



United States Department of Agriculture

Colorado Snow Surveys

# Water Availability Task Force Meeting

## May 14<sup>th</sup>, 2019

### NRCS Snow Survey and Water Supply Forecasting Program

Karl Wetlaufer

Hydrologist

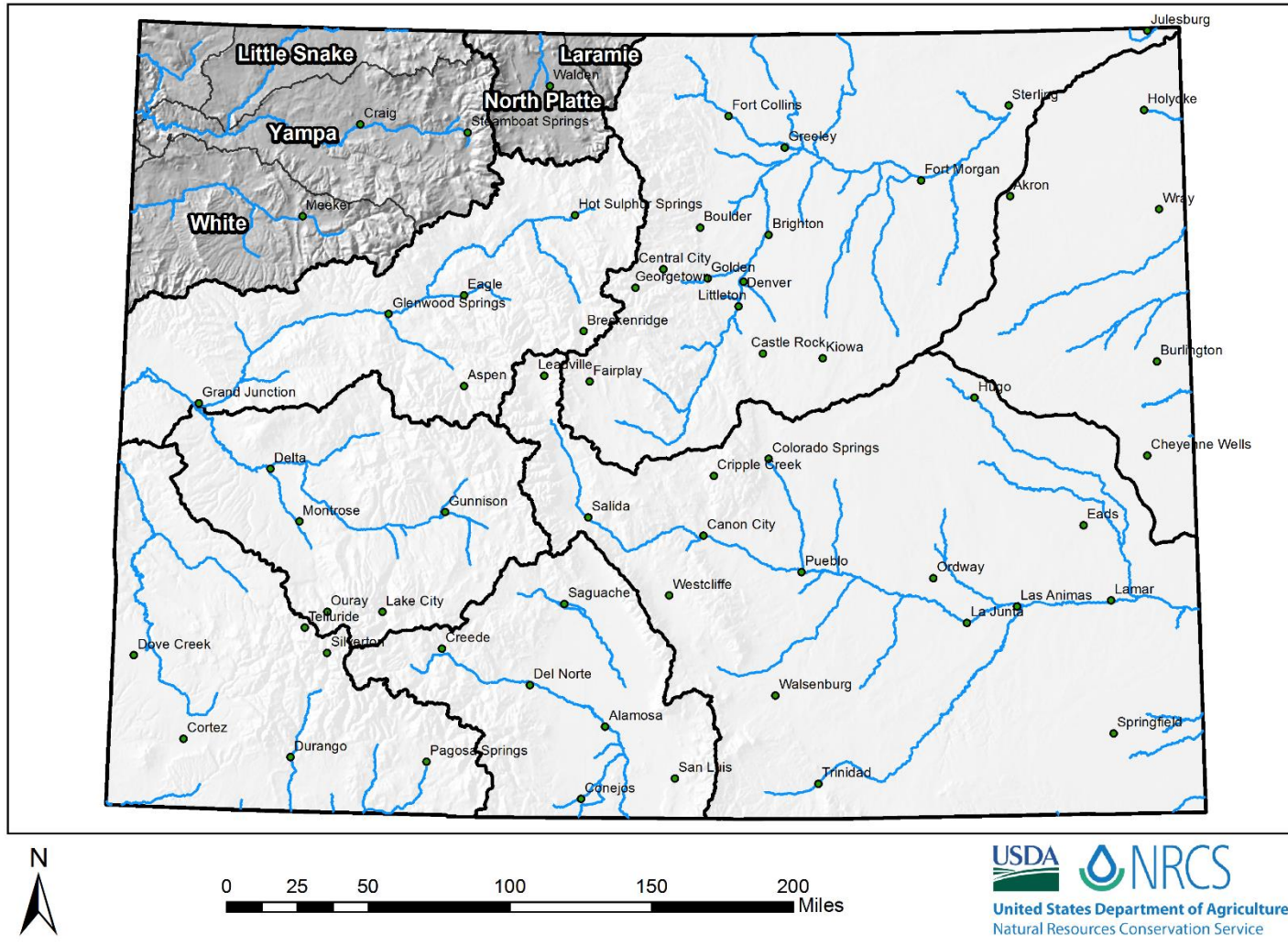
Assistant Snow Survey Supervisor

720-544-2853

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

## Major Basin Summary

Yampa, White, and North Platte River Basins





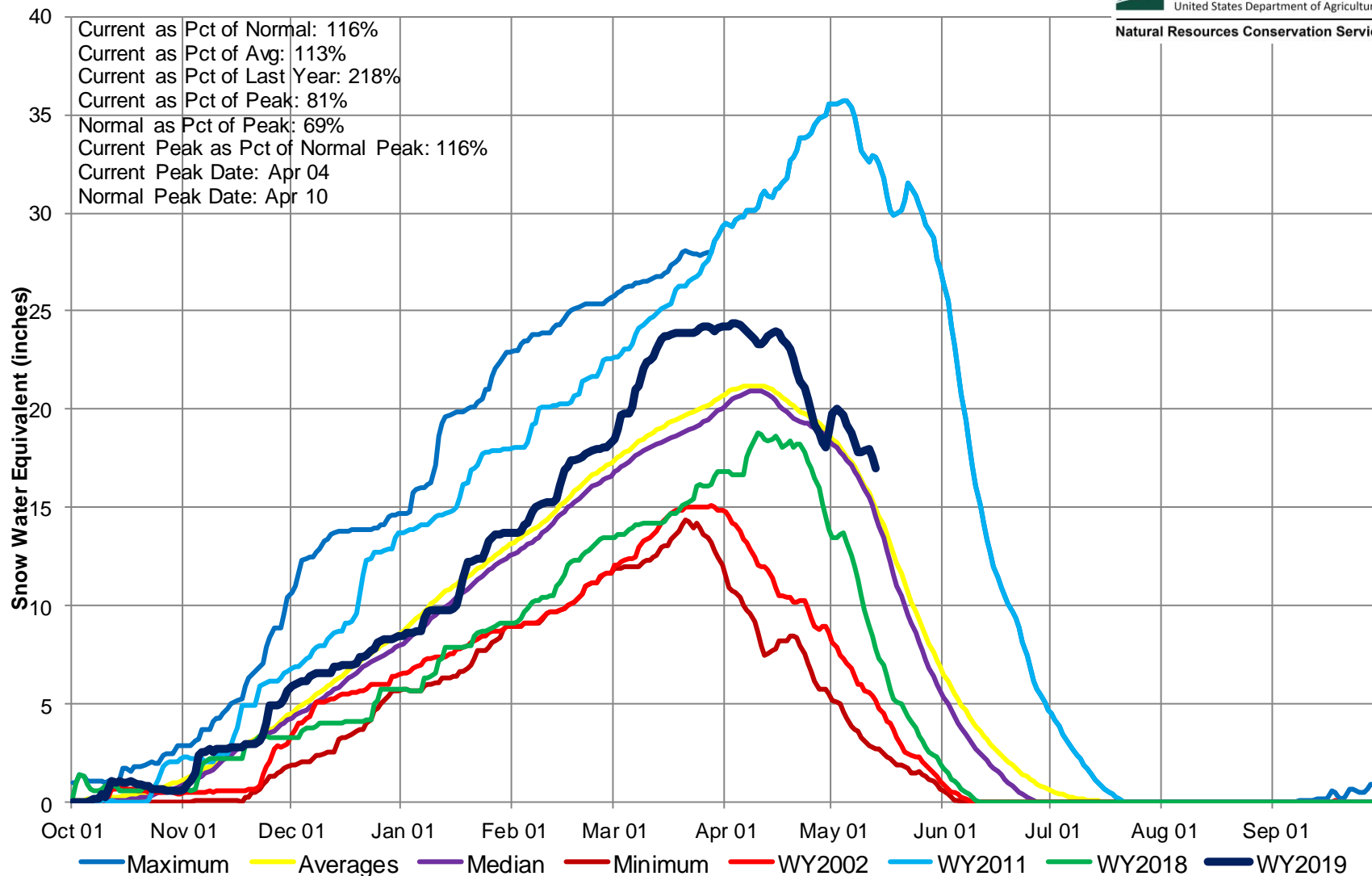
## Yampa and White River Basins High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of May 13, 2019*



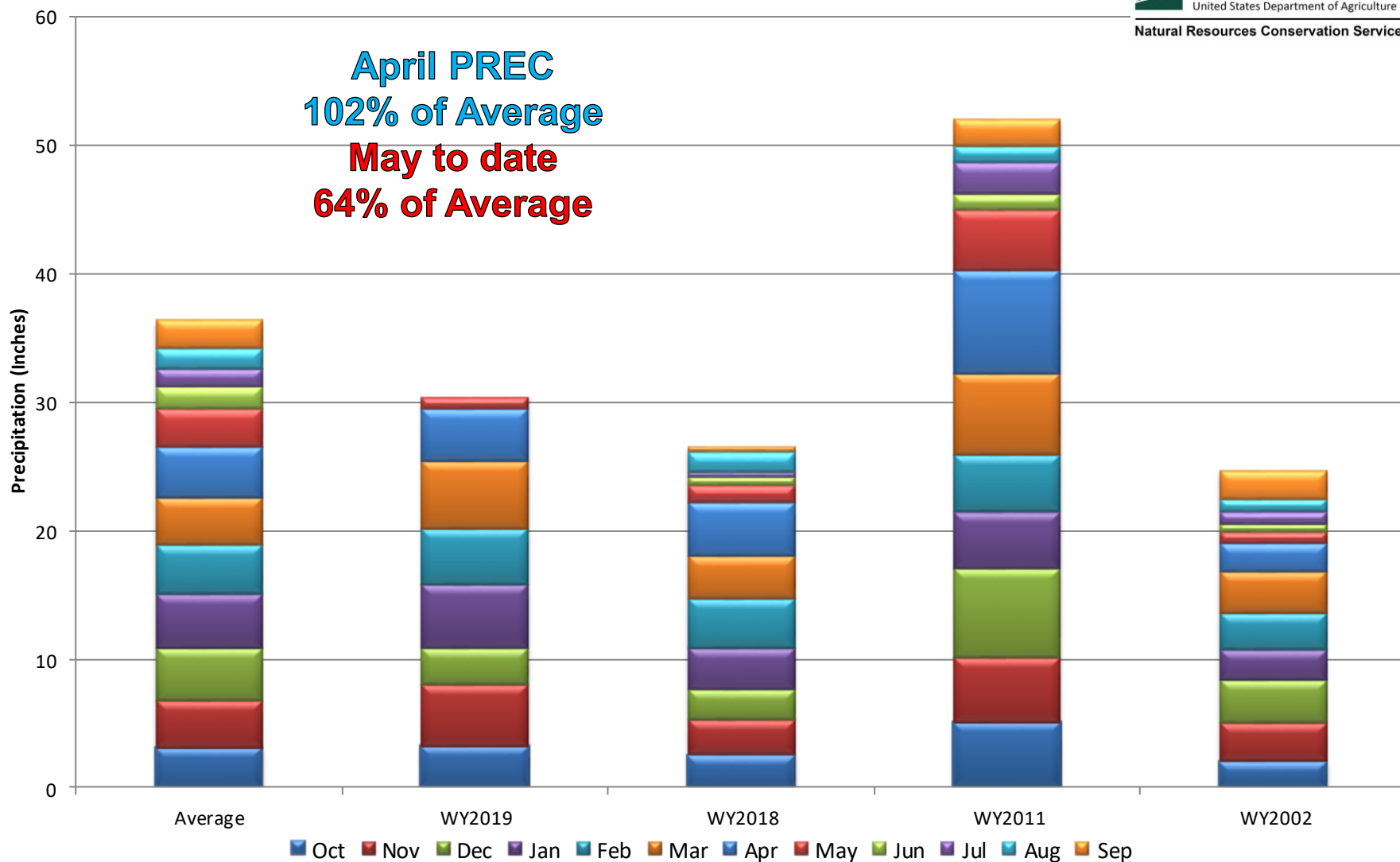
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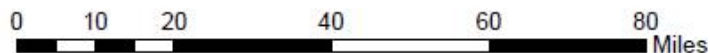
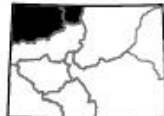
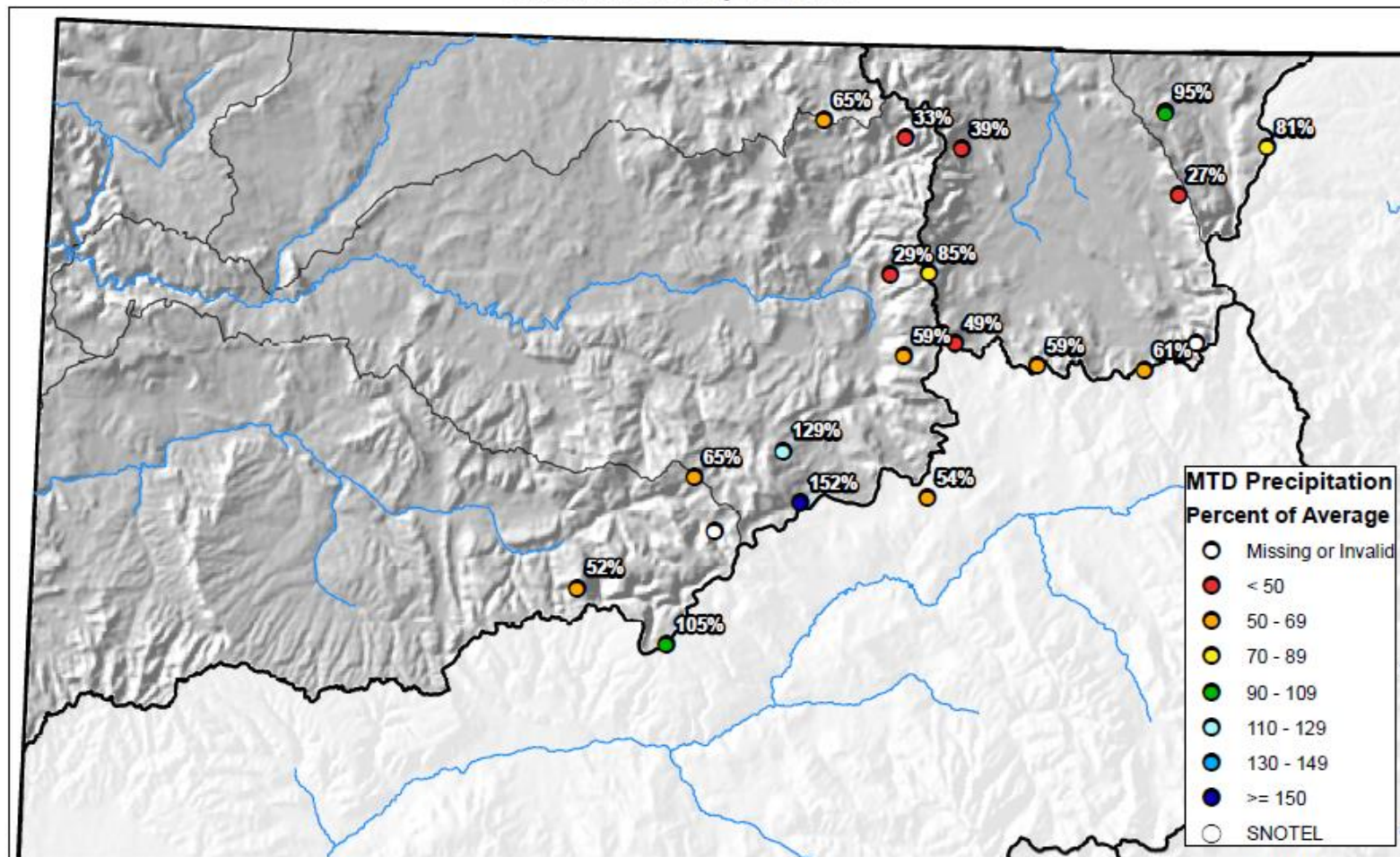
## Yampa and White River Basins High/Low Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of May 13, 2019*





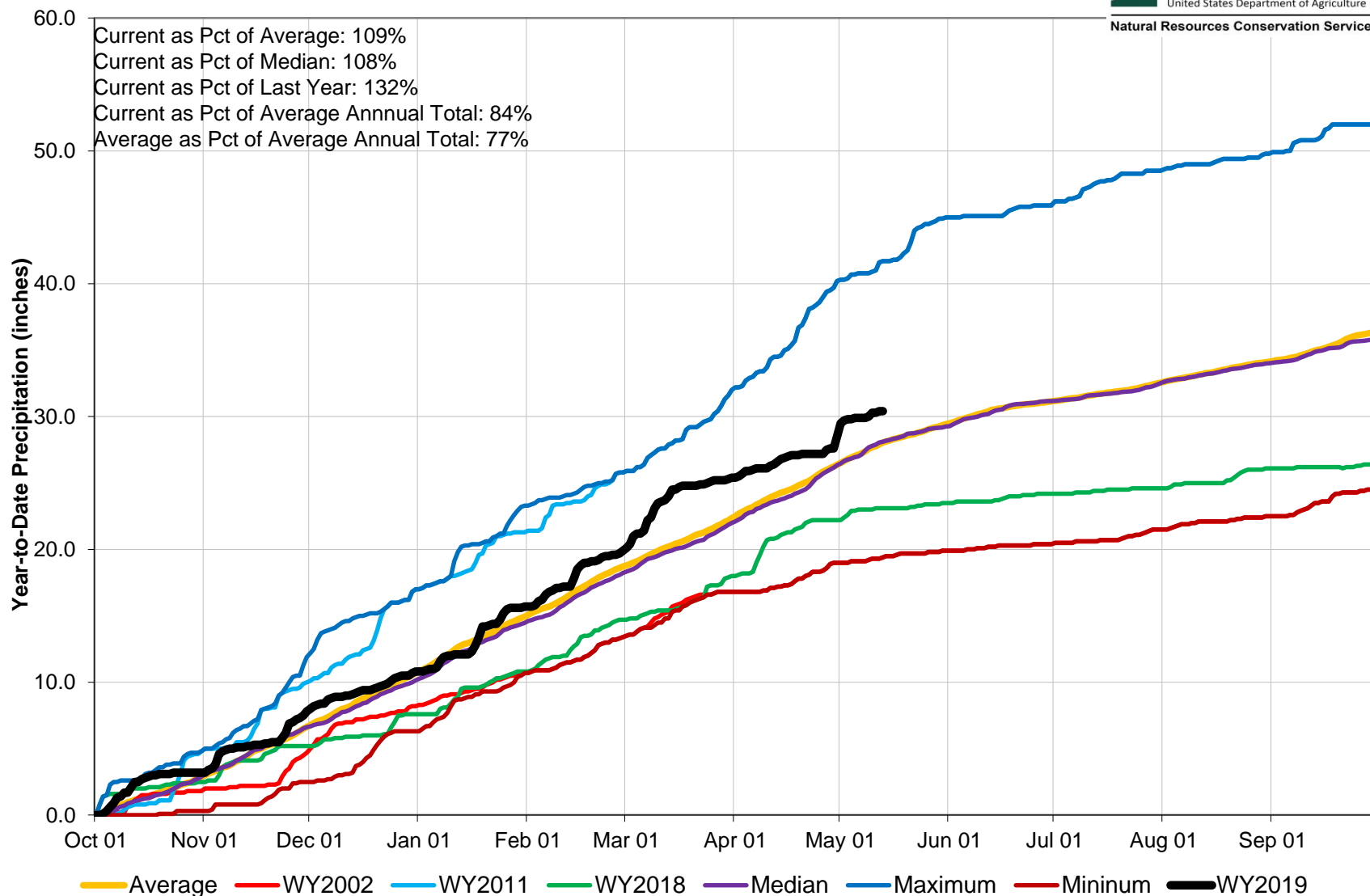
## Yampa, White, and North Platte River Basins Month to Date Precipitation Summary Current as of May 13, 2019



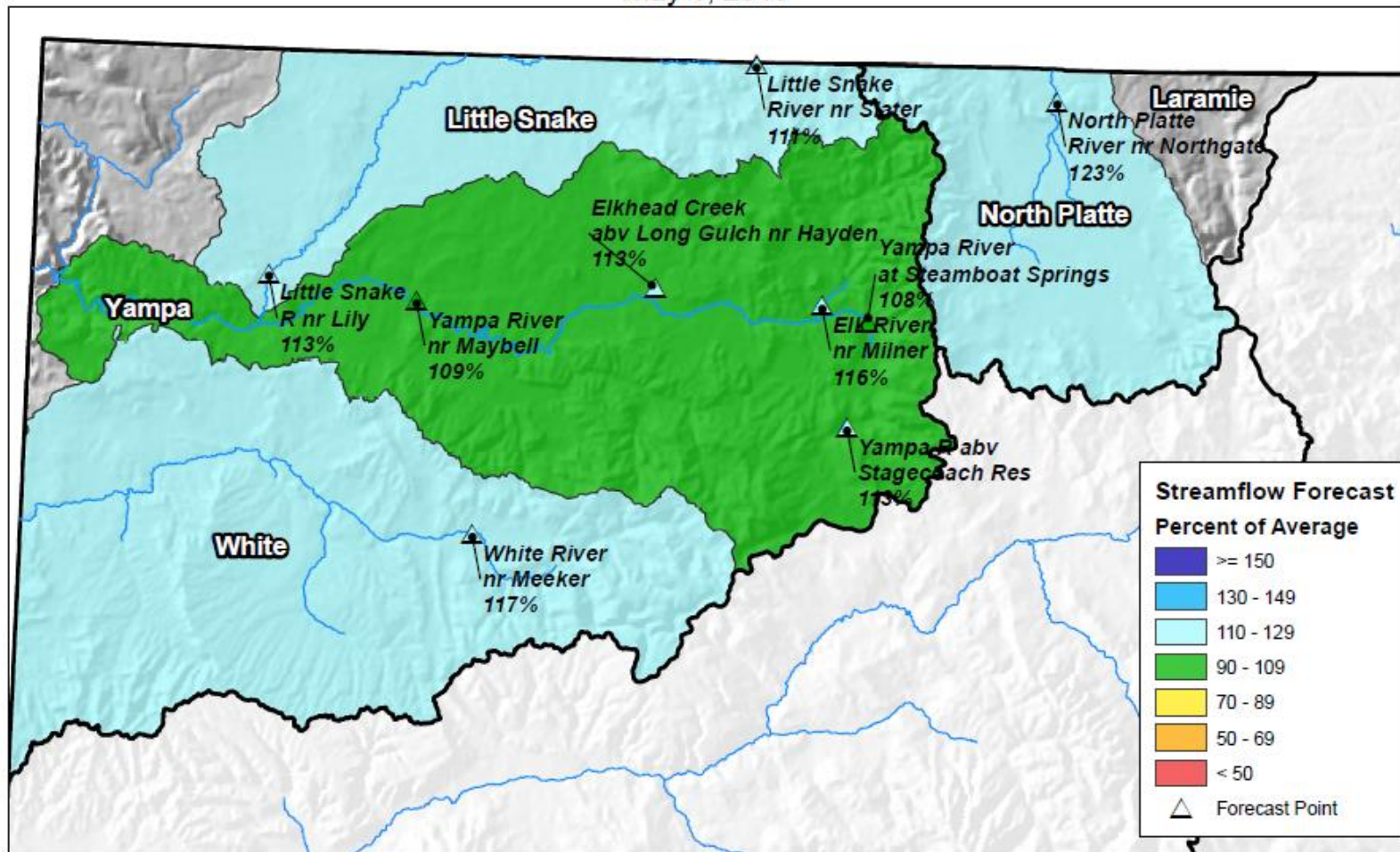


## Yampa and White River Basins High/Low Year-to-Date Precipitation Summary

*Based on Provisional SNOTEL data as of May 13, 2019*



## Yampa, White, and North Platte River Basins Streamflow Forecast Summary May 1, 2019



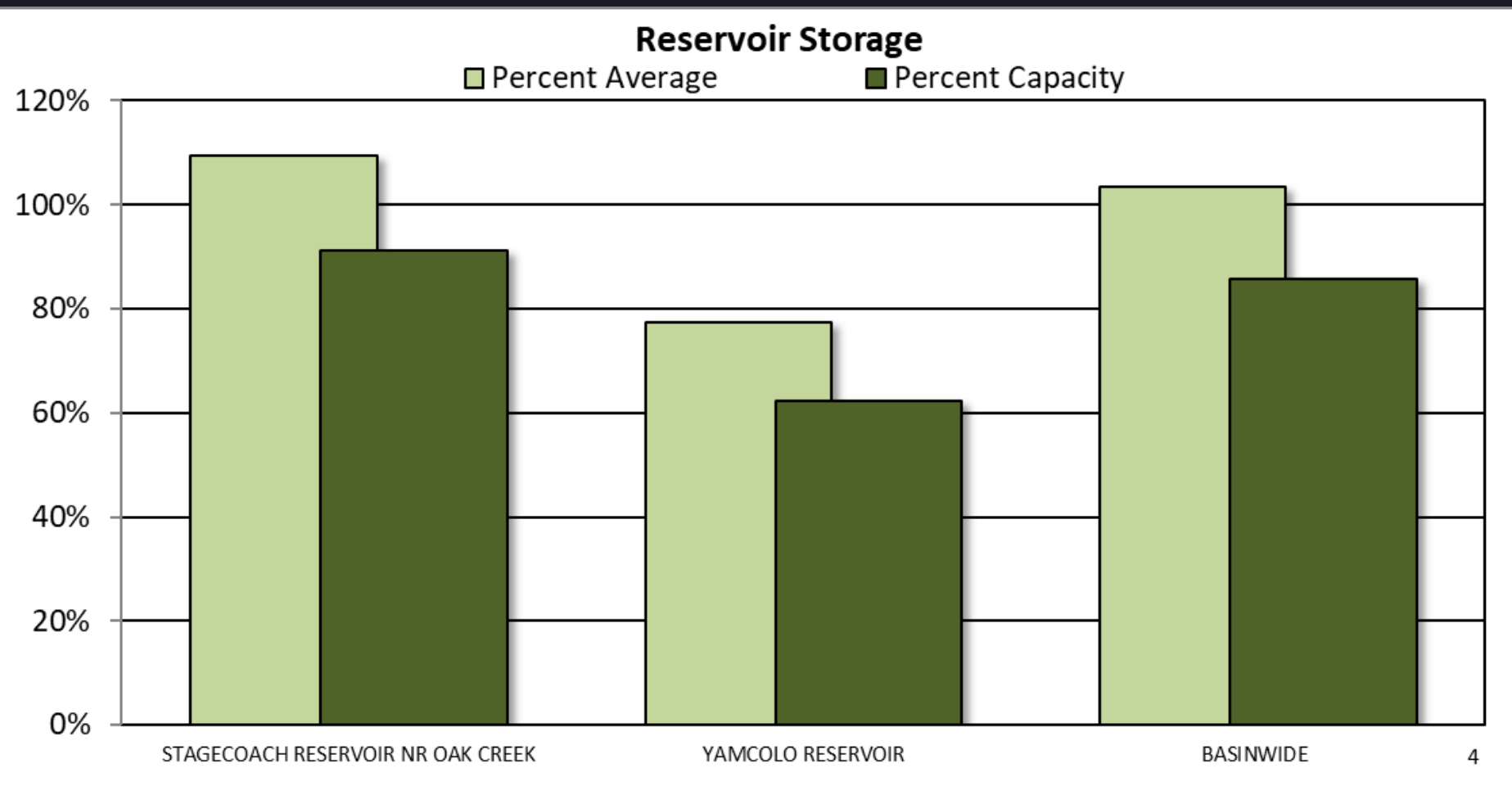
0 10 20 40 60 80 Miles



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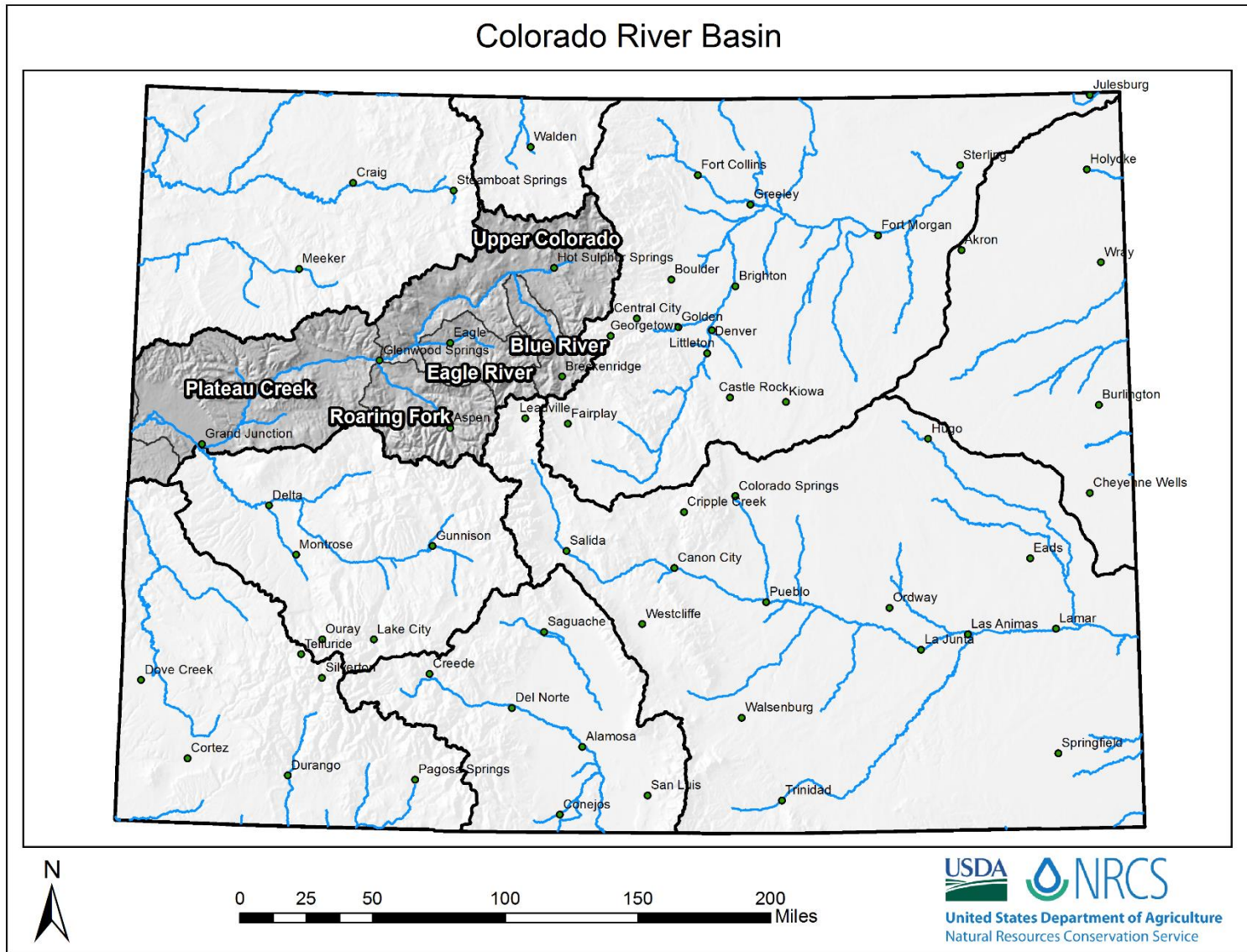
Natural Resources Conservation Service







## Major Basin Summary



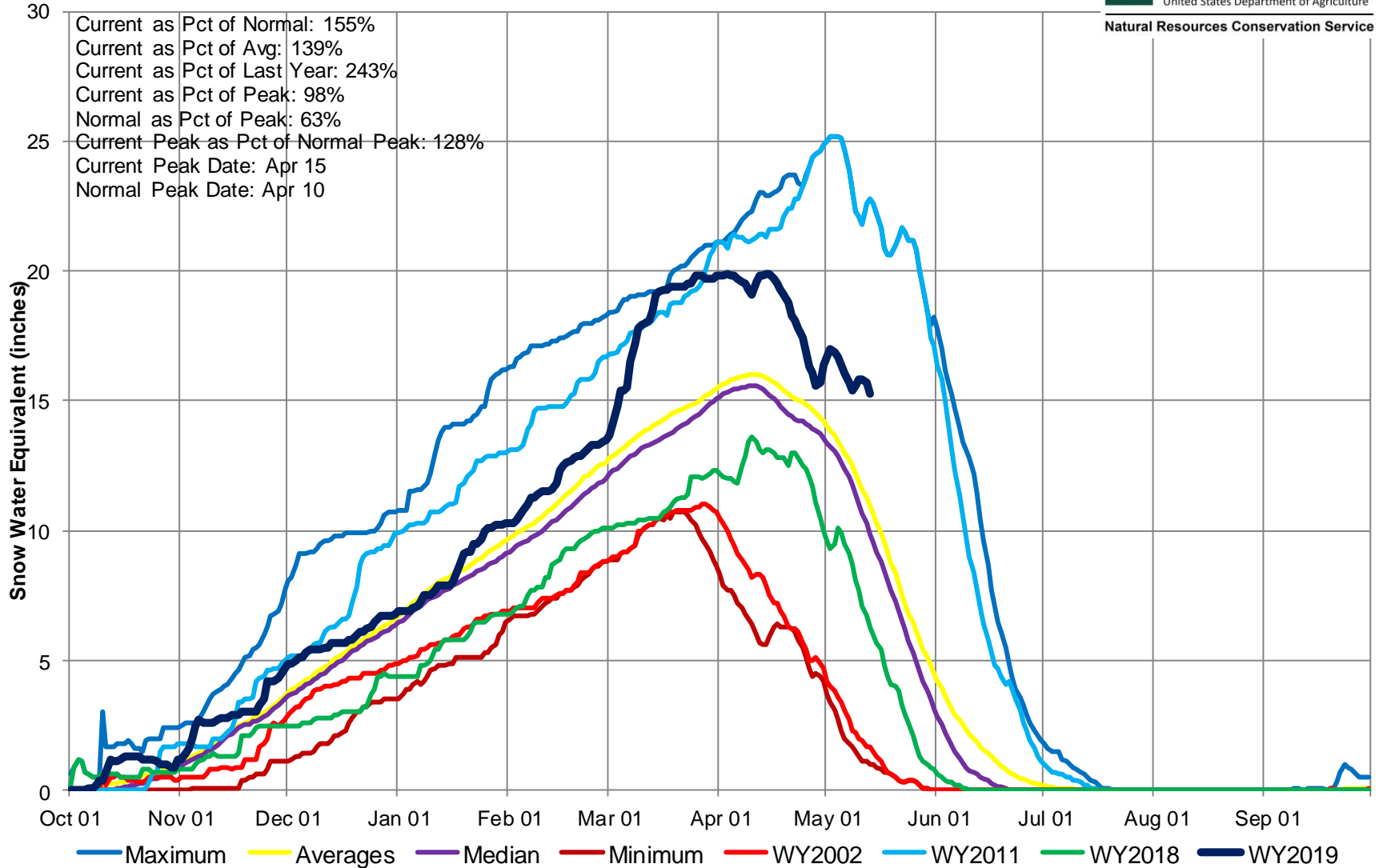
## Upper Colorado River Basin High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of May 13, 2019*



