



# Water Availability Task Force Meeting

May 25<sup>th</sup>, 2021

## NRCS Snow Survey and Water Supply Forecasting Program

Karl Wetlaufer

Hydrologist

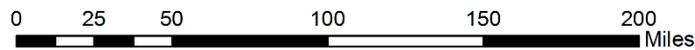
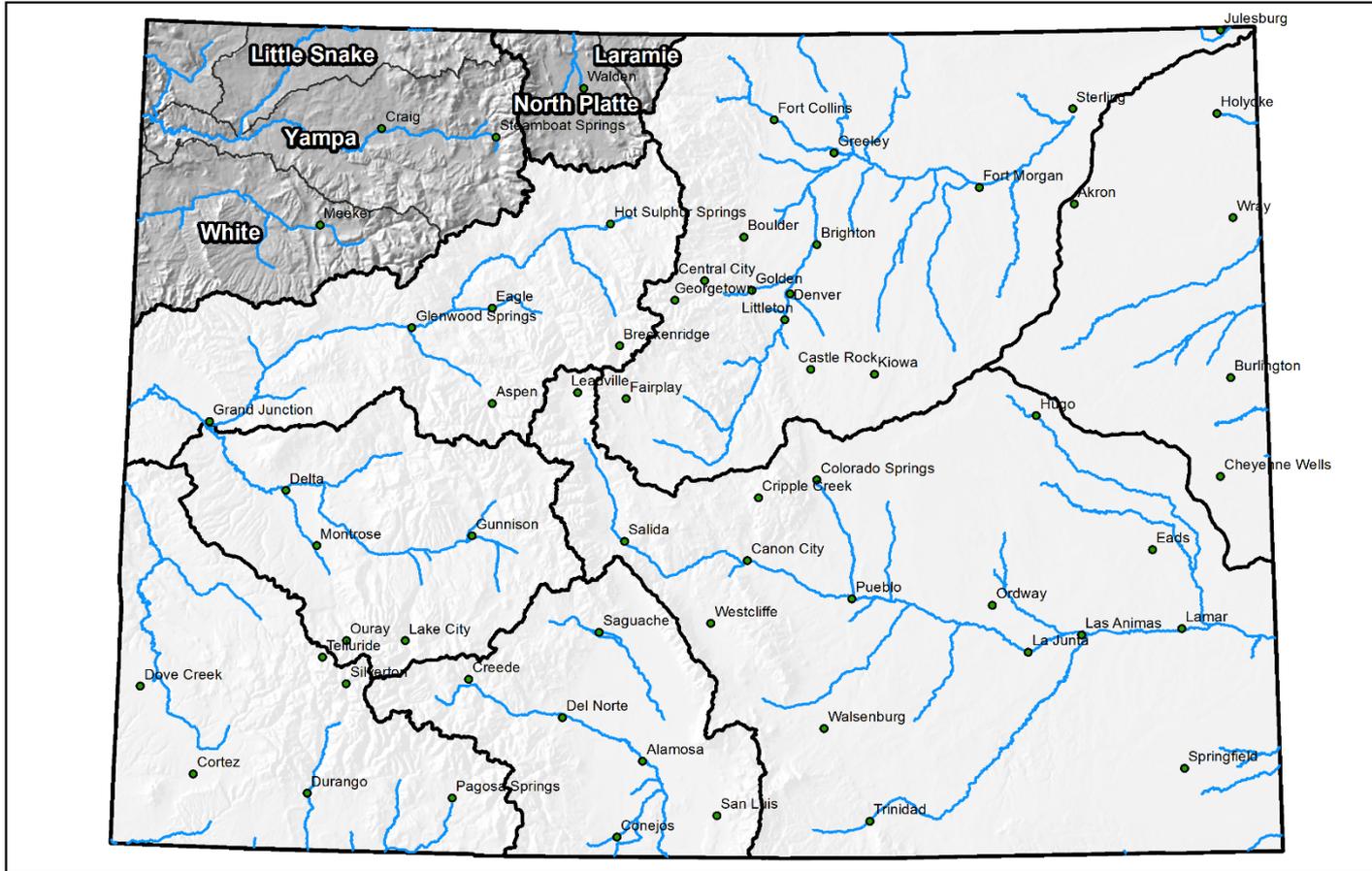
Asst. Snow Survey Supervisor

720-544-2852

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

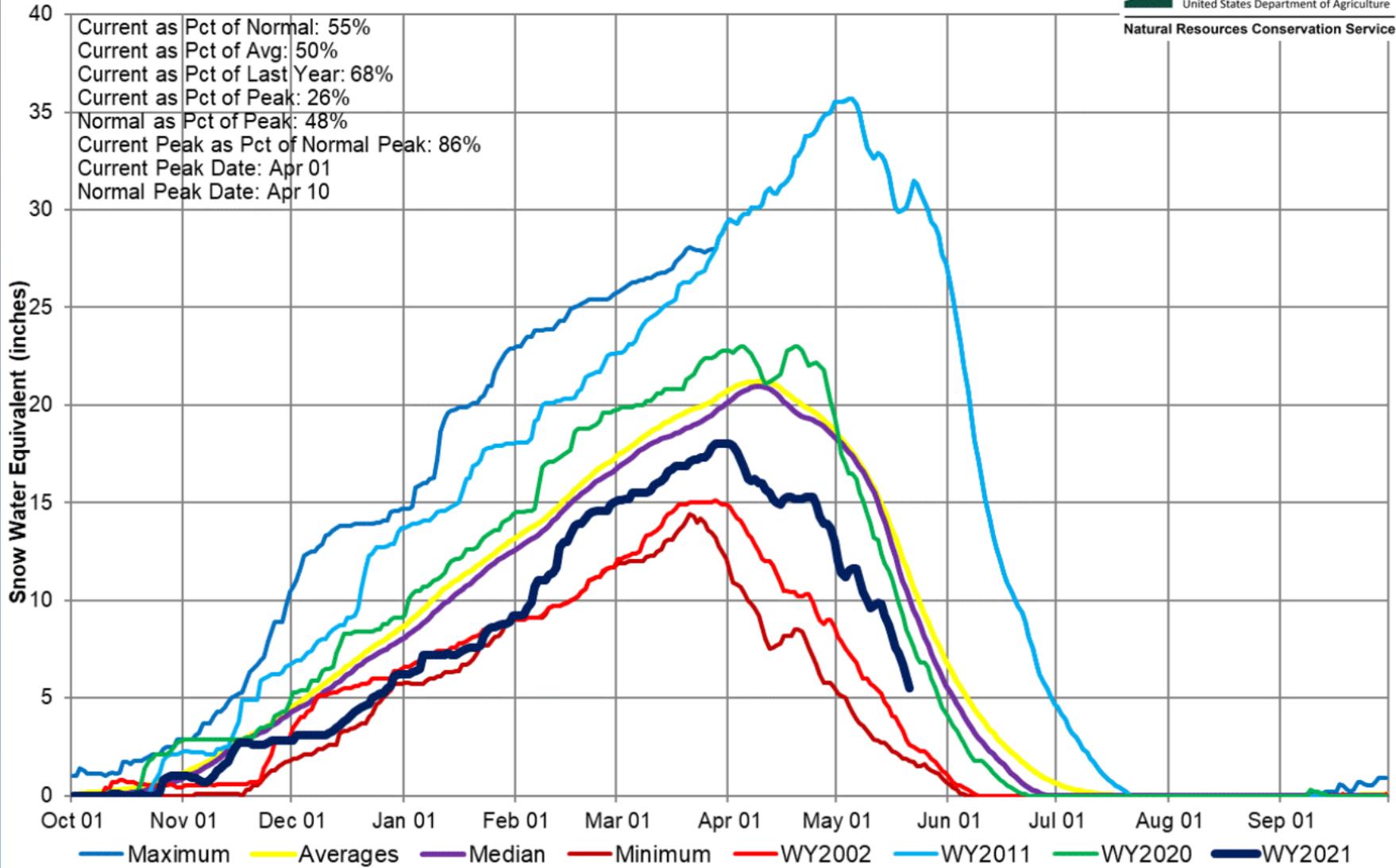
## Major Basin Summary

Yampa, White, and North Platte River Basins

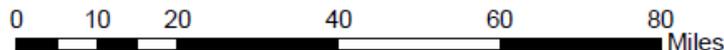
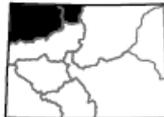
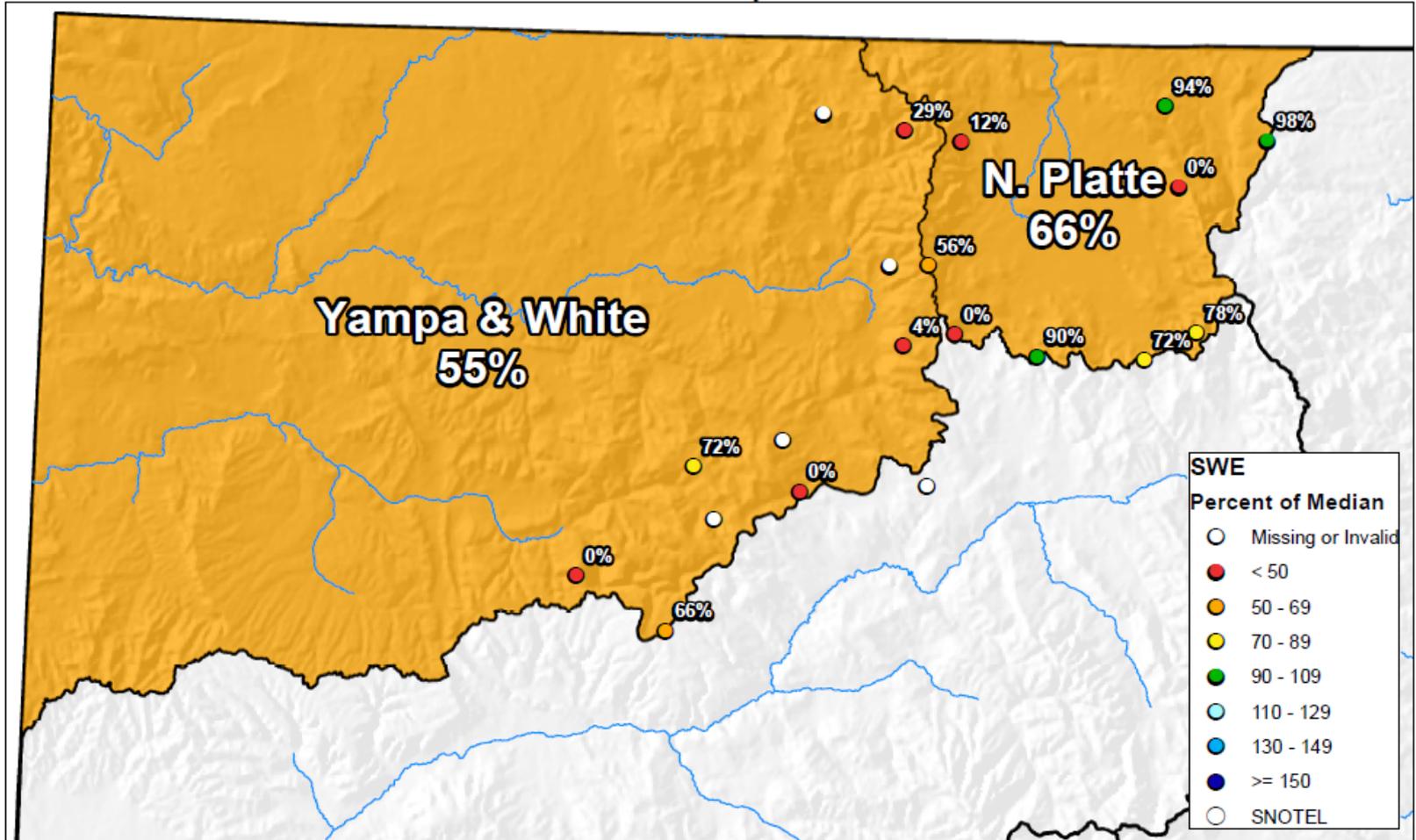


## Yampa and White River Basins High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of May 21, 2021*

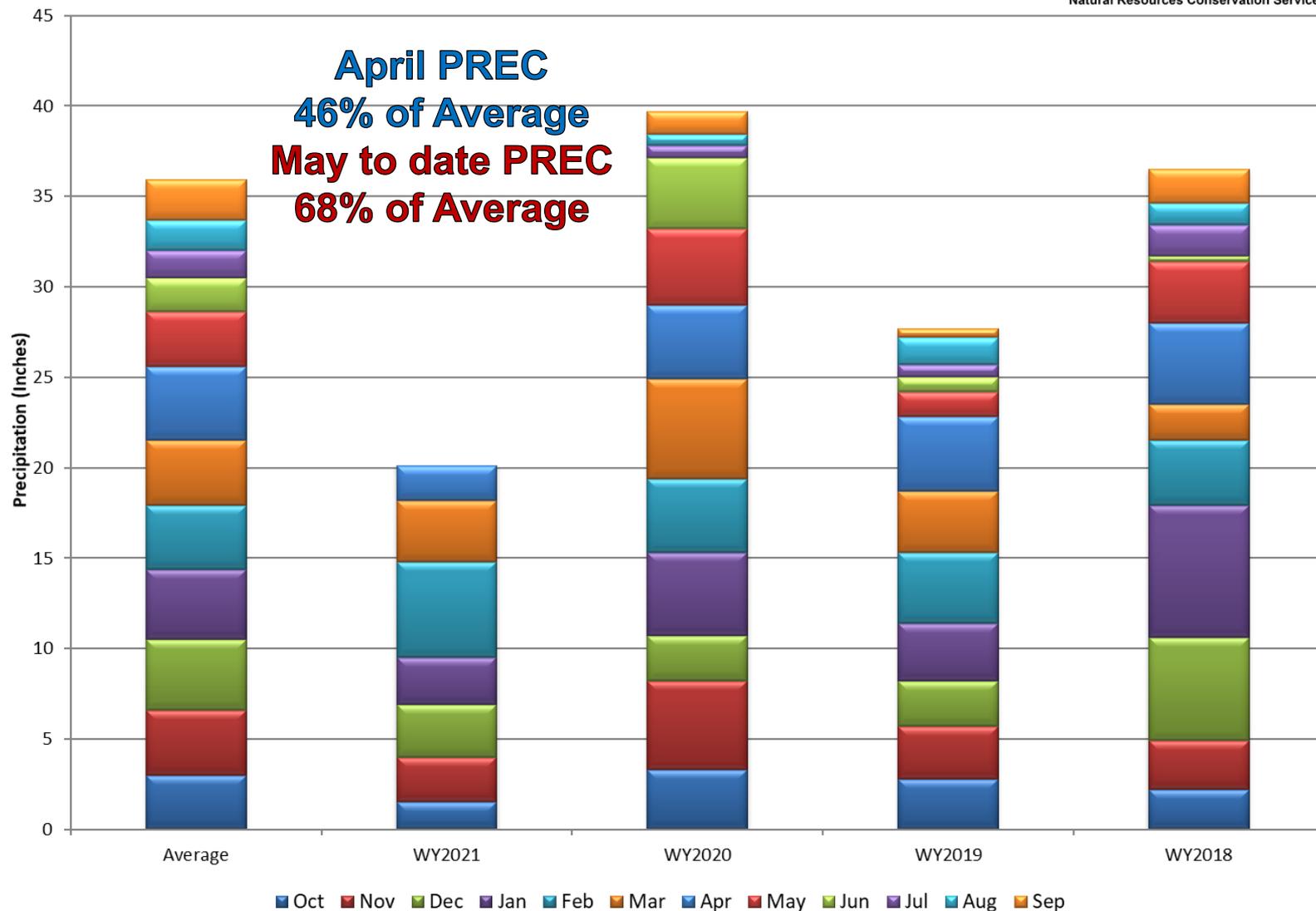


## Yampa, White, and North Platte River Basins Snow Water Equivalent (SWE) Summary Current as of May 21, 2021



## Yampa, White & North Platte River Basins Monthly Precipitation Summary

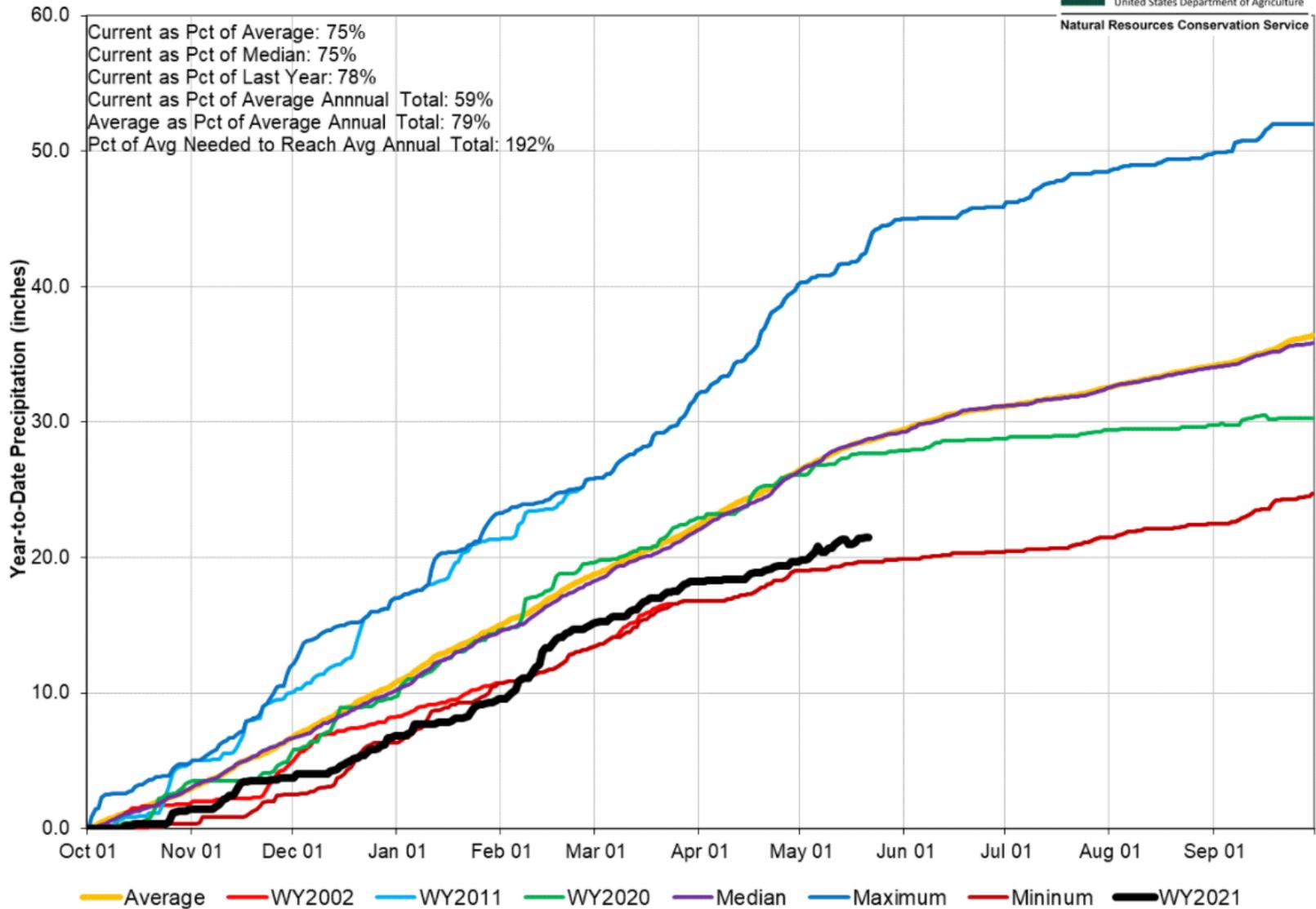
*Based on Provisional SNOTEL data as of May 21, 2021*



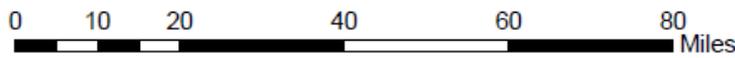
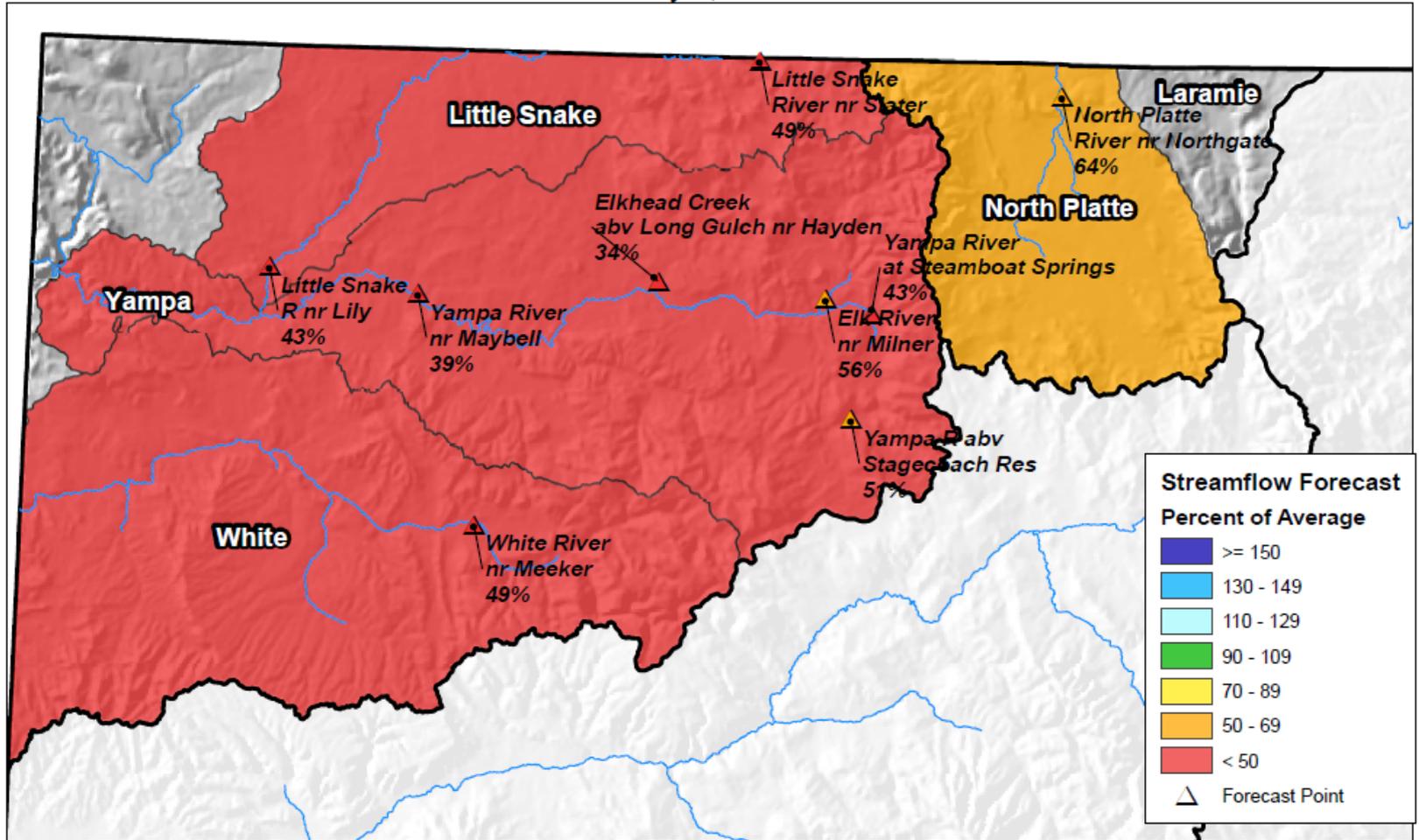
## Yampa and White River Basins High/Low Year-to-Date Precipitation Summary

*Based on Provisional SNOTEL data as of May 21, 2021*

USDA  
United States Department of Agriculture  
Natural Resources Conservation Service

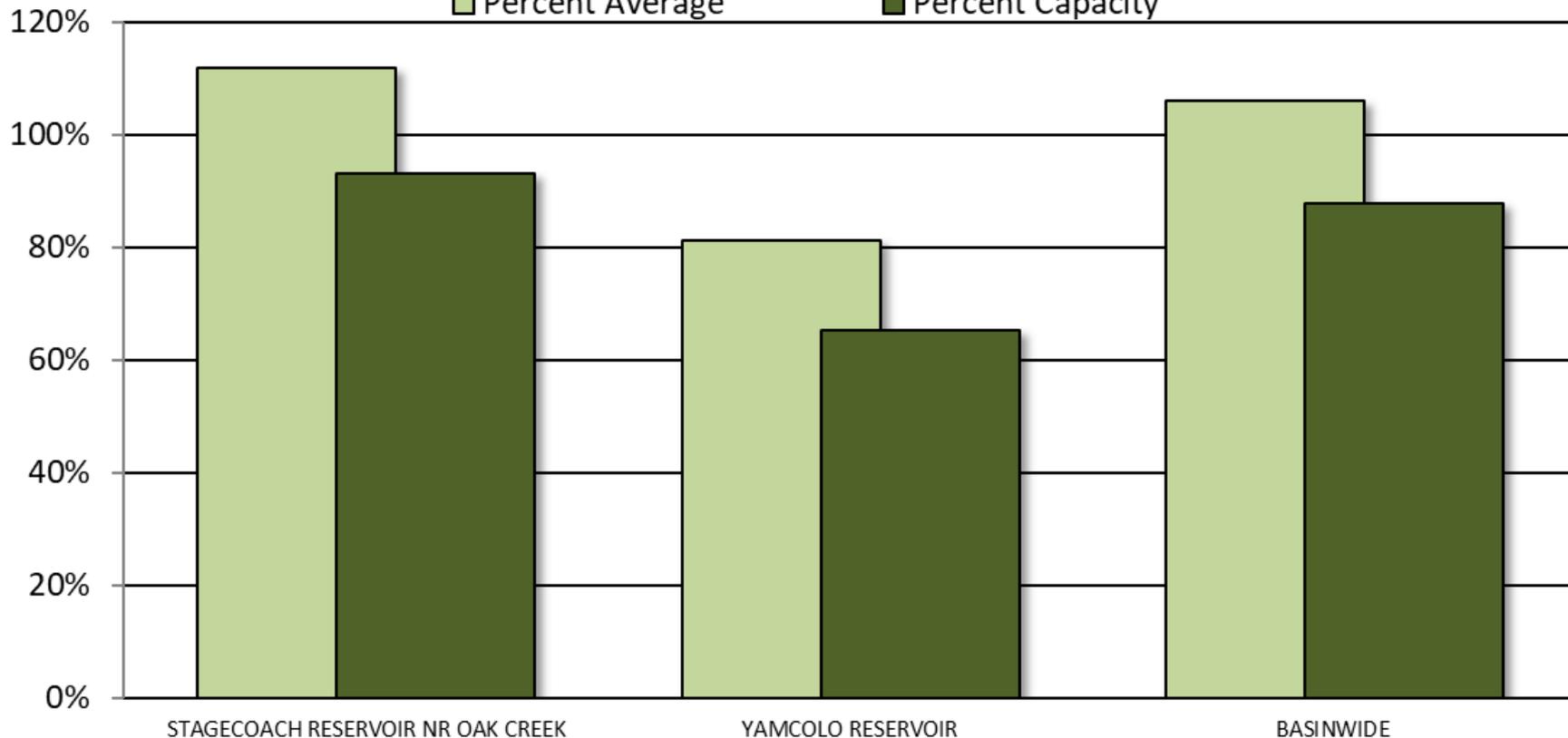


## Yampa, White, and North Platte River Basins Streamflow Forecast Summary May 1, 2021



## End of April Reservoir Storage

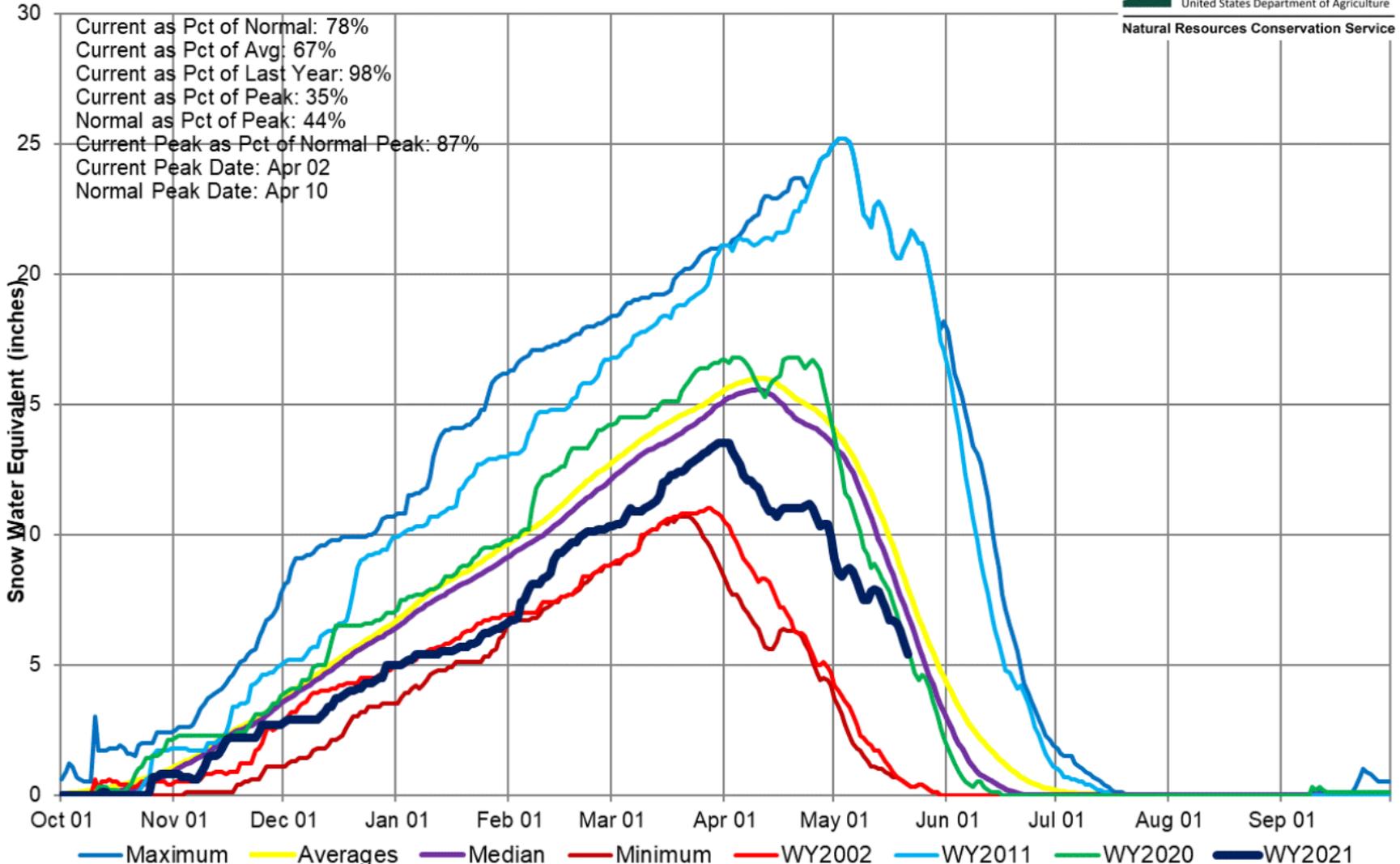
■ Percent Average      ■ Percent Capacity



