

NRCS – Snow Survey & Water Supply Forecasting

Mike Gillespie

Colorado Drought Task Force Meeting

May 27, 2009

The 2009 Water Year

October – Near average precipitation during the first half of the month, followed by dry conditions during the second half. Below average snowpack accumulations during the month.

November – Below average precipitation statewide. Minimal gains in mountain snowpack.

December – Heavy snow storms in the southern mountains. Nearly a repeat of last year!!

January – A good start to the month, followed by a “January Thaw”. Sizable snowpack increases at month’s end.

February – Generally below average snowfall, especially across southern mountains.

March – Warm and dry statewide

April – Sprint to the Finish Line!!

May – How fast can snow melt?

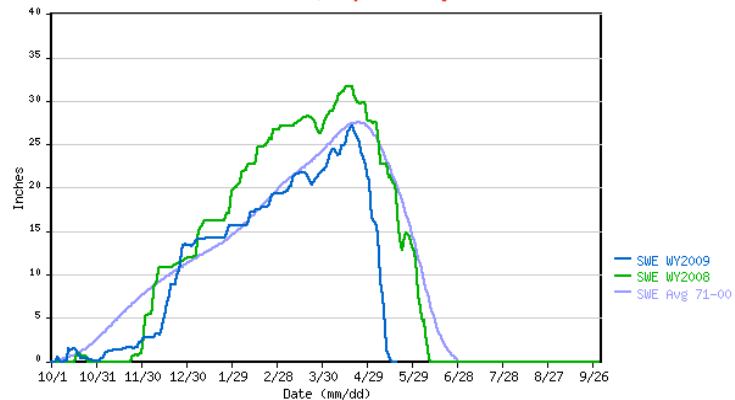
Effects of Dust Layers in the Snowpack

1. Reduced Albedo
2. Rapid melt rates
3. Condensed Runoff Season

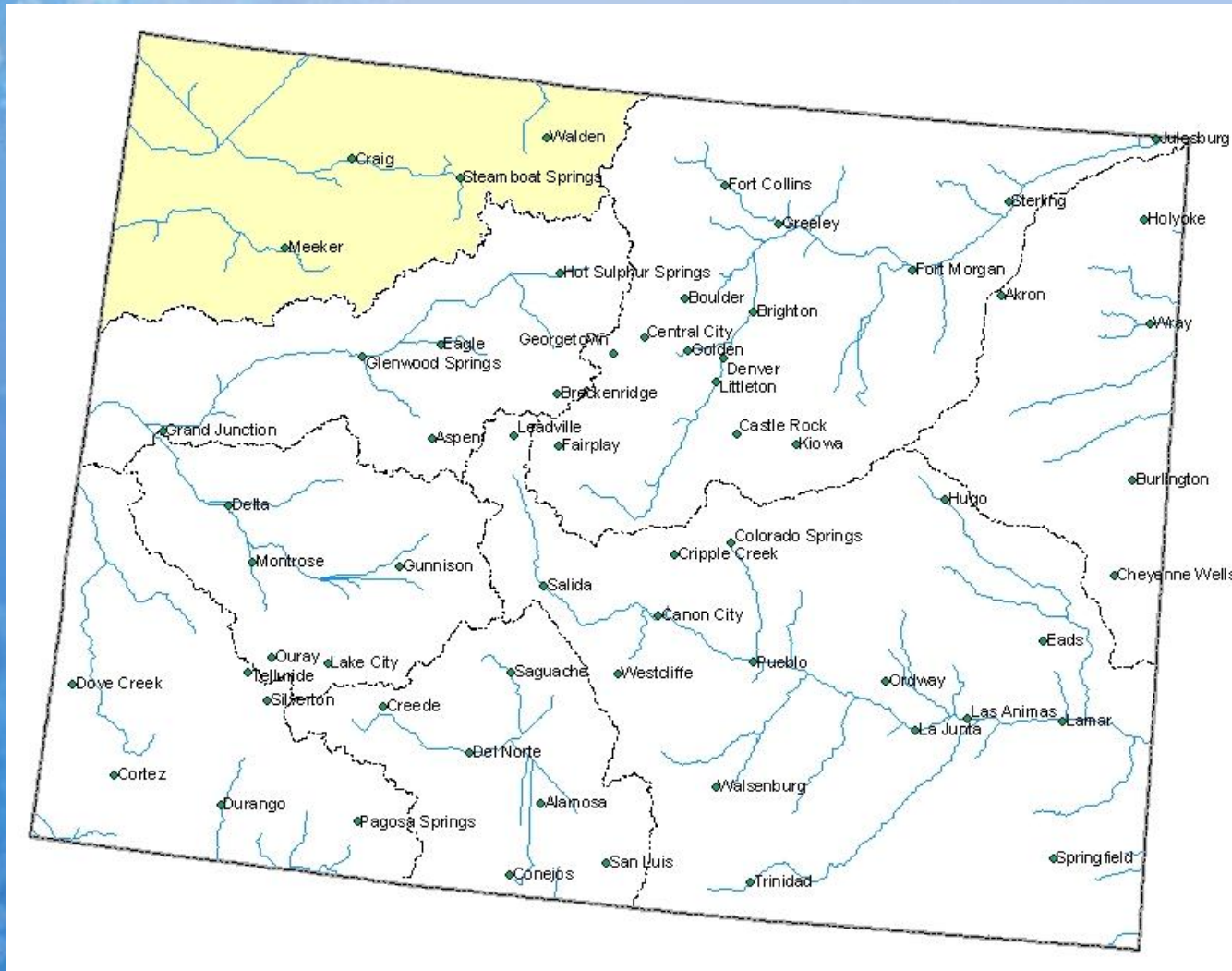


BEARTOWN SNOTEL as of 05/18/2009

*** Provisional Data, Subject to Change ***

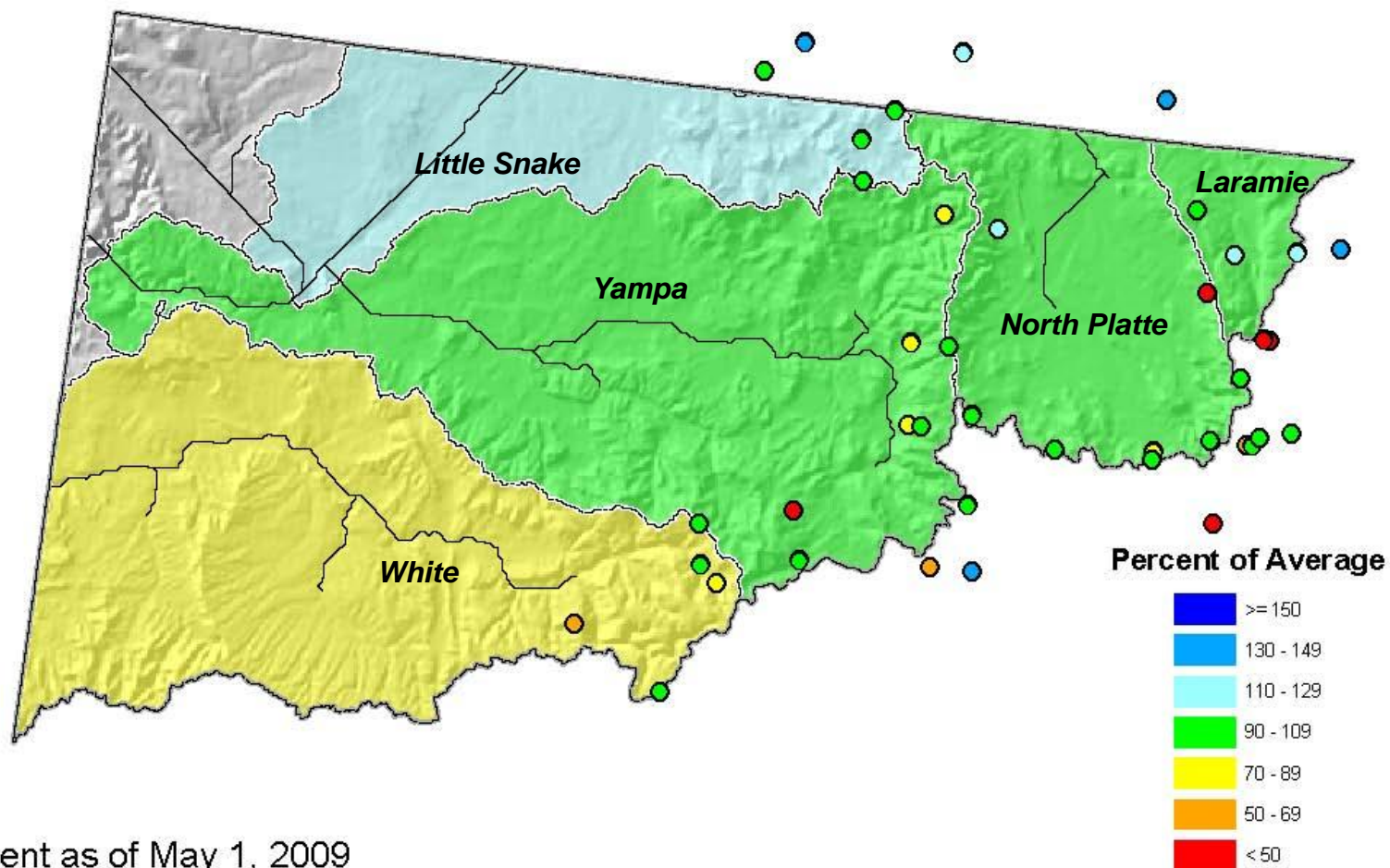


Yampa, White & North Platte River Basins Summary



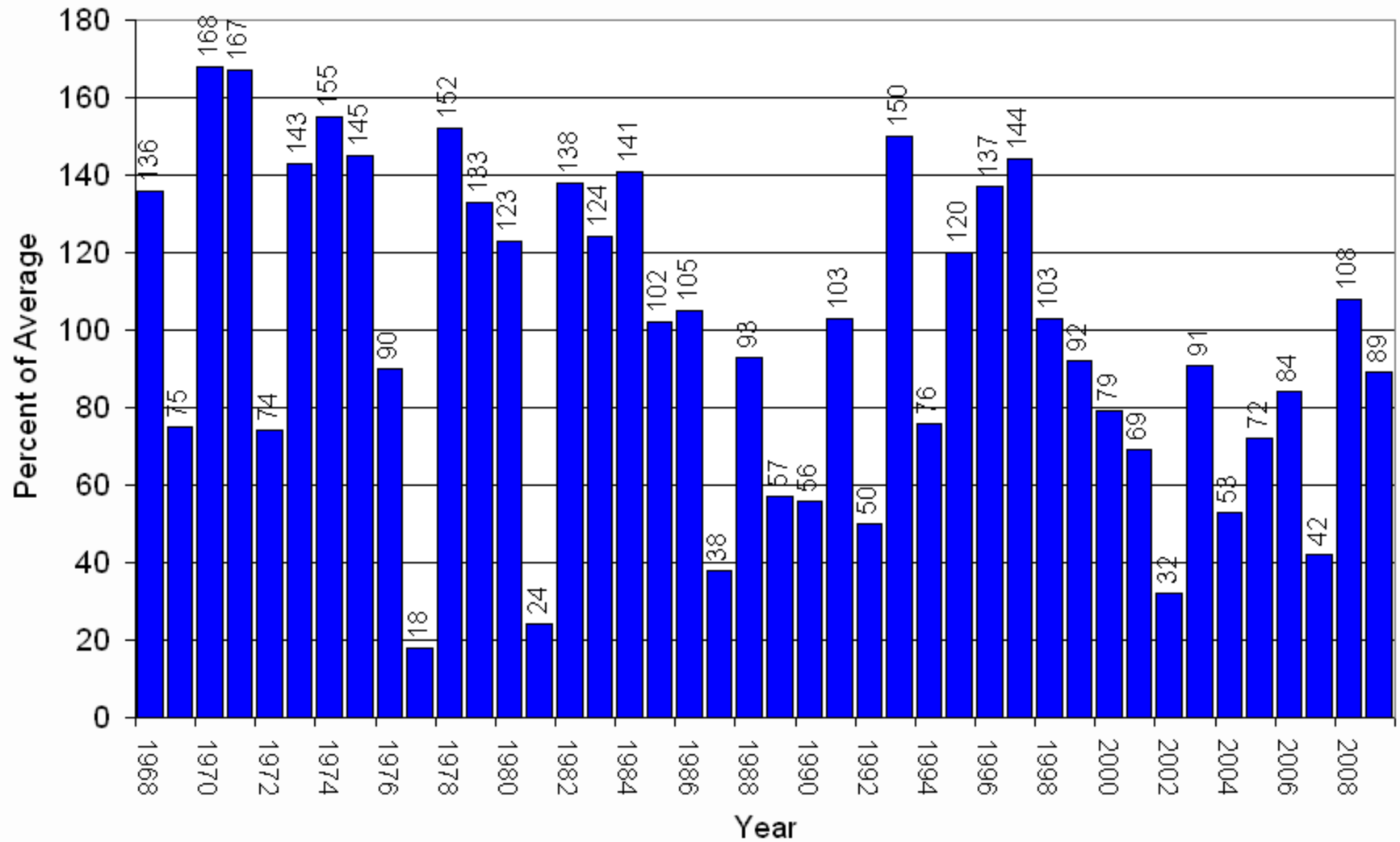
Yampa, White and North Platte River Basins Snowpack Map

*Provisional Data
Subject to Revision*

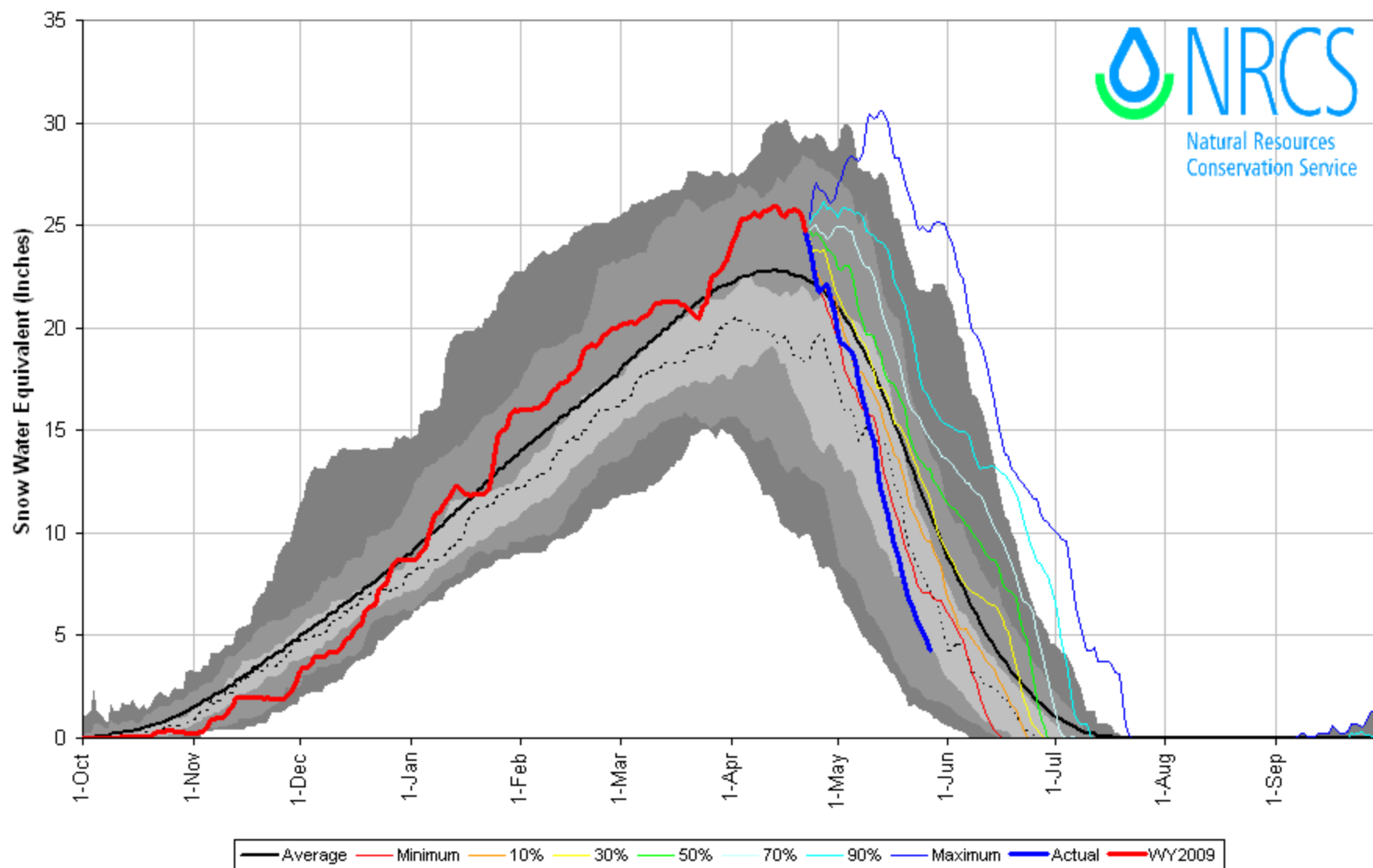


Current as of May 1, 2009

May 1 Total Yampa & White River Basins Snowpack

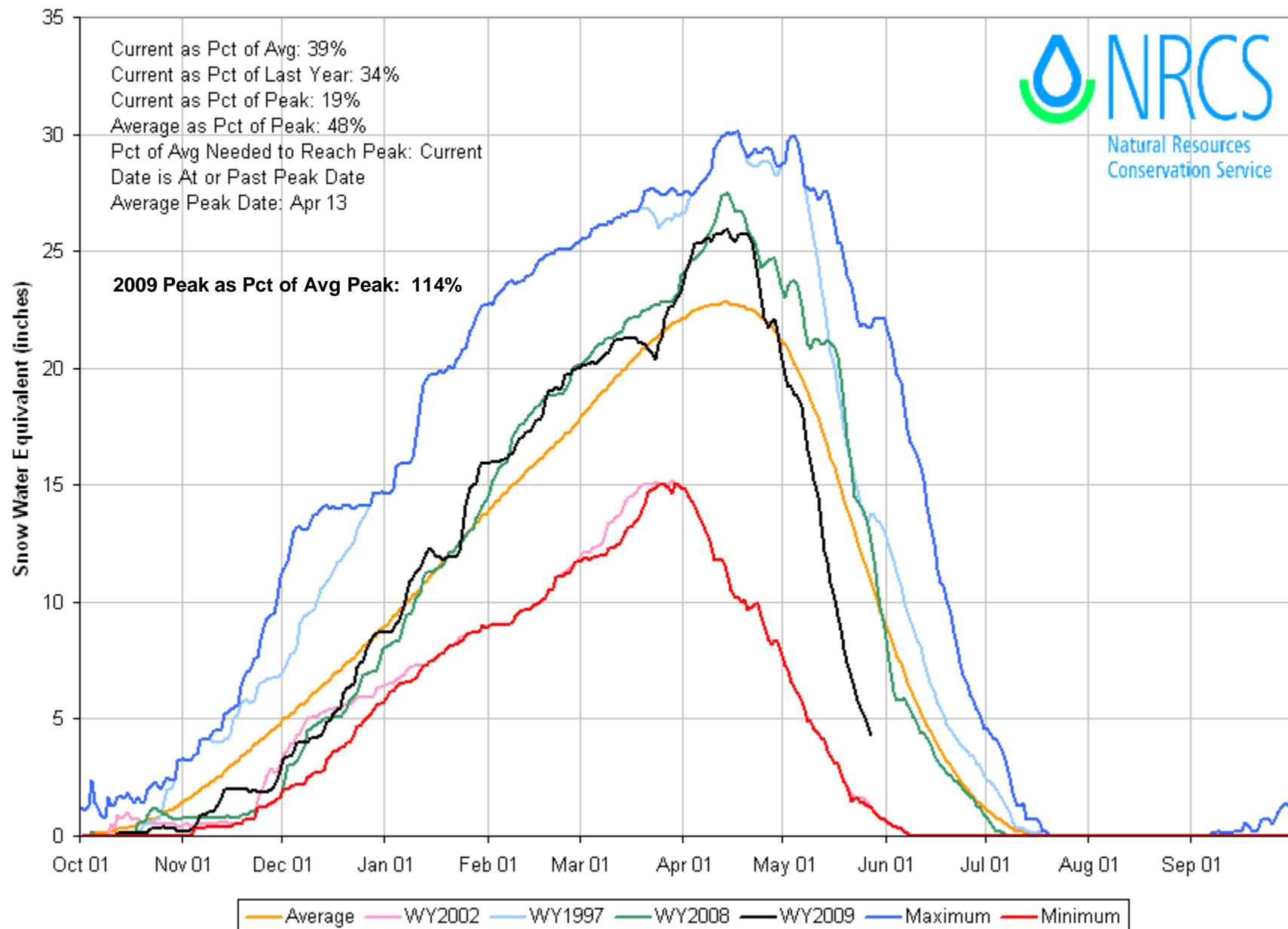


Based on Provisional SNOTEL Data as of May 27, 2009



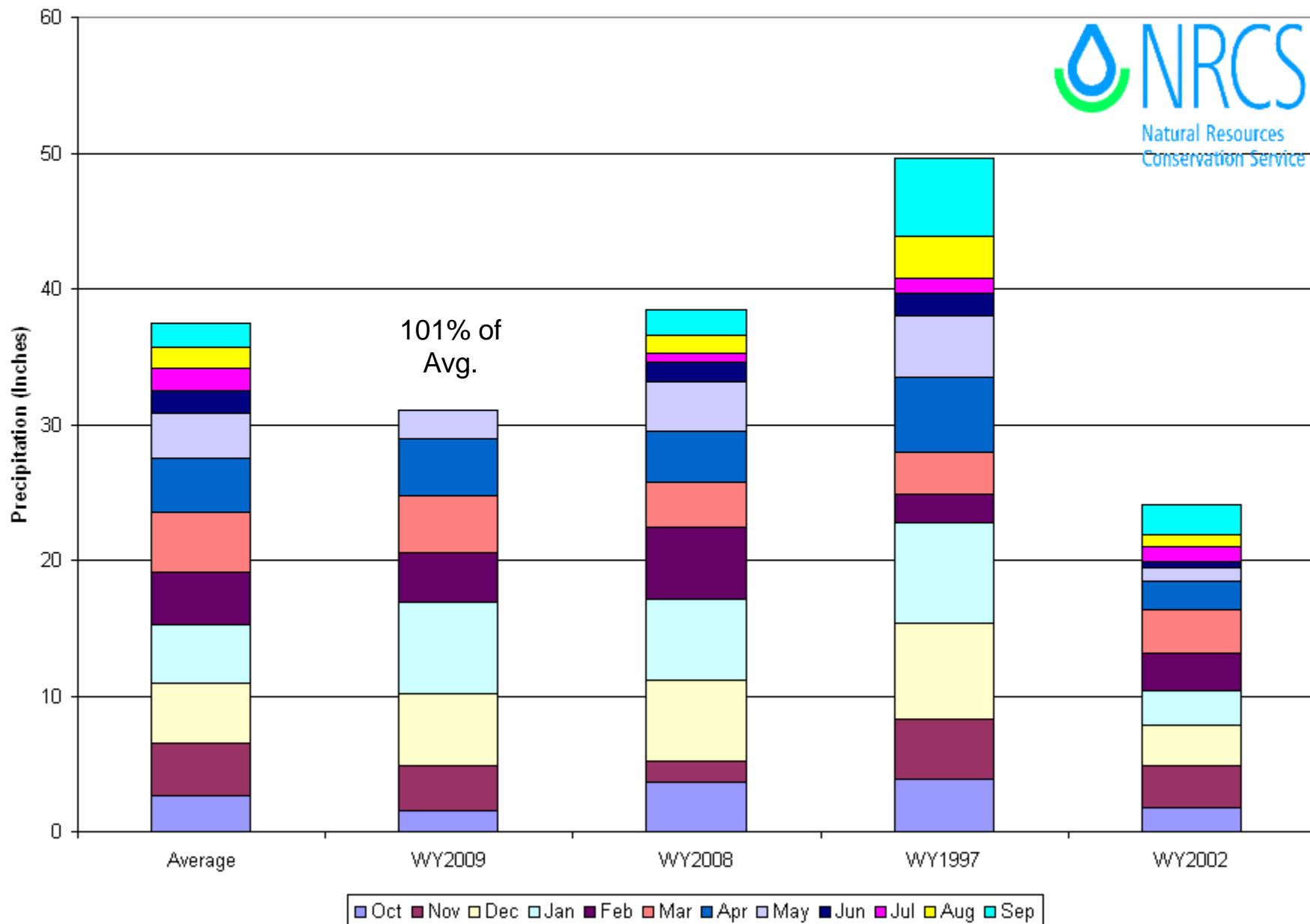
Yampa and White River Basins High/Low Snowpack Summary

Based on Provisional SNOTEL data as of May 27, 2009



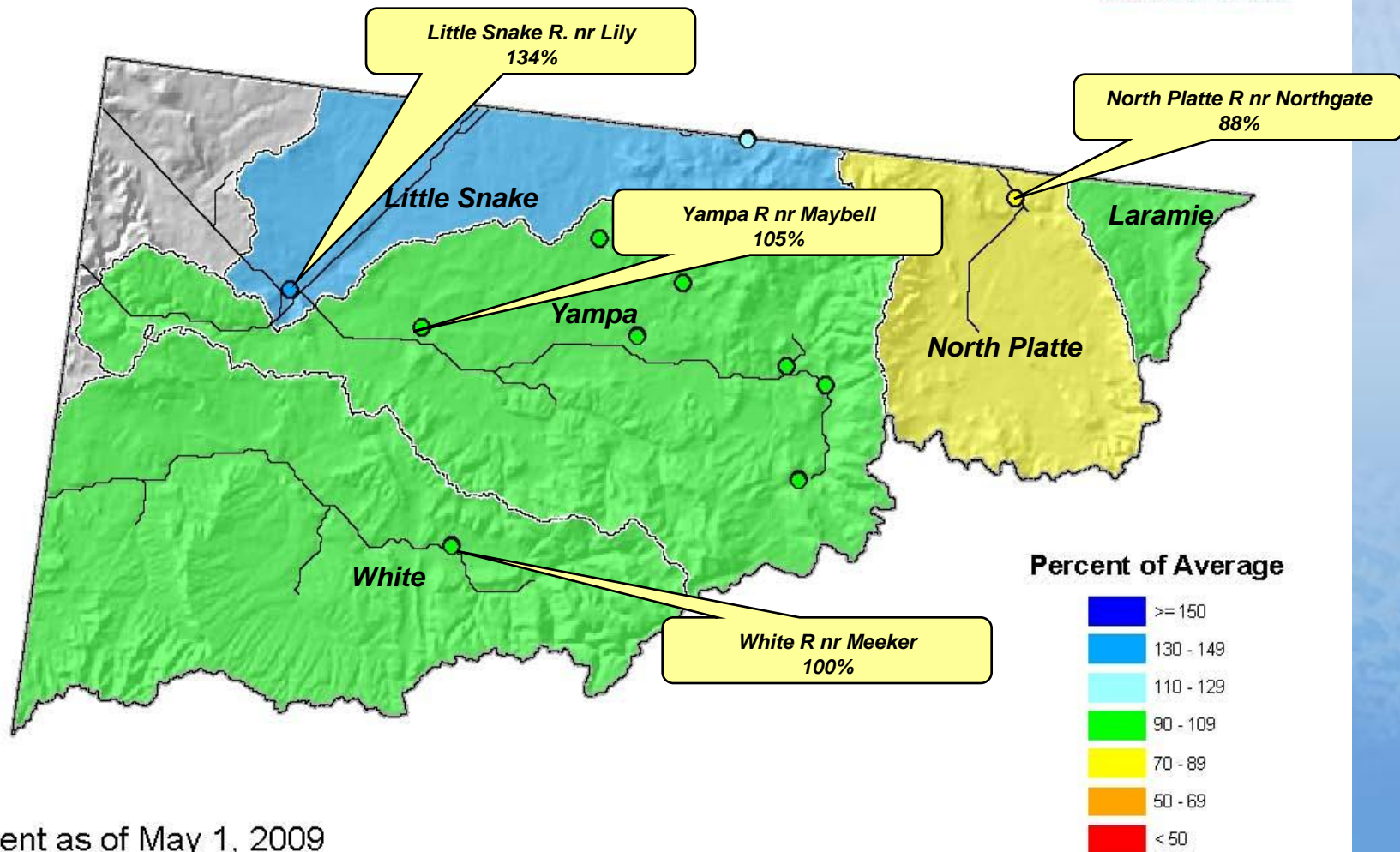
Yampa and White River Basins High/Low Monthly Precipitation Summary