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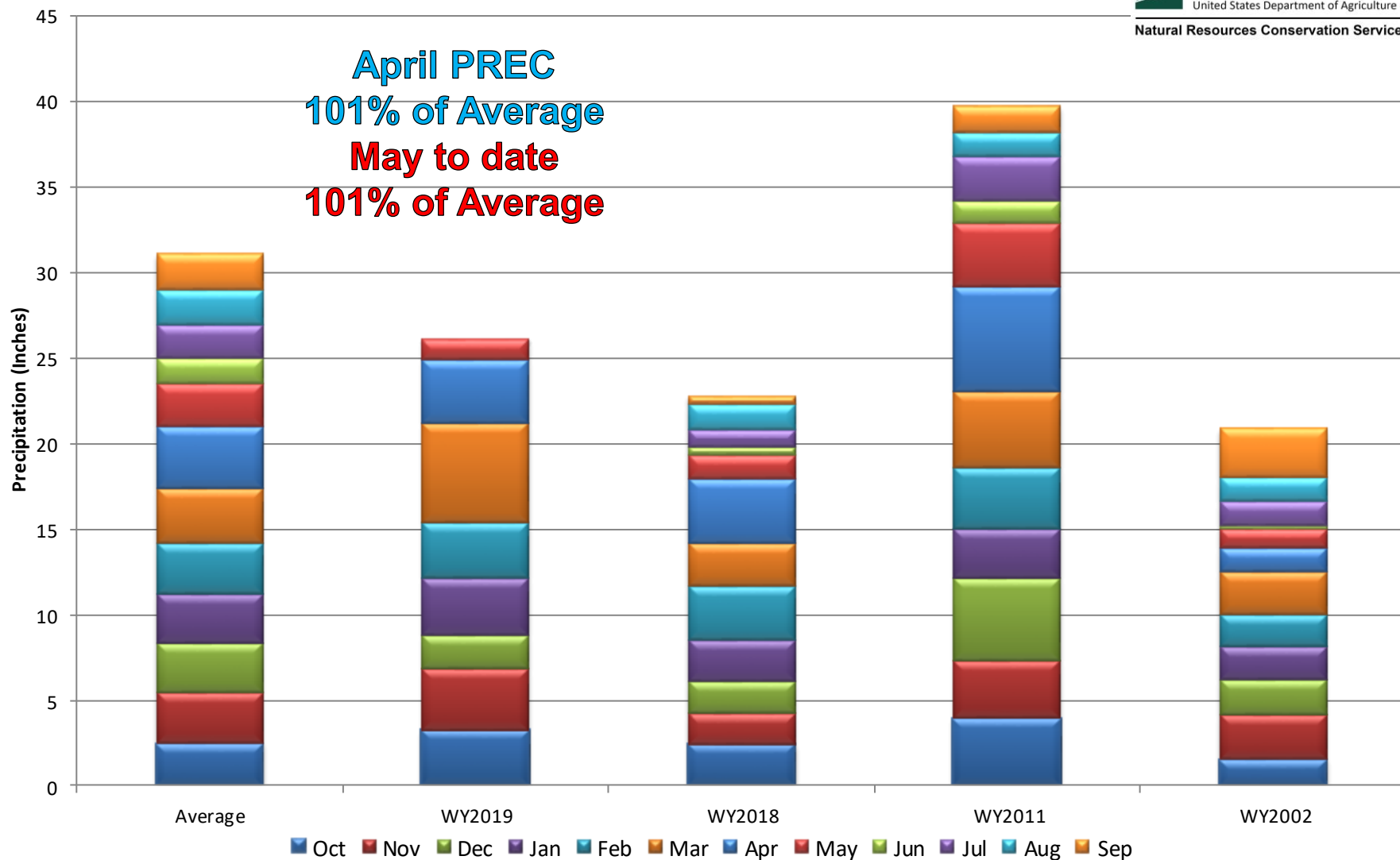
## Upper Colorado River Basin High/Low Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of May 13, 2019*



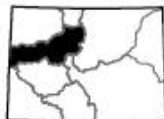
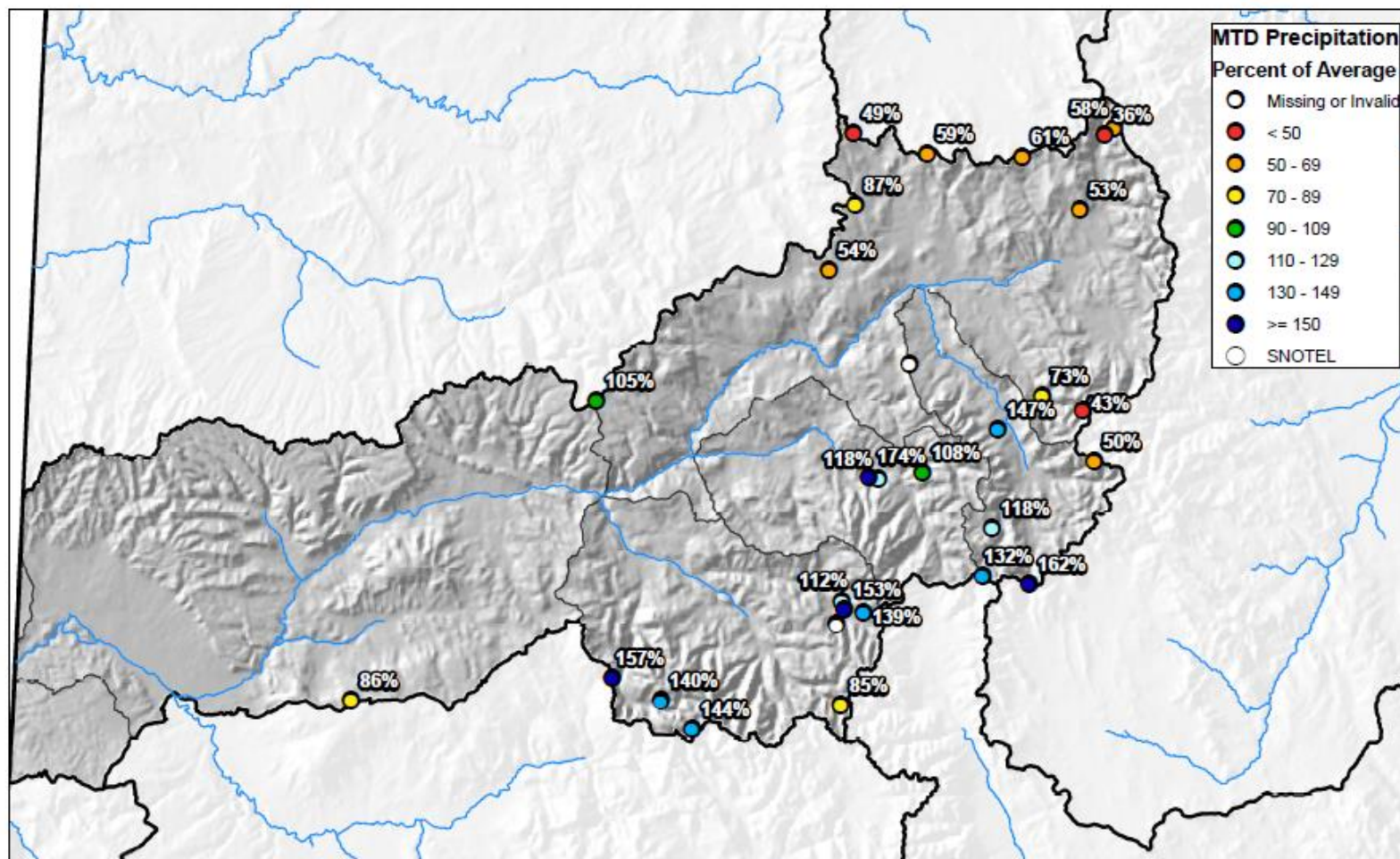
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## Upper Colorado River Basin Month to Date Precipitation Summary Current as of May 13, 2019



0 10 20 40 60 80 Miles



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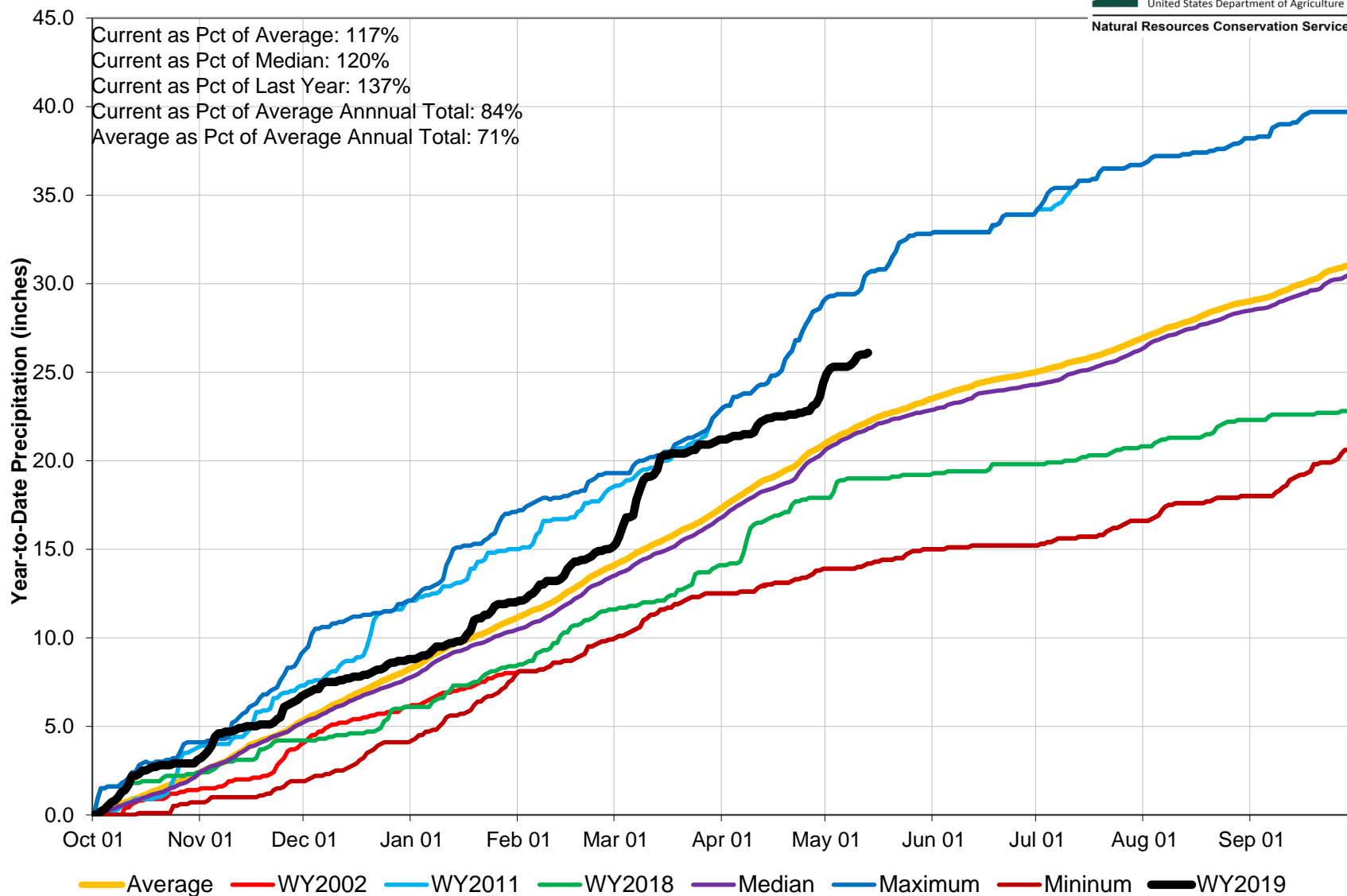
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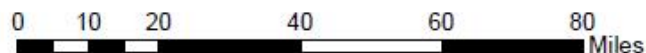
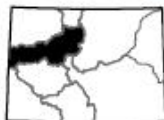
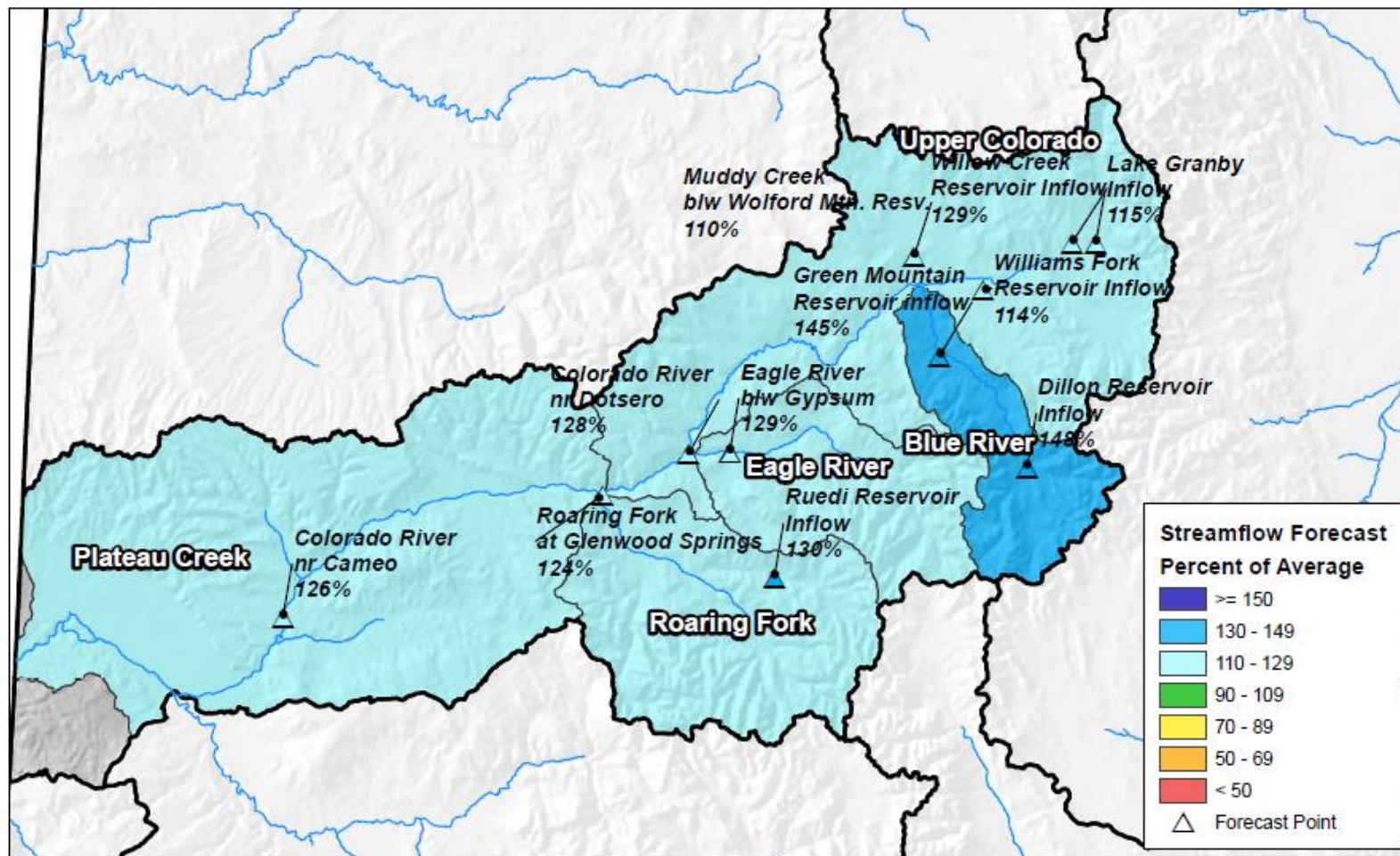
## Upper Colorado River Basin High/Low Year-to-Date Precipitation Summary

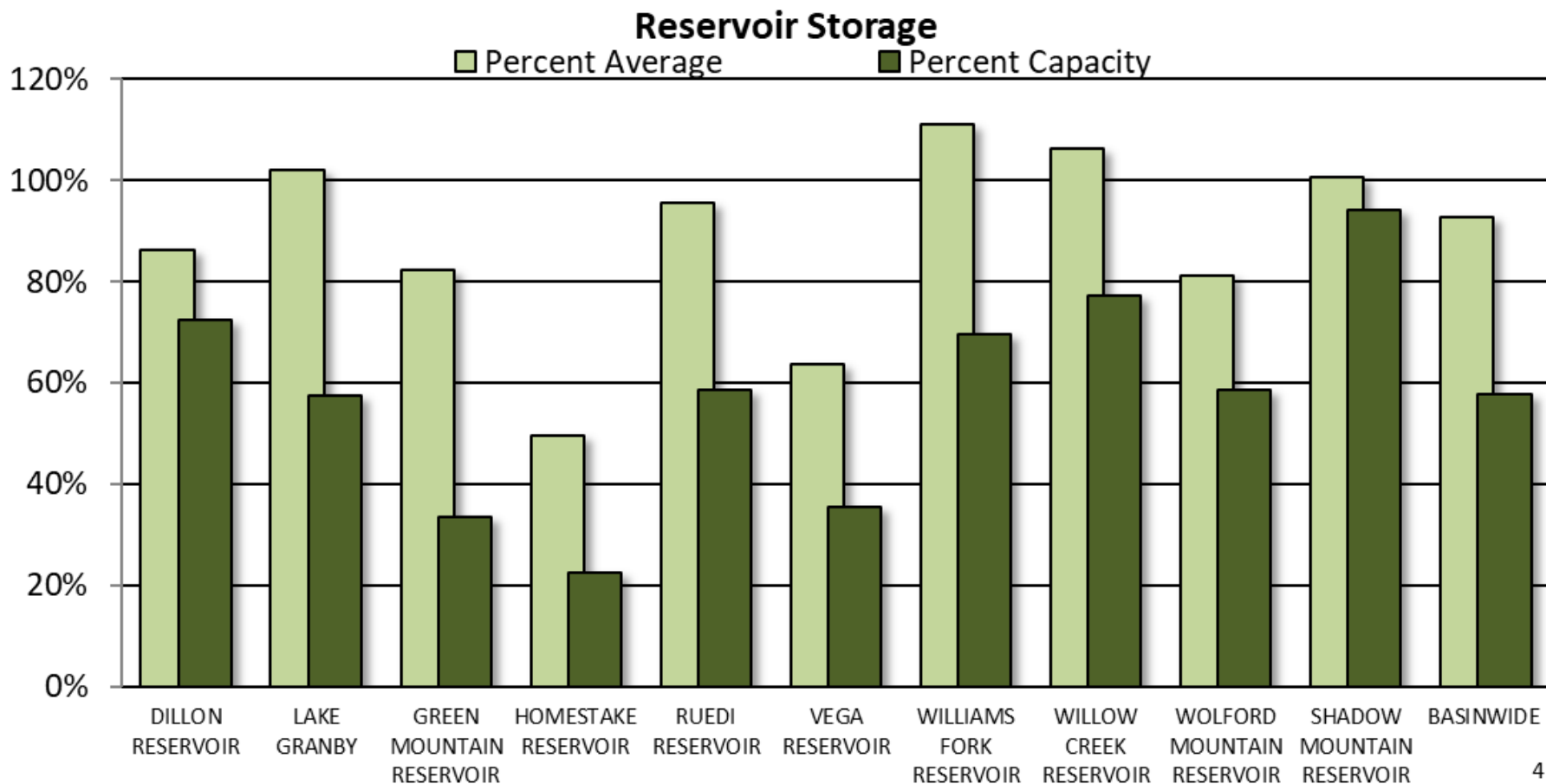
*Based on Provisional SNOTEL data as of May 13, 2019*



## Upper Colorado River Basin Streamflow Forecast Summary

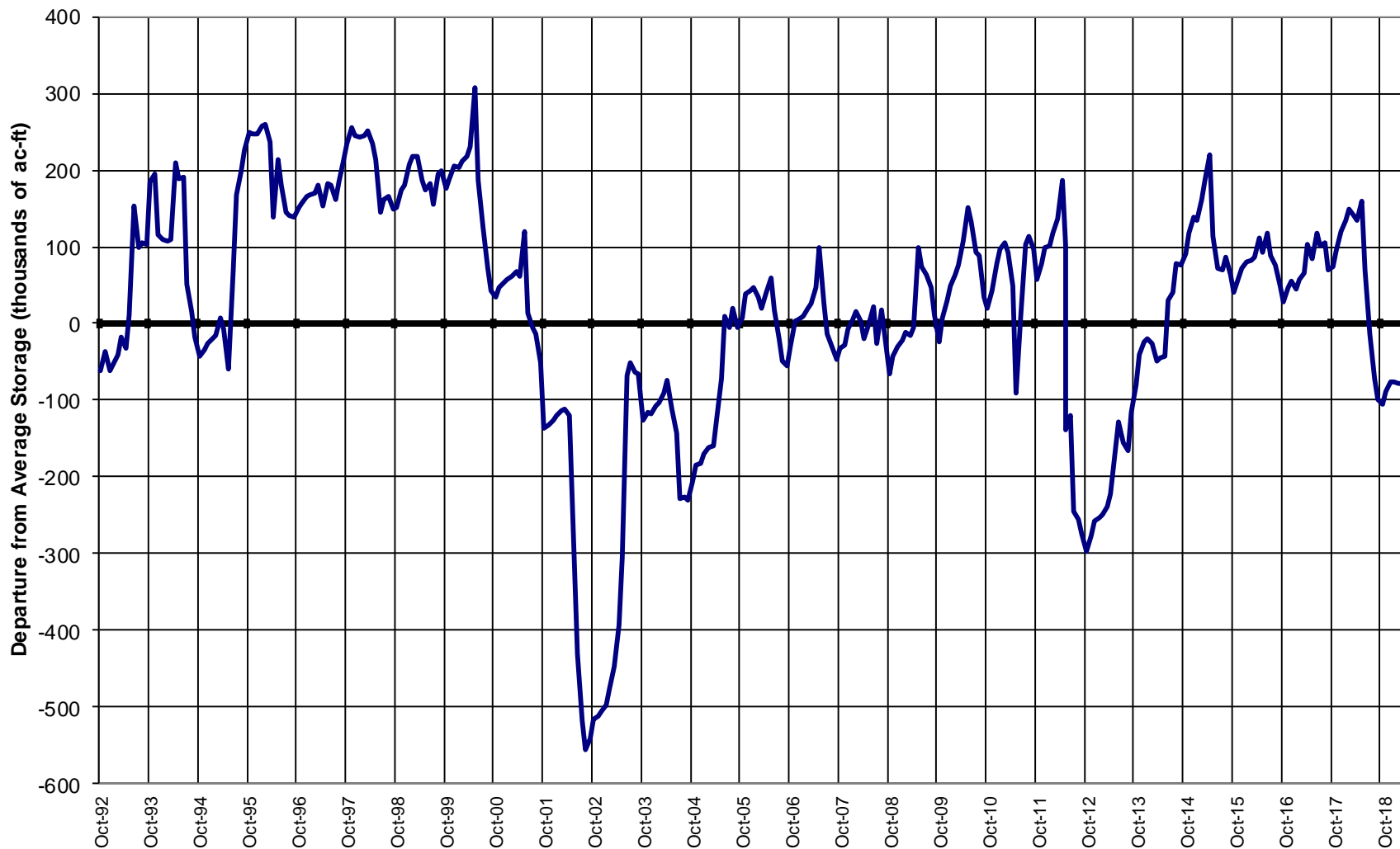
May 1, 2019







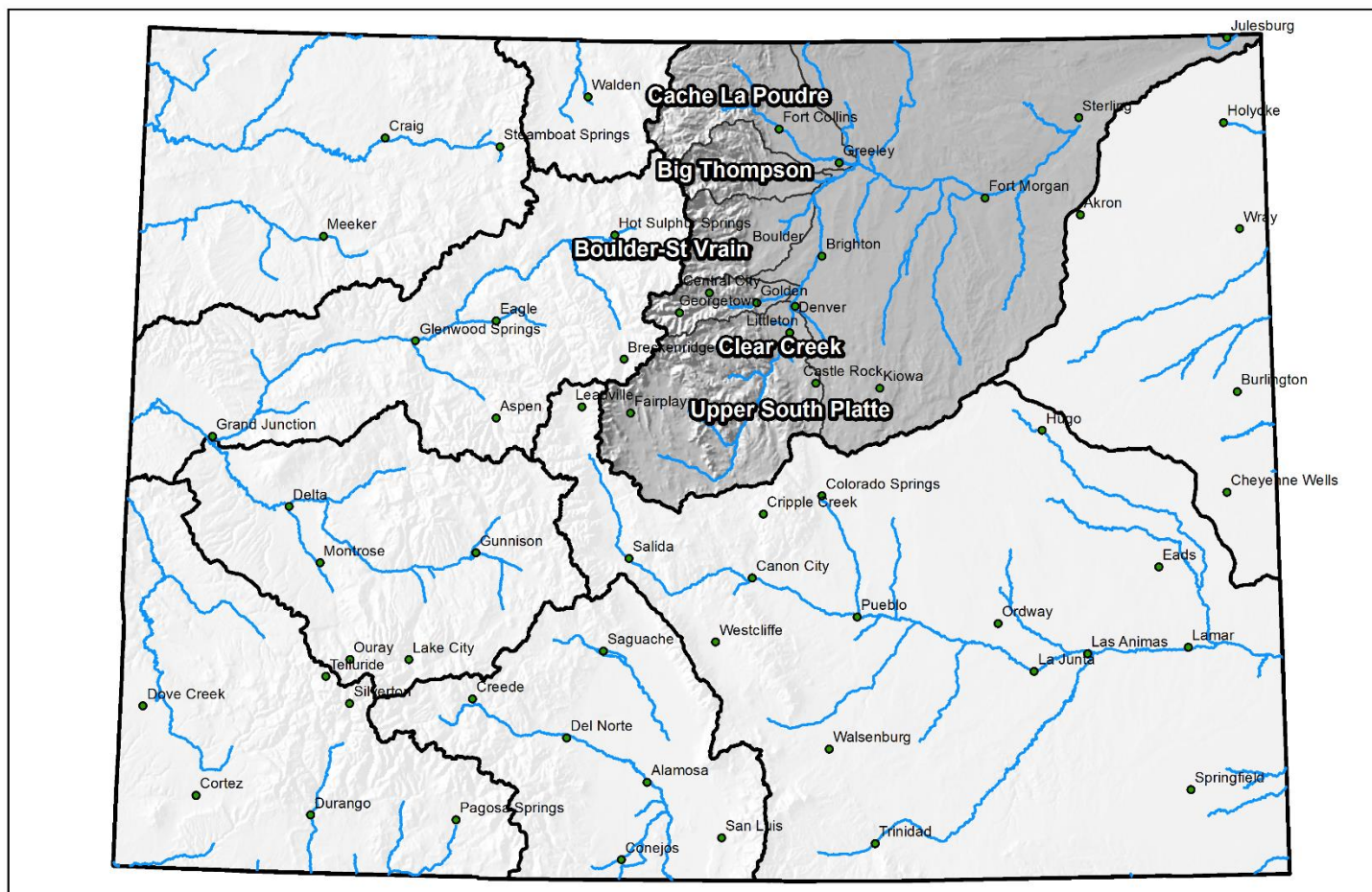
## COLORADO RIVER BASIN Reservoir Storage Departure from Average





# Major Basin Summary

## South Platte River Basin





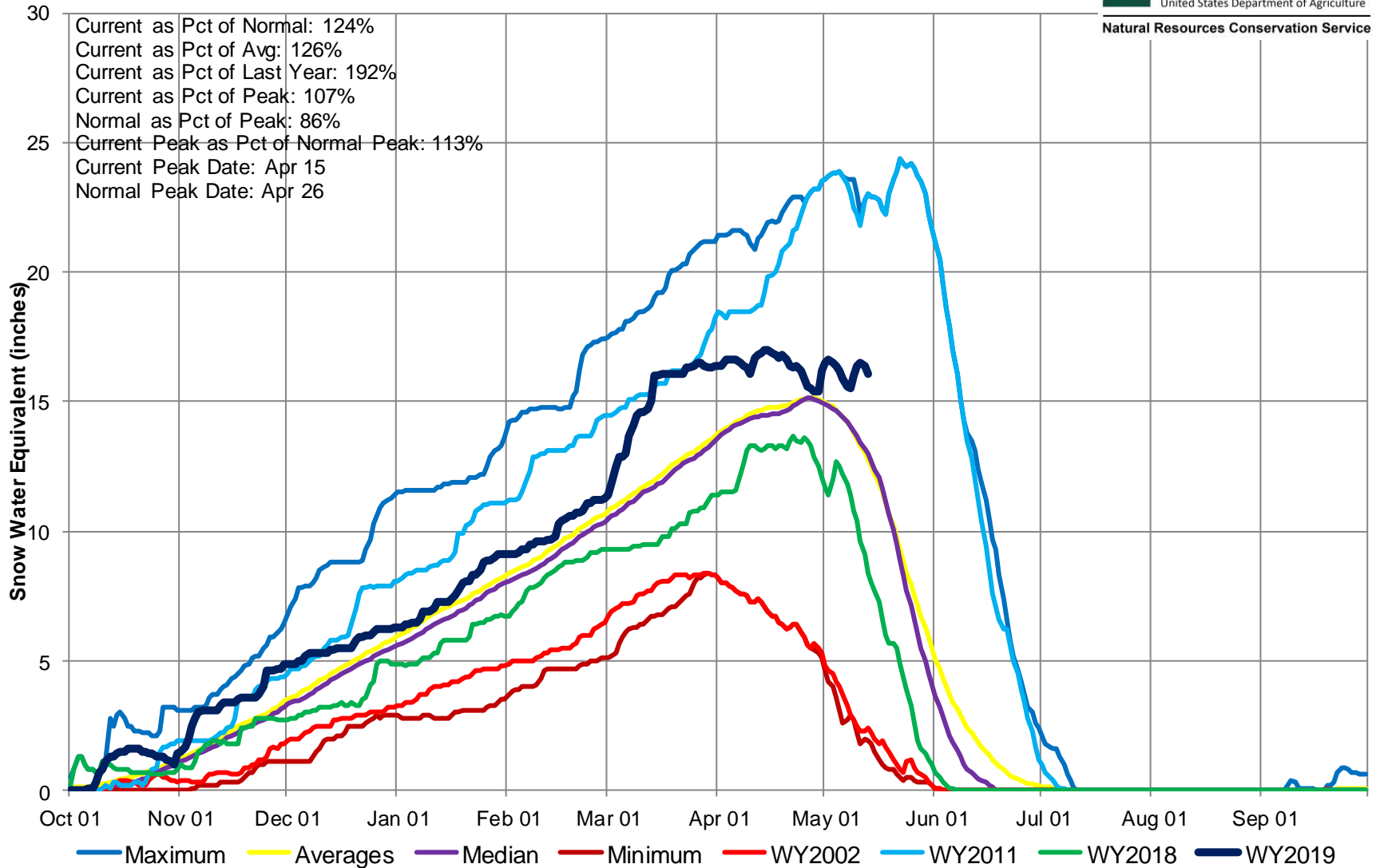
## South Platte River Basin High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of May 13, 2019*