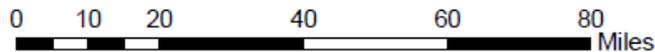
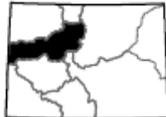
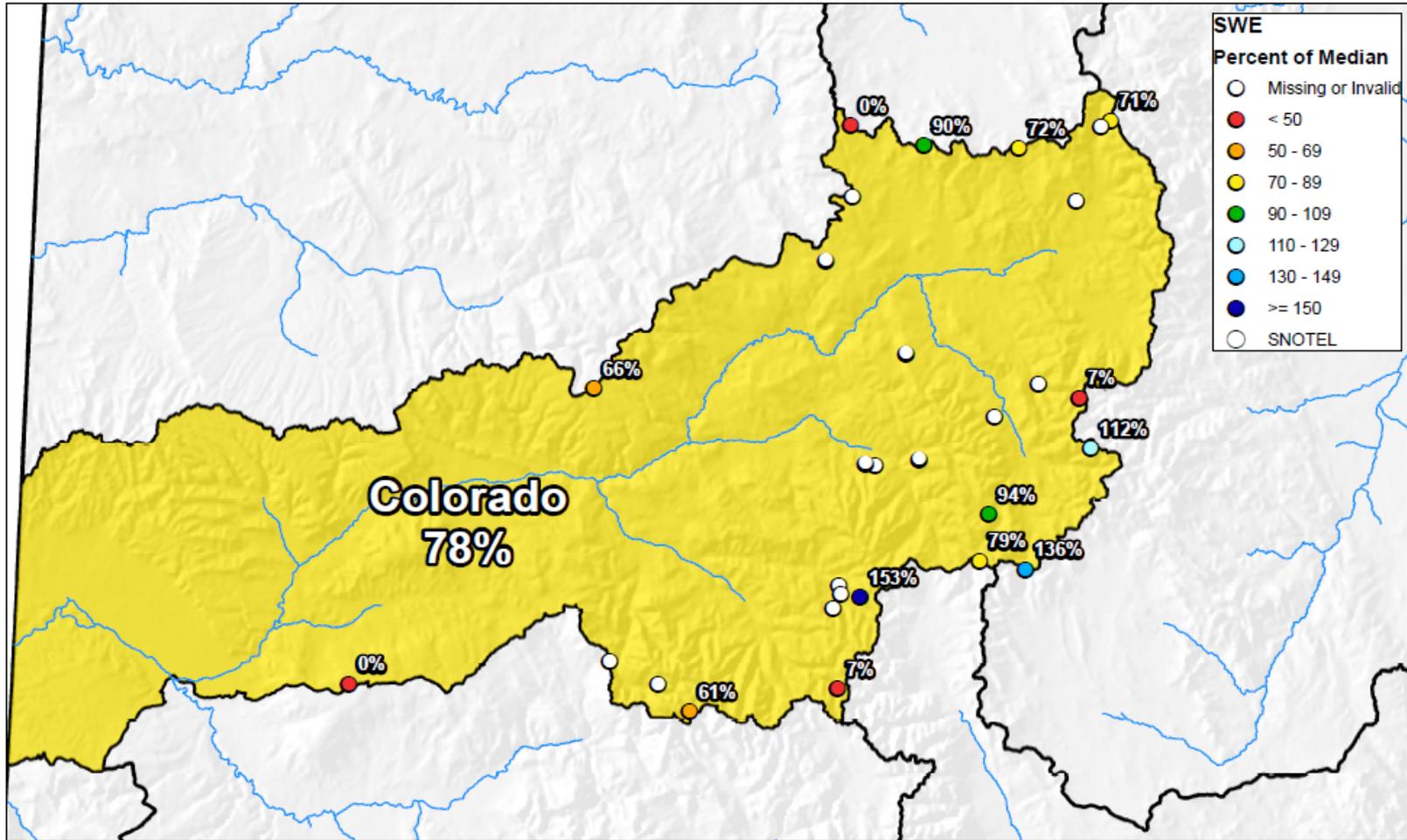


## Upper Colorado River Basin High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of May 21, 2021*



## Upper Colorado River Basin Snow Water Equivalent (SWE) Summary Current as of May 21, 2021



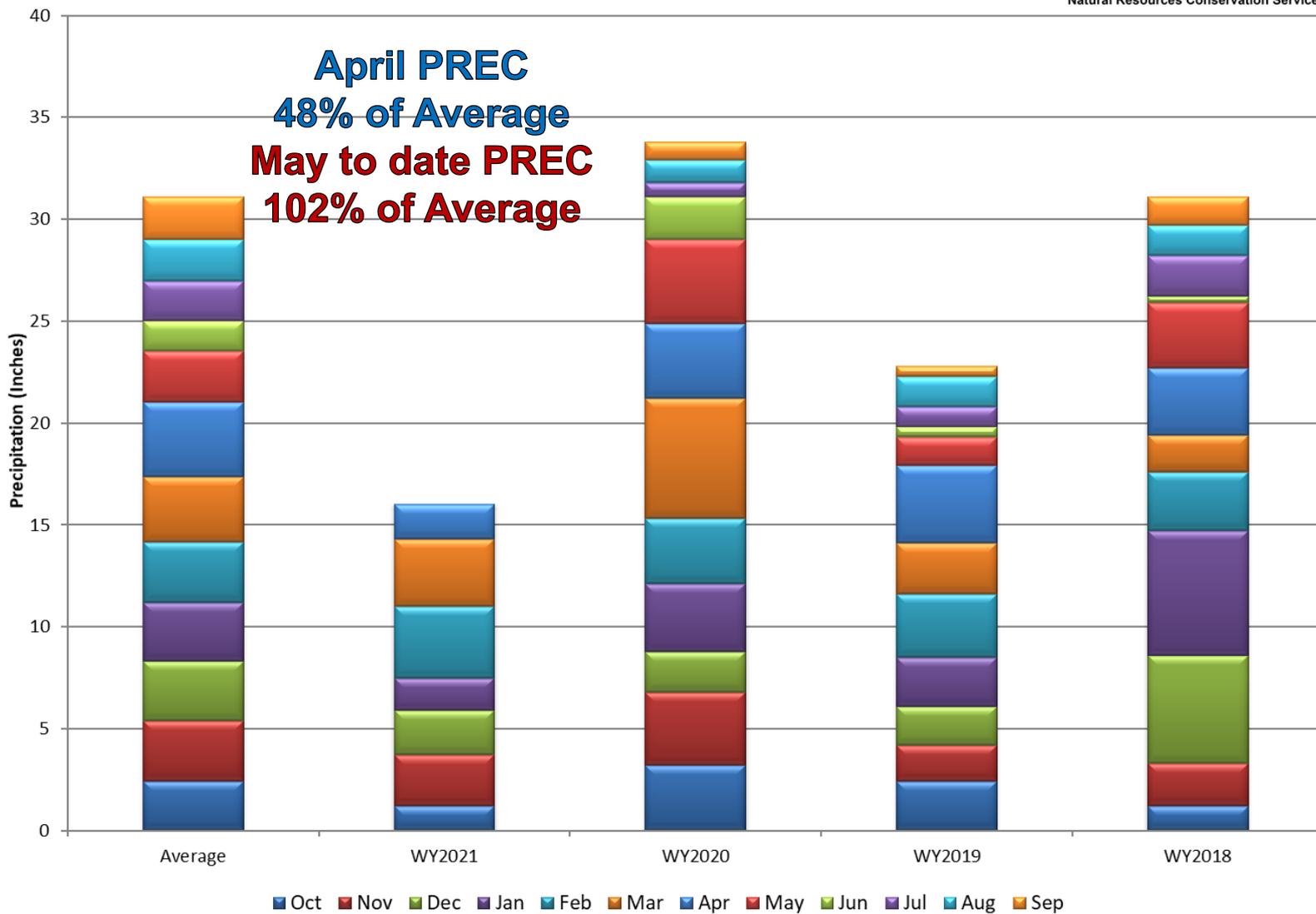
## Colorado River Basin Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of May 21, 2021*



United States Department of Agriculture

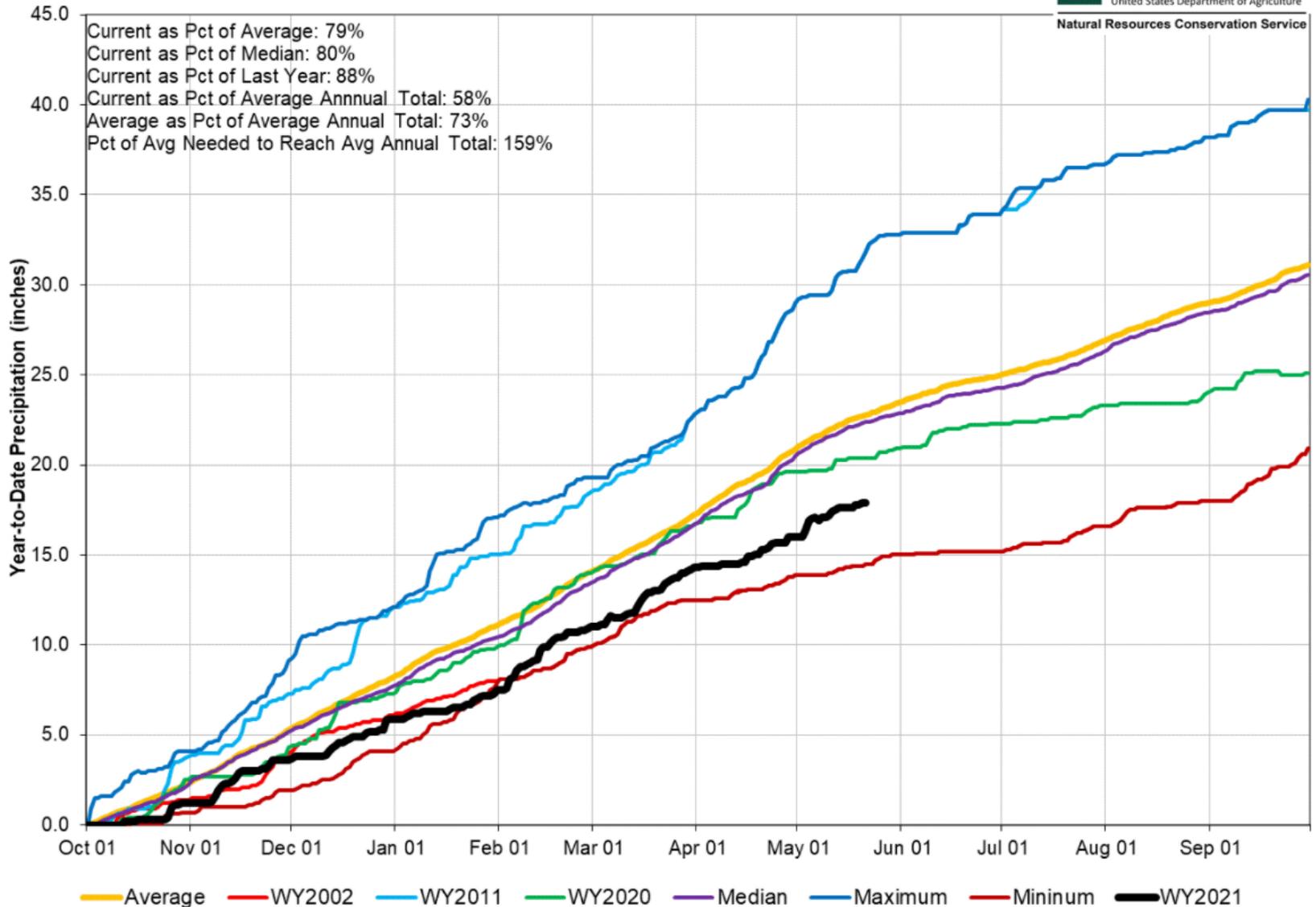
Natural Resources Conservation Service



## Upper Colorado River Basin High/Low Year-to-Date Precipitation Summary

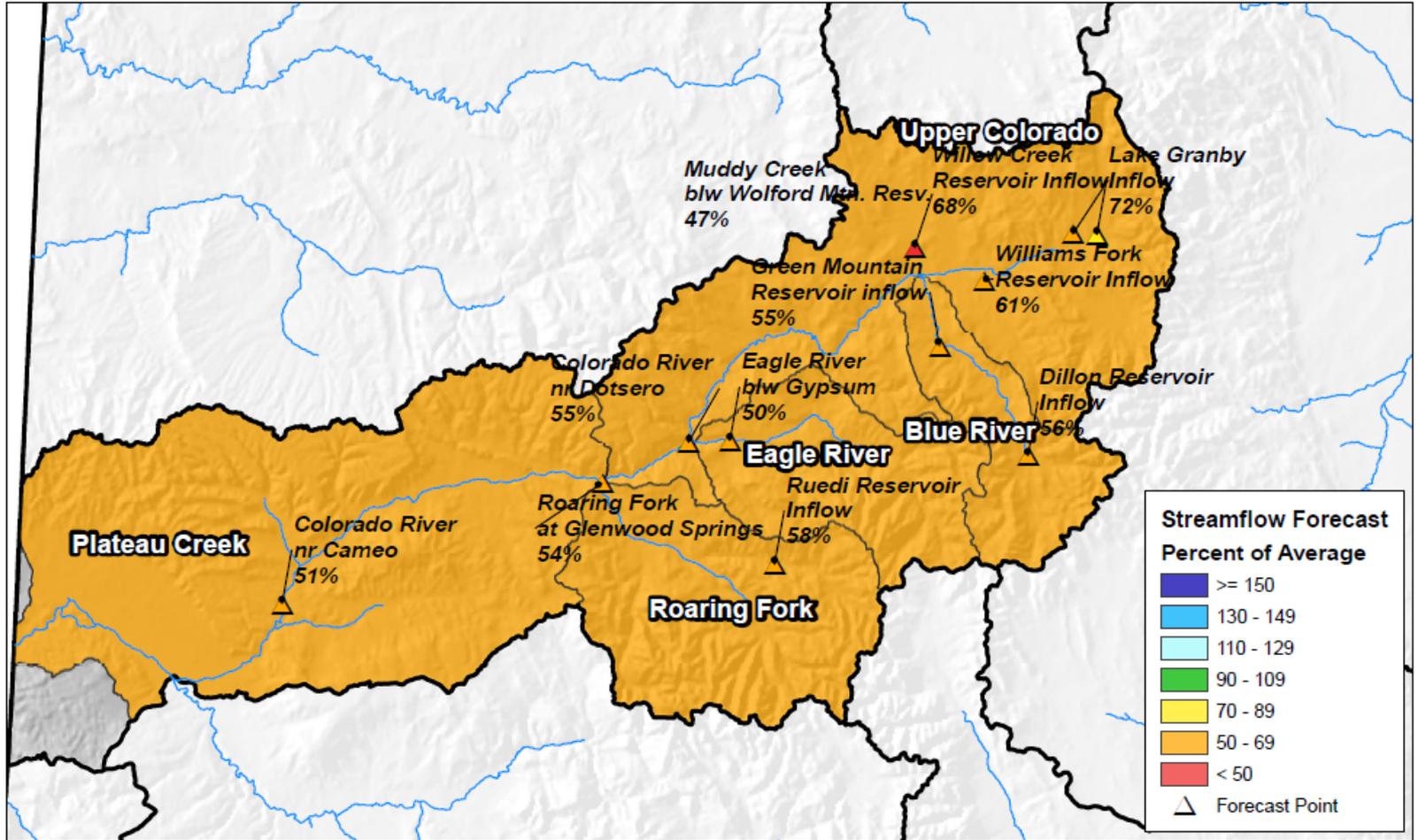
*Based on Provisional SNOTEL data as of May 21, 2021*

USDA  
United States Department of Agriculture  
Natural Resources Conservation Service



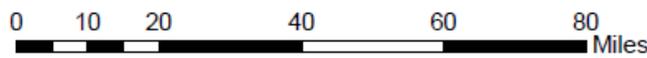
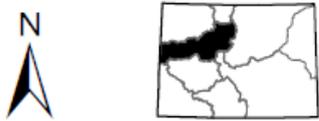
## Upper Colorado River Basin Streamflow Forecast Summary

May 1, 2021



**Streamflow Forecast Percent of Average**

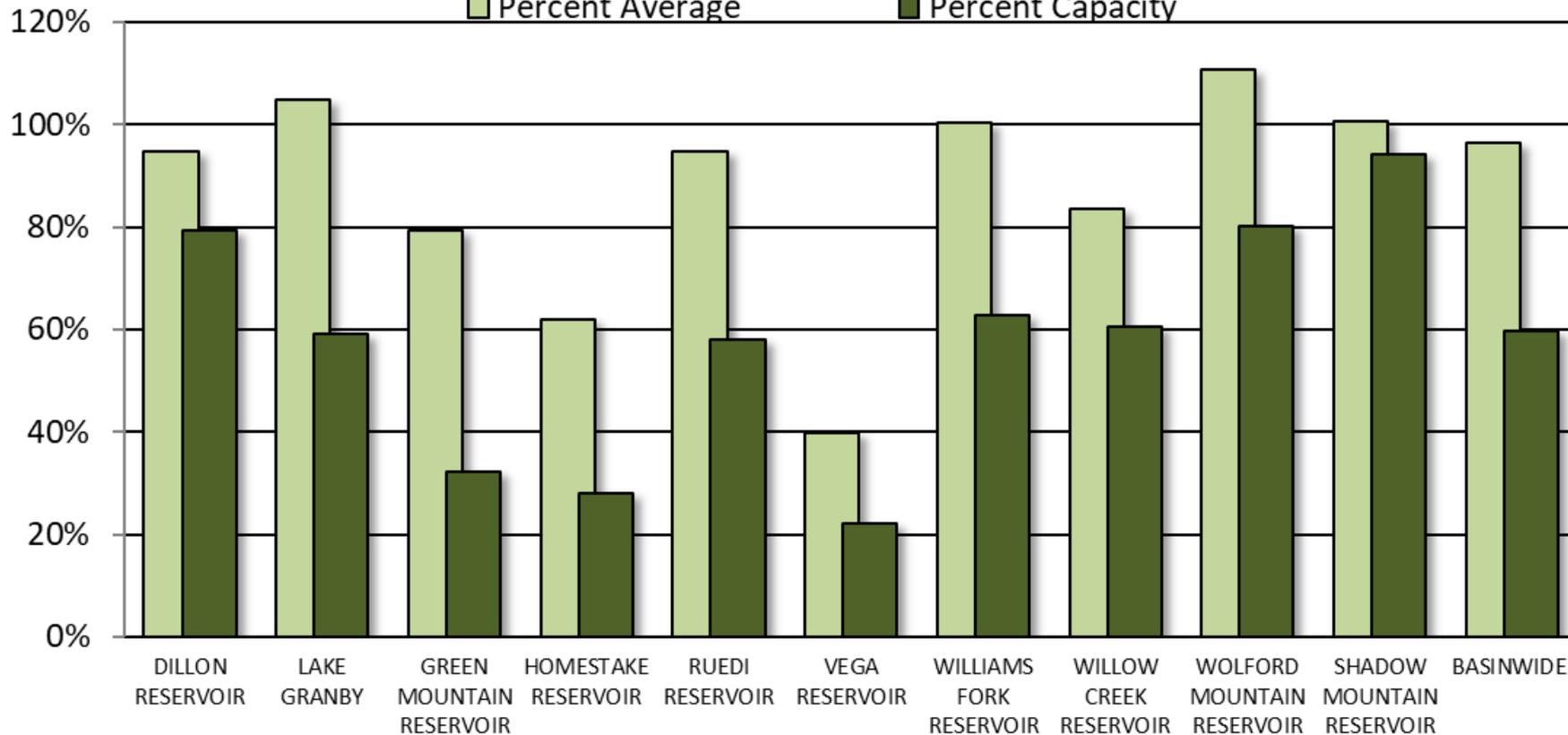
- $\geq 150$
- 130 - 149
- 110 - 129
- 90 - 109
- 70 - 89
- 50 - 69
- $< 50$
- Forecast Point



## End of April Reservoir Storage

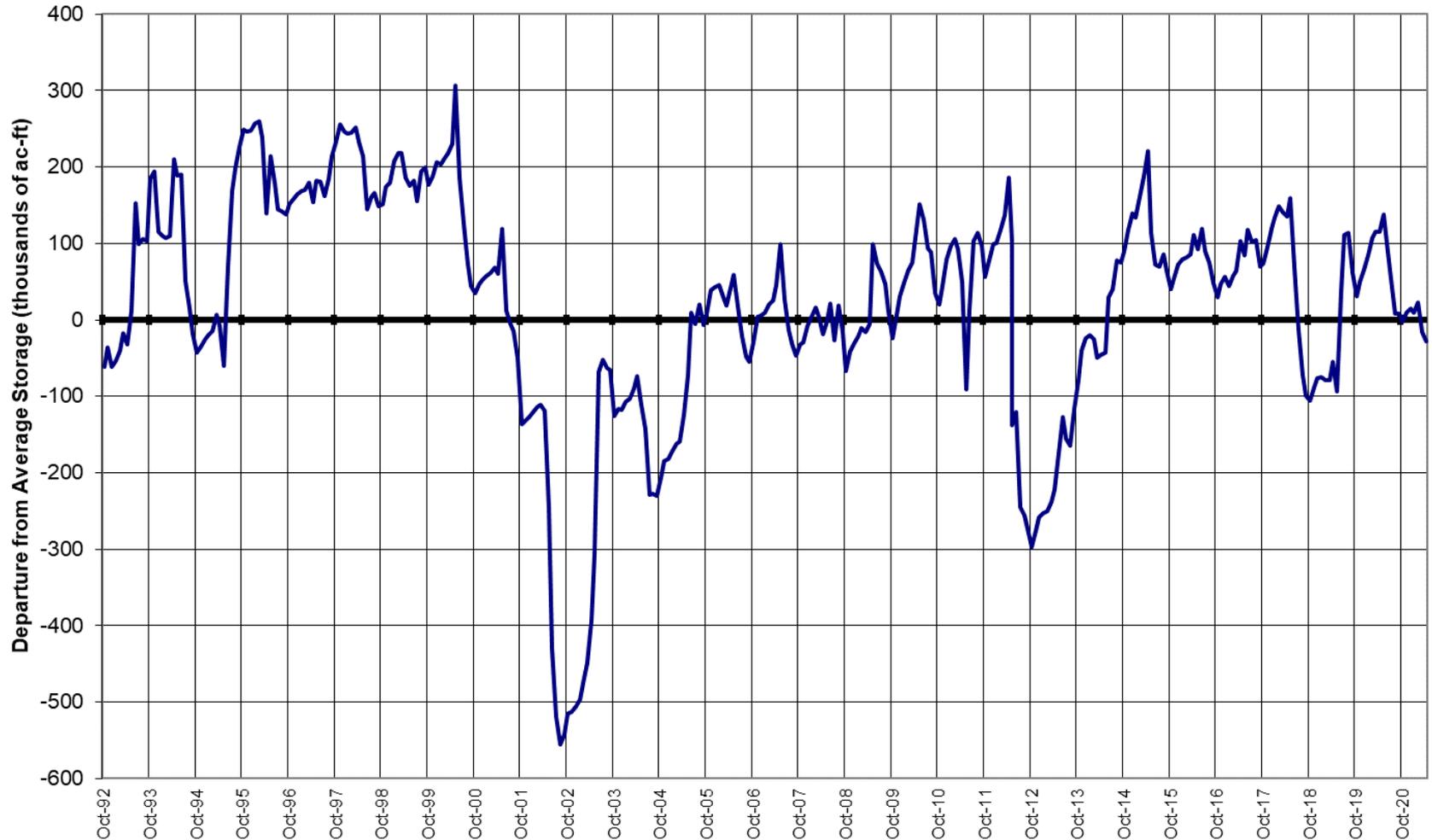
■ Percent Average

■ Percent Capacity



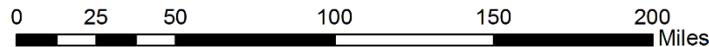
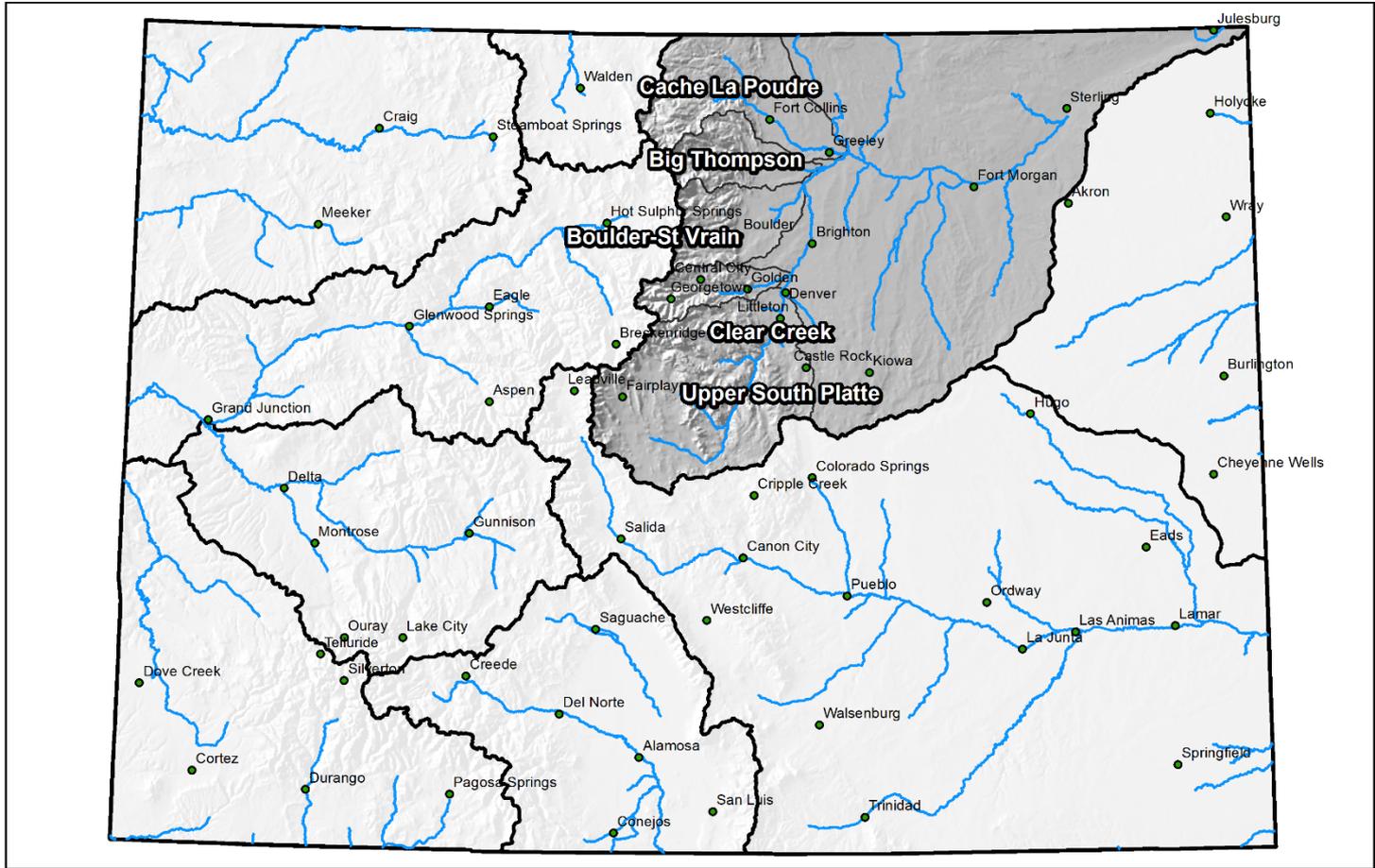


