



United States Department of Agriculture

Colorado Snow Surveys

# Water Availability Task Force Meeting

## June 14<sup>th</sup>, 2018

### NRCS Snow Survey and Water Supply Forecasting Program

Brian Domonkos

Hydrologist

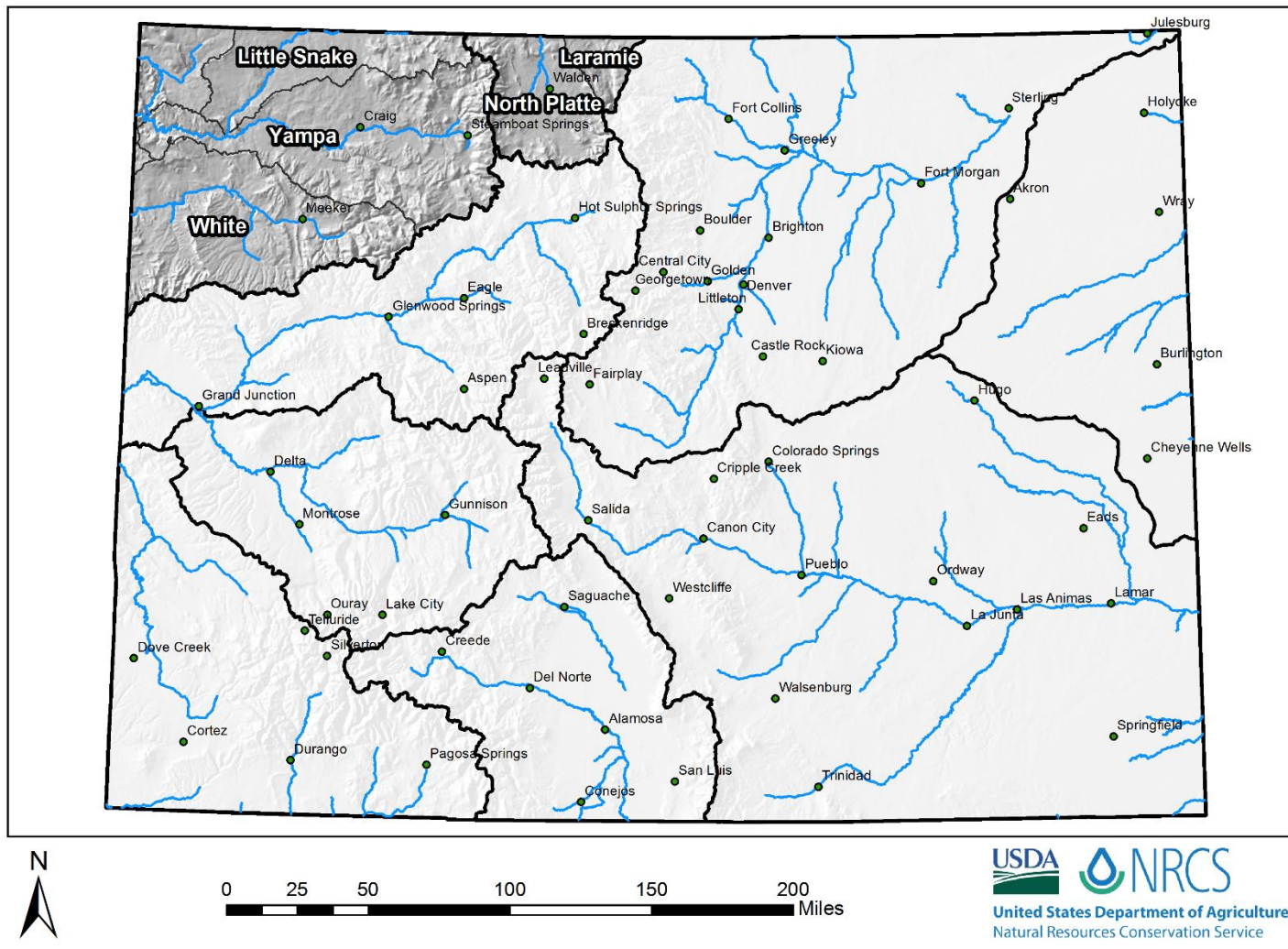
Snow Survey Supervisor

720-544-2852

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

## Major Basin Summary

Yampa, White, and North Platte River Basins





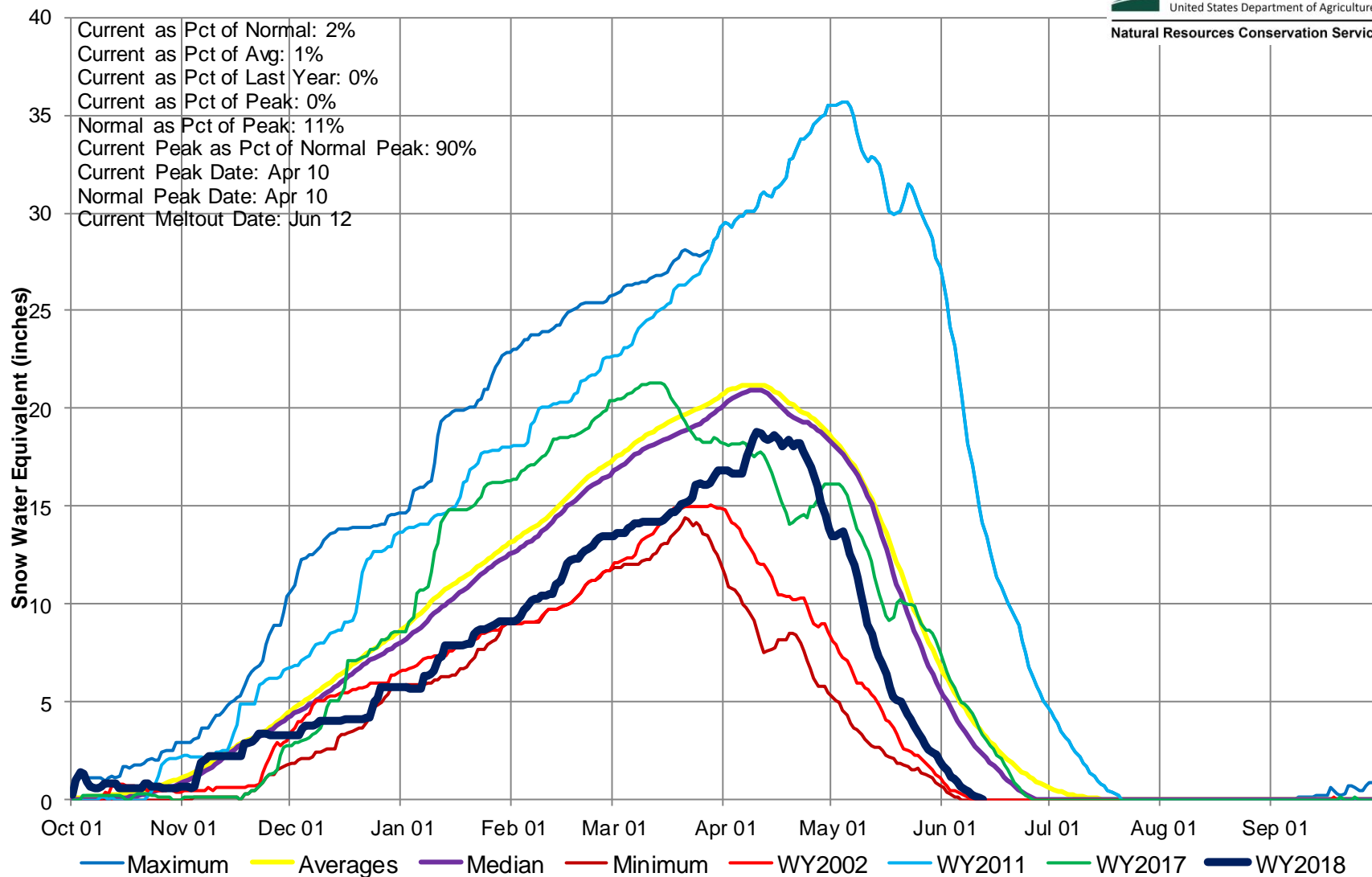
## Yampa and White River Basins High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of Jun 12, 2018*



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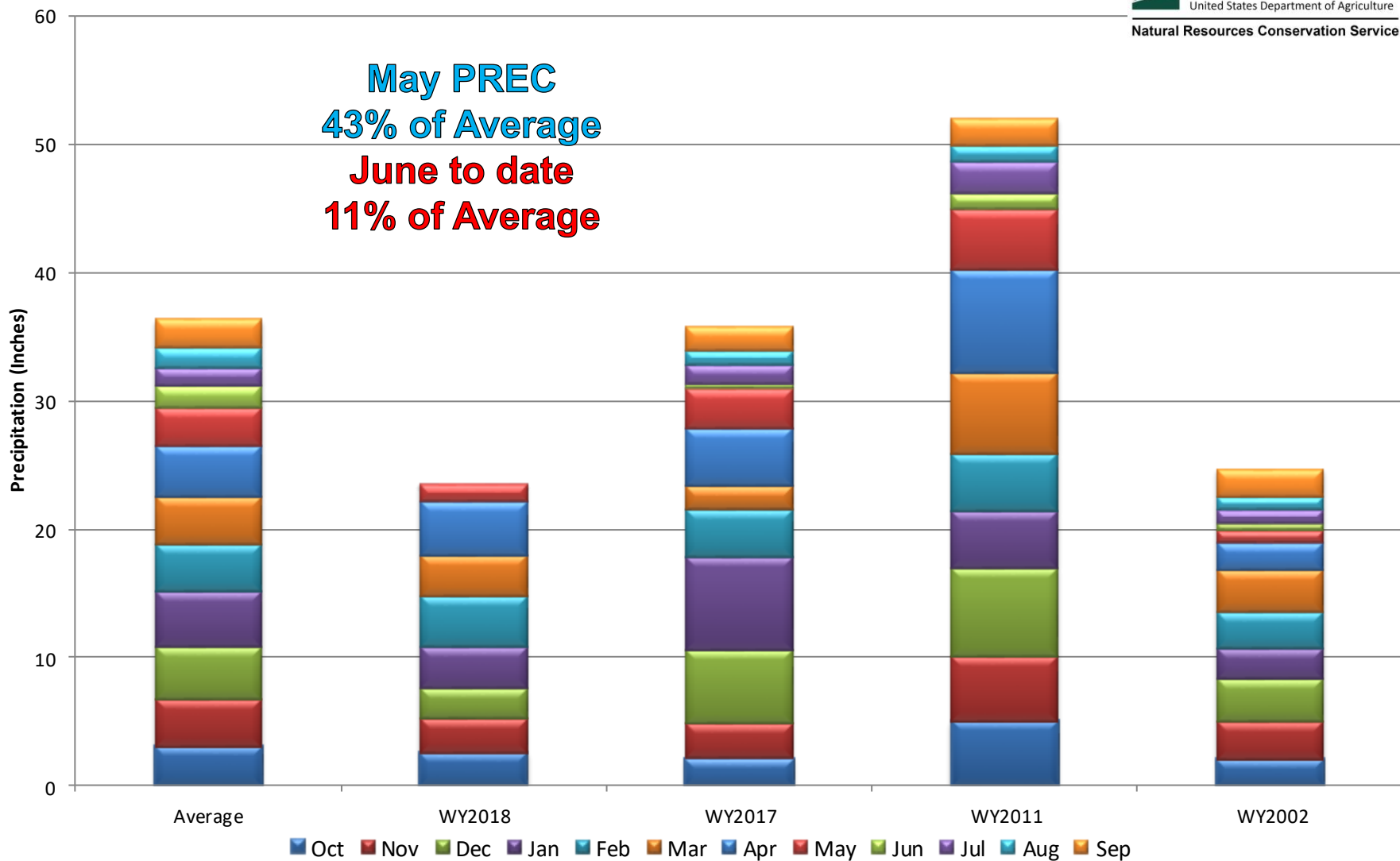
## Yampa and White River Basins High/Low Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of Jun 12, 2018*



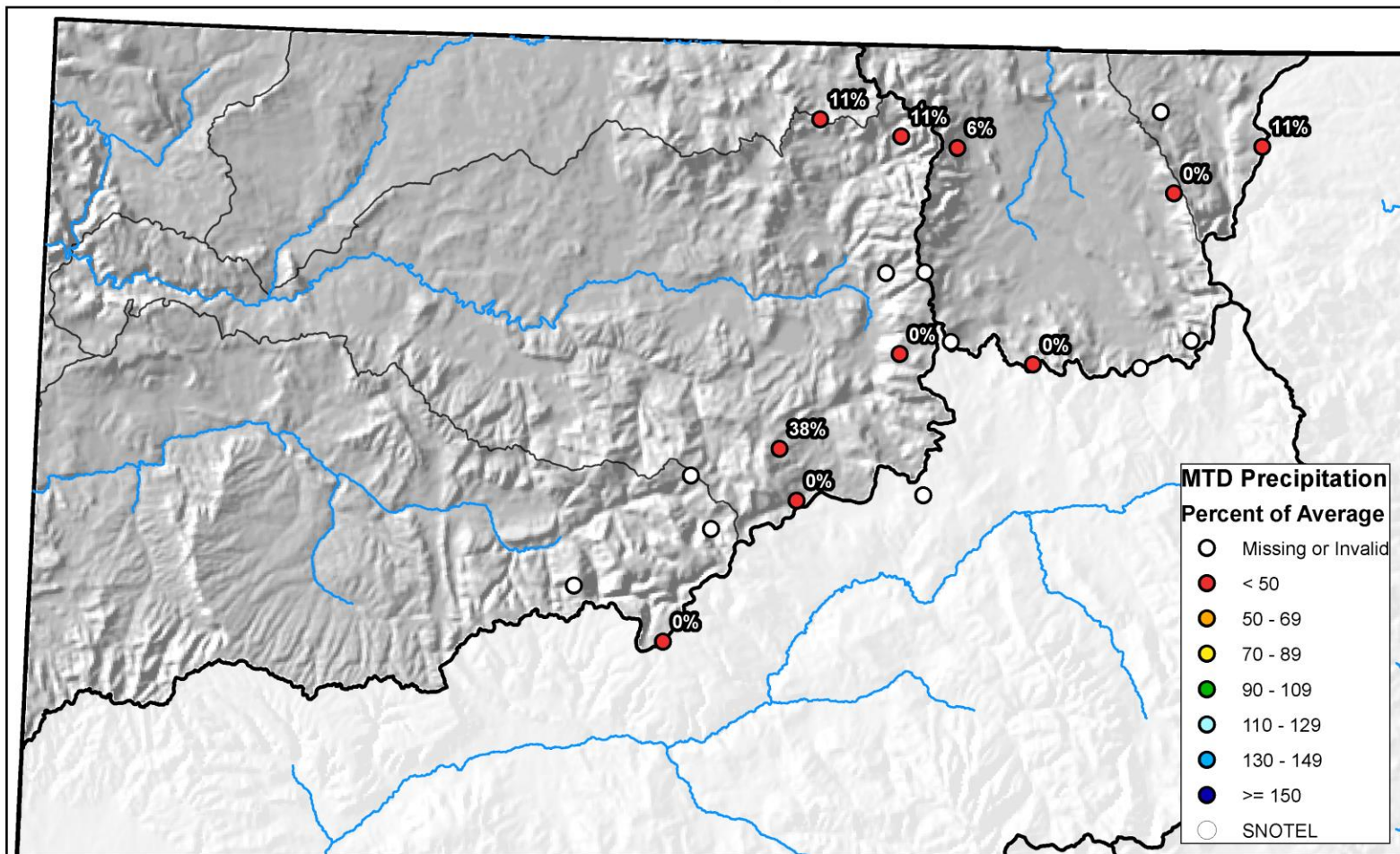
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## Yampa, White, and North Platte River Basins Month to Date Precipitation Summary Current as of Jun 12, 2018



0 10 20 40 60 80 Miles

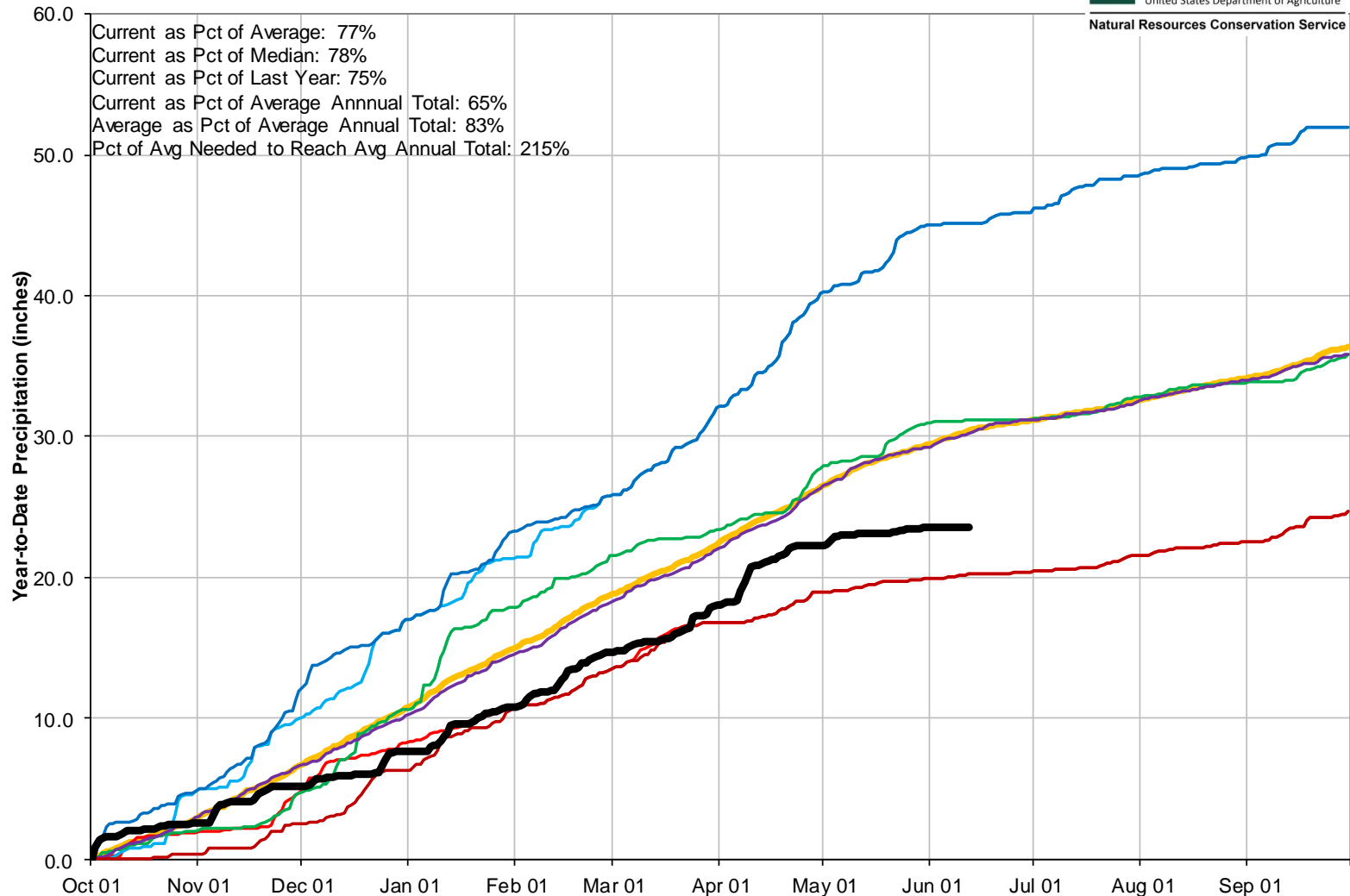
## Yampa and White River Basins High/Low Year-to-Date Precipitation Summary

*Based on Provisional SNOTEL data as of Jun 12, 2018*

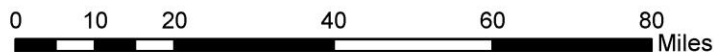
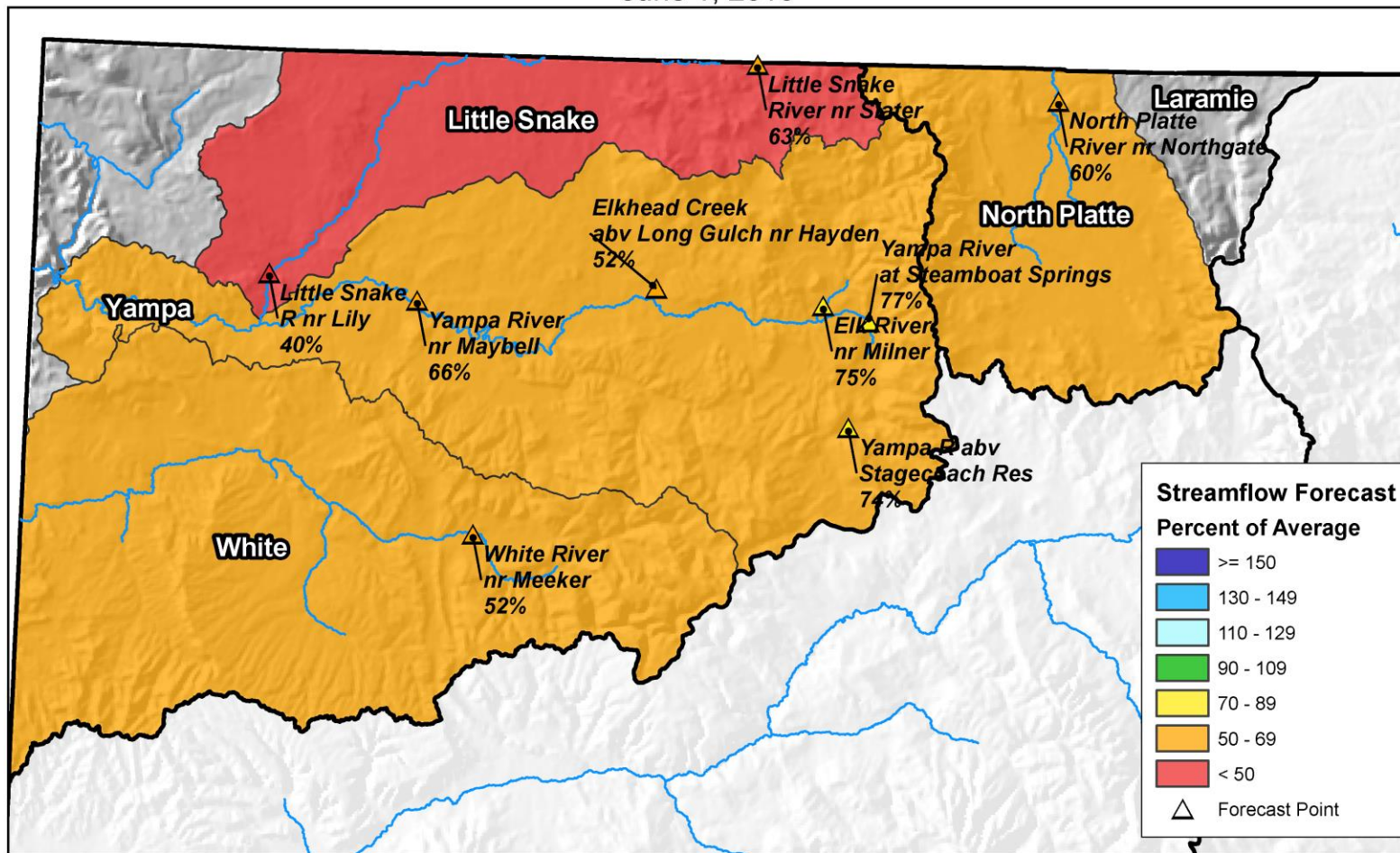


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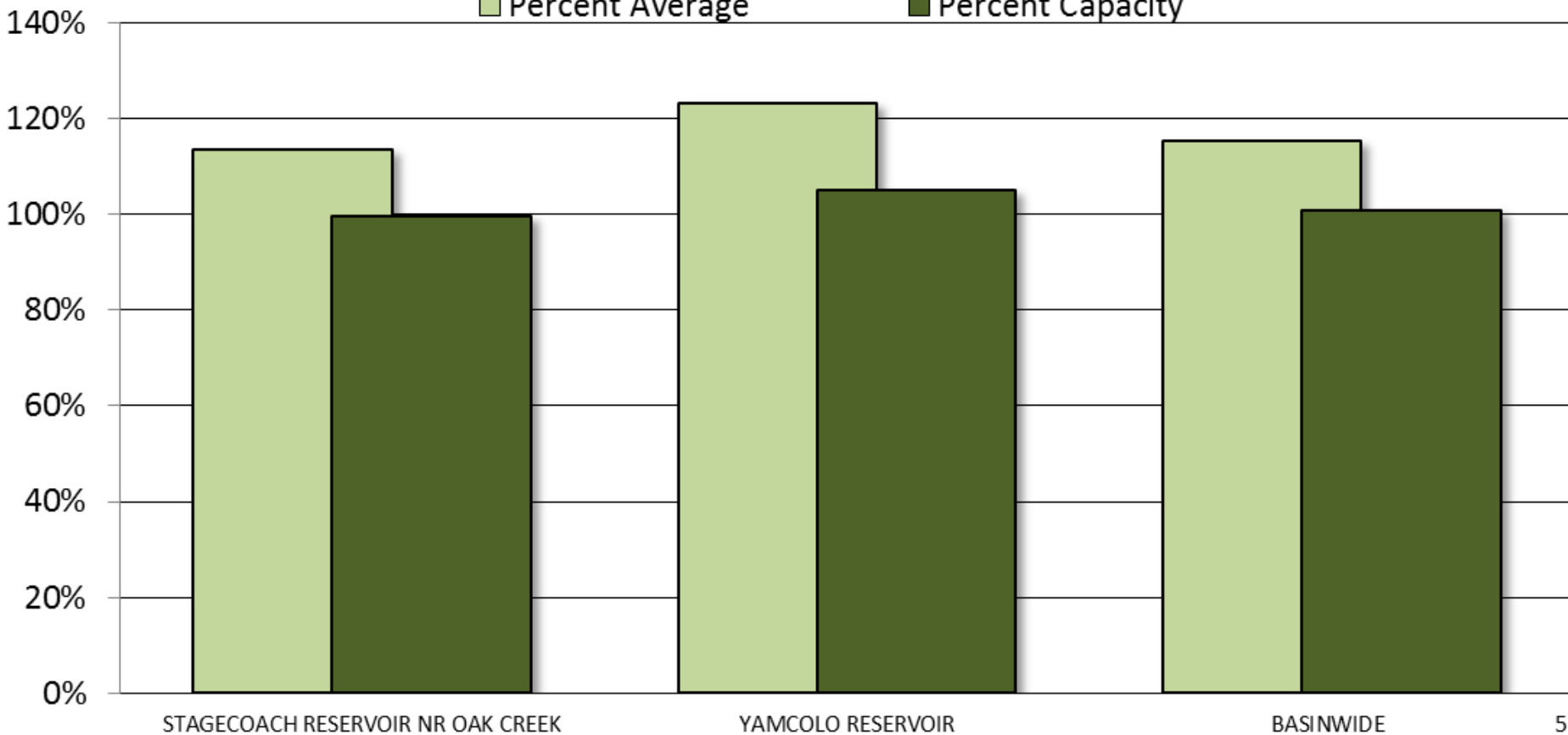
## Yampa, White, and North Platte River Basins Streamflow Forecast Summary June 1, 2018



## Reservoir Storage

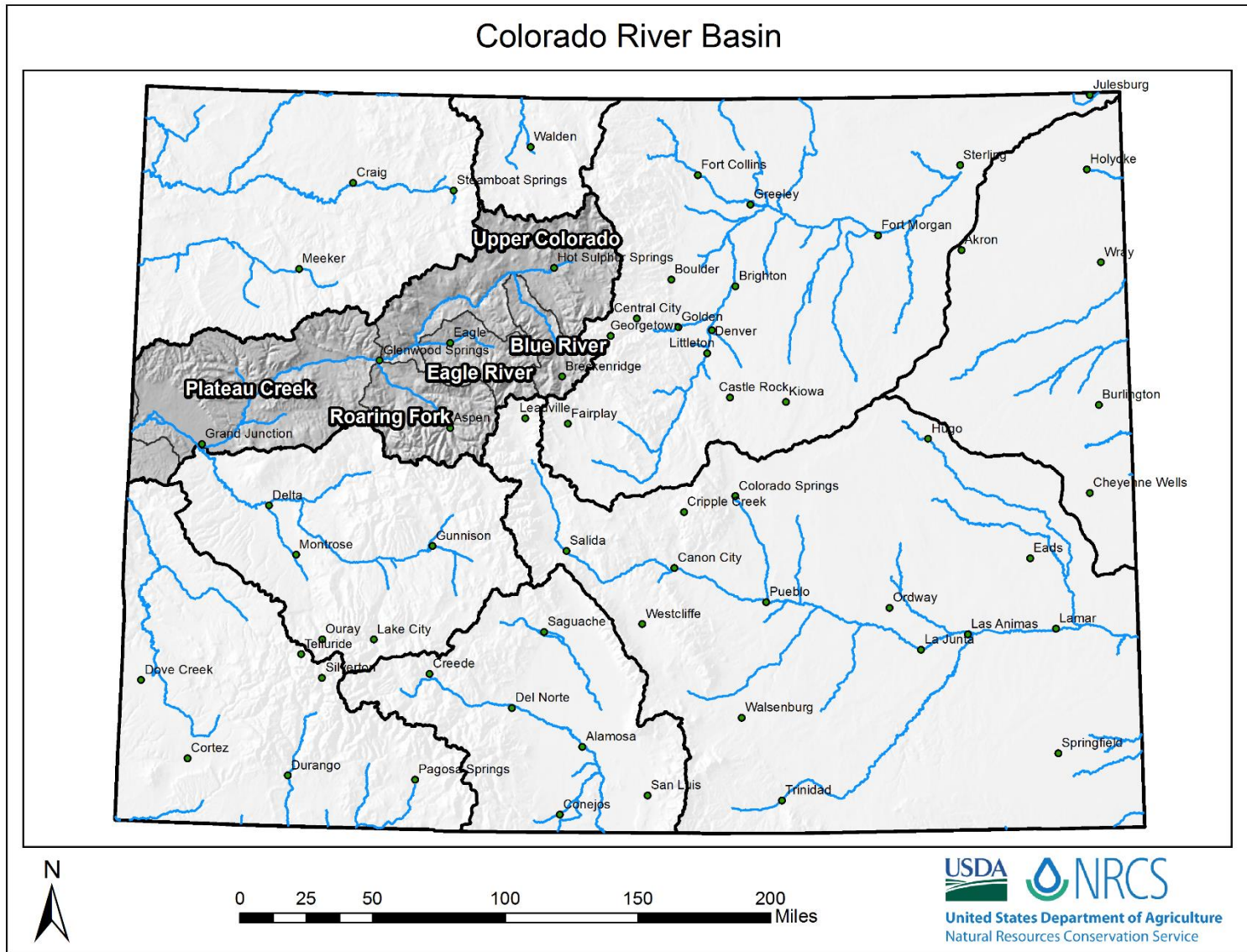
■ Percent Average

■ Percent Capacity





## Major Basin Summary





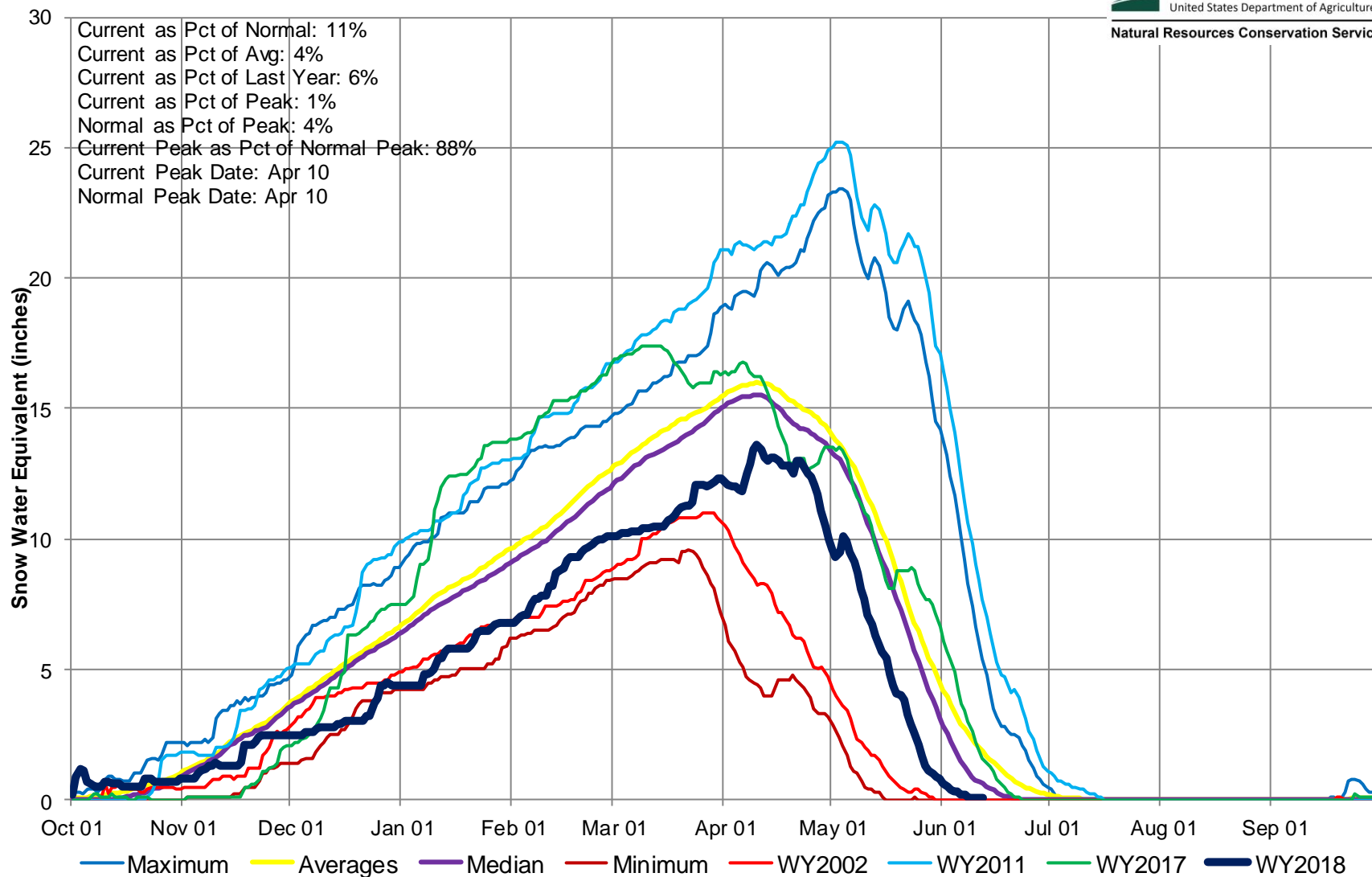
## Upper Colorado River Basin High/Low Snowpack Summary

