



United States Department of Agriculture

Colorado Snow Surveys

# Water Availability Task Force Meeting

## April 21<sup>st</sup>, 2020

### NRCS Snow Survey and Water Supply Forecasting Program

Karl Wetlaufer

Hydrologist

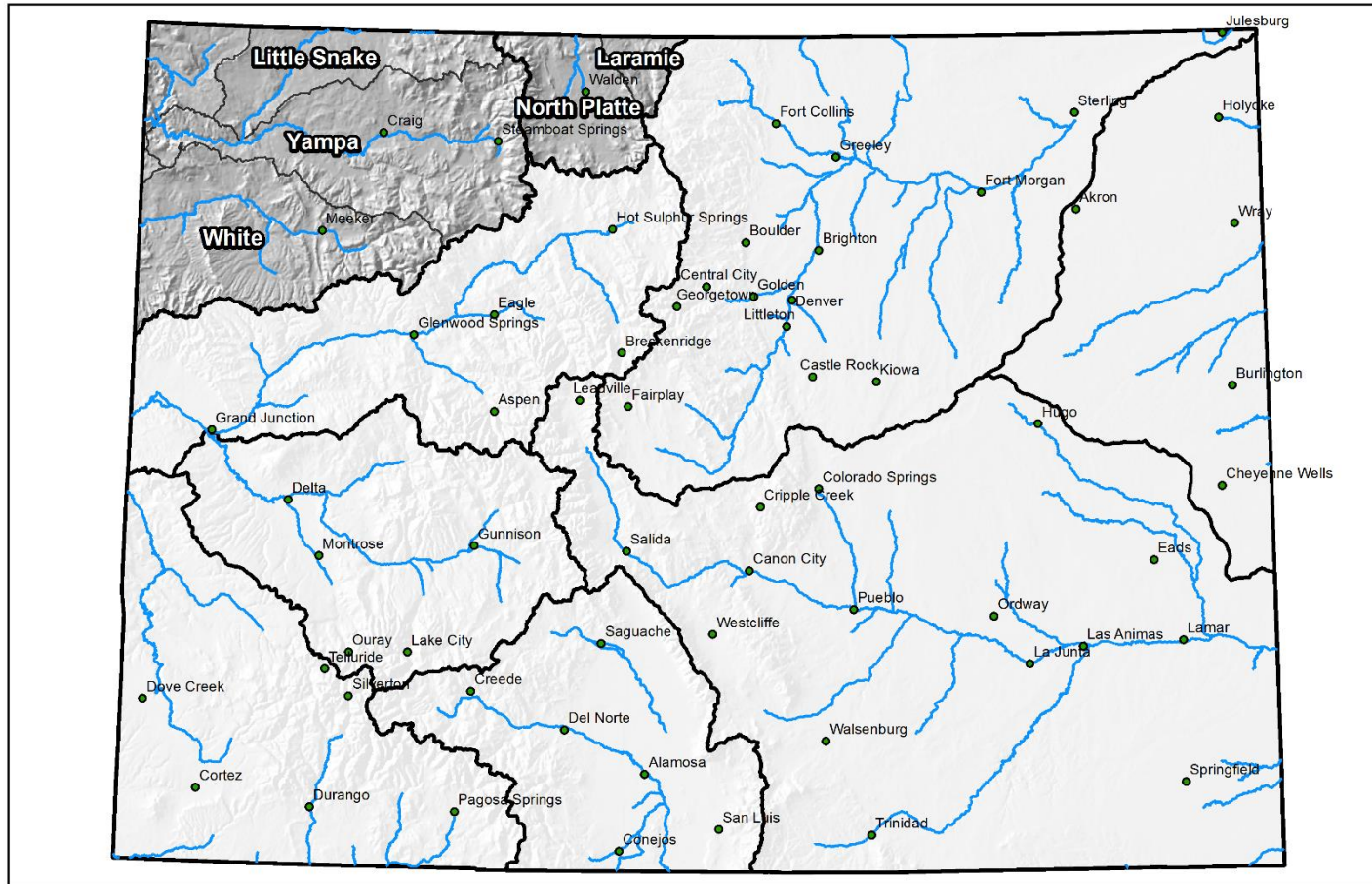
Asst. Snow Survey Supervisor

720-544-2853

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

## Major Basin Summary

Yampa, White, and North Platte River Basins



0 25 50 100 150 200 Miles



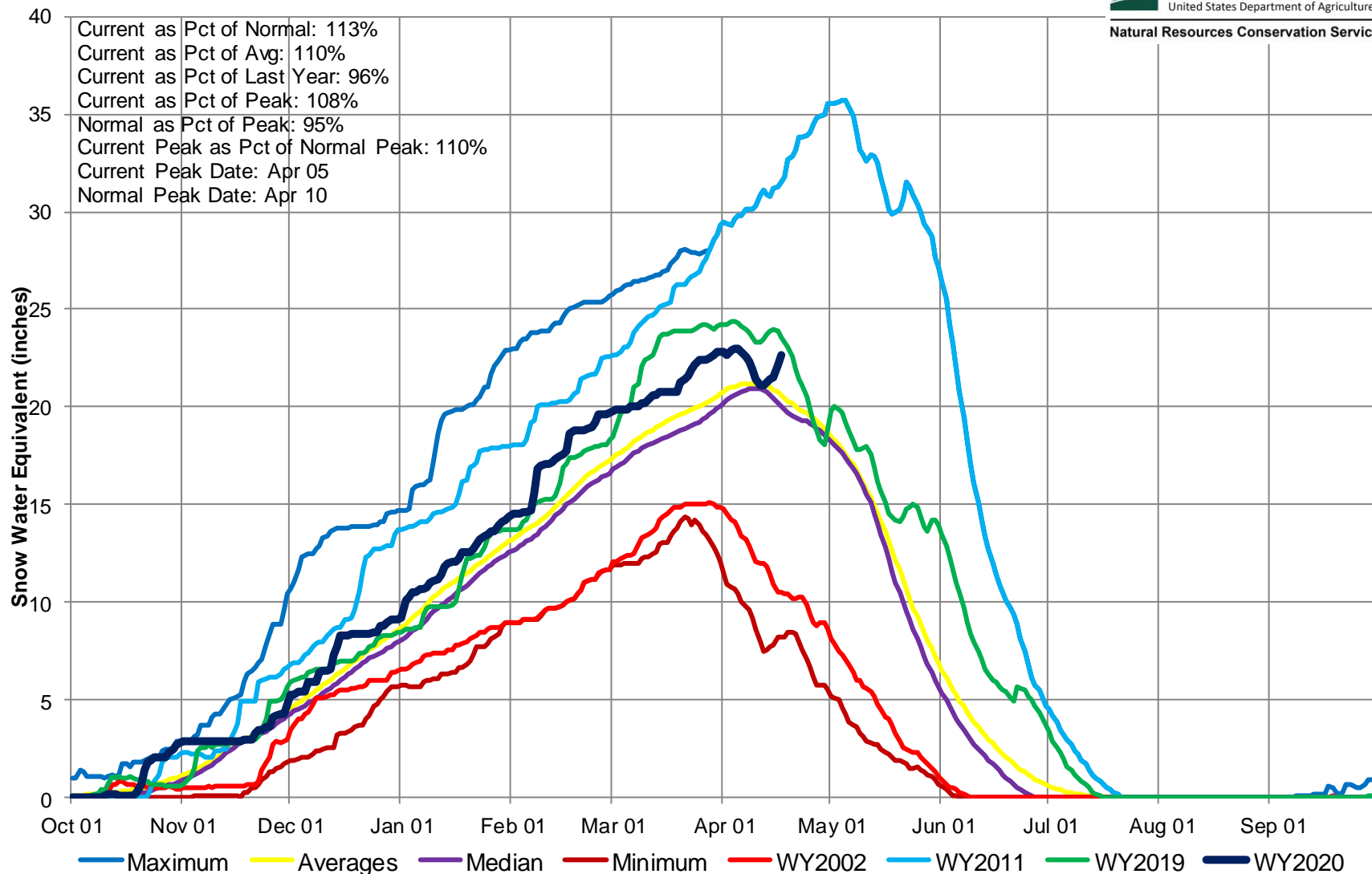
## Yampa and White River Basins High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of Apr 17, 2020*



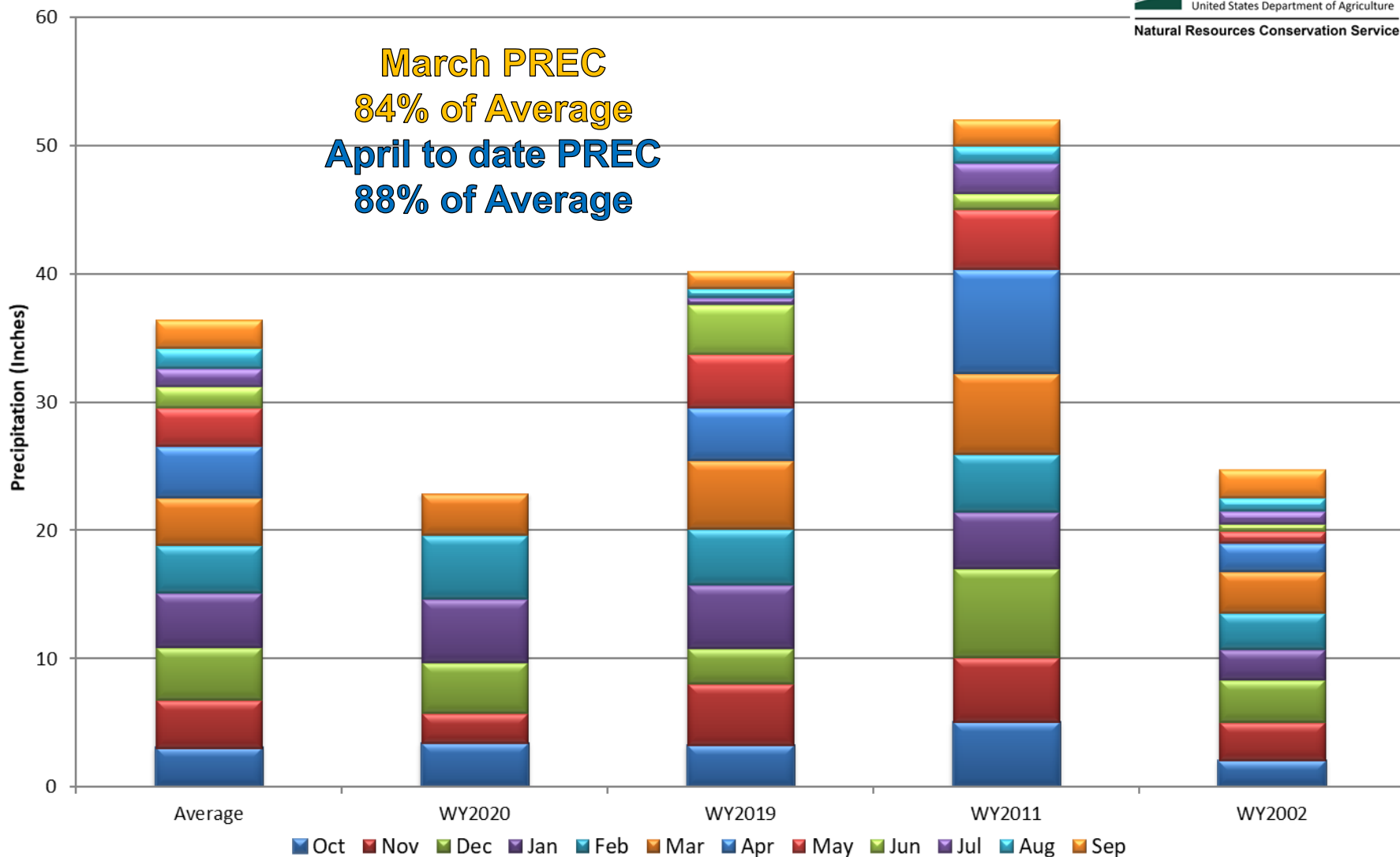
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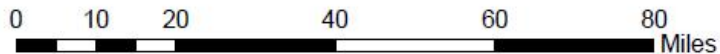
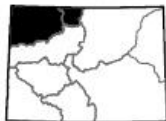
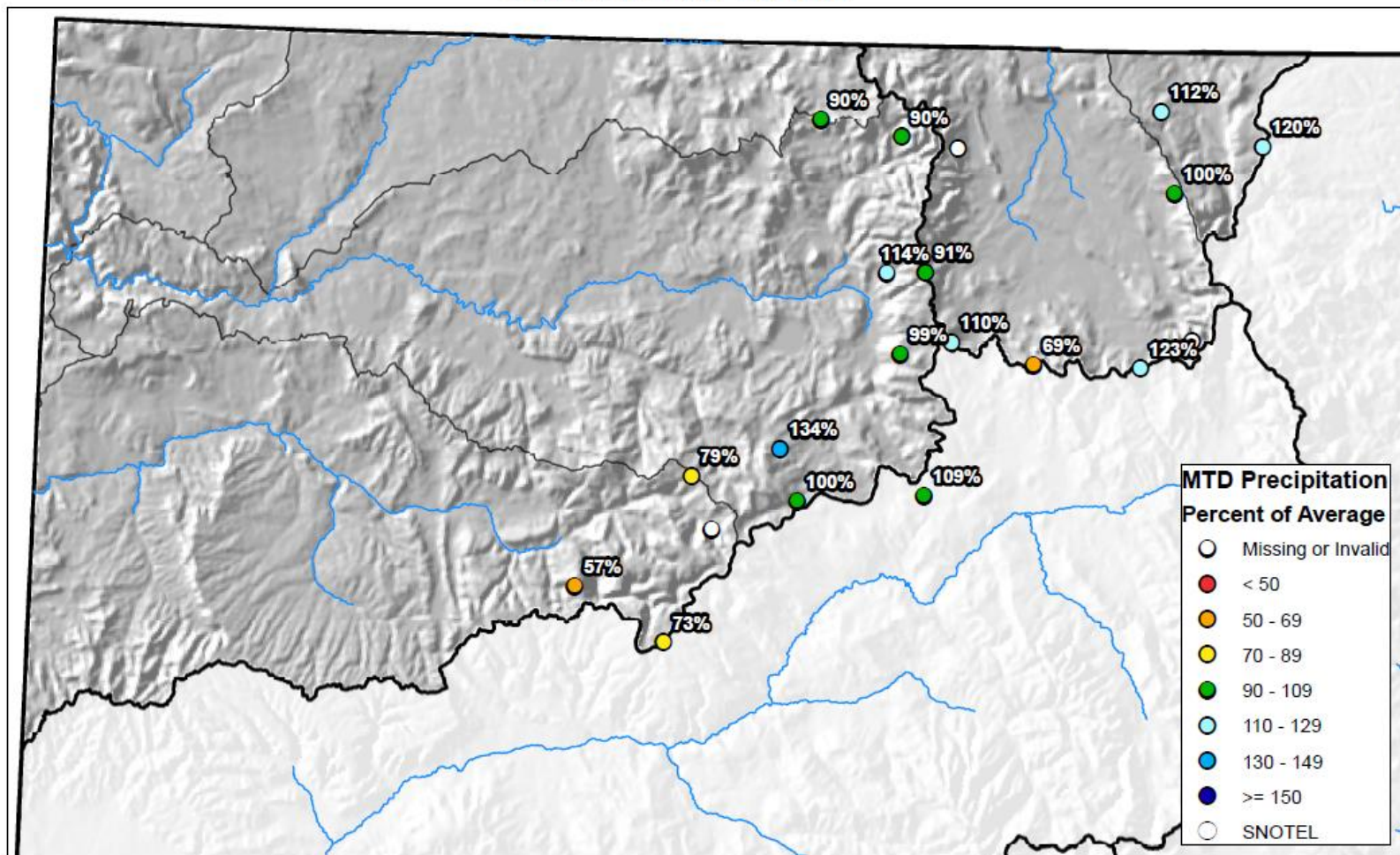


## Yampa and White River Basins High/Low Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of Apr 17, 2020*



## Yampa, White, and North Platte River Basins Month to Date Precipitation Summary Current as of Apr 20, 2020



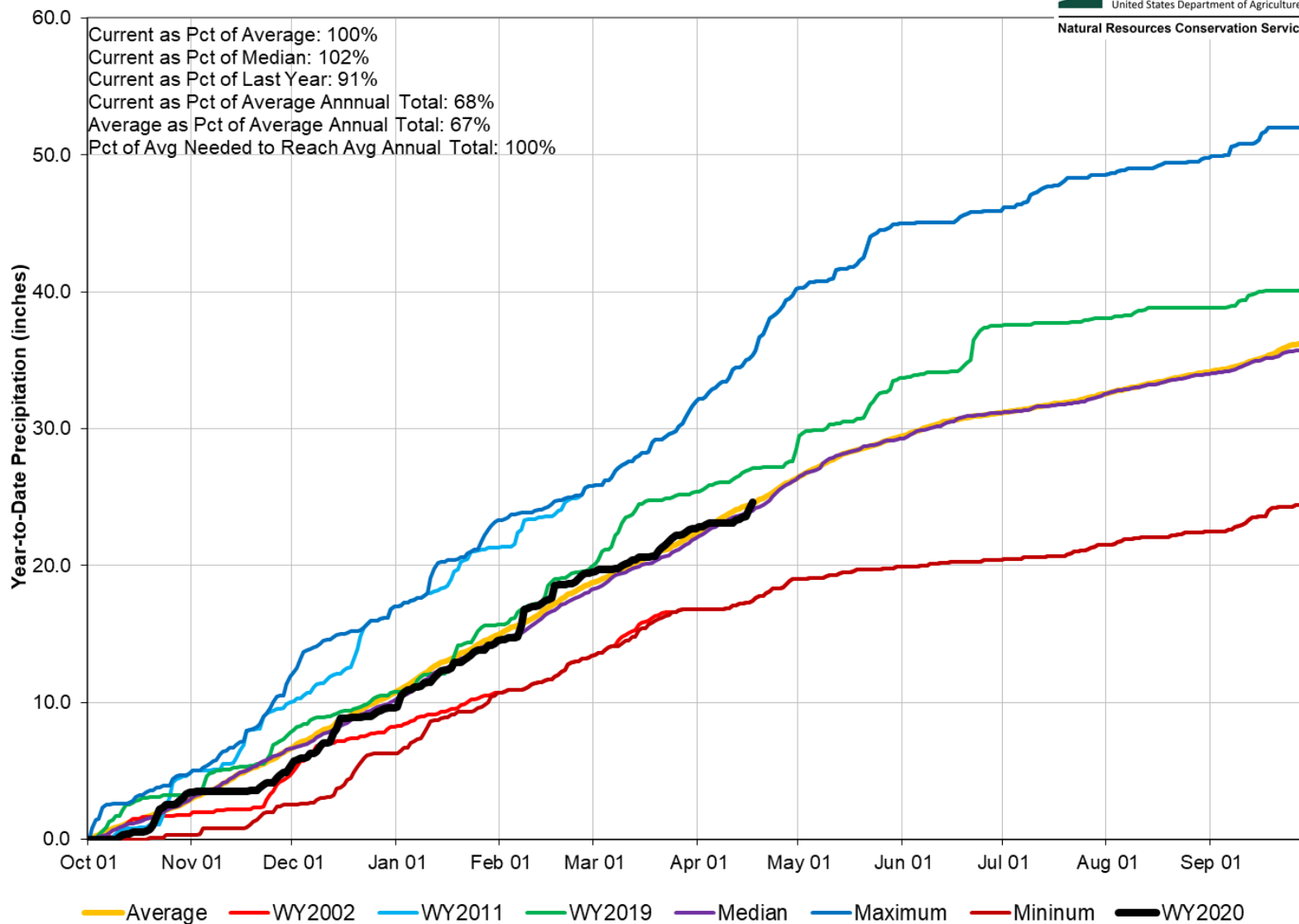
## Yampa and White River Basins High/Low Year-to-Date Precipitation Summary

*Based on Provisional SNOTEL data as of Apr 17, 2020*



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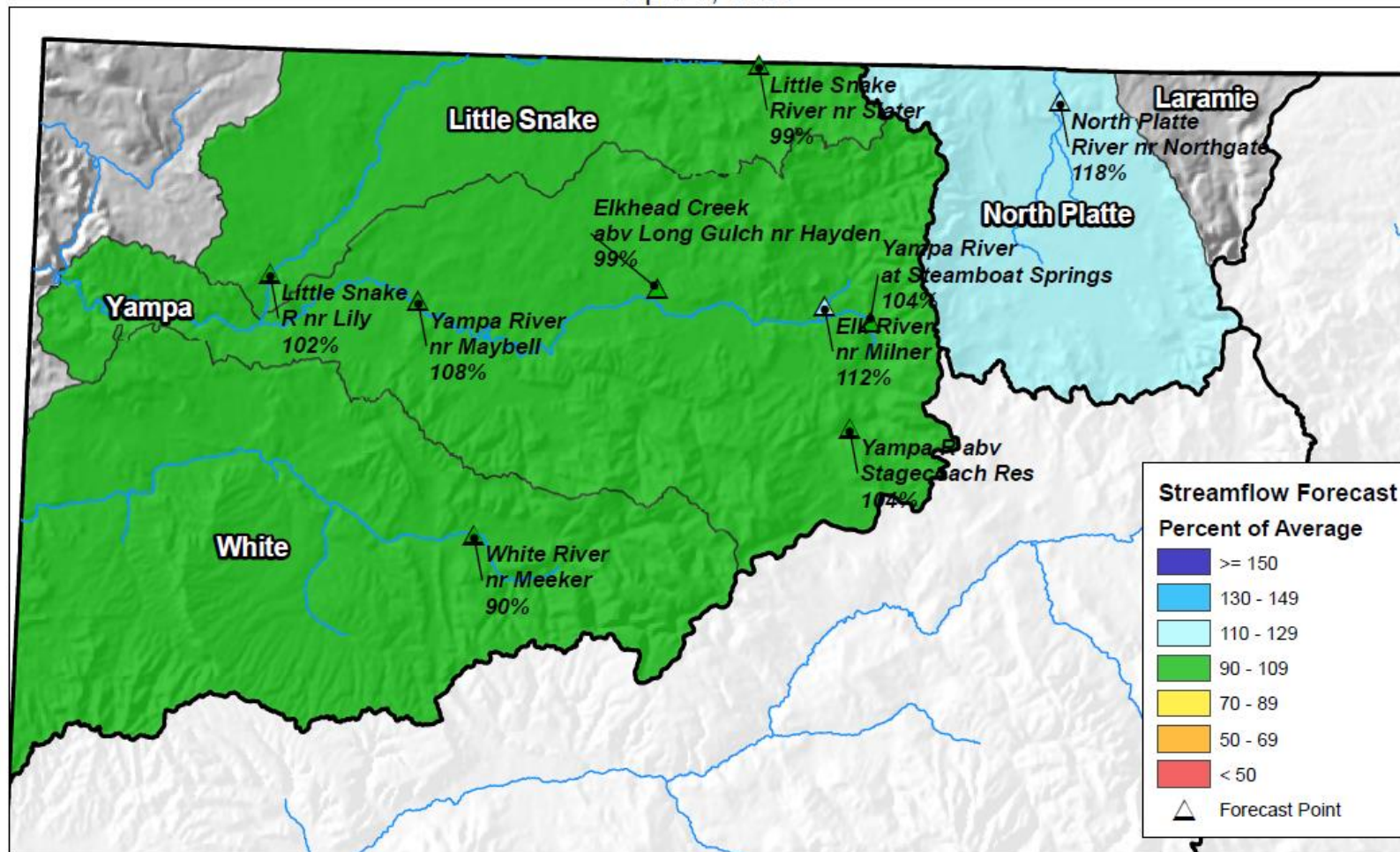
Natural Resources Conservation Service



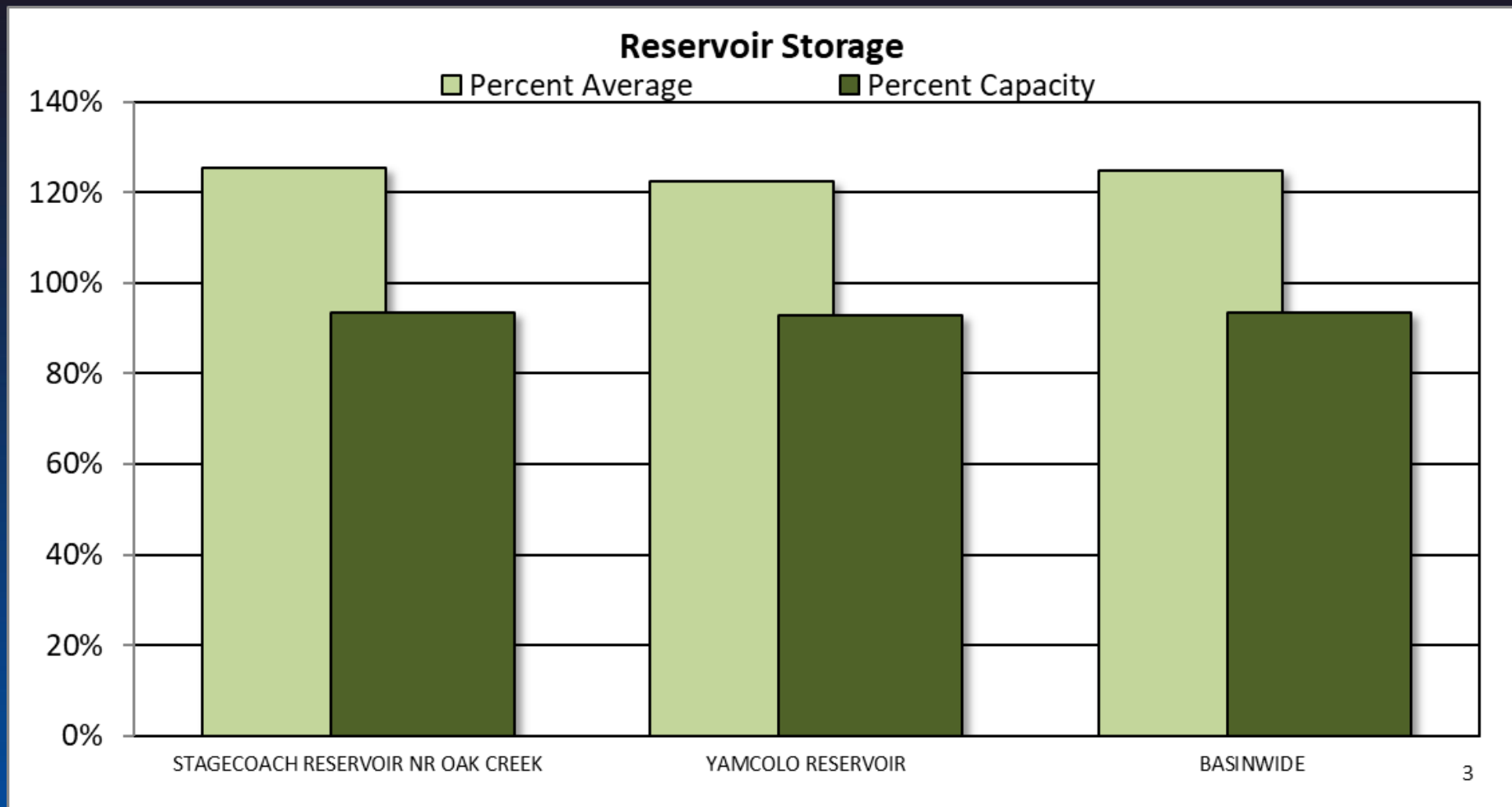
## Yampa, White, and North Platte River Basins

### Streamflow Forecast Summary

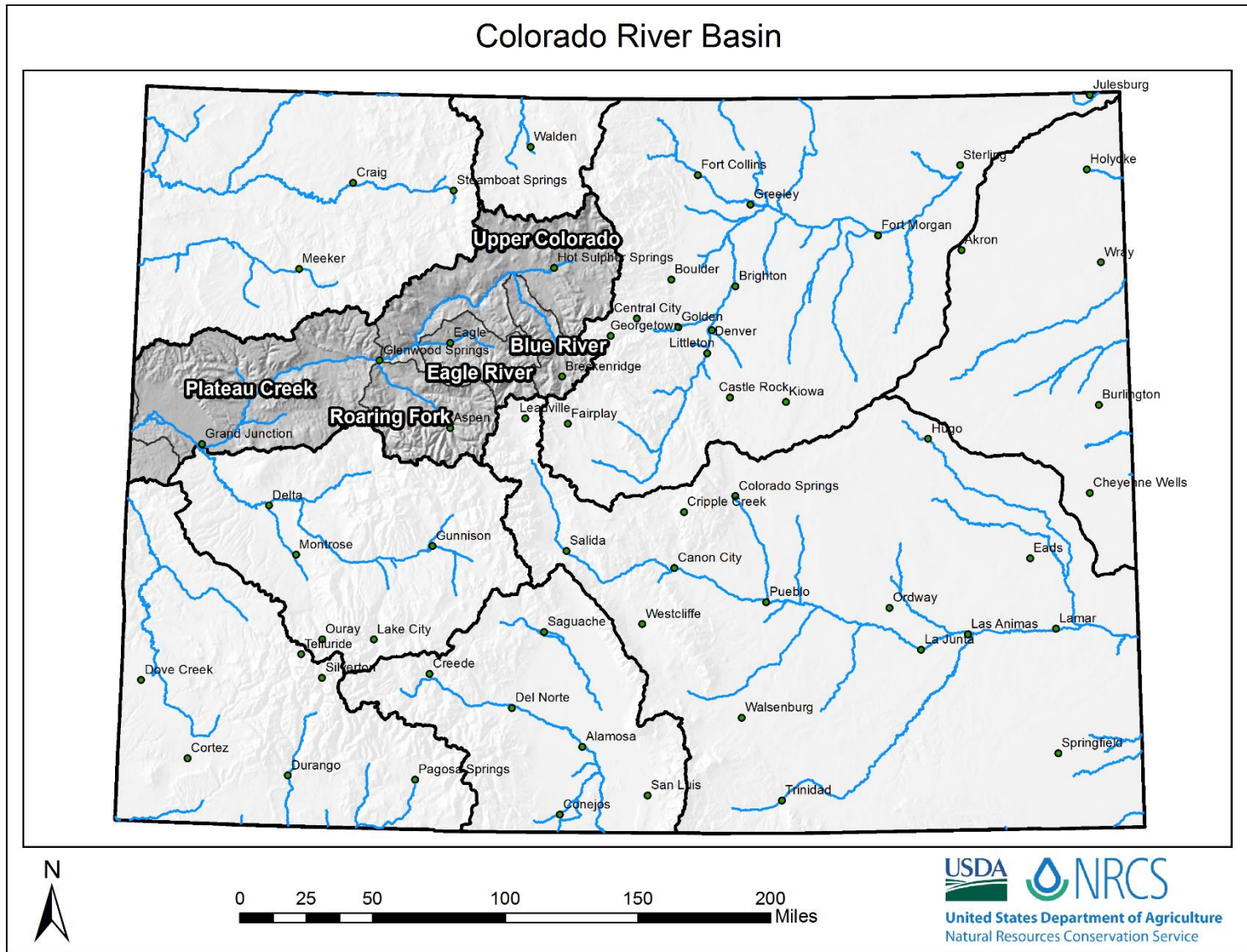
April 1, 2020



0 10 20 40 60 80 Miles



## Major Basin Summary





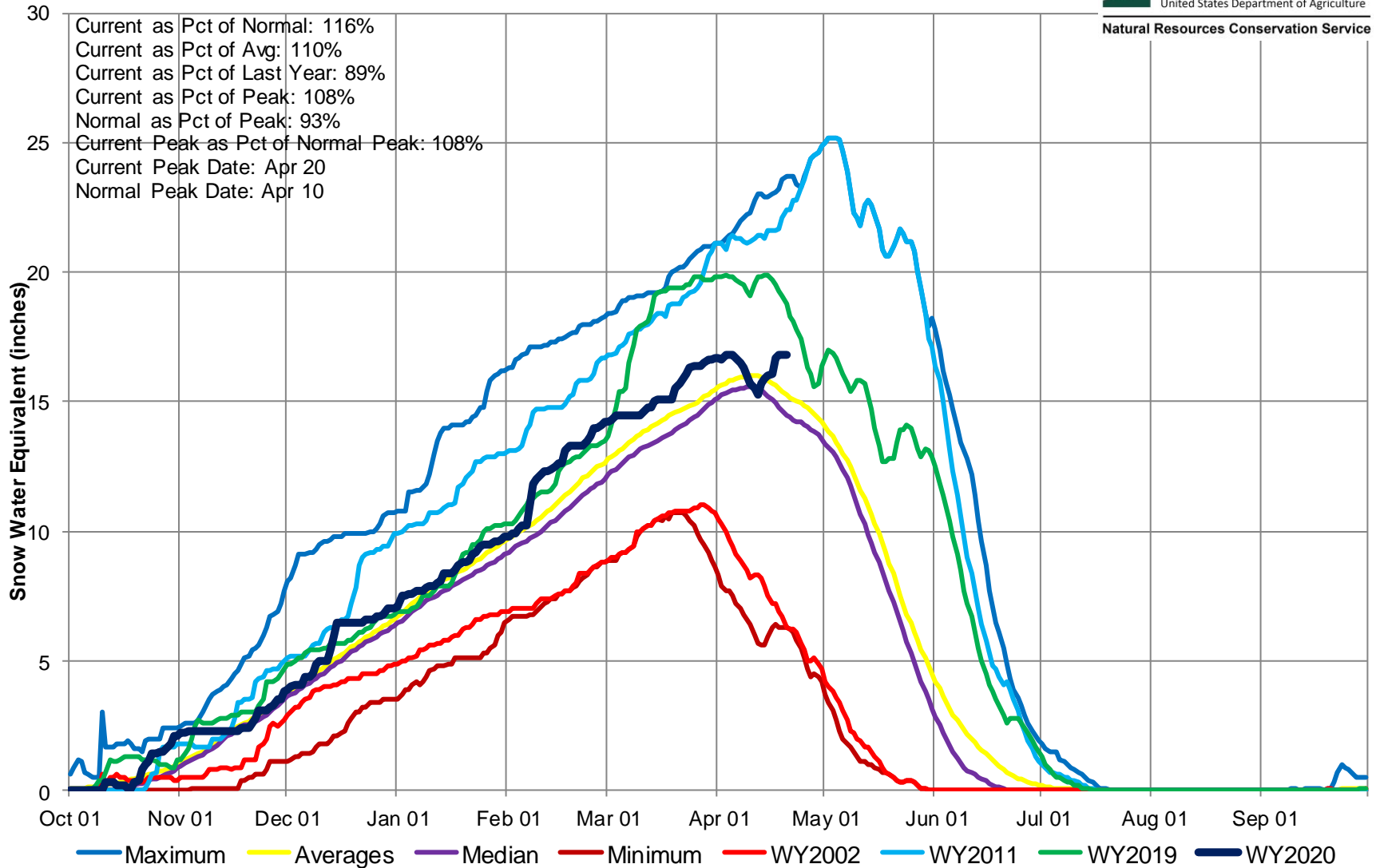
## Upper Colorado River Basin High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of Apr 20, 2020*



