



United States Department of Agriculture

Colorado Snow Surveys

Water Availability Task Force Meeting

January 18th, 2022

NRCS Snow Survey and Water Supply Forecasting Program

Brian Domonkos

Hydrologist

Asst. Snow Survey Supervisor

720-544-2852

<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.
 - IT required a change to new servers. As a result links and webpages have changed.
 - Data resource links are not be affected.
 - Products resource webpages and links will be affected.
 - Working as fast possible to minimize product interruptions. Most products have been replaced. However, some interruptions remain.
 - Changes are requiring considerable work and entirely new tools to generate the replacement products.
- Additional future changes are slated for Oct 1, 2022.
 - 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
- 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.

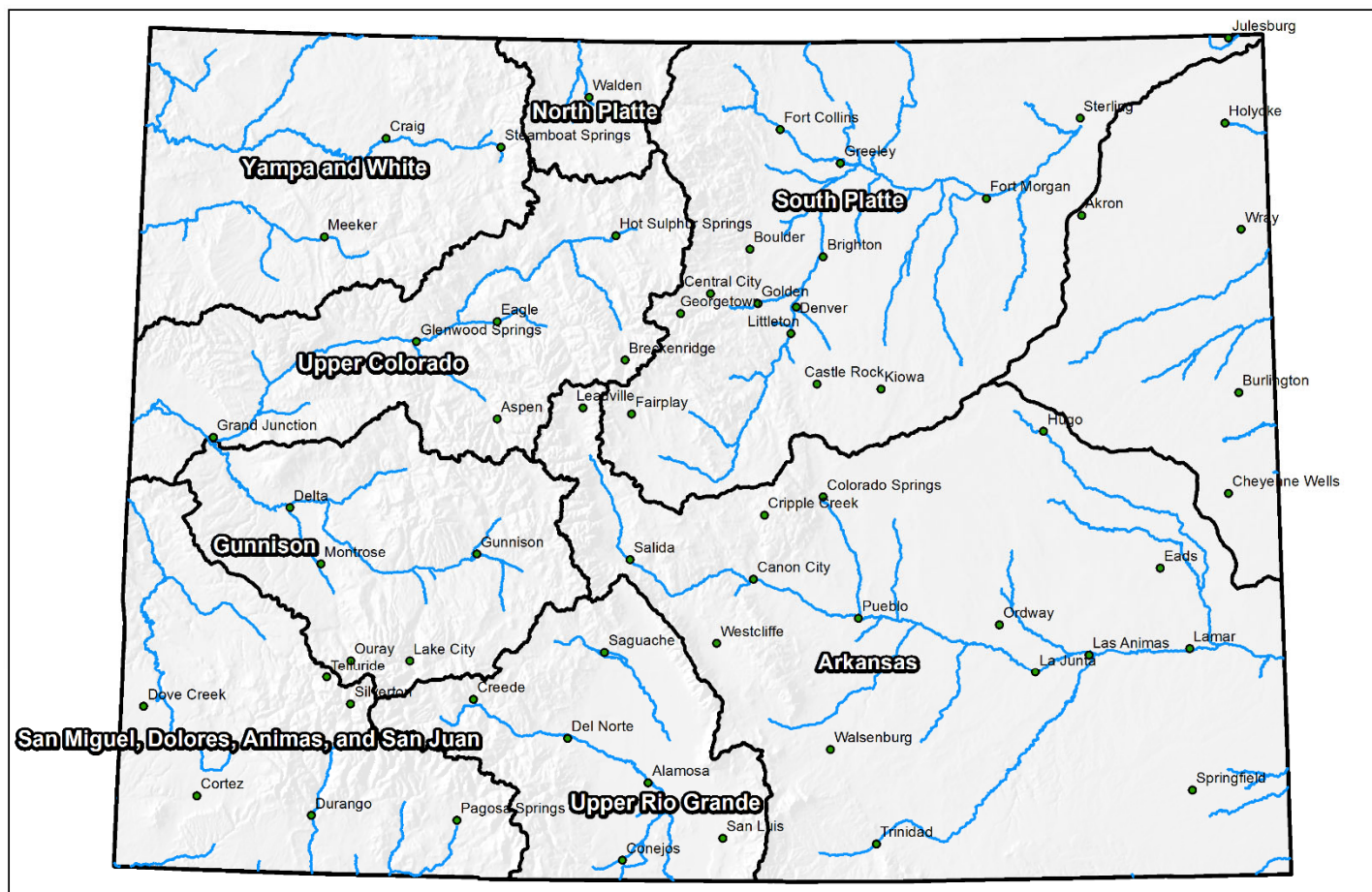


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Colorado Snow Surveys

Colorado Statewide Summary

Colorado Major Basins



0 25 50 100 150 200 Miles



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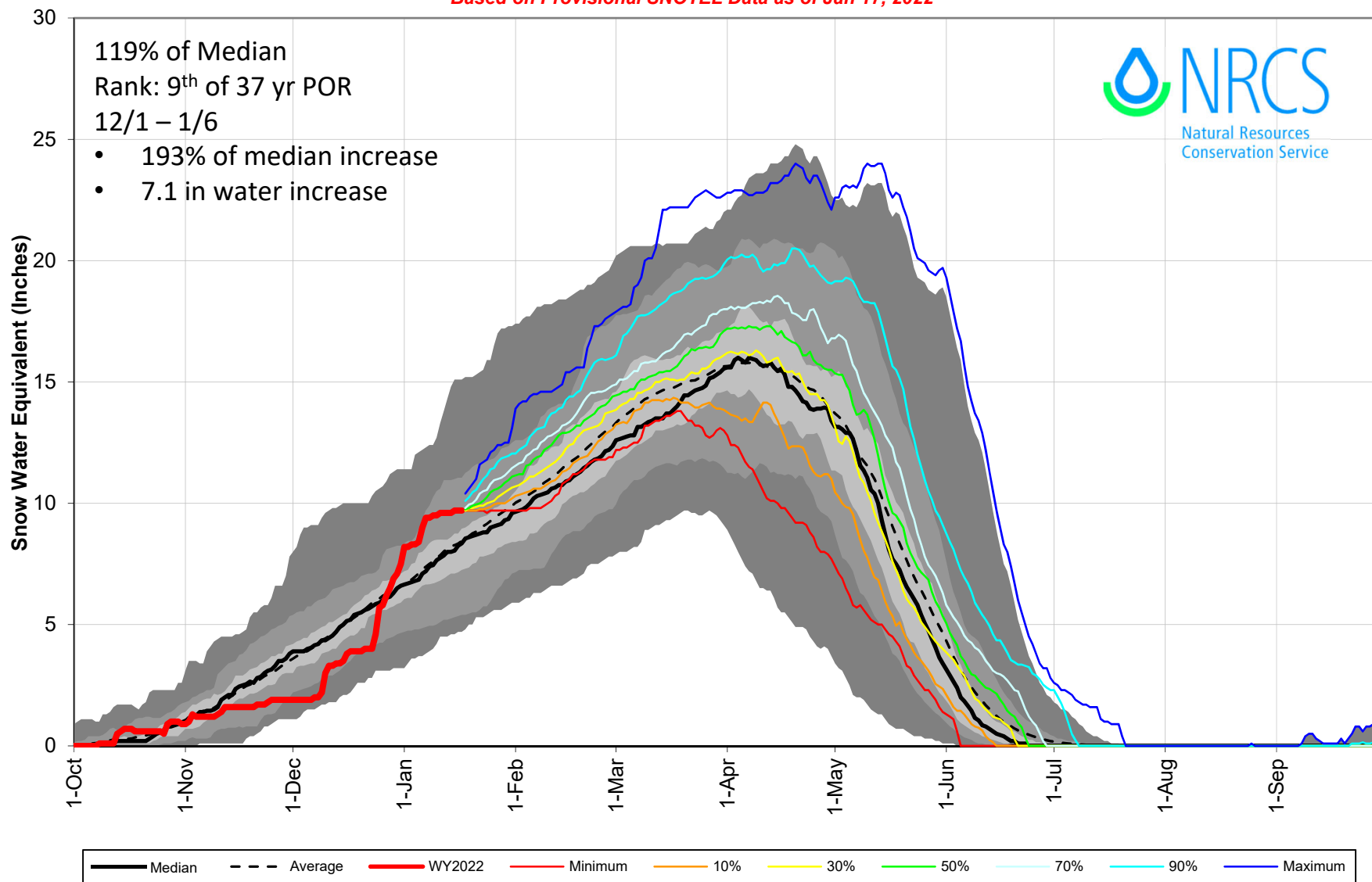


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Colorado Snow Surveys

Colorado Statewide Snowpack with Non-Exceedence Projections

Based on Provisional SNOTEL Data as of Jan 17, 2022





Colorado Snow Surveys

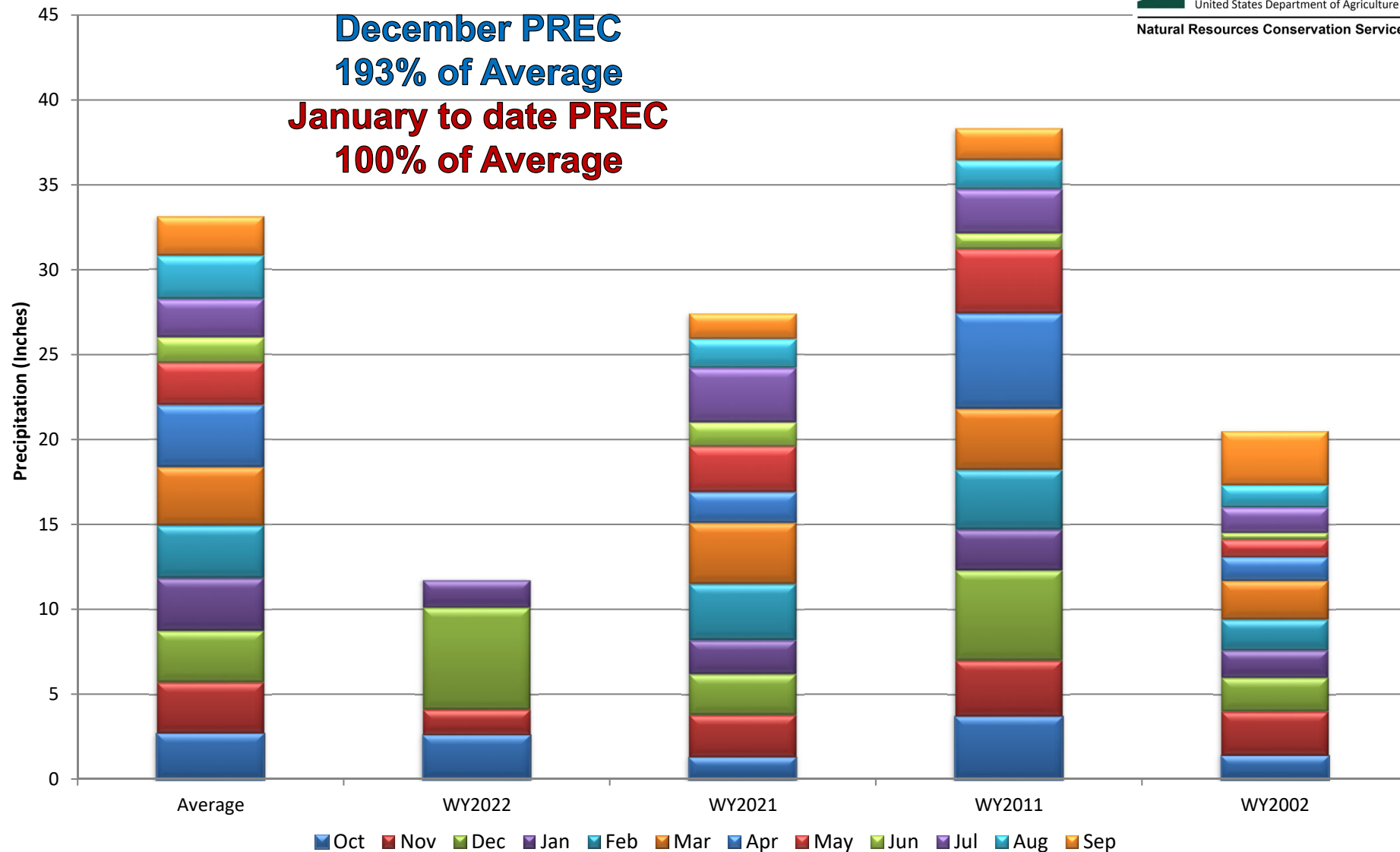
Colorado Statewide High/Low Monthly Precipitation Summary

Based on Provisional SNOTEL data as of Jan 17, 2022



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Natural Resources Conservation Service



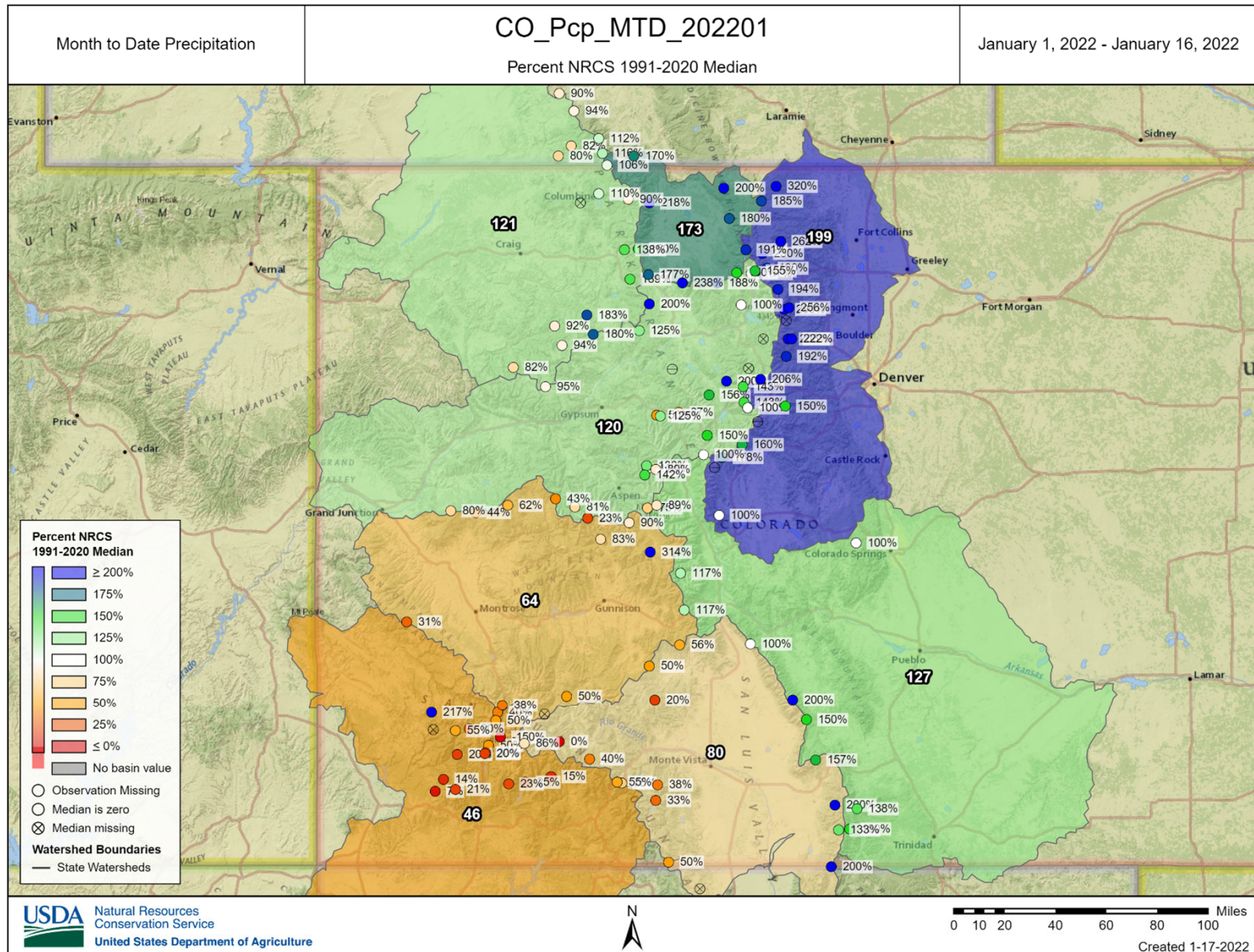
Slide 5

DB-NDC [2]1 Domonkos, Brian - NRCS, Denver, CO, 2/15/2021



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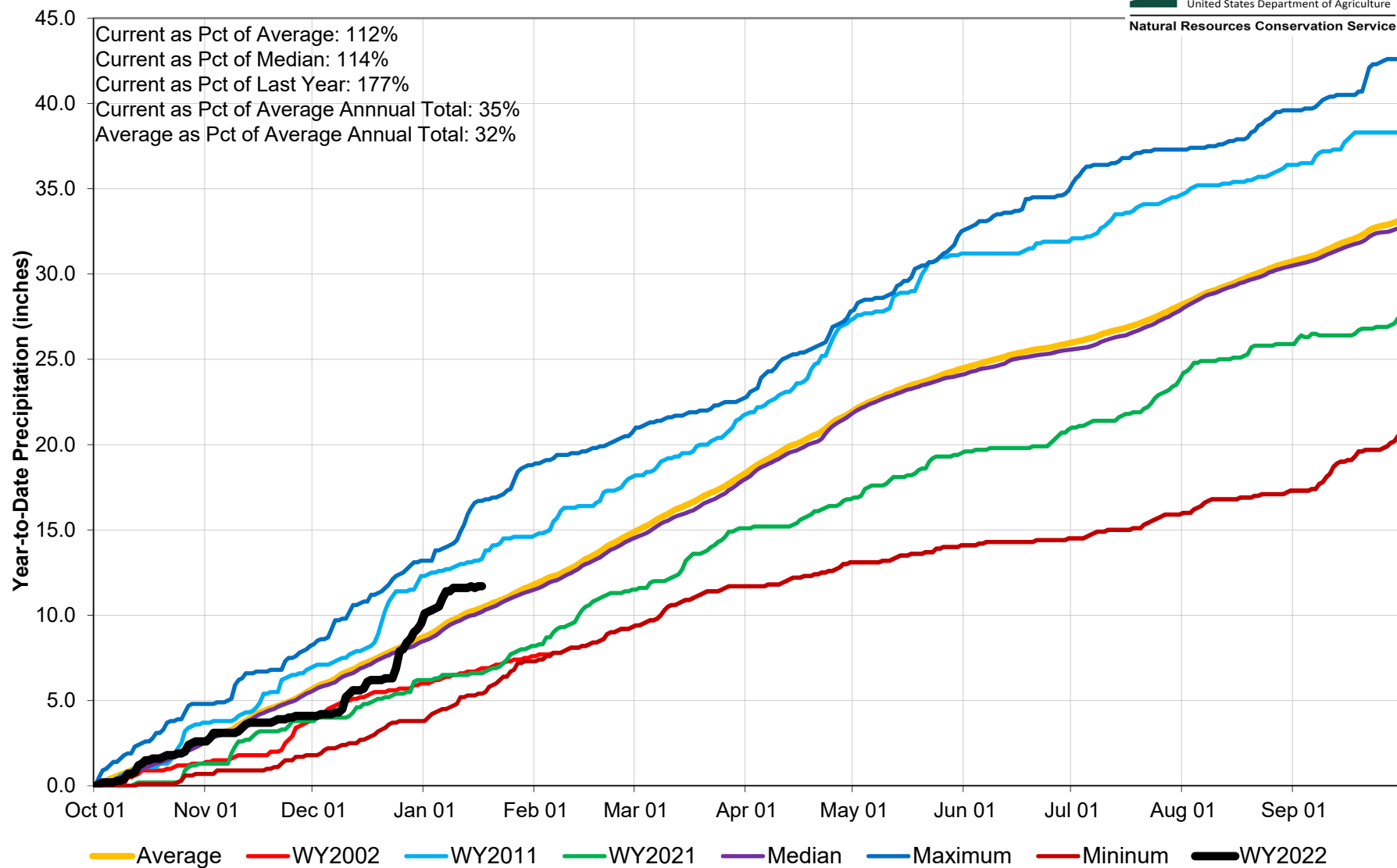
Colorado Statewide High/Low Year-to-Date Precipitation Summary