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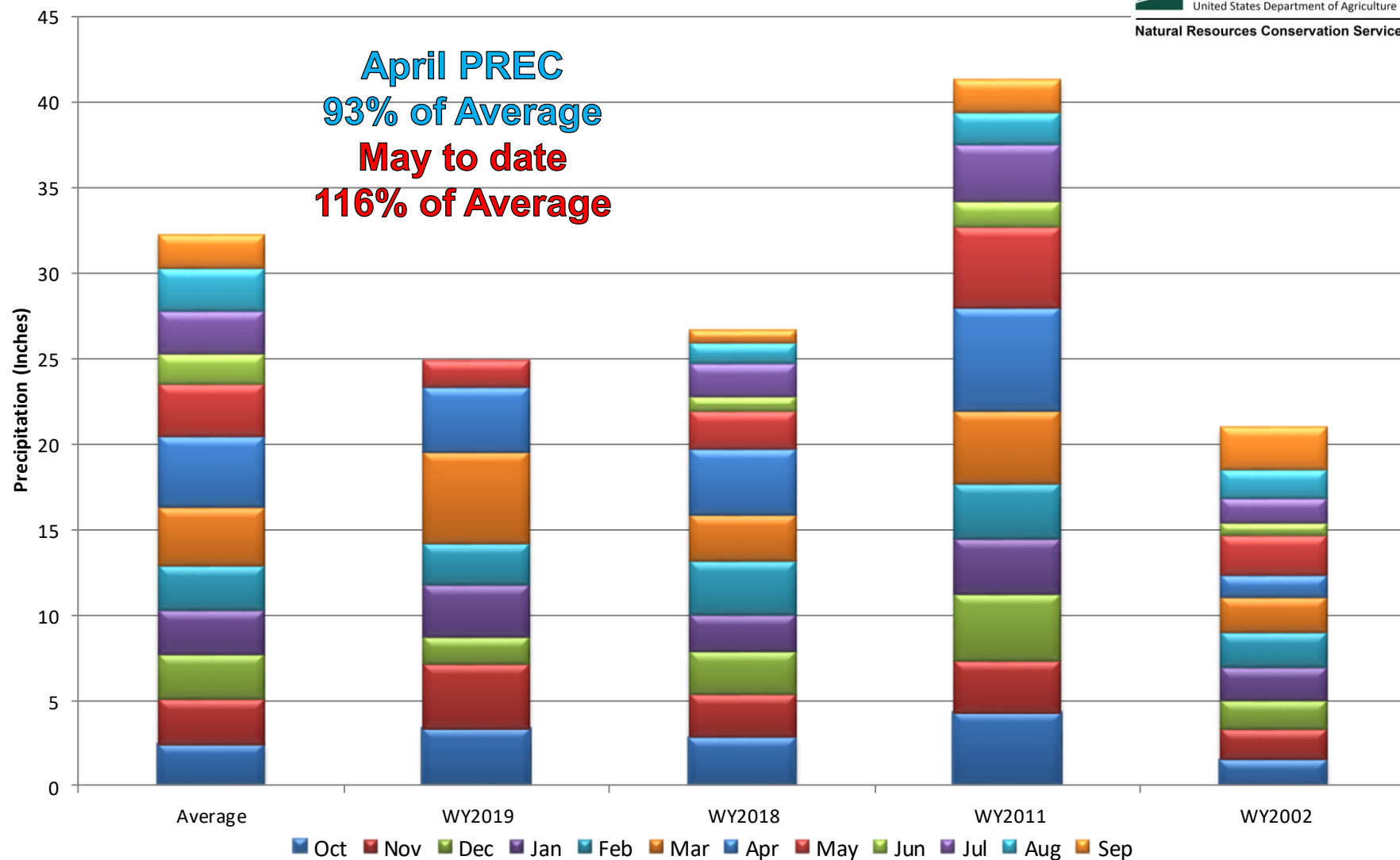
## South Platte River Basin High/Low Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of May 13, 2019*



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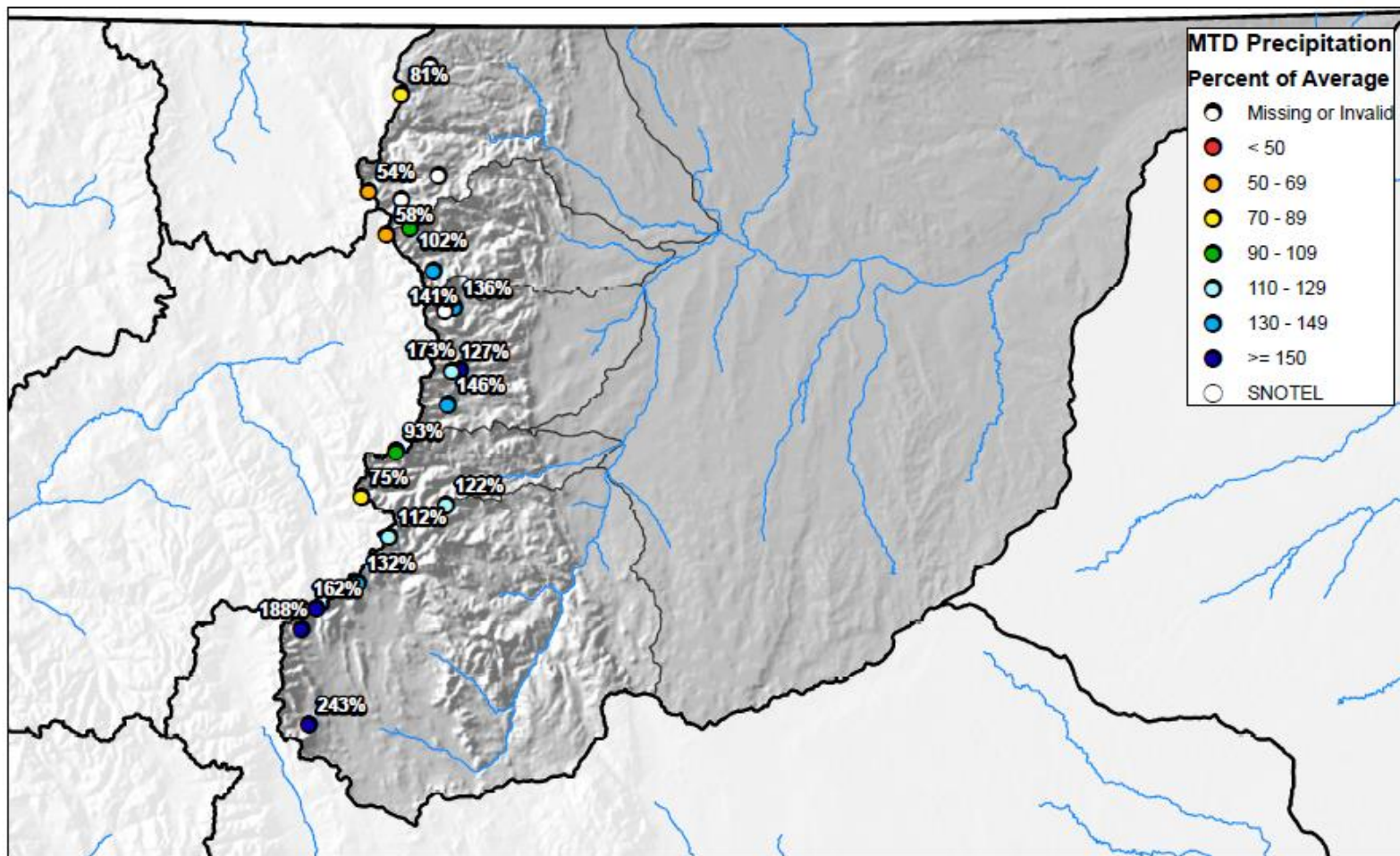
Natural Resources Conservation Service





## South Platte River Basin Month to Date Precipitation Summary

Current as of May 13, 2019



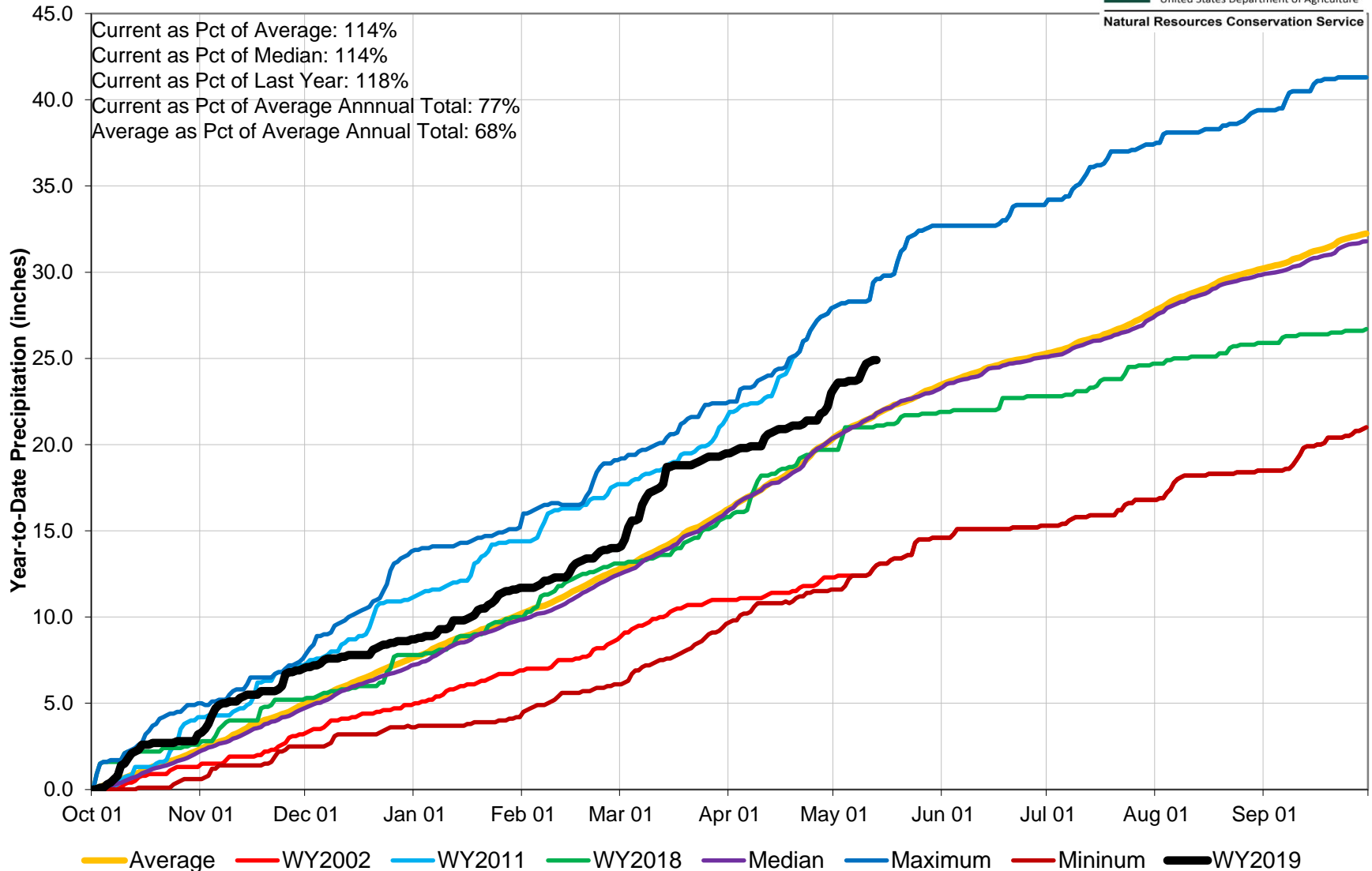
0 10 20 40 60 80 Miles





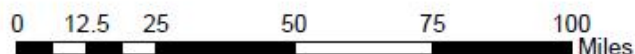
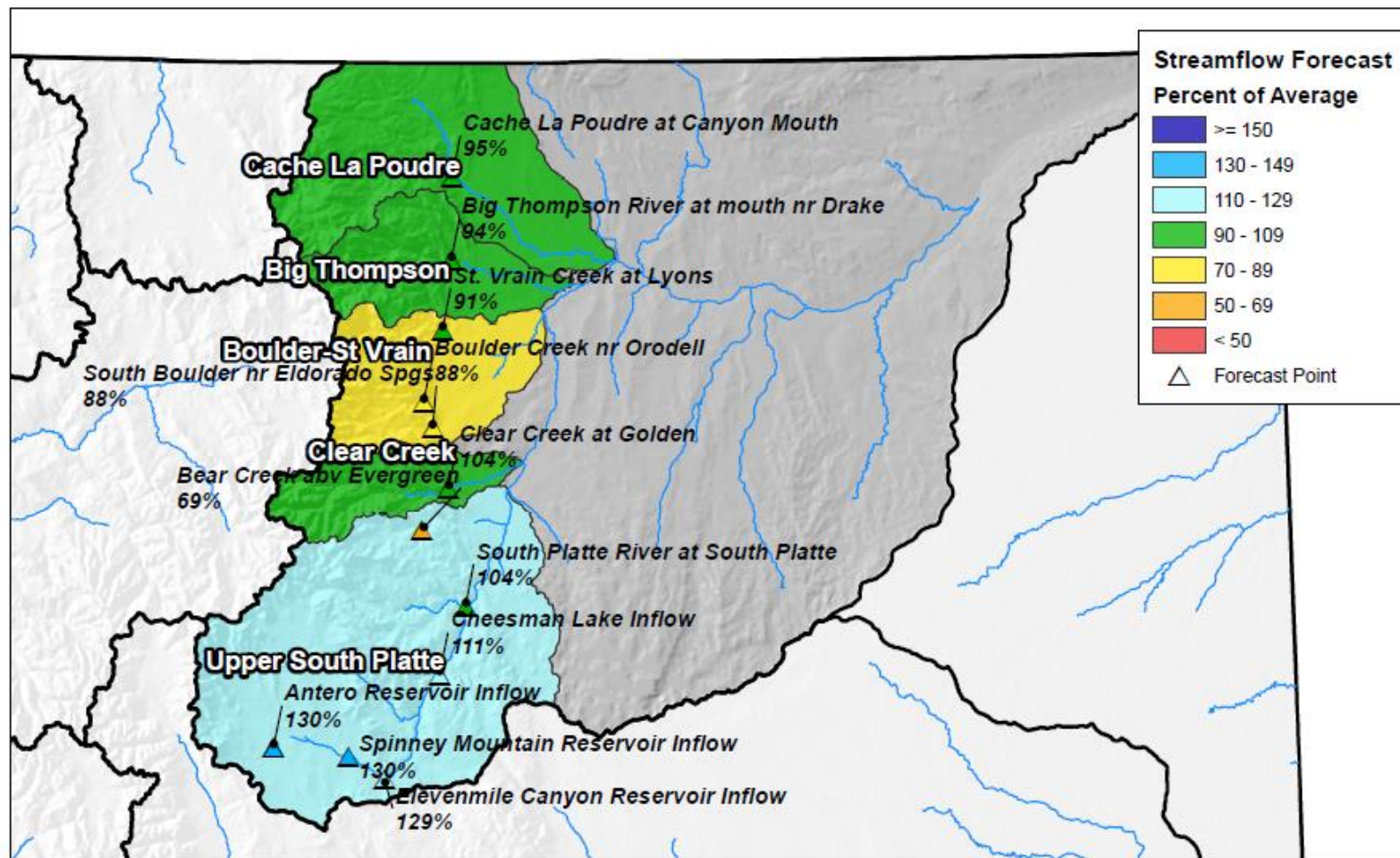
## South Platte River Basin High/Low Year-to-Date Precipitation Summary

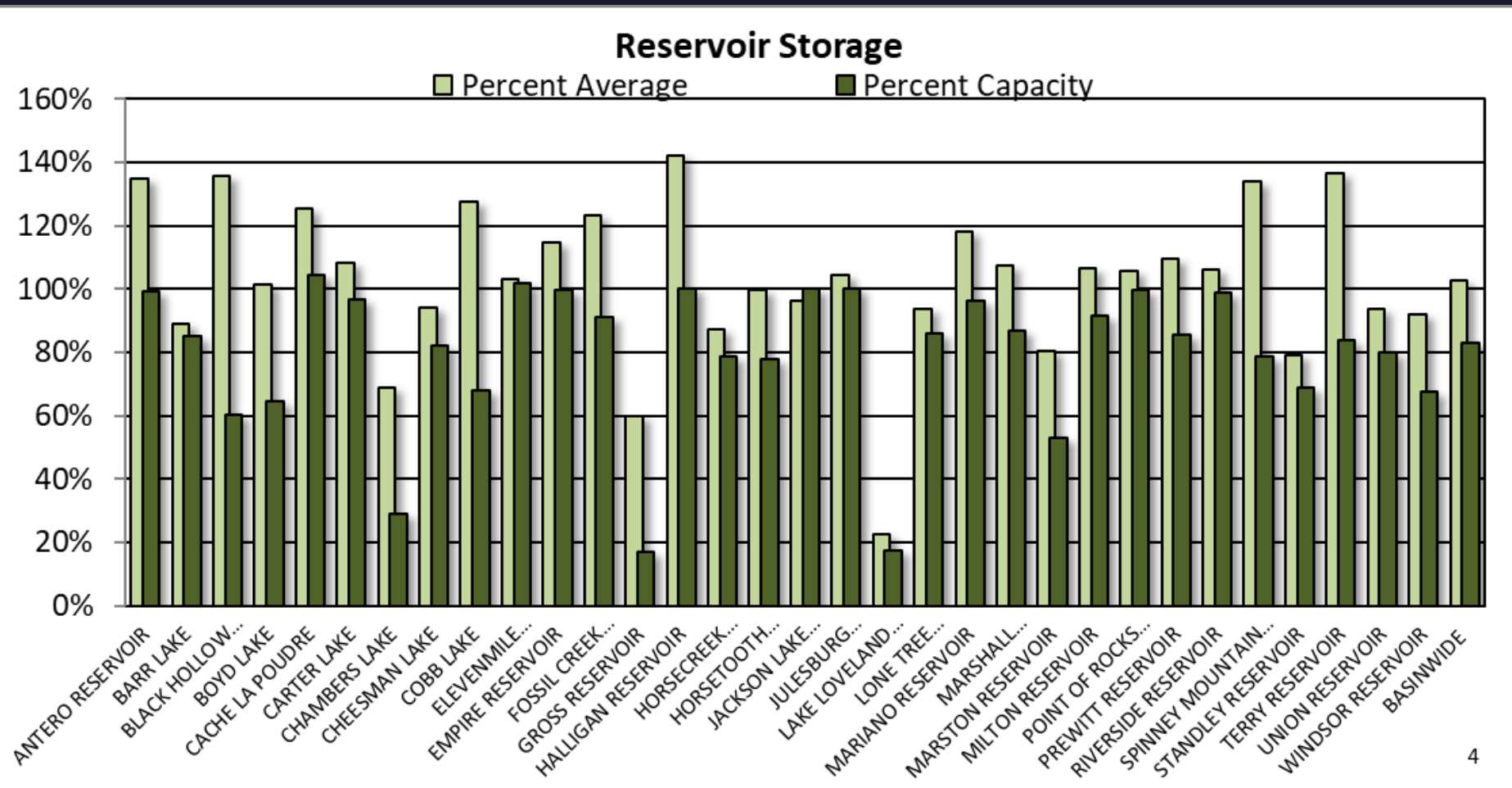
*Based on Provisional SNOTEL data as of May 13, 2019*



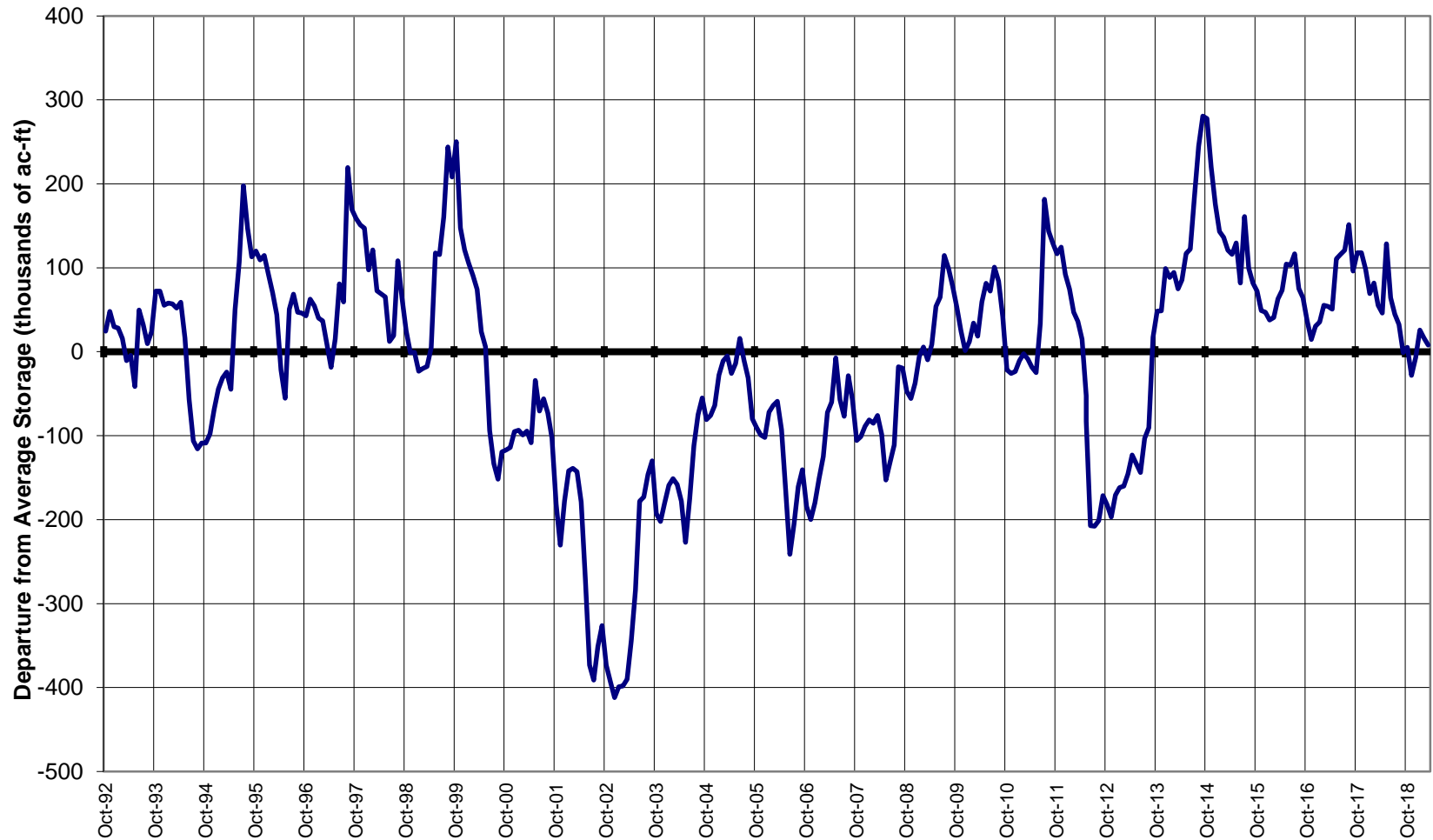
## South Platte River Basin Streamflow Forecast Summary

May 1, 2019





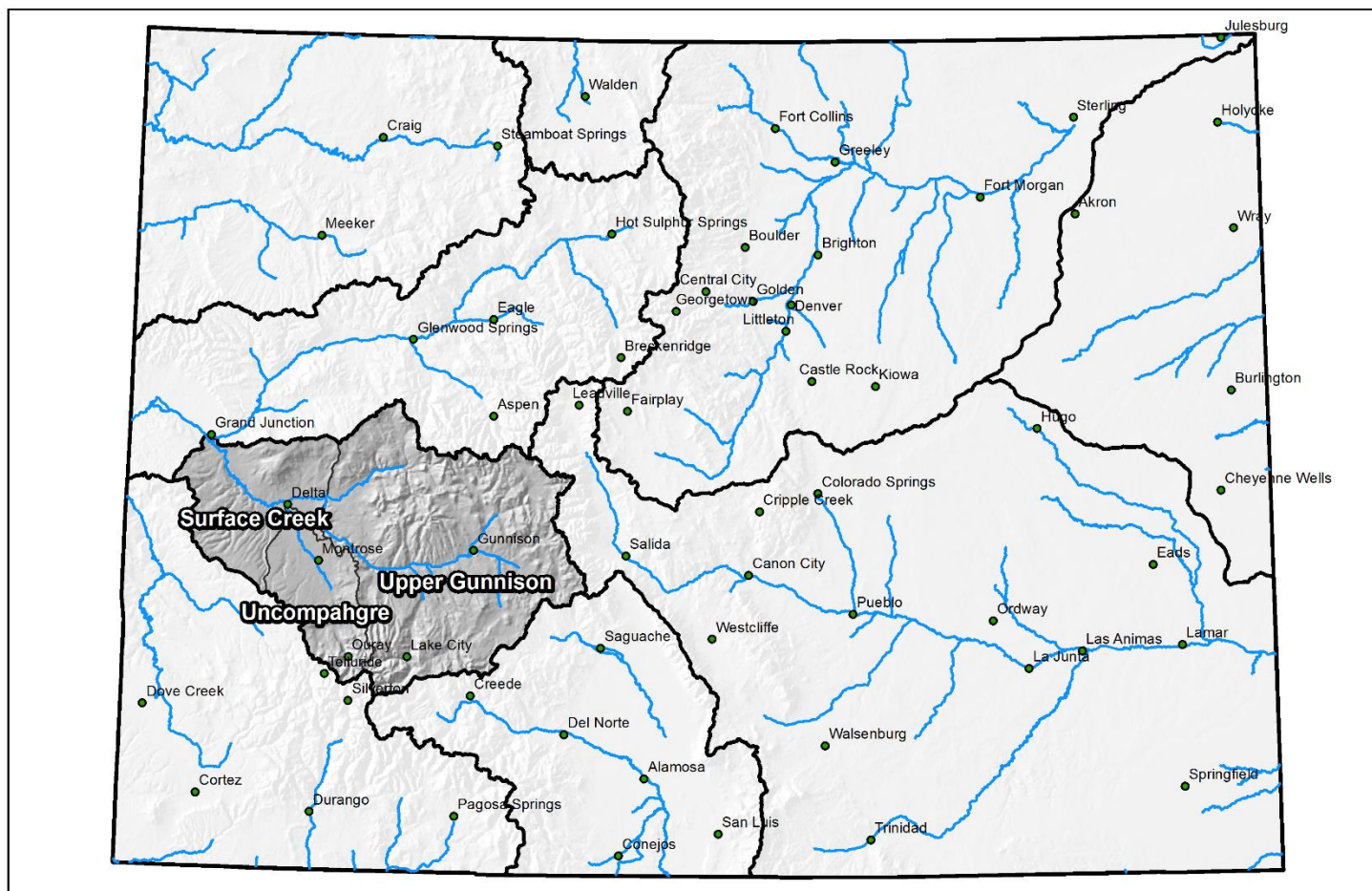
## SOUTH PLATTE RIVER BASIN Reservoir Storage Departure from Average





## Major Basin Summary

Gunnison River Basin



0 25 50 100 150 200 Miles



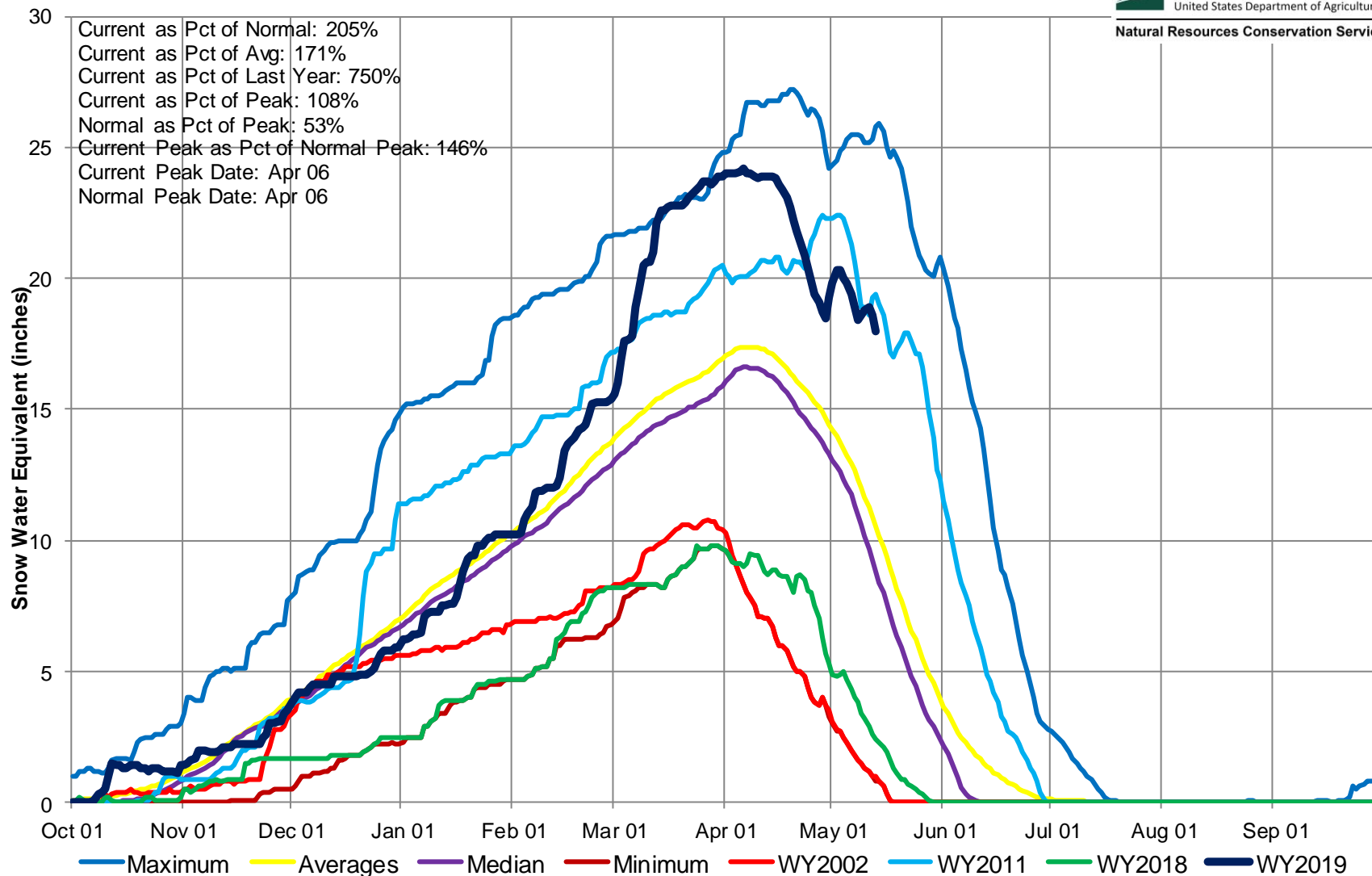
## Gunnison River Basin High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of May 13, 2019*



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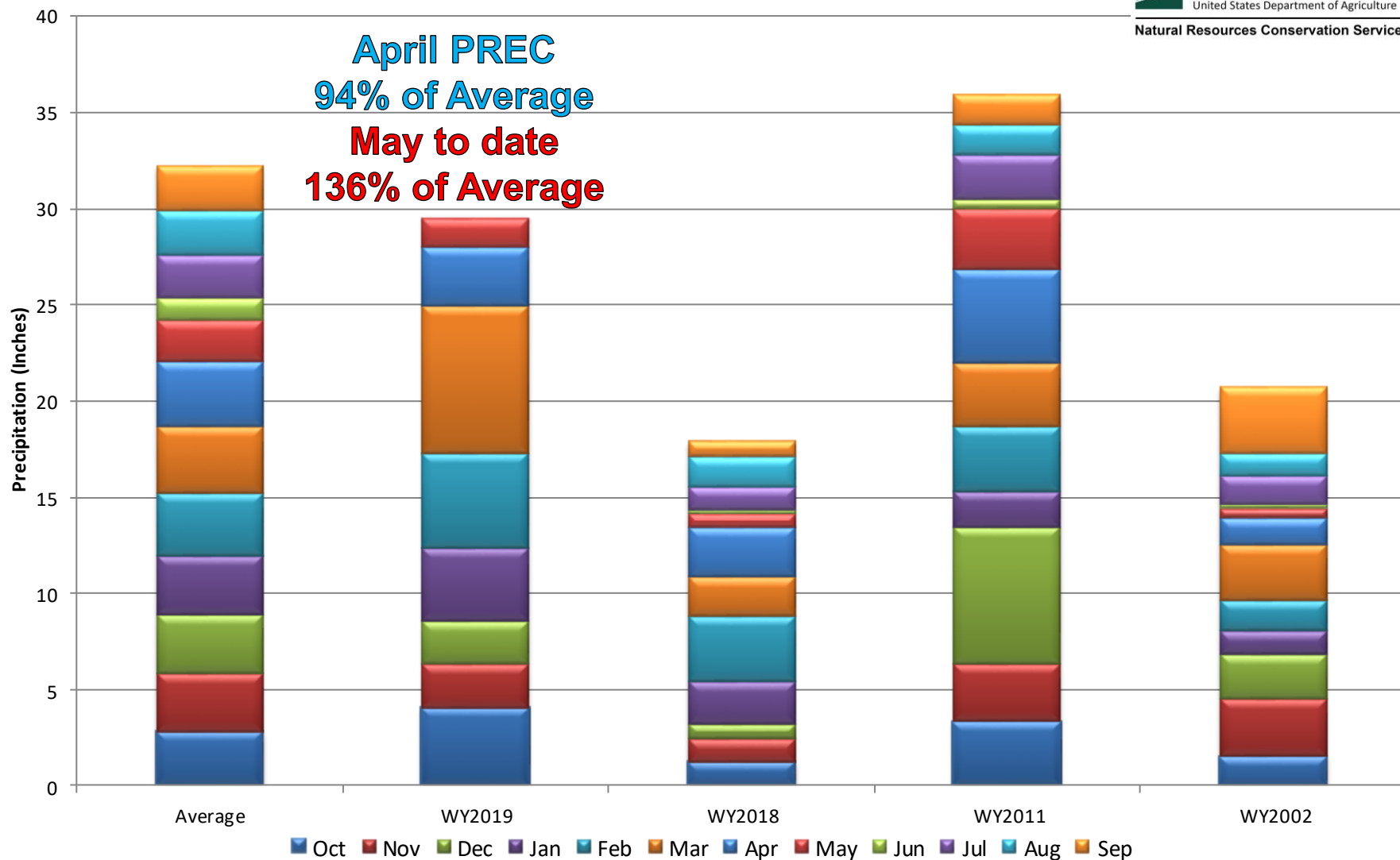
## Gunnison River Basin High/Low Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of May 13, 2019*



