



United States Department of Agriculture

Colorado Snow Surveys

# Water Availability Task Force Meeting

## April 15<sup>th</sup>, 2015

### NRCS Snow Survey and Water Supply Forecasting Program

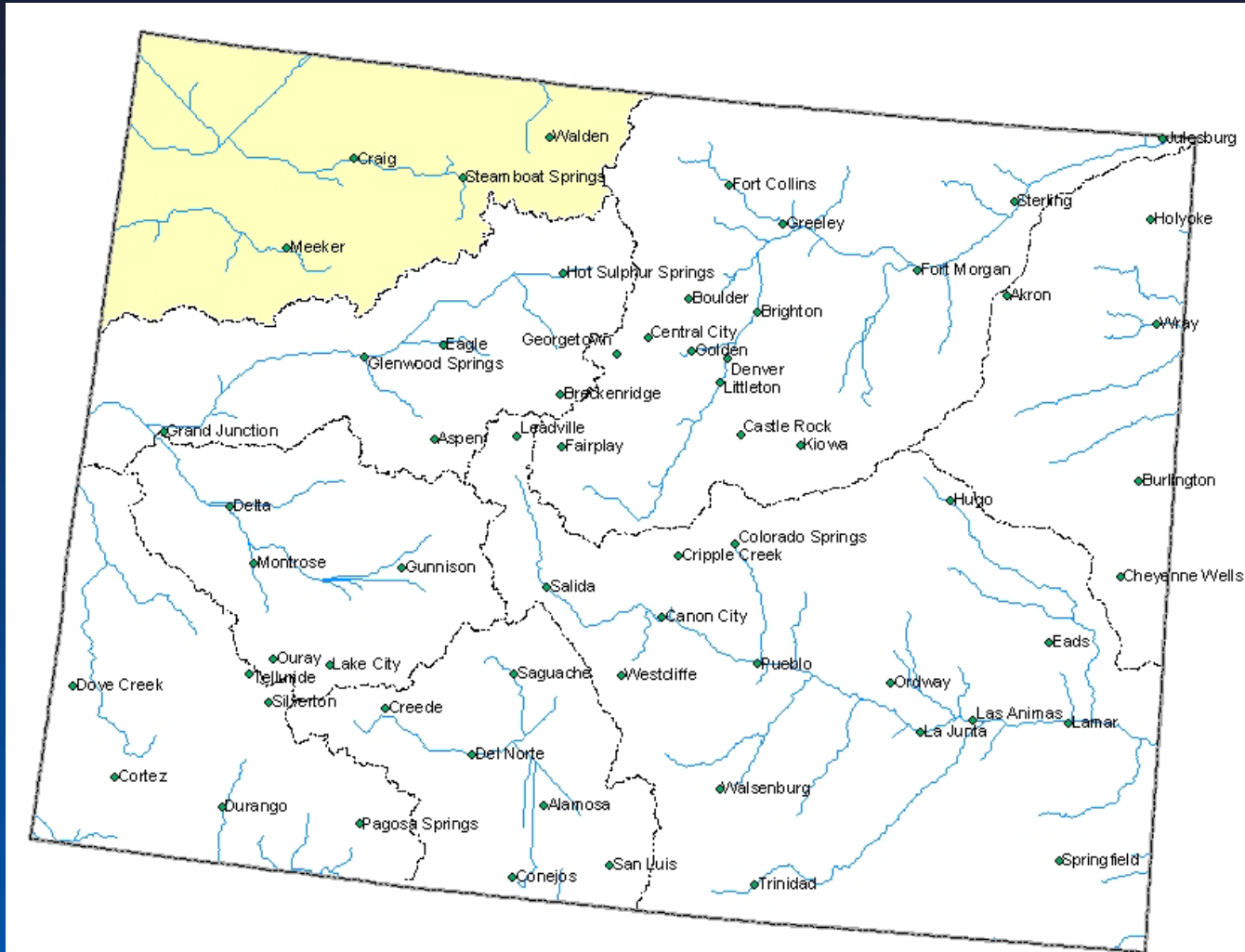
Brian Domonkos

Colorado Snow Survey Supervisor

720-544-2852

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

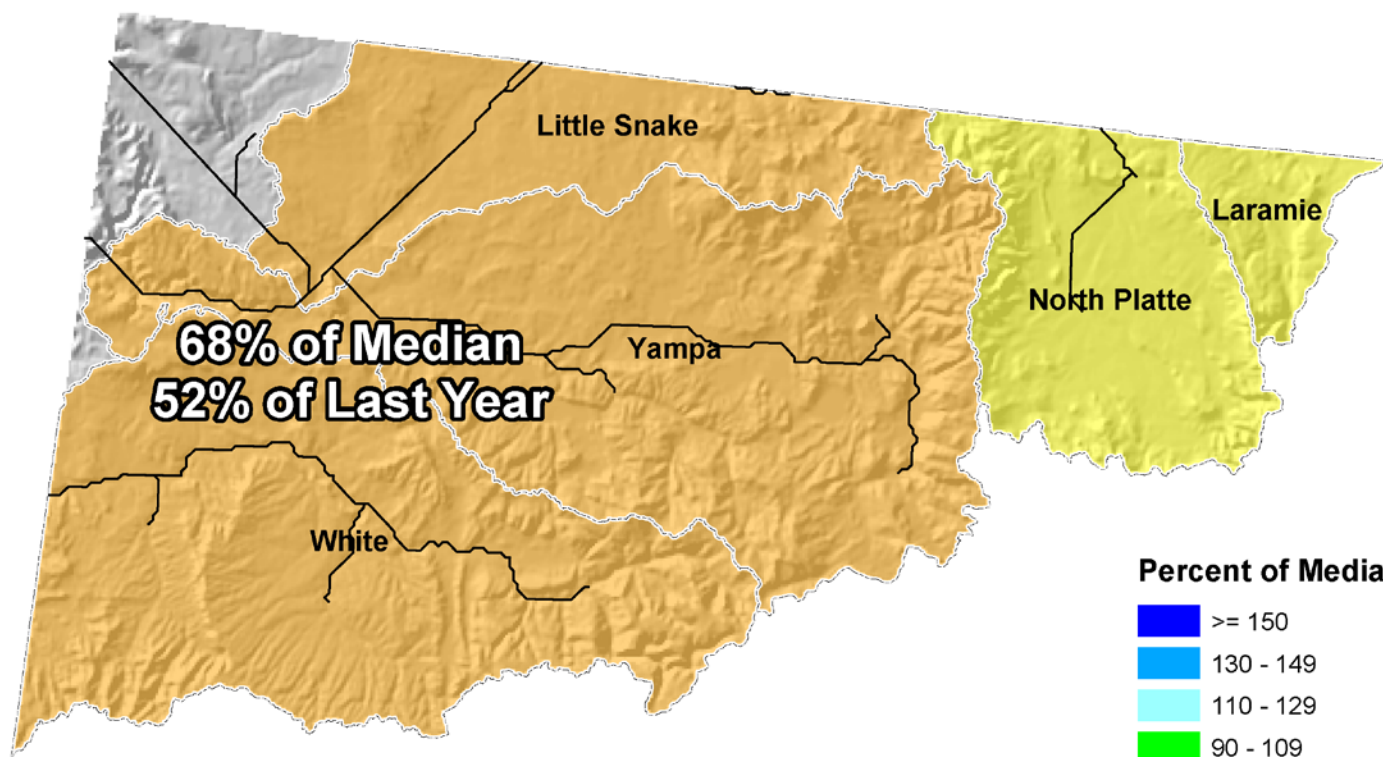
## Yampa, White & North Platte River Basins Summary



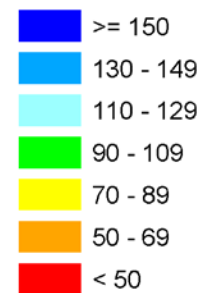
## Yampa, White and North Platte River Basins Snowpack Map



*Provisional Data  
Subject to Revision*



### Percent of Median

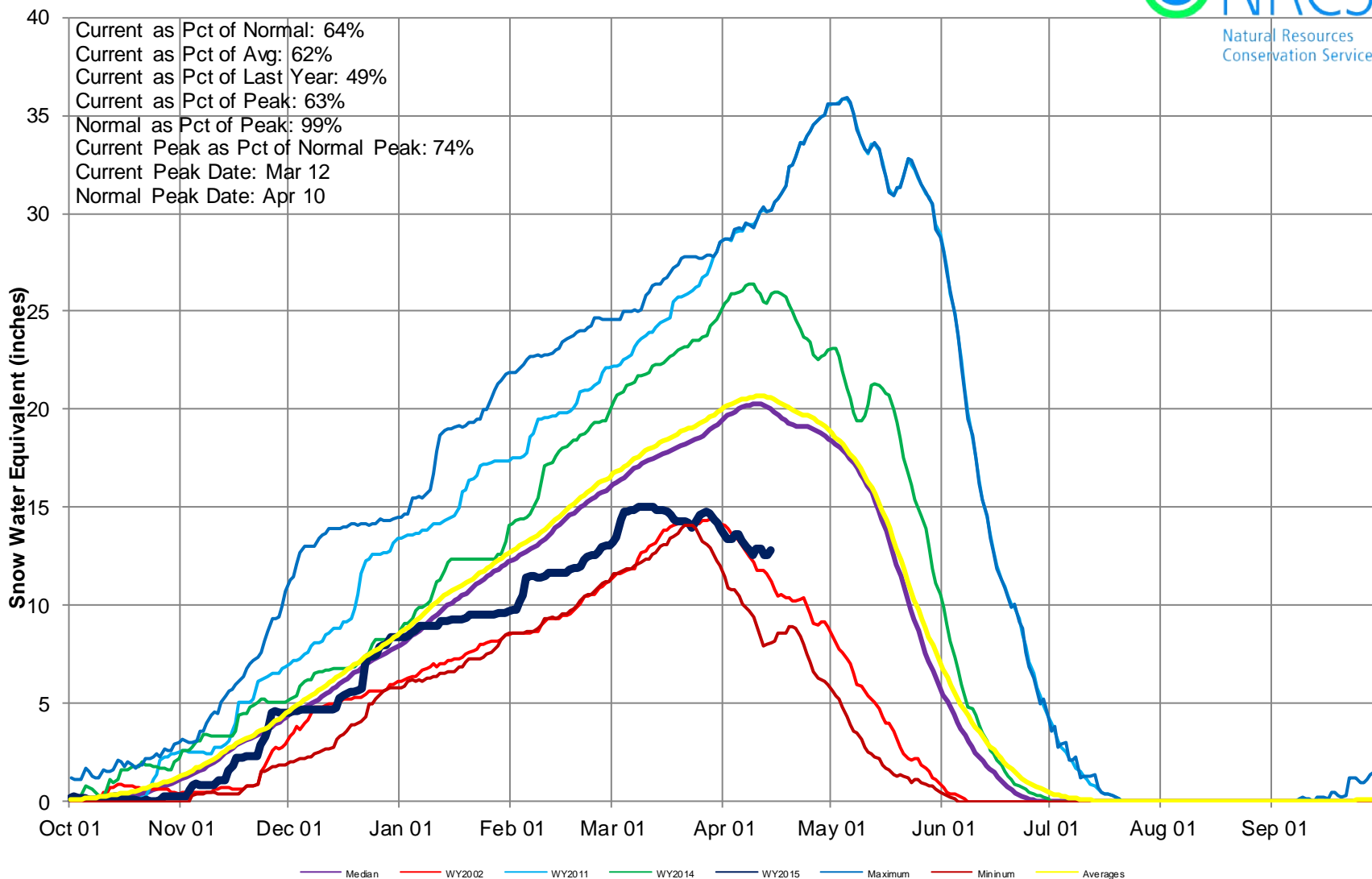


Current as of April 1, 2015



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

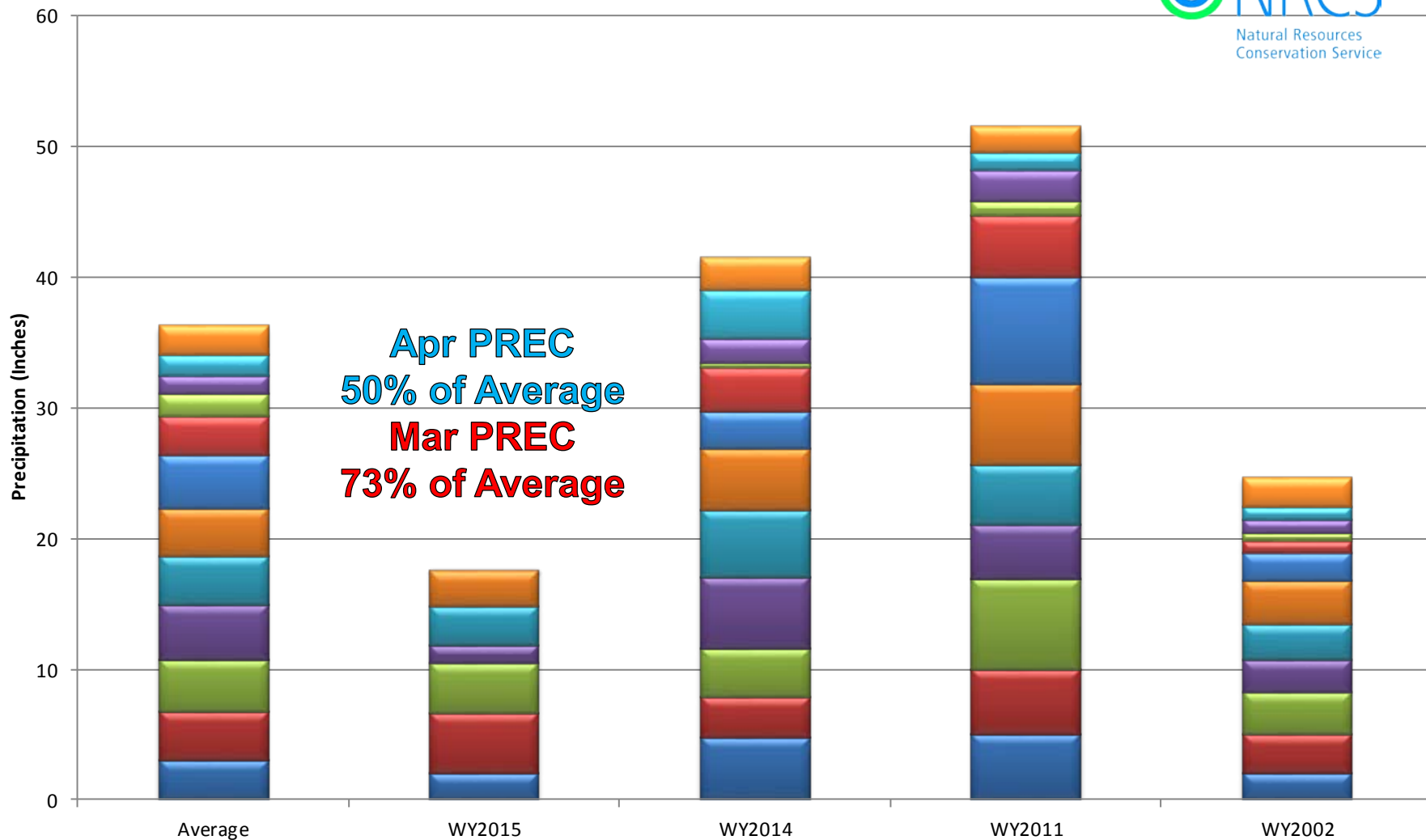
*Based on Provisional SNOTEL data as of Apr 14, 2015*





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

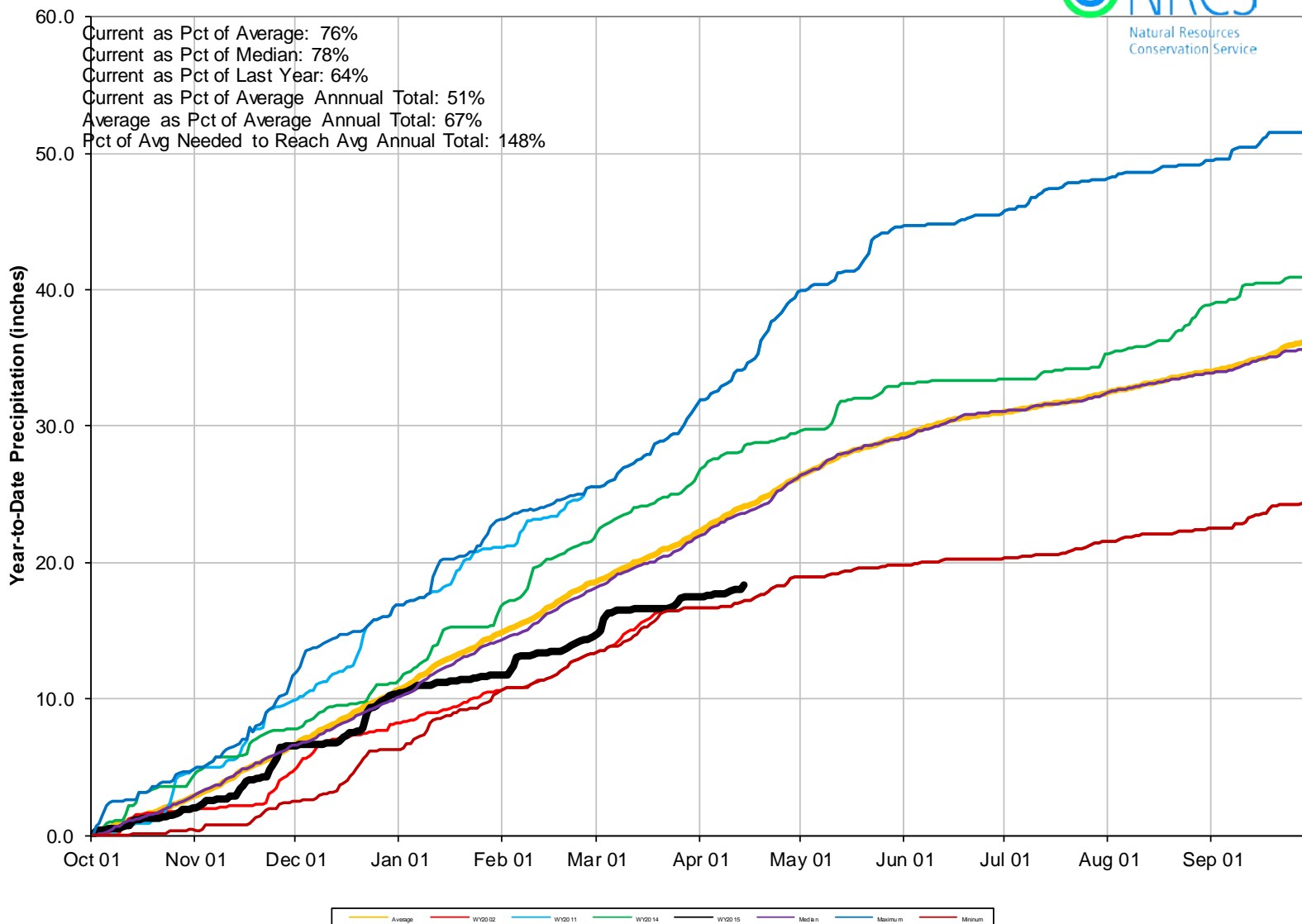
*Based on Provisional SNOTEL data as of Apr 14, 2015*





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

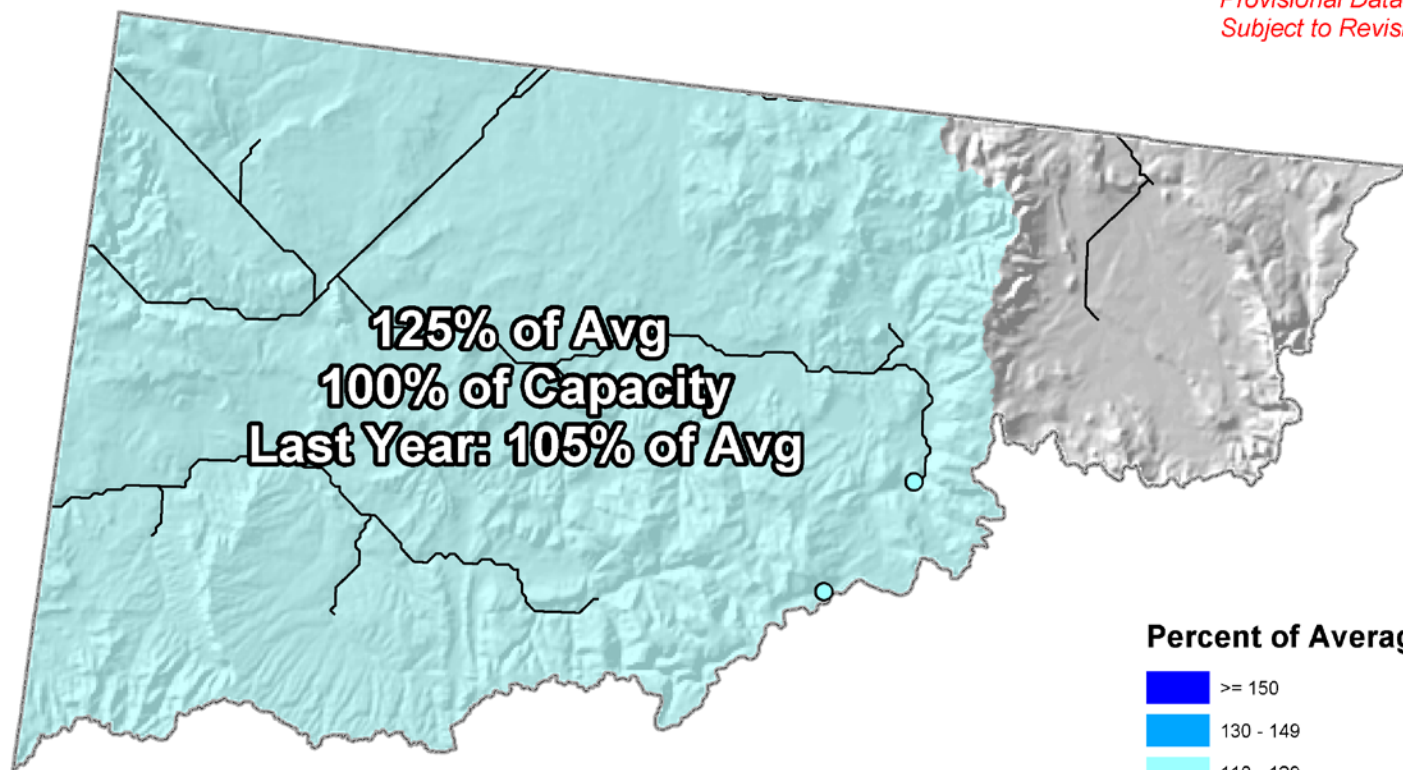
*Based on Provisional SNOTEL data as of Apr 14, 2015*