Based on Provisional SNOTEL data as of Jan 17, 2022



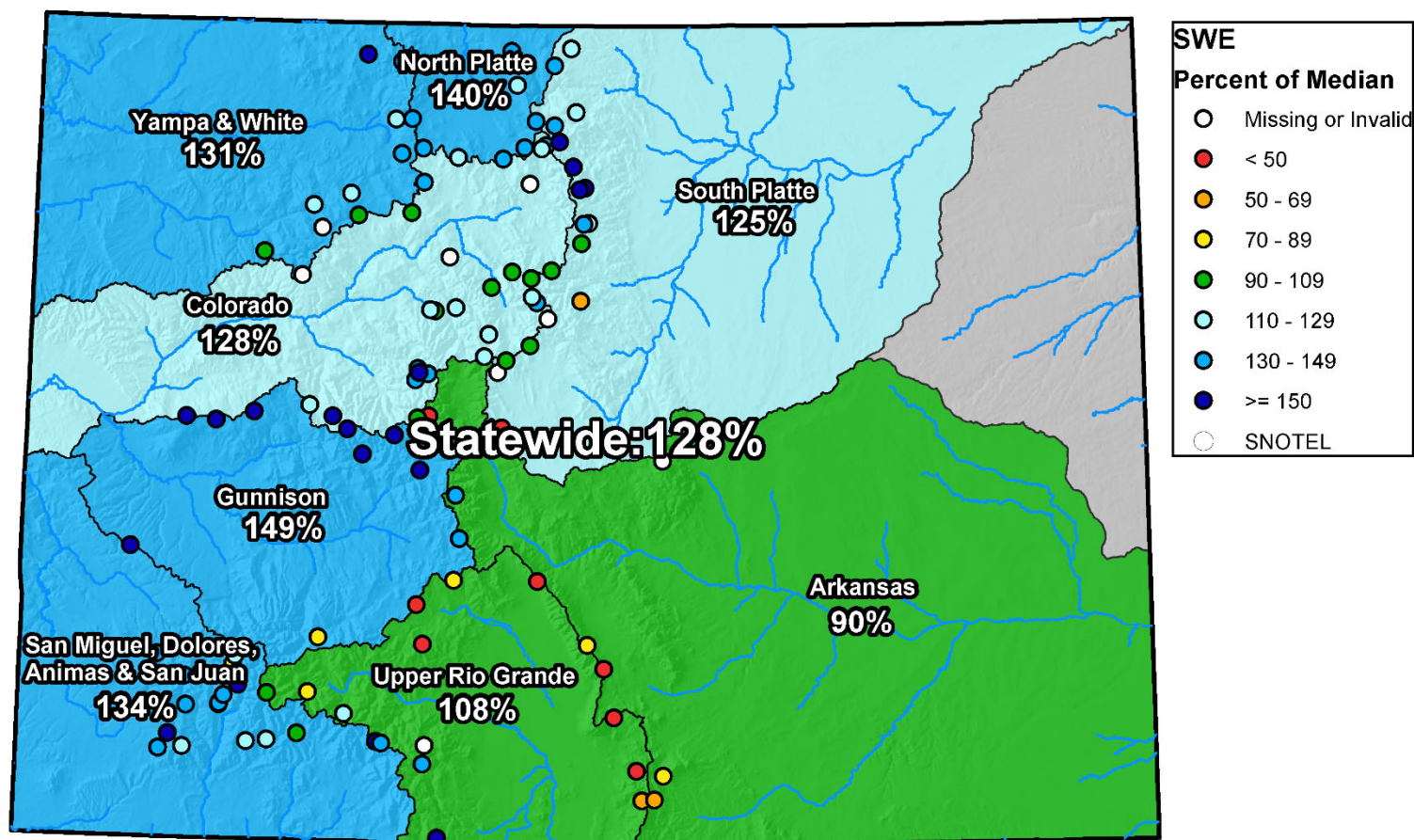
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Colorado SNOTEL Snow Water Equivalent (SWE) Update Map with Site Data

Current as of Jan 10, 2022



0 25 50 100 150 200 Miles



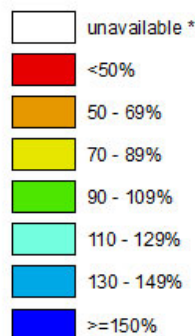
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Jan 16, 2022

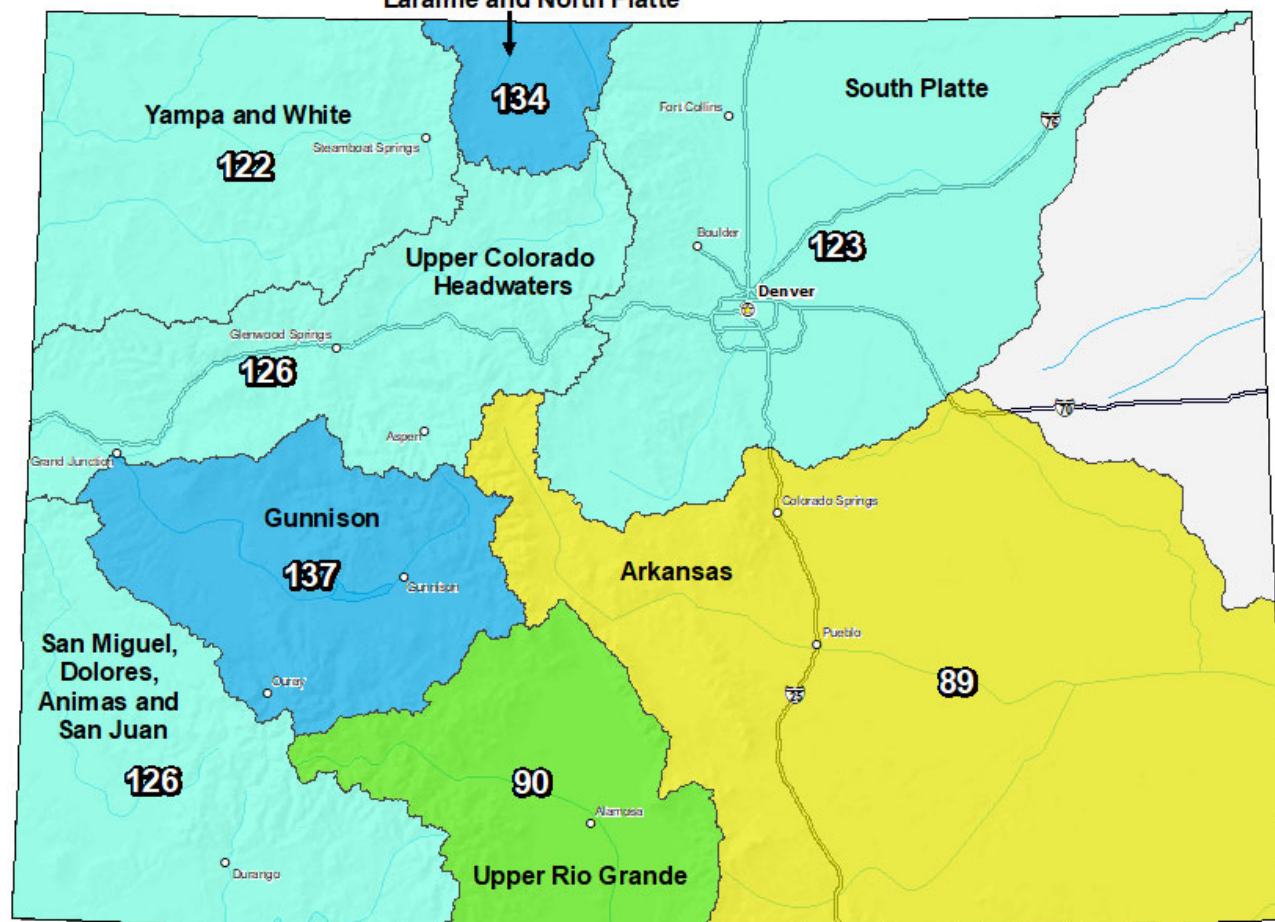
Colorado SNOTEL Current Snow Water Equivalent (SWE) % of Normal Laramie and North Platte

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*



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).

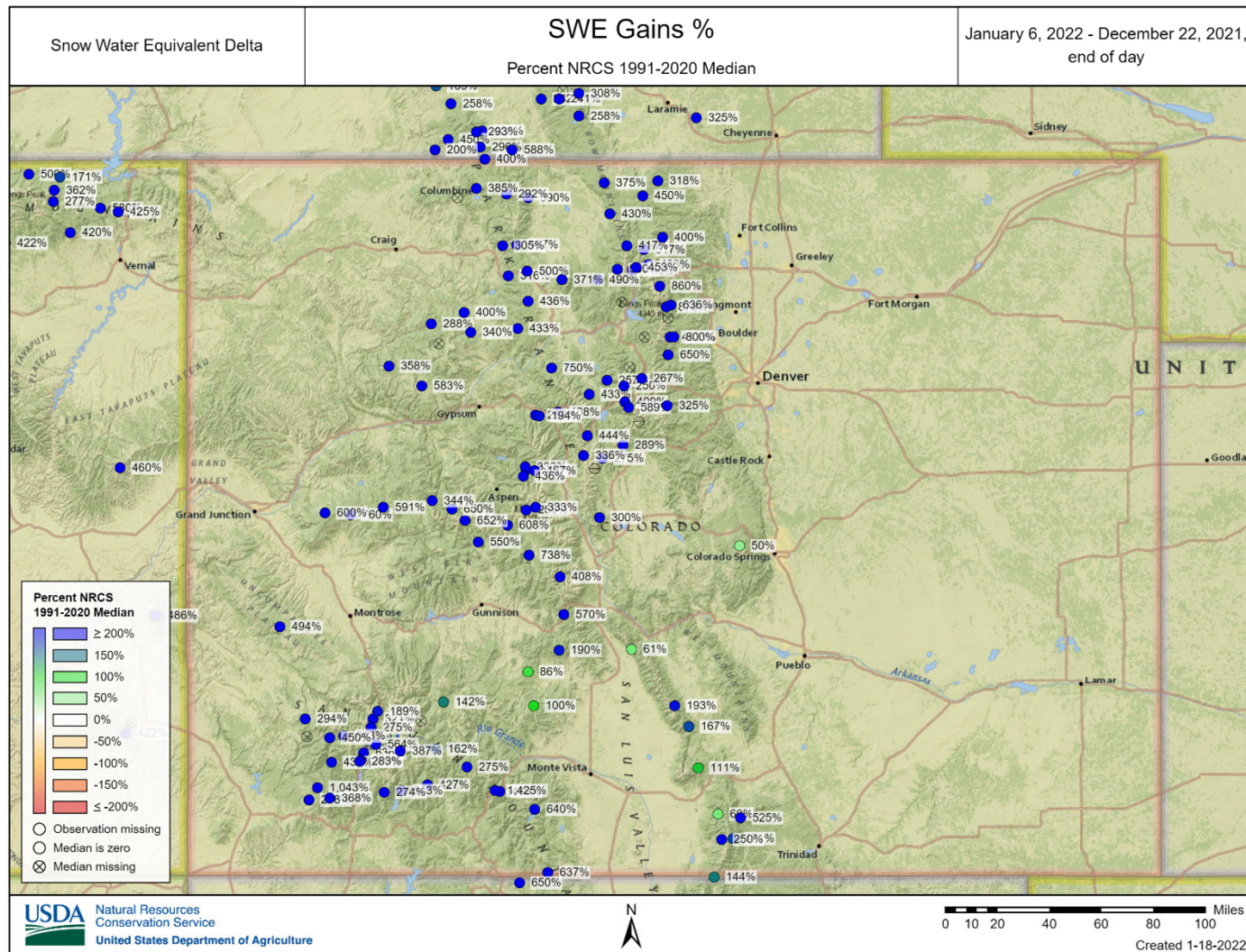
Prepared by:
USDA/NRCS National Water and Climate Center
Portland, Oregon
<https://www.nrcs.usda.gov/wps/portal/wcc/home/>



