



United States Department of Agriculture

Colorado Snow Surveys

# Water Availability Task Force Meeting

## March 22<sup>th</sup>, 2022

### NRCS Snow Survey and Water Supply Forecasting Program

Joel Atwood

Hydrologist

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720-766-4632

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



## Web-Based Products

- Product website and links have changed. Both on the National Water and Climate Center (NWCC) webpages and on Colorado Website pages and links.
  - The Colorado Data Collections office is working to rebuild many of products and creating new products.
- Additional future changes are slated for Oct 1, 2022, and again in Oct. 2023
  - Unsure of the scope of the changes but presently functionality is slated to be significantly decreased.
  - Working to negotiate increased functionality.
- iMap and Report Generator tools & products will remain available and supported
- The web services soap API is still available
- Current presentation maps and graphs will change in appearance however will maintain much of the same data and overall look.
- If you have questions and comments, please reach out to us.

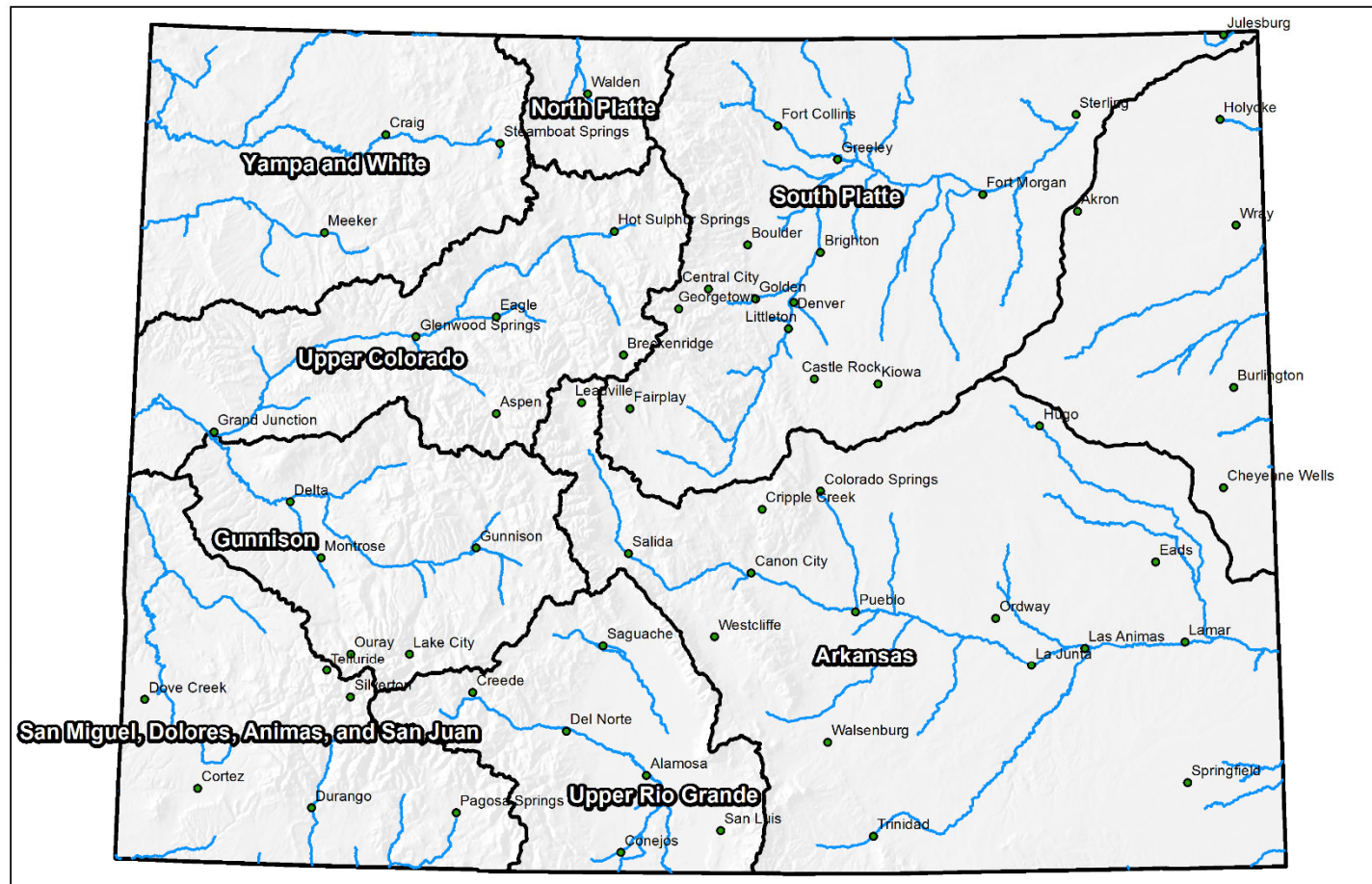


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# Colorado Snow Surveys

## Colorado Statewide Summary

Colorado Major Basins



0 25 50 100 150 200 Miles



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Natural Resources Conservation Service



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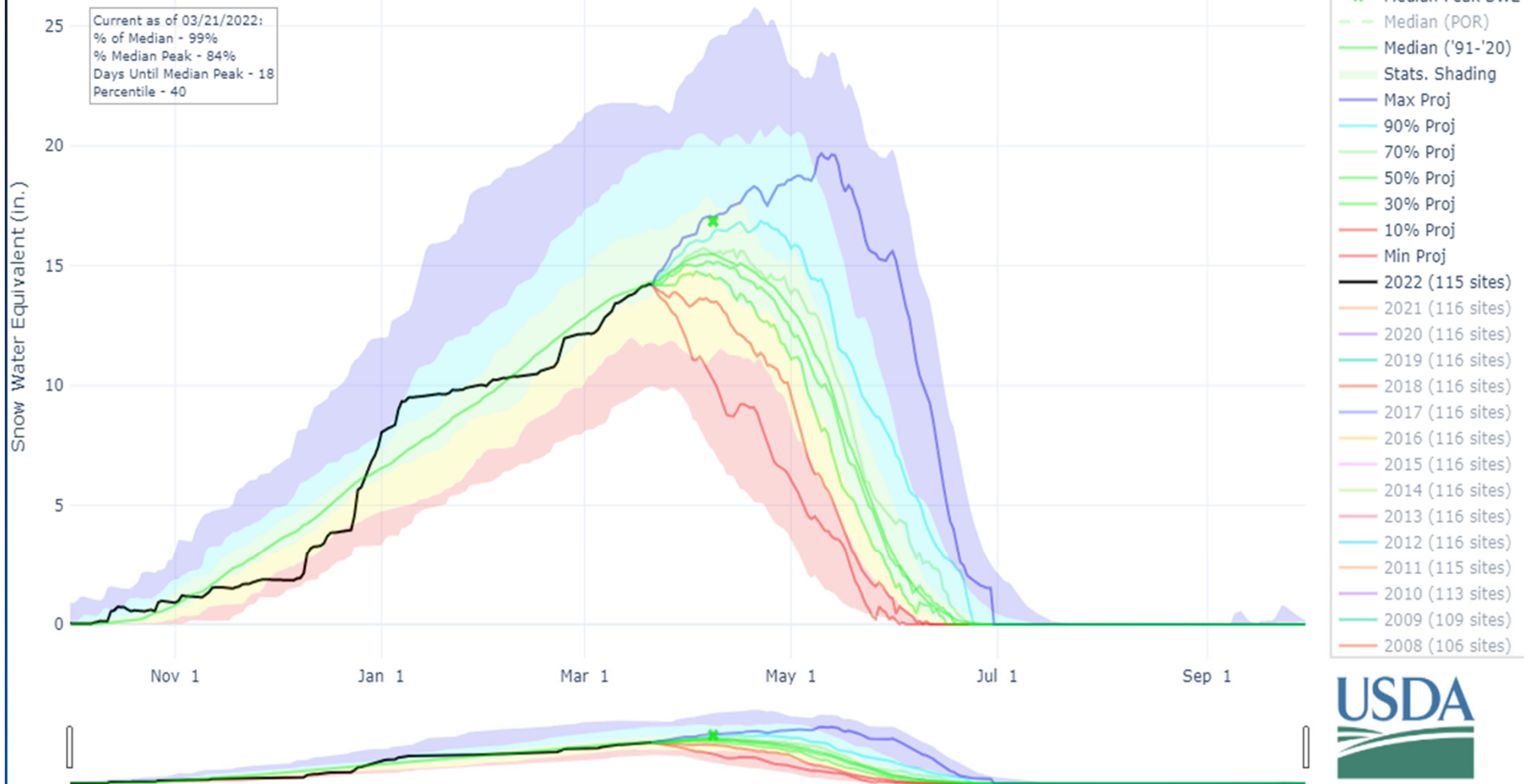
# Colorado Snow Surveys

## SNOW WATER EQUIVALENT PROJECTIONS IN STATE OF COLORADO

Reset Range

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

Station List





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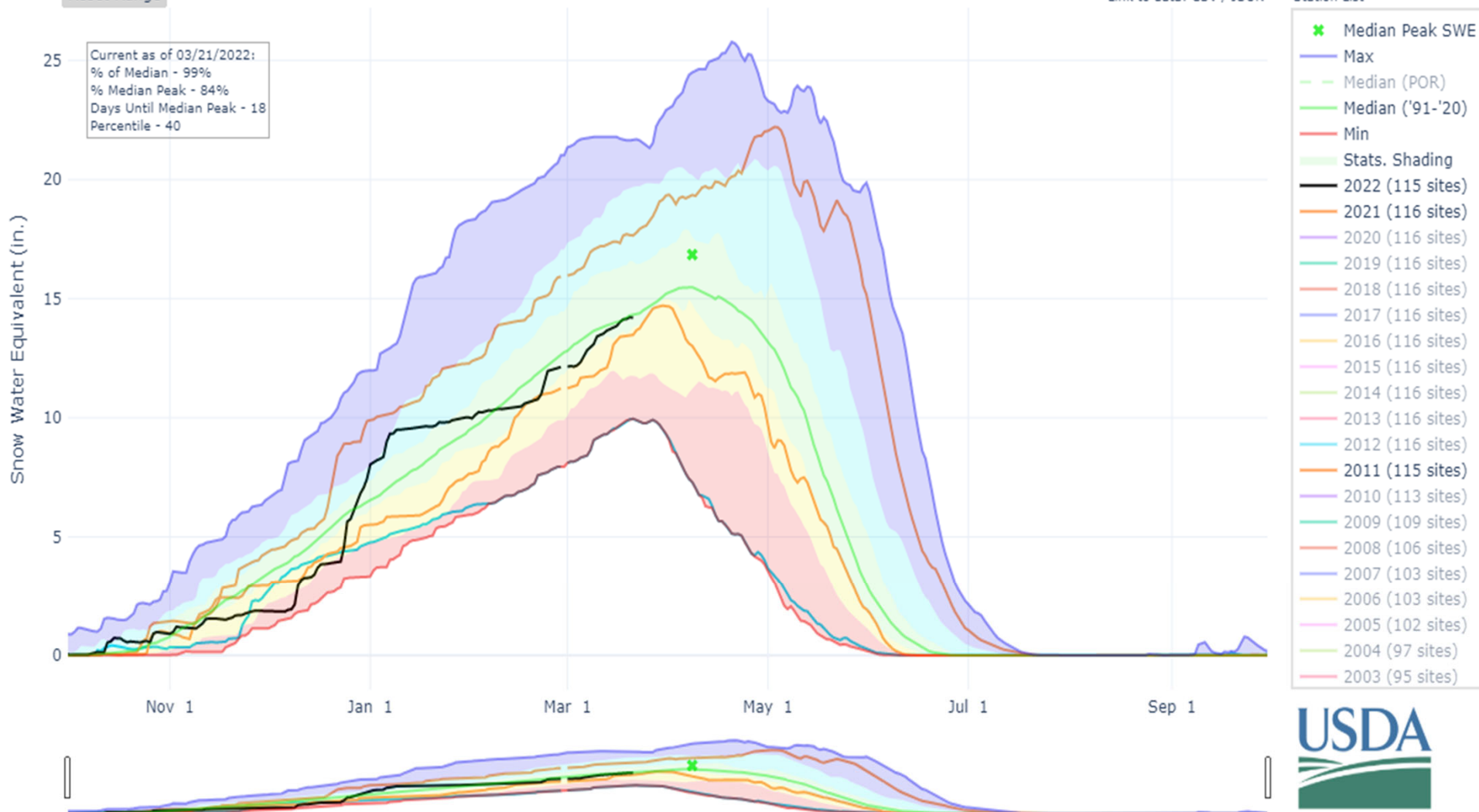
# Colorado Snow Surveys

## SNOW WATER EQUIVALENT IN STATE OF COLORADO

Reset Range

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

[Station List](#)





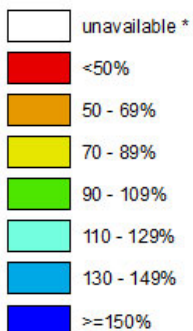
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# Colorado Snow Surveys

Mar 20, 2022

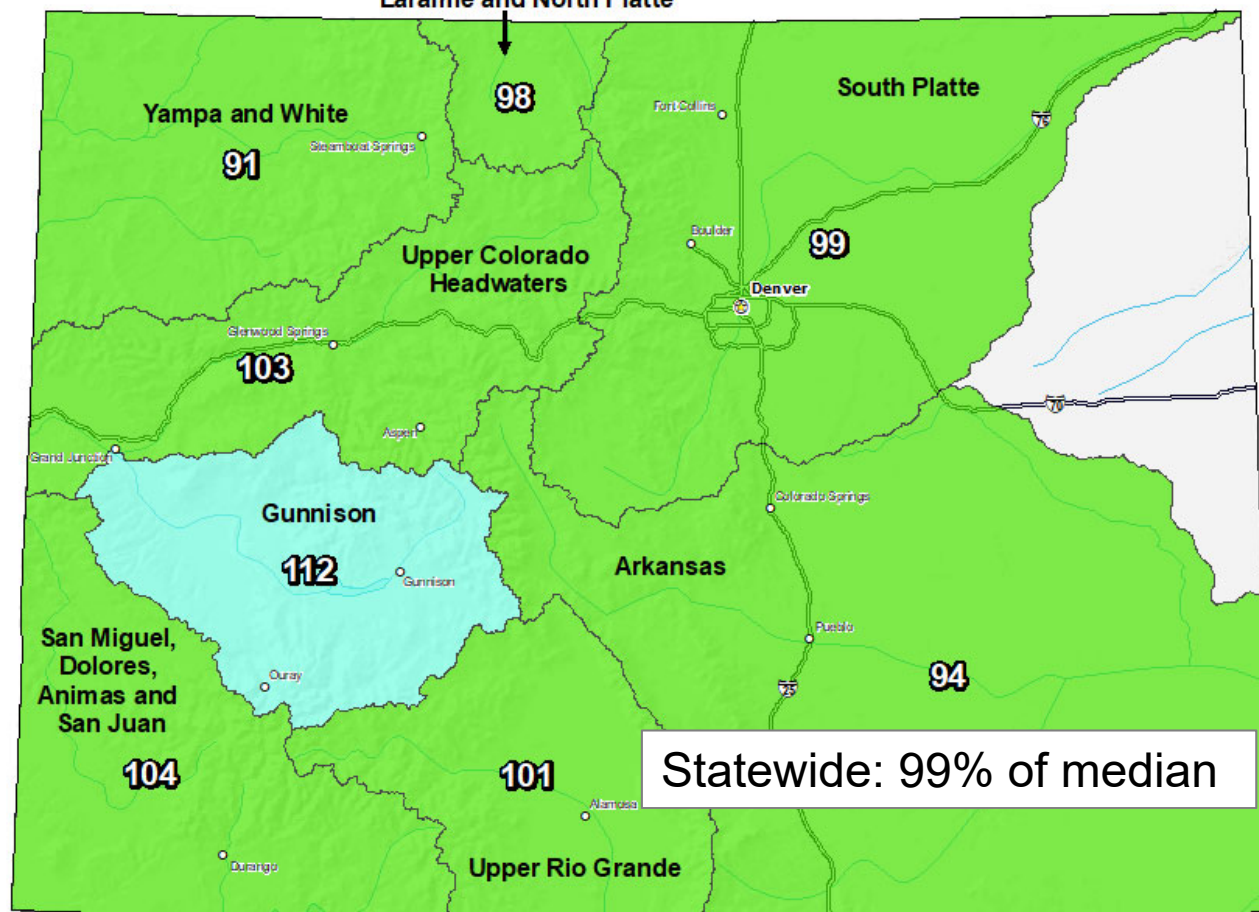
## Colorado SNOTEL Current Snow Water Equivalent (SWE) % of Normal Laramie and North Platte

Current Snow Water  
Equivalent (SWE)  
Basin-wide Percent  
of 1991-2020 Median



\* Data unavailable at time  
of posting or measurement  
is not representative at this  
time of year

*Provisional Data  
Subject to Revision*



Statewide: 99% of median



The snow water equivalent percent of normal represents the current snow water equivalent found at selected SNOTEL sites in or near the basin compared to the average value for those sites on this day. Data based on the first reading of the day (typically 00:00).

Prepared by:  
USDA/NRCS National Water and Climate Center  
Portland, Oregon  
<https://www.nrcs.usda.gov/wps/portal/wcc/home/>



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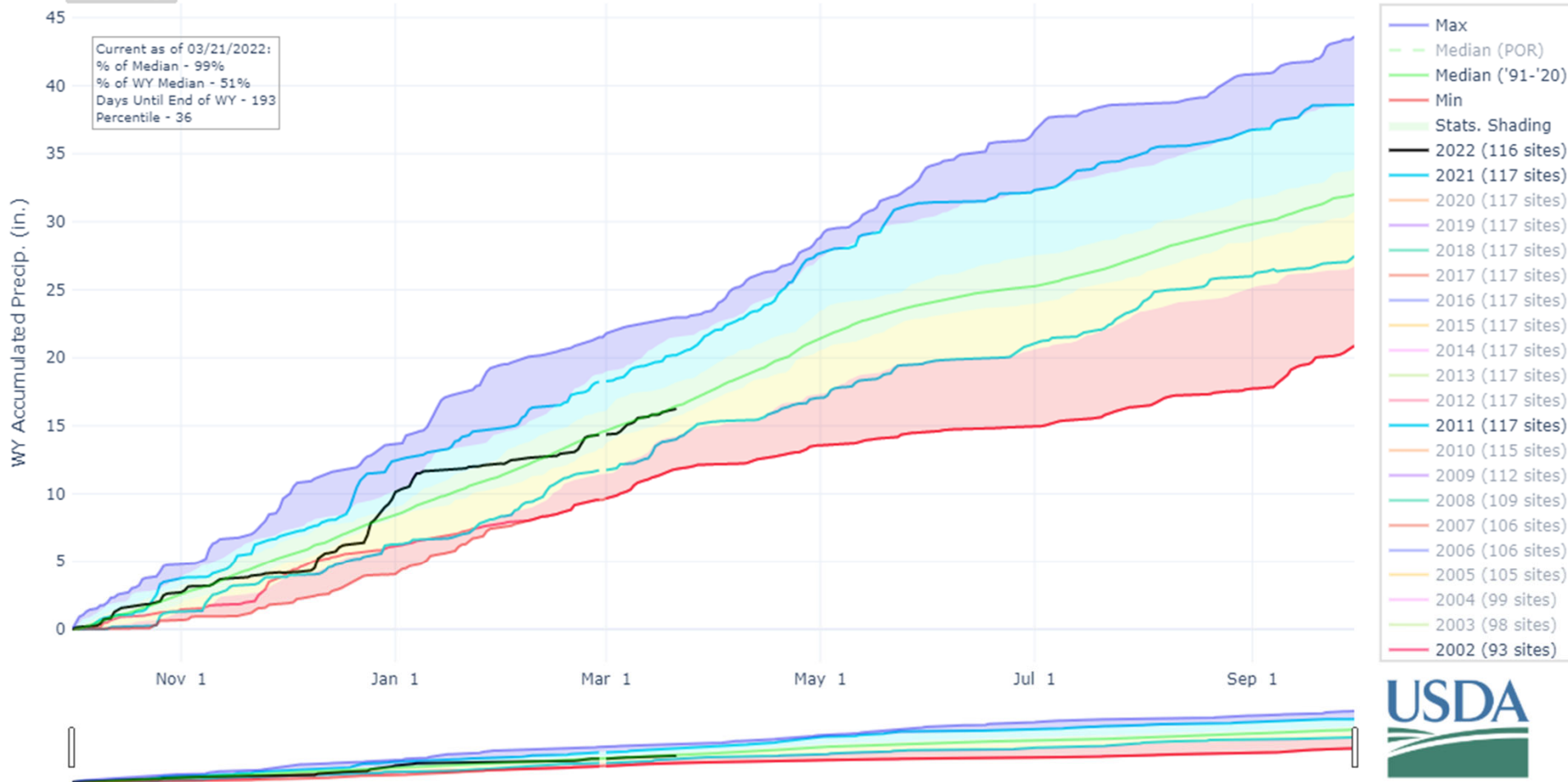
# Colorado Snow Surveys

## PRECIPITATION IN STATE OF COLORADO

Reset Range

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

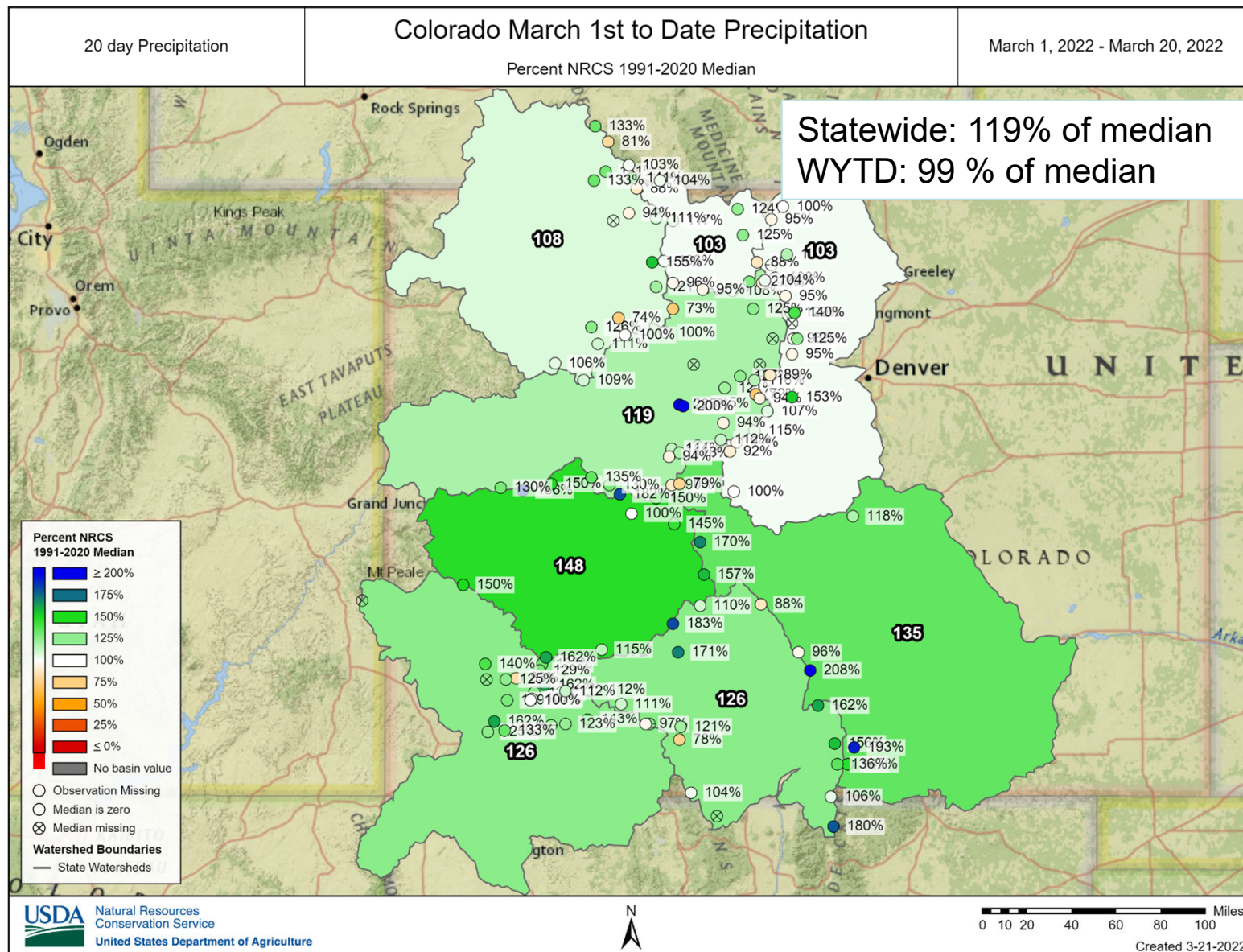
Station List





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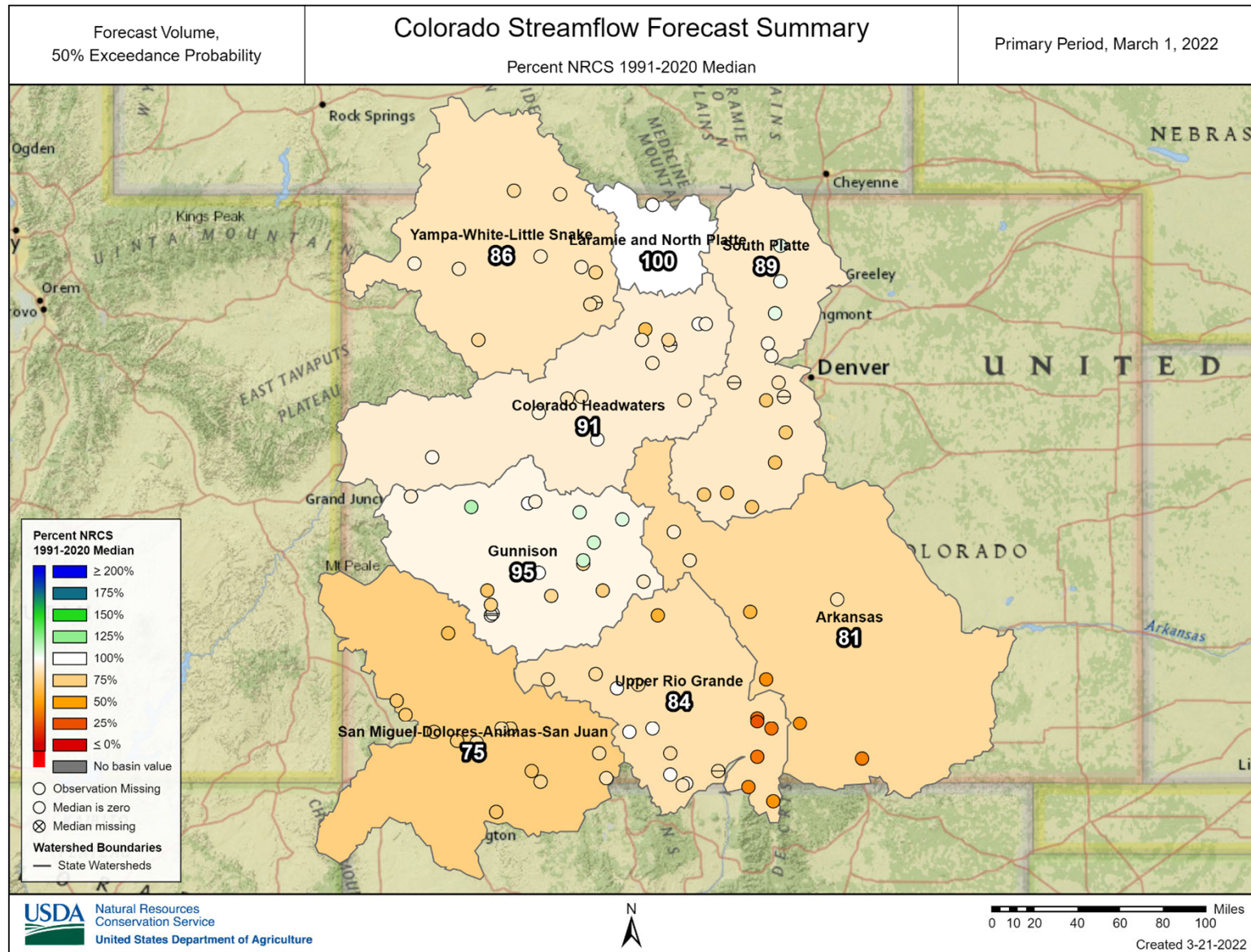
# Colorado Snow Surveys