Based on Provisional SNOTEL data as of May 27, 2009



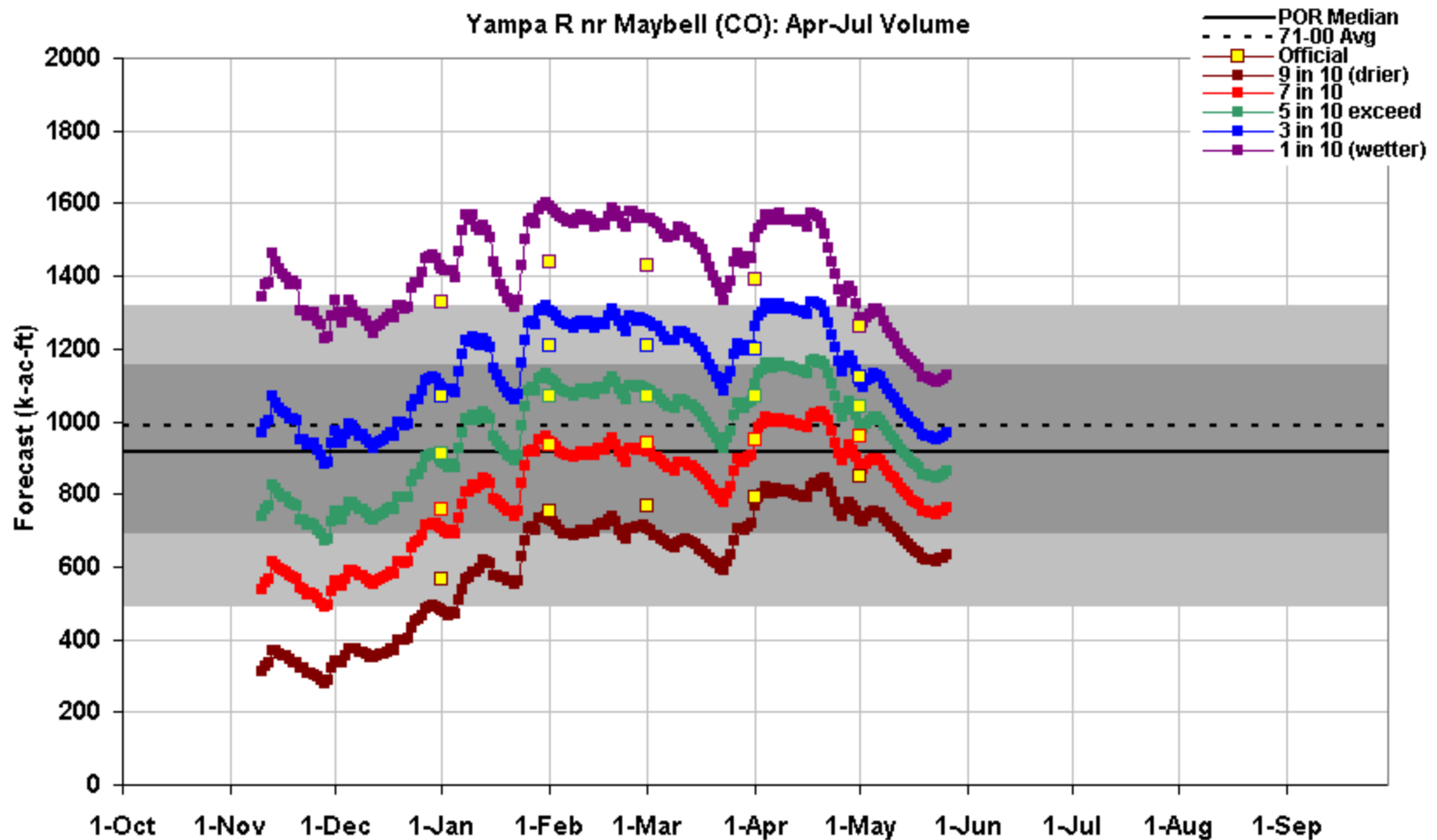
Yampa, White and North Platte River Basins Streamflow Map

*Provisional Data
Subject to Revision*



Current as of May 1, 2009

Yampa R nr Maybell (CO): Apr-Jul Volume



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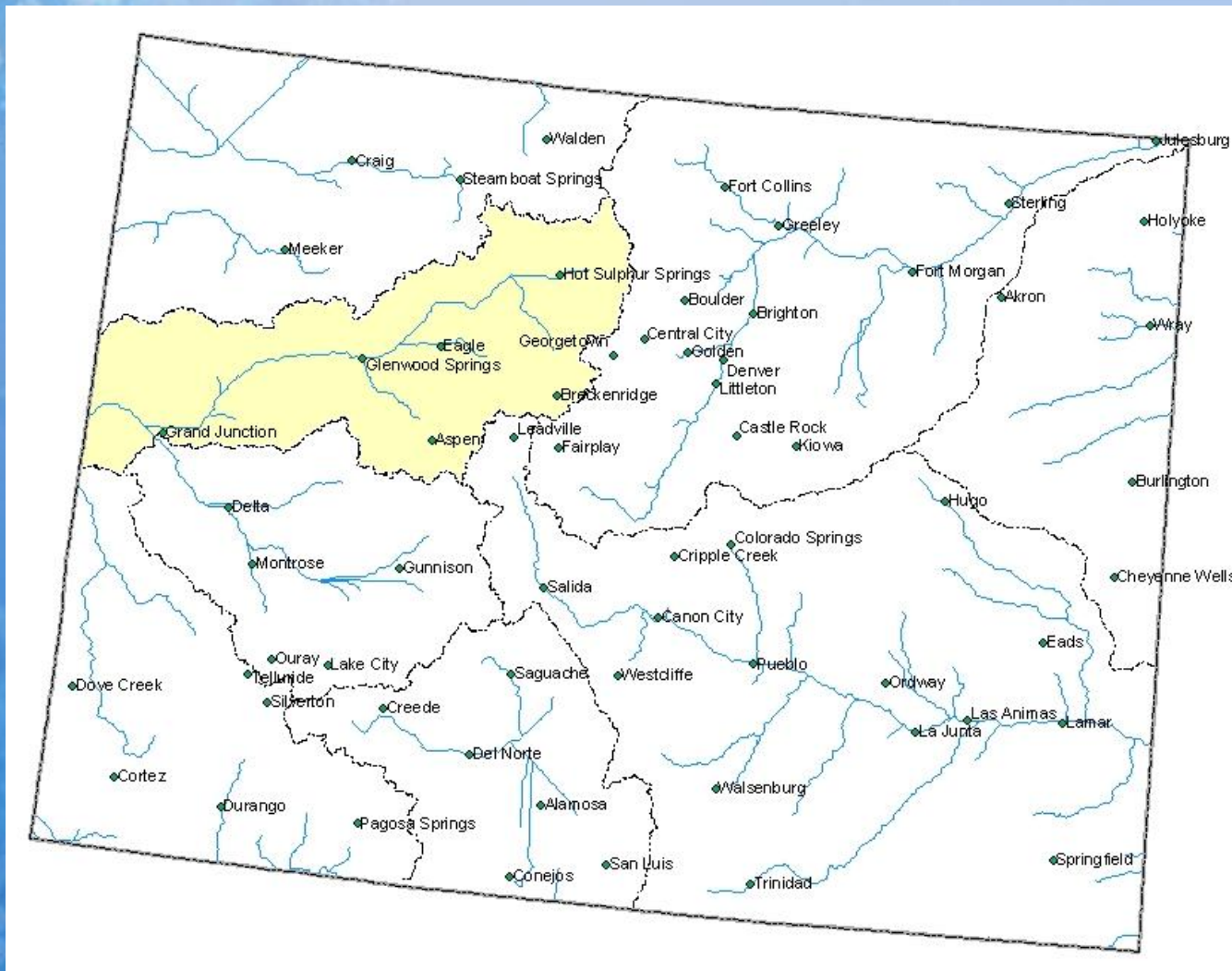
or supercede the official forecasts produced in coordination with the National Weather Service.

Science Contact: Jim.Marron@por.usda.gov www.wcc.nrcs.usda.gov/wsf/daily_forecasts.html

Created 12:06 May 26 2009



Colorado River Basin Summary

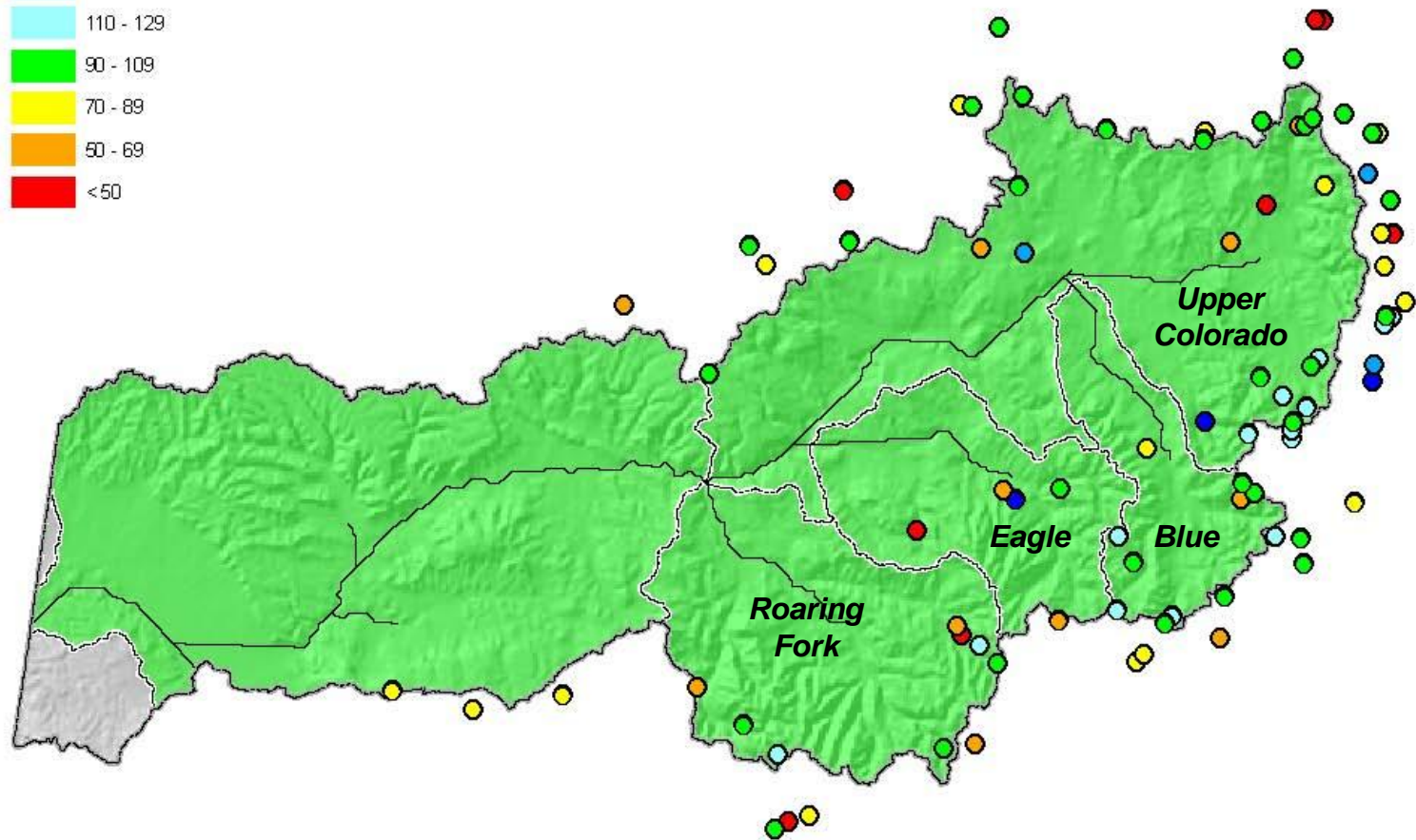


Colorado River Basin Snowpack Map

Percent of Average

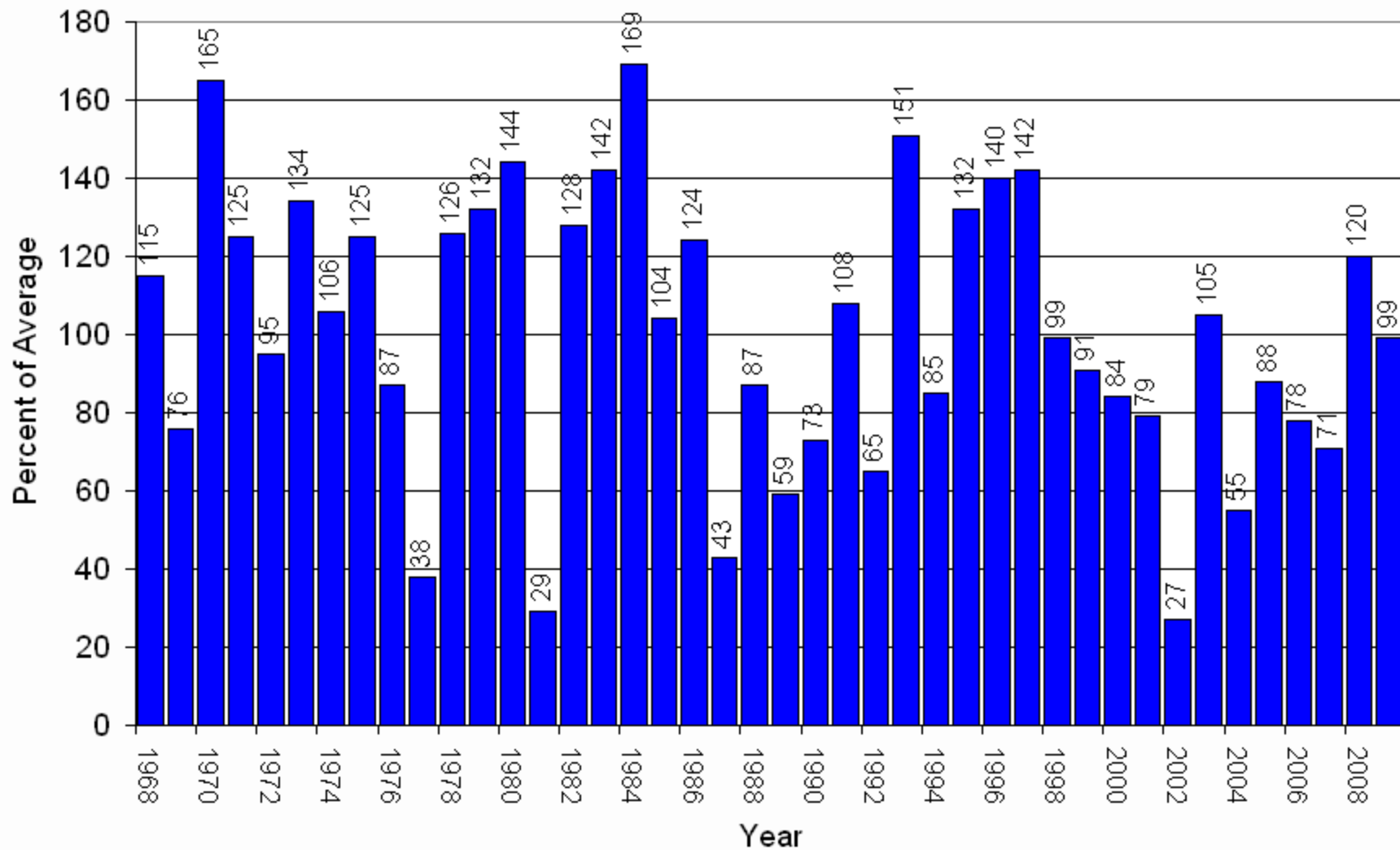


*Provisional Data
Subject to Revision*

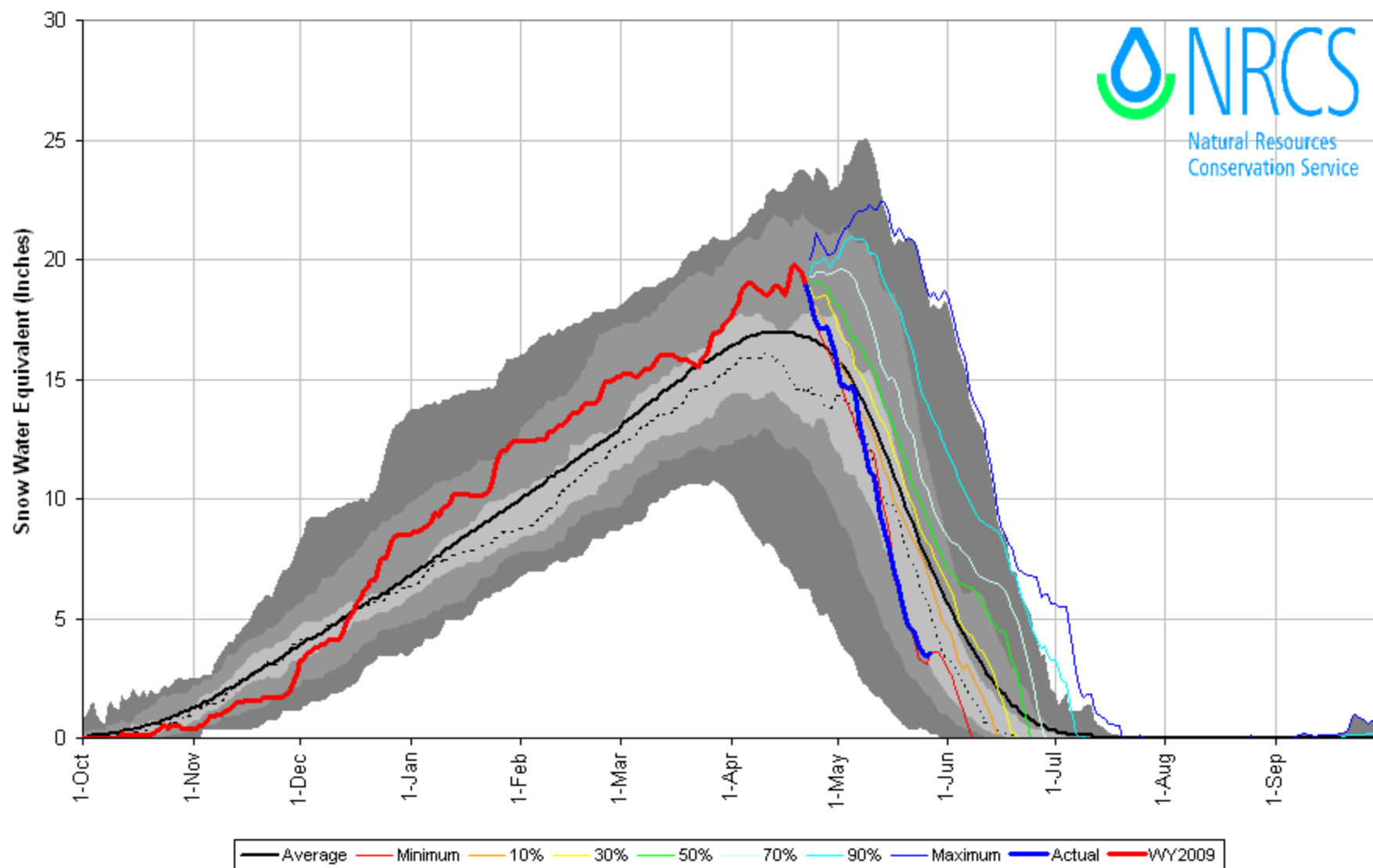


Current as of May 1, 2009

May 1 Total Colorado River Basin Snowpack

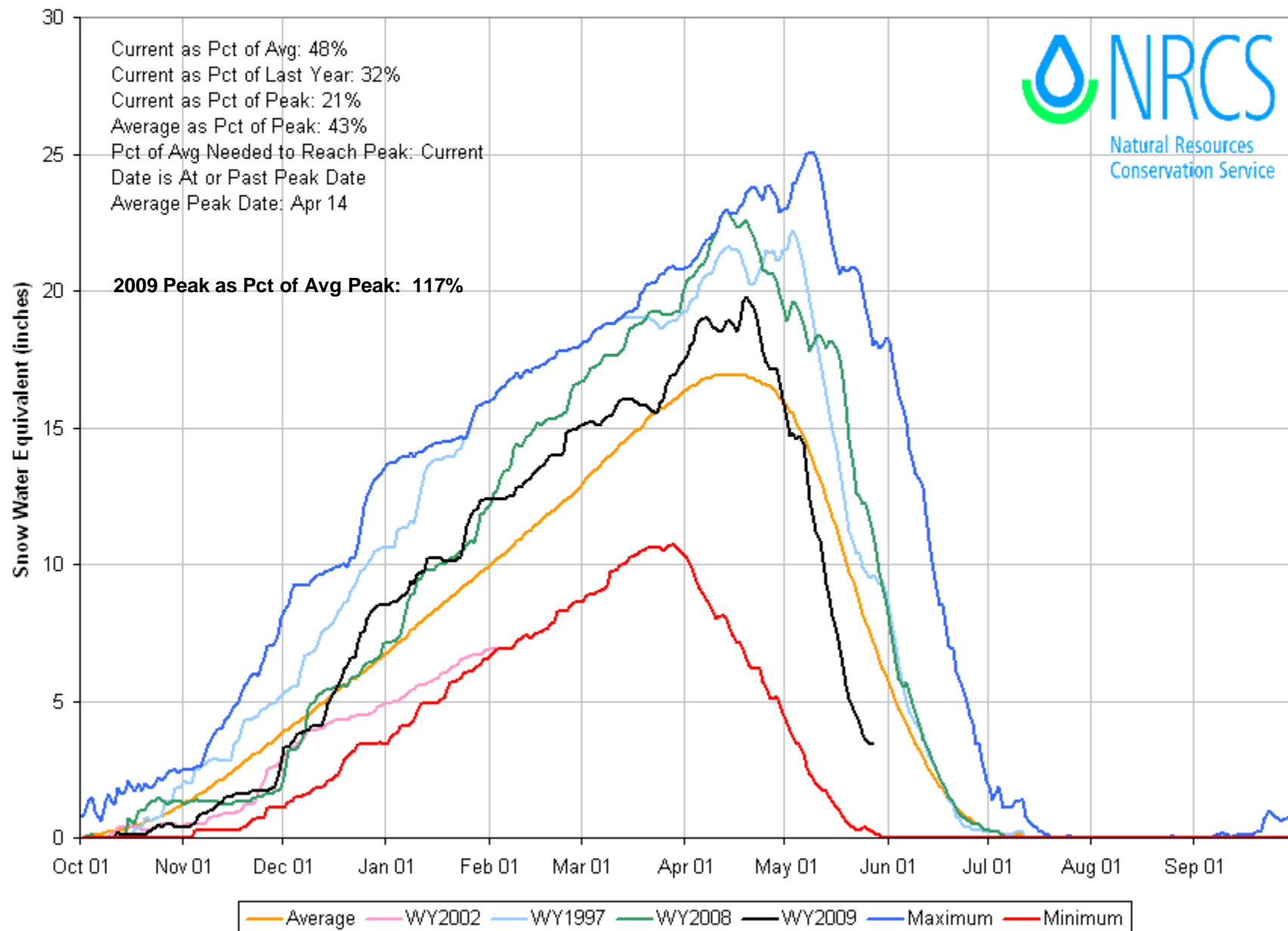


Based on Provisional SNOTEL Data as of May 27, 2009



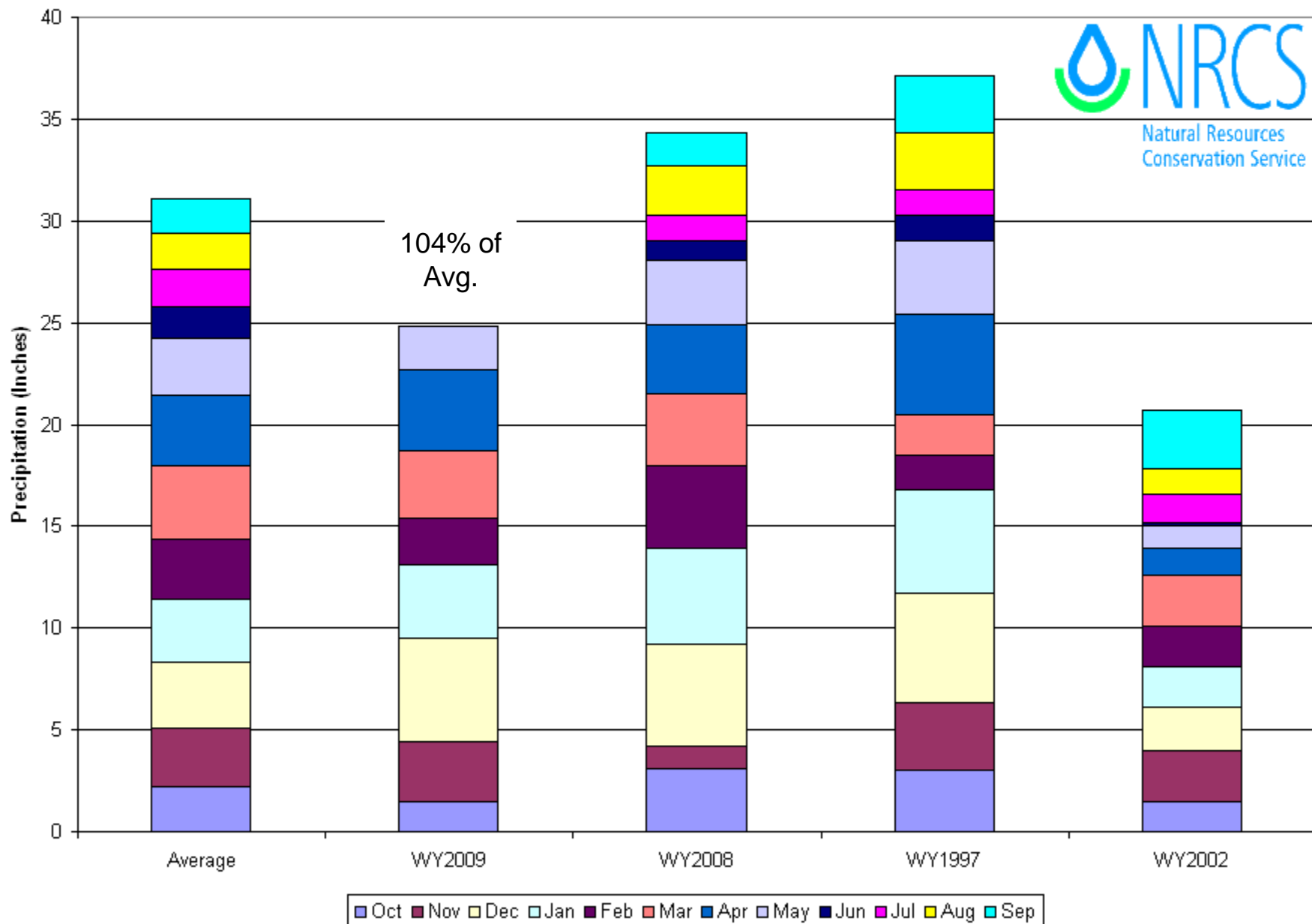
Upper Colorado River Basin High/Low Snowpack Summary

