



United States Department of Agriculture

Colorado Snow Surveys

# Water Availability Task Force Meeting

## April 18<sup>th</sup>, 2017

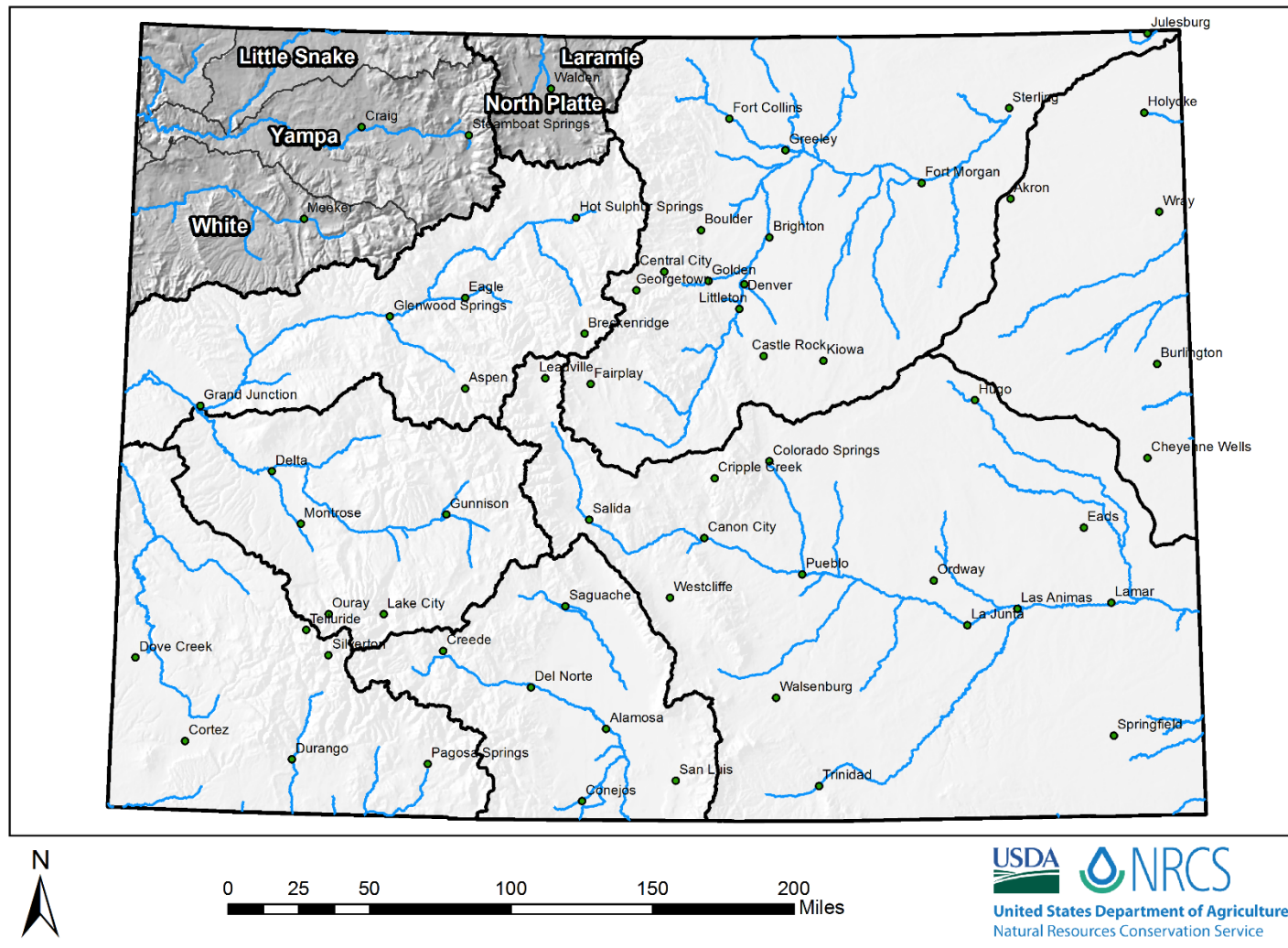
### NRCS Snow Survey and Water Supply Forecasting Program

Brian Domonkos  
Snow Survey Supervisor  
720-544-2852

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

## Major Basin Summary

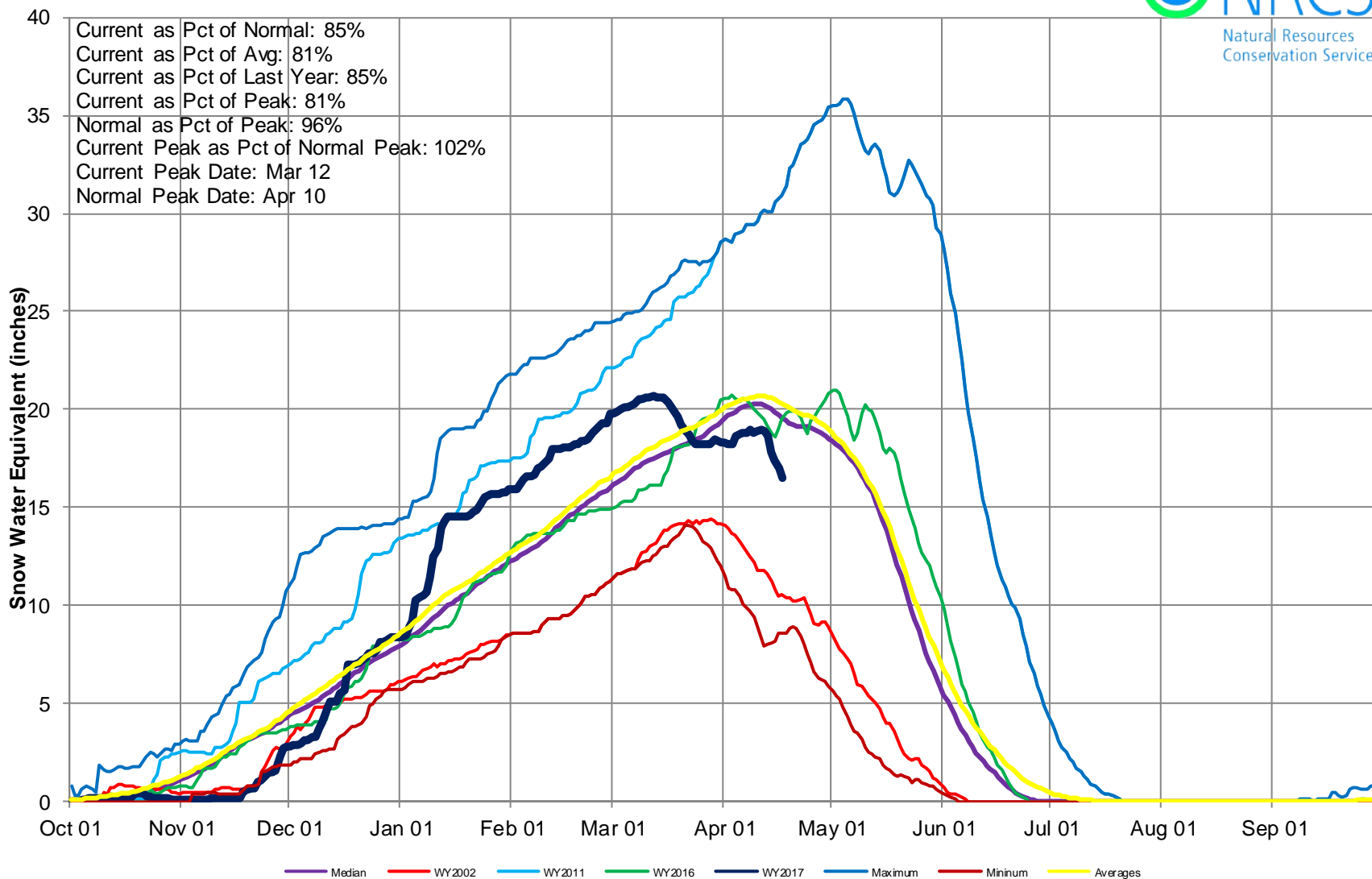
Yampa, White, and North Platte River Basins





## Yampa, White & North Platte River Basins High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of Apr 17, 2017*



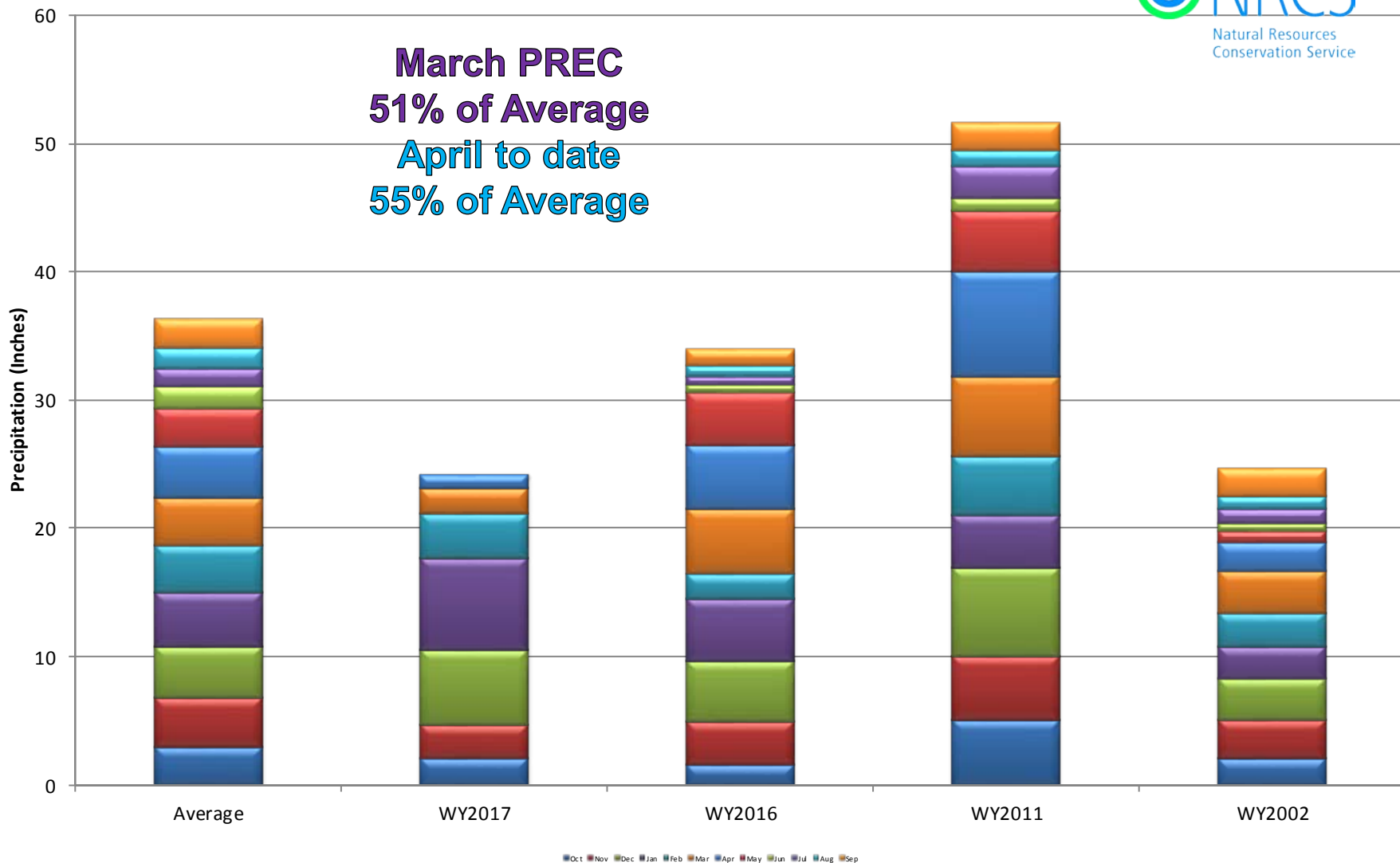


## Yampa & White River Basins High/Low Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of Apr 17, 2017*

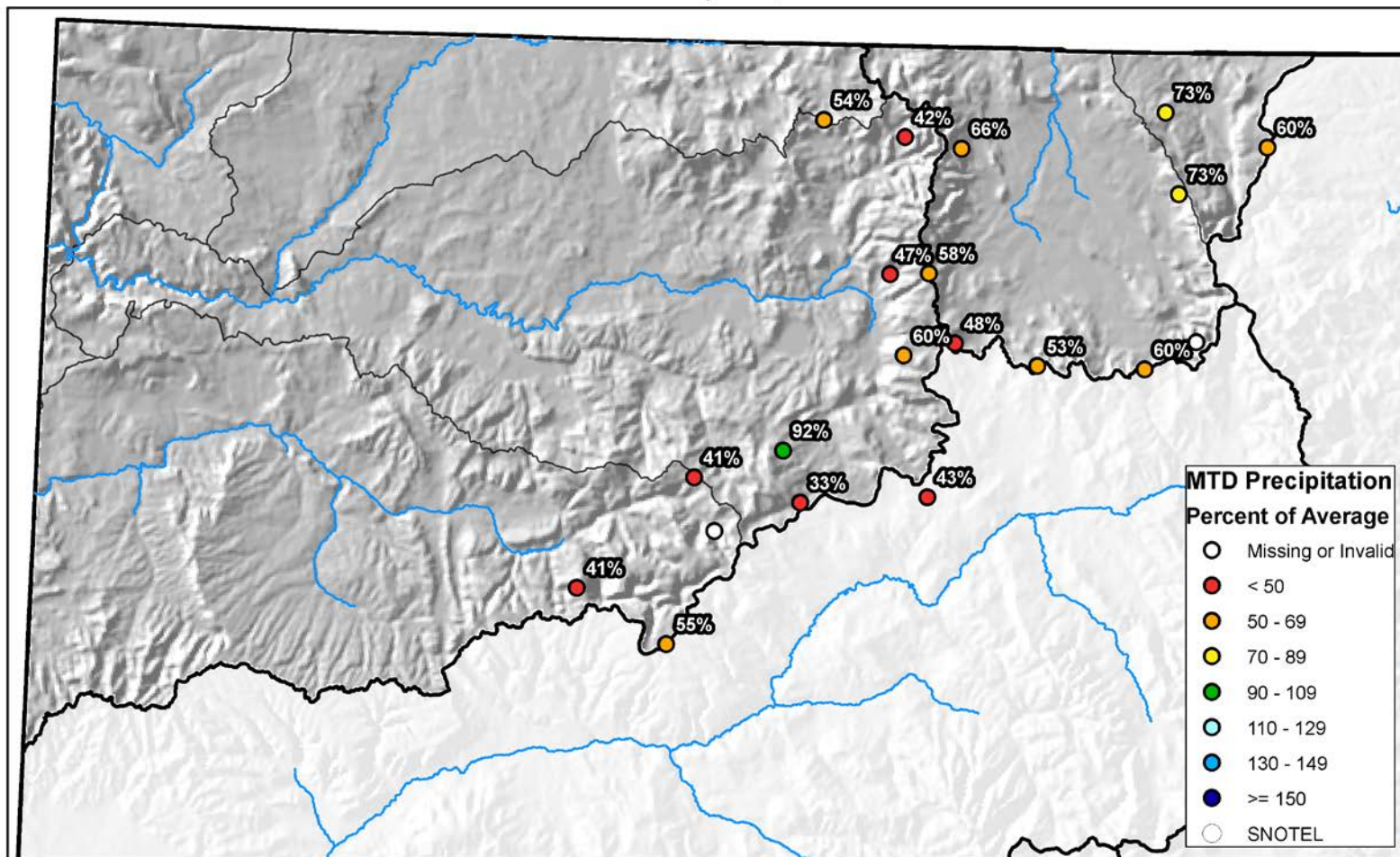


**March PREC**  
**51% of Average**  
**April to date**  
**55% of Average**





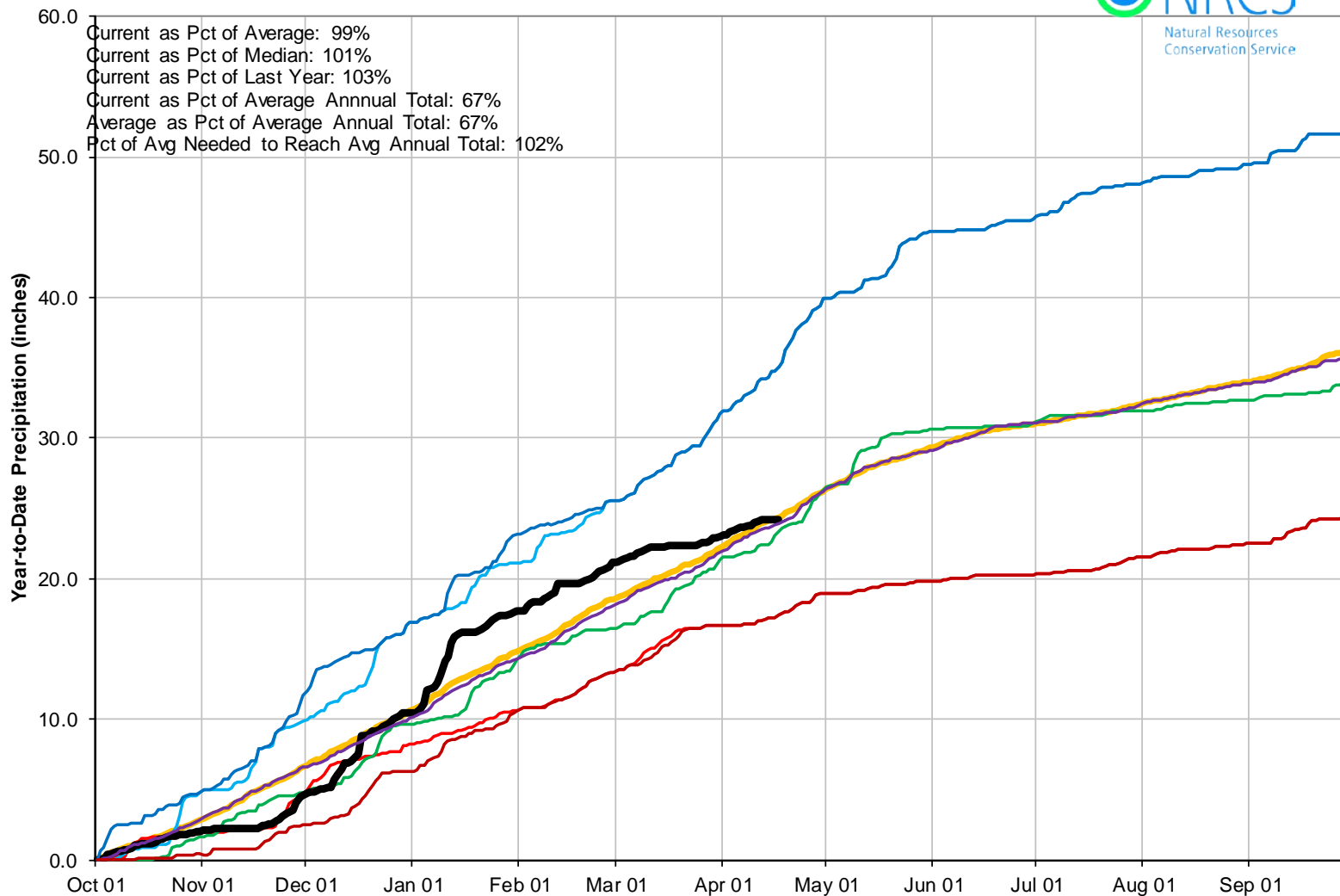
## Yampa, White, and North Platte River Basins Month to Date Precipitation Summary Current as of Apr 17, 2017



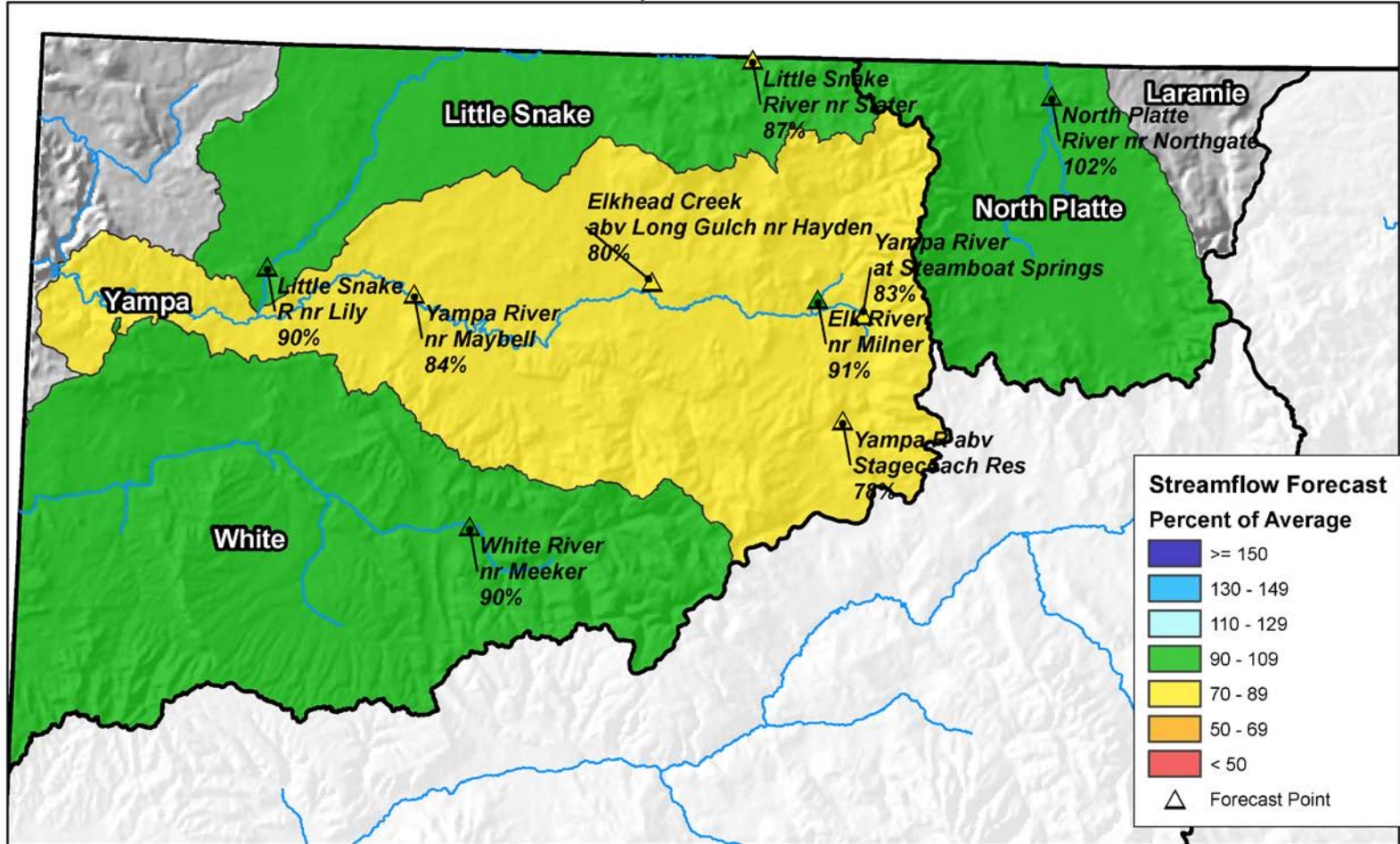
0 10 20 40 60 80 Miles

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

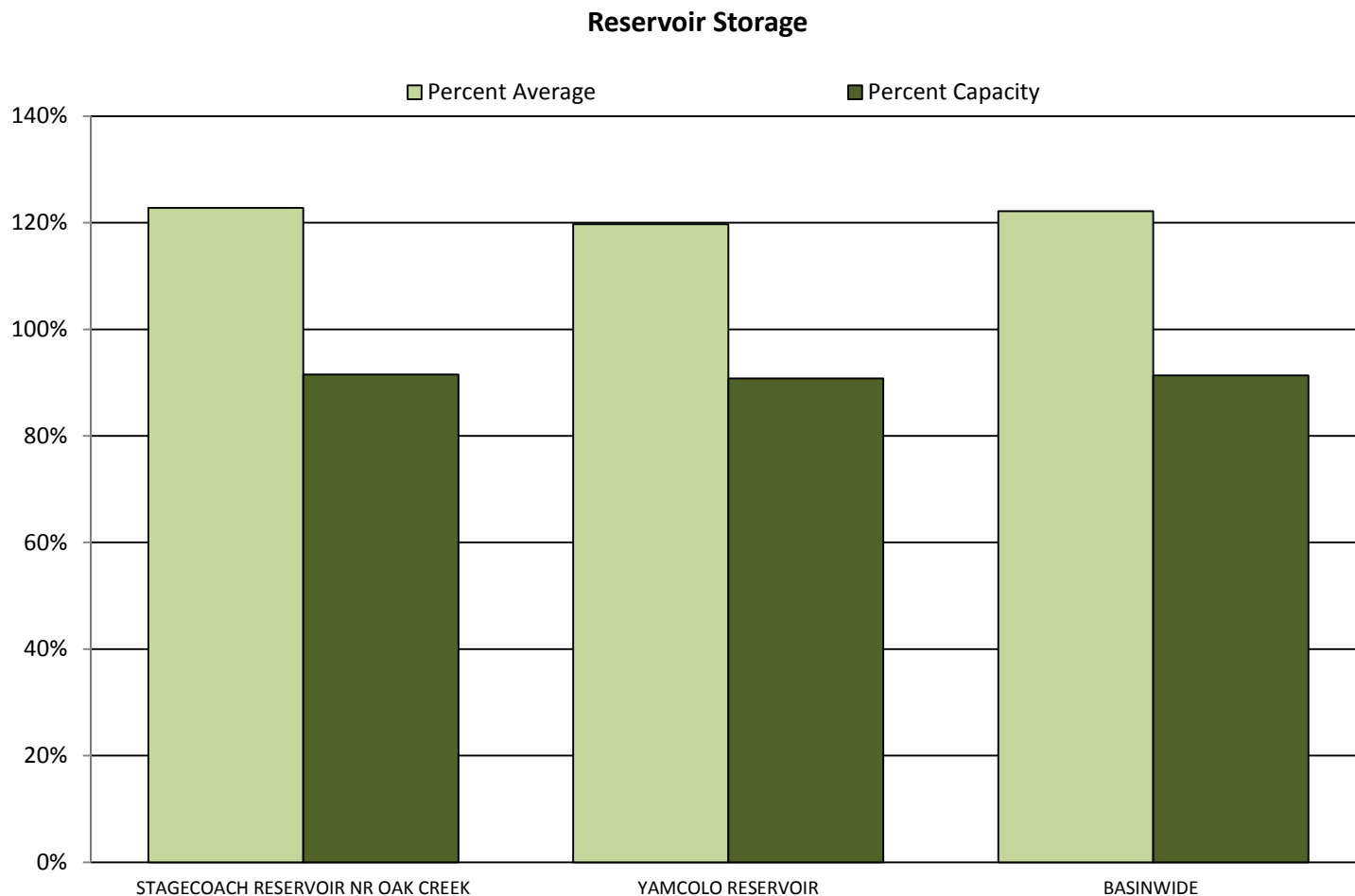
*Based on Provisional SNOTEL data as of Apr 17, 2017*