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# Colorado Snow Surveys





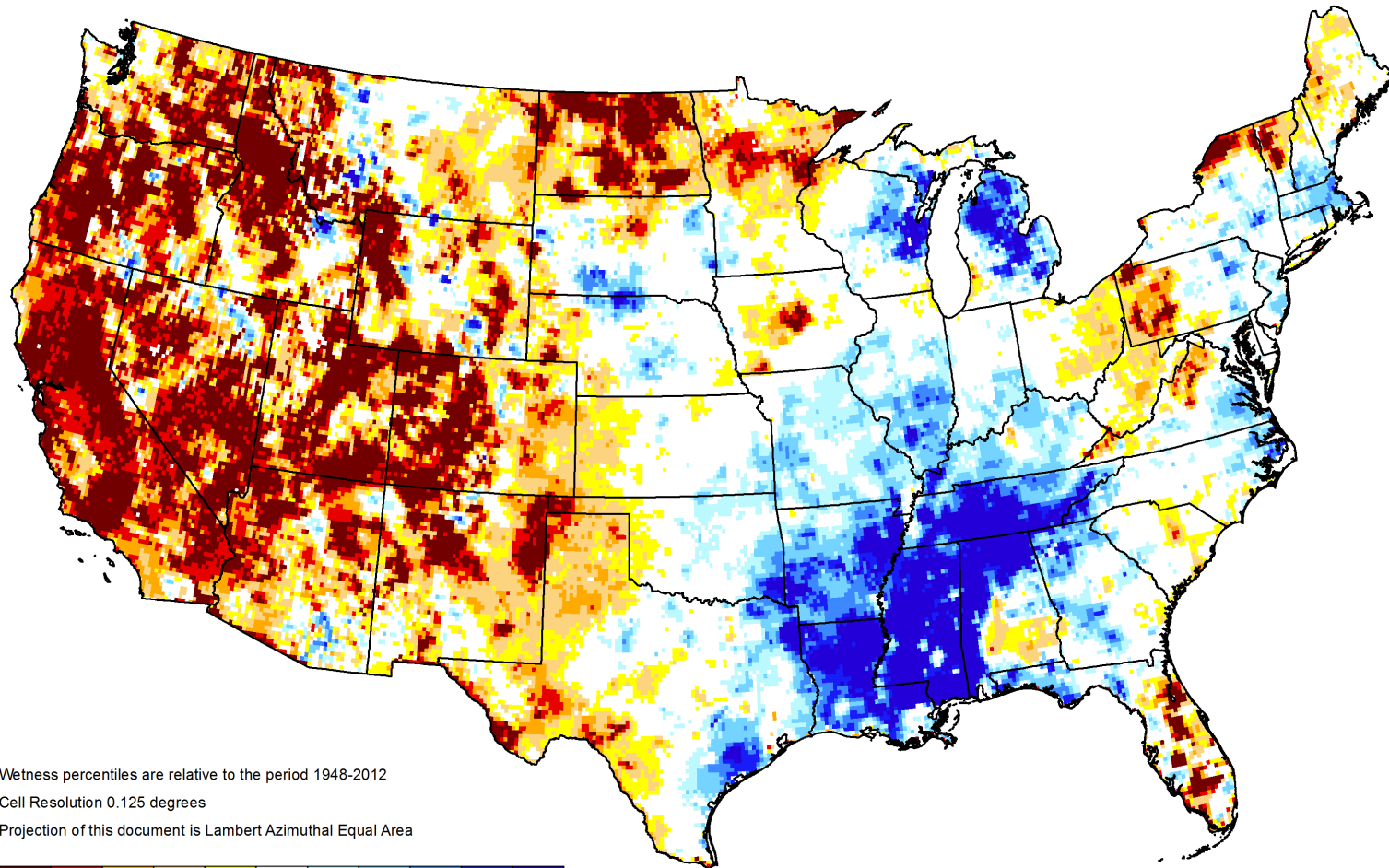
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# Colorado Snow Surveys



## GRACE-Based Shallow Groundwater Drought Indicator

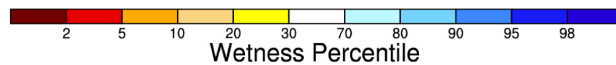
October 04, 2021



Wetness percentiles are relative to the period 1948-2012

Cell Resolution 0.125 degrees

Projection of this document is Lambert Azimuthal Equal Area



<https://nasagrace.unl.edu>



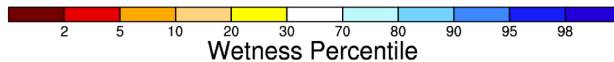
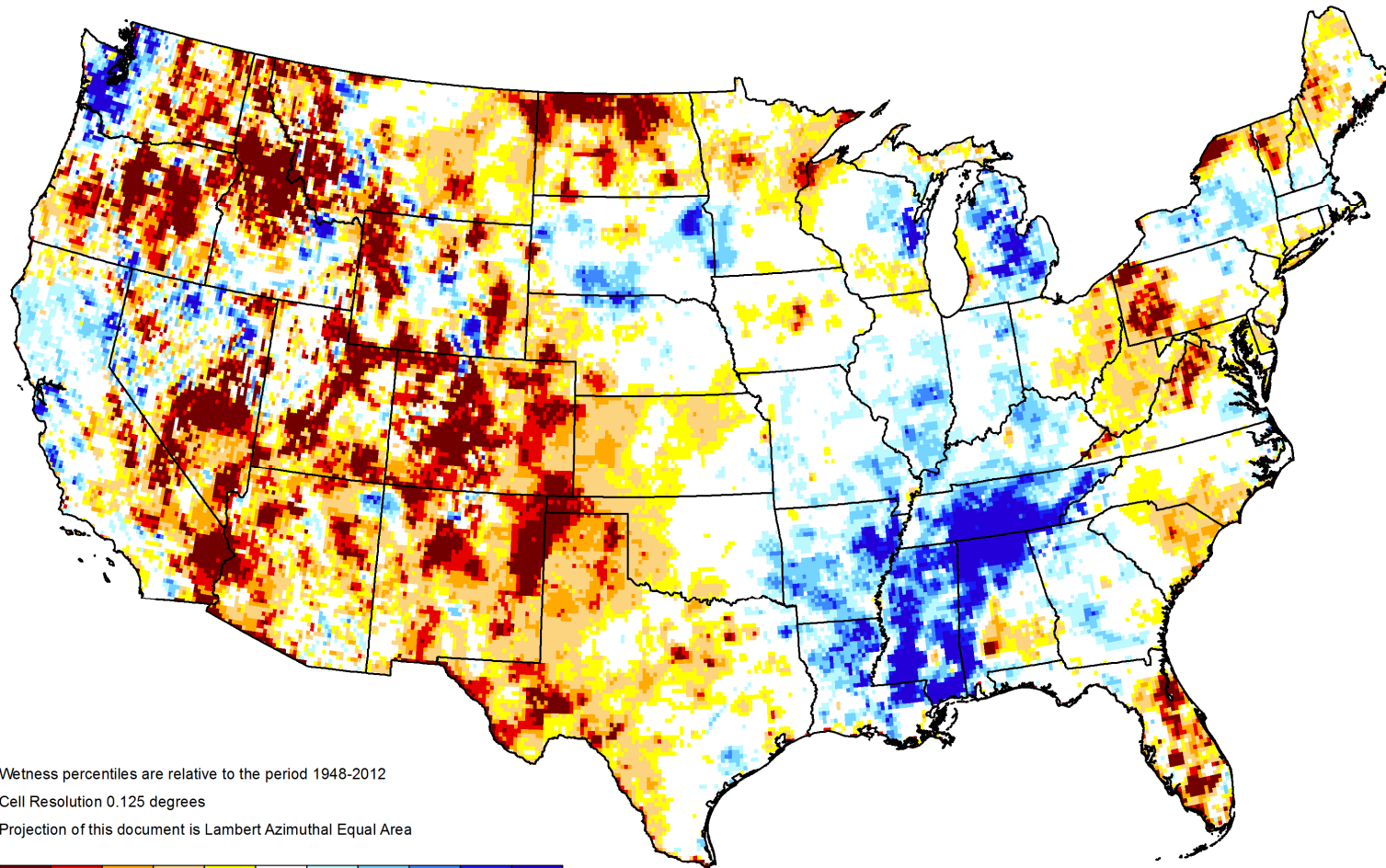
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# Colorado Snow Surveys



## GRACE-Based Shallow Groundwater Drought Indicator

January 10, 2022

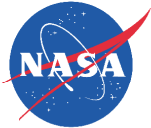


<https://nasagrace.unl.edu>



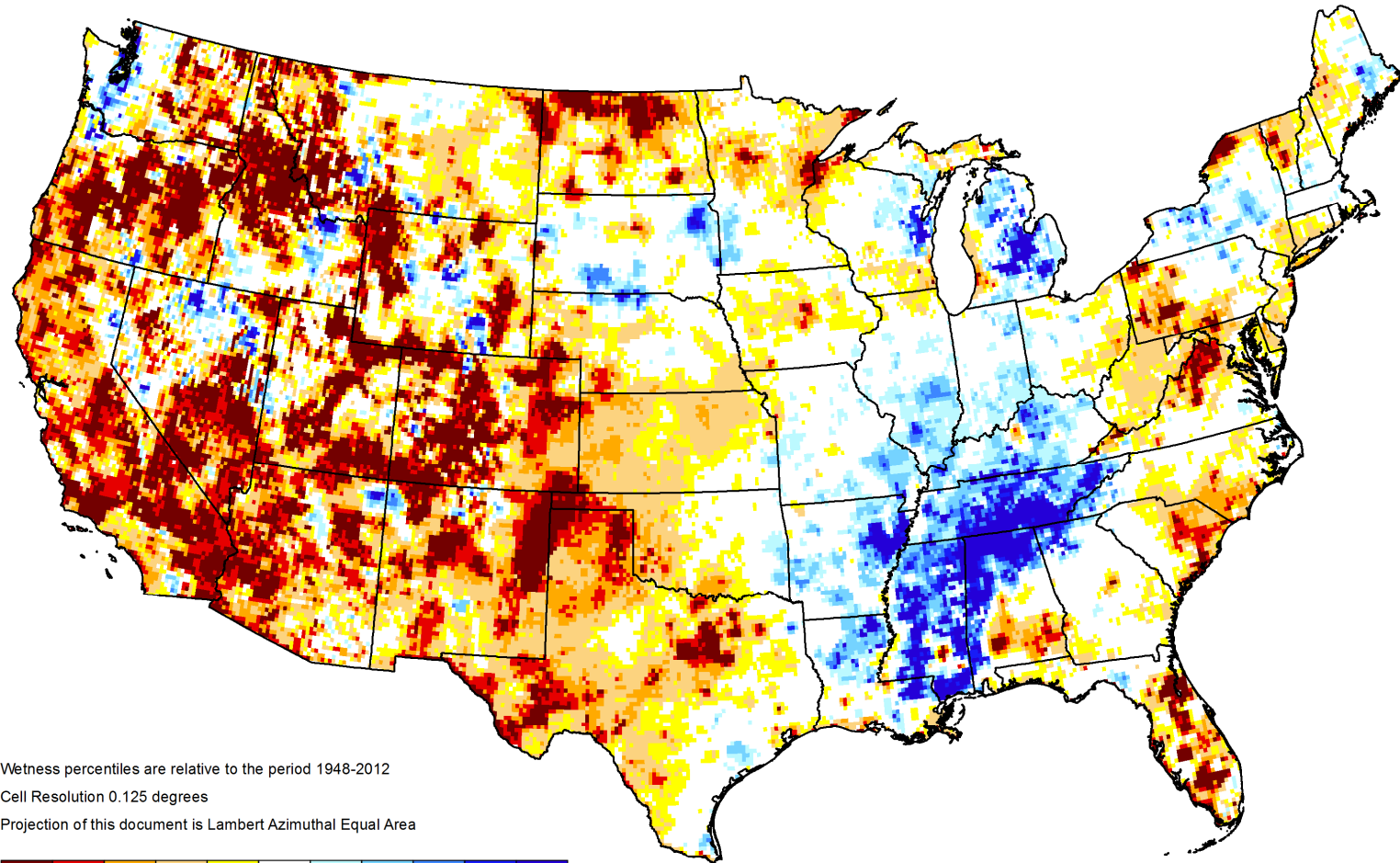
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# Colorado Snow Surveys



## GRACE-Based Shallow Groundwater Drought Indicator

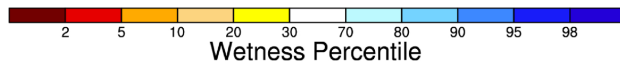
March 14, 2022



Wetness percentiles are relative to the period 1948-2012

Cell Resolution 0.125 degrees

Projection of this document is Lambert Azimuthal Equal Area

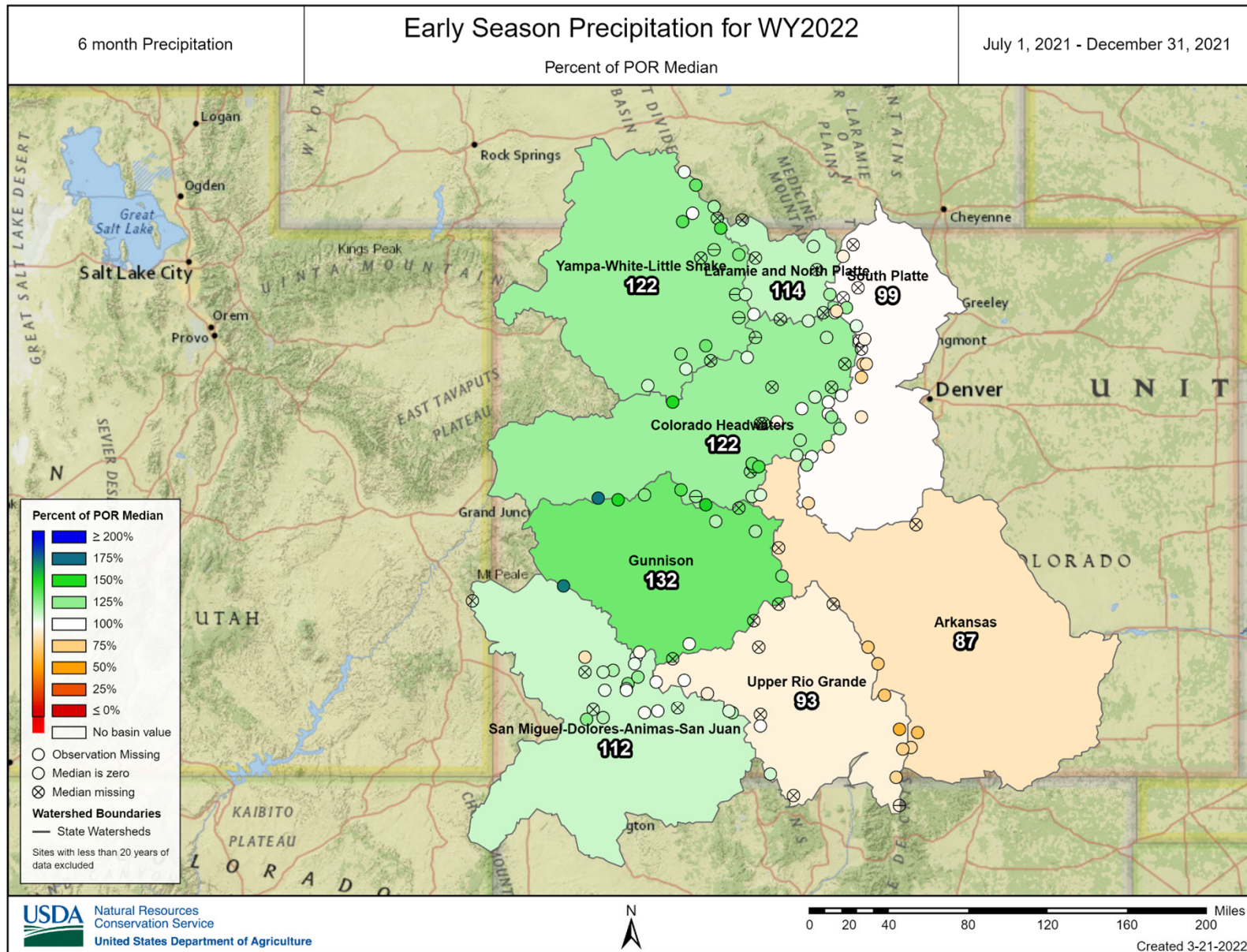


<https://nasagrace.unl.edu>



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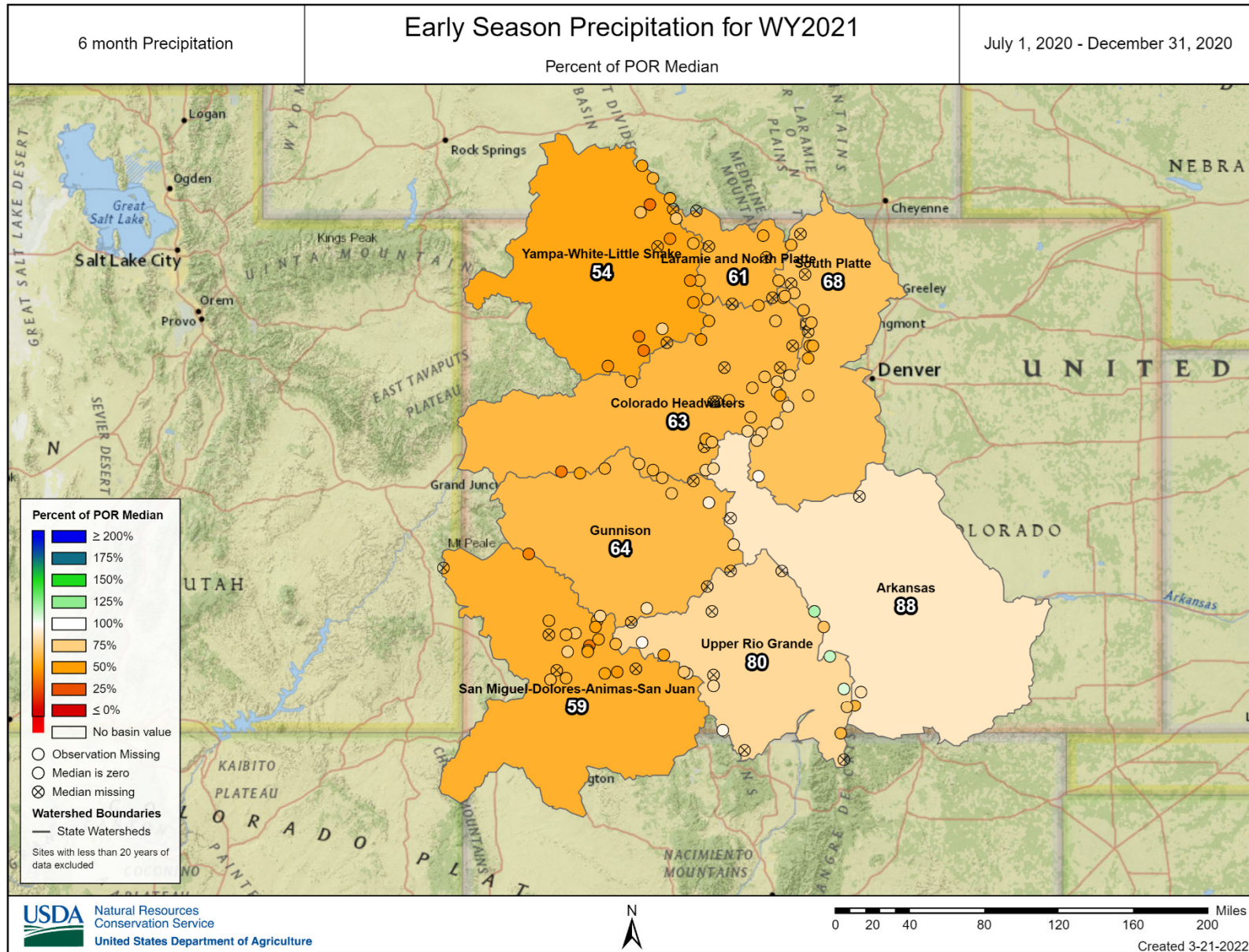
# Colorado Snow Surveys