Based on Provisional SNOTEL data as of May 27, 2009



Upper Colorado River Basin High/Low Monthly Precipitation Summary

Based on Provisional SNOTEL data as of May 27, 2009

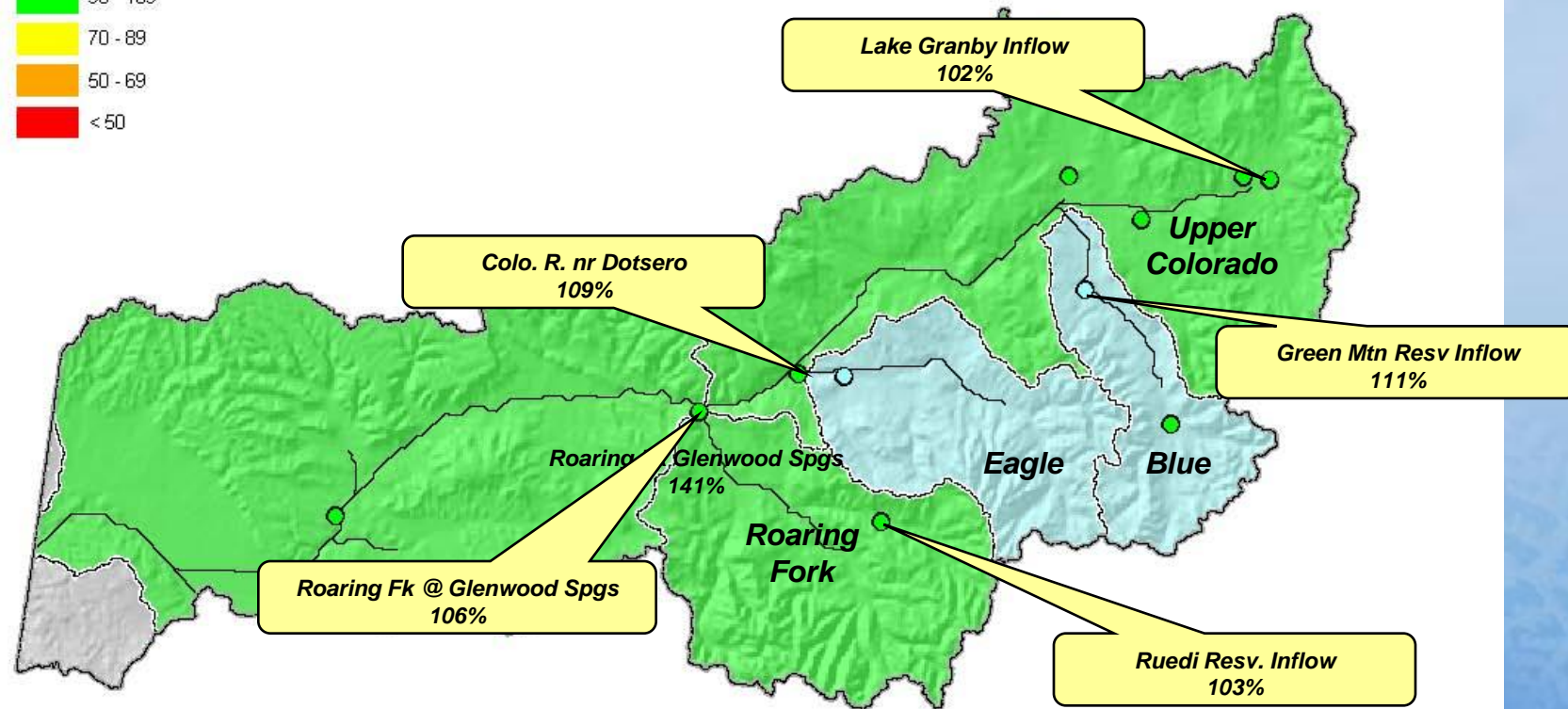


Colorado River Basin Streamflow Forecast Map

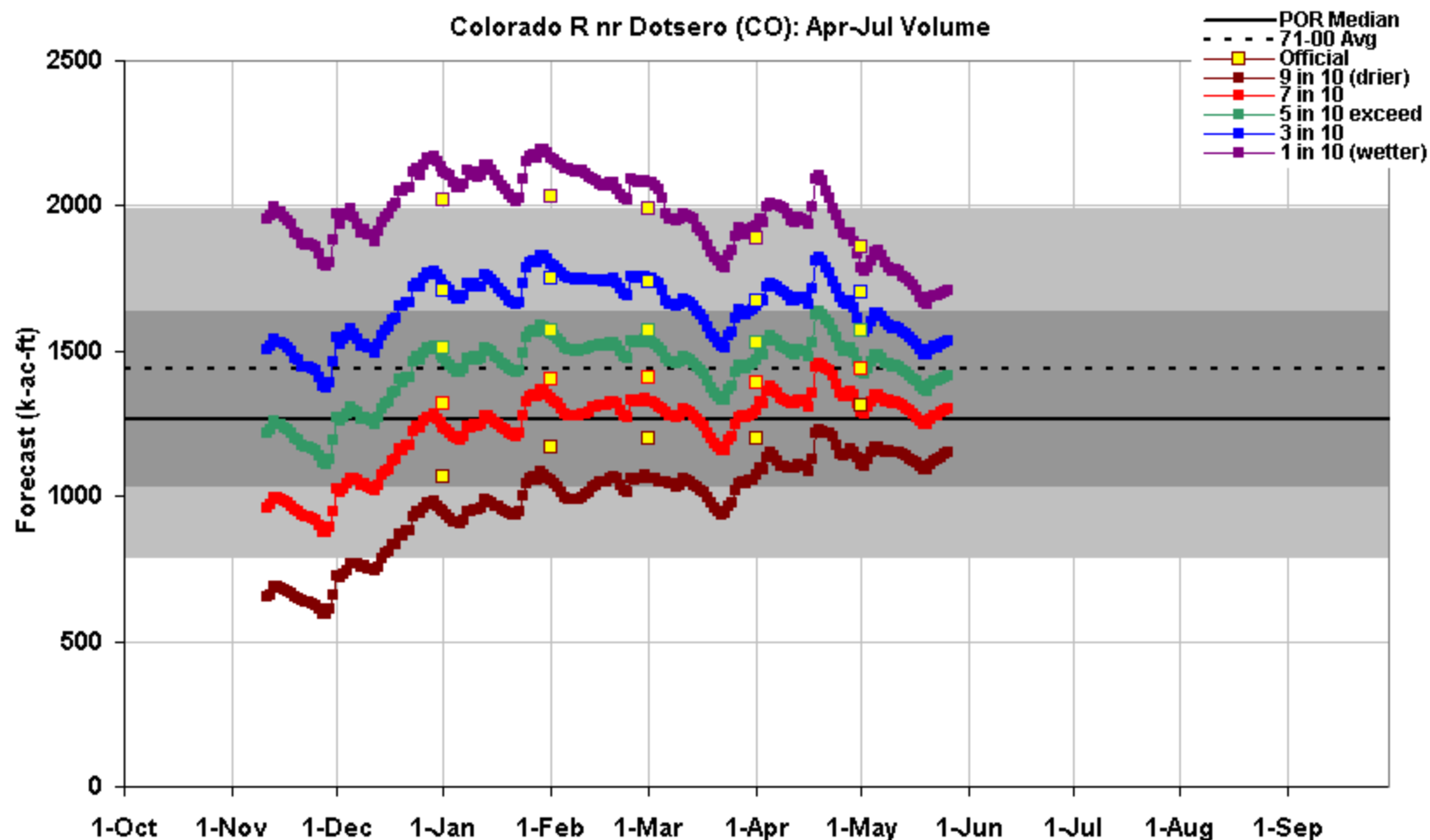
Percent of Average



*Provisional Data
Subject to Revision*



Current as of May 1, 2009

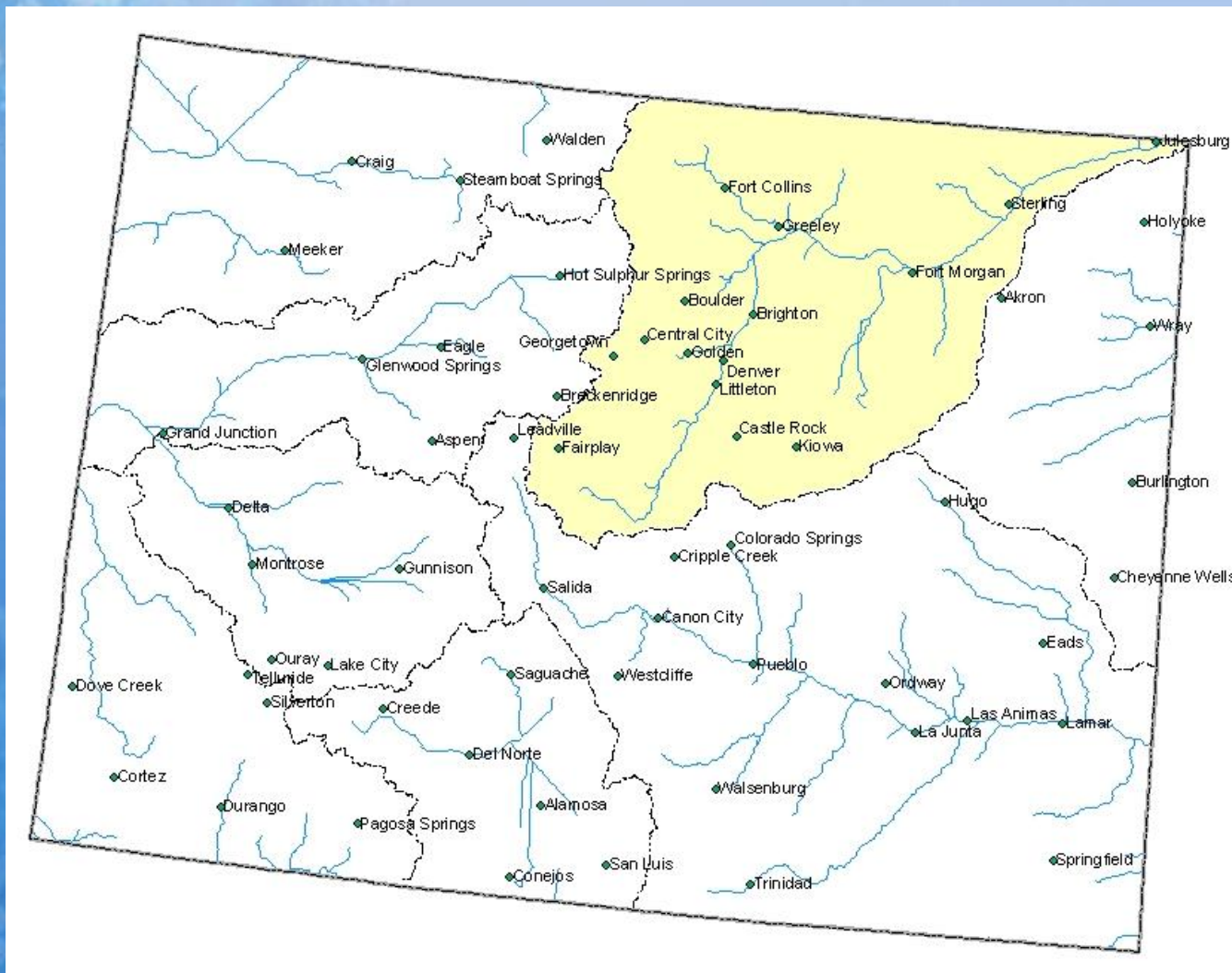


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South Platte River Basin Summary

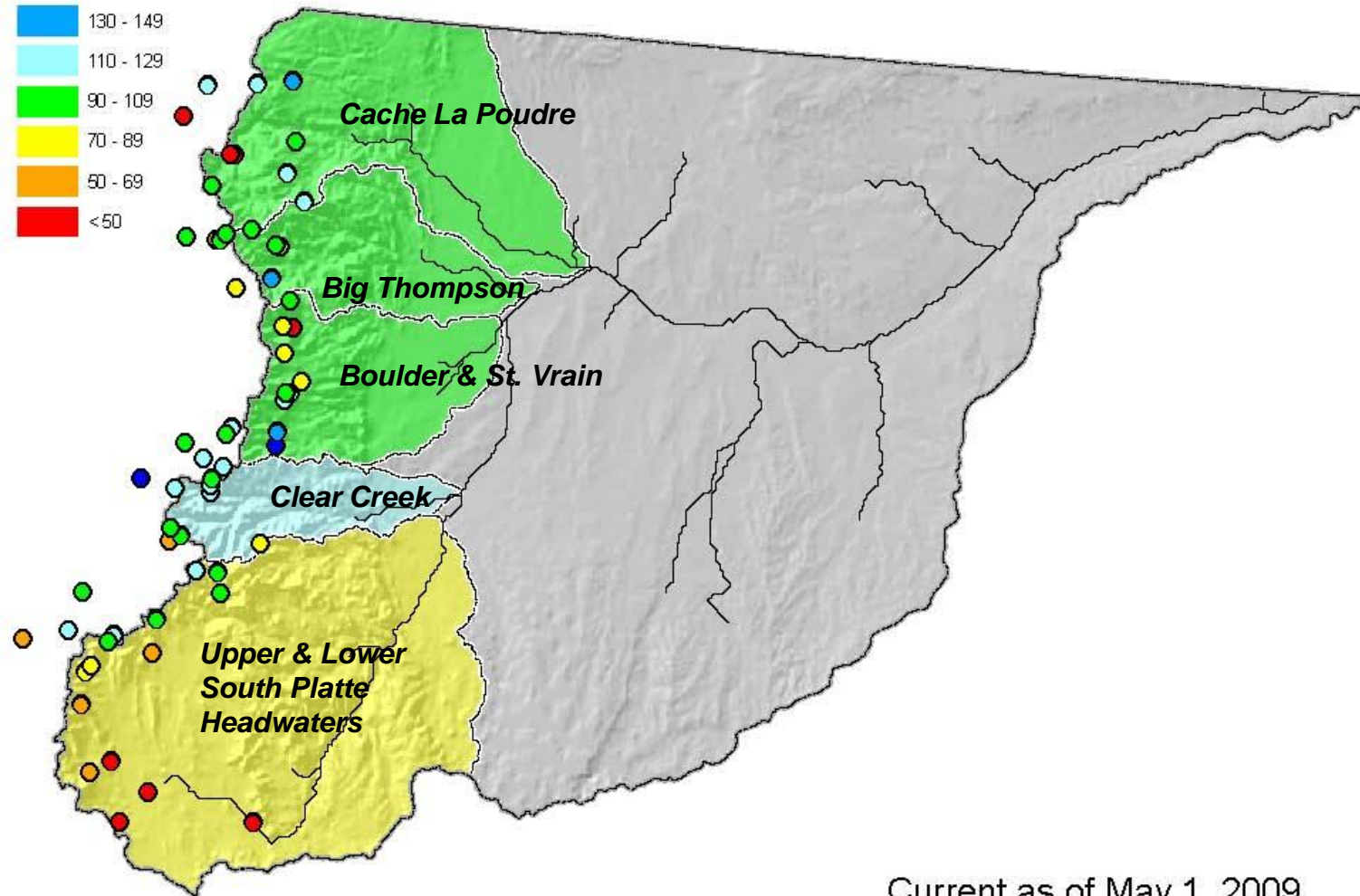


South Platte River Basin Snowpack Map

Percent of Average

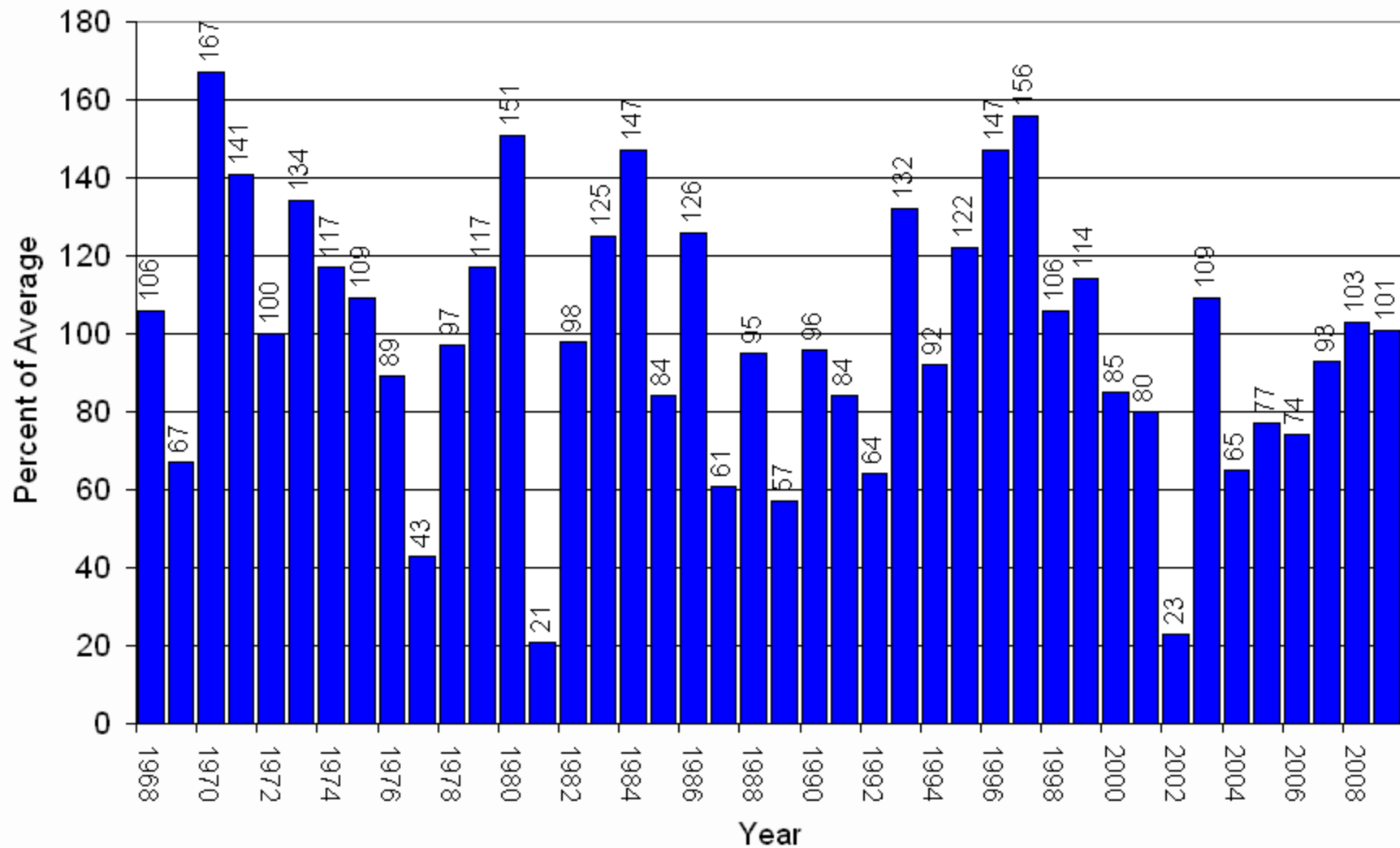


*Provisional Data
Subject to Revision*



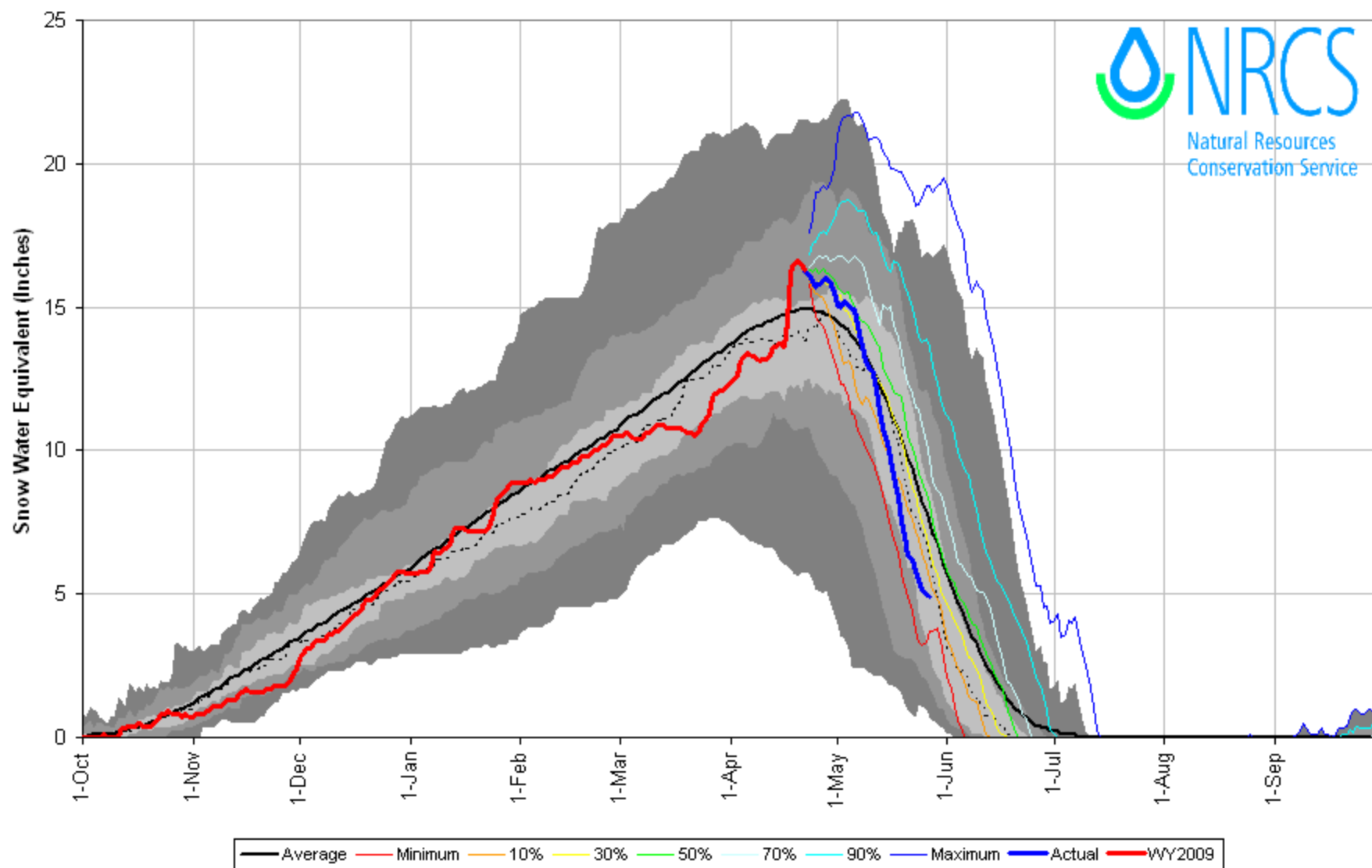
Current as of May 1, 2009

May 1 Total South Platte River Basin Snowpack



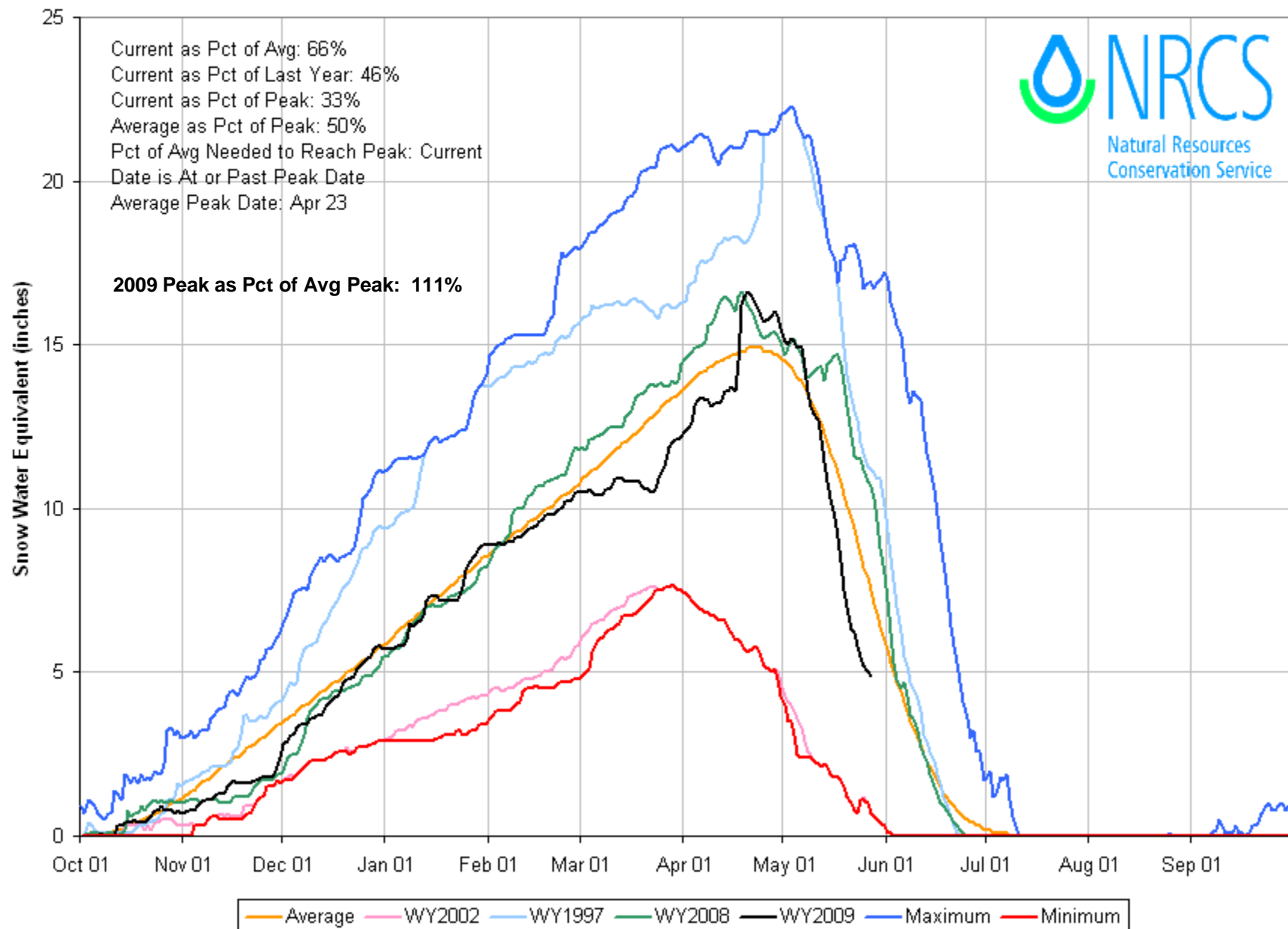
South Platte River Basin with Non-Exceedence Projections

Based on Provisional SNOTEL Data as of May 27, 2009



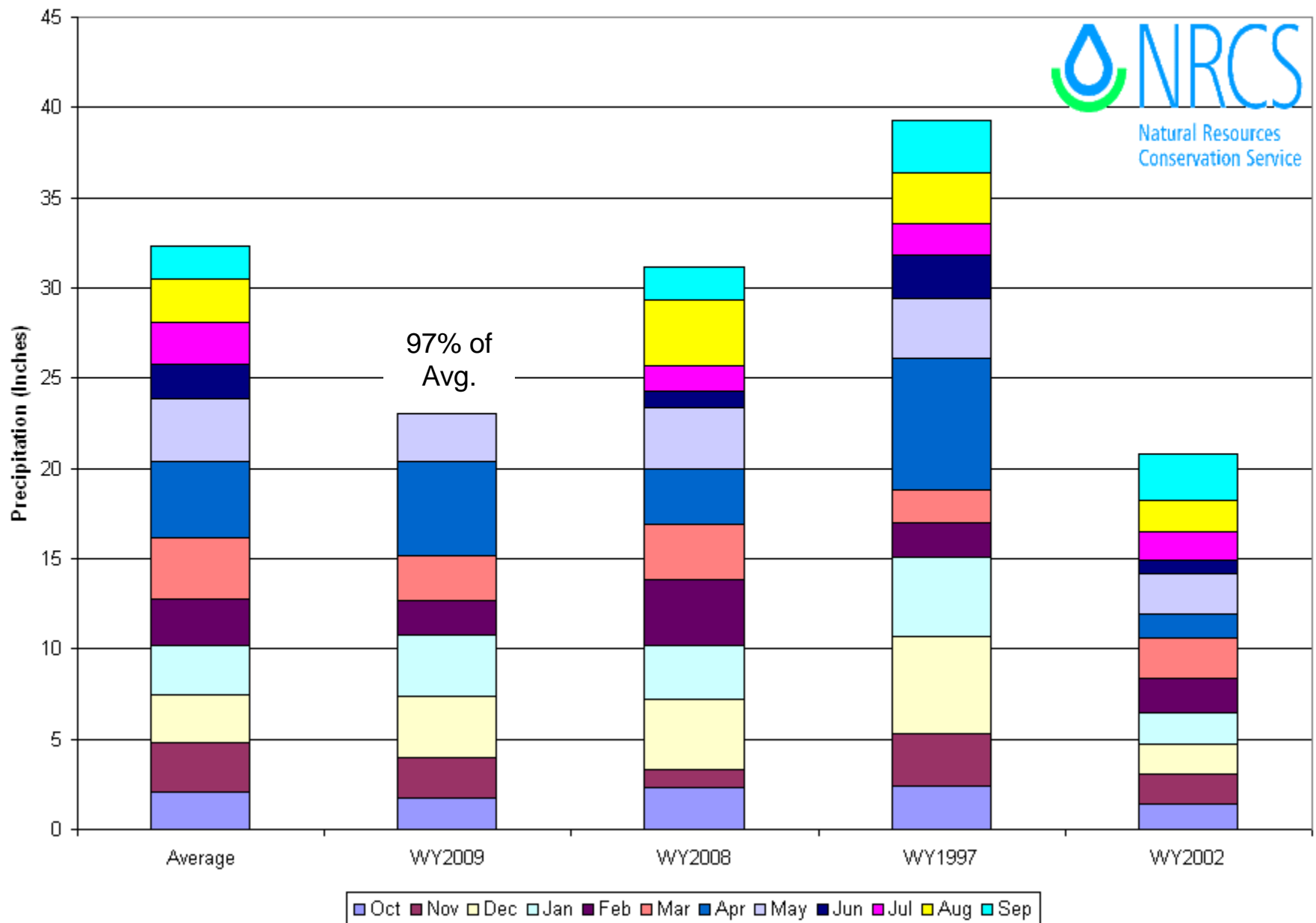
South Platte River Basin High/Low Snowpack Summary

