

# NRCS – Snow Survey & Water Supply Forecasting

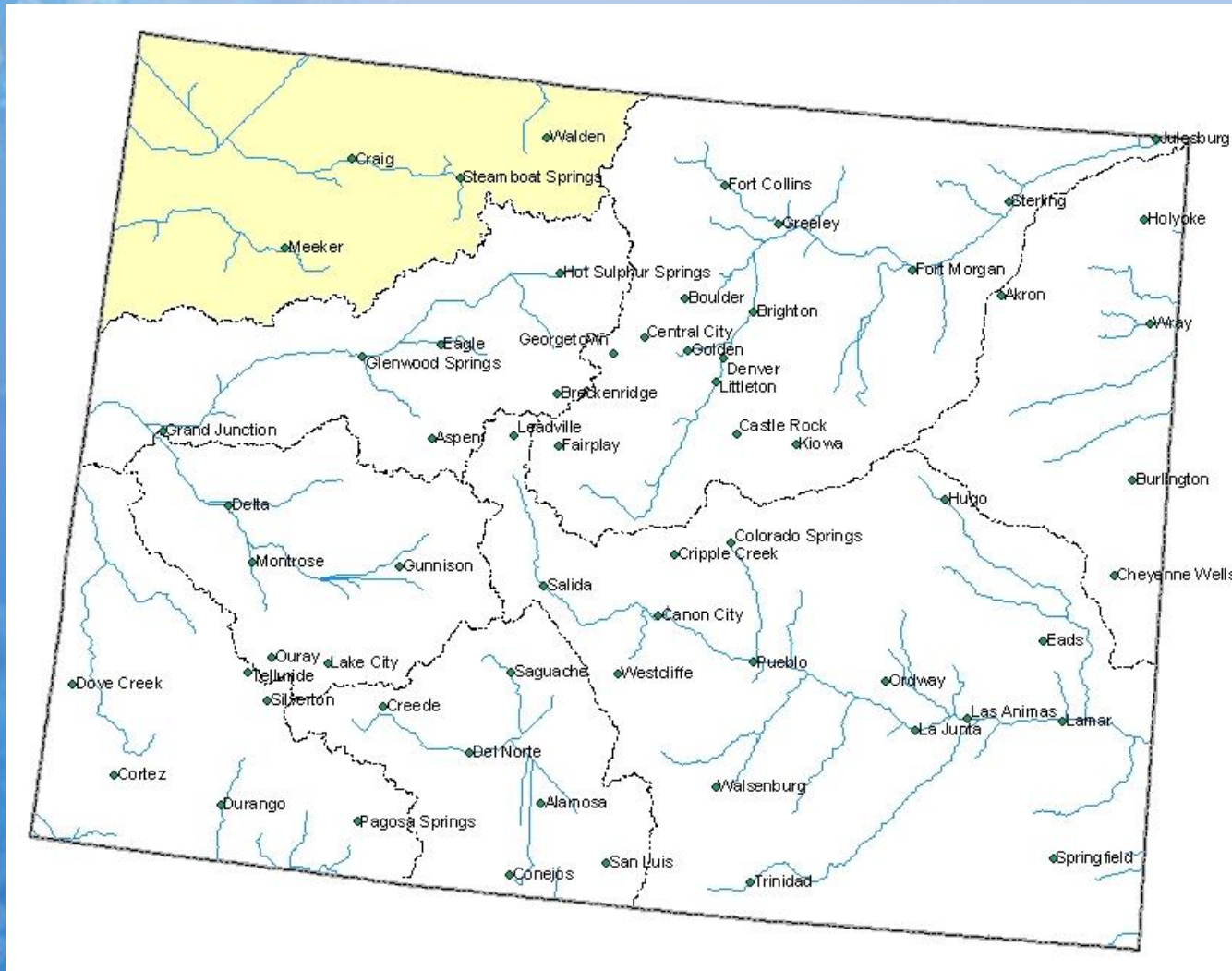
## Water Availability Task Force Meeting January 22<sup>rd</sup> , 2014

Mage Hultstrand

Assistant Snow Survey Supervisor

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

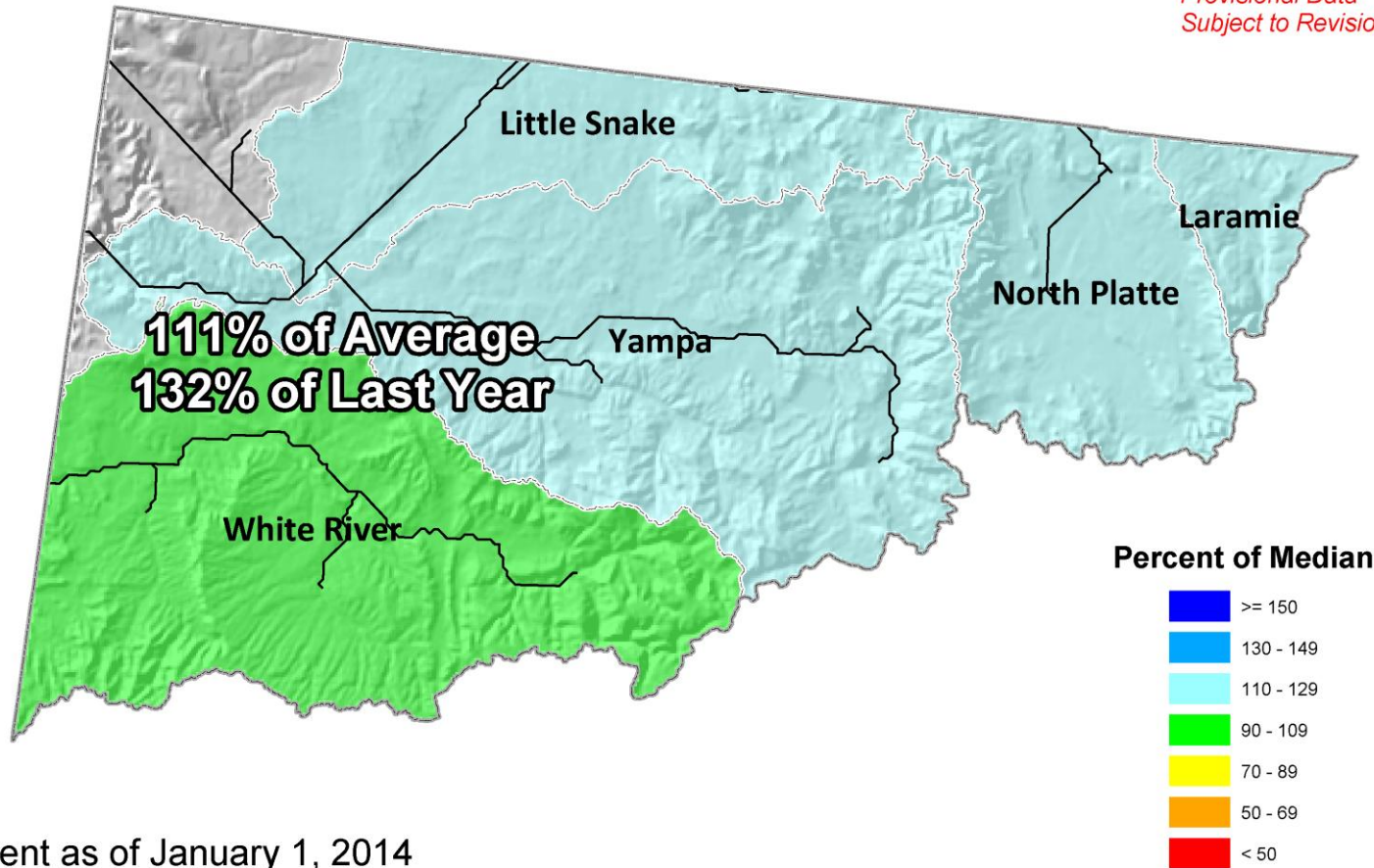
# Yampa, White & North Platte River Basins Summary



# Yampa, White and North Platte River Basins Snowpack Map



*Provisional Data  
Subject to Revision*

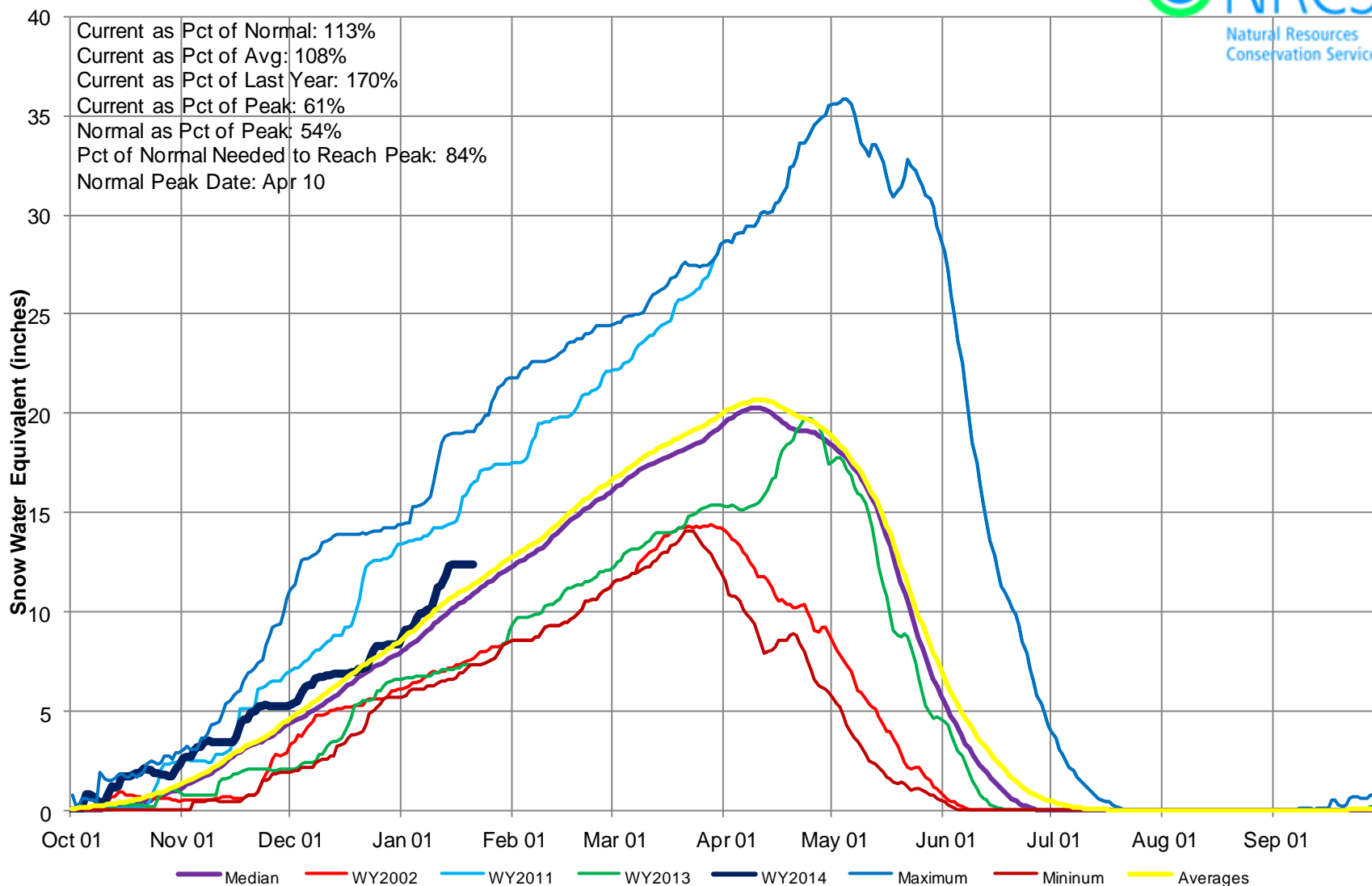


Current as of January 1, 2014



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

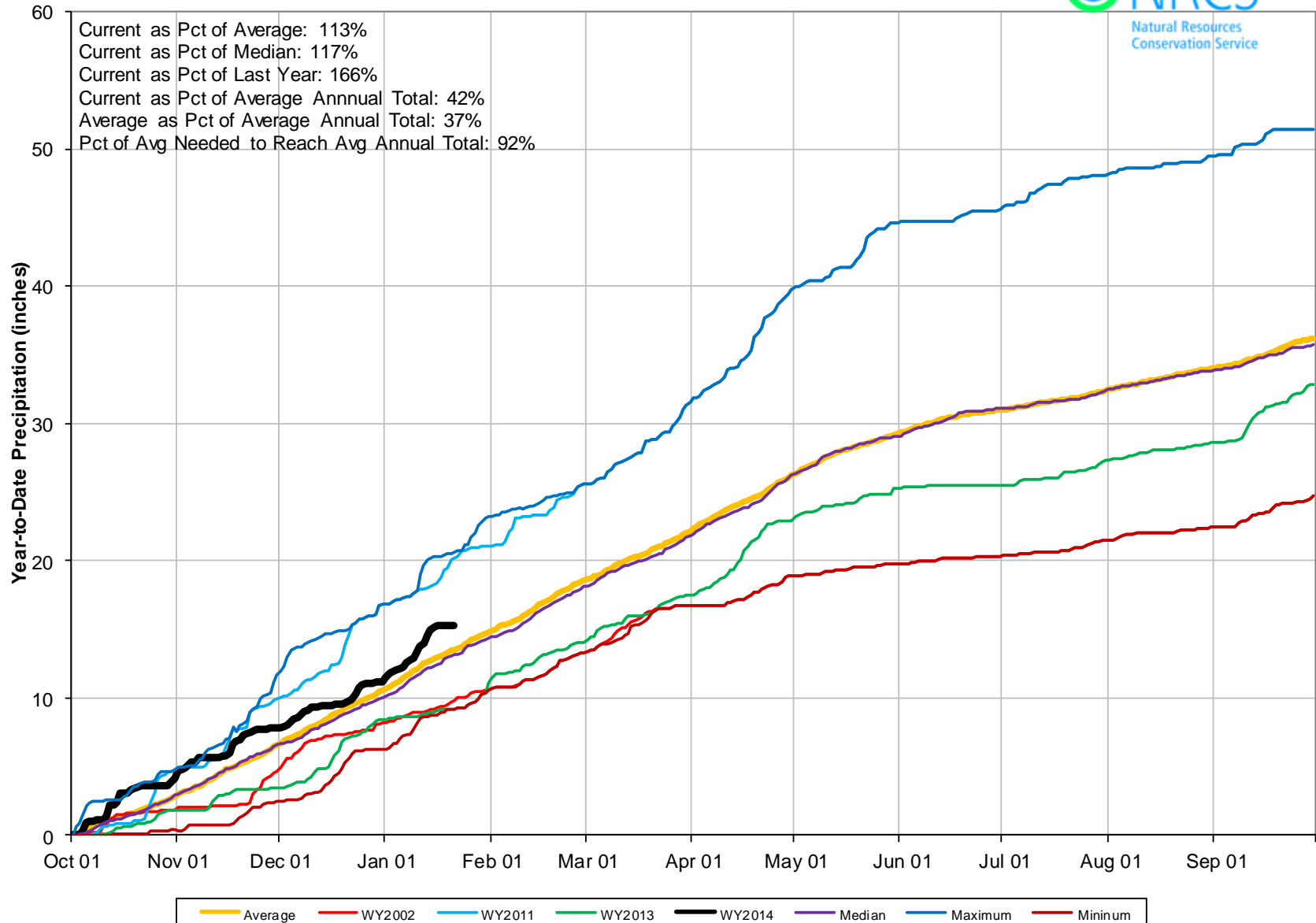
Based on Provisional SNOTEL data as of Jan 21, 2014





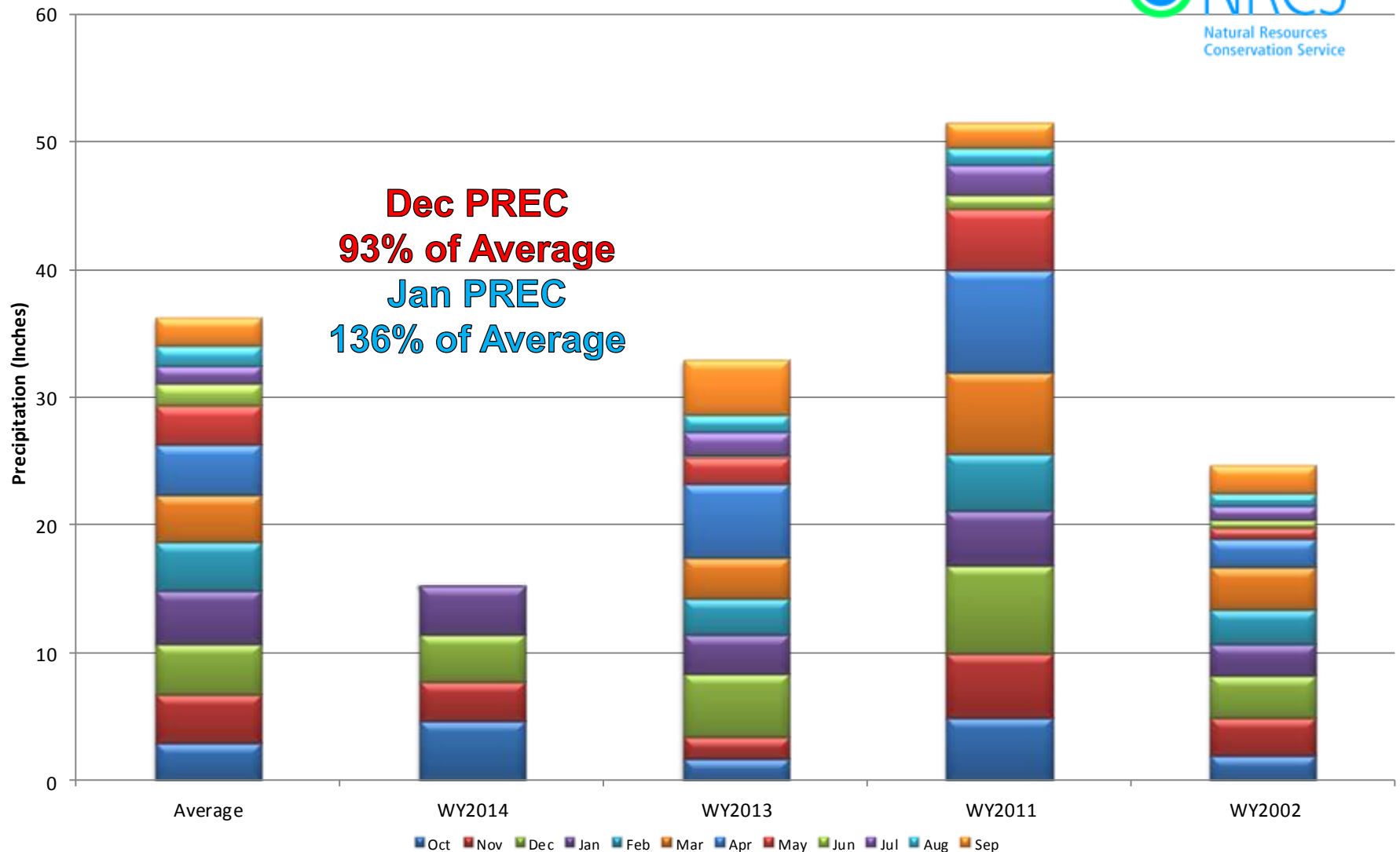
# Yampa & White River Basins High/Low Year-to-Date Precipitation Summary

Based on Provisional SNOTEL data as of Jan 21, 2014



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

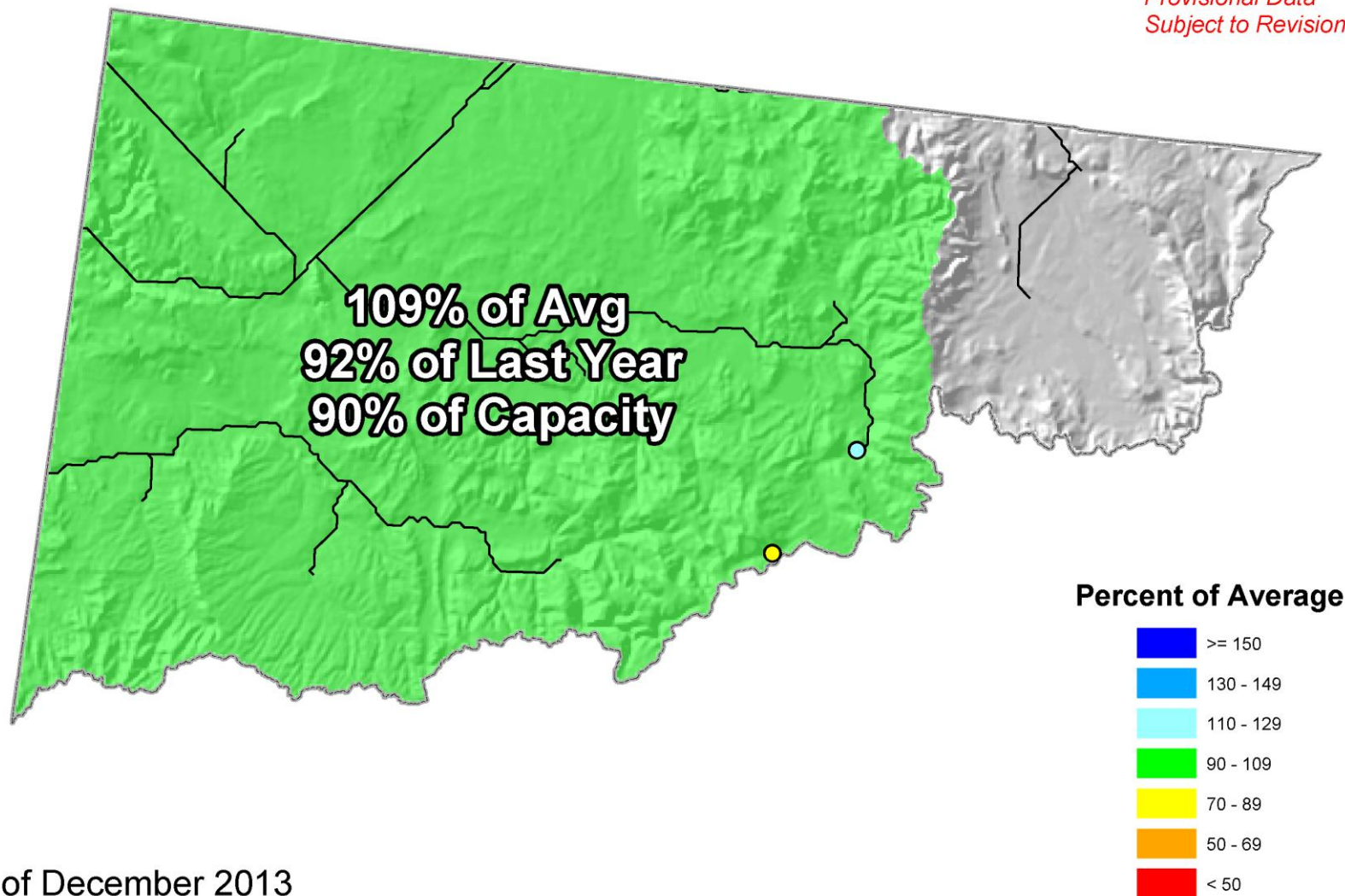
*Based on Provisional SNOTEL data as of Jan 21, 2014*



