

NRCS – Snow Survey & Water Supply Forecasting

Mike Gillespie

Water Availability Task Force Meeting

January 22, 2010

The 2010 Water Year

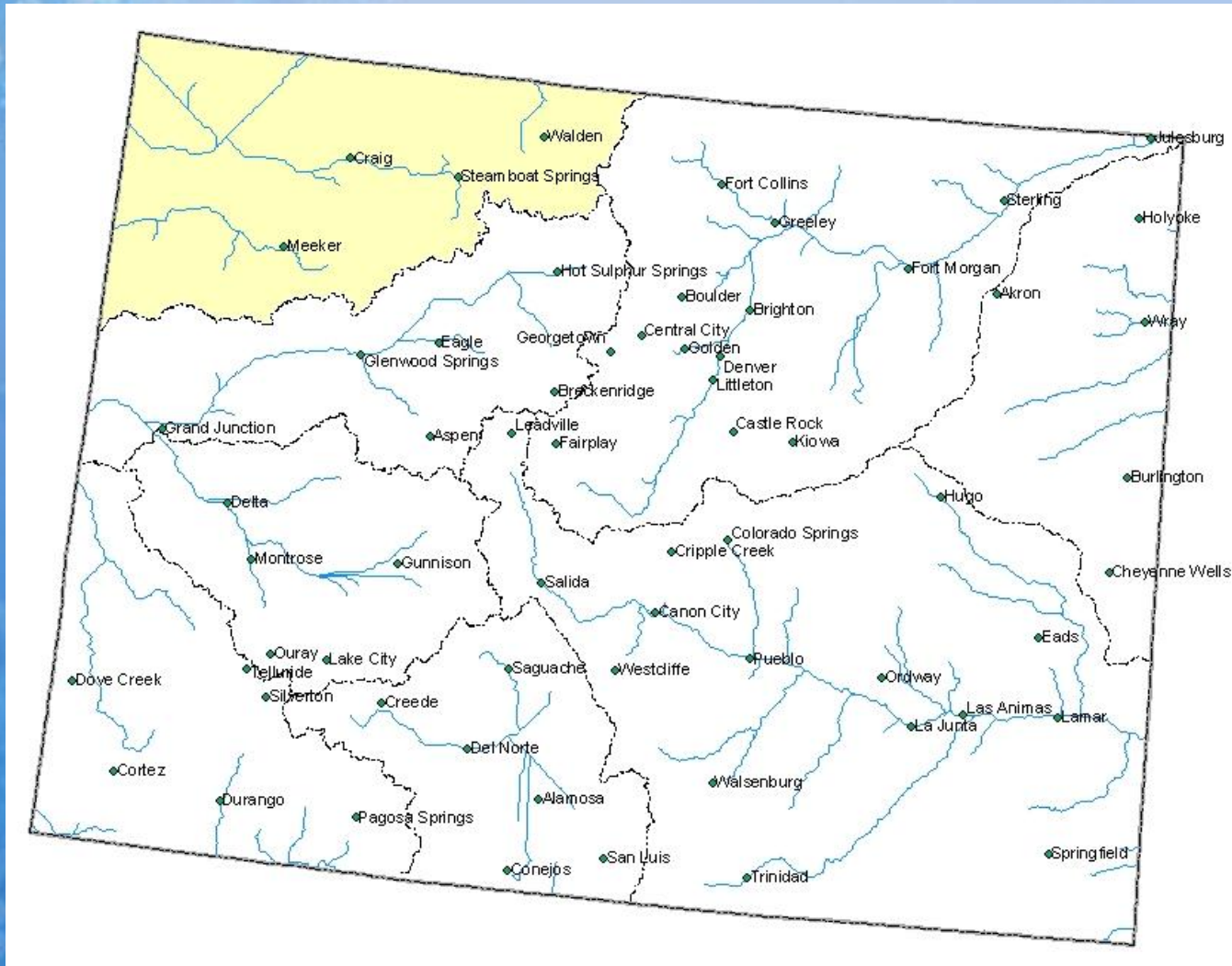
October – Cold statewide with slightly above normal mountain precipitation. Good start to the winter snowpack.