## Yampa & White River Basins Reservoir Storage Map



*Provisional Data  
Subject to Revision*



### Percent of Average

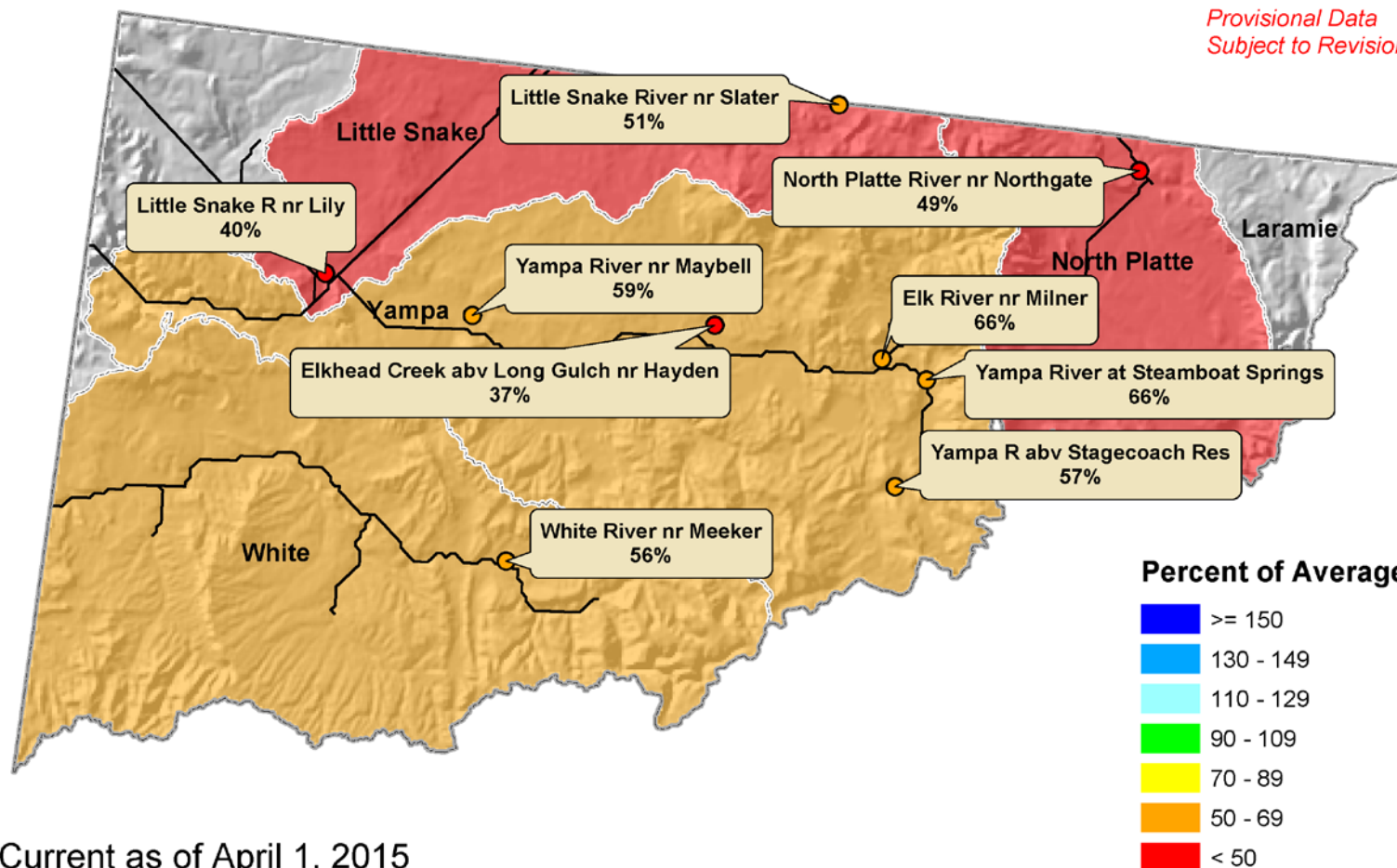


End of March 2015

## Yampa, White and North Platte River Basins Streamflow Map

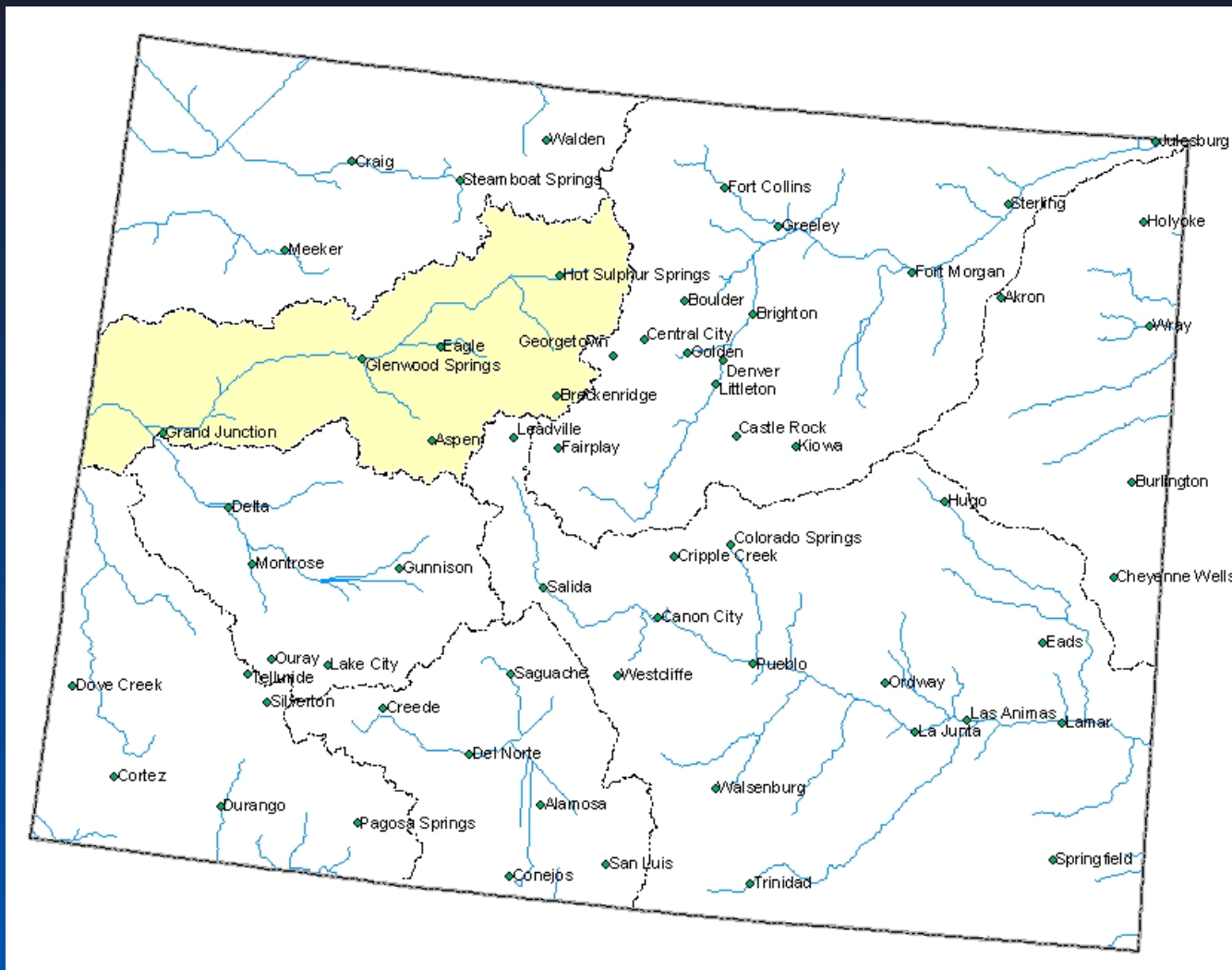


*Provisional Data  
Subject to Revision*



Current as of April 1, 2015

## Colorado River Basin Summary





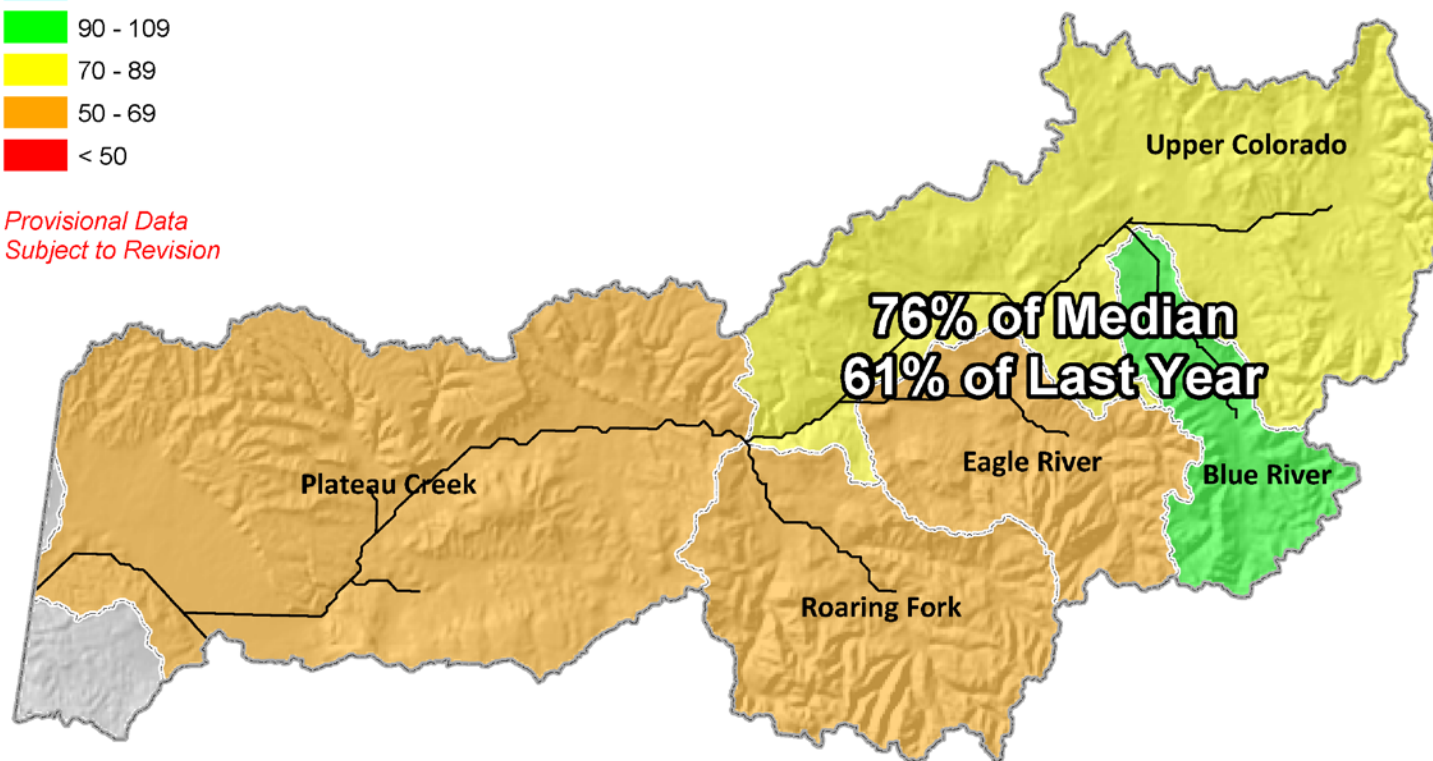
## Colorado River Basin Snowpack Map



### Percent of Median



*Provisional Data  
Subject to Revision*

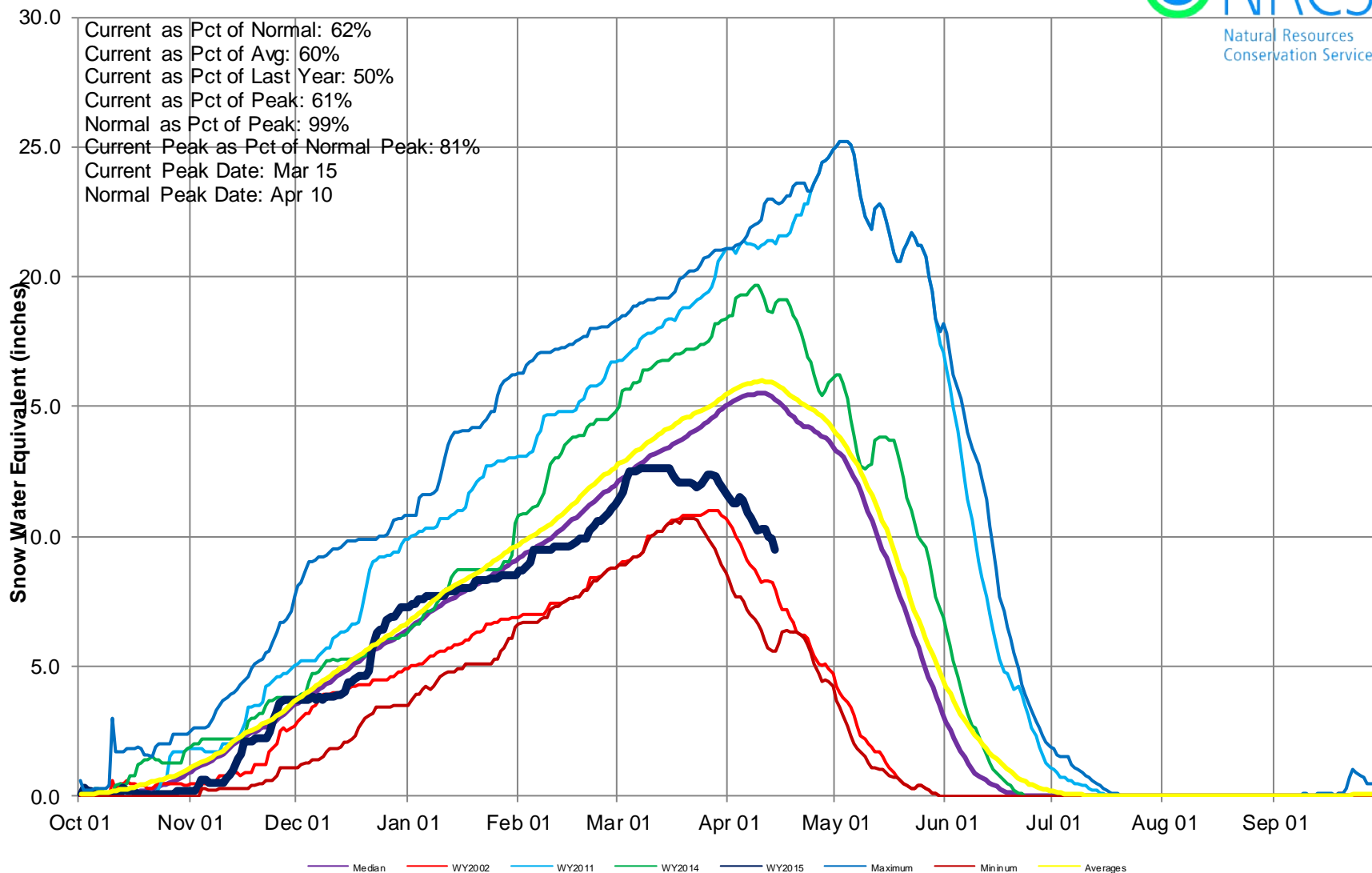


Current as of April 1, 2015



## Upper Colorado River Basin High/Low Snowpack Summary

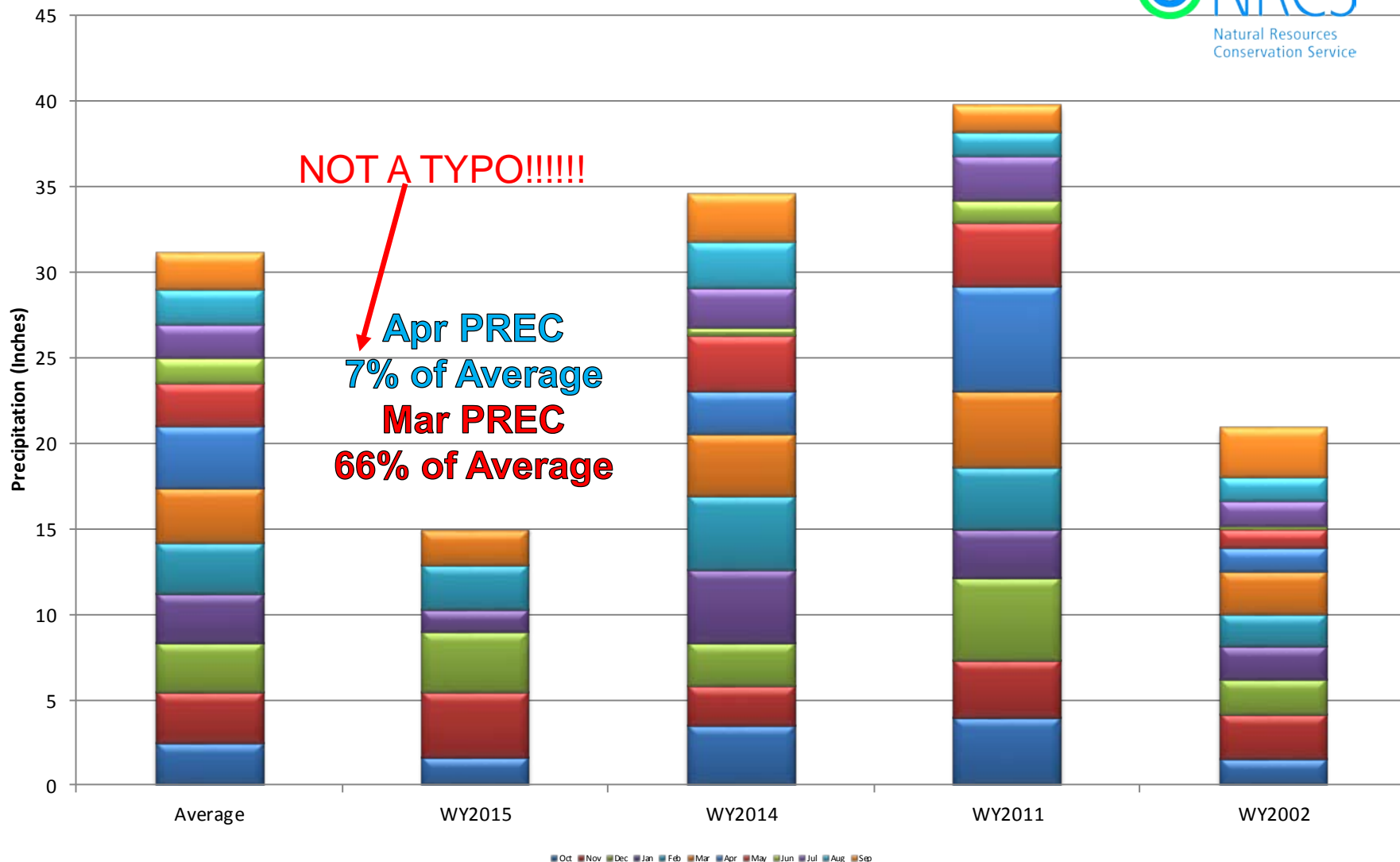
*Based on Provisional SNOTEL data as of Apr 14, 2015*





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

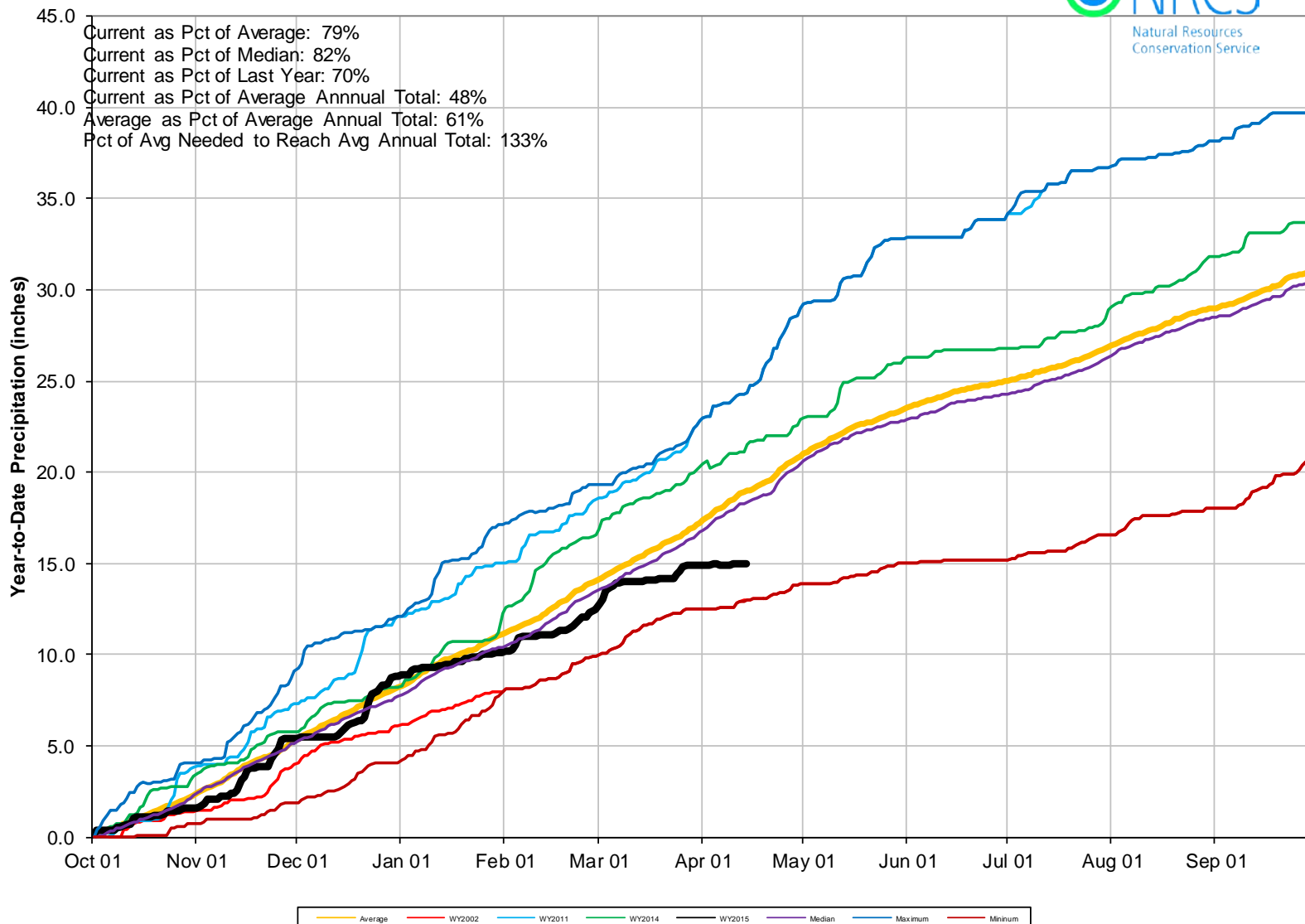
*Based on Provisional SNOTEL data as of Apr 14, 2015*





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

*Based on Provisional SNOTEL data as of Apr 14, 2015*

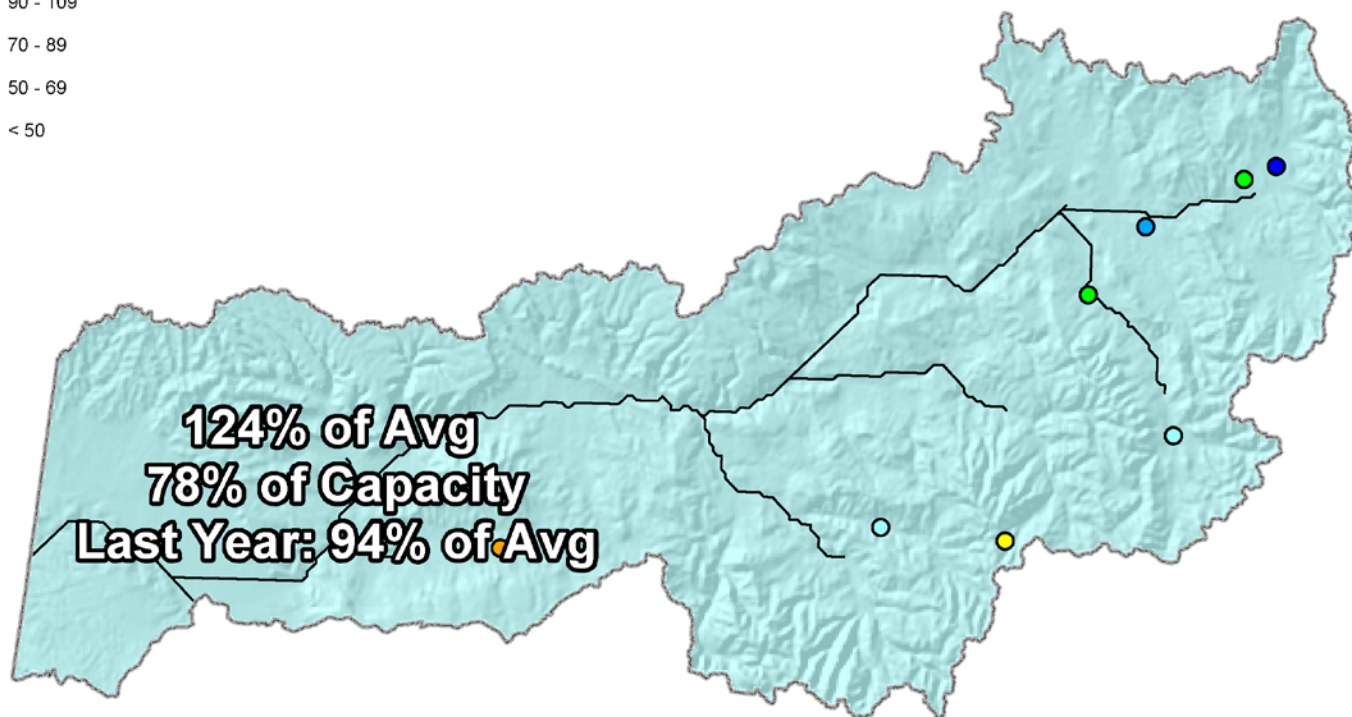


## Colorado River Basin Reservoir Storage Map

### Percent of Average



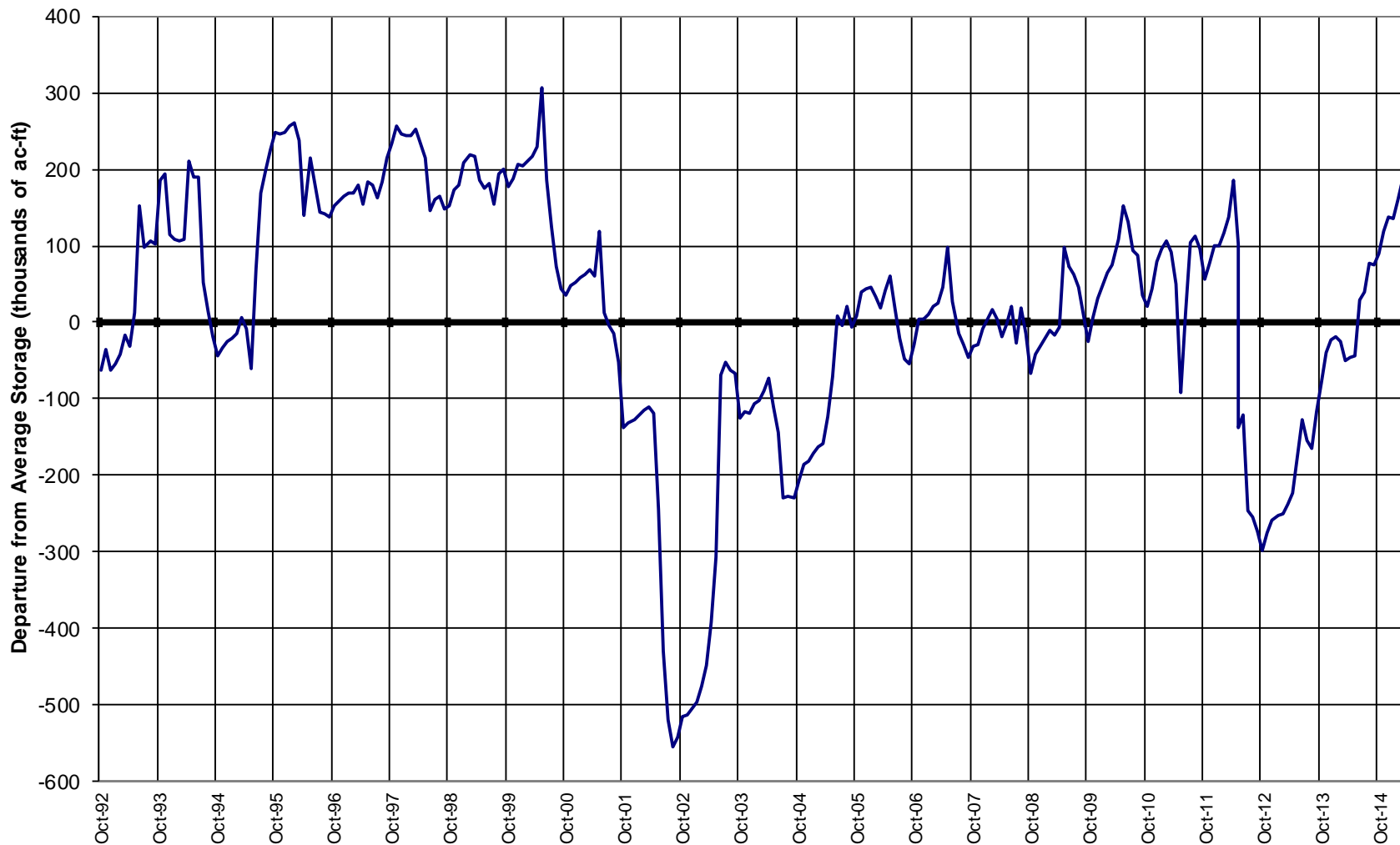
*Provisional Data  
Subject to Revision*



End of March 2015

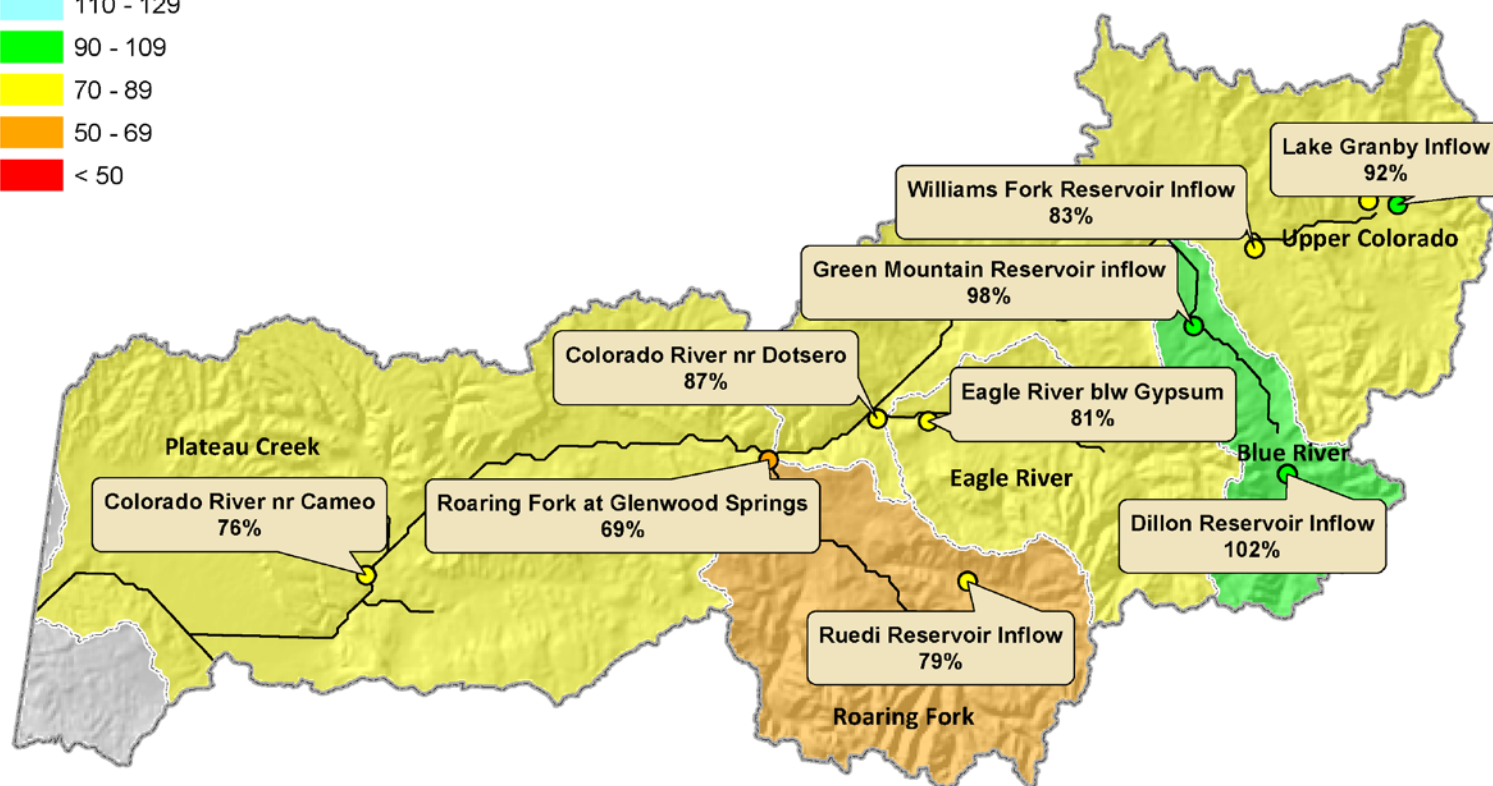


## COLORADO RIVER BASIN Reservoir Storage Departure from Average



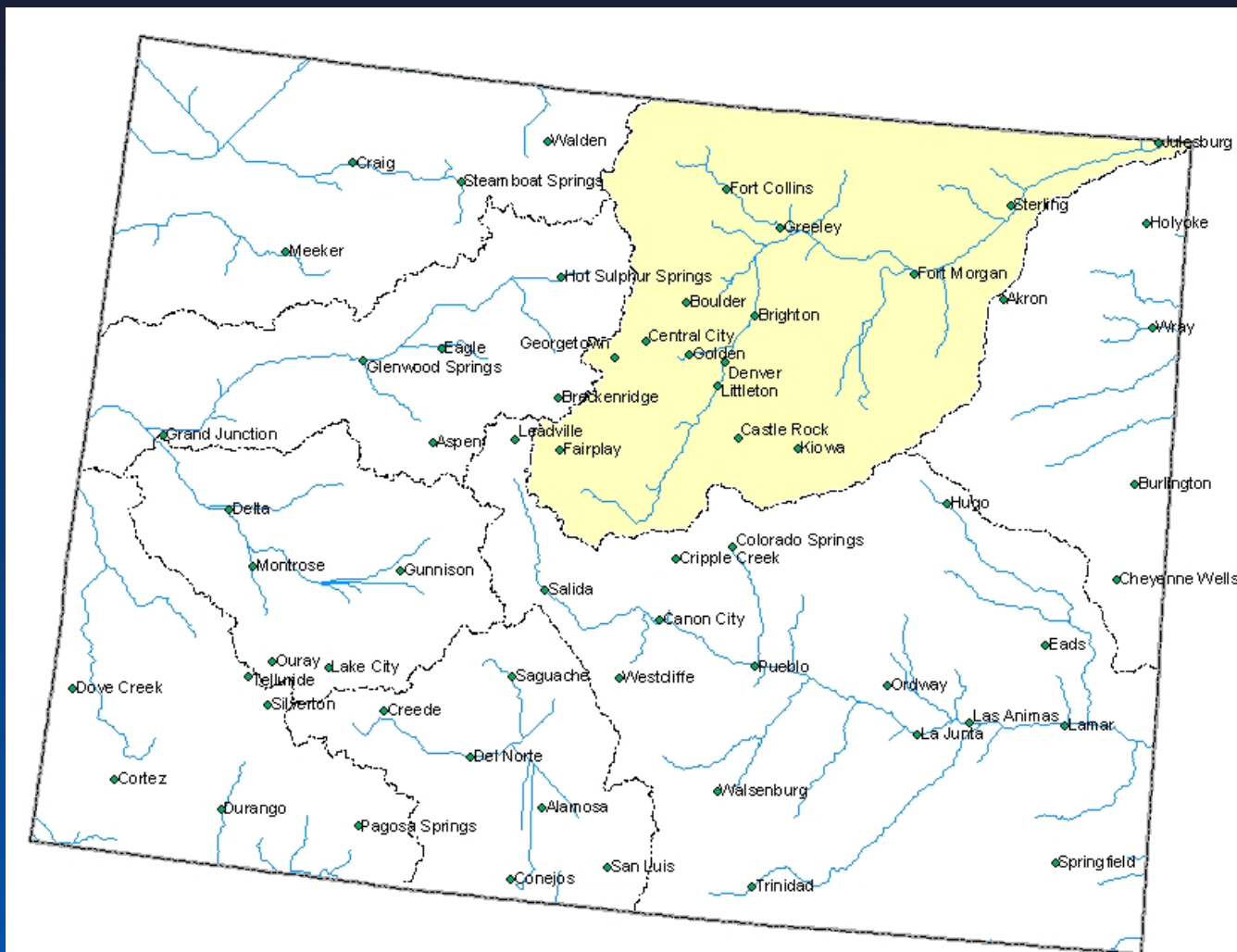
## Colorado River Basin Streamflow Forecast Map

