



United States Department of Agriculture

Colorado Snow Surveys

# Water Availability Task Force Meeting

## September 25<sup>th</sup>, 2019

### NRCS Snow Survey and Water Supply Forecasting Program

Karl Wetlaufer

Hydrologist

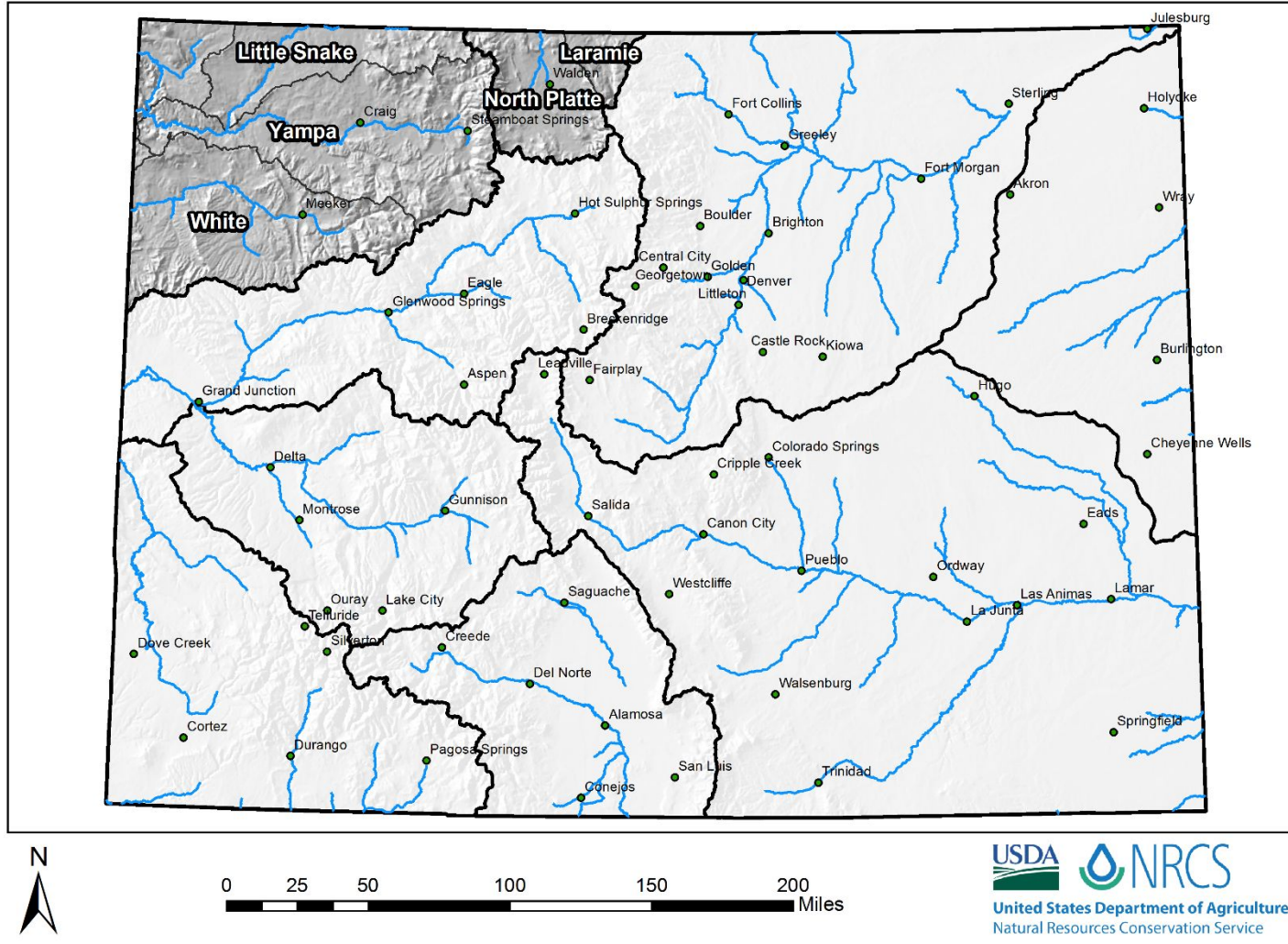
Asst. Snow Survey Supervisor

720-544-2853

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

## Major Basin Summary

Yampa, White, and North Platte River Basins



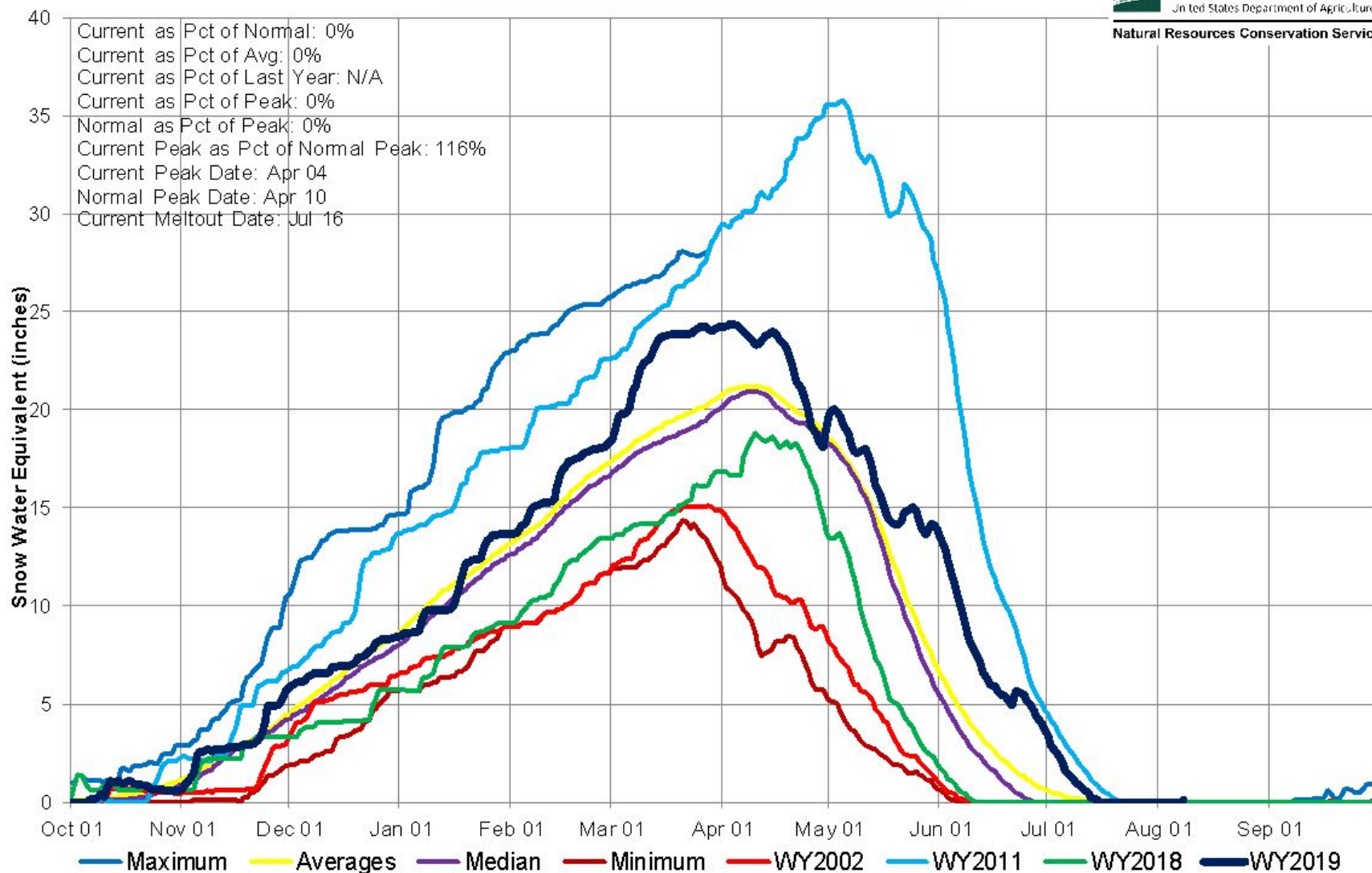
## Yampa and White River Basins High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of Aug 08, 2019*



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# Colorado Snow Surveys

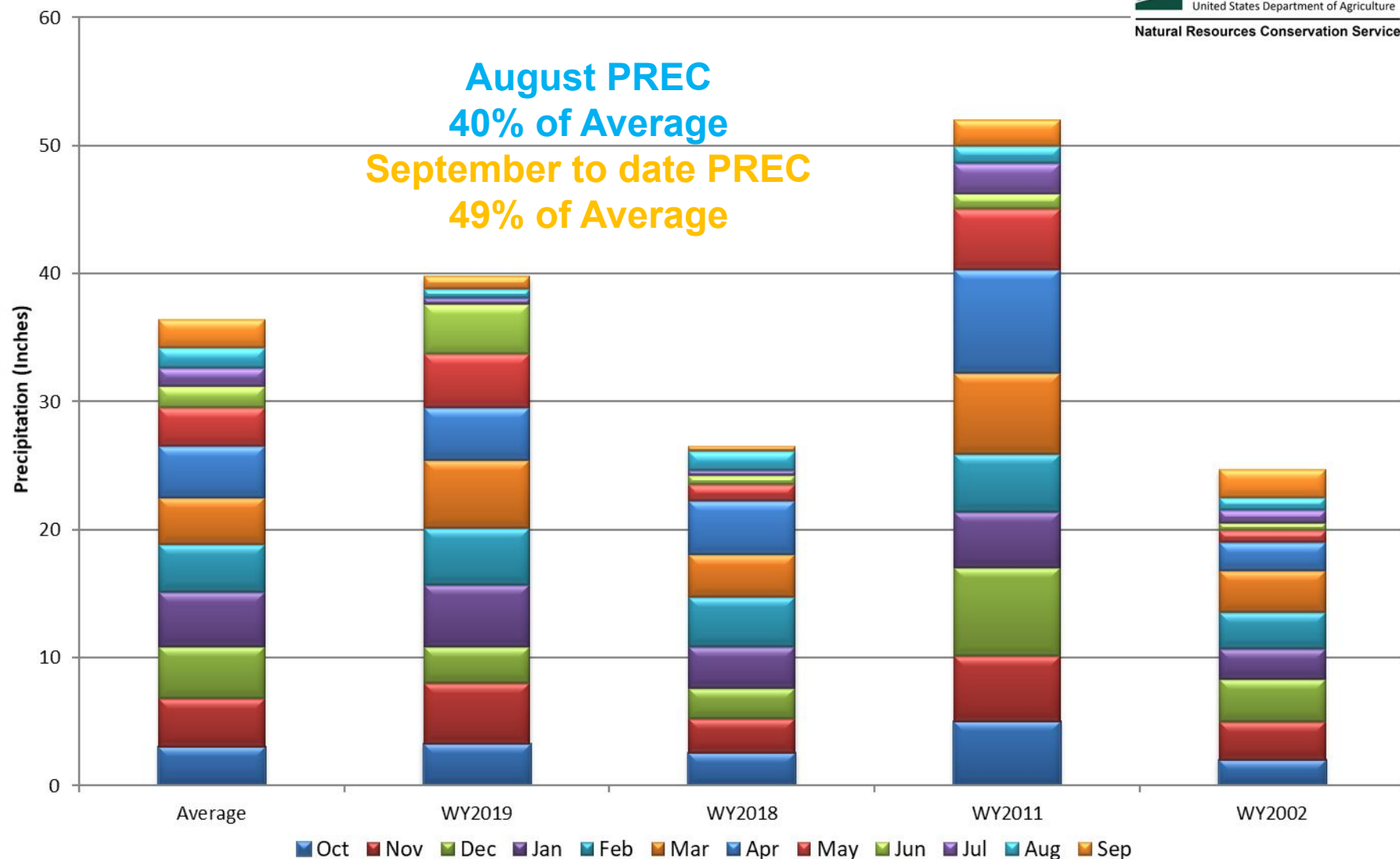
## Yampa and White River Basins High/Low Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of Sep 25, 2019*



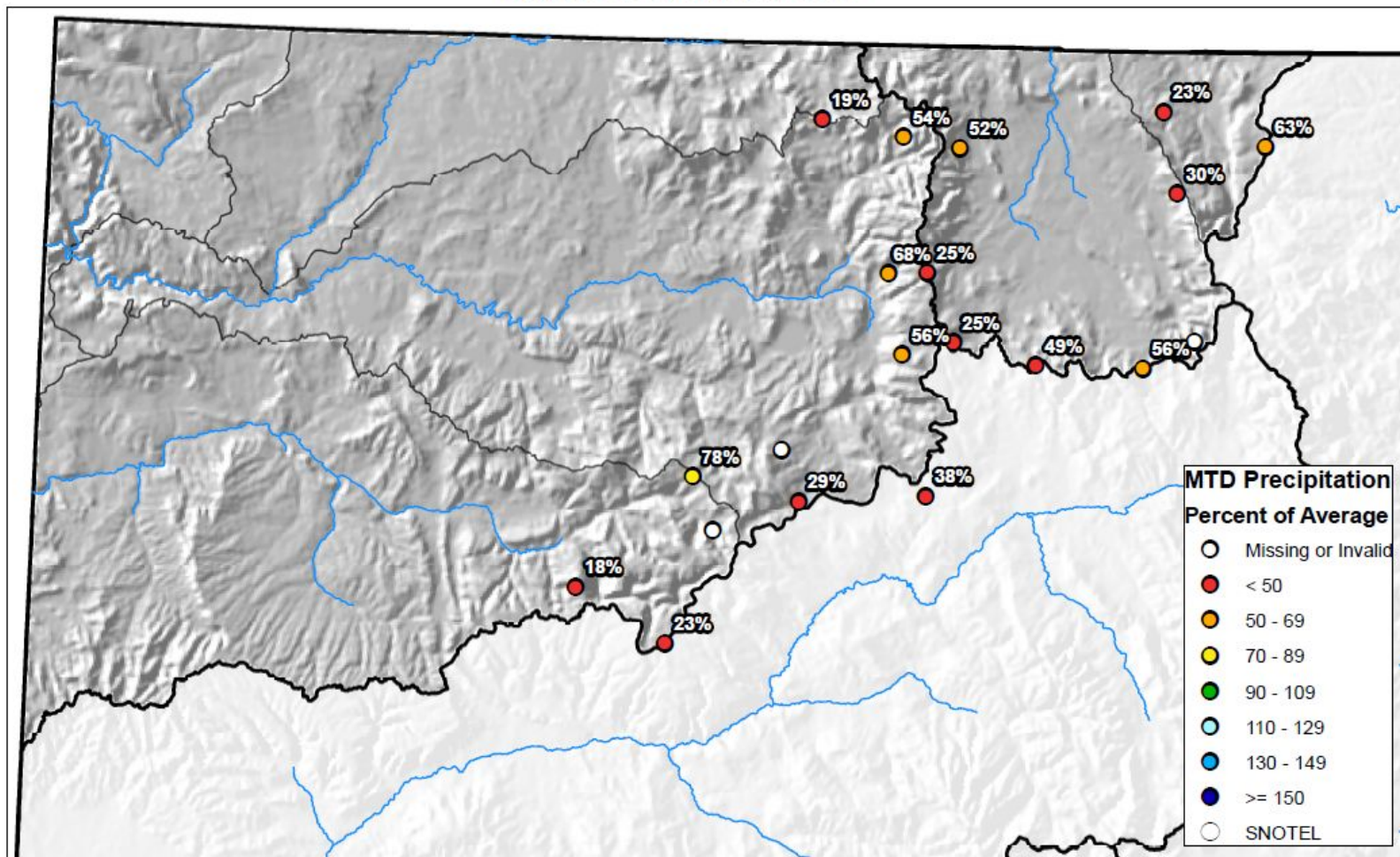
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## Yampa, White, and North Platte River Basins Month to Date Precipitation Summary Current as of Sep 23, 2019



0 10 20 40 60 80 Miles

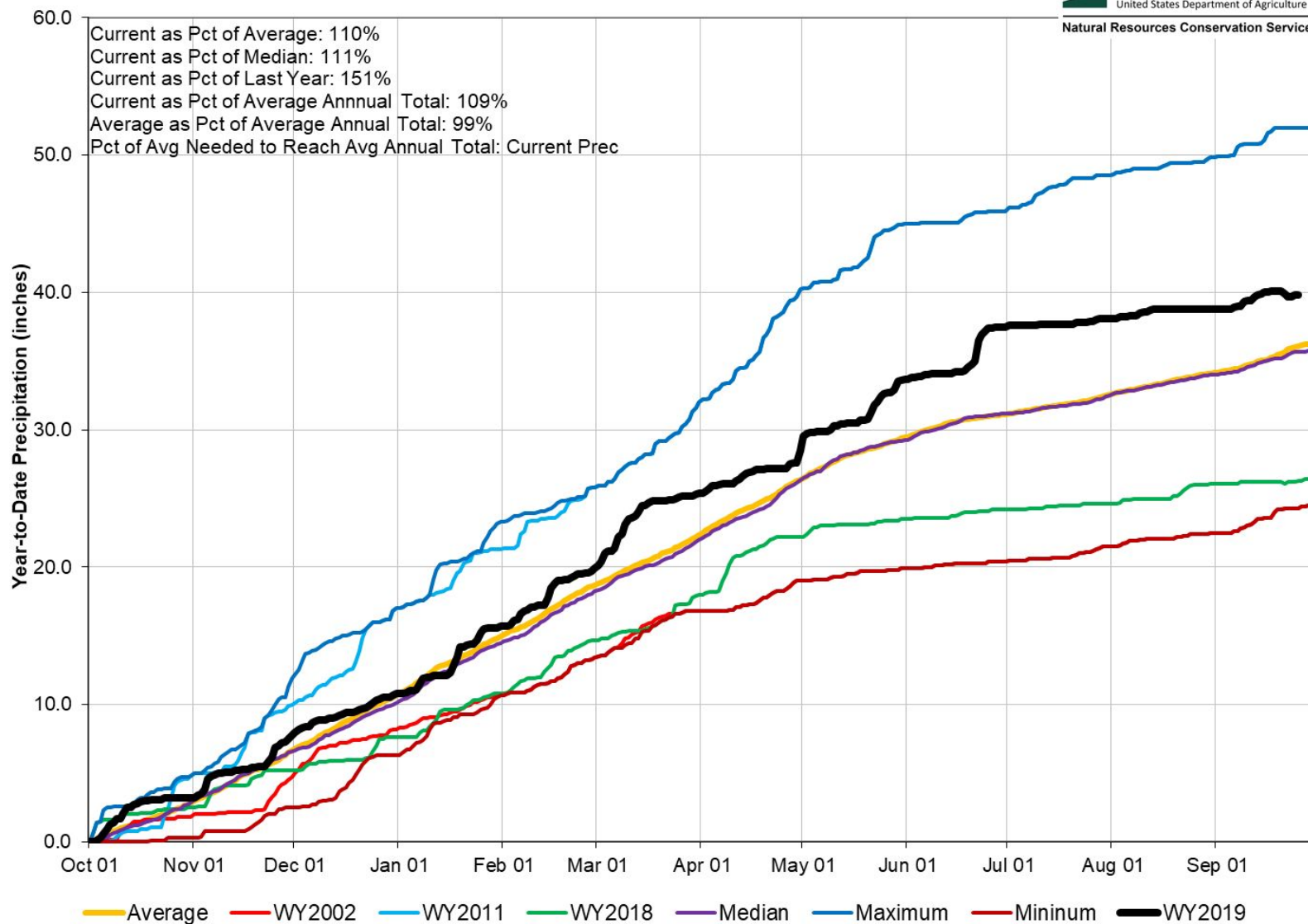
## Yampa and White River Basins High/Low Year-to-Date Precipitation Summary

*Based on Provisional SNOTEL data as of Sep 25, 2019*



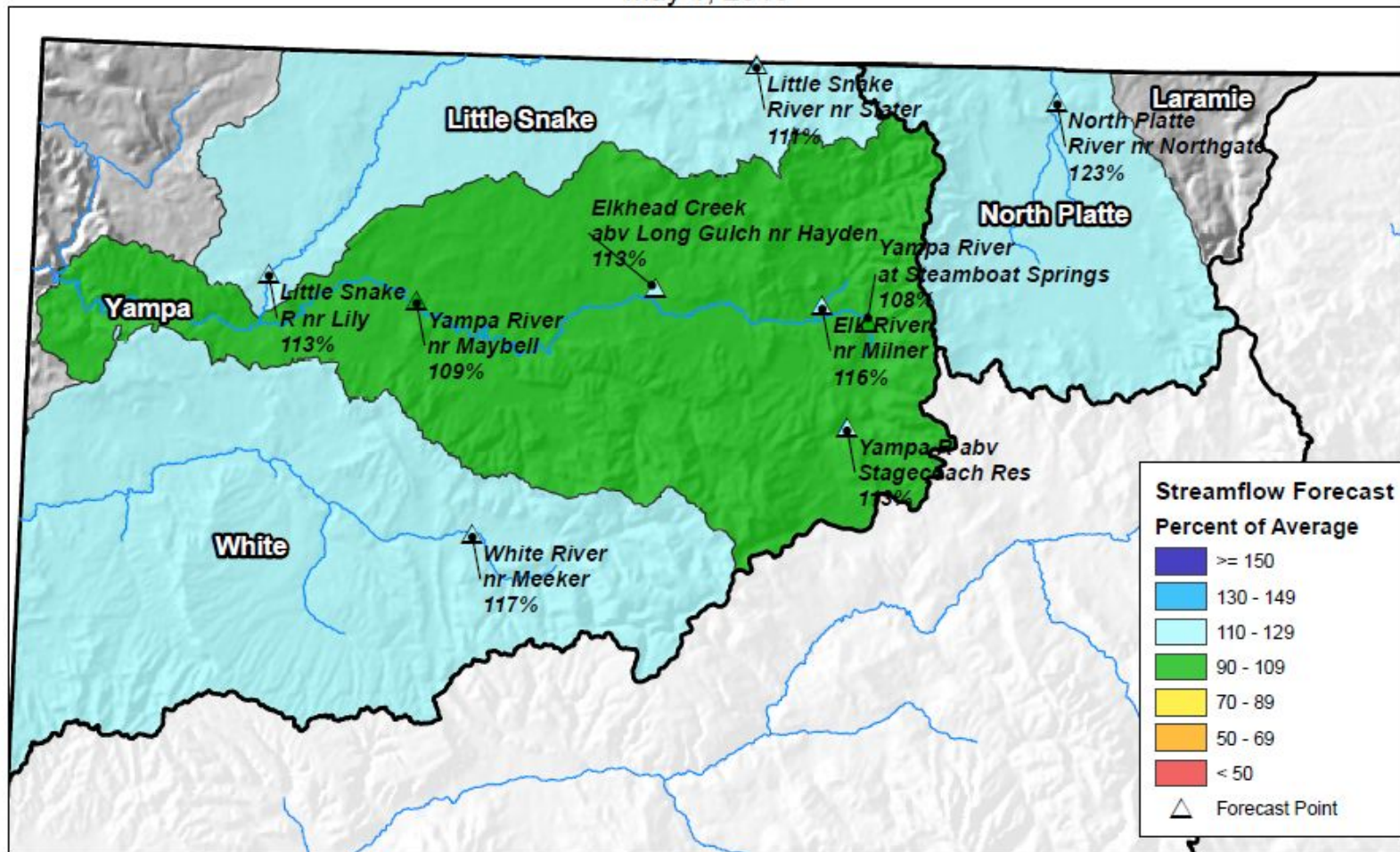
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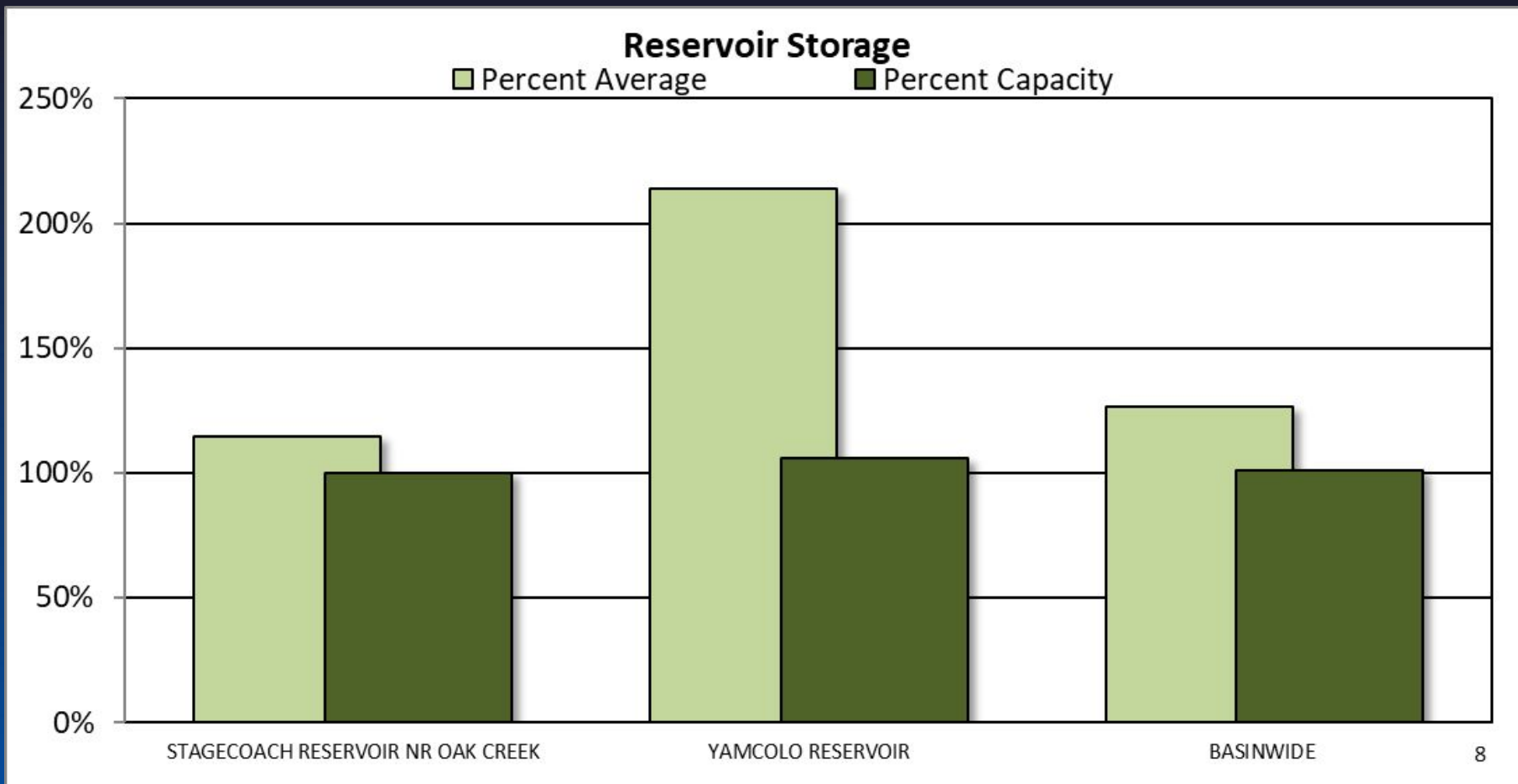




## Yampa, White, and North Platte River Basins Streamflow Forecast Summary May 1, 2019

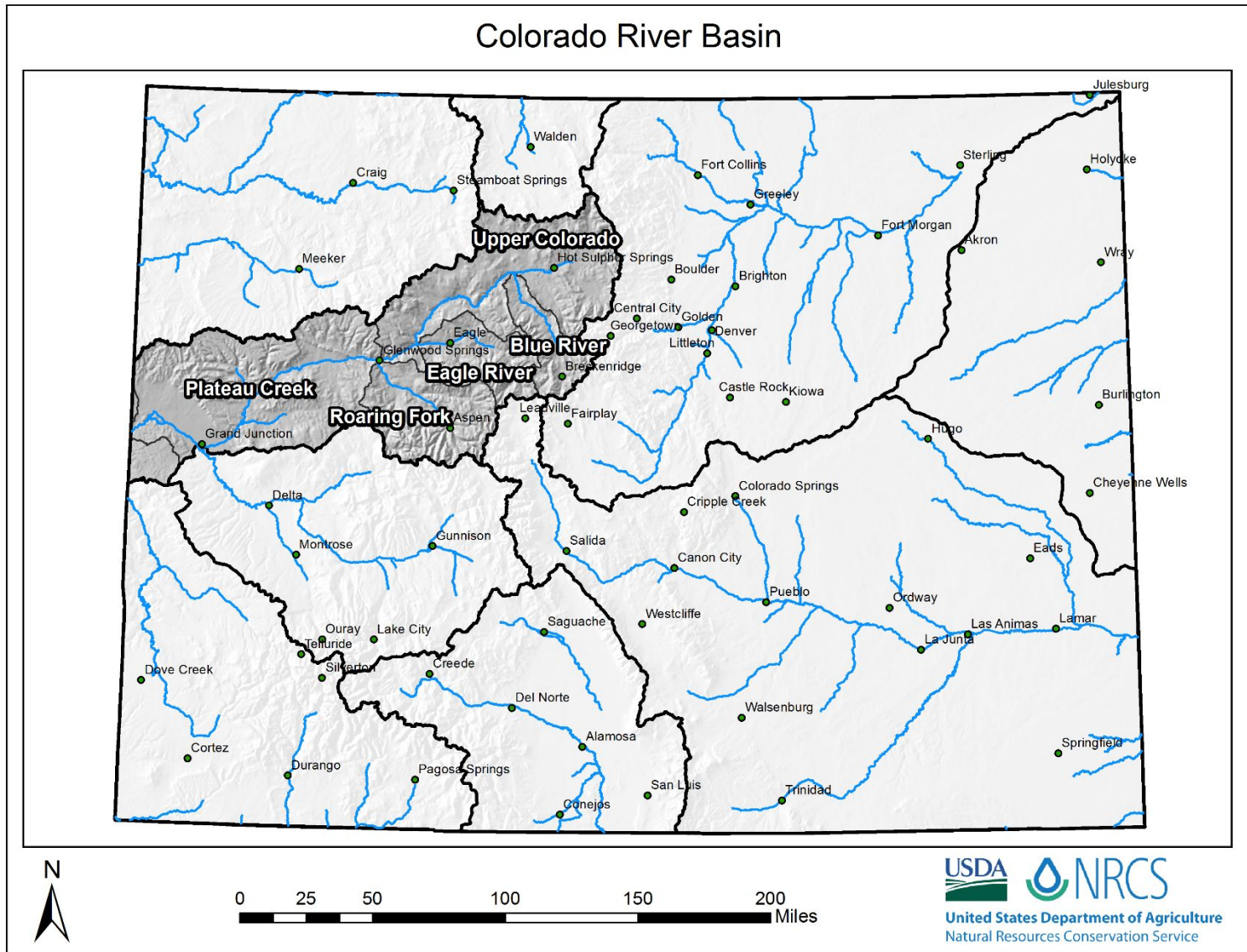


0 10 20 40 60 80 Miles





## Major Basin Summary





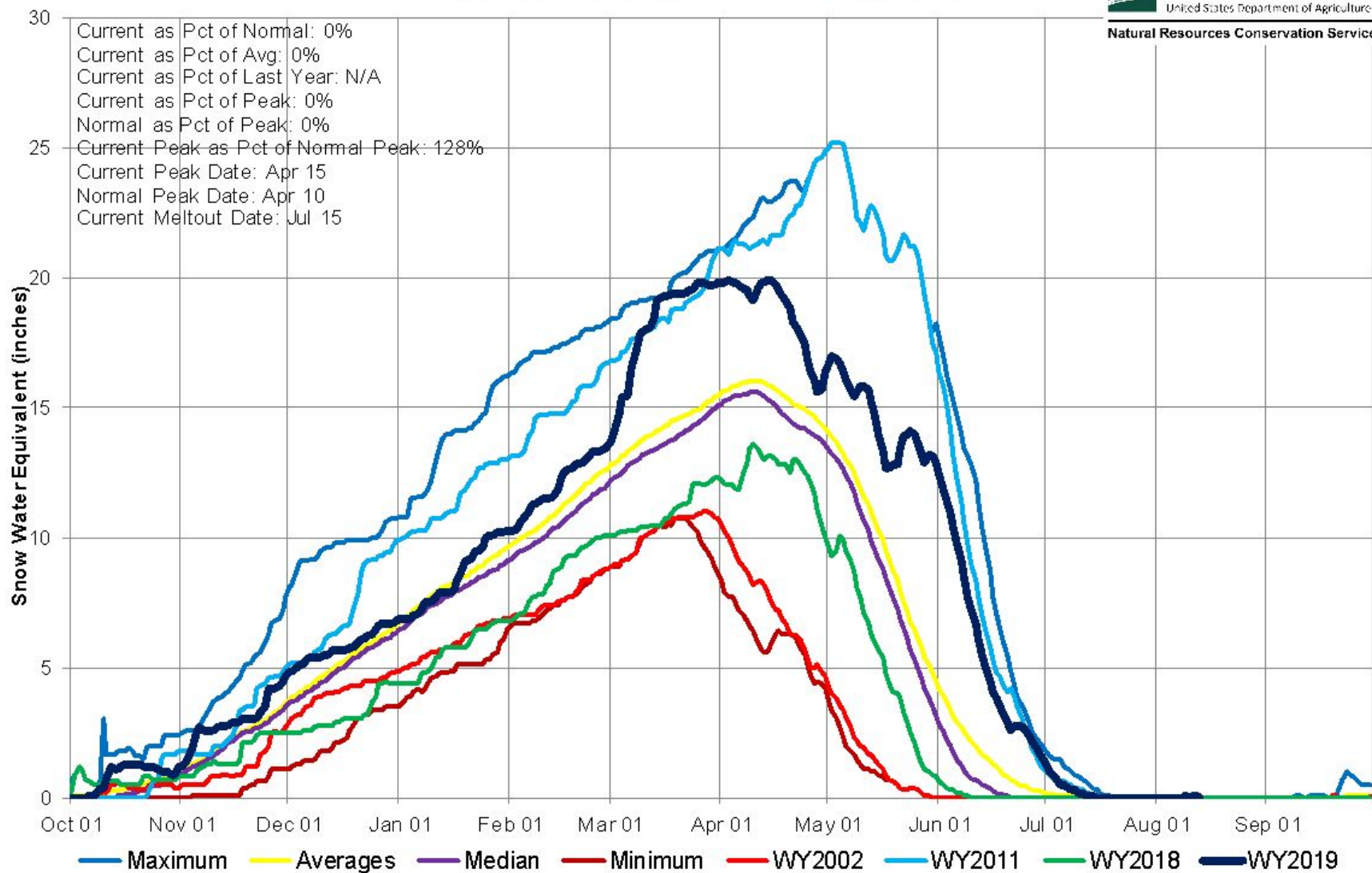
## Upper Colorado River Basin High/Low Snowpack Summary

