



United States Department of Agriculture

Colorado Snow Surveys

# Water Availability Task Force Meeting

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

### NRCS Snow Survey and Water Supply Forecasting Program

Karl Wetlaufer

Hydrologist

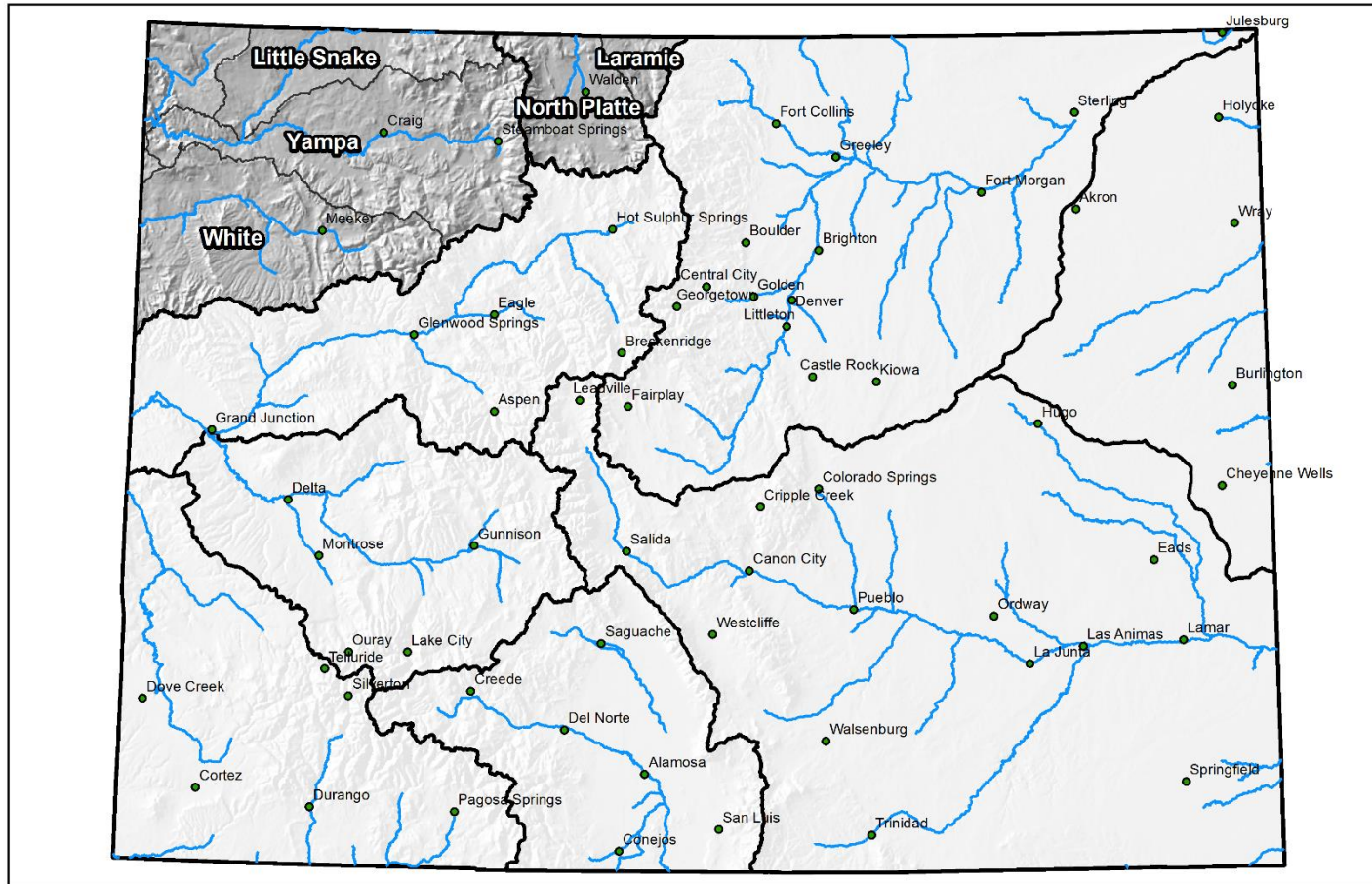
Karl.Wetlaufer@usda.gov

720-544-2853

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

## Major Basin Summary

Yampa, White, and North Platte River Basins



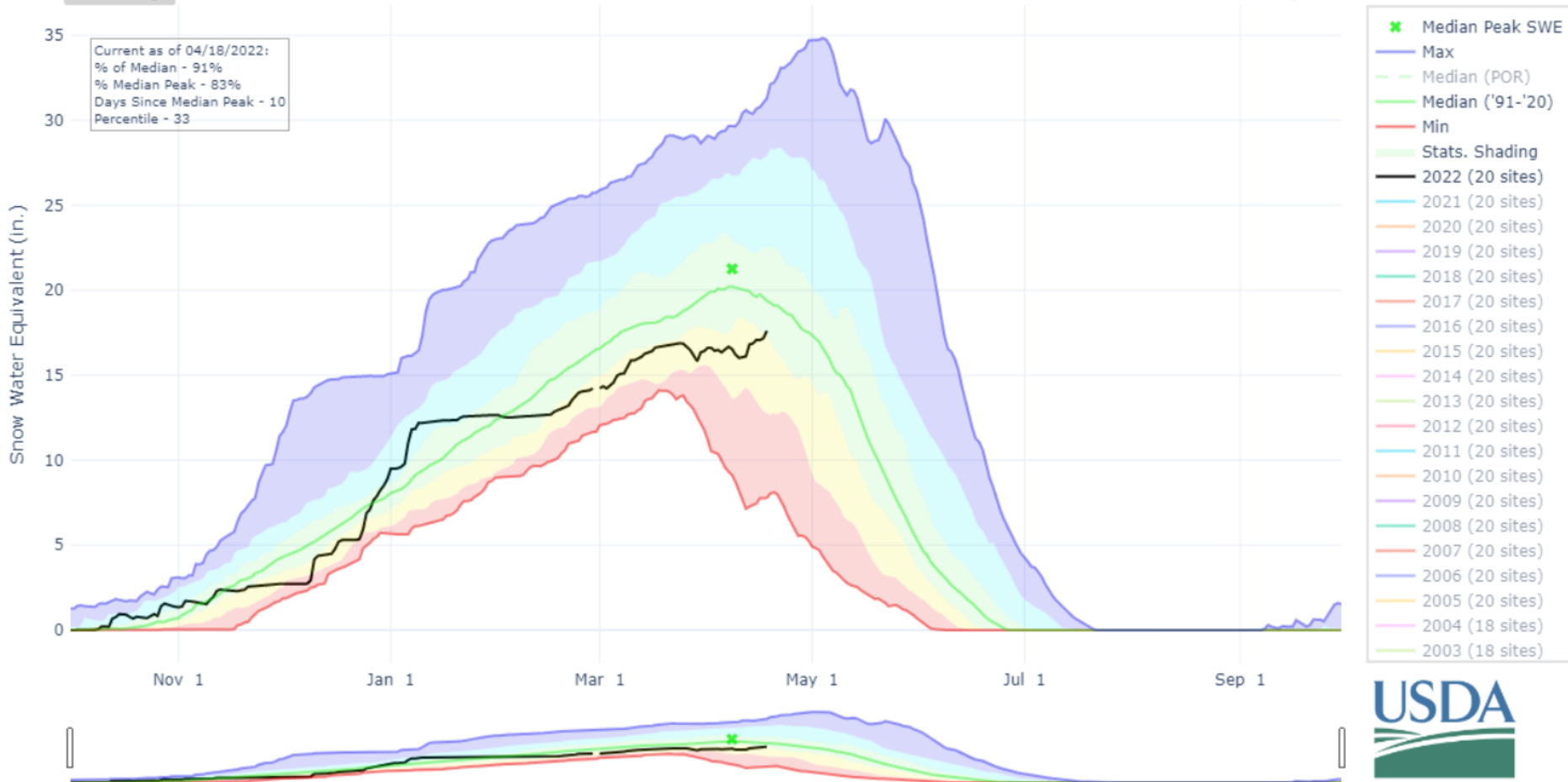
0 25 50 100 150 200 Miles

## SNOW WATER EQUIVALENT IN YAMPA-WHITE-LITTLE SNAKE

Reset Range

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

[Station List](#)





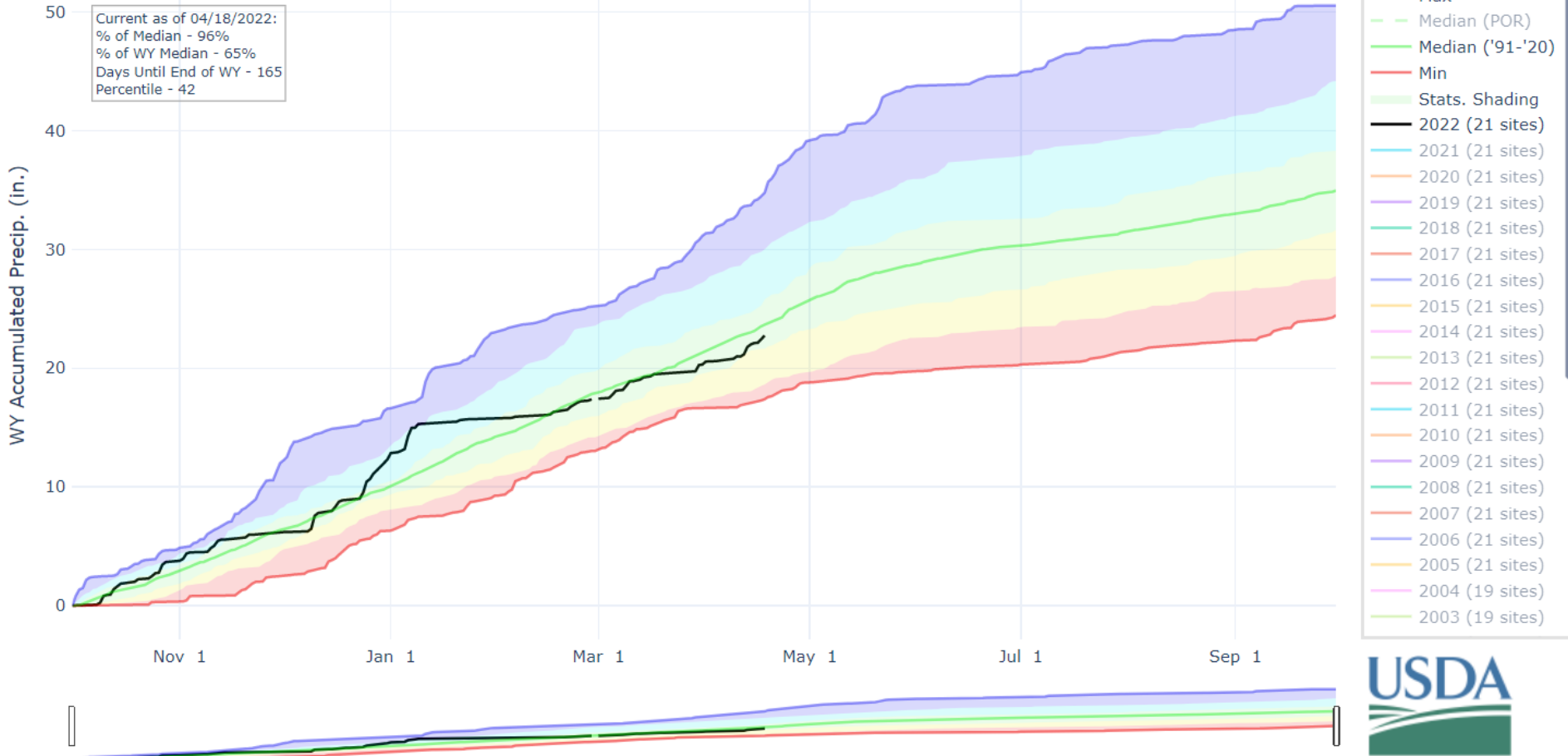
# Colorado Snow Surveys

## PRECIPITATION IN YAMPA-WHITE-LITTLE SNAKE

Reset Range

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

[Station List](#)





## SNOW WATER EQUIVALENT IN LARAMIE AND NORTH PLATTE

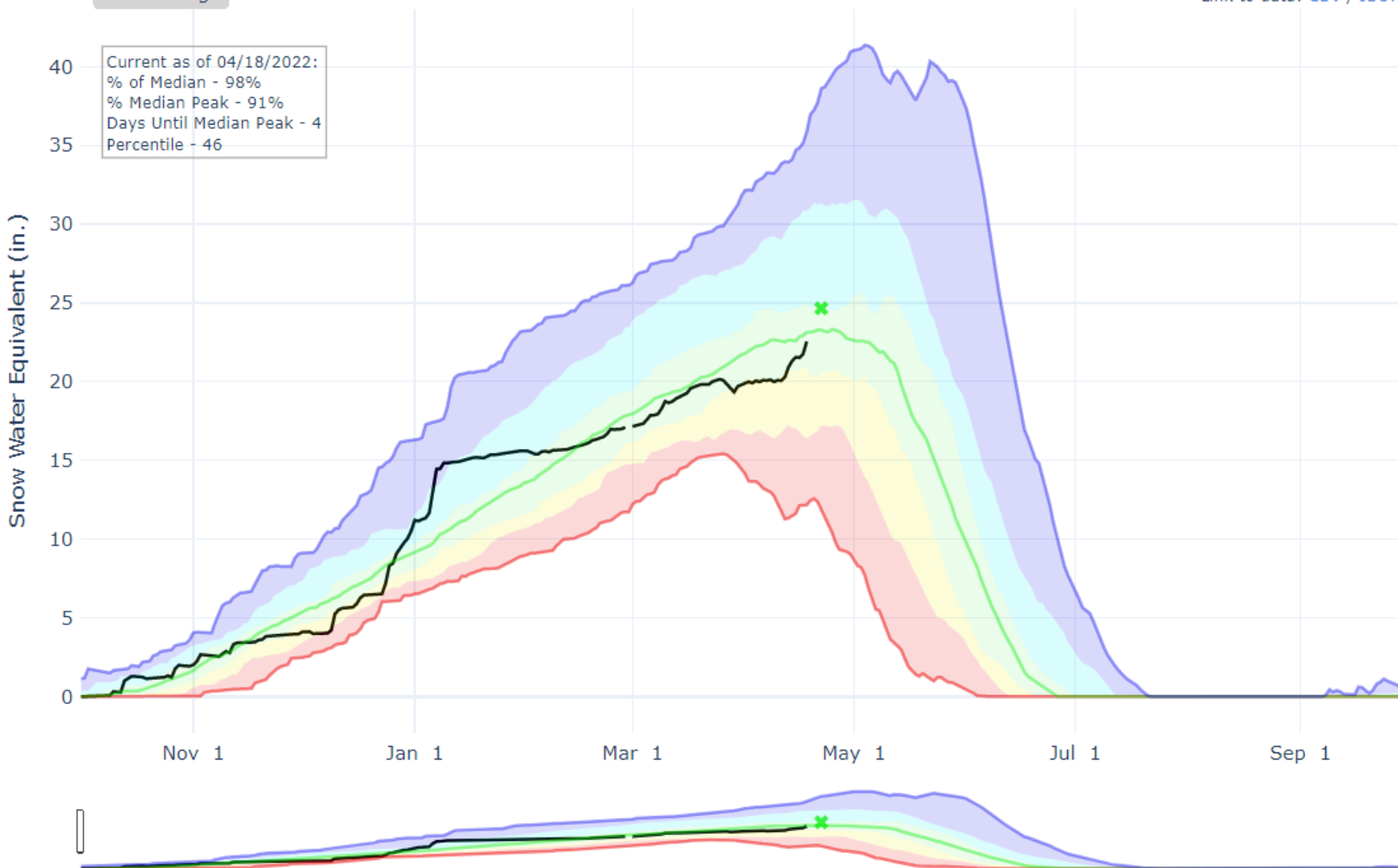
Reset Range

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

[Station List](#)

Current as of 04/18/2022:  
% of Median - 98%  
% Median Peak - 91%  
Days Until Median Peak - 4  
Percentile - 46

- ✕ Median Peak SWE
- Max
- Median (POR)
- Median ('91-'20)
- Min
- Stats. Shading
- 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)





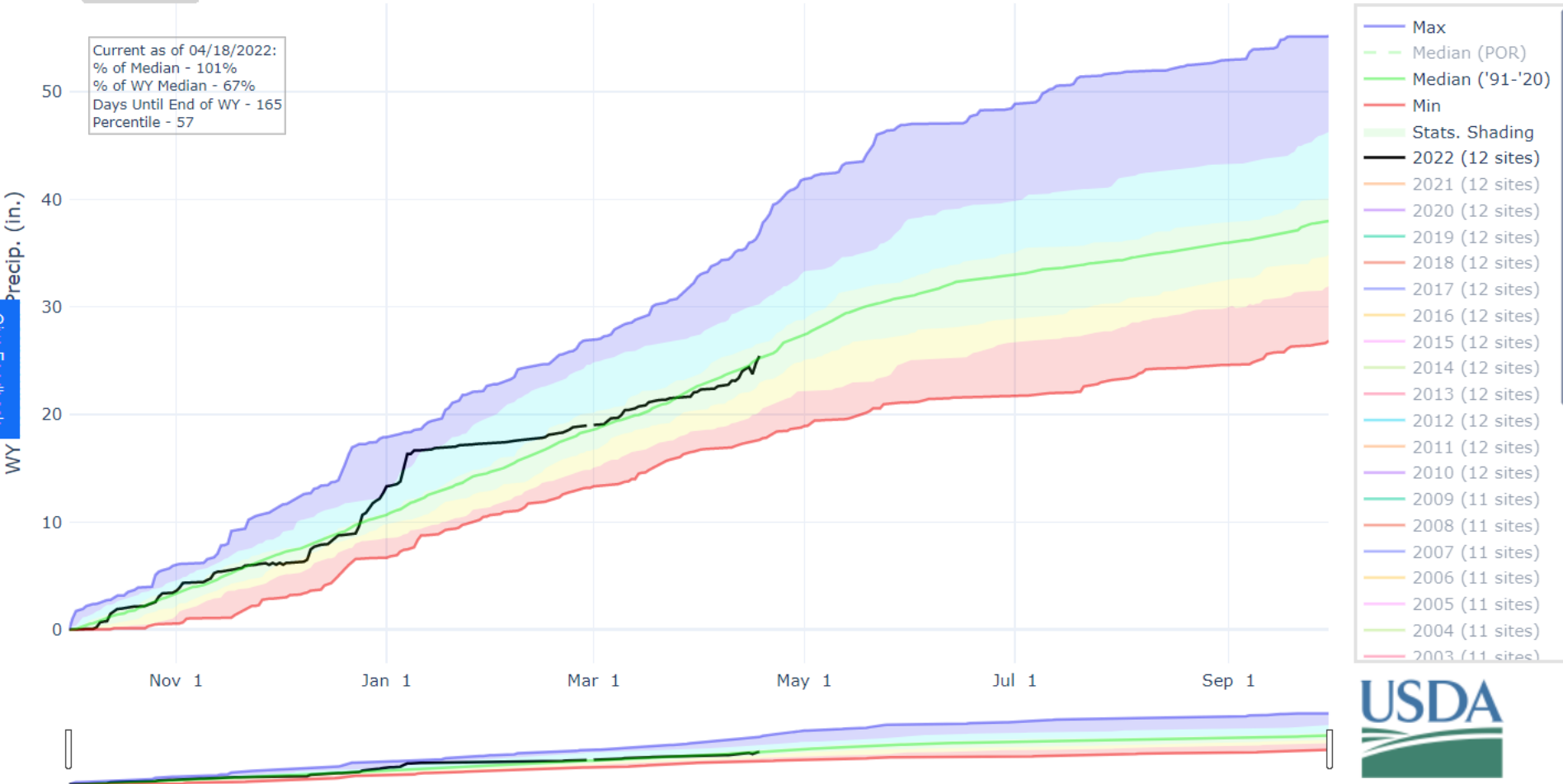
## PRECIPITATION IN LARAMIE AND NORTH PLATTE

Reset Range

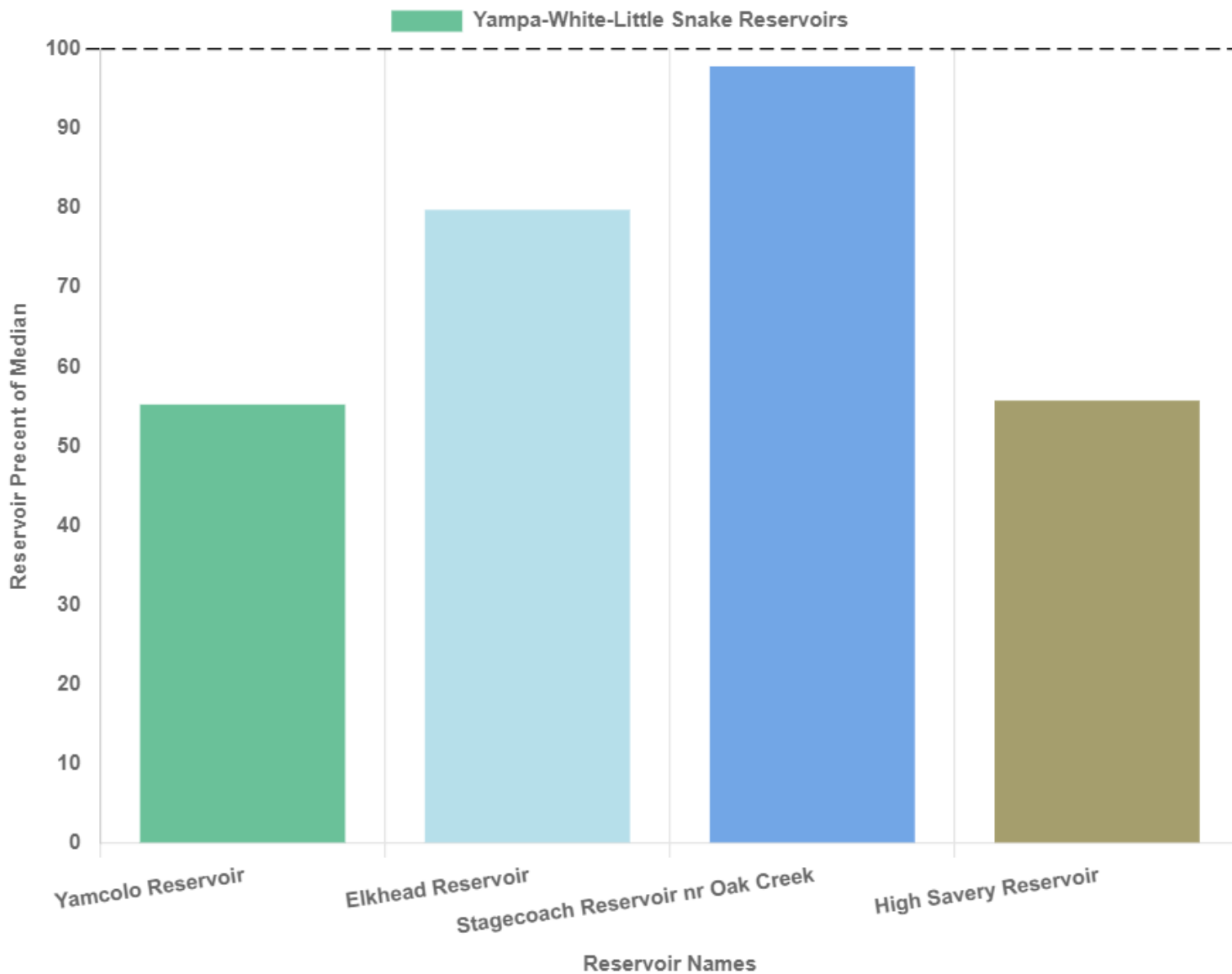
[Link to data: CSV / JSON](#)

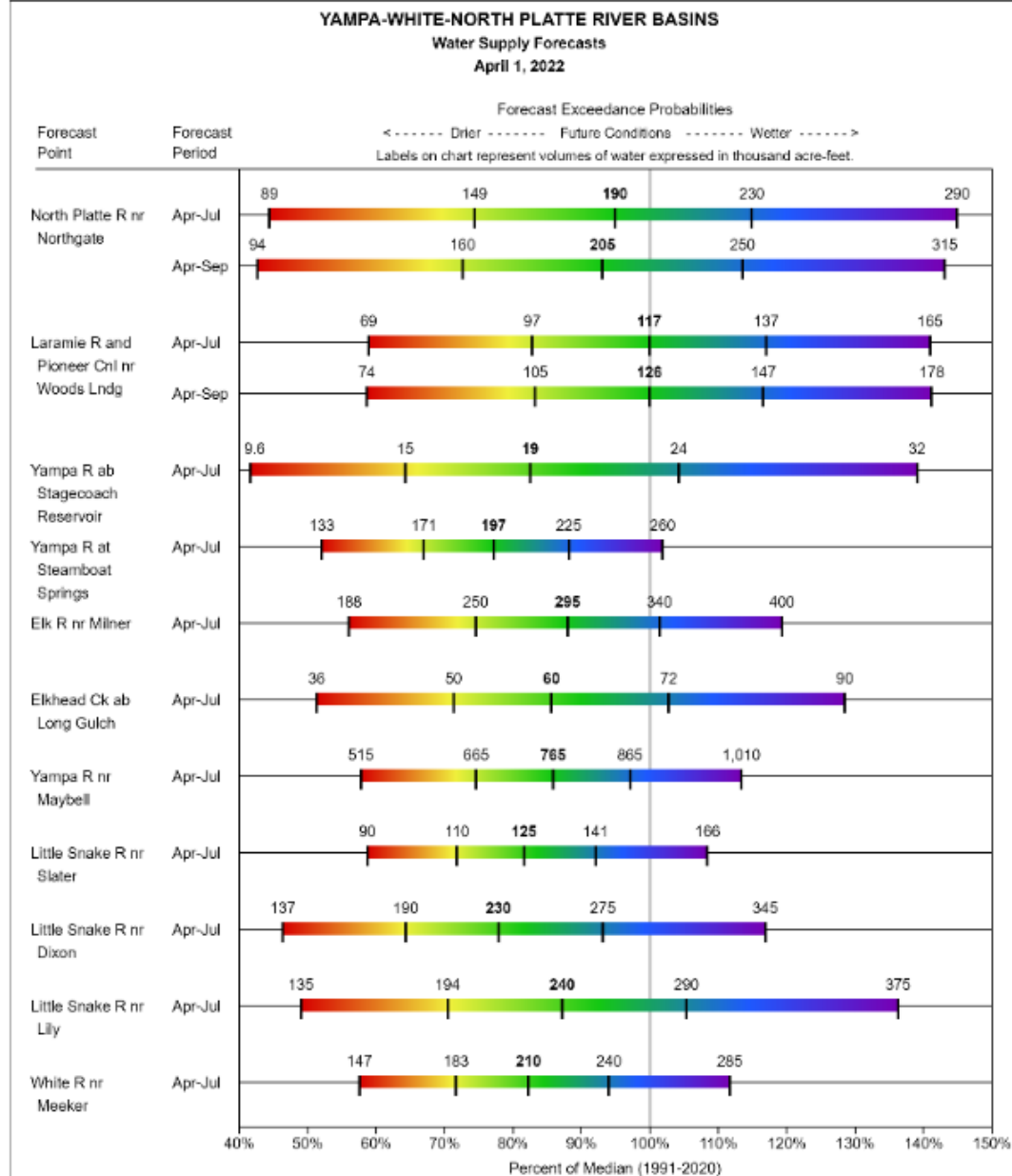
[Station List](#)