### Percent of Average



Current as of April 1, 2015

## South Platte River Basin Summary

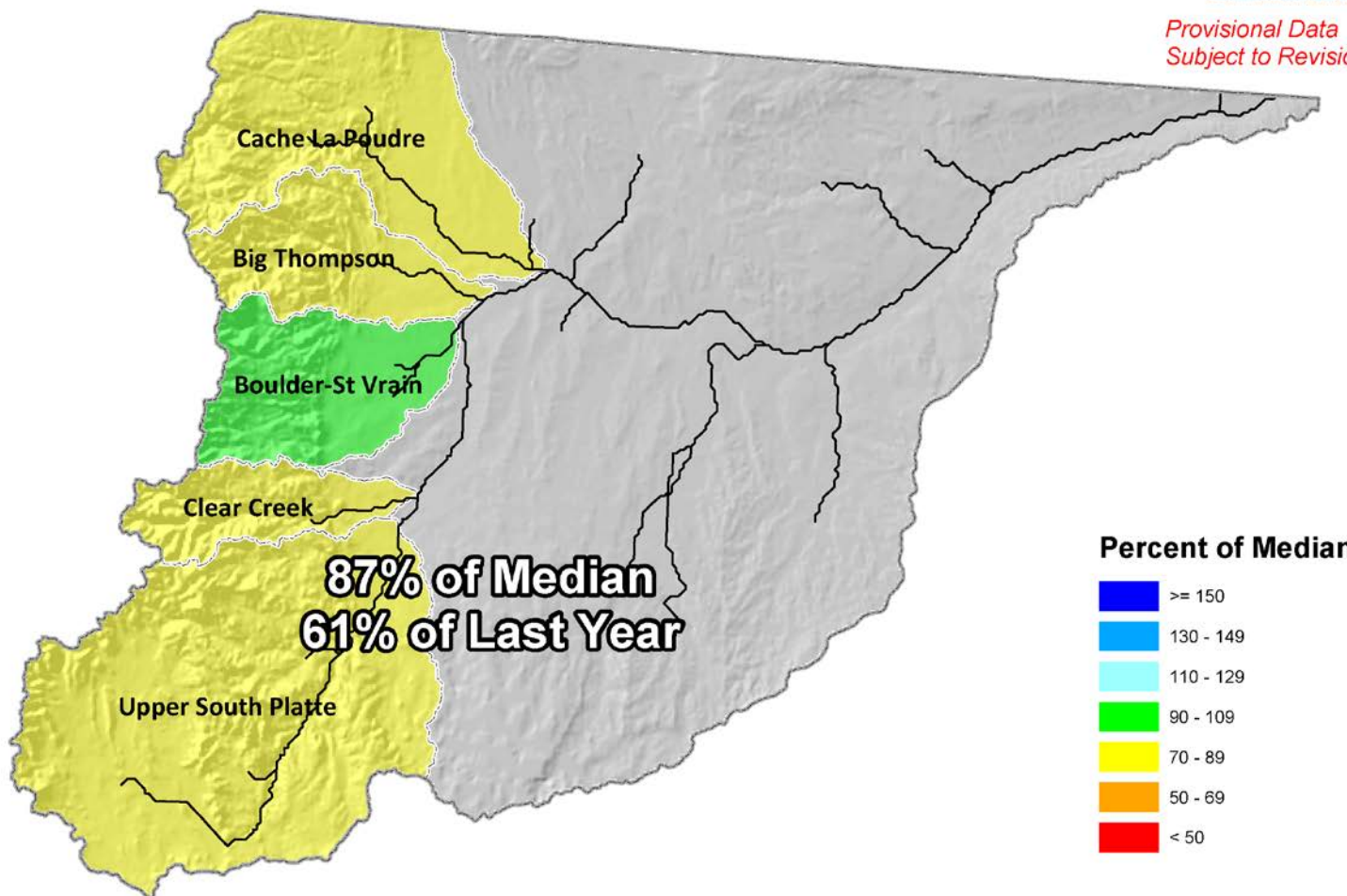




## South Platte River Basin Snowpack Map



*Provisional Data  
Subject to Revision*

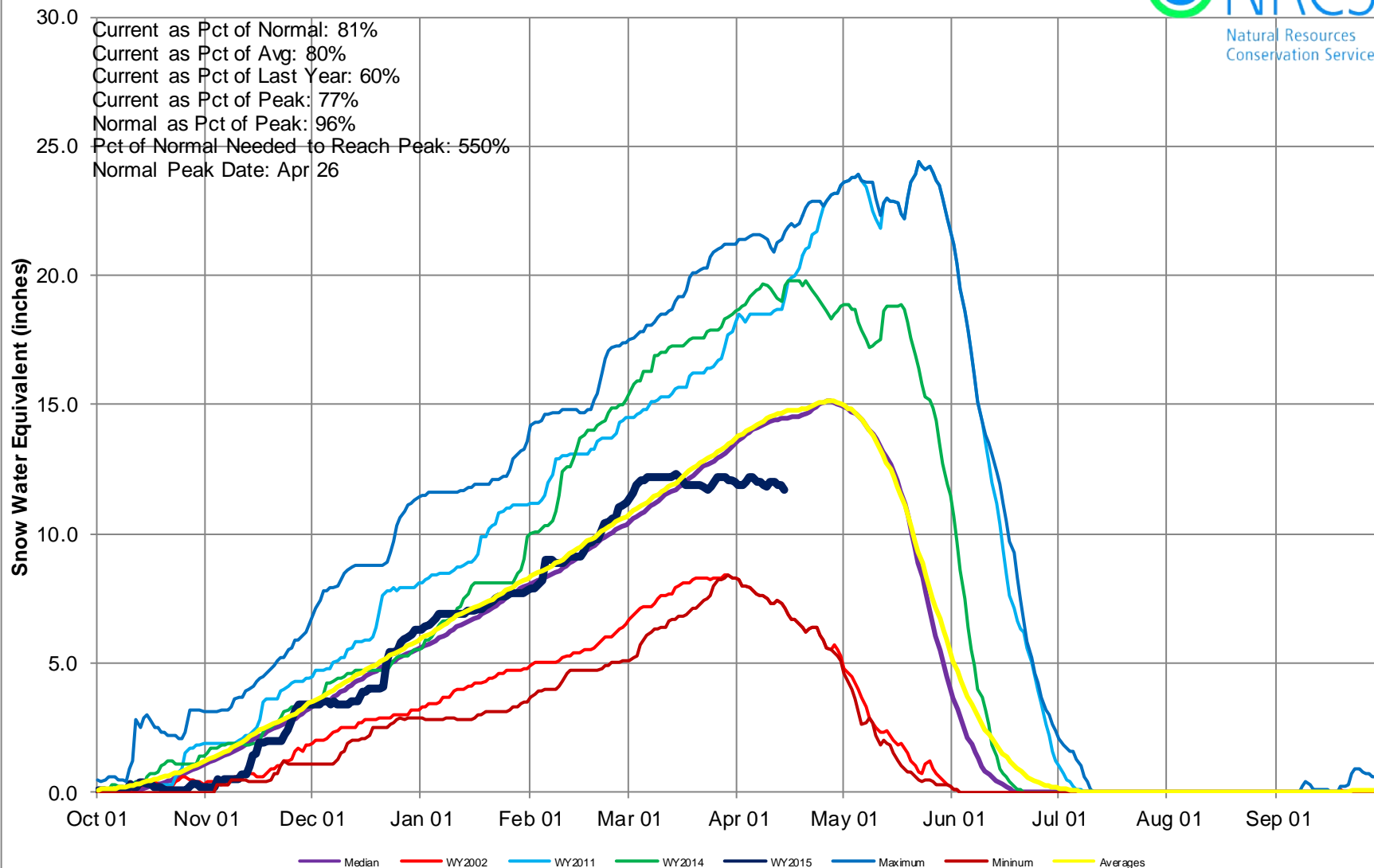


Current as of April 1, 2015



## South Platte River Basin High/Low Snowpack Summary

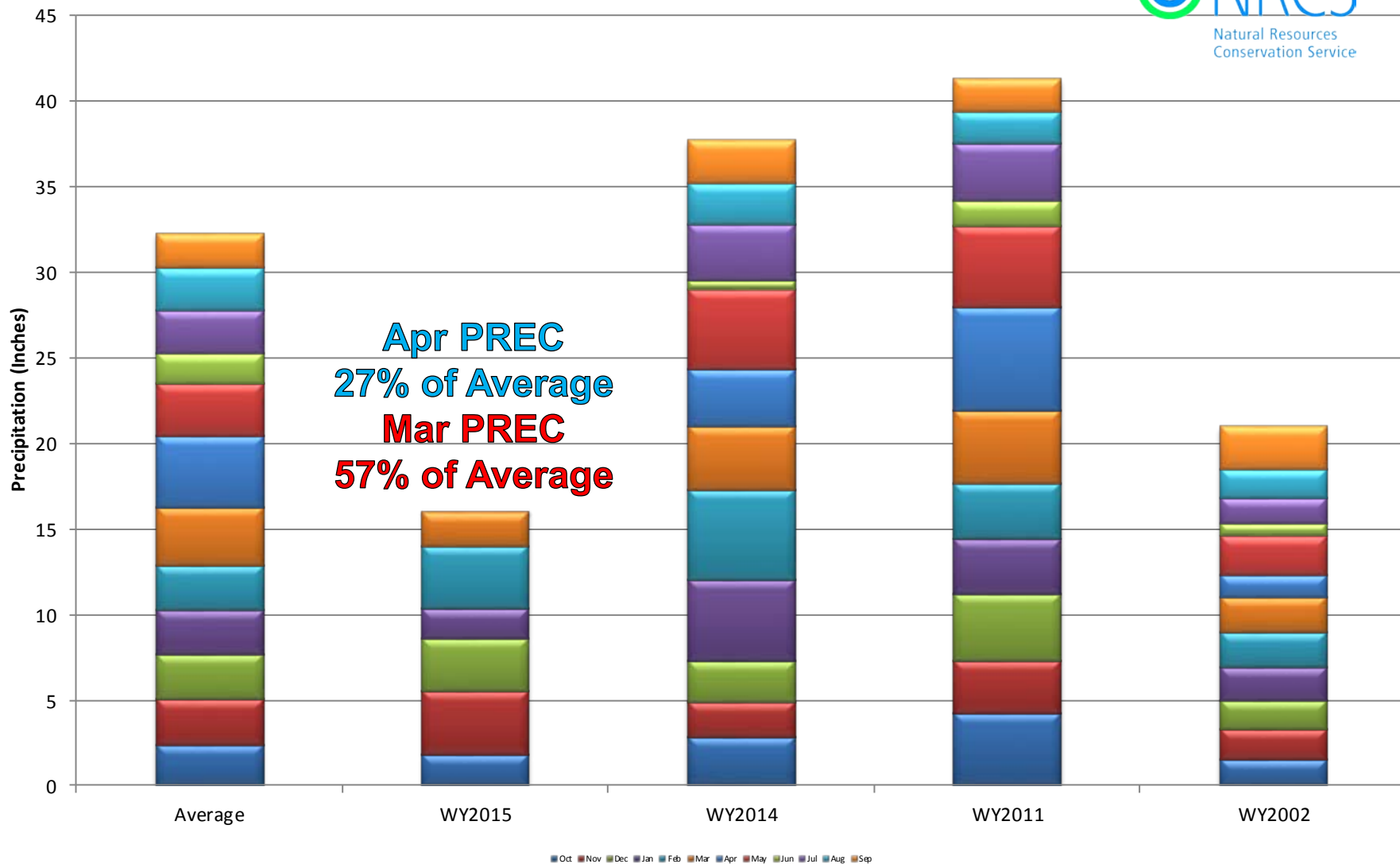
**Based on Provisional SNOTEL data as of Apr 14, 2015**





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

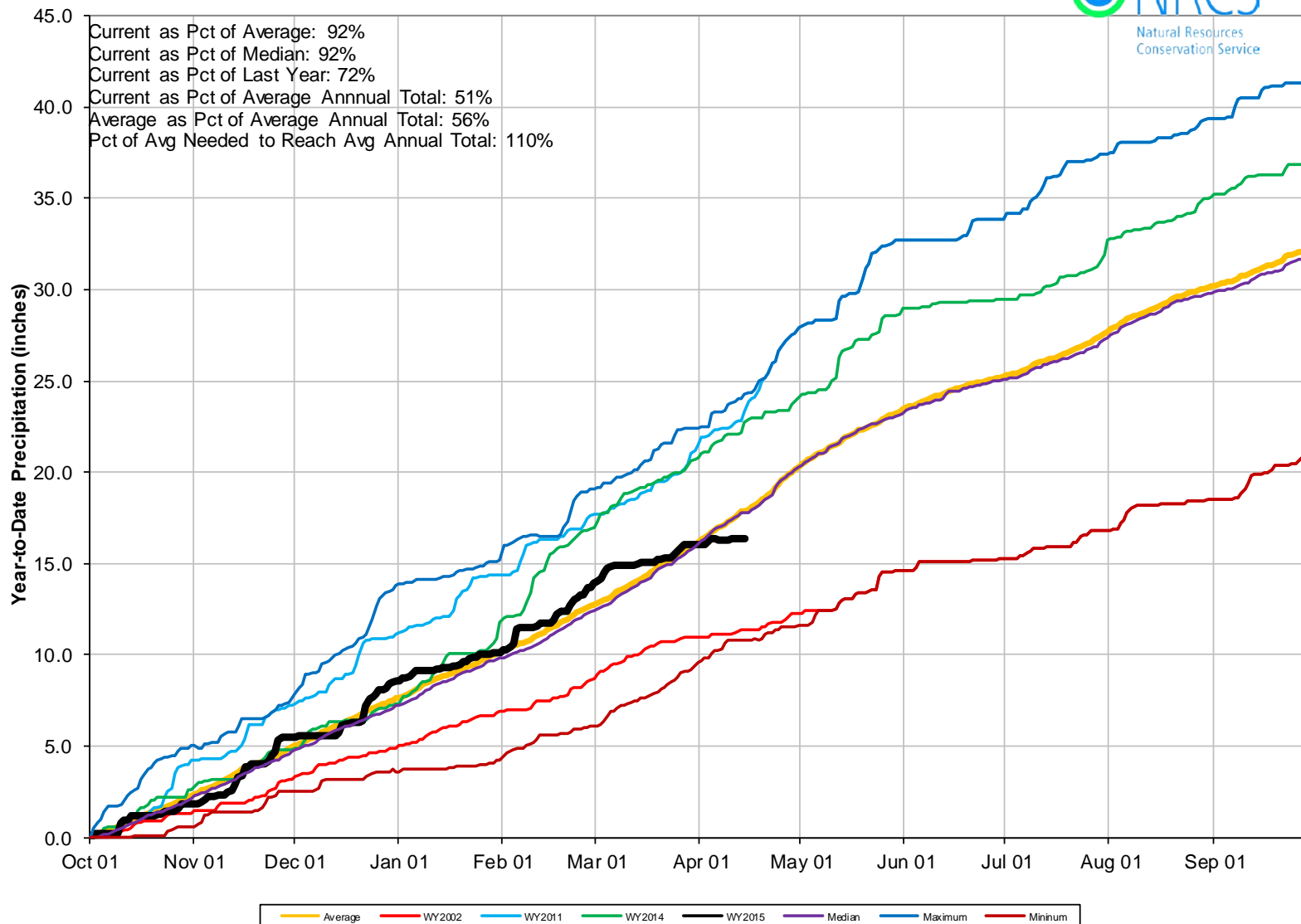
*Based on Provisional SNOTEL data as of Apr 14, 2015*





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

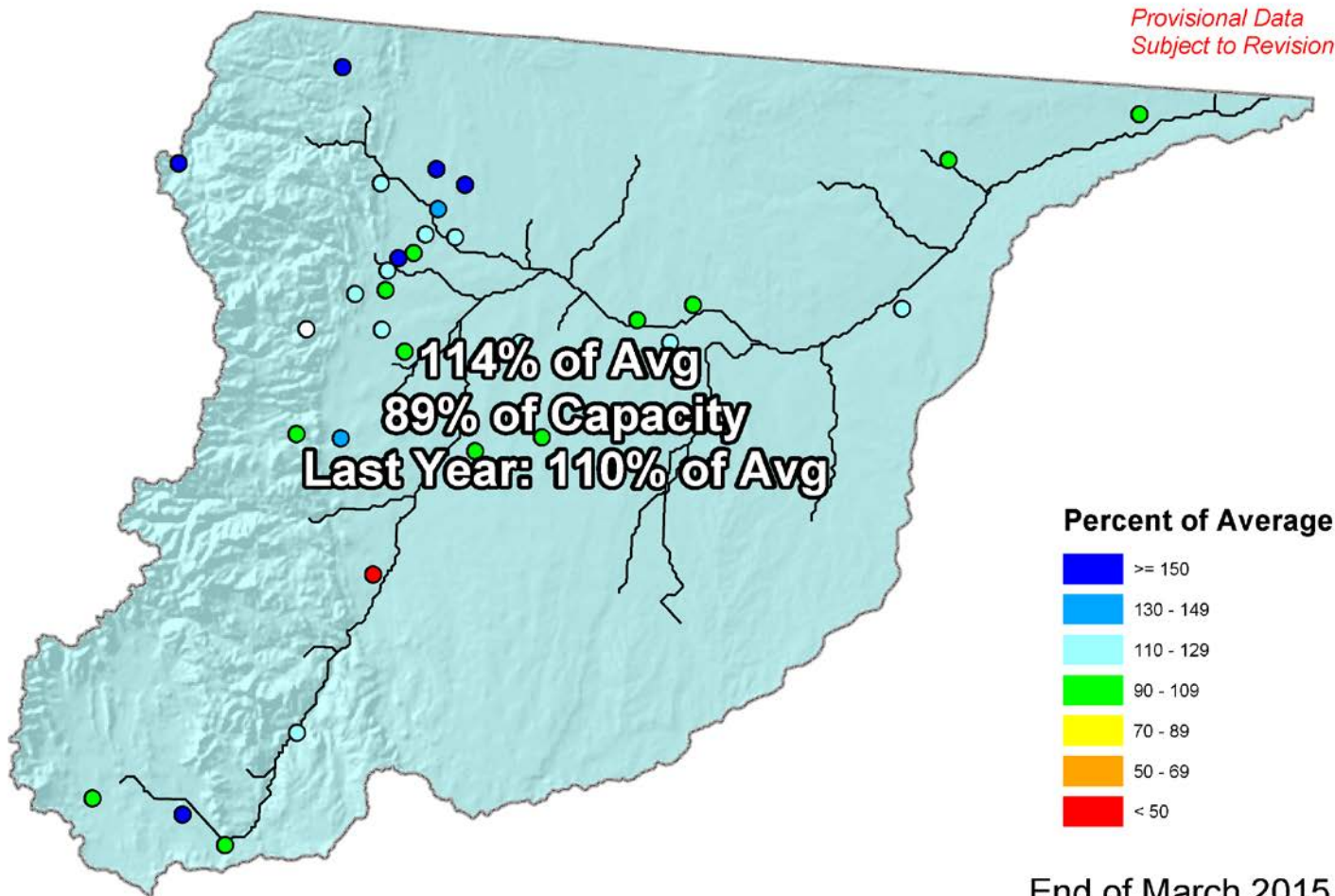
*Based on Provisional SNOTEL data as of Apr 14, 2015*



## South Platte River Basin Reservoir Storage Map



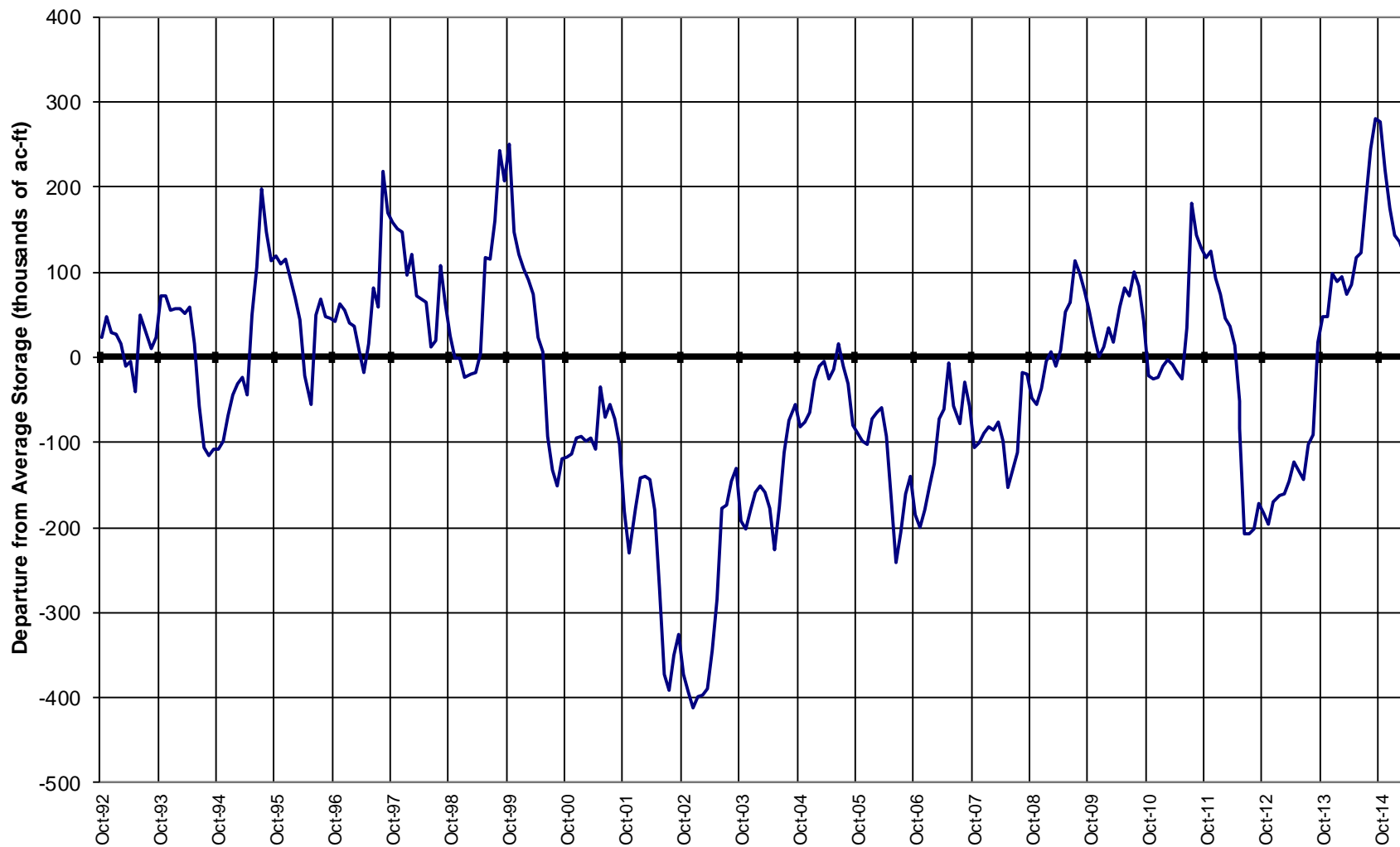
*Provisional Data  
Subject to Revision*



End of March 2015



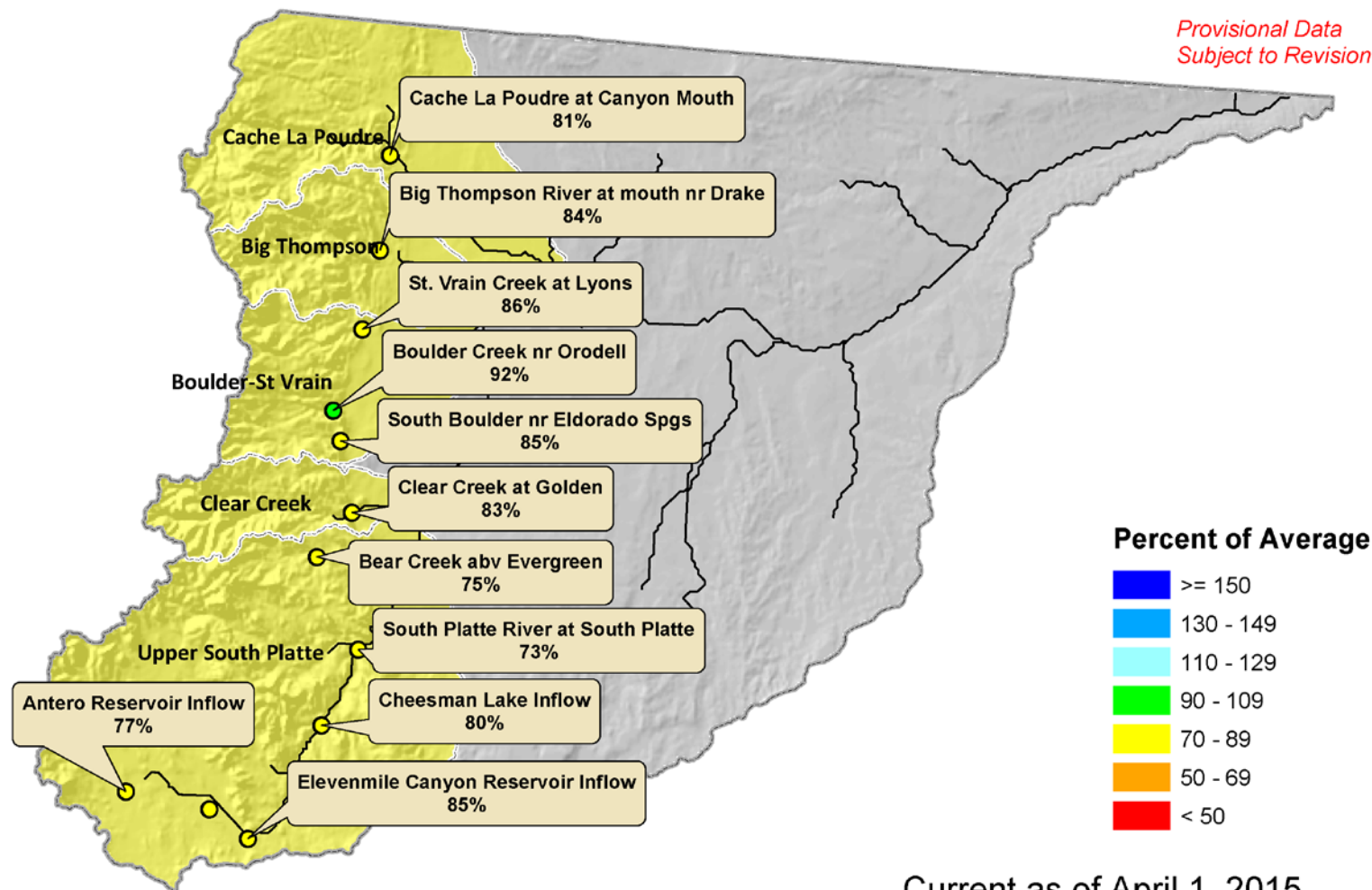
## SOUTH PLATTE RIVER BASIN Reservoir Storage Departure from Average



## South Platte River Basin Streamflow Forecast Map



*Provisional Data  
Subject to Revision*



Current as of April 1, 2015



## Gunnison River Basin Summary

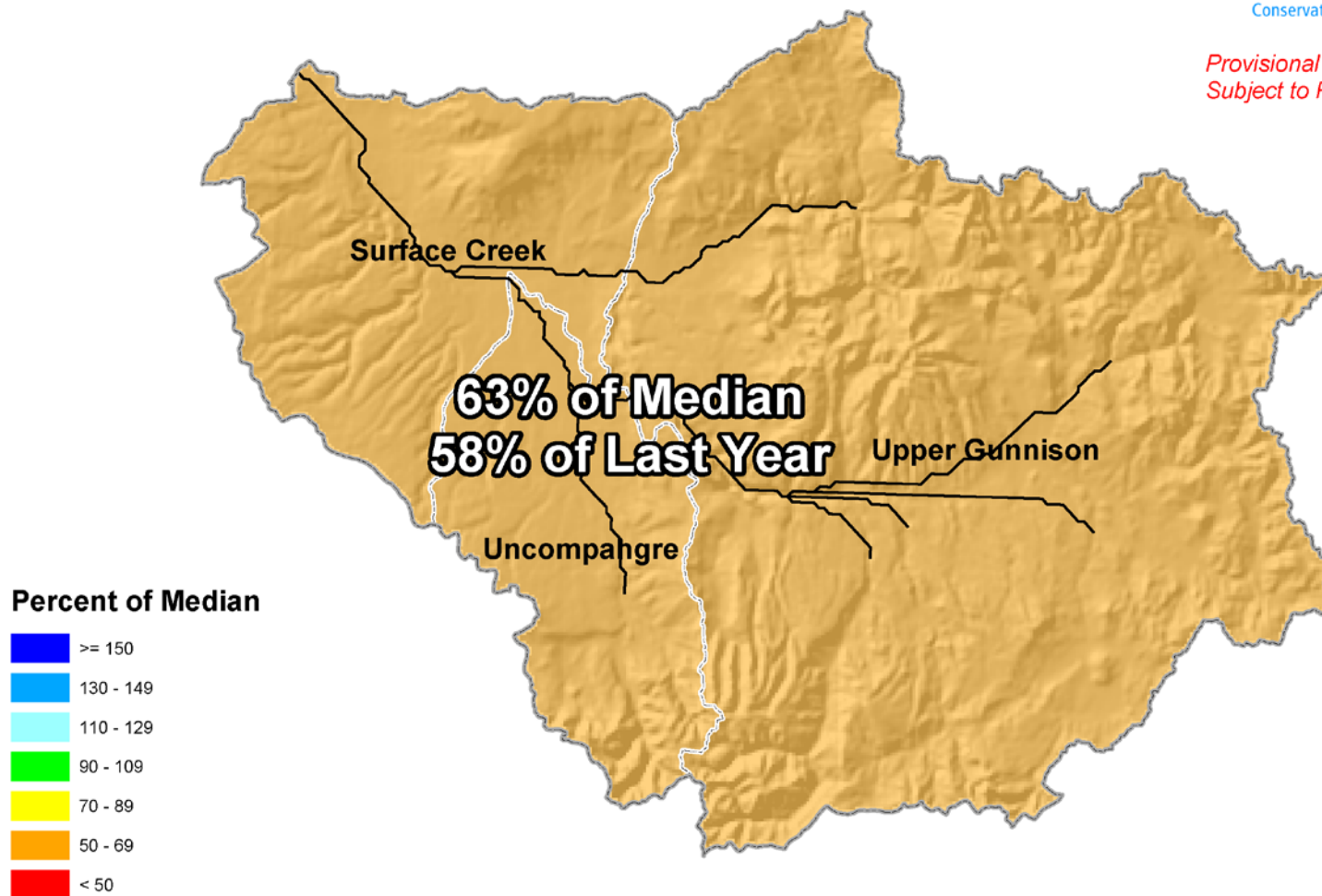




## Gunnison River Basin Snowpack Map



*Provisional Data  
Subject to Revision*

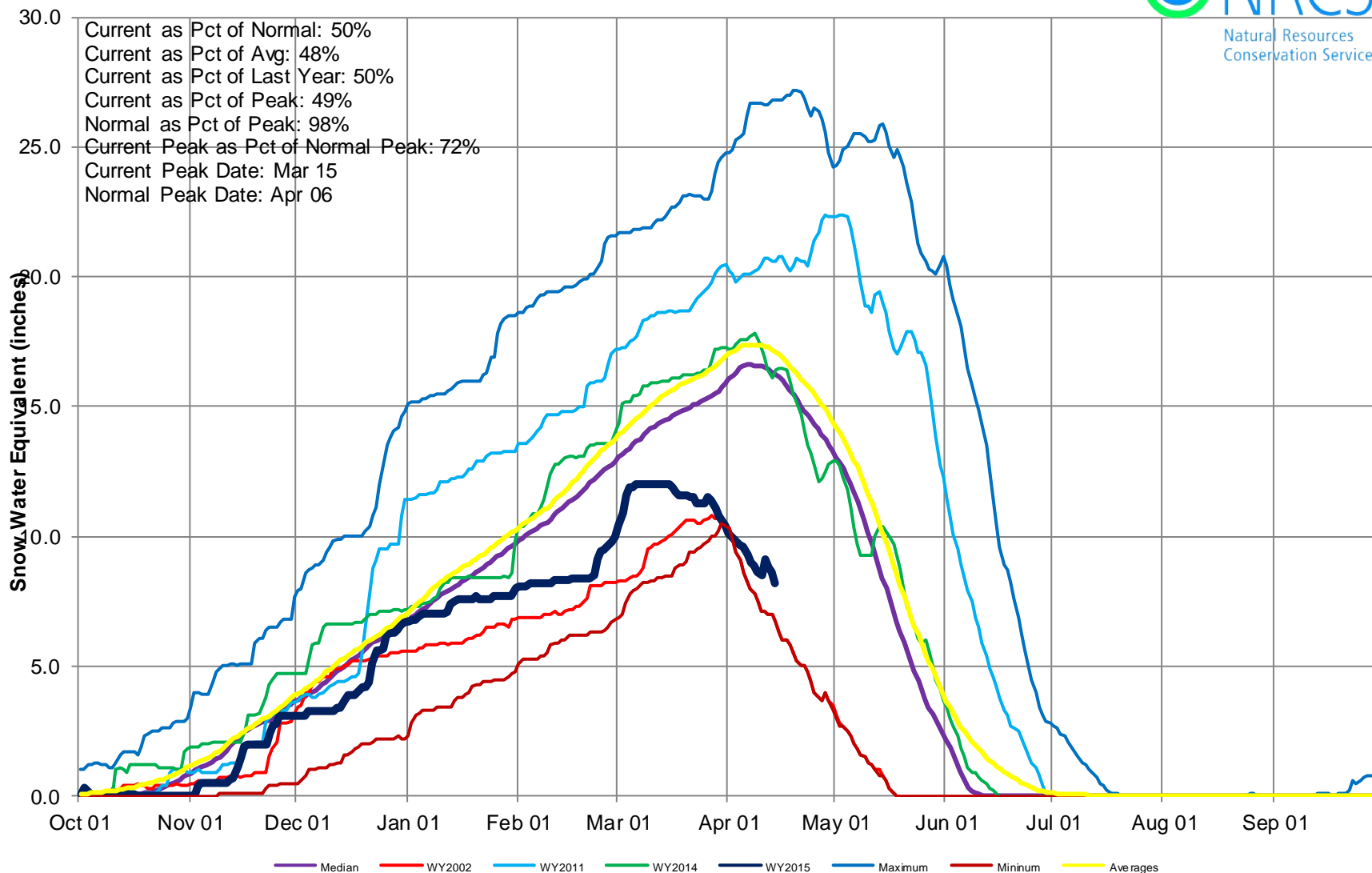


Current as of April 1, 2015



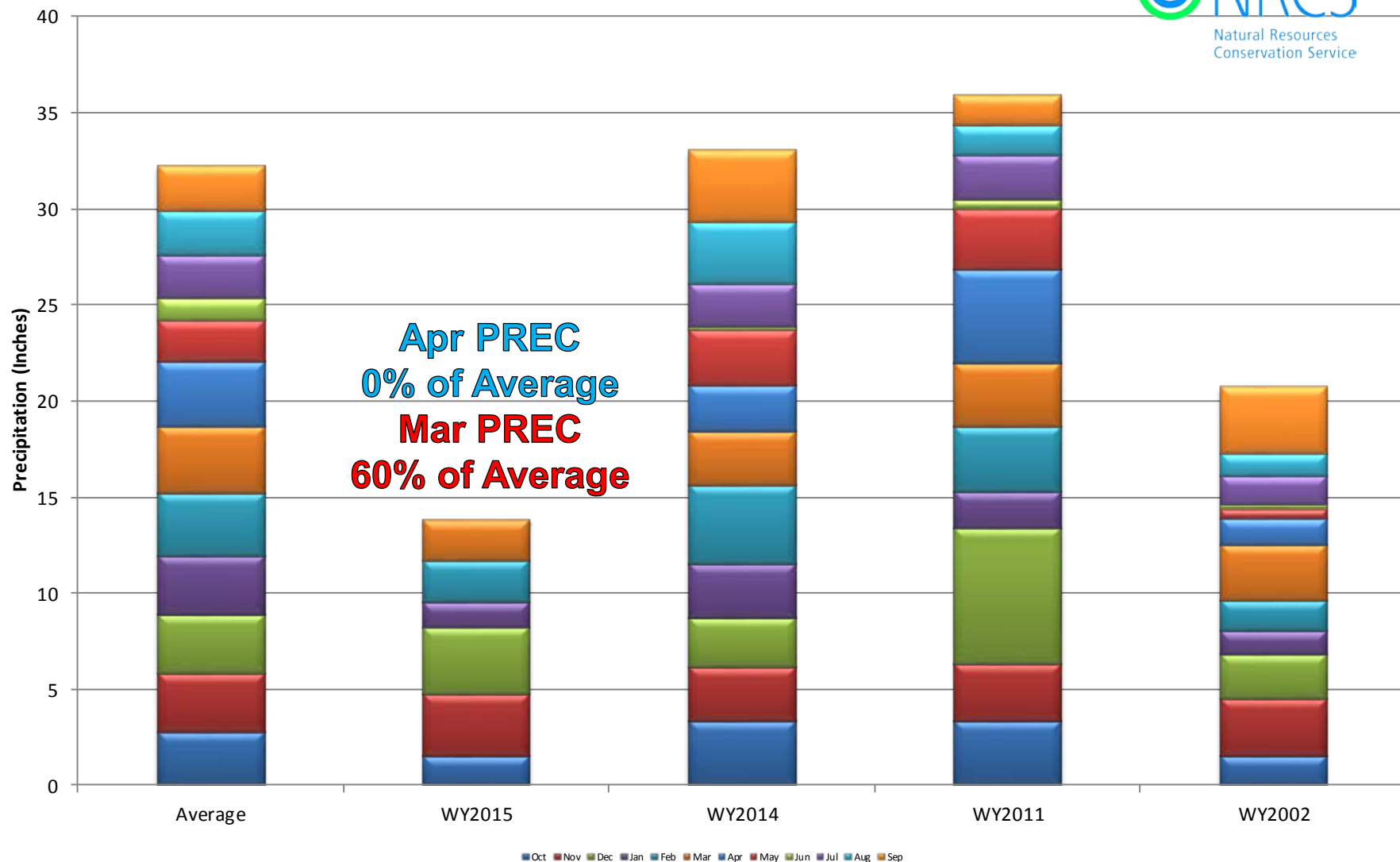
## Gunnison River Basin High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of Apr 14, 2015*