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



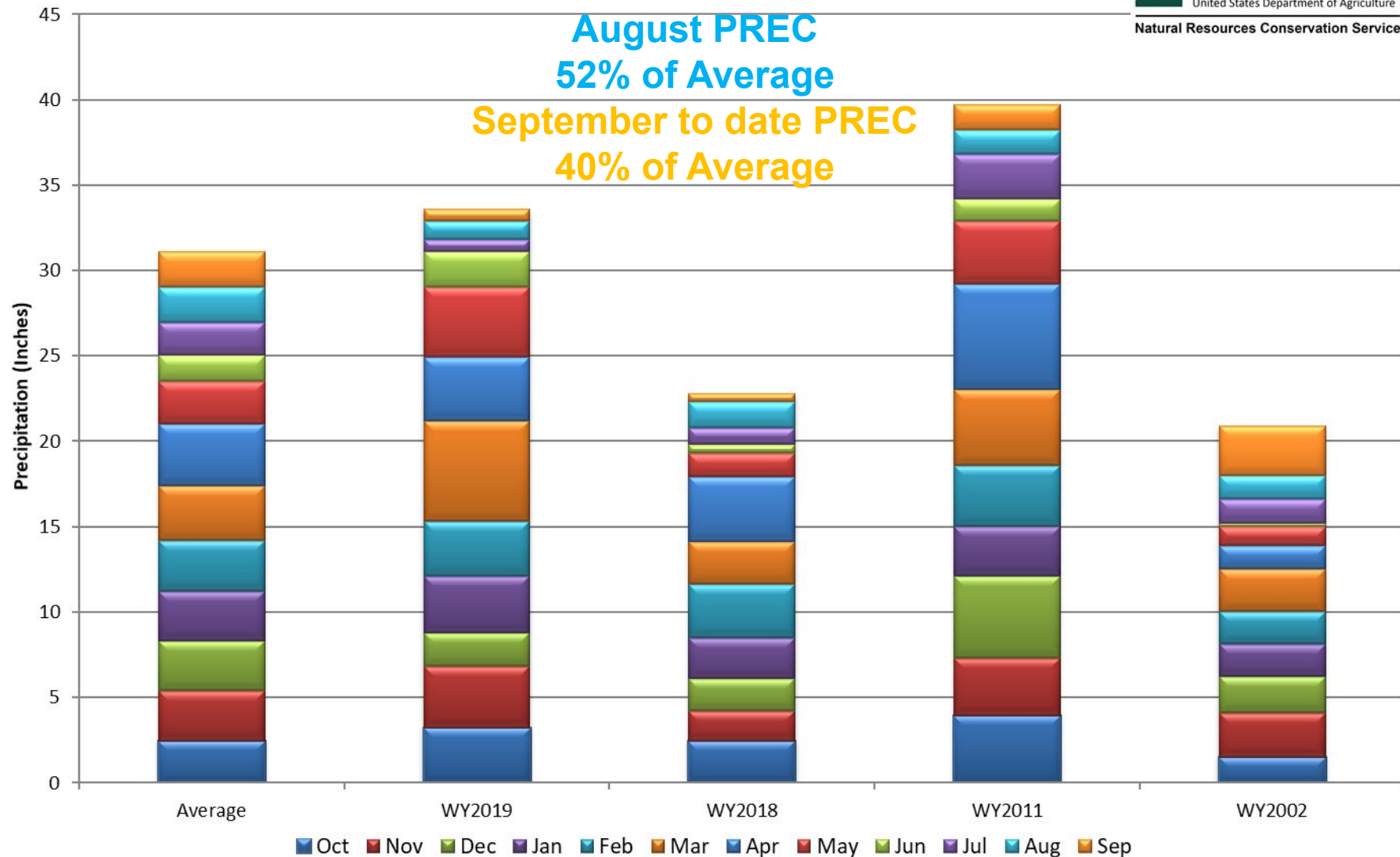
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## Upper Colorado River Basin High/Low Monthly Precipitation Summary

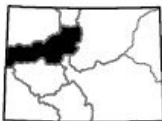
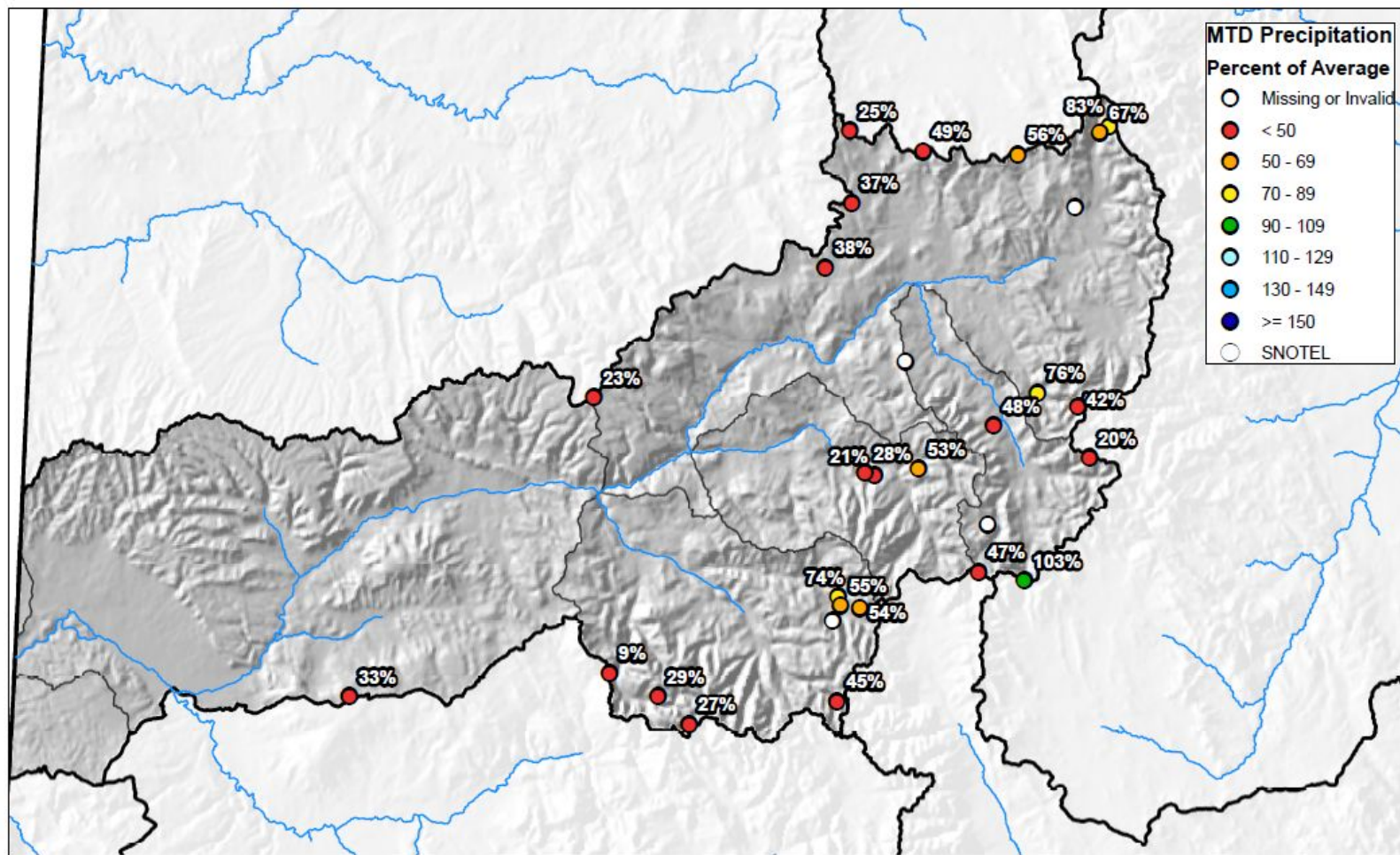
*Based on Provisional SNOTEL data as of Sep 25, 2019*





## Upper Colorado River Basin Month to Date Precipitation Summary

Current as of Sep 23, 2019



0 10 20 40 60 80 Miles



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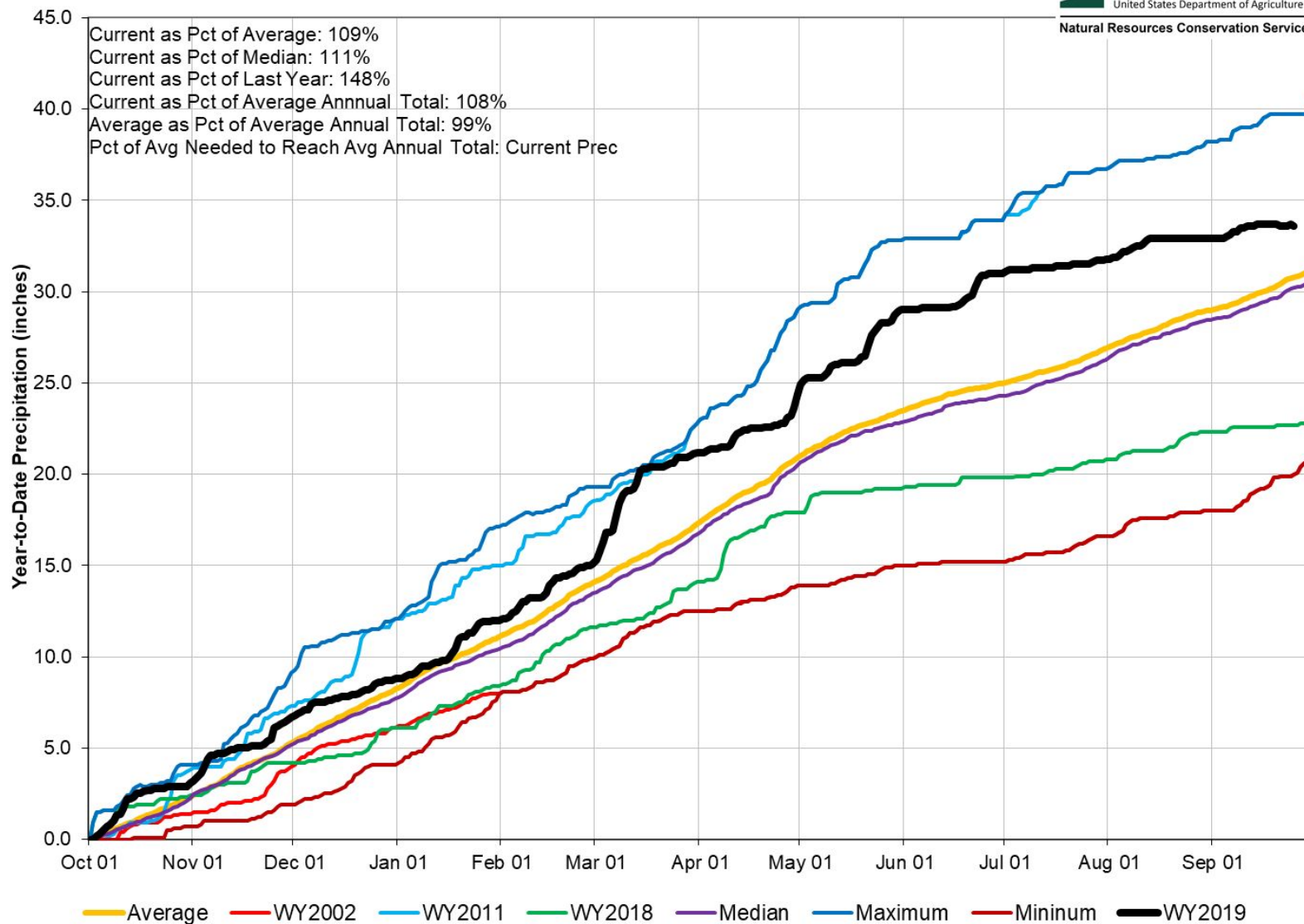
## Upper Colorado River Basin High/Low Year-to-Date Precipitation Summary

*Based on Provisional SNOTEL data as of Sep 25, 2019*



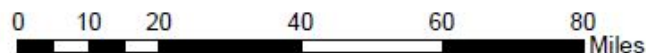
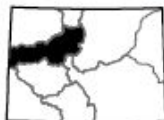
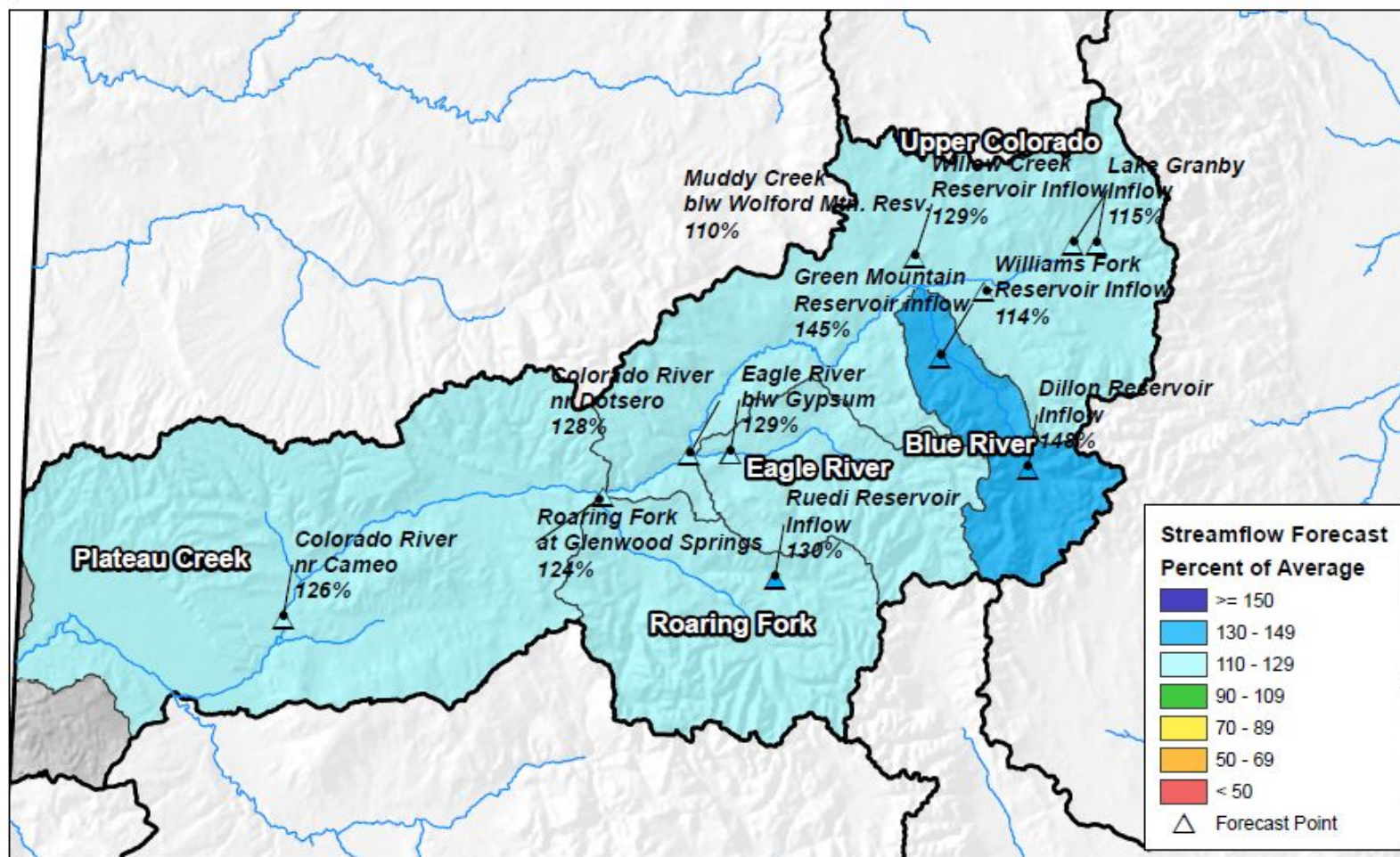
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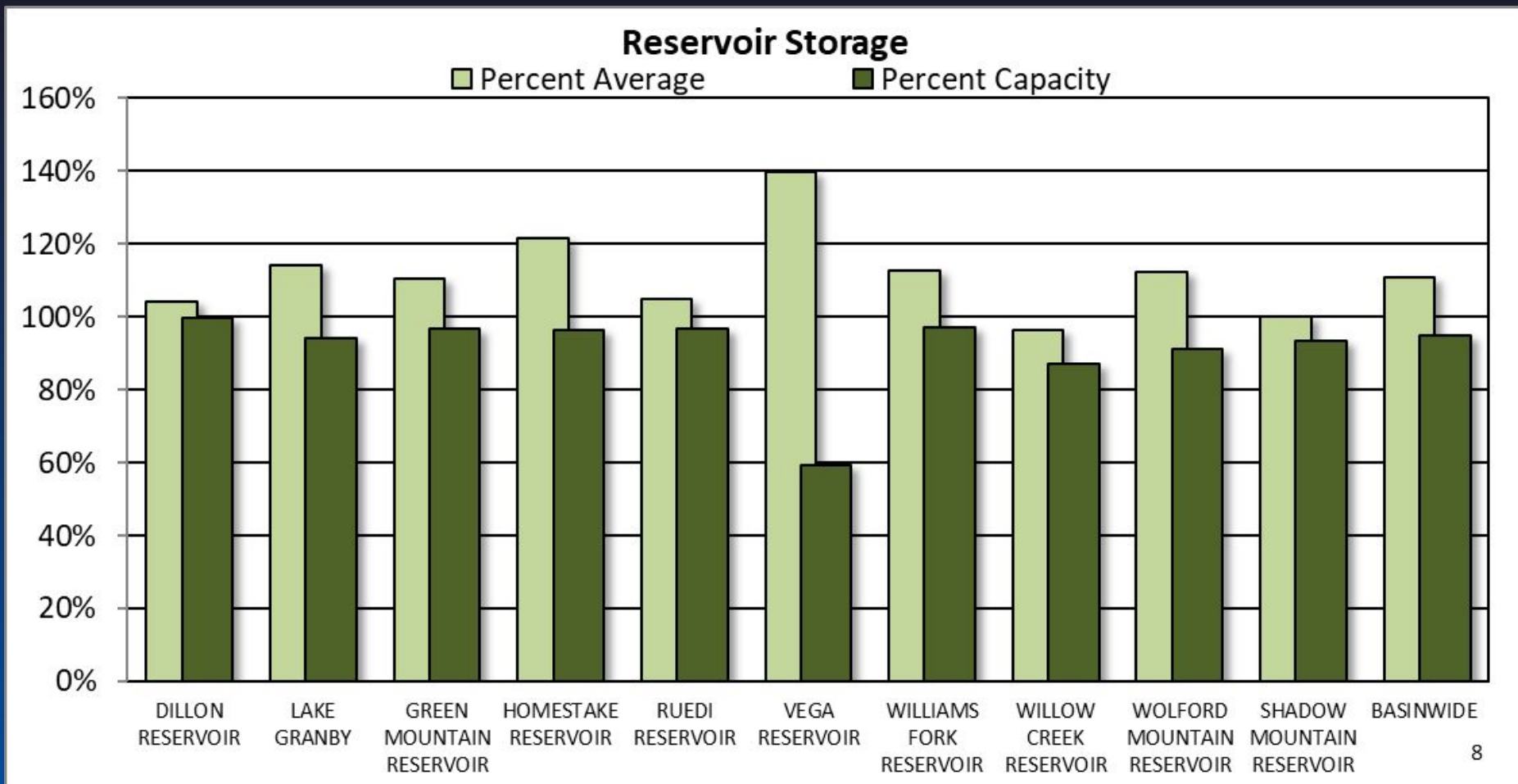
## Upper Colorado River Basin Streamflow Forecast Summary

May 1, 2019



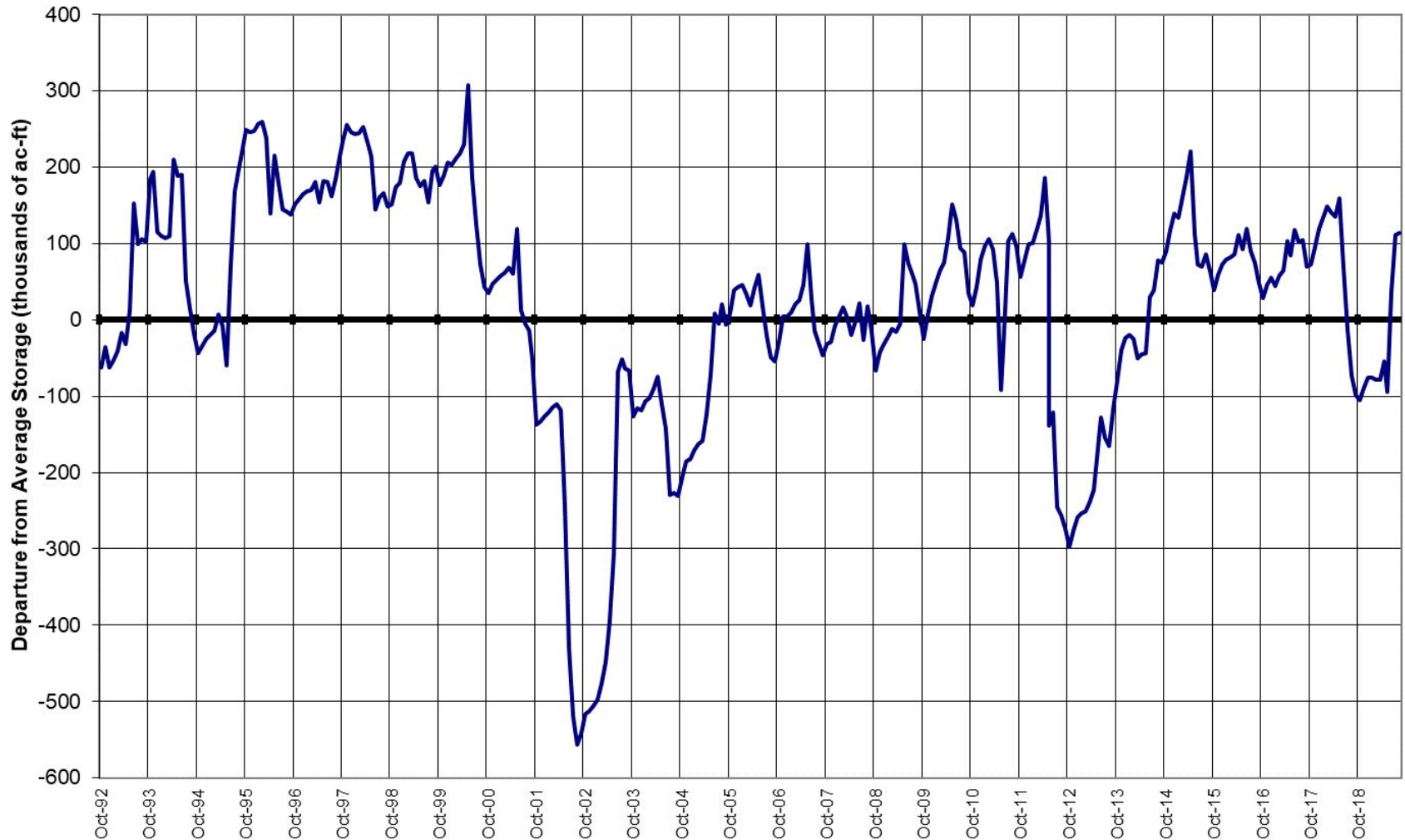
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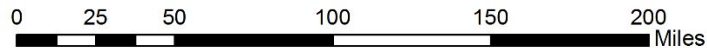
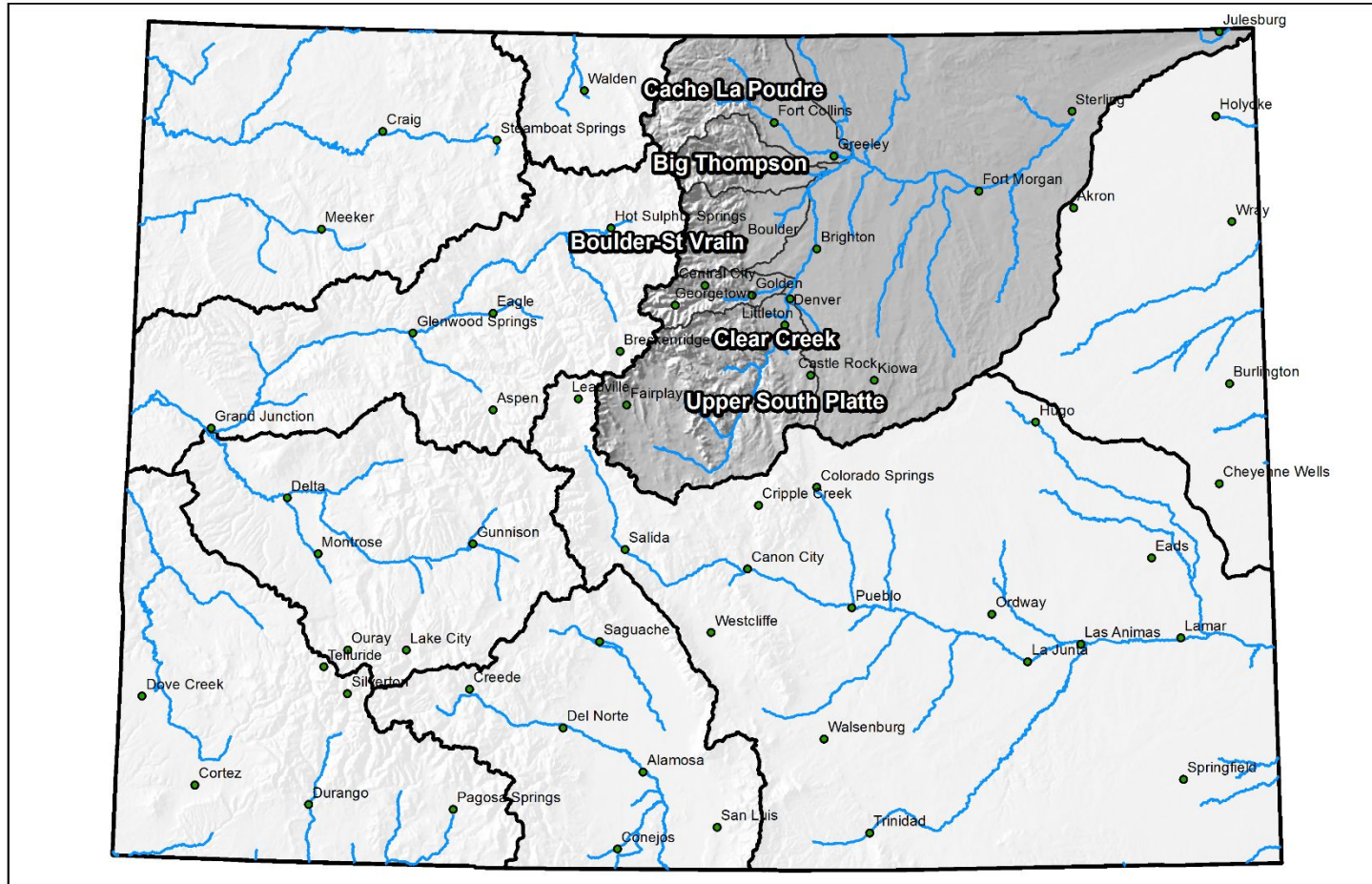
## COLORADO RIVER BASIN Reservoir Storage Departure from Average





## Major Basin Summary

### South Platte River Basin





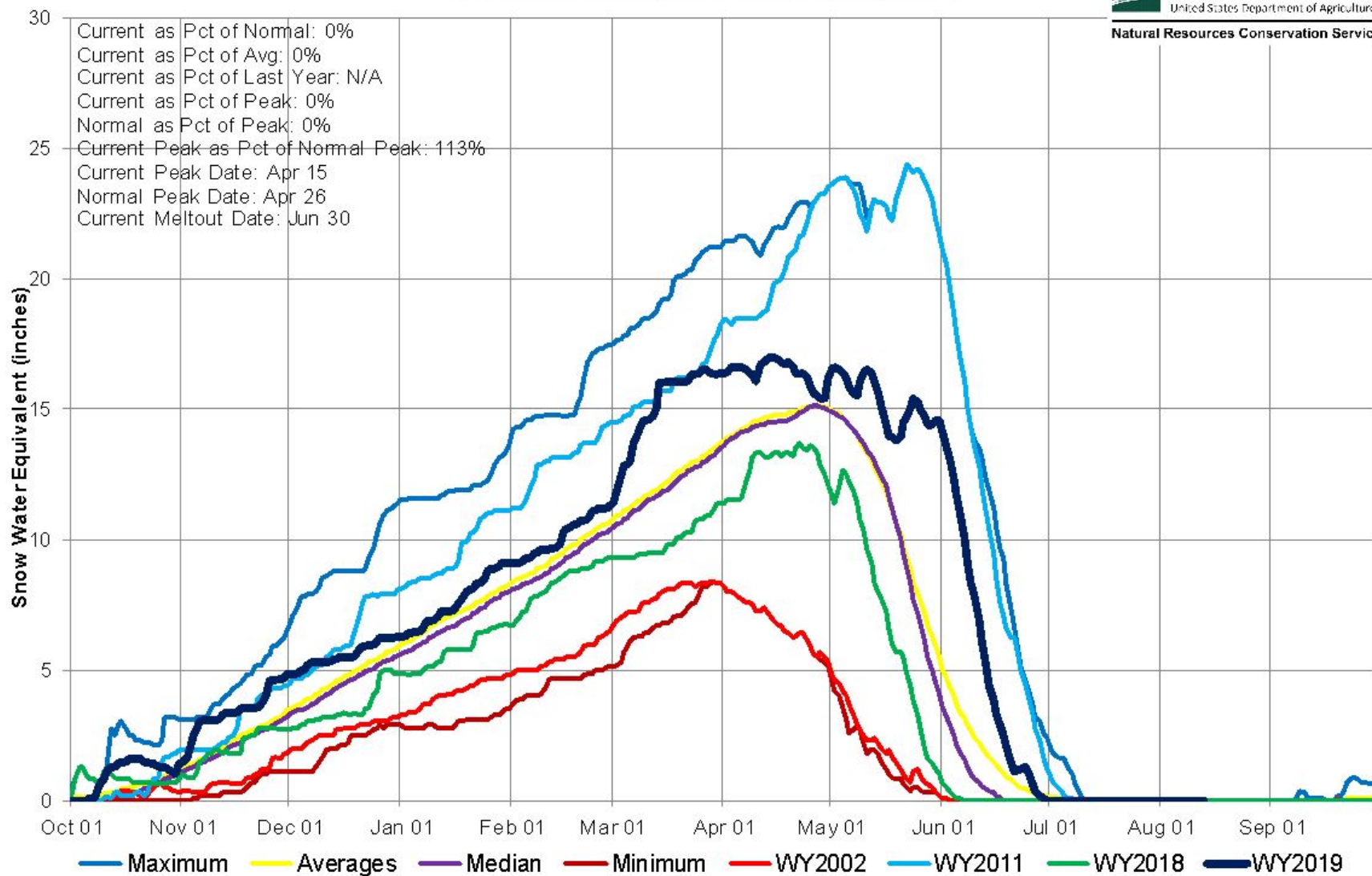
## South Platte River Basin High/Low Snowpack Summary