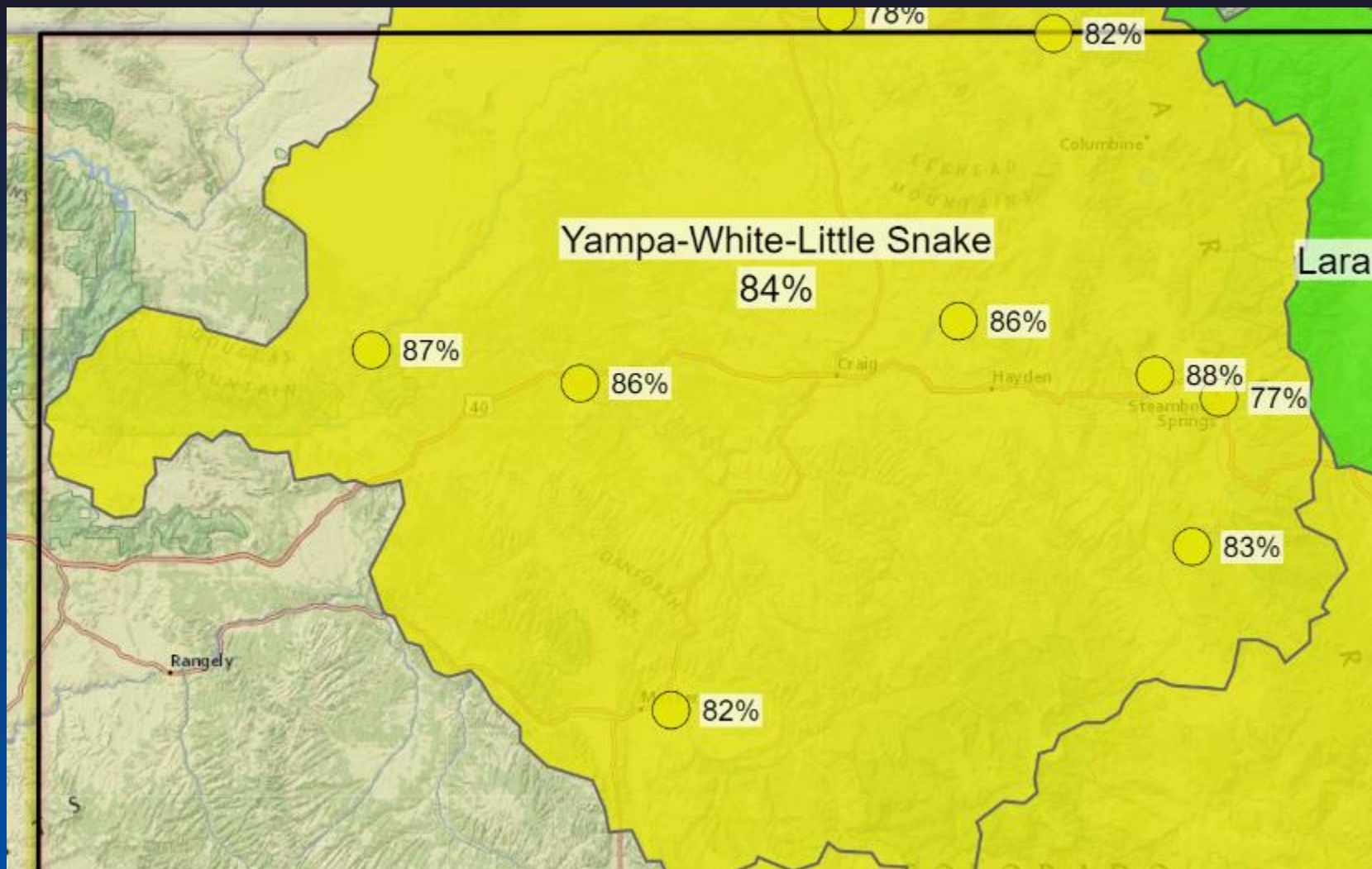
Current as of 04/18/2022:  
% of Median - 101%  
% of WY Median - 67%  
Days Until End of WY - 165  
Percentile - 57



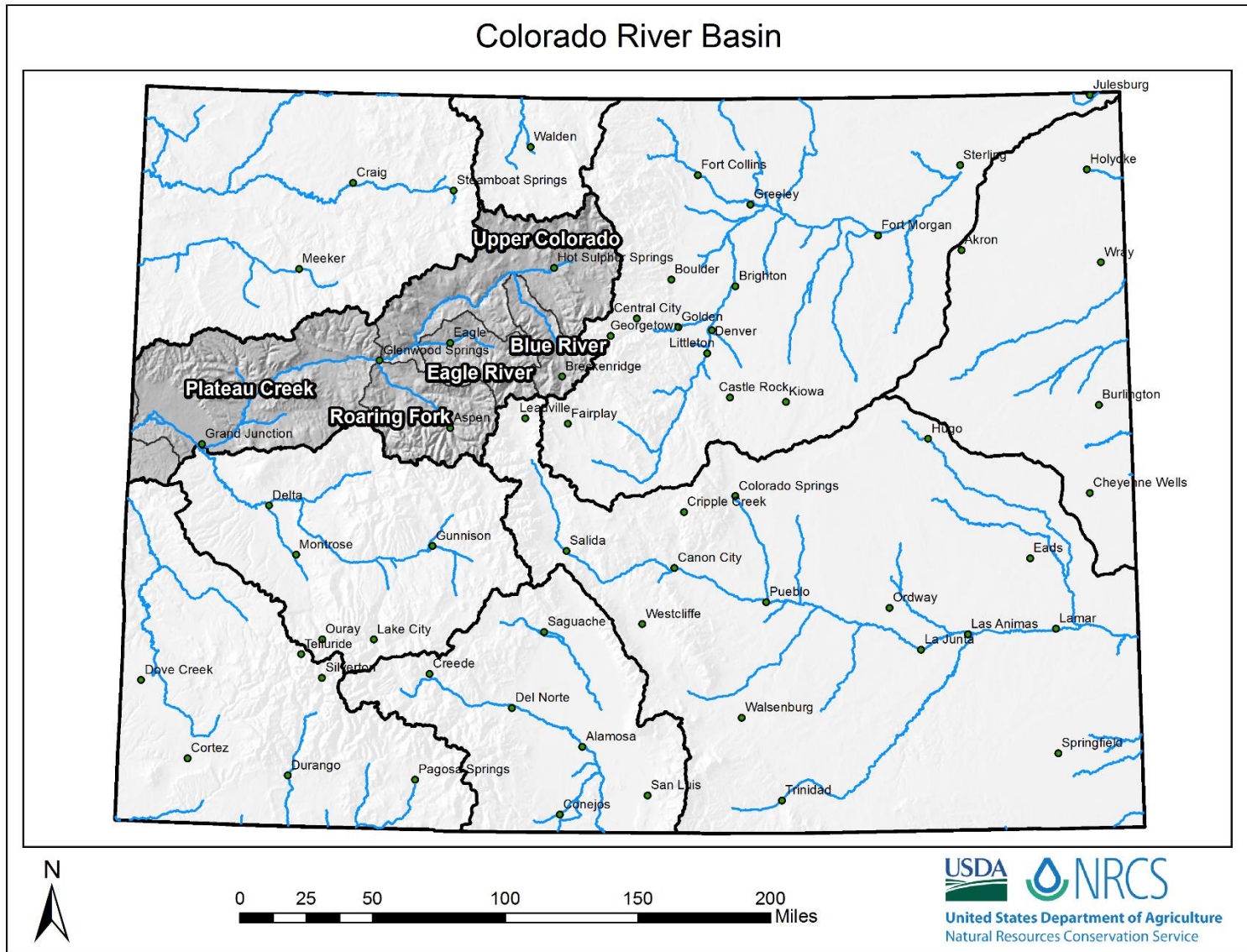
## Reservoir Conditions for Yampa-White-Little Snake on April 1st 2022







## Major Basin Summary





# Colorado Snow Surveys

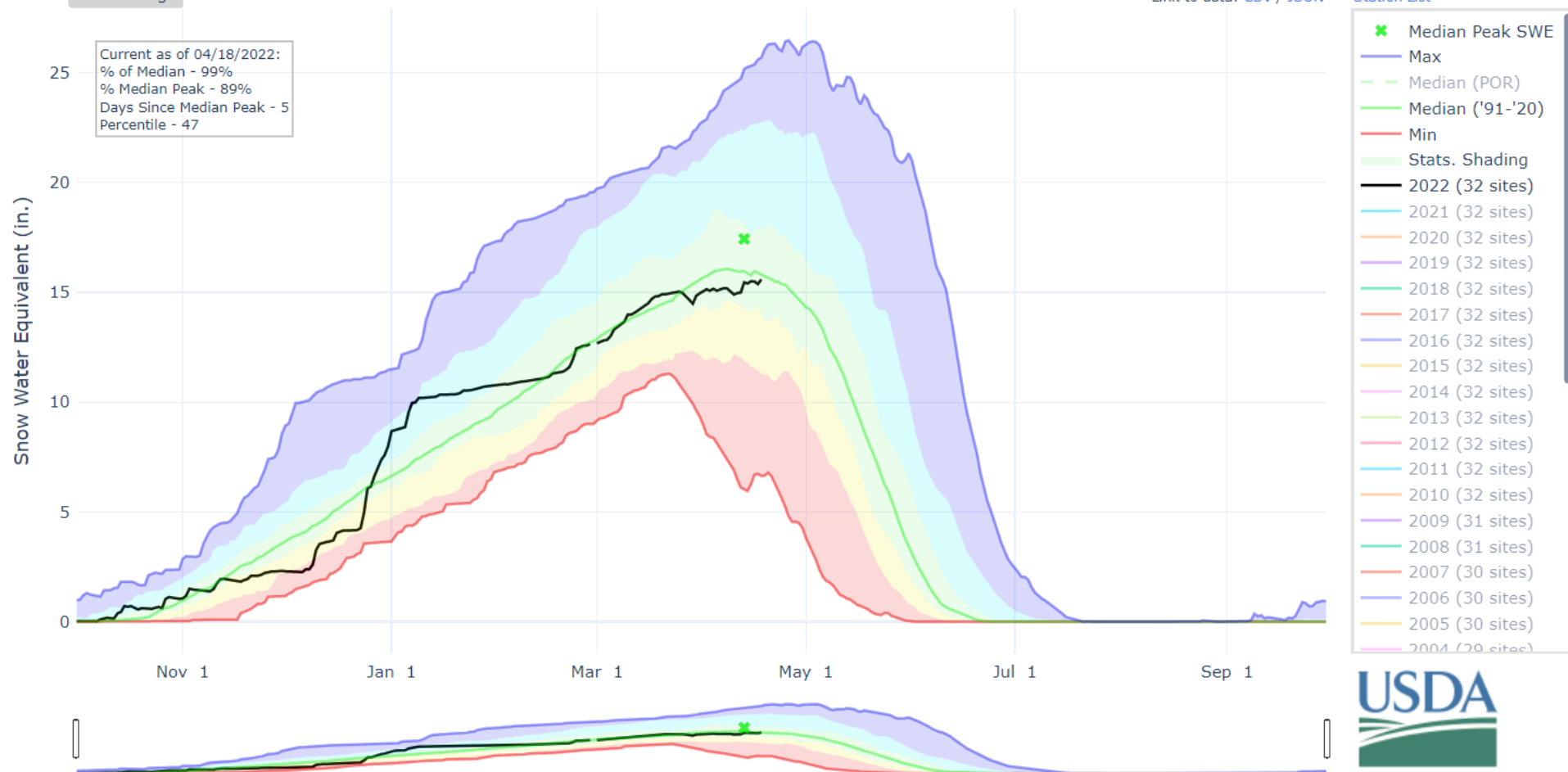
## SNOW WATER EQUIVALENT IN COLORADO HEADWATERS

Reset Range

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

[Station List](#)

Current as of 04/18/2022:  
% of Median - 99%  
% Median Peak - 89%  
Days Since Median Peak - 5  
Percentile - 47





# Colorado Snow Surveys

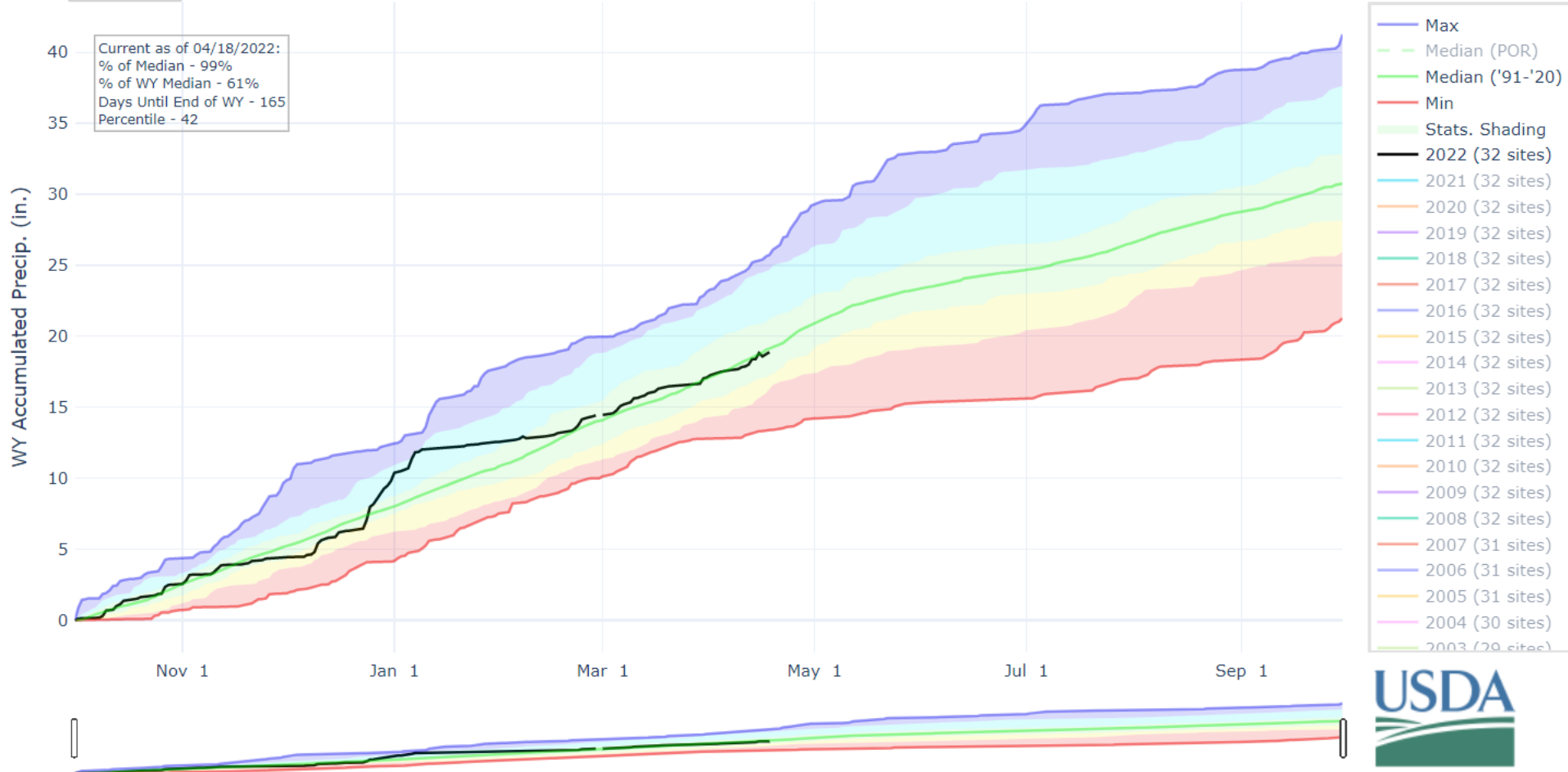
## PRECIPITATION IN COLORADO HEADWATERS

Reset Range

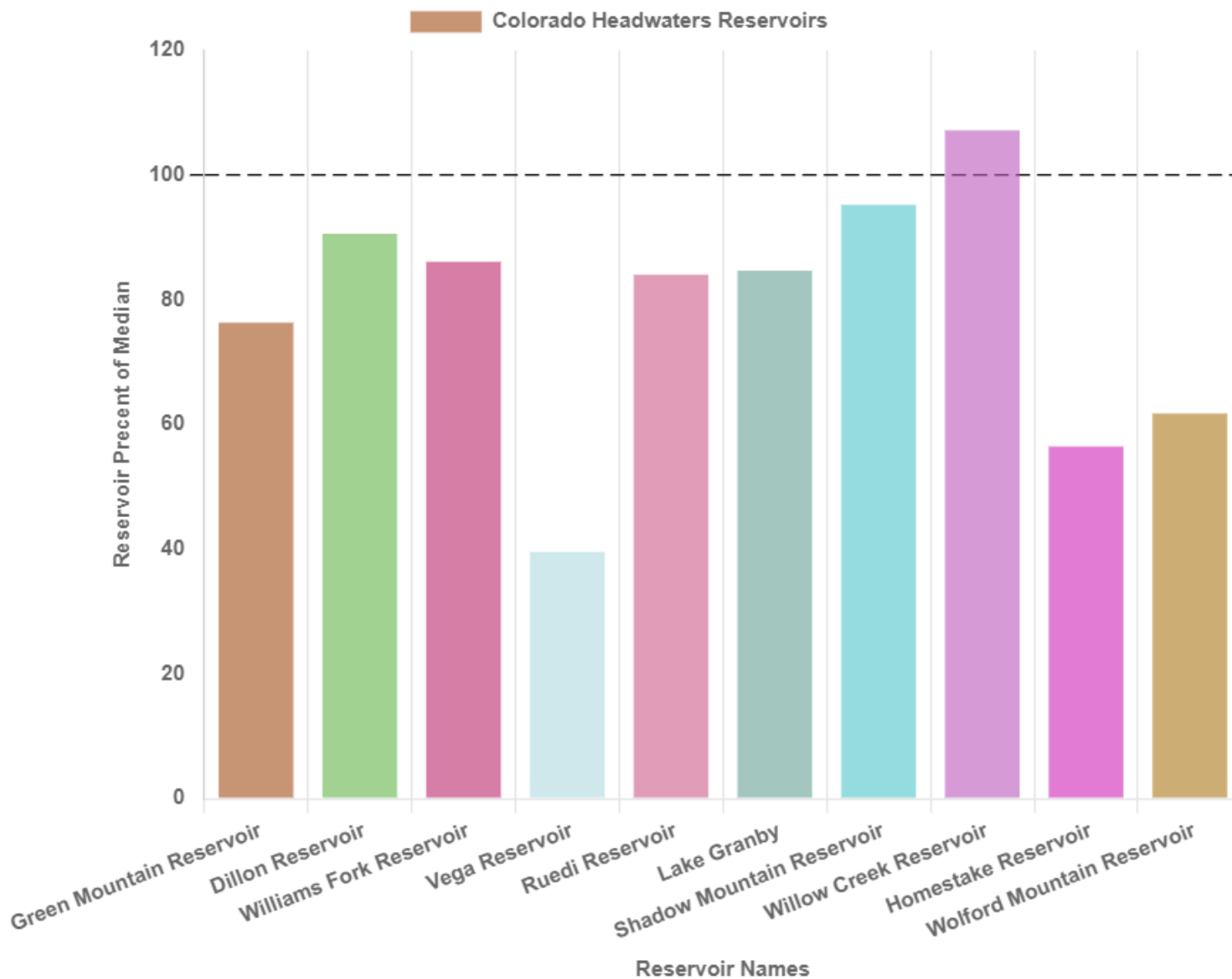
[Link to data: CSV / JSON](#)

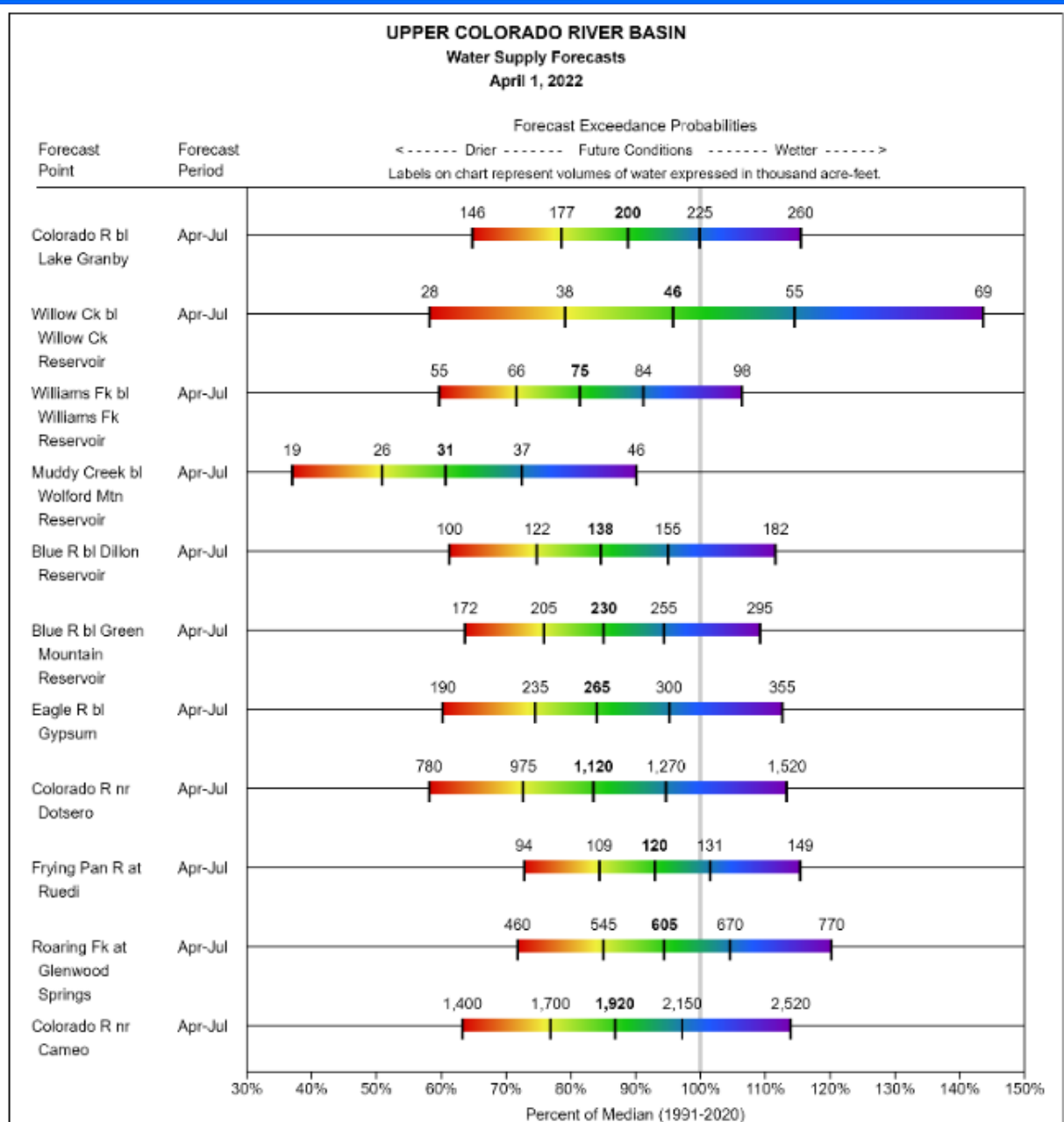
[Station List](#)

Current as of 04/18/2022:  
% of Median - 99%  
% of WY Median - 61%  
Days Until End of WY - 165  
Percentile - 42