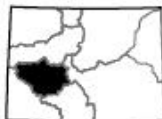
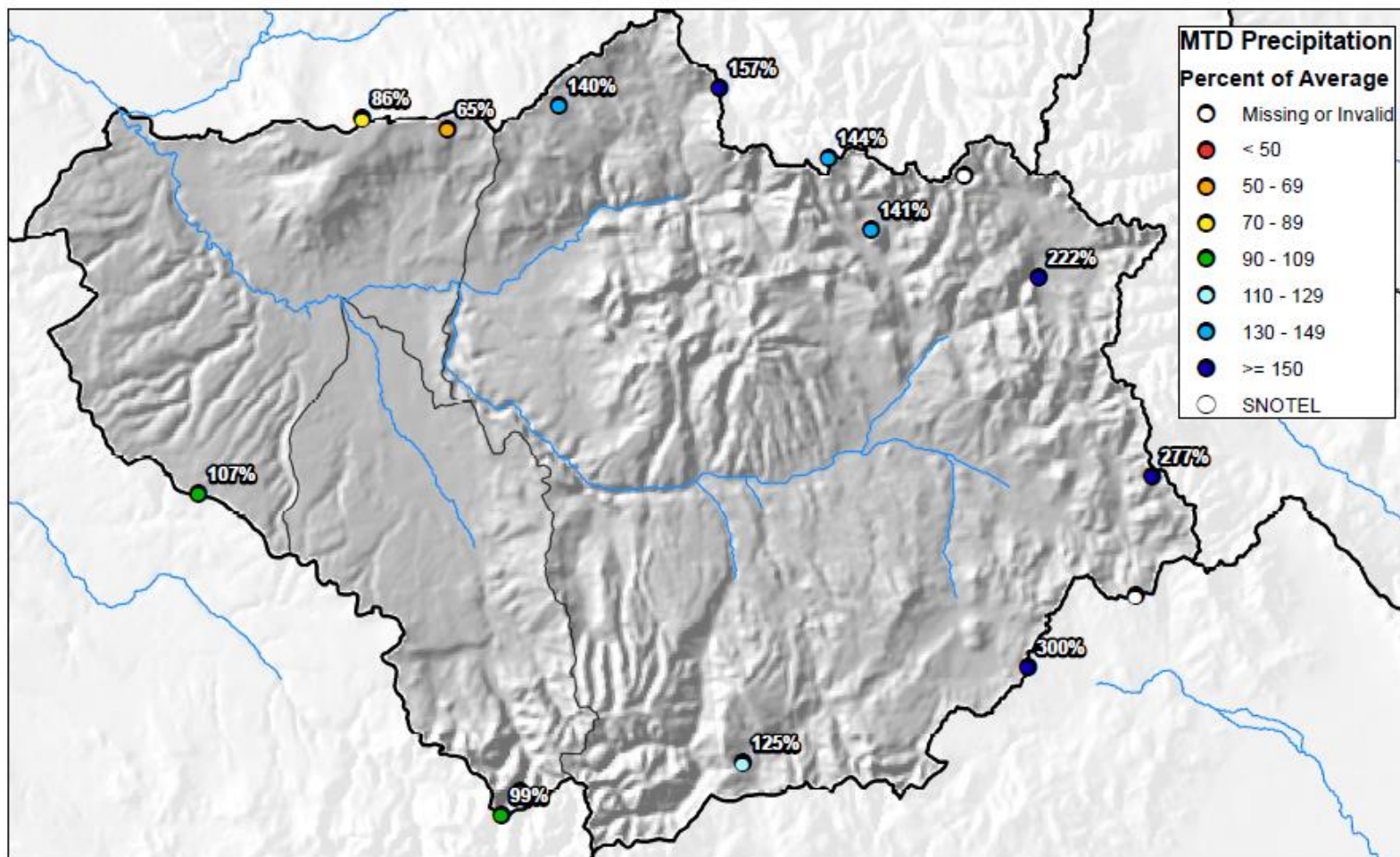
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## Gunnison River Basin Month to Date Precipitation Summary

Current as of May 13, 2019



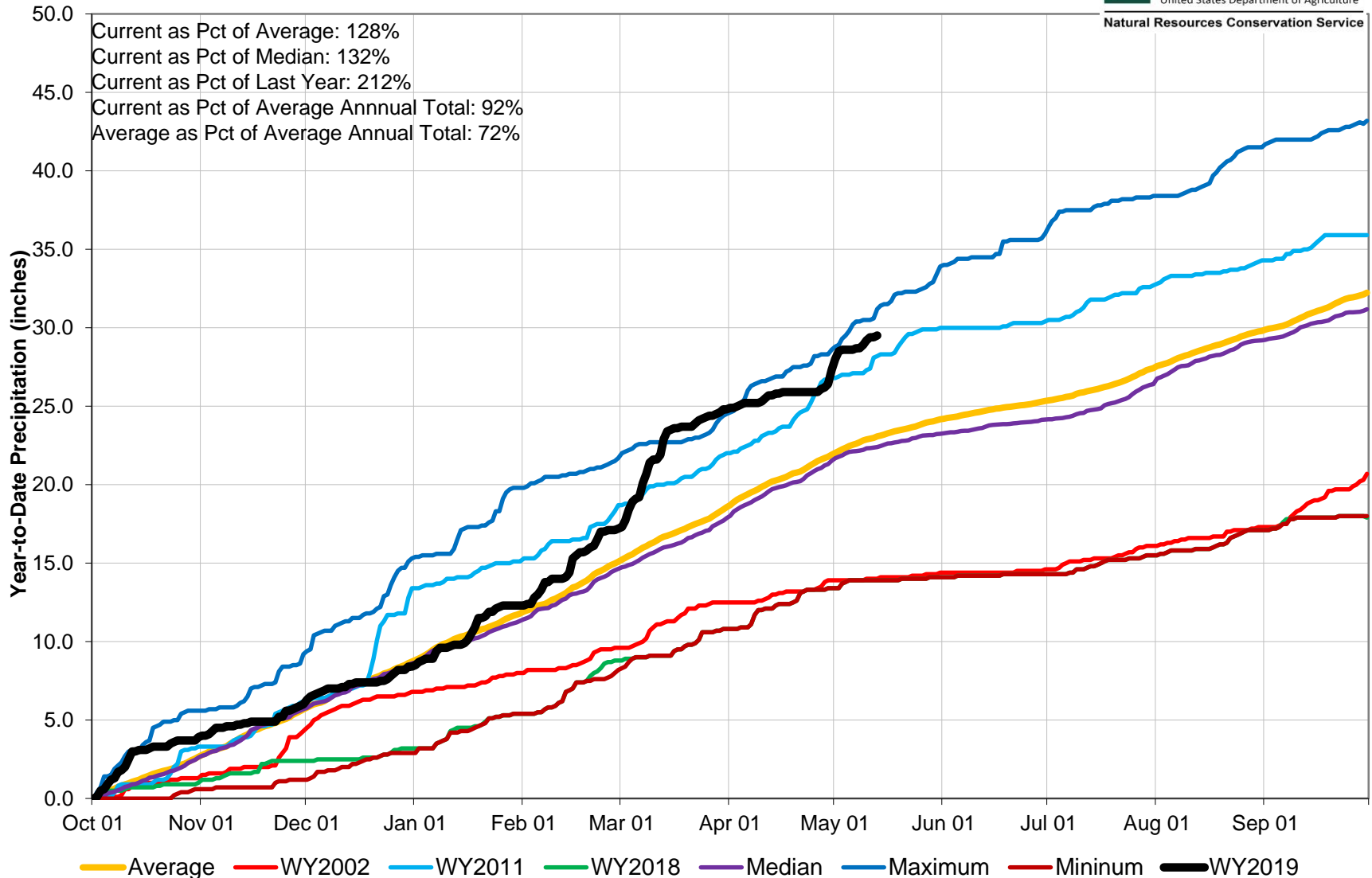
0 5 10 20 30 40 Miles





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

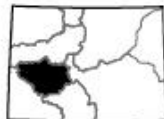
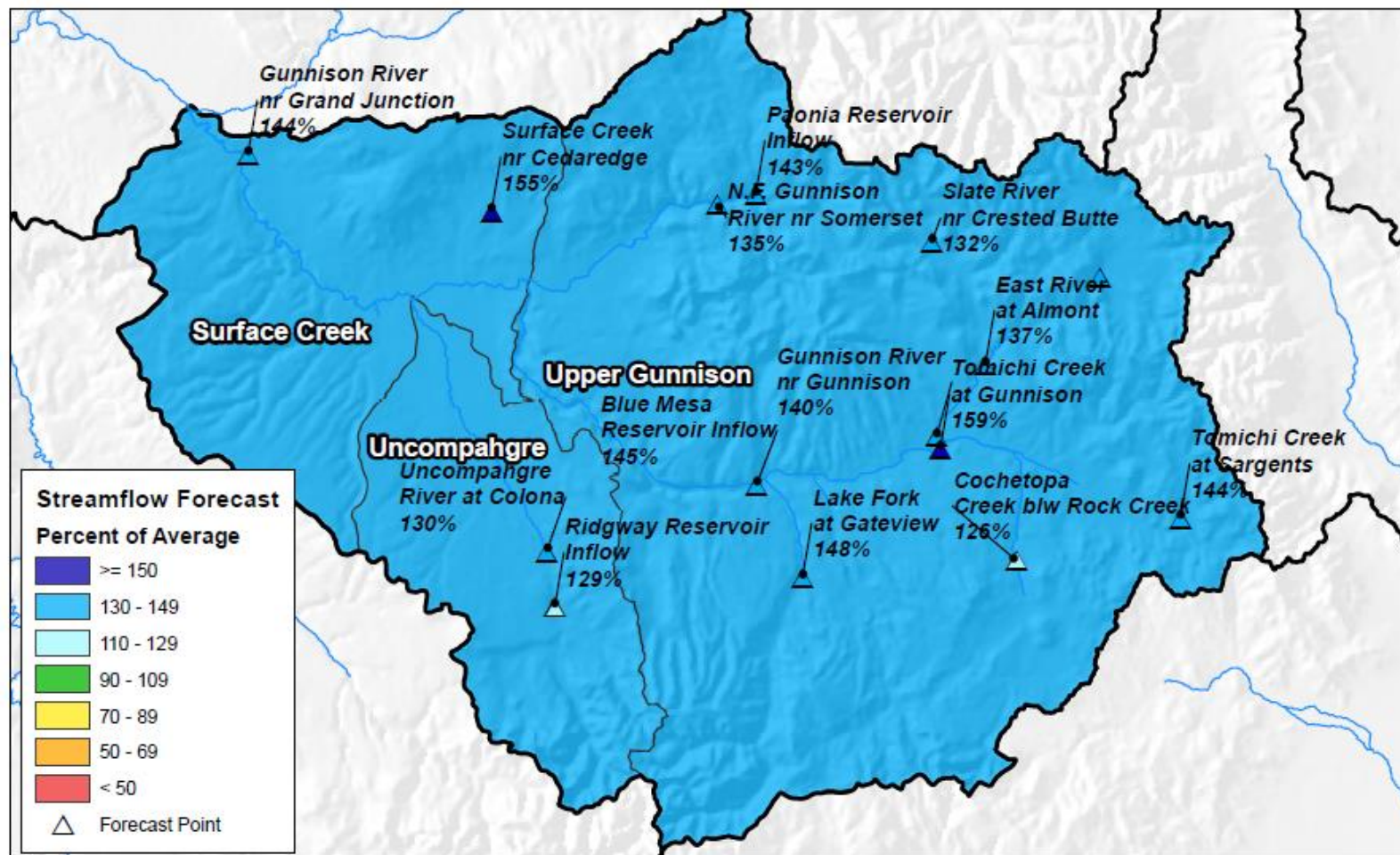
*Based on Provisional SNOTEL data as of May 13, 2019*





## Gunnison River Basin Water Supply Forecast Summary

May 1, 2019

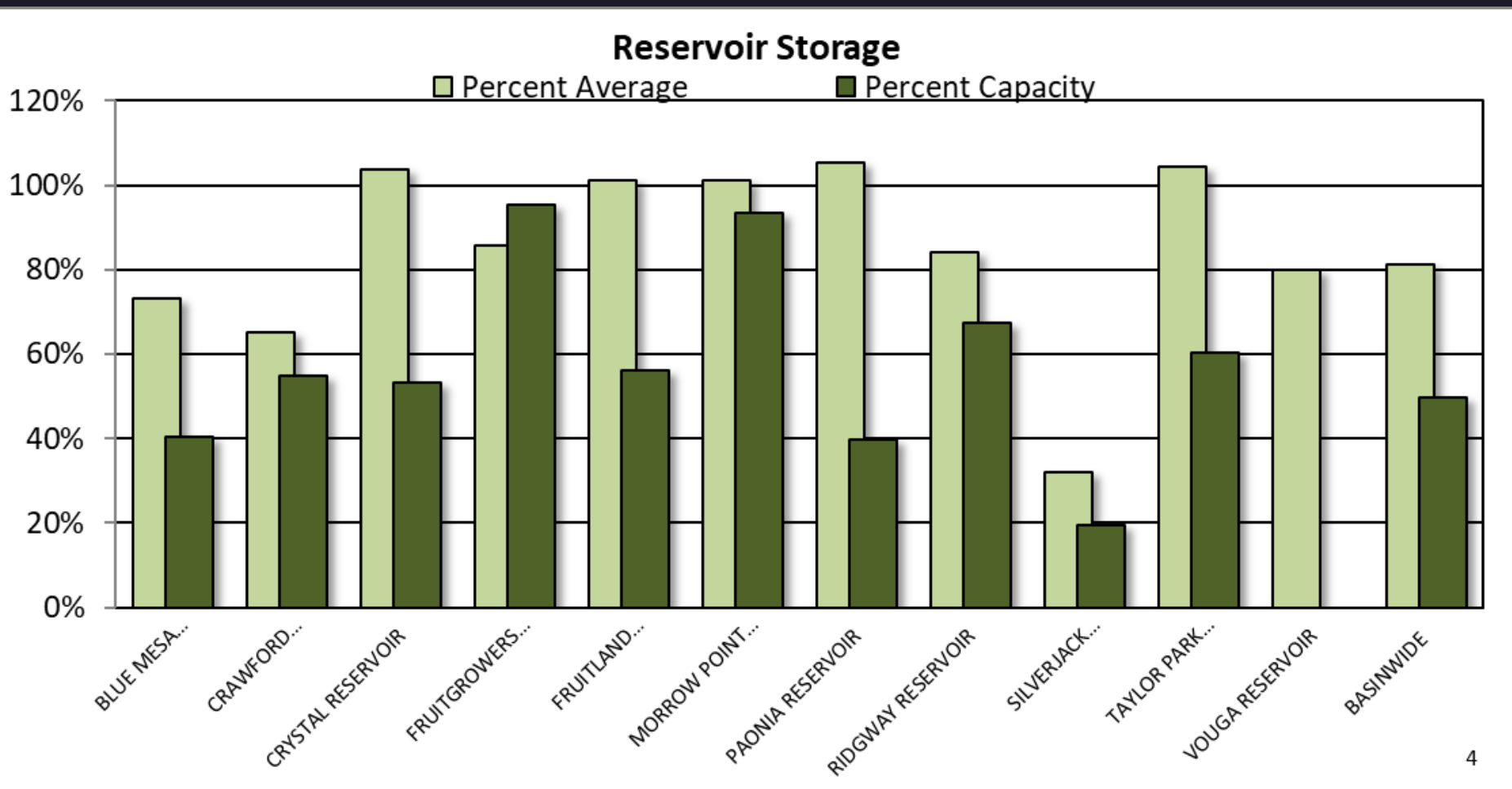


0 5 10 20 30 40 Miles



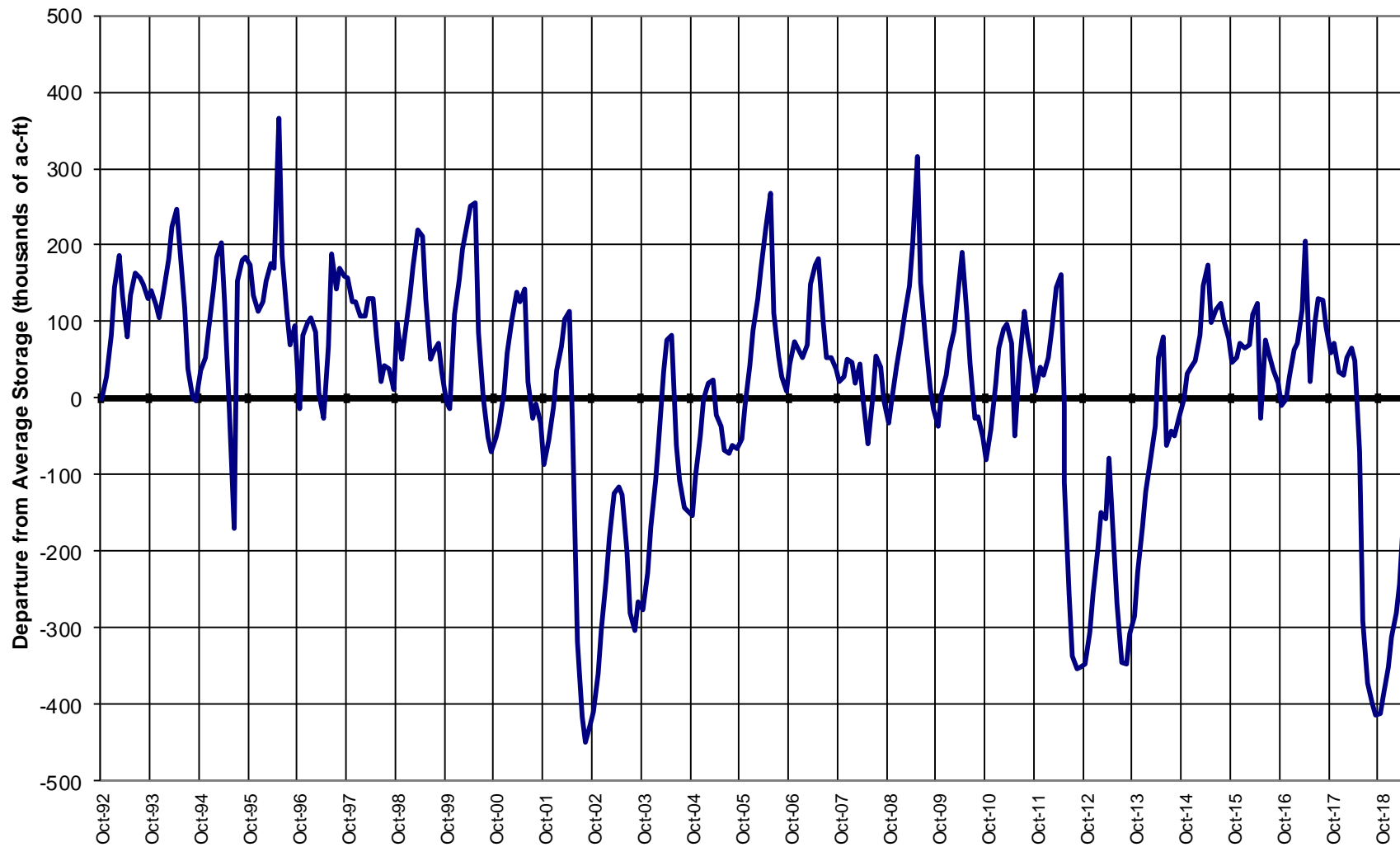
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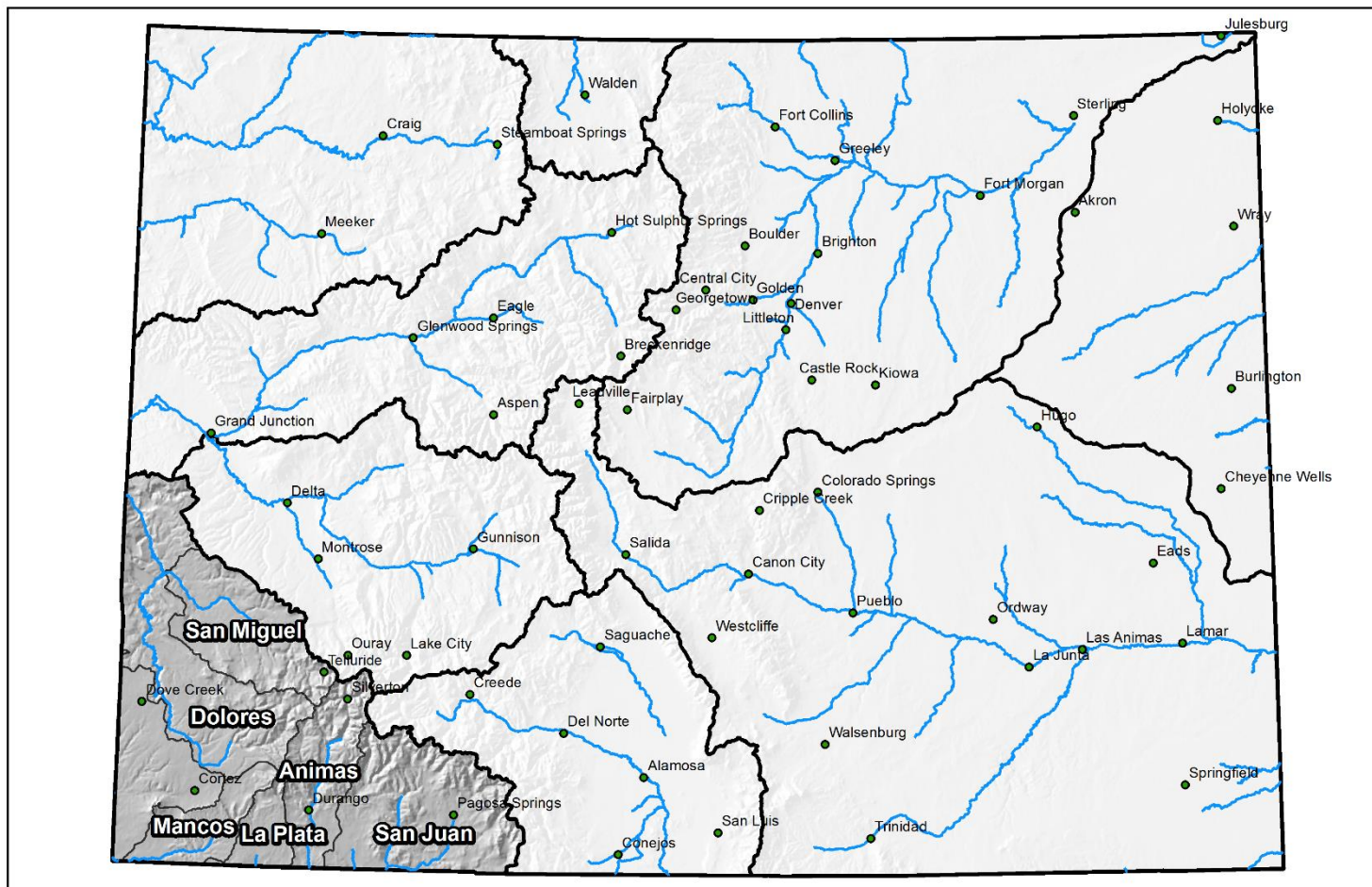


## GUNNISON RIVER BASIN Reservoir Storage Departure from Average



## Major Basin Summary

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



0 25 50 100 150 200 Miles



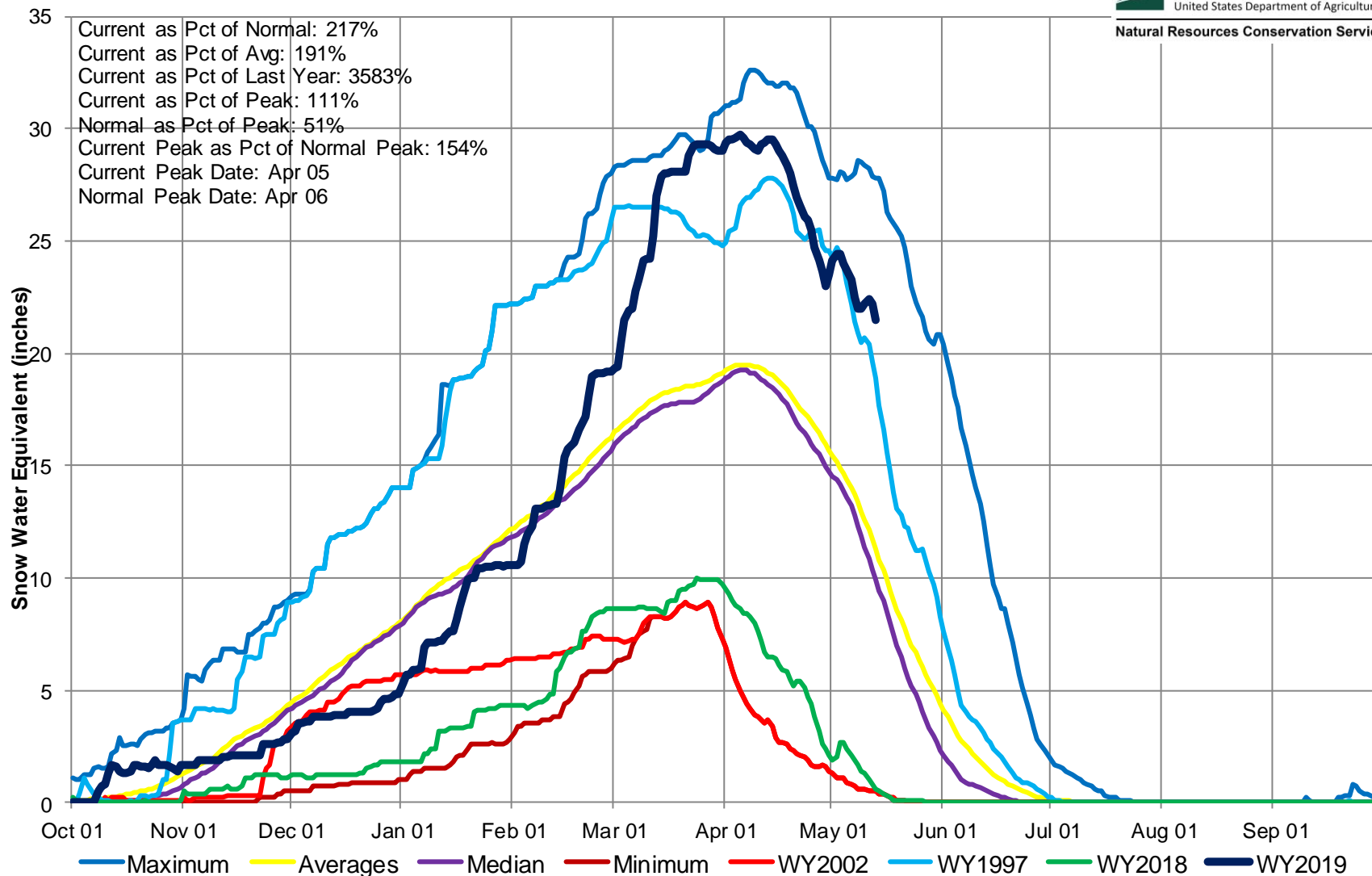
## San Miguel, Dolores, Animas and San Juan River Basins High/Low Snowpack Summary

**Based on Provisional SNOTEL data as of May 13, 2019**



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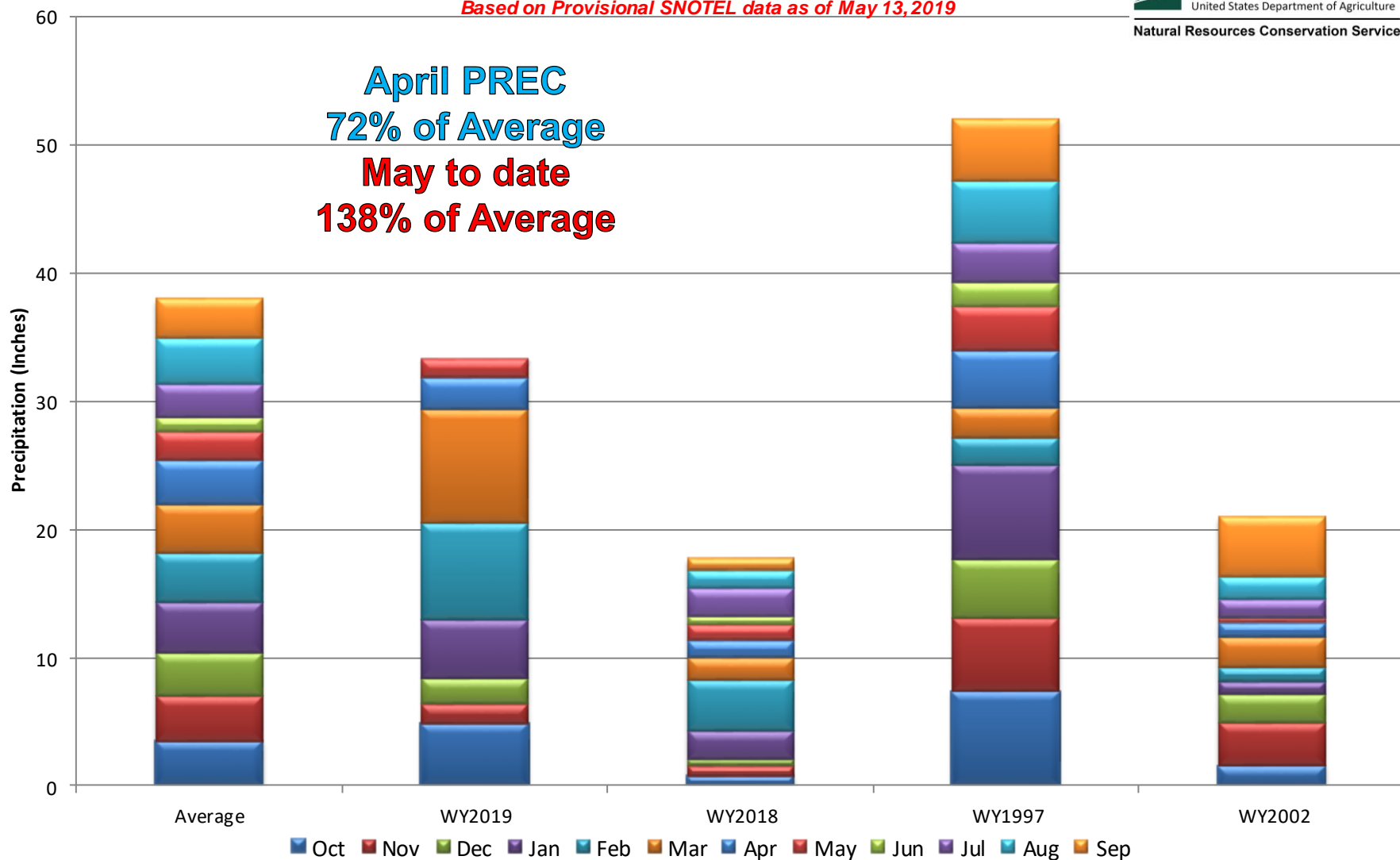
## San Miguel, Dolores, Animas and San Juan River Basins High/Low Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of May 13, 2019*



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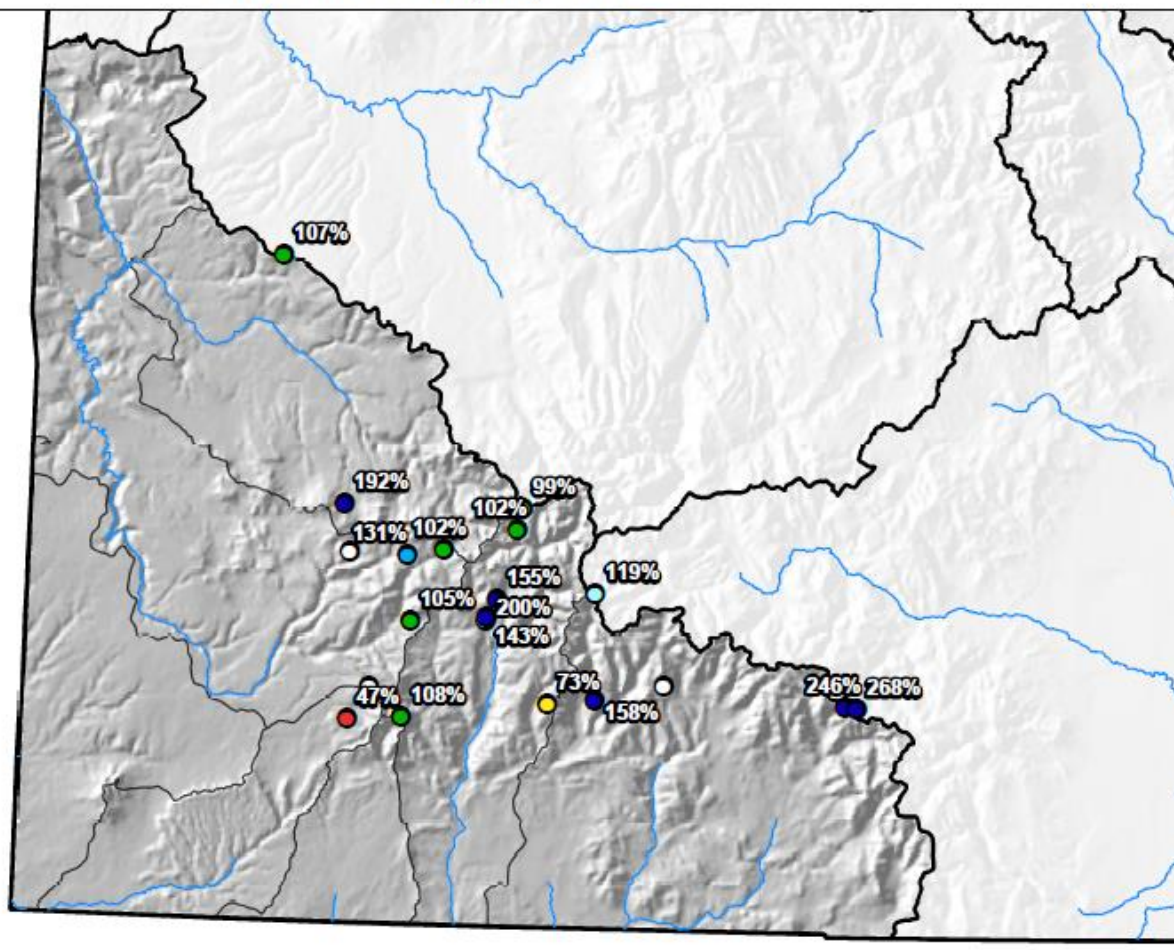