## COLORADO RIVER BASIN Reservoir Storage Departure from Average



## Major Basin Summary

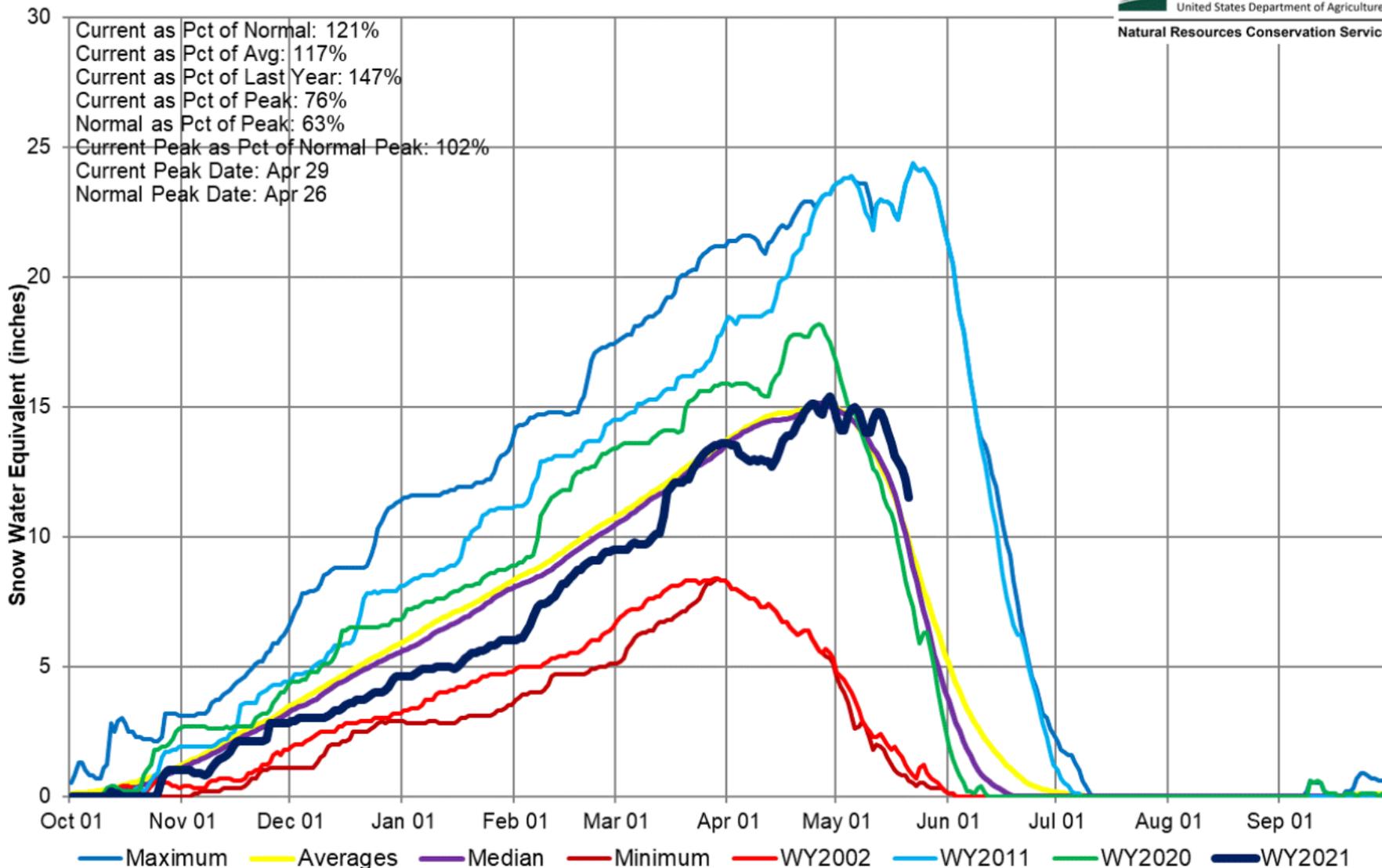
### South Platte River Basin



## South Platte River Basin High/Low Snowpack Summary

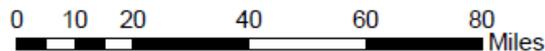
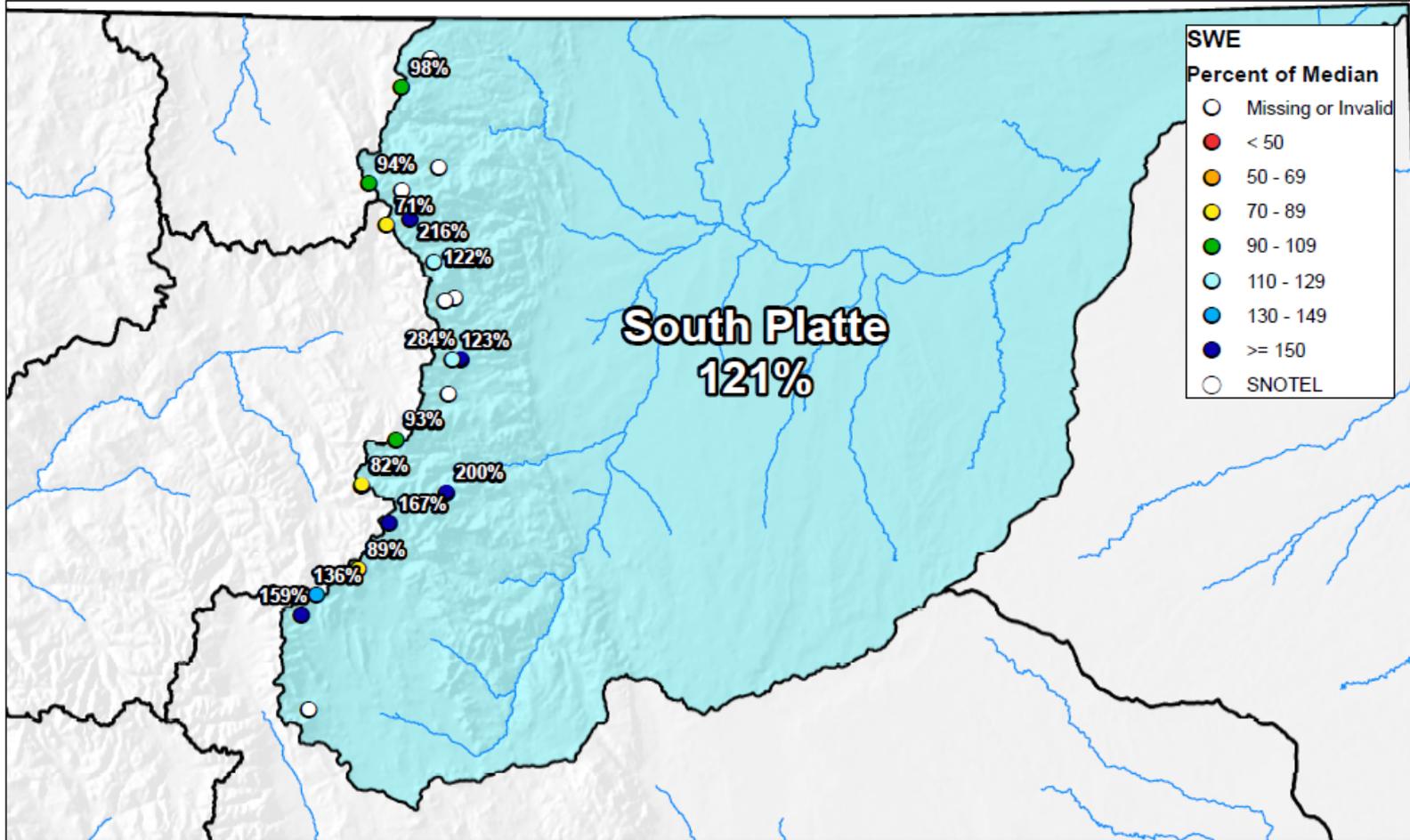
*Based on Provisional SNOTEL data as of May 21, 2021*

USDA  
United States Department of Agriculture  
Natural Resources Conservation Service



## South Platte River Basin Snow Water Equivalent (SWE) Summary

Current as of May 21, 2021



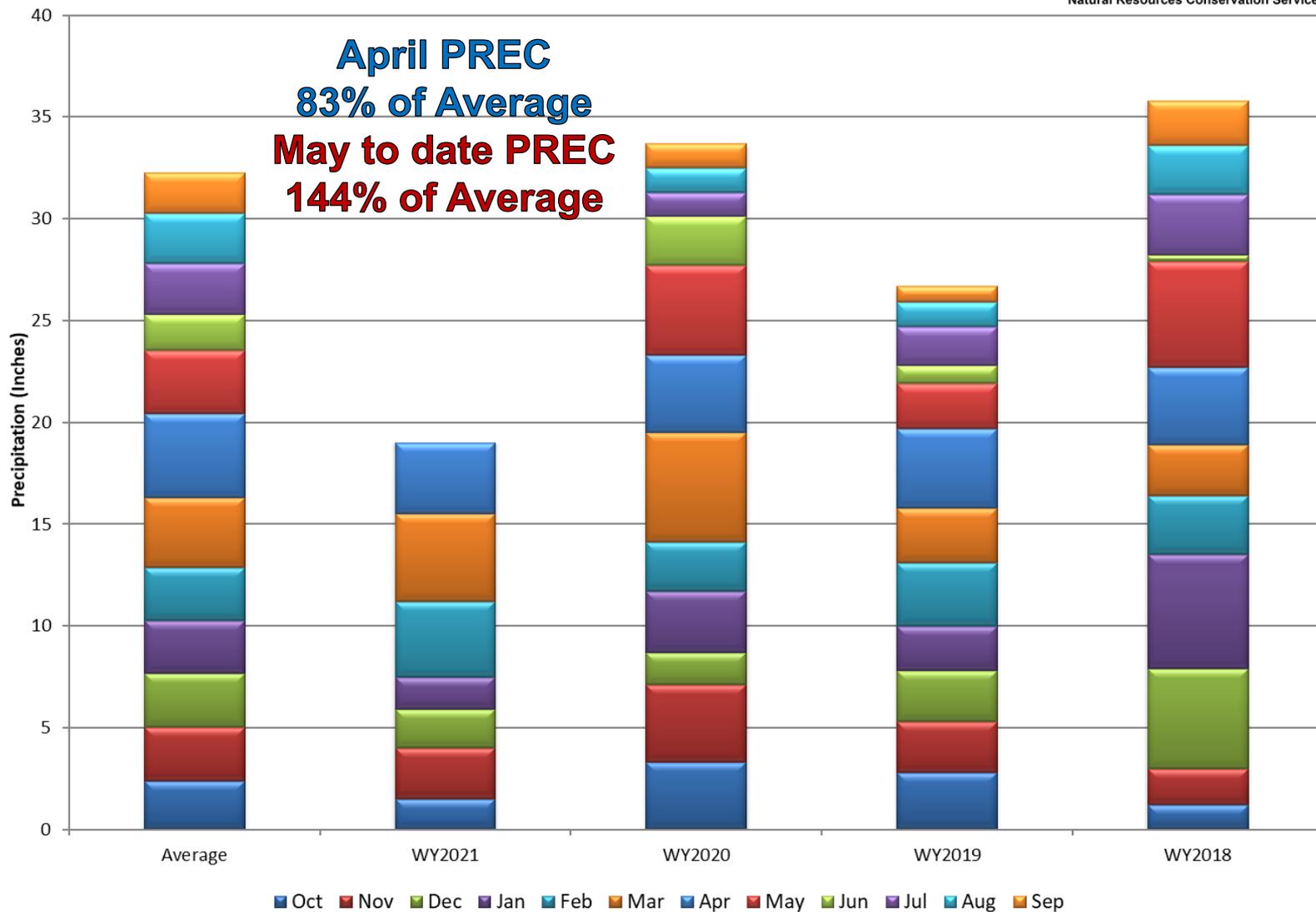
## South Platte River Basin Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of May 21, 2021*



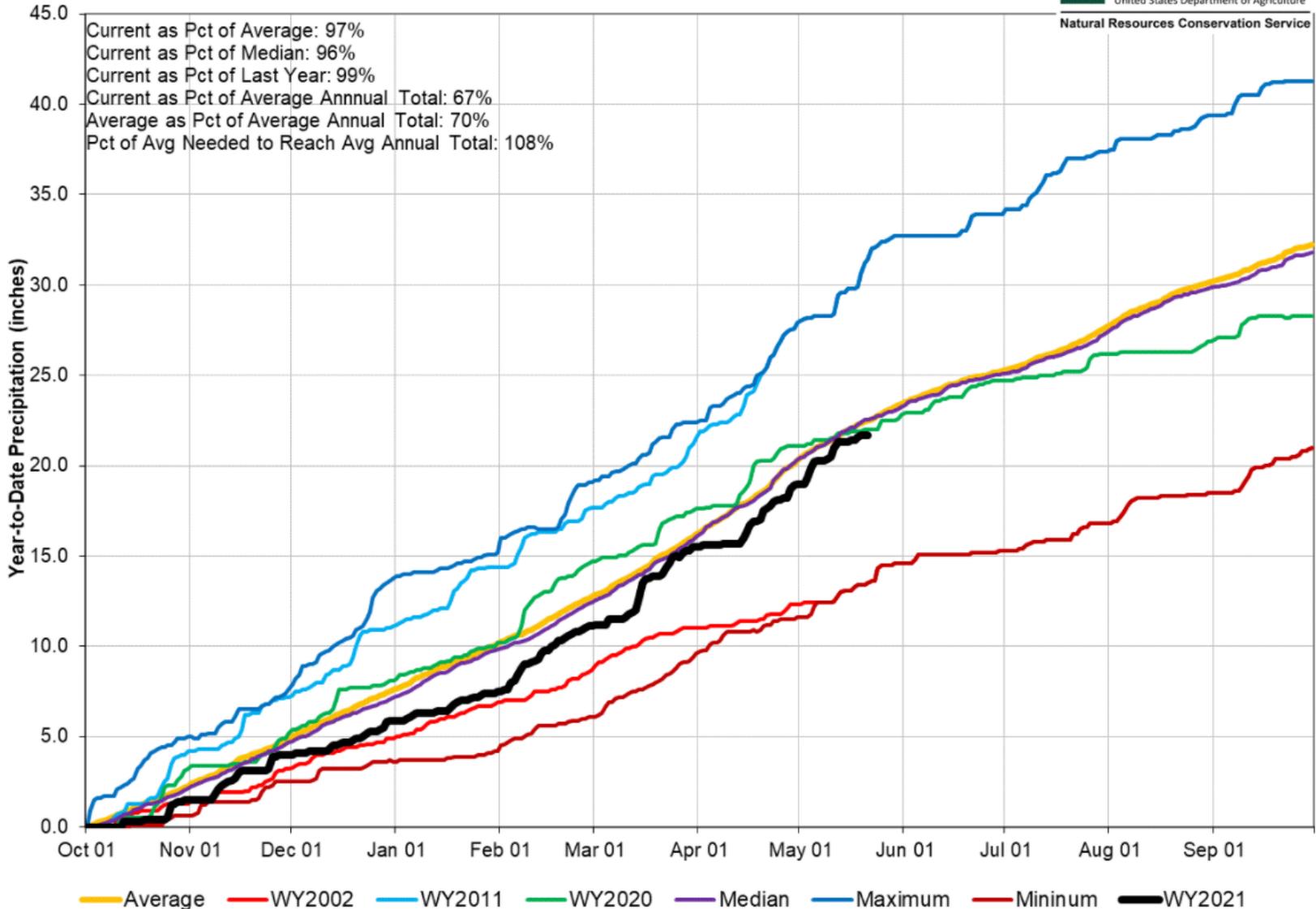
United States Department of Agriculture

Natural Resources Conservation Service



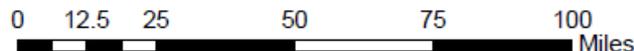
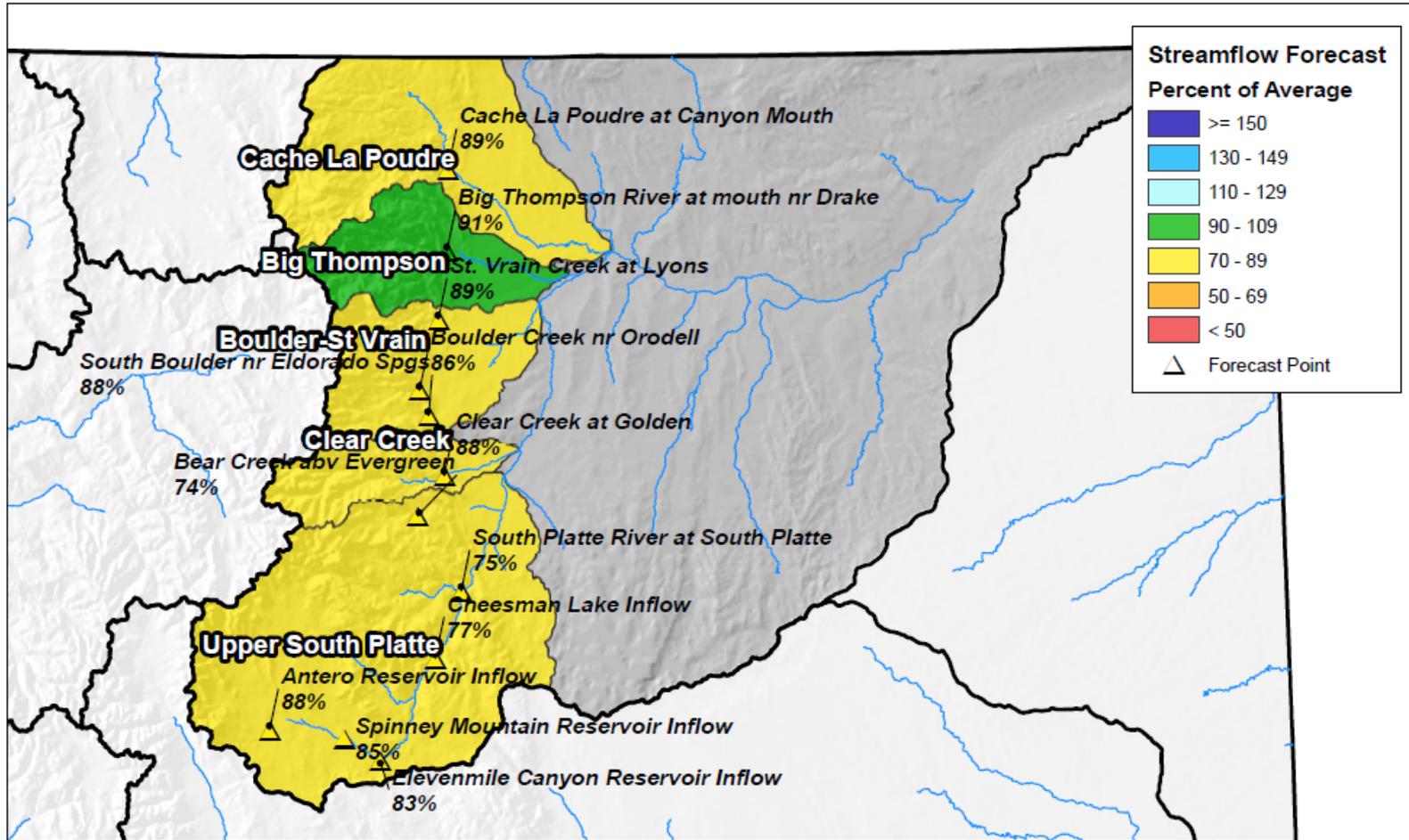
## South Platte River Basin High/Low Year-to-Date Precipitation Summary

*Based on Provisional SNOTEL data as of May 21, 2021*



## South Platte River Basin Streamflow Forecast Summary

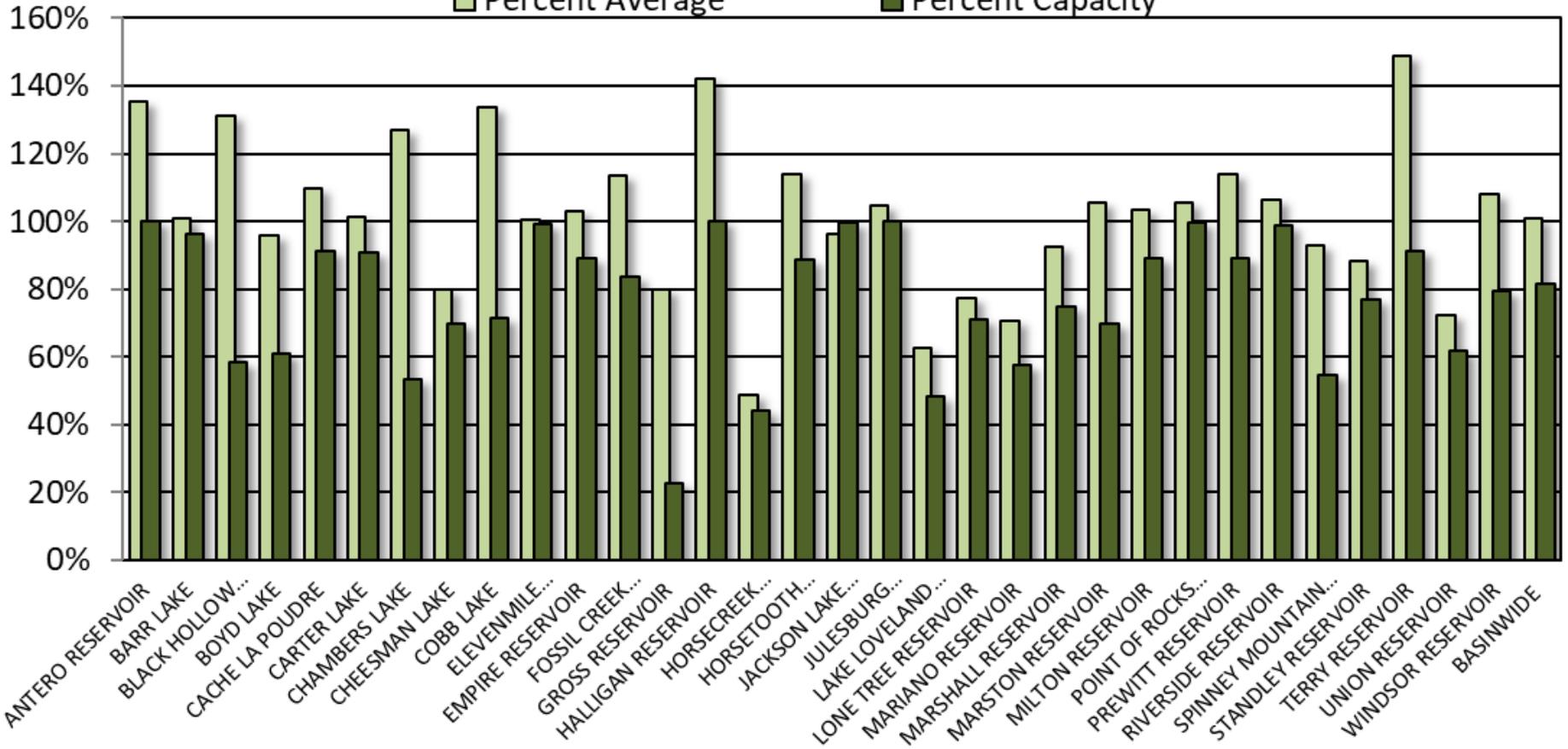
May 1, 2021



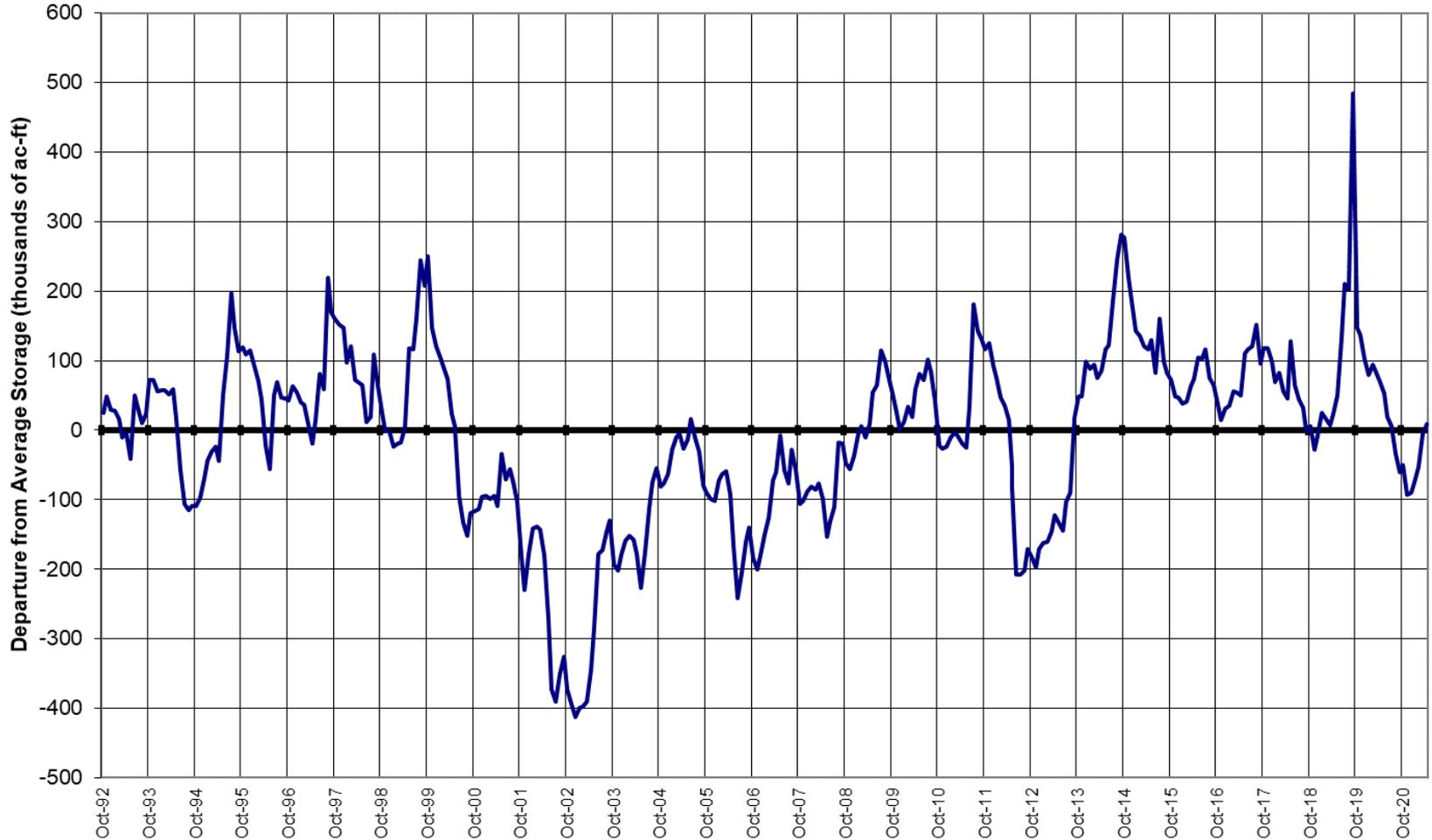
## End of April Reservoir Storage

■ Percent Average

■ Percent Capacity

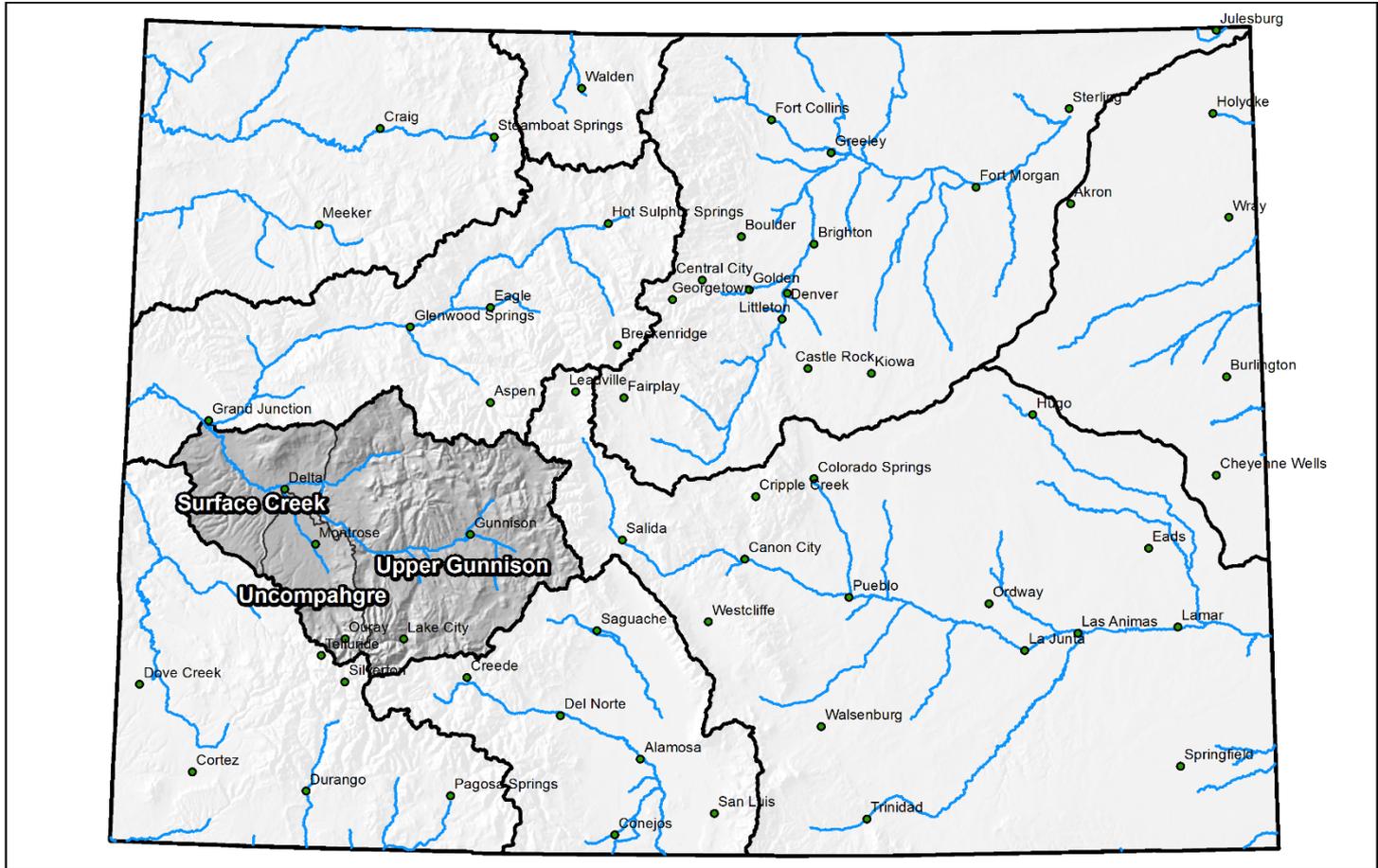


**SOUTH PLATTE RIVER BASIN  
Reservoir Storage  
Departure from Average**



## Major Basin Summary

### Gunnison River Basin

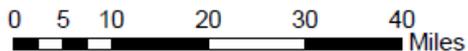
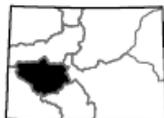
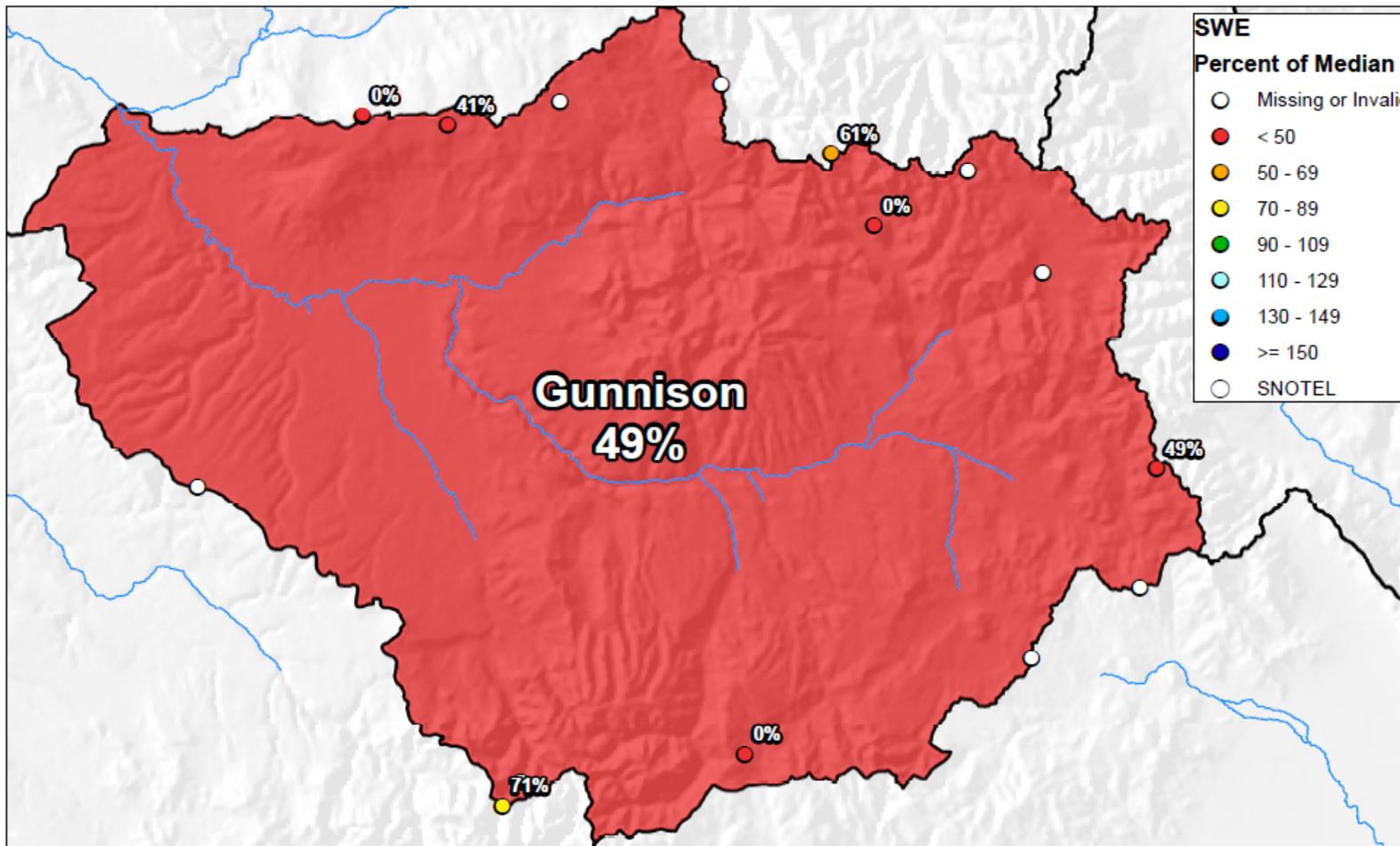