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Impressive SWE Gains in %

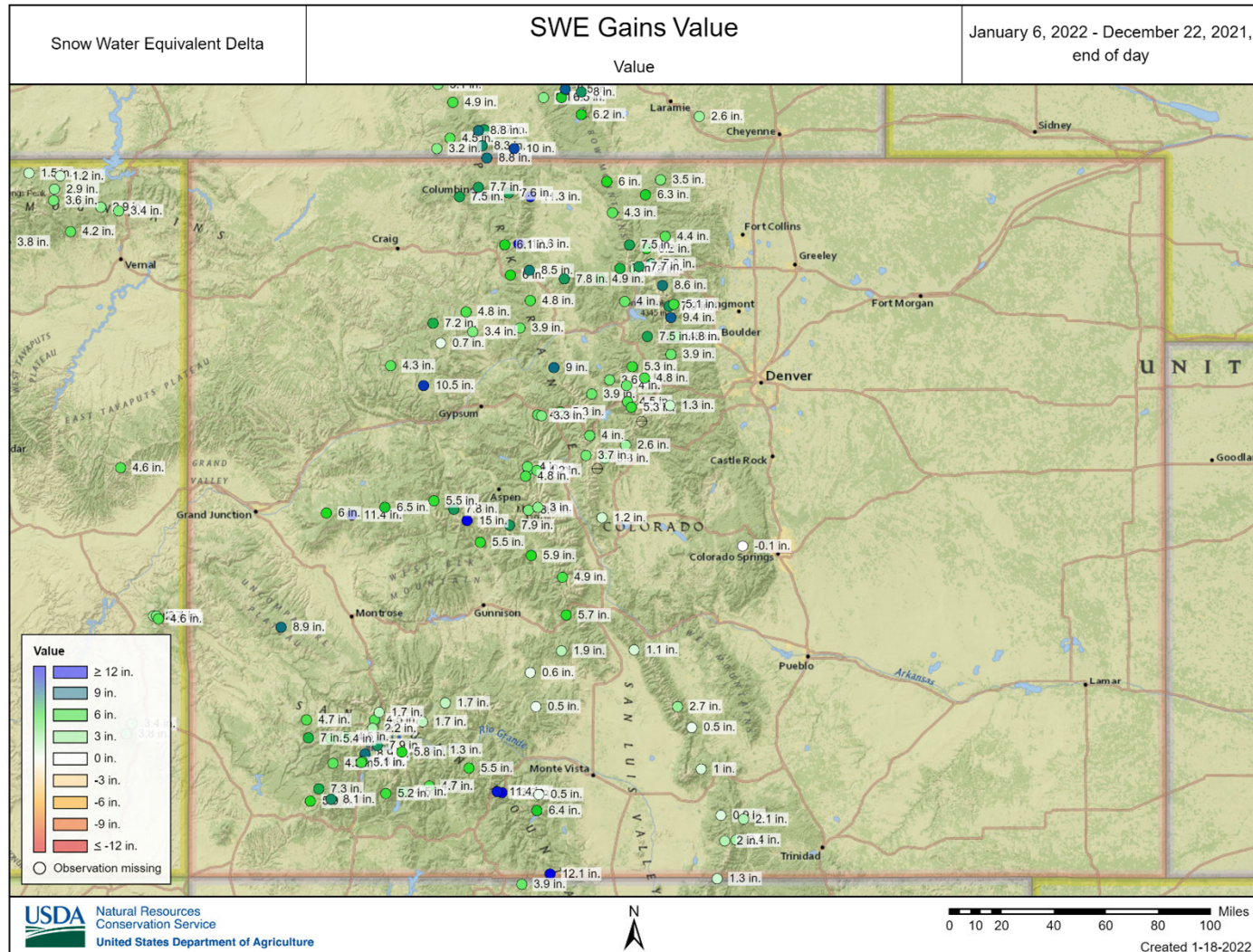




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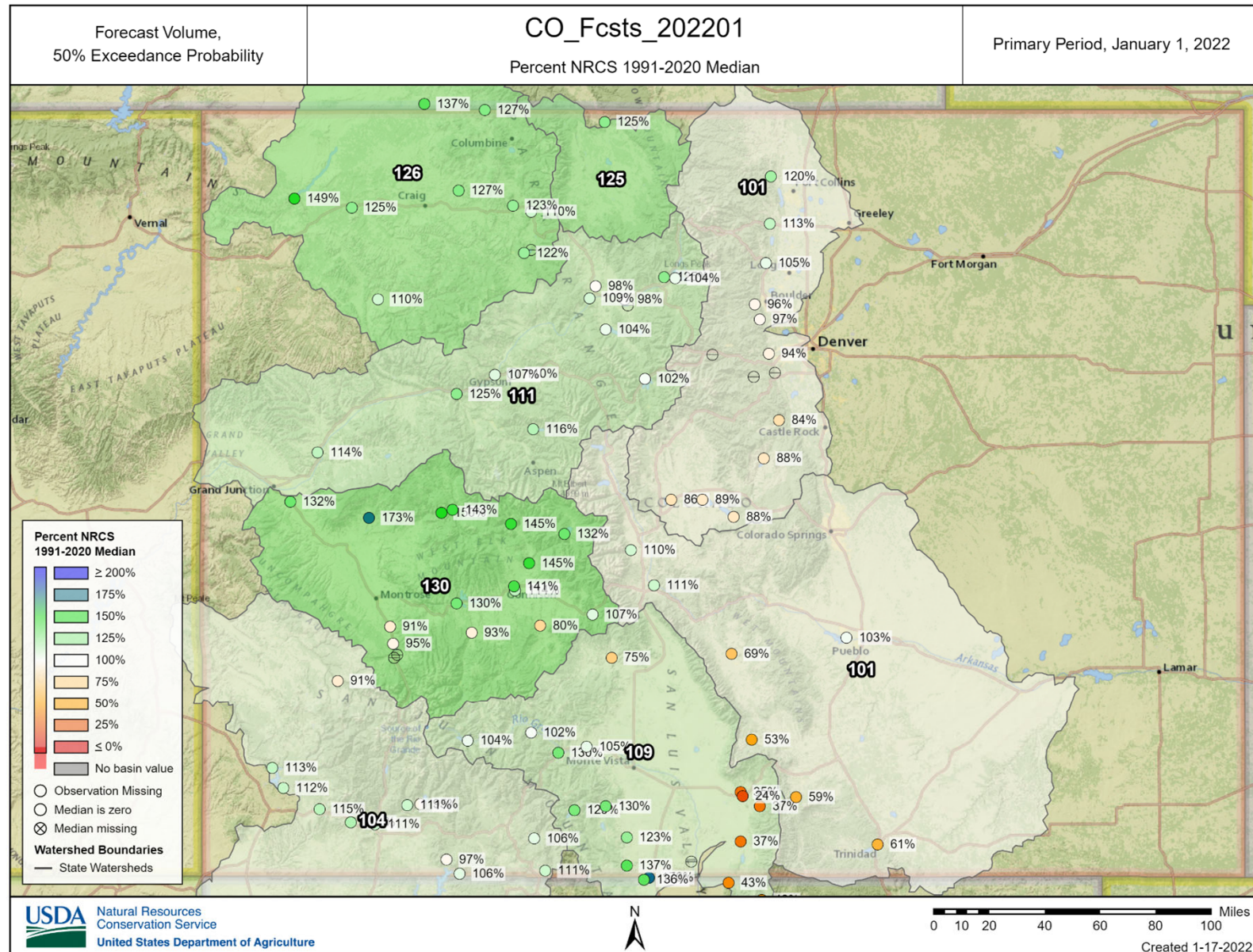
Impressive SWE Gains





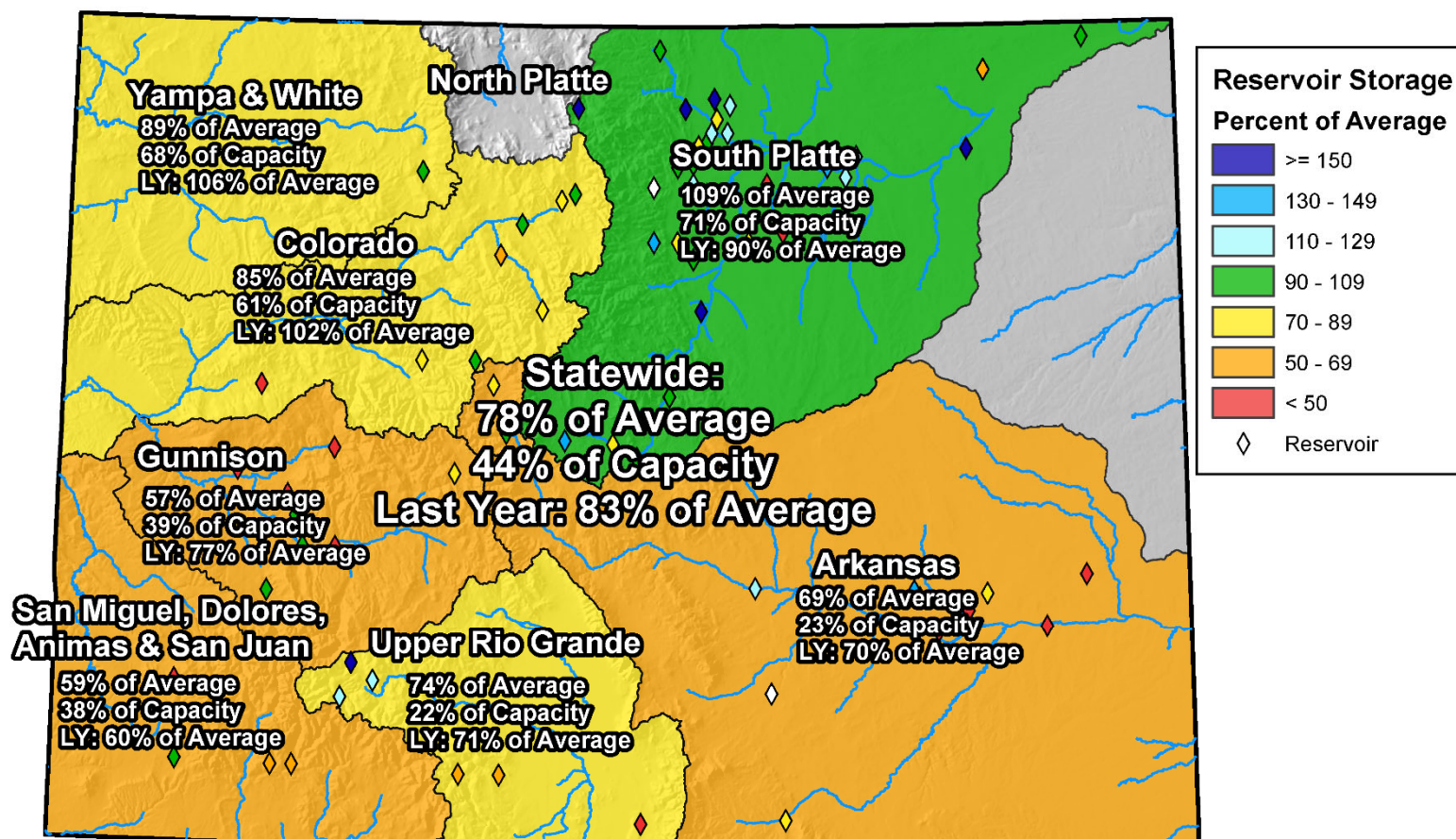
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Colorado Monthly Reservoir Storage Summary

End of December 2021



0 25 50 100 150 200 Miles

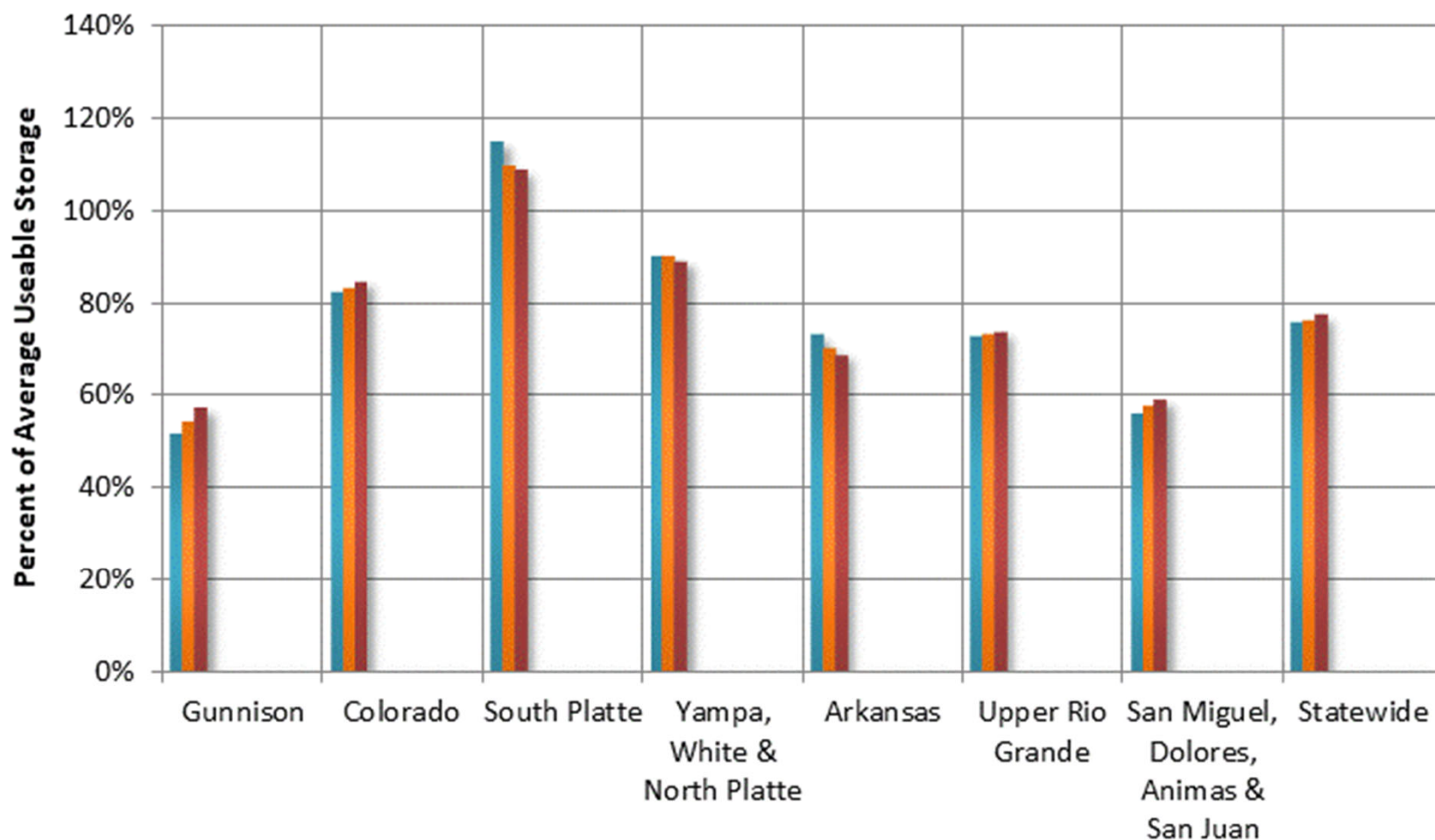


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Colorado Reservoir Storage

Oct-21 Nov-21 Dec-21 Jan-22 Feb-22 Mar-22
Apr-22 May-22 Jun-22 Jul-22 Aug-22 Sep-22

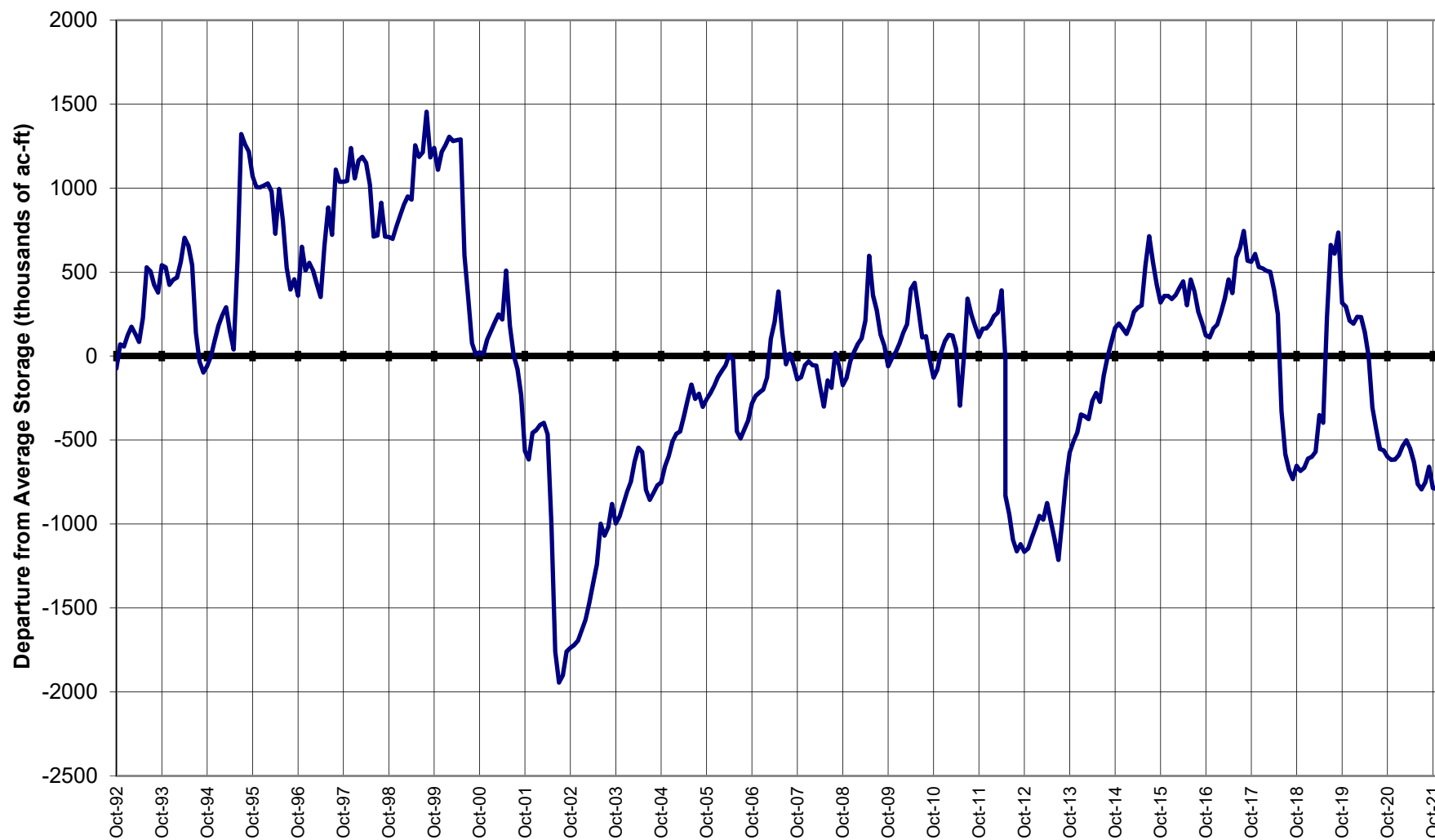




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COLORADO STATEWIDE Reservoir Storage Departure from Average





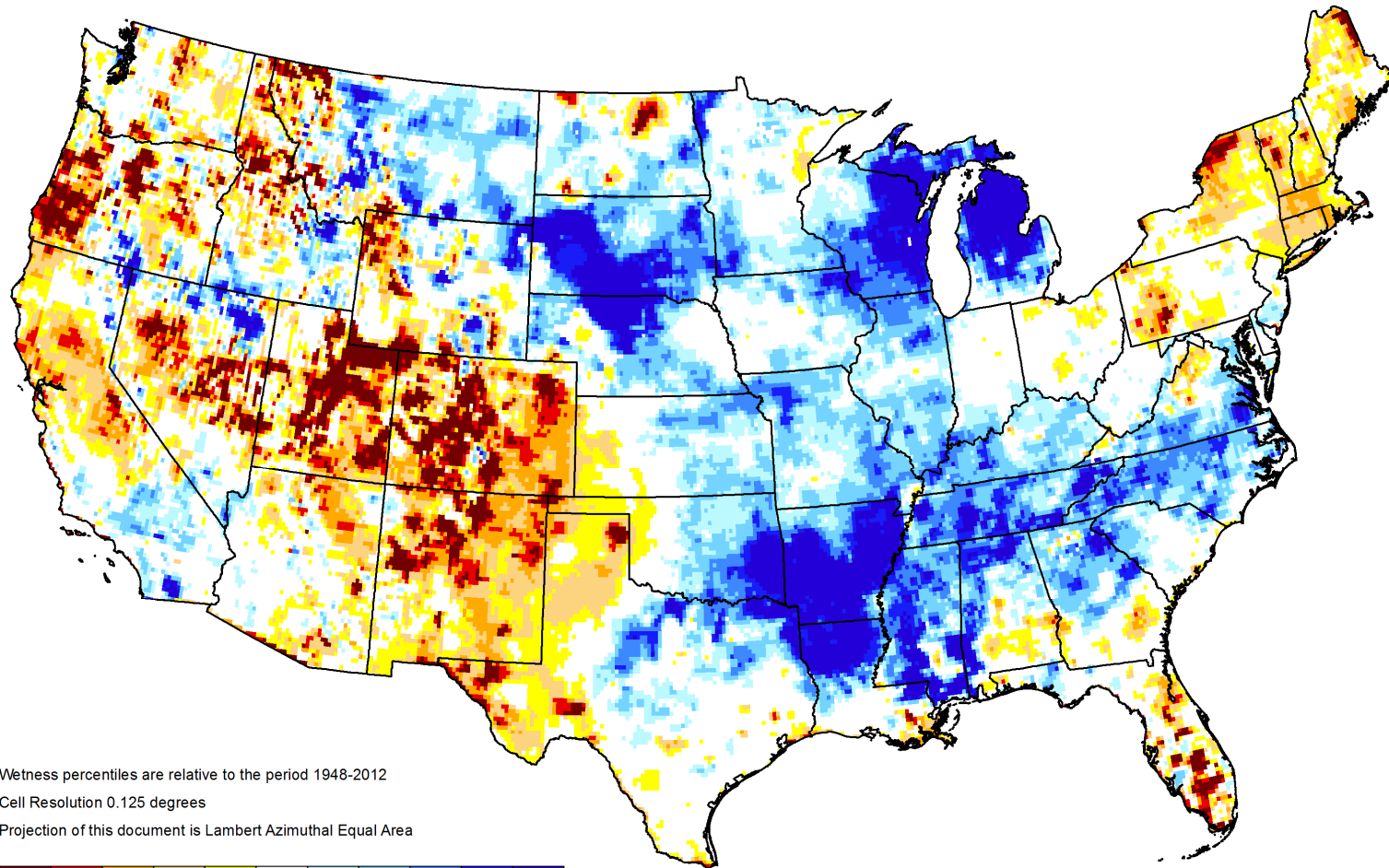
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GRACE-Based Shallow Groundwater Drought Indicator

