



United States Department of Agriculture

Colorado Snow Surveys

# Water Conditions Monitoring Committee Meeting

April 23<sup>rd</sup>, 2024

## NRCS Snow Survey and Water Supply Forecasting Program

Brian Domonkos

Hydrologist

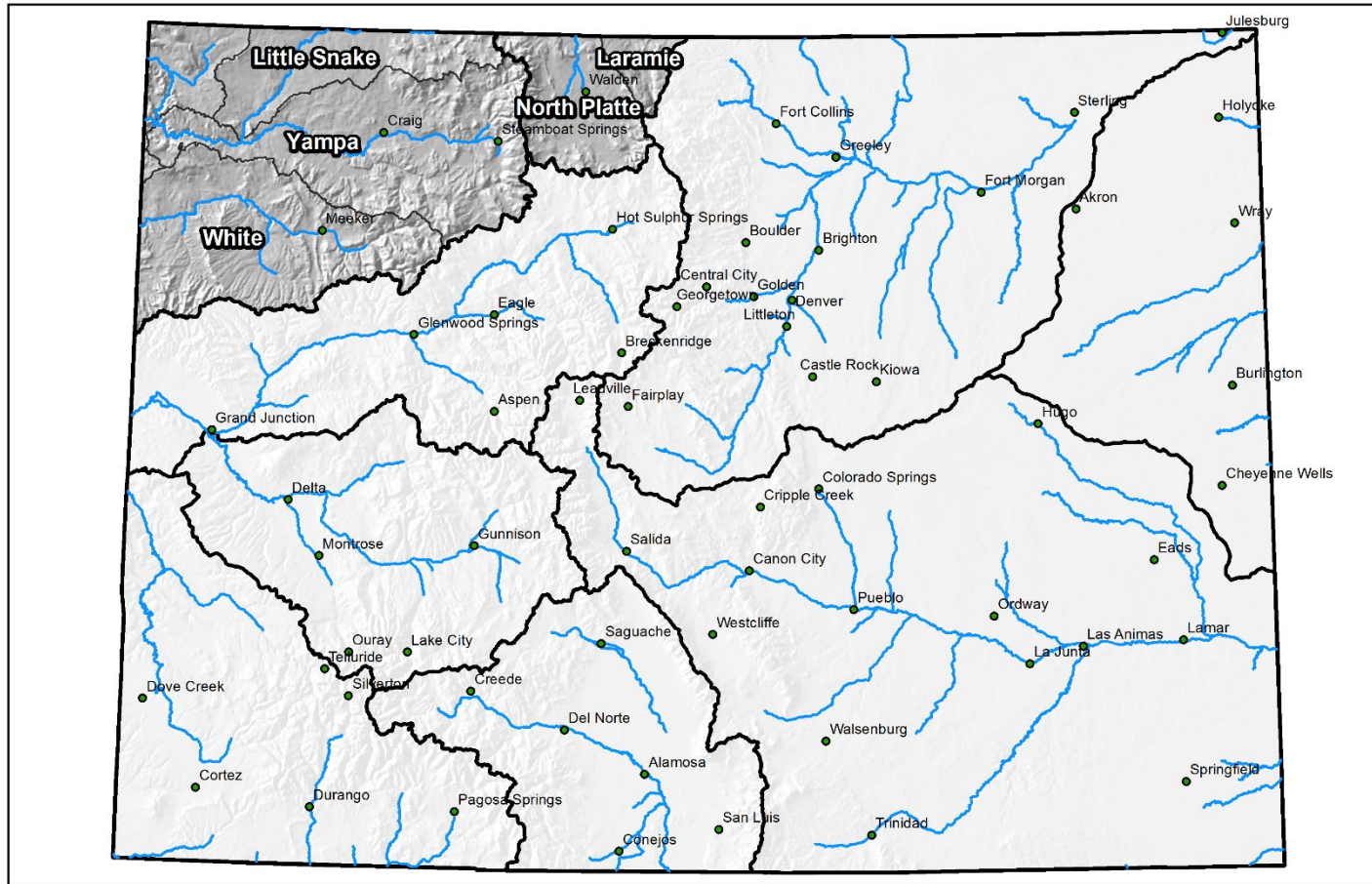
Brian.Domonkos@usda.gov

720-544-2853

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

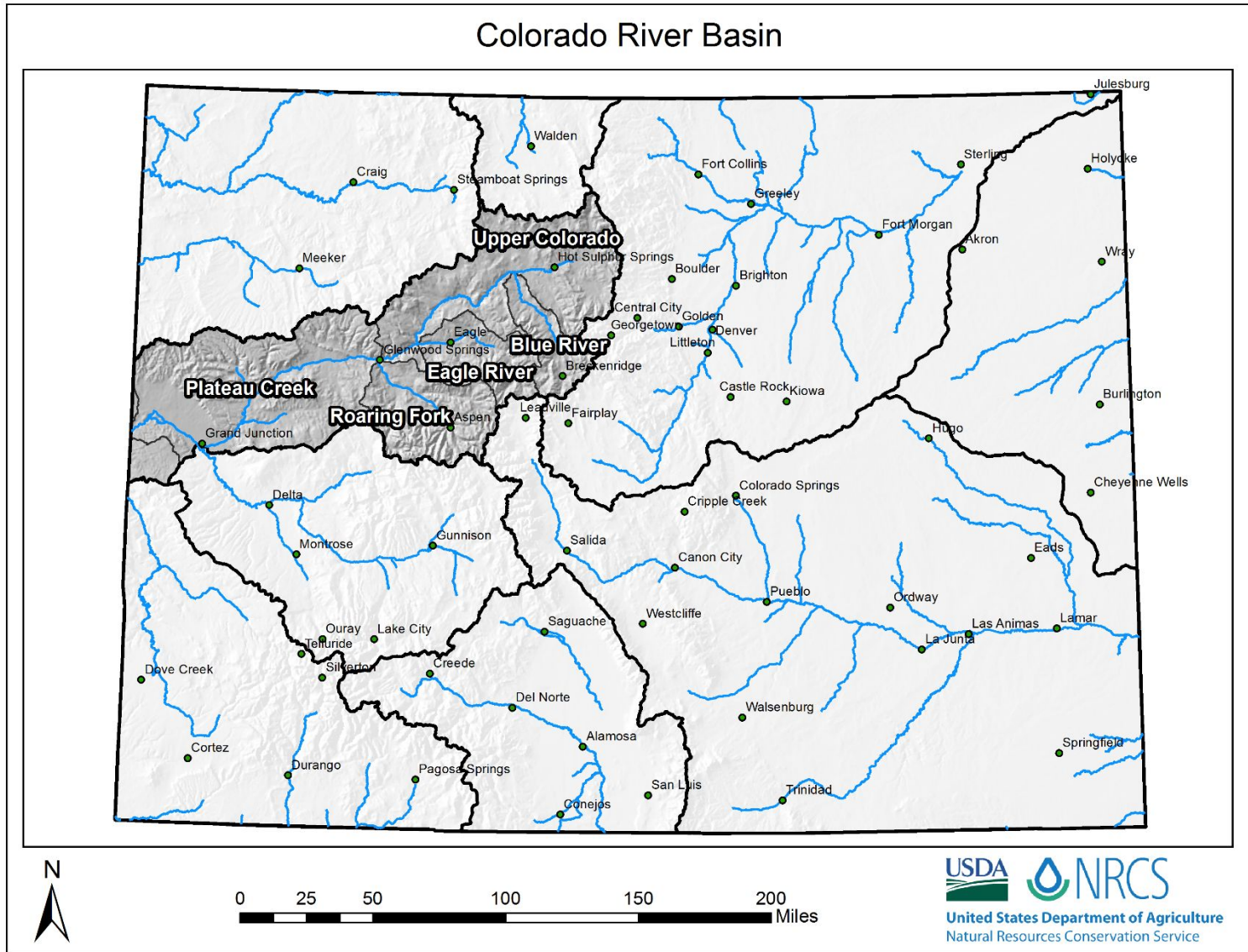
## Major Basin Summary

Yampa, White, and North Platte River Basins



0 25 50 100 150 200 Miles

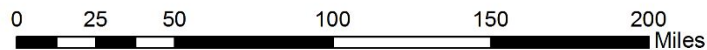
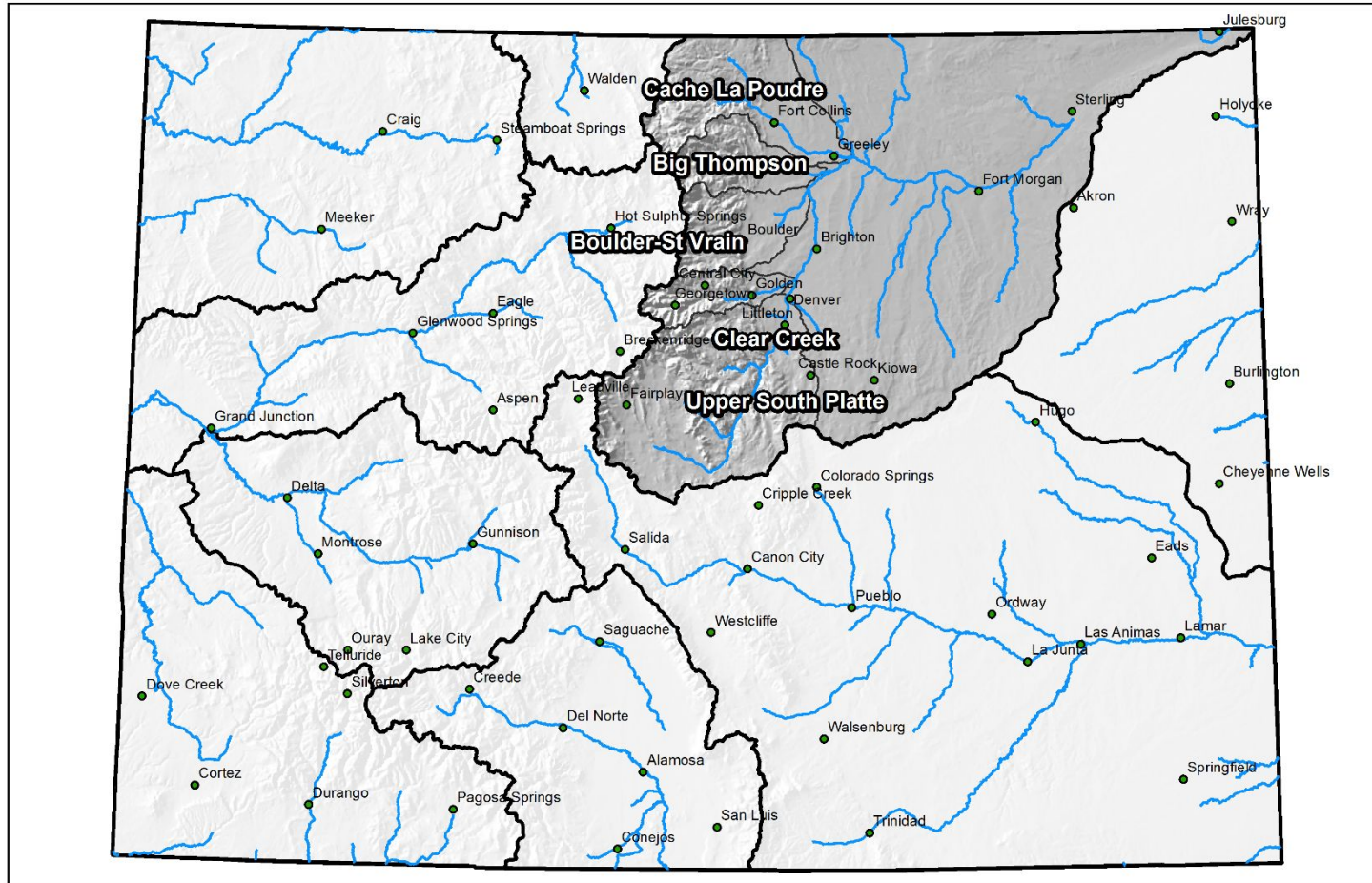
## Major Basin Summary





## Major Basin Summary

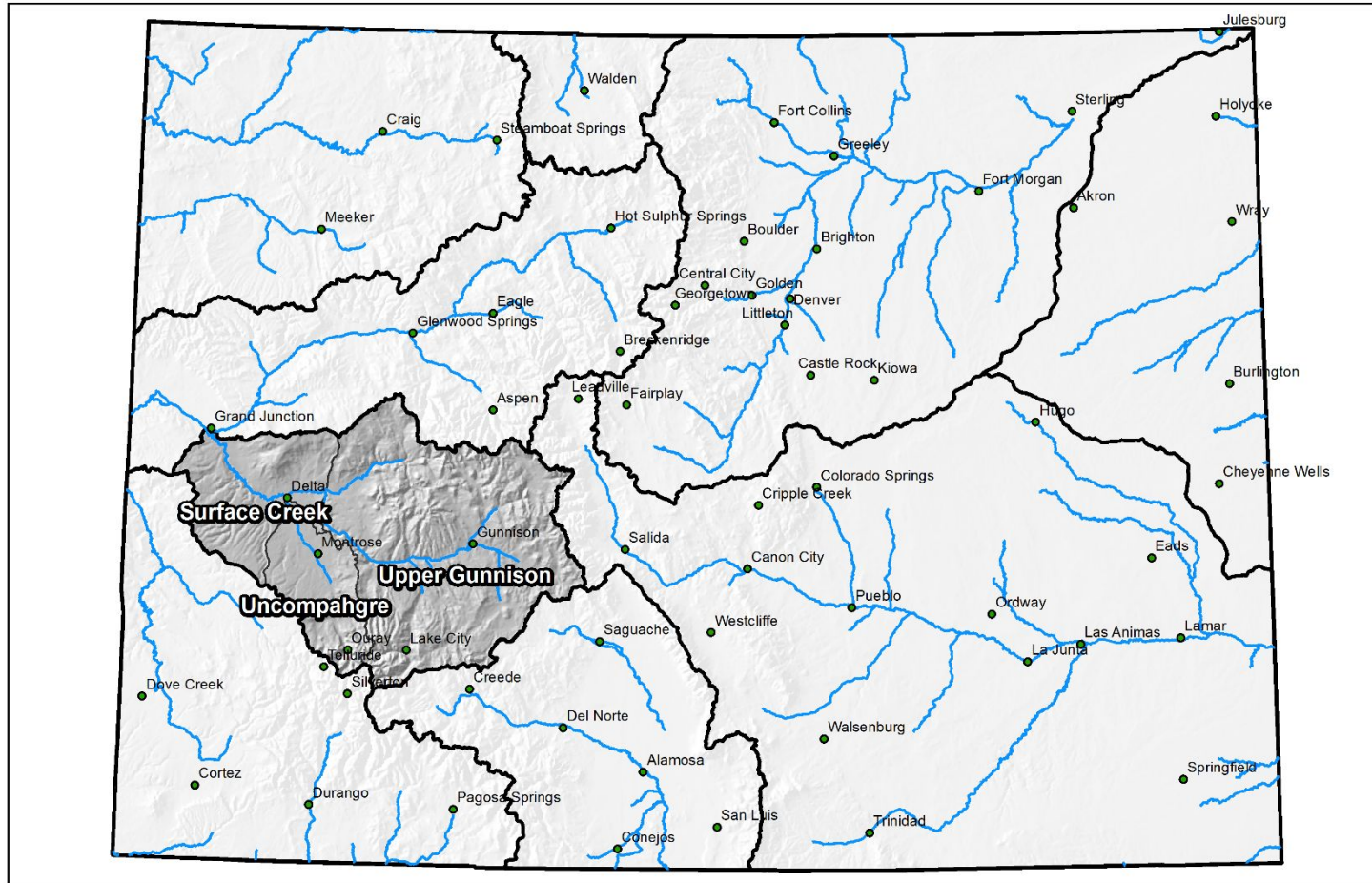
### South Platte River Basin





## Major Basin Summary

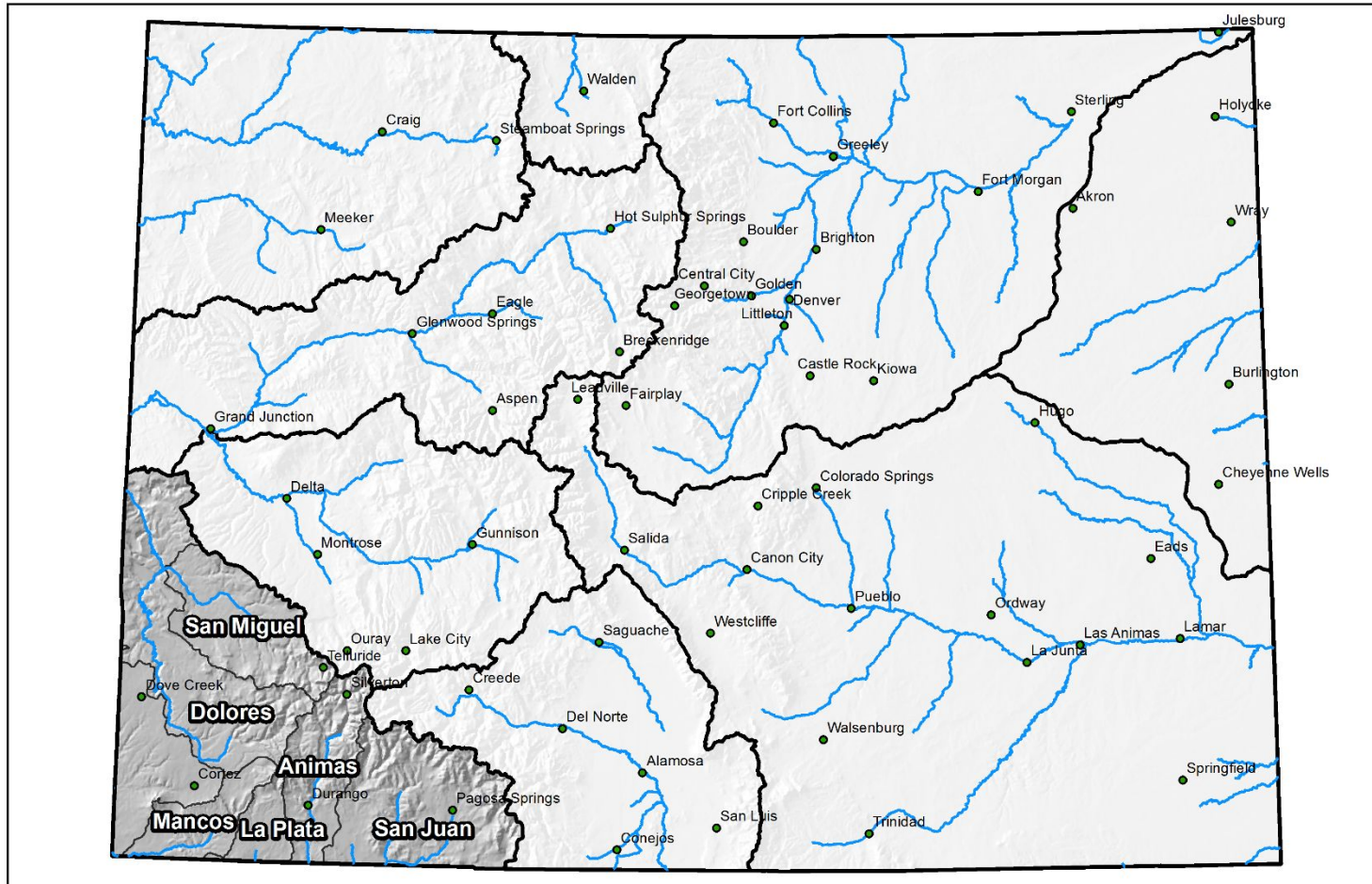
Gunnison River Basin



0 25 50 100 150 200 Miles

## Major Basin Summary

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

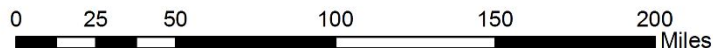
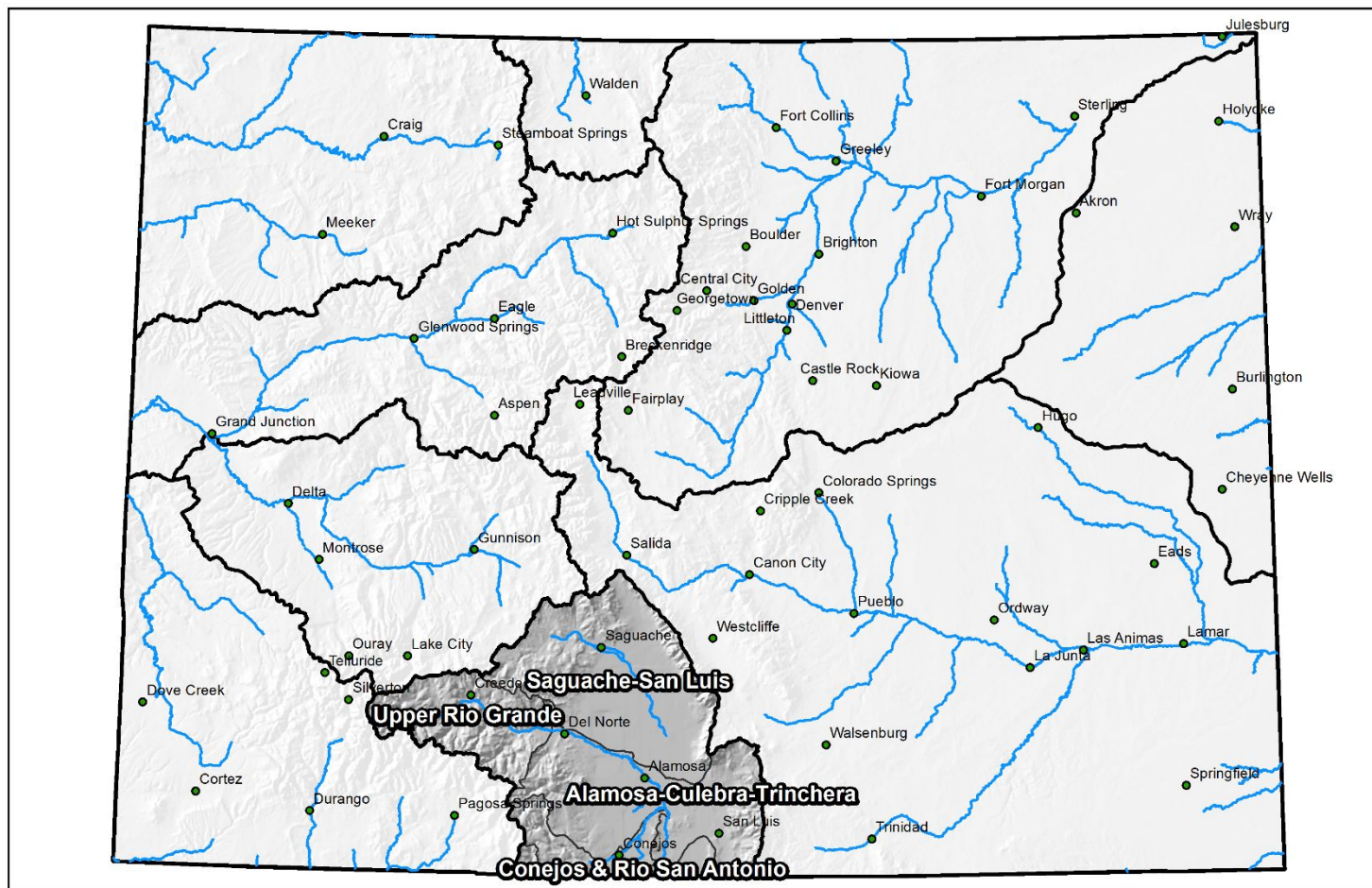