Based on Provisional SNOTEL data as of May 27, 2009



South Platte River Basin High/Low Monthly Precipitation Summary

Based on Provisional SNOTEL data as of May 27, 2009

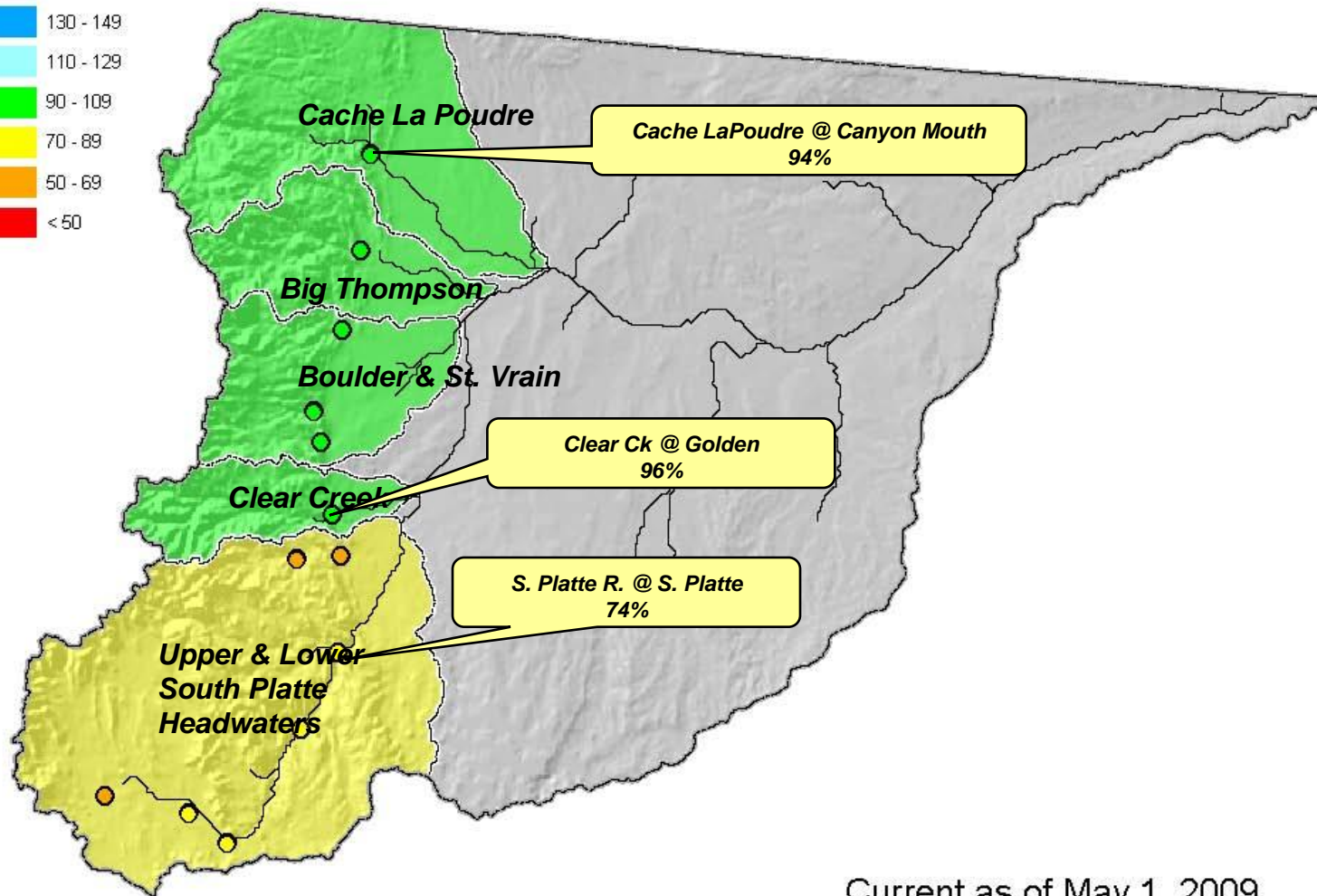


South Platte River Basin Streamflow Forecast Map

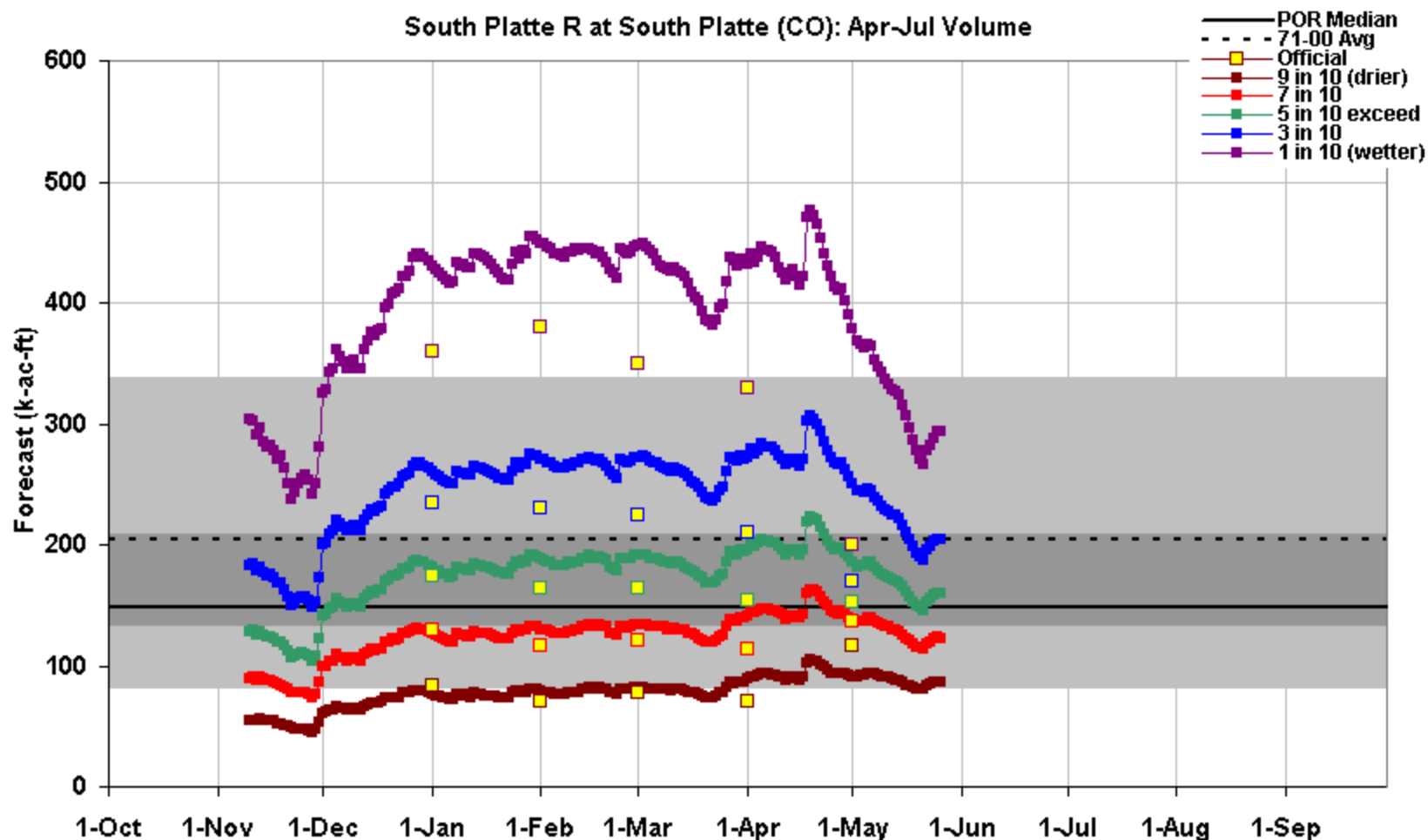
Percent of Average



*Provisional Data
Subject to Revision*



Current as of May 1, 2009

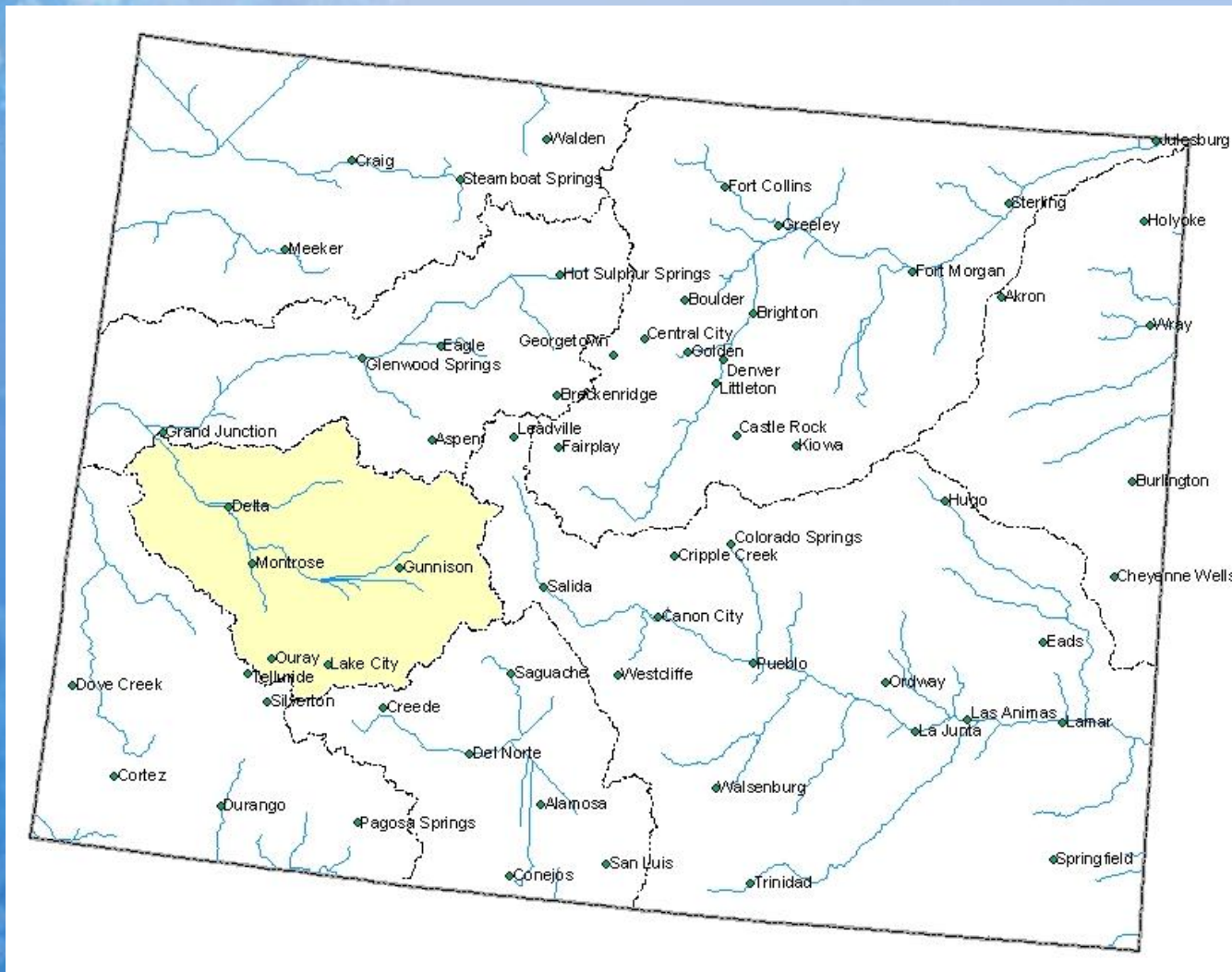


Created 11:51 May 26 2009



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Gunnison River Basin Summary

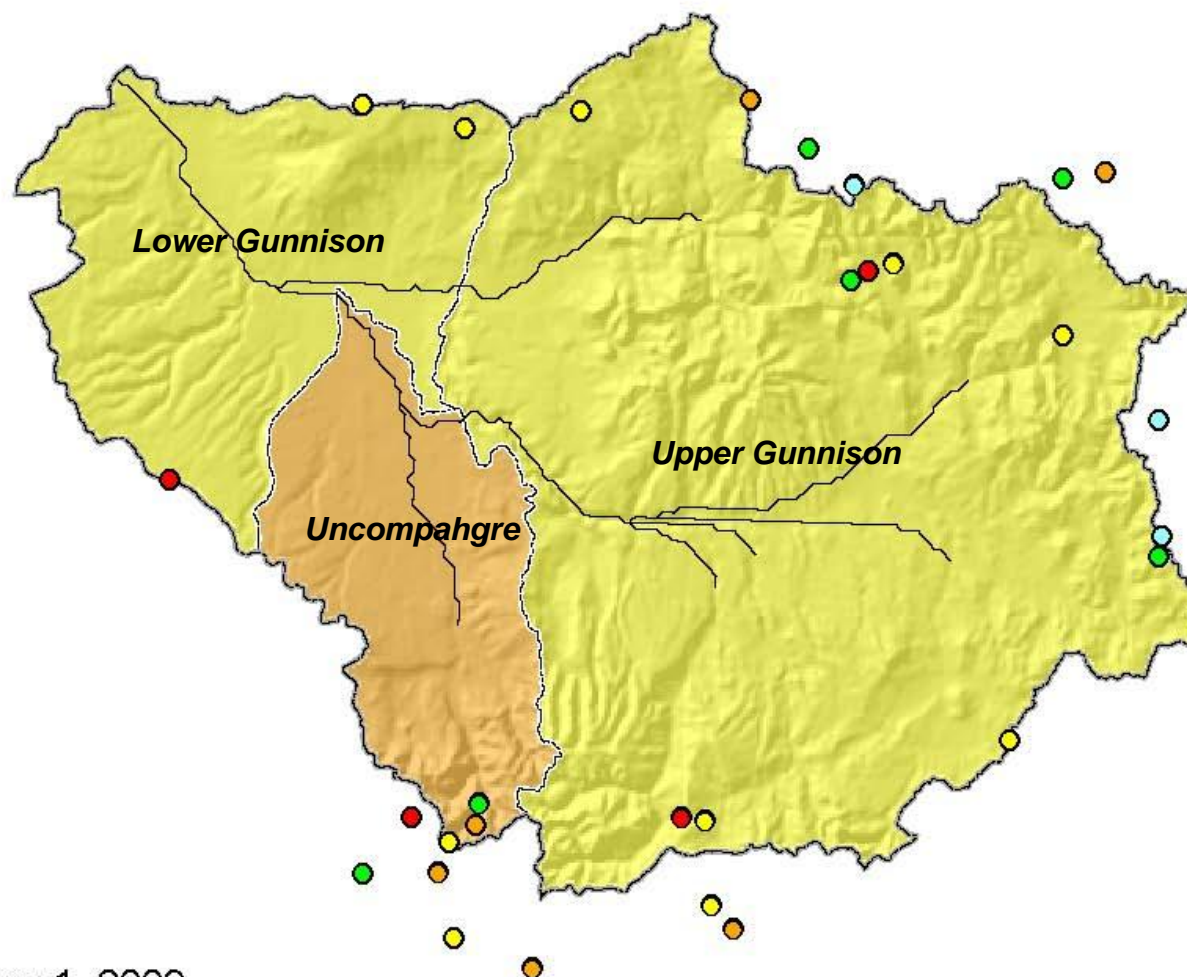


Gunnison River Basin Snowpack Map

Percent of Average

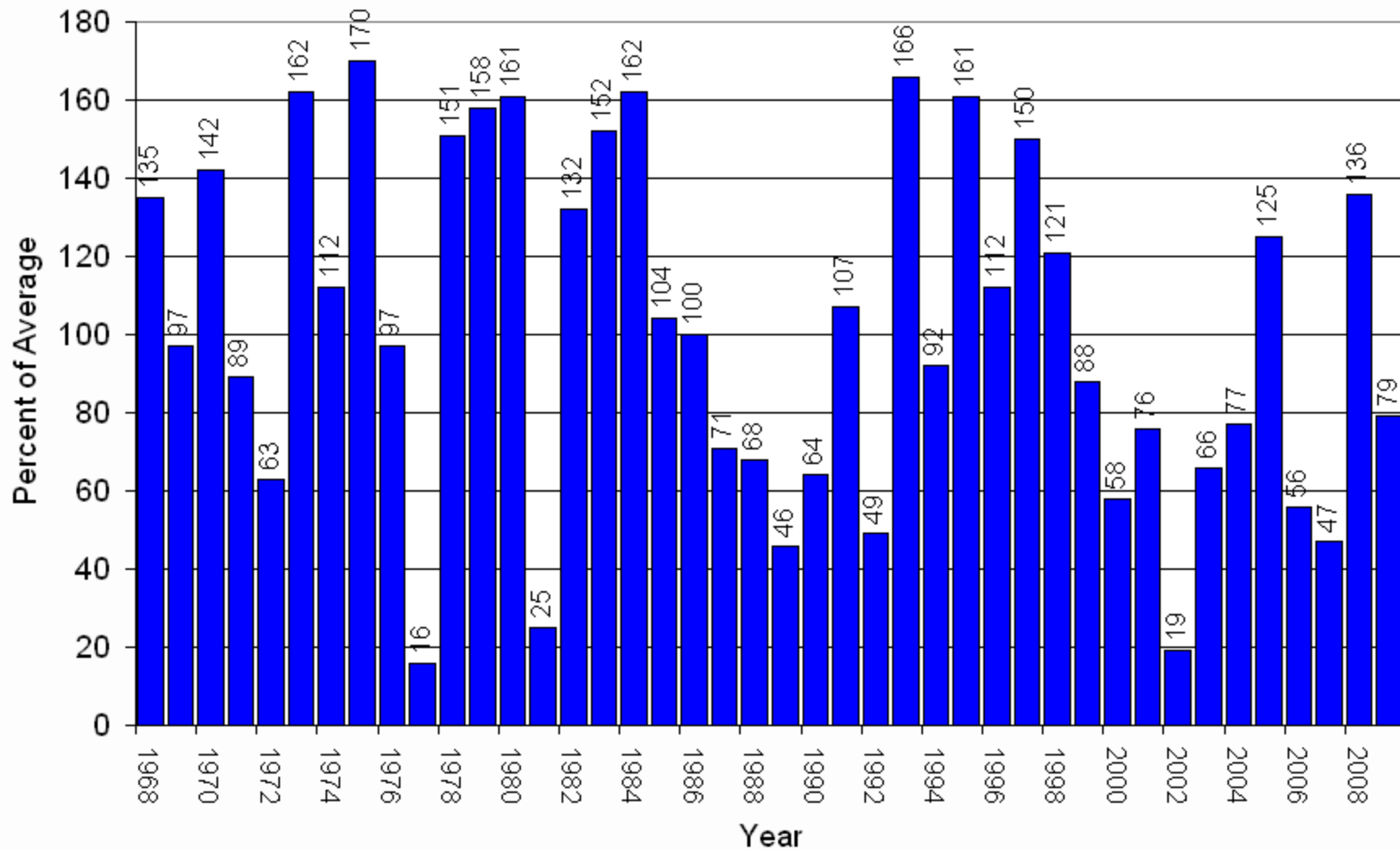


*Provisional Data
Subject to Revision*



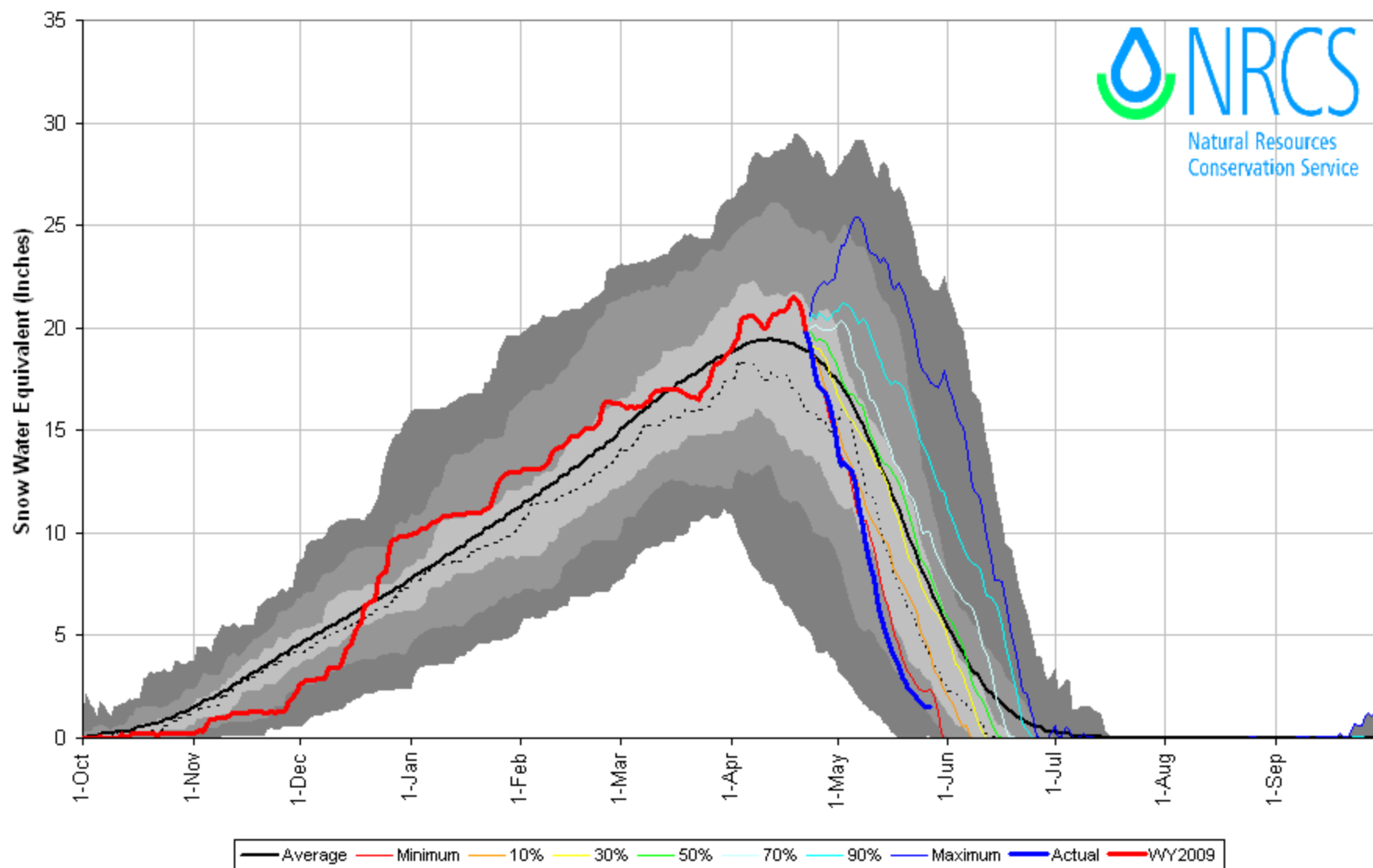
Current as of May 1, 2009

May 1 Total Gunnison River Basin Snowpack



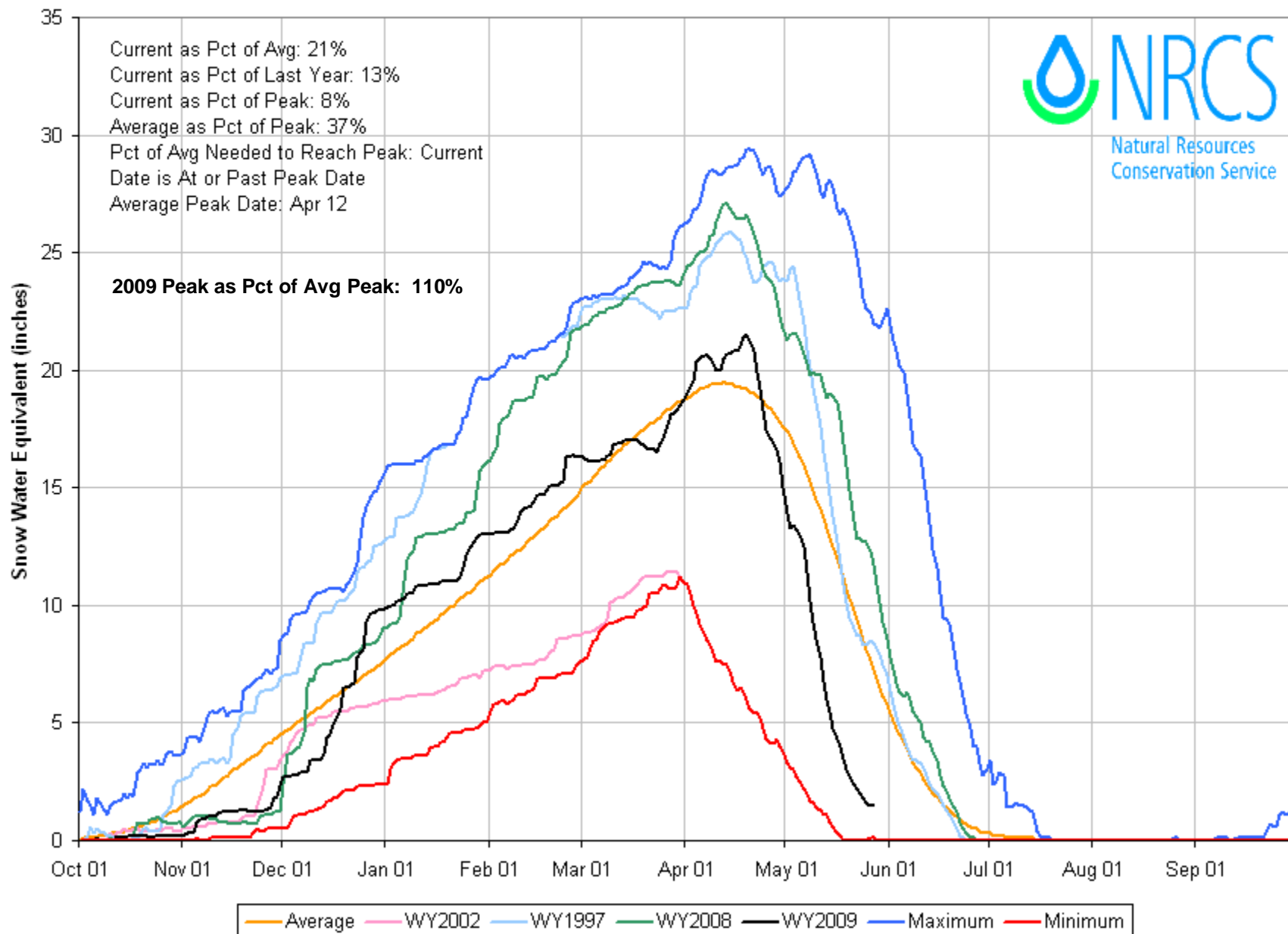
Gunnison River Basin with Non-Exceedence Projections

Based on Provisional SNOTEL Data as of May 27, 2009



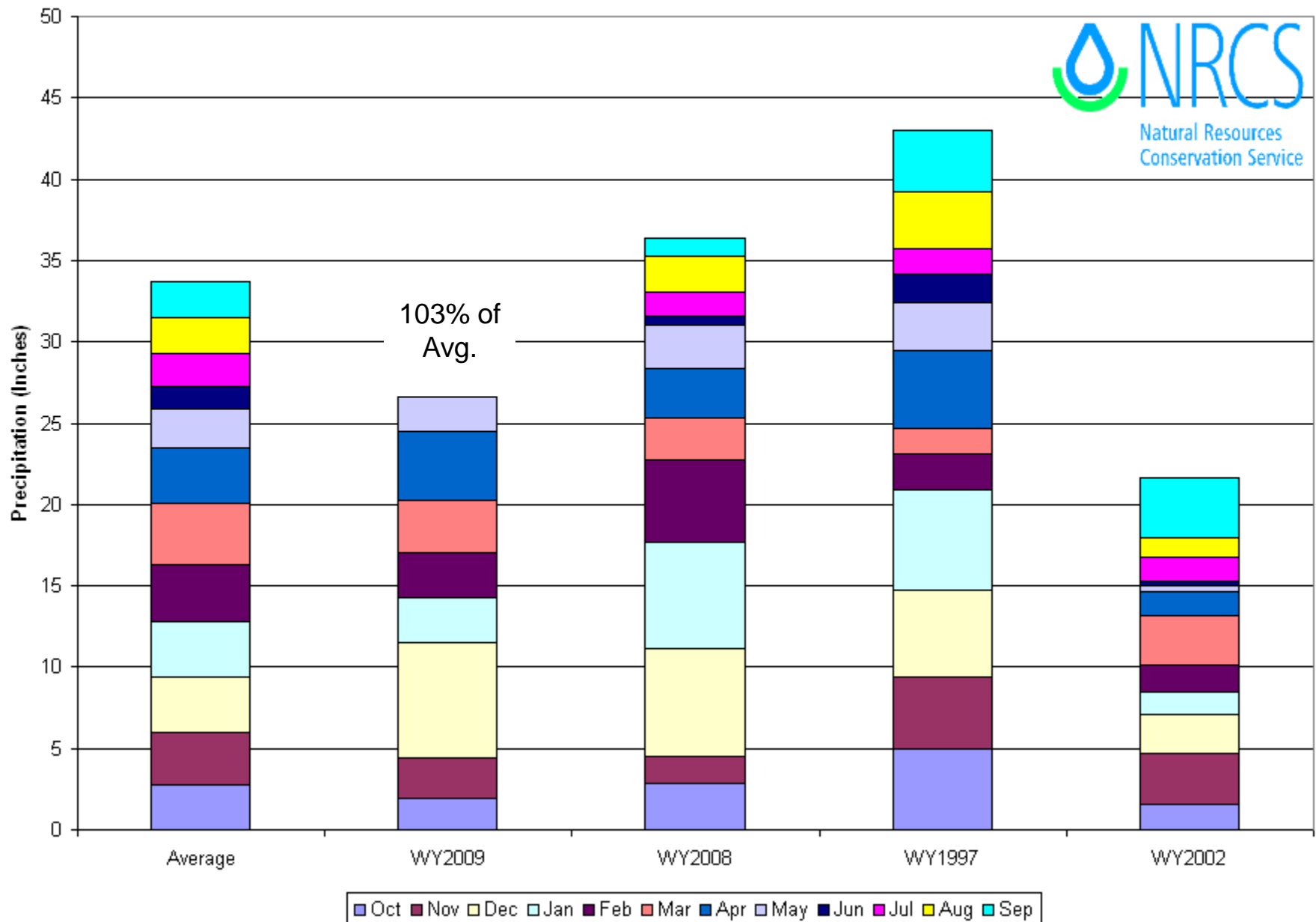
Gunnison River Basin High/Low Snowpack Summary