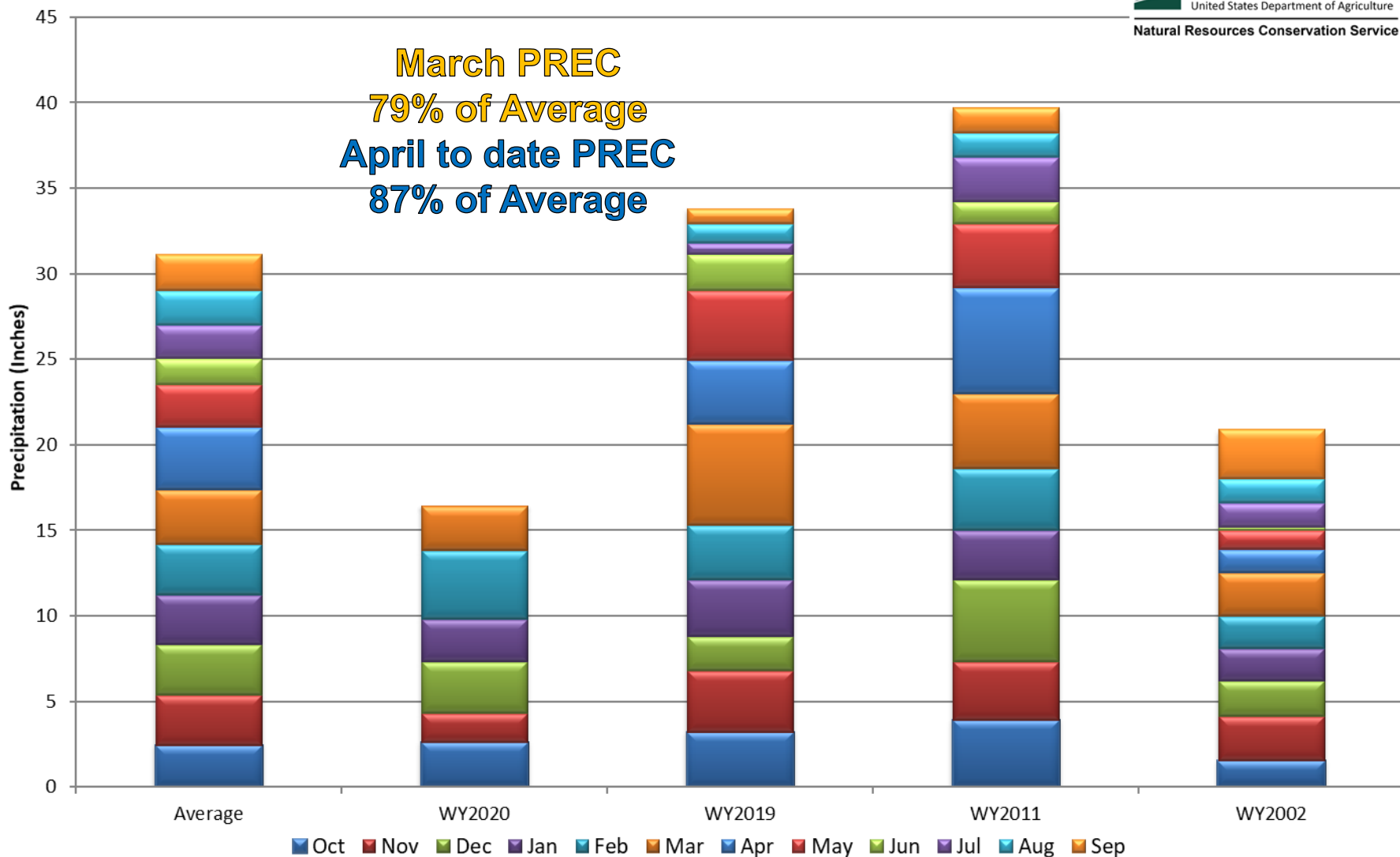
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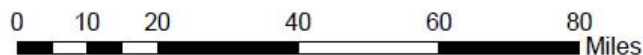
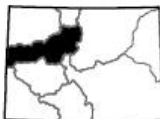
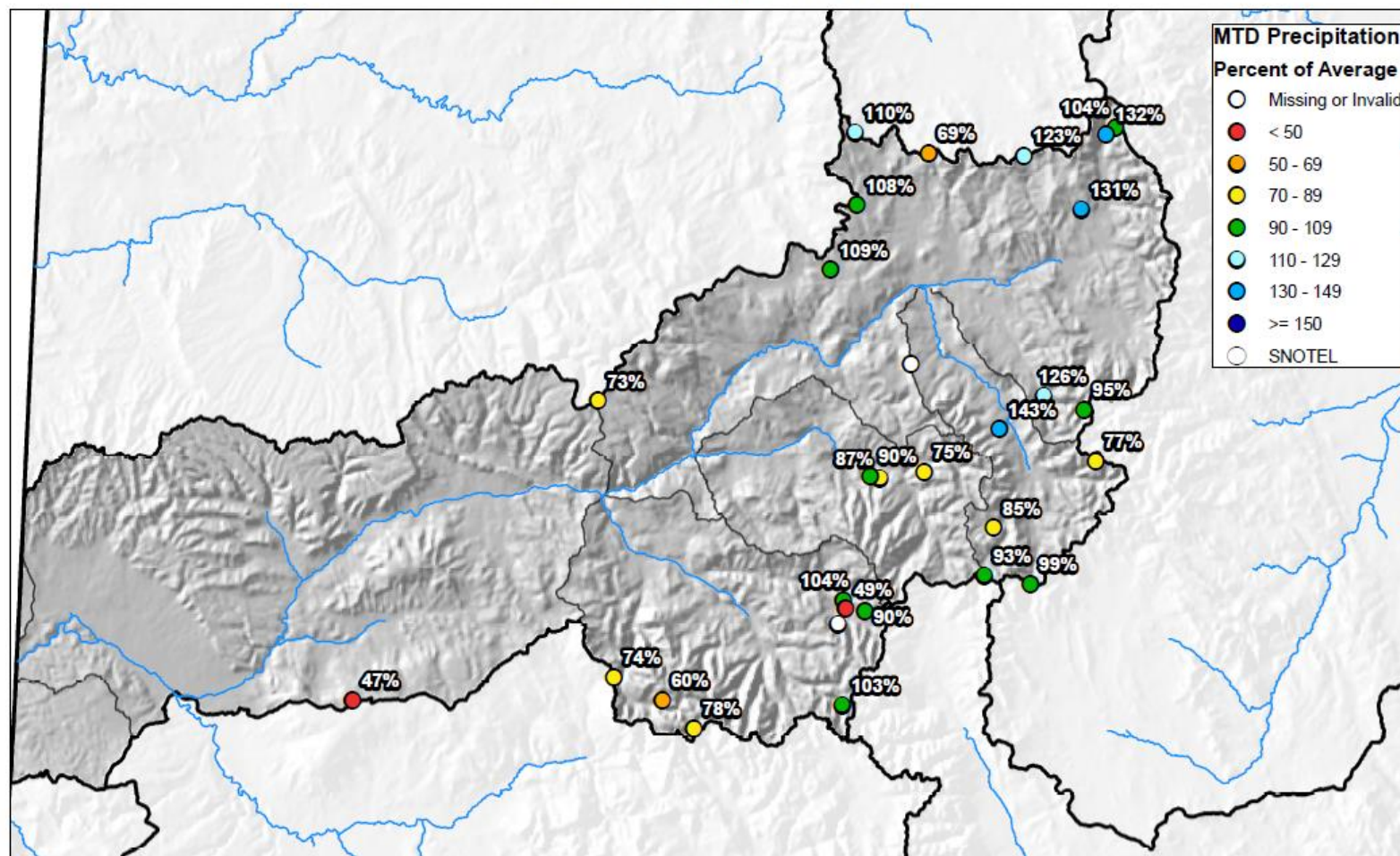
## Upper Colorado River Basin High/Low Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of Apr 17, 2020*



## Upper Colorado River Basin Month to Date Precipitation Summary

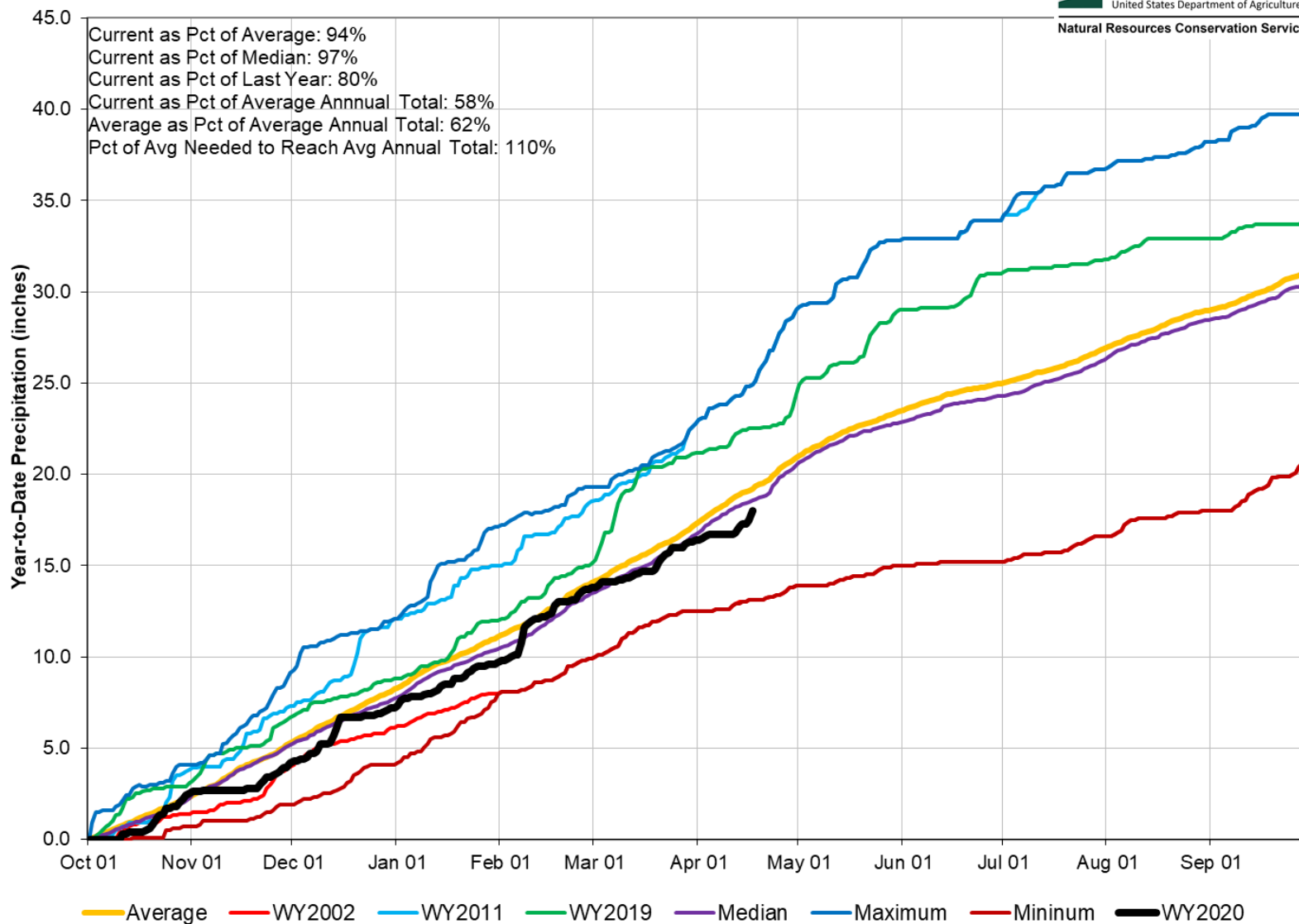
Current as of Apr 20, 2020





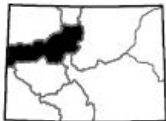
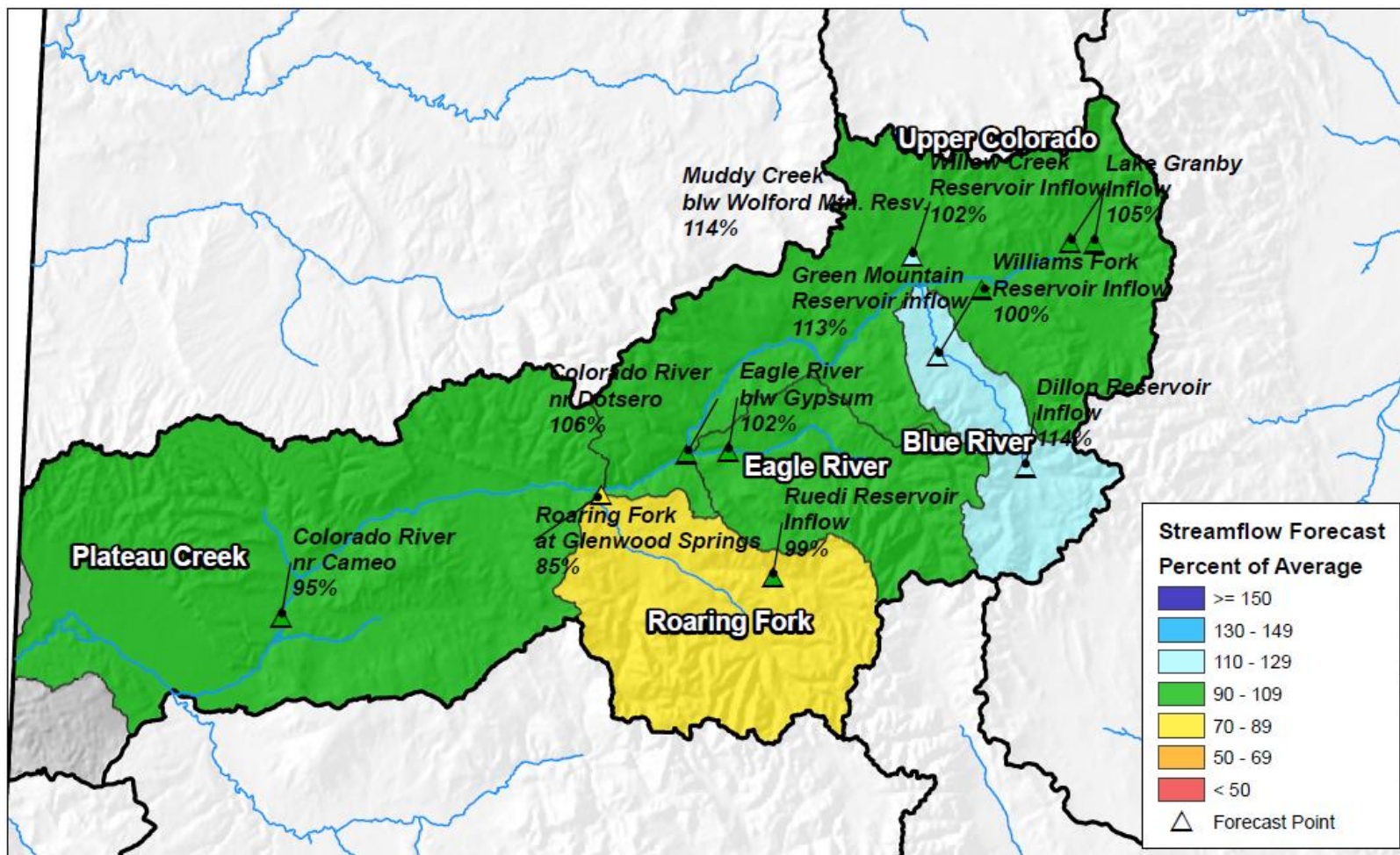
## Upper Colorado River Basin High/Low Year-to-Date Precipitation Summary

*Based on Provisional SNOTEL data as of Apr 17, 2020*



## Upper Colorado River Basin Streamflow Forecast Summary

April 1, 2020

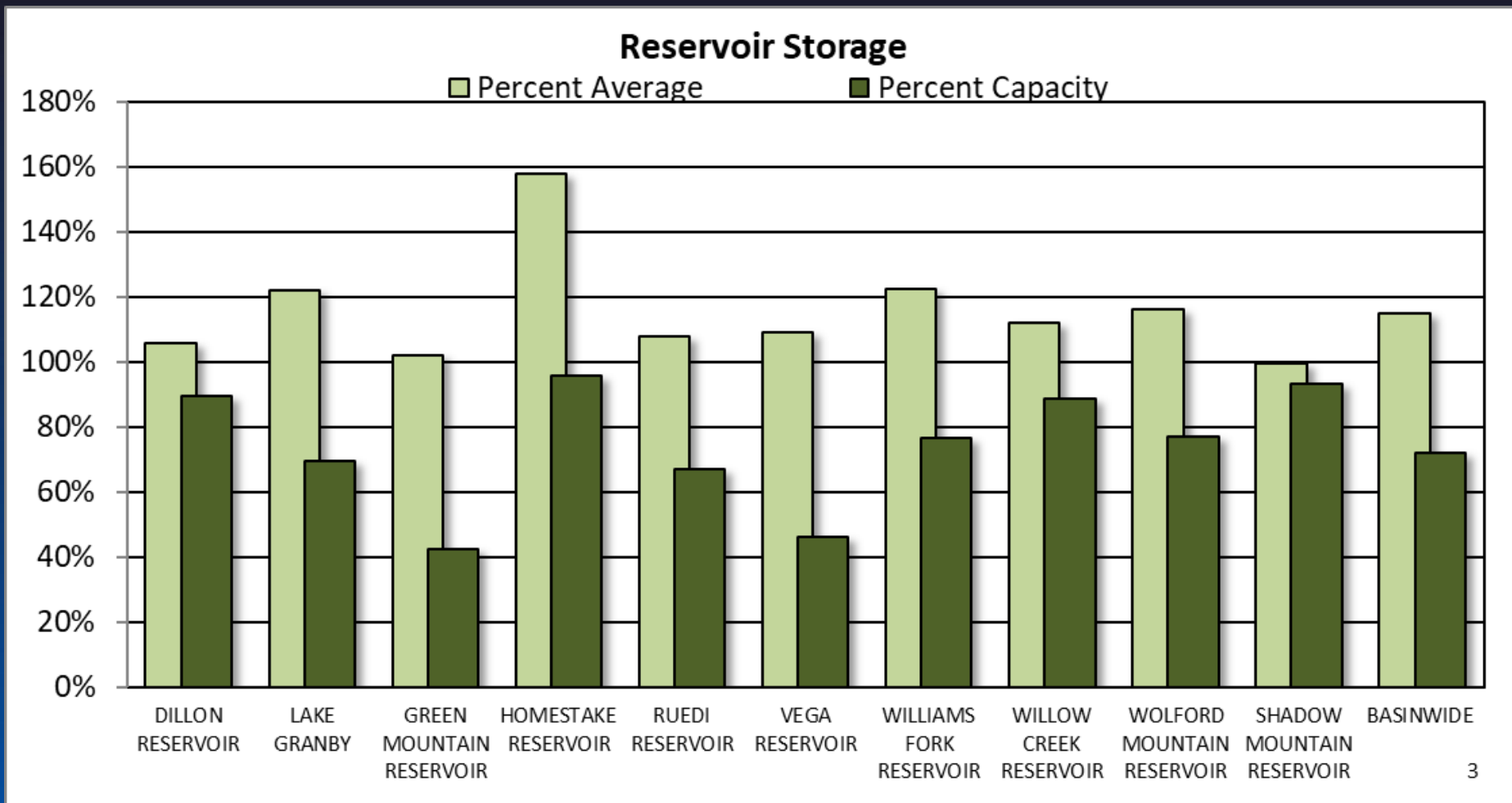


0 10 20 40 60 80 Miles

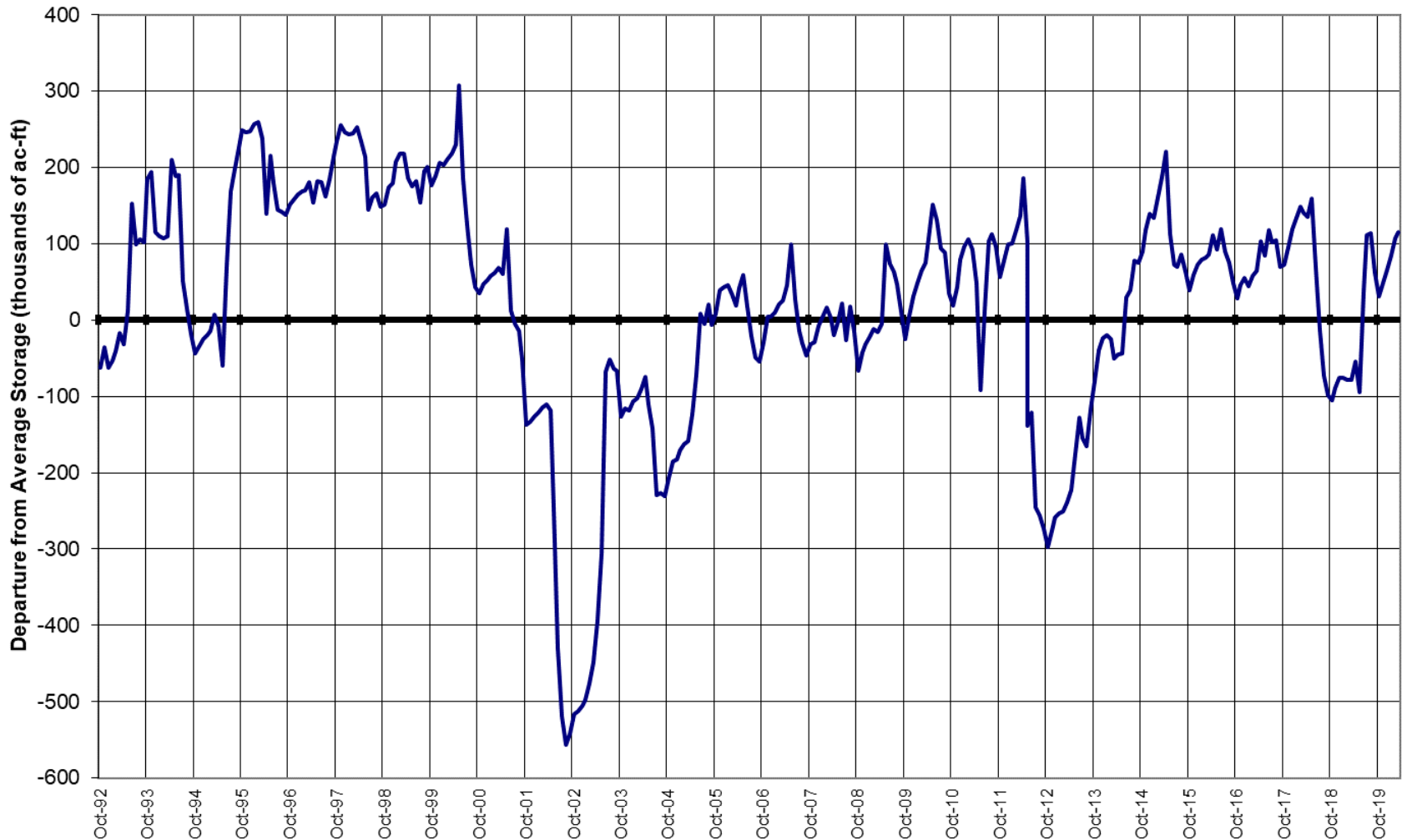


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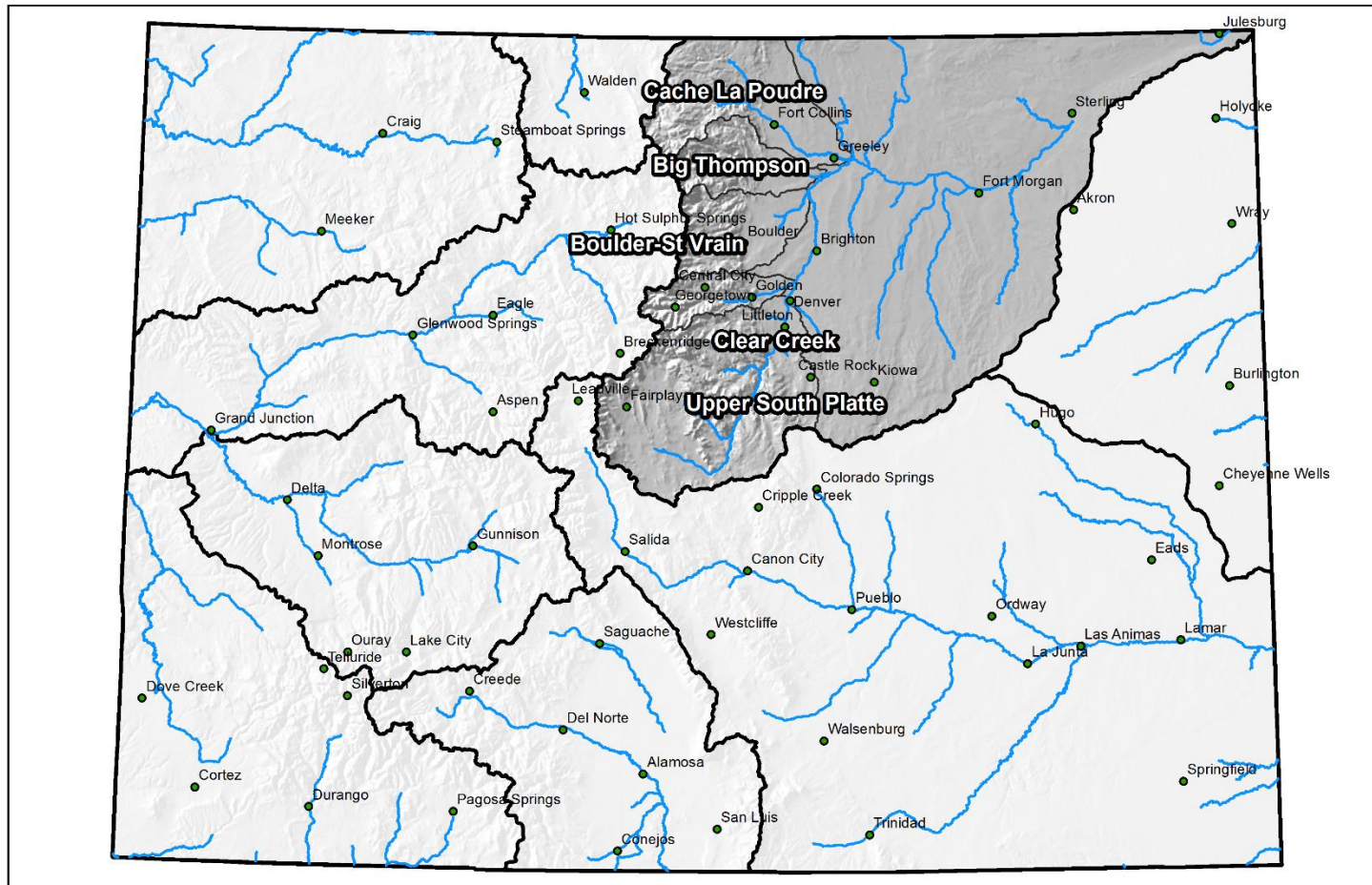


## COLORADO RIVER BASIN Reservoir Storage Departure from Average



## Major Basin Summary

### South Platte River Basin



0 25 50 100 150 200 Miles

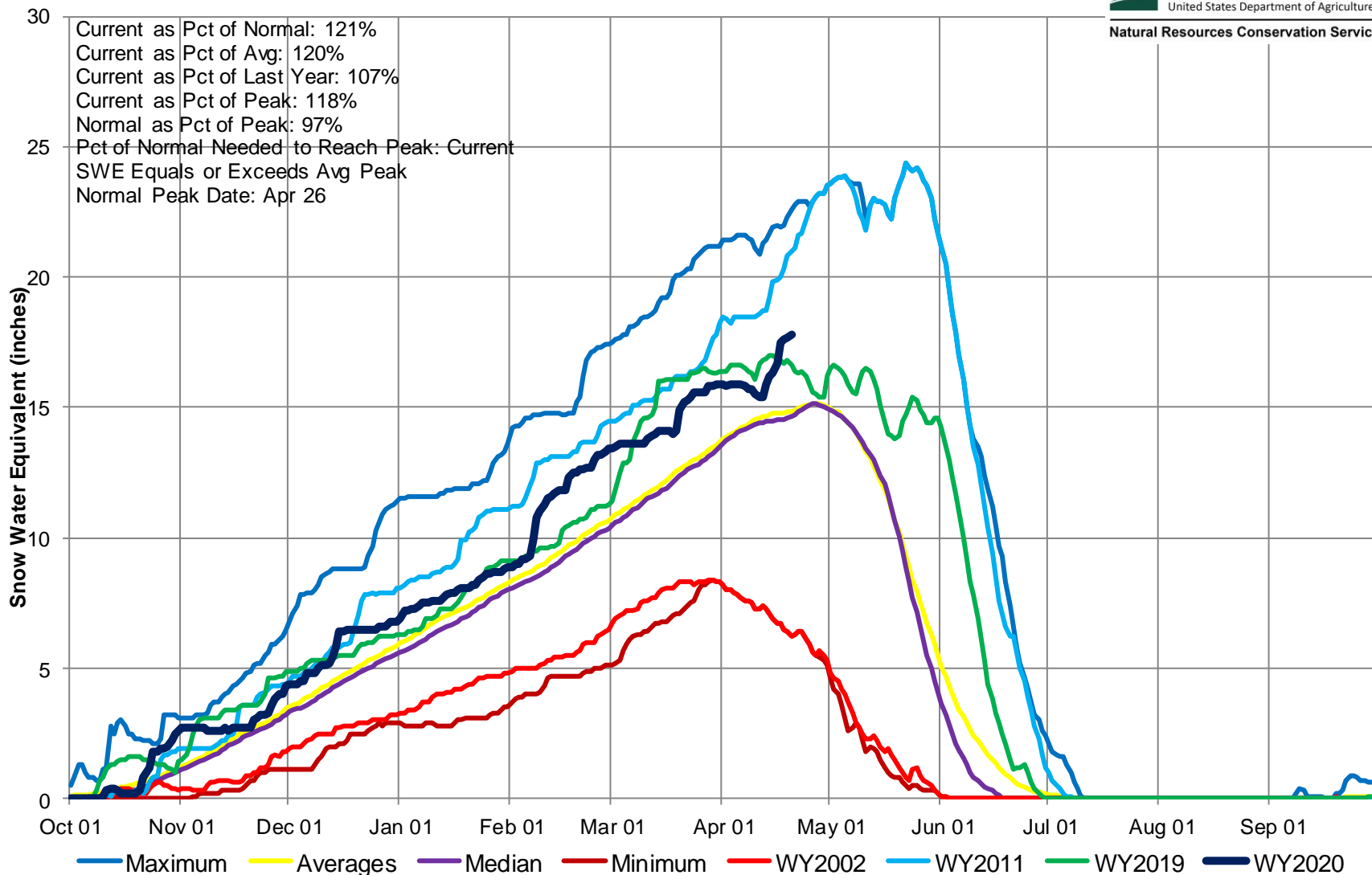
## South Platte River Basin High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of Apr 20, 2020*