## San Miguel, Dolores, Animas, and San Juan River Basins Month to Date Precipitation Summary

Current as of May 13, 2019

### MTD Precipitation Percent of Average

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

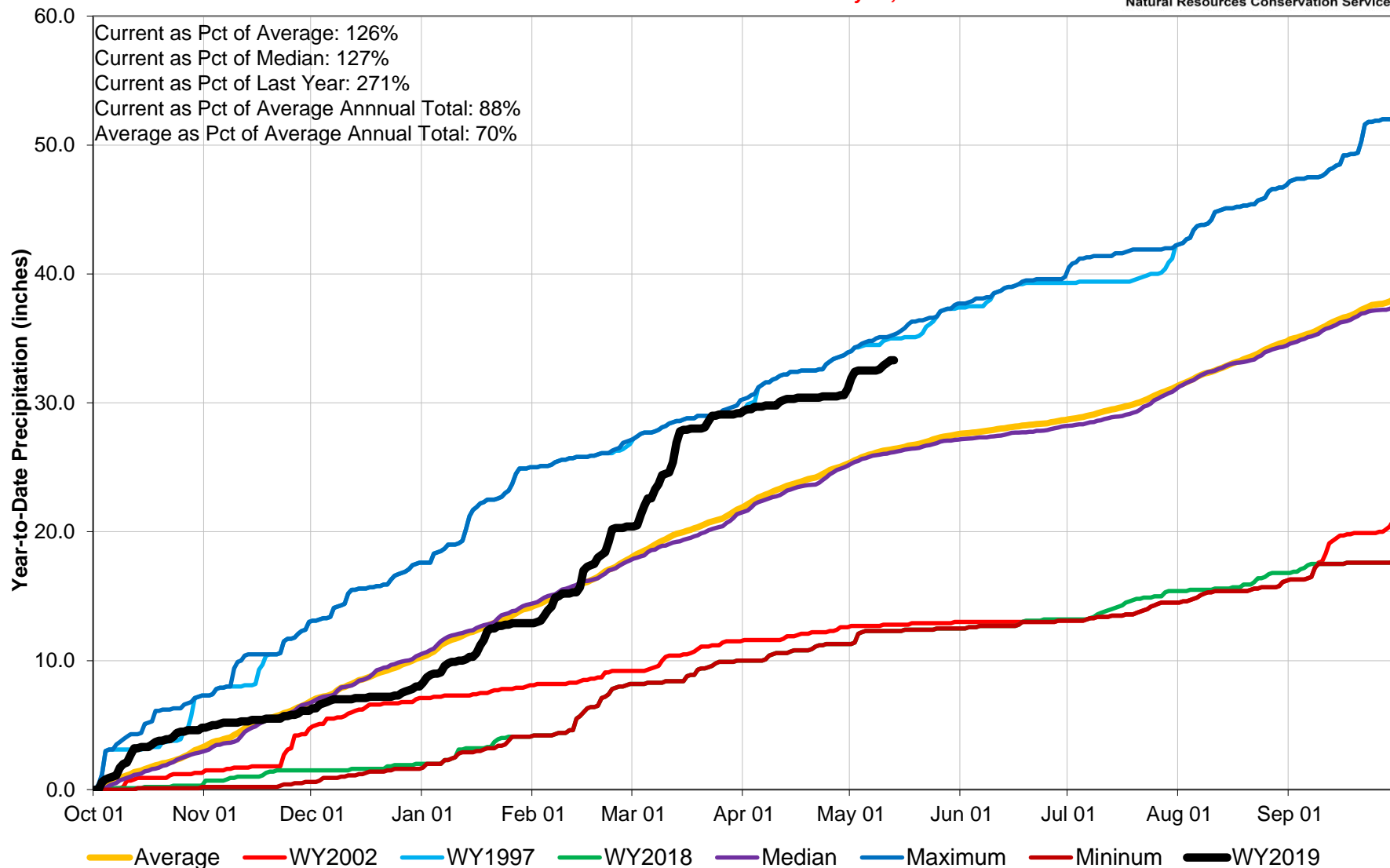


0 10 20 40 60 80 Miles



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

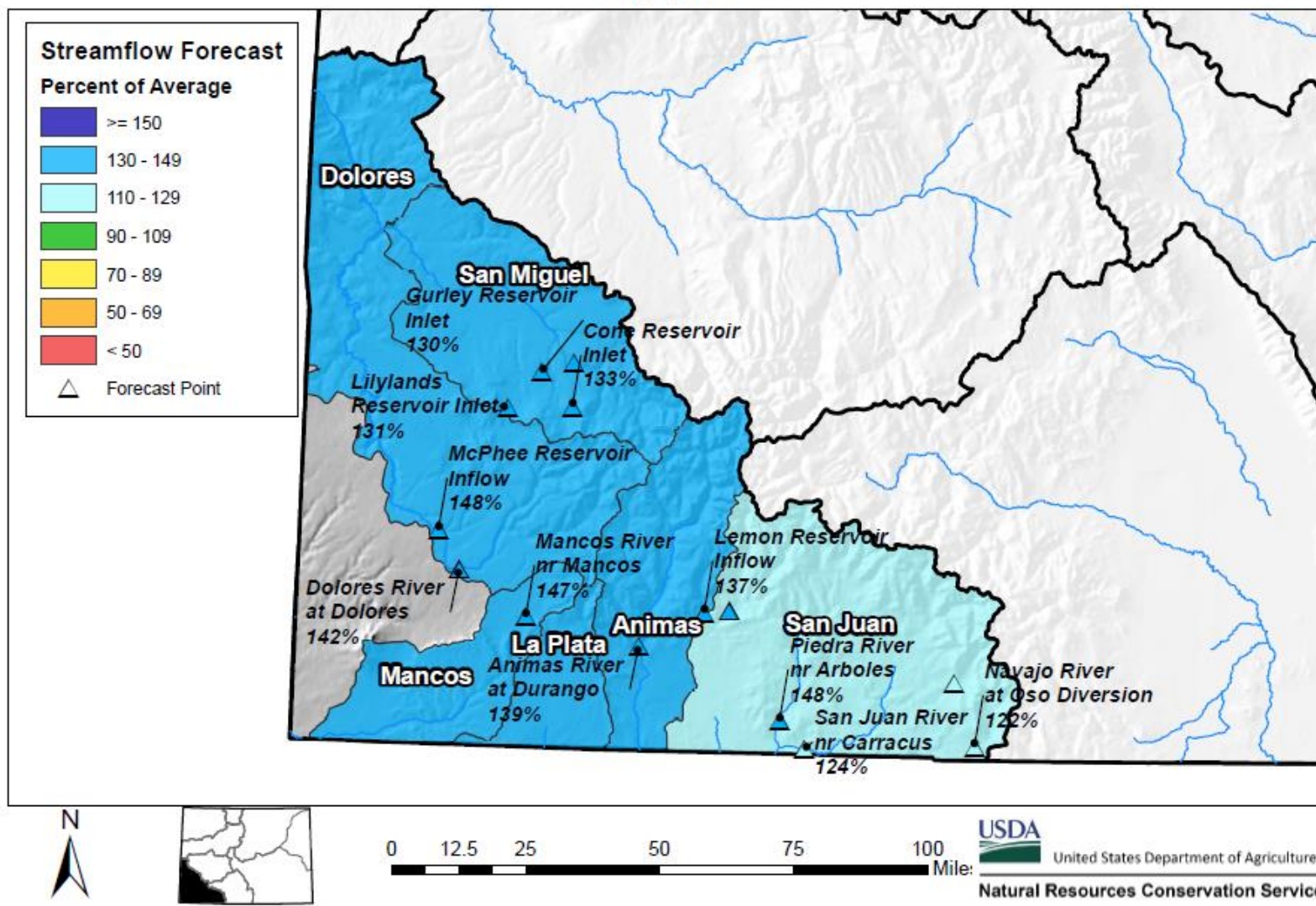
*Based on Provisional SNOTEL data as of May 13, 2019*

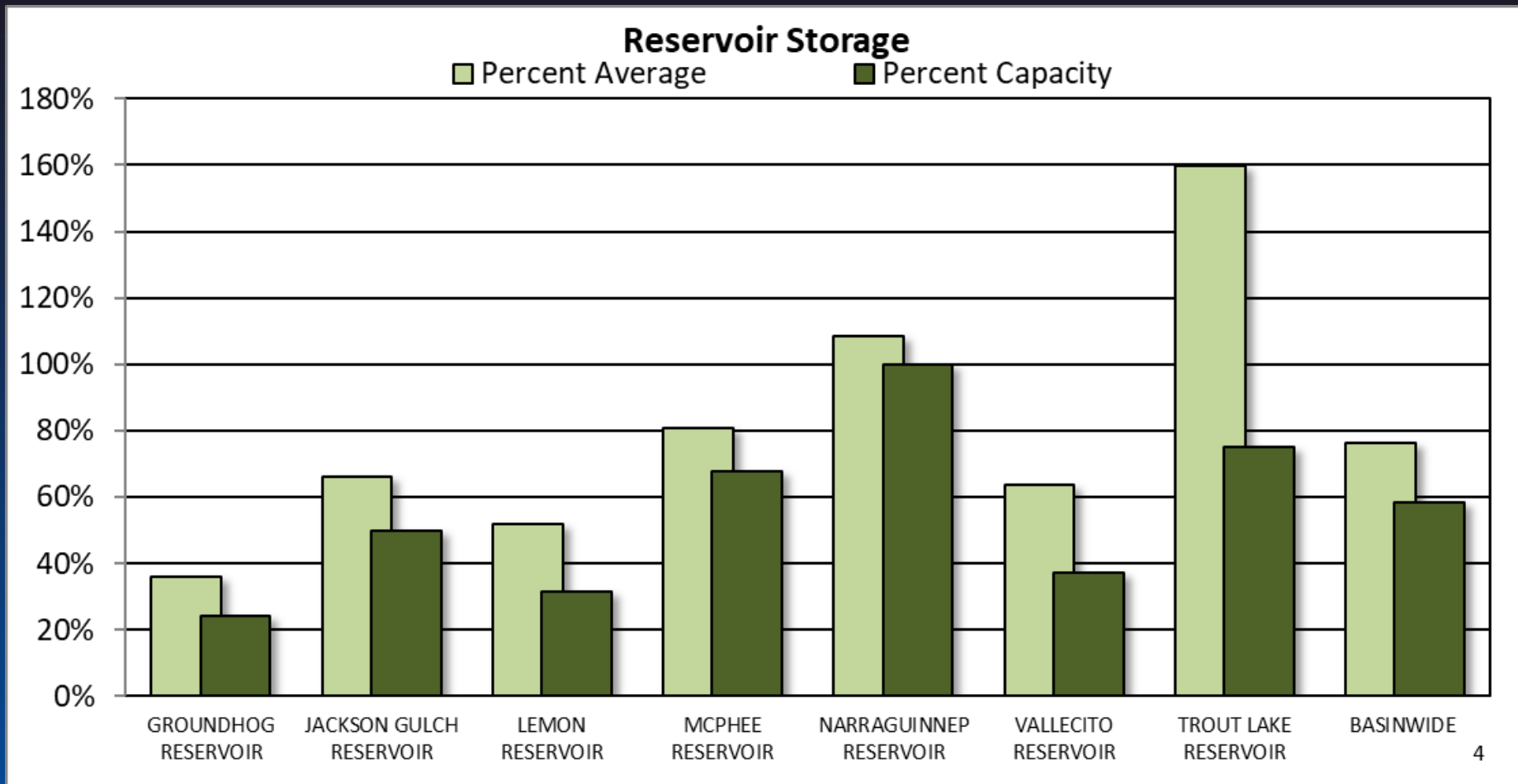




## San Miguel, Dolores, Animas, and San Juan River Basins Streamflow Forecast Summary

May 1, 2019

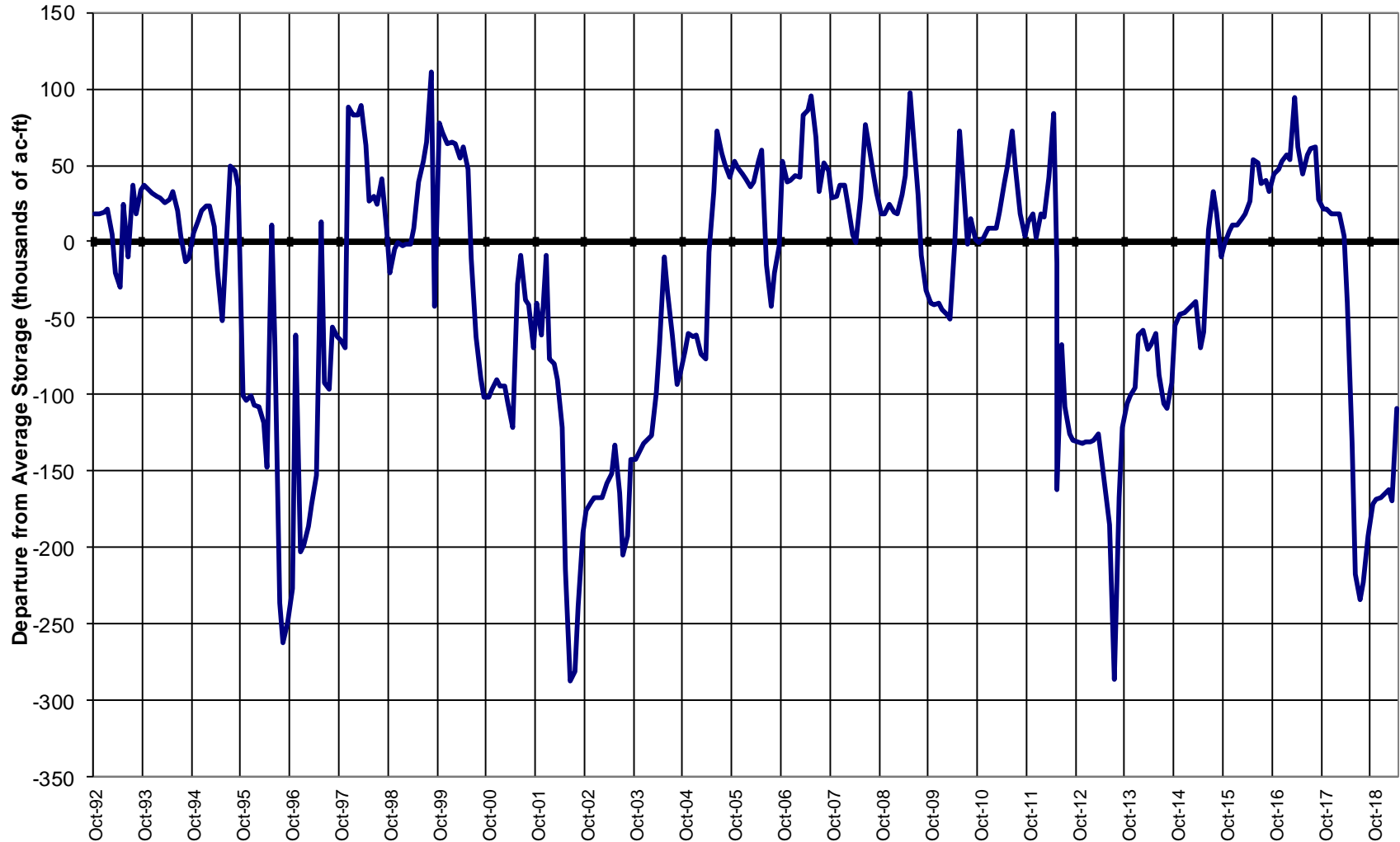






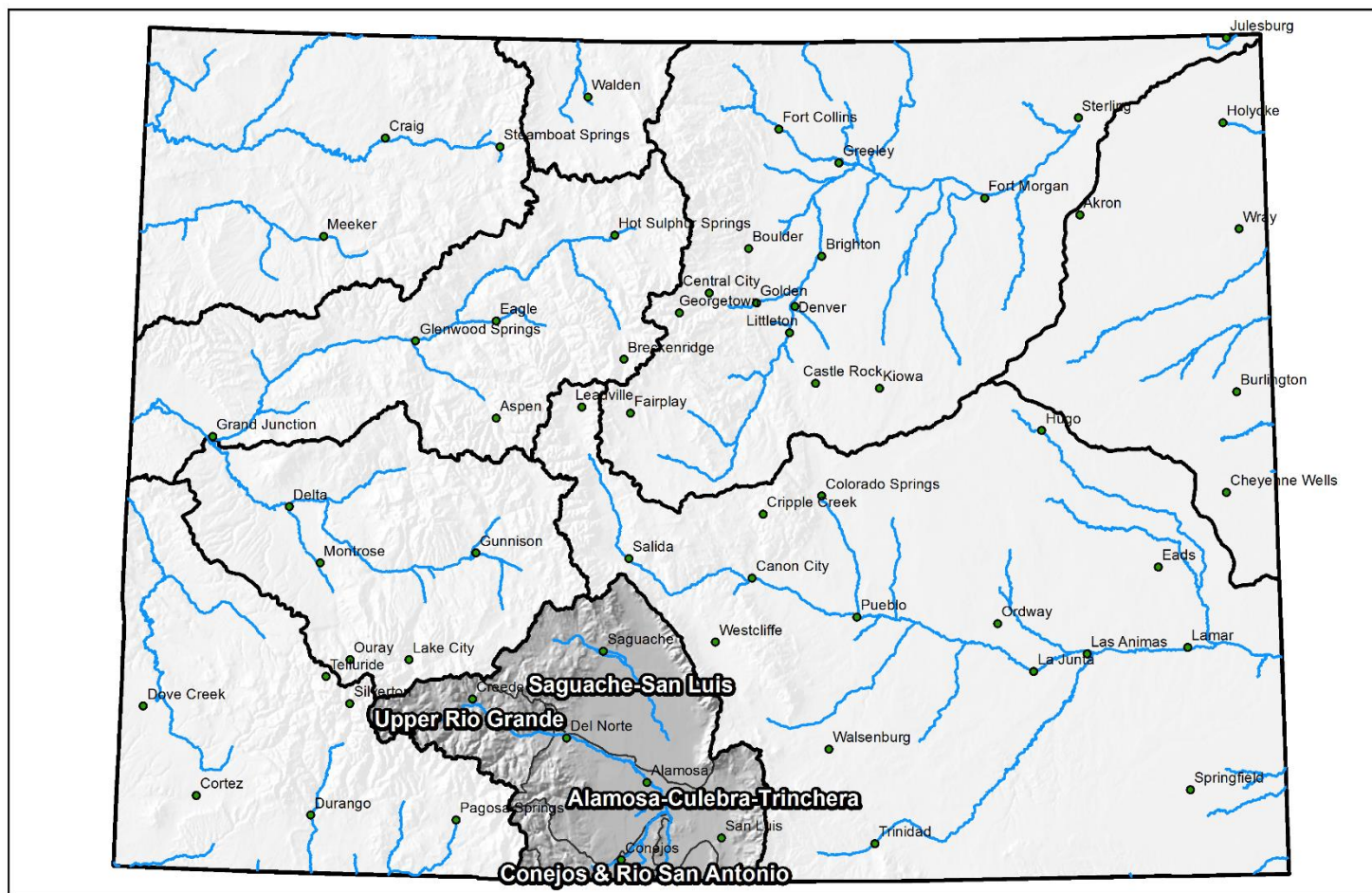
## SAN MIGUEL, DOLORES, ANIMAS AND SAN JUAN RIVER BASINS

Reservoir Storage  
Departure from Average



## Major Basin Summary

### Upper Rio Grande River Basin



0 25 50 100 150 200 Miles





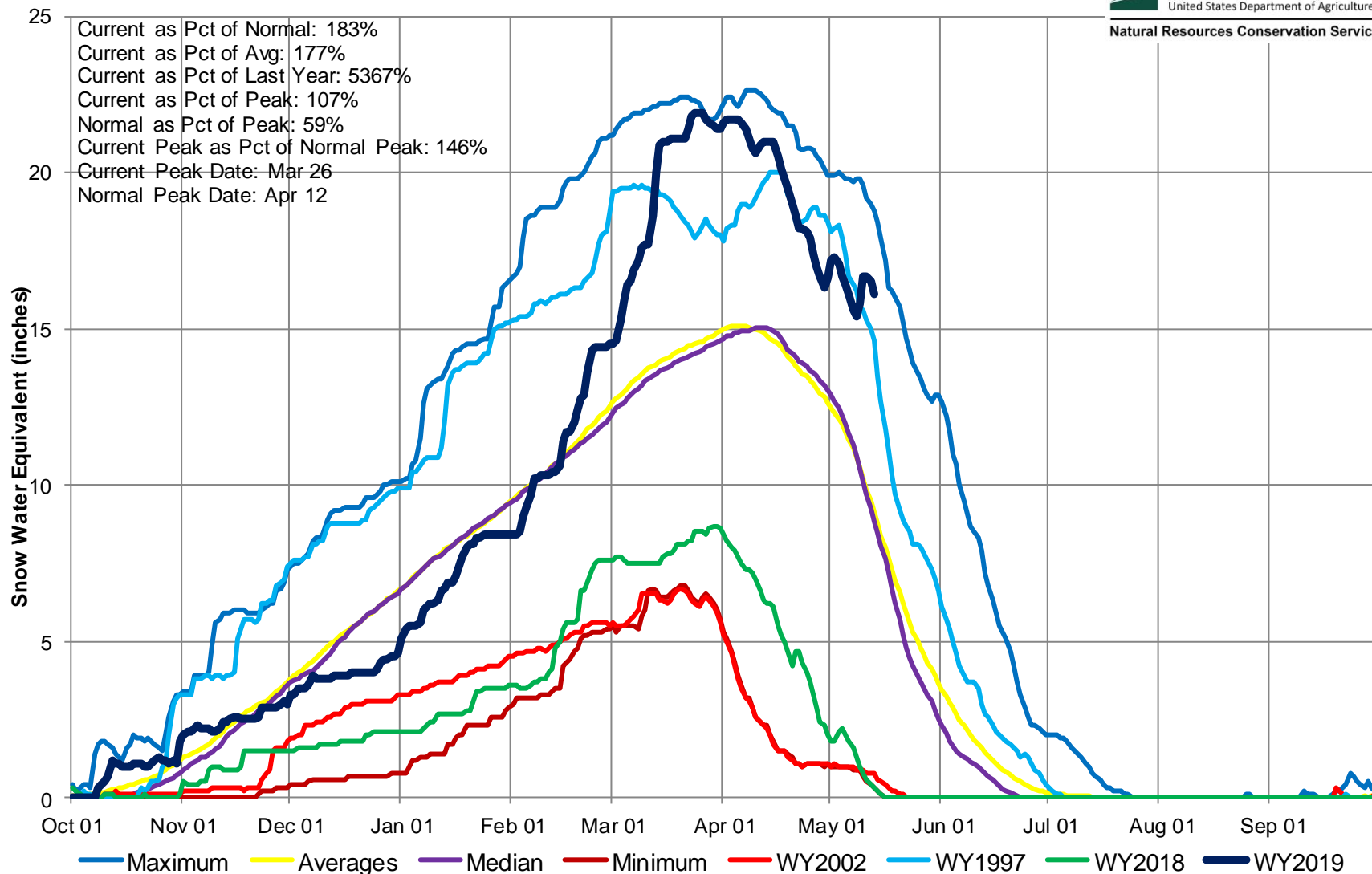
## Upper Rio Grande Basin High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of May 13, 2019*



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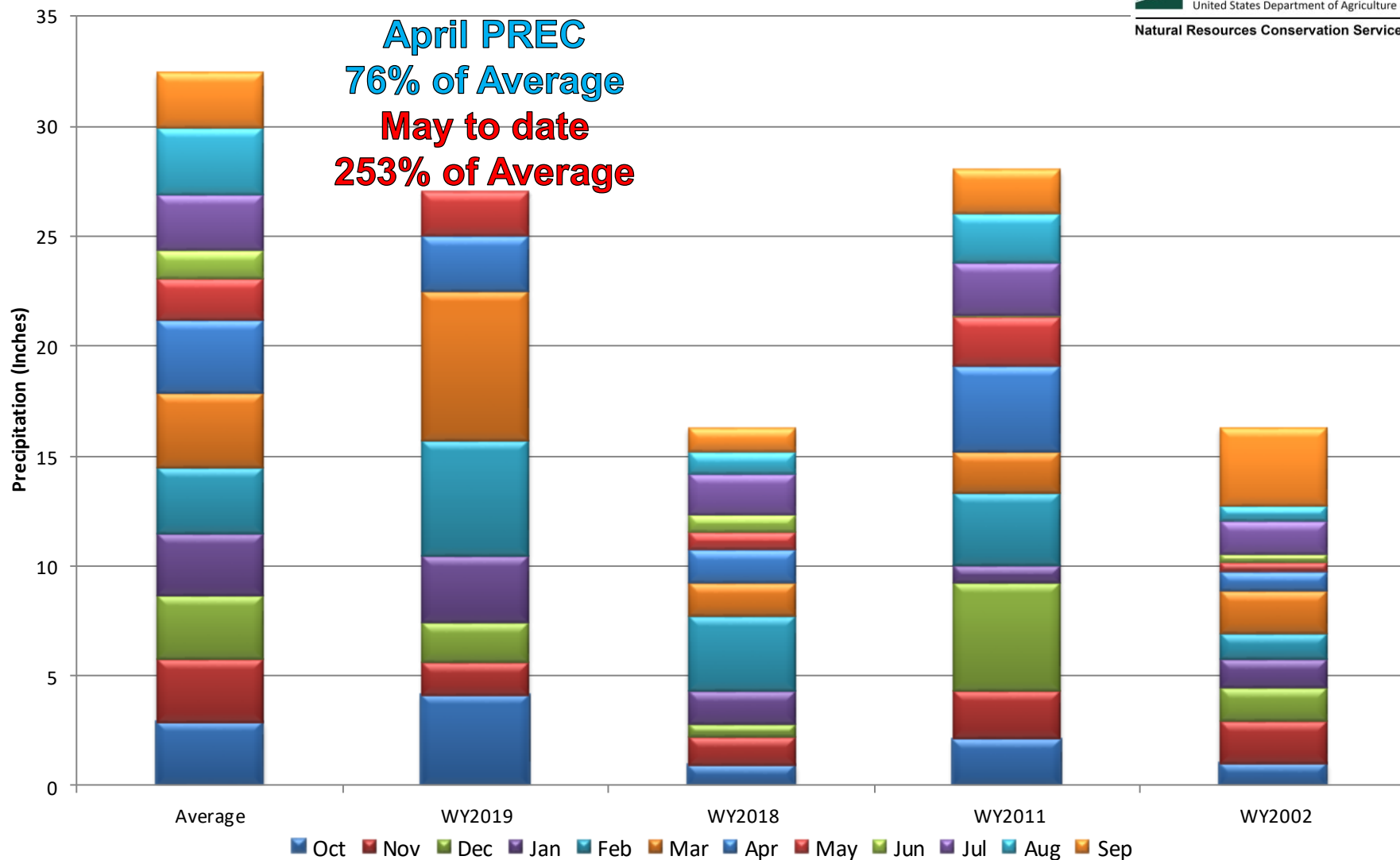
## Upper Rio Grande River Basin High/Low Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of May 13, 2019*



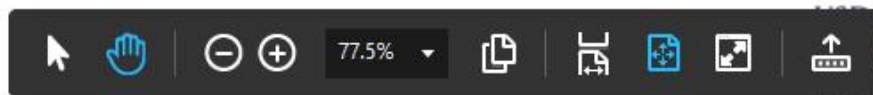
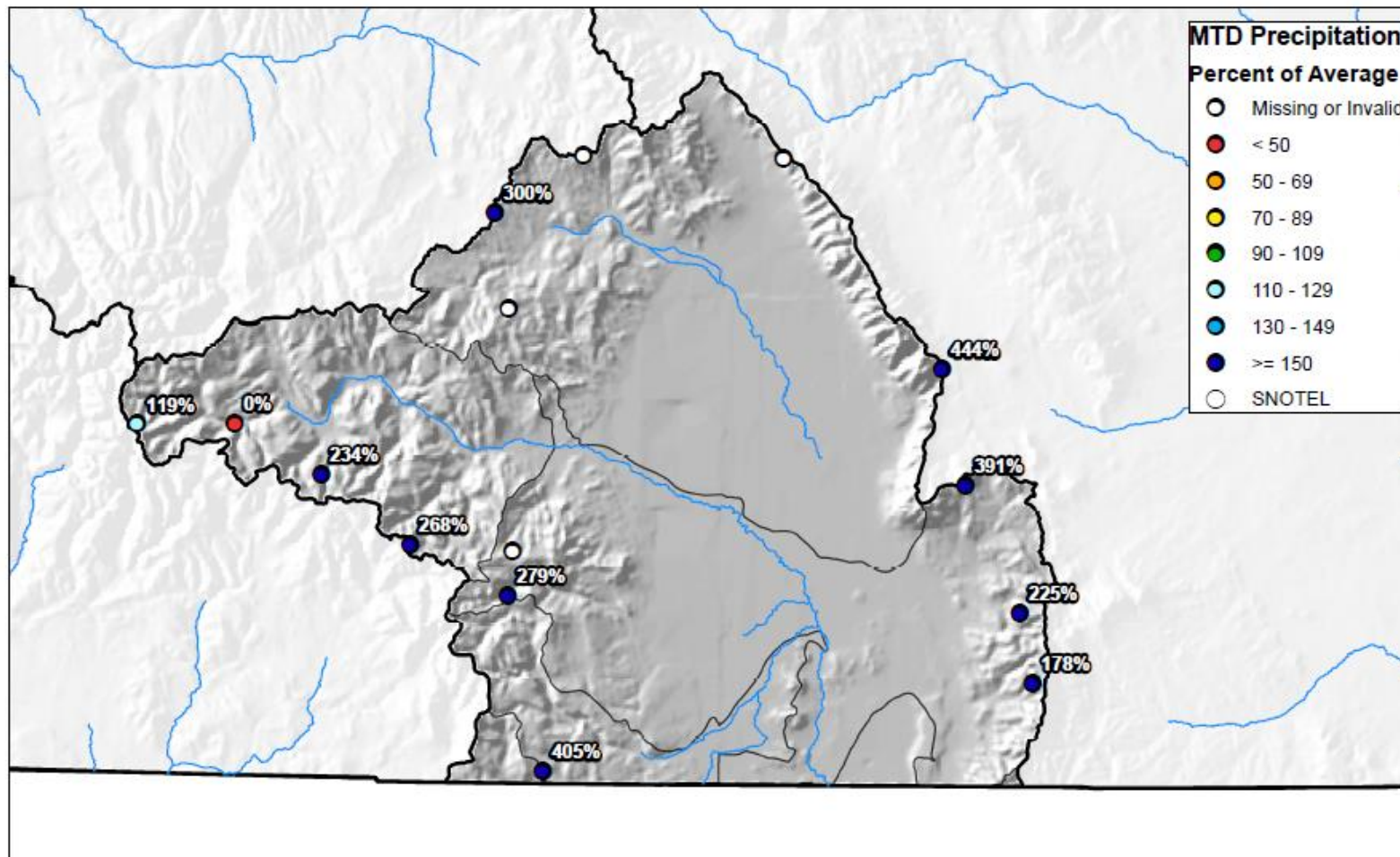
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## Upper Rio Grande River Basin Month to Date Precipitation Summary