## Yampa, White, and North Platte River Basins Streamflow Forecast Summary April 1, 2017

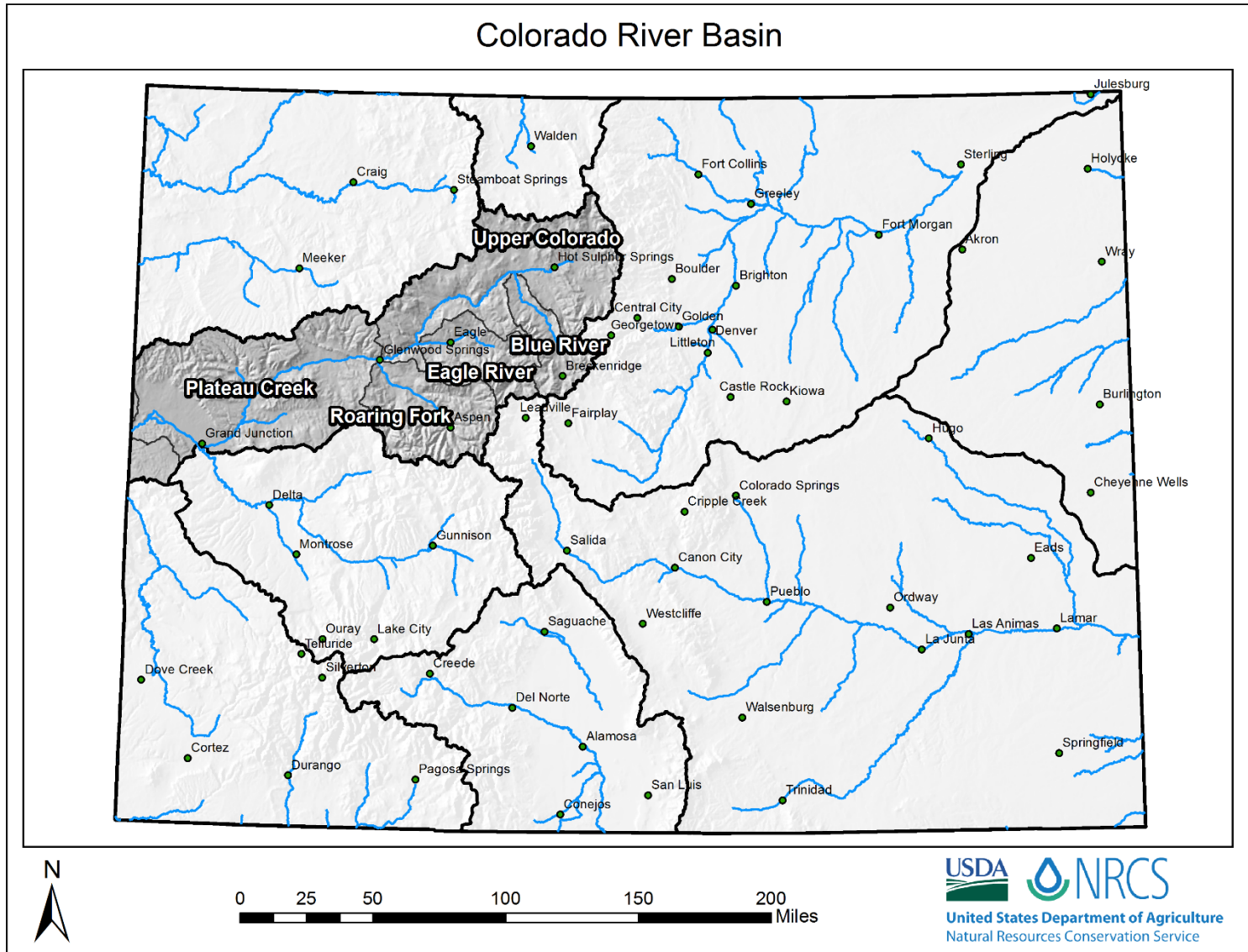


0 10 20 40 60 80 Miles





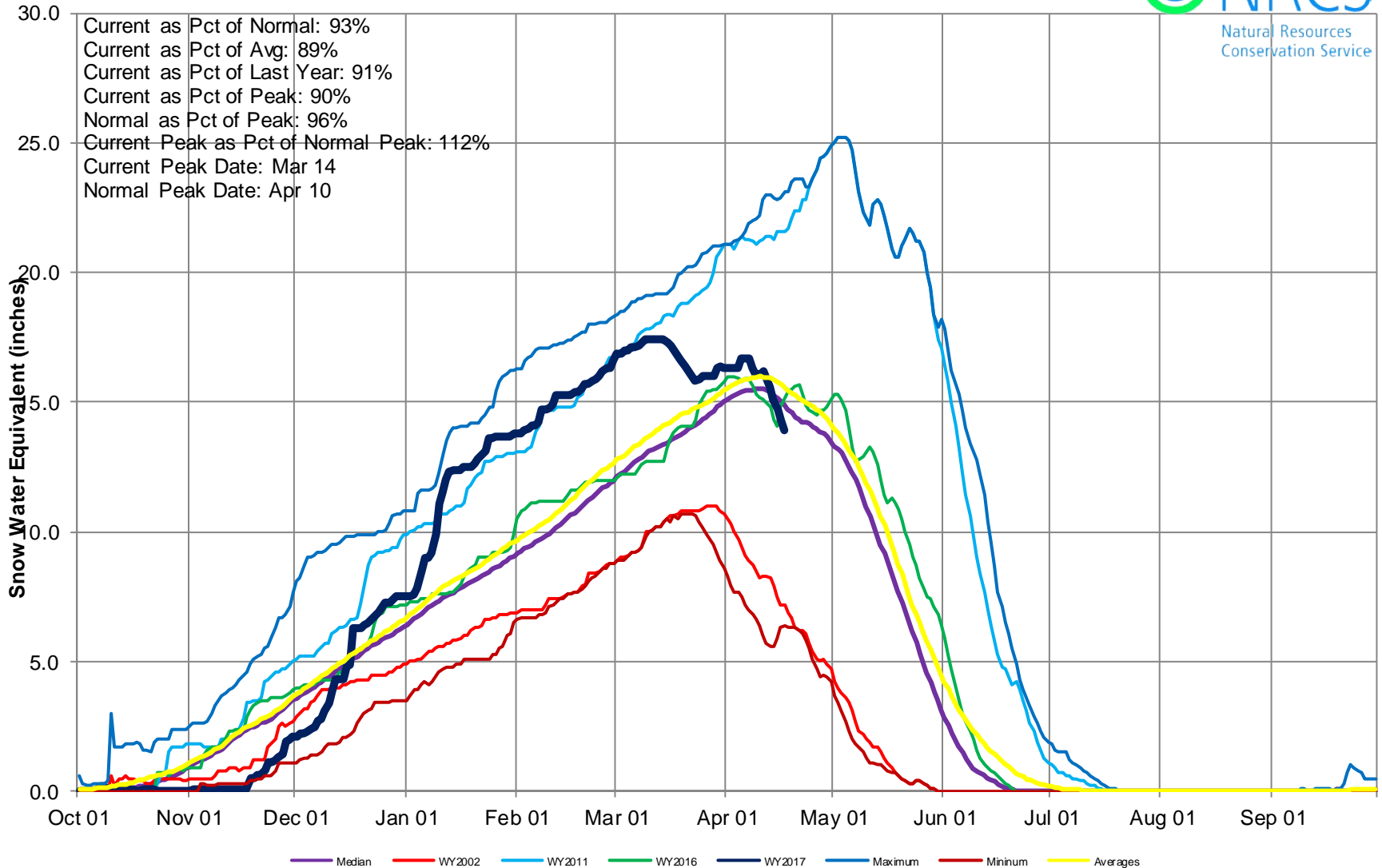
## Major Basin Summary





## Upper Colorado River Basin High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of Apr 17, 2017*





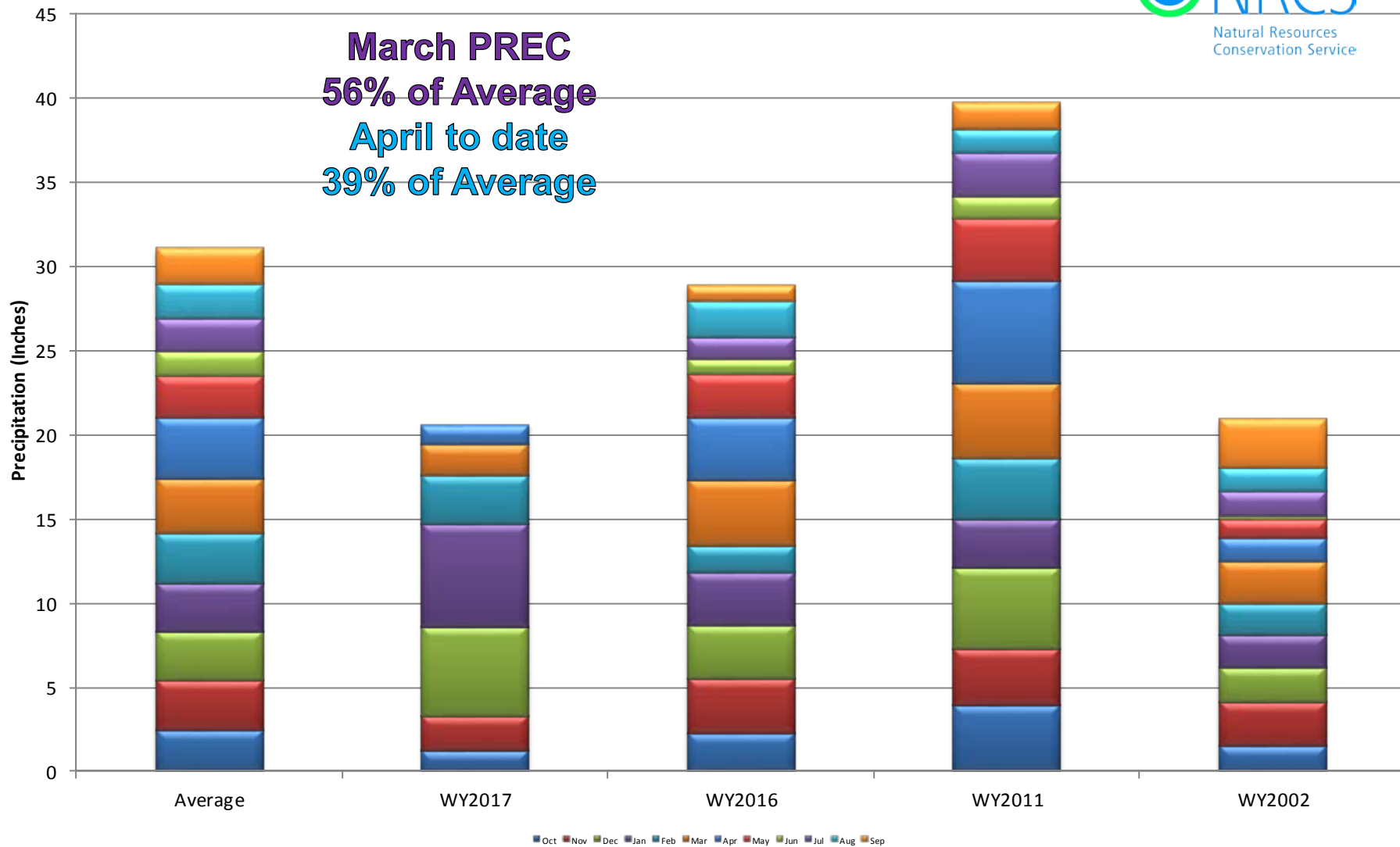


## Upper Colorado River Basin High/Low Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of Apr 17, 2017*

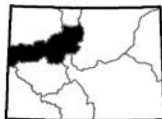
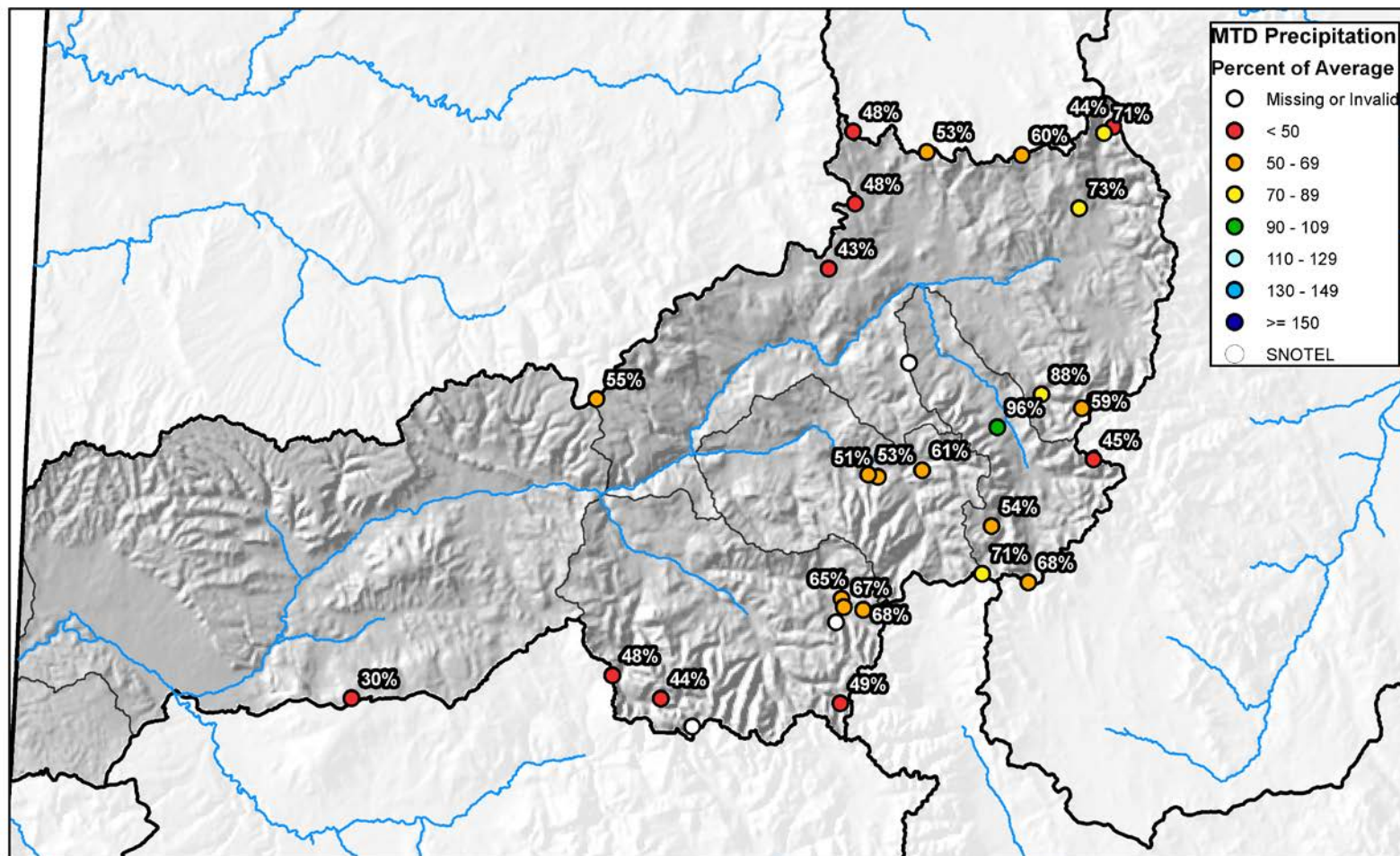


**March PREC**  
**56% of Average**  
**April to date**  
**39% of Average**



## Upper Colorado River Basin Month to Date Precipitation Summary

Current as of Apr 17, 2017



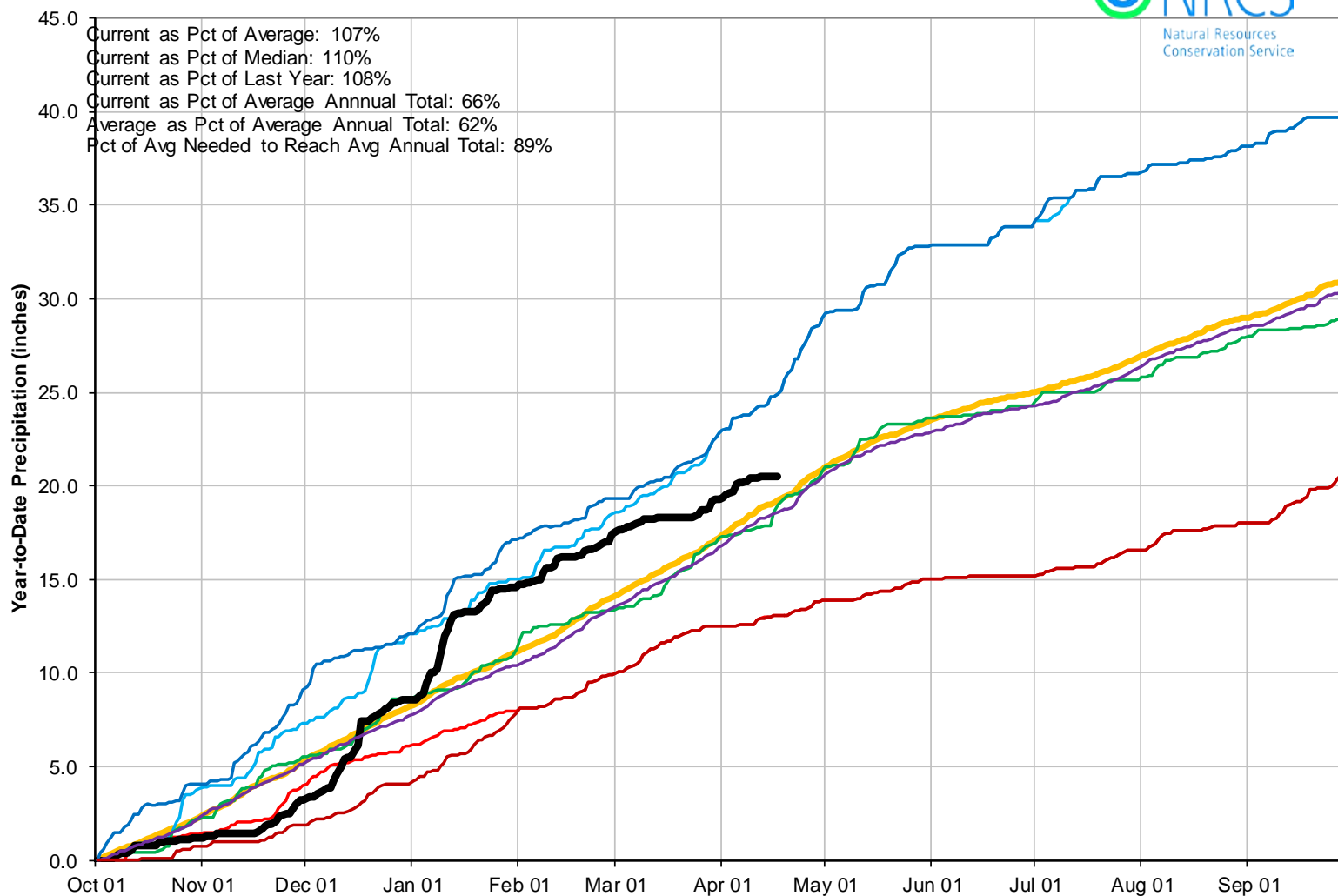


## Upper Colorado River Basin High/Low Year-to-Date Precipitation Summary

*Based on Provisional SNOTEL data as of Apr 17, 2017*



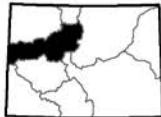
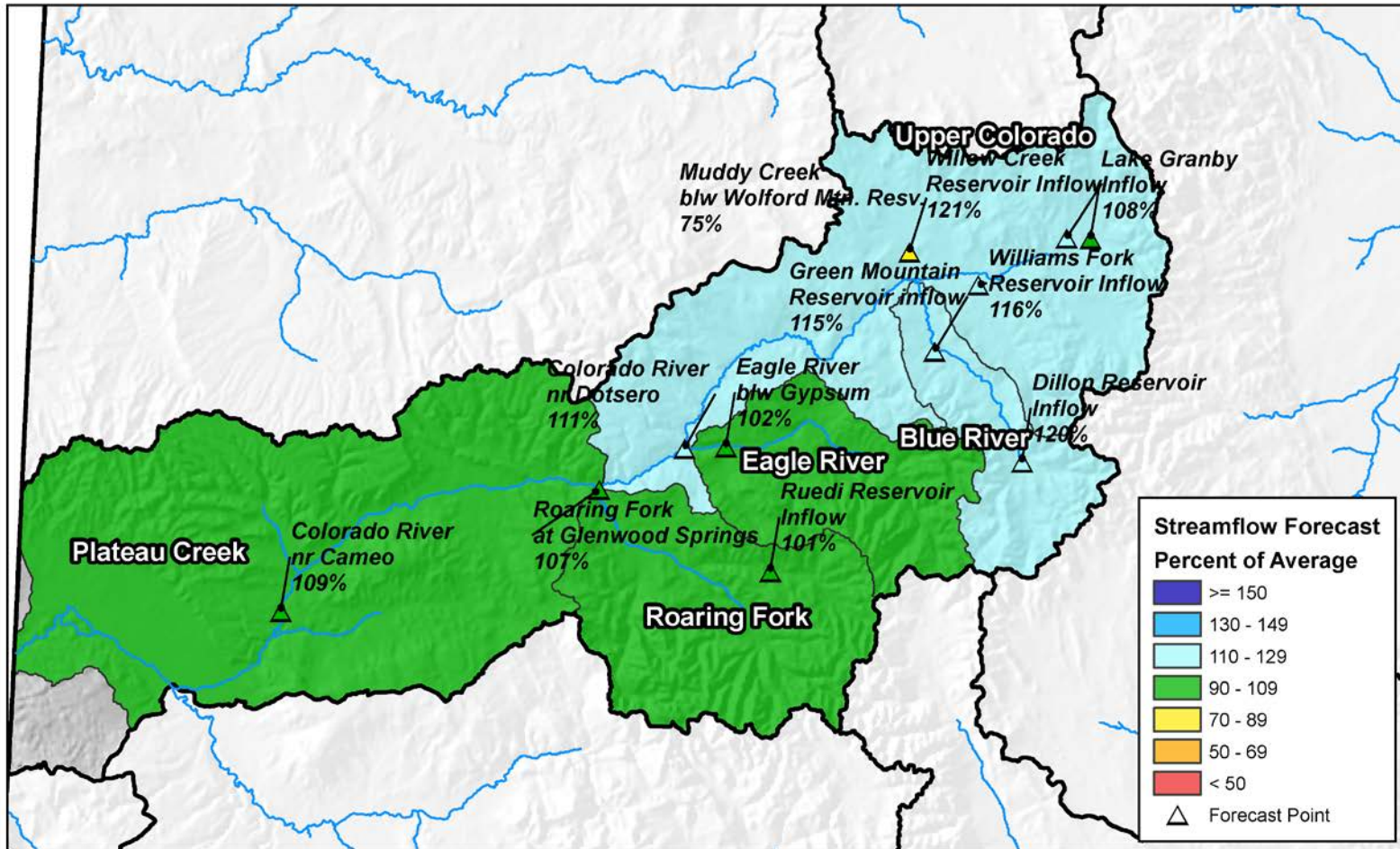
Natural Resources  
Conservation Service





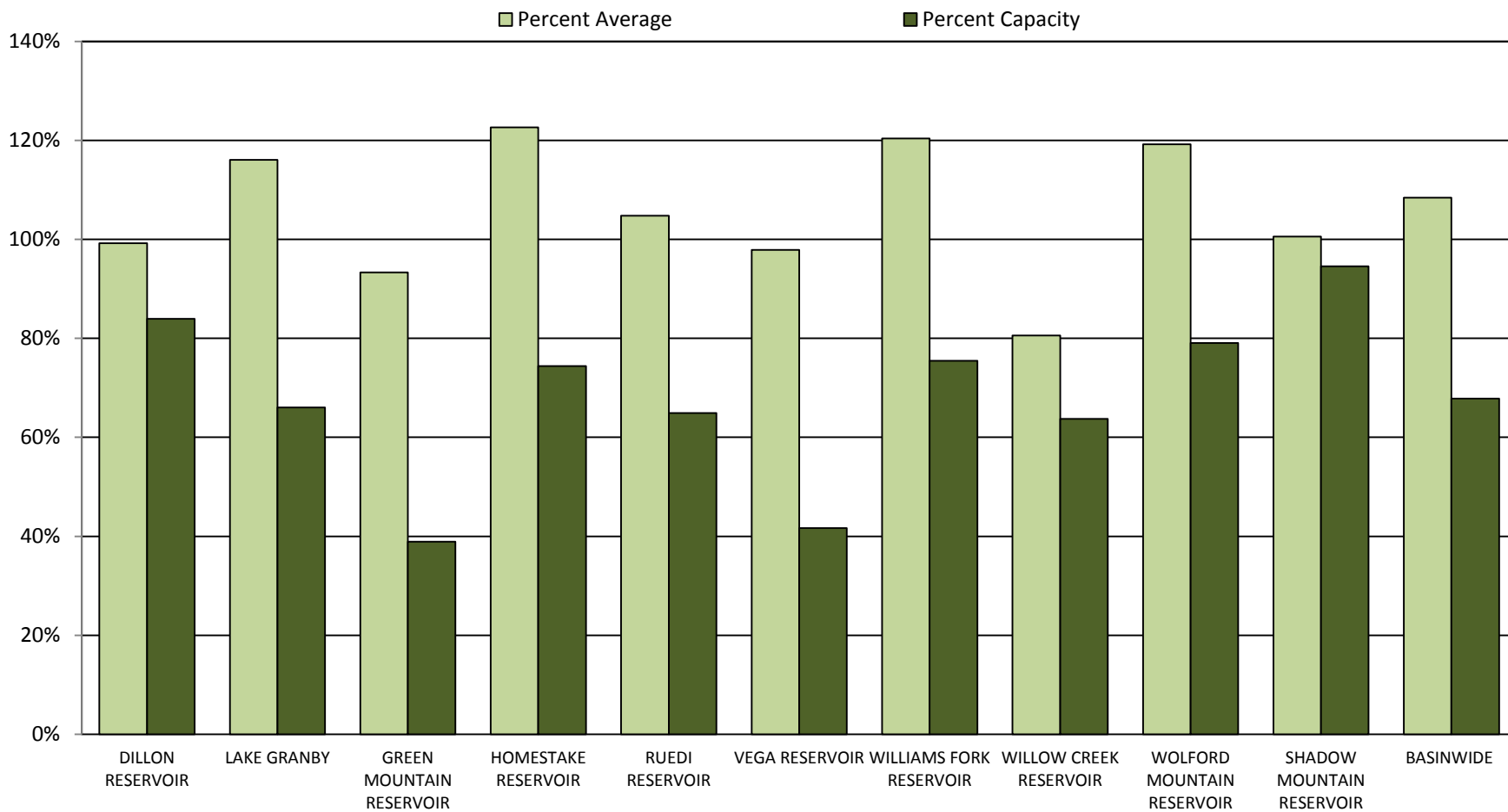
## Upper Colorado River Basin Streamflow Forecast Summary

April 1, 2017



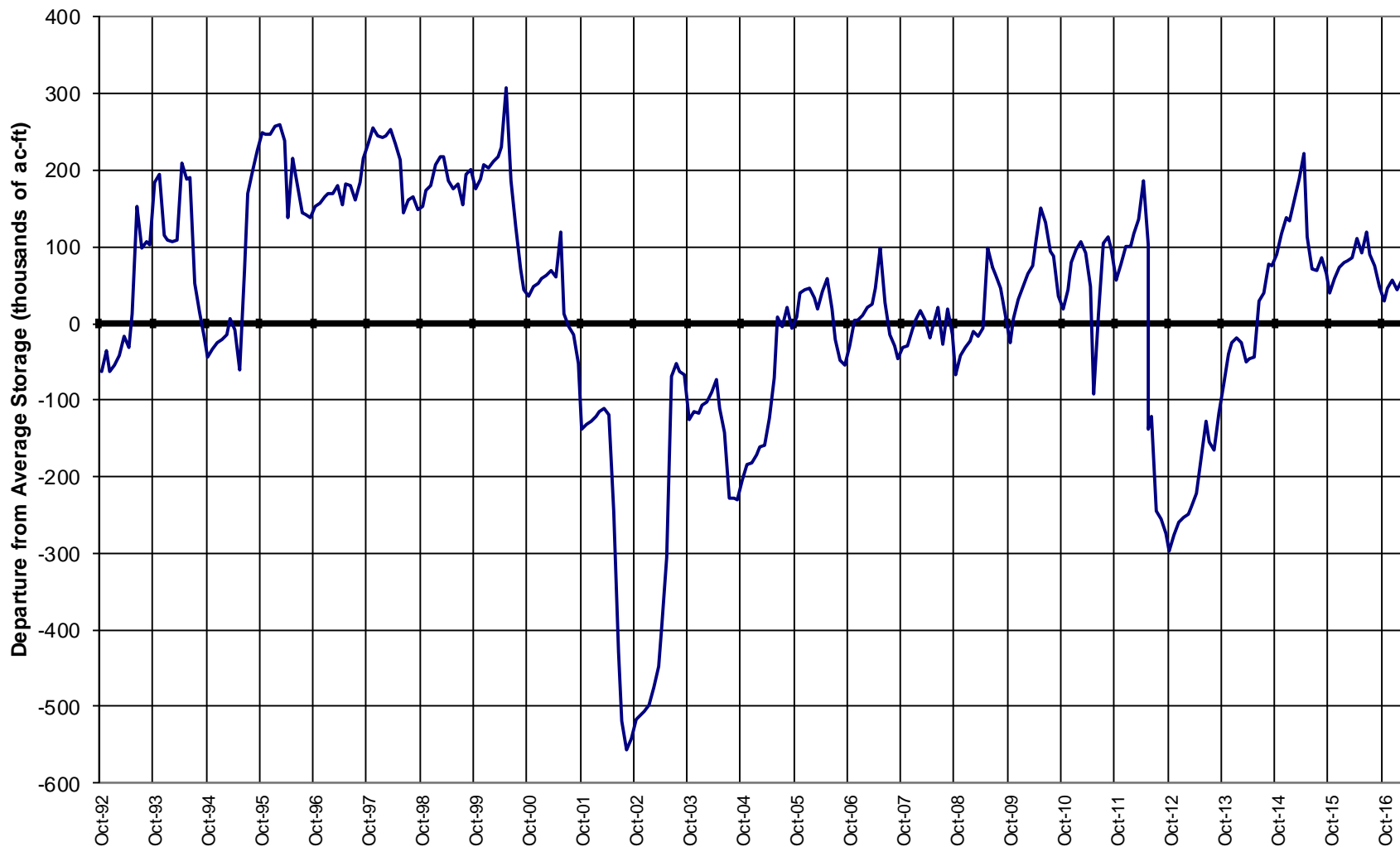
0 10 20 40 60 80 Miles

## Reservoir Storage





## COLORADO RIVER BASIN Reservoir Storage Departure from Average





A map of Colorado showing its major river basins and cities. The basins are labeled in bold black text: Cache La Poudre, Big Thompson, Boulder-St. Vrain, Clear Creek, and Upper South Platte. The map uses a light gray background for the state, with black lines for county boundaries and blue lines for rivers. Green dots represent major cities. The map shows the distribution of water resources across the state, with the Upper South Platte basin being the largest and most central.

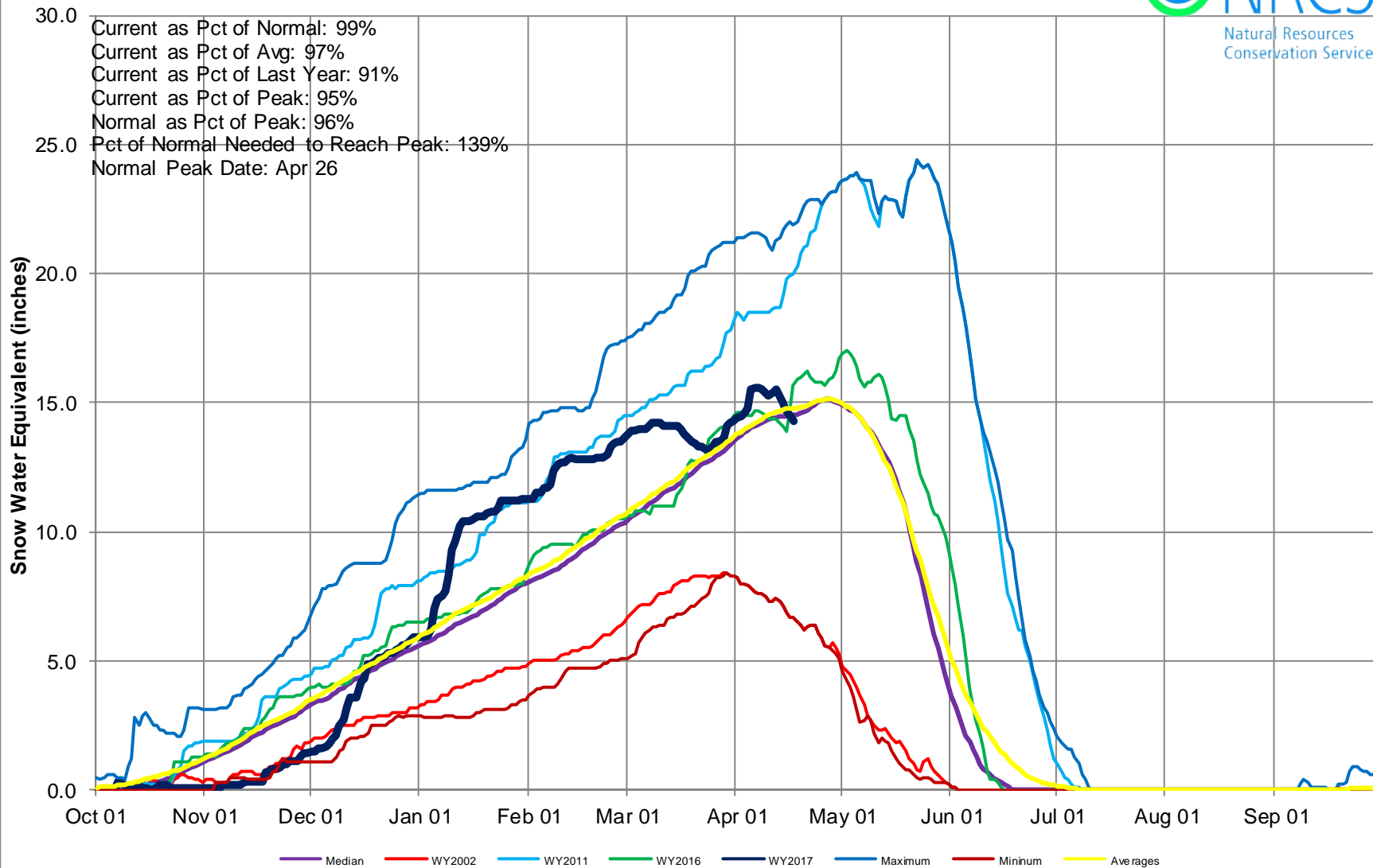


0 25 50 100 150 200 Miles



## South Platte River Basin High/Low Snowpack Summary

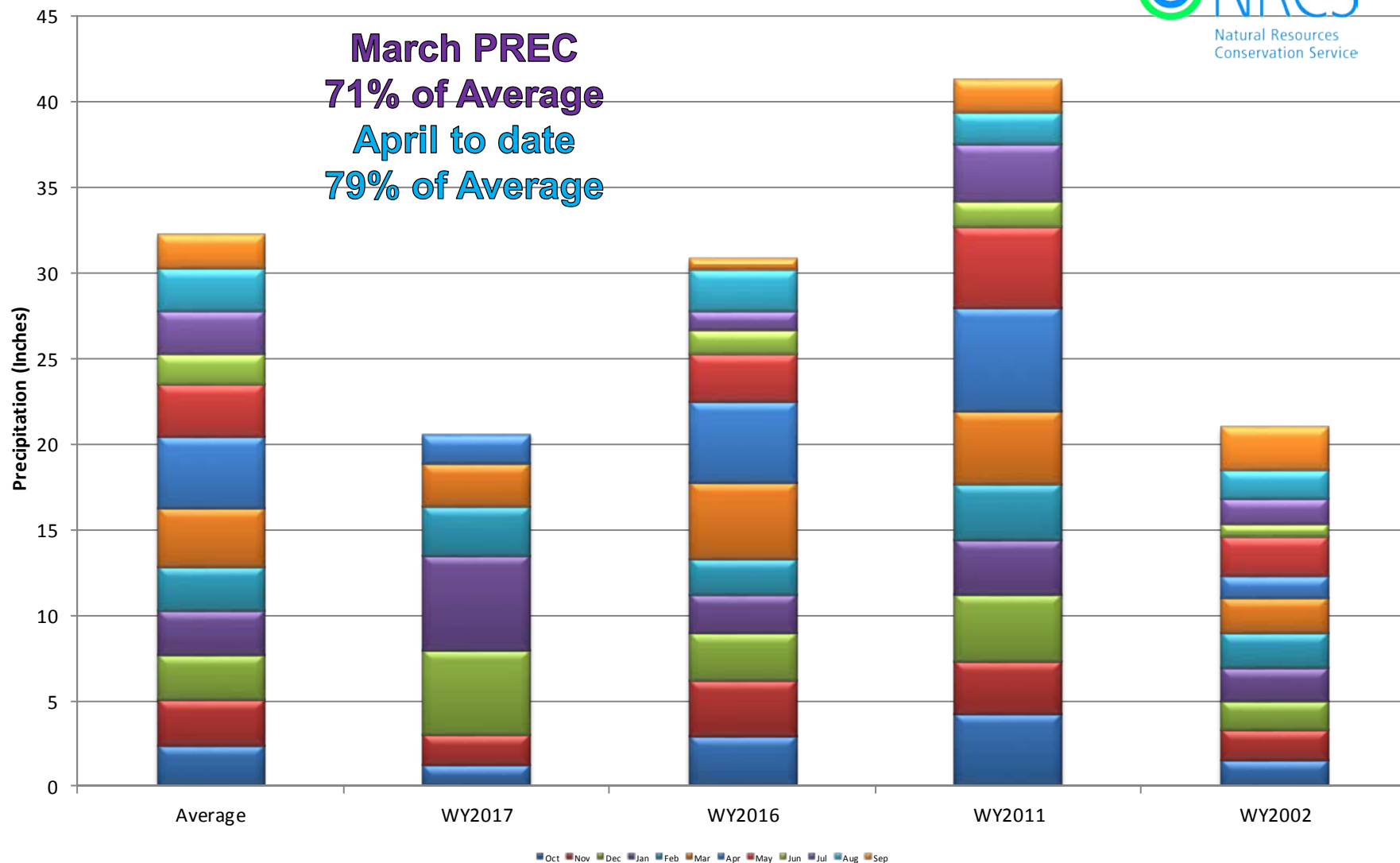
*Based on Provisional SNOTEL data as of Apr 17, 2017*





