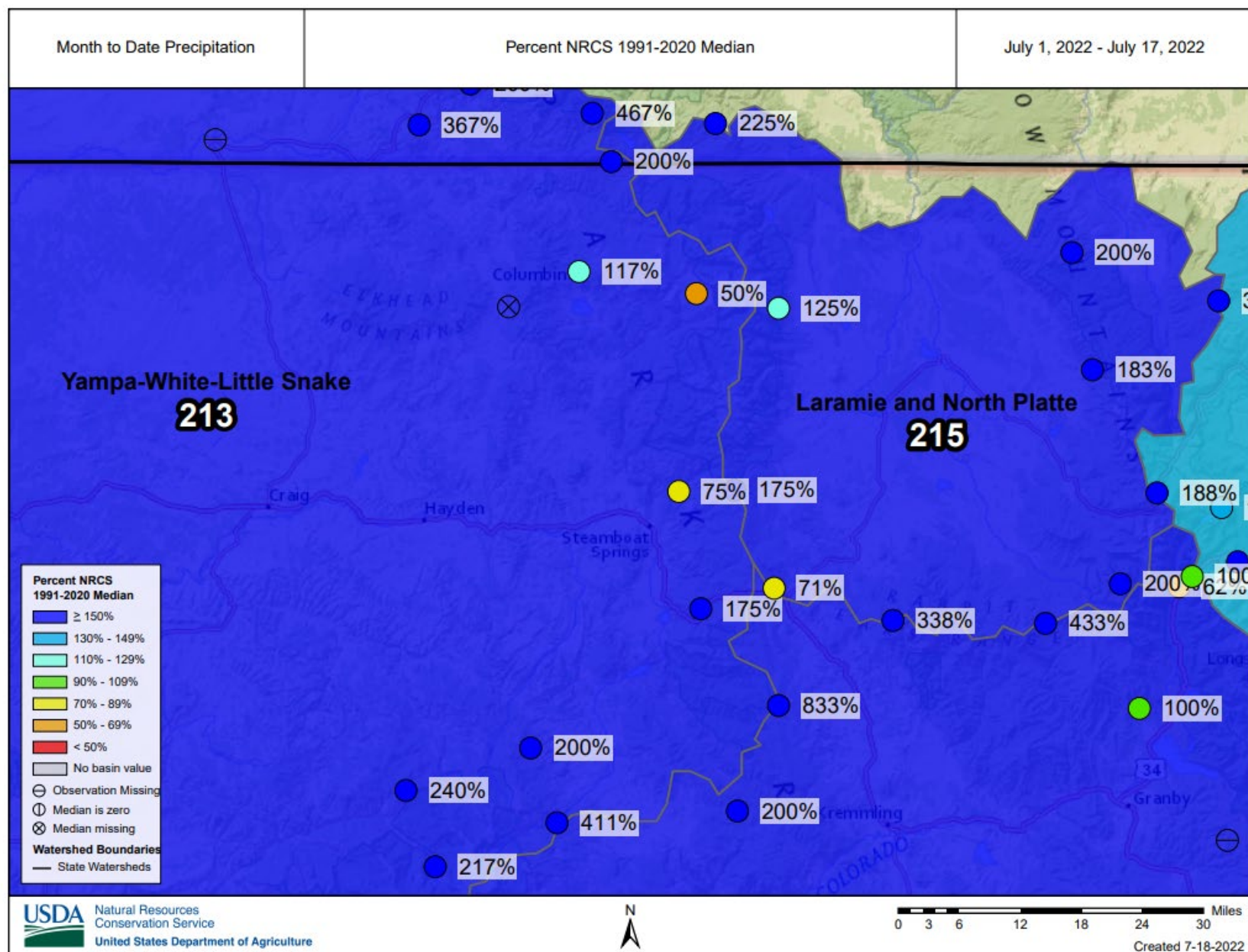






United States Department of Agriculture

# Colorado Snow Surveys





# Colorado Snow Surveys

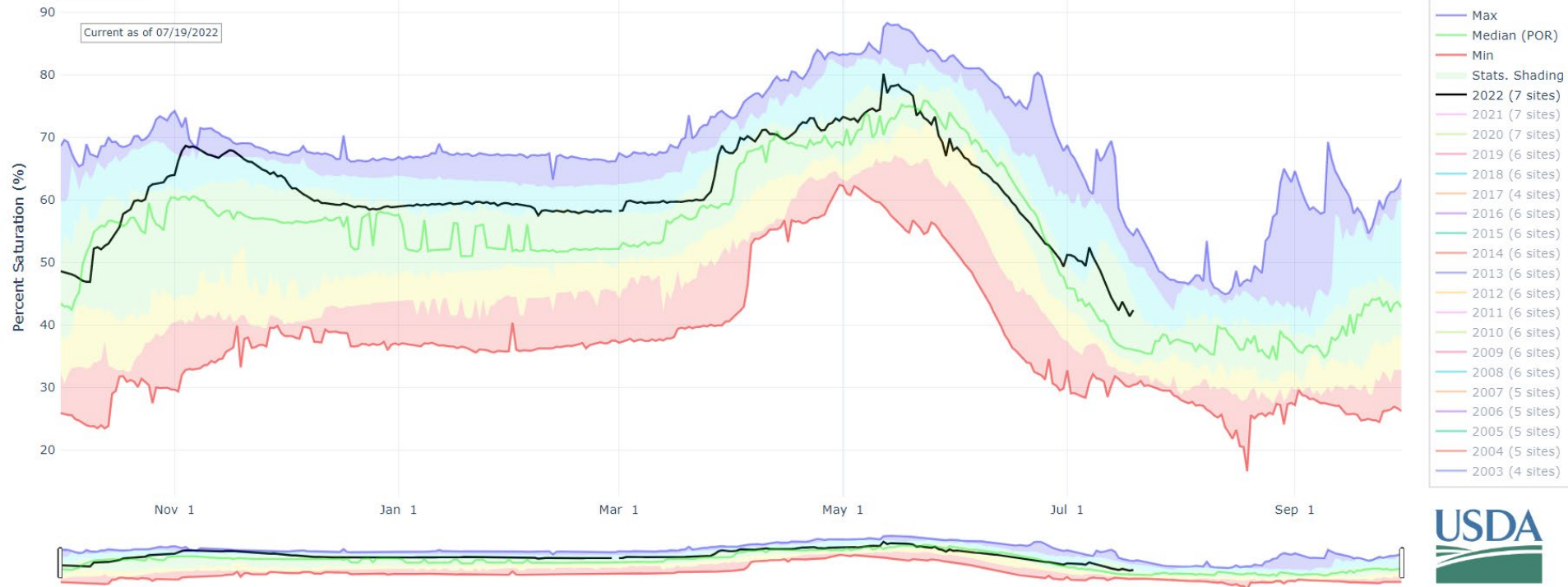
## DEPTH AVERAGED SOIL SATURATION IN YAMPA-WHITE-LITTLE SNAKE

Reset Range

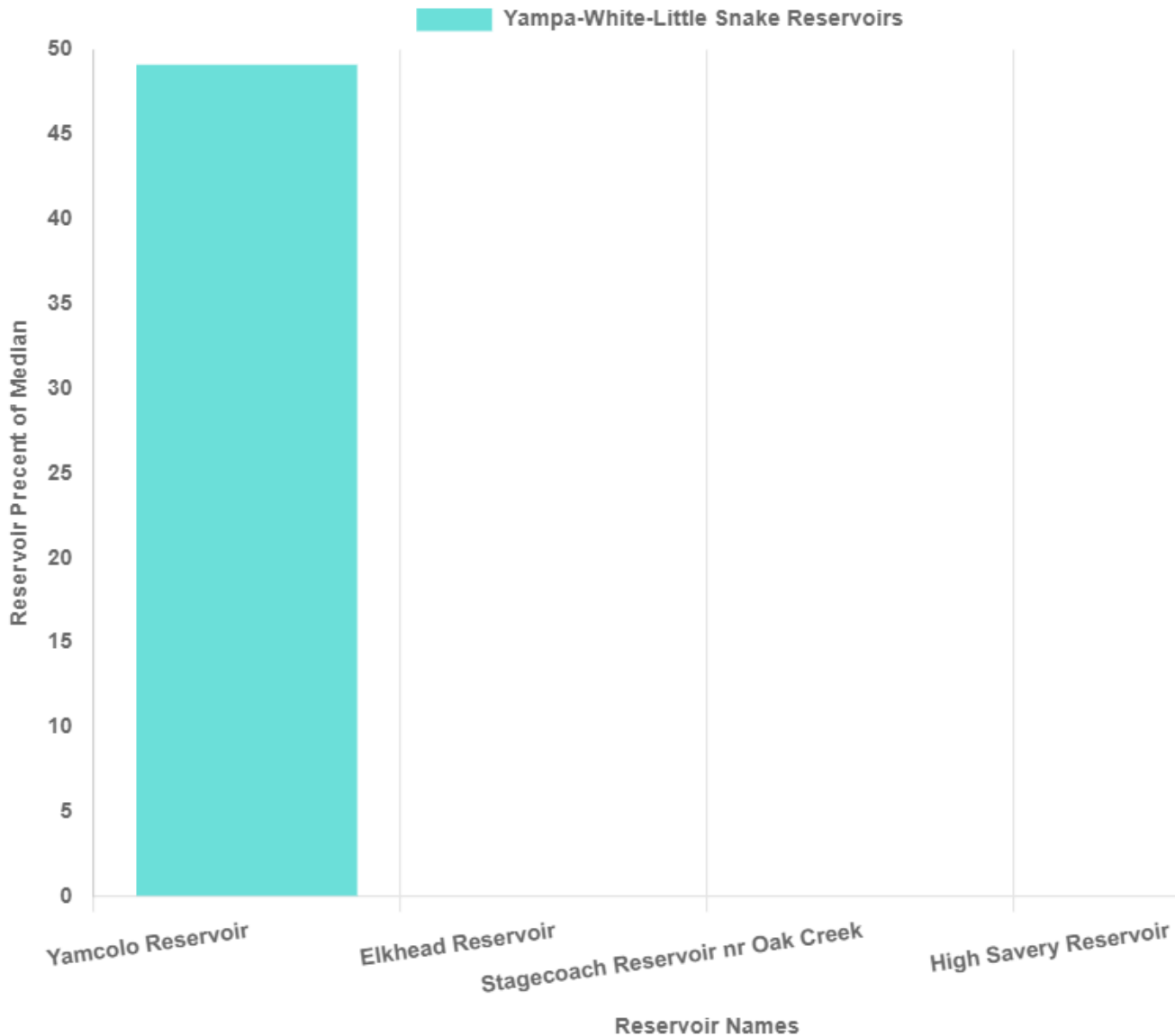
[Link to data: CSV / JSON](#)

Station List

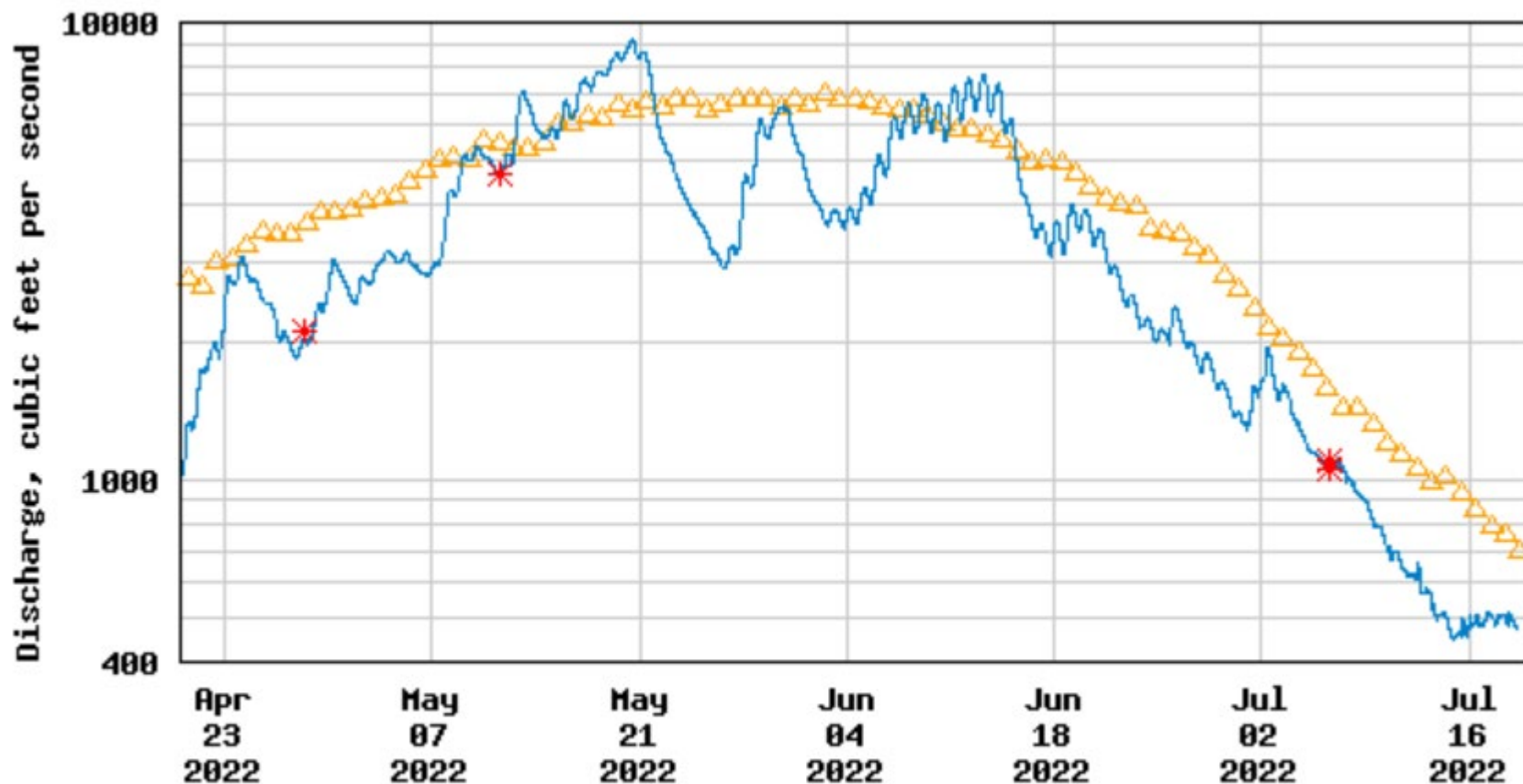
Current as of 07/19/2022



Reservoir Conditions for Yampa-White-Little Snake on July 1st 2022



USGS 09251000 YAMPA RIVER NEAR MAYBELL, CO

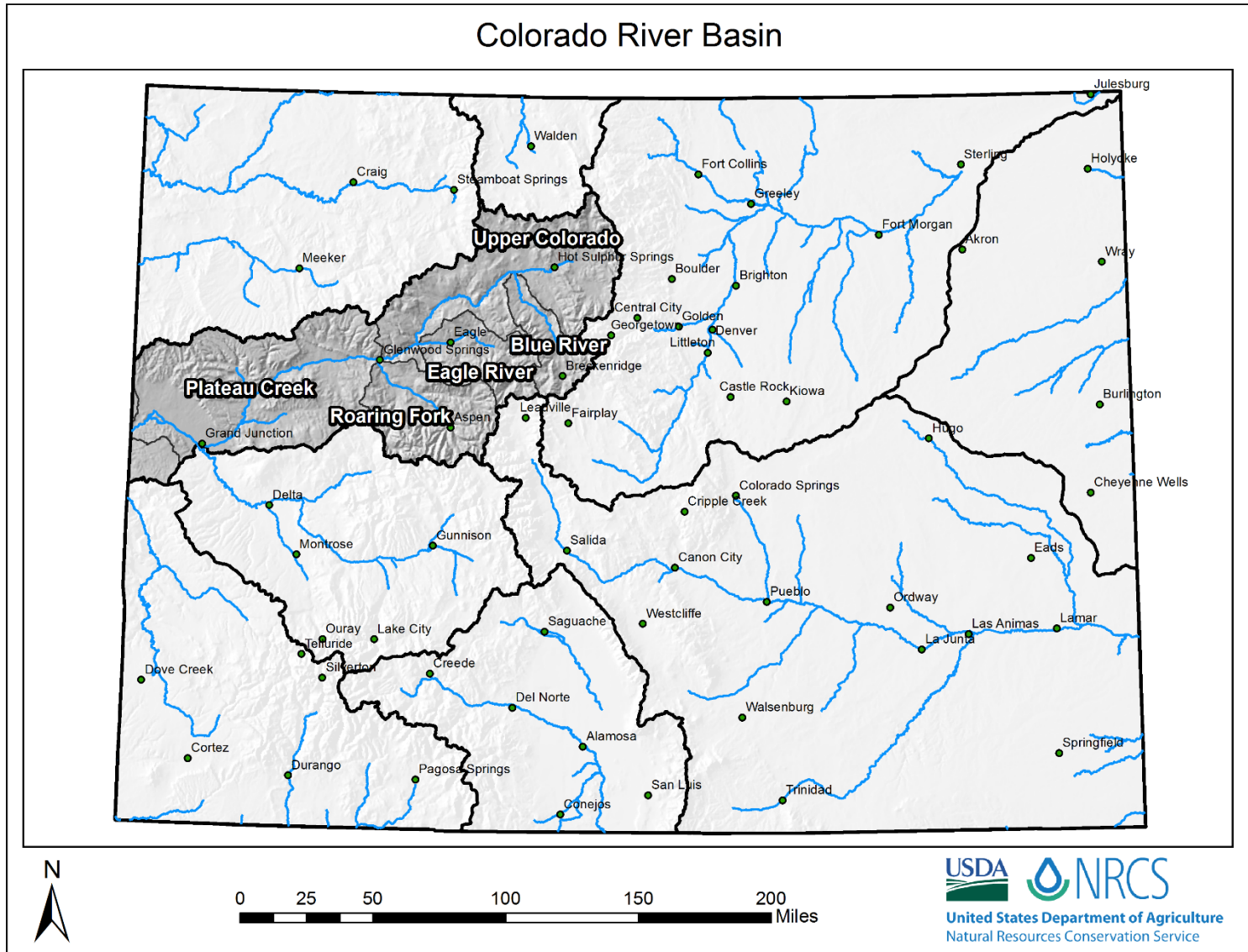


----- Provisional Data Subject to Revision -----

- △ Median daily statistic (105 years)
- \* Measured discharge
- Discharge



## Major Basin Summary







# Colorado Snow Surveys

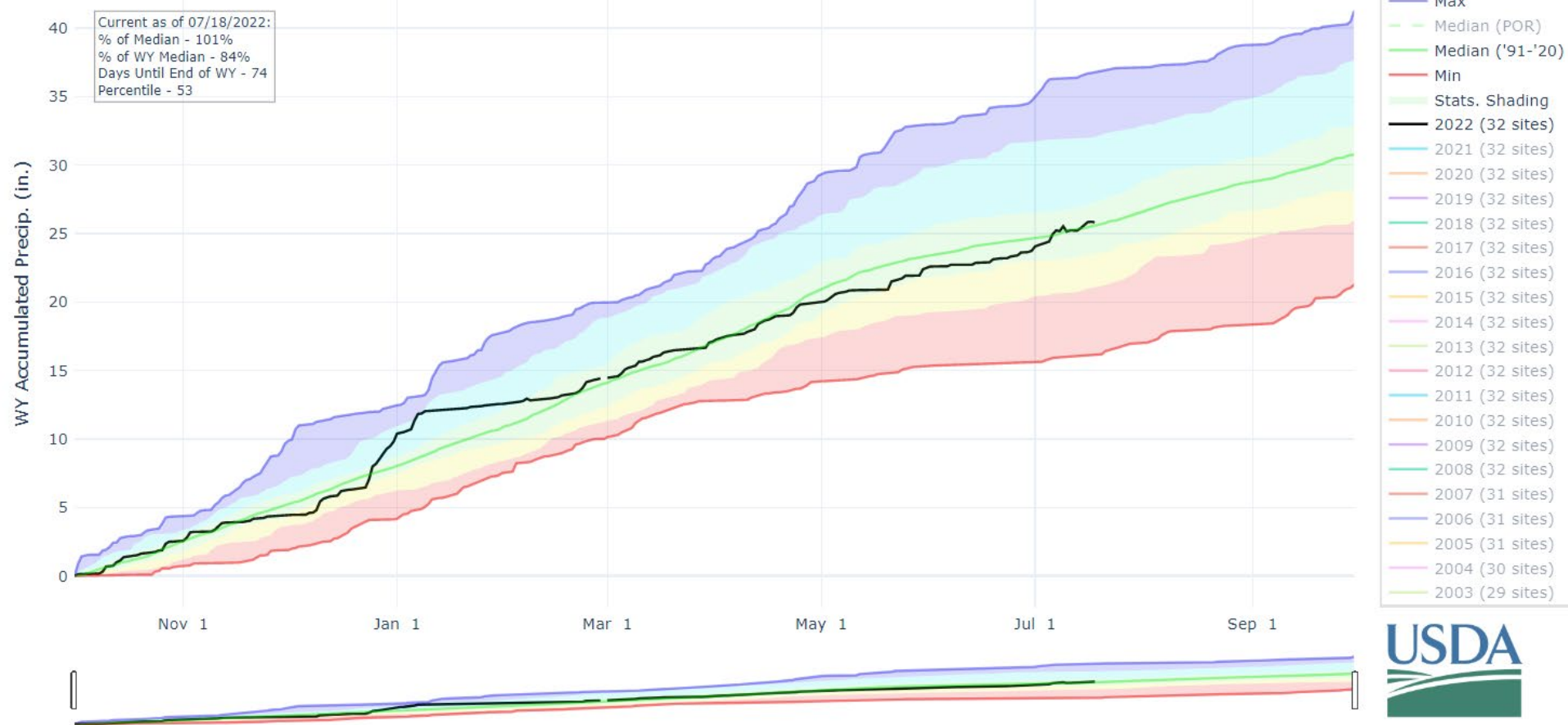
## PRECIPITATION IN COLORADO HEADWATERS

Reset Range

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

[Station List](#)

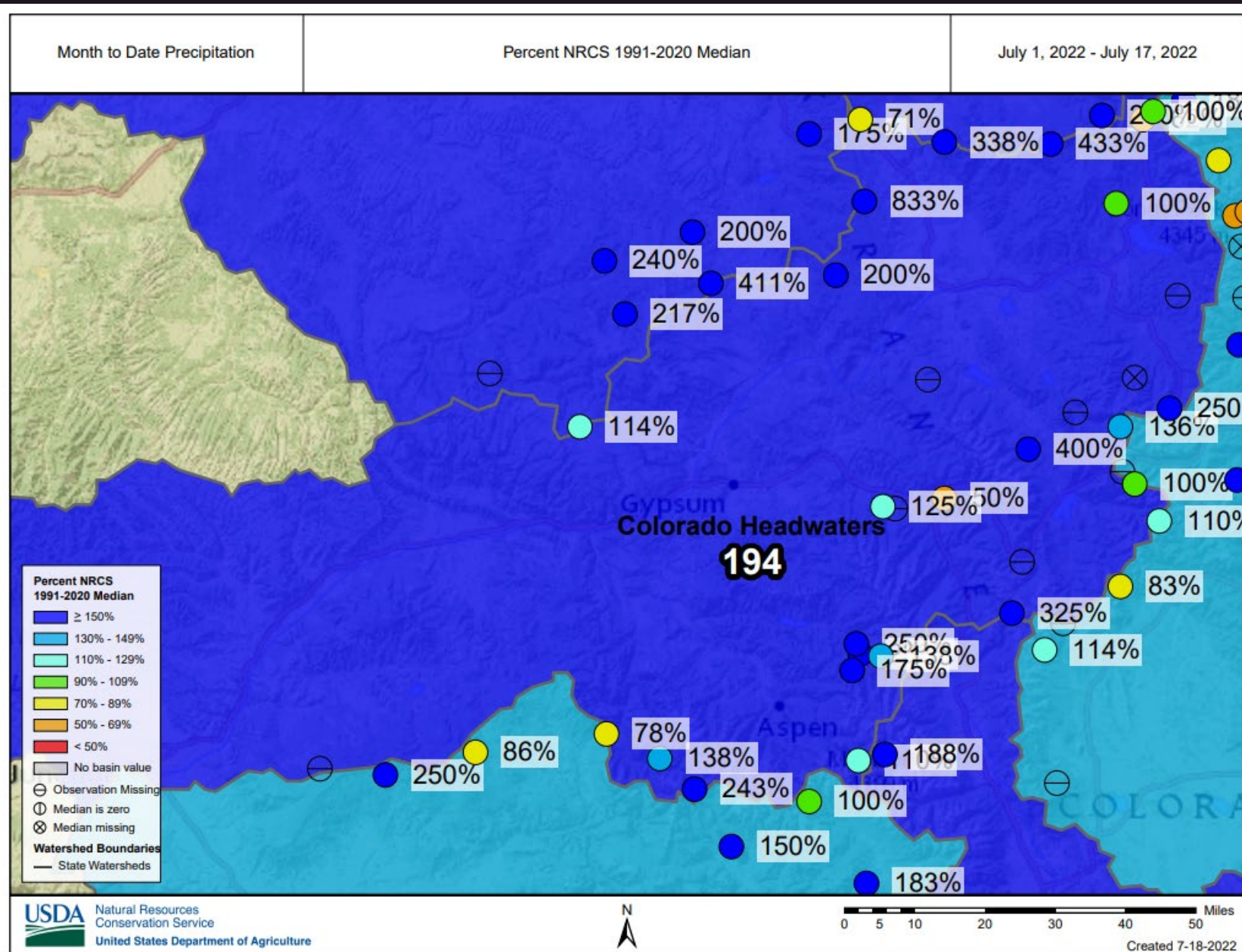
Current as of 07/18/2022:  
% of Median - 101%  
% of WY Median - 84%  
Days Until End of WY - 74  
Percentile - 53