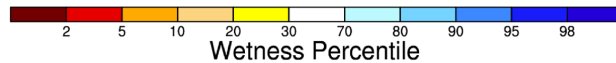
October 05, 2020



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>



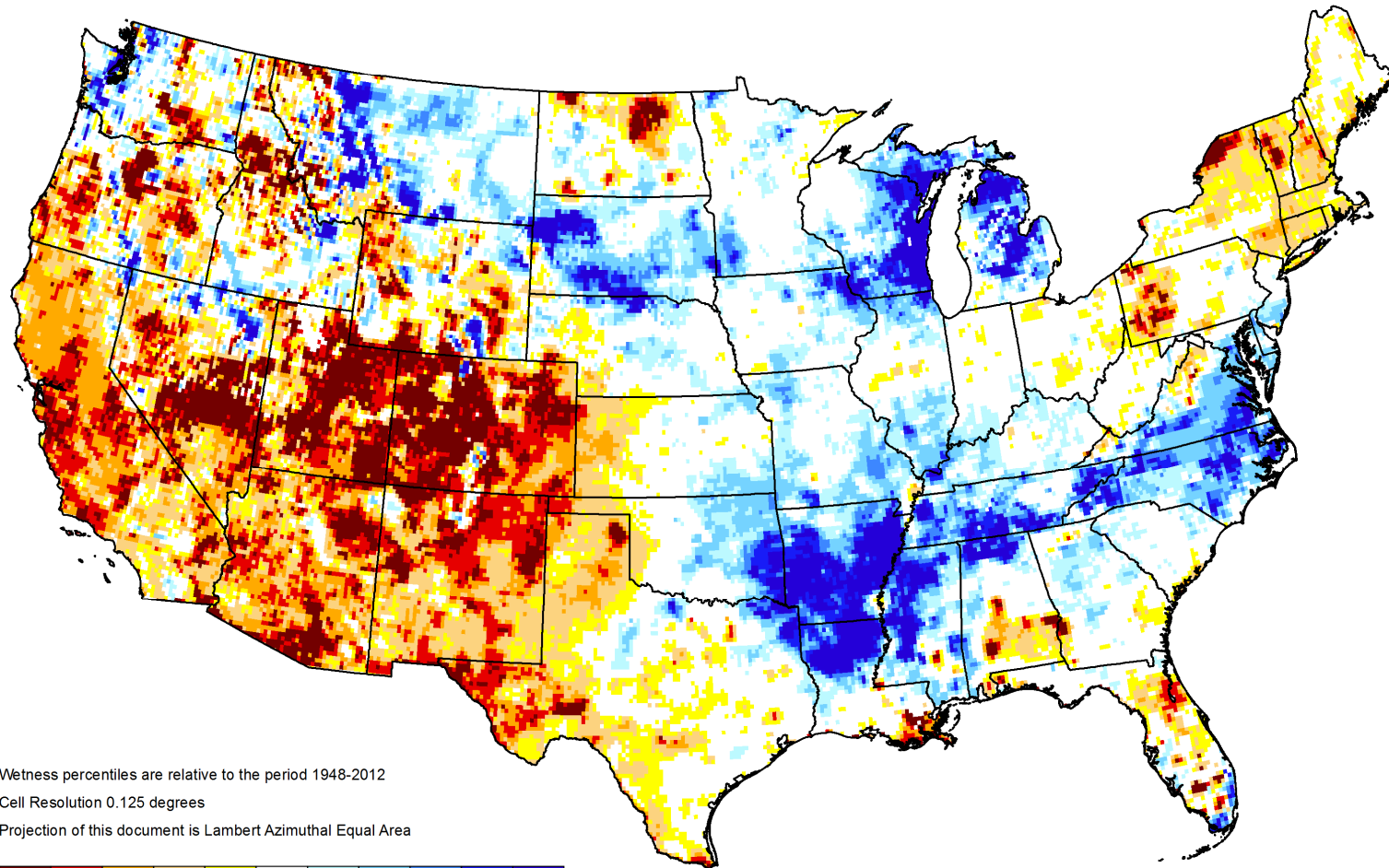
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GRACE-Based Shallow Groundwater Drought Indicator

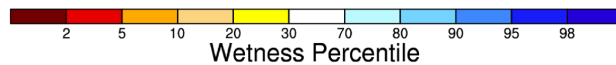
January 18, 2021



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>



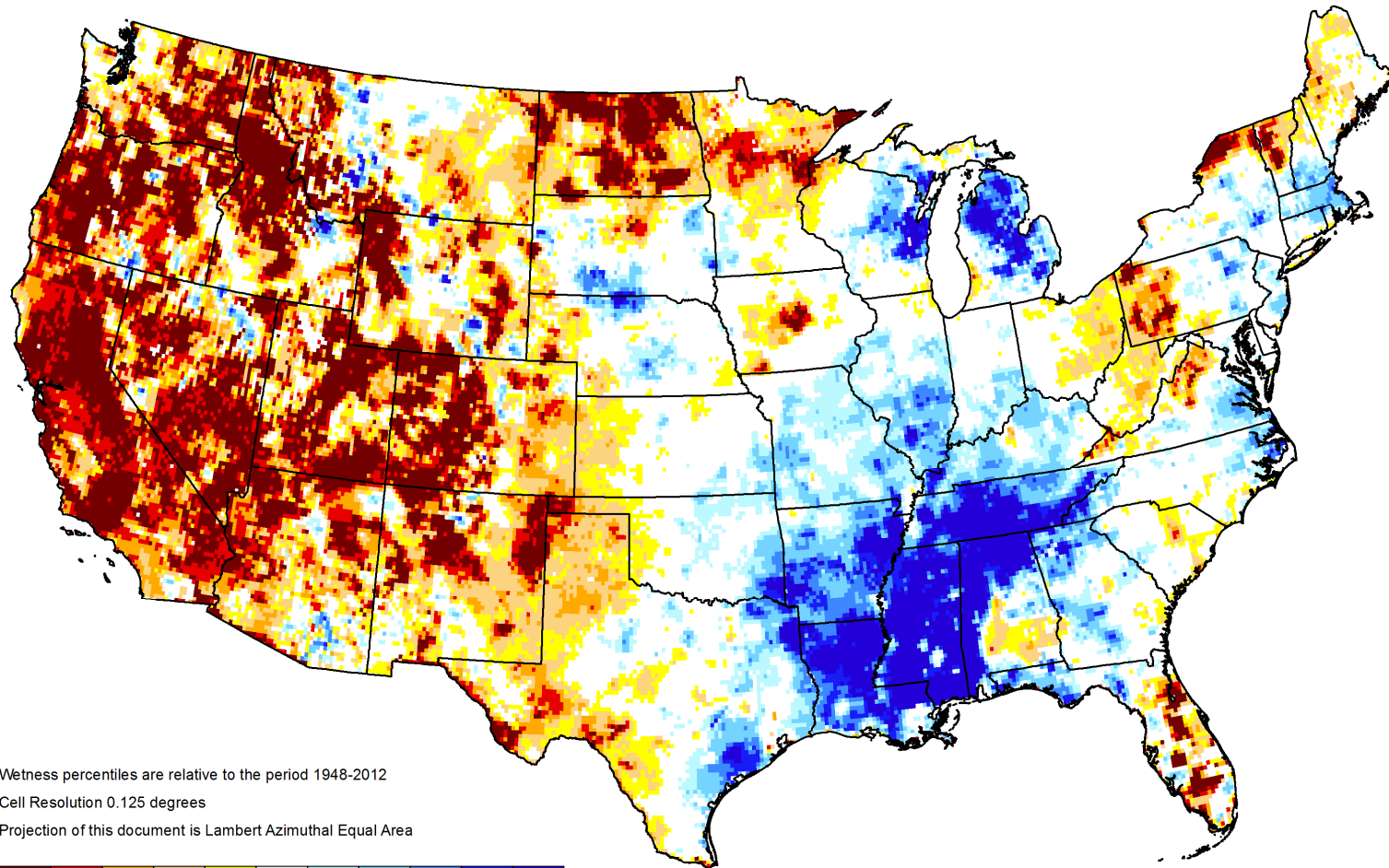
United States Department of Agriculture

Colorado Snow Surveys



GRACE-Based Shallow Groundwater Drought Indicator

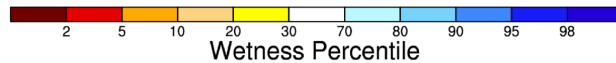
October 04, 2021



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>



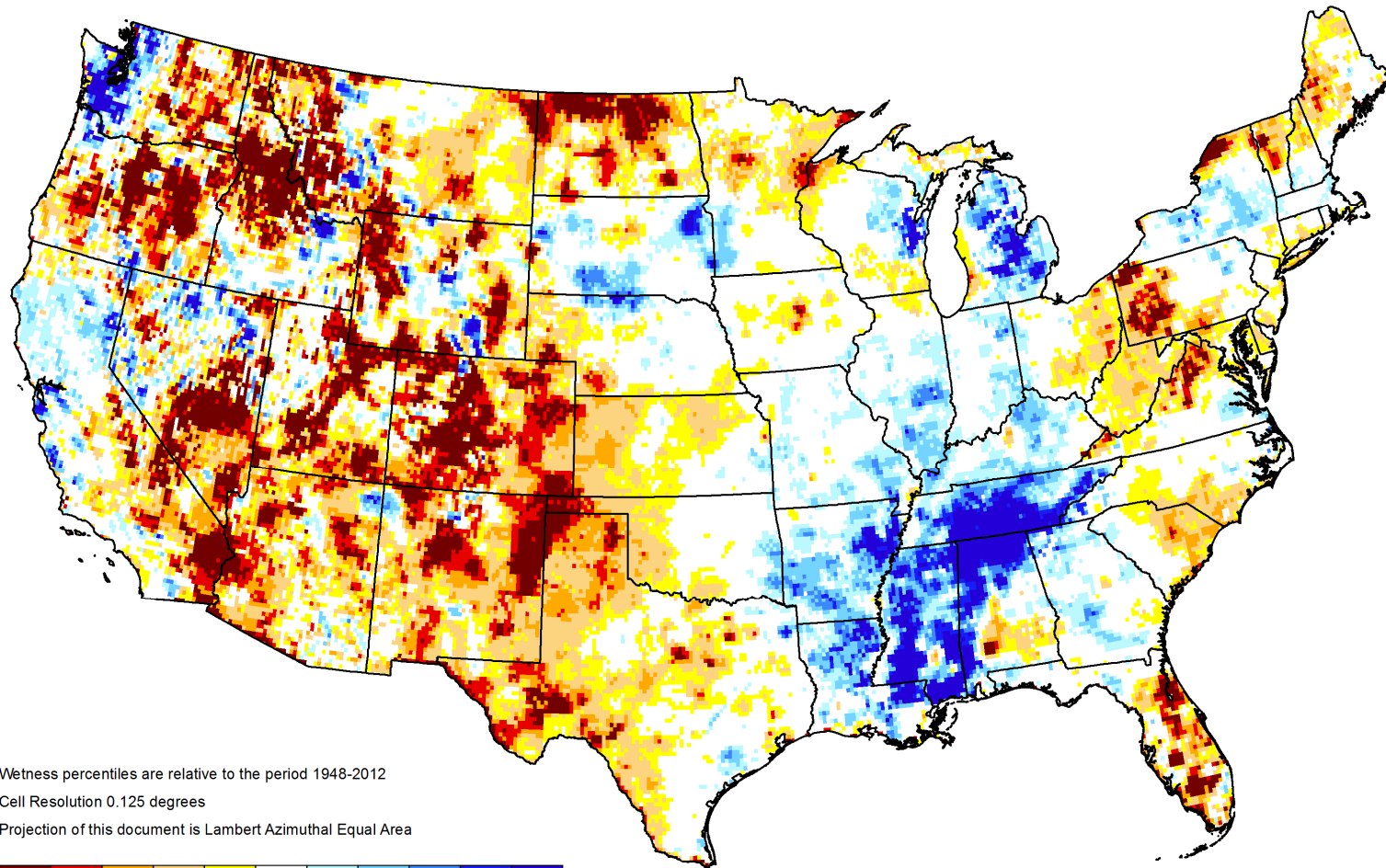
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GRACE-Based Shallow Groundwater Drought Indicator