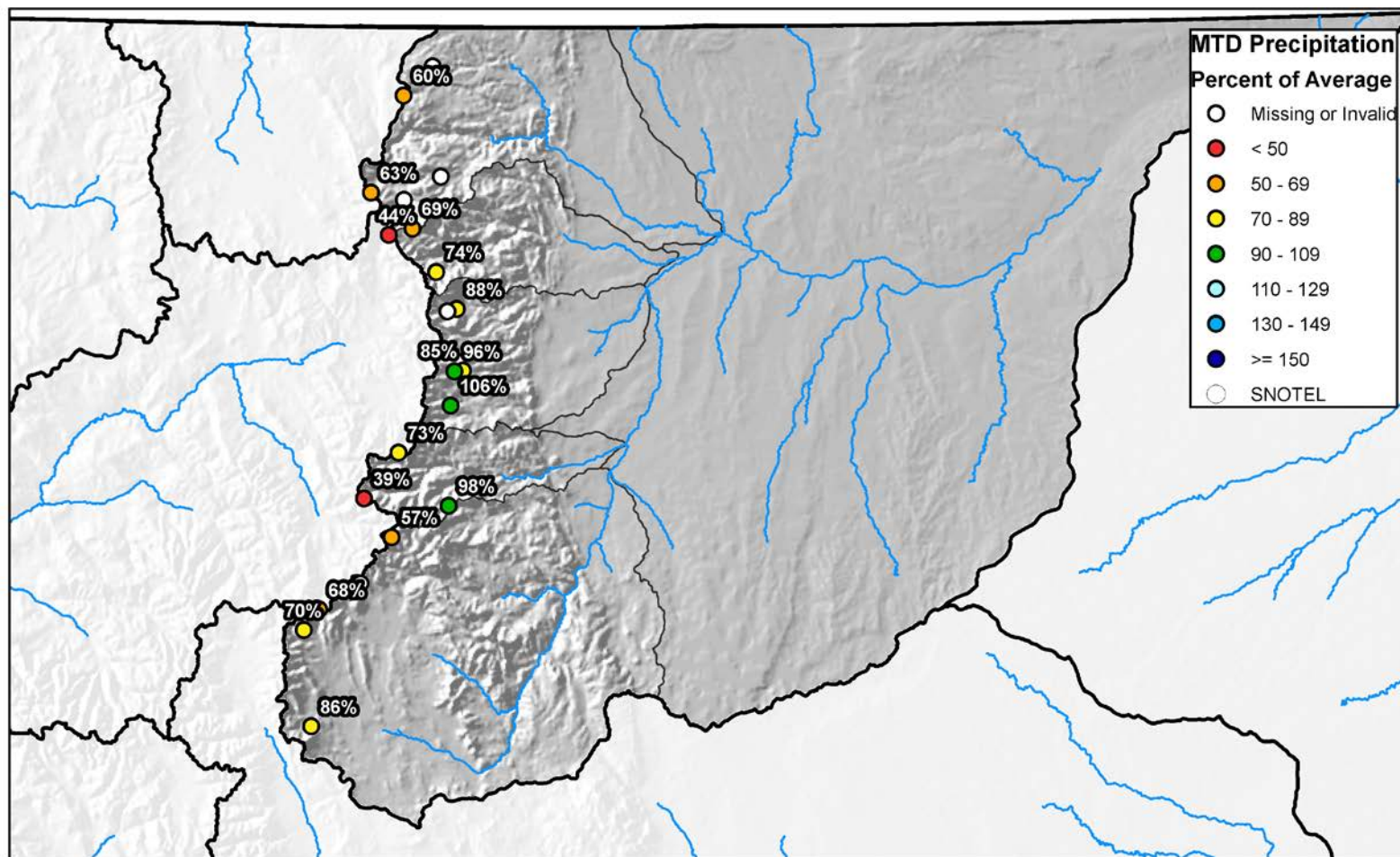
## South Platte River Basin High/Low Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of Apr 17, 2017*



## South Platte River Basin Month to Date Precipitation Summary

Current as of Apr 17, 2017



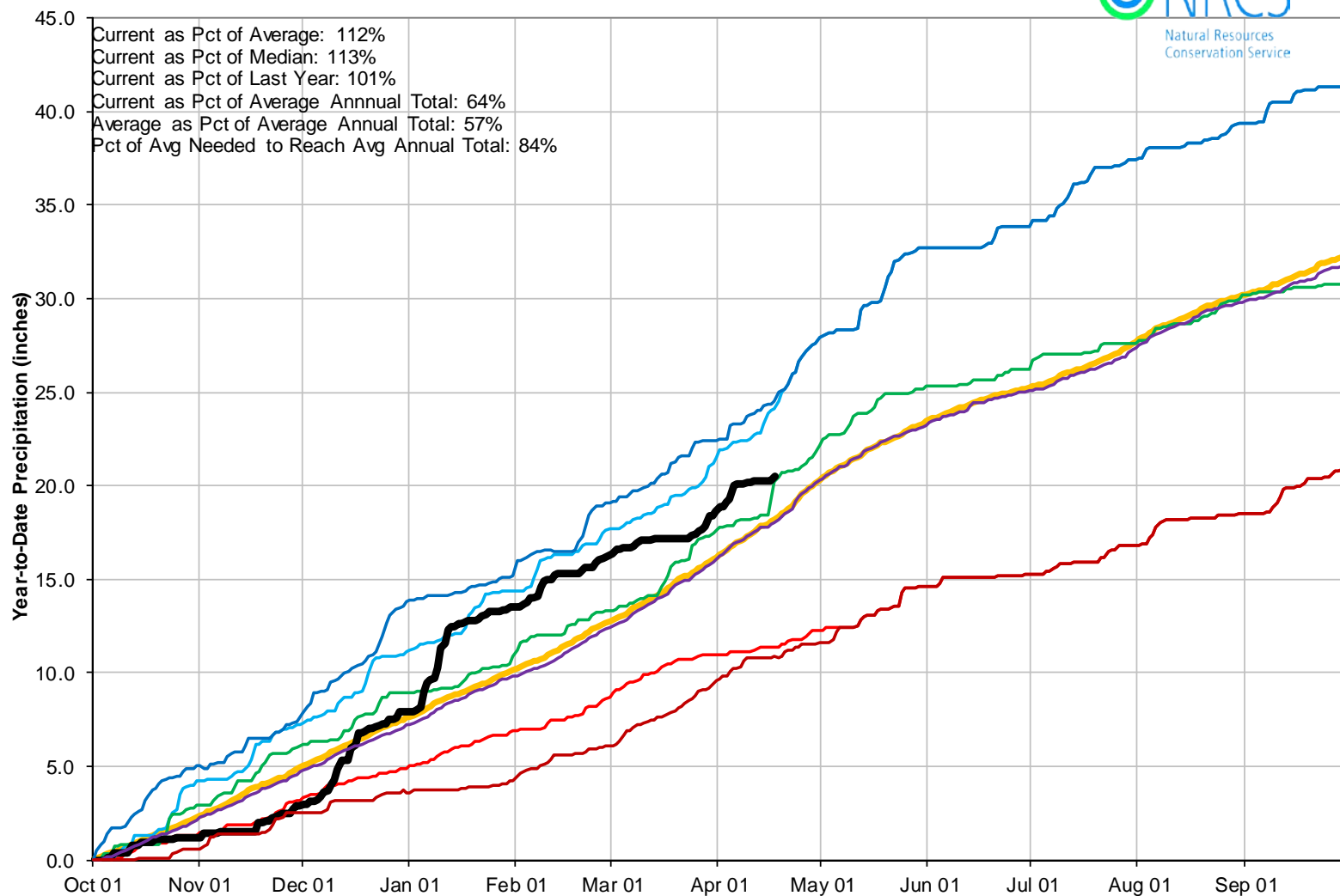
0 10 20 40 60 80 Miles





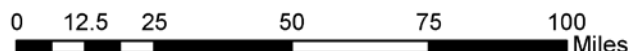
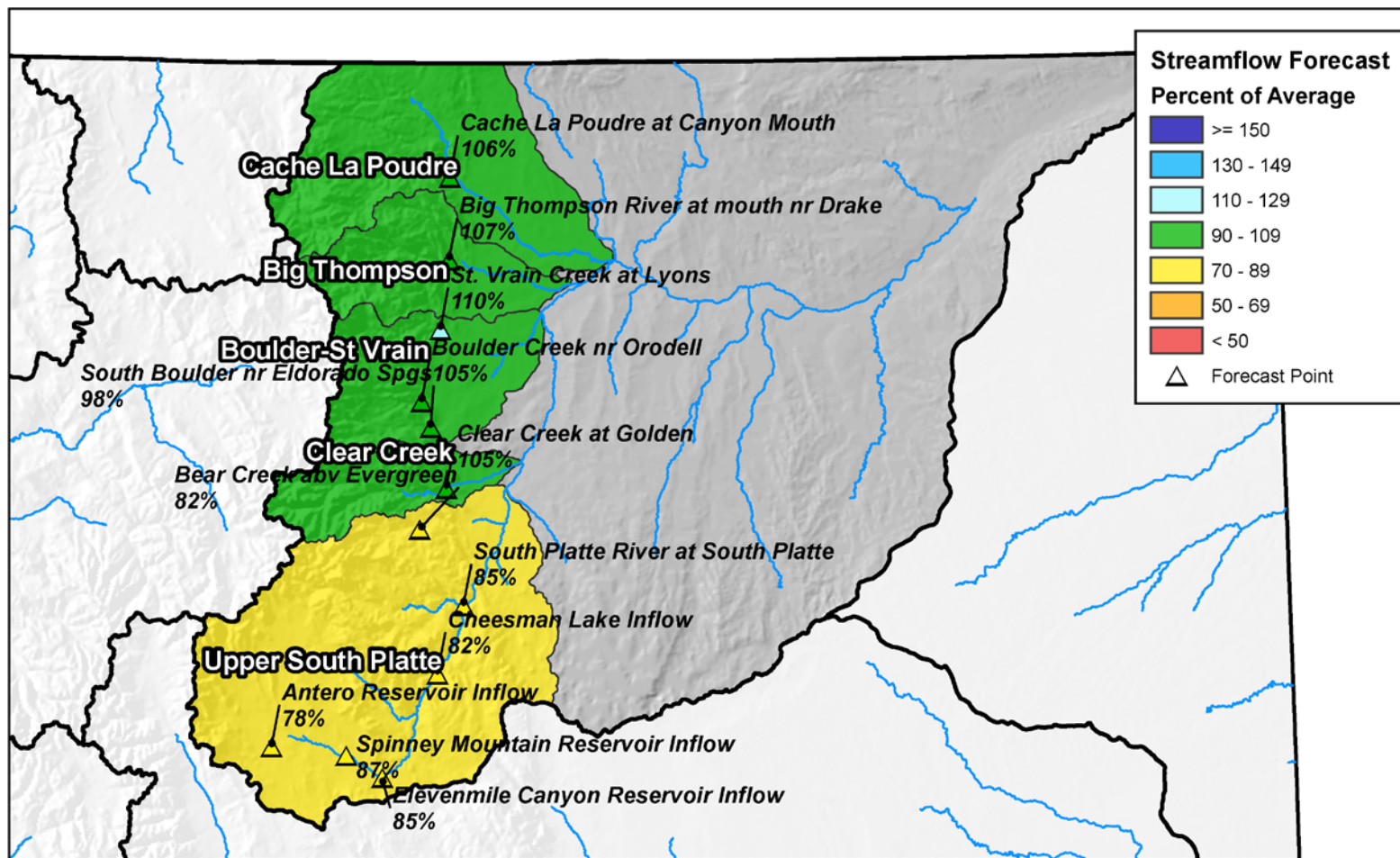
## South Platte River Basin High/Low Year-to-Date Precipitation Summary

*Based on Provisional SNOTEL data as of Apr 17, 2017*



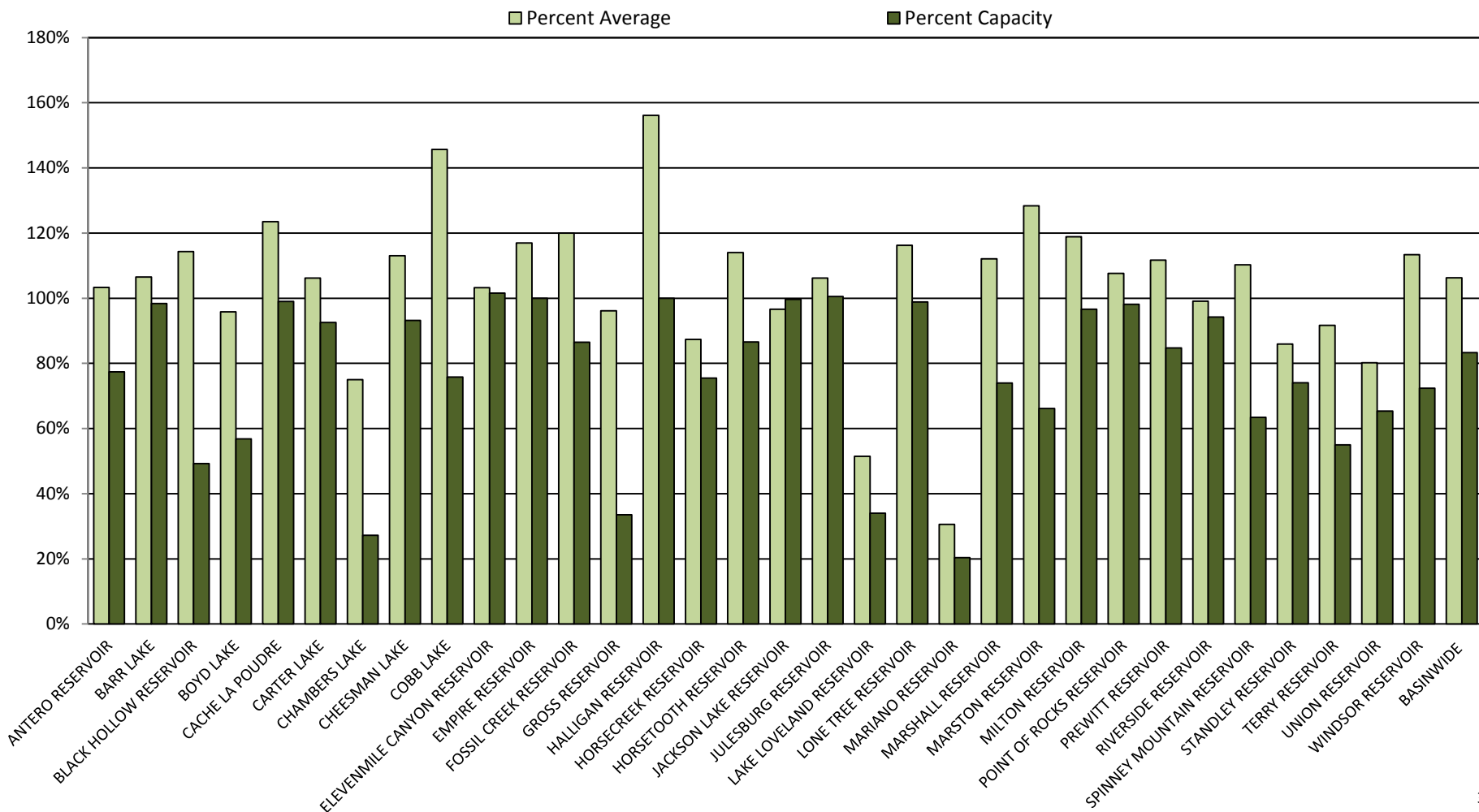
## South Platte River Basin Streamflow Forecast Summary

April 1, 2017



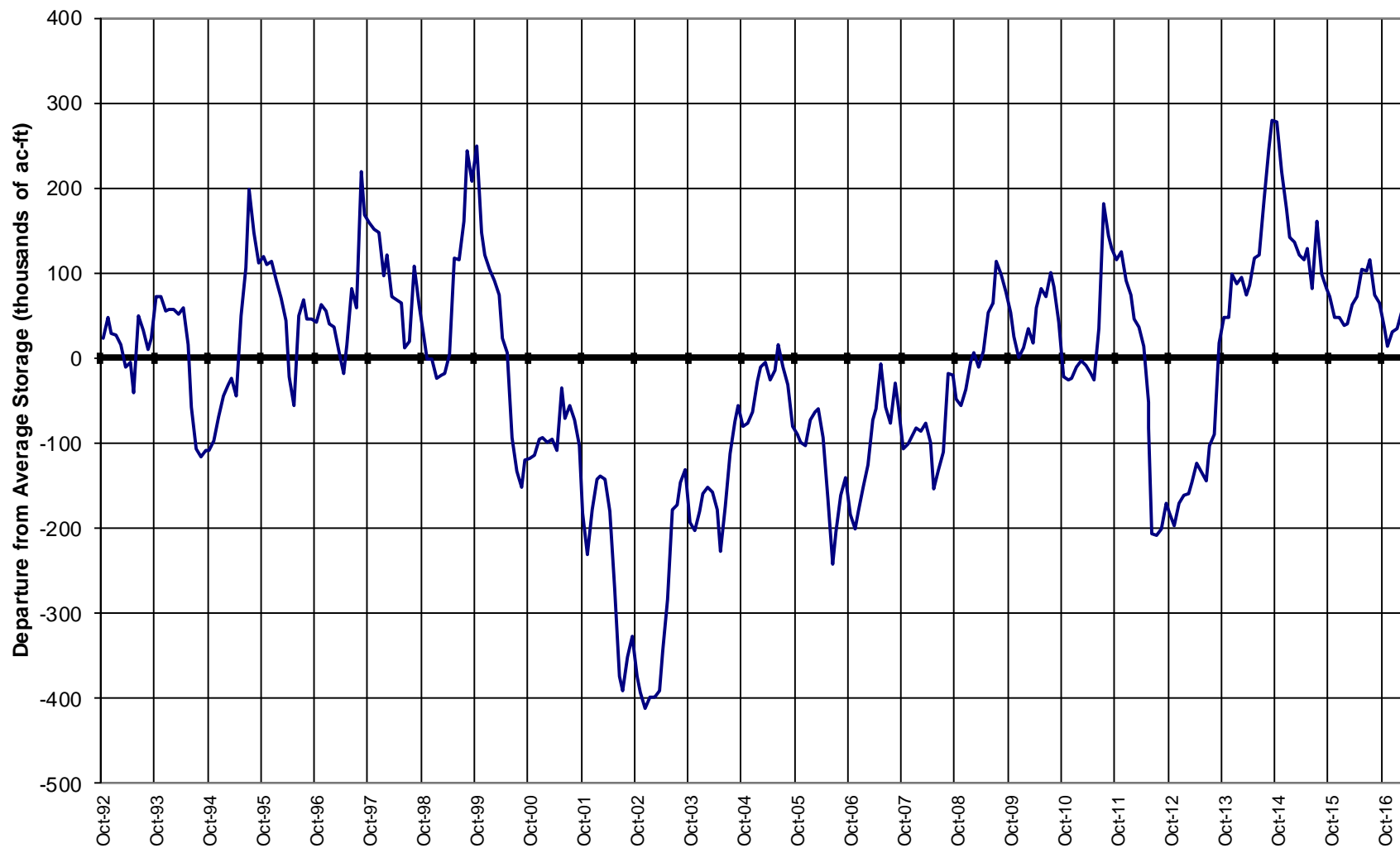


## Reservoir Storage



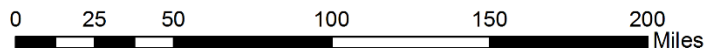
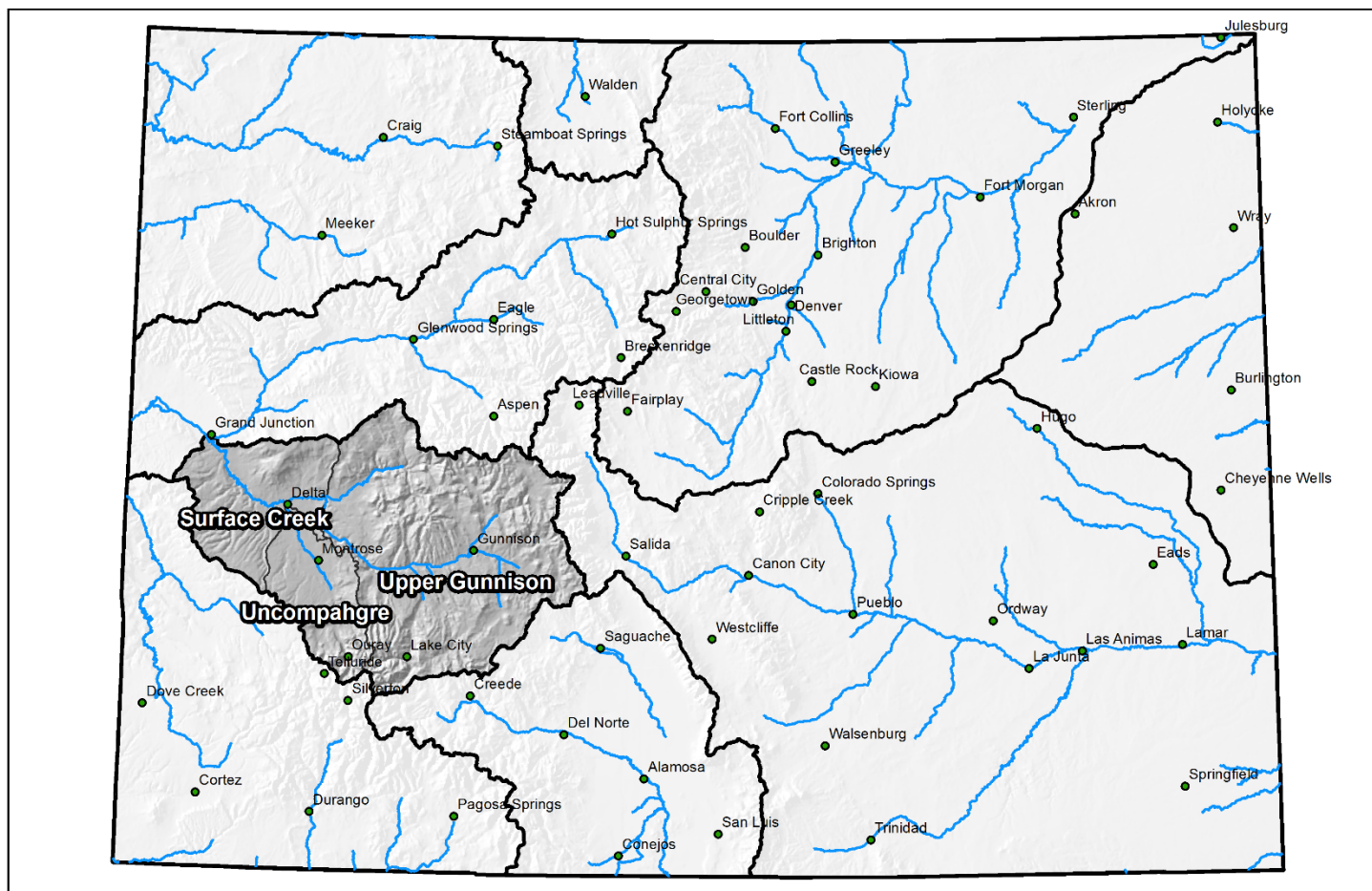


## SOUTH PLATTE RIVER BASIN Reservoir Storage Departure from Average



## Major Basin Summary

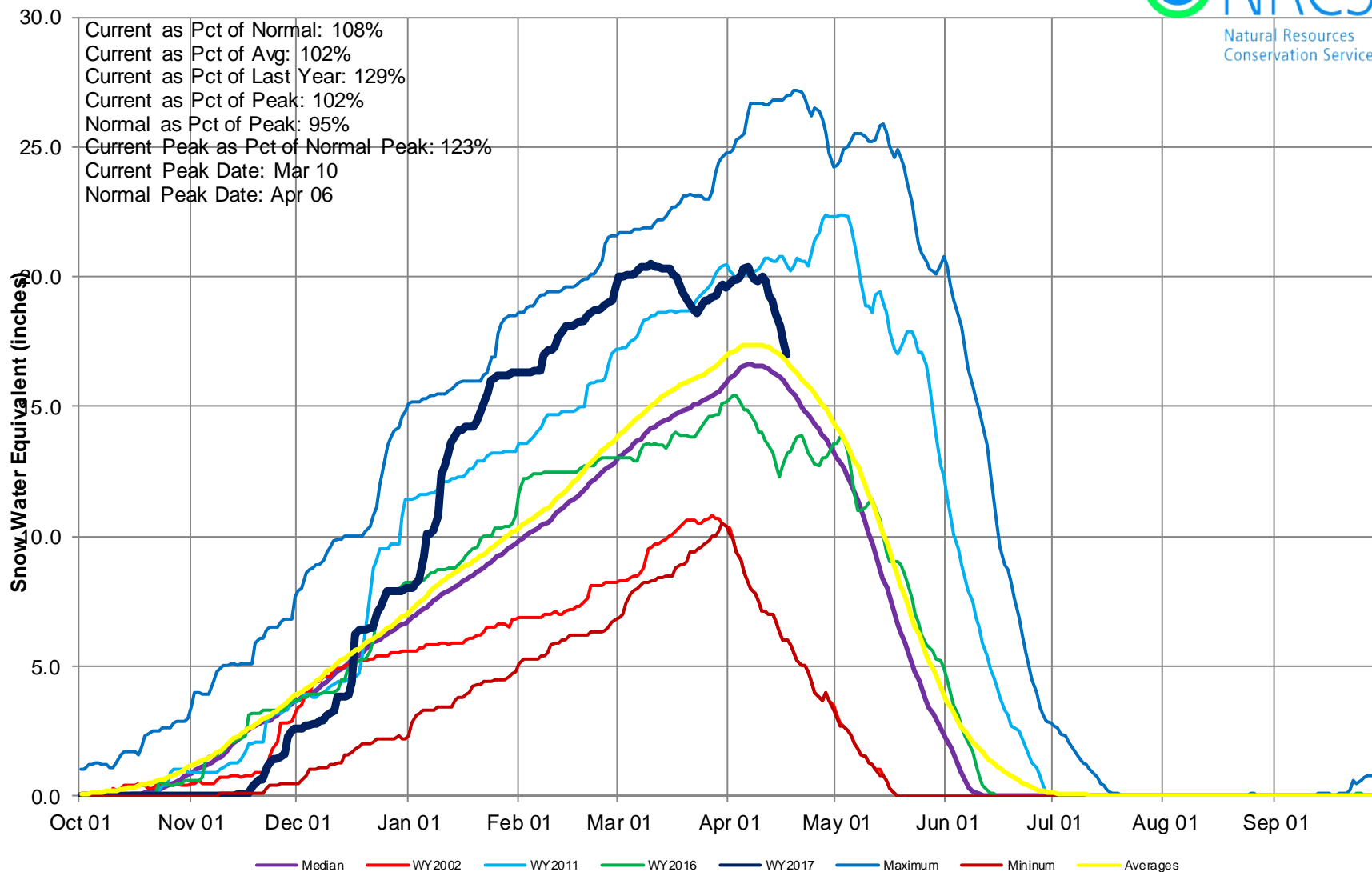
### Gunnison River Basin





## Gunnison River Basin High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of Apr 17, 2017*



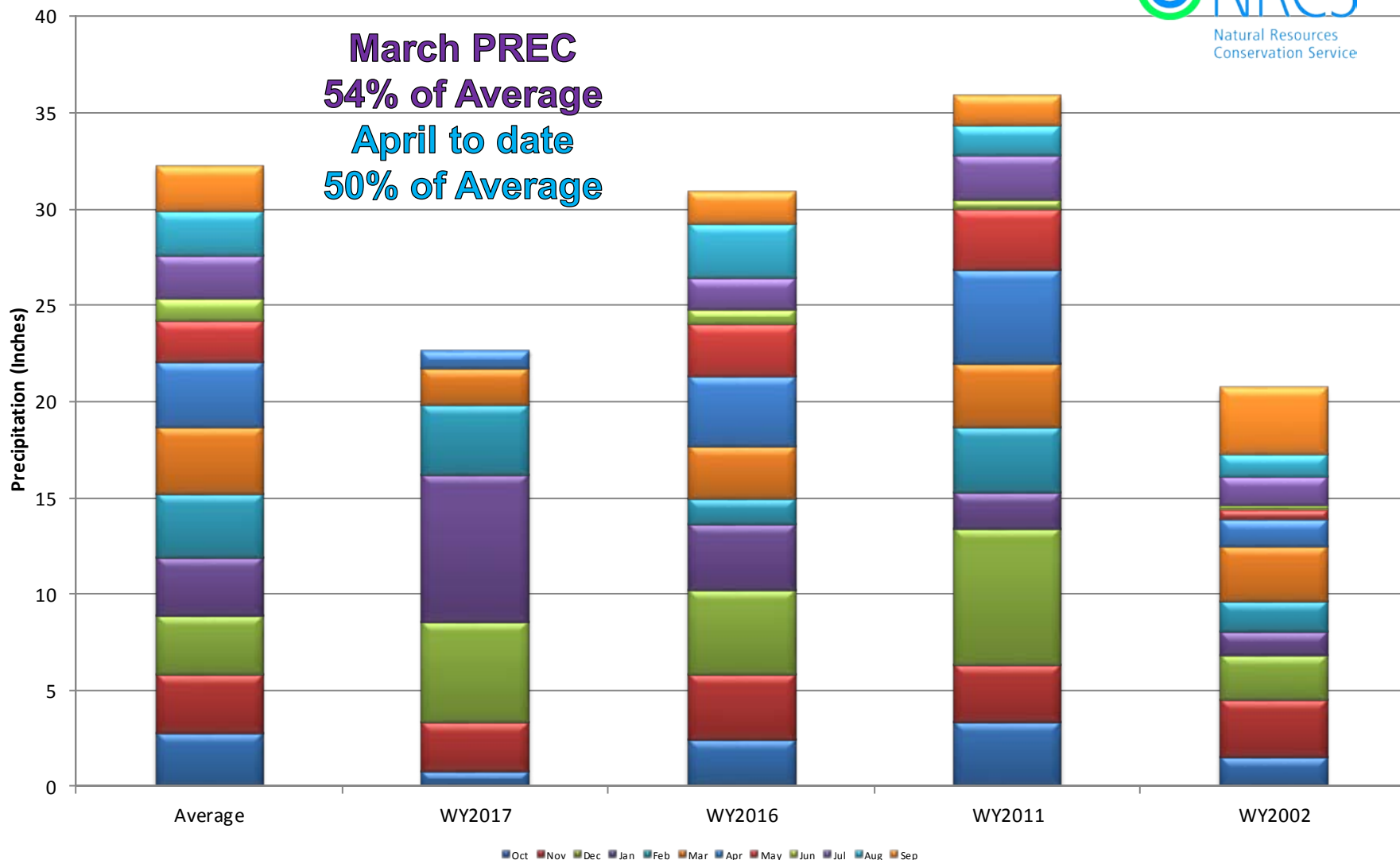


## Gunnison River Basin High/Low Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of Apr 17, 2017*



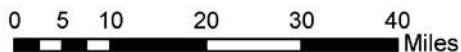
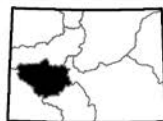
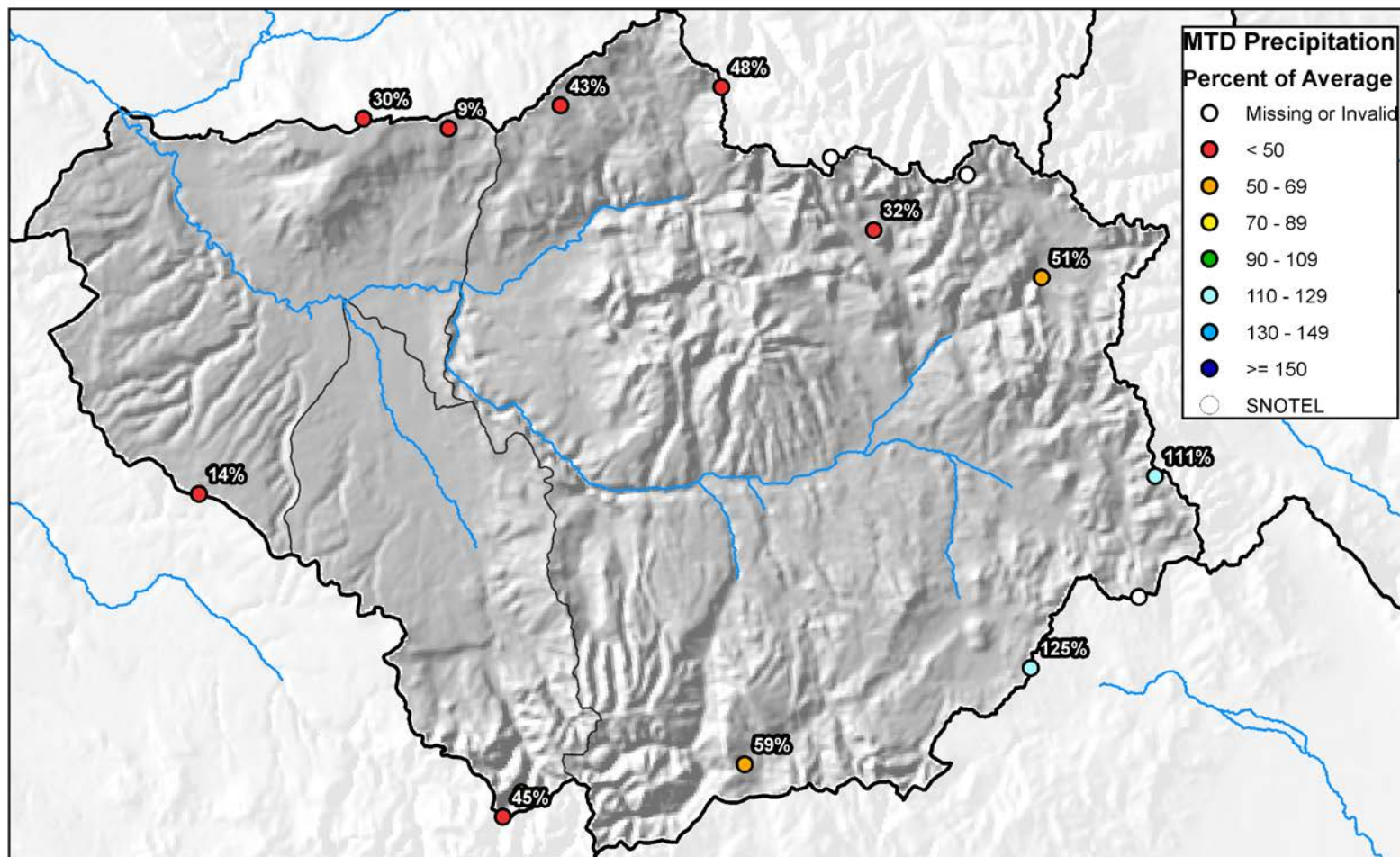
**March PREC**  
**54% of Average**  
**April to date**  
**50% of Average**