United States Department of Agriculture

# Colorado Snow Surveys





# Colorado Snow Surveys

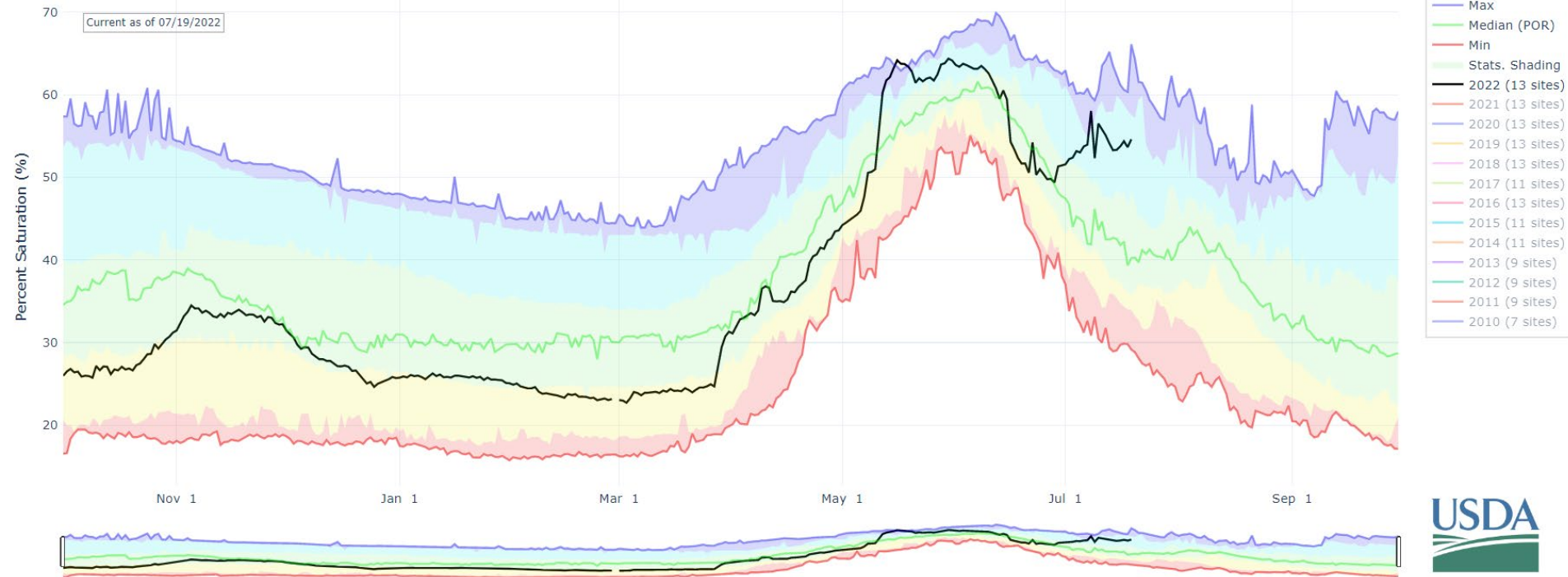
## DEPTH AVERAGED SOIL SATURATION IN COLORADO HEADWATERS

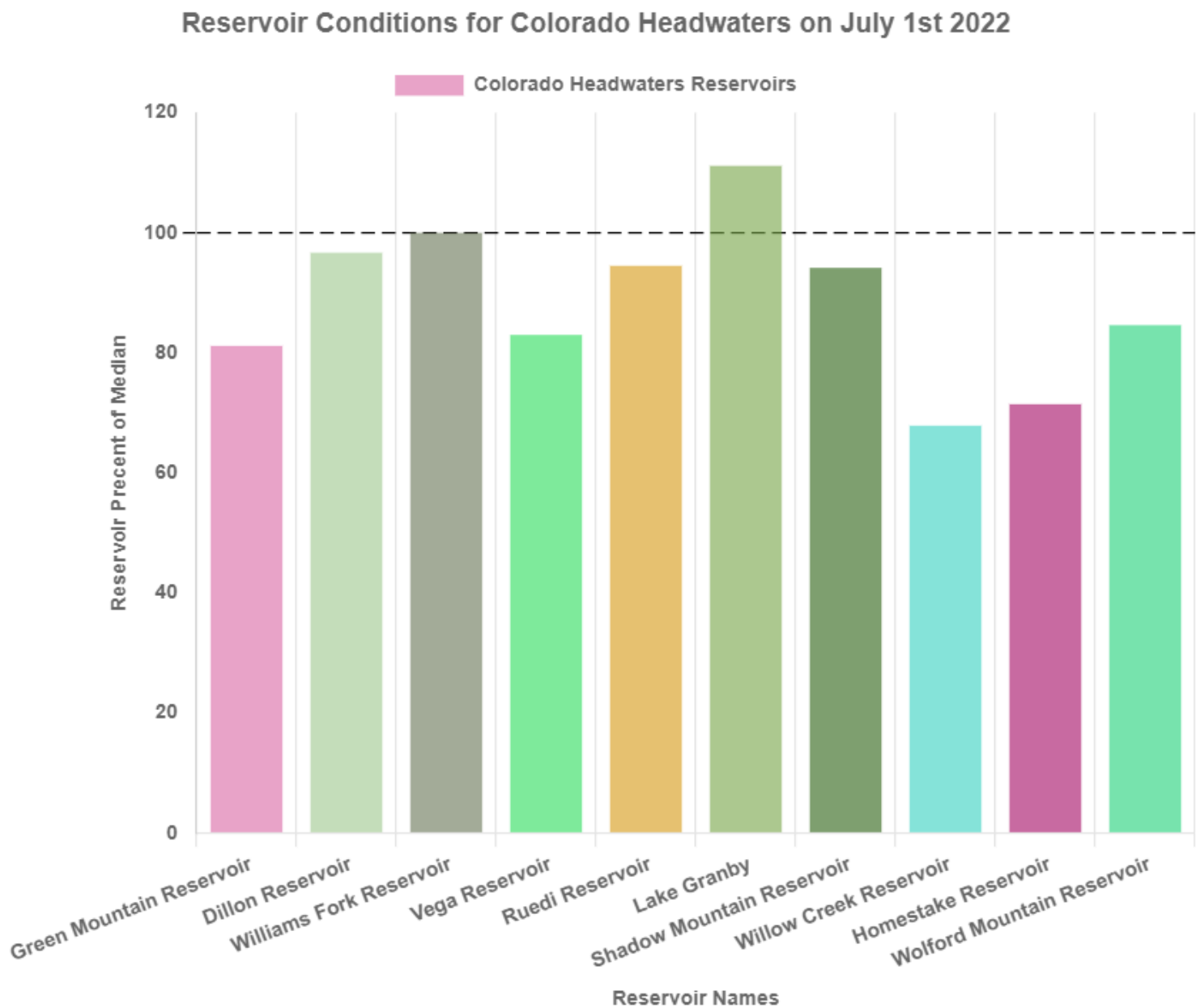
Reset Range

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

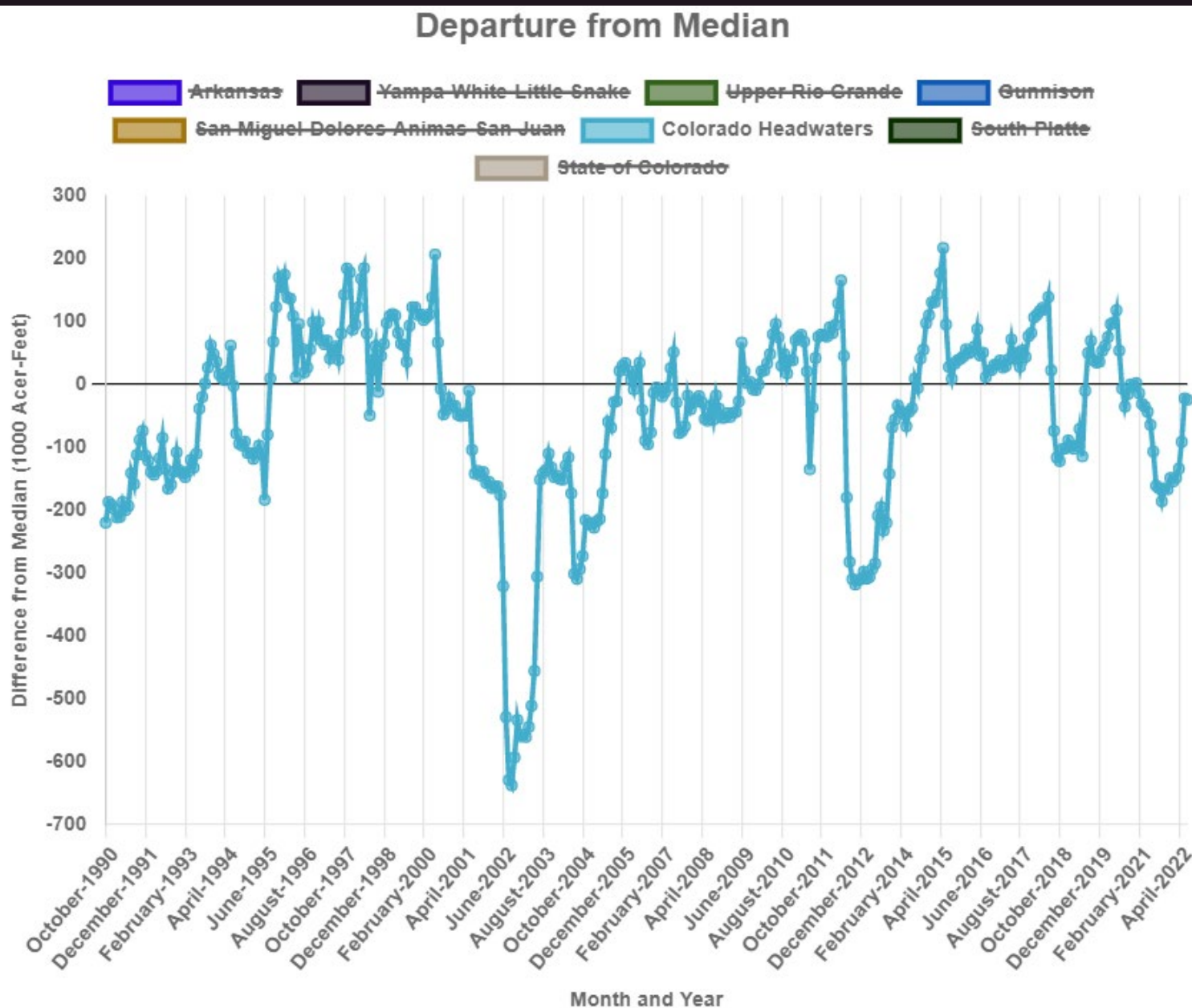
[Station List](#)

Current as of 07/19/2022

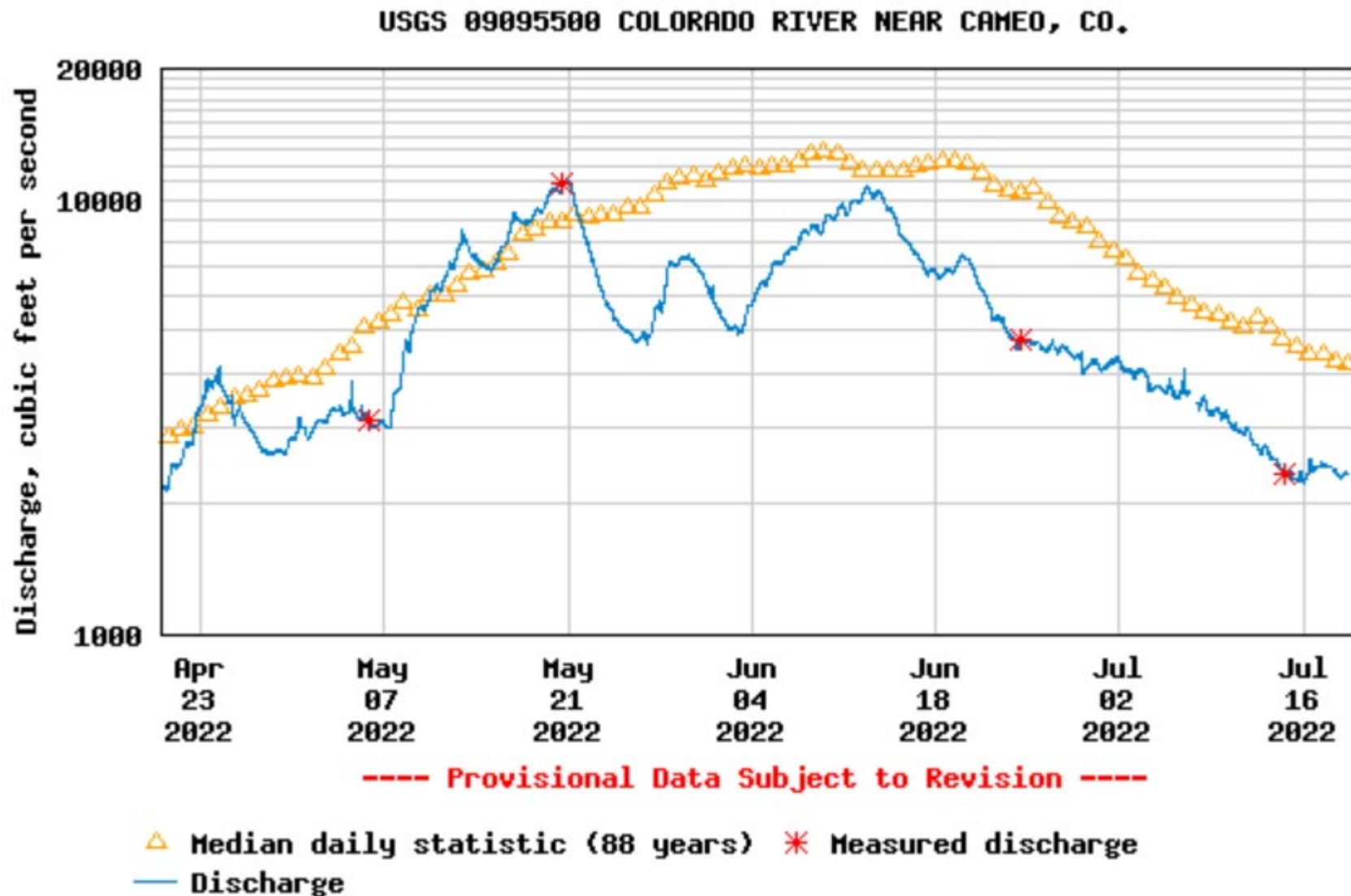






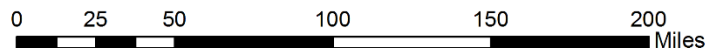
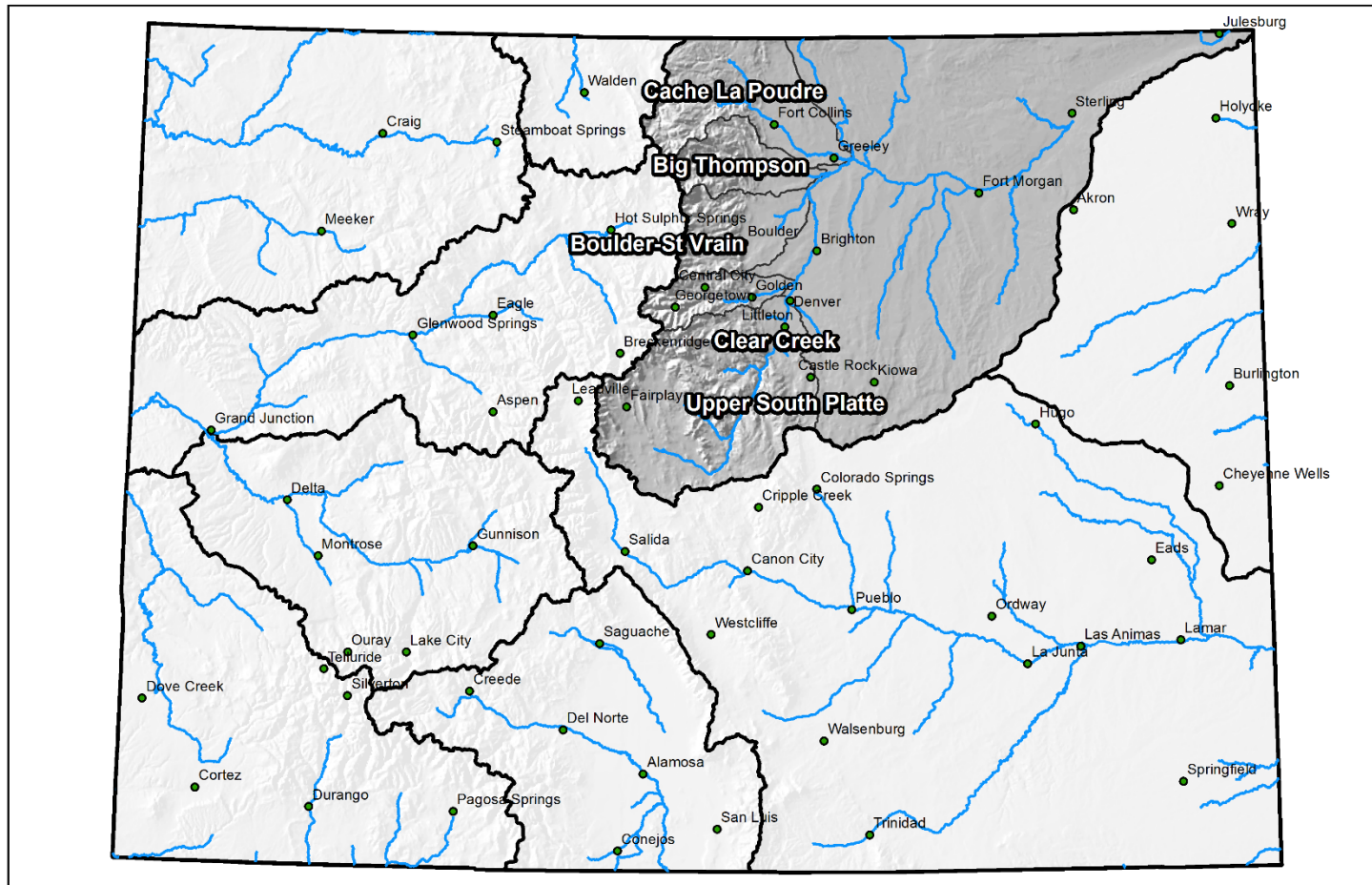






## Major Basin Summary

### South Platte River Basin





# Colorado Snow Surveys

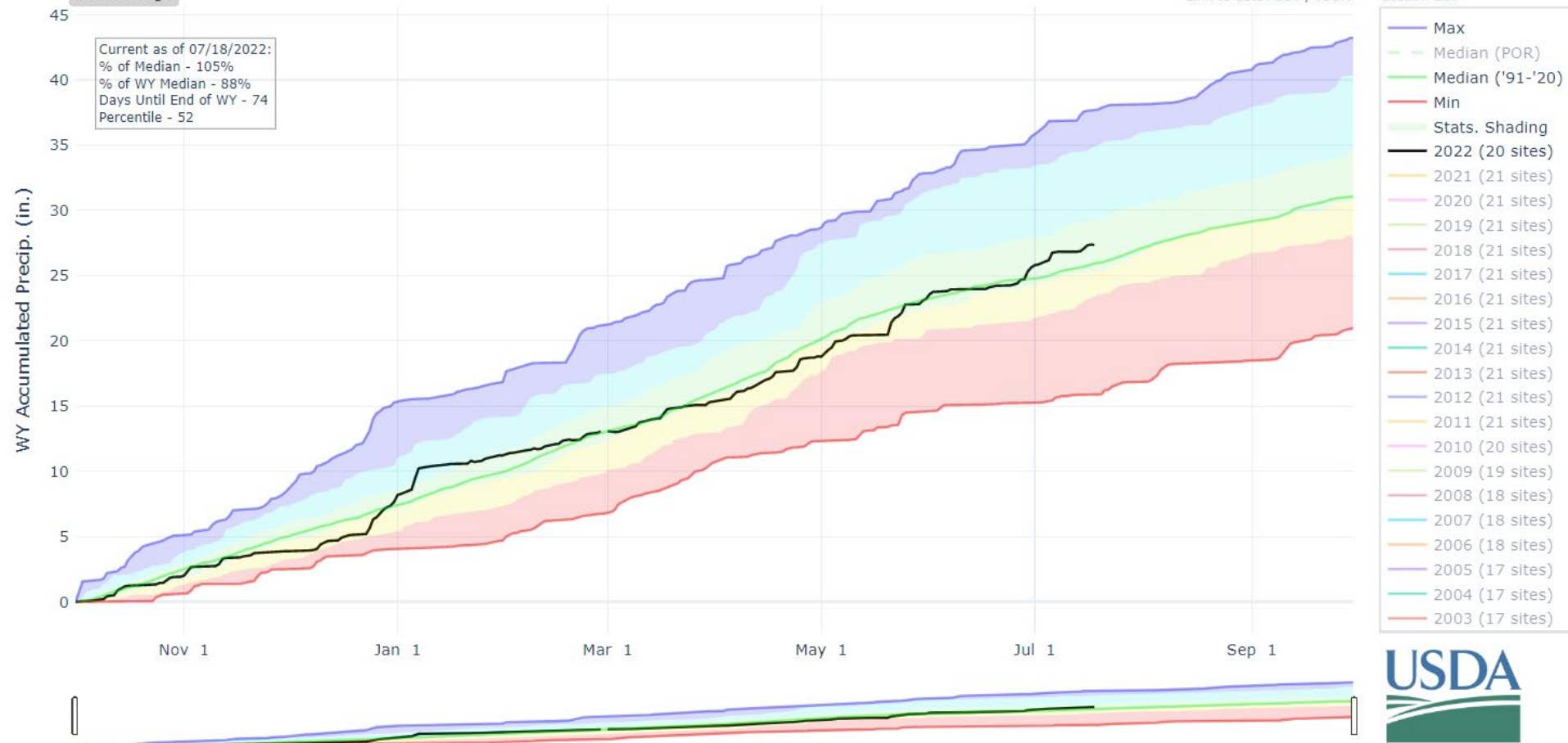
## PRECIPITATION IN SOUTH PLATTE

Reset Range

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

[Station List](#)

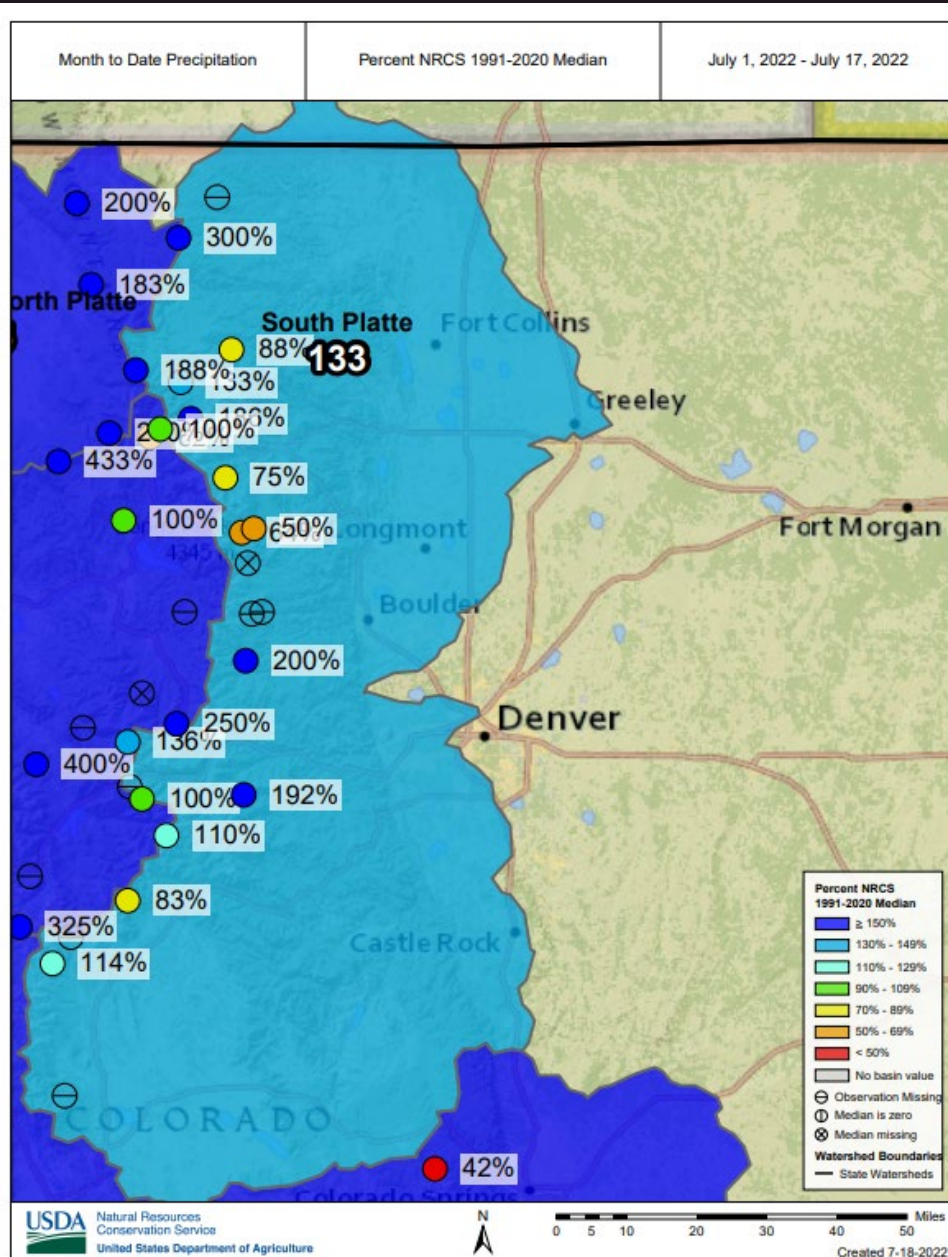
Current as of 07/18/2022:  
% of Median - 105%  
% of WY Median - 88%  
Days Until End of WY - 74  
Percentile - 52