# Yampa & White River Basins Reservoir Storage Map



*Provisional Data  
Subject to Revision*



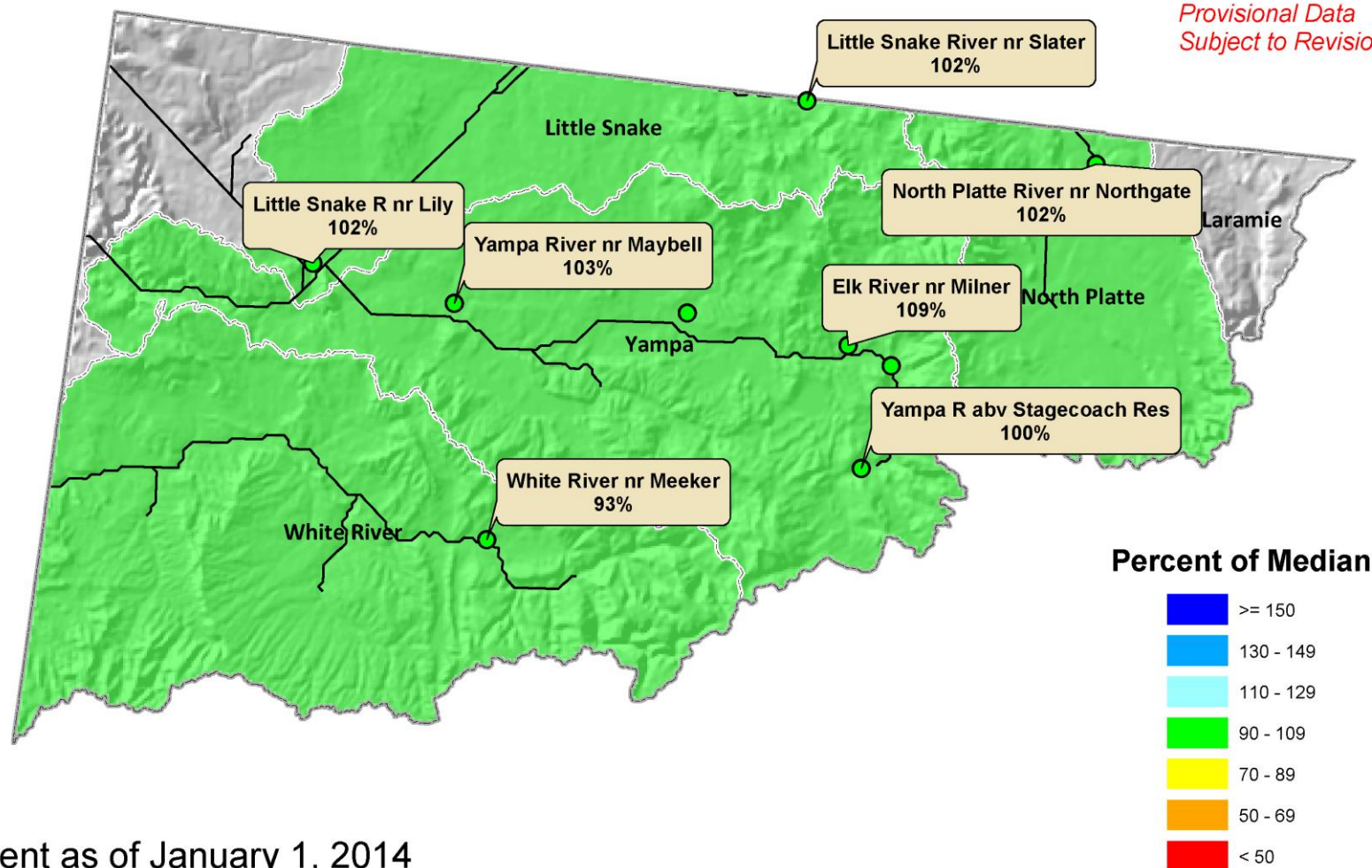
End of December 2013



# Yampa, White and North Platte River Basins Streamflow Map

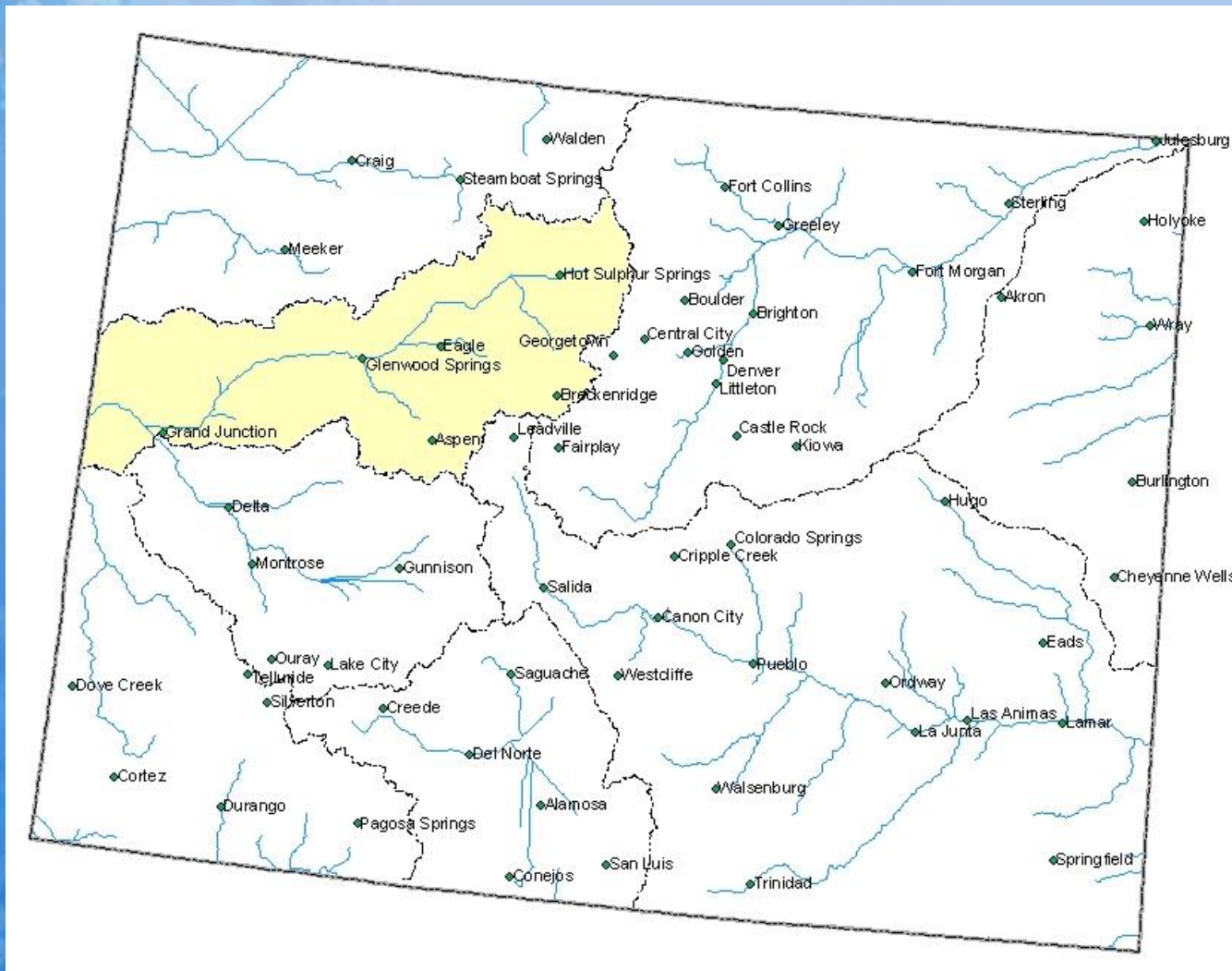


*Provisional Data  
Subject to Revision*



Current as of January 1, 2014

# Colorado River Basin Summary



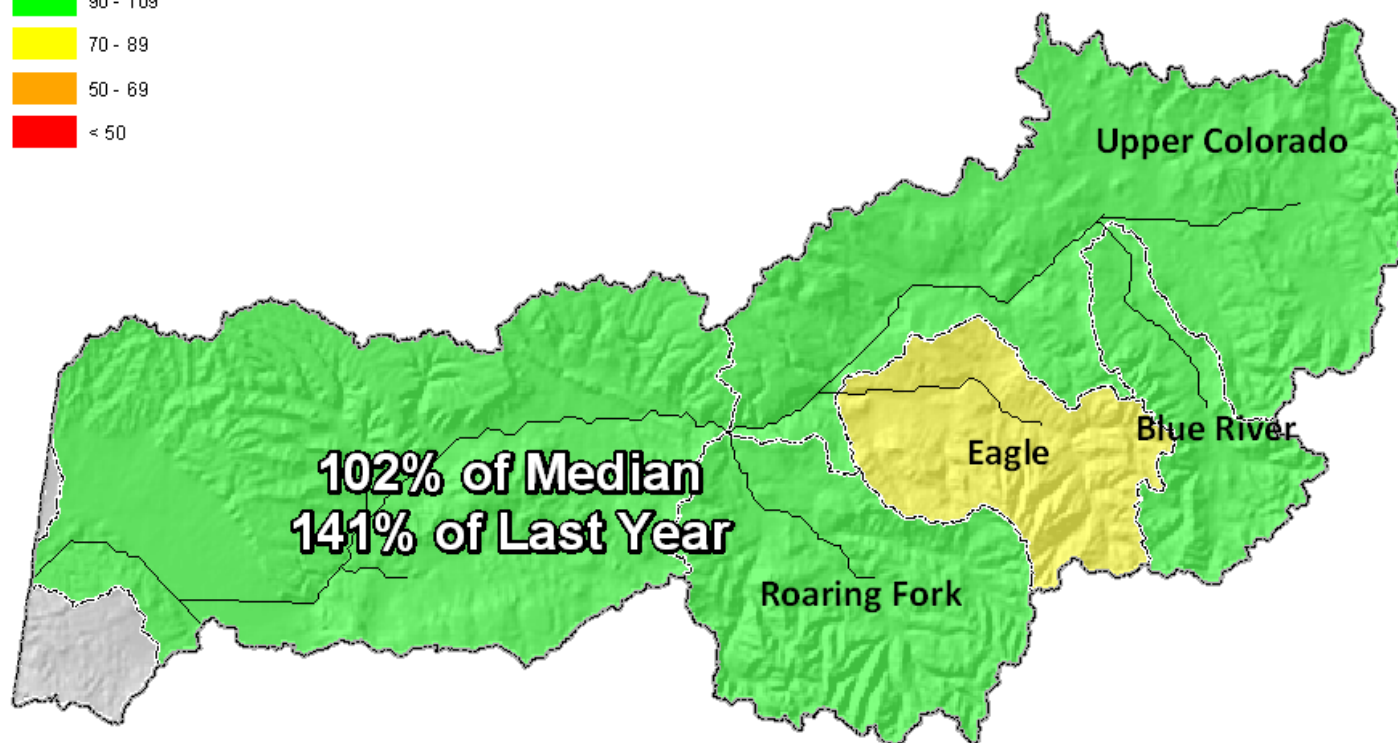
# Colorado River Basin Snowpack Map



## Percent of Average



*Provisional Data  
Subject to Revision*

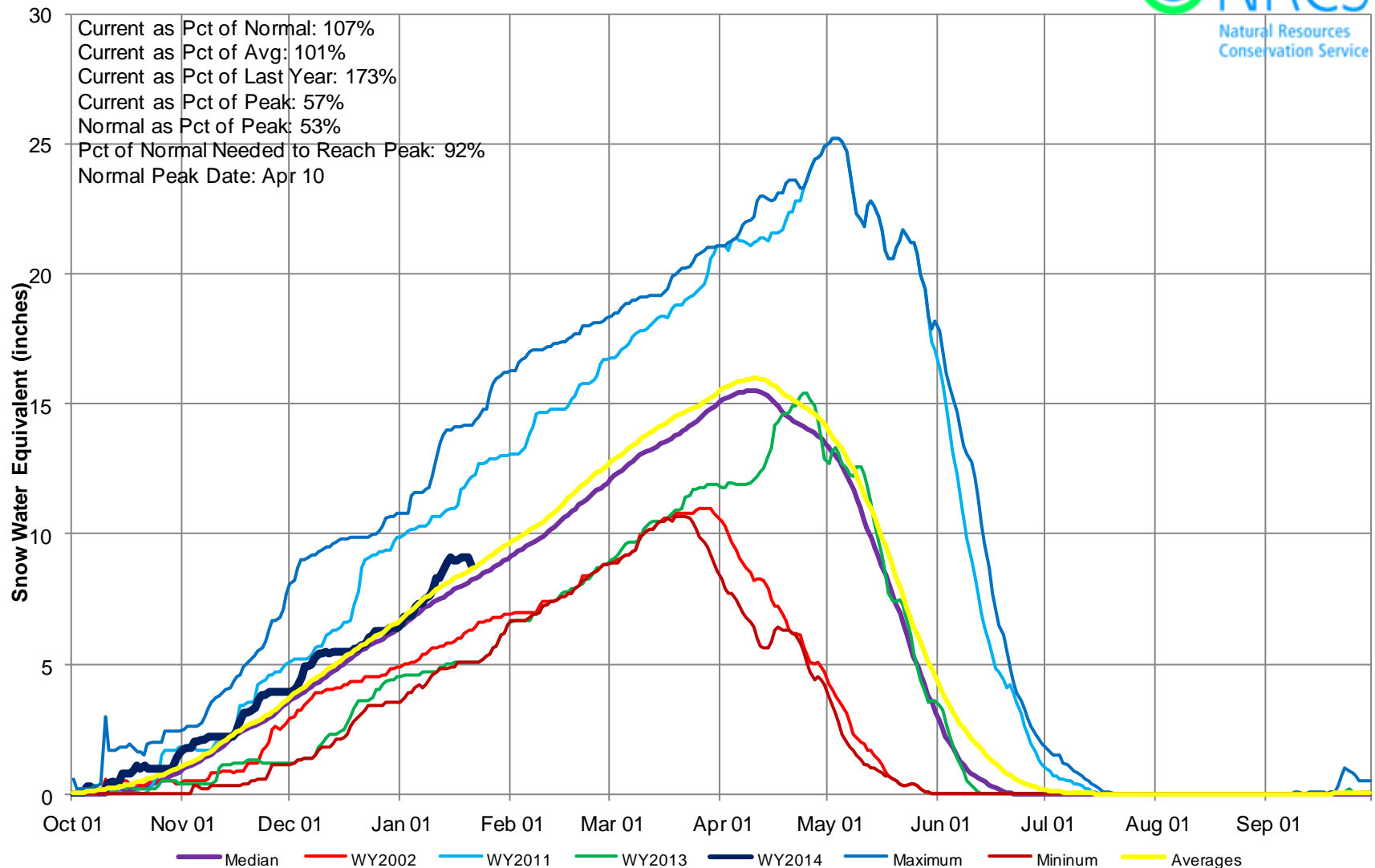


Current as of January 1, 2014



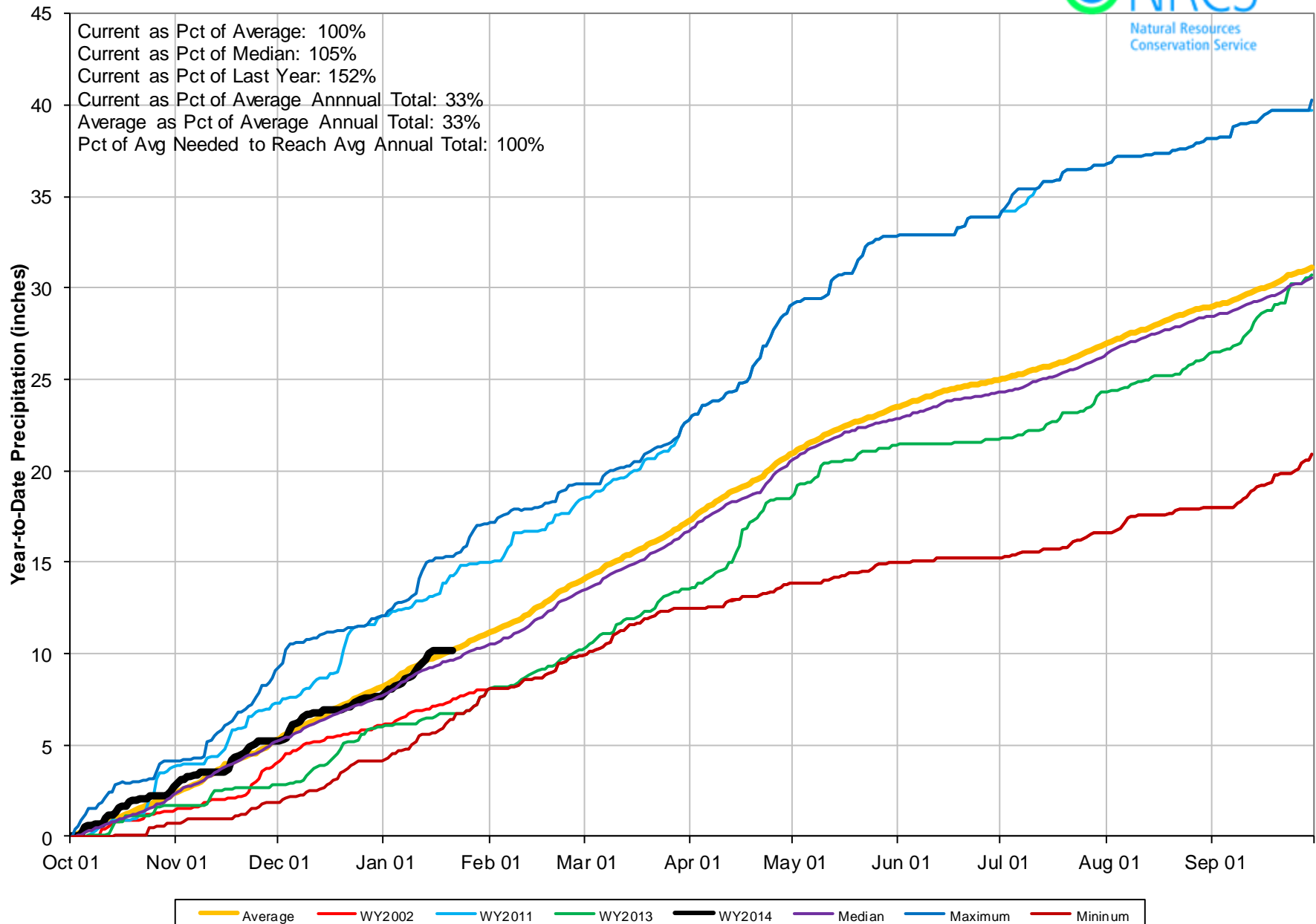
## Upper Colorado River Basin High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of Jan 21, 2014*



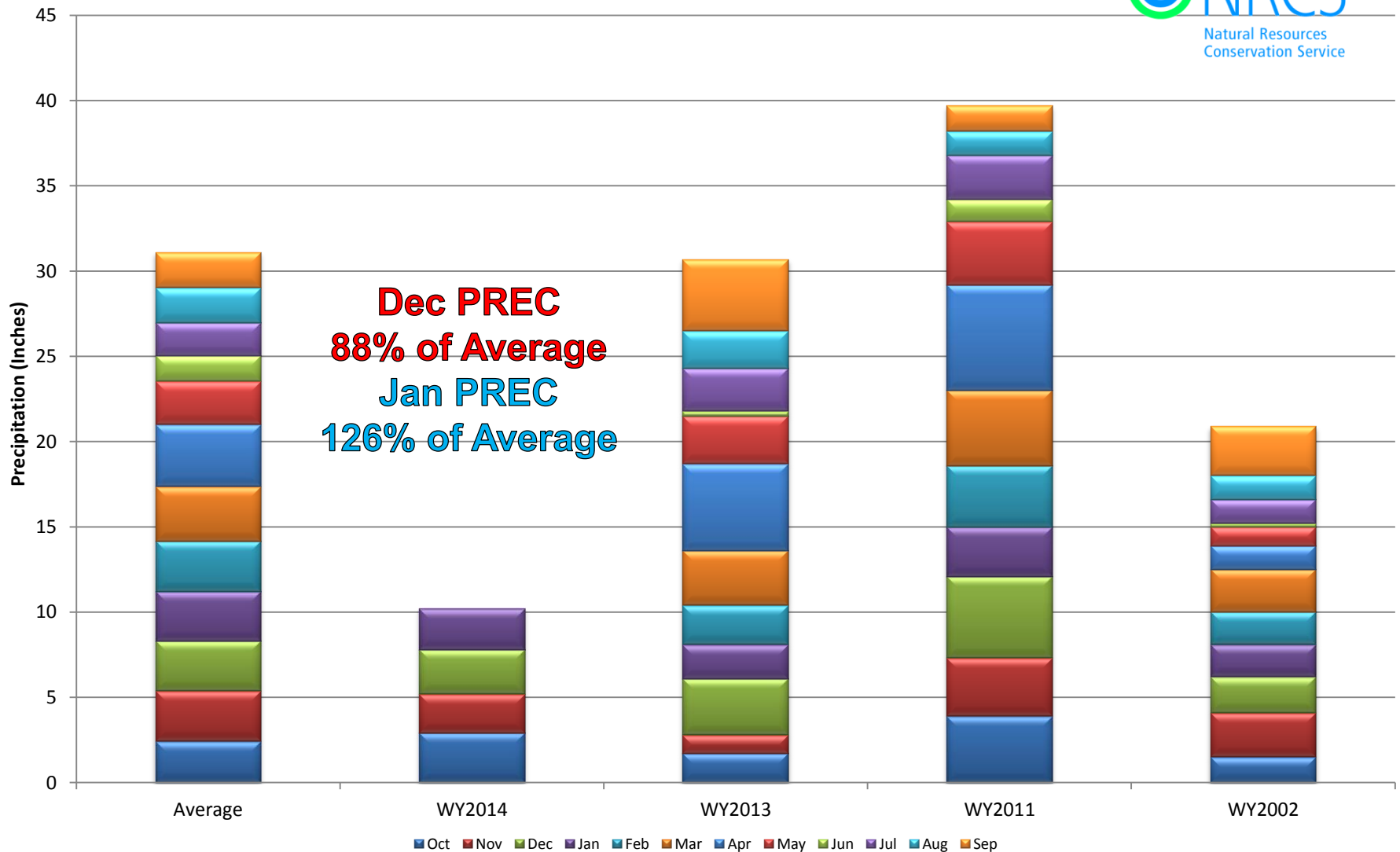
# Upper Colorado River Basin High/Low Year-to-Date Precipitation Summary

*Based on Provisional SNOTEL data as of Jan 21, 2014*



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

*Based on Provisional SNOTEL data as of Jan 21, 2014*





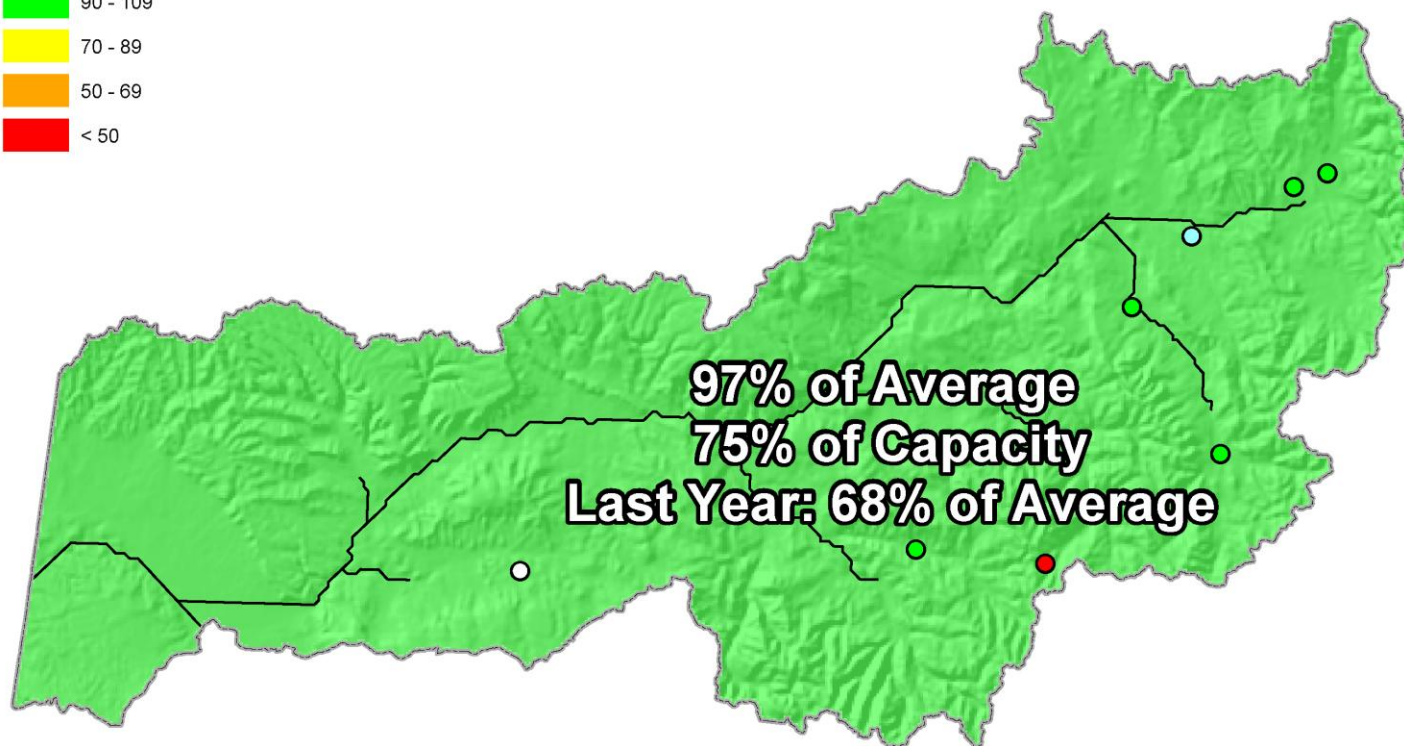
# Colorado River Basin Reservoir Storage Map



## Percent of Average

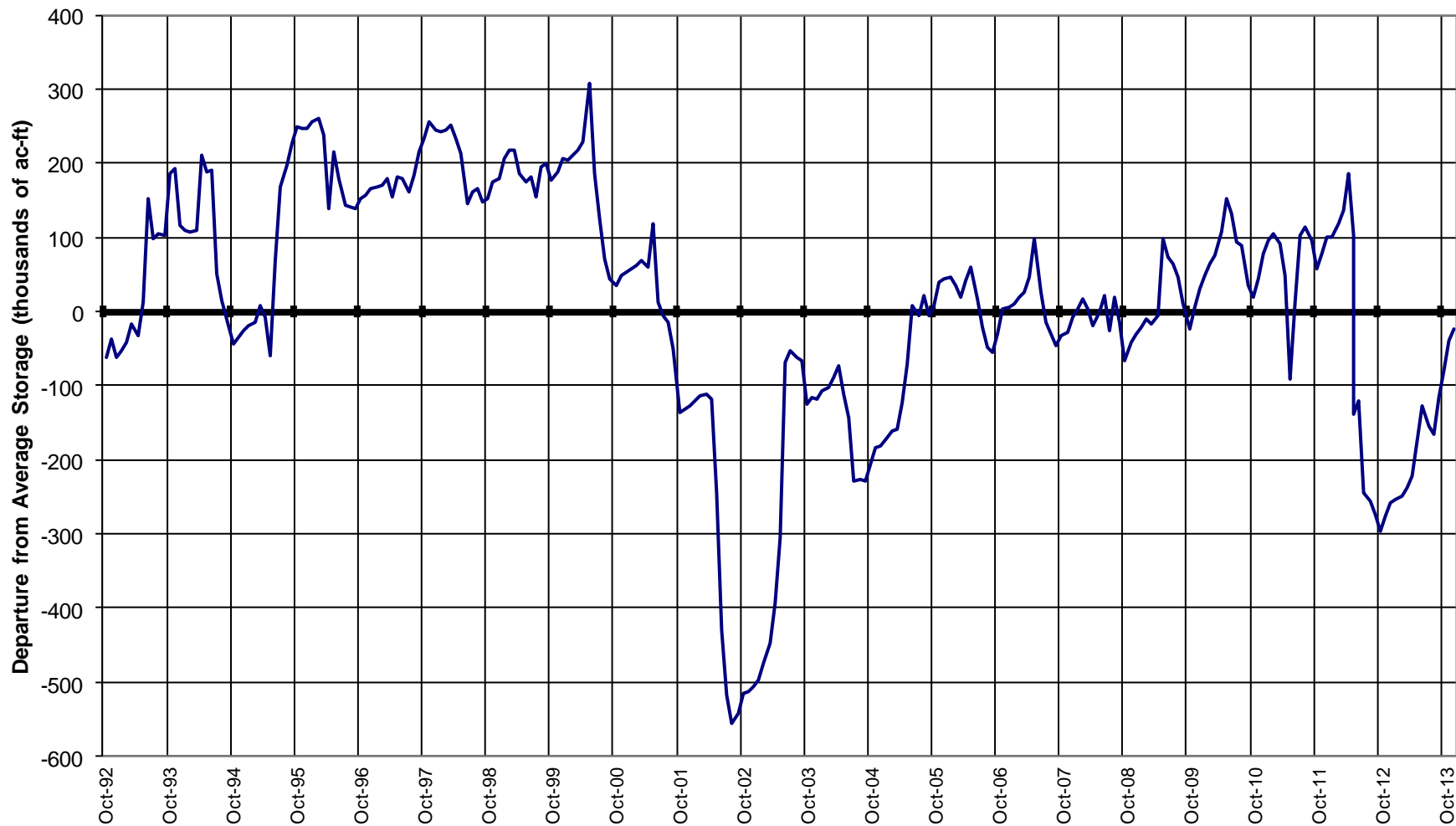


*Provisional Data  
Subject to Revision*



End of December 2013

**COLORADO RIVER BASIN**  
**Reservoir Storage**  
**Departure from Average**

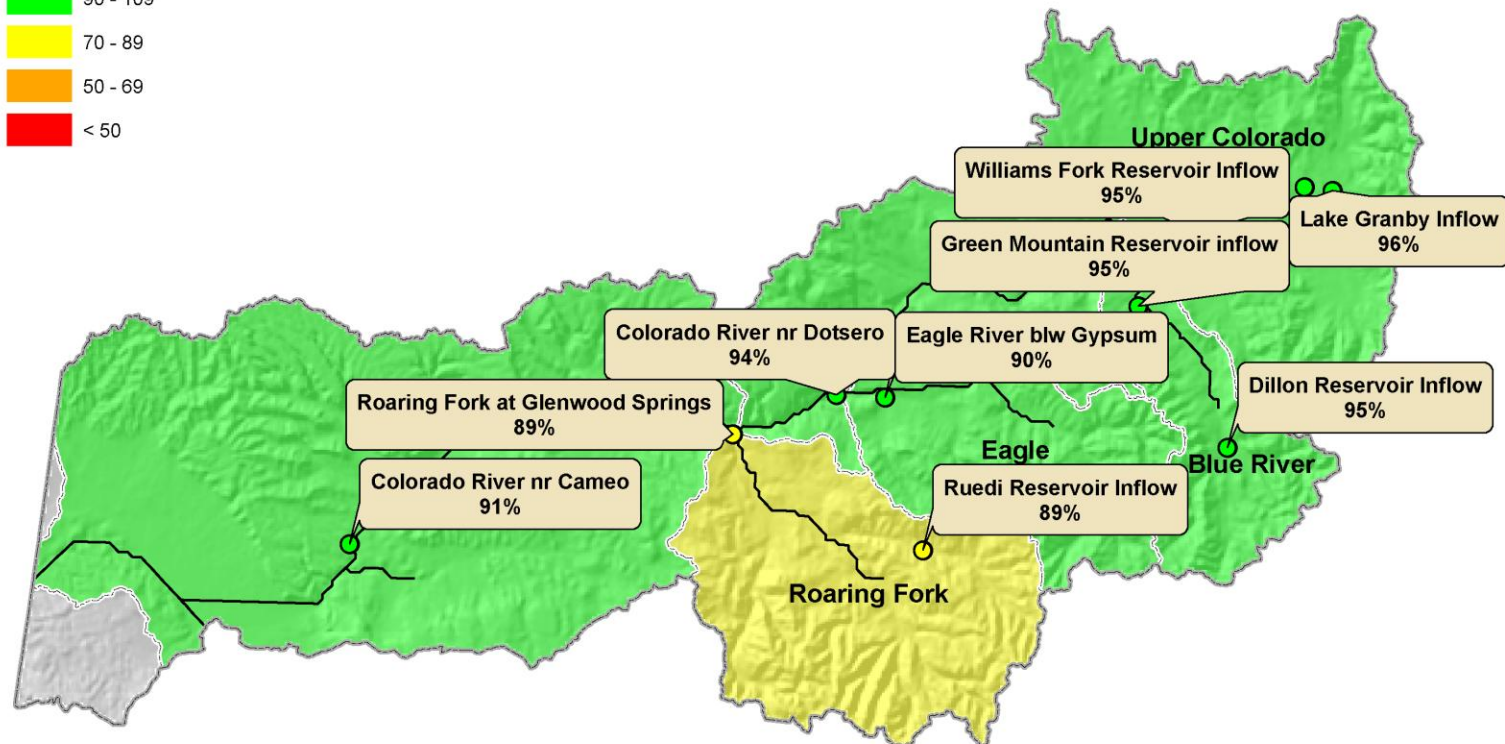


# Colorado River Basin Streamflow Forecast Map



*Provisional Data  
Subject to Revision*

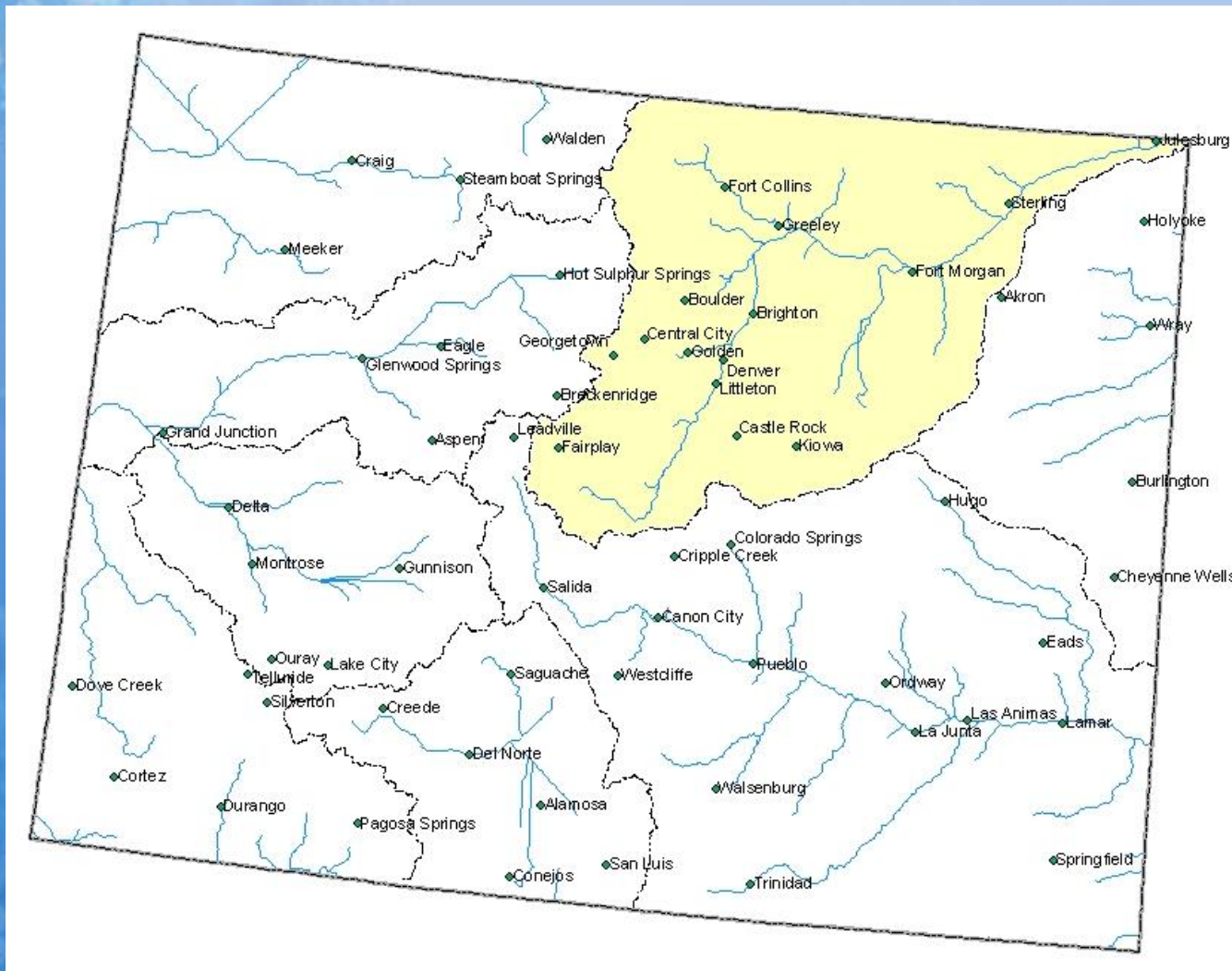
## Percent of Median



Current as of January 1, 2014



# South Platte River Basin Summary

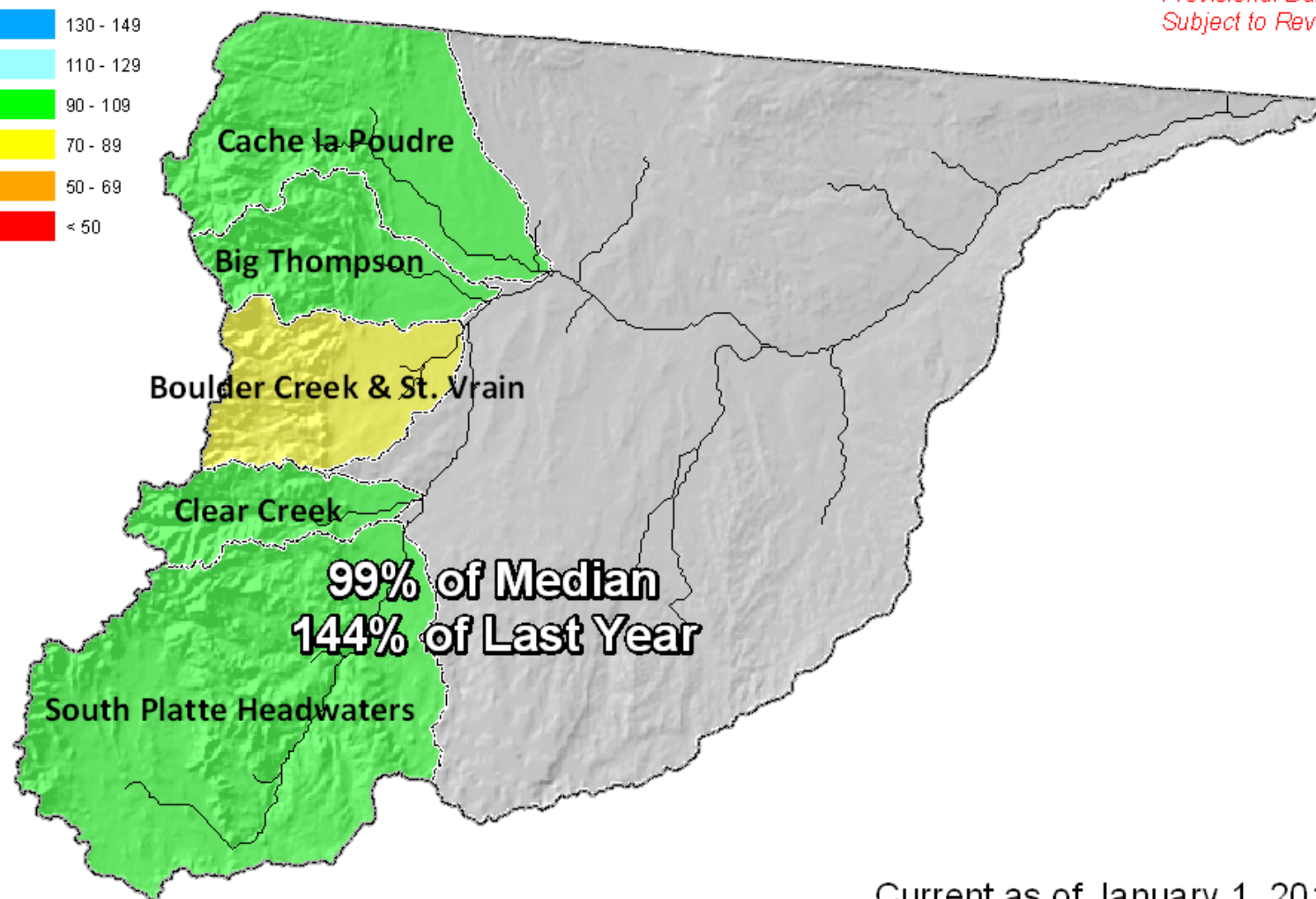
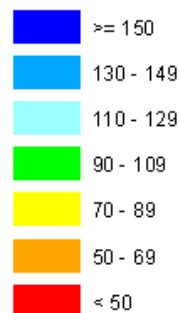