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



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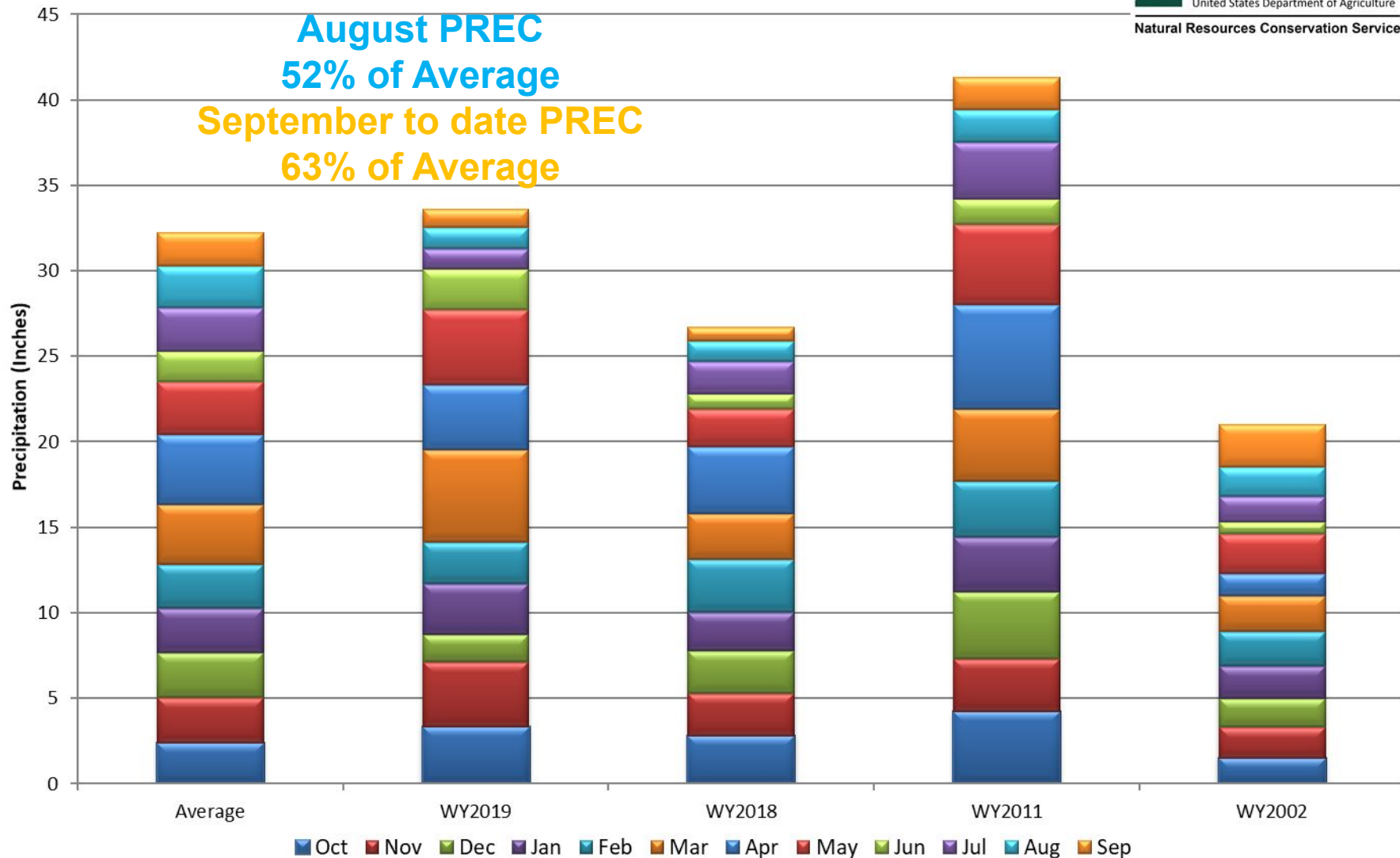
## South Platte River Basin High/Low Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of Sep 25, 2019*



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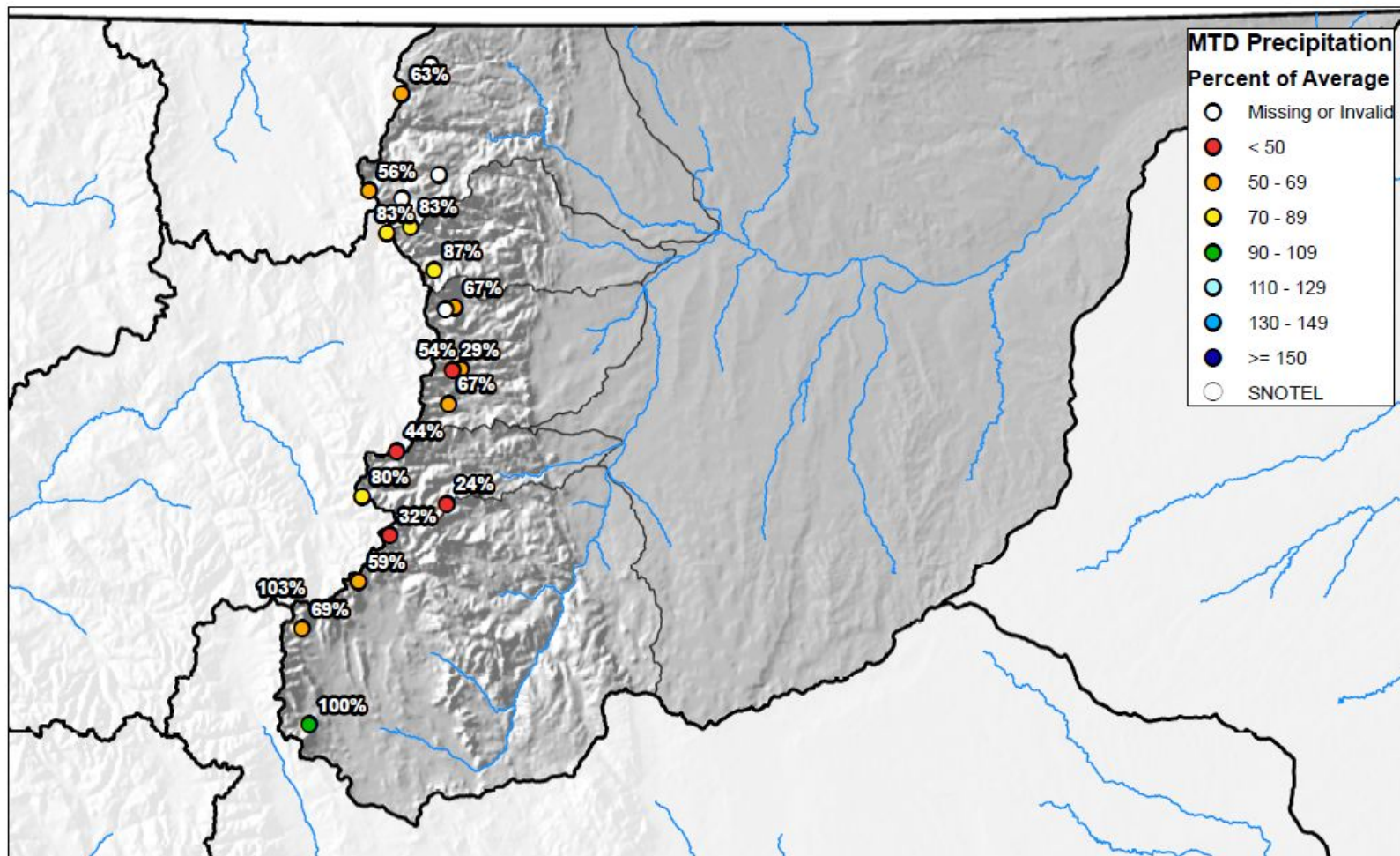
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## South Platte River Basin Month to Date Precipitation Summary

Current as of Sep 23, 2019

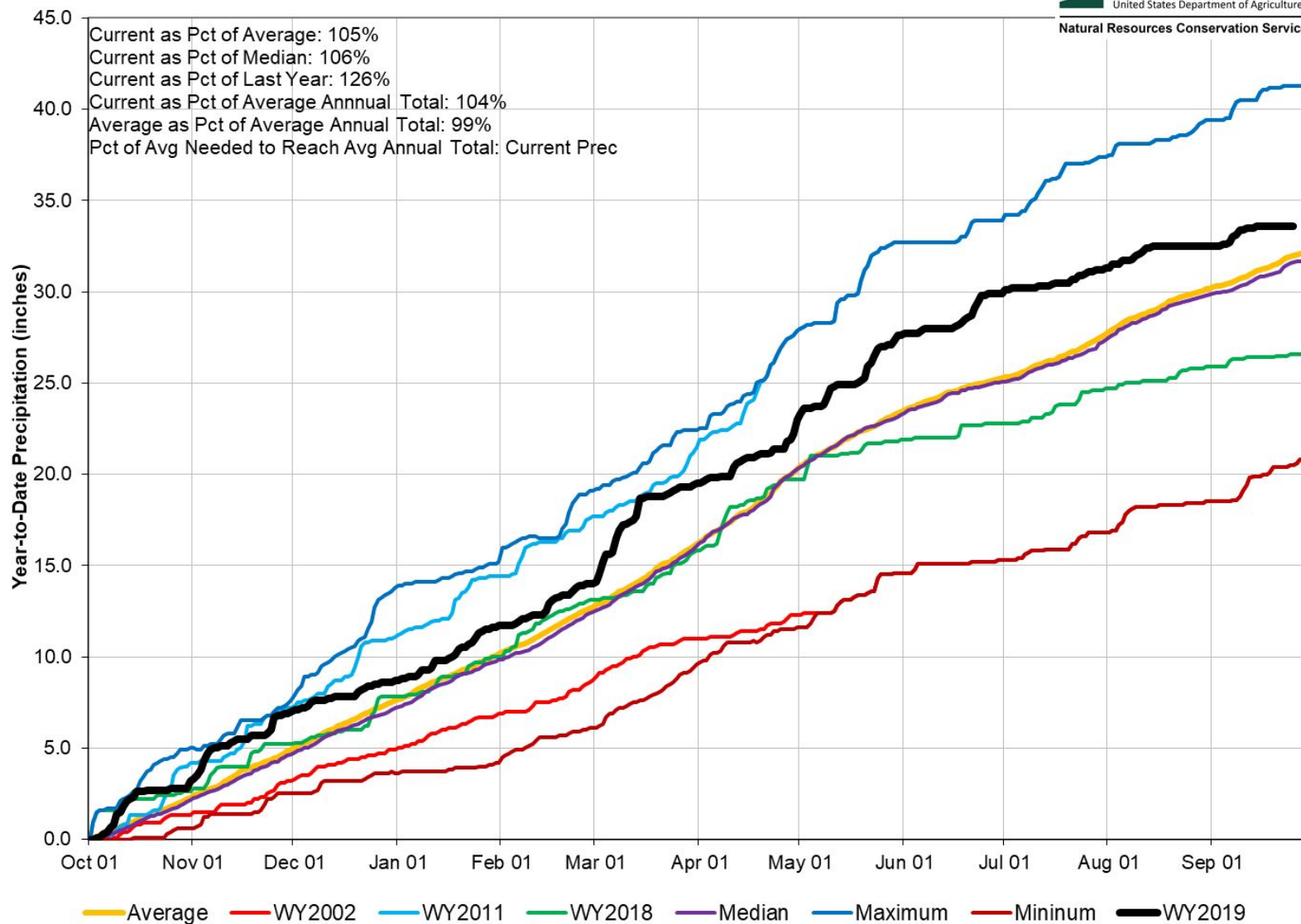


0 10 20 40 60 80 Miles



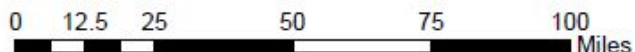
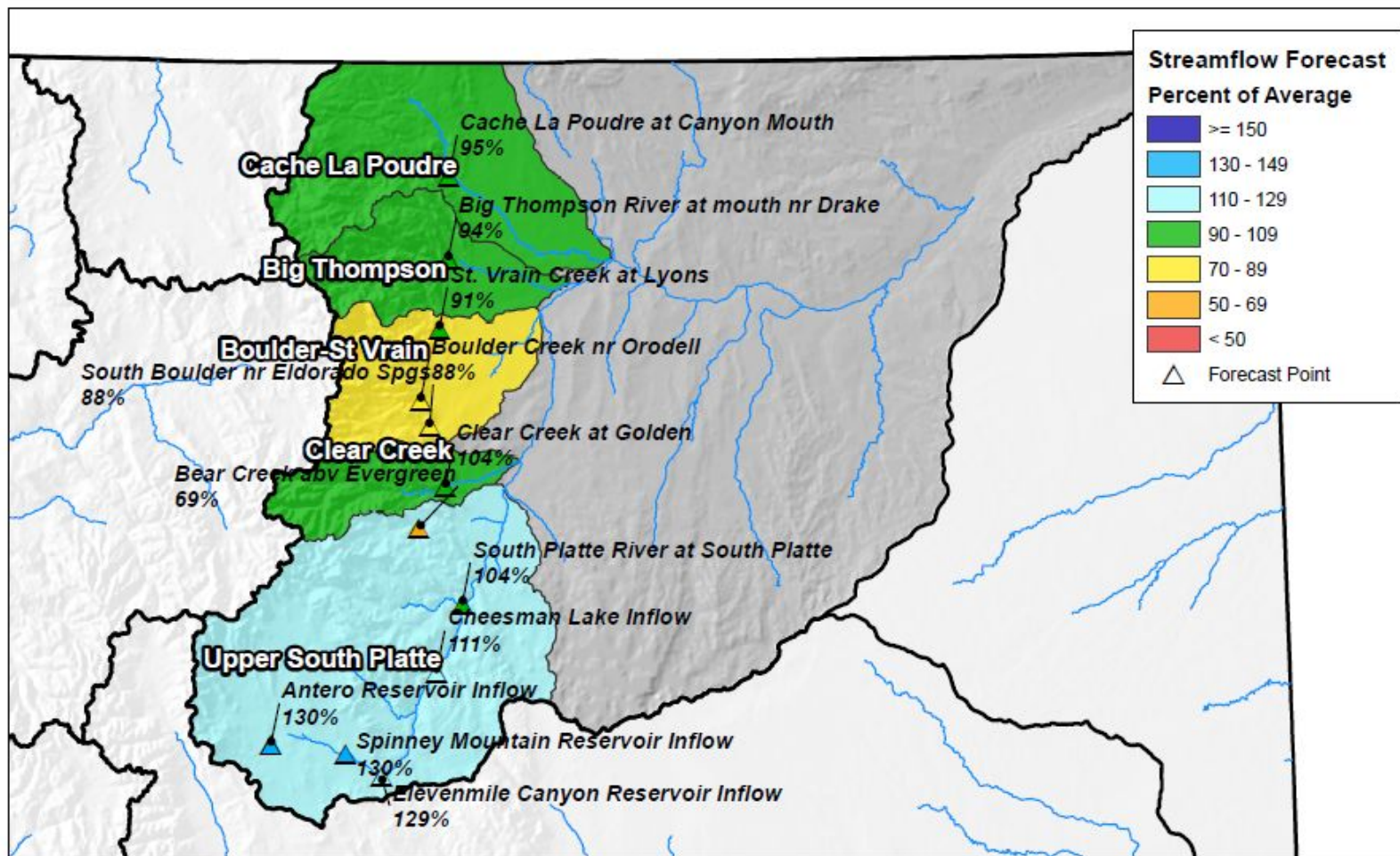
## South Platte River Basin High/Low Year-to-Date Precipitation Summary

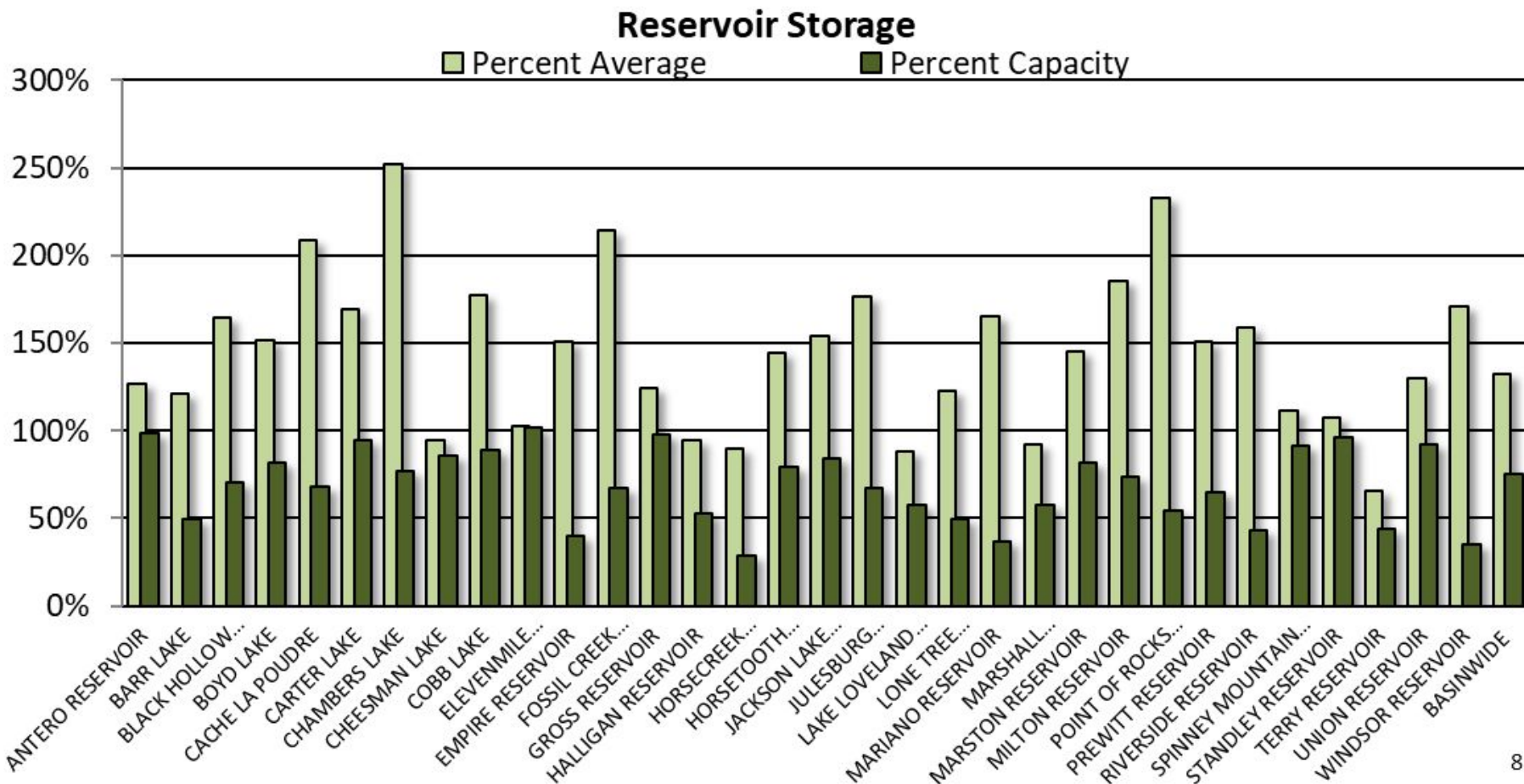
*Based on Provisional SNOTEL data as of Sep 25, 2019*



## South Platte River Basin Streamflow Forecast Summary

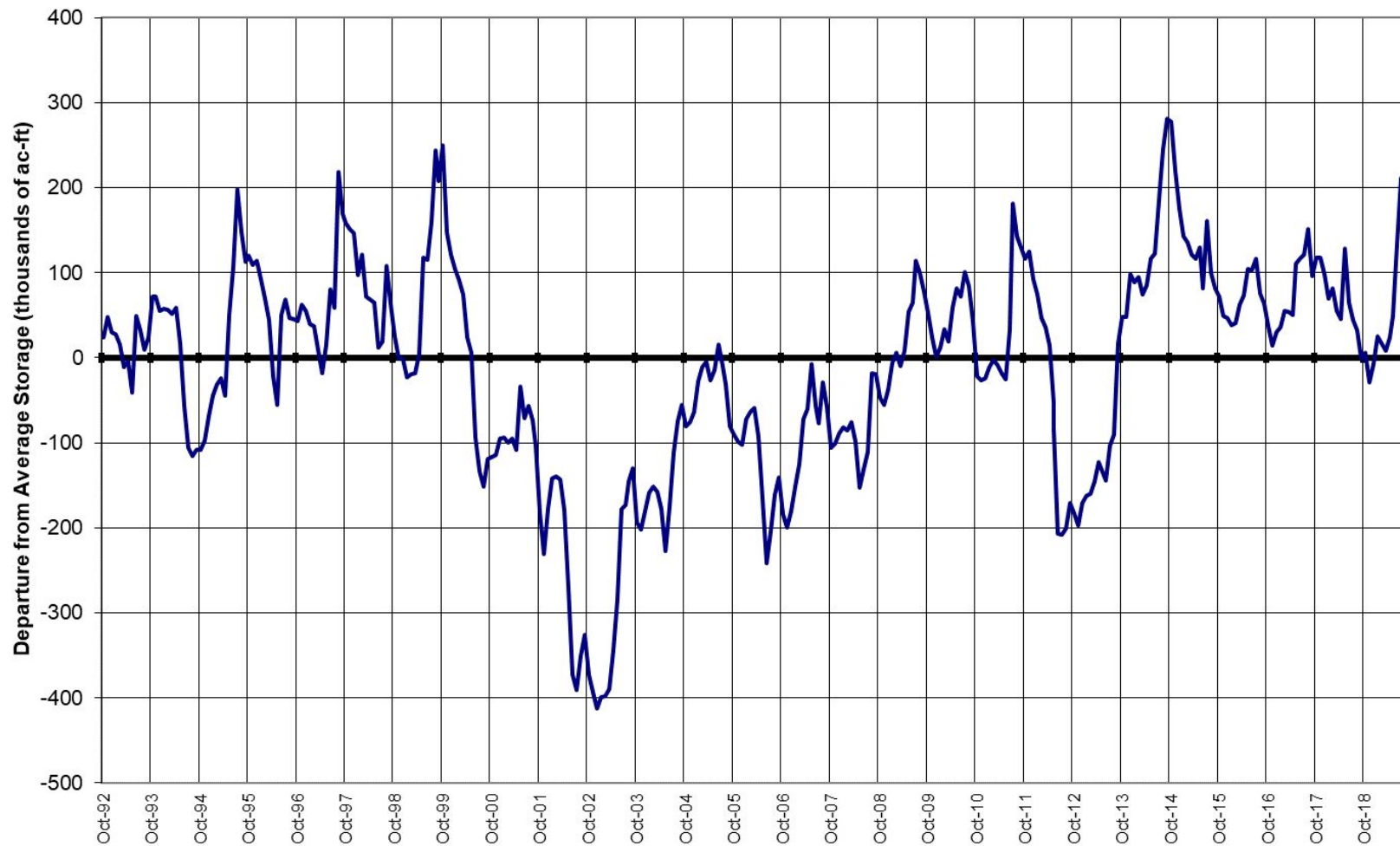
May 1, 2019





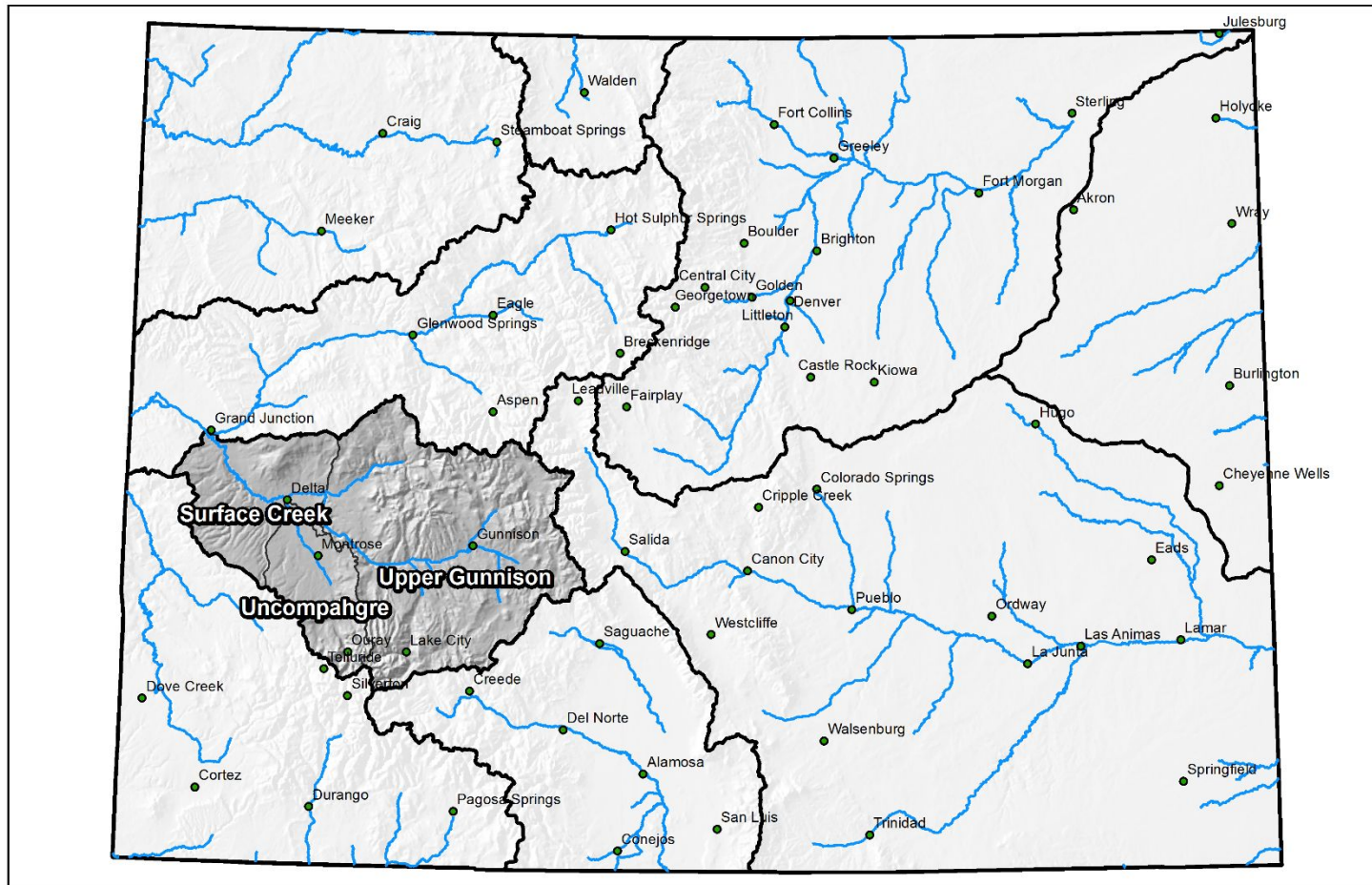


## SOUTH PLATTE RIVER BASIN Reservoir Storage Departure from Average



## Major Basin Summary

### Gunnison River Basin



0 25 50 100 150 200 Miles

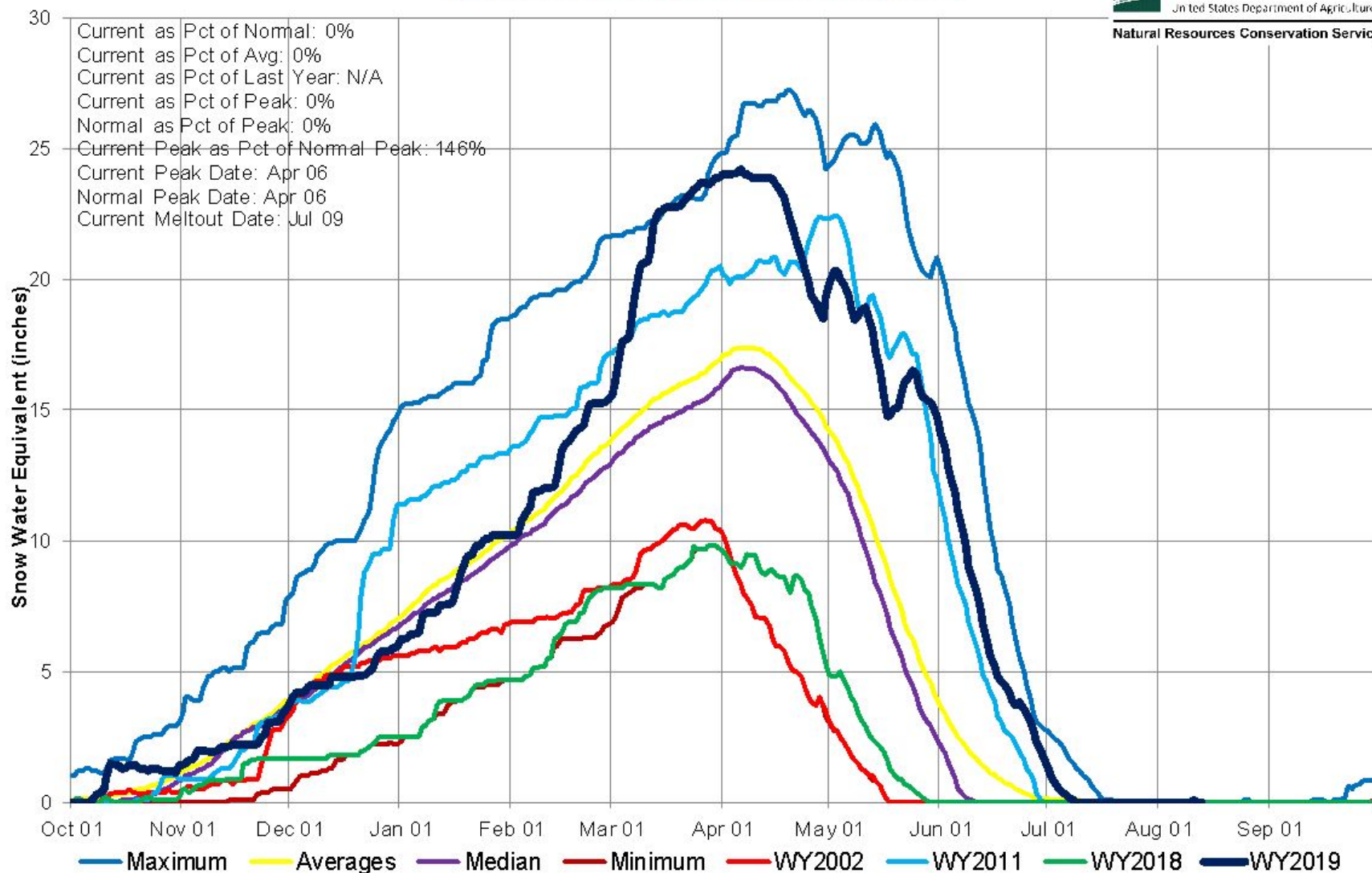
## Gunnison River Basin High/Low Snowpack Summary

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



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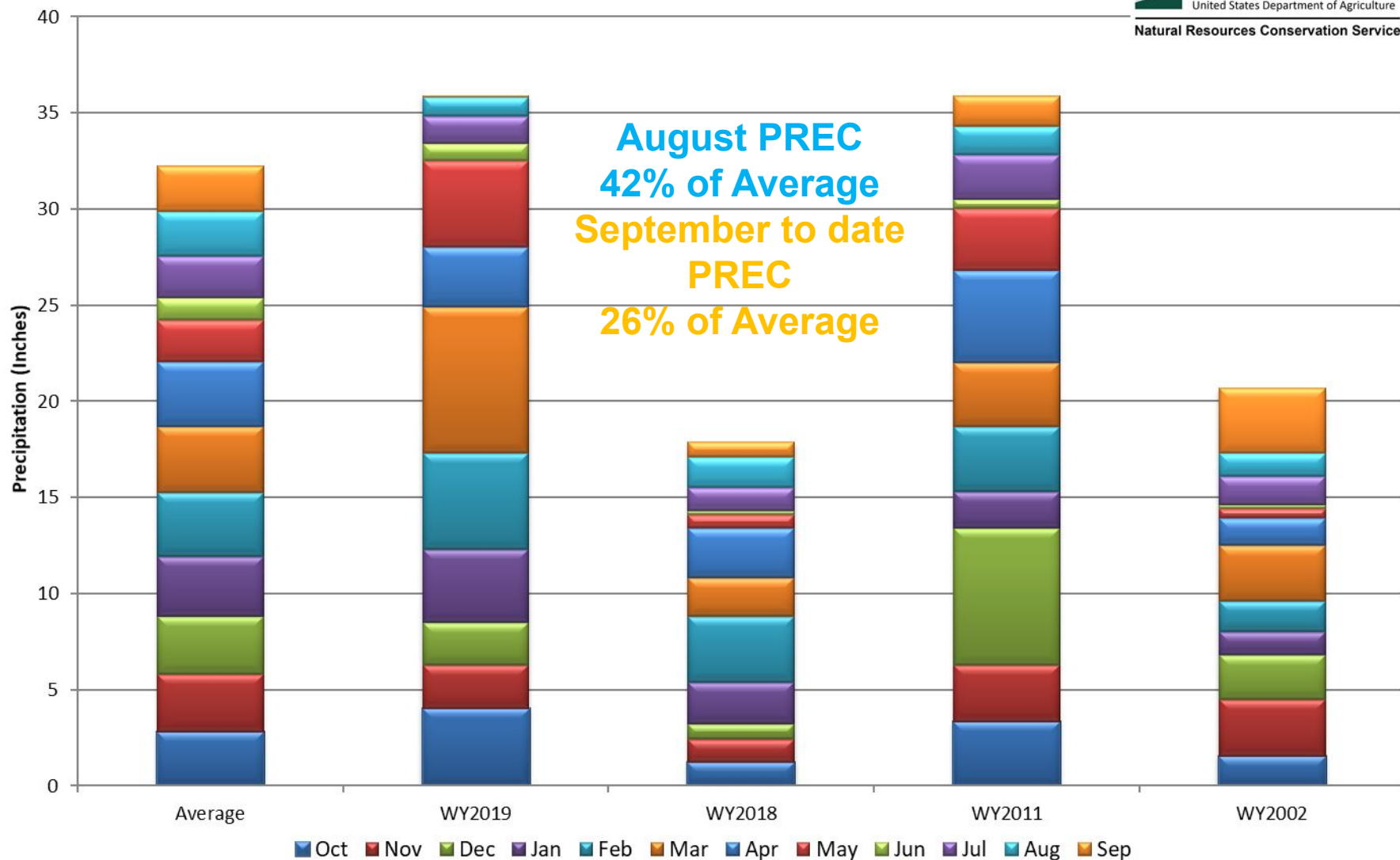
## Gunnison River Basin High/Low Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of Sep 25, 2019*