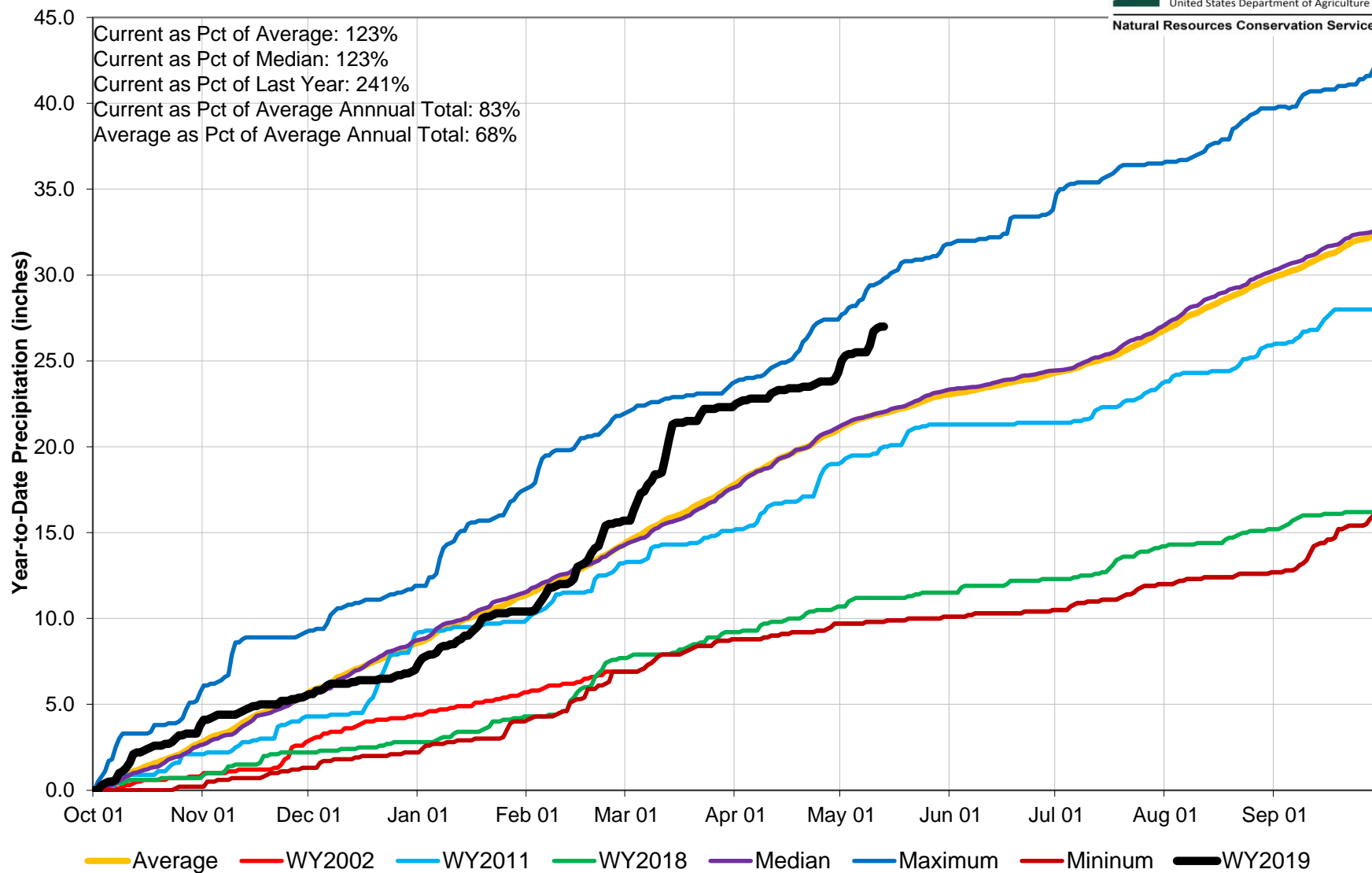
Current as of May 13, 2019





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

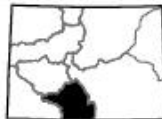
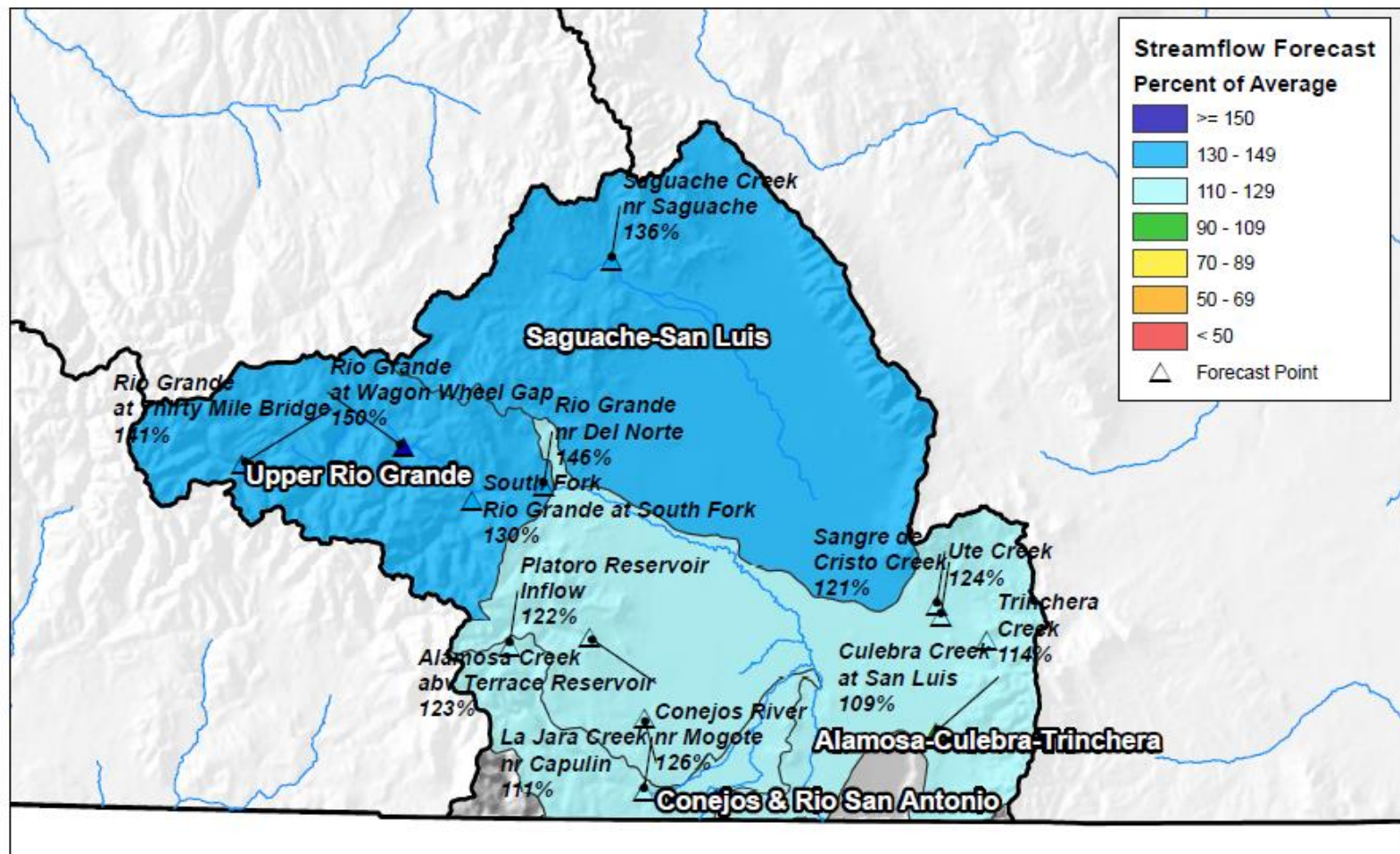
*Based on Provisional SNOTEL data as of May 13, 2019*



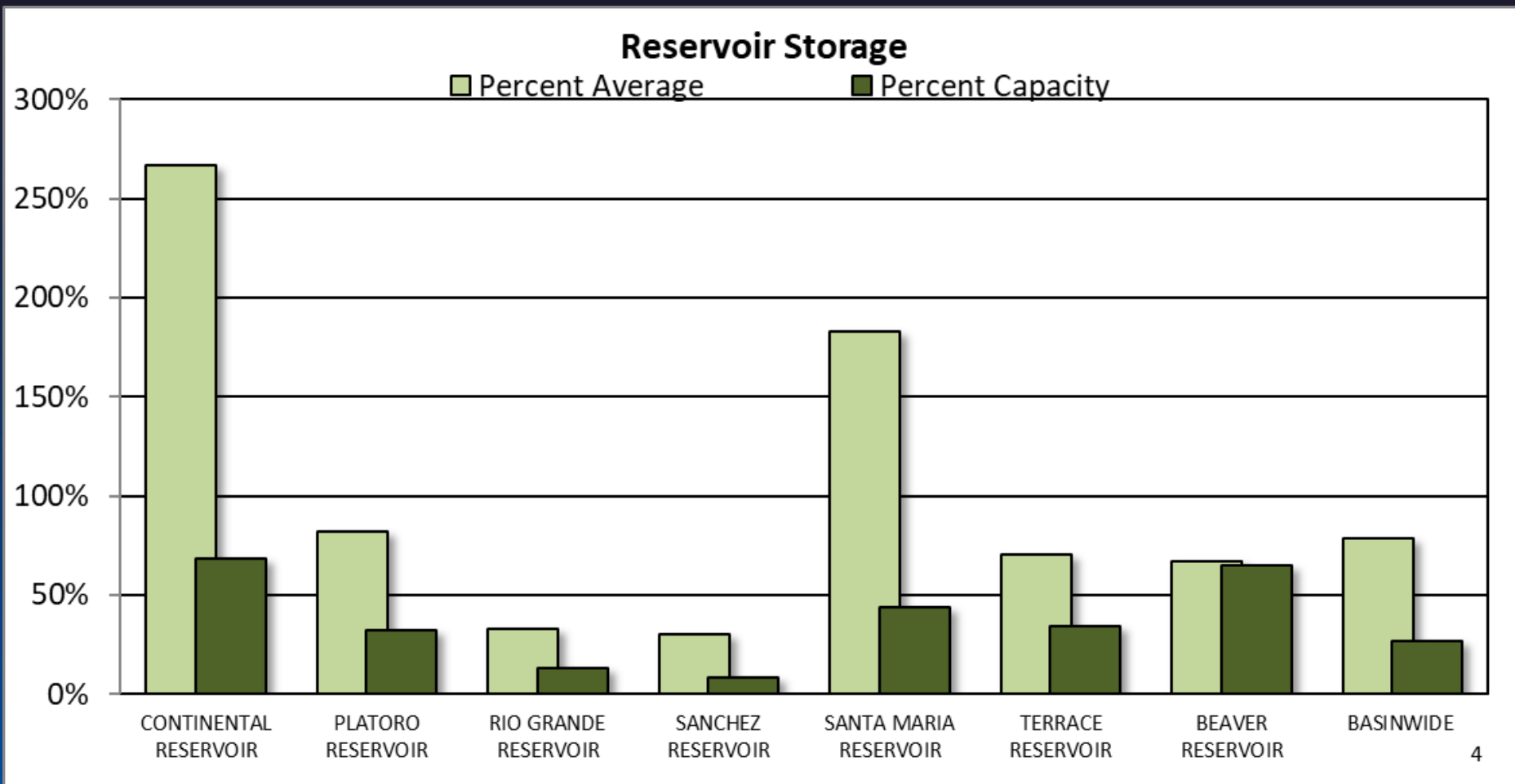


## Upper Rio Grande River Basin Streamflow Forecast Summary

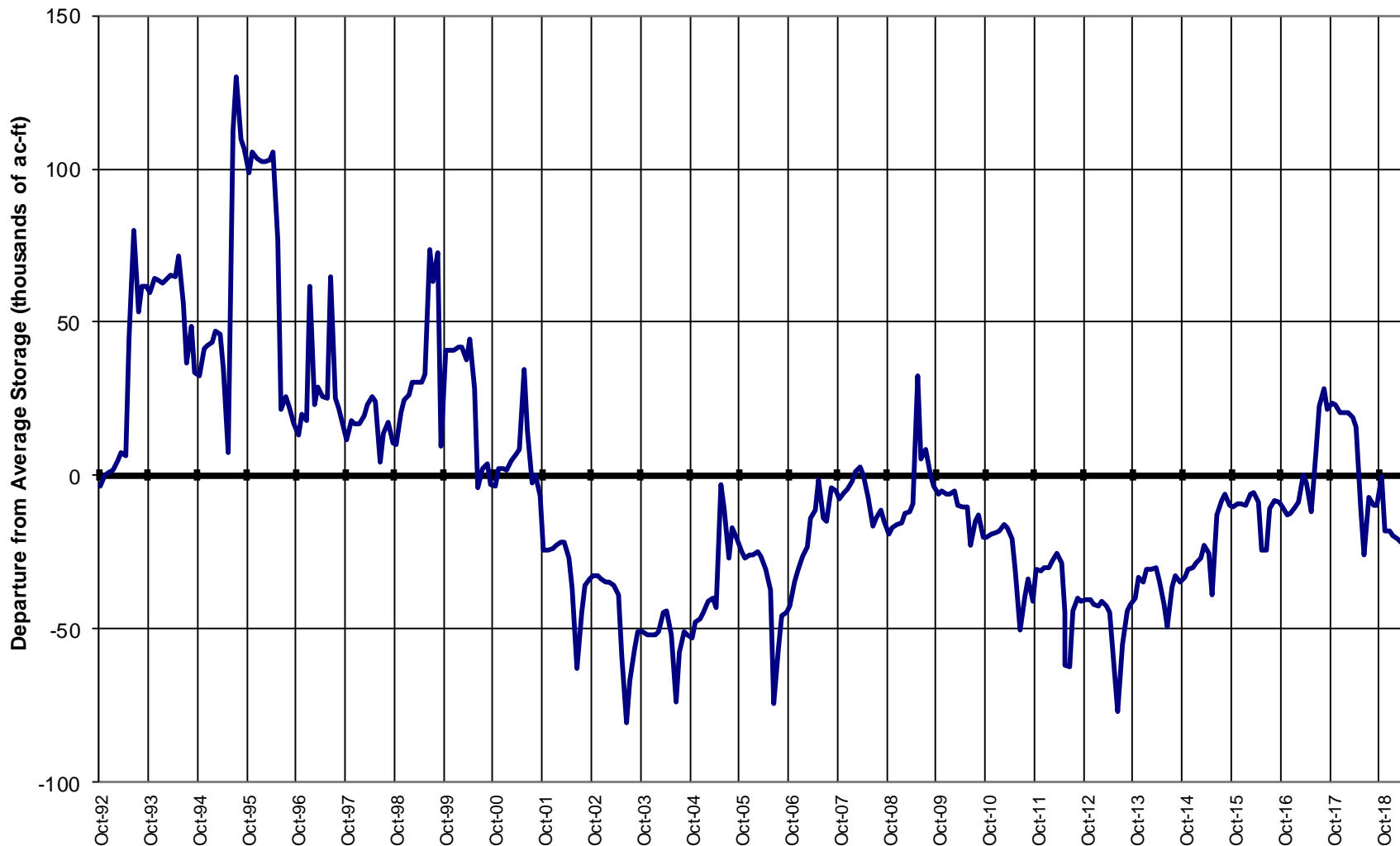
May 1, 2019



0 10 20 40 60 80 Miles

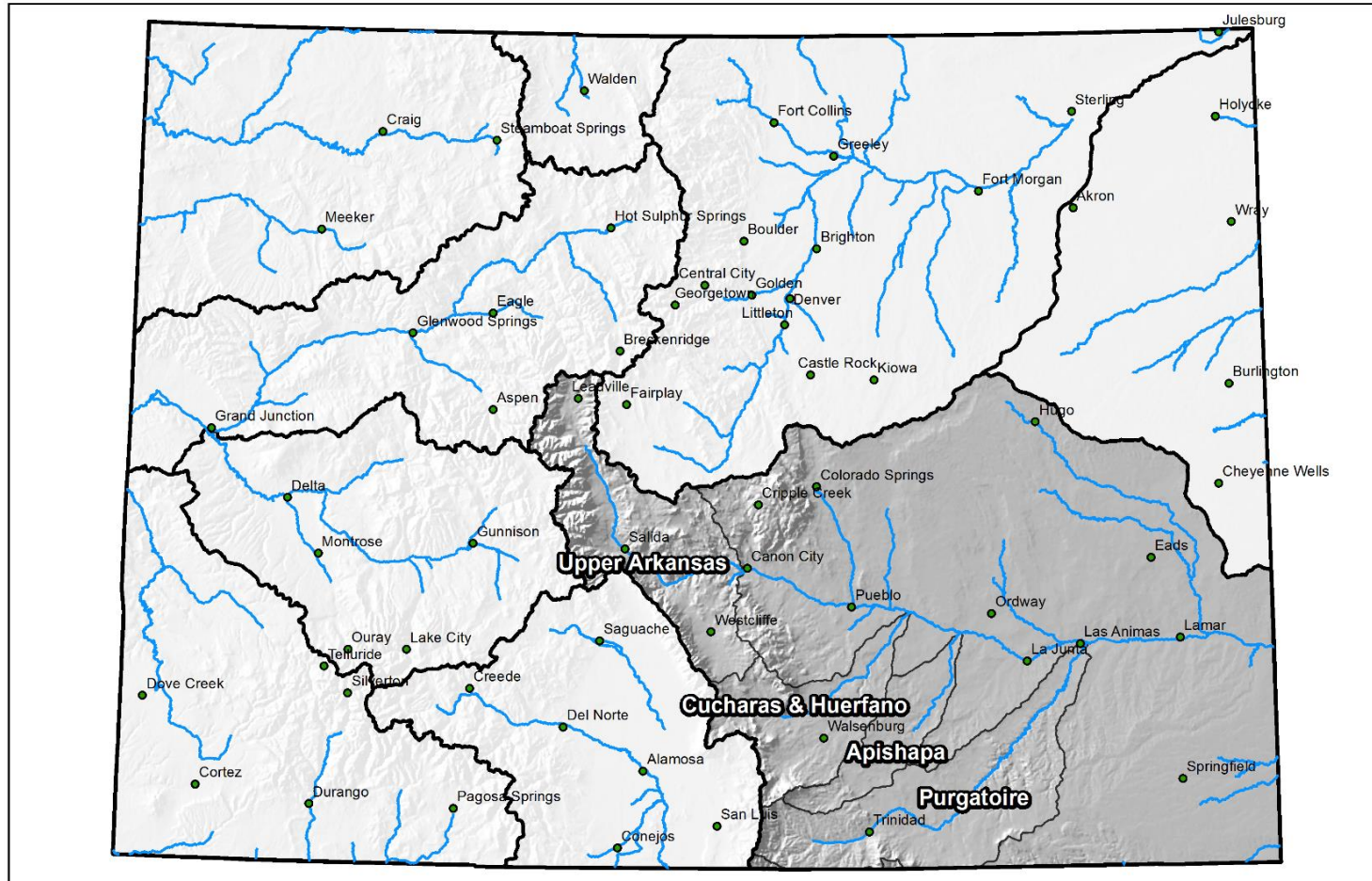


## UPPER RIO GRANDE BASIN Reservoir Storage Departure from Average



## Major Basin Summary

### Arkansas River Basin



0 25 50 100 150 200 Miles



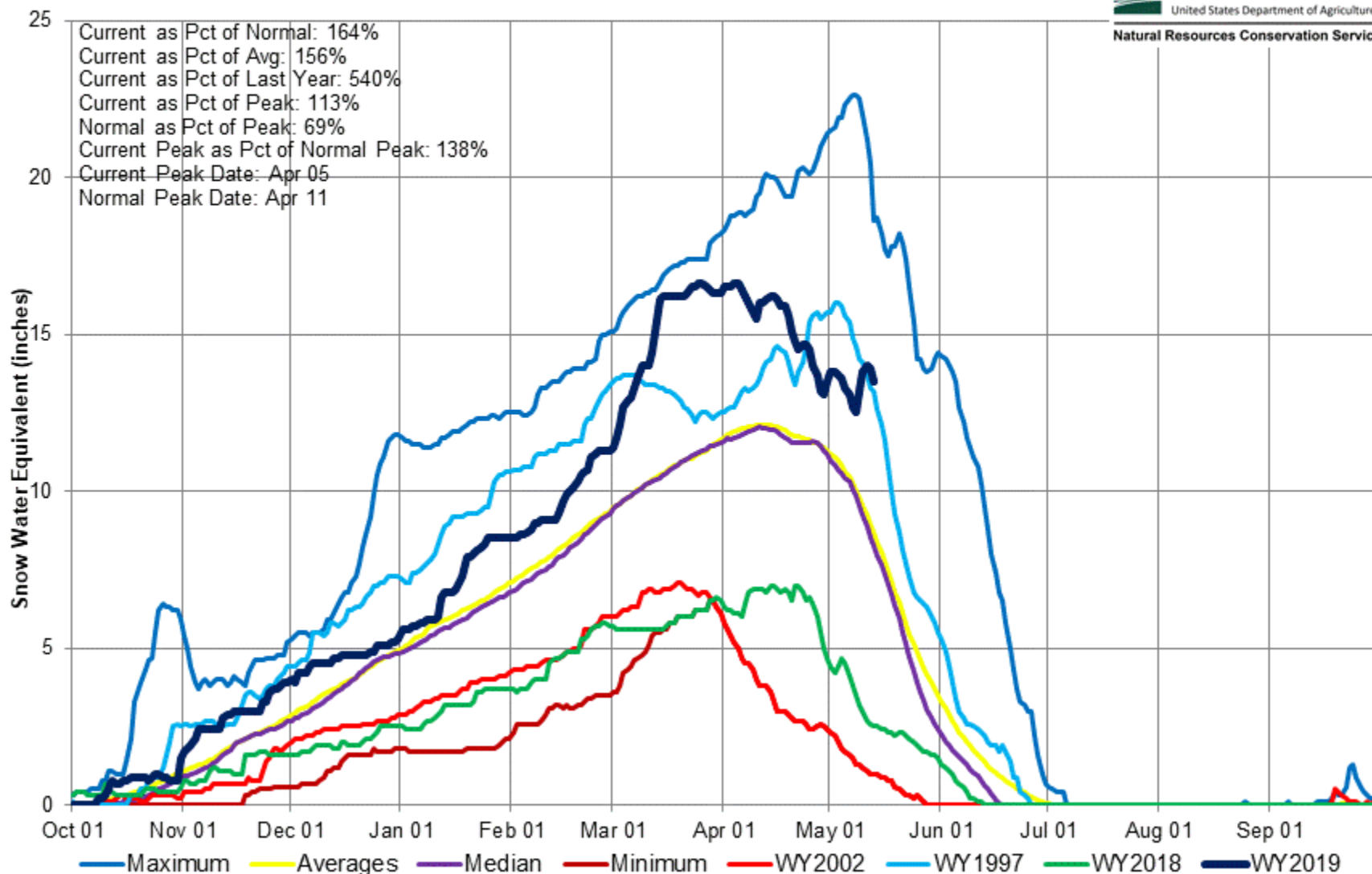
## Arkansas River Basin High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of May 13, 2019*



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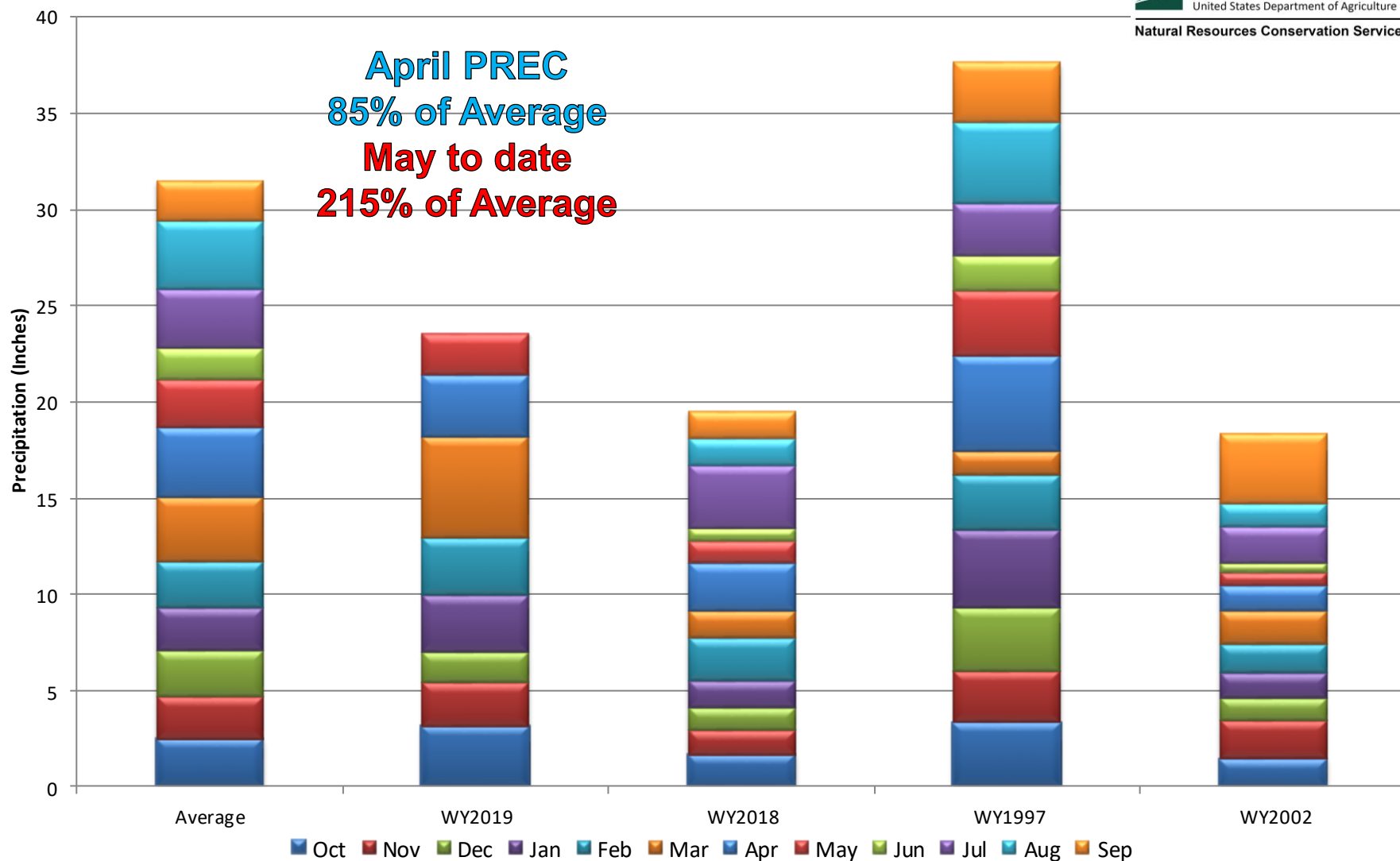
## Arkansas River Basin High/Low Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of May 13, 2019*



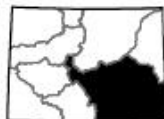
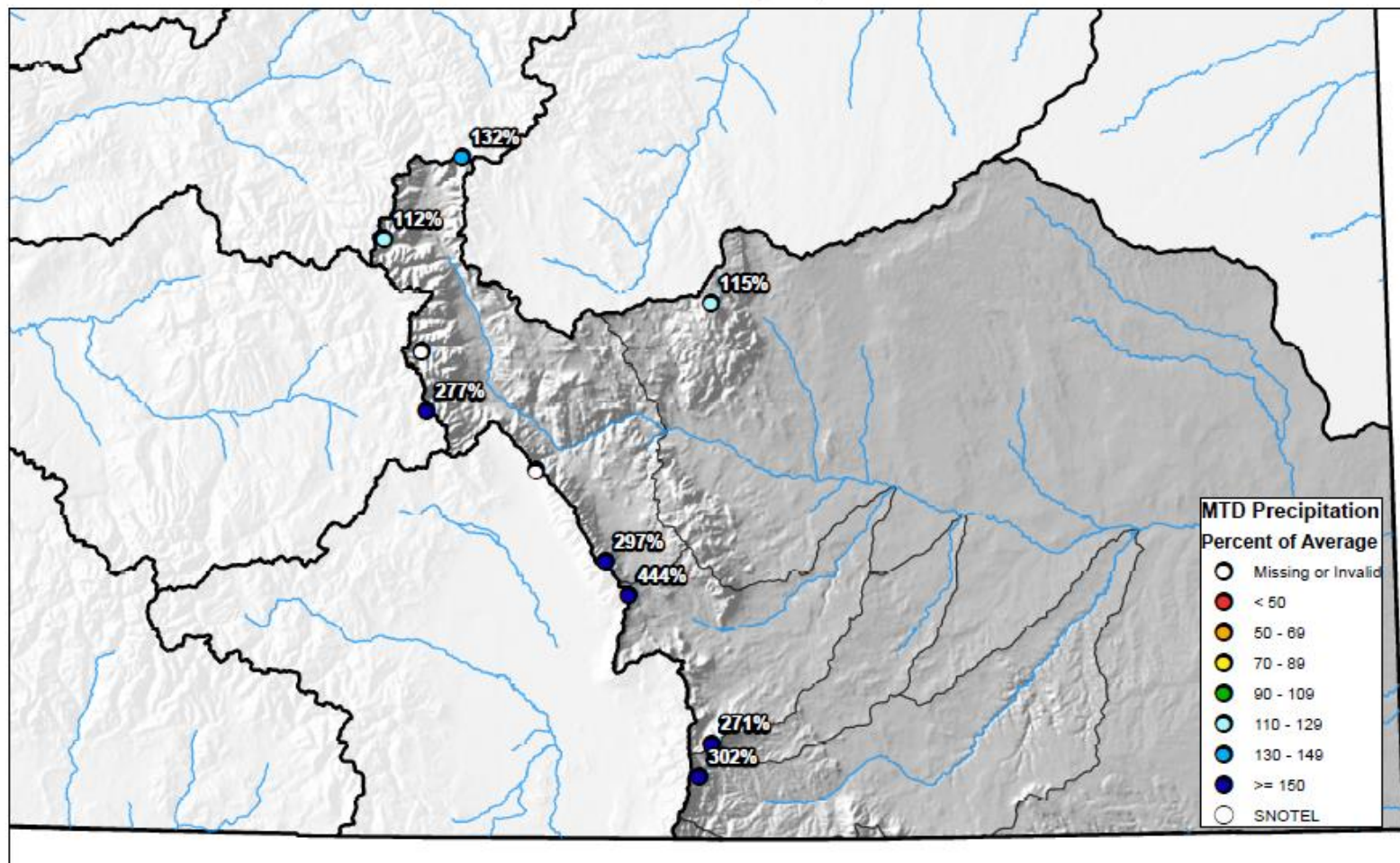
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## Arkansas River Basin Month to Date Precipitation Summary