# South Platte River Basin Snowpack Map



*Provisional Data  
Subject to Revision*

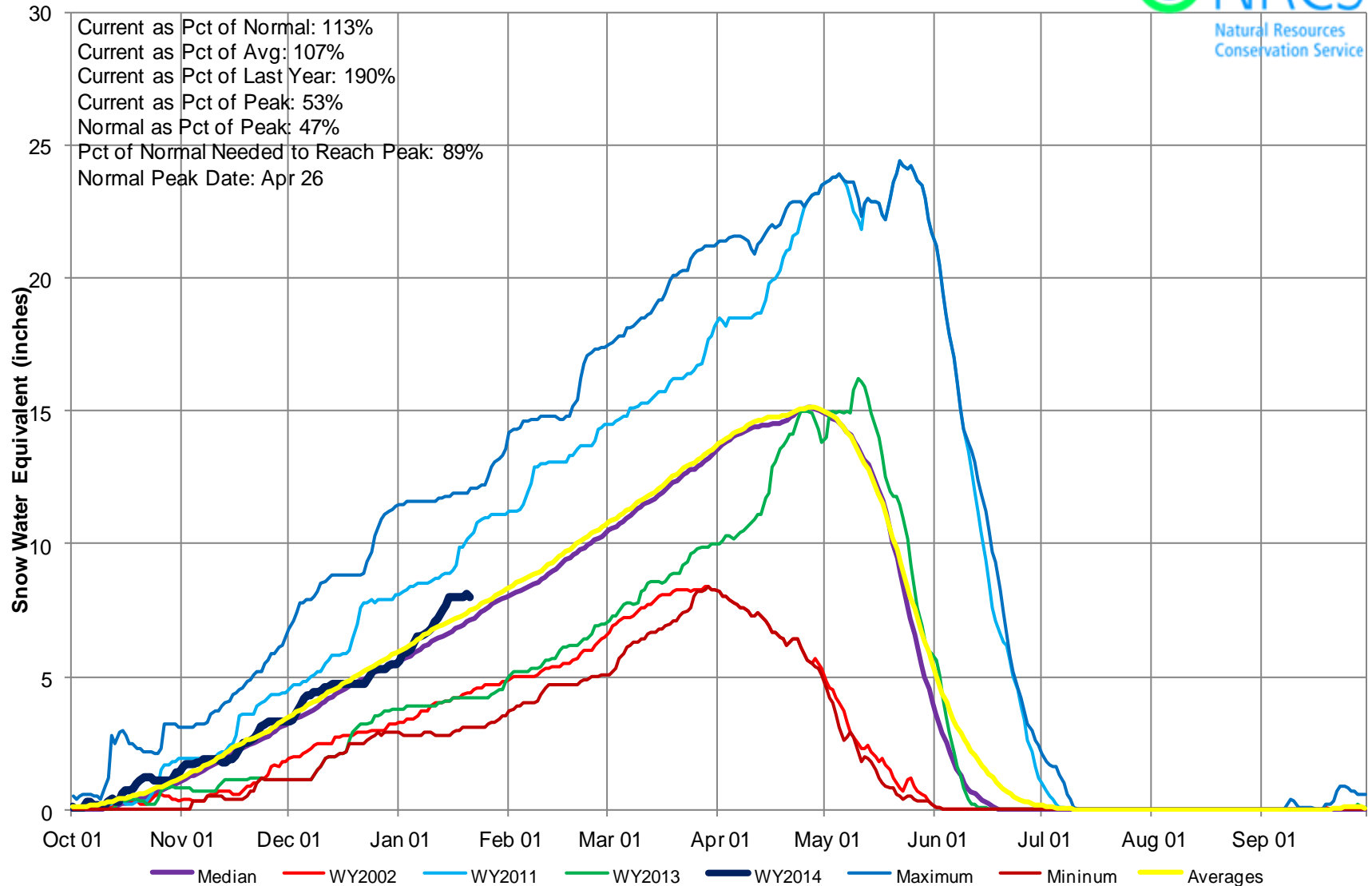
## Percent of Median



Current as of January 1, 2014

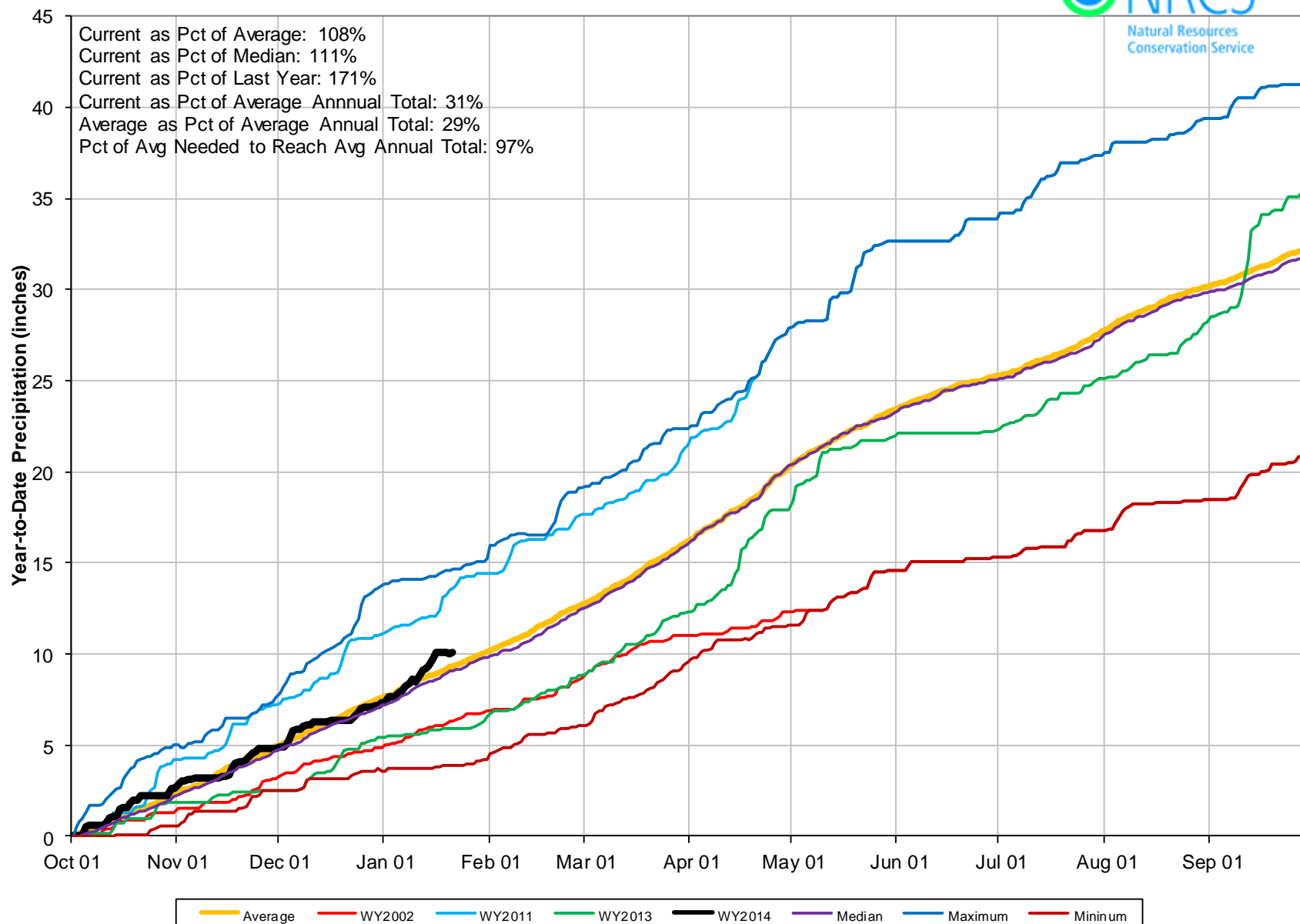
## South Platte River Basin High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of Jan 21, 2014*



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

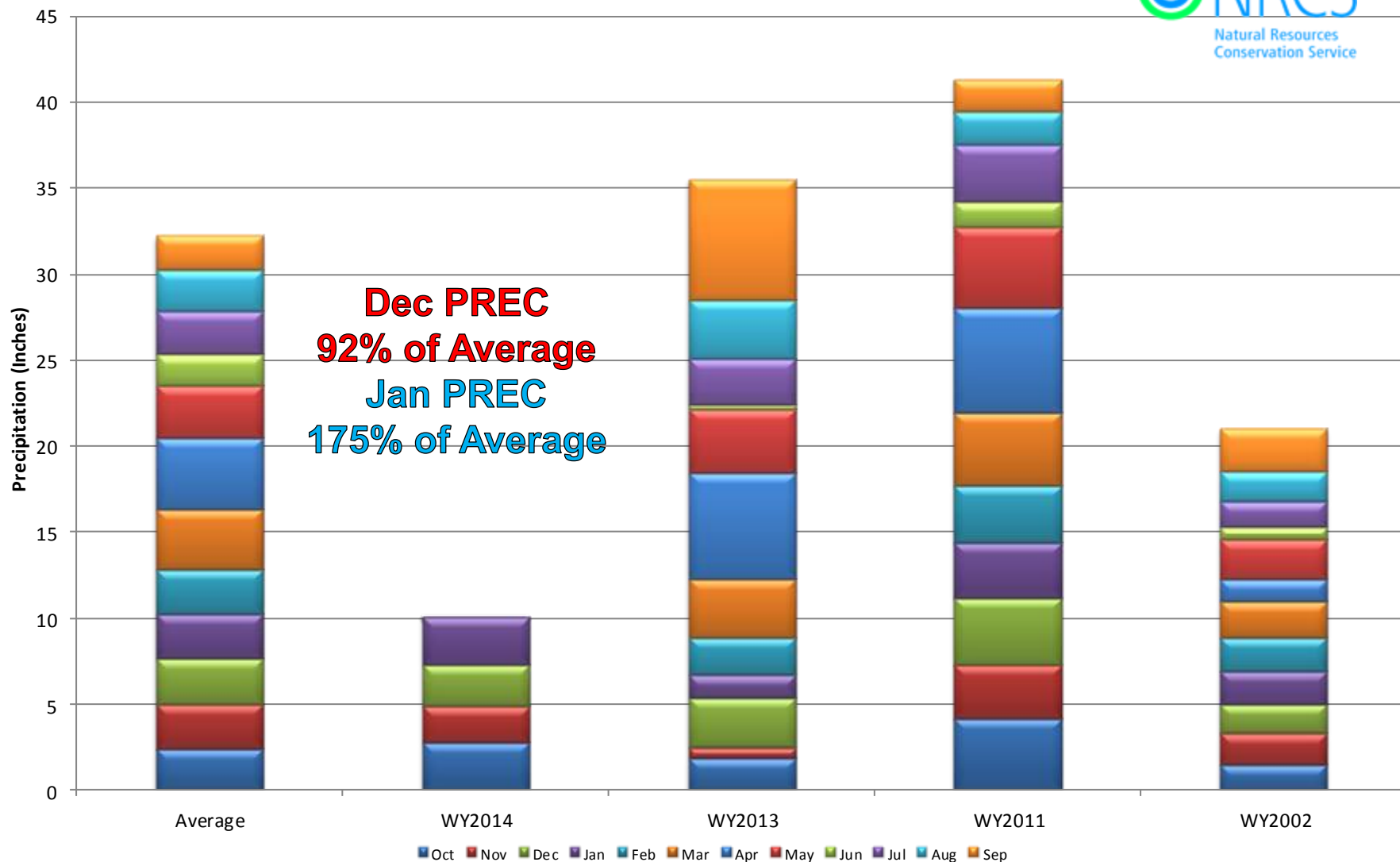
*Based on Provisional SNOTEL data as of Jan 21, 2014*





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

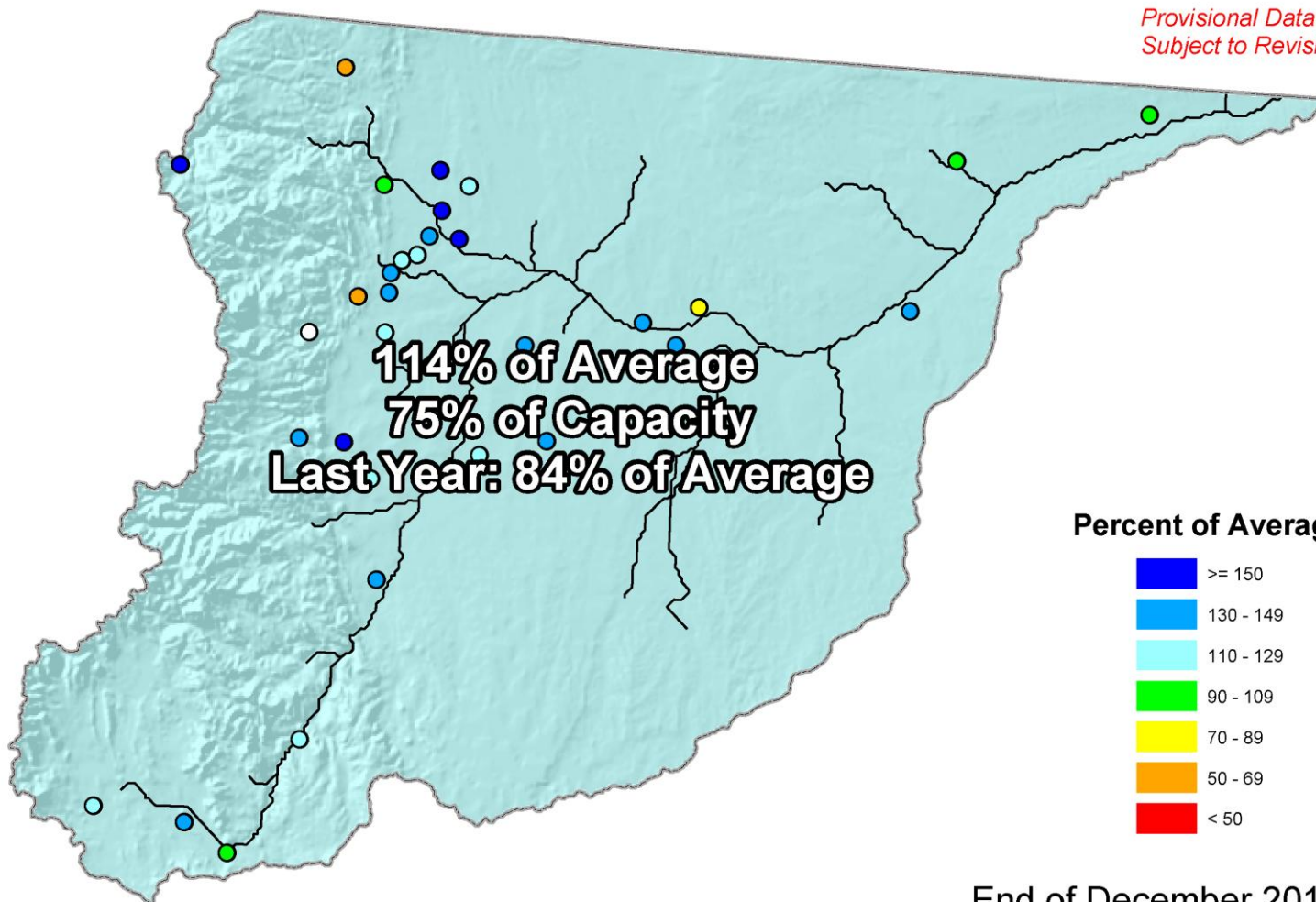
*Based on Provisional SNOTEL data as of Jan 21, 2014*



# South Platte River Basin Reservoir Storage Map

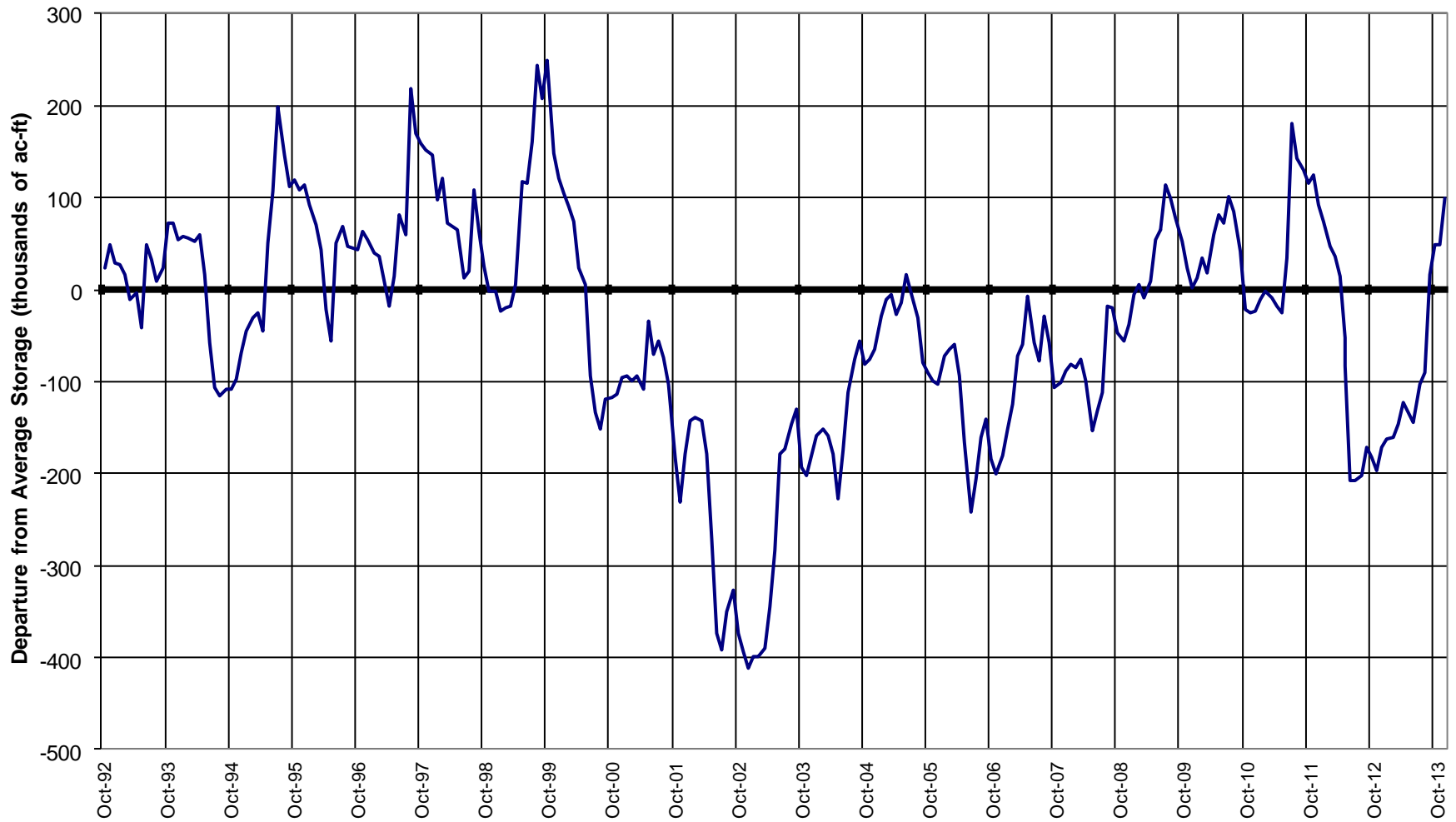


*Provisional Data  
Subject to Revision*



End of December 2013

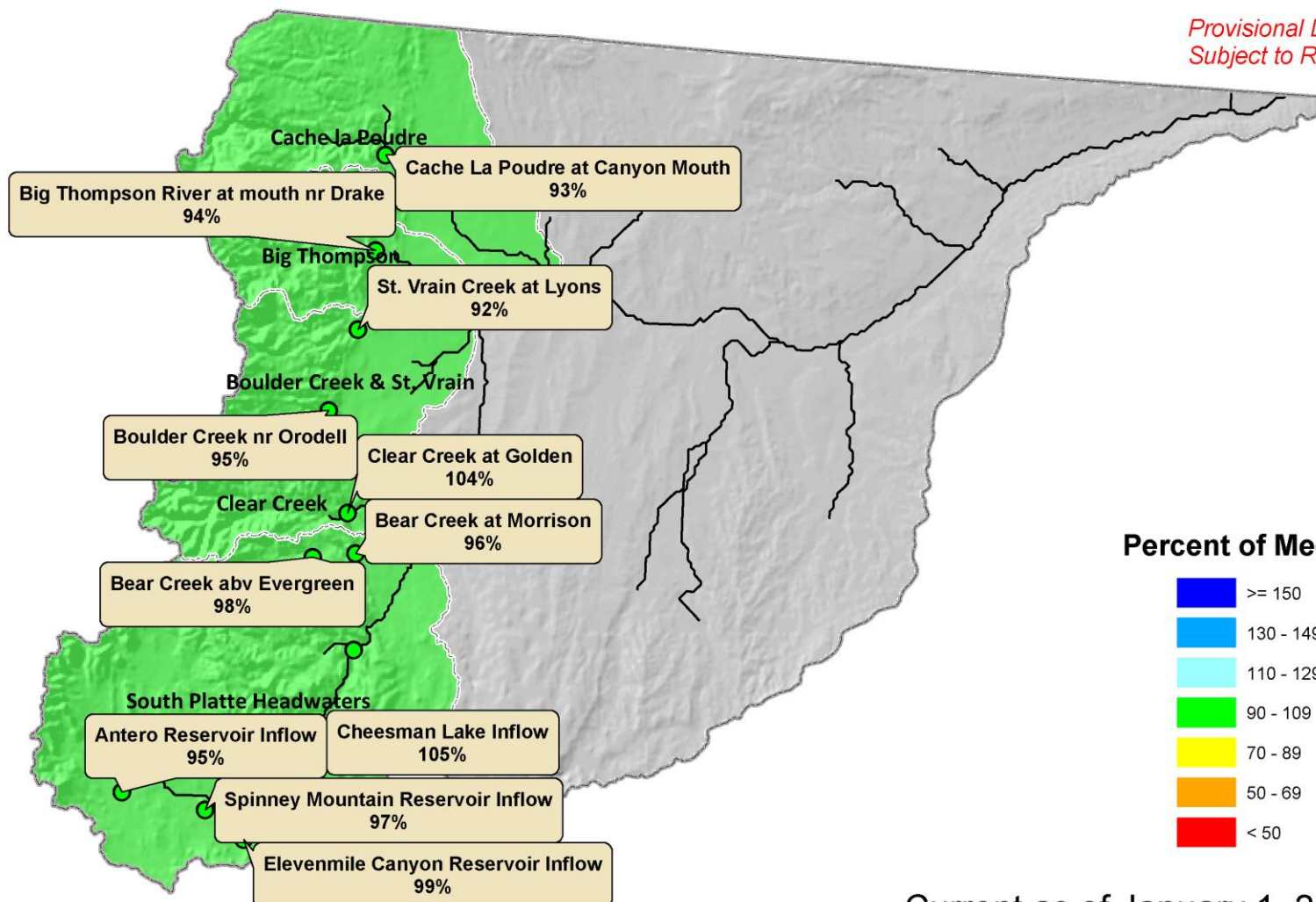
**SOUTH PLATTE RIVER BASIN**  
**Reservoir Storage**  
**Departure from Average**



# South Platte River Basin Streamflow Forecast Map



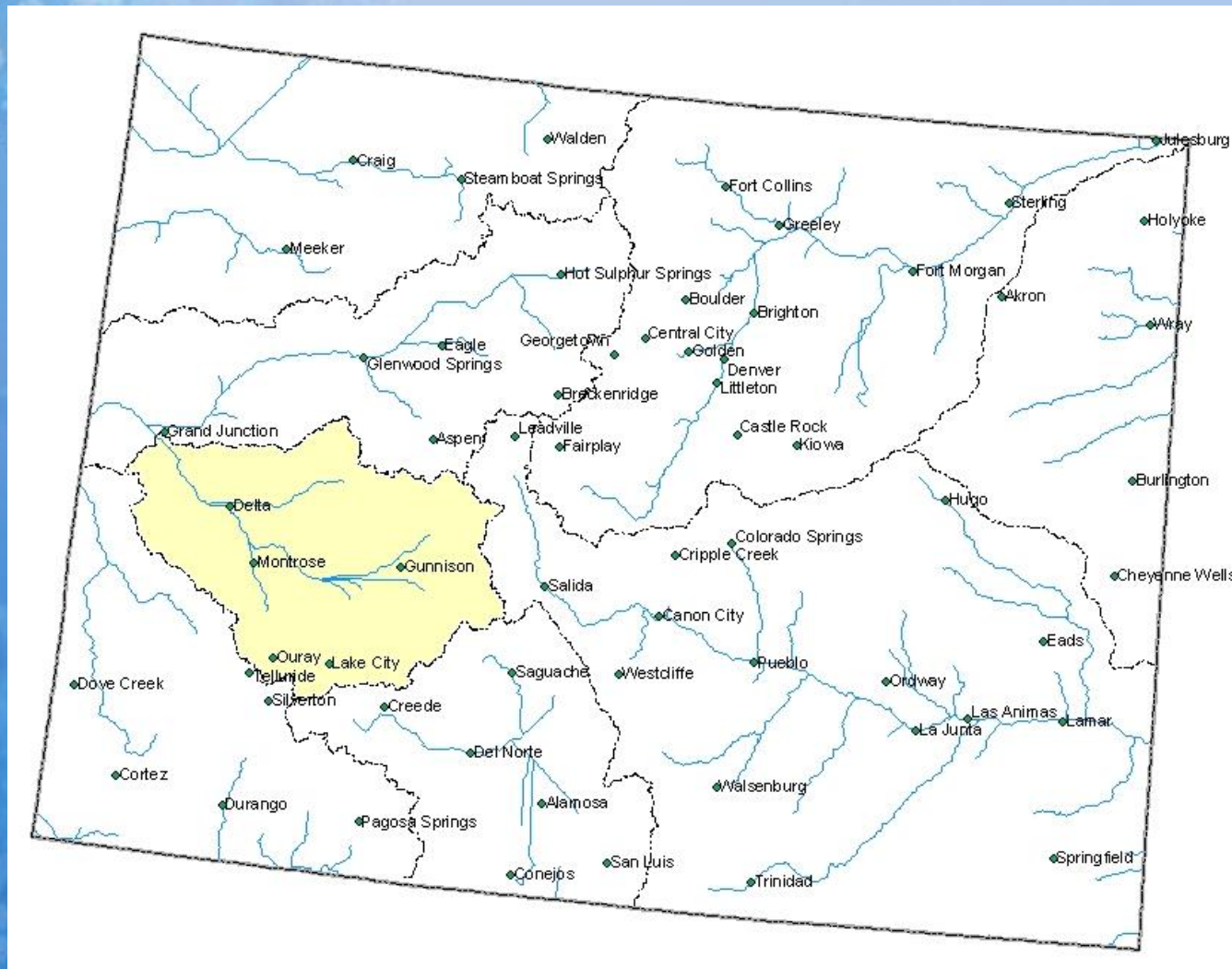
*Provisional Data  
Subject to Revision*