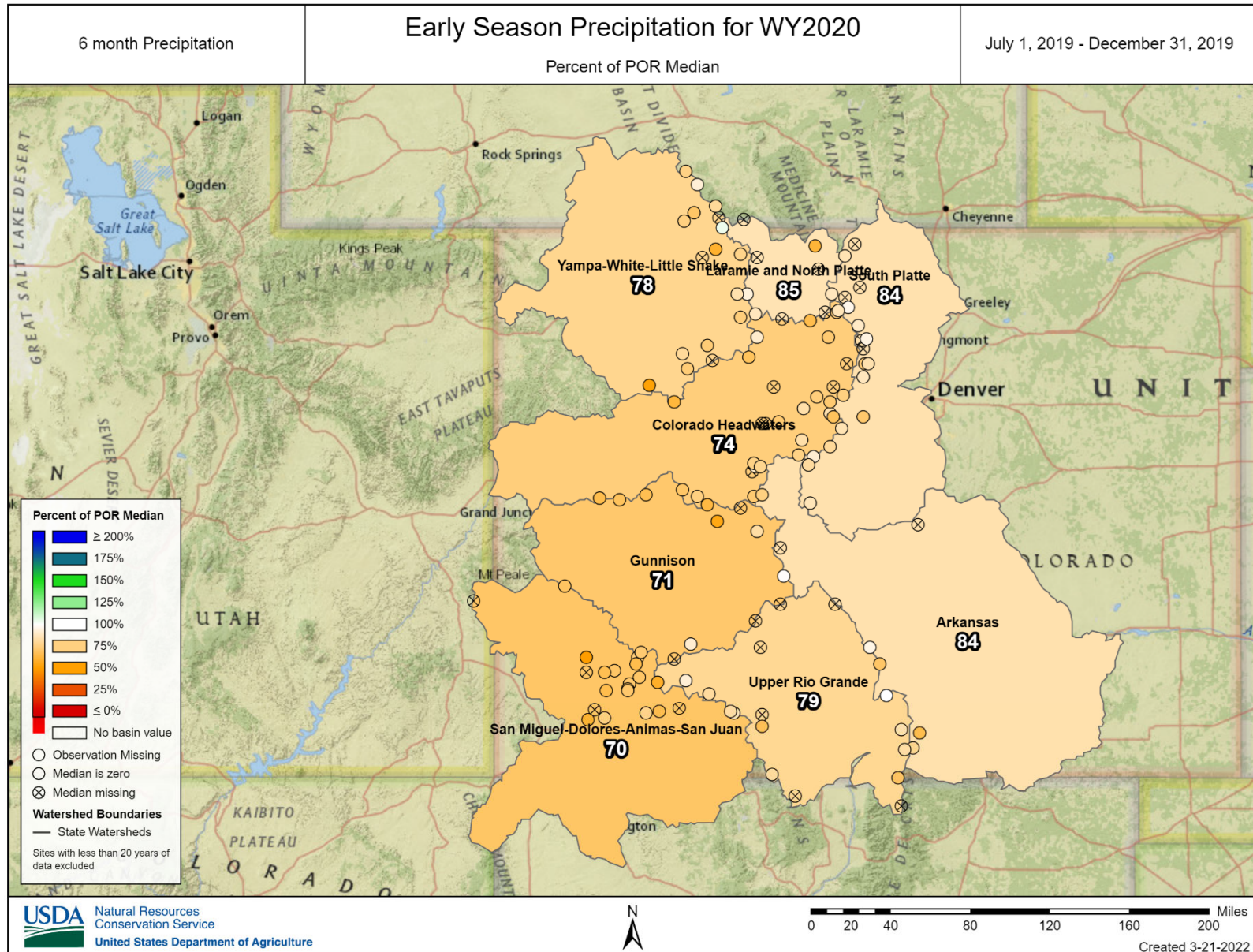




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# Colorado Snow Surveys



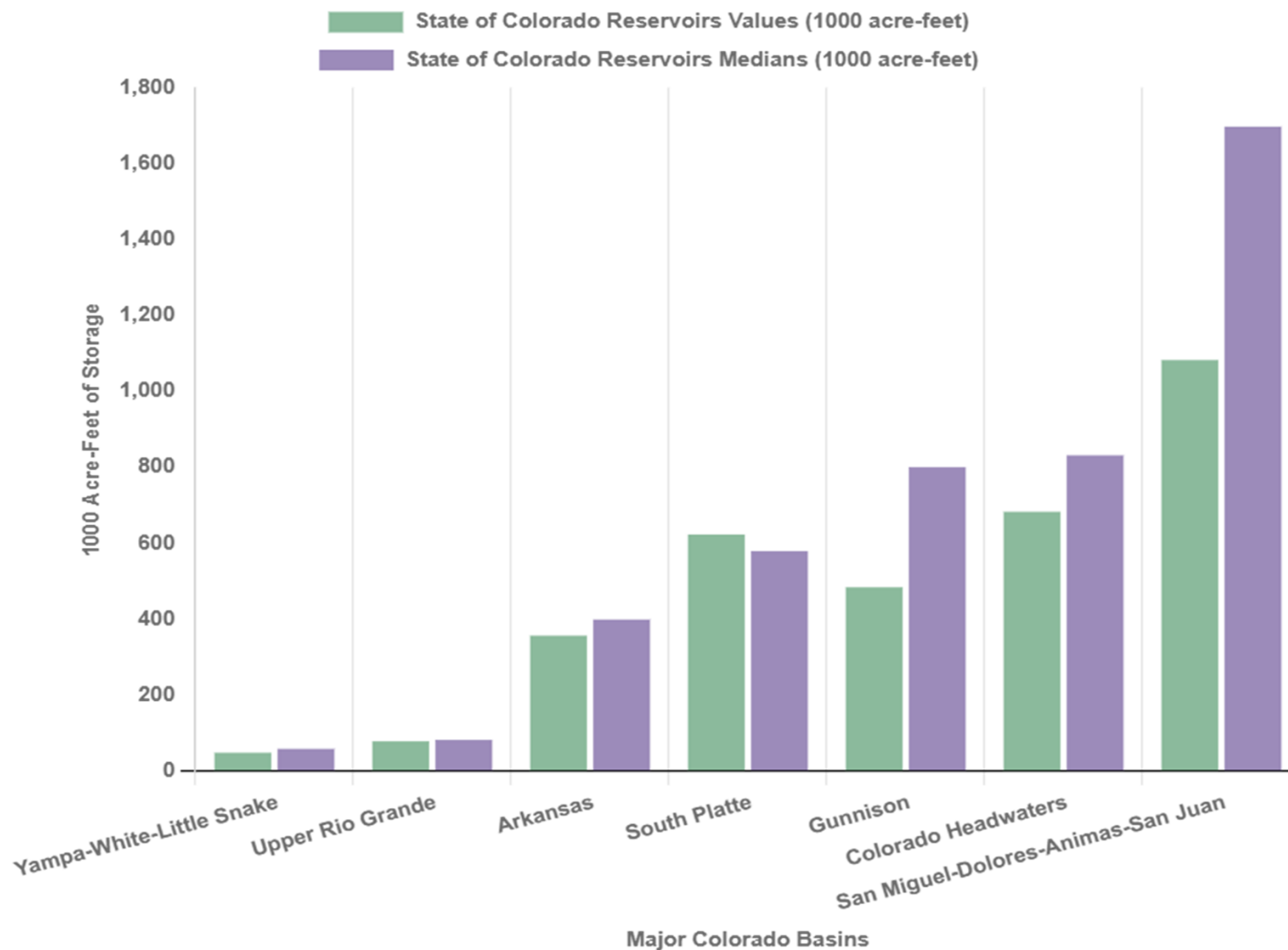




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# Colorado Snow Surveys

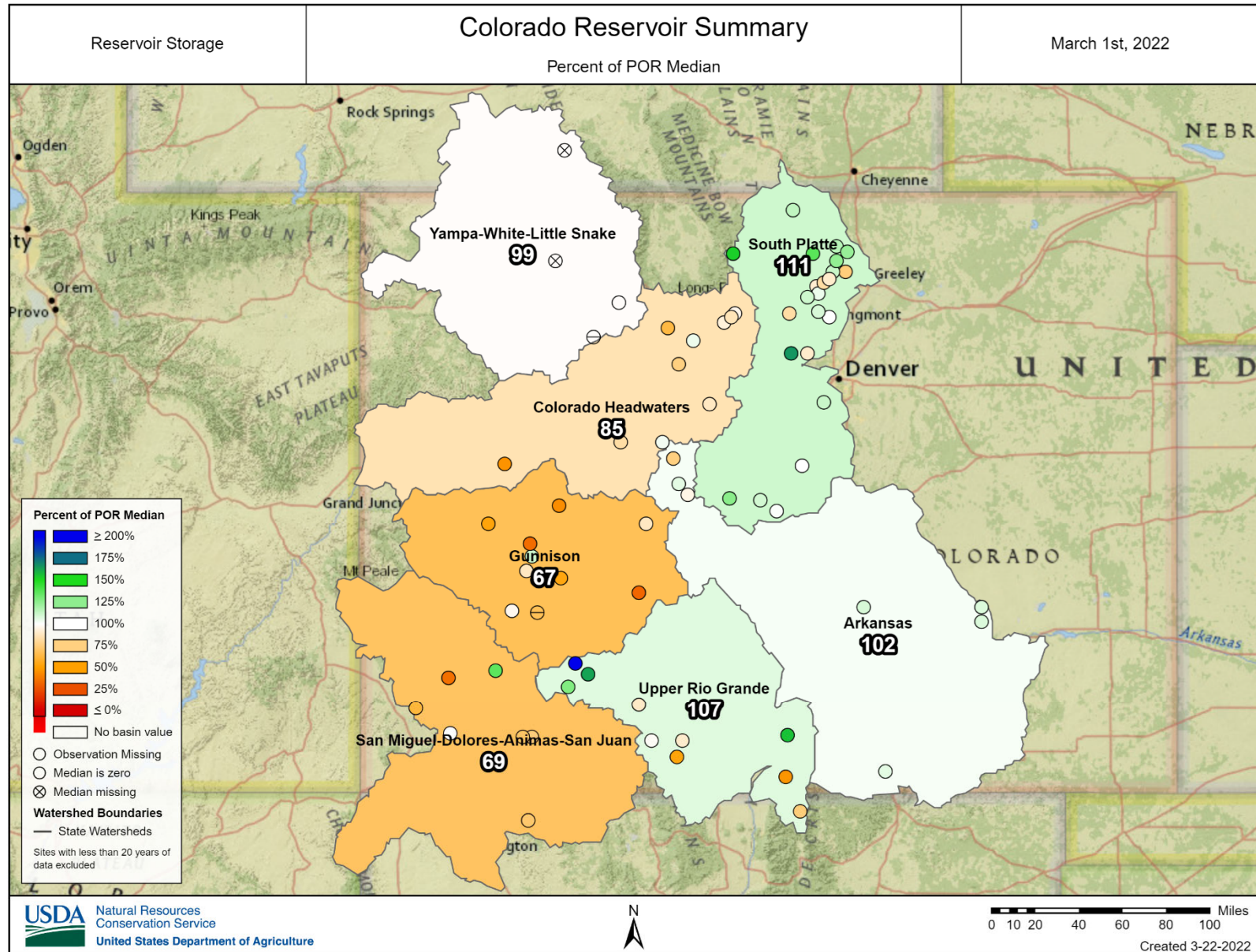
State of Colorado Reservoir Storage Summary for March 1st 2022





United States Department of Agriculture

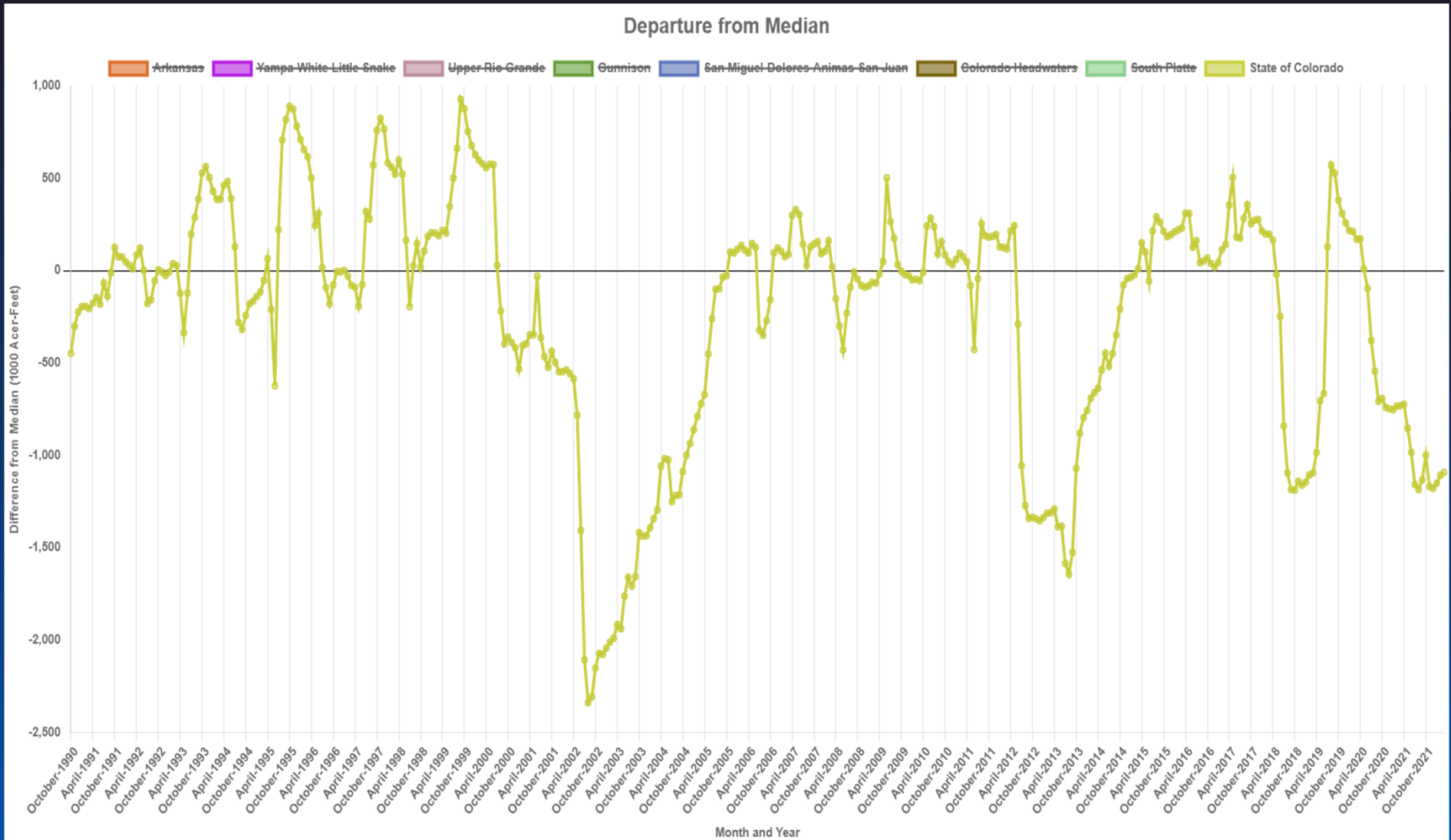
# Colorado Snow Surveys





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# Colorado Snow Surveys

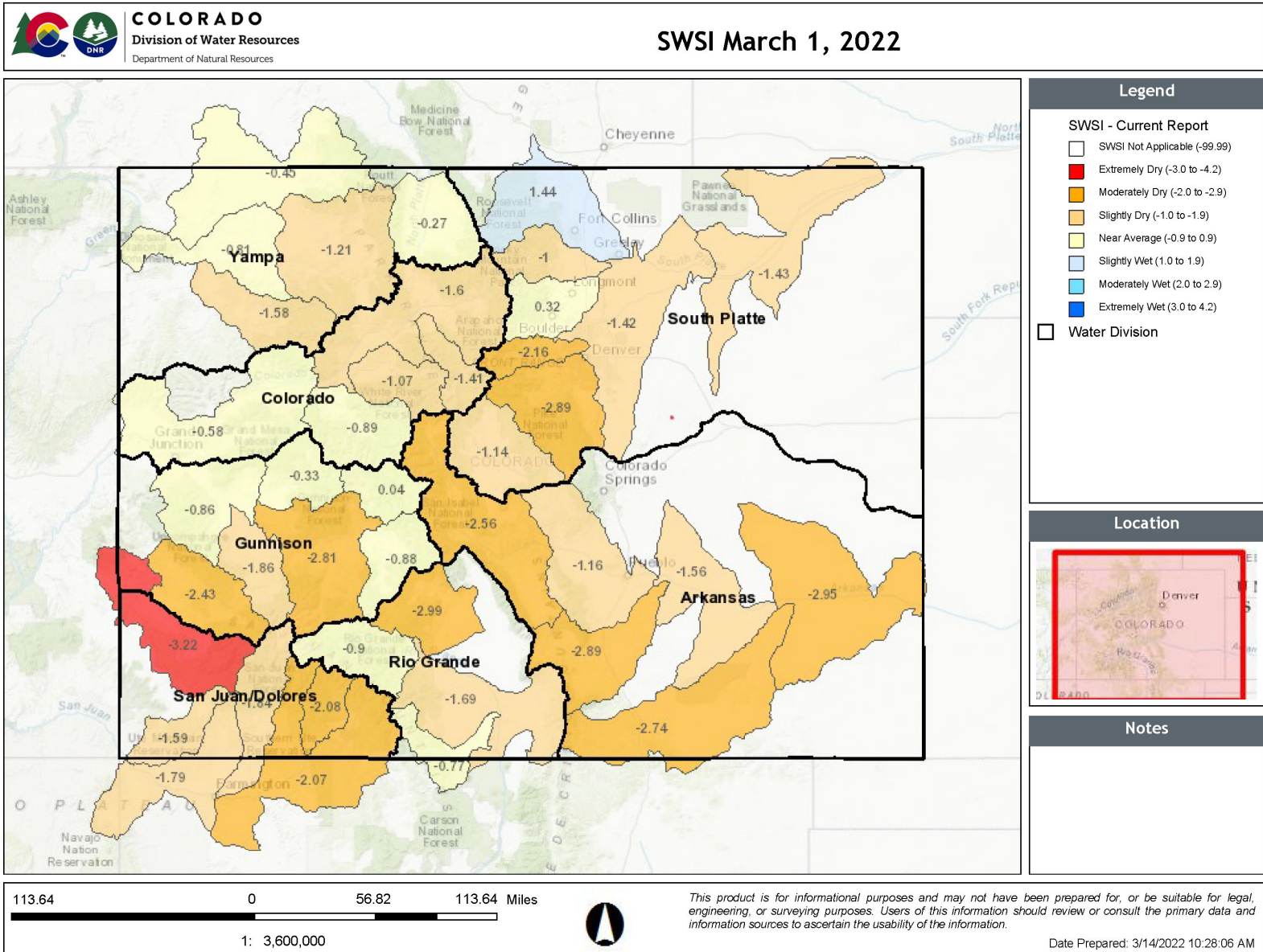




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# Colorado Snow Surveys

February 1, 2020 SWSI



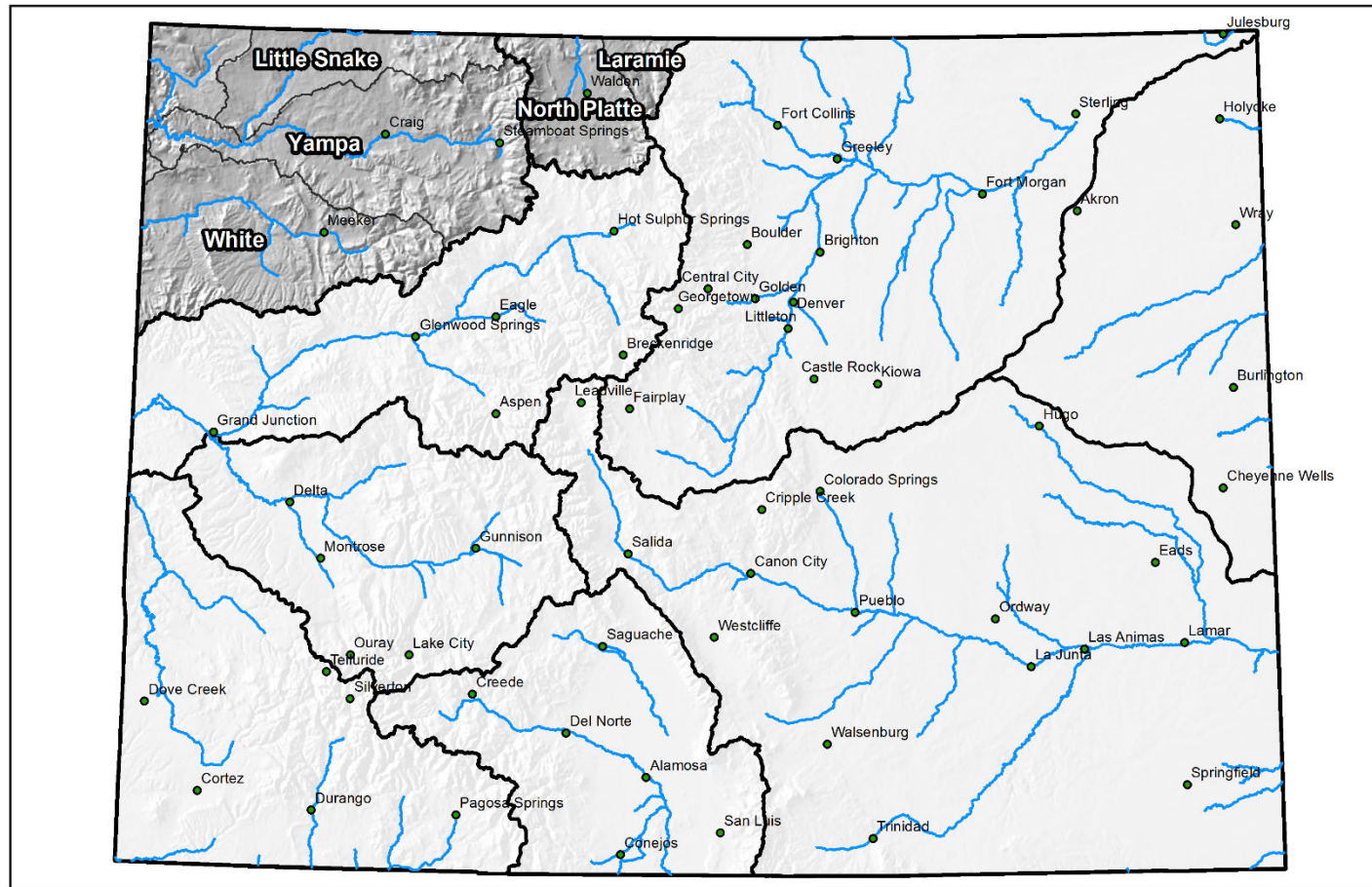


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# Colorado Snow Surveys

## Major Basin Summary

Yampa, White, and North Platte River Basins



0 25 50 100 150 200 Miles



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Natural Resources Conservation Service



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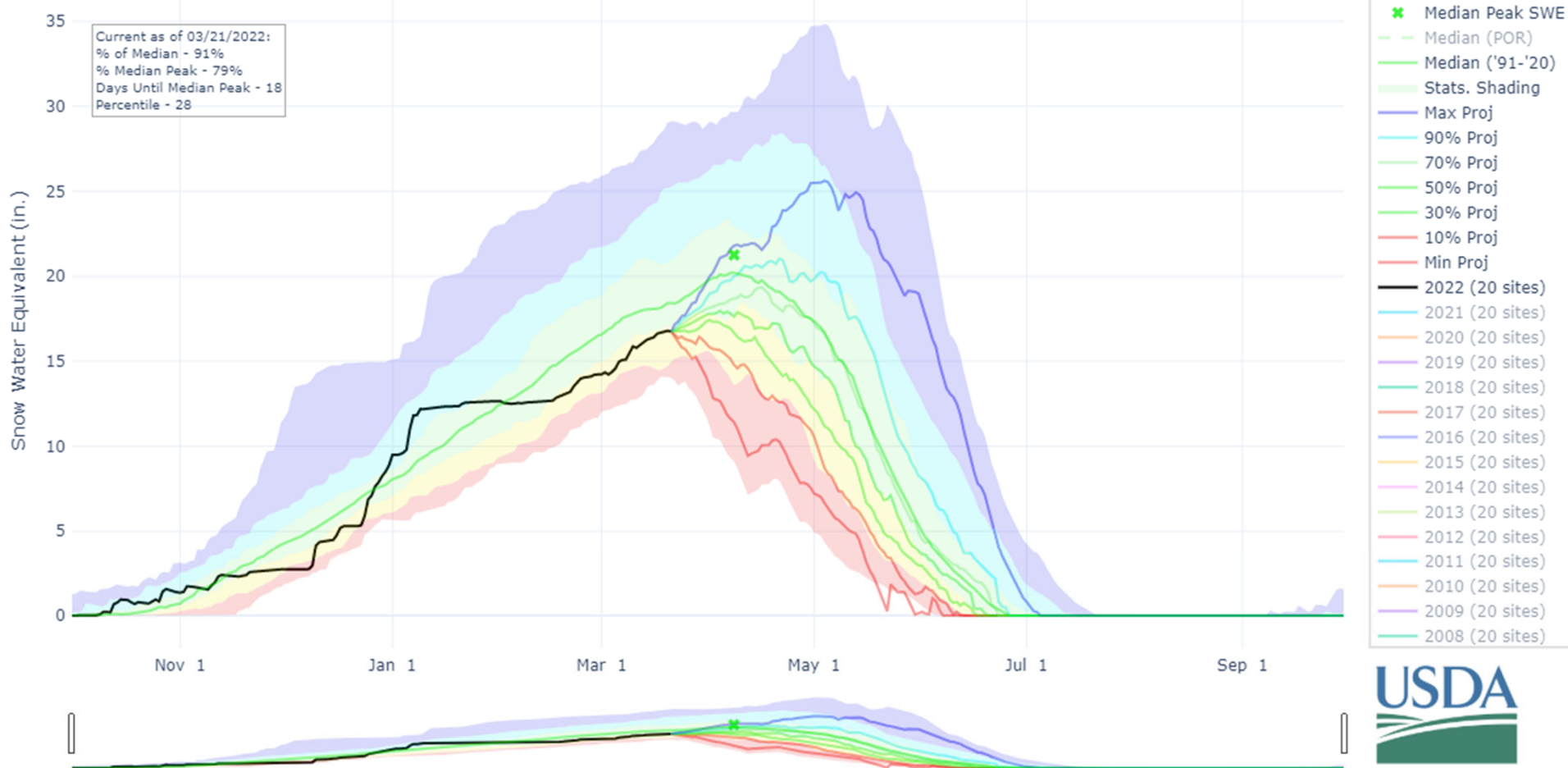
# Colorado Snow Surveys

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

Reset Range

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

Station List





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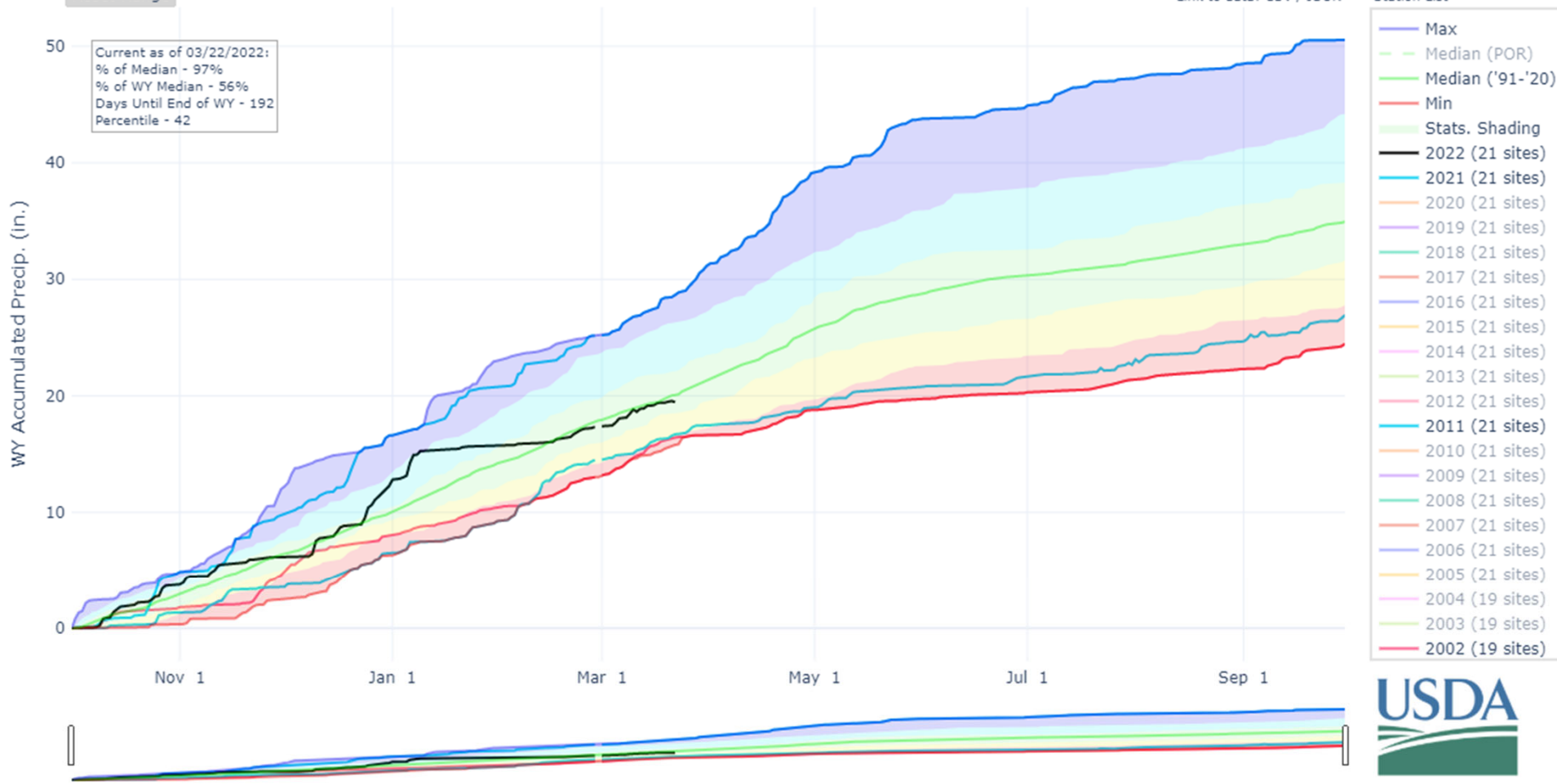
# Colorado Snow Surveys