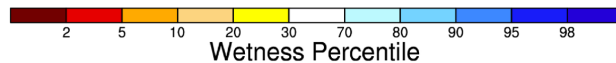
January 10, 2022



Wetness percentiles are relative to the period 1948-2012

Cell Resolution 0.125 degrees

Projection of this document is Lambert Azimuthal Equal Area

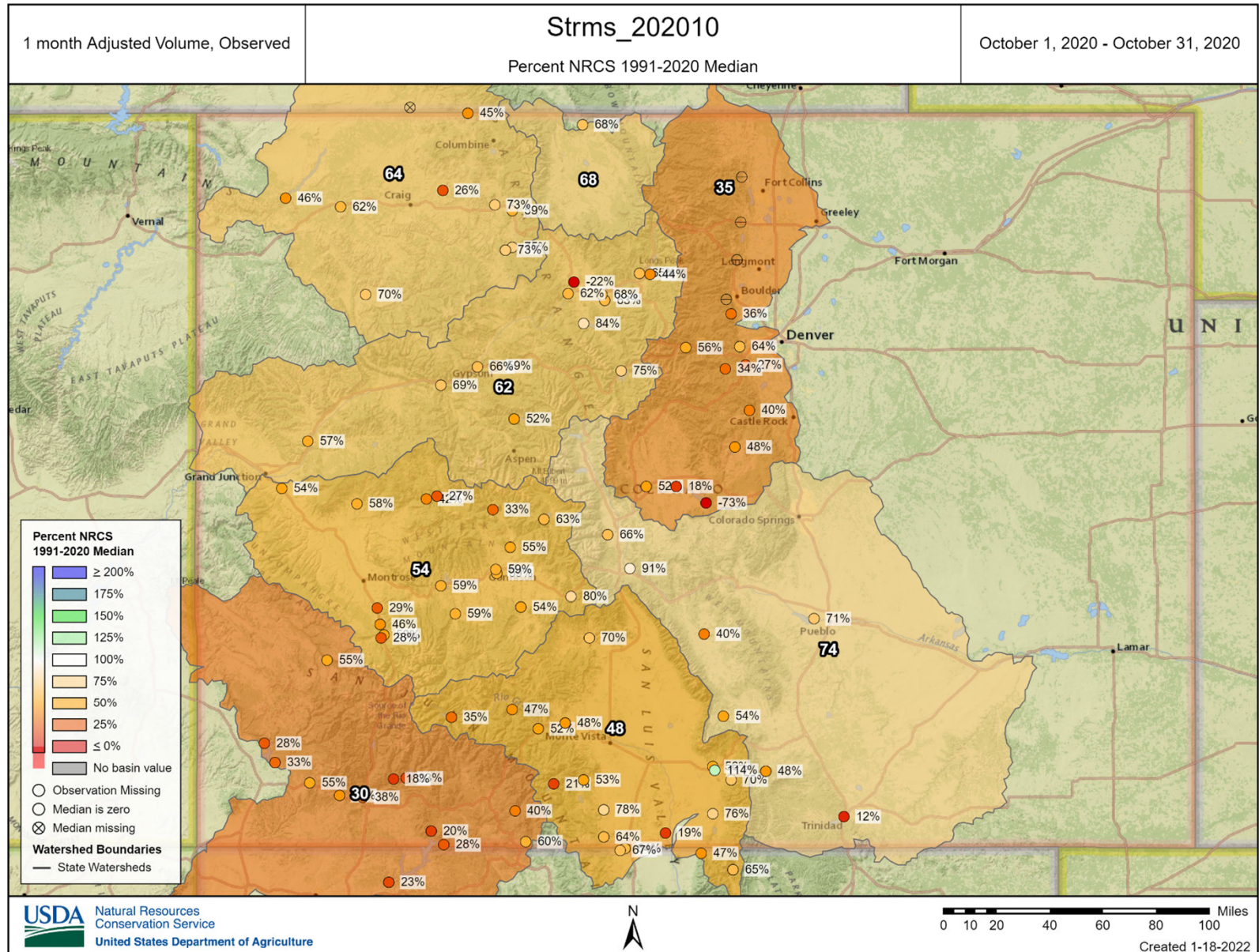


<https://nasagrace.unl.edu>



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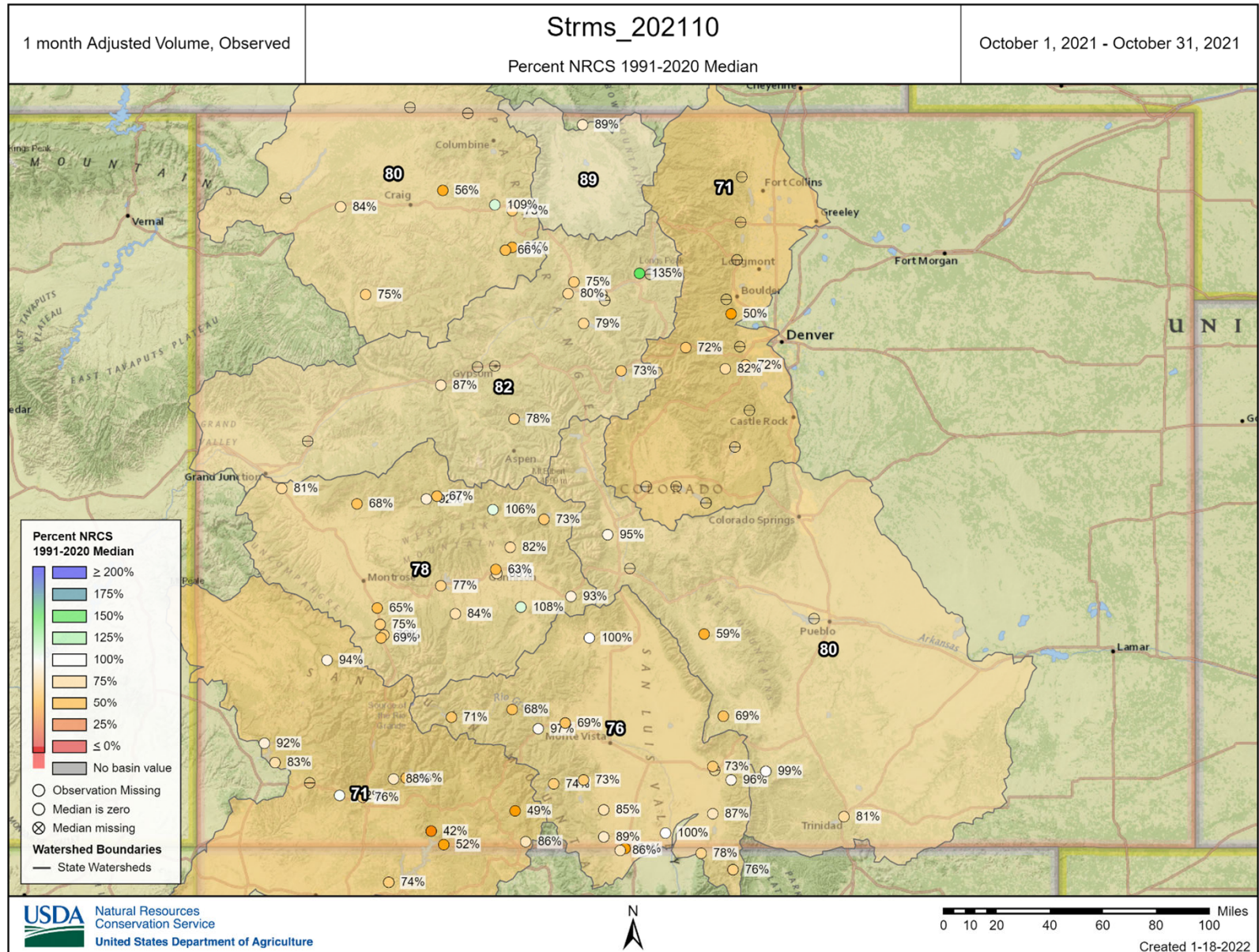
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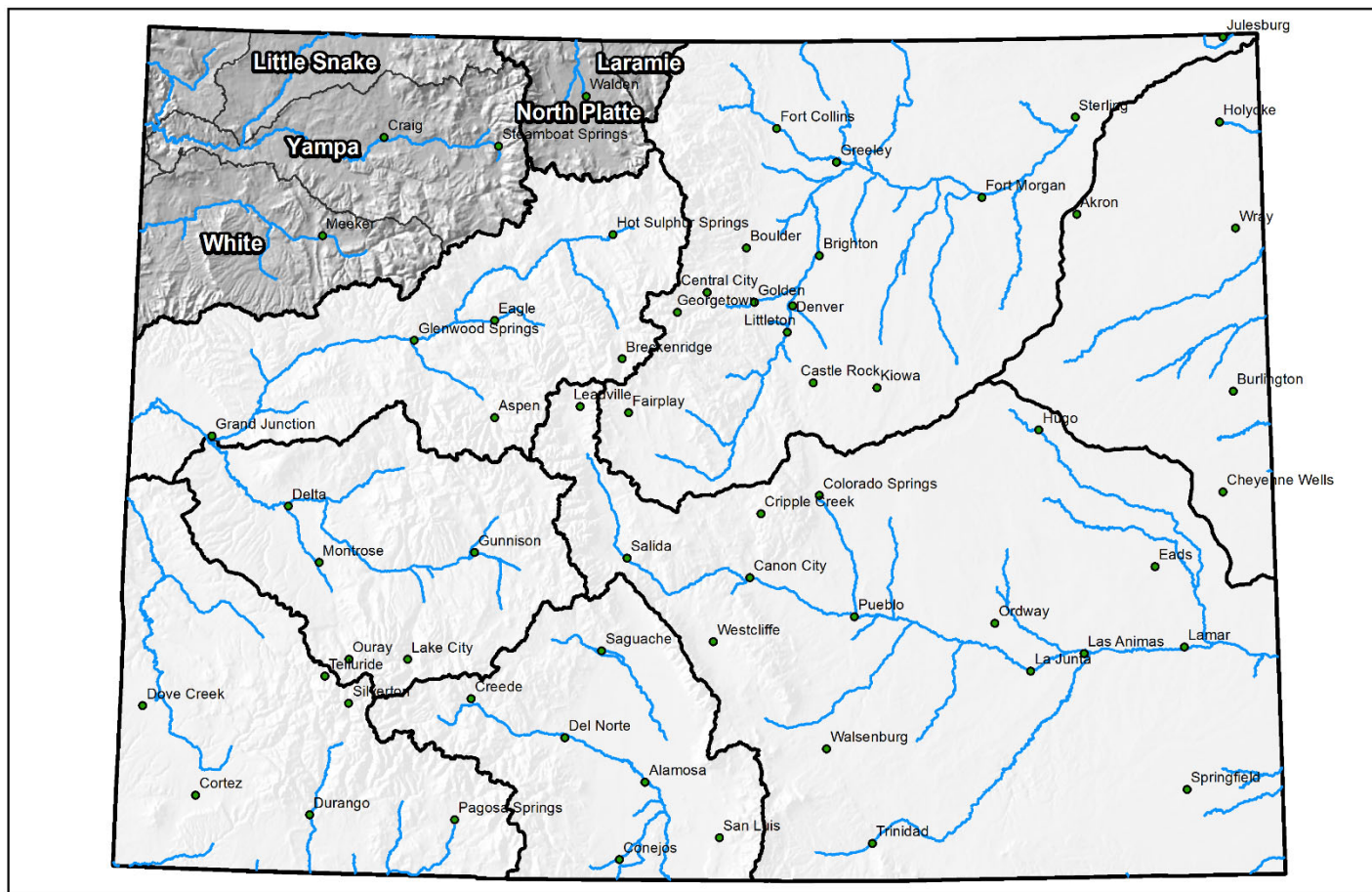


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Colorado Snow Surveys

Major Basin Summary

Yampa, White, and North Platte River Basins



0 25 50 100 150 200 Miles



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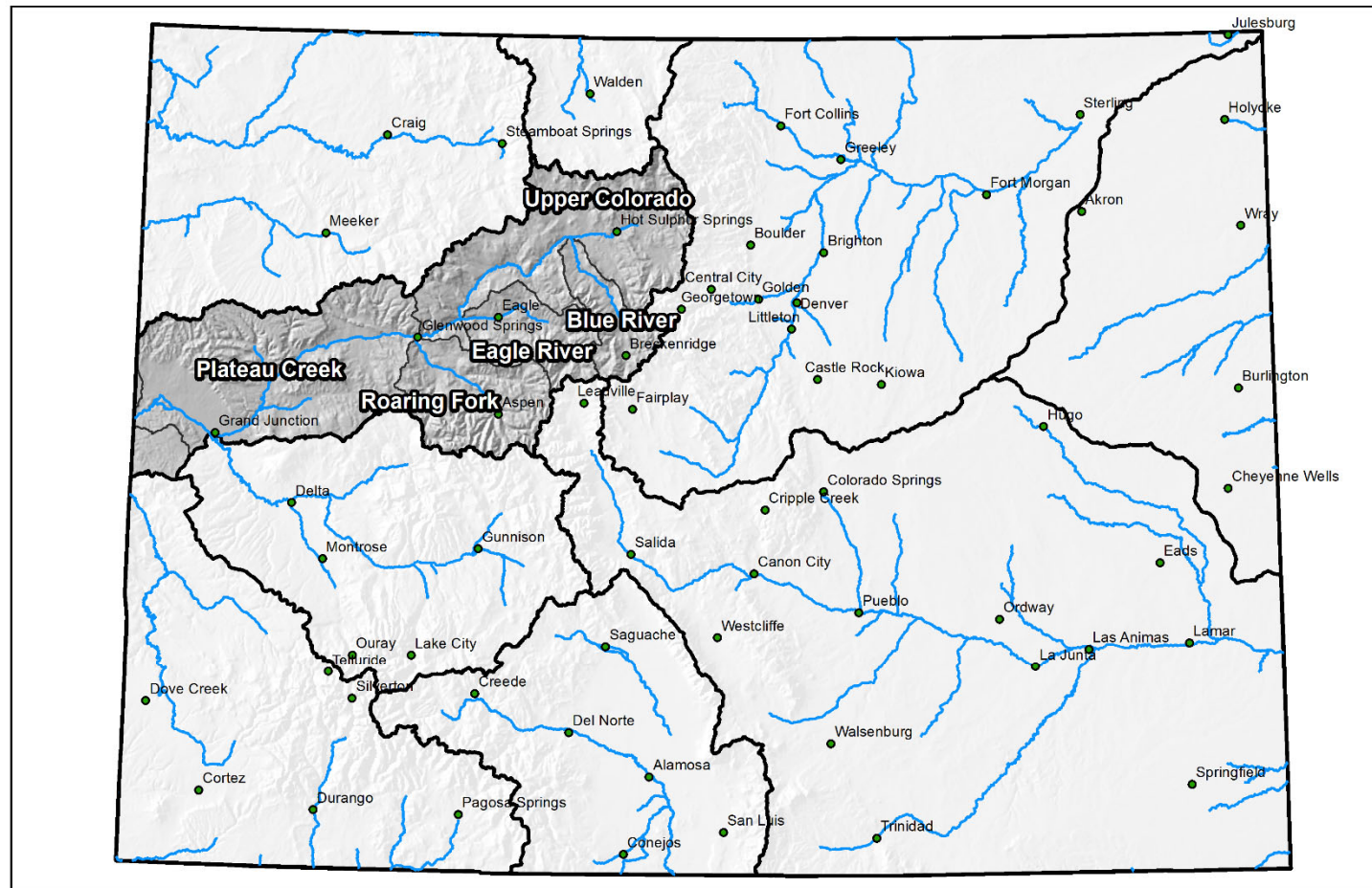