0 25 50 100 150 200 Miles



## Major Basin Summary

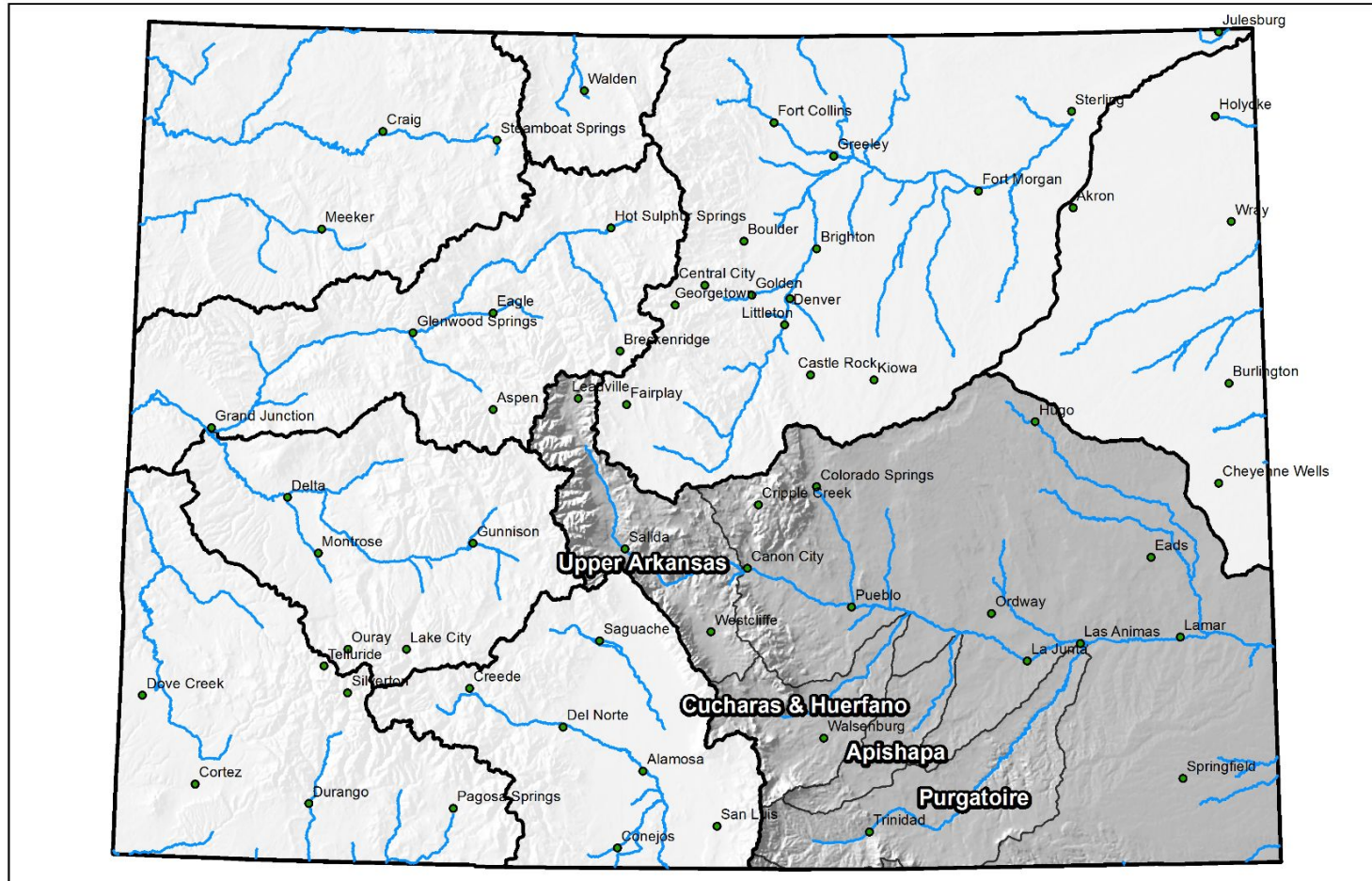
### Upper Rio Grande River Basin





## Major Basin Summary

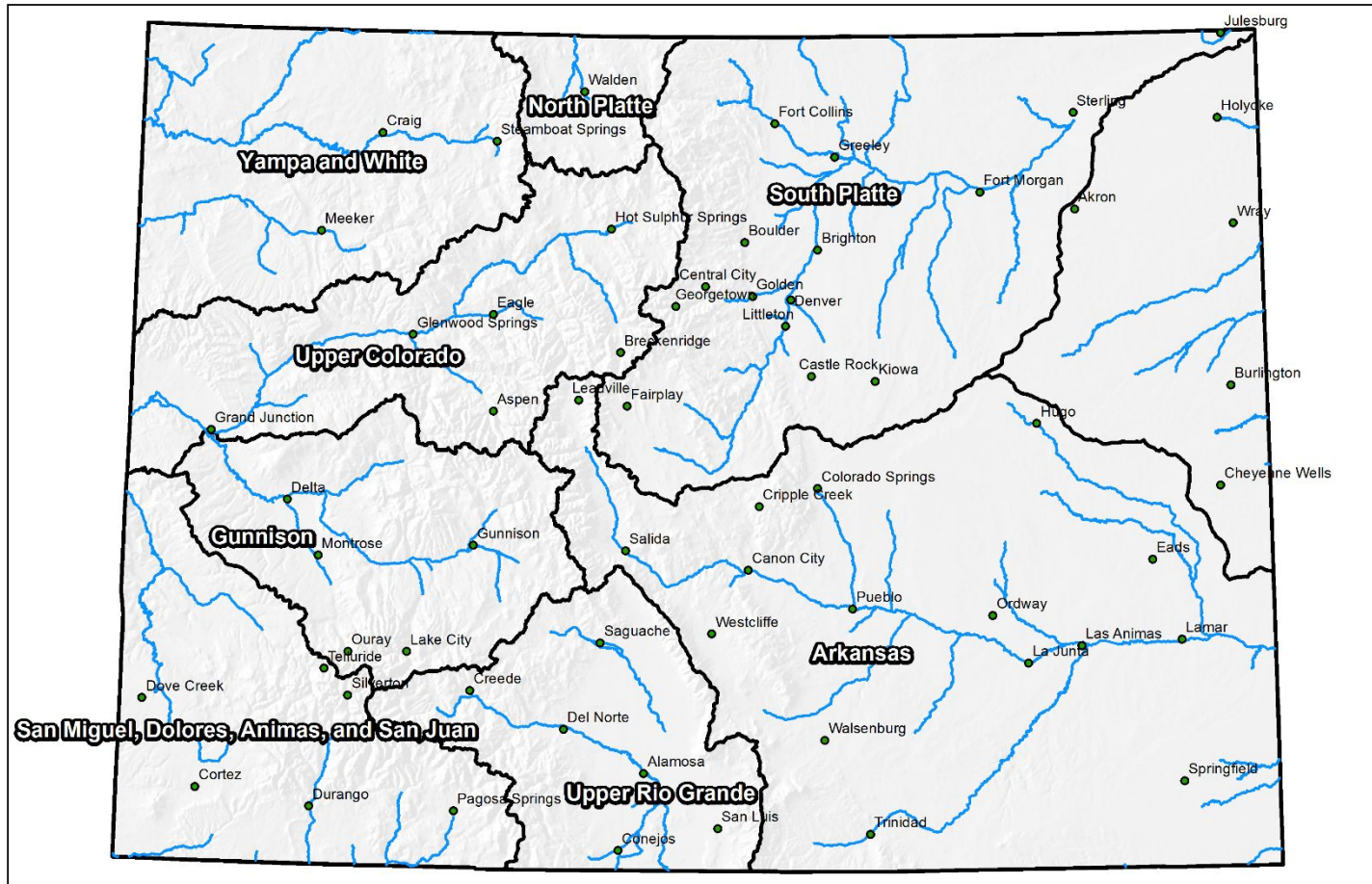
### Arkansas River Basin



0 25 50 100 150 200 Miles

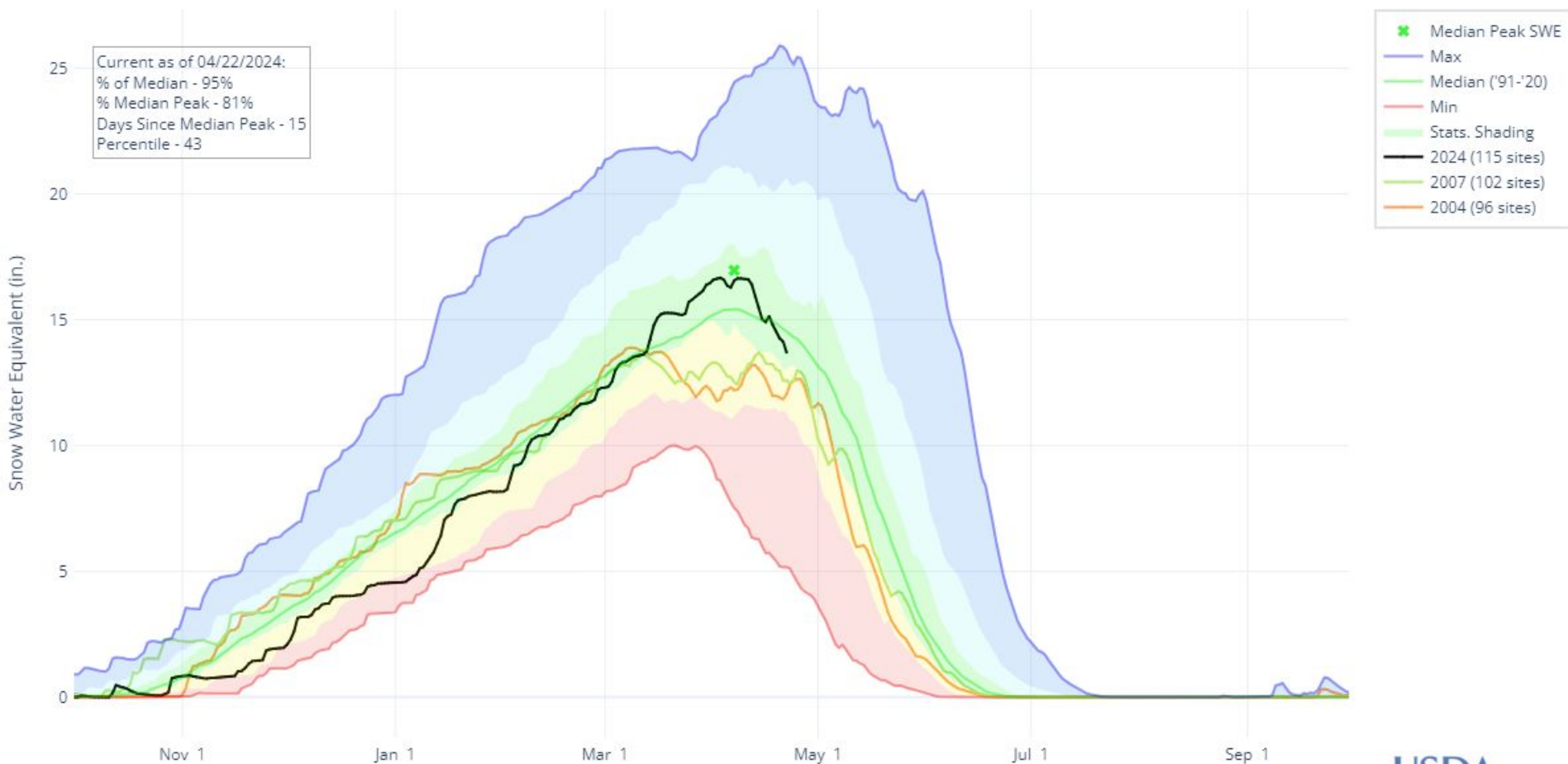
## Colorado Statewide Summary

Colorado Major Basins



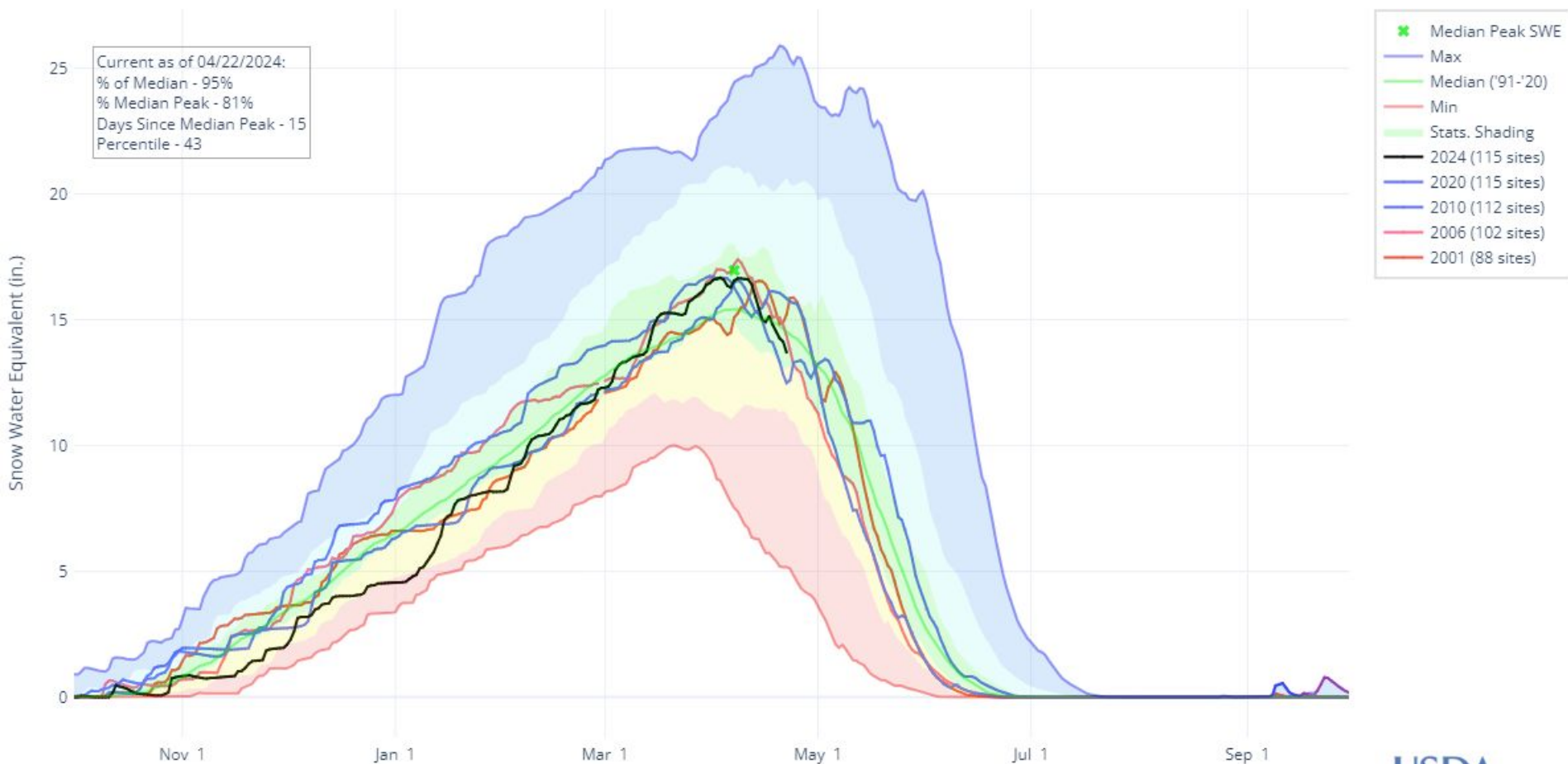
0 25 50 100 150 200 Miles

## SNOW WATER EQUIVALENT IN STATE OF COLORADO





## SNOW WATER EQUIVALENT IN STATE OF COLORADO



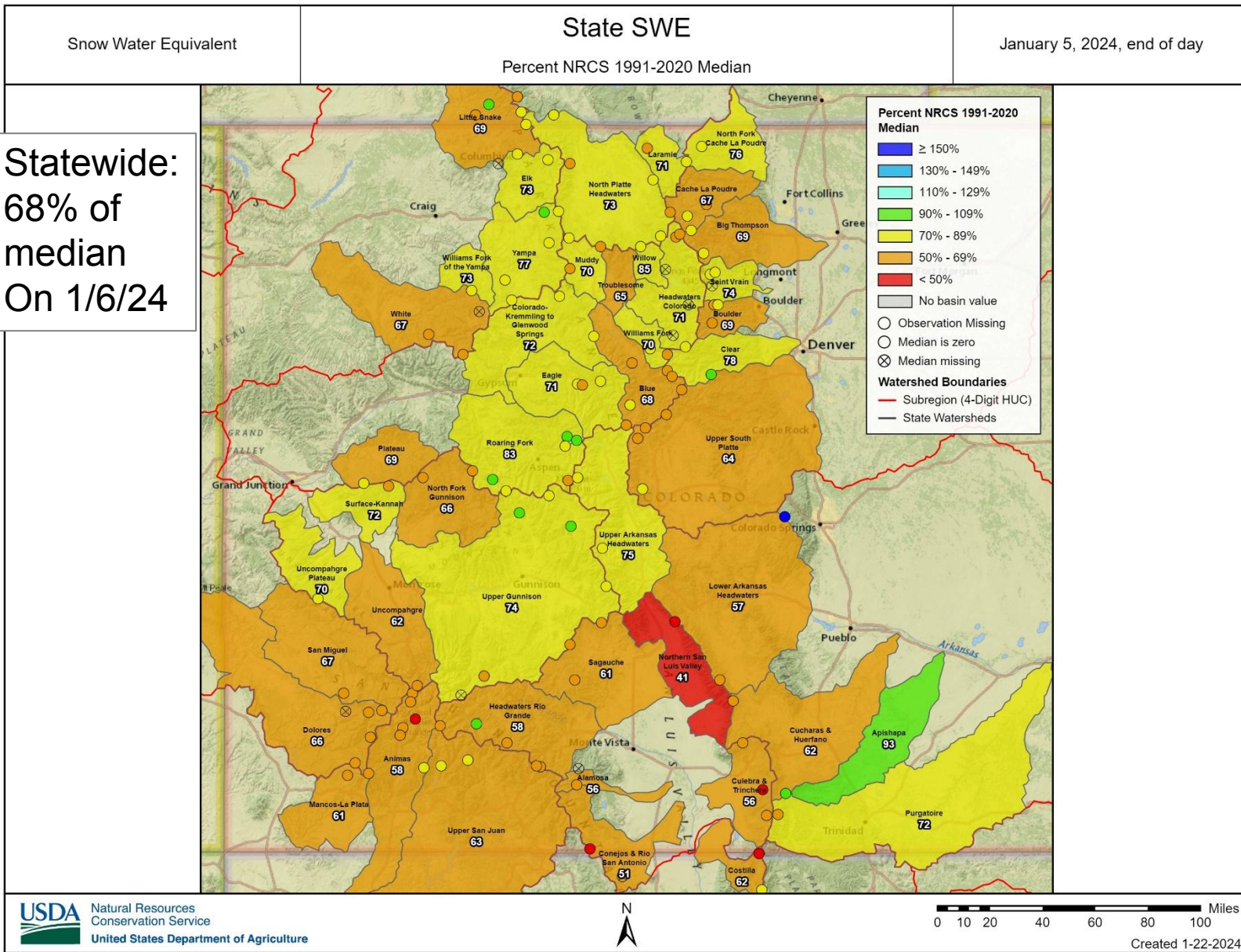


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# Colorado Snow Surveys

## Snowpack

Statewide:  
68% of  
median  
On 1/6/24