## PRECIPITATION IN YAMPA-WHITE-LITTLE SNAKE

Reset Range

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

Station List





United States Department of Agriculture

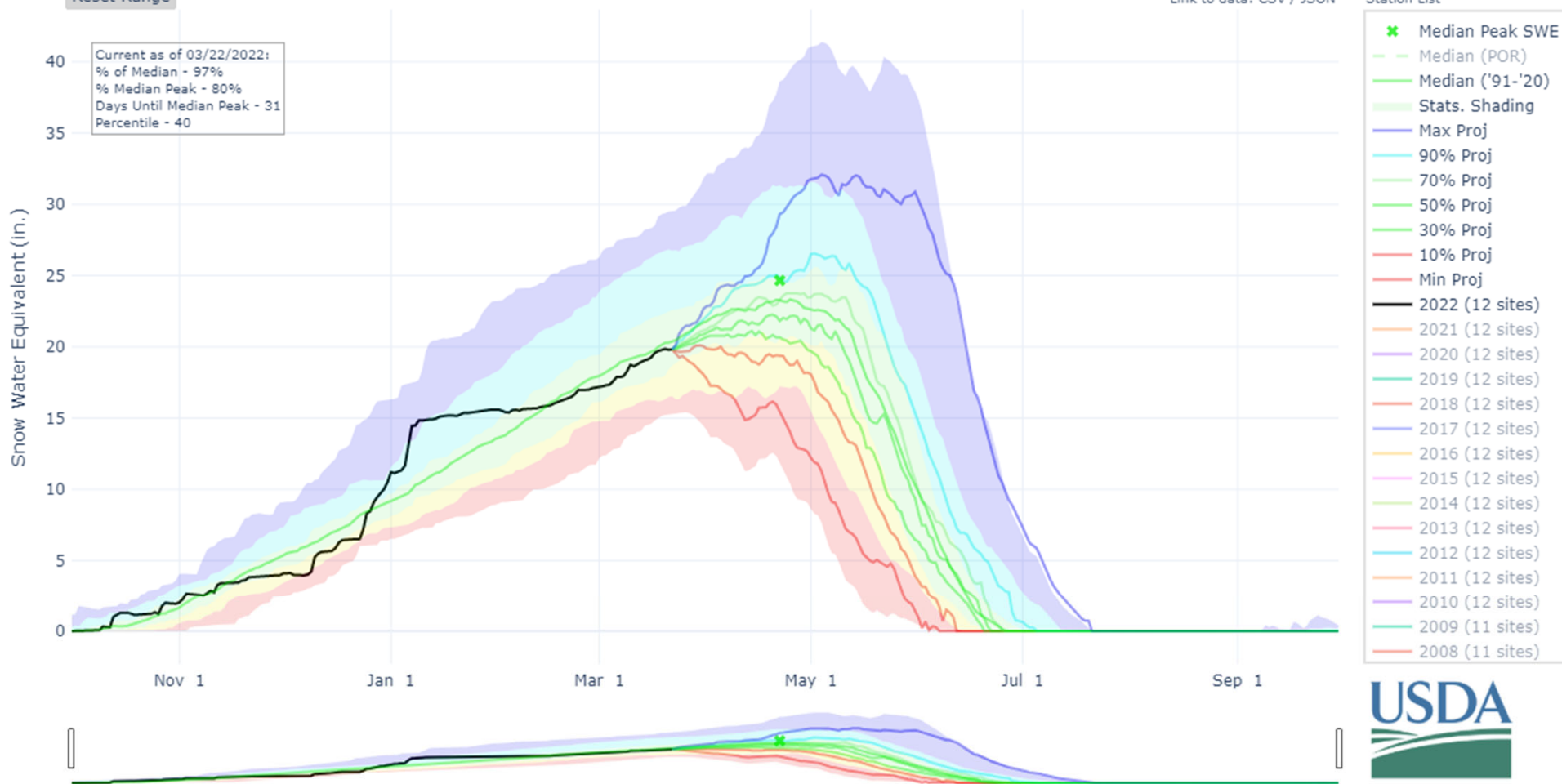
# Colorado Snow Surveys

## SNOW WATER EQUIVALENT PROJECTIONS IN LARAMIE AND NORTH PLATTE

Reset Range

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

[Station List](#)





United States Department of Agriculture

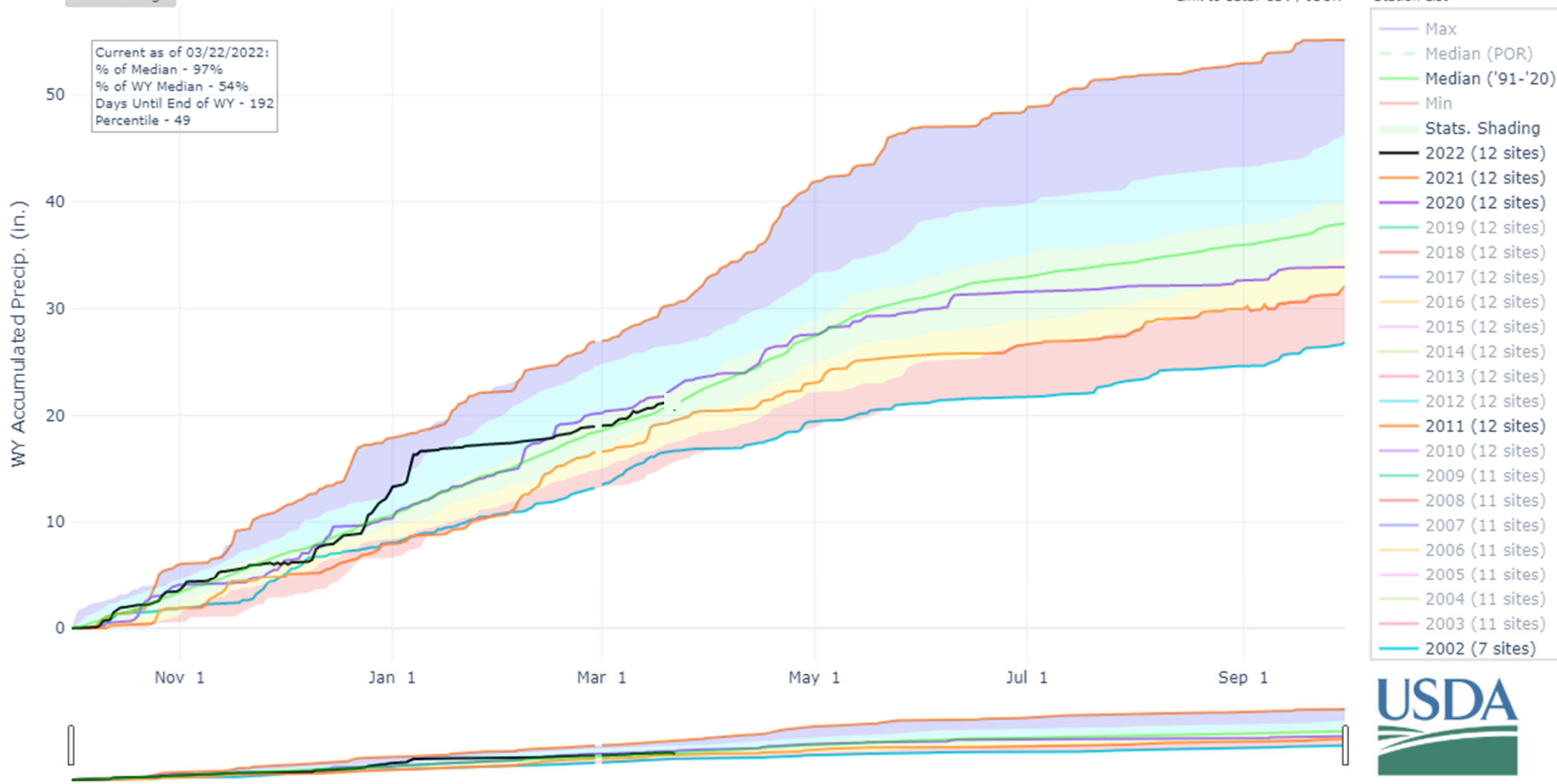
# Colorado Snow Surveys

## PRECIPITATION IN LARAMIE AND NORTH PLATTE

Reset Range

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

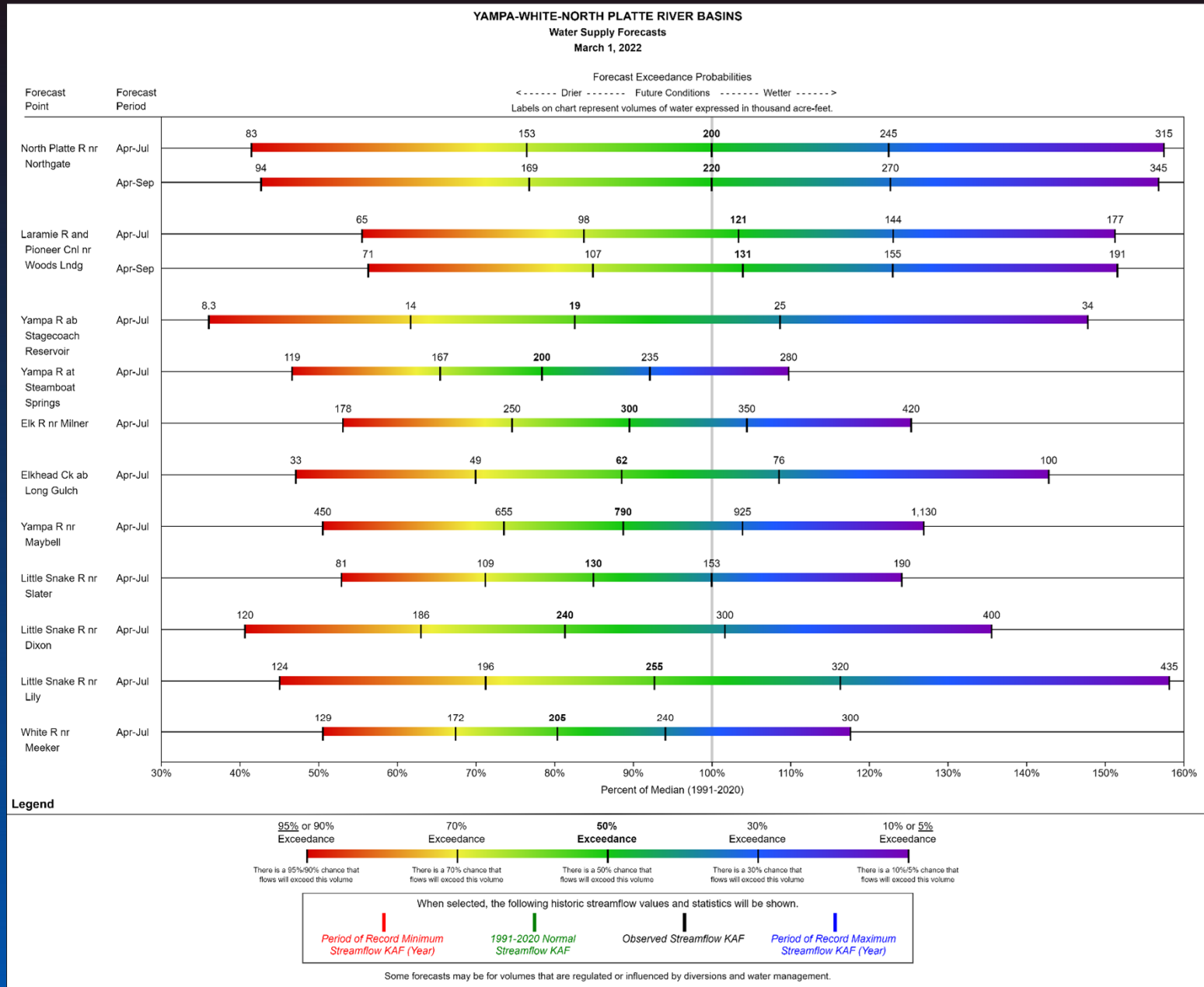
Station List





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# Colorado Snow Surveys



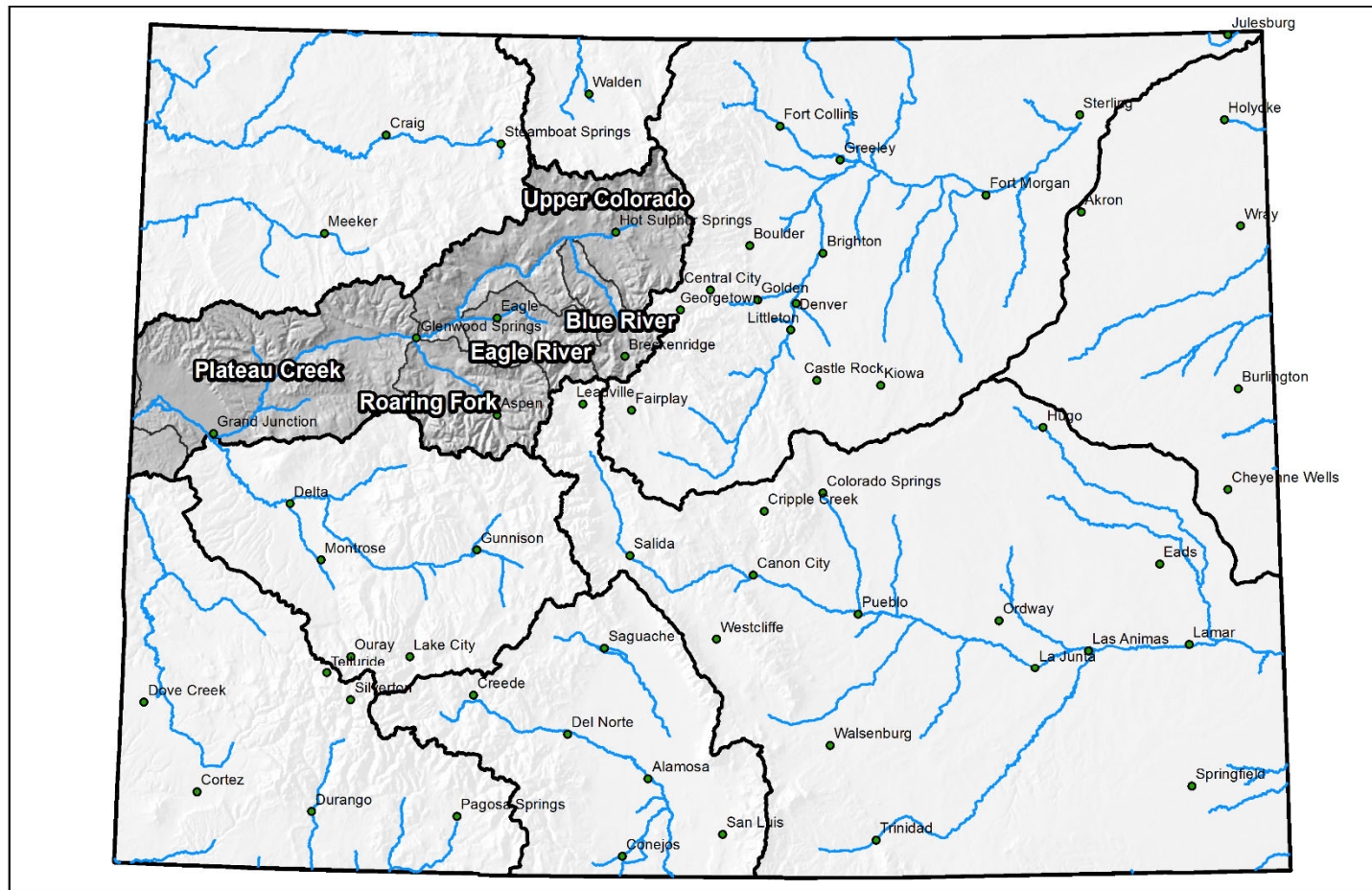


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# Colorado Snow Surveys

## Major Basin Summary

### Colorado River Basin



0 25 50 100 150 200 Miles



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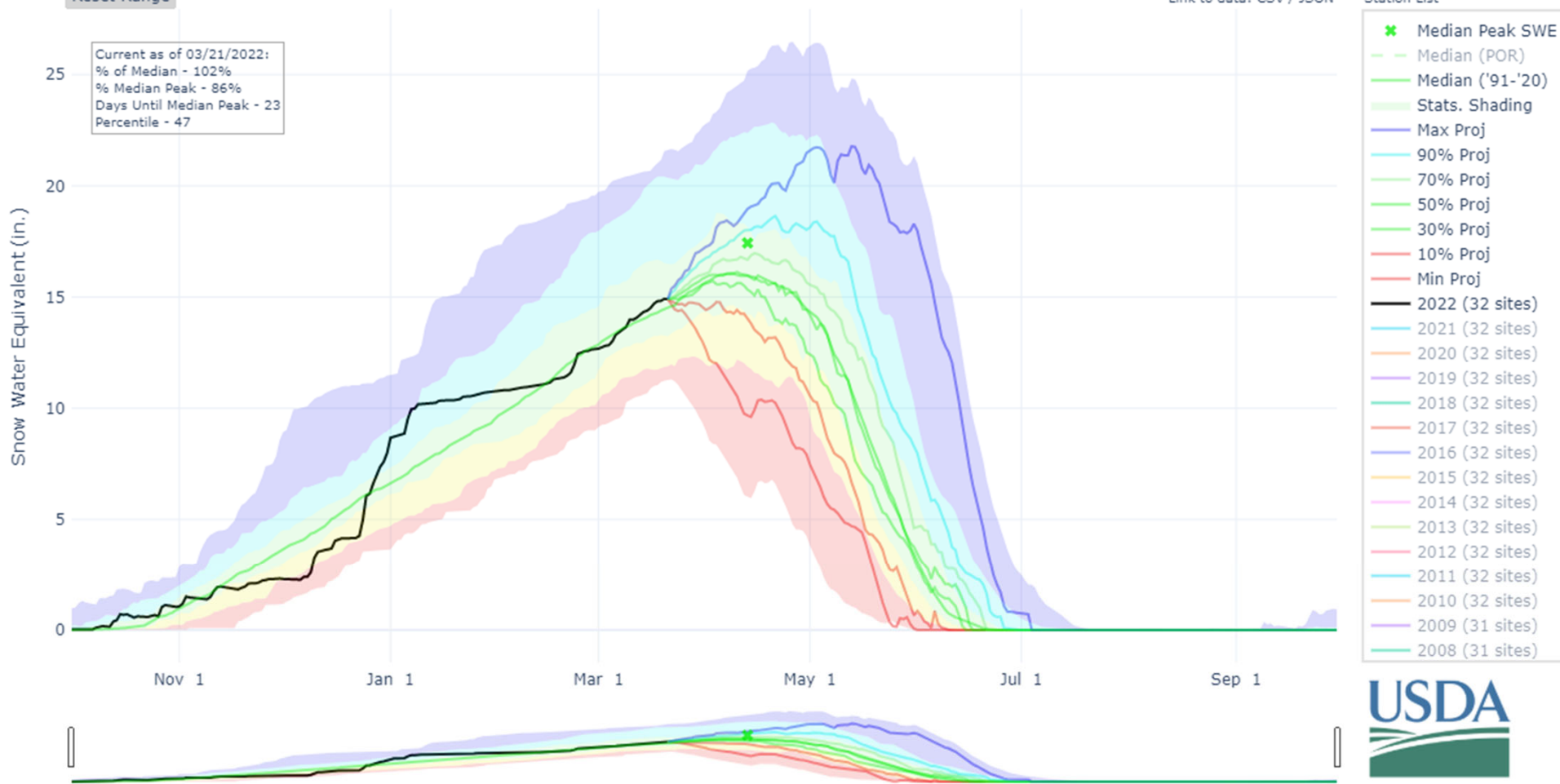
# Colorado Snow Surveys

## SNOW WATER EQUIVALENT PROJECTIONS IN COLORADO HEADWATERS

Reset Range

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

[Station List](#)