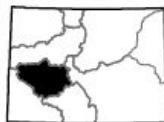
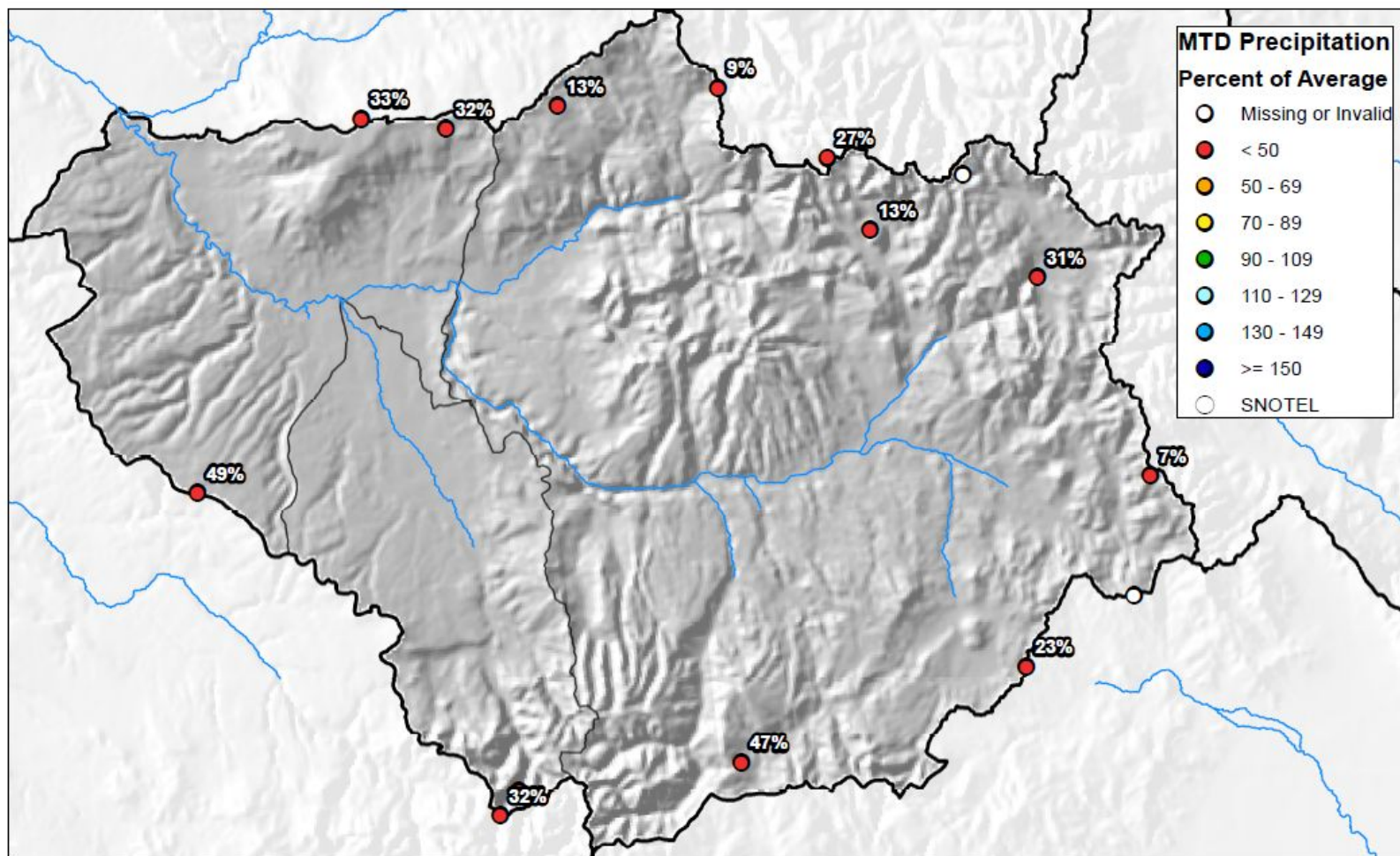
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## Gunnison River Basin Month to Date Precipitation Summary

Current as of Sep 23, 2019

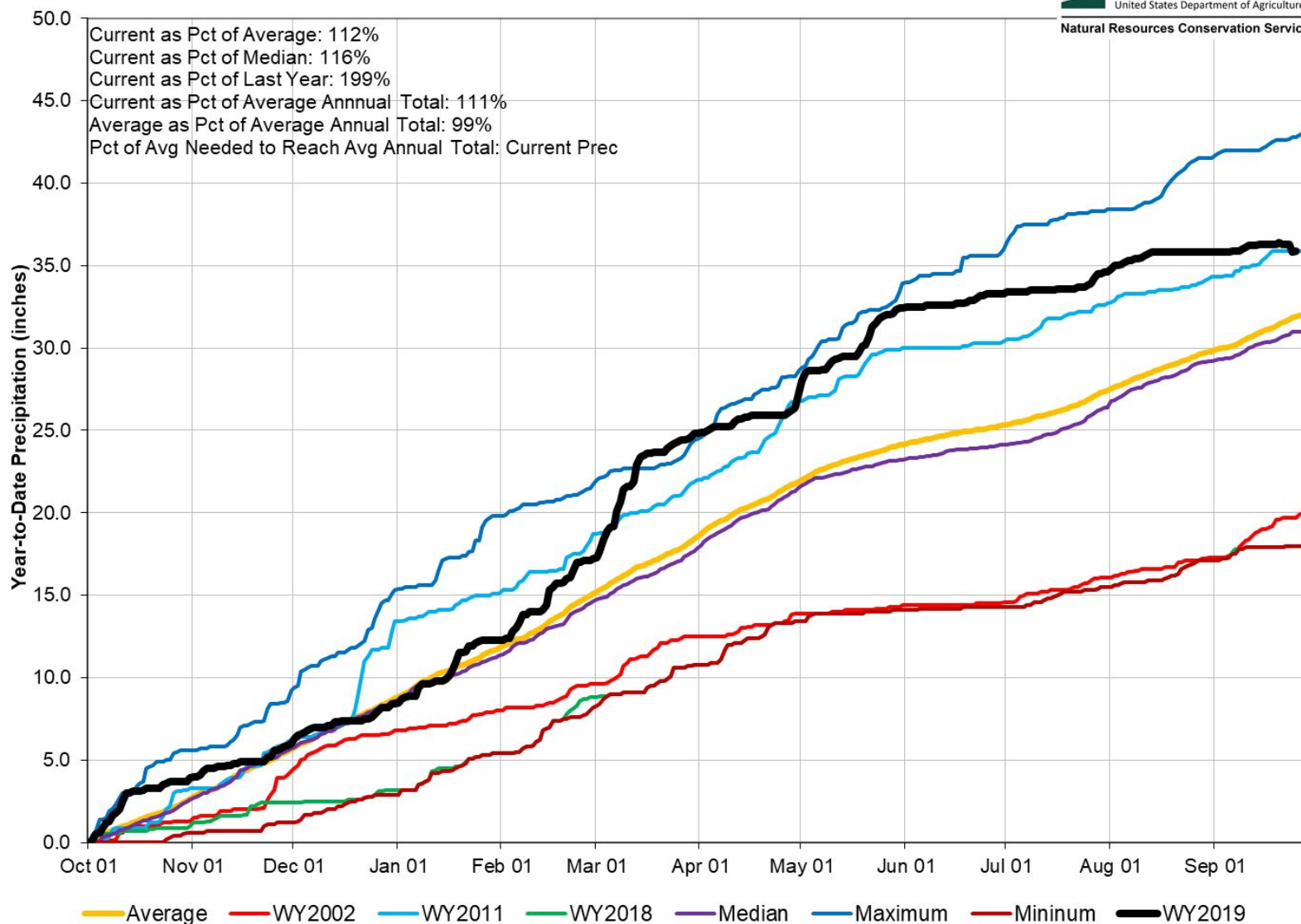


0 5 10 20 30 40 Miles



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

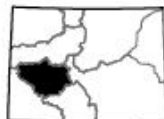
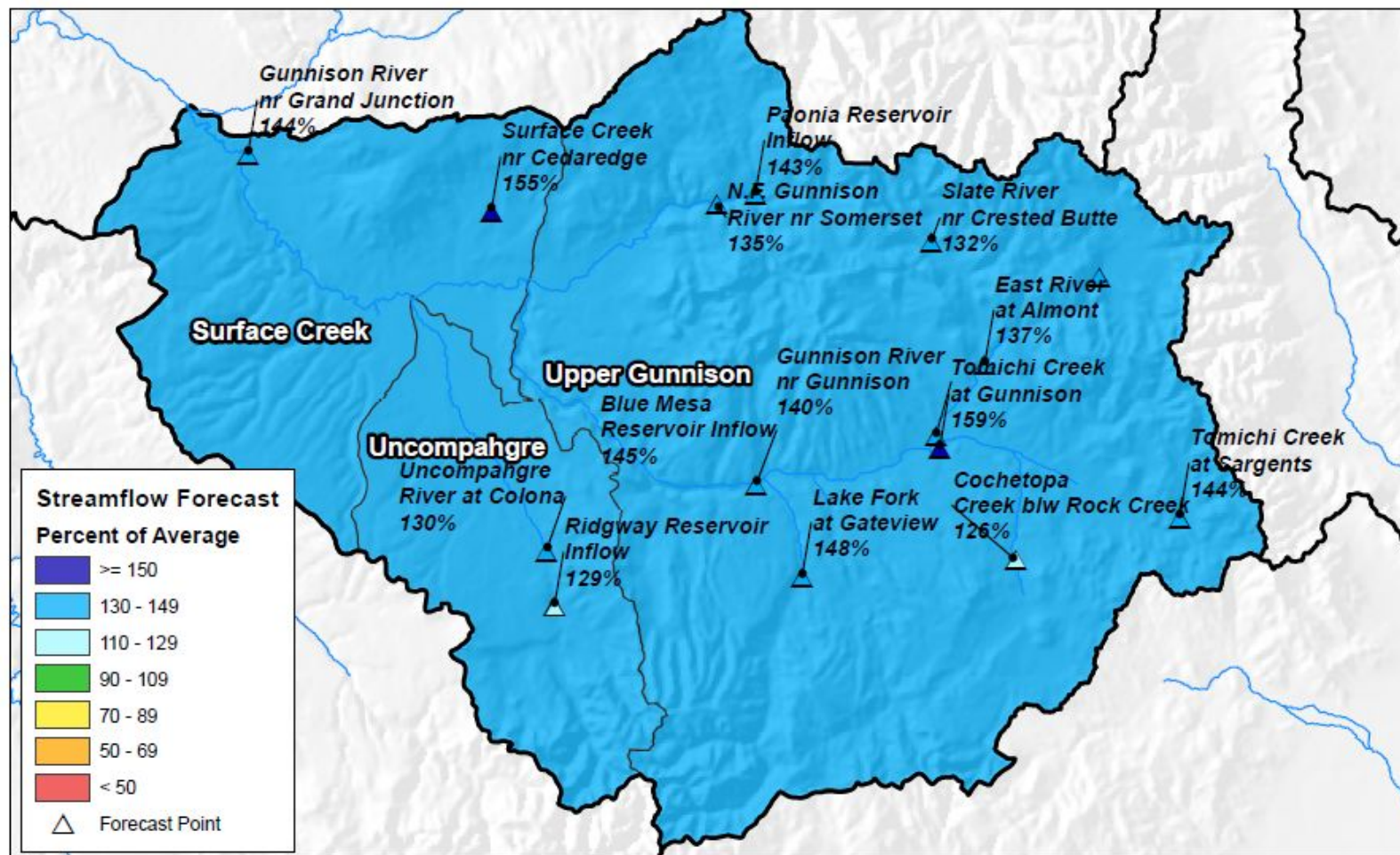
*Based on Provisional SNOTEL data as of Sep 25, 2019*





## Gunnison River Basin Water Supply Forecast Summary

May 1, 2019

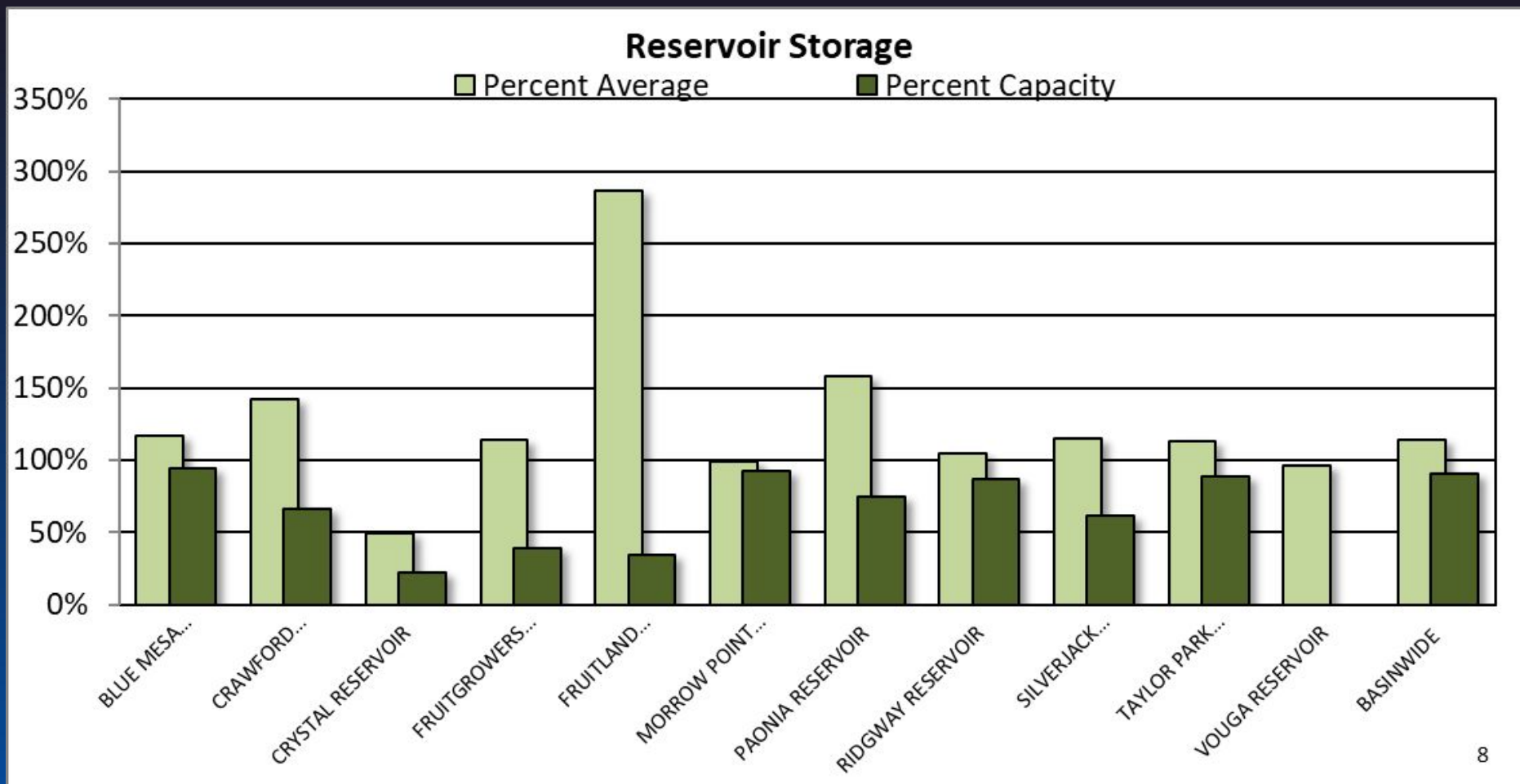


0 5 10 20 30 40 Miles



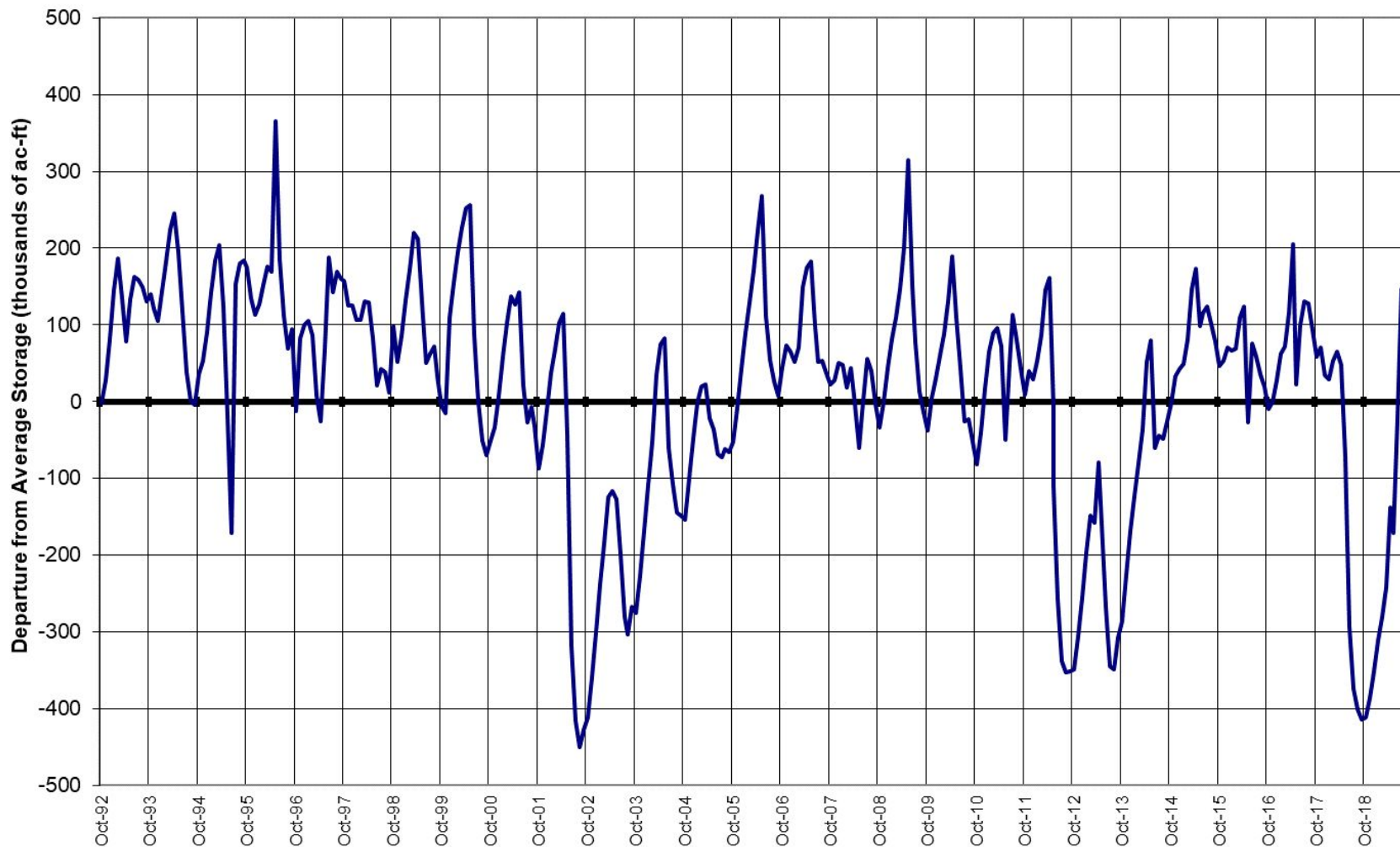
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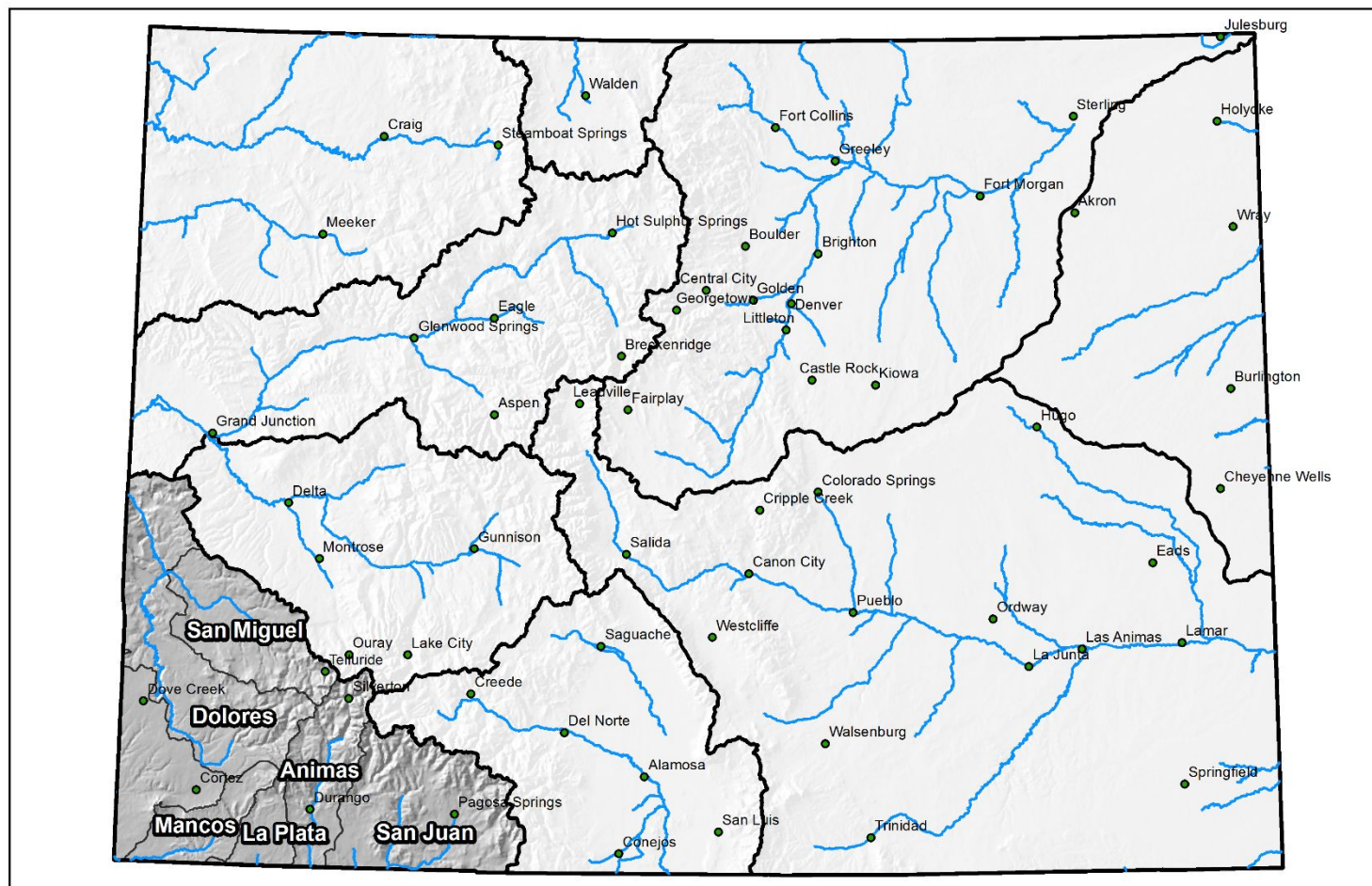
## GUNNISON RIVER BASIN Reservoir Storage Departure from Average





## Major Basin Summary

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



0 25 50 100 150 200 Miles



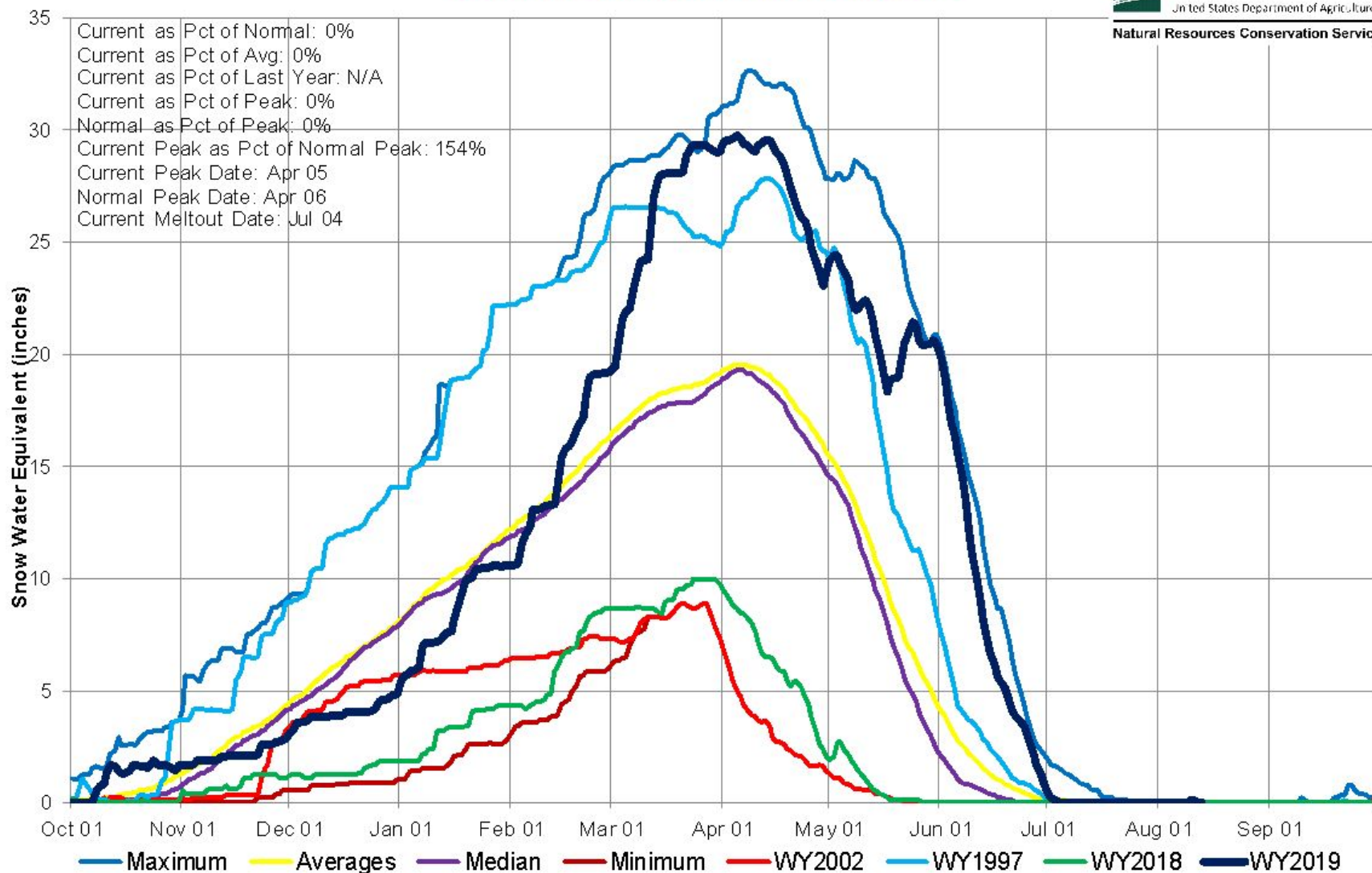
## San Miguel, Dolores, Animas and San Juan River Basins High/Low Snowpack Summary

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



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

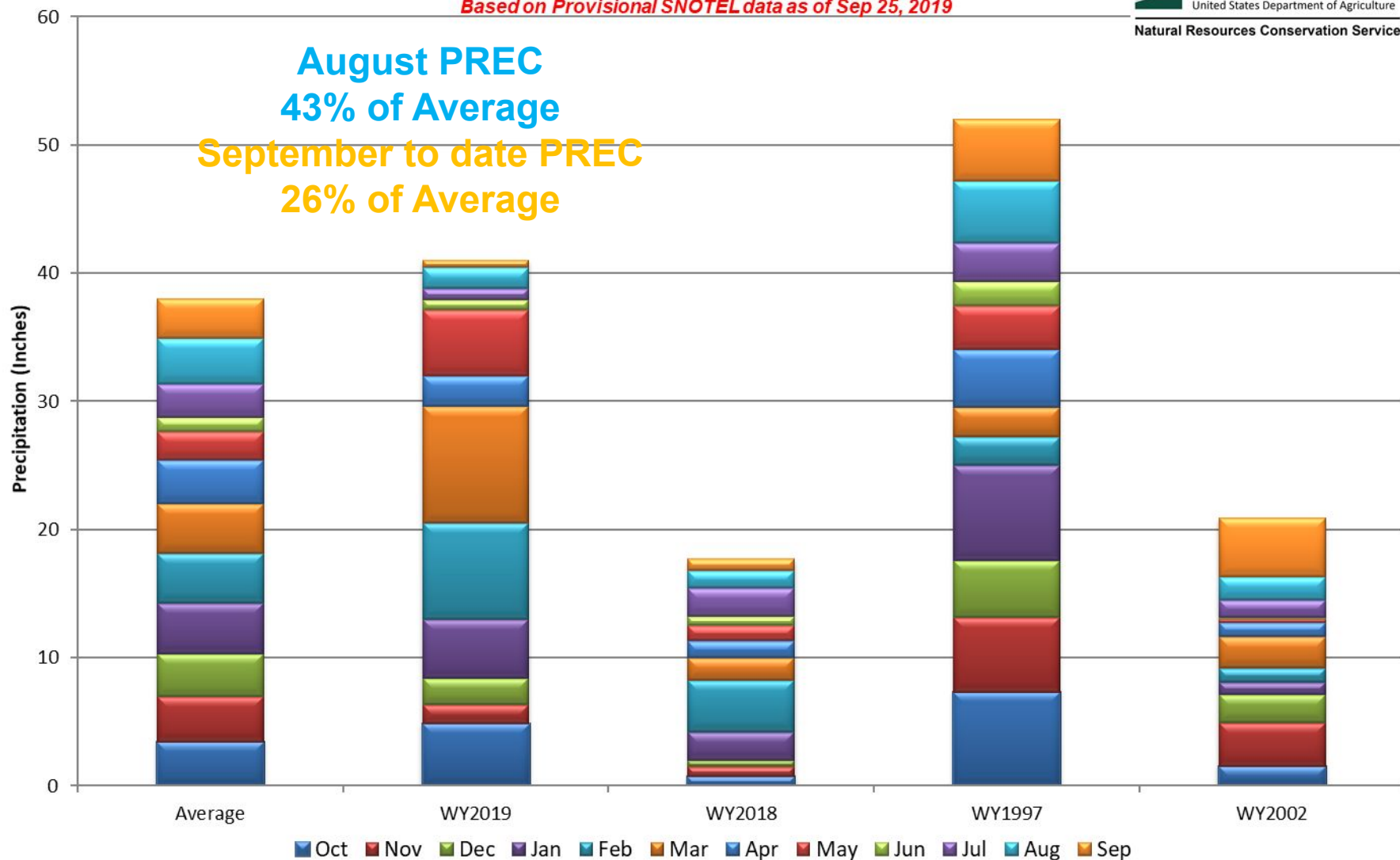
### High/Low Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of Sep 25, 2019*



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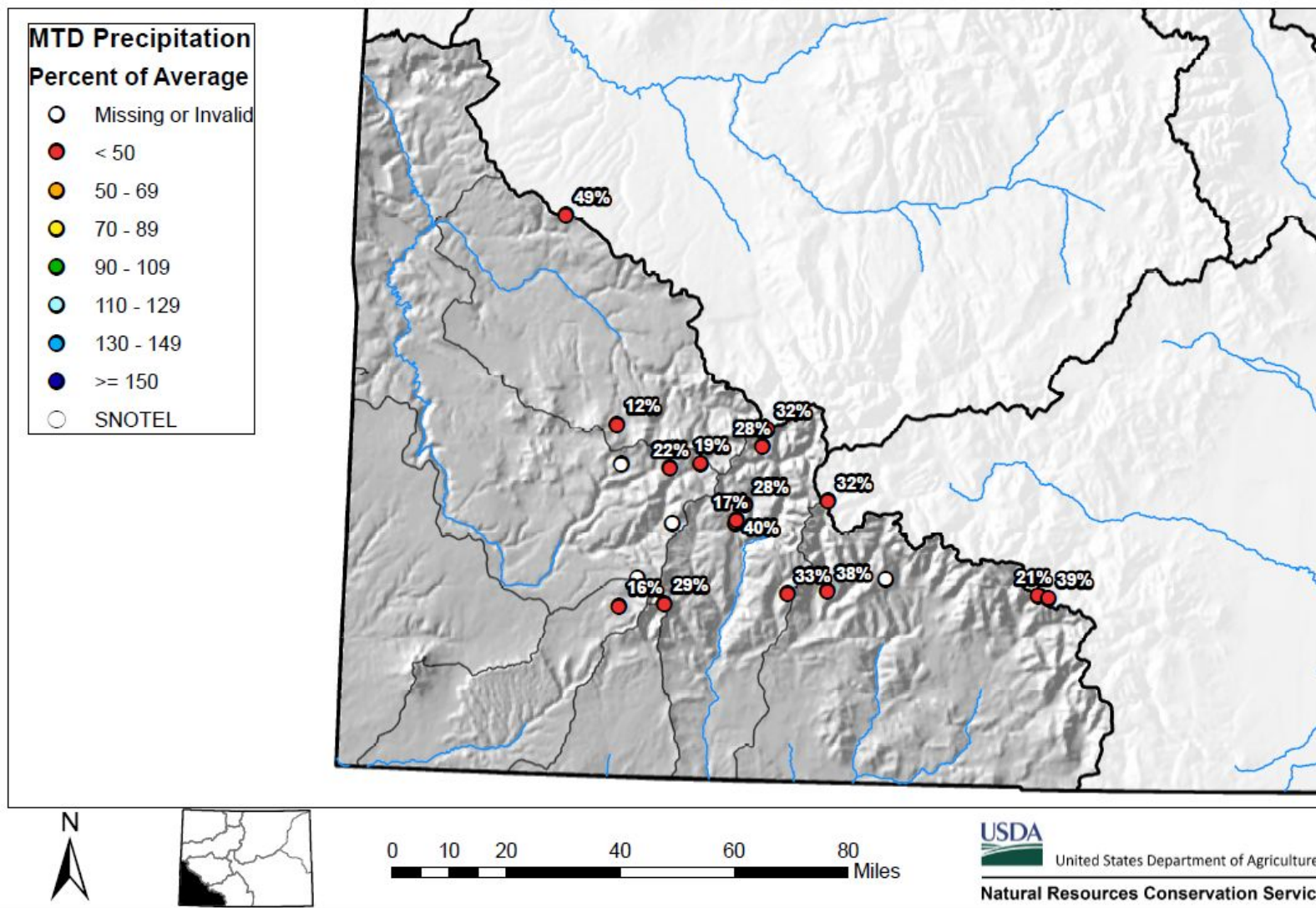
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## San Miguel, Dolores, Animas, and San Juan River Basins Month to Date Precipitation Summary