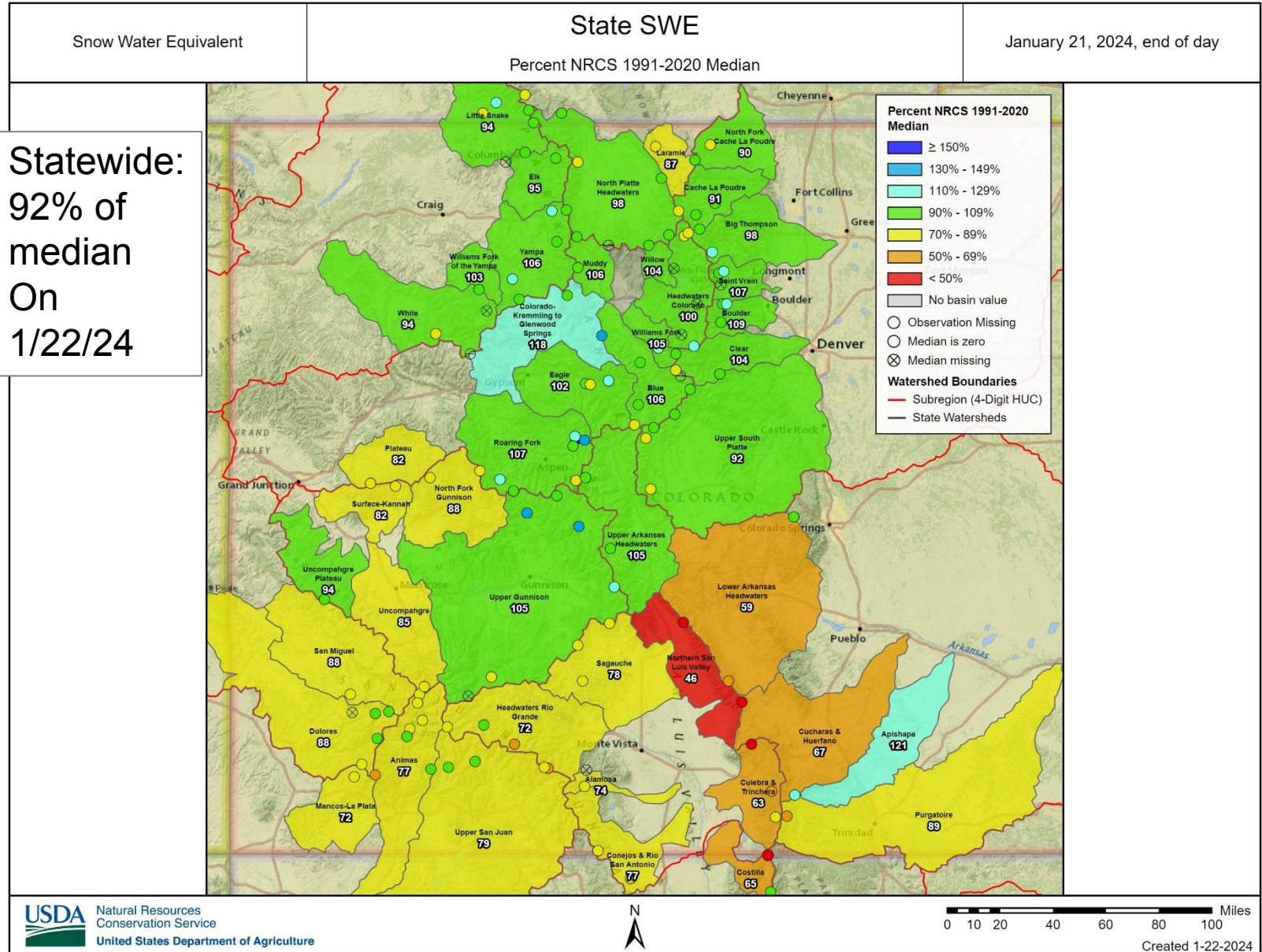


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# Colorado Snow Surveys

## Snowpack

Statewide:  
92% of  
median  
On  
1/22/24





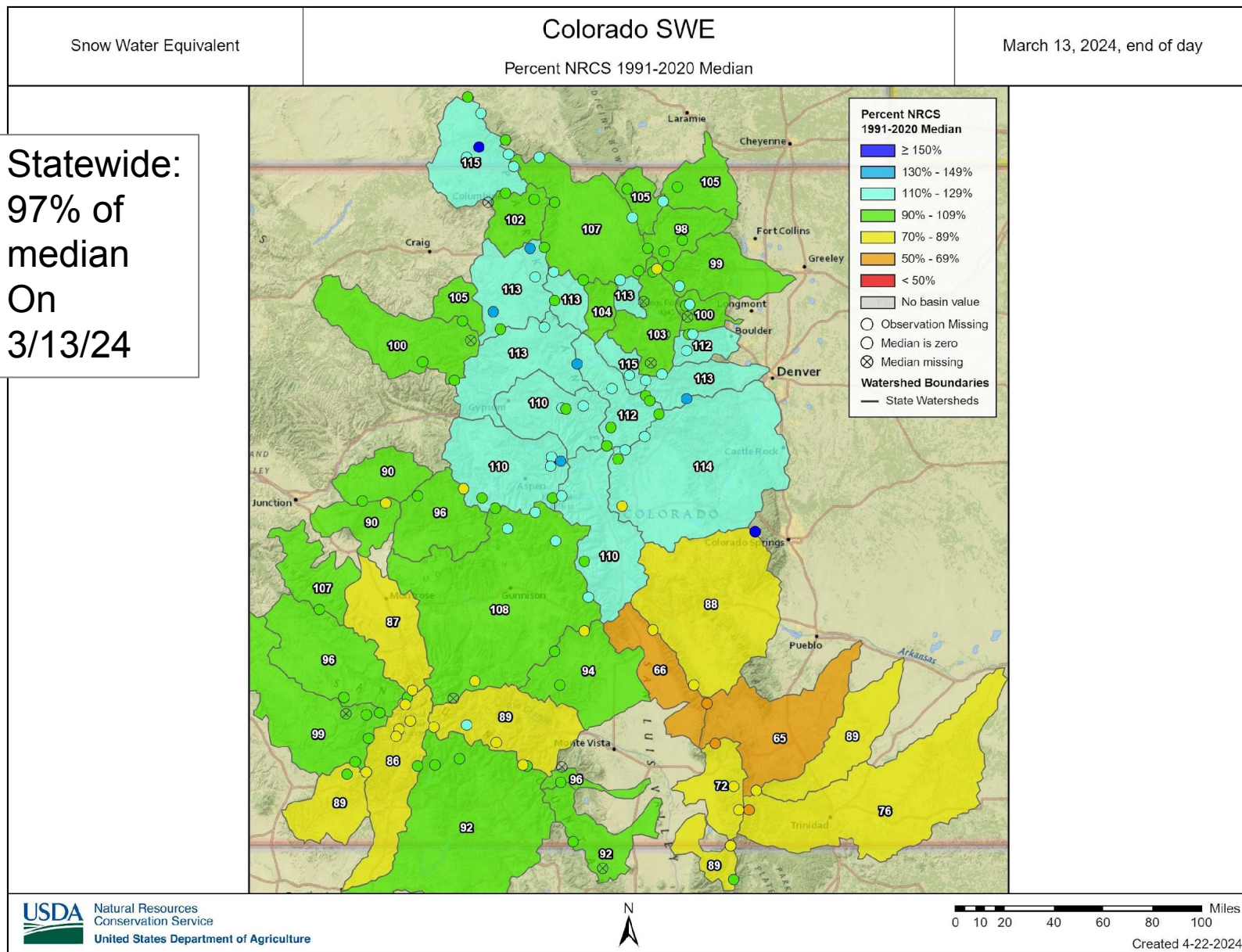


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# Colorado Snow Surveys

## Snowpack

Statewide:  
97% of  
median  
On  
3/13/24



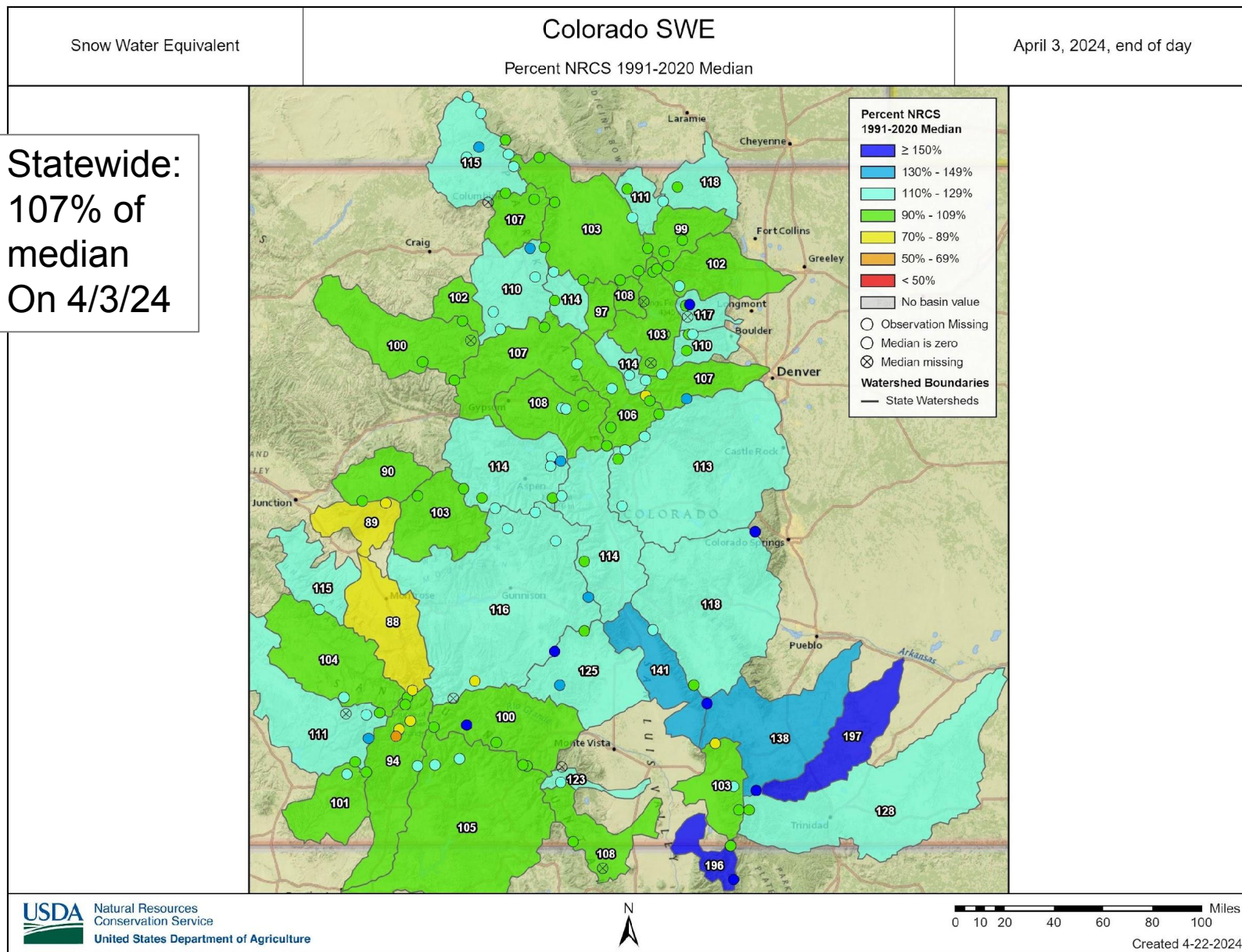


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# Colorado Snow Surveys

## Snowpack

Statewide:  
107% of  
median  
On 4/3/24



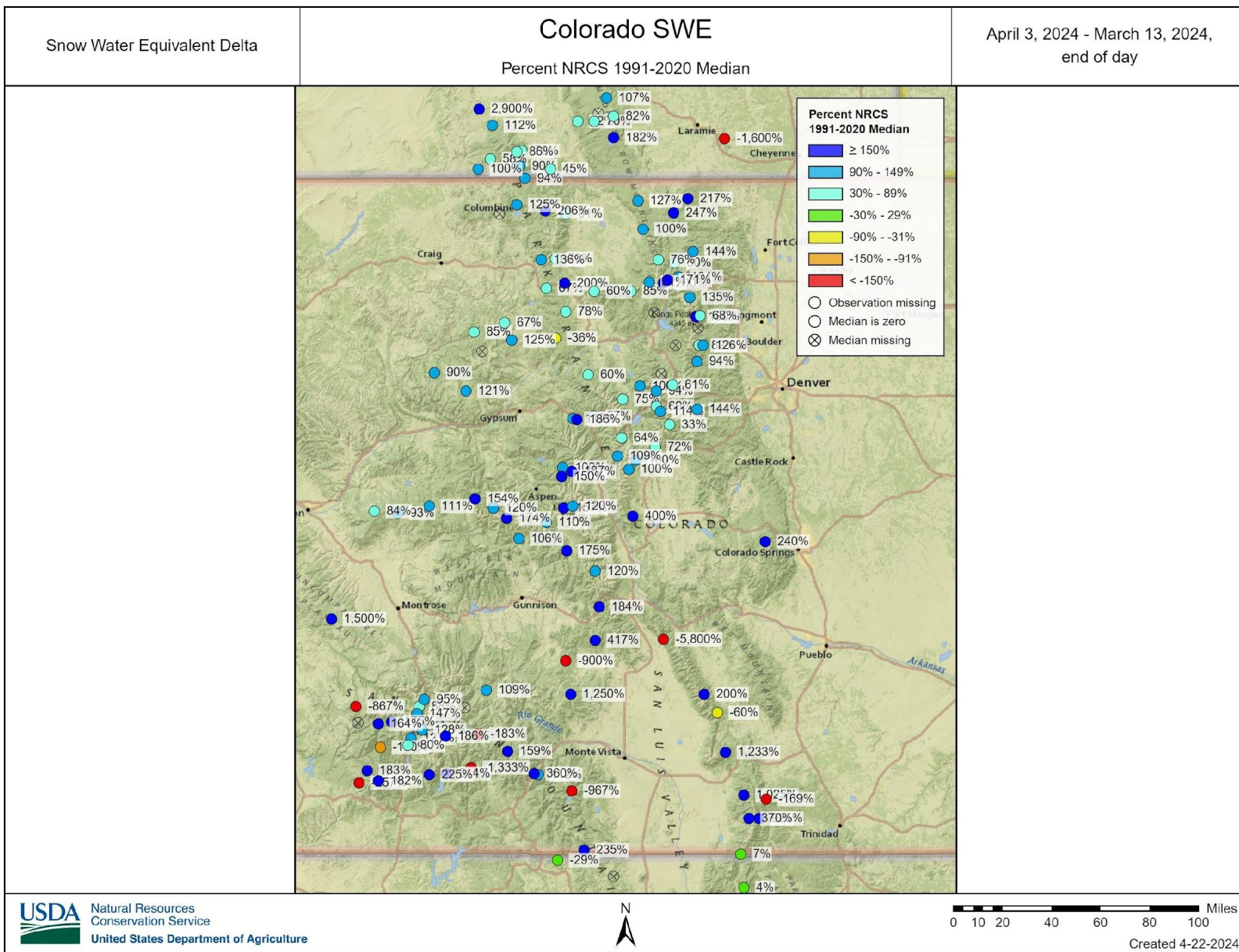




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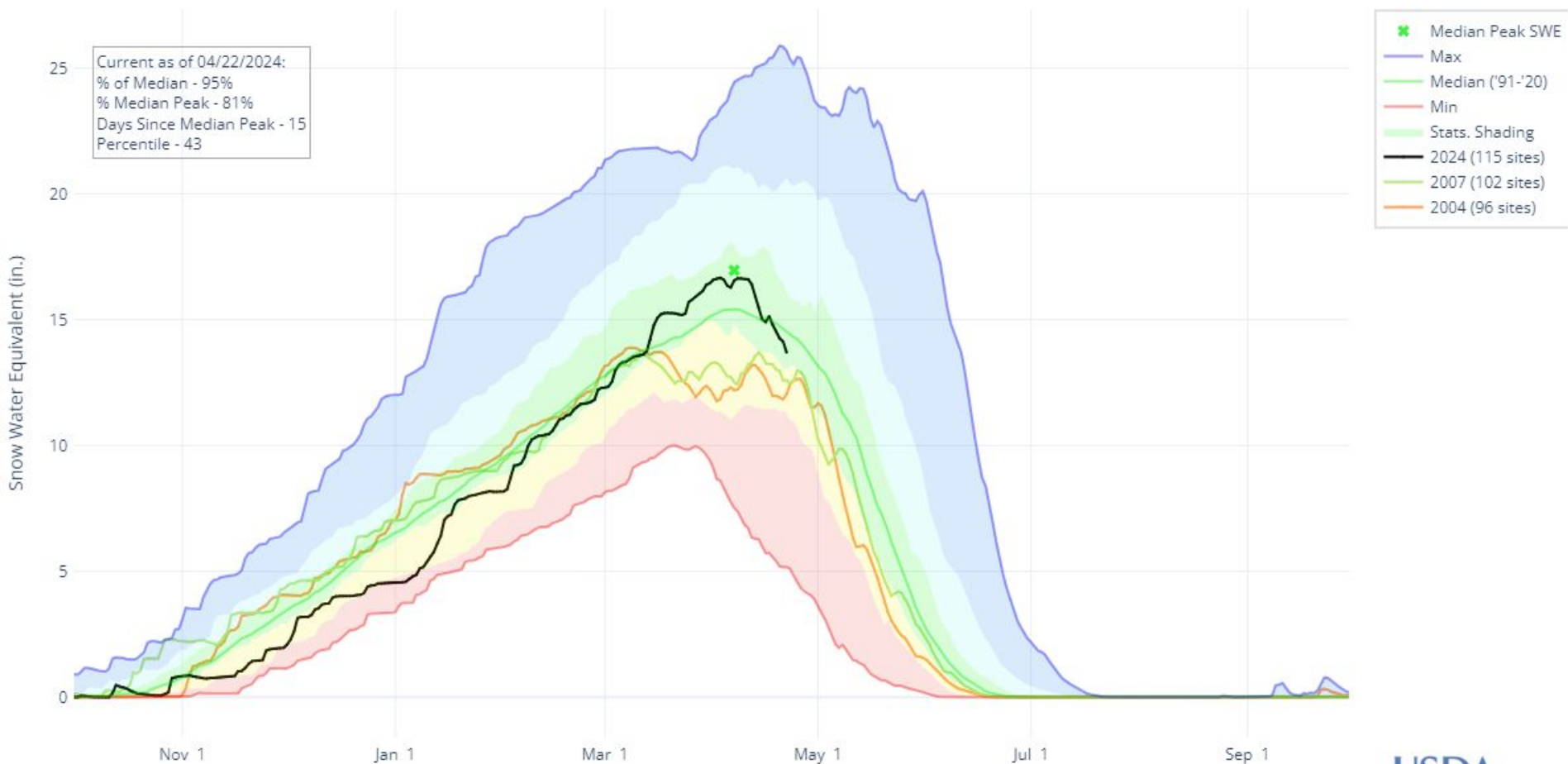
# Colorado Snow Surveys