Based on Provisional SNOTEL data as of May 27, 2009



Gunnison River Basin High/Low Monthly Precipitation Summary

Based on Provisional SNOTEL data as of May 27, 2009

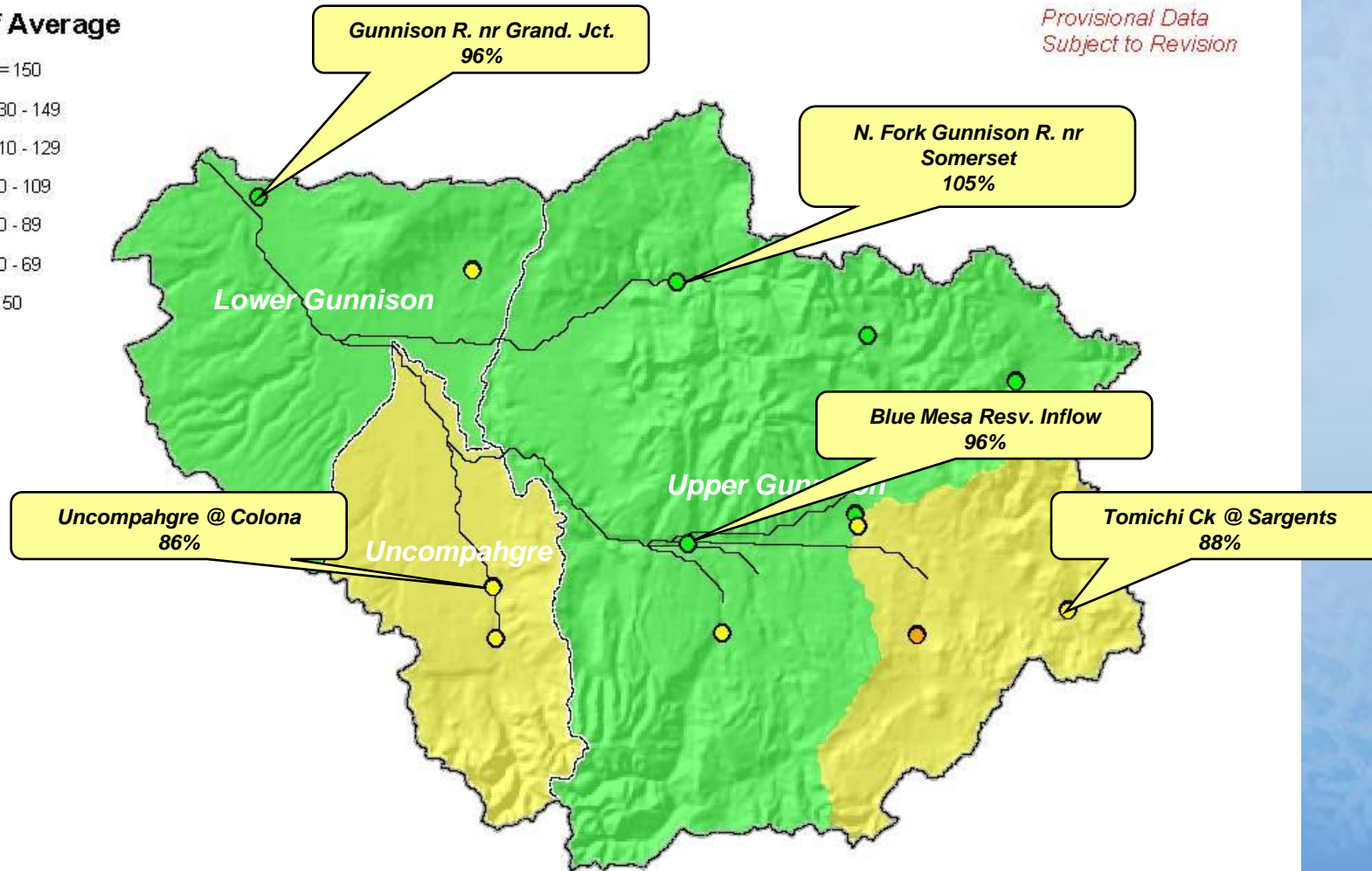


Gunnison River Basin Streamflow Forecast Map

Percent of Average

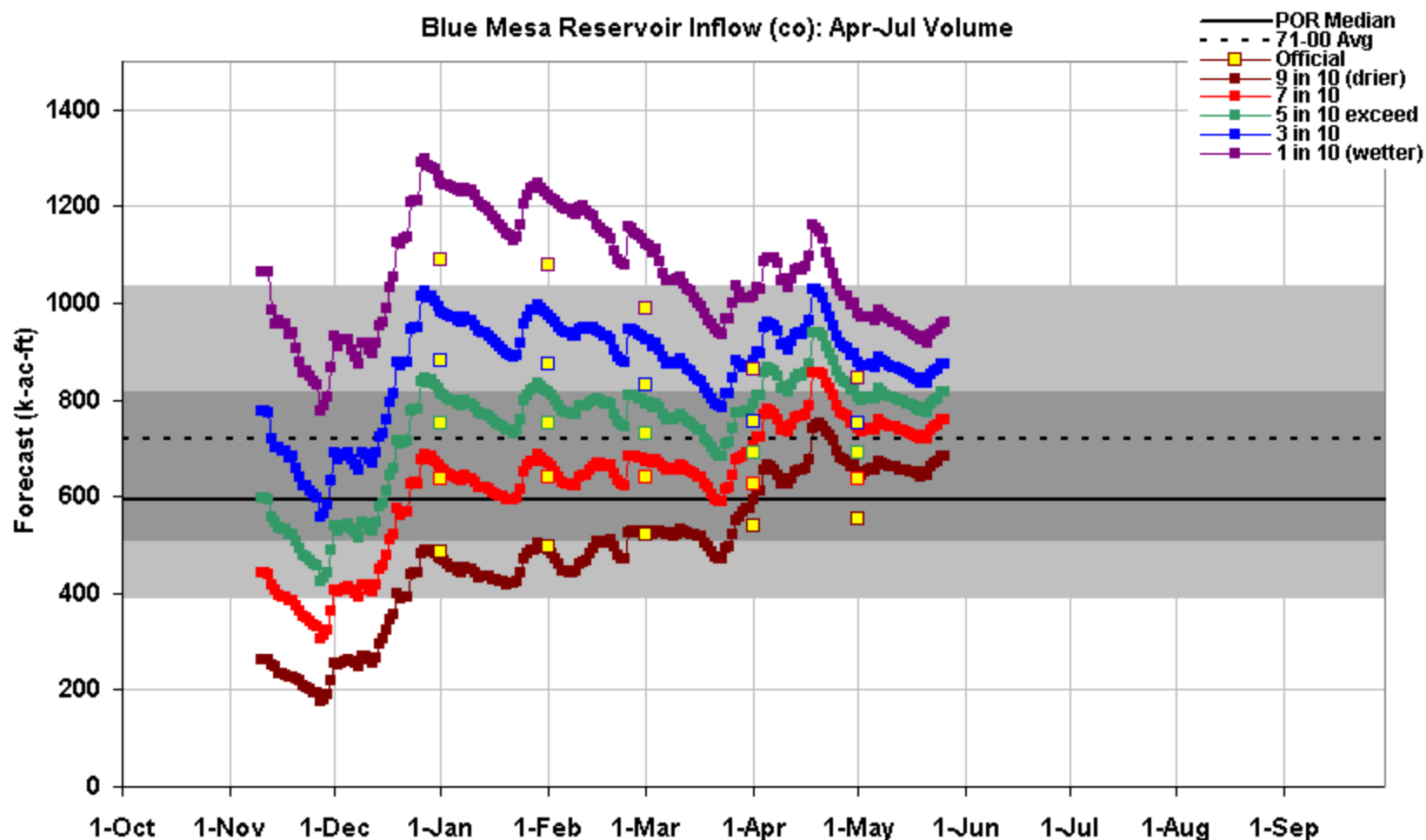


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Current as of May 1, 2009

Blue Mesa Reservoir Inflow (co): Apr-Jul Volume



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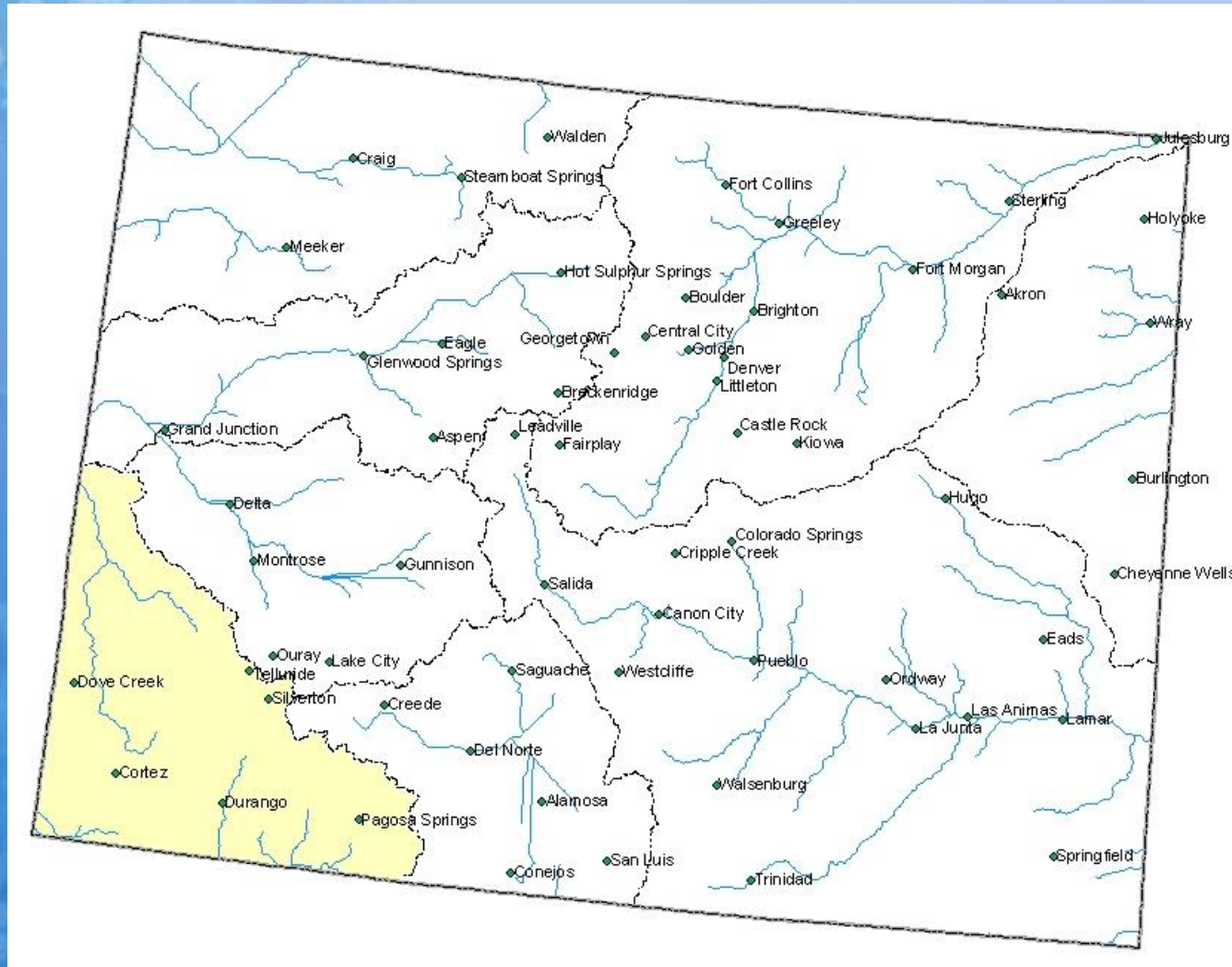
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Created 12:02 May 26 2009



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

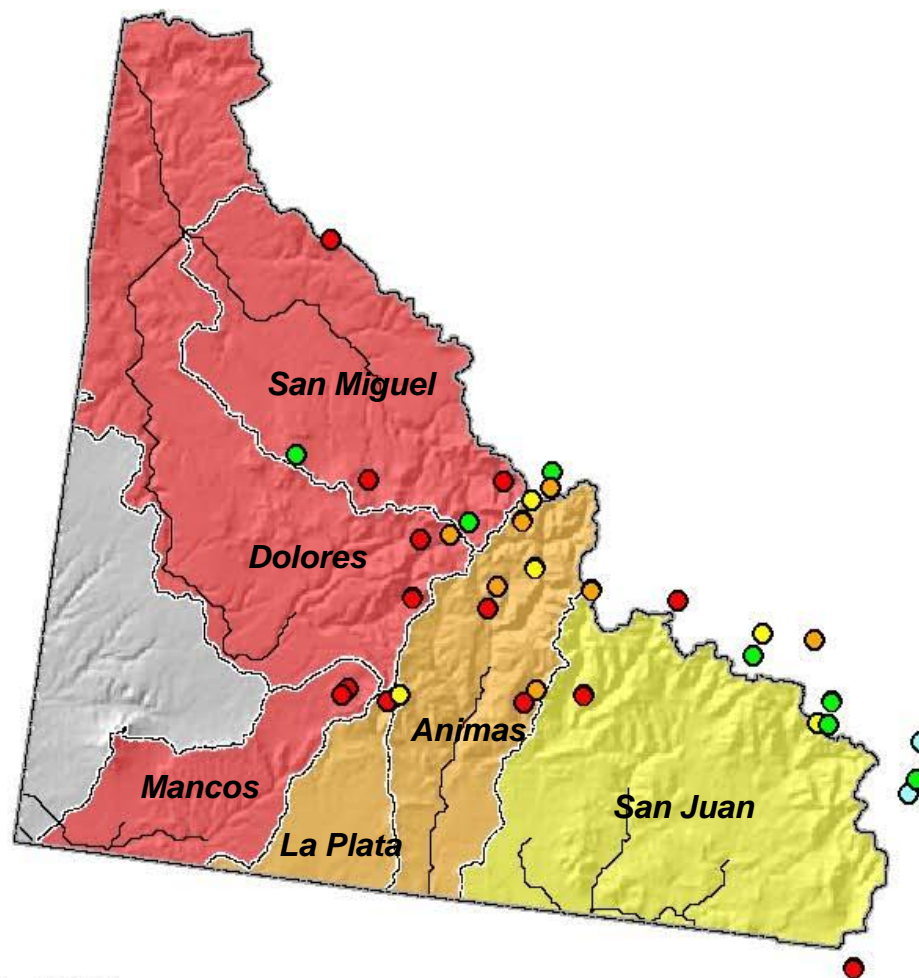


San Miguel, Dolores, Animas and San Juan River Basins Snowpack Map

Percent of Average

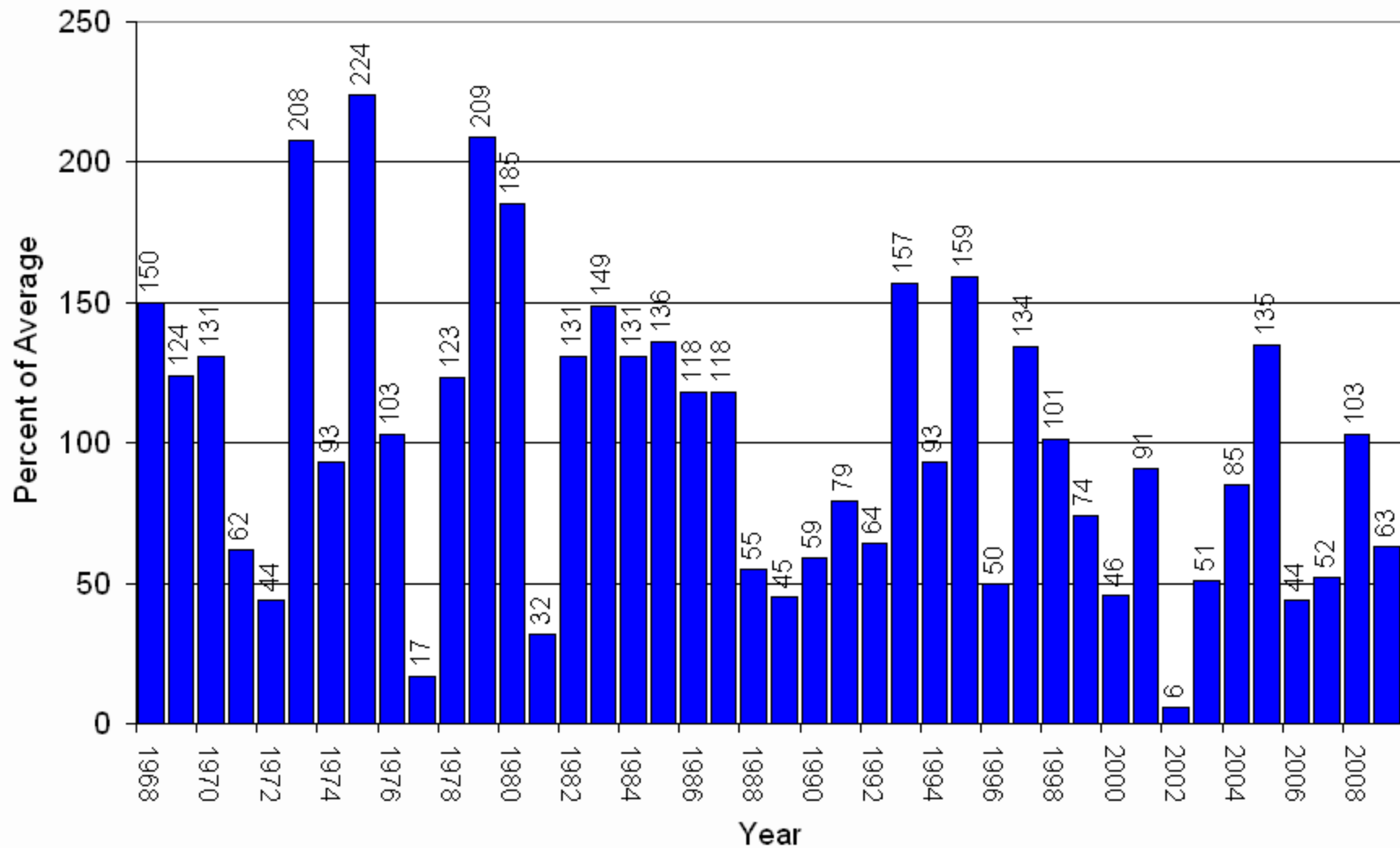


*Provisional Data
Subject to Revision*



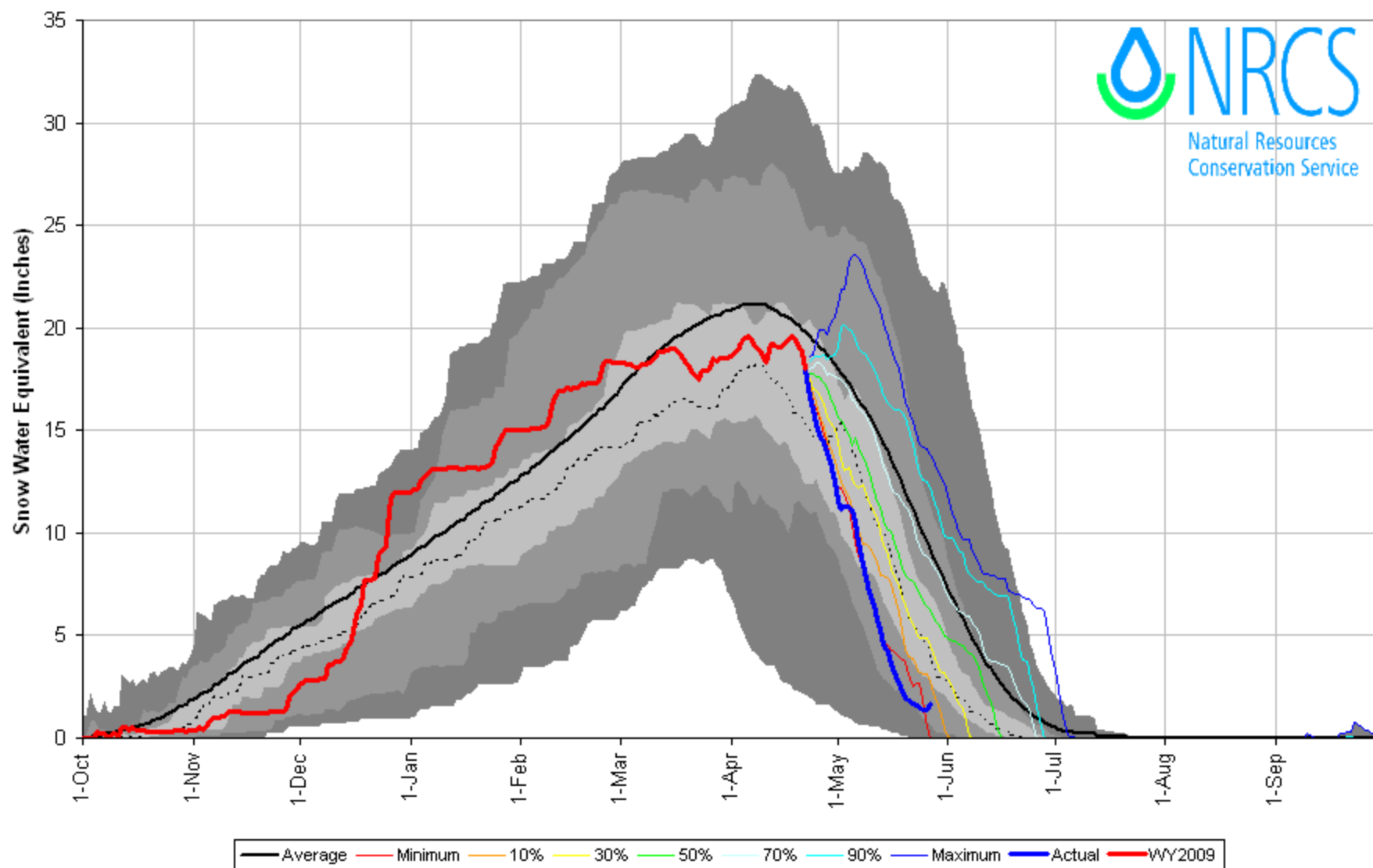
Current as of May 1, 2009

May 1 Total San Miguel, Dolores, Animas & San Juan River Basins Snowpack



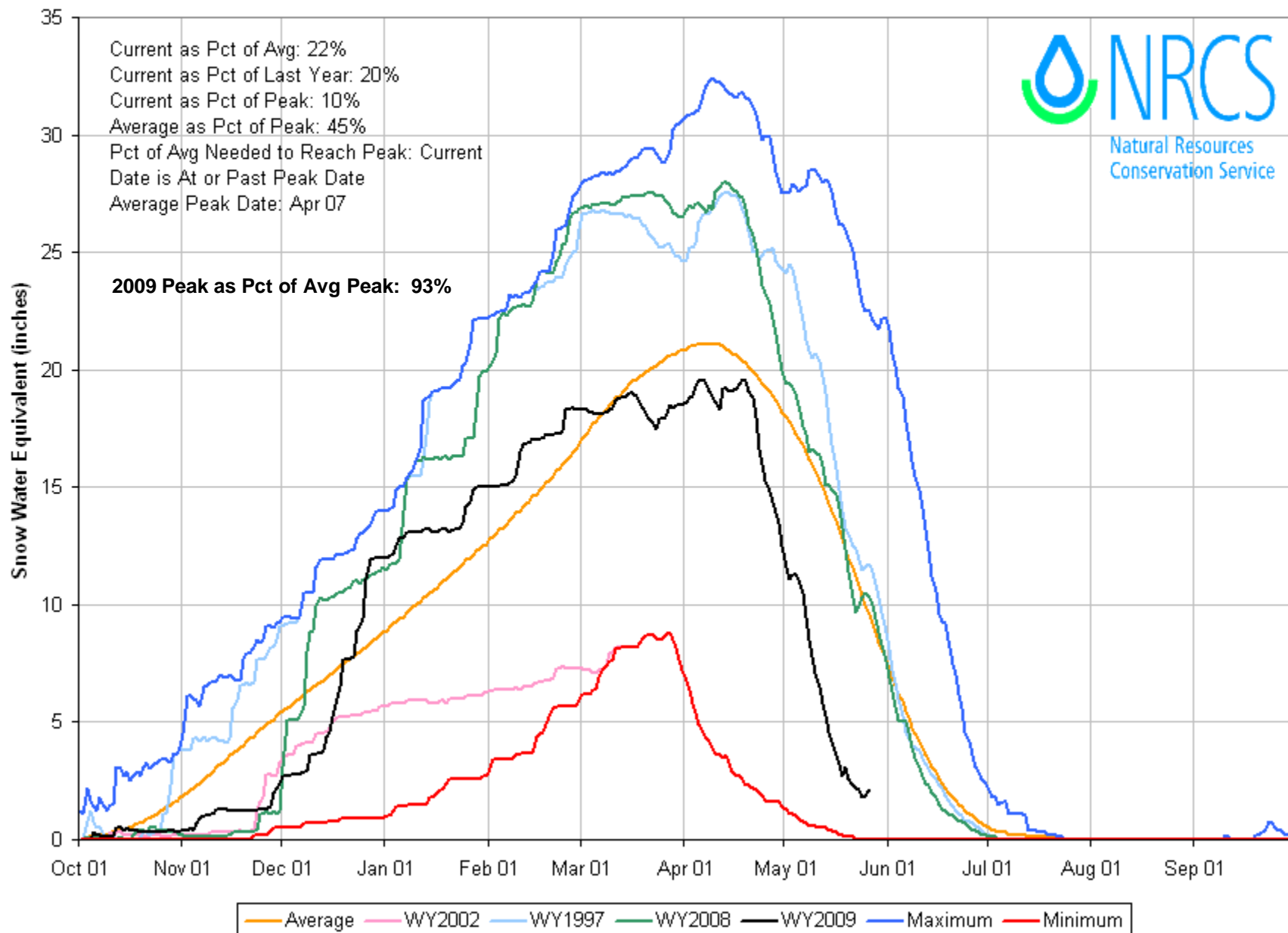
San Miguel, Dolores, Animas & San Juan River Basins with Non-Exceedence Projections

Based on Provisional SNOTEL Data as of May 27, 2009

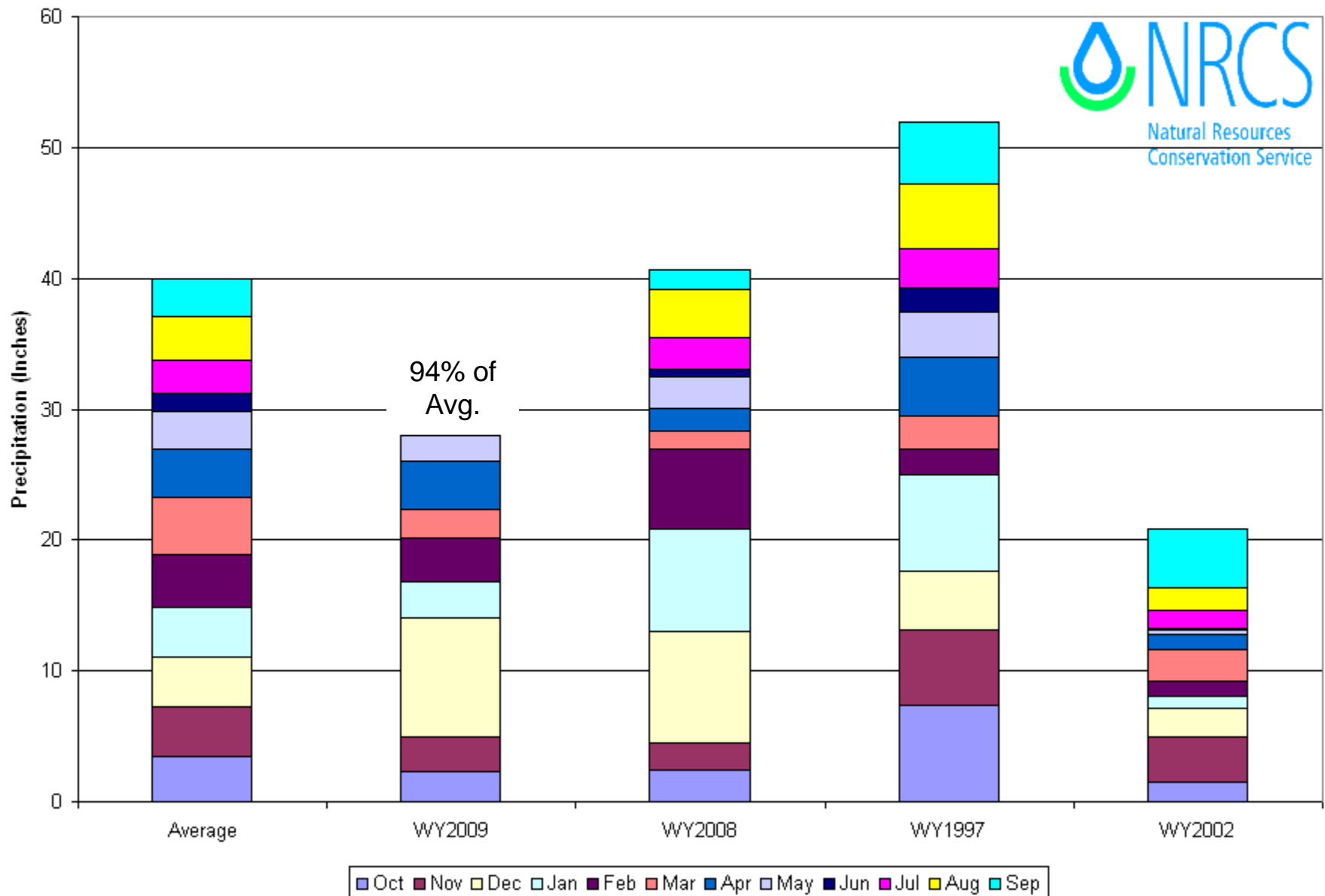


San Miguel, Dolores, Animas & San Juan River Basins High/Low Snowpack Summary

Based on Provisional SNOTEL data as of May 26, 2009



San Miguel, Dolores, Animas and San Juan River Basins
 High/Low Monthly Precipitation Summary
Based on Provisional SNOTEL data as of May 27, 2009

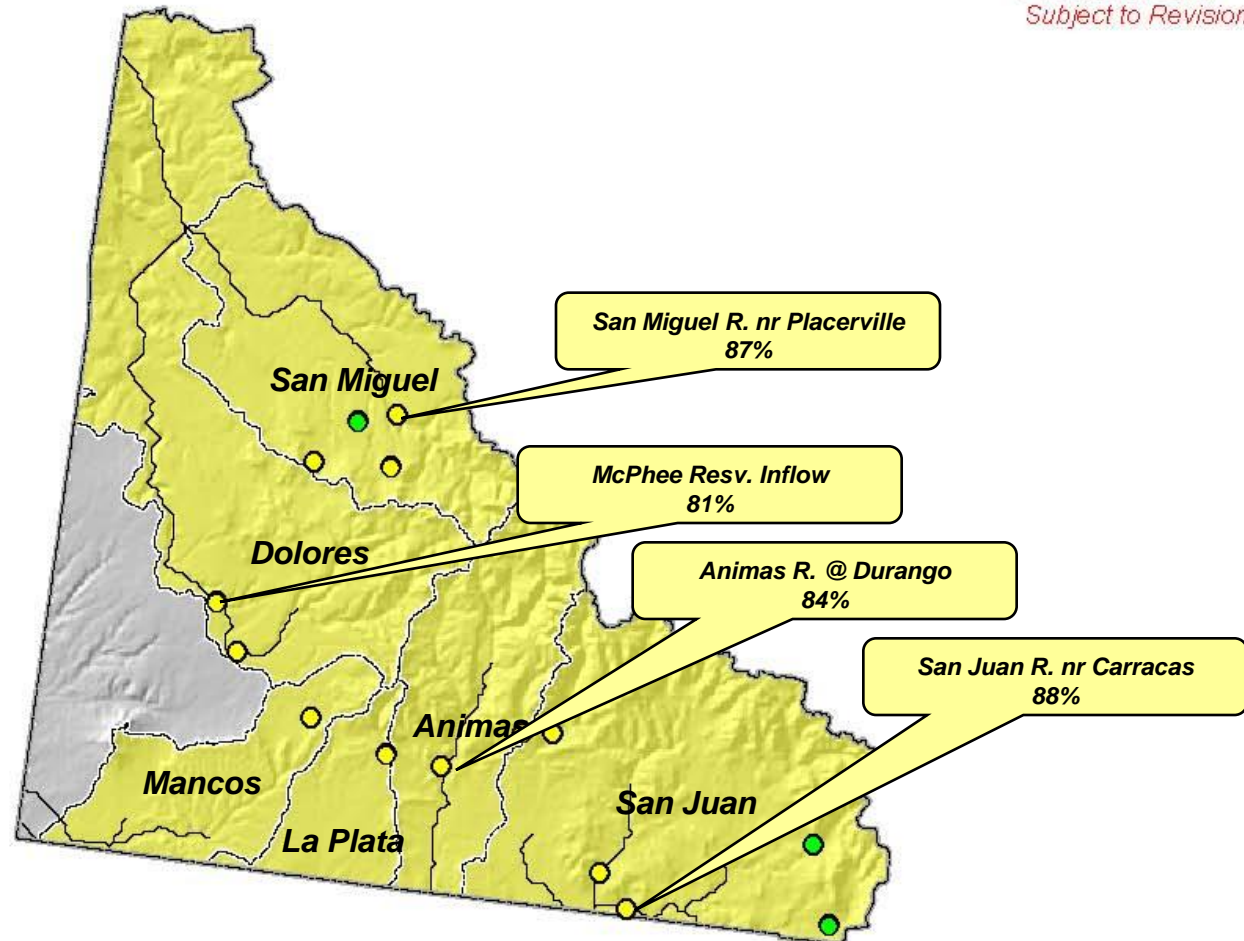


San Miguel, Dolores, Animas and San Juan River Basins Streamflow Forecast Map

Percent of Average

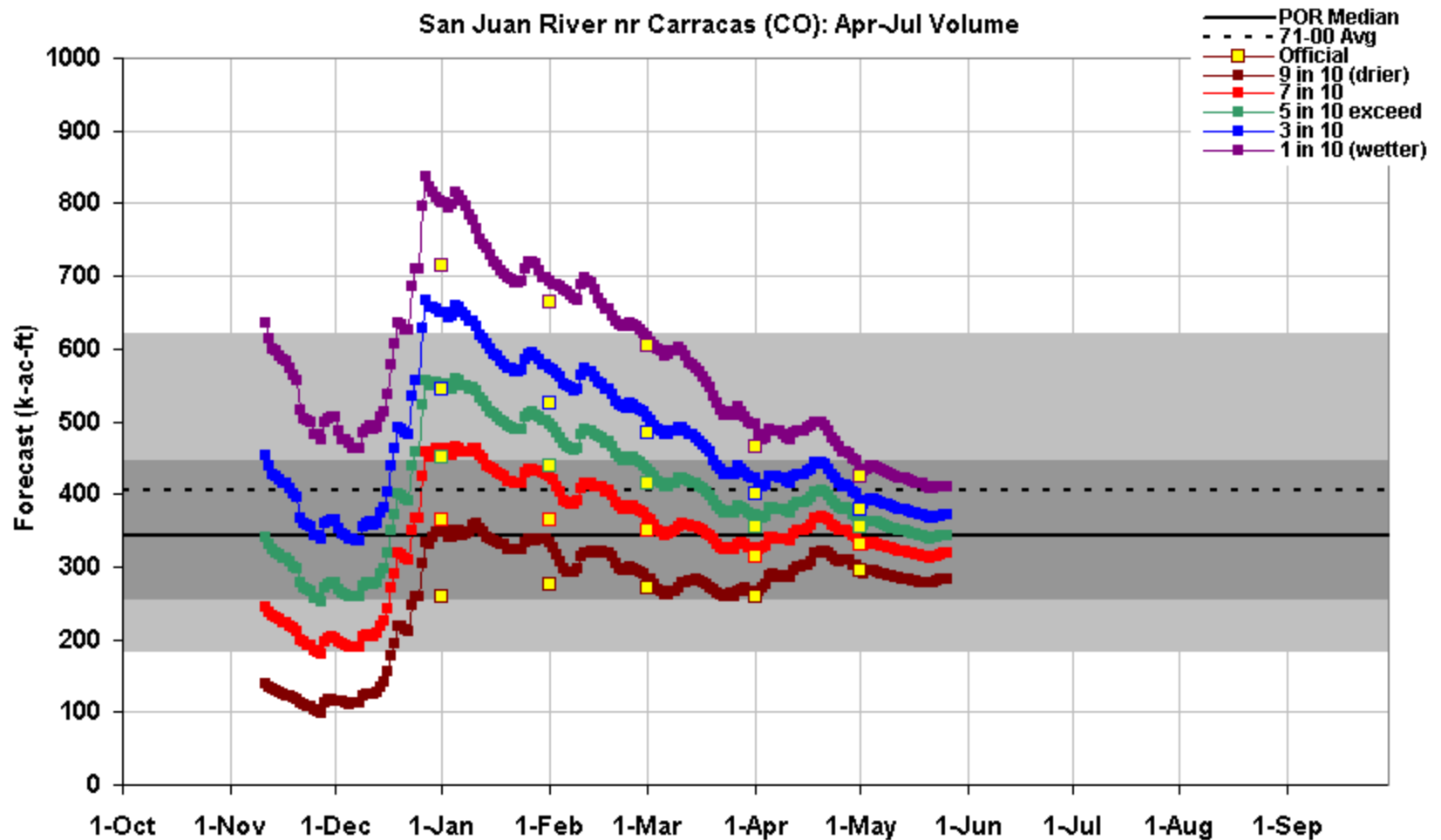


*Provisional Data
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Current as of May 1, 2009