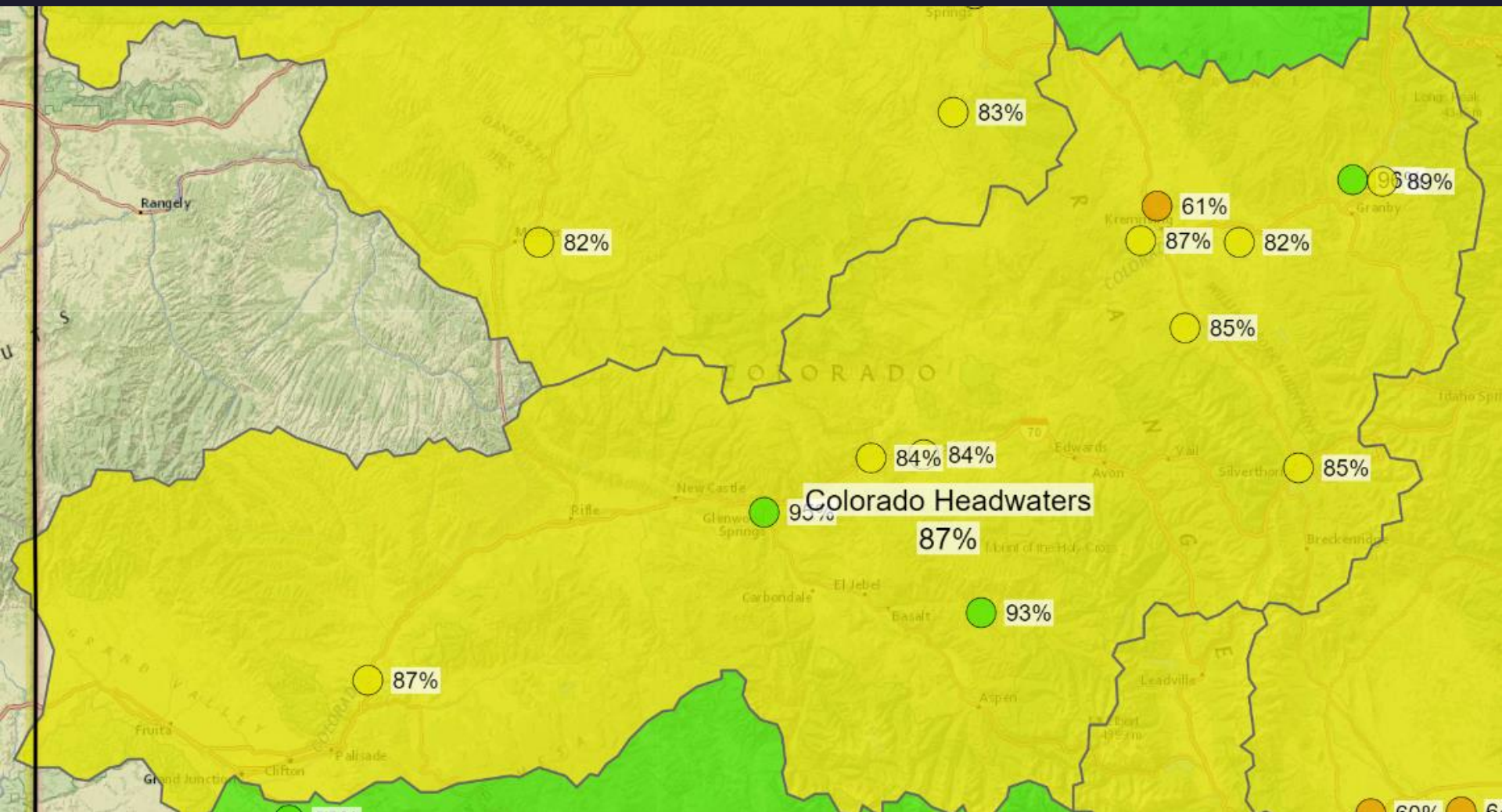


Reservoir Conditions for Colorado Headwaters on April 1st 2022



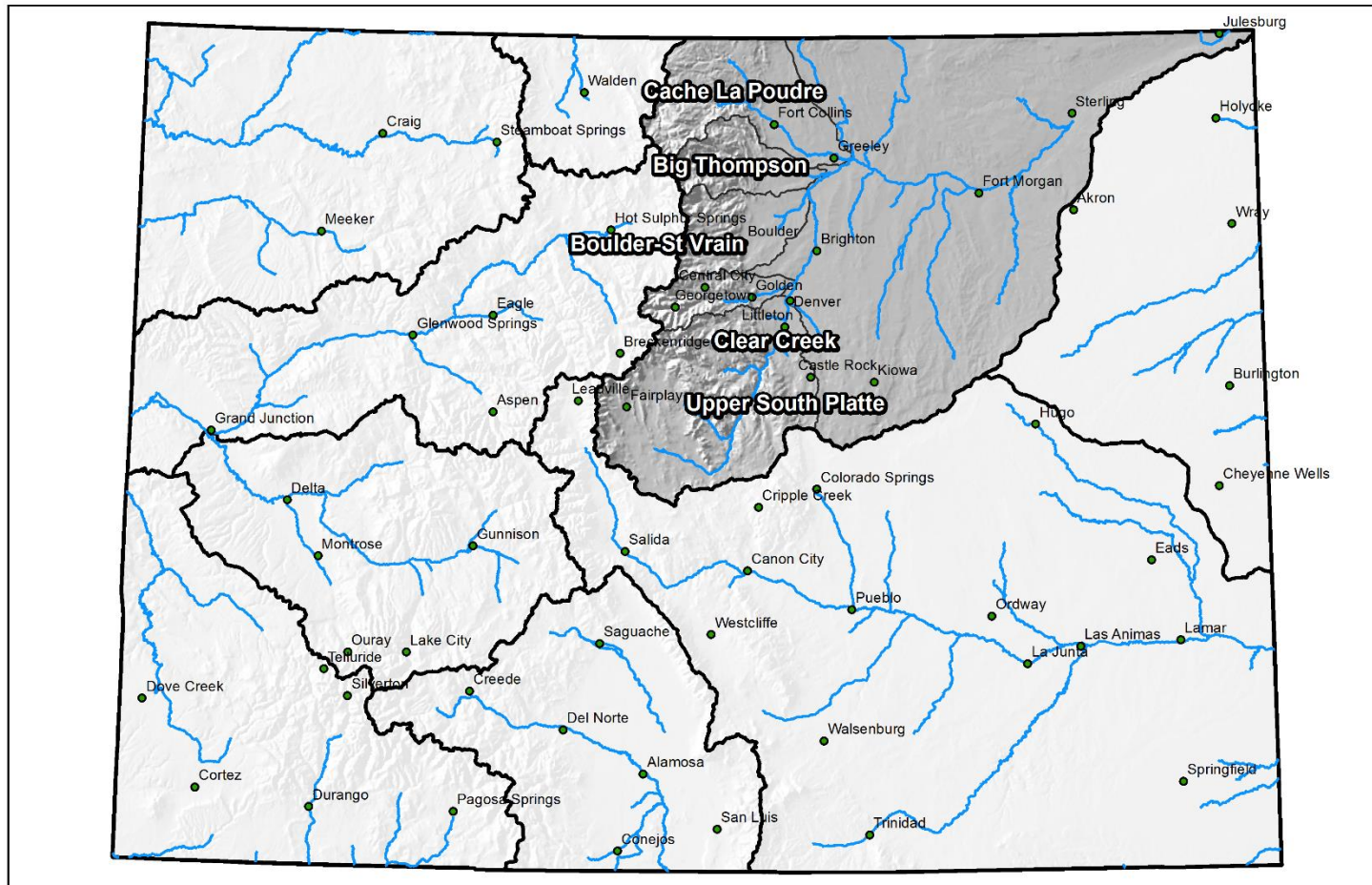


# Colorado Snow Surveys



## Major Basin Summary

### South Platte River Basin



0 25 50 100 150 200 Miles



# Colorado Snow Surveys

## SNOW WATER EQUIVALENT IN SOUTH PLATTE

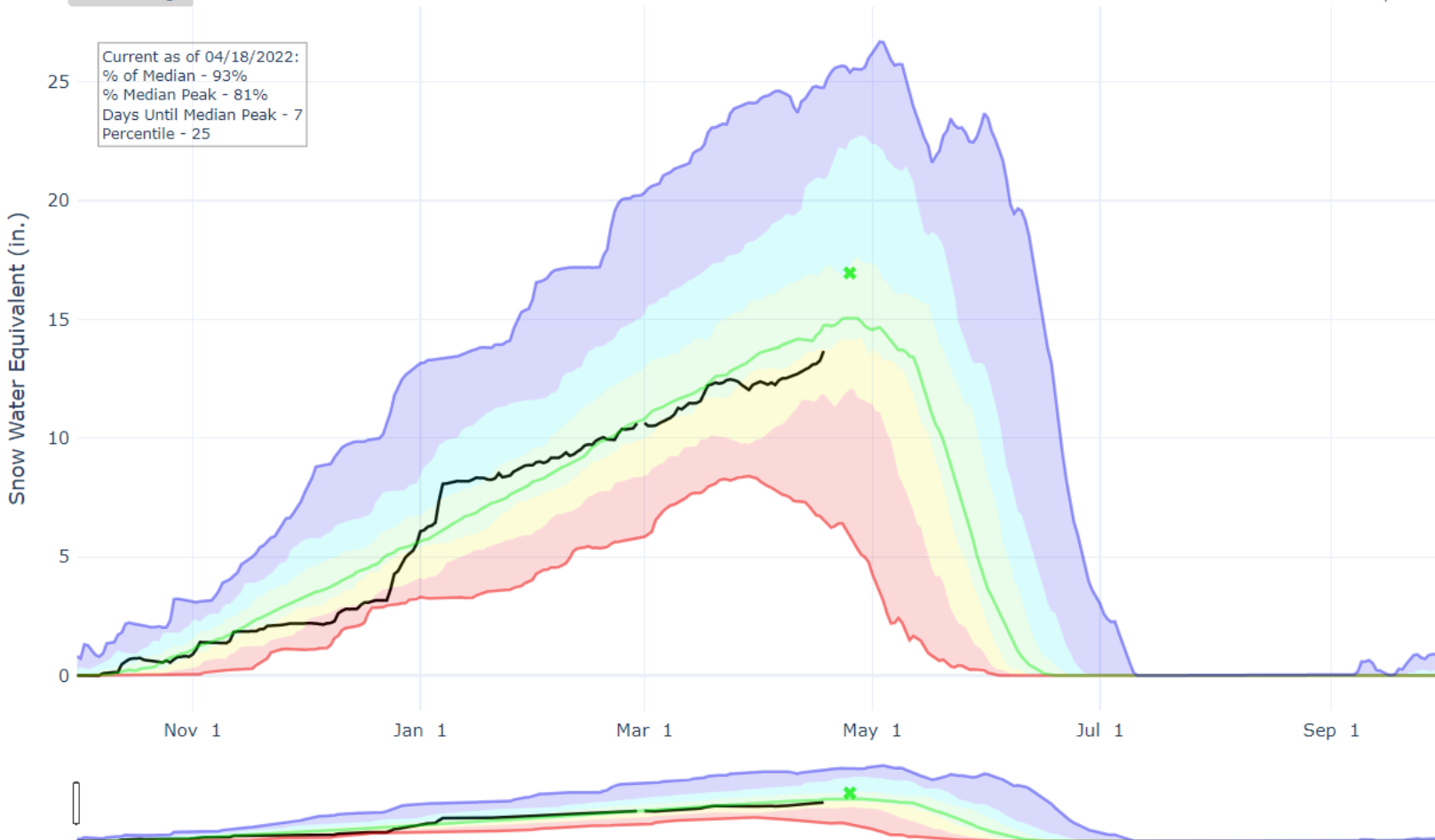
Reset Range

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

[Station List](#)

Current as of 04/18/2022:  
% of Median - 93%  
% Median Peak - 81%  
Days Until Median Peak - 7  
Percentile - 25

- ✕ Median Peak SWE
- Max
- Median (POR)
- Median ('91-'20)
- Min
- Stats. Shading
- 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

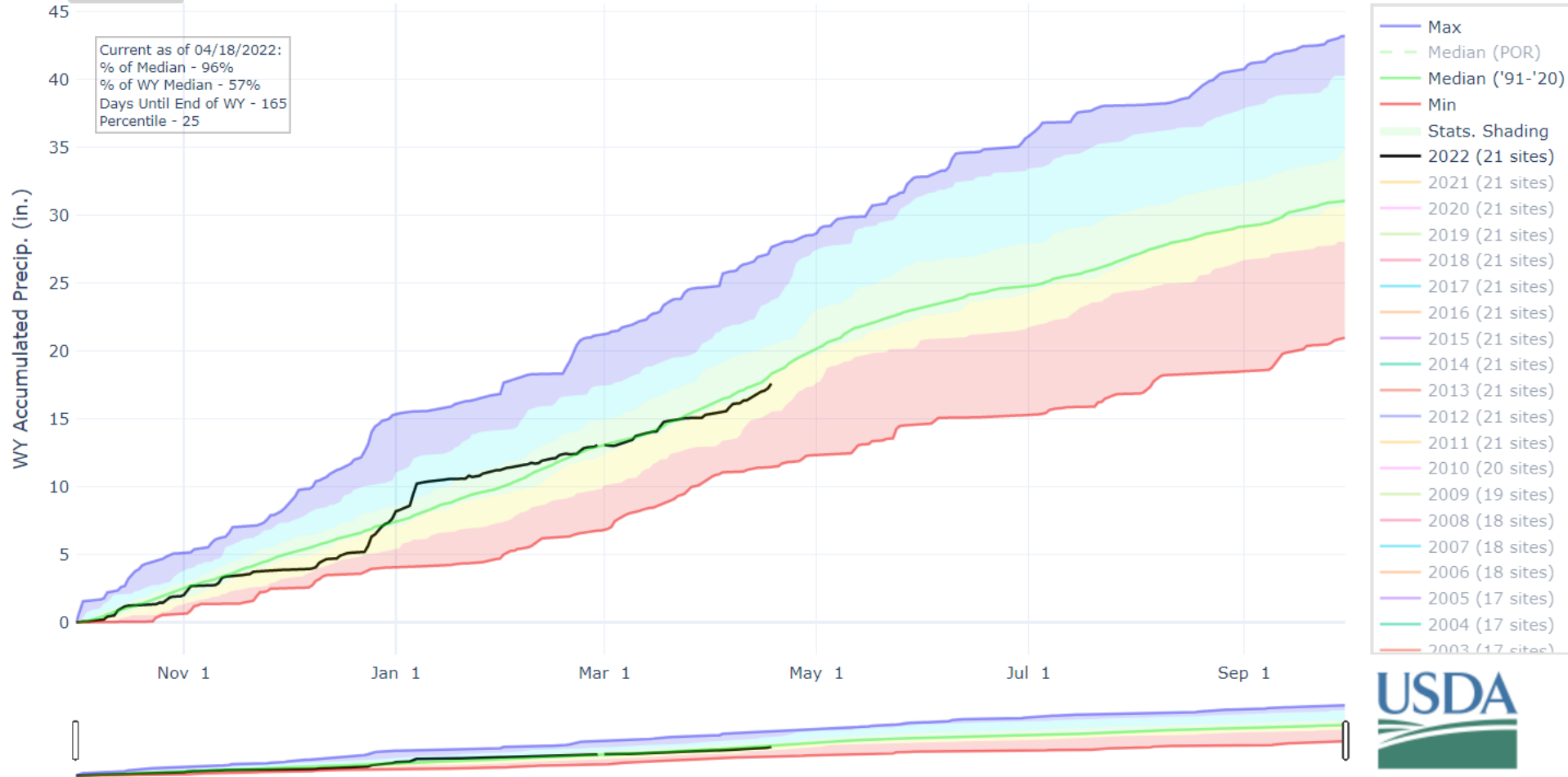
## PRECIPITATION IN SOUTH PLATTE

Reset Range

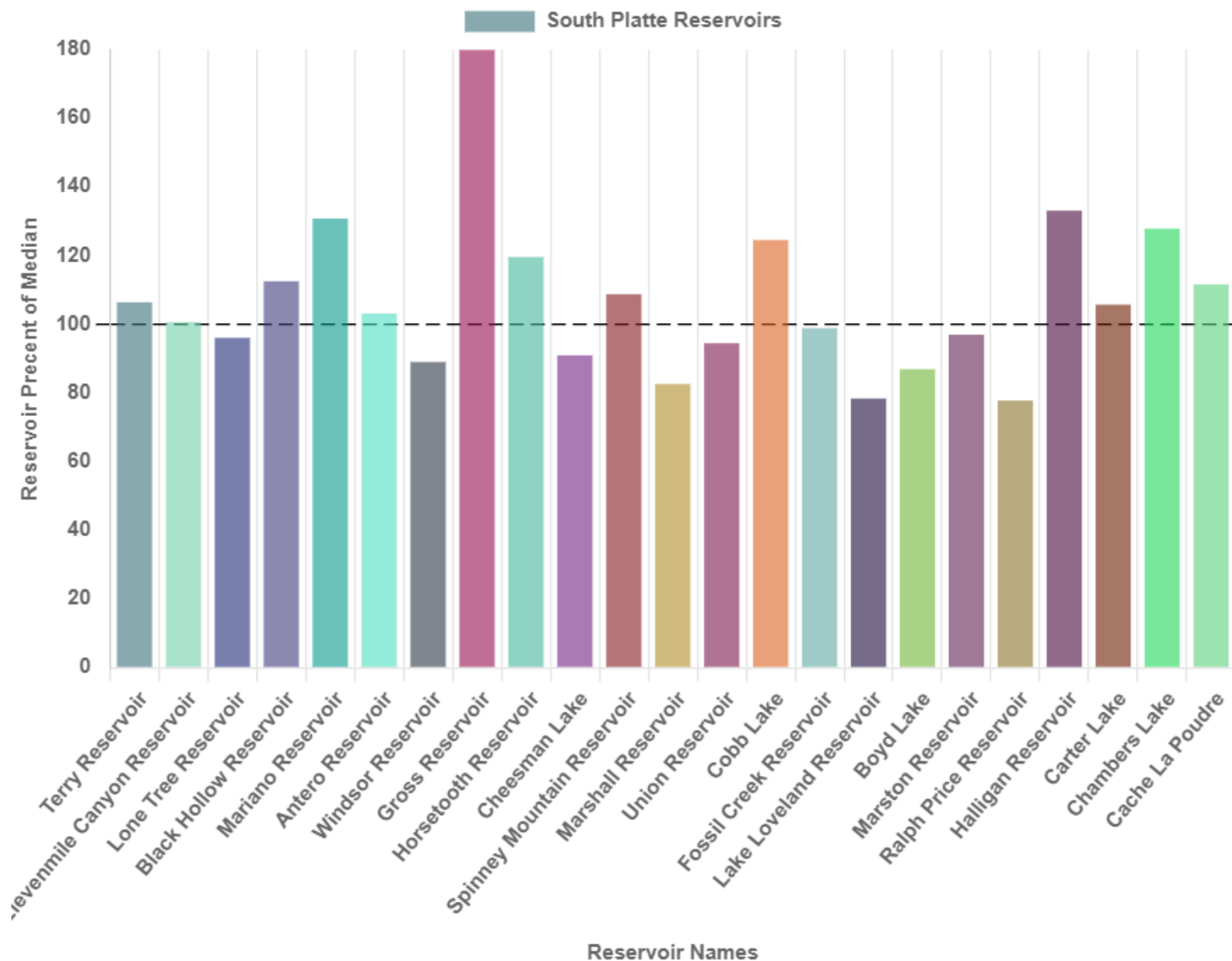
[Link to data: CSV / JSON](#)

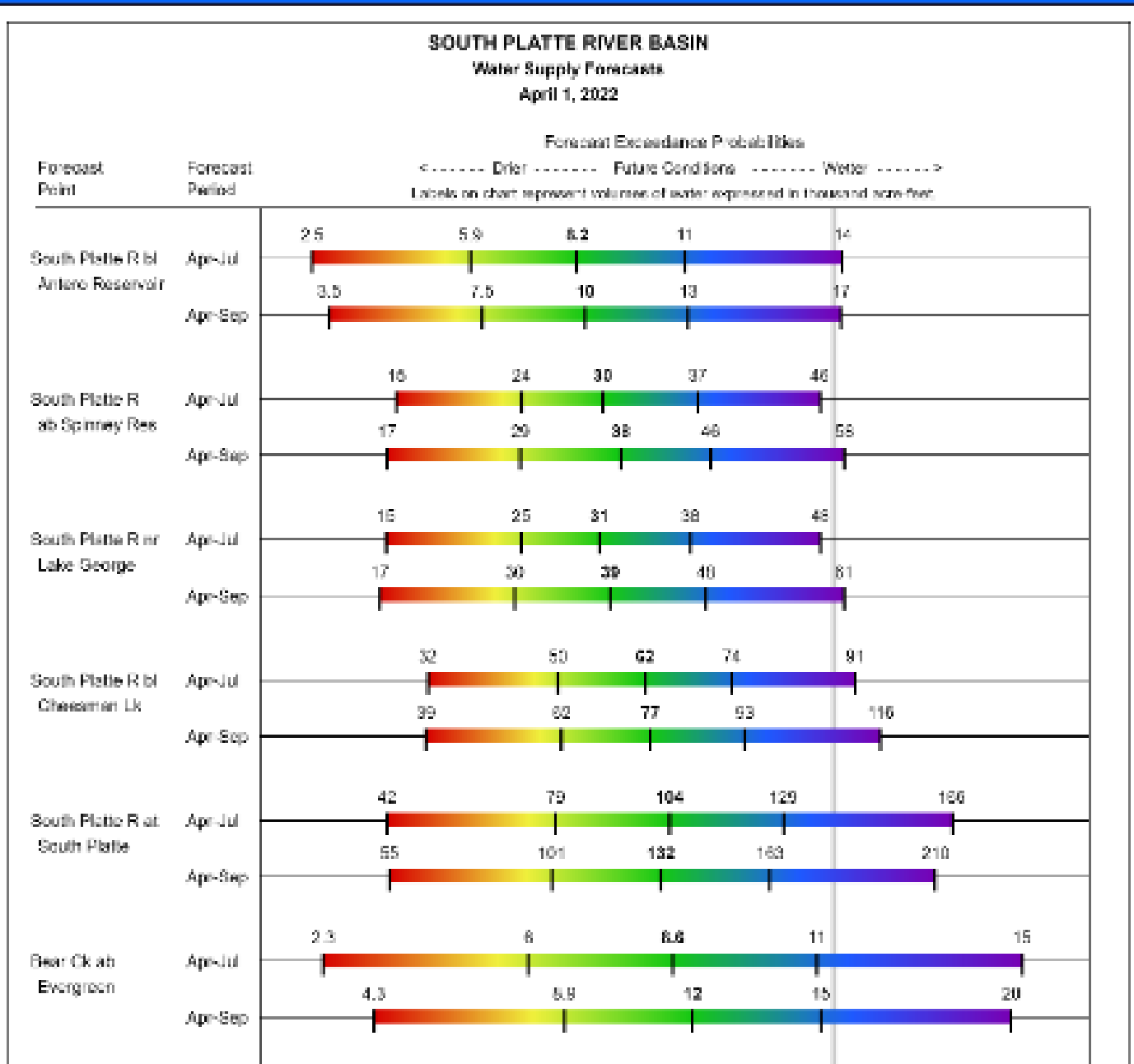
[Station List](#)

Current as of 04/18/2022:  
% of Median - 96%  
% of WY Median - 57%  
Days Until End of WY - 165  
Percentile - 25

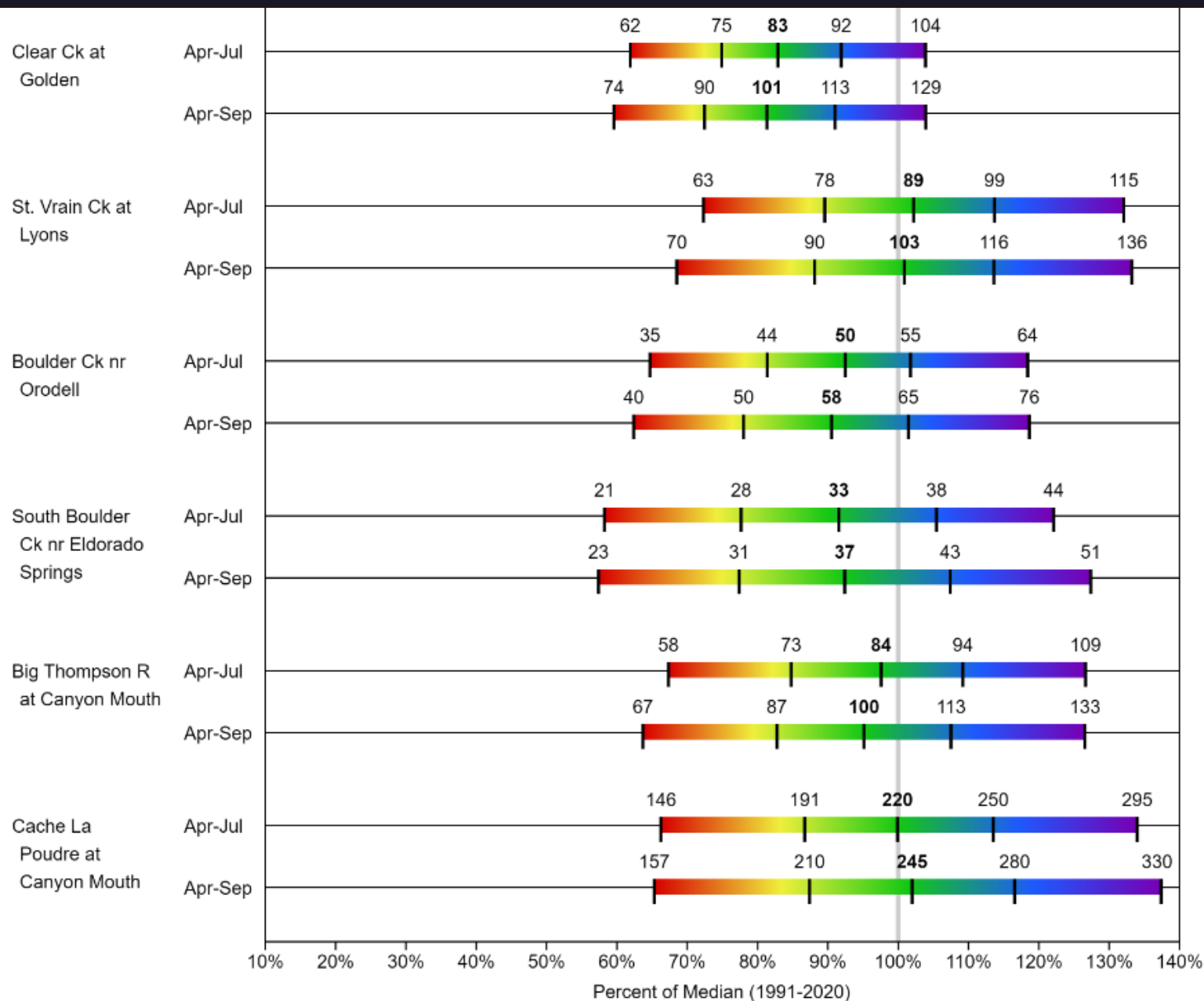


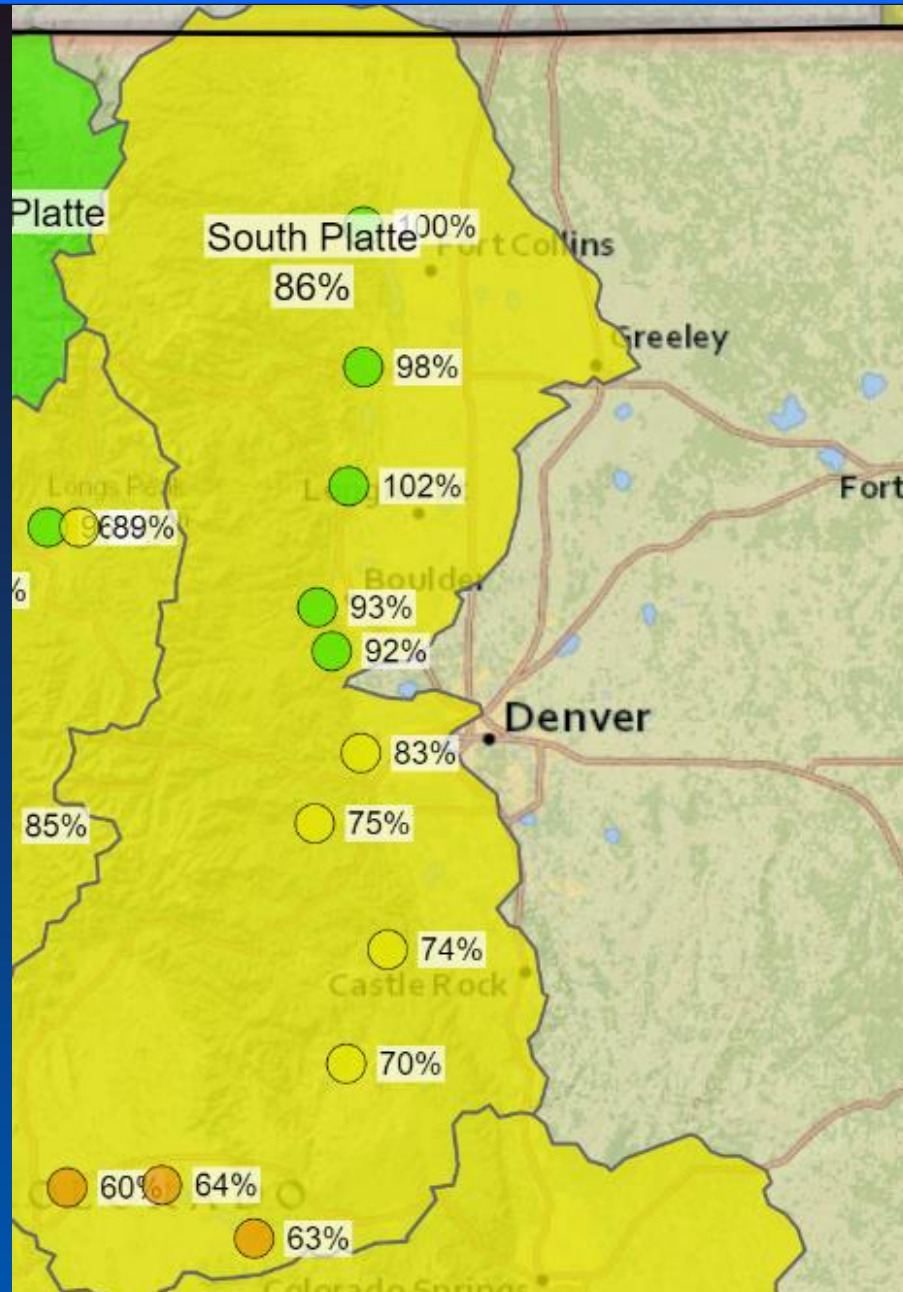
## Reservoir Conditions for South Platte on April 1st 2022





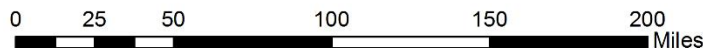
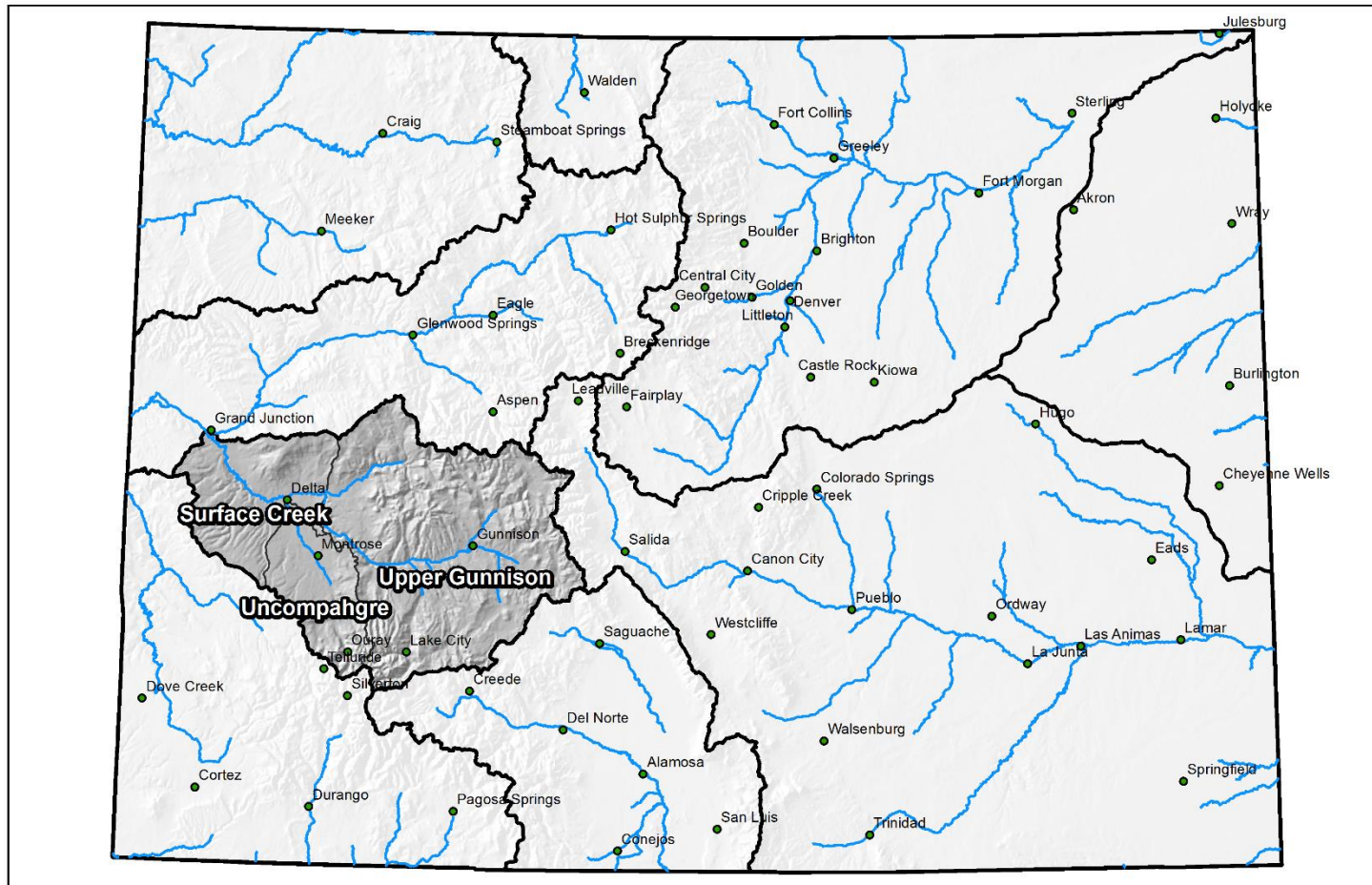
# Colorado Snow Surveys