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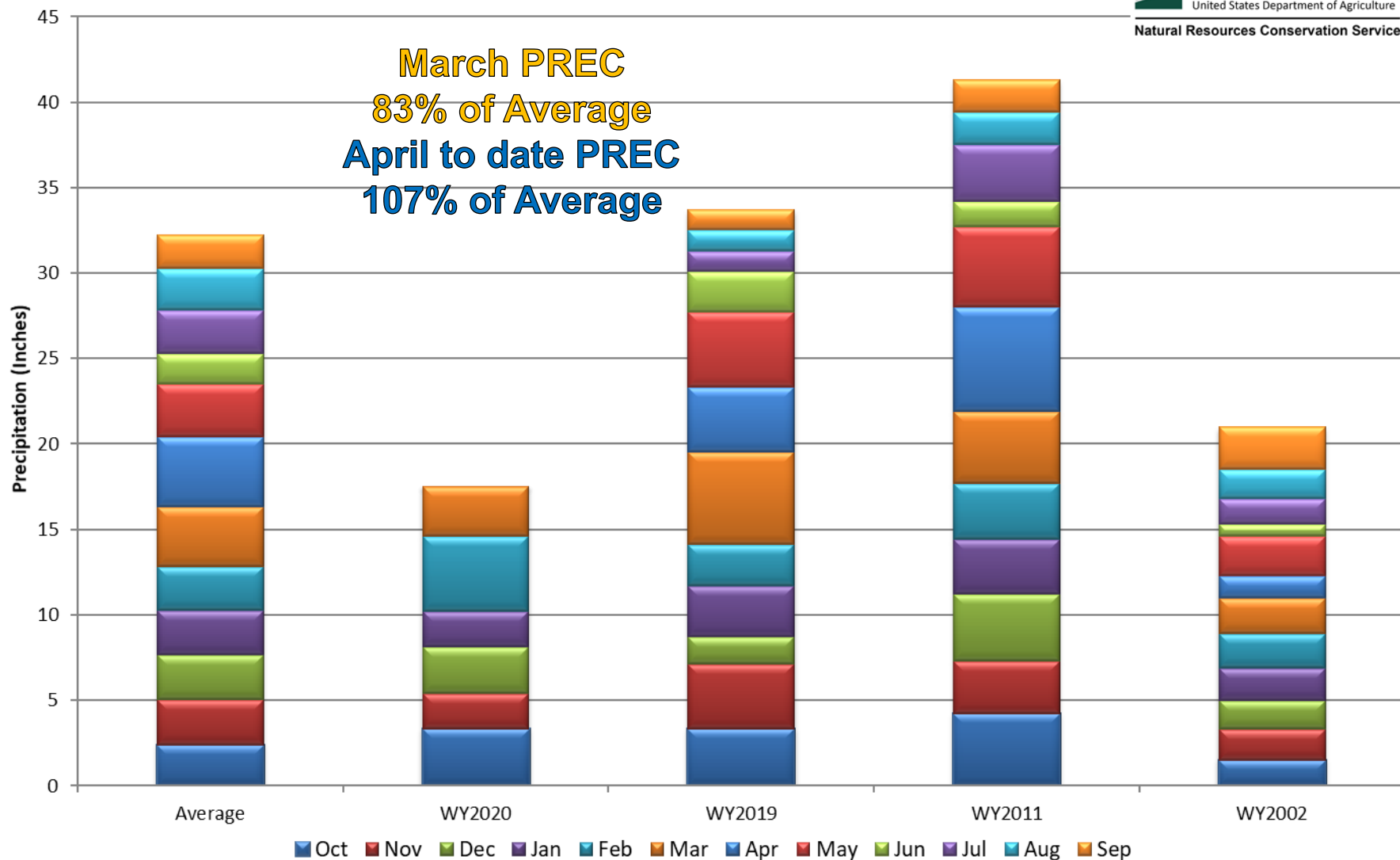
## South Platte River Basin High/Low Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of Apr 17, 2020*



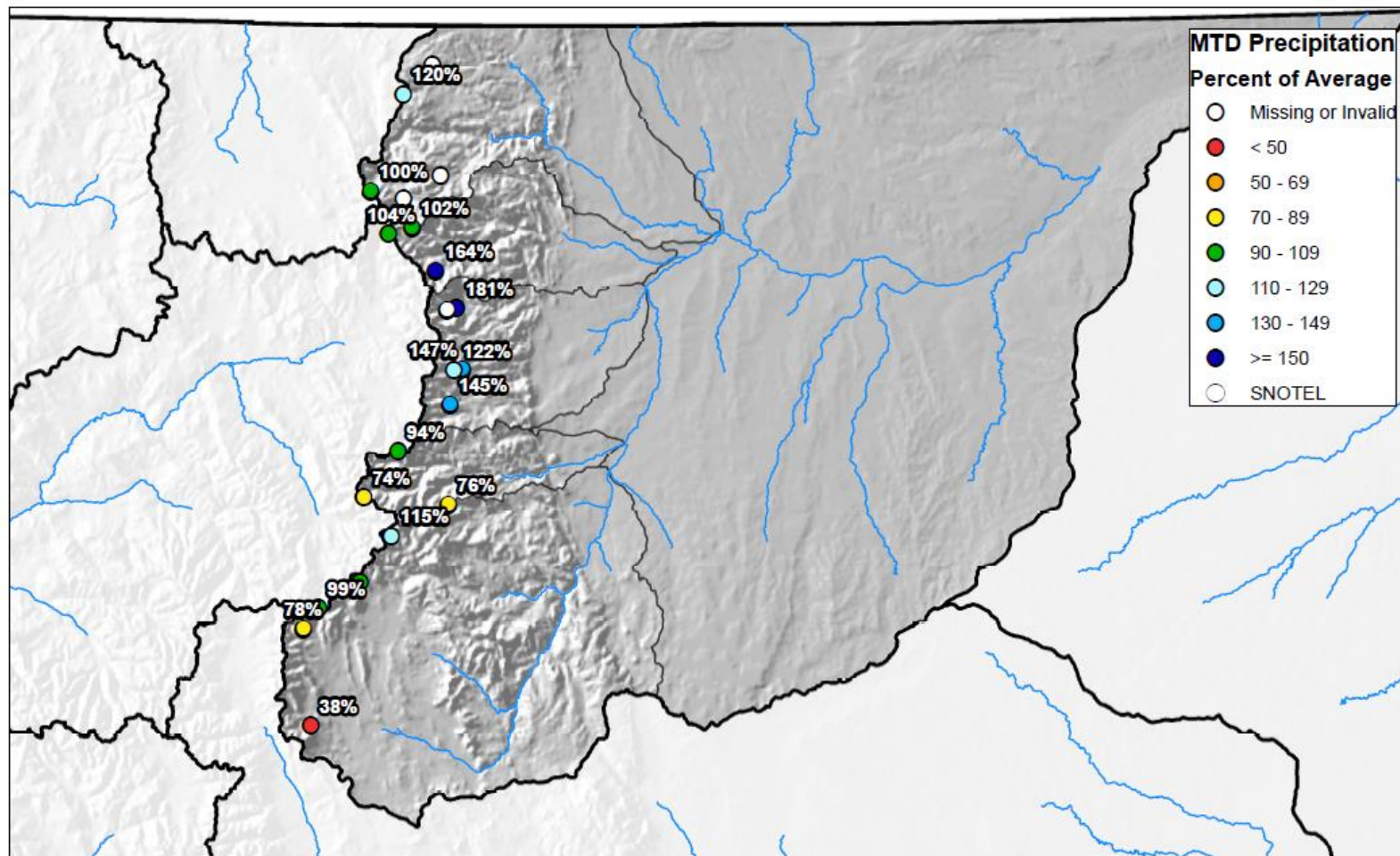
United States Department of Agriculture

Natural Resources Conservation Service



## South Platte River Basin Month to Date Precipitation Summary

Current as of Apr 20, 2020



0 10 20 40 60 80 Miles

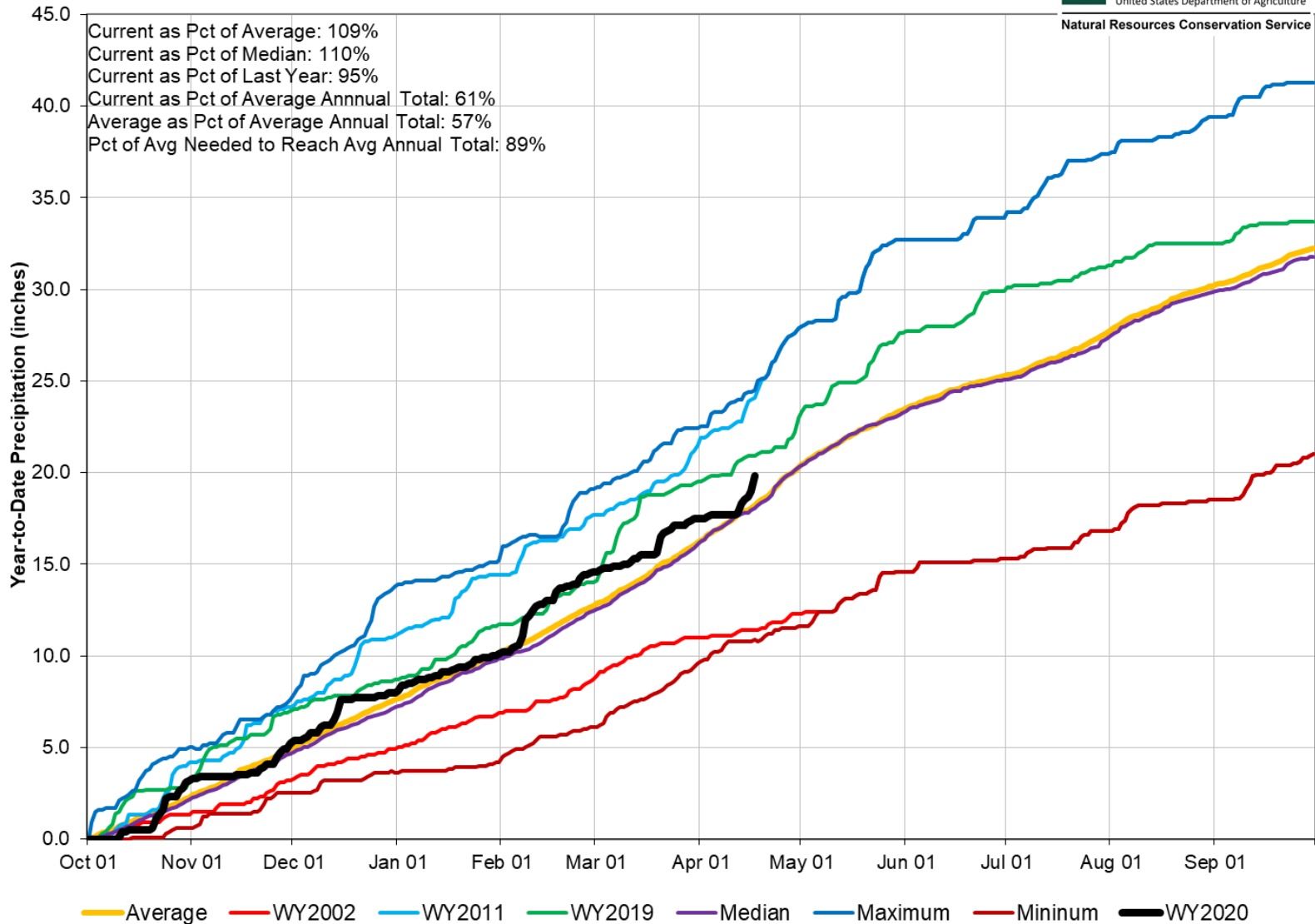
## South Platte River Basin High/Low Year-to-Date Precipitation Summary

*Based on Provisional SNOTEL data as of Apr 17, 2020*



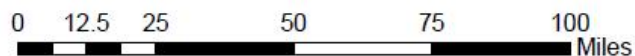
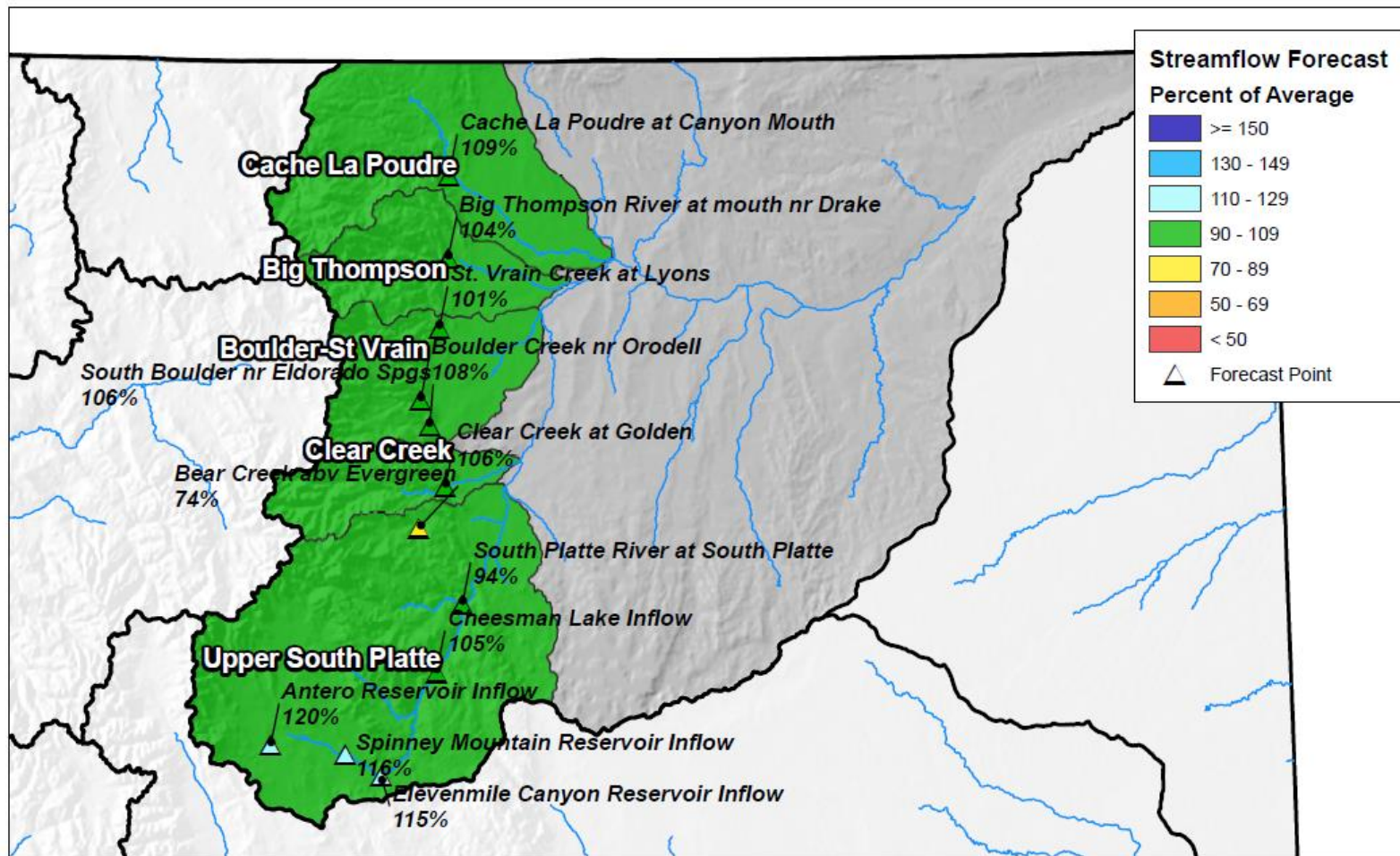
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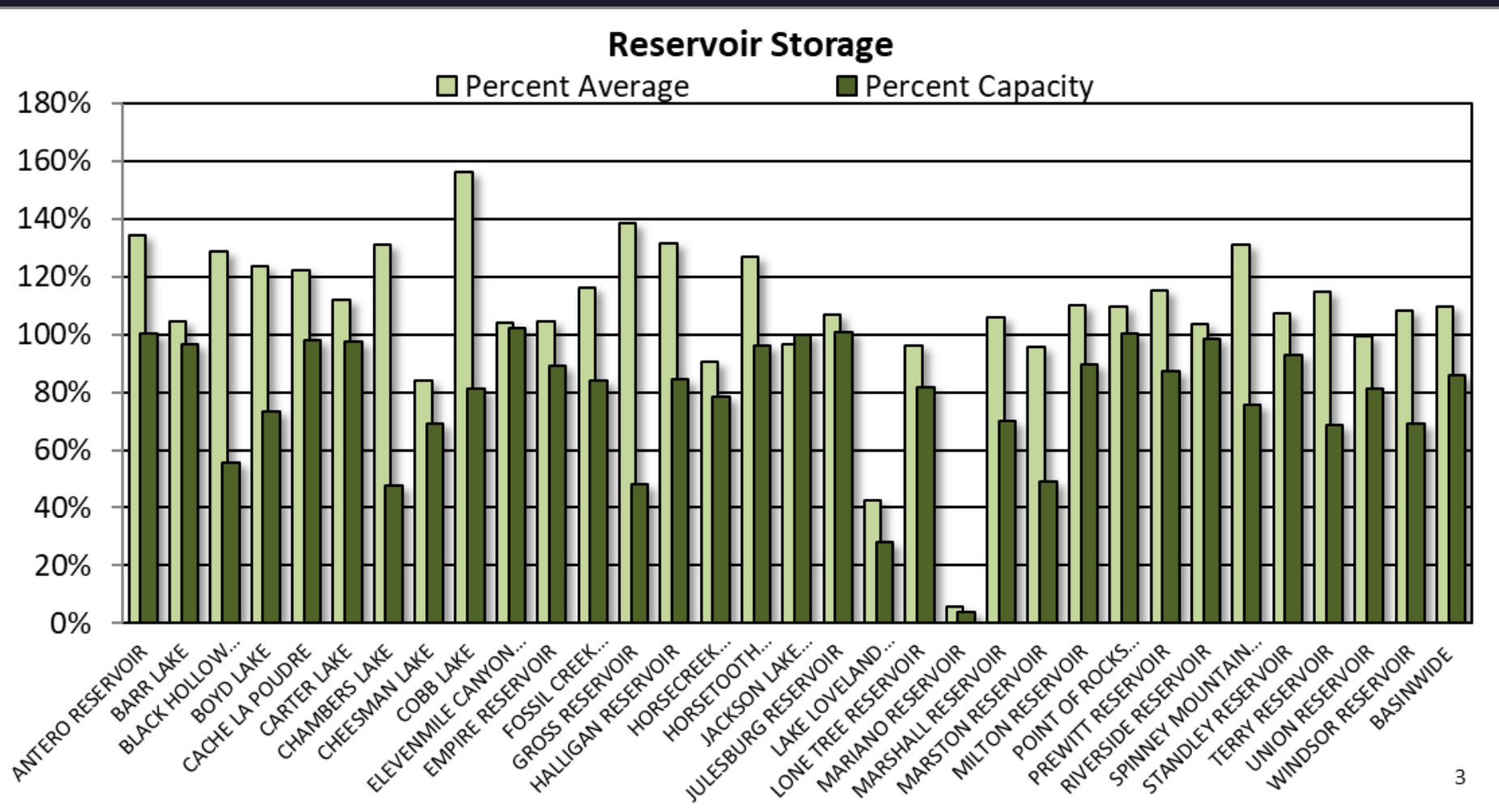
Natural Resources Conservation Service



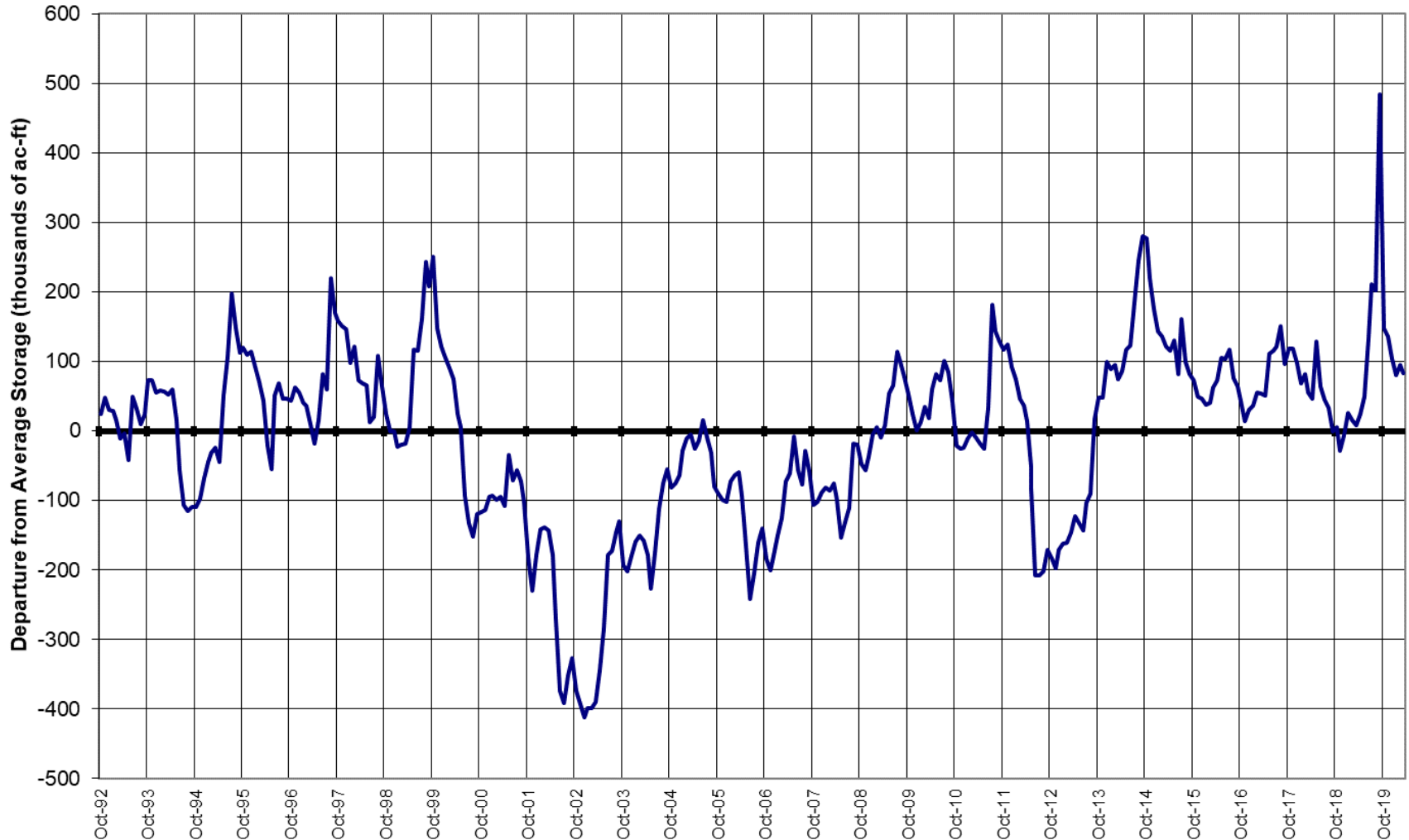
## South Platte River Basin Streamflow Forecast Summary

April 1, 2020



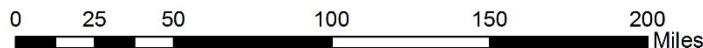
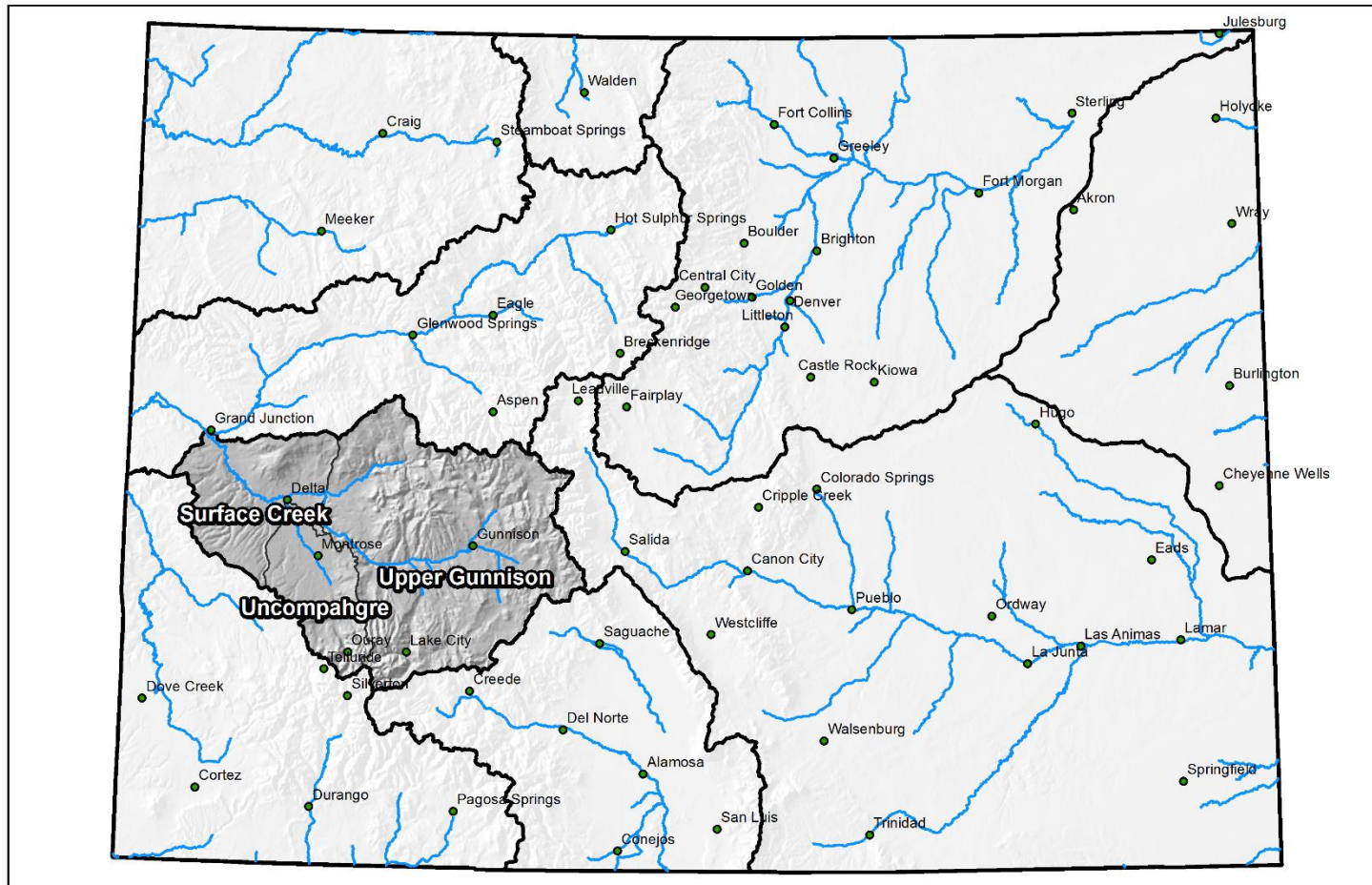


## SOUTH PLATTE RIVER BASIN Reservoir Storage Departure from Average



## Major Basin Summary

Gunnison River Basin





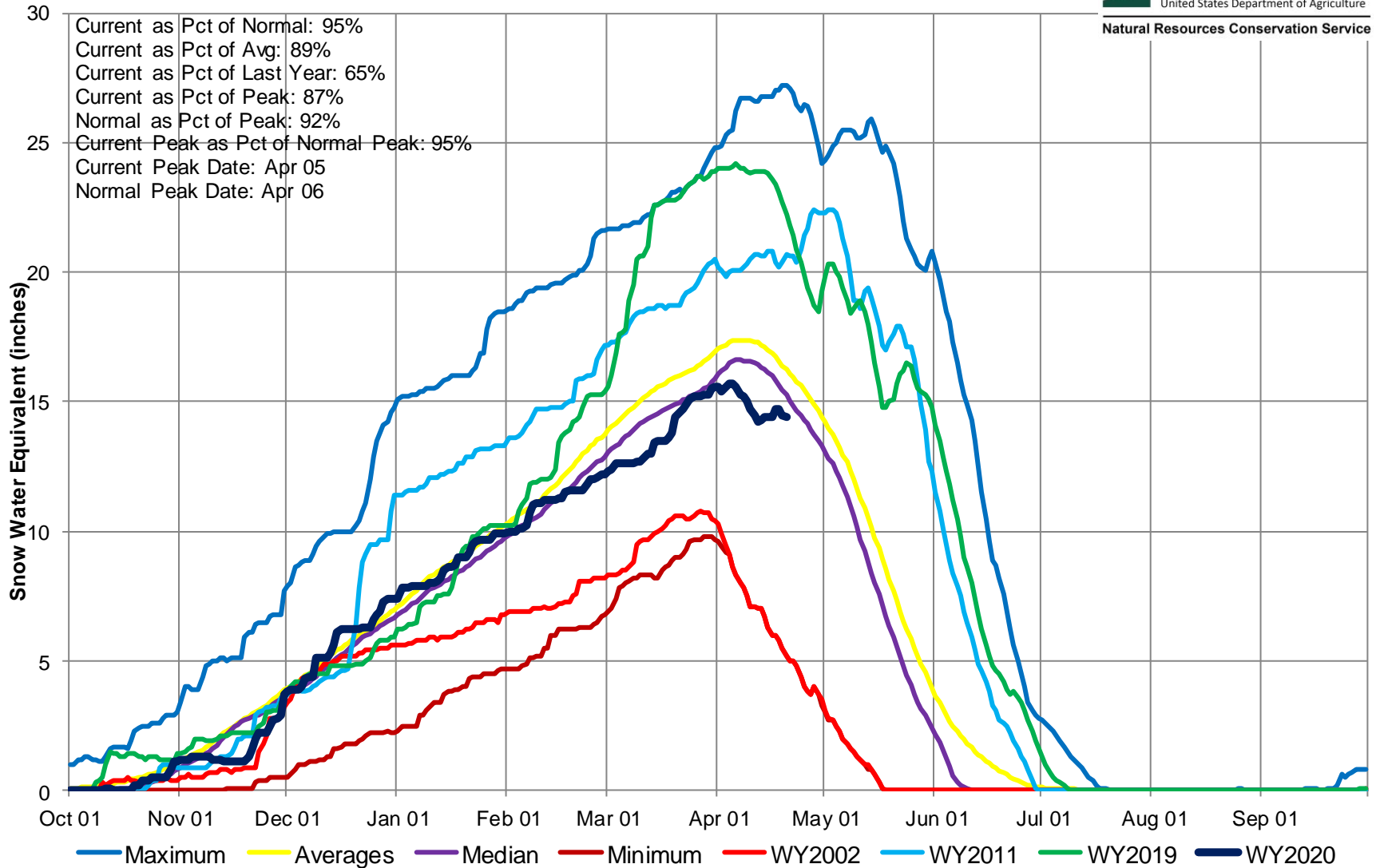
## Gunnison River Basin High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of Apr 20, 2020*