**Based on Provisional SNOTEL data as of Jun 12, 2018**



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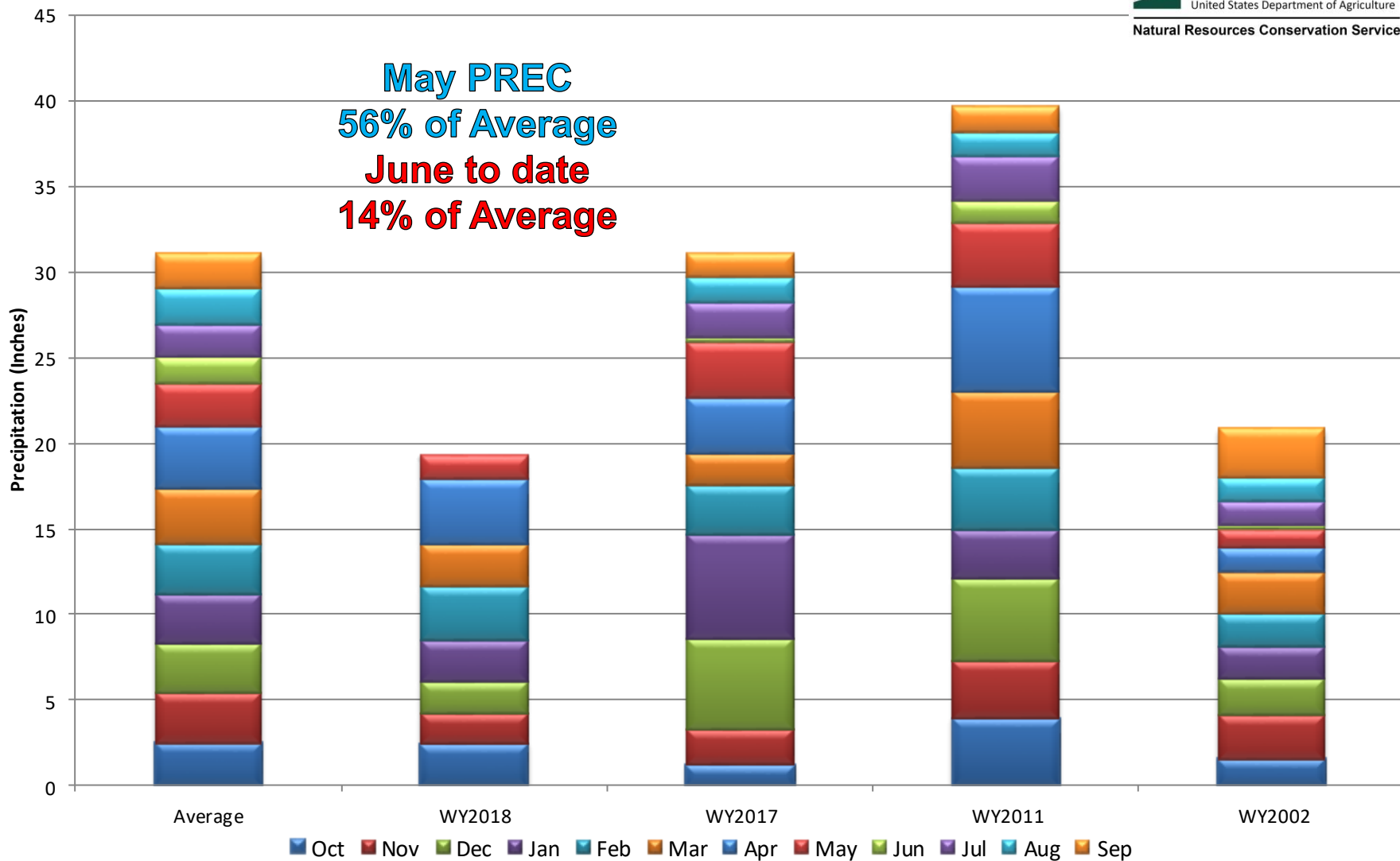
## Upper Colorado River Basin High/Low Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of Jun 12, 2018*



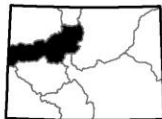
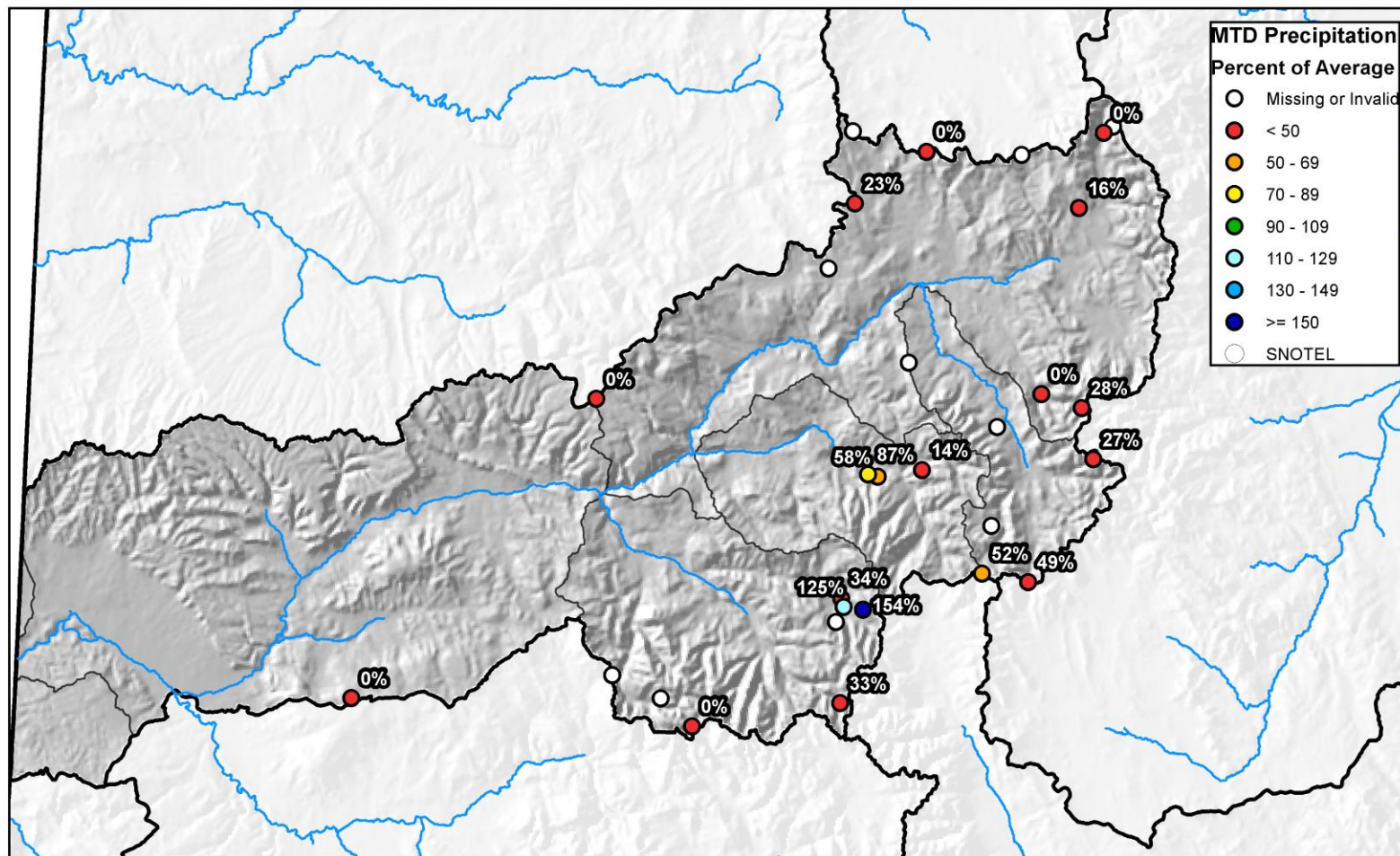
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## Upper Colorado River Basin Month to Date Precipitation Summary

Current as of Jun 12, 2018



0 10 20 40 60 80 Miles



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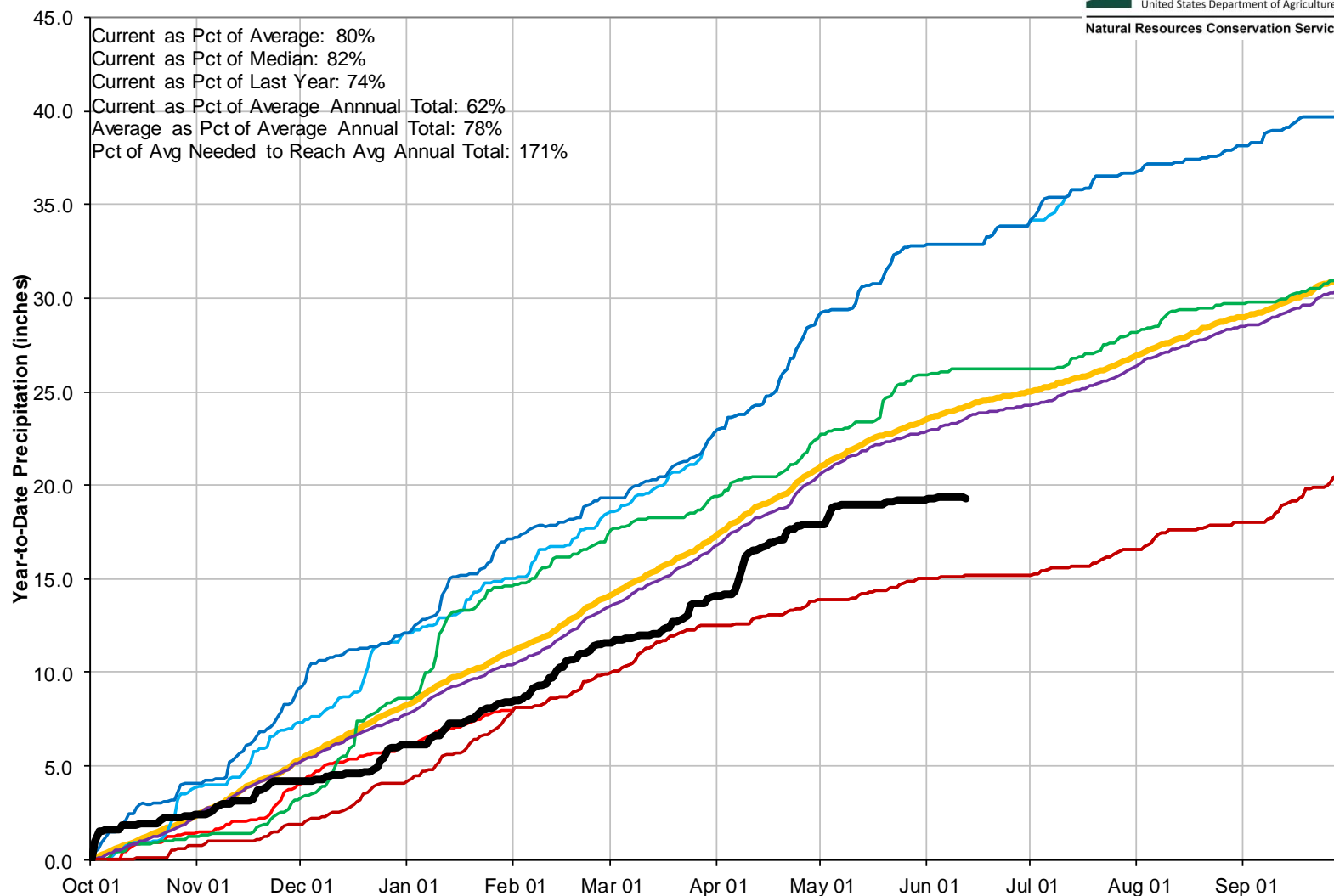
## Upper Colorado River Basin High/Low Year-to-Date Precipitation Summary

*Based on Provisional SNOTEL data as of Jun 12, 2018*



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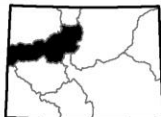
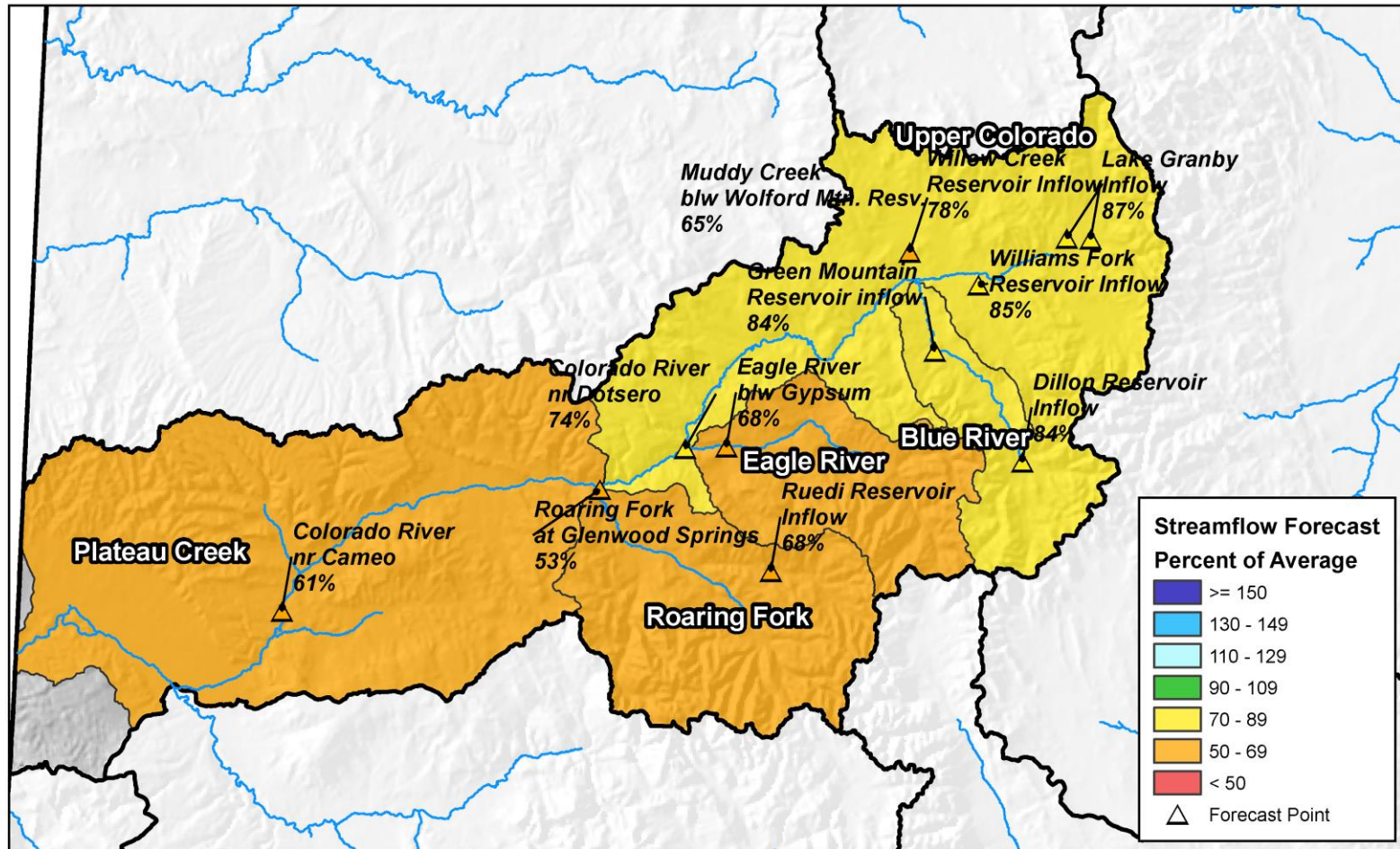
Natural Resources Conservation Service





## Upper Colorado River Basin Streamflow Forecast Summary

June 1, 2018



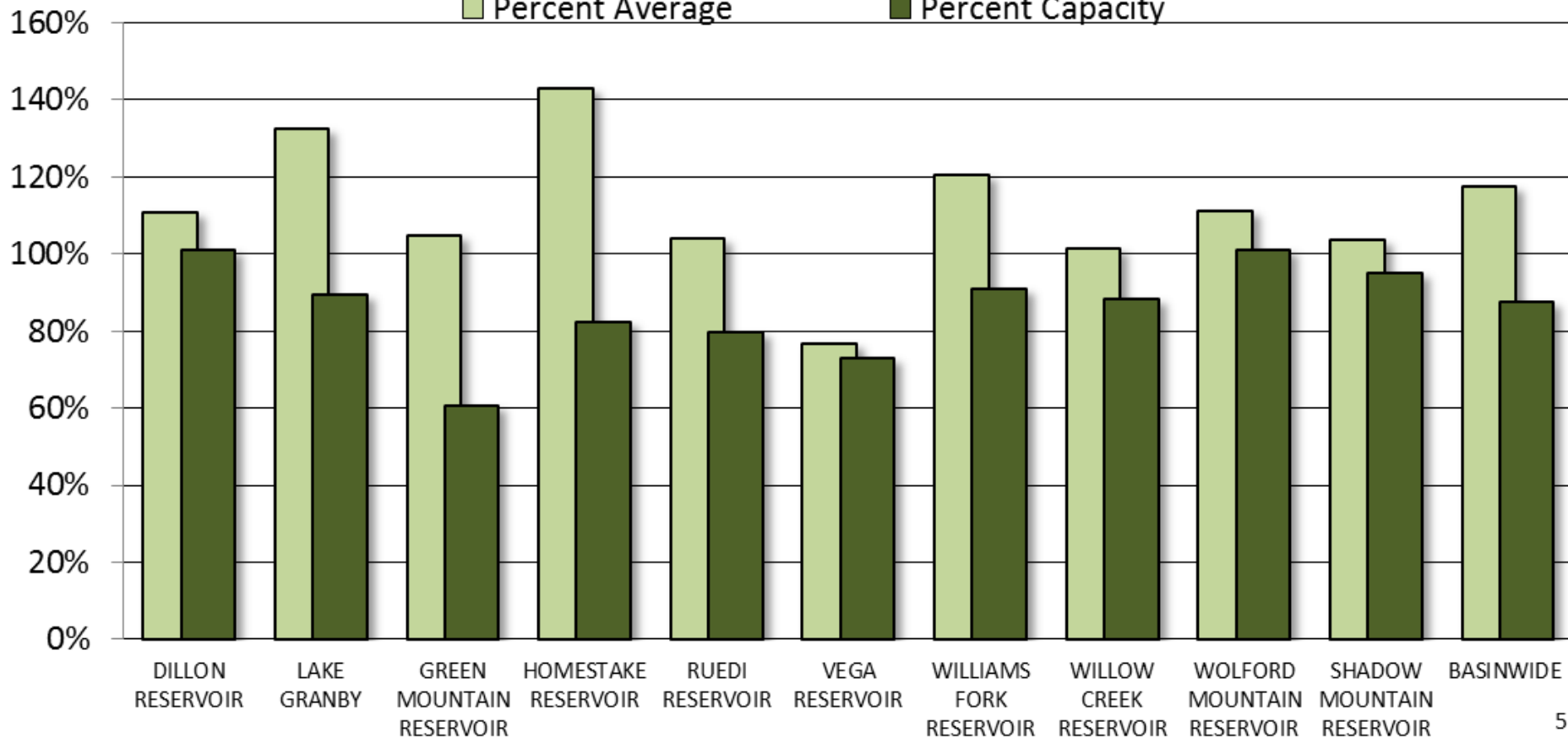
0 10 20 40 60 80 Miles



## Reservoir Storage

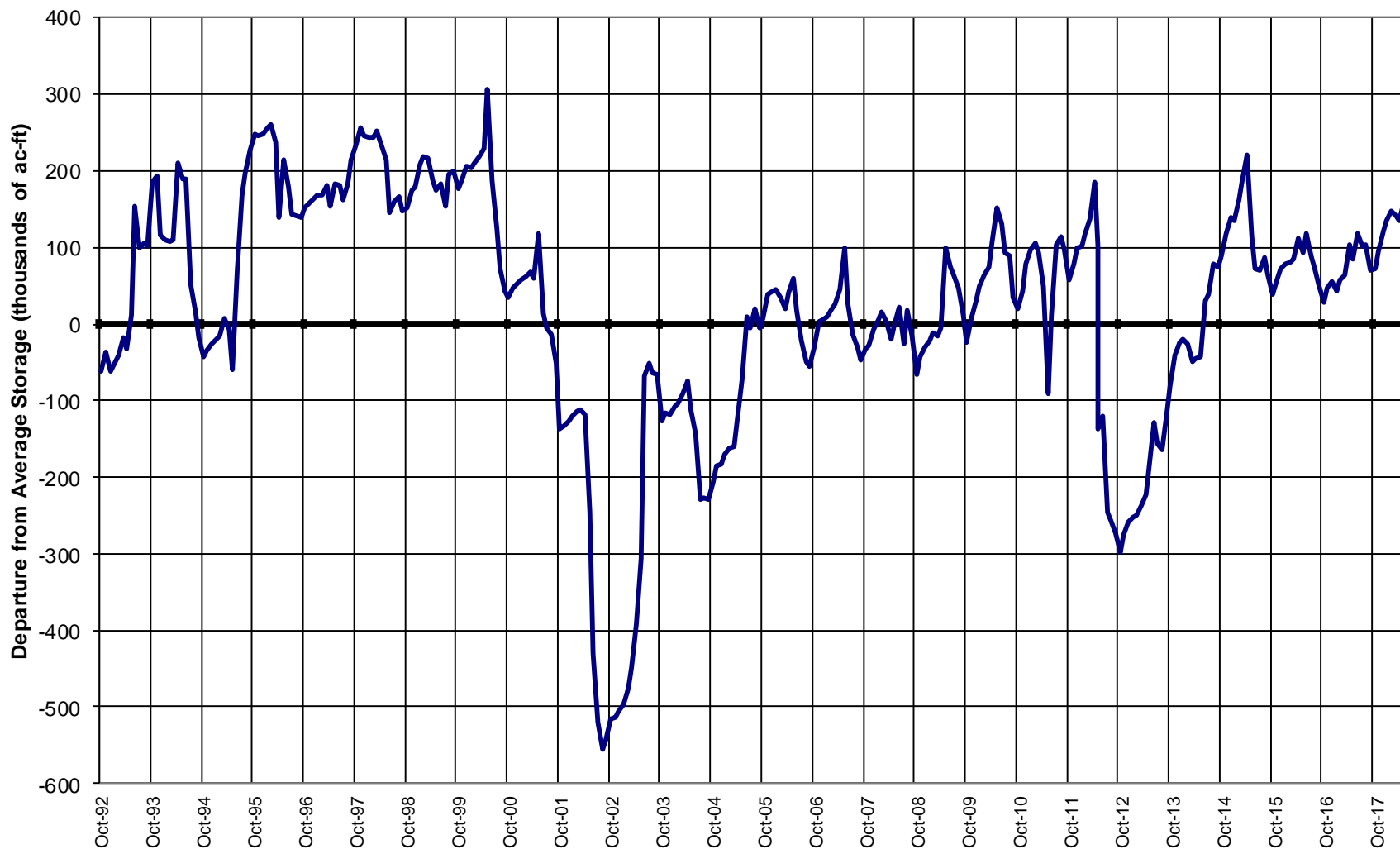
■ Percent Average

■ Percent Capacity



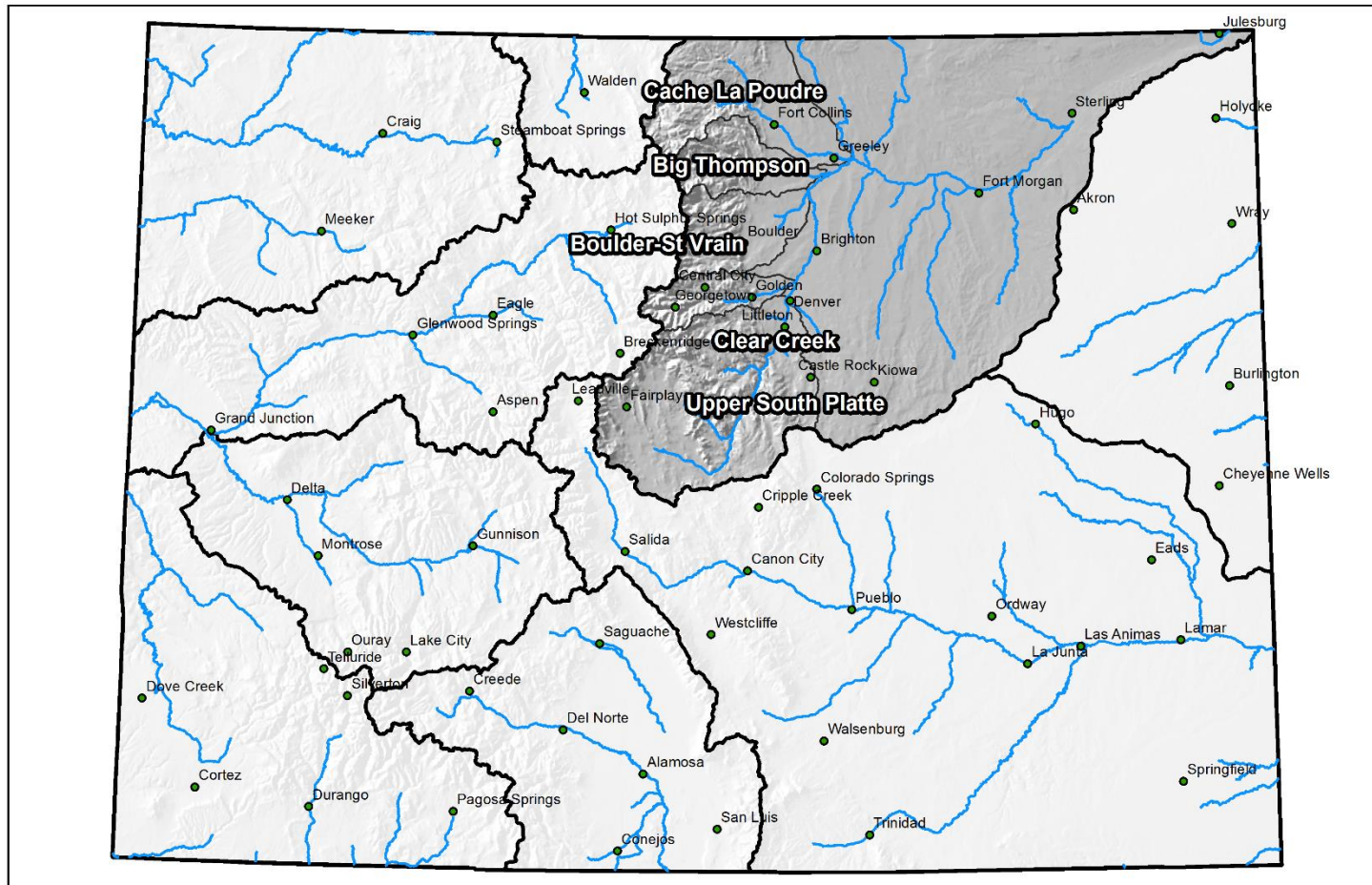


## COLORADO RIVER BASIN Reservoir Storage Departure from Average



## Major Basin Summary

South Platte River Basin





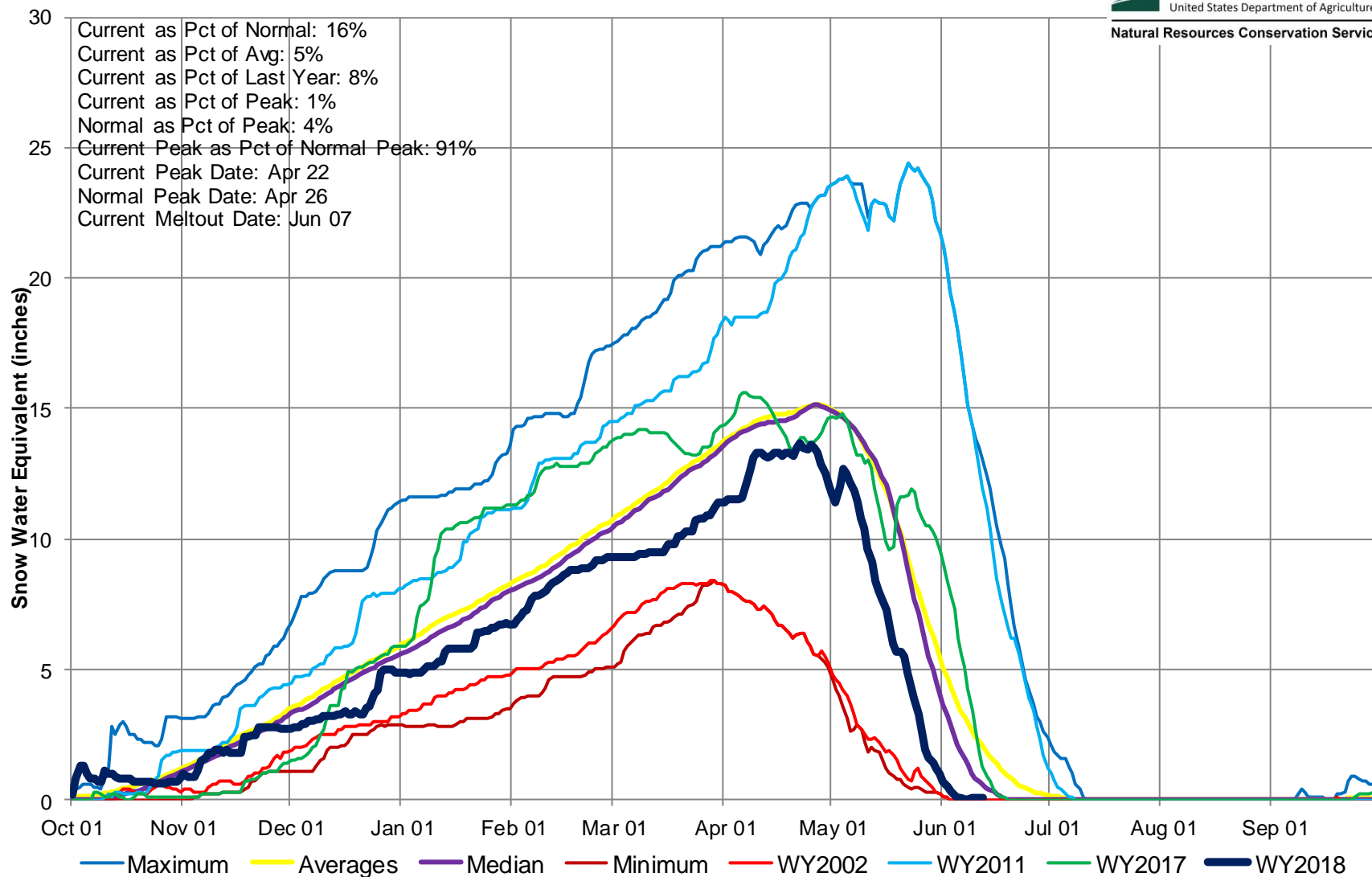
## South Platte River Basin High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of Jun 12, 2018*



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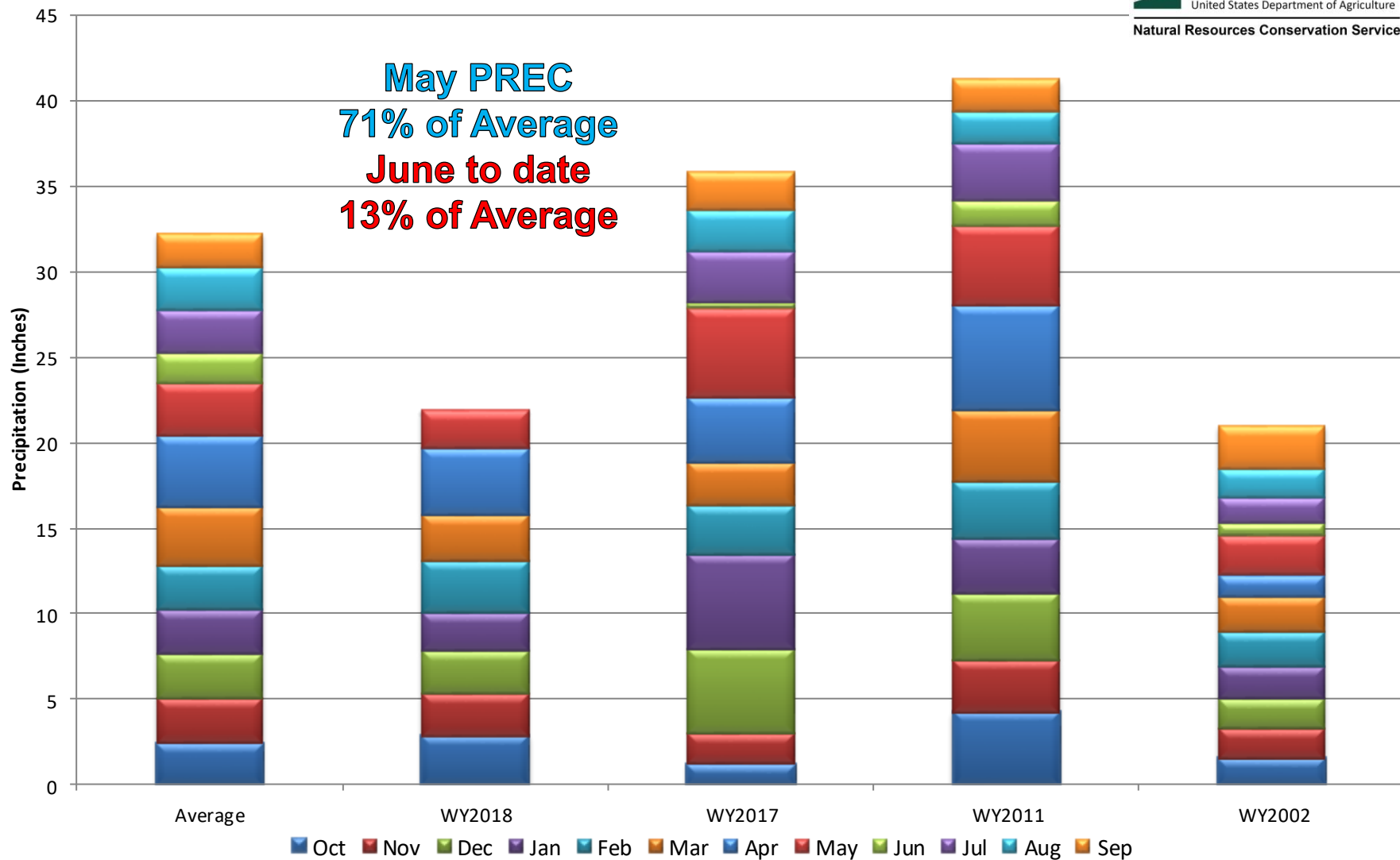
## South Platte River Basin High/Low Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of Jun 12, 2018*