## Snowpack





## SNOW WATER EQUIVALENT IN STATE OF COLORADO



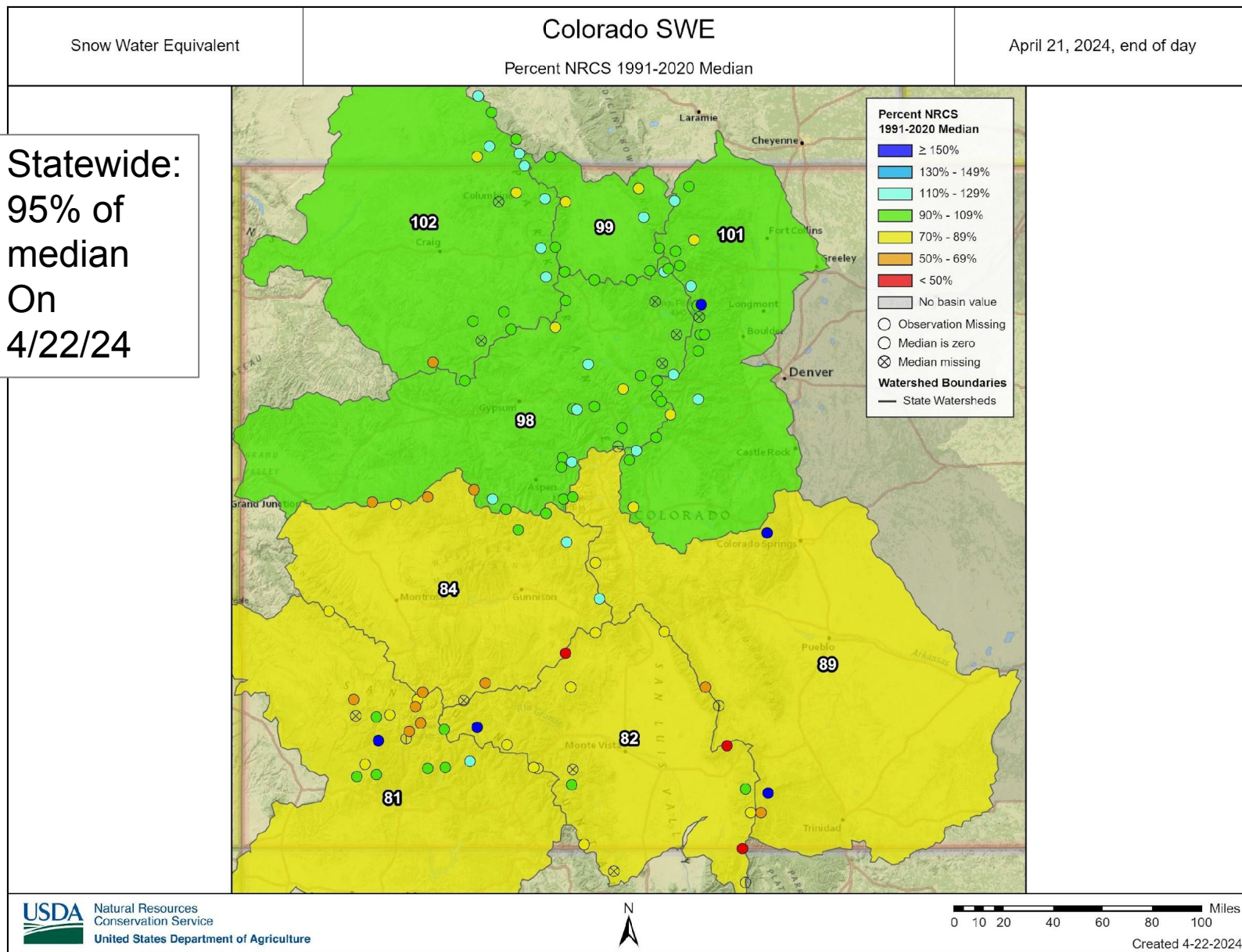


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# Colorado Snow Surveys

## Snowpack

Statewide:  
95% of  
median  
On  
4/22/24

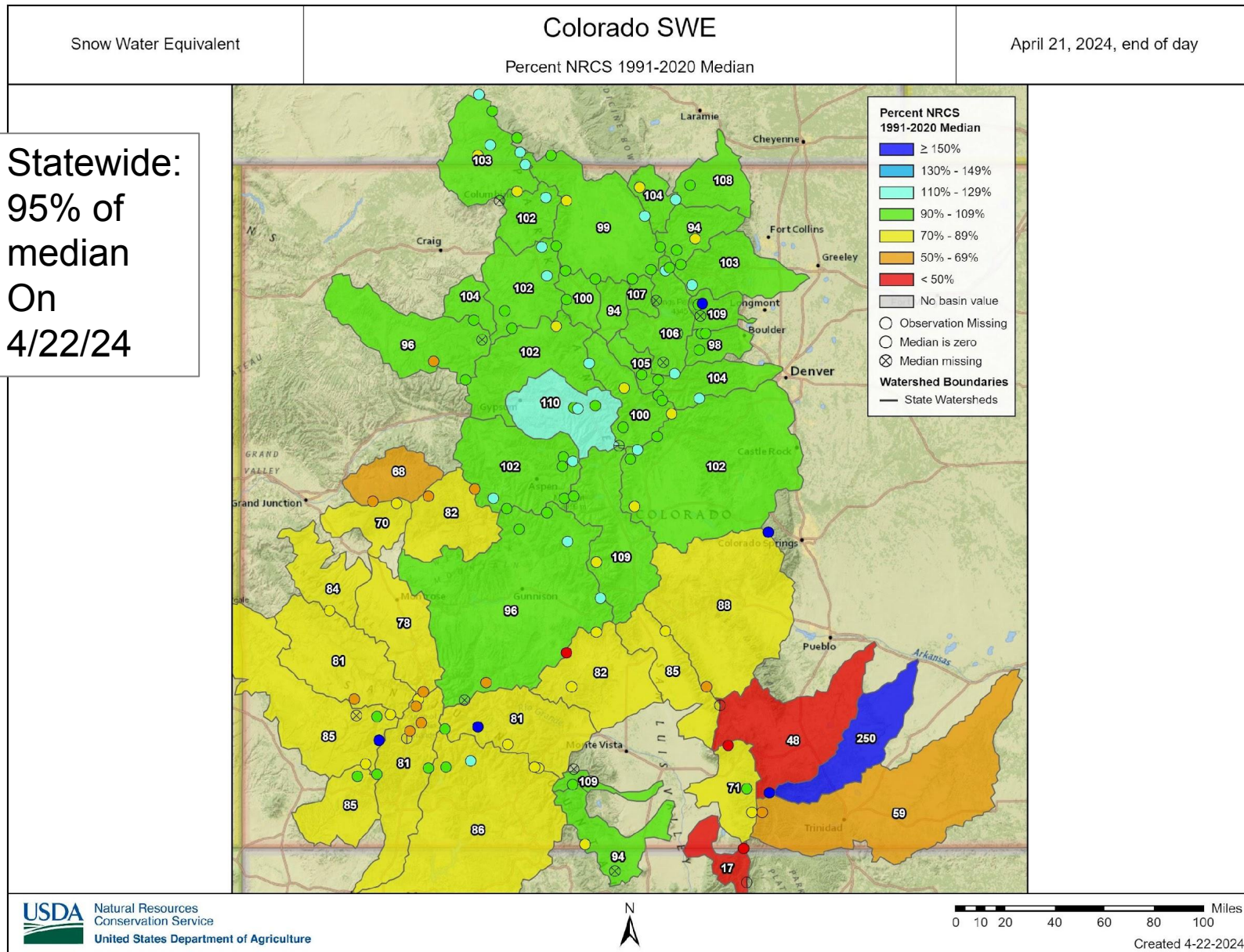






# Colorado Snow Surveys

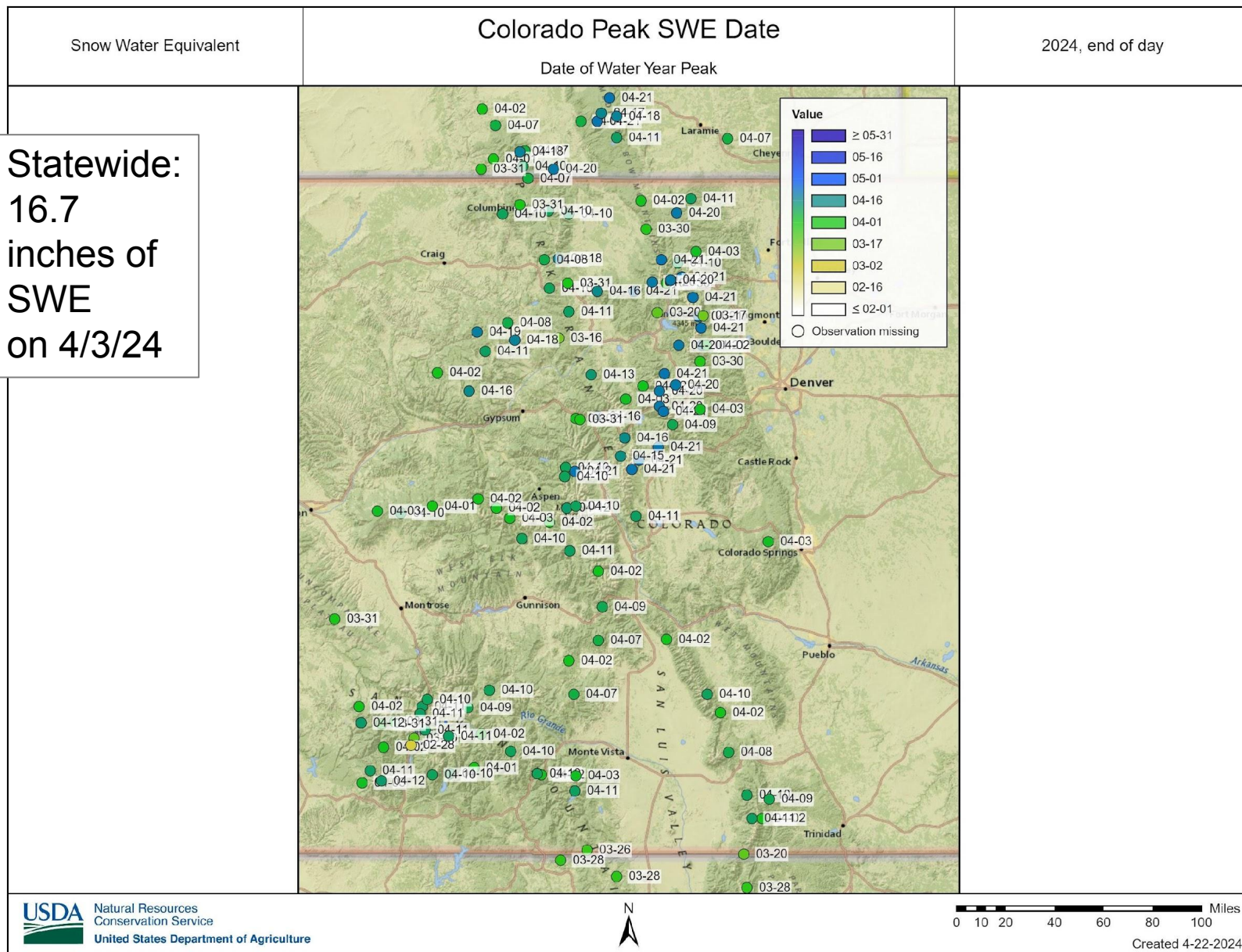
Basin	Normal Peak Date	Normal Peak SWE	Peak Date	Peak SWE	% of Norm Peak SWE	% of Norm SWE 4/22
SMDASJ	4/1	18.6	4/2	18.1	97%	81%
URG	4/2	14.5	4/3	12.9	89%	82%
Arkansas	4/3	12.0	4/3	12.6	105%	89%
Yampa-White-LS	4/7	21.3	4/6*	22.0*	103%	102%
Gunnison	4/8	17.9	4/10	16.3	91%	84%
Colorado Headwaters	4/12	17.5	4/11*	17.1*	98%	98%
NP-Laramie	4/21	24.7	4/18*	23.7*	96%	99%
S. Platte	4/24	16.7	4/21*	15.1*	90%	101%
Statewide	4/7	17.0	4/3	16.7	98%	94.5%
* = could see another snowpack peak if a storm big enough provides the snow						





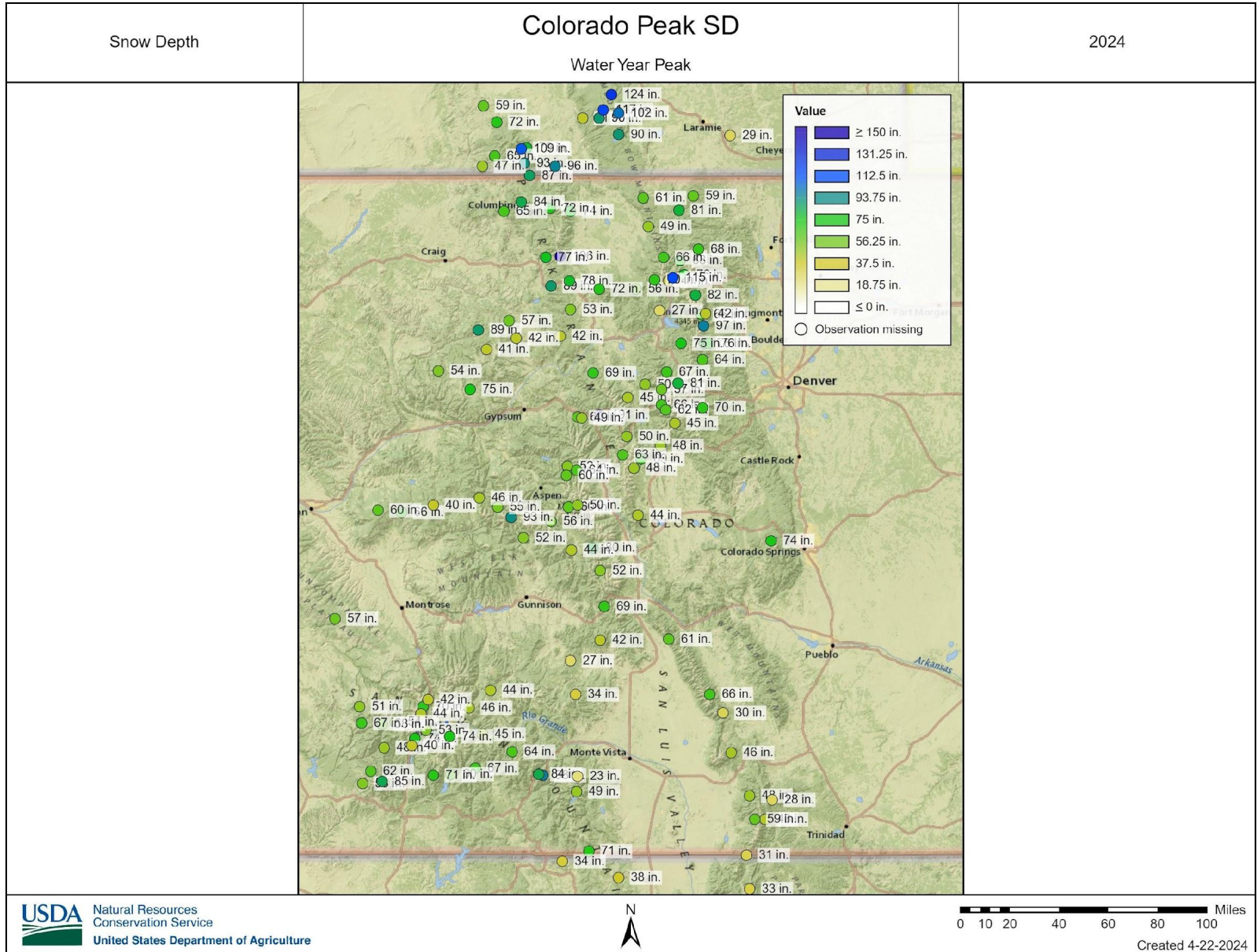


Statewide:  
16.7  
inches of  
SWE  
on 4/3/24





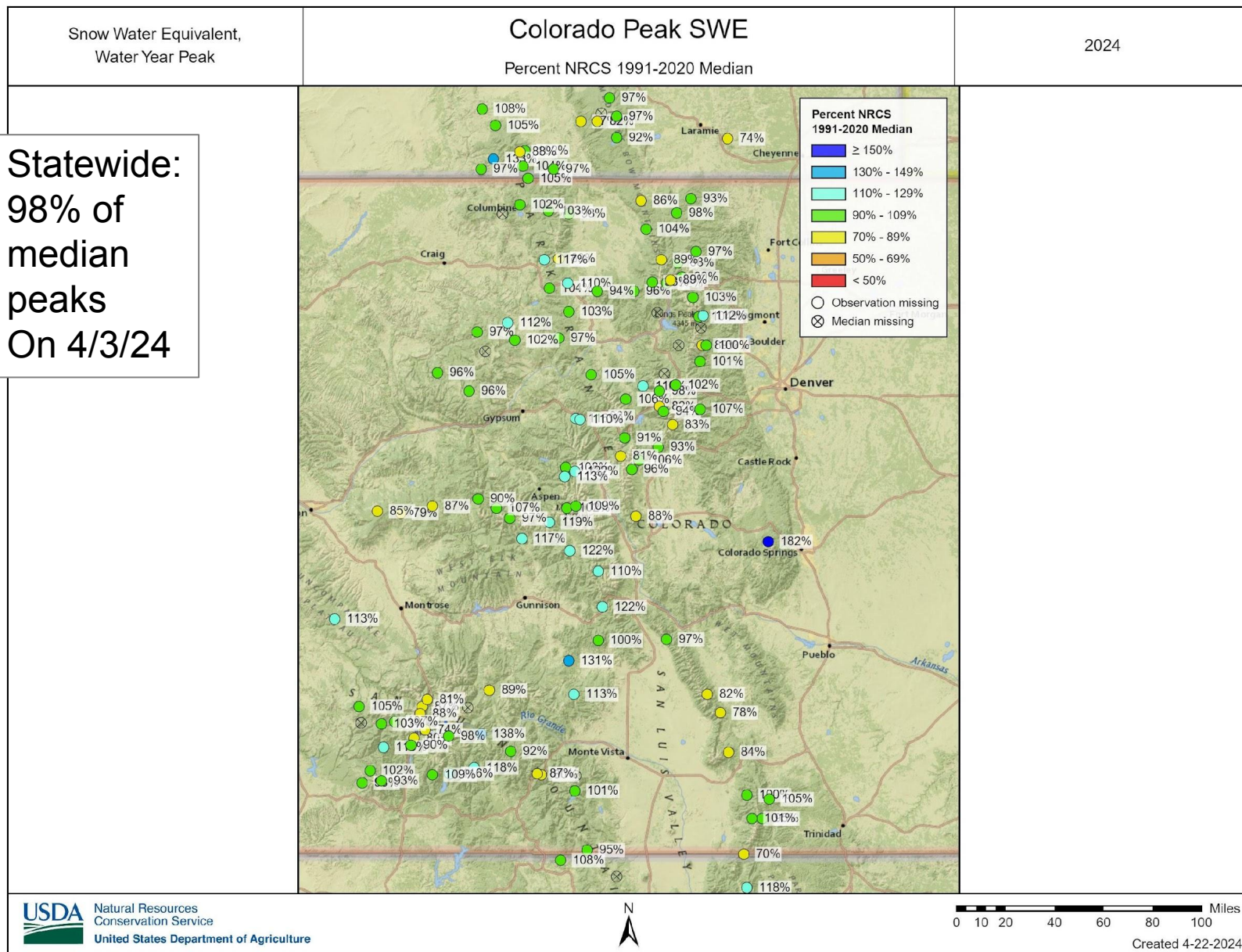
# Colorado Snow Surveys







Statewide:  
98% of  
median  
peaks  
On 4/3/24



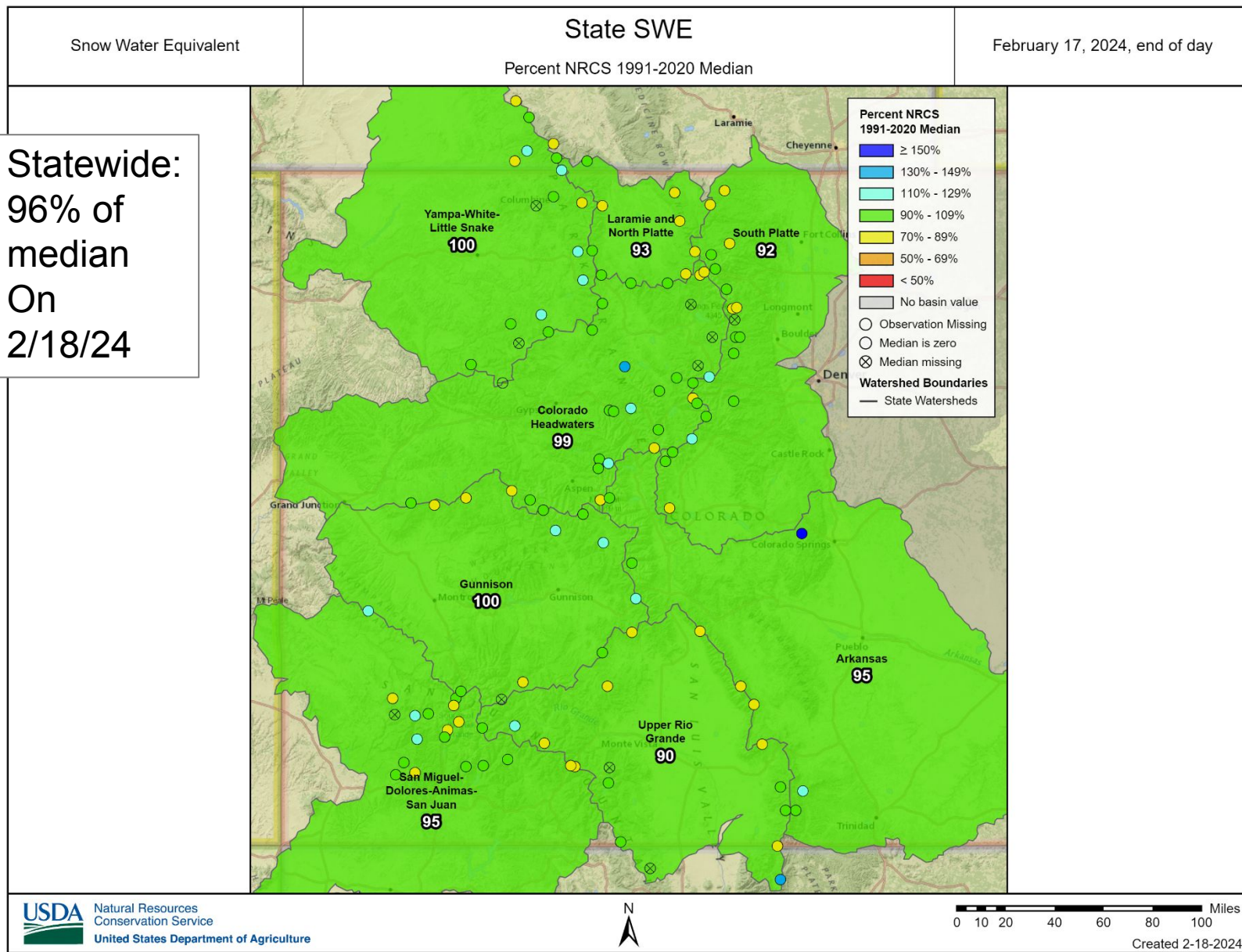


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# Colorado Snow Surveys

## Snowpack

Statewide:  
96% of  
median  
On  
2/18/24



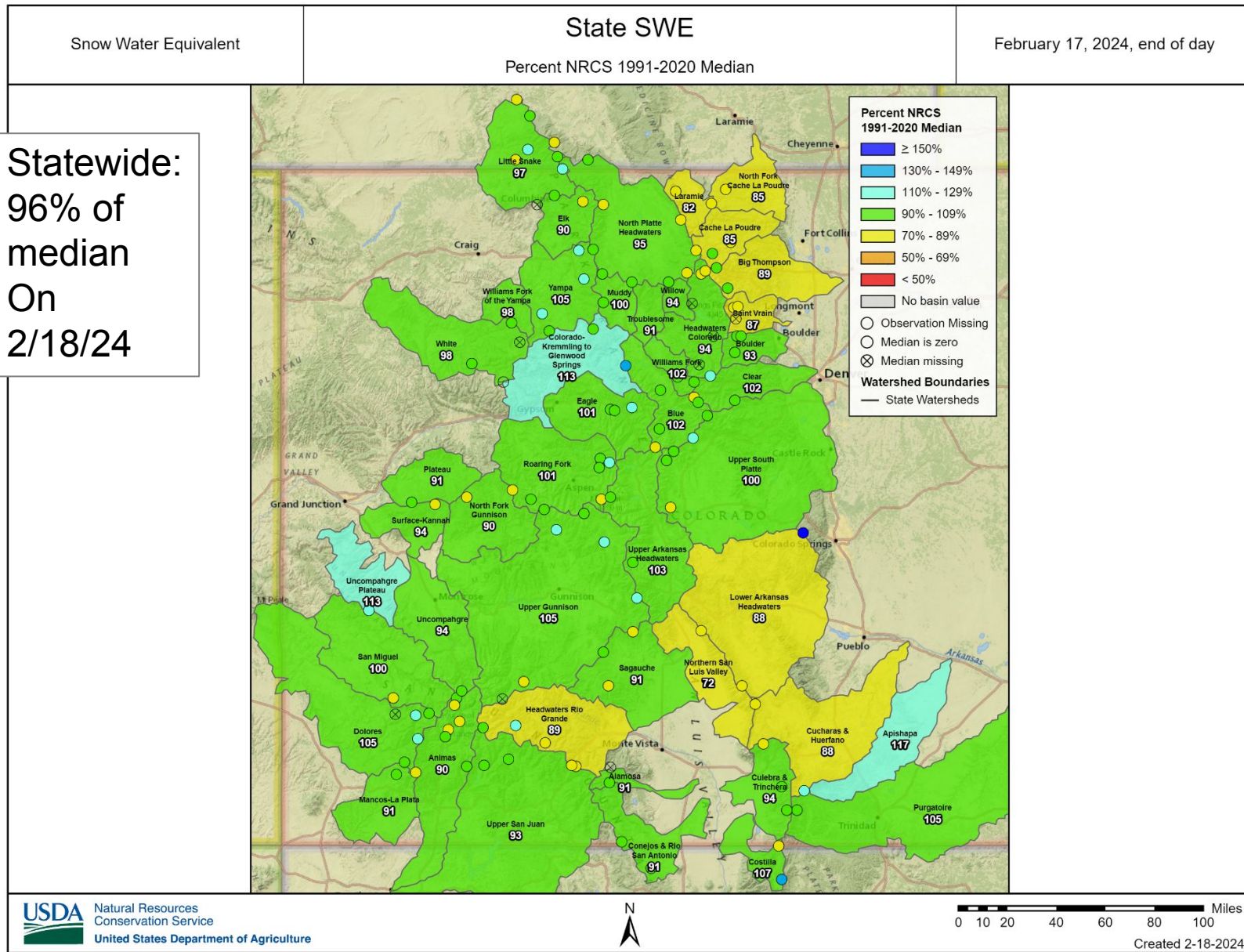




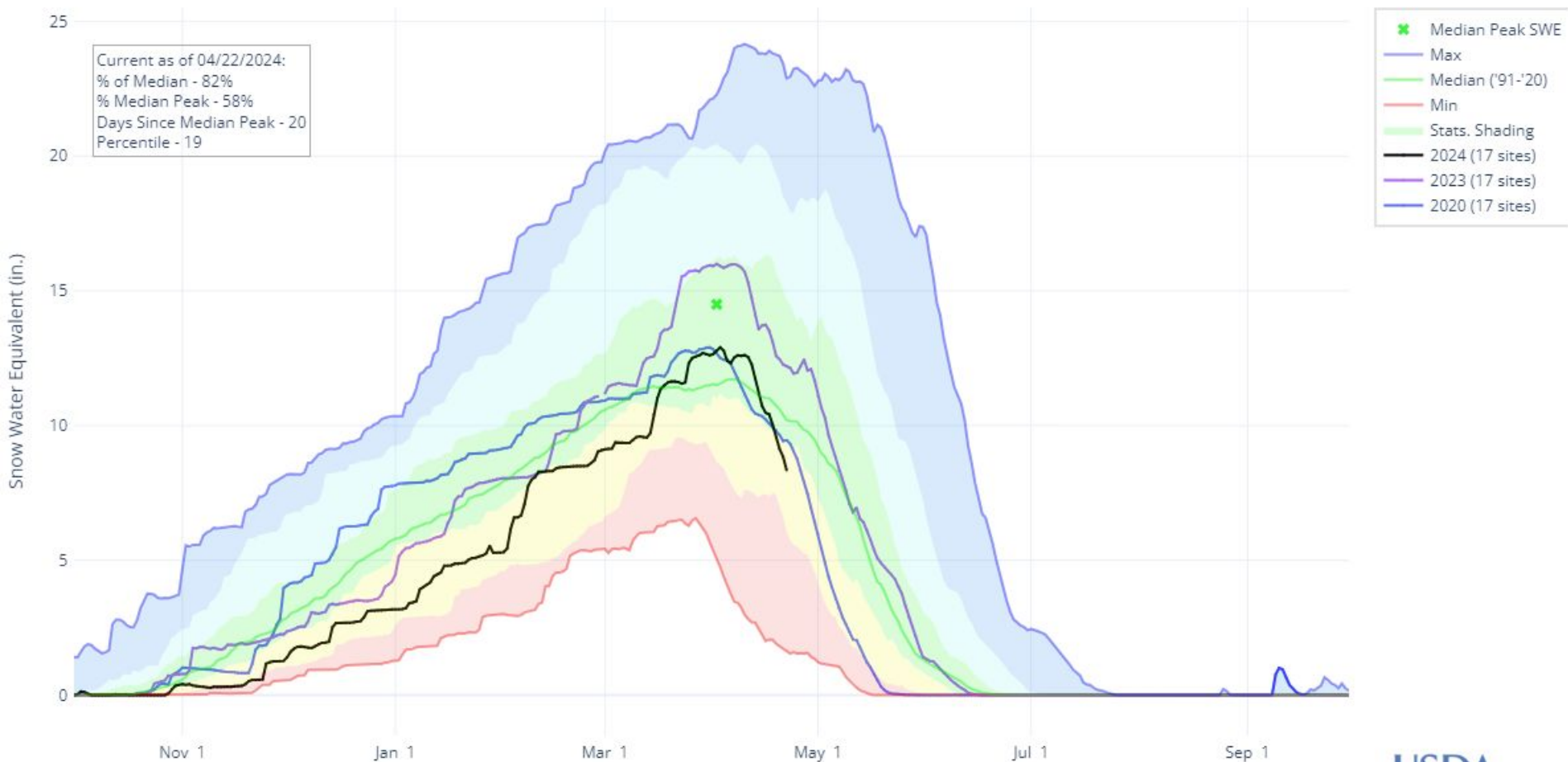
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# Colorado Snow Surveys

