

NRCS – Snow Survey & Water Supply Forecasting

Water Availability Task Force Meeting June 20th, 2013

Mage Hultstrand

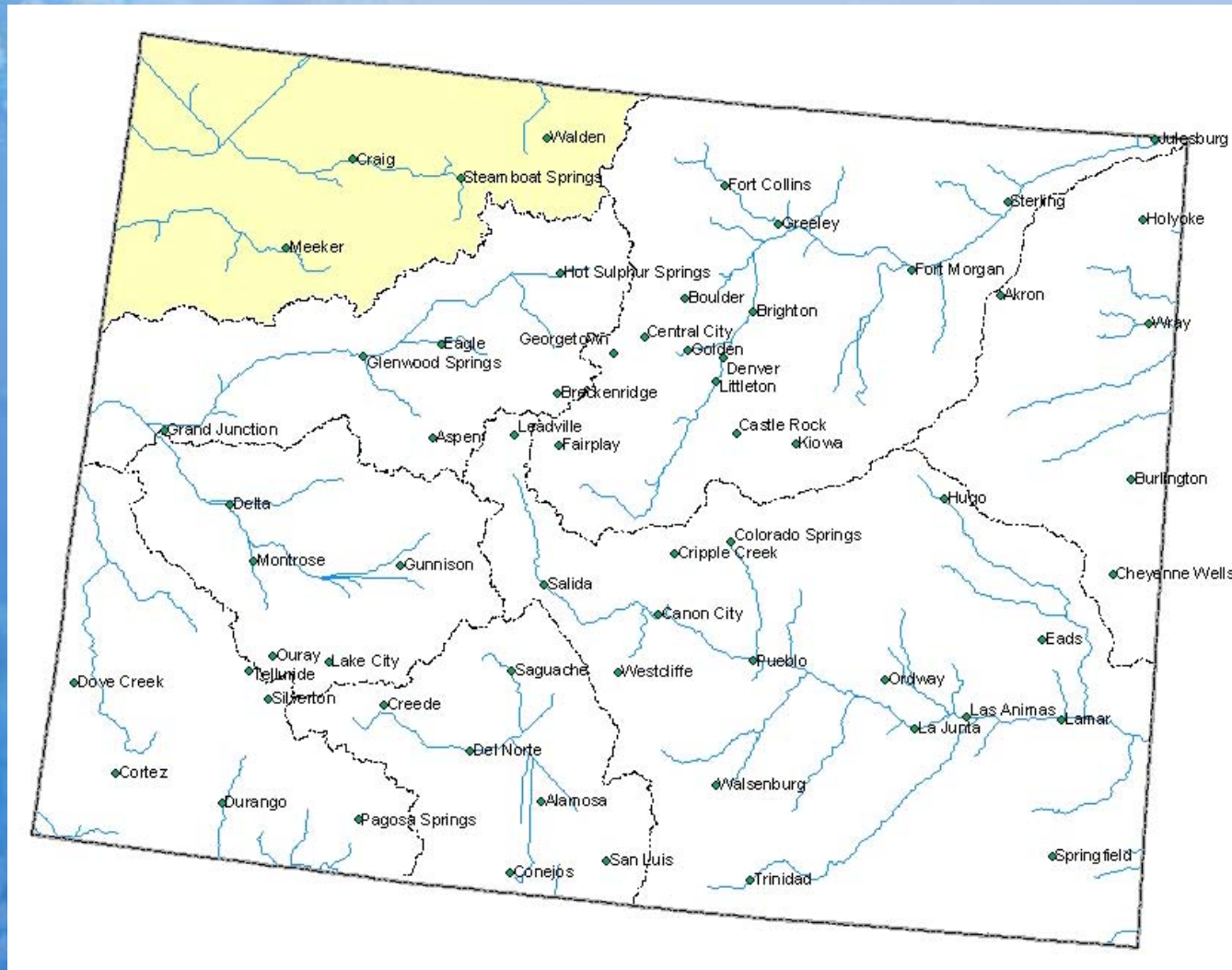
Assistant Snow Survey Supervisor

720-544-2855

mage.hultstrand@co.usda.gov

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

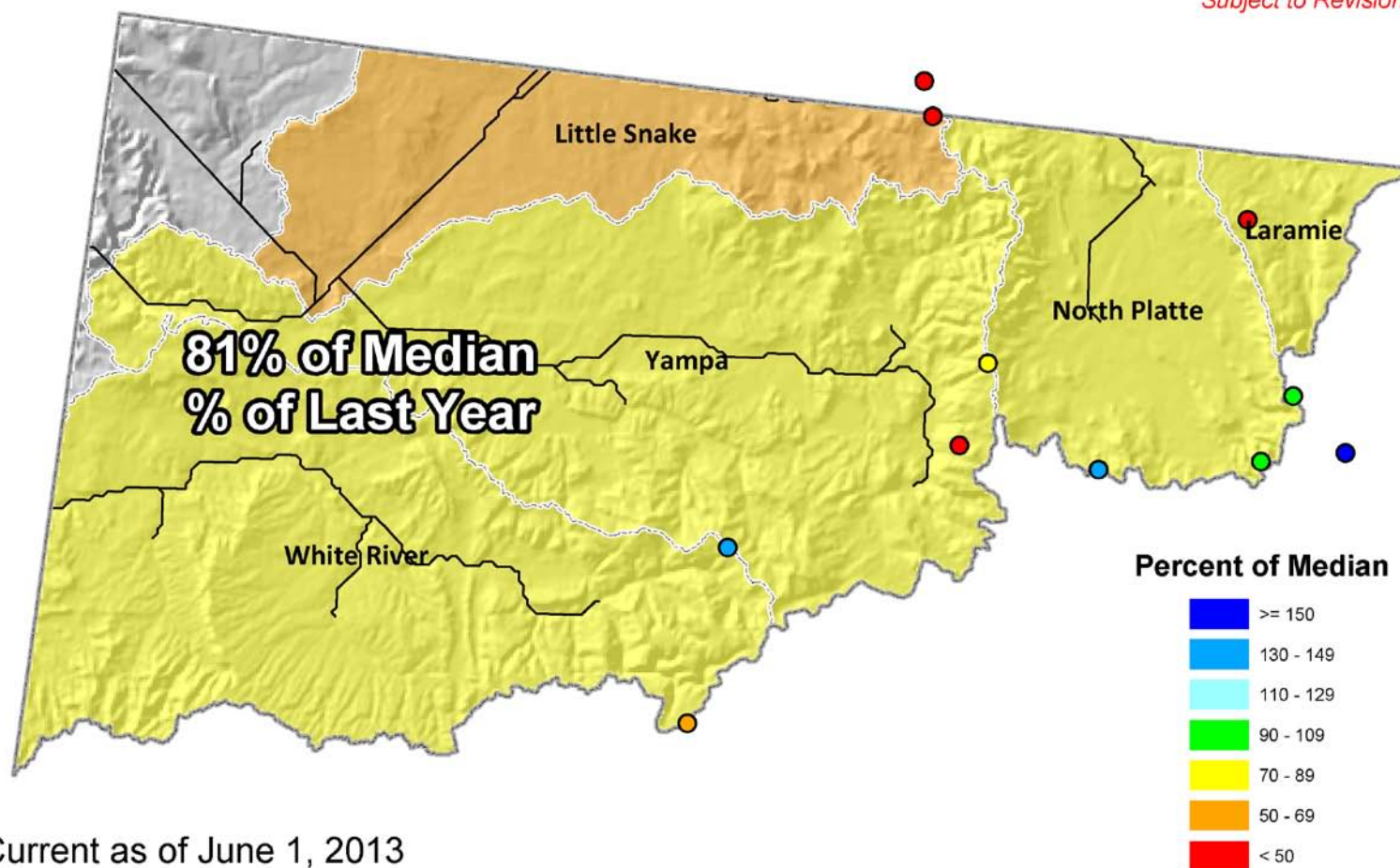
Yampa, White & North Platte River Basins Summary



Yampa, White and North Platte River Basins Snowpack Map



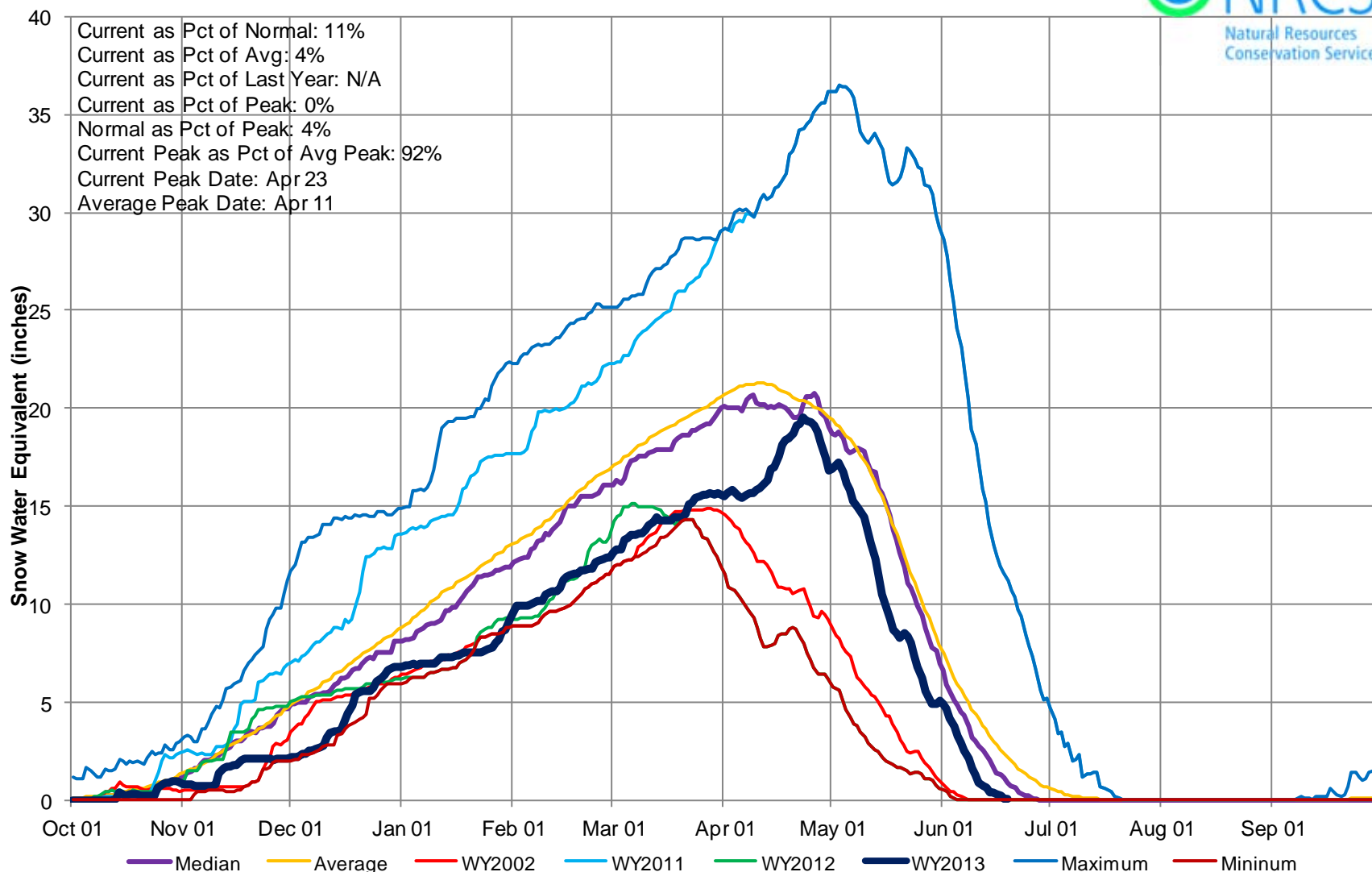
*Provisional Data
Subject to Revision*



Current as of June 1, 2013

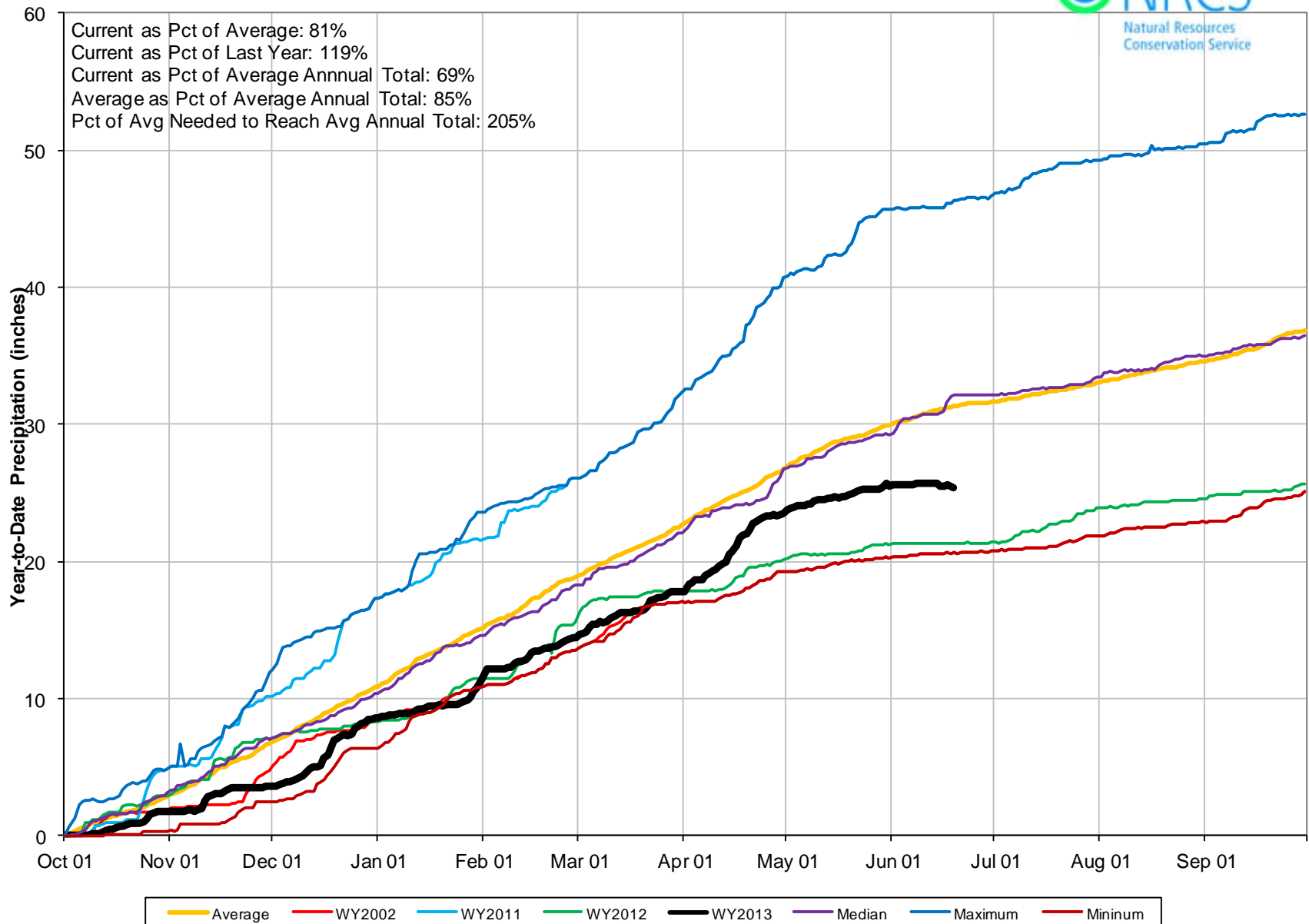
Yampa, White and North Platte River Basins High/Low Snowpack Summary

Based on Provisional SNOTEL data as of Jun 19, 2013



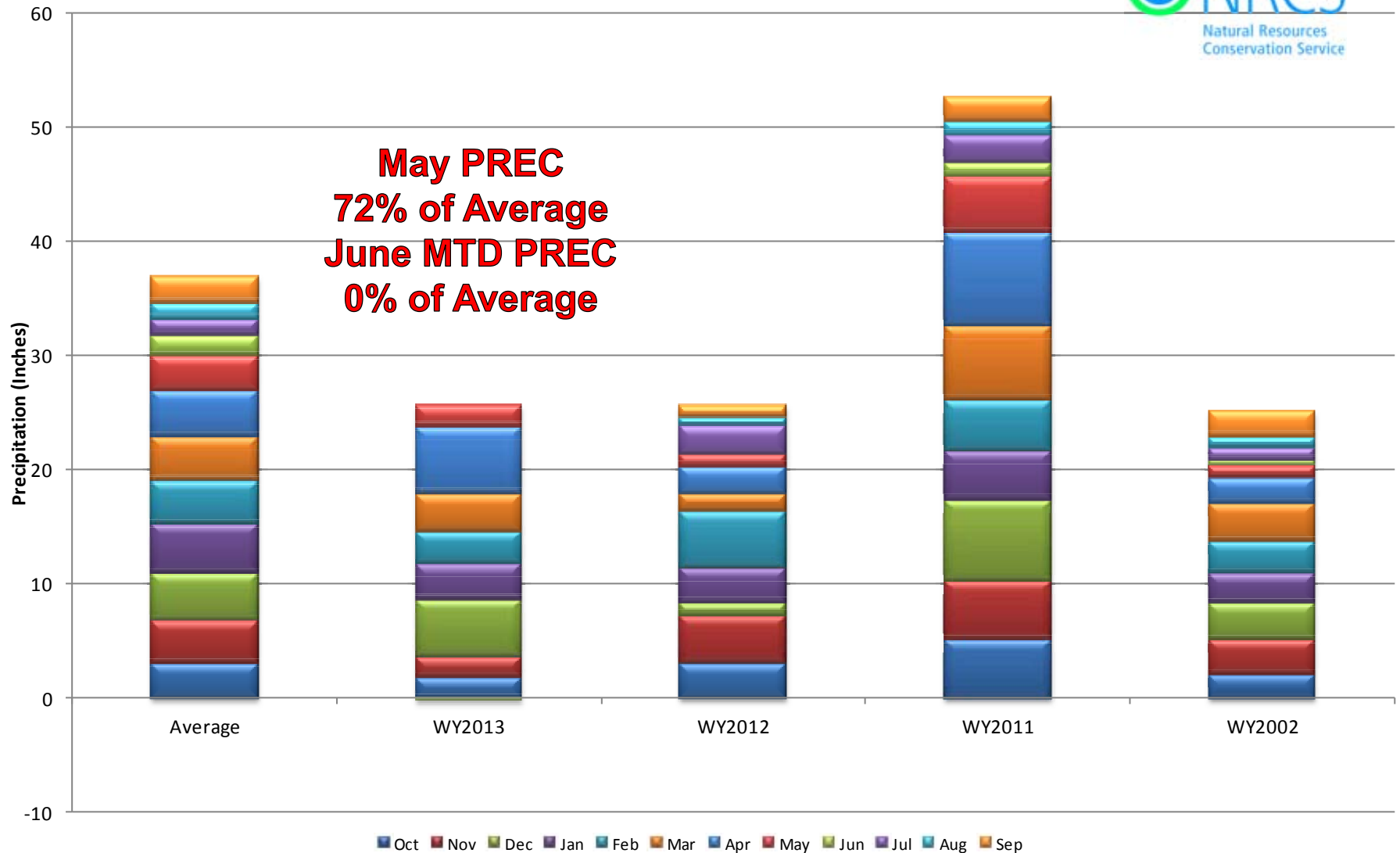
Yampa and White River Basins High/Low Year-to-Date Precipitation Summary

Based on Provisional SNOTEL data as of Jun 19, 2013



Yampa and White River Basins High/Low Monthly Precipitation Summary

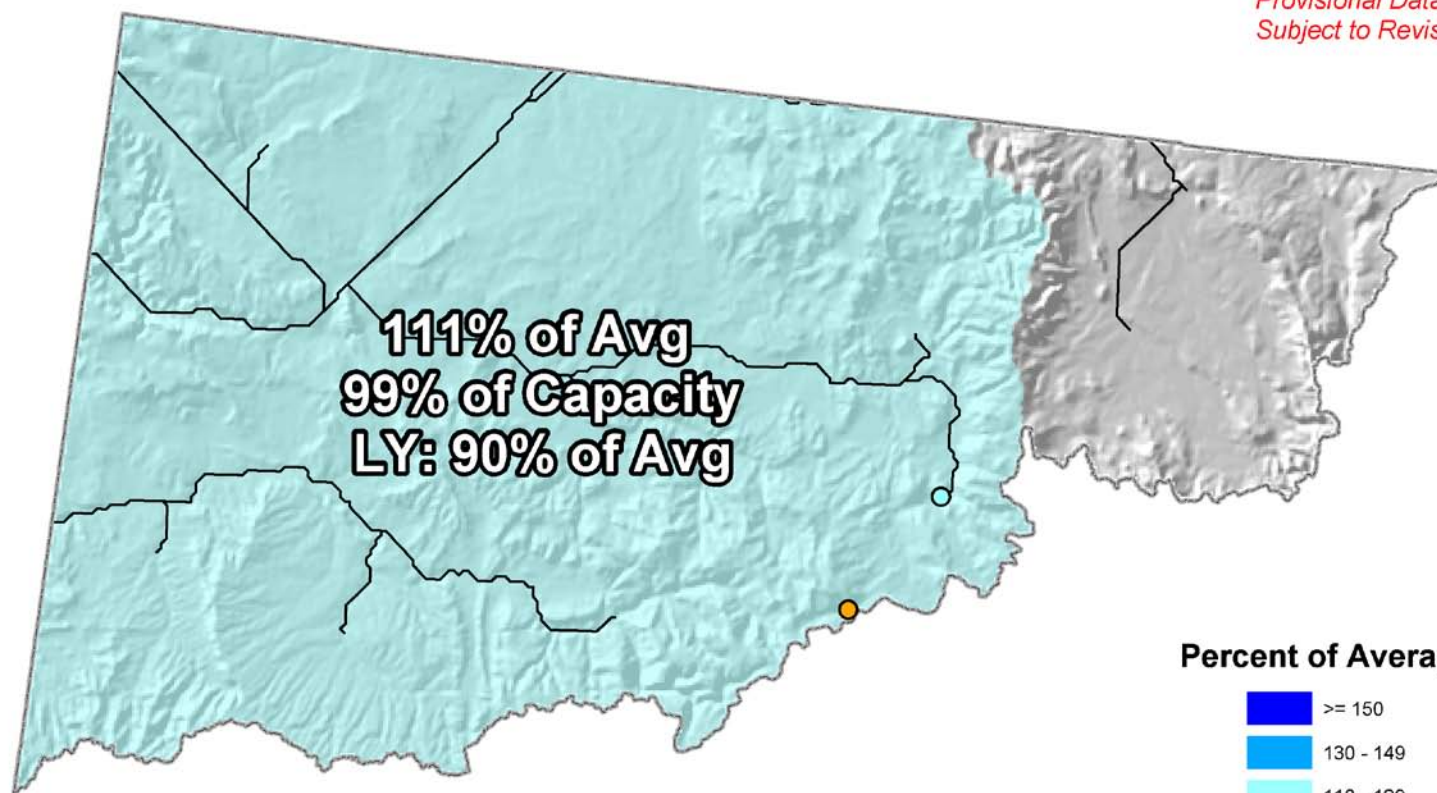
Based on Provisional SNOTEL data as of Jun 19, 2013