## Gunnison River Basin Month to Date Precipitation Summary

Current as of Apr 17, 2017

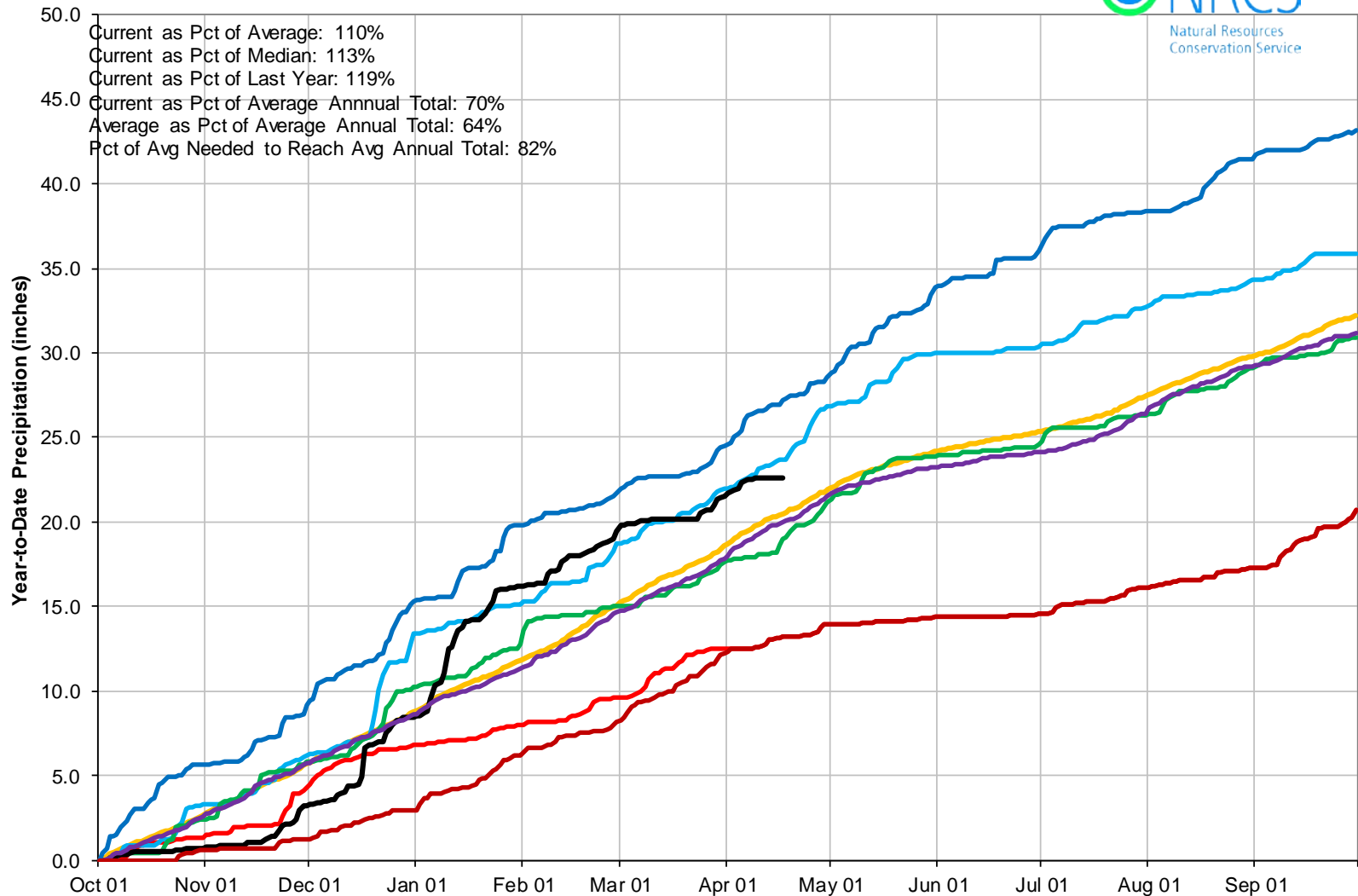






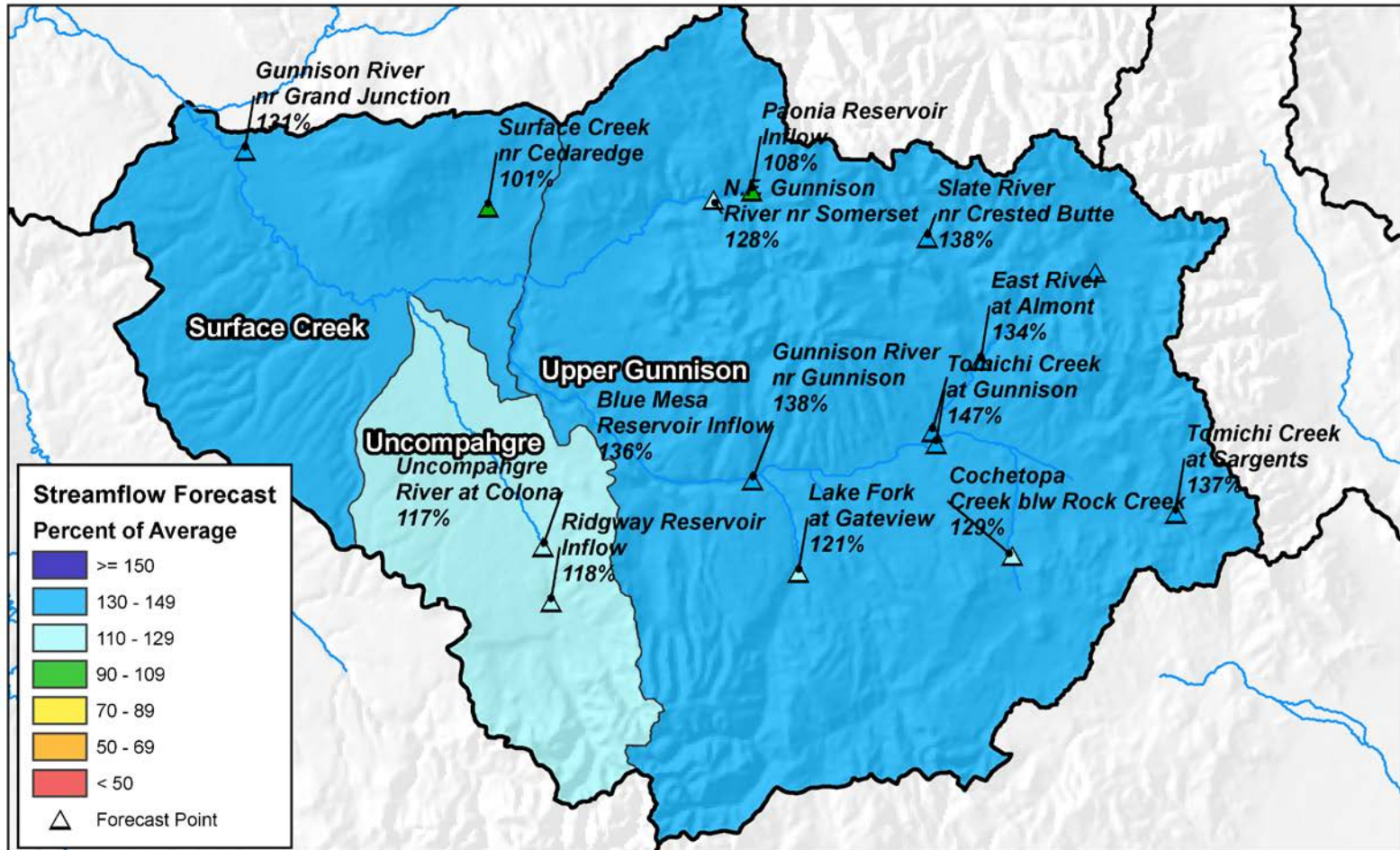
## Gunnison River Basin High/Low Year-to-Date Precipitation Summary

*Based on Provisional SNOTEL data as of Apr 17, 2017*



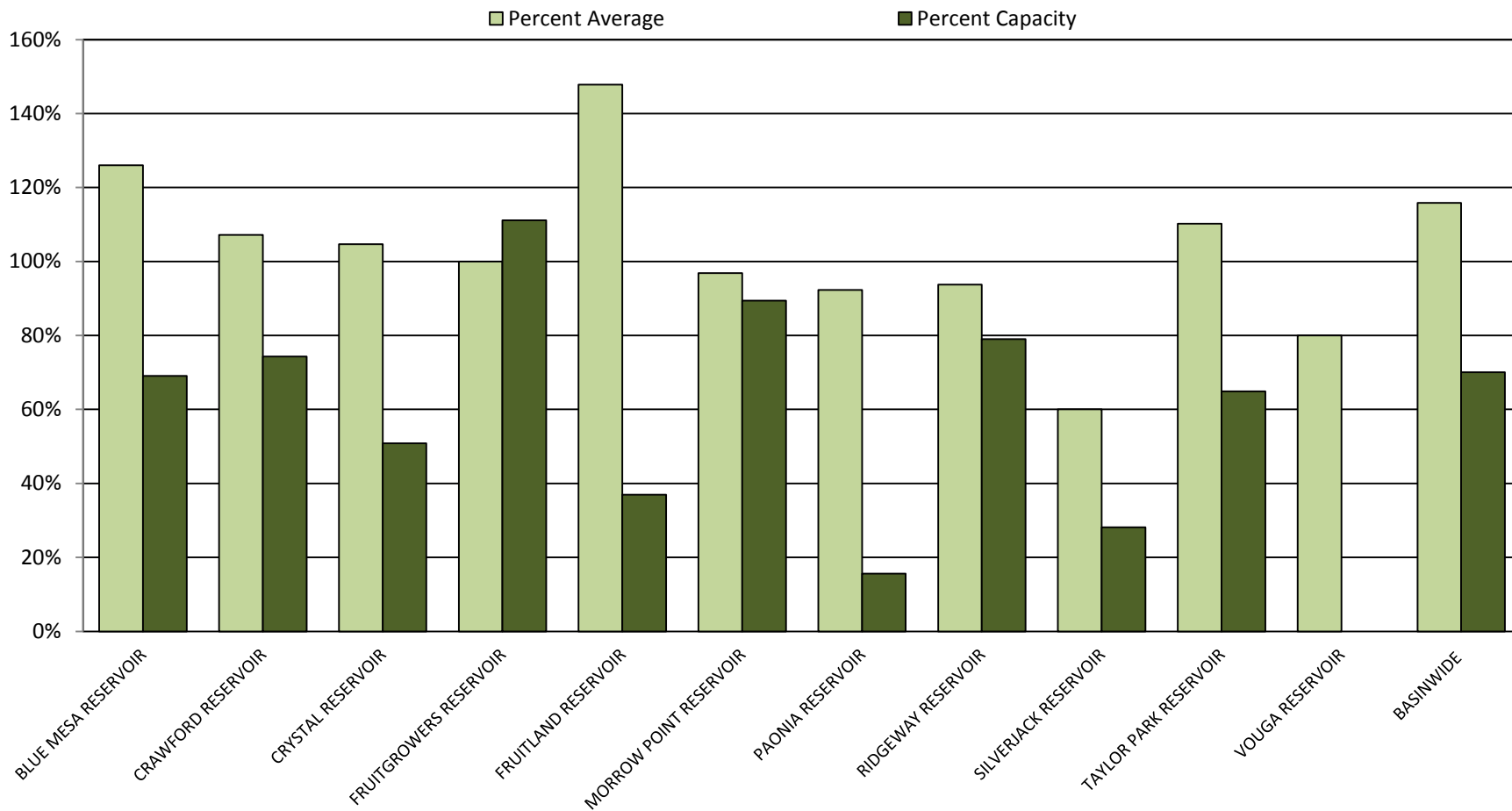
## Gunnison River Basin Water Supply Forecast Summary