## Snowpack

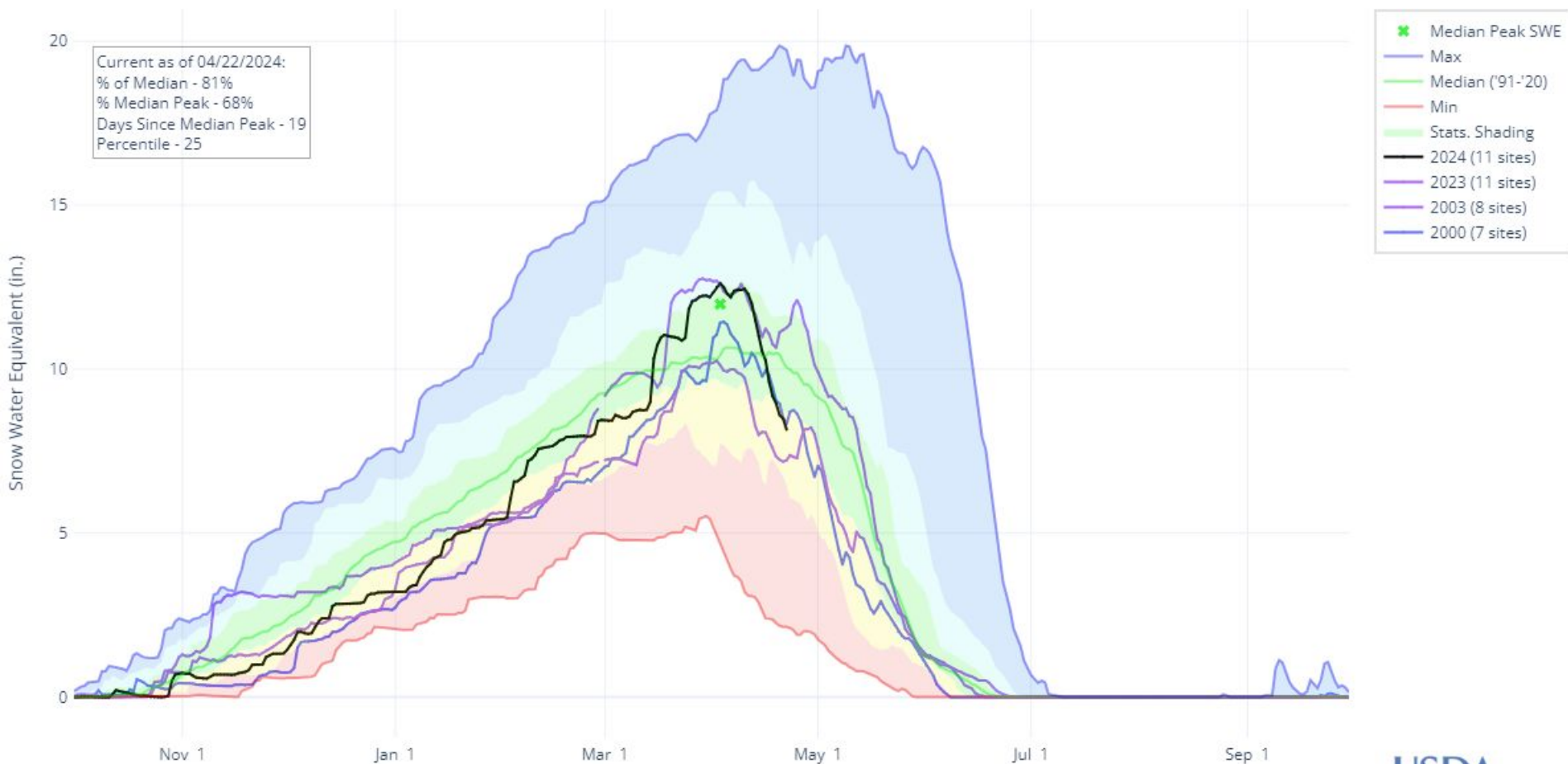


## SNOW WATER EQUIVALENT IN UPPER RIO GRANDE

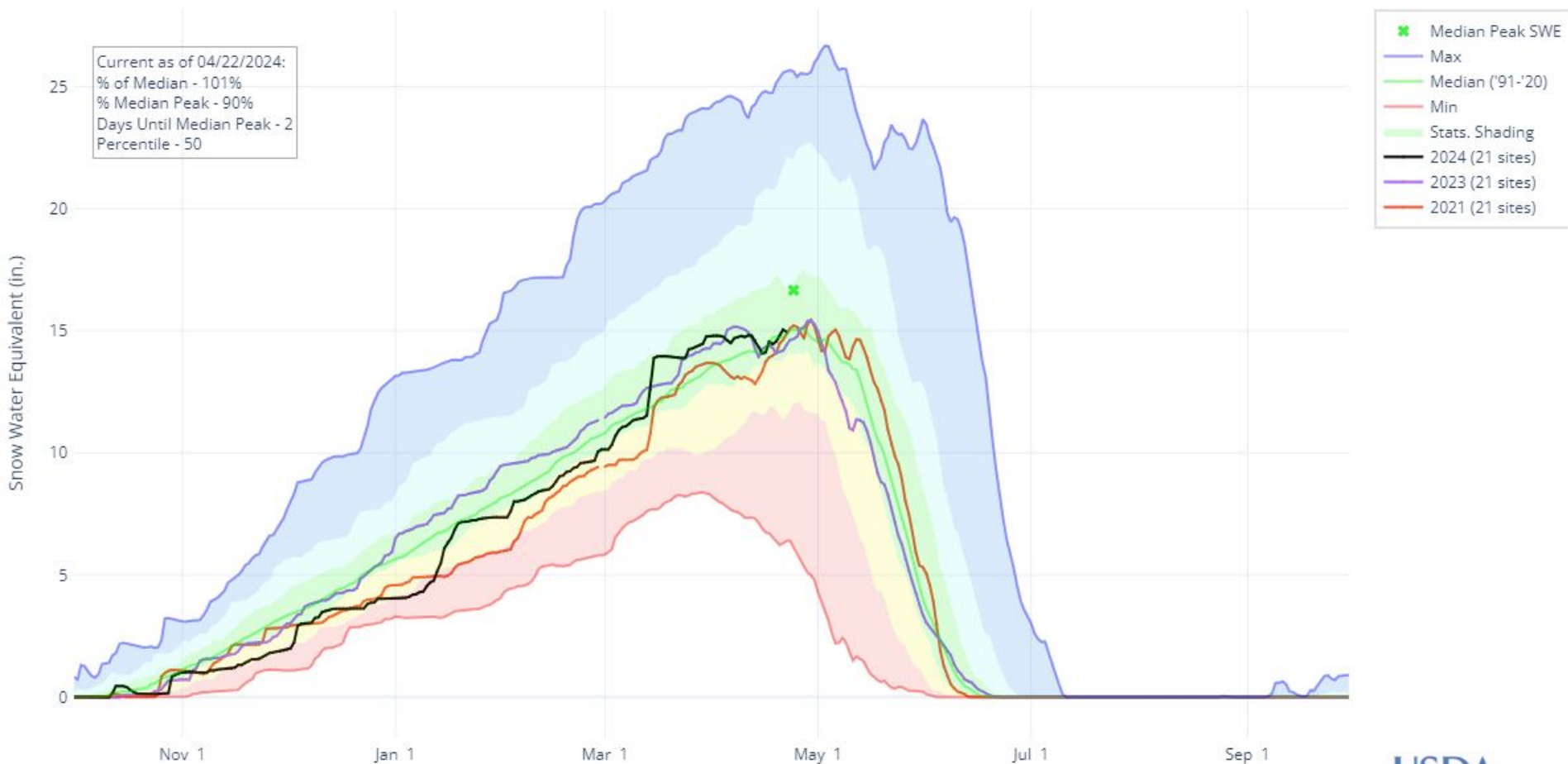




## SNOW WATER EQUIVALENT IN ARKANSAS

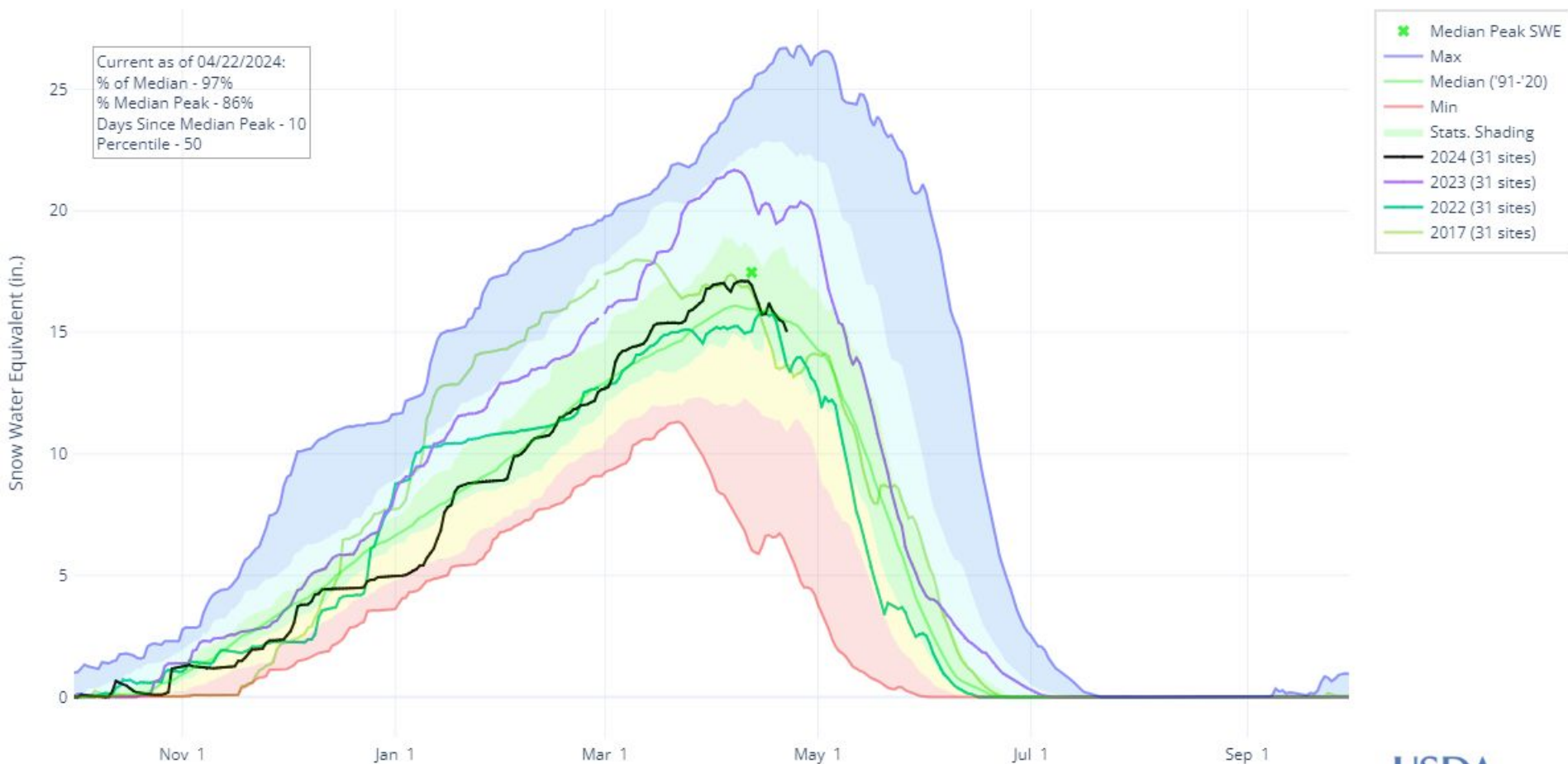


## SNOW WATER EQUIVALENT IN SOUTH PLATTE





## SNOW WATER EQUIVALENT IN COLORADO HEADWATERS





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# Colorado Snow Surveys

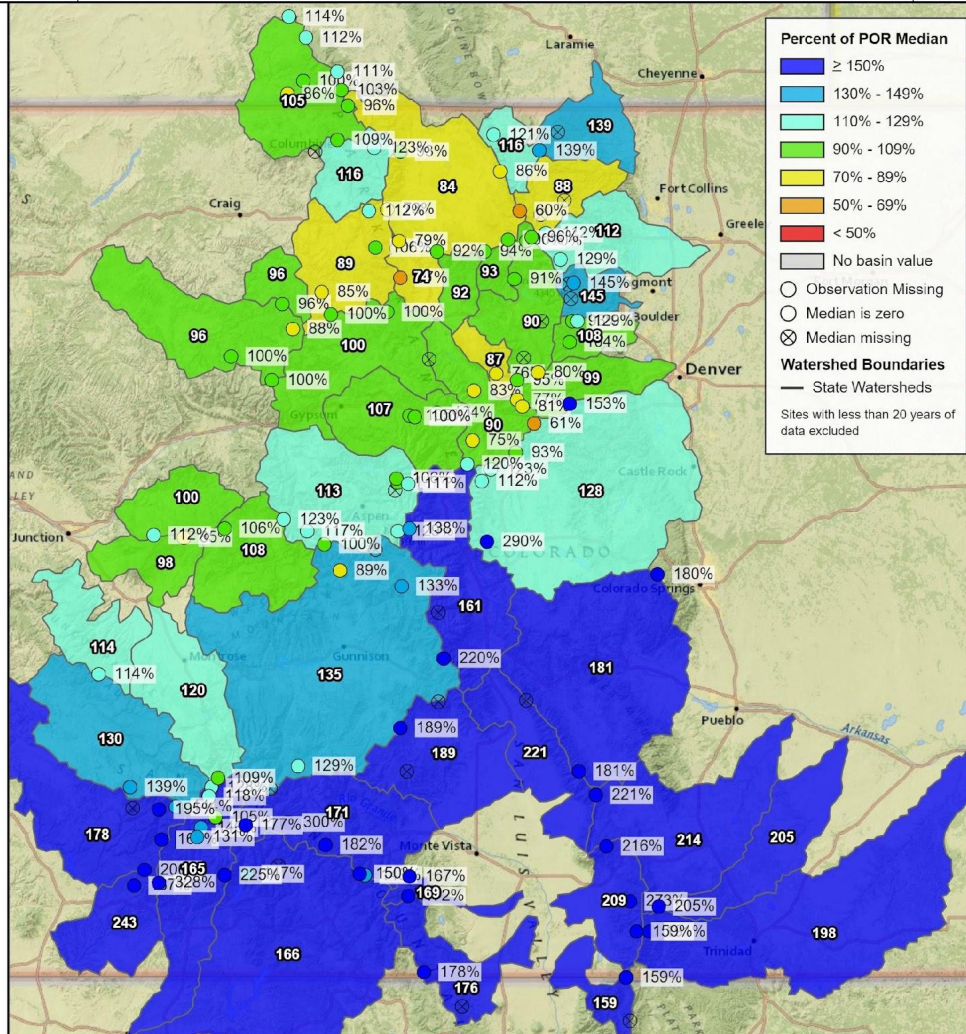
3/14 – 4/3 Precipitation

21 day Precipitation

Colorado Prec

Percent of POR Median

March 14, 2024 - April 3, 2024



102%  
normal  
Precip on  
4/3/24



Natural Resources  
Conservation Service  
United States Department of Agriculture