Current as of January 1, 2014



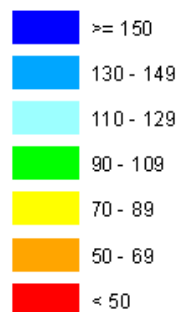
# Gunnison River Basin Summary



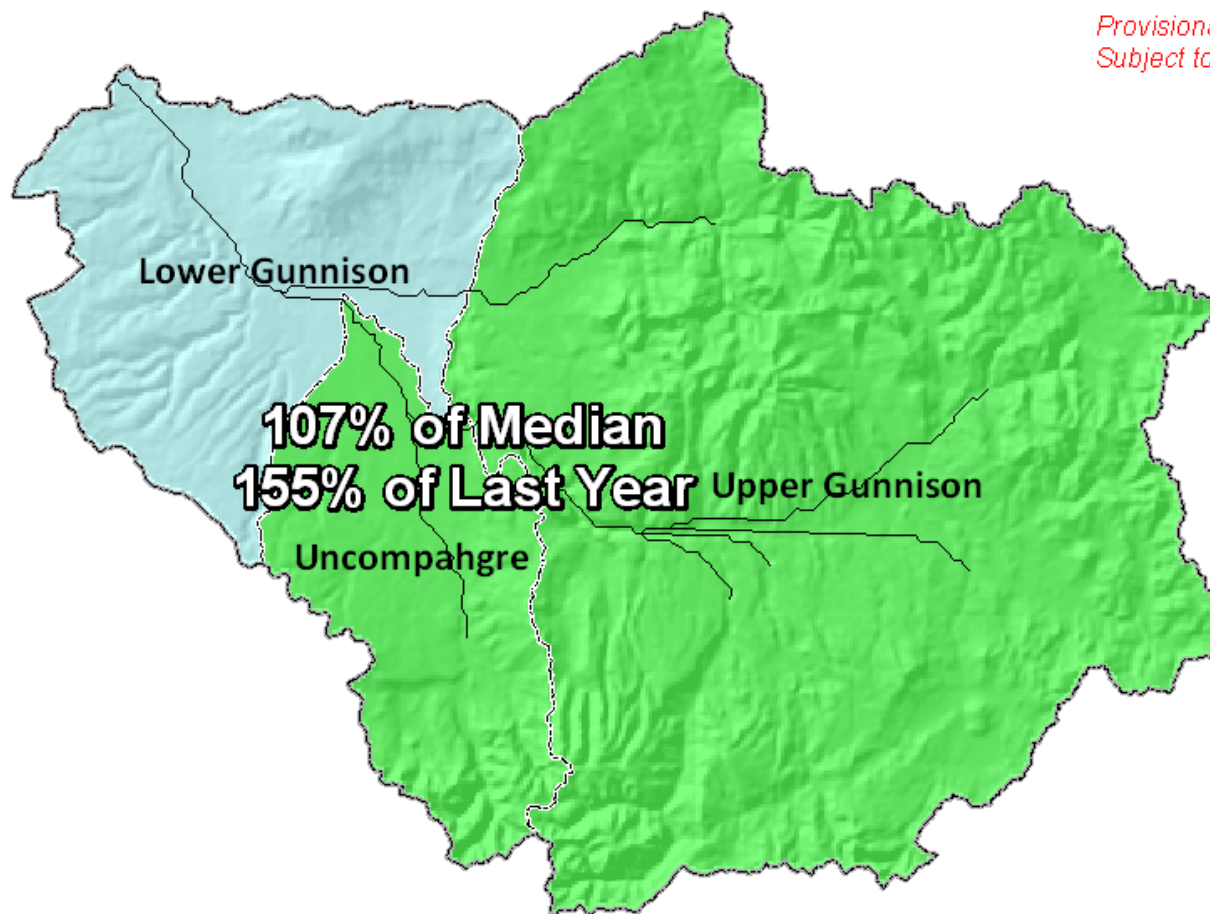
# Gunnison River Basin Snowpack Map



## Percent of Median



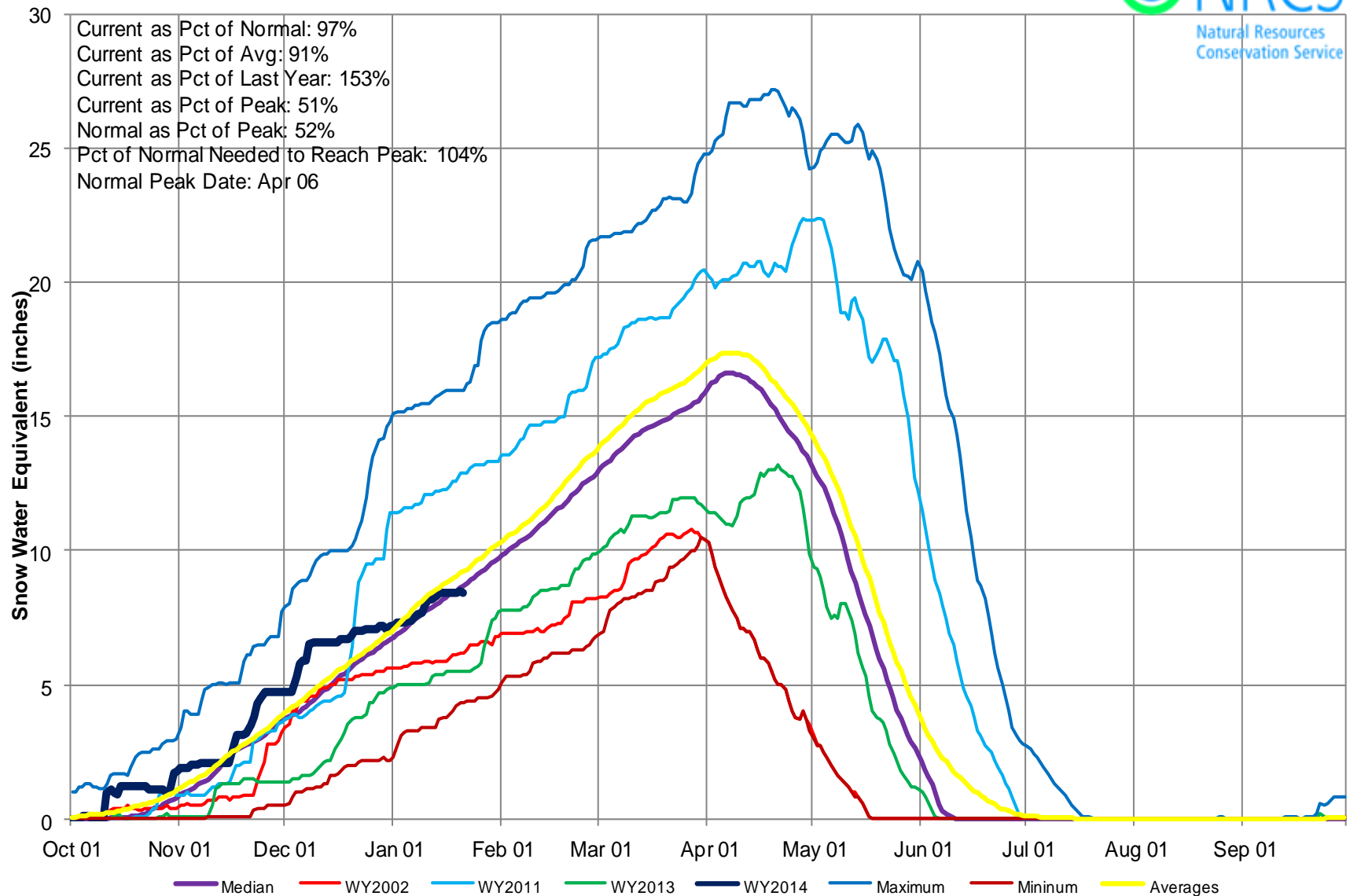
*Provisional Data  
Subject to Revision*



Current as of January 1, 2014

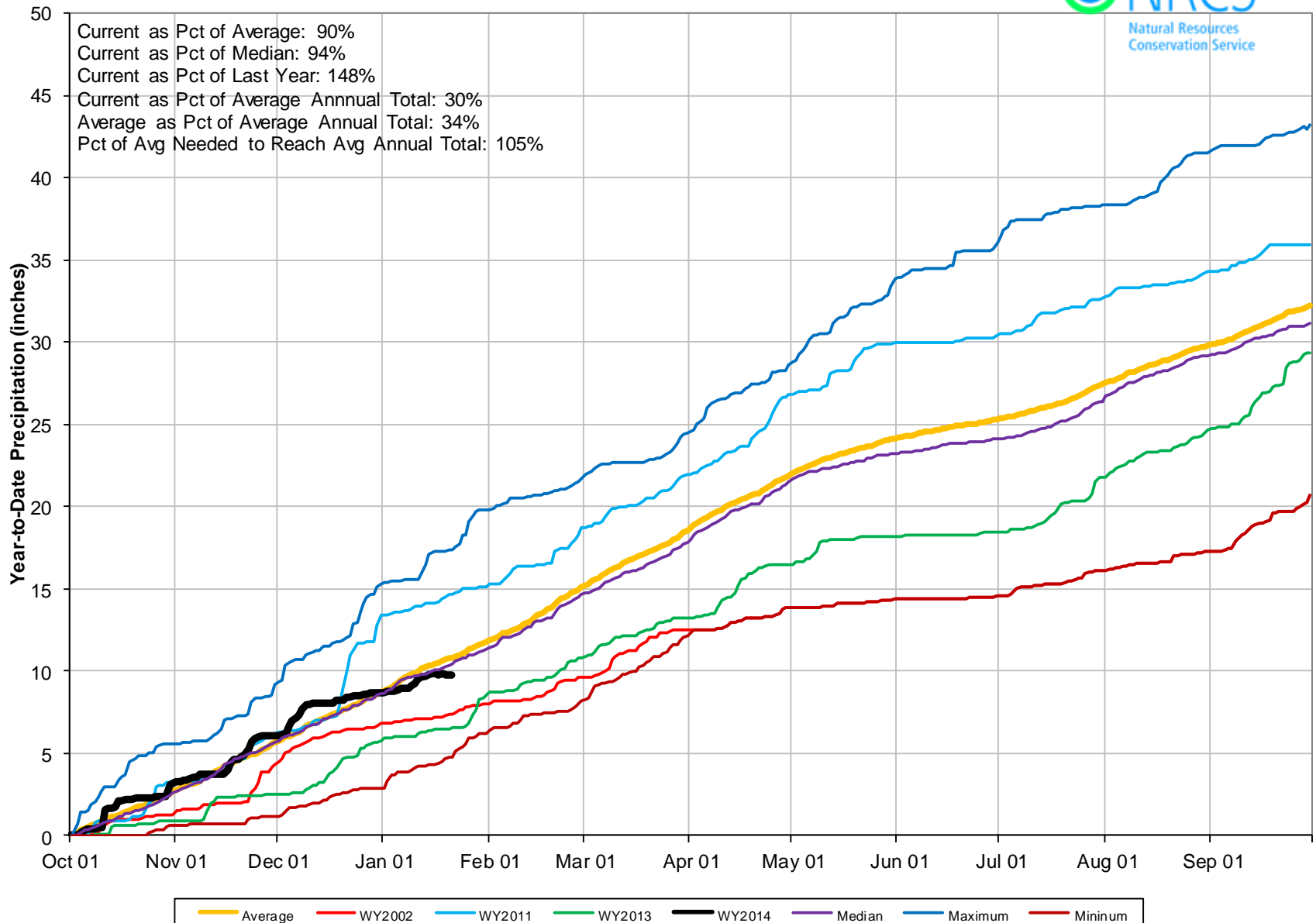
## Gunnison River Basin High/Low Snowpack Summary

Based on Provisional SNOTEL data as of Jan 21, 2014



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

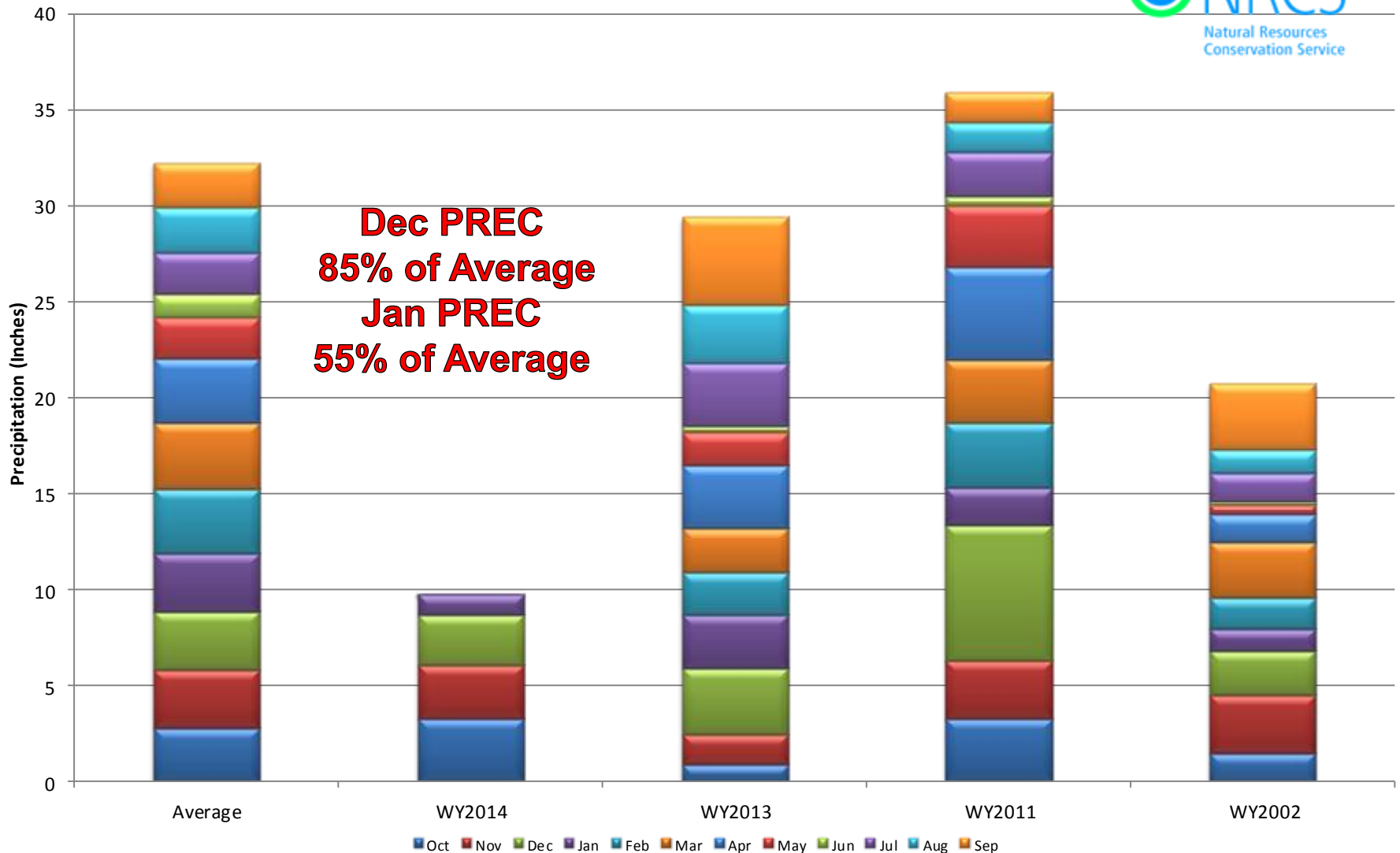
Based on Provisional SNOTEL data as of Jan 21, 2014





## Gunnison River Basin High/Low Monthly Precipitation Summary

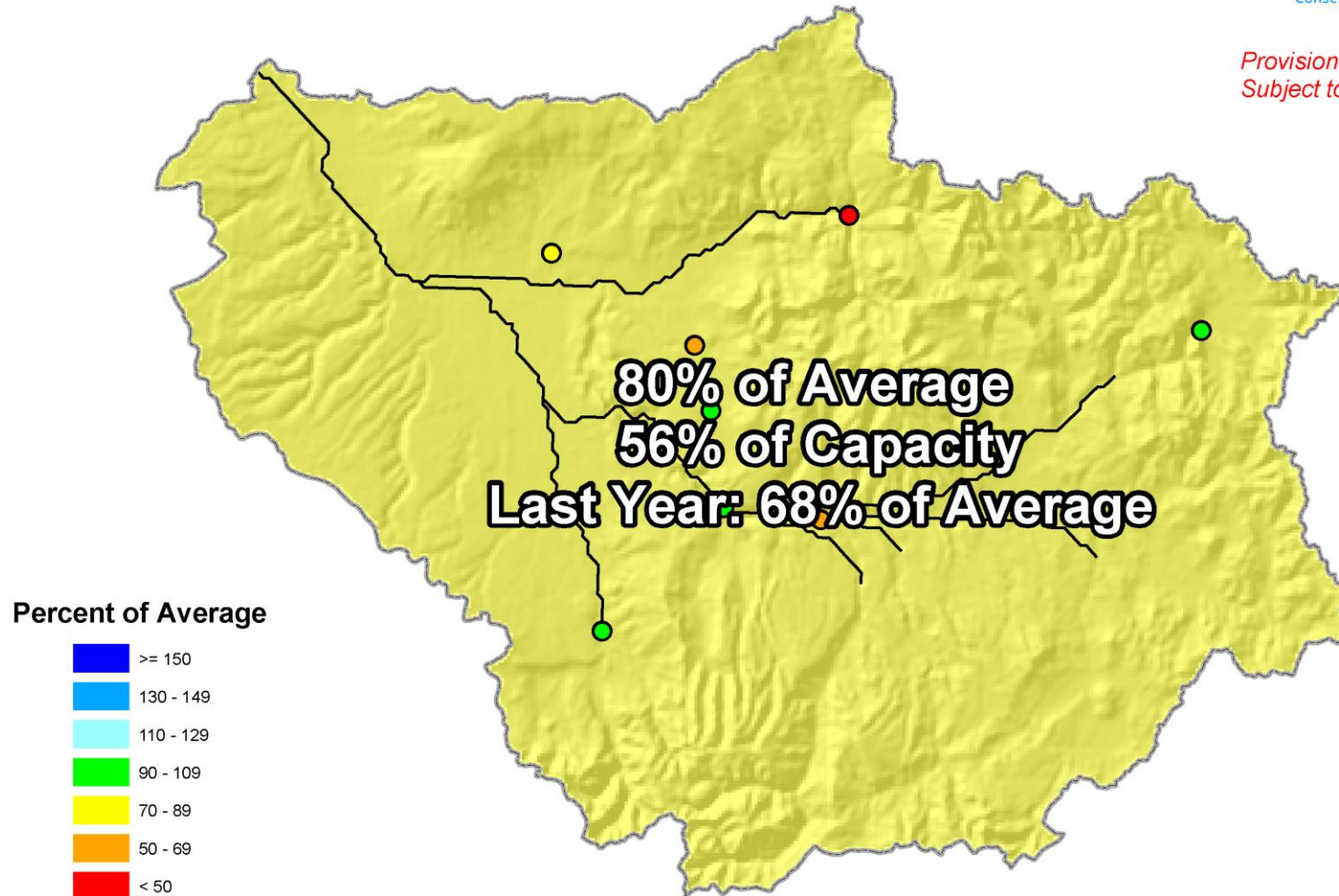
*Based on Provisional SNOTEL data as of Jan 21, 2014*



# Gunnison River Basin Reservoir Storage Map

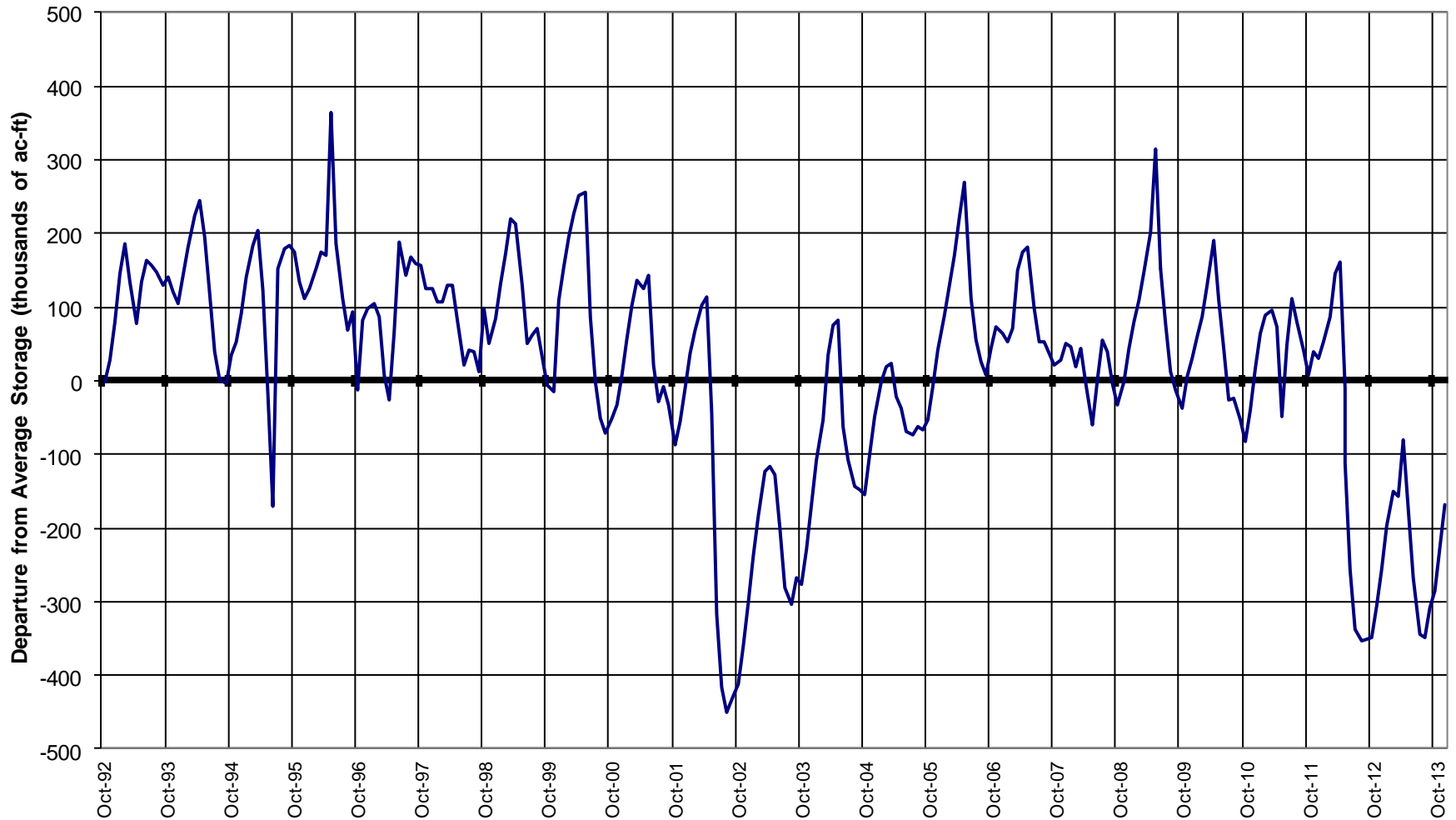


*Provisional Data  
Subject to Revision*



End of December 2013

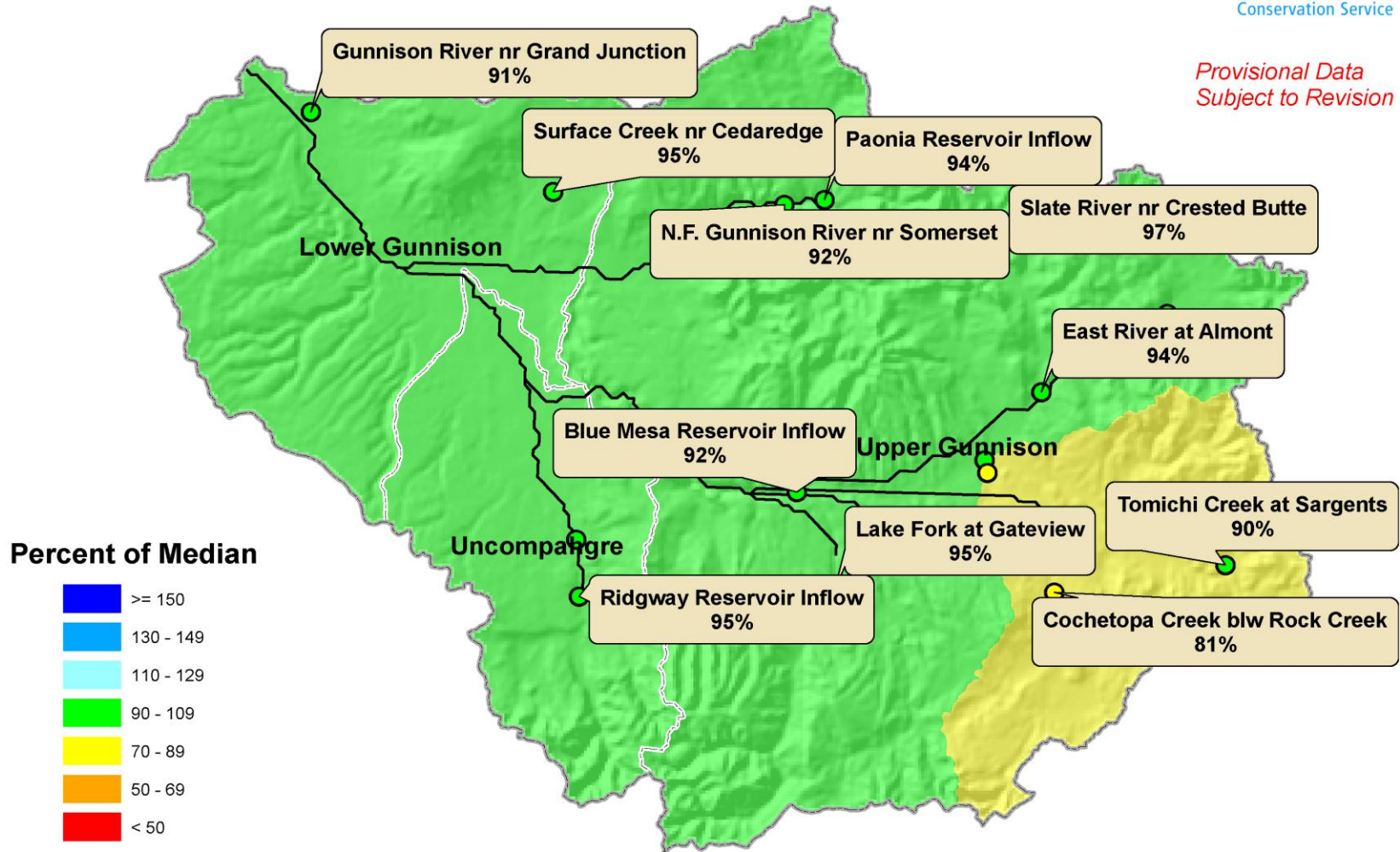
**GUNNISON RIVER BASIN**  
**Reservoir Storage**  
**Departure from Average**



# Gunnison River Basin Streamflow Forecast Map



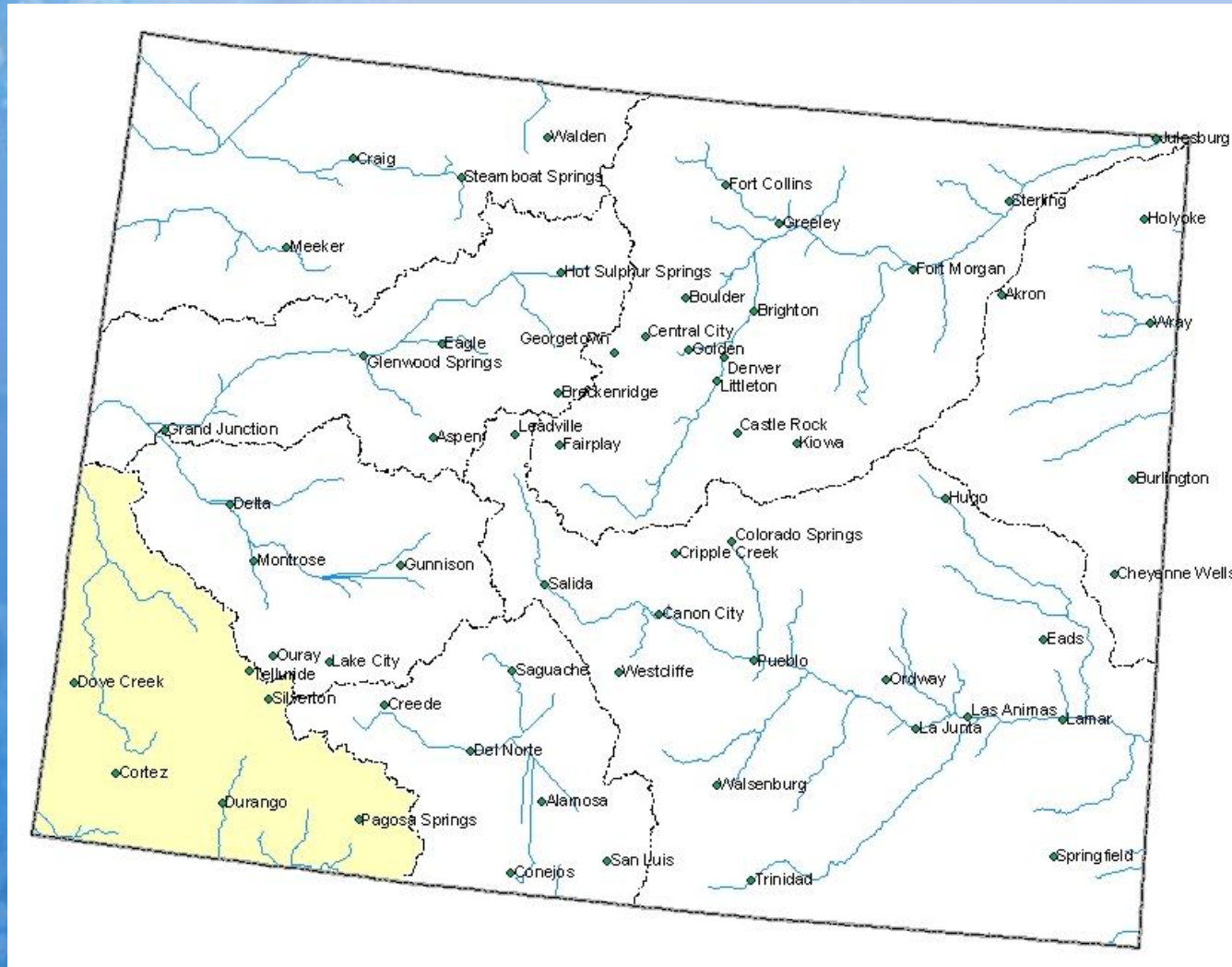
*Provisional Data  
Subject to Revision*



Current as of January 1, 2014



# San Miguel, Dolores, Animas & San Juan River Basins Summary

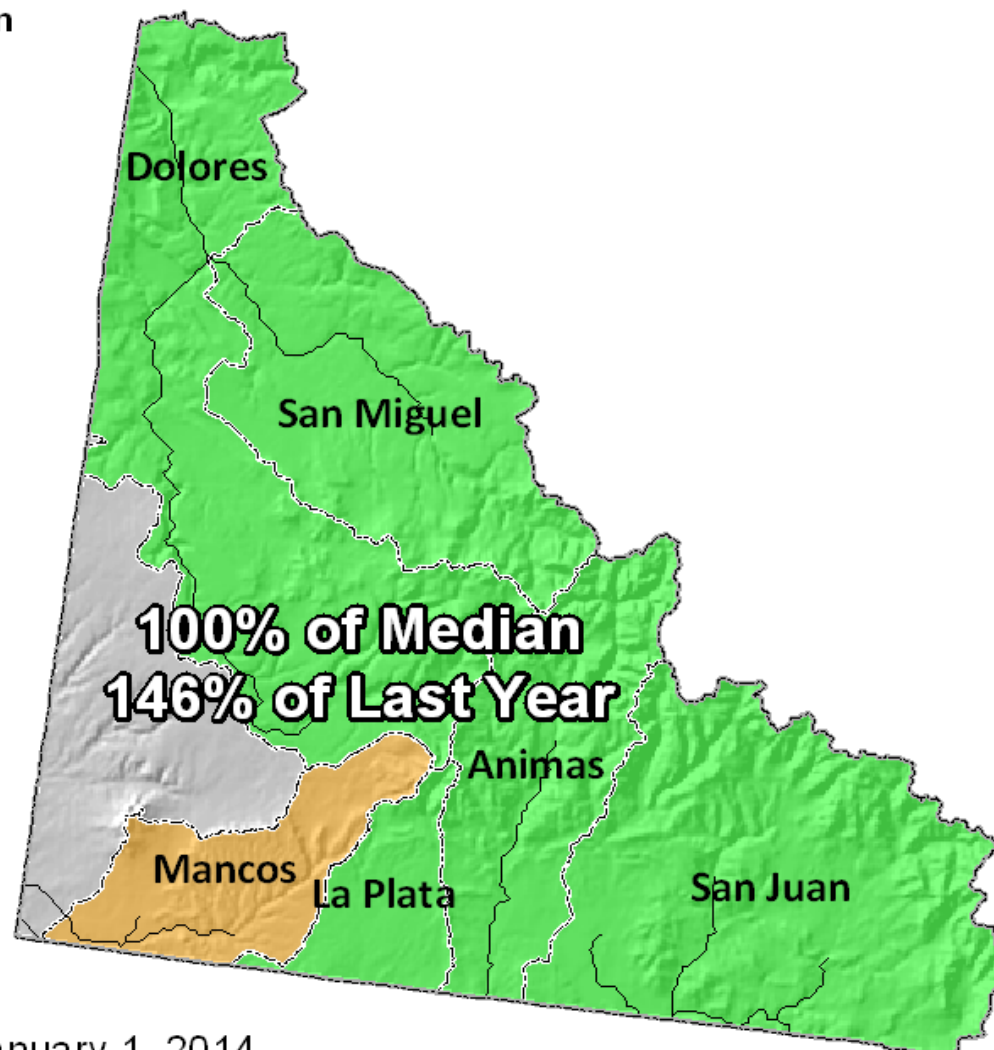
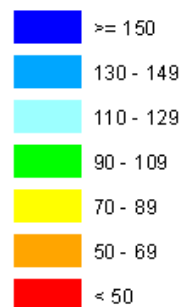