## Major Basin Summary

### Gunnison River Basin





# Colorado Snow Surveys

## SNOW WATER EQUIVALENT IN GUNNISON

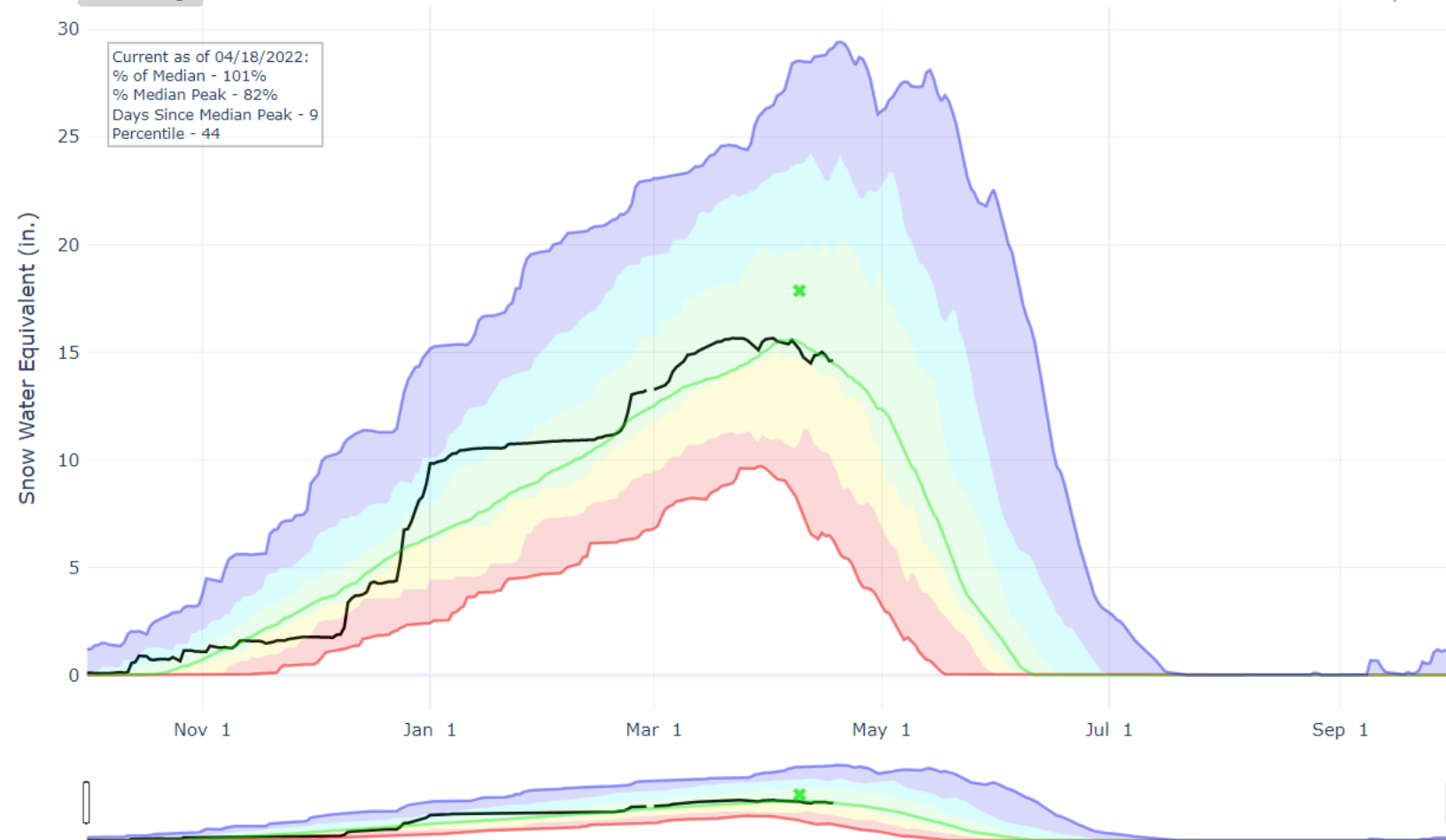
Reset Range

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

[Station List](#)

Current as of 04/18/2022:  
% of Median - 101%  
% Median Peak - 82%  
Days Since Median Peak - 9  
Percentile - 44

- ✖ Median Peak SWE
- 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)





# Colorado Snow Surveys

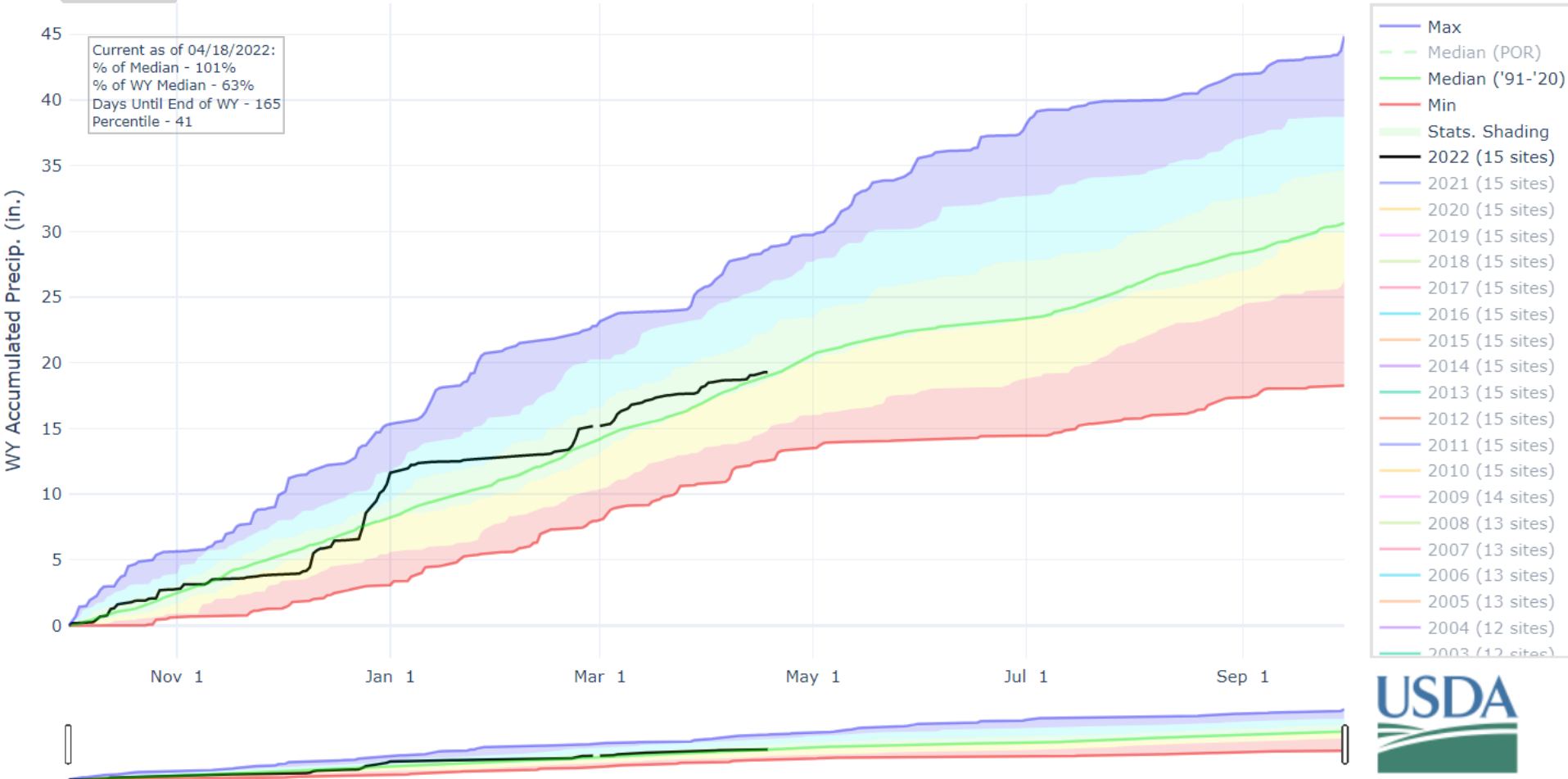
## PRECIPITATION IN GUNNISON

Reset Range

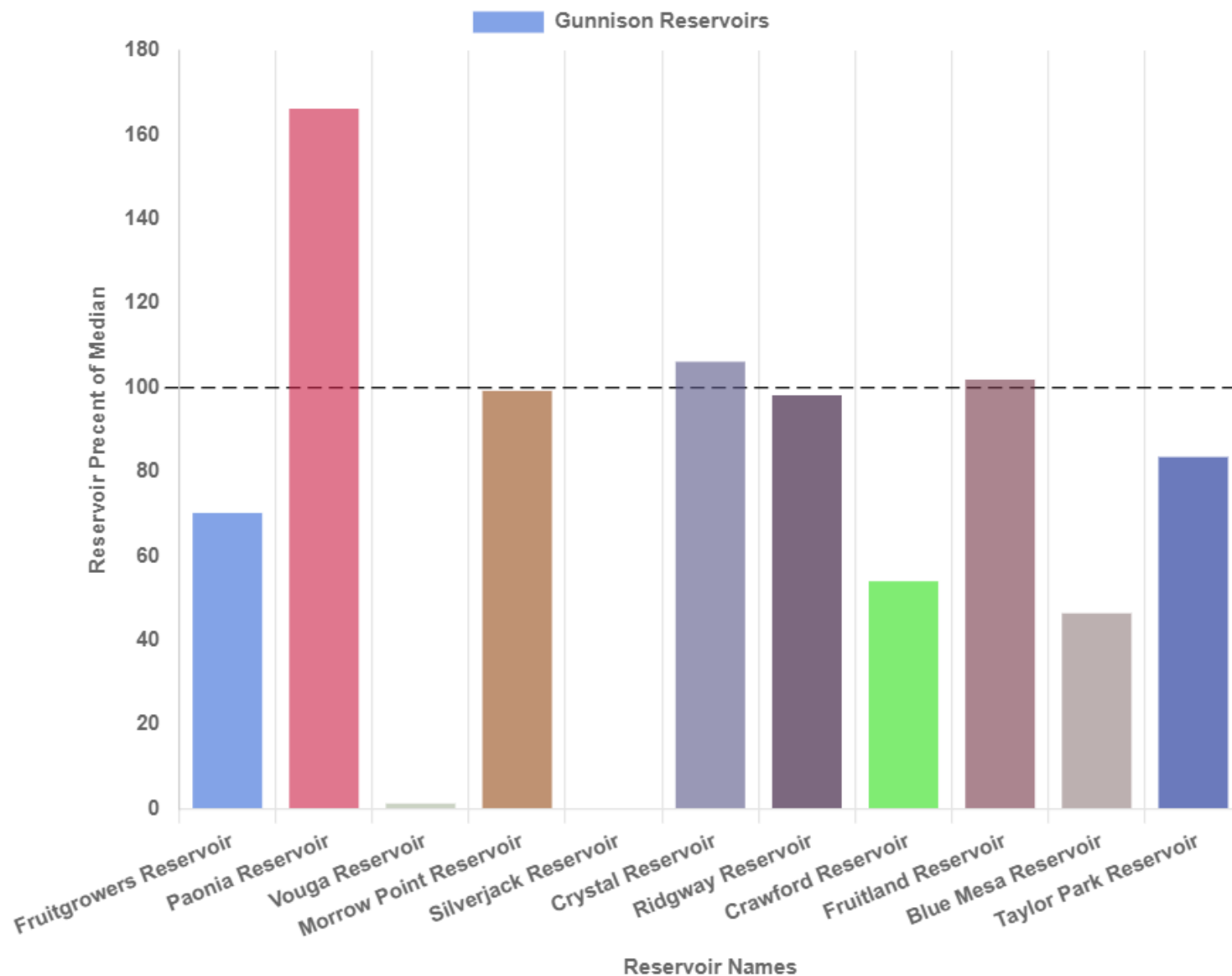
[Link to data: CSV / JSON](#)

[Station List](#)

Current as of 04/18/2022:  
% of Median - 101%  
% of WY Median - 63%  
Days Until End of WY - 165  
Percentile - 41



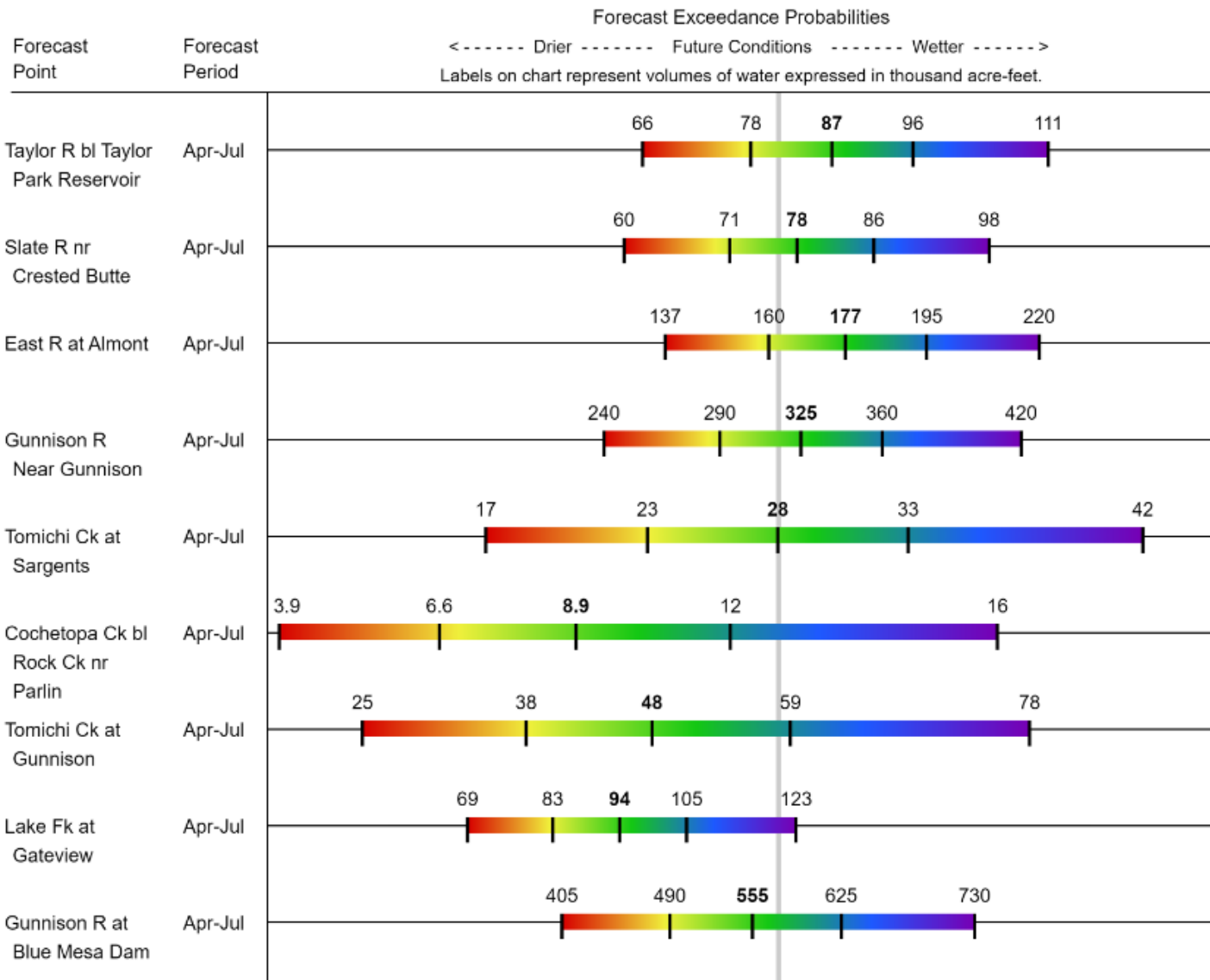
Reservoir Conditions for Gunnison on April 1st 2022



## GUNNISON RIVER BASIN

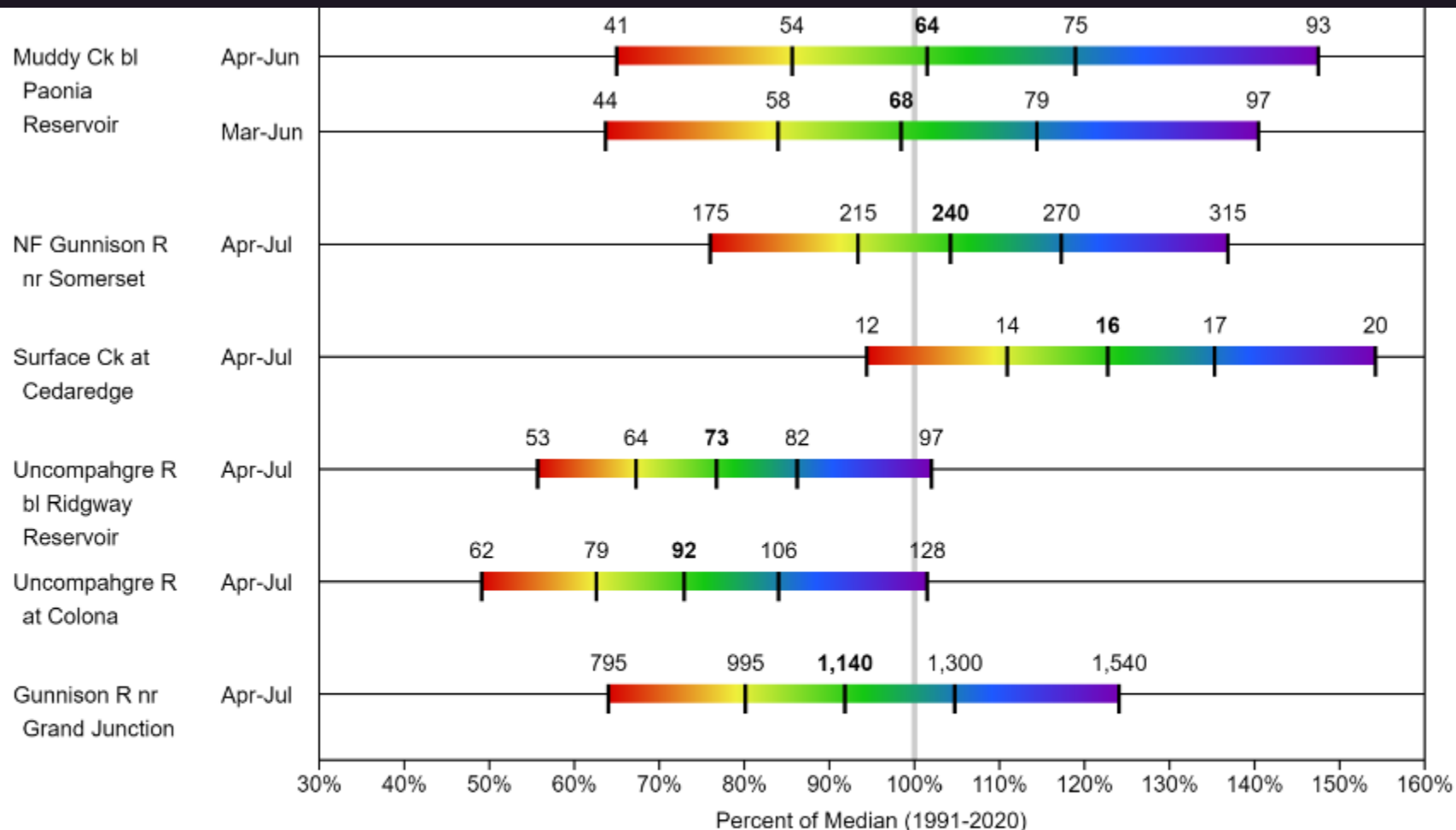
### Water Supply Forecasts

April 1, 2022





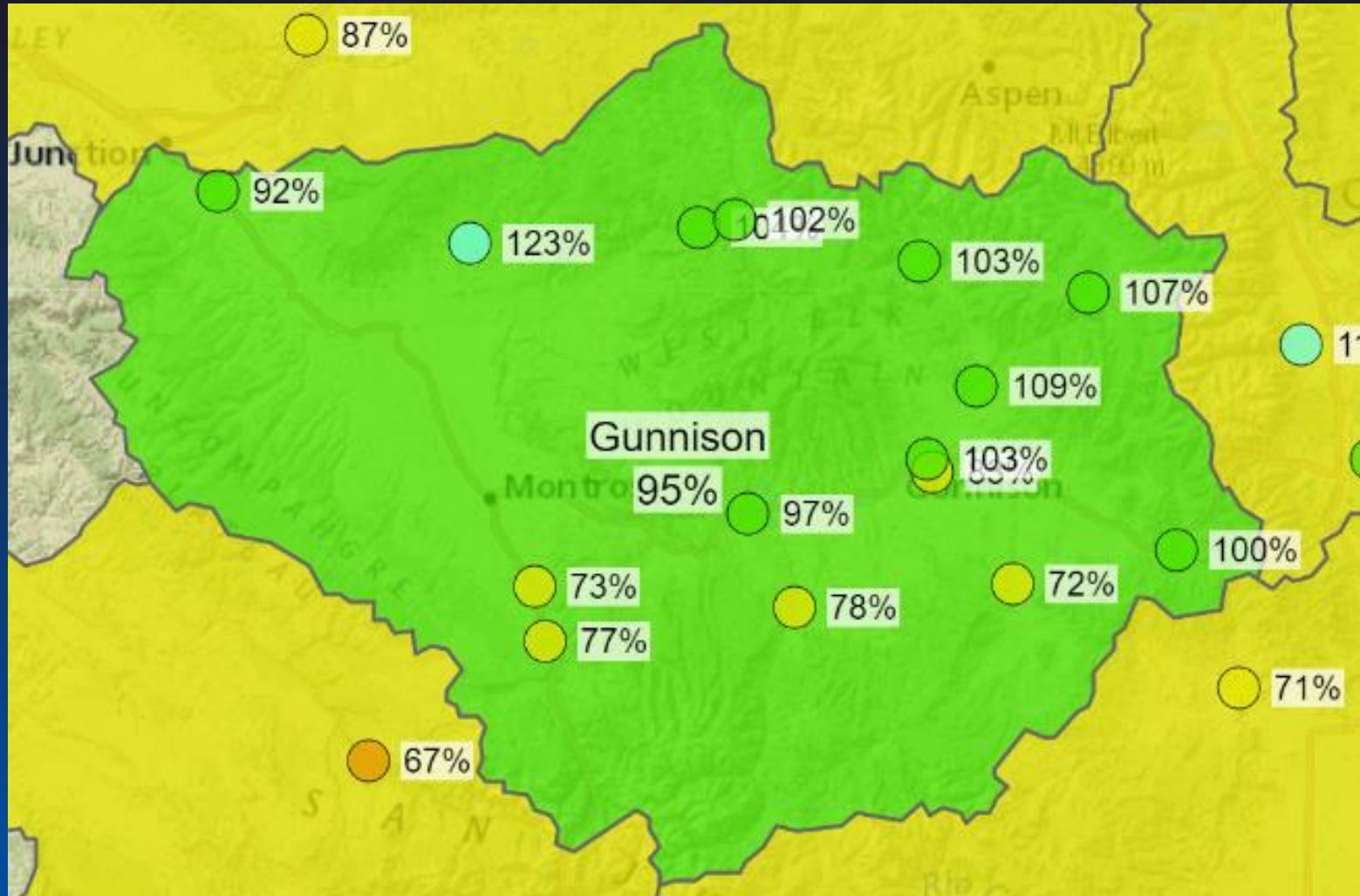
# Colorado Snow Surveys



## Legend

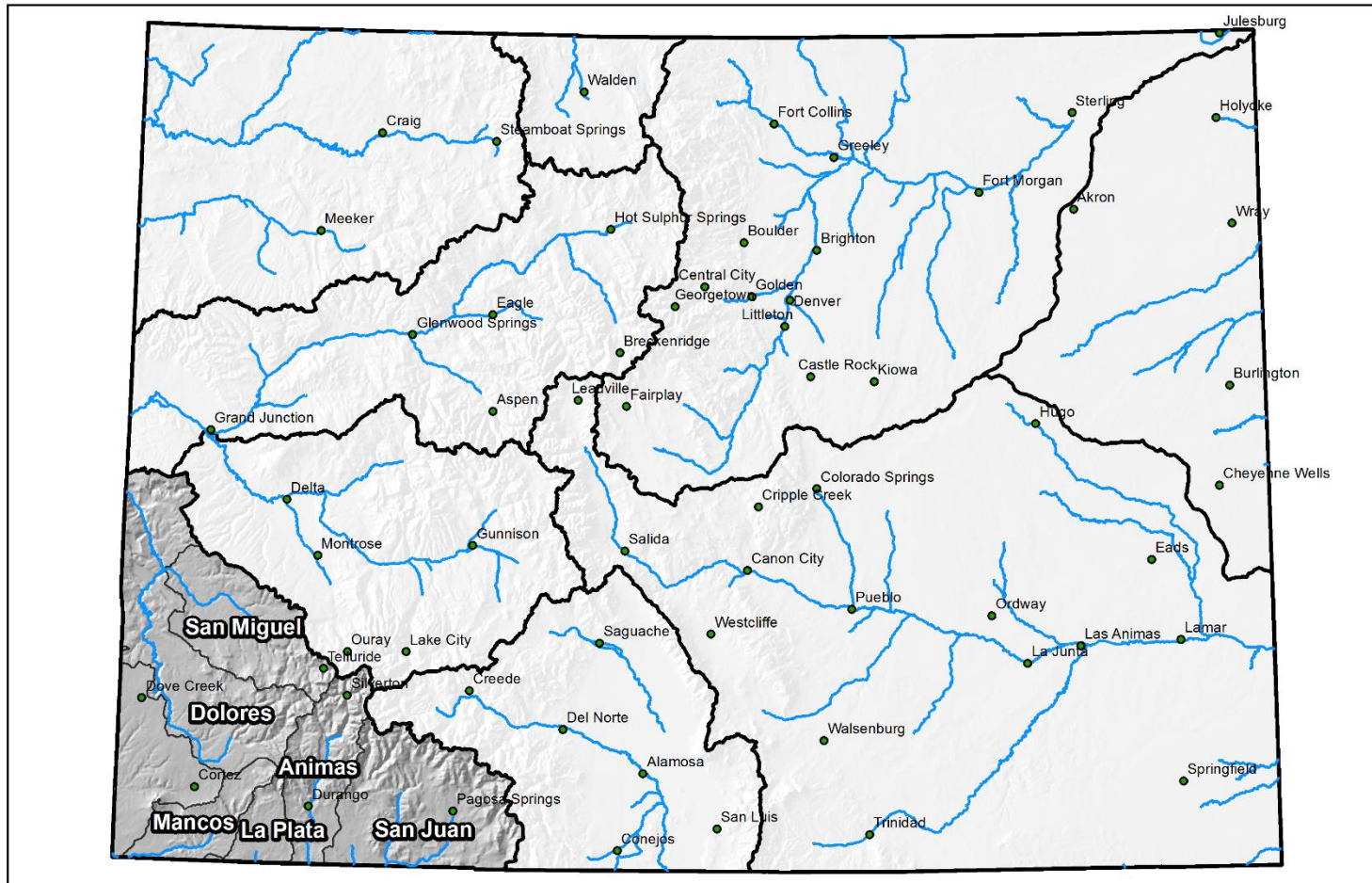


# Colorado Snow Surveys



## Major Basin Summary

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



0 25 50 100 150 200 Miles



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

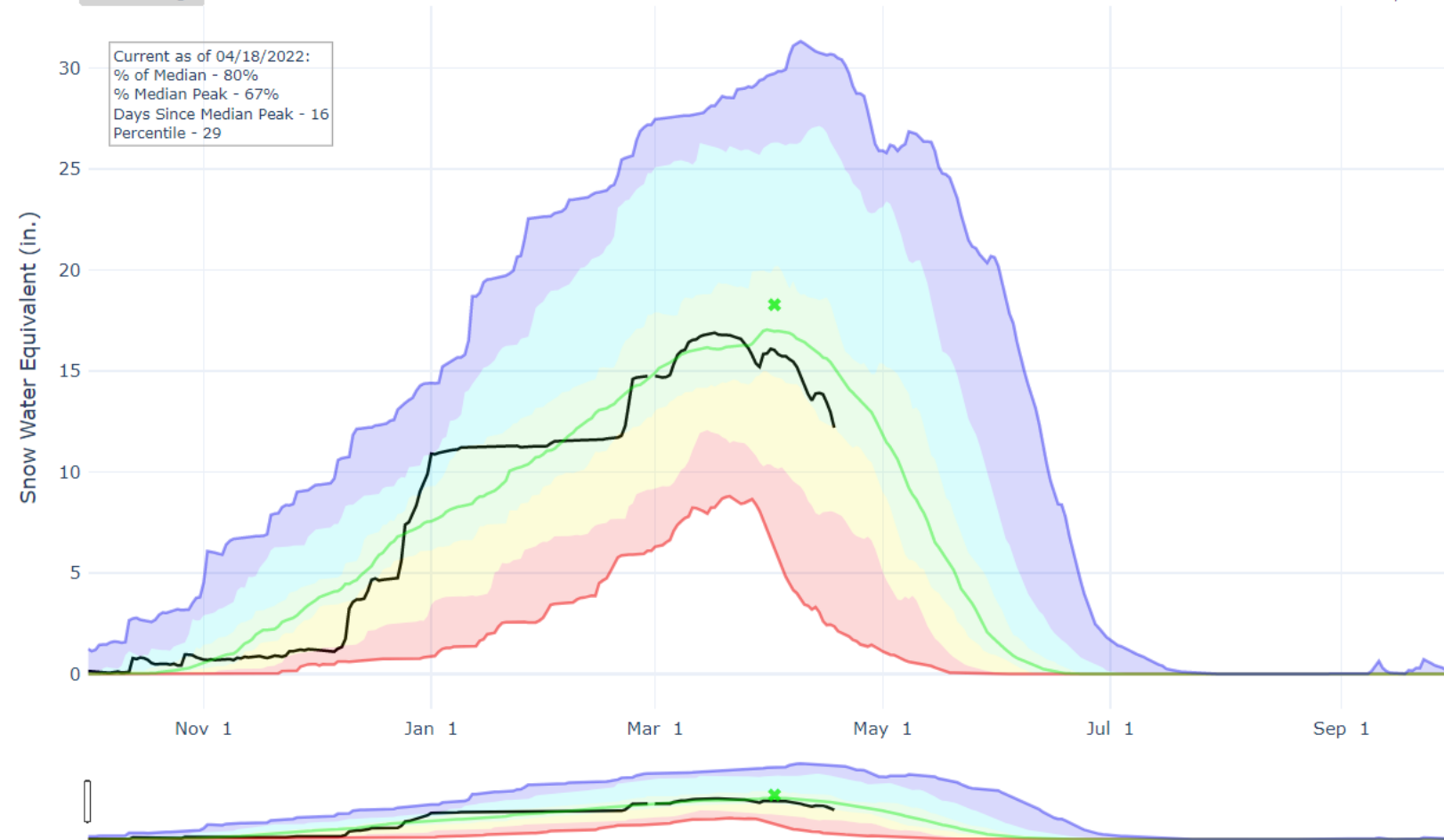
Reset Range

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

[Station List](#)