## Gunnison River Basin High/Low Monthly Precipitation Summary

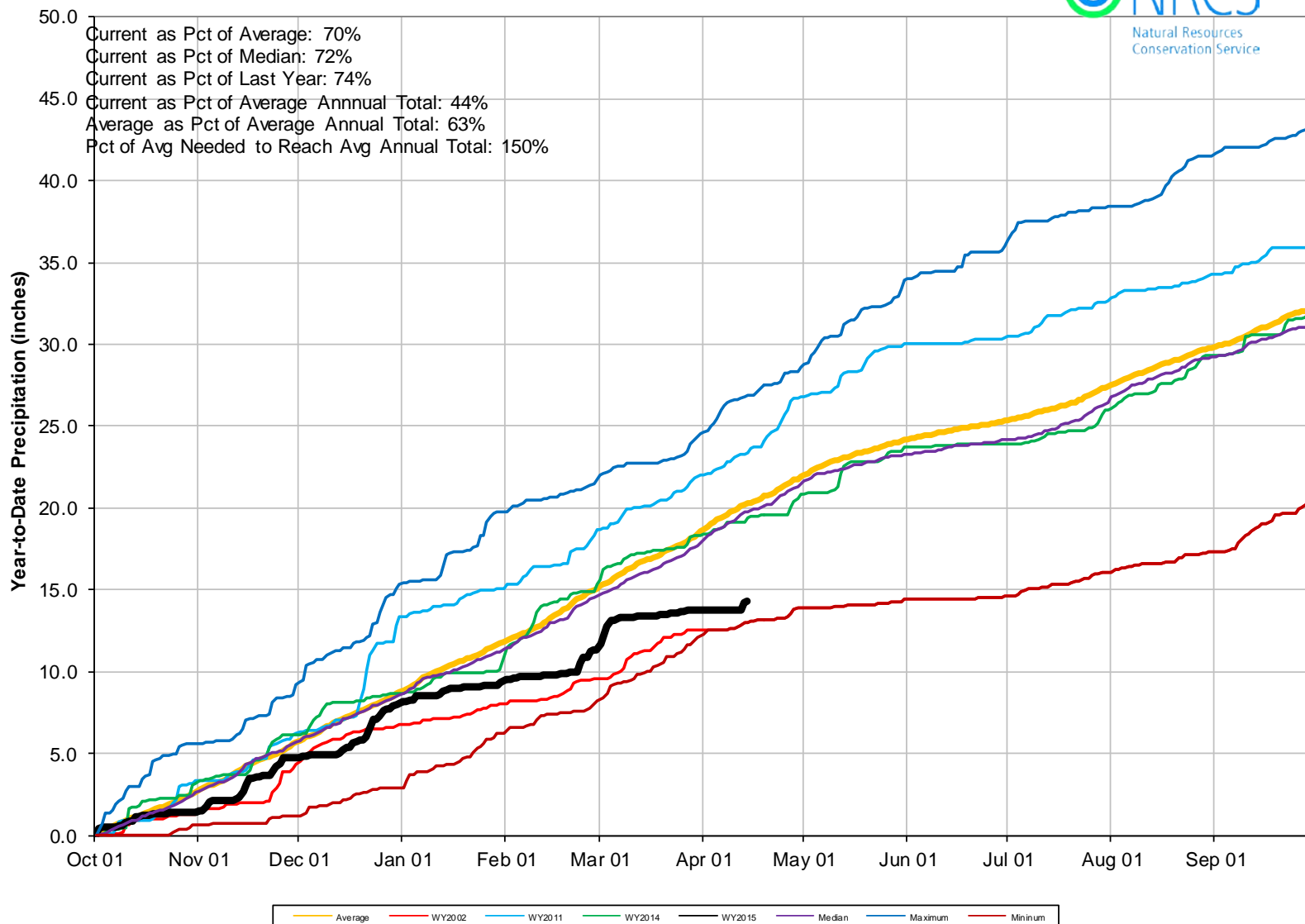
*Based on Provisional SNOTEL data as of Apr 14, 2015*





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

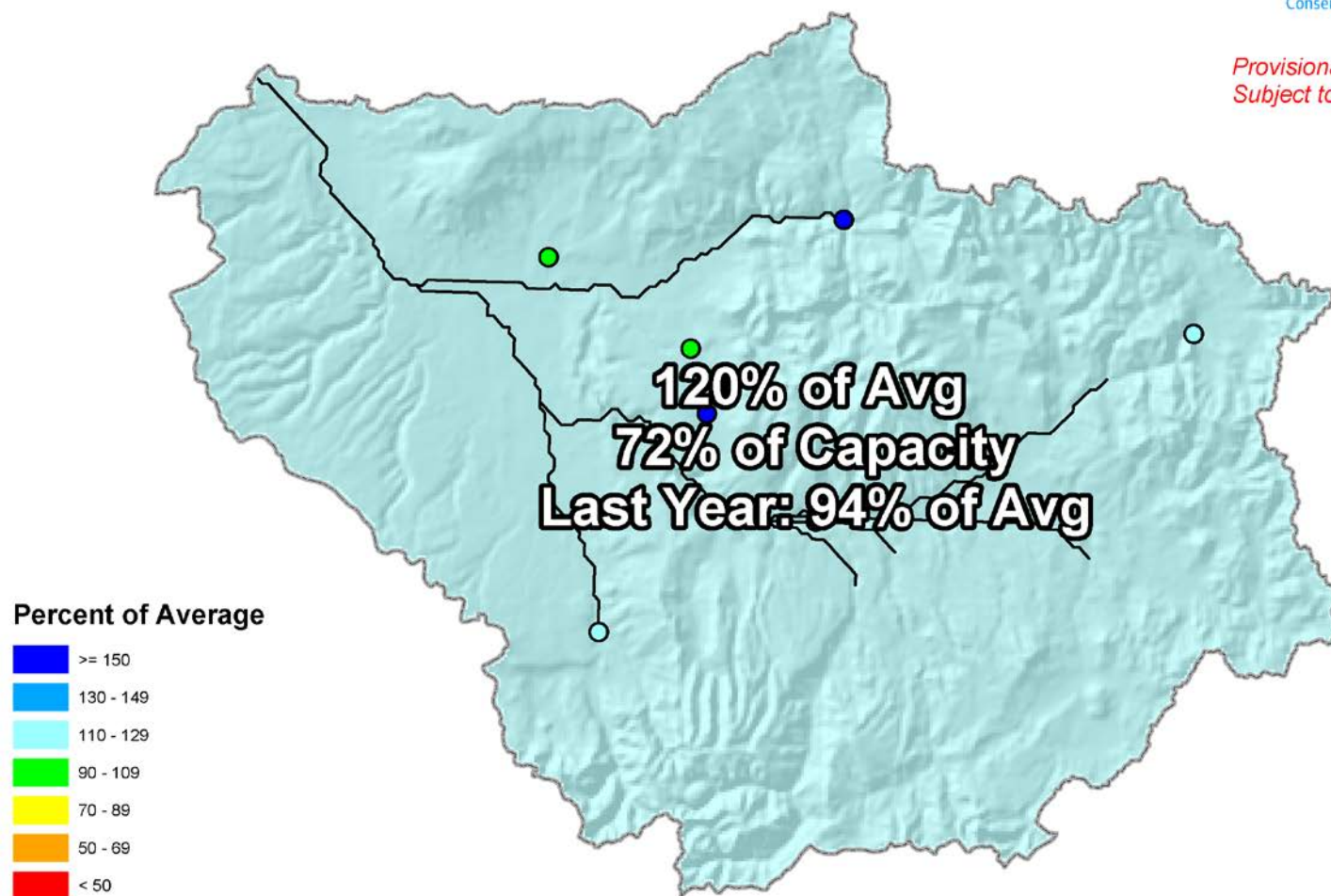
*Based on Provisional SNOTEL data as of Apr 14, 2015*



## Gunnison River Basin Reservoir Storage Map



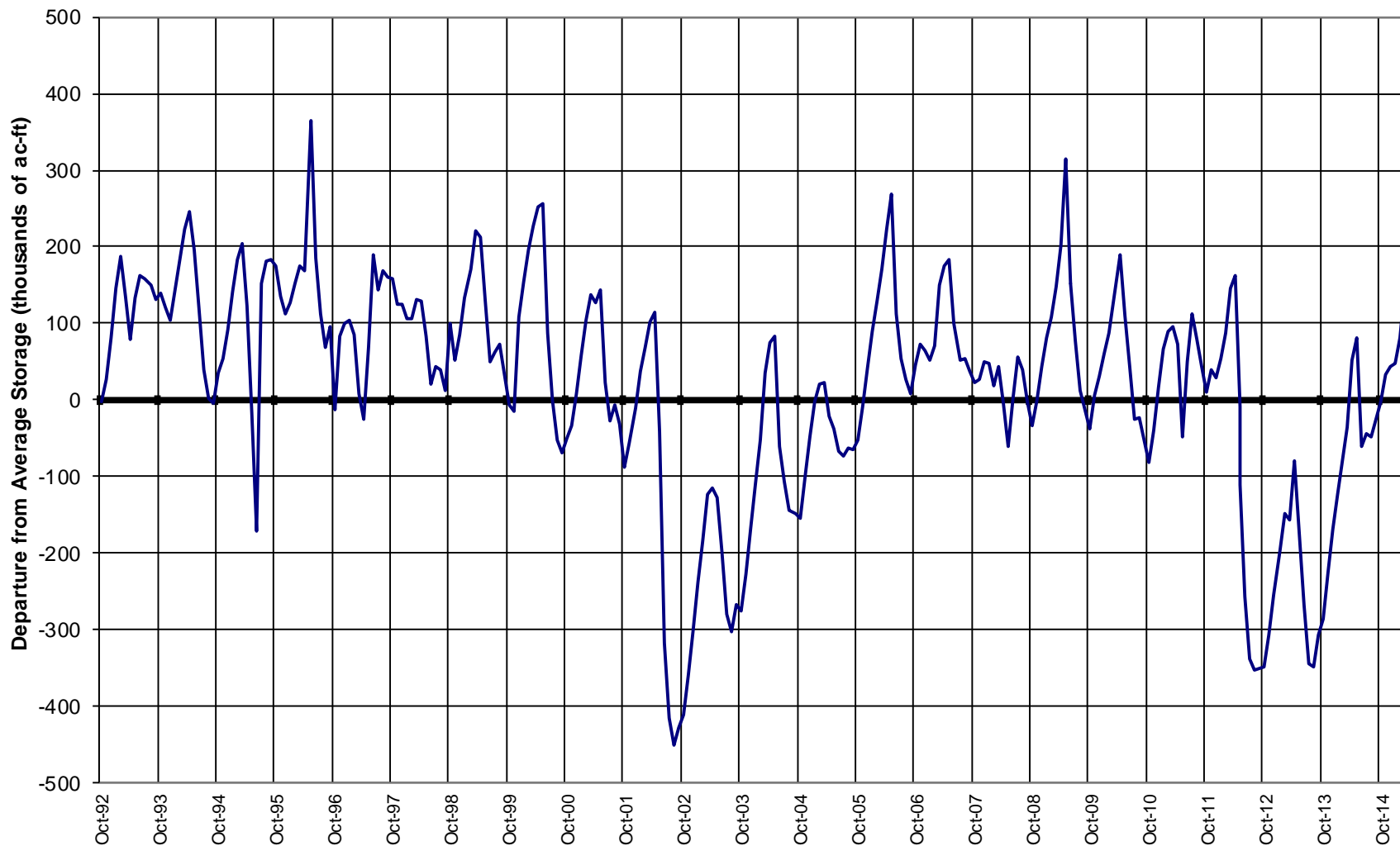
*Provisional Data  
Subject to Revision*



End of March 2015



## GUNNISON RIVER BASIN Reservoir Storage Departure from Average

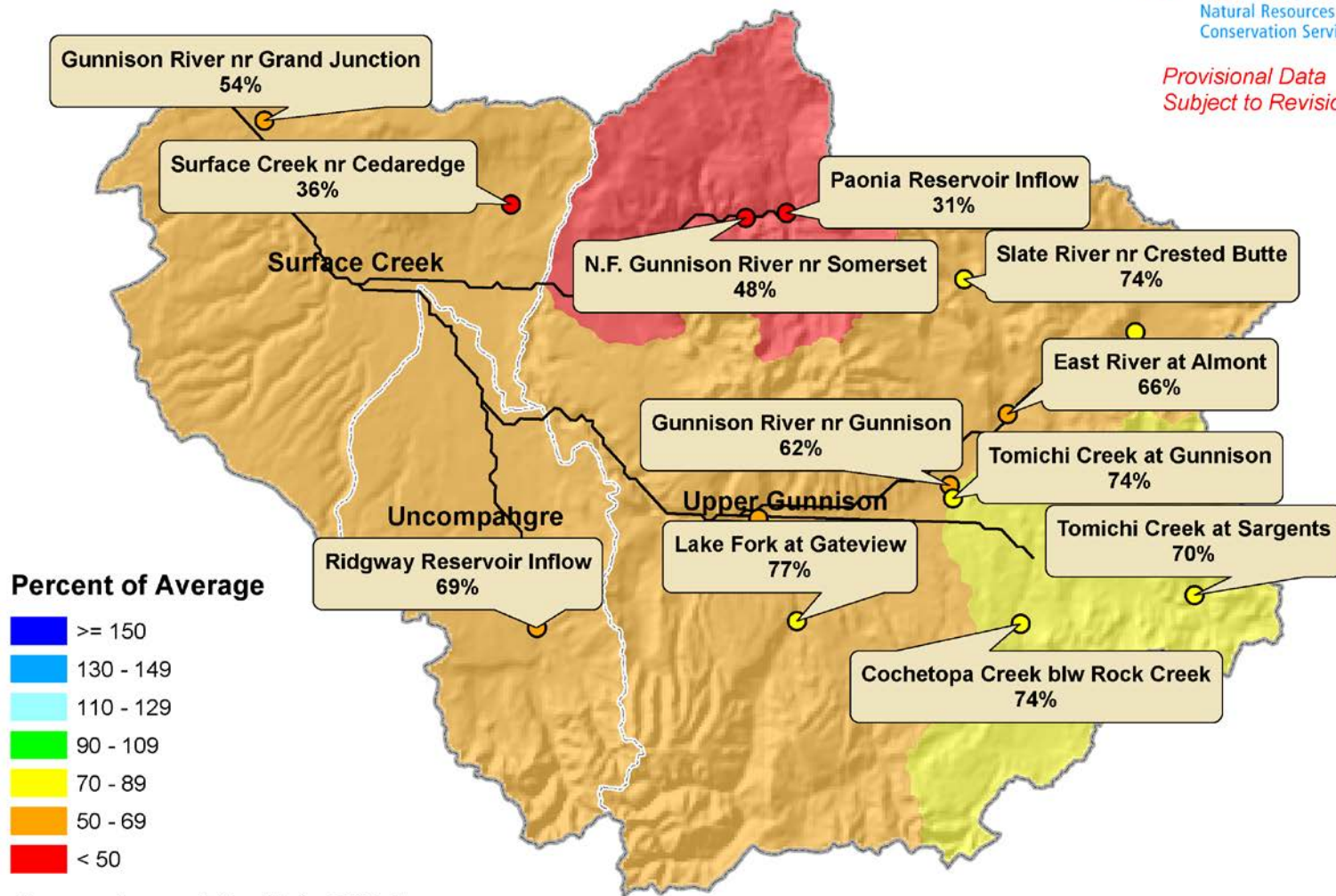




## Gunnison River Basin Streamflow Forecast Map



*Provisional Data  
Subject to Revision*



Current as of April 1, 2015



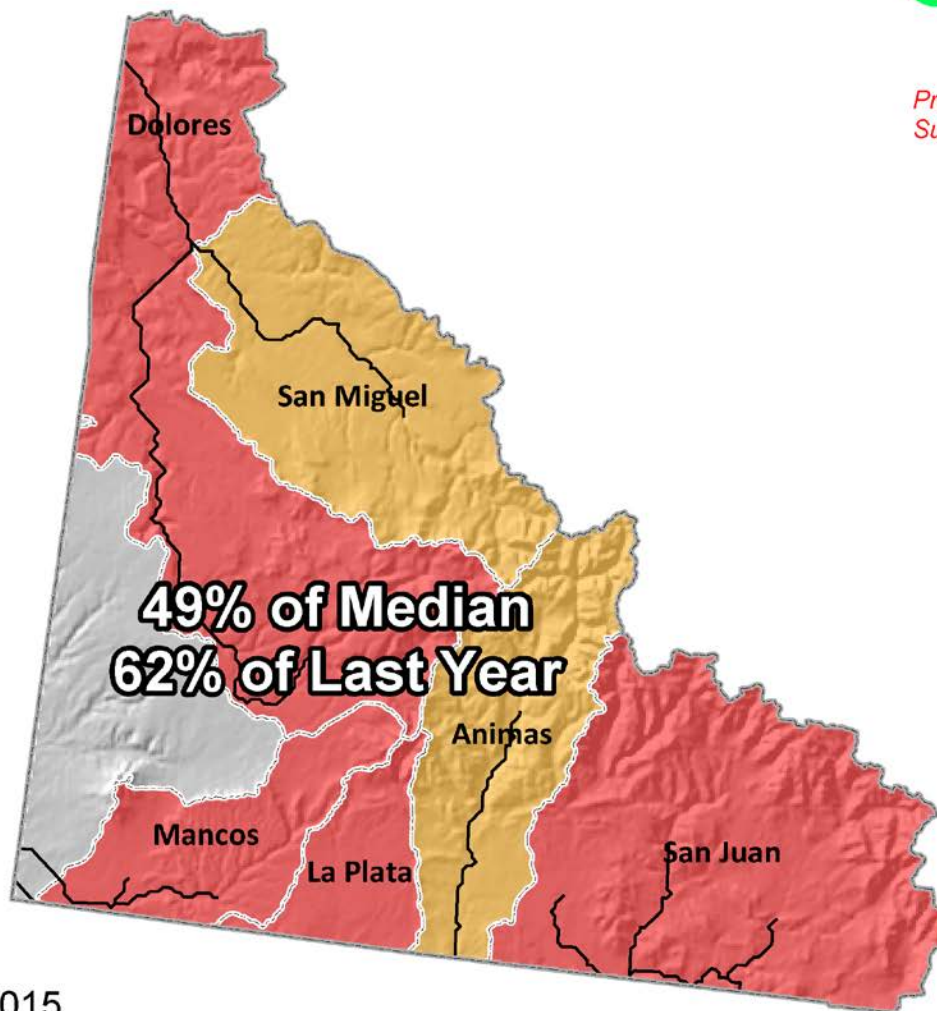


## San Miguel, Dolores, Animas and San Juan River Basins Snowpack Map



*Provisional Data  
Subject to Revision*

### Percent of Median

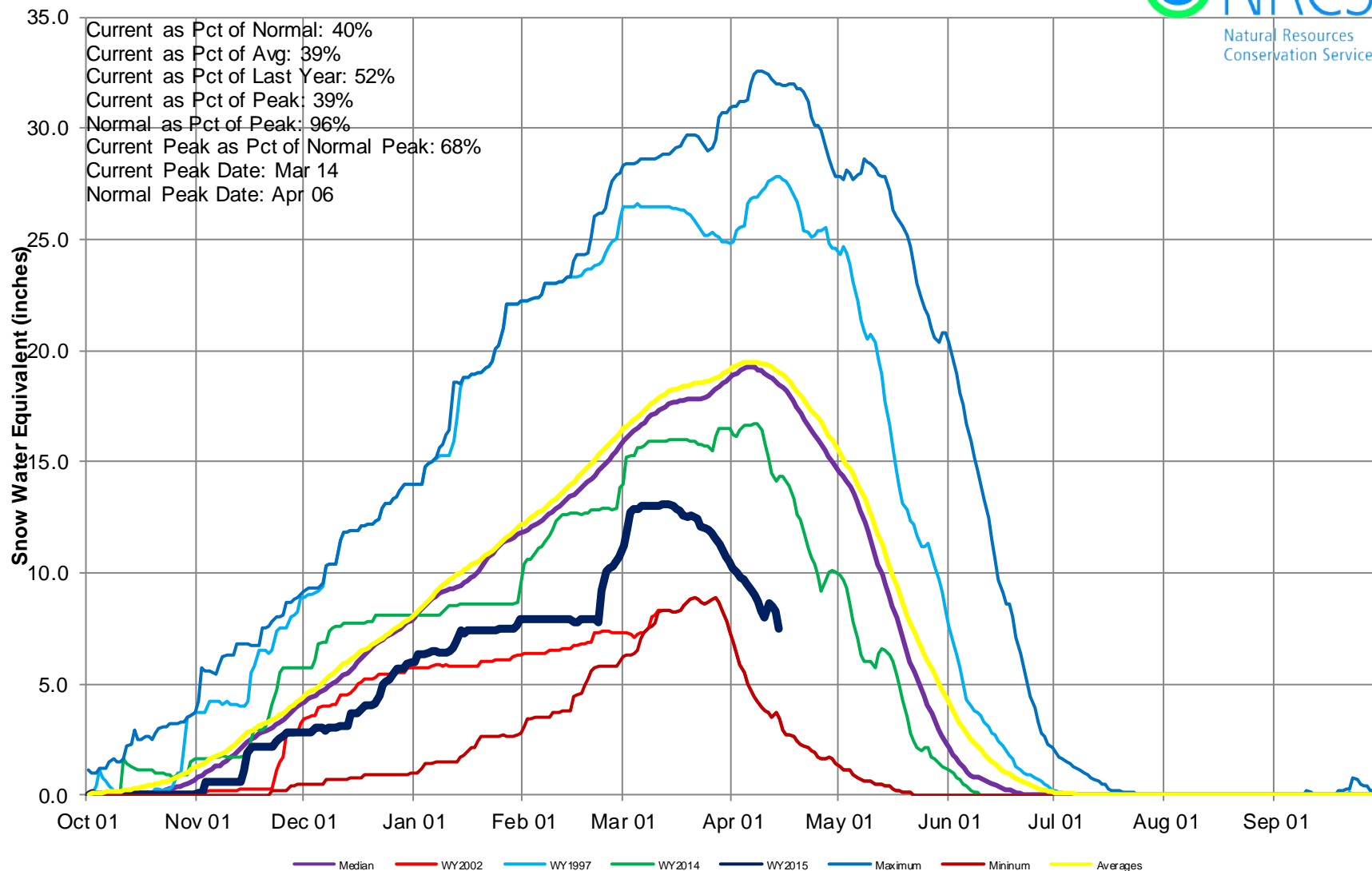


Current as of April 1, 2015

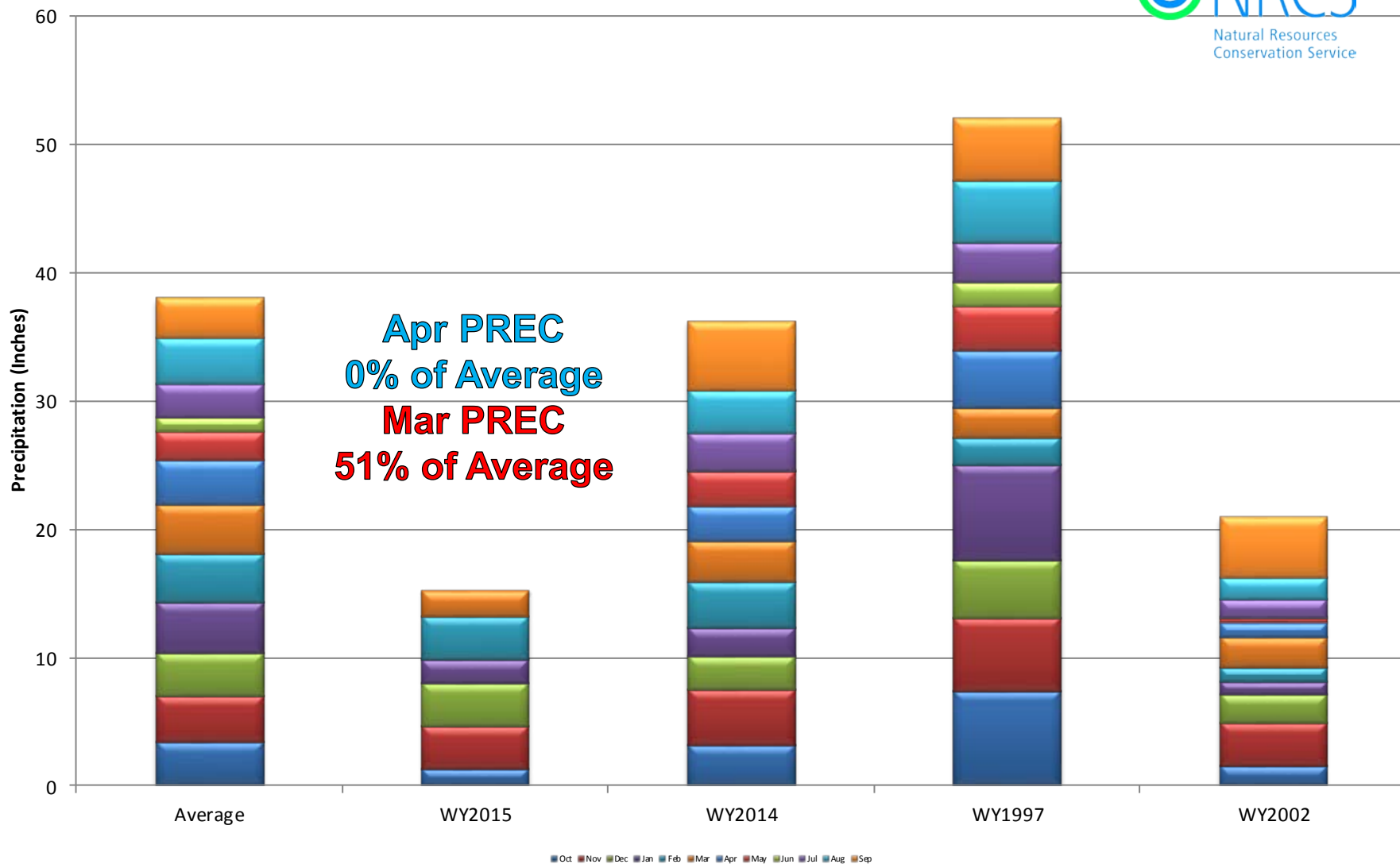


## San Miguel, Dolores, Animas and San Juan River Basins High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of Apr 14, 2015*



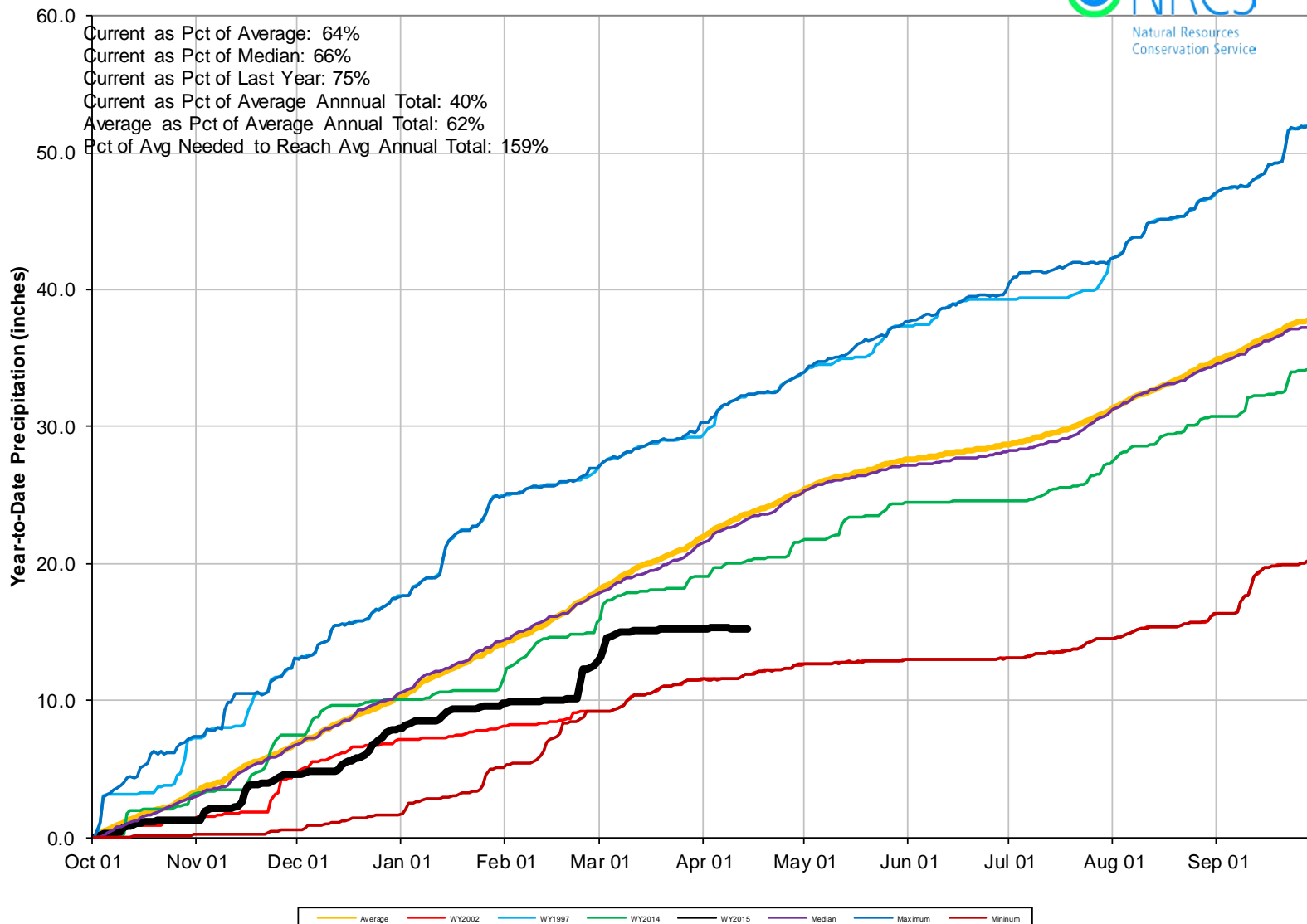
## San Miguel, Dolores, Animas & San Juan River Basins High/Low Monthly Precipitation Summary