# San Miguel, Dolores, Animas and San Juan River Basins Snowpack Map



*Provisional Data  
Subject to Revision*

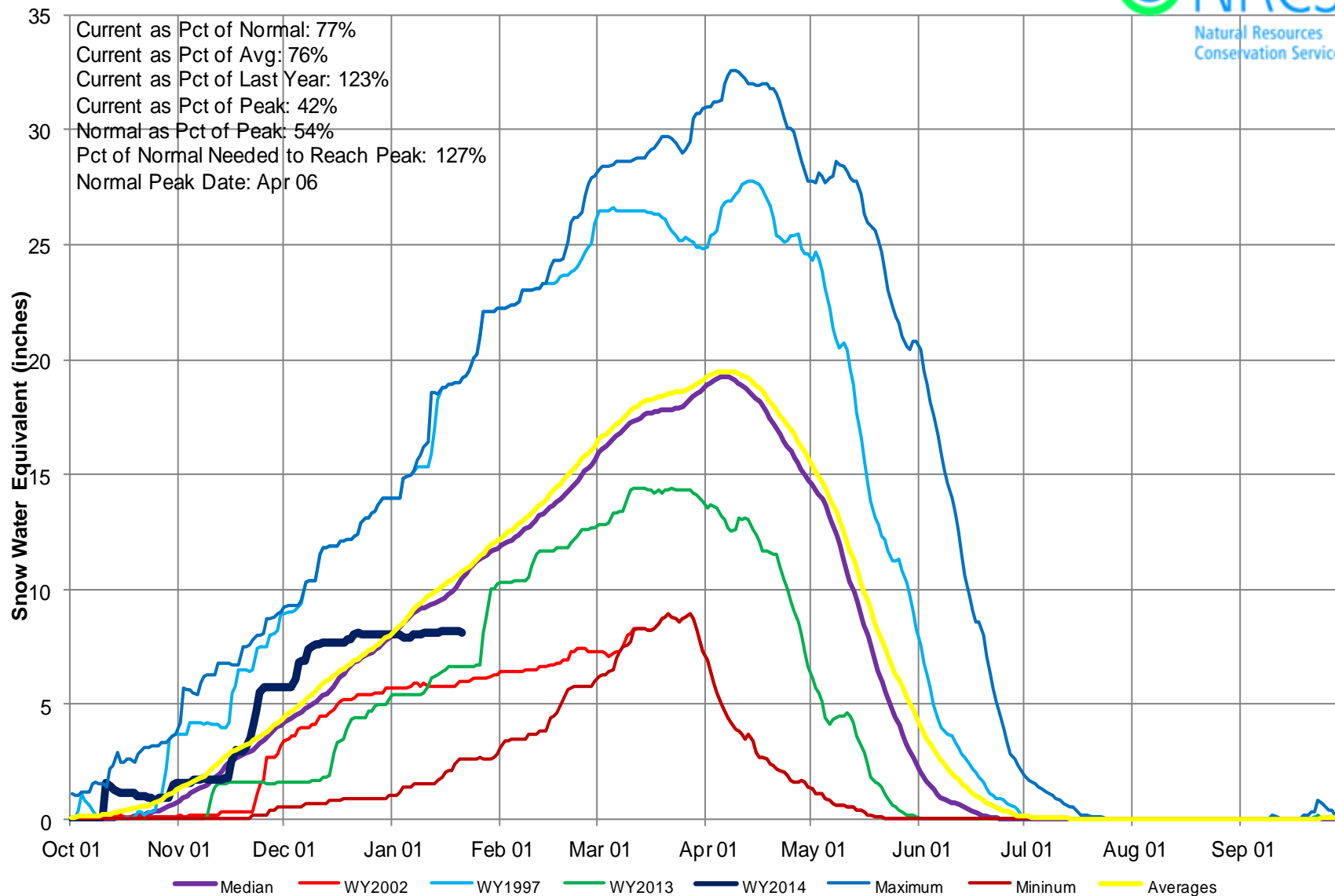
## Percent of Median



Current as of January 1, 2014

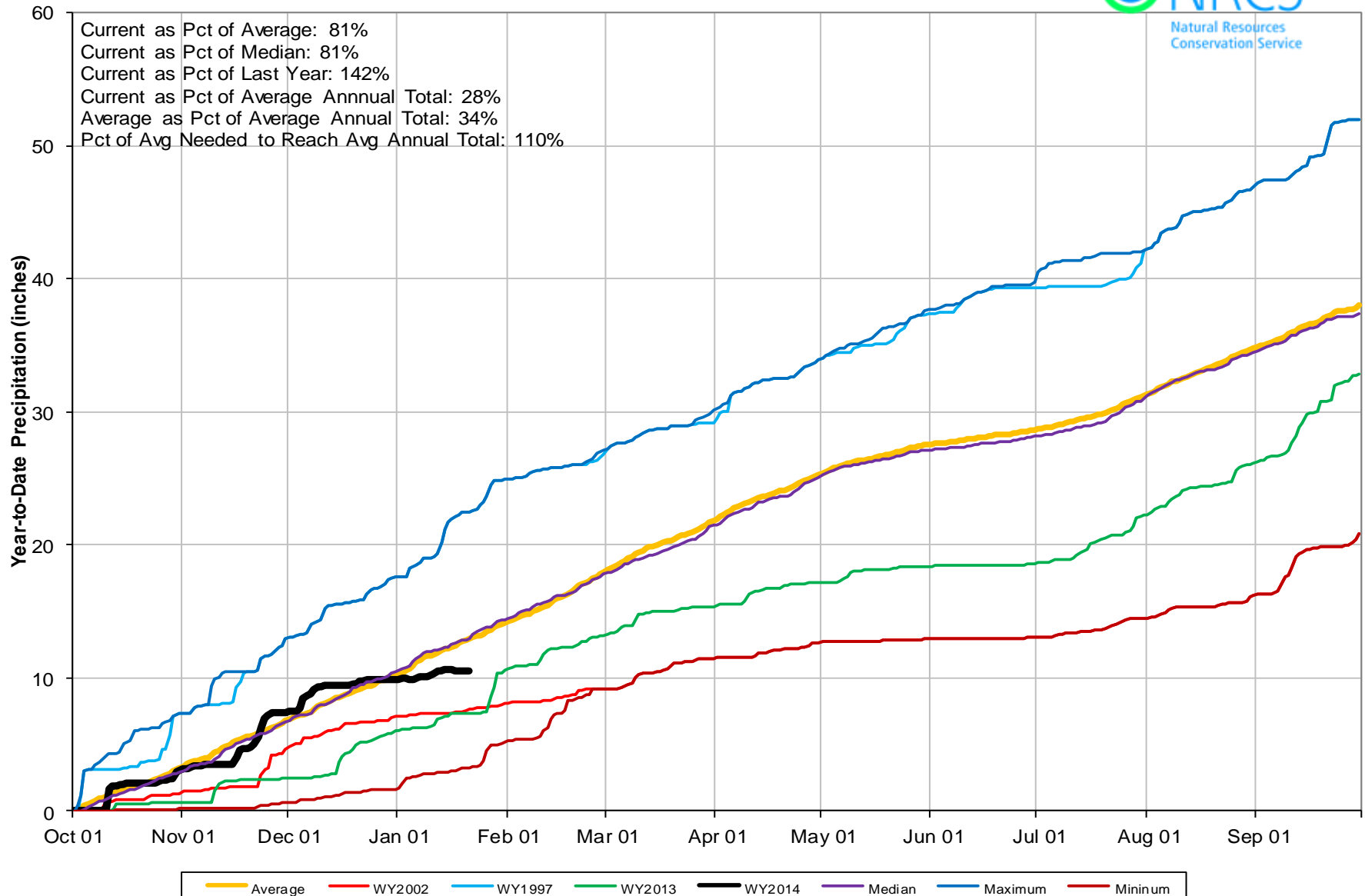
# San Miguel, Dolores, Animas & San Juan River Basins High/Low Snowpack Summary

Based on Provisional SNOTEL data as of Jan 21, 2014



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

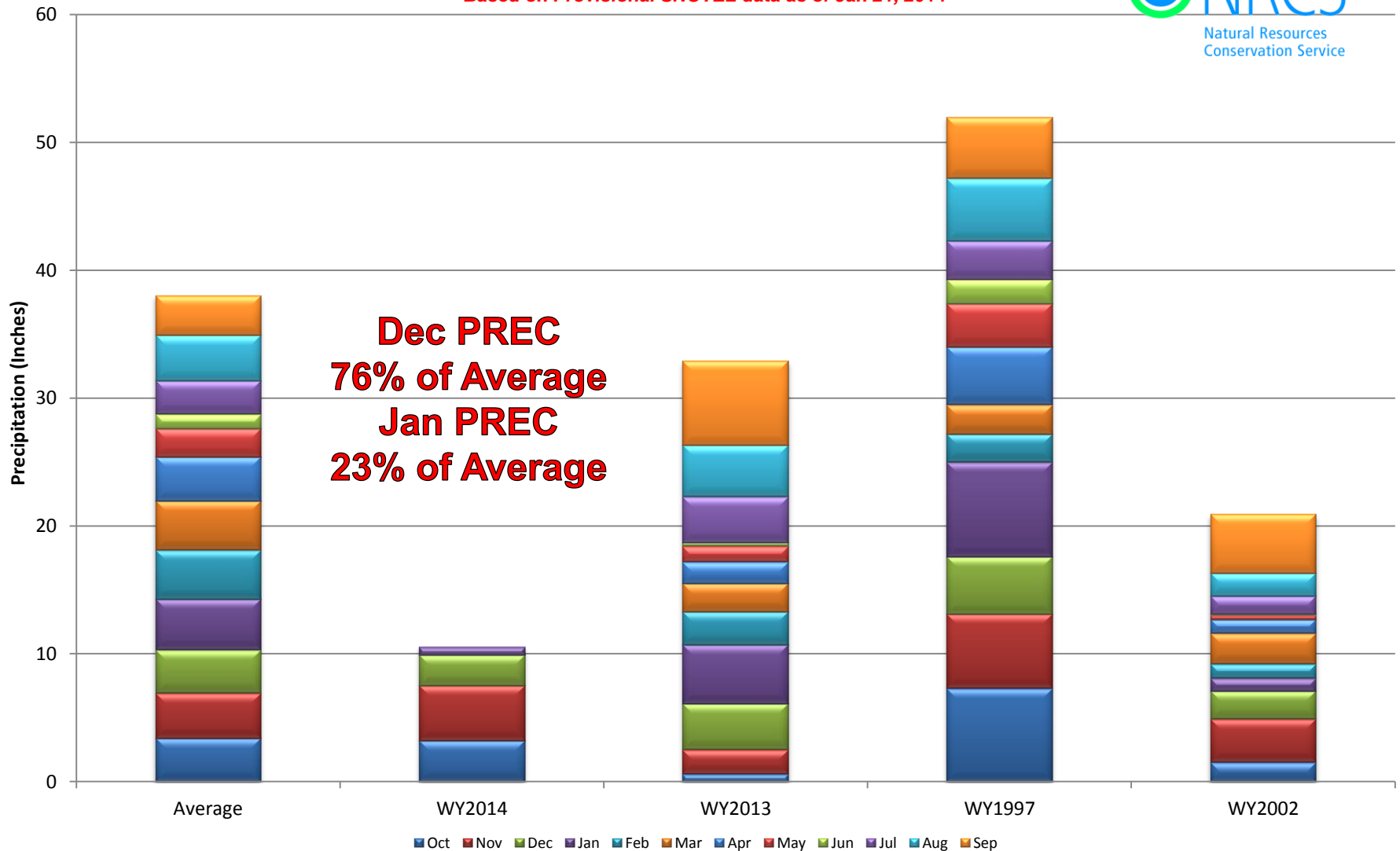
*Based on Provisional SNOTEL data as of Jan 21, 2014*





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

*Based on Provisional SNOTEL data as of Jan 21, 2014*



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

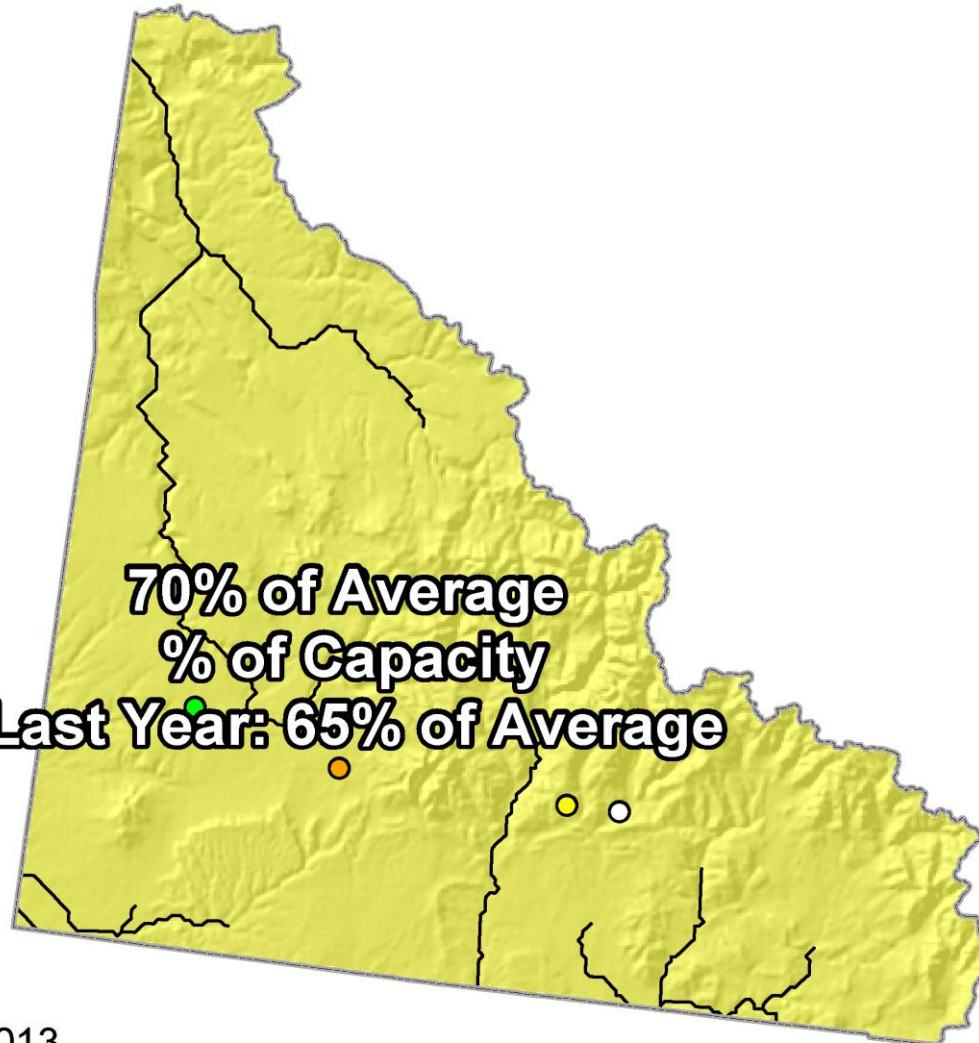


*Provisional Data  
Subject to Revision*

## Percent of Average

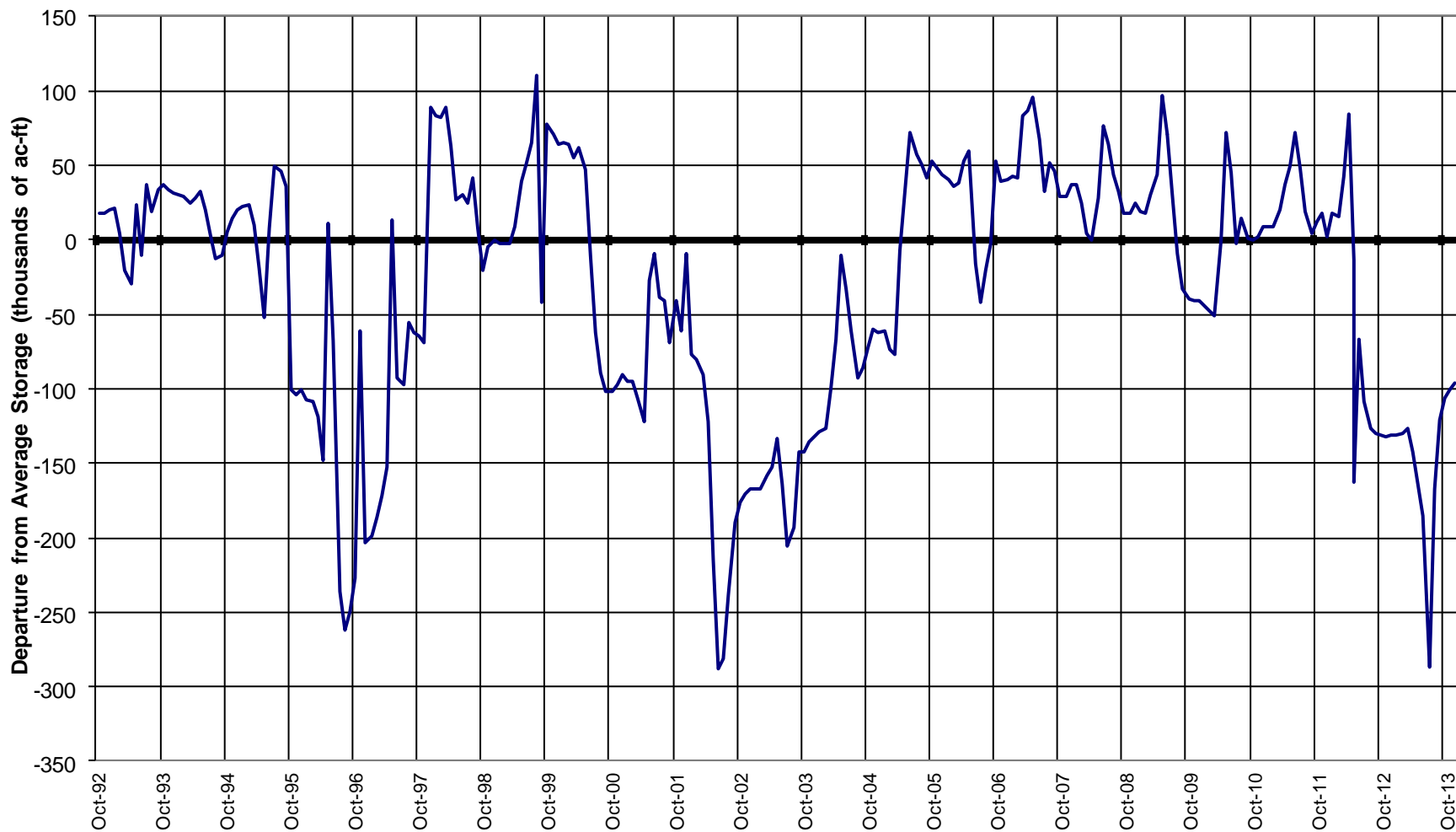


**70% of Average  
% of Capacity  
Last Year: 65% of Average**



End of December 2013

**SAN MIGUEL, DOLORES, ANIMAS AND SAN JUAN RIVER BASINS**  
**Reservoir Storage**  
**Departure from Average**

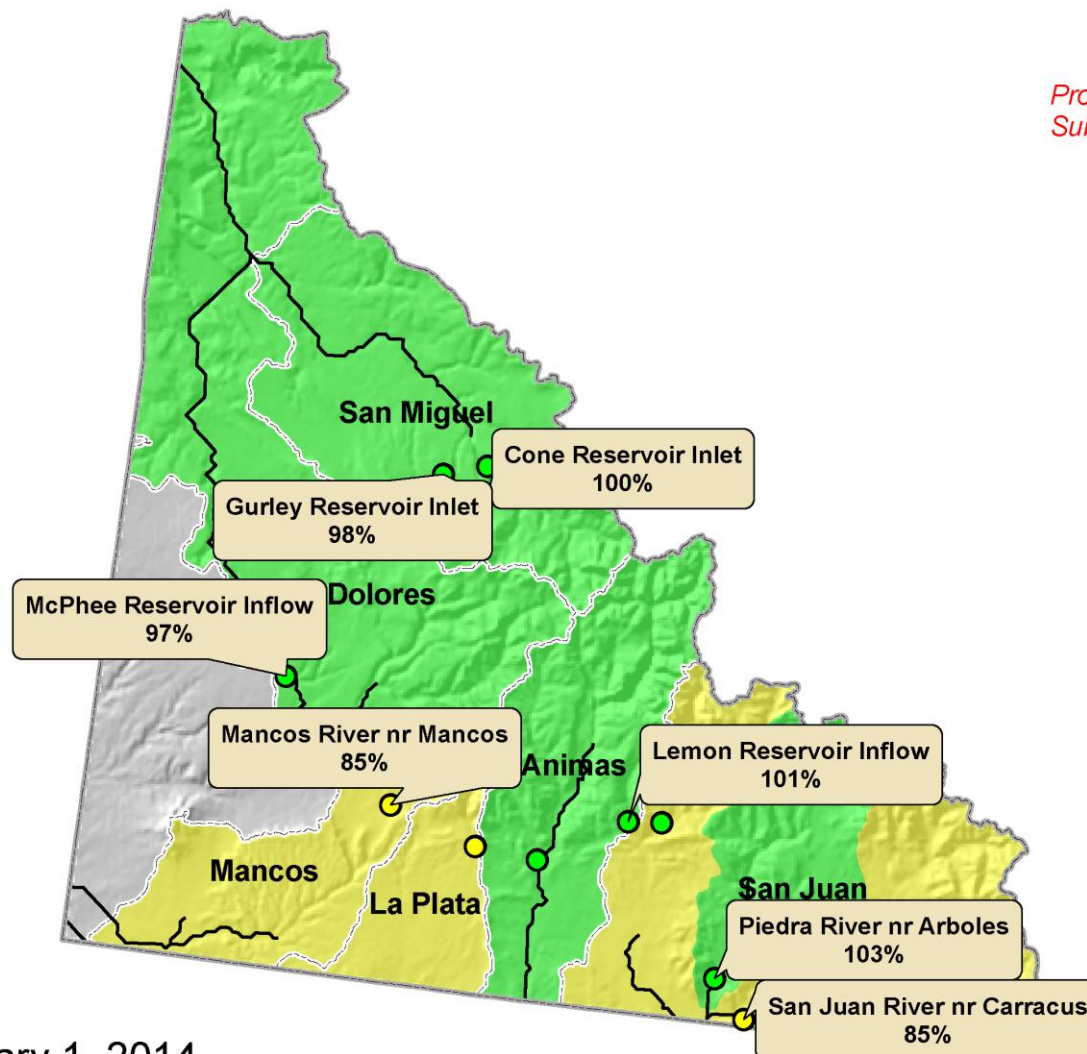


# San Miguel, Dolores, Animas and San Juan River Basins Streamflow Forecast Map



*Provisional Data  
Subject to Revision*

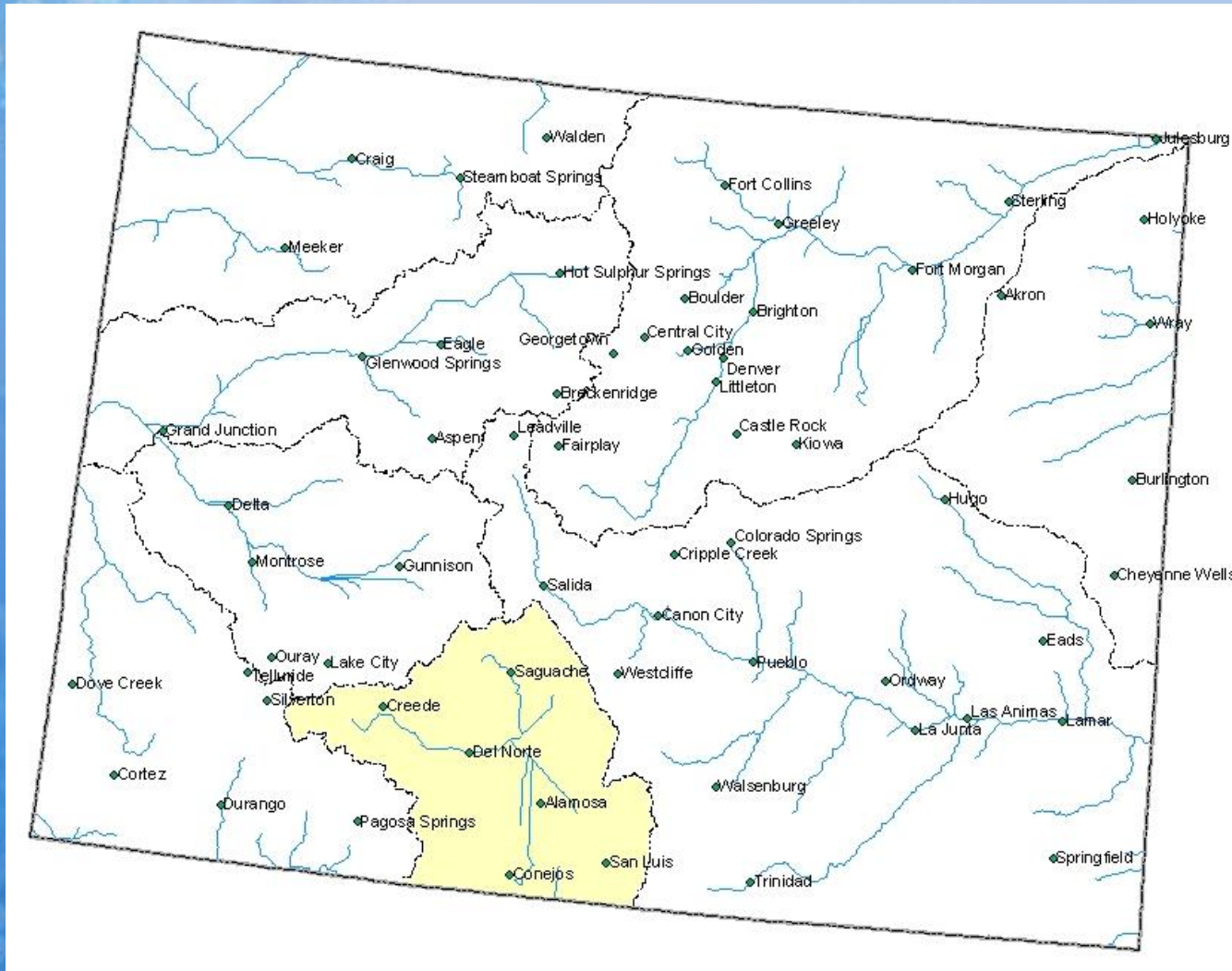
## Percent of Median



Current as of January 1, 2014



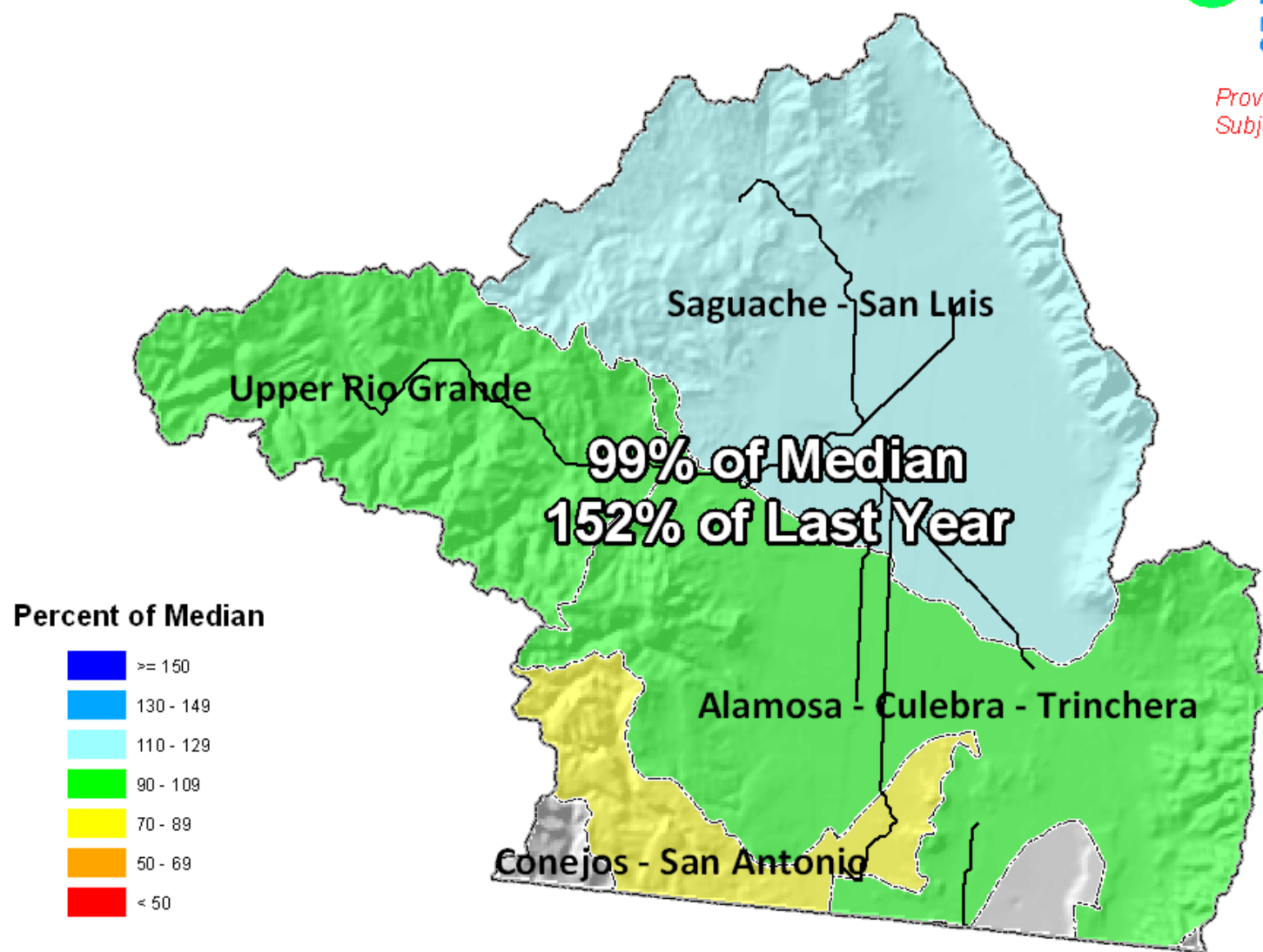
# Upper Rio Grande Basin Summary



# Upper Rio Grande Basin Snowpack Map



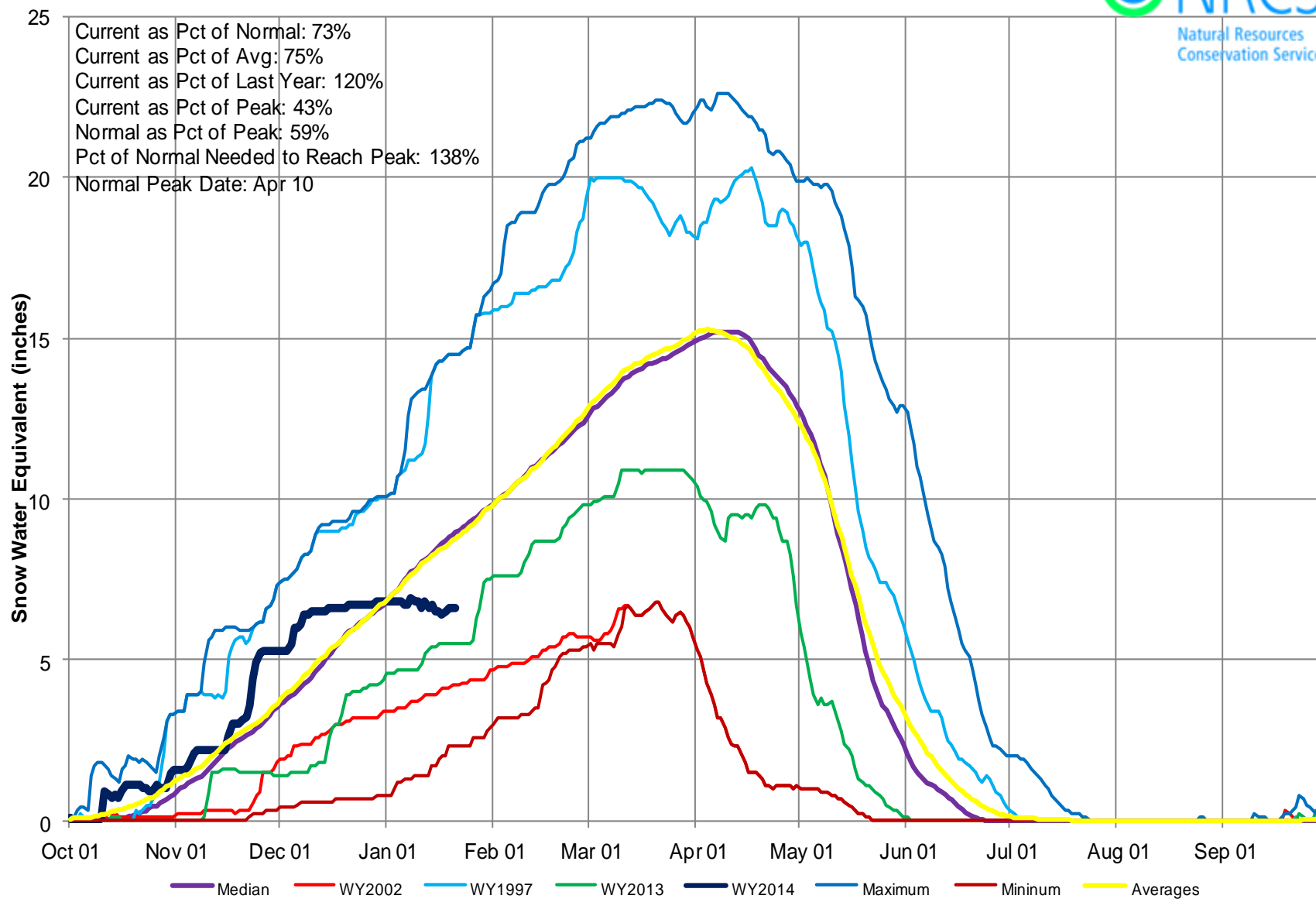
*Provisional Data  
Subject to Revision*