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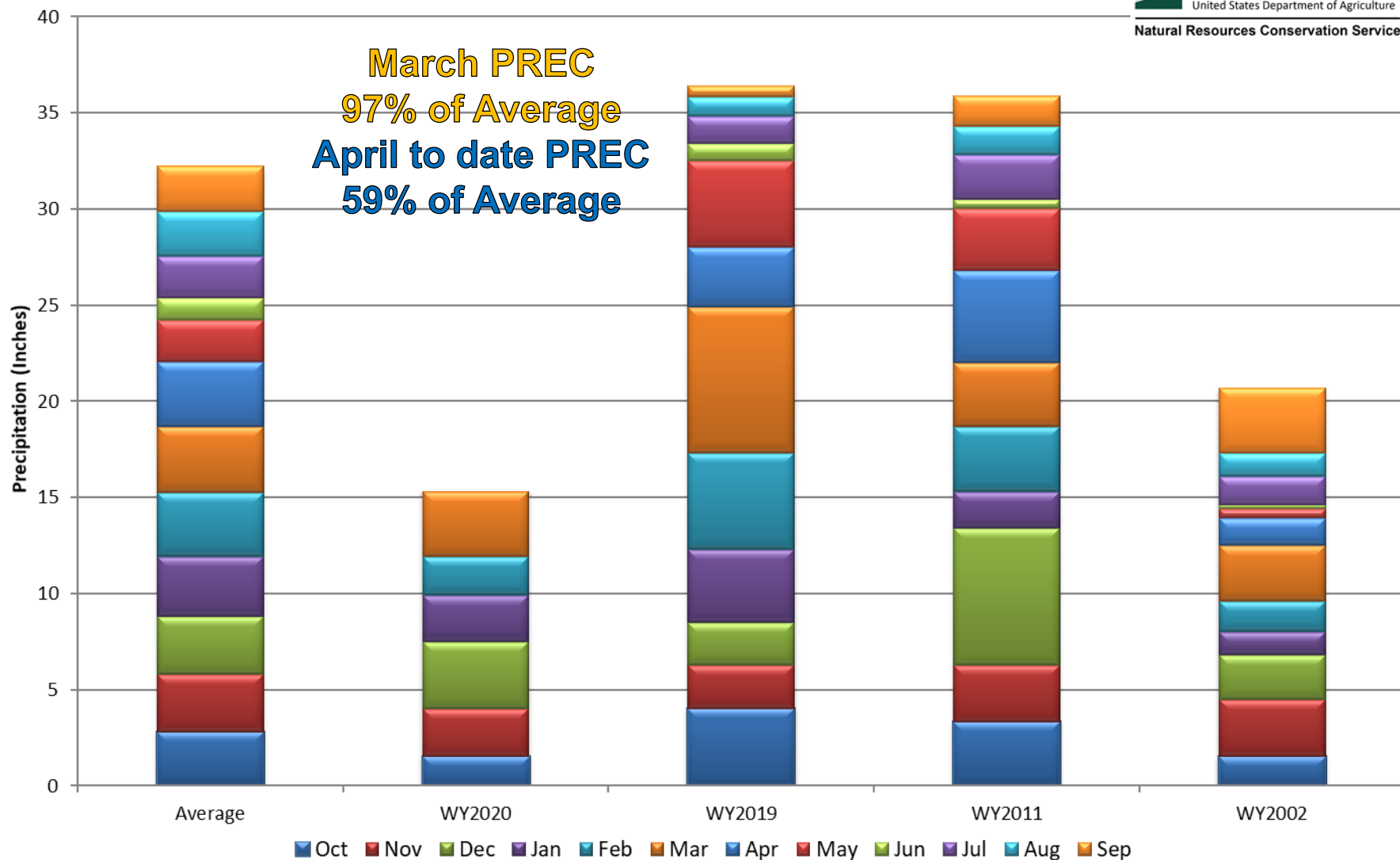
## Gunnison River Basin High/Low Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of Apr 17, 2020*



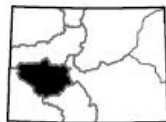
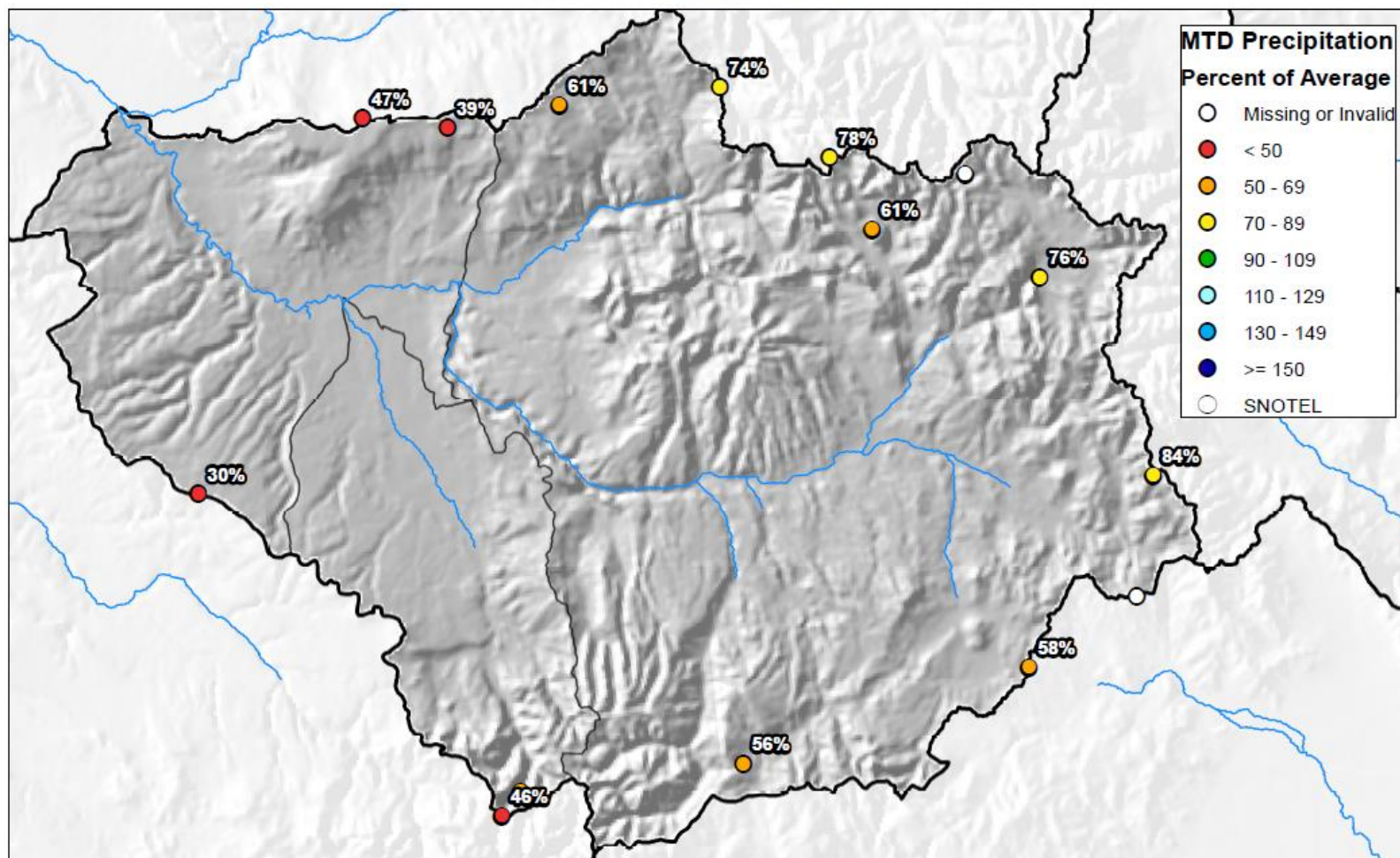
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## Gunnison River Basin Month to Date Precipitation Summary

Current as of Apr 20, 2020



0 5 10 20 30 40 Miles

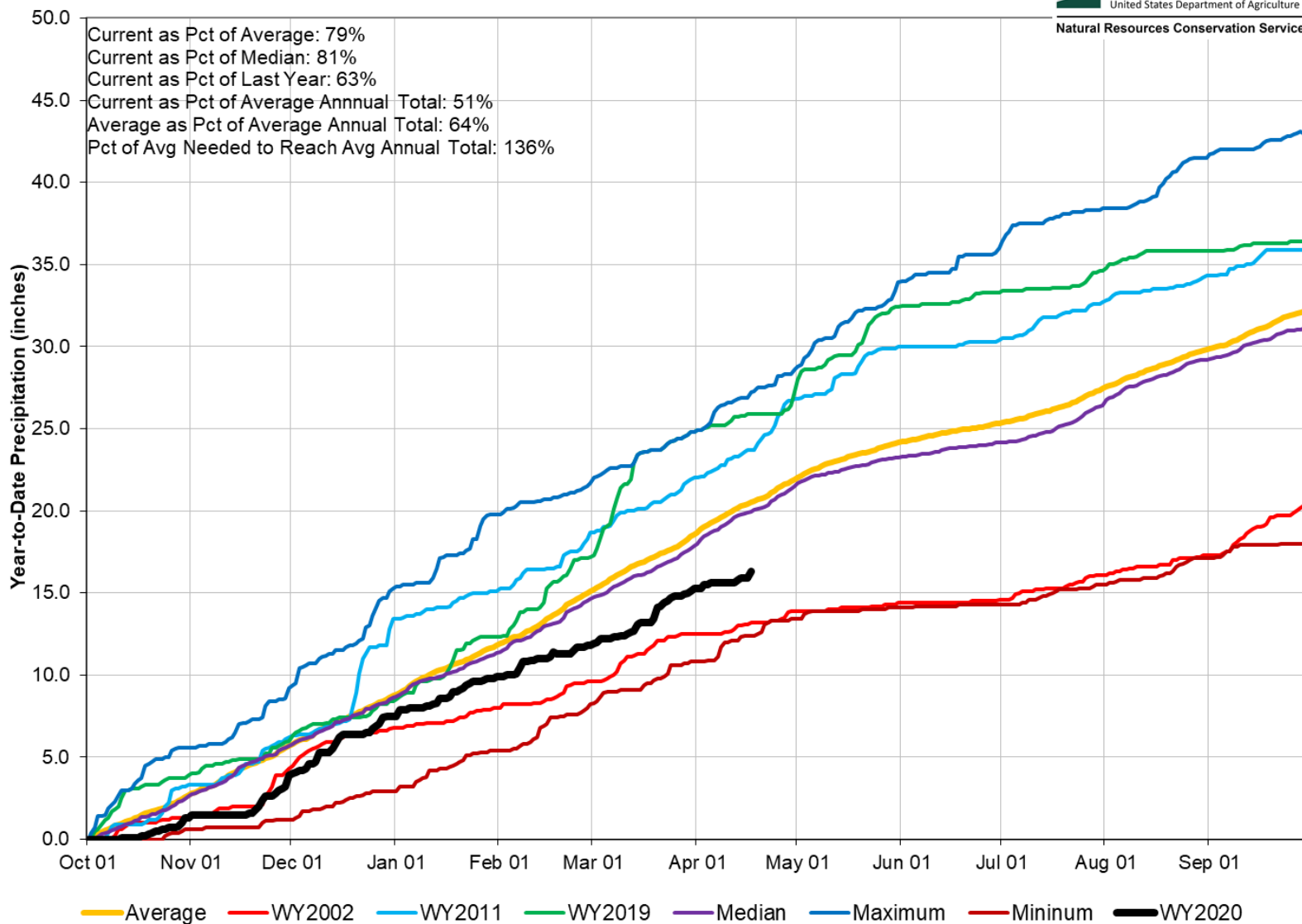
## Gunnison River Basin High/Low Year-to-Date Precipitation Summary

*Based on Provisional SNOTEL data as of Apr 17, 2020*



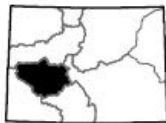
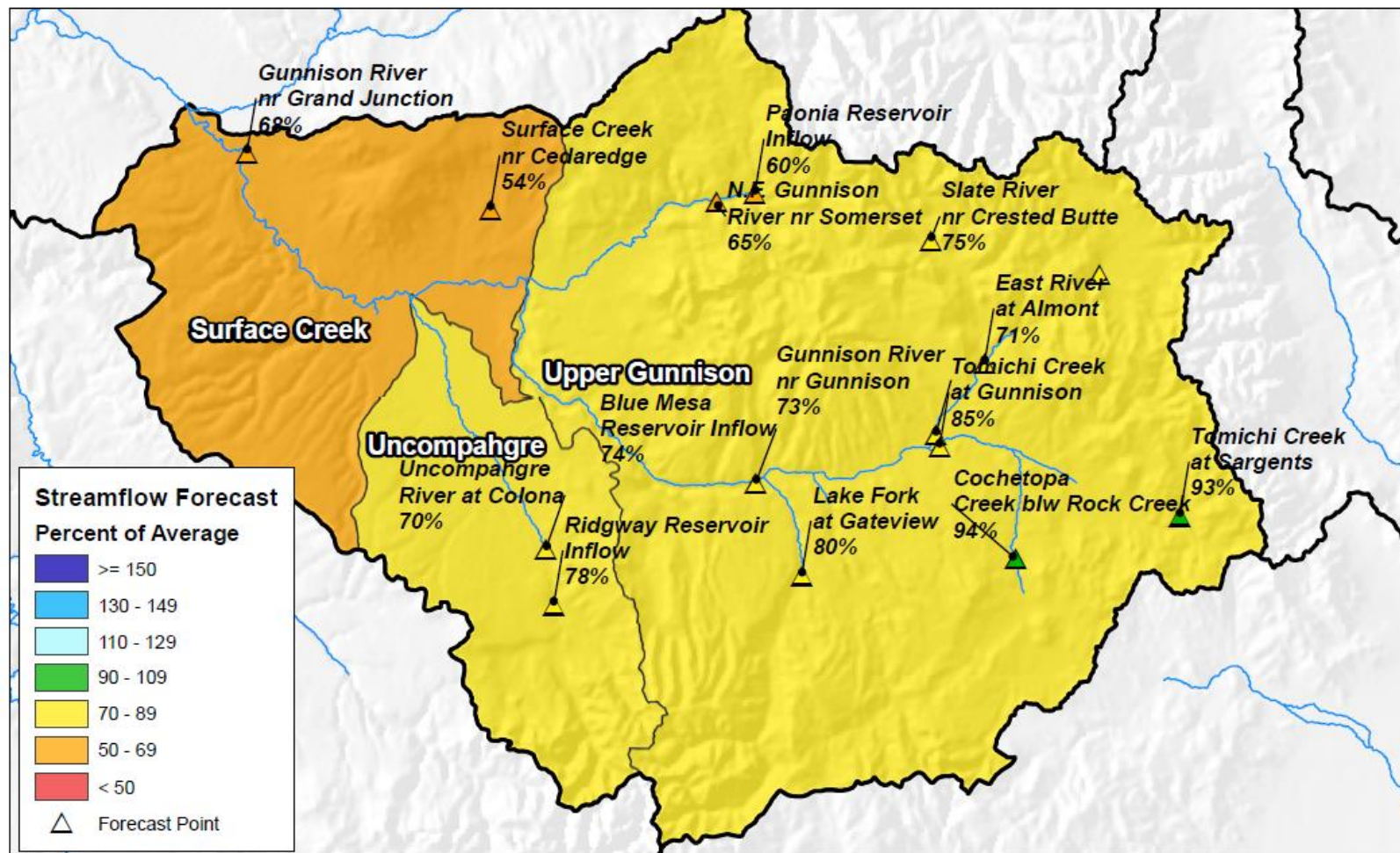
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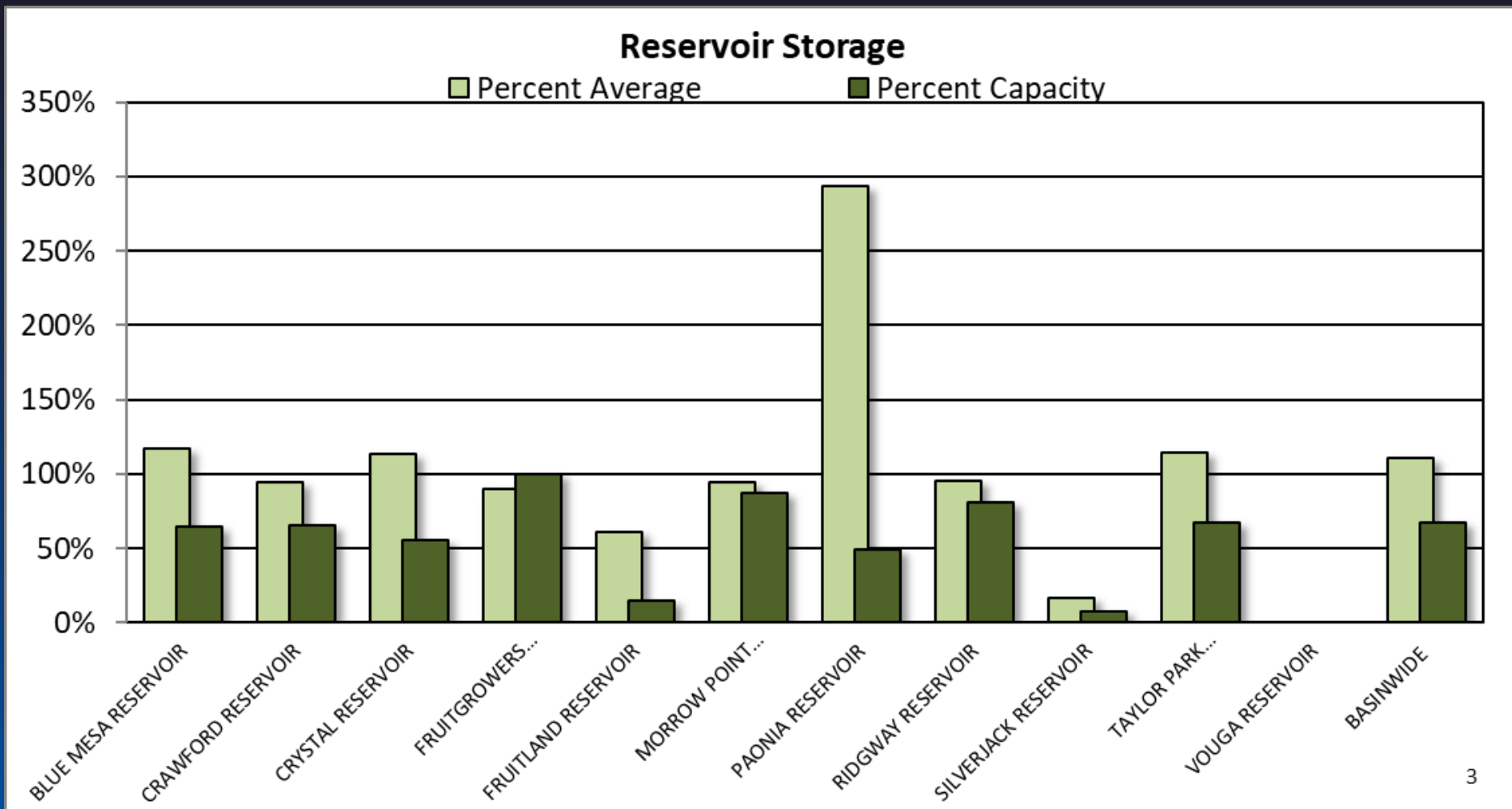


## Gunnison River Basin Water Supply Forecast Summary

April 1, 2020

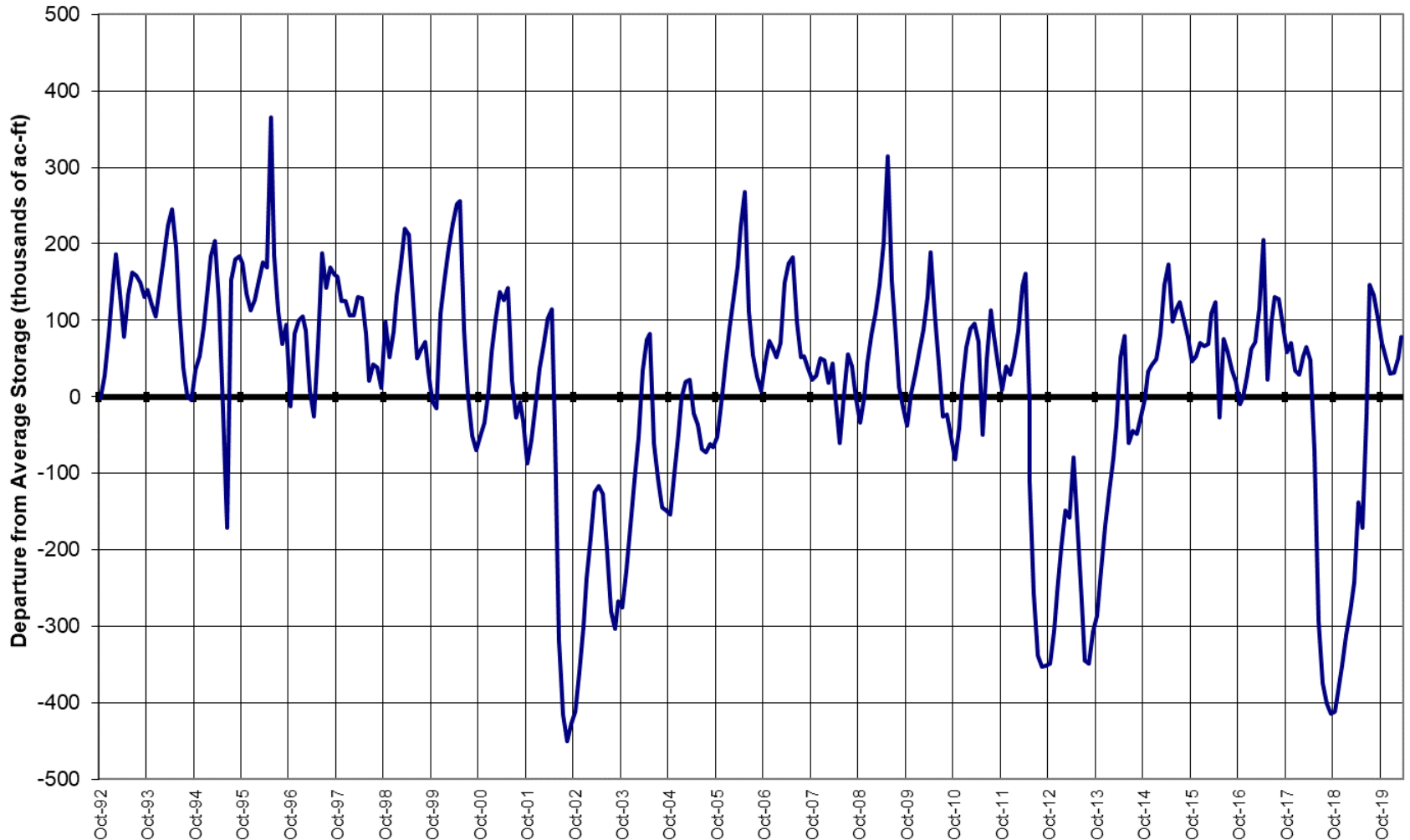


0 5 10 20 30 40 Miles



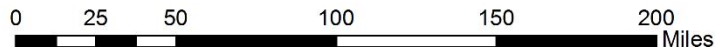
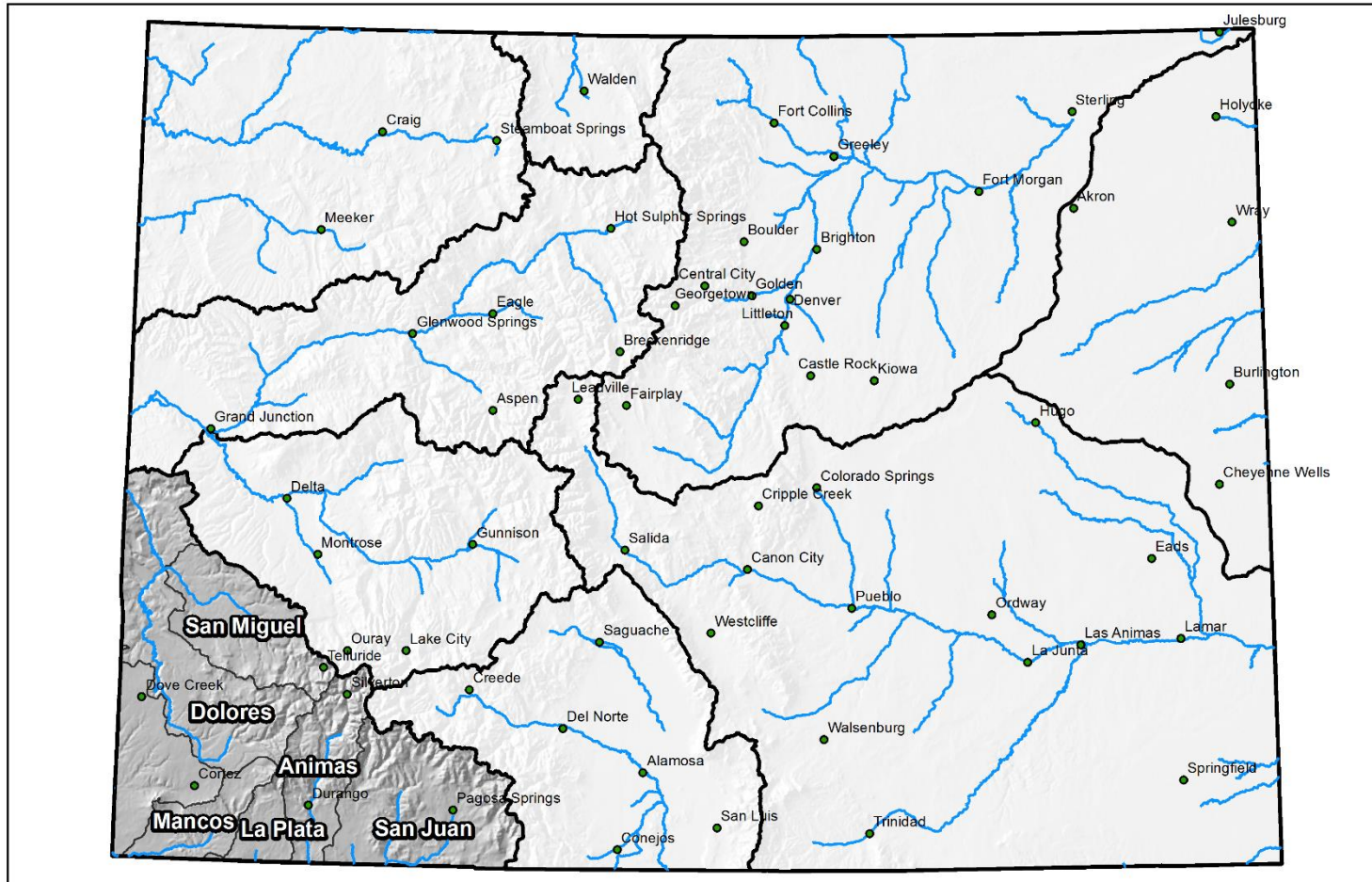


## GUNNISON RIVER BASIN Reservoir Storage Departure from Average



## Major Basin Summary

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





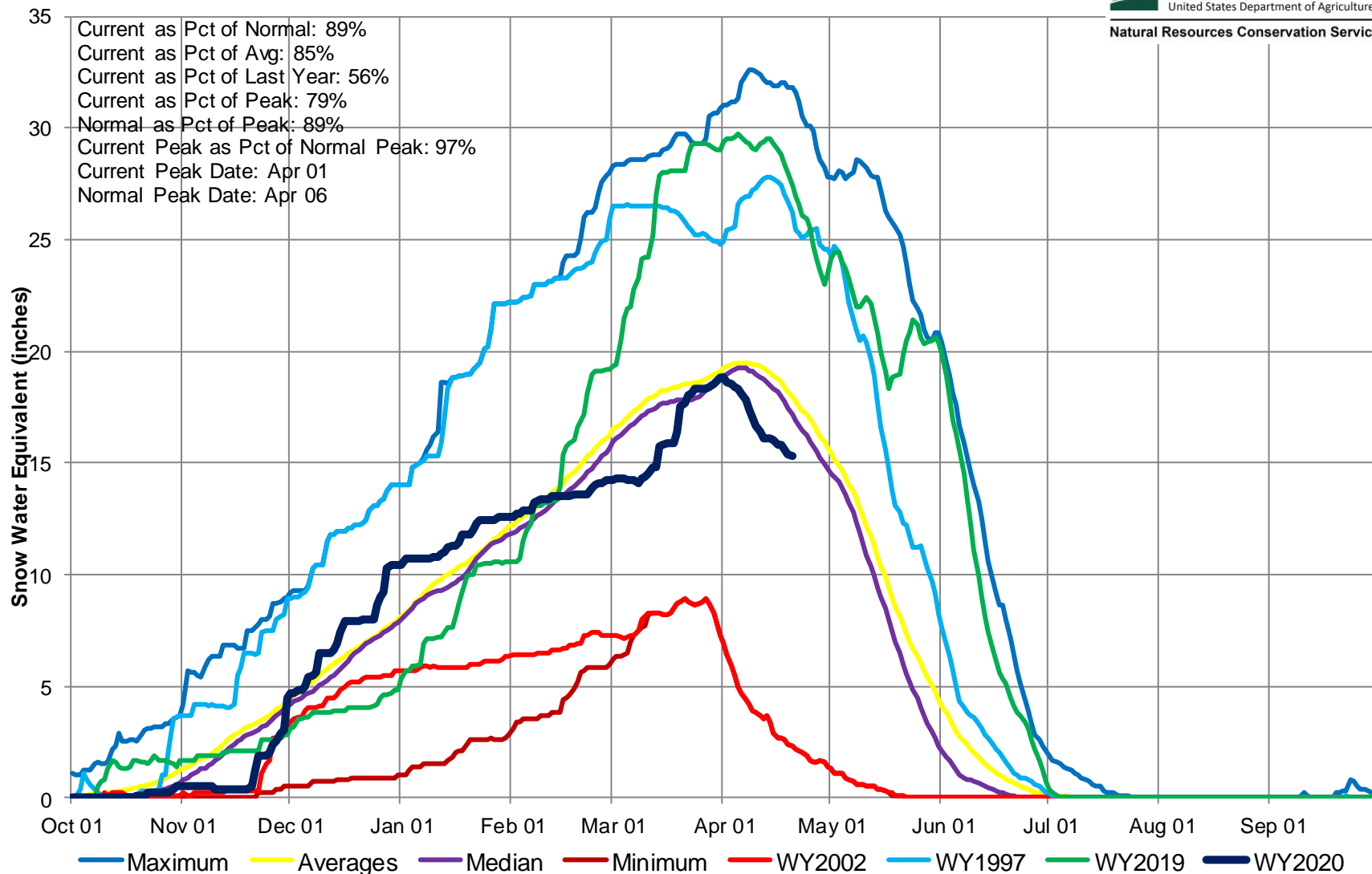
## San Miguel, Dolores, Animas and San Juan River Basins High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of Apr 20, 2020*



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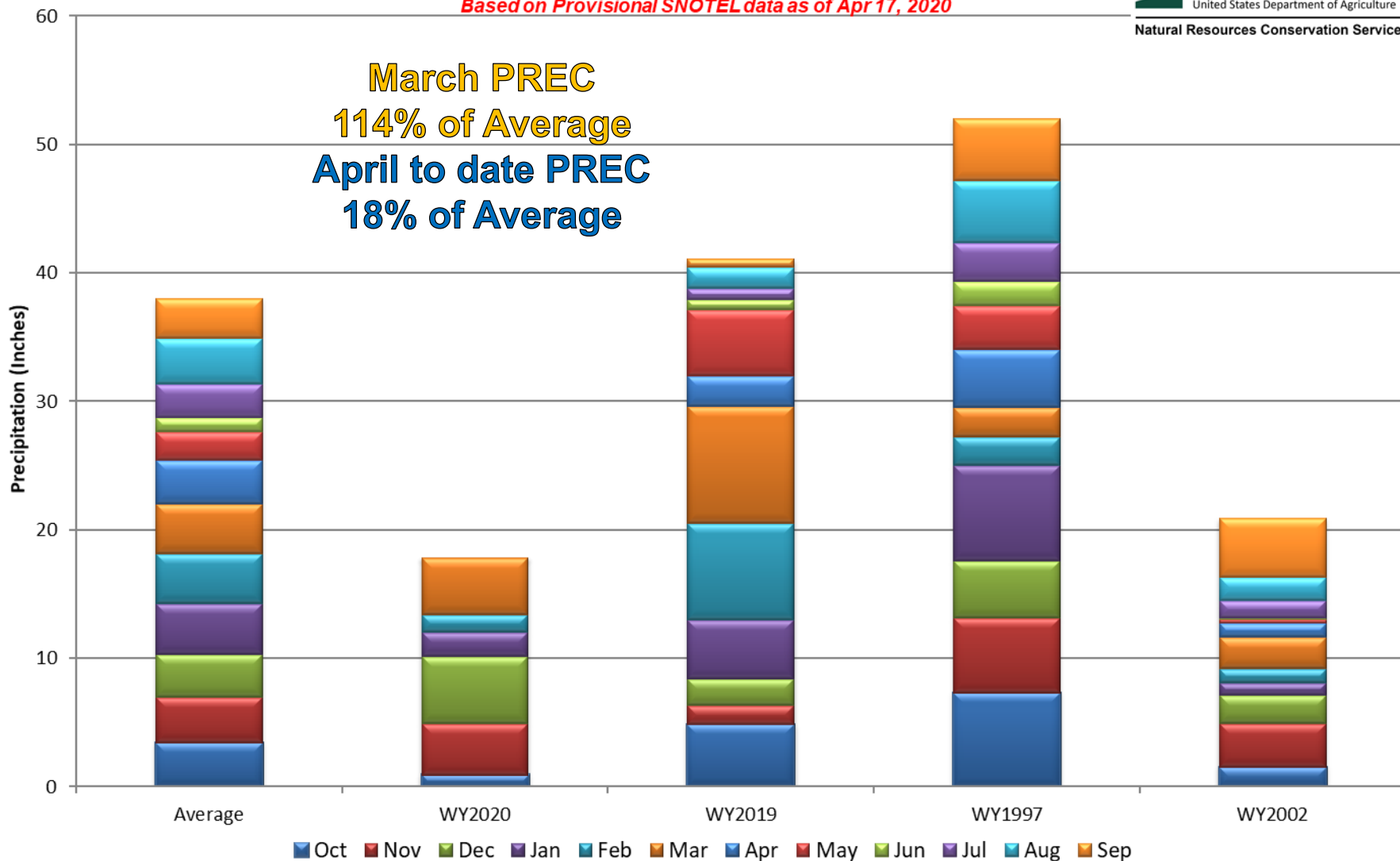