November – Warm and dry conditions statewide. Mountain snowpack put on hold.

December – Cold again with improved snowfall especially across southern basins.

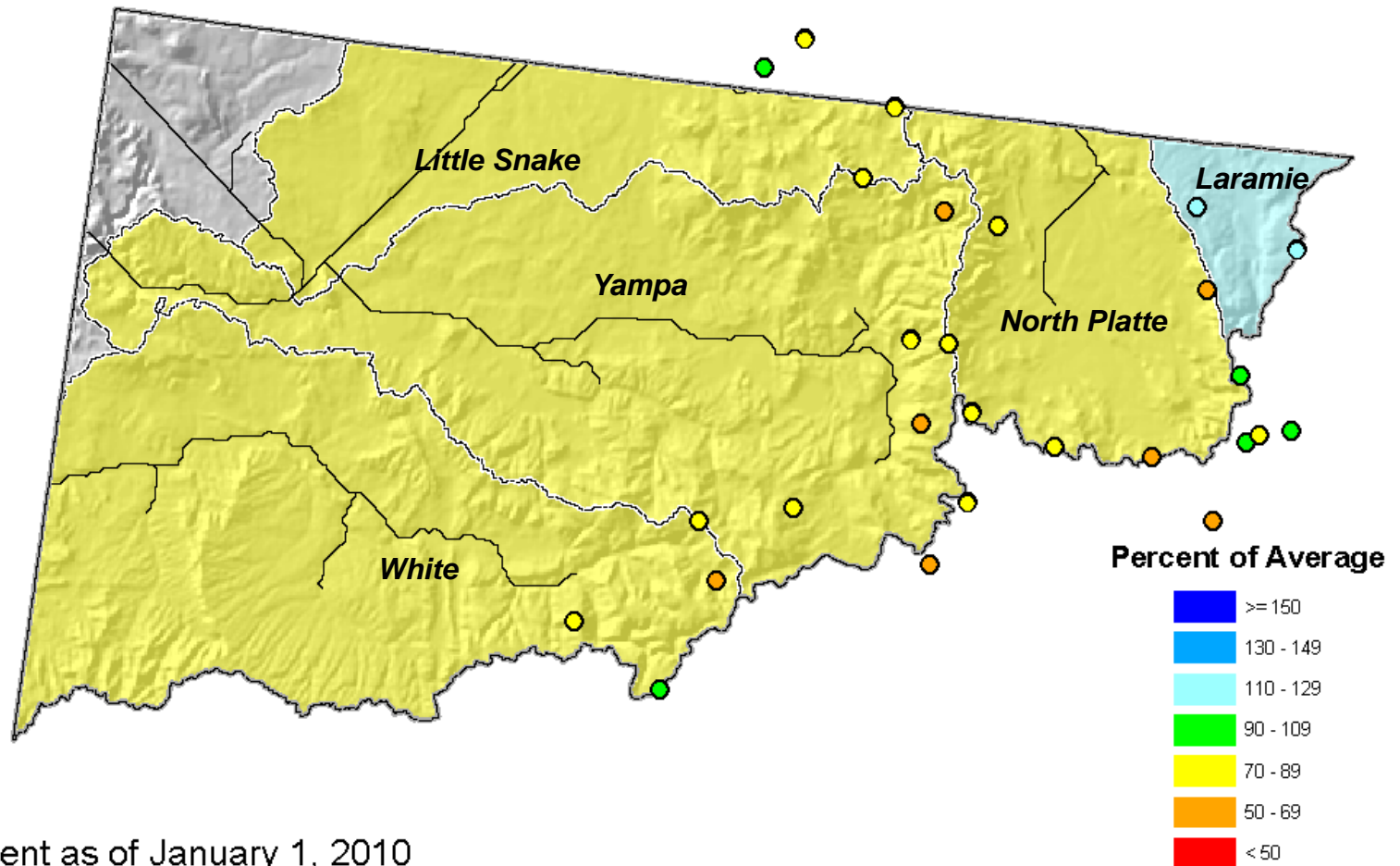
January – El Nino??? La Nina??? ~~La Nada!!!~~