Current as of 04/18/2022:  
% of Median - 80%  
% Median Peak - 67%  
Days Since Median Peak - 16  
Percentile - 29

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





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

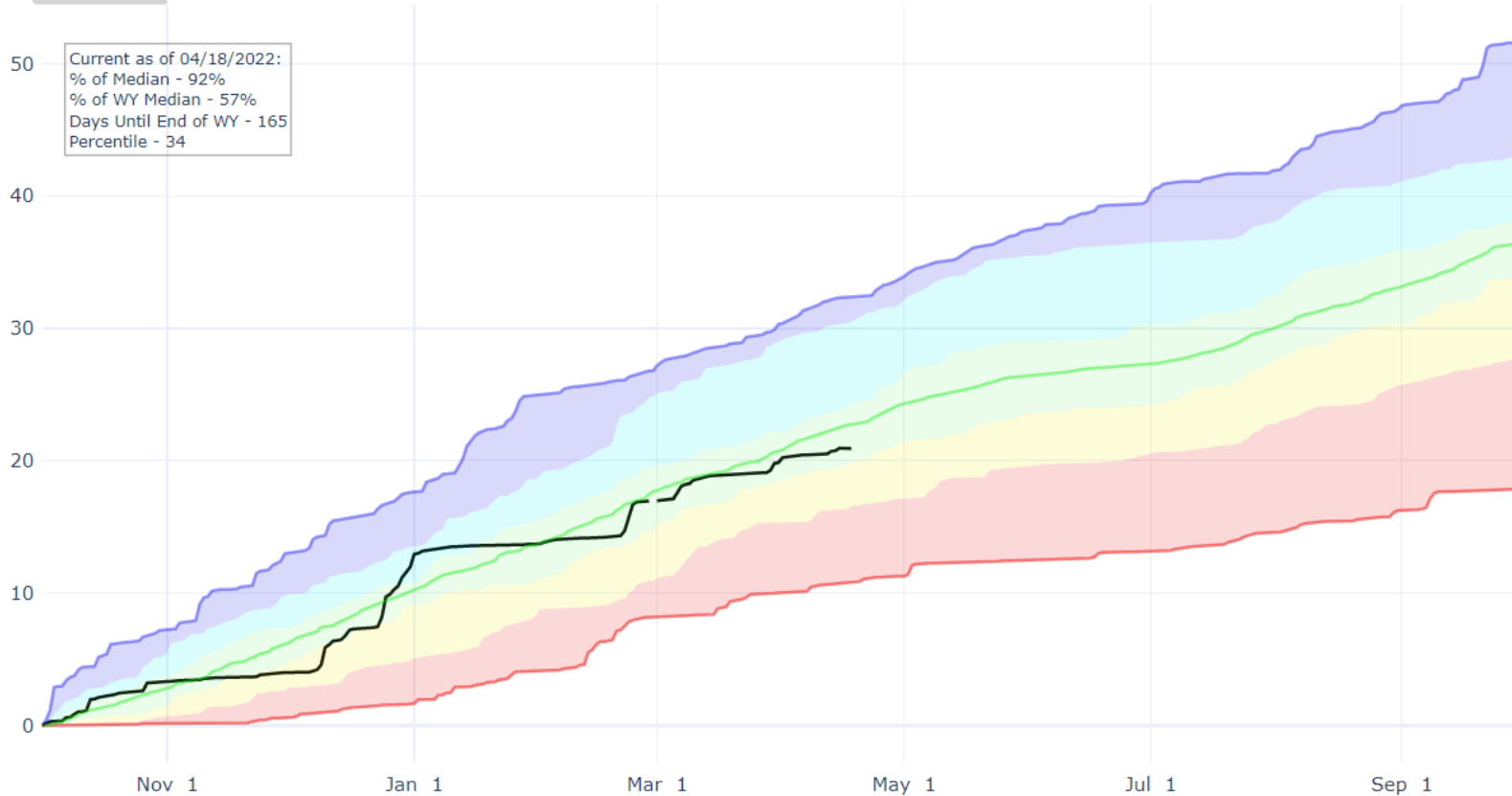
Reset Range

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

[Station List](#)

Current as of 04/18/2022:  
% of Median - 92%  
% of WY Median - 57%  
Days Until End of WY - 165  
Percentile - 34

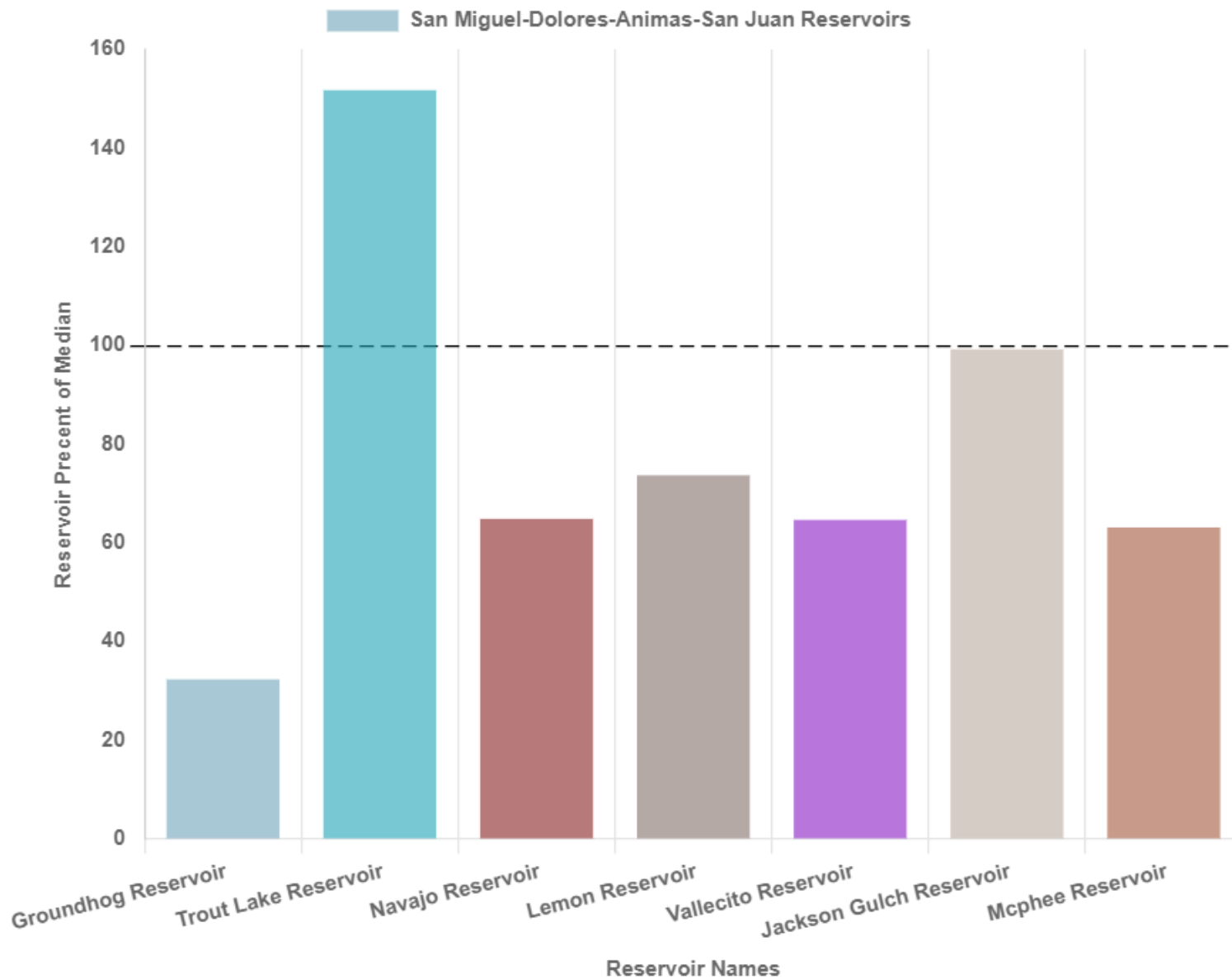
WY Accumulated Precip. (in.)

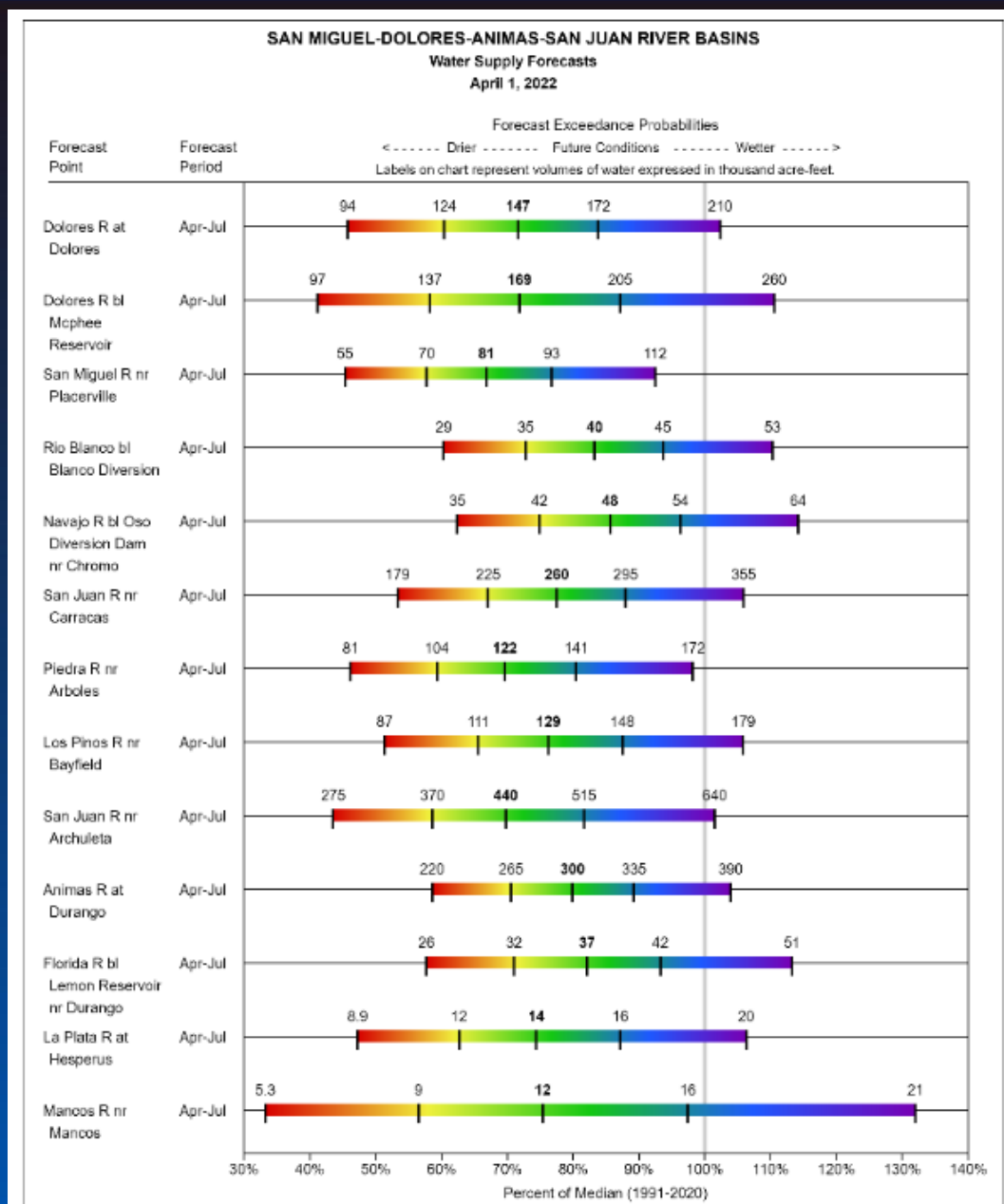


- Max
- Median (P0R)
- Median ('91-'20)
- Min
- Stats. Shading
- 2022 (20 sites)
- 2021 (20 sites)
- 2020 (20 sites)
- 2019 (20 sites)
- 2018 (20 sites)
- 2017 (20 sites)
- 2016 (20 sites)
- 2015 (20 sites)
- 2014 (20 sites)
- 2013 (20 sites)
- 2012 (20 sites)
- 2011 (20 sites)
- 2010 (19 sites)
- 2009 (19 sites)
- 2008 (19 sites)
- 2007 (19 sites)
- 2006 (19 sites)
- 2005 (19 sites)
- 2004 (18 sites)
- 2003 (18 sites)

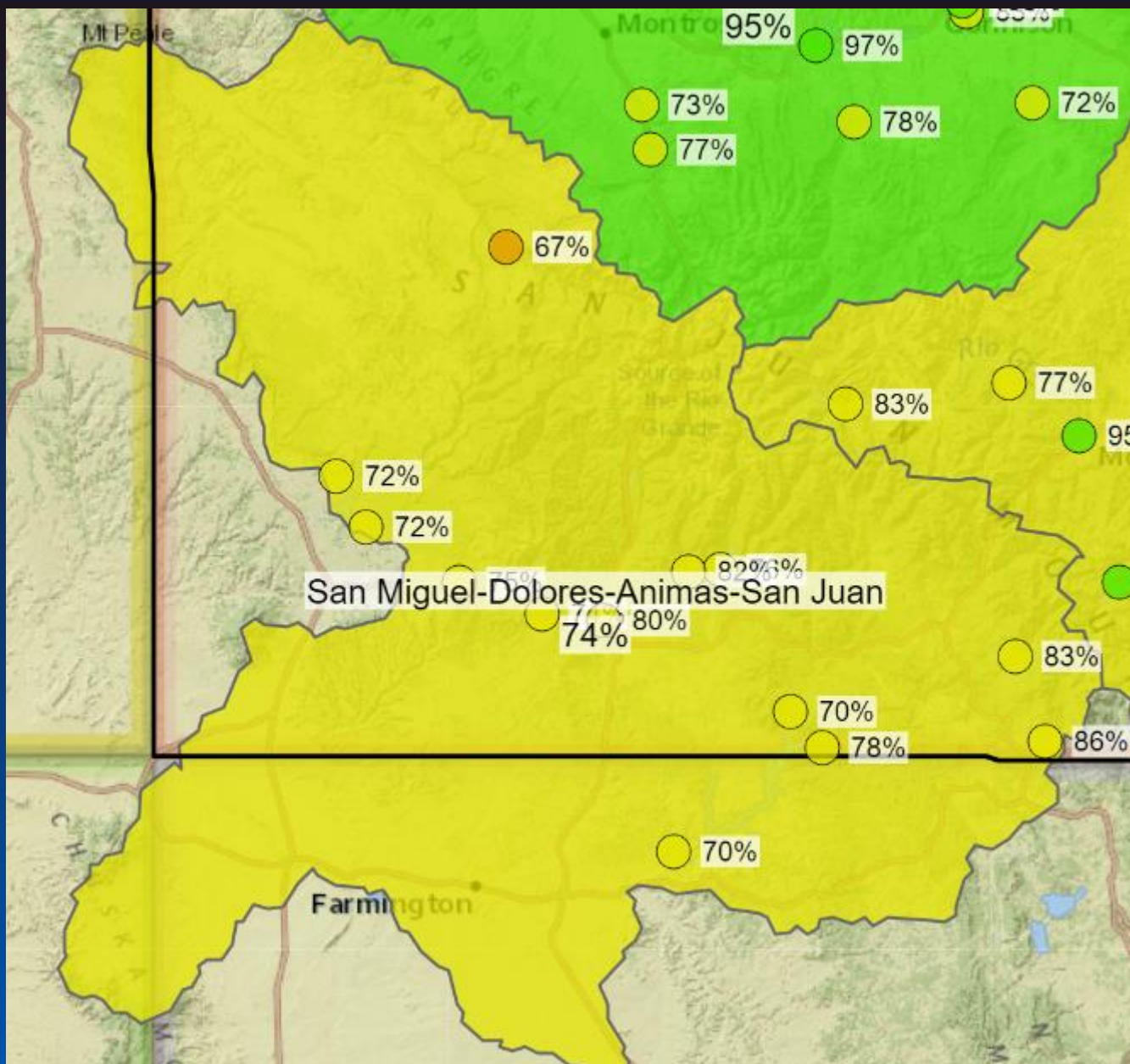


Reservoir Conditions for San Miguel-Dolores-Animas-San Juan on April 1st 2022



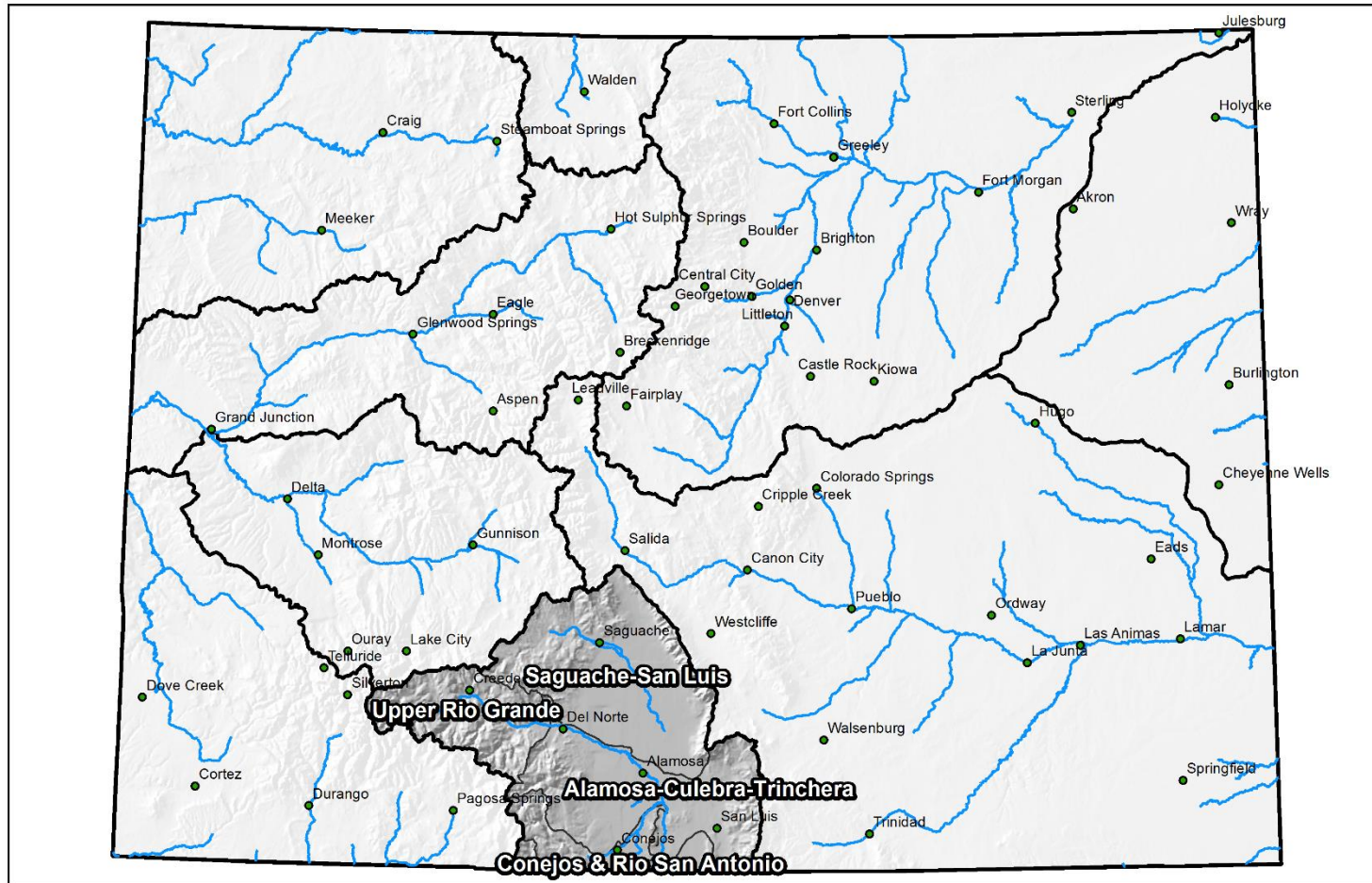


# Colorado Snow Surveys



## Major Basin Summary

### Upper Rio Grande River Basin





# Colorado Snow Surveys

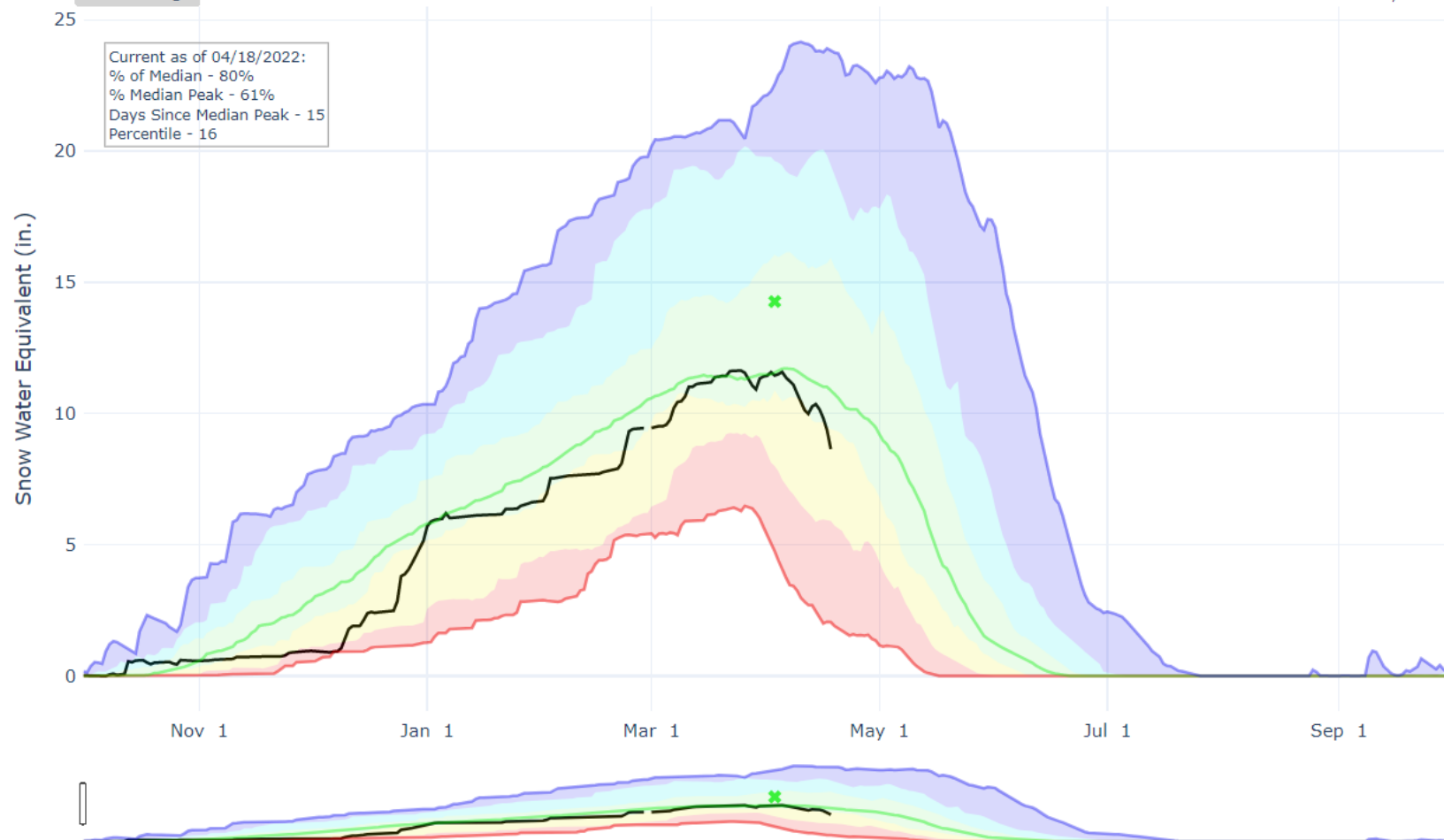
## SNOW WATER EQUIVALENT IN UPPER RIO GRANDE

Reset Range

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

[Station List](#)

Current as of 04/18/2022:  
% of Median - 80%  
% Median Peak - 61%  
Days Since Median Peak - 15  
Percentile - 16



- \* Median Peak SWE
- 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 (17 sites)
- 2010 (16 sites)
- 2009 (16 sites)
- 2008 (14 sites)
- 2007 (13 sites)
- 2006 (13 sites)
- 2005 (13 sites)
- 2004 (12 sites)