Yampa & White River Basins Reservoir Storage Map

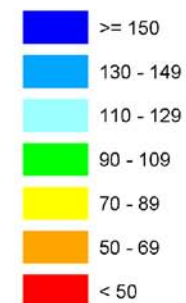


*Provisional Data
Subject to Revision*



**111% of Avg
99% of Capacity
LY: 90% of Avg**

Percent of Average

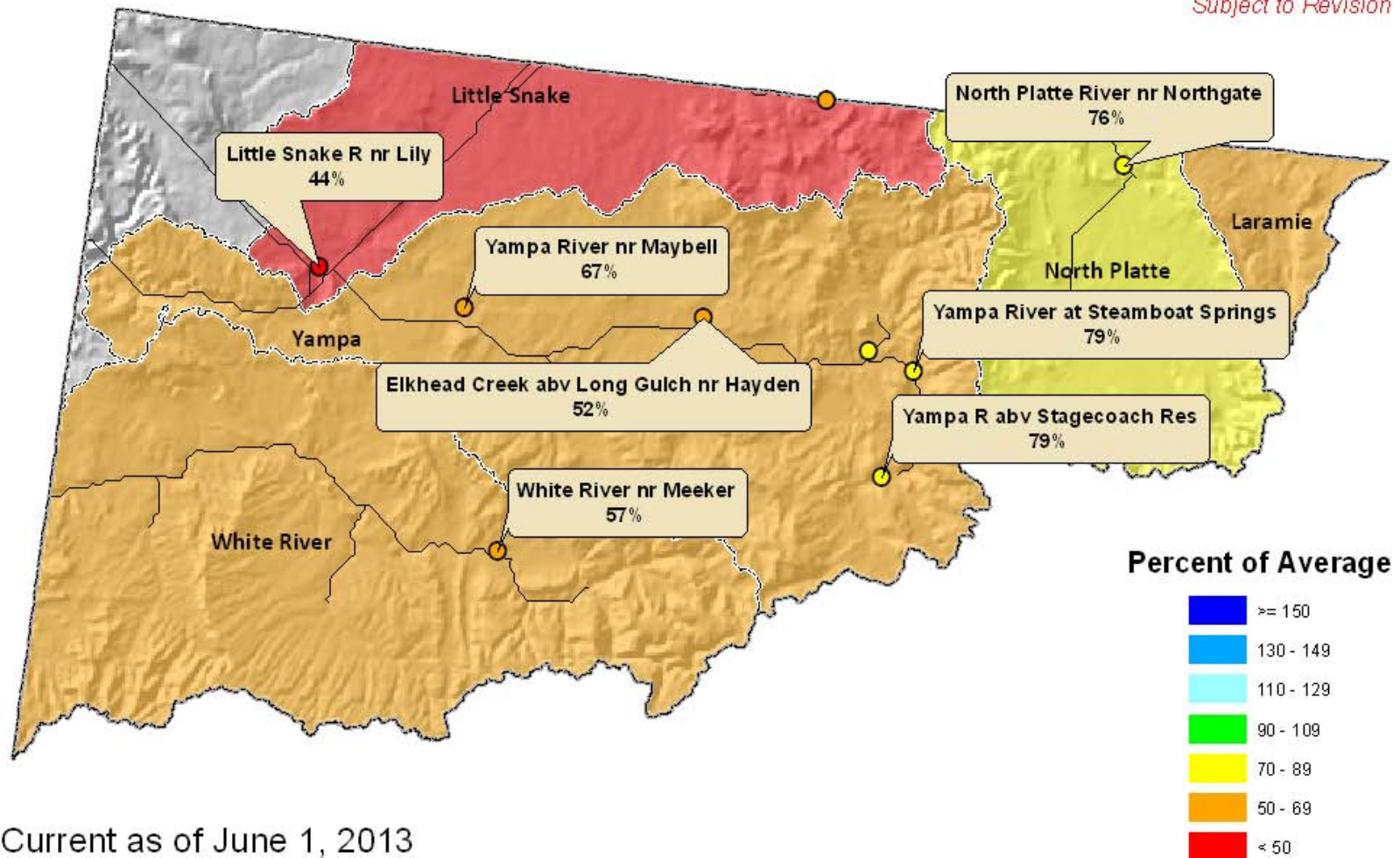


End of May 2013

Yampa, White and North Platte River Basins Streamflow Map

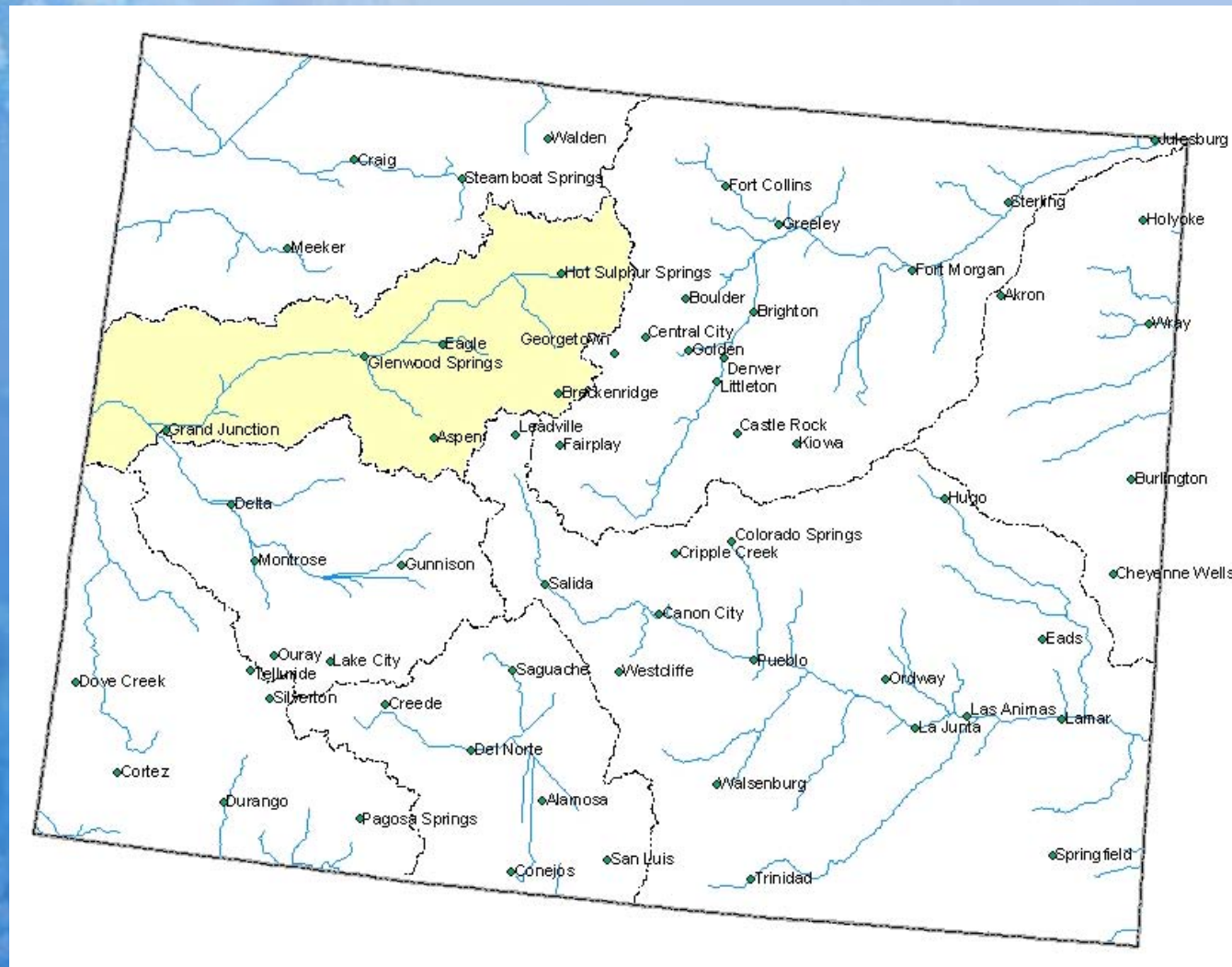


*Provisional Data
Subject to Revision*



Current as of June 1, 2013

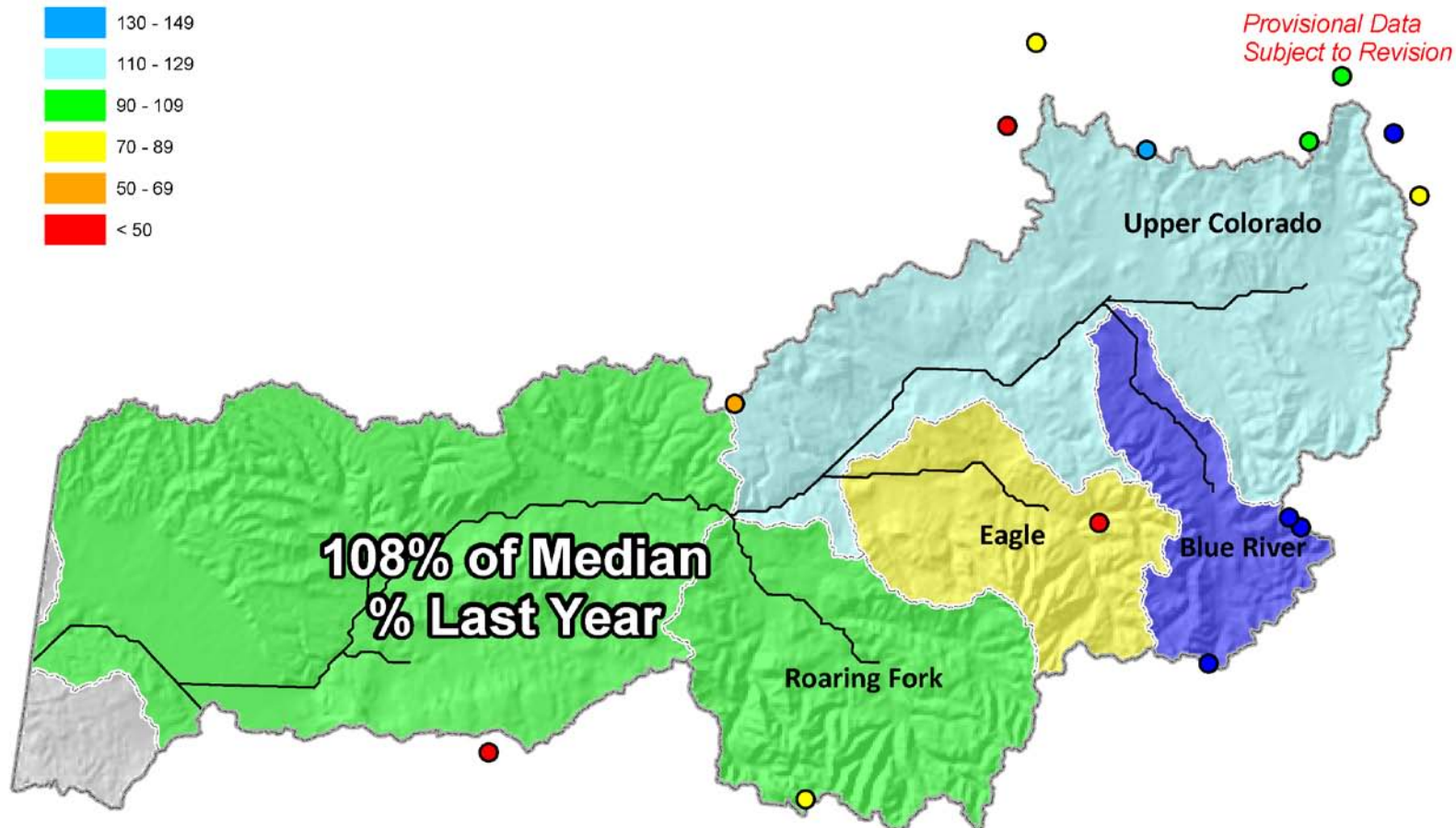
Colorado River Basin Summary



Colorado River Basin Snowpack Map



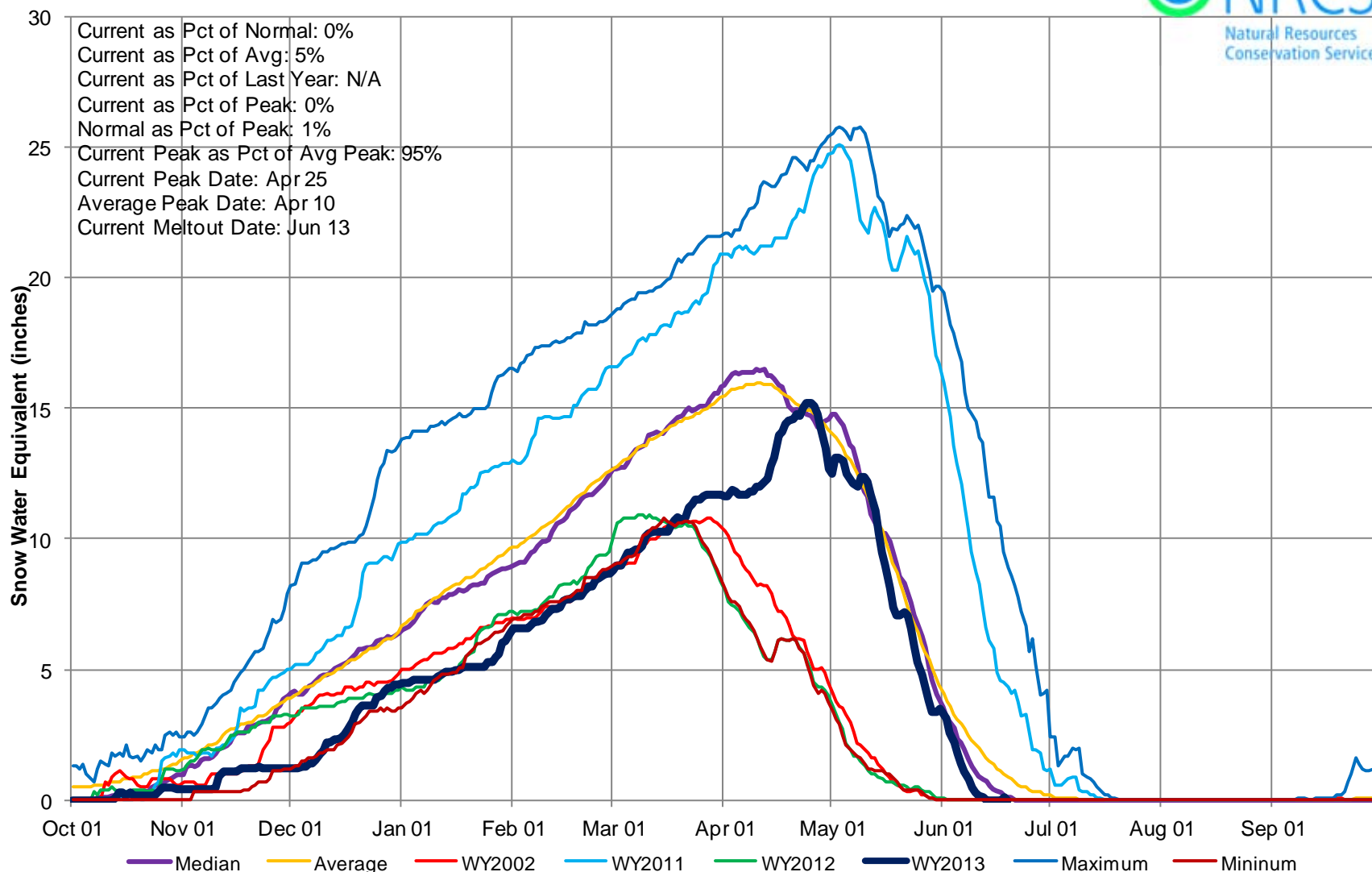
Percent of Median



Current as of June 1, 2013

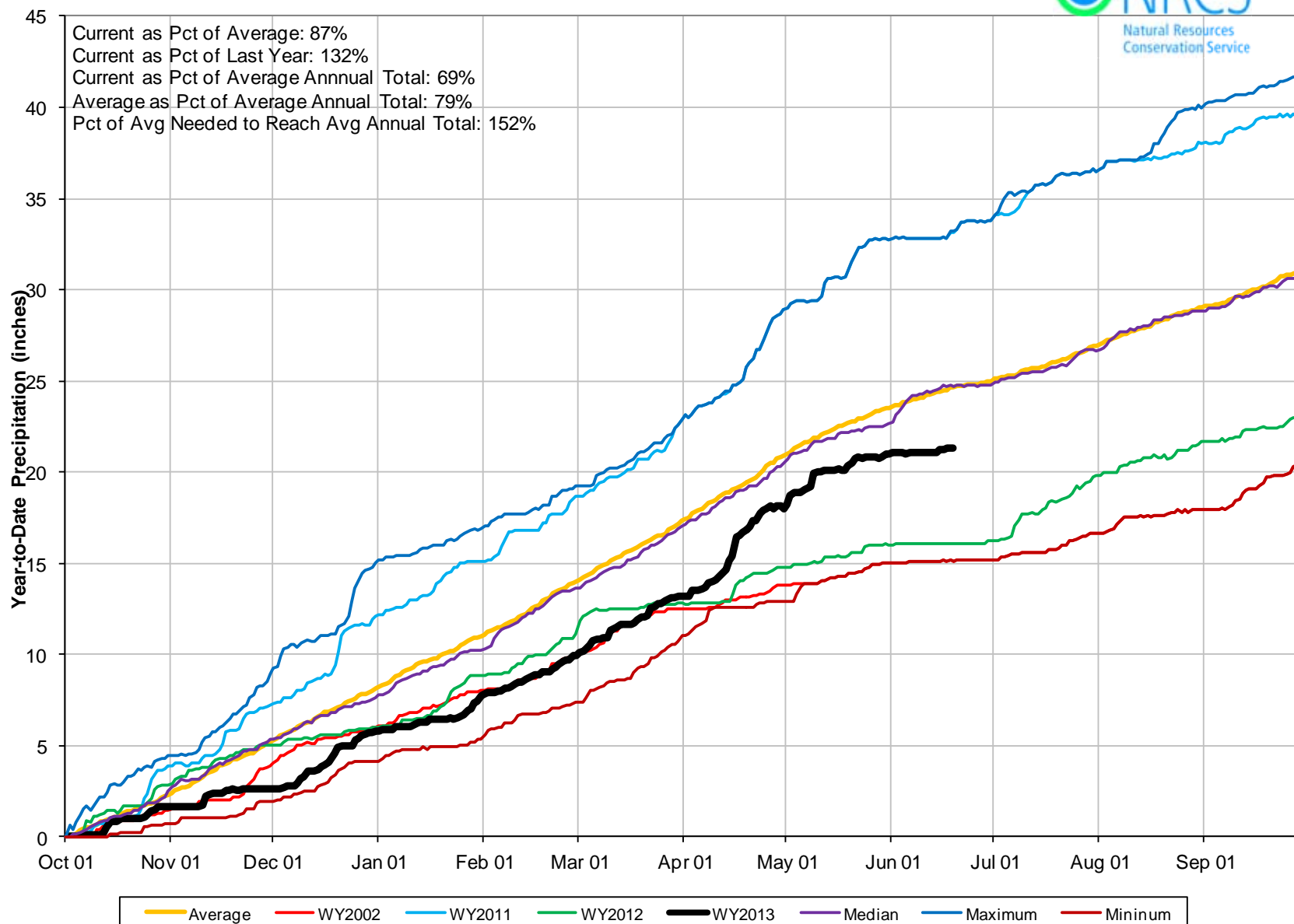
Upper Colorado River Basin High/Low Snowpack Summary

Based on Provisional SNOTEL data as of Jun 19, 2013



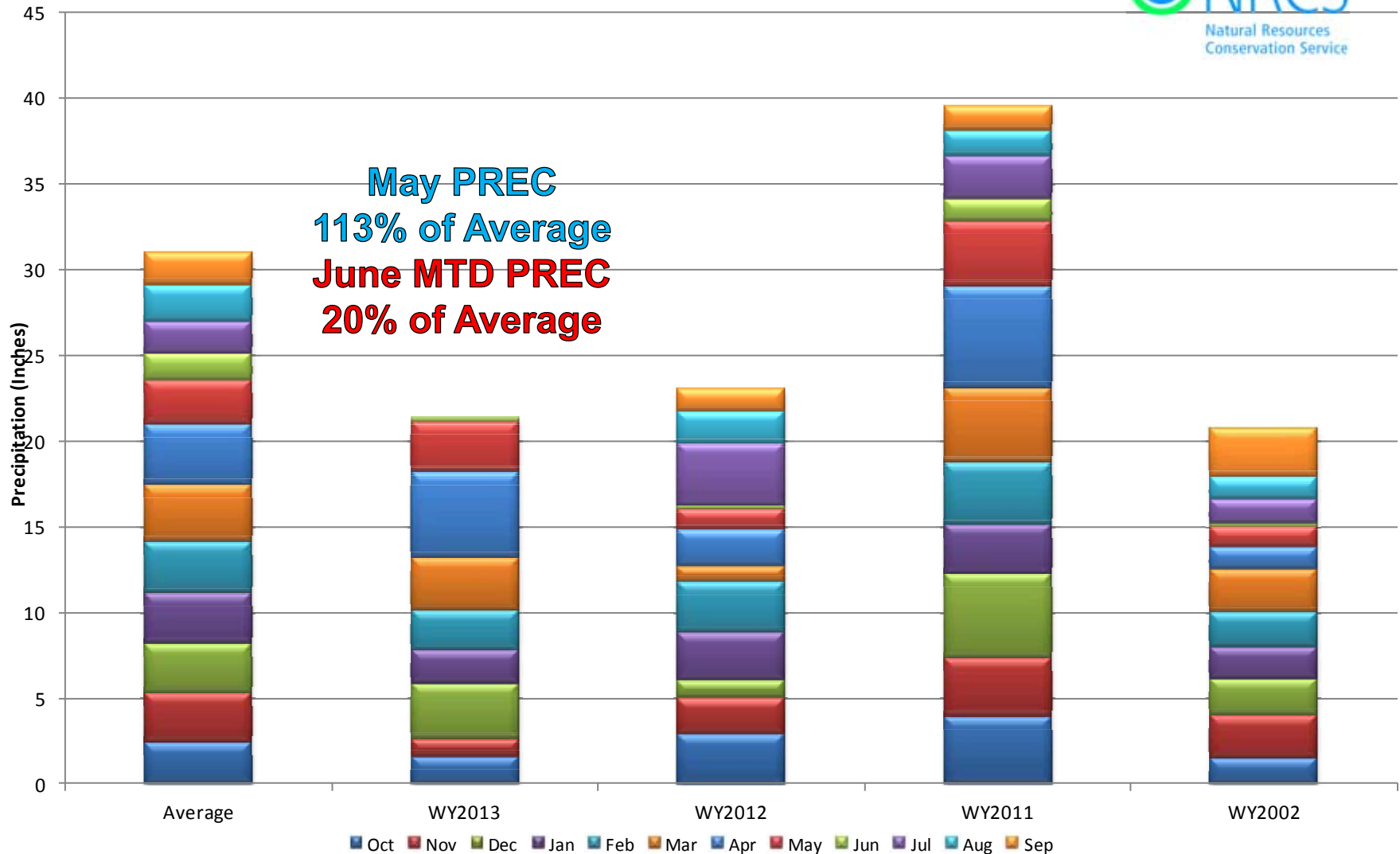
Upper Colorado River Basin High/Low Year-to-Date Precipitation Summary

Based on Provisional SNOTEL data as of Jun 19, 2013



Upper Colorado River Basin High/Low Monthly Precipitation Summary

Based on Provisional SNOTEL data as of Jun 19, 2013



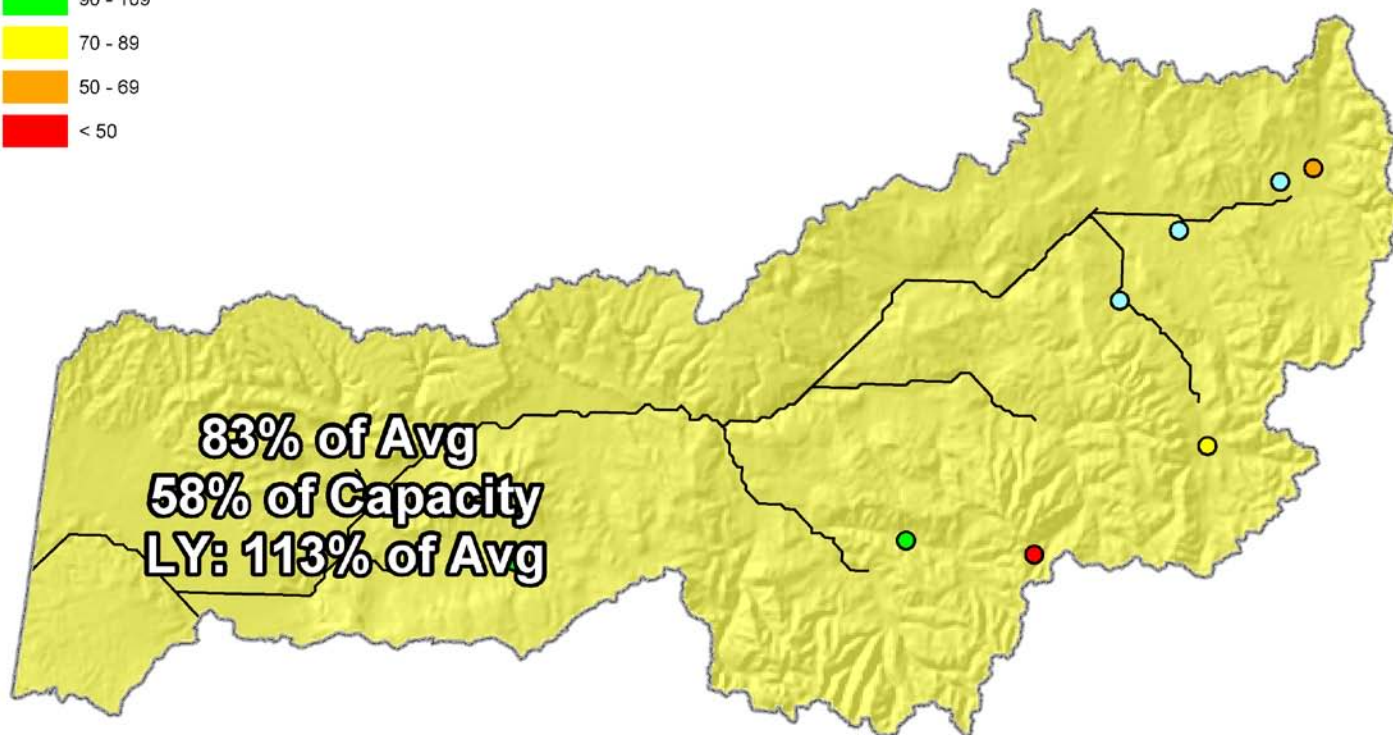
Colorado River Basin Reservoir Storage Map



Percent of Average



*Provisional Data
Subject to Revision*

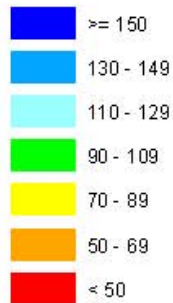


End of May 2013

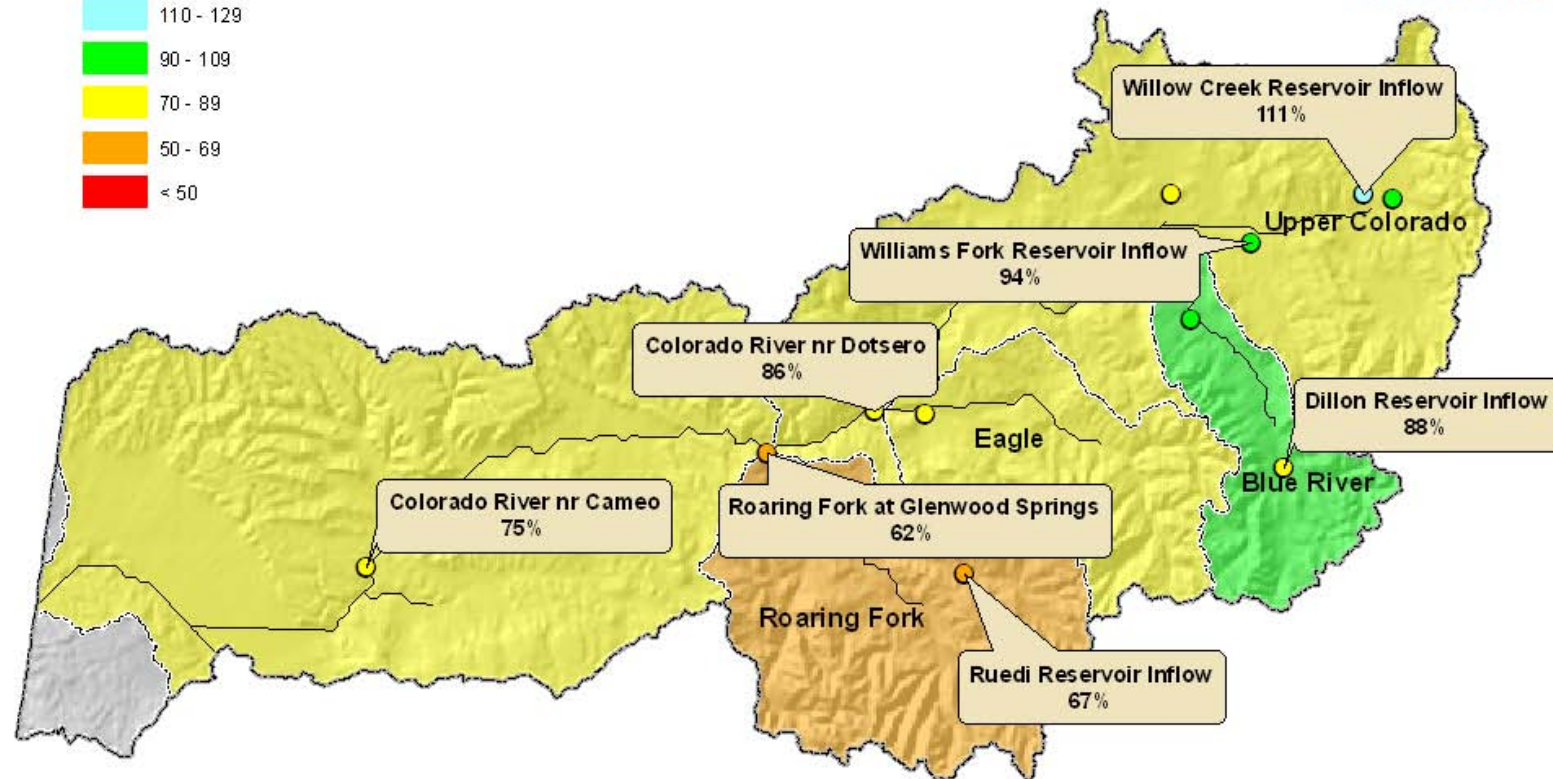
Colorado River Basin Streamflow Forecast Map