## San Miguel, Dolores, Animas and San Juan River Basins

### High/Low Monthly Precipitation Summary

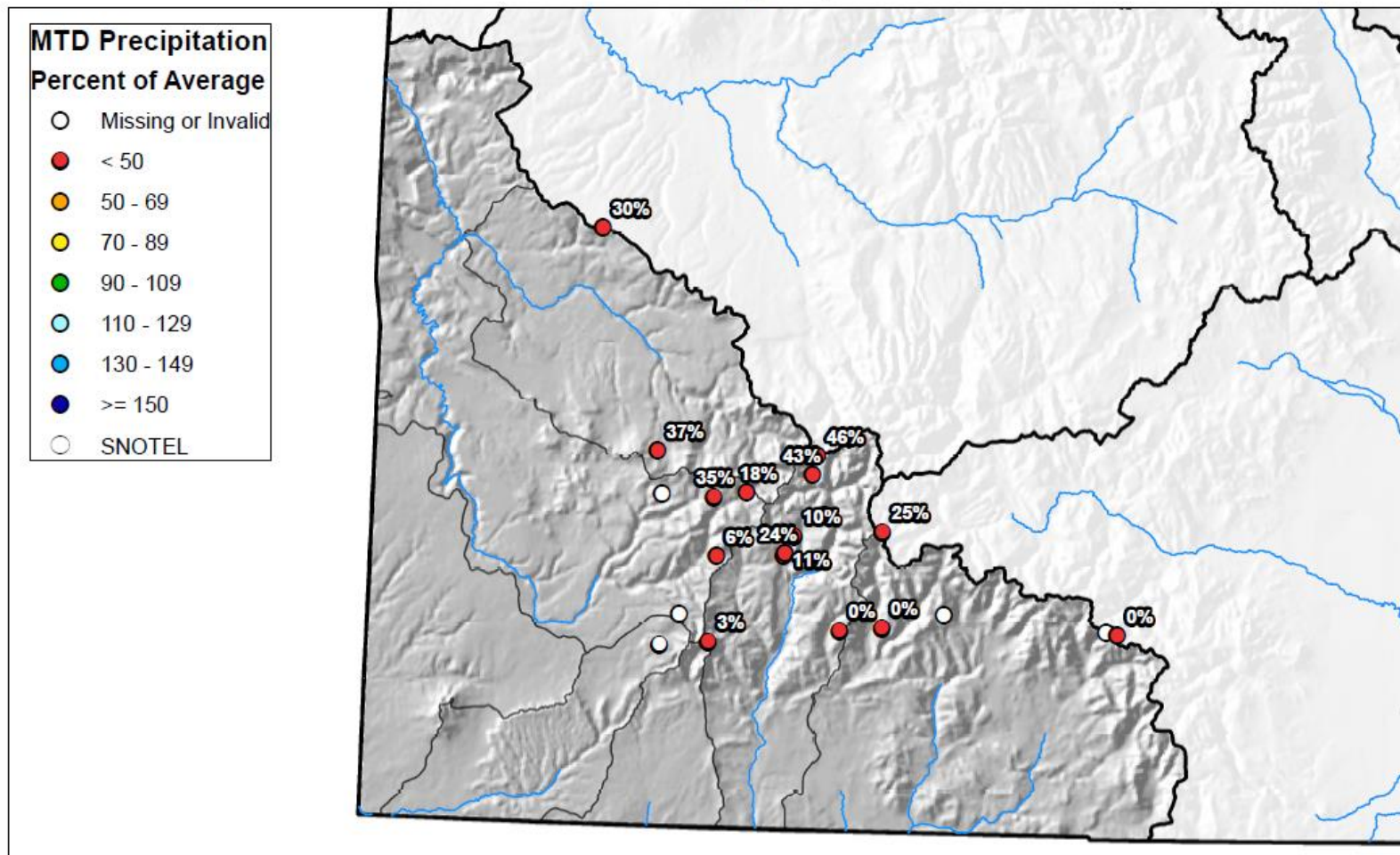
*Based on Provisional SNOTEL data as of Apr 17, 2020*

**March PREC**  
**114% of Average**  
**April to date PREC**  
**18% of Average**



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

Current as of Apr 20, 2020



0 10 20 40 60 80 Miles

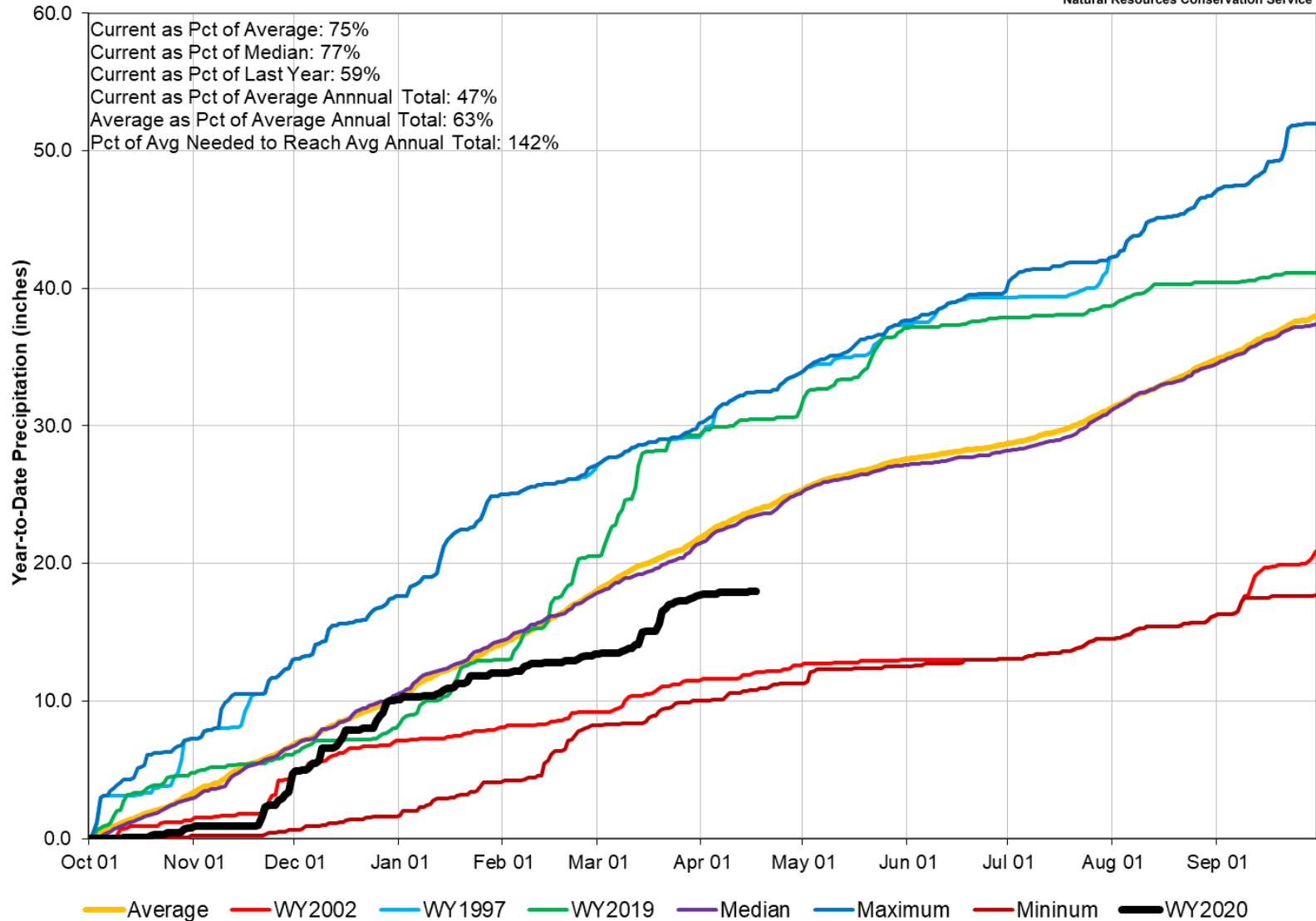
## San Miguel, Dolores, Animas and San Juan River Basins High/Low Year-to-Date Precipitation Summary

*Based on Provisional SNOTEL data as of Apr 17, 2020*



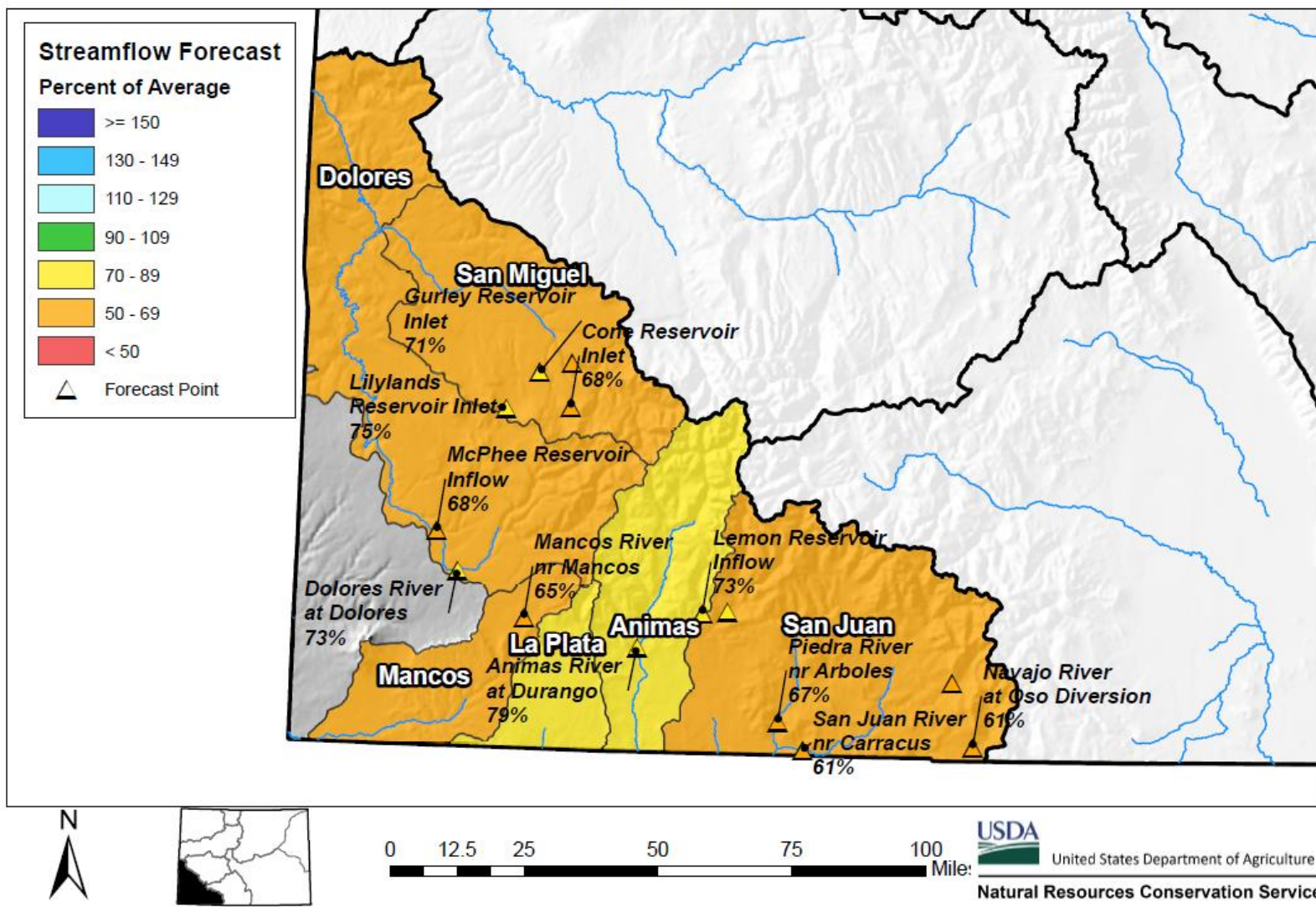
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## San Miguel, Dolores, Animas, and San Juan River Basins Streamflow Forecast Summary

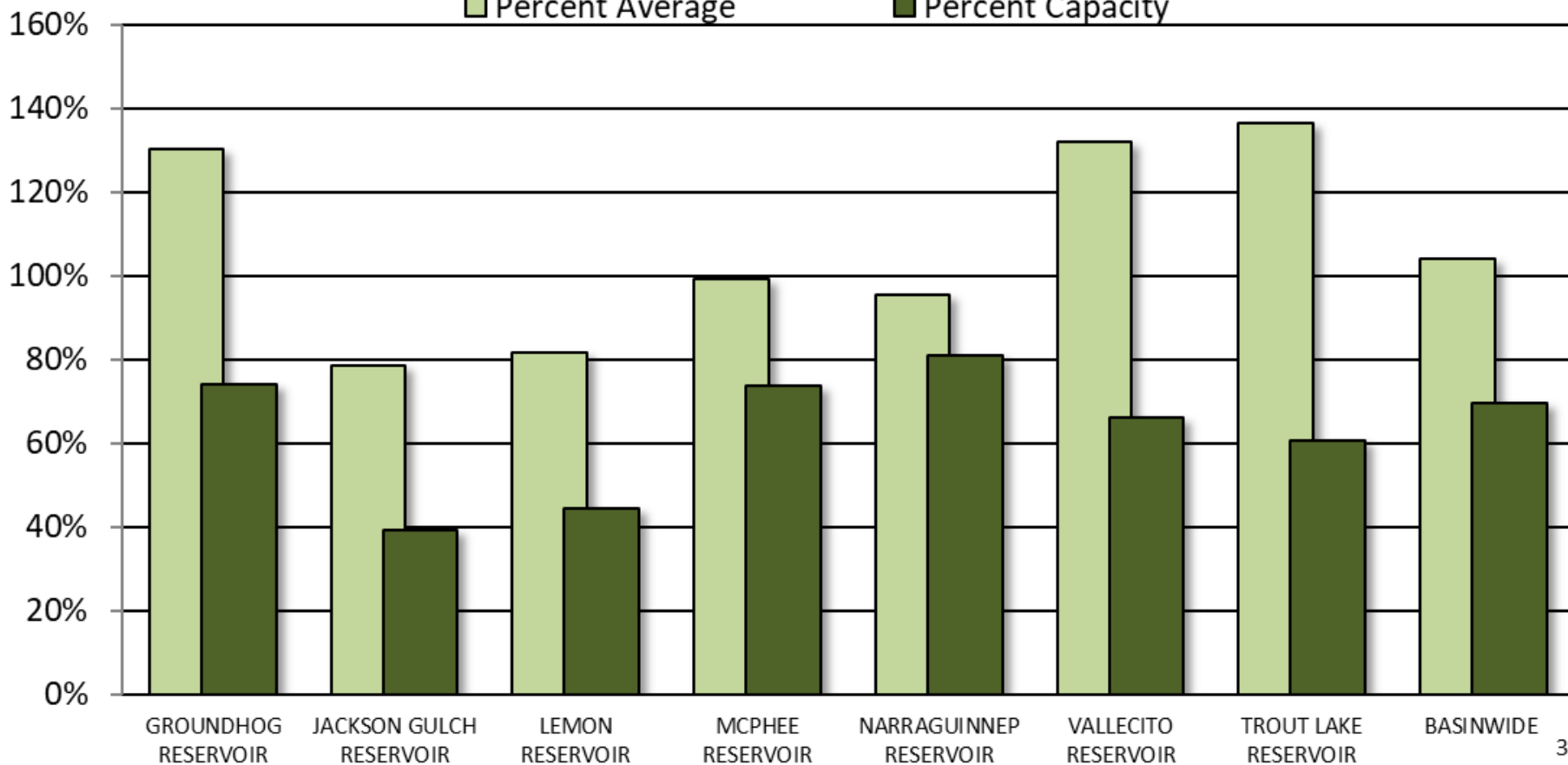
April 1, 2020



## Reservoir Storage

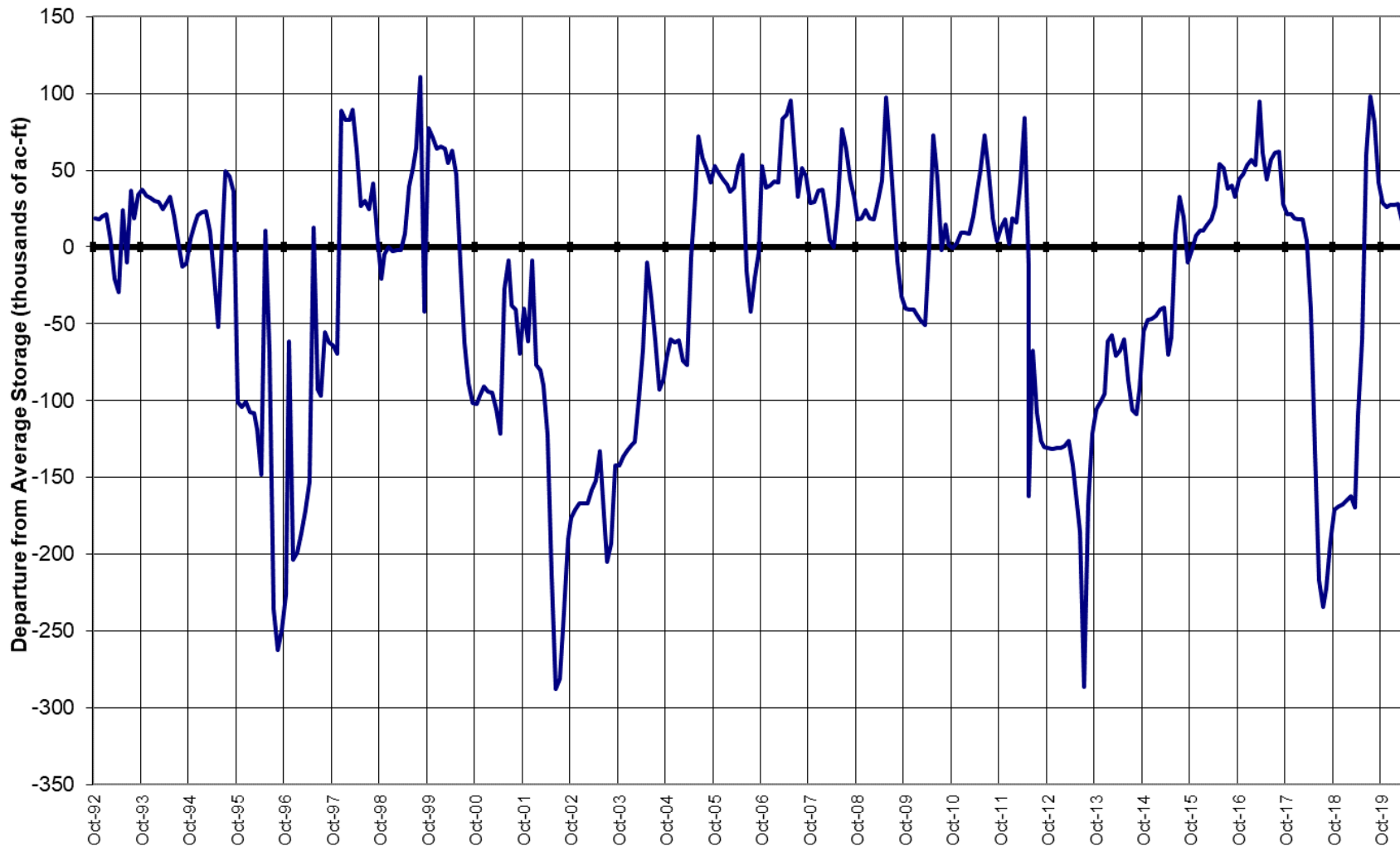
■ Percent Average

■ Percent Capacity



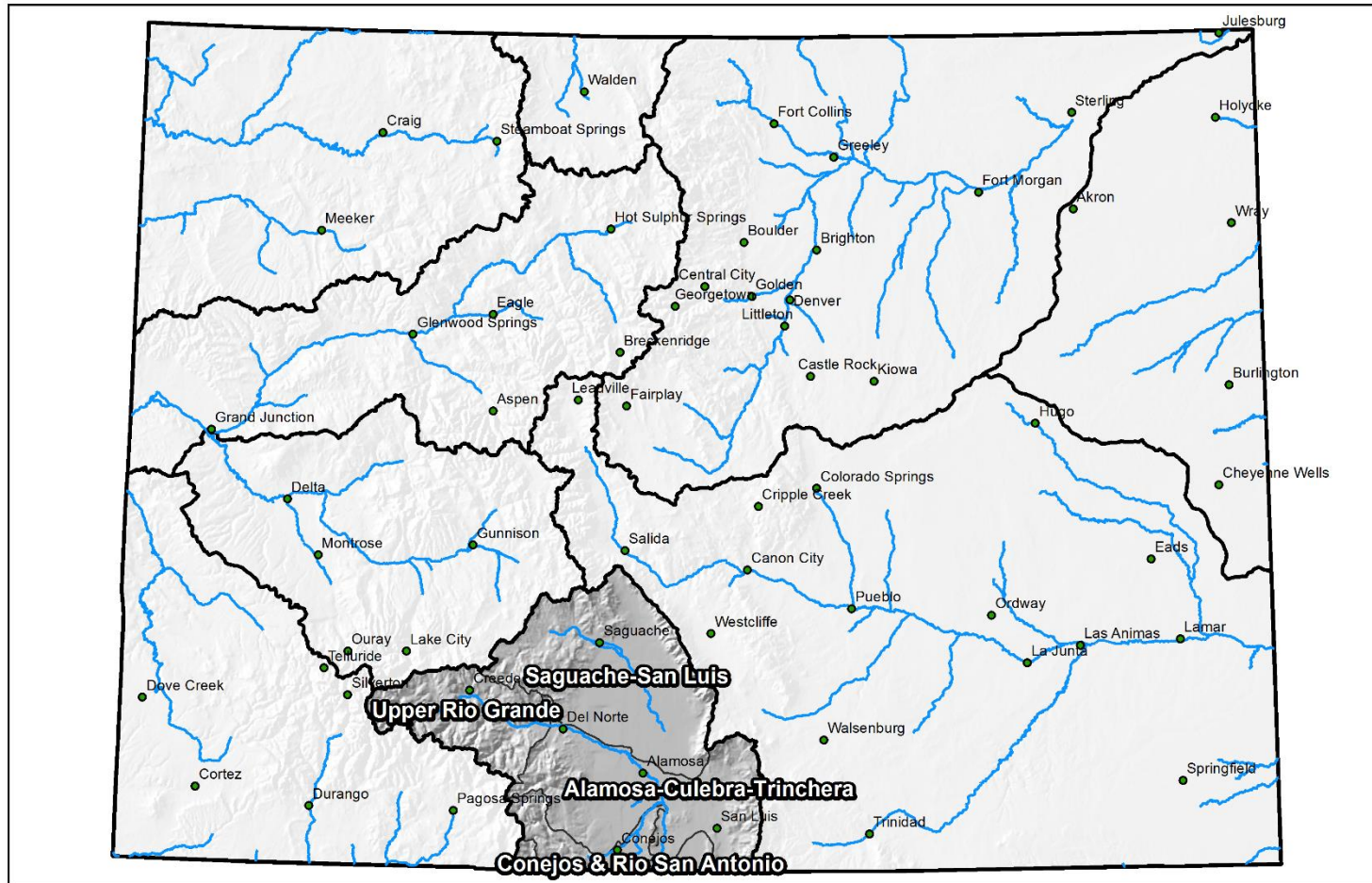
## SAN MIGUEL, DOLORES, ANIMAS AND SAN JUAN RIVER BASINS

Reservoir Storage  
Departure from Average



## Major Basin Summary

### Upper Rio Grande River Basin



0 25 50 100 150 200 Miles



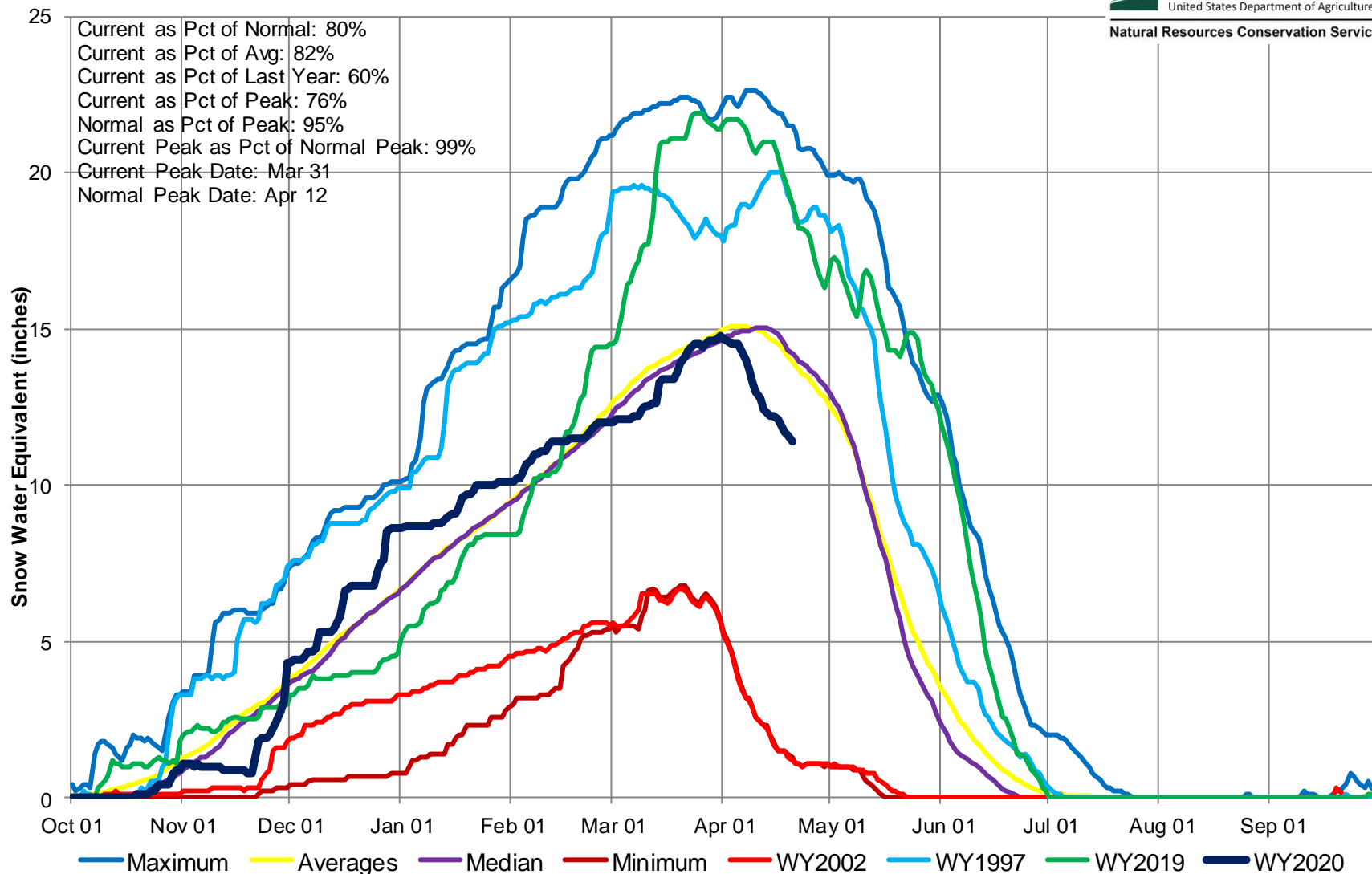
## Upper Rio Grande Basin High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of Apr 20, 2020*



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

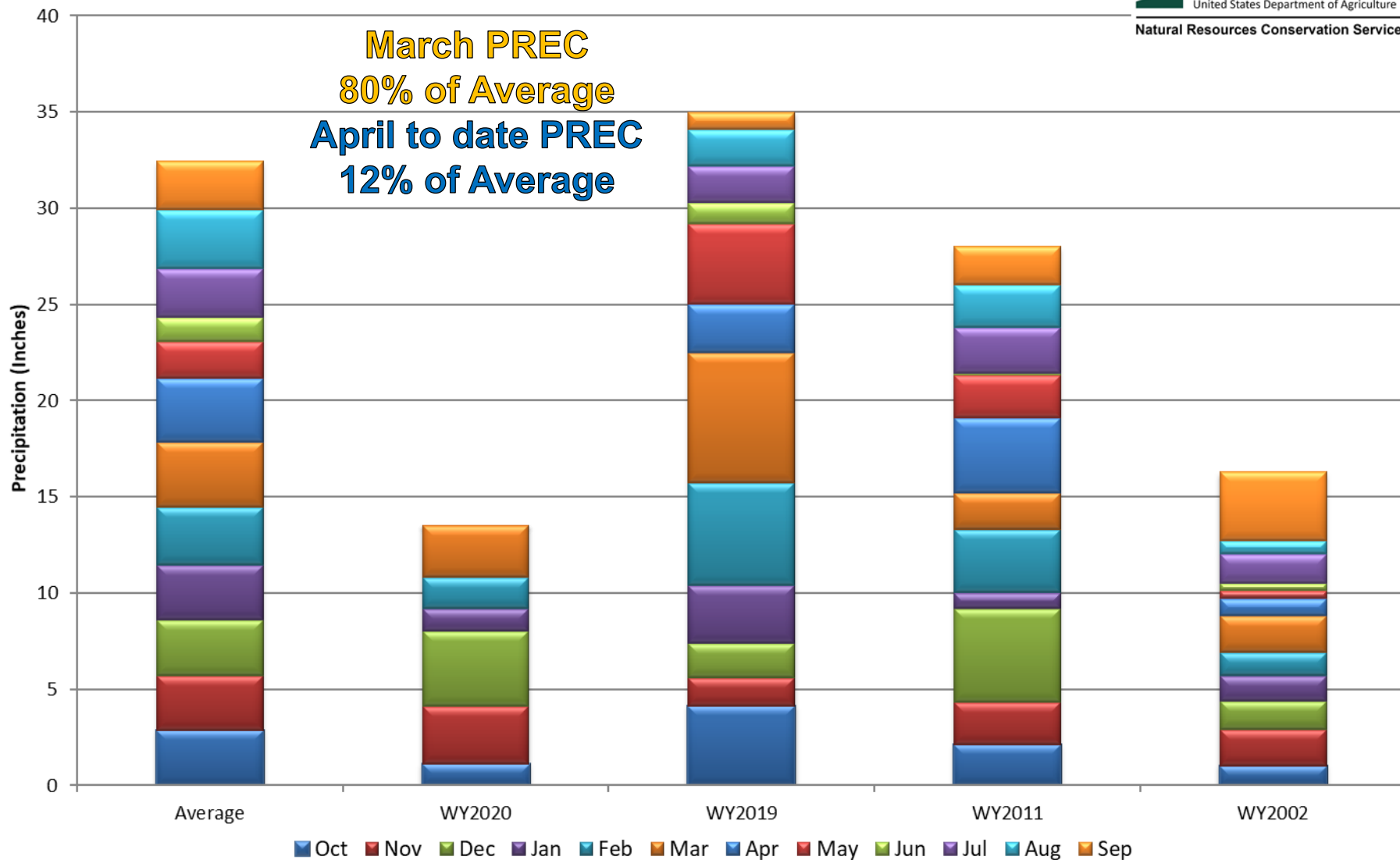
*Based on Provisional SNOTEL data as of Apr 17, 2020*