0 25 50 100 150 200 Miles



## Gunnison River Basin Snow Water Equivalent (SWE) Summary

Current as of May 21, 2021



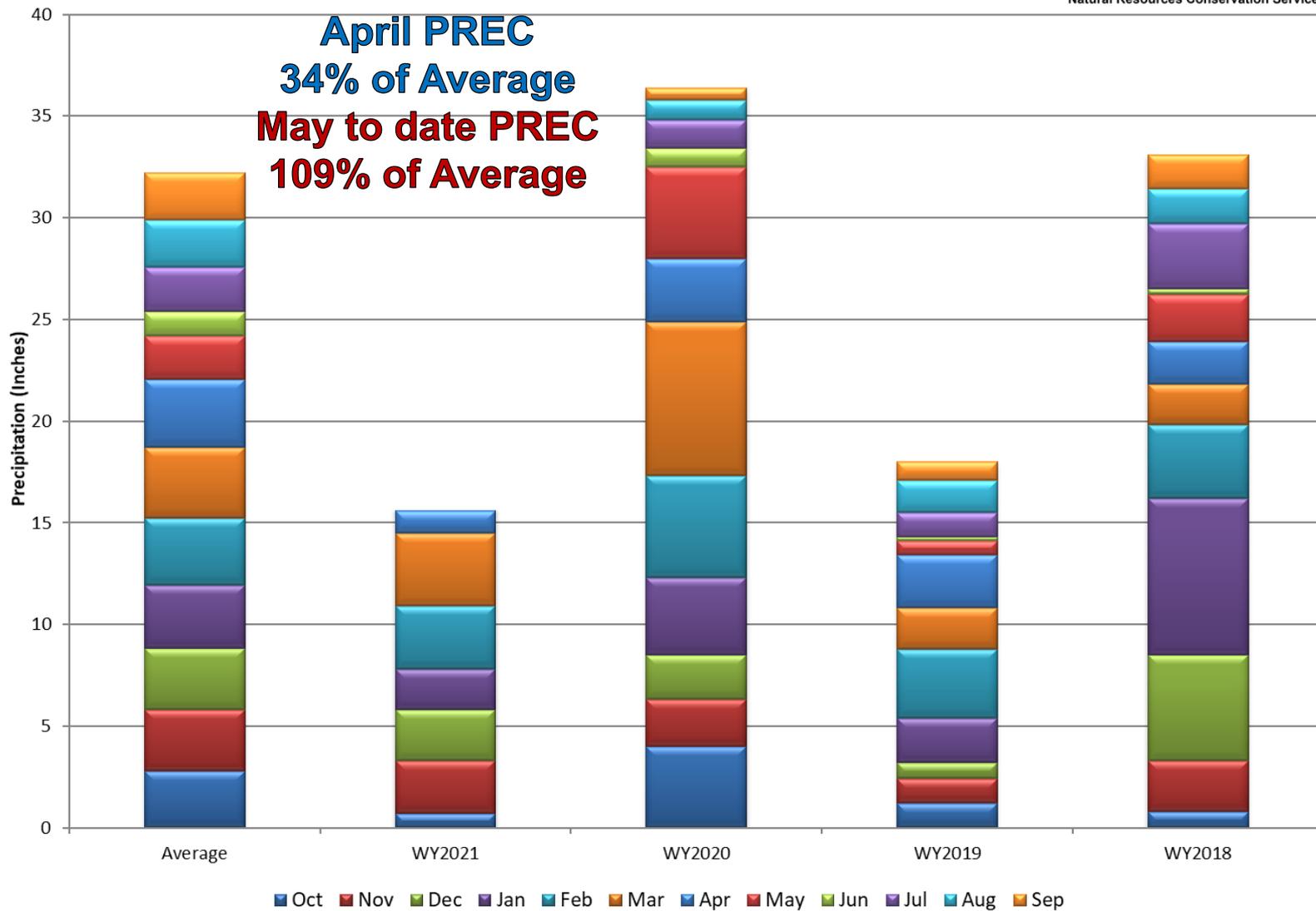
## Gunnison River Basin Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of May 21, 2021*



United States Department of Agriculture

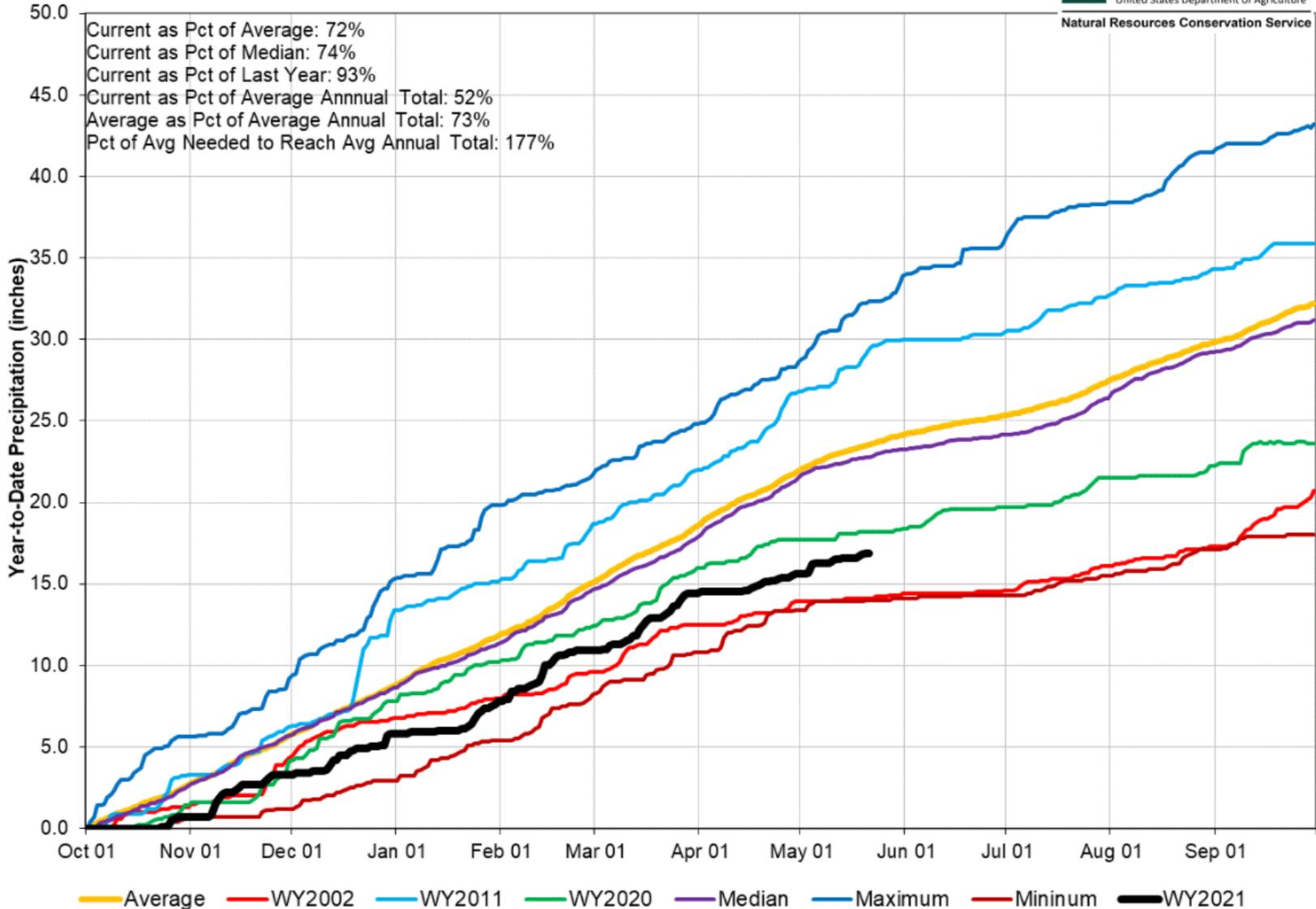
Natural Resources Conservation Service



## Gunnison River Basin High/Low Year-to-Date Precipitation Summary

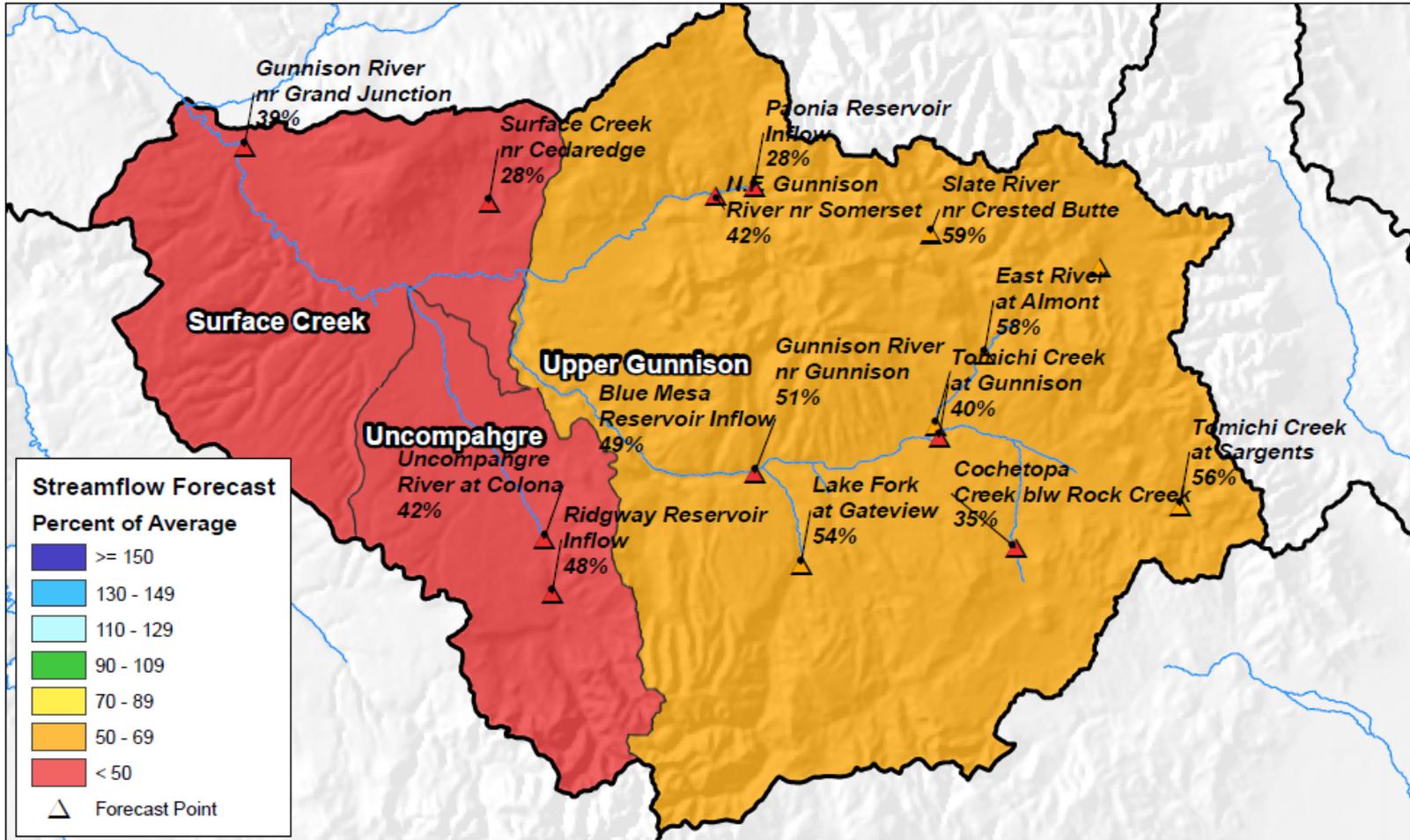
*Based on Provisional SNOTEL data as of May 21, 2021*

USDA  
United States Department of Agriculture  
Natural Resources Conservation Service



## Gunnison River Basin Water Supply Forecast Summary

May 1, 2021

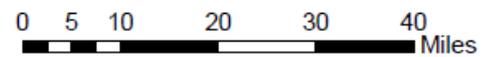


**Streamflow Forecast**

**Percent of Average**

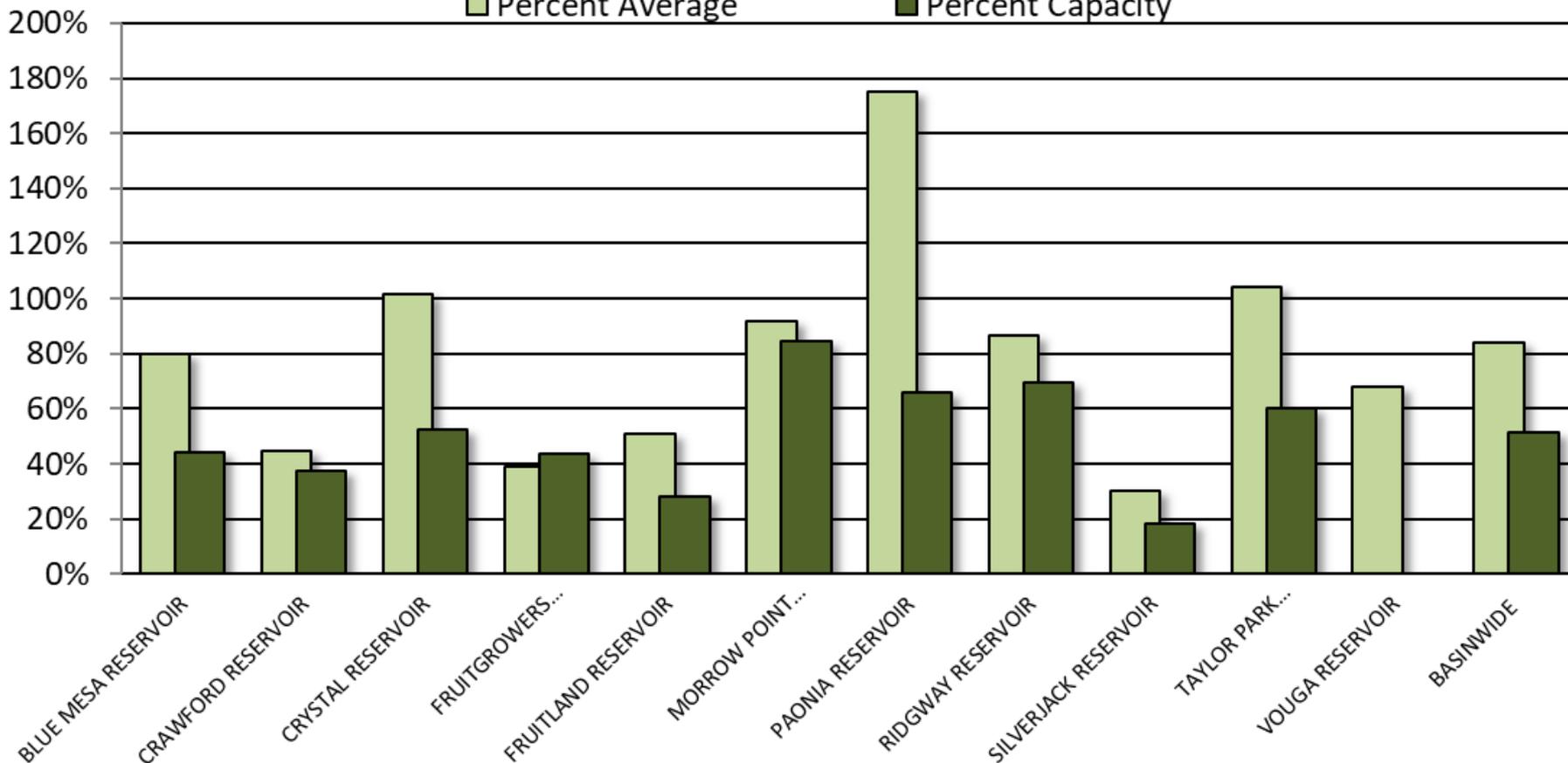
- >= 150
- 130 - 149
- 110 - 129
- 90 - 109
- 70 - 89
- 50 - 69
- < 50

Forecast Point

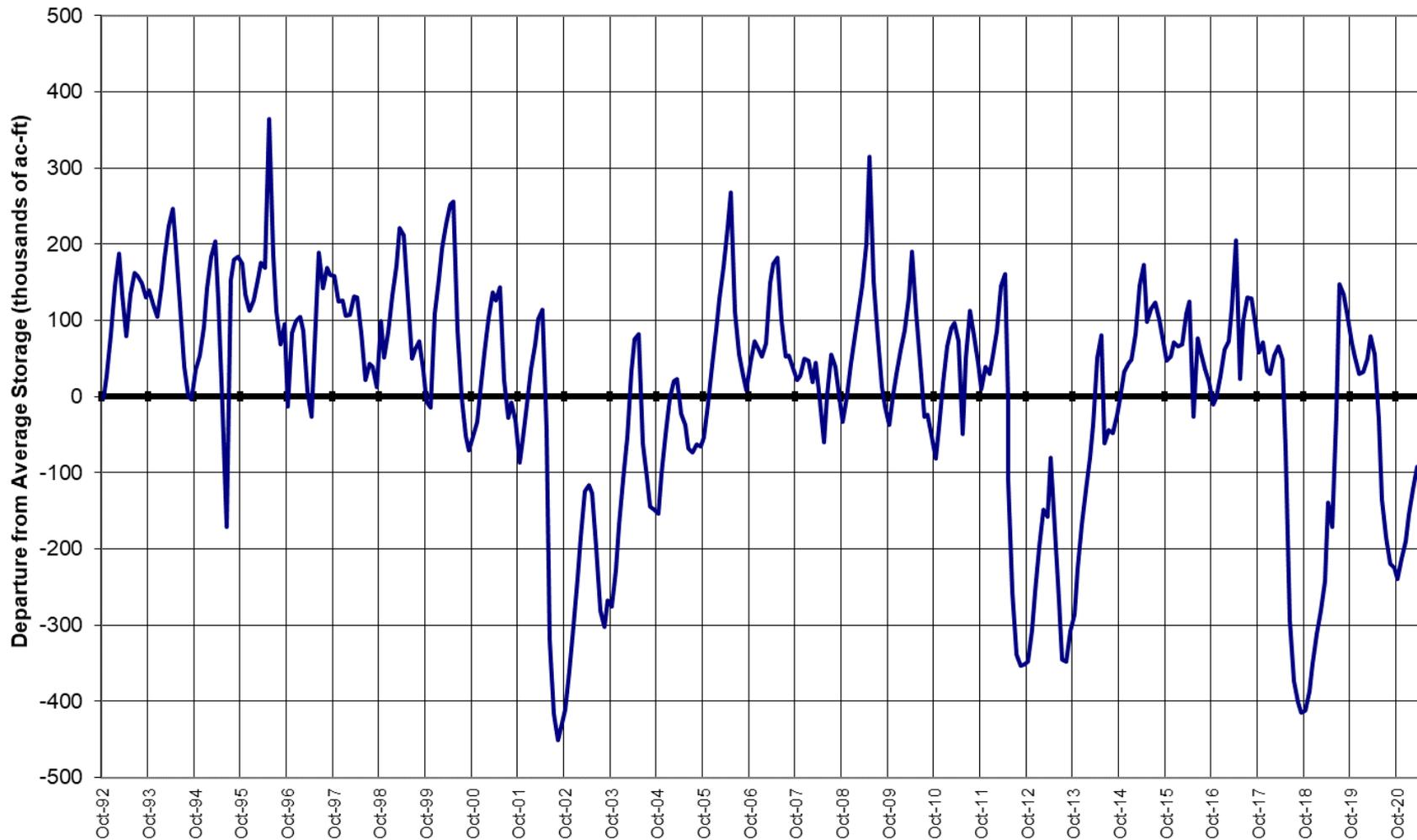


## End of April Reservoir Storage

■ Percent Average      ■ Percent Capacity



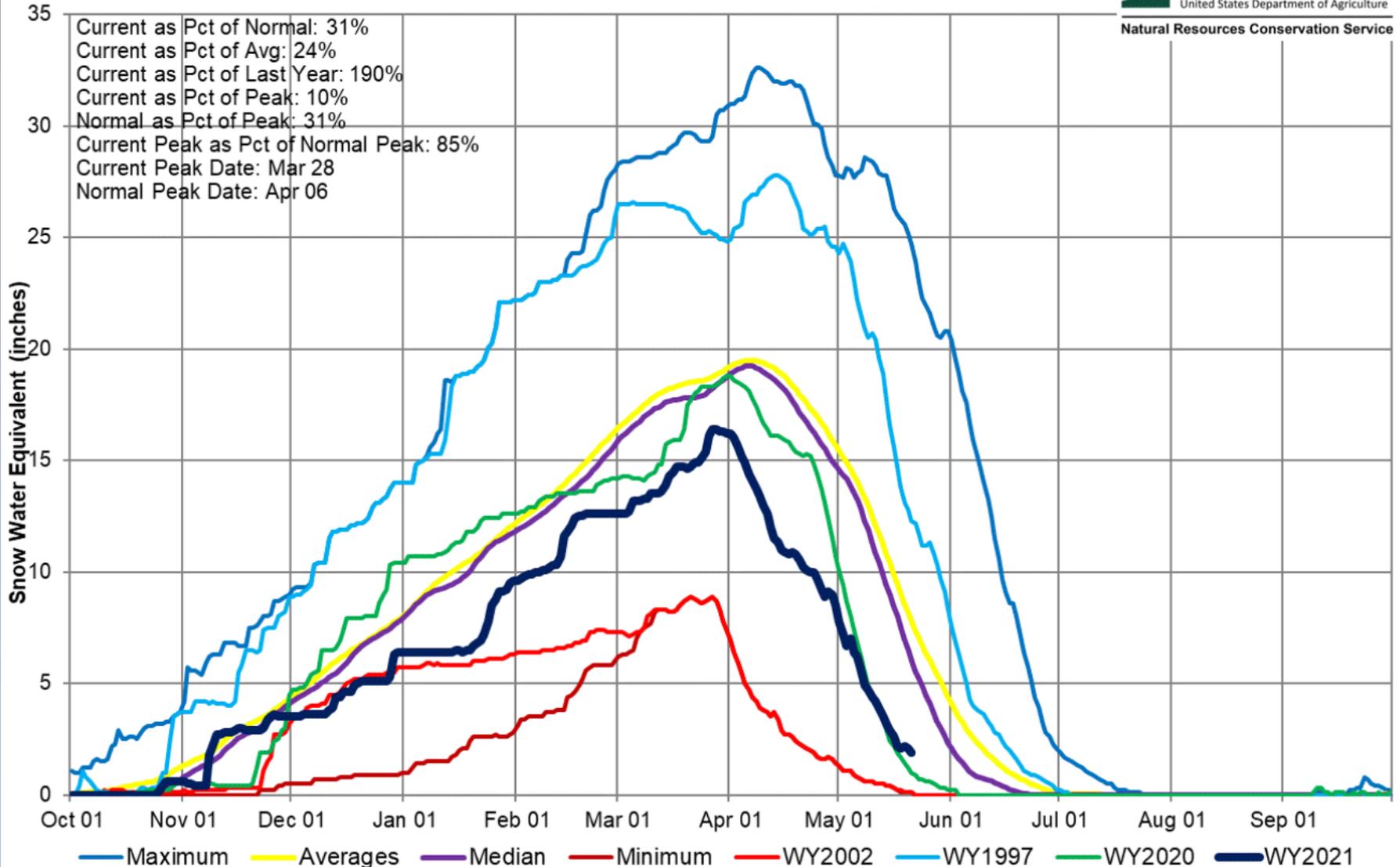
**GUNNISON RIVER BASIN**  
**Reservoir Storage**  
**Departure from Average**





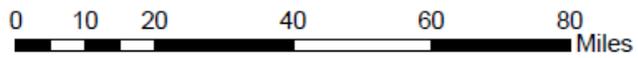
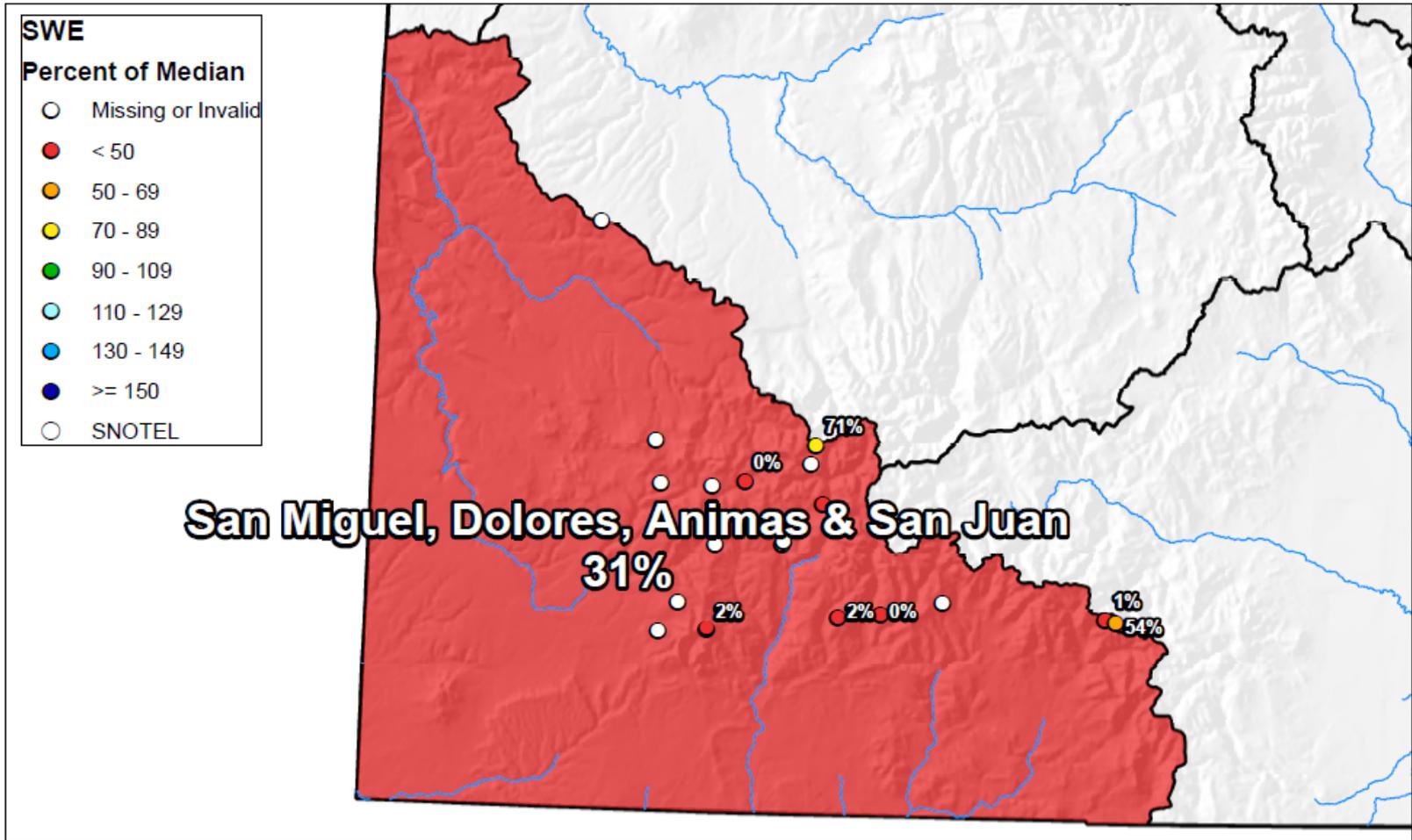
## San Miguel, Dolores, Animas and San Juan River Basins High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of May 21, 2021*