Percent of Average

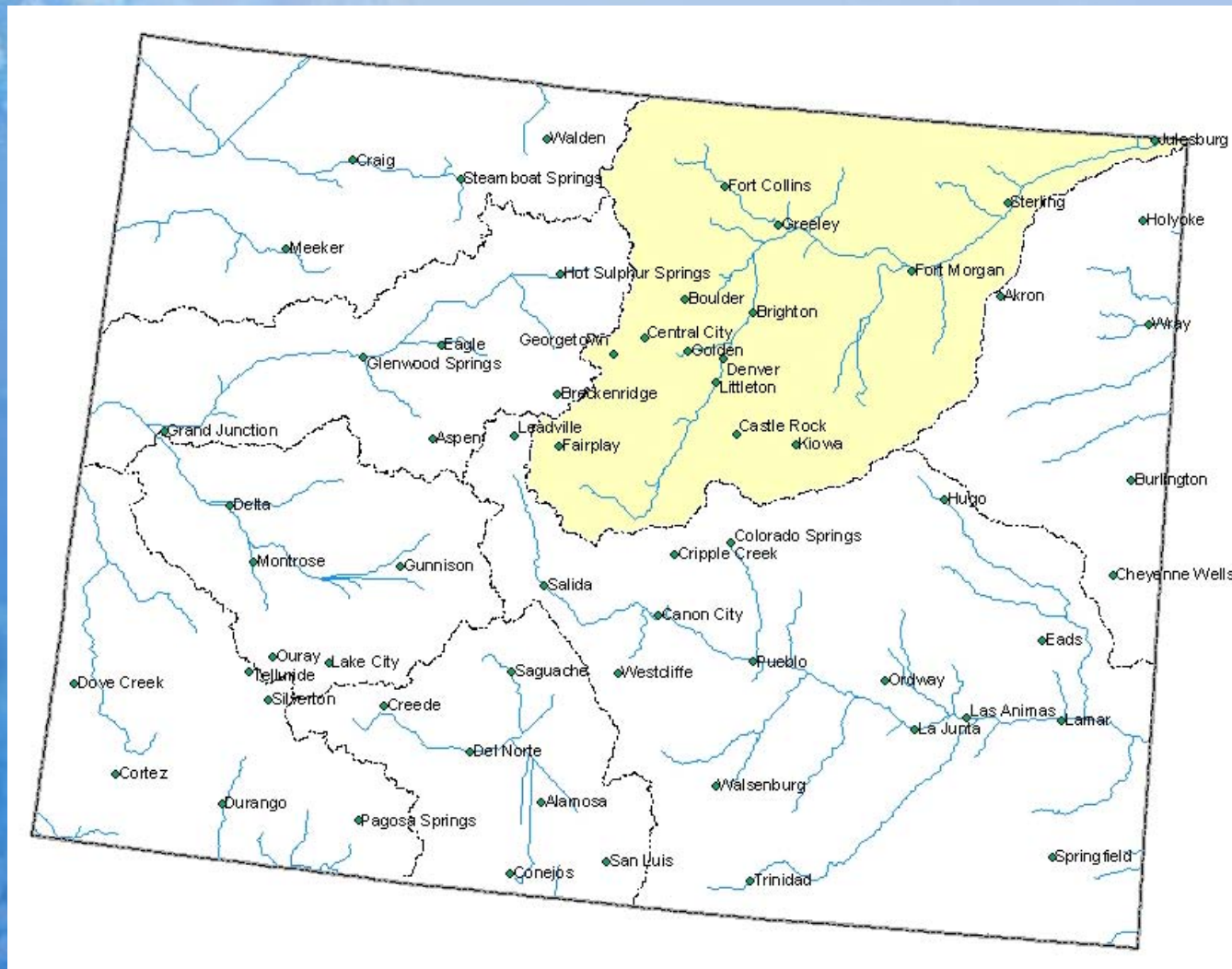


*Provisional Data
Subject to Revision*

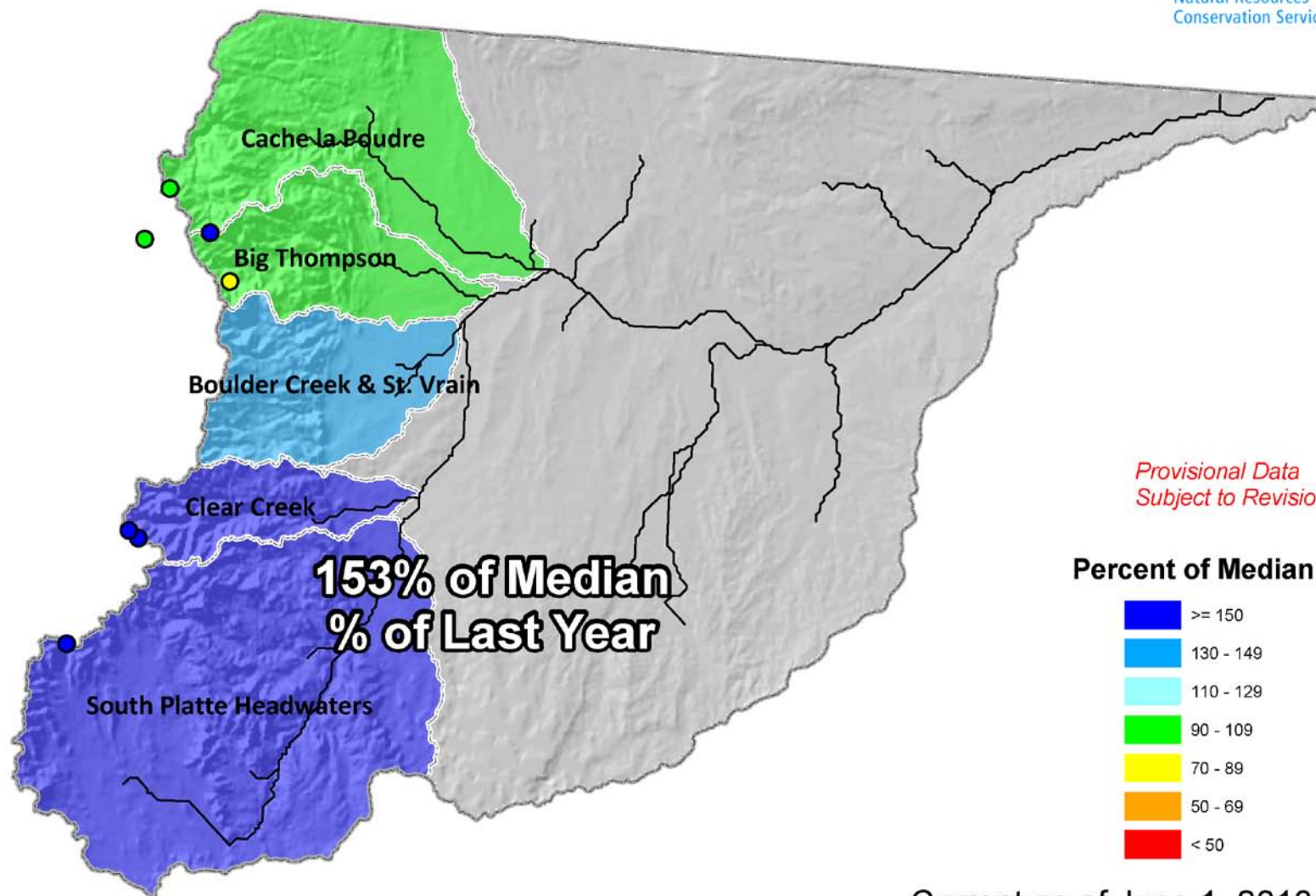


Current as of June 1, 2013

South Platte River Basin Summary



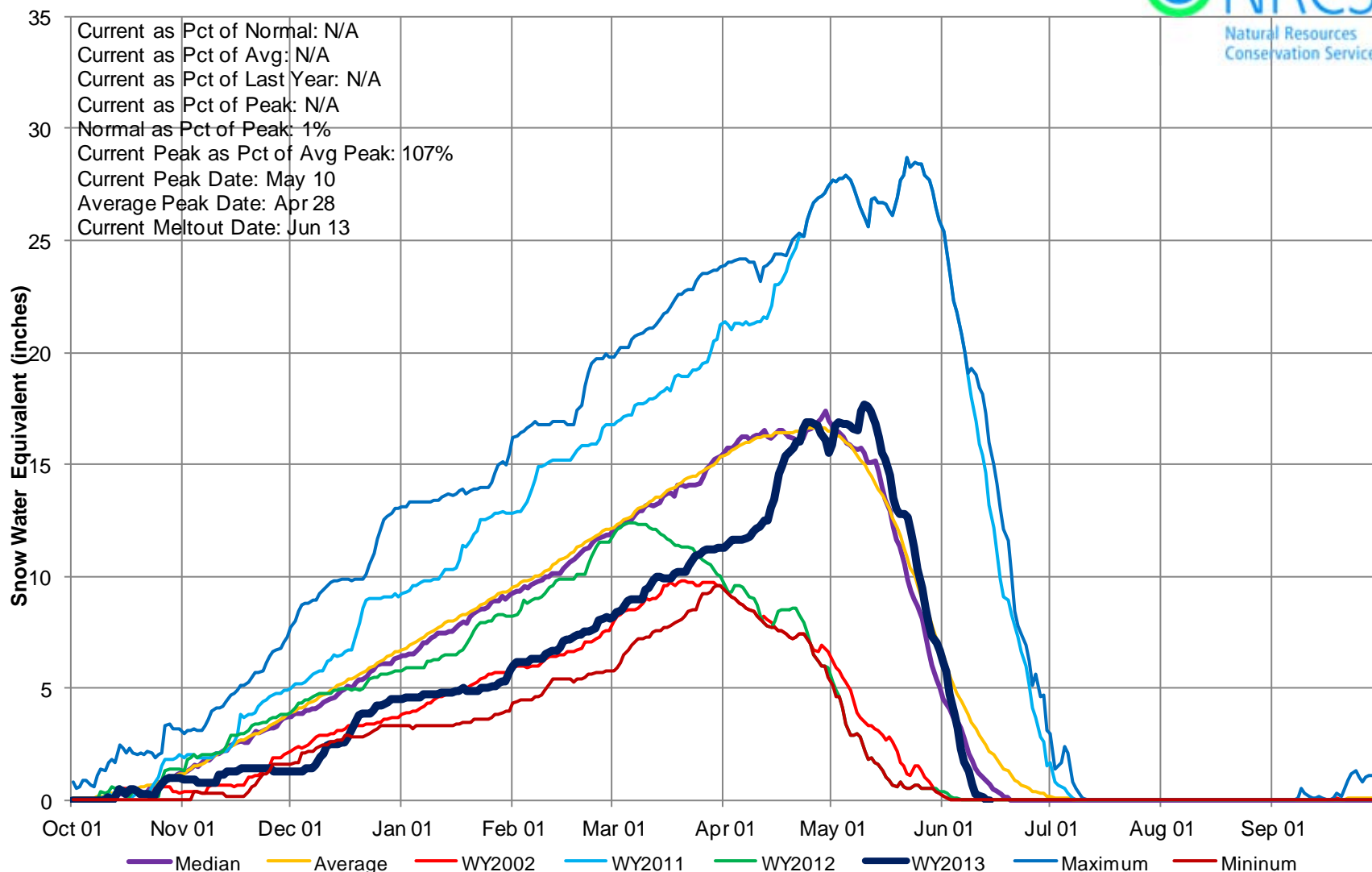
South Platte River Basin Snowpack Map



Current as of June 1, 2013

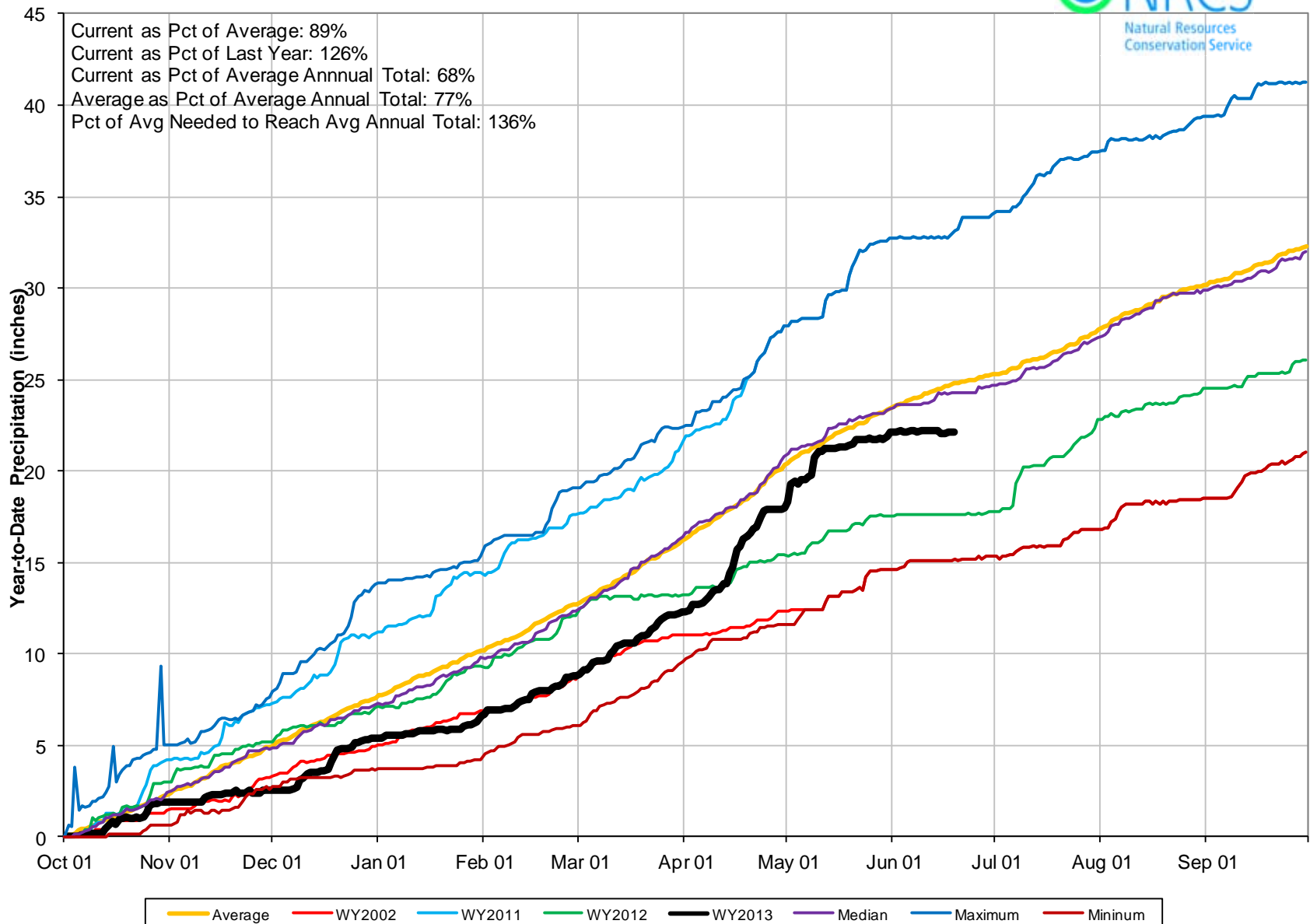
South Platte River Basin High/Low Snowpack Summary

Based on Provisional SNOTEL data as of Jun 19, 2013



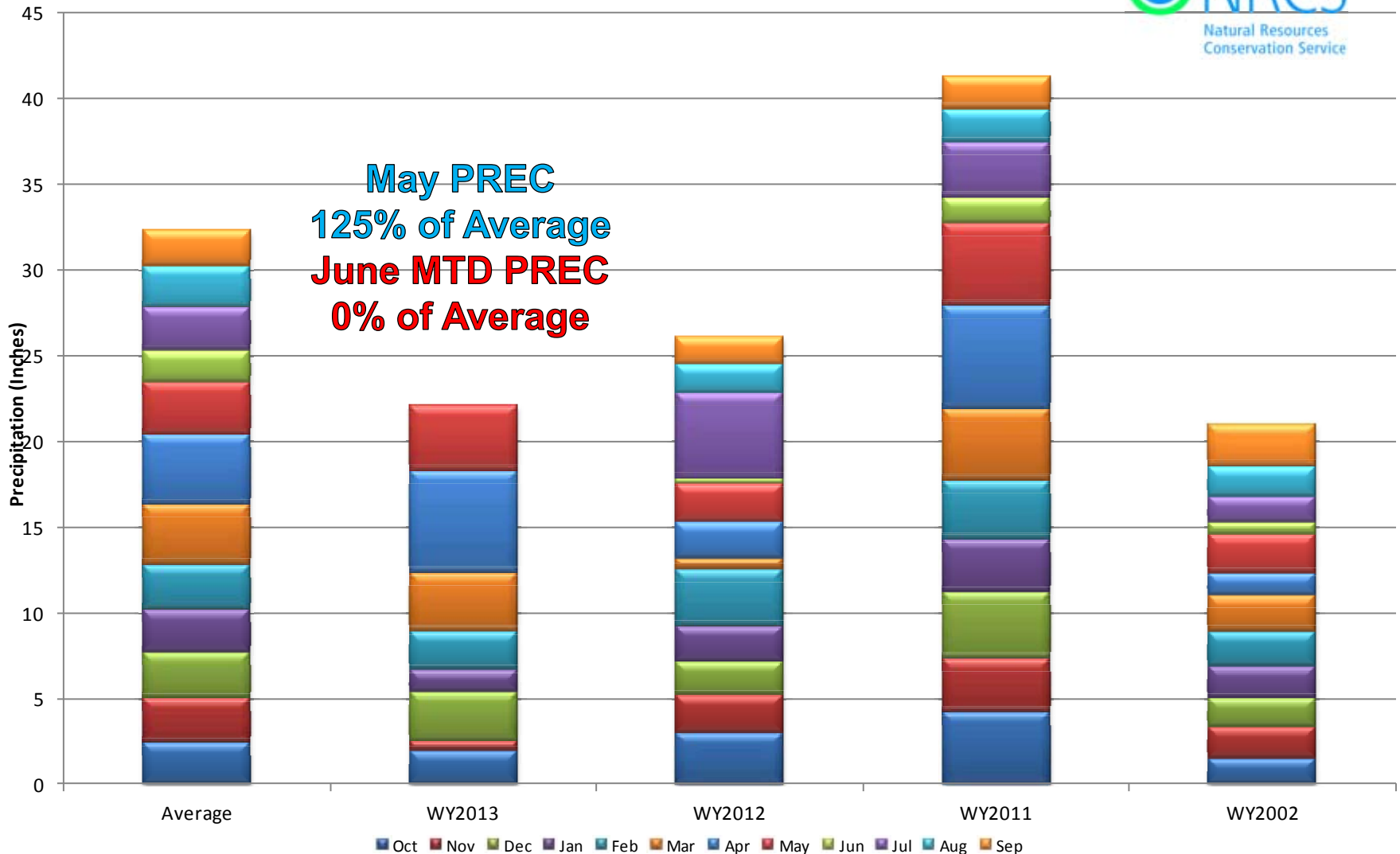
South Platte River Basin High/Low Year-to-Date Precipitation Summary

Based on Provisional SNOTEL data as of Jun 19, 2013



South Platte River Basin High/Low Monthly Precipitation Summary

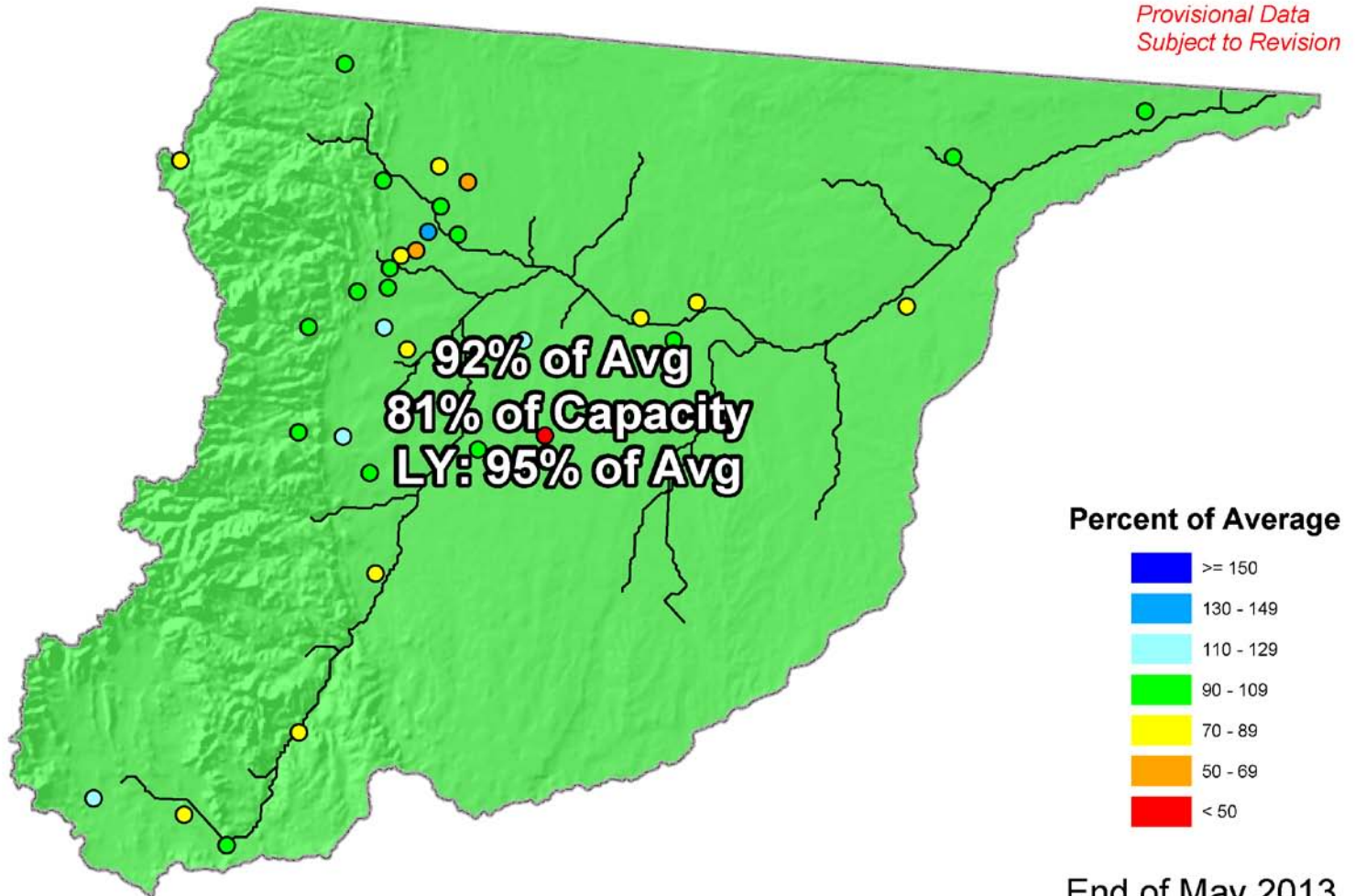
Based on Provisional SNOTEL data as of Jun 19, 2013



South Platte River Basin Reservoir Storage Map



*Provisional Data
Subject to Revision*

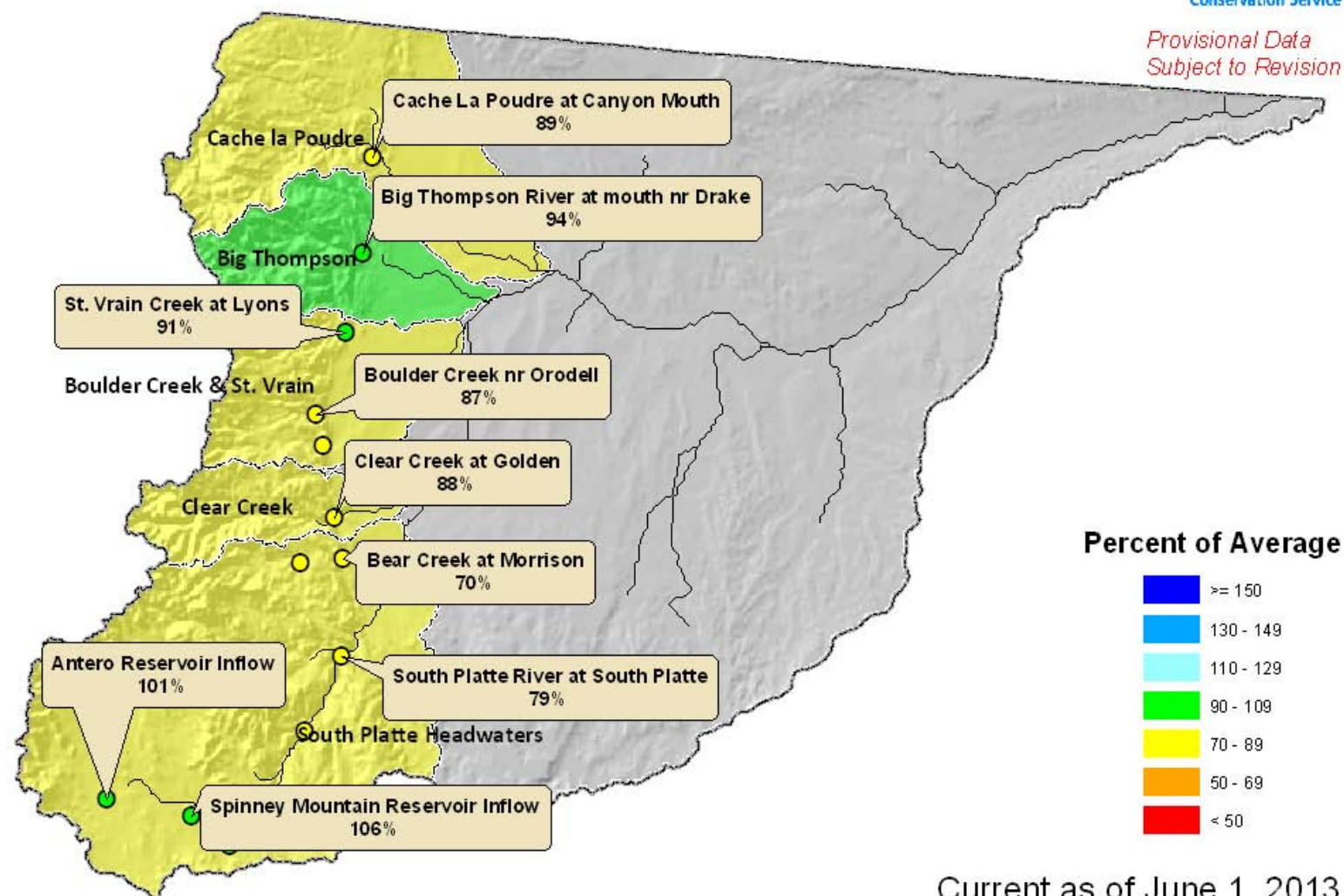


End of May 2013

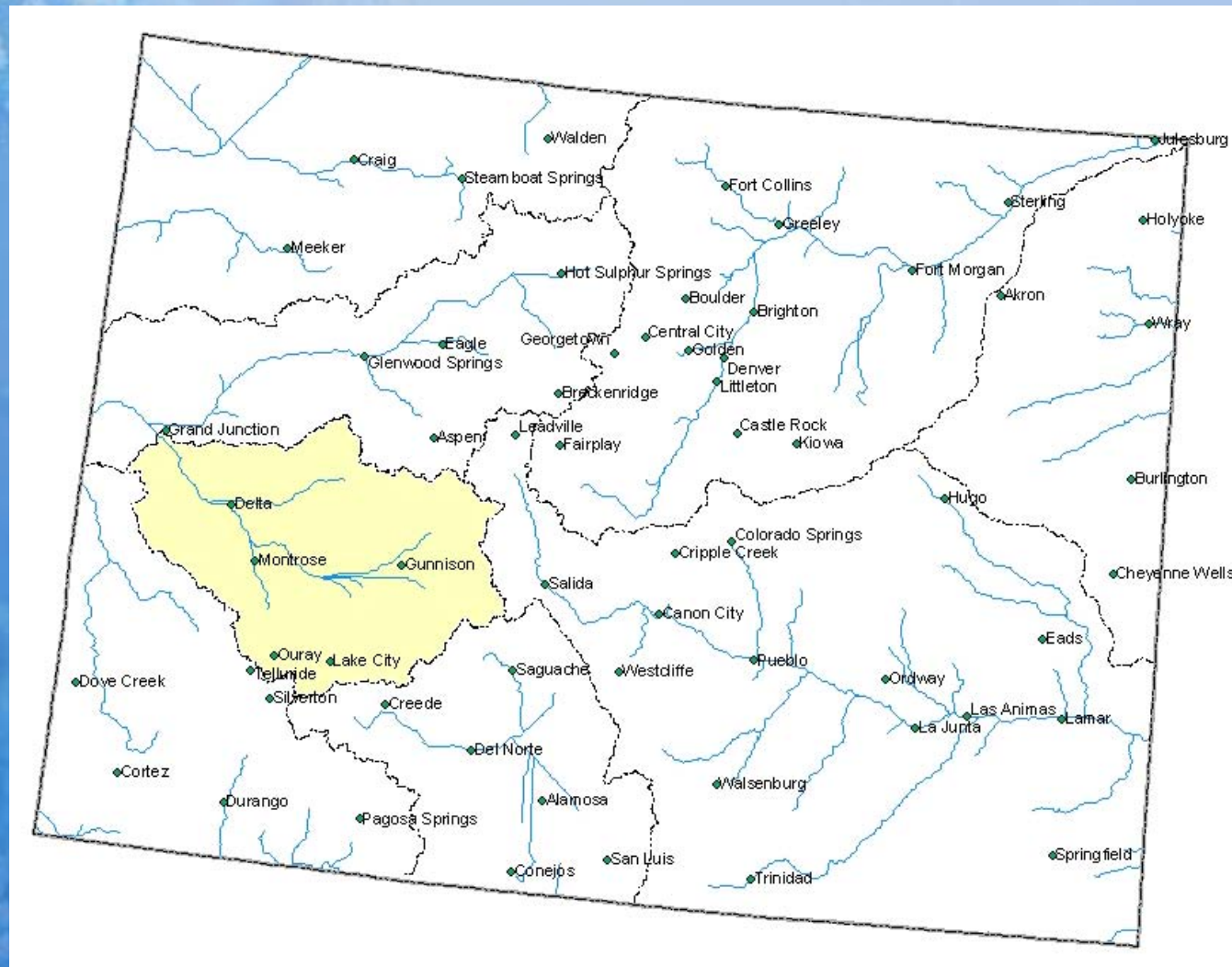
South Platte River Basin Streamflow Forecast Map