United States Department of Agriculture

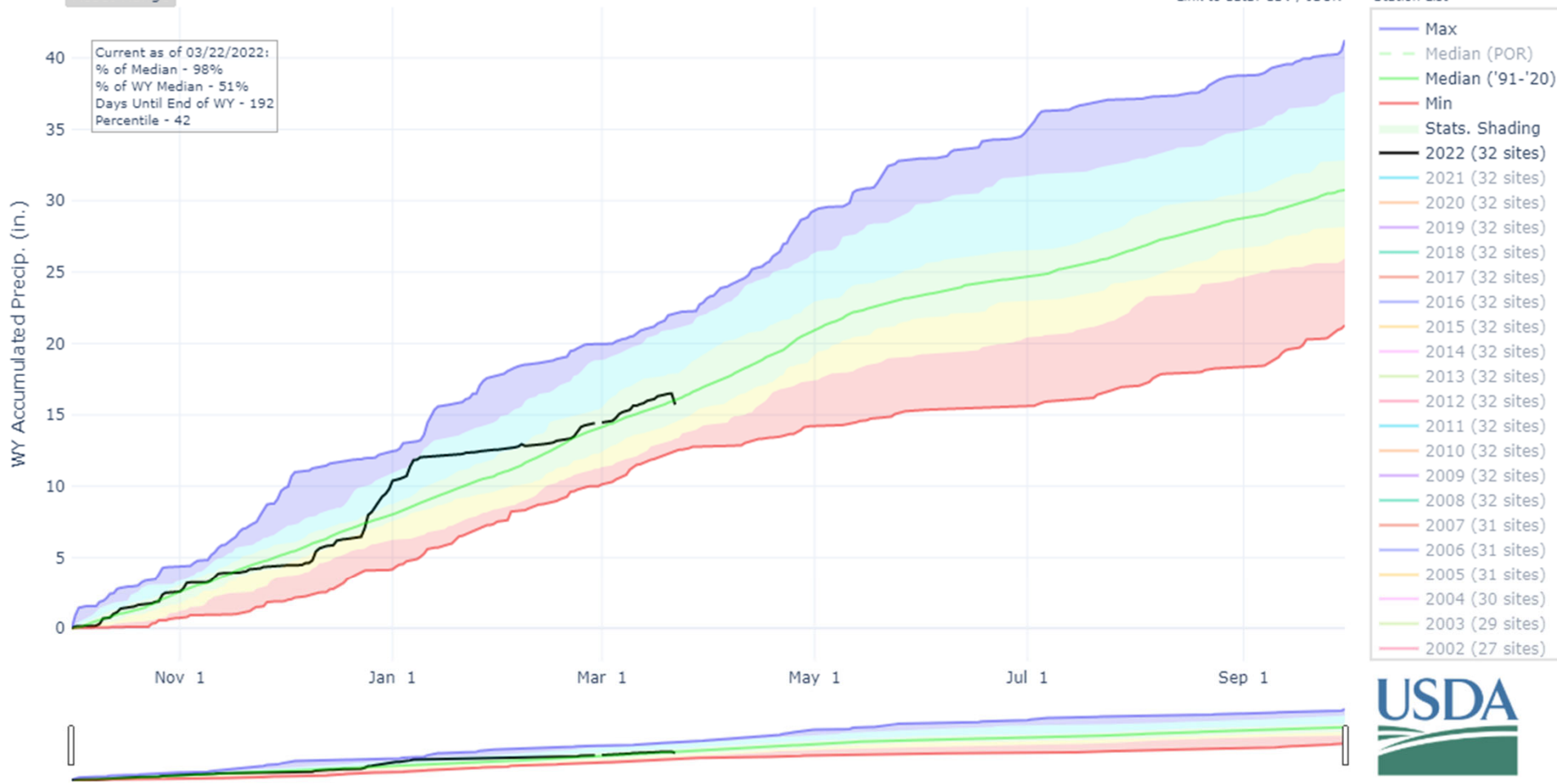
# Colorado Snow Surveys

## PRECIPITATION IN COLORADO HEADWATERS

Reset Range

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

Station List





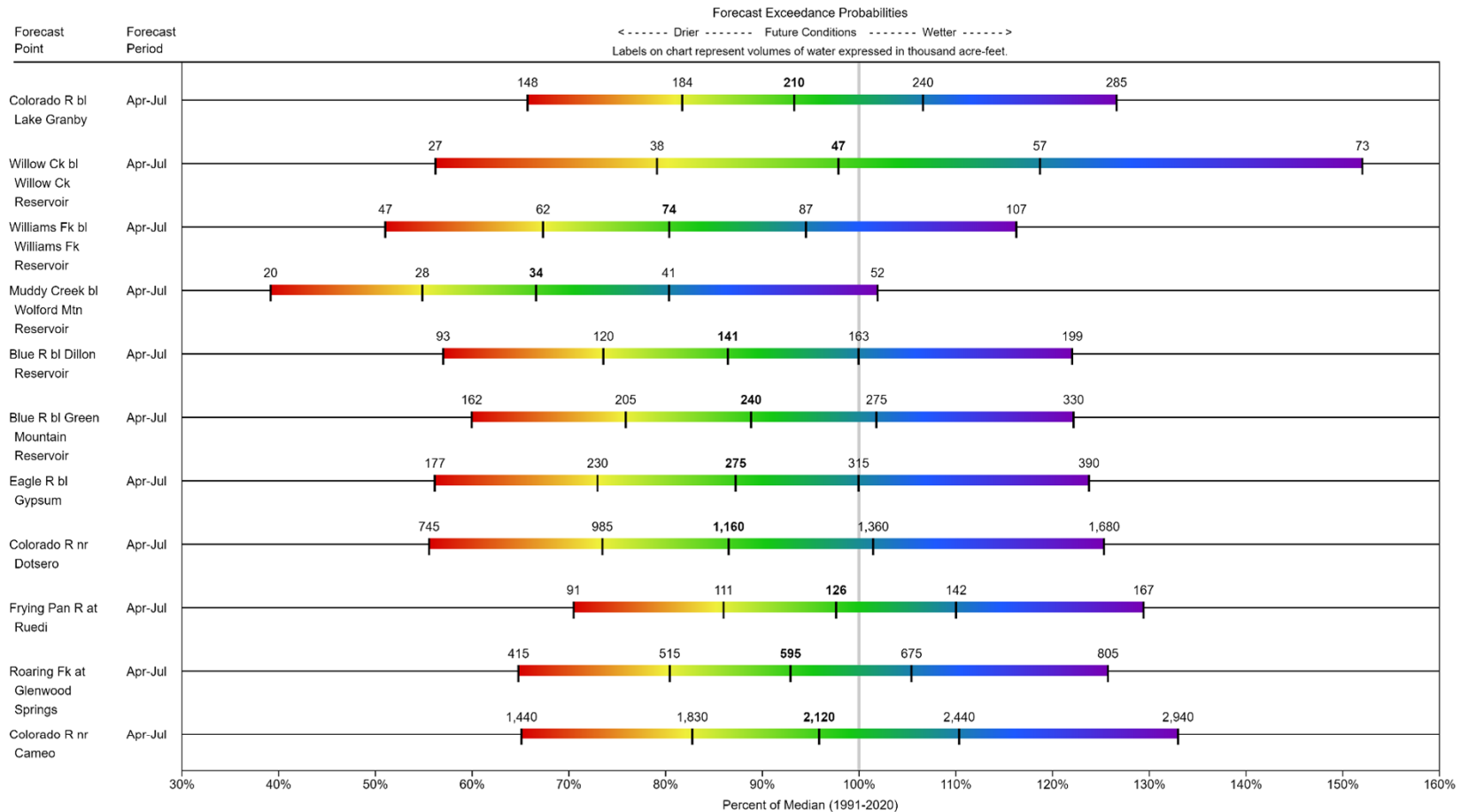
United States Department of Agriculture

# Colorado Snow Surveys

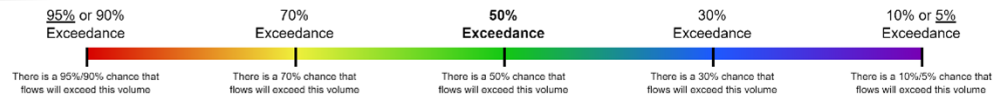
## UPPER COLORADO RIVER BASIN

### Water Supply Forecasts

March 1, 2022



### Legend



When selected, the following historic streamflow values and statistics will be shown.

Period of Record Minimum Streamflow KAF (Year)

1991-2020 Normal Streamflow KAF

Observed Streamflow KAF

Period of Record Maximum Streamflow KAF (Year)

Some forecasts may be for volumes that are regulated or influenced by diversions and water management.



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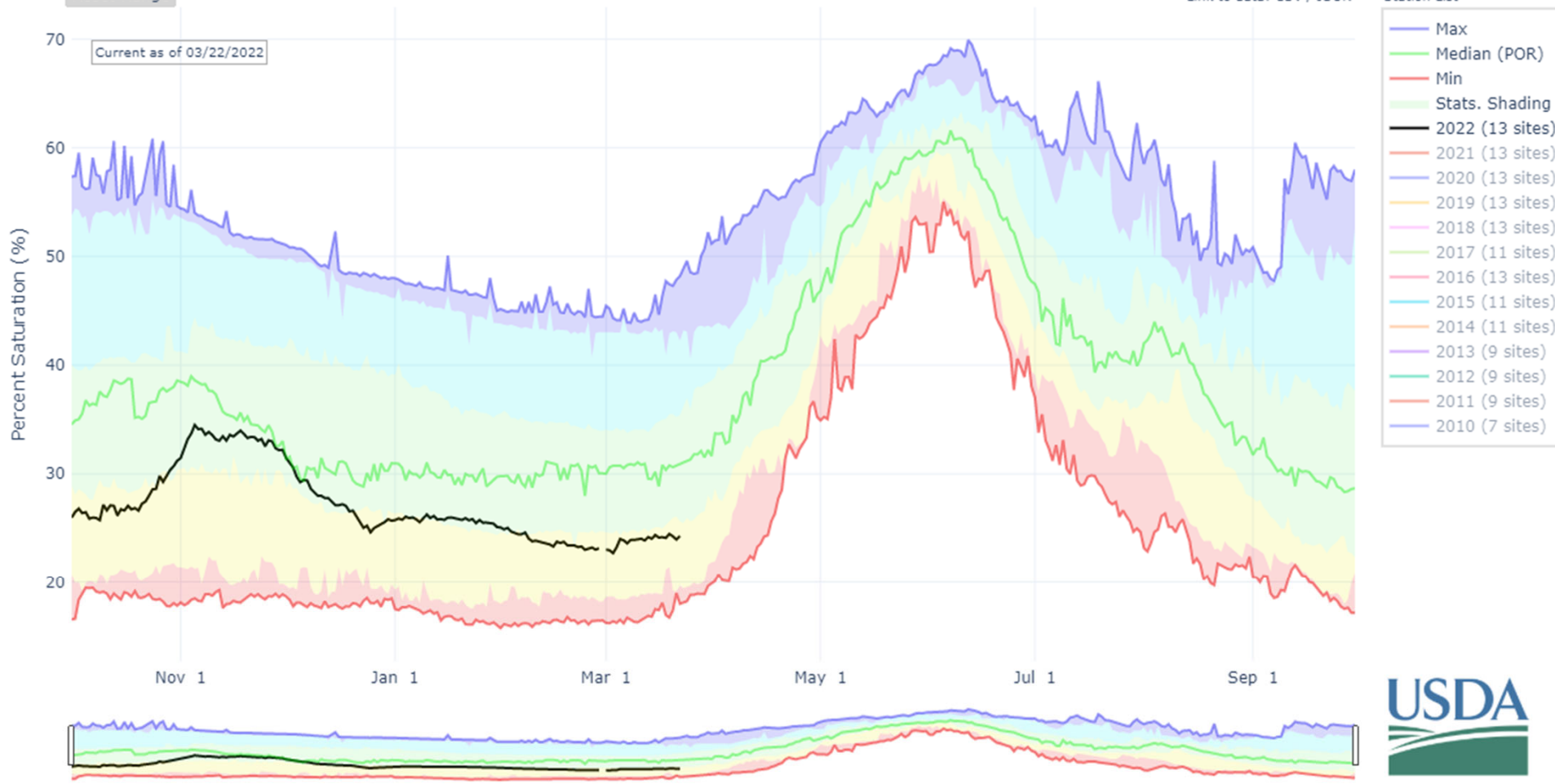
# Colorado Snow Surveys

## DEPTH AVERAGED SOIL SATURATION IN COLORADO HEADWATERS

Reset Range

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

Station List



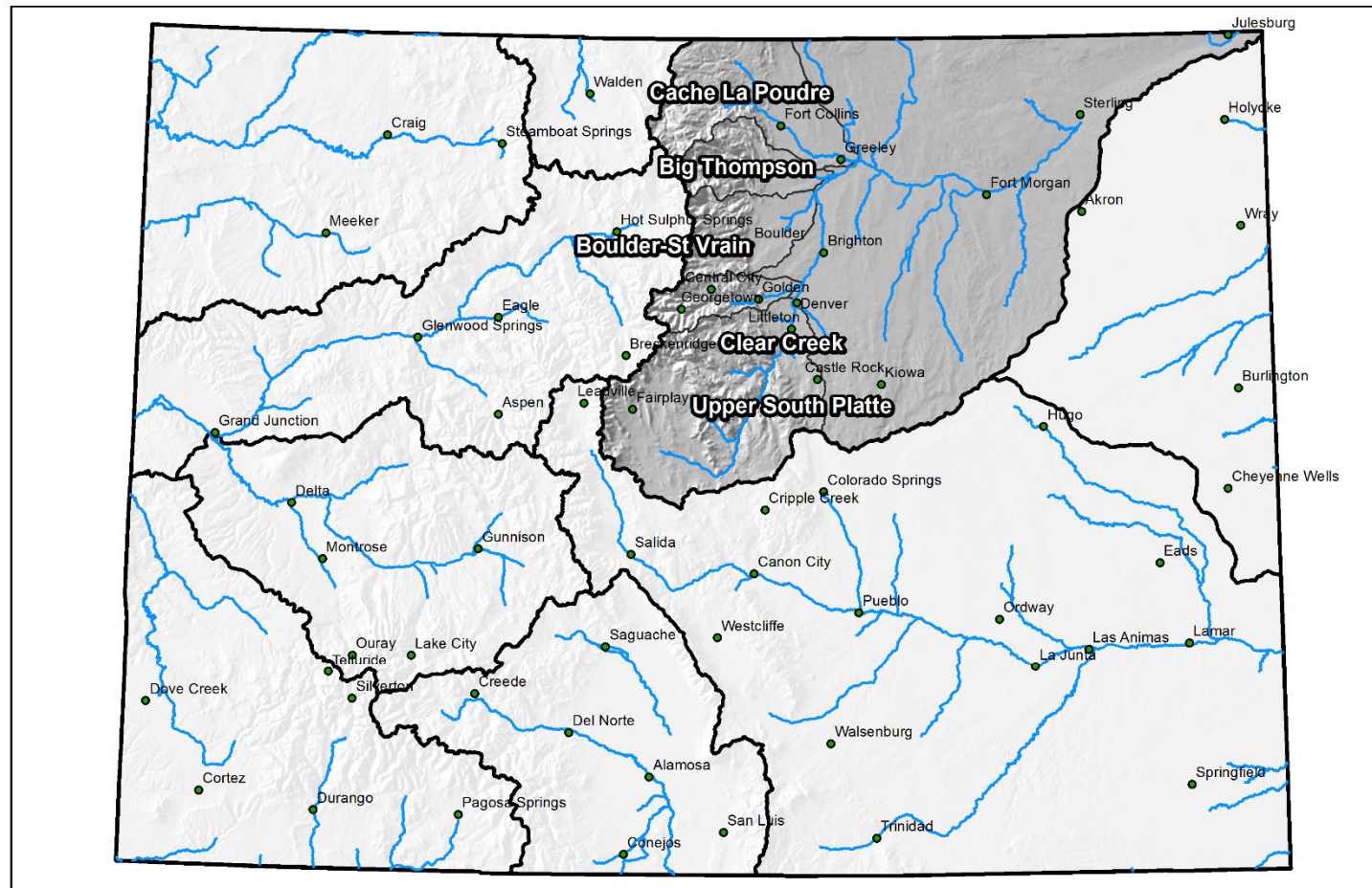


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# Colorado Snow Surveys

## Major Basin Summary

### South Platte River Basin



0 25 50 100 150 200 Miles



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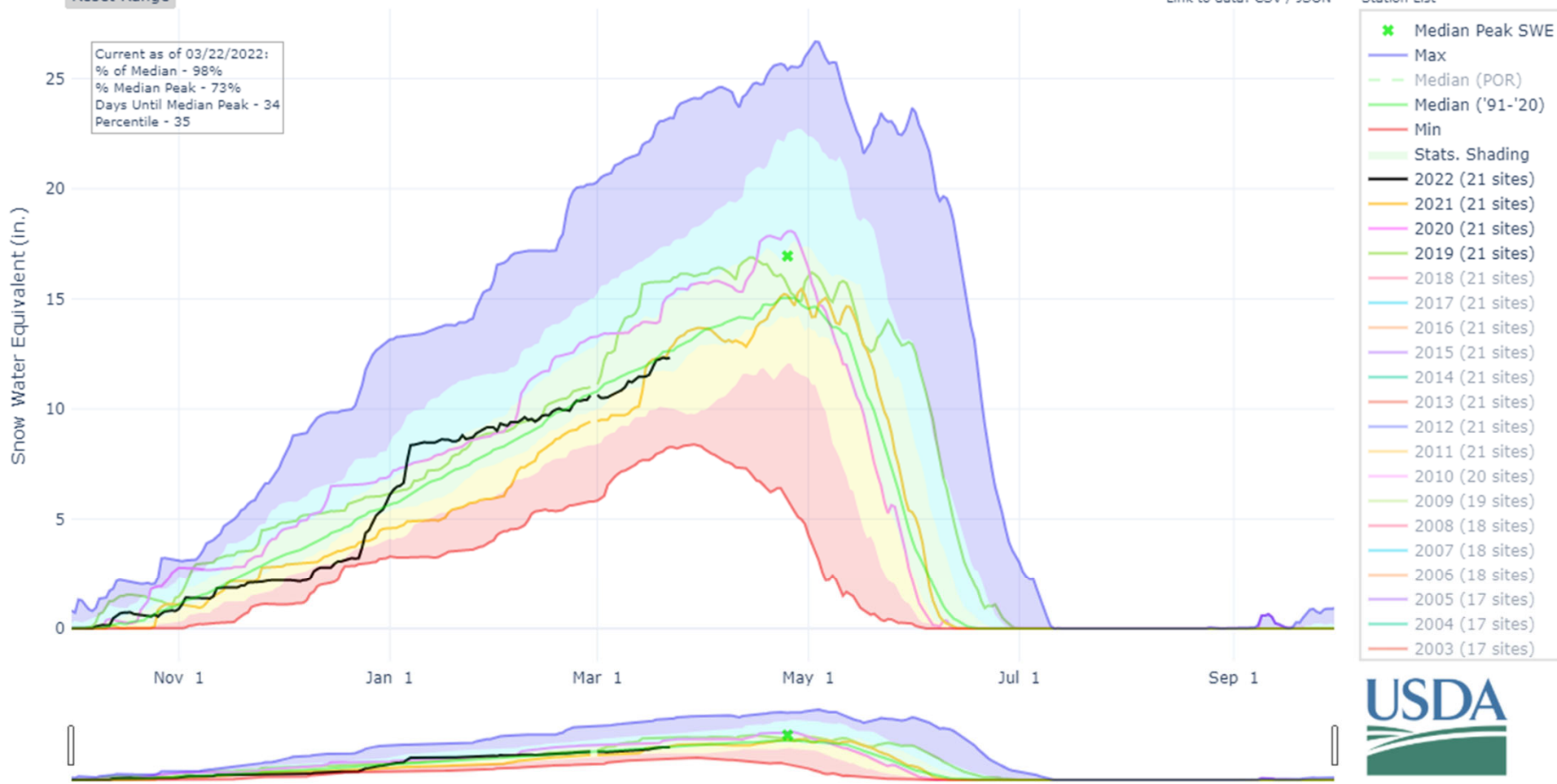
# Colorado Snow Surveys