April 1, 2017



0 5 10 20 30 40 Miles

## Reservoir Storage

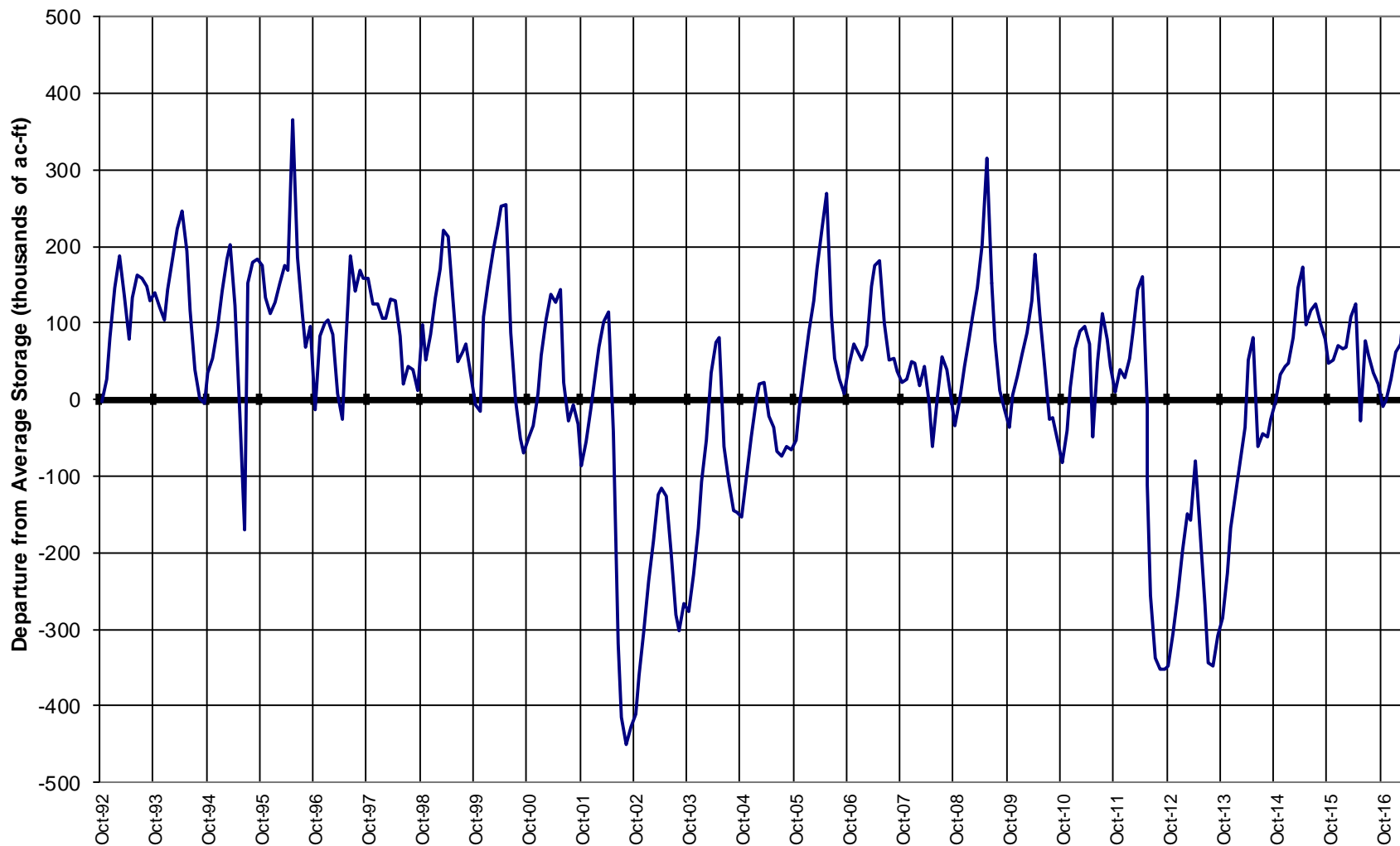




## GUNNISON RIVER BASIN

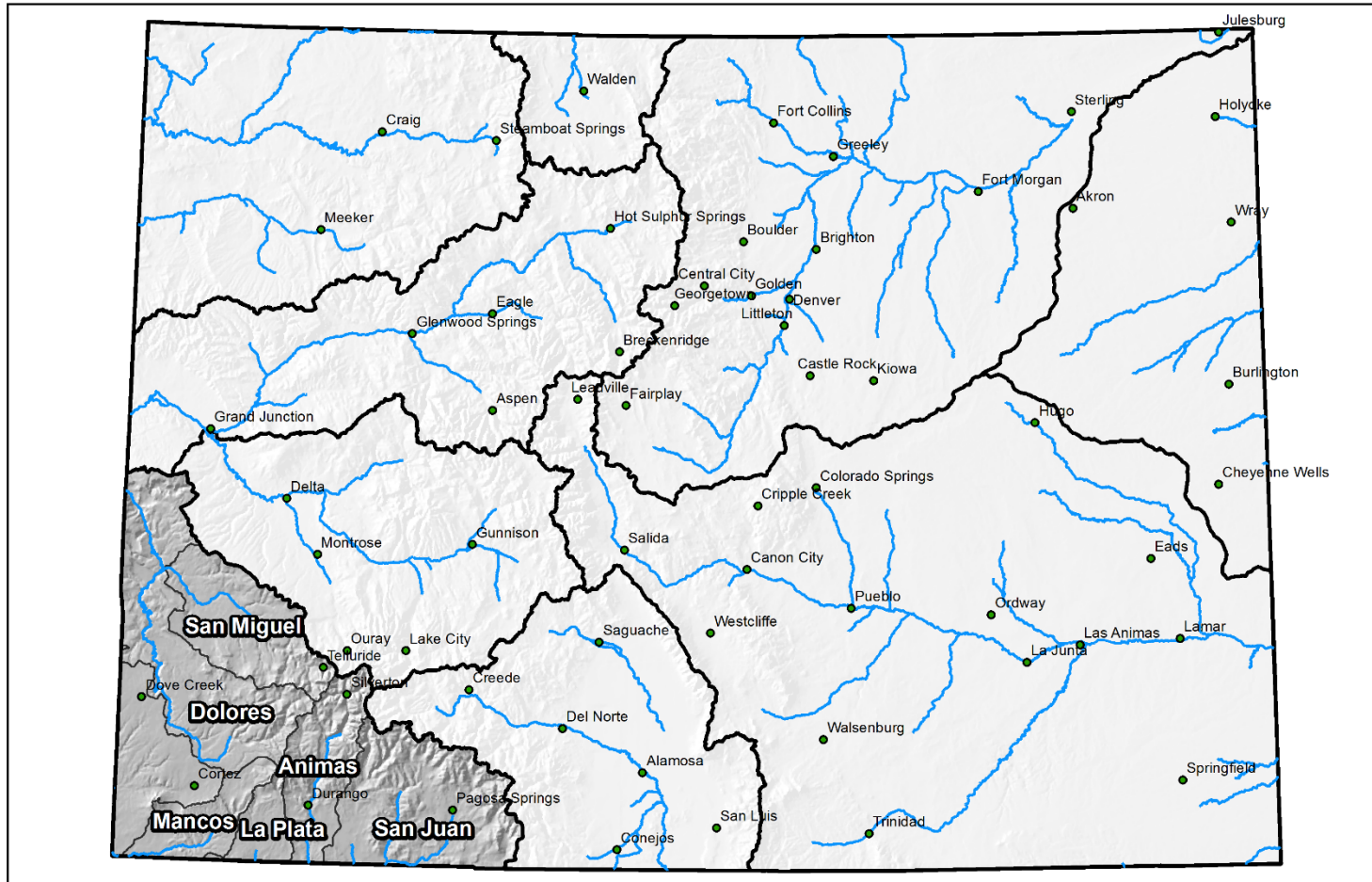
### Reservoir Storage

### Departure from Average



## Major Basin Summary

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



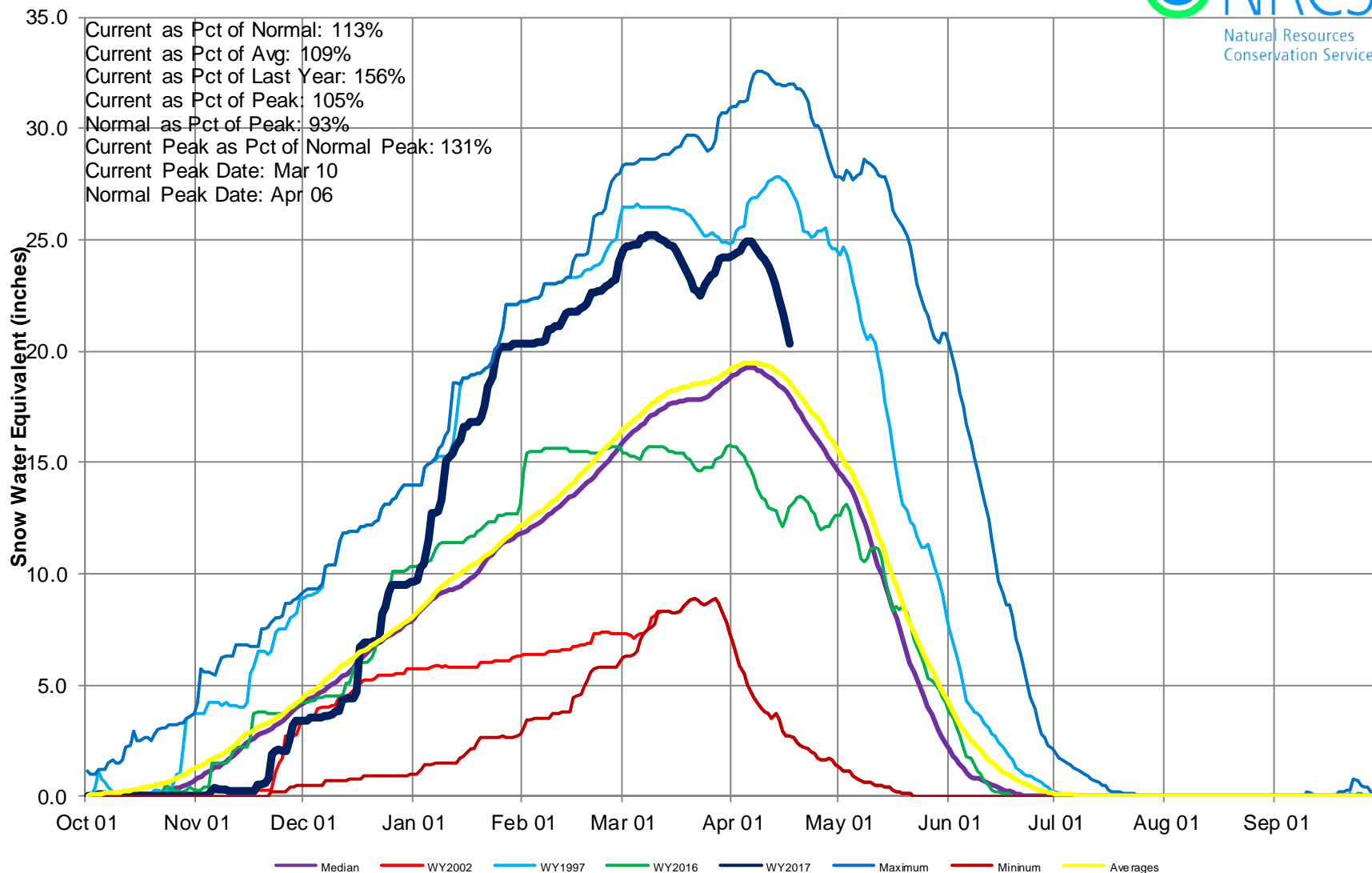
0 25 50 100 150 200 Miles





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

*Based on Provisional SNOTEL data as of Apr 17, 2017*

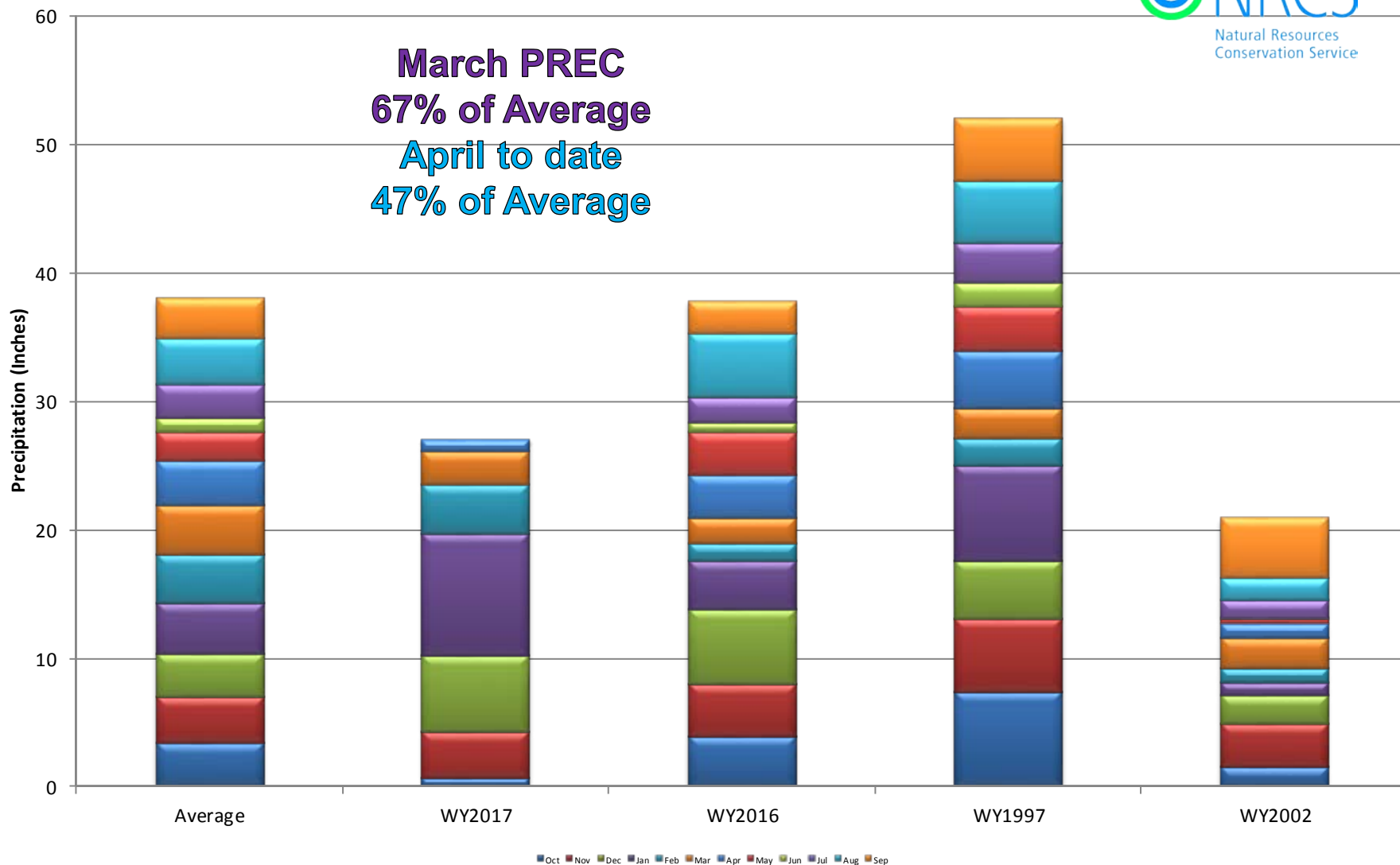




## San Miguel, Dolores, Animas & San Juan River Basins High/Low Monthly Precipitation Summary



**March PREC**  
**67% of Average**  
**April to date**  
**47% of Average**

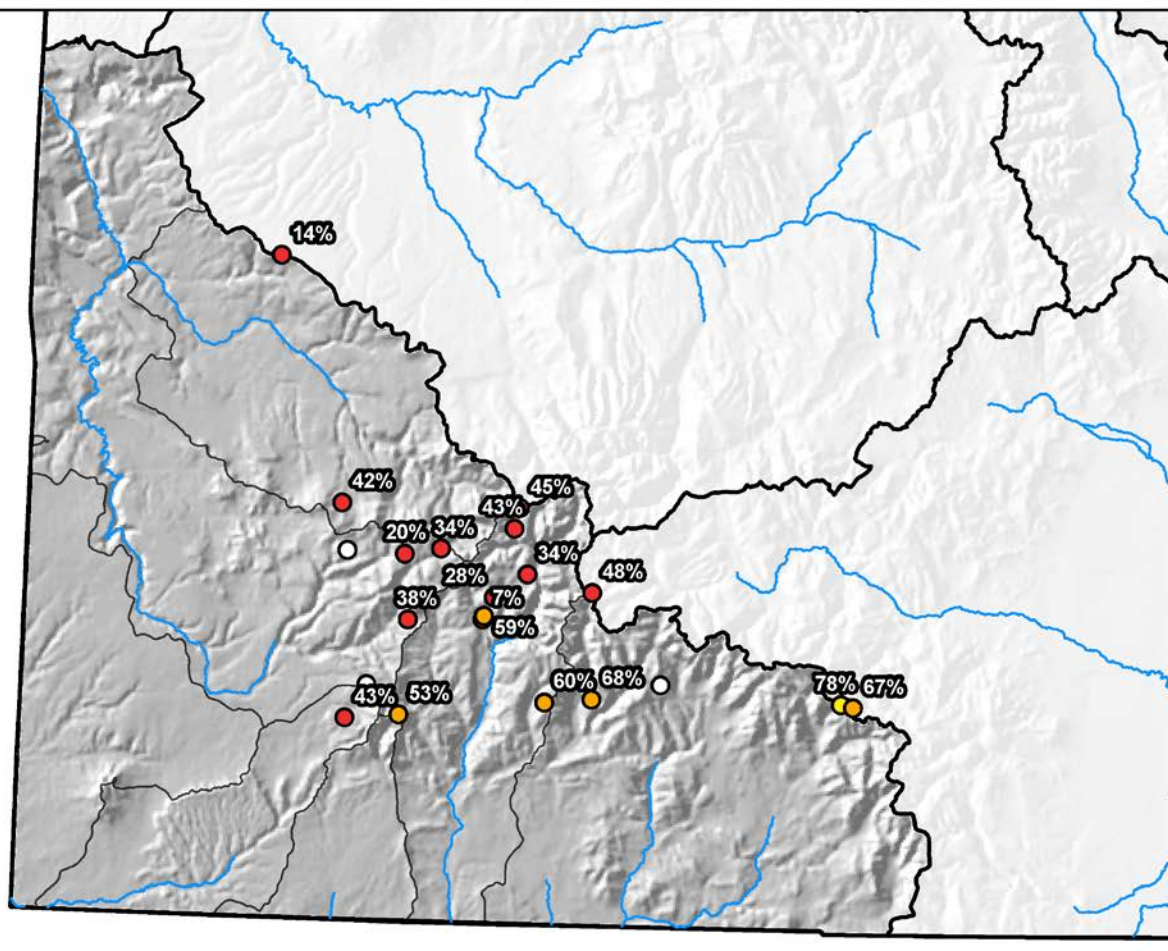


## San Miguel, Dolores, Animas, and San Juan River Basins Month to Date Precipitation Summary

Current as of Apr 17, 2017

### MTD Precipitation Percent of Average

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

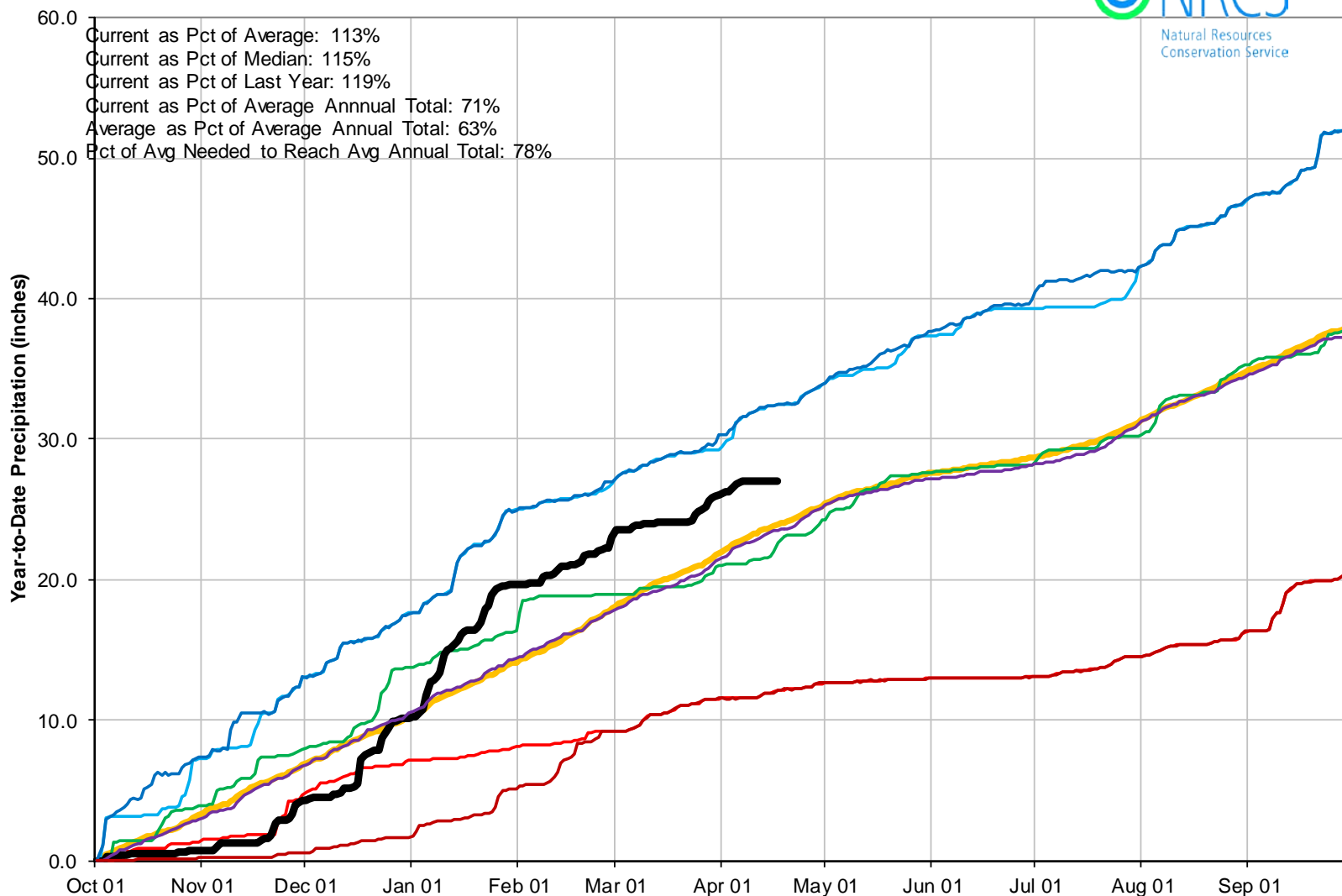


0 10 20 40 60 80 Miles



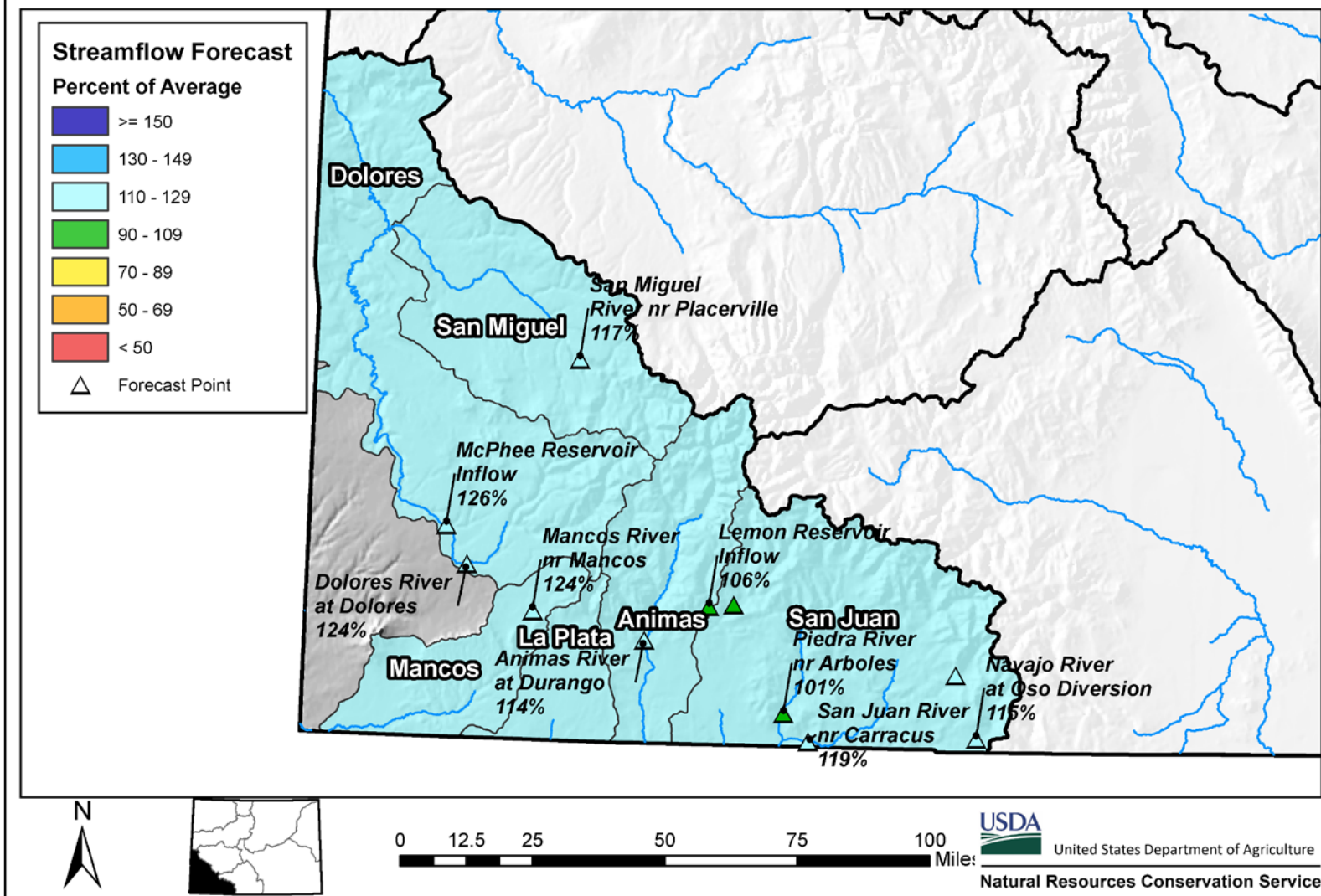
## San Miguel, Dolores, Animas & San Juan River Basins High/Low Year-to-Date Precipitation Summary

*Based on Provisional SNOTEL data as of Apr 17, 2017*



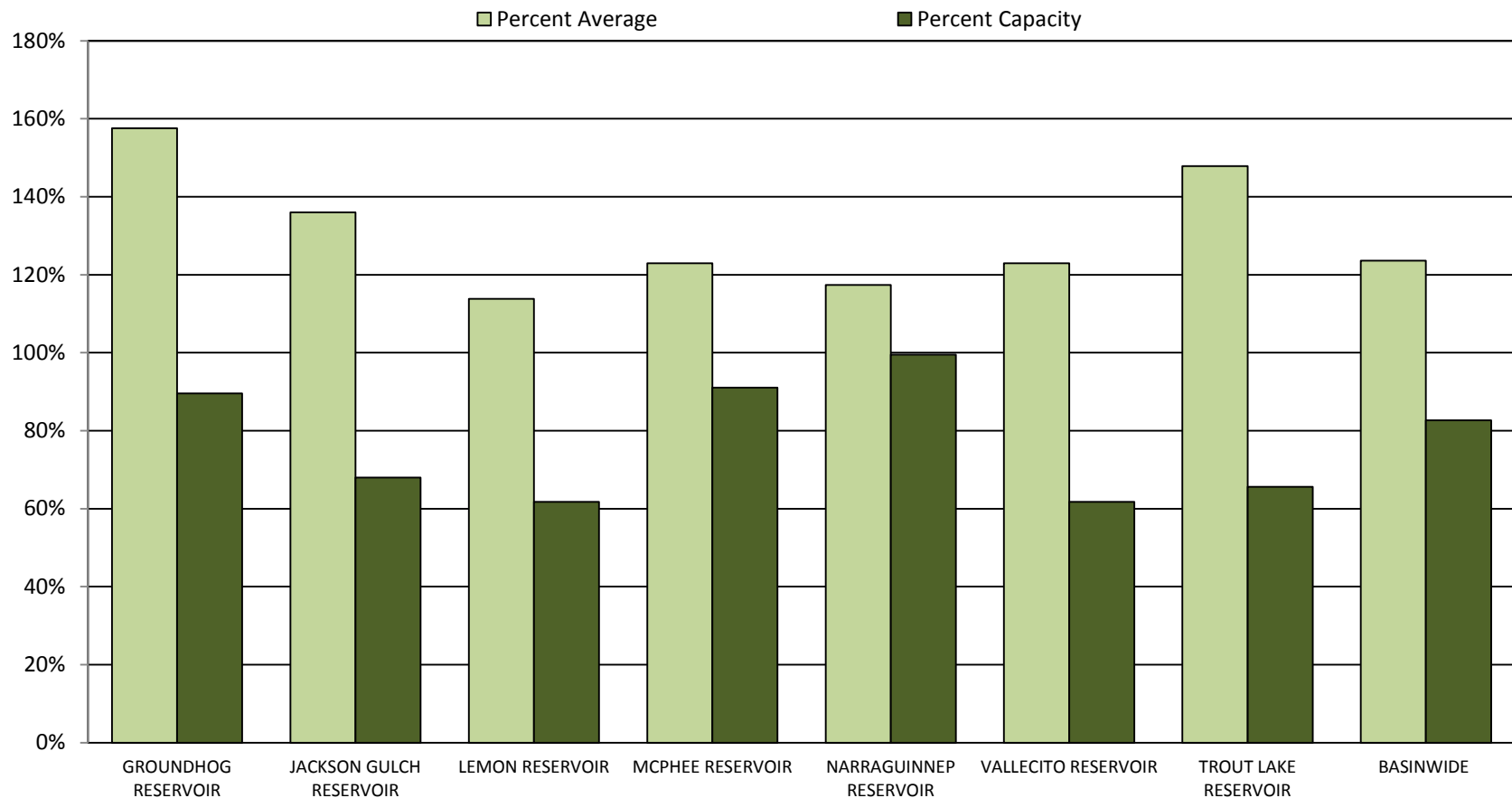
## San Miguel, Dolores, Animas, and San Juan River Basins Streamflow Forecast Summary

April 1, 2017





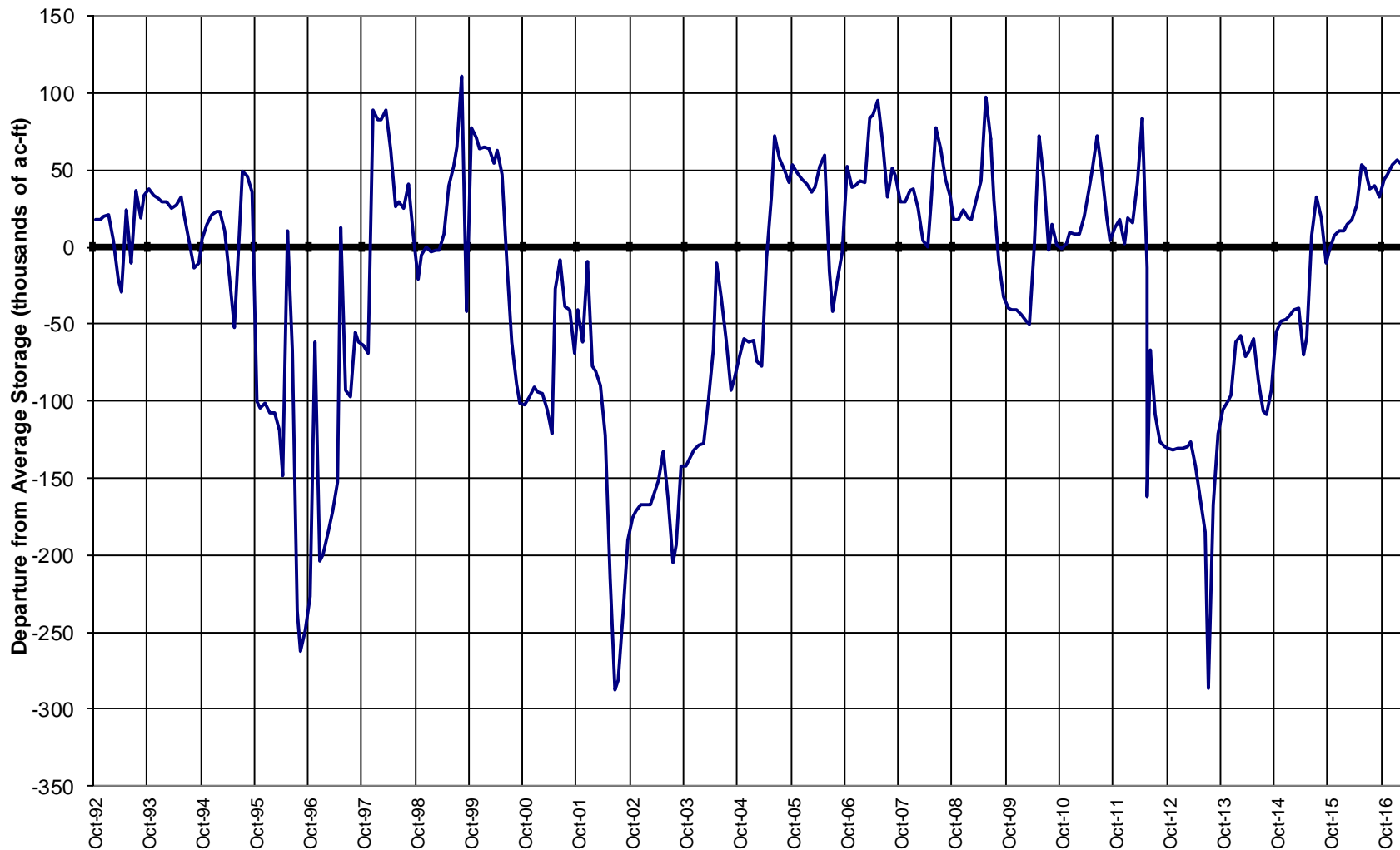
## Reservoir Storage





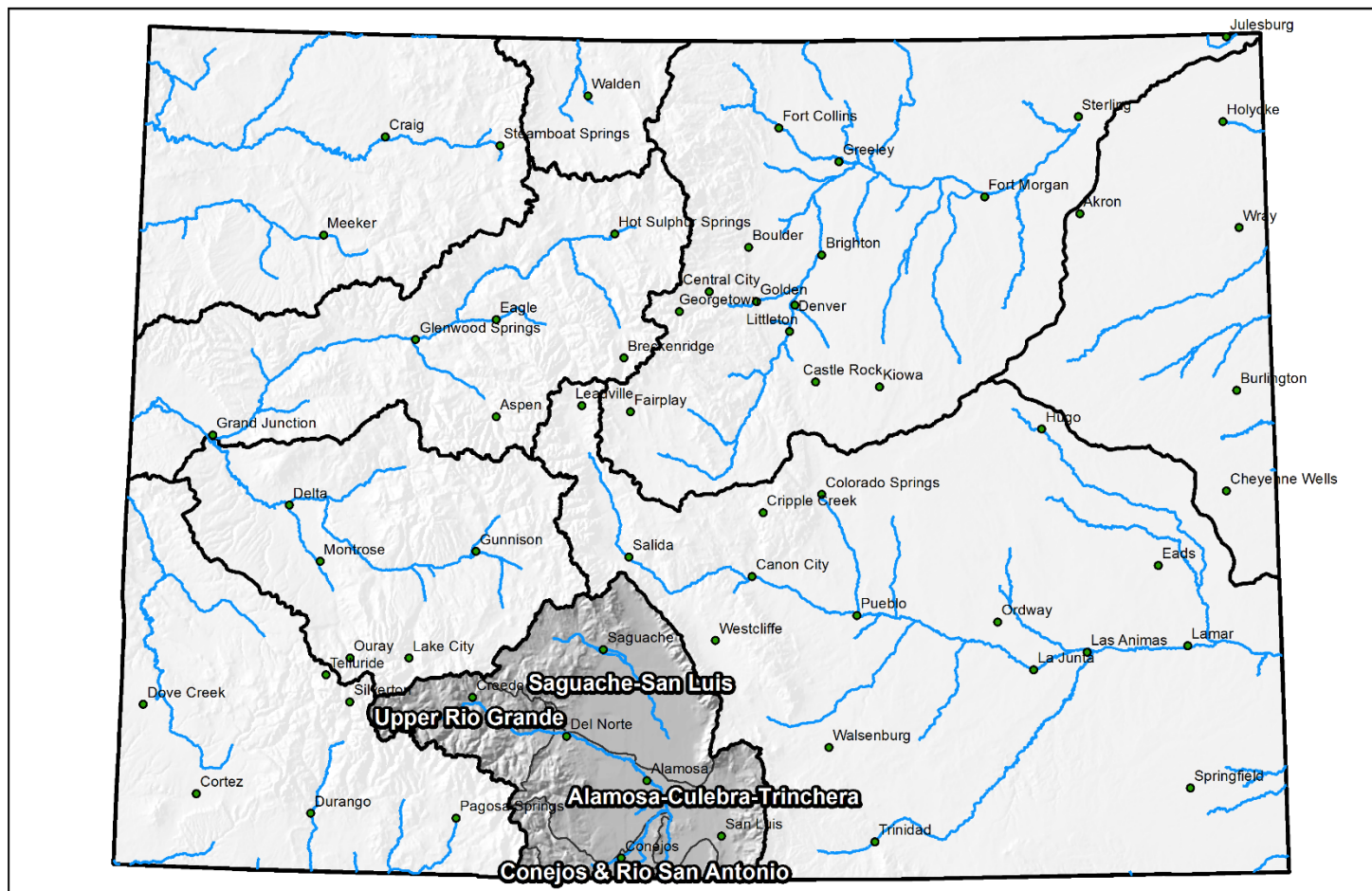
## SAN MIGUEL, DOLORES, ANIMAS AND SAN JUAN RIVER BASINS

Reservoir Storage  
Departure from Average



## Major Basin Summary

### Upper Rio Grande River Basin

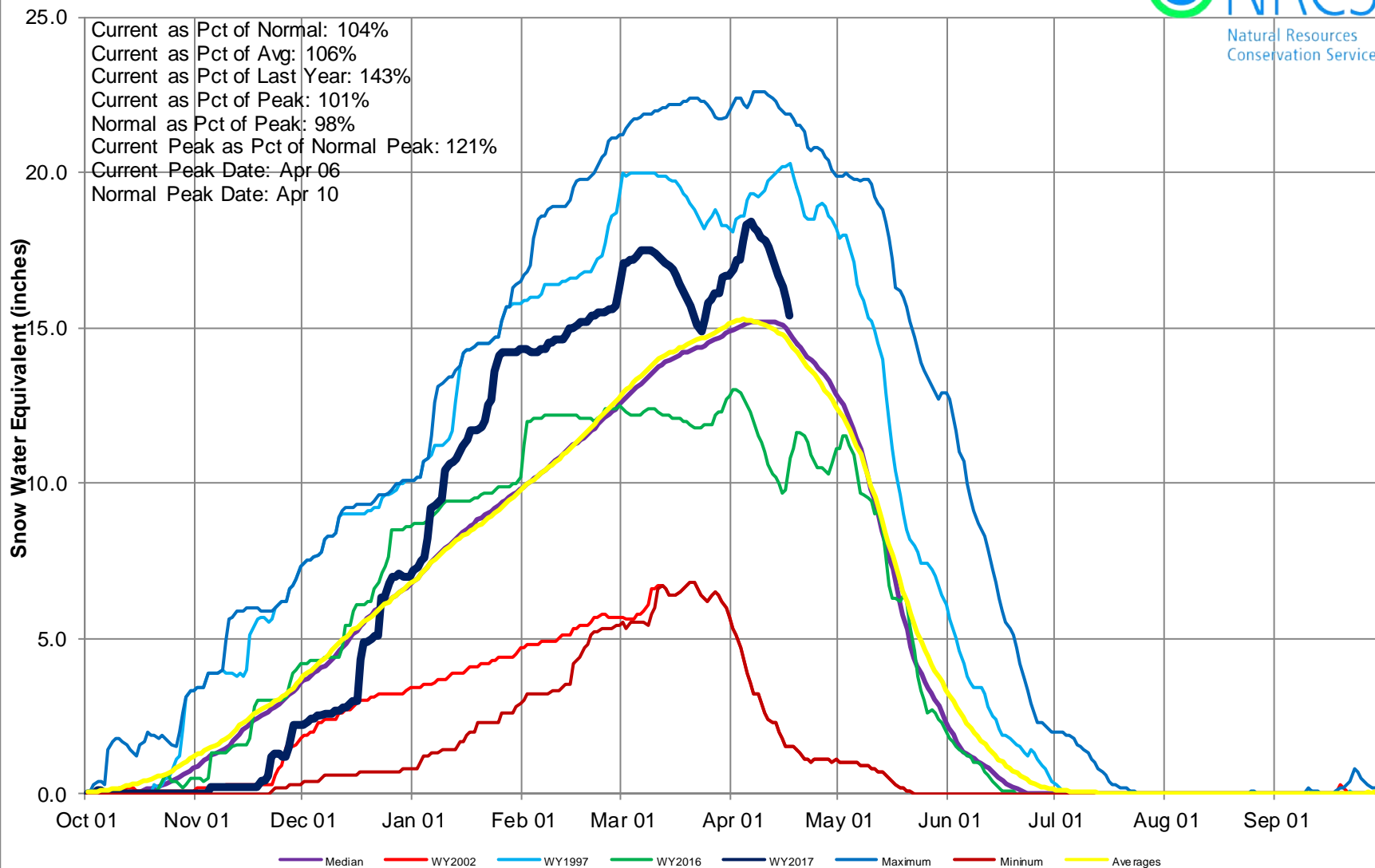


0 25 50 100 150 200 Miles



## Upper Rio Grande Basin High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of Apr 17, 2017*



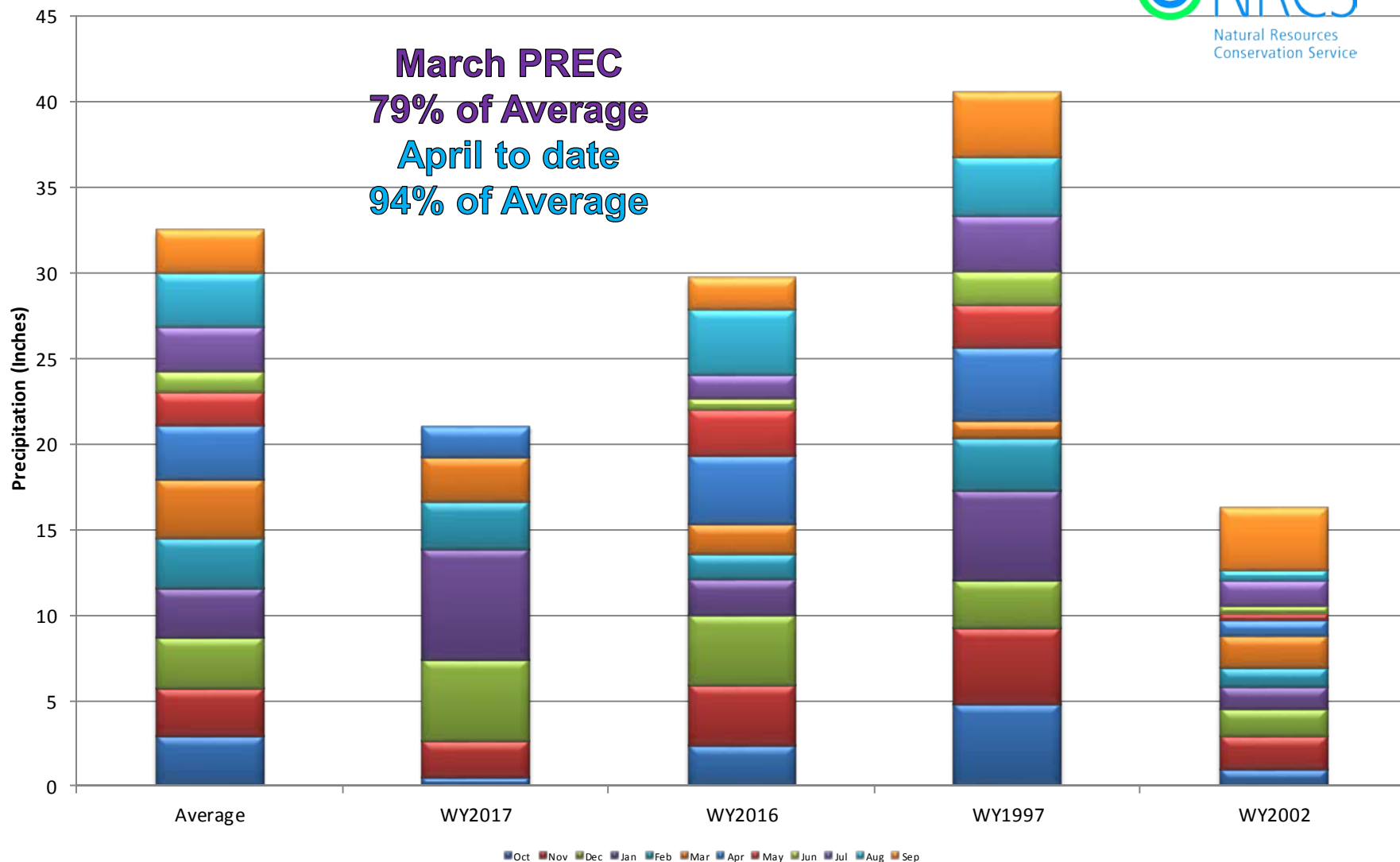


## Upper Rio Grande Basin High/Low Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of Apr 17, 2017*



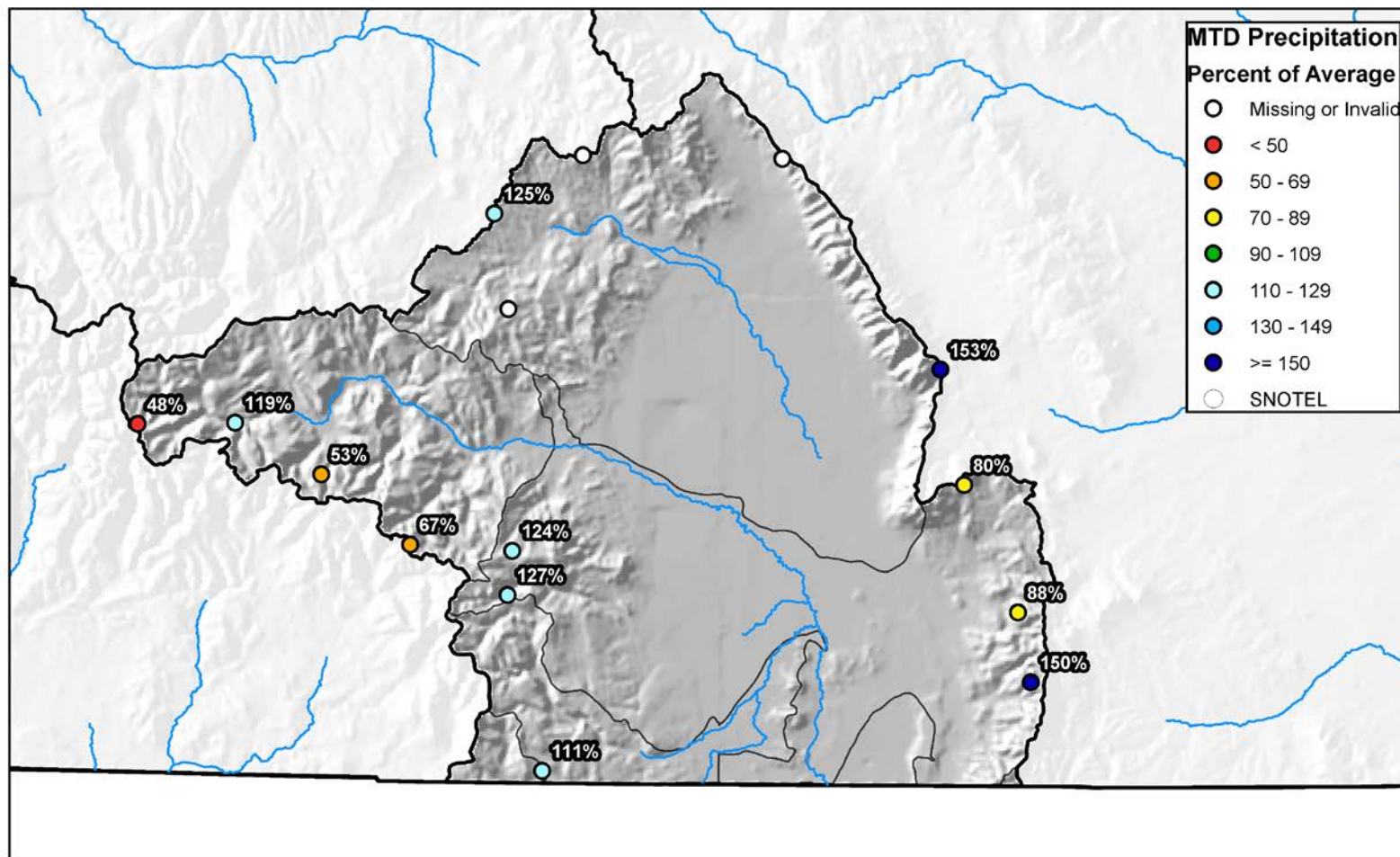
**March PREC**  
**79% of Average**  
**April to date**  
**94% of Average**