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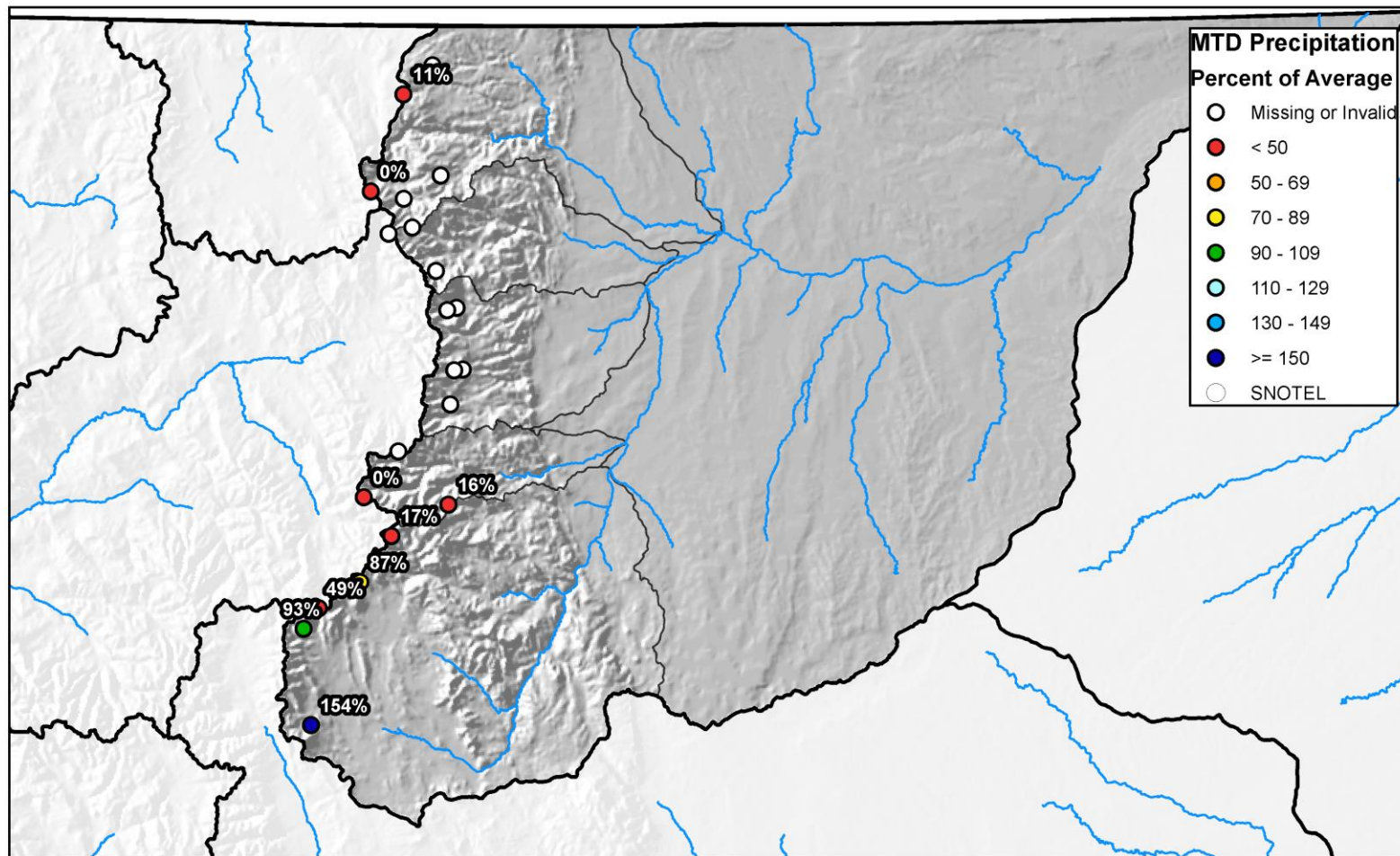
Natural Resources Conservation Service





## South Platte River Basin Month to Date Precipitation Summary

Current as of Jun 12, 2018



0 10 20 40 60 80 Miles



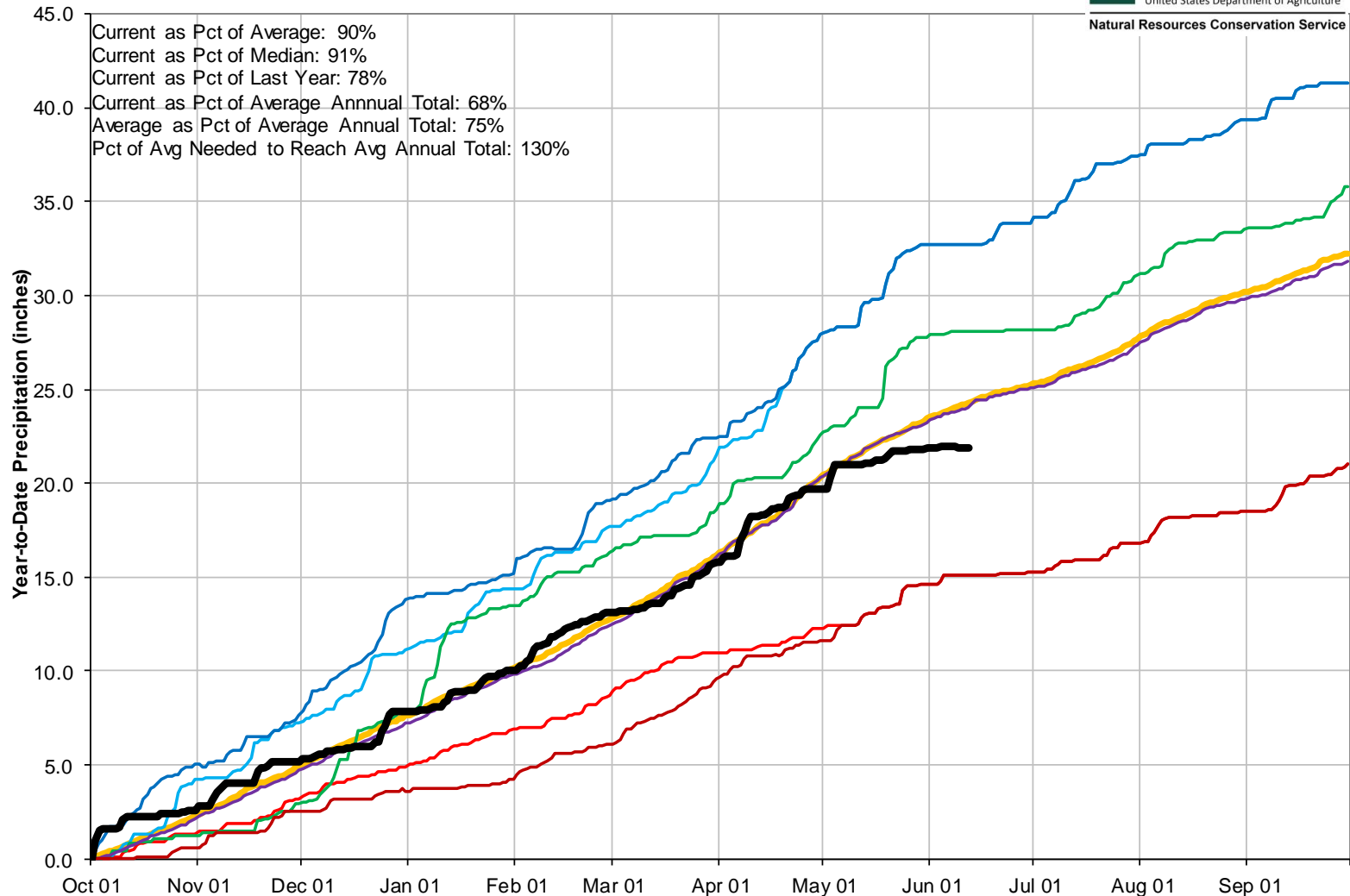
## South Platte River Basin High/Low Year-to-Date Precipitation Summary

*Based on Provisional SNOTEL data as of Jun 12, 2018*



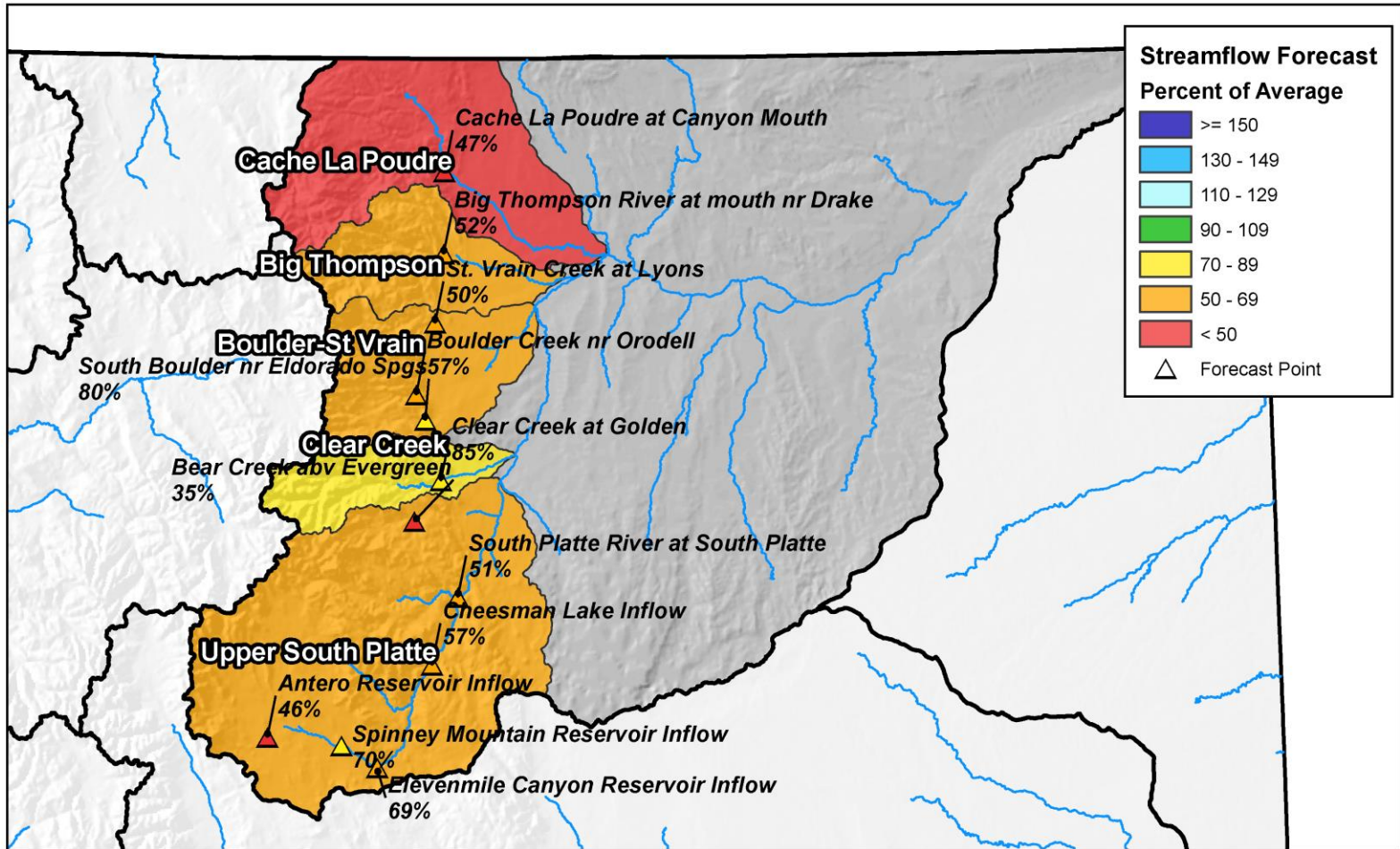
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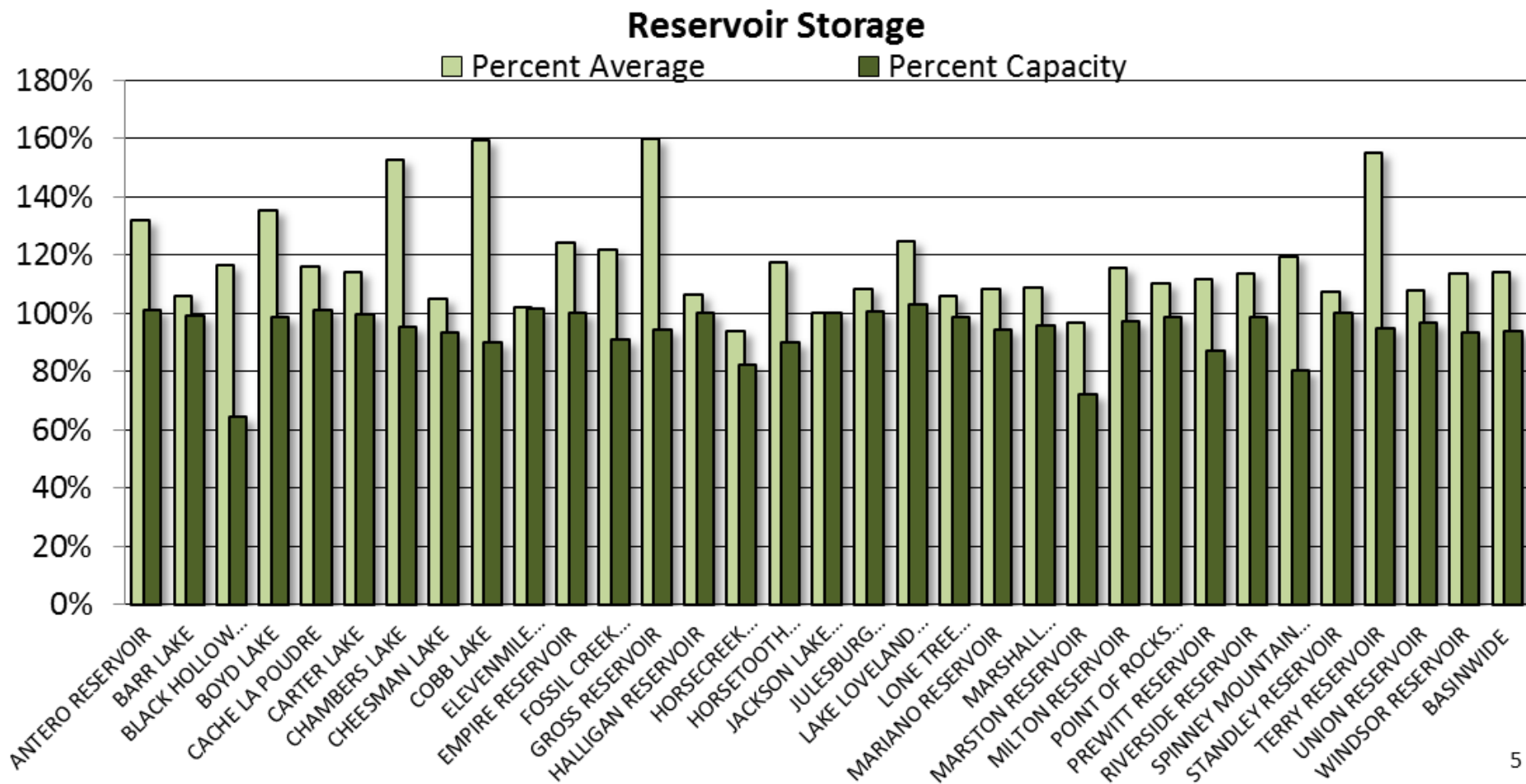
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## South Platte River Basin Streamflow Forecast Summary

June 1, 2018

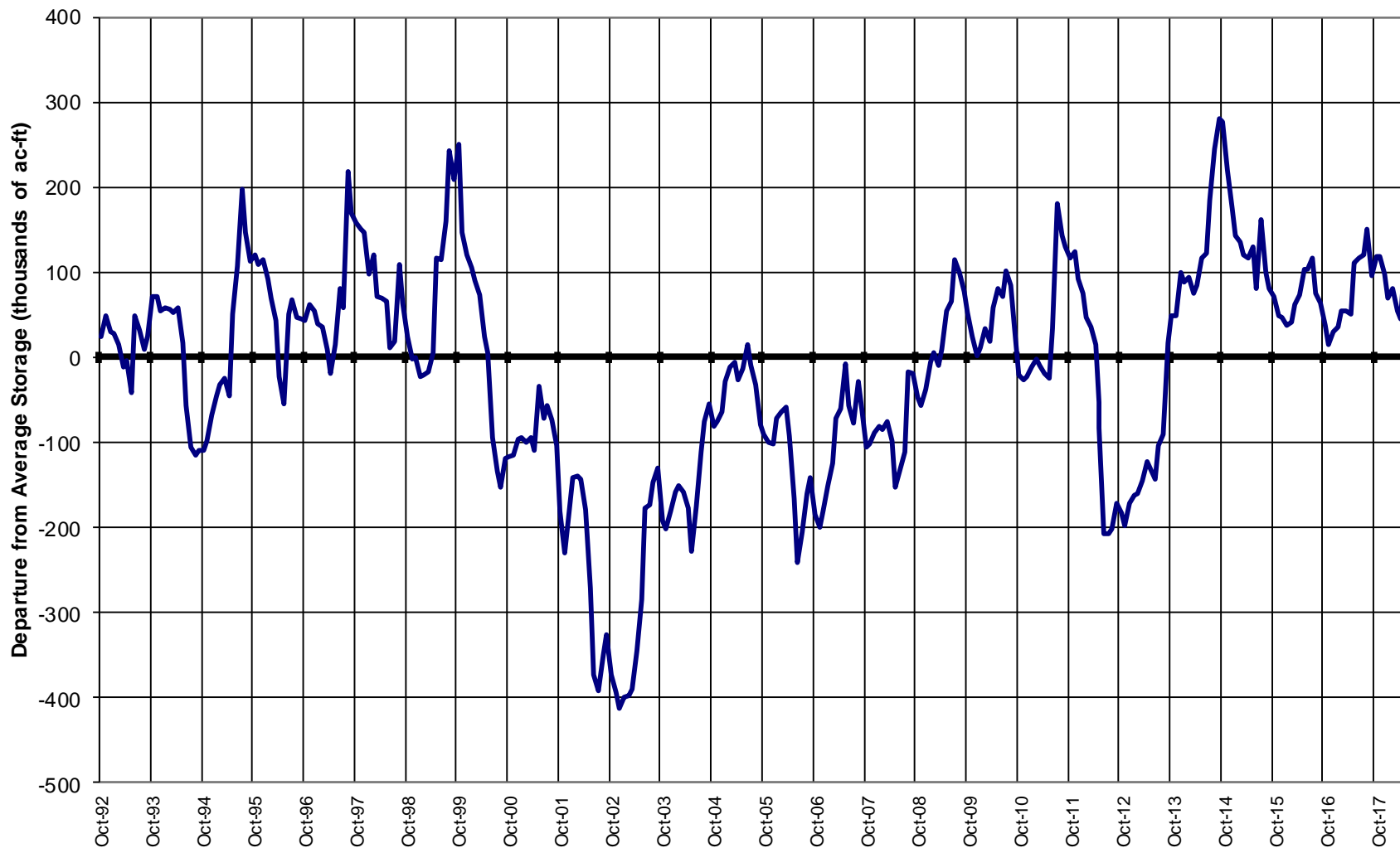








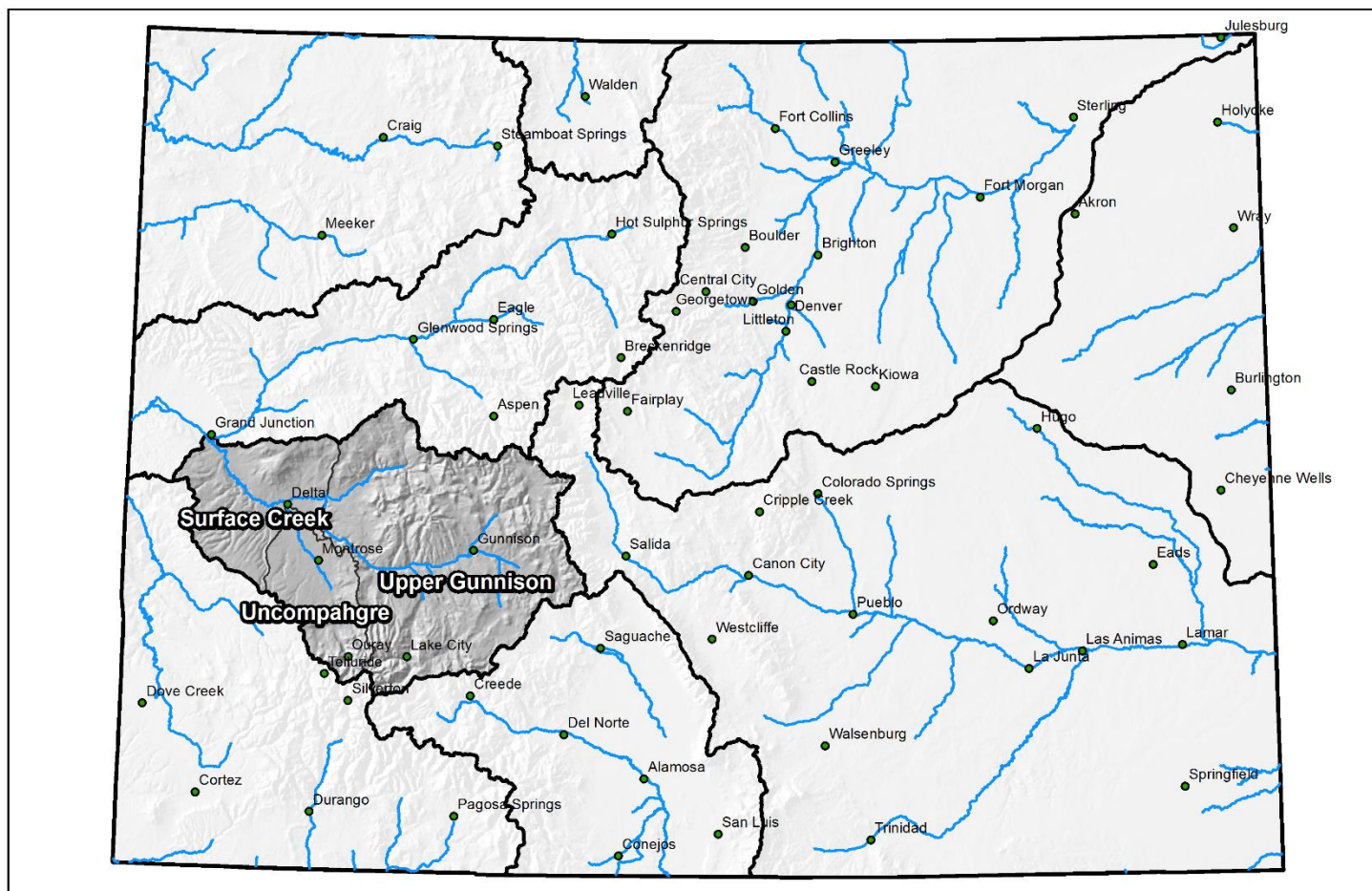
## SOUTH PLATTE RIVER BASIN Reservoir Storage Departure from Average





## Major Basin Summary

Gunnison River Basin



0 25 50 100 150 200 Miles



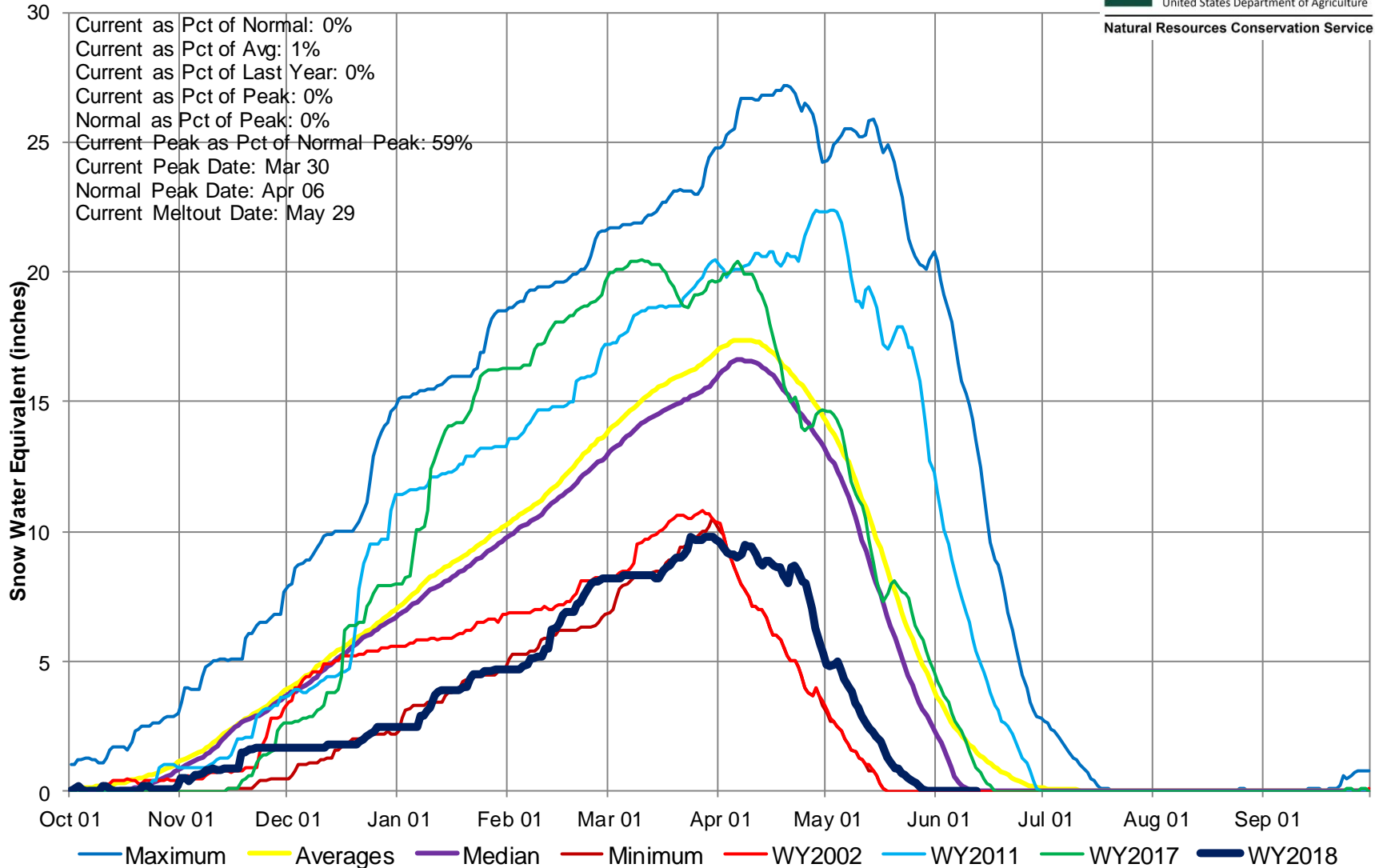
## Gunnison River Basin High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of Jun 12, 2018*



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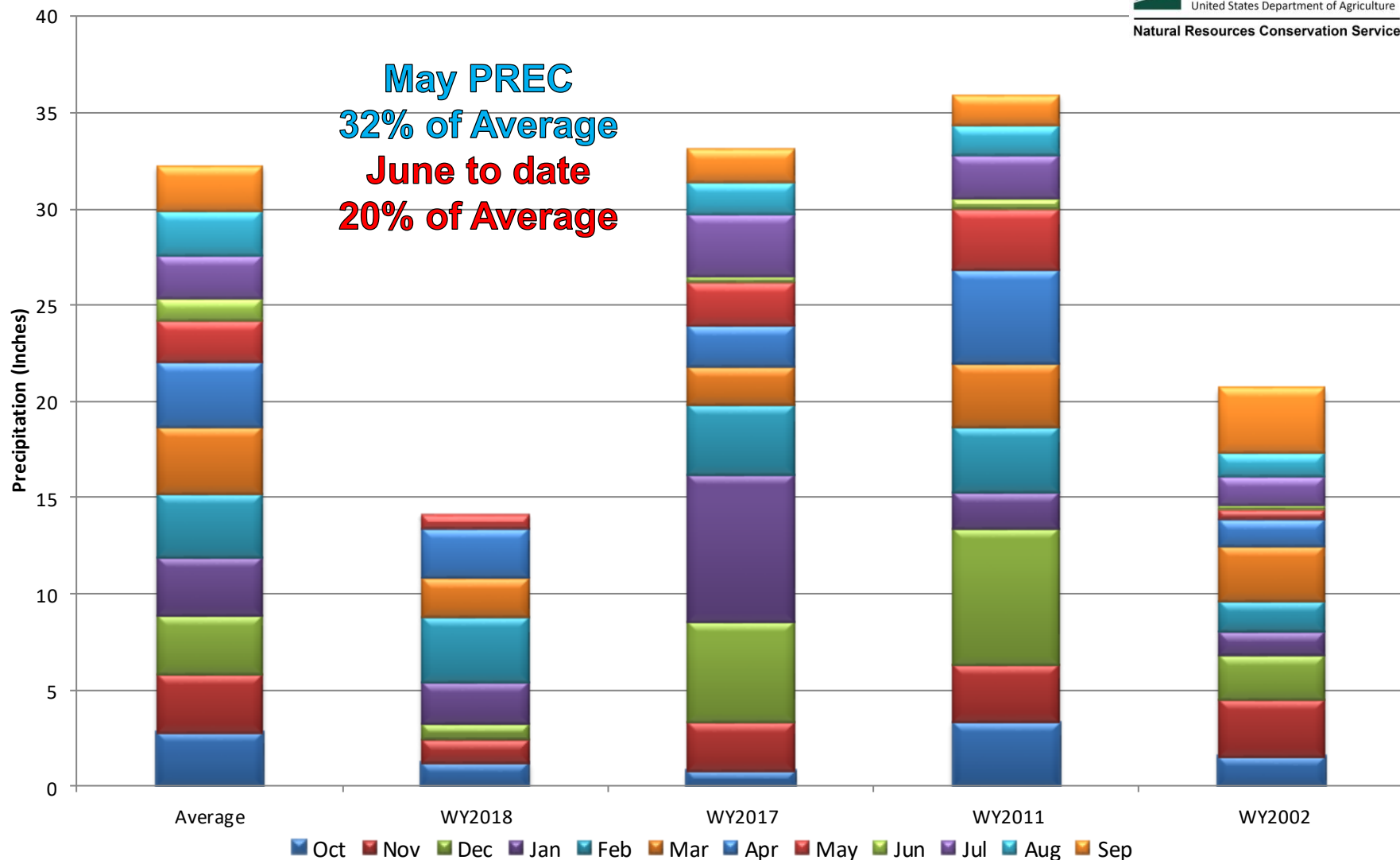
## Gunnison River Basin High/Low Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of Jun 12, 2018*



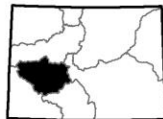
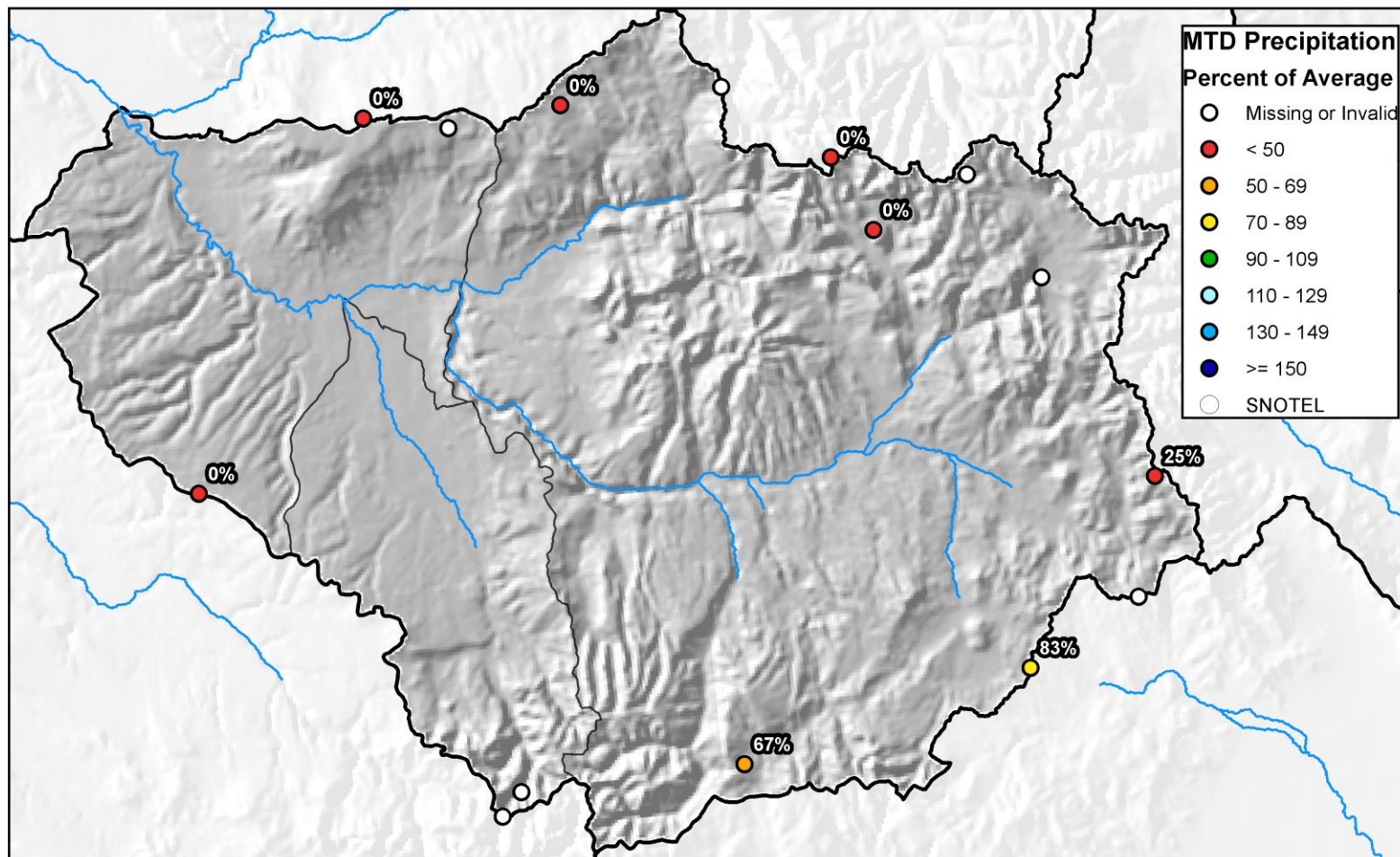
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## Gunnison River Basin Month to Date Precipitation Summary