*Provisional Data
Subject to Revision*



Gunnison River Basin Summary



Gunnison River Basin Snowpack Map

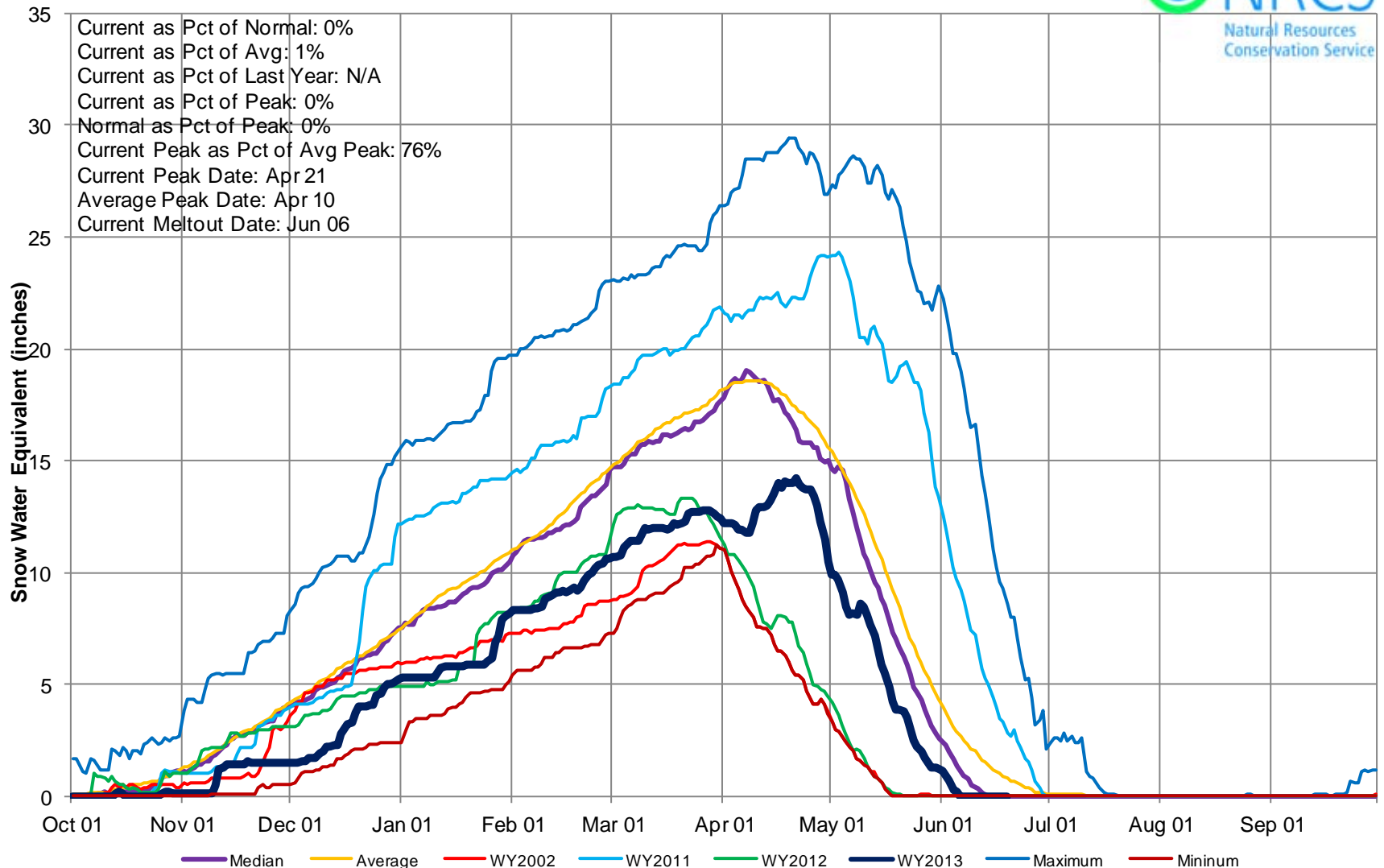


*Provisional Data
Subject to Revision*



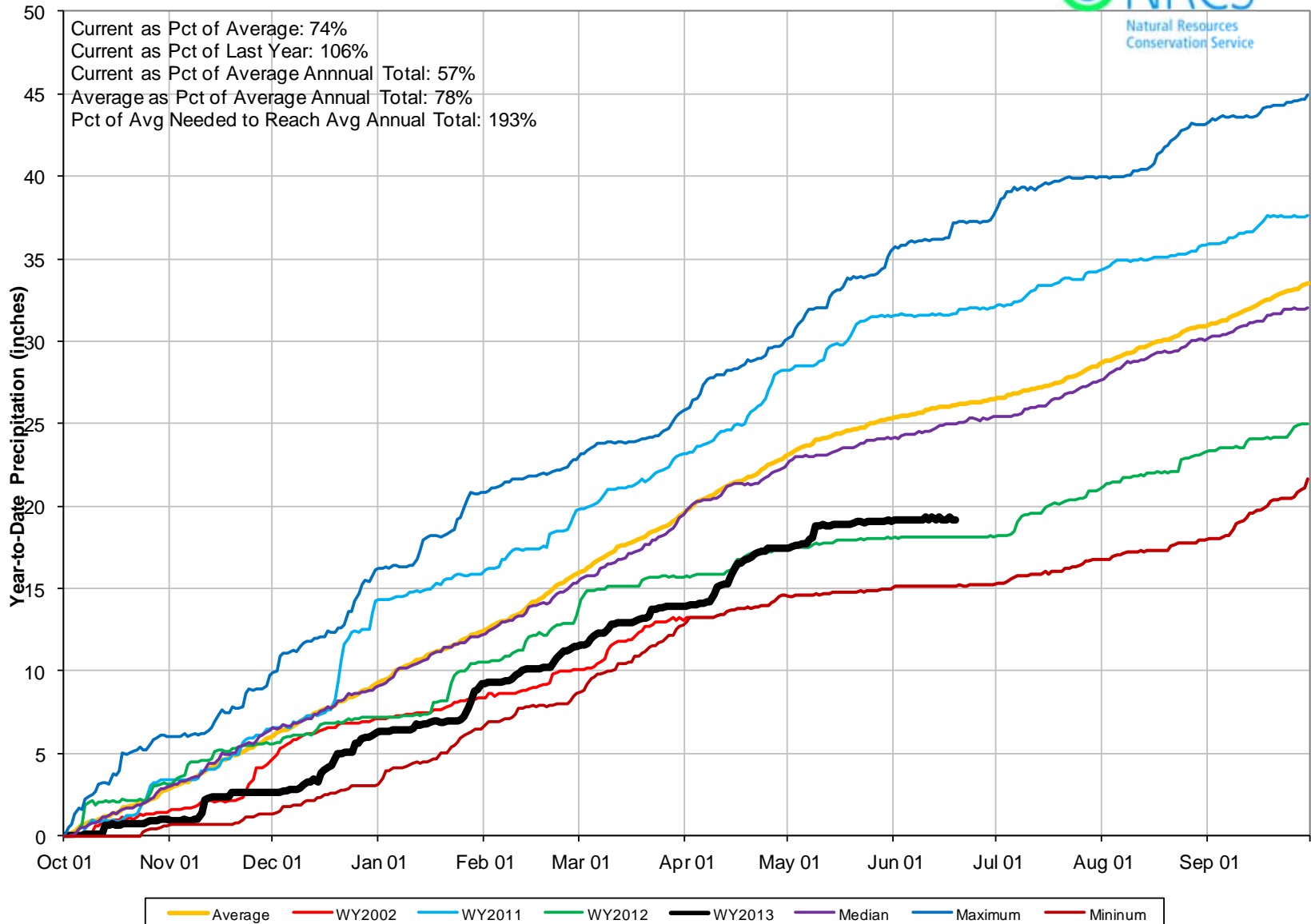
Gunnison River Basin High/Low Snowpack Summary

Based on Provisional SNOTEL data as of Jun 19, 2013



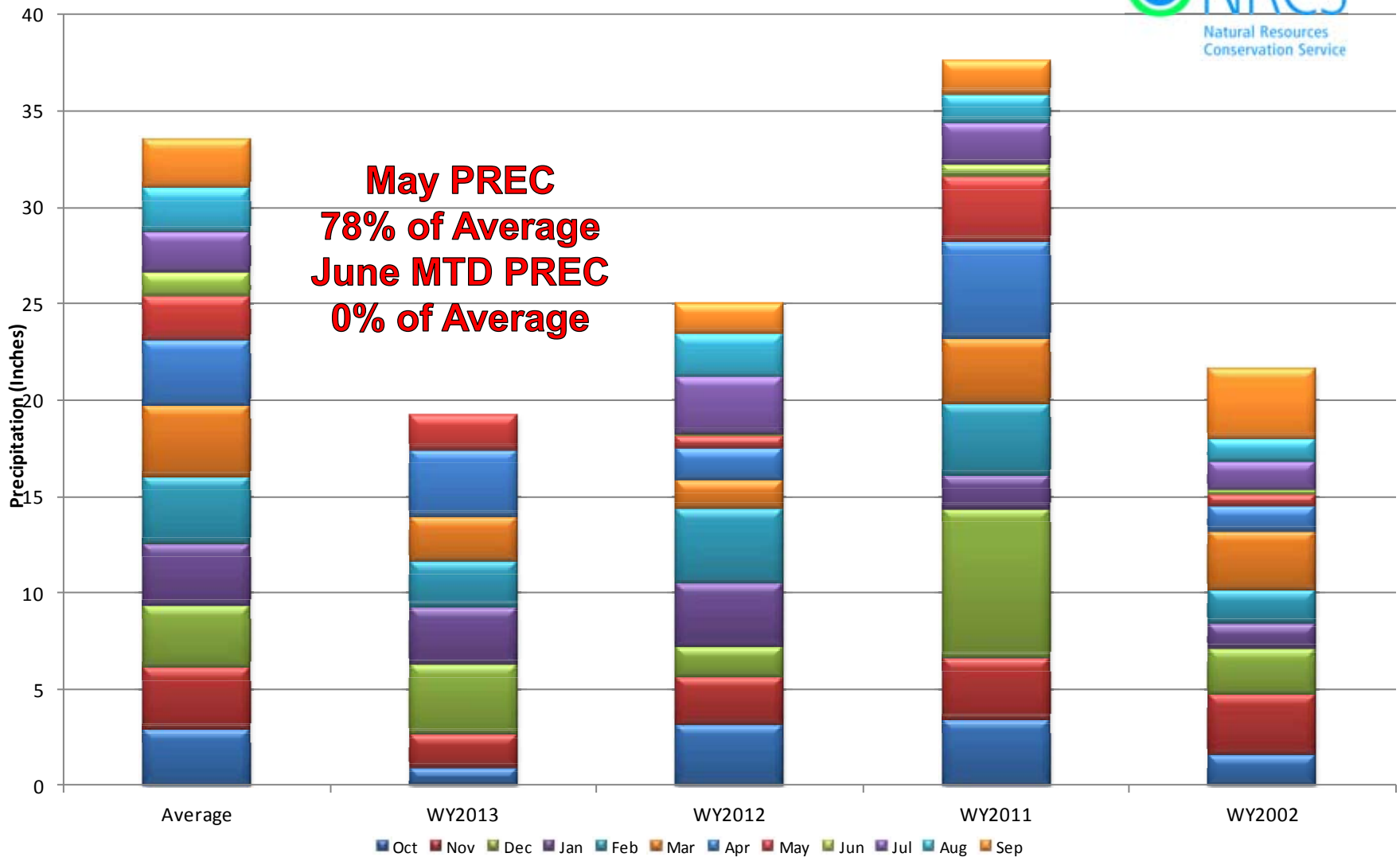
Gunnison River Basin High/Low Year-to-Date Precipitation Summary

Based on Provisional SNOTEL data as of Jun 19, 2013



Gunnison River Basin High/Low Monthly Precipitation Summary

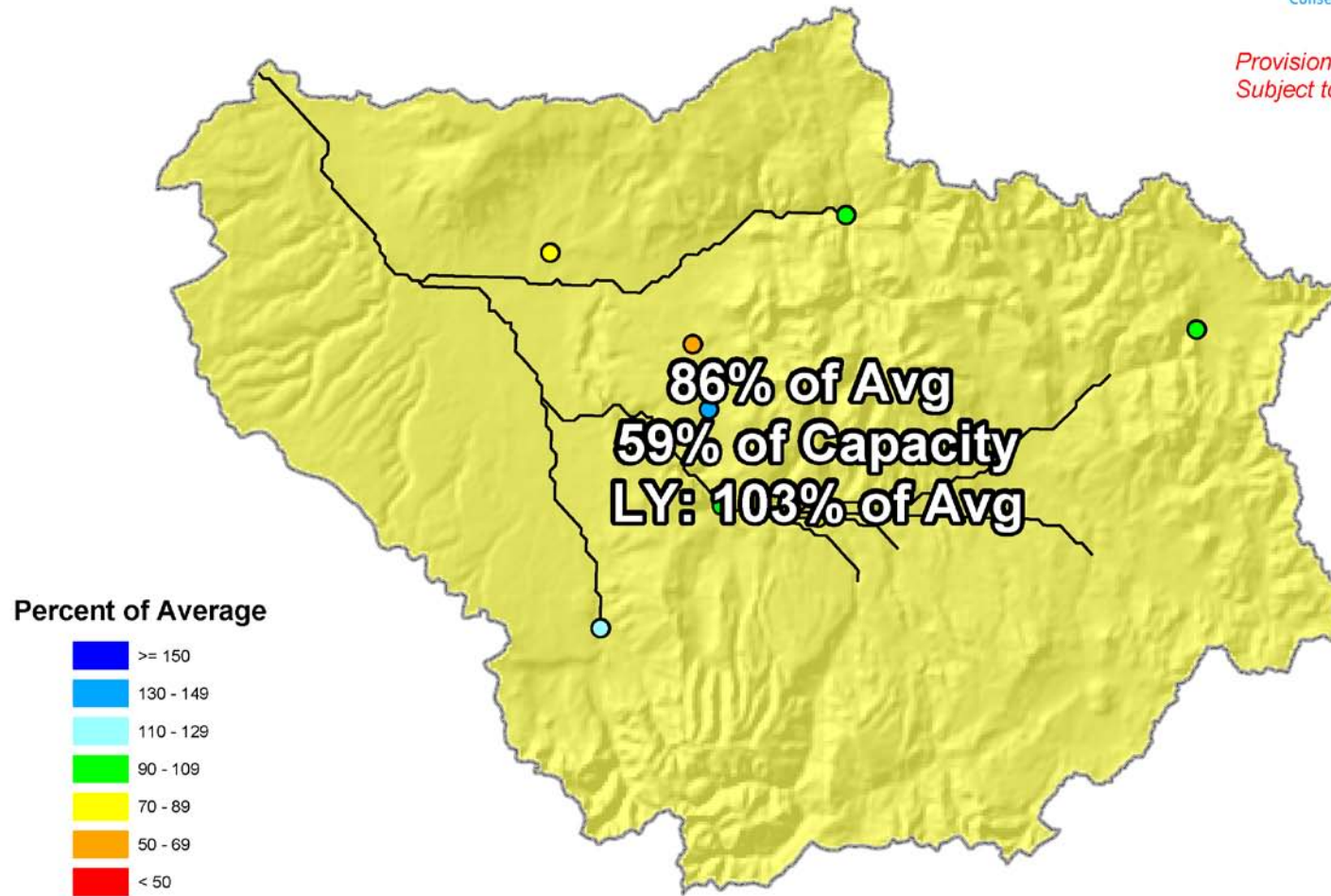
Based on Provisional SNOTEL data as of Jun 19, 2013



Gunnison River Basin Reservoir Storage Map



*Provisional Data
Subject to Revision*

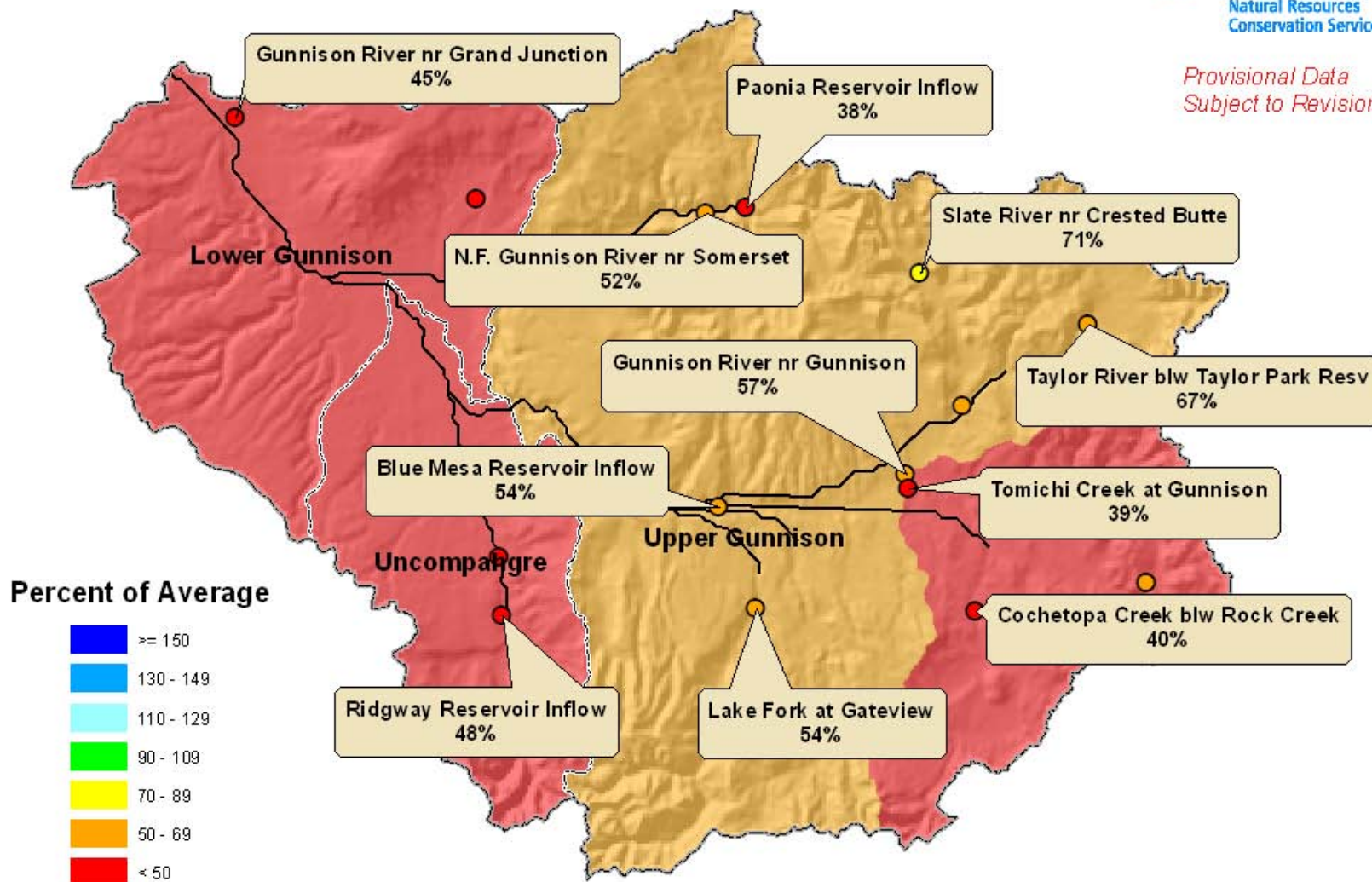


End of May 2013

Gunnison River Basin Streamflow Forecast Map



*Provisional Data
Subject to Revision*



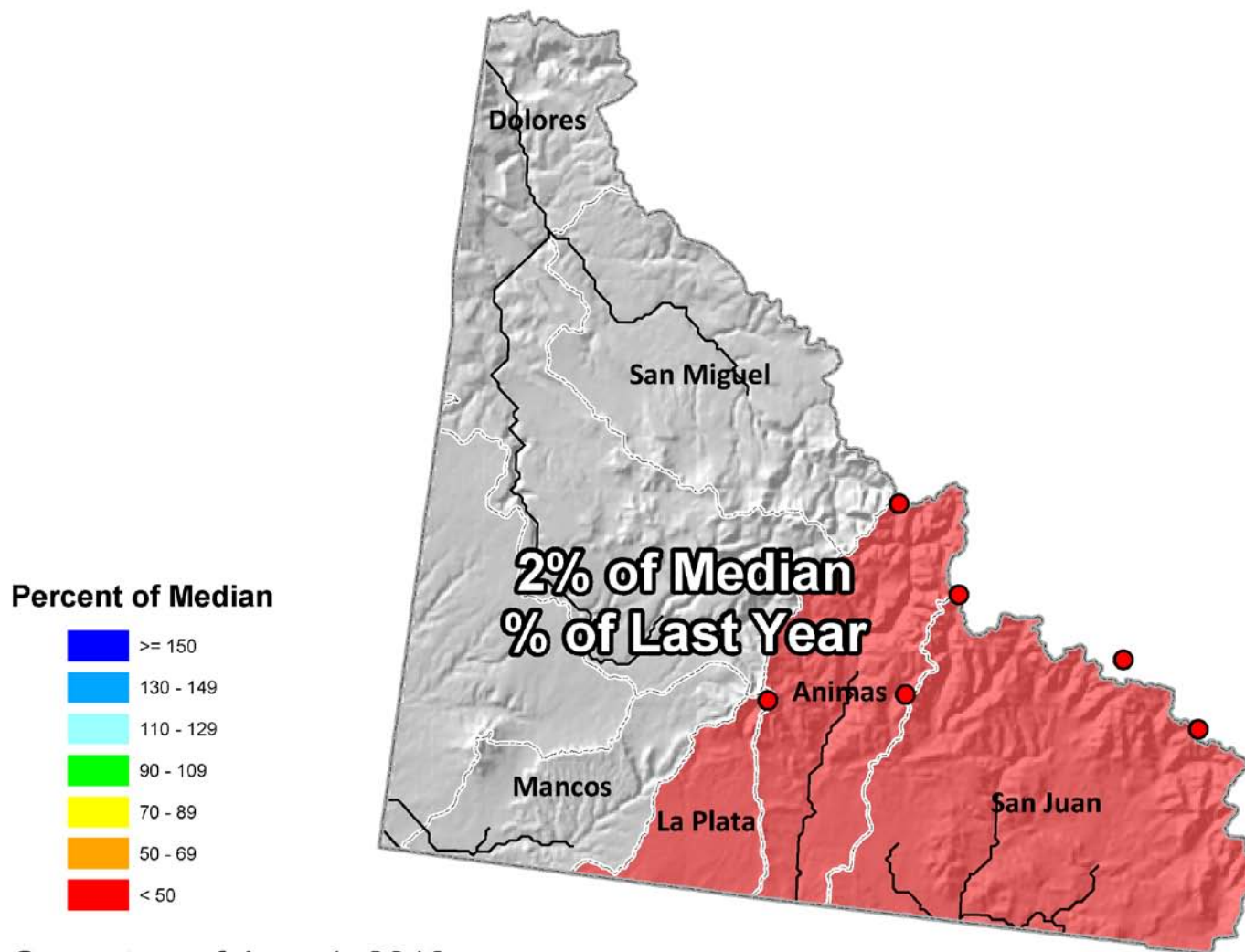
Current as of June 1, 2013

A map of the state of Colorado with its county boundaries indicated by dashed lines. Major cities and towns are marked with black dots and labeled. The southwestern portion of the state, including the Four Corners area, is shaded in yellow. This shaded region encompasses parts of Montezuma, San Juan, and La Plata counties, as well as the cities of Cortez, Durango, and Pagosa Springs. Other labeled cities include Meeker, Grand Junction, Montrose, Delta, Ouray, Lake City, Silverton, Creede, Del Norte, Alamosa, Conejos, San Luis, Trinidad, Valsenburg, Las Animas, Lamar, Eads, Cheyenne Wells, Burlington, Hugo, Cripple Creek, Colorado Springs, Canon City, Salida, Saguache, Westcliffe, Pueblo, Canon City, Cripple Creek, Colorado Springs, Castle Rock, Kiowa, Denver, Littleton, Golden, Central City, Boulder, Hot Sulphur Springs, Fort Collins, Greeley, Fort Morgan, Akron, Sterling, Holyoke, Wray, and Julesburg. The map also shows major river networks in blue.

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



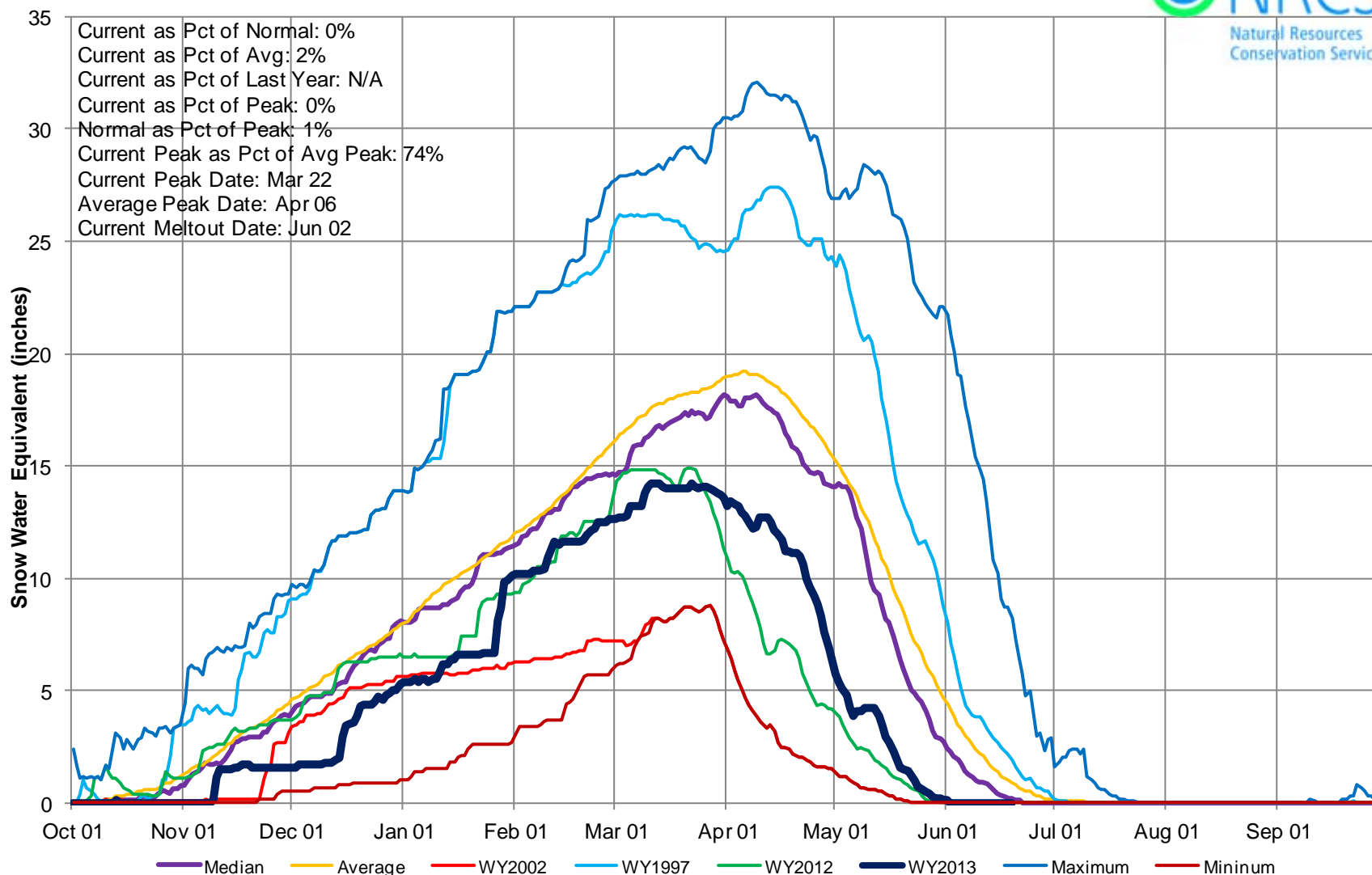
*Provisional Data
Subject to Revision*



Current as of June 1, 2013

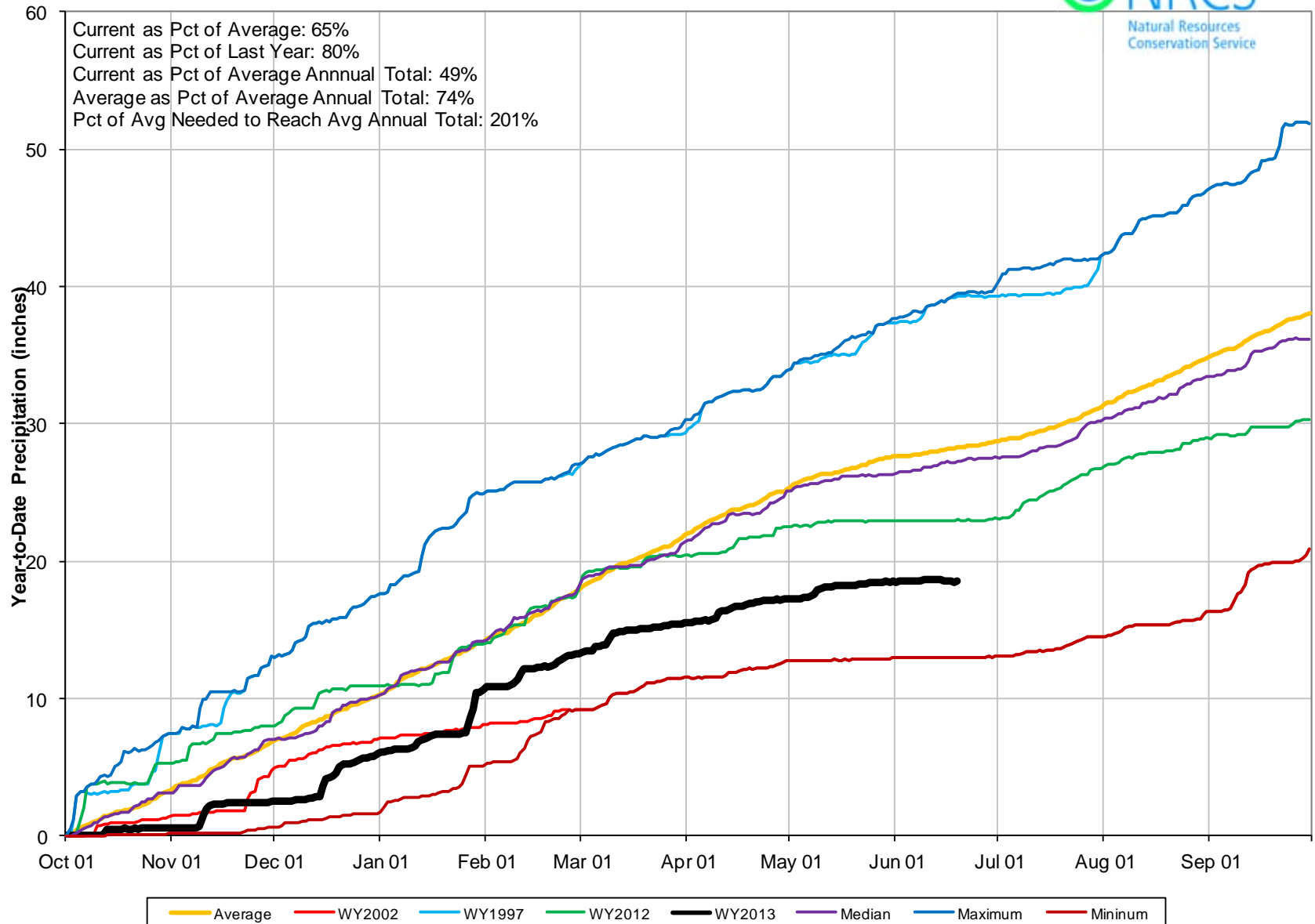
San Miguel, Dolores, Animas & San Juan River Basins High/Low Snowpack Summary