## SNOW WATER EQUIVALENT IN SOUTH PLATTE

Reset Range

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

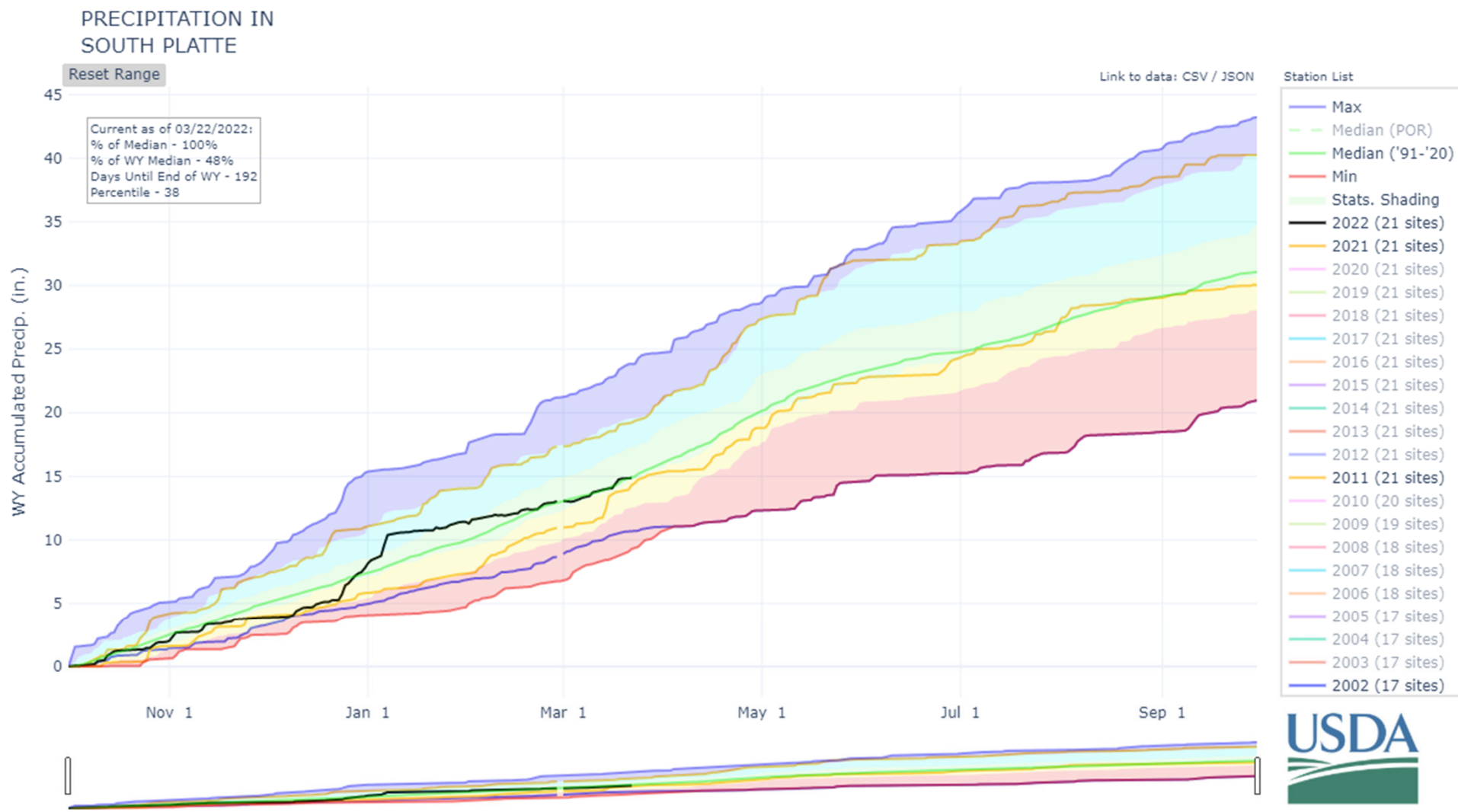
Station List





United States Department of Agriculture

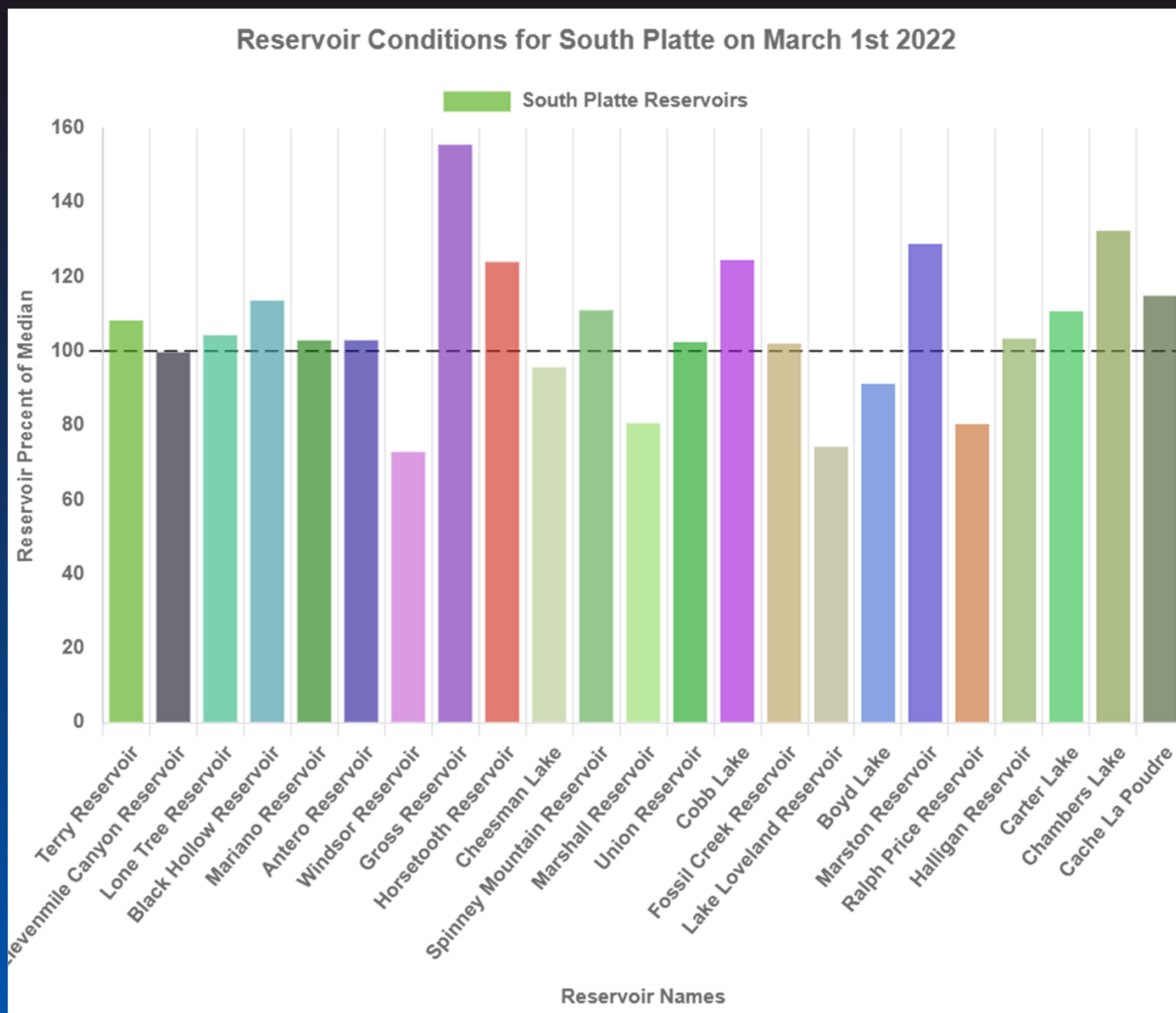
# Colorado Snow Surveys





United States Department of Agriculture

# Colorado Snow Surveys



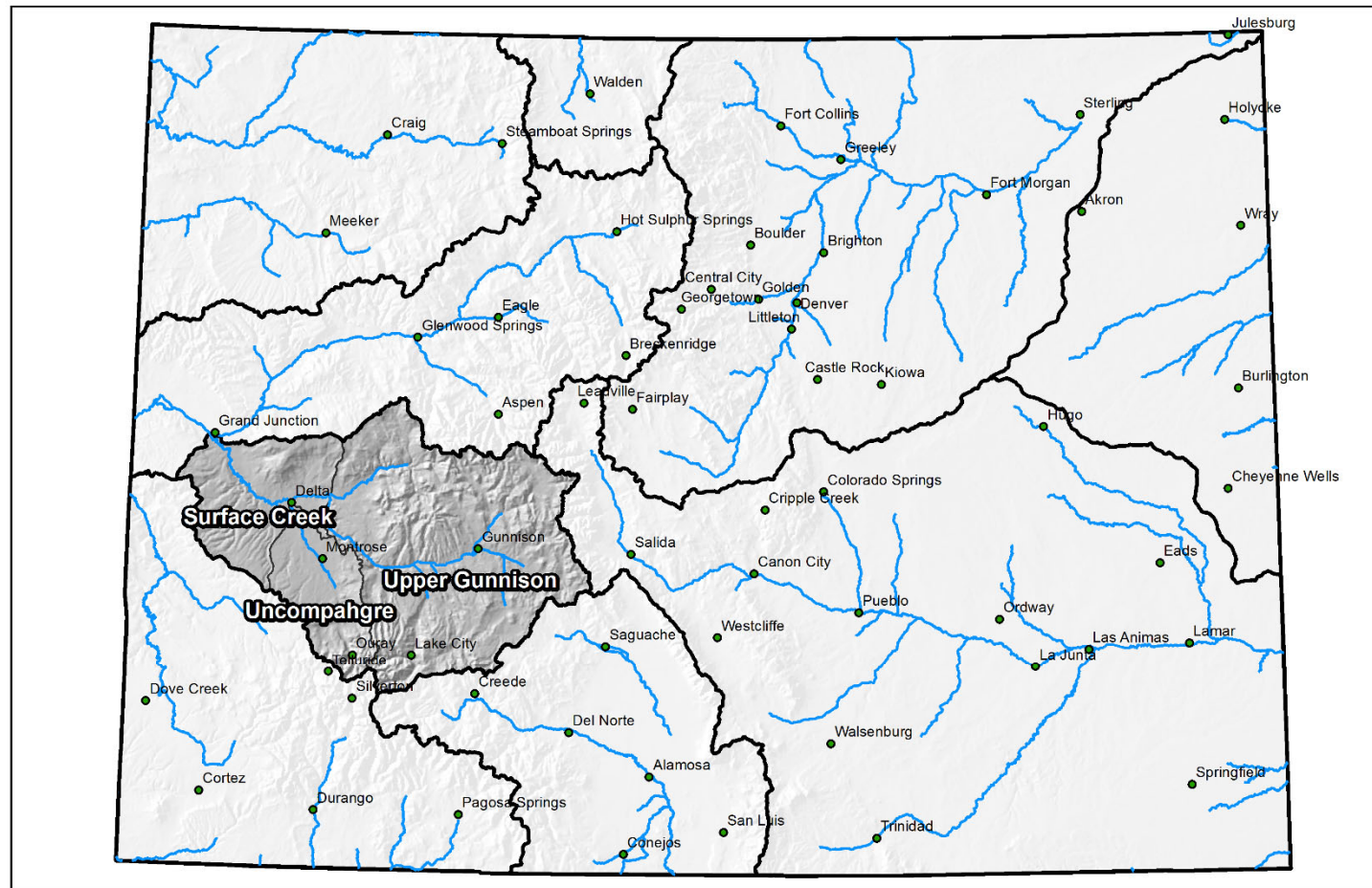


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# Colorado Snow Surveys

## Major Basin Summary

### Gunnison River Basin



0 25 50 100 150 200 Miles



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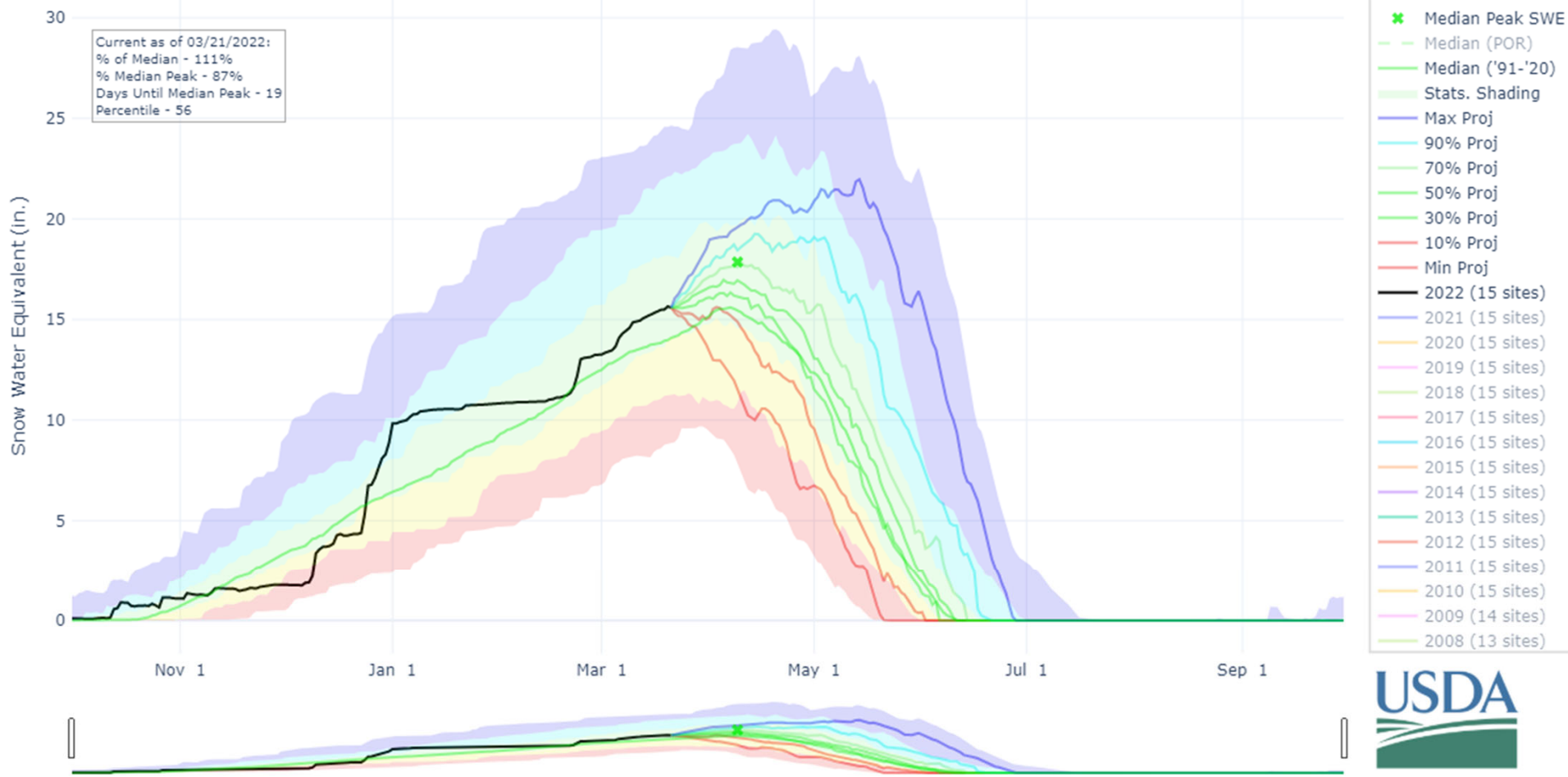
# Colorado Snow Surveys

## SNOW WATER EQUIVALENT PROJECTIONS IN GUNNISON

Reset Range

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

Station List





United States Department of Agriculture

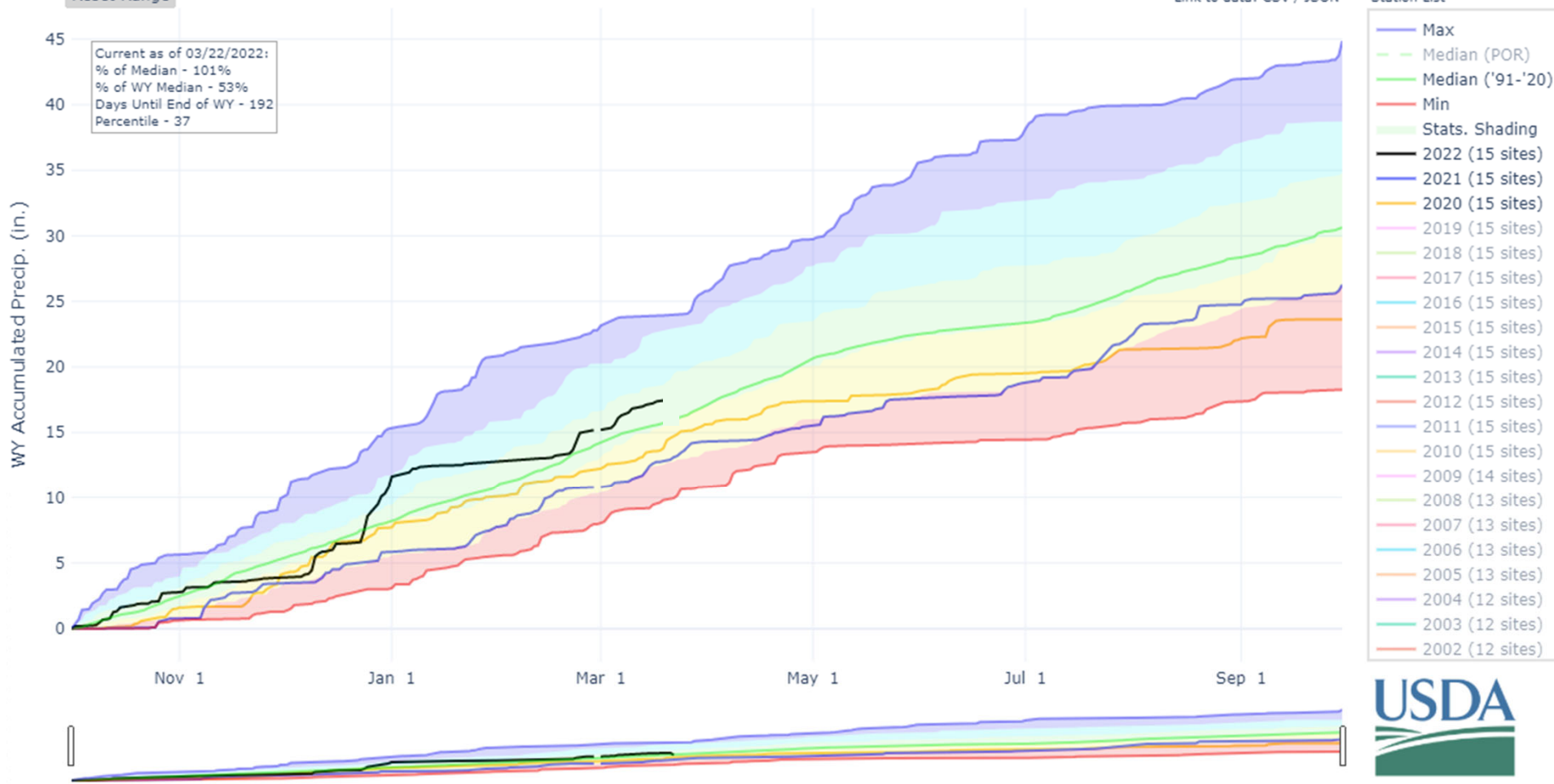
# Colorado Snow Surveys

## PRECIPITATION IN GUNNISON

Reset Range

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

Station List

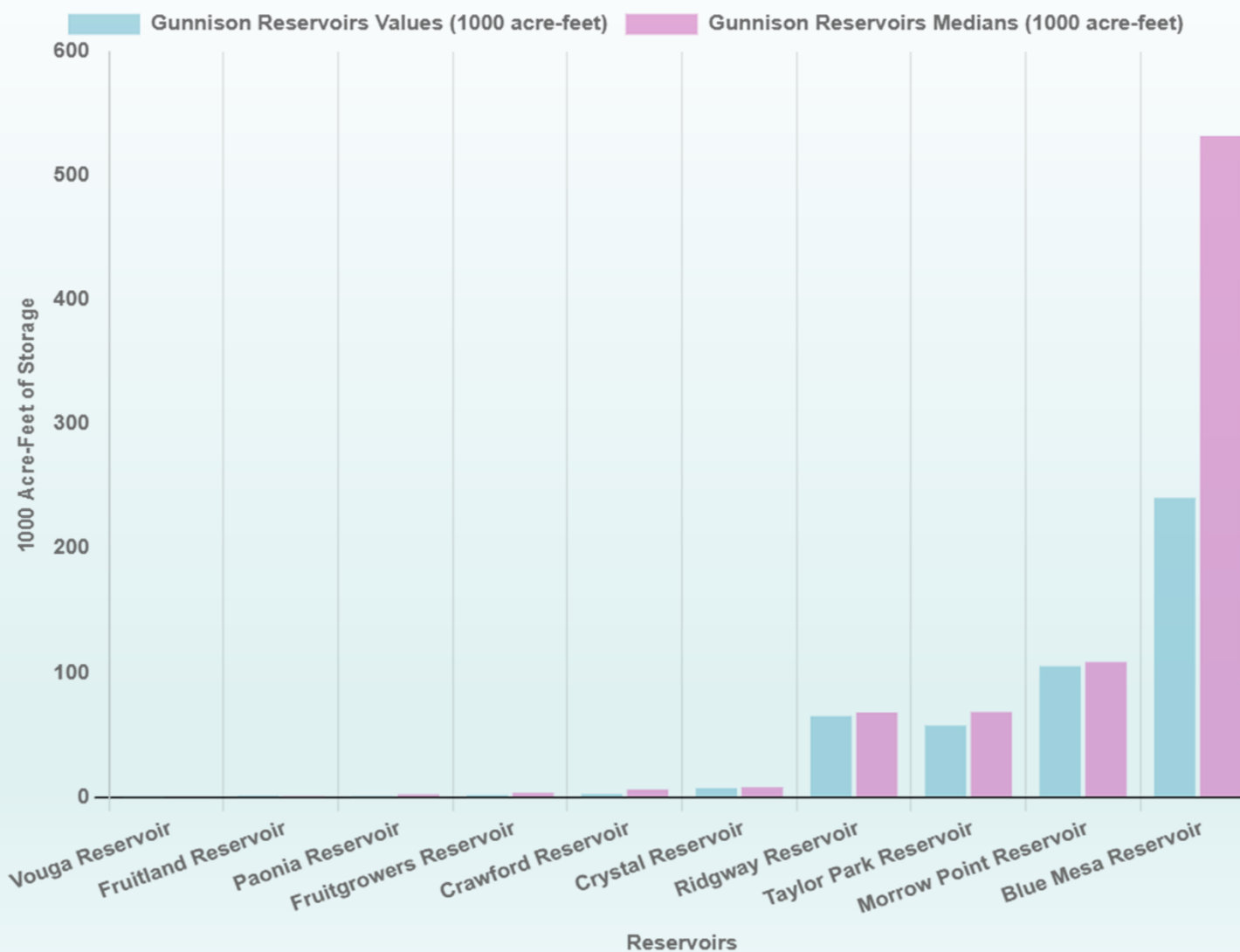




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# Colorado Snow Surveys

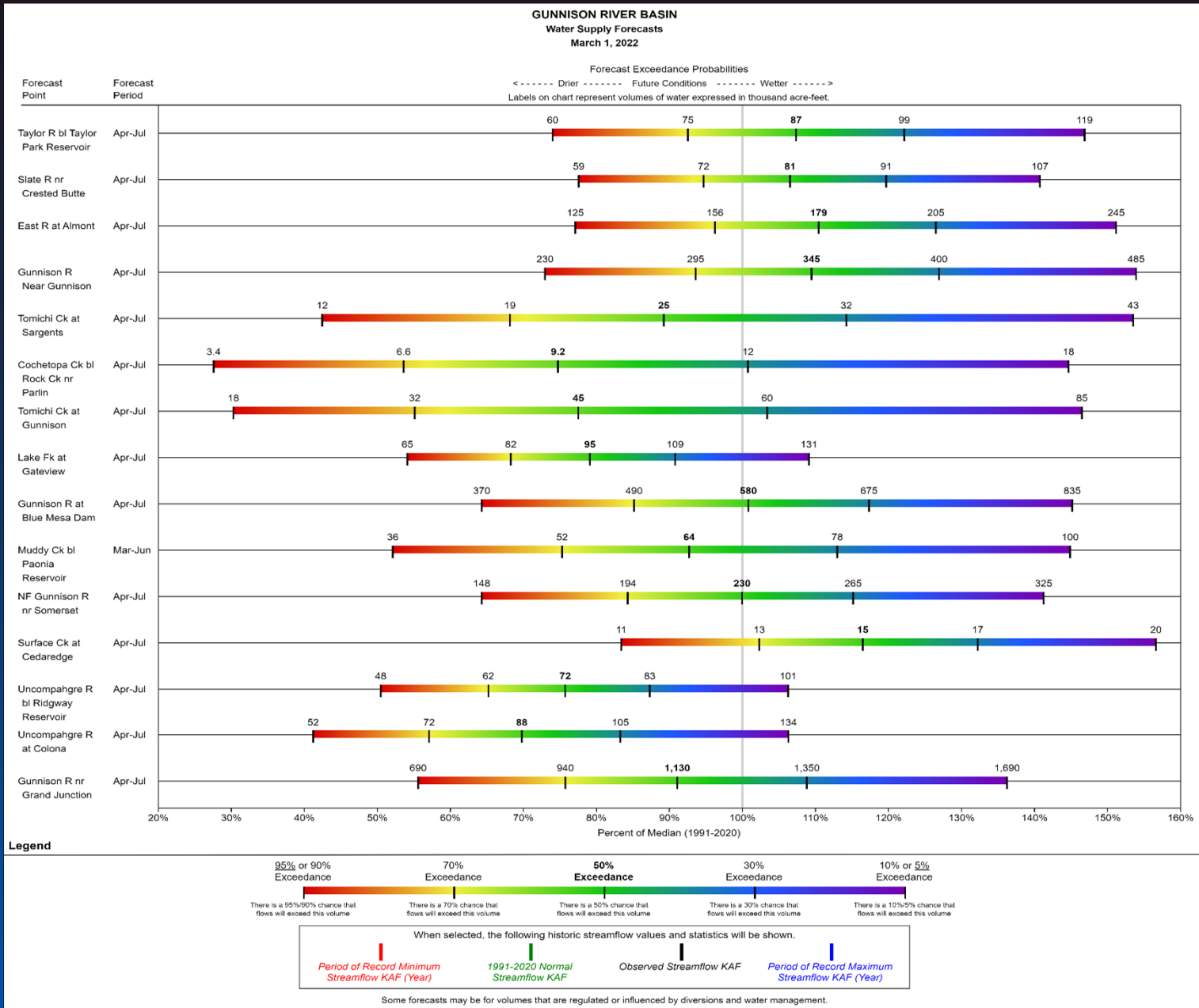
Gunnison Reservoir Storage Summary for March 1st 2022





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# Colorado Snow Surveys





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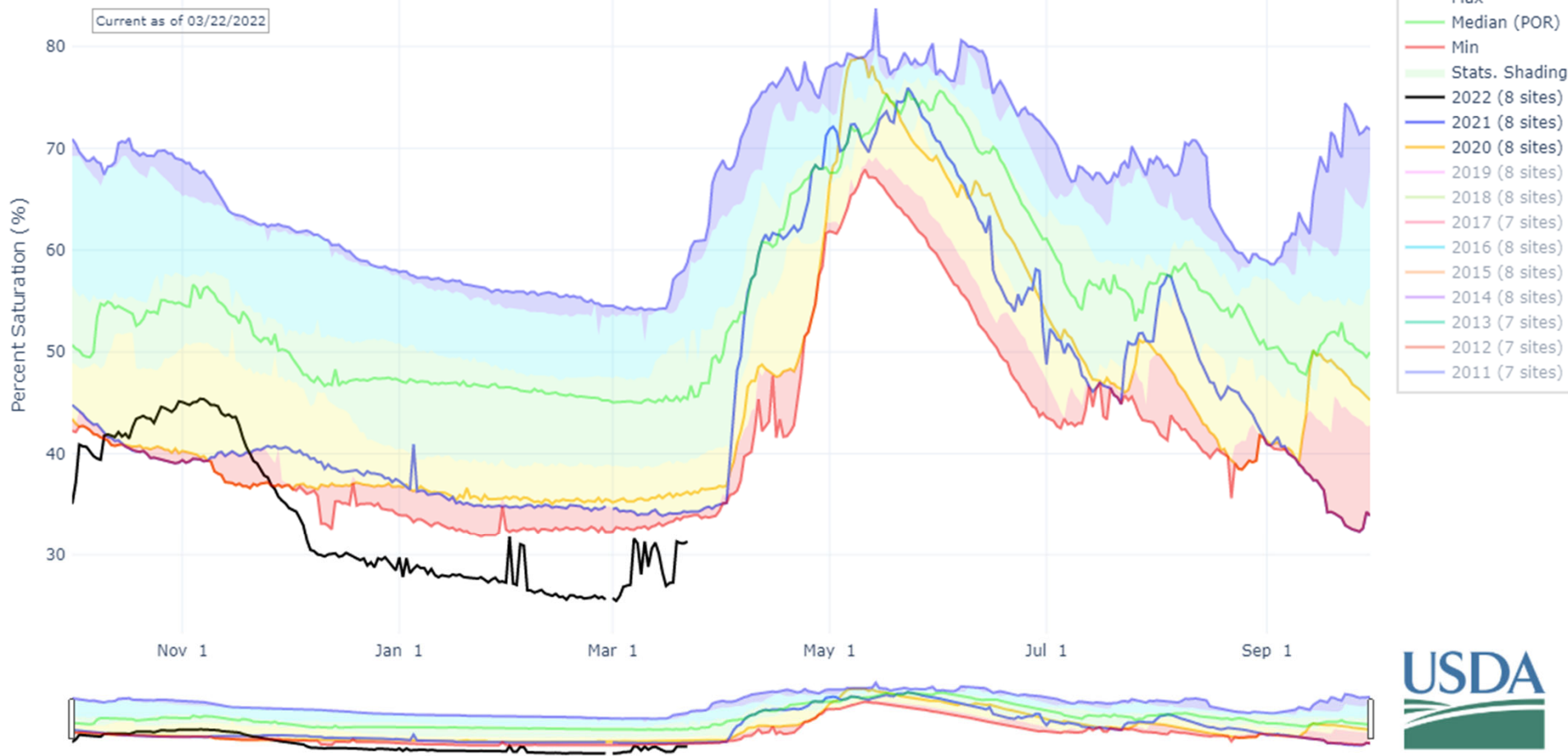
# Colorado Snow Surveys

## DEPTH AVERAGED SOIL SATURATION IN GUNNISON

Reset Range

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

Station List



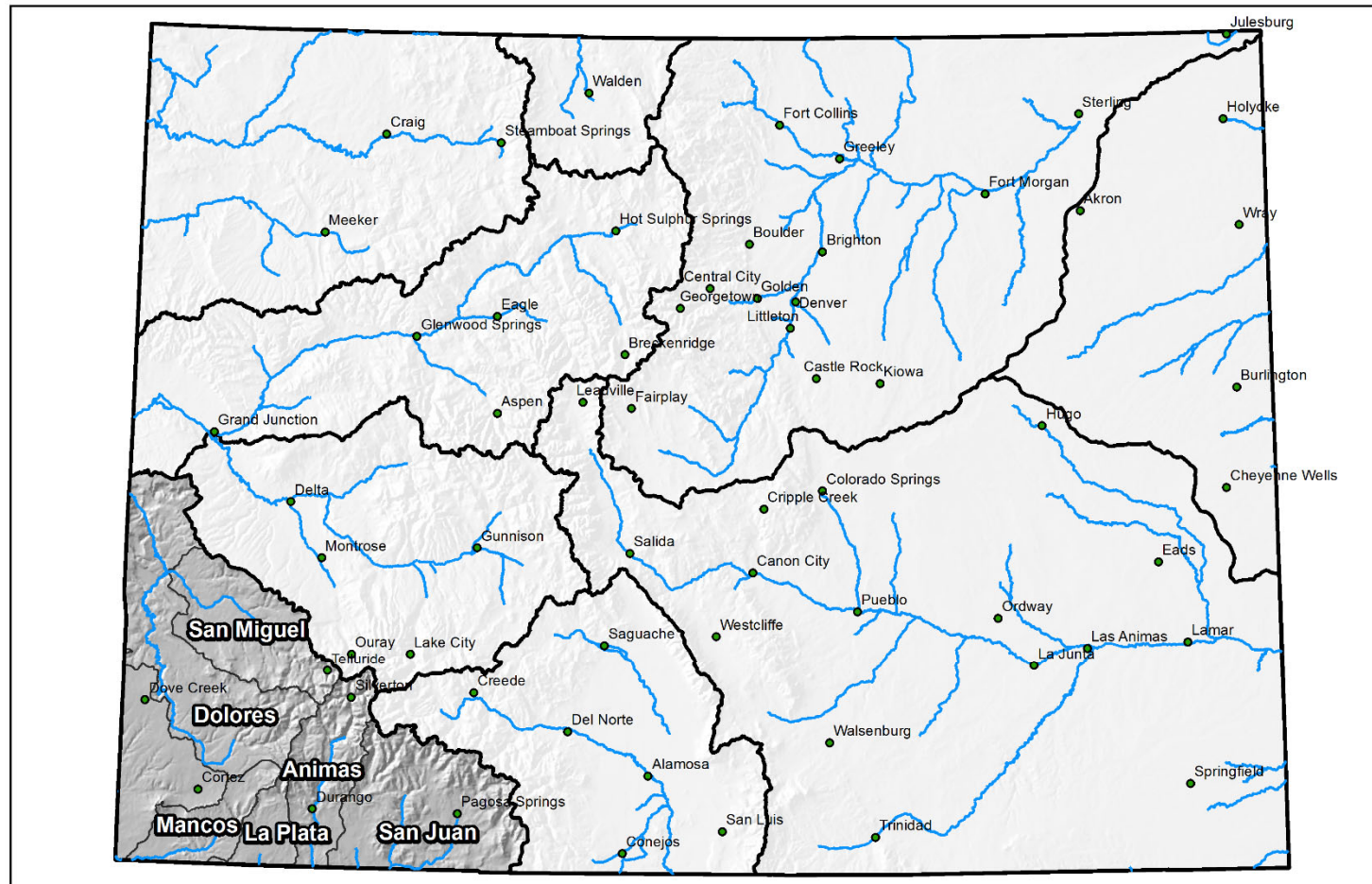


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# Colorado Snow Surveys

## Major Basin Summary

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



0 25 50 100 150 200 Miles



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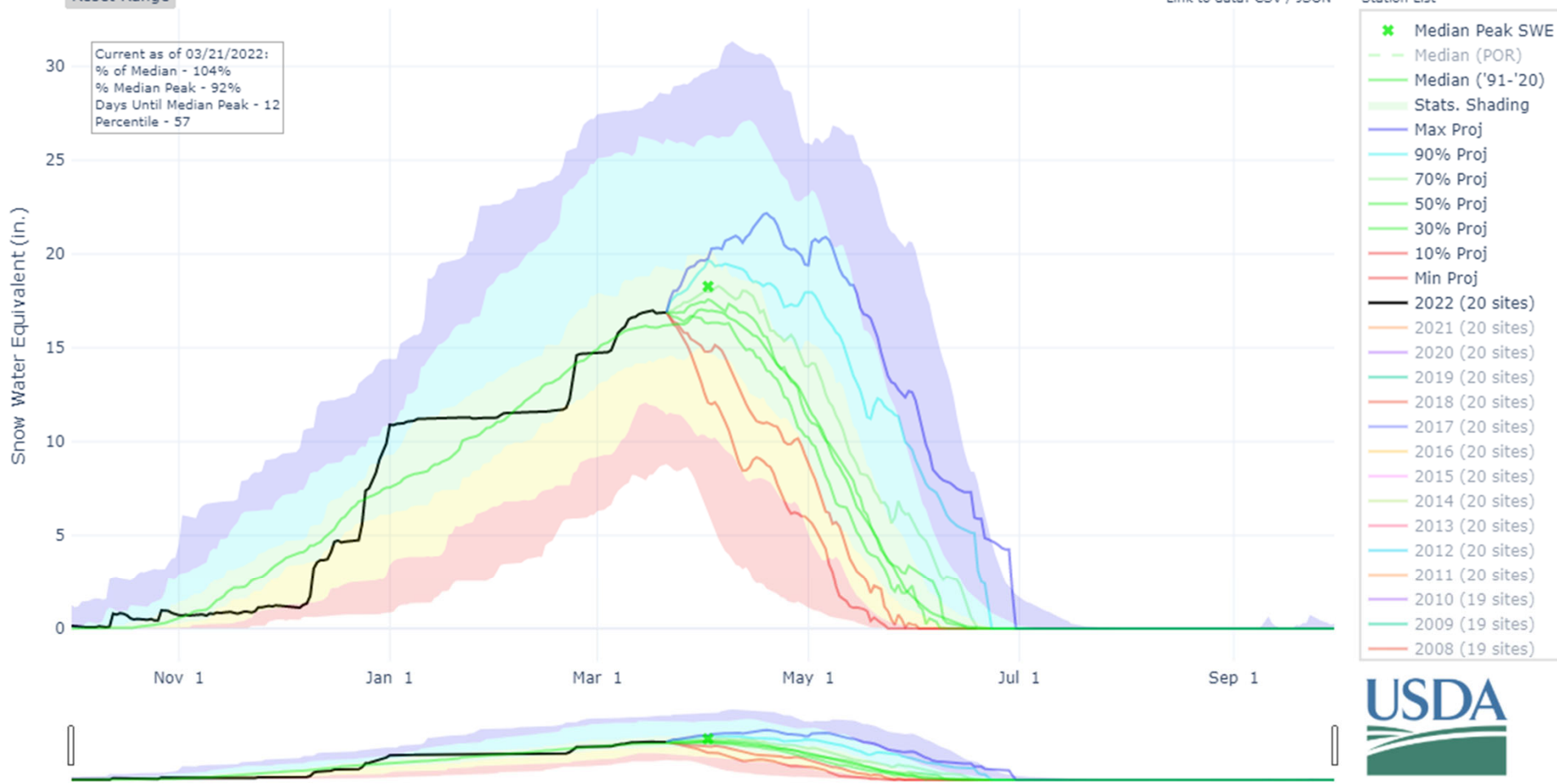
# Colorado Snow Surveys