San Juan River nr Carracas (CO): Apr-Jul Volume



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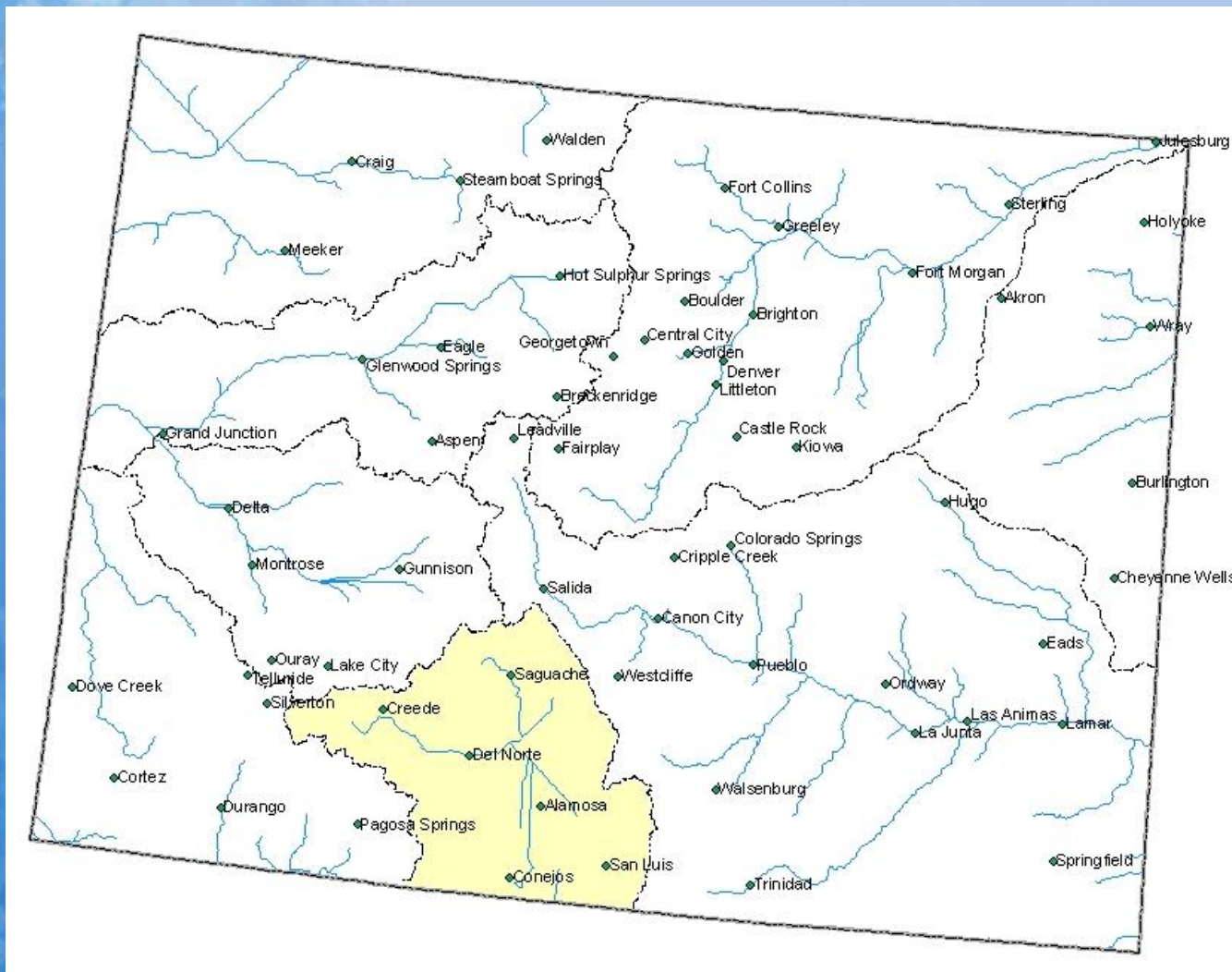
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Created 12:11 May 26 2009



Upper Rio Grande Basin Summary

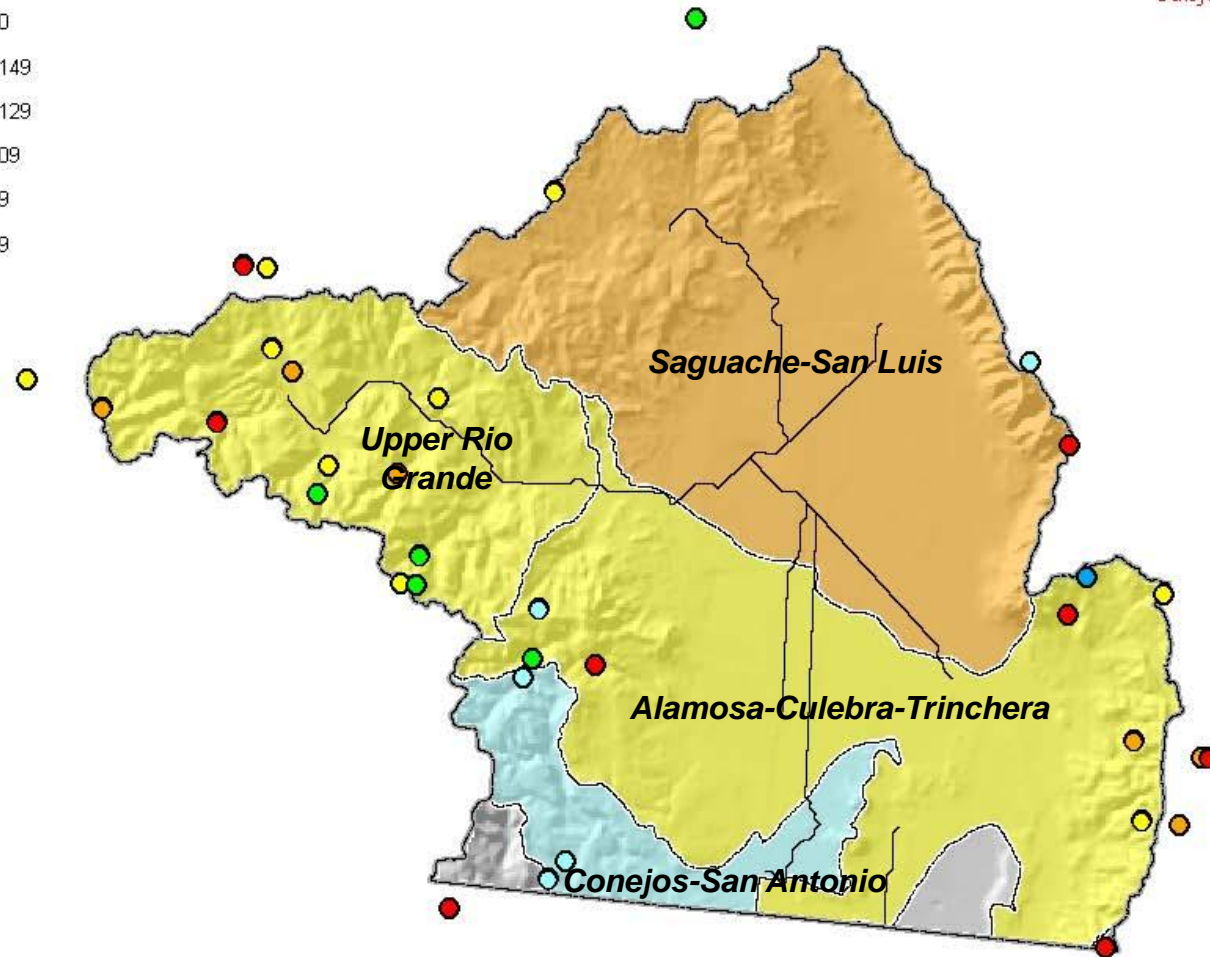


Upper Rio Grande Basin Snowpack Map

Percent of Average

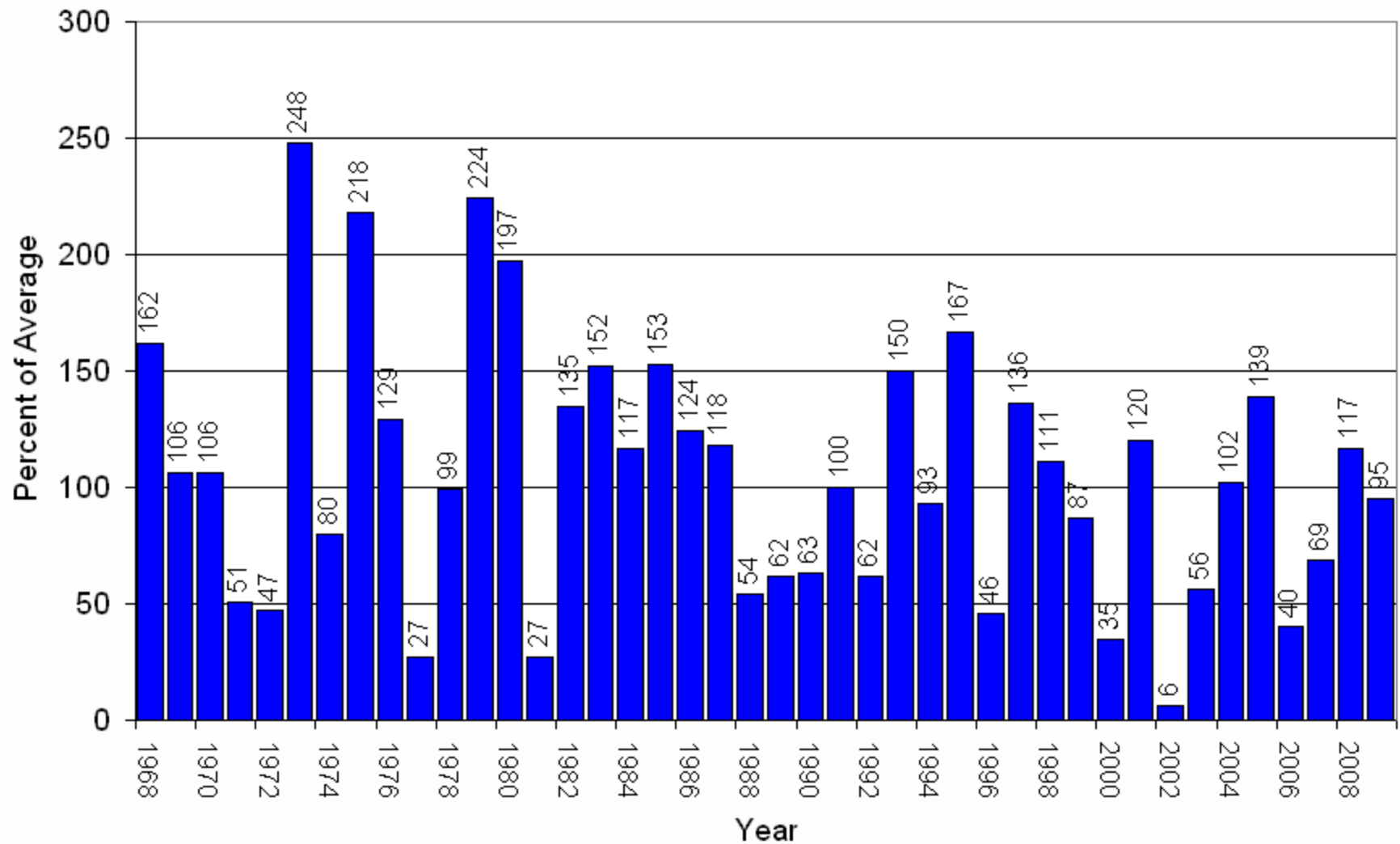


*Provisional Data
Subject to Revision*



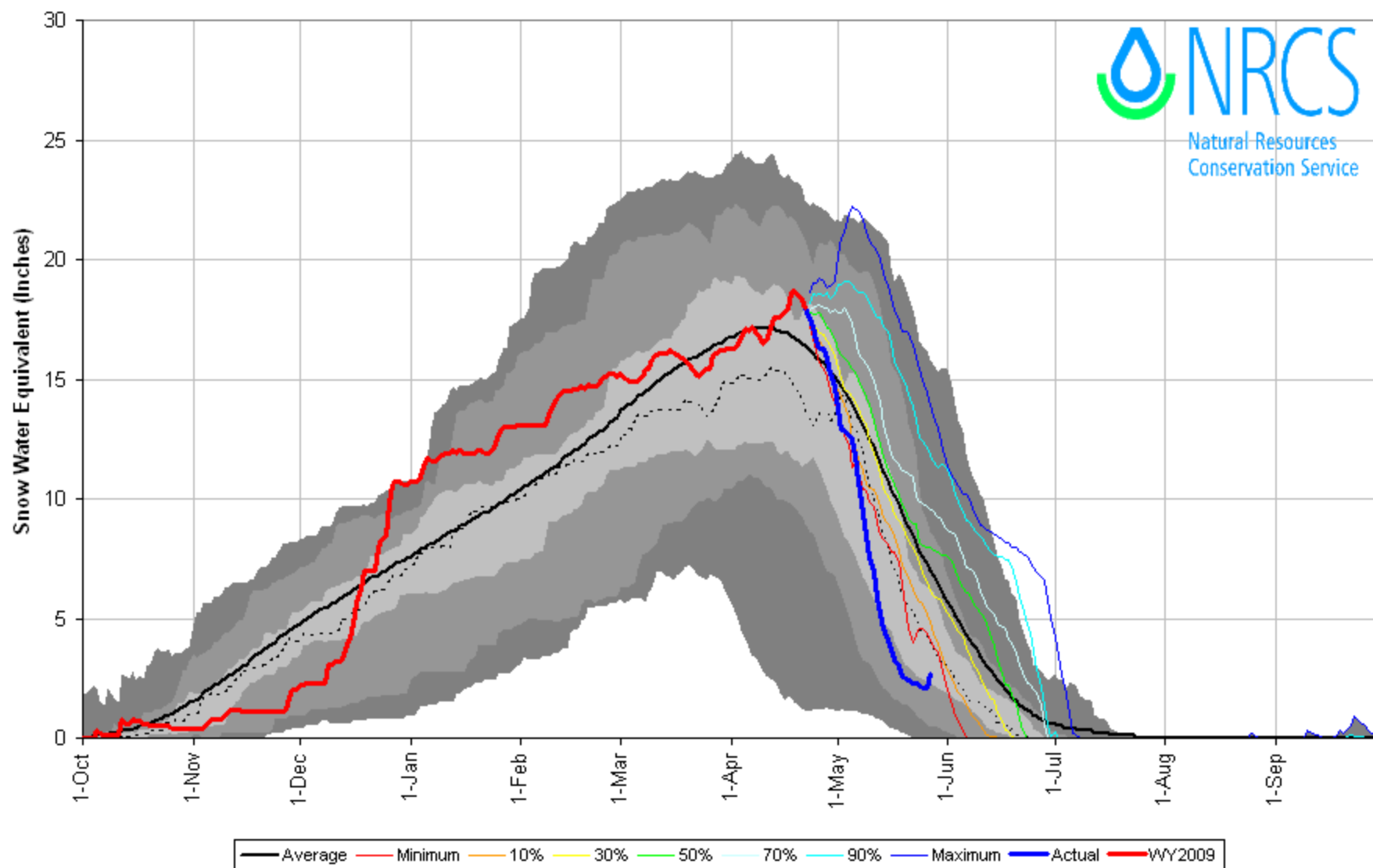
Current as of May 1, 2009

May 1 Total Upper Rio Grande Basin Snowpack



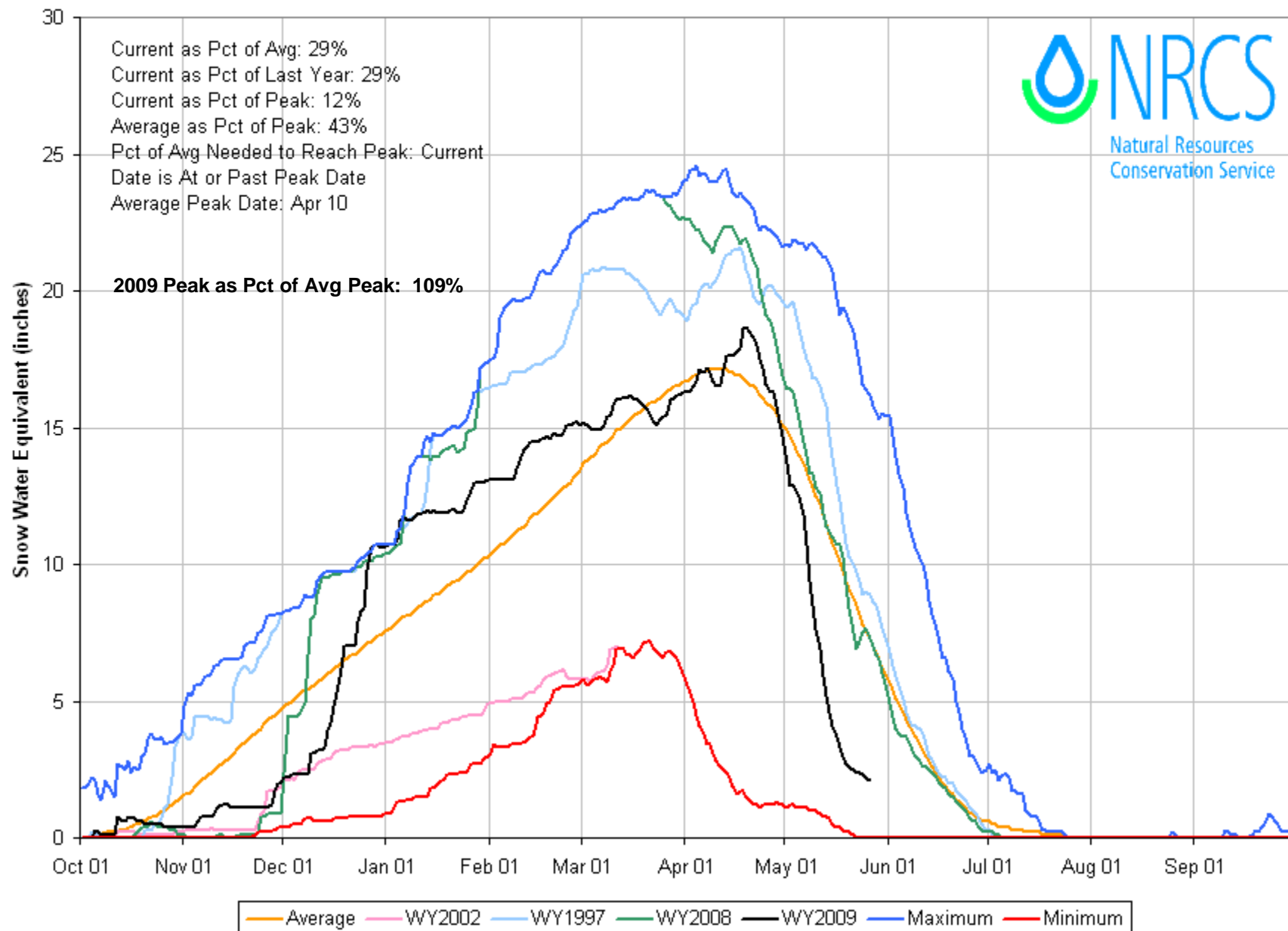
Upper Rio Grande Basin with Non-Exceedence Projections

Based on Provisional SNOTEL Data as of May 27, 2009



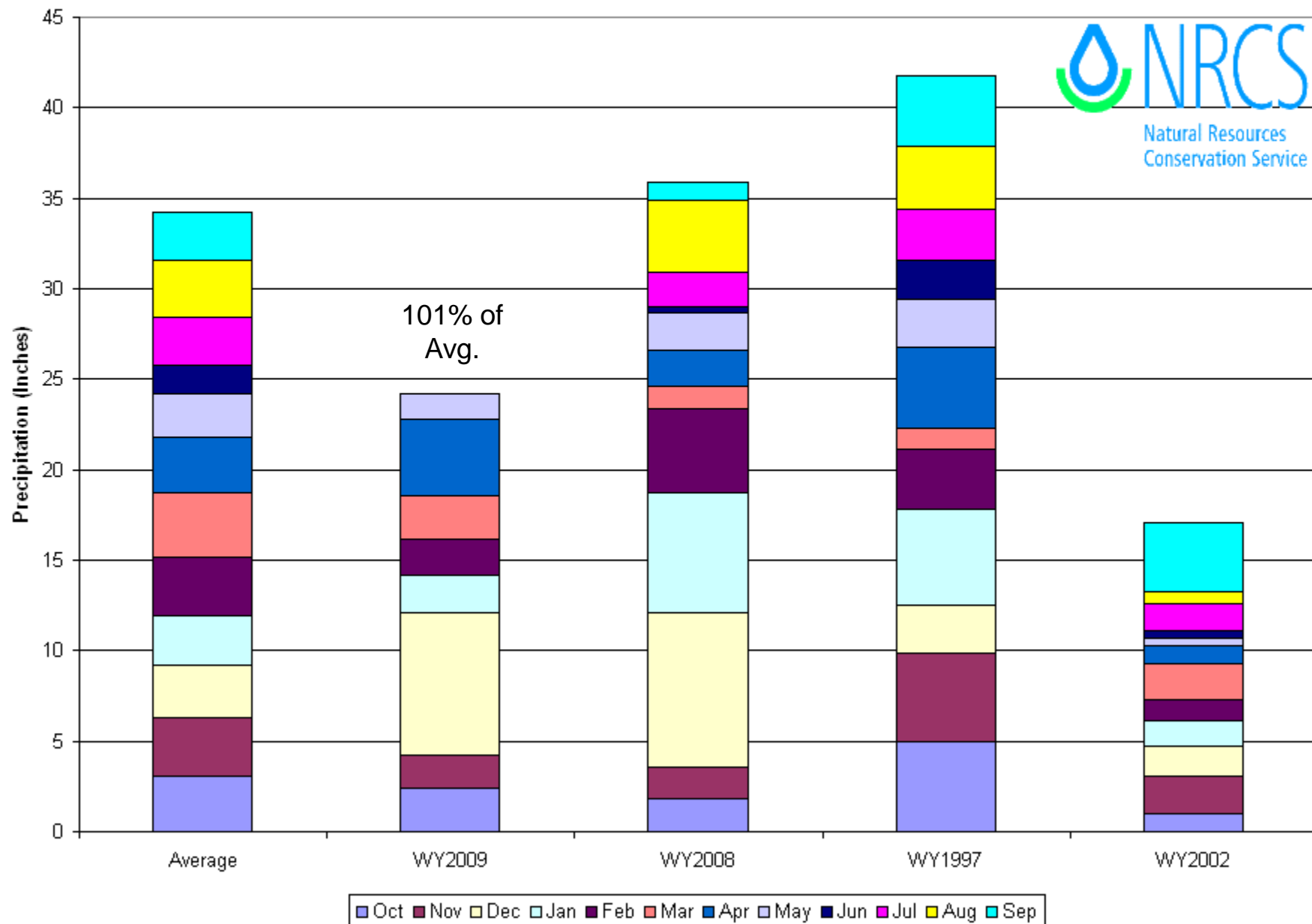
Upper Rio Grande Basin High/Low Snowpack Summary