United States Department of Agriculture

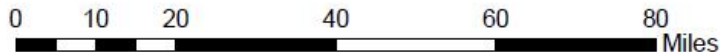
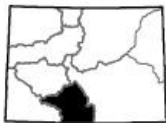
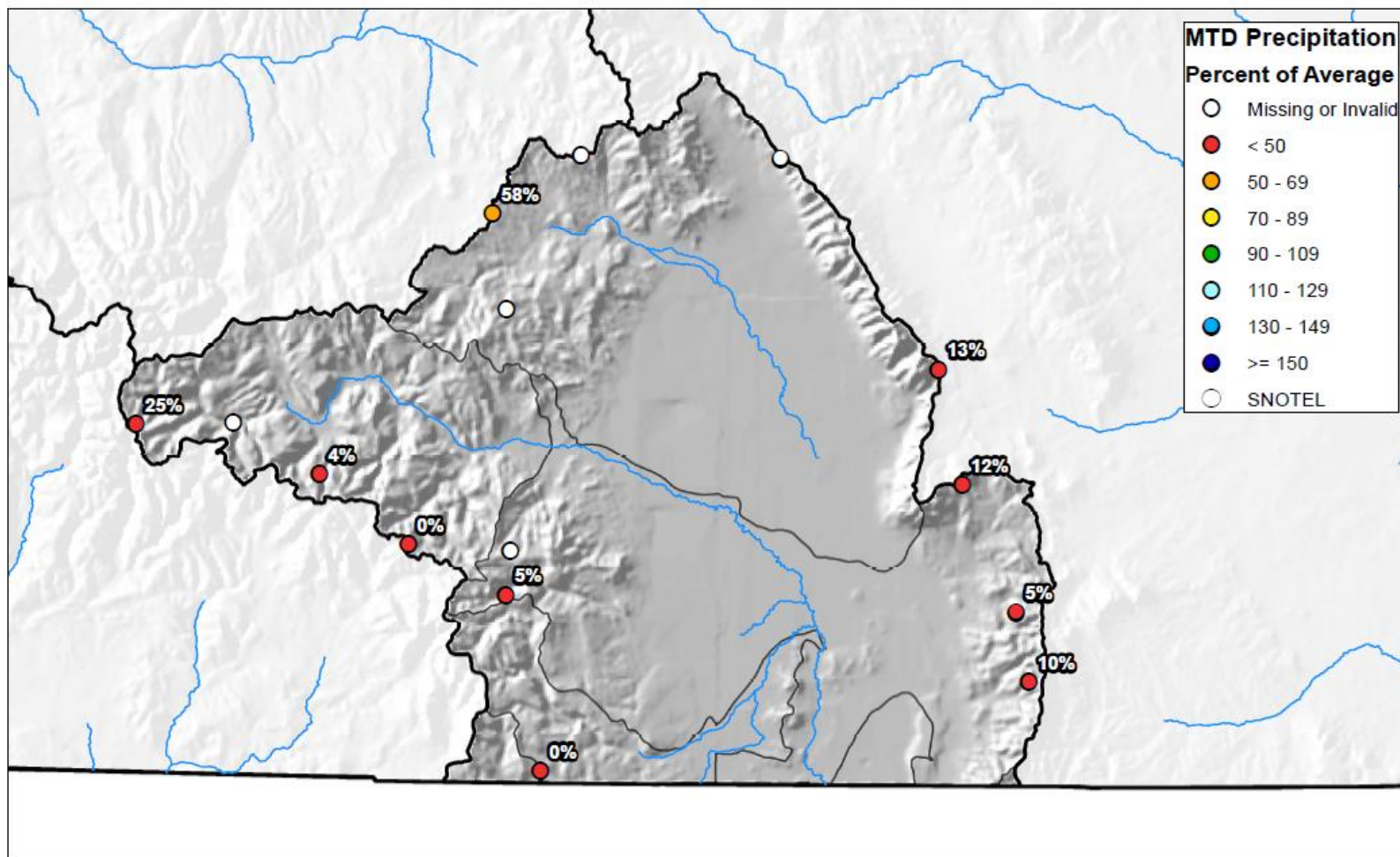
Natural Resources Conservation Service

**March PREC**  
**80% of Average**  
**April to date PREC**  
**12% of Average**



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

Current as of Apr 20, 2020



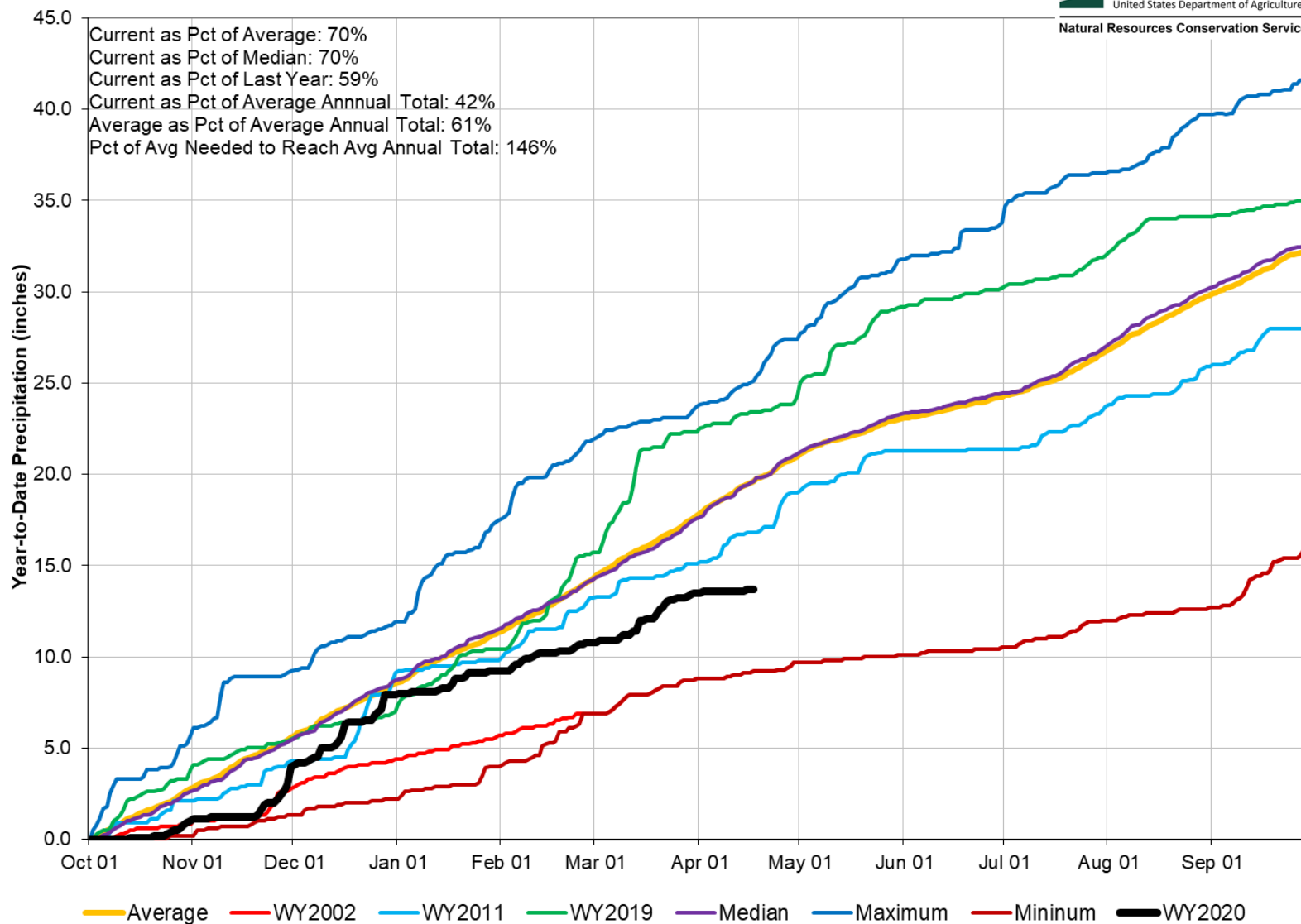
## Upper Rio Grande River Basin High/Low Year-to-Date Precipitation Summary

*Based on Provisional SNOTEL data as of Apr 17, 2020*



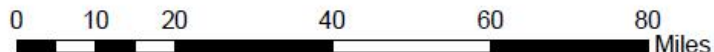
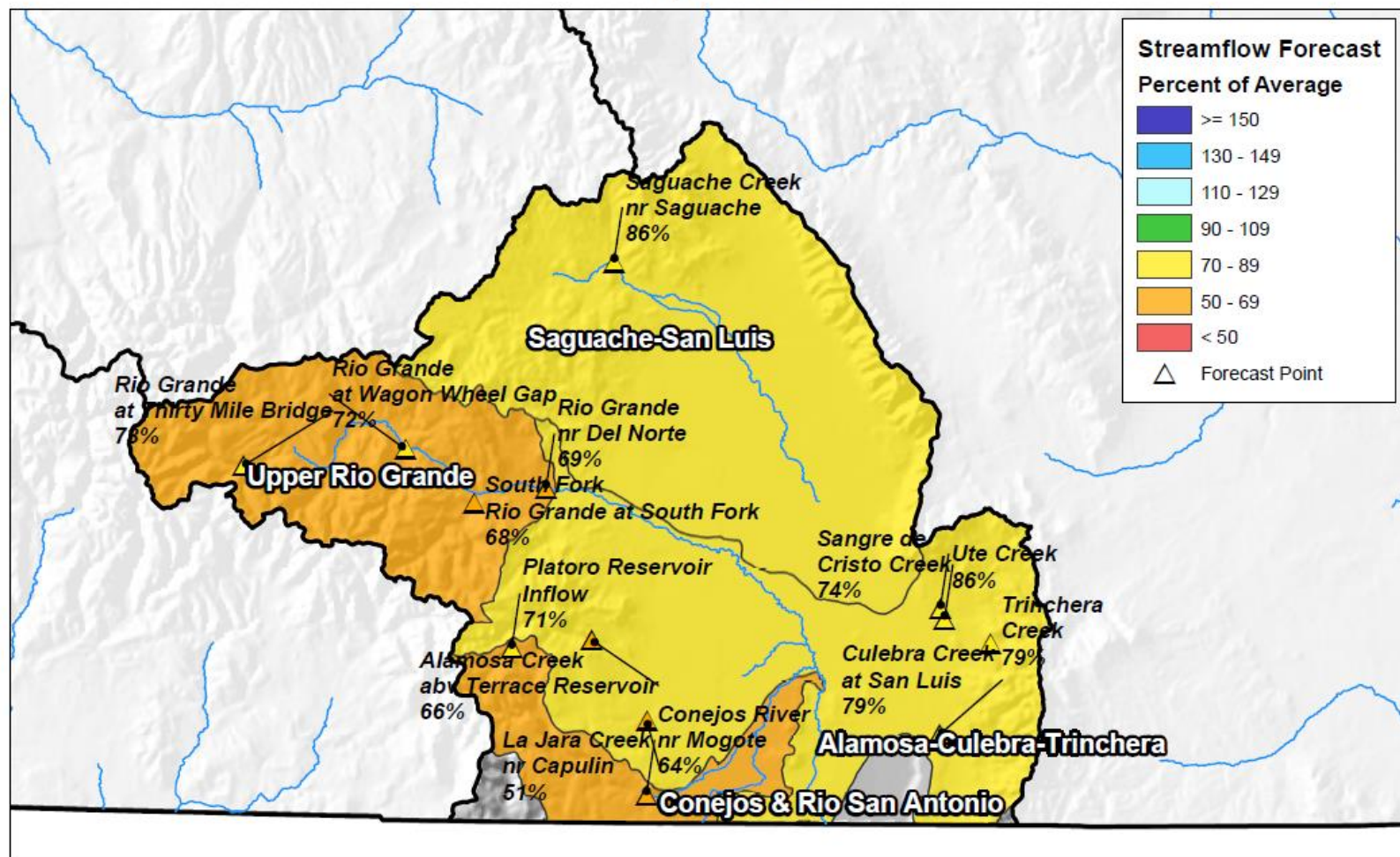
United States Department of Agriculture

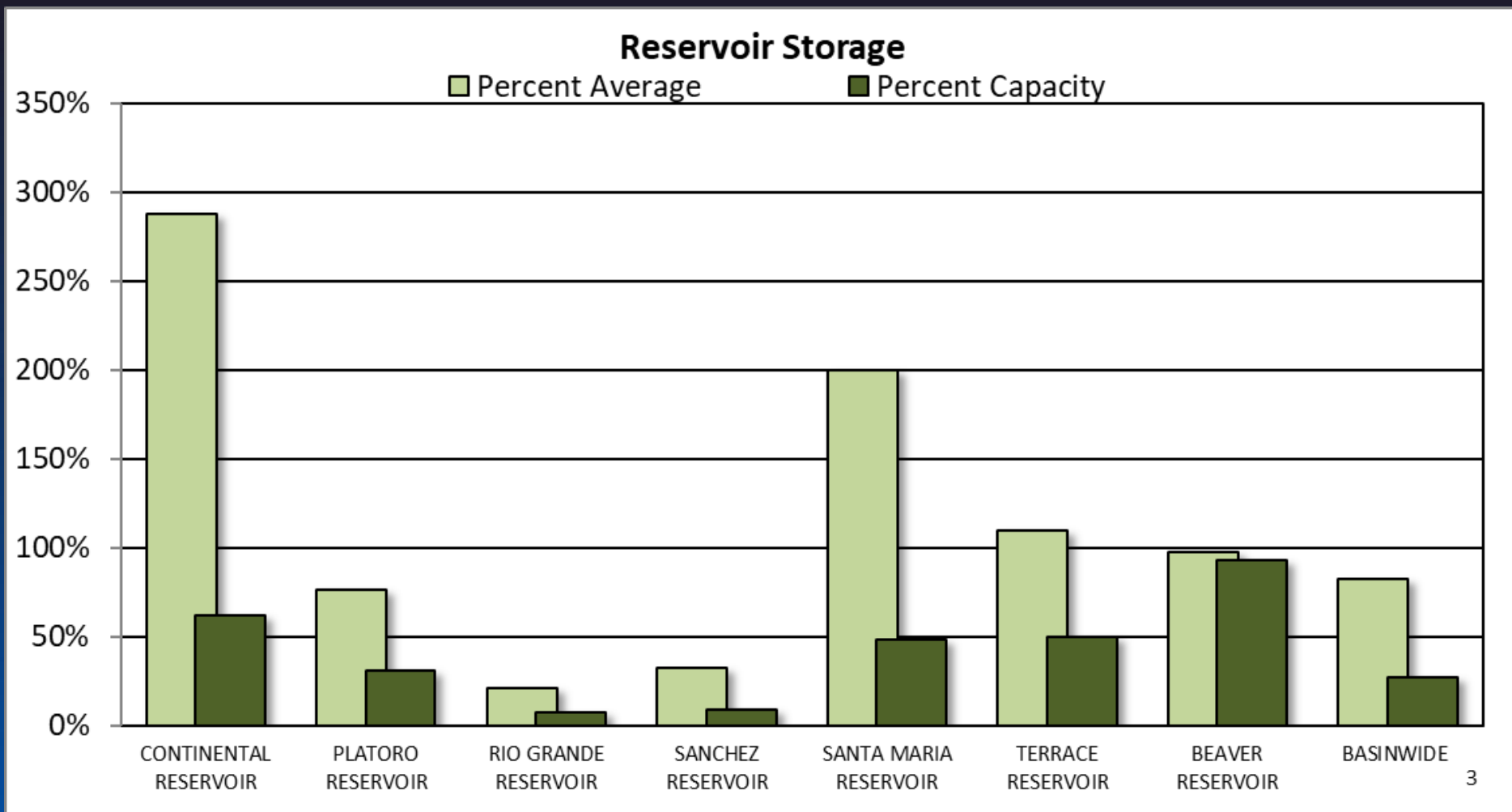
Natural Resources Conservation Service



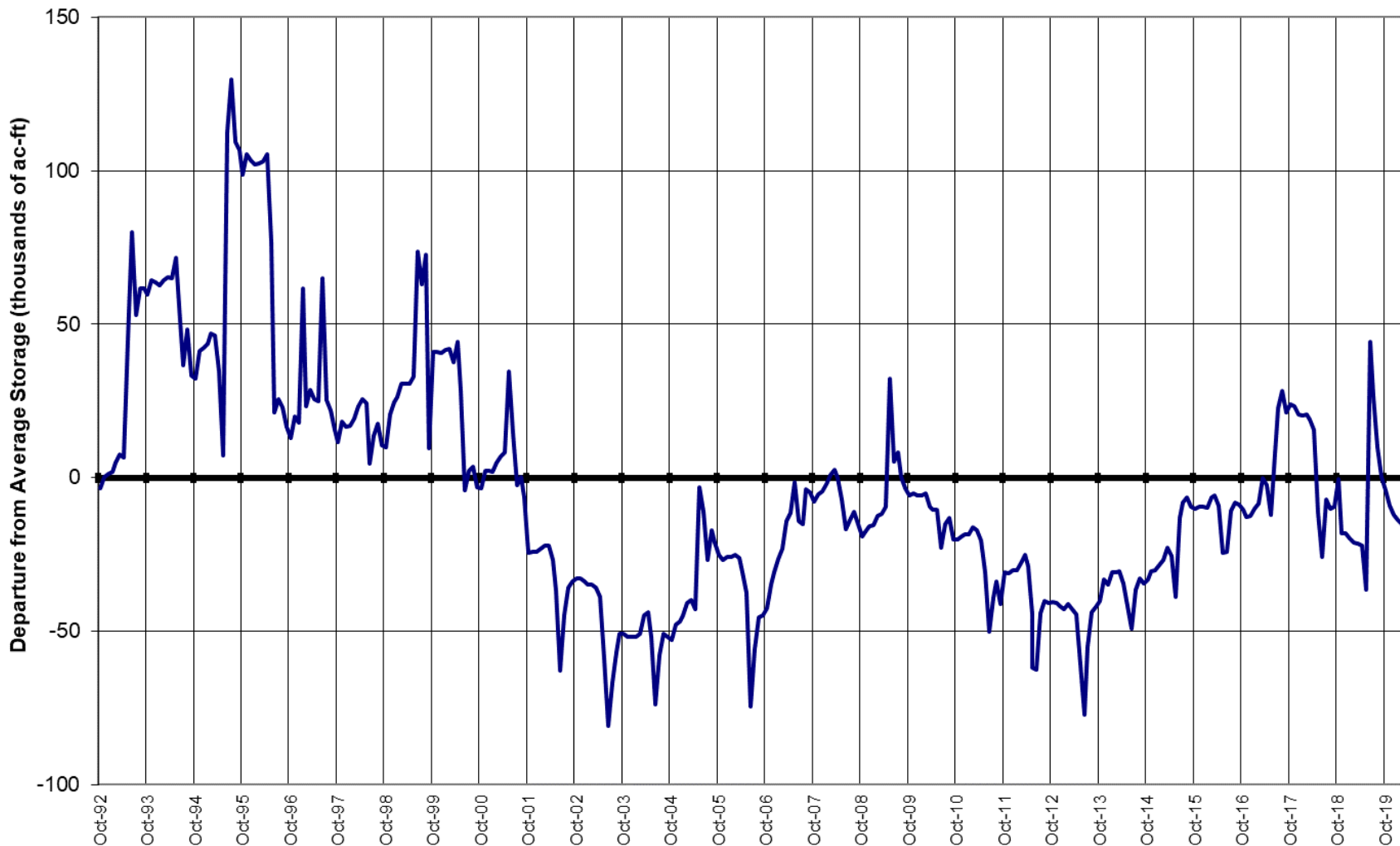
## Upper Rio Grande River Basin Streamflow Forecast Summary

April 1, 2020



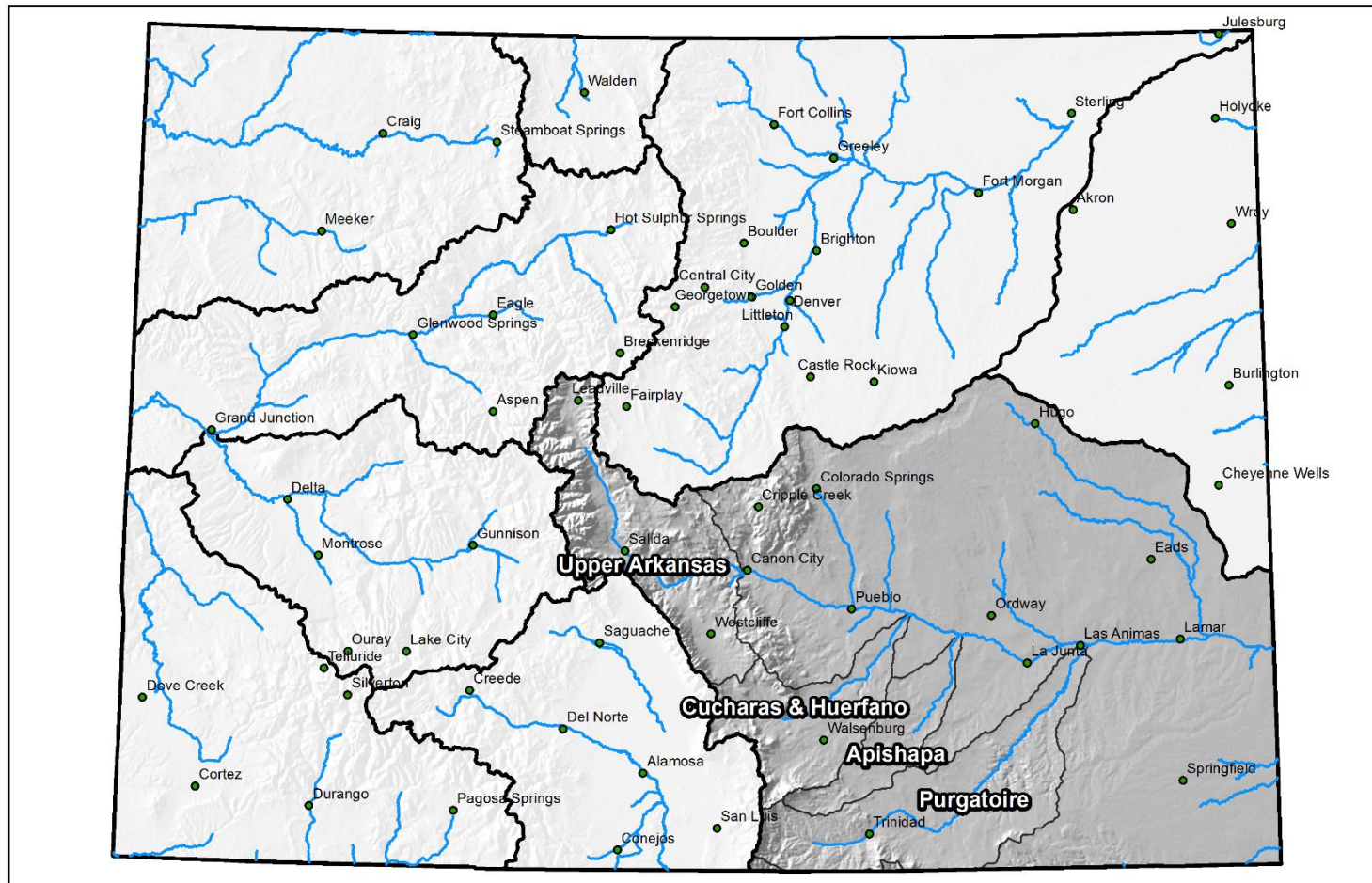


## UPPER RIO GRANDE BASIN Reservoir Storage Departure from Average



## Major Basin Summary

### Arkansas River Basin



0 25 50 100 150 200 Miles

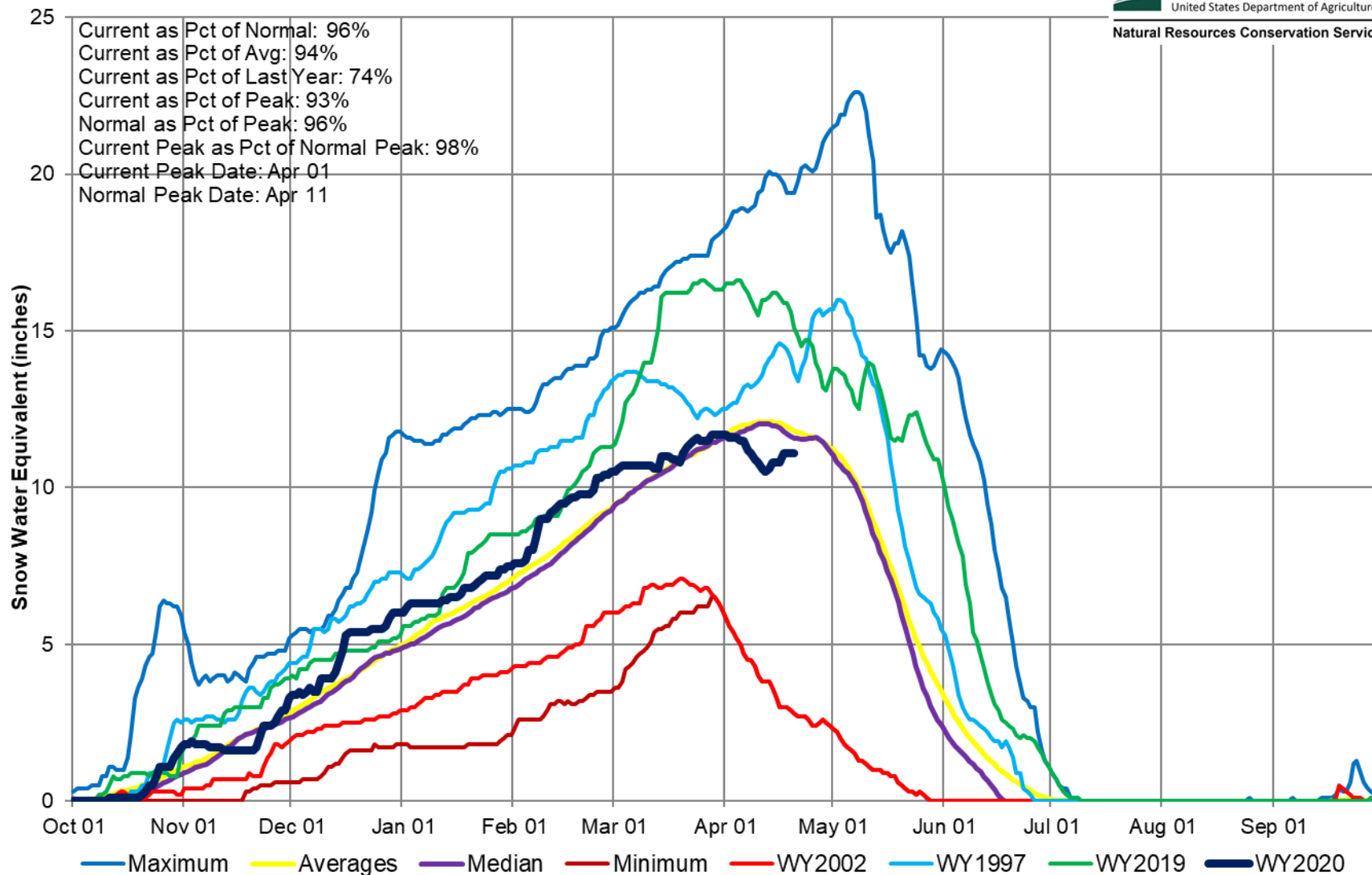
## Arkansas River Basin High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of Apr 20, 2020*



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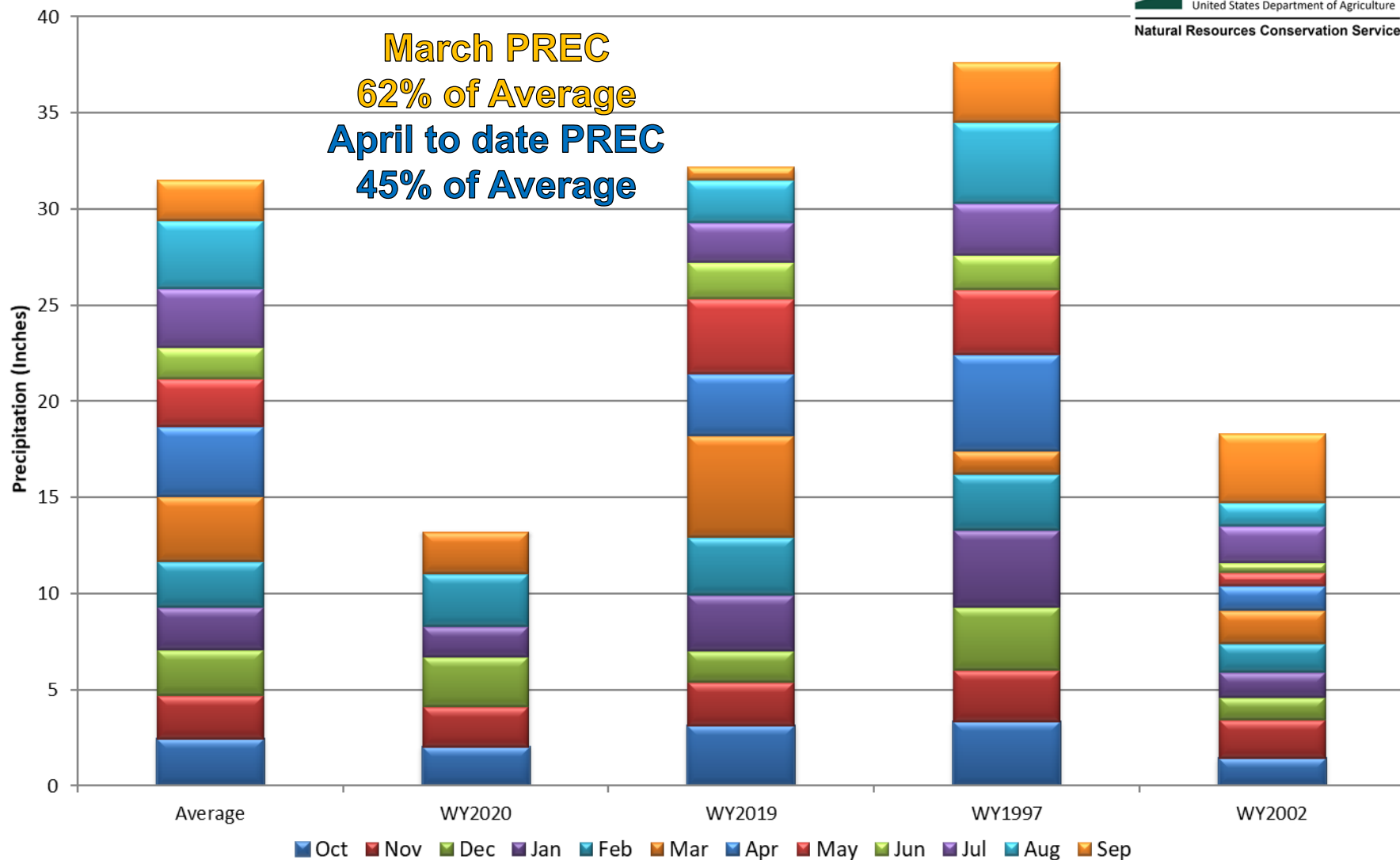
## Arkansas River Basin High/Low Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of Apr 17, 2020*