Based on Provisional SNOTEL data as of Jun 19, 2013

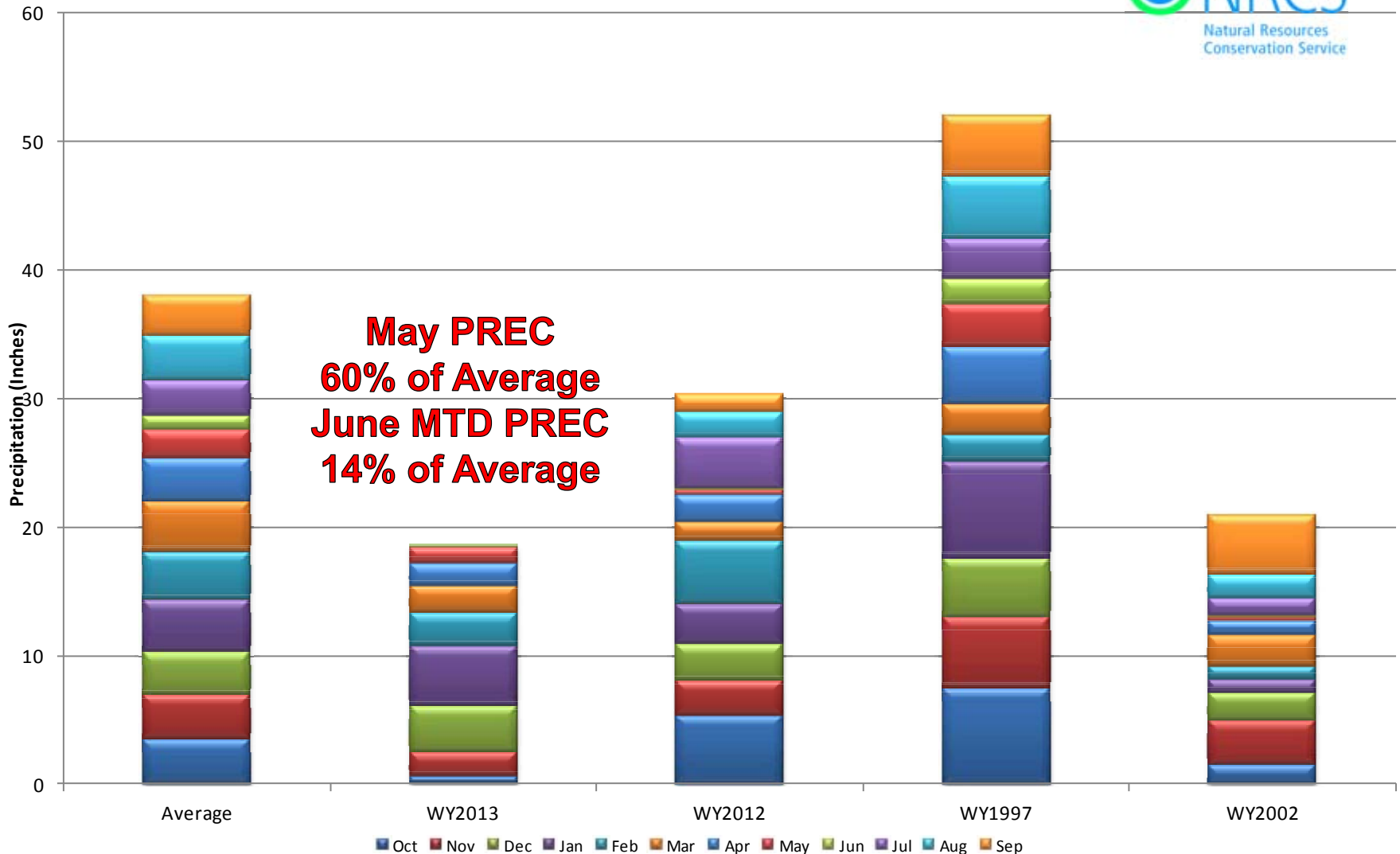


San Miguel, Dolores, Animas & San Juan River Basins High/Low Year-to-Date Precipitation Summary

Based on Provisional SNOTEL data as of Jun 19, 2013



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



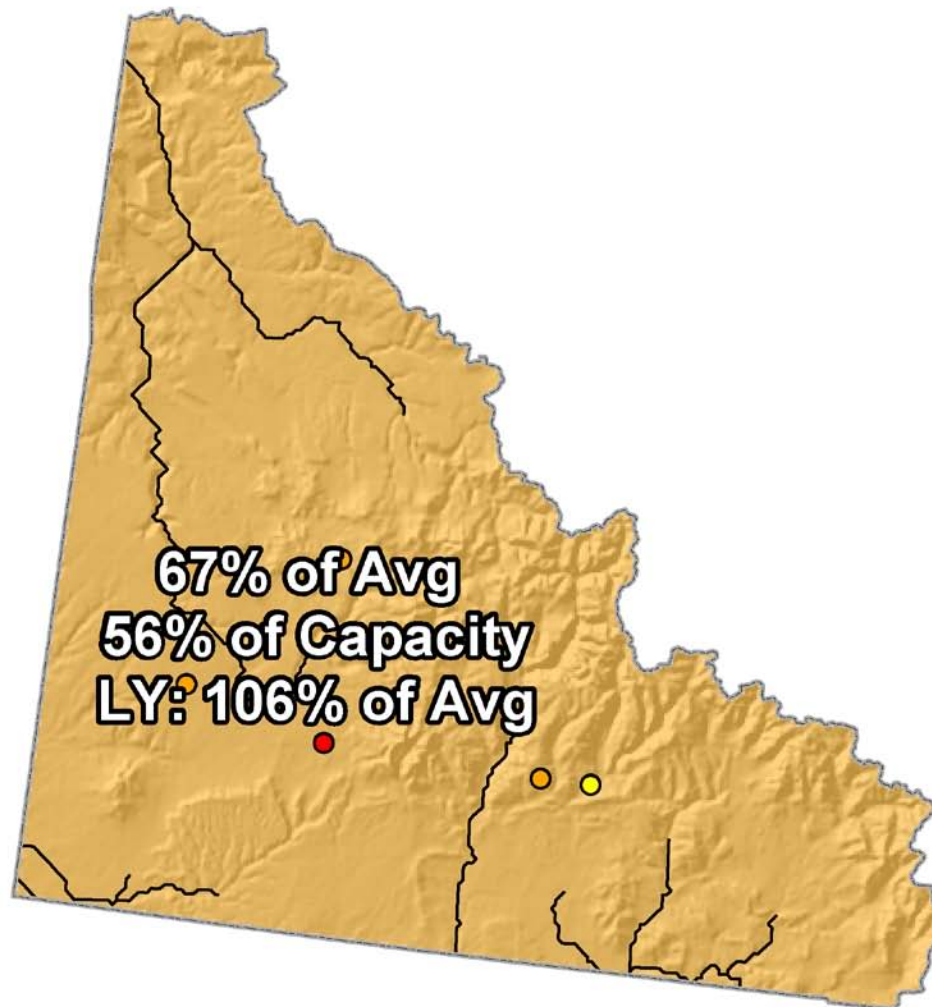
San Miguel, Dolores, Animas and San Juan River Basins Reservoir Storage Map



Percent of Average



*Provisional Data
Subject to Revision*



End of May 2013

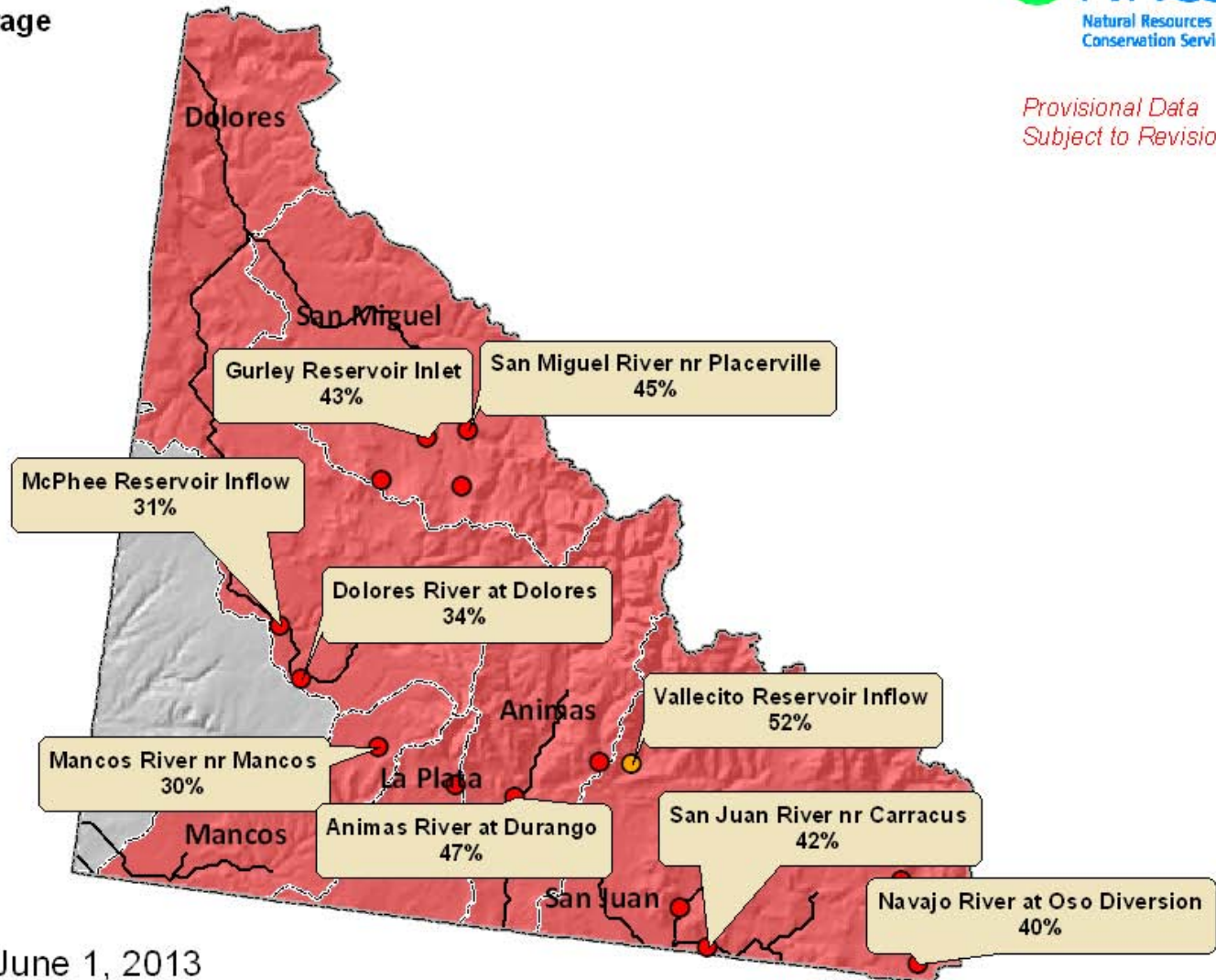
San Miguel, Dolores, Animas and San Juan River Basins Streamflow Forecast Map



Percent of Average

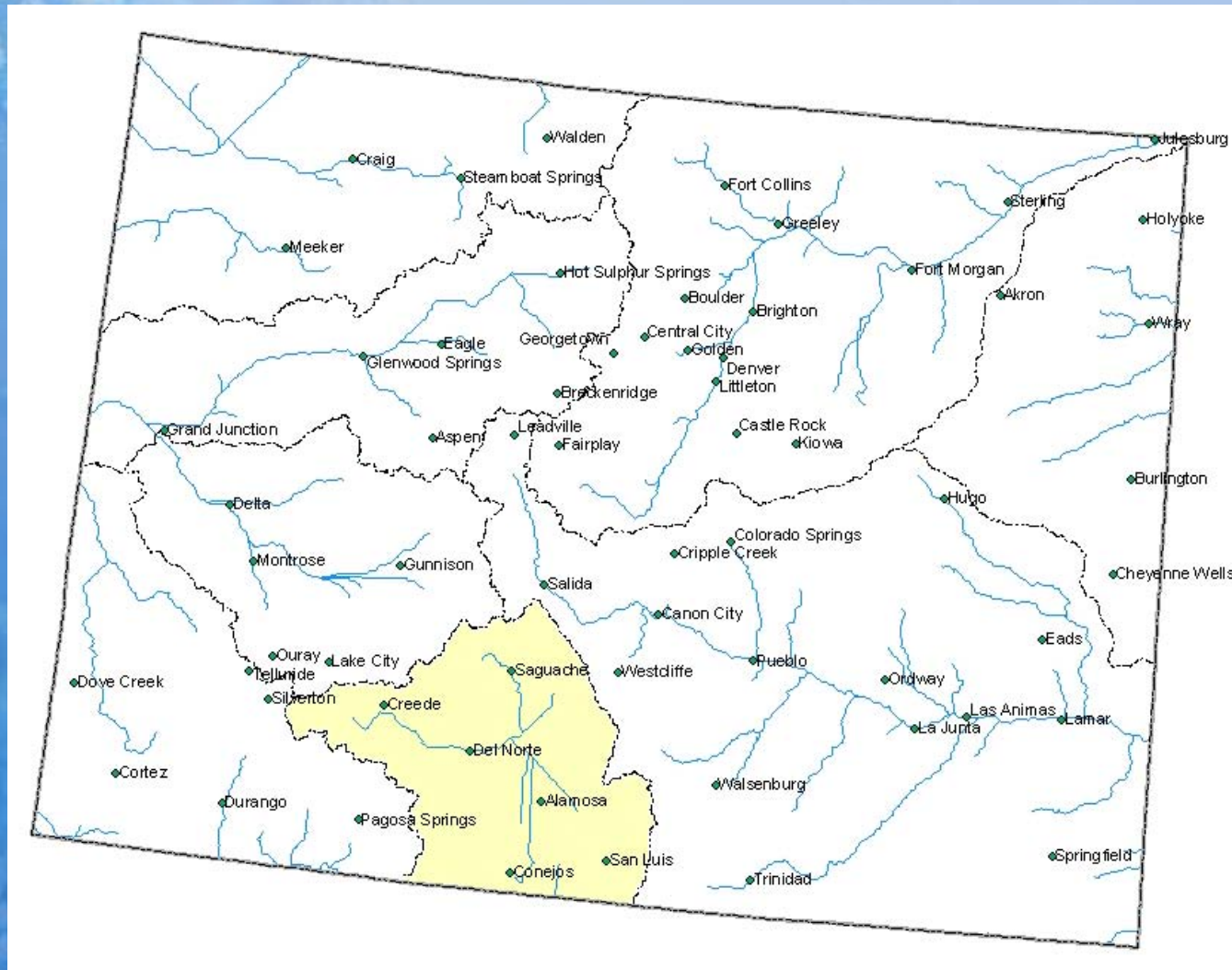


*Provisional Data
Subject to Revision*



Current as of June 1, 2013

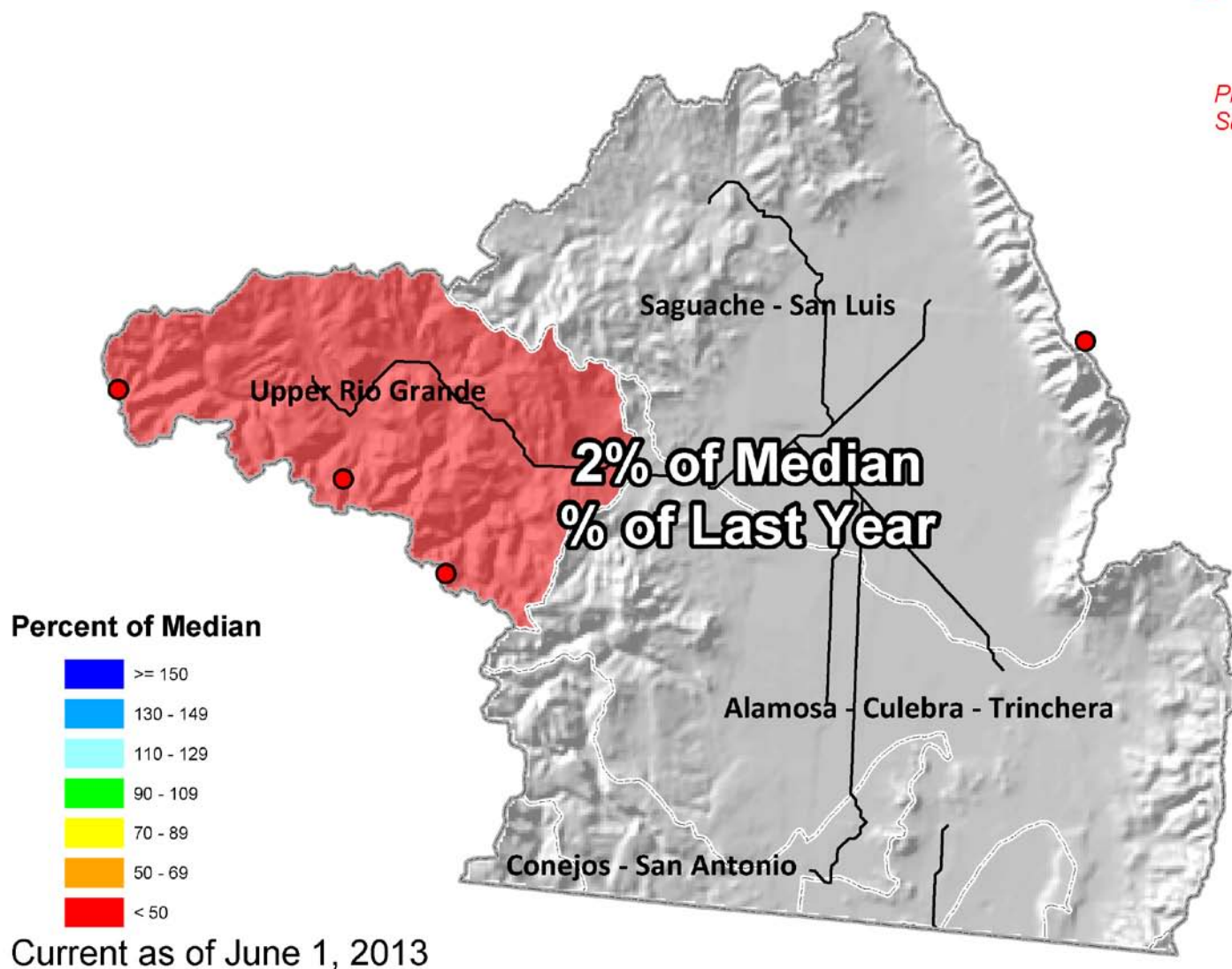
Upper Rio Grande Basin Summary



Upper Rio Grande Basin Snowpack Map

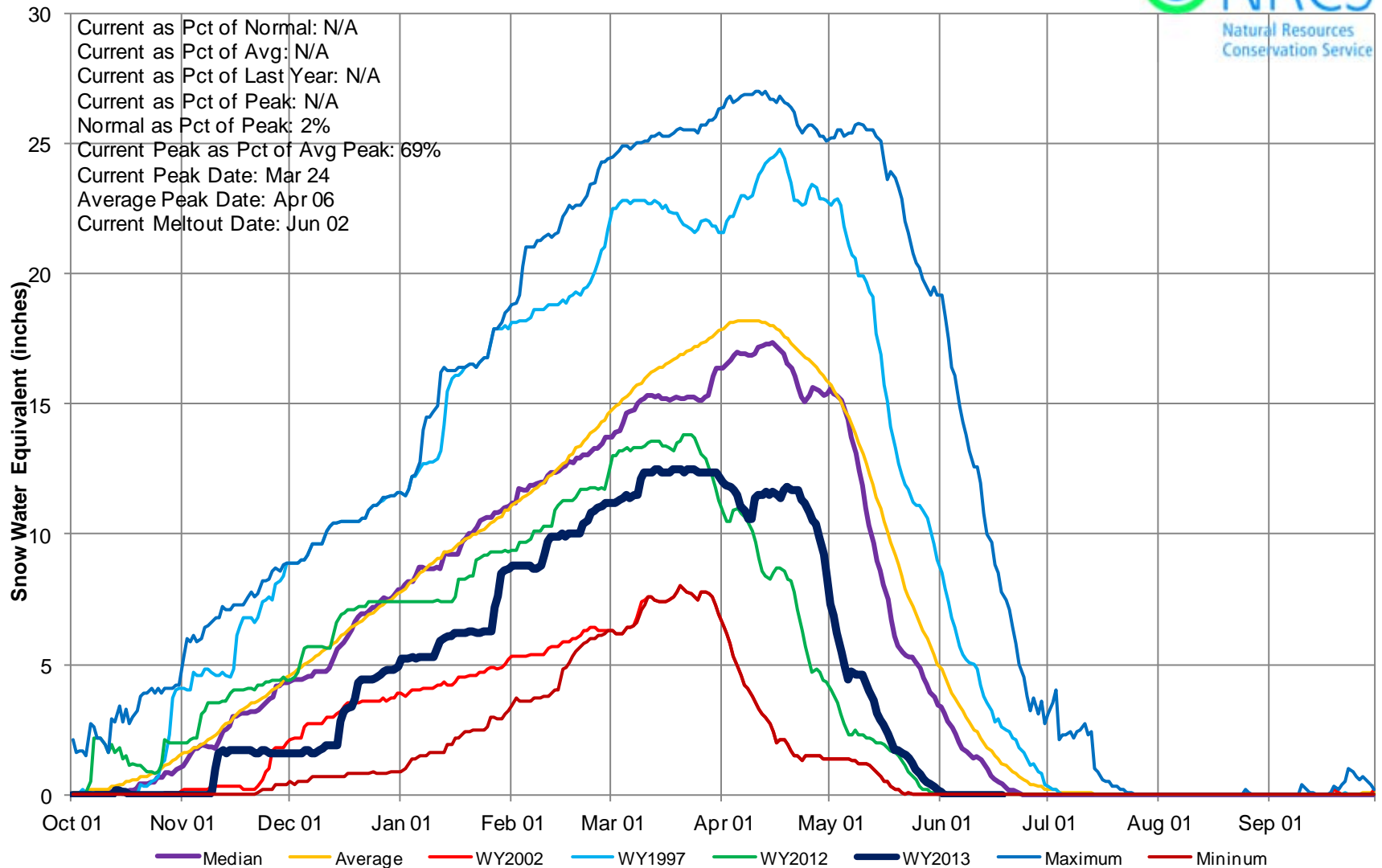


*Provisional Data
Subject to Revision*



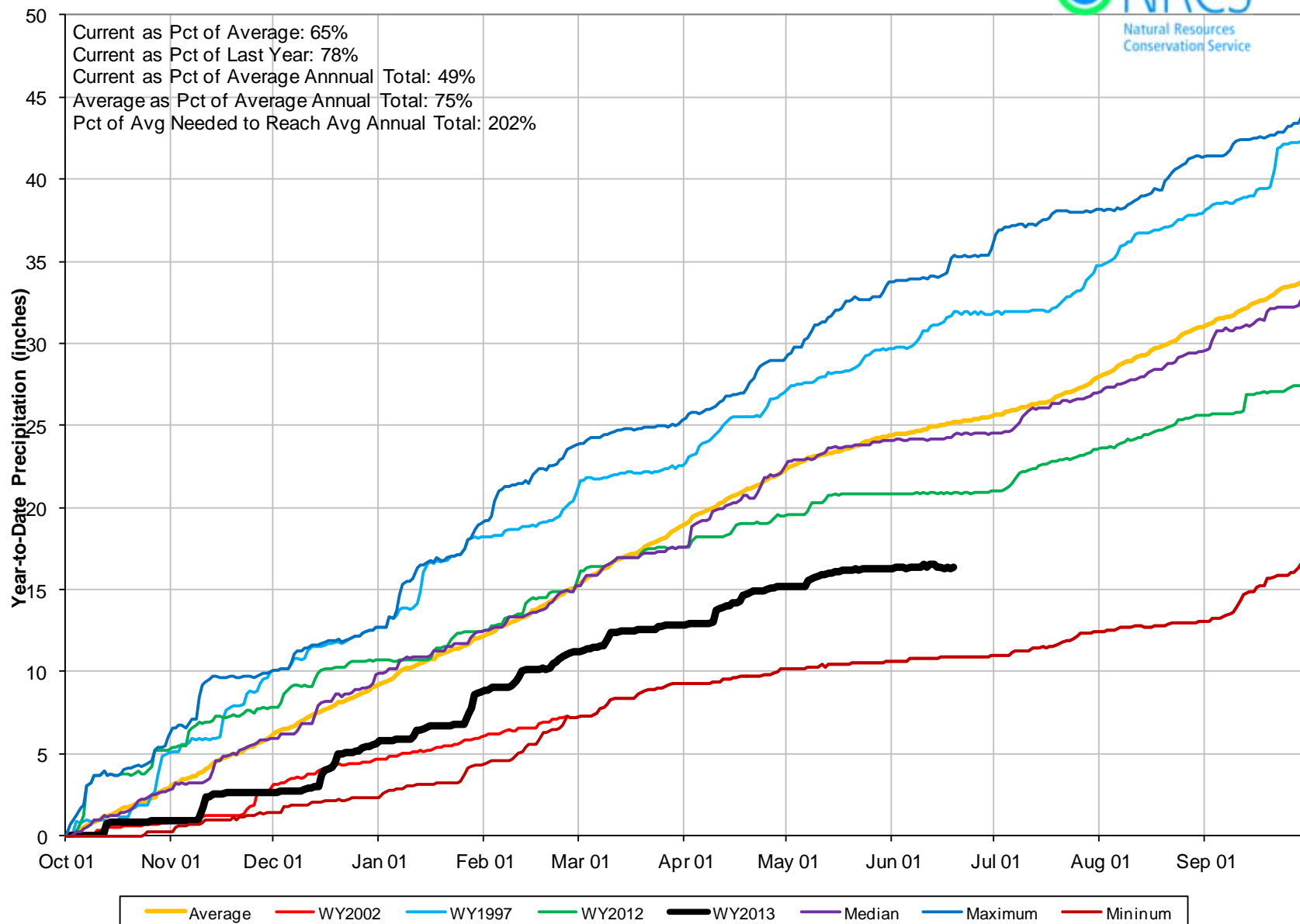
Upper Rio Grande Basin High/Low Snowpack Summary

Based on Provisional SNOTEL data as of Jun 19, 2013



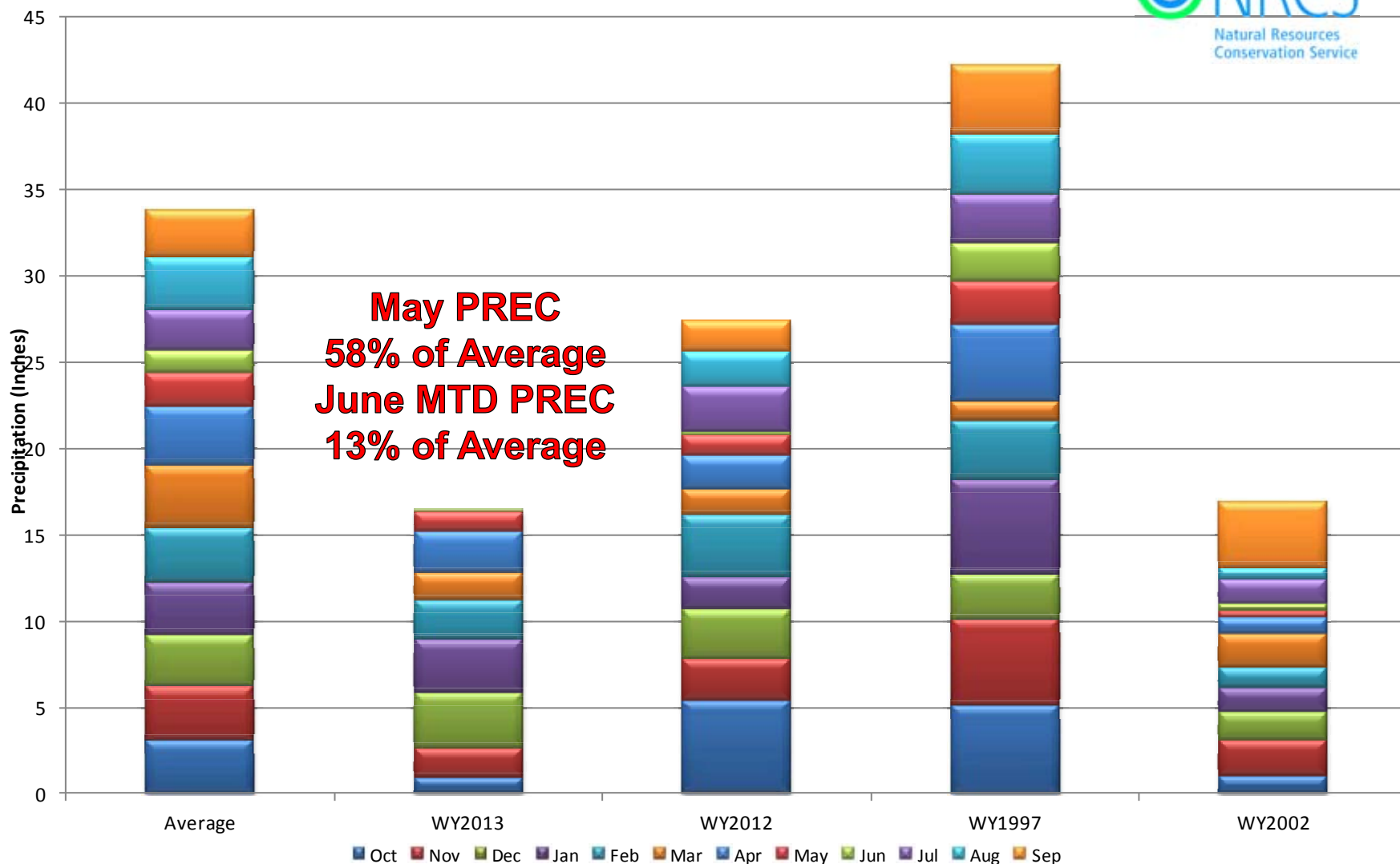
Upper Rio Grande Basin High/Low Year-to-Date Precipitation Summary