0 10 20 40 60 80 100 Miles

Created 4-22-2024

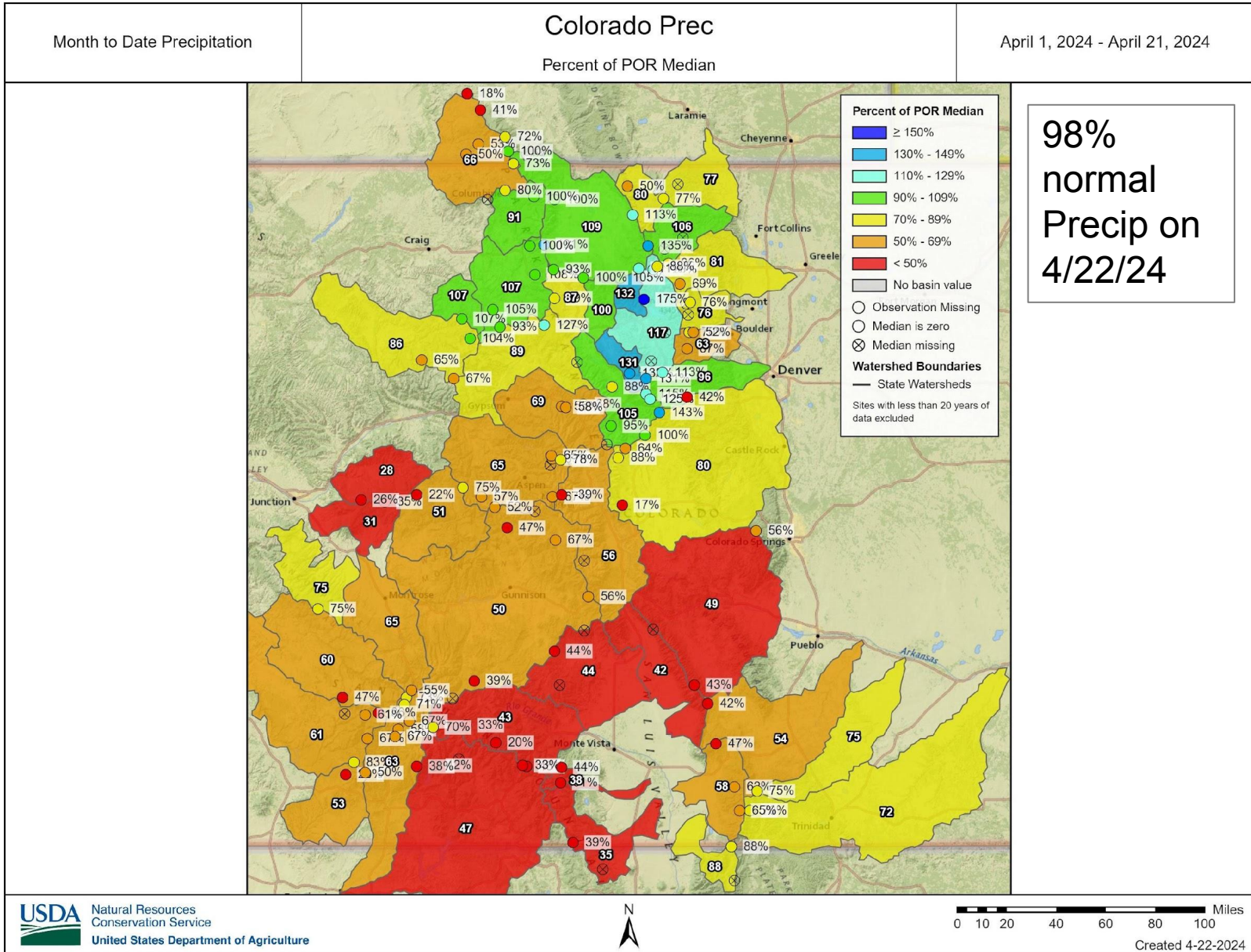




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# Colorado Snow Surveys

## MTD Precipitation

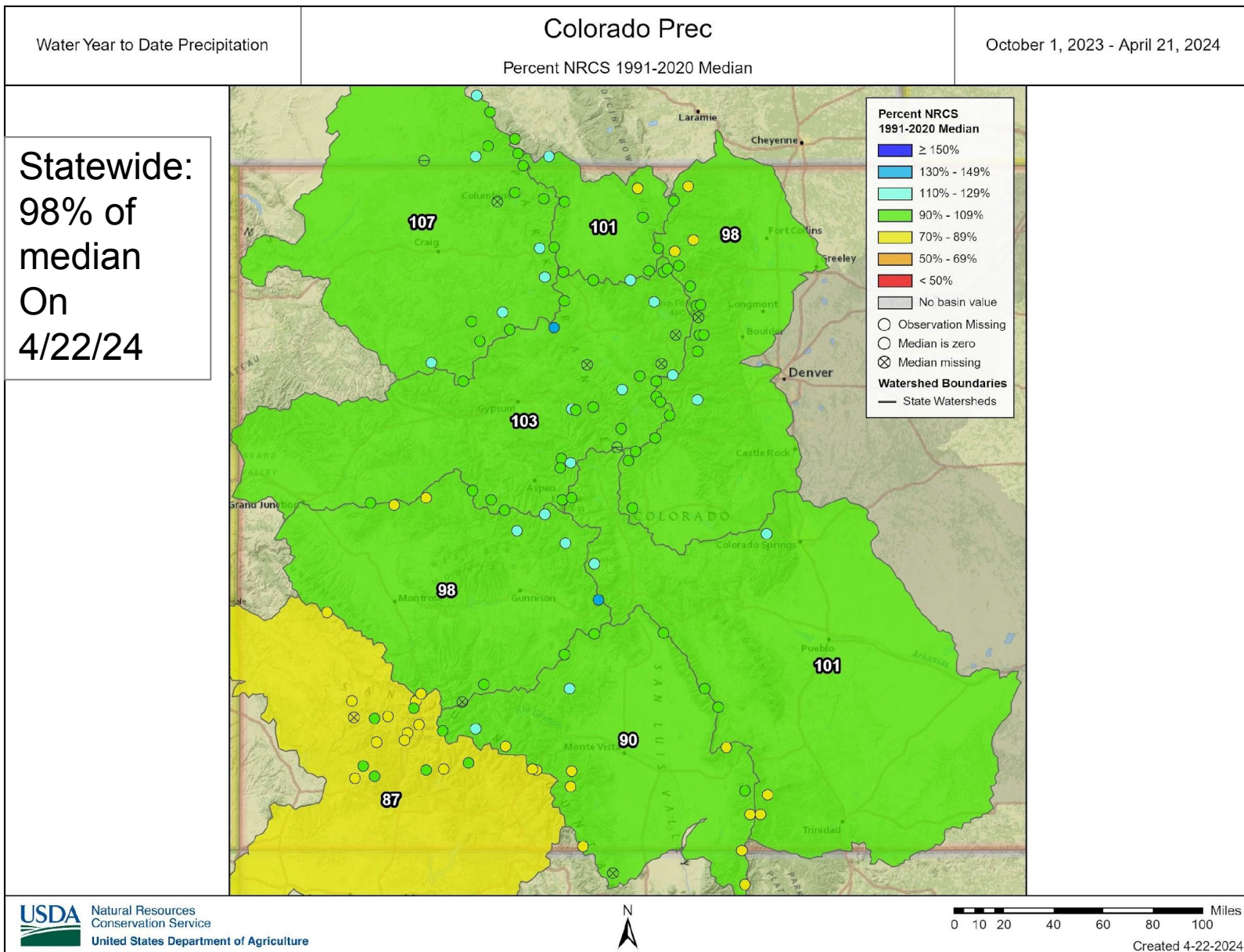




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# Colorado Snow Surveys

WY Precipitation







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# Colorado Snow Surveys

WY Precipitation

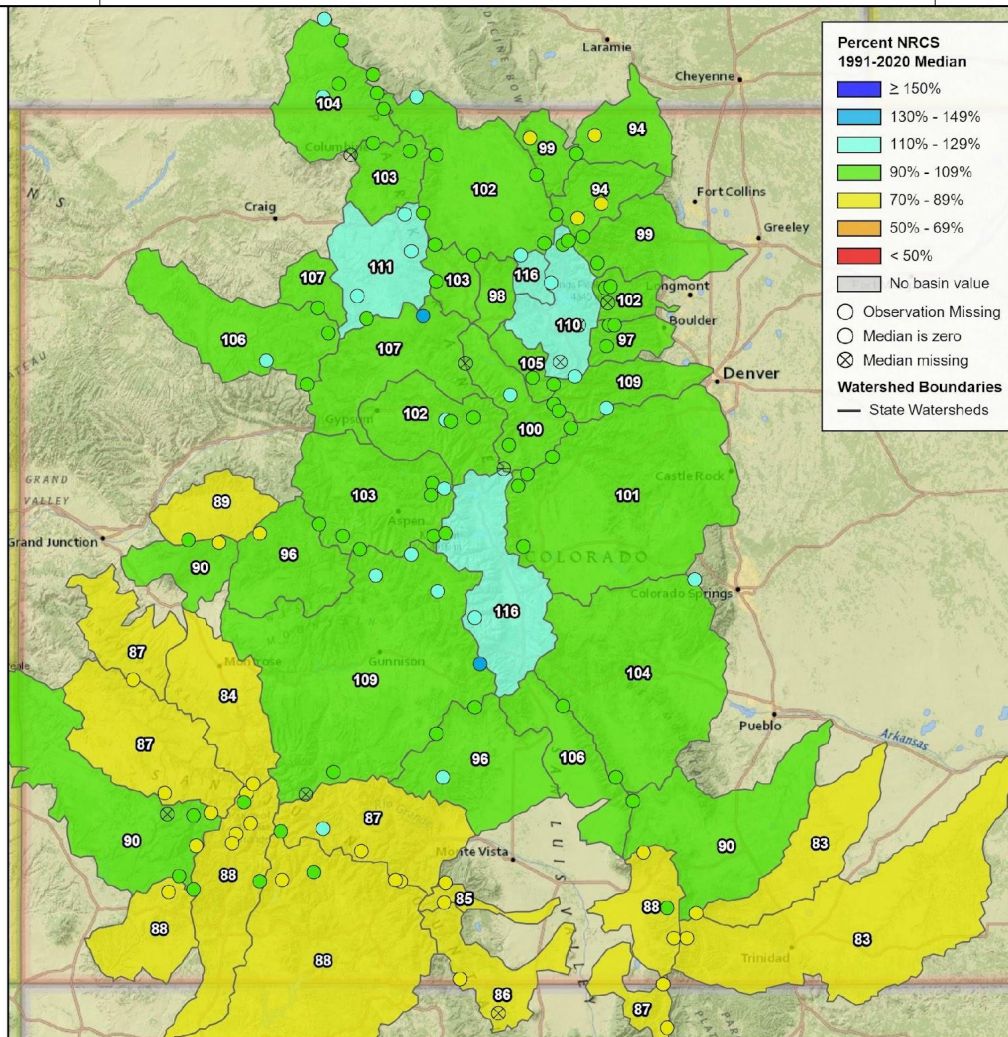
Water Year to Date Precipitation

## Colorado Prec

Percent NRCS 1991-2020 Median

October 1, 2023 - April 21, 2024

Statewide:  
98% of  
median  
On  
4/22/24



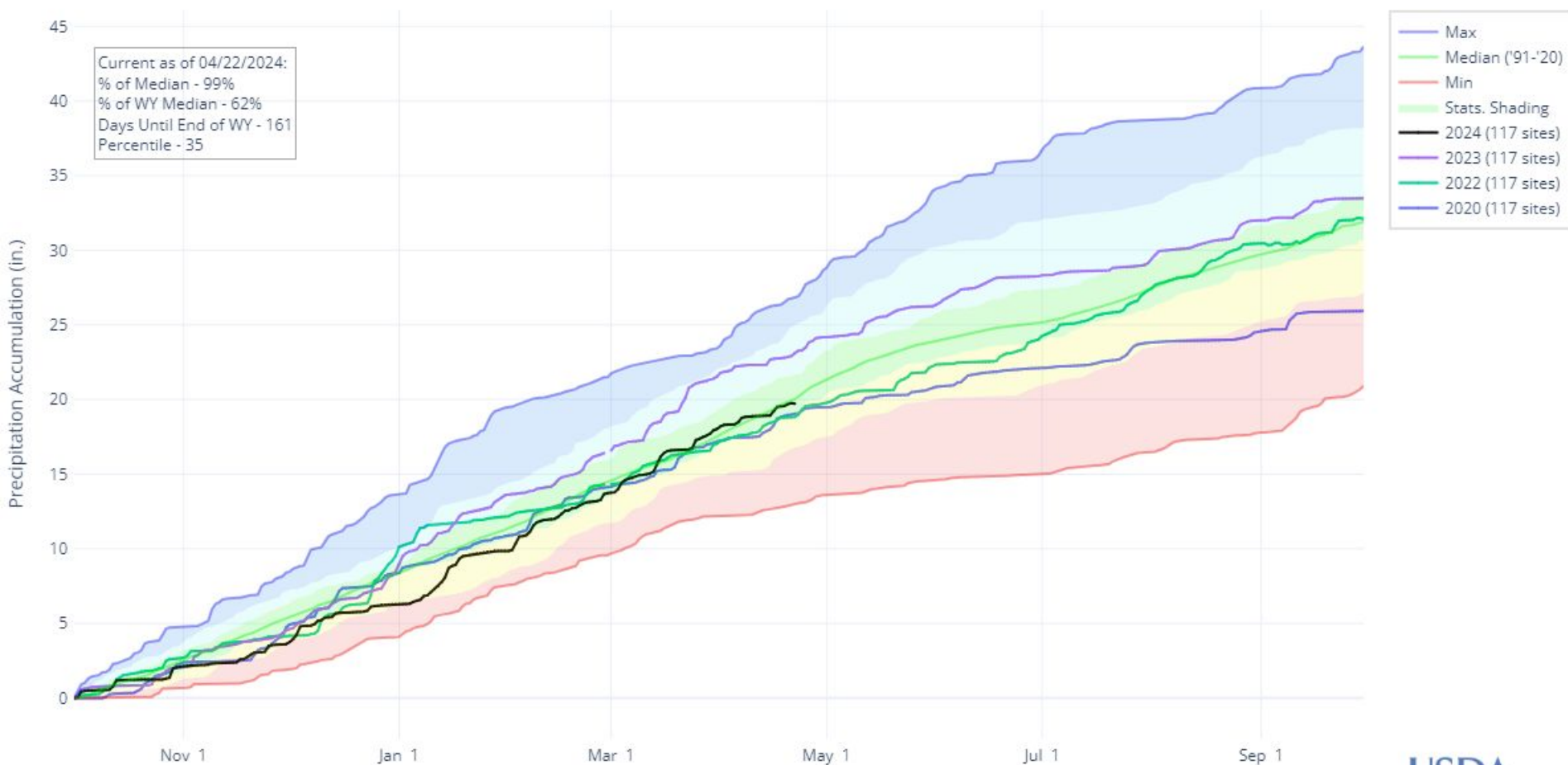
Natural Resources  
Conservation Service  
United States Department of Agriculture