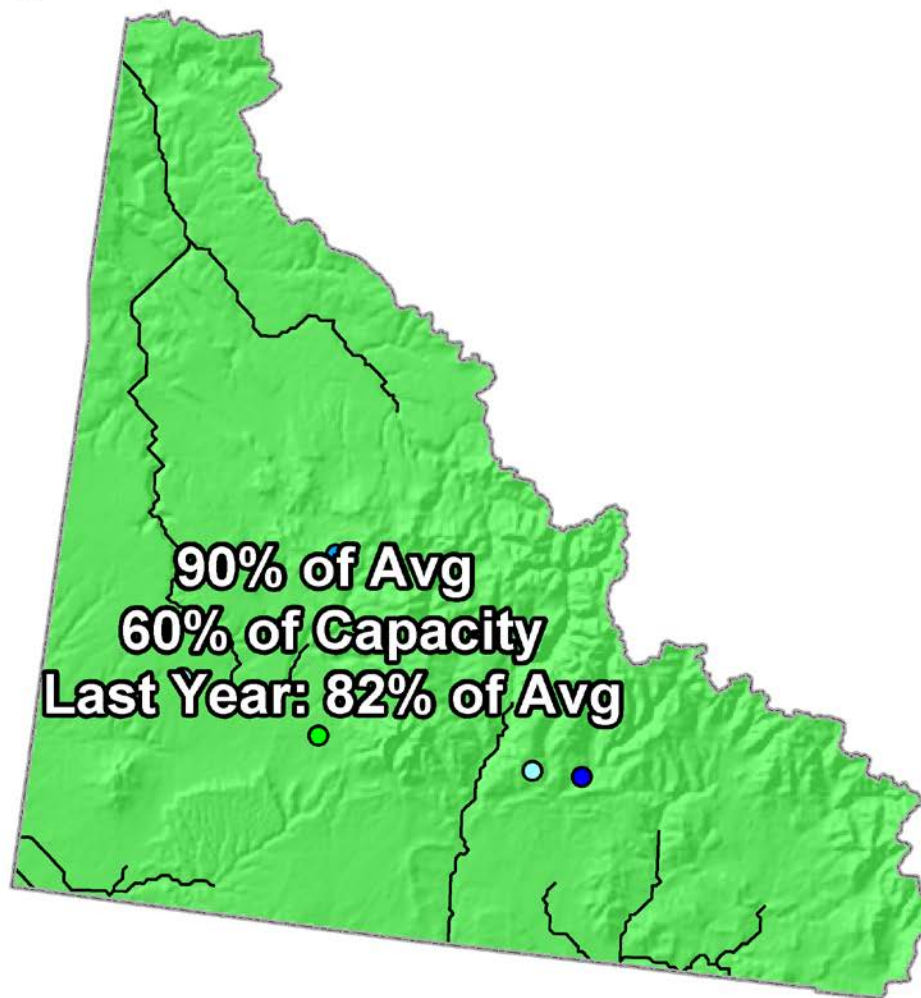
## San Miguel, Dolores, Animas & San Juan River Basins High/Low Year-to-Date Precipitation Summary

*Based on Provisional SNOTEL data as of Apr 14, 2015*



## San Miguel, Dolores, Animas and San Juan River Basins Reservoir Storage Map

### Percent of Average



*Provisional Data  
Subject to Revision*

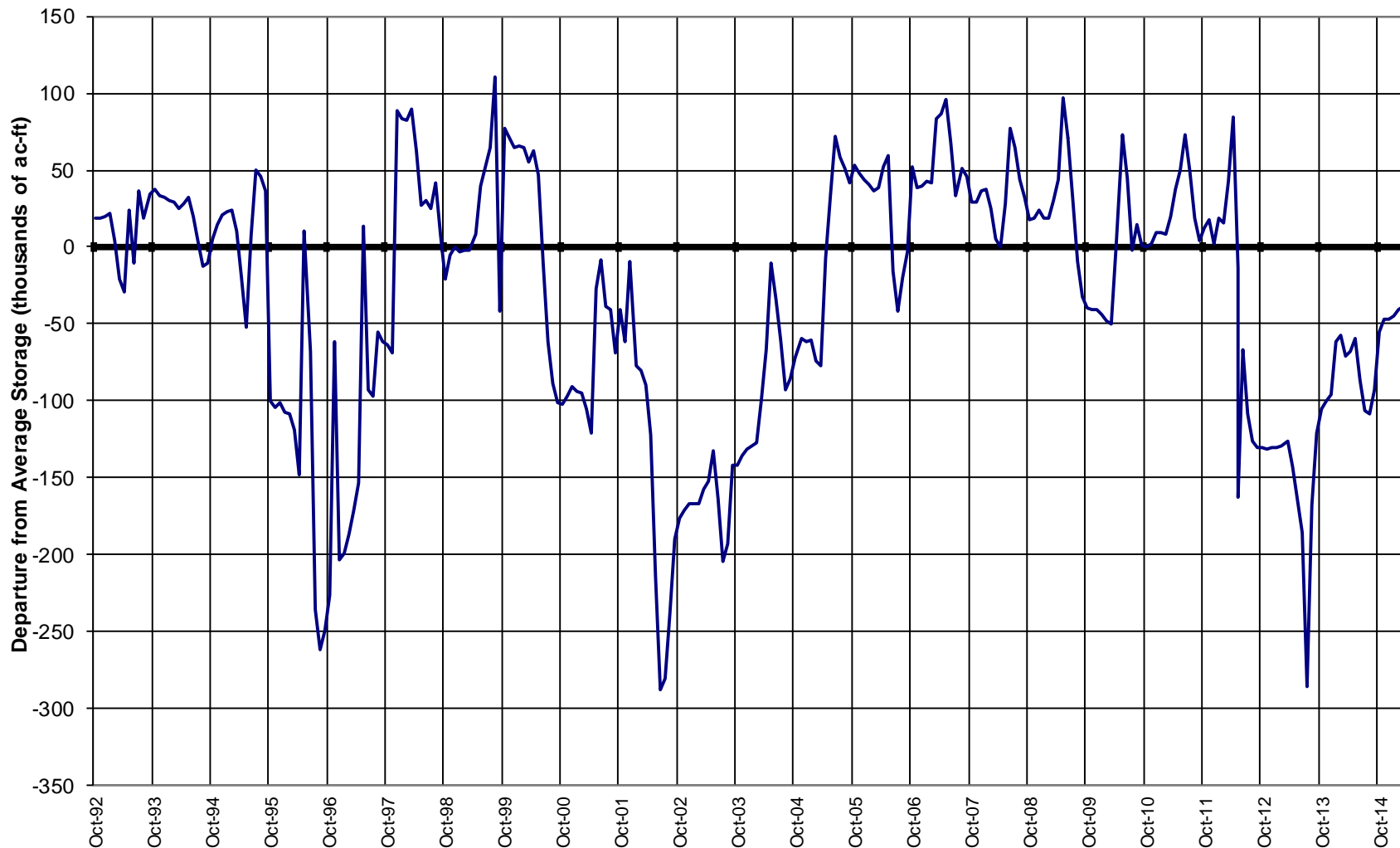
End of March 2015





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

Reservoir Storage  
Departure from Average

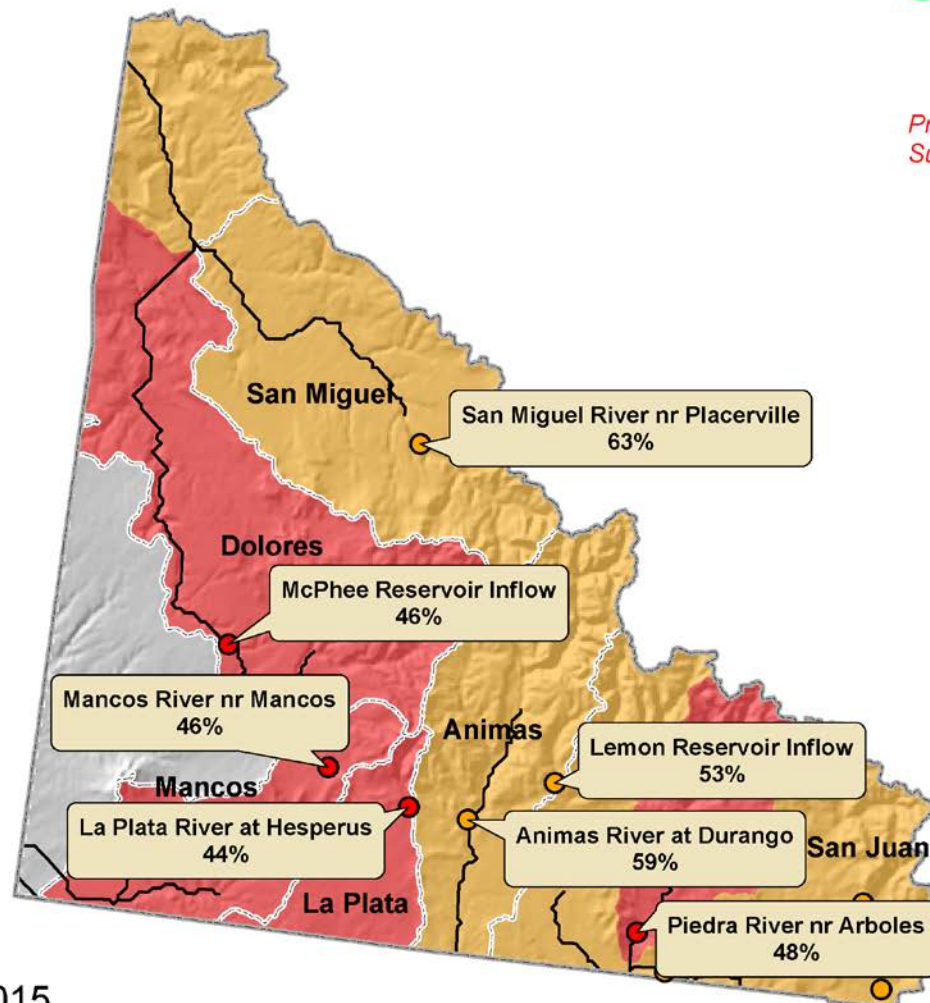


## San Miguel, Dolores, Animas and San Juan River Basins Streamflow Forecast Map



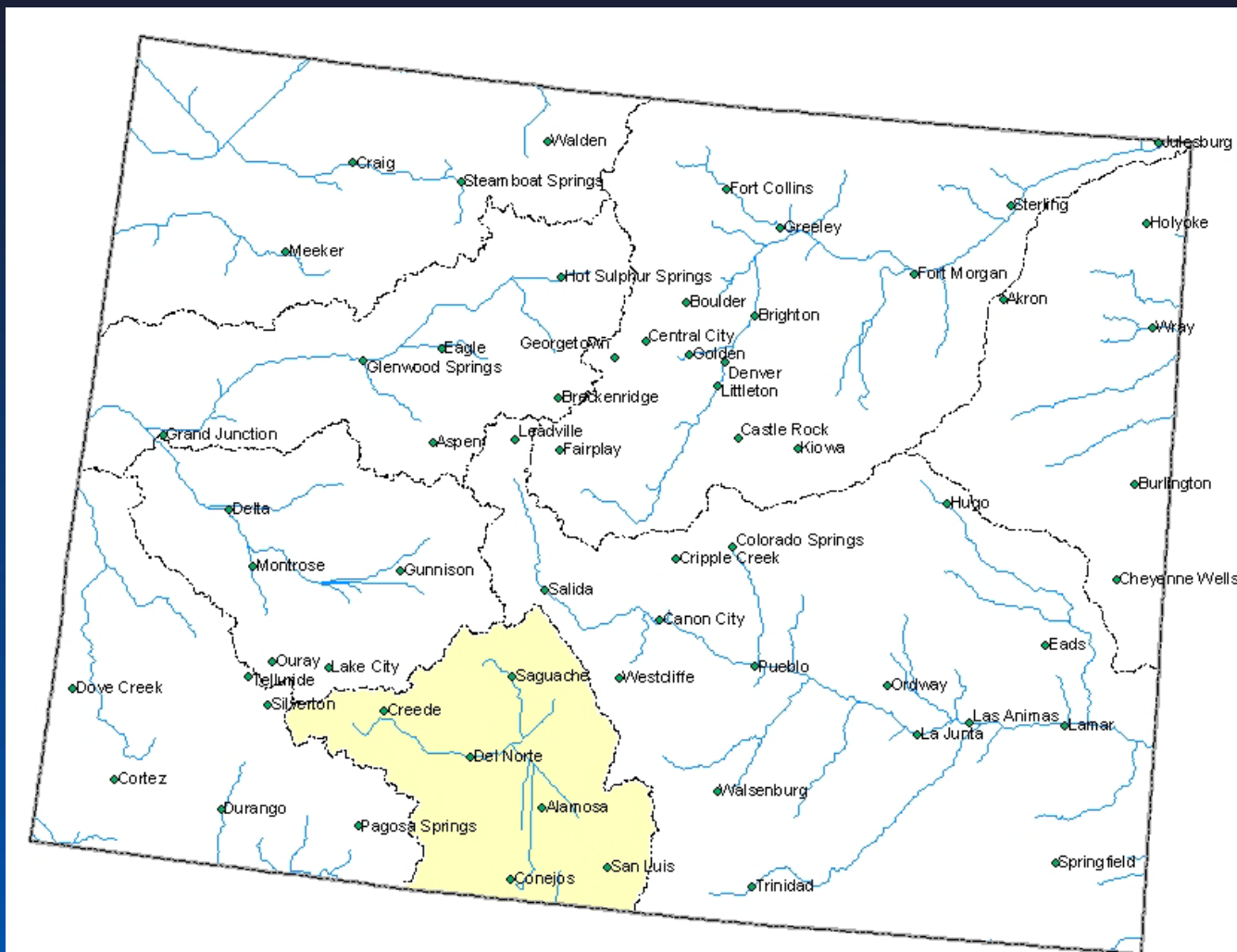
*Provisional Data  
Subject to Revision*

### Percent of Average



Current as of April 1, 2015

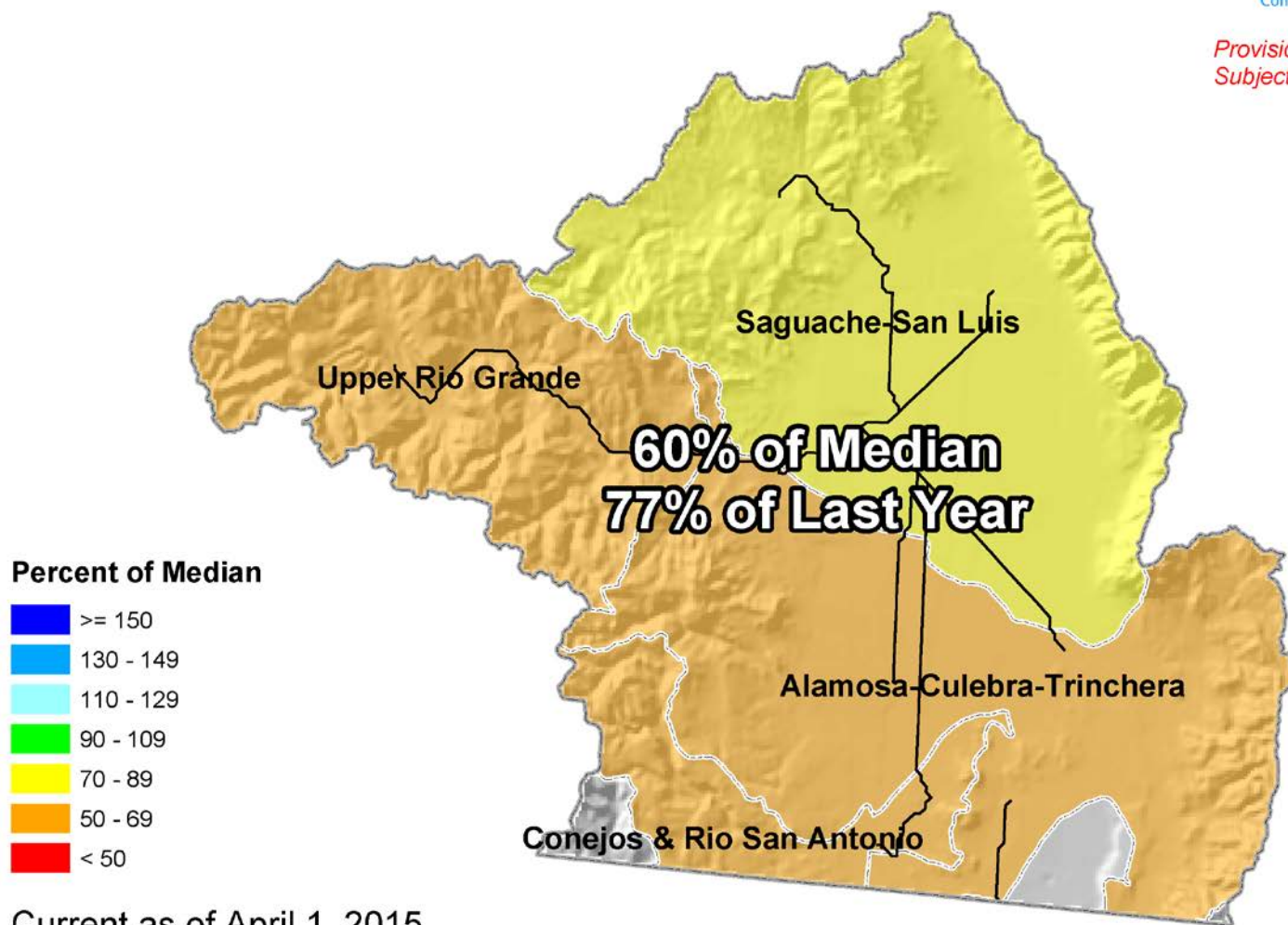
## Upper Rio Grande Basin Summary



## Upper Rio Grande Basin Snowpack Map



*Provisional Data  
Subject to Revision*

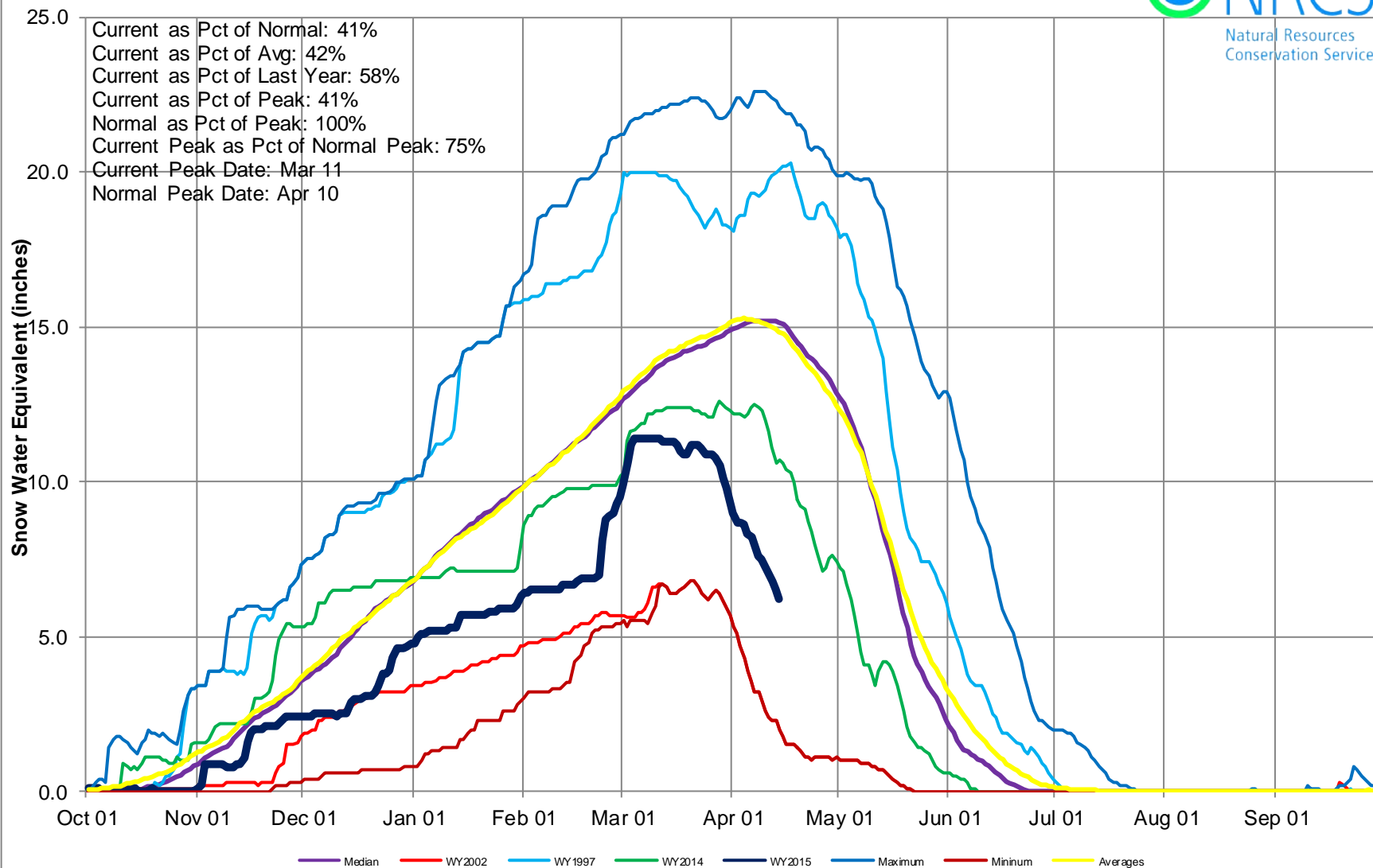


Current as of April 1, 2015



## Upper Rio Grande Basin High/Low Snowpack Summary

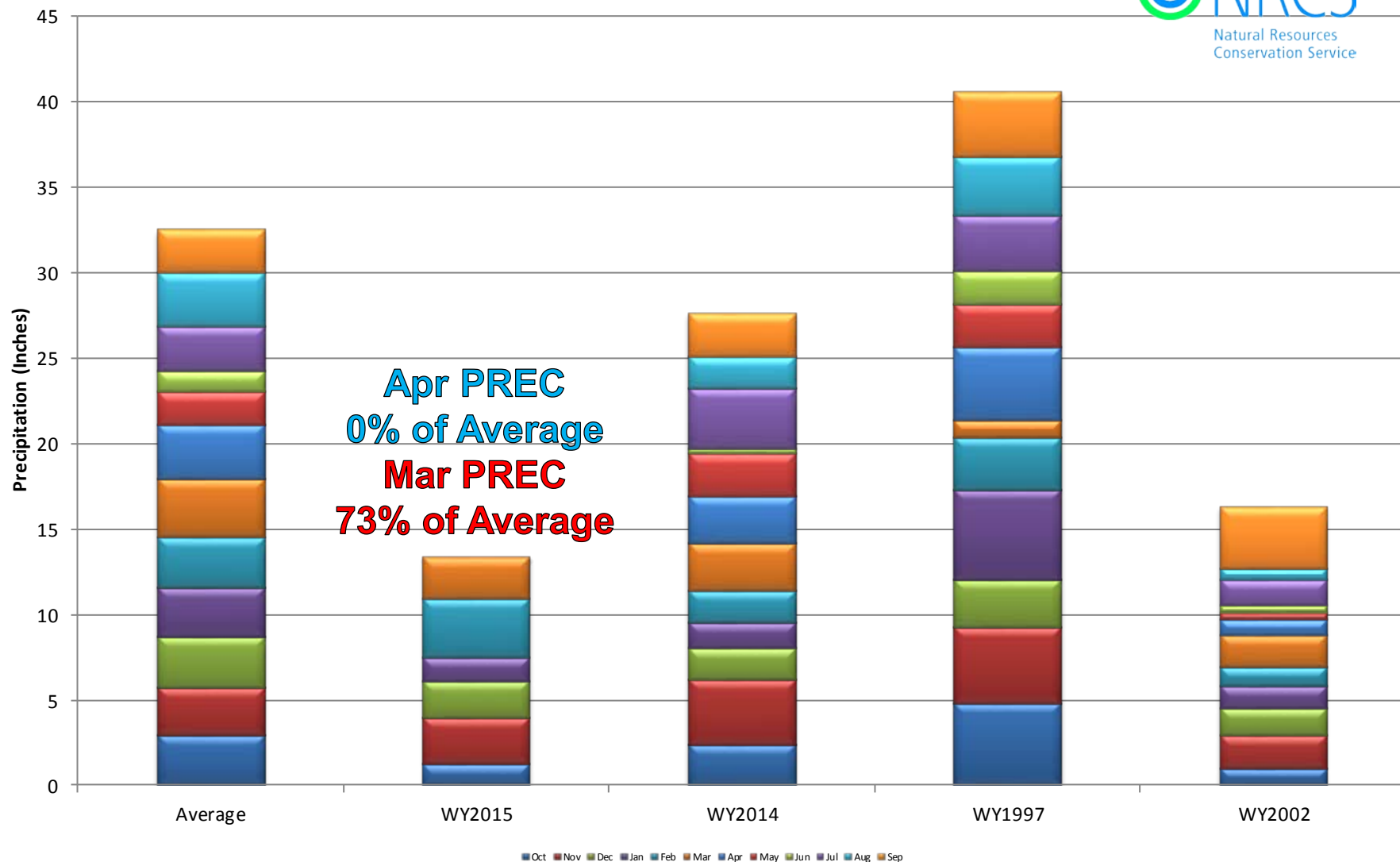
*Based on Provisional SNOTEL data as of Apr 14, 2015*





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

**Based on Provisional SNOTEL data as of Apr 14, 2015**

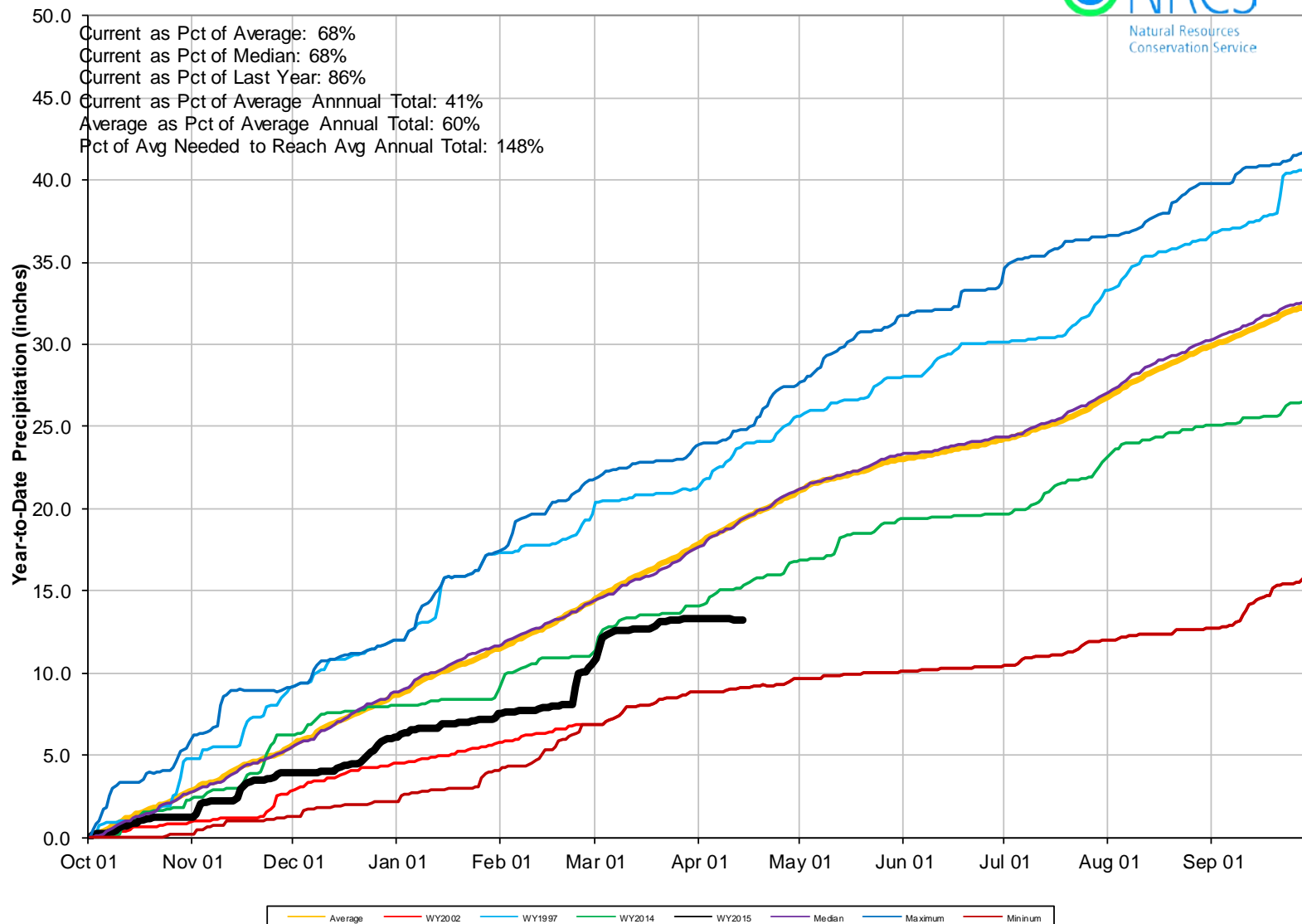






## Upper Rio Grande Basin High/Low Year-to-Date Precipitation Summary

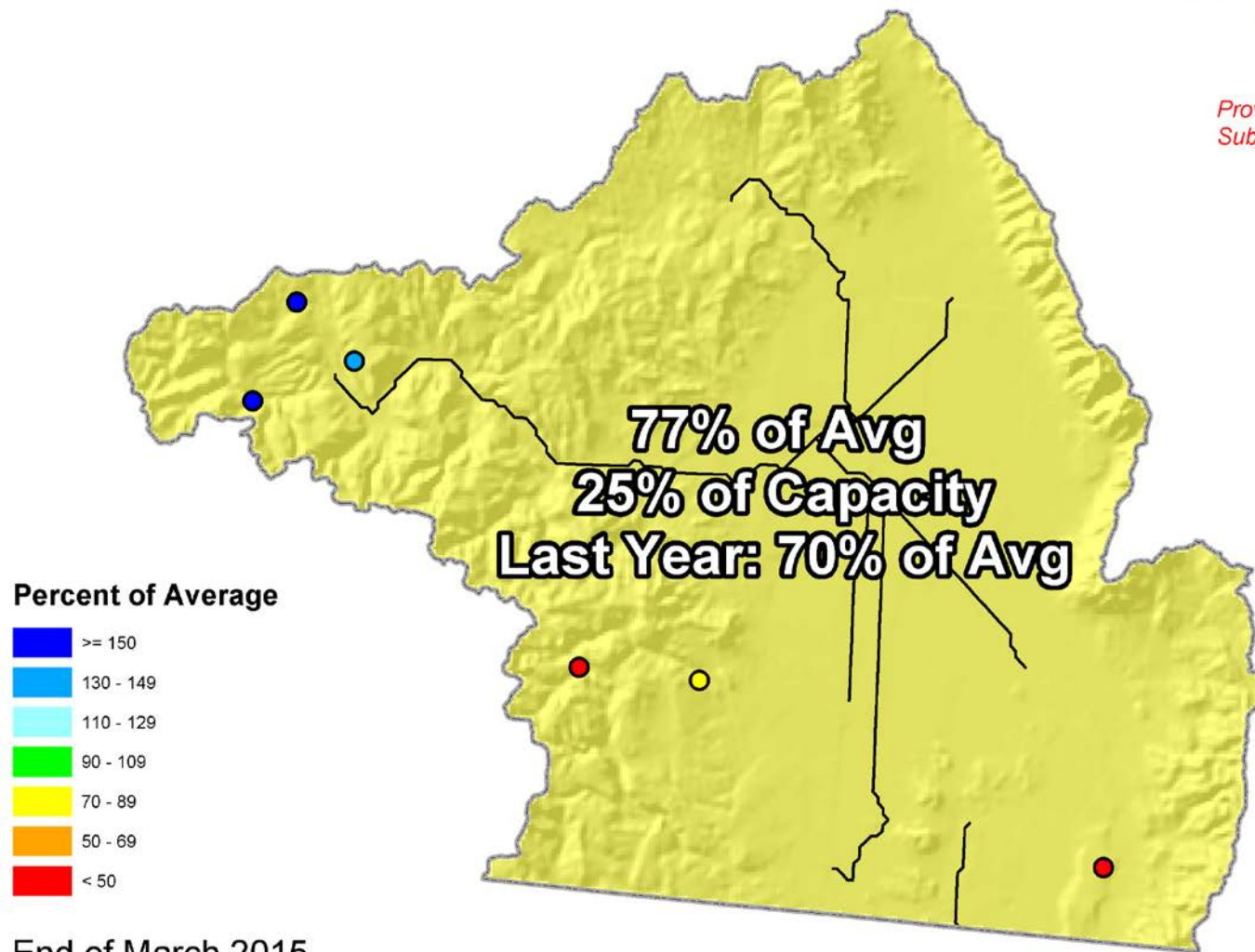
*Based on Provisional SNOTEL data as of Apr 14, 2015*