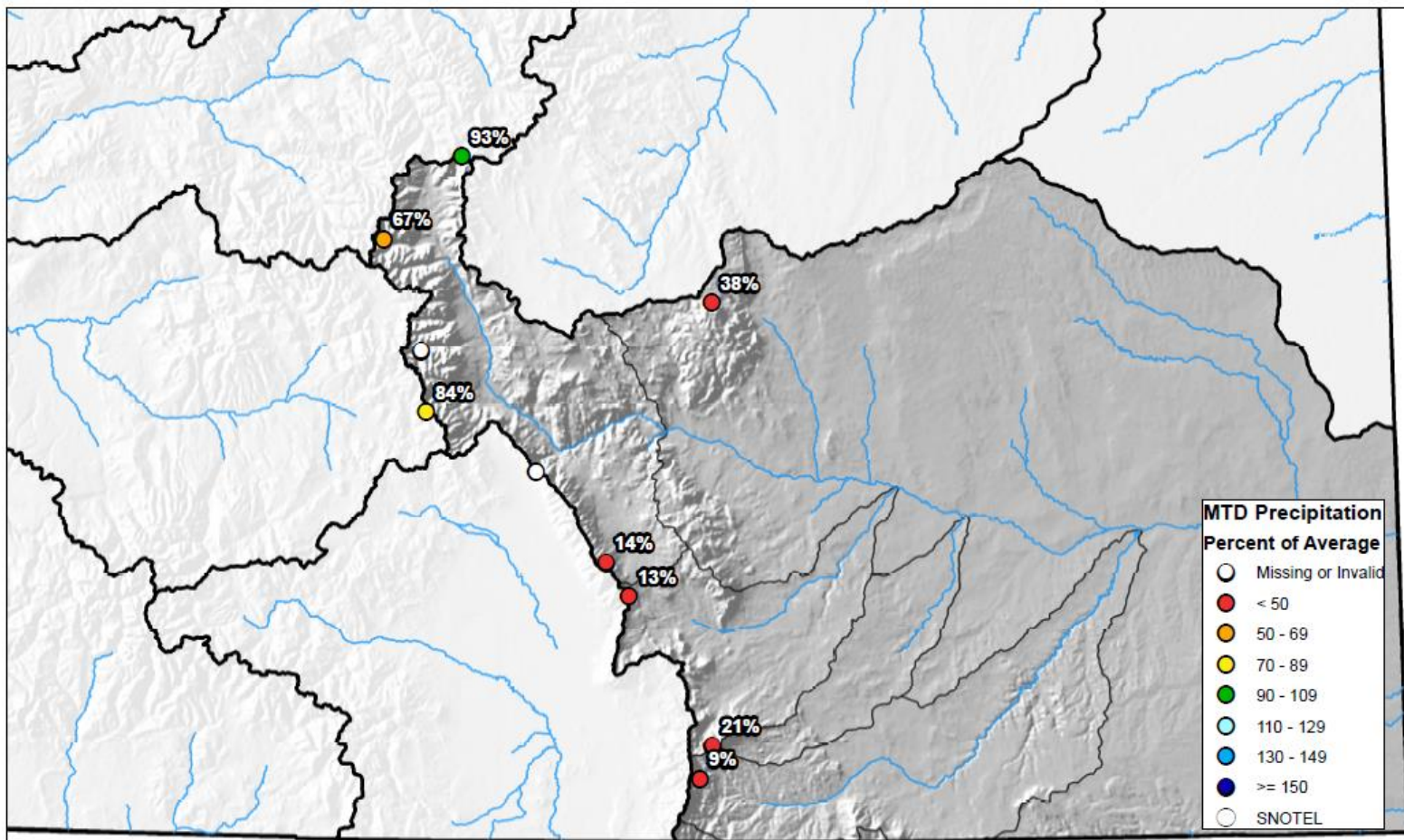
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## Arkansas River Basin Month to Date Precipitation Summary

Current as of Apr 20, 2020

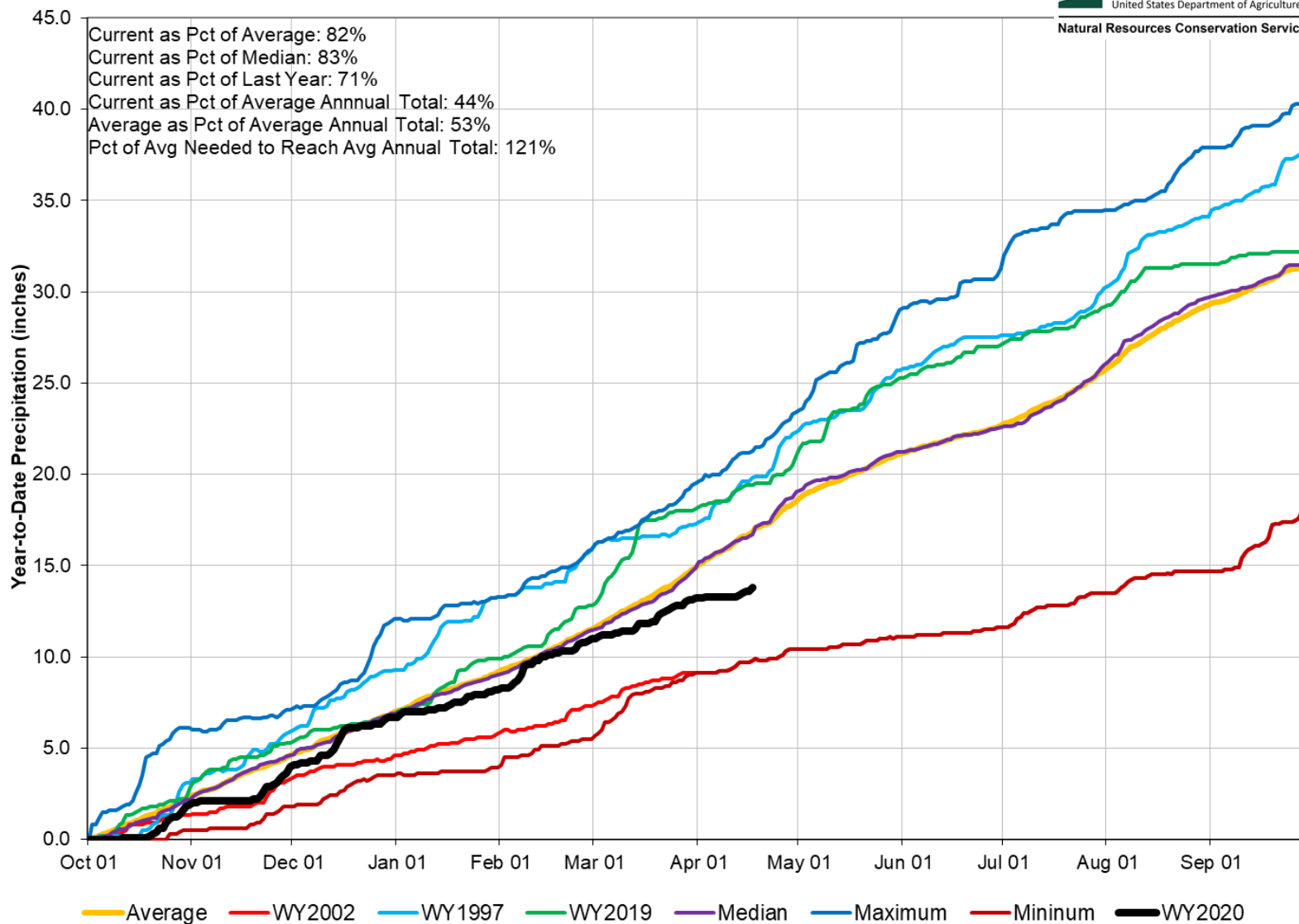


0 10 20 40 60 80 Miles



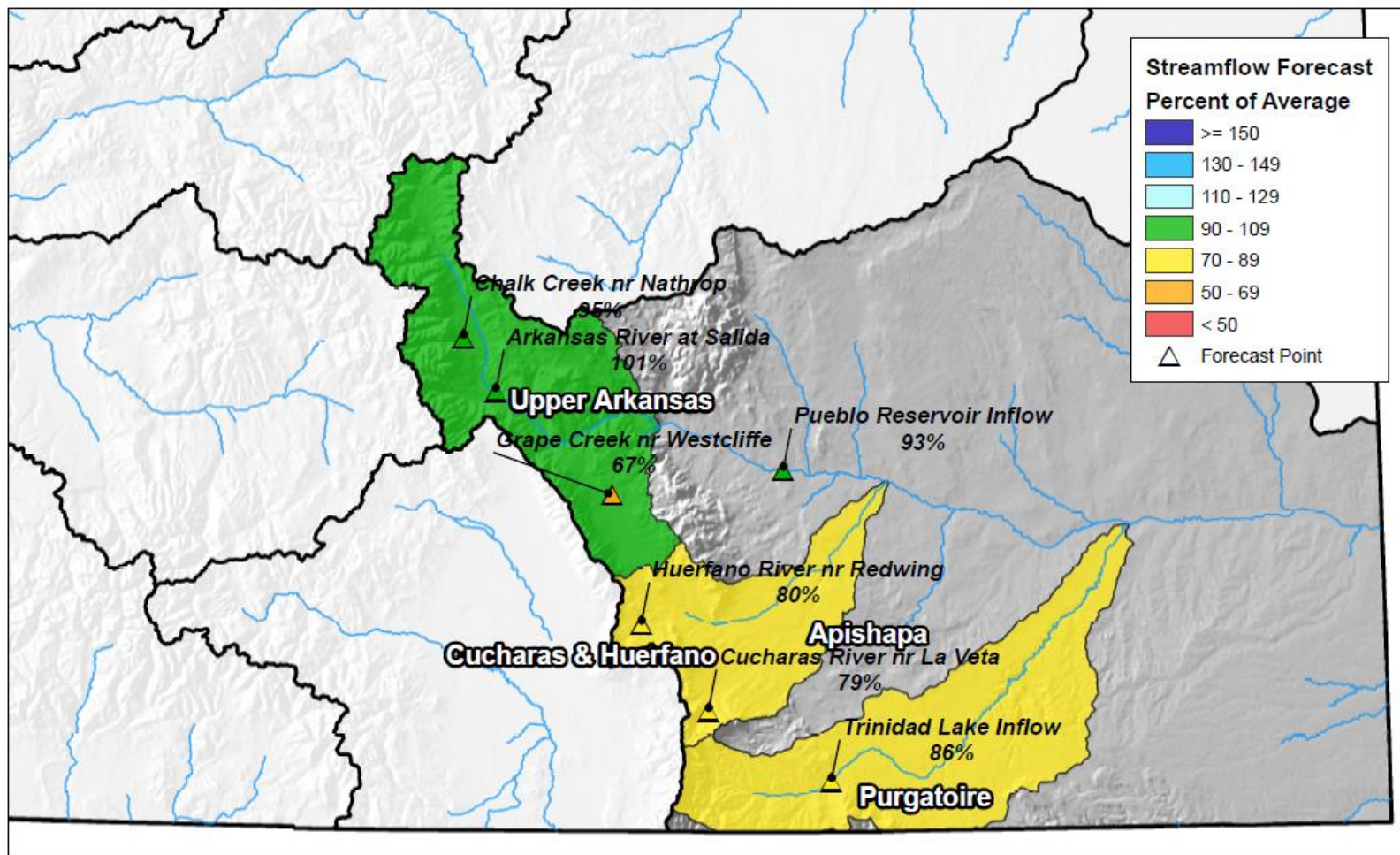
## Arkansas River Basin High/Low Year-to-Date Precipitation Summary

*Based on Provisional SNOTEL data as of Apr 17, 2020*

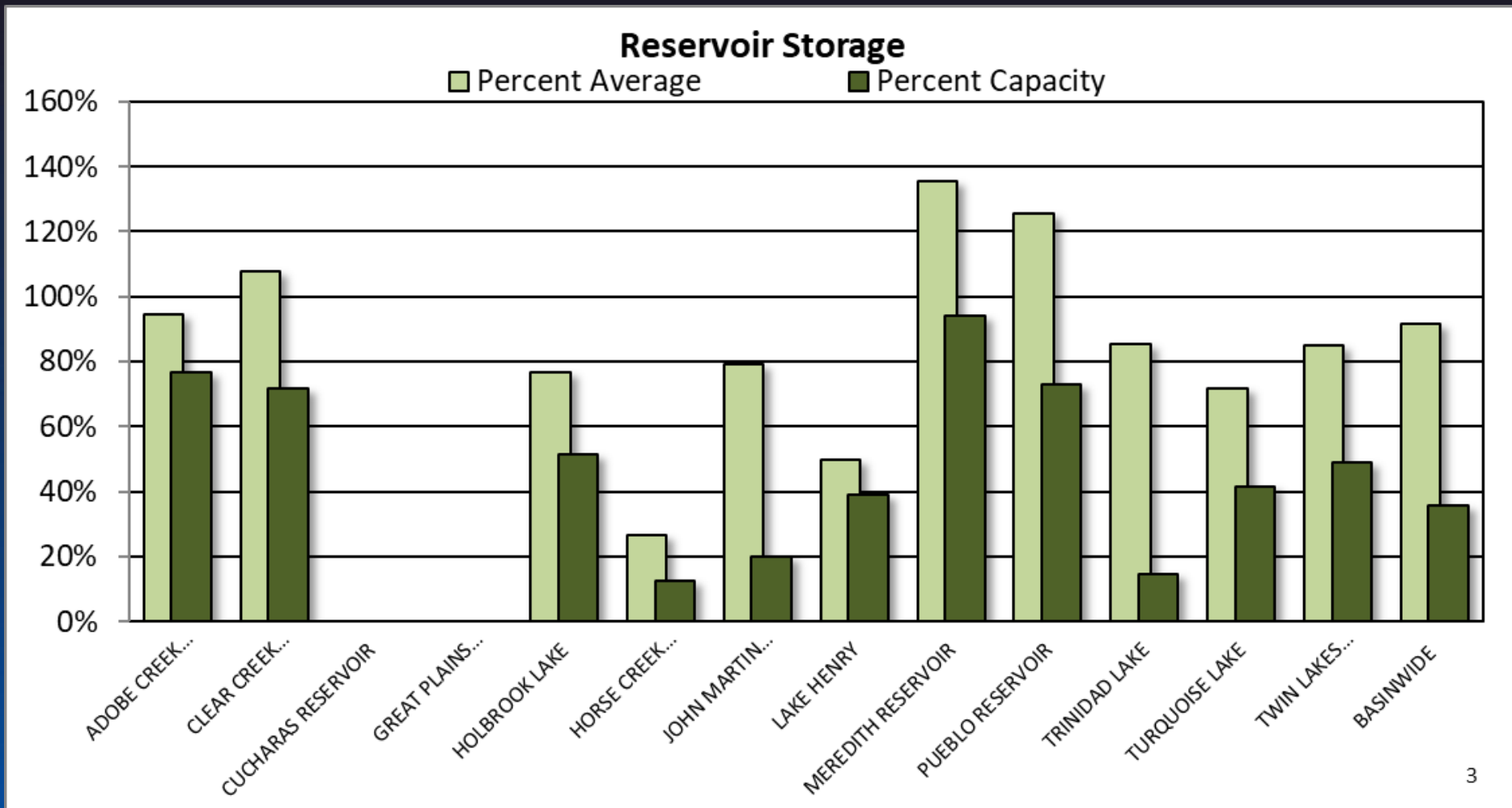


## Arkansas River Basin Streamflow Forecast Summary

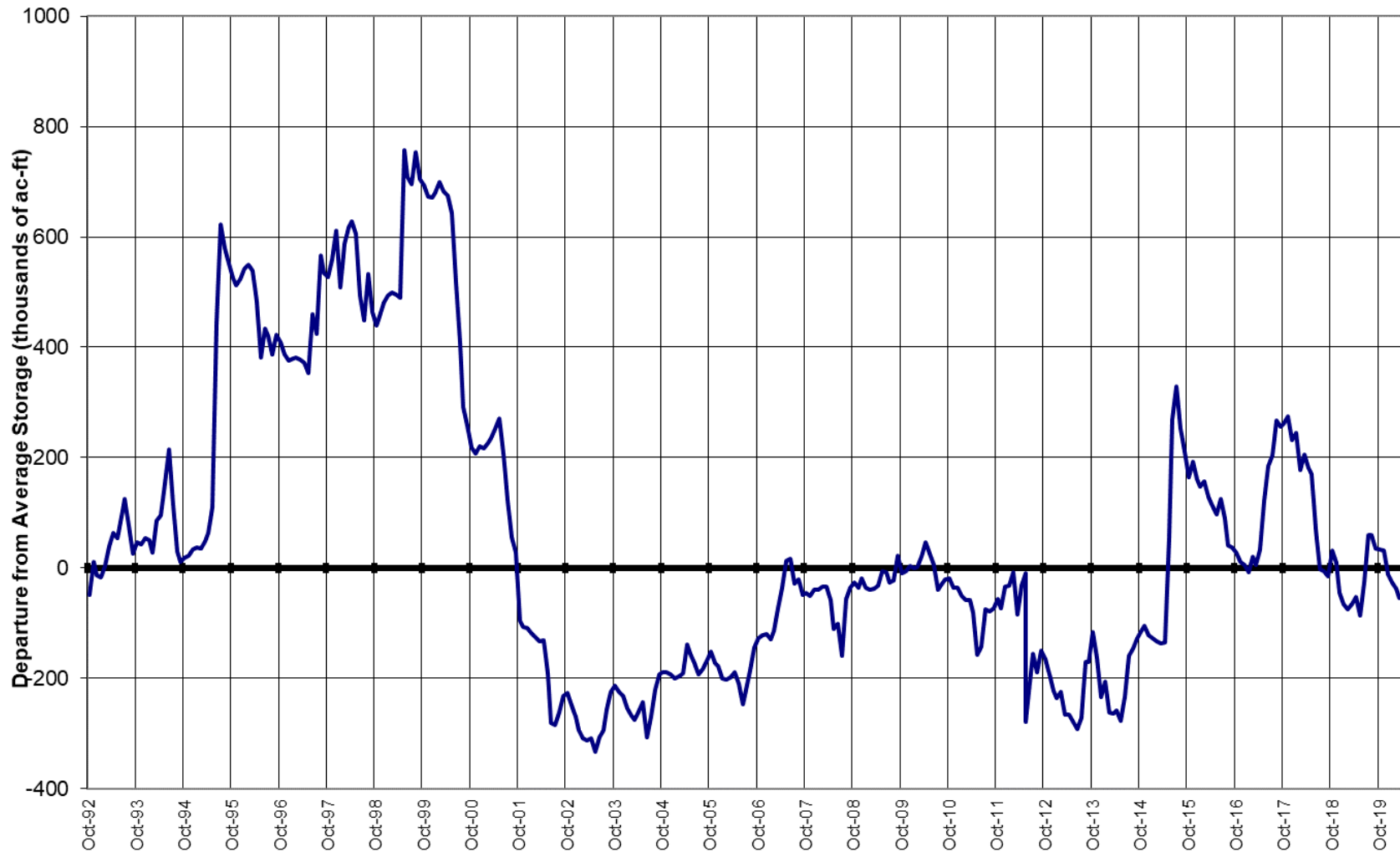
April 1, 2020



0 10 20 40 60 80 Miles

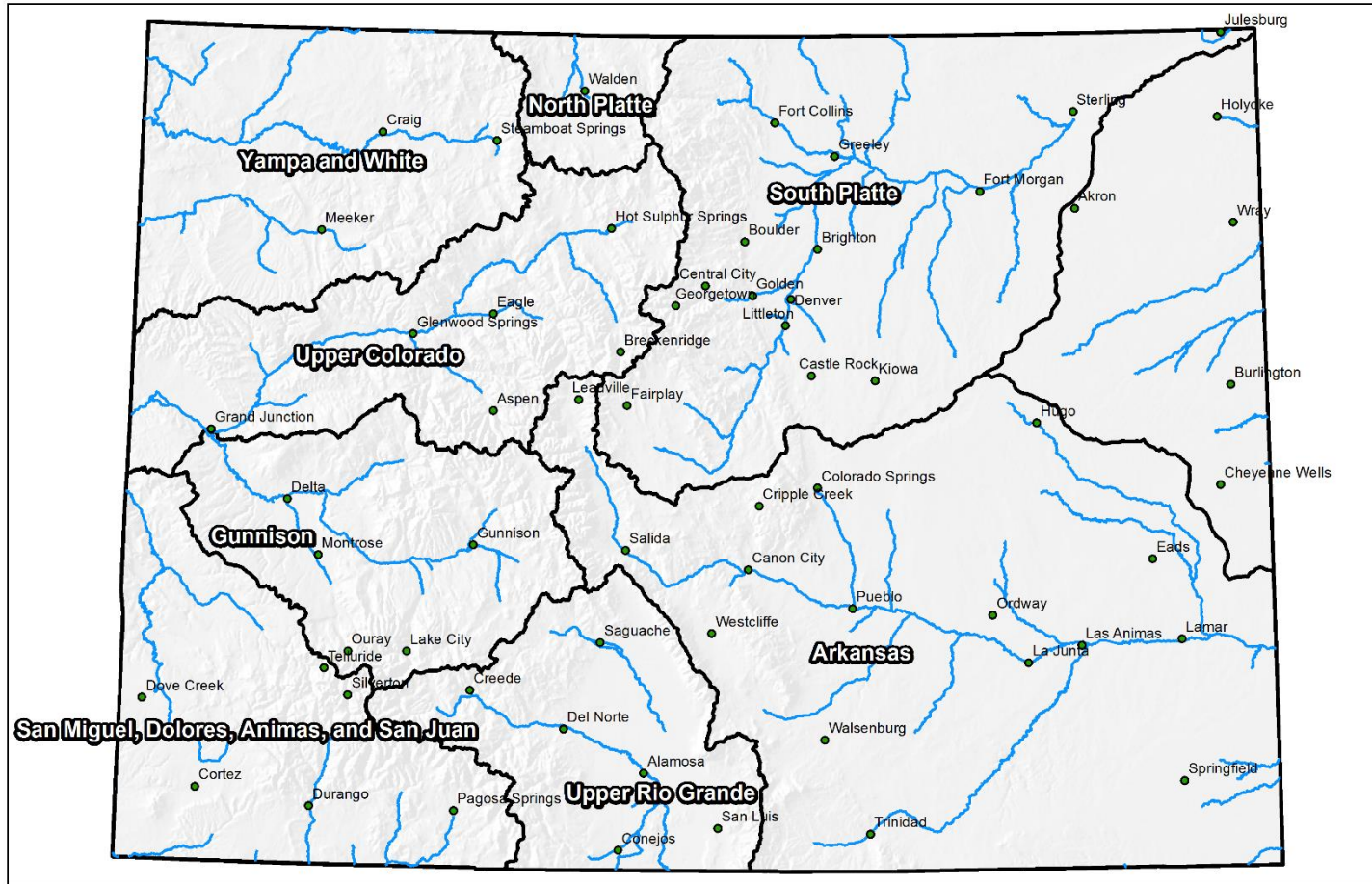


## ARKANSAS RIVER BASIN Reservoir Storage Departure from Average



## Colorado Statewide Summary

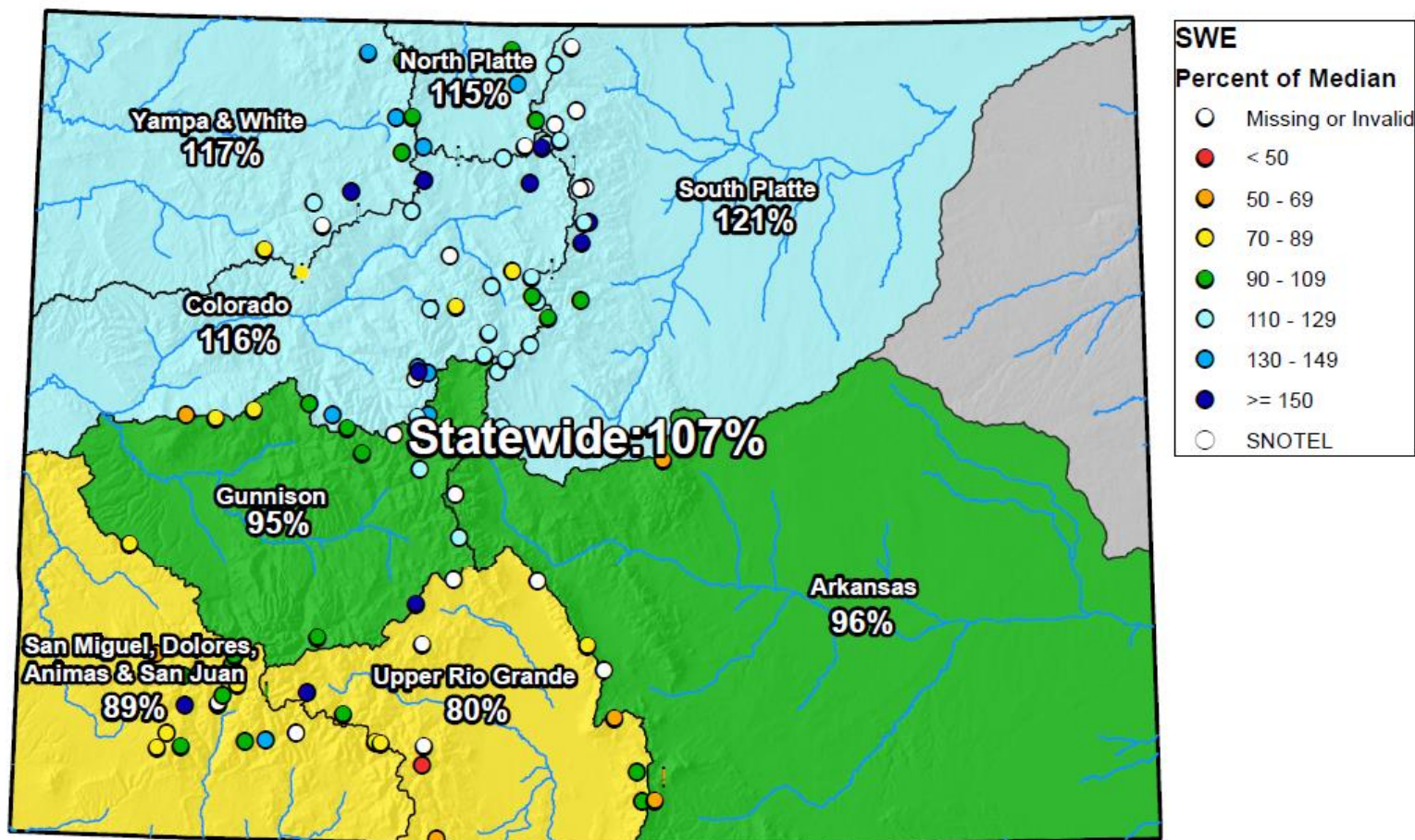
Colorado Major Basins



0 25 50 100 150 200 Miles

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

Current as of Apr 20, 2020



0 25 50 100 150 200 Miles

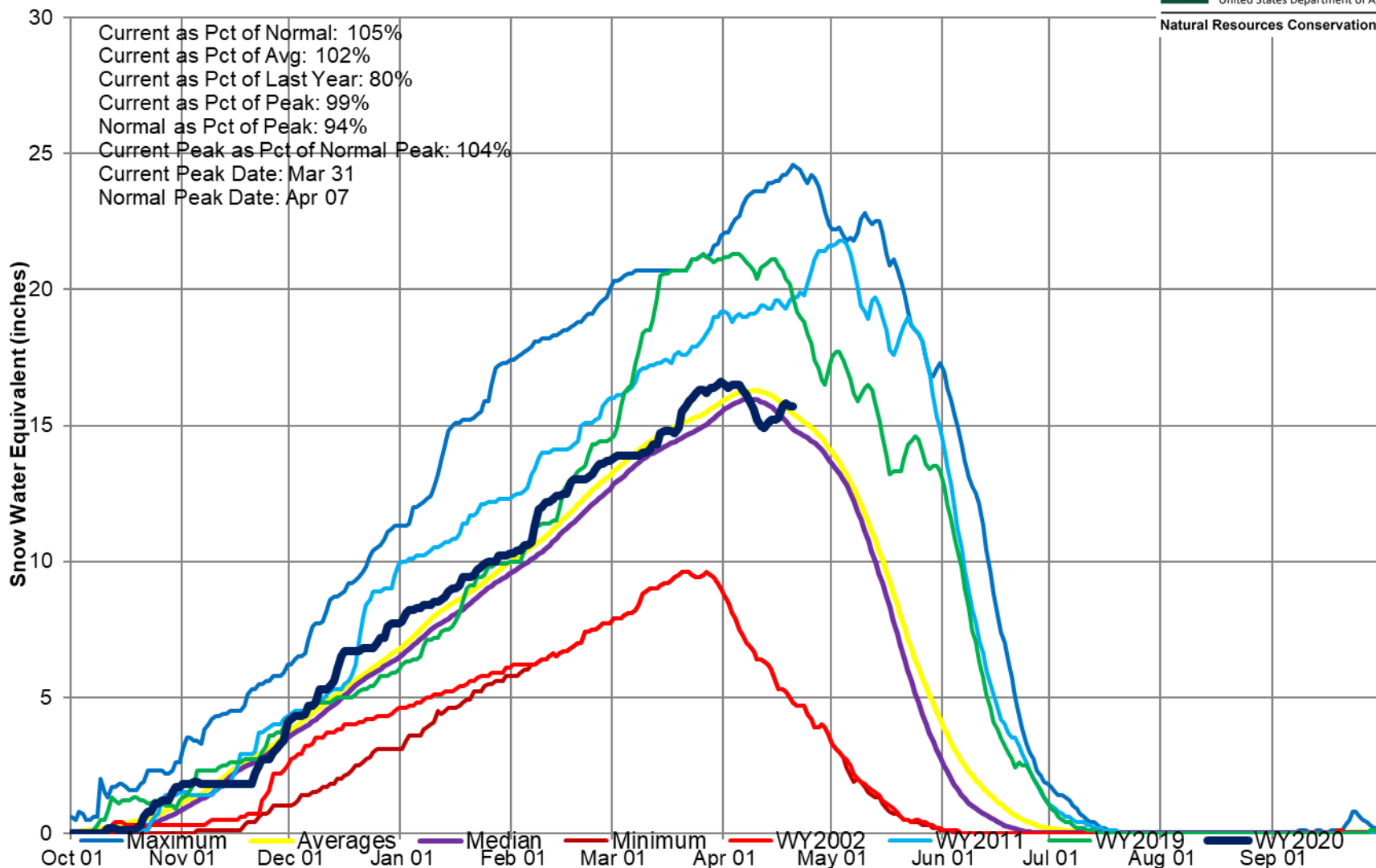
## Colorado Statewide High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of Apr 20, 2020*



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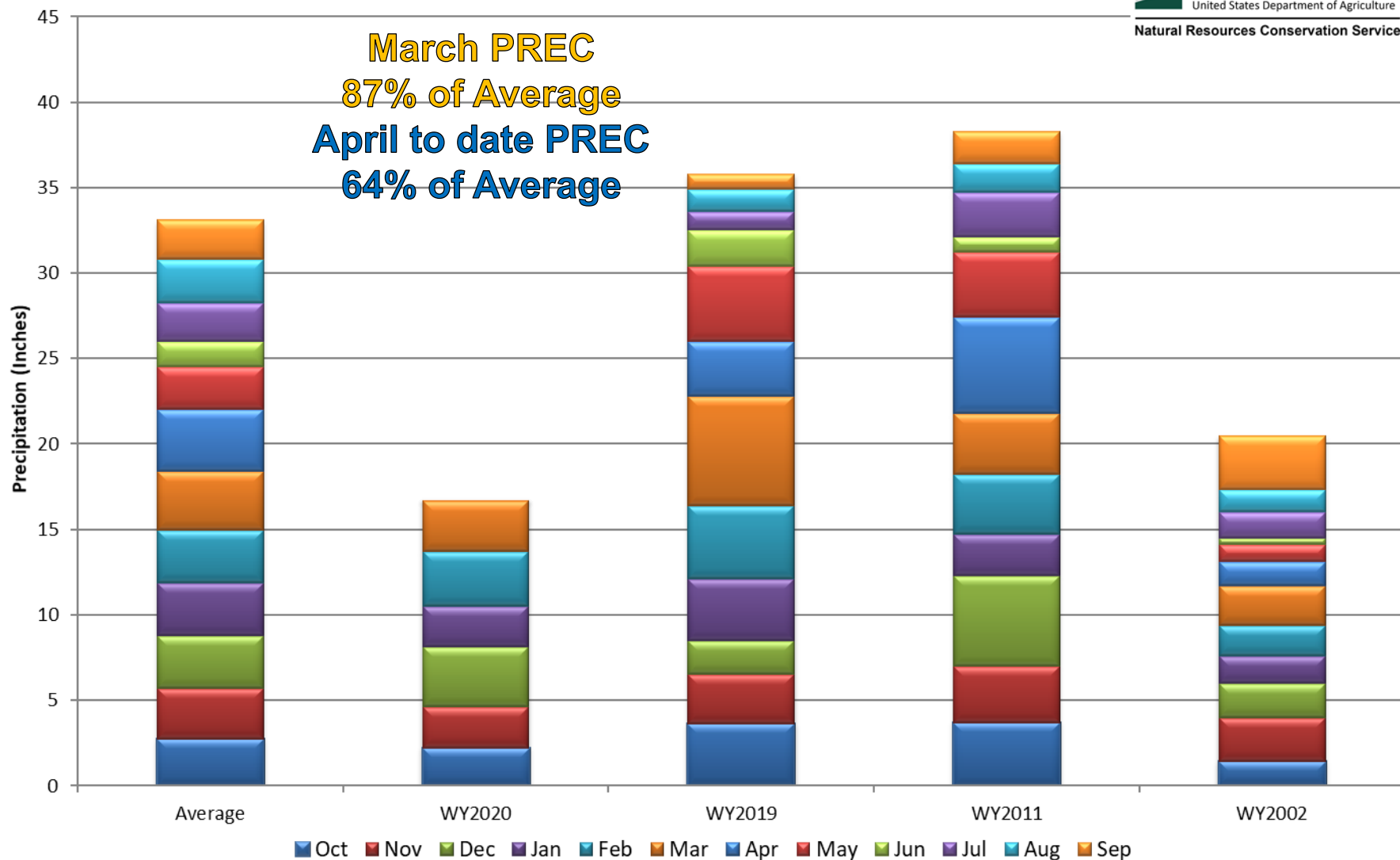
## Colorado Statewide High/Low Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of Apr 17, 2020*