0 10 20 40 60 80 100 Miles

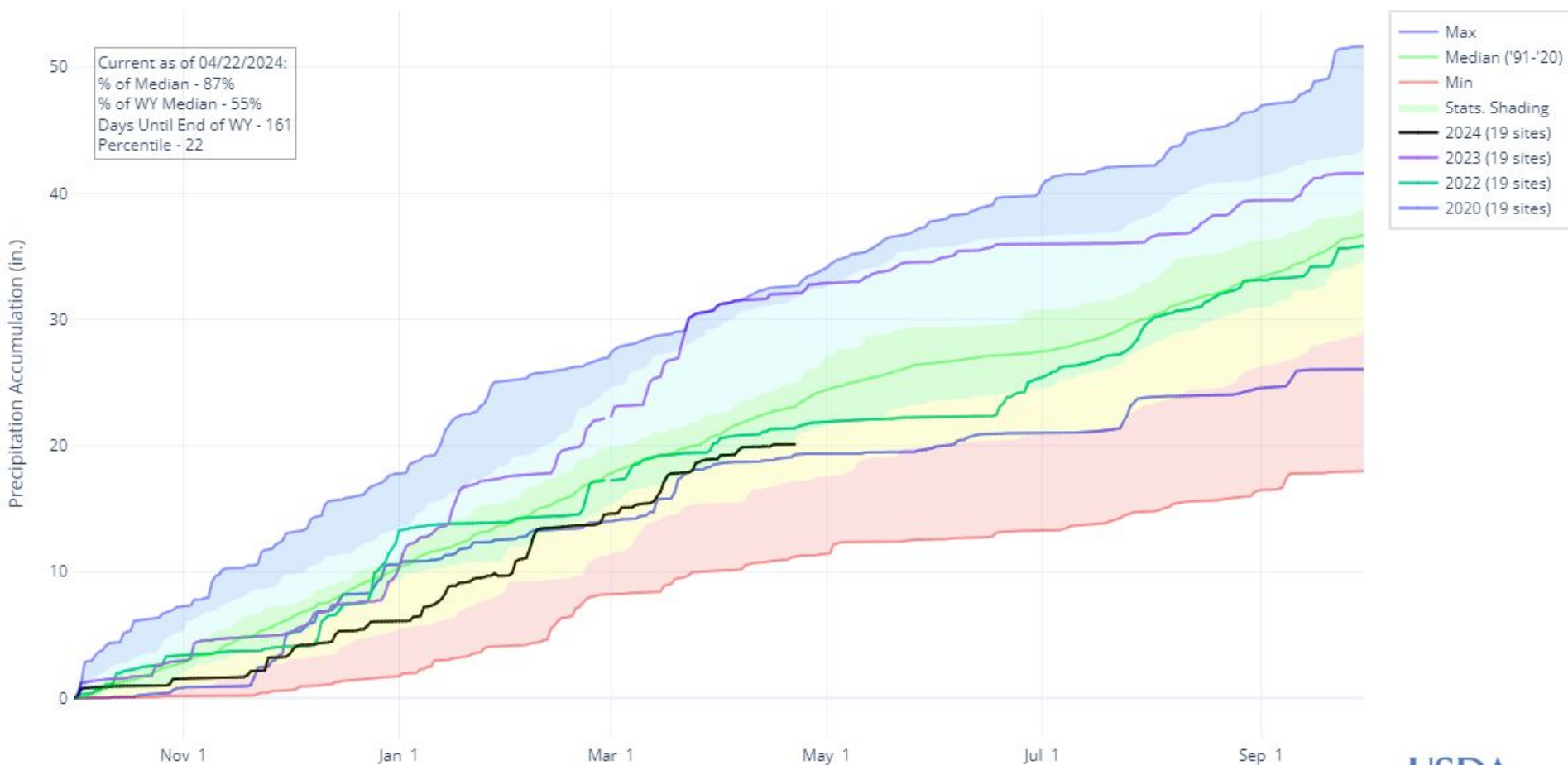
Created 4-22-2024

## PRECIPITATION ACCUMULATION IN STATE OF COLORADO

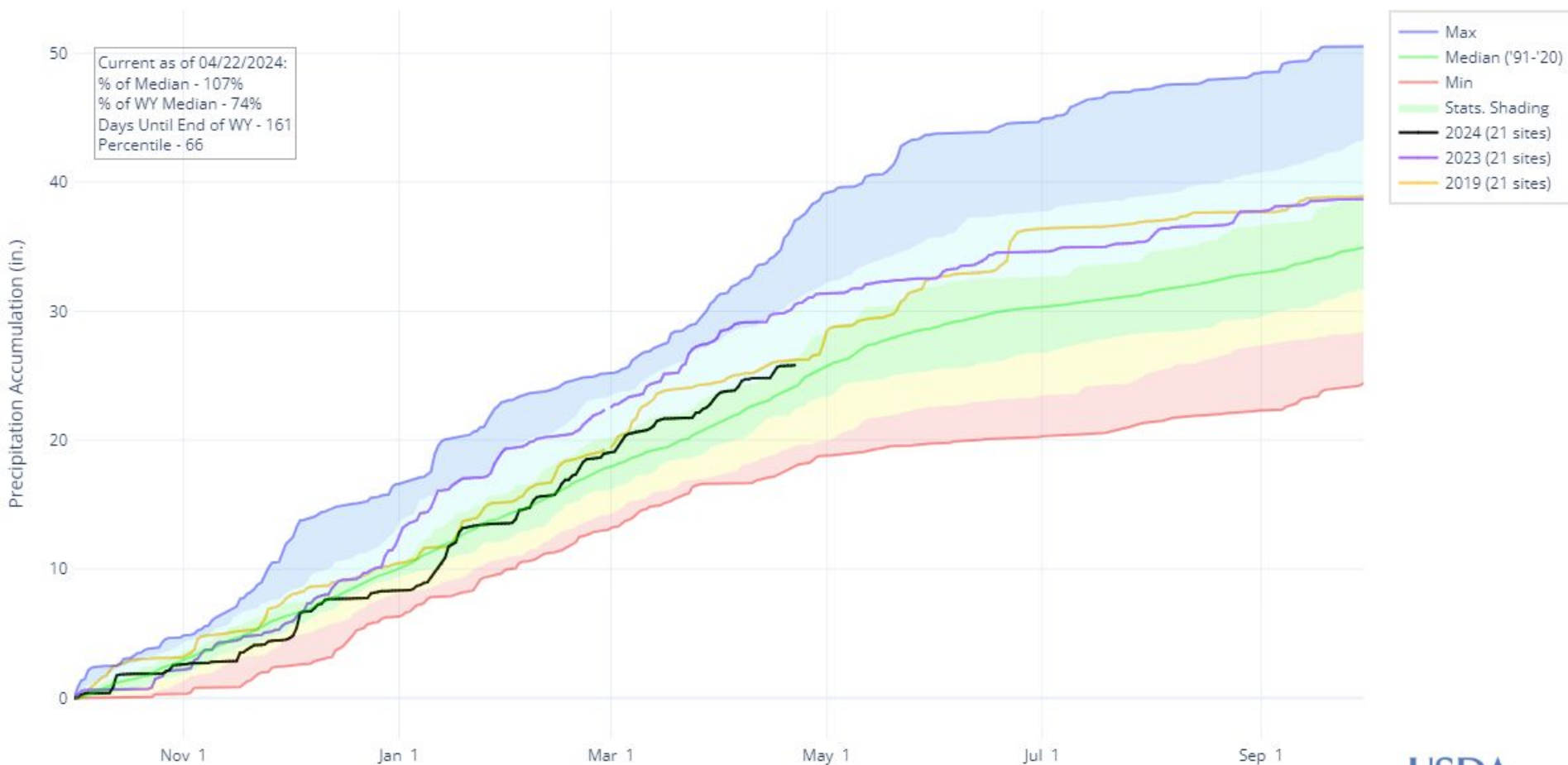




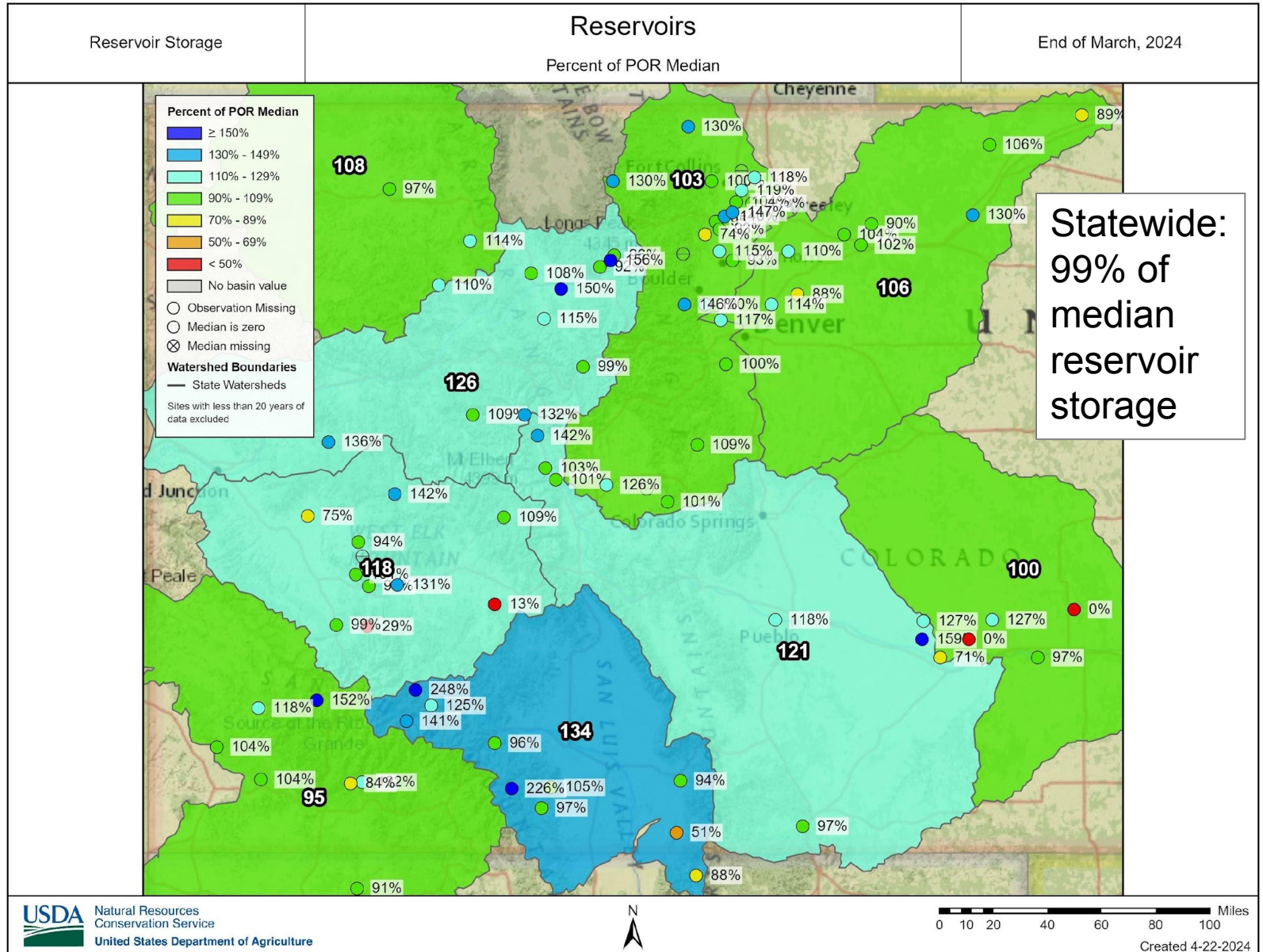
## PRECIPITATION ACCUMULATION IN SAN MIGUEL-DOLORES-ANIMAS-SAN JUAN



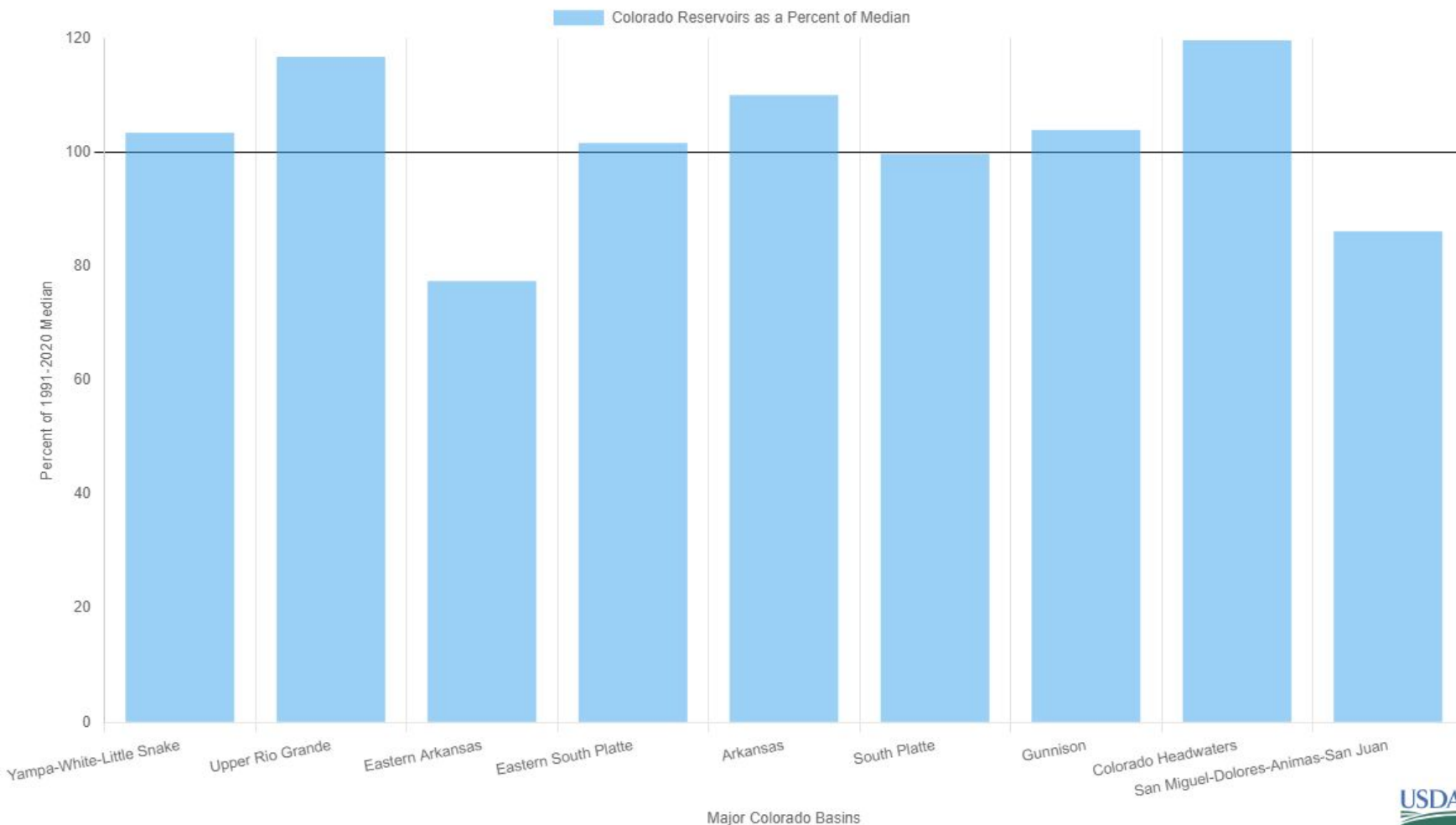
## PRECIPITATION ACCUMULATION IN YAMPA-WHITE-LITTLE SNAKE





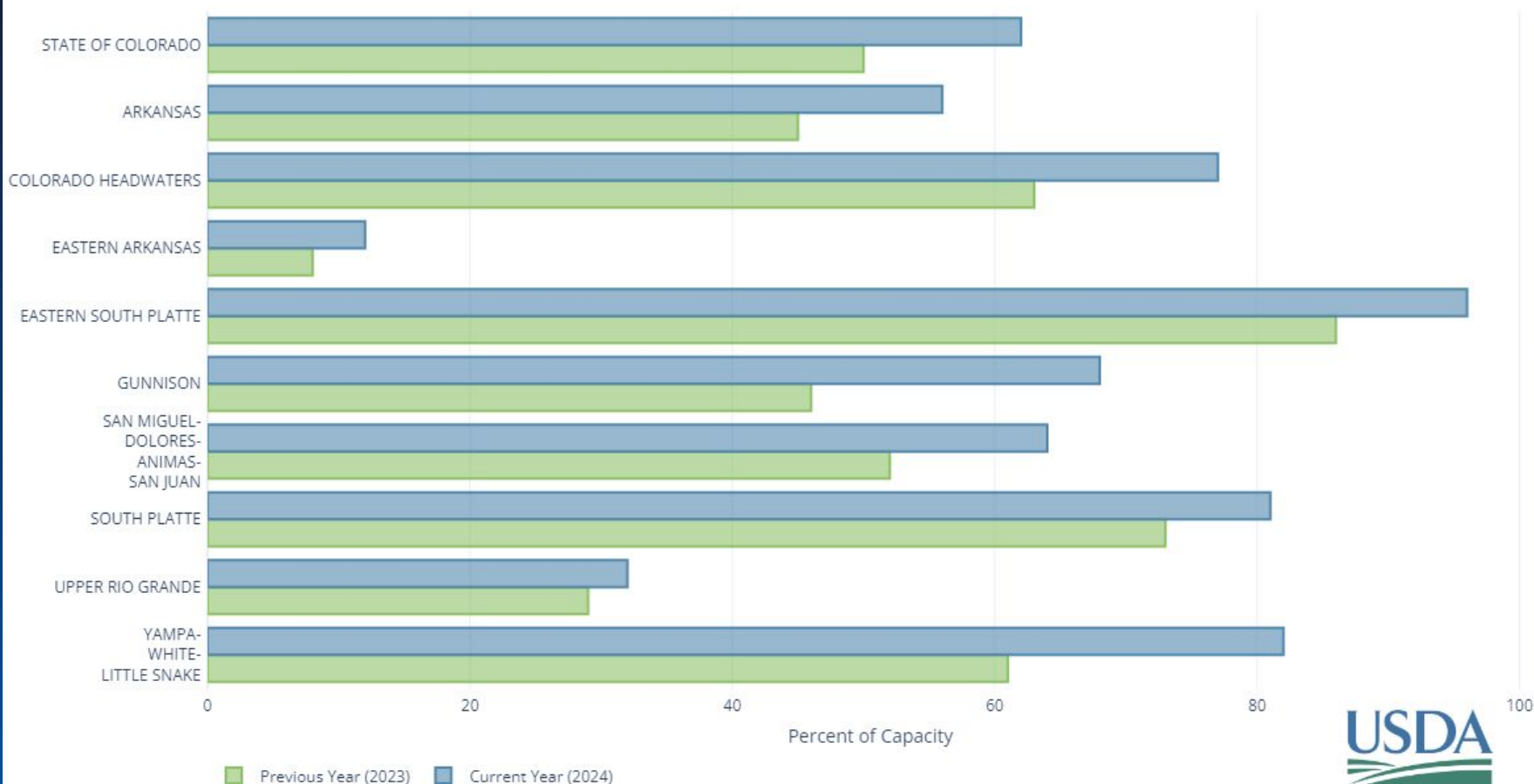


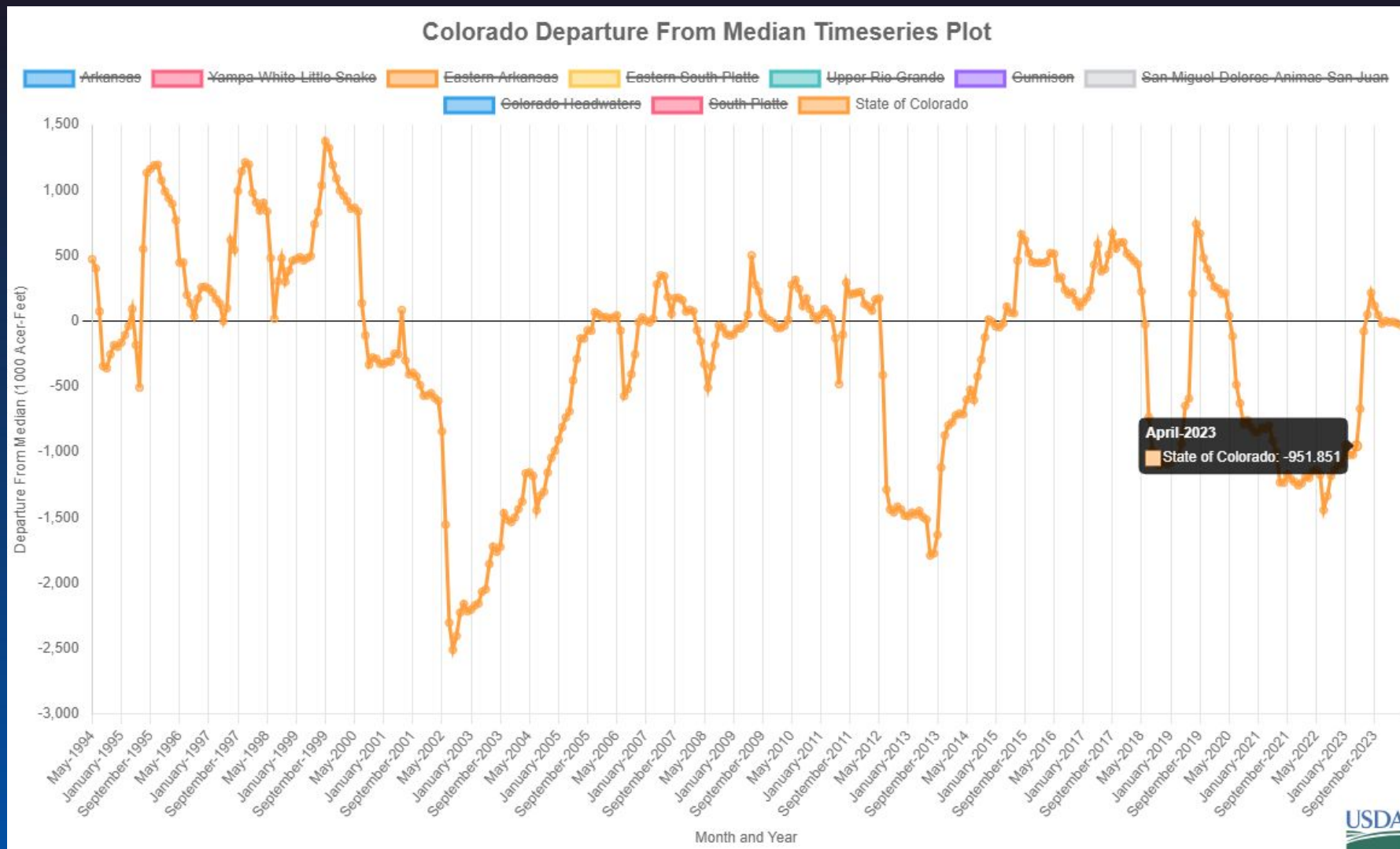
Colorado Reservoir Storage Summary for April 1st 2024