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

Reset Range

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

Station List





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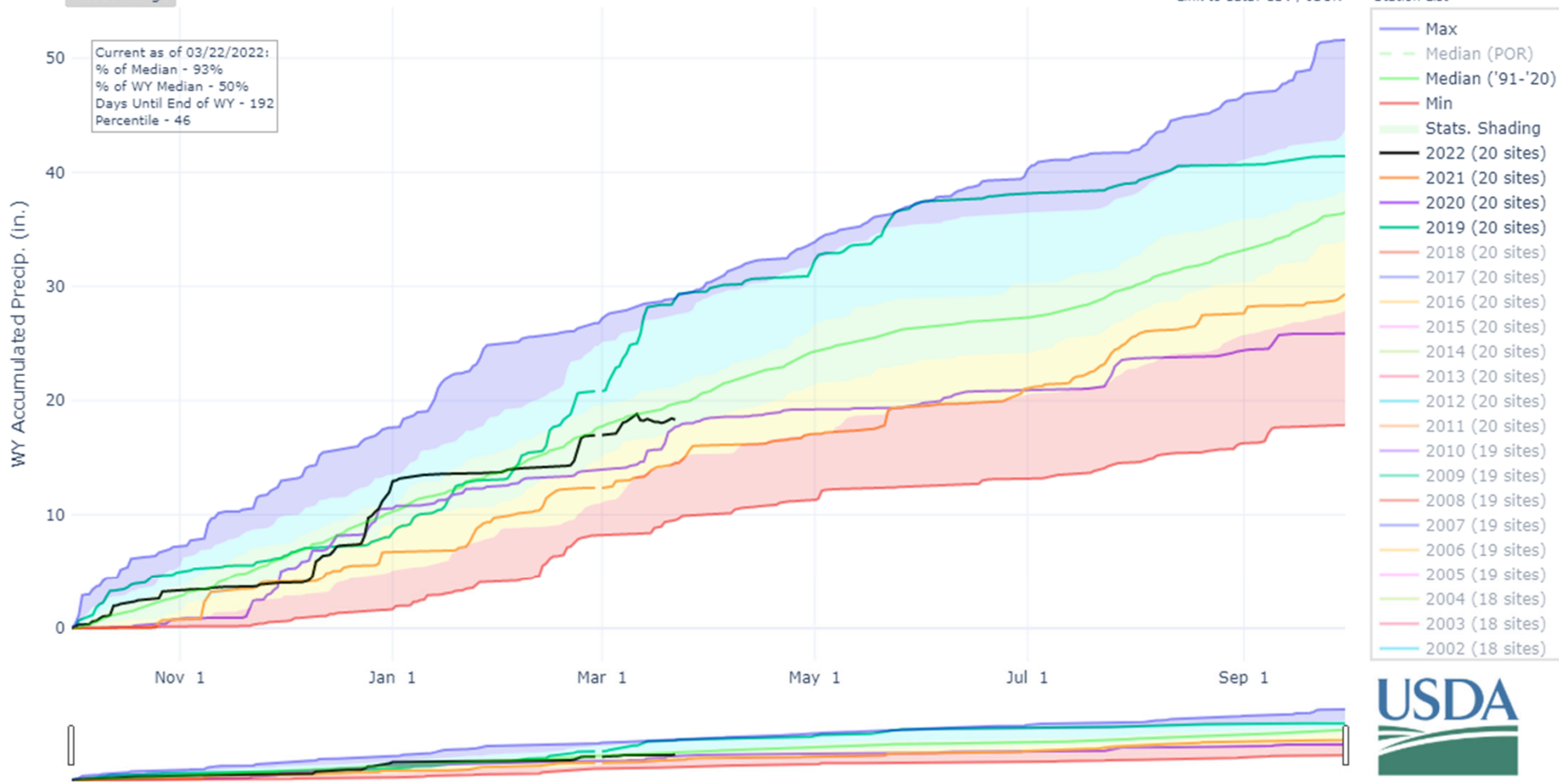
# Colorado Snow Surveys

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

Reset Range

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

Station List

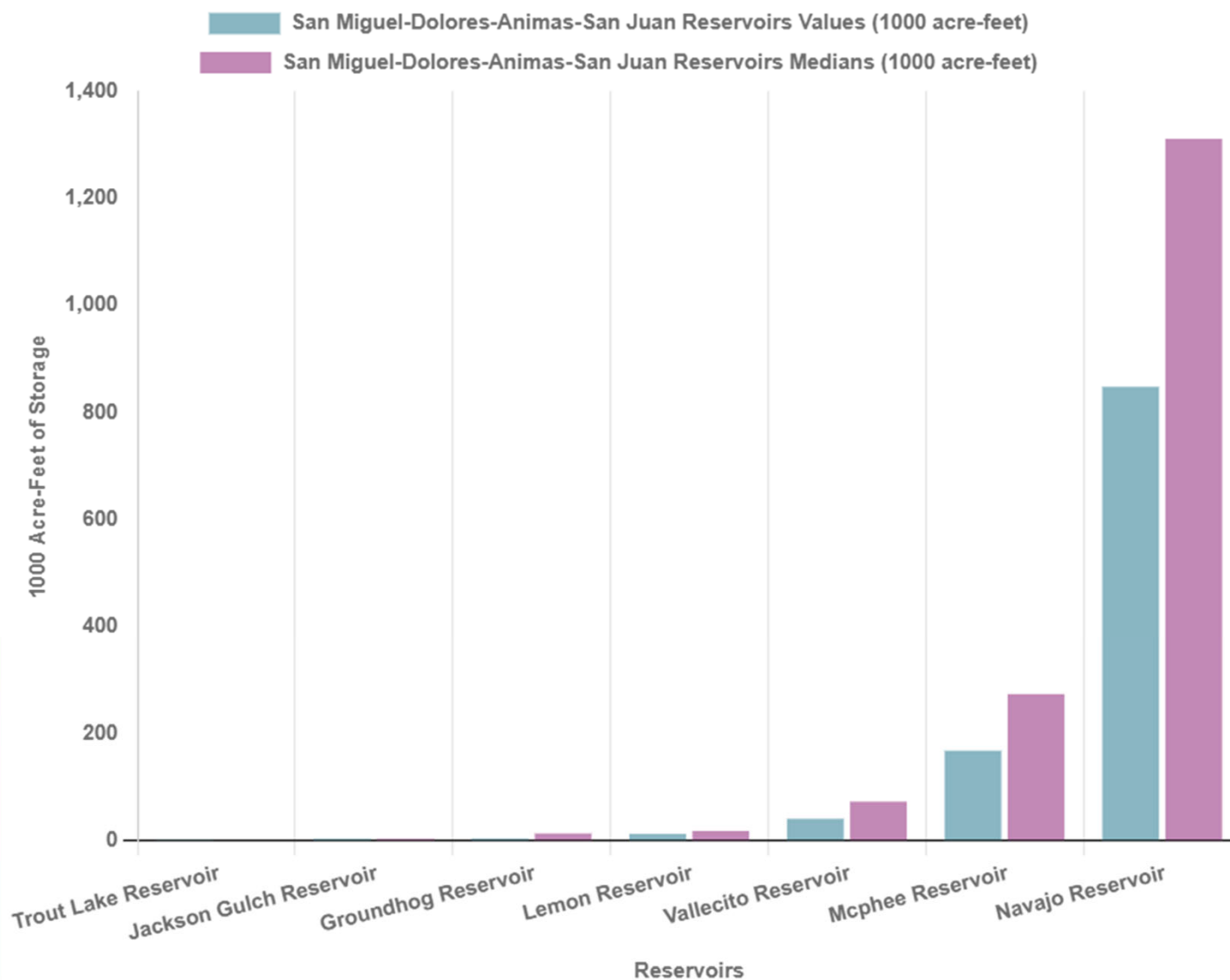




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# Colorado Snow Surveys

San Miguel-Dolores-Animas-San Juan Reservoir Storage Summary for March 1st 2022





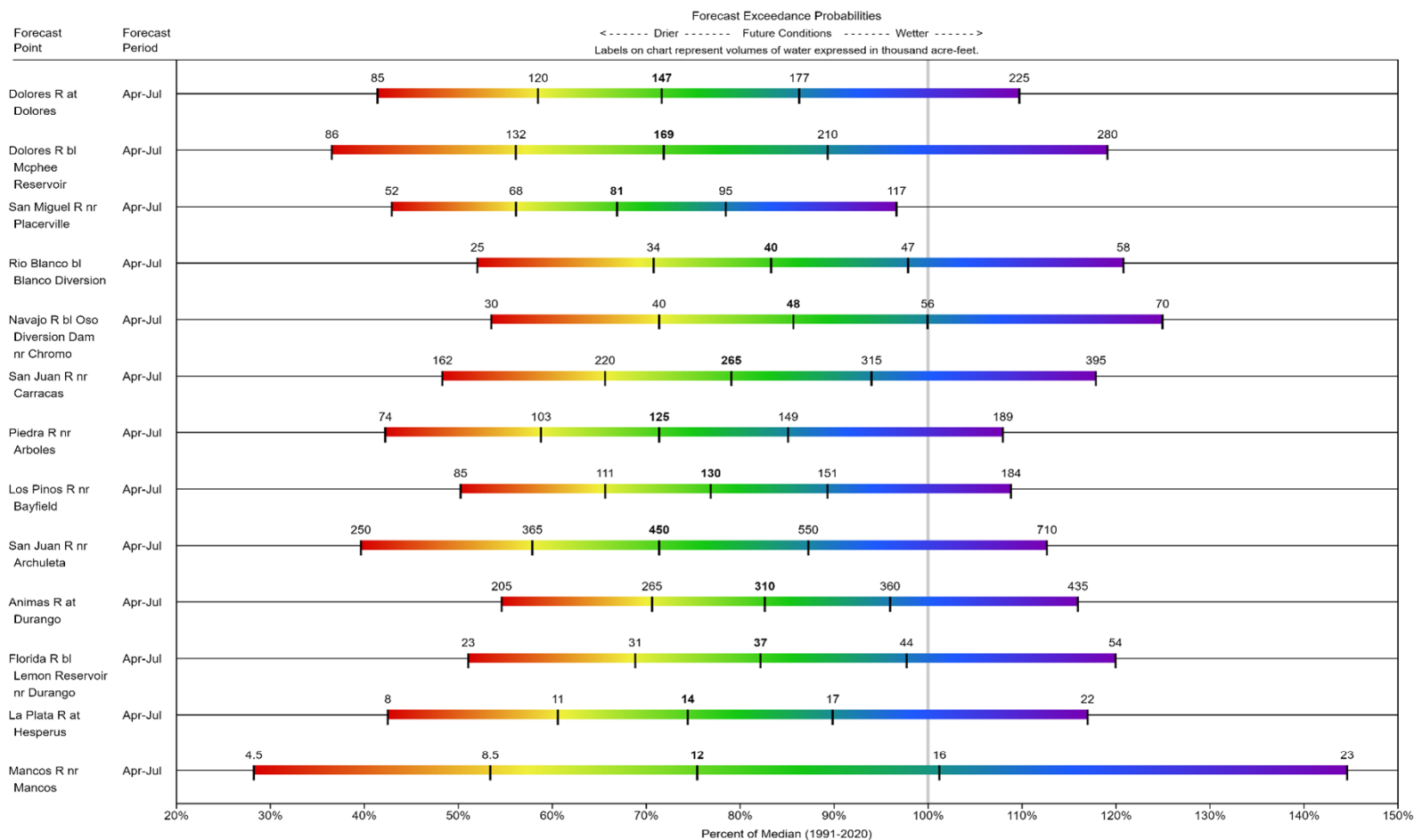
United States Department of Agriculture

# Colorado Snow Surveys

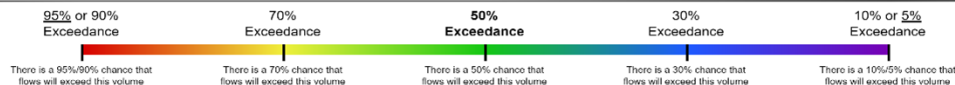
## SAN MIGUEL-DOLORES-ANIMAS-SAN JUAN RIVER BASINS

Water Supply Forecasts

March 1, 2022



### Legend



When selected, the following historic streamflow values and statistics will be shown.

Period of Record Minimum Streamflow KAF (Year)      1991-2020 Normal Streamflow KAF      Observed Streamflow KAF      Period of Record Maximum Streamflow KAF (Year)

Some forecasts may be for volumes that are regulated or influenced by diversions and water management.

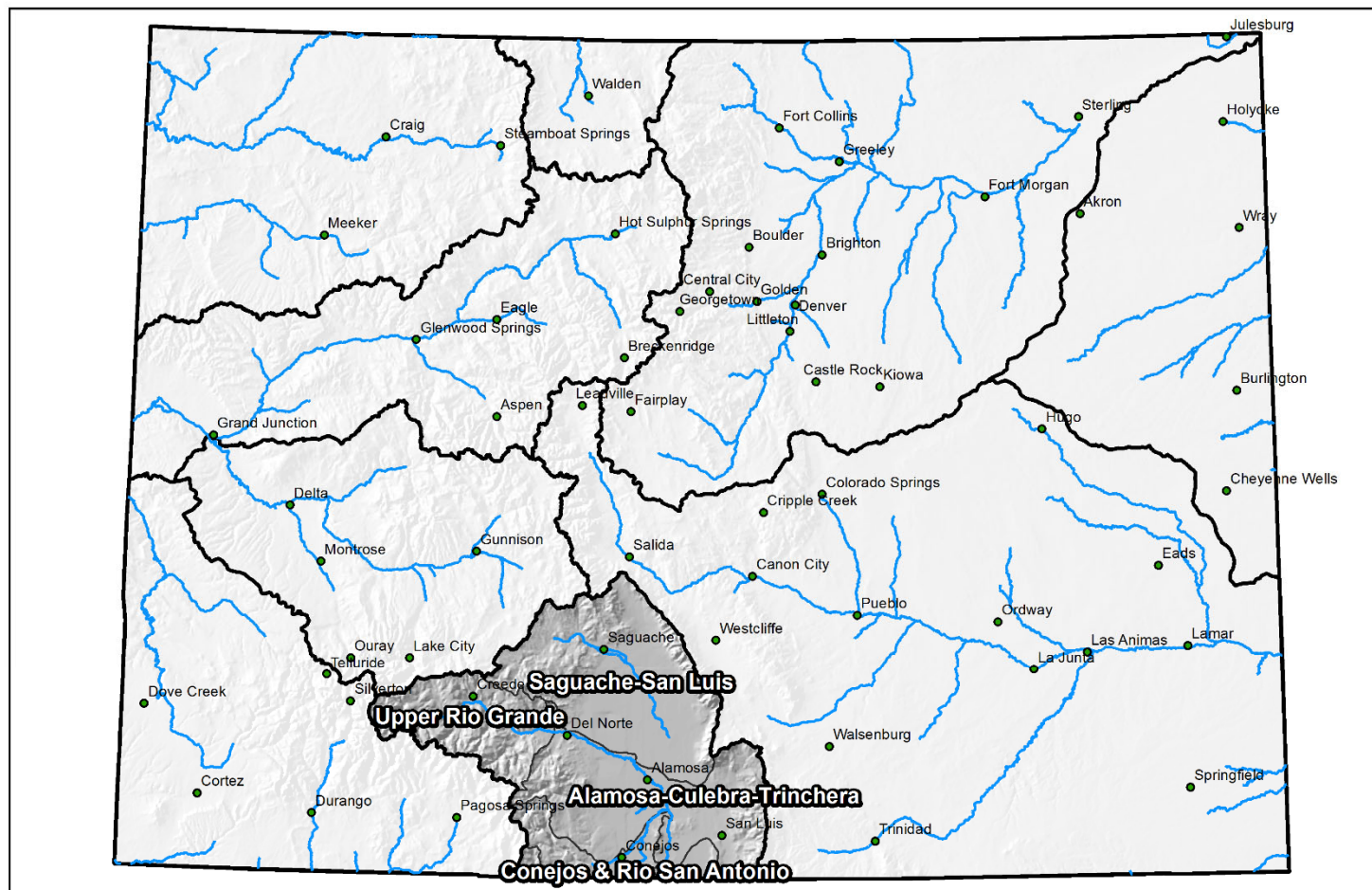


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# Colorado Snow Surveys

## Major Basin Summary

### Upper Rio Grande River Basin



0 25 50 100 150 200 Miles



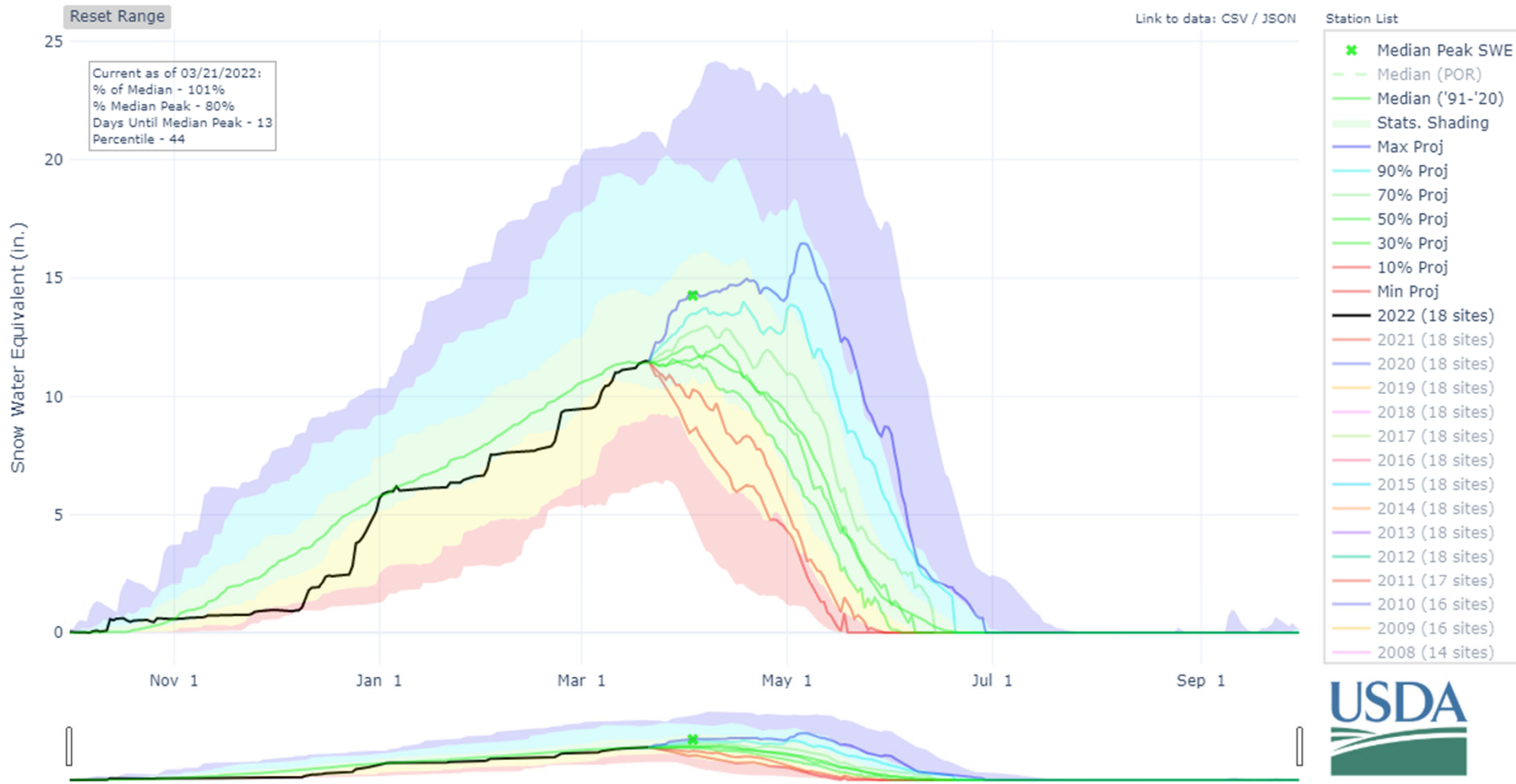
United States Department of Agriculture  
Natural Resources Conservation Service