# Colorado Snow Surveys





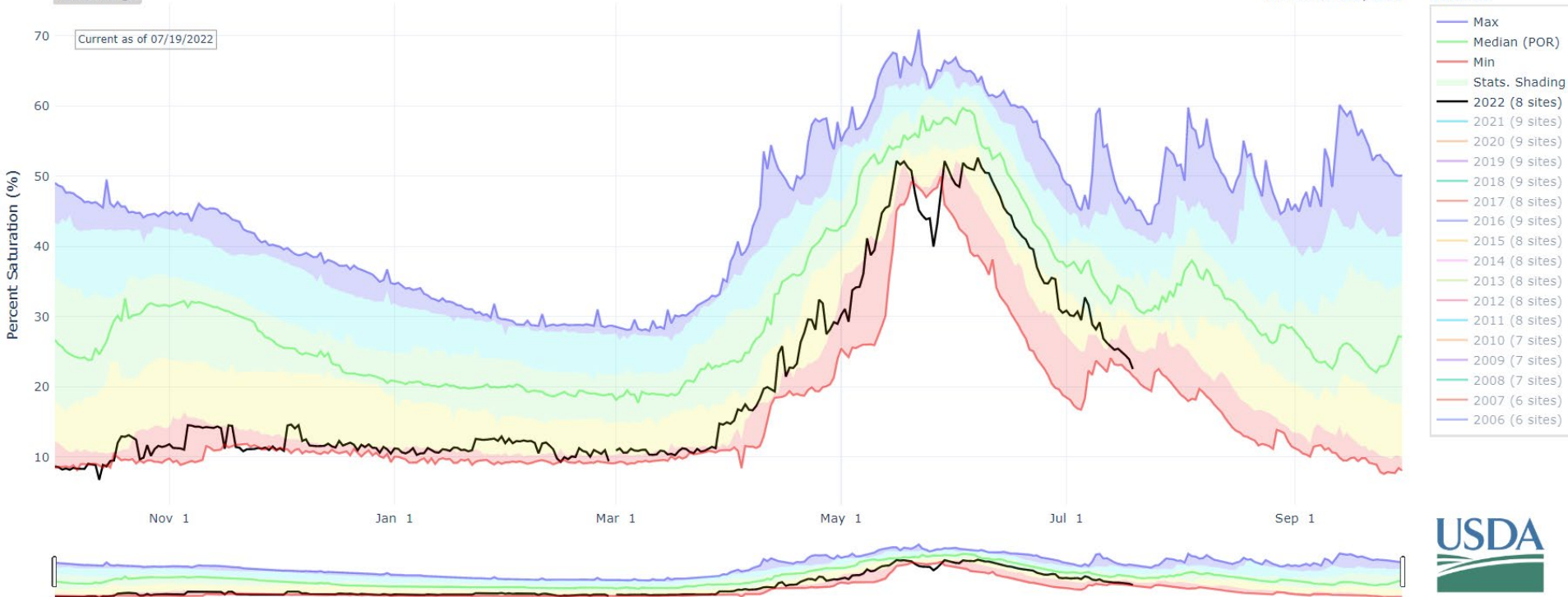
# Colorado Snow Surveys

## DEPTH AVERAGED SOIL SATURATION IN SOUTH PLATTE

Reset Range

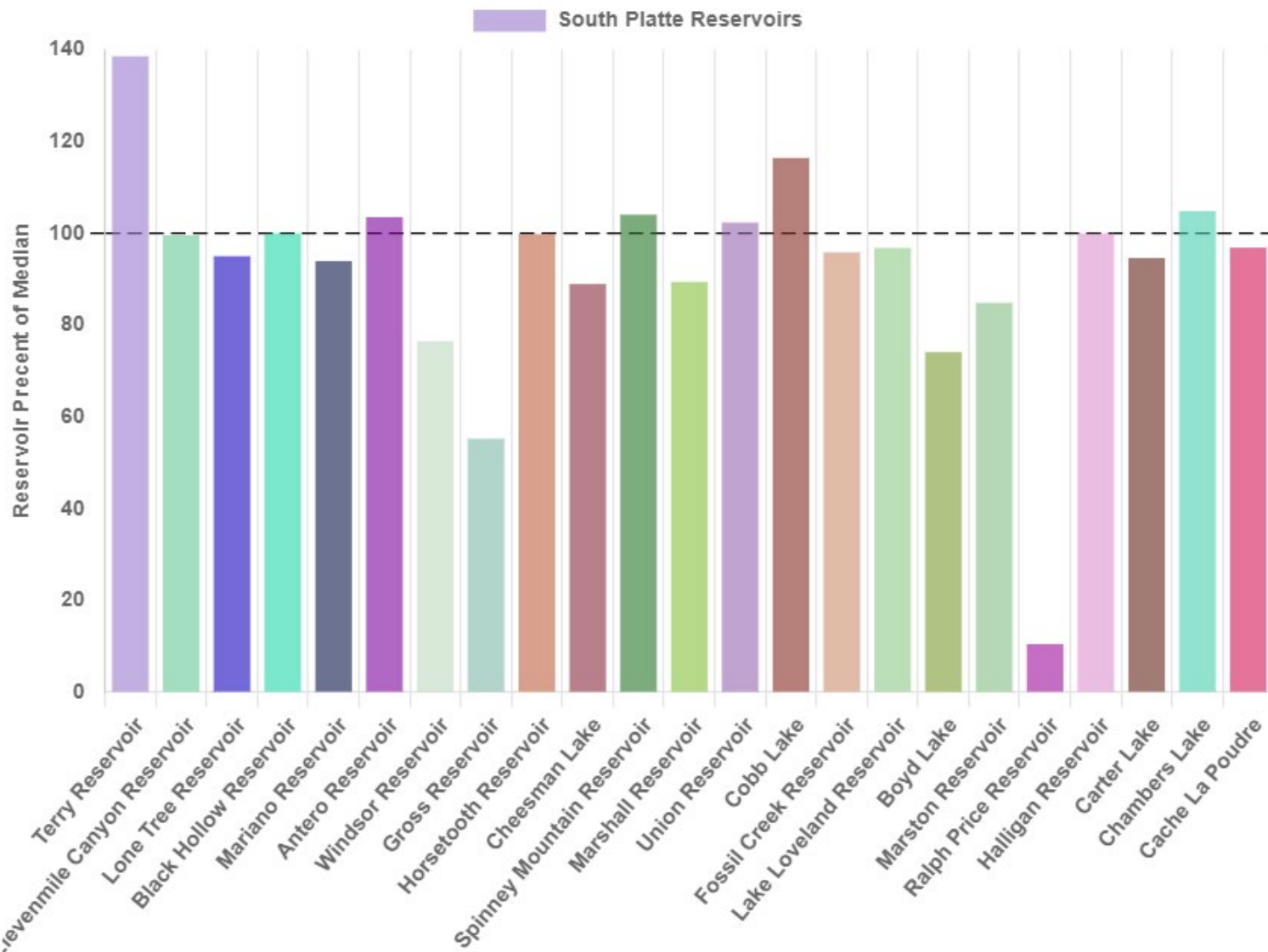
[Link to data: CSV / JSON](#)

Station List

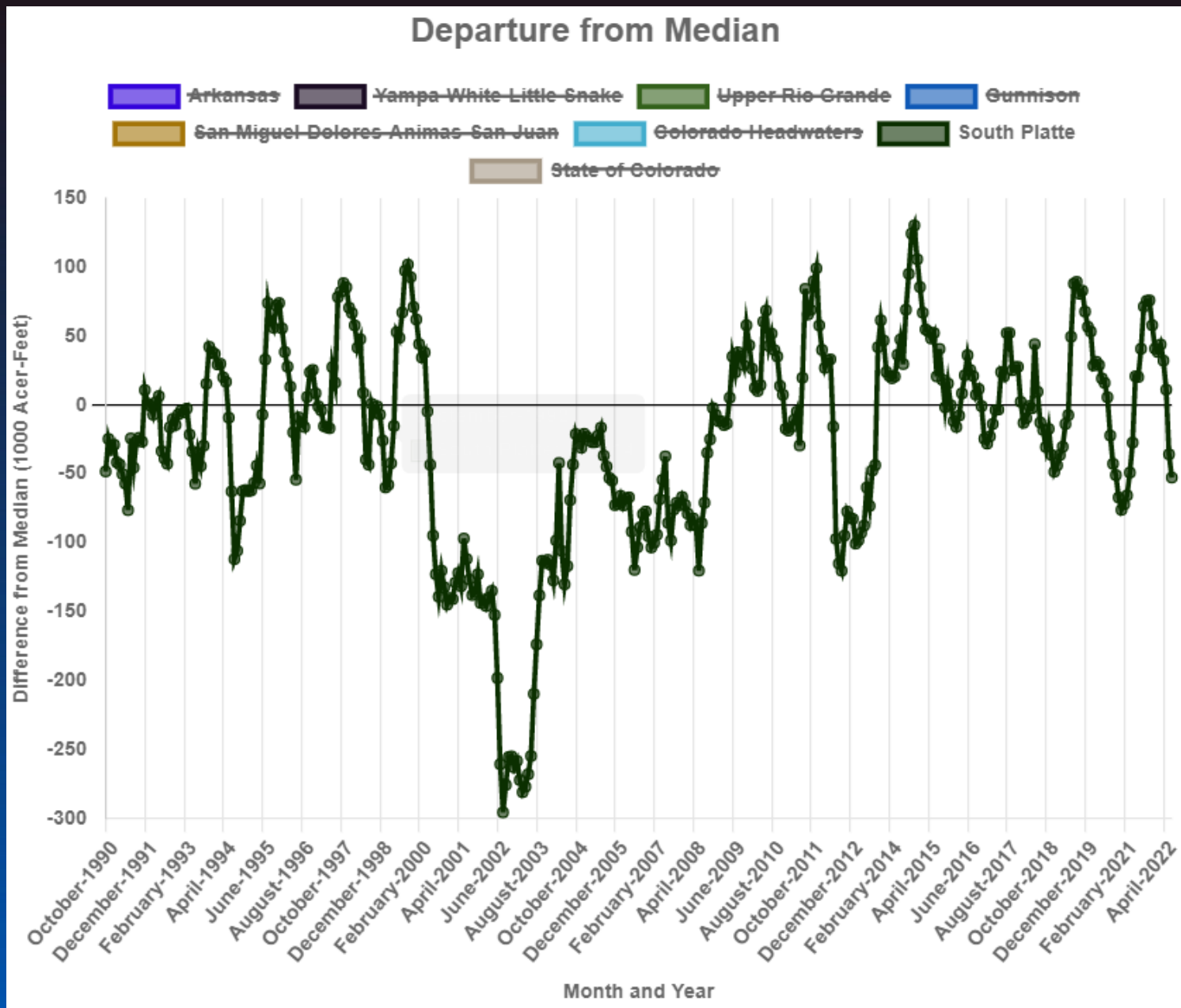




Reservoir Conditions for South Platte on July 1st 2022

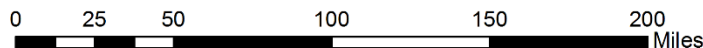
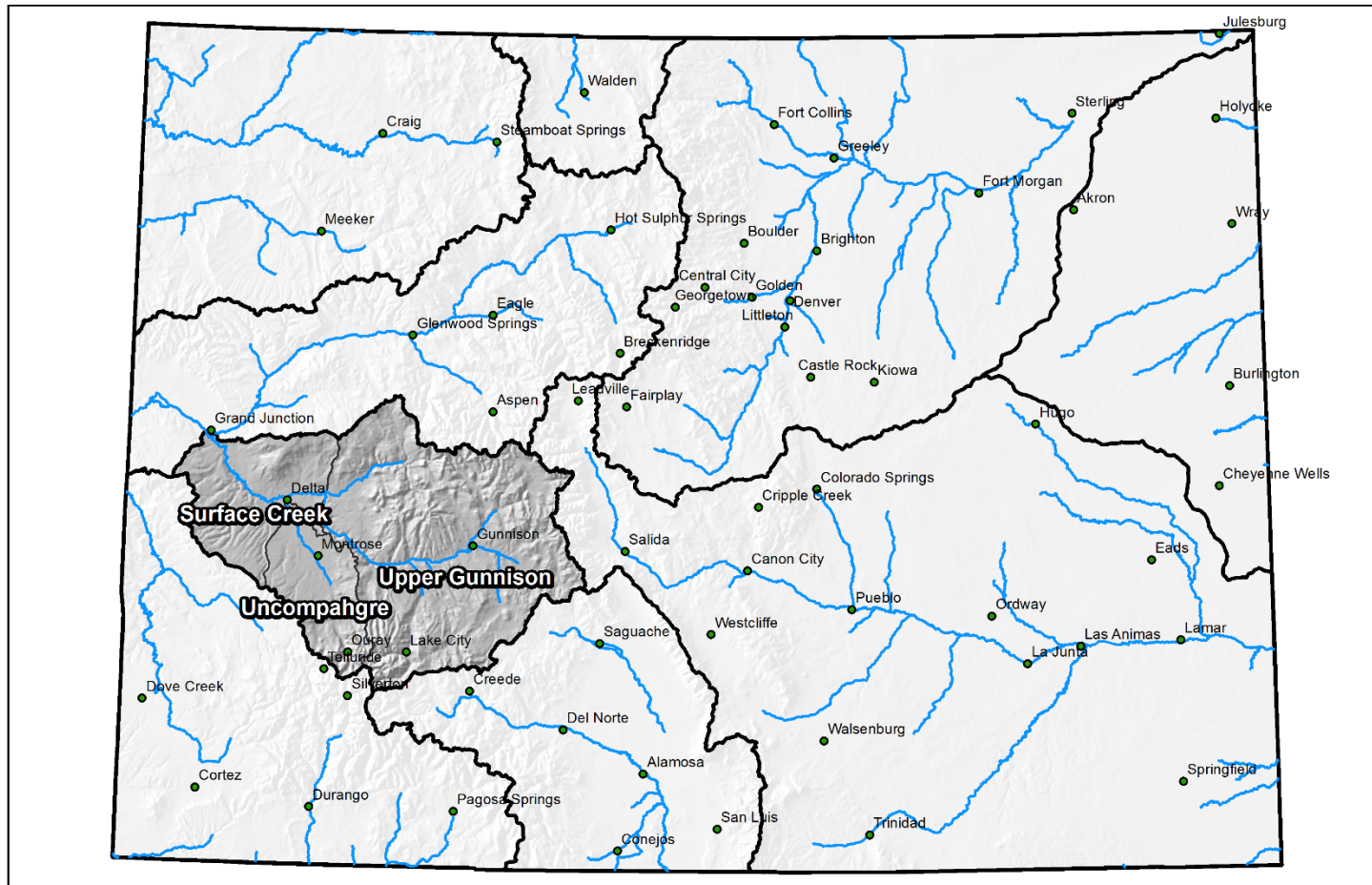


Reservoir Names



## Major Basin Summary

### Gunnison River Basin





# Colorado Snow Surveys

## PRECIPITATION IN GUNNISON

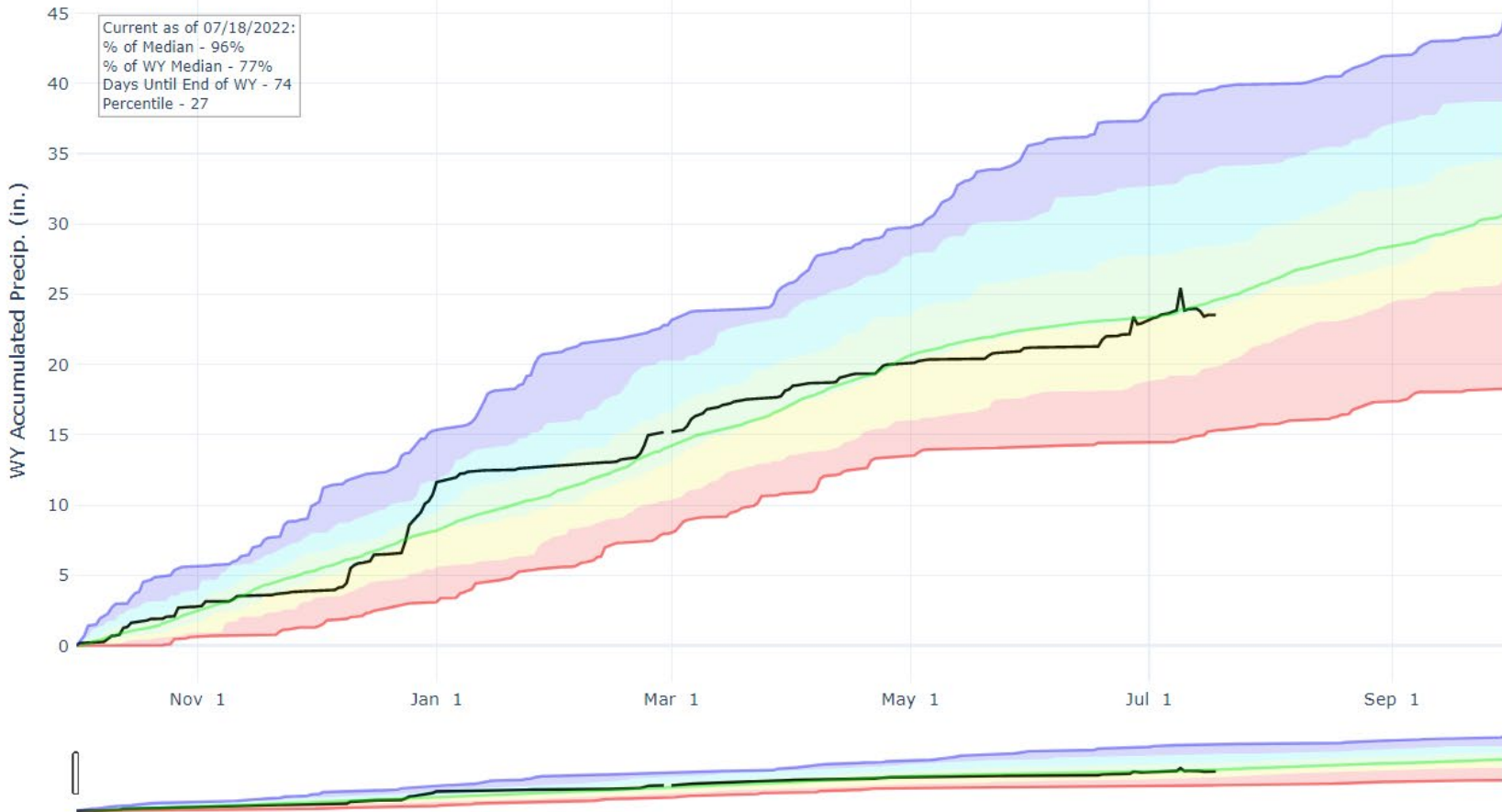
Reset Range

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

Station List

Current as of 07/18/2022:  
% of Median - 96%  
% of WY Median - 77%  
Days Until End of WY - 74  
Percentile - 27

- Max
- Median (POR)
- Median ('91-'20)
- Min
- Stats. Shading
- 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)
- 2003 (12 sites)