Current as of May 13, 2019

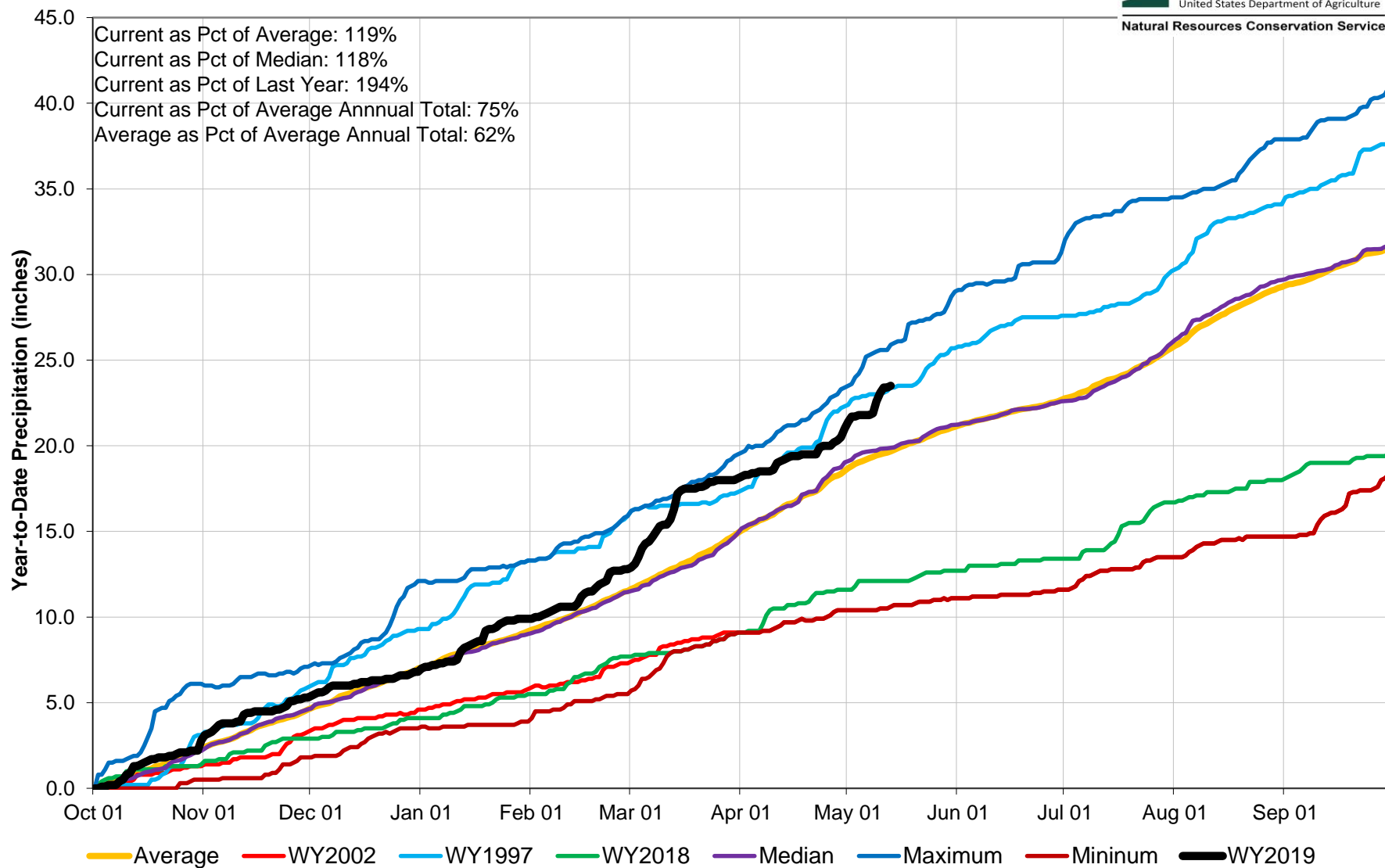


0 10 20 40 60 80 Miles



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

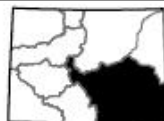
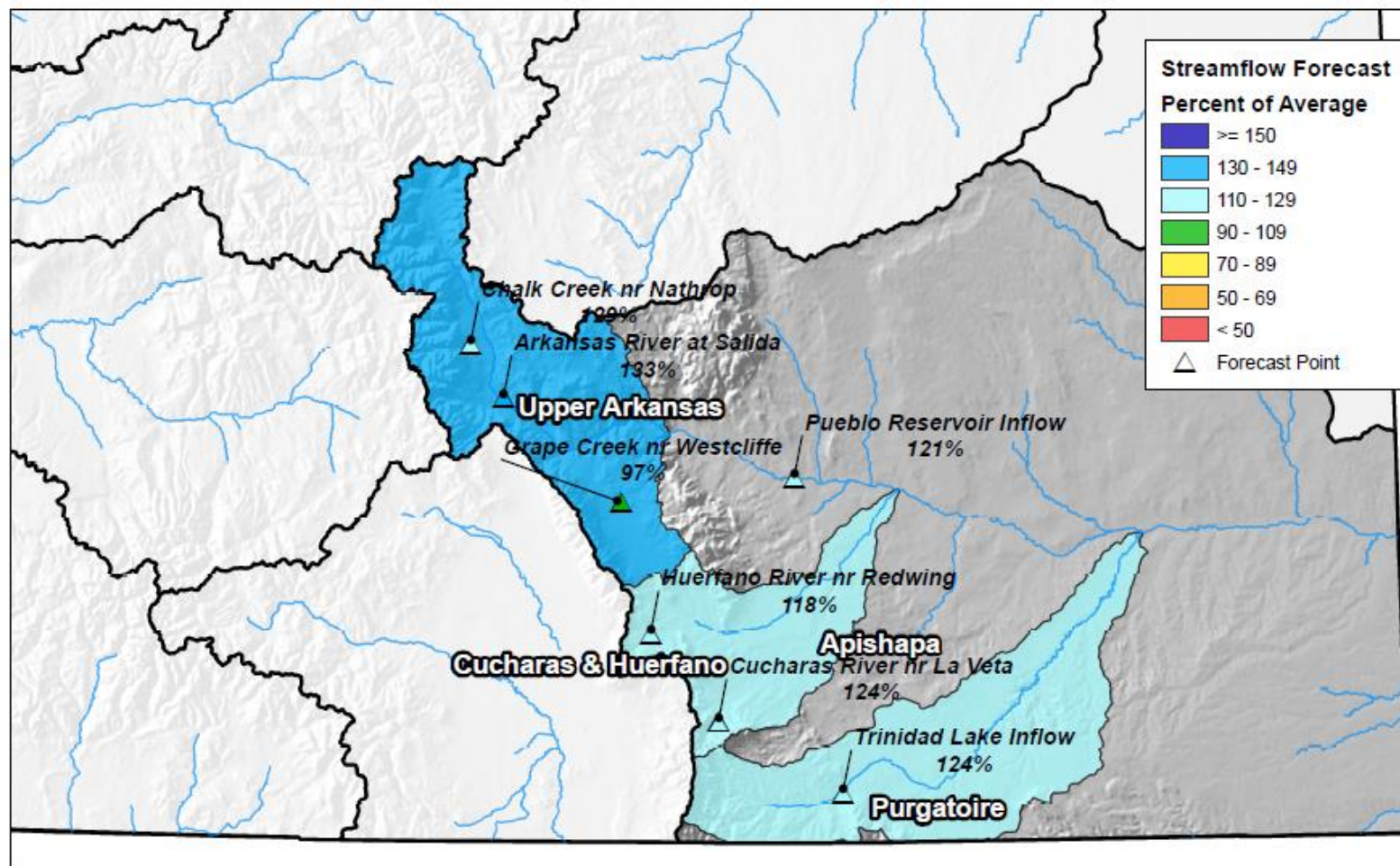
*Based on Provisional SNOTEL data as of May 13, 2019*



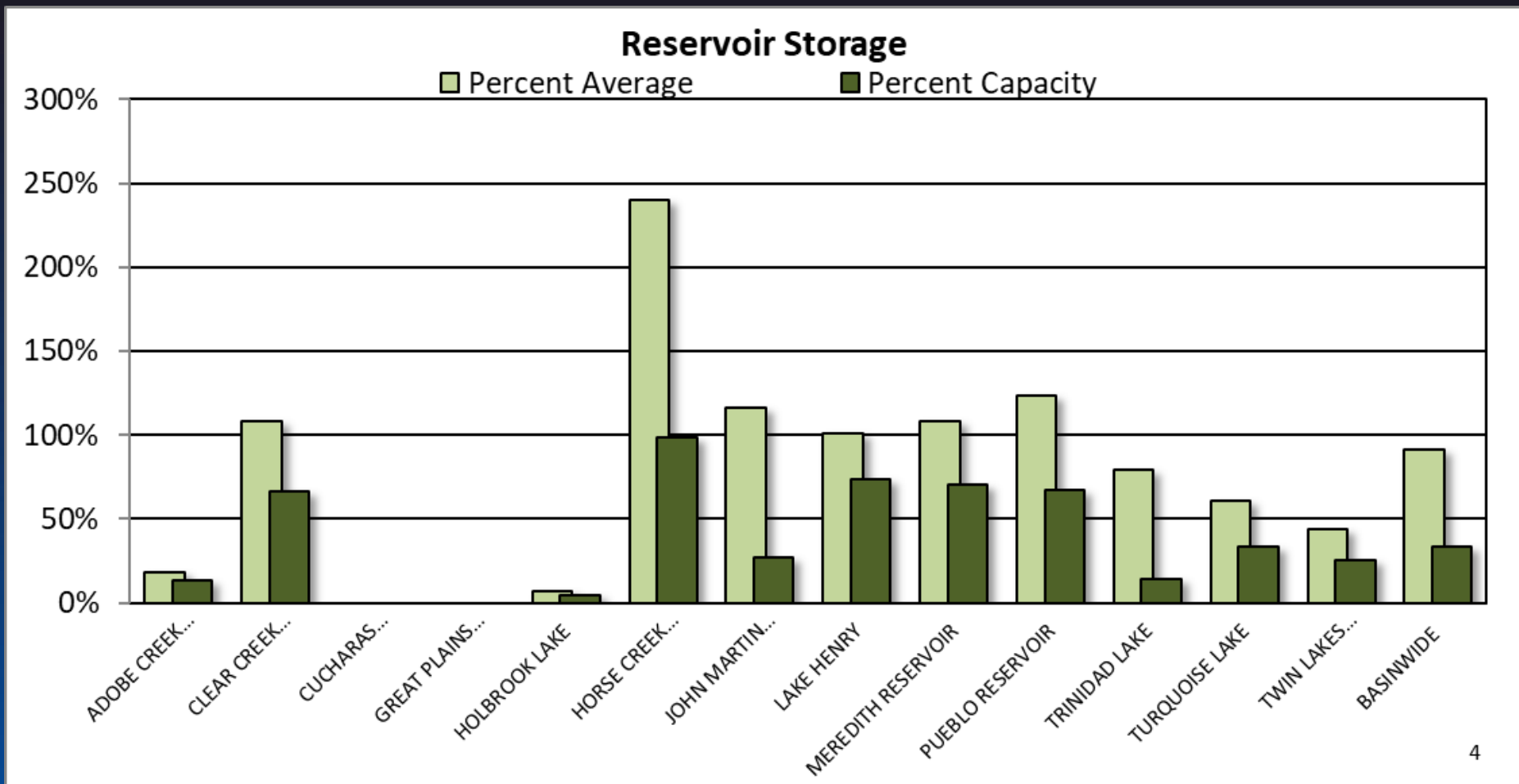


## Arkansas River Basin Streamflow Forecast Summary

May 1, 2019

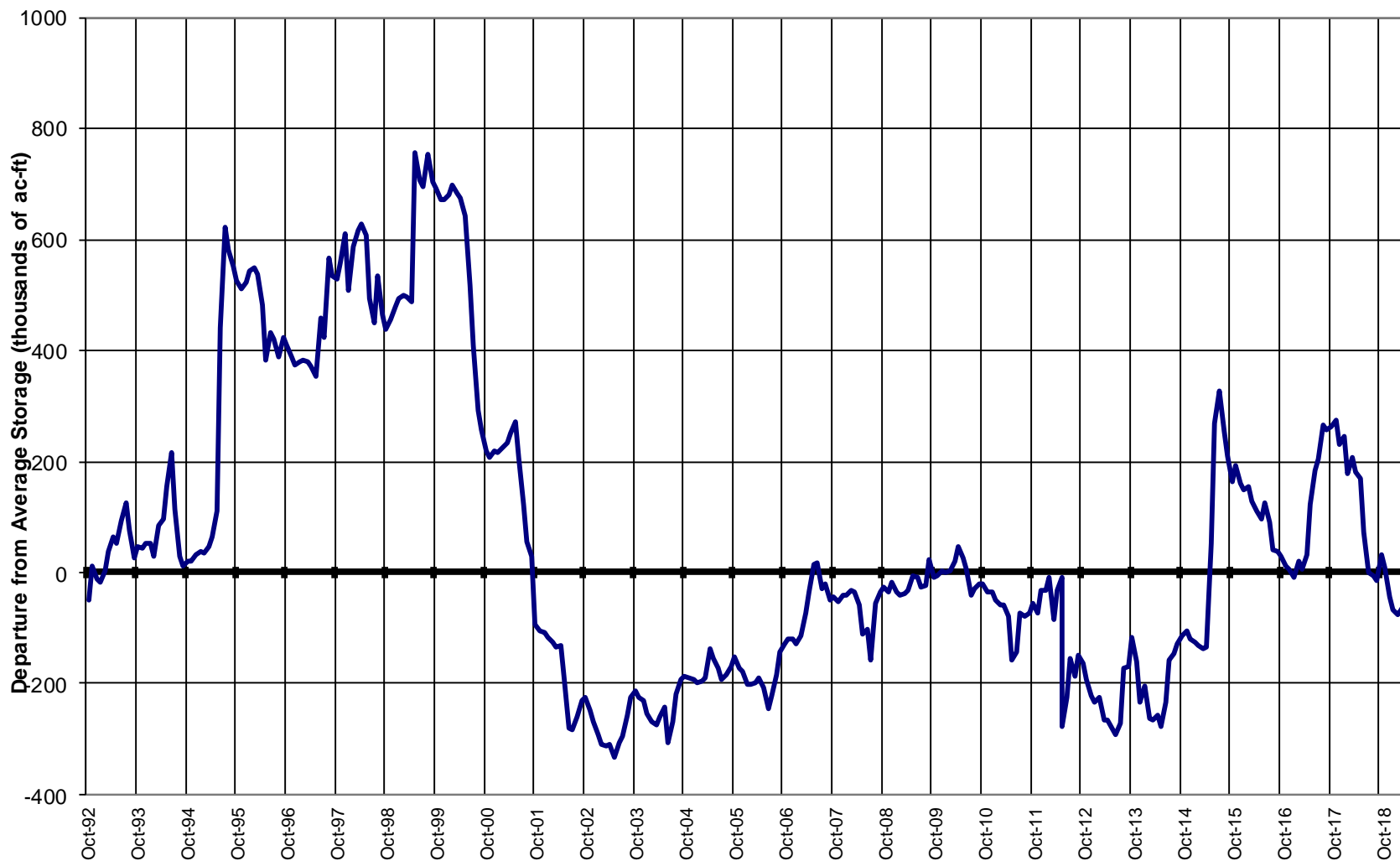


0 10 20 40 60 80 Miles



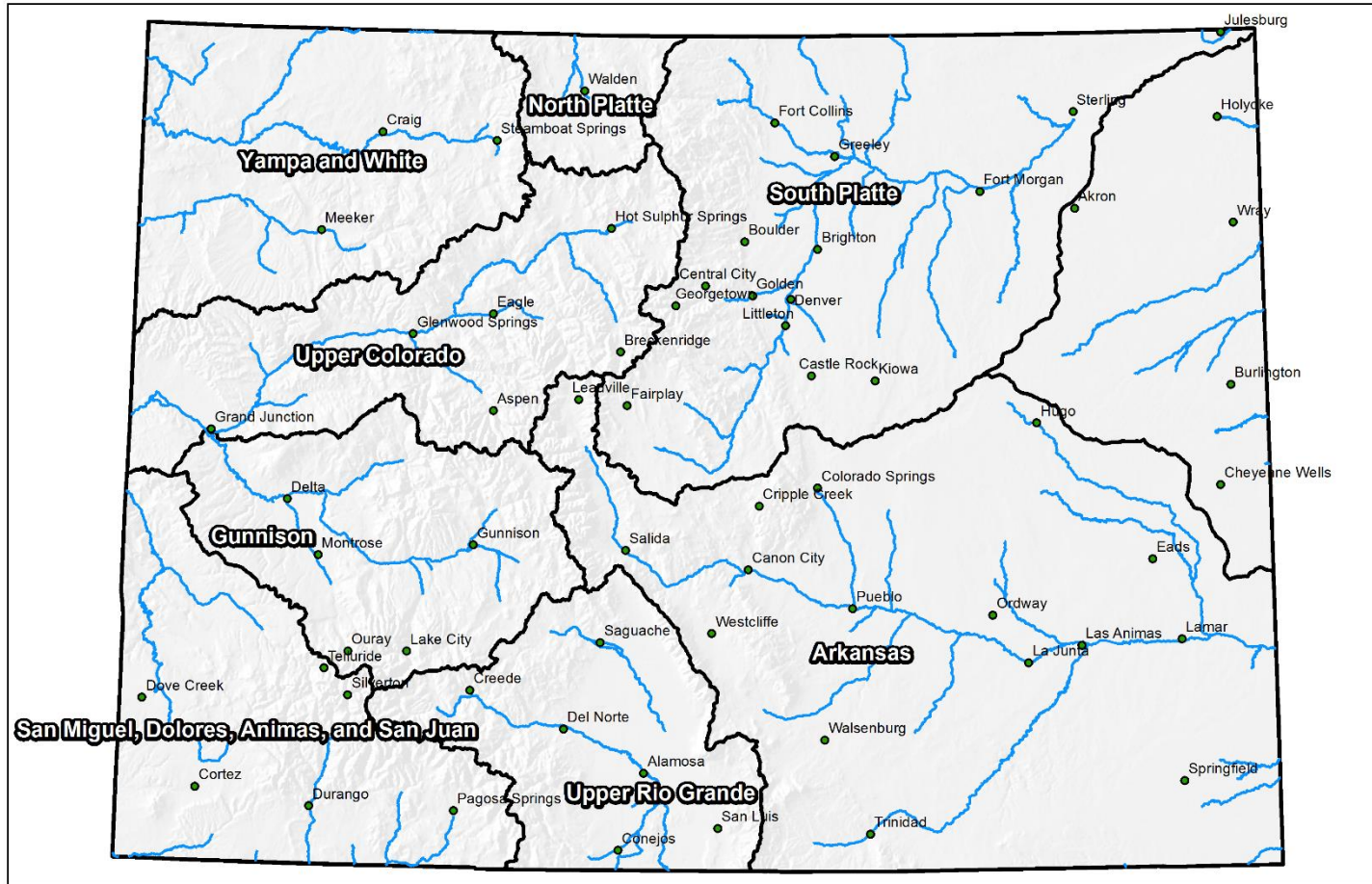


## ARKANSAS RIVER BASIN Reservoir Storage Departure from Average



## Colorado Statewide Summary

Colorado Major Basins

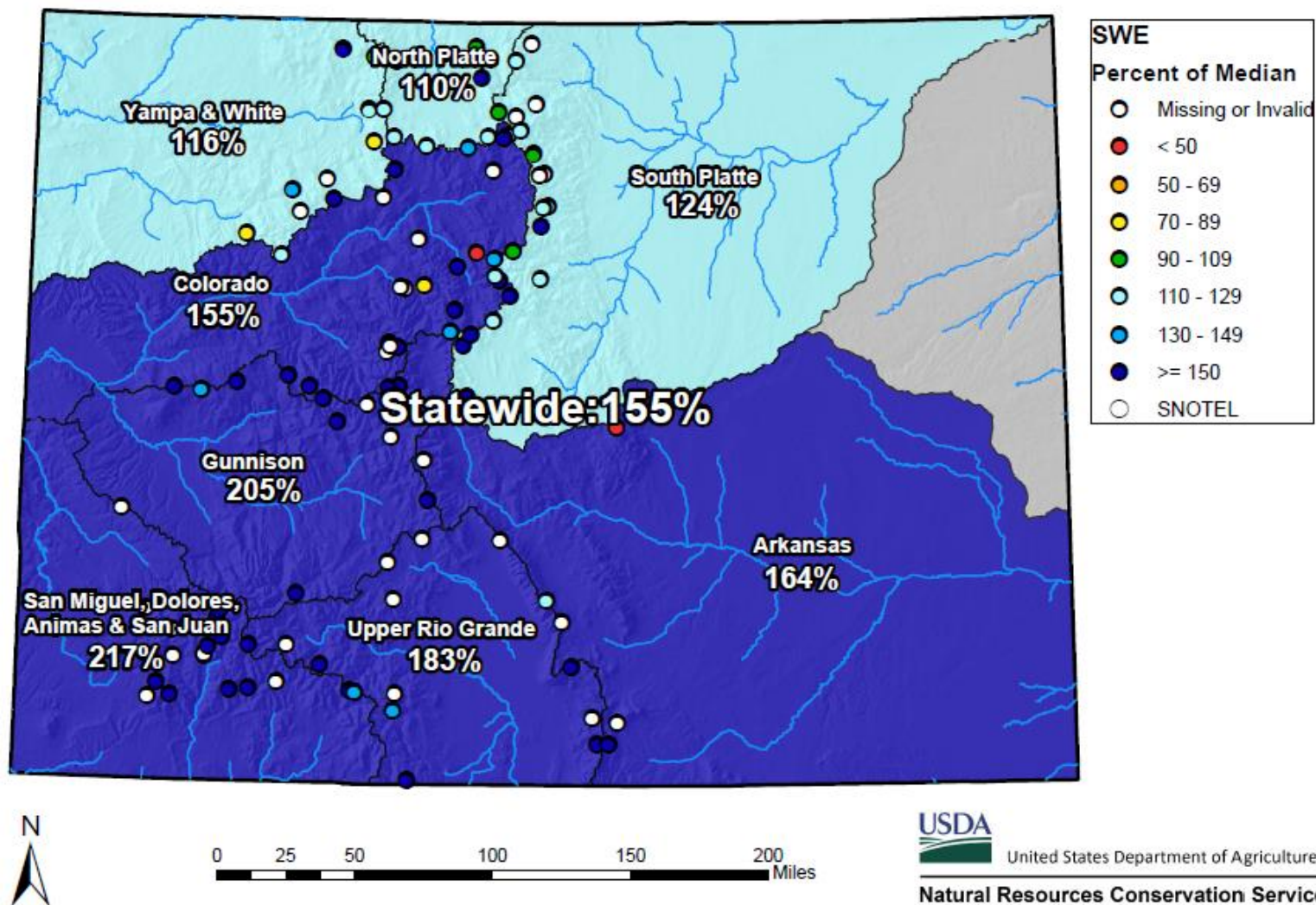


0 25 50 100 150 200 Miles



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

Current as of May 13, 2019





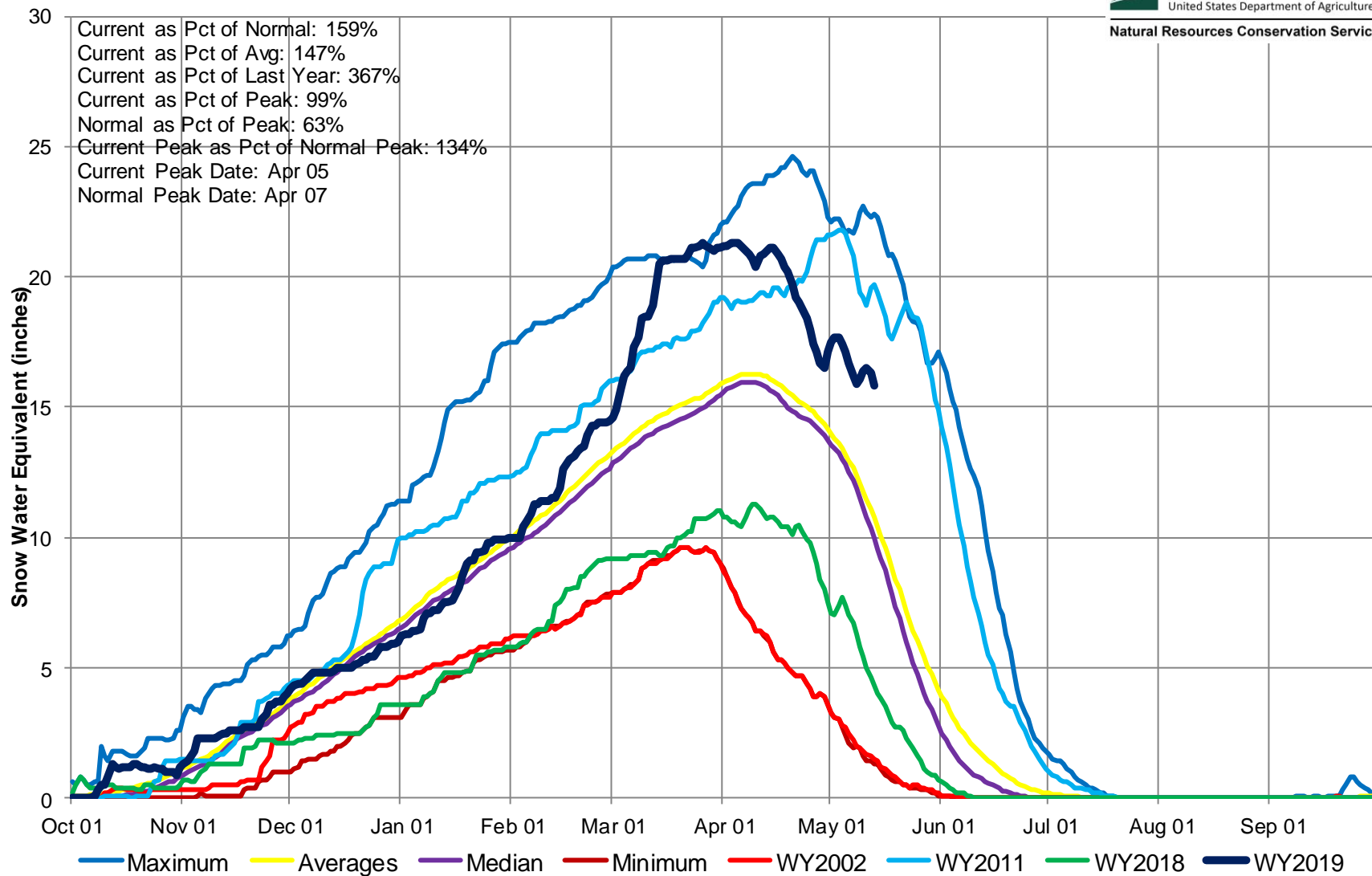
## Colorado Statewide High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of May 13, 2019*



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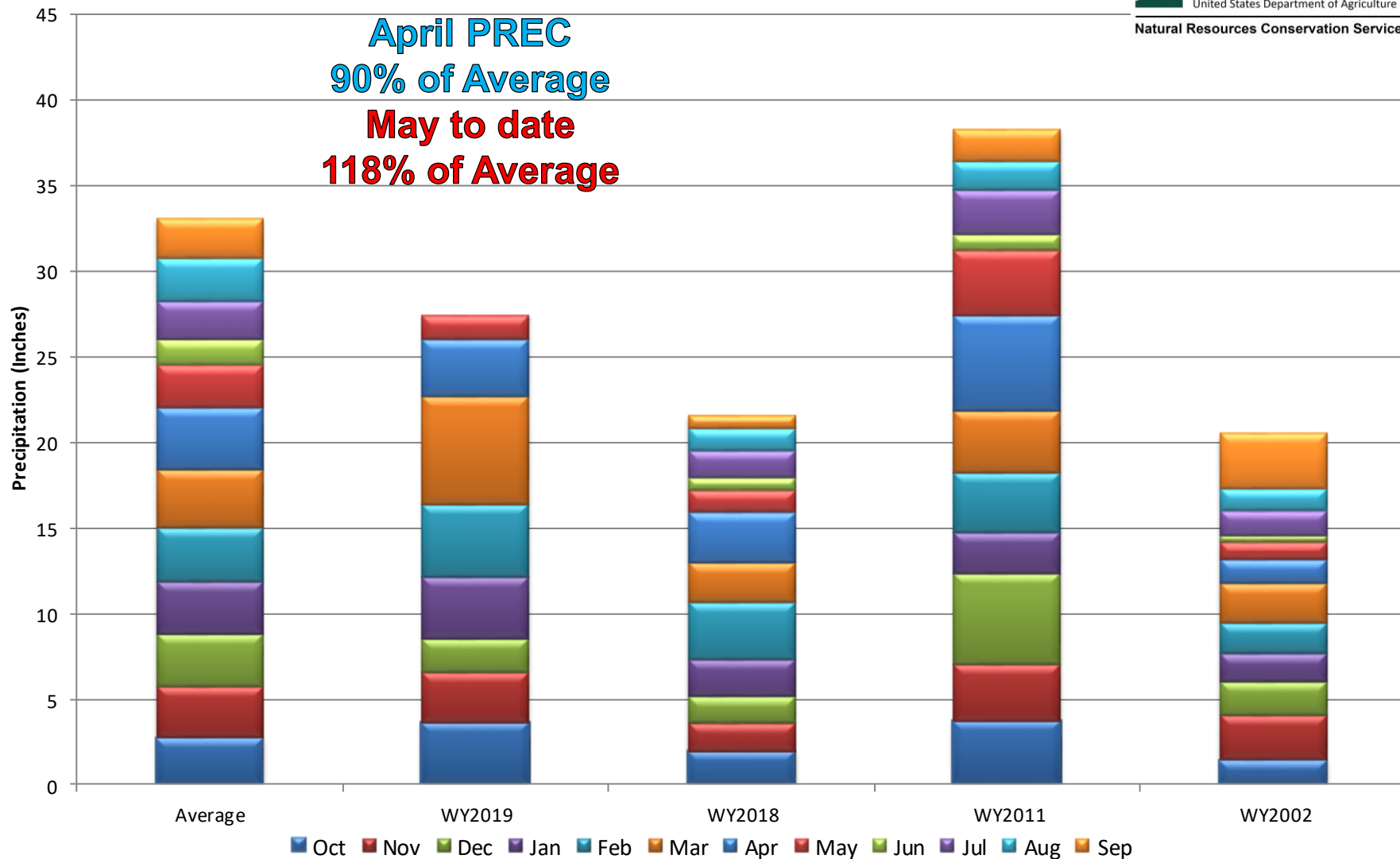
## Colorado Statewide High/Low Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of May 13, 2019*



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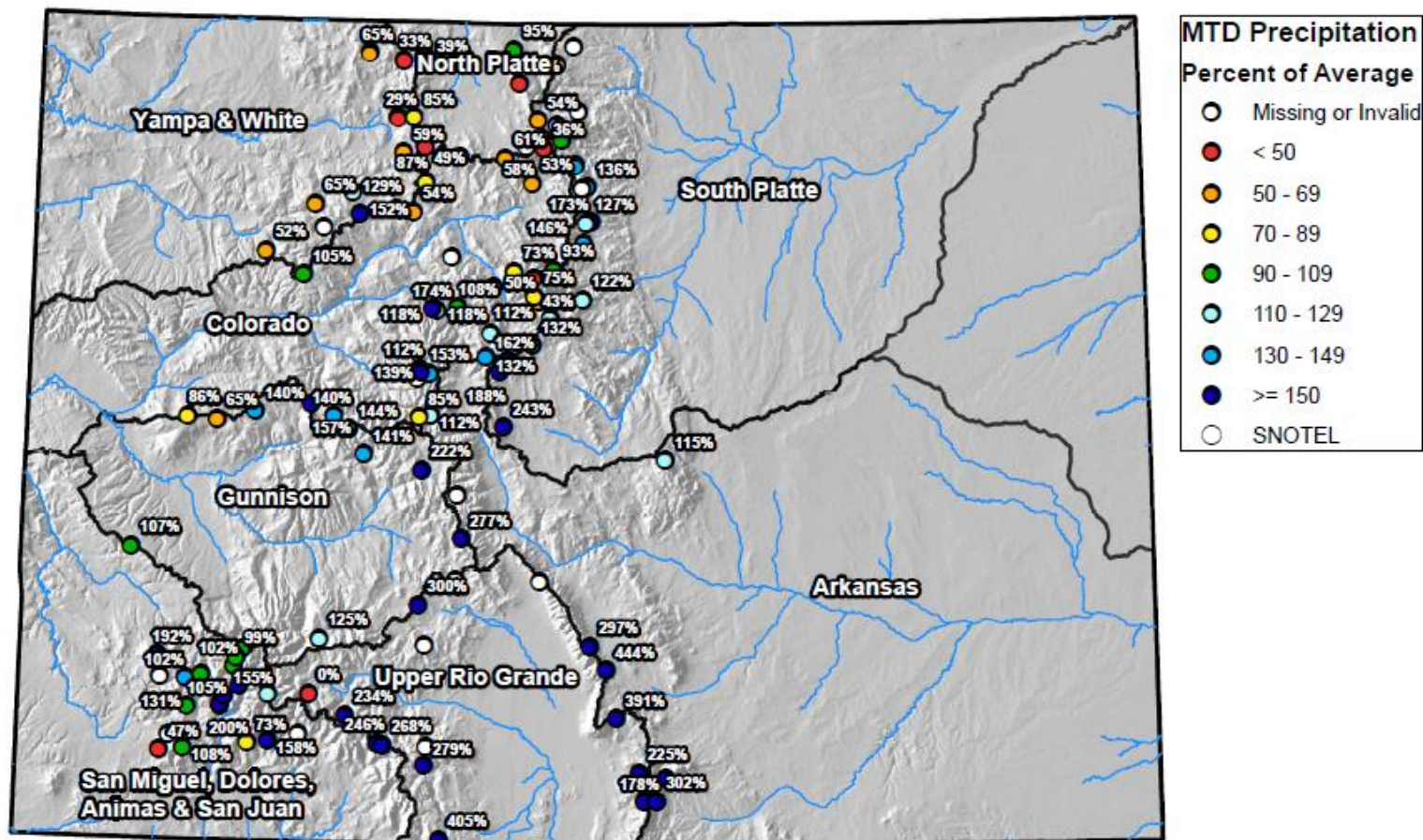
Natural Resources Conservation Service