Yampa, White & North Platte River Basins Summary



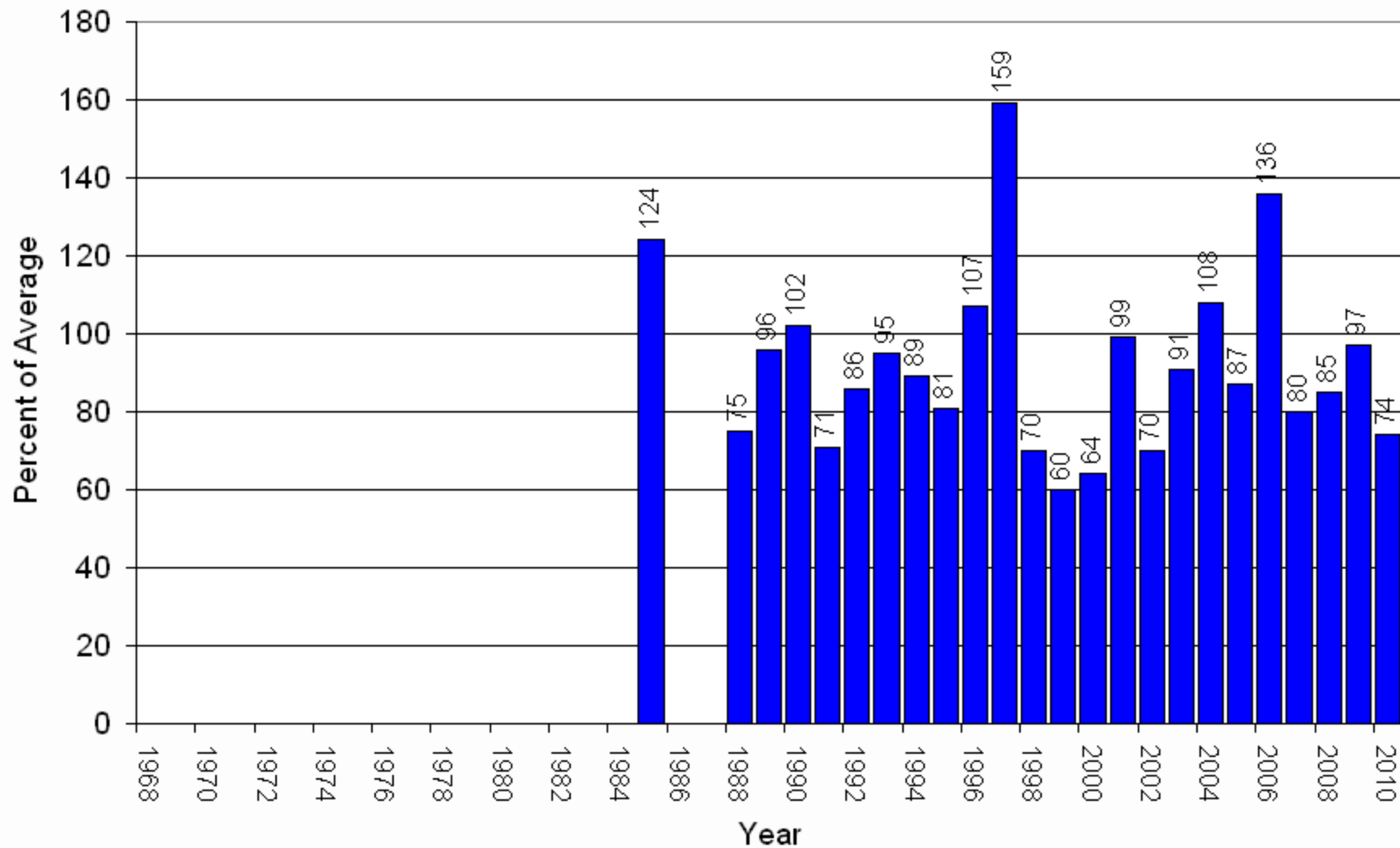
Yampa, White and North Platte River Basins Snowpack Map