# Colorado Snow Surveys

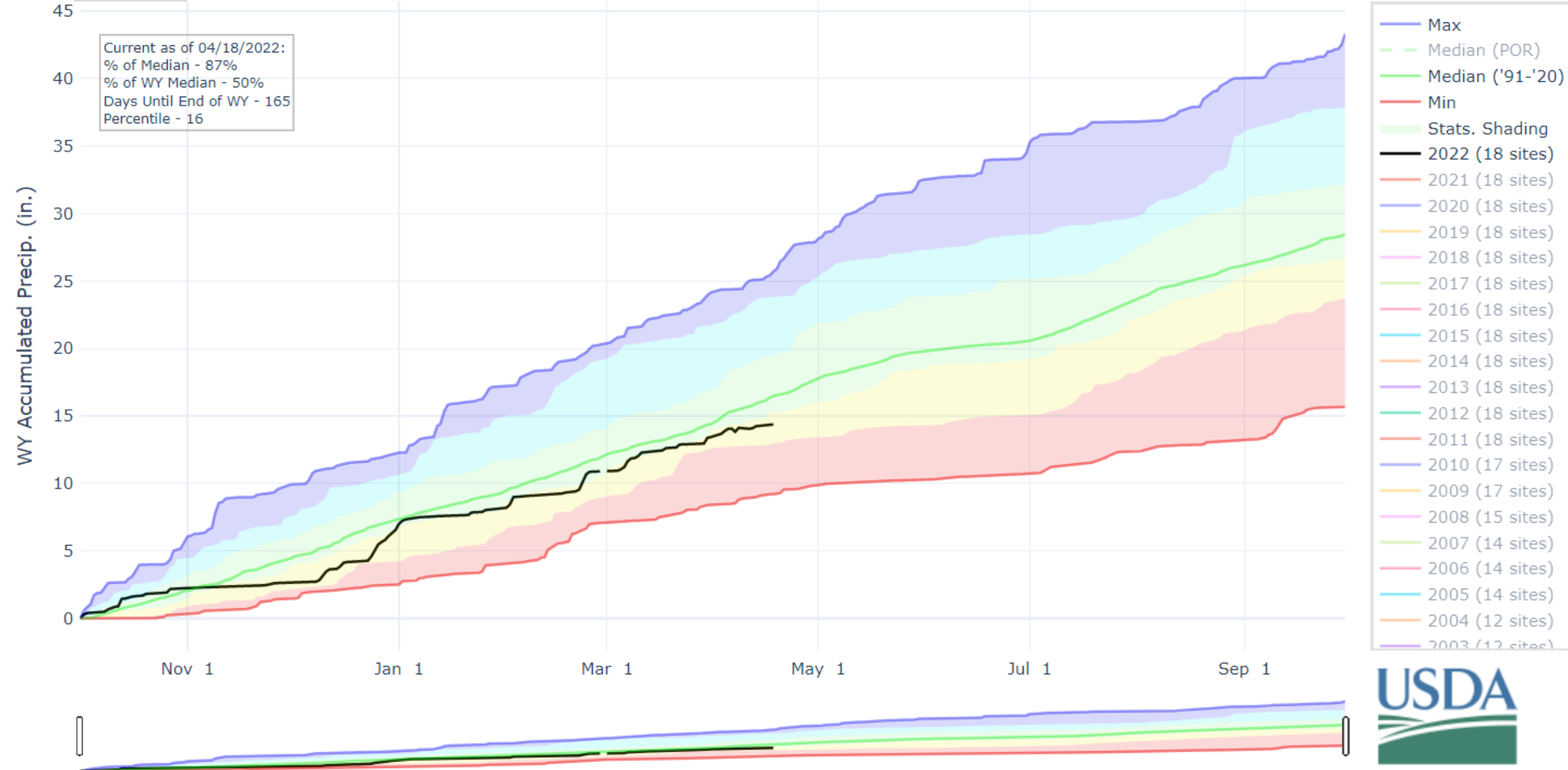
## PRECIPITATION IN UPPER RIO GRANDE

Reset Range

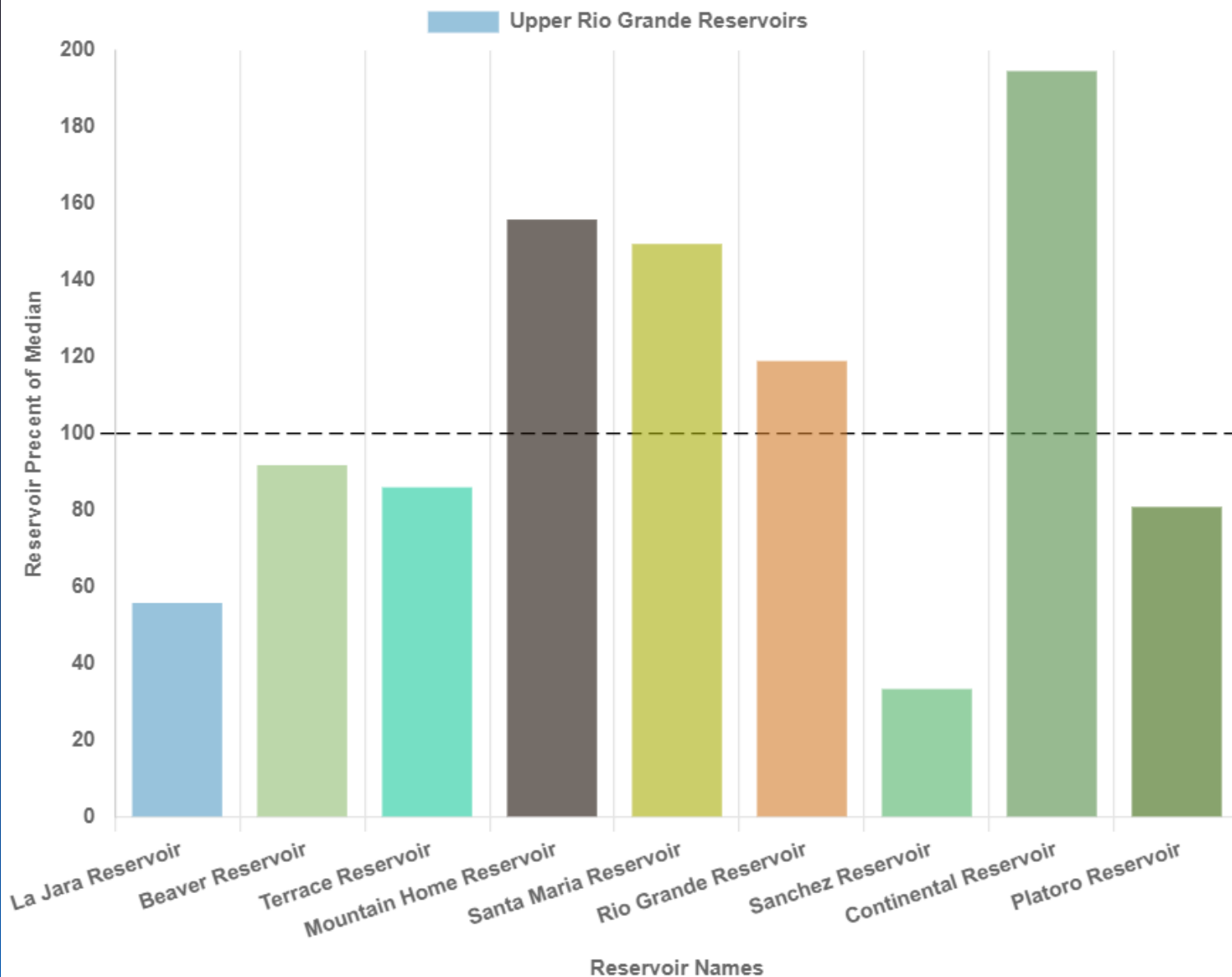
[Link to data: CSV / JSON](#)

[Station List](#)

Current as of 04/18/2022:  
% of Median - 87%  
% of WY Median - 50%  
Days Until End of WY - 165  
Percentile - 16



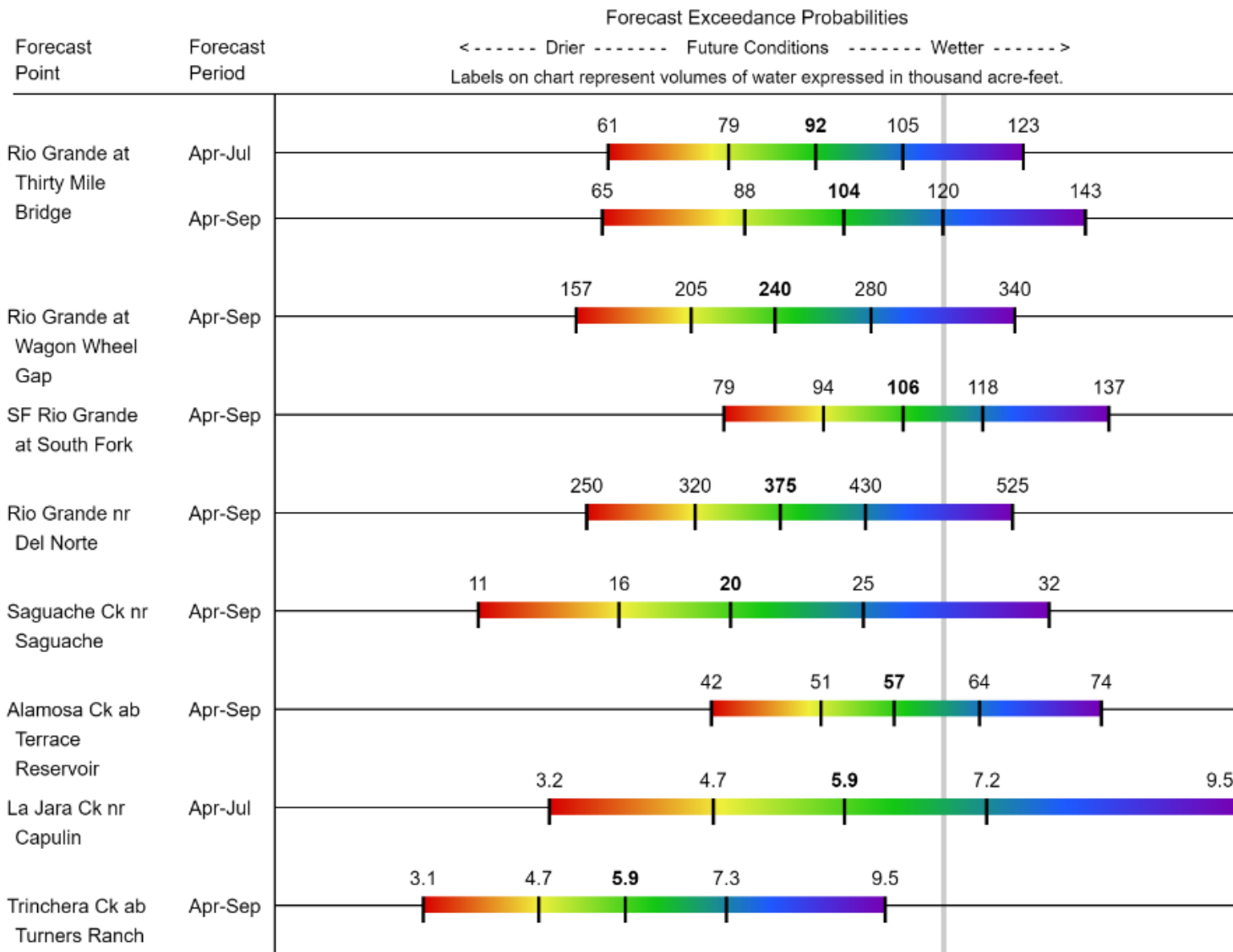
Reservoir Conditions for Upper Rio Grande on April 1st 2022



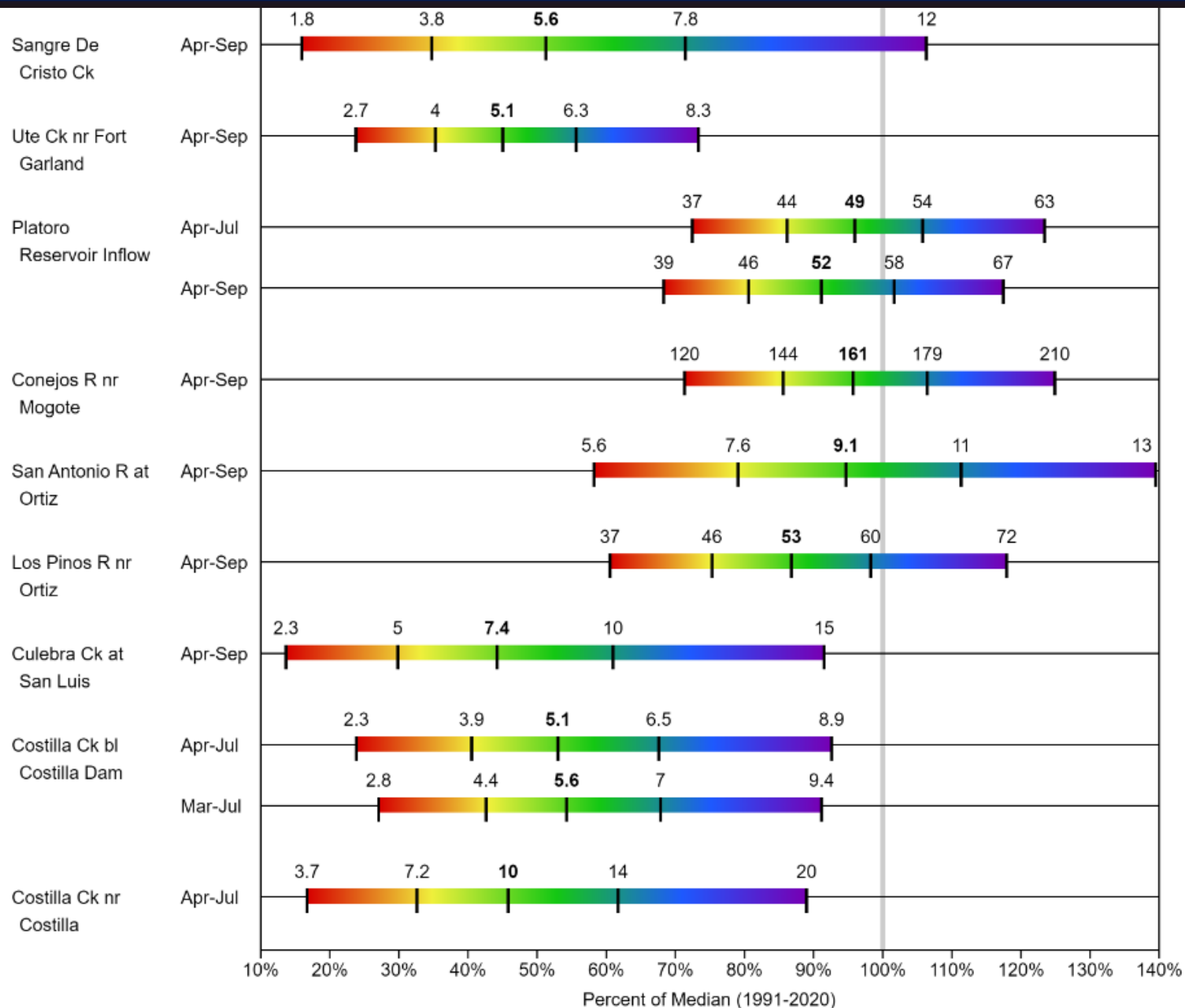
## UPPER RIO GRANDE BASIN

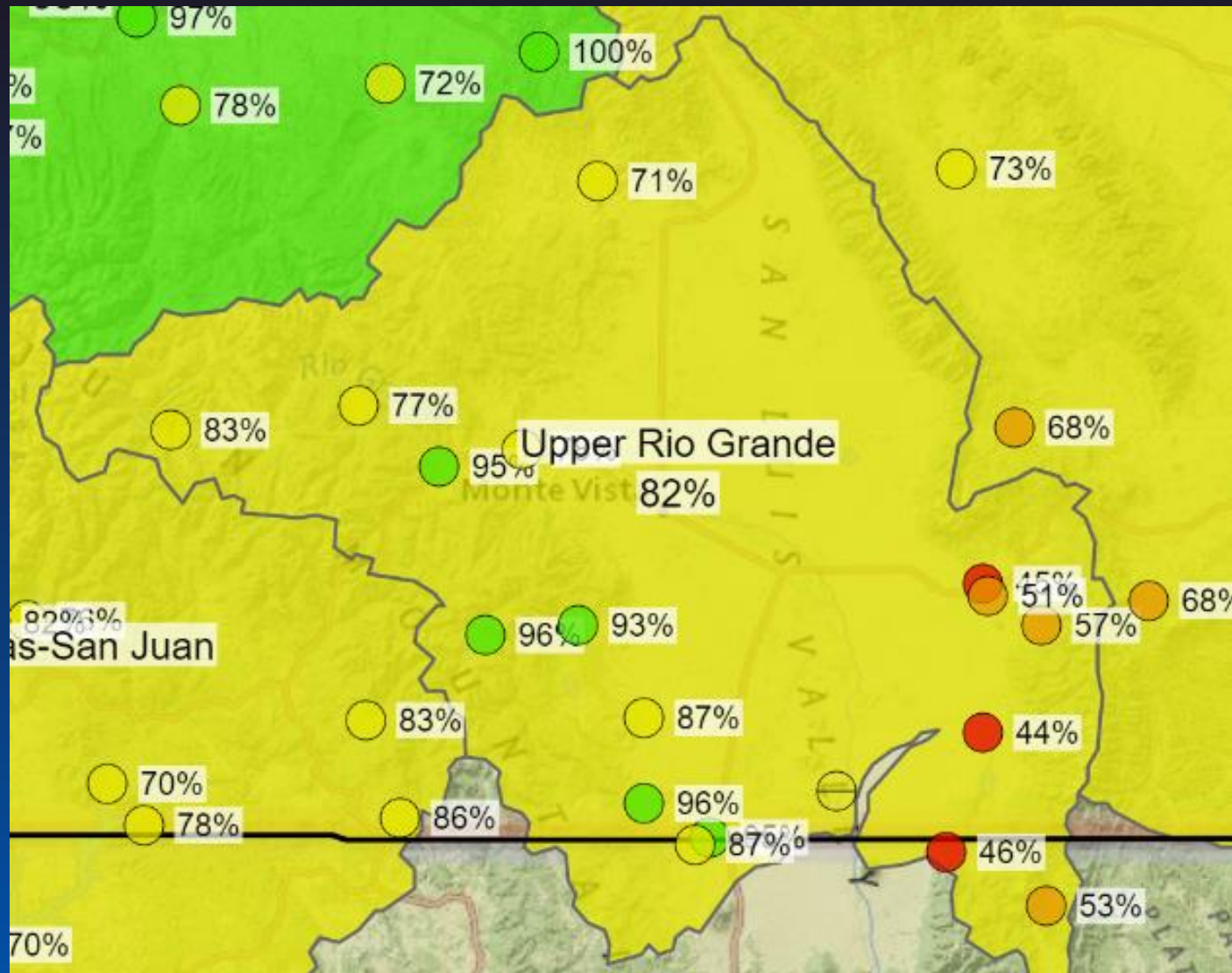
### Water Supply Forecasts

April 1, 2022



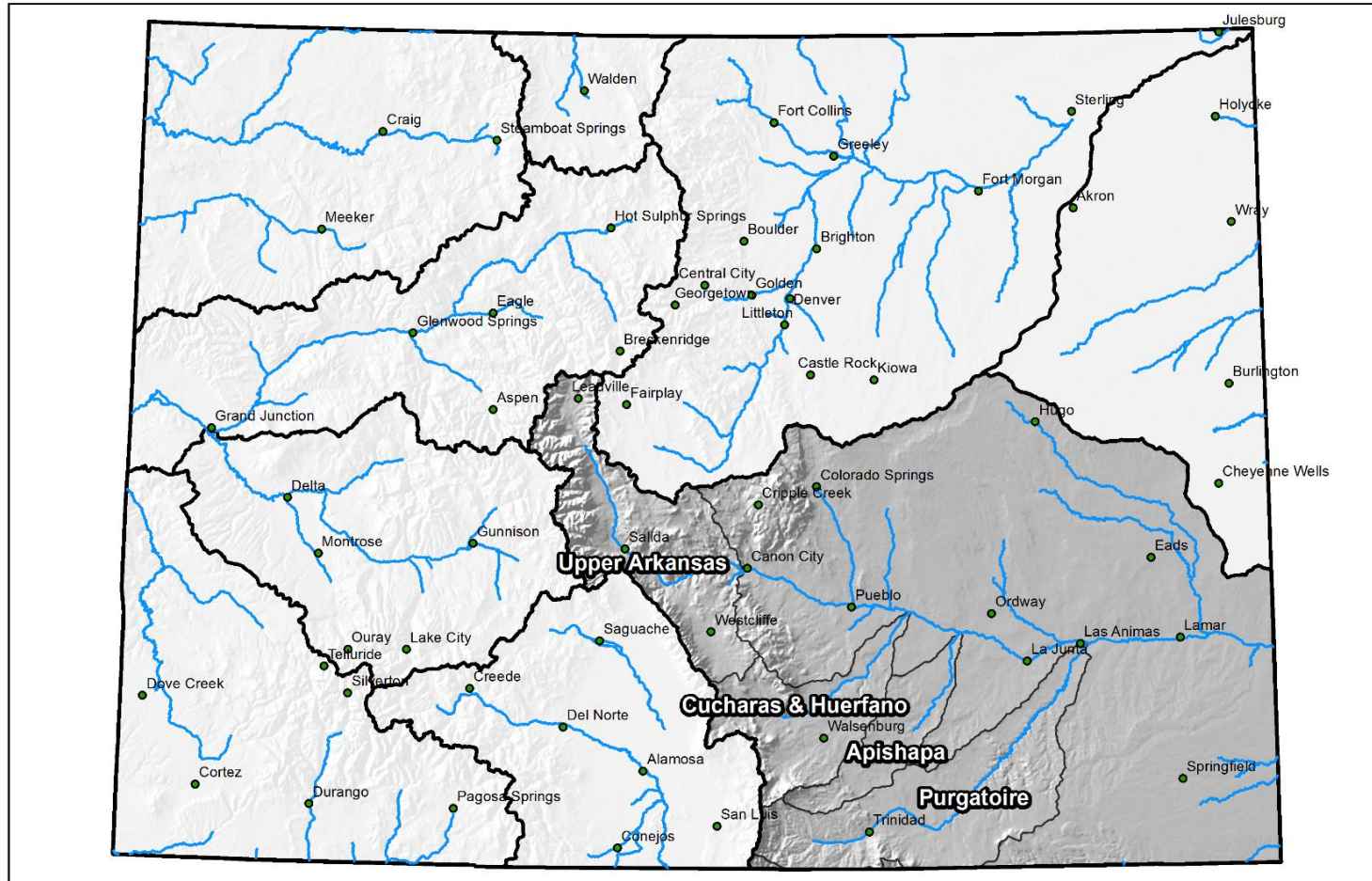
# Colorado Snow Surveys





## Major Basin Summary

### Arkansas River Basin



0 25 50 100 150 200 Miles

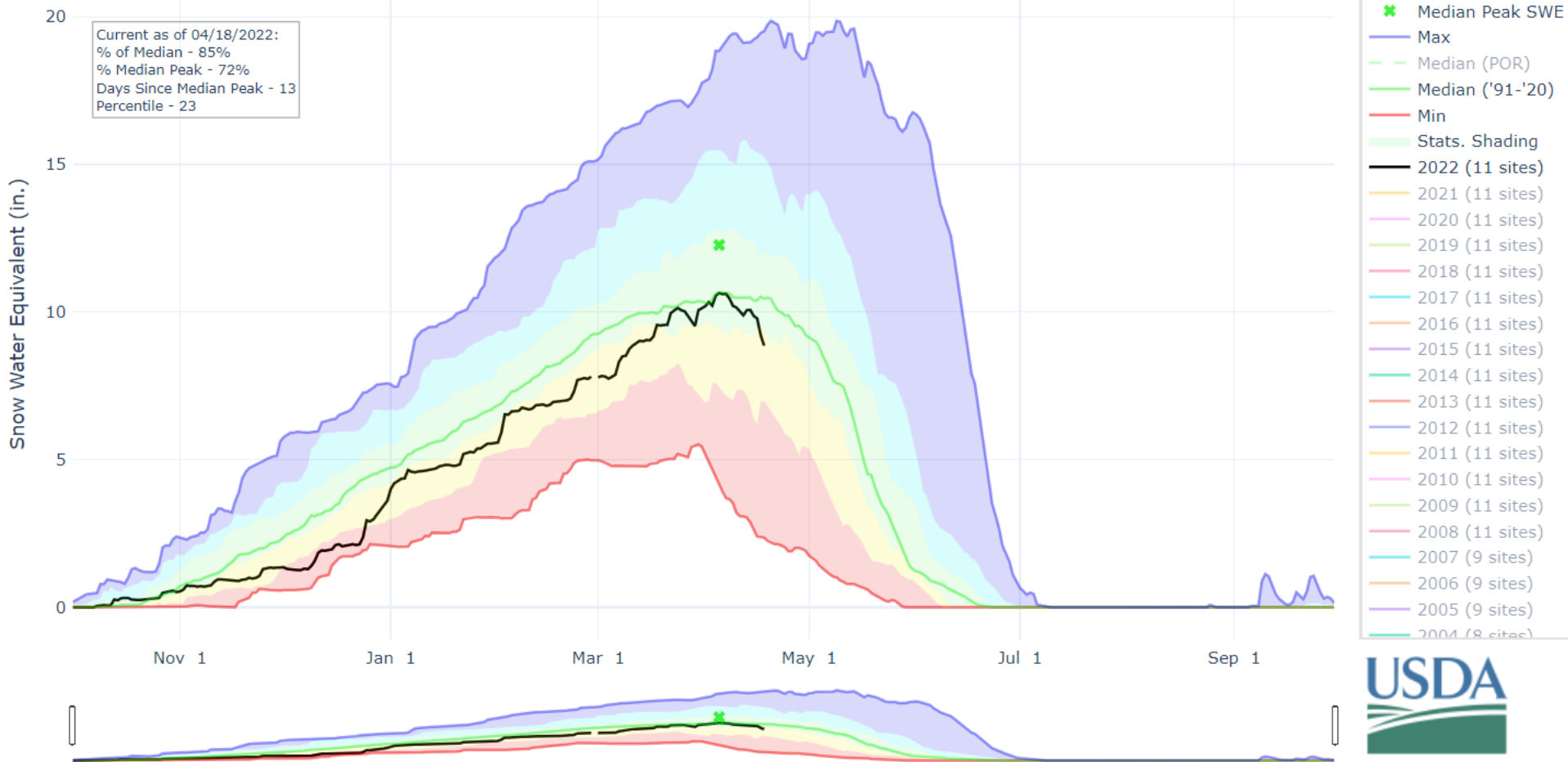


## SNOW WATER EQUIVALENT IN ARKANSAS

Reset Range

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

[Station List](#)