## Upper Rio Grande Basin Reservoir Storage Map



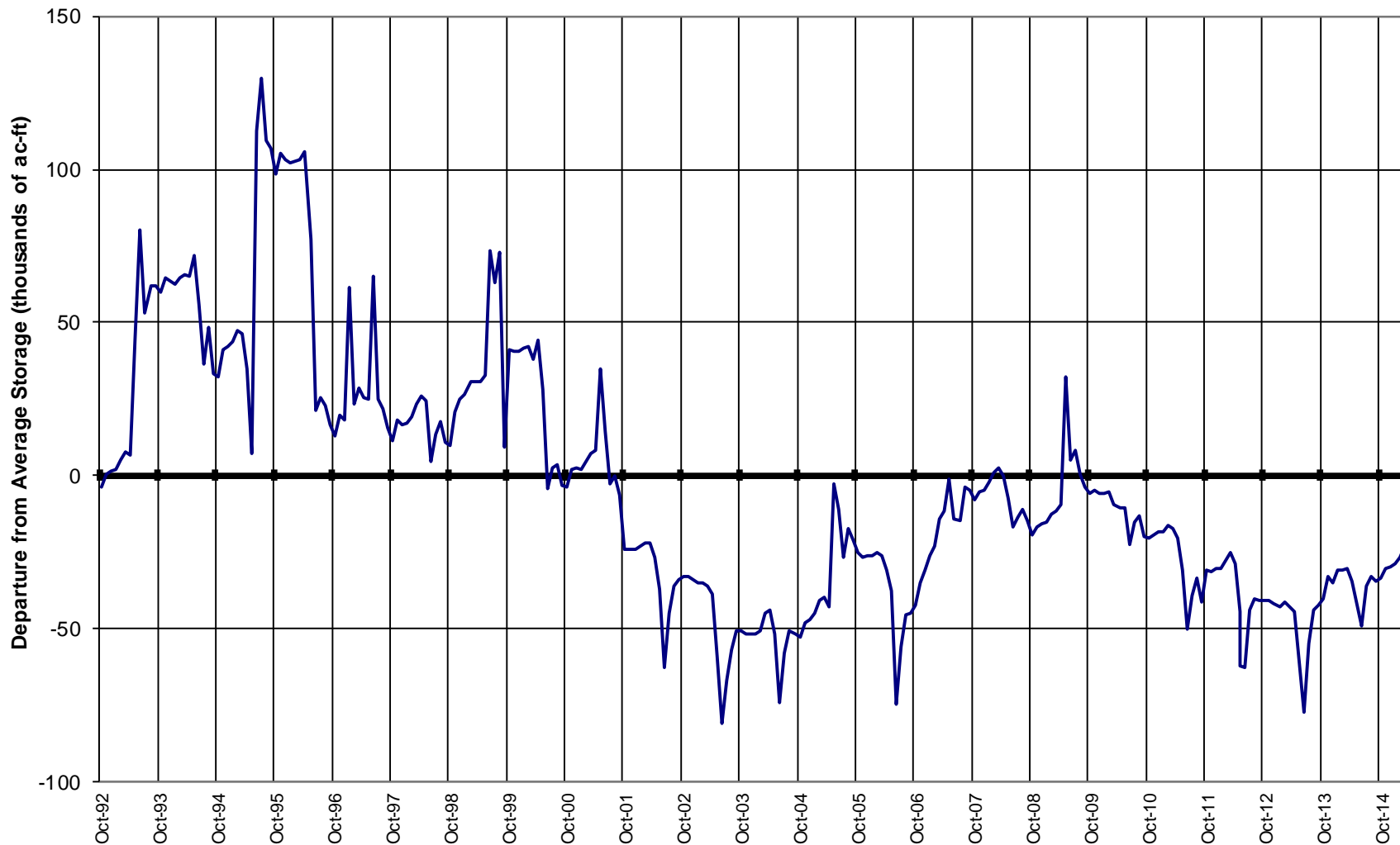
*Provisional Data  
Subject to Revision*



End of March 2015

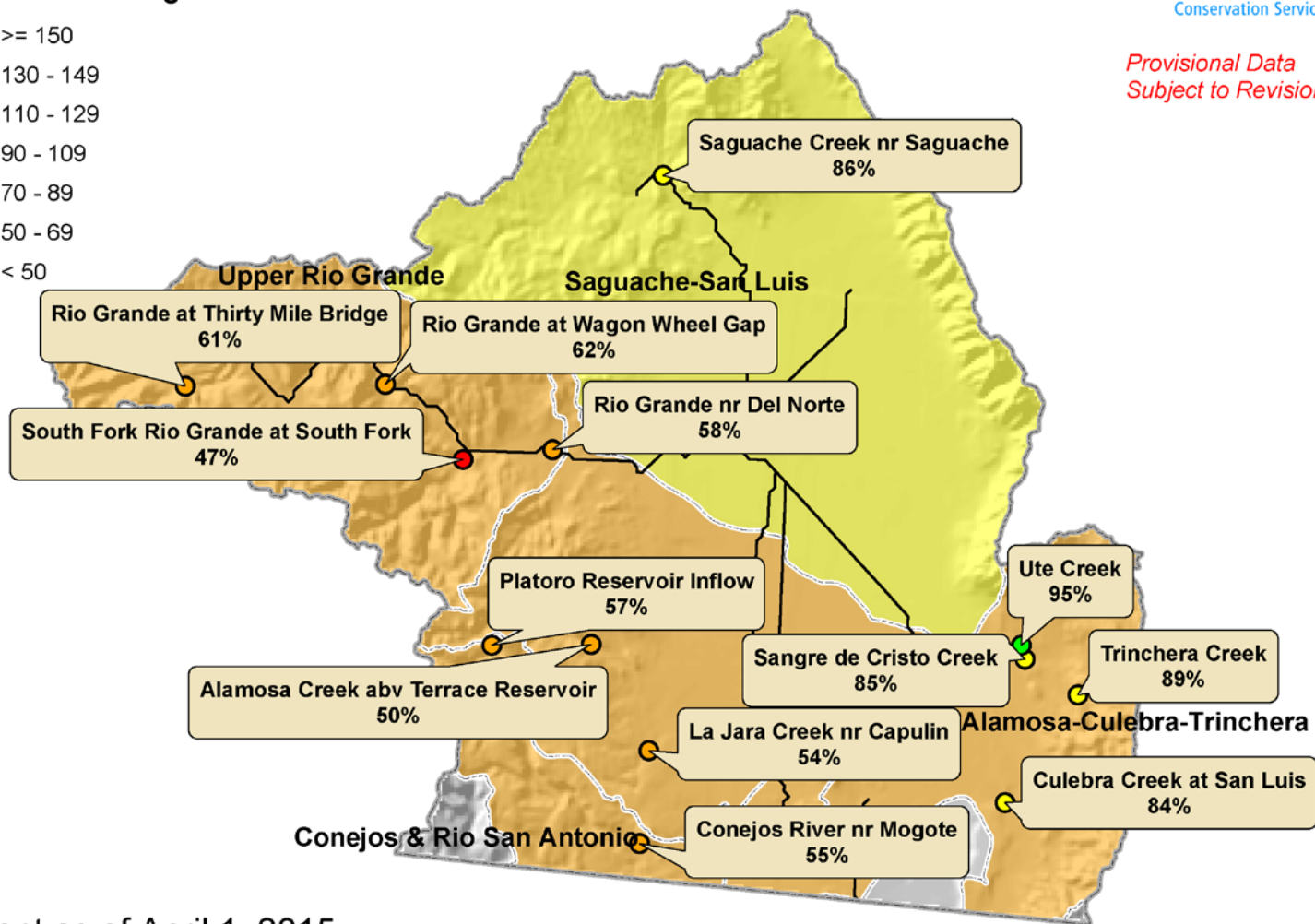


## UPPER RIO GRANDE BASIN Reservoir Storage Departure from Average



## Upper Rio Grande Basin Streamflow Forecast Map

### Percent of Average



## Arkansas River Basin Summary

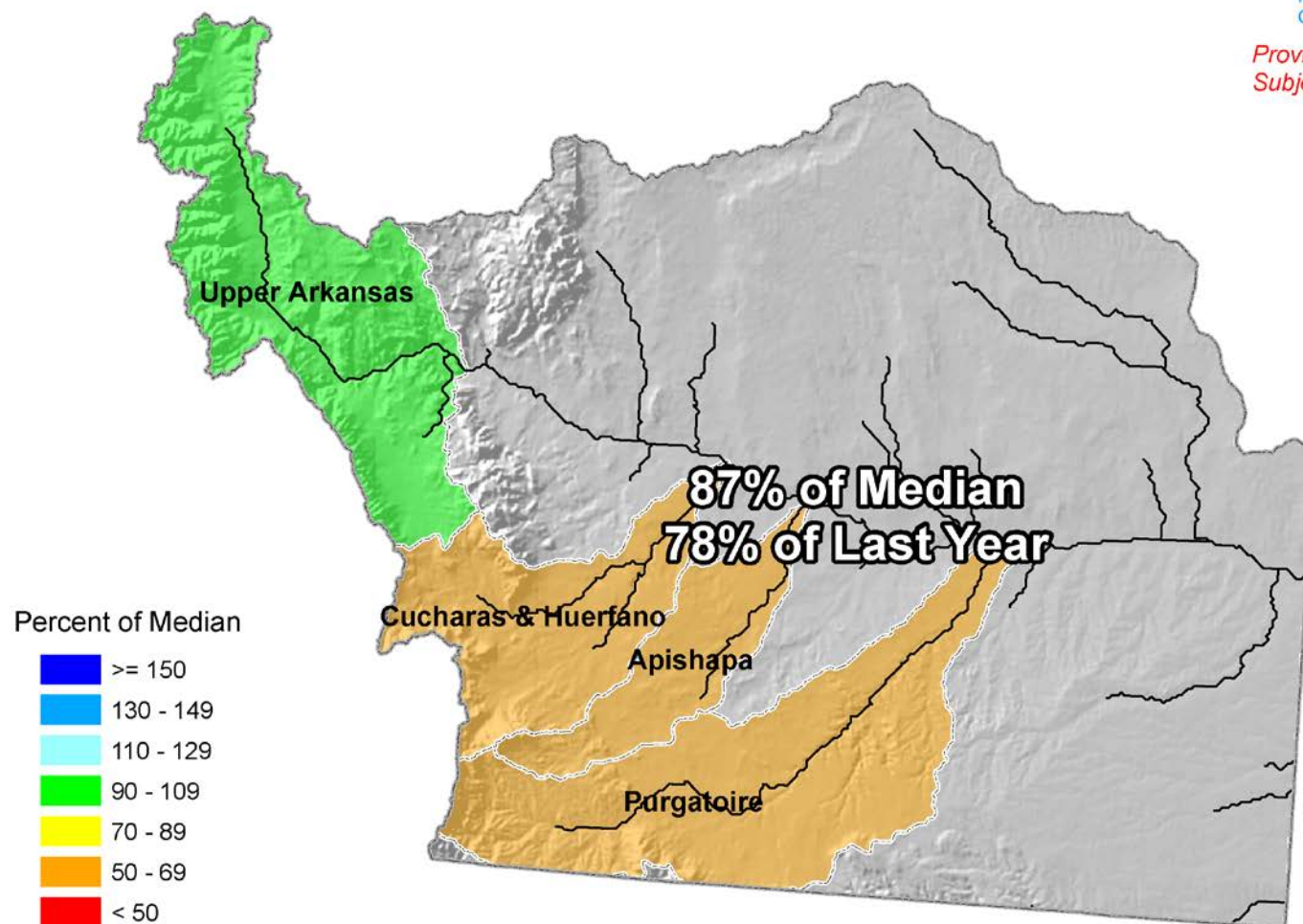




## Arkansas River Basin Snowpack Map



*Provisional Data  
Subject to Revision*



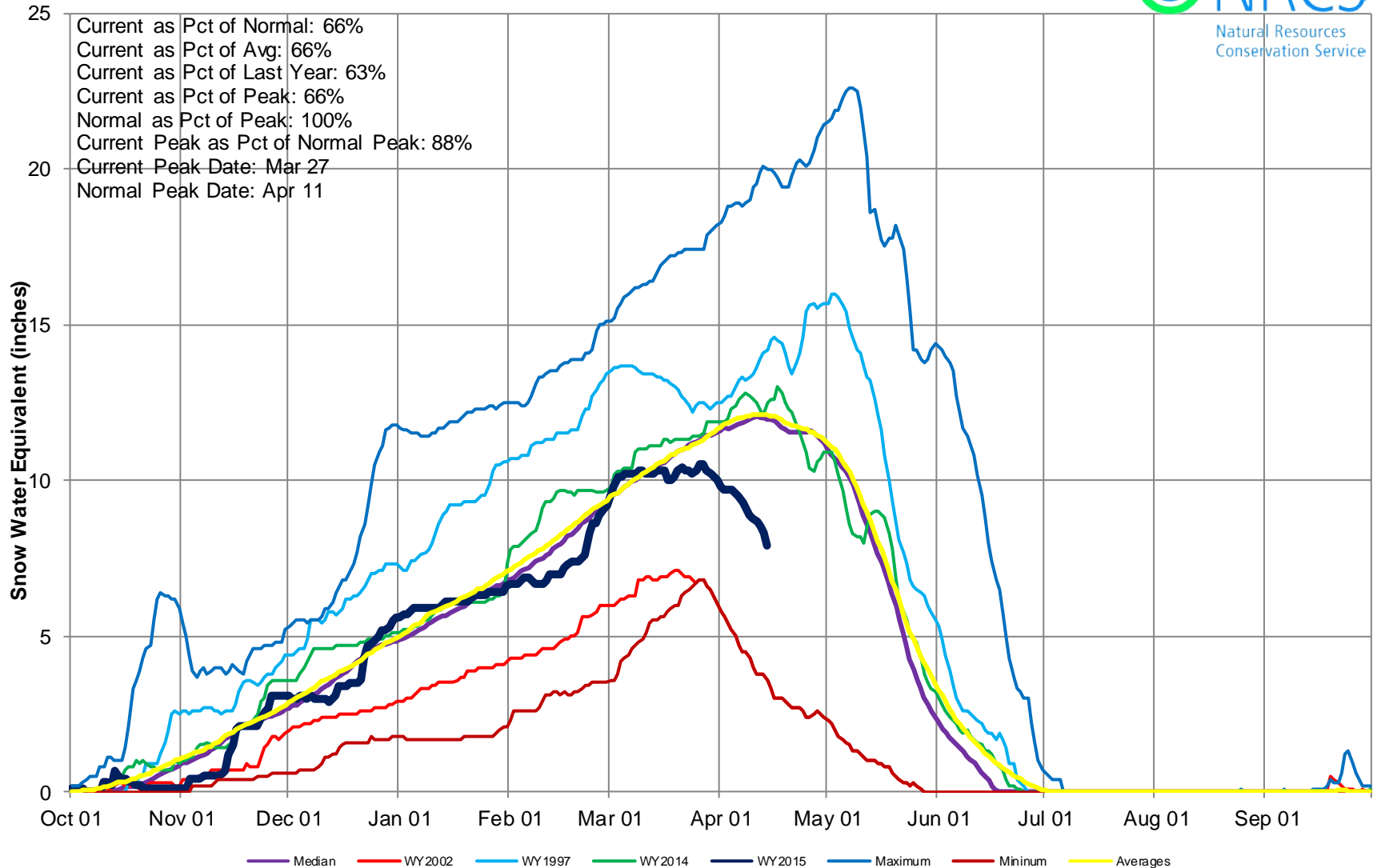
Current as of April 1, 2015





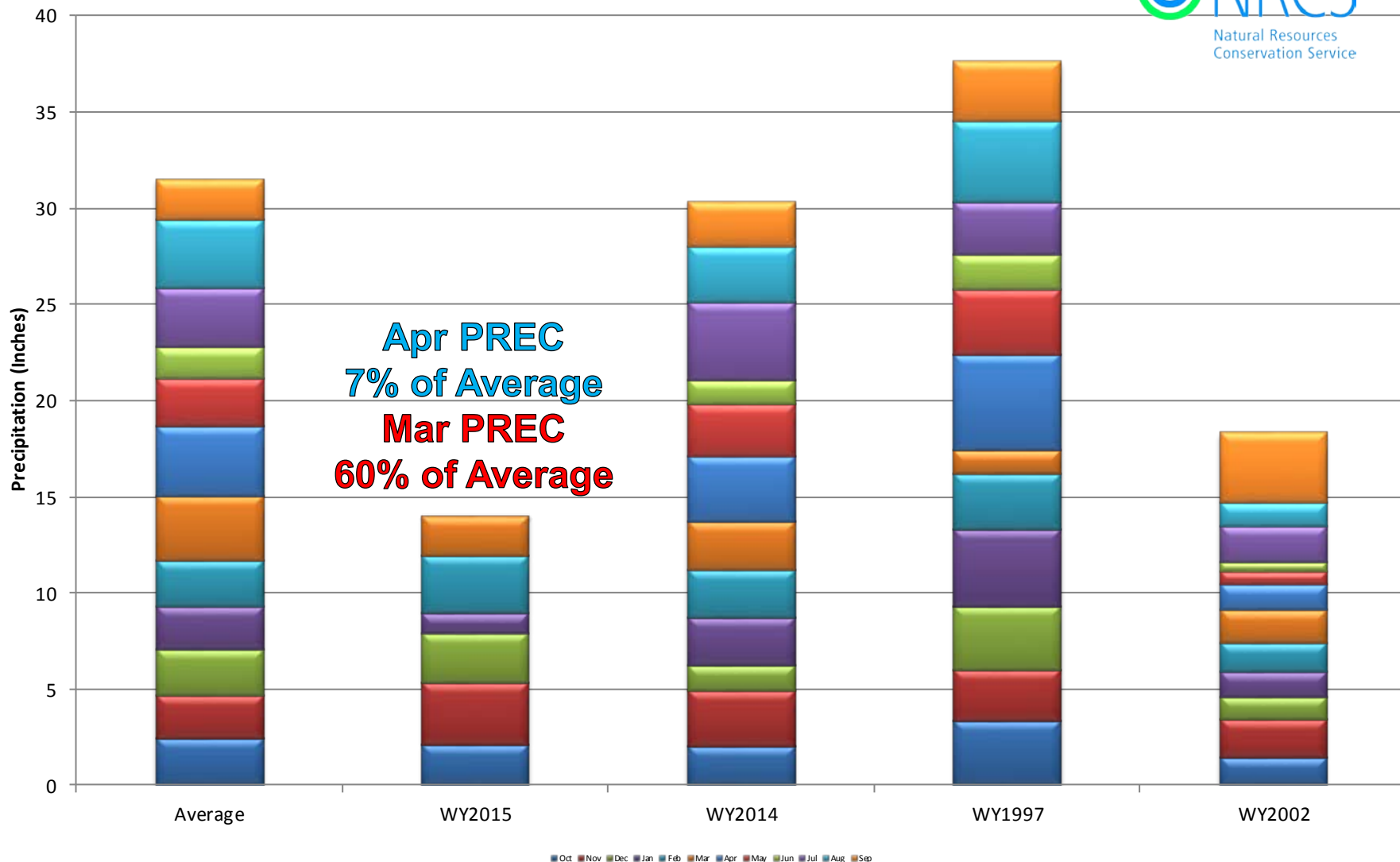
## Arkansas River Basin High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of Apr 14, 2015*



## Arkansas River Basin High/Low Monthly Precipitation Summary

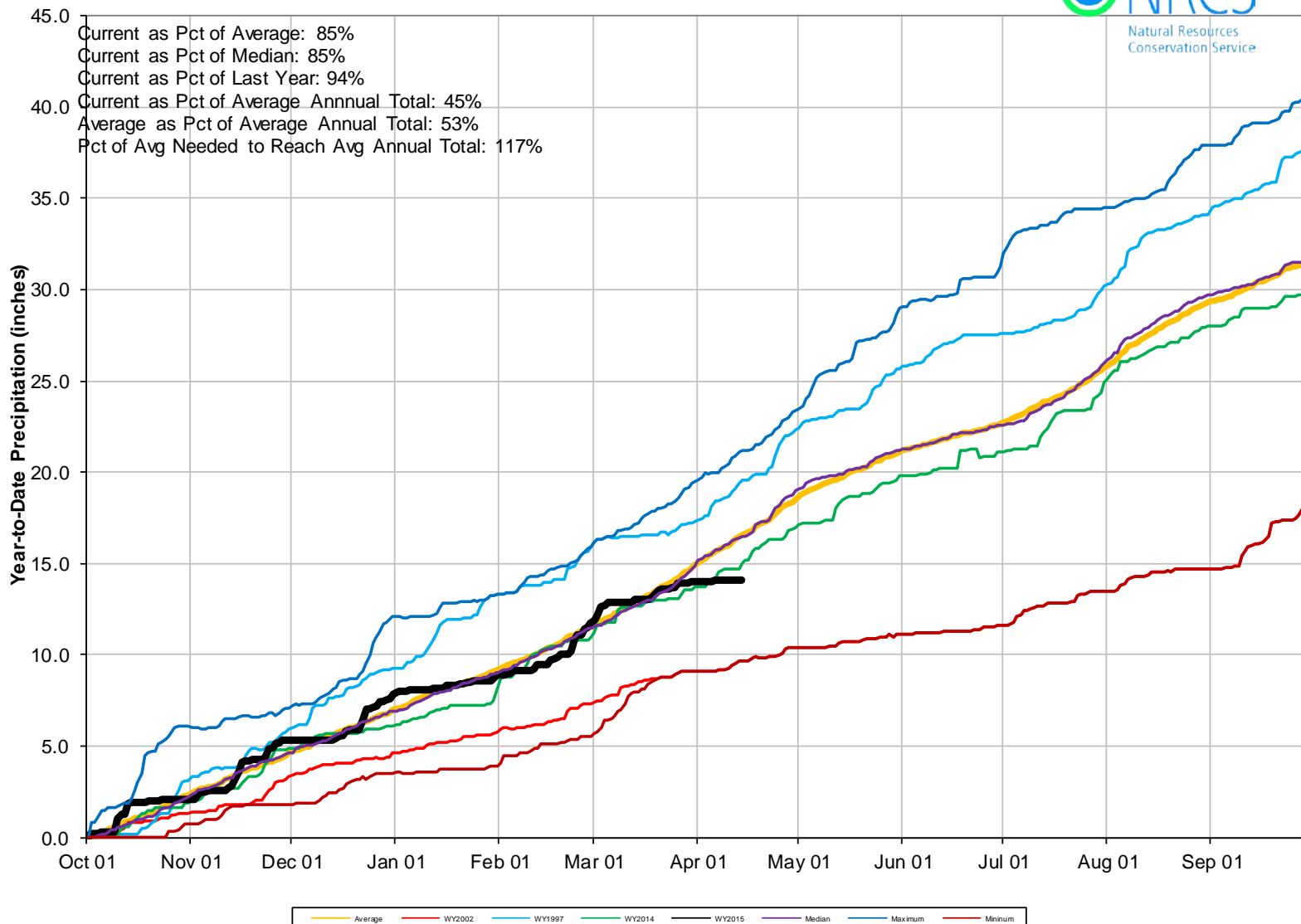
*Based on Provisional SNOTEL data as of Apr 14, 2015*





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

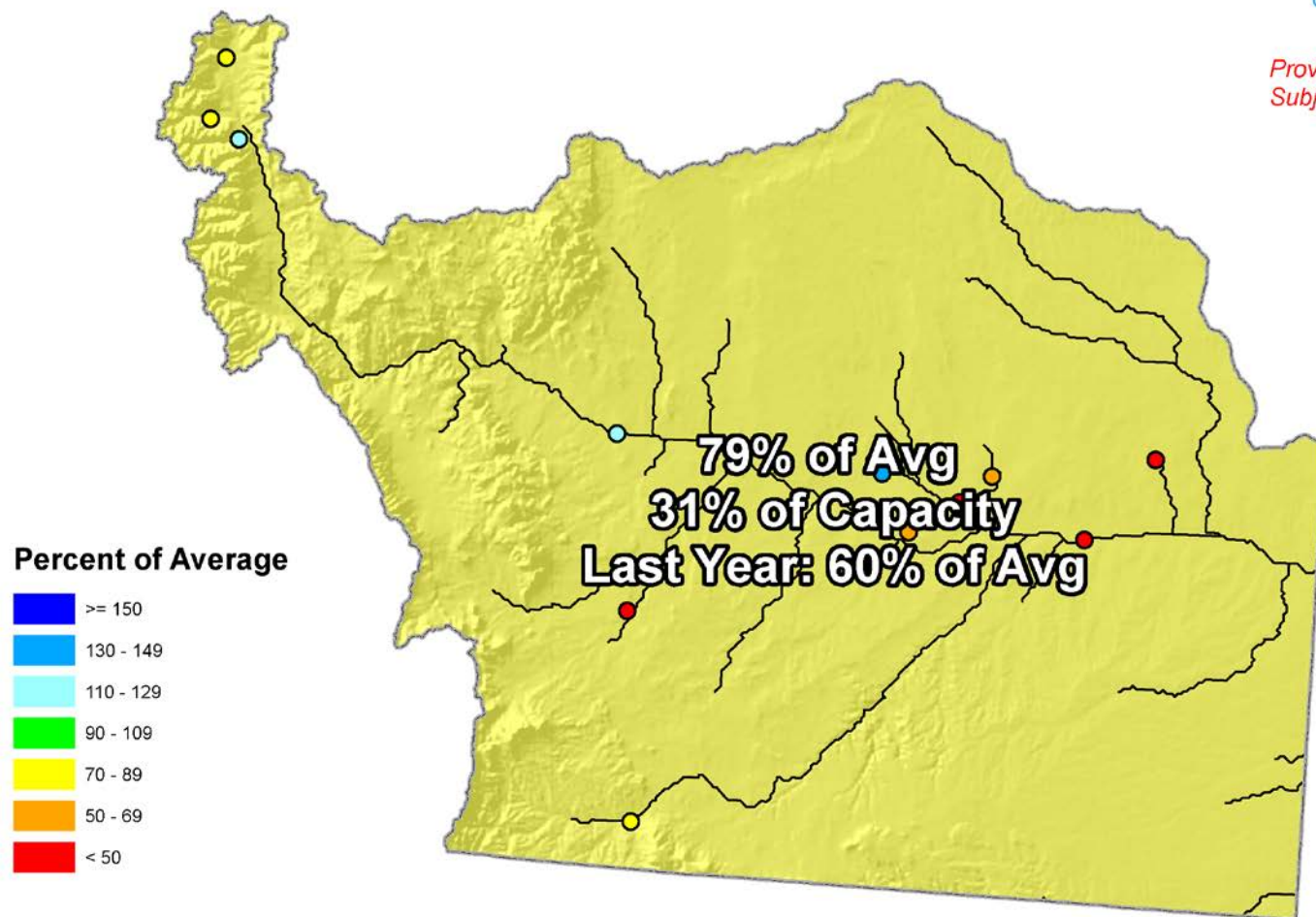
*Based on Provisional SNOTEL data as of Apr 14, 2015*



## Arkansas River Basin Reservoir Storage Map



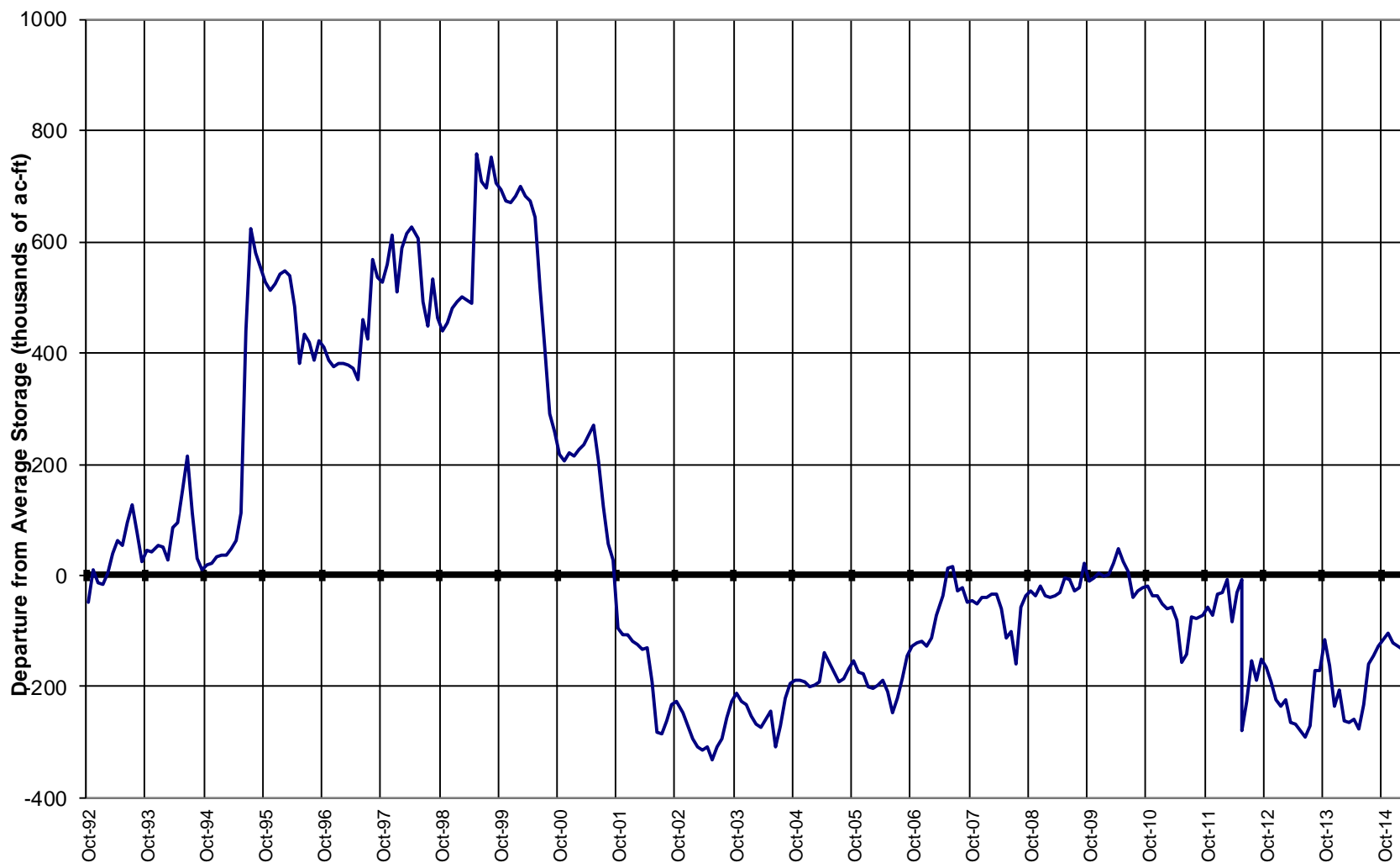
*Provisional Data  
Subject to Revision*



End of March 2015



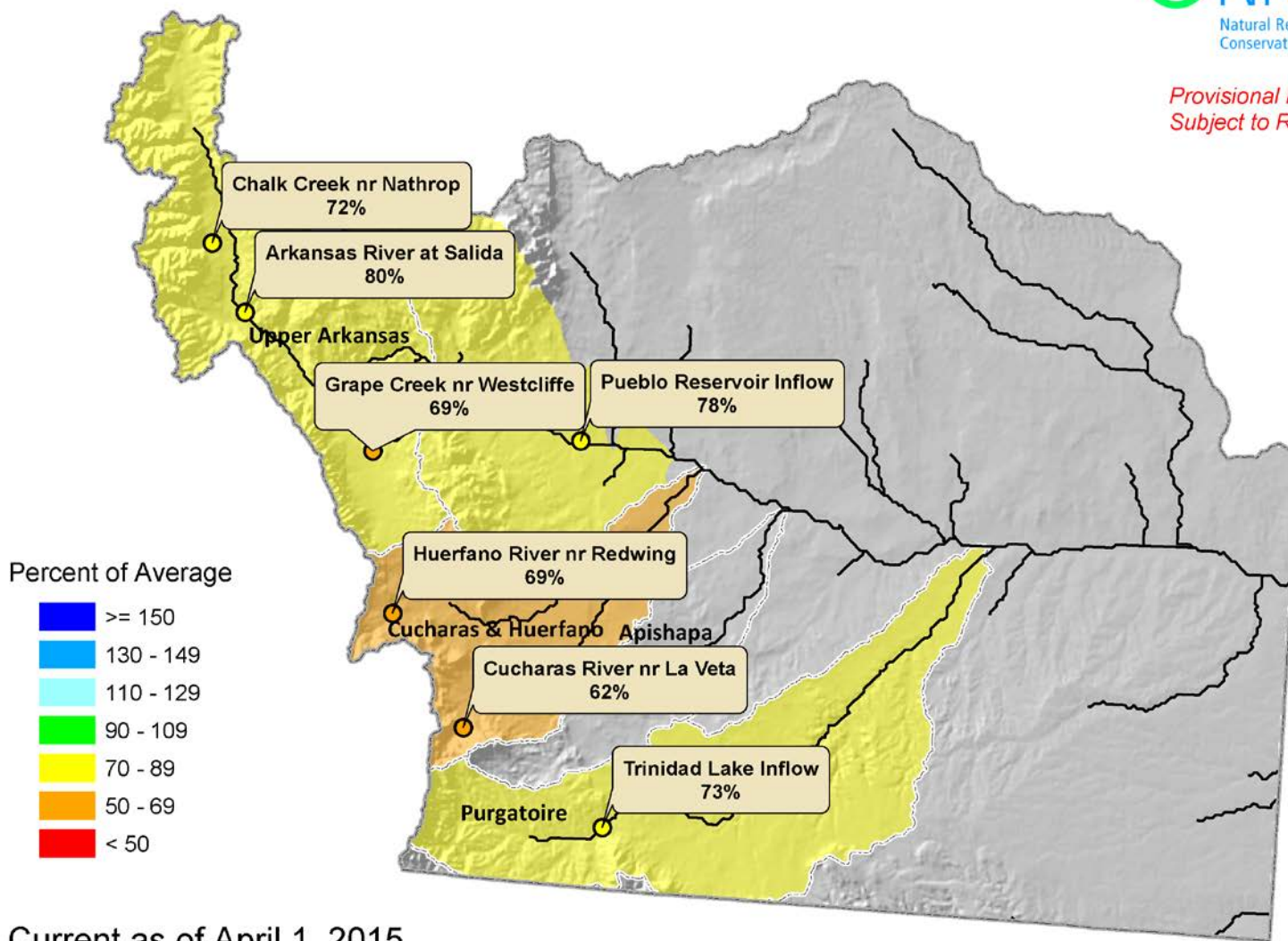
## ARKANSAS RIVER BASIN Reservoir Storage Departure from Average