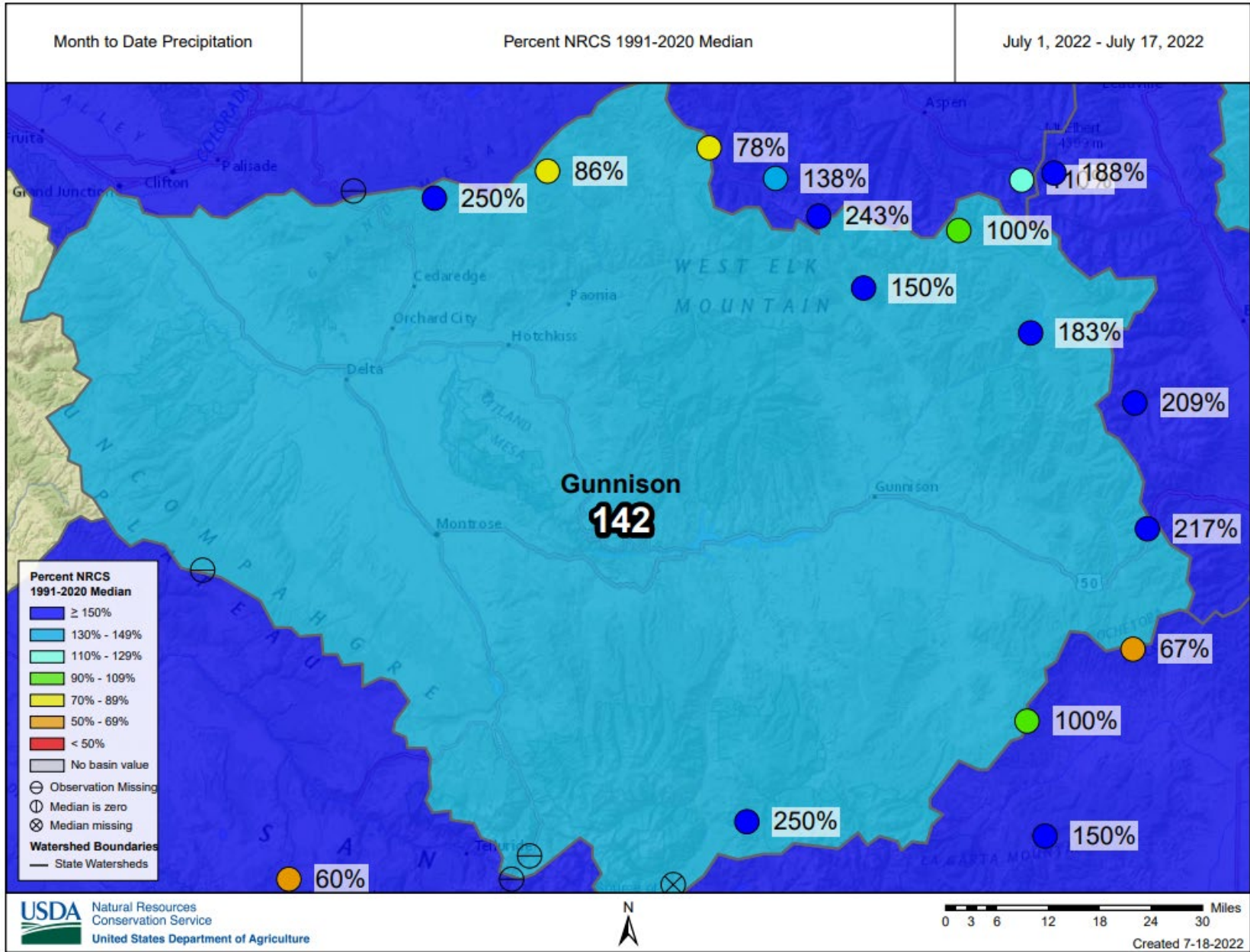






United States Department of Agriculture

# Colorado Snow Surveys







# Colorado Snow Surveys

## DEPTH AVERAGED SOIL SATURATION IN GUNNISON

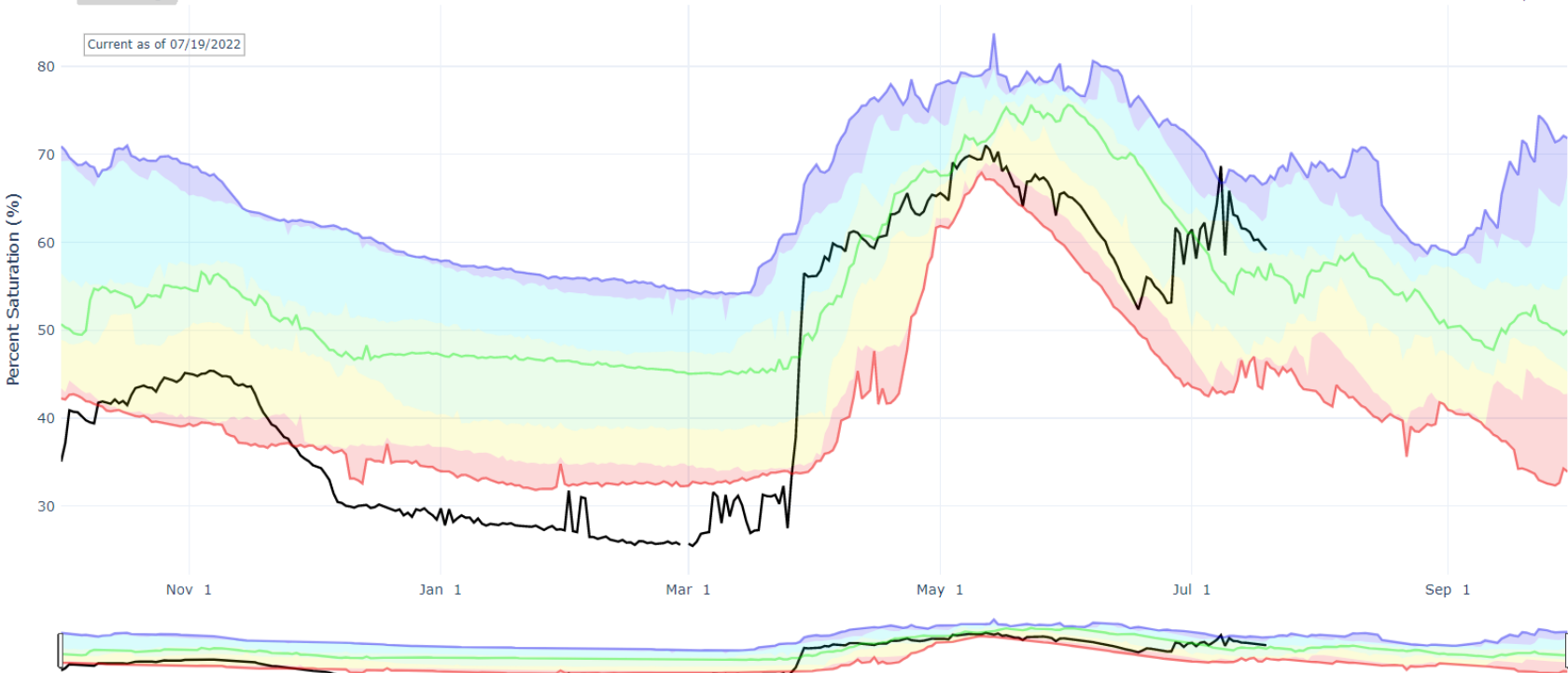
Reset Range

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

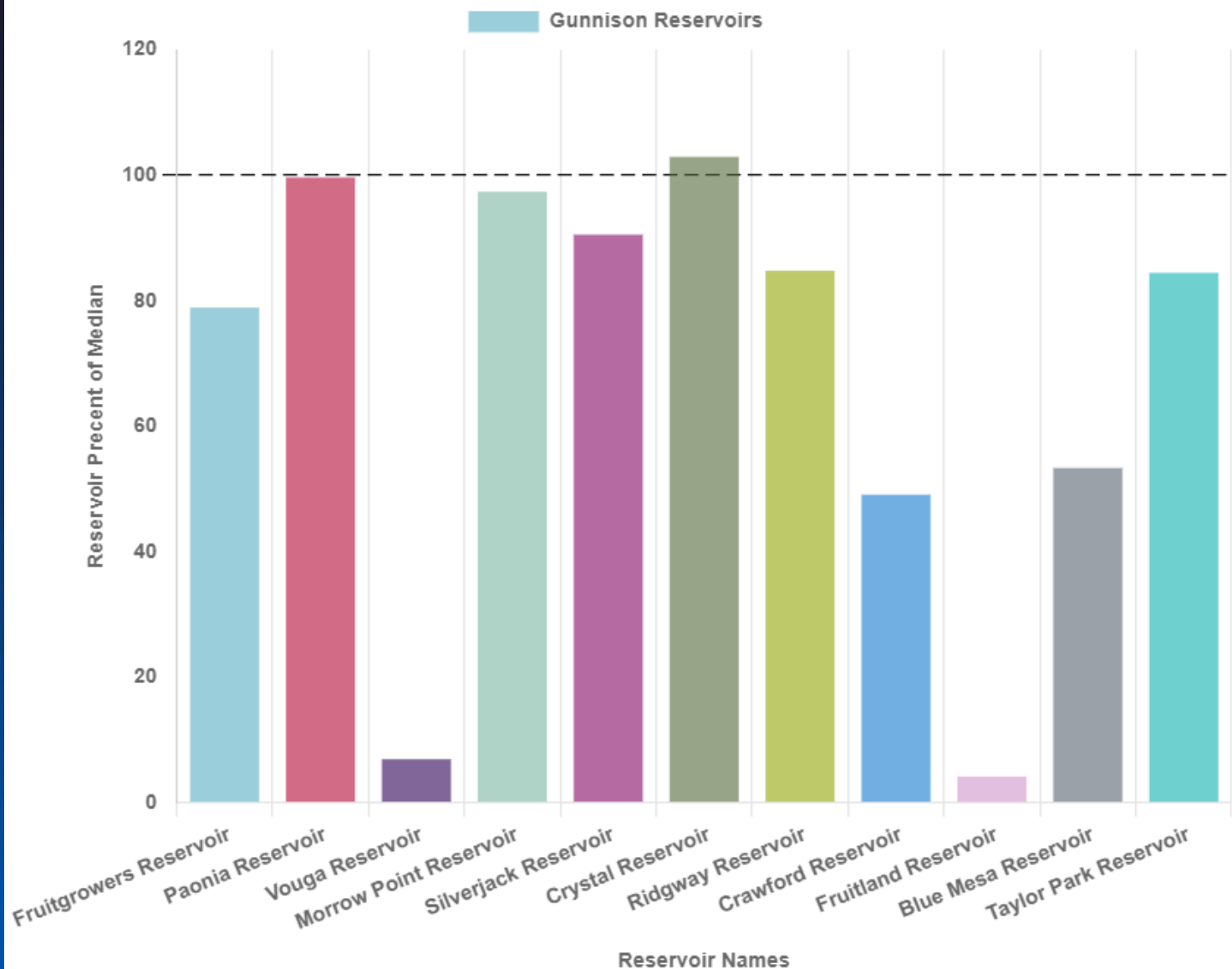
[Station List](#)

Current as of 07/19/2022

- Max
- Median (POR)
- Min
- Stats. Shading
- 2022 (8 sites)
- 2021 (8 sites)
- 2020 (8 sites)
- 2019 (8 sites)
- 2018 (8 sites)
- 2017 (7 sites)
- 2016 (8 sites)
- 2015 (8 sites)
- 2014 (8 sites)
- 2013 (7 sites)
- 2012 (7 sites)
- 2011 (7 sites)

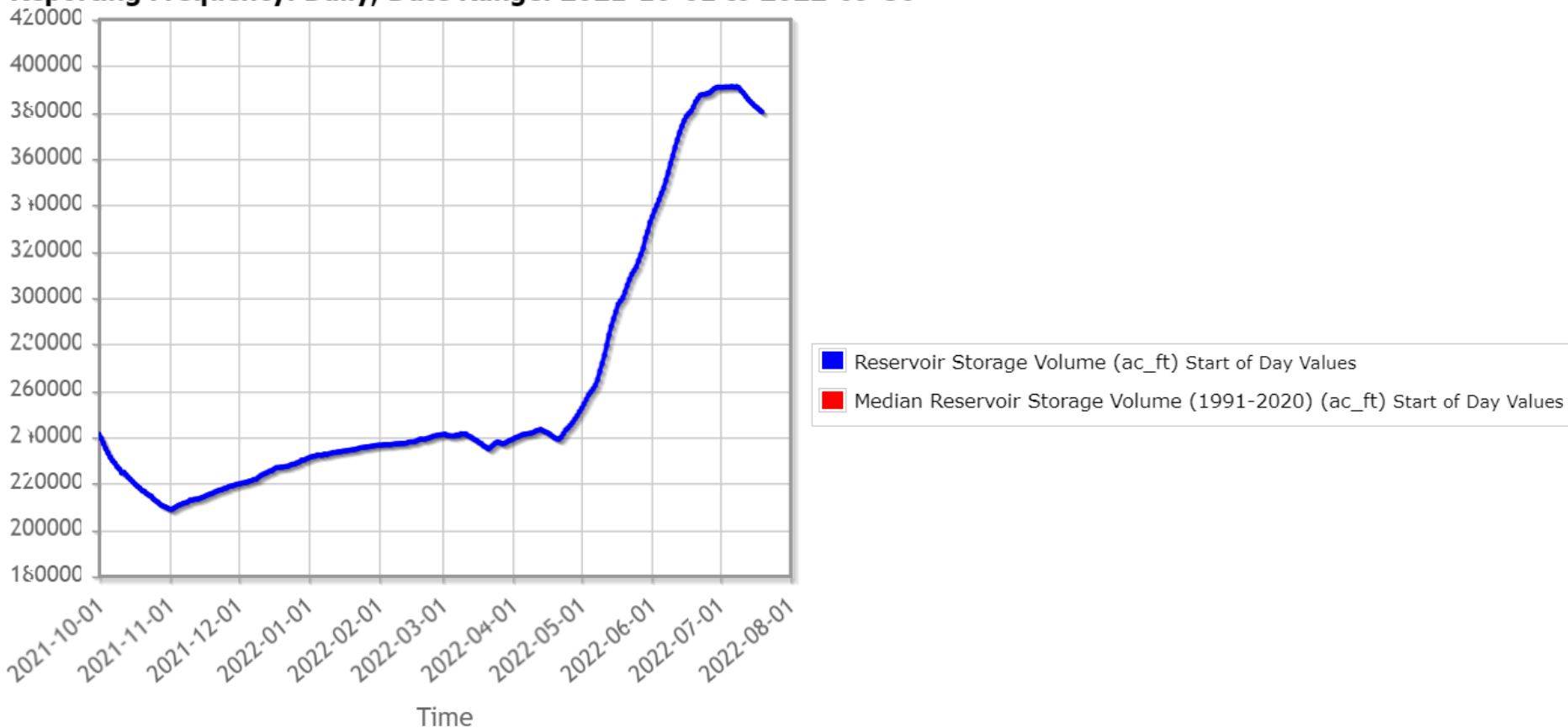


Reservoir Conditions for Gunnison on July 1st 2022

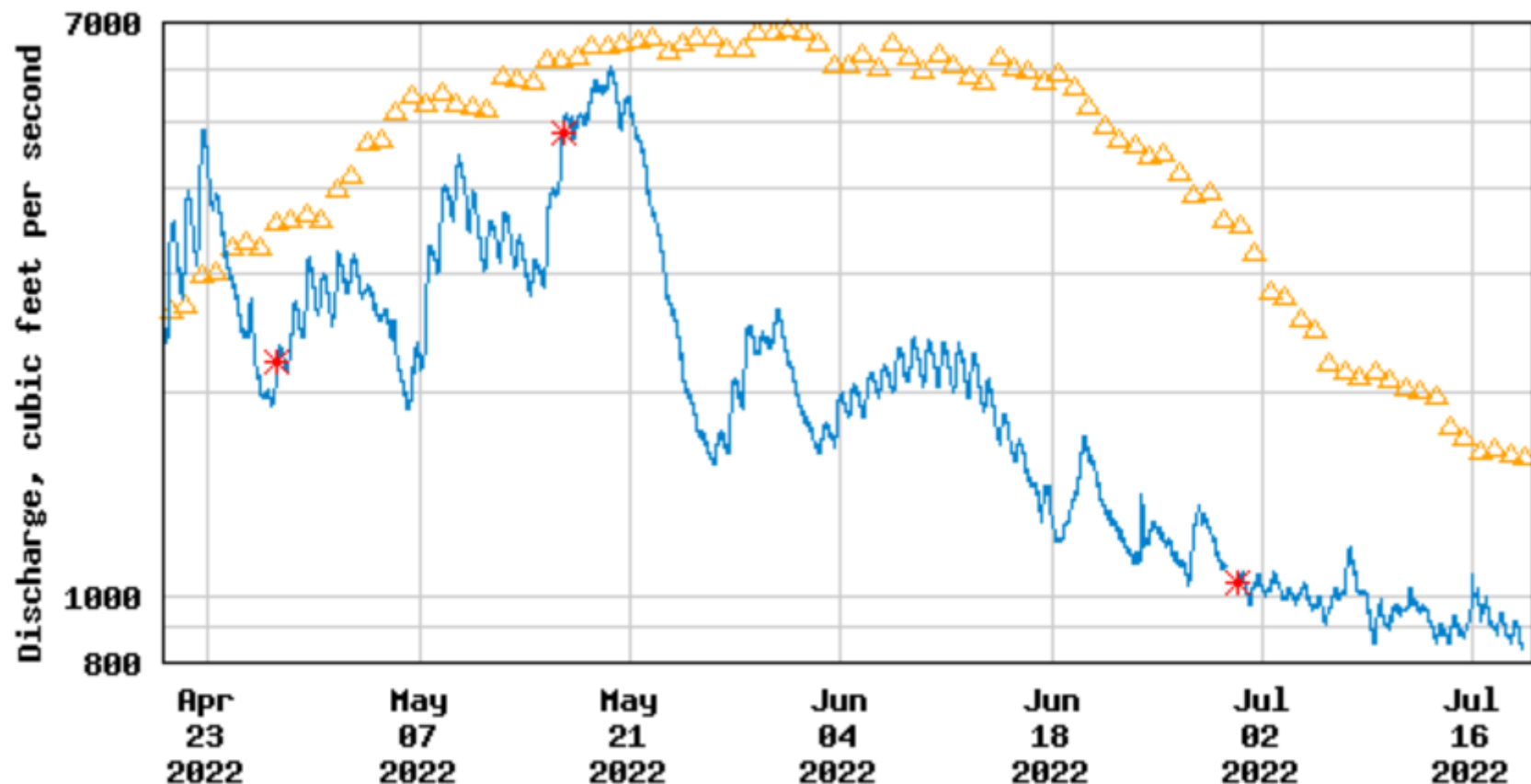




**Blue Mesa Reservoir (09009010) Colorado RESERVOIR Site - 7550 ft**  
**Reporting Frequency: Daily; Date Range: 2021-10-01 to 2022-09-30**



USGS 09152500 GUNNISON RIVER NEAR GRAND JUNCTION, CO.



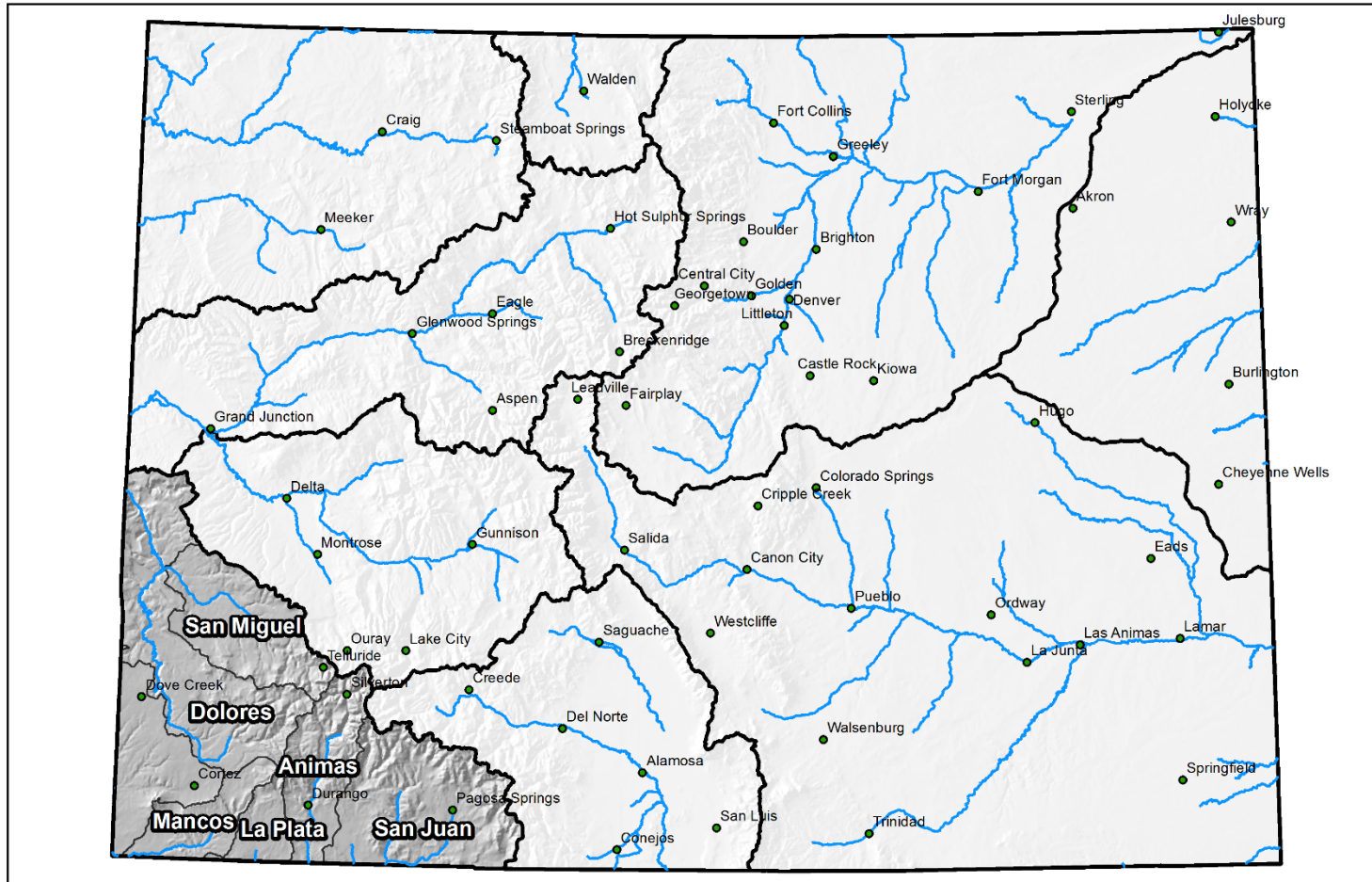
---- Provisional Data Subject to Revision ----

- △ Median daily statistic (113 years)
- \* Measured discharge
- Discharge



## Major Basin Summary

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



0 25 50 100 150 200 Miles



# Colorado Snow Surveys

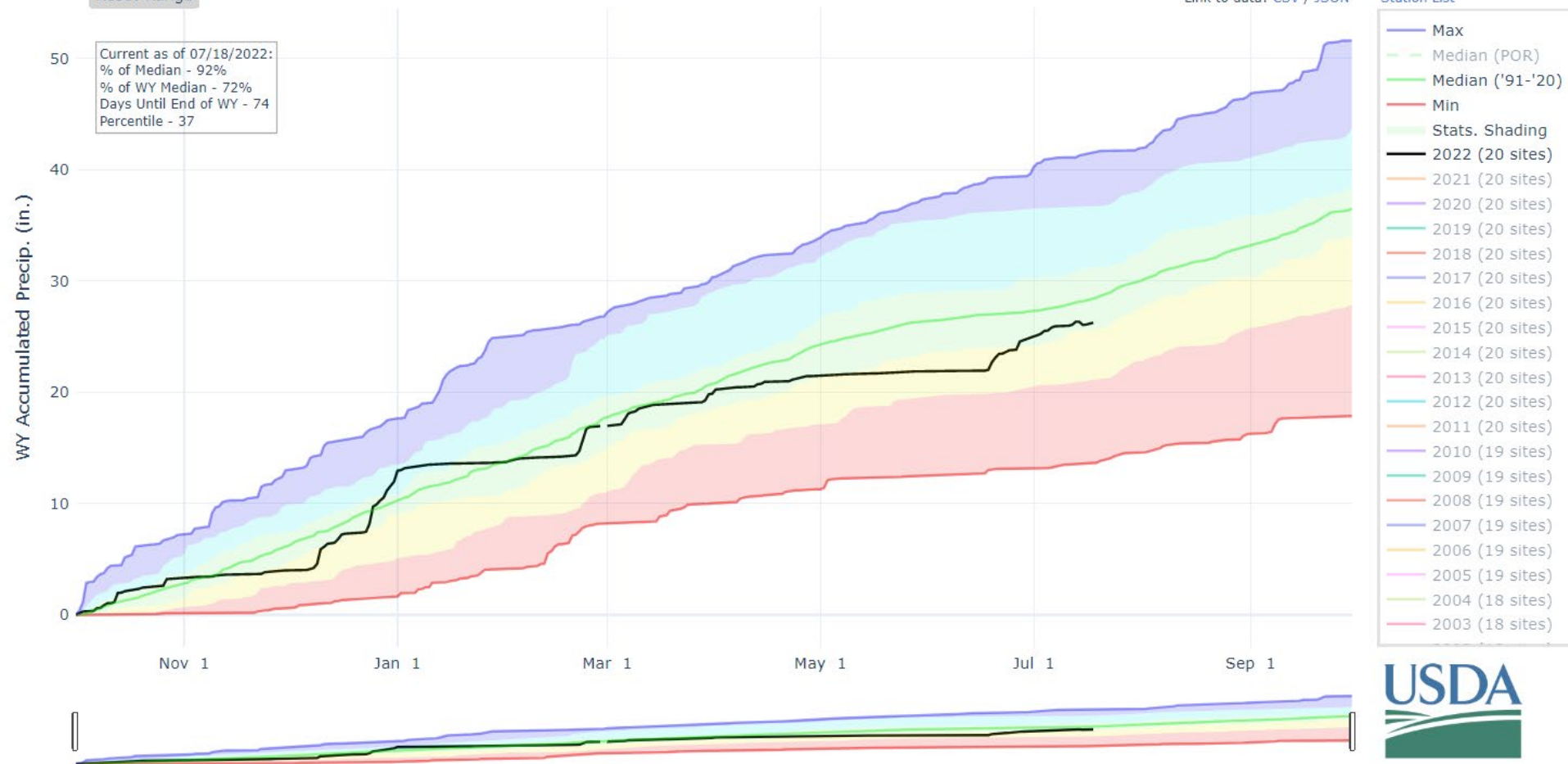
## PRECIPITATION IN SAN MIGUEL-DOLORES-ANIMAS-SAN JUAN

Reset Range

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

[Station List](#)

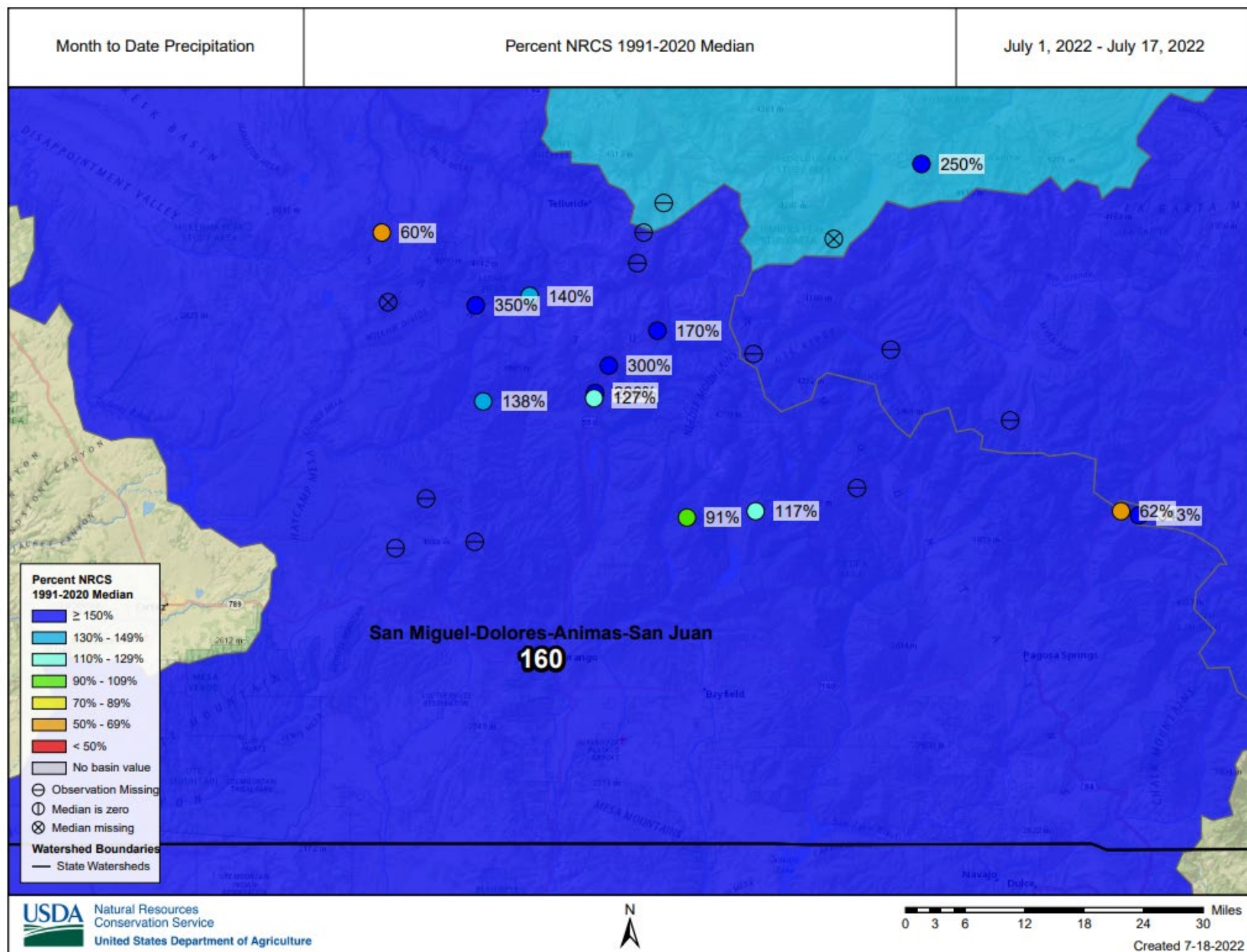
Current as of 07/18/2022:  
% of Median - 92%  
% of WY Median - 72%  
Days Until End of WY - 74  
Percentile - 37