Current as of Jun 12, 2018



0 5 10 20 30 40 Miles



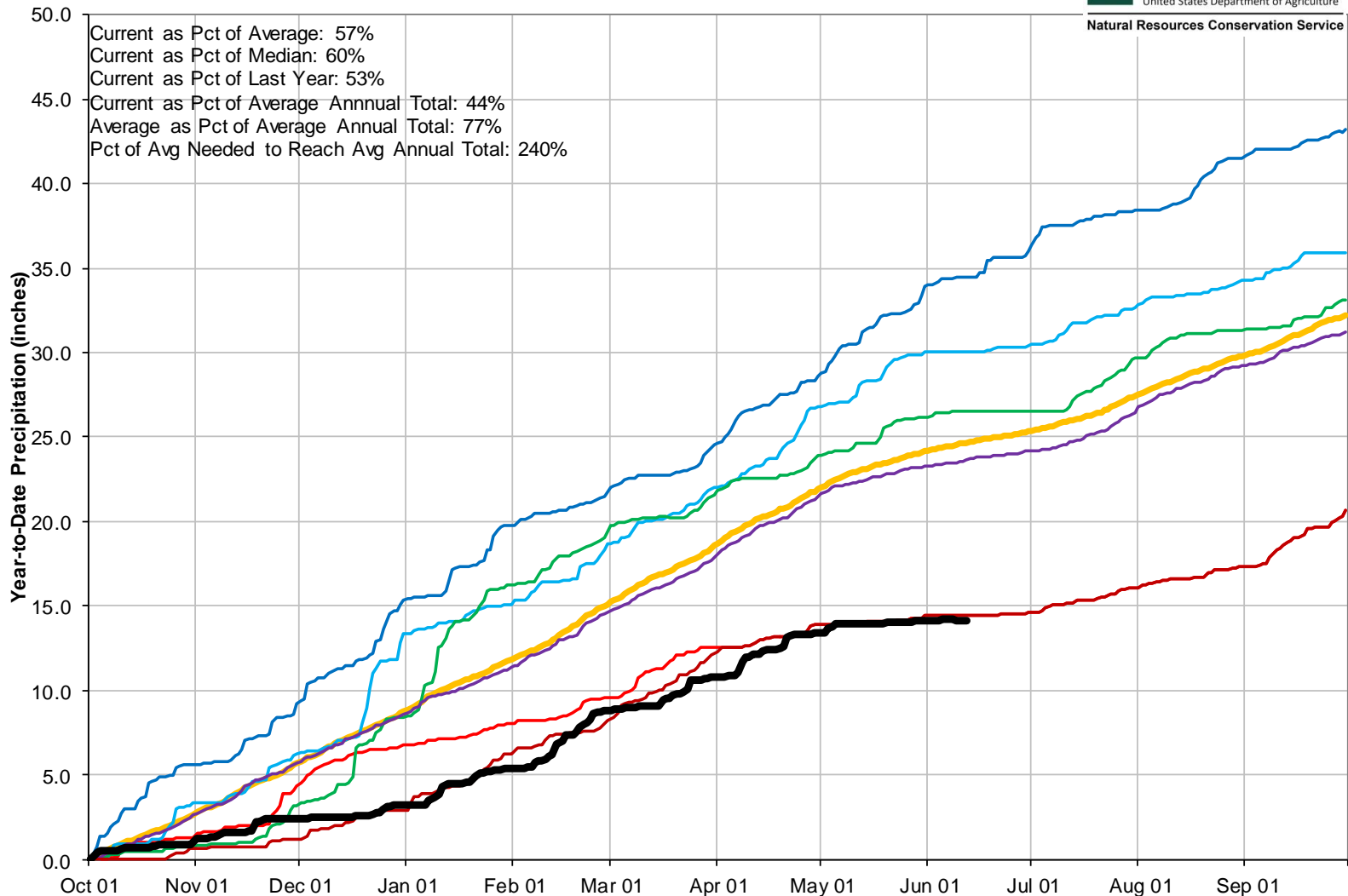
## Gunnison River Basin High/Low Year-to-Date Precipitation Summary

*Based on Provisional SNOTEL data as of Jun 12, 2018*



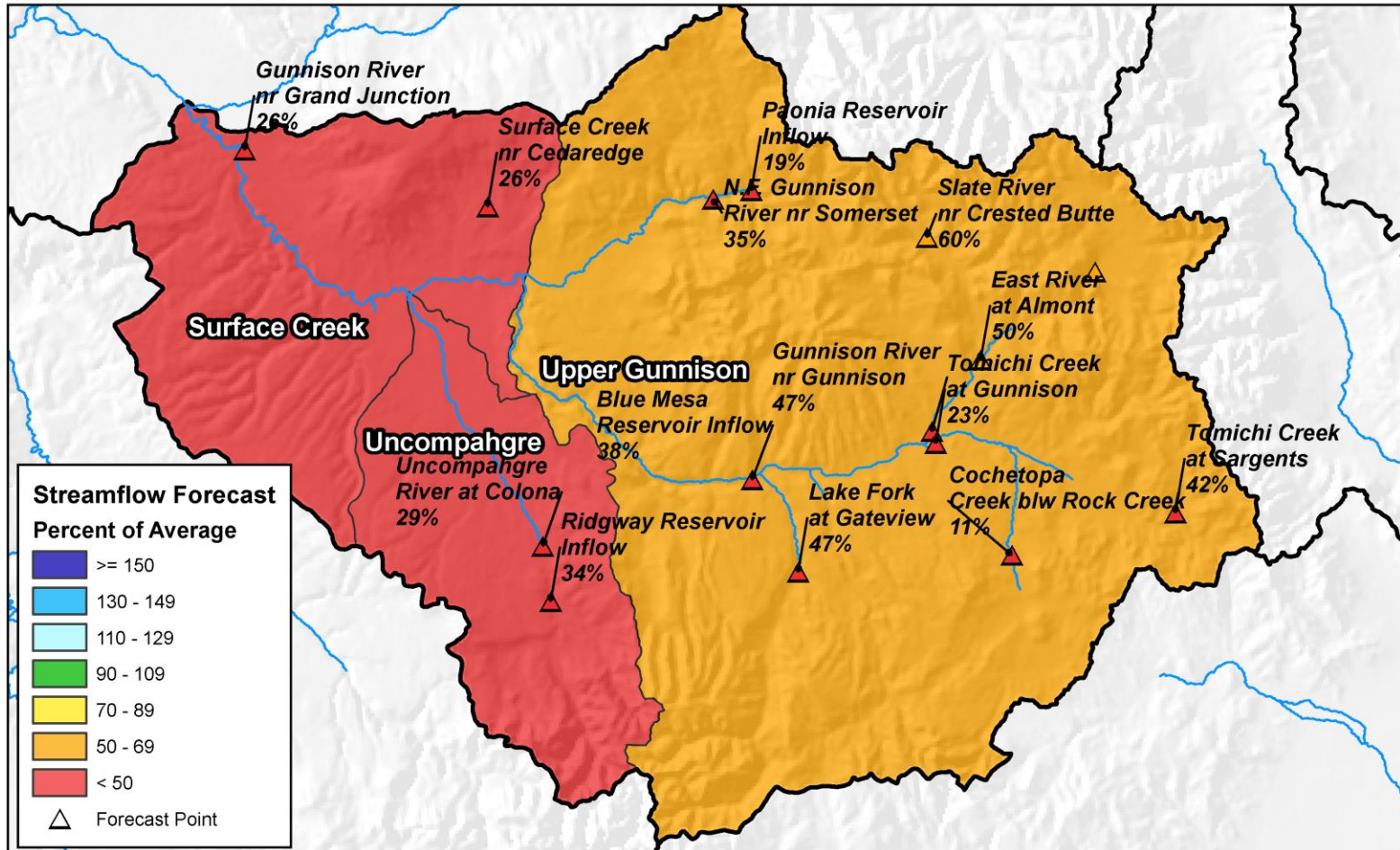
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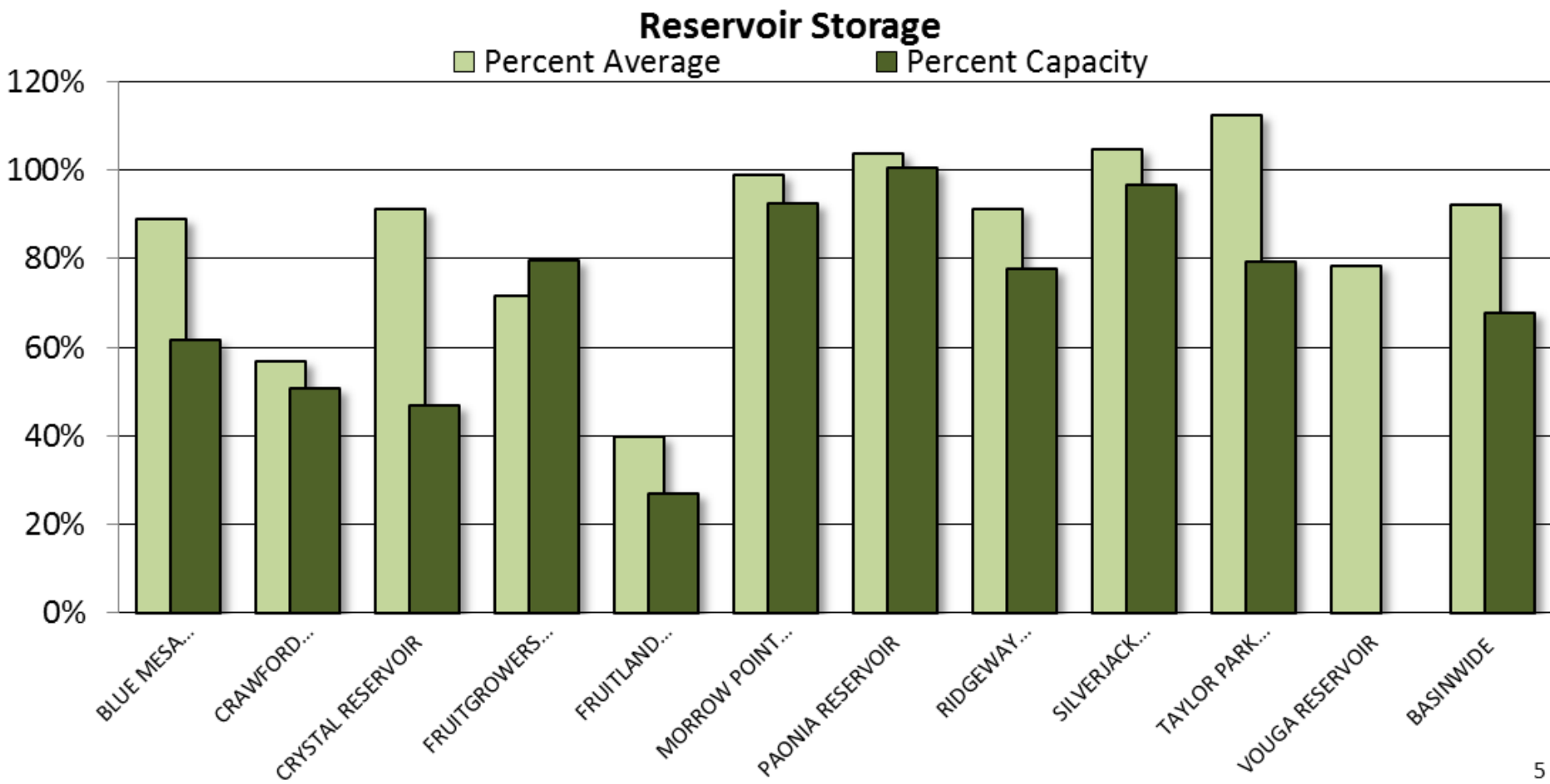


## Gunnison River Basin Water Supply Forecast Summary

June 1, 2018

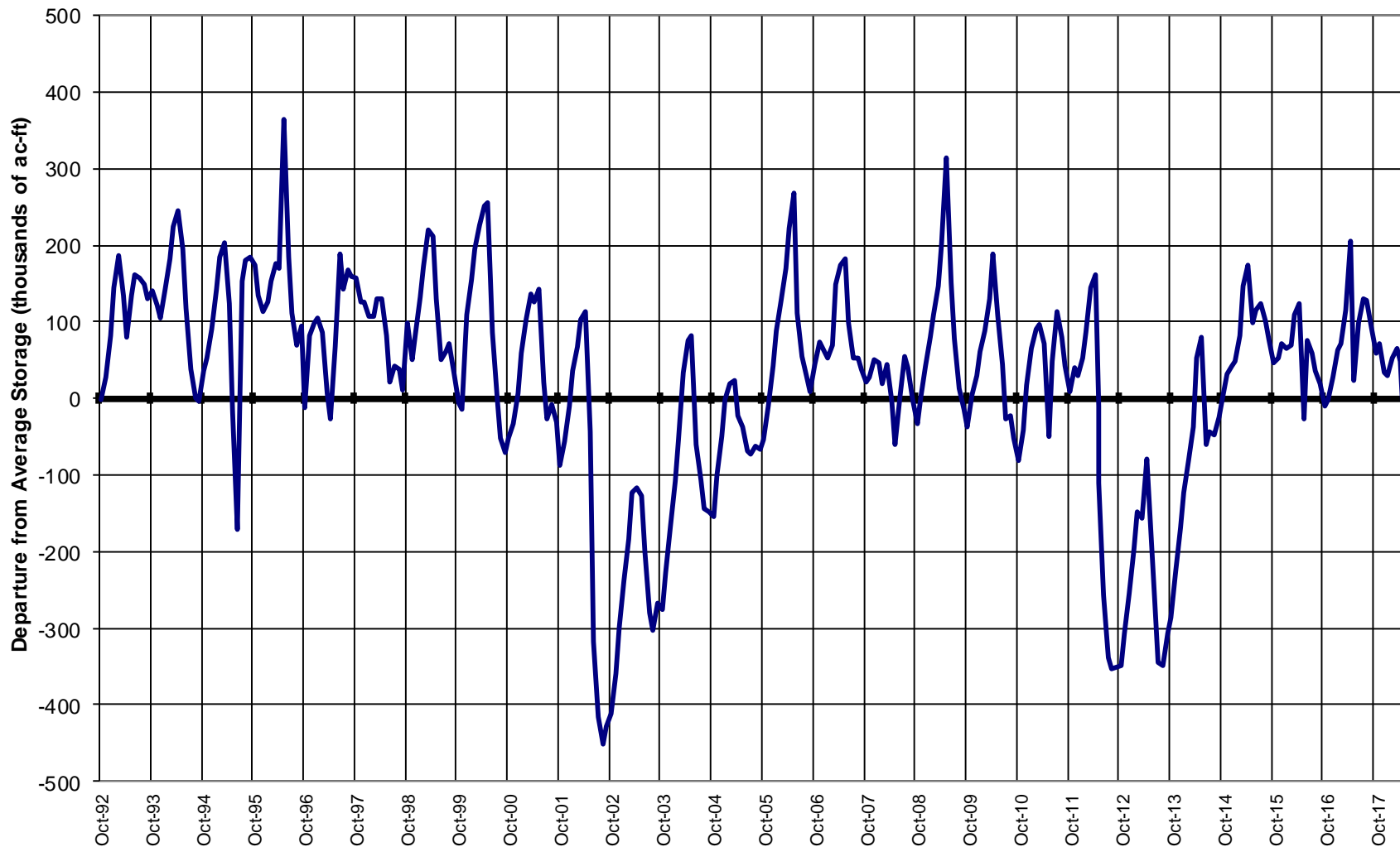


0 5 10 20 30 40 Miles





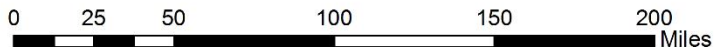
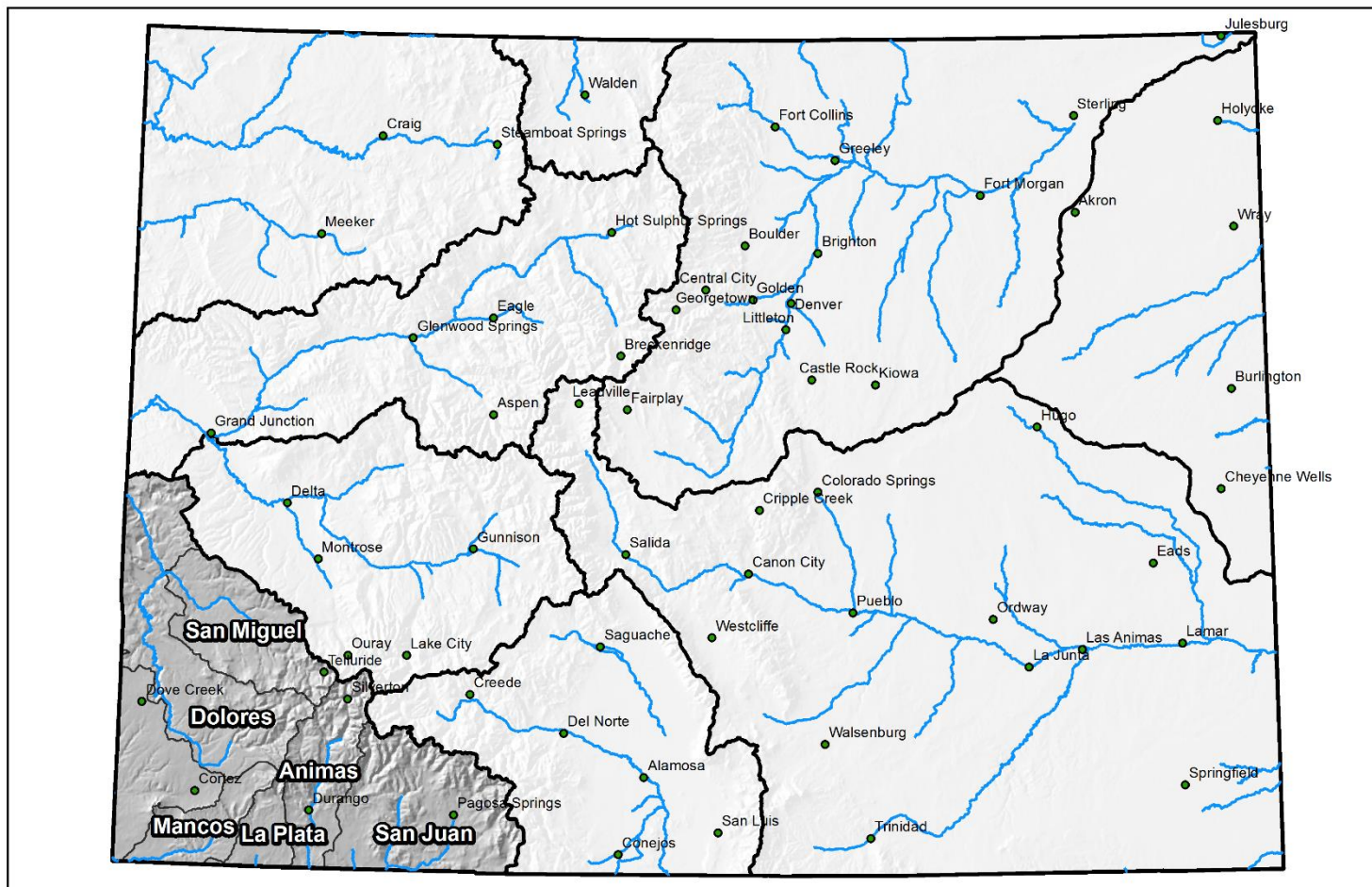
## GUNNISON RIVER BASIN Reservoir Storage Departure from Average





## Major Basin Summary

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





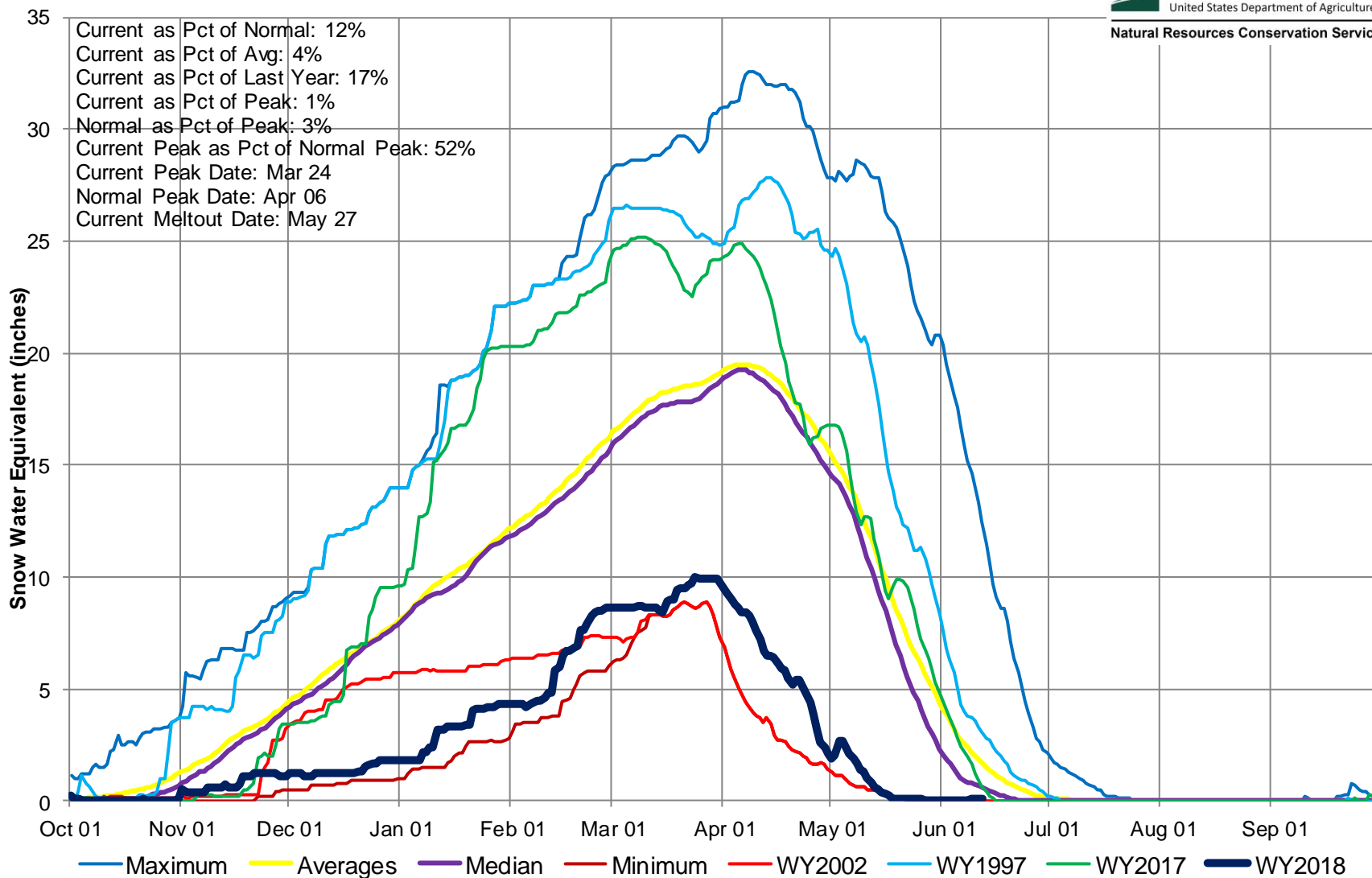
## San Miguel, Dolores, Animas and San Juan River Basins High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of Jun 12, 2018*



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

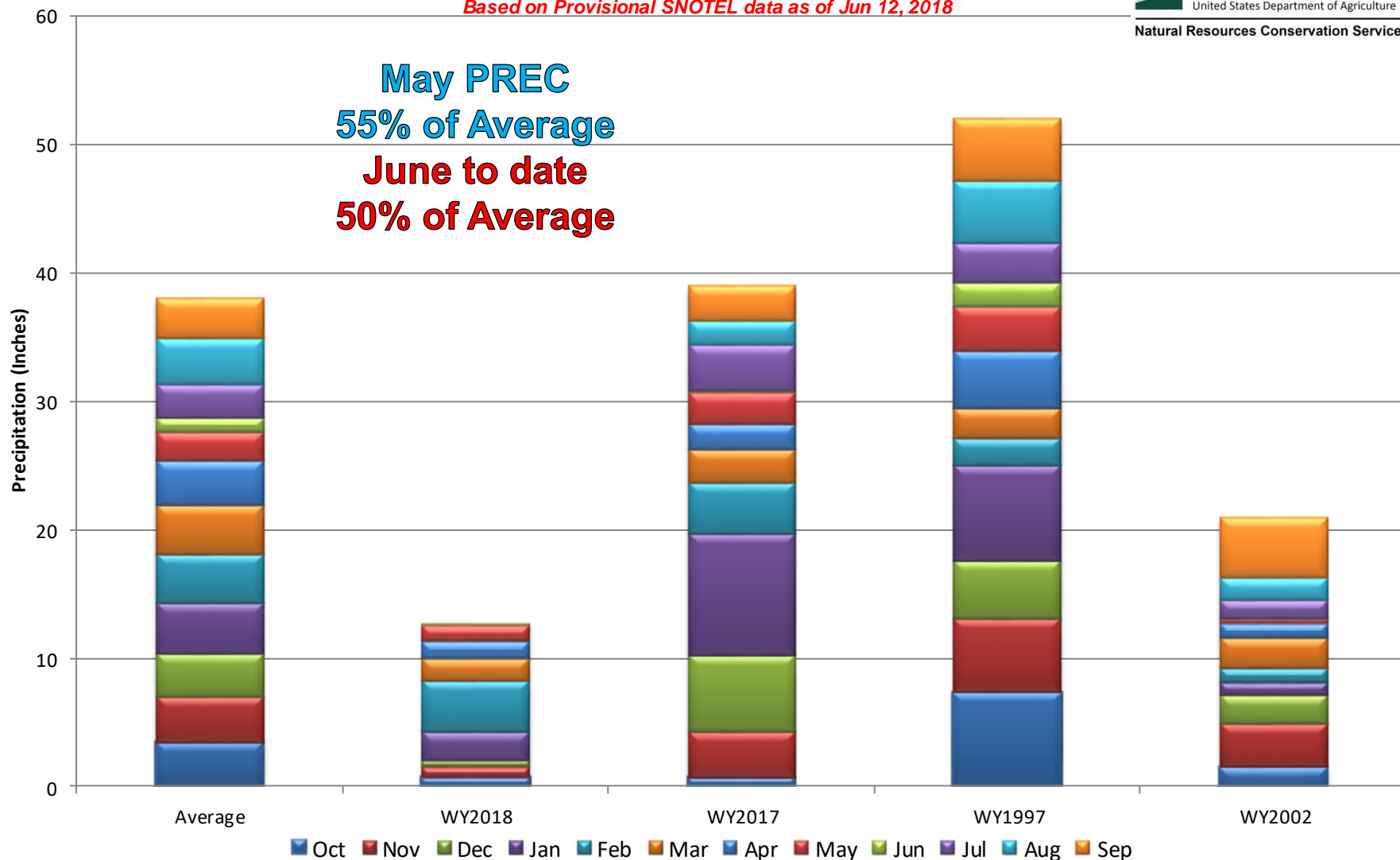
*Based on Provisional SNOTEL data as of Jun 12, 2018*



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**May PREC**  
**55% of Average**  
**June to date**  
**50% of Average**

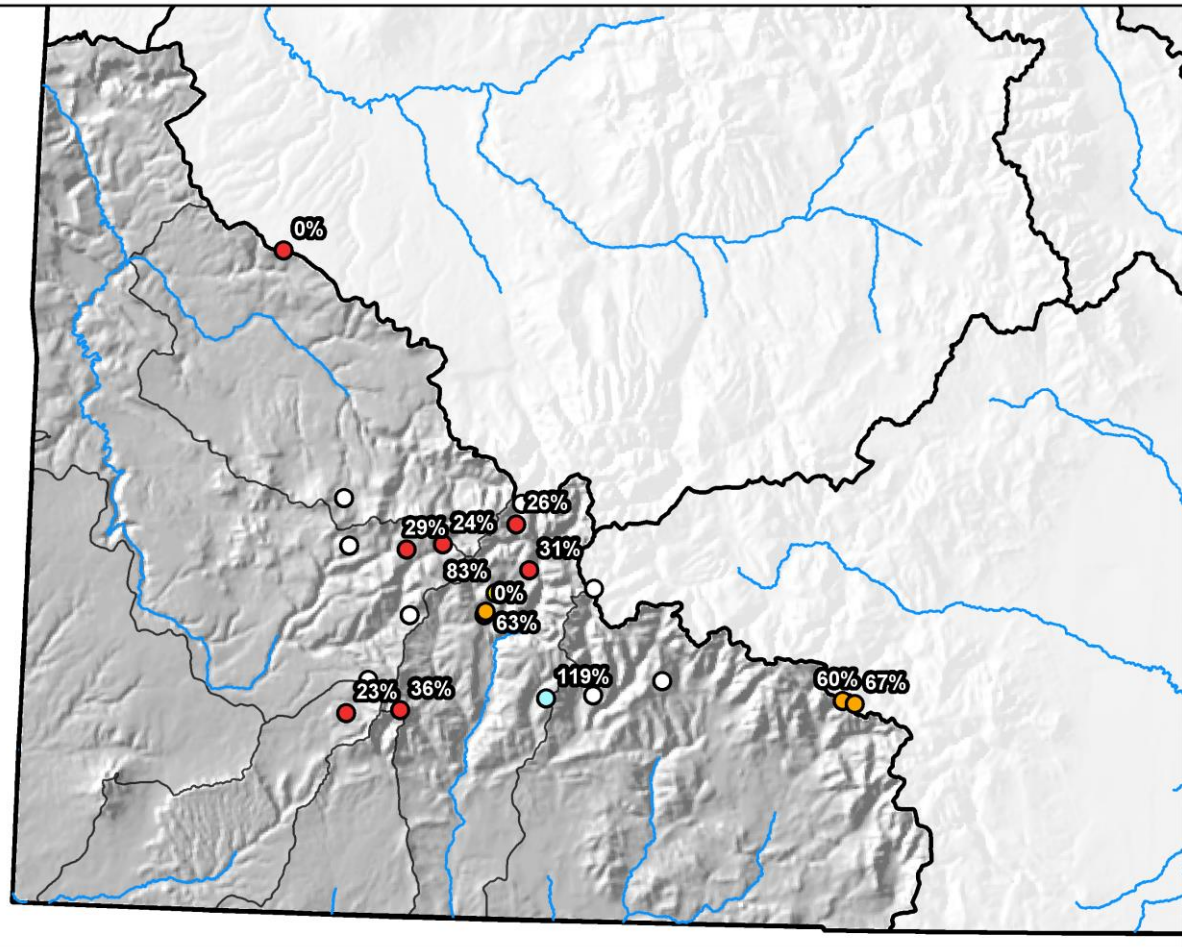


## San Miguel, Dolores, Animas, and San Juan River Basins Month to Date Precipitation Summary

Current as of Jun 12, 2018

### 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





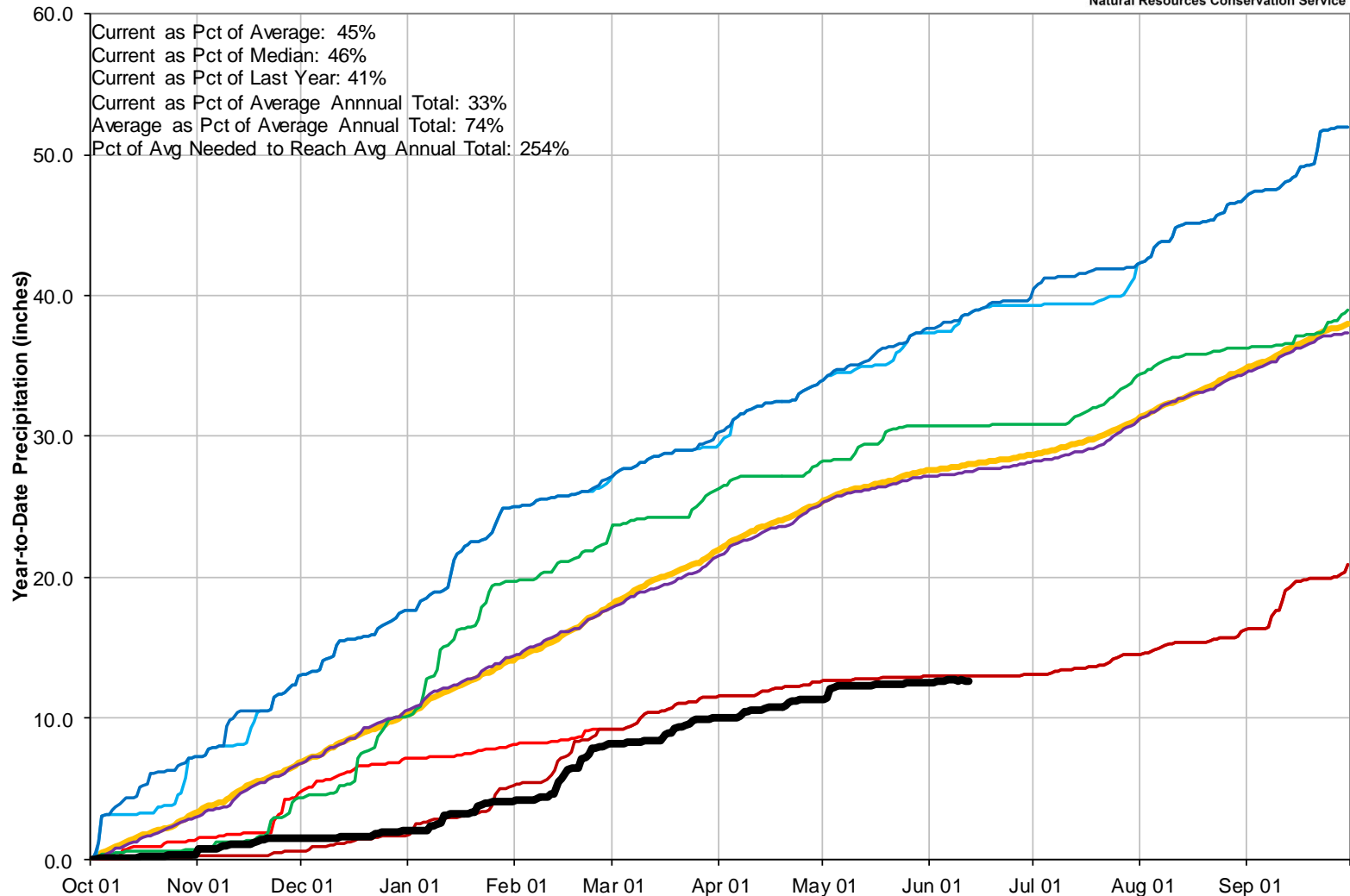
## San Miguel, Dolores, Animas and San Juan River Basins High/Low Year-to-Date Precipitation Summary