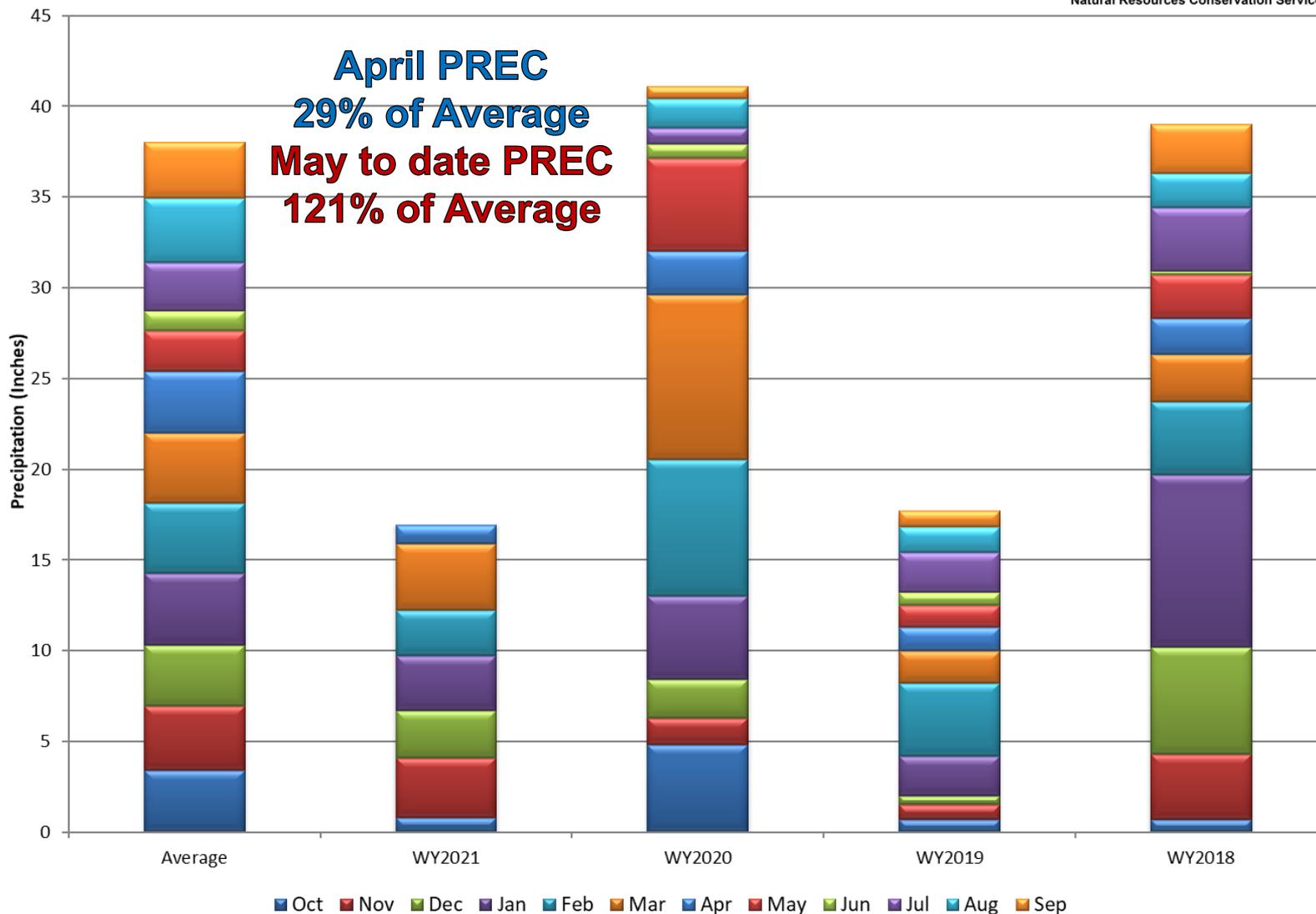
## San Miguel, Dolores, Animas, and San Juan River Basins Snow Water Equivalent (SWE) Summary

Current as of May 21, 2021



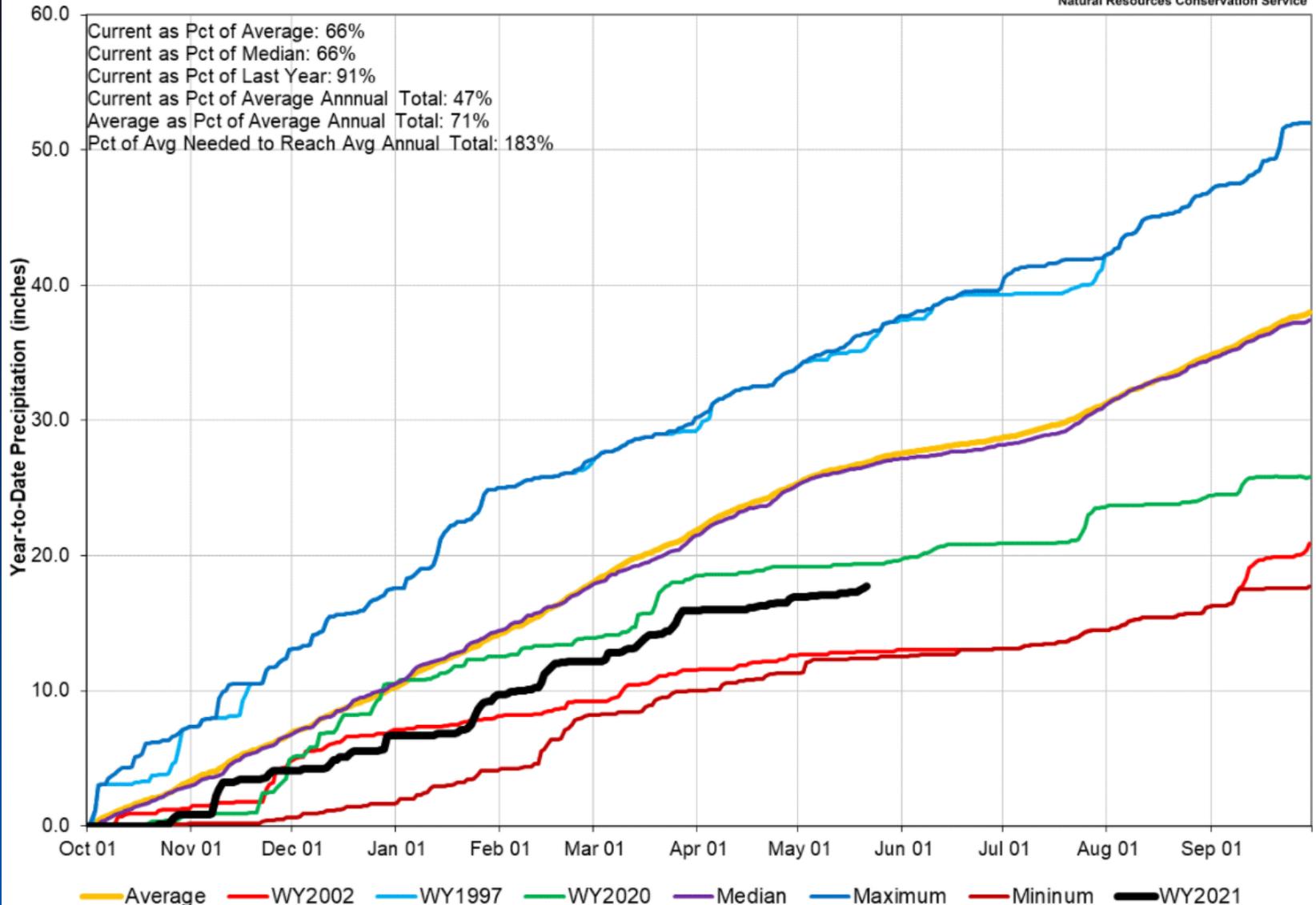
## San Miguel, Dolores, Animas & San Juan River Basins Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of May 21, 2021*



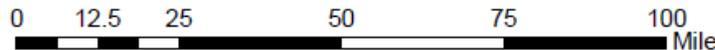
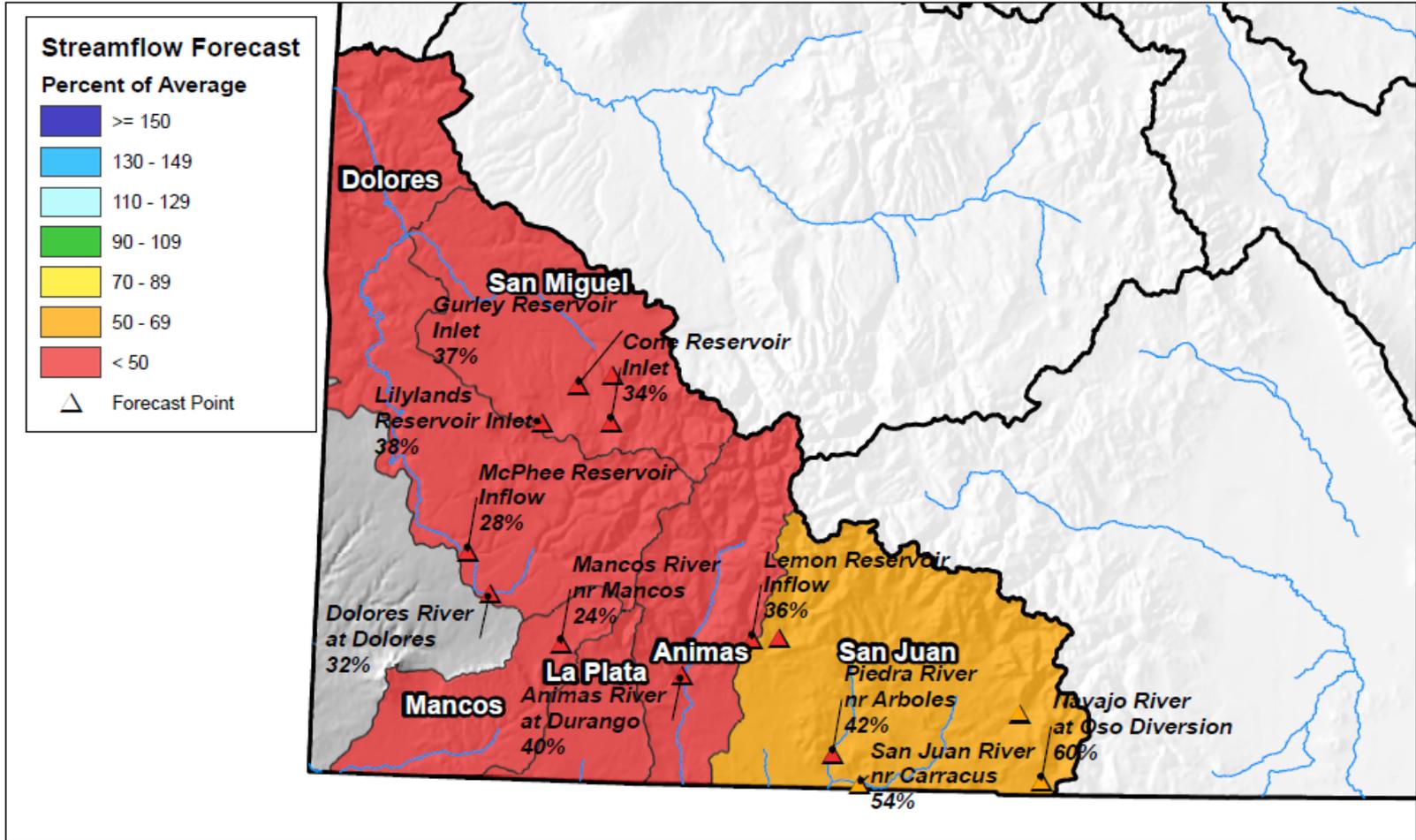
## San Miguel, Dolores, Animas and San Juan River Basins High/Low Year-to-Date Precipitation Summary

*Based on Provisional SNOTEL data as of May 21, 2021*



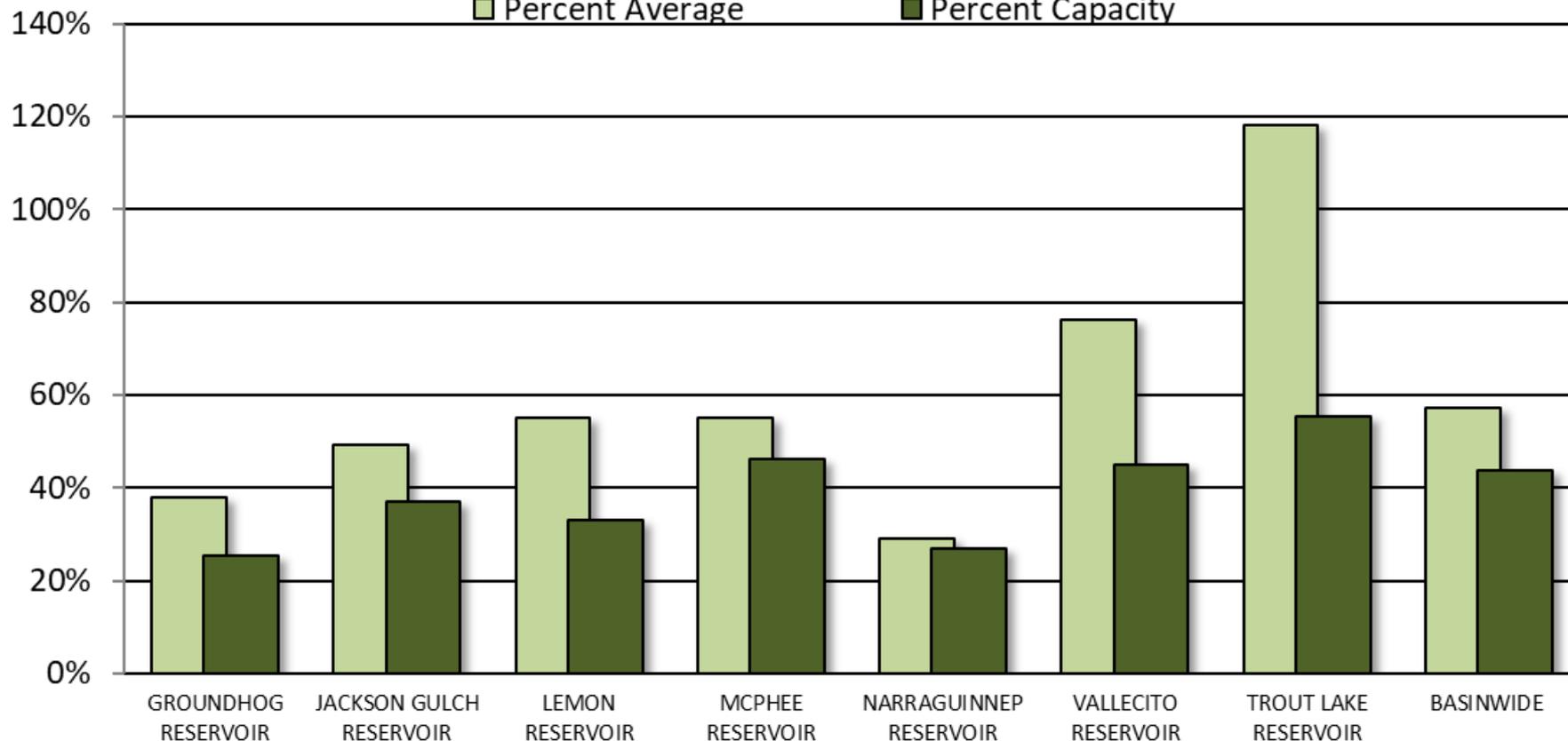
## San Miguel, Dolores, Animas, and San Juan River Basins Streamflow Forecast Summary

May 1, 2021

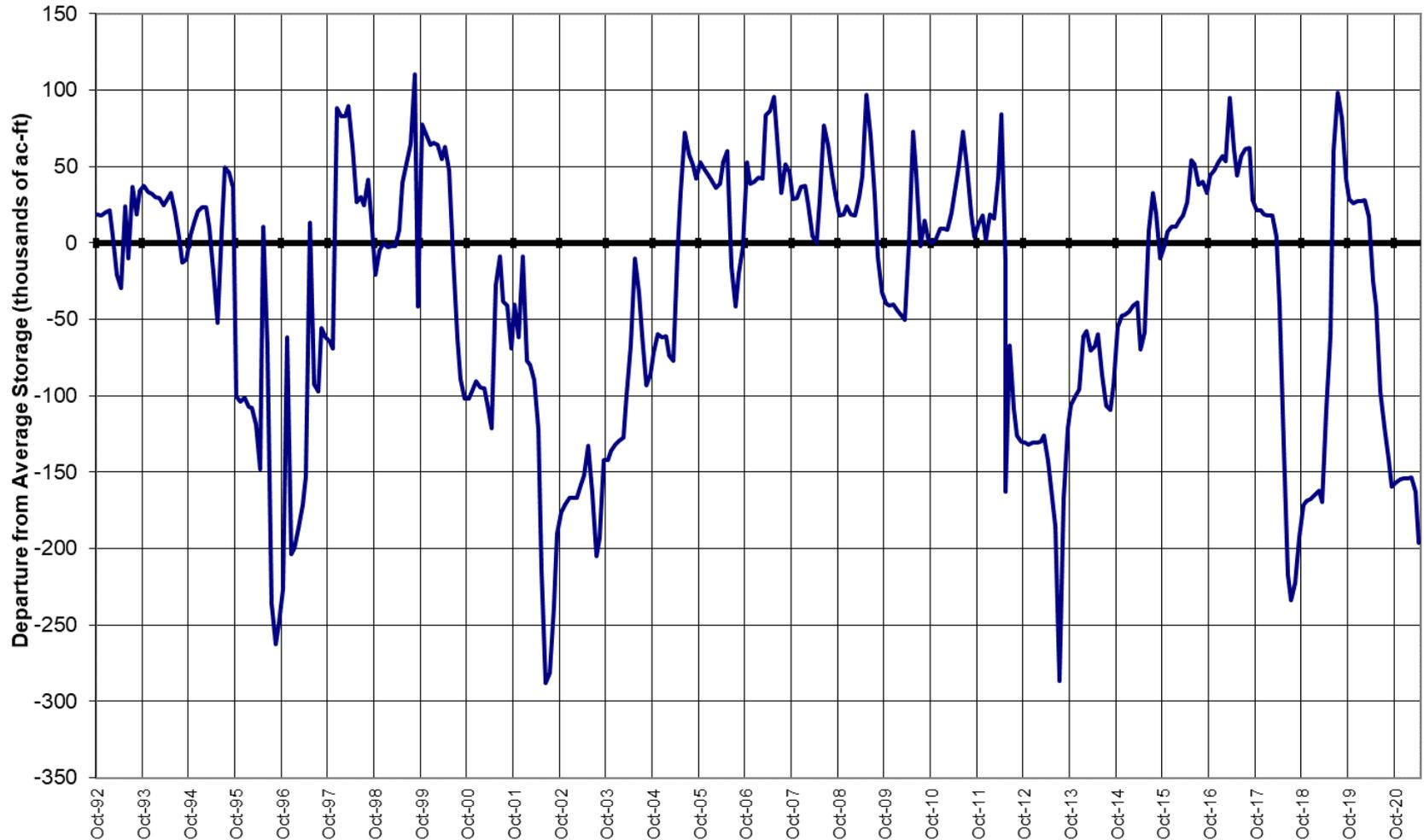


## End of April Reservoir Storage

■ Percent Average      ■ Percent Capacity

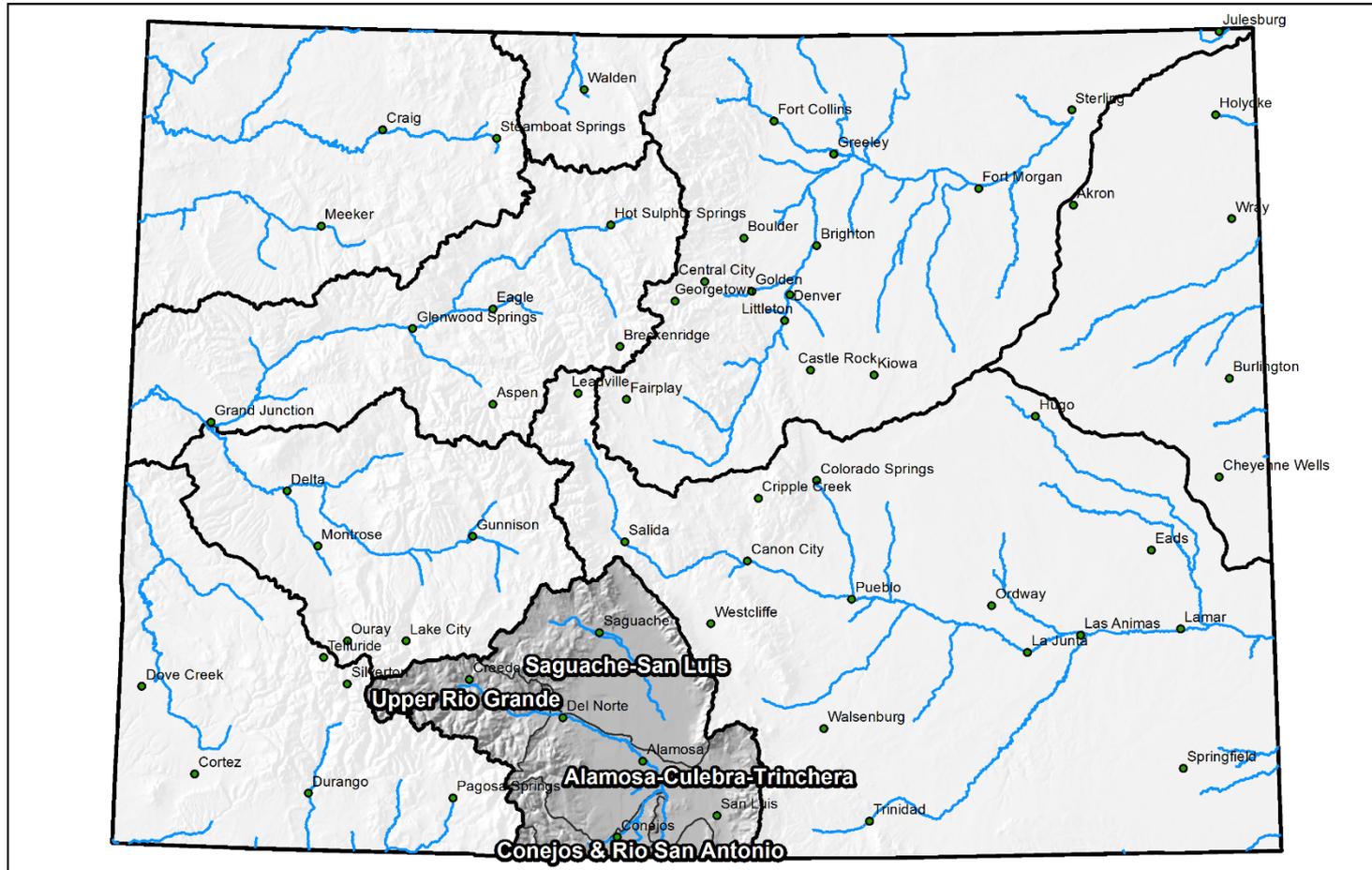


**SAN MIGUEL, DOLORES, ANIMAS AND SAN JUAN RIVER BASINS**  
**Reservoir Storage**  
**Departure from Average**



## Major Basin Summary

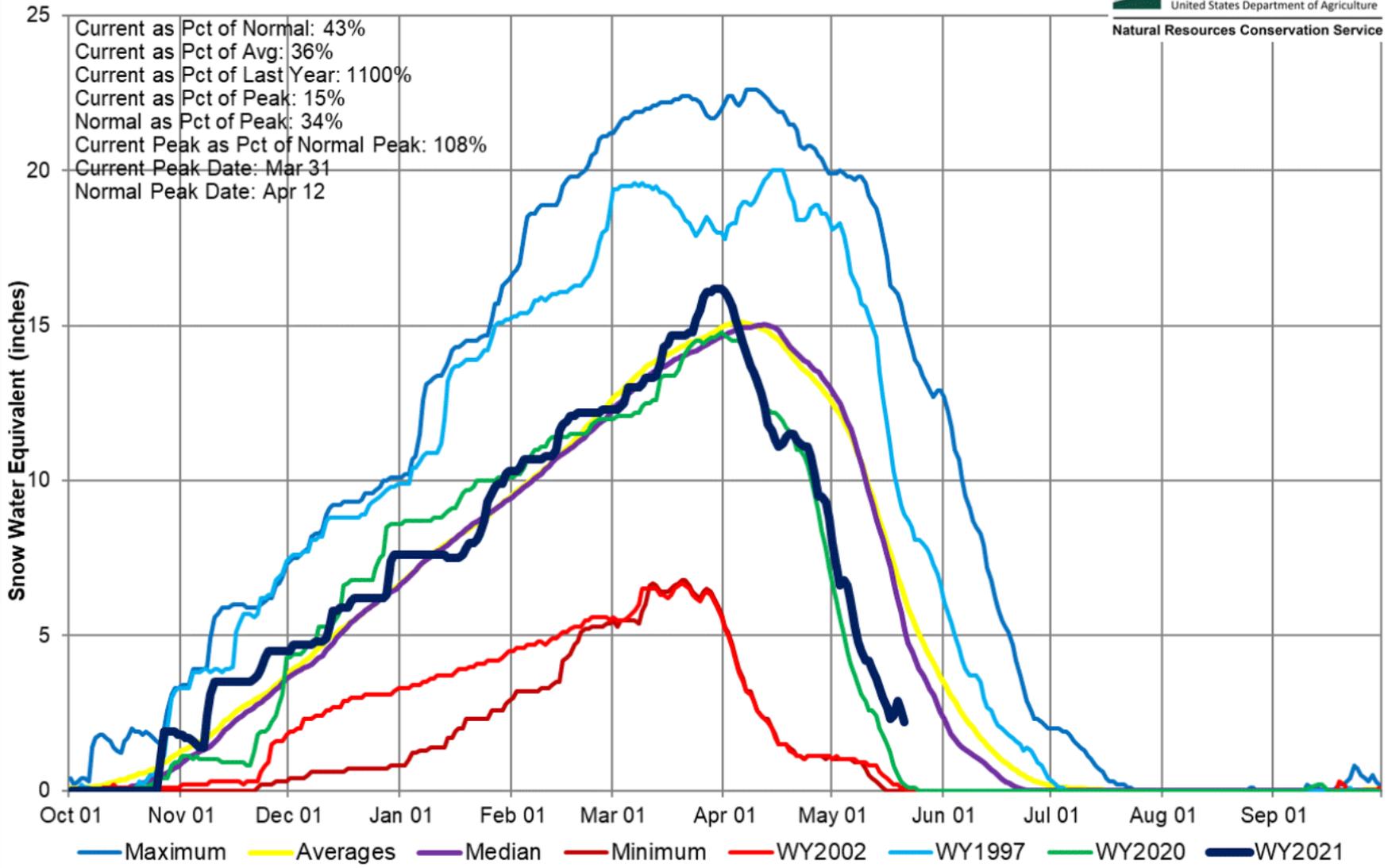
### Upper Rio Grande River Basin



## Upper Rio Grande Basin High/Low Snowpack Summary

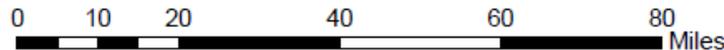
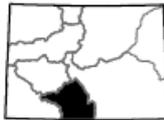
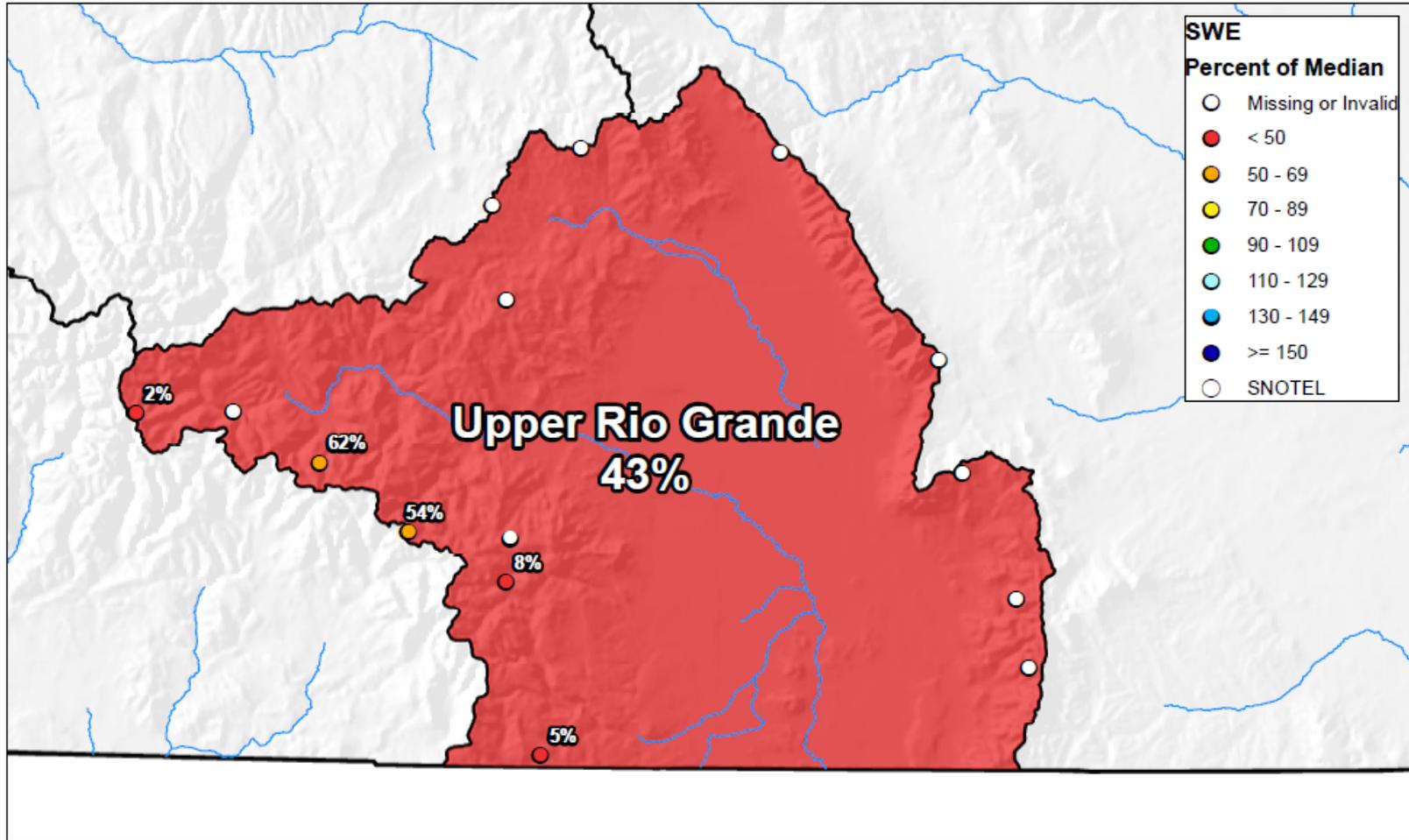
*Based on Provisional SNOTEL data as of May 21, 2021*