Current as of Sep 23, 2019





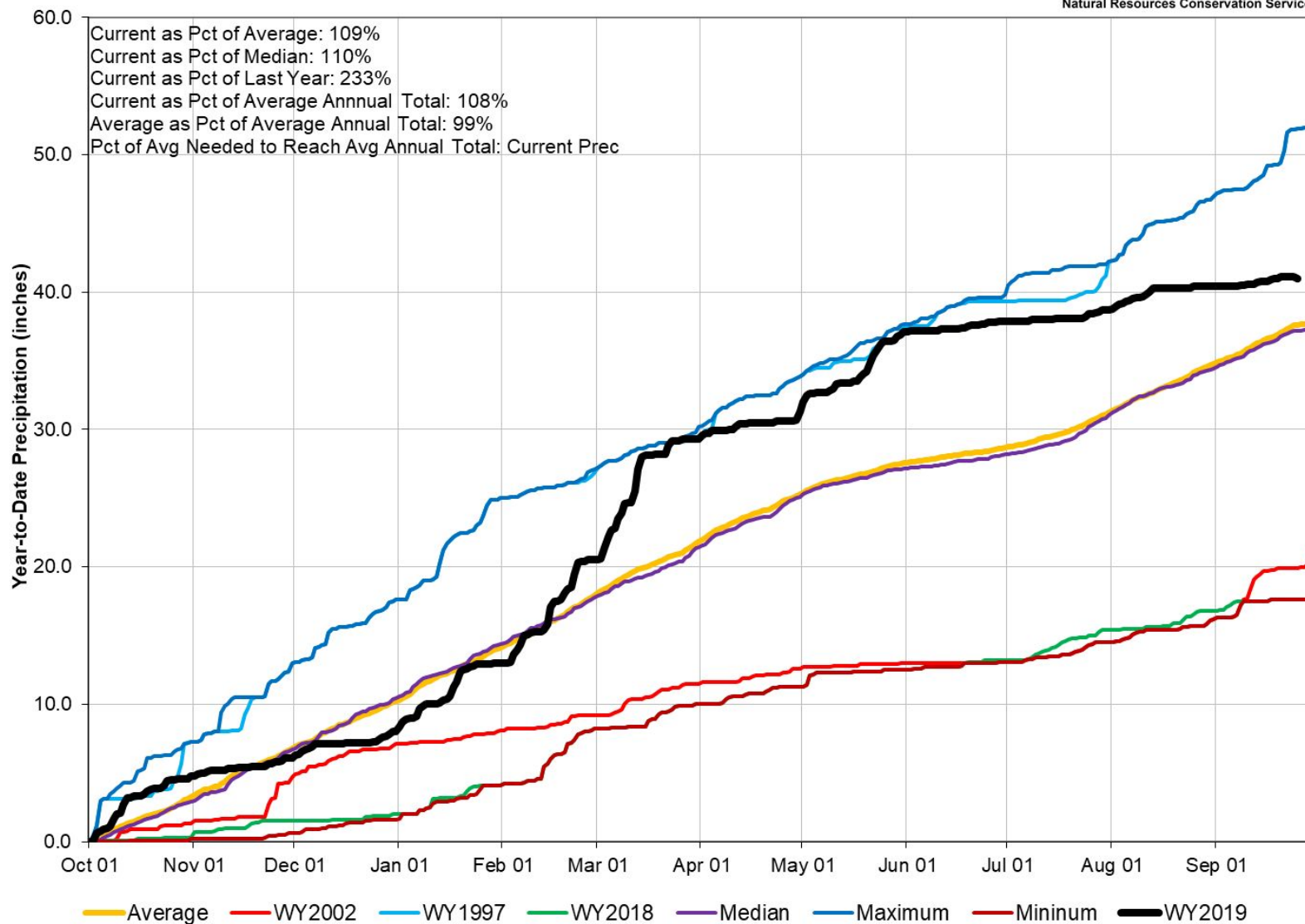
## San Miguel, Dolores, Animas and San Juan River Basins High/Low Year-to-Date Precipitation Summary

*Based on Provisional SNOTEL data as of Sep 25, 2019*



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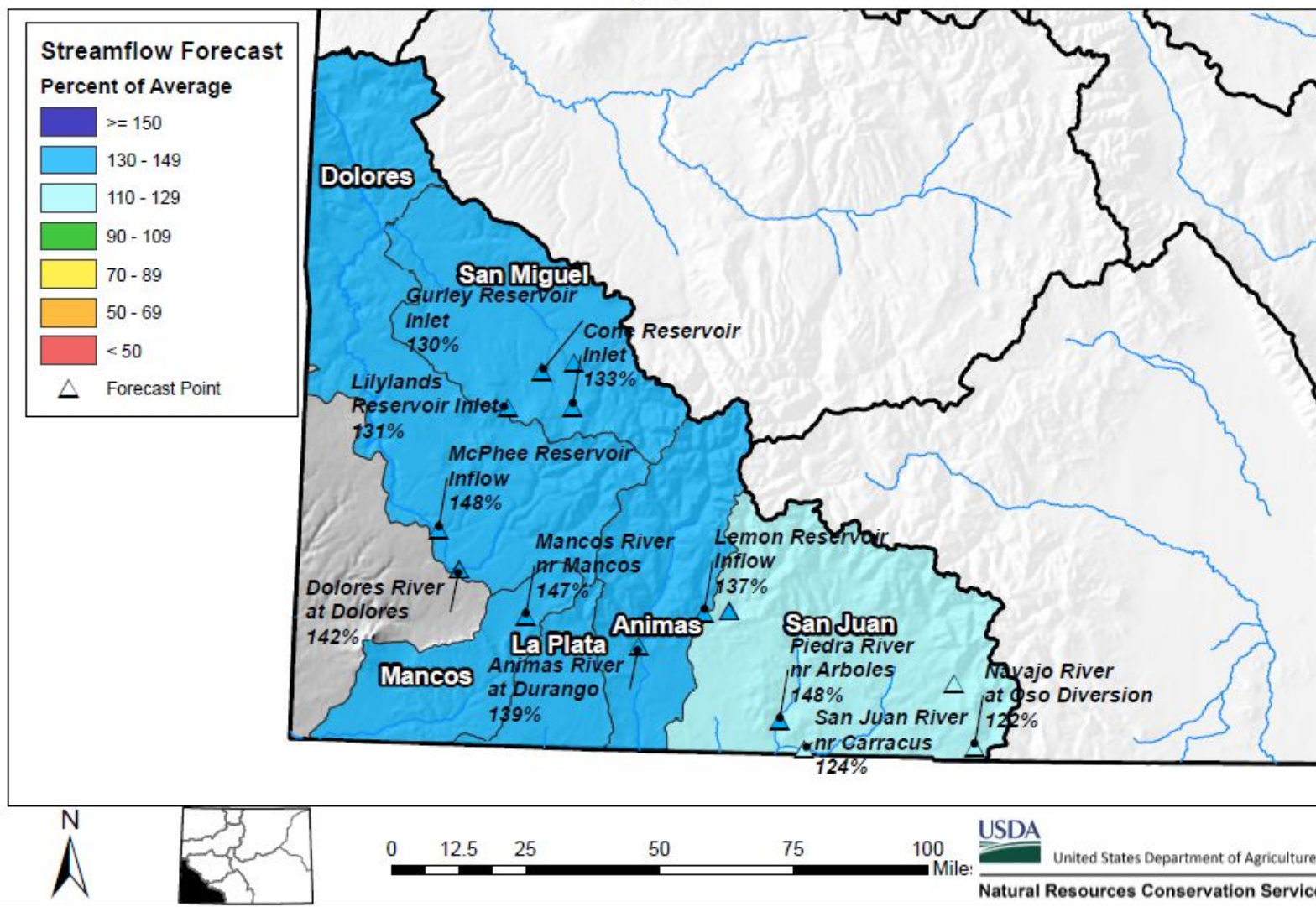
Natural Resources Conservation Service



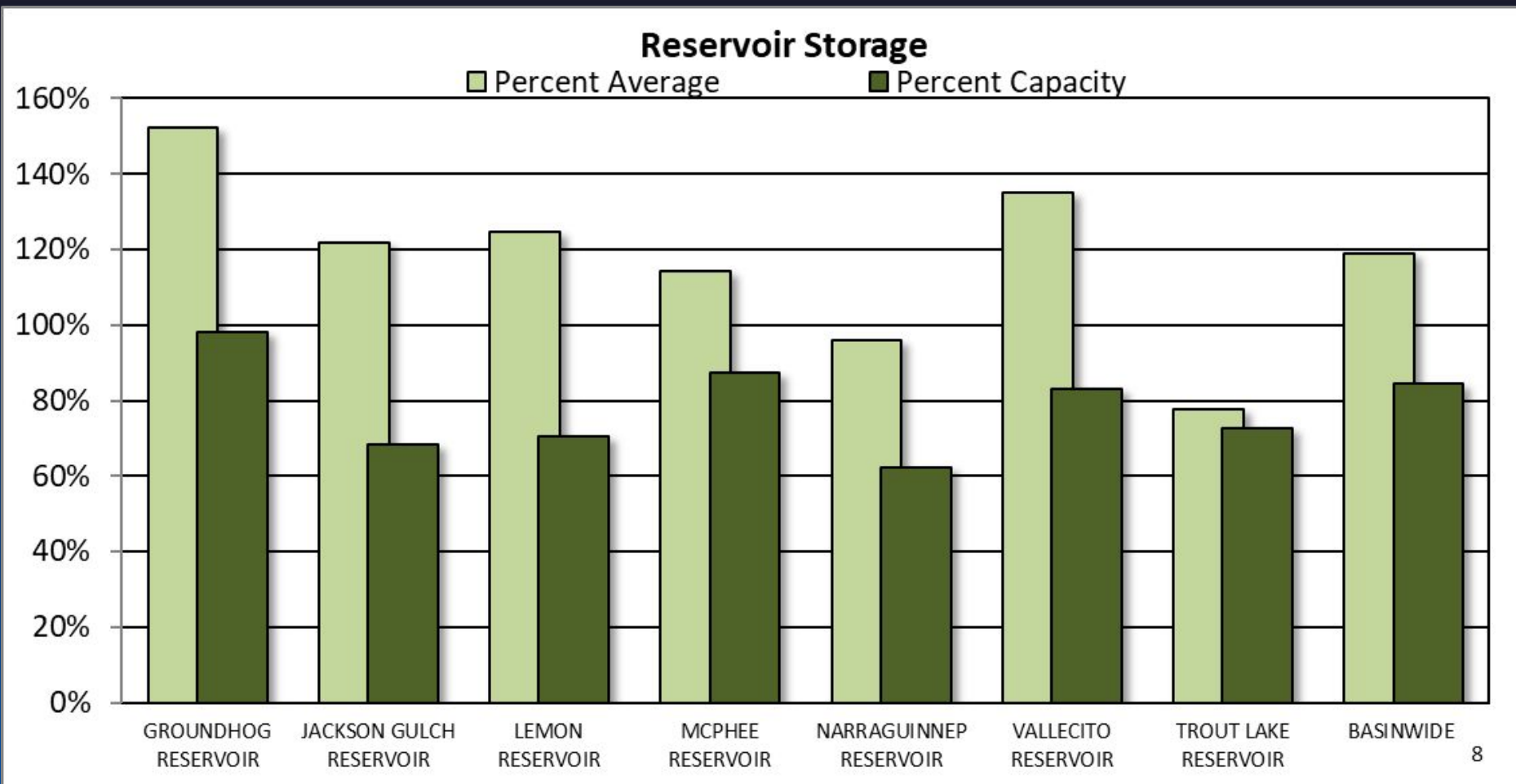


## San Miguel, Dolores, Animas, and San Juan River Basins Streamflow Forecast Summary

May 1, 2019

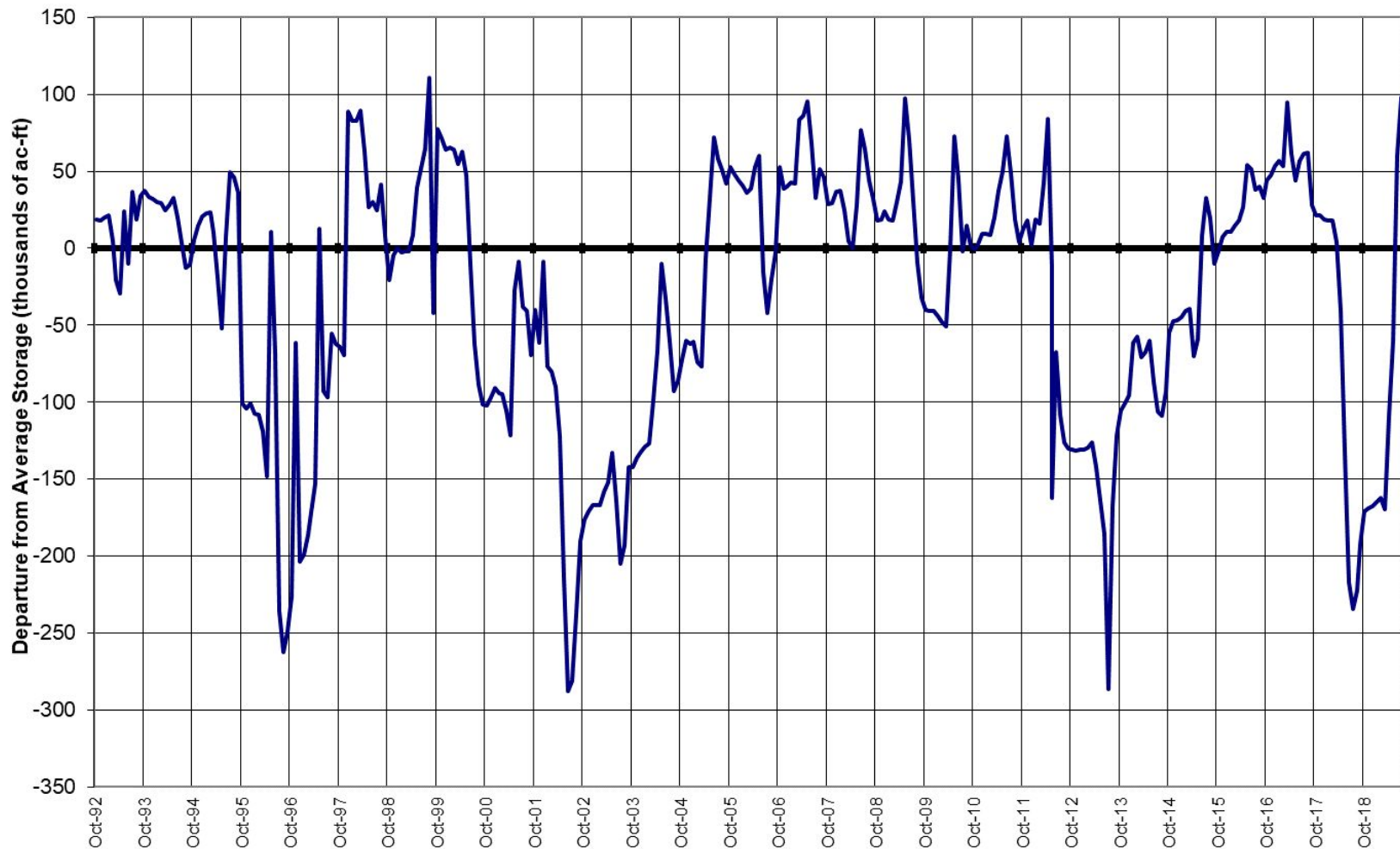






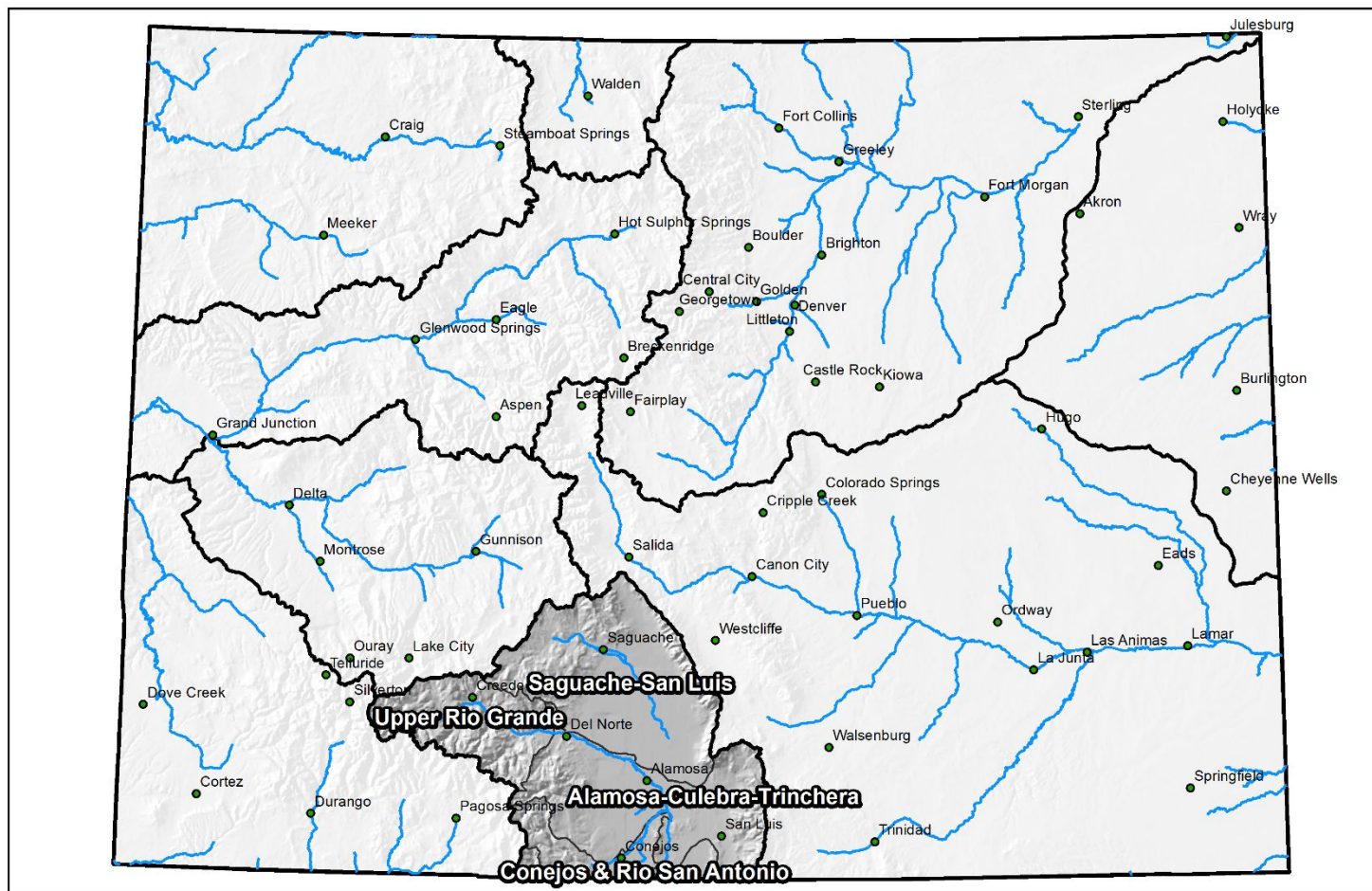
## SAN MIGUEL, DOLORES, ANIMAS AND SAN JUAN RIVER BASINS

Reservoir Storage  
Departure from Average



## Major Basin Summary

### Upper Rio Grande River Basin



0 25 50 100 150 200 Miles



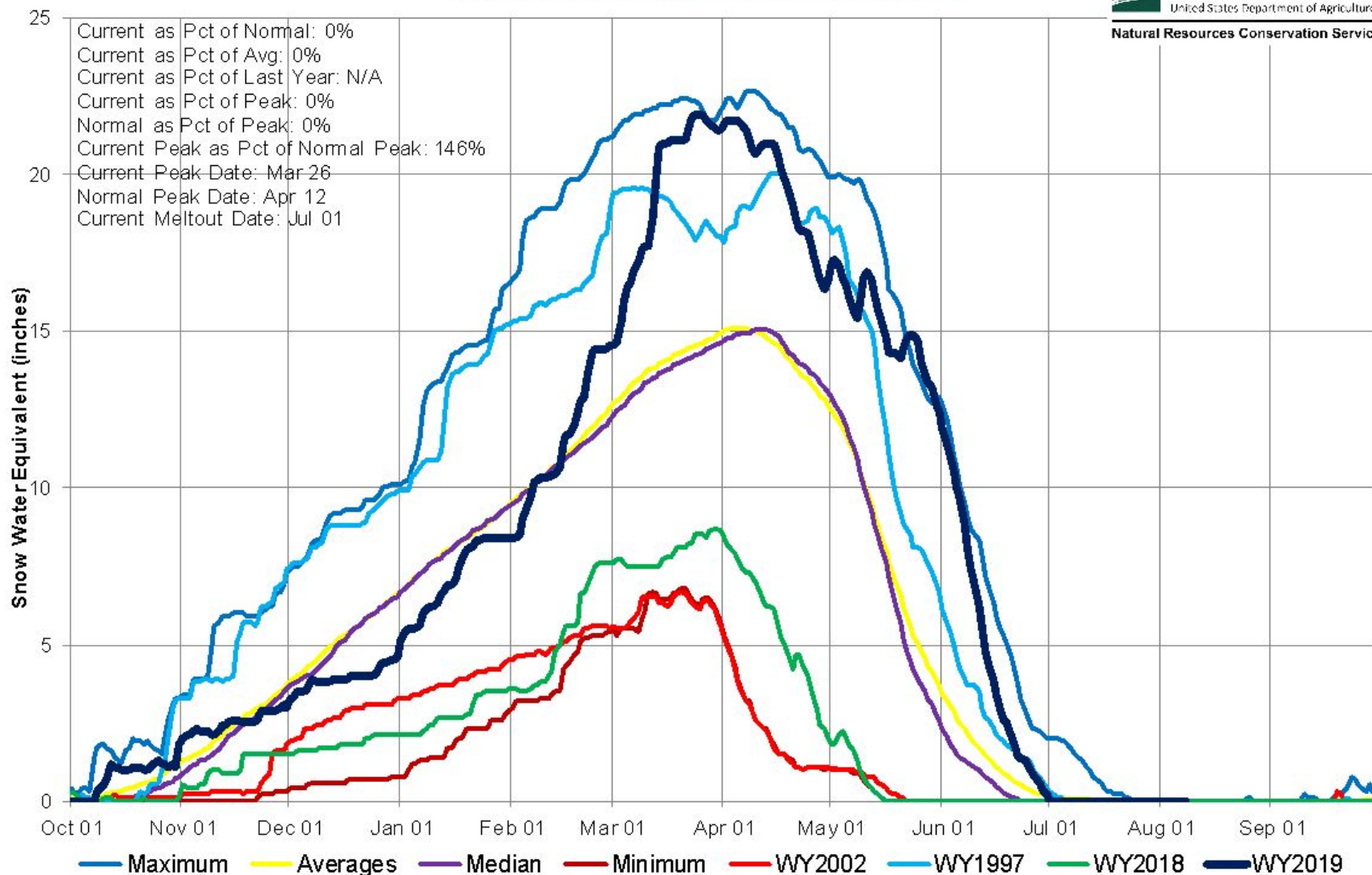
## Upper Rio Grande Basin High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of Aug 08, 2019*



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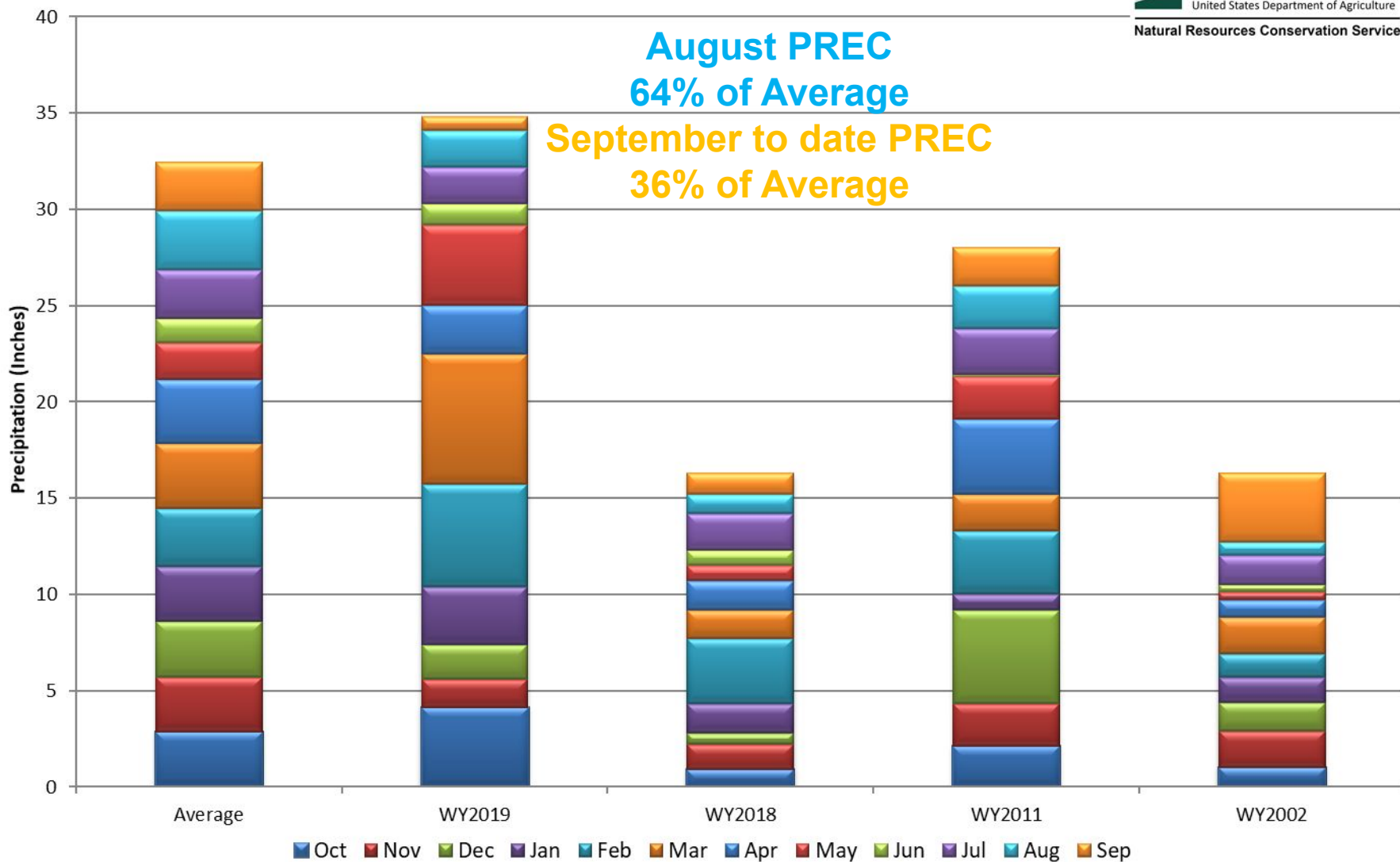
## Upper Rio Grande River Basin High/Low Monthly Precipitation Summary

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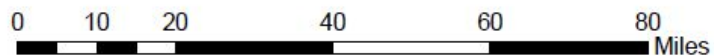
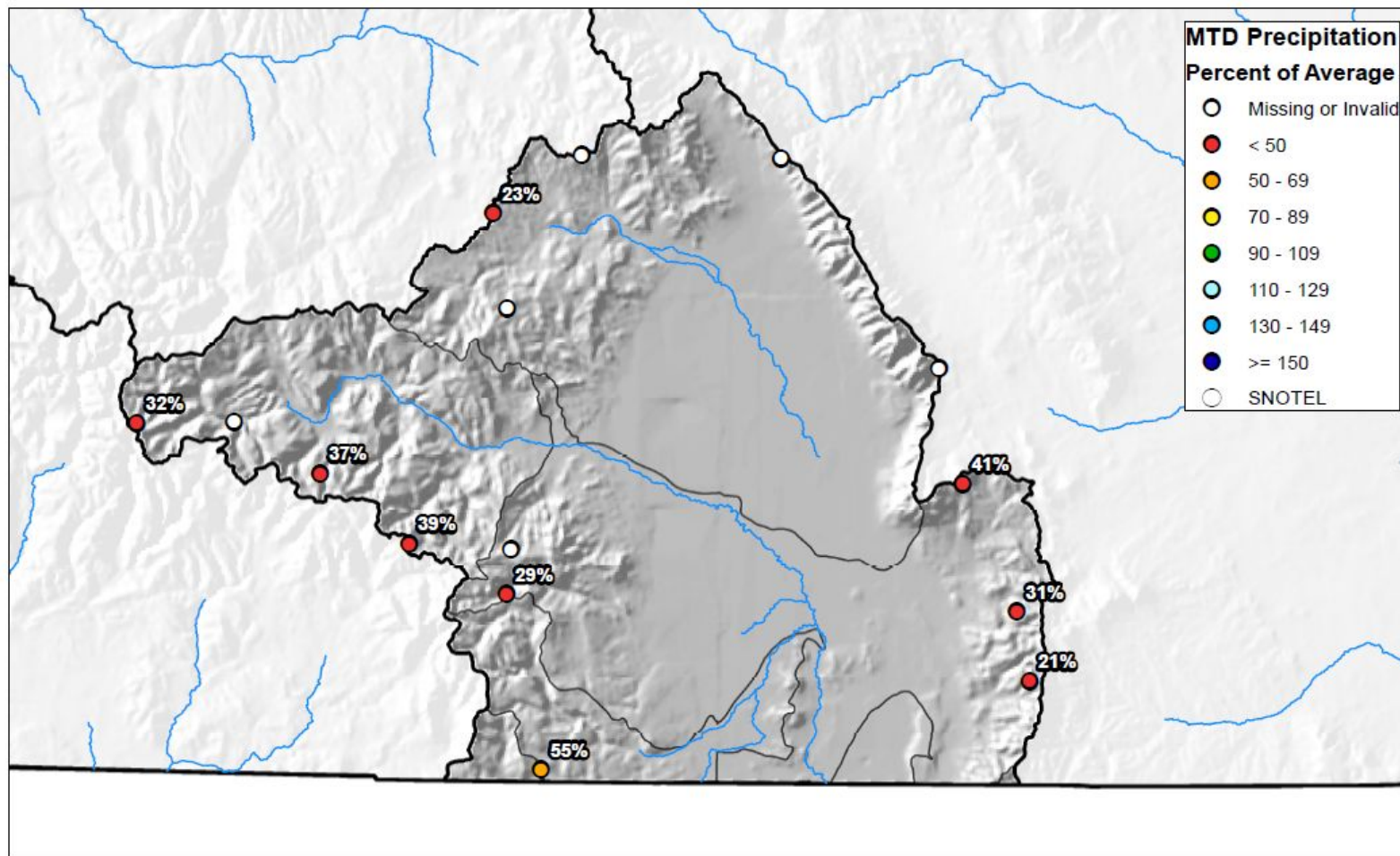
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## Upper Rio Grande River Basin Month to Date Precipitation Summary