*Based on Provisional SNOTEL data as of Jun 12, 2018*



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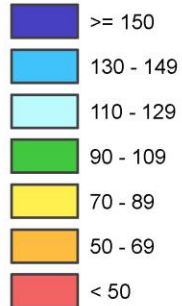
Natural Resources Conservation Service



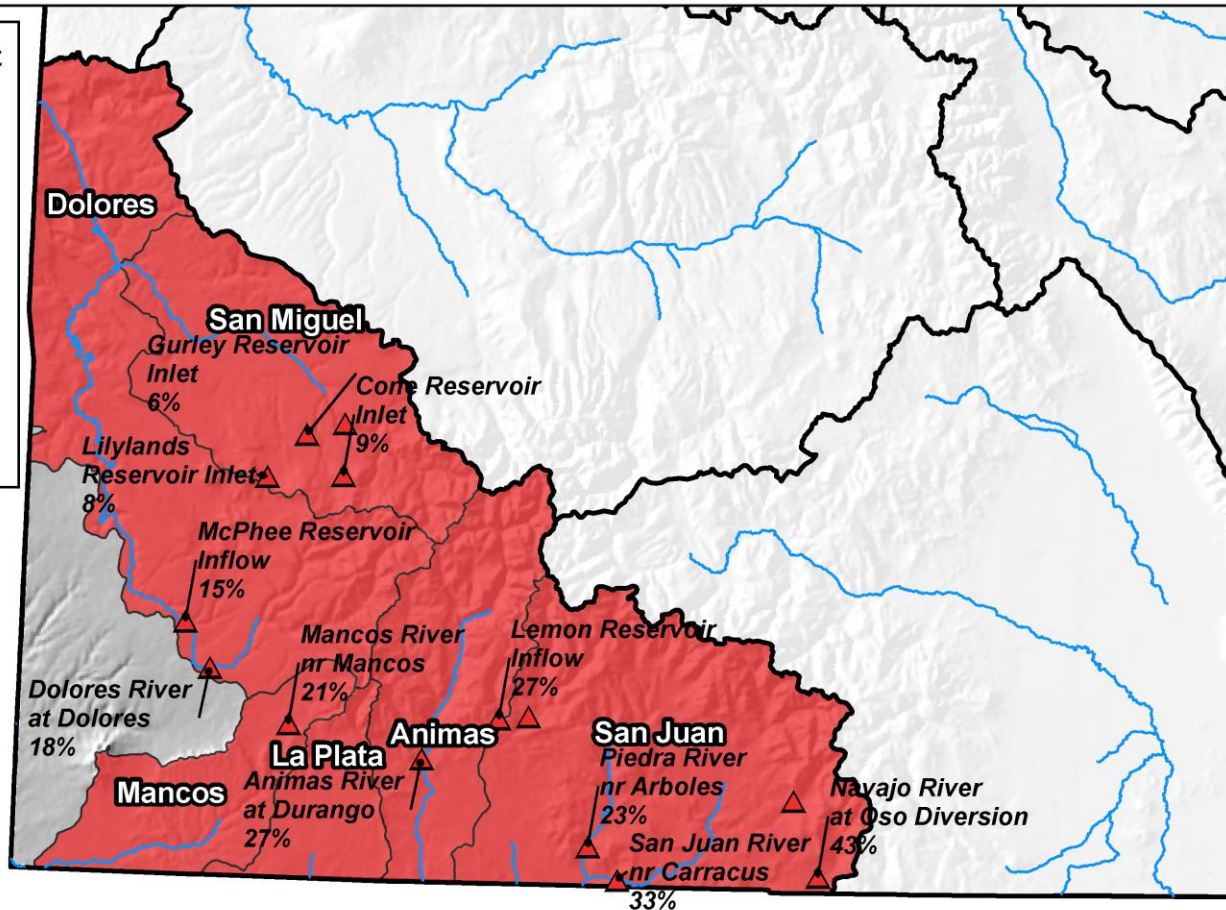
## San Miguel, Dolores, Animas, and San Juan River Basins Streamflow Forecast Summary

June 1, 2018

### Streamflow Forecast Percent of Average



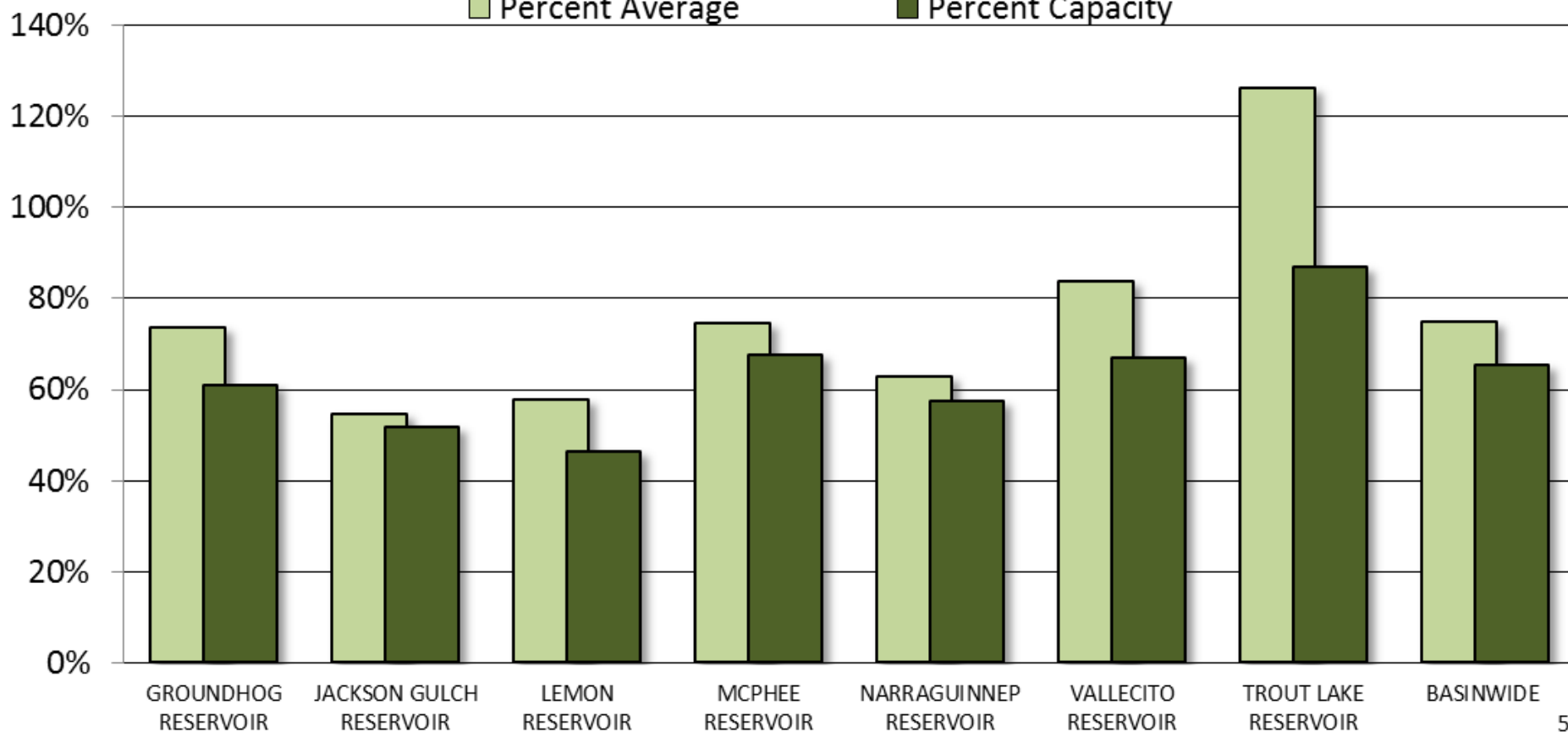
Forecast Point



## Reservoir Storage

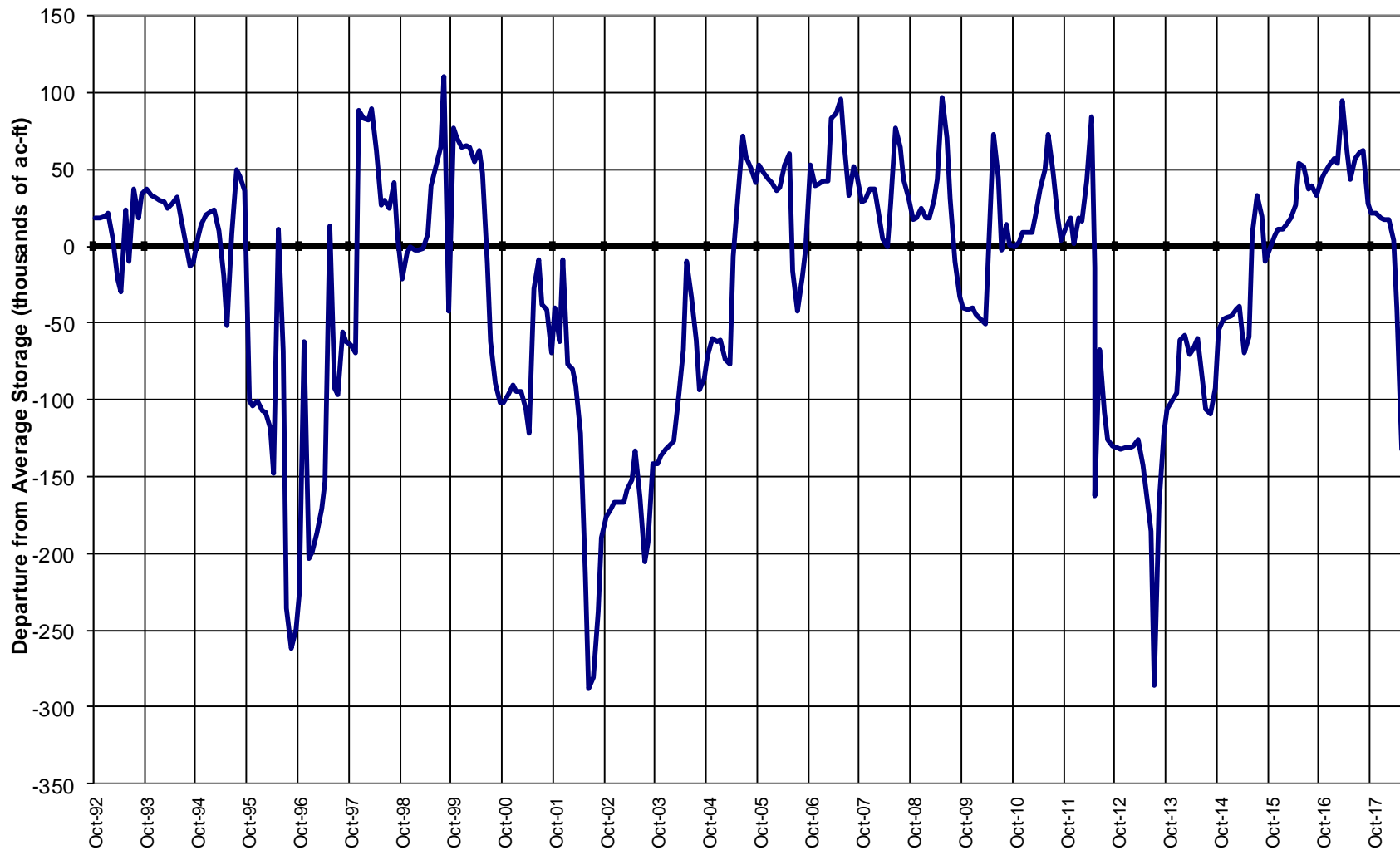
■ Percent Average

■ Percent Capacity



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

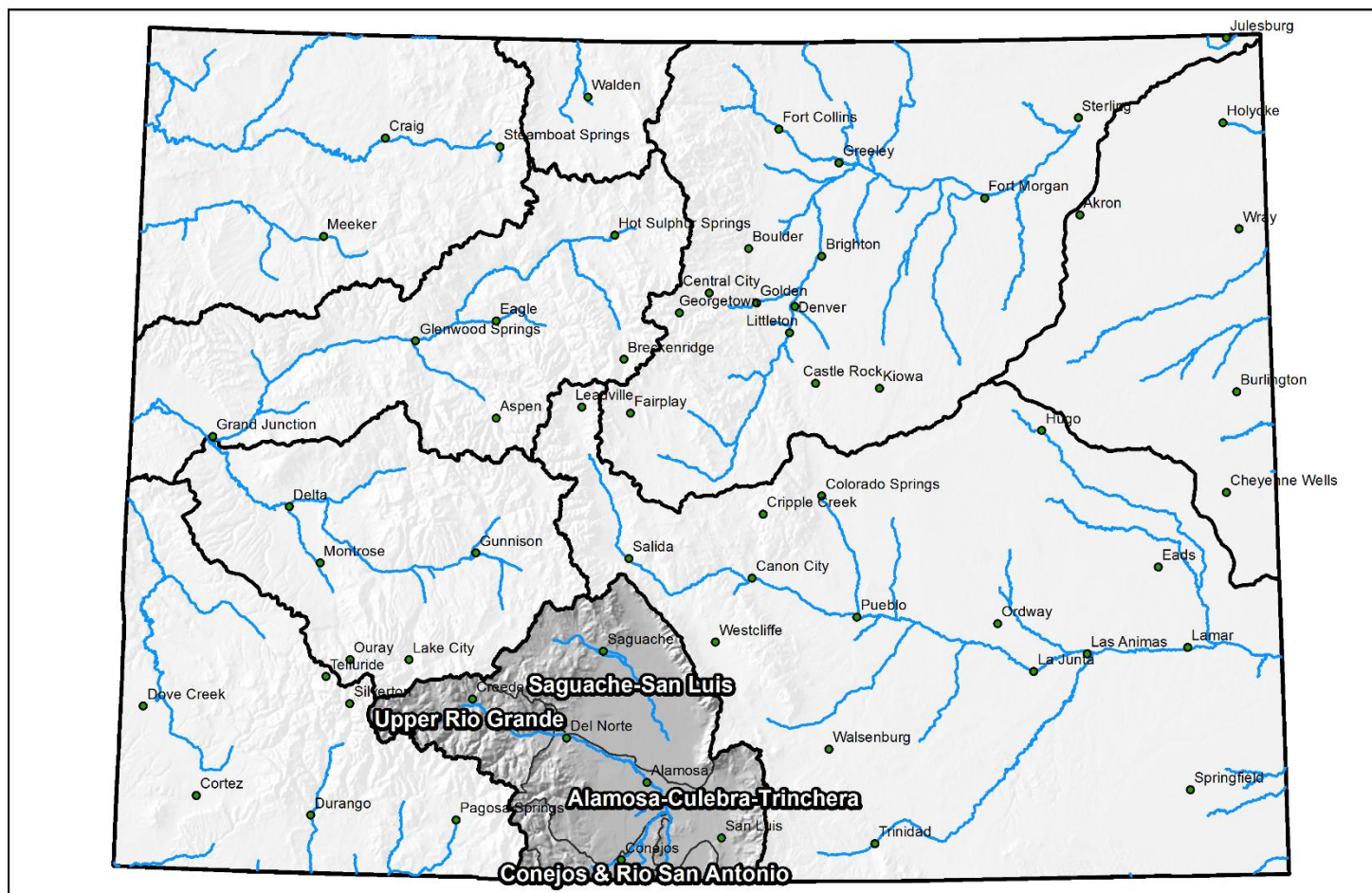
Reservoir Storage  
Departure from Average





## Major Basin Summary

### Upper Rio Grande River Basin



0 25 50 100 150 200 Miles

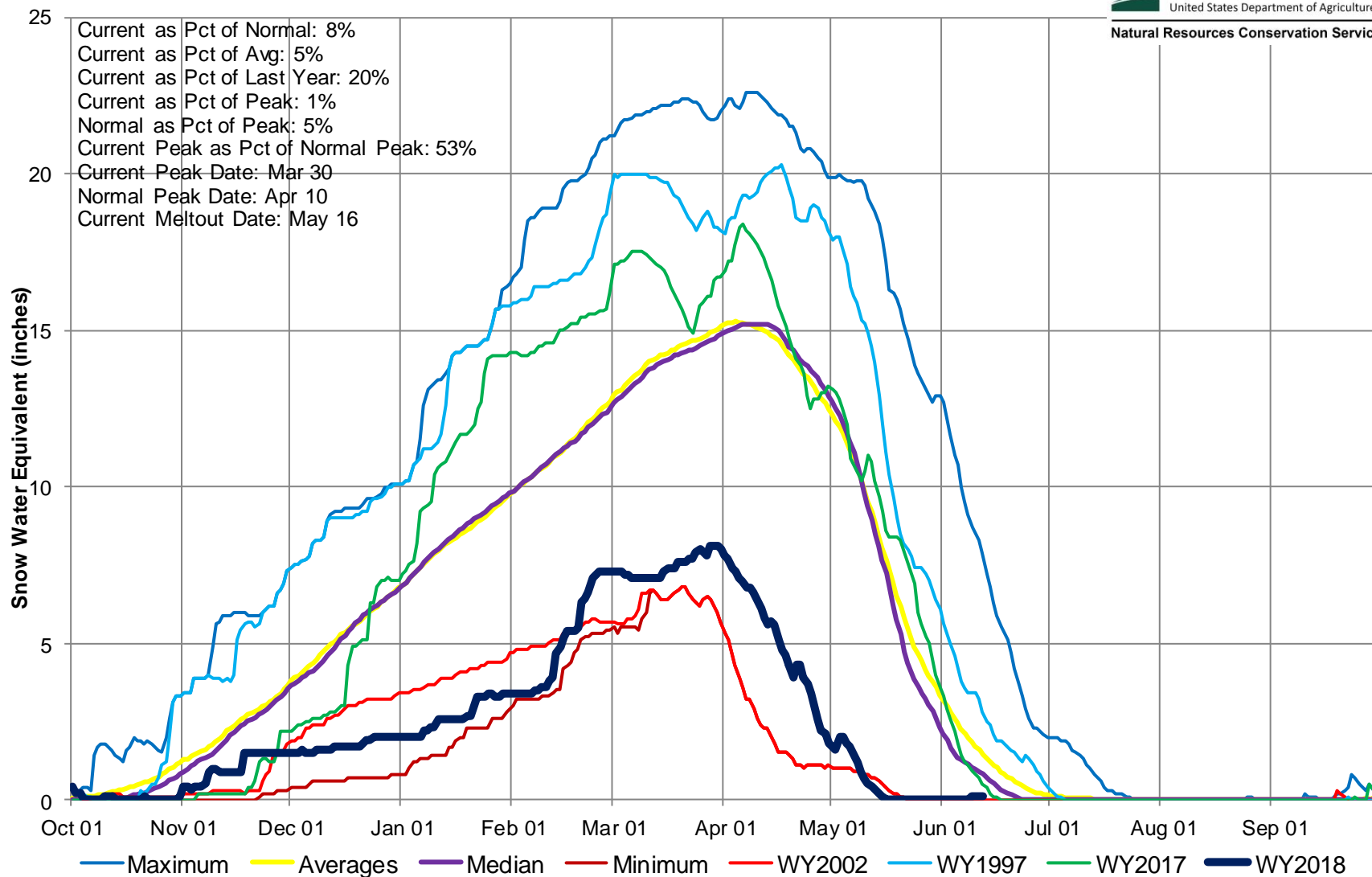
## Upper Rio Grande Basin High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of Jun 12, 2018*



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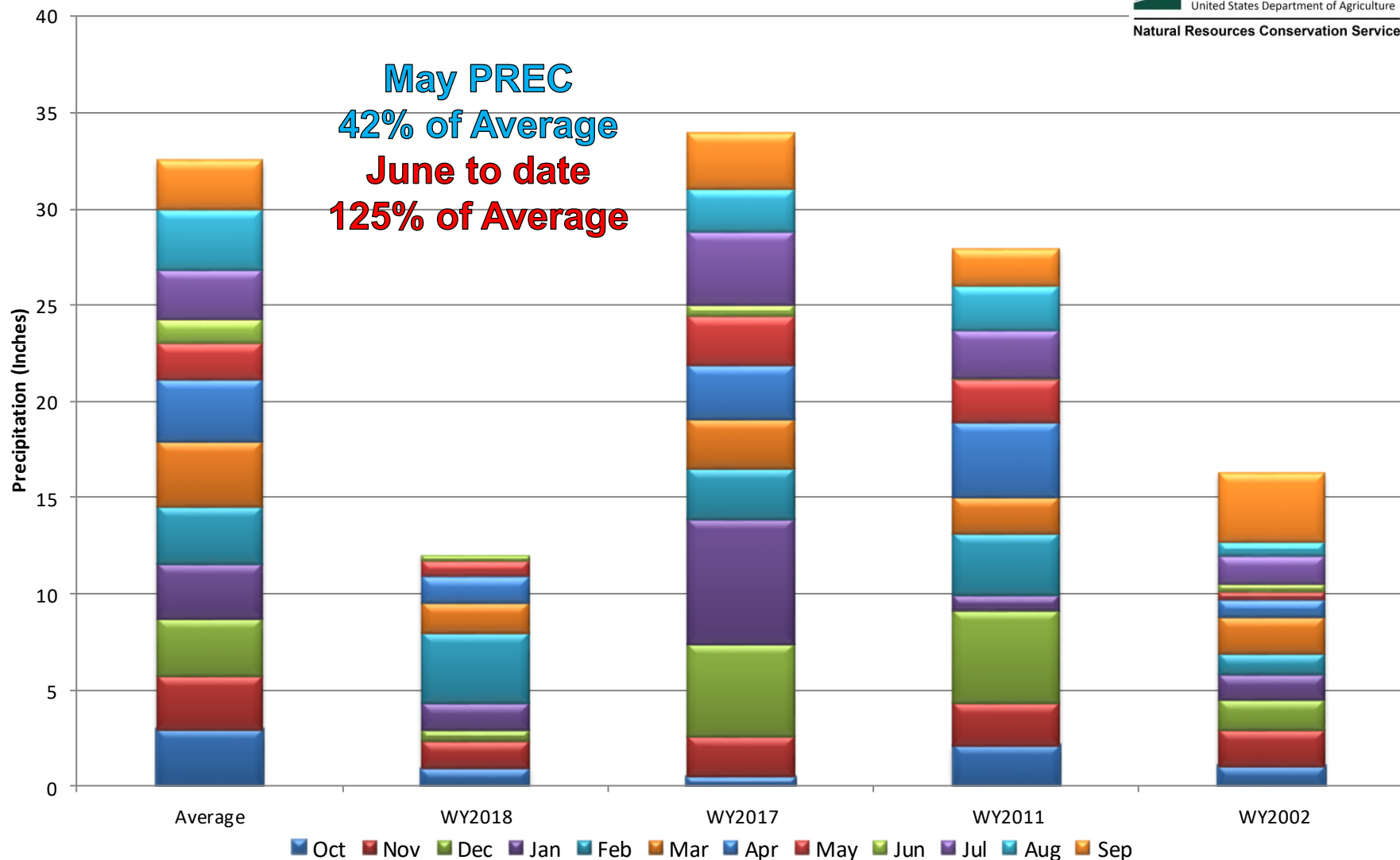
## Upper Rio Grande River Basin High/Low Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of Jun 12, 2018*



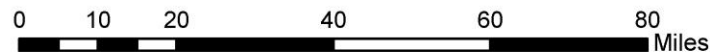
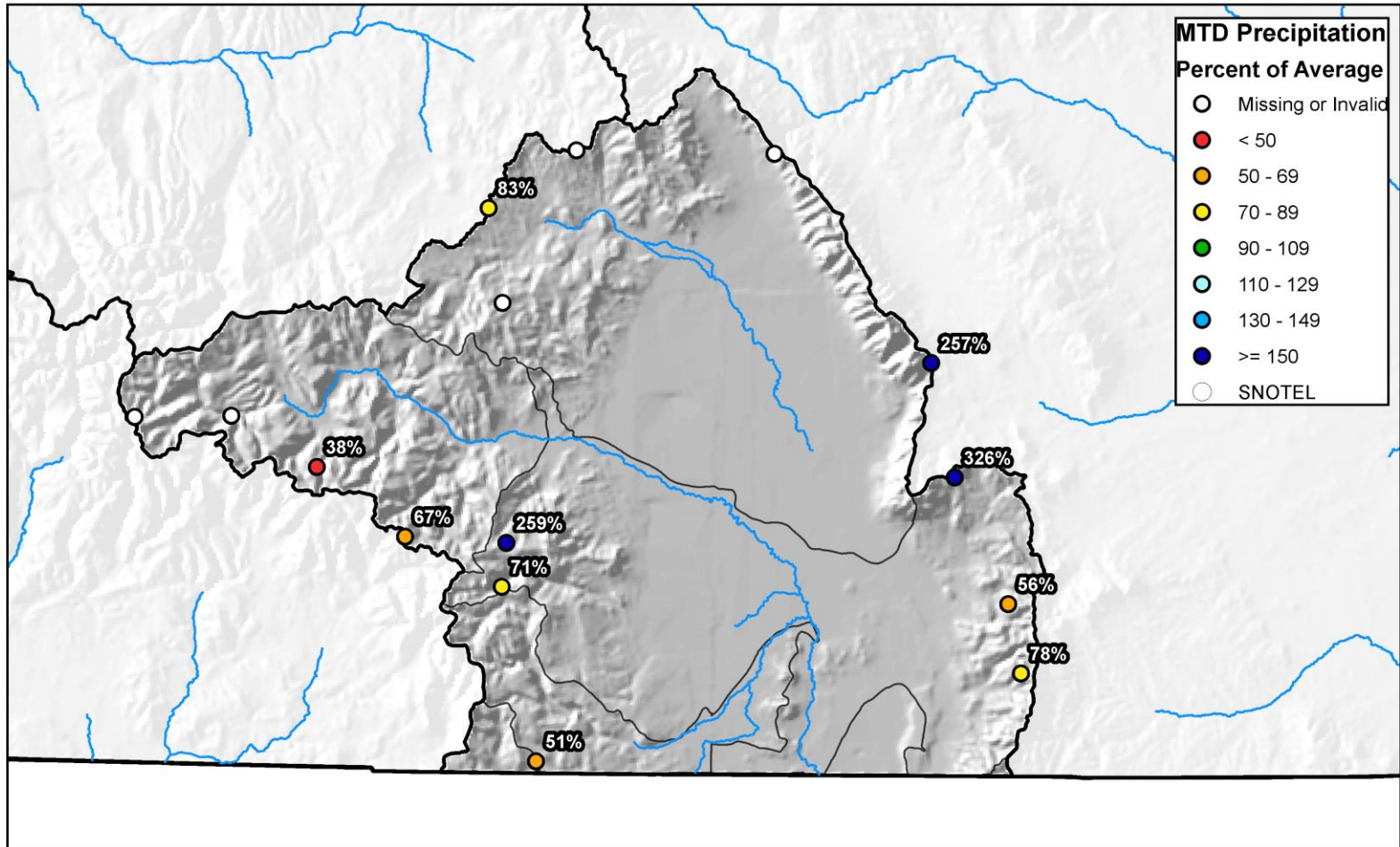
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## Upper Rio Grande River Basin Month to Date Precipitation Summary

Current as of Jun 12, 2018

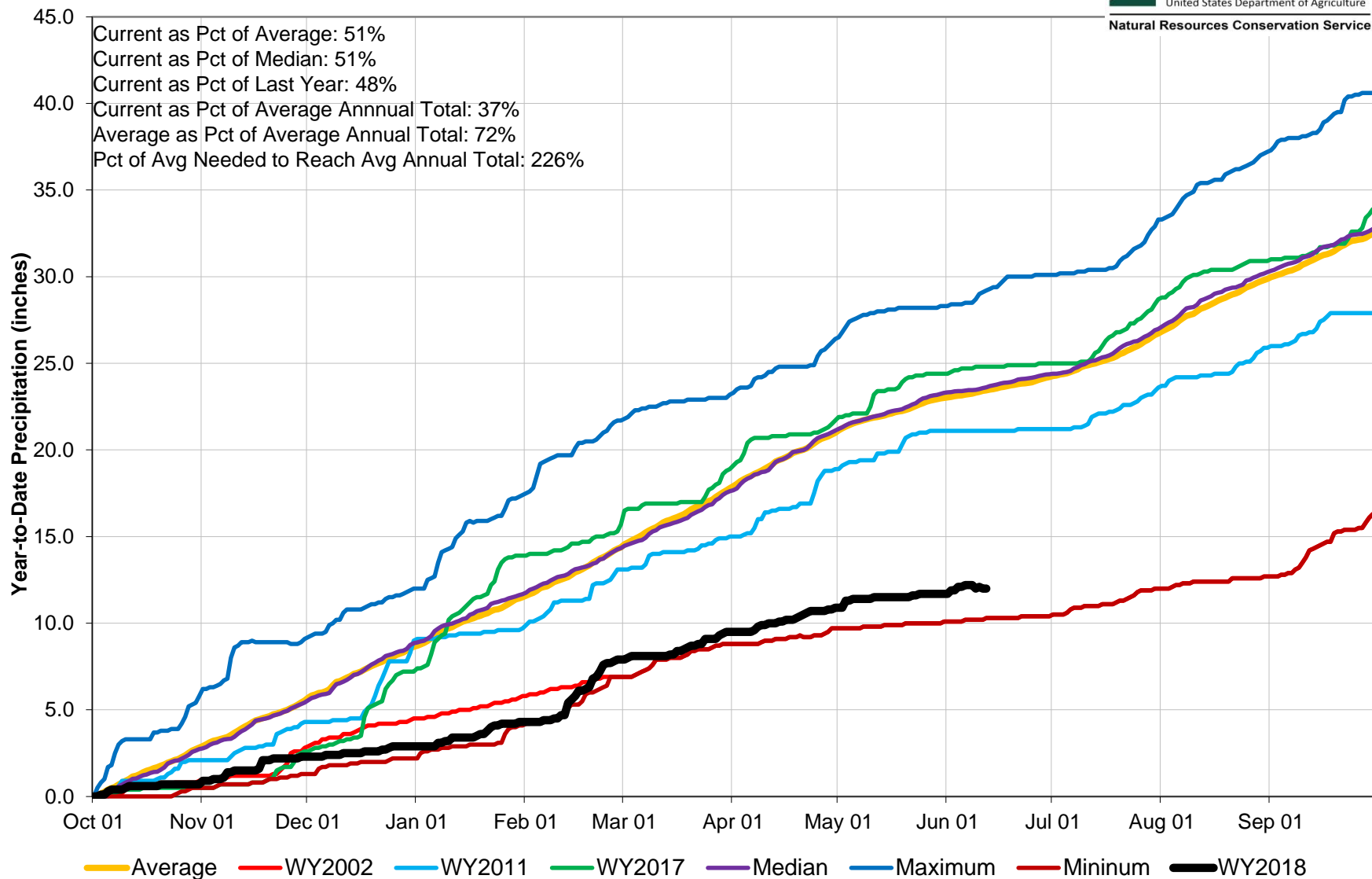






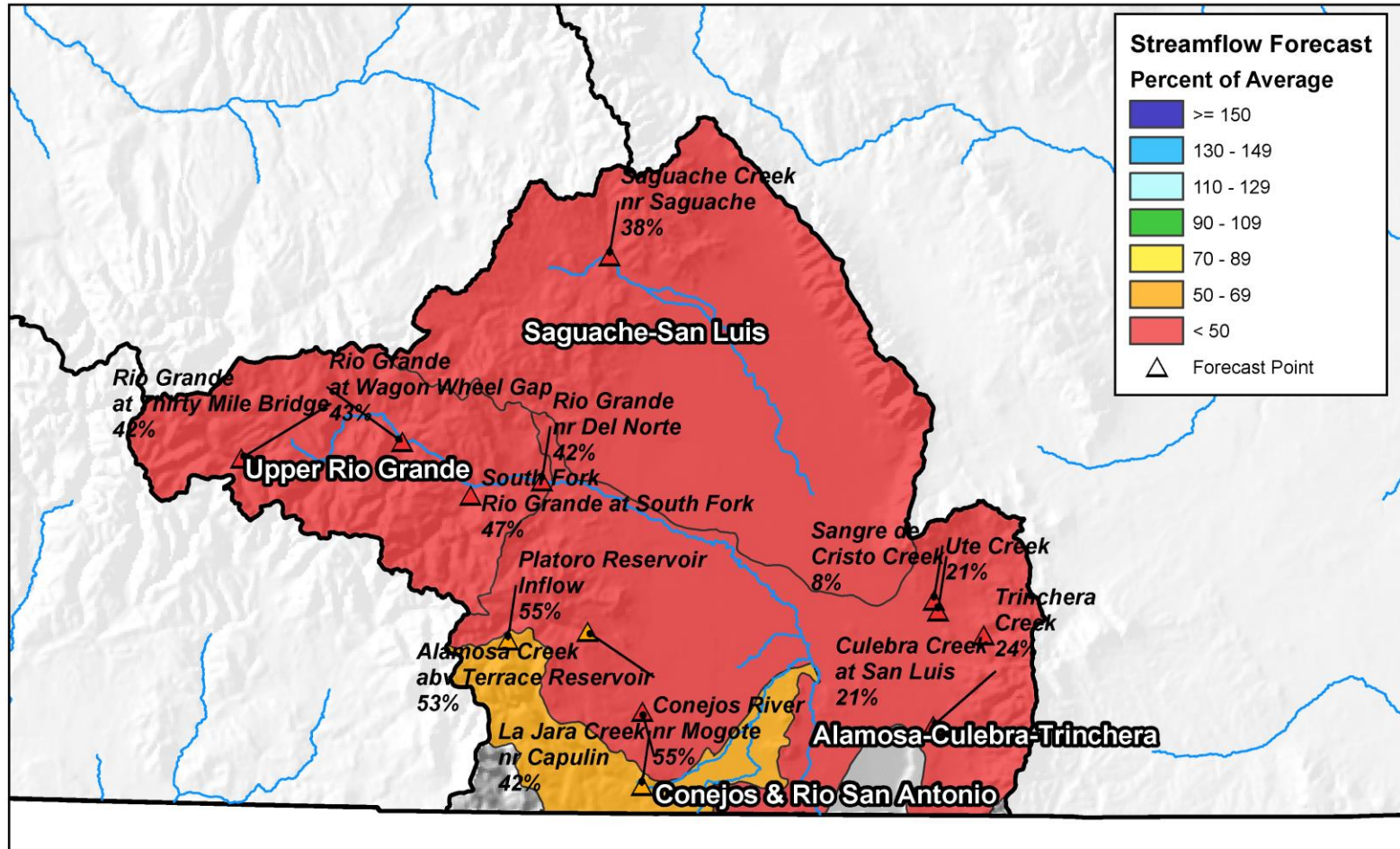
## Upper Rio Grande River Basin High/Low Year-to-Date Precipitation Summary