Current as of January 1, 2014

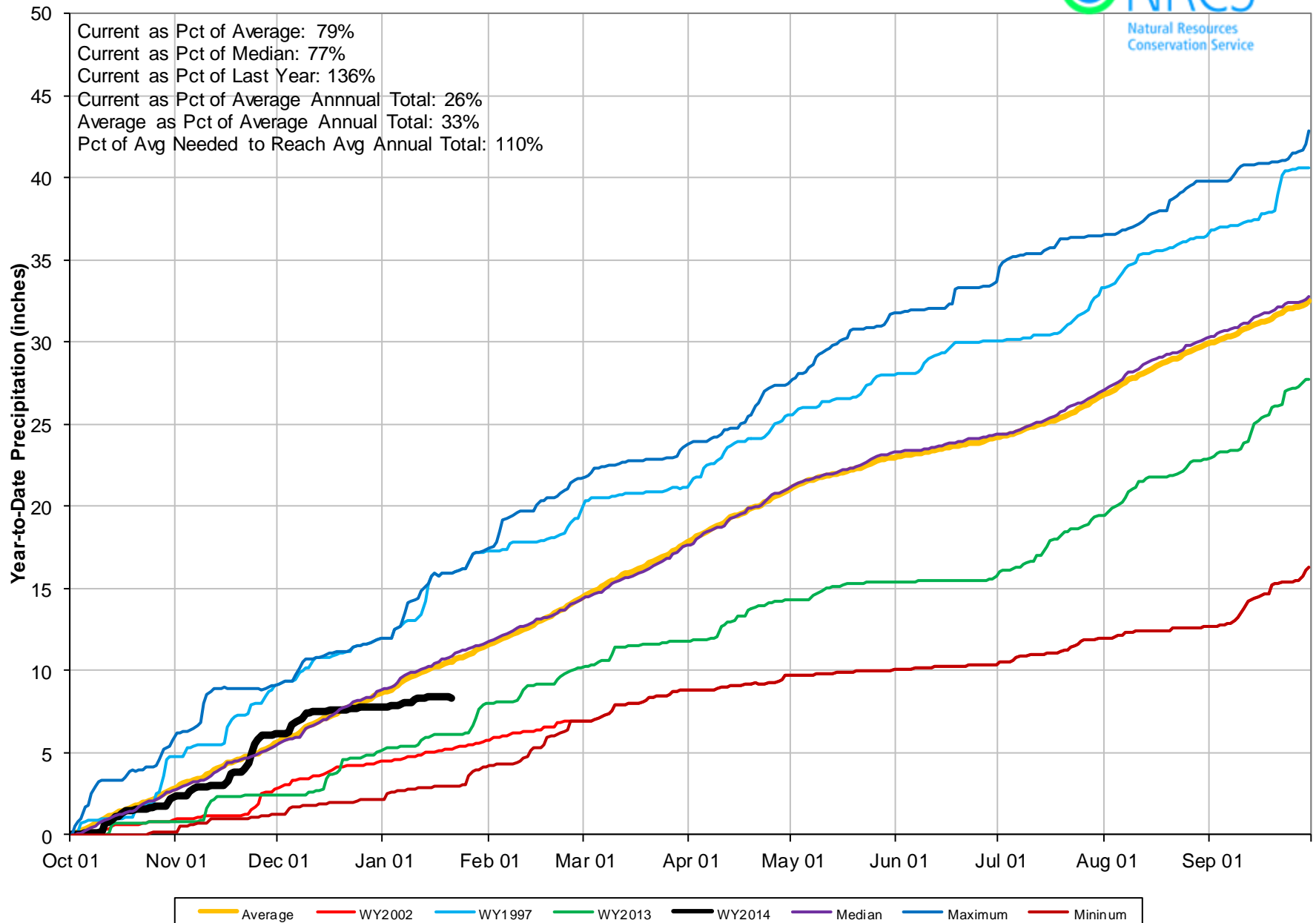
# Upper Rio Grande River Basin High/Low Snowpack Summary

Based on Provisional SNOTEL data as of Jan 21, 2014



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

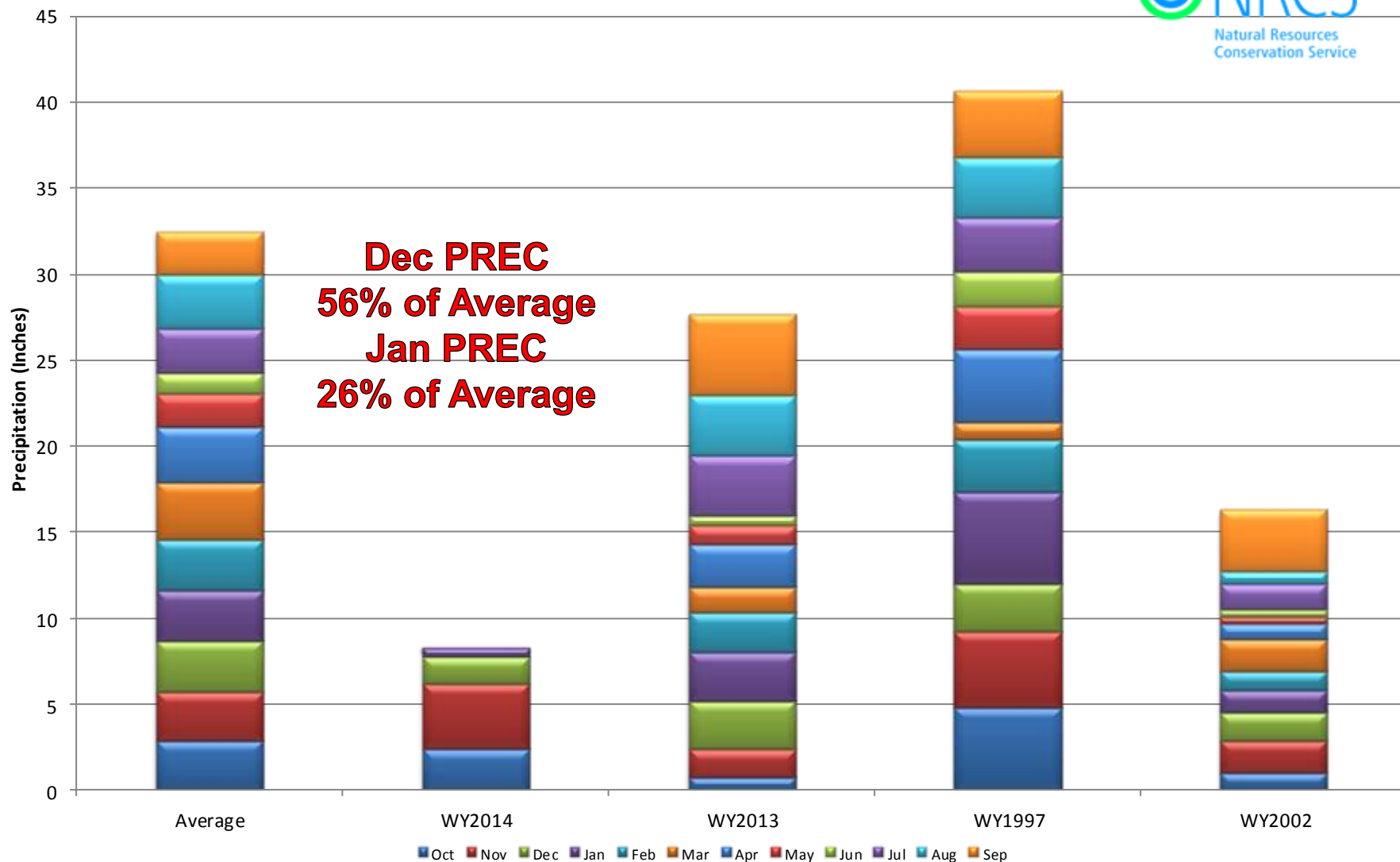
Based on Provisional SNOTEL data as of Jan 21, 2014





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

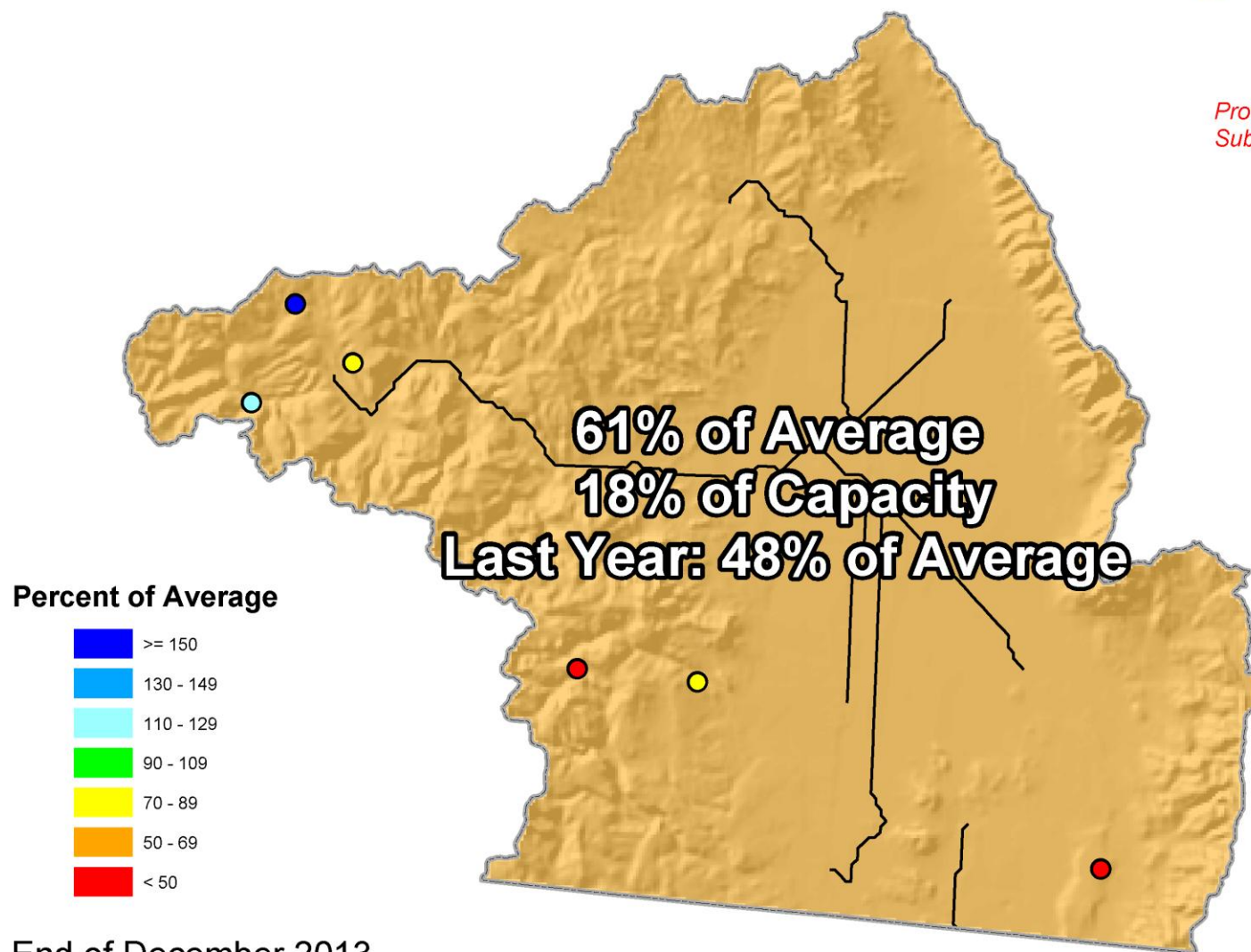
*Based on Provisional SNOTEL data as of Jan 21, 2014*



# Upper Rio Grande Basin Reservoir Storage Map

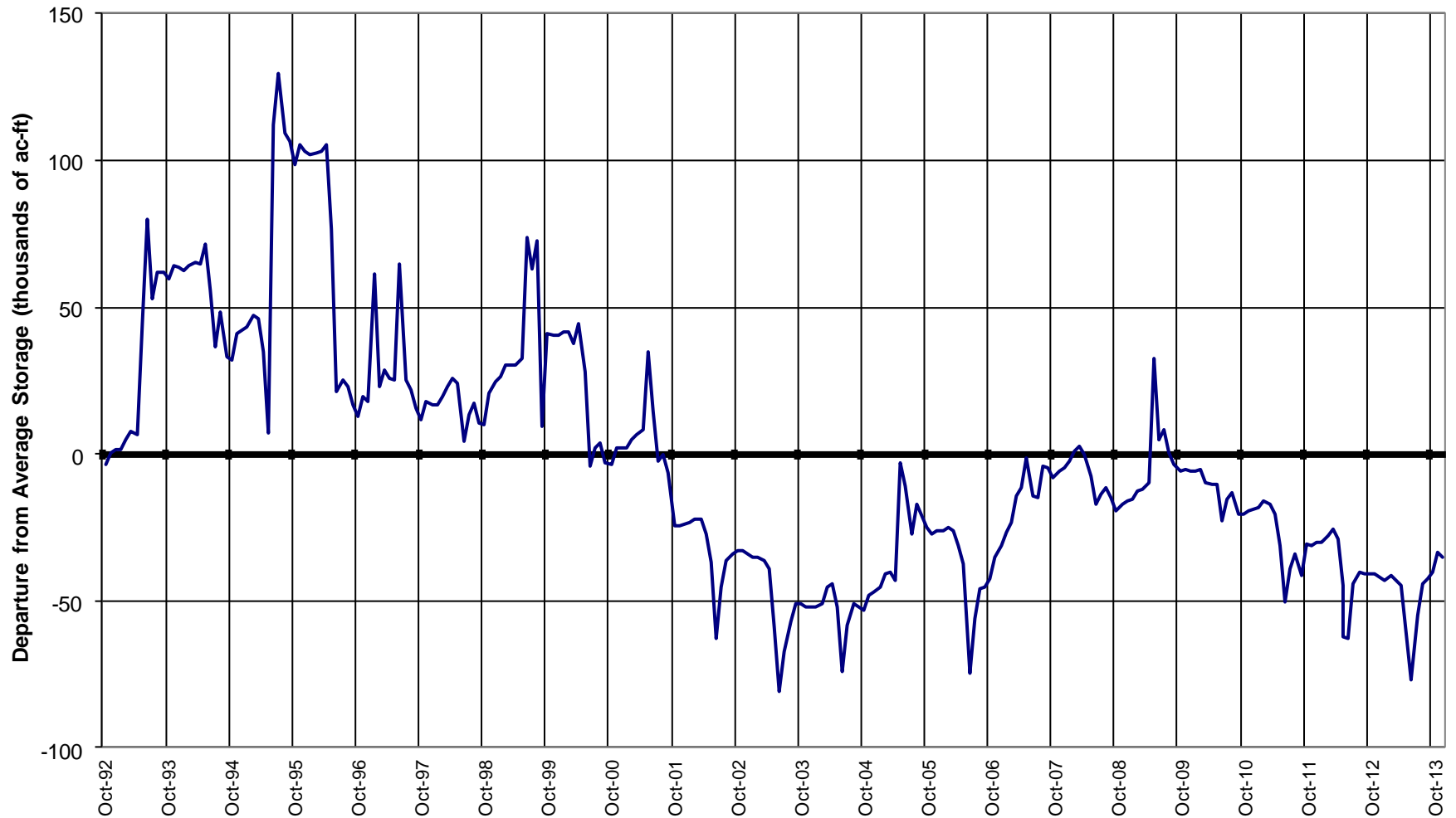


*Provisional Data  
Subject to Revision*



End of December 2013

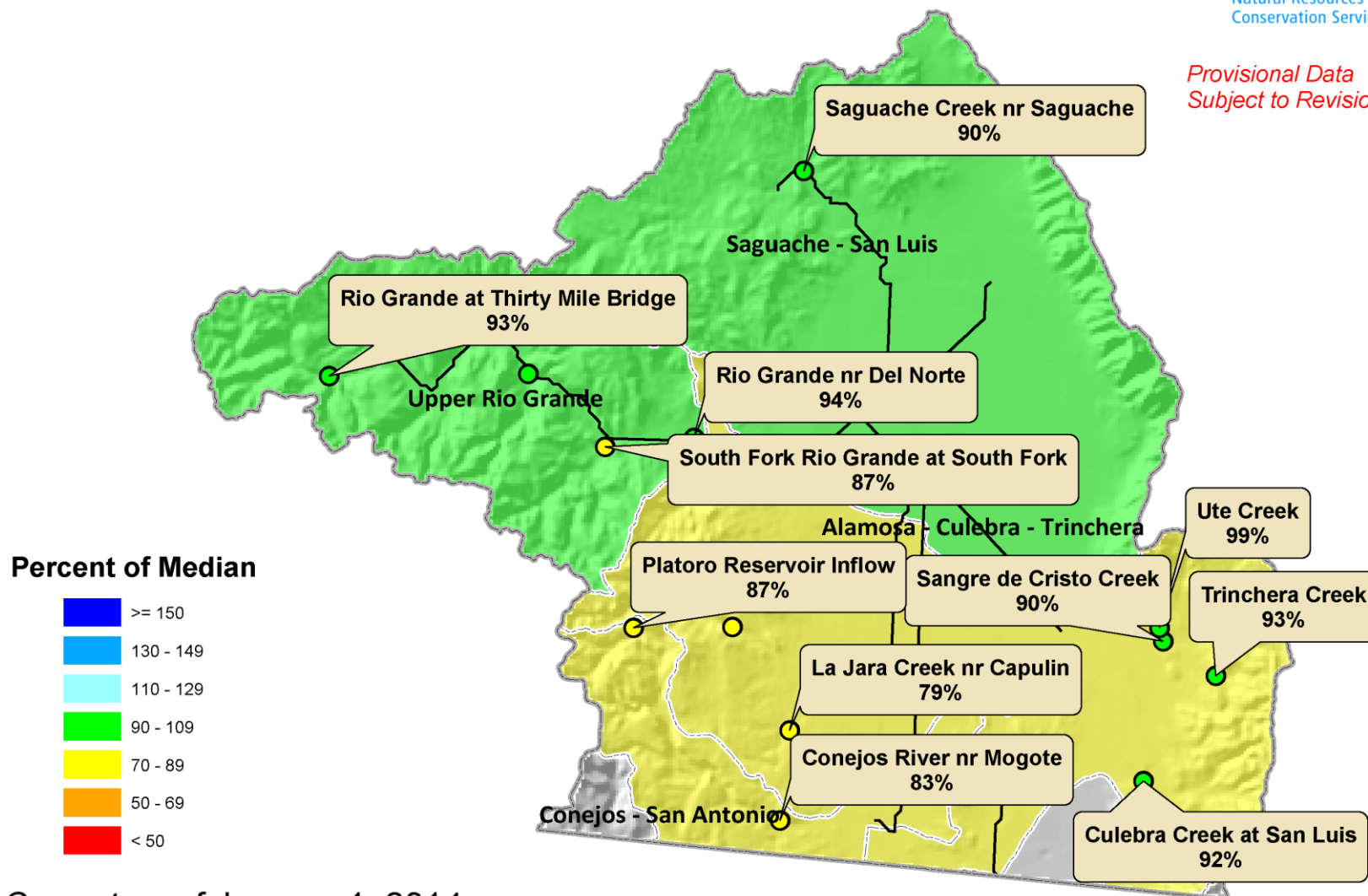
**UPPER RIO GRANDE BASIN**  
**Reservoir Storage**  
**Departure from Average**



# Upper Rio Grande Basin Streamflow Forecast Map



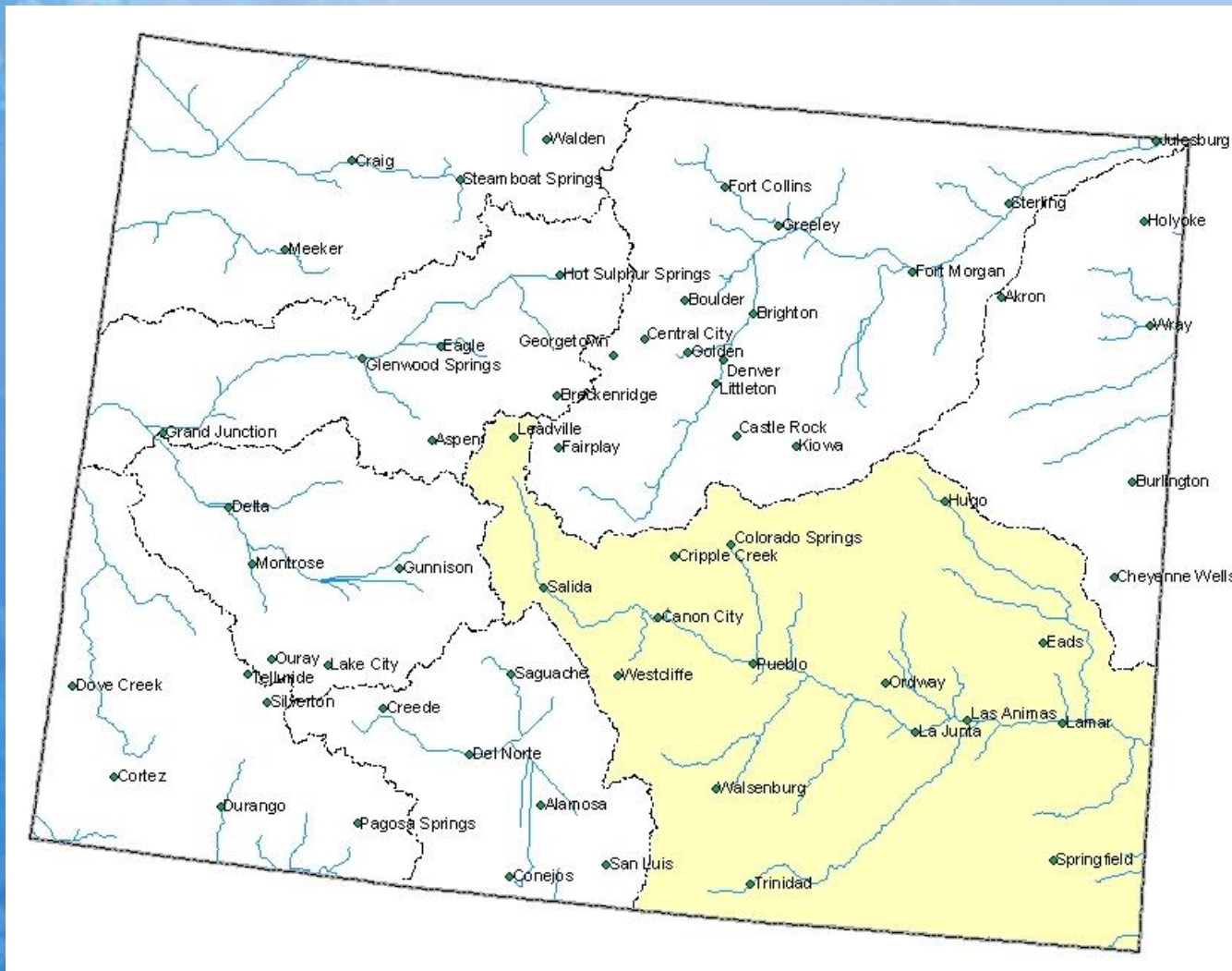
*Provisional Data  
Subject to Revision*



Current as of January 1, 2014



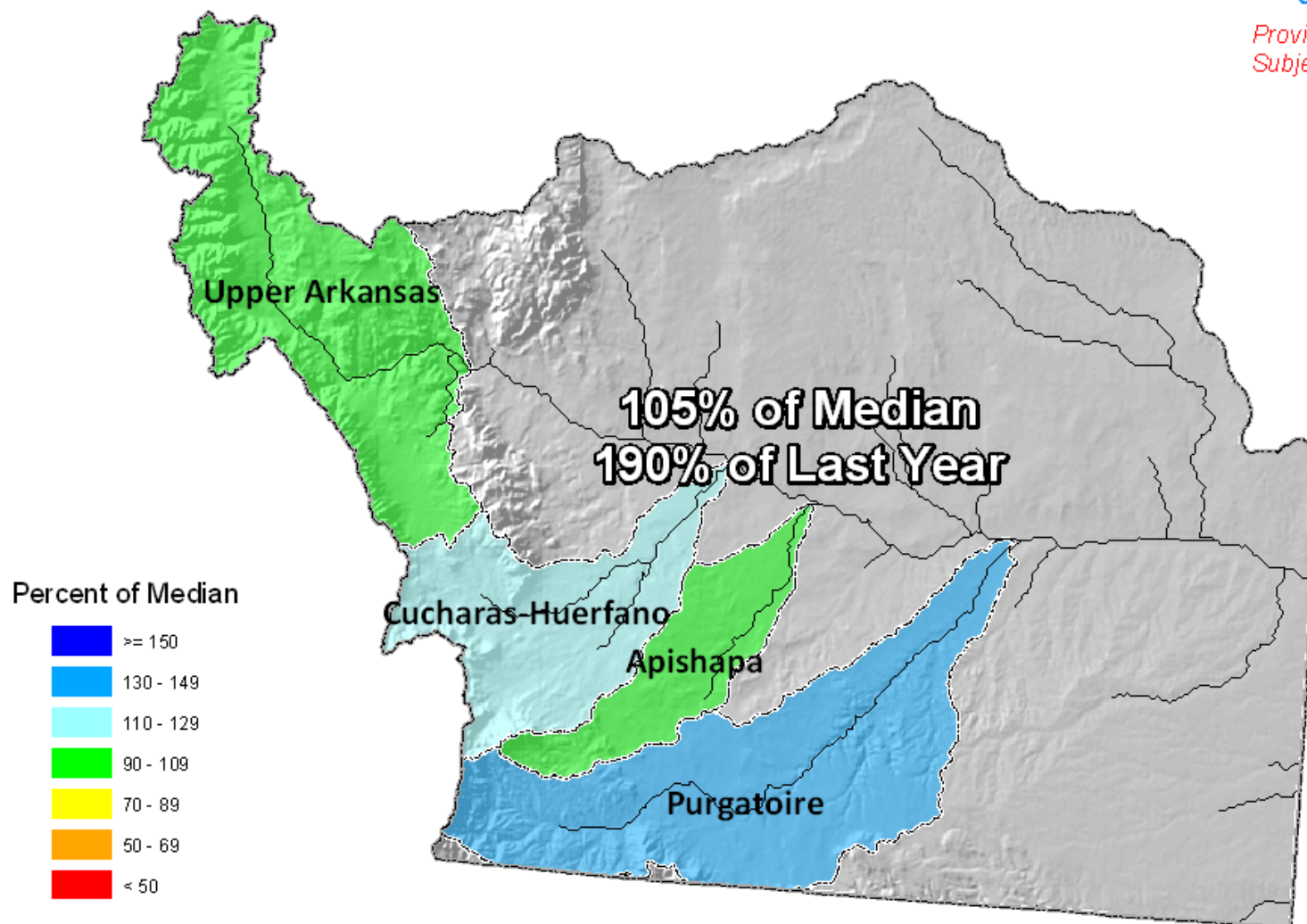
# Arkansas River Basin Summary



# Arkansas River Basin Snowpack Map



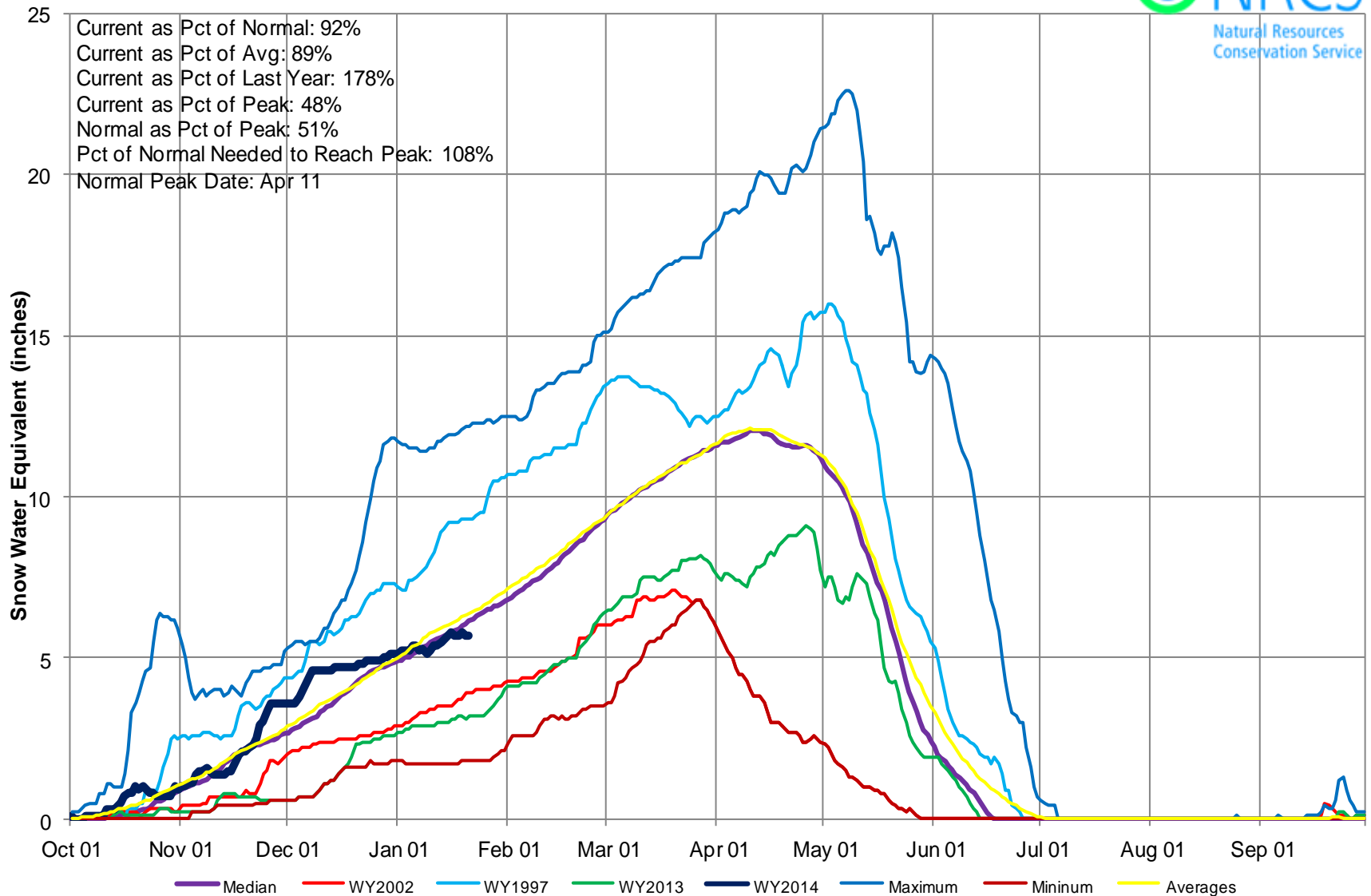
*Provisional Data  
Subject to Revision*