United States Department of Agriculture

# Colorado Snow Surveys







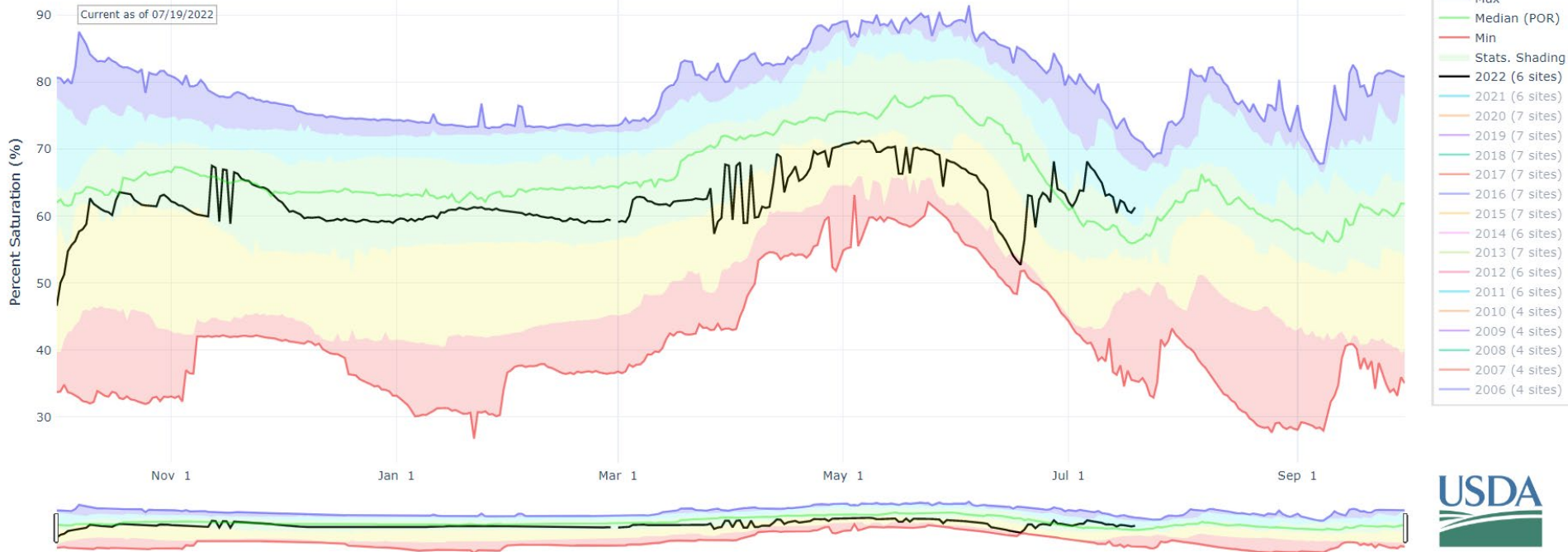
# Colorado Snow Surveys

## DEPTH AVERAGED SOIL SATURATION IN SAN MIGUEL-DOLORES-ANIMAS-SAN JUAN

Reset Range

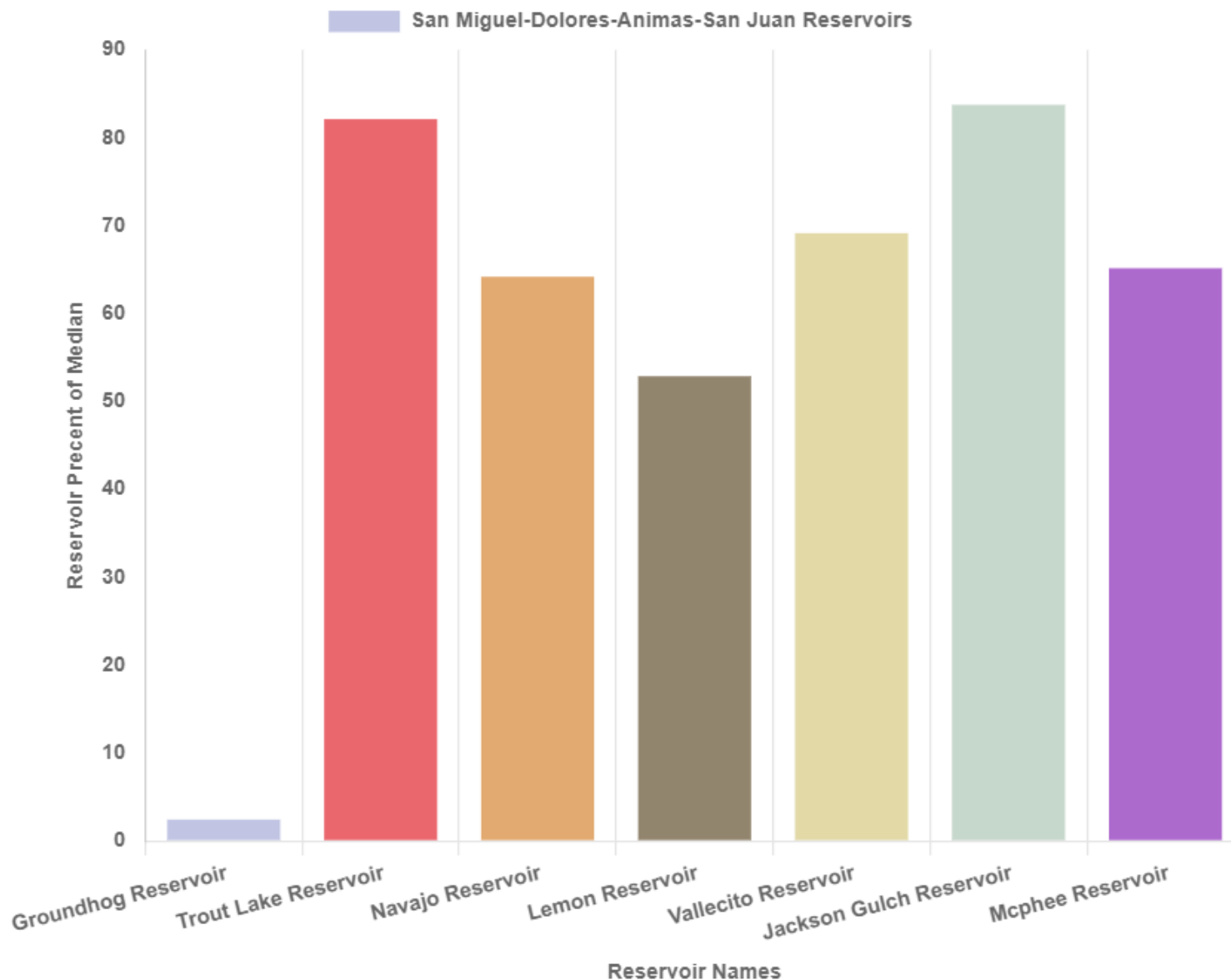
[Link to data: CSV / JSON](#)

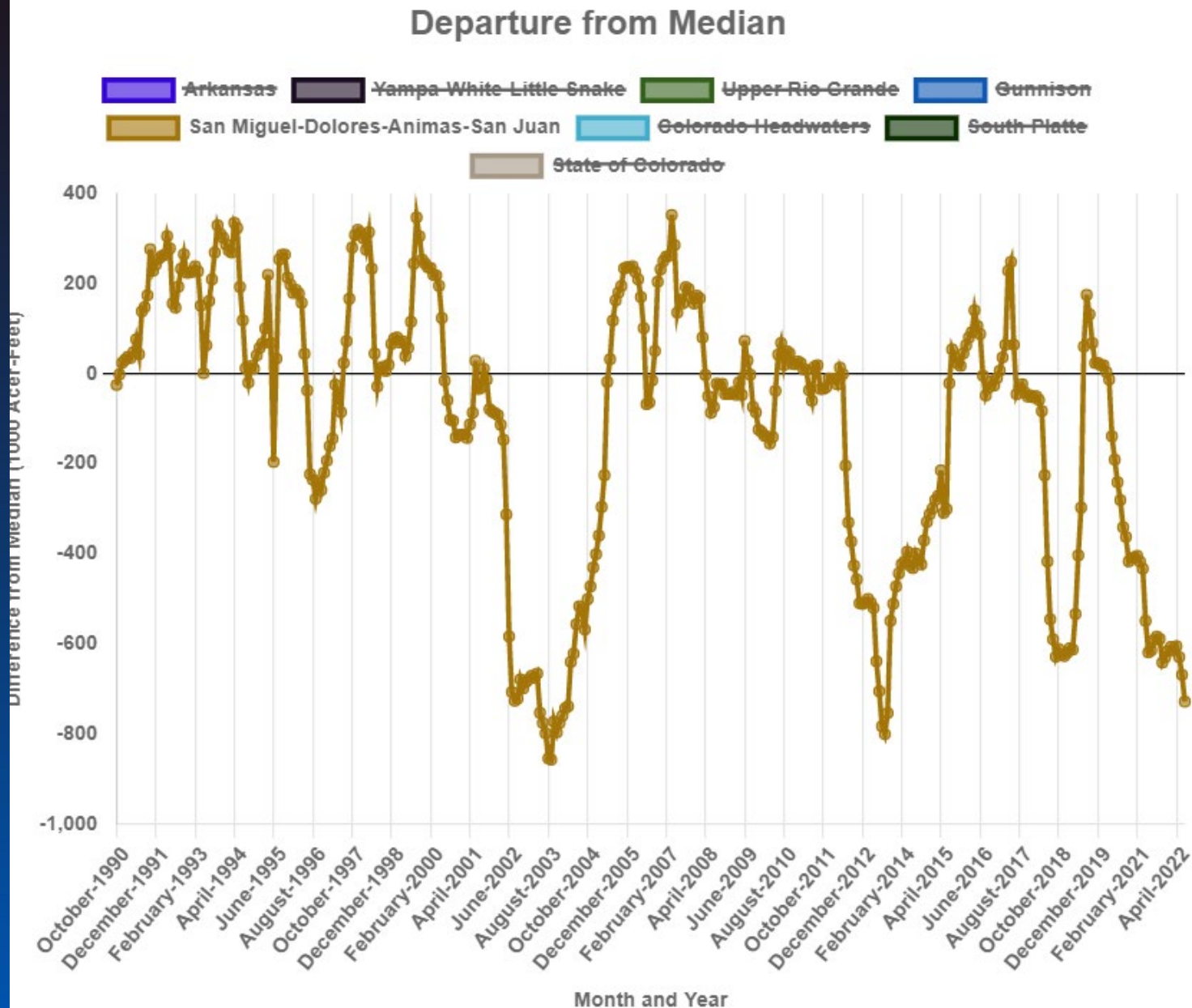
Station List





## Reservoir Conditions for San Miguel-Dolores-Animas-San Juan on July 1st 2022





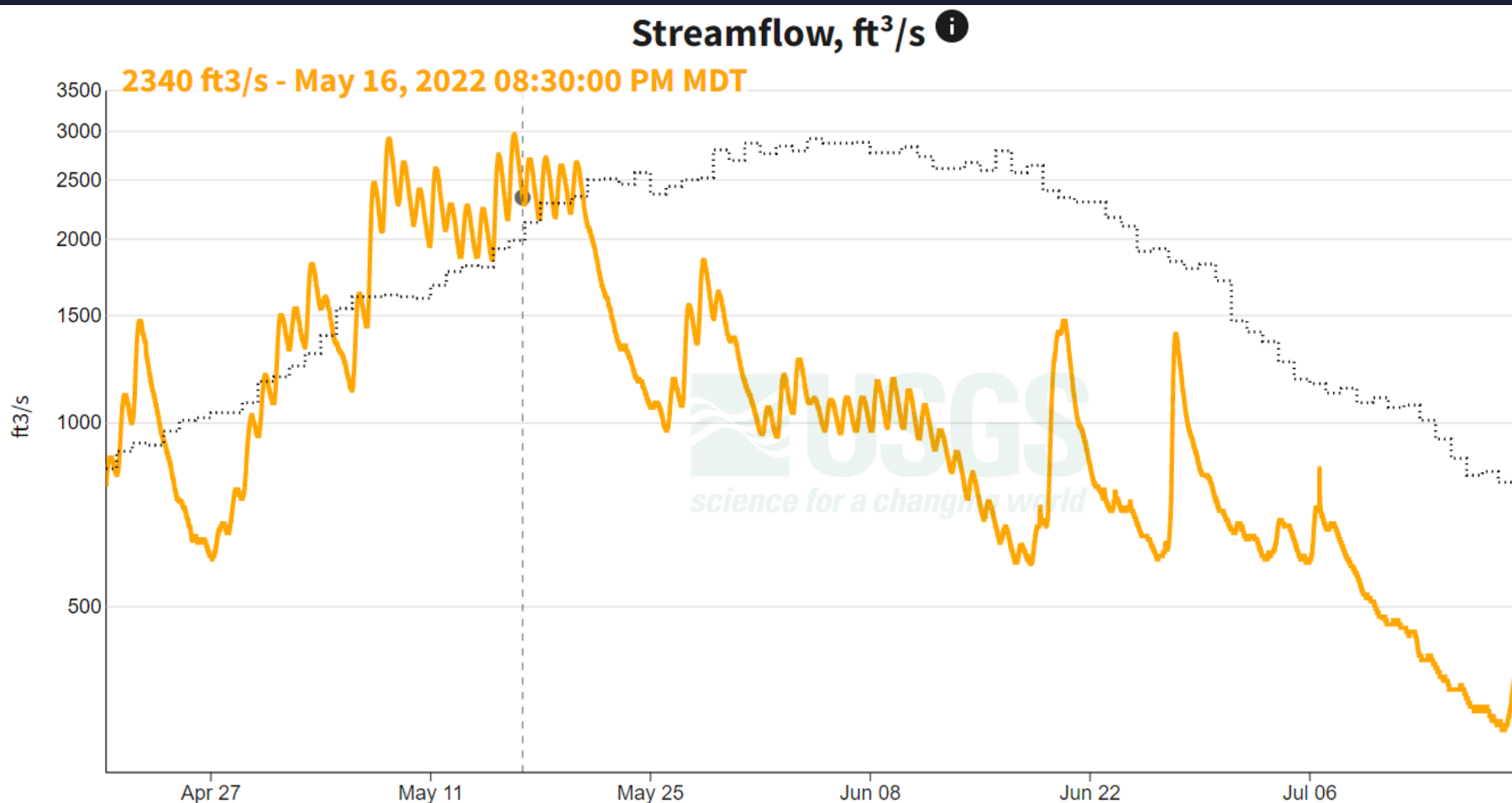


United States Department of Agriculture

# Colorado Snow Surveys

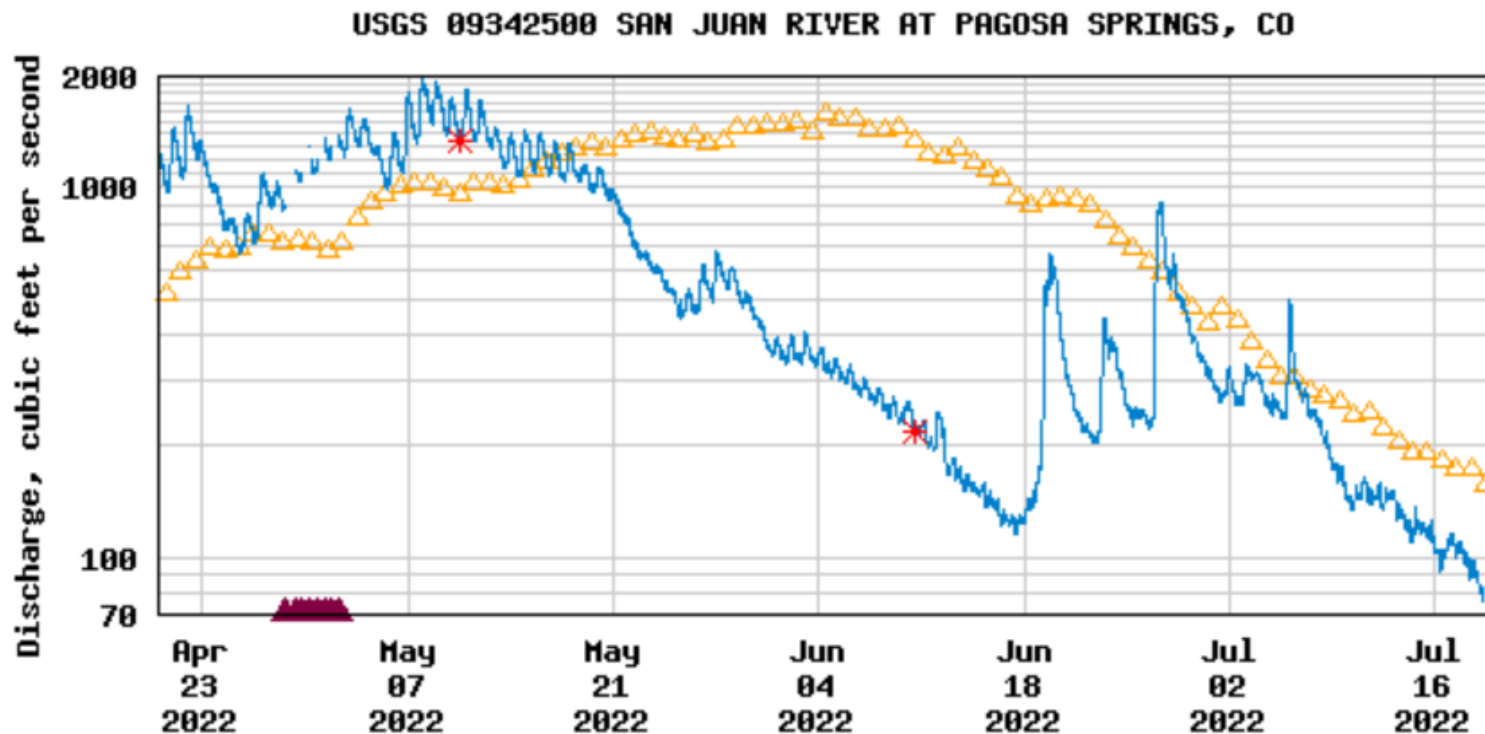
## Animas at Durango:

Note the early peak and spikes from monsoon rain but quick return to baseflow



## Discharge, cubic feet per second

Most recent instantaneous value: 76.4 07-19-2022 08:00 MDT



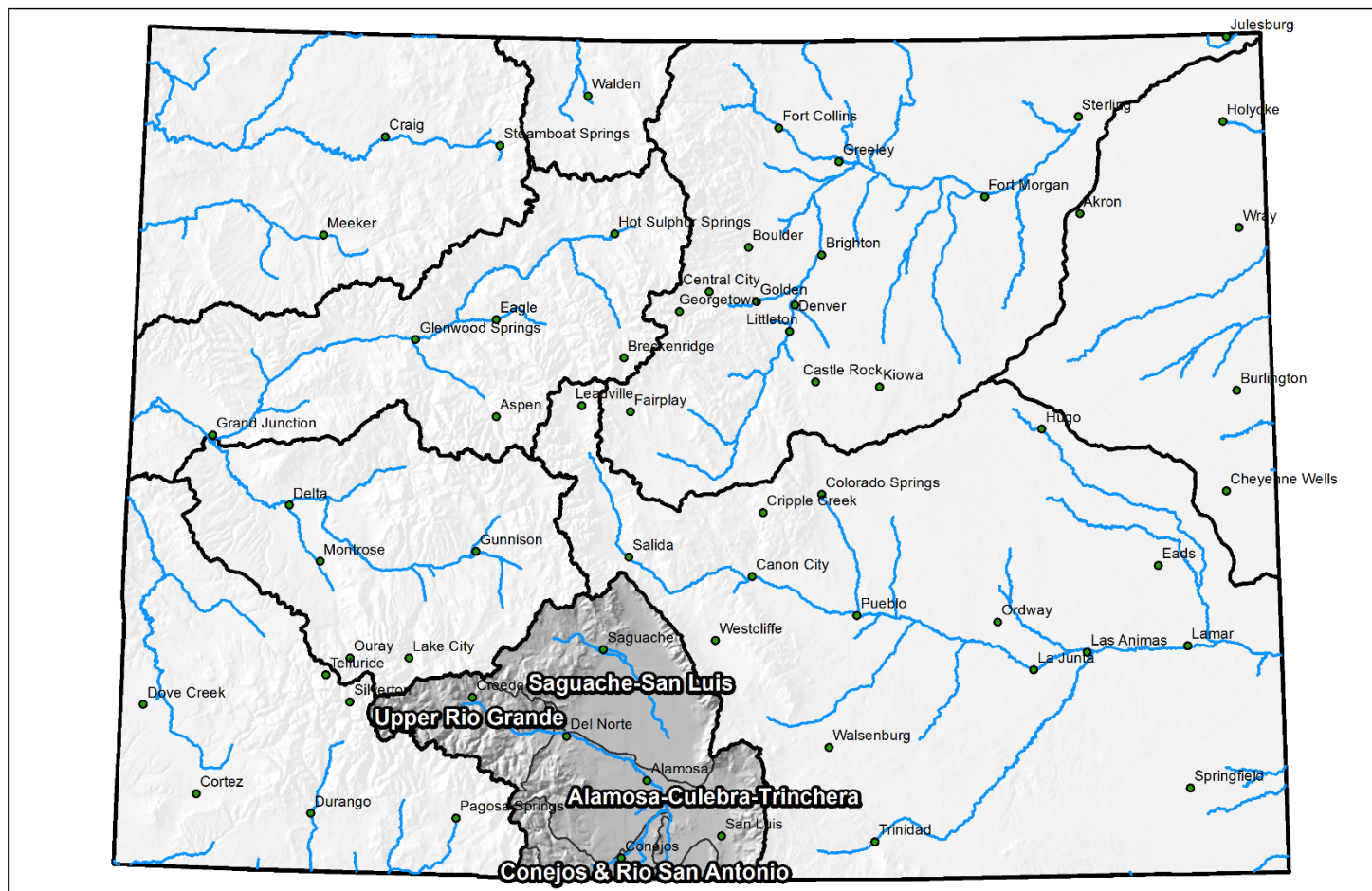
----- Provisional Data Subject to Revision -----

- △ Median daily statistic (86 years)
- Discharge
- Value affected by equipment malfunction.
- \* Measured discharge



## Major Basin Summary

### Upper Rio Grande River Basin



0 25 50 100 150 200 Miles



# Colorado Snow Surveys

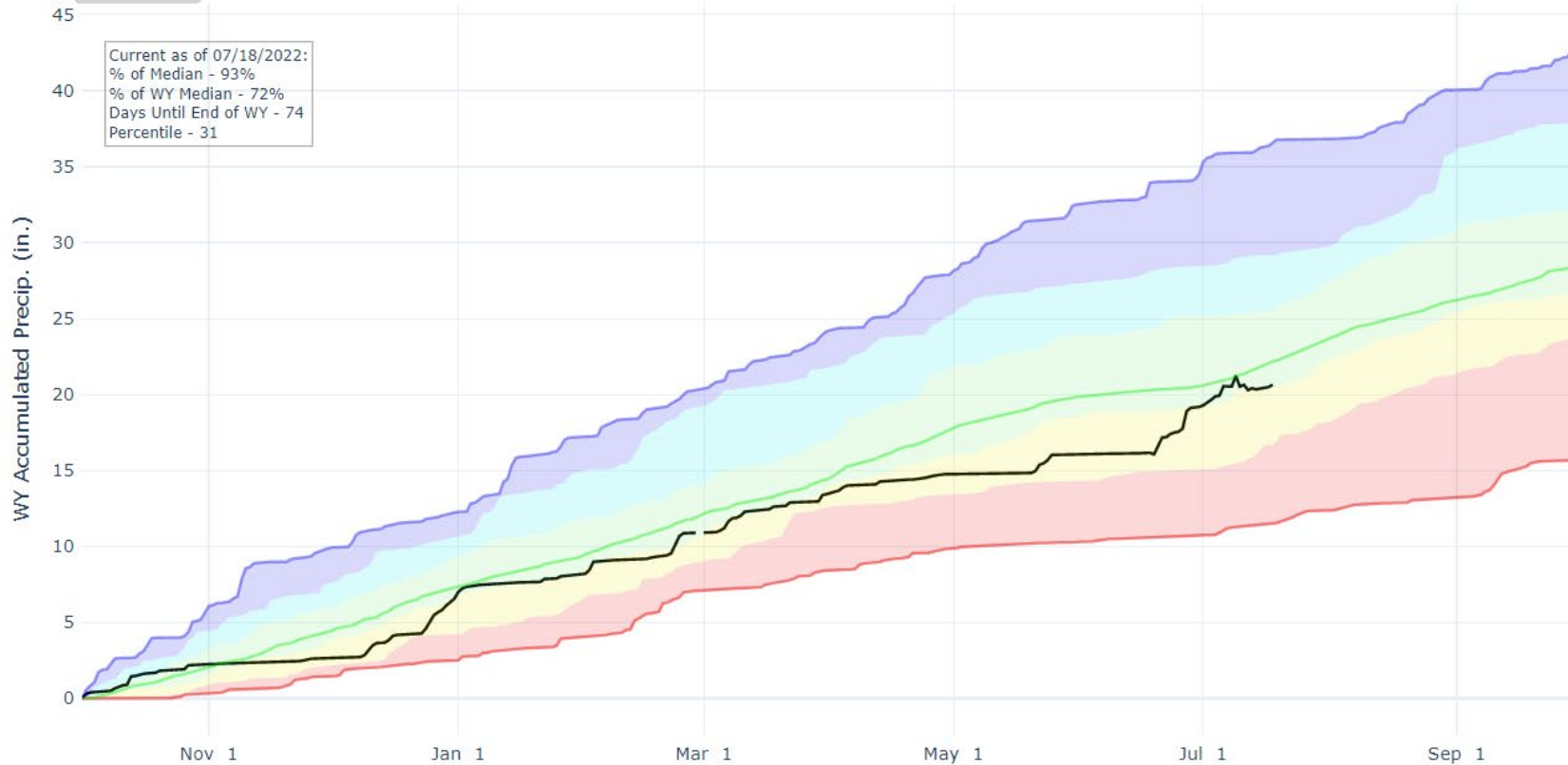
## PRECIPITATION IN UPPER RIO GRANDE

Reset Range

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

[Station List](#)