Based on Provisional SNOTEL data as of Jun 19, 2013



Upper Rio Grande Basin High/Low Monthly Precipitation Summary

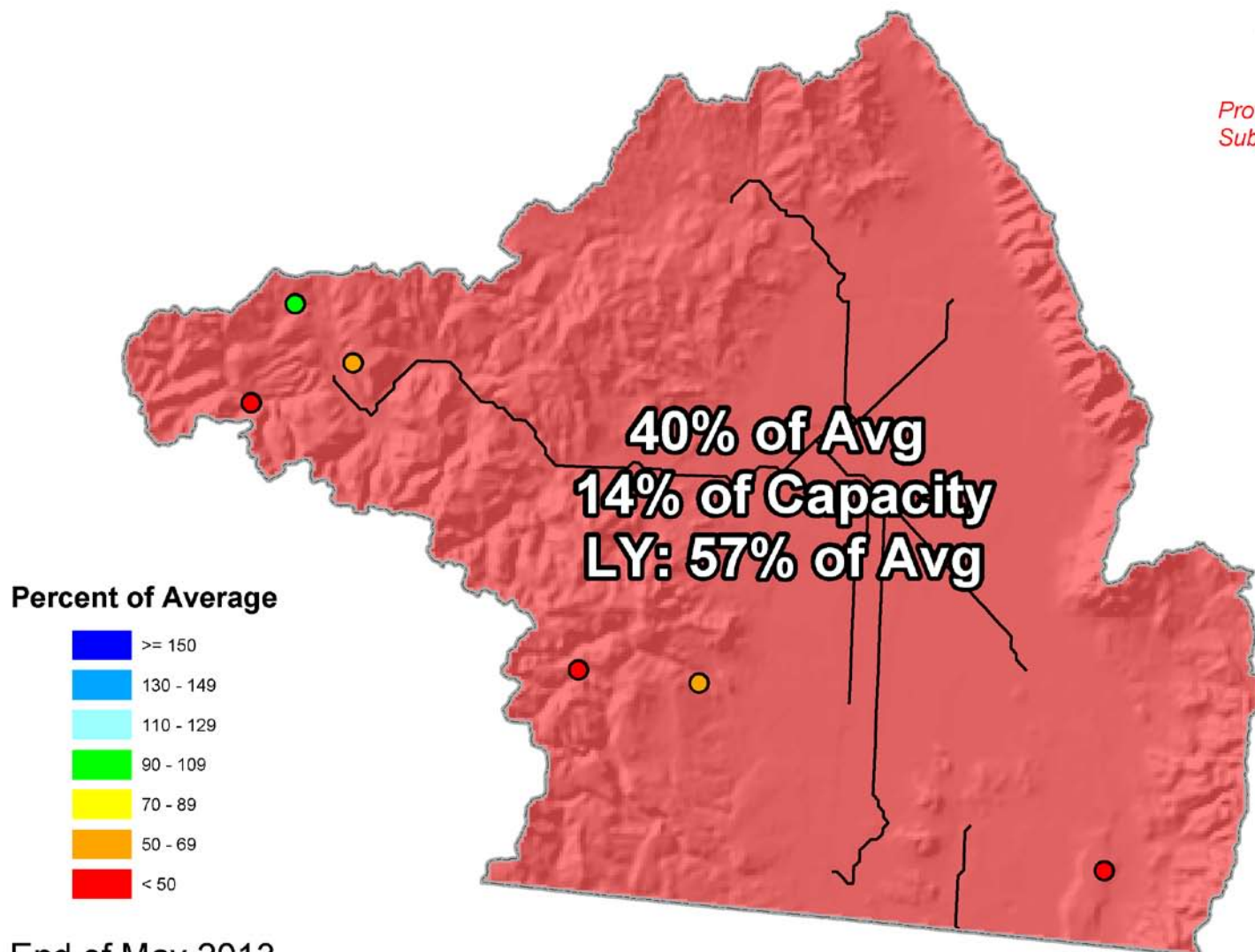
Based on Provisional SNOTEL data as of Jun 19, 2013



Upper Rio Grande Basin Reservoir Storage Map



*Provisional Data
Subject to Revision*

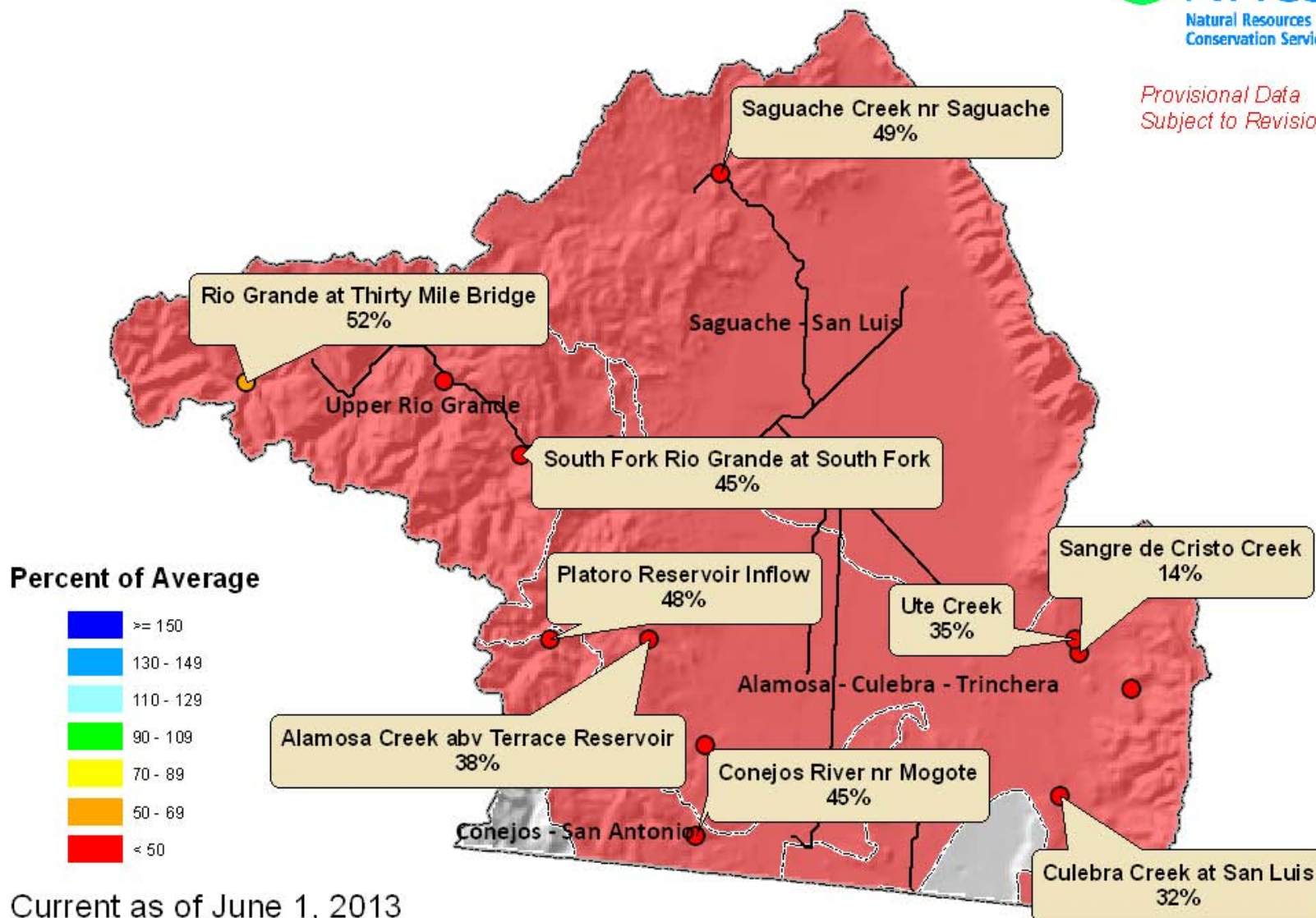


End of May 2013

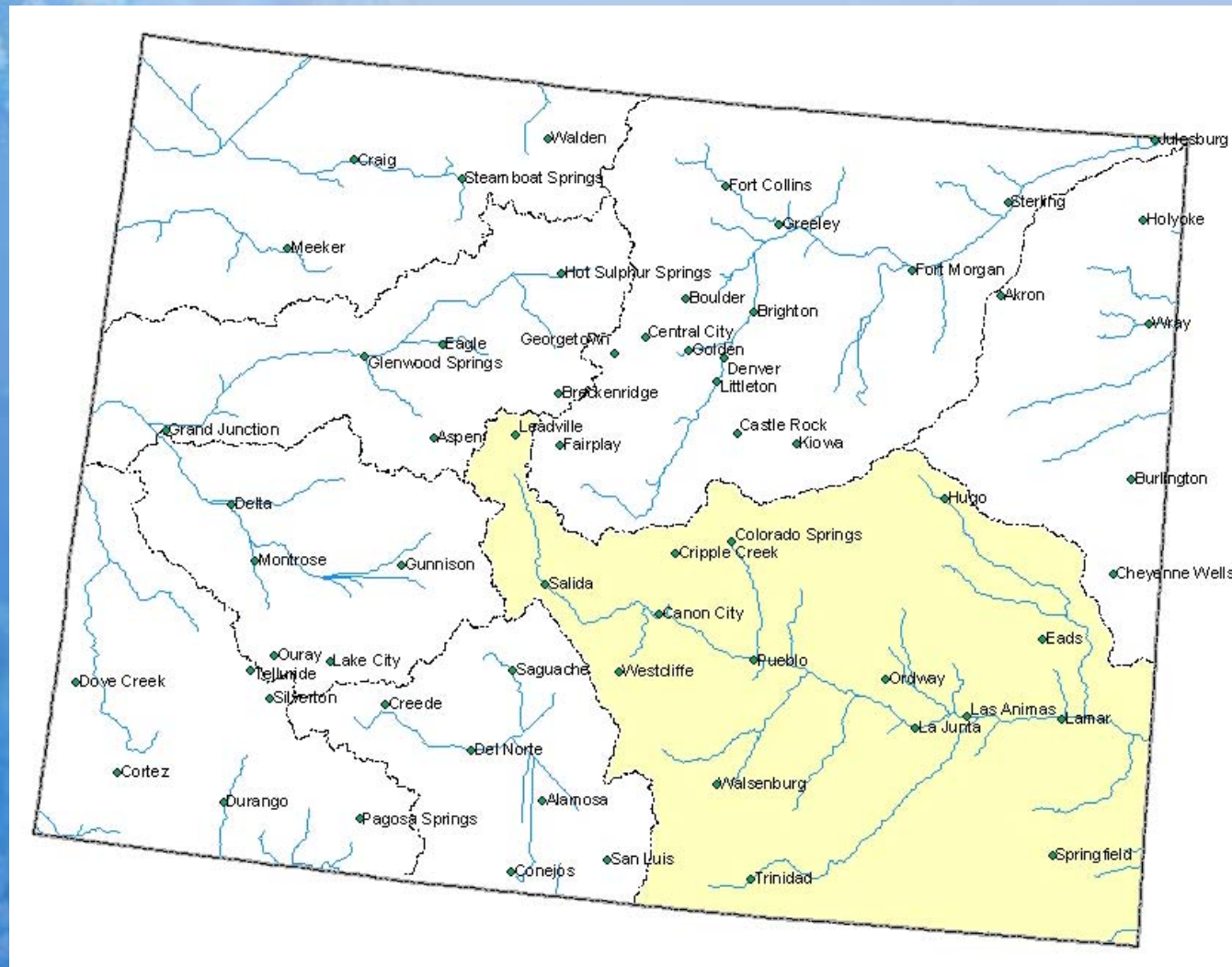
Upper Rio Grande Basin Streamflow Forecast Map



*Provisional Data
Subject to Revision*



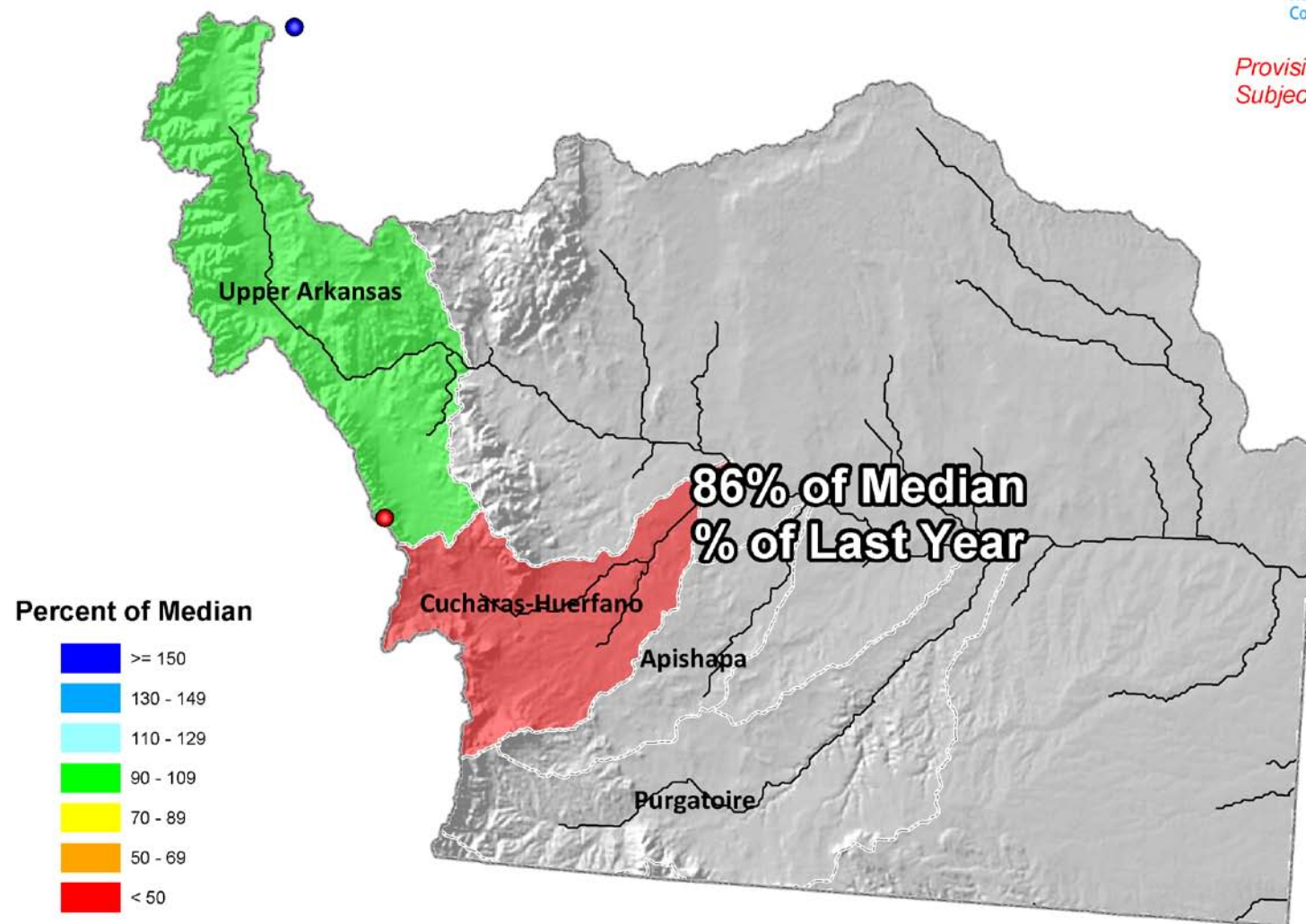
Arkansas River Basin Summary



Arkansas River Basin Snowpack Map



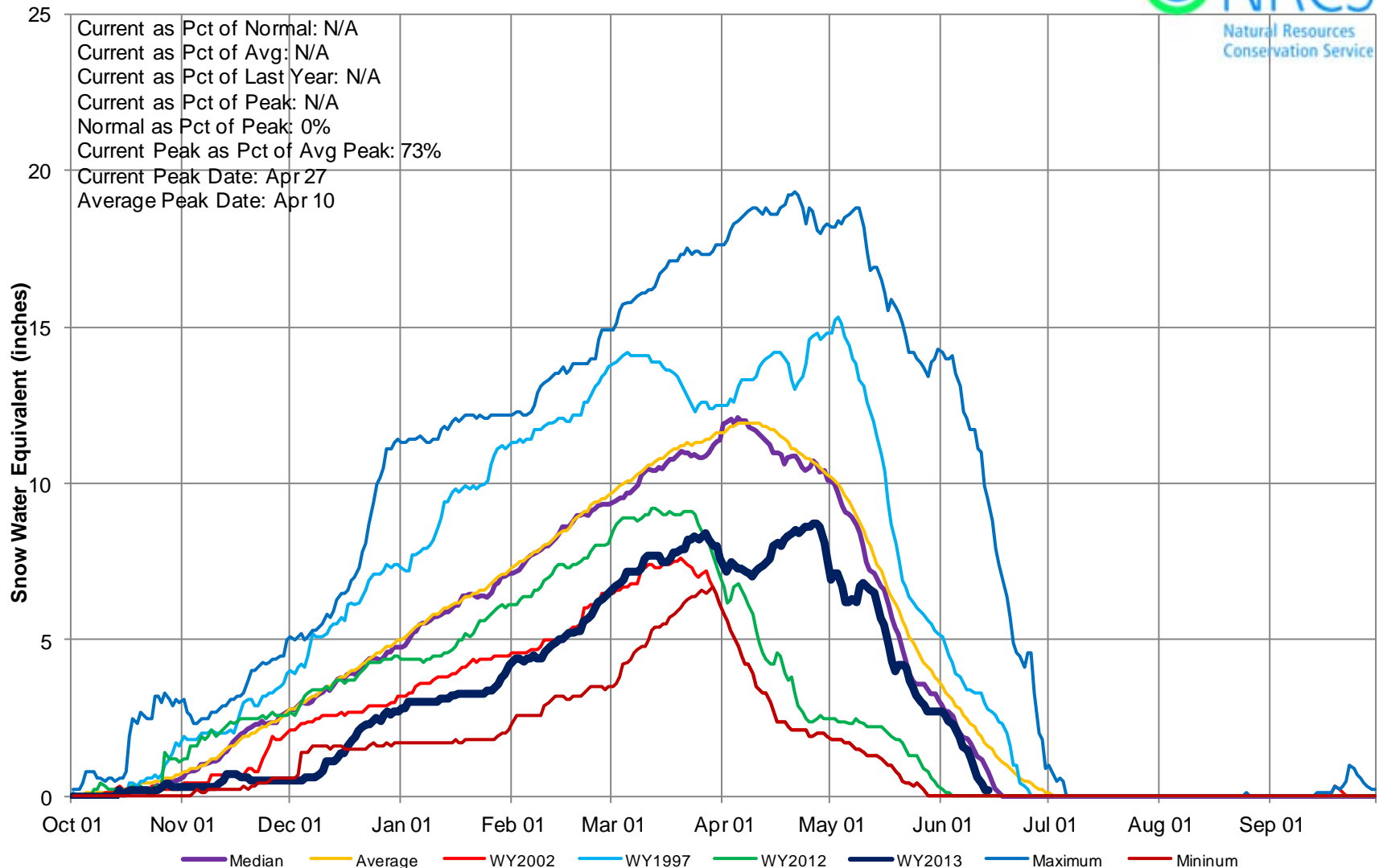
*Provisional Data
Subject to Revision*



Current as of June 1, 2013

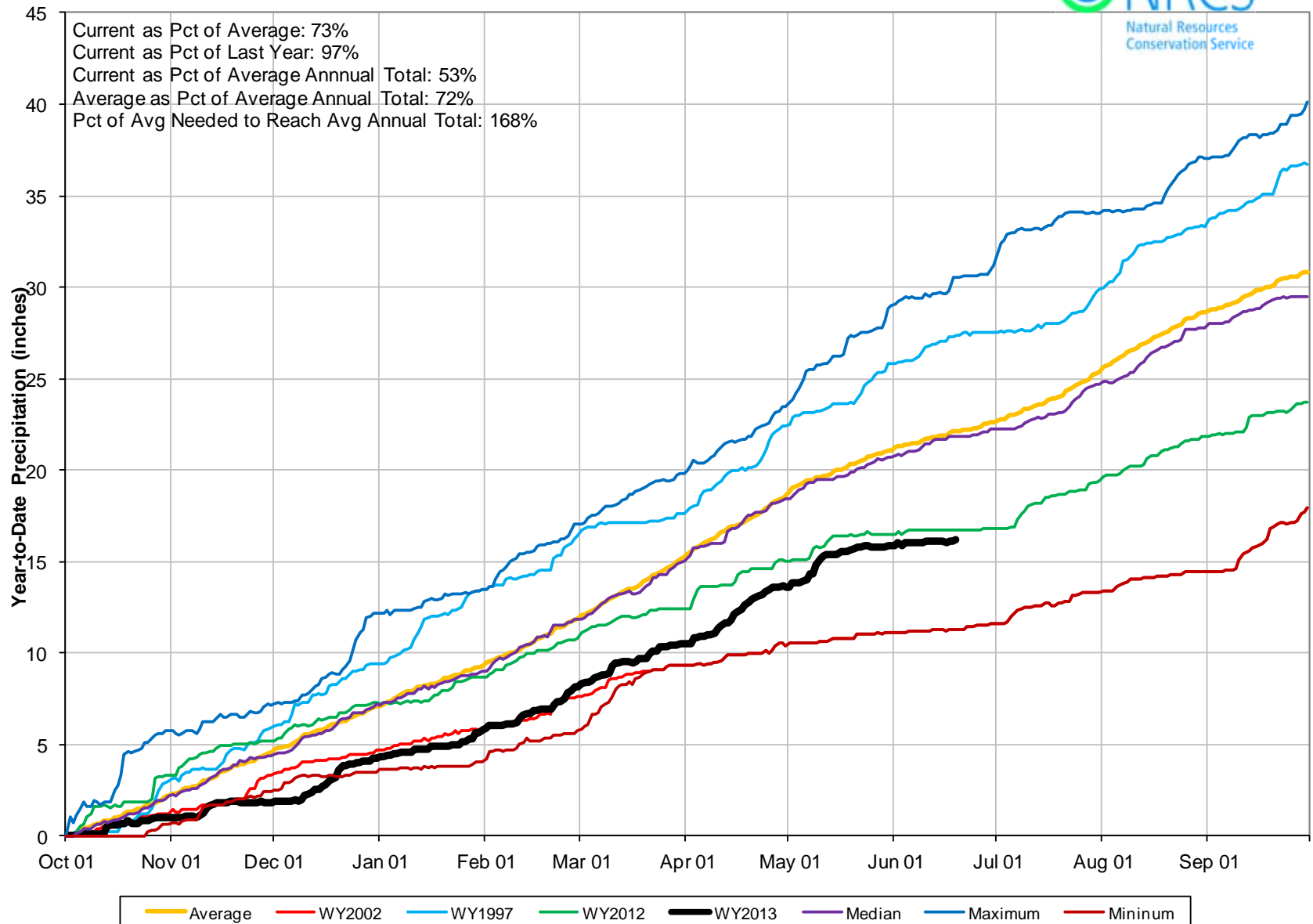
Arkansas River Basin High/Low Snowpack Summary

Based on Provisional SNOTEL data as of Jun 19, 2013



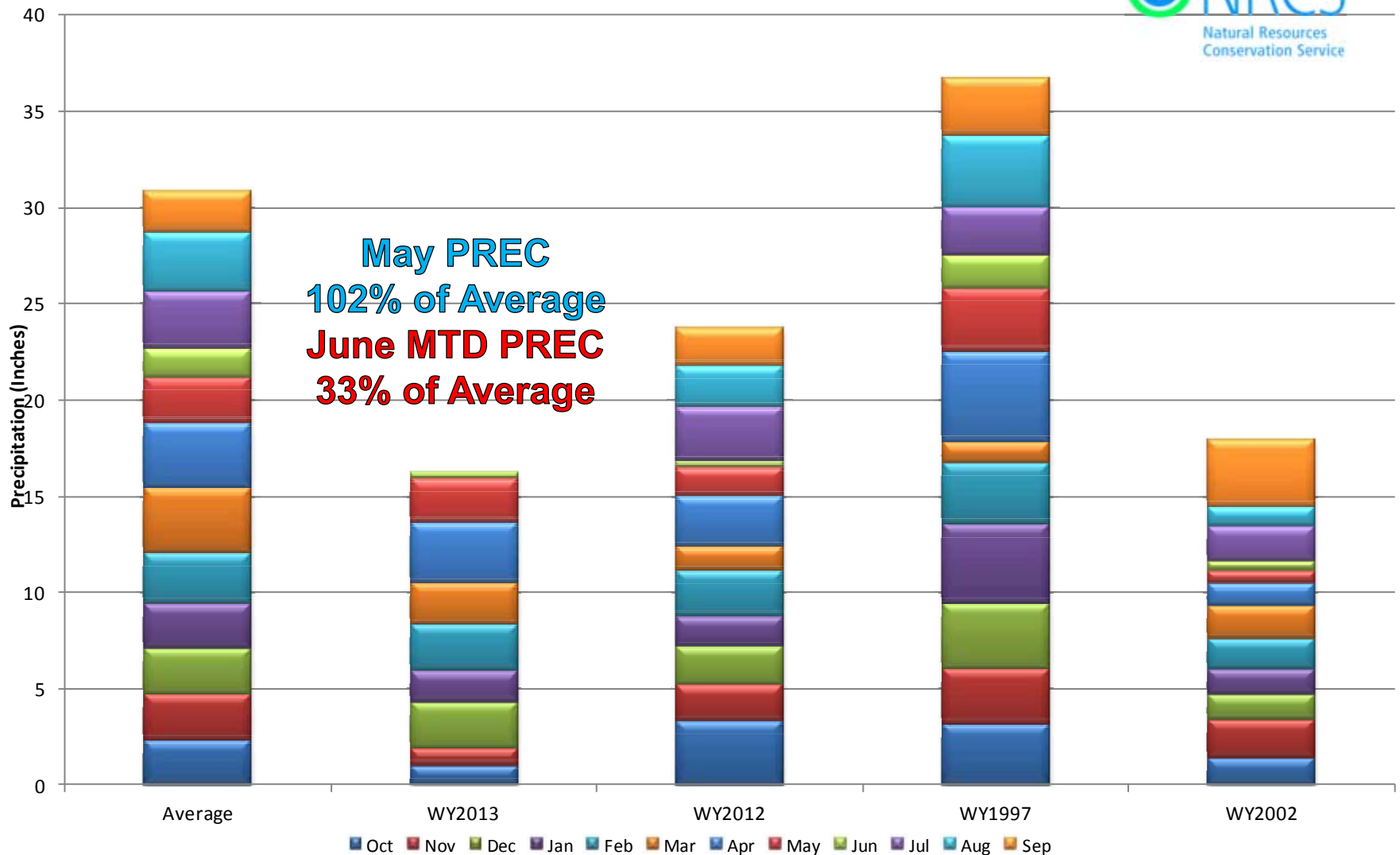
Arkansas River Basin High/Low Year-to-Date Precipitation Summary