*Based on Provisional SNOTEL data as of Jun 12, 2018*



## Upper Rio Grande River Basin Streamflow Forecast Summary

June 1, 2018

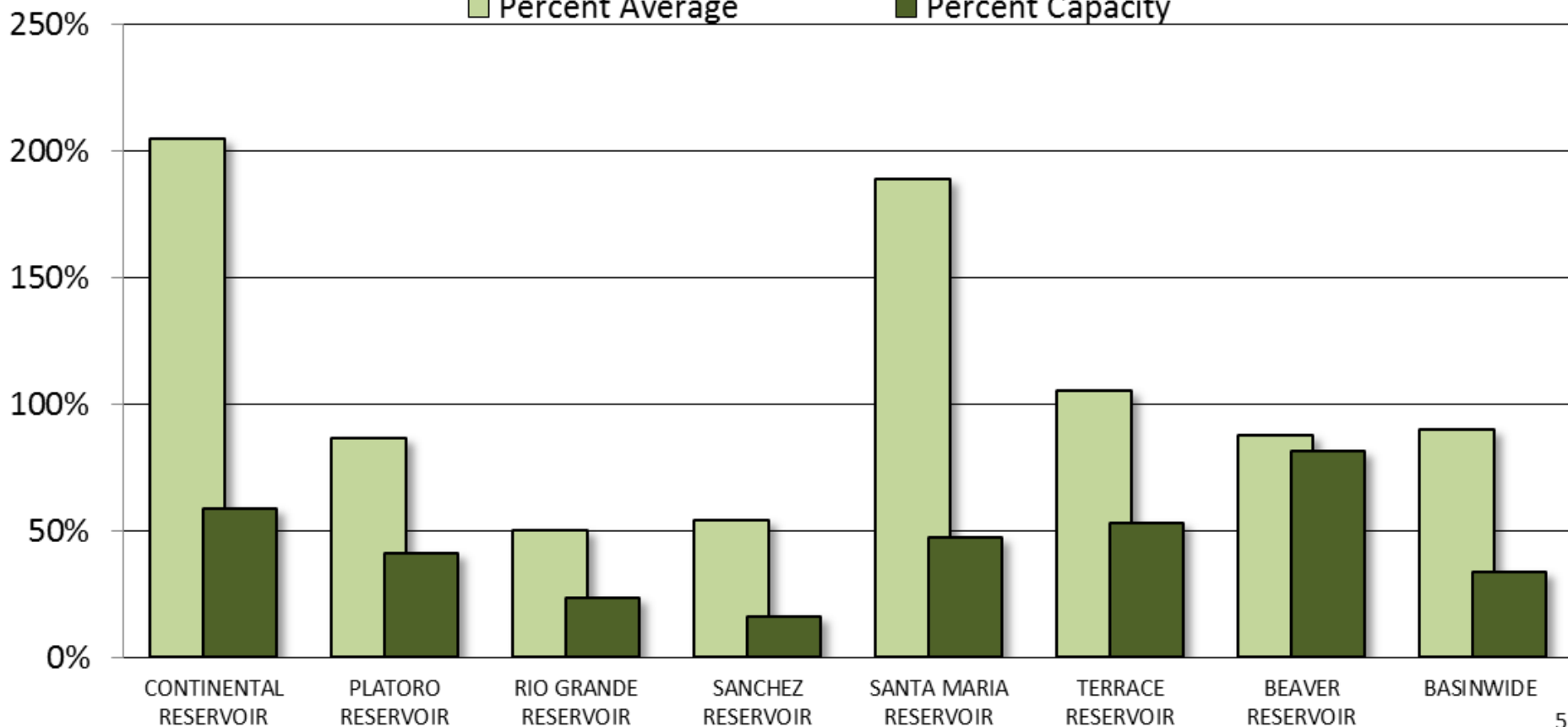


0 10 20 40 60 80 Miles

## Reservoir Storage

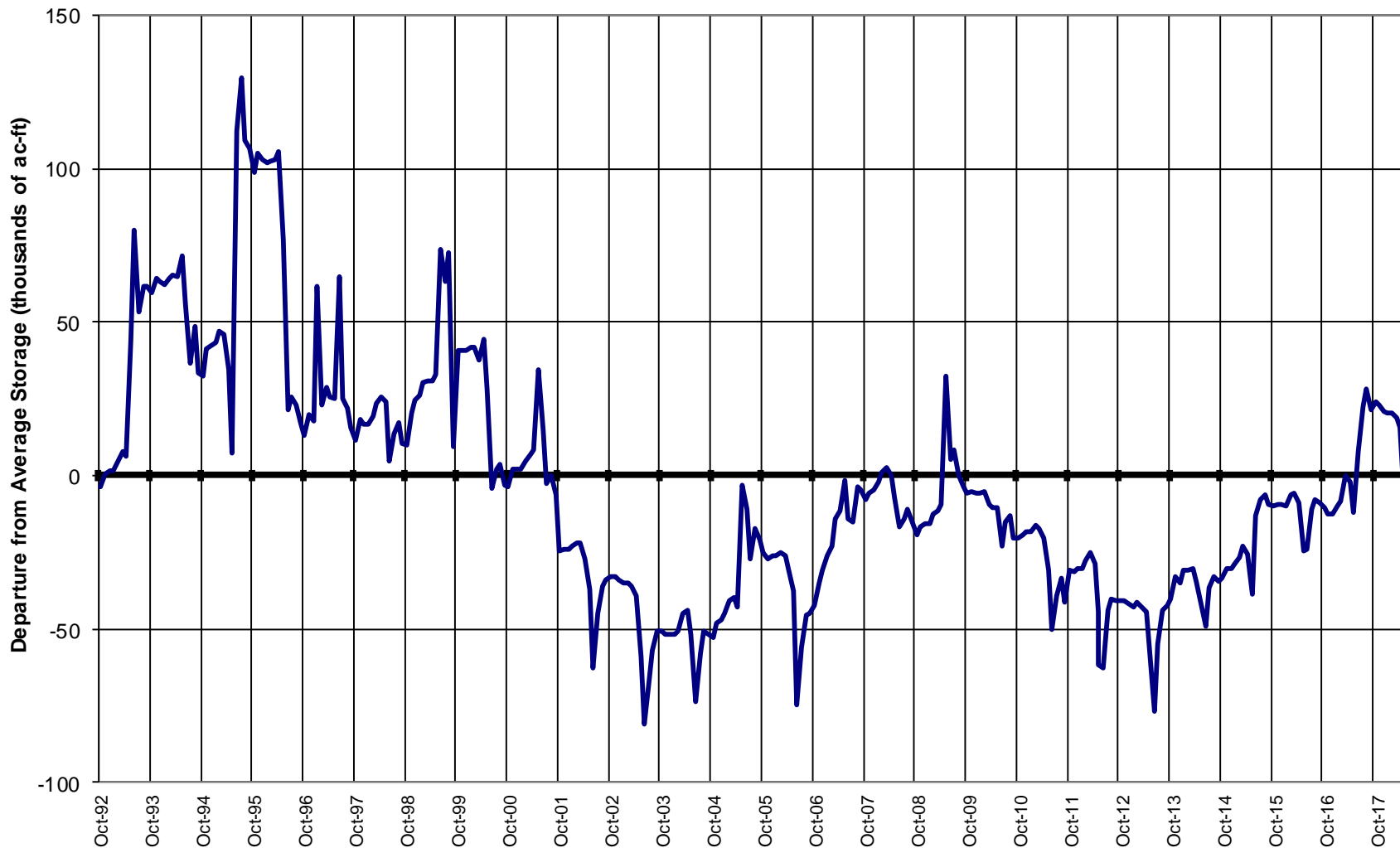
■ Percent Average

■ Percent Capacity





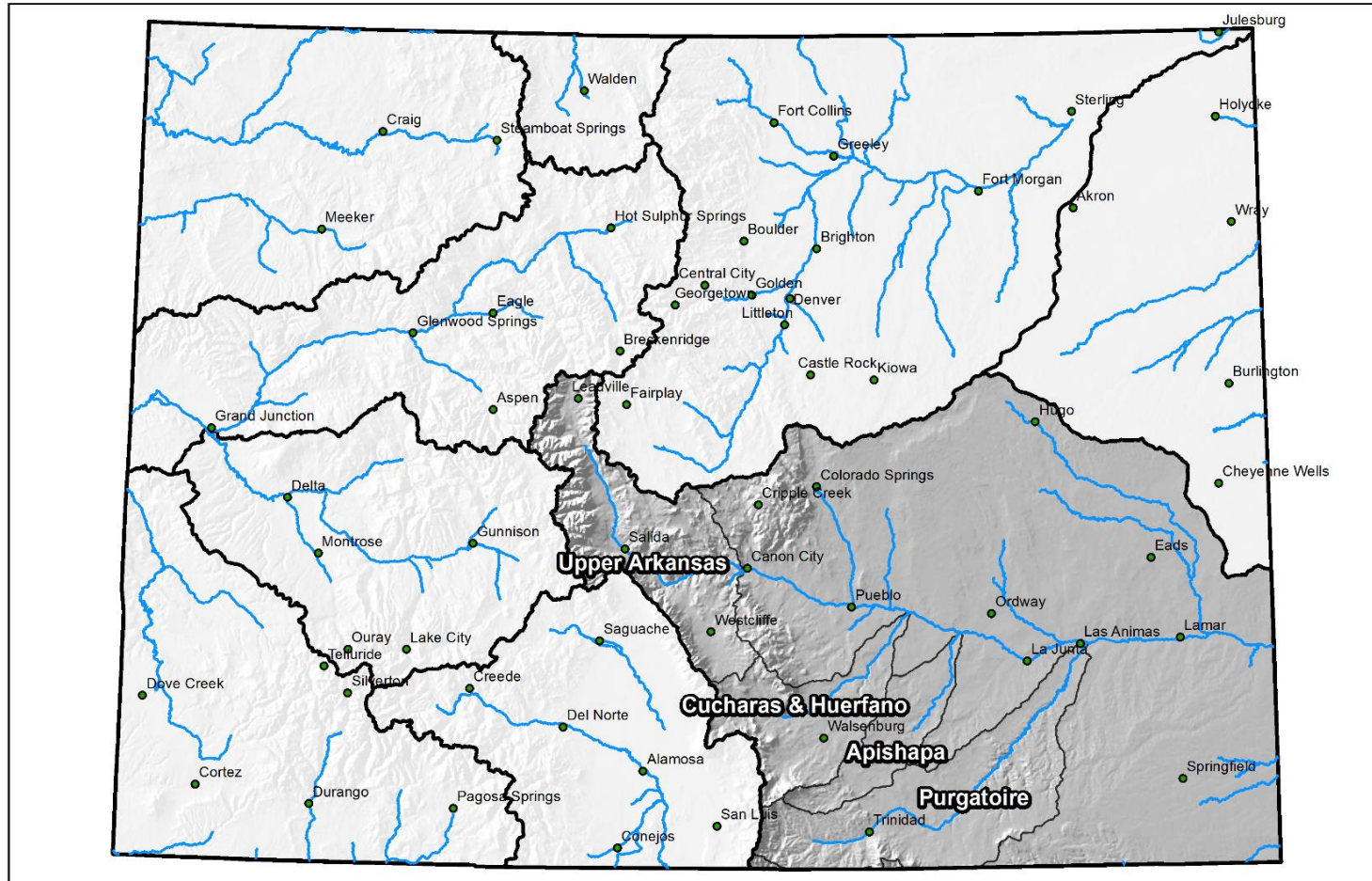
## UPPER RIO GRANDE BASIN Reservoir Storage Departure from Average





## Major Basin Summary

### Arkansas River Basin



0 25 50 100 150 200 Miles



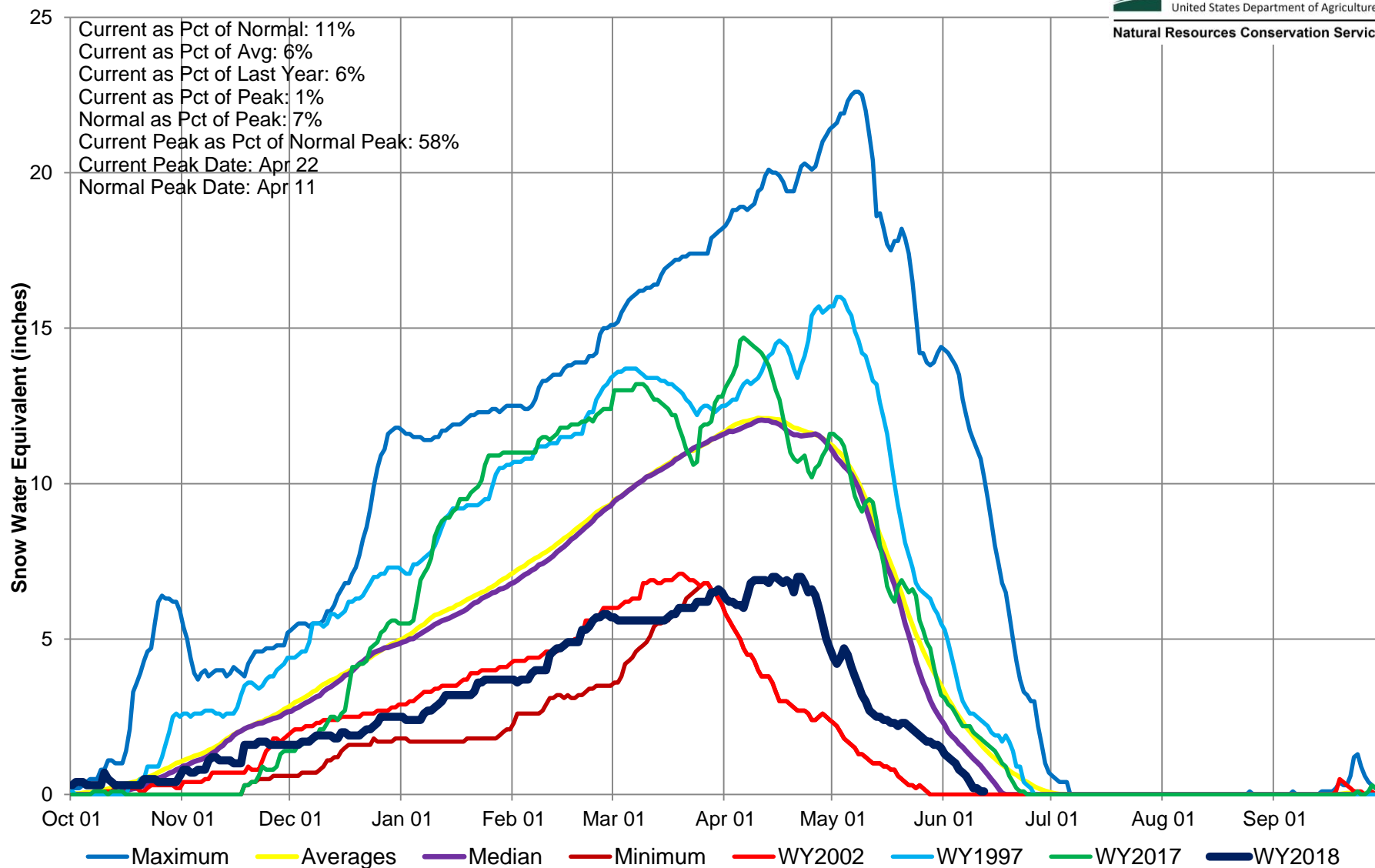
## Arkansas River Basin High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of Jun 12, 2018*



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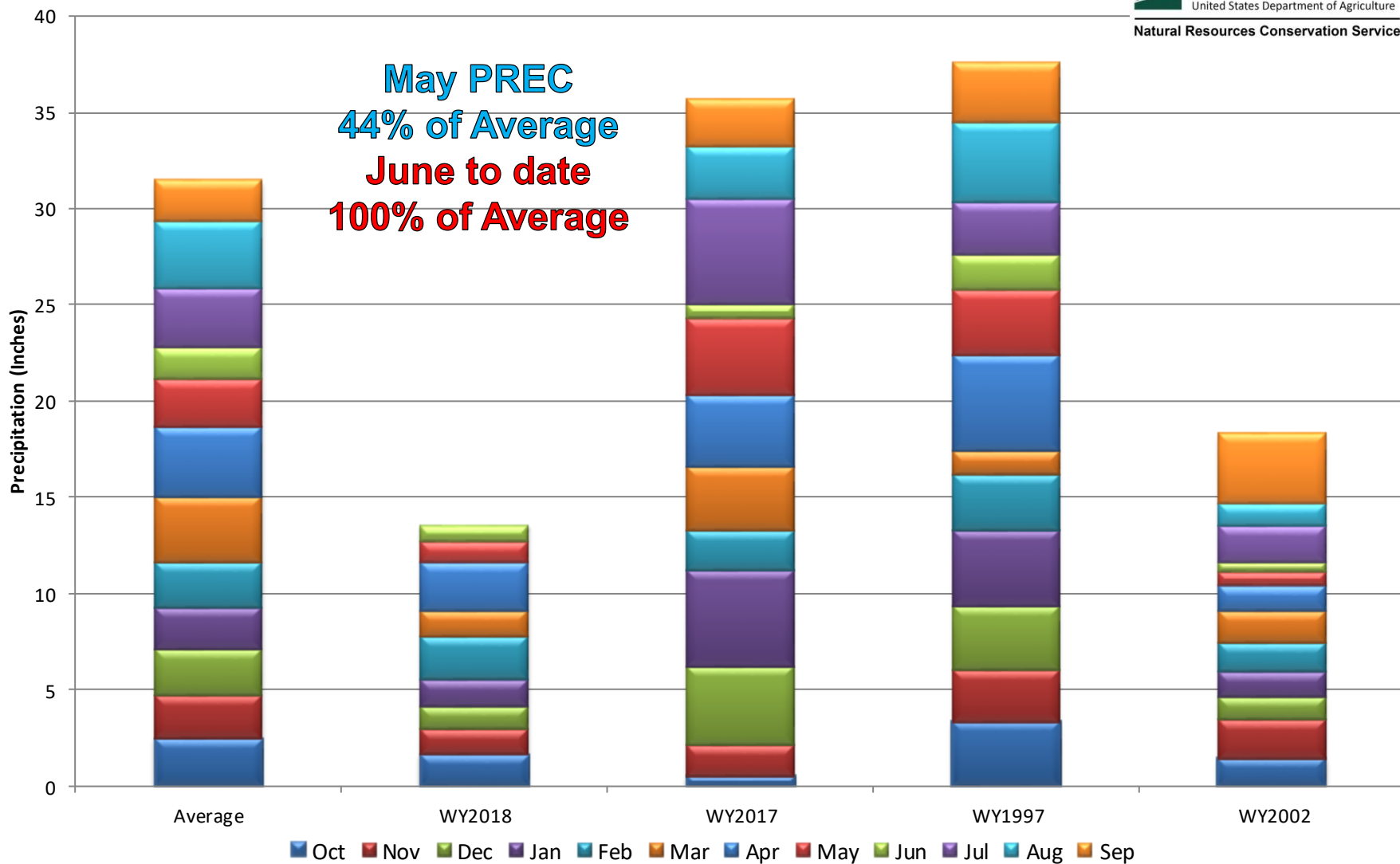
## Arkansas River Basin High/Low Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of Jun 12, 2018*



United States Department of Agriculture

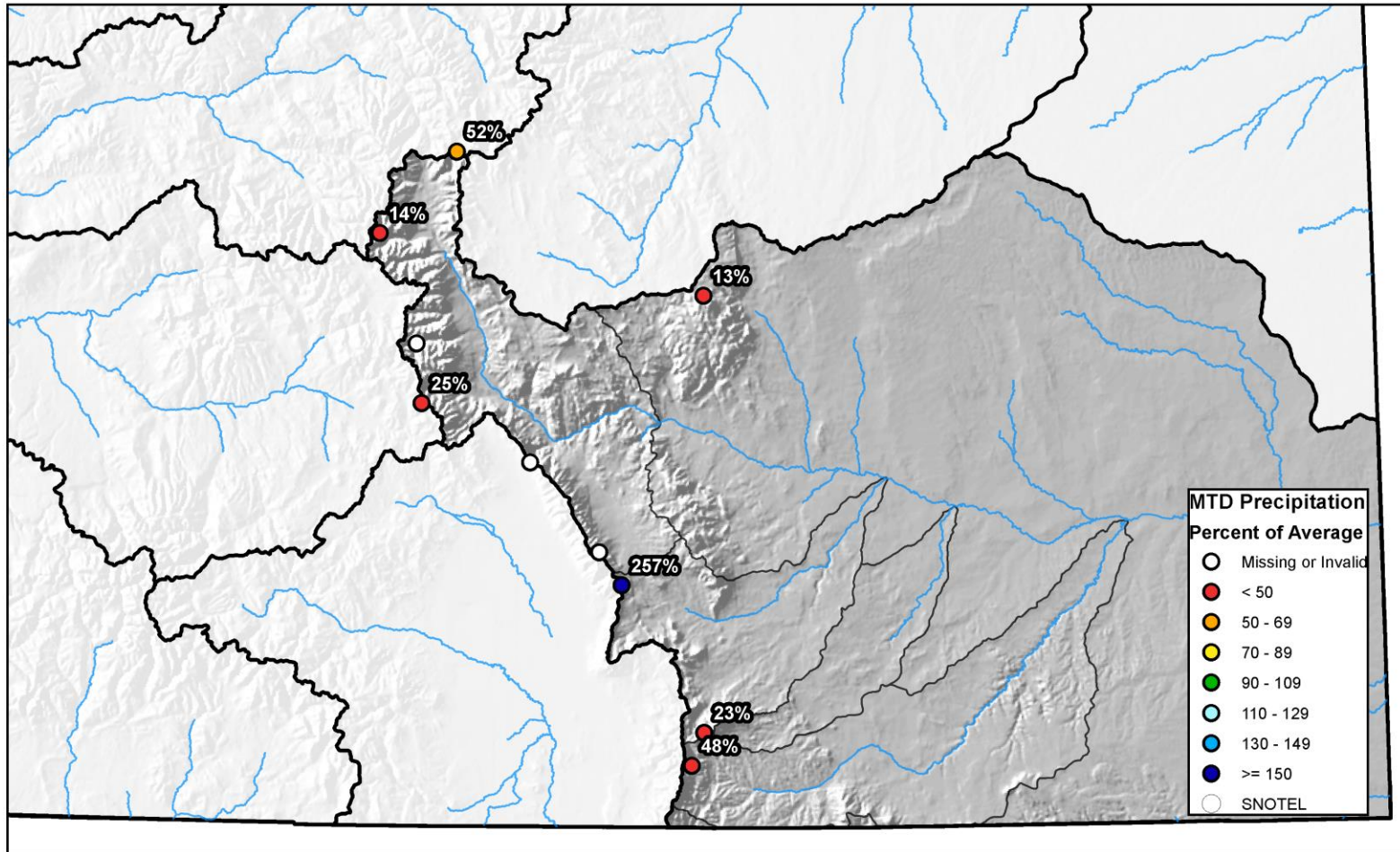
Natural Resources Conservation Service





## Arkansas River Basin Month to Date Precipitation Summary

Current as of Jun 12, 2018



0 10 20 40 60 80 Miles



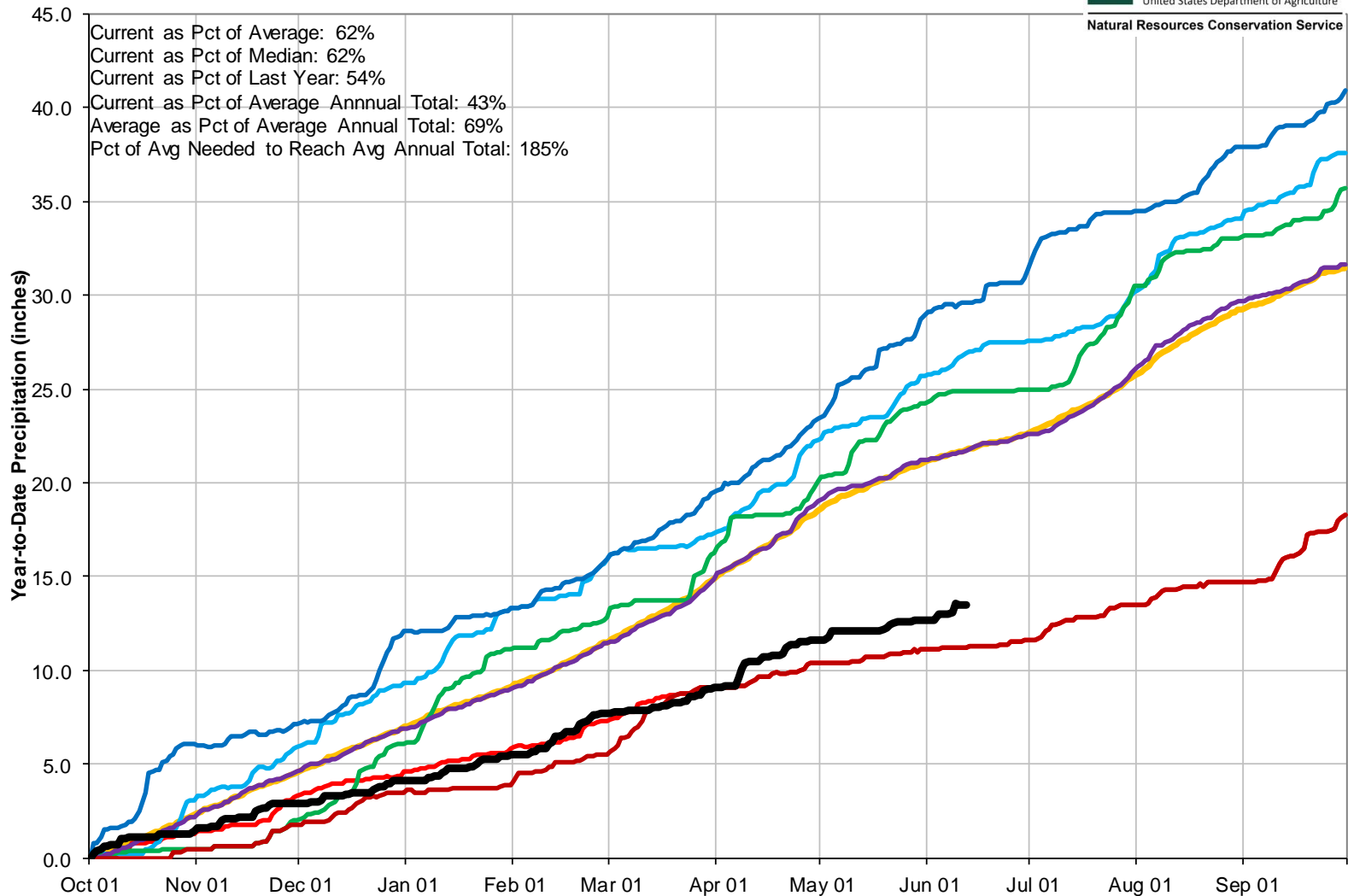
## Arkansas River Basin High/Low Year-to-Date Precipitation Summary

*Based on Provisional SNOTEL data as of Jun 12, 2018*



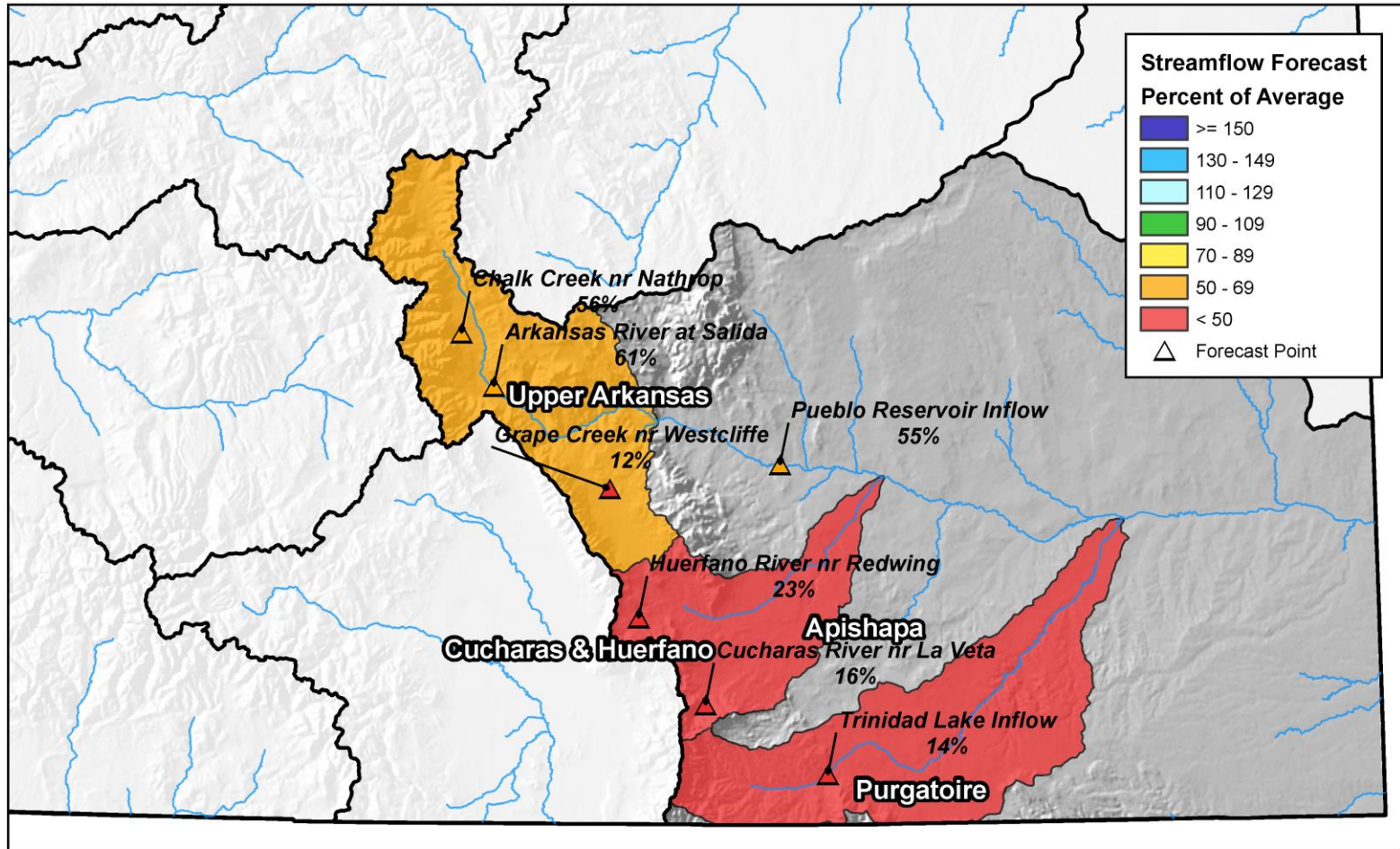
United States Department of Agriculture

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## Arkansas River Basin Streamflow Forecast Summary