## Arkansas River Basin Streamflow Forecast Map



*Provisional Data  
Subject to Revision*



Current as of April 1, 2015



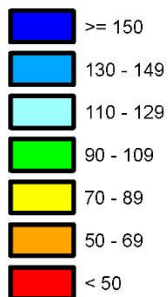
## Colorado Statewide Summary



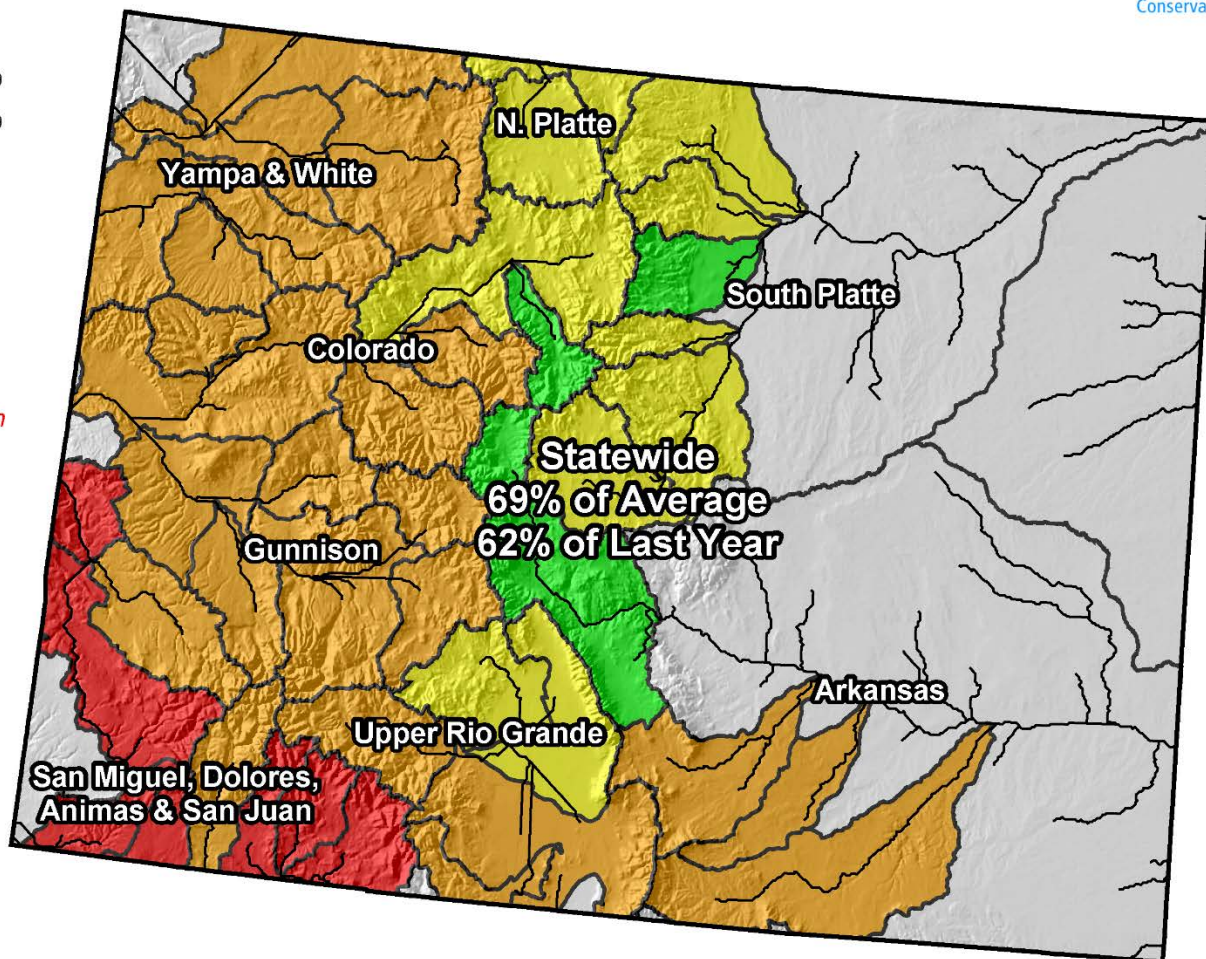
## Colorado Snowpack Map



### Percent of Median



*Provisional Data  
Subject to Revision*

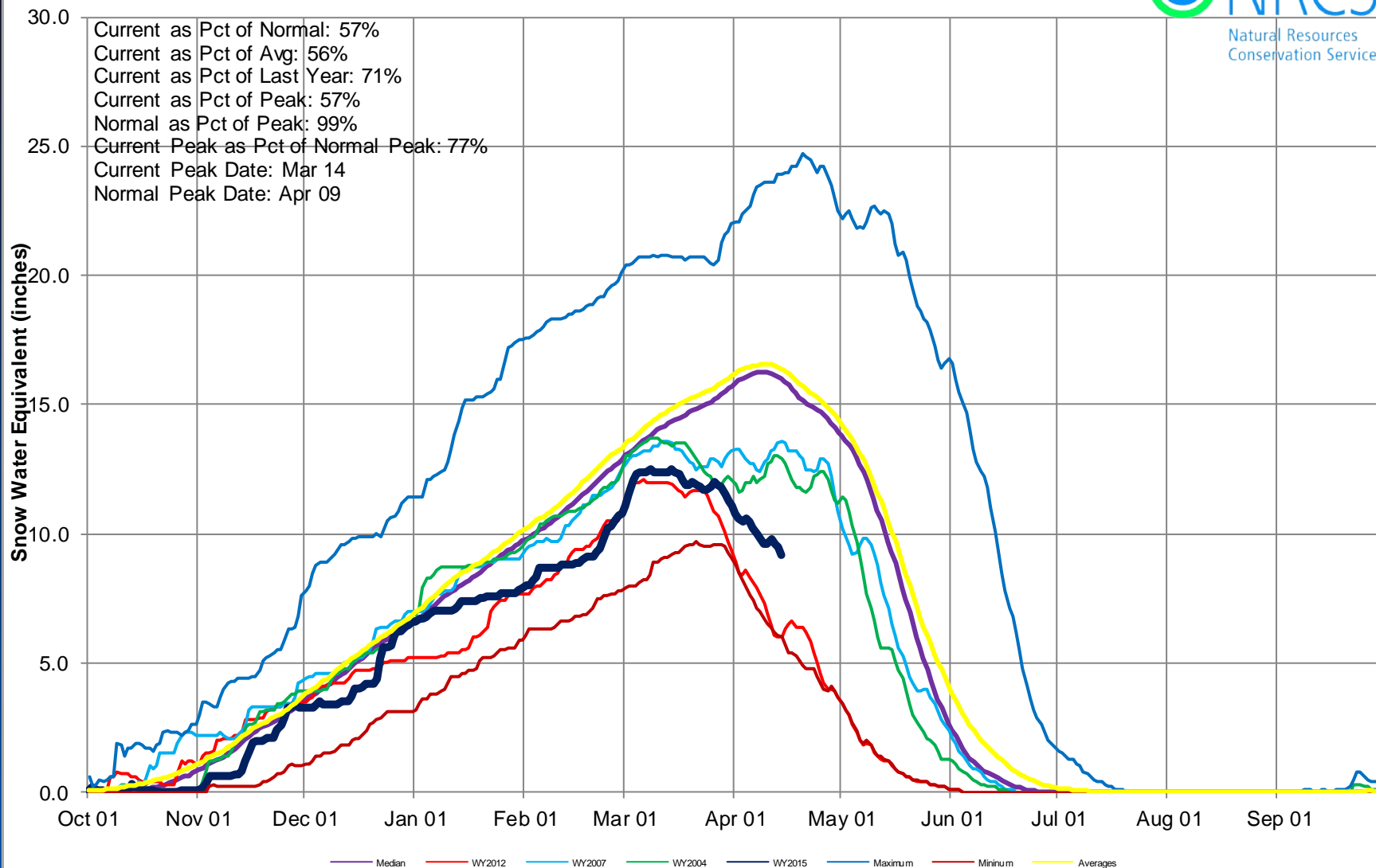


Current as of April 1, 2015



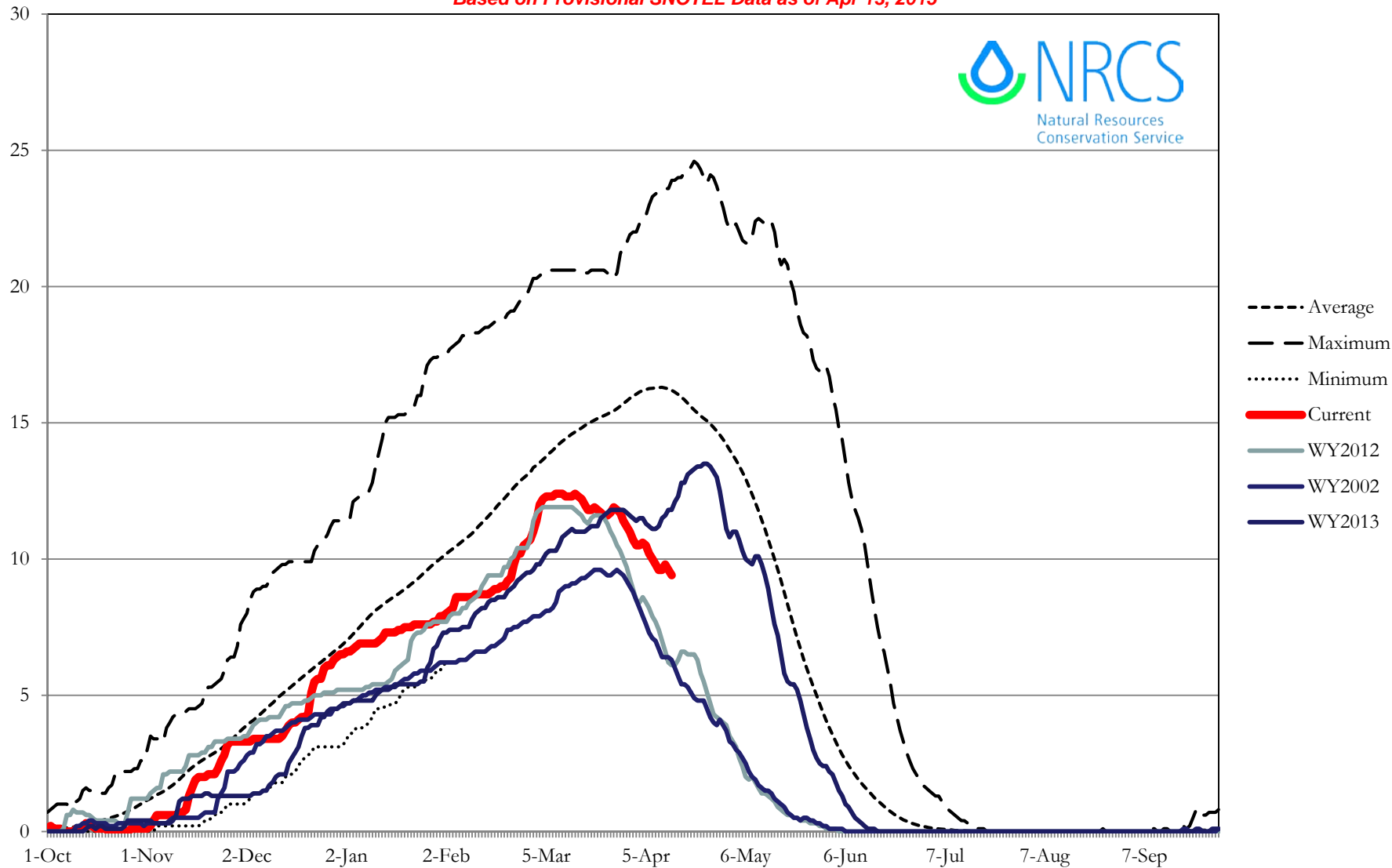
## Colorado Statewide High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of Apr 14, 2015*



## Colorado State-Wide Snowpack with Select Analog Years

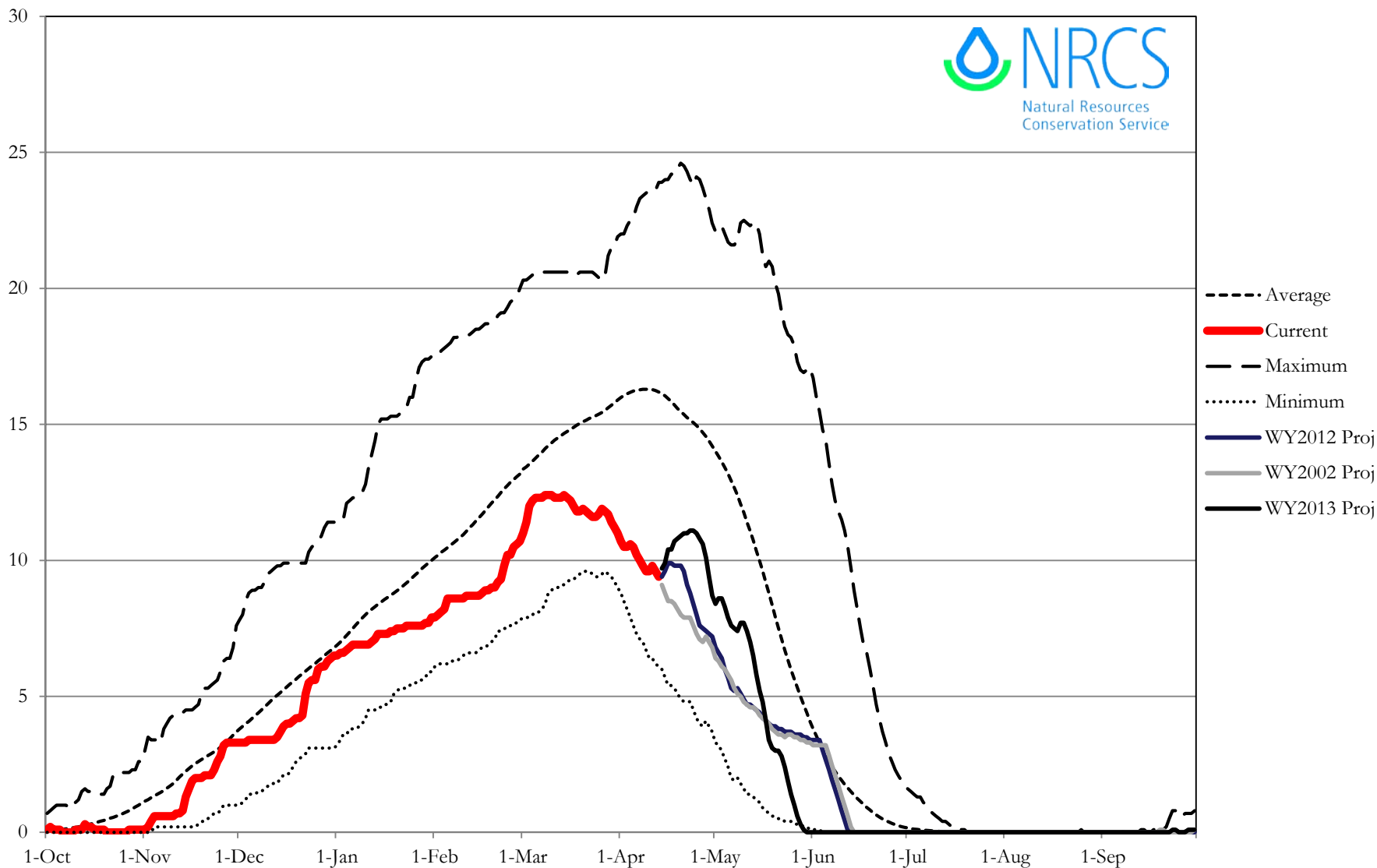
*Based on Provisional SNOTEL Data as of Apr 13, 2015*





## Colorado State-Wide Snowpack with Select Analog Year Projections

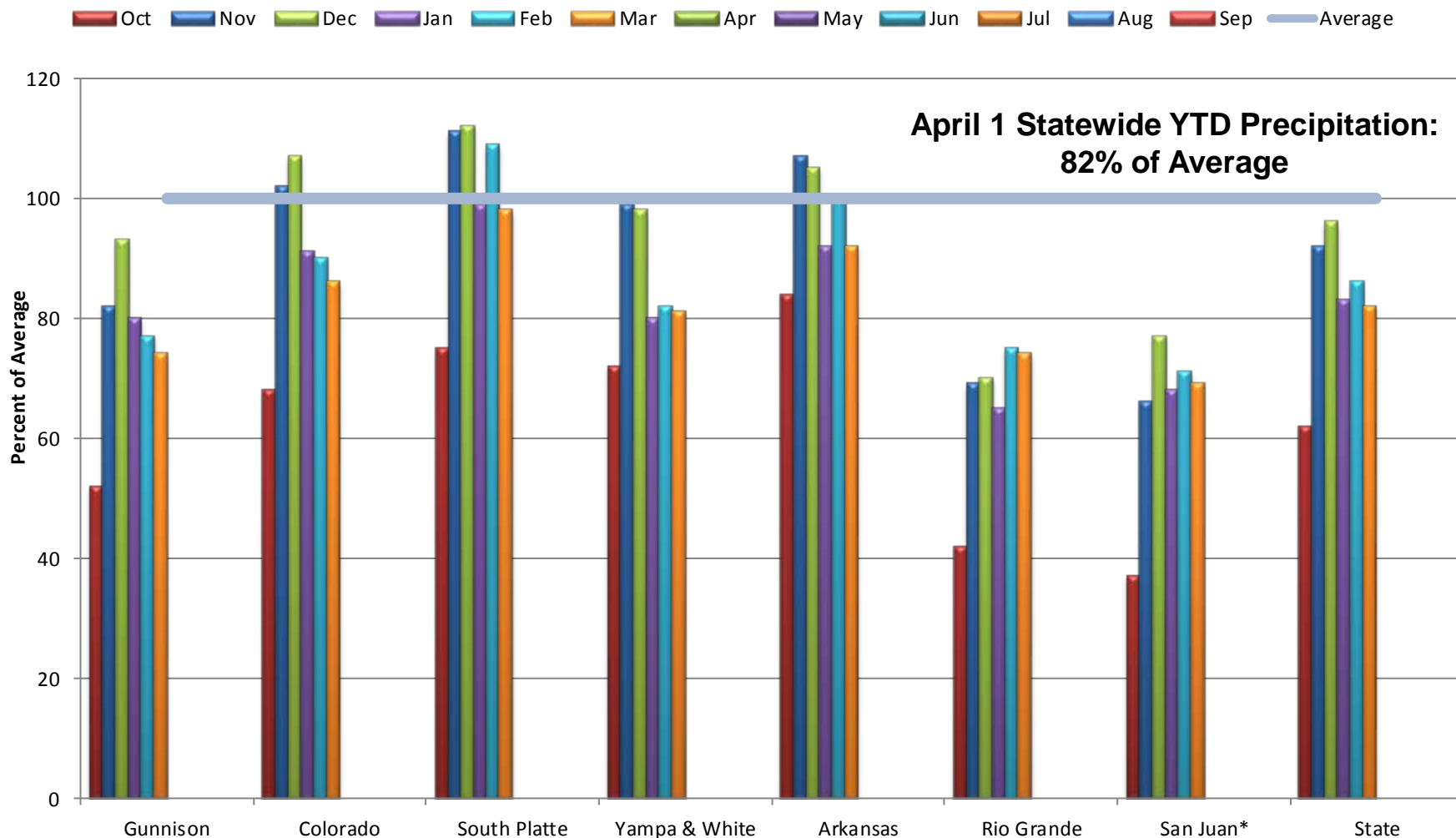
*Based on Provisional SNOTEL Data as of Apr 13, 2015*





## Colorado Year-to-Date Precipitation Summary for WY2015

USDA Natural Resources Conservation Service

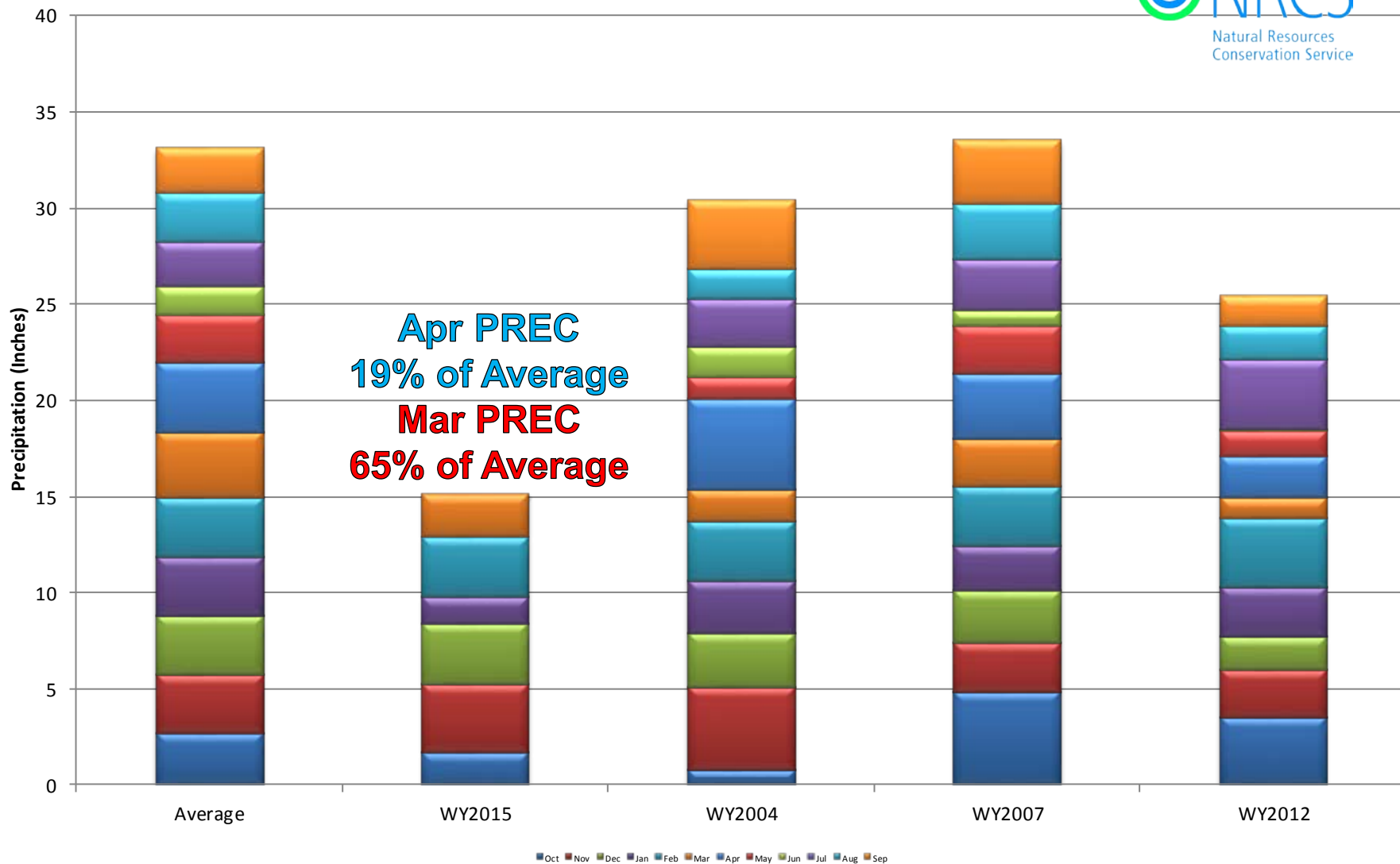


\*Includes Animas, Dolores, San Miguel Basins



## Colorado Statewide High/Low Monthly Precipitation Summary

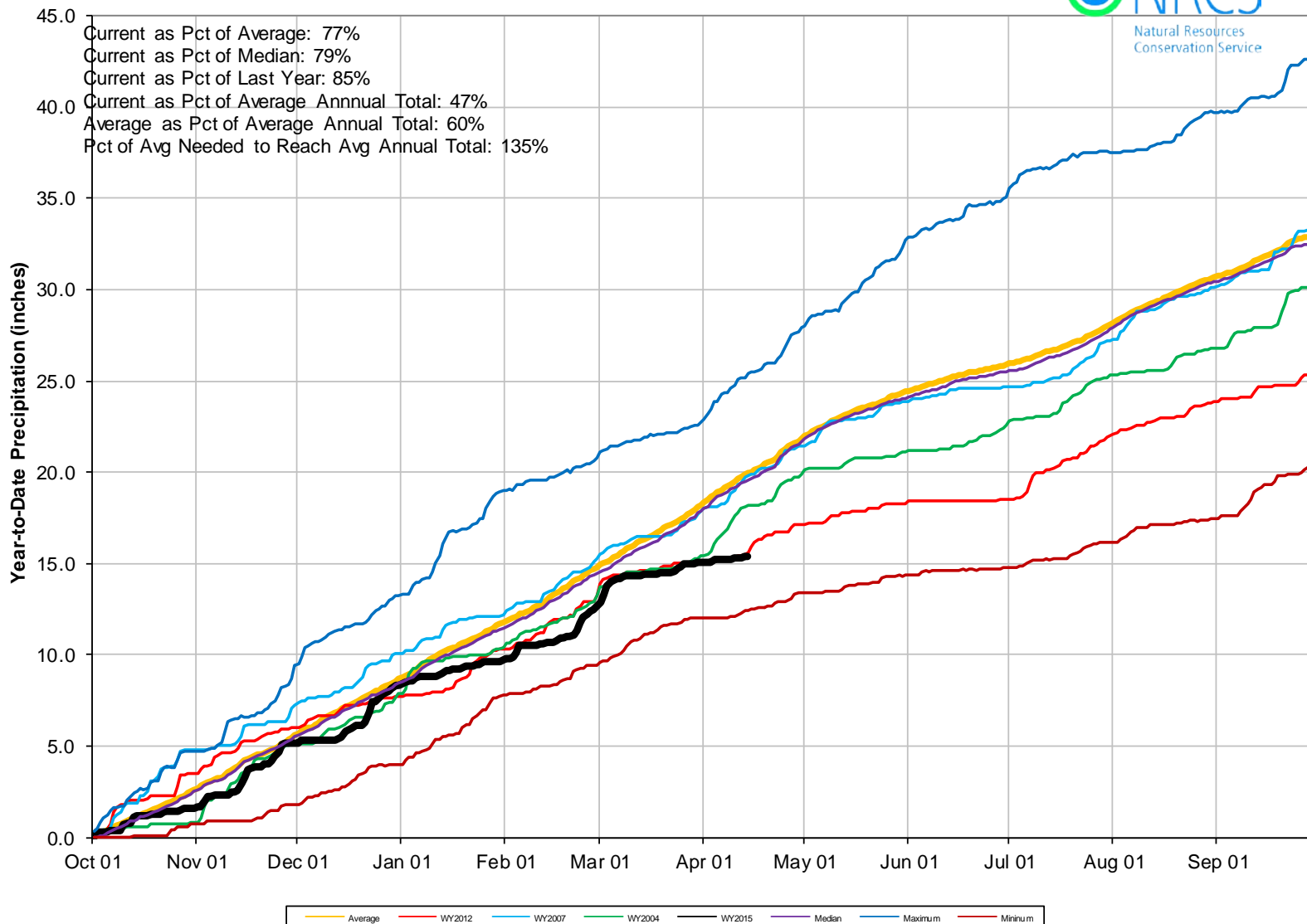
*Based on Provisional SNOTEL data as of Apr 14, 2015*





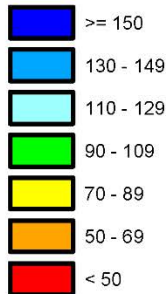
## Colorado Statewide High/Low Year-to-Date Precipitation Summary