Based on Provisional SNOTEL data as of May 26, 2009



Upper Rio Grande Basin High/Low Monthly Precipitation Summary

Based on Provisional SNOTEL data as of May 27, 2009

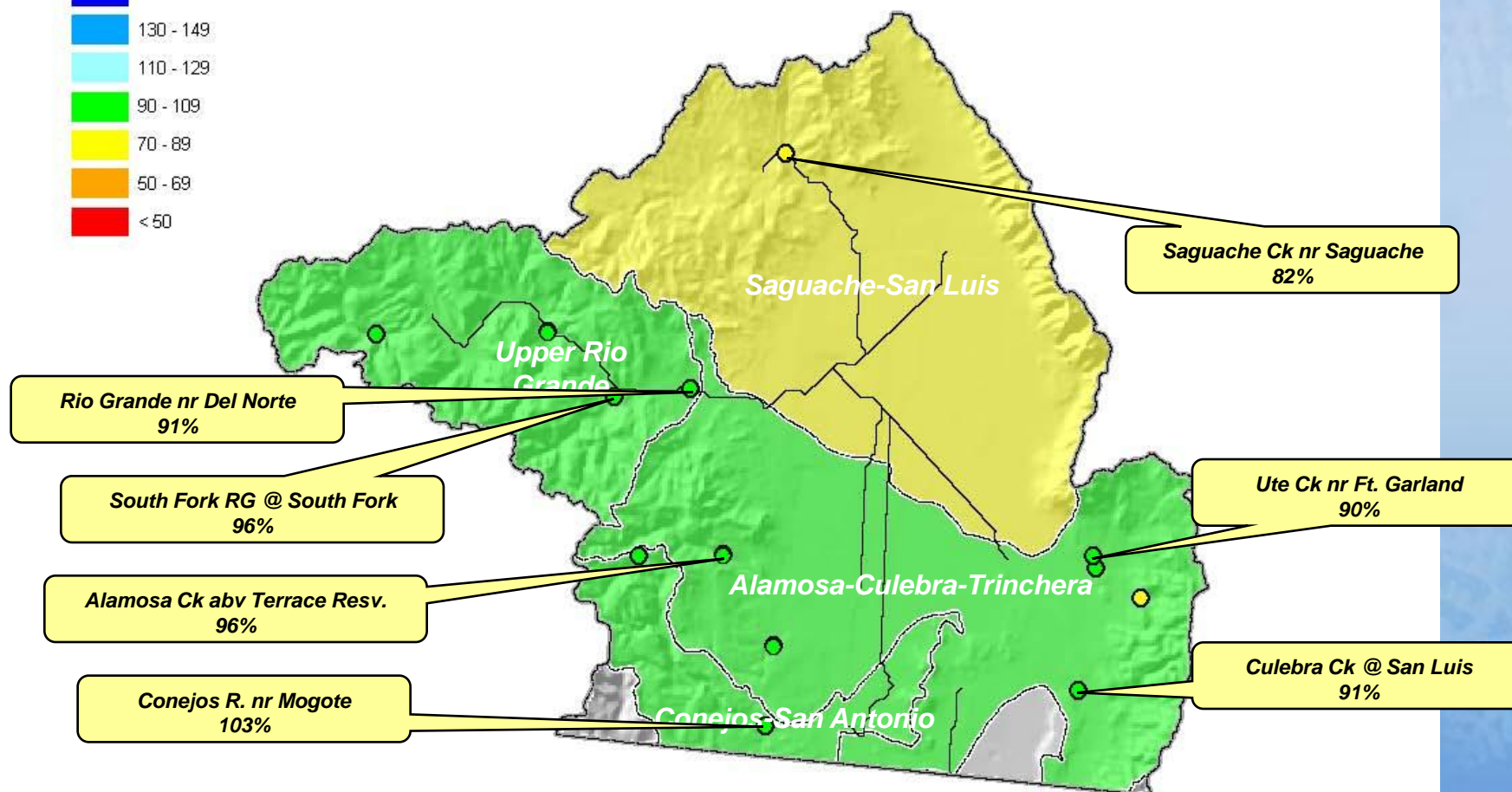


Upper Rio Grande Basin Streamflow Forecast Map

Percent of Average

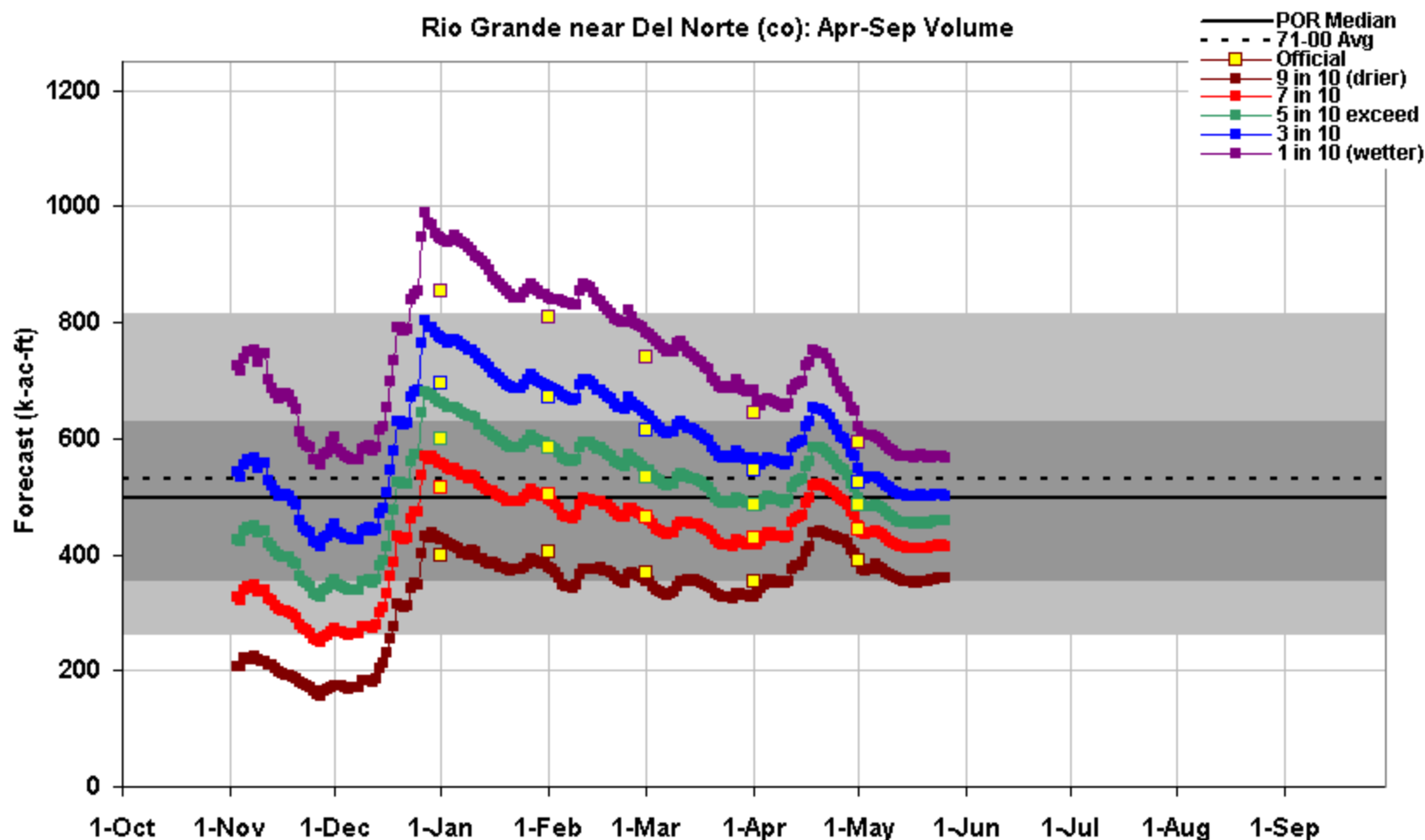


*Provisional Data
Subject to Revision*



Current as of May 1, 2009

Rio Grande near Del Norte (co): Apr-Sep Volume



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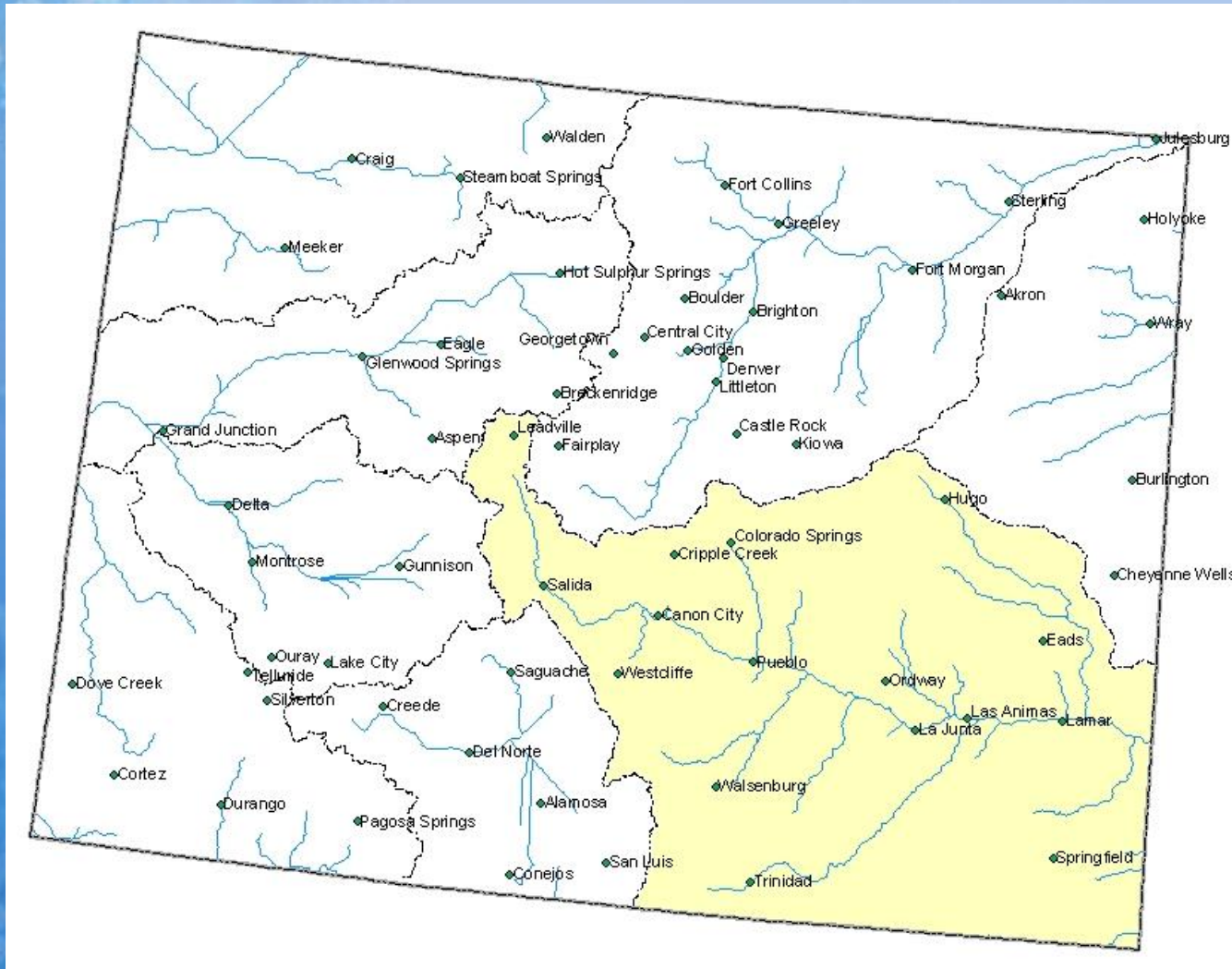
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Created 11:55 May 26 2009

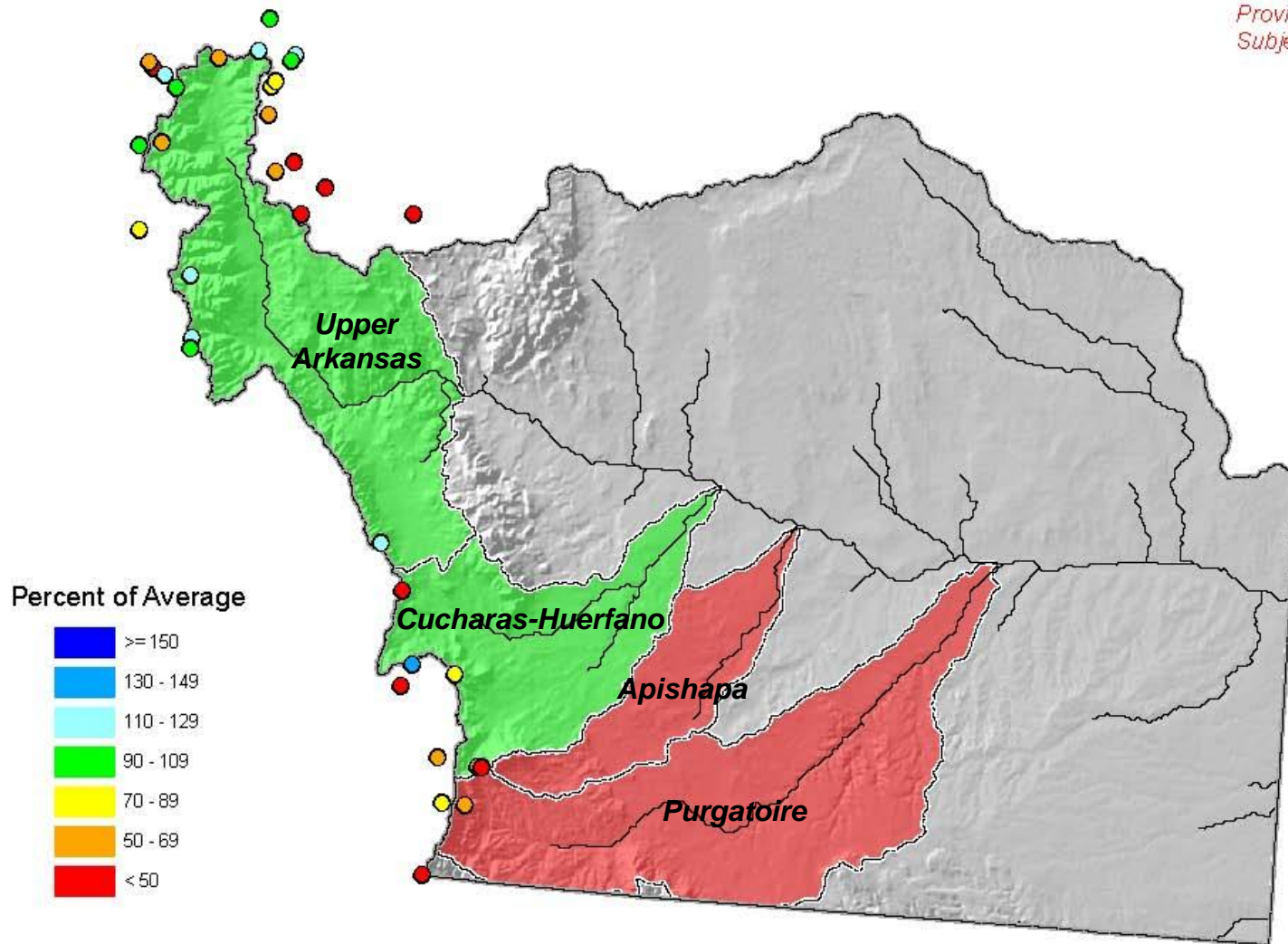


Arkansas River Basin Summary



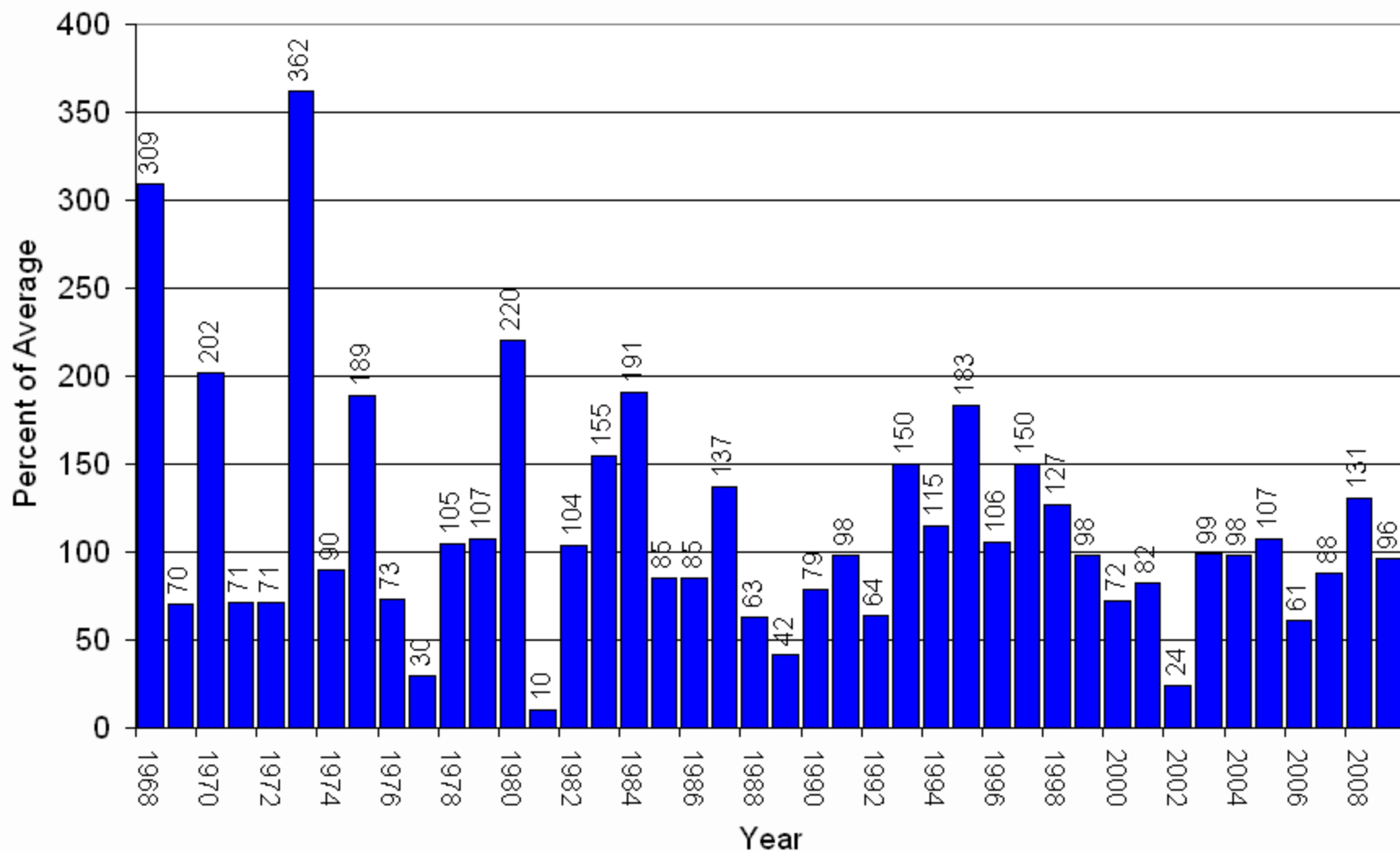
Arkansas River Basin Snowpack Map

*Provisional Data
Subject to Revision*

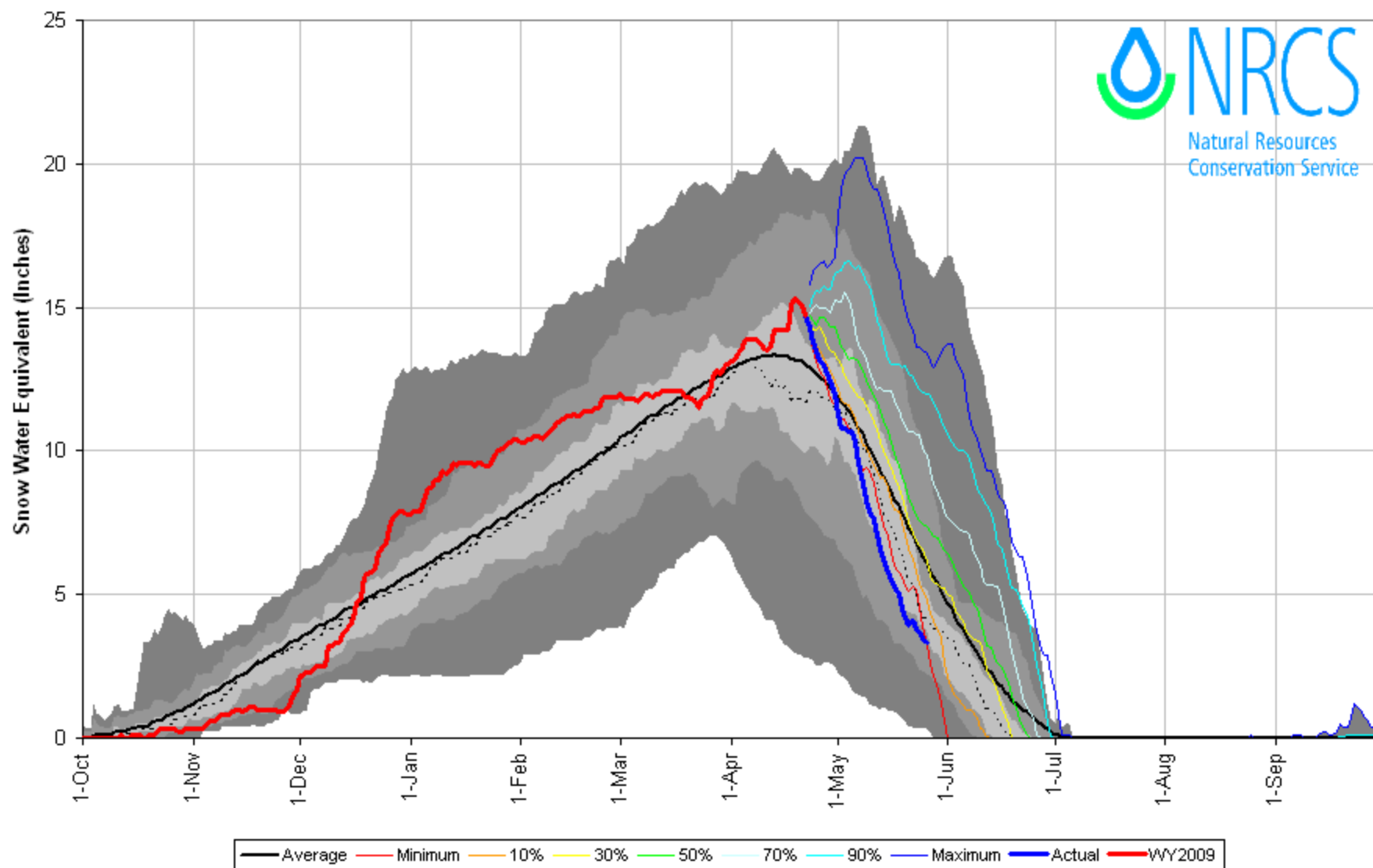


Current as of May 1, 2009

May 1 Total Arkansas River Basin Snowpack

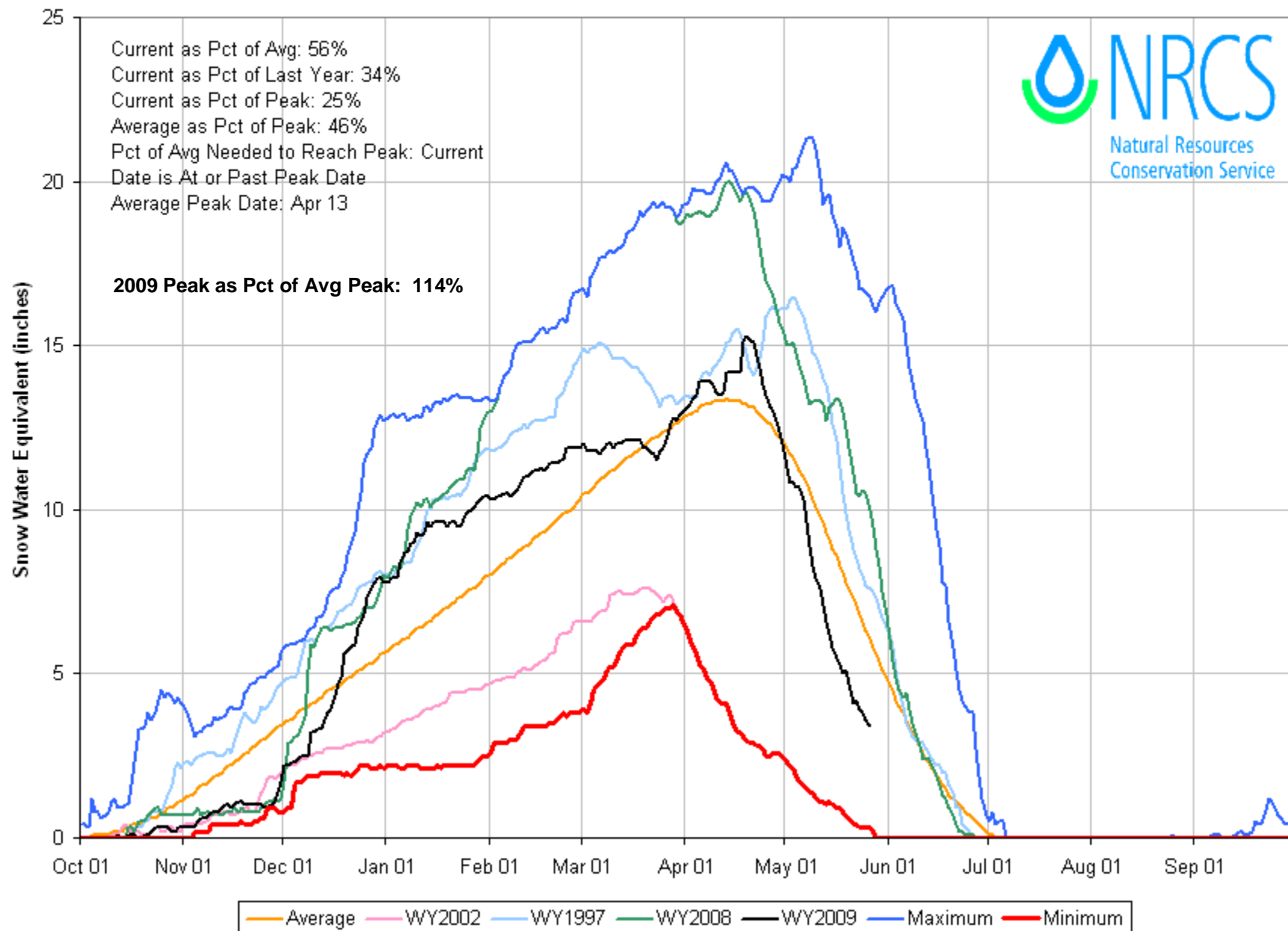


Based on Provisional SNOTEL Data as of May 27, 2009



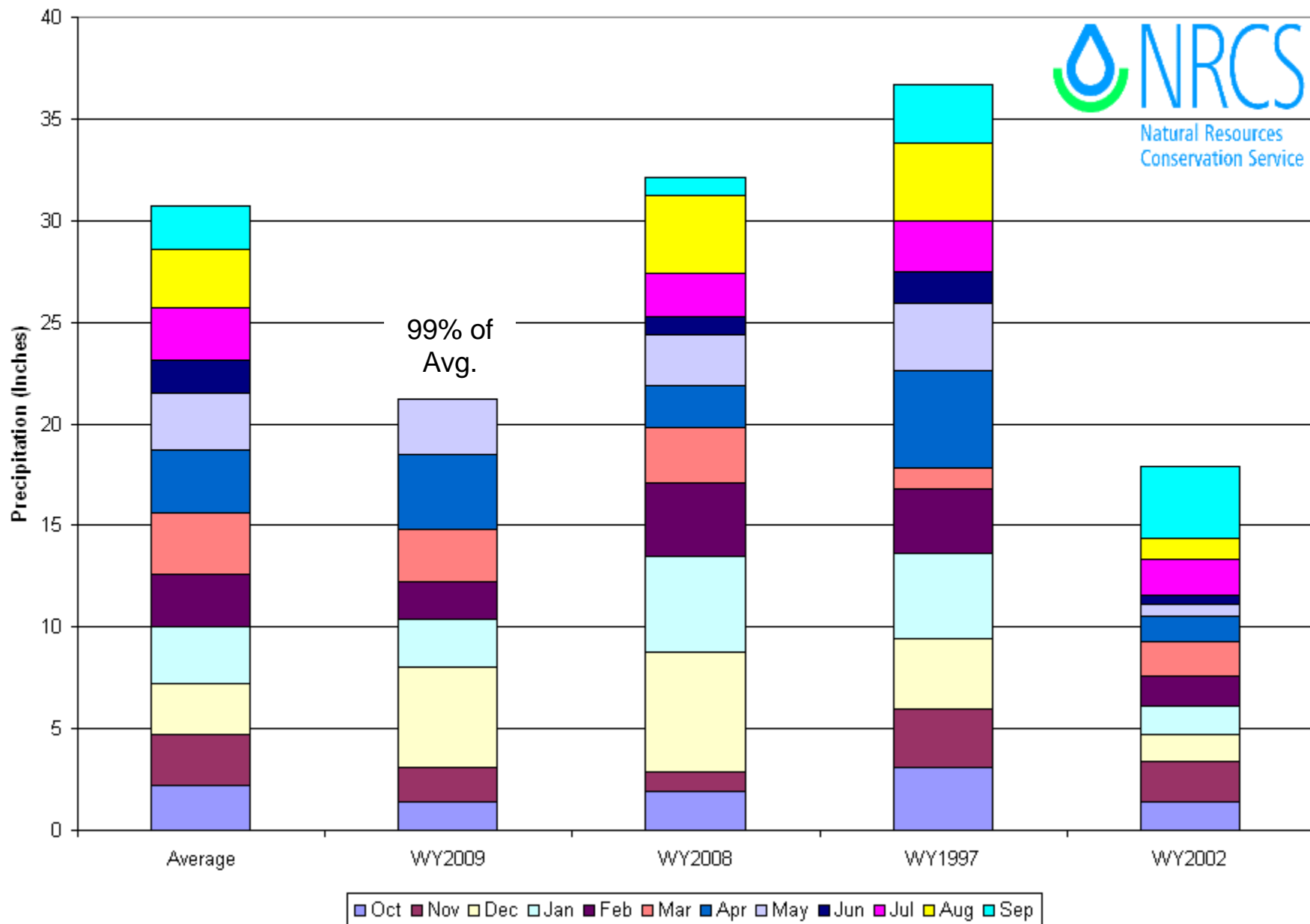
Arkansas River Basin High/Low Snowpack Summary

Based on Provisional SNOTEL data as of May 26, 2009



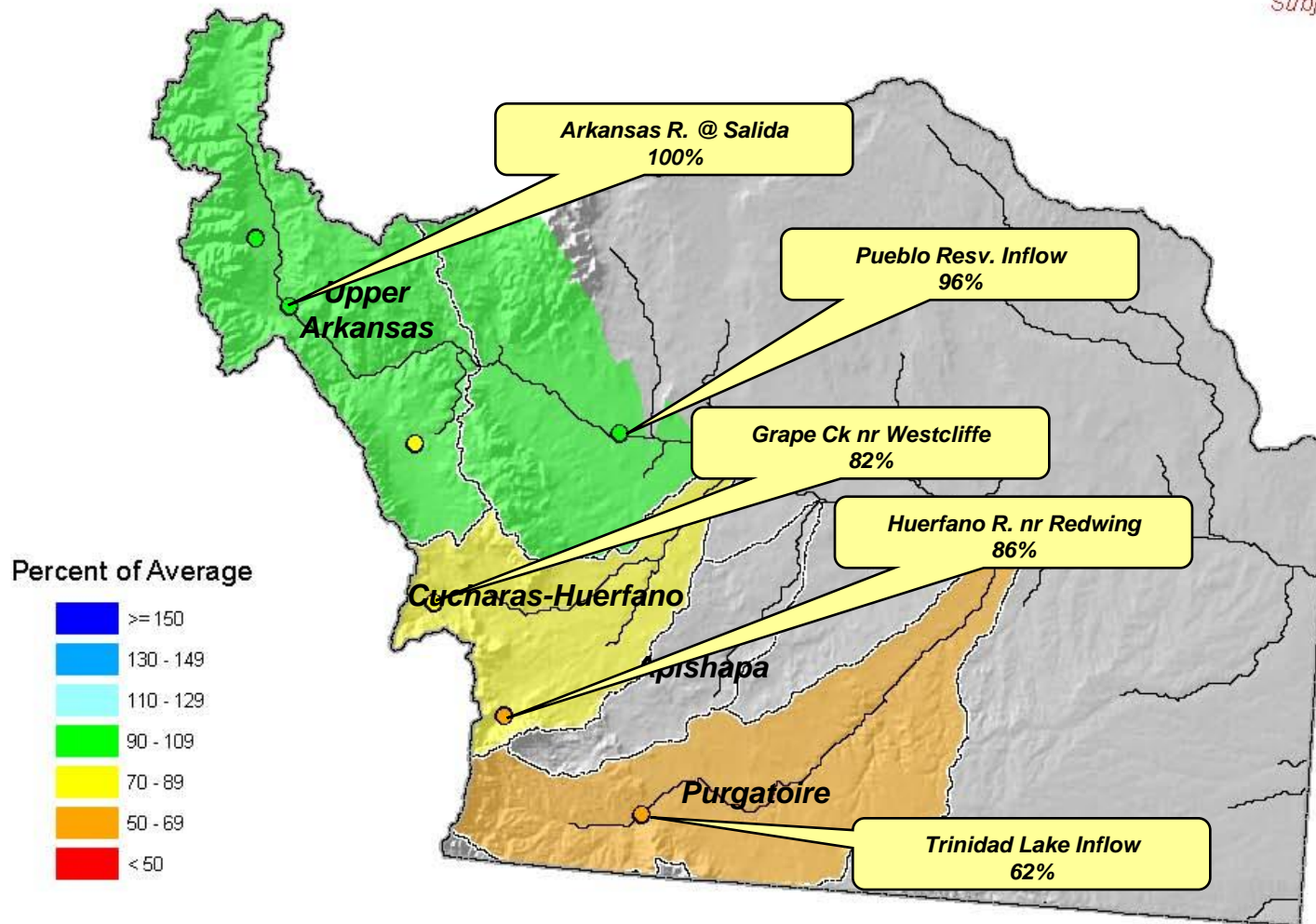
Arkansas River Basin High/Low Monthly Precipitation Summary