*Provisional Data
Subject to Revision*



Current as of January 1, 2010

January 1 Total Yampa & White River Basins Snowpack



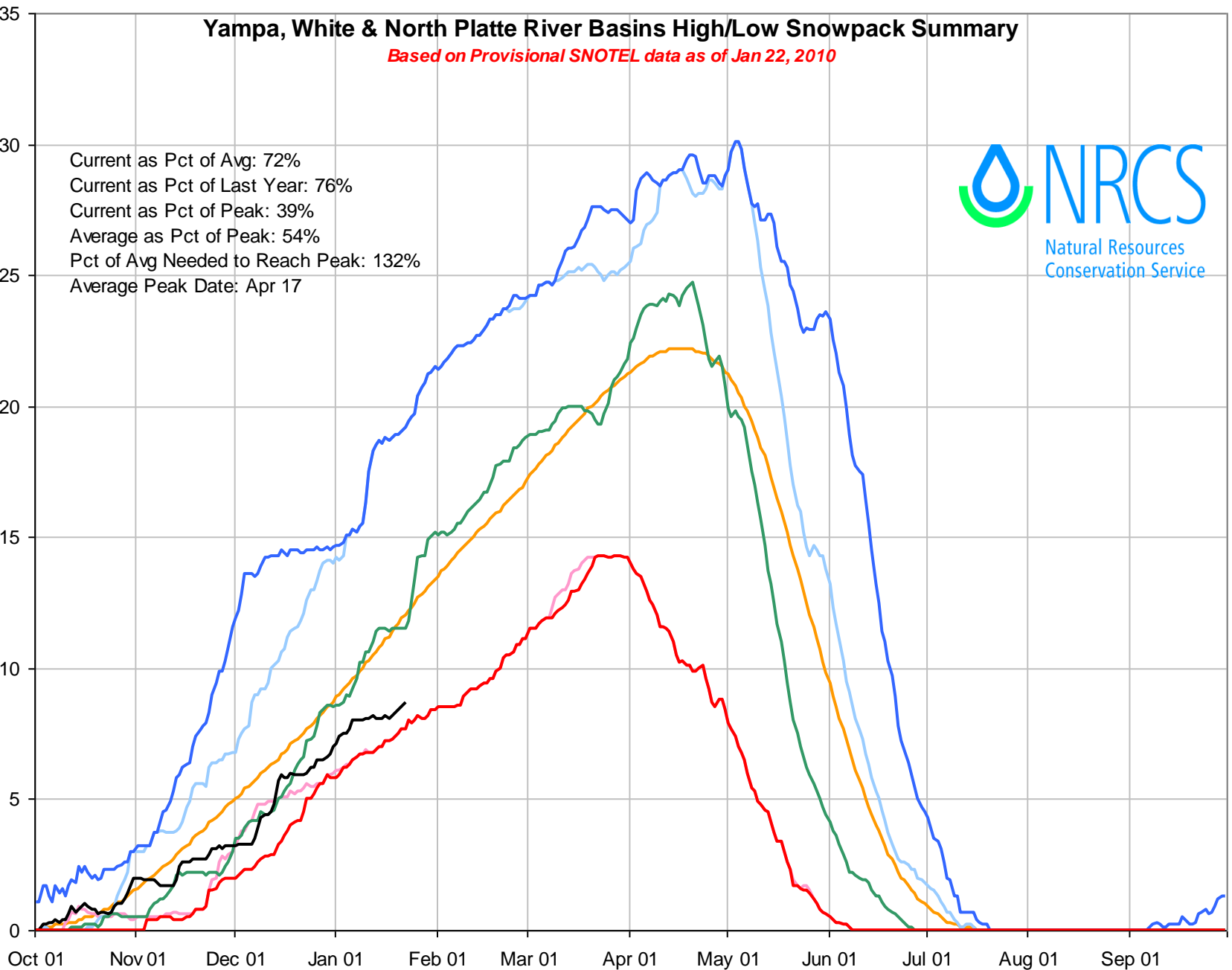
Yampa, White & North Platte River Basins High/Low Snowpack Summary

Based on Provisional SNOTEL data as of Jan 22, 2010



Current as Pct of Avg: 72%
Current as Pct of Last Year: 76%
Current as Pct of Peak: 39%
Average as Pct of Peak: 54%
Pct of Avg Needed to Reach Peak: 132%
Average Peak Date: Apr 17