Based on Provisional SNOTEL data as of Jun 19, 2013



Arkansas River Basin High/Low Monthly Precipitation Summary

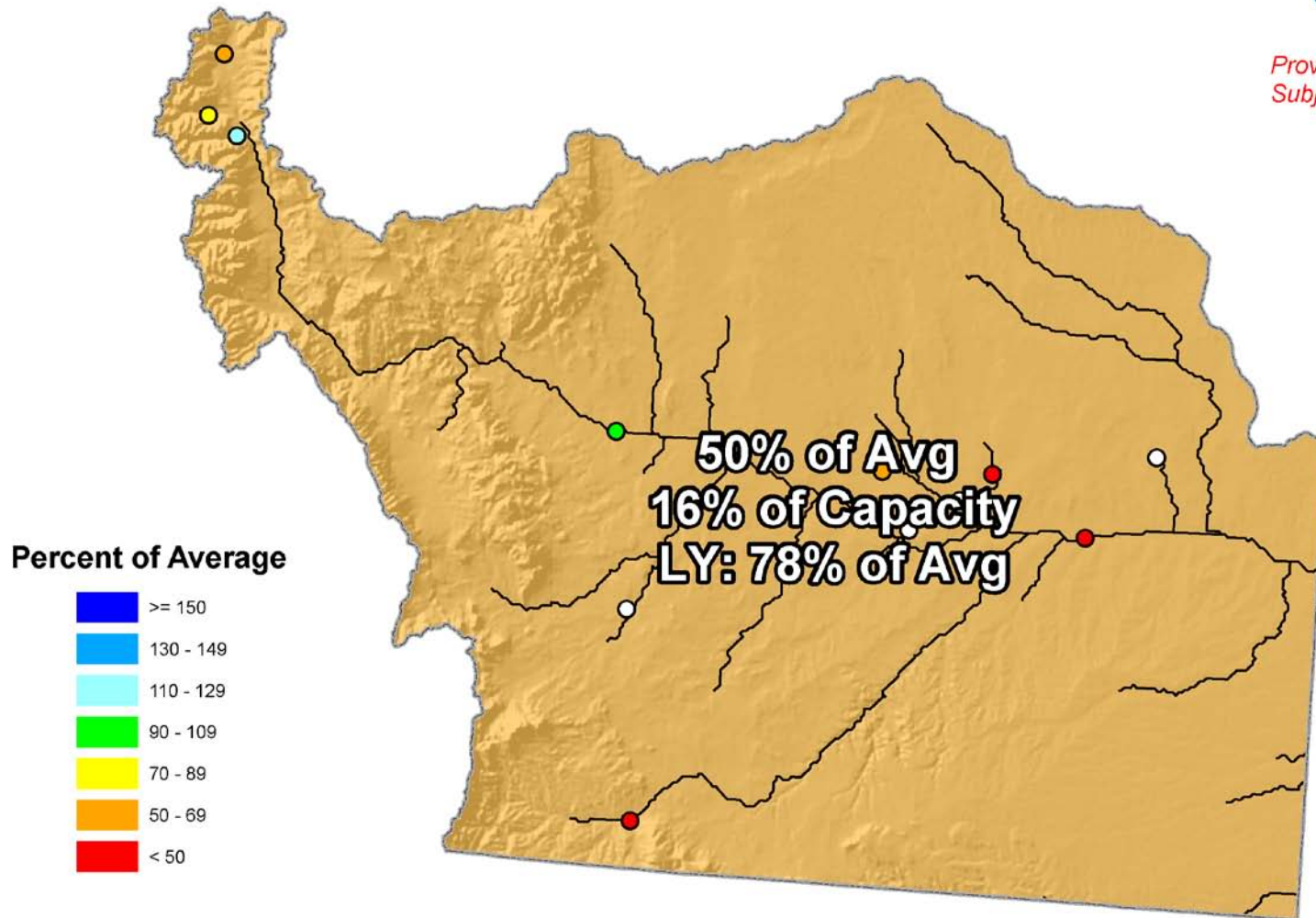
Based on Provisional SNOTEL data as of Jun 19, 2013



Arkansas River Basin Reservoir Storage Map



*Provisional Data
Subject to Revision*

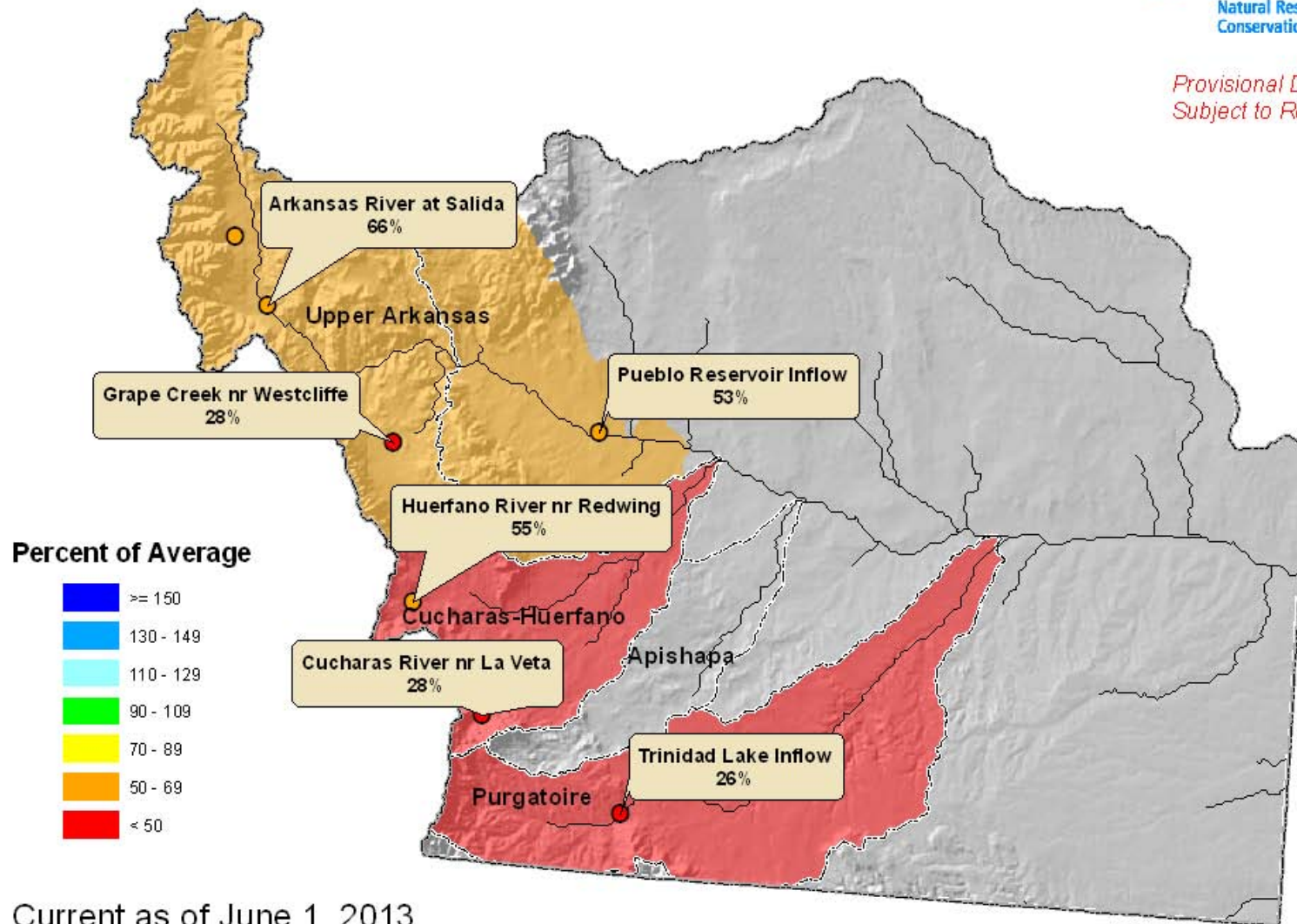


End of May 2013

Arkansas River Basin Streamflow Forecast Map

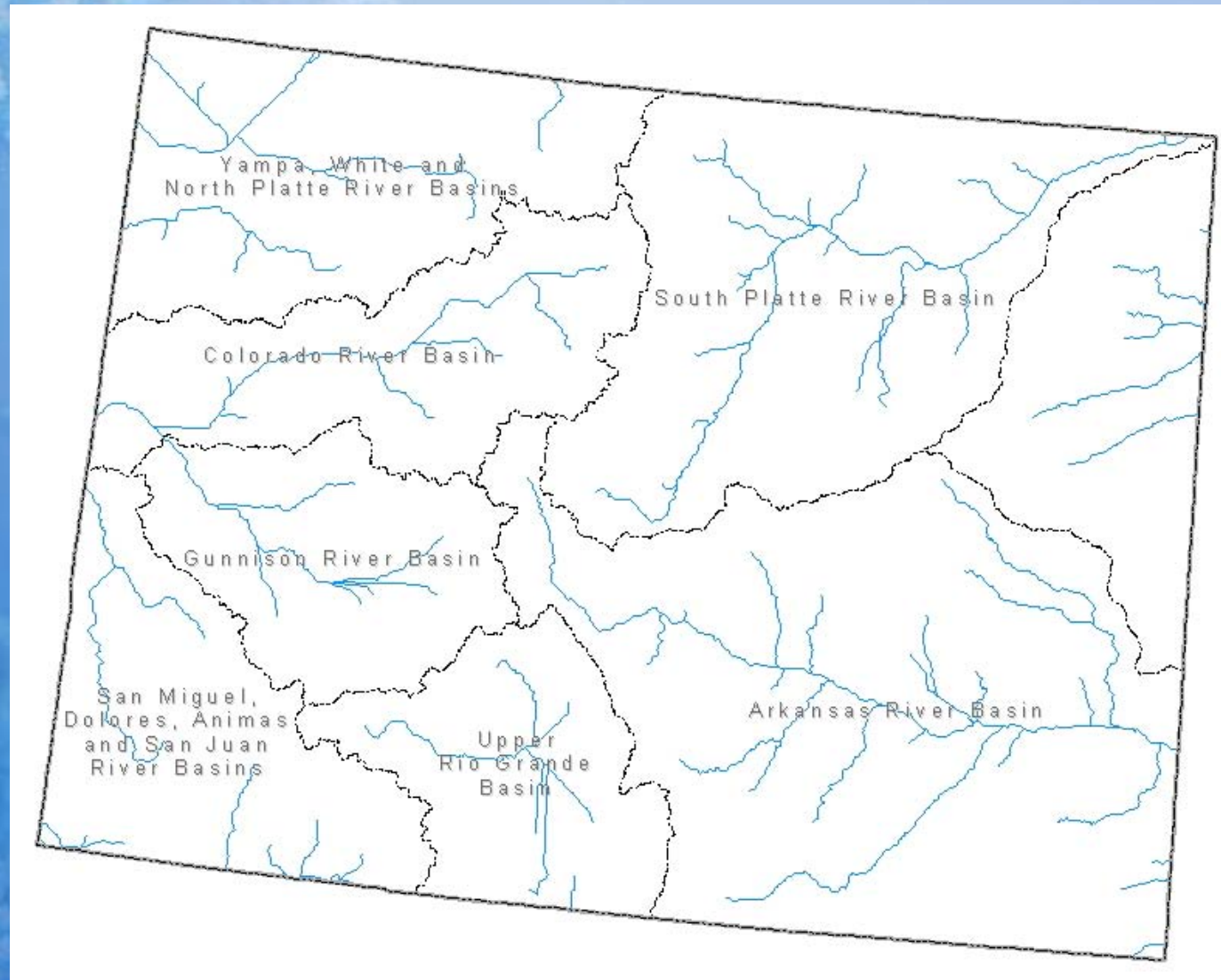


*Provisional Data
Subject to Revision*



Current as of June 1, 2013

Colorado Statewide Summary

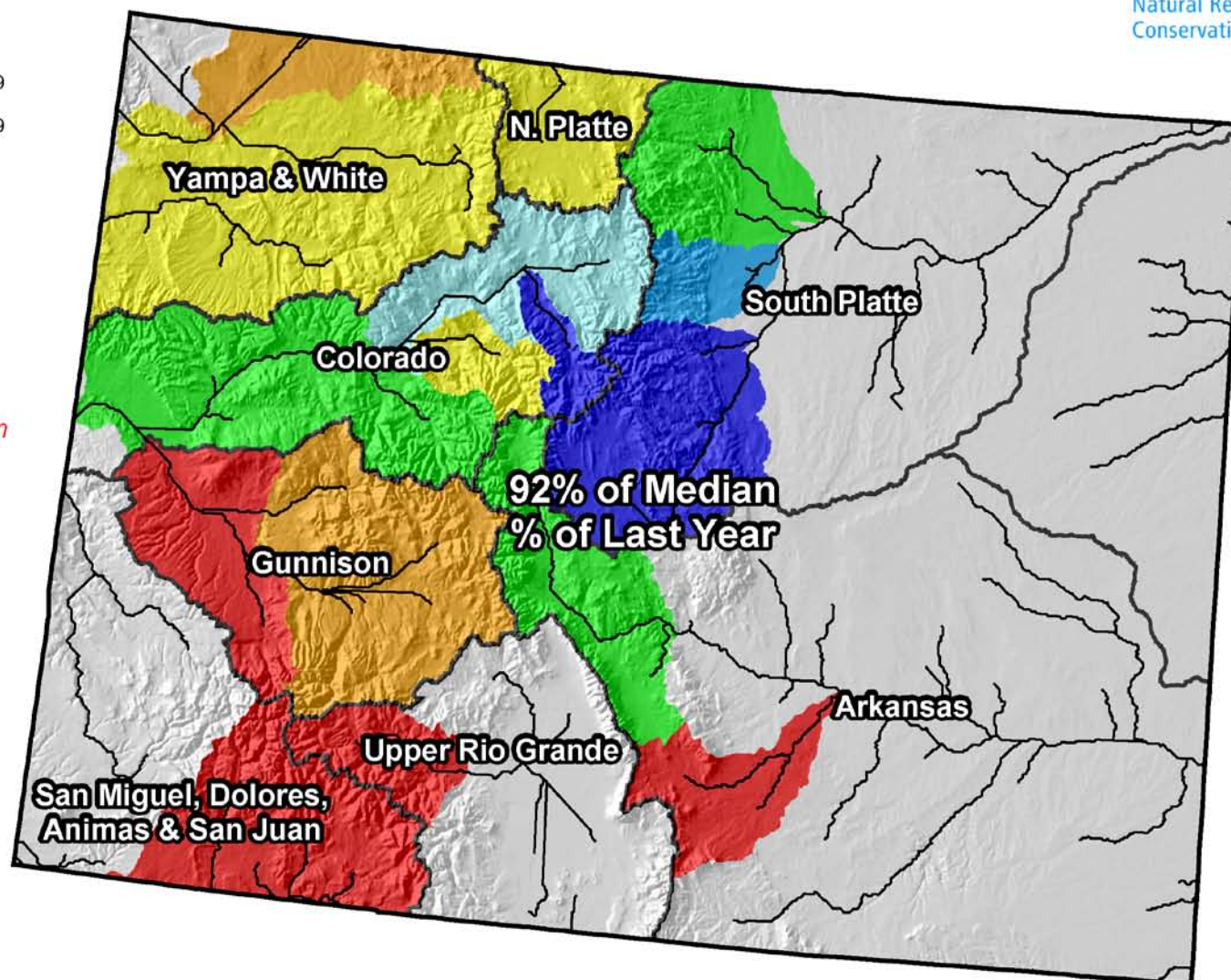


Colorado Snowpack Map

Percent of Median



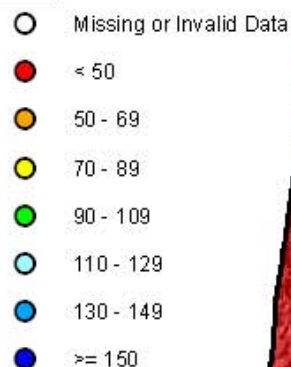
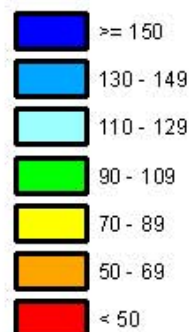
*Provisional Data
Subject to Revision*



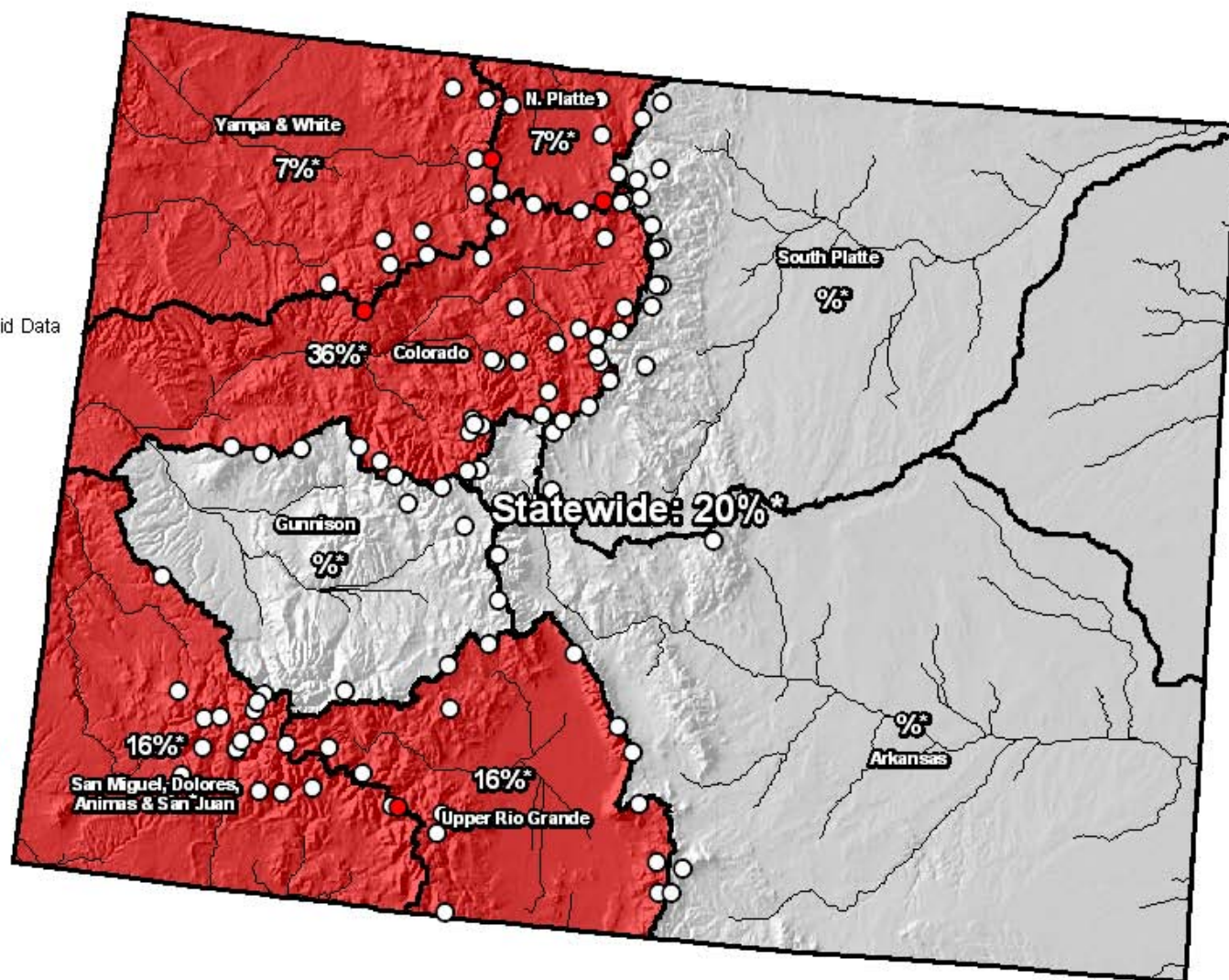
Current as of June 1, 2013

Colorado SNOTEL Snowpack Update Map with Site Data

Percent of Average



*Provisional Data
Subject to Revision*

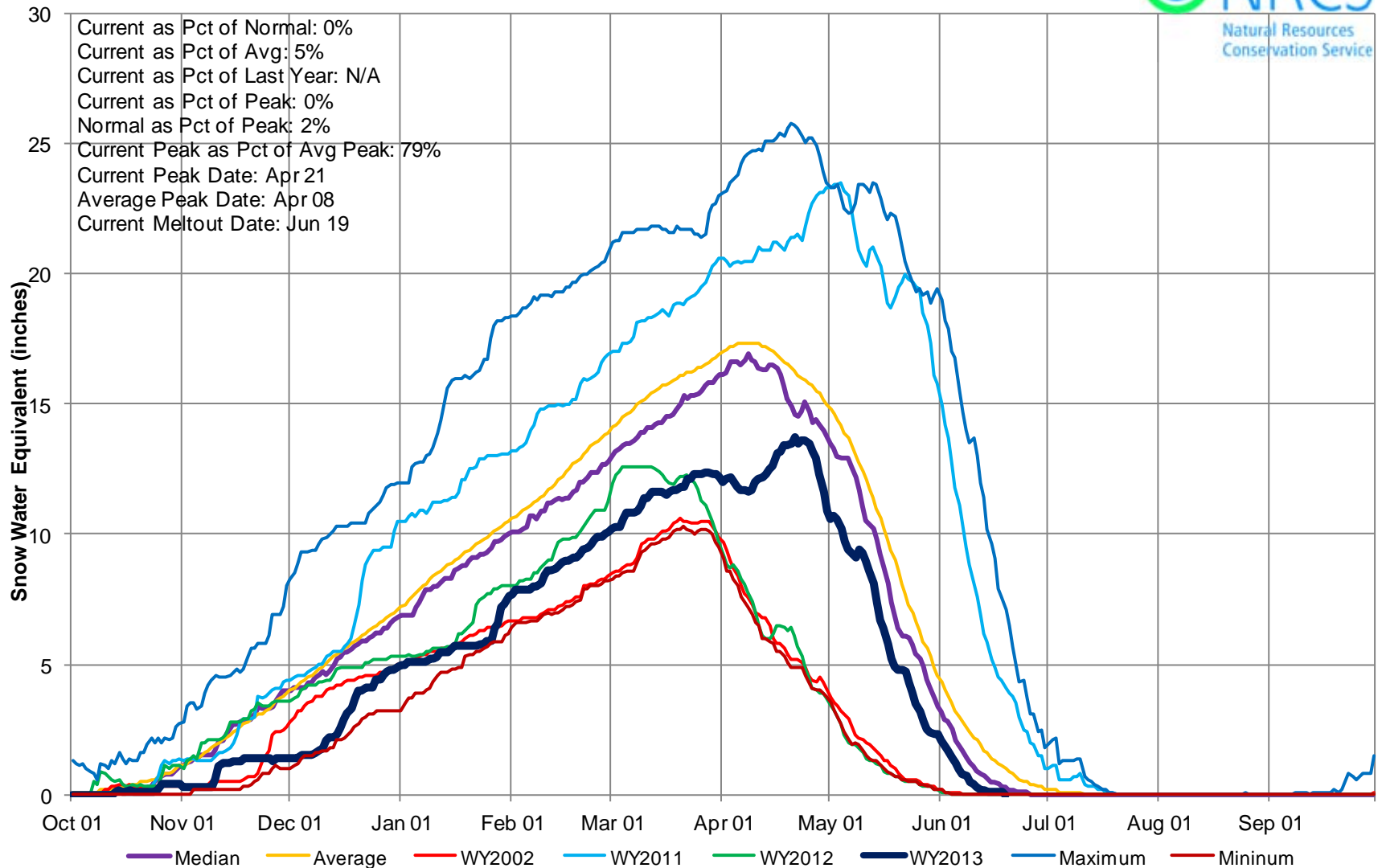


Current as of Jun 19, 2013

*Data may not provide a valid measure of conditions

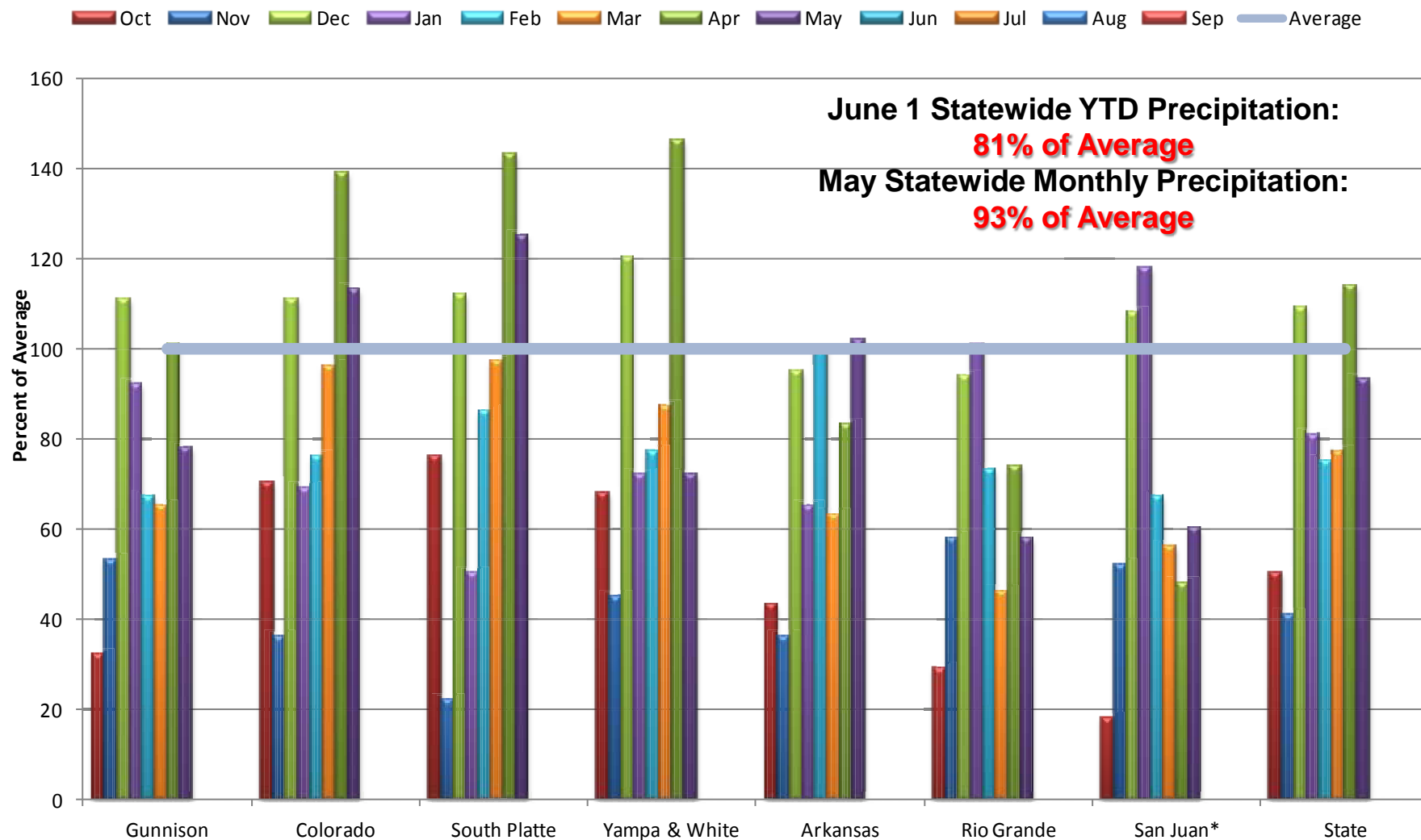
Colorado State-Wide High/Low Snowpack Summary

Based on Provisional SNOTEL data as of Jun 19, 2013



Colorado Monthly Precipitation Summary for WY2013

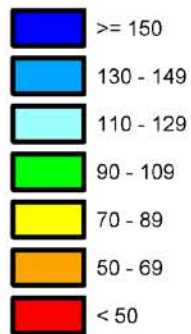
USDA Natural Resources Conservation Service



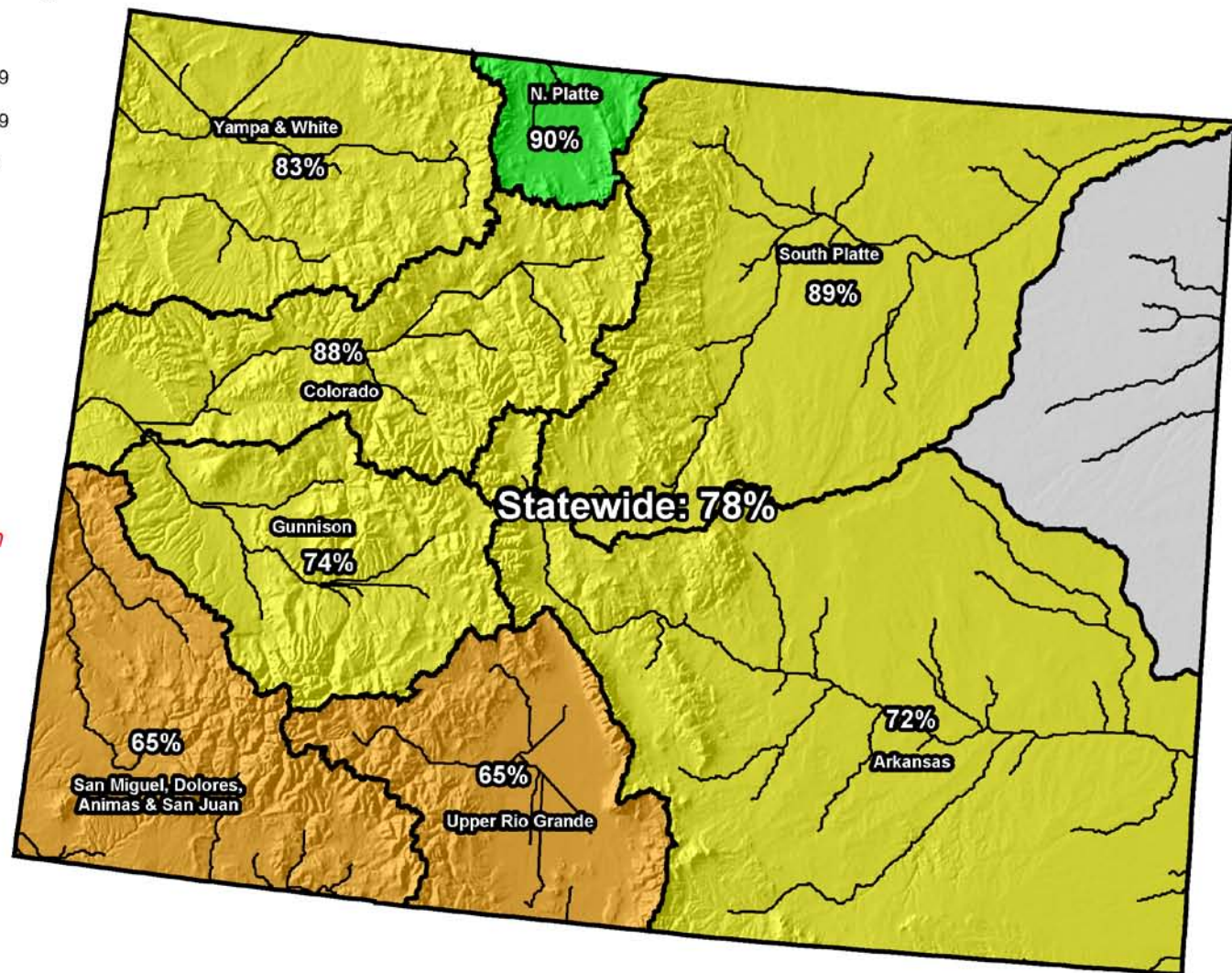
*Includes Animas, Dolores, San Miguel Basins