Current as of January 1, 2014

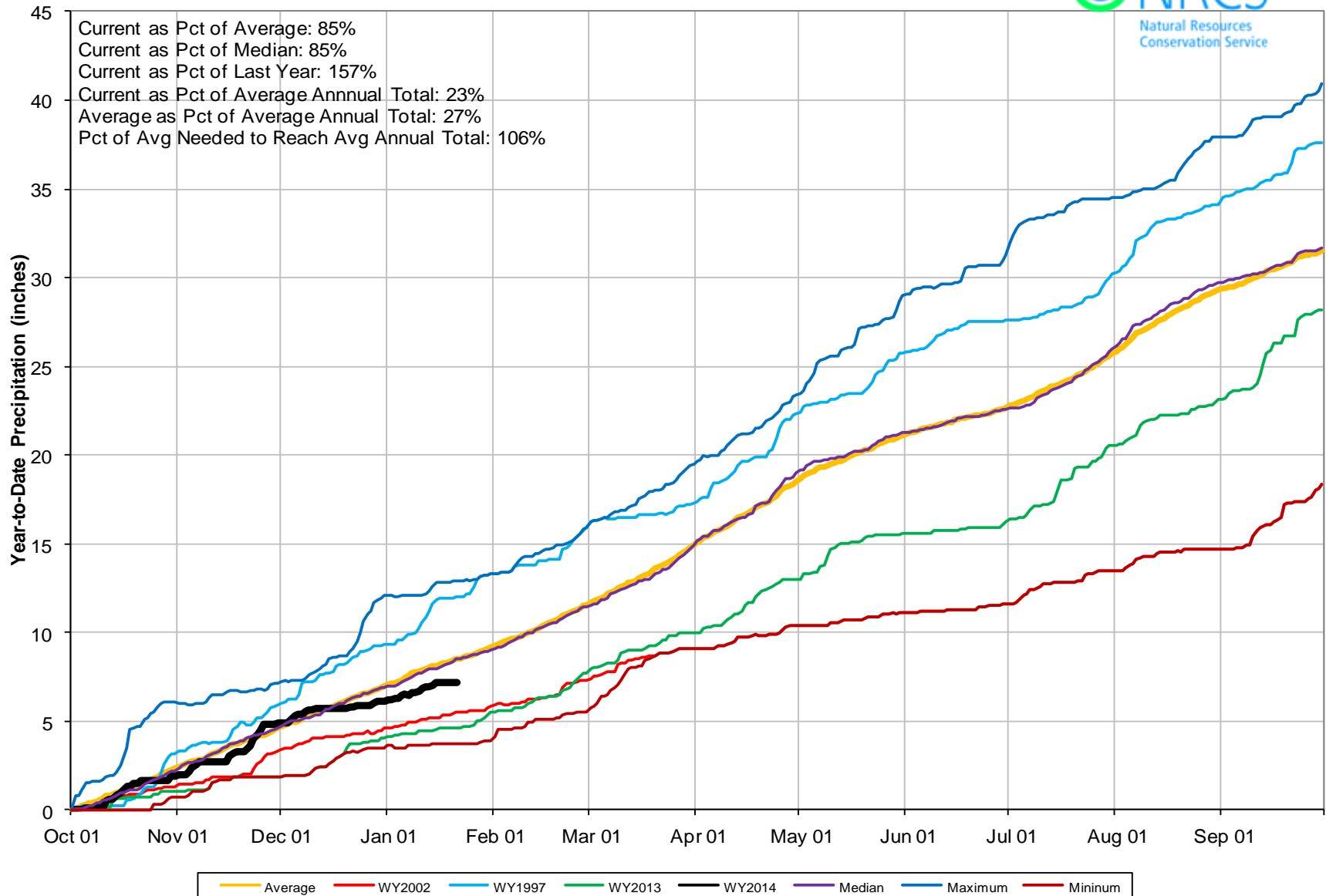
# Arkansas River Basin High/Low Snowpack Summary

Based on Provisional SNOTEL data as of Jan 21, 2014



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

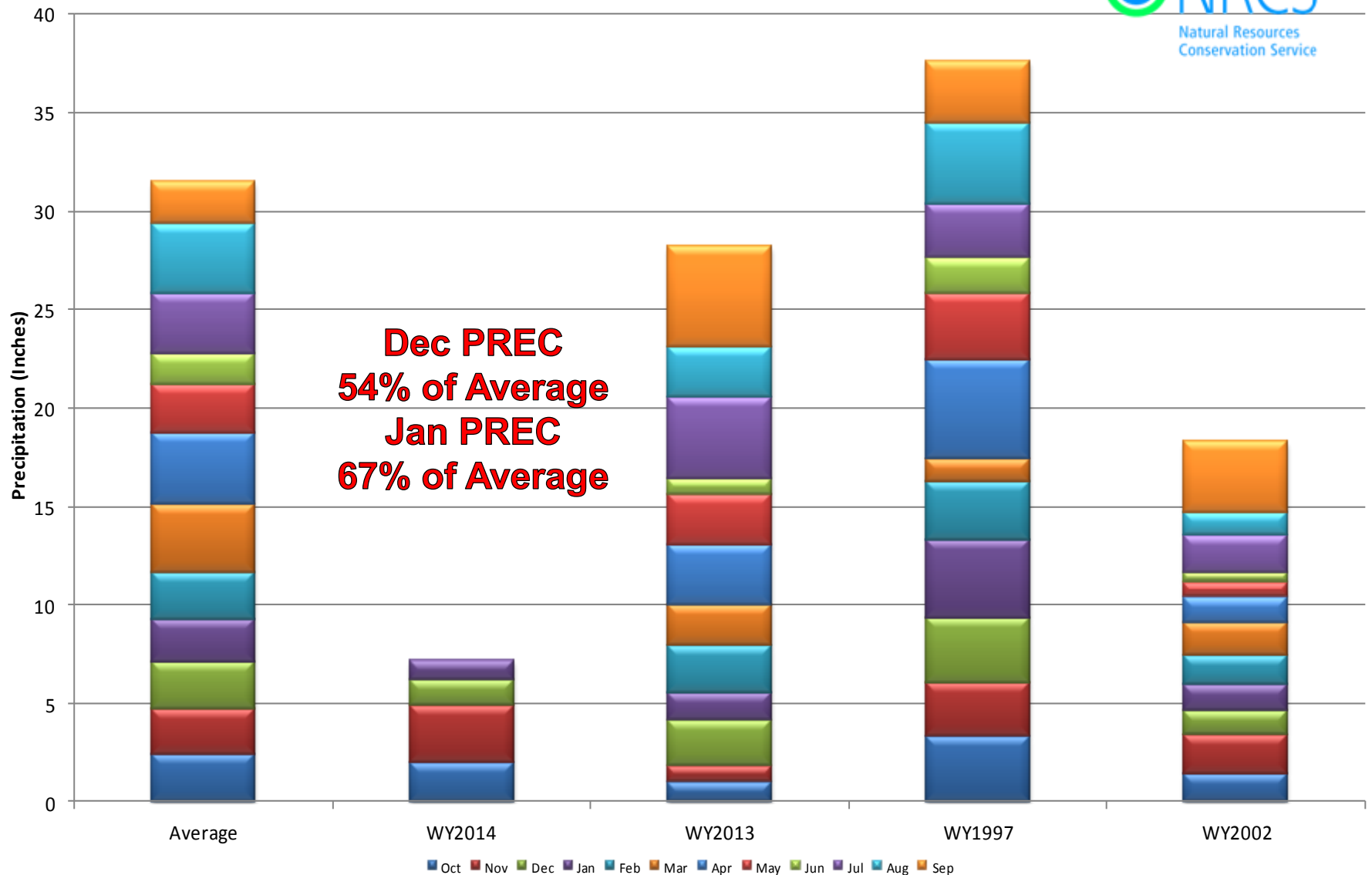
*Based on Provisional SNOTEL data as of Jan 21, 2014*





## Arkansas River Basin High/Low Monthly Precipitation Summary

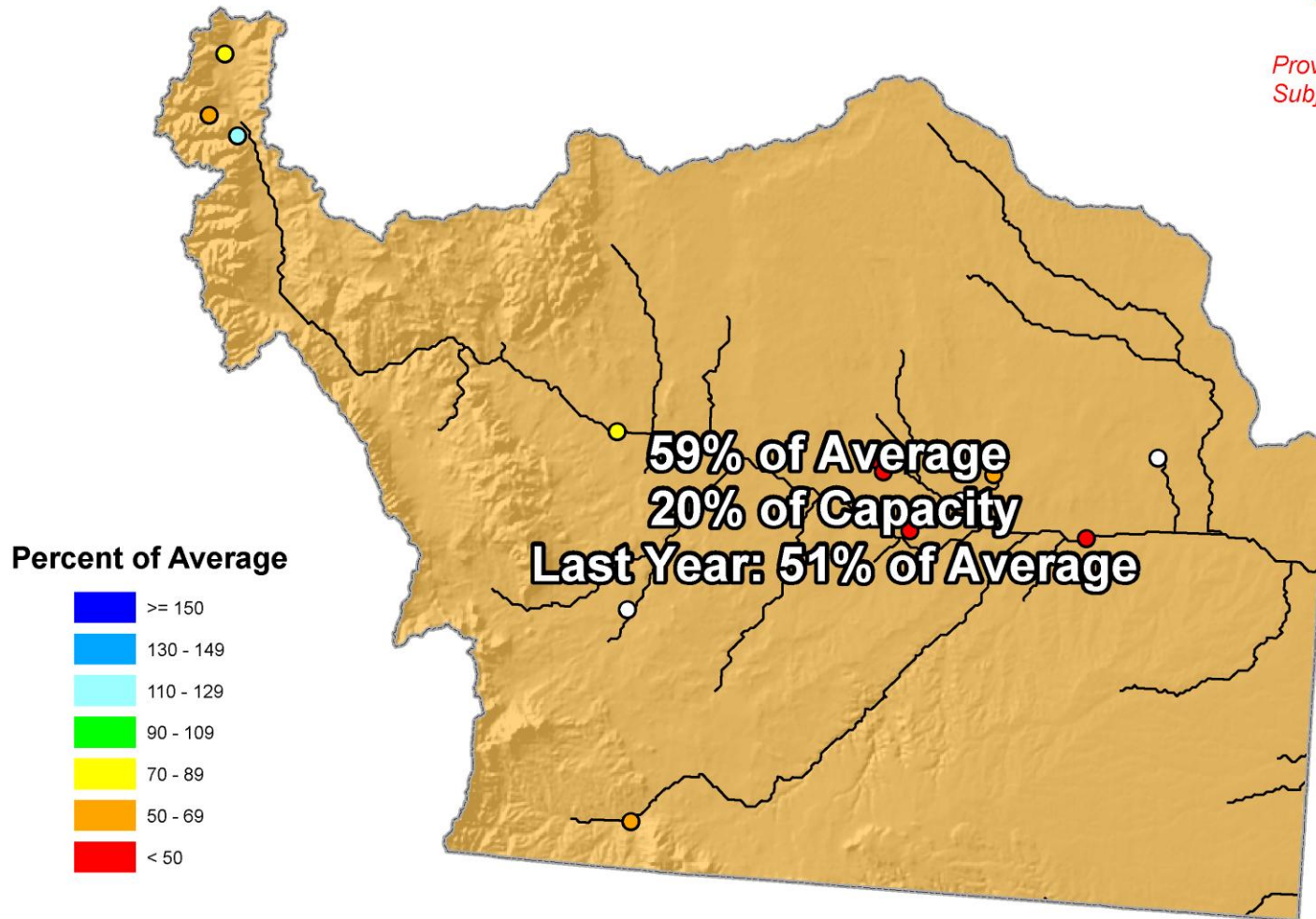
*Based on Provisional SNOTEL data as of Jan 21, 2014*



# Arkansas River Basin Reservoir Storage Map

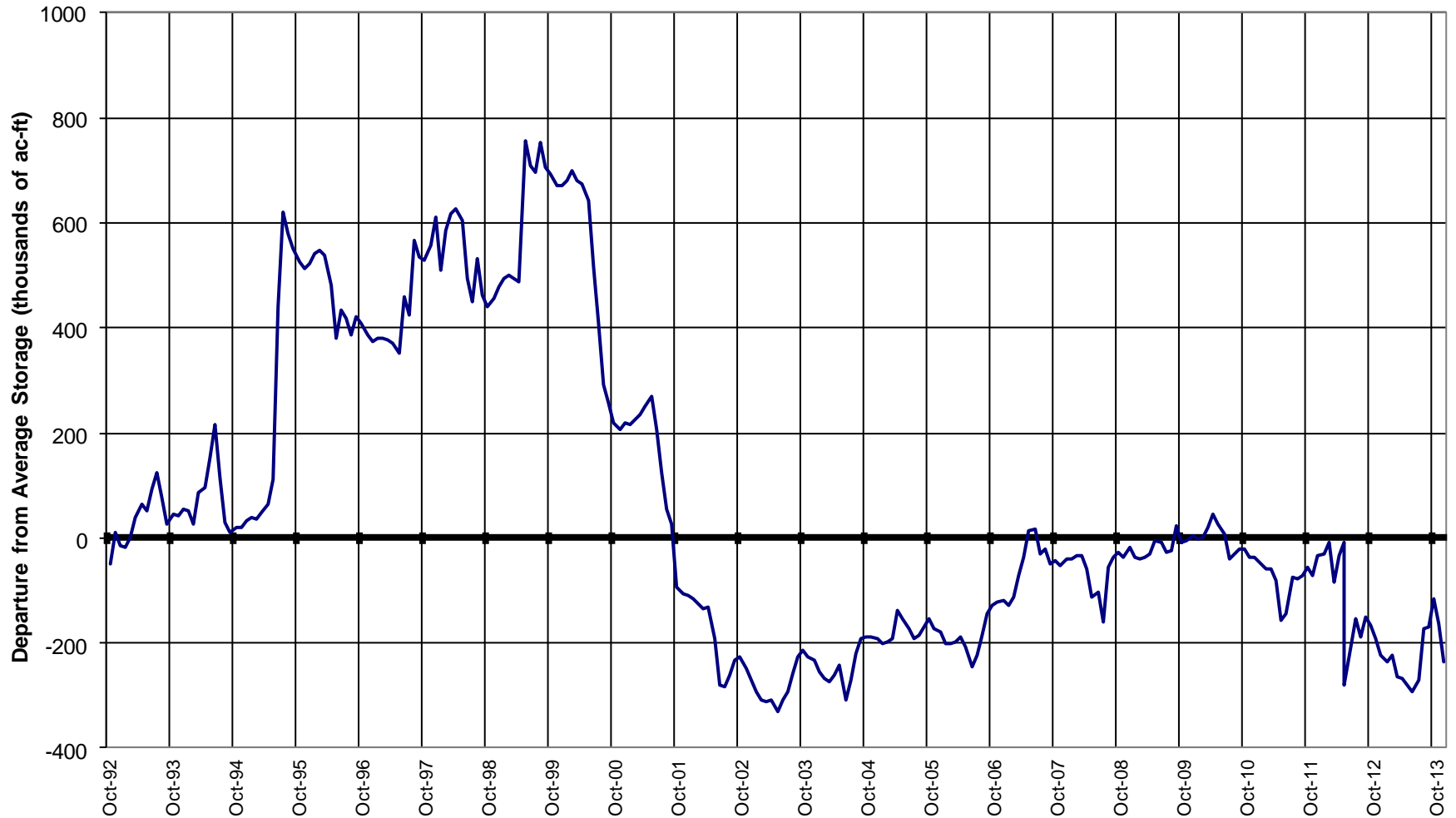


*Provisional Data  
Subject to Revision*



End of December 2013

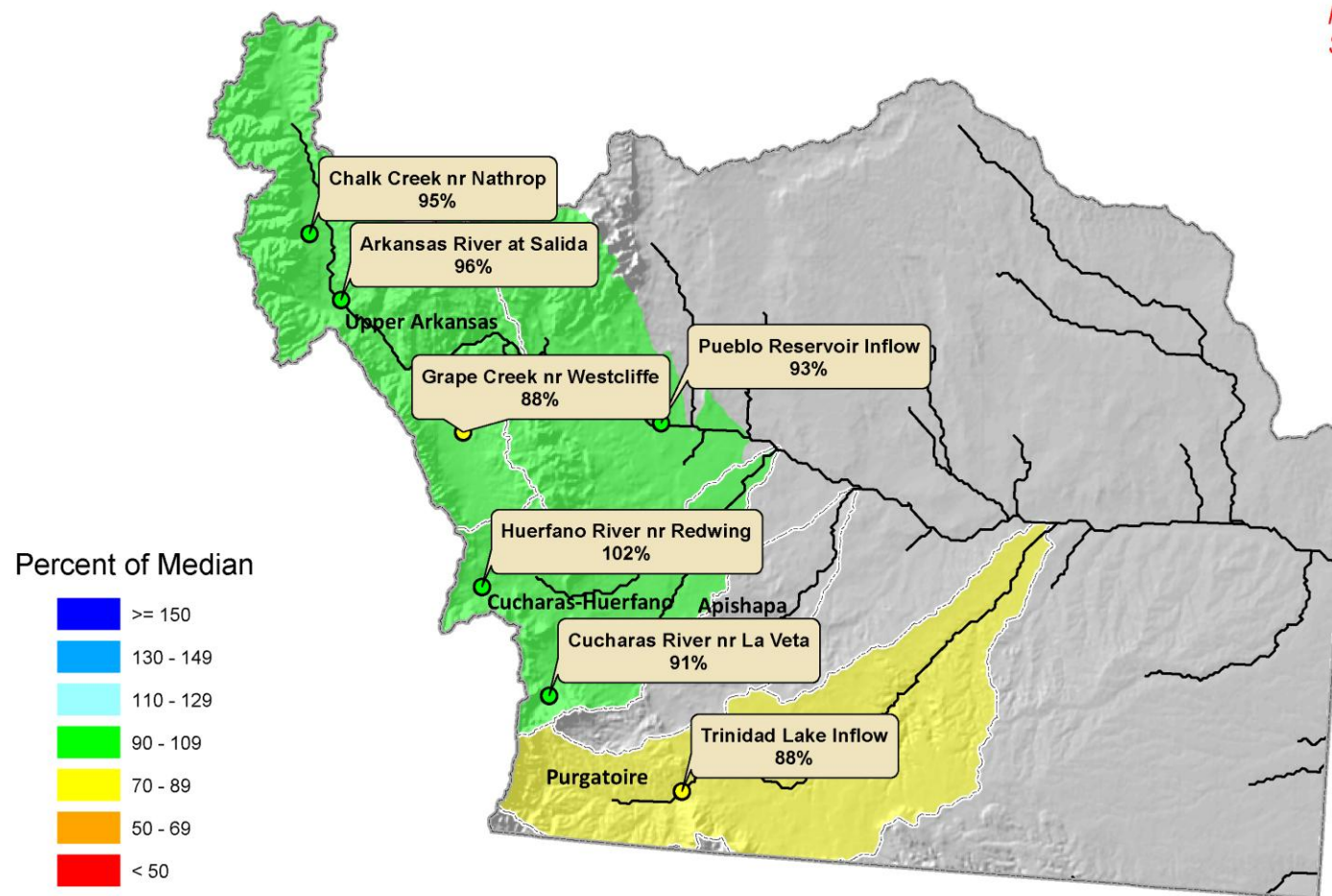
**ARKANSAS RIVER BASIN**  
**Reservoir Storage**  
**Departure from Average**



# Arkansas River Basin Streamflow Forecast Map



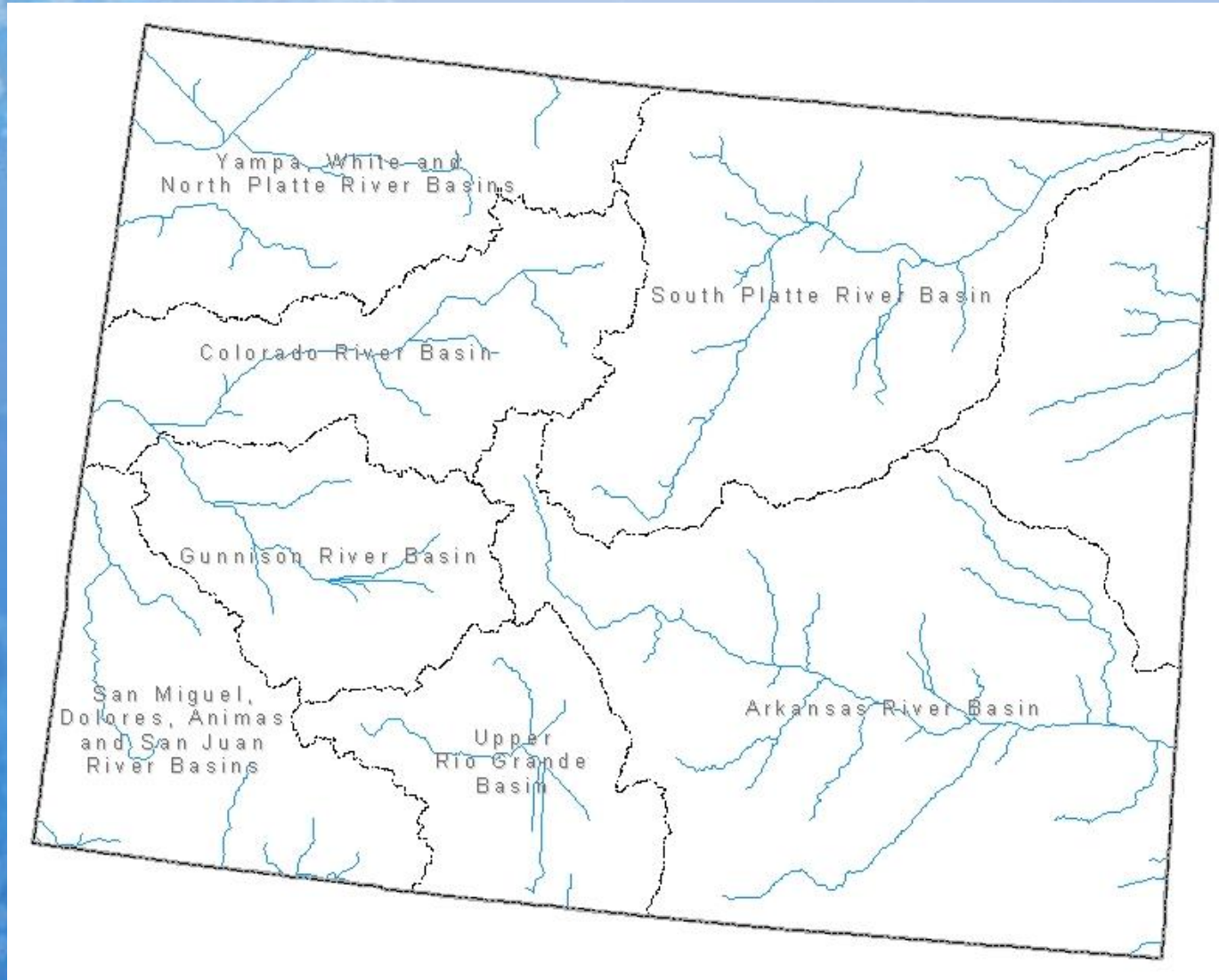
*Provisional Data  
Subject to Revision*



Current as of January 1, 2014



# Colorado Statewide Summary

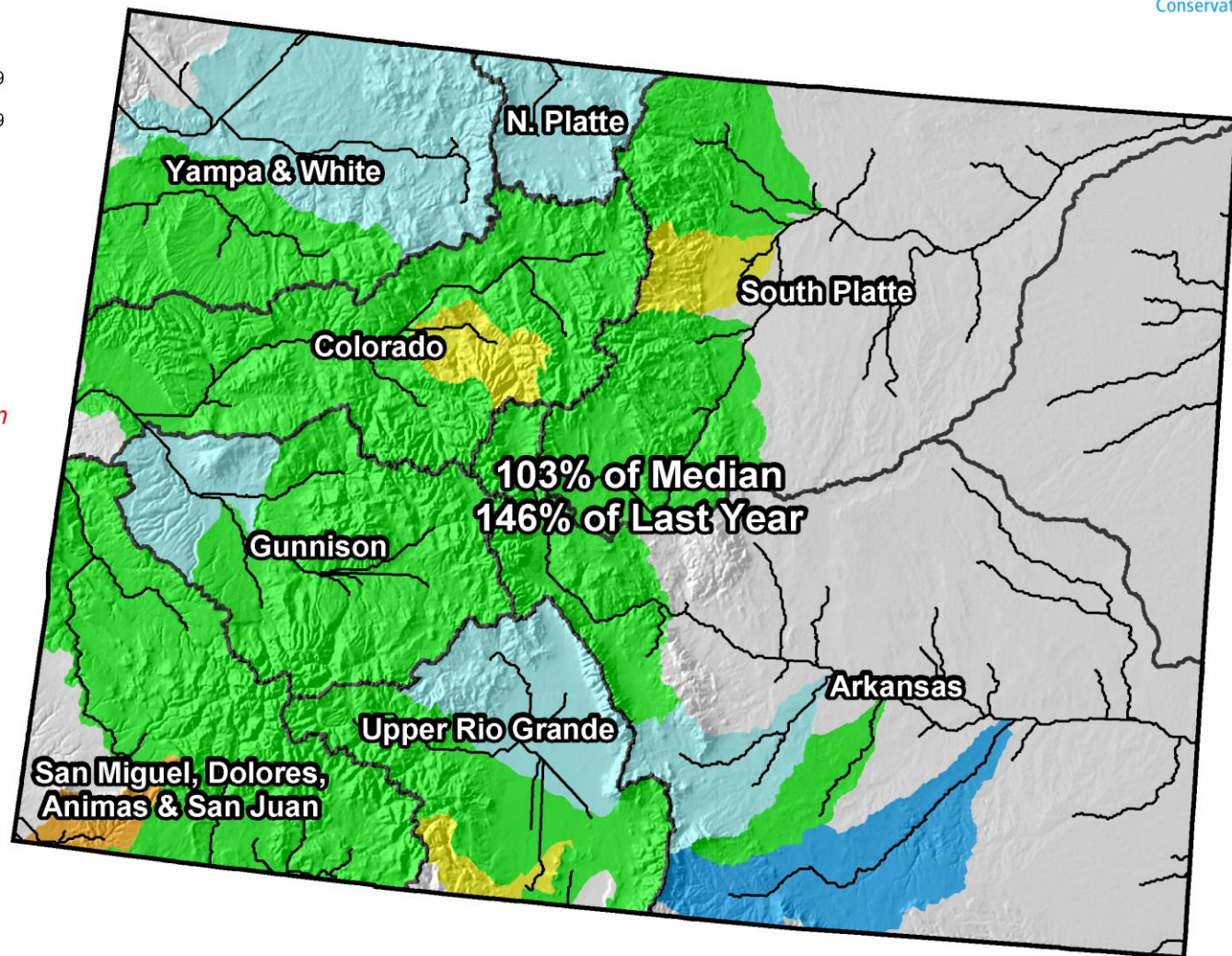


# Colorado Snowpack Map

## Percent of Median



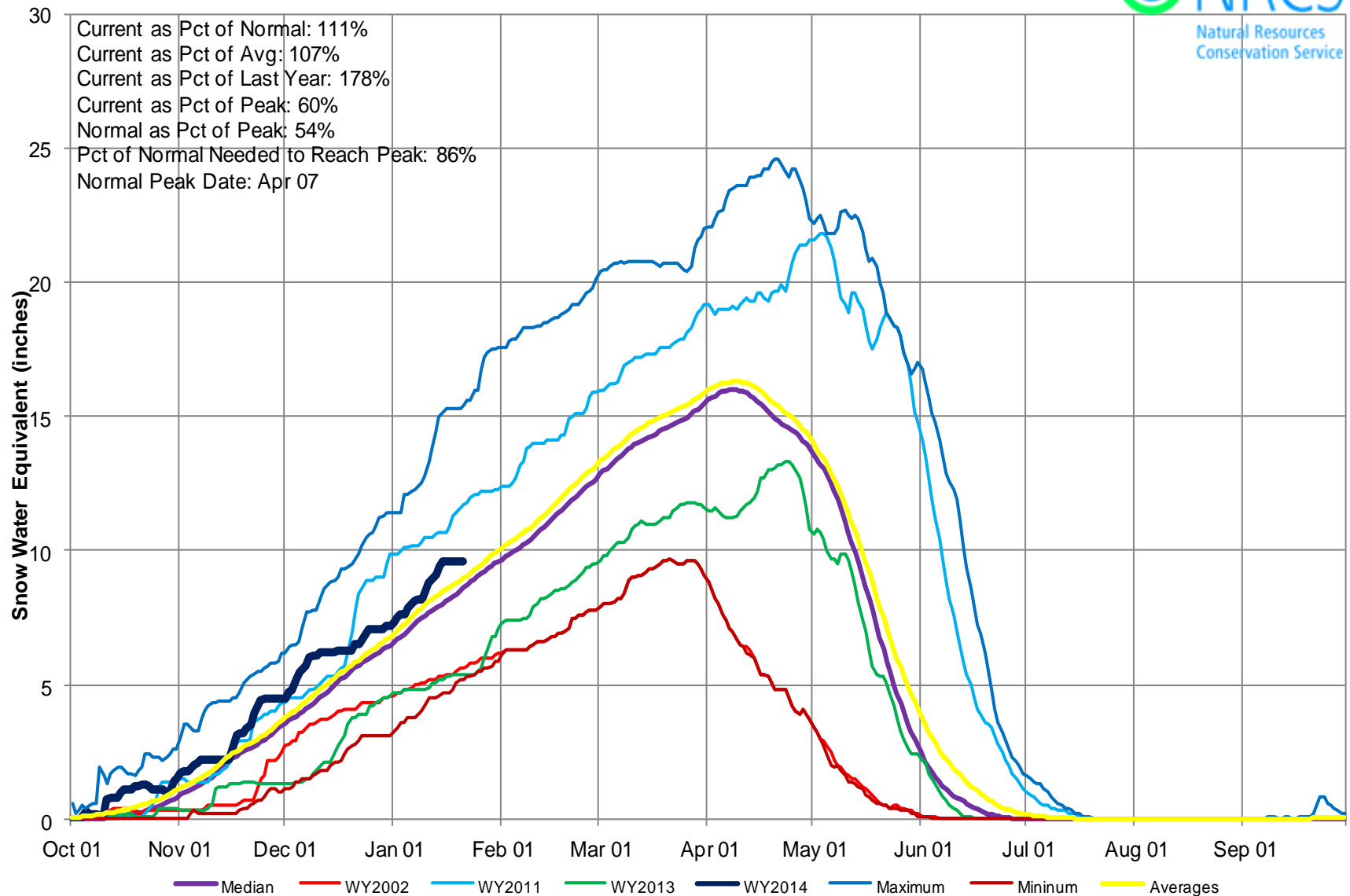
*Provisional Data  
Subject to Revision*