June 1, 2018

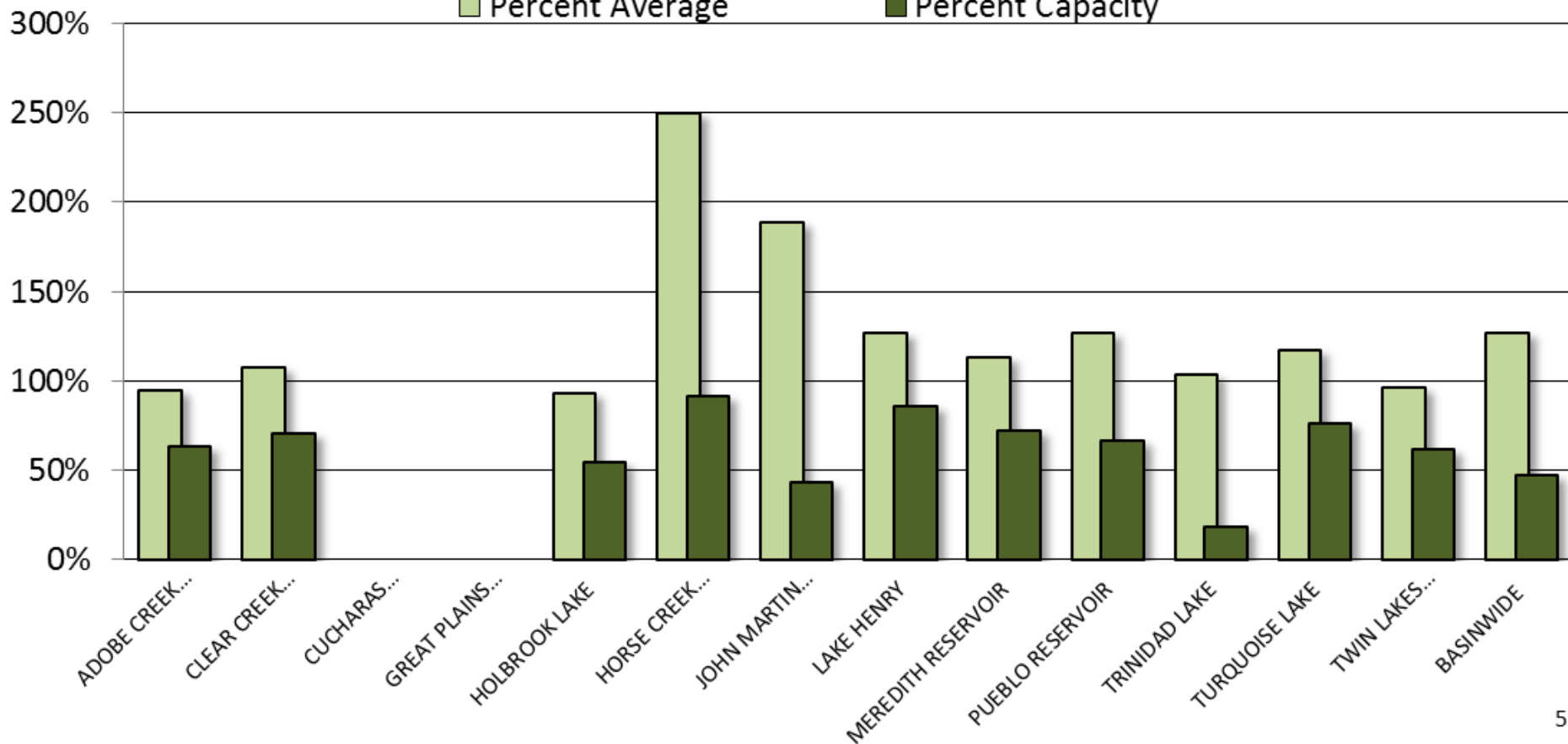


0 10 20 40 60 80 Miles

## Reservoir Storage

■ Percent Average

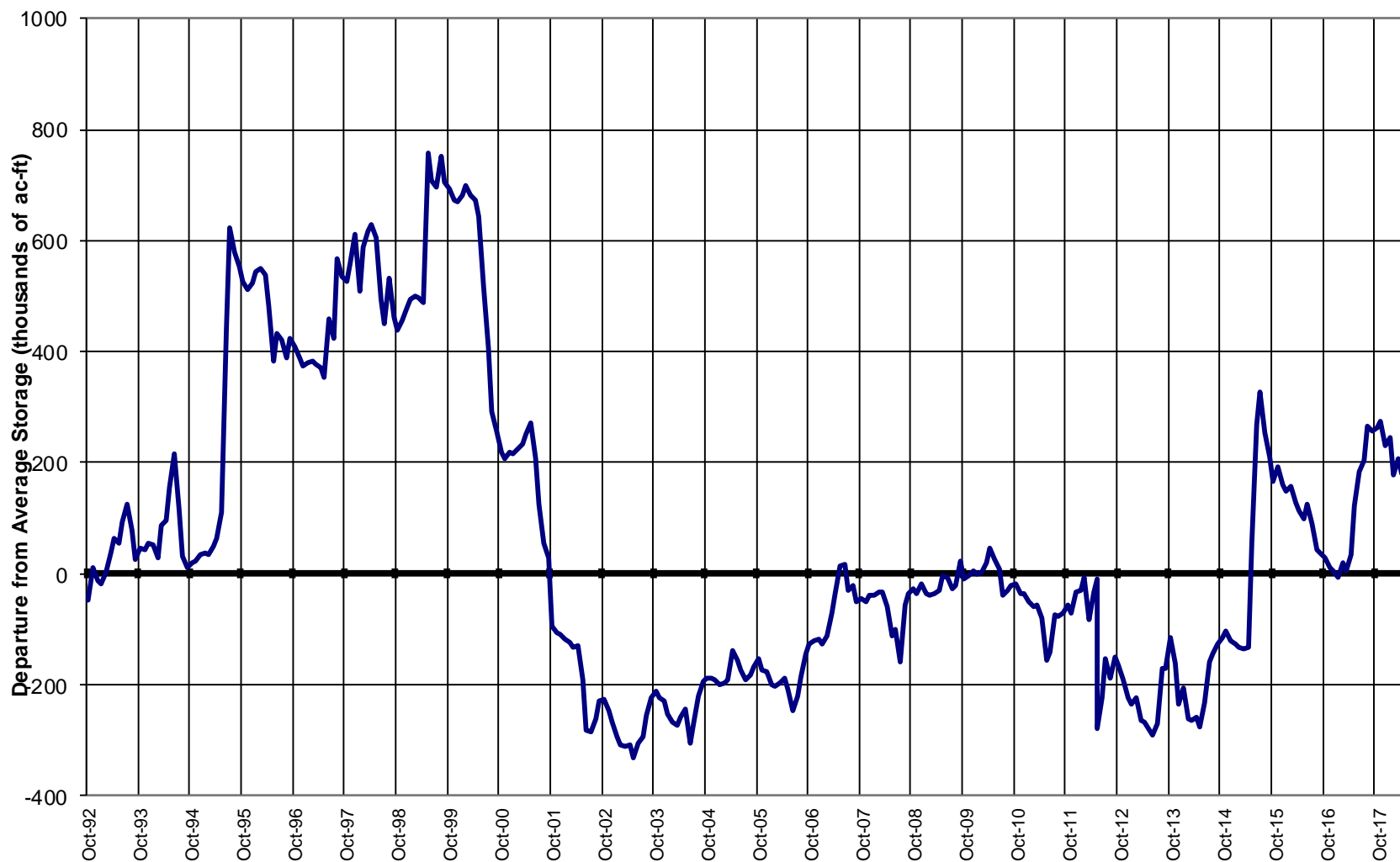
■ Percent Capacity



## ARKANSAS RIVER BASIN

### Reservoir Storage

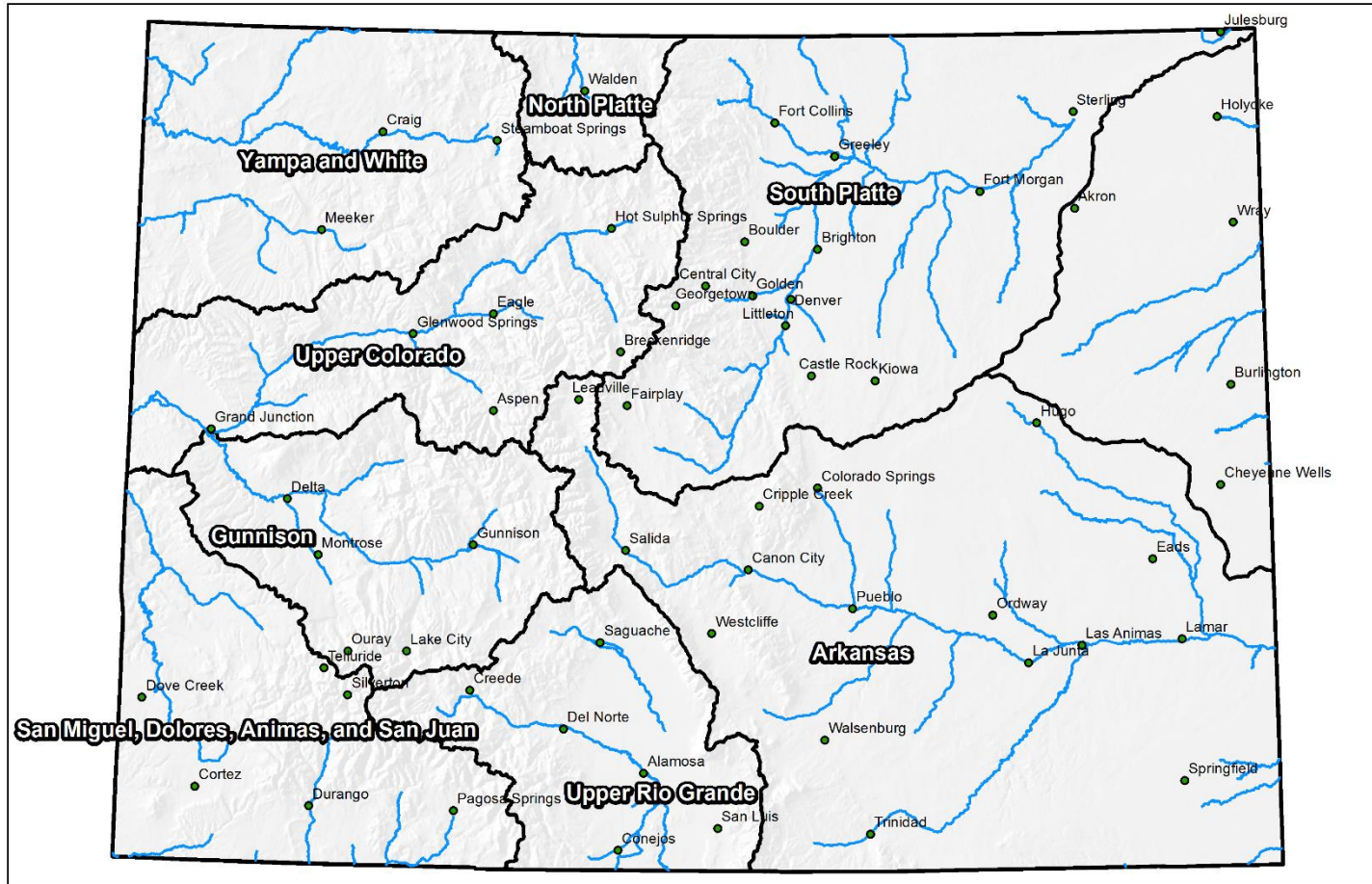
### Departure from Average





## Colorado Statewide Summary

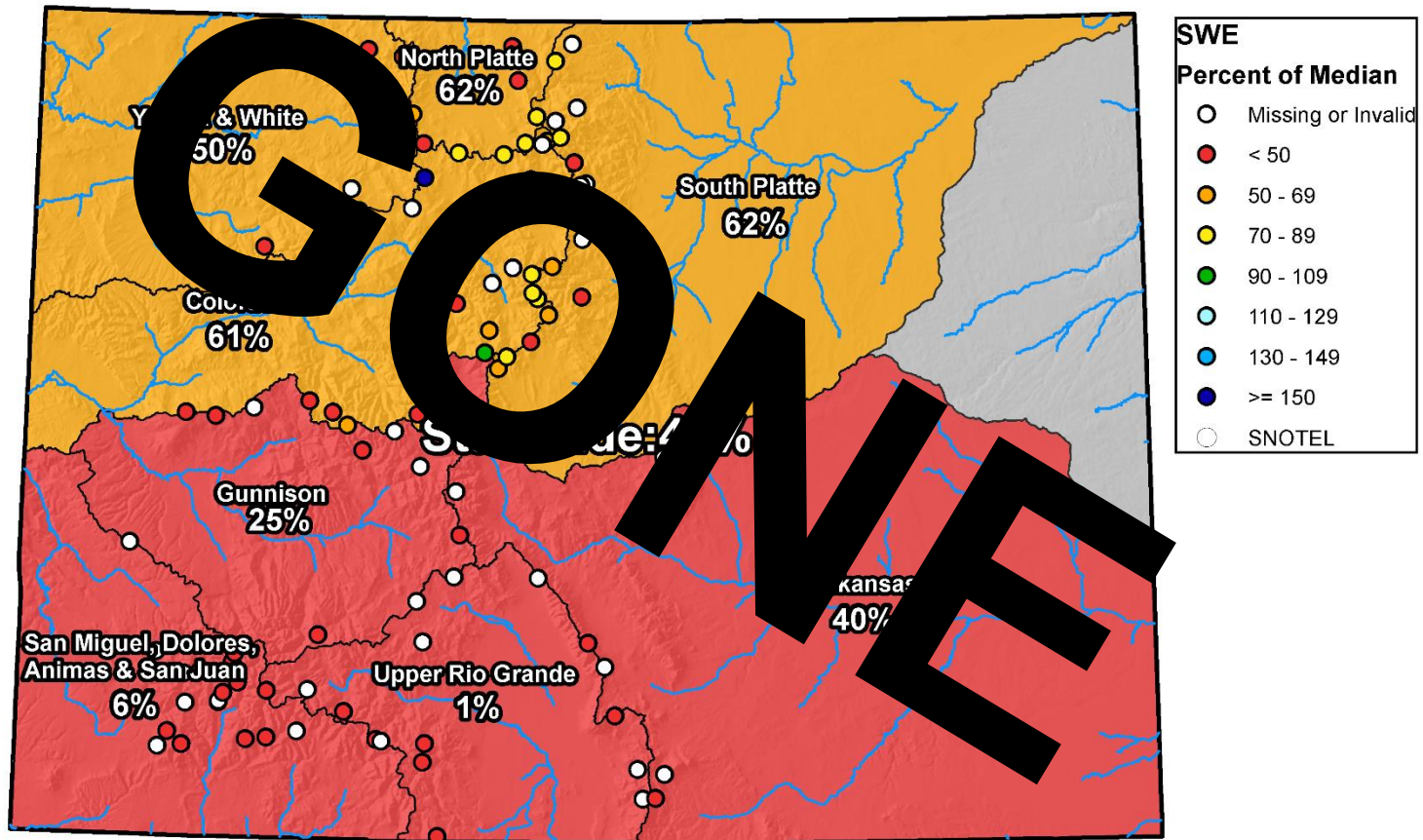
Colorado Major Basins



0 25 50 100 150 200 Miles

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

Current as of May 16, 2018



0 25 50 100 150 200 Miles



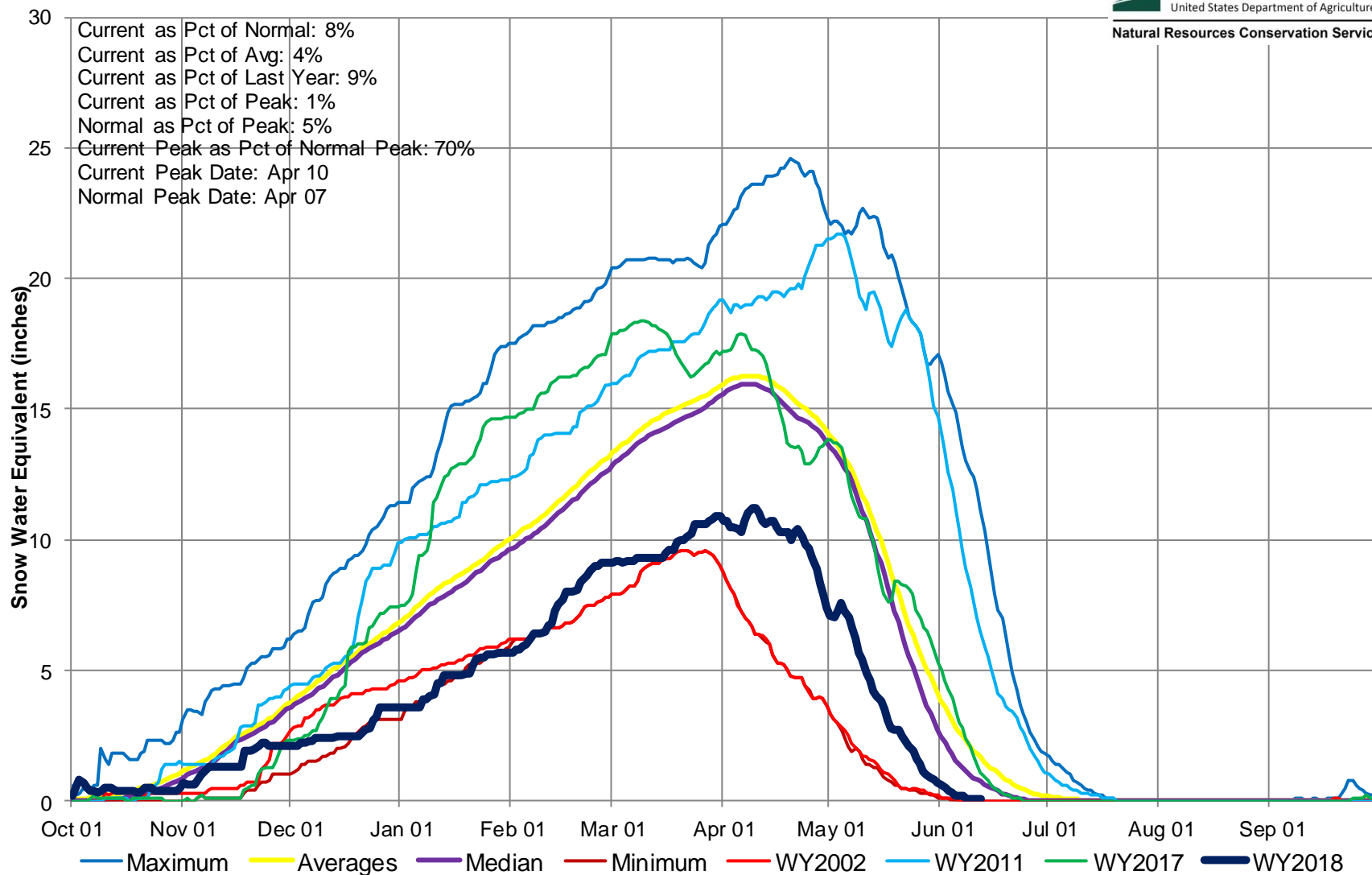
## Colorado Statewide High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of Jun 12, 2018*



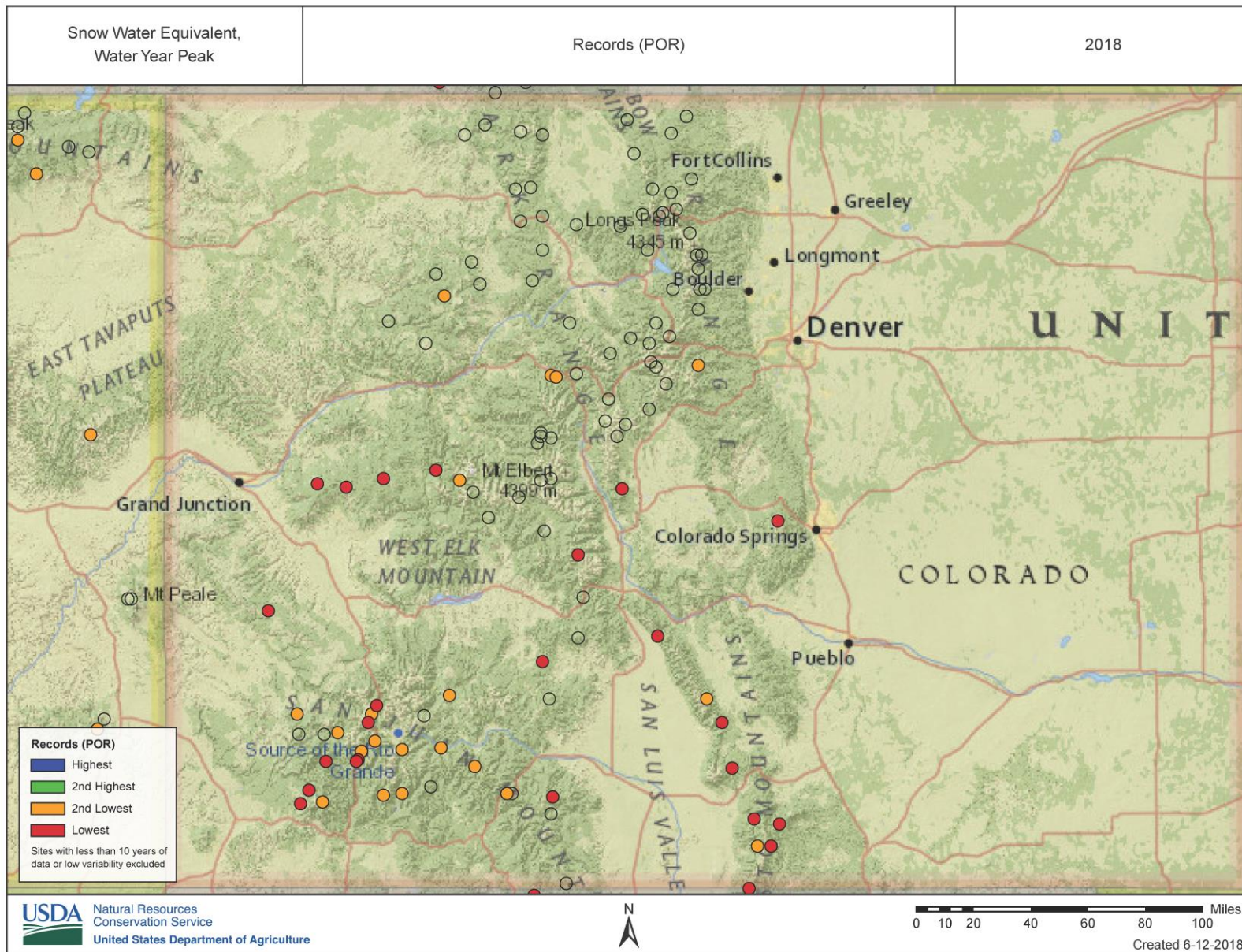
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# Colorado Snow Surveys





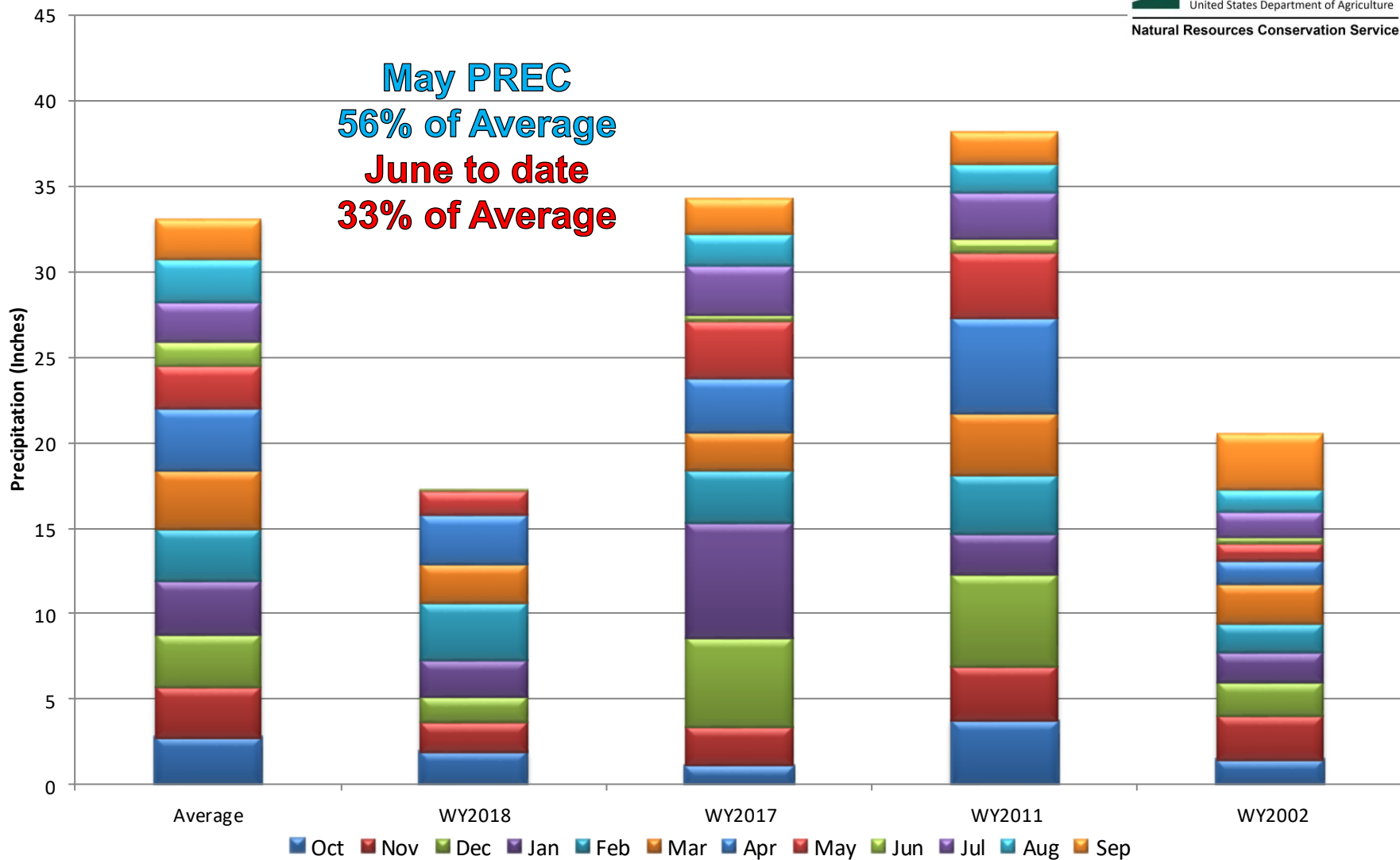
## Colorado Statewide High/Low Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of Jun 12, 2018*



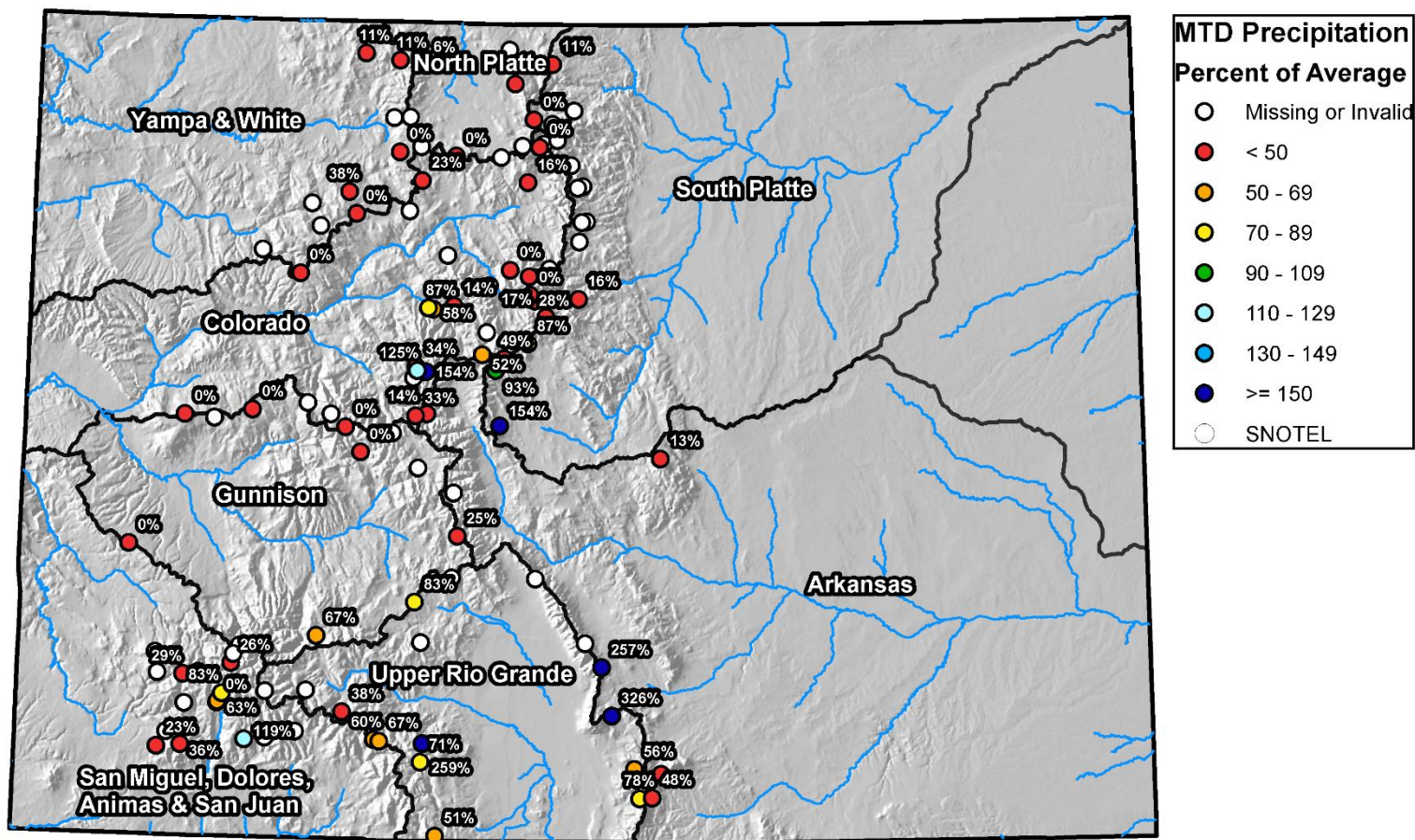
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## Colorado SNOTEL Month-to-Date Precipitation

Current as of Jun 12, 2018



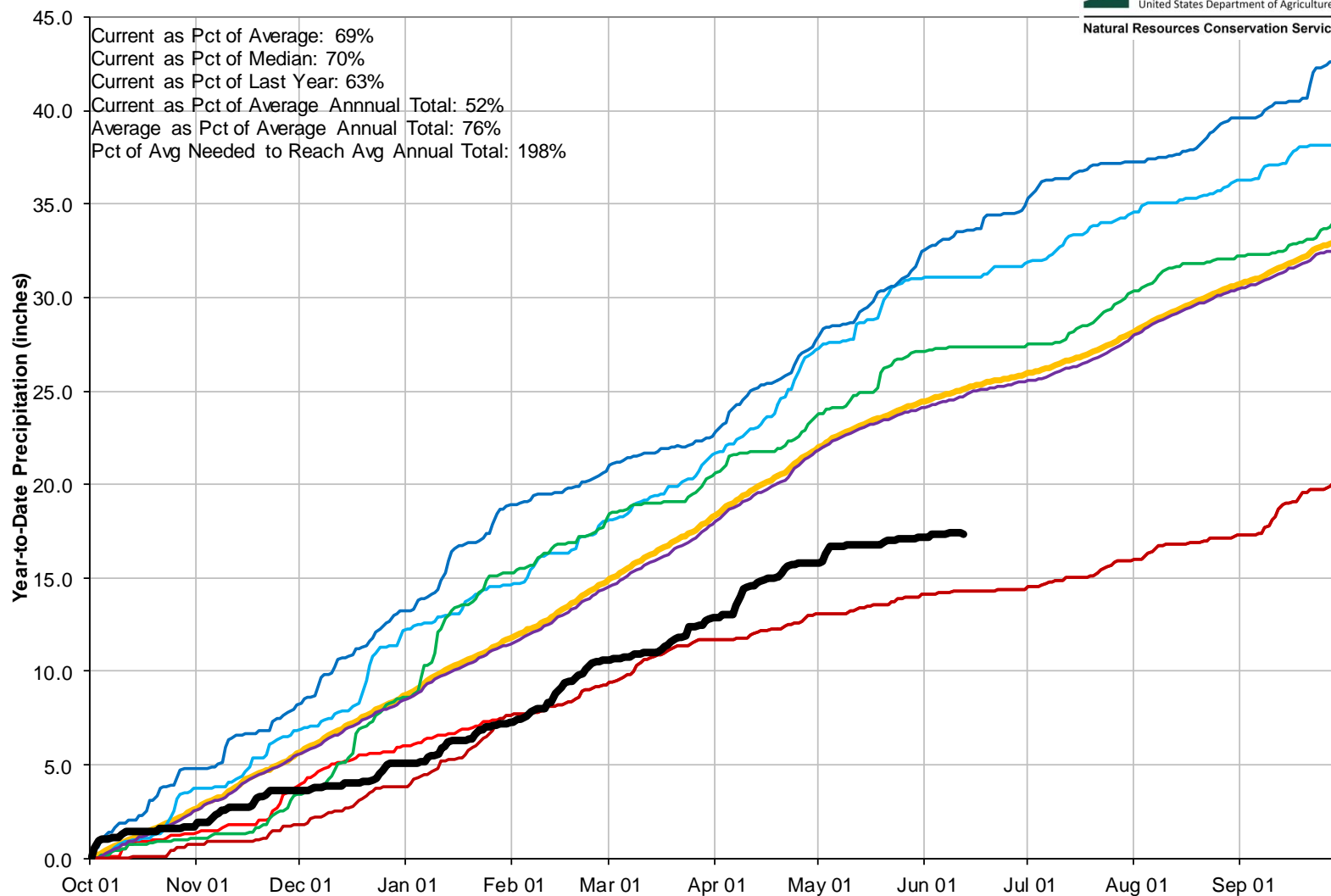
## Colorado Statewide High/Low Year-to-Date Precipitation Summary