USDA  
United States Department of Agriculture  
Natural Resources Conservation Service



## Upper Rio Grande River Basin Snow Water Equivalent (SWE) Summary

Current as of May 21, 2021



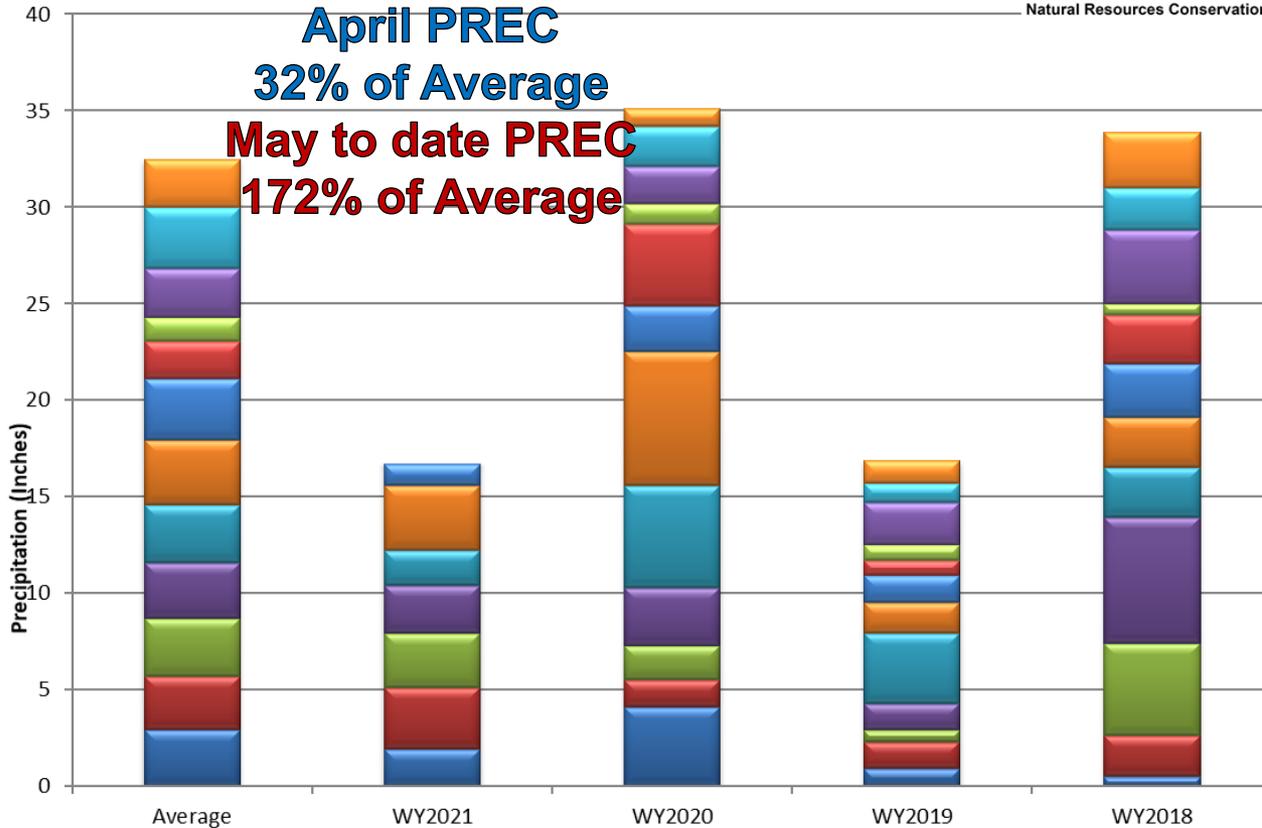
## Upper Rio Grande Basin Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of May 21, 2021*



United States Department of Agriculture

Natural Resources Conservation Service

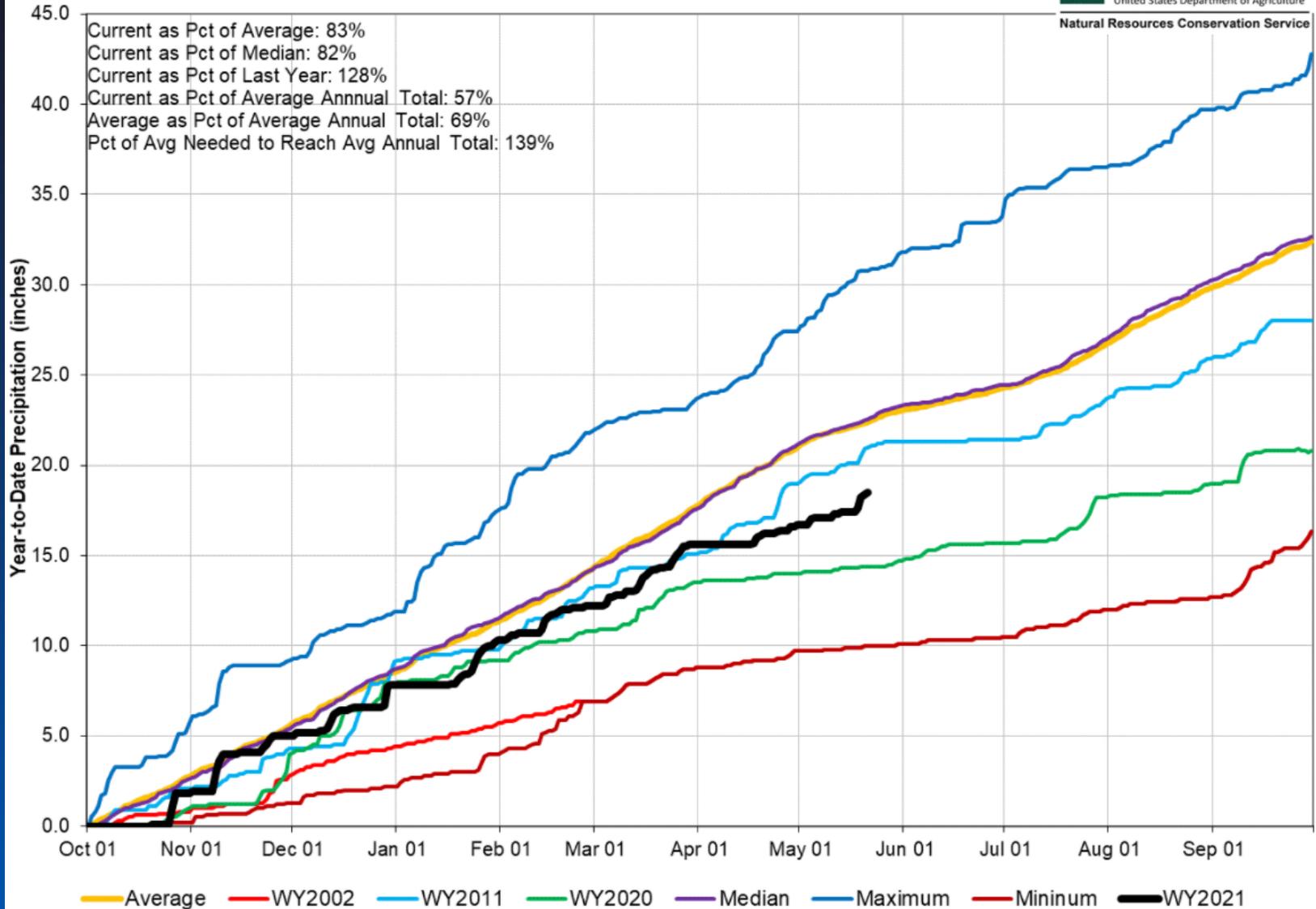


■ Oct 
 ■ Nov 
 ■ Dec 
 ■ Jan 
 ■ Feb 
 ■ Mar 
 ■ Apr 
 ■ May 
 ■ Jun 
 ■ Jul 
 ■ Aug 
 ■ Sep

## Upper Rio Grande River Basin High/Low Year-to-Date Precipitation Summary

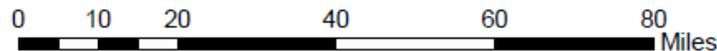
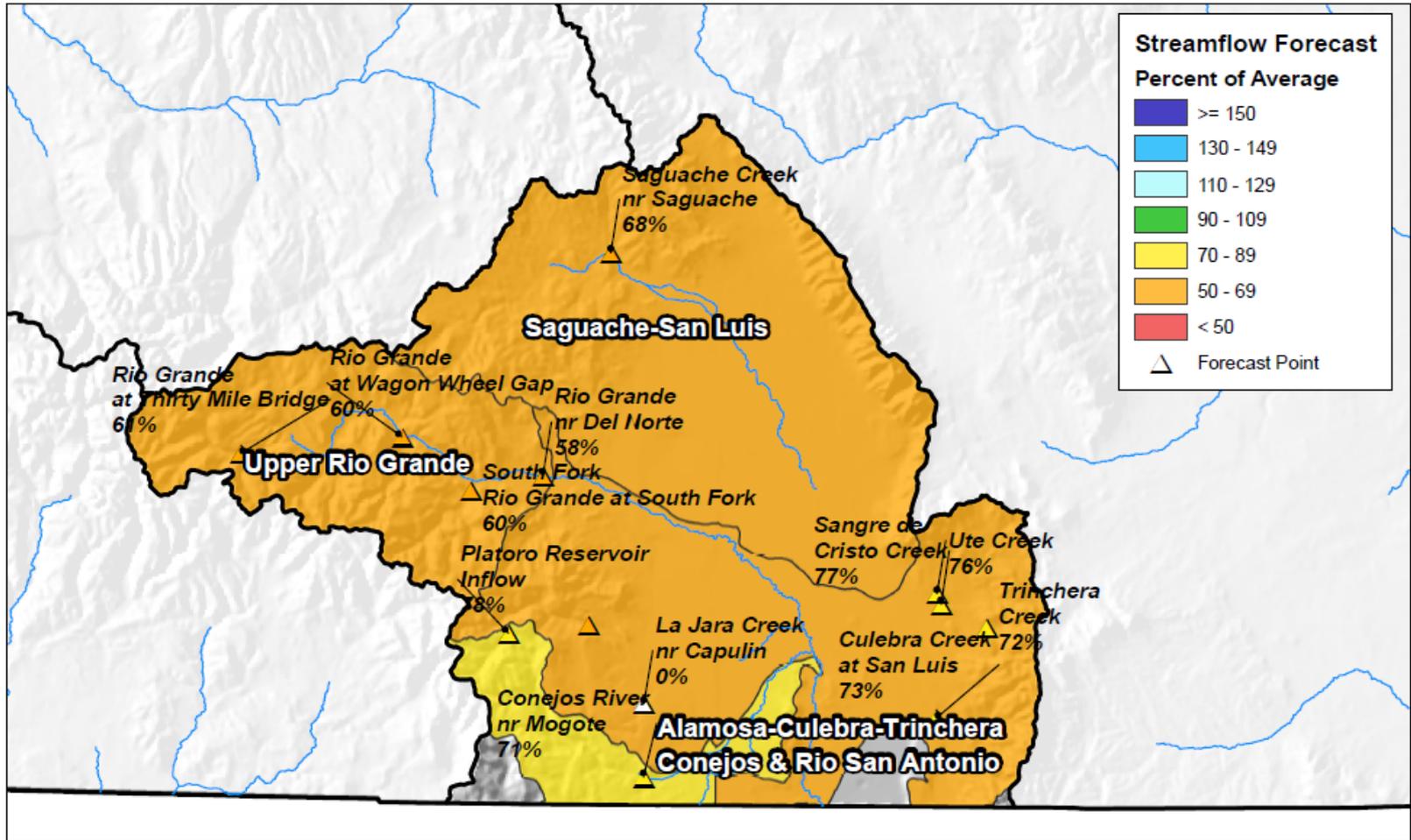
Based on Provisional SNOTEL data as of May 21, 2021

USDA  
United States Department of Agriculture  
Natural Resources Conservation Service



## Upper Rio Grande River Basin Streamflow Forecast Summary

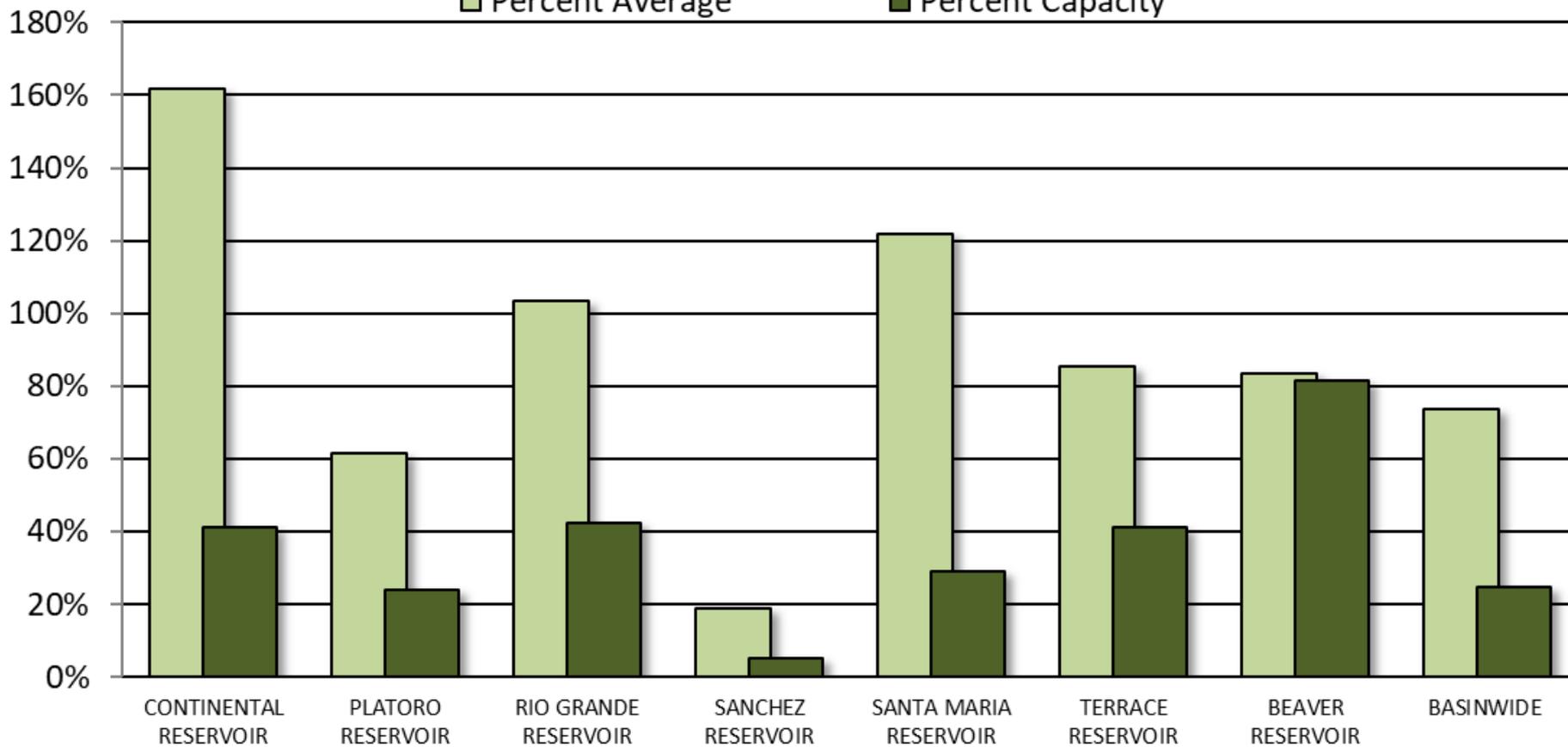
May 1, 2021



## End of April Reservoir Storage

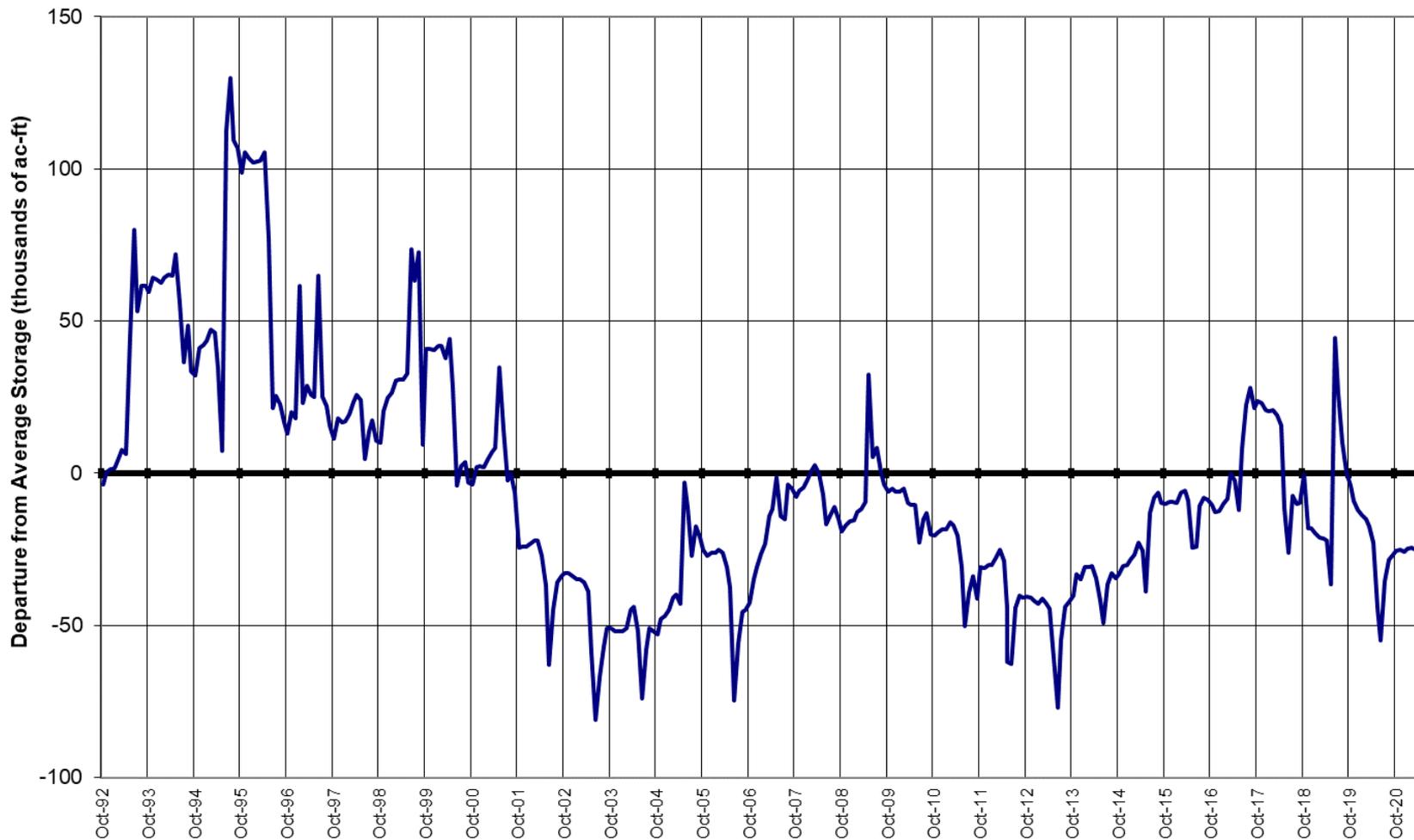
■ Percent Average

■ Percent Capacity



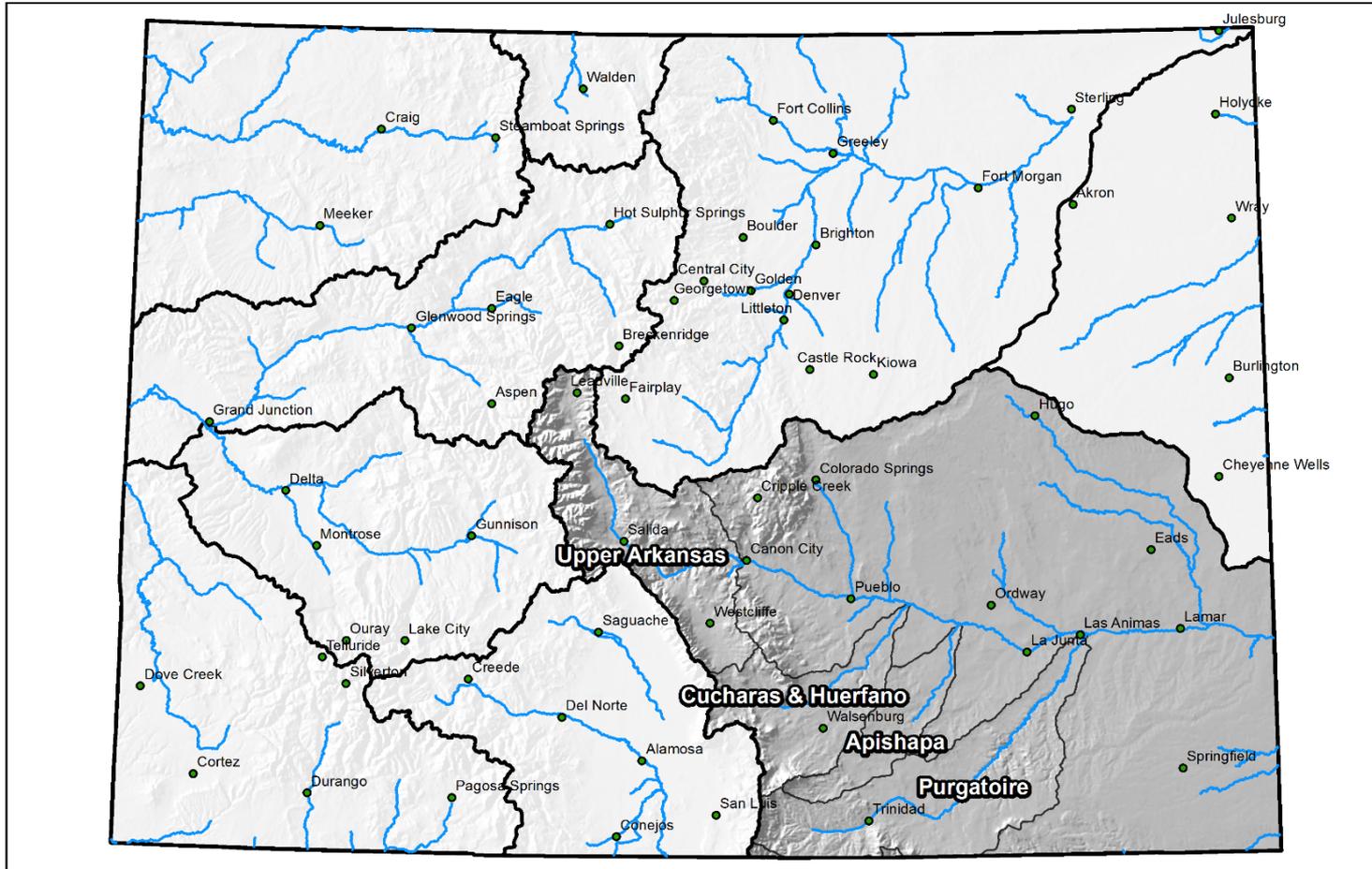


## UPPER RIO GRANDE BASIN Reservoir Storage Departure from Average



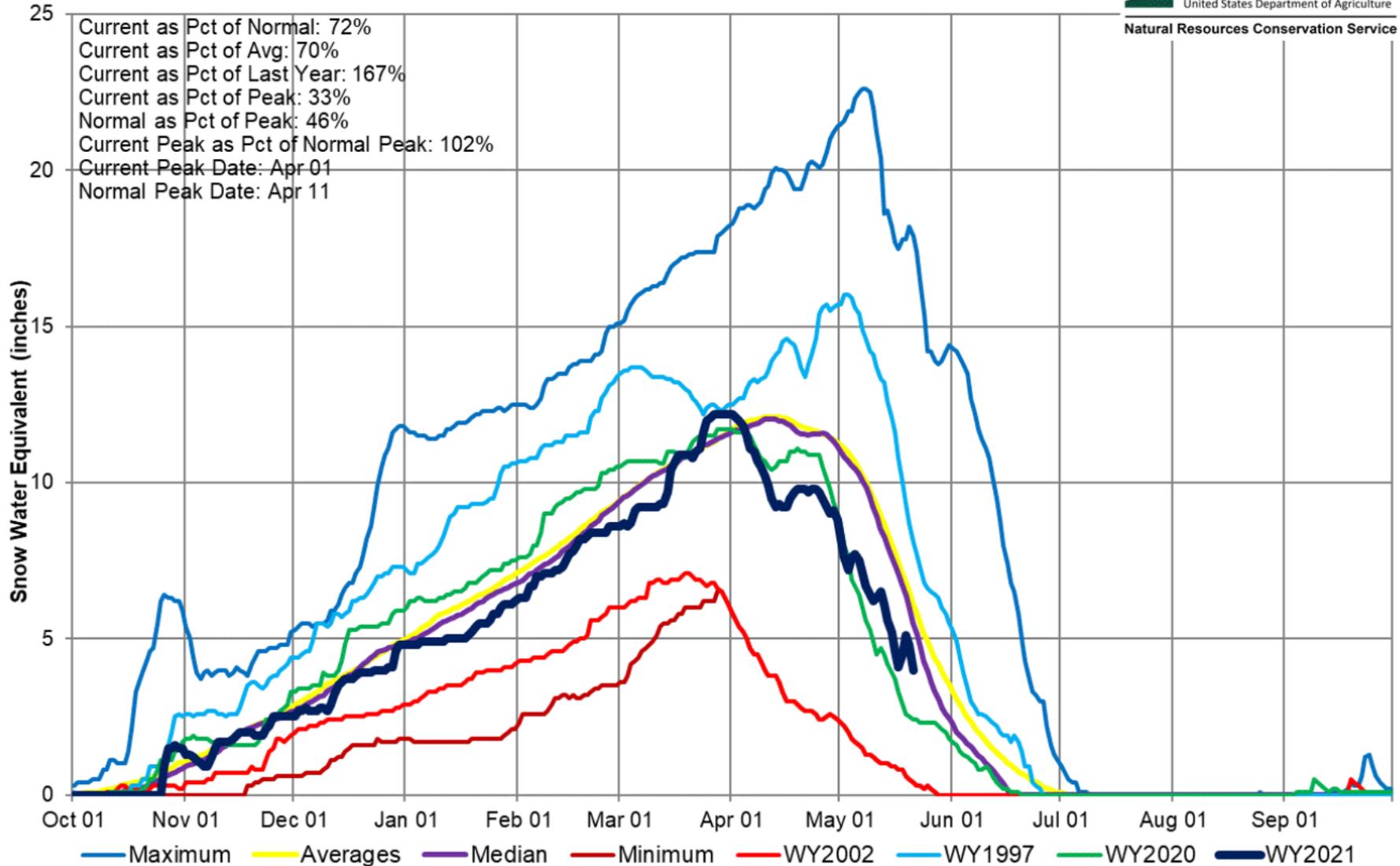
## Major Basin Summary

### Arkansas River Basin



## Arkansas River Basin High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of May 21, 2021*



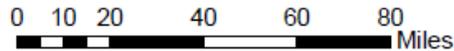
## Arkansas River Basin Snow Water Equivalent (SWE) Summary