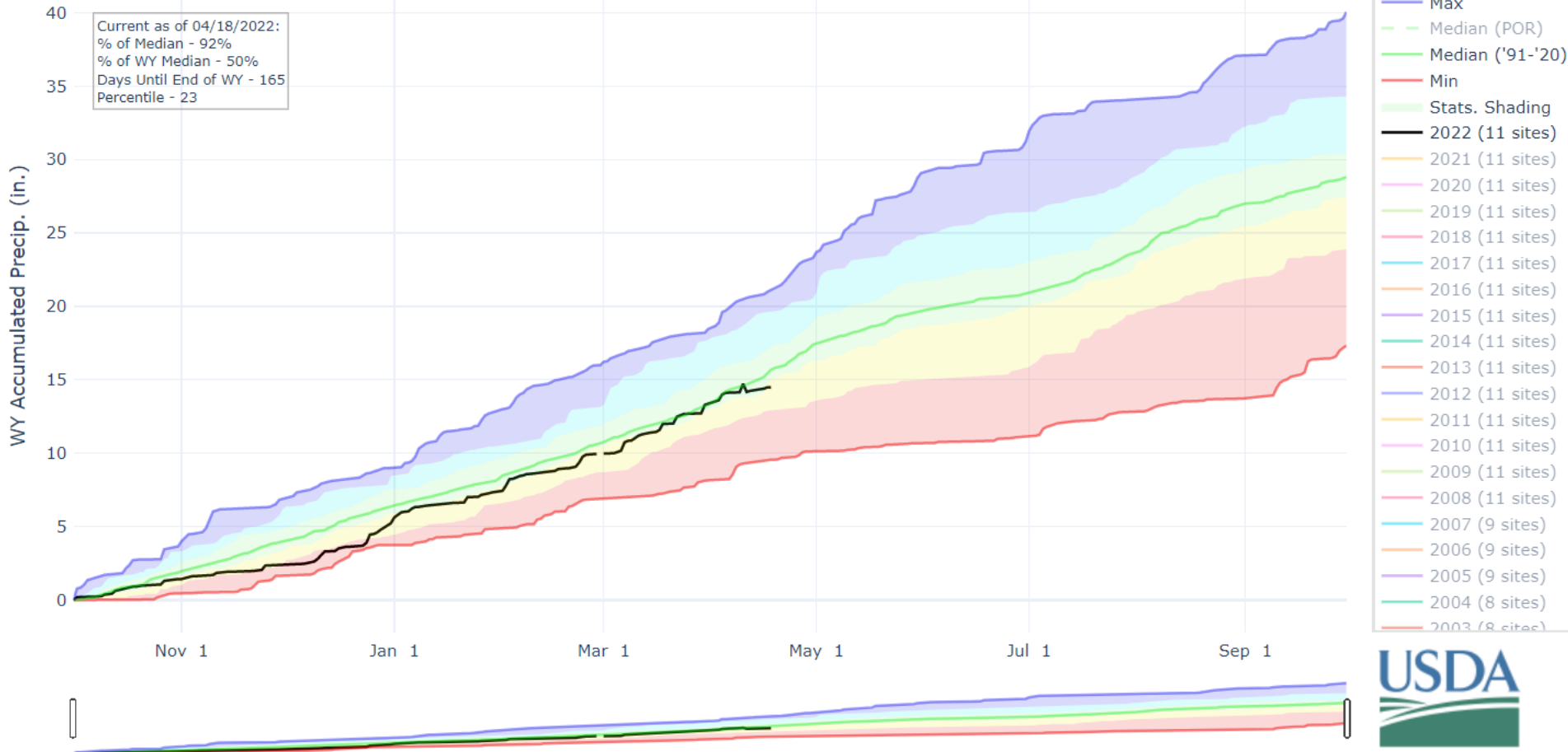
## PRECIPITATION IN ARKANSAS

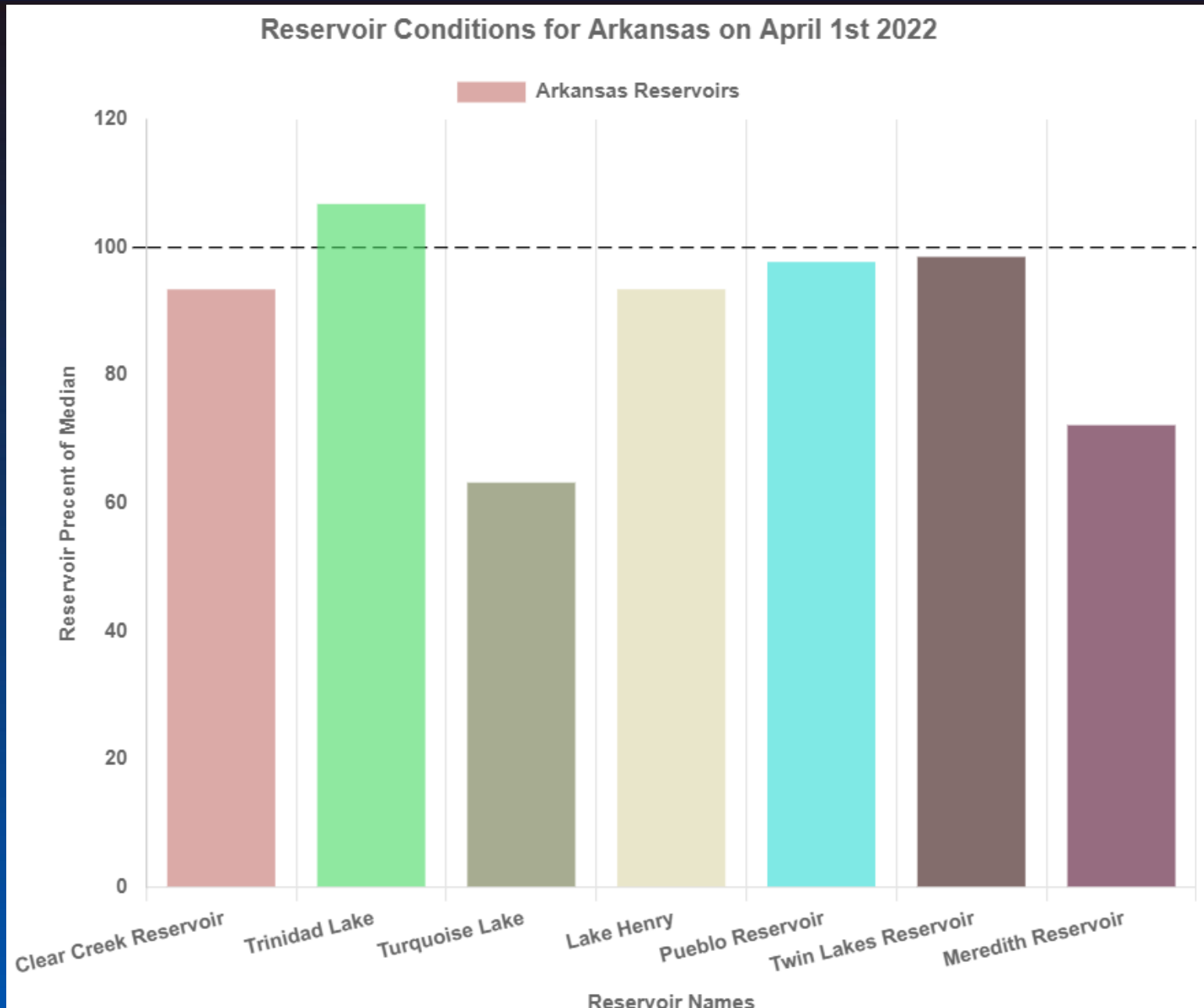
Reset Range

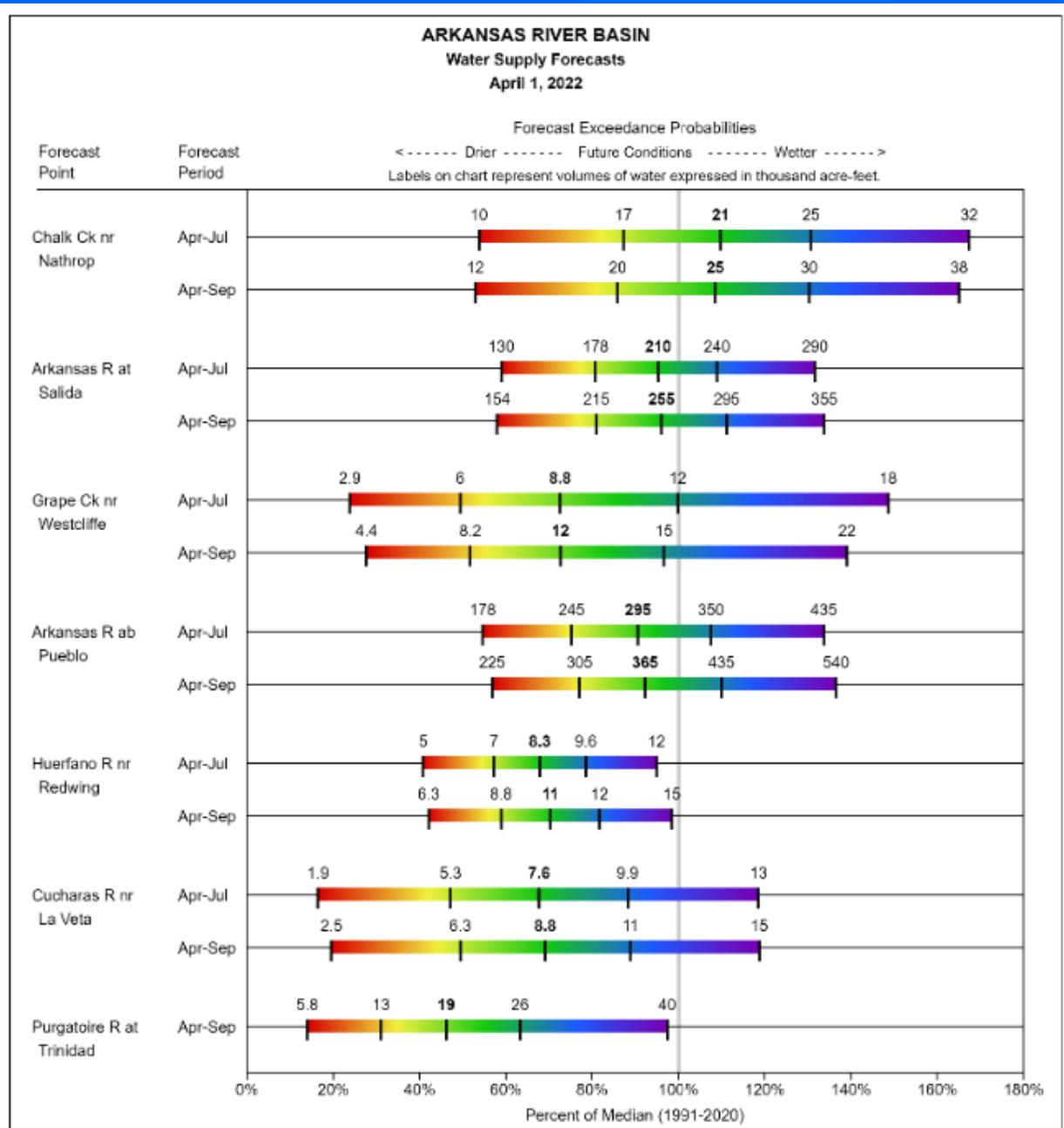
[Link to data: CSV / JSON](#)

[Station List](#)

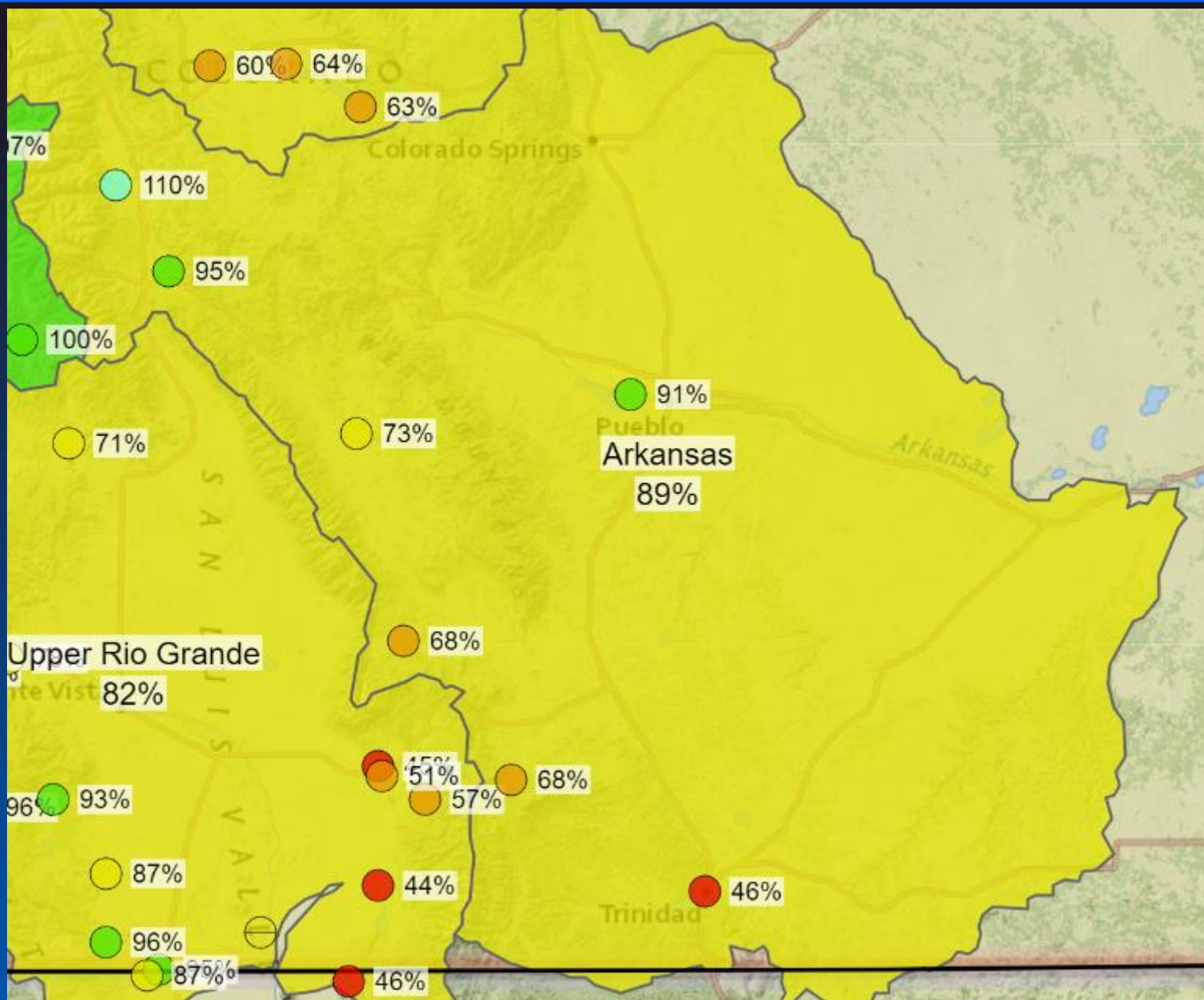
Current as of 04/18/2022:  
% of Median - 92%  
% of WY Median - 50%  
Days Until End of WY - 165  
Percentile - 23





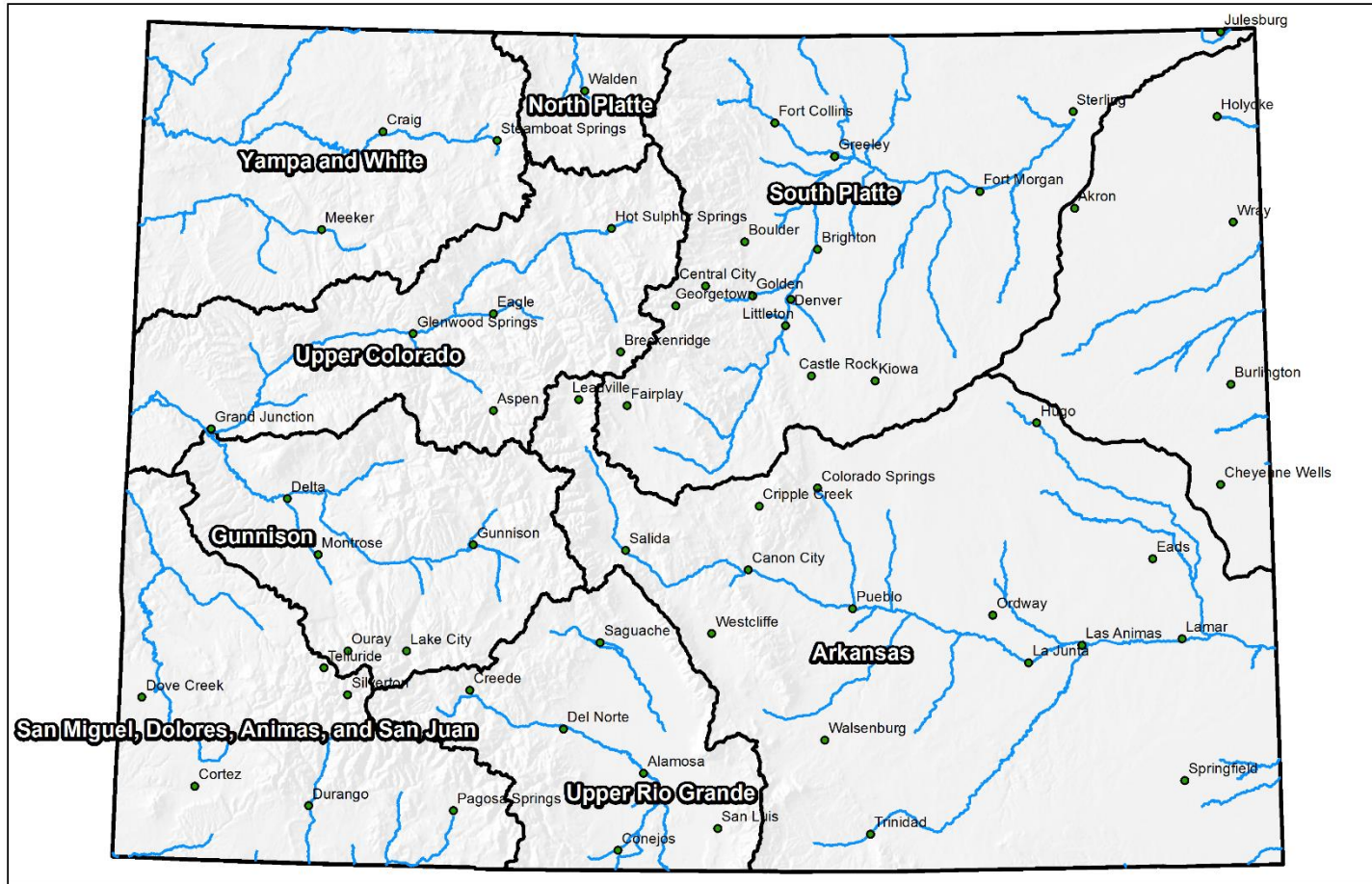


# Colorado Snow Surveys



## Colorado Statewide Summary

Colorado Major Basins



0 25 50 100 150 200 Miles



# Colorado Snow Surveys

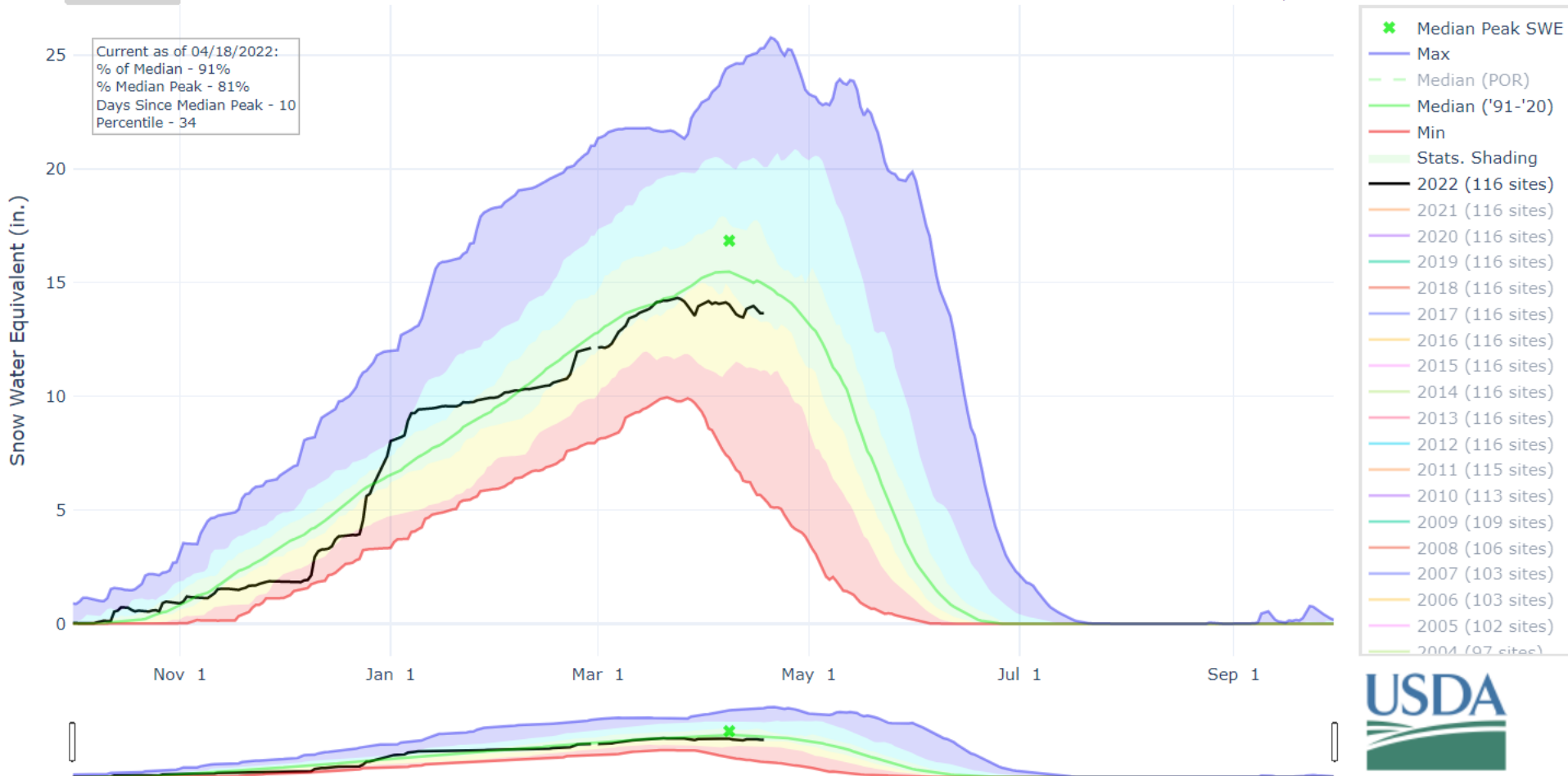
## SNOW WATER EQUIVALENT IN STATE OF COLORADO

Reset Range

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

[Station List](#)

Current as of 04/18/2022:  
% of Median - 91%  
% Median Peak - 81%  
Days Since Median Peak - 10  
Percentile - 34

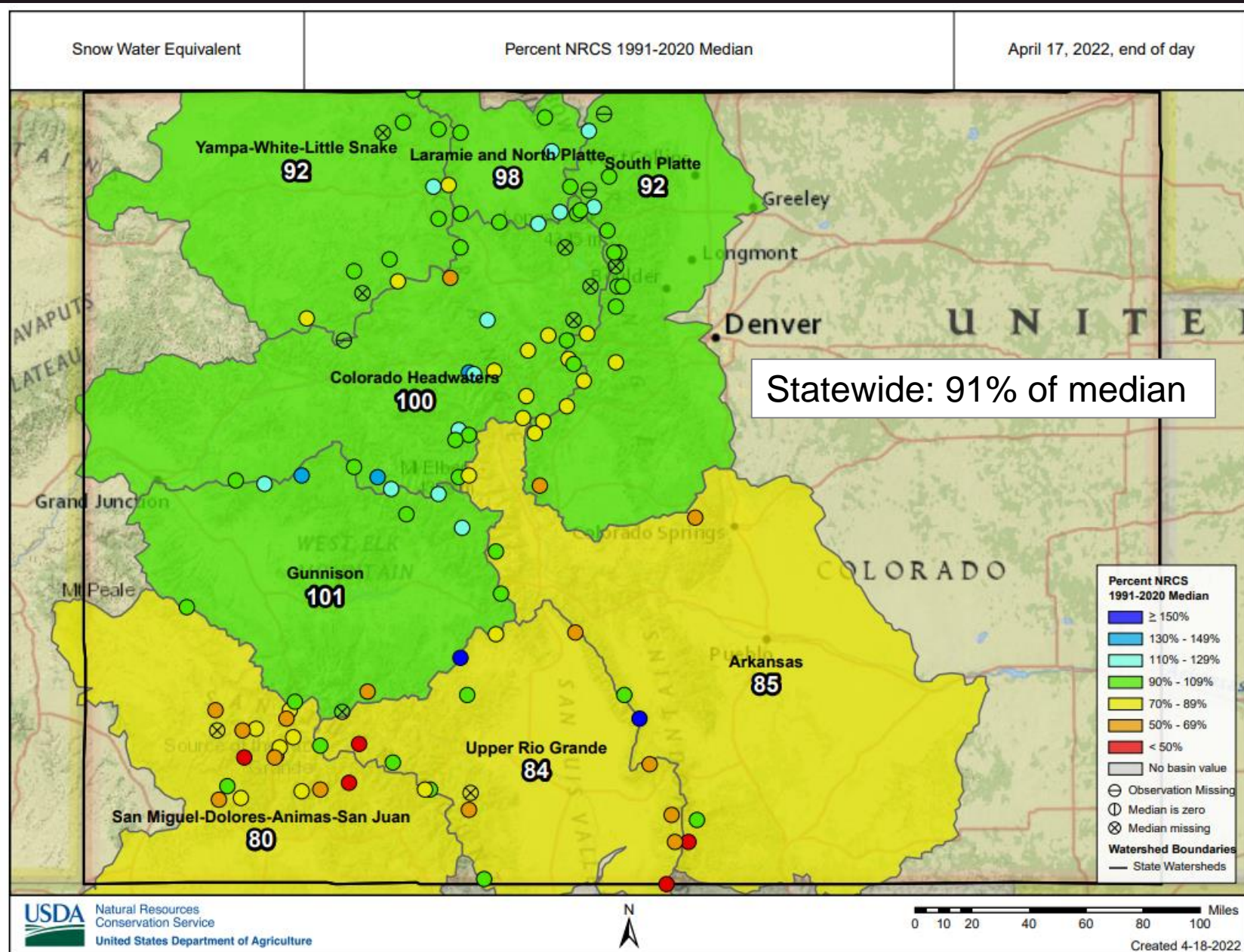




United States Department of Agriculture

# Colorado Snow Surveys

Snowpack





# Colorado Snow Surveys

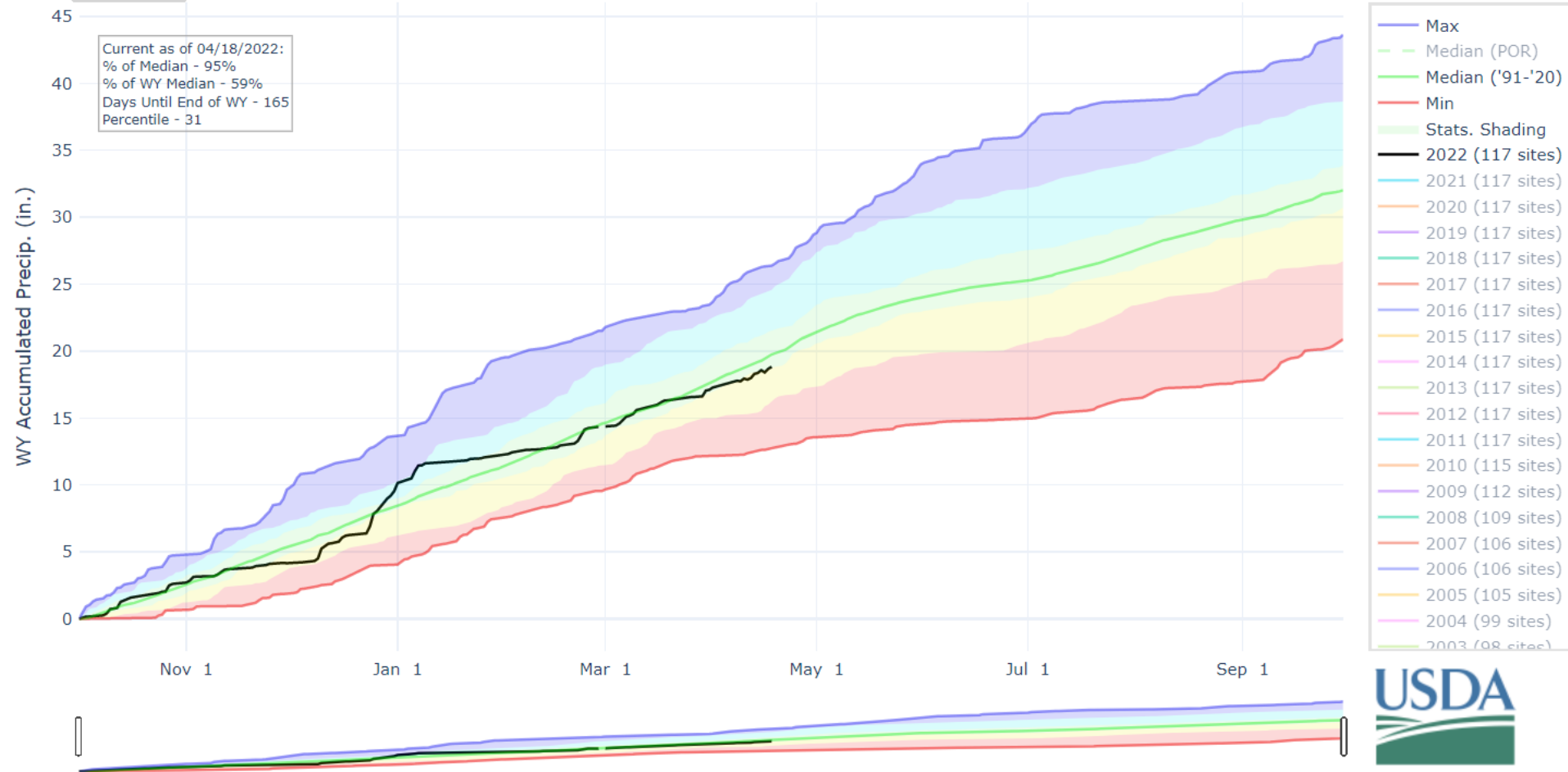
## PRECIPITATION IN STATE OF COLORADO

Reset Range

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

[Station List](#)

Current as of 04/18/2022:  
% of Median - 95%  
% of WY Median - 59%  
Days Until End of WY - 165  
Percentile - 31