Colorado SNOTEL Water Year-to-Date Precipitation Update Map

Percent of Average



*Provisional Data
Subject to Revision*



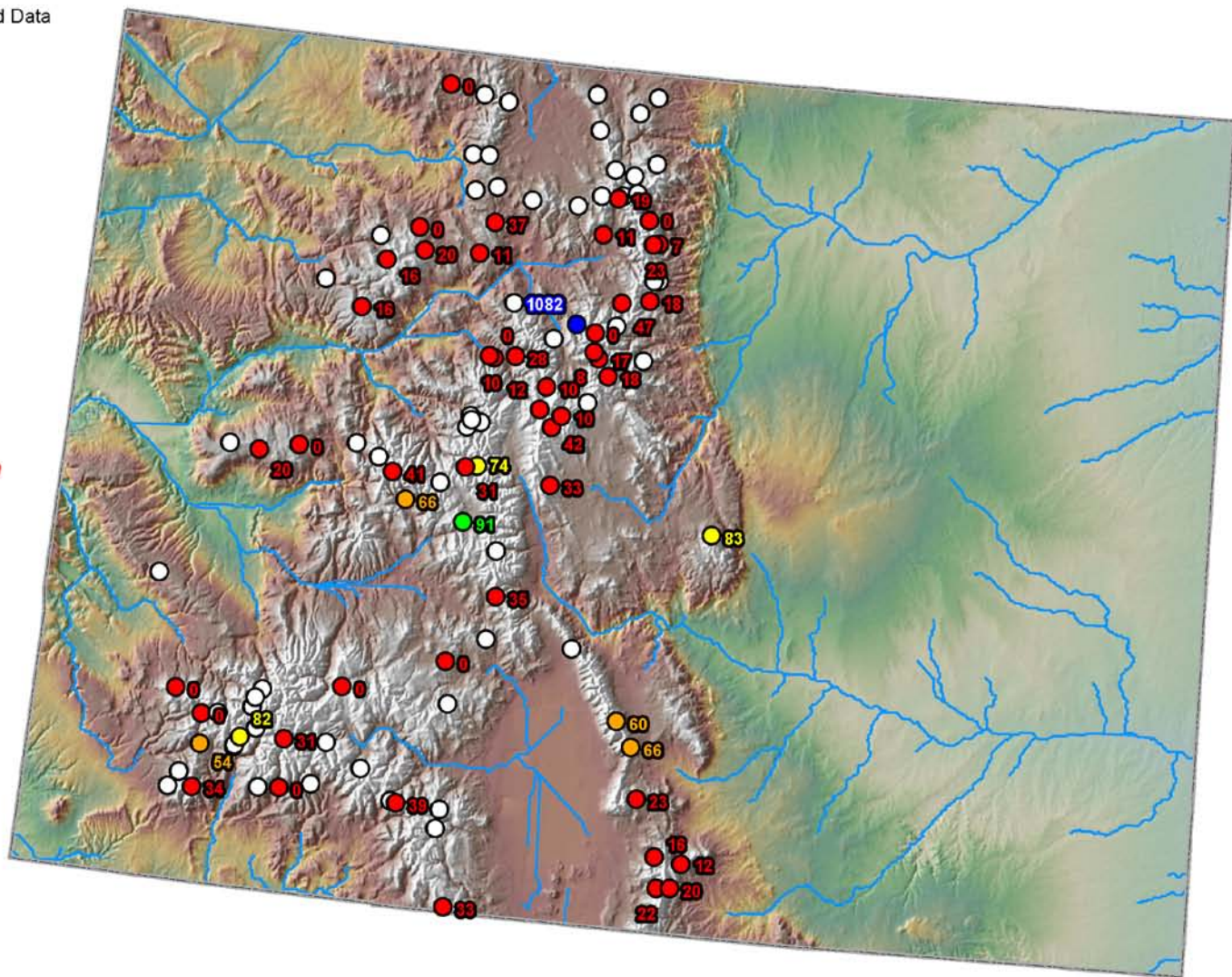
Current as of Jun 19, 2013

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

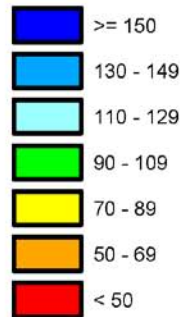
*Provisional Data
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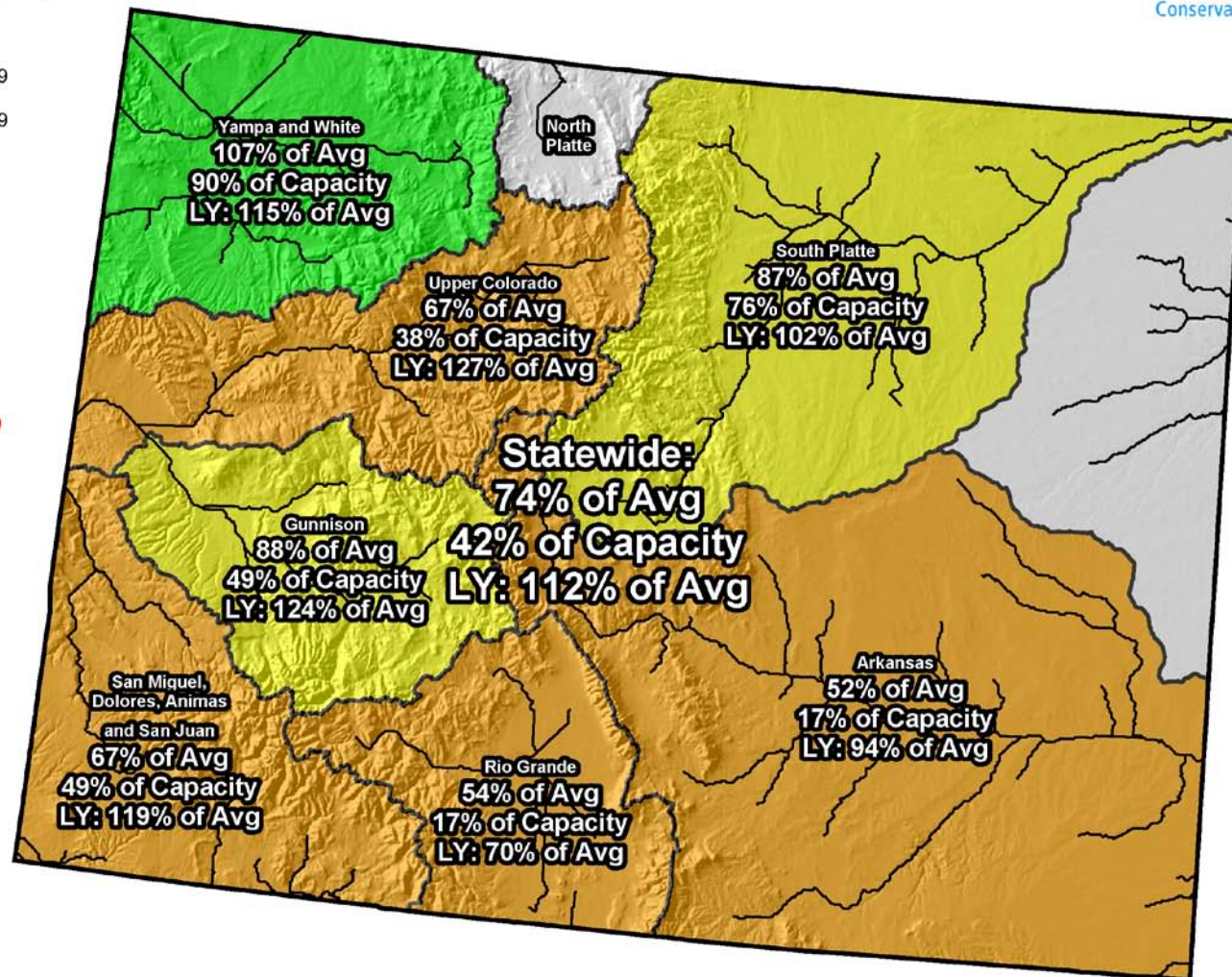
Current as of Jun 19, 2013

Colorado Reservoir Storage Map

Percent of Average



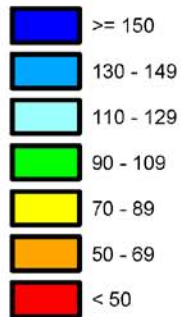
*Provisional Data
Subject to Revision*



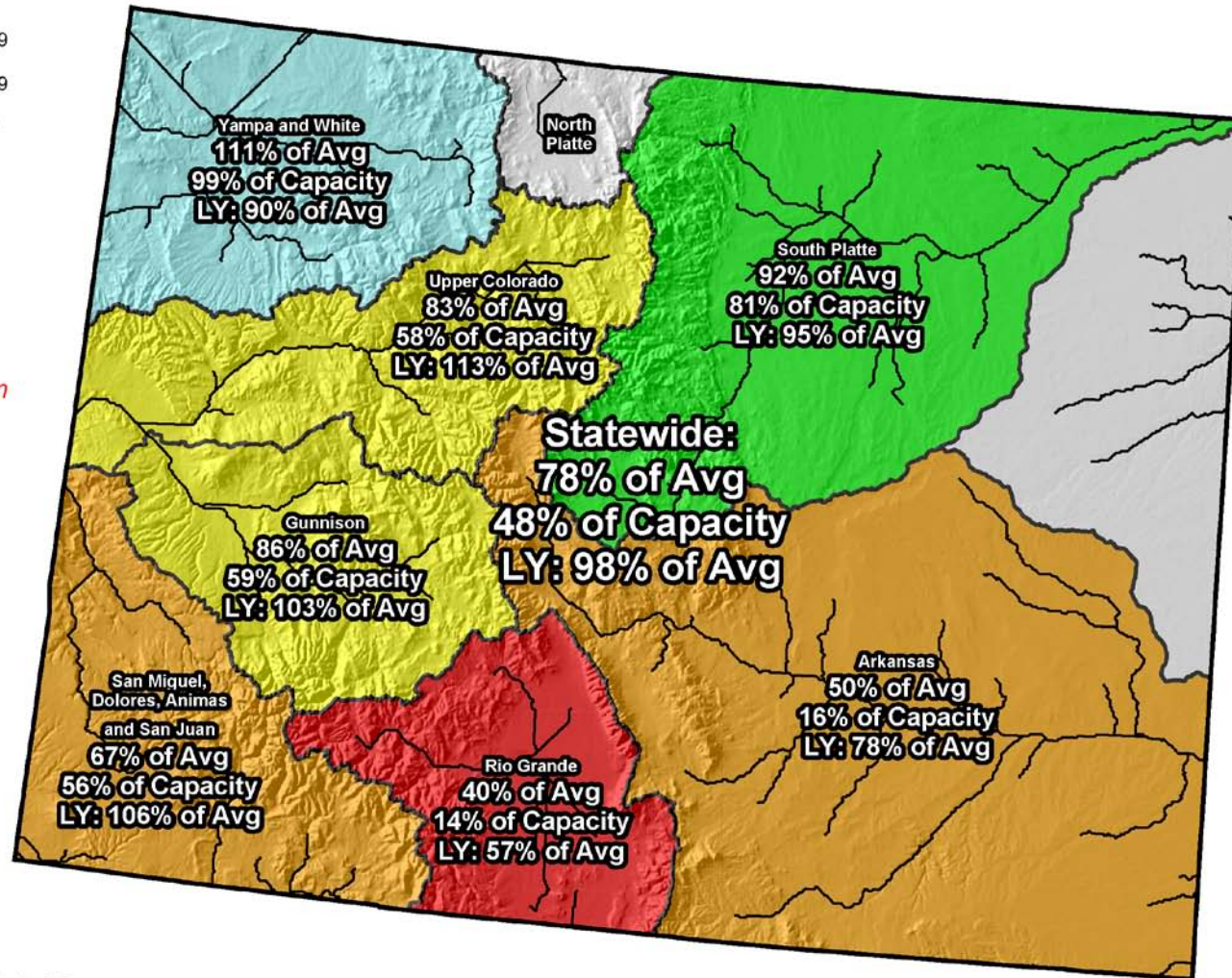
End of April 2013

Colorado Reservoir Storage Map

Percent of Average



*Provisional Data
Subject to Revision*



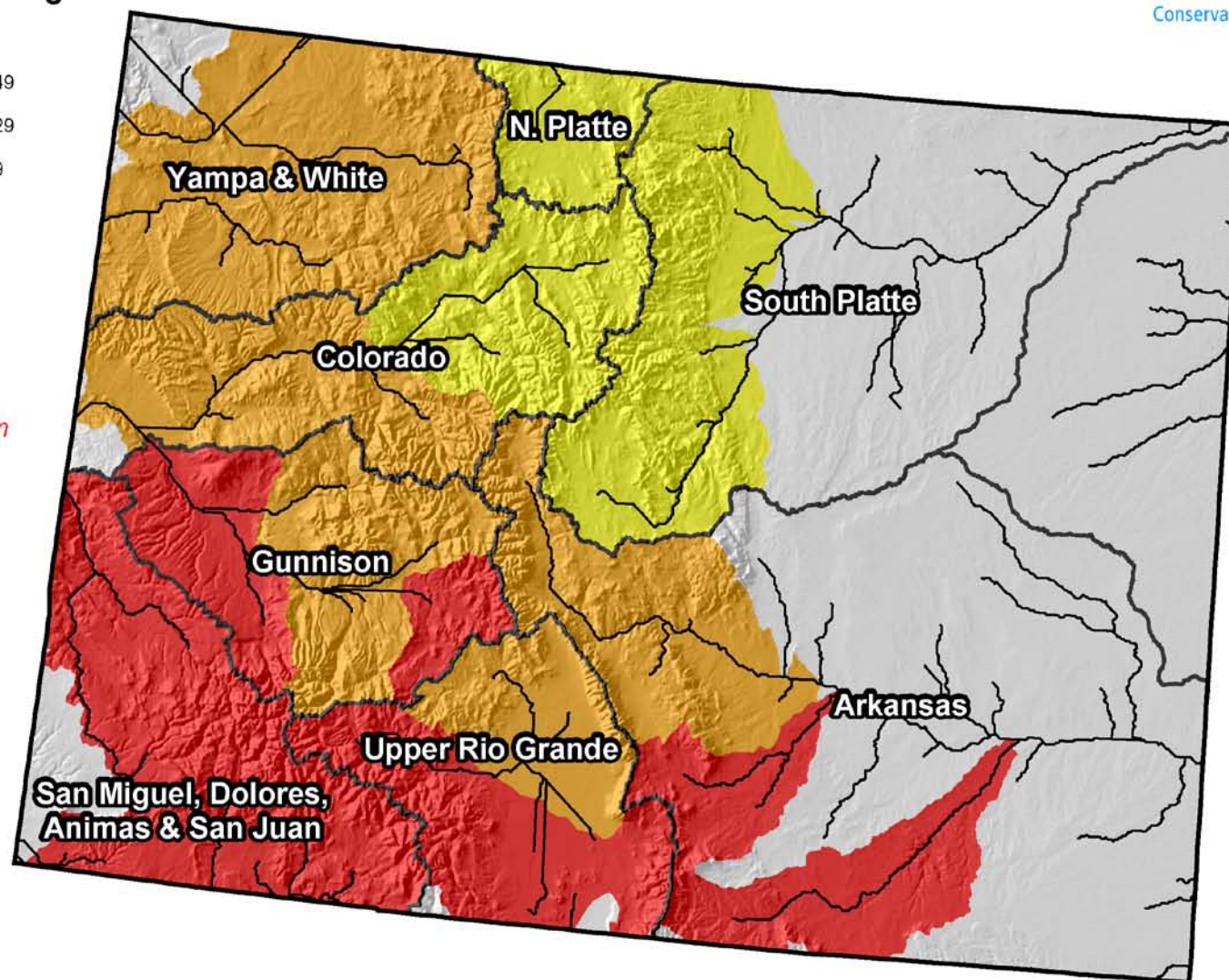
End of May 2013

Colorado Streamflow Forecast Map

Percent of Average



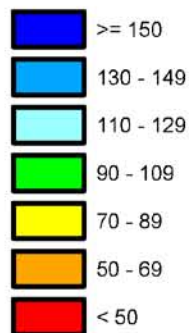
*Provisional Data
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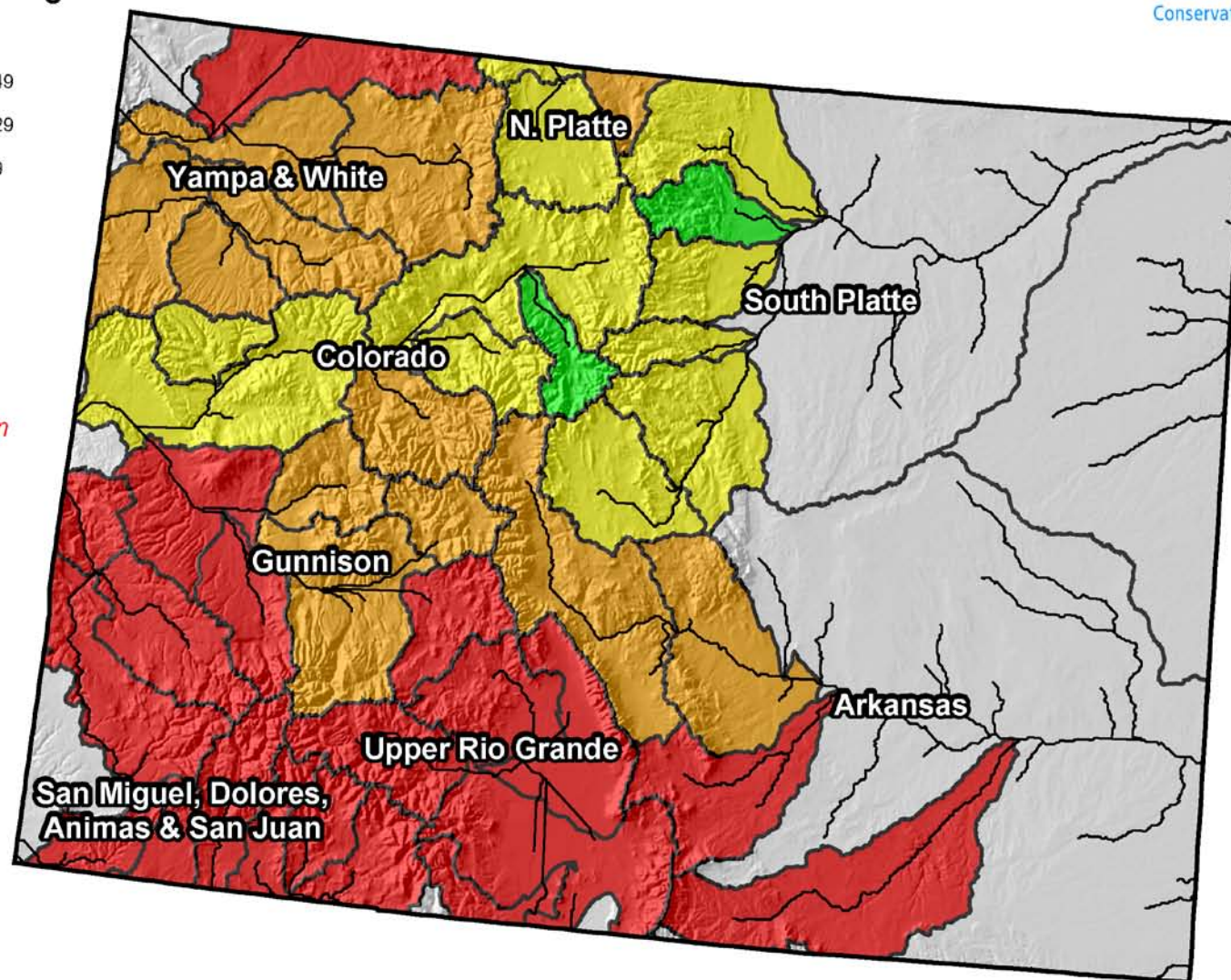
Current as of May 1, 2013

Colorado Streamflow Forecast Map

Percent of Average

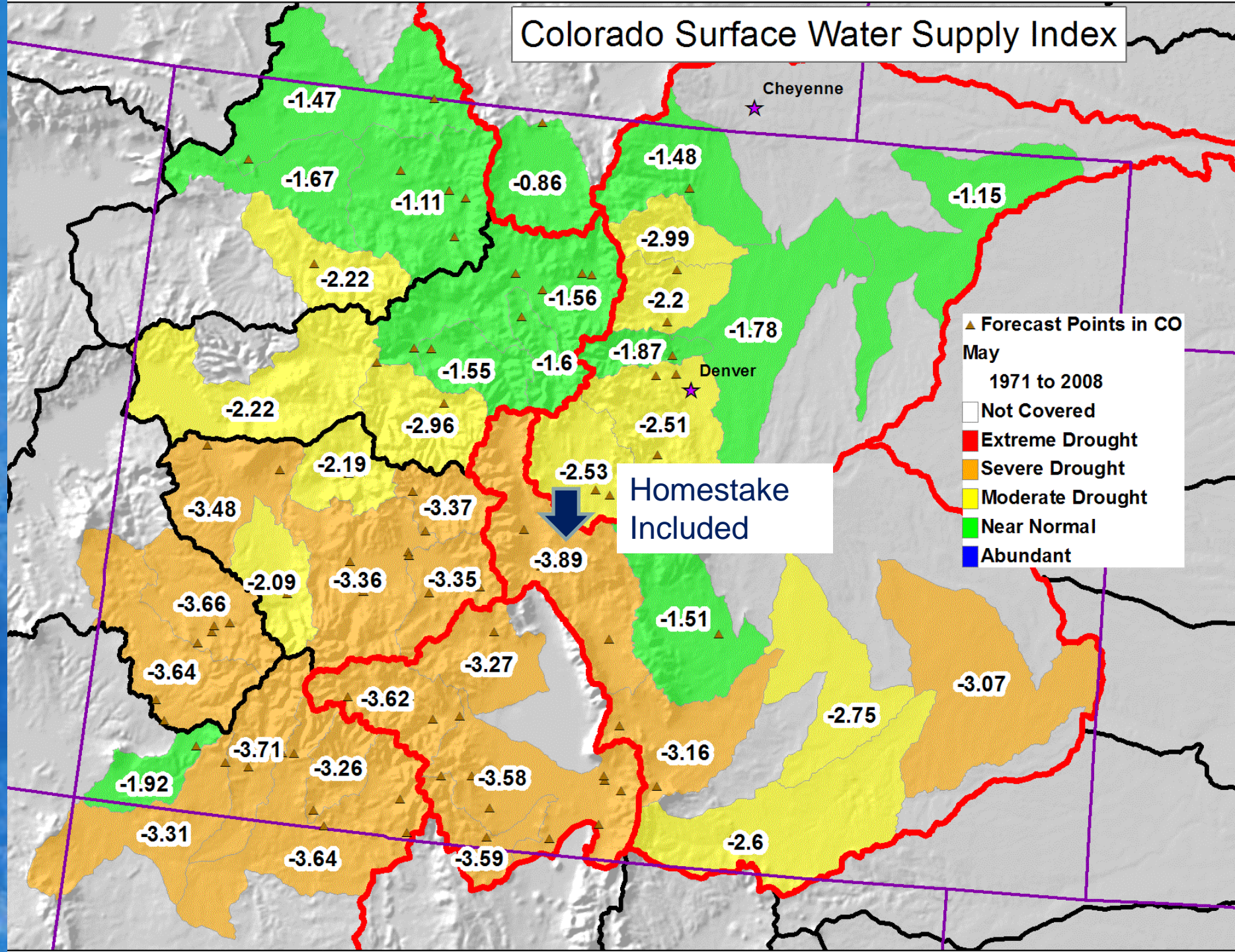


*Provisional Data
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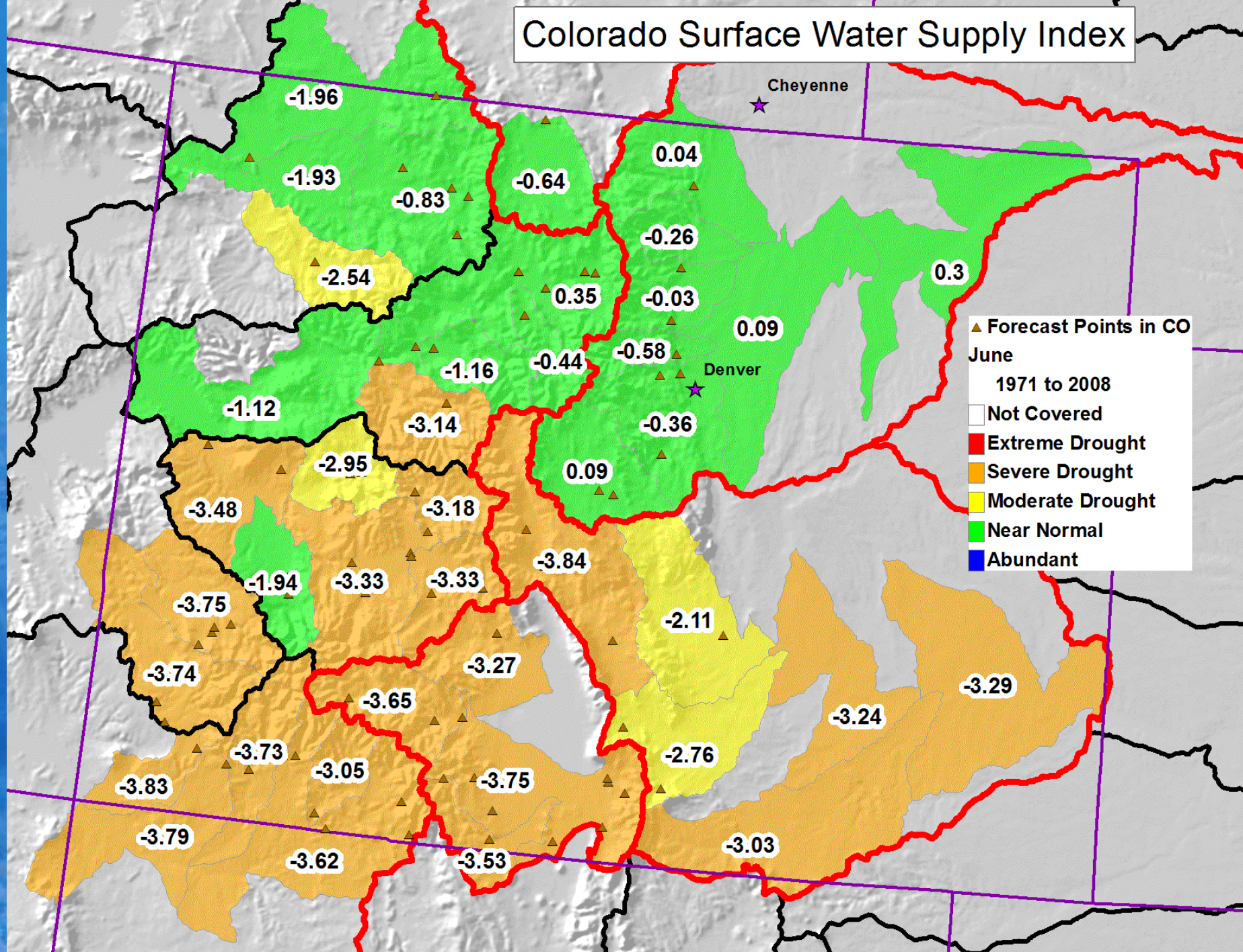


Current as of June 1, 2013

Colorado Surface Water Supply Index



Colorado Surface Water Supply Index



WY2013 Summary

- DEC:** SNOW! Finally. Storms in mid to late Dec boosted snowpack but it was not enough to reach normal conditions.
- JAN:** End of month storm increased the snowpack in Southwest basins.
- FEB:** Prec below average. The Snow we did receive was just enough to keep the snowpack from further declining.
- MAR:** Storms helped maintained snowpack but no boost.
- APR:** Multiple storm systems brought the snowpack up substantially and in some cases to near normal peaks. Really improved the northern basins but did not help the southern basins.
- MAY:** Above normal prec recorded for the South Platte, Upper Colorado and Arkansas basins. In the South Platte additional snow accumulation caused the basin to reach a second higher peak SWE in early March.
- JUNE:** Statewide snowpack has melted out as of June 19th. Very little precipitation received in the mountains so far this month. Reservoir storage beginning to recover in the northern basins.