*Based on Provisional SNOTEL data as of Apr 14, 2015*

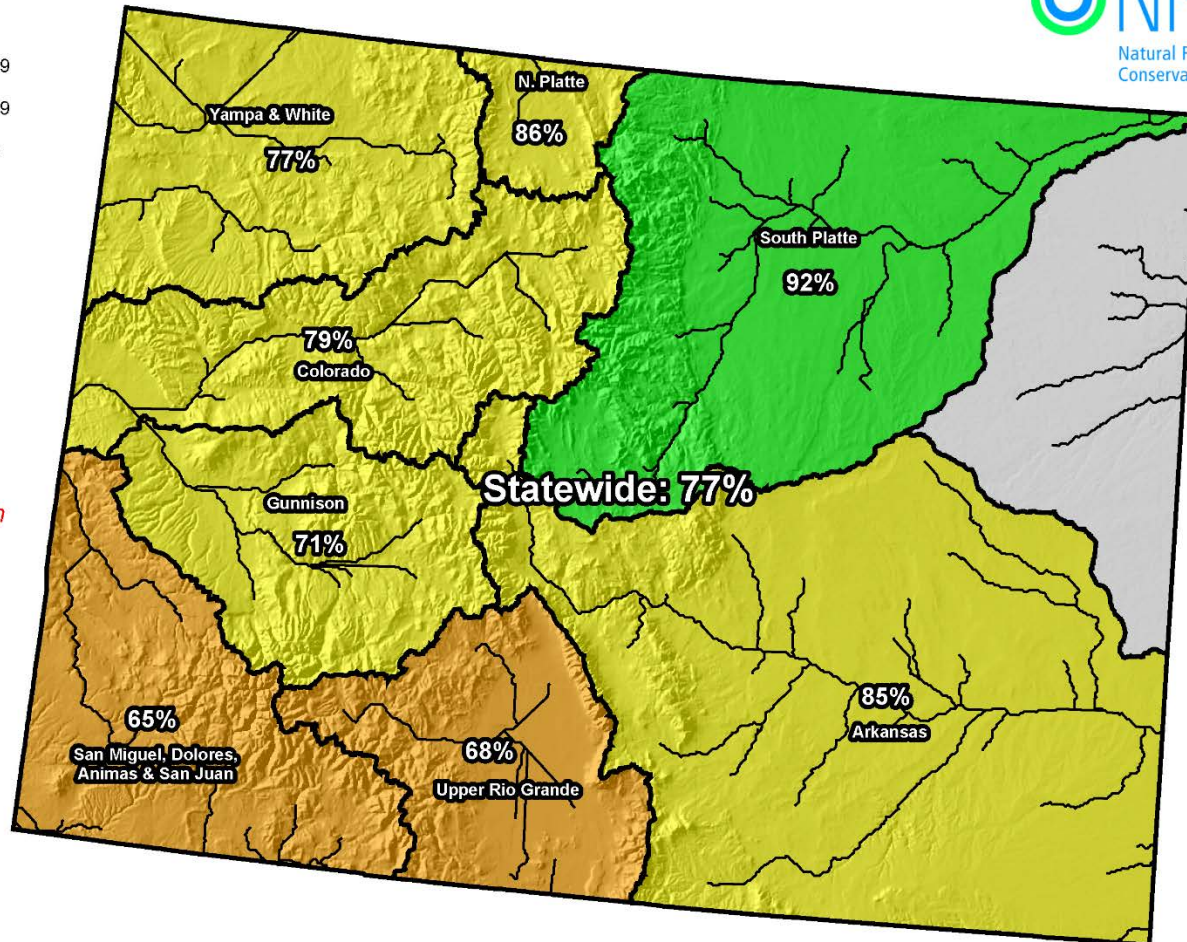


## Colorado SNOTEL Water Year-to-Date Precipitation Update Map

### Percent of Average



*Provisional Data  
Subject to Revision*



Current as of 04/13/2015

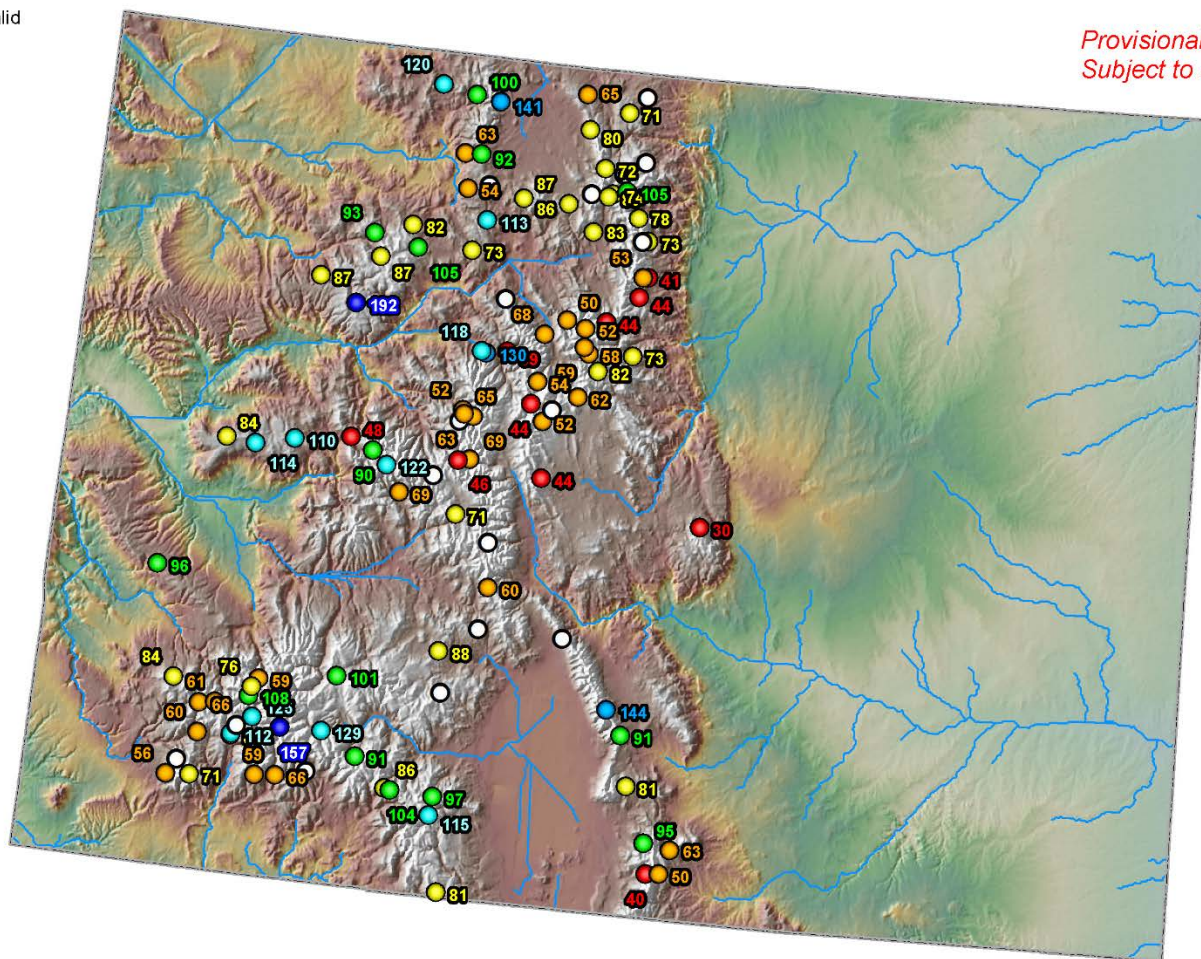


## Colorado SNOTEL Month-to-Date Precipitation

Percent of Average

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

*Provisional Data  
Subject to Revision*

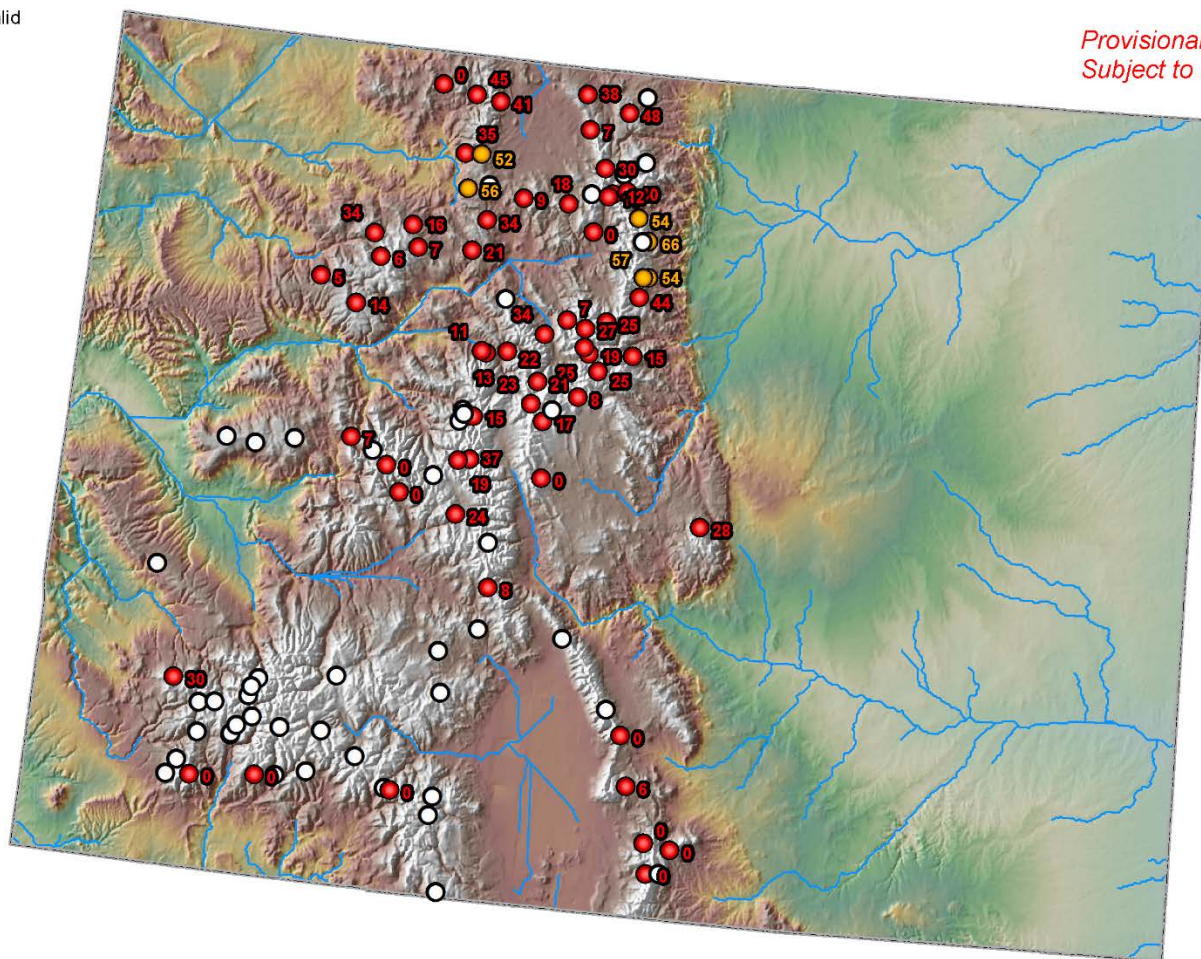


Current as of 03 16, 2015

## Colorado SNOTEL Month-to-Date Precipitation

Percent of Average

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



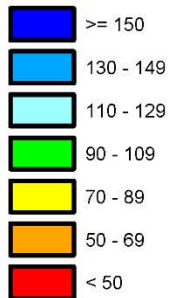
*Provisional Data  
Subject to Revision*

Current as of 04 13, 2015

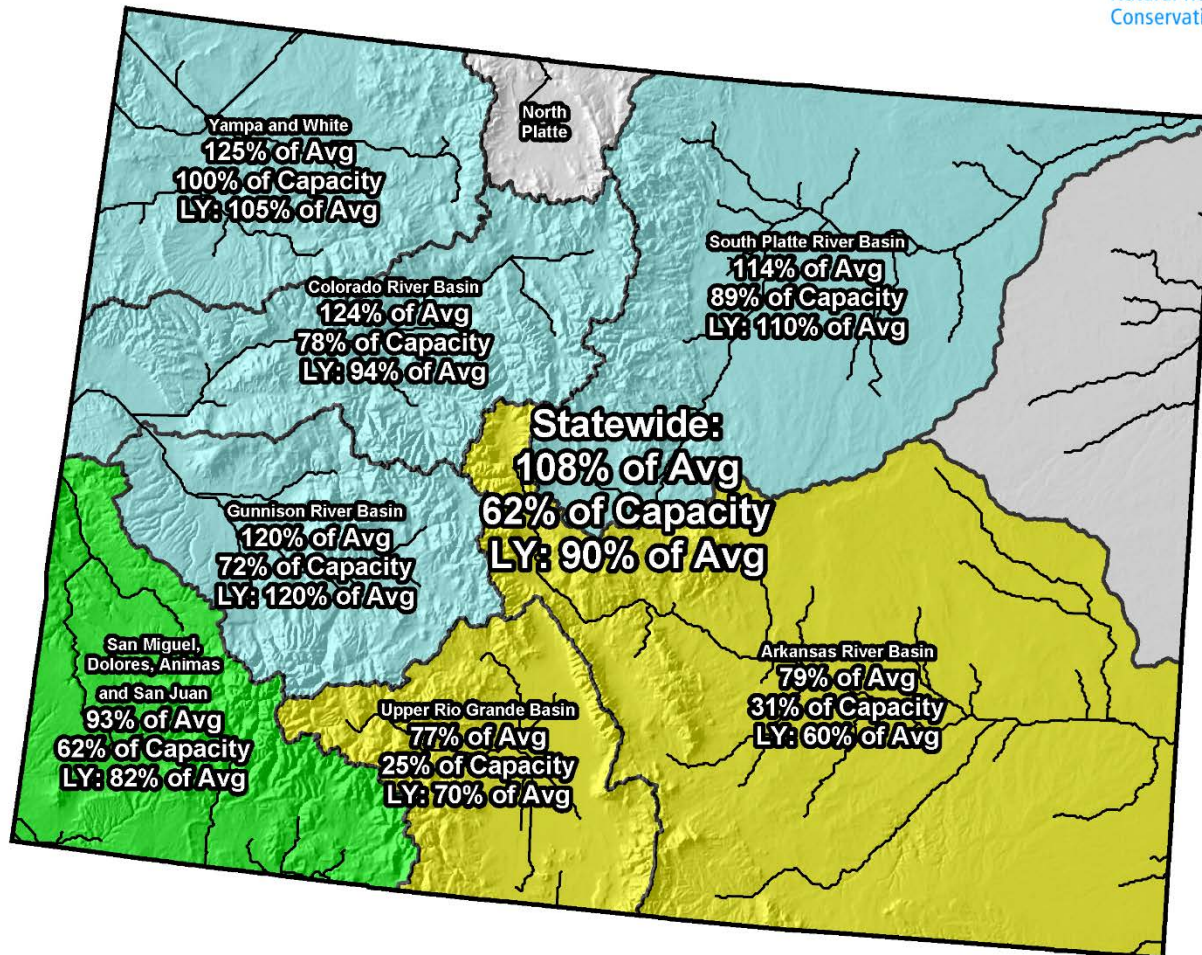


## Colorado Reservoir Storage Map

### Percent of Average



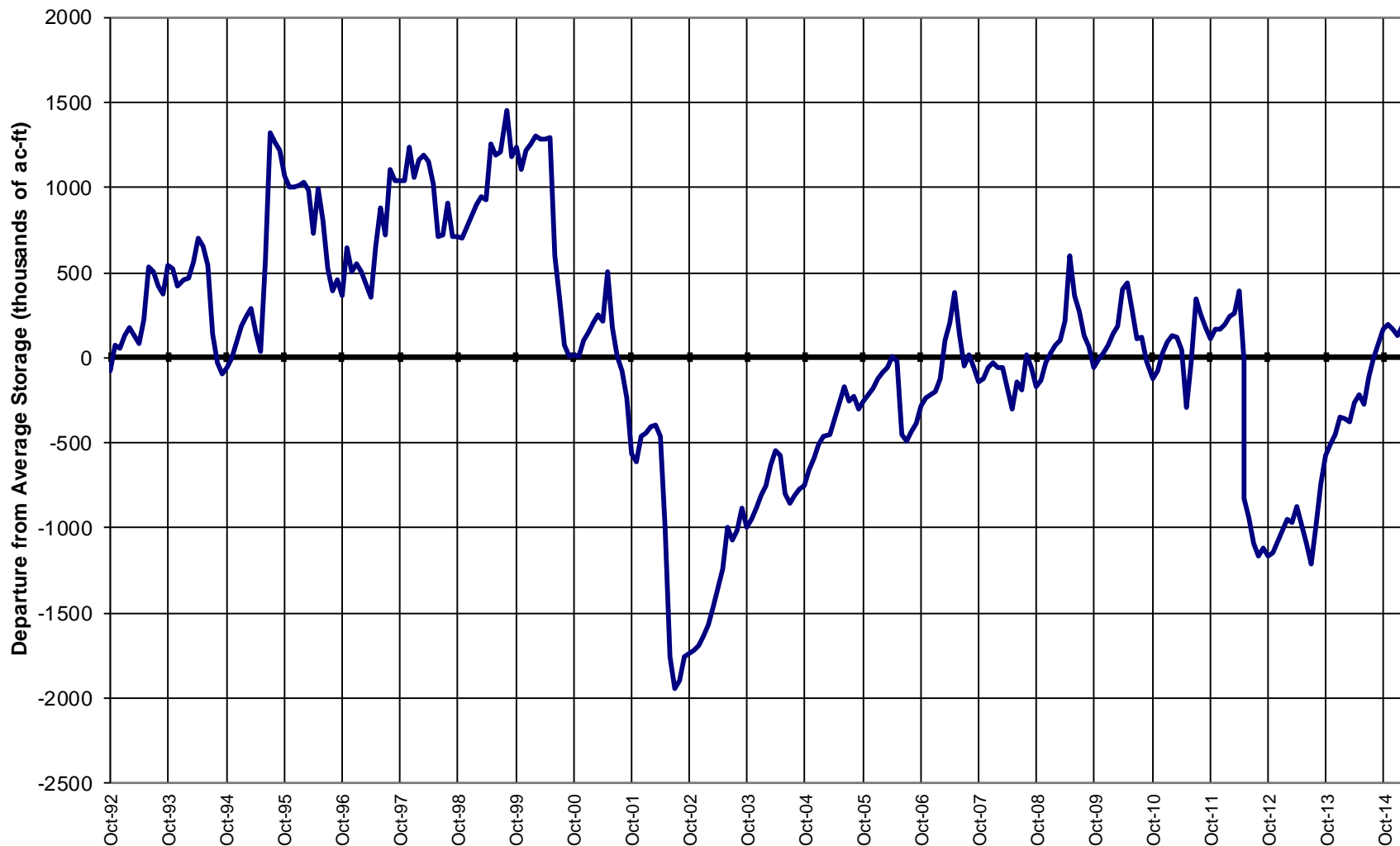
*Provisional Data  
Subject to Revision*





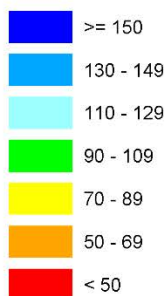


## COLORADO STATEWIDE Reservoir Storage Departure from Average

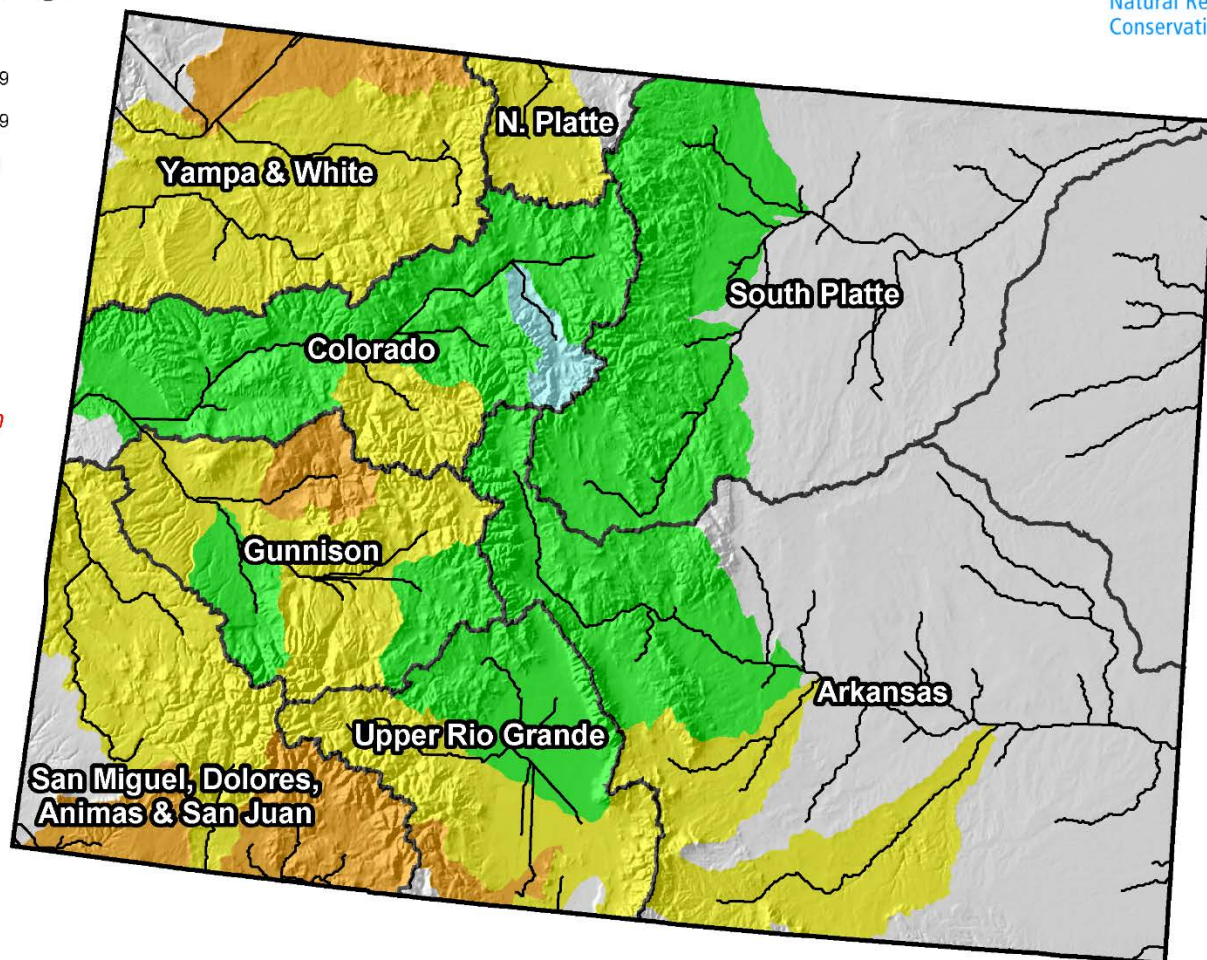


## Colorado Streamflow Forecast Map

### Percent of Average



*Provisional Data  
Subject to Revision*

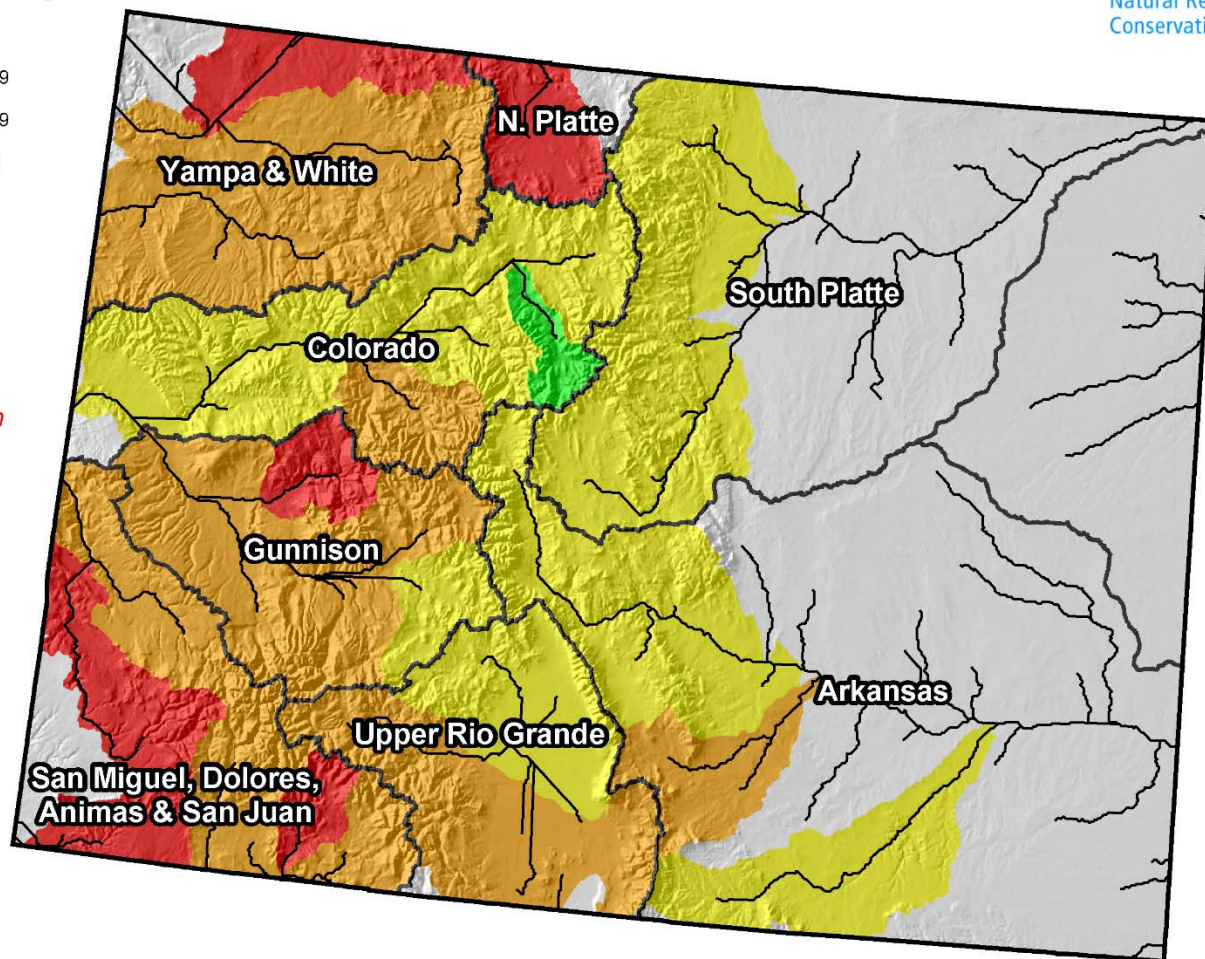


## Colorado Streamflow Forecast Map

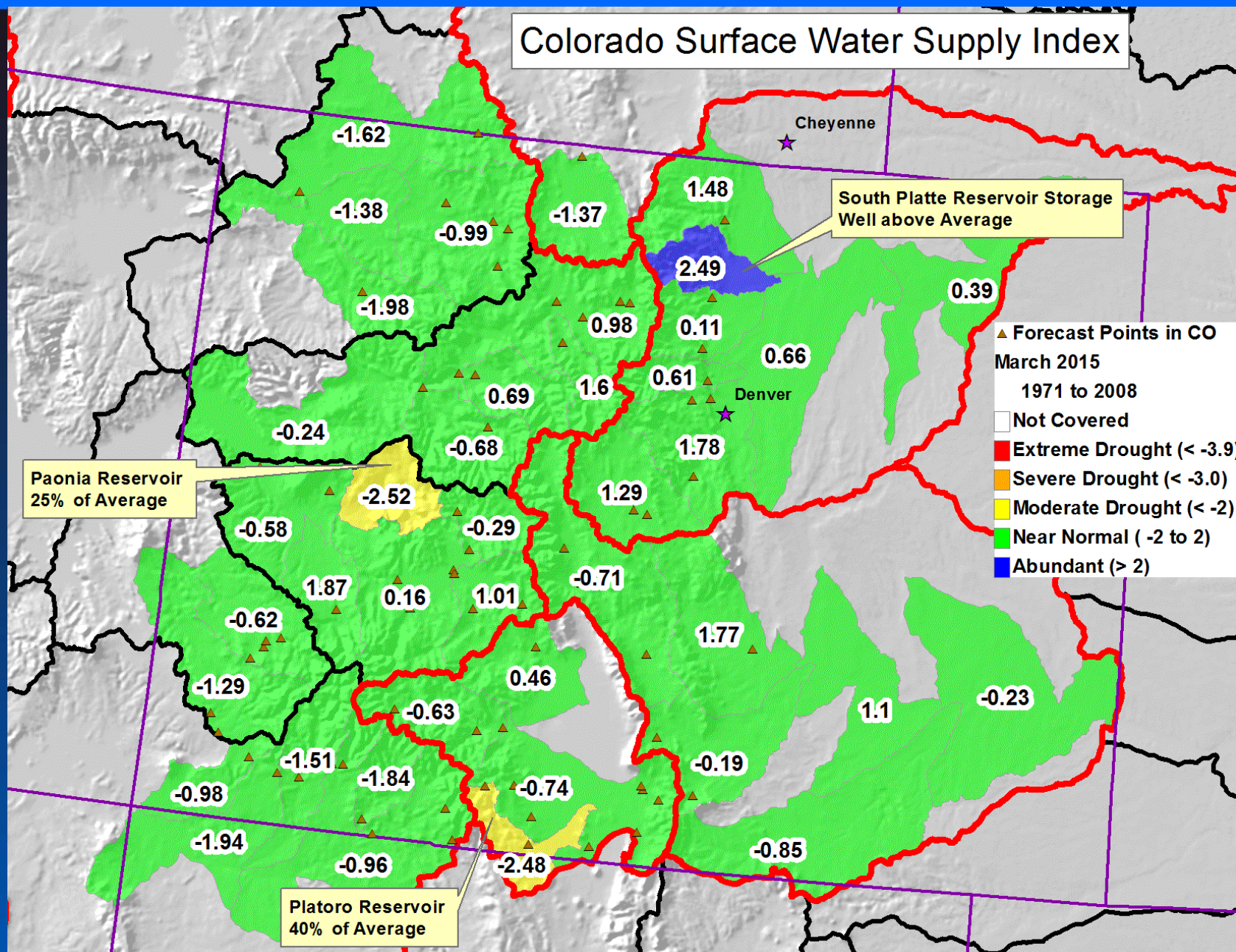
### Percent of Average



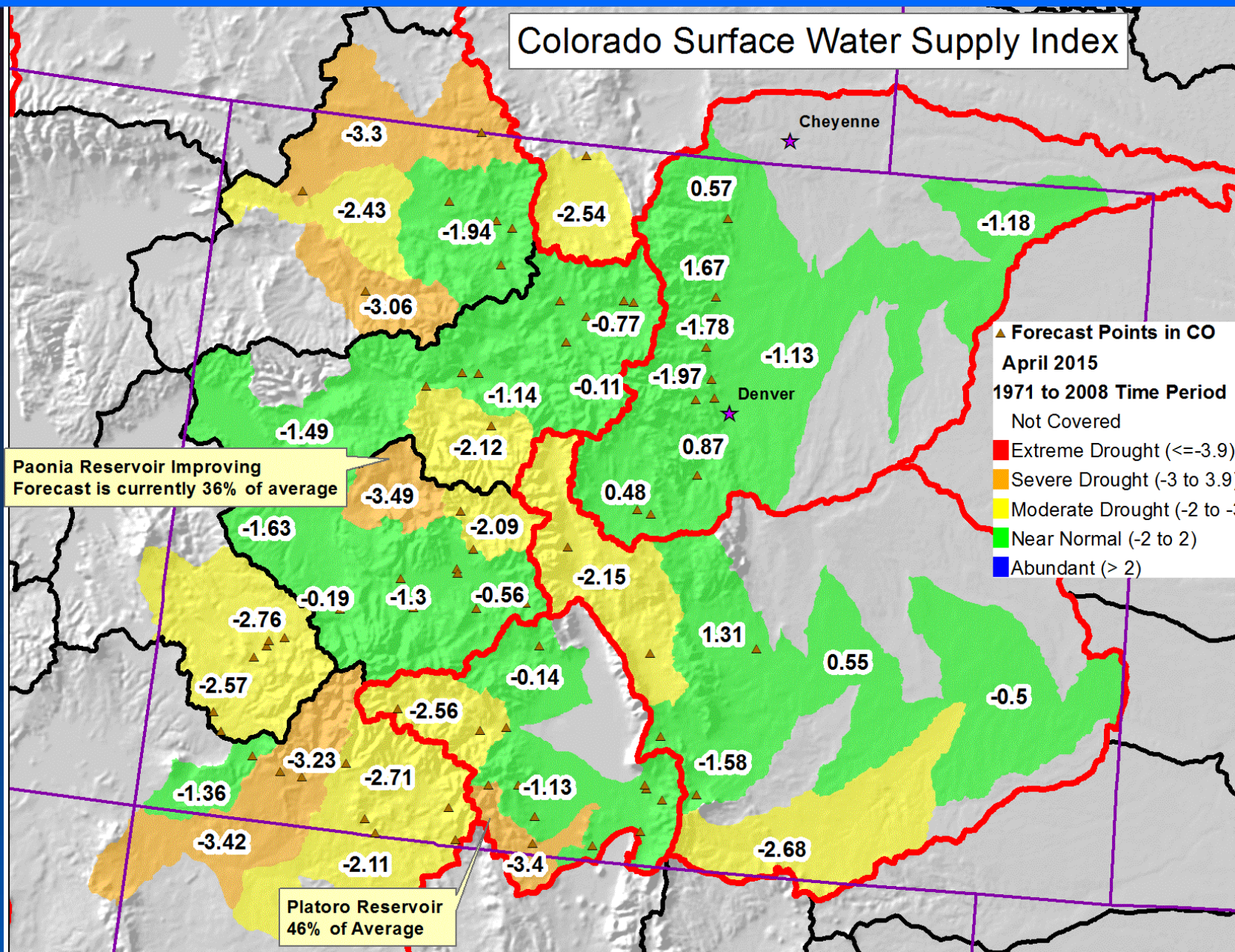
*Provisional Data  
Subject to Revision*











## Summary

### •Snowpack

- Currently statewide snowpack is ranked 28<sup>th</sup> of 30 years, at 58% of normal

### •Statewide snowpack peak occurred Mar. 14<sup>th</sup>, four weeks early

- Peaks this early have happened only three times before:
  - 2012 – Mar 4 (ranked 29<sup>th</sup>/30 yrs); 2004 – Mar 8 (24<sup>th</sup>/30 yrs); 2002 – Mar 20 (30<sup>th</sup>/30 yrs)
- Doubtful we can exceed this peak through the remainder of the year
- This year's snowpack peak (if it has passed) was 77% of the typical peak
- Nearly one quarter of this year's seasonal snowpack has melted already

### •April Precip has been poor to this point

### •Reservoirs are slightly above average statewide but vary

- Better in northern CO & Gunnison between 114% - 125% (basin-wide totals)
- Worse in southern CO between 77% - 93% (basin-wide totals)

### •Streamflow forecasts have degraded on average 15 percentage points in nearly all basins





United States Department of Agriculture

Colorado Snow Surveys

# Water Availability Task Force Meeting

## April 15<sup>th</sup>, 2015

### NRCS Snow Survey and Water Supply Forecasting Program

Brian Domonkos

Colorado Snow Survey Supervisor

720-544-2852

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