Based on Provisional SNOTEL data as of May 27, 2009



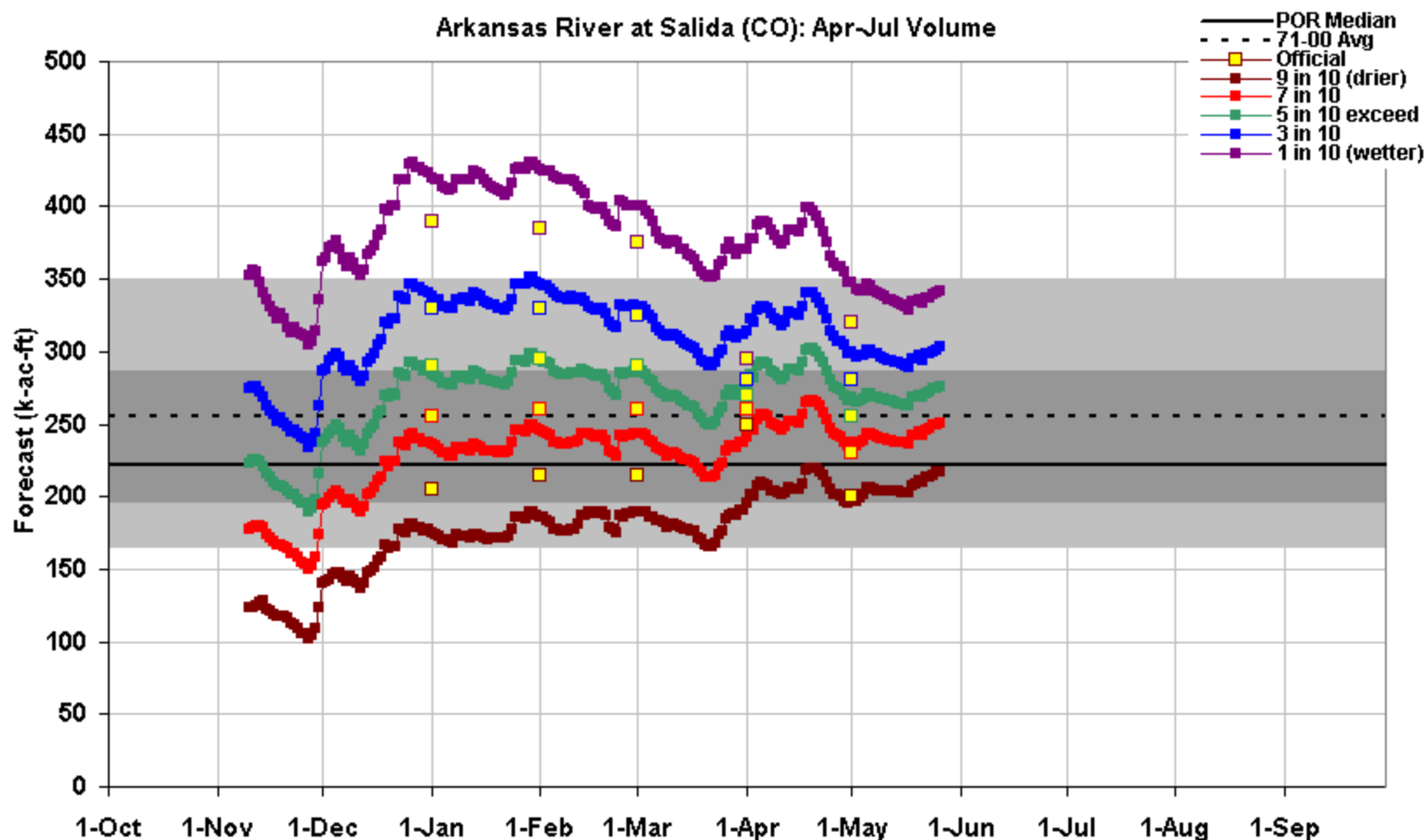
Arkansas River Basin Streamflow Forecast Map

*Provisional Data
Subject to Revision*



Current as of May 1, 2009

Arkansas River at Salida (CO): Apr-Jul Volume



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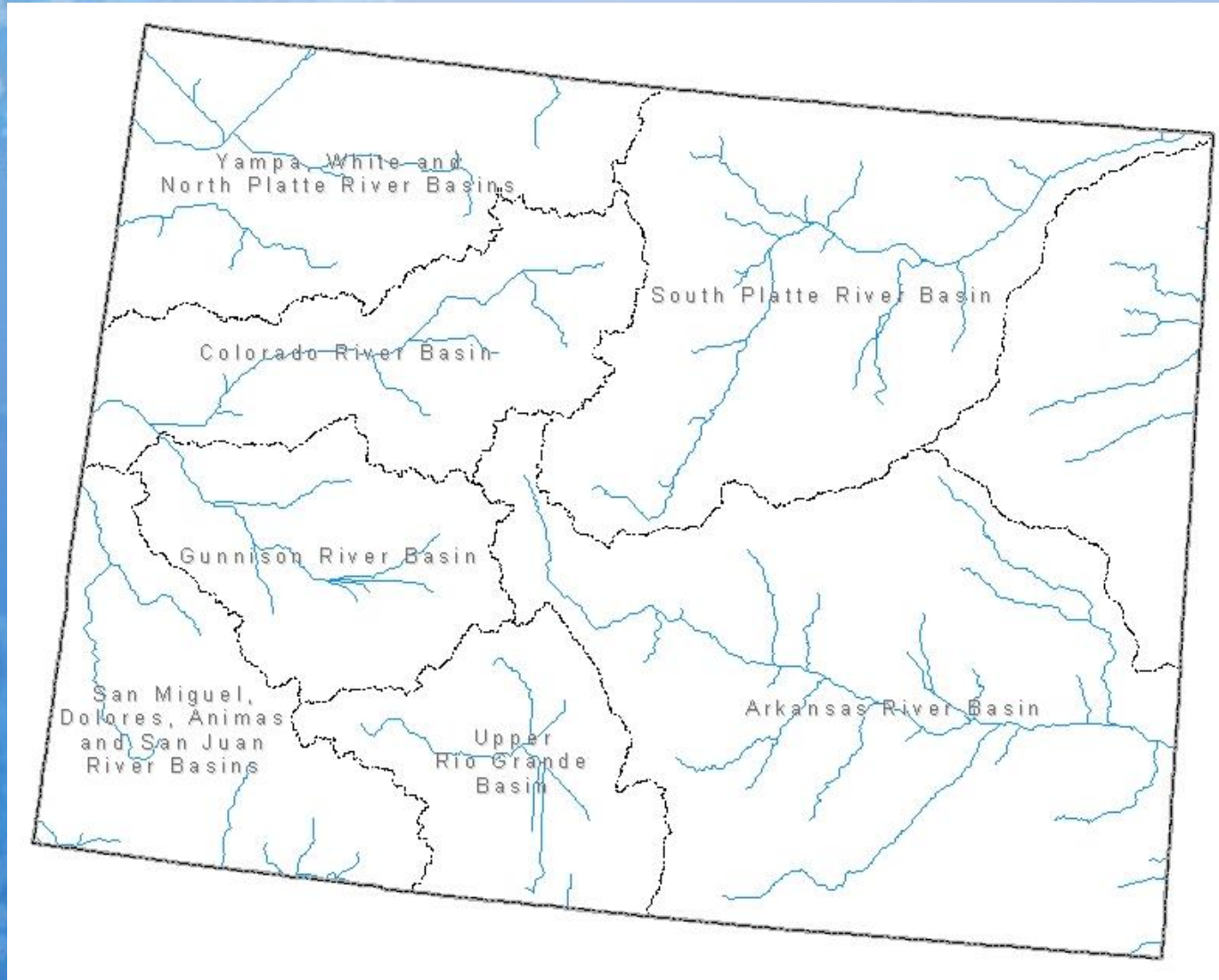
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Science Contact: Jim.Marron@por.usda.gov www.wcc.nrcs.usda.gov/wsf/daily_forecasts.html

Created 11:53 May 26 2009

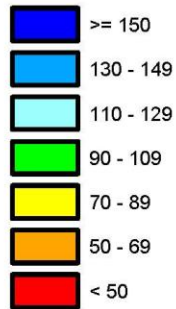


Colorado Statewide Summary

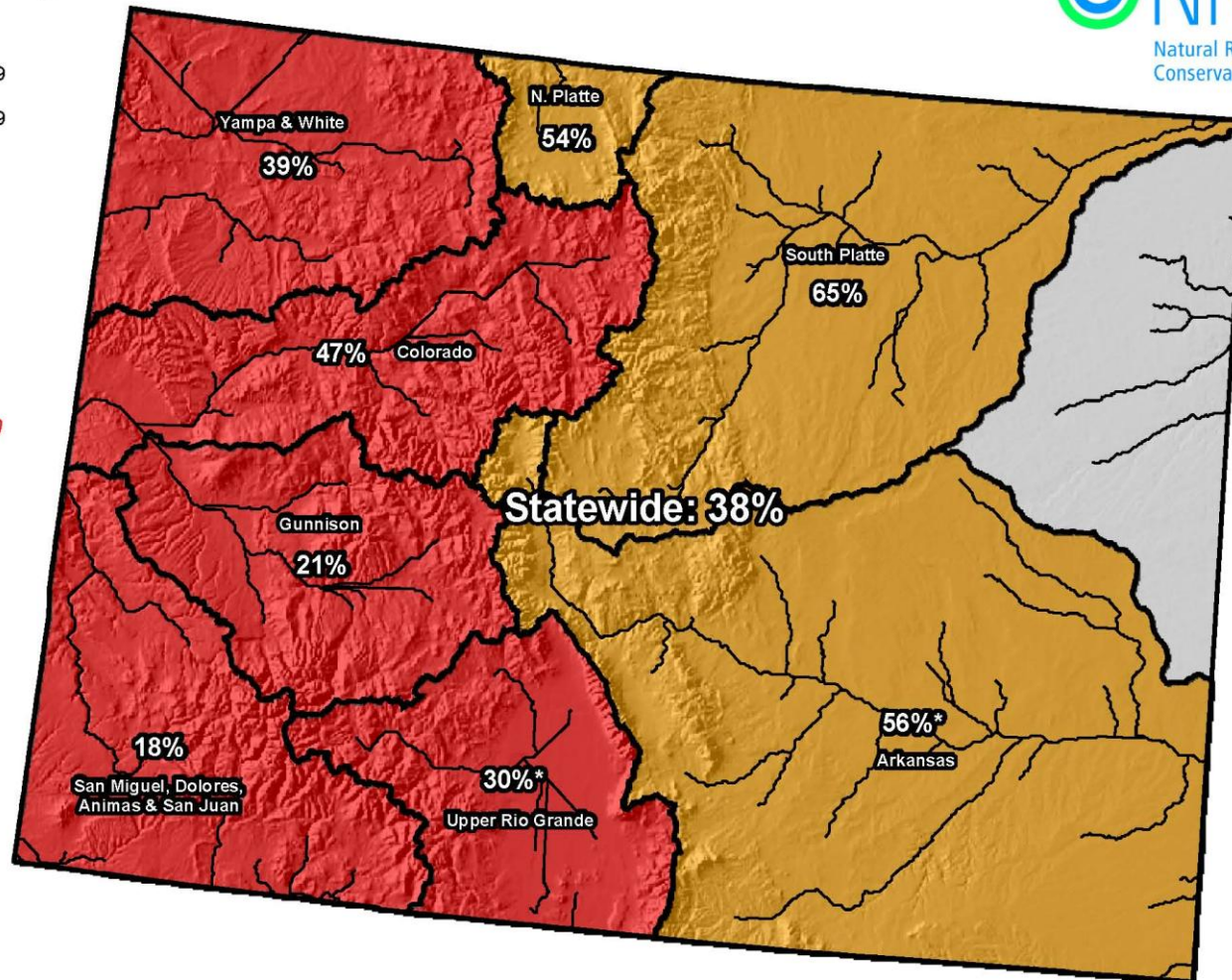


Colorado SNOTEL Snowpack Update Map

Percent of Average



*Provisional Data
Subject to Revision*



Current as of May 27, 2009

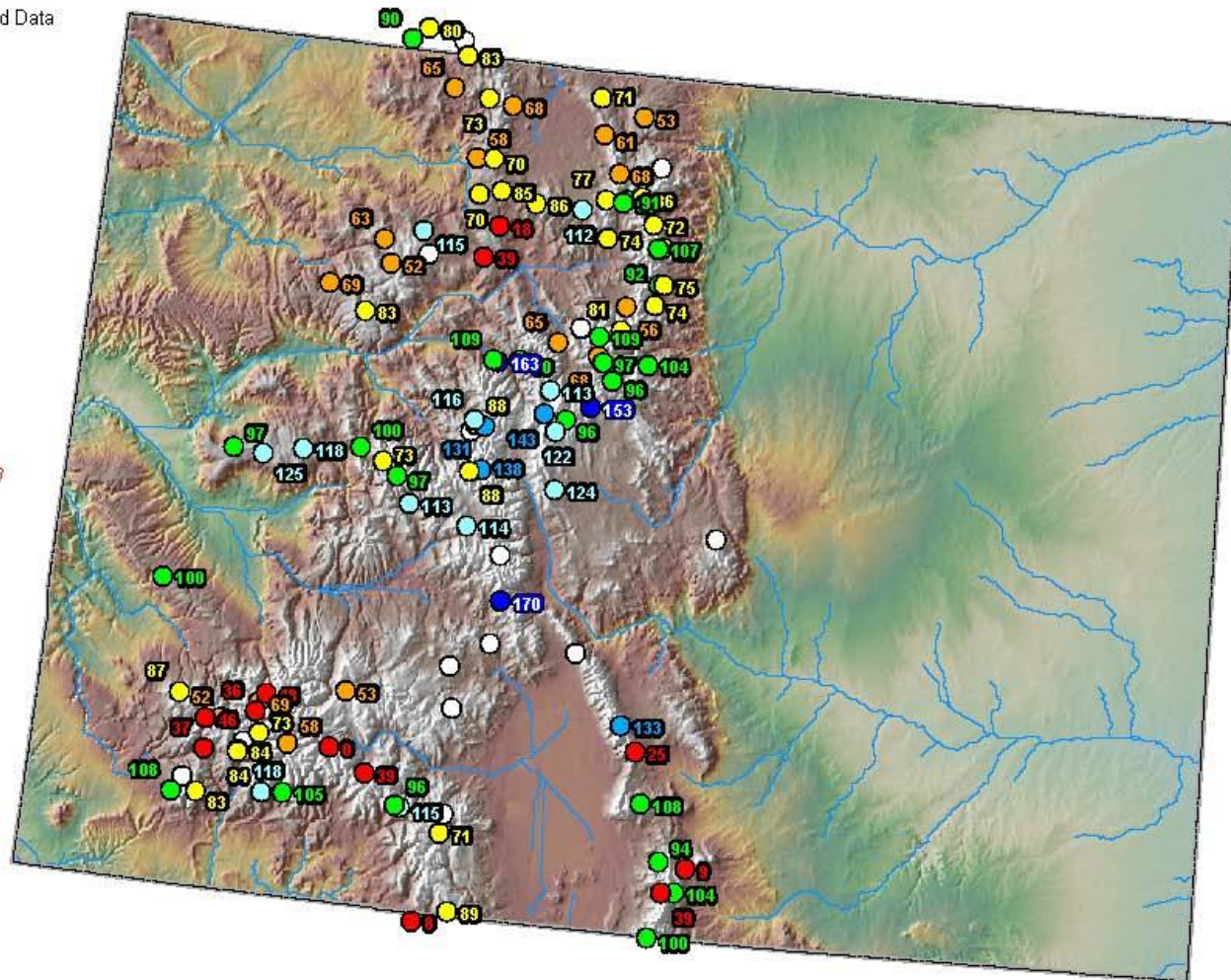
*Data may not provide a valid measure of conditions

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*



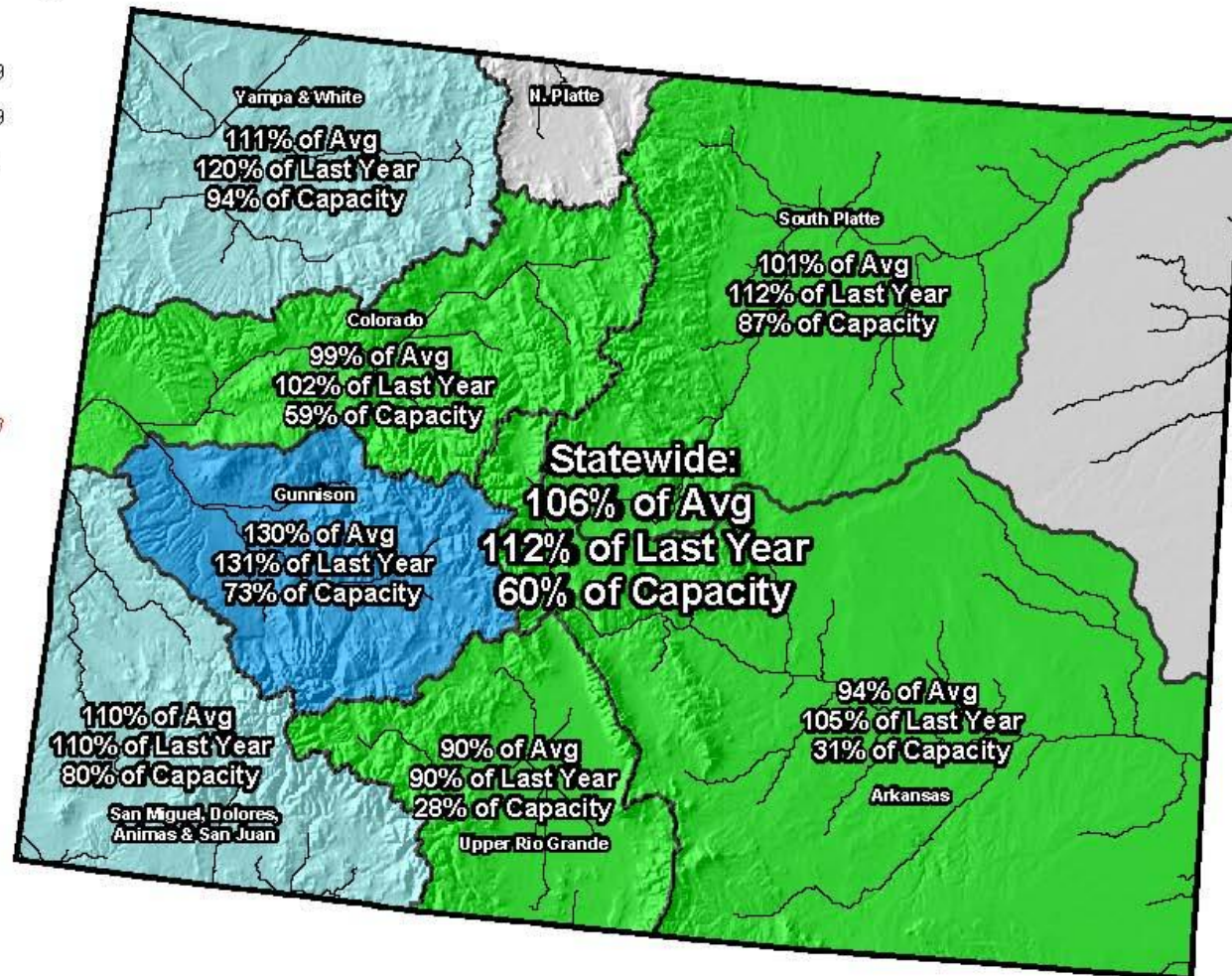
Current as of May 27, 2009

Colorado Reservoir Storage Map

Percent of Average

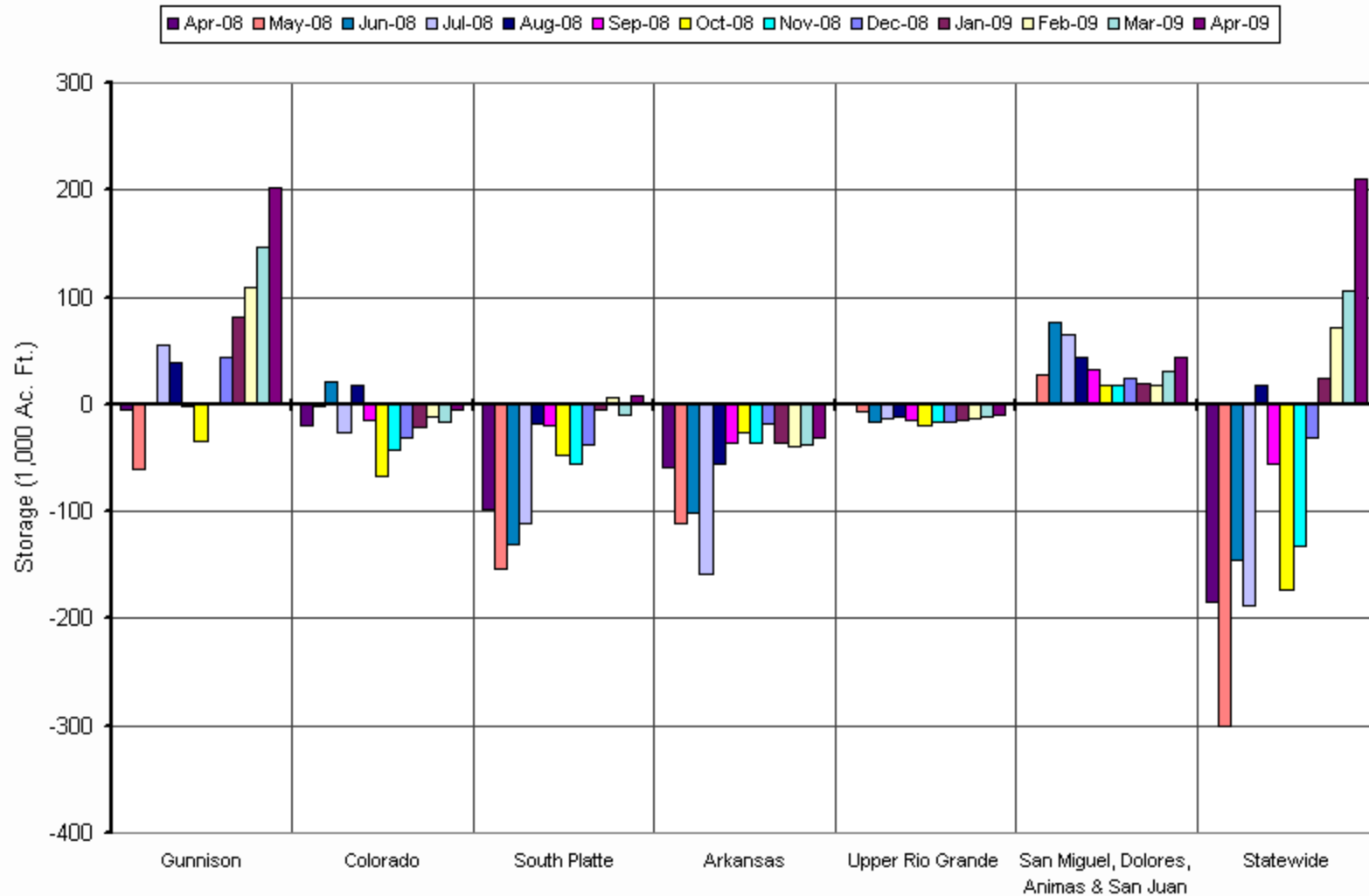


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End of April 2009

COLORADO RESERVOIR STORAGE End-of-Month Departure from Average

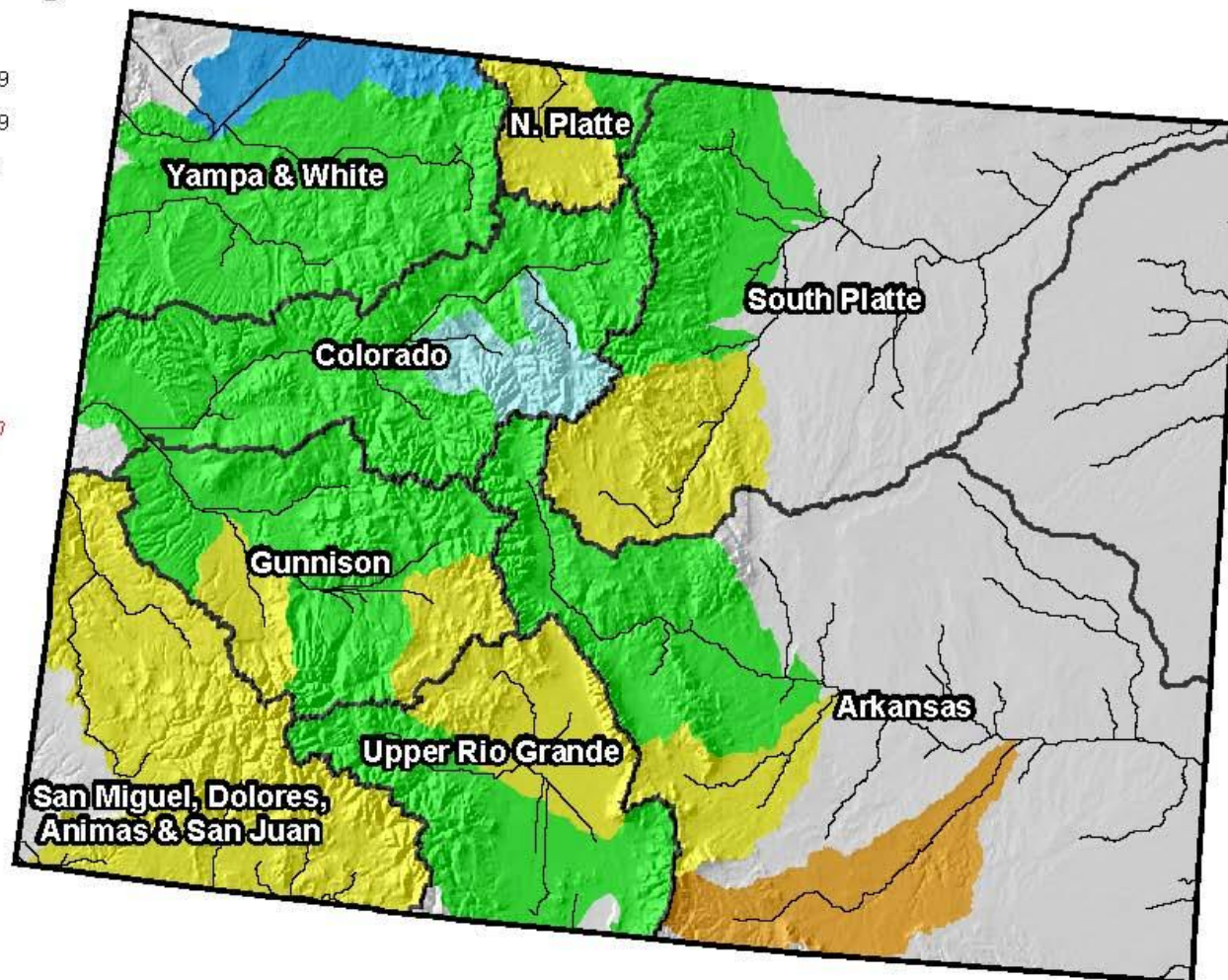


Colorado Streamflow Forecast Map

Percent of Average



*Provisional Data
Subject to Revision*



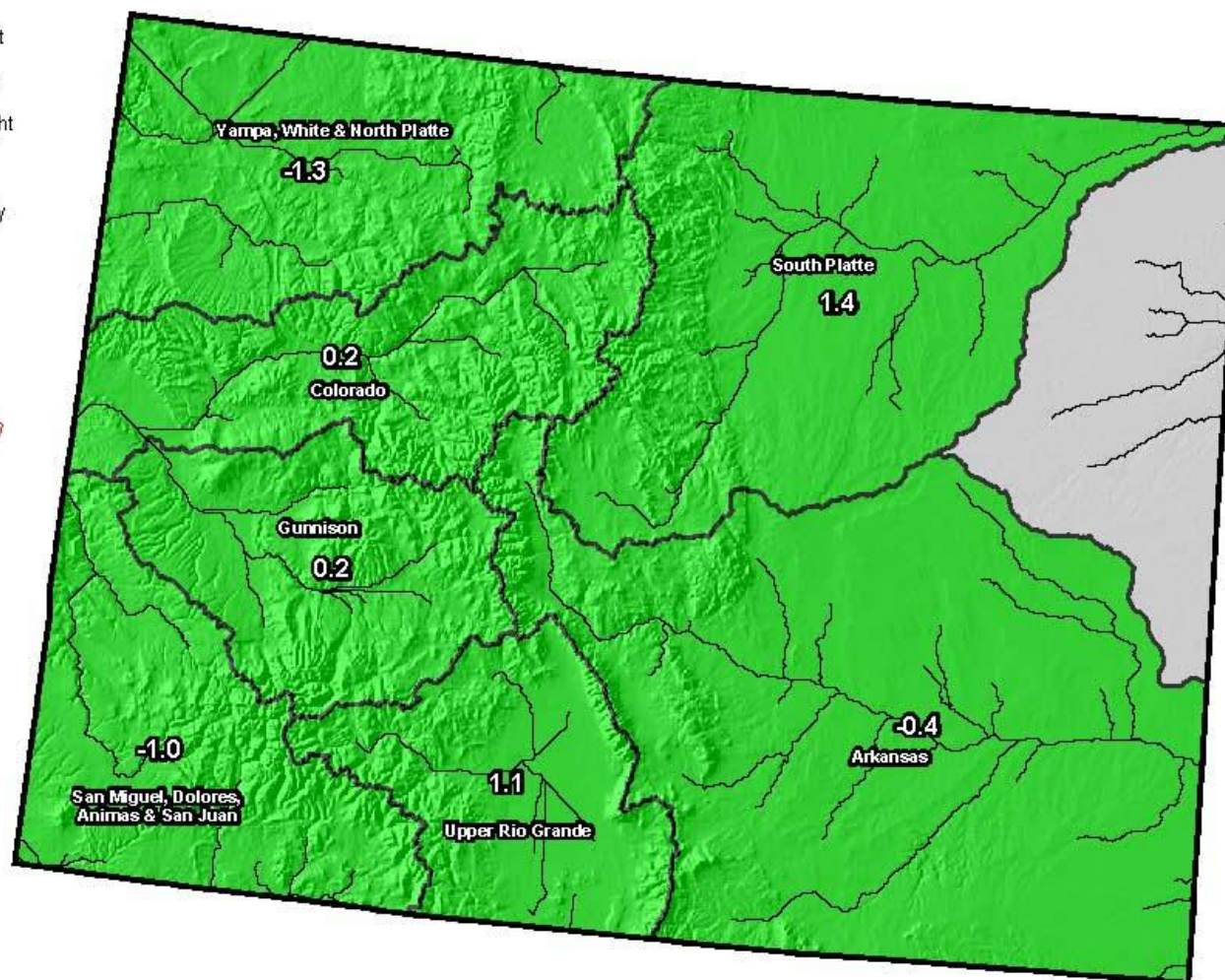
Current as of May 1, 2009

Colorado Surface Water Supply Index (SWSI) Map

Legend



*Provisional Data
Subject to Revision*



Current as of May 1, 2009