Current as of May 21, 2021



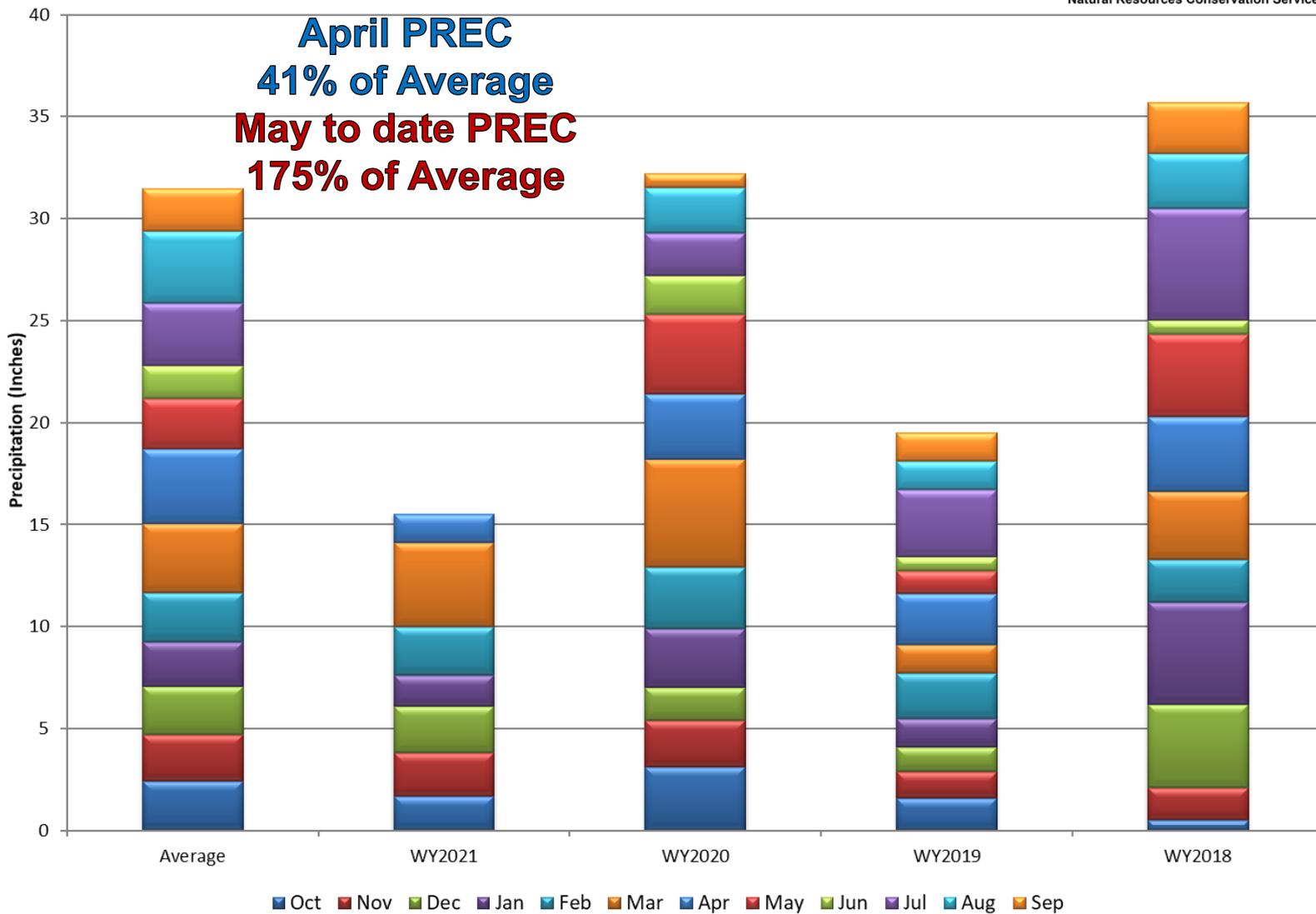
**SWE**  
Percent of Median

- Missing or Invalid
- < 50
- 50 - 69
- 70 - 89
- 90 - 109
- 110 - 129
- 130 - 149
- >= 150
- SNOTEL



## Arkansas River Basin Monthly Precipitation Summary

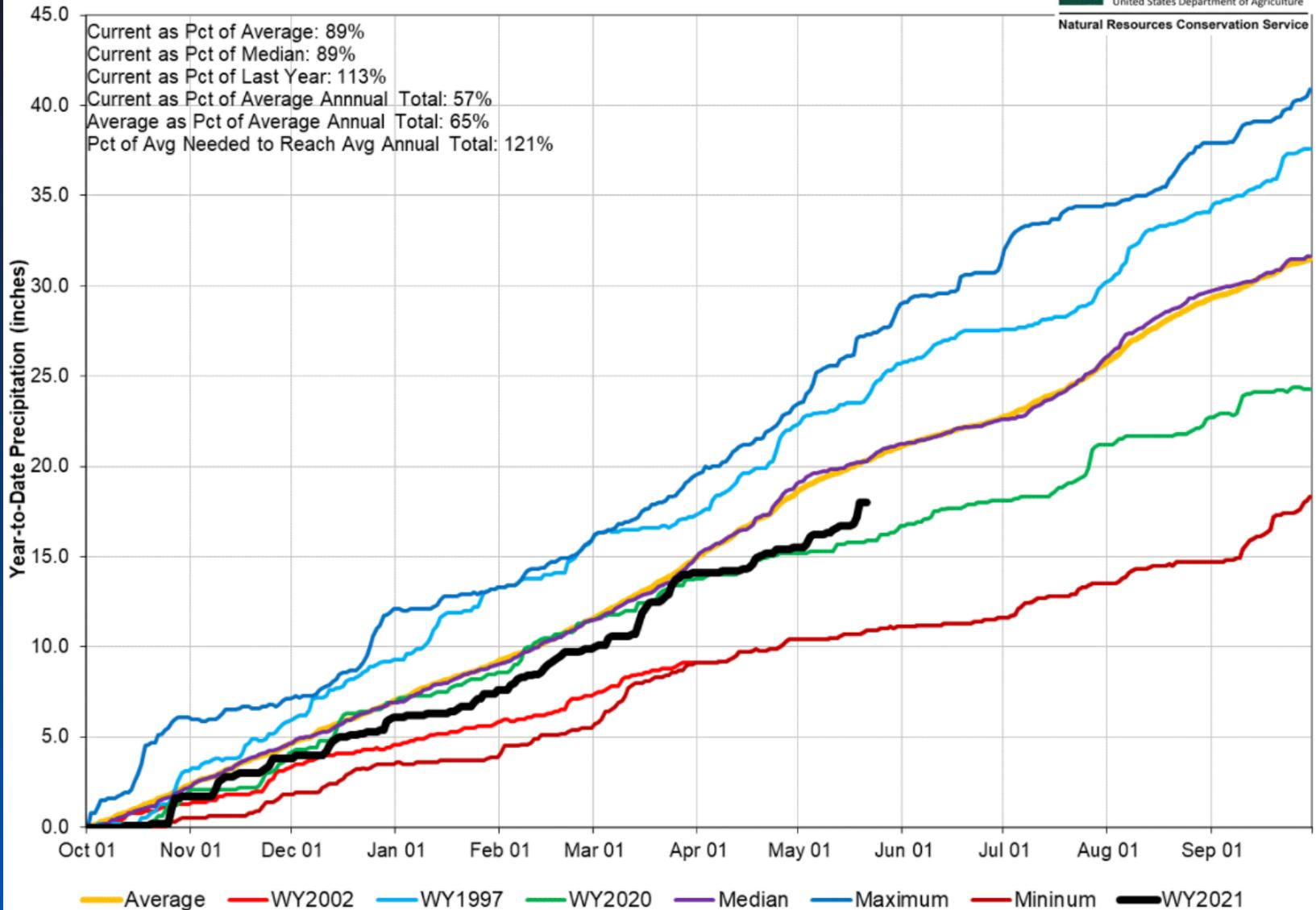
*Based on Provisional SNOTEL data as of May 21, 2021*



## Arkansas River Basin High/Low Year-to-Date Precipitation Summary

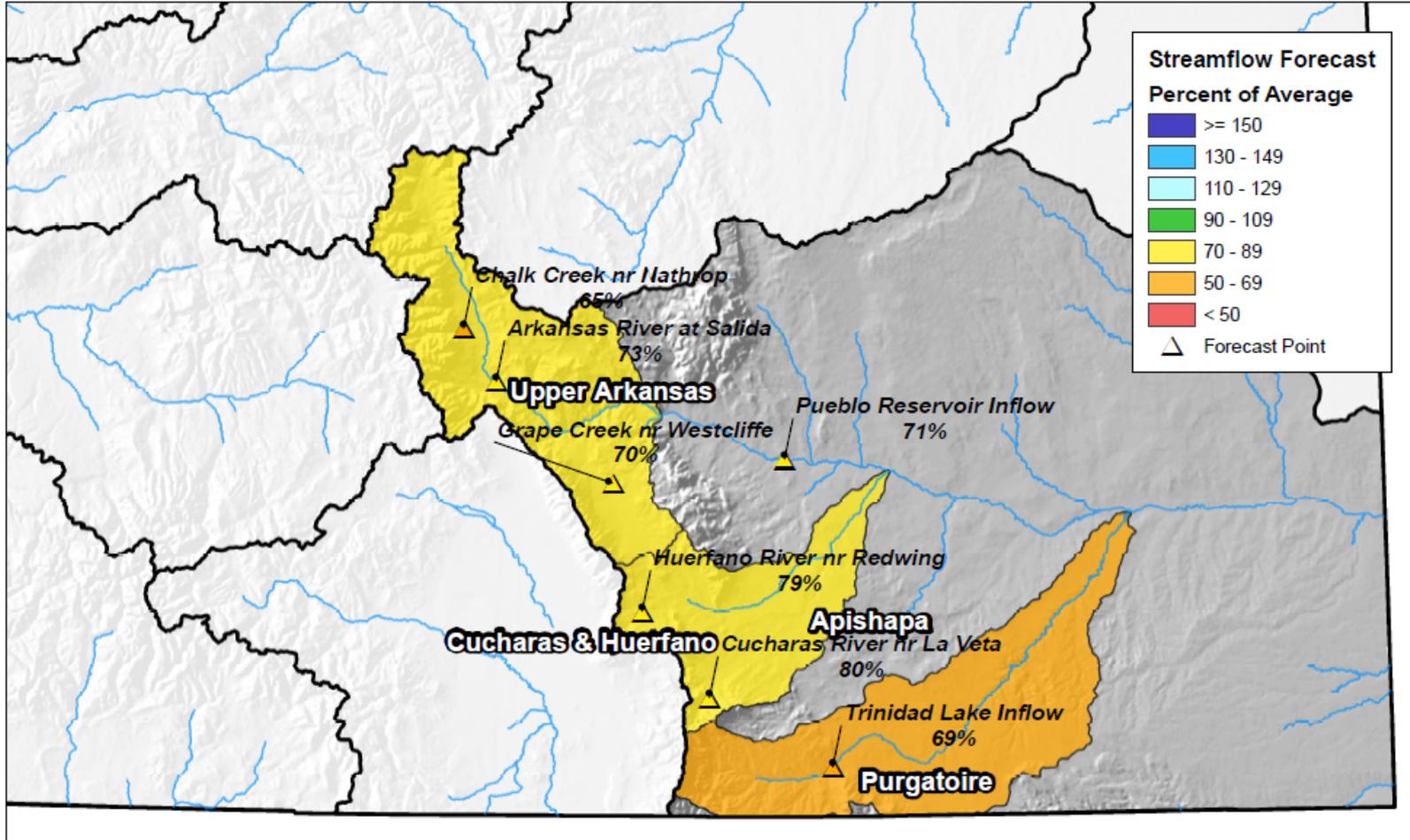
*Based on Provisional SNOTEL data as of May 21, 2021*

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United States Department of Agriculture  
Natural Resources Conservation Service



## Arkansas River Basin Streamflow Forecast Summary

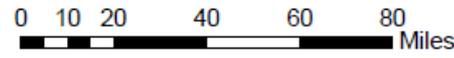
May 1, 2021

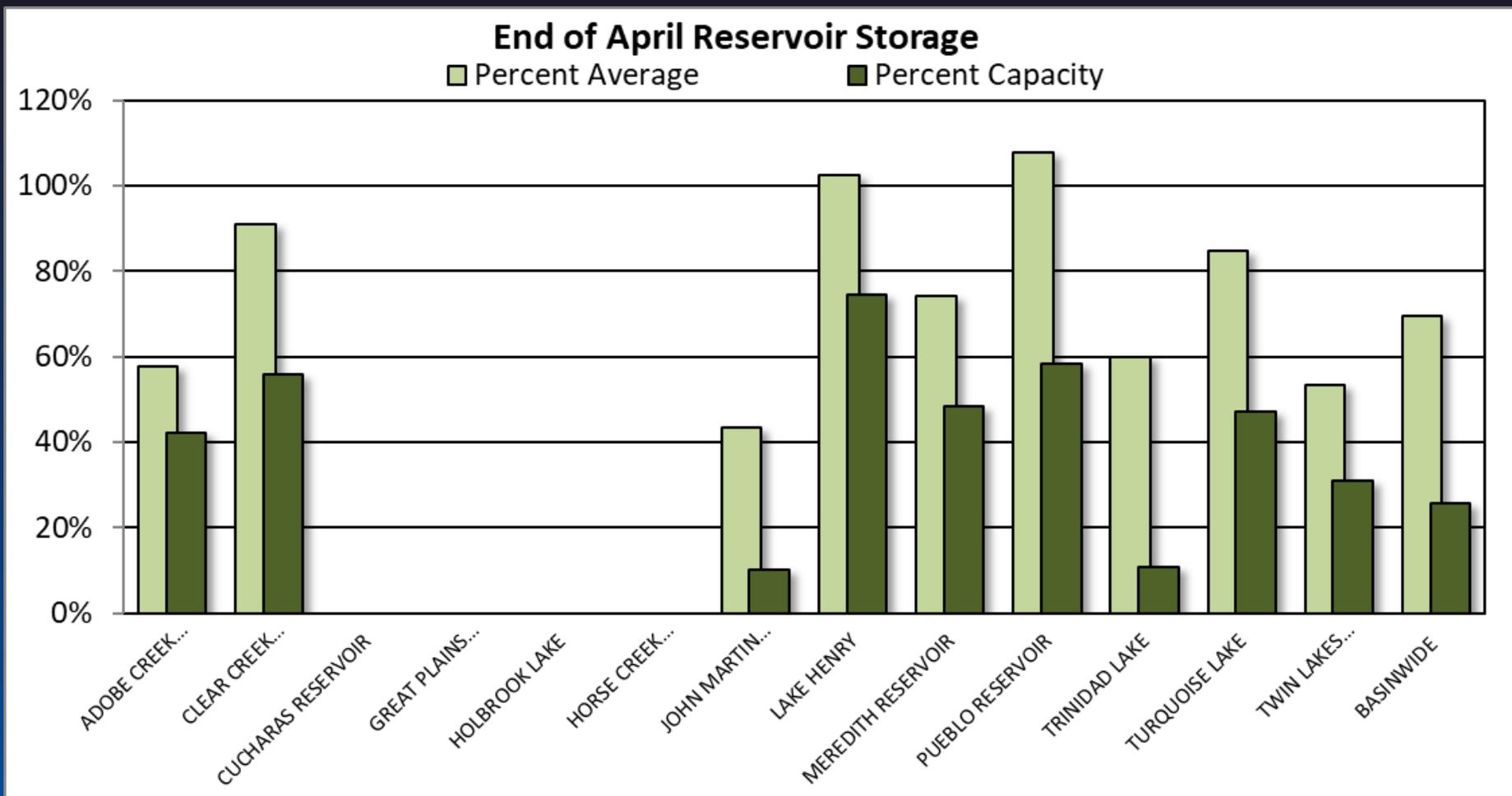


**Streamflow Forecast**  
Percent of Average

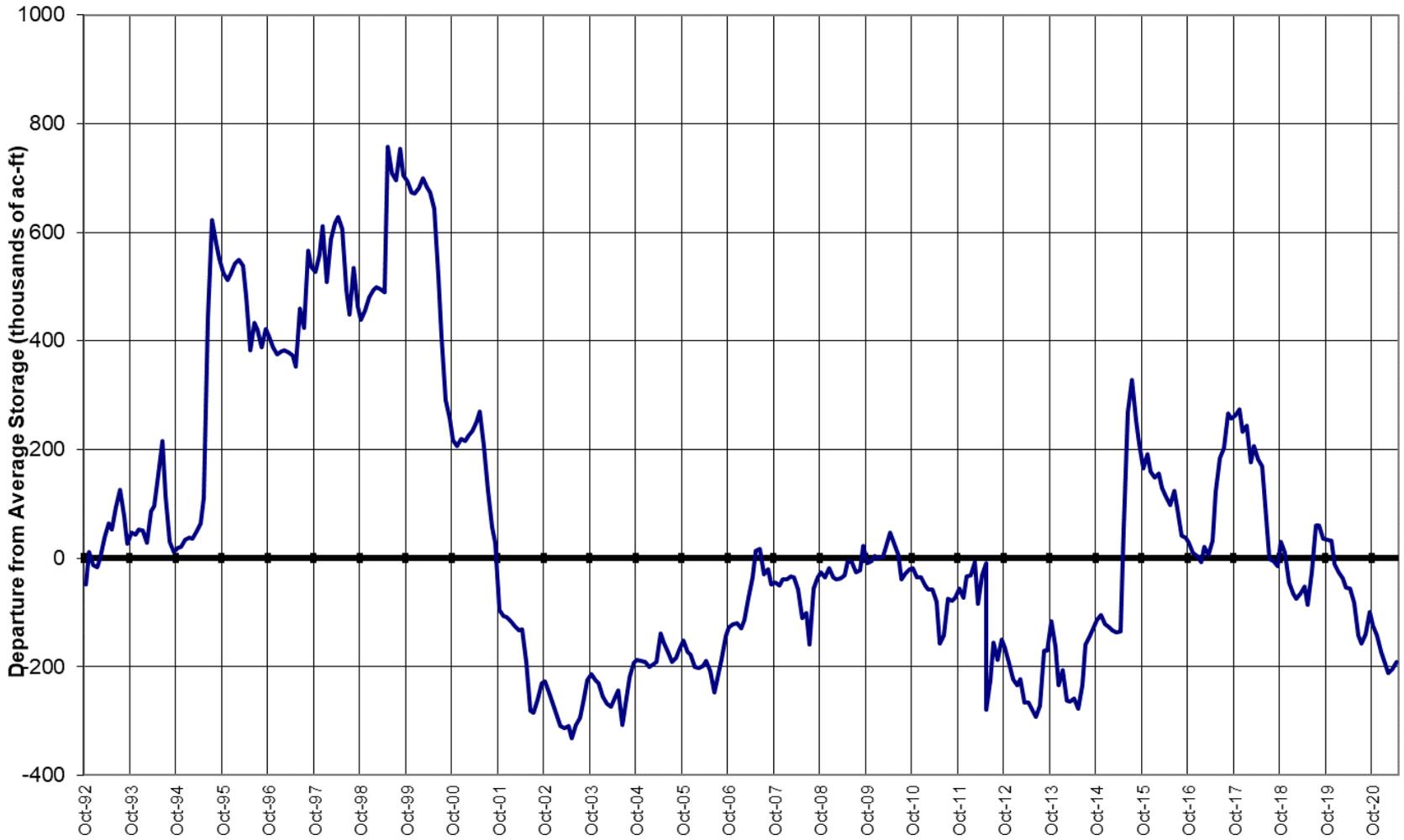
- $\geq 150$
- 130 - 149
- 110 - 129
- 90 - 109
- 70 - 89
- 50 - 69
- $< 50$

Forecast Point



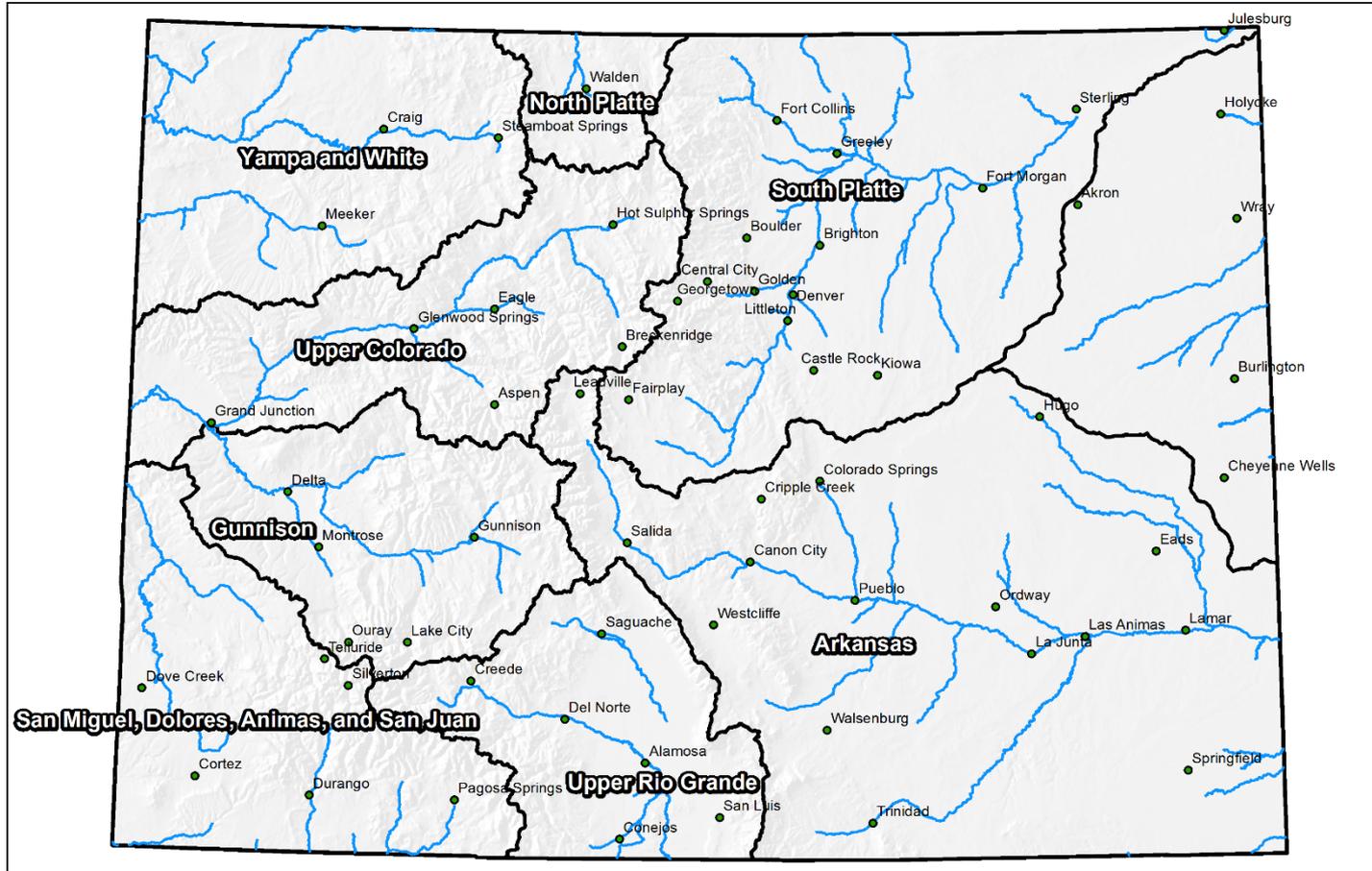


**ARKANSAS RIVER BASIN**  
**Reservoir Storage**  
**Departure from Average**



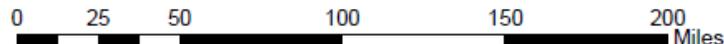
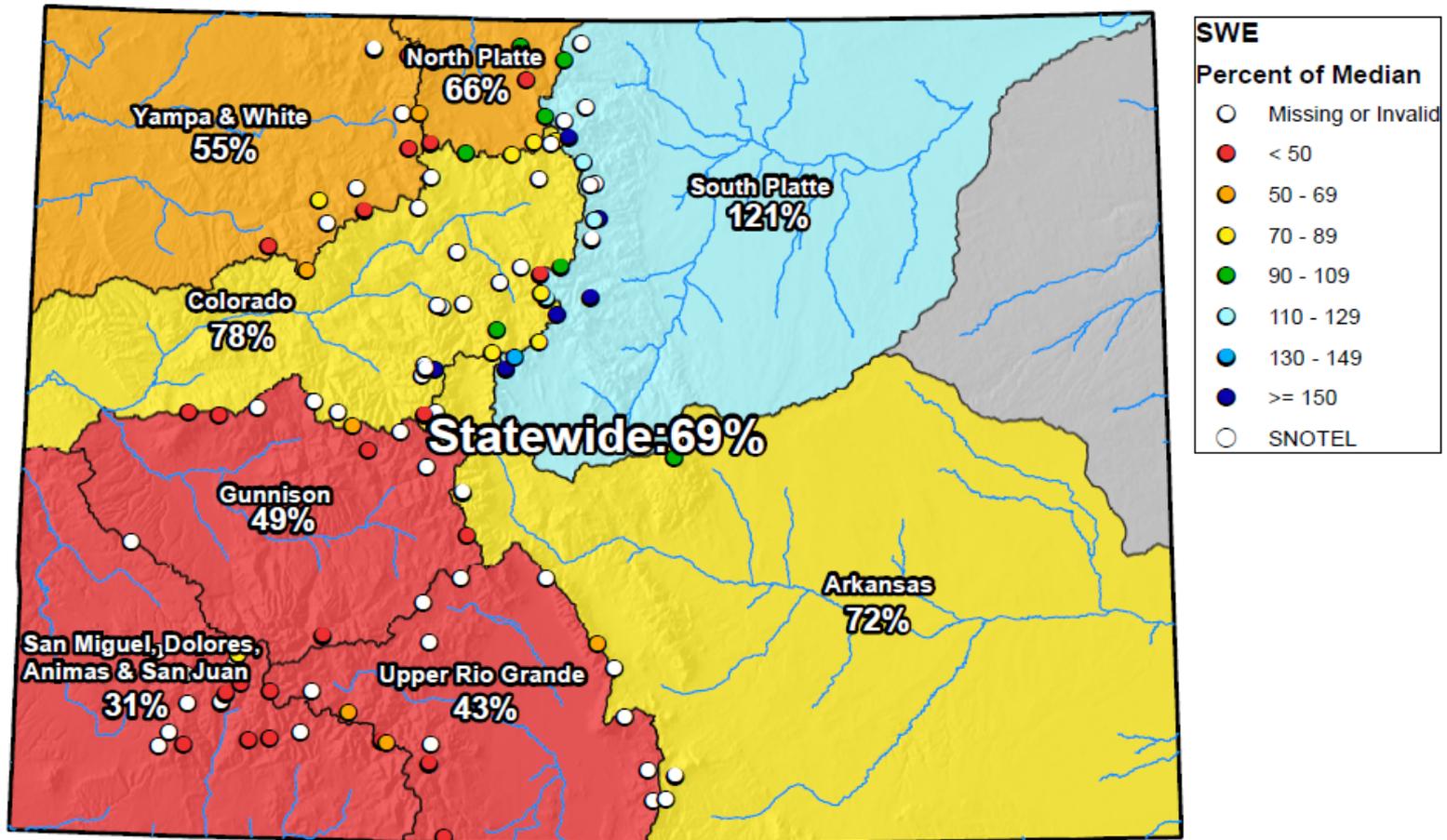
## Colorado Statewide Summary

### Colorado Major Basins



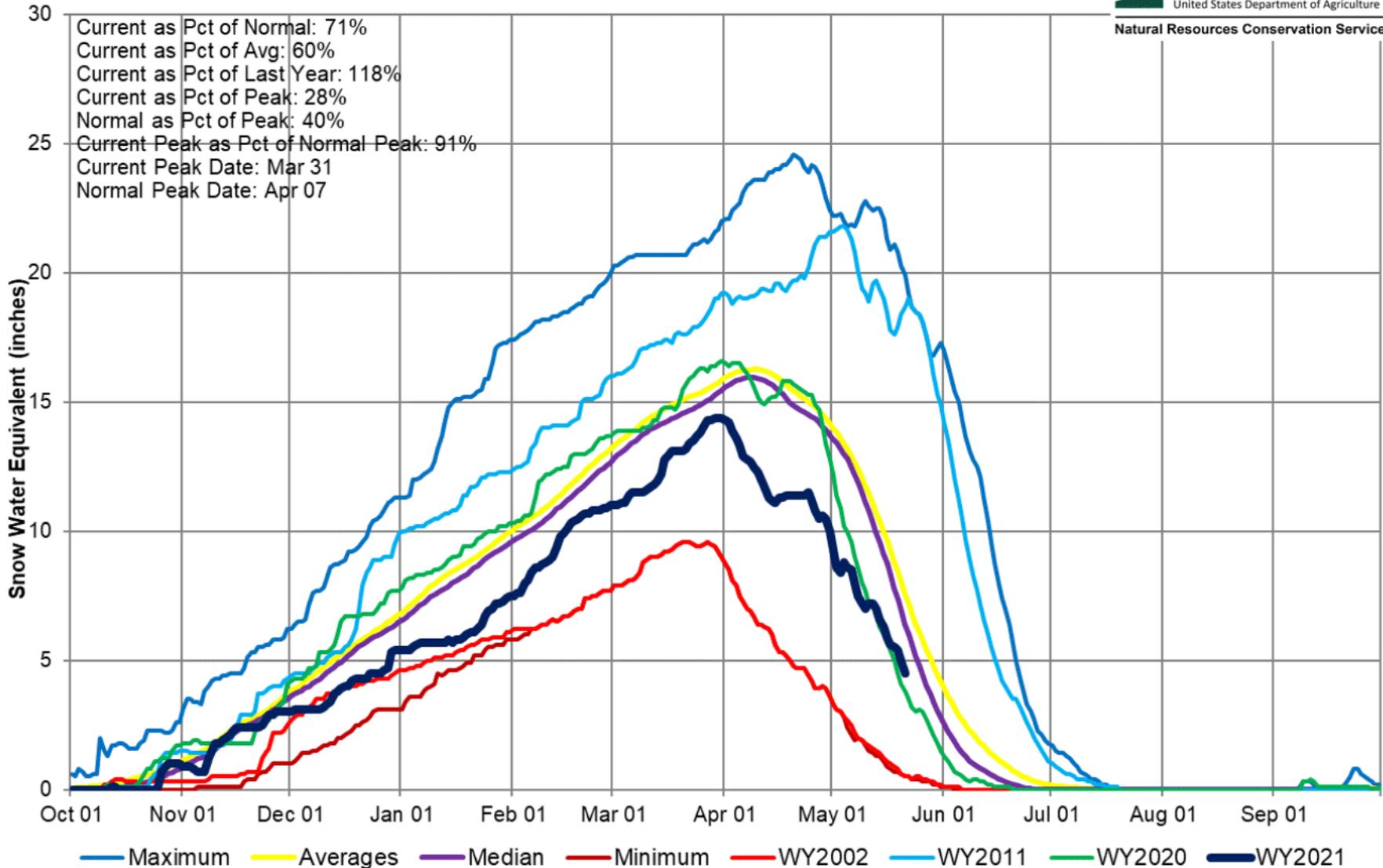
## Colorado SNOTEL Snow Water Equivalent (SWE) Update Map with Site Data