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

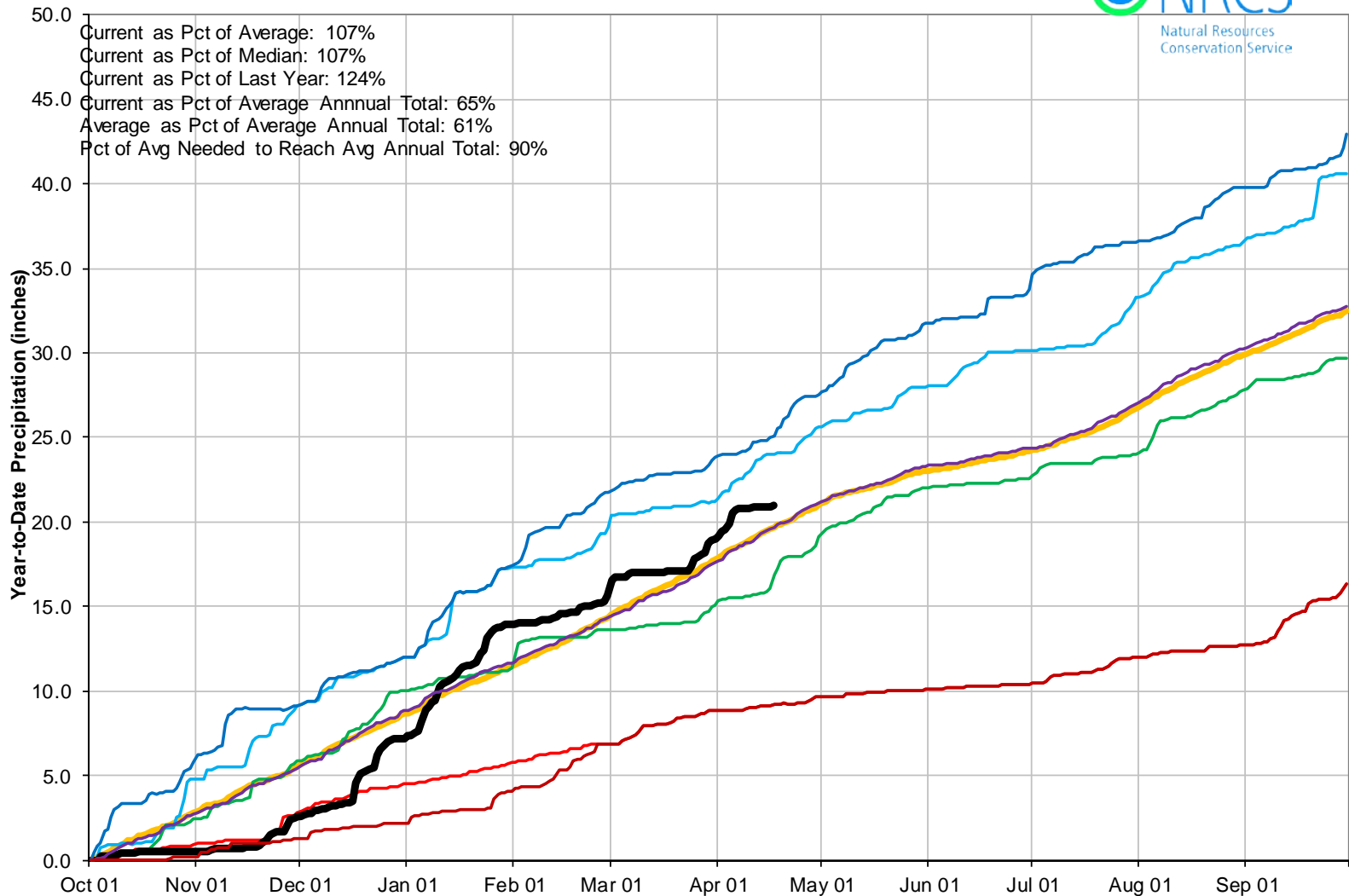
Current as of Apr 17, 2017





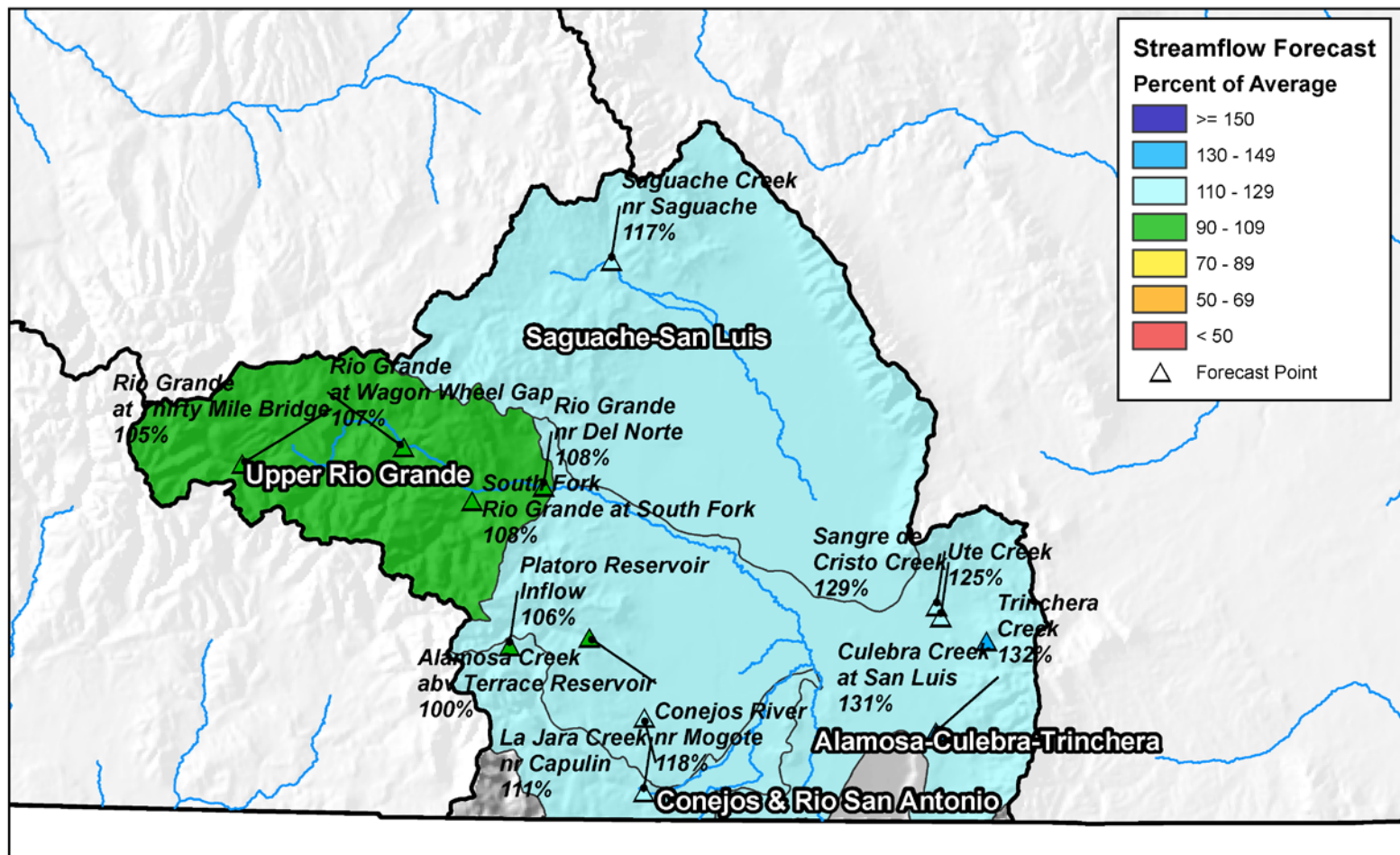
## Upper Rio Grande Basin High/Low Year-to-Date Precipitation Summary

*Based on Provisional SNOTEL data as of Apr 17, 2017*



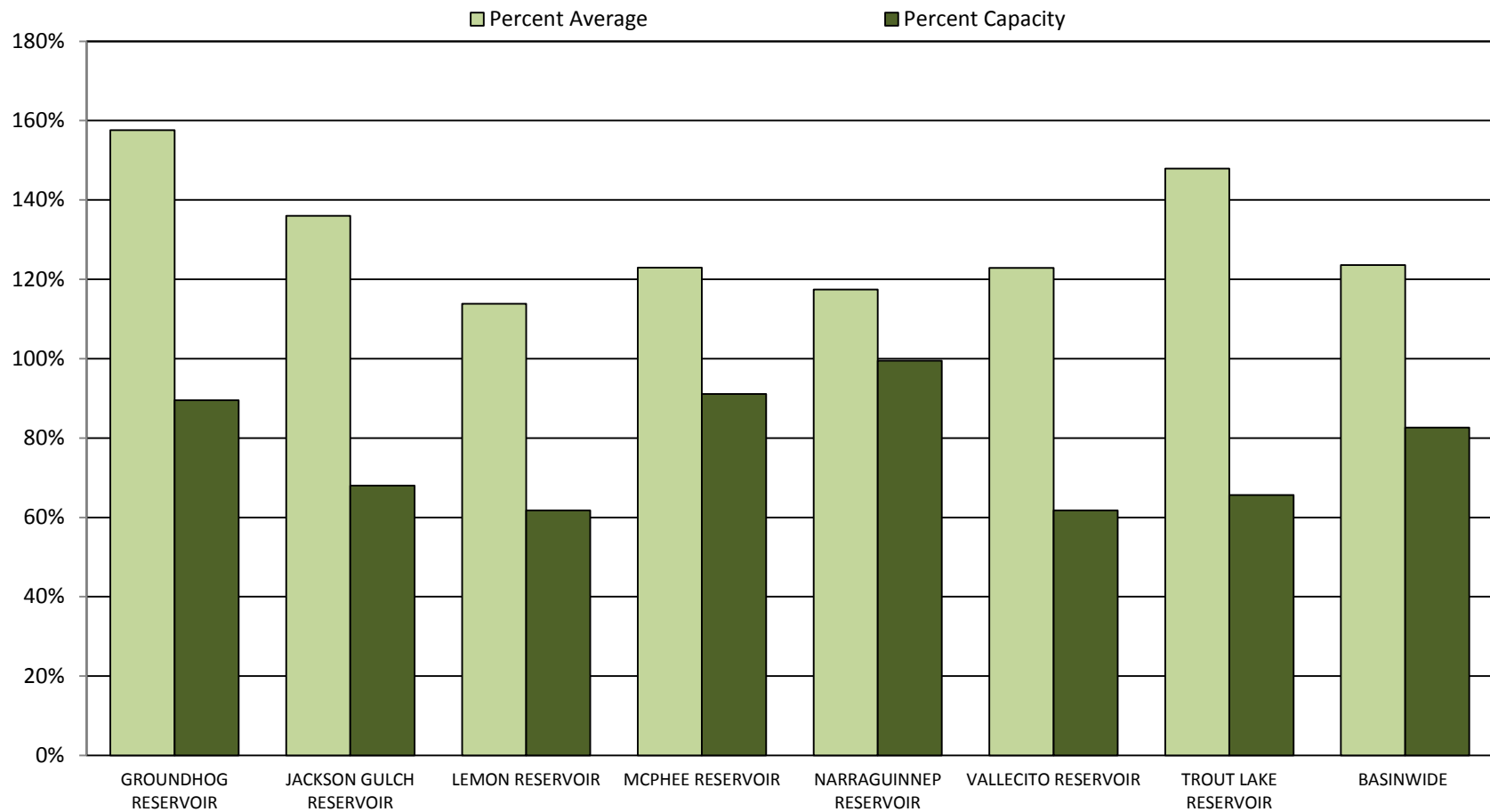
## Upper Rio Grande River Basin Streamflow Forecast Summary

April 1, 2017



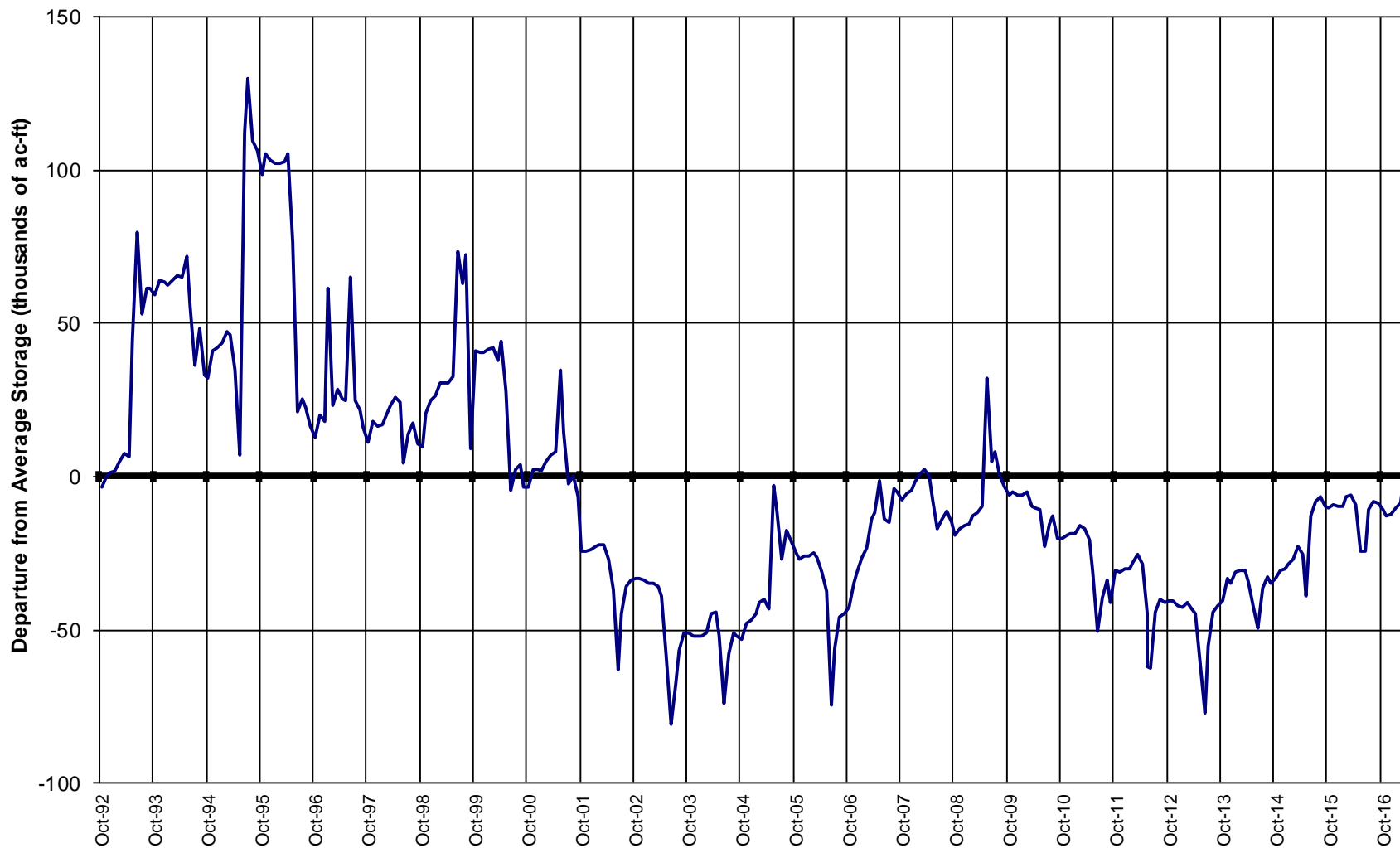
0 10 20 40 60 80 Miles

## Reservoir Storage





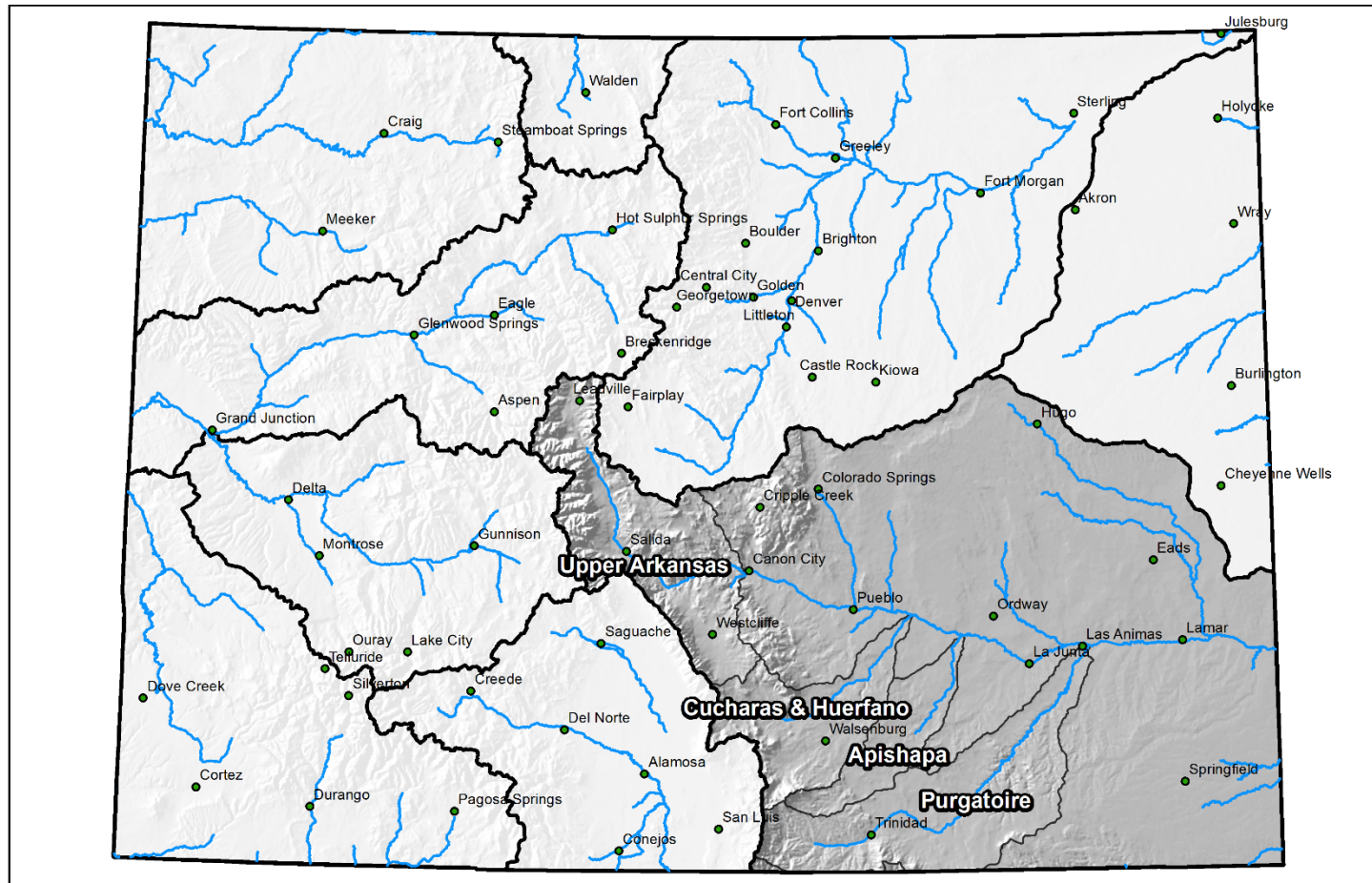
## UPPER RIO GRANDE BASIN Reservoir Storage Departure from Average





## Major Basin Summary

### Arkansas River Basin

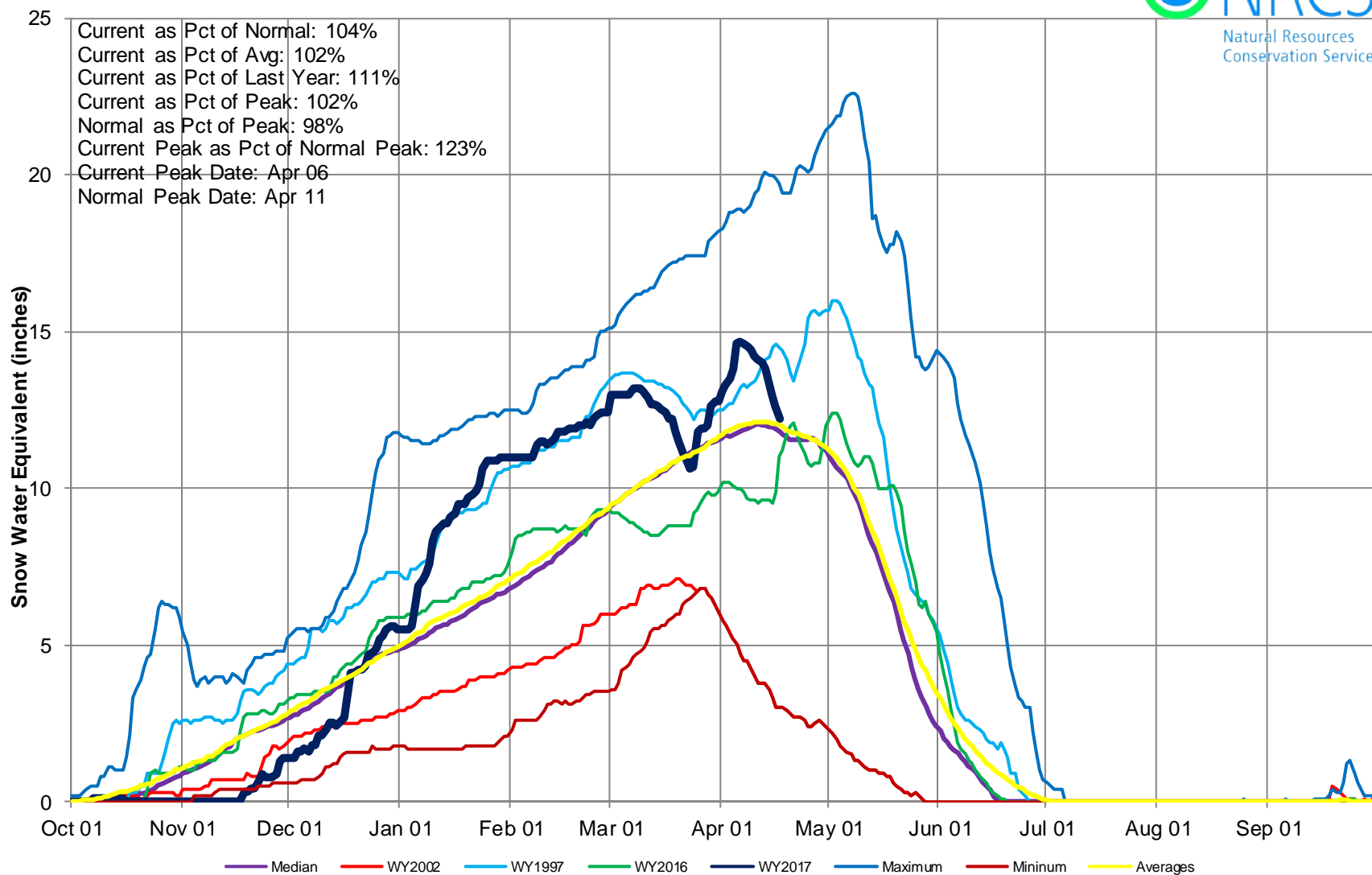


0 25 50 100 150 200 Miles

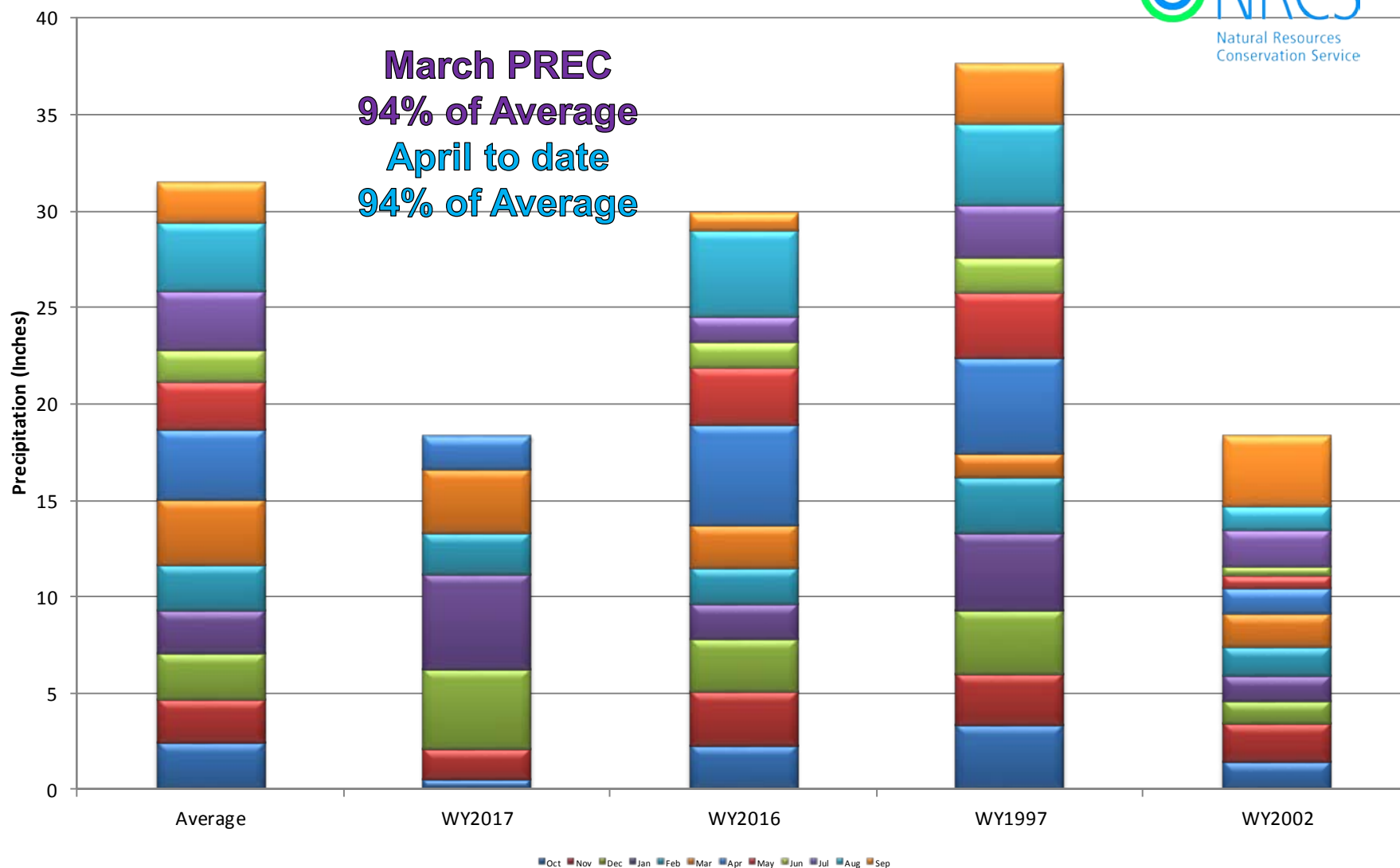


## Arkansas River Basin High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of Apr 17, 2017*

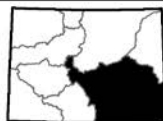
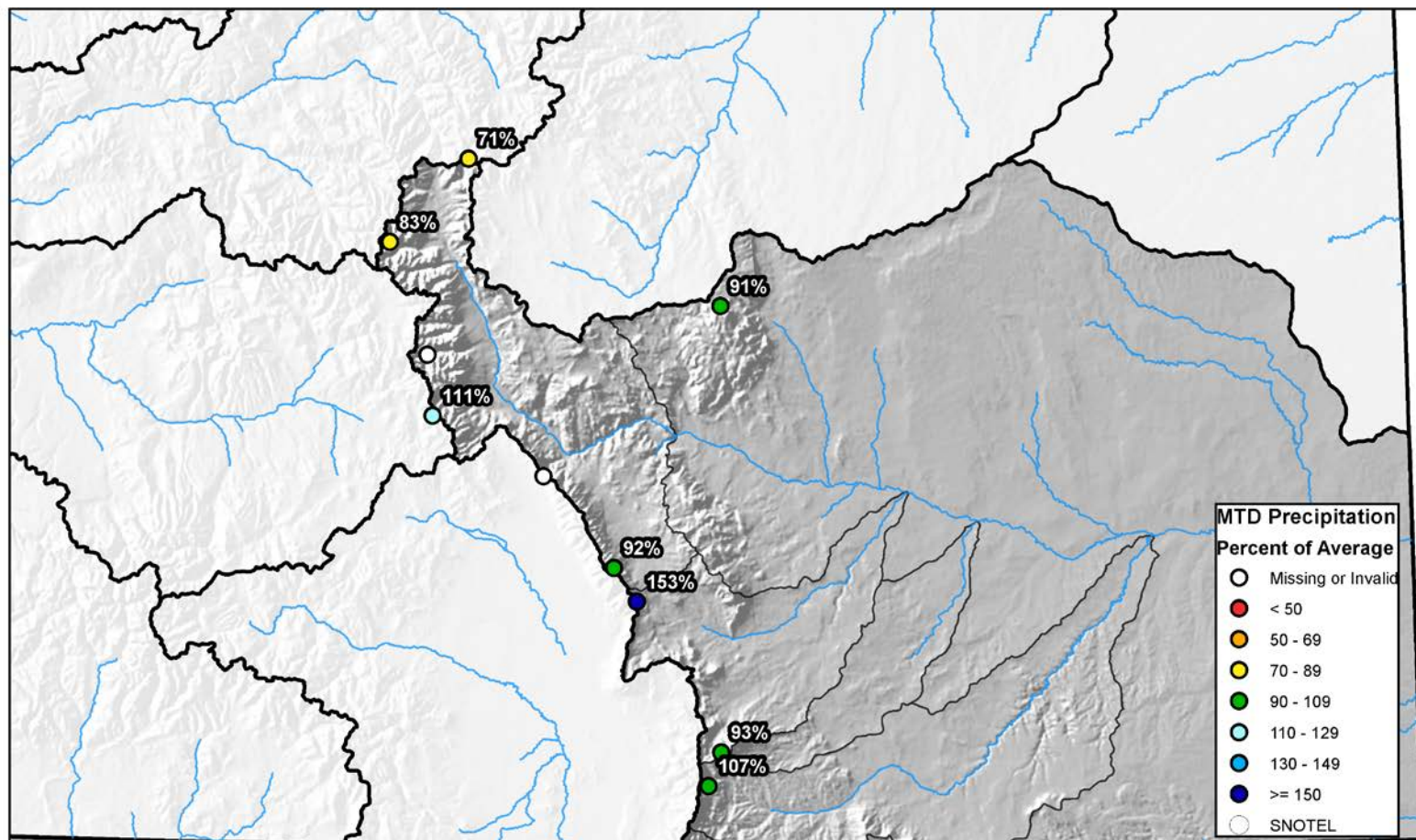