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Major Basin Summary

Colorado River Basin



0 25 50 100 150 200 Miles

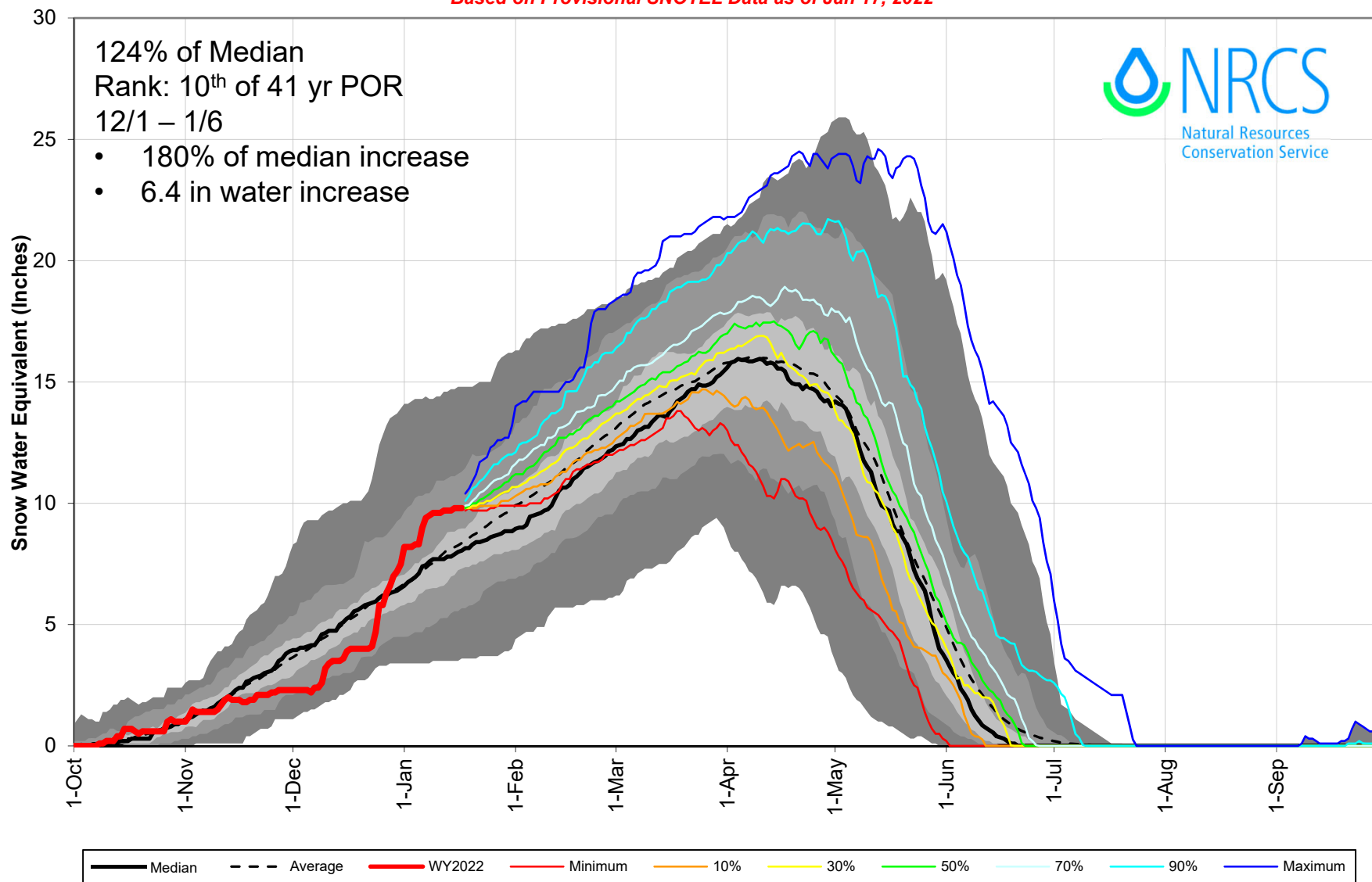


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Colorado Snow Surveys

Colorado River Basin Snowpack with Non-Exceedence Projections

Based on Provisional SNOTEL Data as of Jan 17, 2022



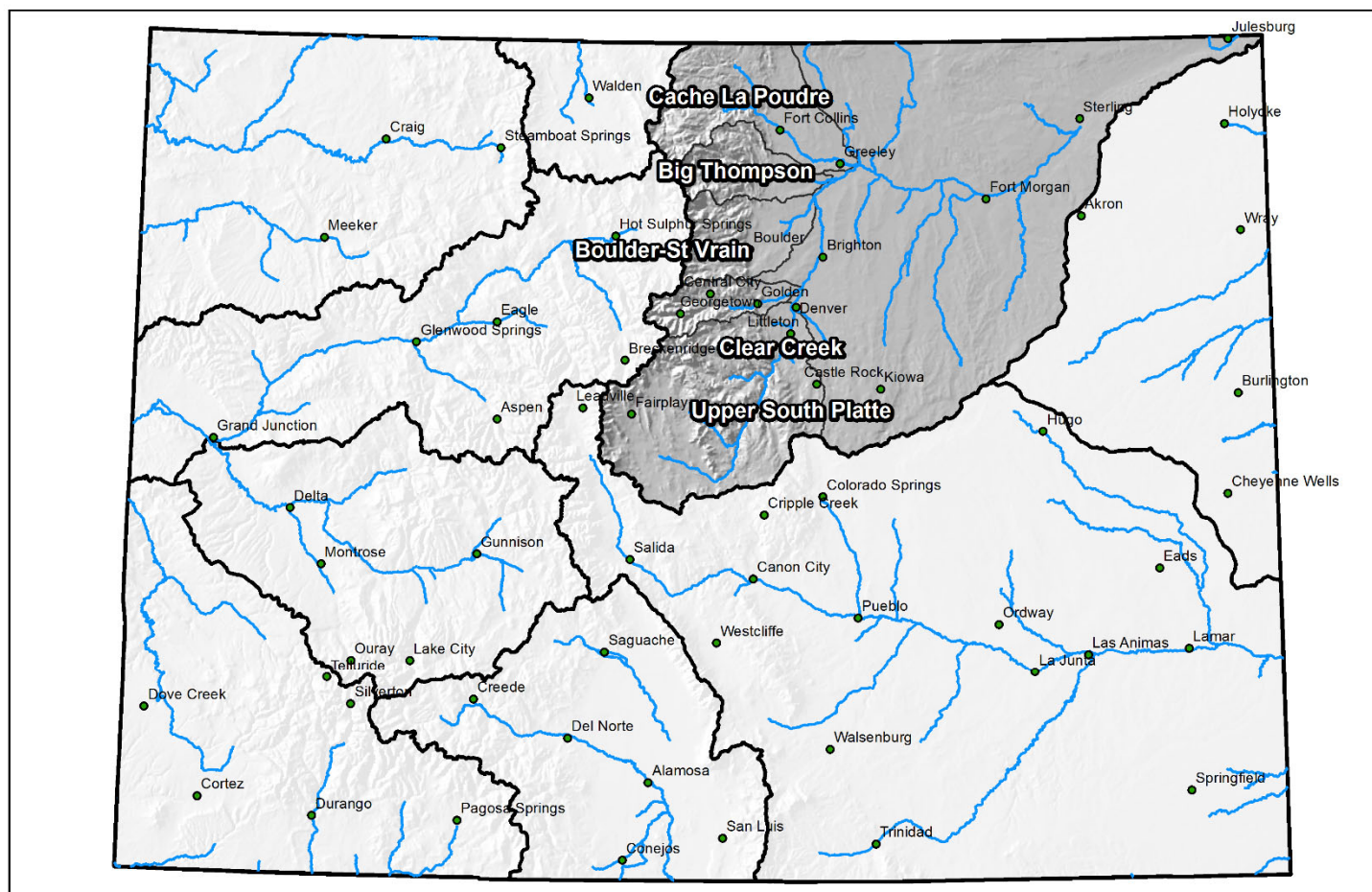


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Major Basin Summary

South Platte River Basin



0 25 50 100 150 200 Miles

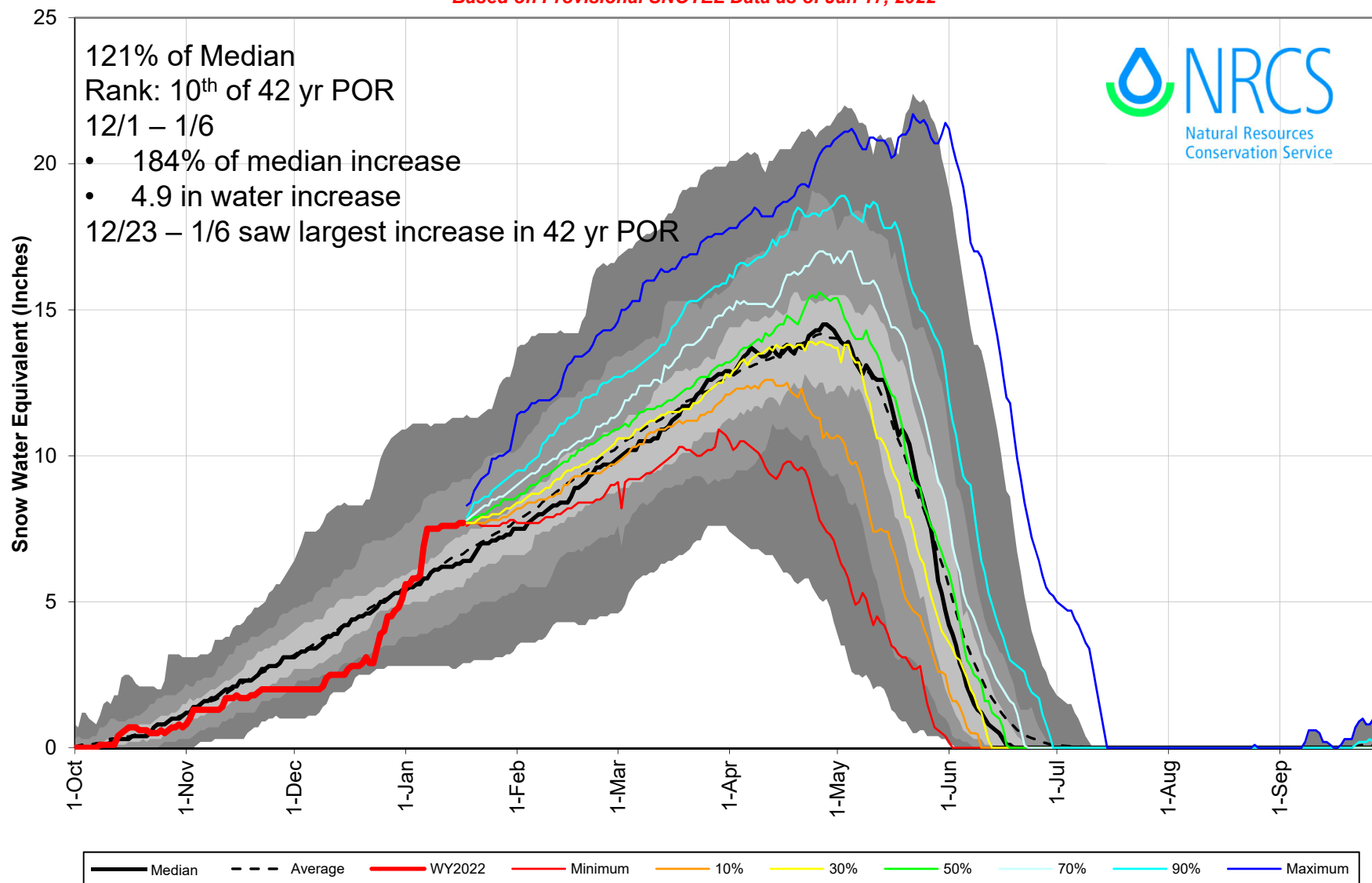


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South Platte River Basin Snowpack with Non-Exceedence Projections

Based on Provisional SNOTEL Data as of Jan 17, 2022



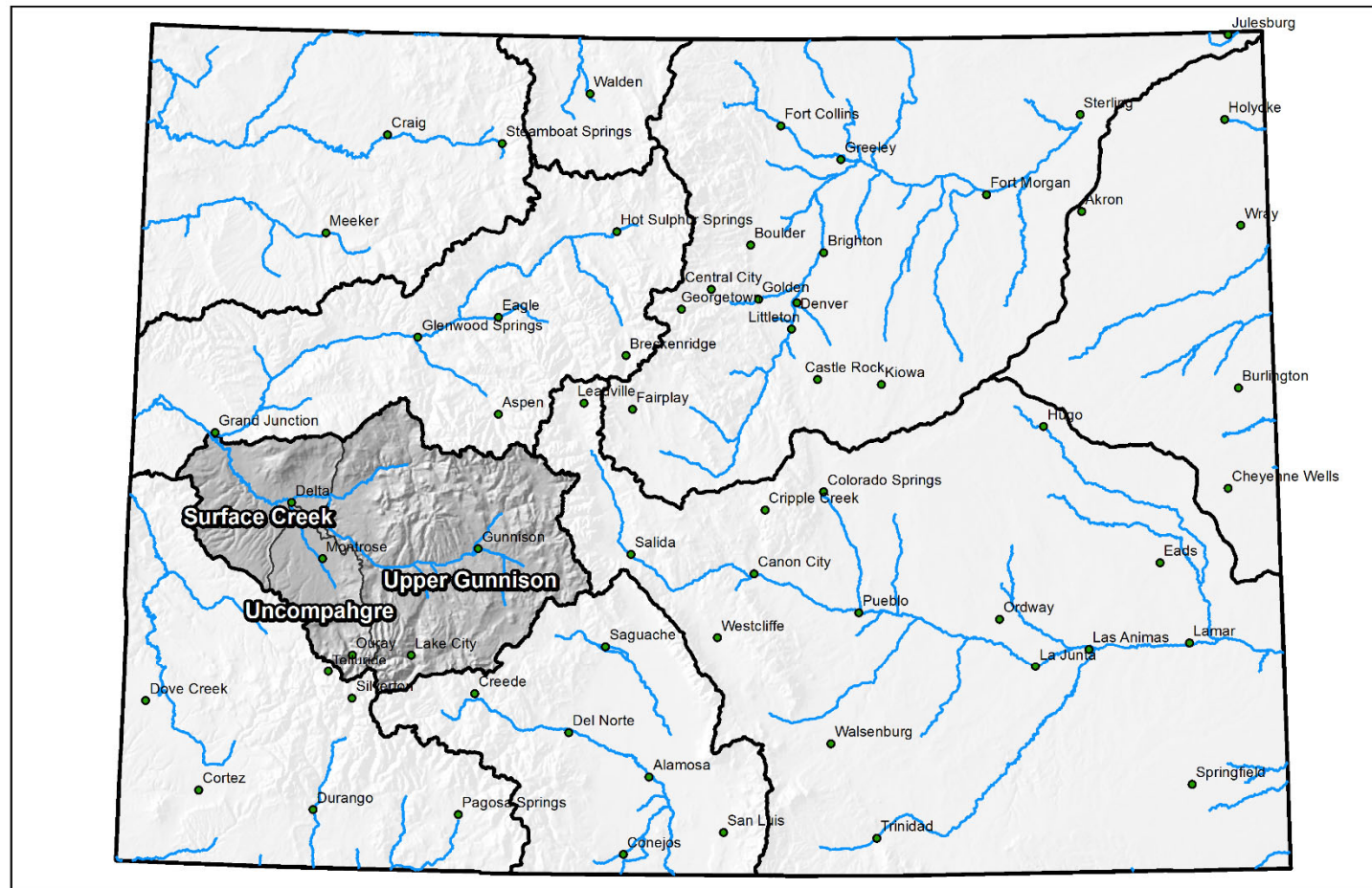


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Major Basin Summary

Gunnison River Basin



0 25 50 100 150 200 Miles

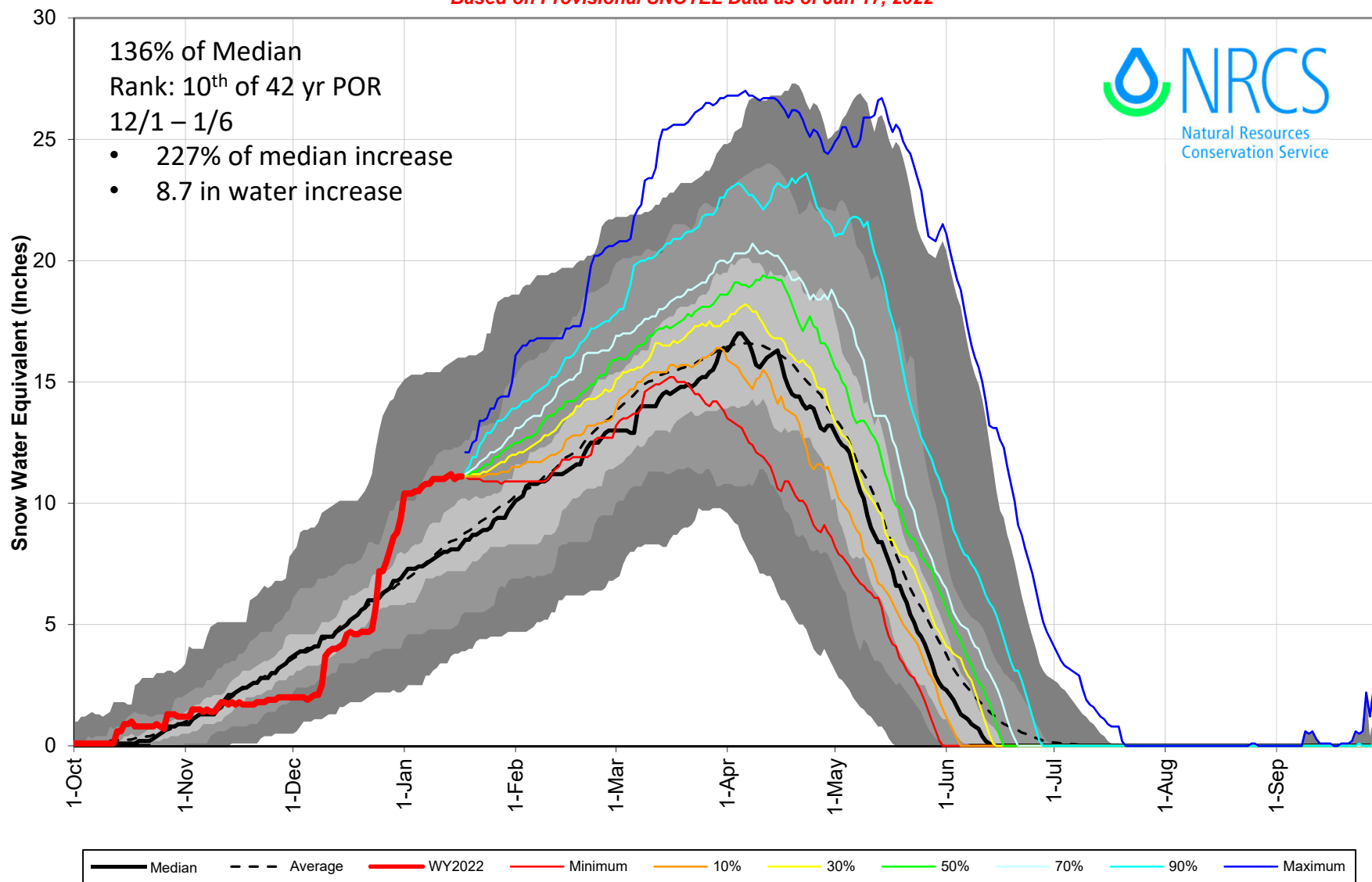


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Gunnison River Basin Snowpack with Non-Exceedence Projections

Based on Provisional SNOTEL Data as of Jan 17, 2022

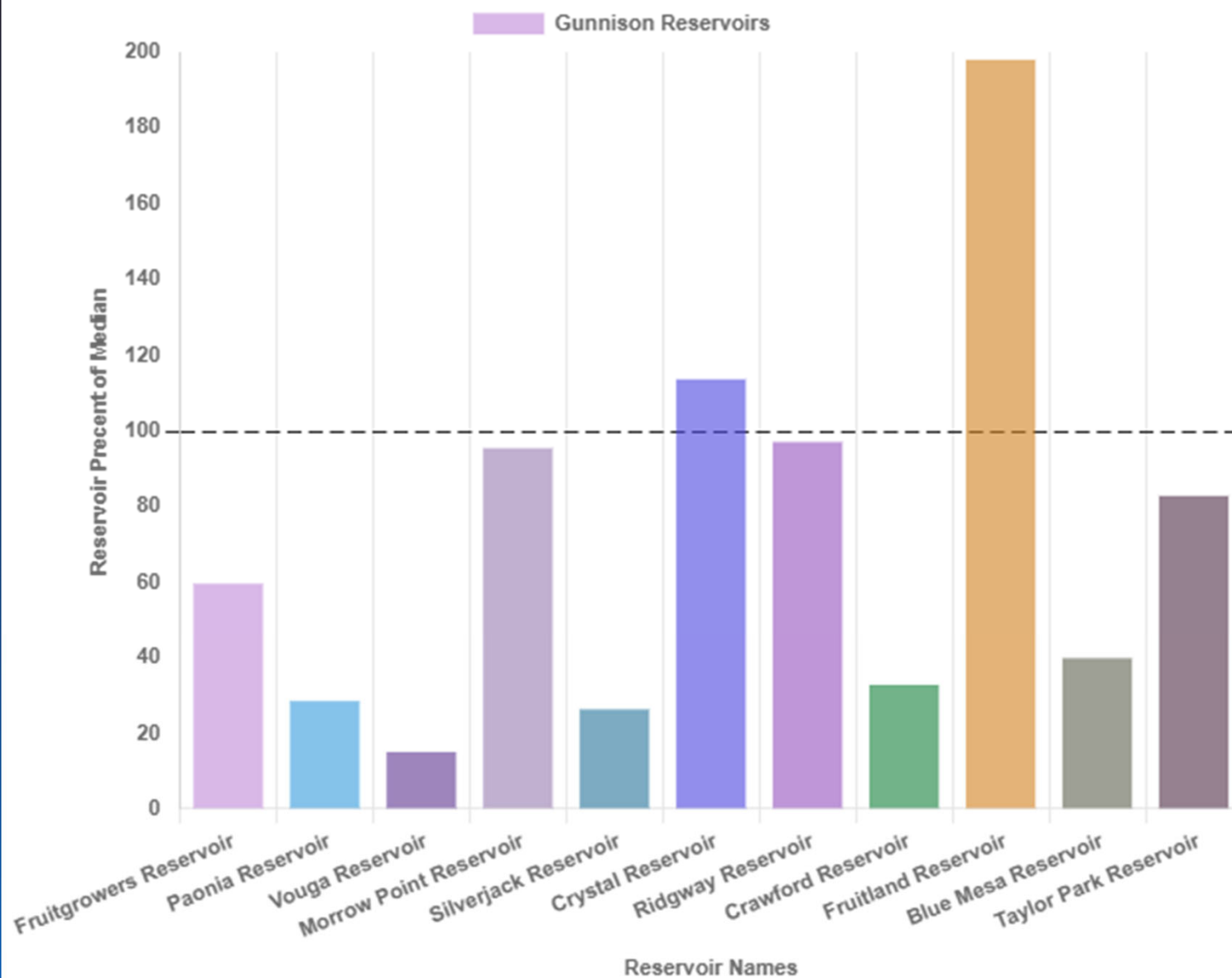




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Reservoir Conditions for Gunnison on January 1st 2022