RESERVOIR STORAGE IN COLORADO  
END OF MARCH 2024







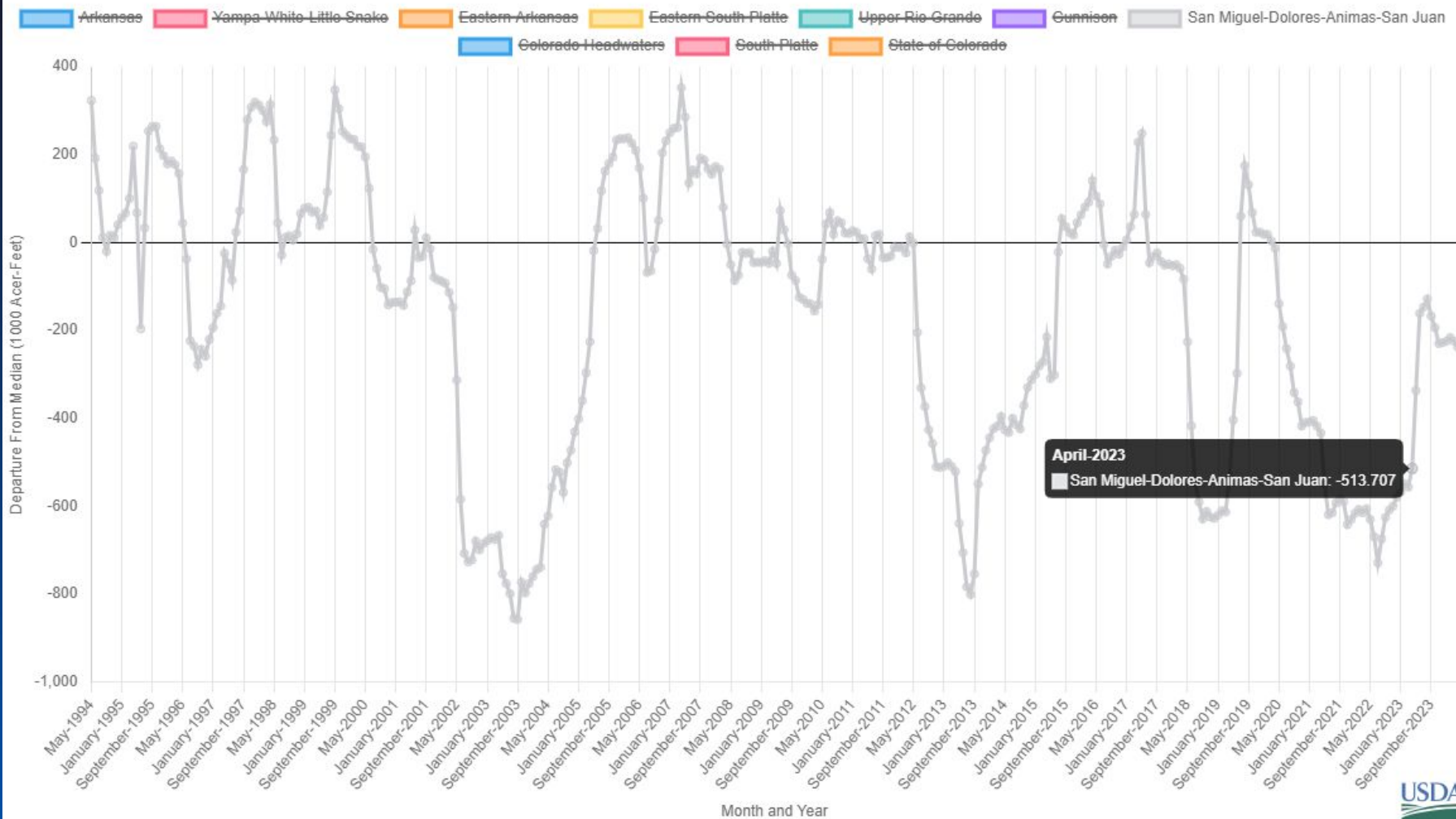


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# Colorado Snow Surveys

## SMDASJ Reservoir Storage

Colorado Departure From Median Timeseries Plot



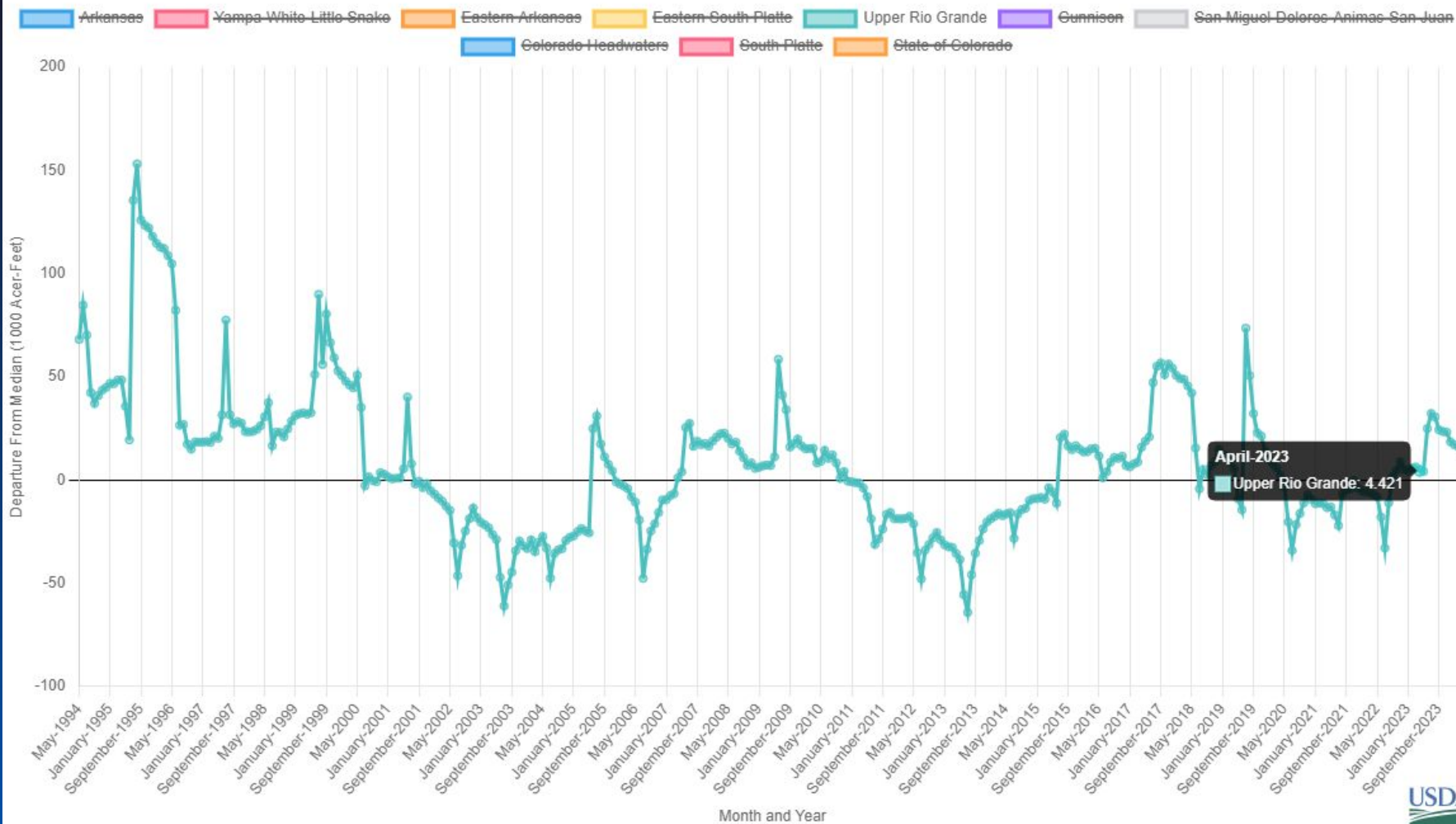


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# Colorado Snow Surveys

URG Reservoir Storage

Colorado Departure From Median Timeseries Plot





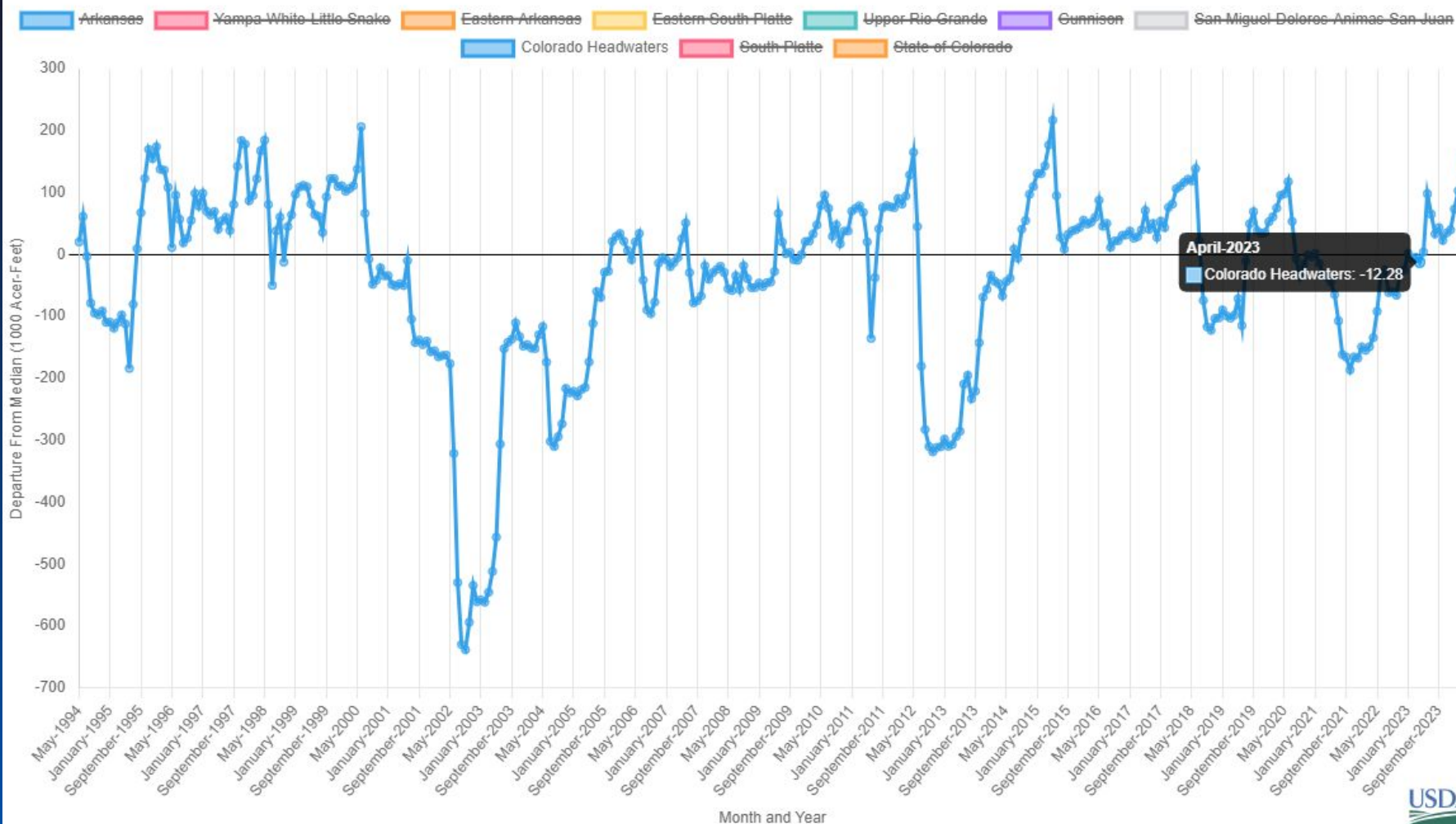


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# Colorado Snow Surveys

Colorado Headwaters Reservoir

Colorado Departure From Median Timeseries Plot

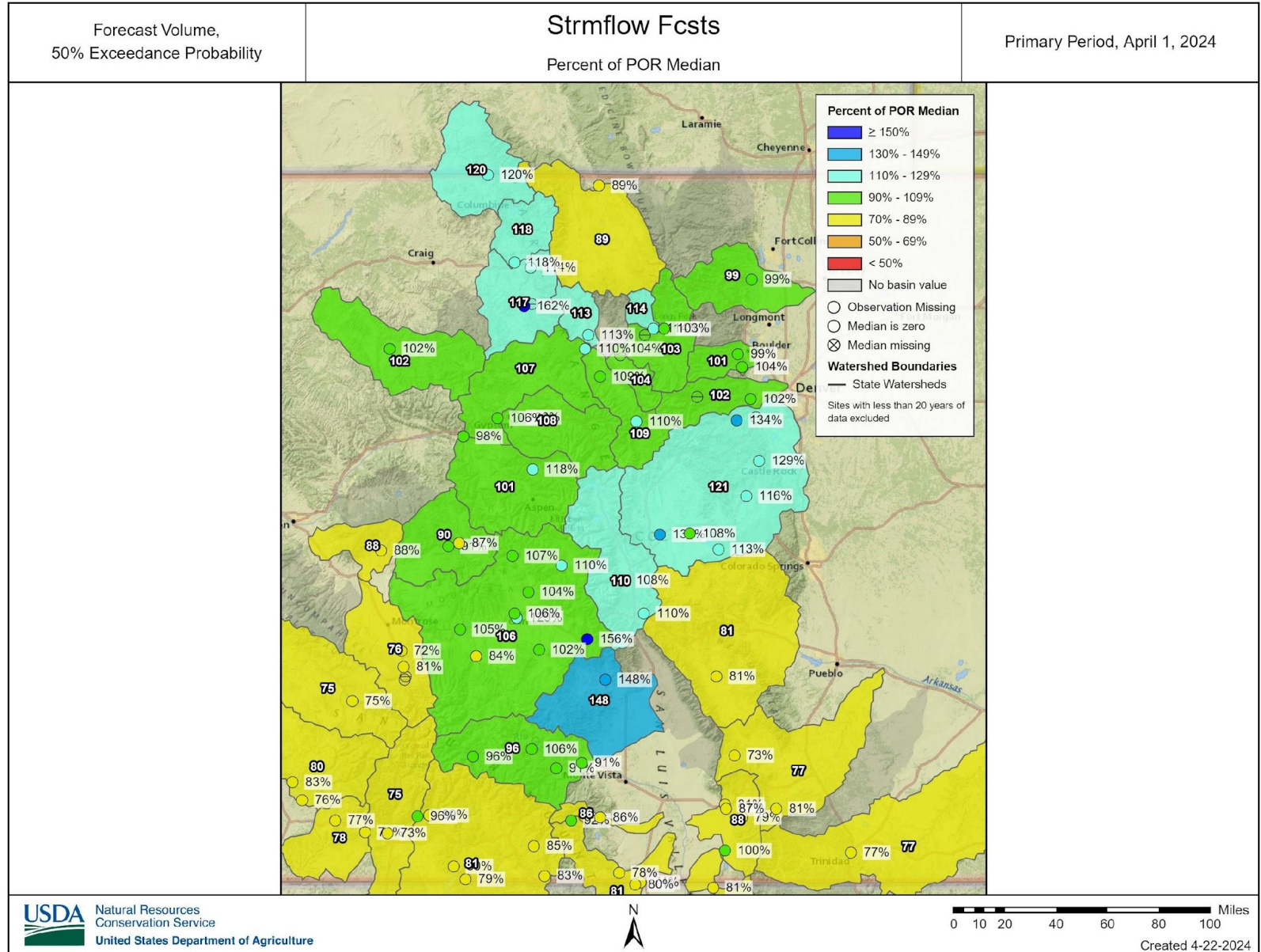




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# Colorado Snow Surveys

## Streamflow Forecasts



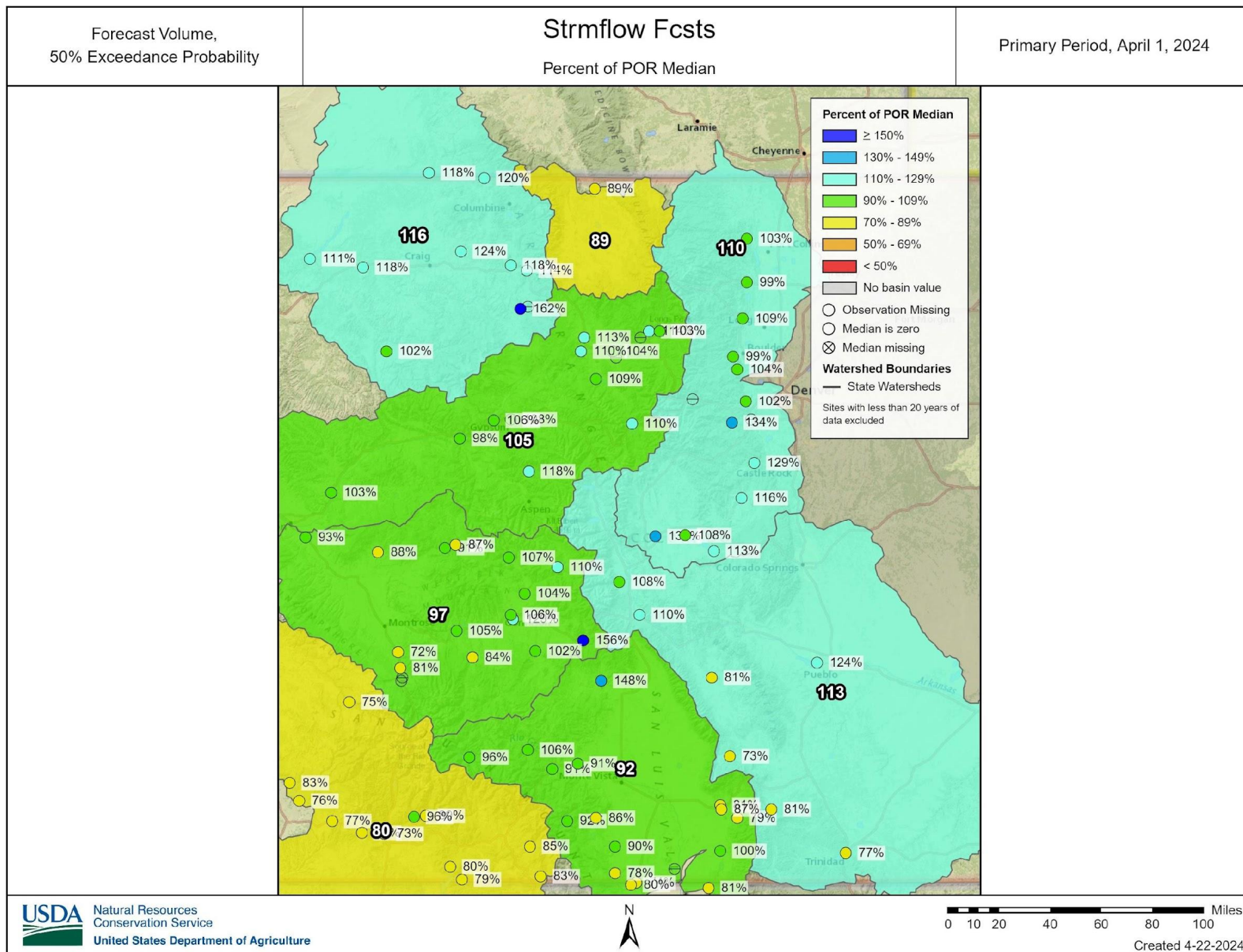




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# Colorado Snow Surveys

## Streamflow Forecasts



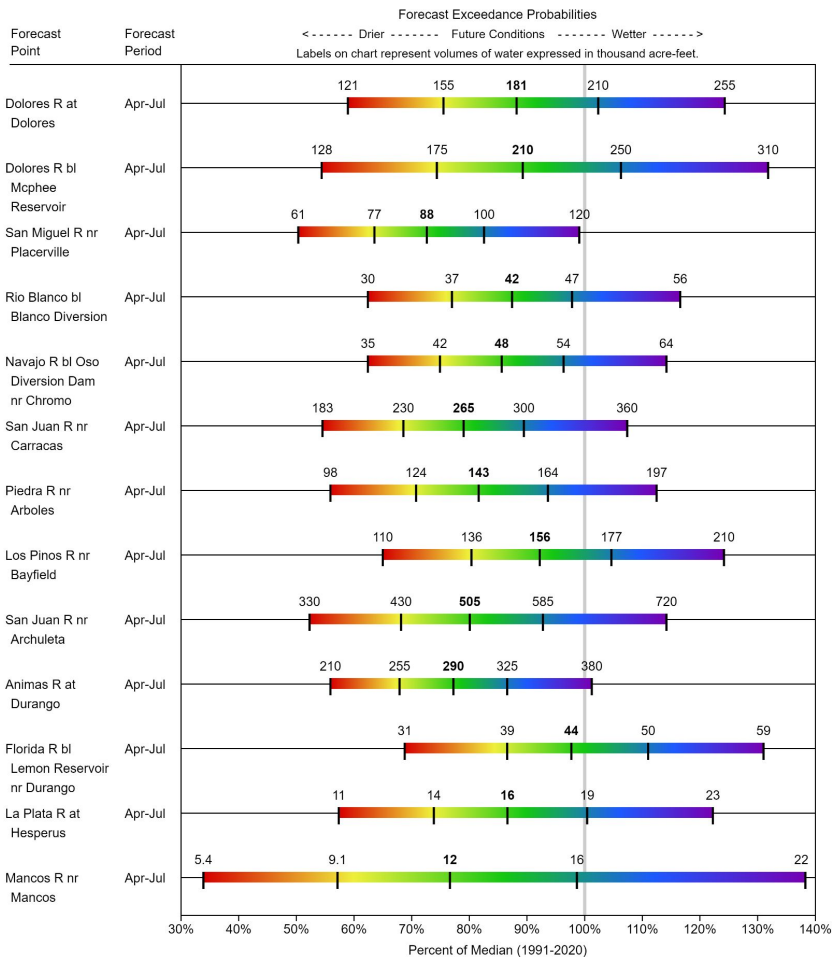


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## SAN MIGUEL-DOLORES-ANIMAS-SAN JUAN

### Water Supply Forecasts

April 1, 2024



#### Legend



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

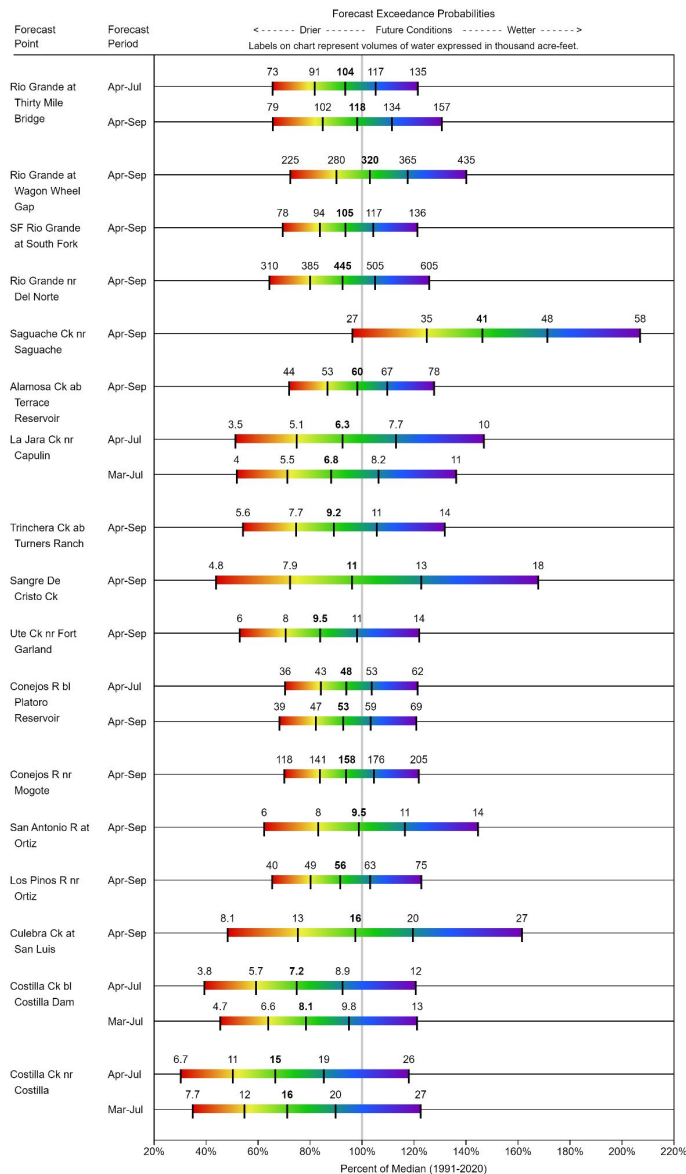
Period of Record Minimum Streamflow KAF (Year) 1991-2020 Normal Streamflow KAF Observed Streamflow KAF Period of Record Maximum Streamflow KAF (Year)

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

## UPPER RIO GRANDE

### Water Supply Forecasts

April 1, 2024



#### 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.

Streamflow Forecasts

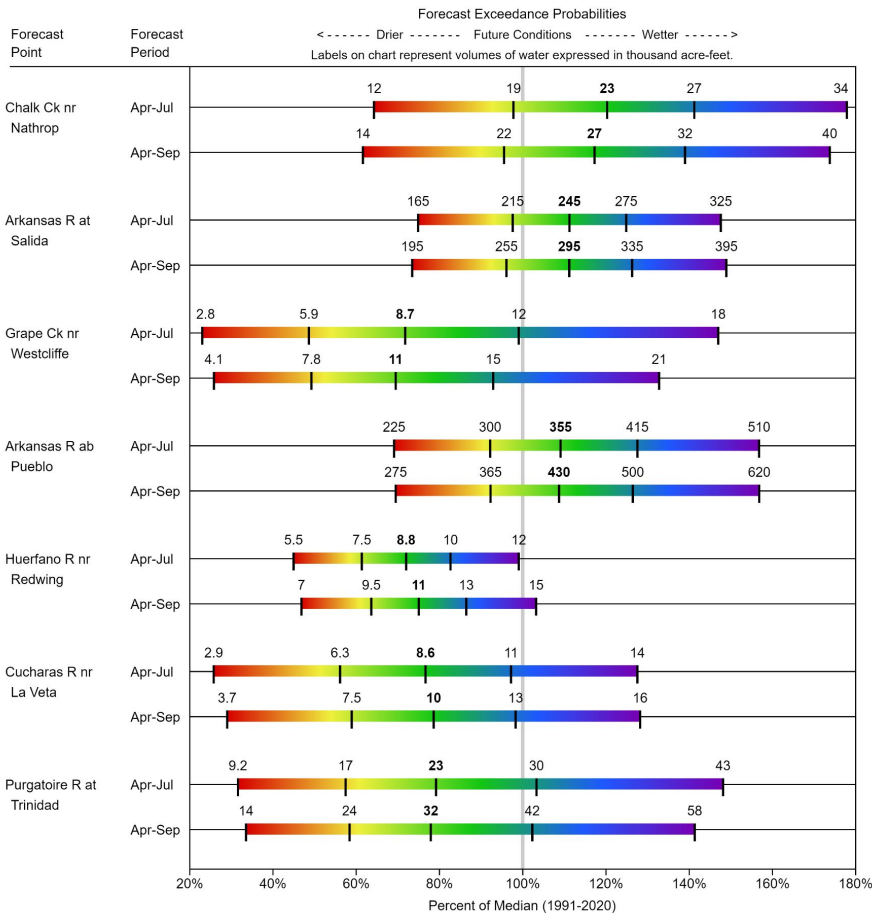


United States Department of Agriculture

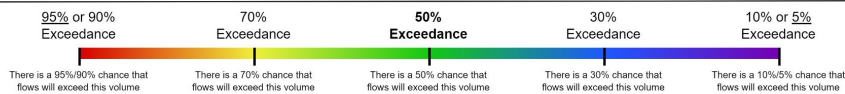
# Colorado Snow Surveys

## Streamflow Forecasts

### ARKANSAS Water Supply Forecasts April 1, 2024



#### Legend

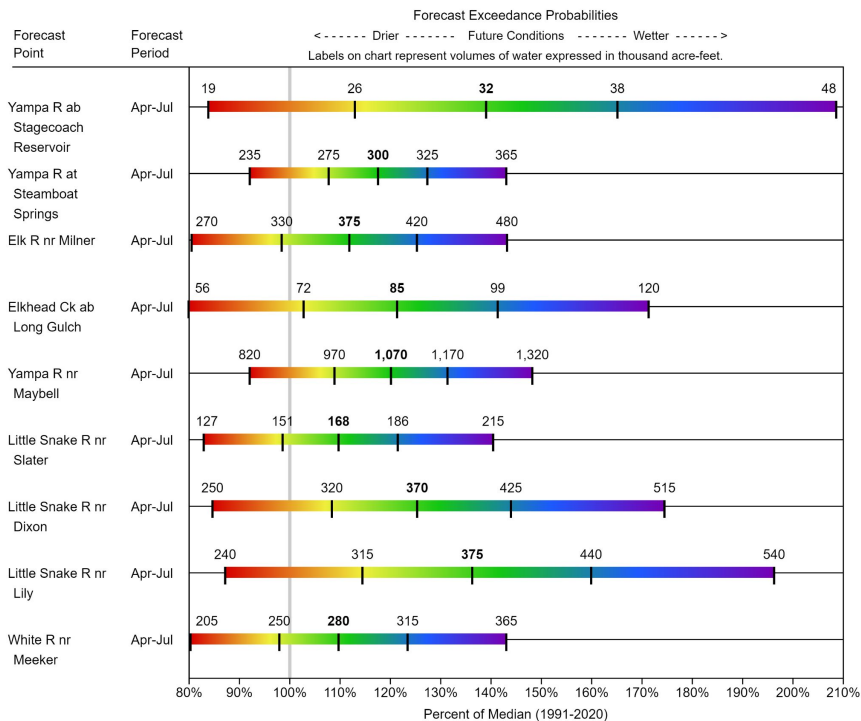


When selected, the following historic streamflow values and statistics will be shown.

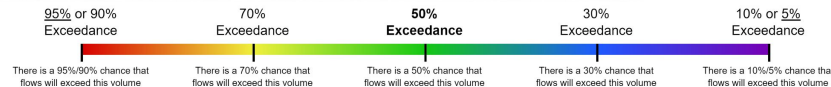


Some forecasts may be for volumes that are regulated or influenced by diversions and water management.

### YAMPA-WHITE-LITTLE SNAKE Water Supply Forecasts April 1, 2024



#### Legend



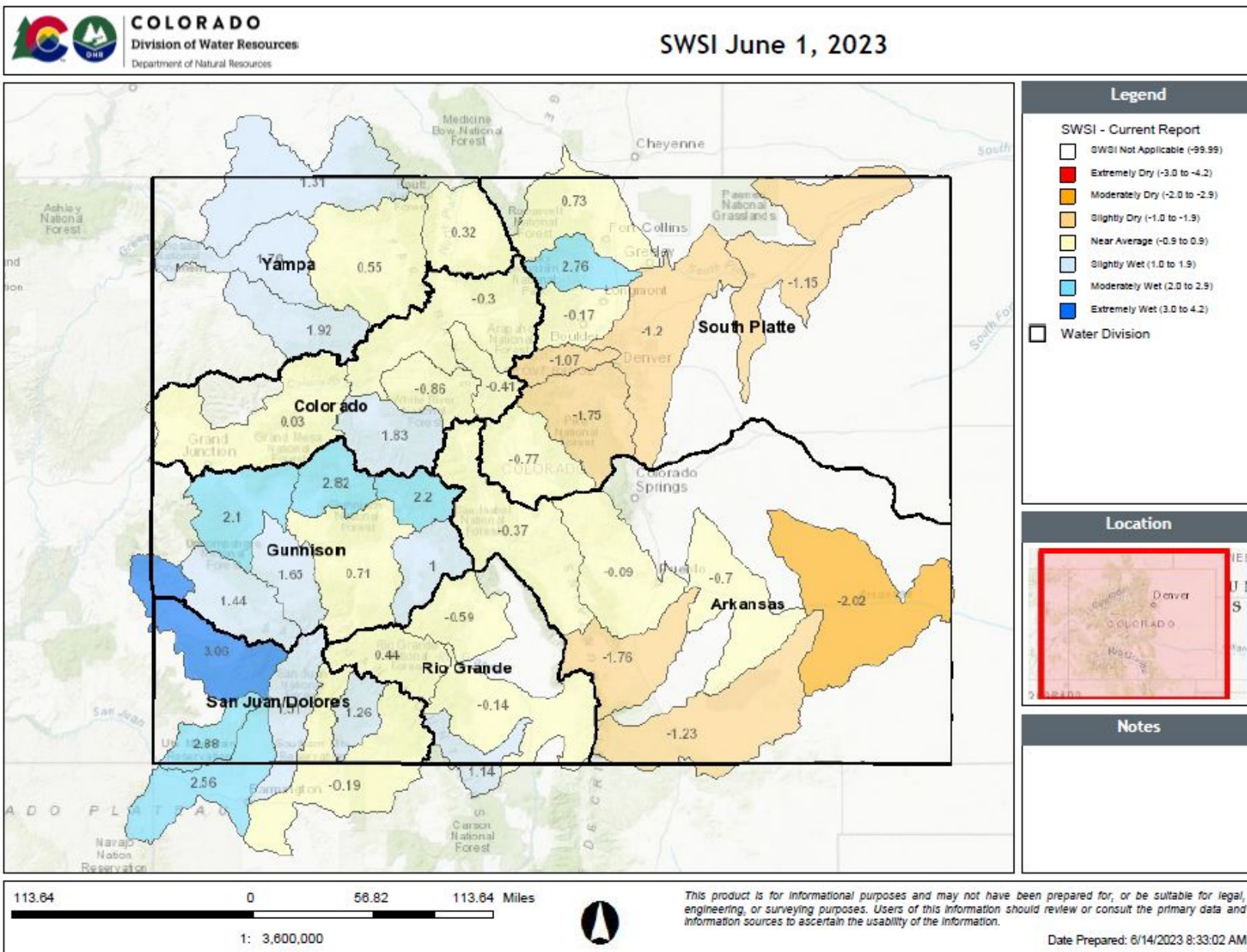
When selected, the following historic streamflow values and statistics will be shown.



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



June 1, 2023 SWSI



## Summary

- Statewide snowpack is 95% of median.
  - Lowest basin is the SMDASJ @ 81%
- Snowpack Peaked at 98% of median.
- Northern Basins are currently right at normal
- Southern Basins are melting snow faster than usual
- Late March storm pattern helped boost snowpack
- Dry in Southern CO since 4/3
- Peak snowpack achieved in most basins, decreasing chance of peaking again in Northern CO
- Statewide reservoir storage is 99% of median
- Streamflows this summer range from below to above normal.
  - Most Southern Basins are projected for below normal runoff
  - Northern Basins are projected for near normal runoff
  - Recent dry in south point toward lower runoff.



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United States Department of Agriculture

Colorado Snow Surveys

# Water Conditions Monitoring Committee Meeting

April 23<sup>rd</sup>, 2024

## NRCS Snow Survey and Water Supply Forecasting Program

Brian Domonkos

Hydrologist

Brian.Domonkos@usda.gov

720-544-2853

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