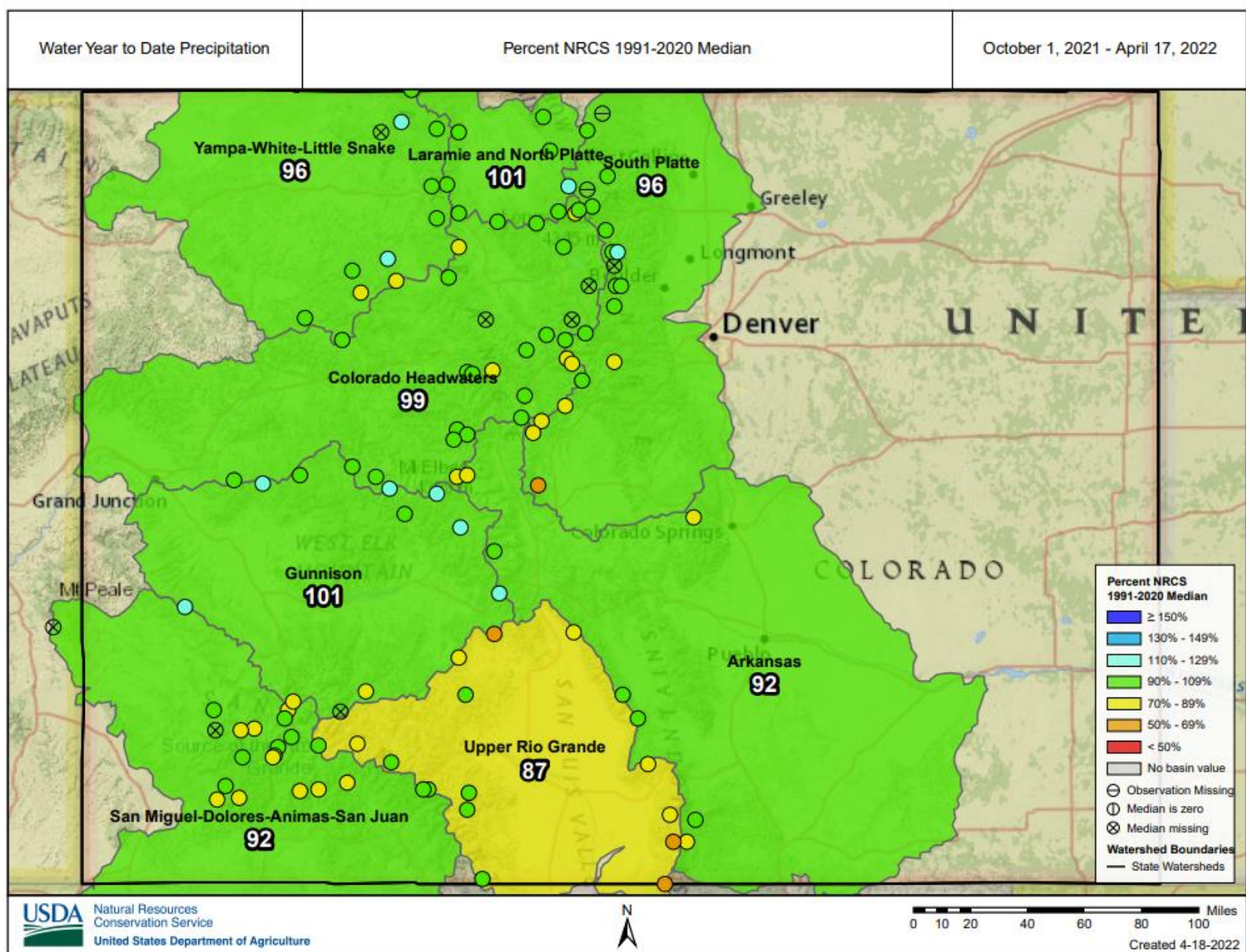




United States Department of Agriculture

# Colorado Snow Surveys

WY Precipitation

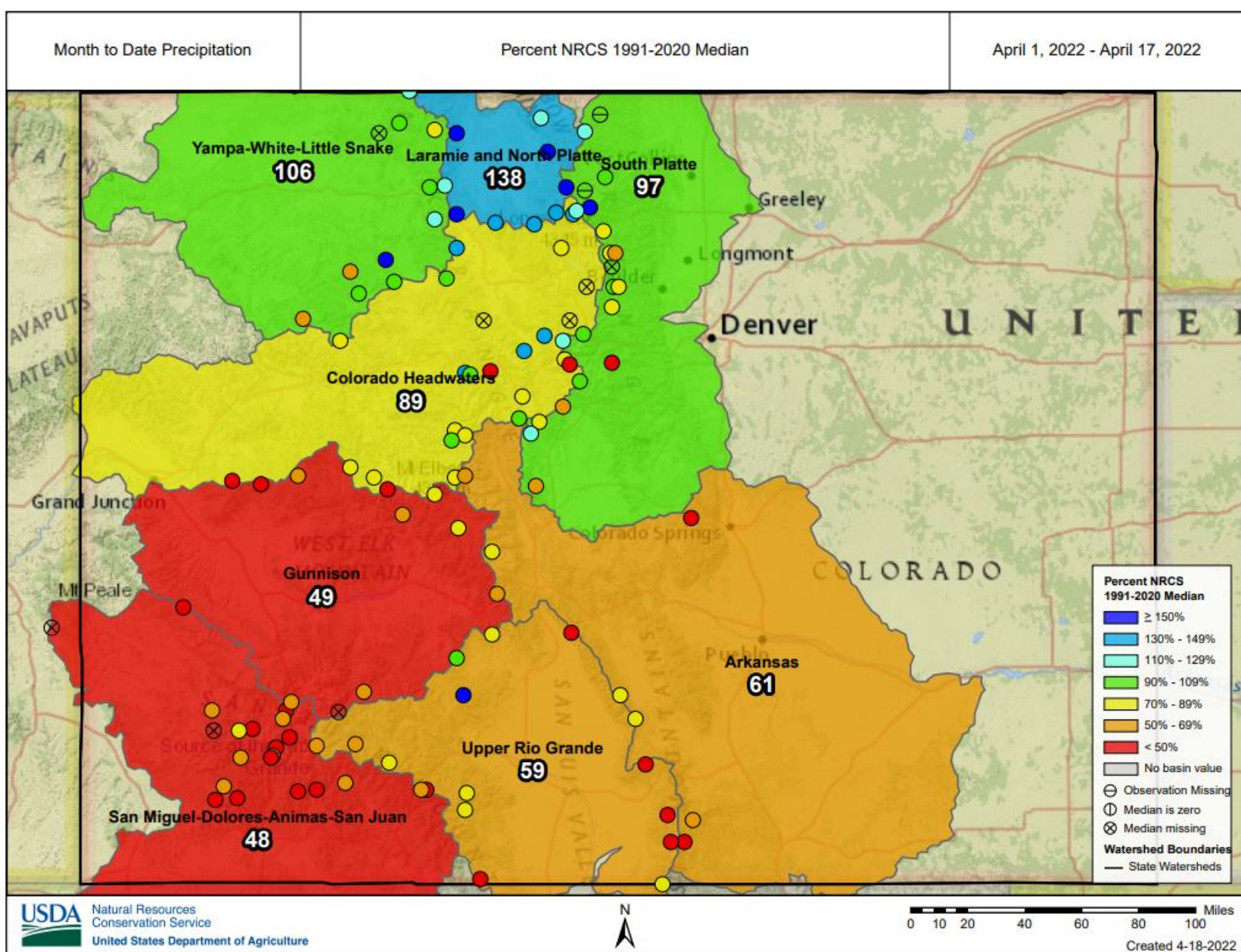




United States Department of Agriculture

# Colorado Snow Surveys

## MTD Precipitation

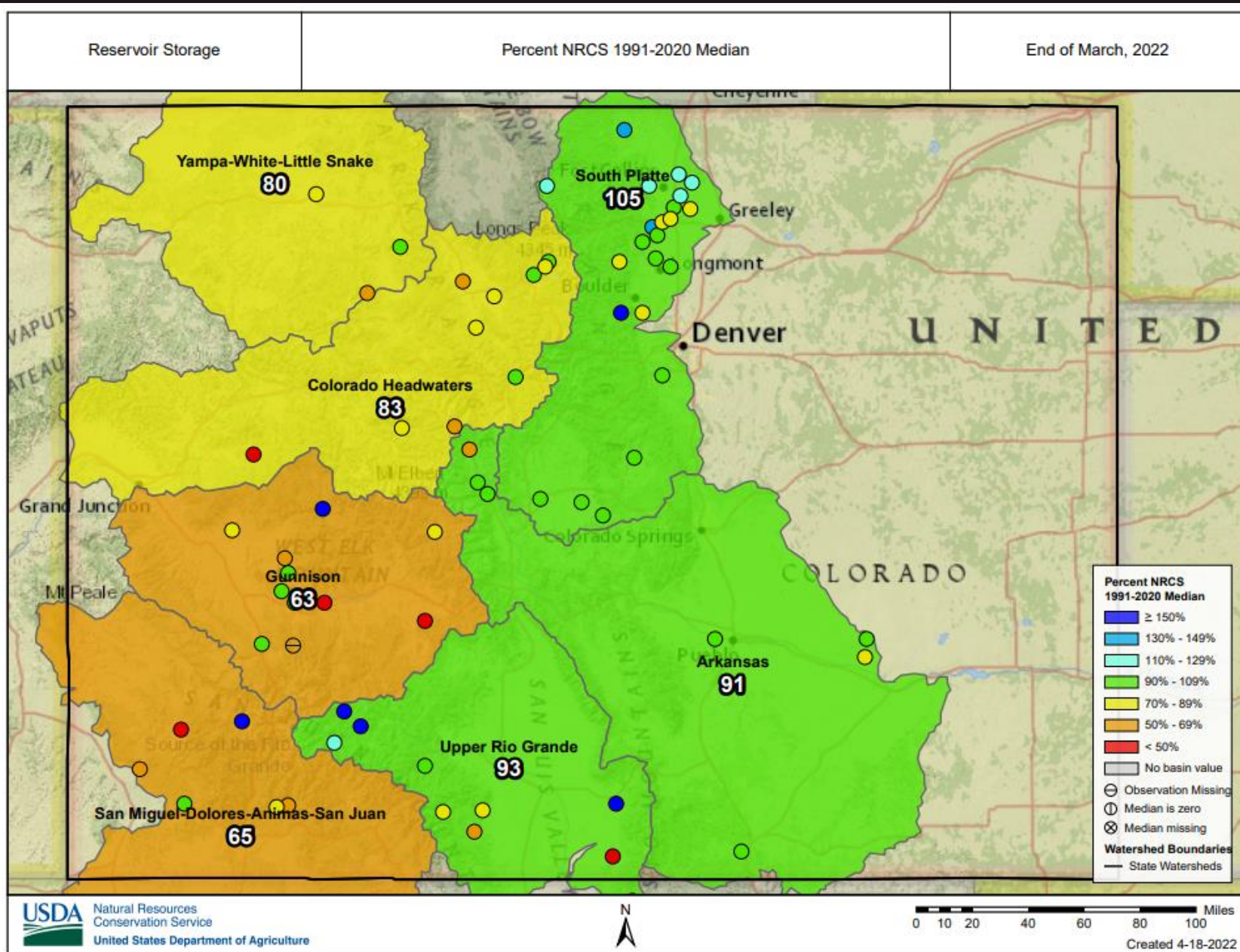


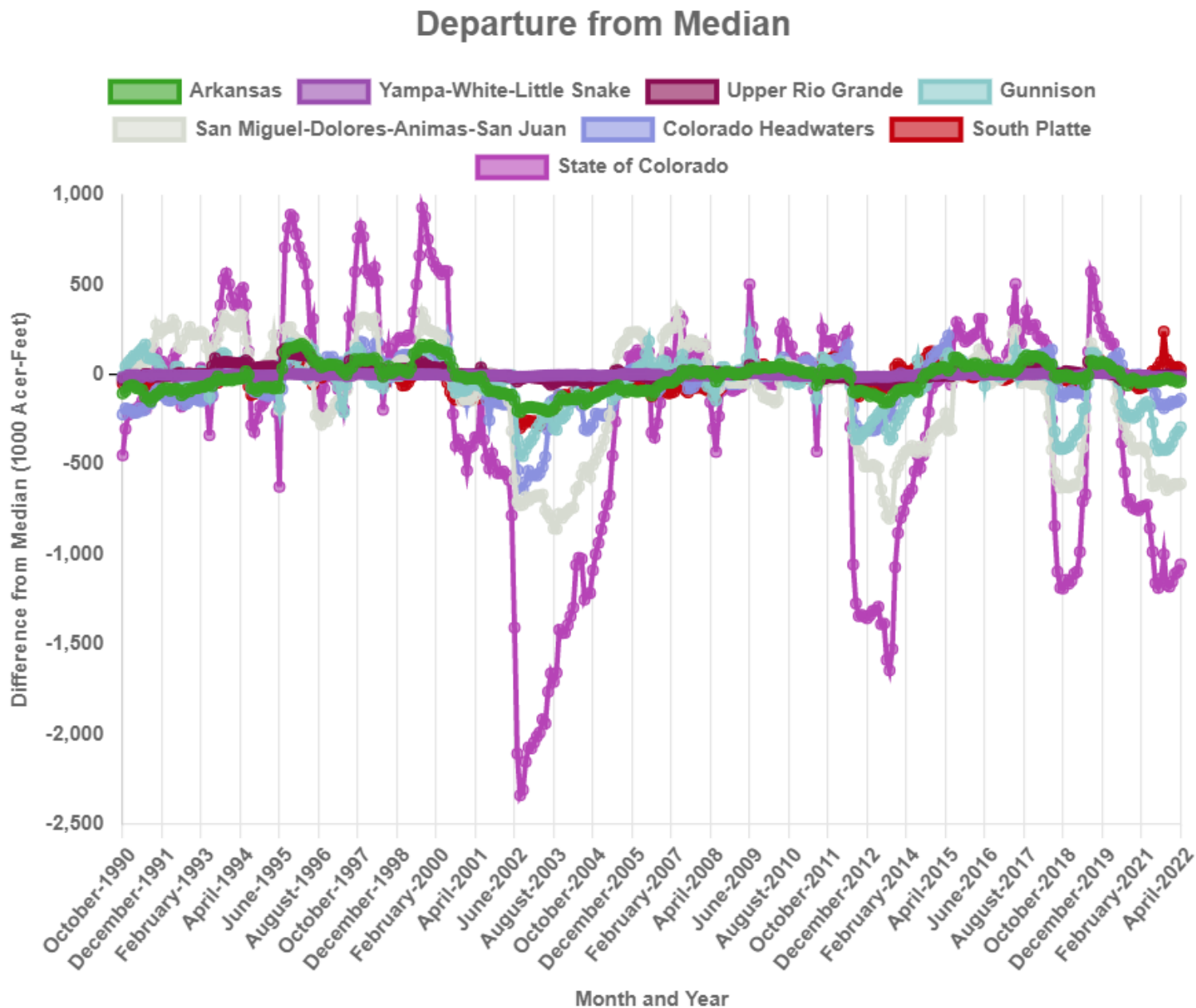


United States Department of Agriculture

# Colorado Snow Surveys

## Reservoir Storage



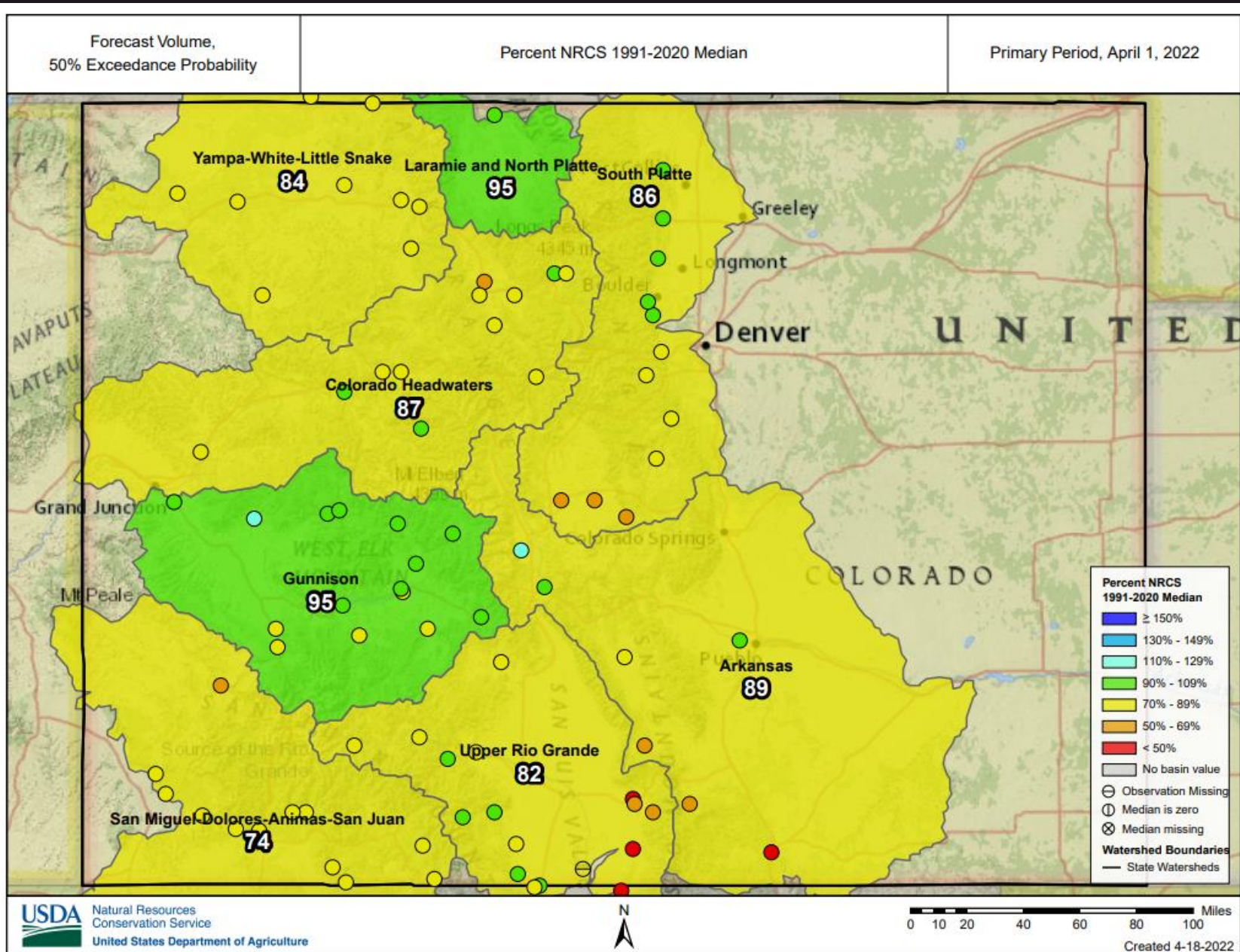




United States Department of Agriculture

# Colorado Snow Surveys

## Streamflow Forecasts





## SNOTEL Soil Moisture

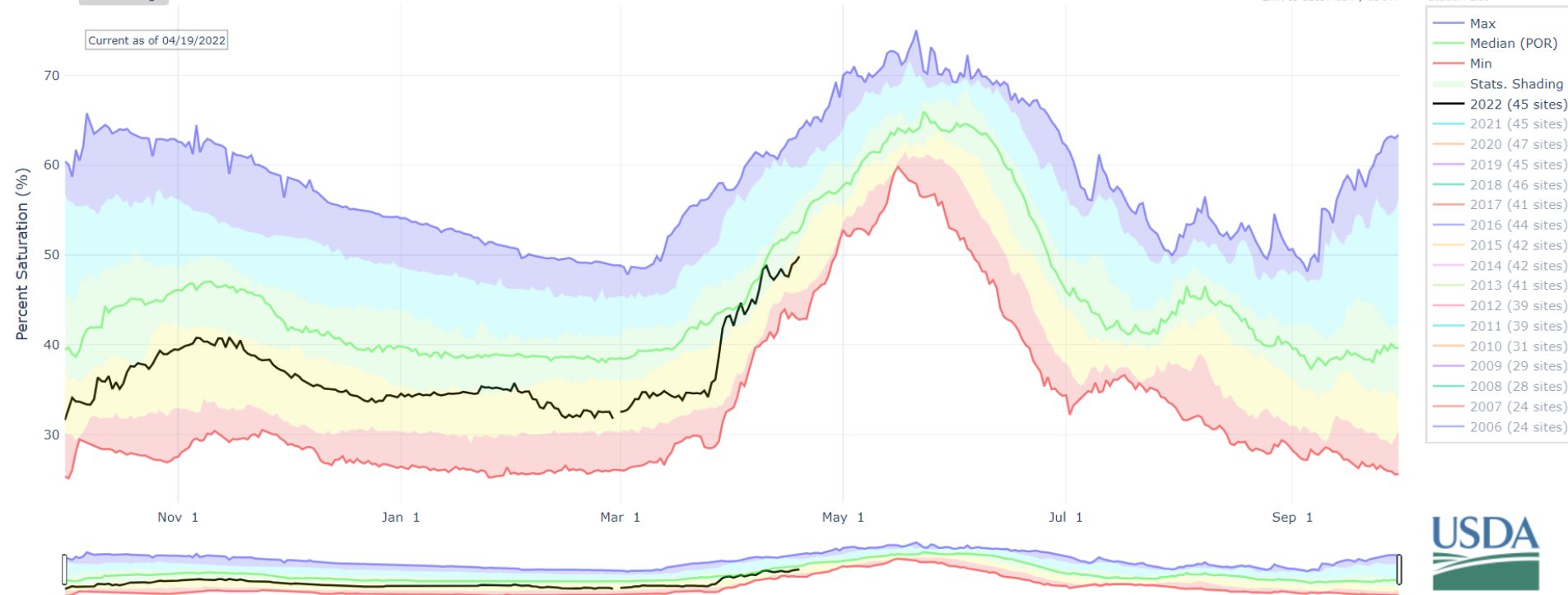
DEPTH AVERAGED SOIL SATURATION IN  
STATE OF COLORADO

Reset Range

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

Station List

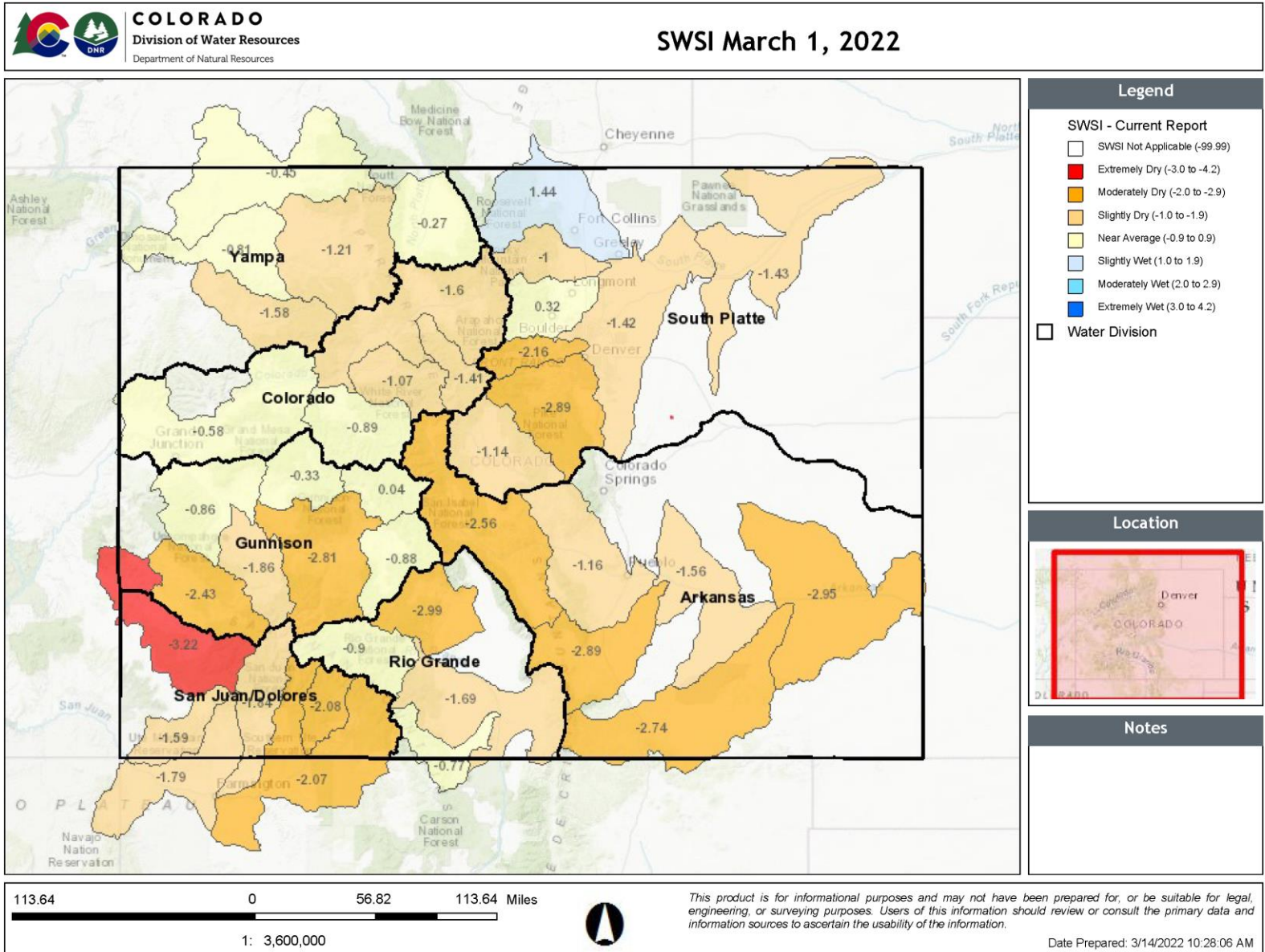
Current as of 04/19/2022



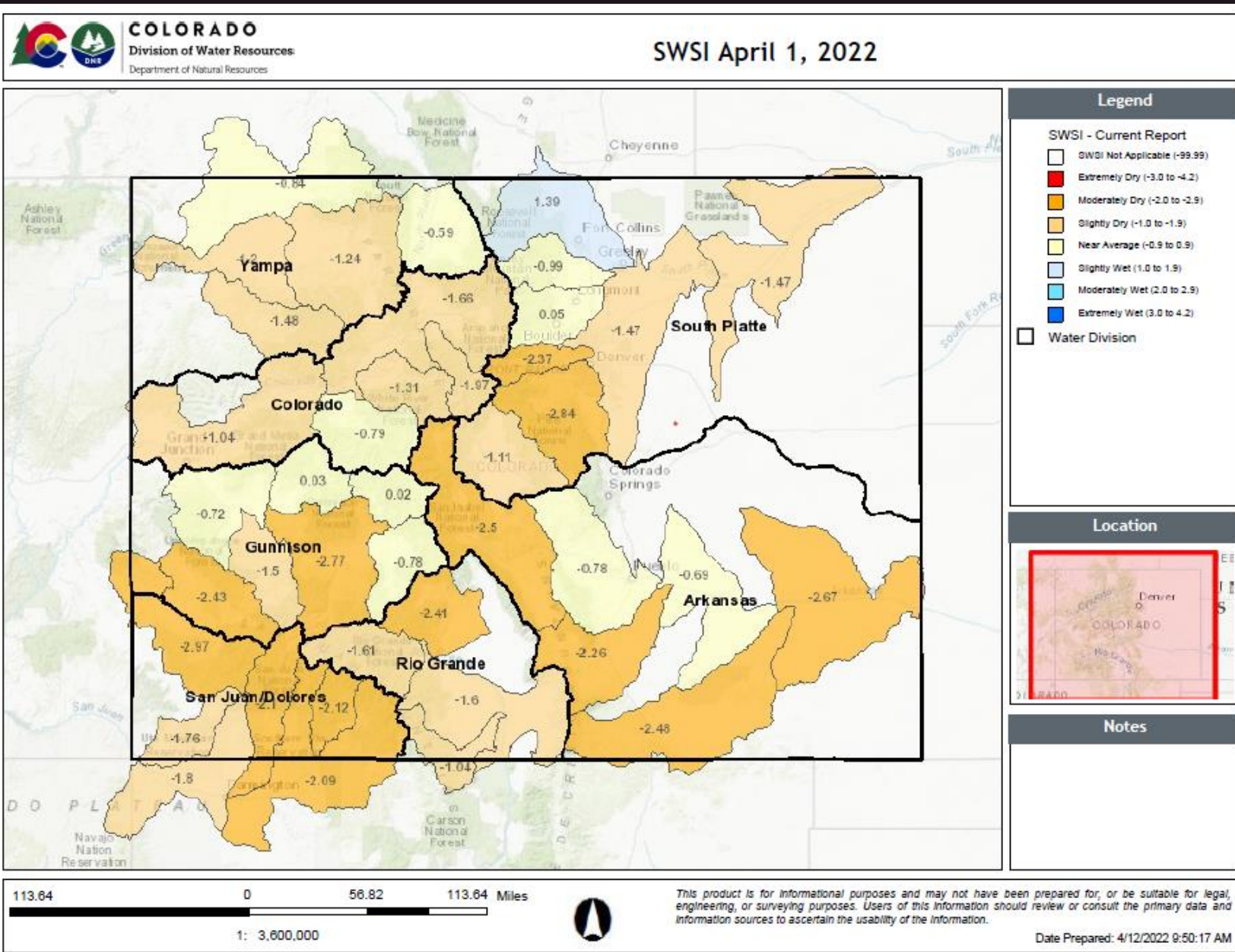
Feedback

\*\*\* Provisional Data

March 1, 2022 SWSI



April 1, 2020 SWSI



# Summary

- Statewide snowpack peaked earlier than usual near 94 percent of normal but subsequent cold spells and precipitation have slowed the melt rate in many areas.
  - In basins where snowpack has maintained near peak values intermittent pulses of melt indicate the snowpack is “ripe” for more sustained melt with warmer temperatures.
- April precipitation has favored central and northern Colorado more than the basins of southern Colorado.
- The South Platte is the only basin in the state with above normal reservoir storage. Storage in the Gunnison and combined San Miguel, Dolores, Animas, and San Juan basins are some of the lowest on record.
- Antecedent soil moisture conditions in several basins are still in a deficit.
- Streamflow forecasts for much of the state are expected to be below normal for the spring and summer.



## 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).