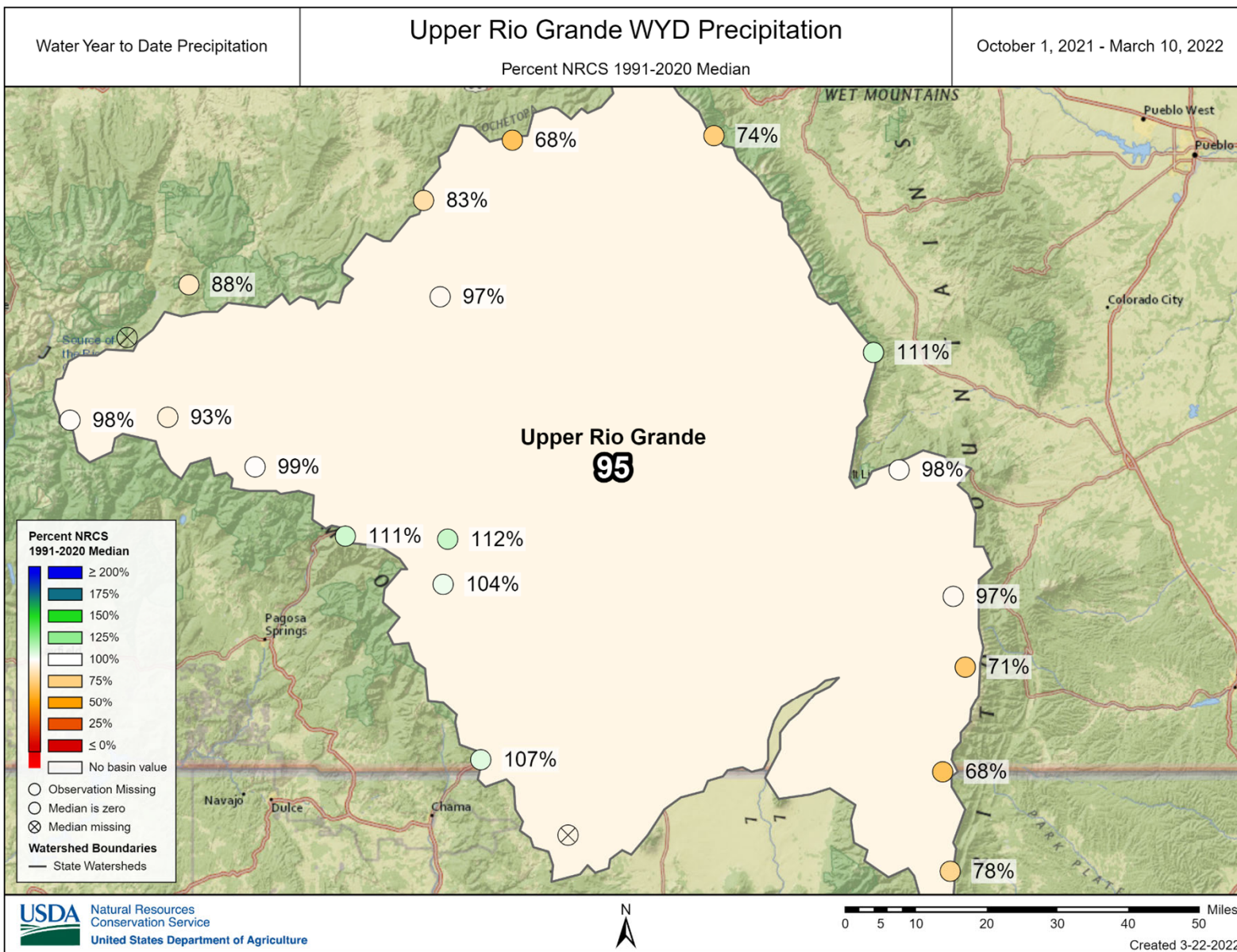


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# Colorado Snow Surveys

## SNOW WATER EQUIVALENT PROJECTIONS IN UPPER RIO GRANDE



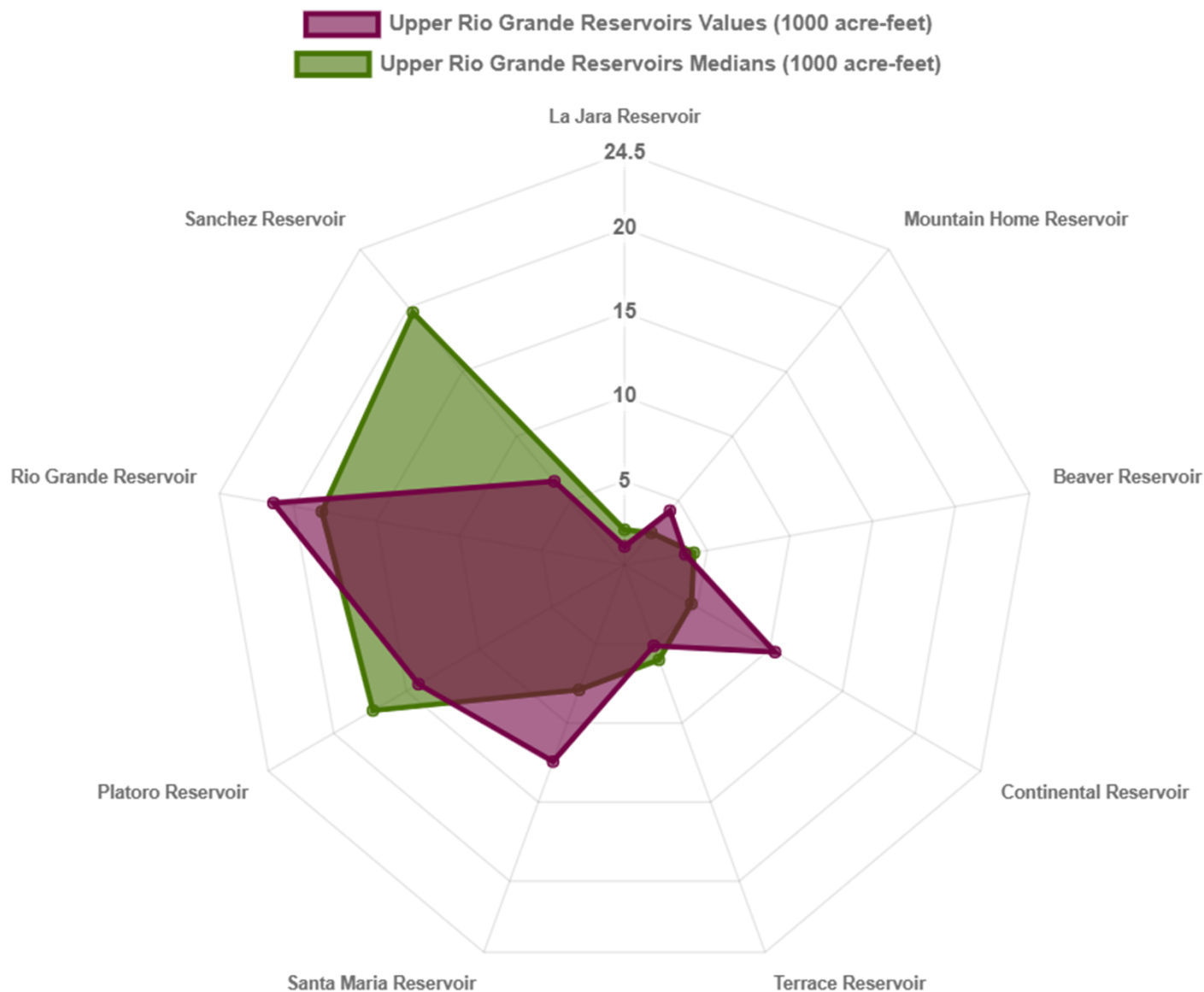




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# Colorado Snow Surveys

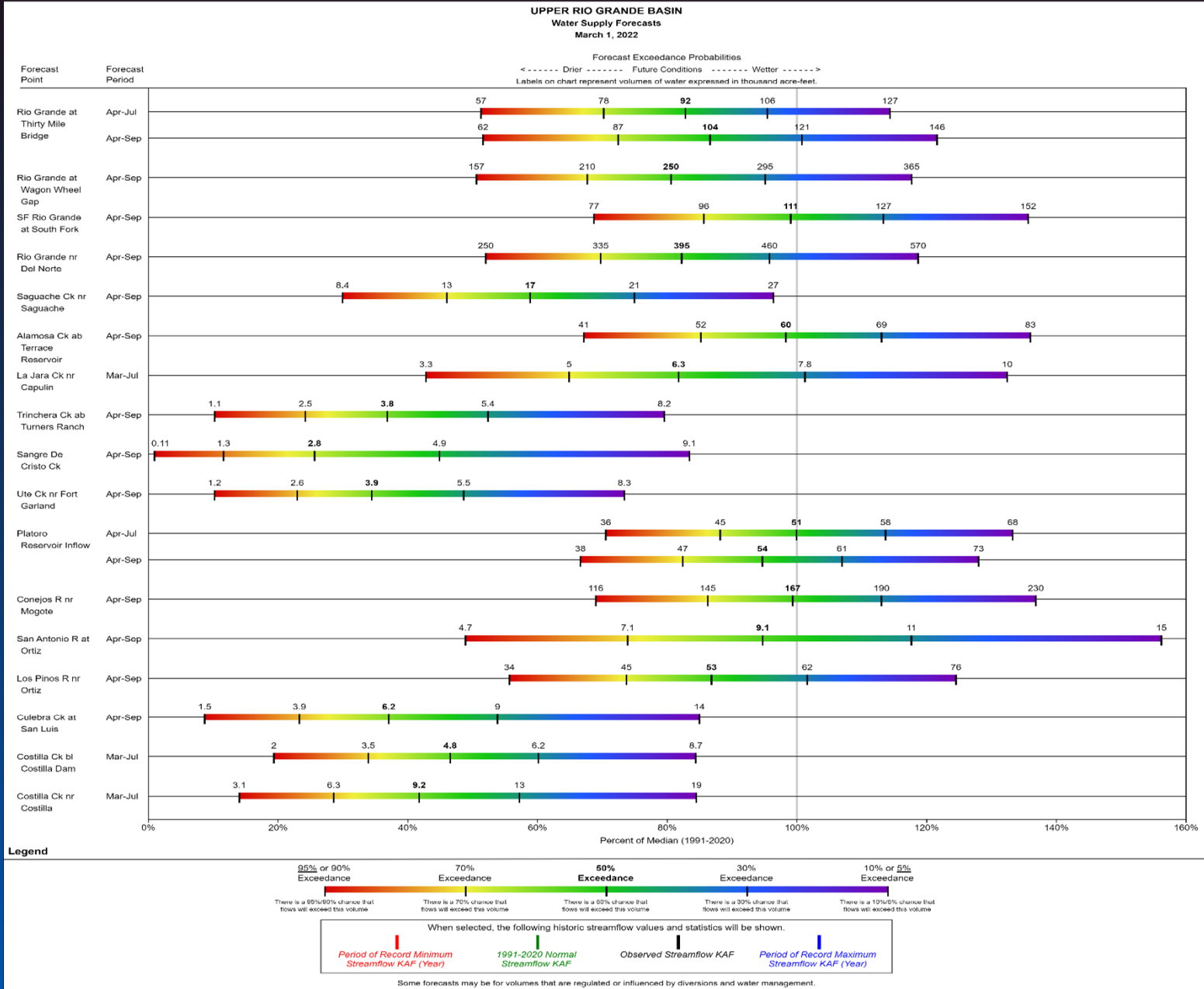
## Upper Rio Grande Reservoir Storage Summary for March 1st 2022



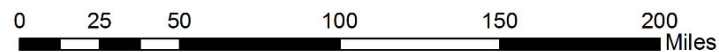


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# Colorado Snow Surveys



A detailed map of Colorado showing its geographical features. Major cities are marked with green dots and labeled, including Julesburg, Holyoke, Wray, Burlington, Cheyenne Wells, Eads, Lamar, Springfield, Trinidad, San Luis, Alamosa, Conejos, Pagosa Springs, Durango, Cortez, Dove Creek, Silverton, Telluride, Lake City, Ouray, Montrose, Delta, Grand Junction, Aspen, Leadville, Fairplay, Breckenridge, Glenwood Springs, Eagle, Meeker, Craig, Steamboat Springs, Walden, Hot Sulphur Springs, Boulder, Brighton, Central City, Georgetown, Golden, Littleton, Denver, Castle Rock, Kiowa, Hugo, Colorado Springs, Cripple Creek, Canon City, Pueblo, Westcliffe, Saguache, Salida, Gunnison, and Del Norte. The map highlights four mountain ranges in grey: Upper Arkansas, Cucharas & Huerfano, Apishapa, and Purgatoire. A network of blue lines represents the state's river system, and black lines delineate county boundaries.





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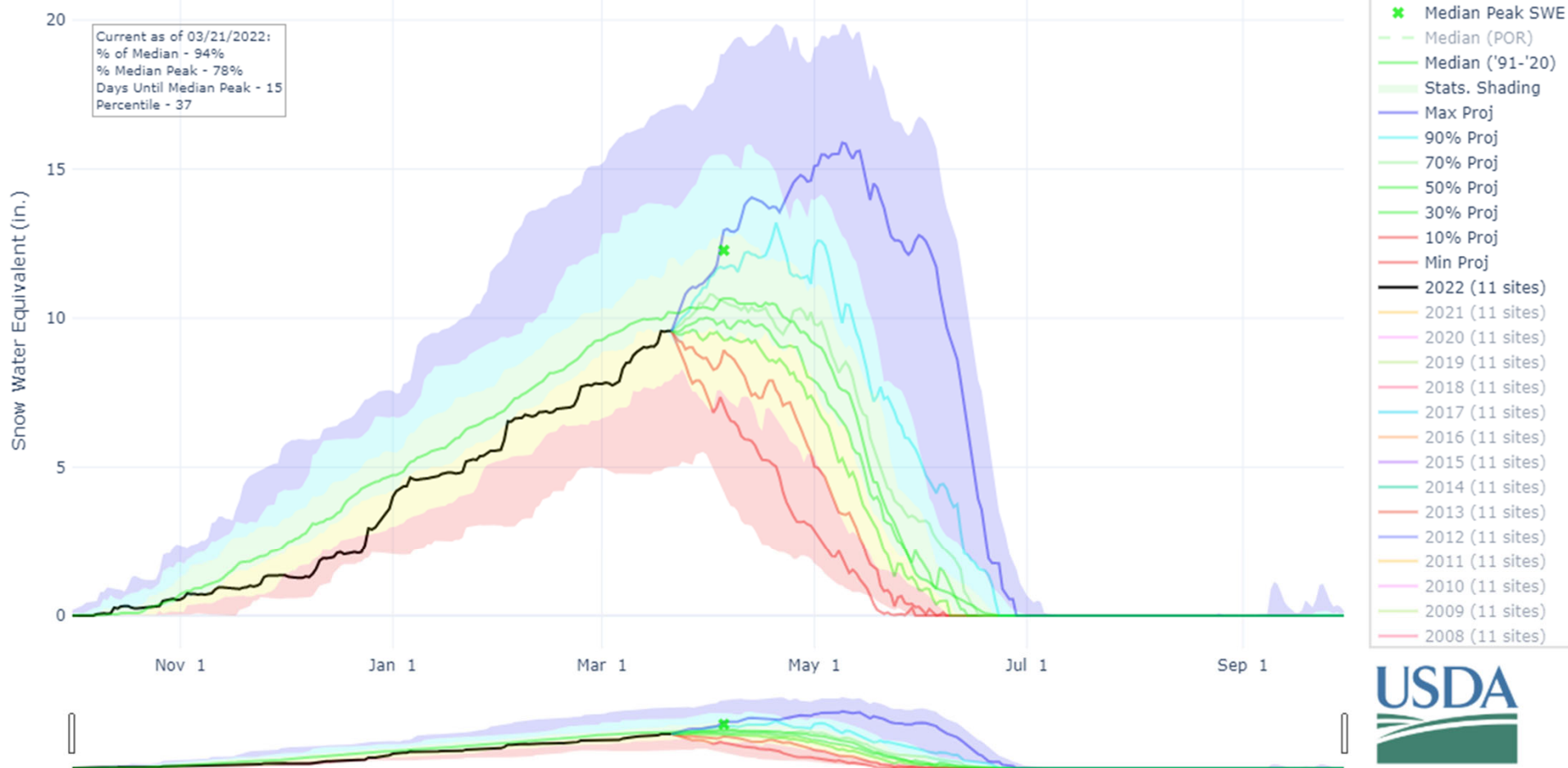
# Colorado Snow Surveys

## SNOW WATER EQUIVALENT PROJECTIONS IN ARKANSAS

Reset Range

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

Station List





United States Department of Agriculture

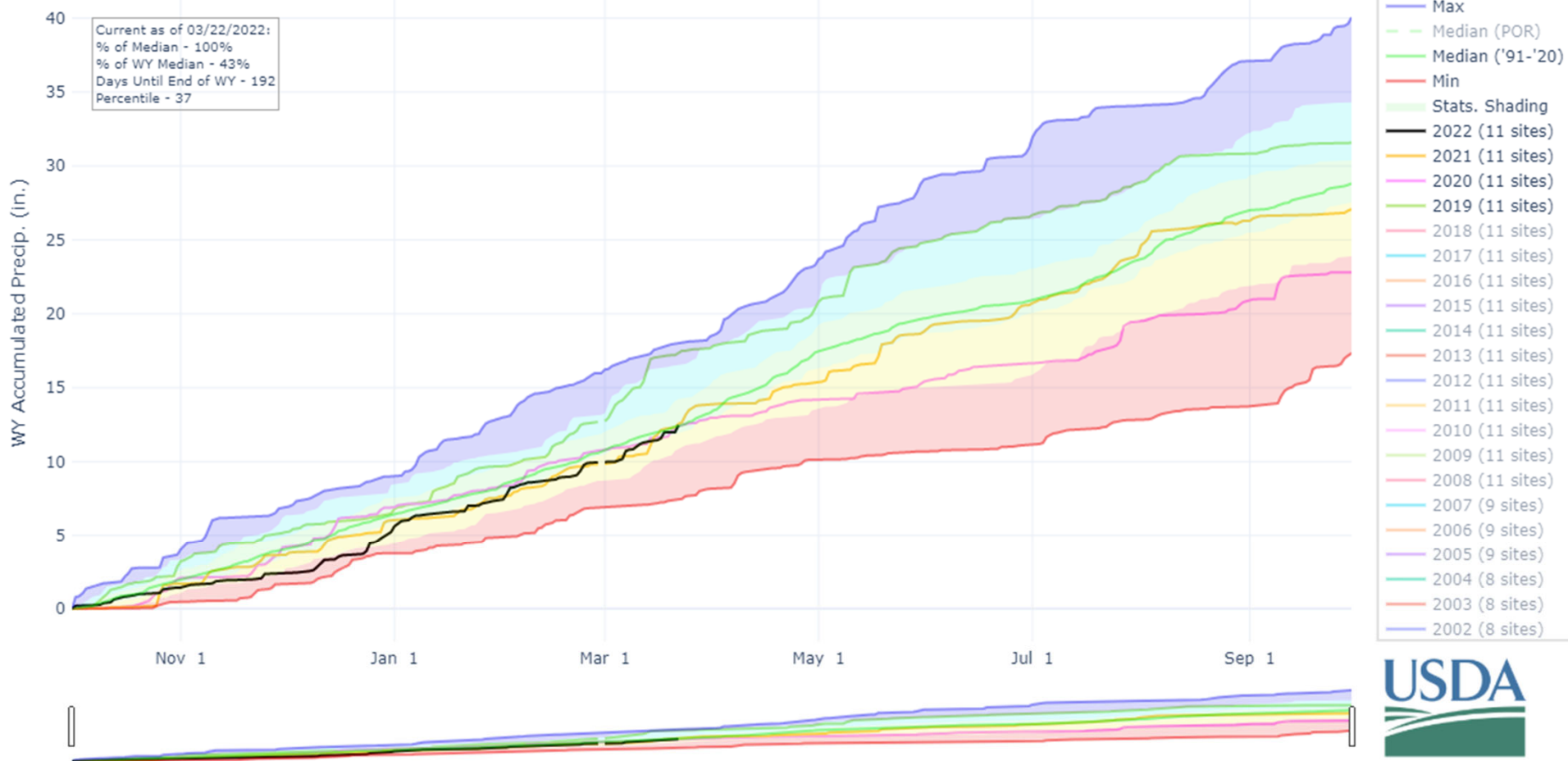
# Colorado Snow Surveys

## PRECIPITATION IN ARKANSAS

Reset Range

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

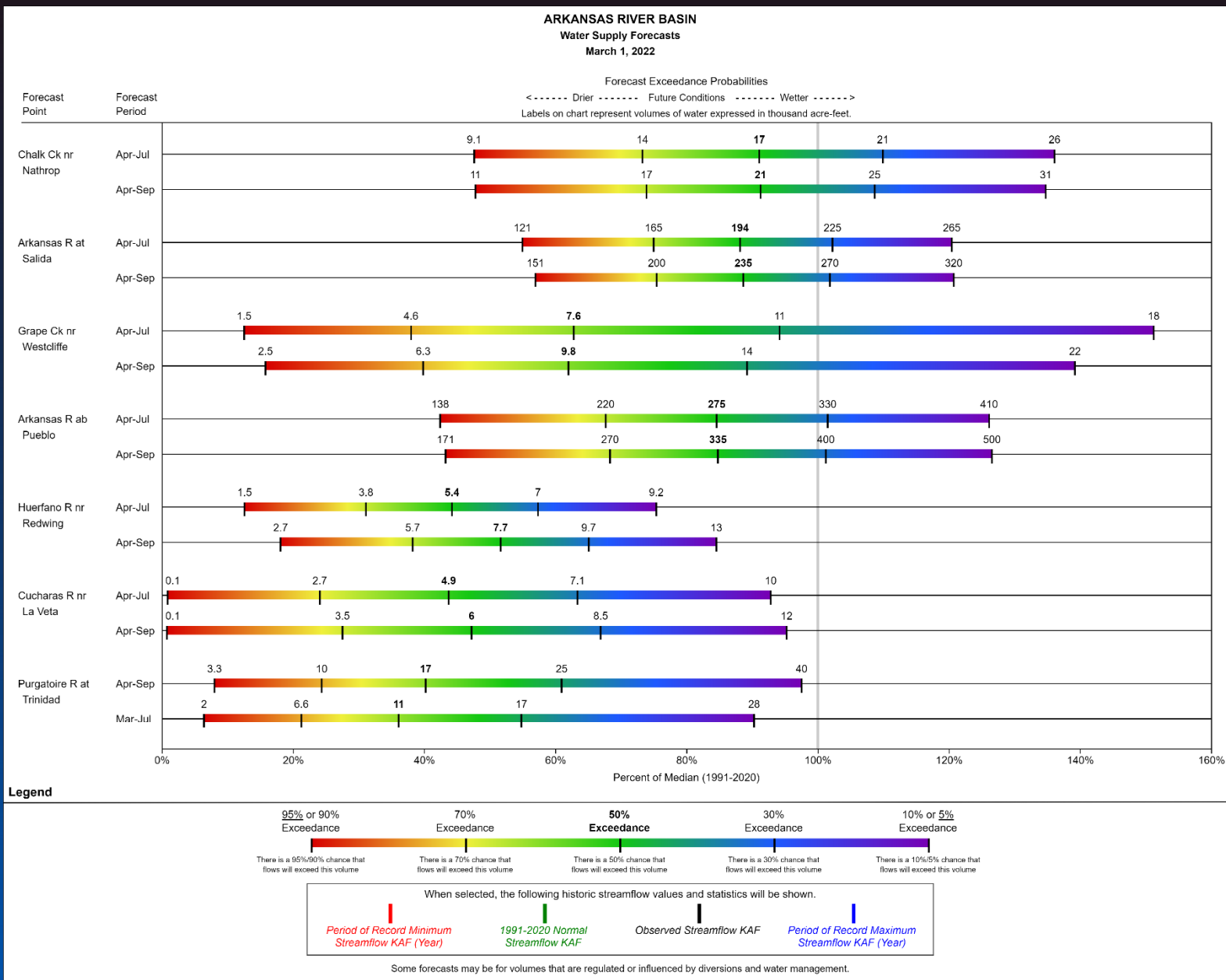
Station List





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# Colorado Snow Surveys





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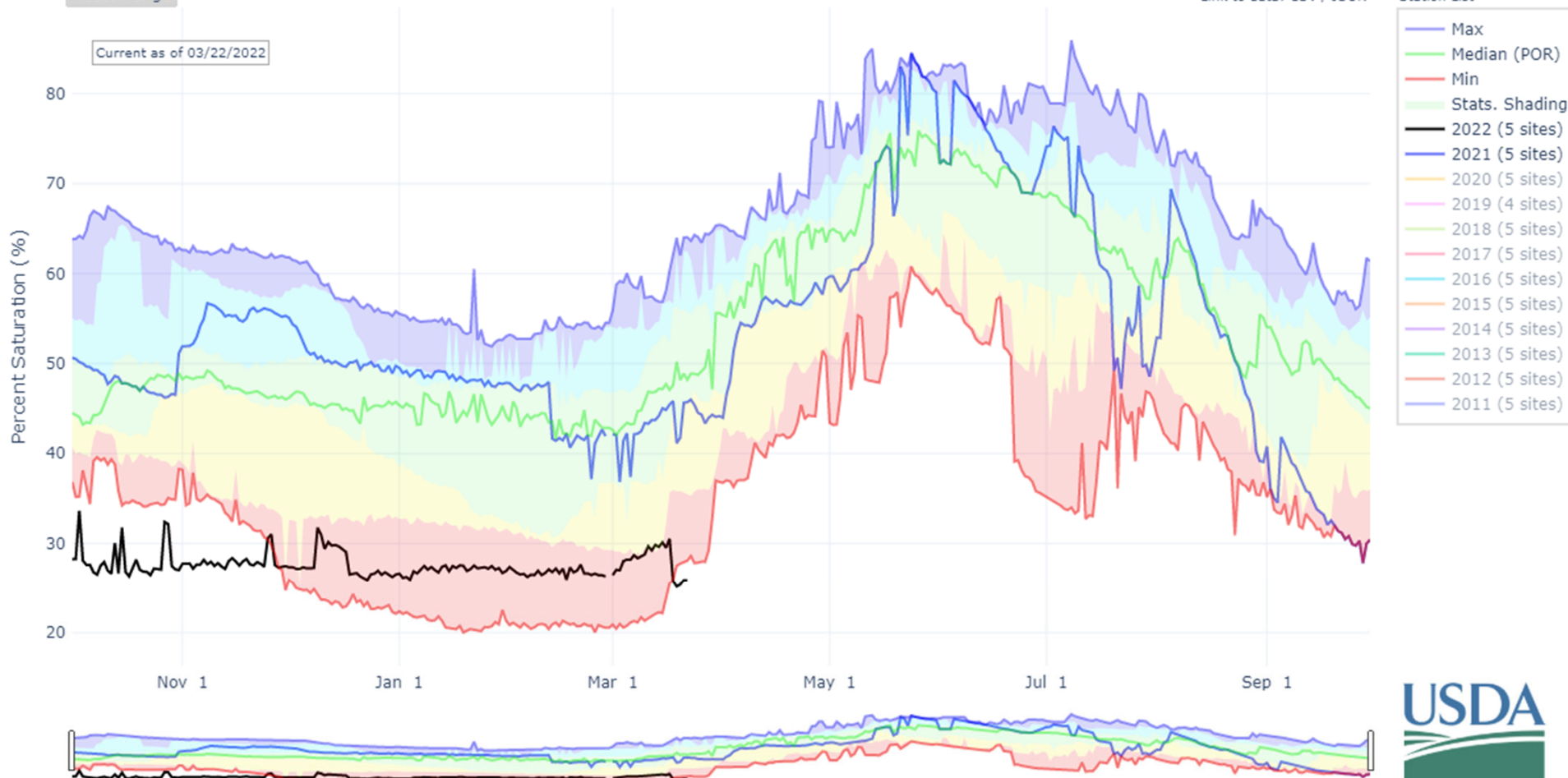
# Colorado Snow Surveys

## DEPTH AVERAGED SOIL SATURATION IN ARKANSAS

Reset Range

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

Station List





## Summary

- Much of the state has near normal snowpack and precipitation.
- Statewide reservoirs are at 75% of median
- Antecedent soil moisture conditions in several basins are still in a deficit.
- Multi-year drought conditions still persist in much of the state.
- Streamflow forecasts for much of the state are expected to be below normal for the spring and summer.
- Many streamflow forecasts remain fairly uncertain.



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Colorado Snow Surveys

# Water Availability Task Force Meeting

## January 18<sup>th</sup>, 2022

### NRCS Snow Survey and Water Supply Forecasting Program

Joel Atwood

Hydrologist

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United States Department of Agriculture

# Colorado Snow Surveys

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