Current as of 07/18/2022:  
% of Median - 93%  
% of WY Median - 72%  
Days Until End of WY - 74  
Percentile - 31



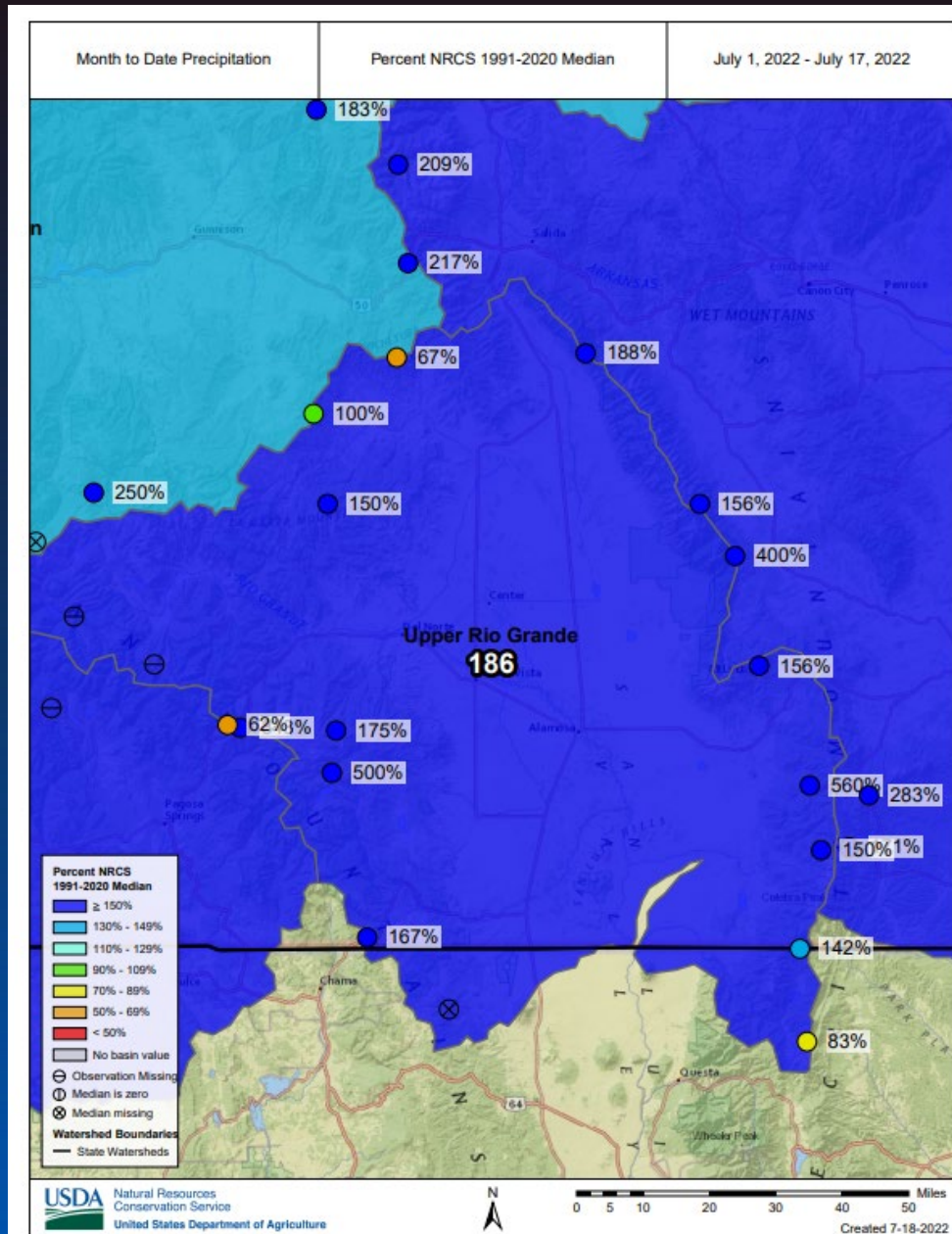
- Max
- Median (POR)
- Median ('91-'20)
- Min
- Stats. Shading
- 2022 (18 sites)
- 2021 (18 sites)
- 2020 (18 sites)
- 2019 (18 sites)
- 2018 (18 sites)
- 2017 (18 sites)
- 2016 (18 sites)
- 2015 (18 sites)
- 2014 (18 sites)
- 2013 (18 sites)
- 2012 (18 sites)
- 2011 (18 sites)
- 2010 (17 sites)
- 2009 (17 sites)
- 2008 (15 sites)
- 2007 (14 sites)
- 2006 (14 sites)
- 2005 (14 sites)
- 2004 (12 sites)
- 2003 (12 sites)





United States Department of Agriculture

# Colorado Snow Surveys







# Colorado Snow Surveys

## DEPTH AVERAGED SOIL SATURATION IN UPPER RIO GRANDE

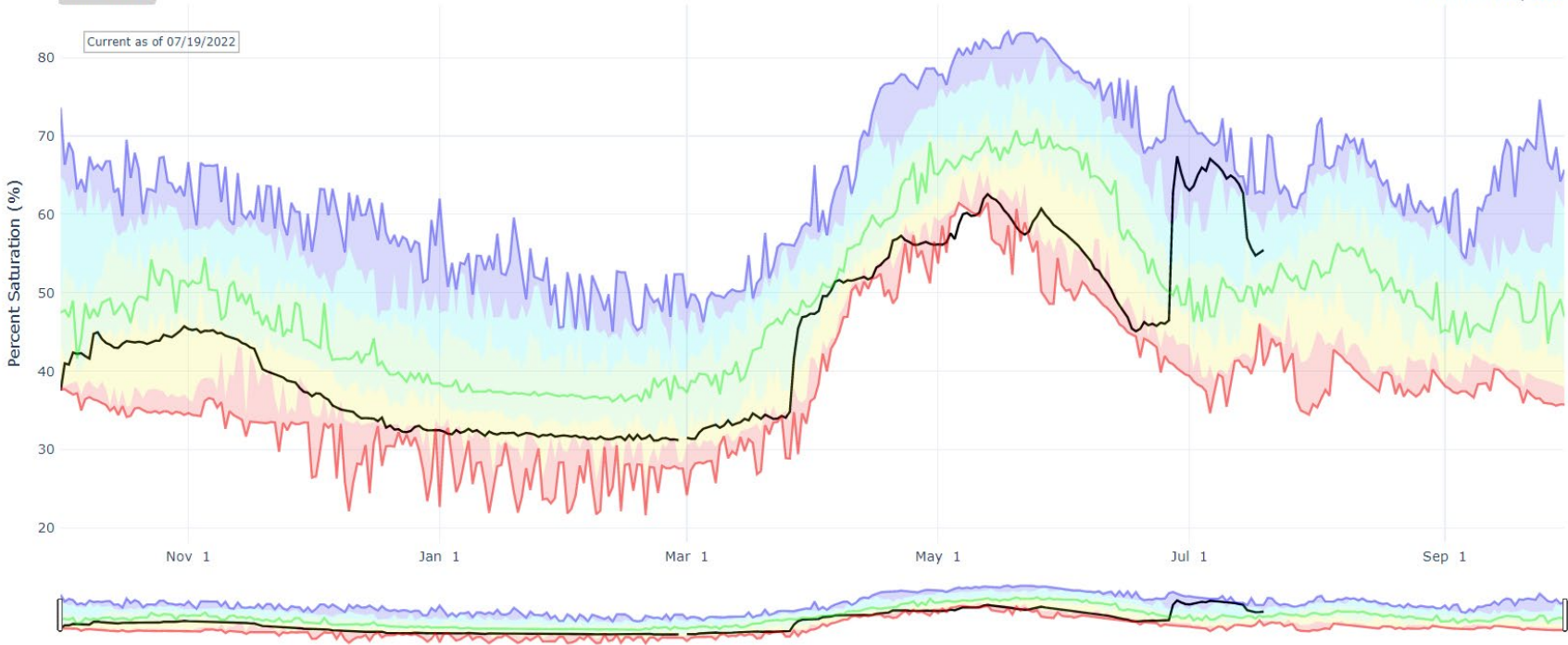
Reset Range

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

Current as of 07/19/2022

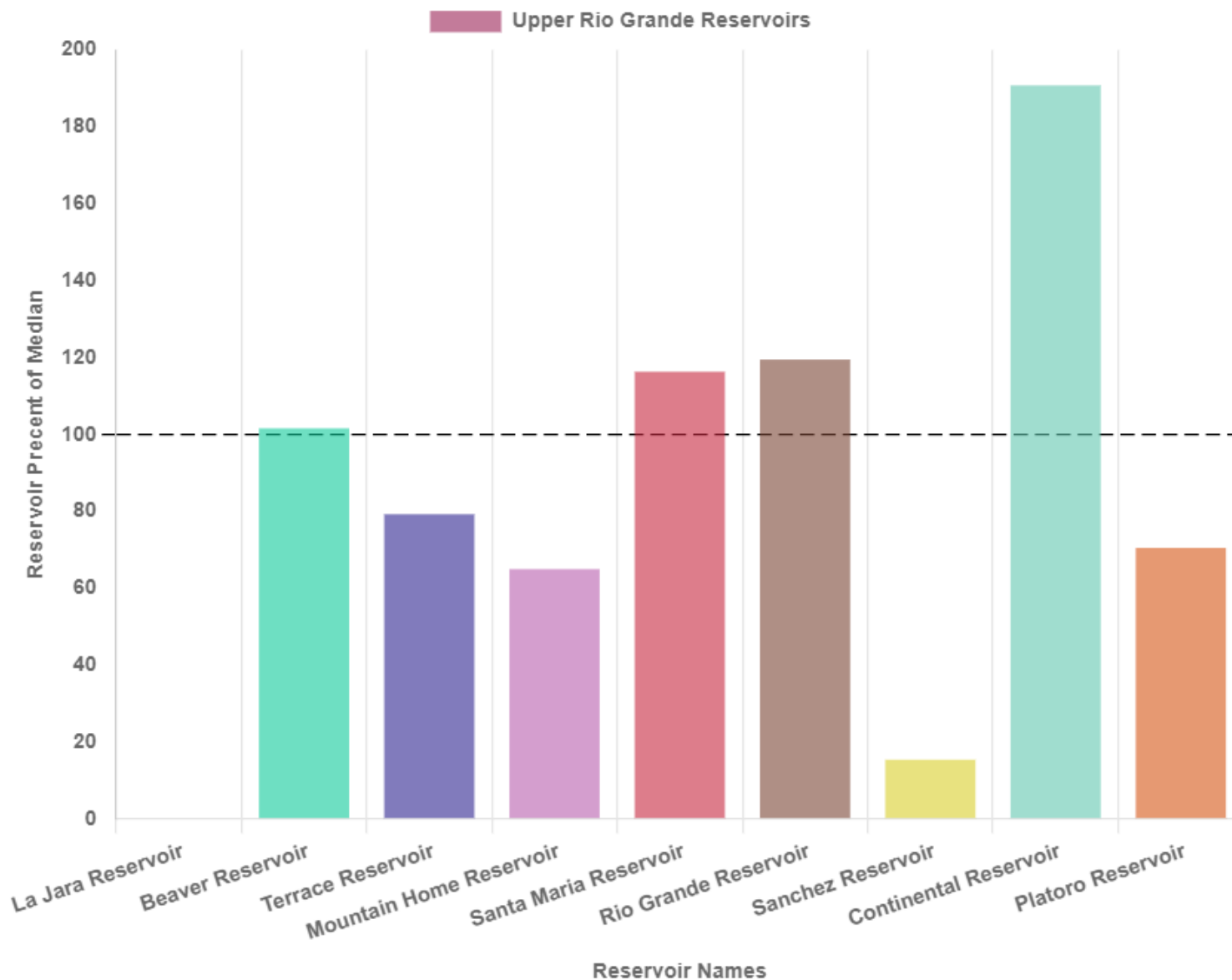
Station List

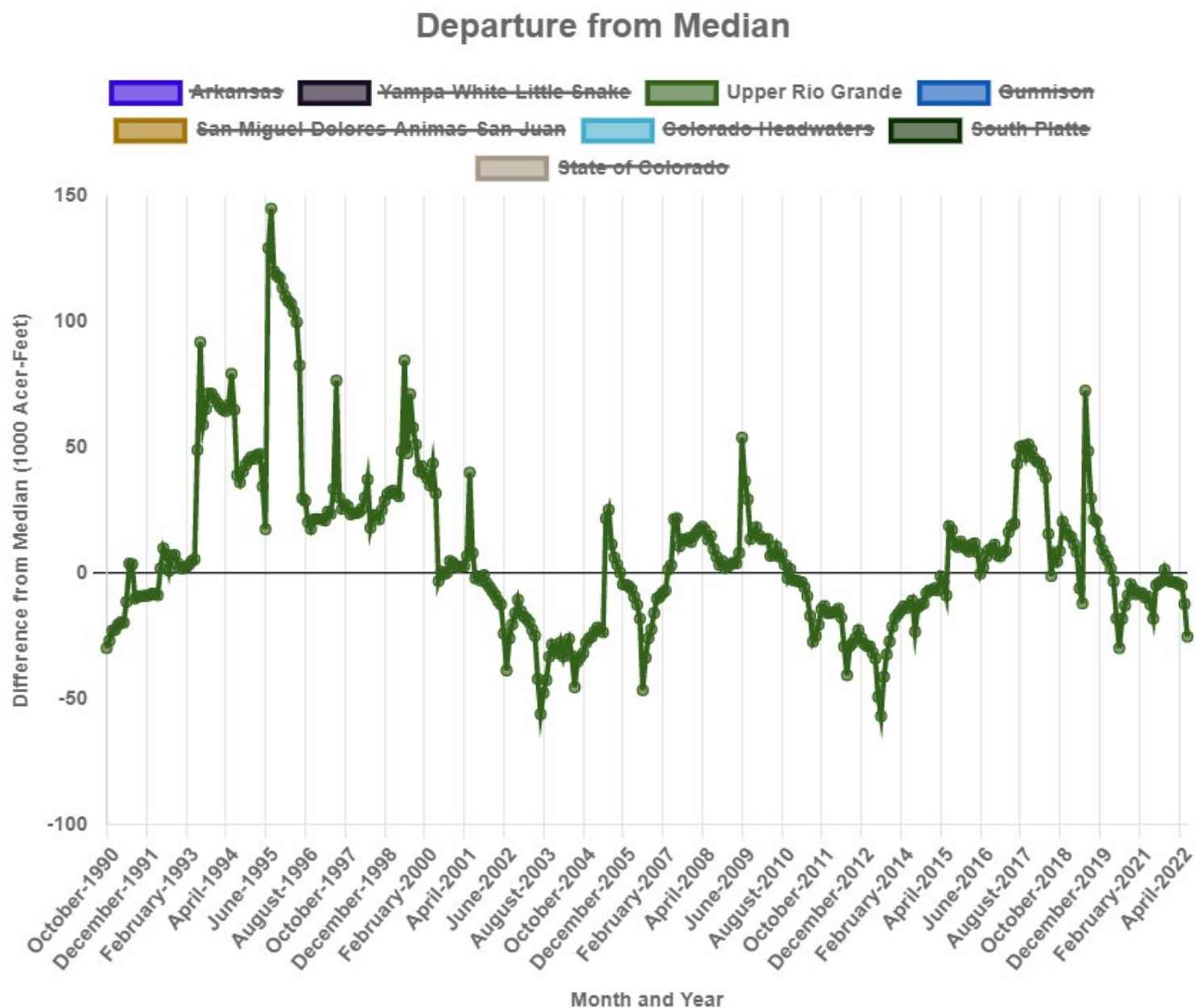
- Max
- Median (POR)
- Min
- Stats. Shading
- 2022 (7 sites)
- 2021 (7 sites)
- 2020 (8 sites)
- 2019 (8 sites)
- 2018 (8 sites)
- 2017 (6 sites)
- 2016 (7 sites)
- 2015 (7 sites)
- 2014 (8 sites)
- 2013 (8 sites)
- 2012 (8 sites)
- 2011 (8 sites)
- 2010 (5 sites)
- 2009 (5 sites)





Reservoir Conditions for Upper Rio Grande on July 1st 2022

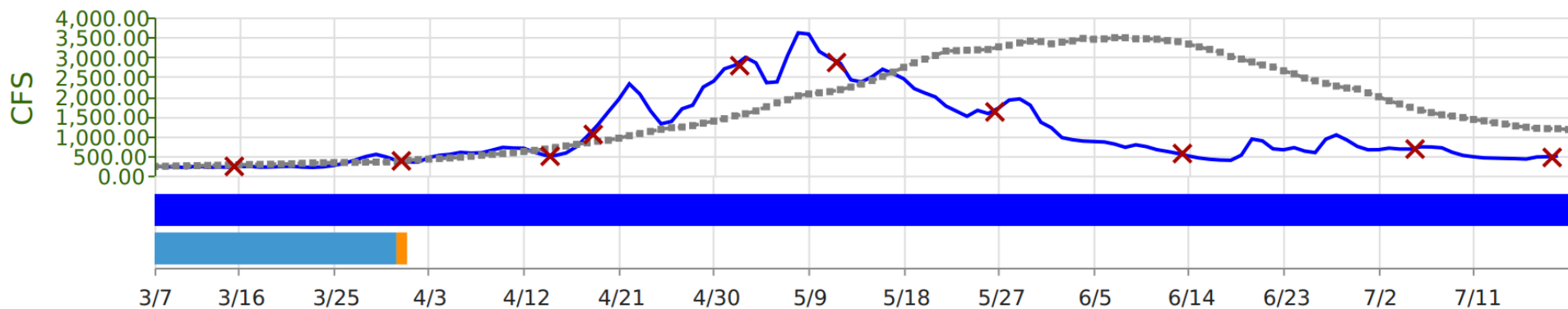






# Colorado Snow Surveys

RIODELCO - RIO GRANDE NEAR DEL NORTE, CO



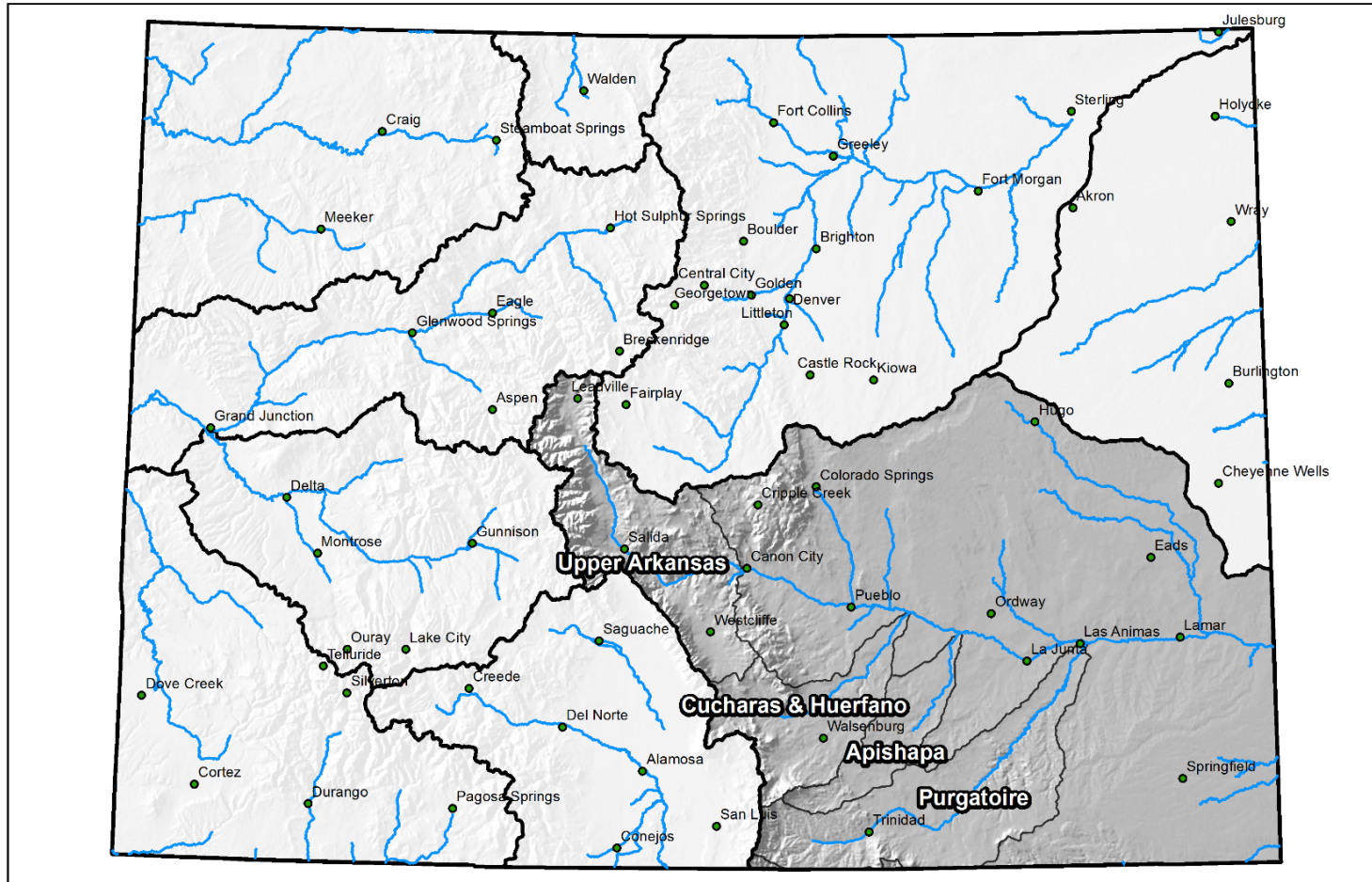
## Legend

### Flags

■ O - Original data as collected by the data collection platform ■ Ice - Ice affected ■ Obs\* - Multiple flags were active during this timestep