Current as of Sep 23, 2019







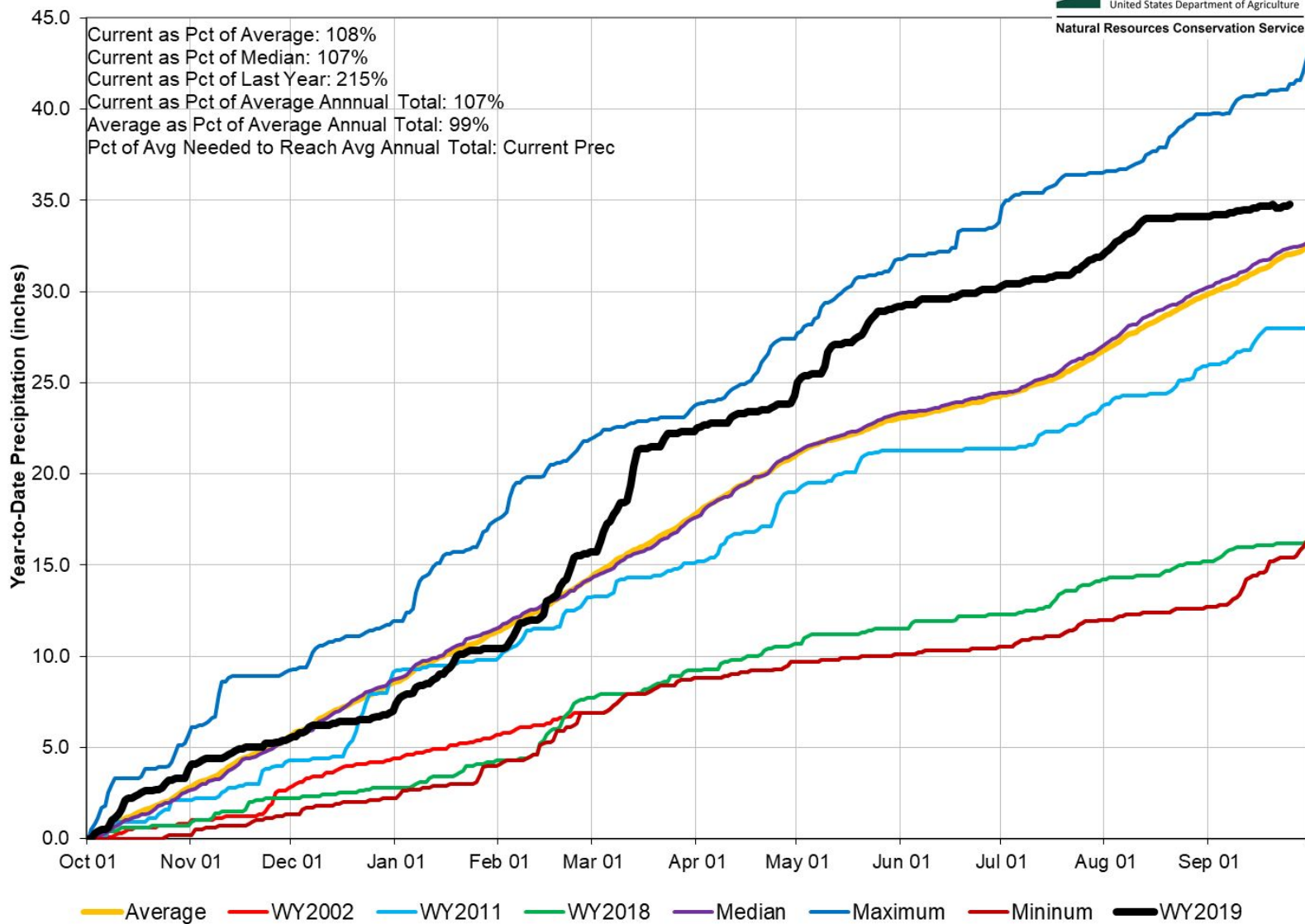
## Upper Rio Grande River Basin High/Low Year-to-Date Precipitation Summary

*Based on Provisional SNOTEL data as of Sep 25, 2019*



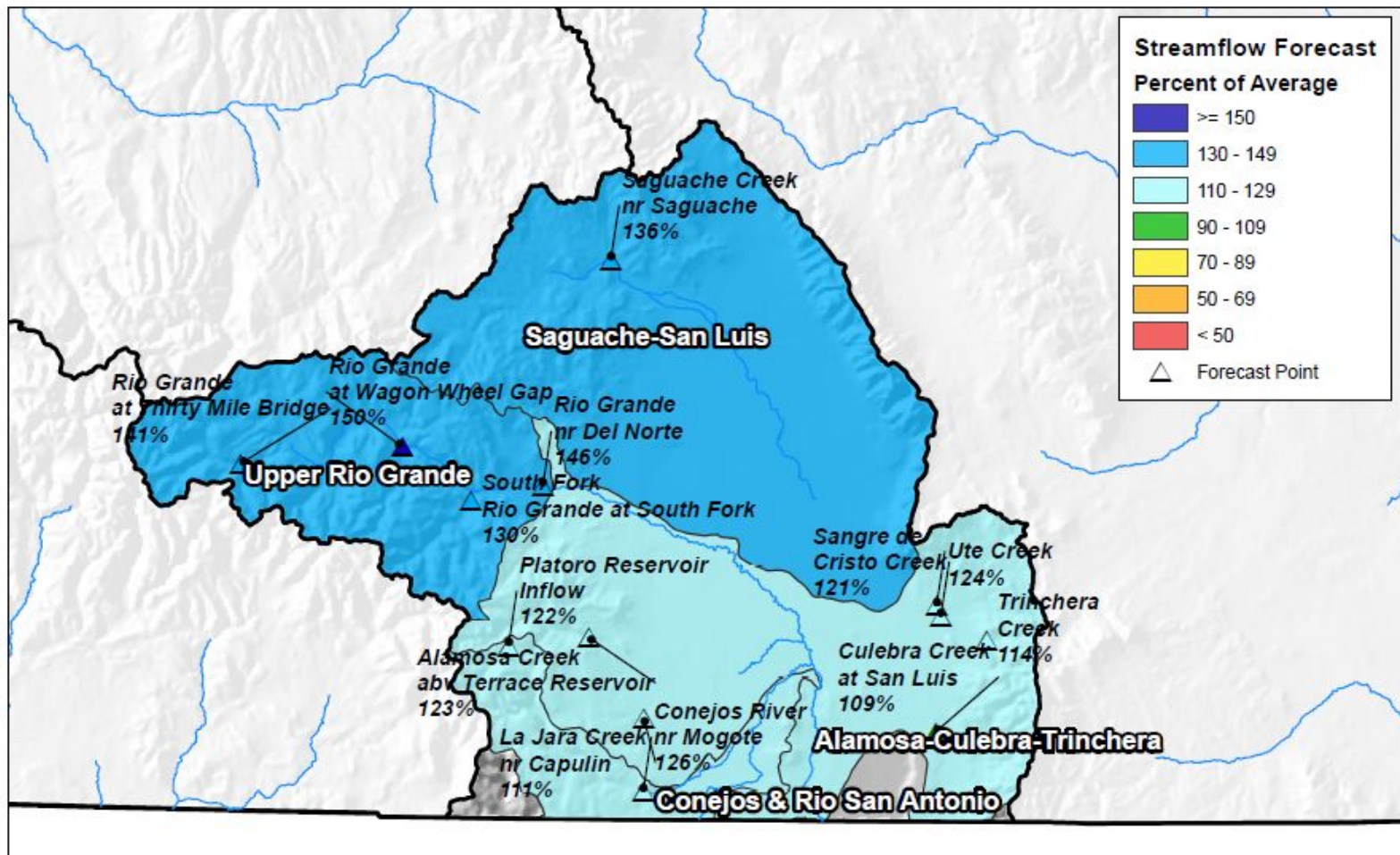
United States Department of Agriculture

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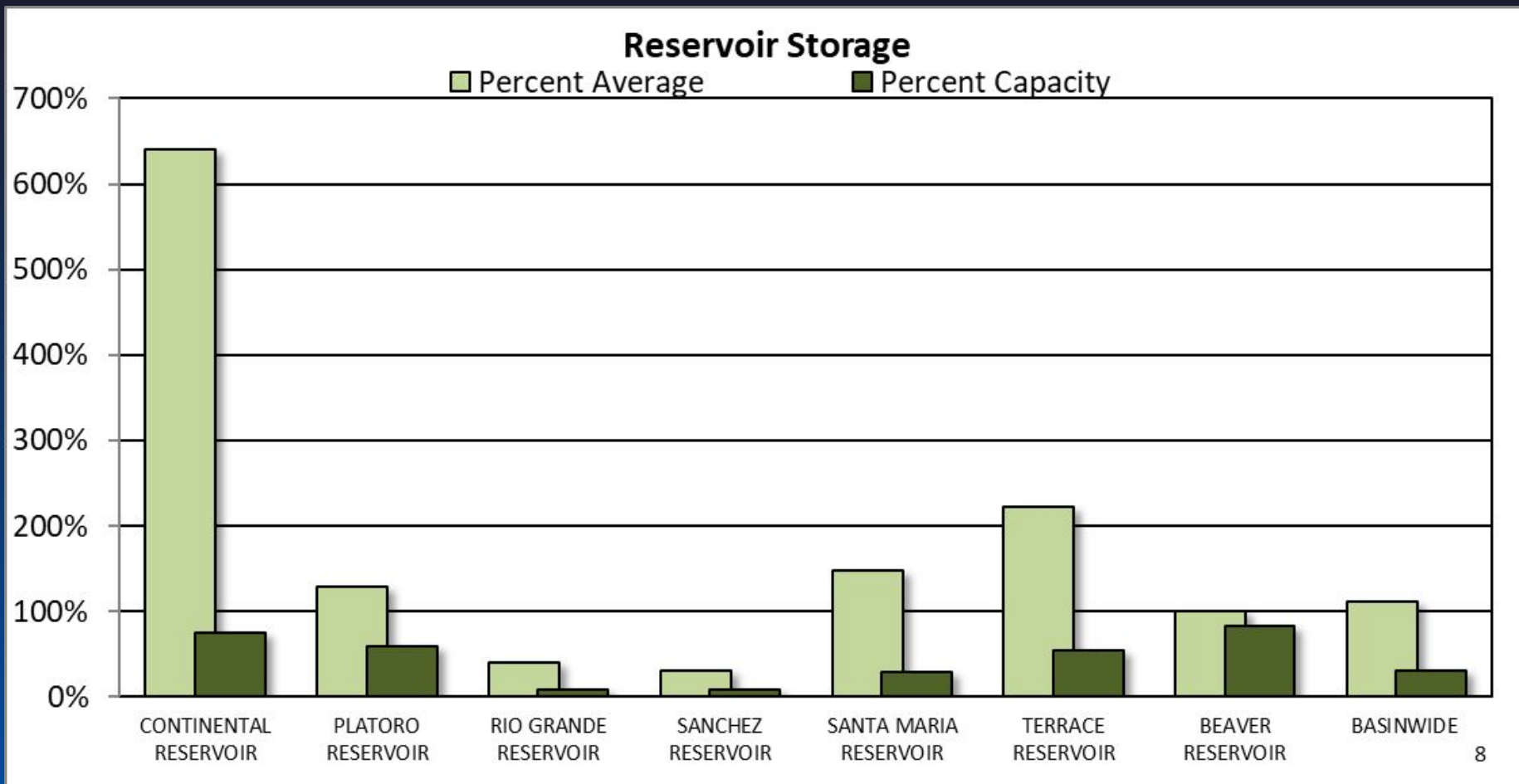


## Upper Rio Grande River Basin Streamflow Forecast Summary

May 1, 2019

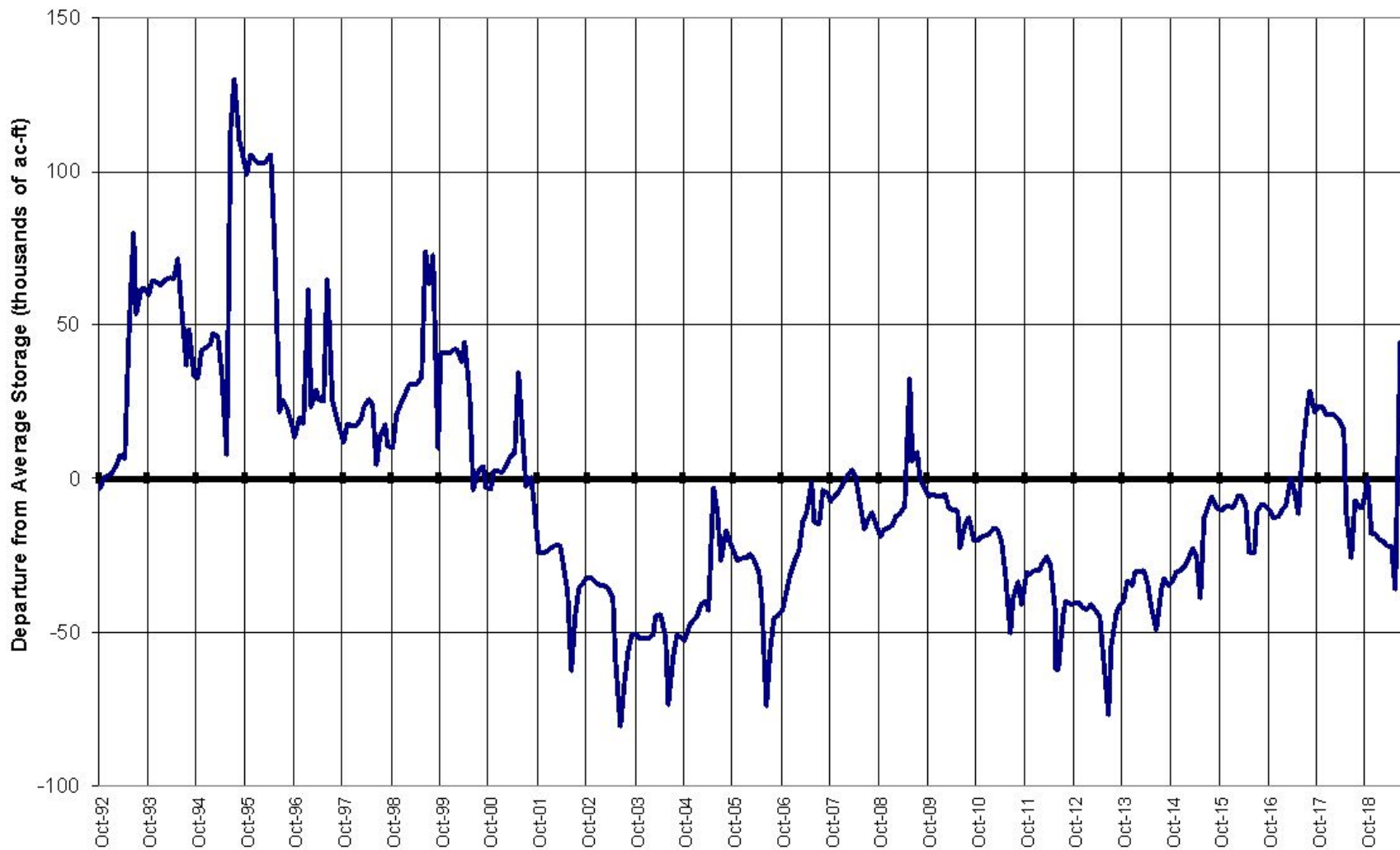


0 10 20 40 60 80 Miles





## UPPER RIO GRANDE BASIN Reservoir Storage Departure from Average



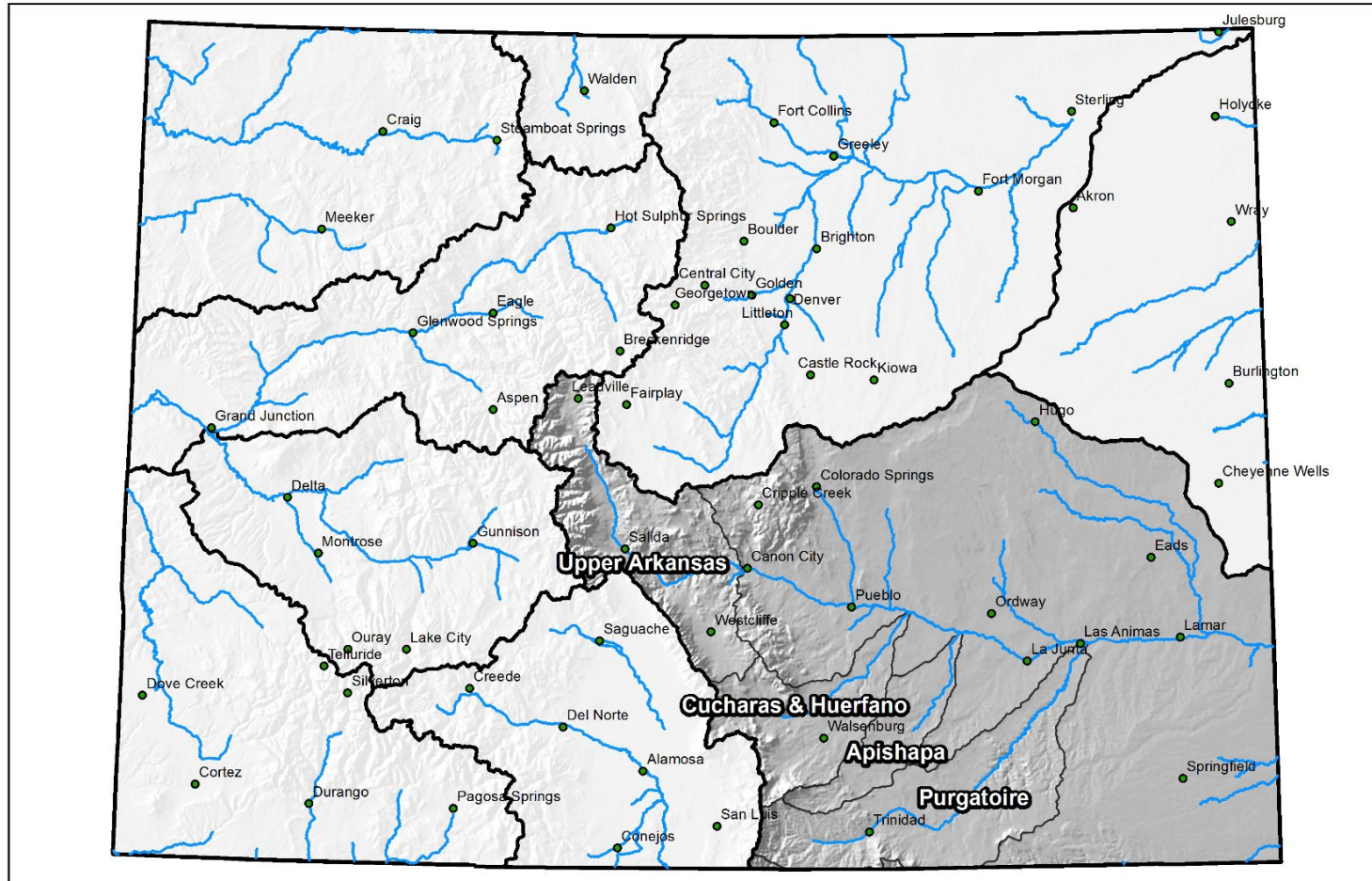


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# Colorado Snow Surveys

## Major Basin Summary

### Arkansas River Basin



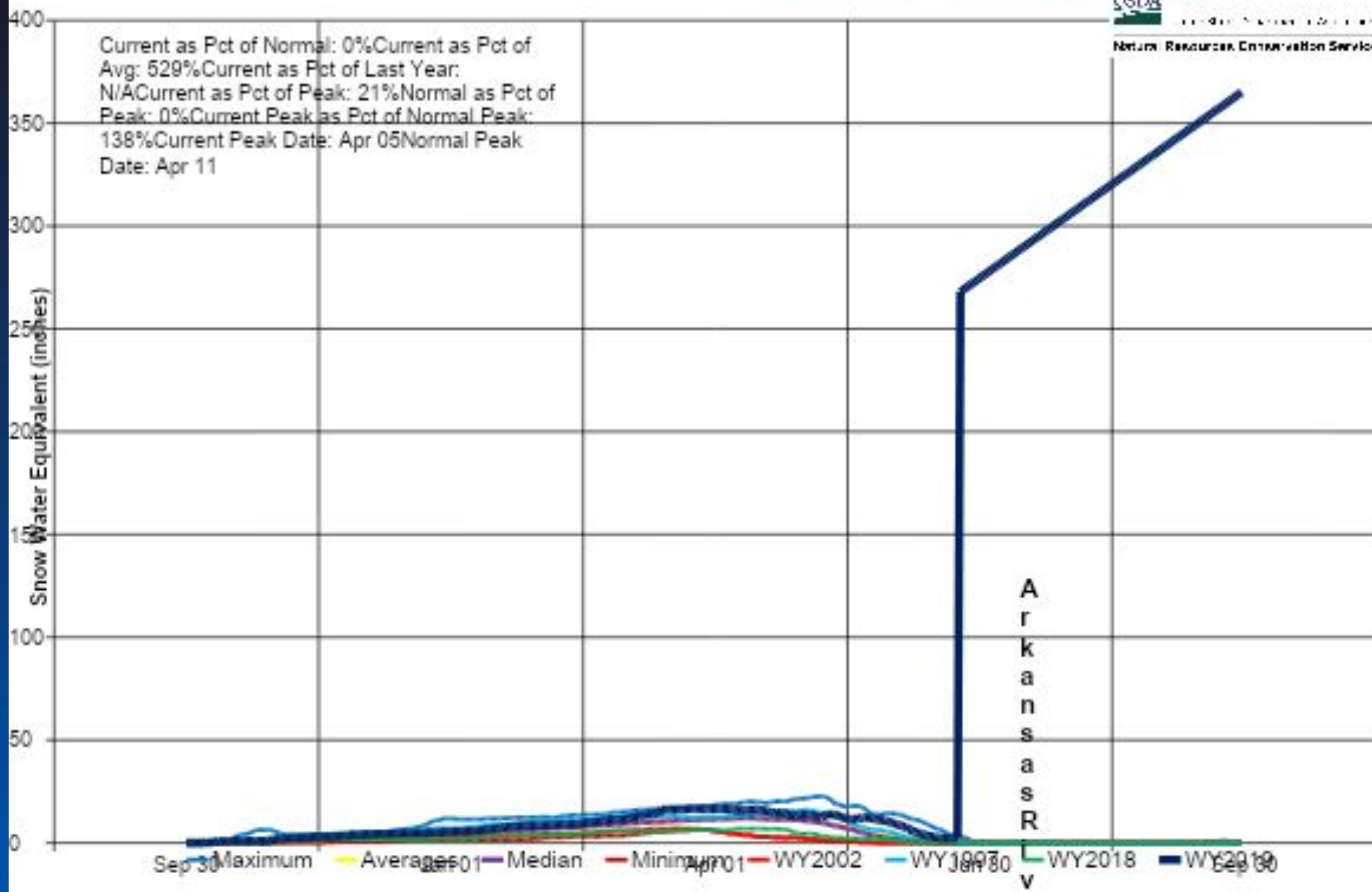
0 25 50 100 150 200 Miles

## Arkansas River Basin High/Low Snowpack Summary

Based on Provisional SNOTEL data as of Jun 24, 2019

USDA

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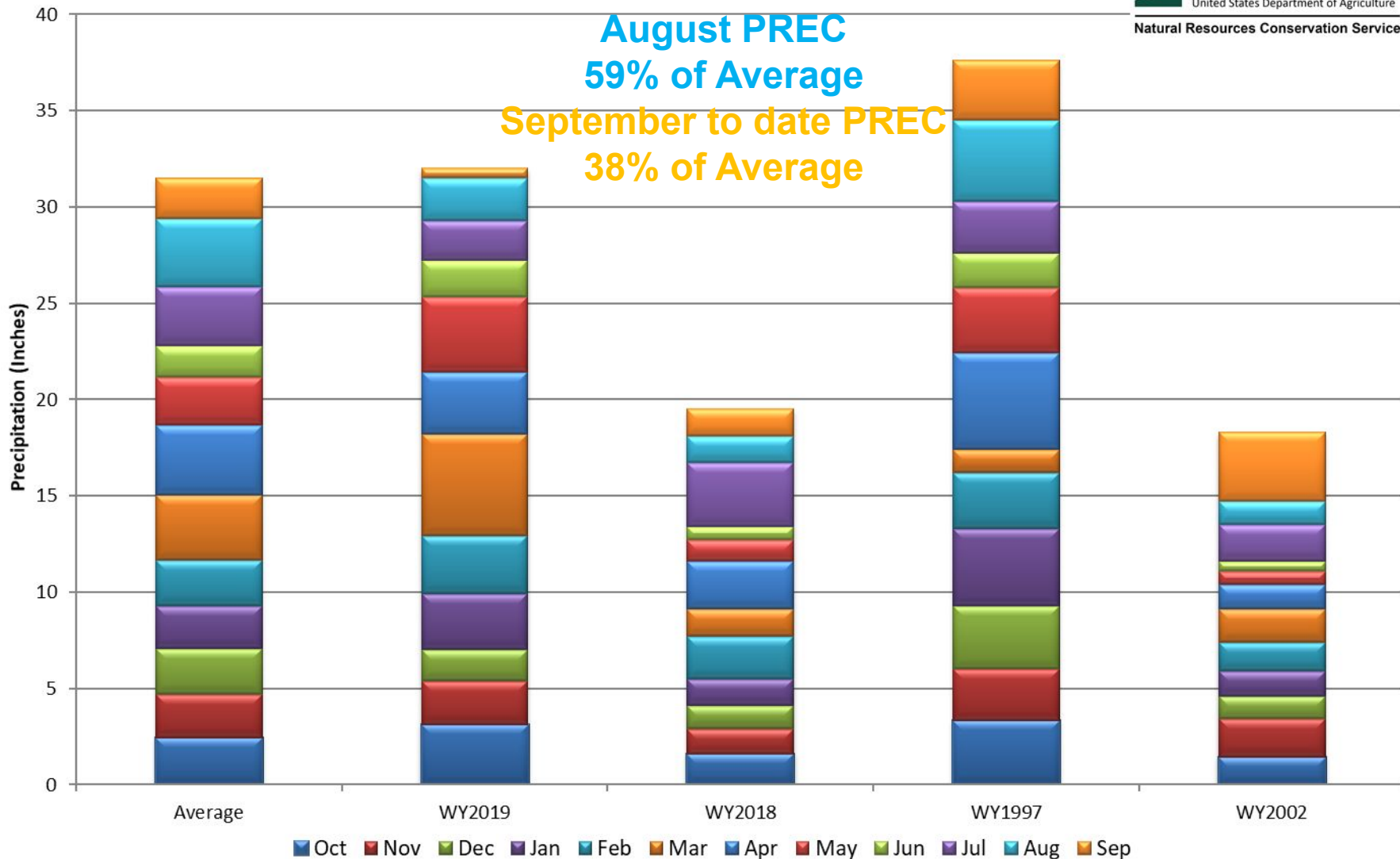
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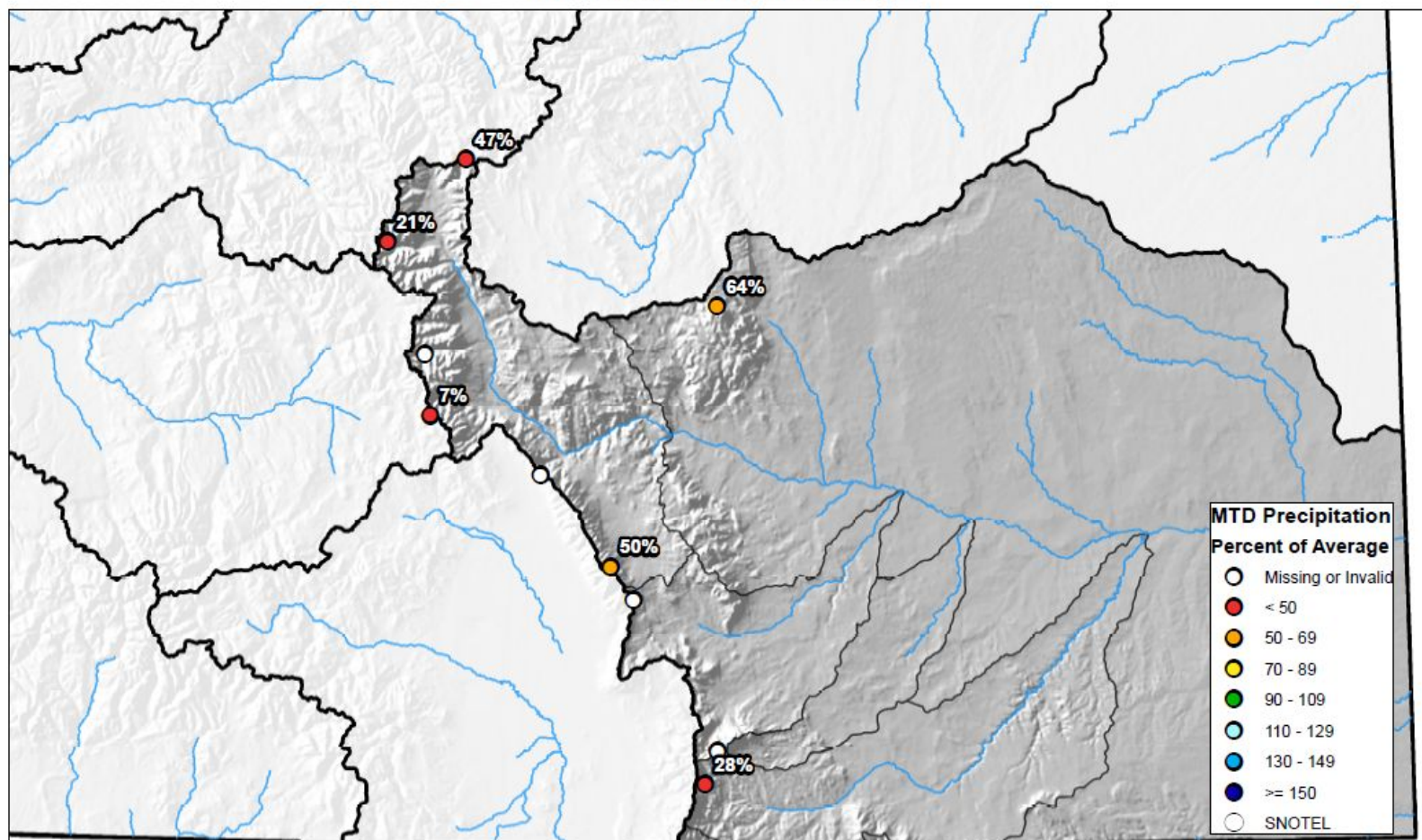
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## Arkansas River Basin Month to Date Precipitation Summary