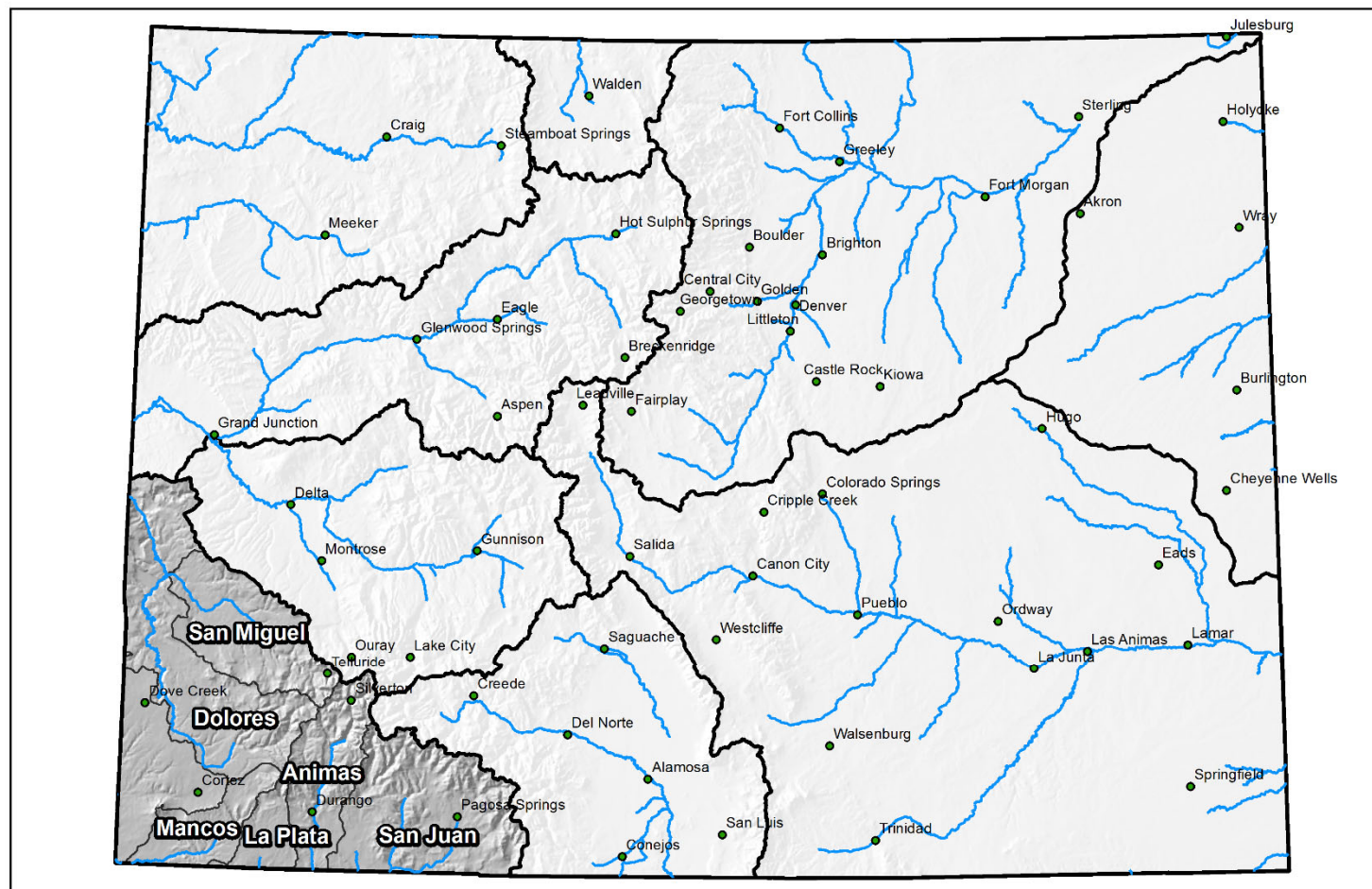


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Major Basin Summary

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



0 25 50 100 150 200 Miles

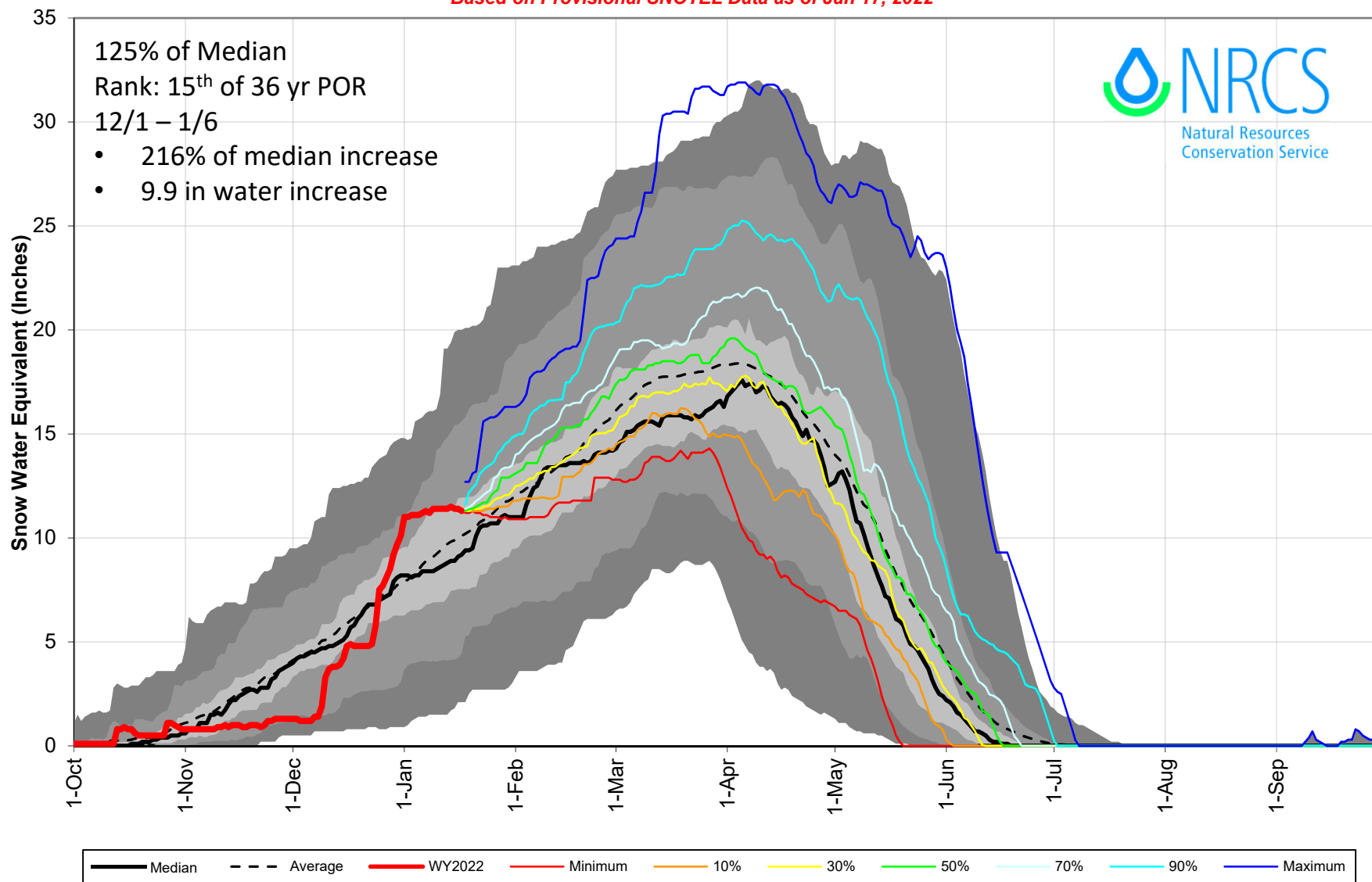


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San Miguel, Dolores, Animas, San Juan River Basin Snowpack with Non-Exceedence Projections

Based on Provisional SNOTEL Data as of Jan 17, 2022



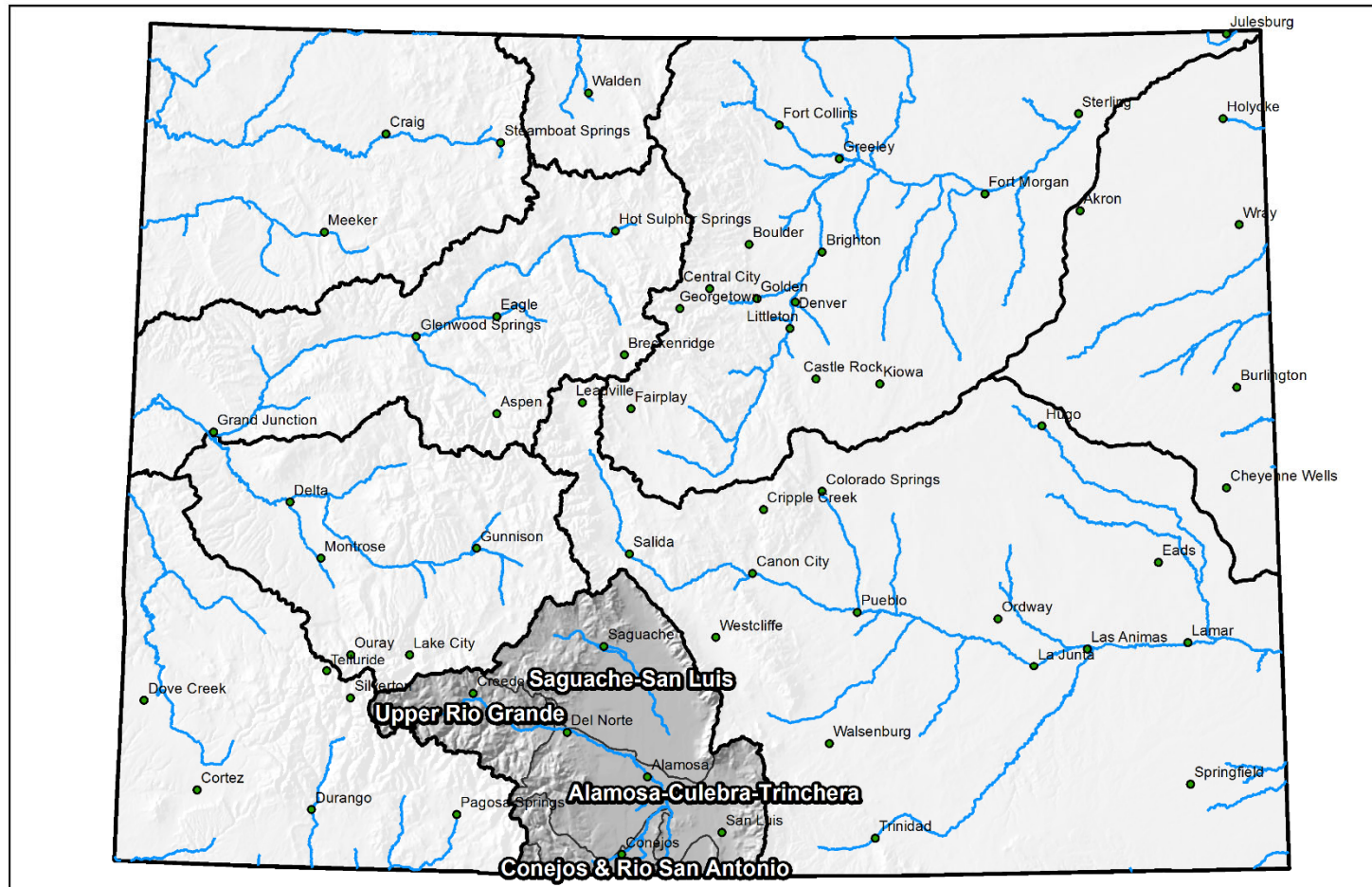


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Major Basin Summary

Upper Rio Grande River Basin



0 25 50 100 150 200 Miles



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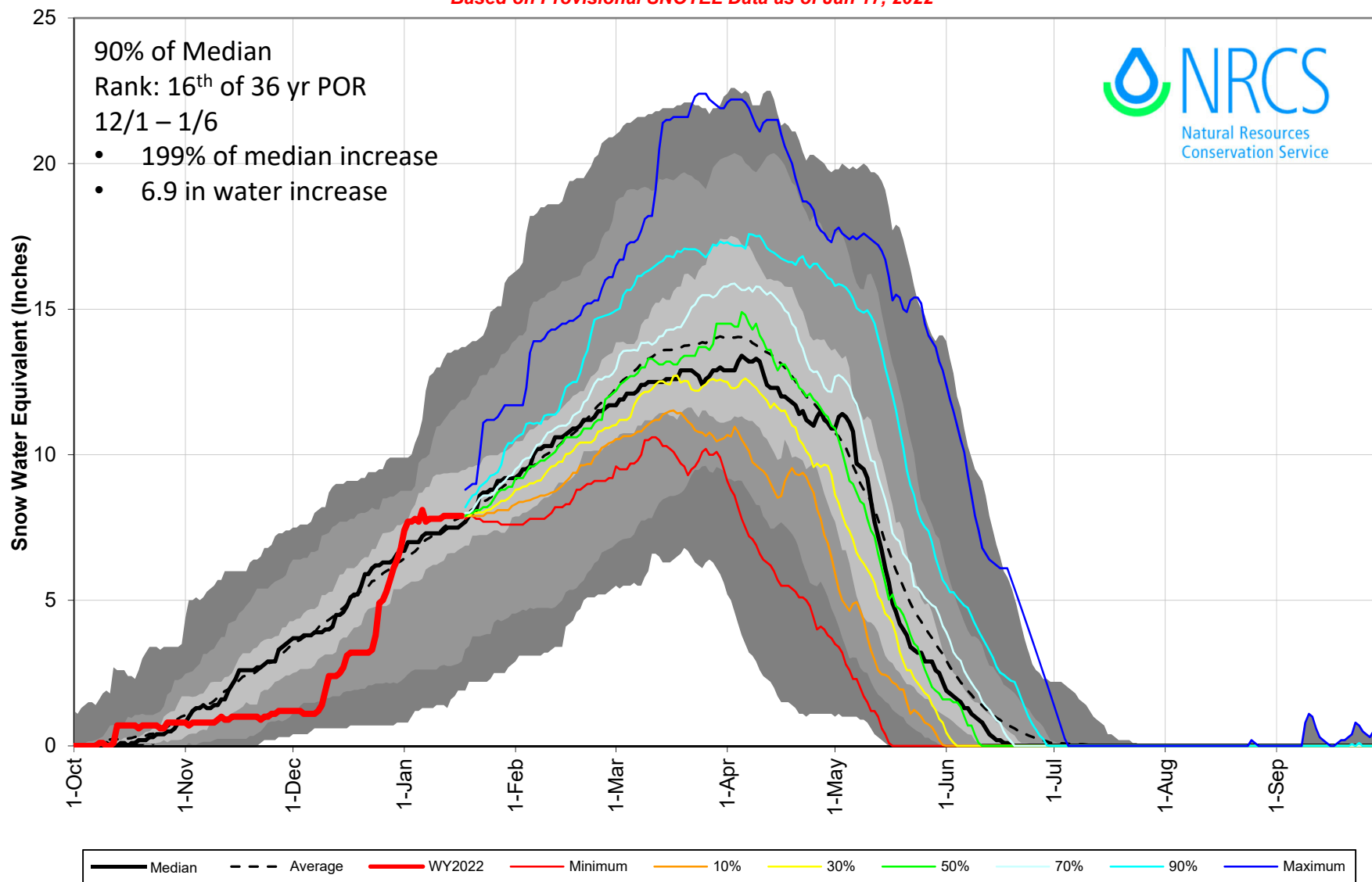


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Upper Rio Grande Basin Snowpack with Non-Exceedence Projections

Based on Provisional SNOTEL Data as of Jan 17, 2022

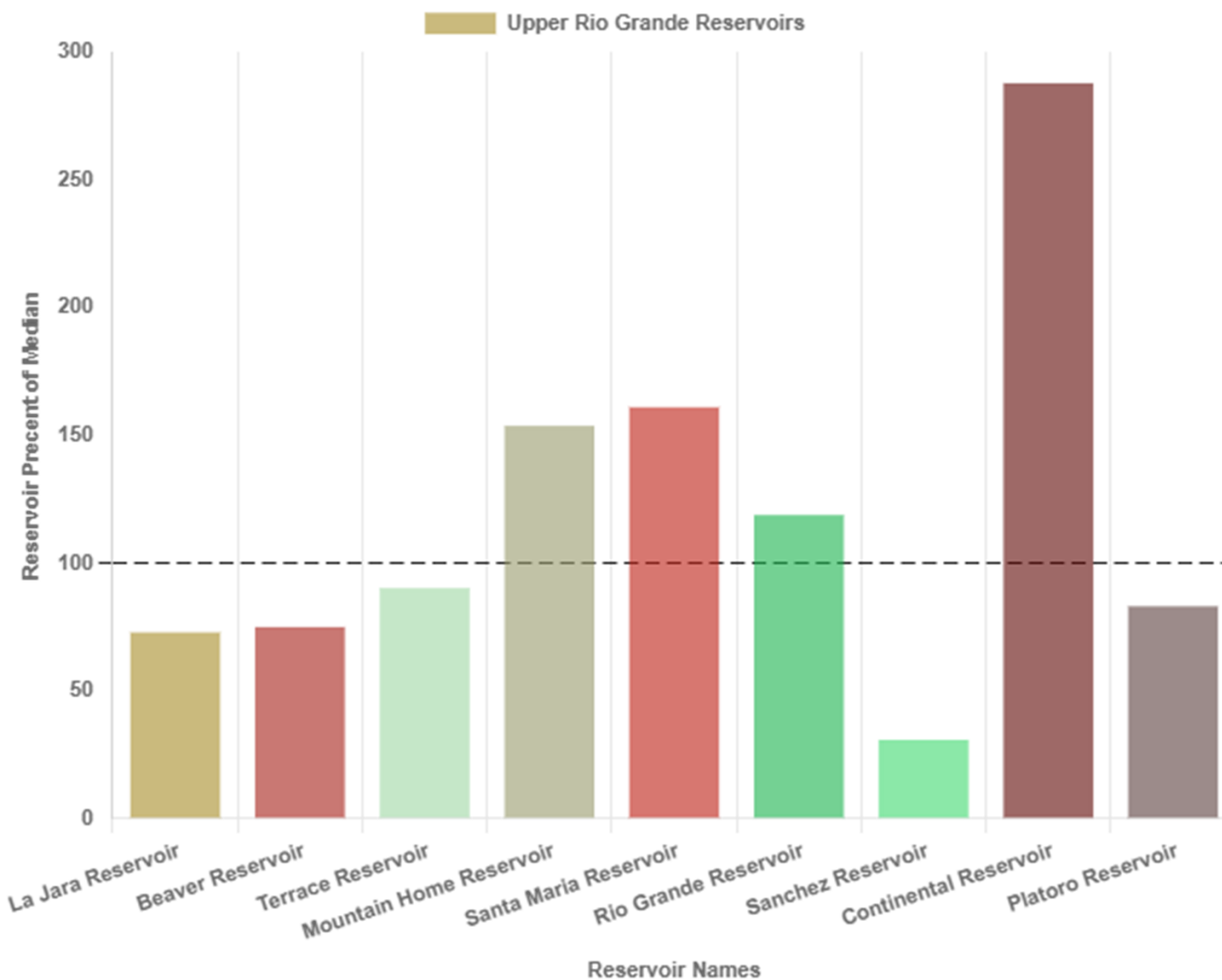


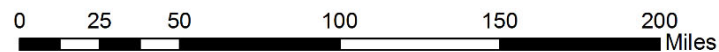


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Reservoir Conditions for Upper Rio Grande on January 1st 2022