## Major Basin Summary

### Arkansas River Basin



0 25 50 100 150 200 Miles





# Colorado Snow Surveys

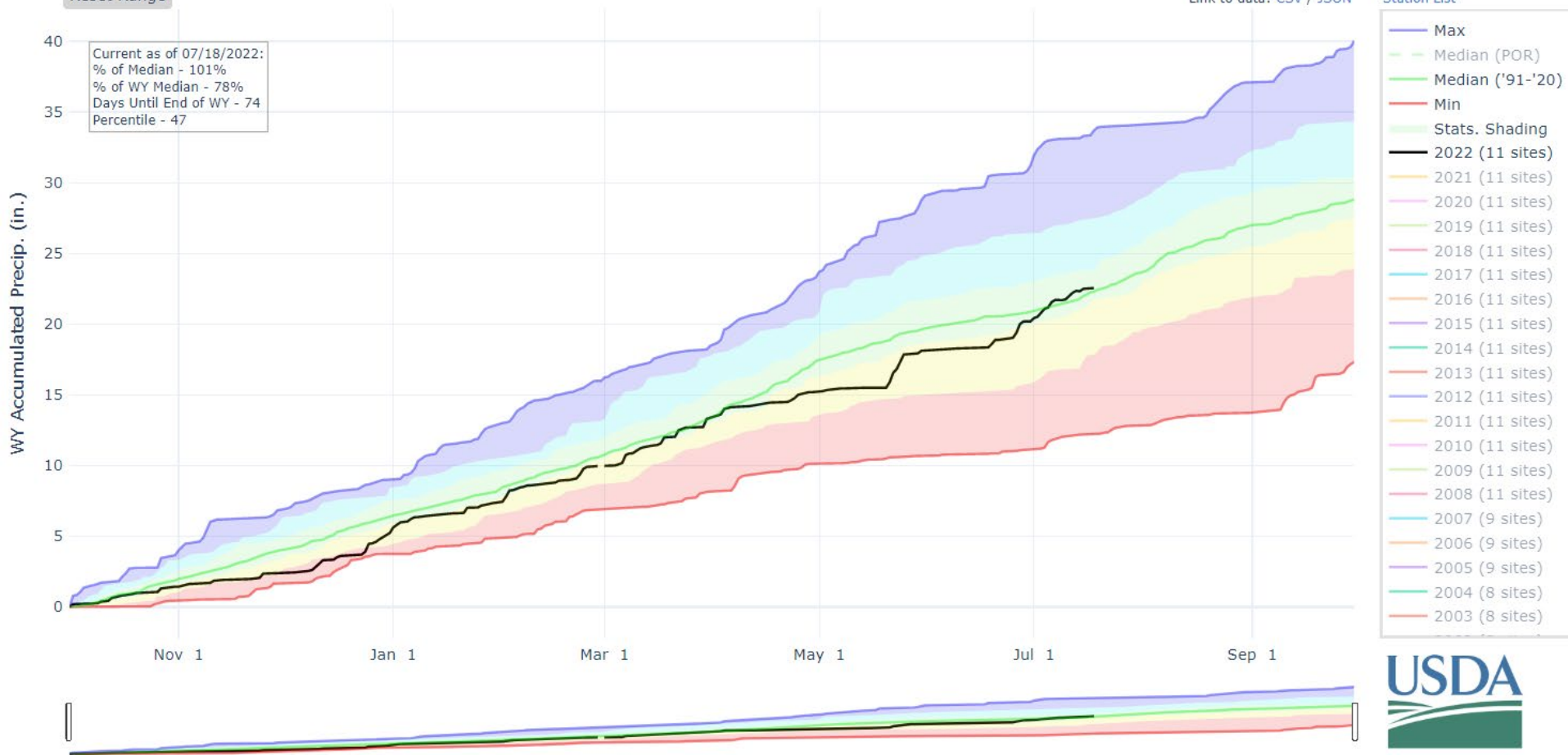
## PRECIPITATION IN ARKANSAS

Reset Range

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

[Station List](#)

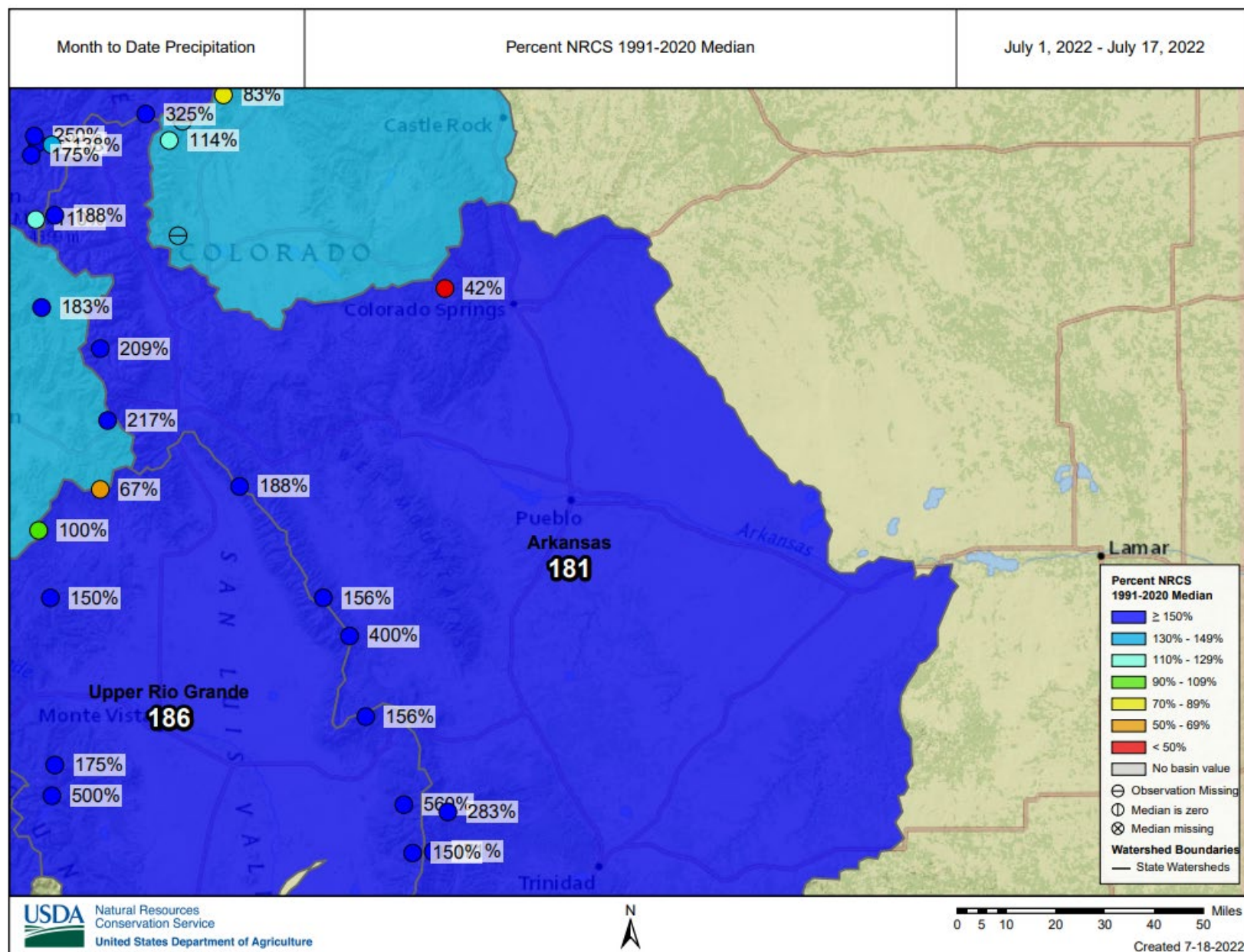
Current as of 07/18/2022:  
% of Median - 101%  
% of WY Median - 78%  
Days Until End of WY - 74  
Percentile - 47



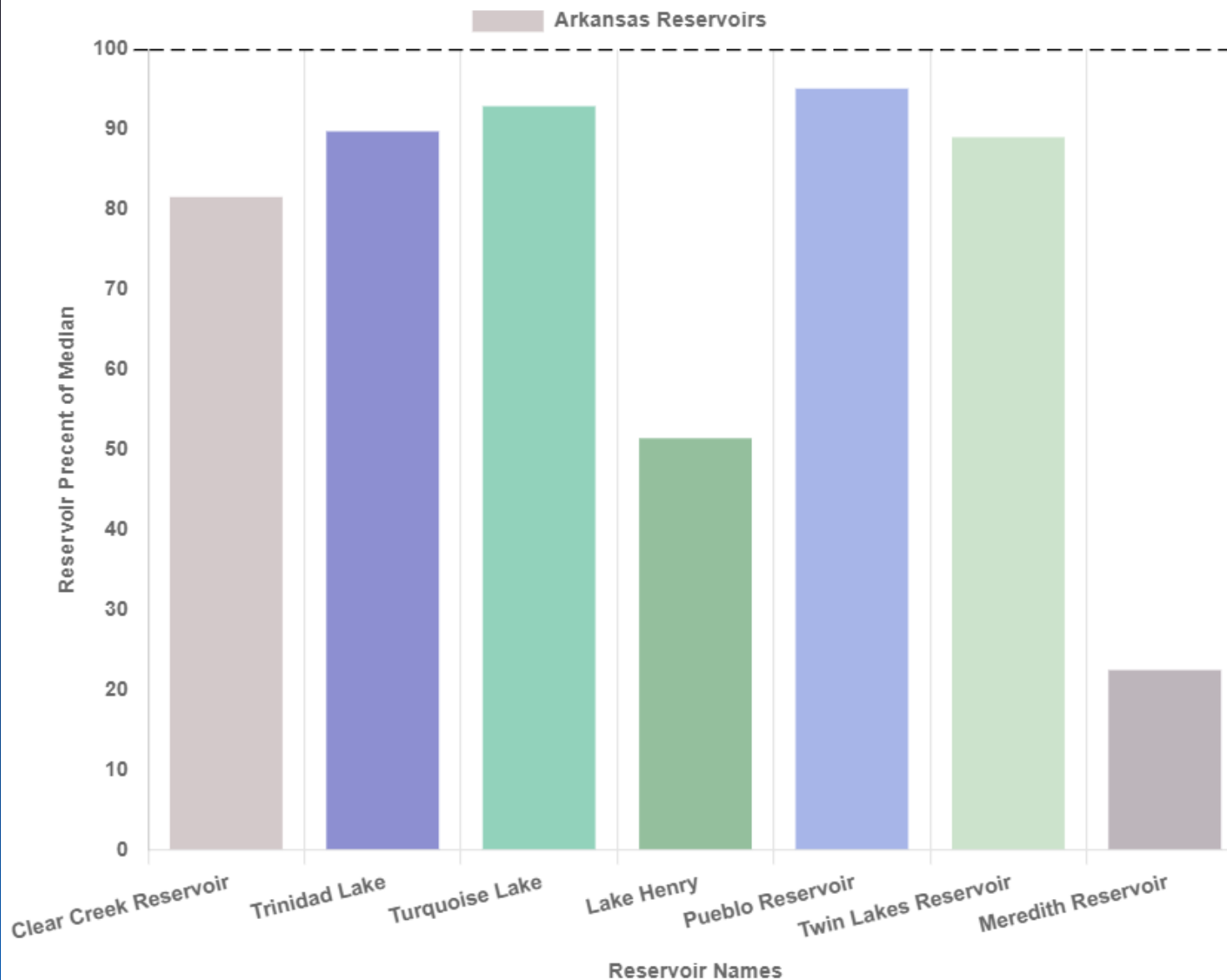


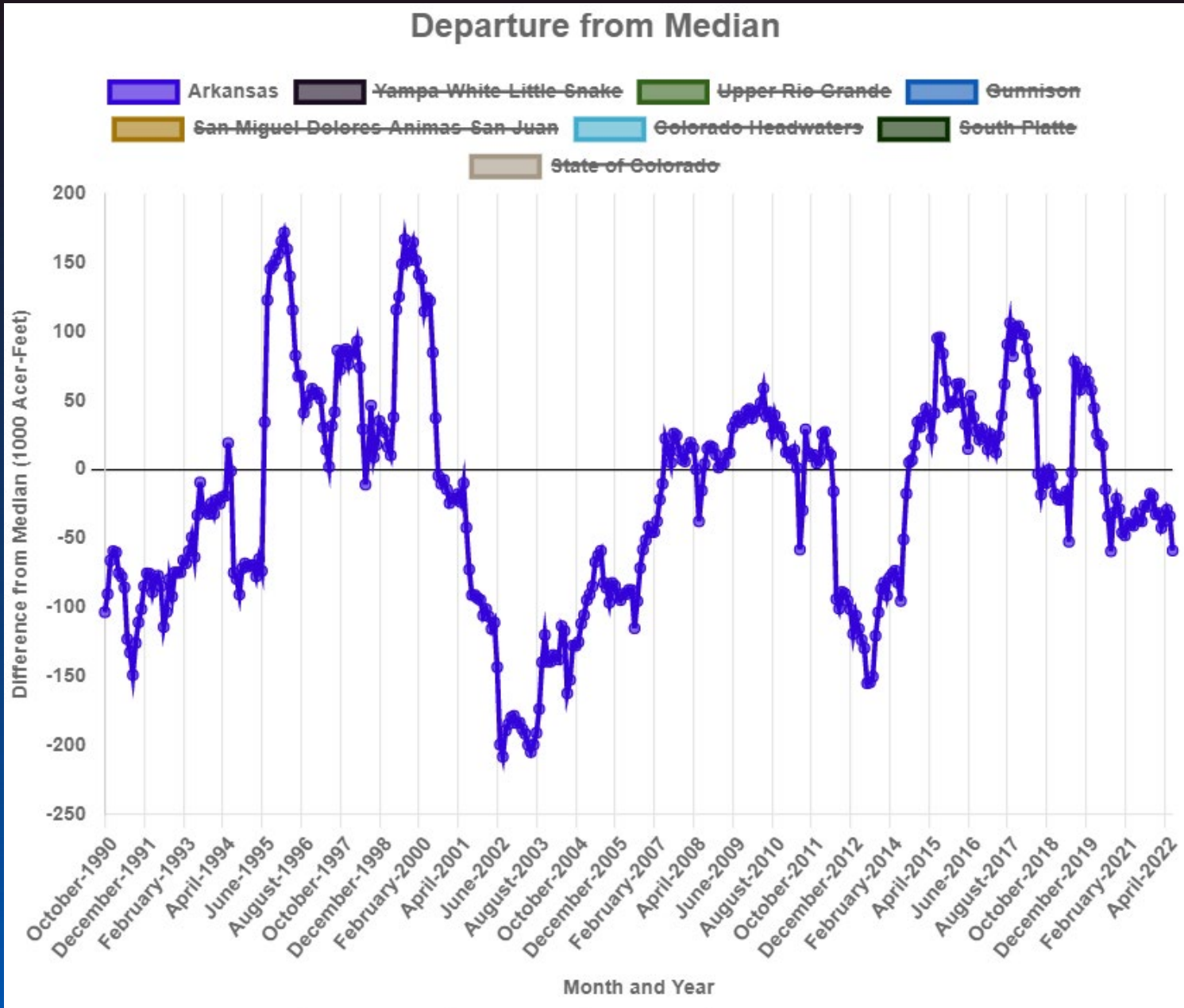
United States Department of Agriculture

# Colorado Snow Surveys



Reservoir Conditions for Arkansas on July 1st 2022



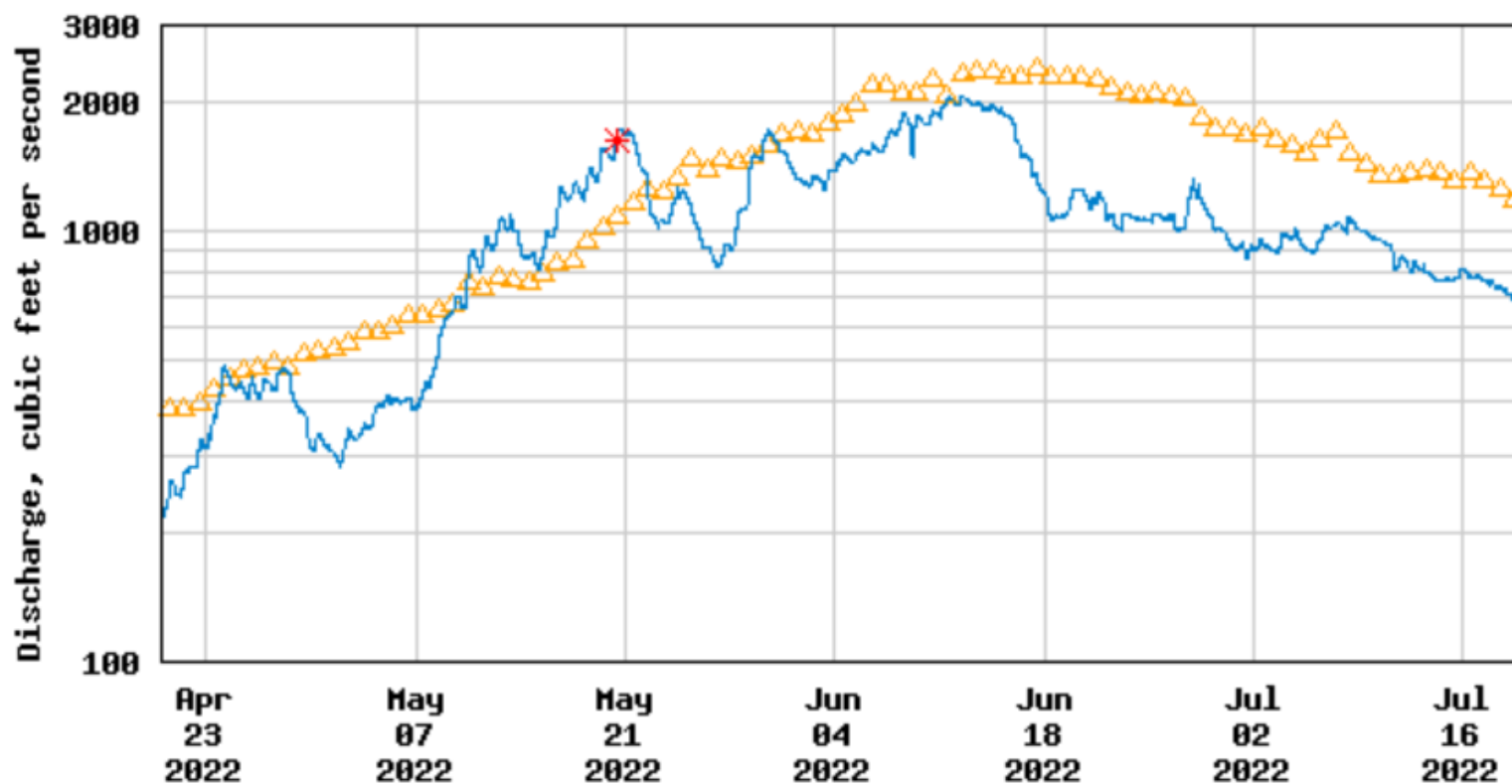




## Discharge, cubic feet per second

Most recent instantaneous value: 692 07-19-2022 07:45 MDT

USGS 07094500 ARKANSAS RIVER AT PARKDALE, CO.

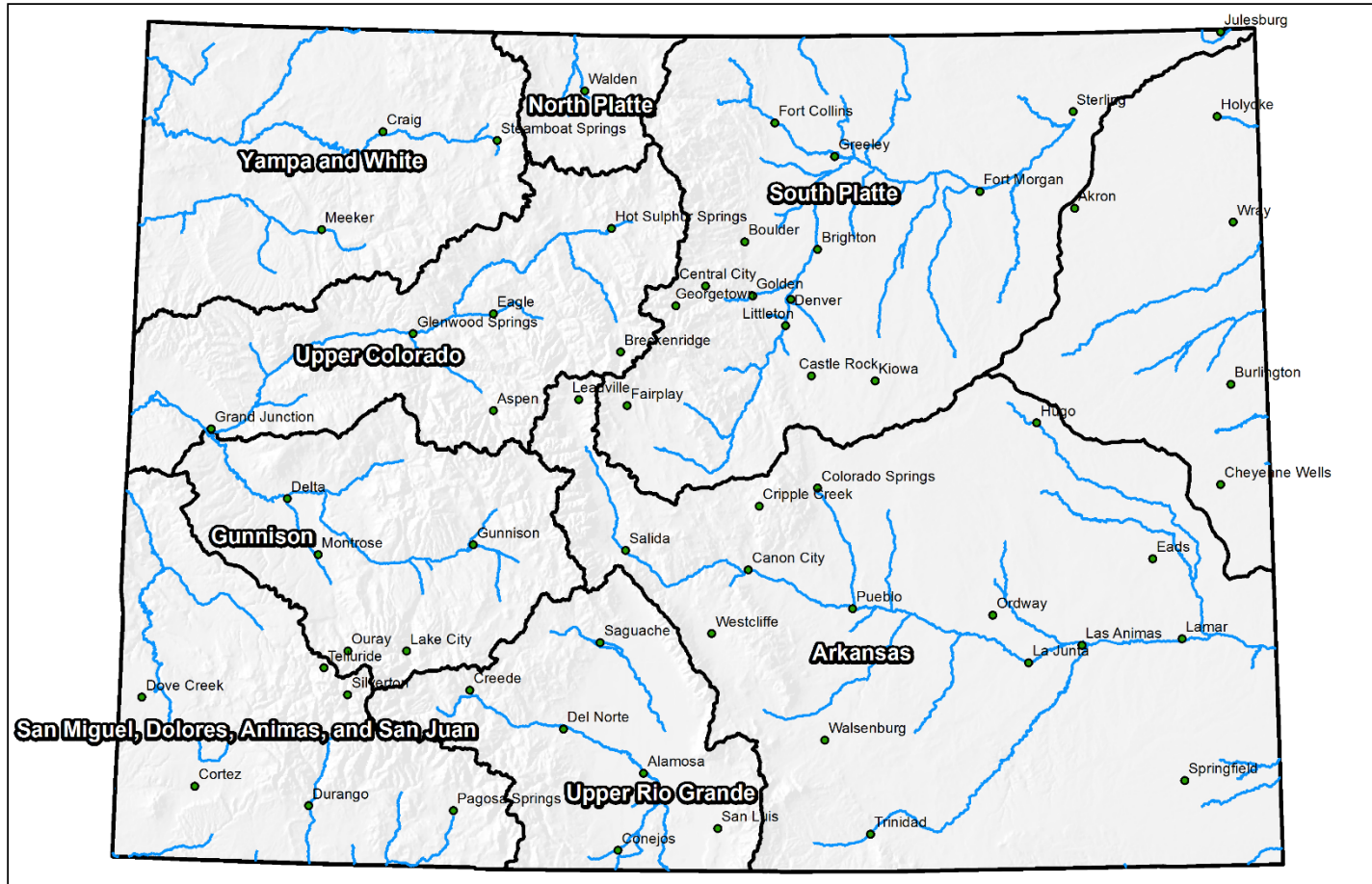


---- Provisional Data Subject to Revision ----

△ Median daily statistic (67 years) \* Measured discharge  
— Discharge

## Colorado Statewide Summary

Colorado Major Basins



0 25 50 100 150 200 Miles



# Colorado Snow Surveys

## PRECIPITATION IN STATE OF COLORADO

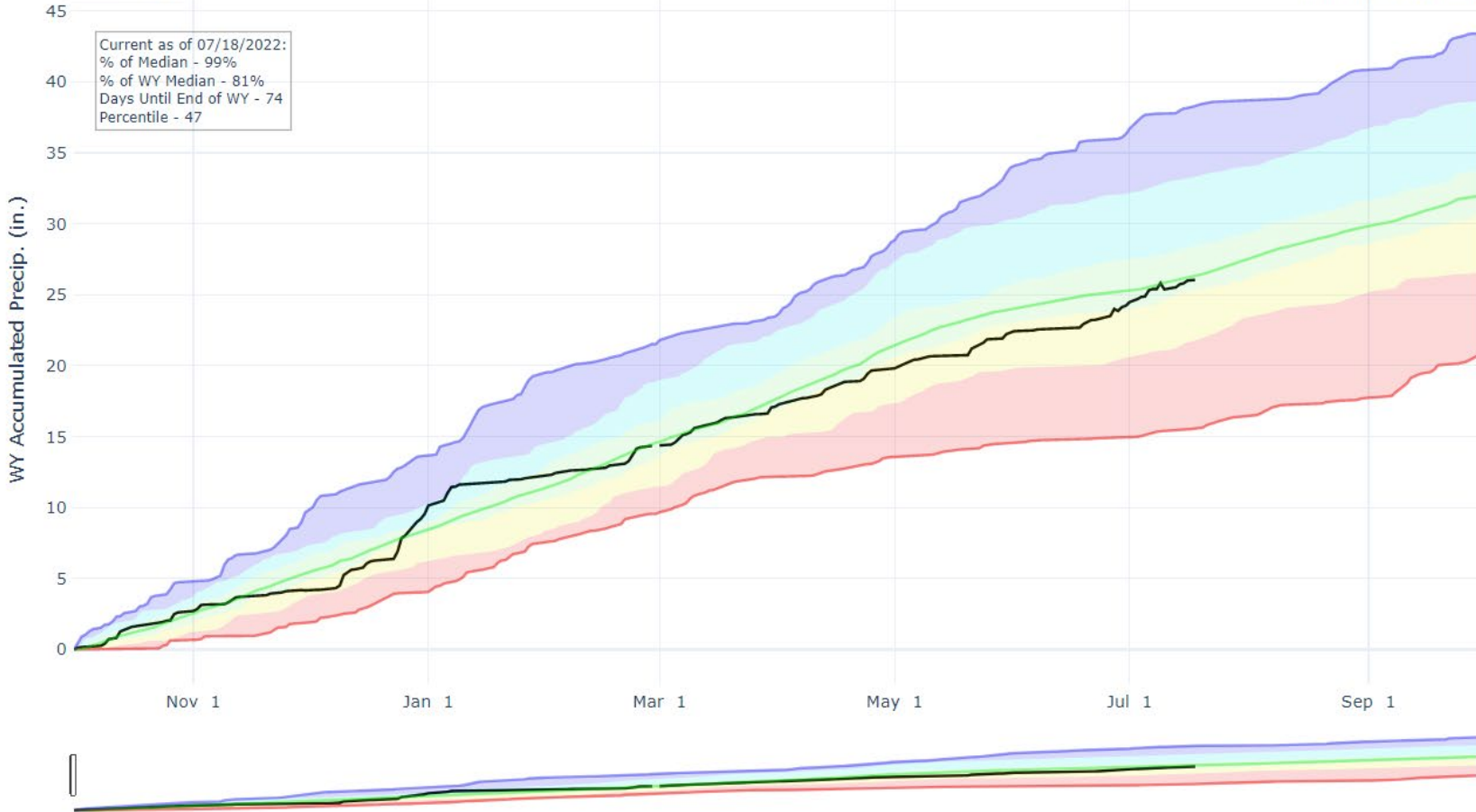
Reset Range

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

[Station List](#)