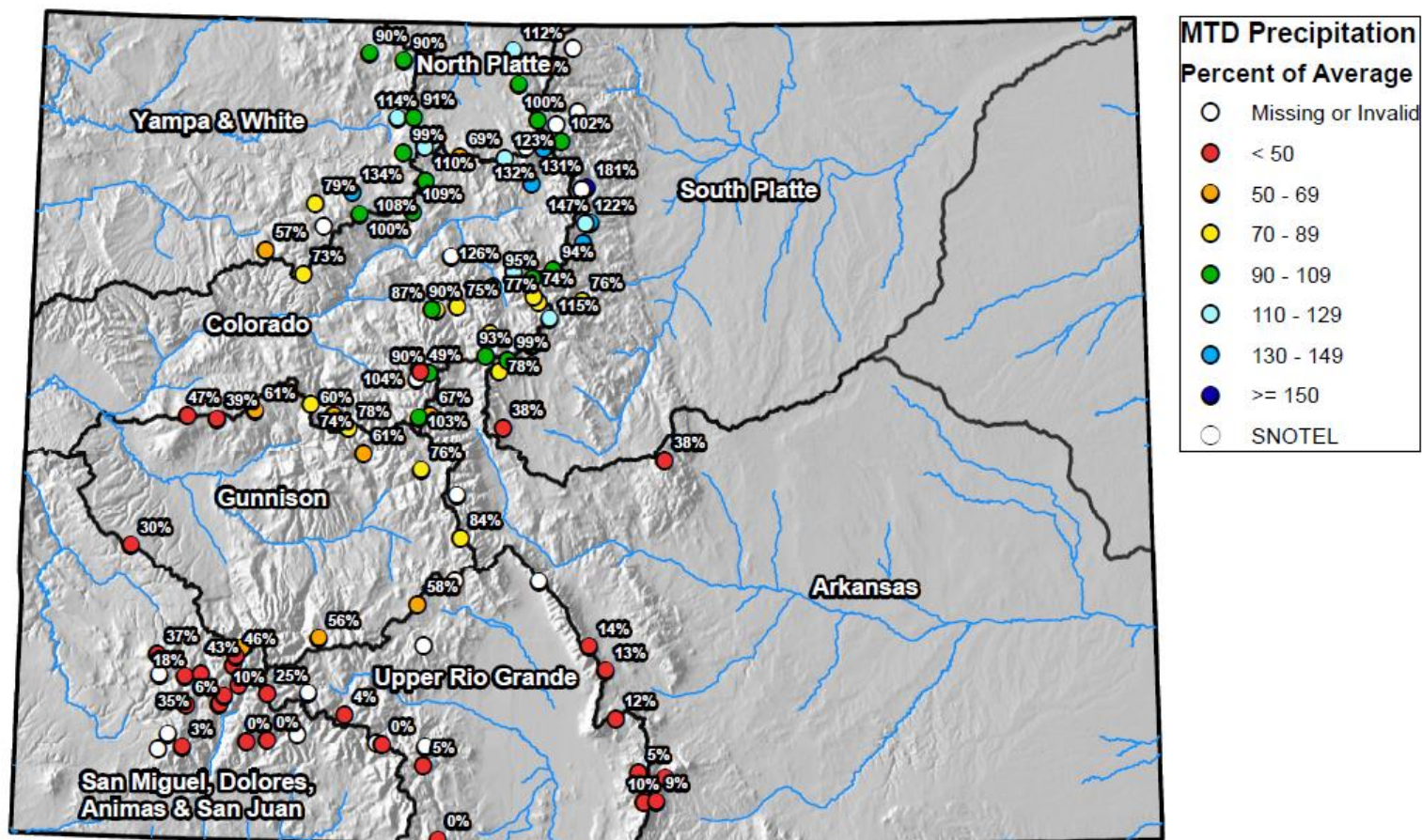
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## Colorado SNOTEL Month-to-Date Precipitation

Current as of Apr 20, 2020



0 25 50 100 150 200 Miles

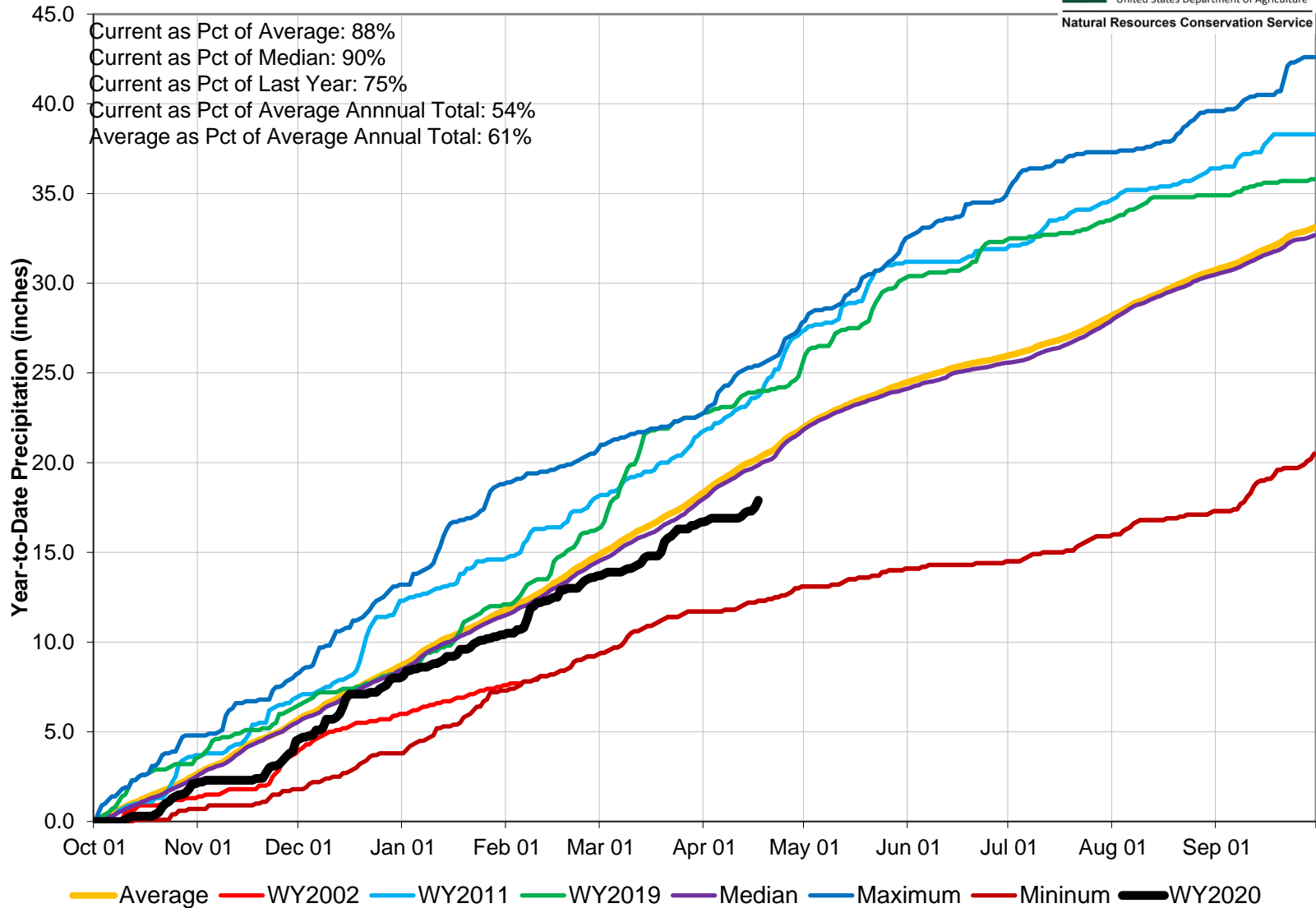
## Colorado Statewide High/Low Year-to-Date Precipitation Summary

*Based on Provisional SNOTEL data as of Apr 17, 2020*



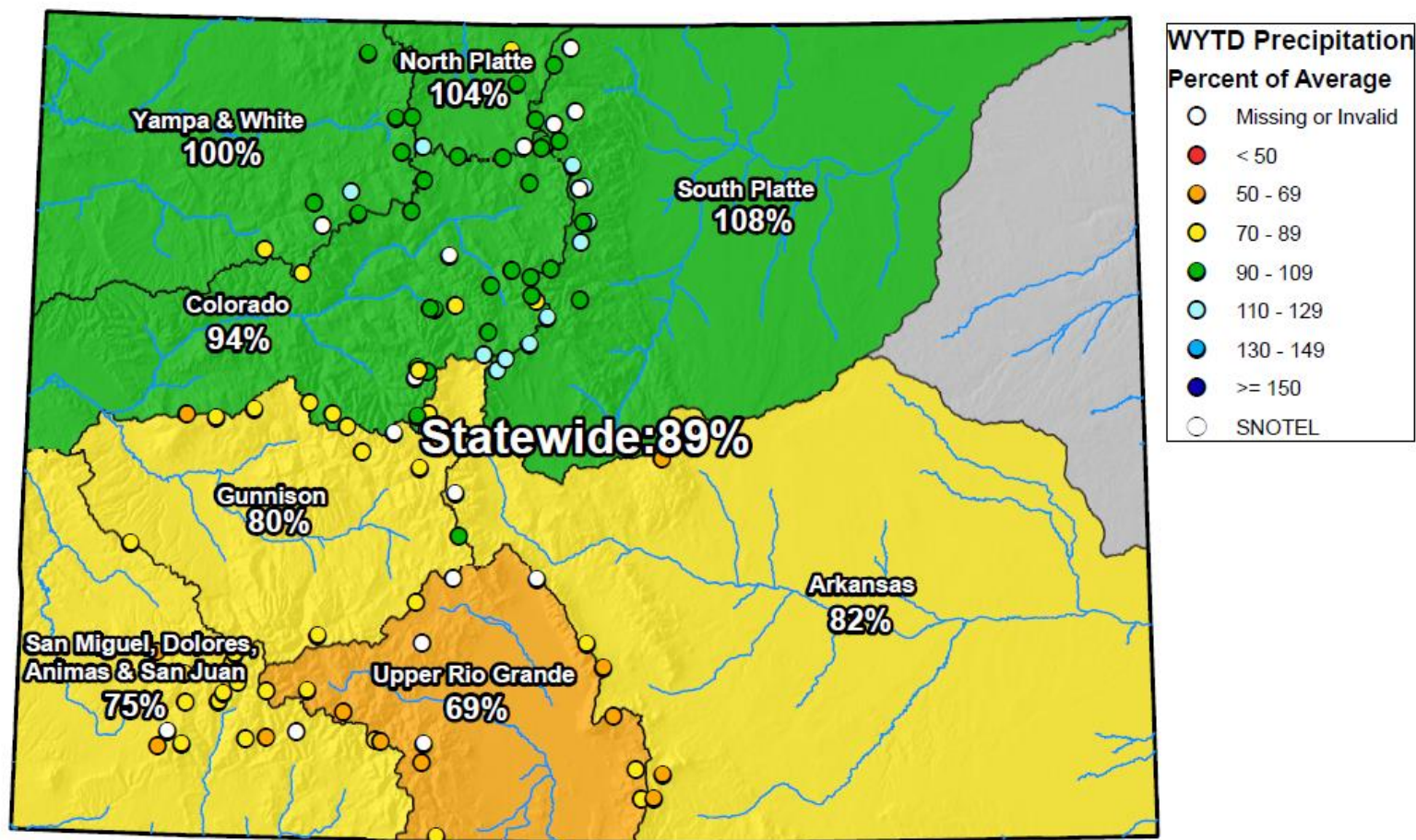
United States Department of Agriculture

Natural Resources Conservation Service



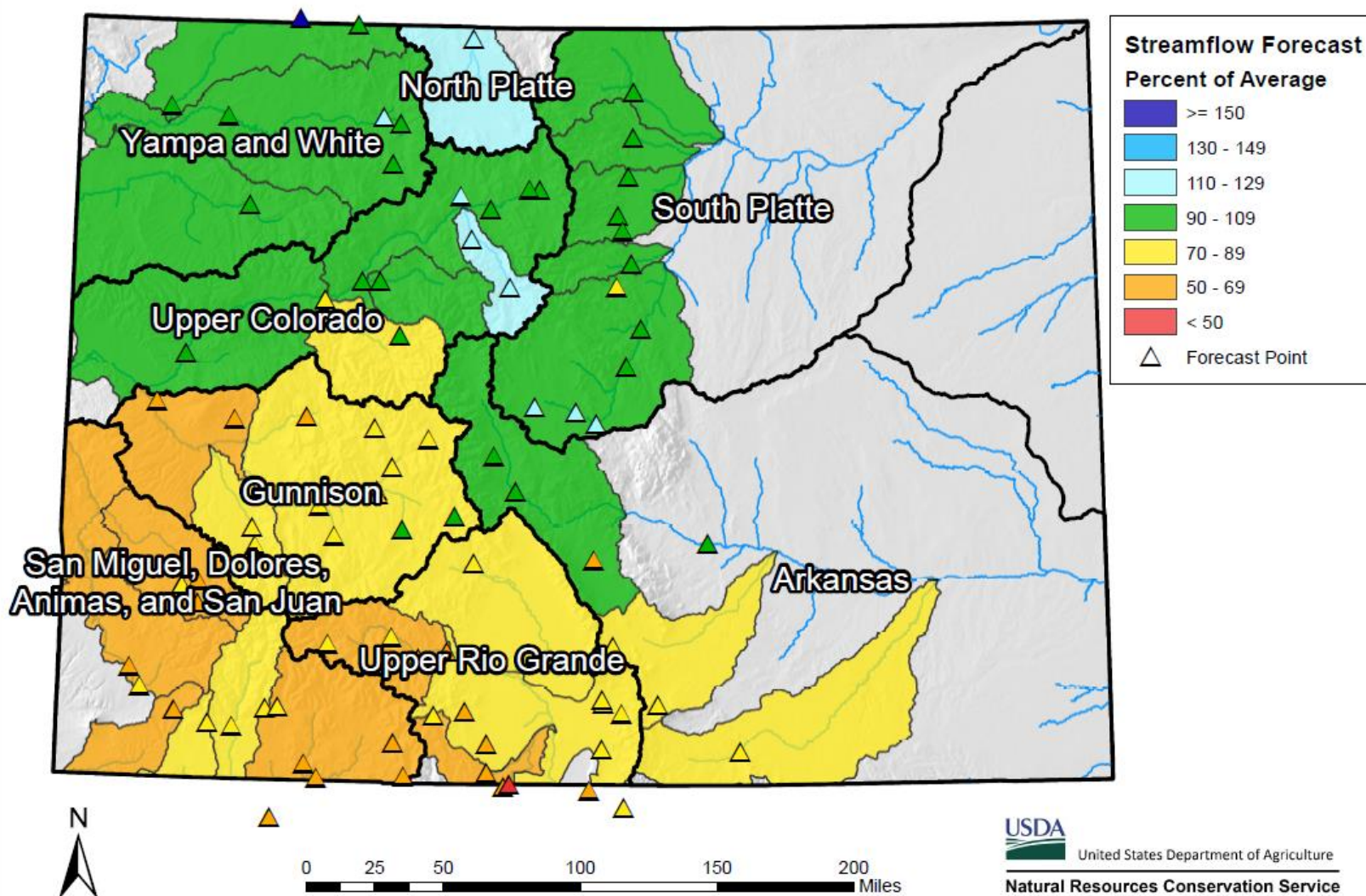
## Colorado SNOTEL Water Year to Date Precipitation

Current as of Apr 20, 2020



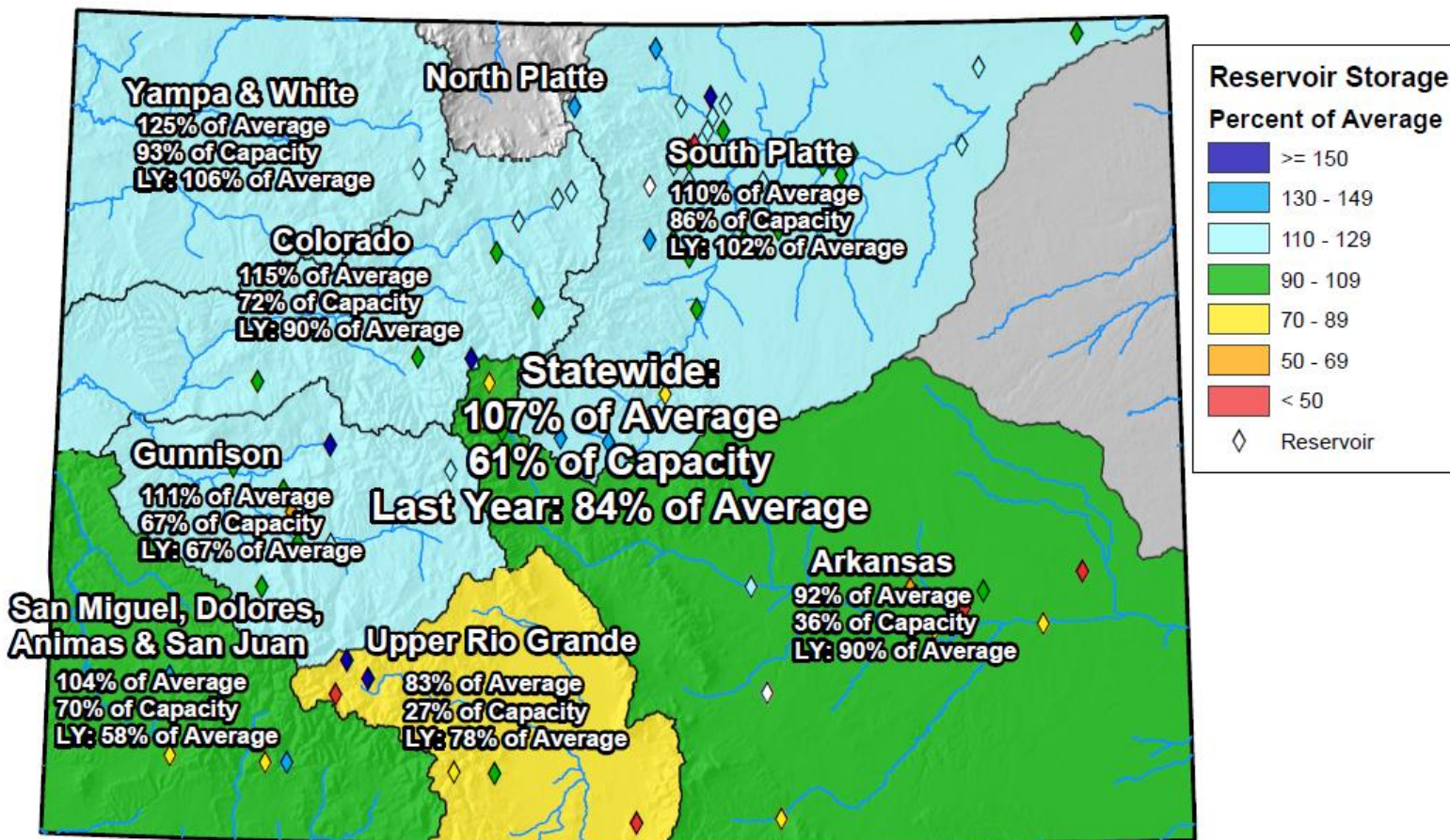
0 25 50 100 150 200 Miles

## Colorado Streamflow Forecasts Summary April 1, 2020



## Colorado Monthly Reservoir Storage Summary

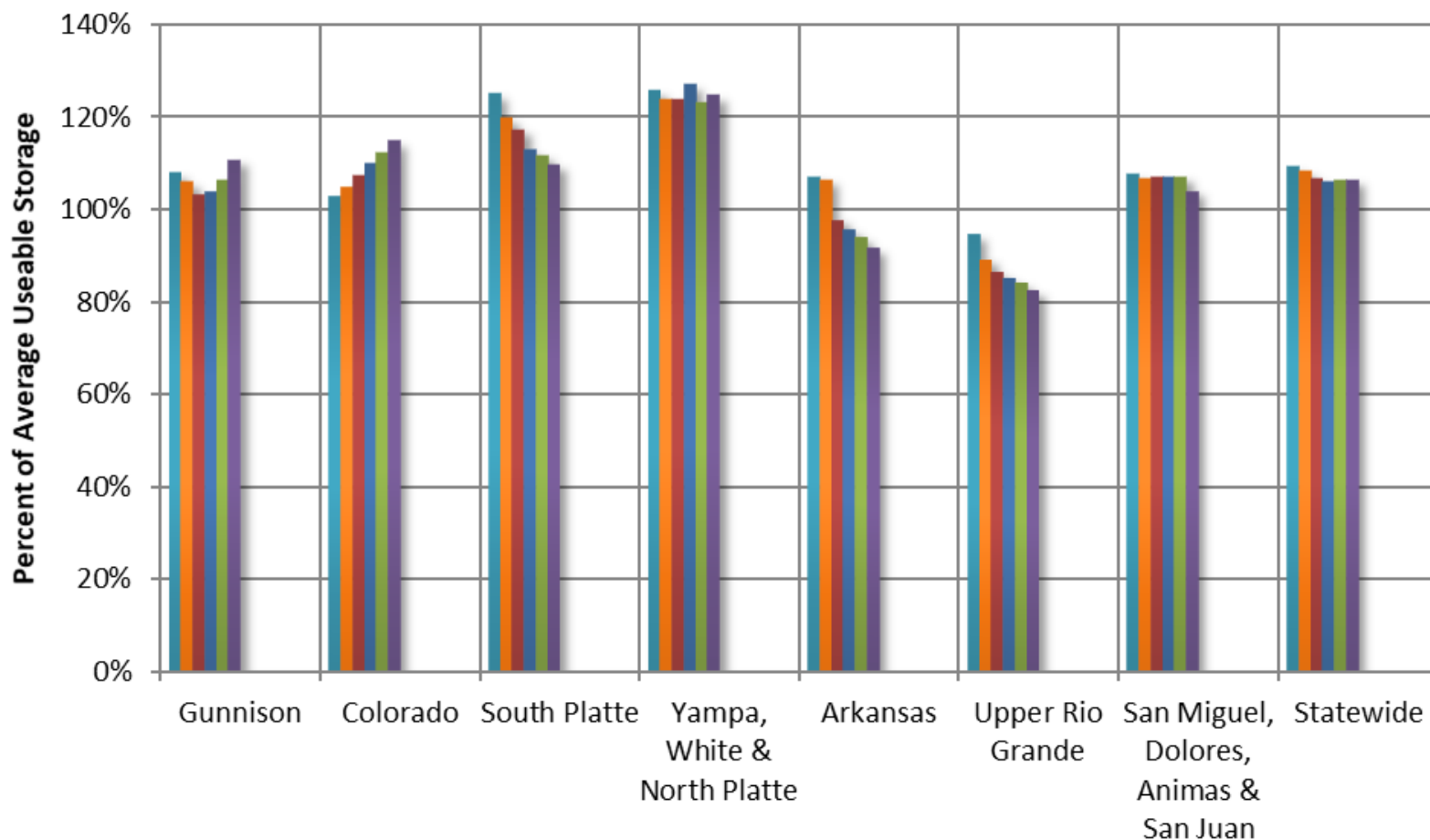
End of March 2020



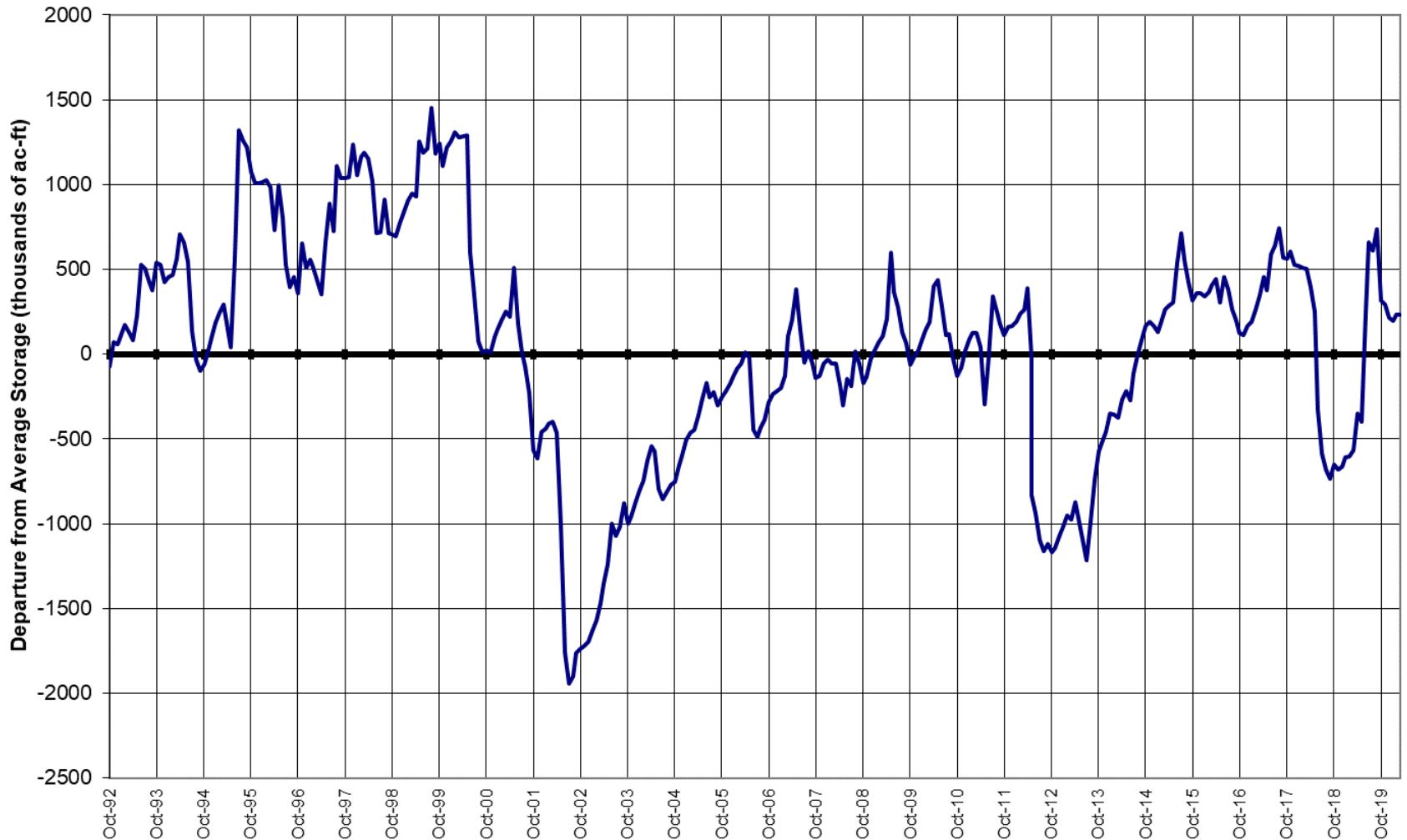
0 25 50 100 150 200 Miles

## Colorado Reservoir Storage

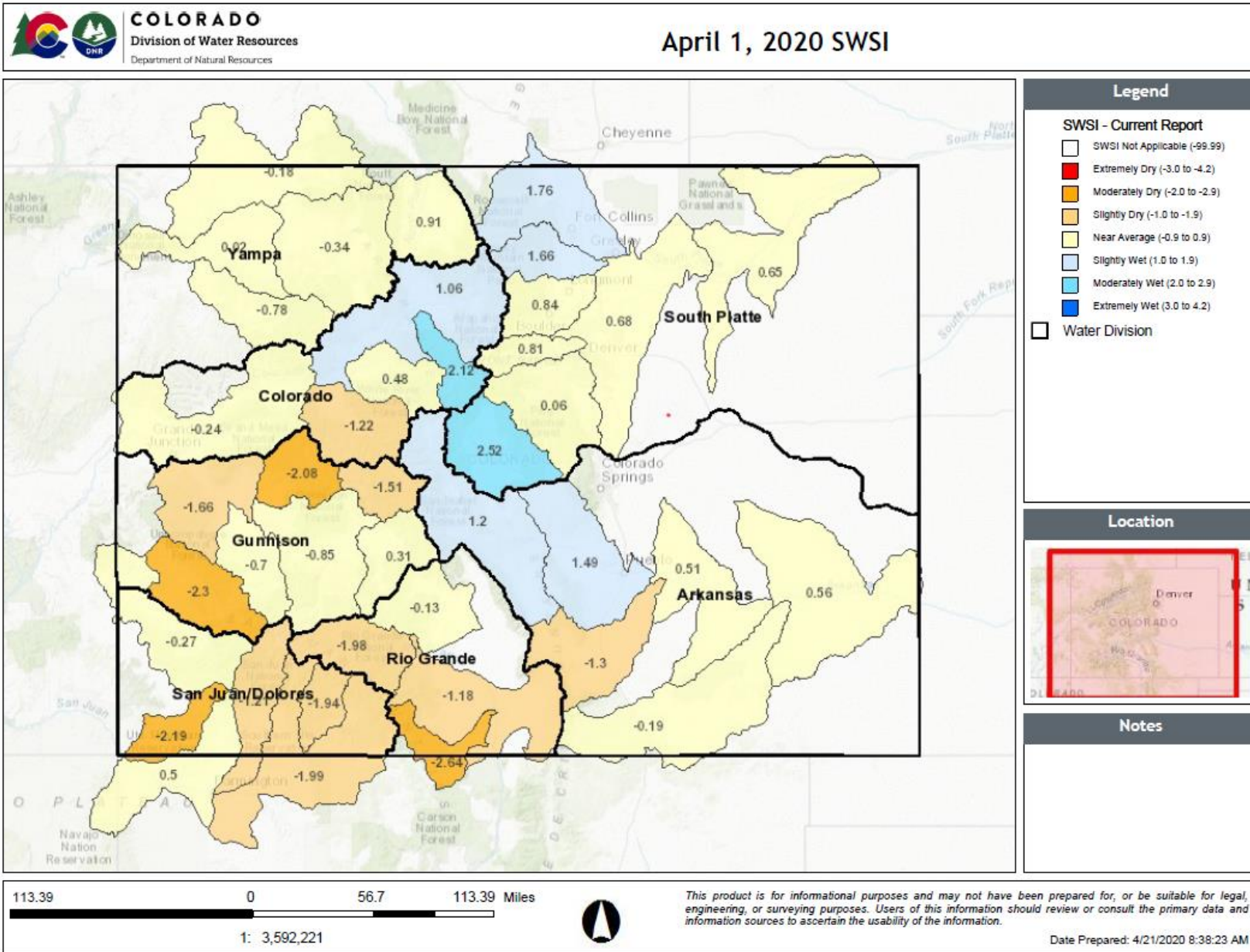
Oct-19   Nov-19   Dec-19   Jan-20   Feb-20   Mar-20  
 Apr-20   May-20   Jun-20   Jul-20   Aug-20   Sep-20



## COLORADO STATEWIDE Reservoir Storage Departure from Average



April 1, 2020 SWSI



# Summary

- April-to-date precipitation varied widely with Southern Colorado being extremely dry and Northern Colorado closer to normal
- Statewide snowpack peaked at 104 percent of normal
- Snowmelt began earlier than normal across the state
  - Much of the northern half of Colorado got a recent boost to SWE but melt has been quickly progressing in the southern basins
- Reservoir storage remains above average in all major basins except for the Rio Grande and Arkansas
- Ranging from 83-125 percent of average storage and is 106 percent of average statewide
- April 1<sup>st</sup> streamflow forecasts were generally near normal in Northern Colorado and notably below normal in Southern Colorado
  - With April precipitation patterns it can be anticipated this difference will widen for May 1<sup>st</sup> forecasts



United States Department of Agriculture

Colorado Snow Surveys

# Water Availability Task Force Meeting

## April 21<sup>st</sup>, 2020

### NRCS Snow Survey and Water Supply Forecasting Program

Karl Wetlaufer

Hydrologist

Asst. Snow Survey Supervisor

720-544-2853

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



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