*Based on Provisional SNOTEL data as of Jun 12, 2018*



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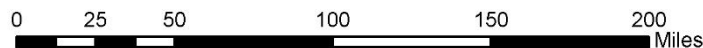
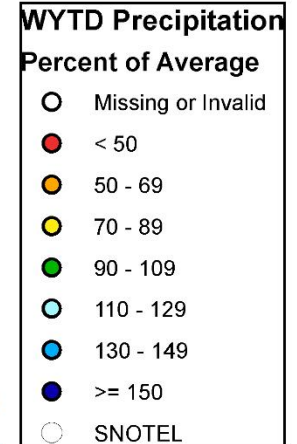
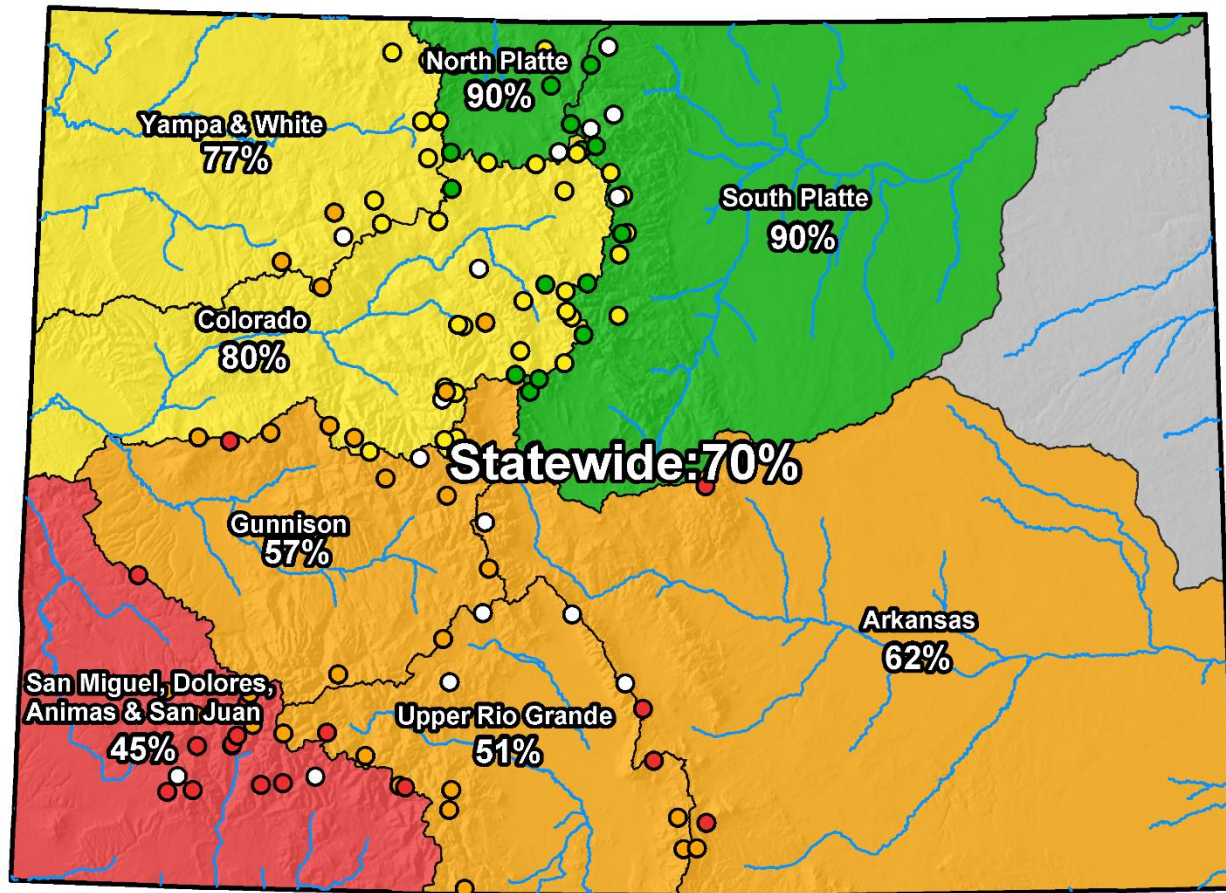
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## Colorado SNOTEL Water Year to Date Precipitation

Current as of Jun 12, 2018



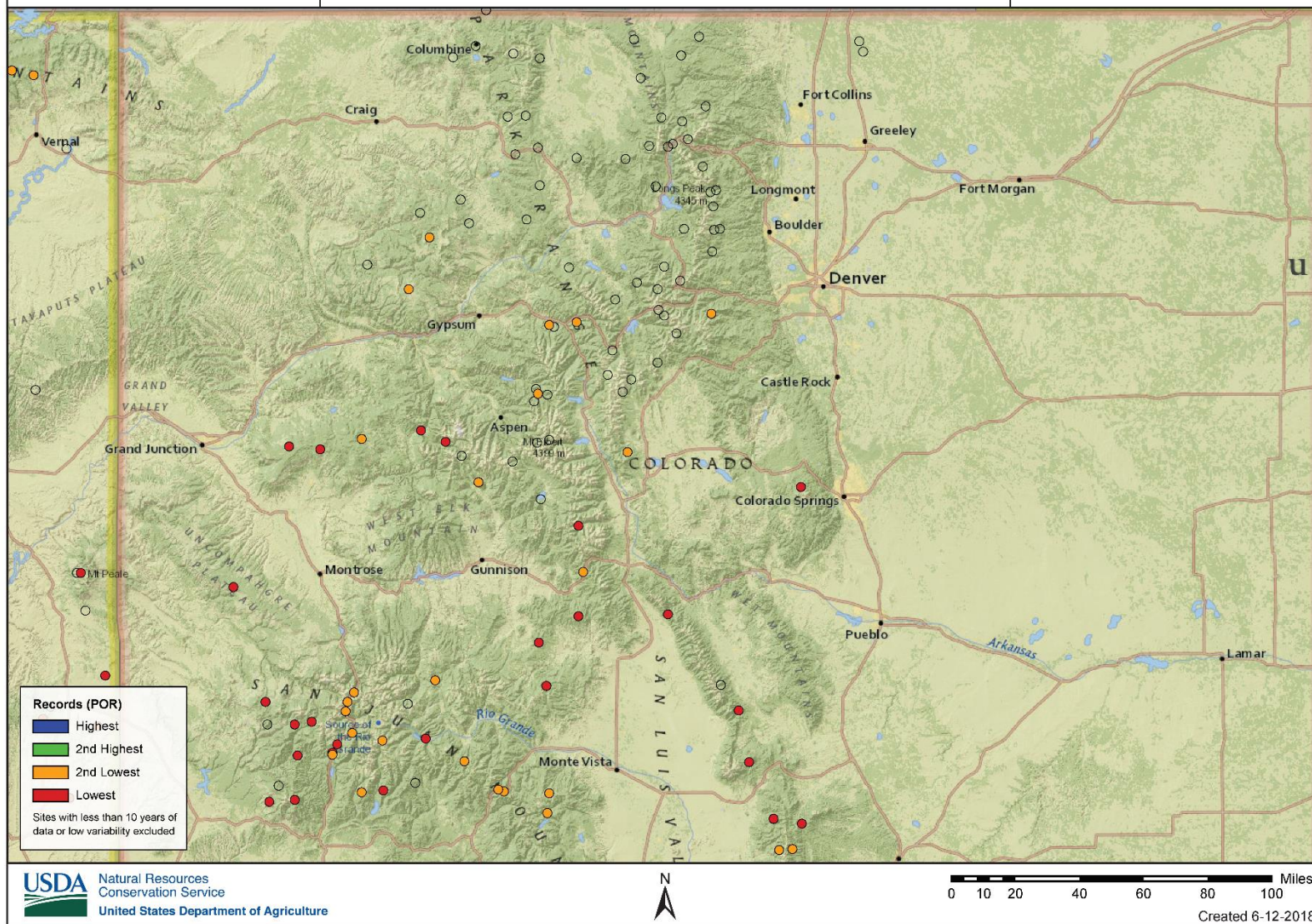


# Colorado Snow Surveys

Water Year to Date Precipitation

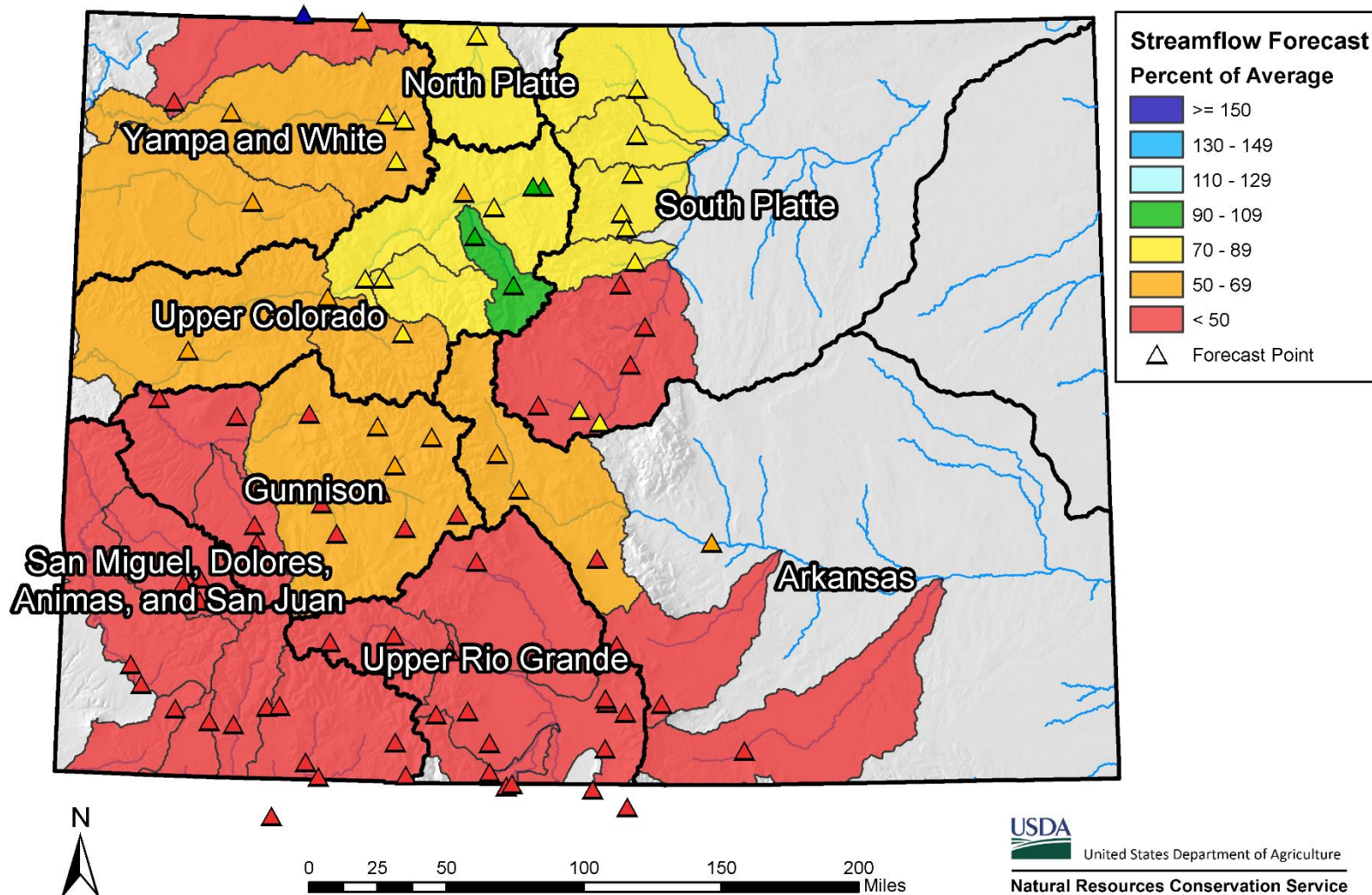
Records (POR)

October 1, 2017 - June 11, 2018

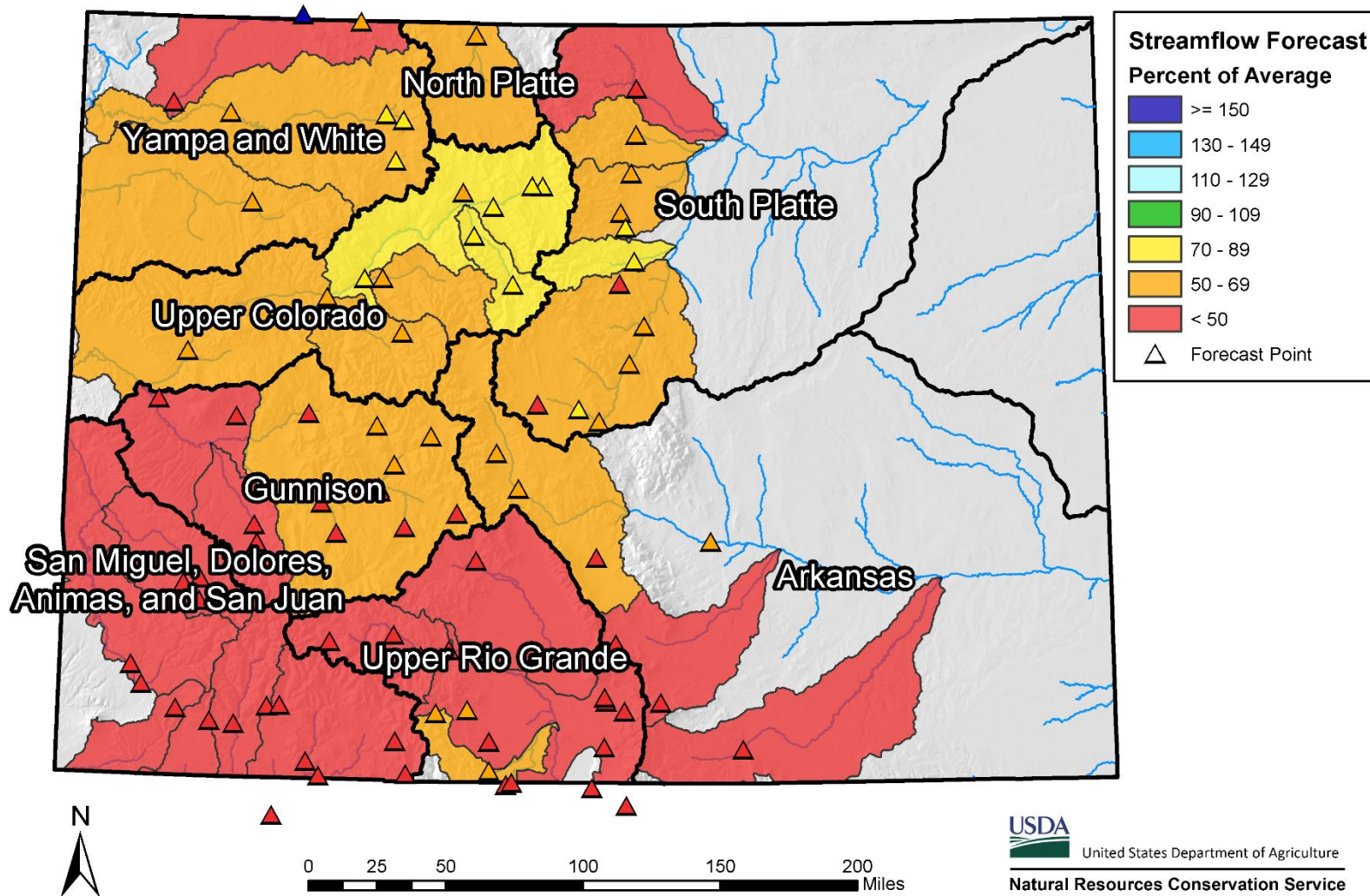




## Colorado Streamflow Forecasts Summary May 1, 2018



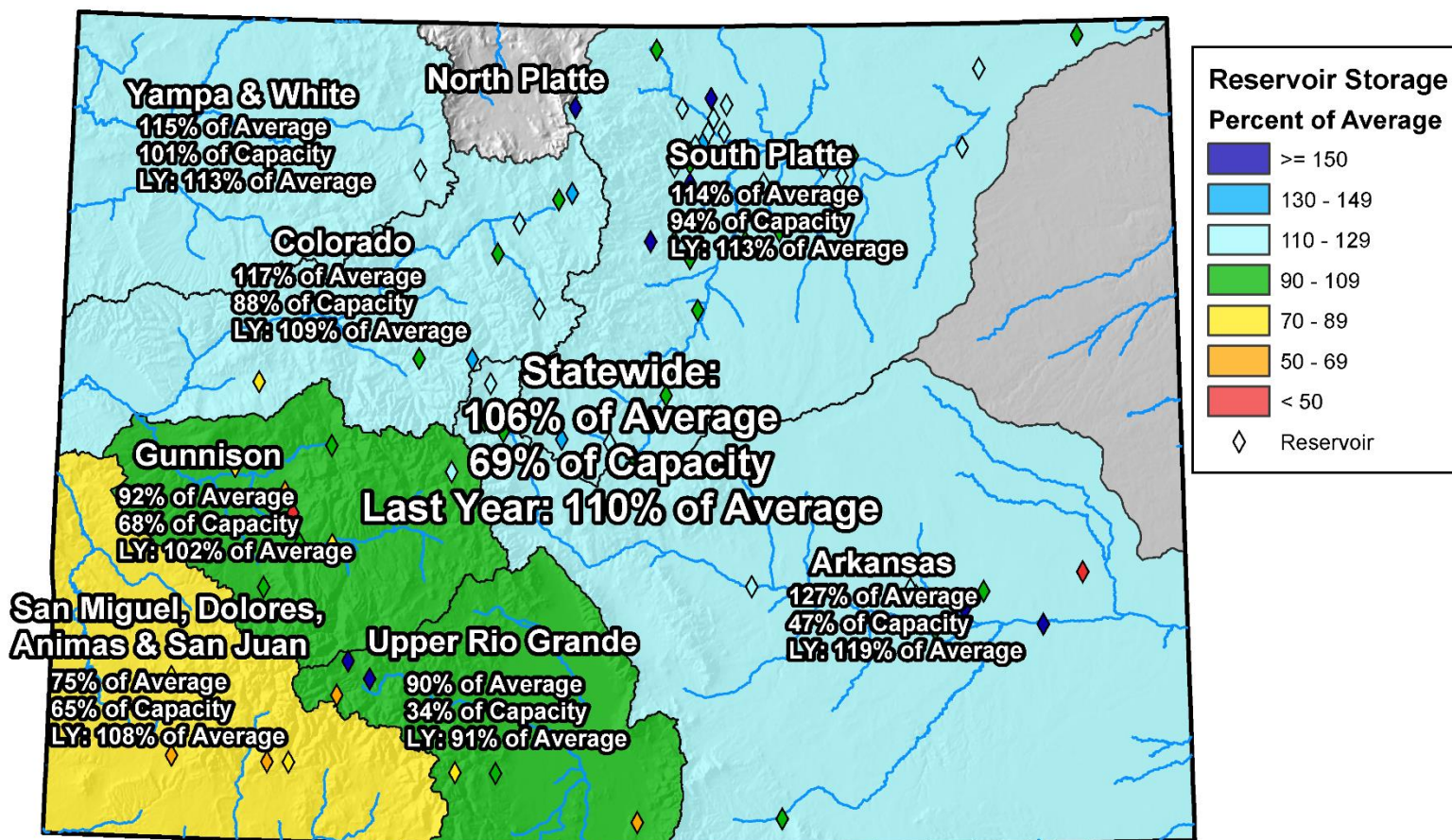
## Colorado Streamflow Forecasts Summary June 1, 2018





## Colorado Monthly Reservoir Storage Summary

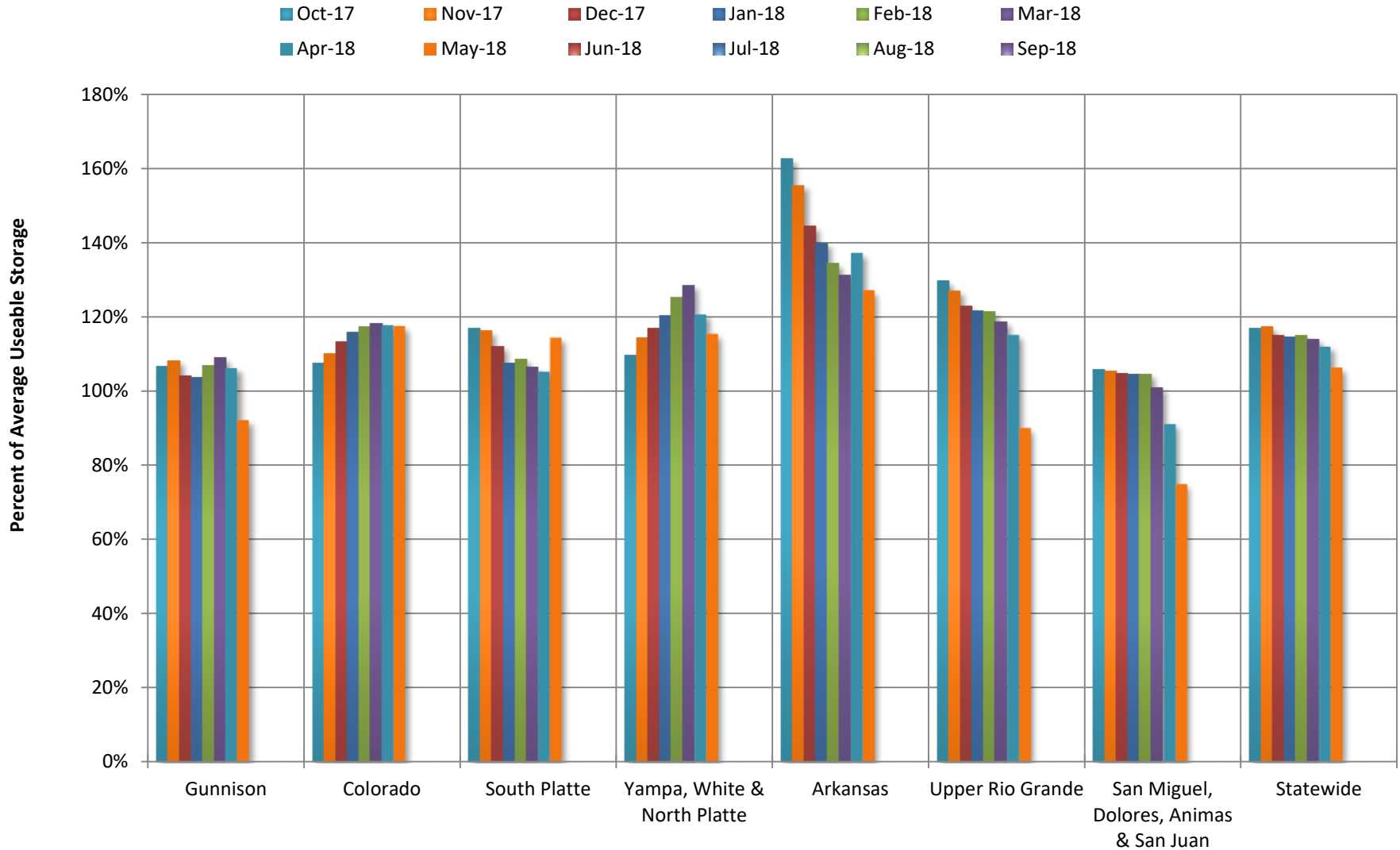
End of May 2018



0 25 50 100 150 200 Miles

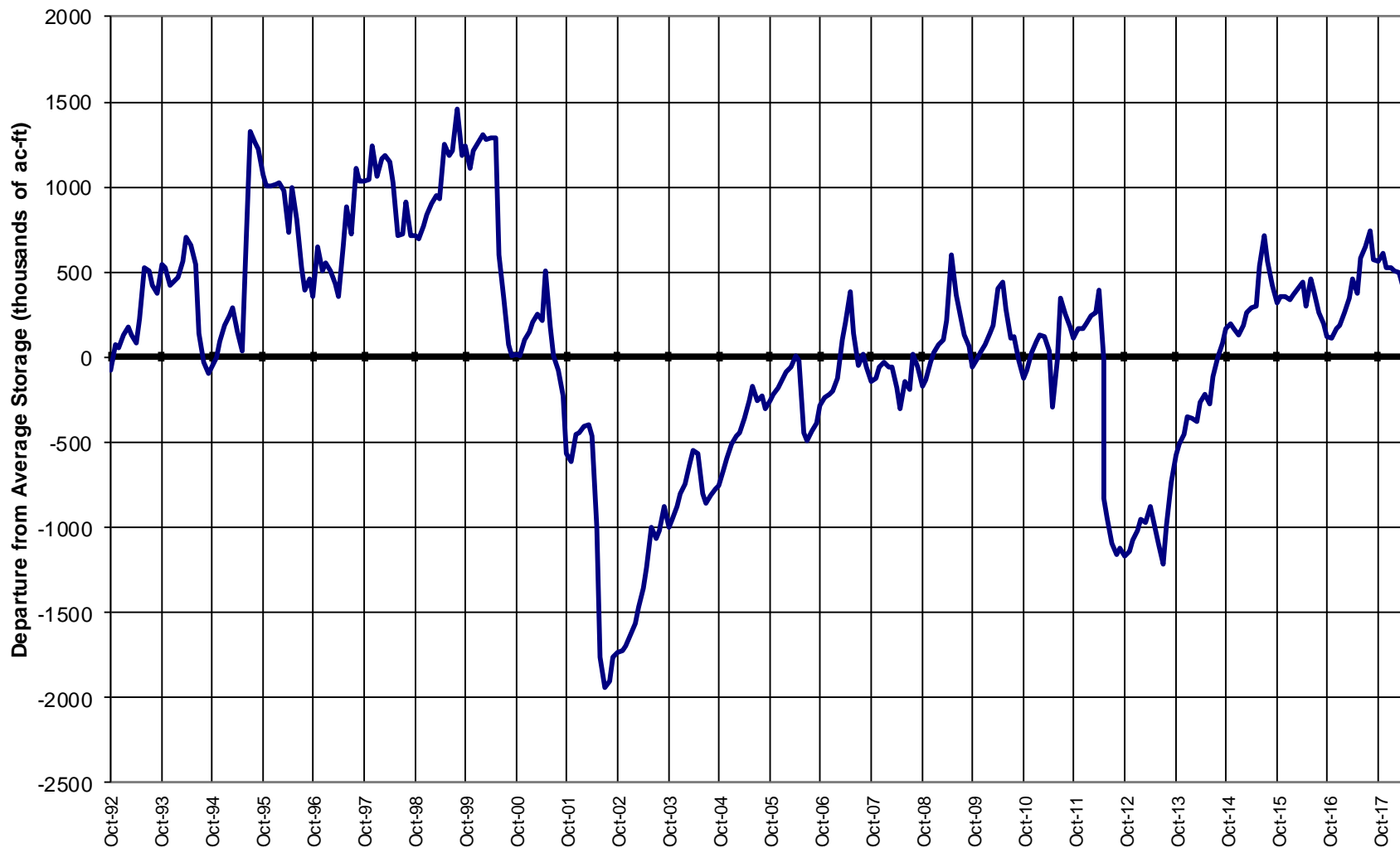


## Colorado Reservoir Storage

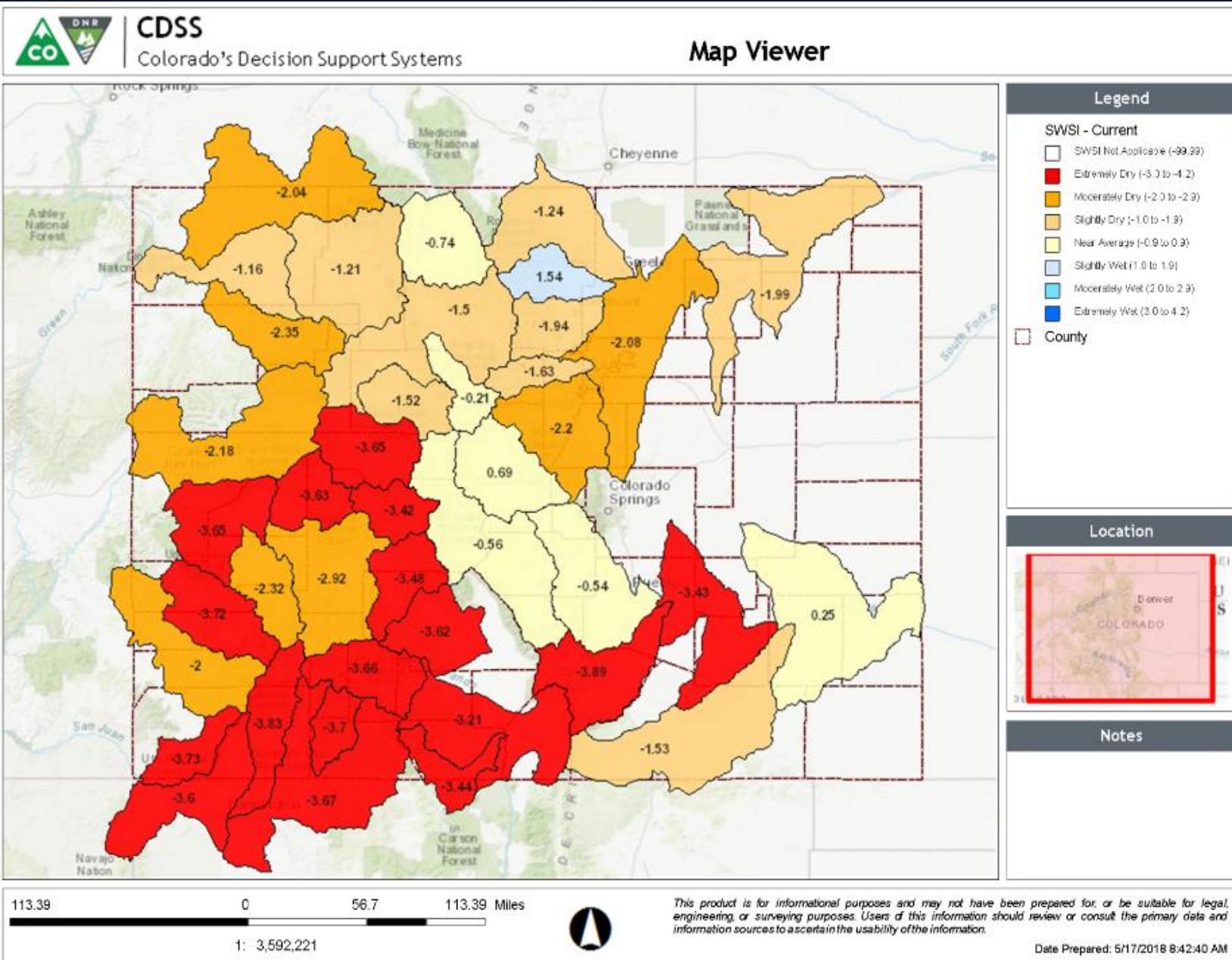




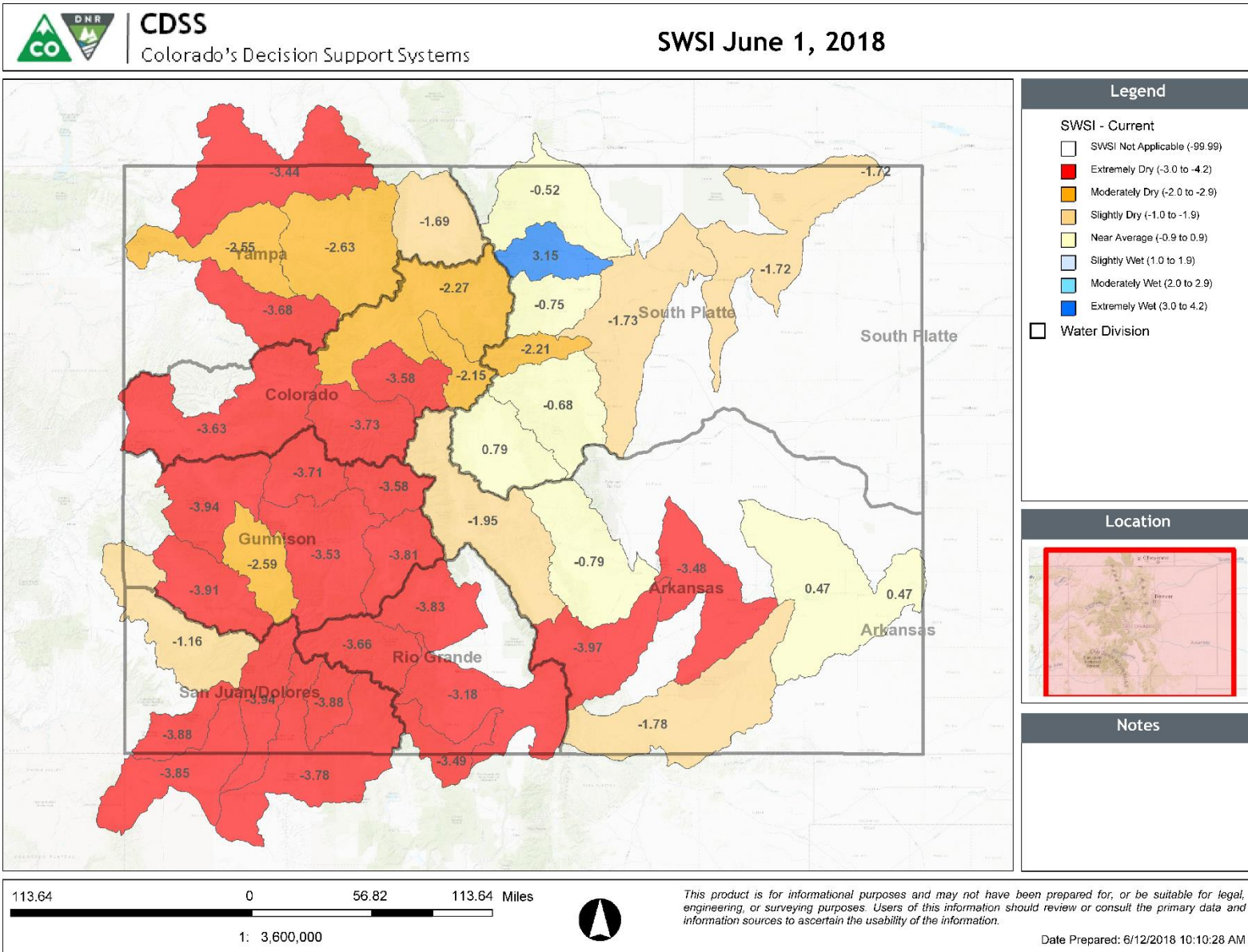
## COLORADO STATEWIDE Reservoir Storage Departure from Average



May 1, 2018 SWSI



June 1, 2018 SWSI





## Summary

- Statewide snowpack is **GONE** – Most Southern CO sites saw record or near record low snowpack peaks
- May precipitation was 56% of normal
- June precipitation so far - 33% of normal
- Most SNOTEL sites in southern Colorado are recording record low or near record low water year precipitation values
- Streamflow forecasts are all below average
  - Closer to normal in Northern basins
  - Well below normal in Southern basins- none above 40 percent of average for the San Juan and Sangre de Cristo Mountains
  - Hydrograph peaks were 2 – 3 week earlier than normal - most particularly those in Southern CO
- Reservoir storage fell 15% or more from May 1 -> June 1 in the Gunnison, Rio Grande & Southwest Basins. Statewide – 106%



United States Department of Agriculture

Colorado Snow Surveys

# Water Availability Task Force Meeting

## June 14<sup>th</sup>, 2018

### NRCS Snow Survey and Water Supply Forecasting Program

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720-544-2852

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



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