Current as of 07/18/2022:  
% of Median - 99%  
% of WY Median - 81%  
Days Until End of WY - 74  
Percentile - 47

- Max
- Median (POR)
- Median ('91-'20)
- Min
- Stats. Shading
- 2022 (116 sites)
- 2021 (117 sites)
- 2020 (117 sites)
- 2019 (117 sites)
- 2018 (117 sites)
- 2017 (117 sites)
- 2016 (117 sites)
- 2015 (117 sites)
- 2014 (117 sites)
- 2013 (117 sites)
- 2012 (117 sites)
- 2011 (117 sites)
- 2010 (115 sites)
- 2009 (112 sites)
- 2008 (109 sites)
- 2007 (106 sites)
- 2006 (106 sites)
- 2005 (105 sites)
- 2004 (99 sites)
- 2003 (98 sites)



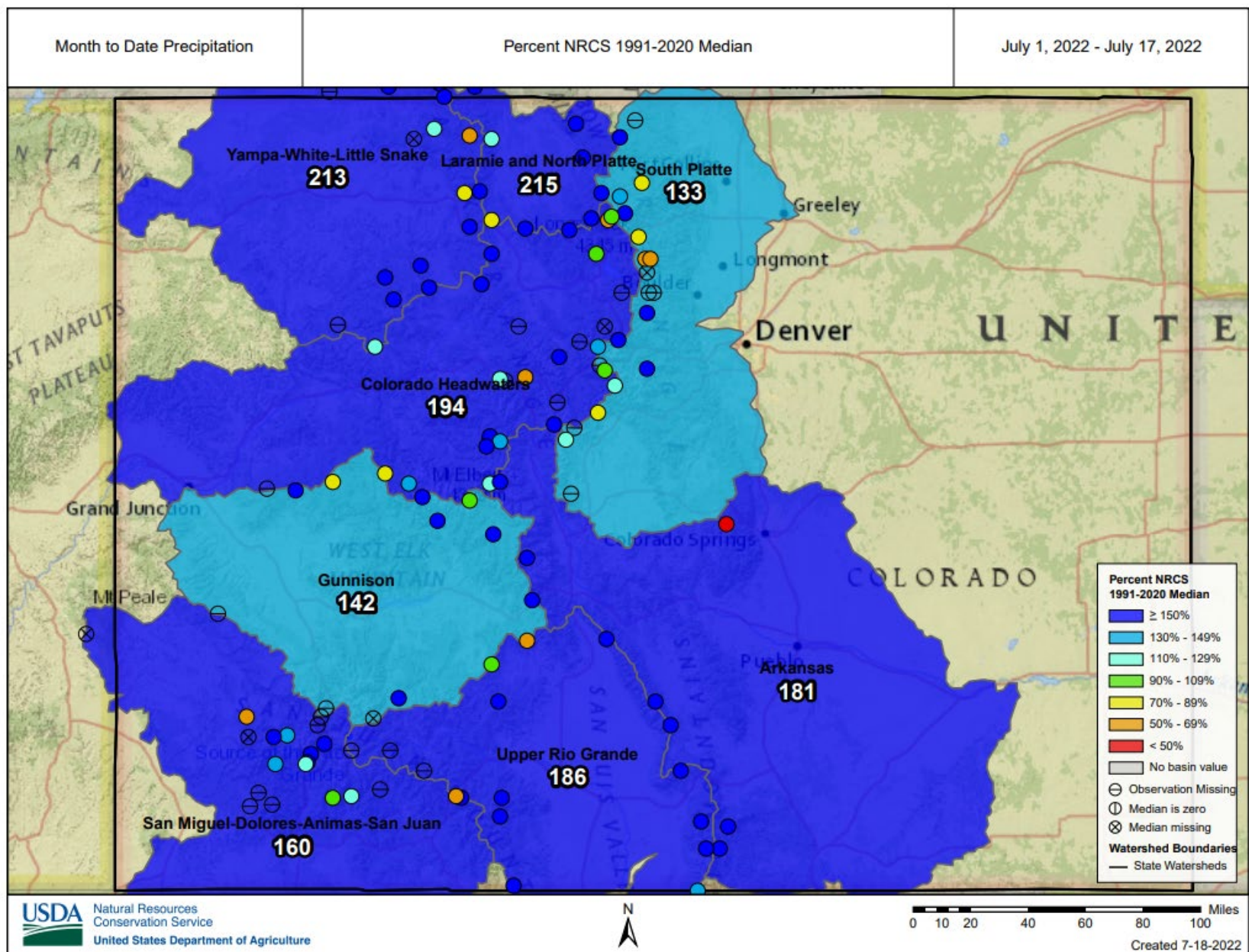




United States Department of Agriculture

# Colorado Snow Surveys

## MTD Precipitation



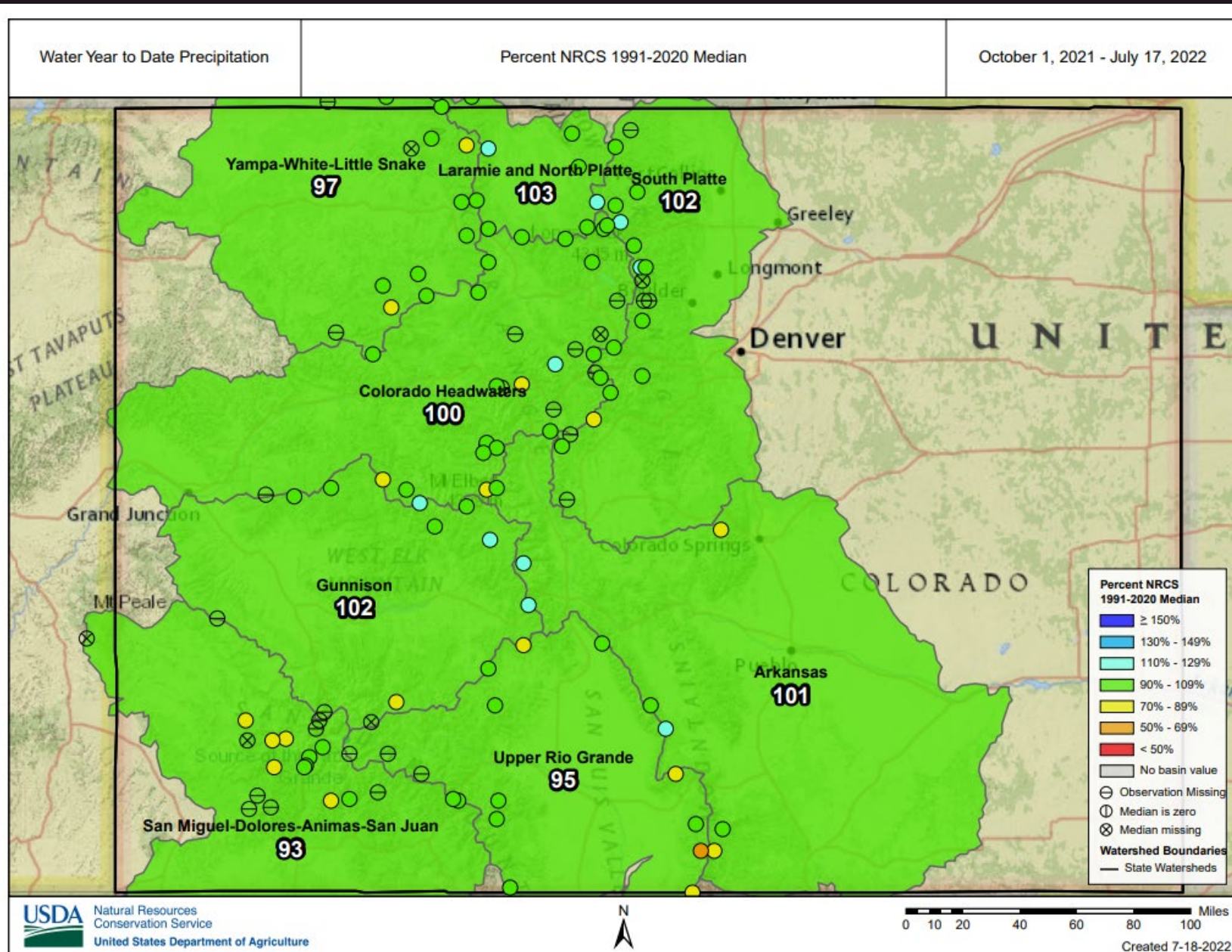




United States Department of Agriculture

# Colorado Snow Surveys

WY Precipitation



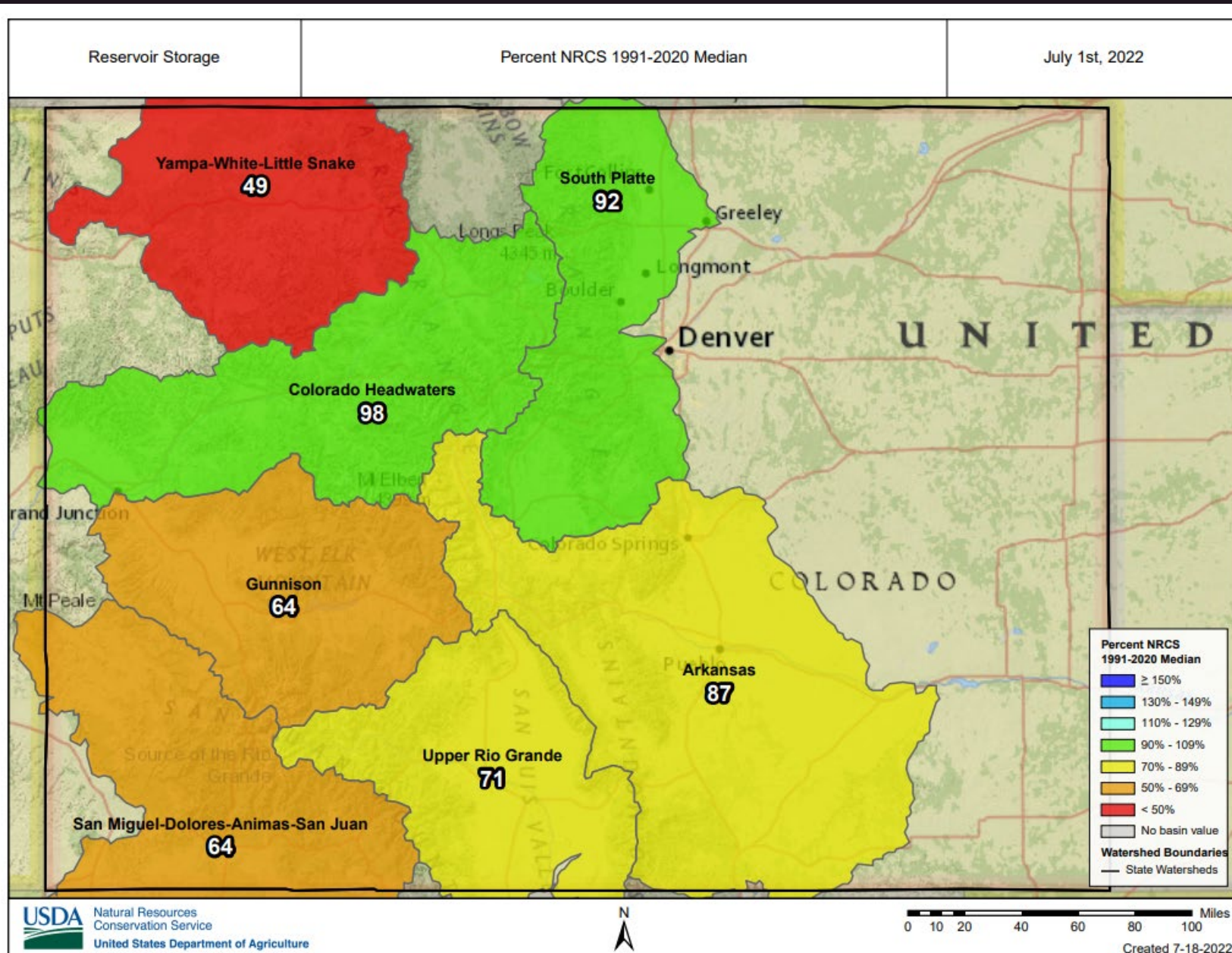


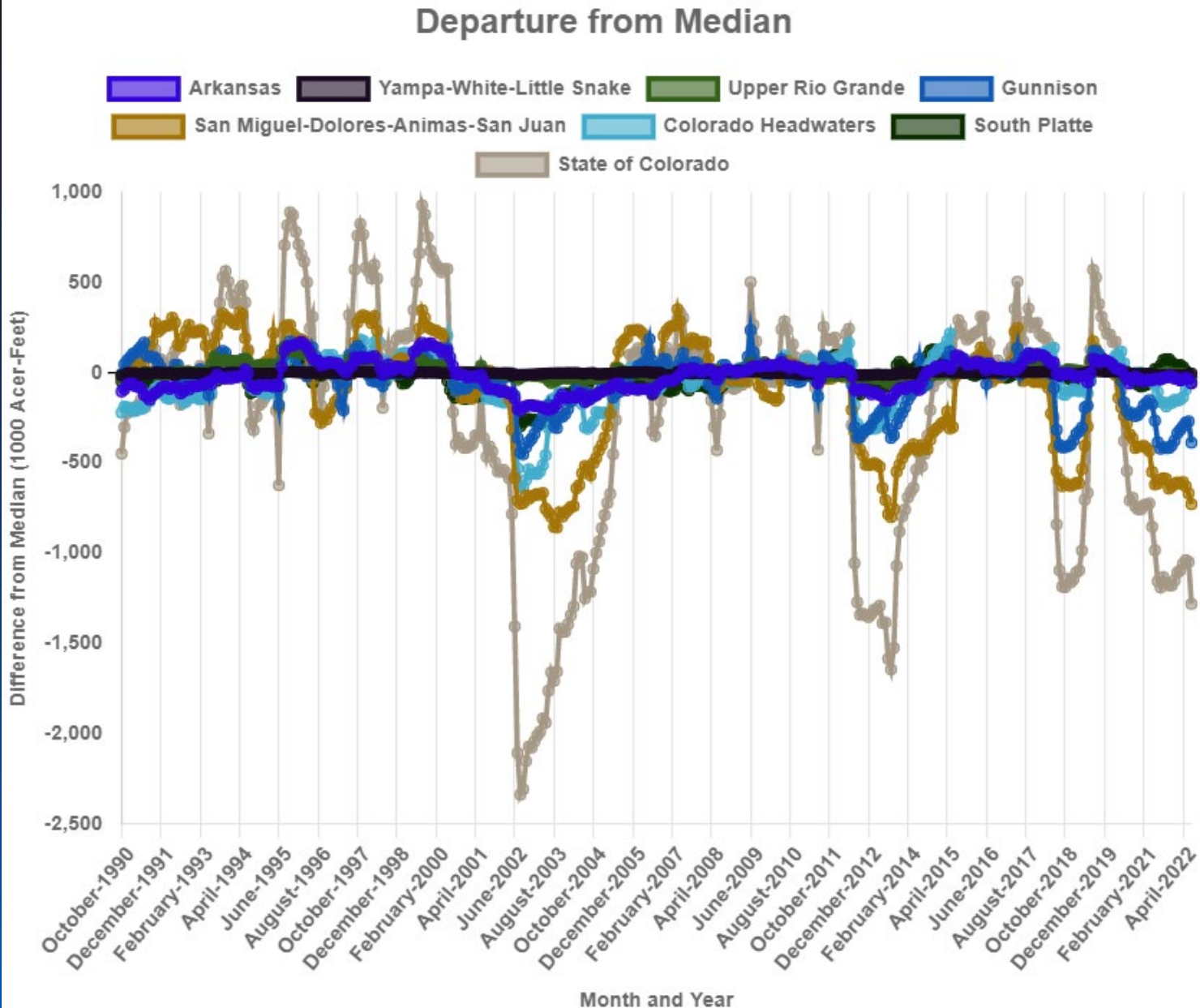


United States Department of Agriculture

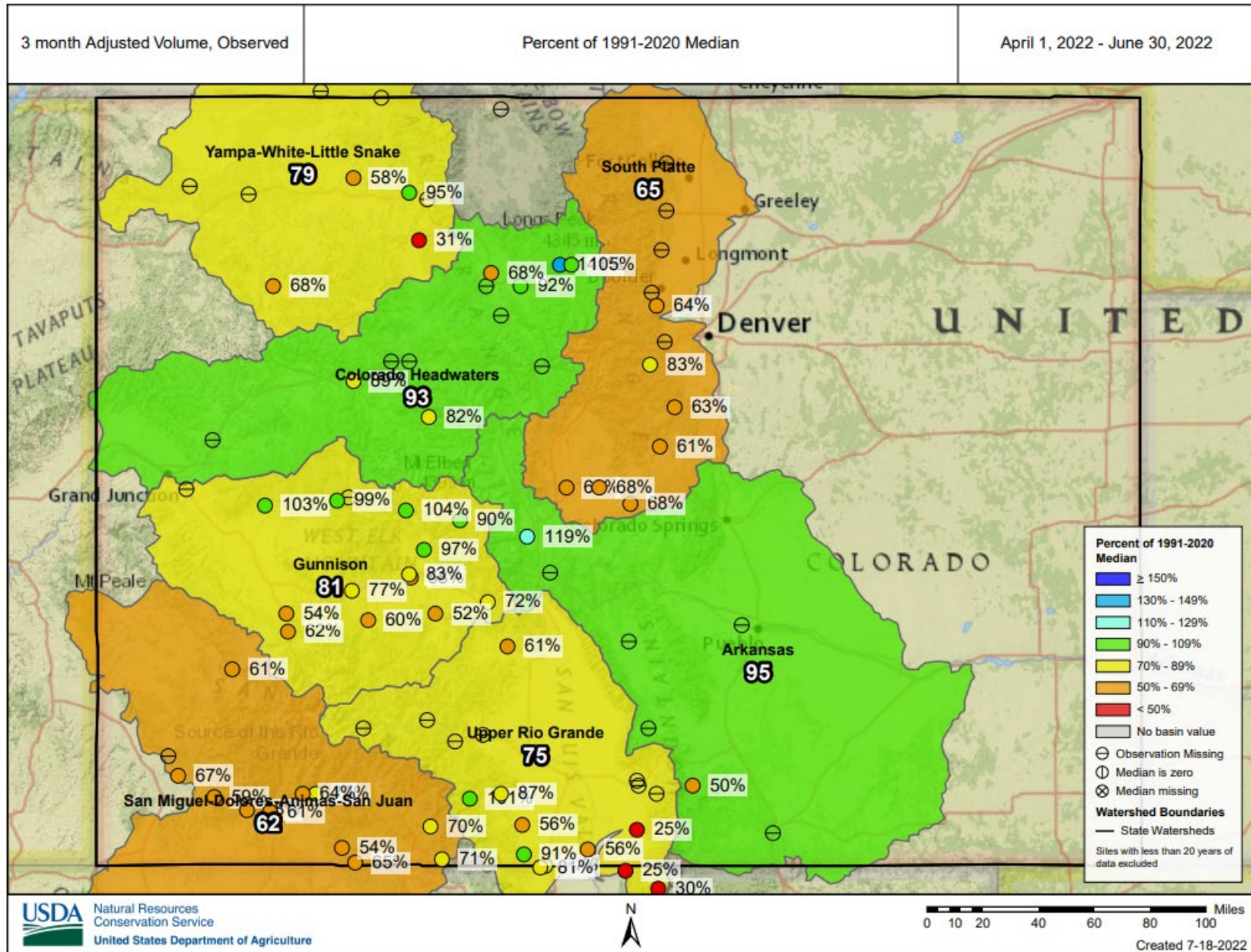
# Colorado Snow Surveys

## Reservoir Storage













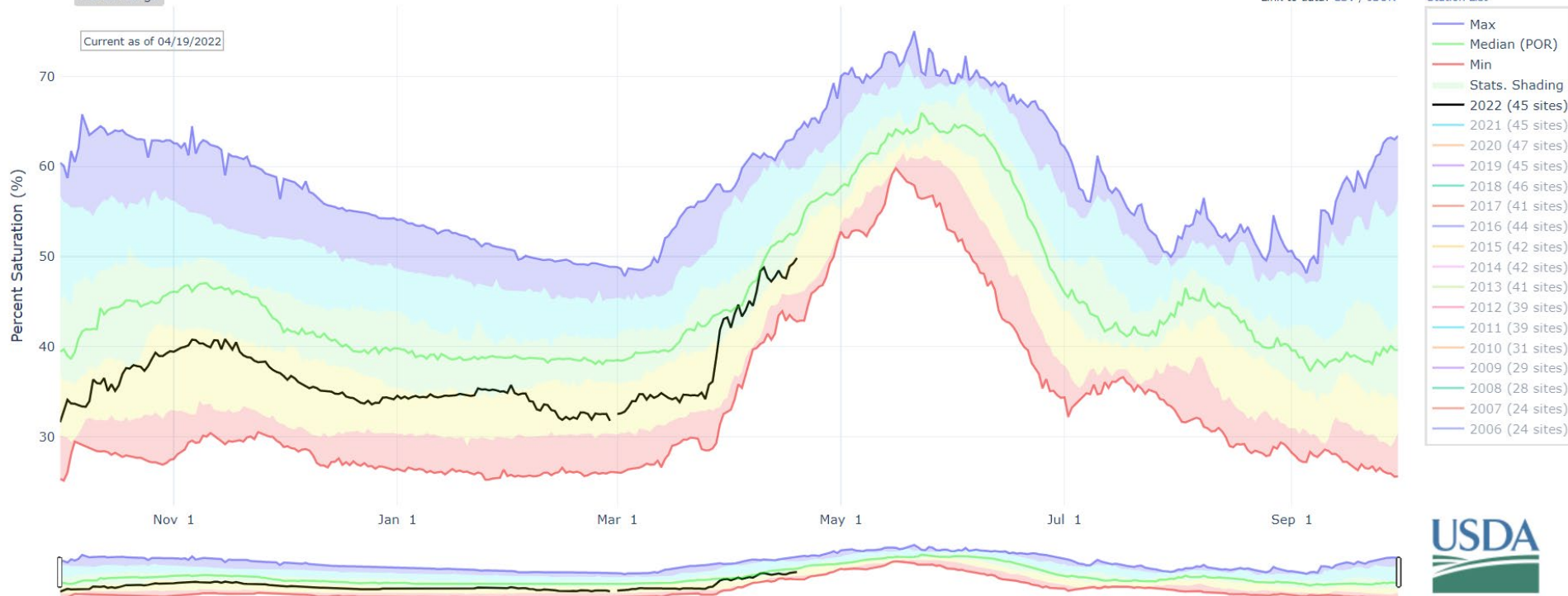
## SNOTEL Soil Moisture

DEPTH AVERAGED SOIL SATURATION IN  
STATE OF COLORADO

Reset Range

Link to data: CSV / JSON

Station List



Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th Percentiles  
For more information visit: [30-Year Hydroclimatic Normals](#)



\*\*\* Provisional Data

## Summary

- Late June and July to date have brought well above normal precipitation to the mountains of every major river basin in Colorado.
- Reservoir storage remains below normal across the state.
  - The lowest storages are in the Gunnison and combined San Miguel, Dolores, Animas, and San Juan basins.
  - The Colorado and South Platte basins are holding the most storage in the state, relative to normal.
- Peak streamflows from snowmelt runoff occurred much earlier than normal in much of the state. Most notably in southwest Colorado.
- Despite spikes in streamflow resulting from precipitation events streamflows are generally remaining at below normal levels across the state.
- The snowmelt driven portion of the hydrograph is nearing an end for this year.



## Non-Discrimination Statement:

In accordance with Federal civil rights law and U.S. Department of agriculture (USDA) civil rights regulations and policies, the USDA, its Agencies, offices, and employees, and institutions participating in or administering USDA programs are prohibited from discriminating based on race, color, national origin, religion, sex, gender identity (including gender expression), sexual orientation, disability, age, marital status, family/parental status, income derived from a public assistance program, political beliefs, or reprisal or retaliation for prior civil rights activity, in any program or activity conducted or funded by USDA (not all bases apply to all programs). Remedies and complaint filing deadlines vary by program or incident.

Persons with disabilities who require alternative means of communication for program information (e.g., Braille, large print, audiotape, American Sign Language, etc.) should contact the responsible Agency or USDA 's TARGET Center at (202) 720-2600 (voice and TTY) or contact USDA through the Federal Relay Service at (800) 877-8339. Additionally, program information may be made available in languages other than English.

To file a program discrimination complaint, complete the USDA Program Discrimination Complaint Form, AD-3027, found online at [How to File a Program Discrimination Complaint](#) and at any USDA office or write a letter addressed to USDA and provide in the letter all of the information requested in the form. To request a copy of the complaint form, call (866) 632-9992. Submit your completed form or letter to USDA by: (1) mail: U.S. Department of Agriculture, Office of the Assistant Secretary for Civil Rights, 1400 Independence Avenue, SW, Washington, D.C. 20250-9410; (2) fax: (202) 690-7442; or (3) email: [program.intake@usda.gov](mailto:program.intake@usda.gov).