Current as of Sep 23, 2019

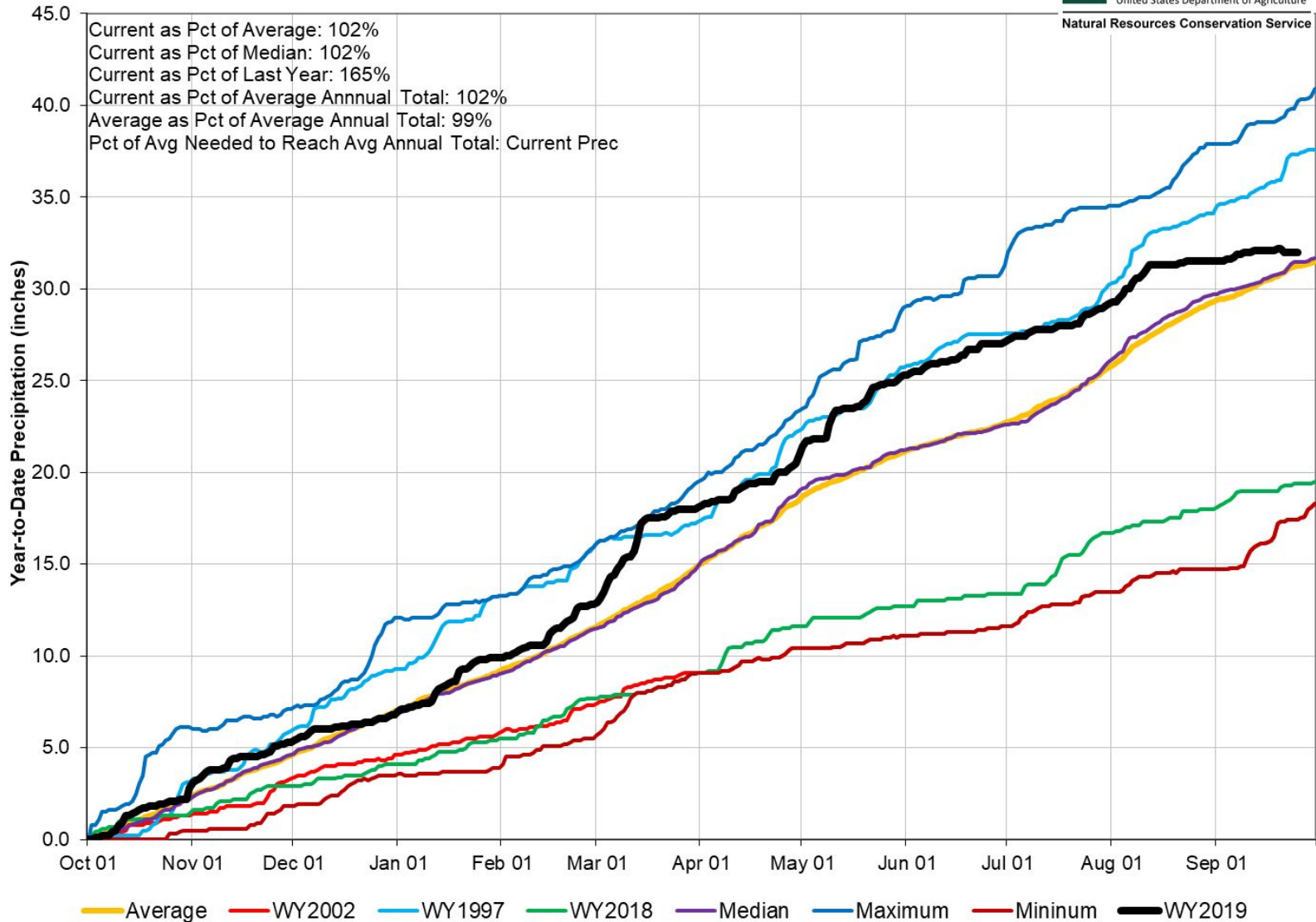


0 10 20 40 60 80 Miles

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

*Based on Provisional SNOTEL data as of Sep 25, 2019*

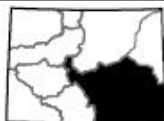
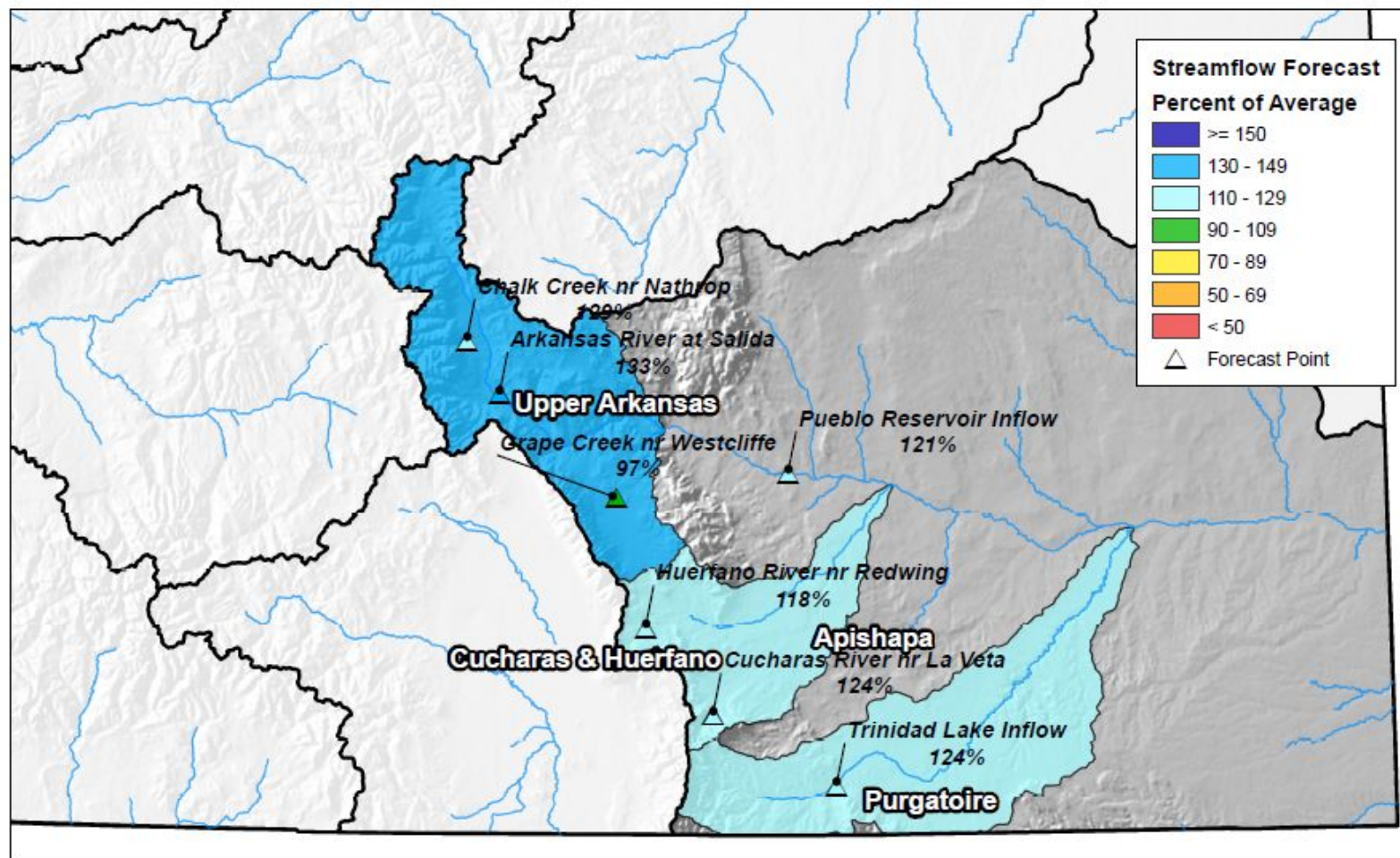
USDA  
United States Department of Agriculture  
Natural Resources Conservation Service



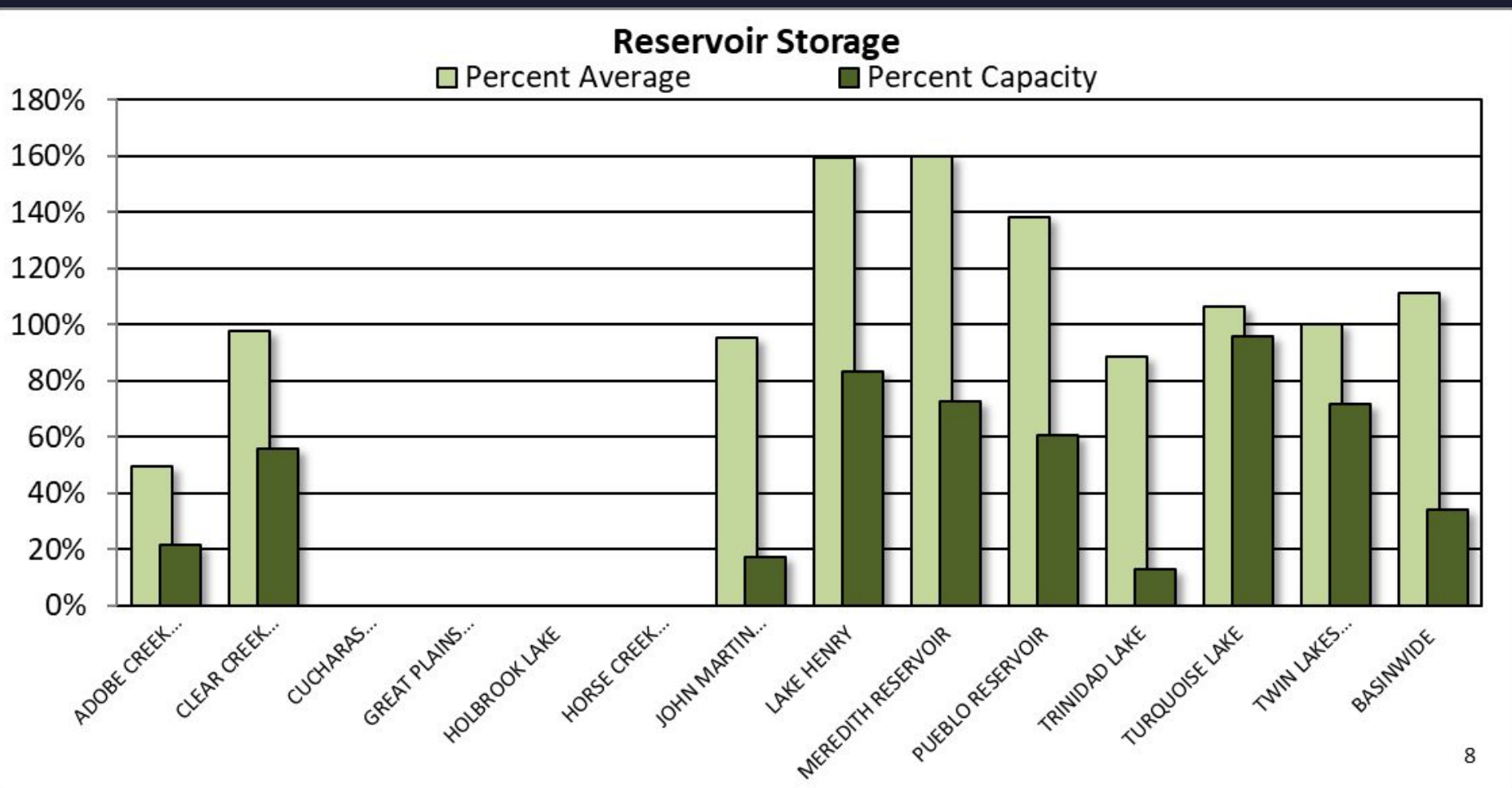


## Arkansas River Basin Streamflow Forecast Summary

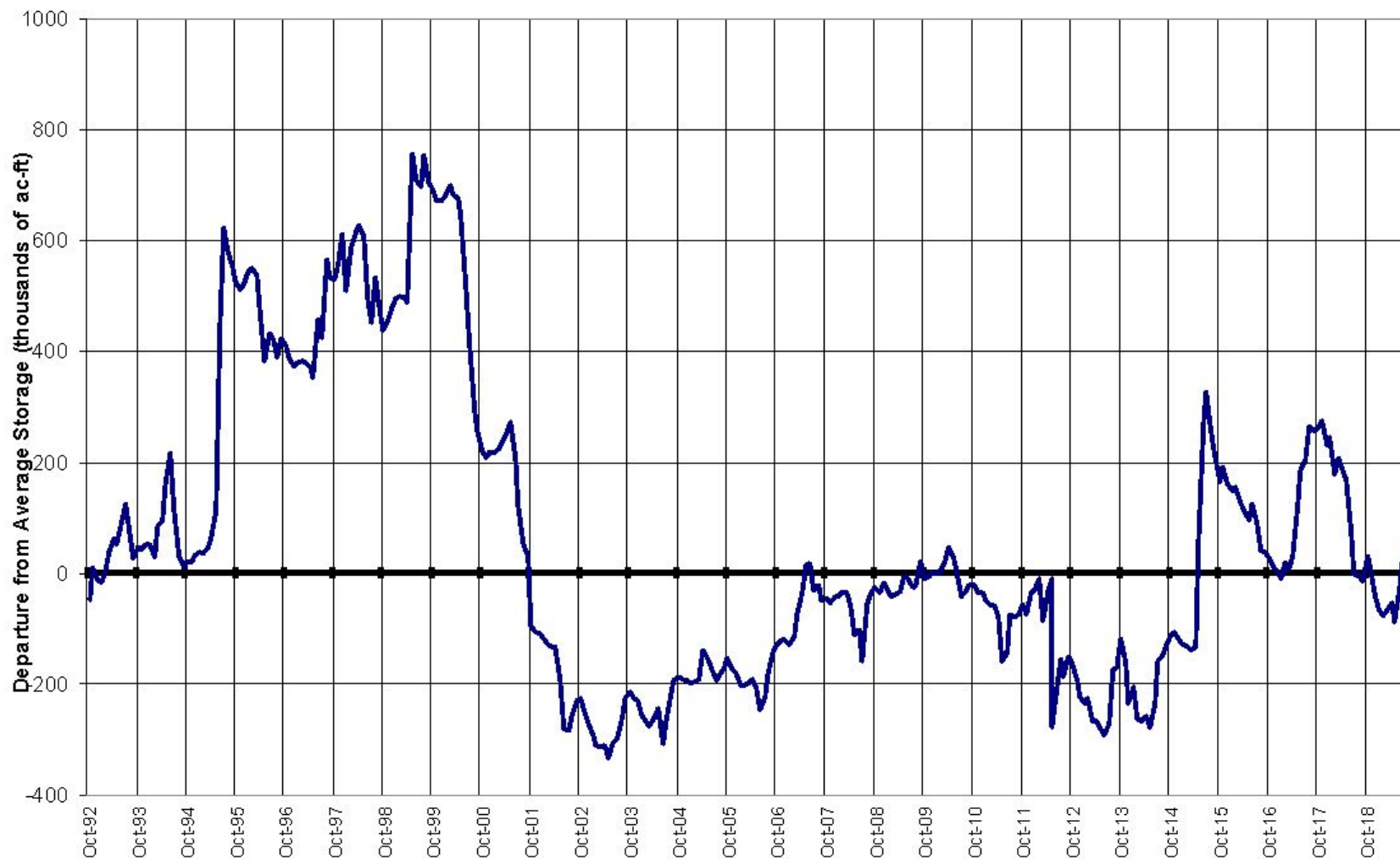
May 1, 2019



0 10 20 40 60 80 Miles



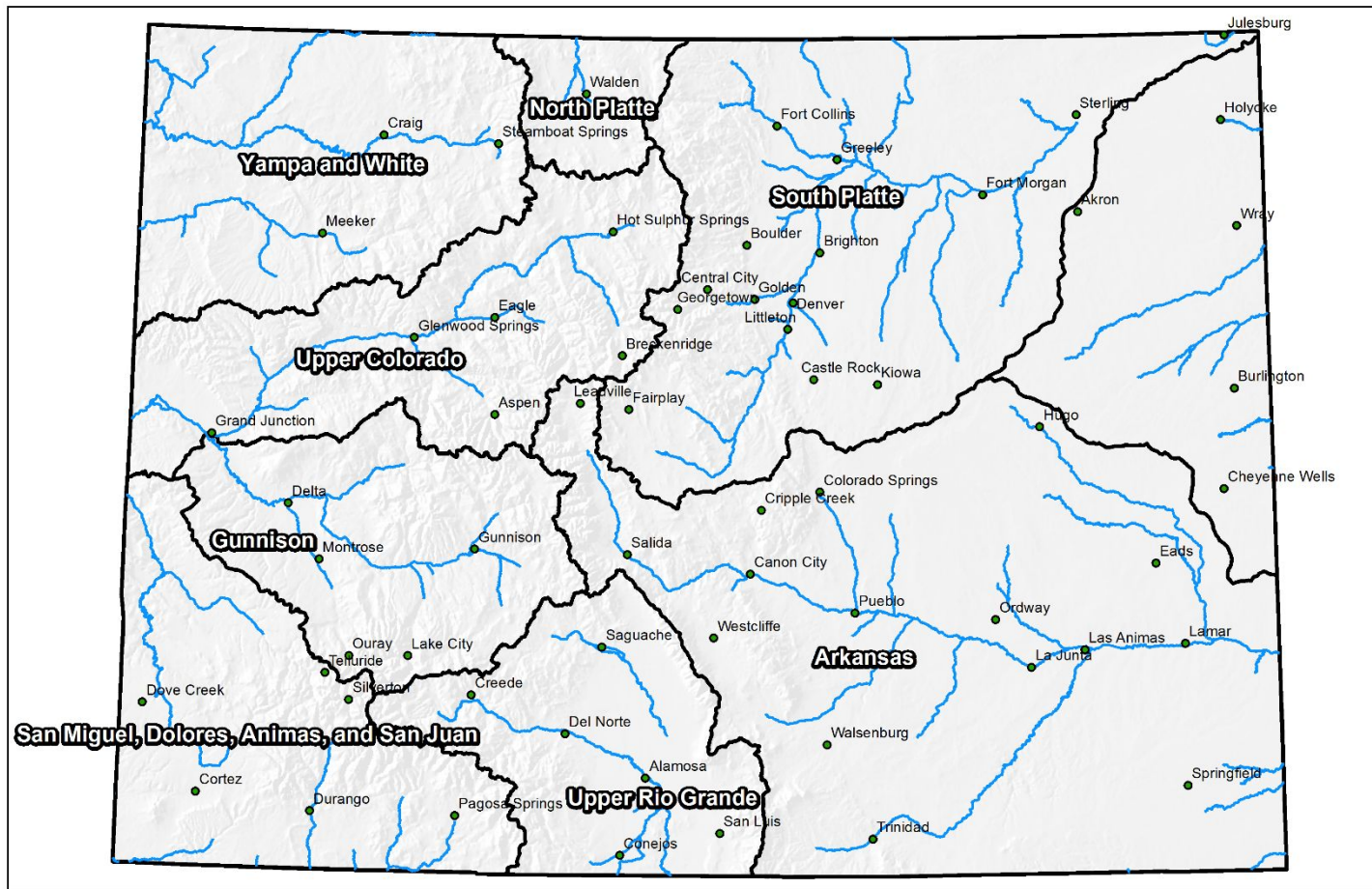
## ARKANSAS RIVER BASIN Reservoir Storage Departure from Average





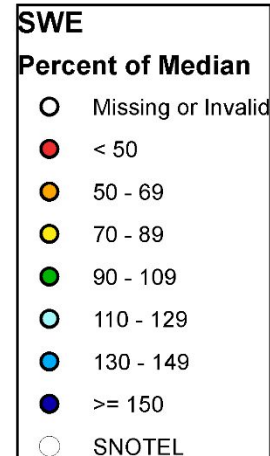
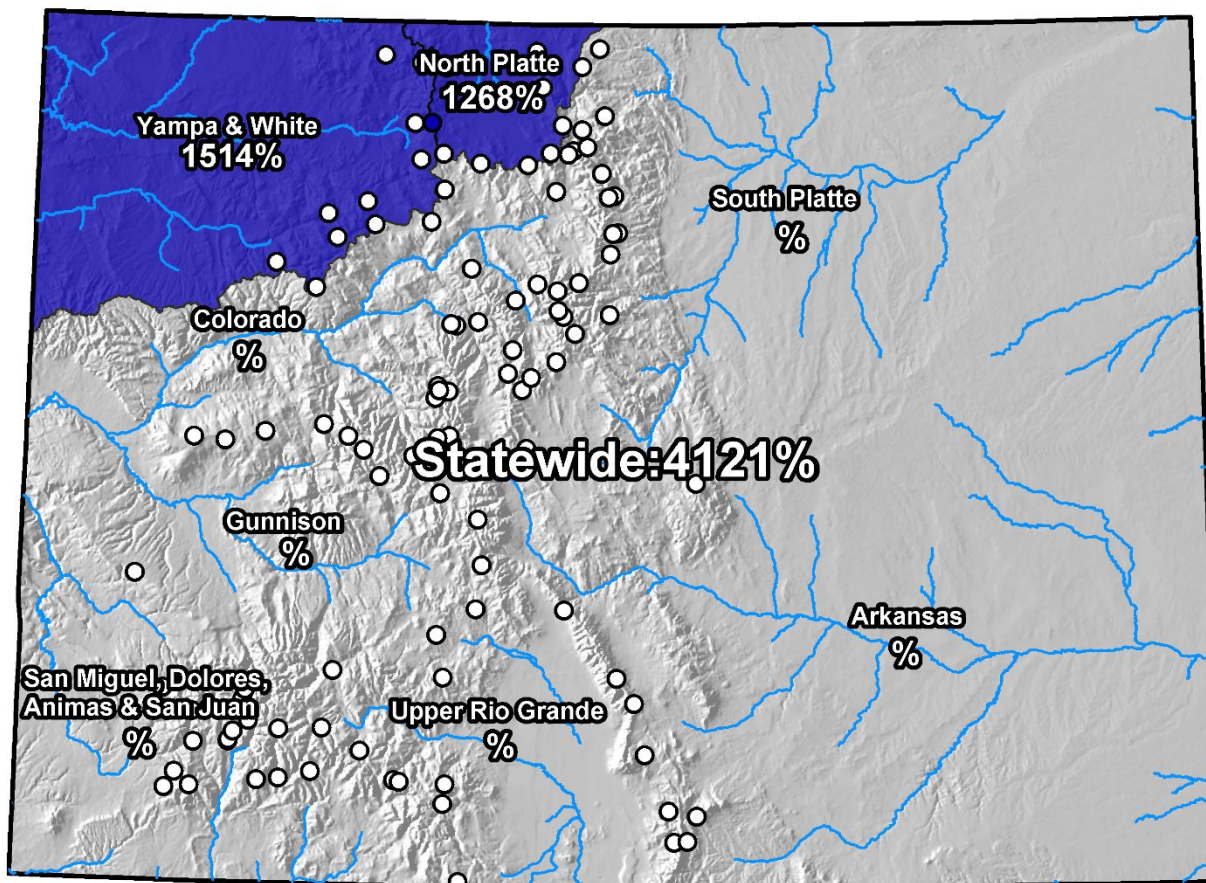
# Colorado Statewide Summary

## Colorado Major Basins



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

Current as of Jun 24, 2019



0 25 50 100 150 200 Miles





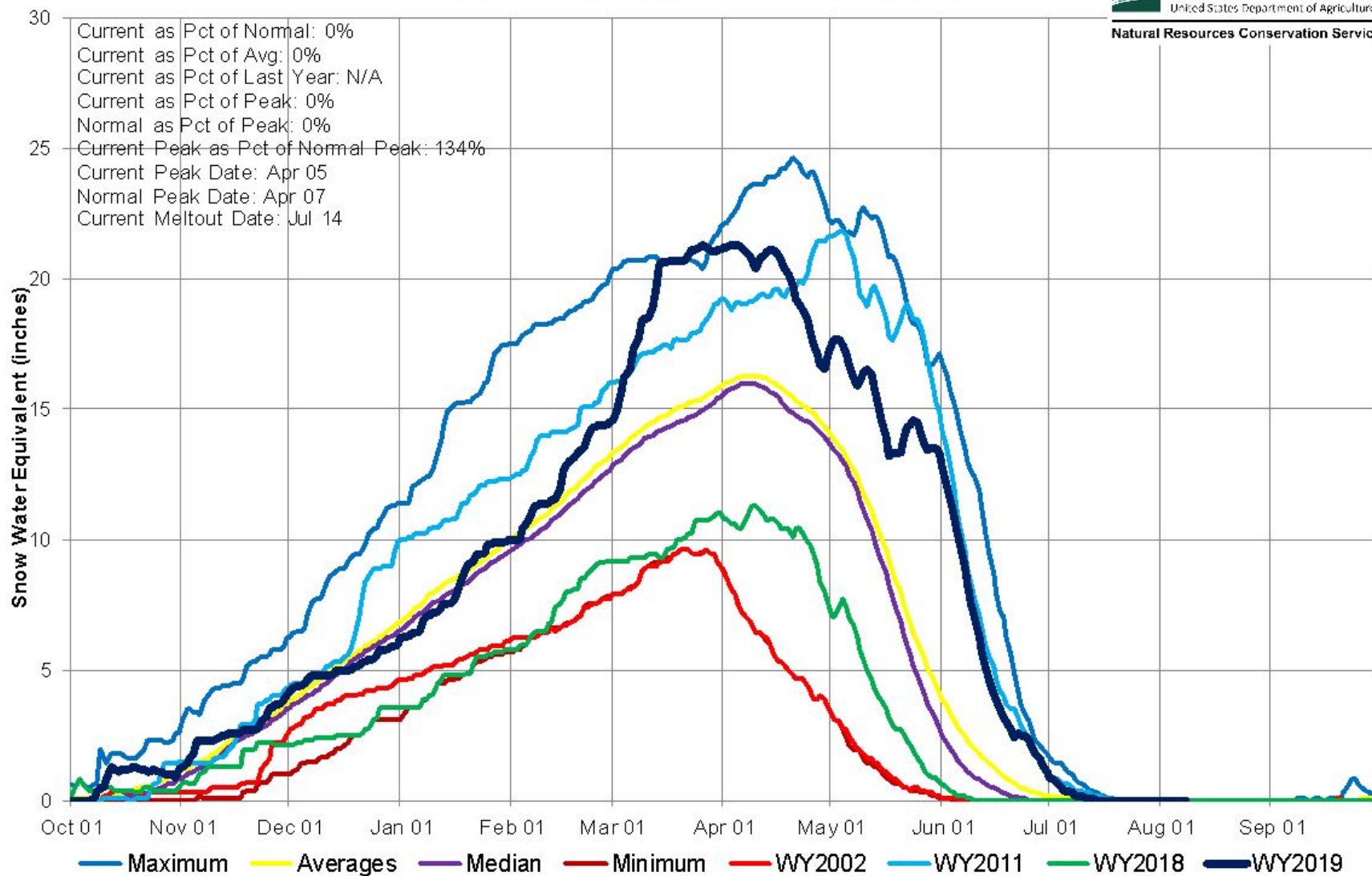
## Colorado Statewide High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of Aug 08, 2019*



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# Colorado Snow Surveys

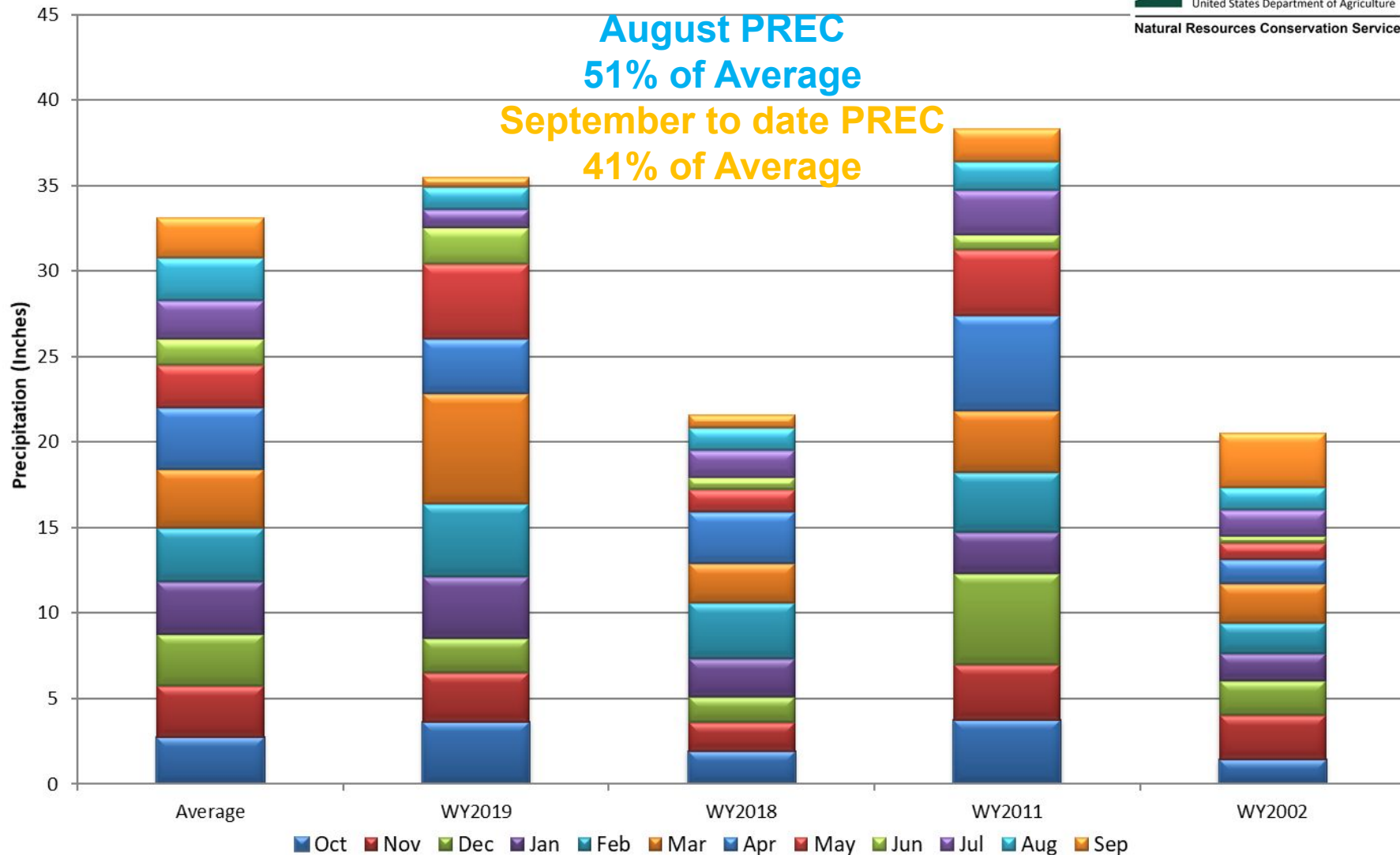
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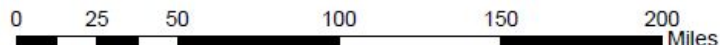
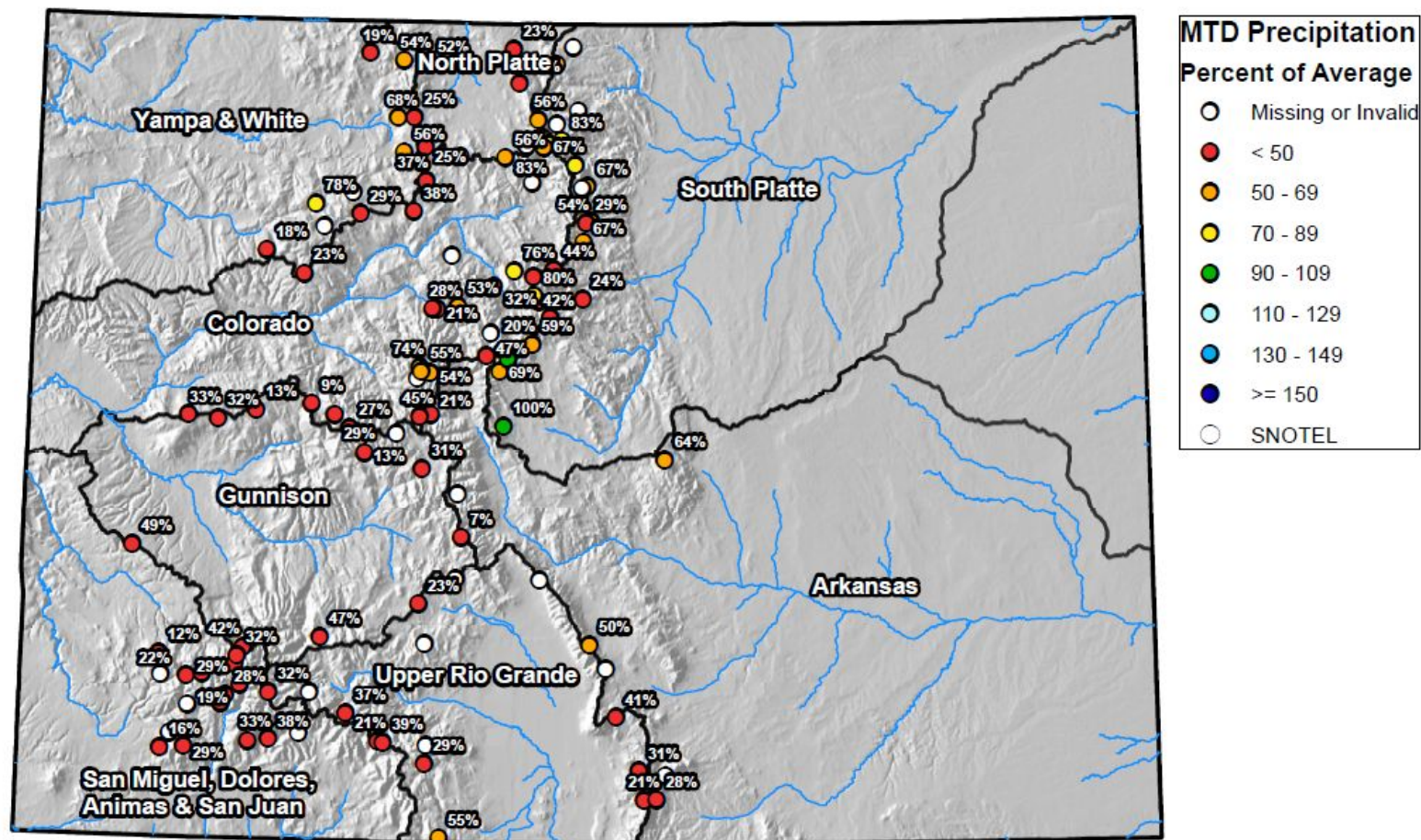
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## Colorado SNOTEL Month-to-Date Precipitation