Current as of May 21, 2021



## Colorado Statewide High/Low Snowpack Summary

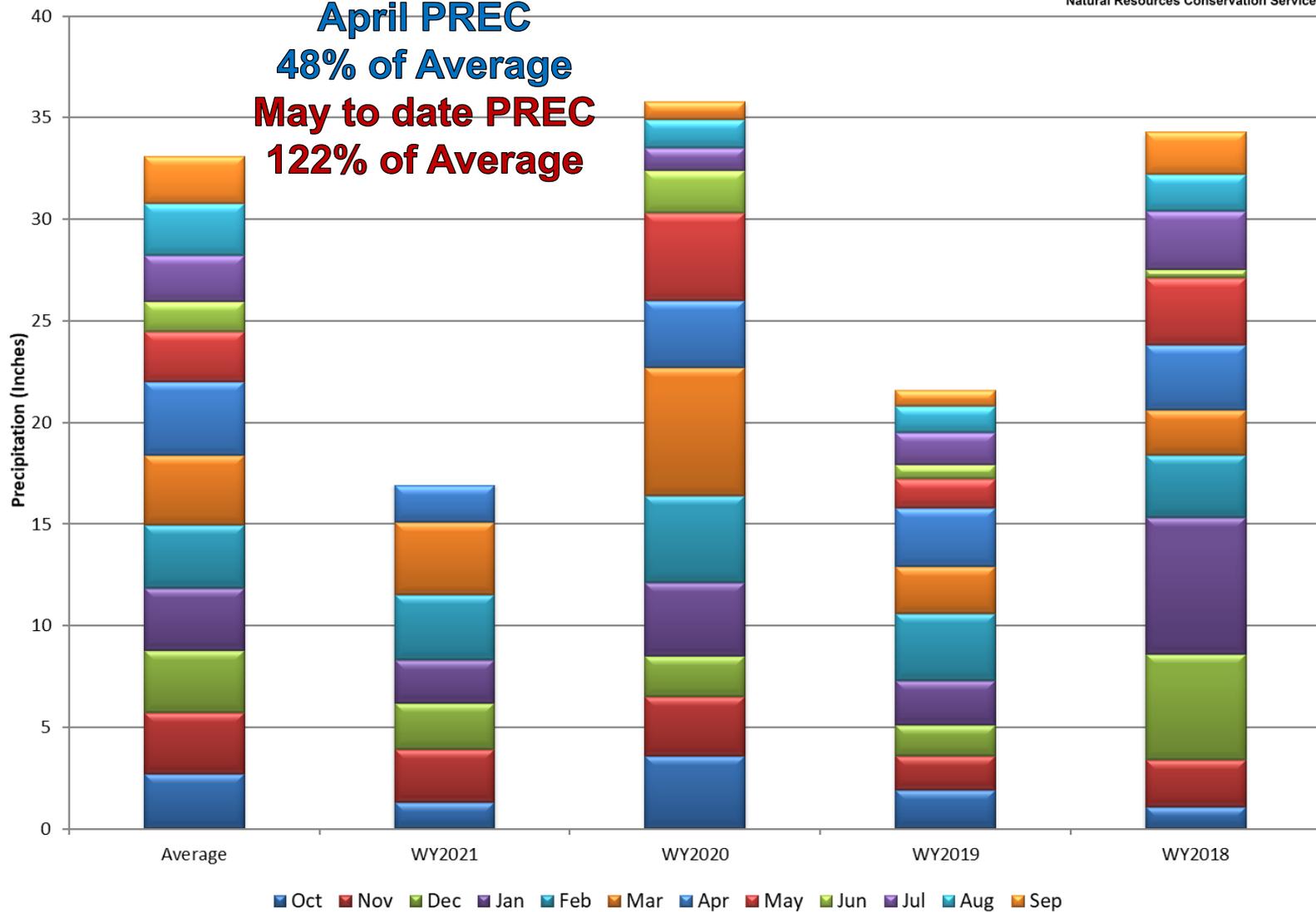
*Based on Provisional SNOTEL data as of May 21, 2021*



## Colorado Statewide Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of May 21, 2021*

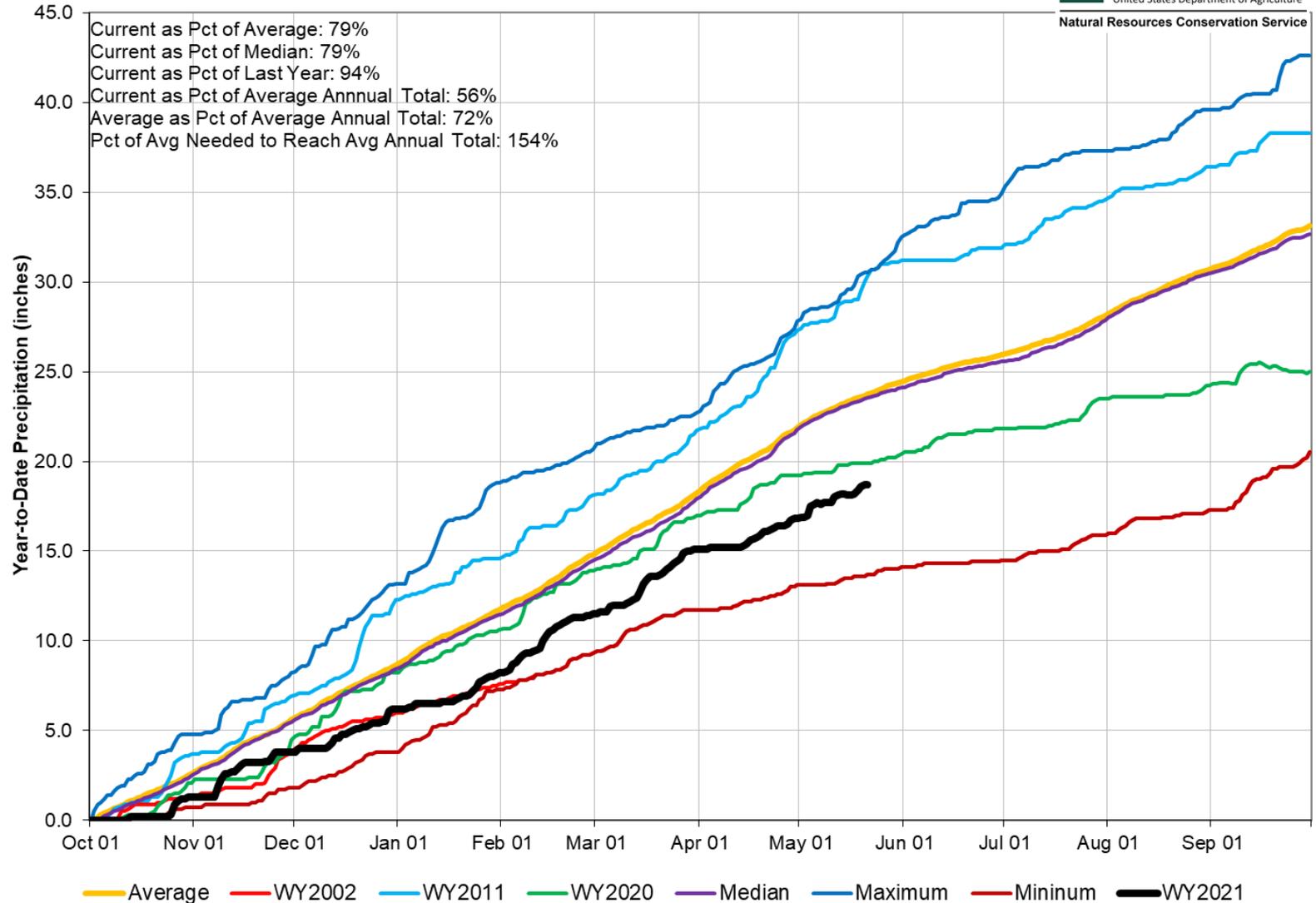
**April PREC**  
**48% of Average**  
**May to date PREC**  
**122% of Average**





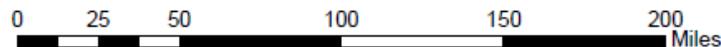
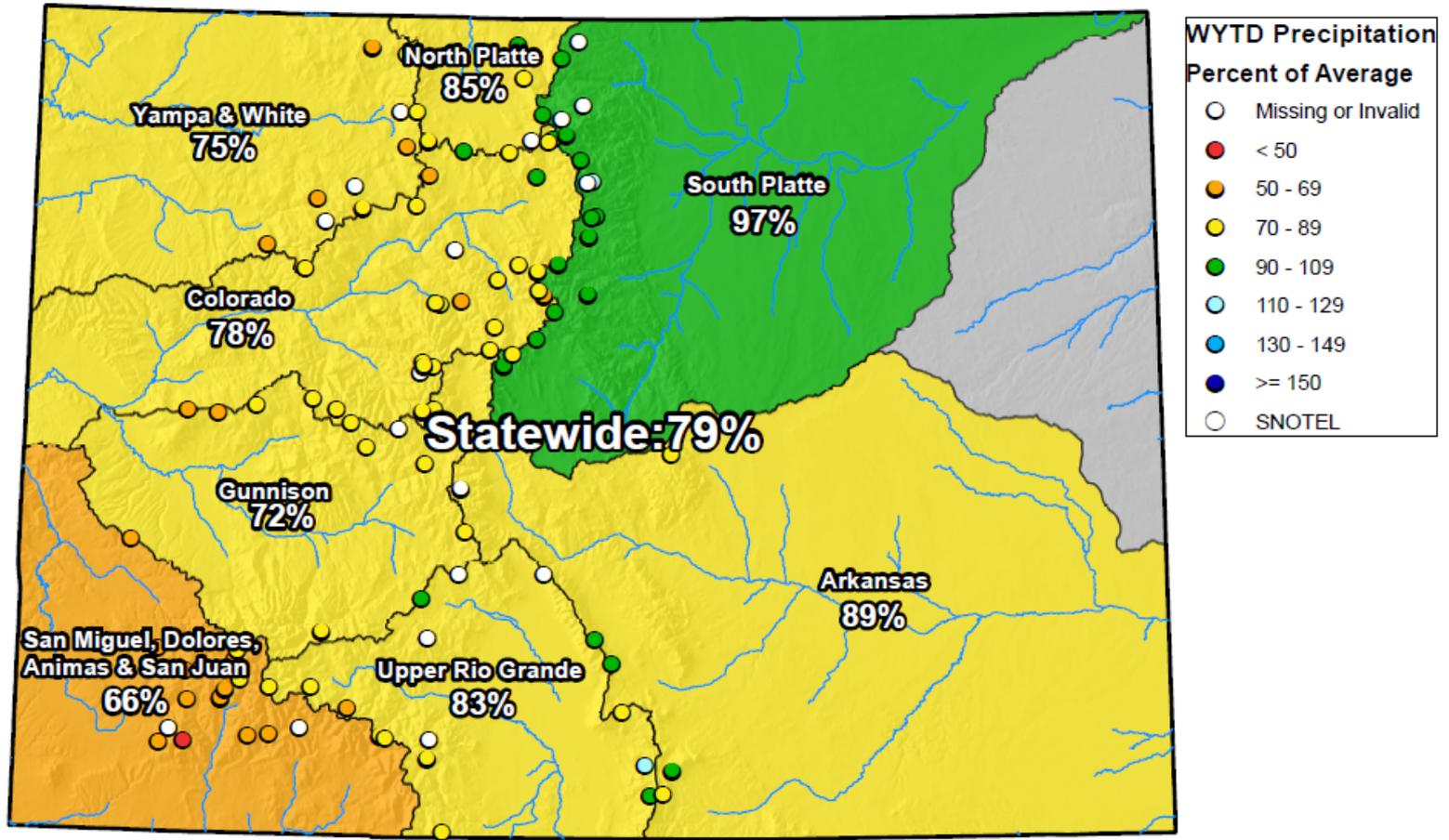
## Colorado Statewide High/Low Year-to-Date Precipitation Summary

*Based on Provisional SNOTEL data as of May 21, 2021*

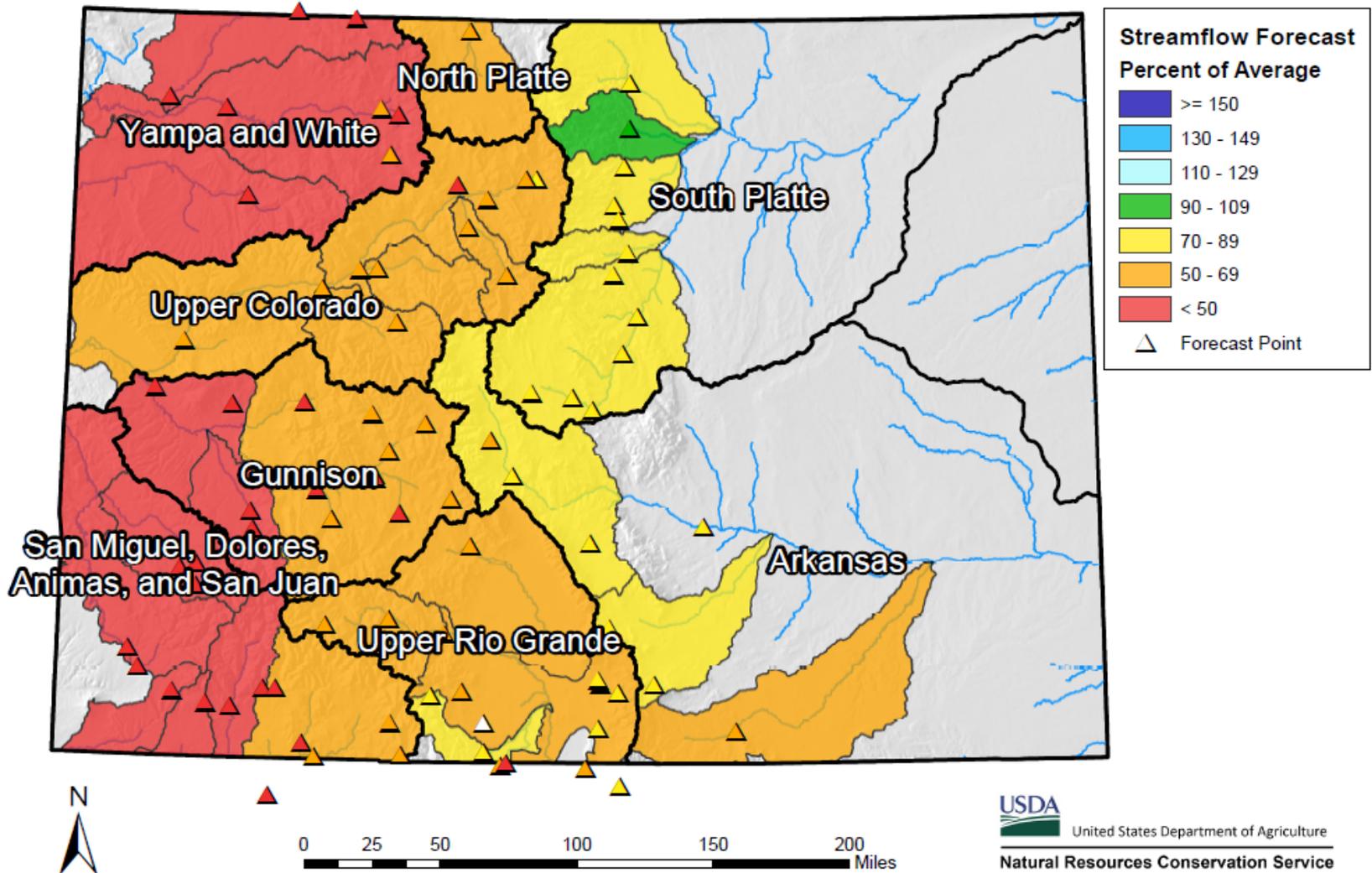


## Colorado SNOTEL Water Year to Date Precipitation

Current as of May 21, 2021

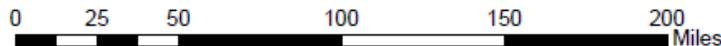
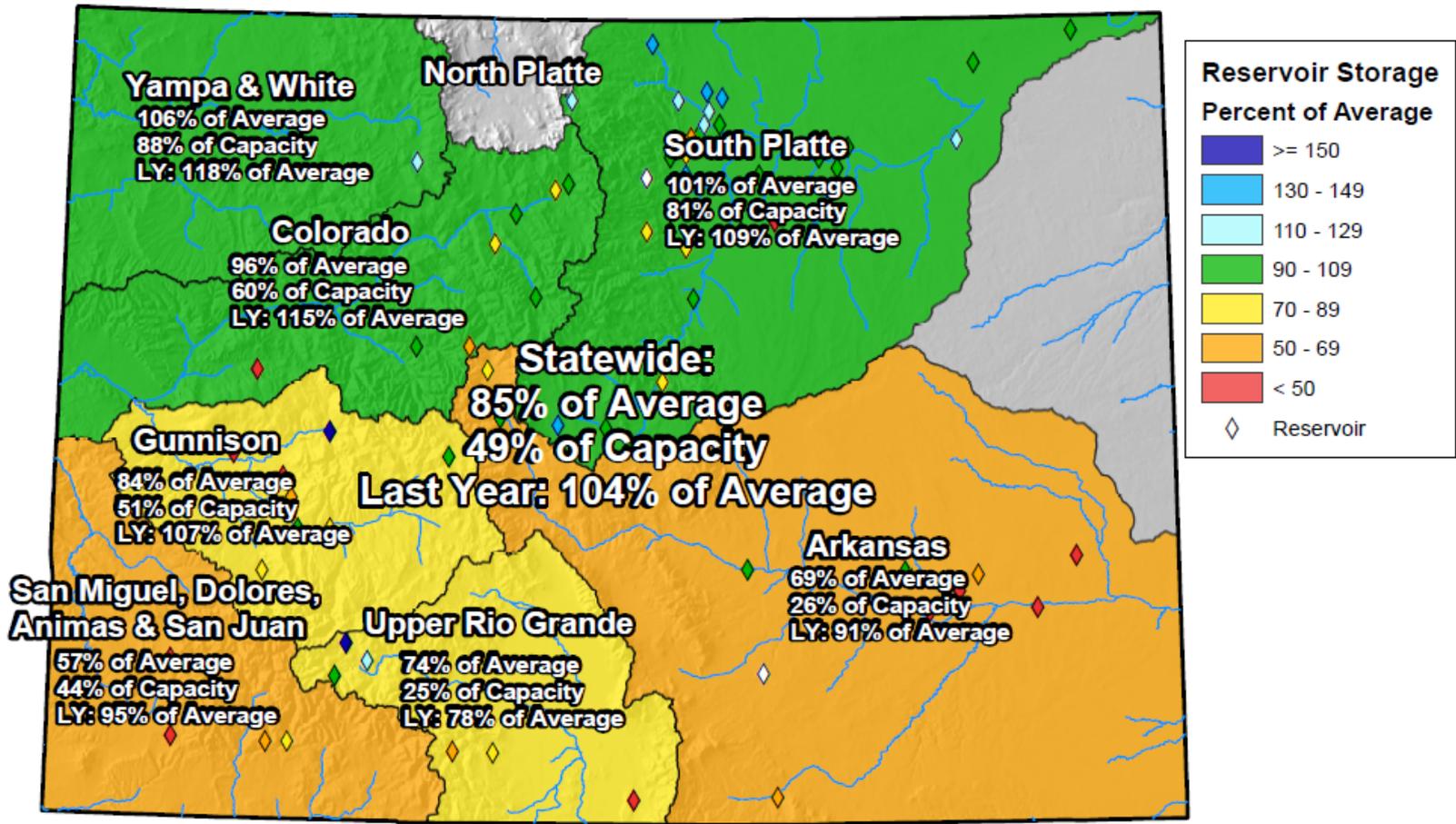


## Colorado Streamflow Forecasts Summary May 1, 2021



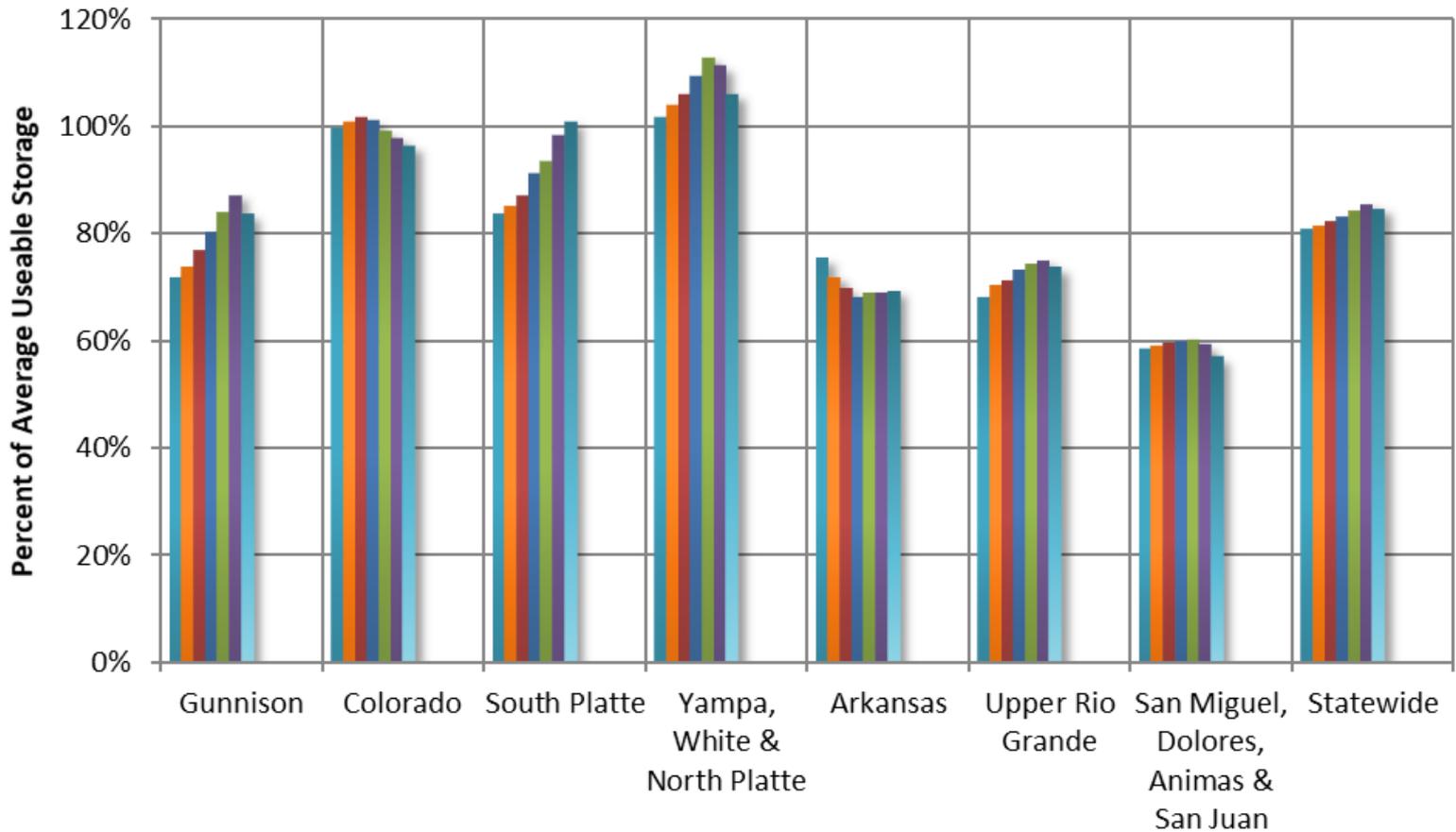
## Colorado Monthly Reservoir Storage Summary

End of April 2021



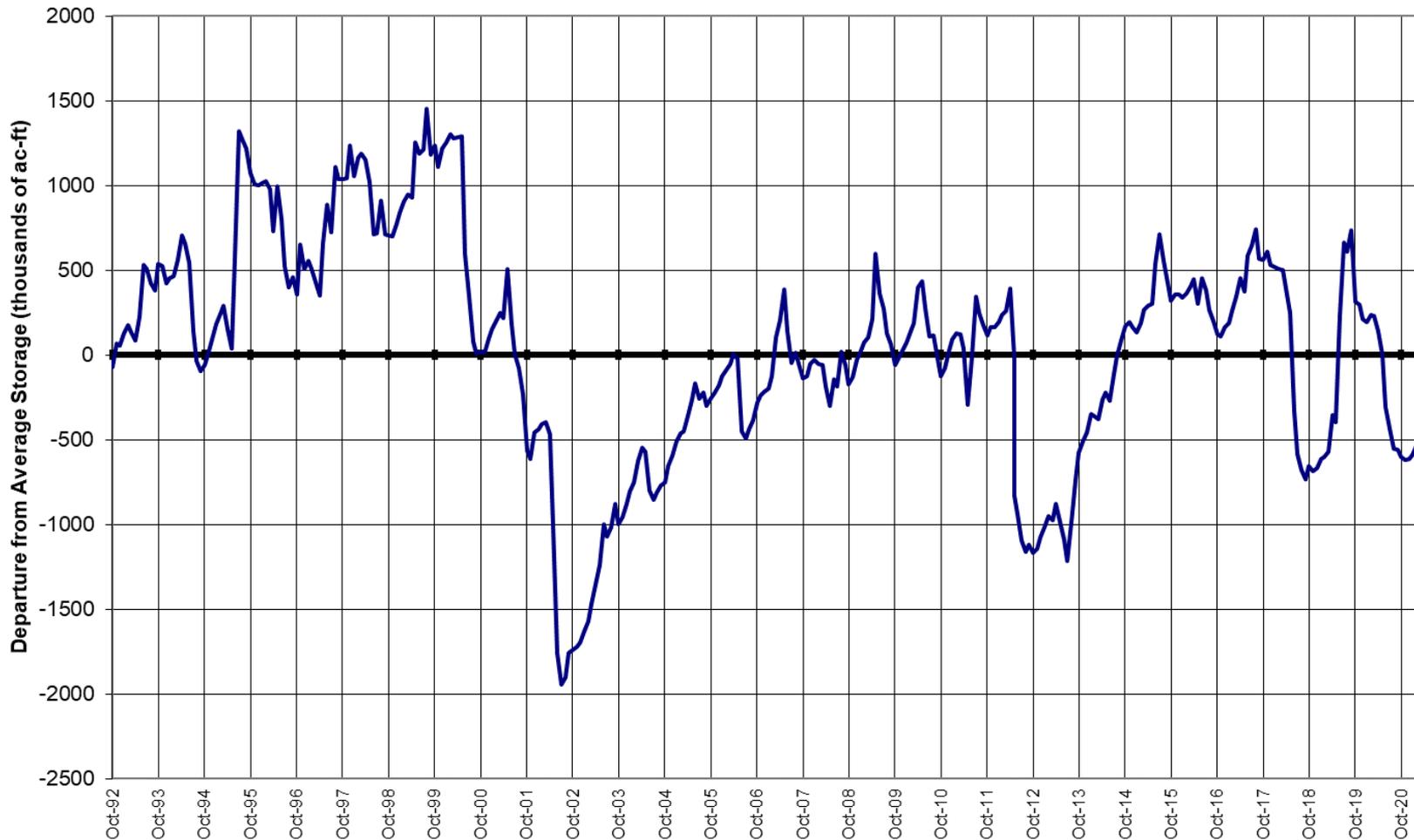
## Colorado Reservoir Storage

■ Oct-20    ■ Nov-20    ■ Dec-20    ■ Jan-21    ■ Feb-21    ■ Mar-21  
■ Apr-21    ■ May-21    ■ Jun-21    ■ Jul-21    ■ Aug-21    ■ Sep-21





## COLORADO STATEWIDE Reservoir Storage Departure from Average



# Summary

- Below average April precipitation led to decreases in streamflow forecasts across the state as of May 1st
- May-to-date precipitation has been above average across most major basins
  - The southern basins received the most moisture which are regions that have been the driest for the last two years
- Statewide snowpack peak was 91 percent of normal but this varied widely basin to basin
- Most of the state has been observing earlier than normal snowmelt
- Statewide reservoir storage is 85 percent of average but with the southern basins holding lower amounts of storage.
- Dry soils resulting from summer and fall of 2020 are causing streamflow forecasts to be substantially lower than would be commonly expected with a similar snowpack



# Water Availability Task Force Meeting

May 25<sup>th</sup>, 2021

## NRCS Snow Survey and Water Supply Forecasting Program

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Asst. Snow Survey Supervisor

720-544-2852

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



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