Current as of January 1, 2014

## Colorado Statewide High/Low Snowpack Summary

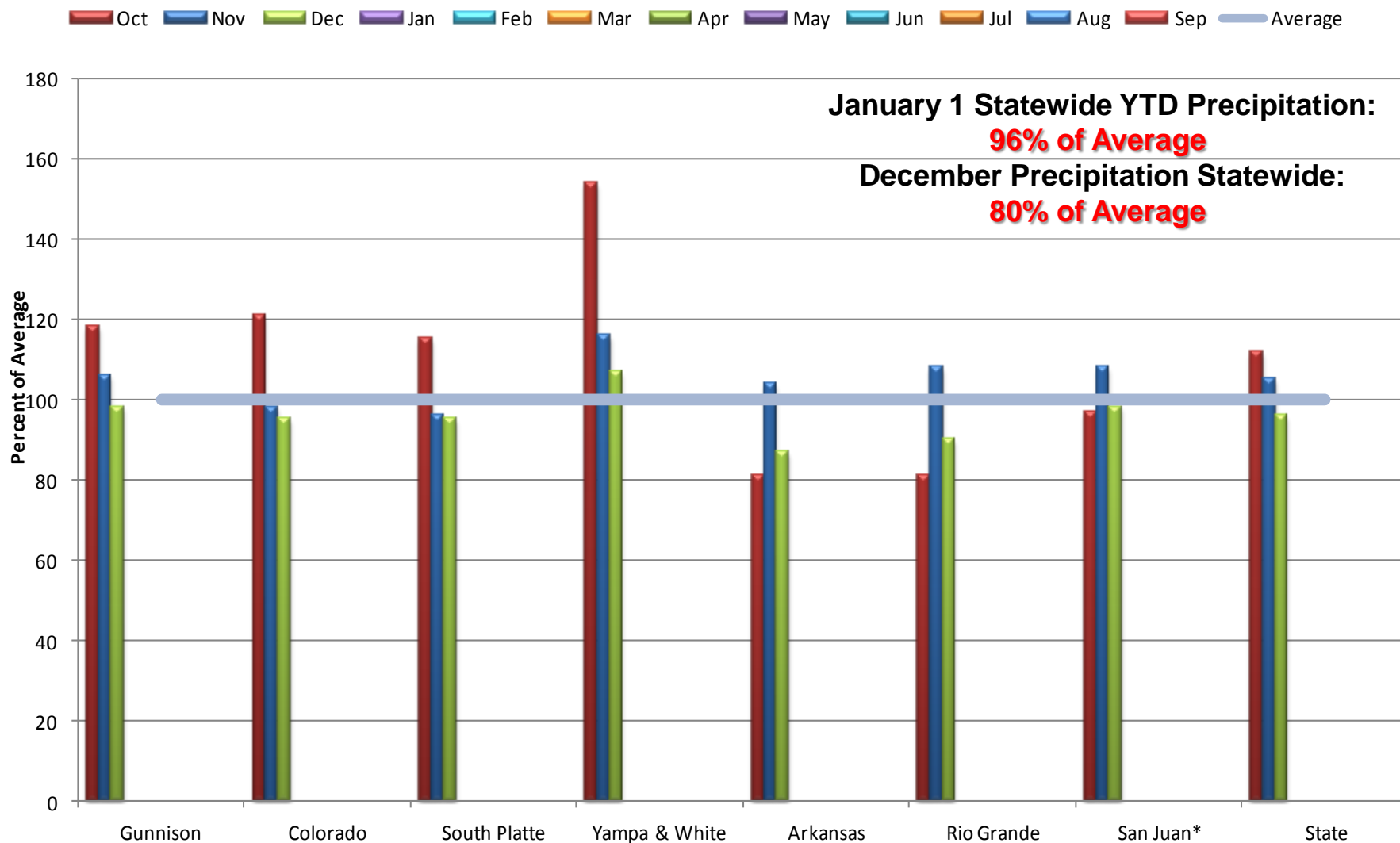
Based on Provisional SNOTEL data as of Jan 21, 2014





# Colorado Year-to-Date Precipitation Summary for WY2014

USDA Natural Resources Conservation Service

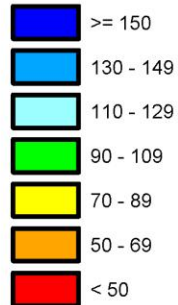


\*Includes Animas, Dolores, San Miguel Basins

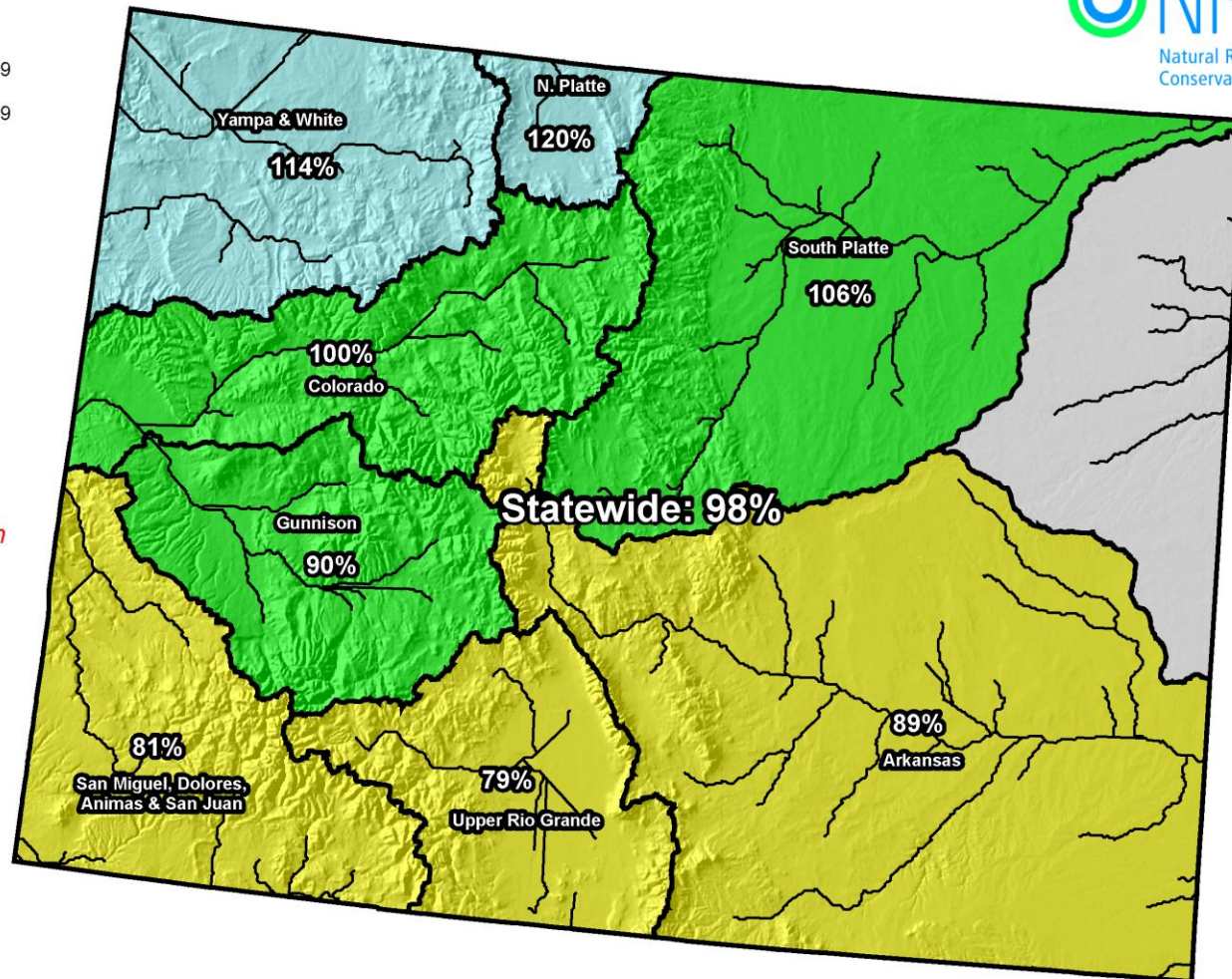


# Colorado SNOTEL Water Year-to-Date Precipitation Update Map

Percent of Average



*Provisional Data  
Subject to Revision*



Current as of Jan 21, 2014

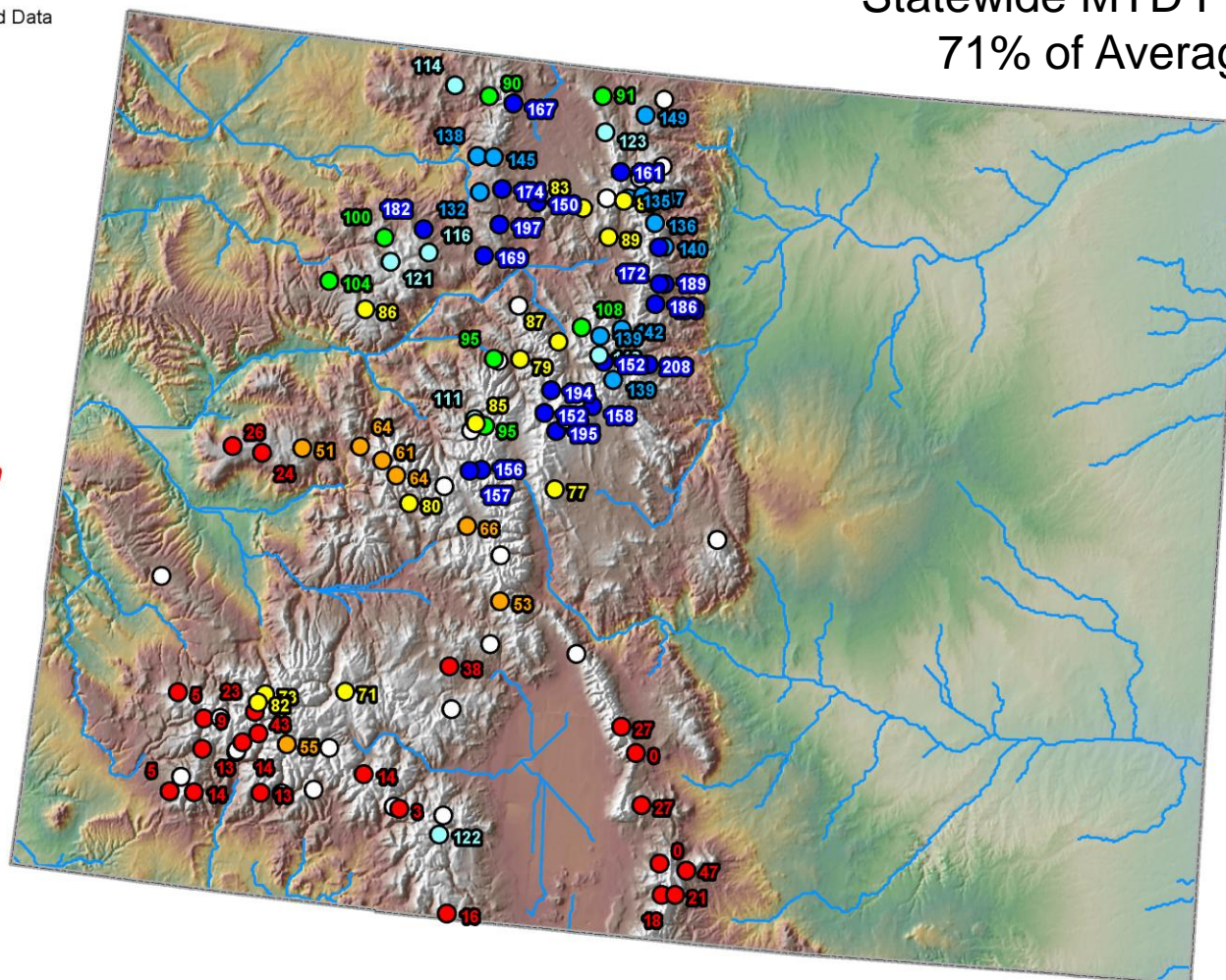


# Colorado SNOTEL Month-to-Date Precipitation

Percent of Average

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

*Provisional Data  
Subject to Revision*

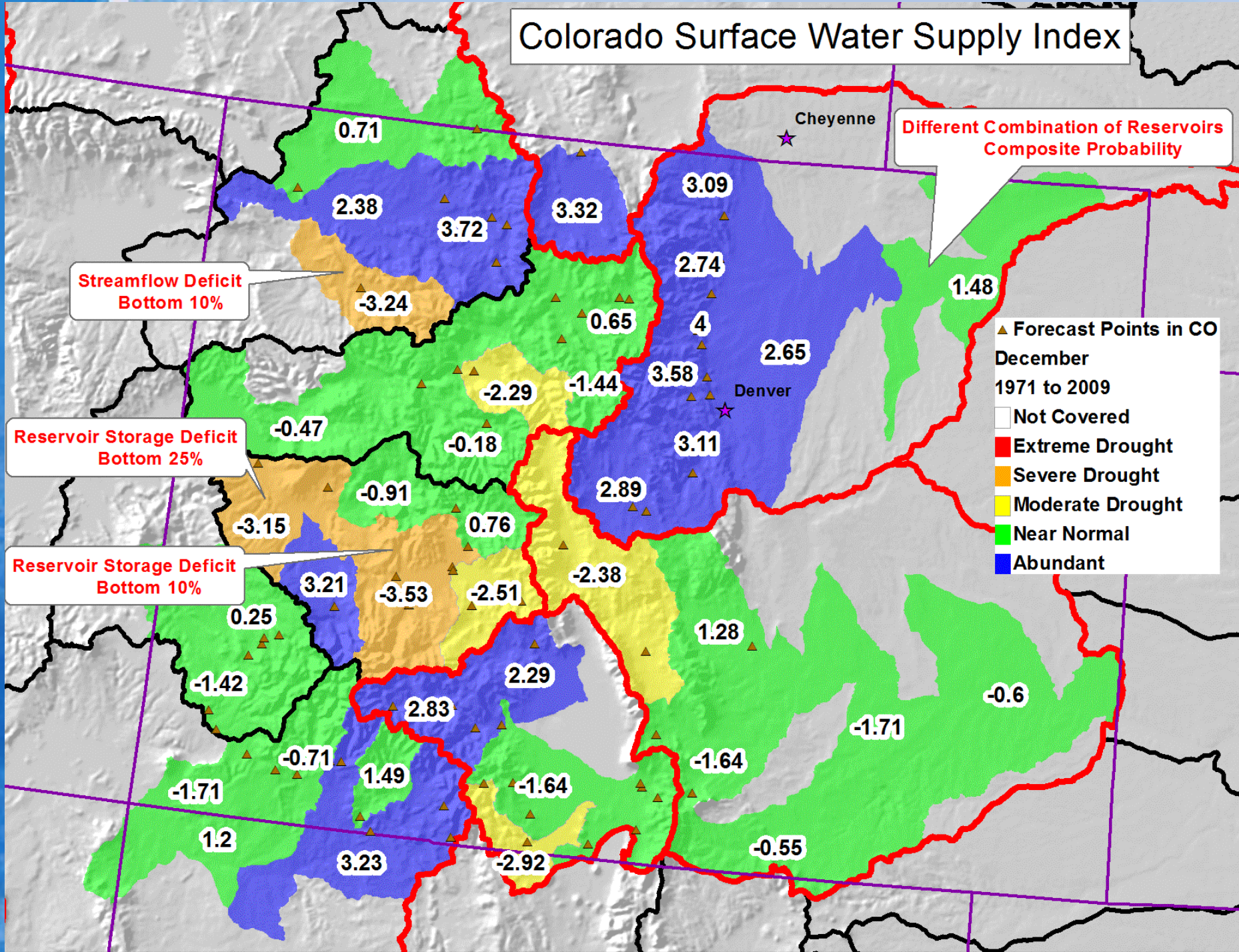


Statewide MTD PREC:  
71% of Average

Current as of Jan 21, 2014



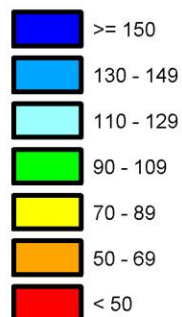
# Colorado Surface Water Supply Index



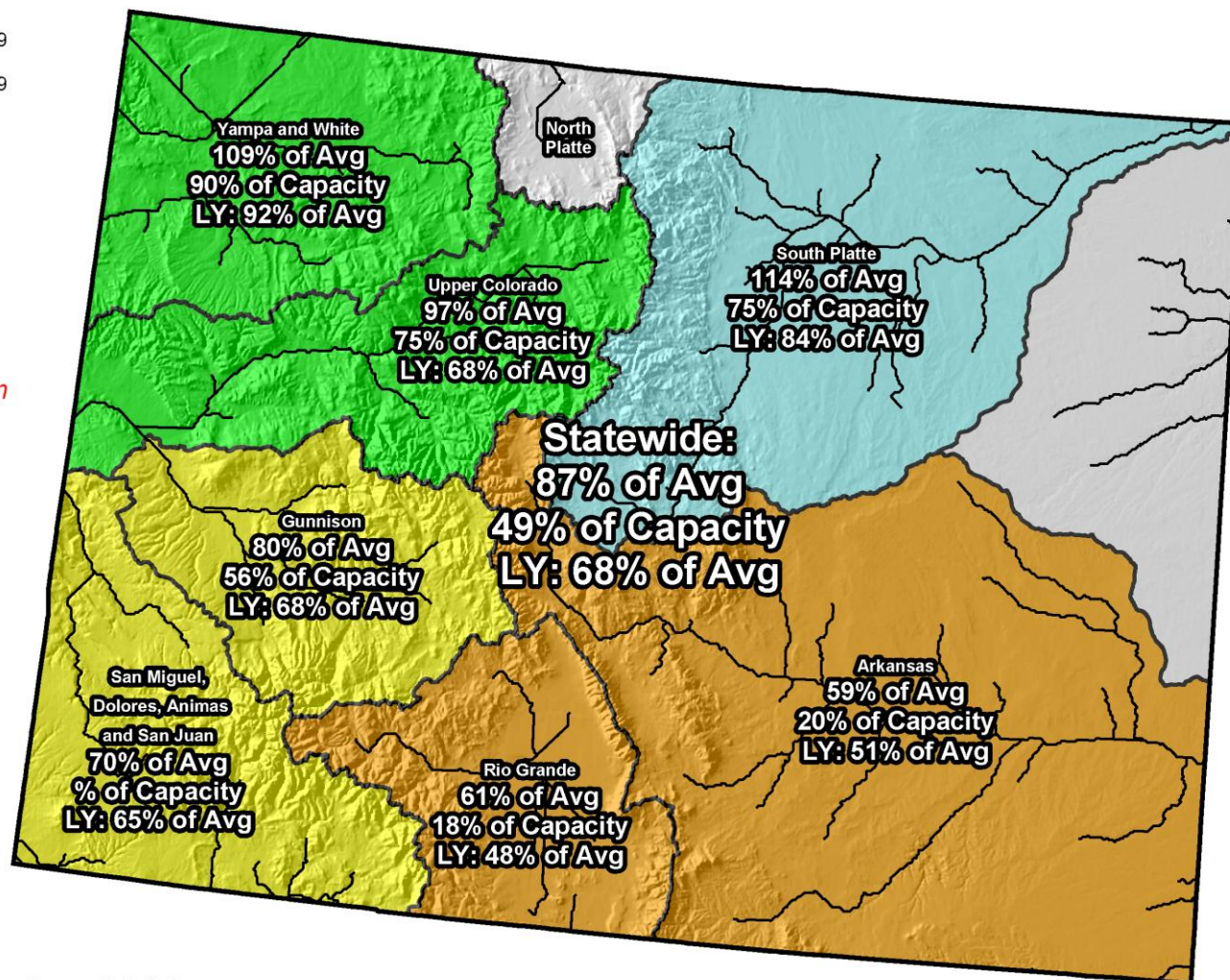


# Colorado Reservoir Storage Map

## Percent of Average



*Provisional Data  
Subject to Revision*



End of December 2013

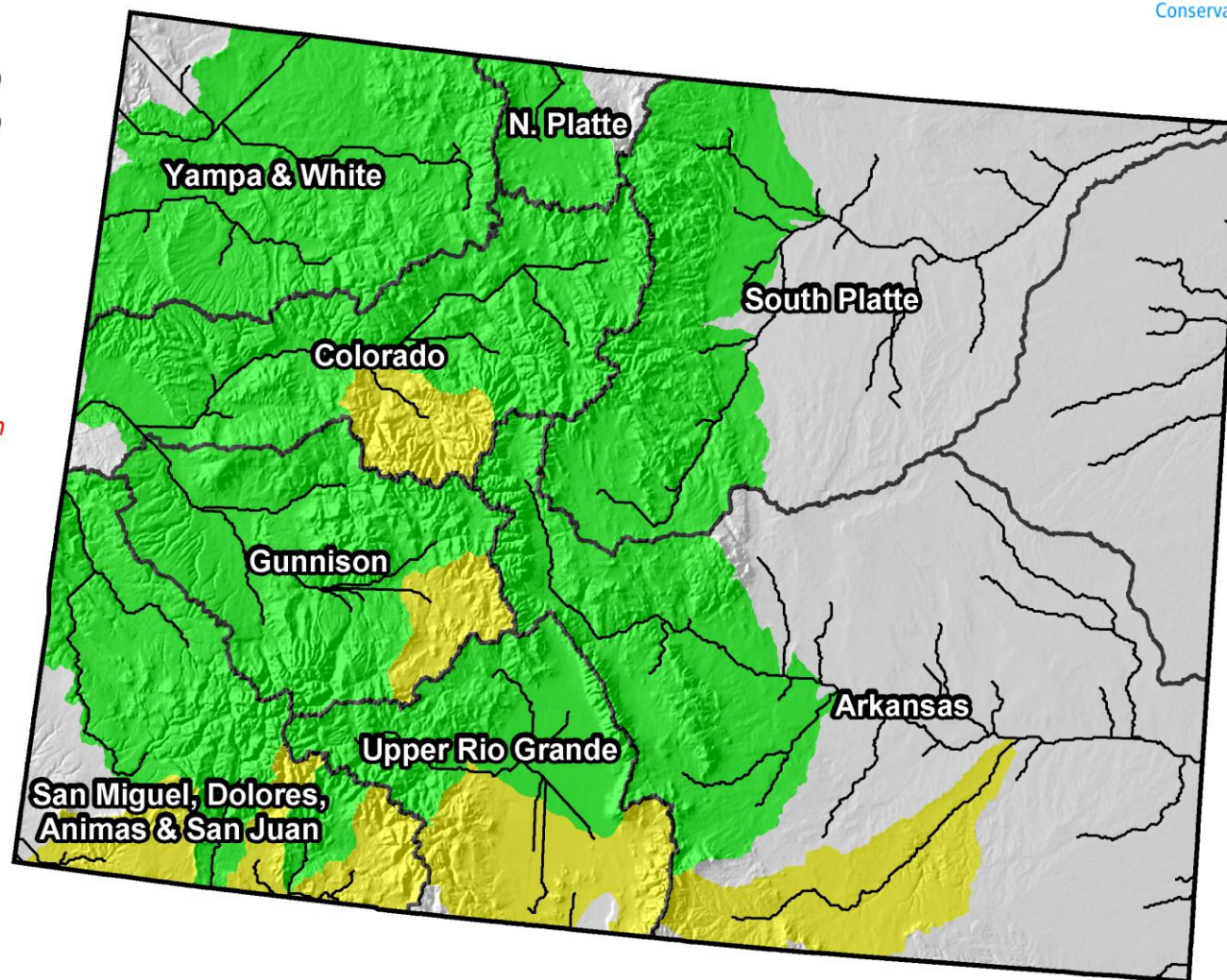


# Colorado Streamflow Forecast Map

## Percent of Median



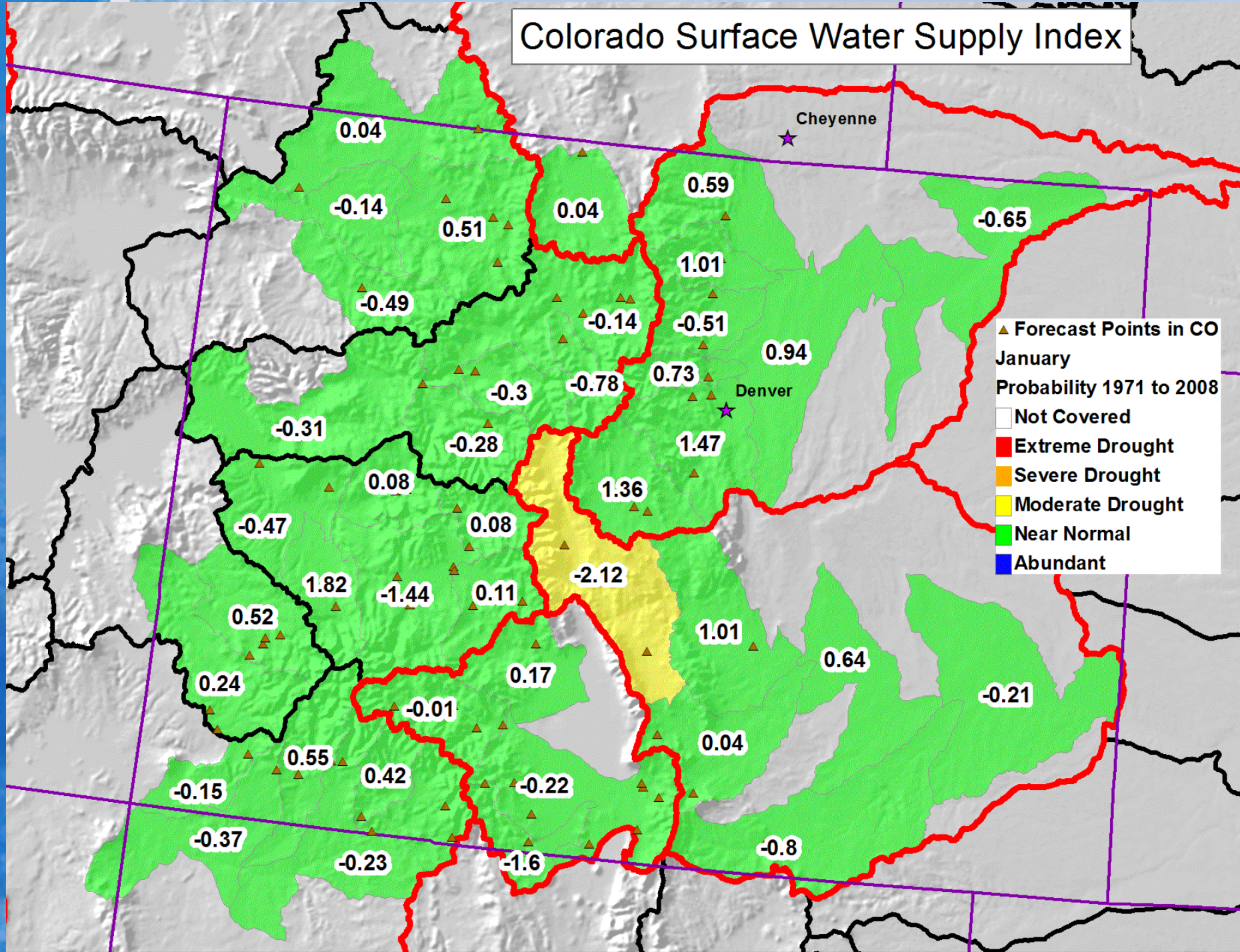
*Provisional Data  
Subject to Revision*



Current as of January 1, 2014



# Colorado Surface Water Supply Index





# Notes on the January SWSI

- SWSI inputs switch in January from reservoir storage and observed streamflow to reservoir storage and streamflow forecasts.
  - “More of a future component”
- This seems to have “evened” out all the HUC’s compared to December.
- The outlier in the Arkansas Headwaters is due to Homestake.

# WY2014 Summary

- OCT: The northern basins had well above average precipitation for the 2<sup>nd</sup> consecutive month. The southern basins were in the 80 -90% range. All basins received some good early season snow accumulation.
- NOV: Basins flip flopped with the southern basins seeing above avg precip and northern basins slightly below average. All basins still accumulating snow.
- DEC: Things dried up in the southwest part of the state in early December. Still ended the month with snowpack totals above to near normal across the state.
- JAN: The northern basins continue to accumulate snow at near normal rates but things have started to really dry up in the southern part of the state.