**Based on Provisional SNOTEL data as of Apr 17, 2017**



## Arkansas River Basin Month to Date Precipitation Summary

Current as of Apr 17, 2017



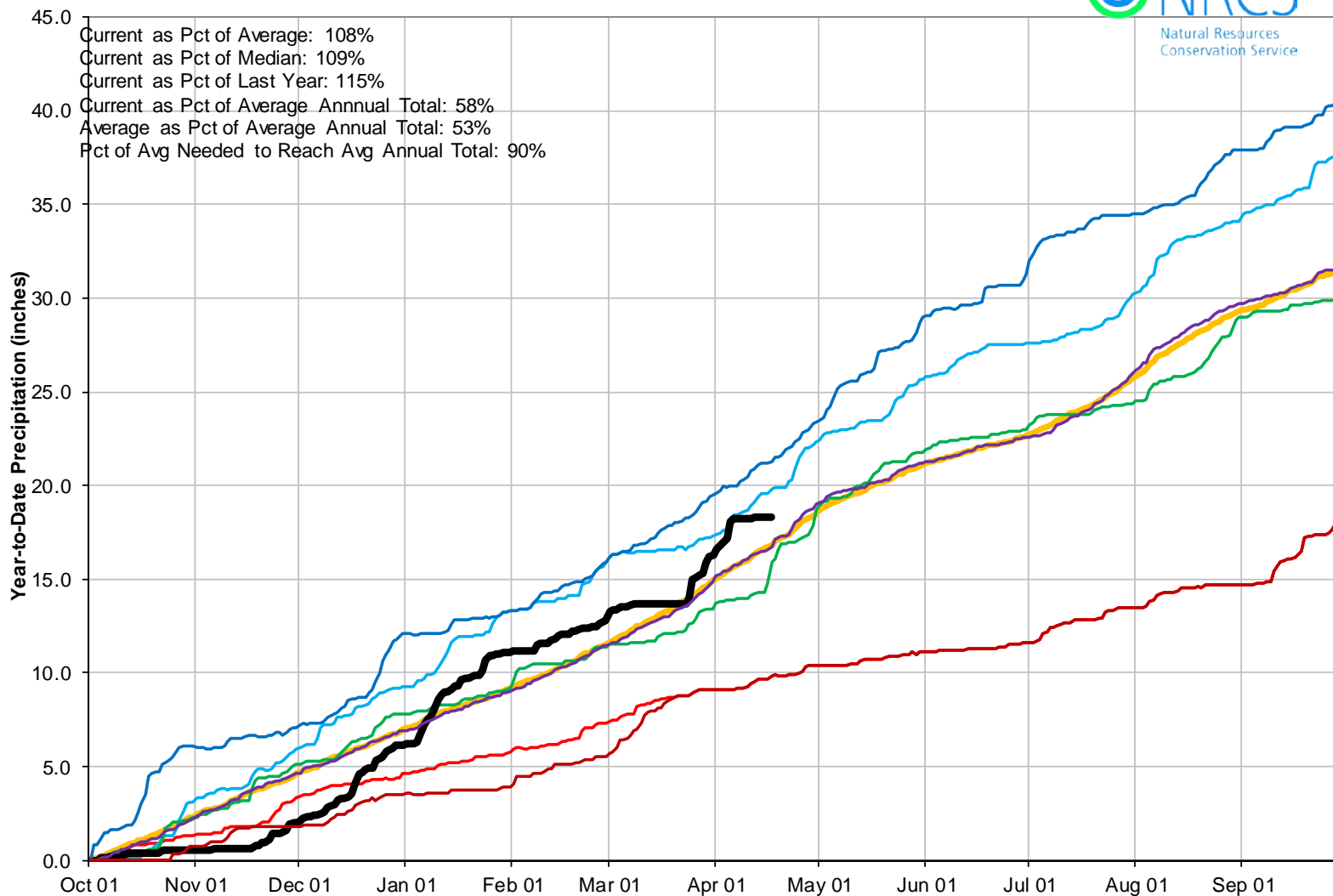
0 10 20 40 60 80 Miles





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

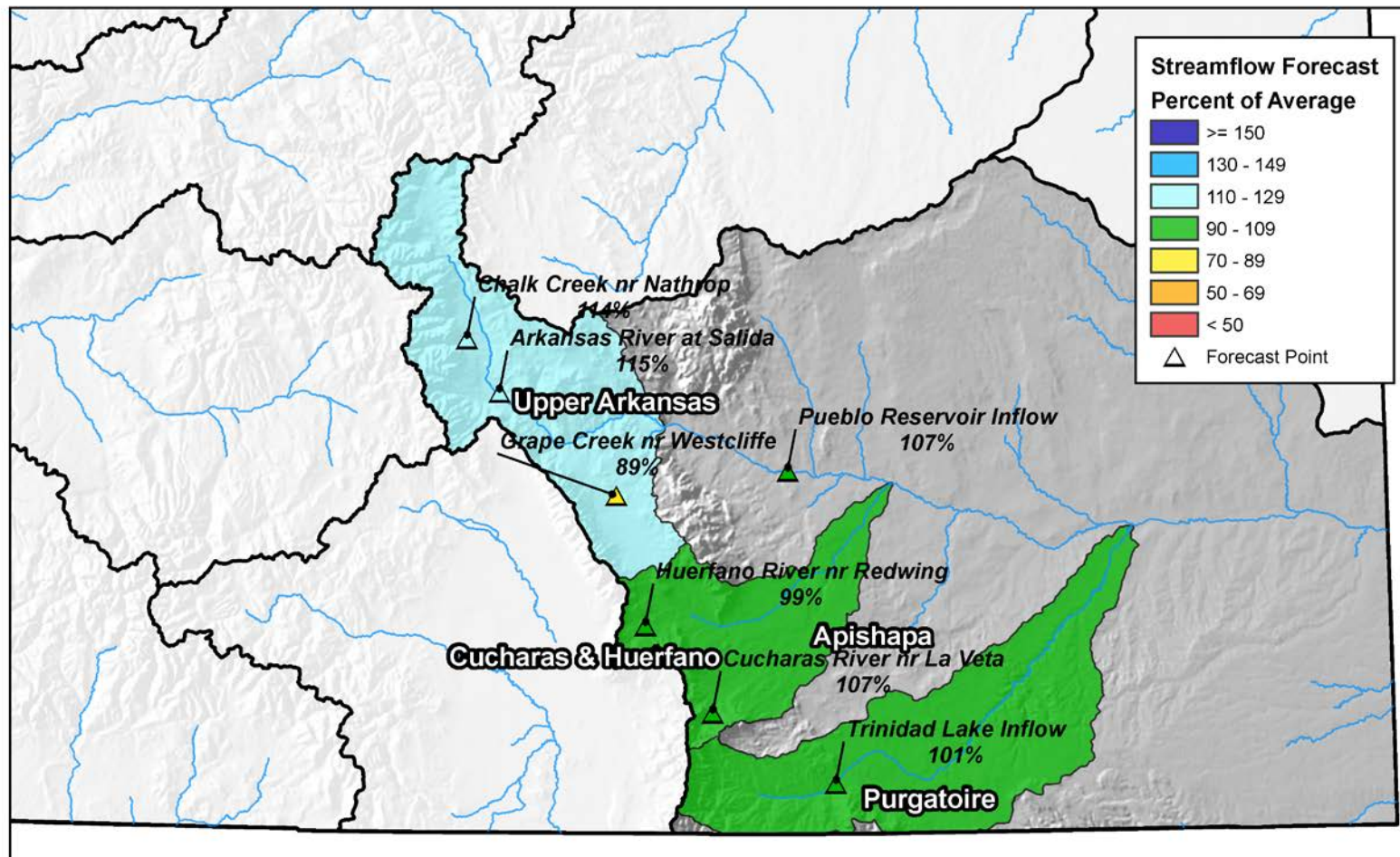
*Based on Provisional SNOTEL data as of Apr 17, 2017*





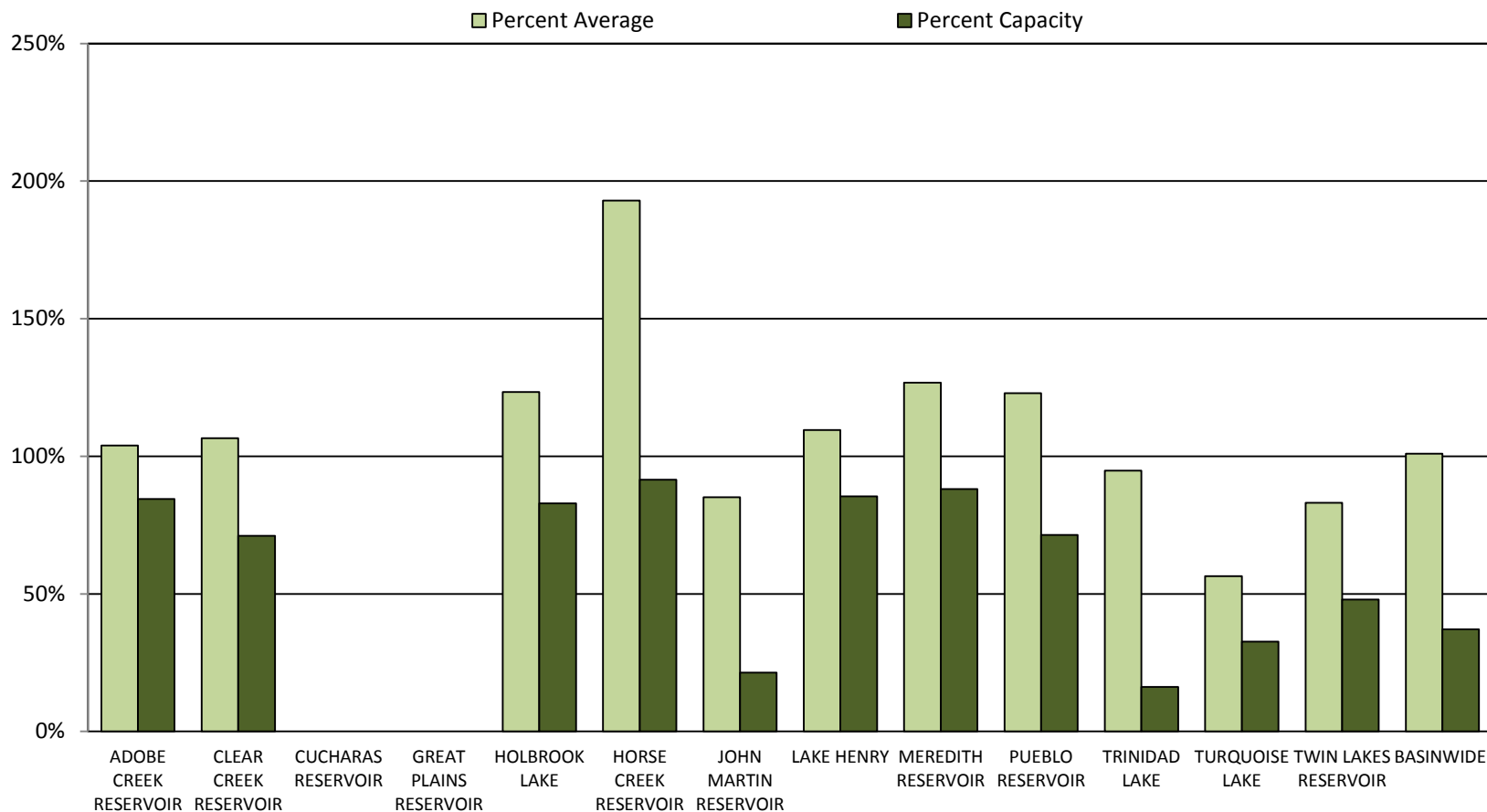
## Arkansas River Basin Streamflow Forecast Summary

April 1, 2017



0 10 20 40 60 80 Miles

## Reservoir Storage



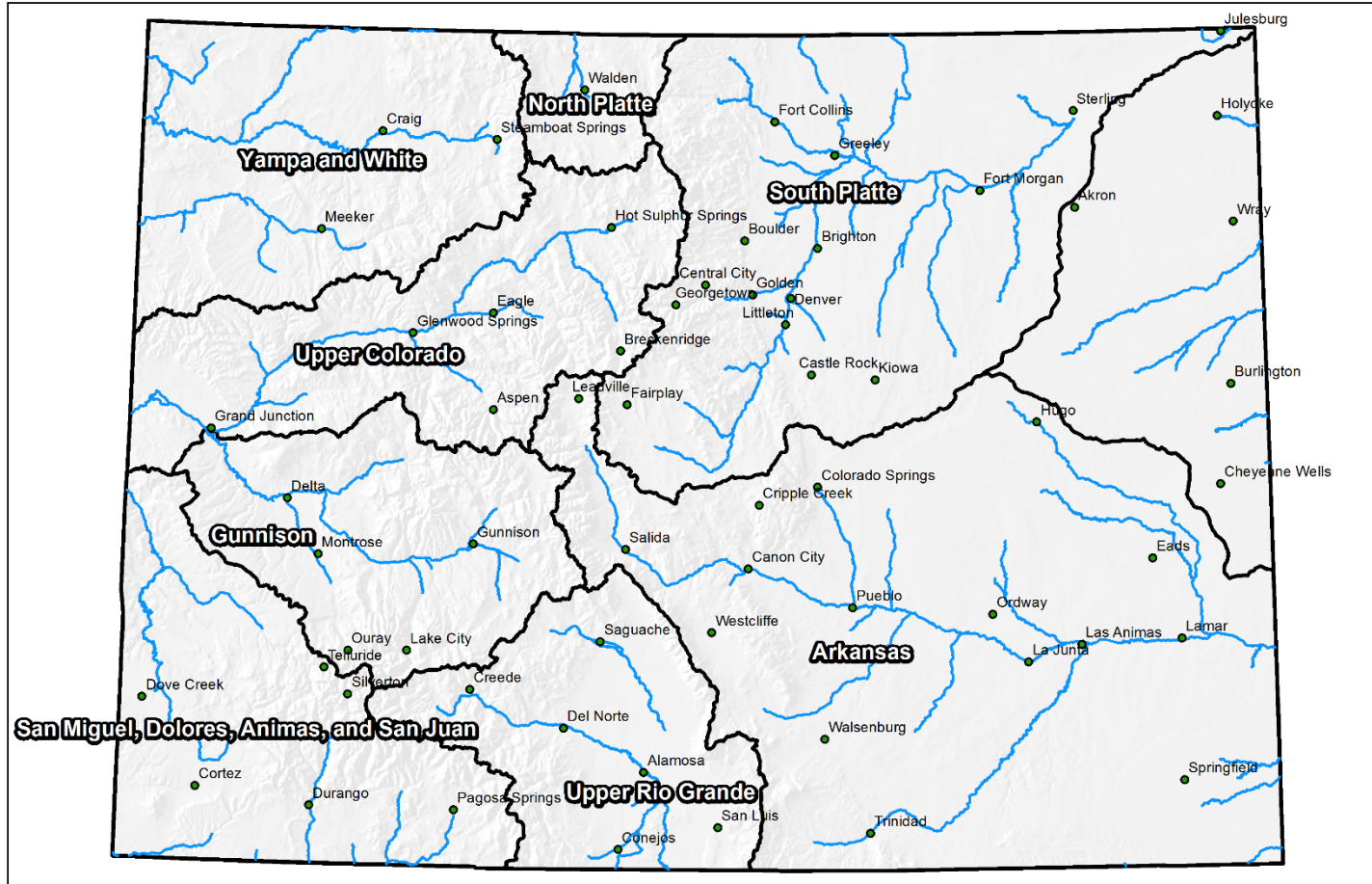


## ARKANSAS RIVER BASIN Reservoir Storage Departure from Average



## Colorado Statewide Summary

Colorado Major Basins

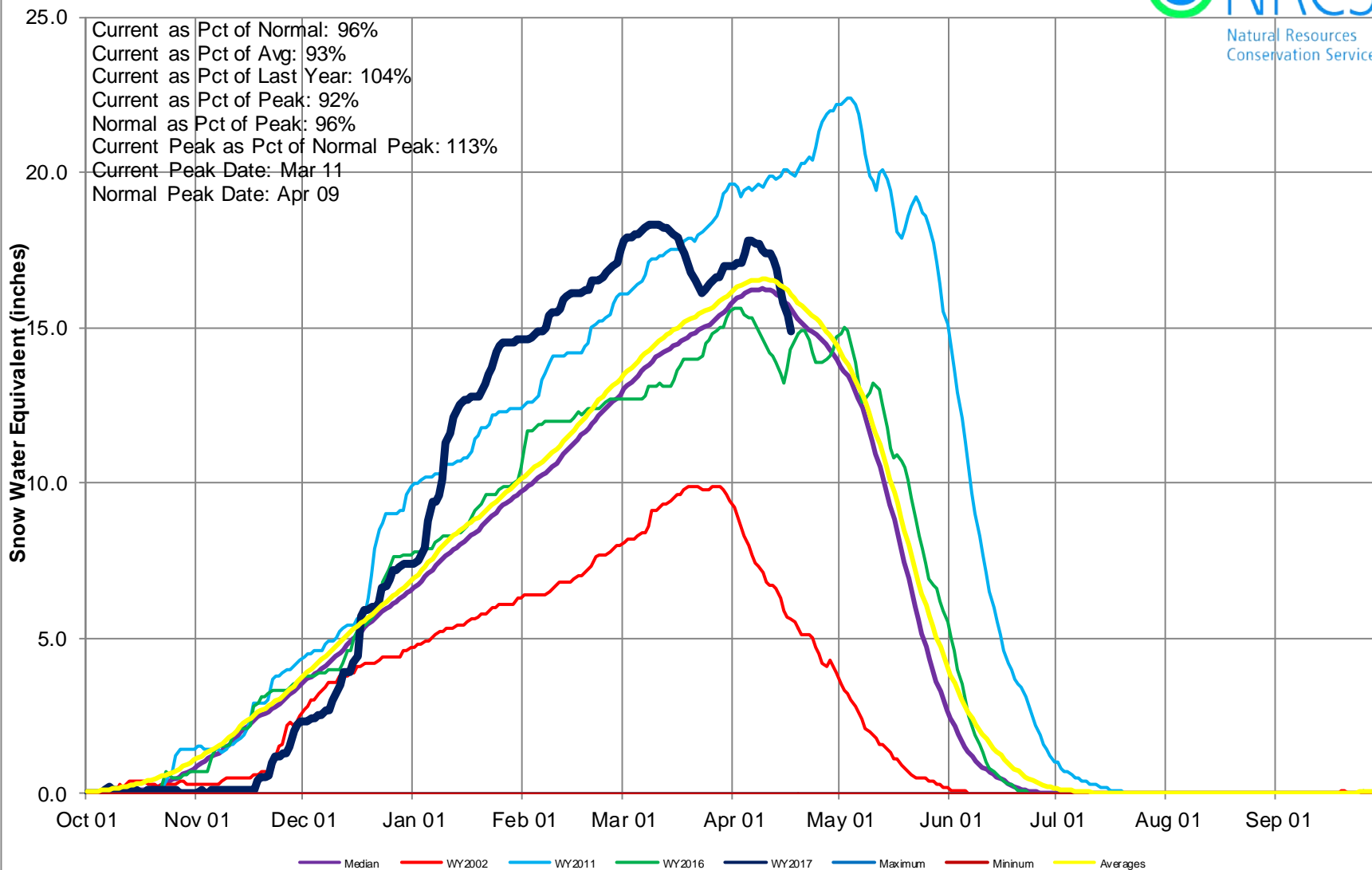


0 25 50 100 150 200 Miles



## Colorado Statewide High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of Apr 17, 2017*





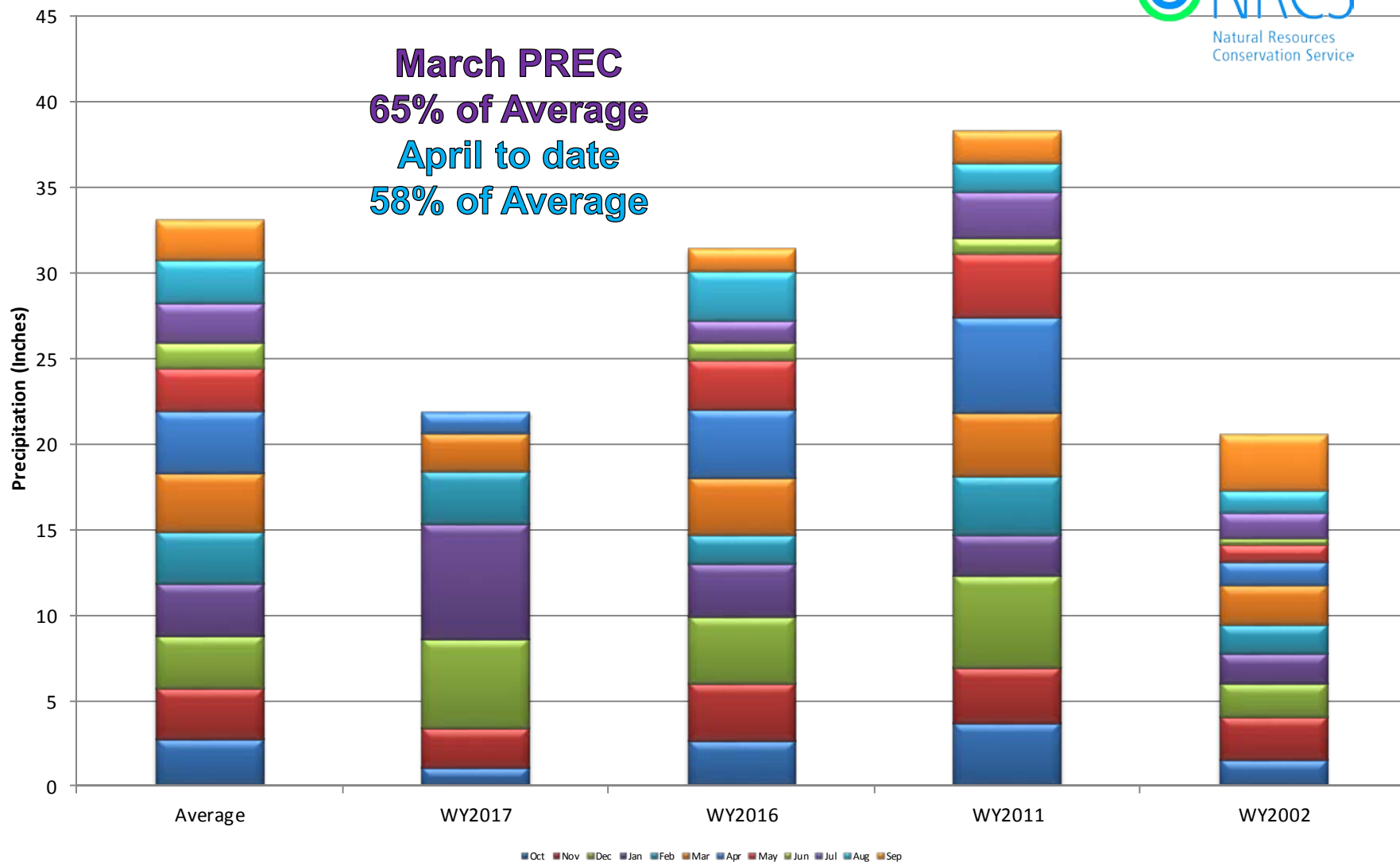


## Colorado Statewide High/Low Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of Apr 17, 2017*

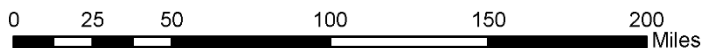
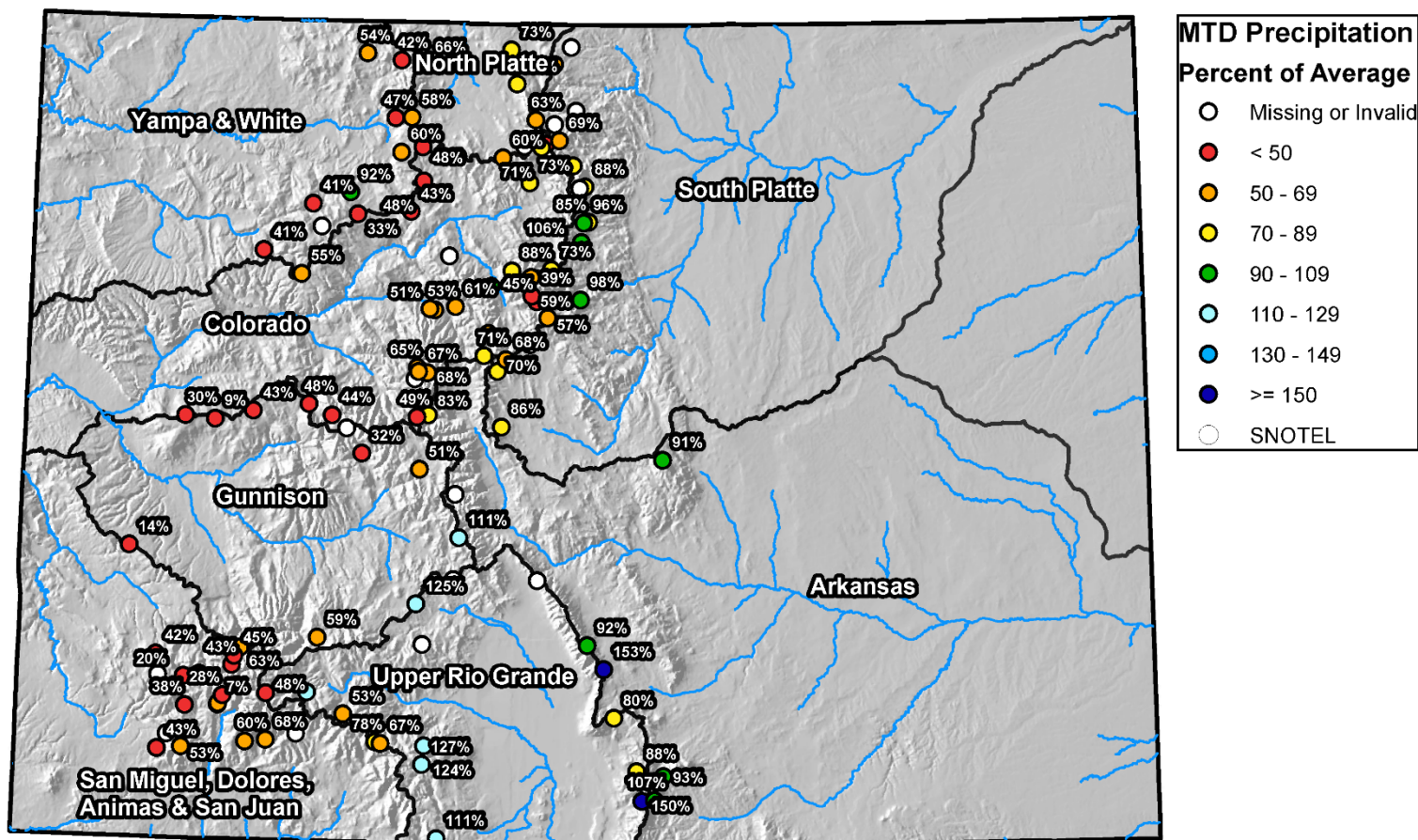


**March PREC**  
**65% of Average**  
**April to date**  
**58% of Average**



## Colorado SNOTEL Month-to-Date Precipitation

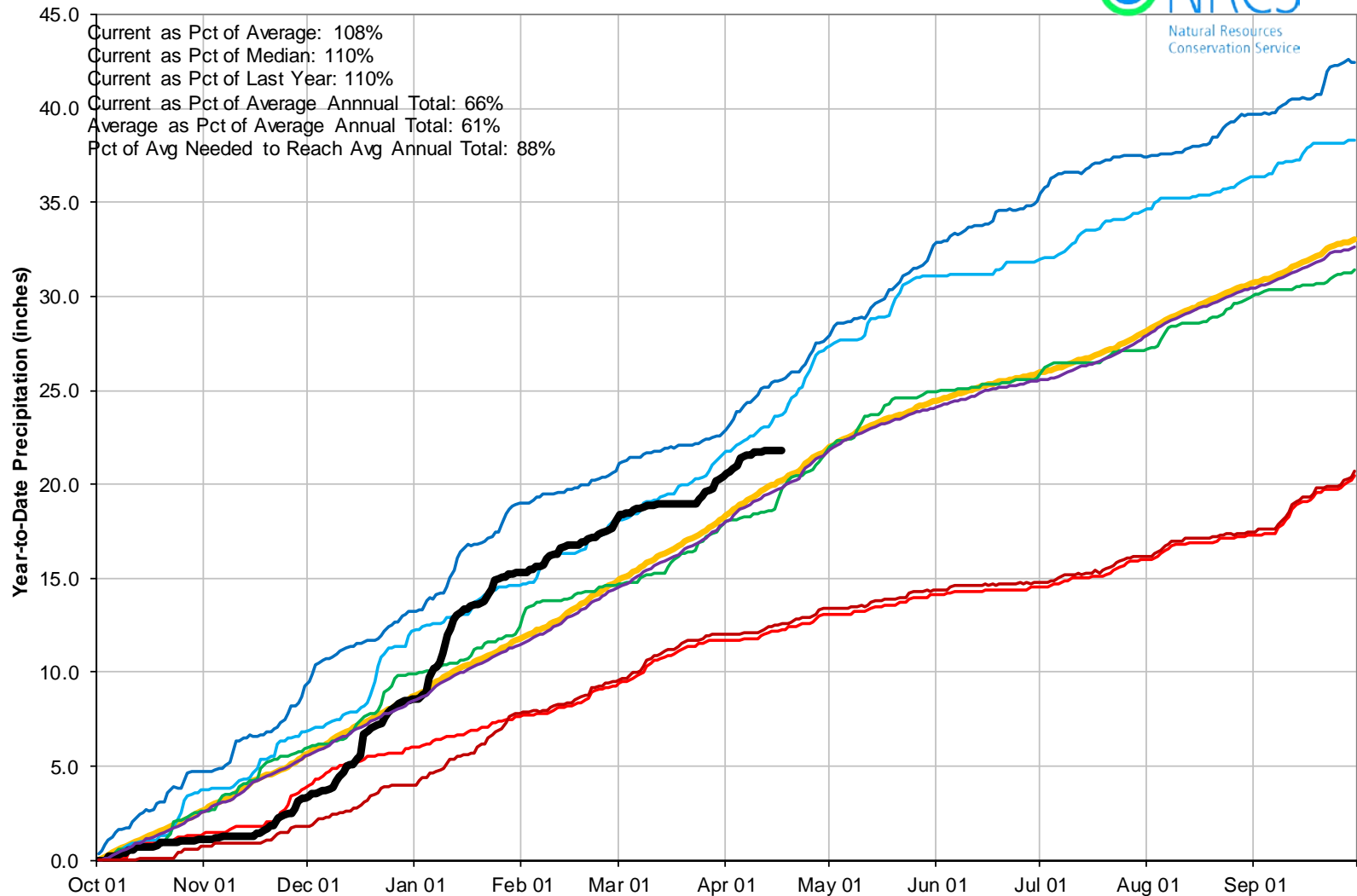
Current as of Apr 17, 2017





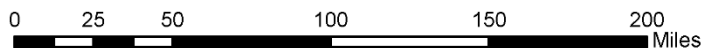
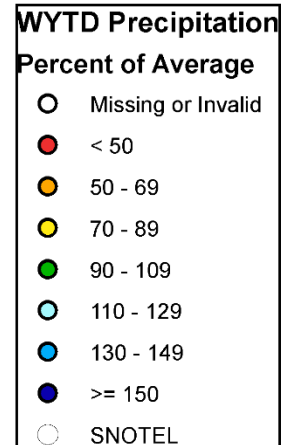
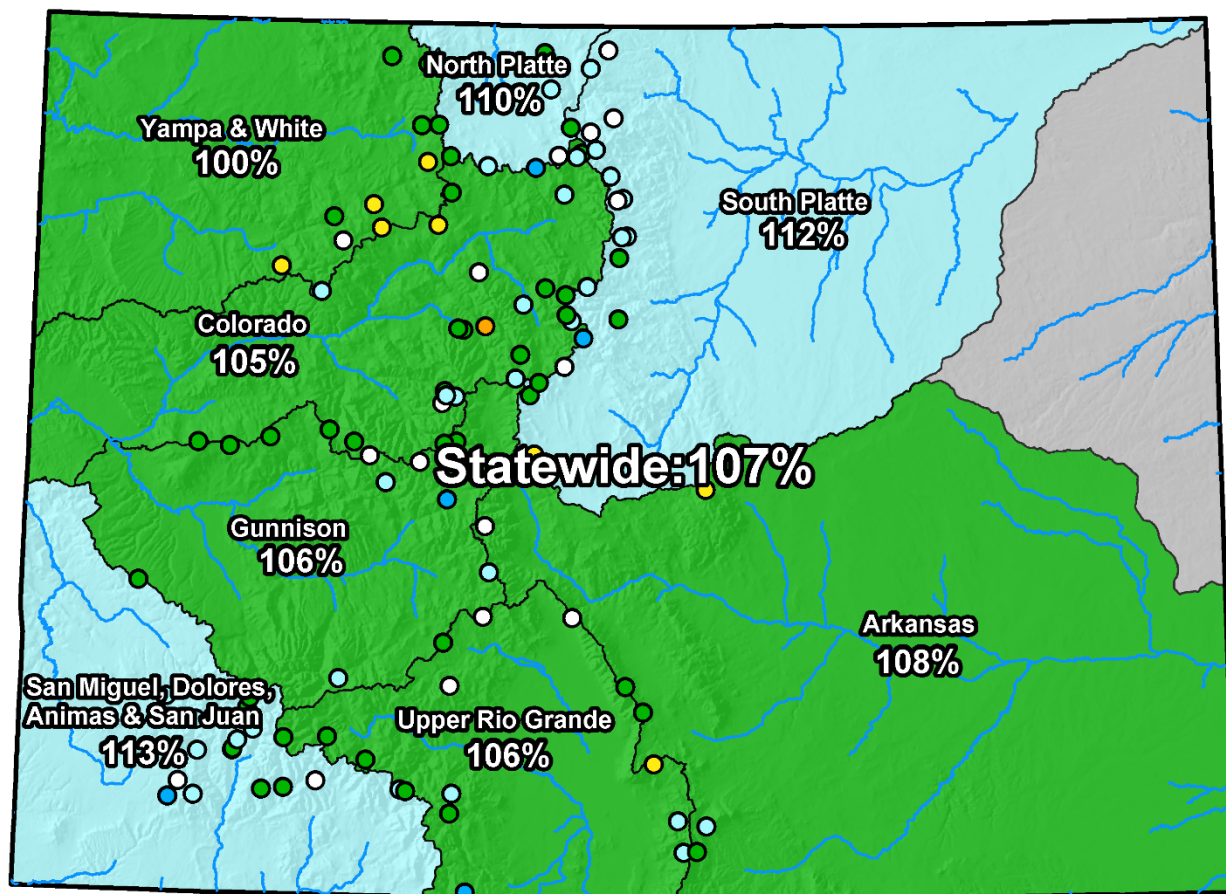
## Colorado Statewide High/Low Year-to-Date Precipitation Summary