Current as of Sep 23, 2019



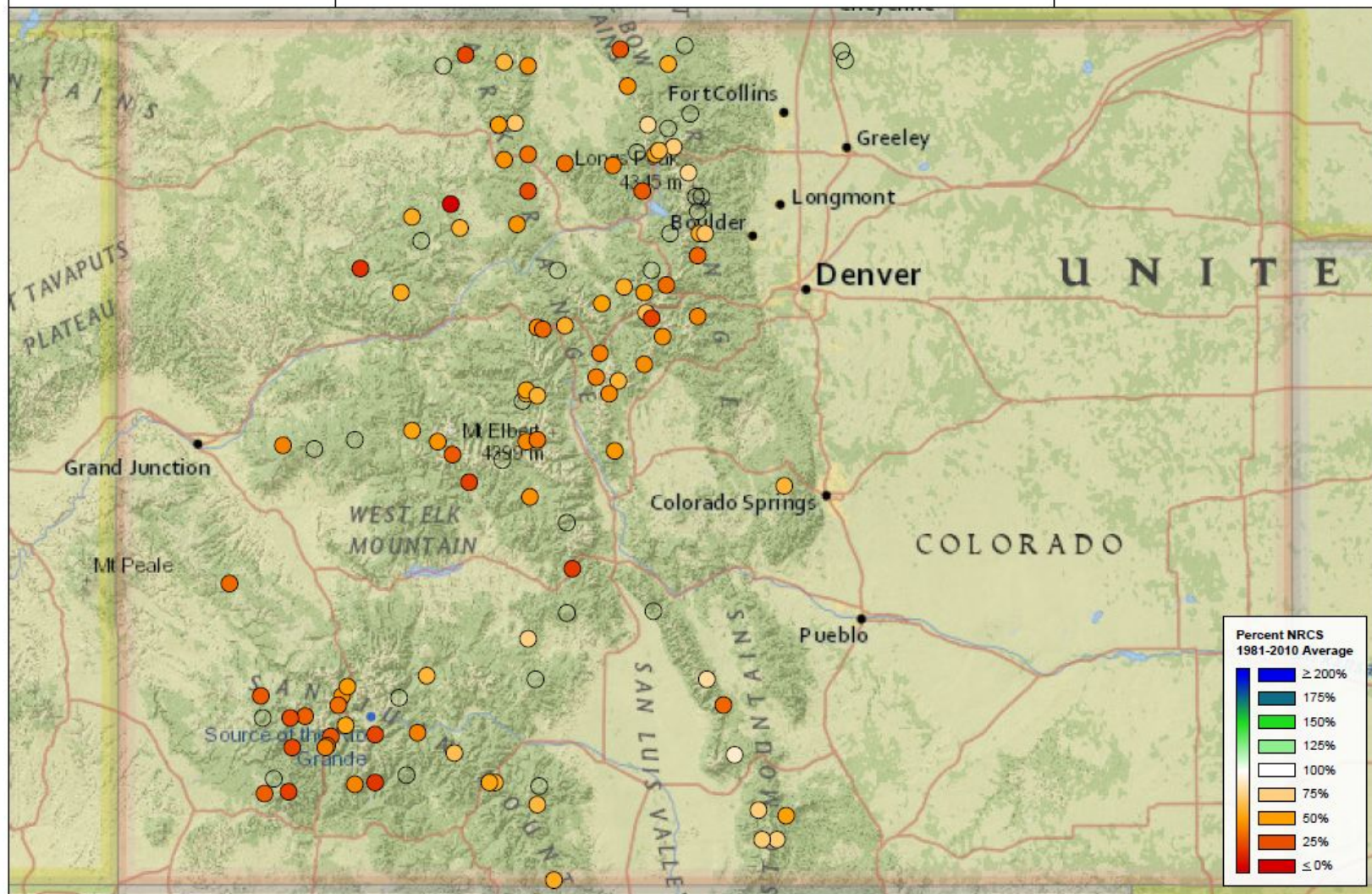


# Colorado Snow Surveys

90 day Precipitation

Percent NRCS 1981-2010 Average

June 27, 2019 - September 24, 2019



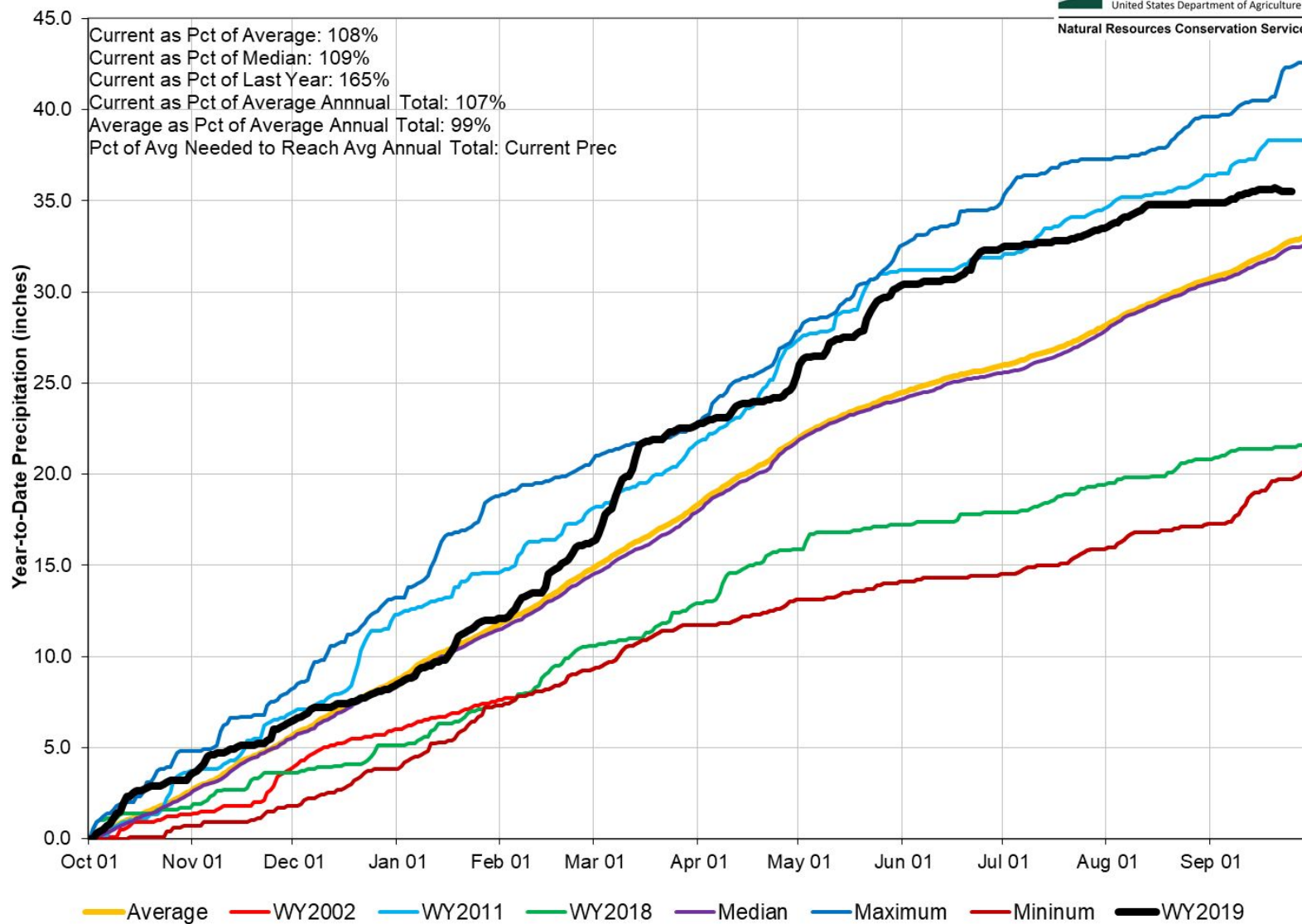




## Colorado Statewide High/Low Year-to-Date Precipitation Summary

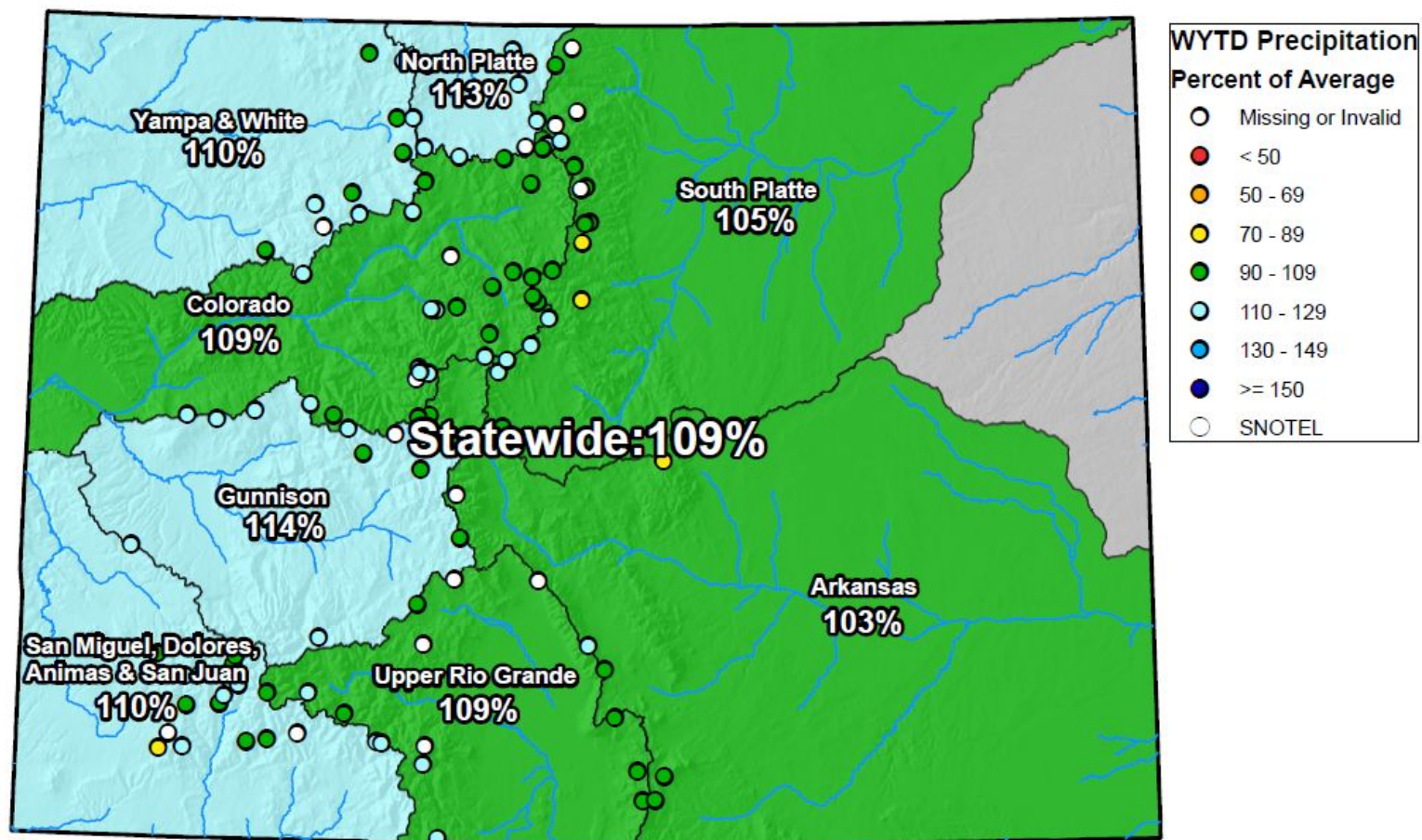
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Natural Resources Conservation Service



## Colorado SNOTEL Water Year to Date Precipitation

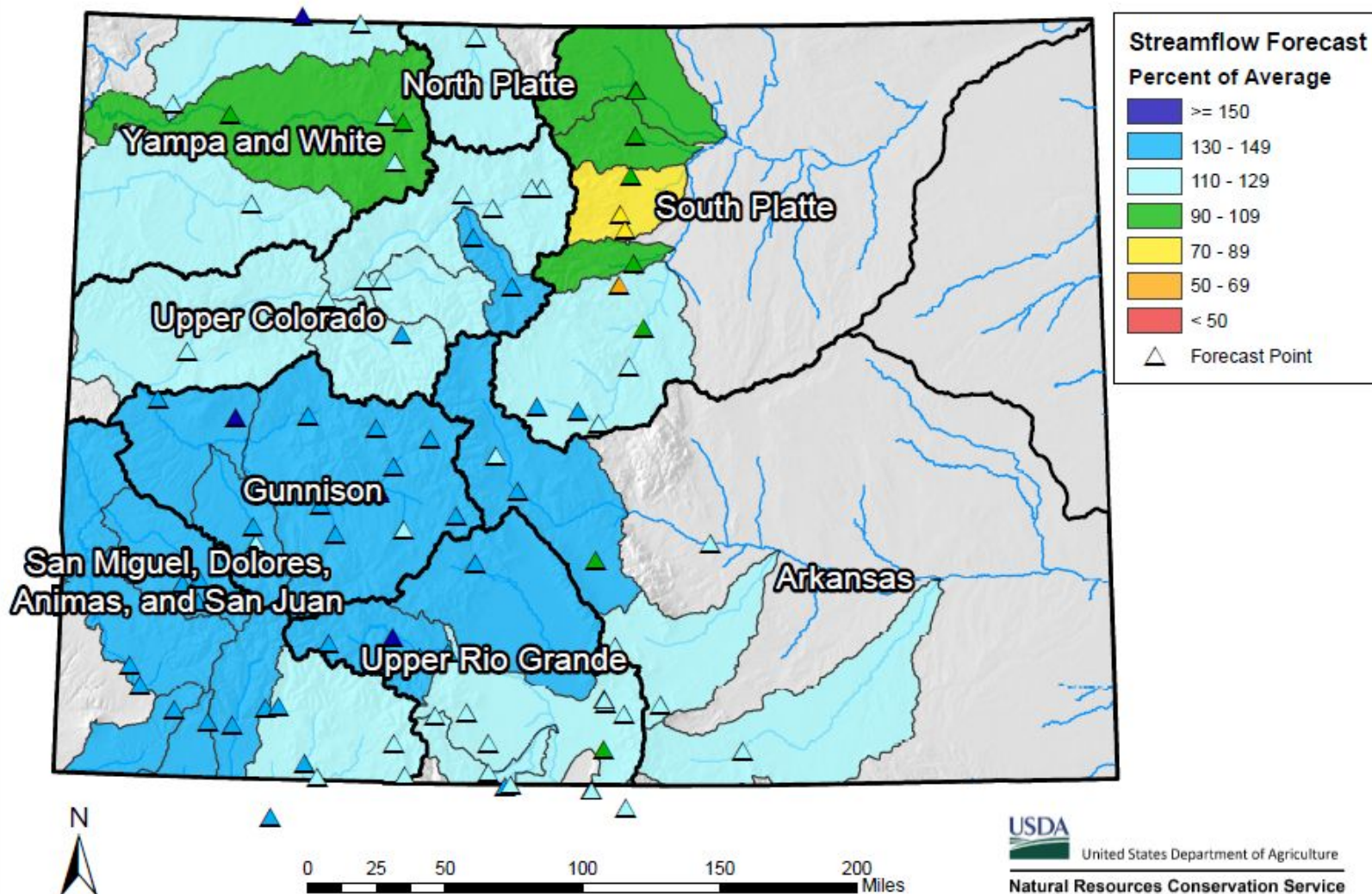
Current as of Sep 23, 2019



0 25 50 100 150 200 Miles



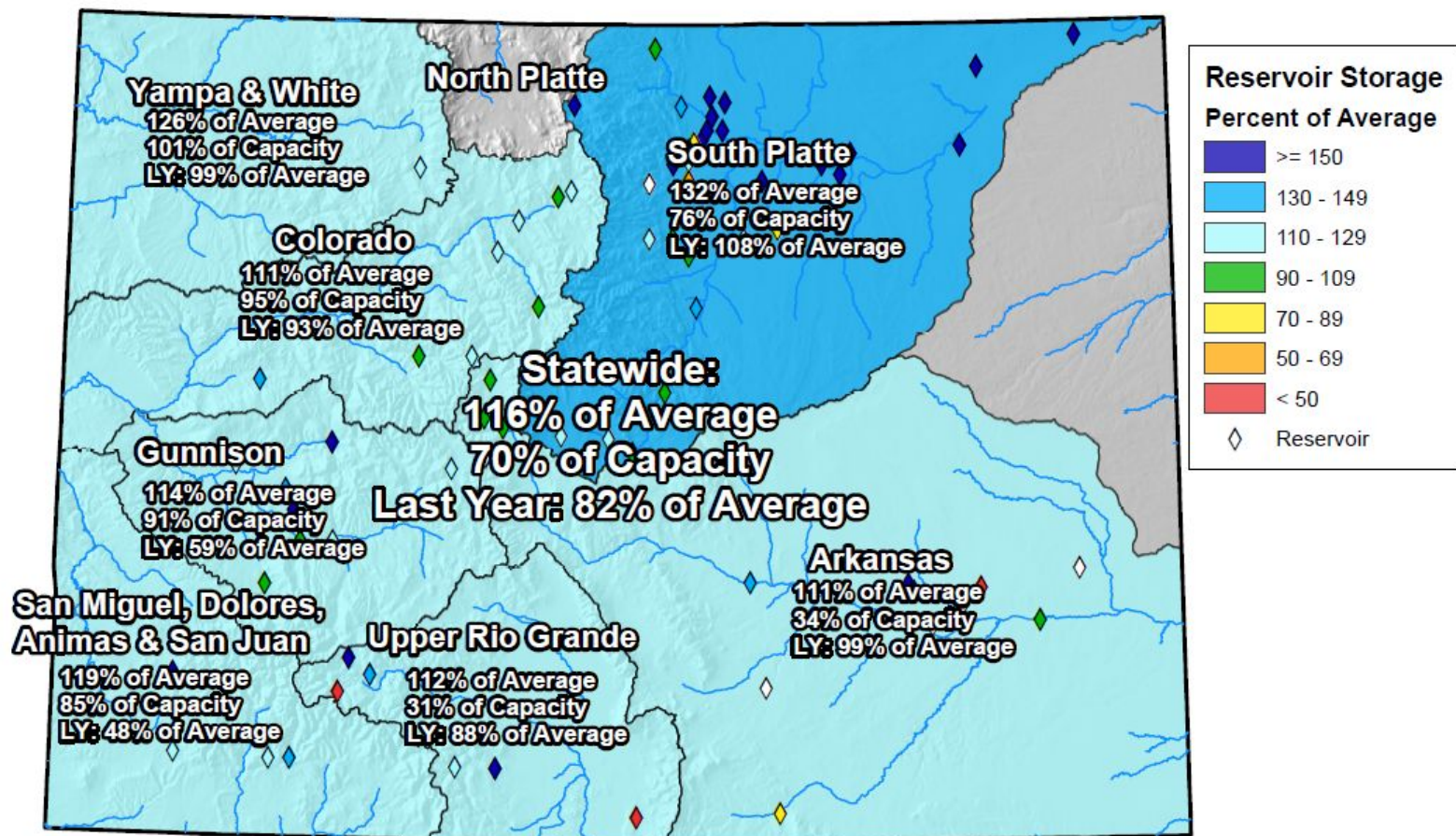
## Colorado Streamflow Forecasts Summary May 1, 2019





## Colorado Monthly Reservoir Storage Summary

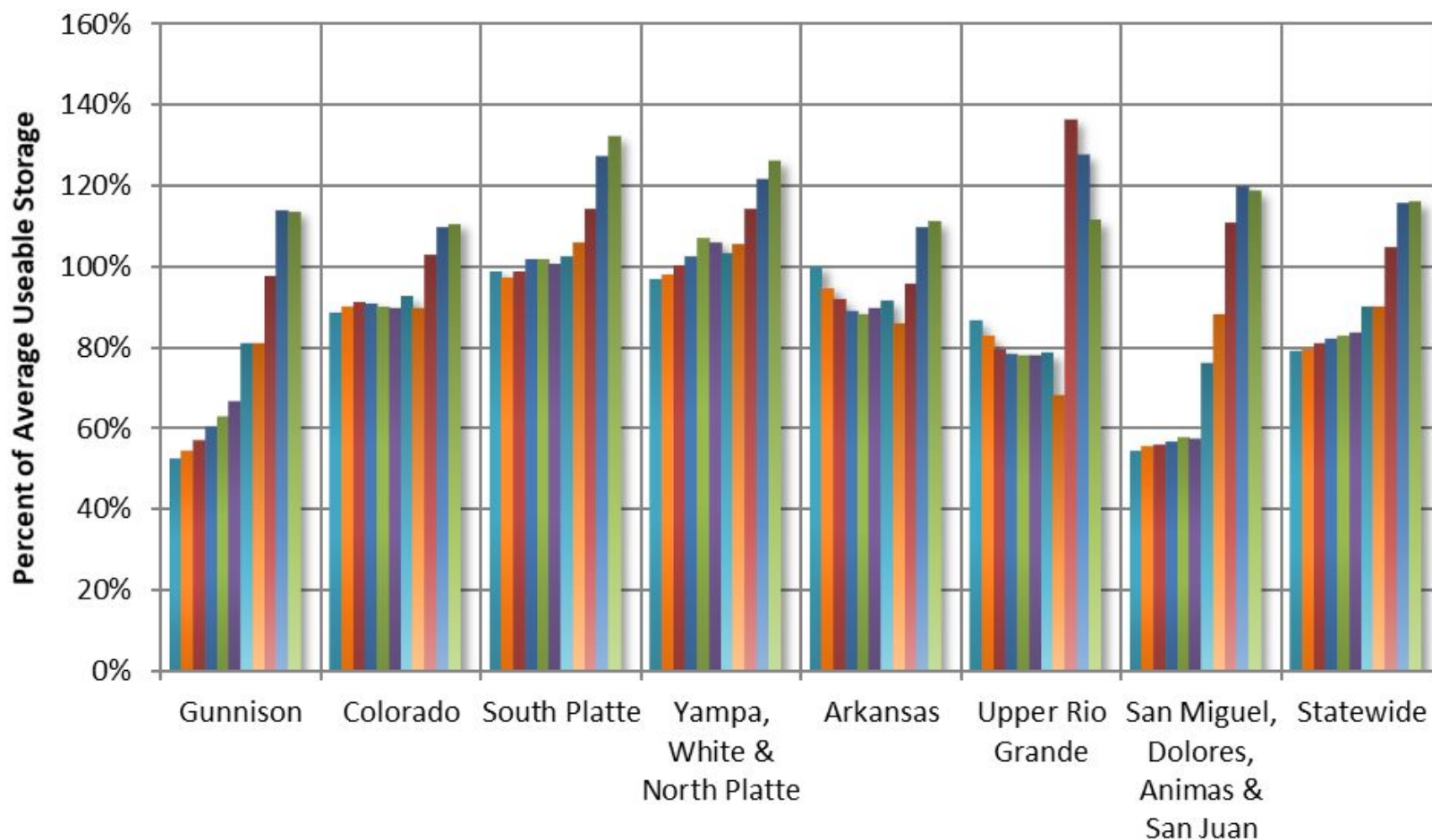
End of August 2019



0 25 50 100 150 200 Miles

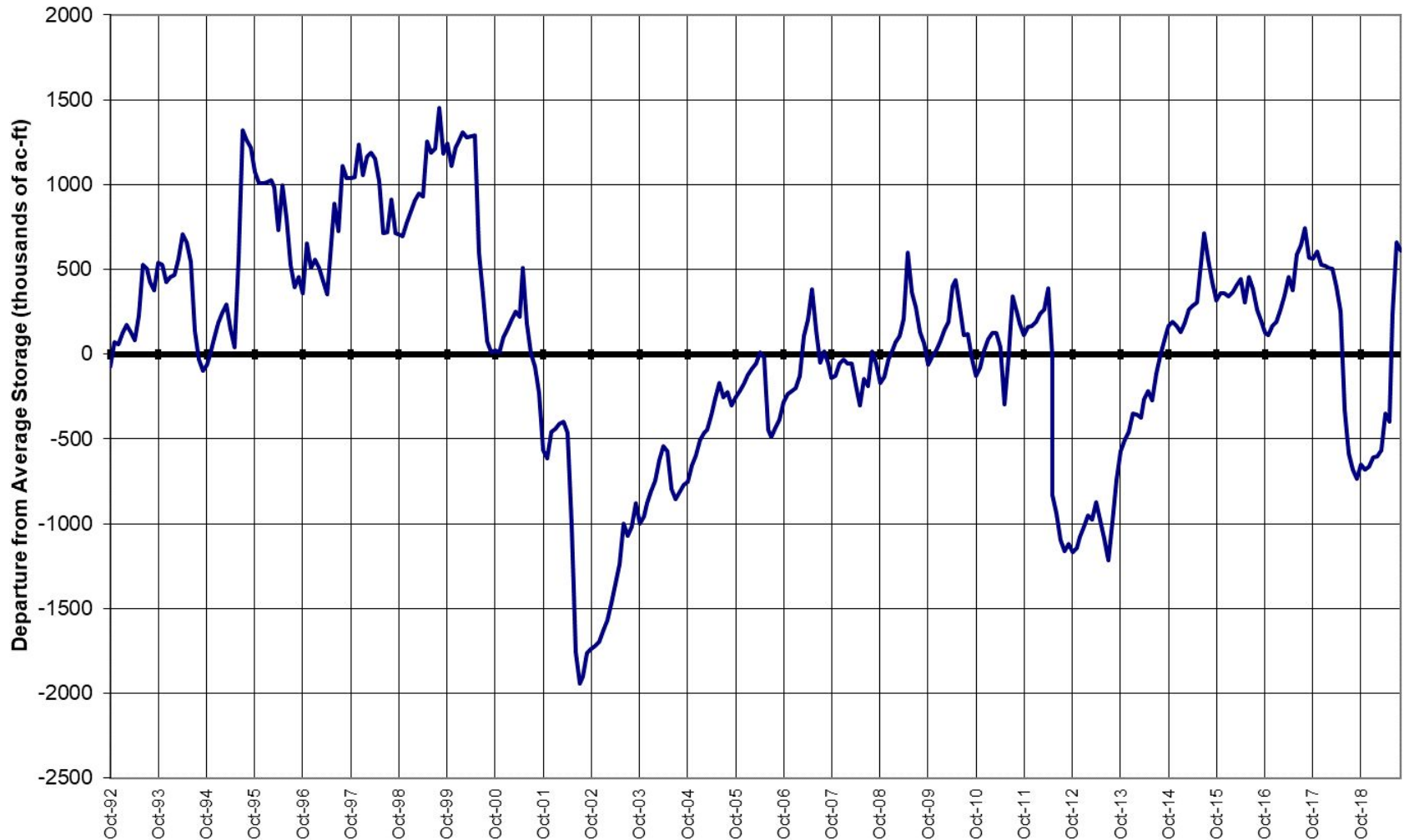
## Colorado Reservoir Storage

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



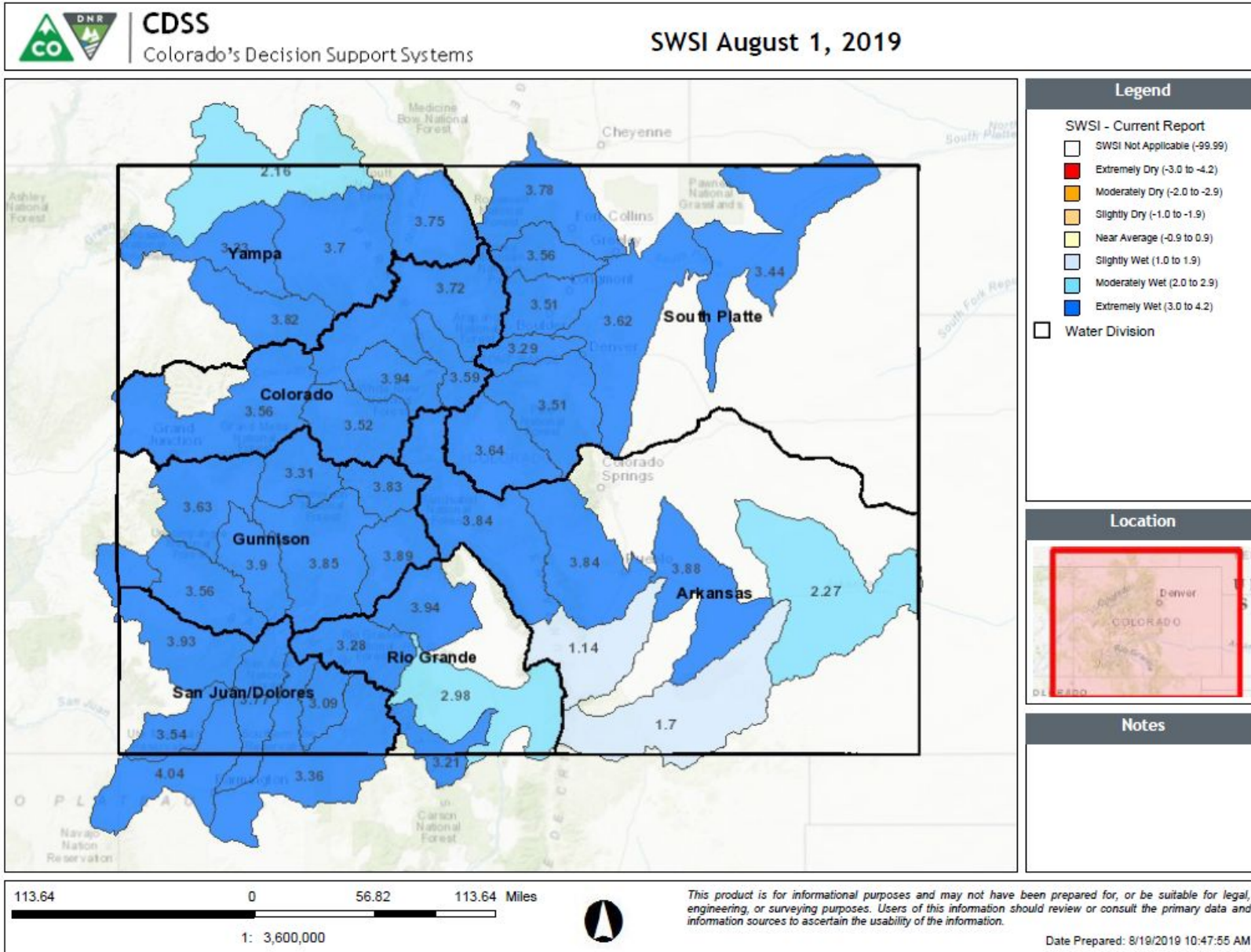


## COLORADO STATEWIDE Reservoir Storage Departure from Average

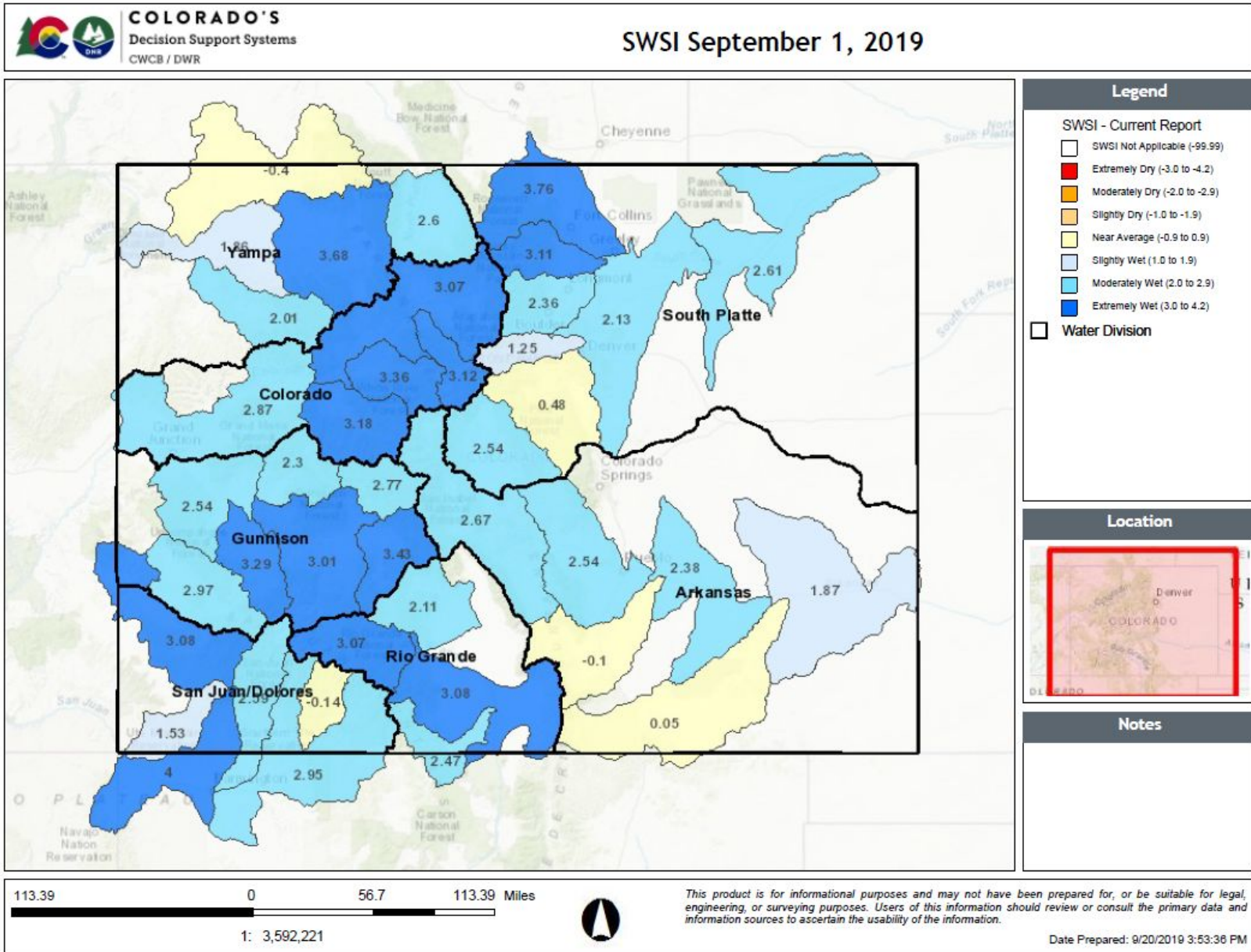




August 1, 2019 SWSI



September 1, 2019 SWSI



## Summary

### •Precipitation Statewide

- July, August, and September have all had well below average mountain precipitation across all major basins in Colorado
  - Near or below 50 percent of normal values for all three months
- Water year to date precipitation ranges from 107 to 120 percent of average

### •Reservoir storage remains above average in all major basins

- Storage ranges from 111-132 percent of average in the basins as is 116 percent of average statewide
- Overall very similar to last month

### •While the last several months have been dry having ample reservoir storage is encouraging as winter approaches

### •A dusting of snow occurred at Tower SNOTEL last week but no other accumulations have been observed at a SNOTEL site so far





United States Department of Agriculture

Colorado Snow Surveys

# Water Availability Task Force Meeting

## September 25<sup>th</sup>, 2019

### NRCS Snow Survey and Water Supply Forecasting Program

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



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