[illegible]

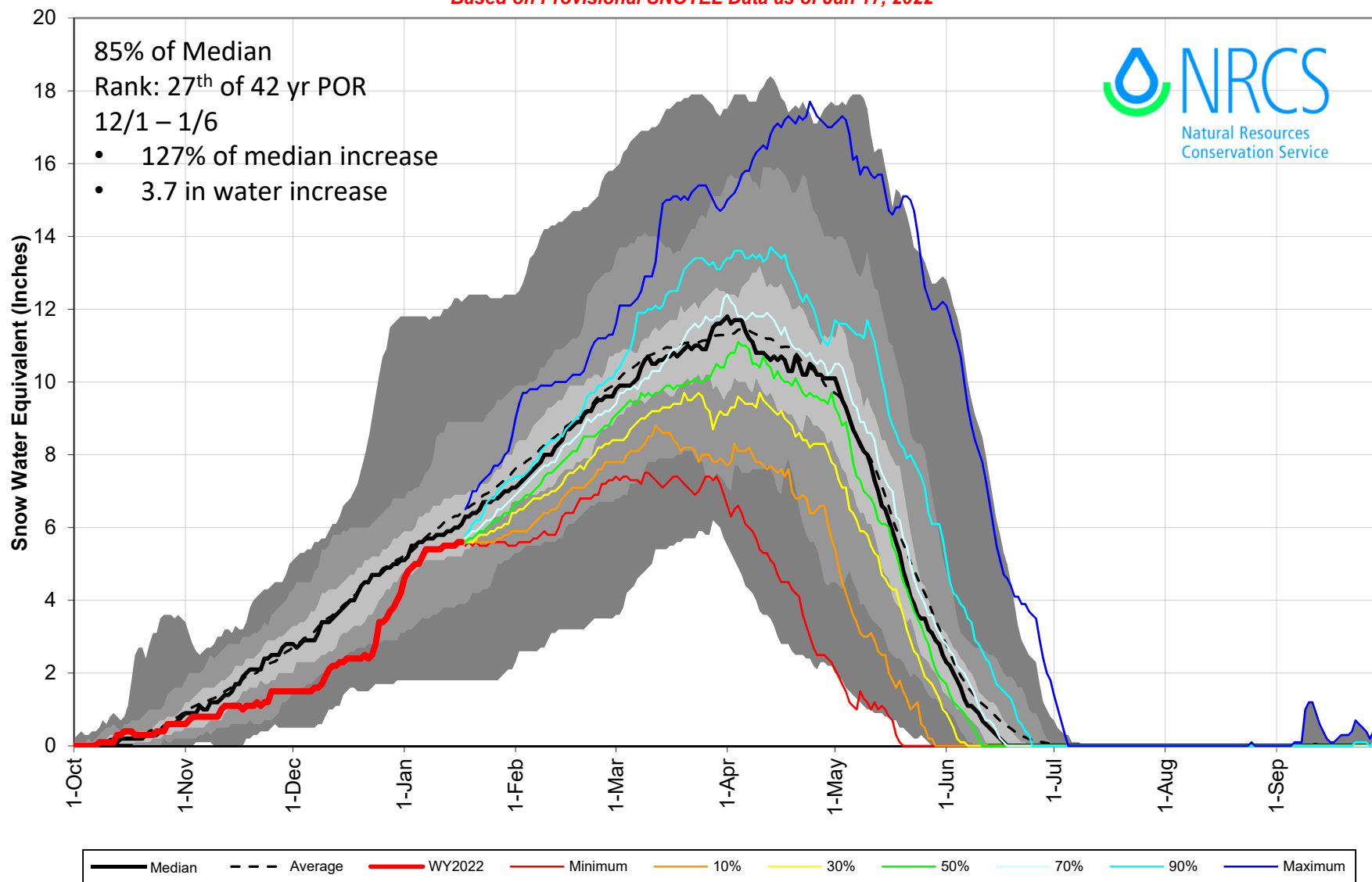


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Arkansas River Basin Snowpack with Non-Exceedence Projections

Based on Provisional SNOTEL Data as of Jan 17, 2022





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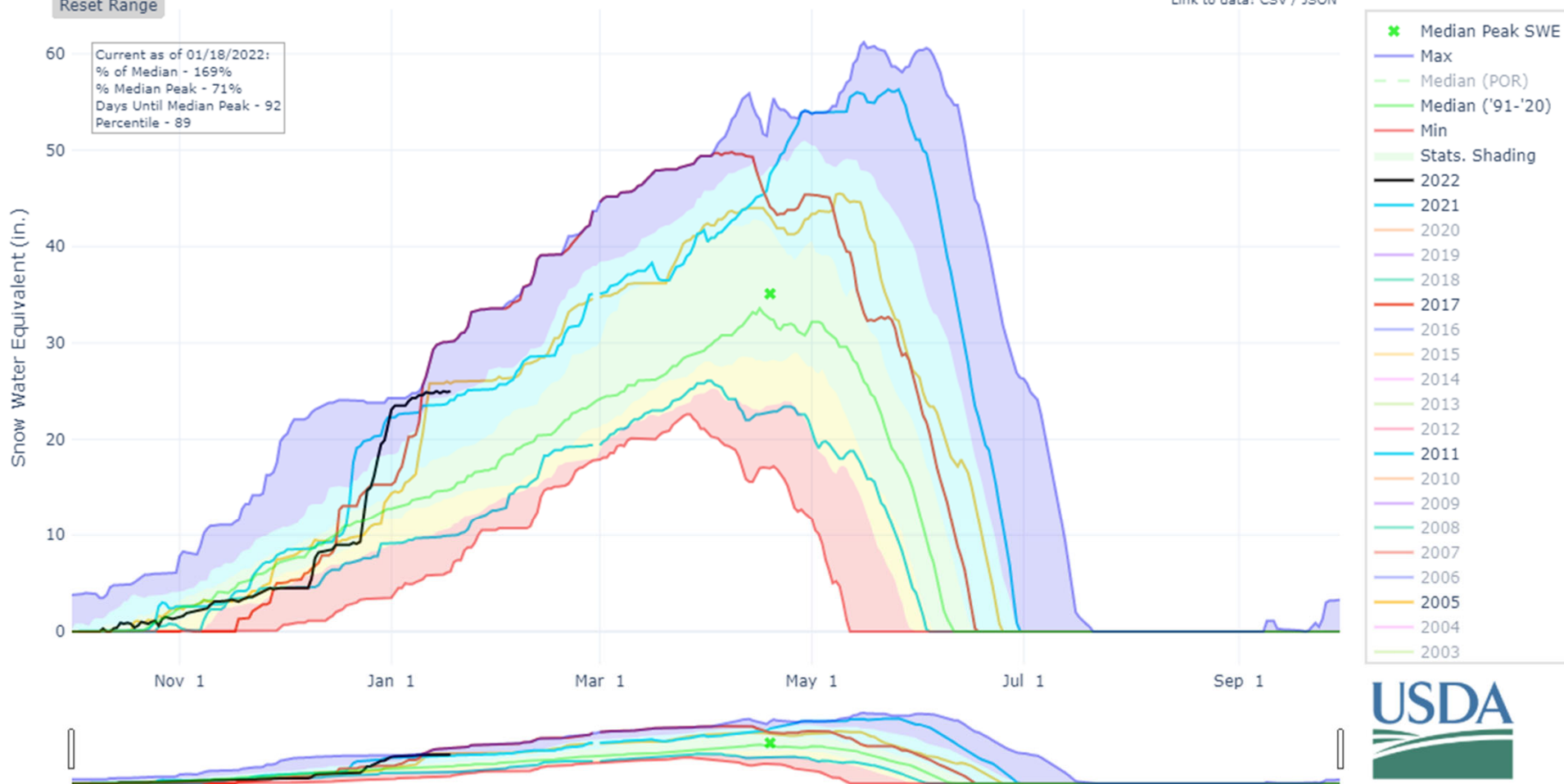
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Impressive Gains @ Schofield Pass

SNOW WATER EQUIVALENT AT SCHOFIELD PASS

Reset Range

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

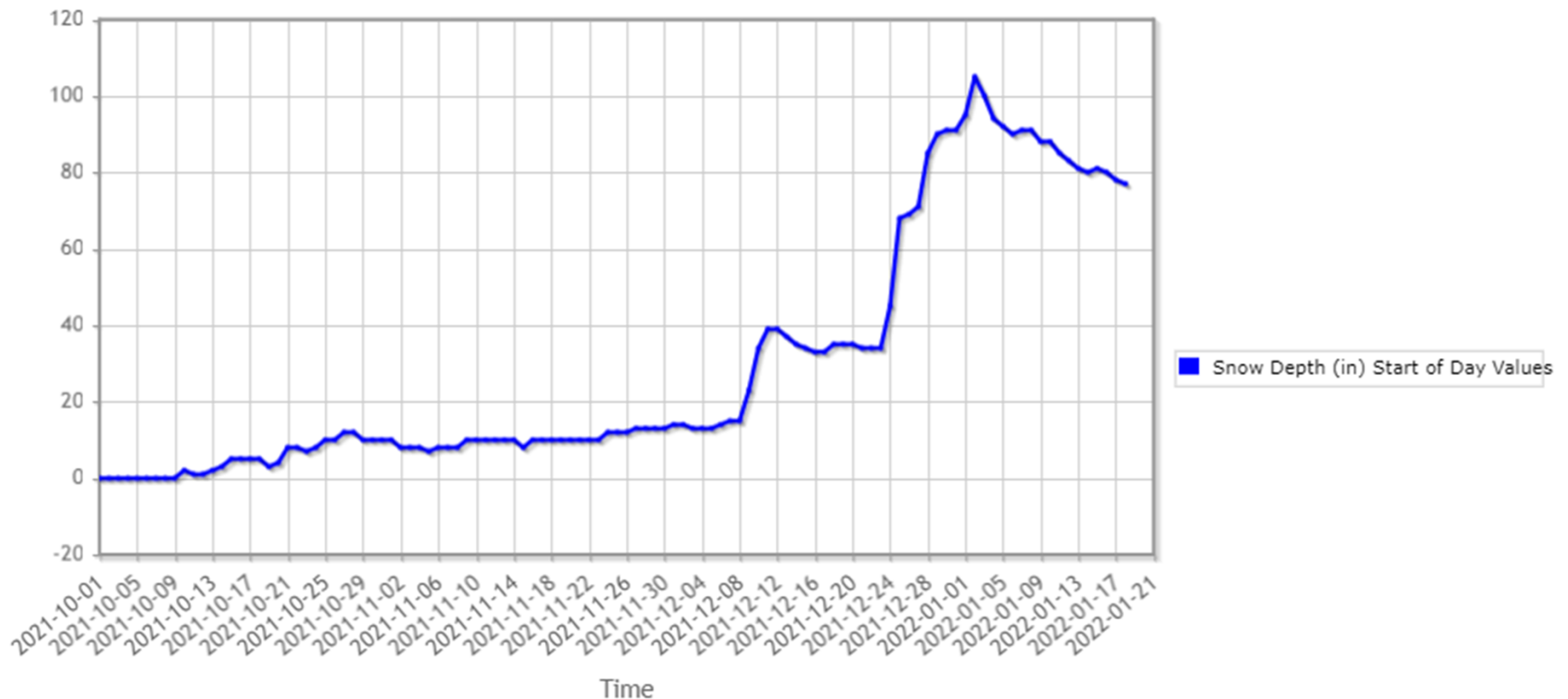




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Schofield Pass (737) Colorado SNOTEL Site - 10700 ft Reporting Frequency: Daily; Date Range: 2021-10-01 to 2022-09-30



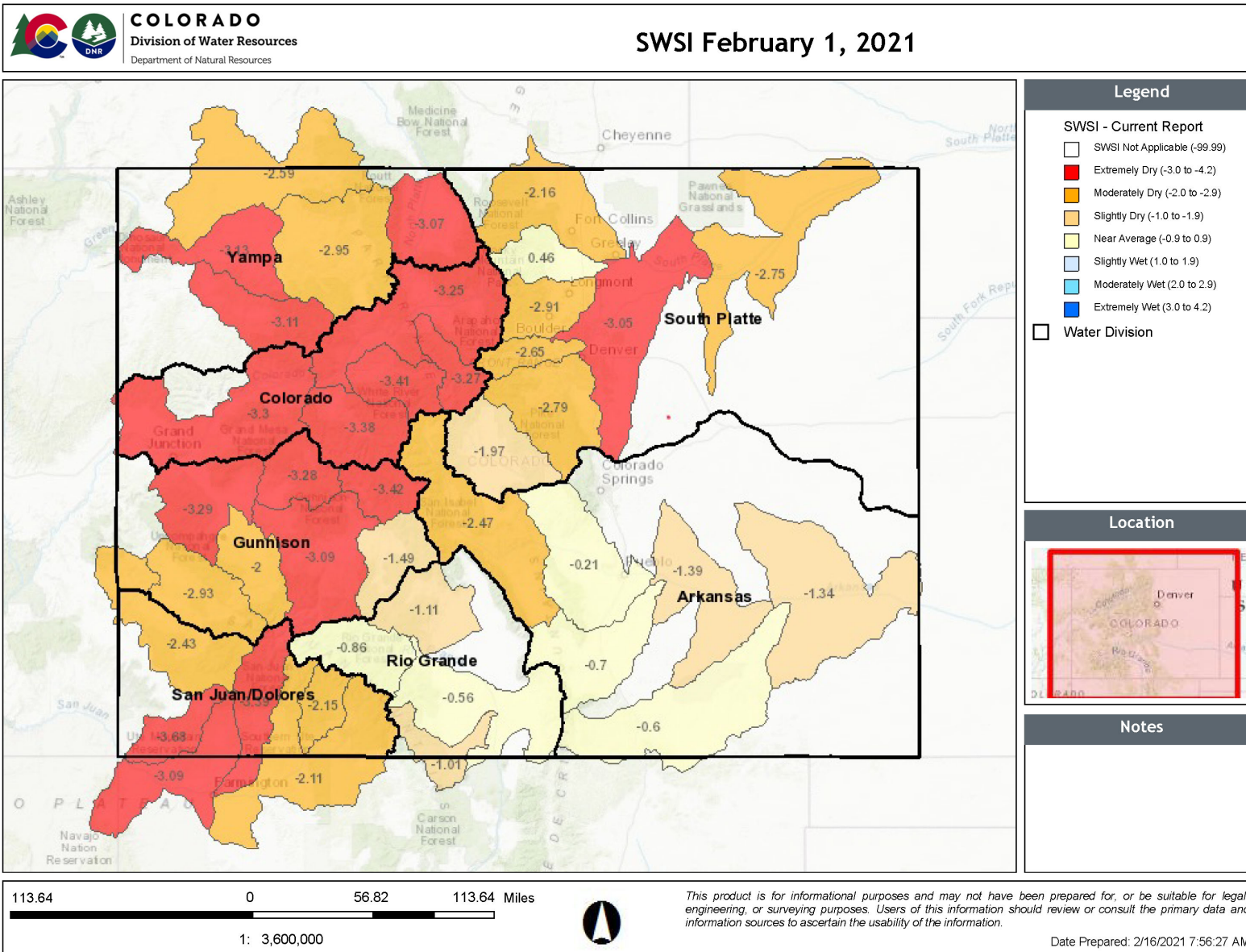
- 12/8/21 = 15 inches of snow depth
- 12/11/21 = 39 inches of snow depth
- 3.7 in SWE gain = ~3 ft of snow accumulation by ski resort standards
- 12/23/21 = 34 inches of snow depth
- 1/2/22 = 105 inches of snow depth
- 14.4 in SWE gain = ~144 inches (12 ft) of snow accumulation by ski resort standards



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Colorado Snow Surveys

February 1, 2020 SWSI





Summary

- December-Early January storms provided much needed Snowpack improvement. Statewide snowpack went from 52% of median on Dec 1, 2021 to ~124% of median on Jan 6, 2022.
- In some cases improvements were the most in the period of record
- Statewide reservoirs are at 78% of average
- Soil moisture conditions are slightly improved over last year at this time
- Streamflows look to be better than last year at the end of October
- January 1 Streamflow forecasts project generally near to slightly above normal streamflows come spring and summer. Near 100% of normal east of the divide. Forecasts improve further west in Colorado.



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