*Based on Provisional SNOTEL data as of Apr 17, 2017*



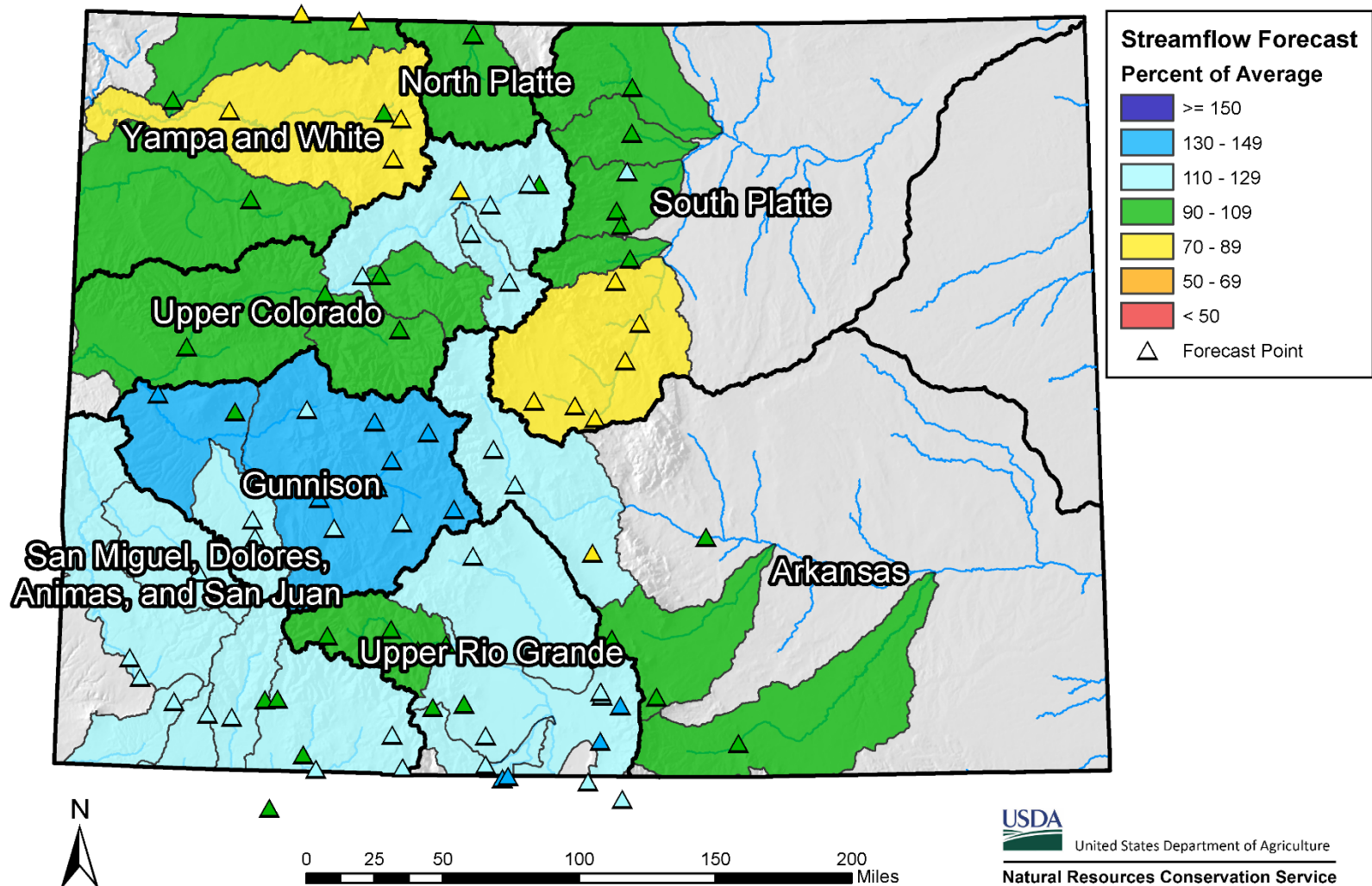
## Colorado SNOTEL Water Year to Date Precipitation

Current as of Apr 17, 2017





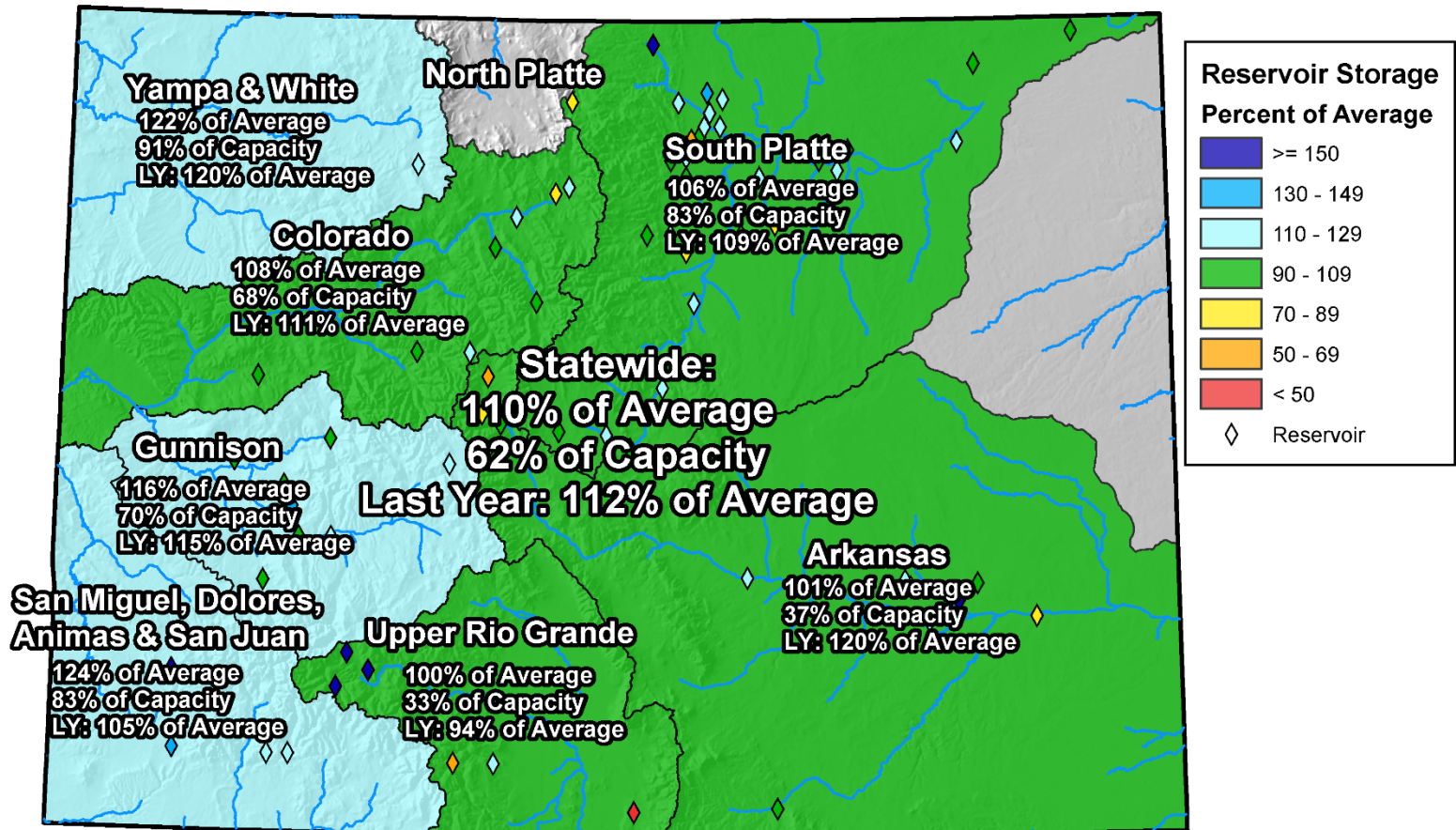
## Colorado Streamflow Forecasts Summary April 1, 2017





## Colorado Monthly Reservoir Storage Summary

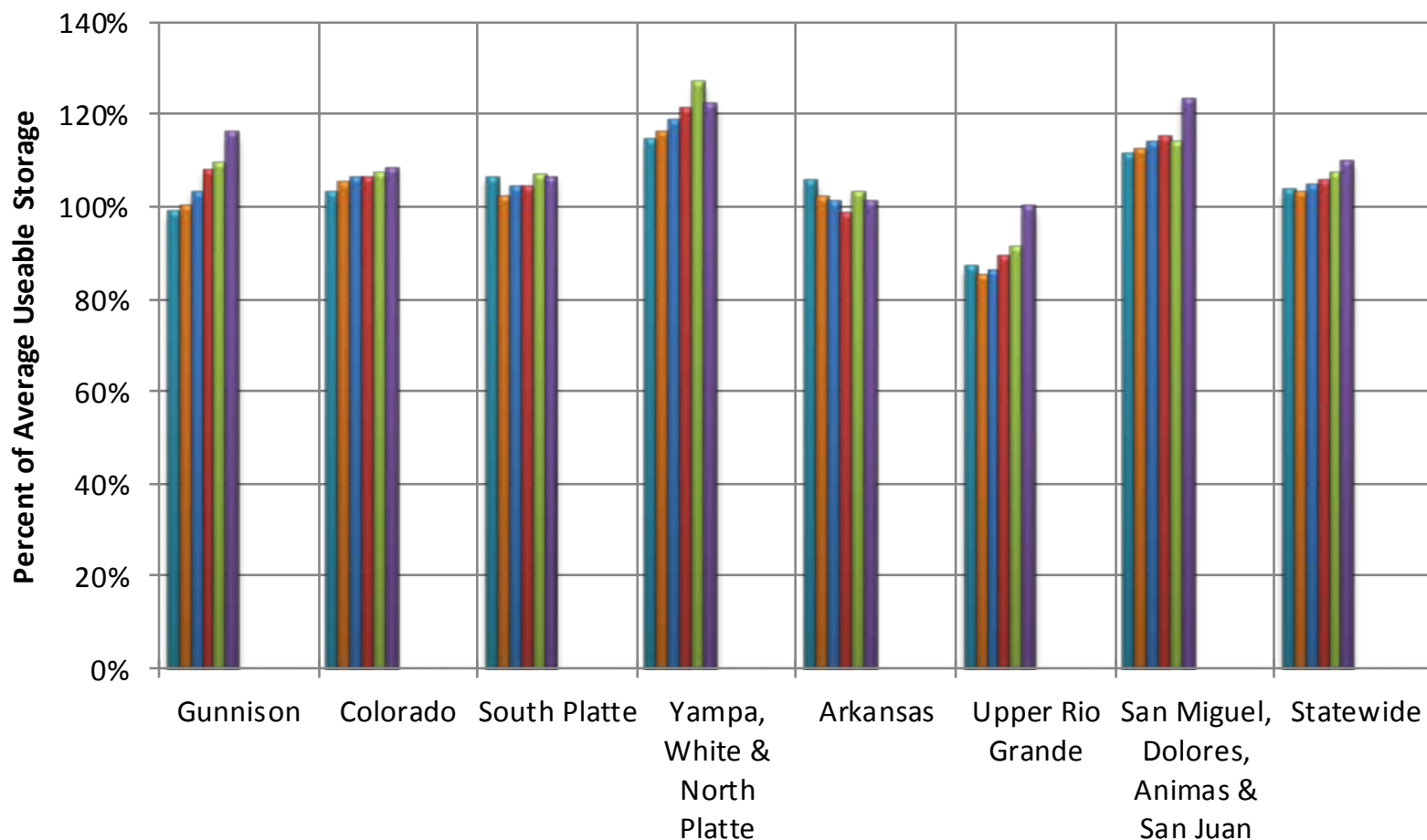
End of March 2017



0 25 50 100 150 200 Miles

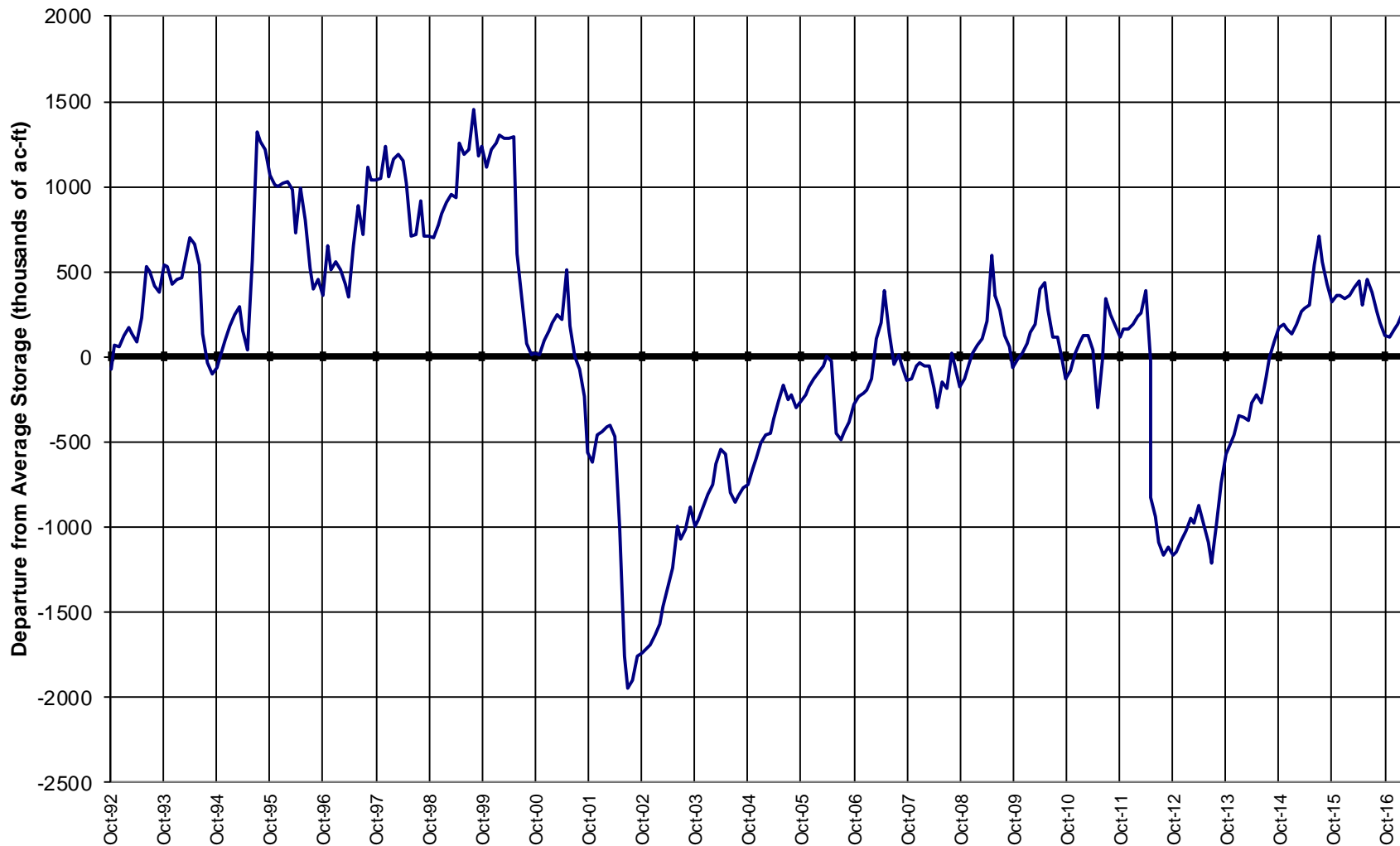
## Colorado Reservoir Storage

Oct-16   Nov-16   Dec-16   Jan-17   Feb-17   Mar-17  
 Apr-17   May-17   Jun-17   Jul-17   Aug-17   Sep-17





## COLORADO STATEWIDE Reservoir Storage Departure from Average

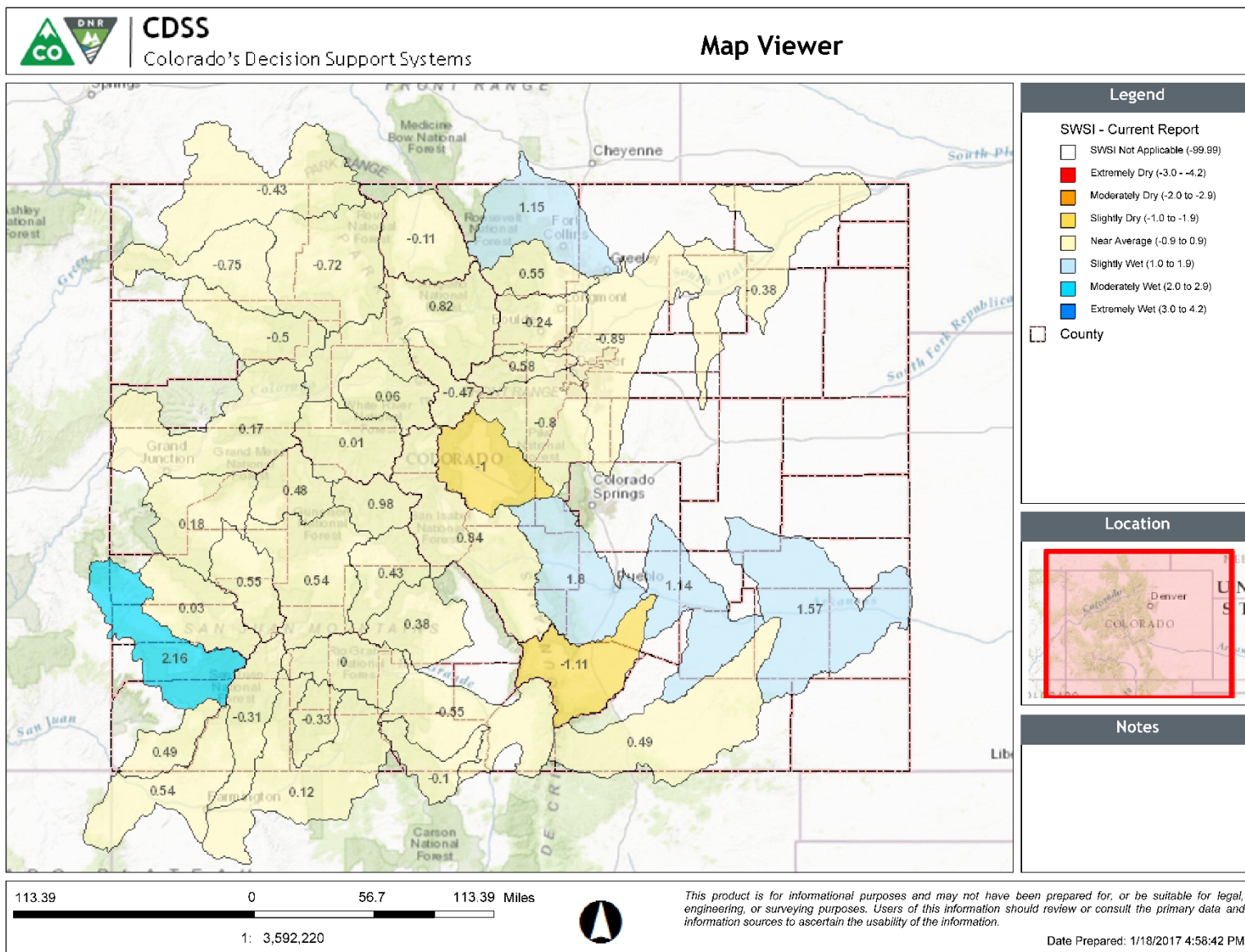




United States Department of Agriculture

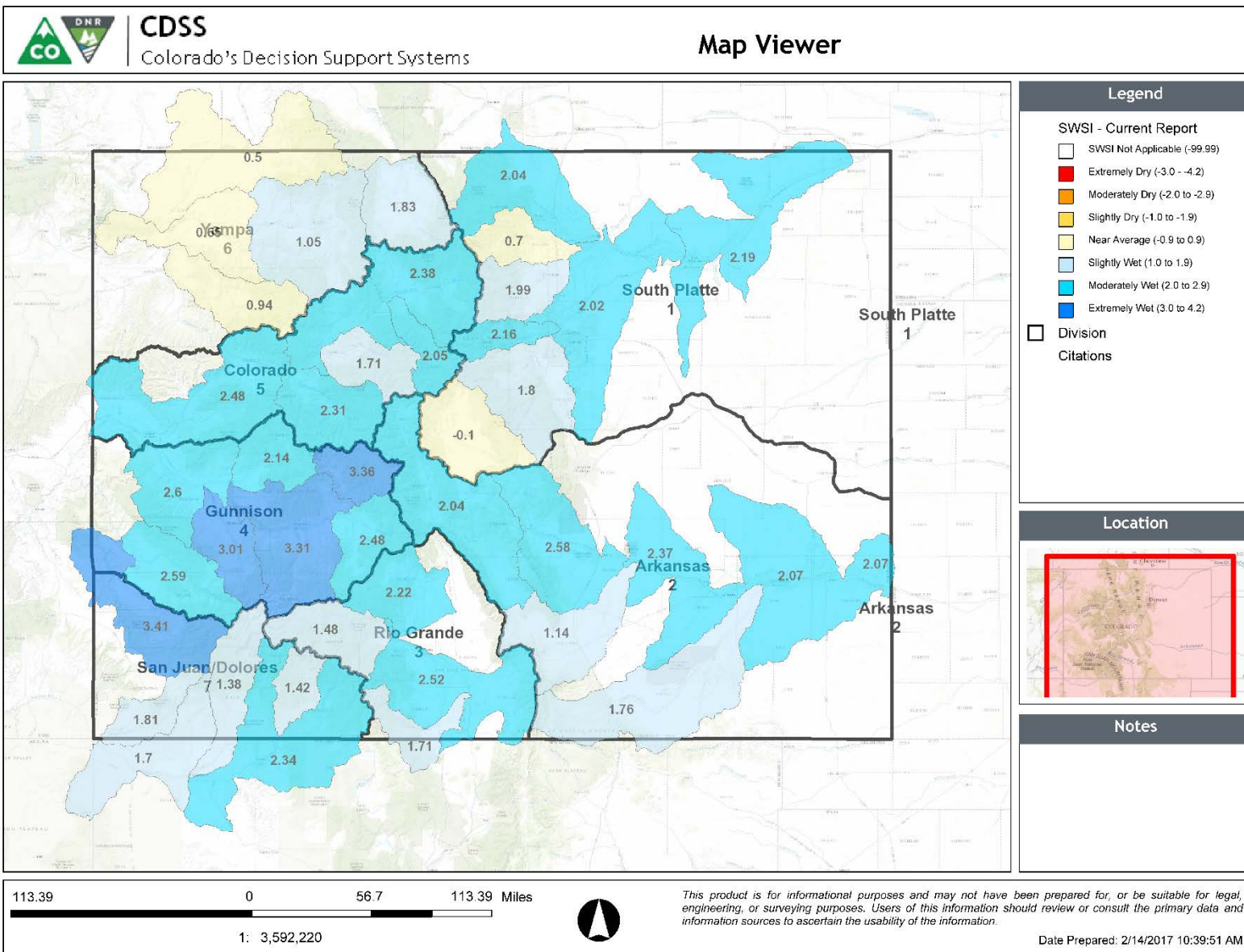
# Colorado Snow Surveys

January 1, 2017 SWSI





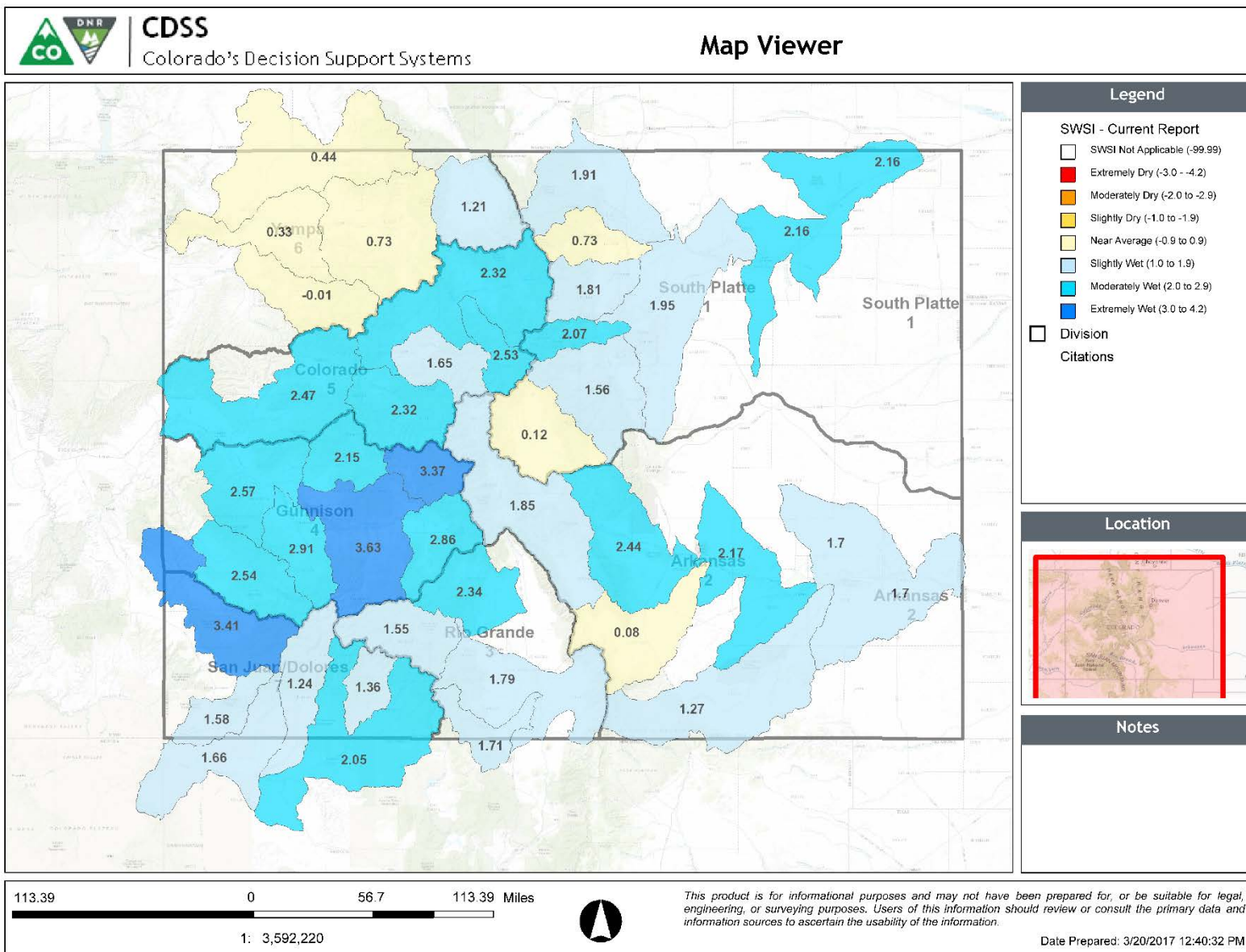
February 1, 2017 SWSI







March 1, 2017 SWSI





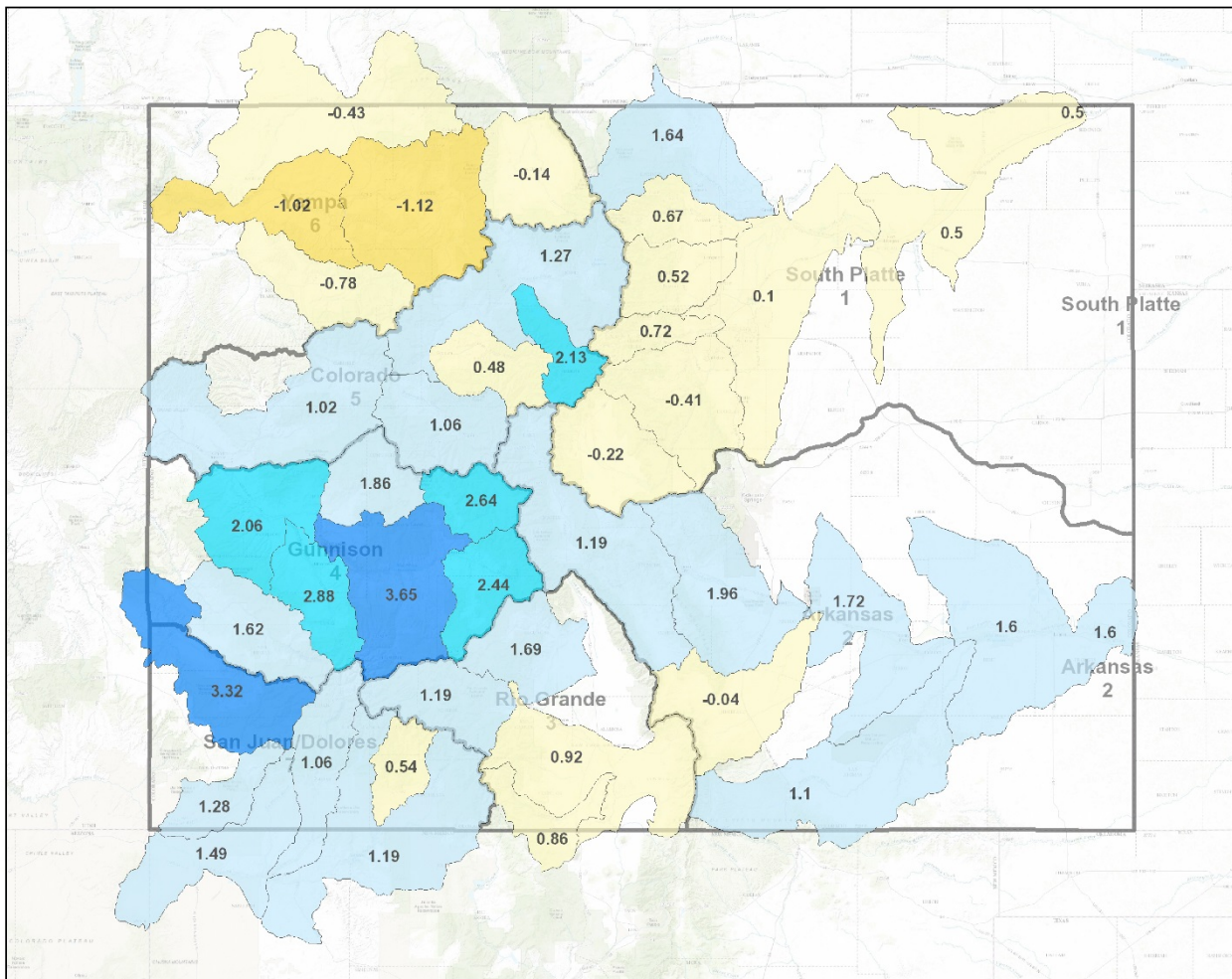
April 1, 2017 SWSI



CDSS

Colorado's Decision Support Systems

SWSI April 1, 2017



## Legend

### SWSI - Current Report

- ☐ SWSI Not Applicable (-99.99)
- ☐ Extremely Dry (-3.0 - -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)

- ☐ Division
- ☐ Citations

## Location



## Notes

113.39 0 56.7 113.39 Miles

1: 3,592,220



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: 4/14/2017 2:58:59 PM

## Summary

- Colorado Statewide snowpack is at 96% of normal, down from 121% on 3/17
- Due to the extremely warm dry spell in mid-March, snowpack melt rates will accelerate quickly each time CO returns to warm weather
- All River basins were able to reach or exceed typical peak snowpack levels this year some basins could still reach a new snowpack peak dependent on future weather
  - Northern Basins met typical snowpack peak levels (SP, YWNP, & Colorado)
  - Southern Basins exceeded typical snowpack peak levels (inc. Gunnison)
  - Some basins could achieve a new peak with adequate future weather
  - However most basins peaked early but saw some recovery
- All basins at or above normal reservoir storage – statewide-110% norm
- SWSIs are on the decline after last two months' below normal precip
- Streamflow forecasts did in fact fall considerably – range from 147% of normal on Tomichi Ck to 78% on Antero & Yampa abv Stagecoach





United States Department of Agriculture

Colorado Snow Surveys

# Water Availability Task Force Meeting

## April 18<sup>th</sup>, 2017

### NRCS Snow Survey and Water Supply Forecasting Program

Brian Domonkos  
Snow Survey Supervisor  
720-544-2852

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