## Colorado SNOTEL Month-to-Date Precipitation

Current as of May 13, 2019



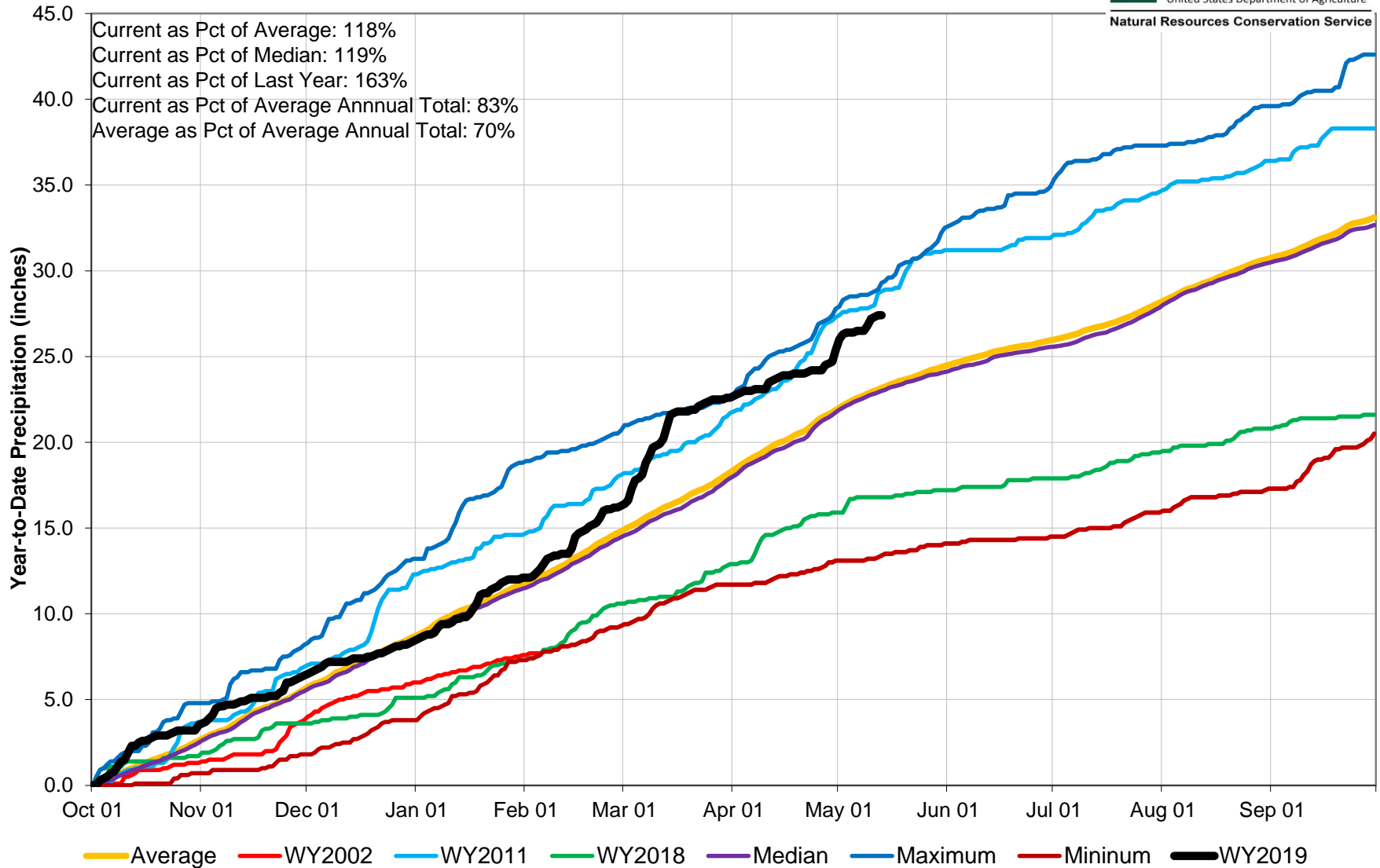
0 25 50 100 150 200 Miles





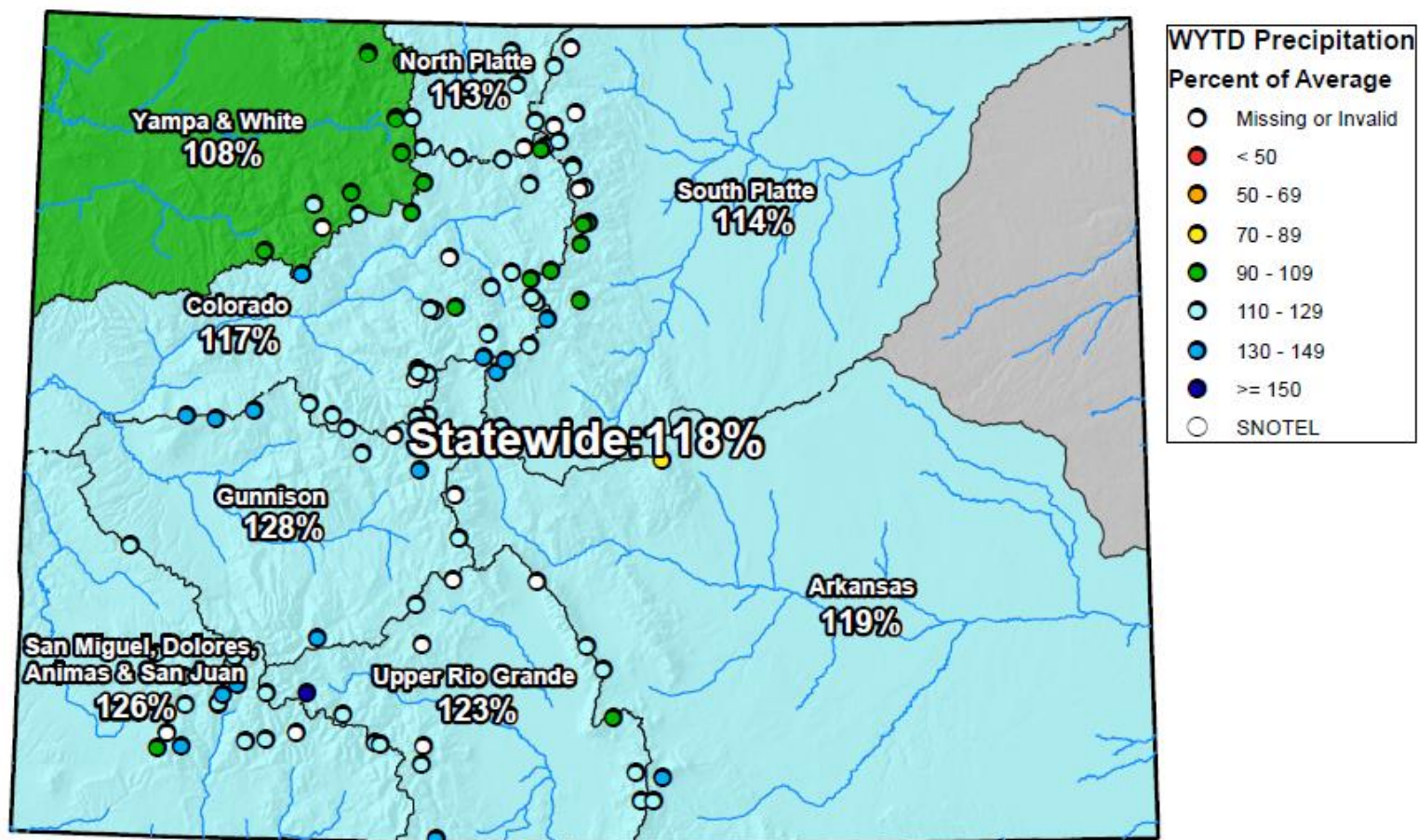
## Colorado Statewide High/Low Year-to-Date Precipitation Summary

*Based on Provisional SNOTEL data as of May 13, 2019*



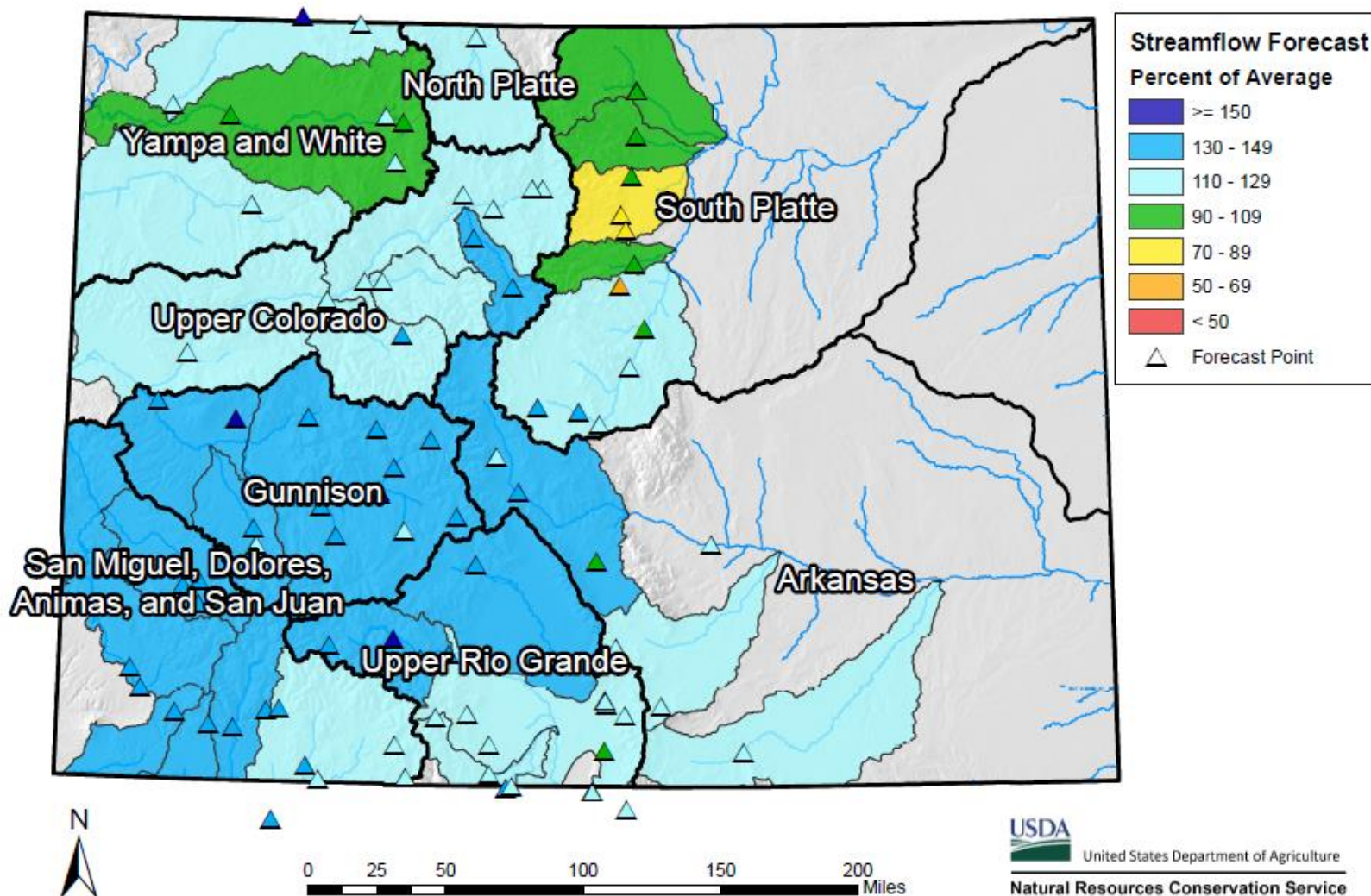
## Colorado SNOTEL Water Year to Date Precipitation

Current as of May 13, 2019



0 25 50 100 150 200 Miles

## Colorado Streamflow Forecasts Summary May 1, 2019

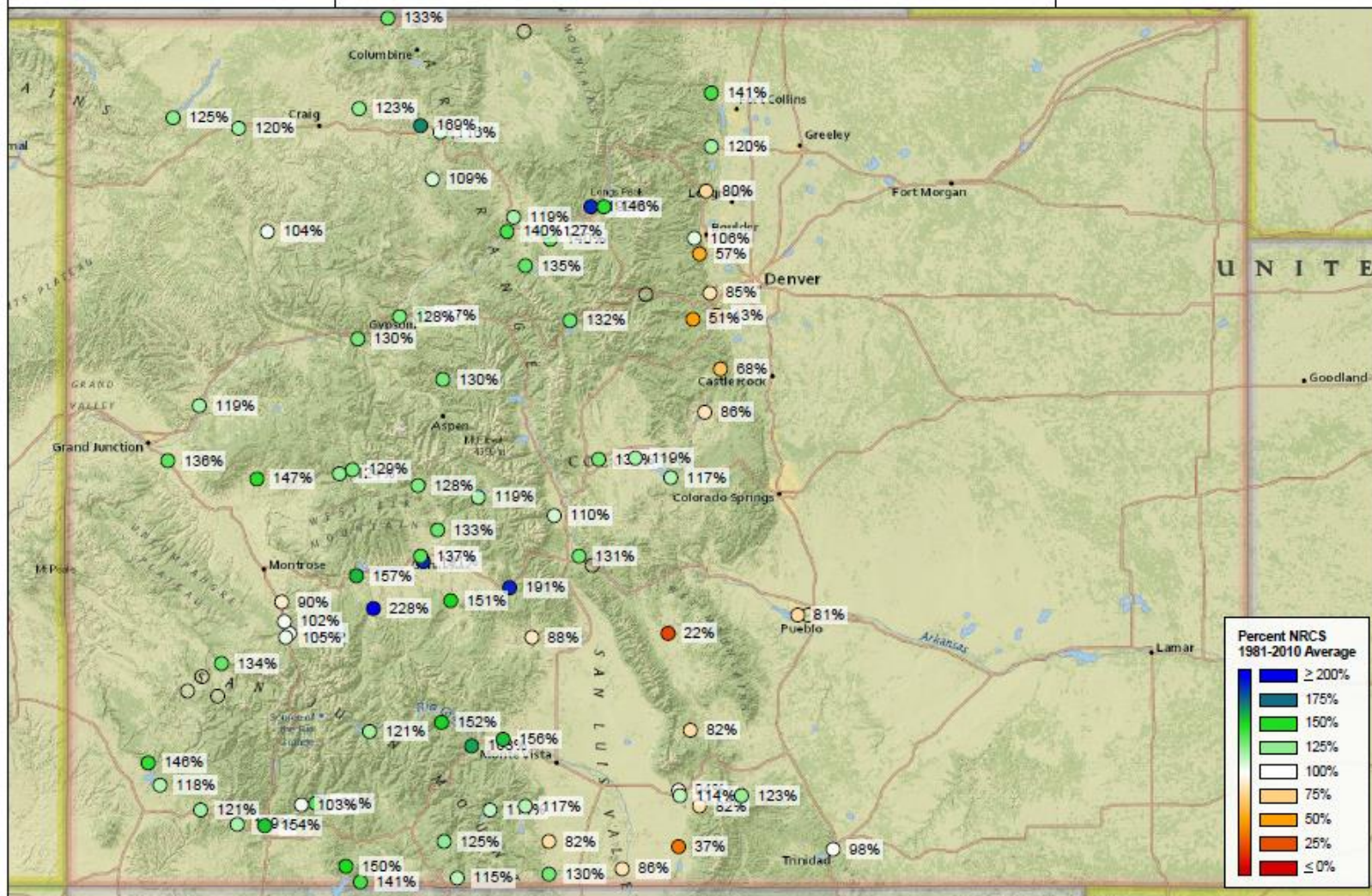




1 month Adjusted Volume, Observed

Percent NRCS 1981-2010 Average

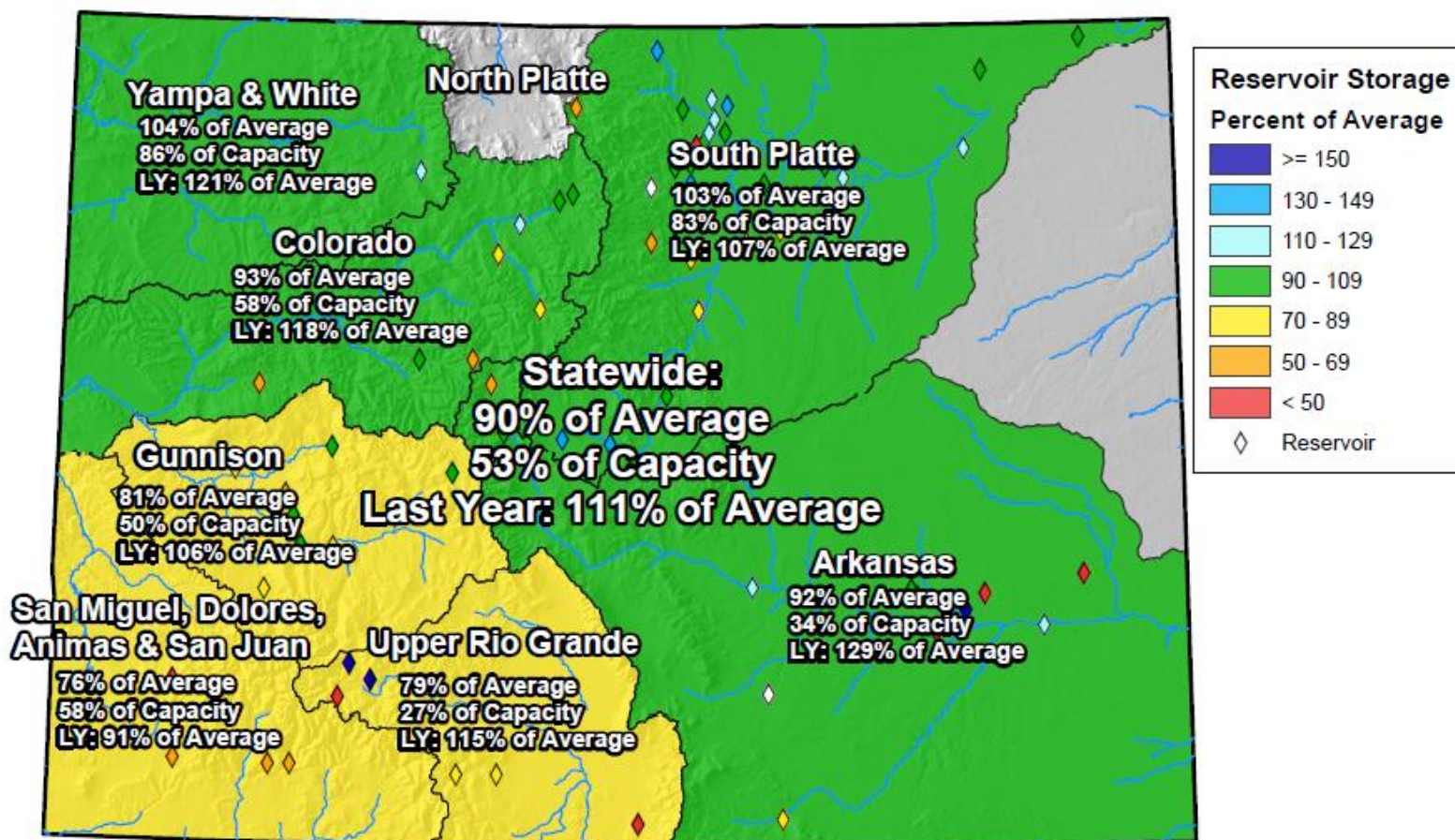
April 1, 2019 - April 30, 2019





## Colorado Monthly Reservoir Storage Summary

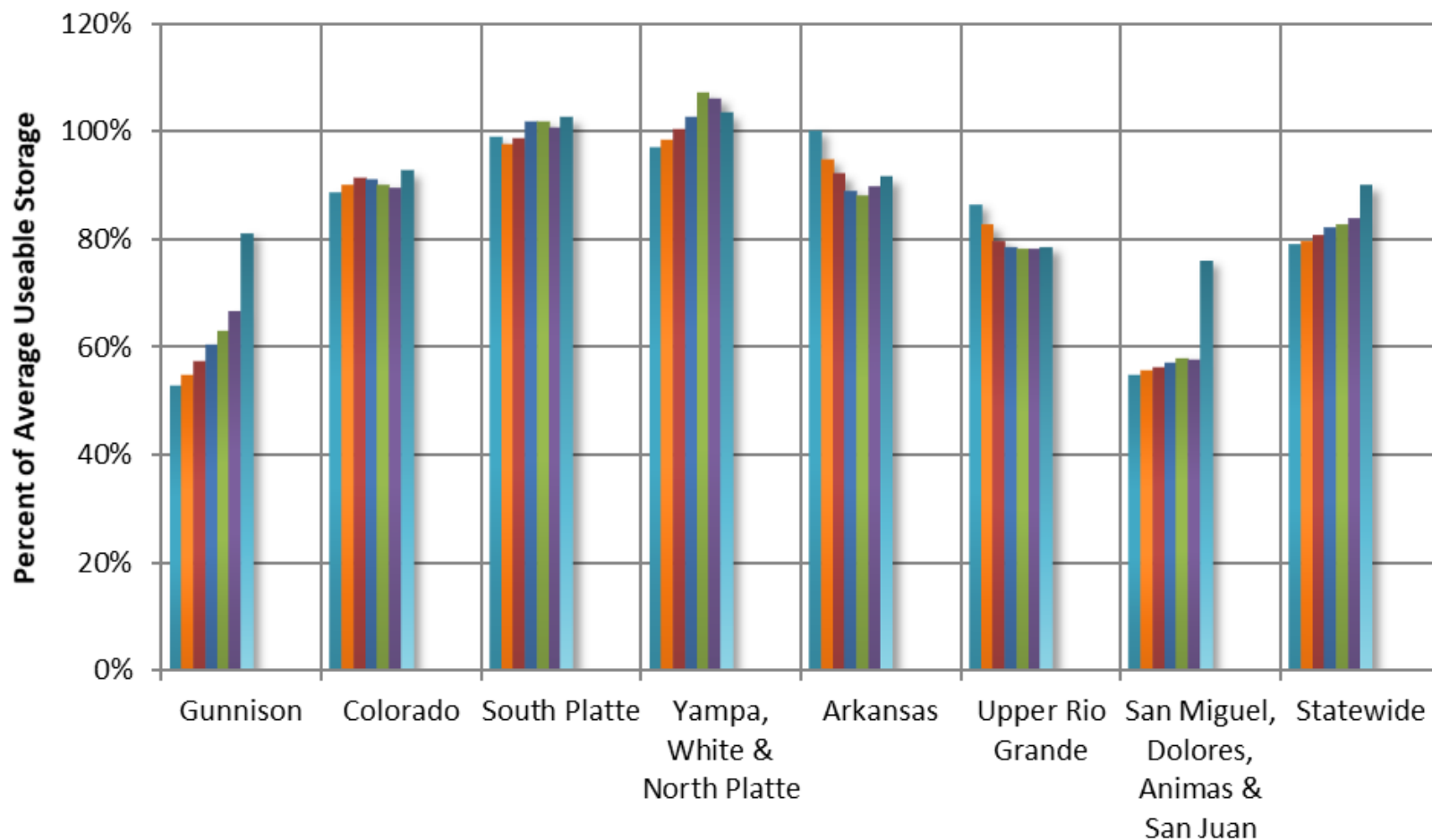
End of April 2019



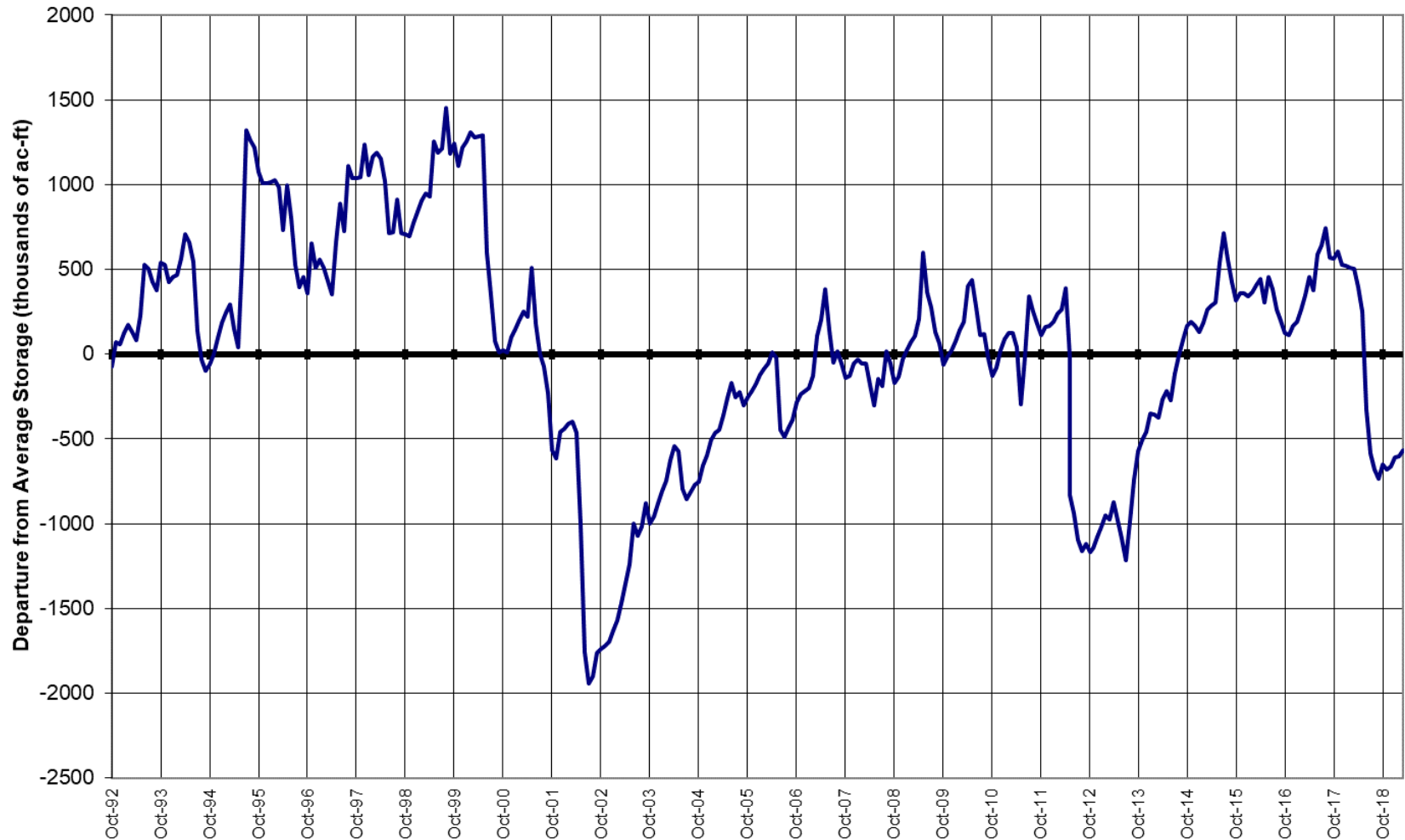
0 25 50 100 150 200 Miles

## Colorado Reservoir Storage

Oct-18 Nov-18 Dec-18 Jan-19 Feb-19 Mar-19  
 Apr-19 May-19 Jun-19 Jul-19 Aug-19 Sep-19

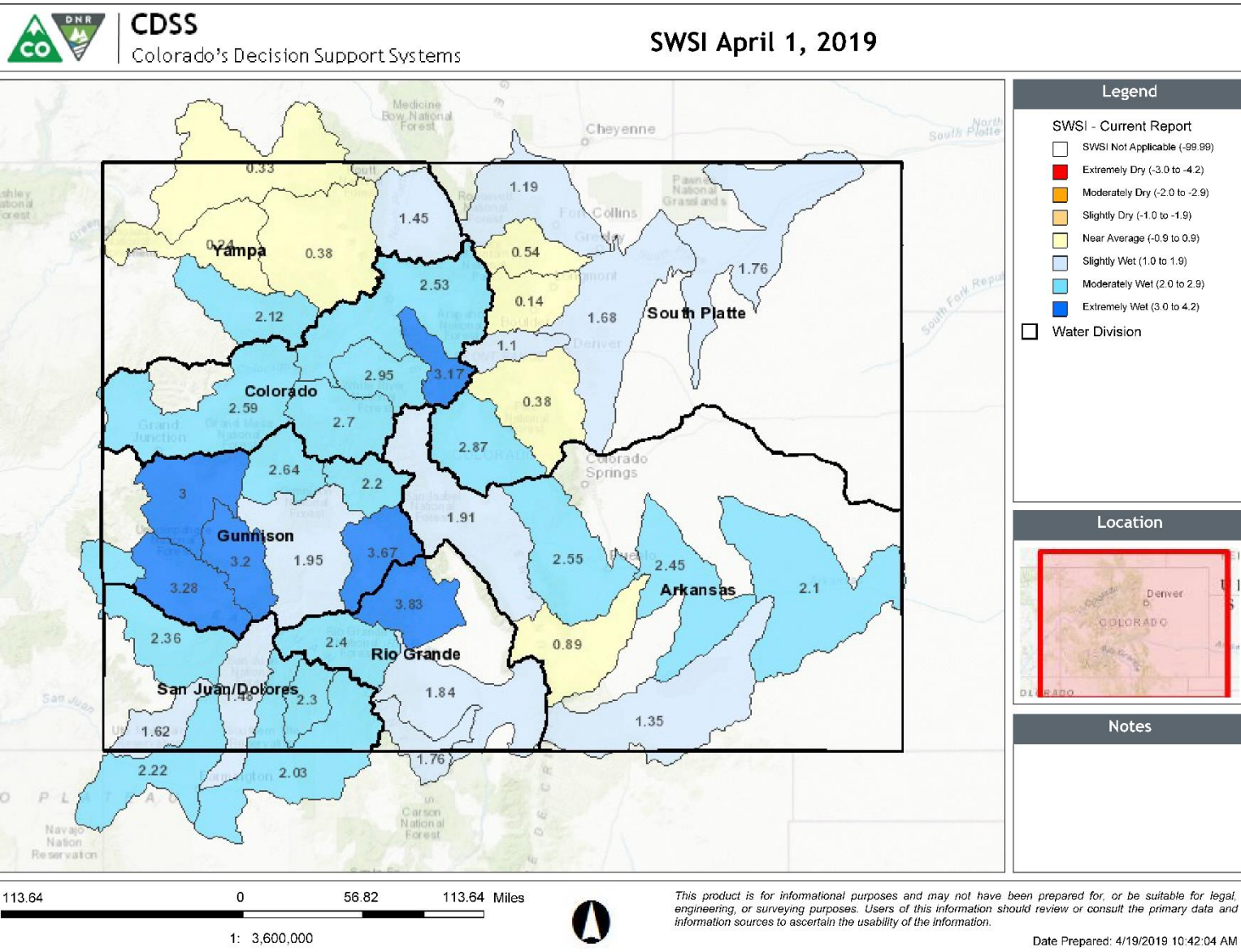


## COLORADO STATEWIDE Reservoir Storage Departure from Average





April 1, 2019 SWSI





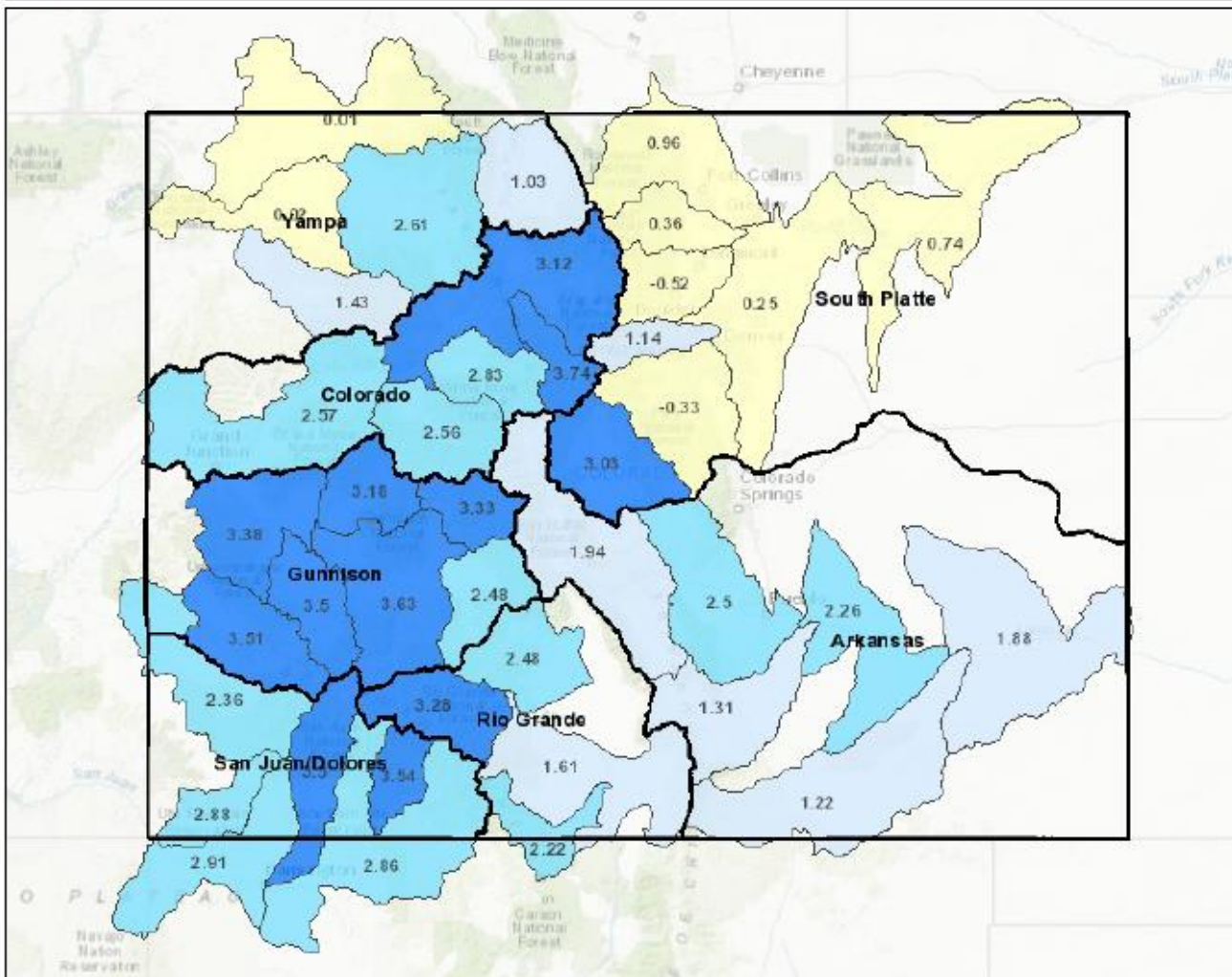
May 1, 2019 SWSI



CDSS

Colorado's Decision Support Systems

SWSI May 1, 2019



## Legend

### SWSI - Current Report

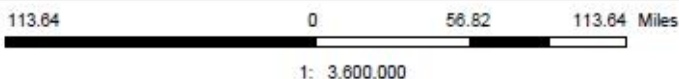
- SWSI Not Applicable (-99.99)
- Extremely Dry (-3.0 to -4.2)
- Moderately Dry (-2.0 to -2.9)
- Slightly Dry (-1.0 to -1.9)
- Near Average (-0.9 to 0.9)
- Slightly Wet (1.0 to 1.9)
- Moderately Wet (2.0 to 2.9)
- Extremely Wet (3.0 to 4.2)

Water Division

## Location



## Notes



This product is for informational purposes and may not have been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.

Date Prepared: 5/10/2019 10:59:06 AM

## Summary

### •Precipitation Statewide

- April ended with below average precipitation across the state but May has started off above average and particularly so in Southern Colorado
- Current water year to date precipitation is 118 percent of average statewide

### •Snowpack

- Statewide snowpack now 155 percent median and melting faster with the warmer weather

### •Statewide reservoir storage is 90 percent of average

- Huge gains in storage were observed in the Gunnison and combined basins of Southwest Colorado

### •Above average April streamflows occurred across most of the state

### •May 1 volumetric streamflow forecasts dropped from the April forecasts but not dramatically



United States Department of Agriculture

Colorado Snow Surveys

# Water Availability Task Force Meeting

## May 14<sup>th</sup>, 2019

### NRCS Snow Survey and Water Supply Forecasting Program

Karl Wetlaufer

Hydrologist

Assistant Snow Survey Supervisor

720-544-2853

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



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