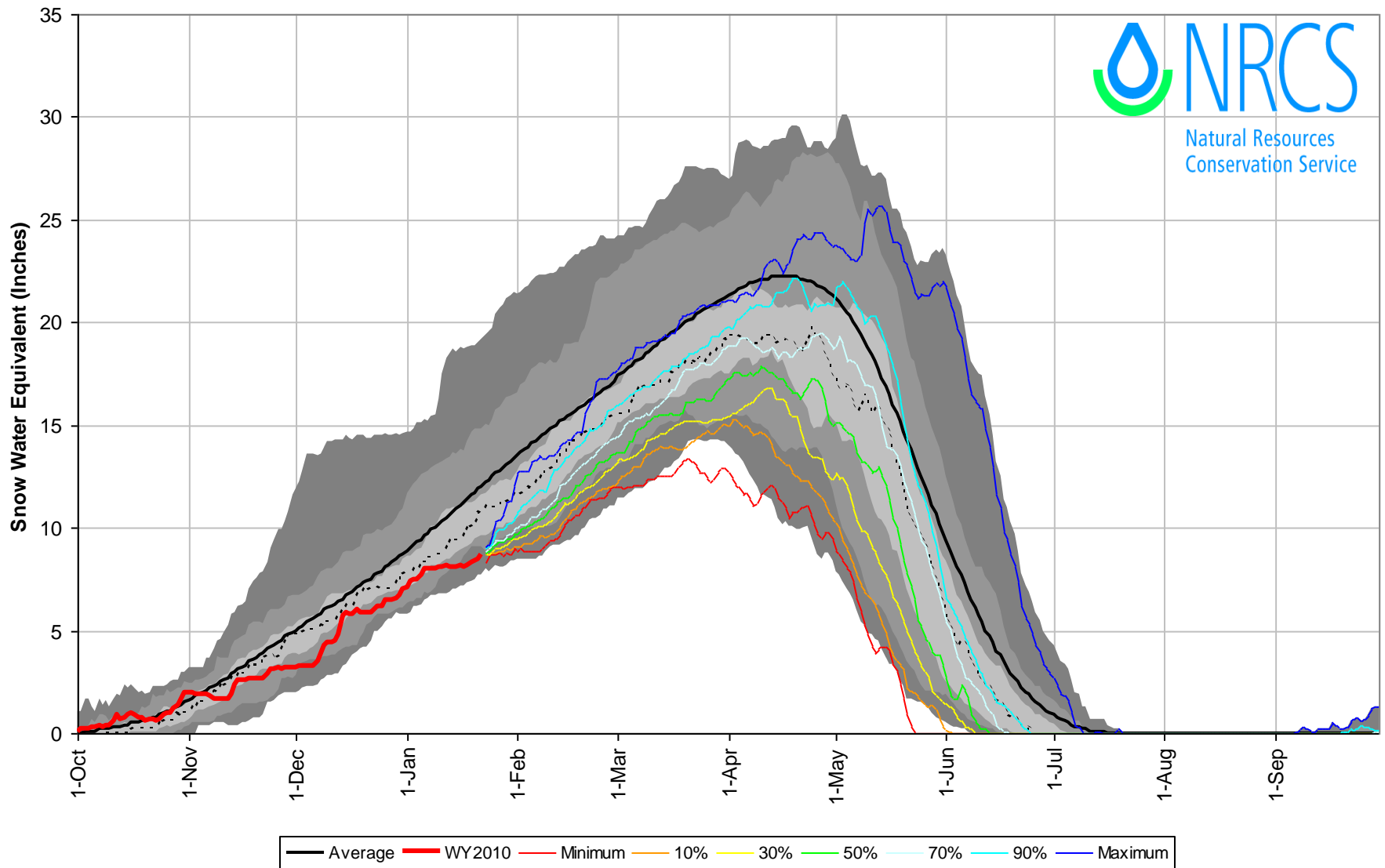
Snow Water Equivalent (inches)



— Average — WY2002 — WY1997 — WY2009 — WY2010 — Maximum — Minimum

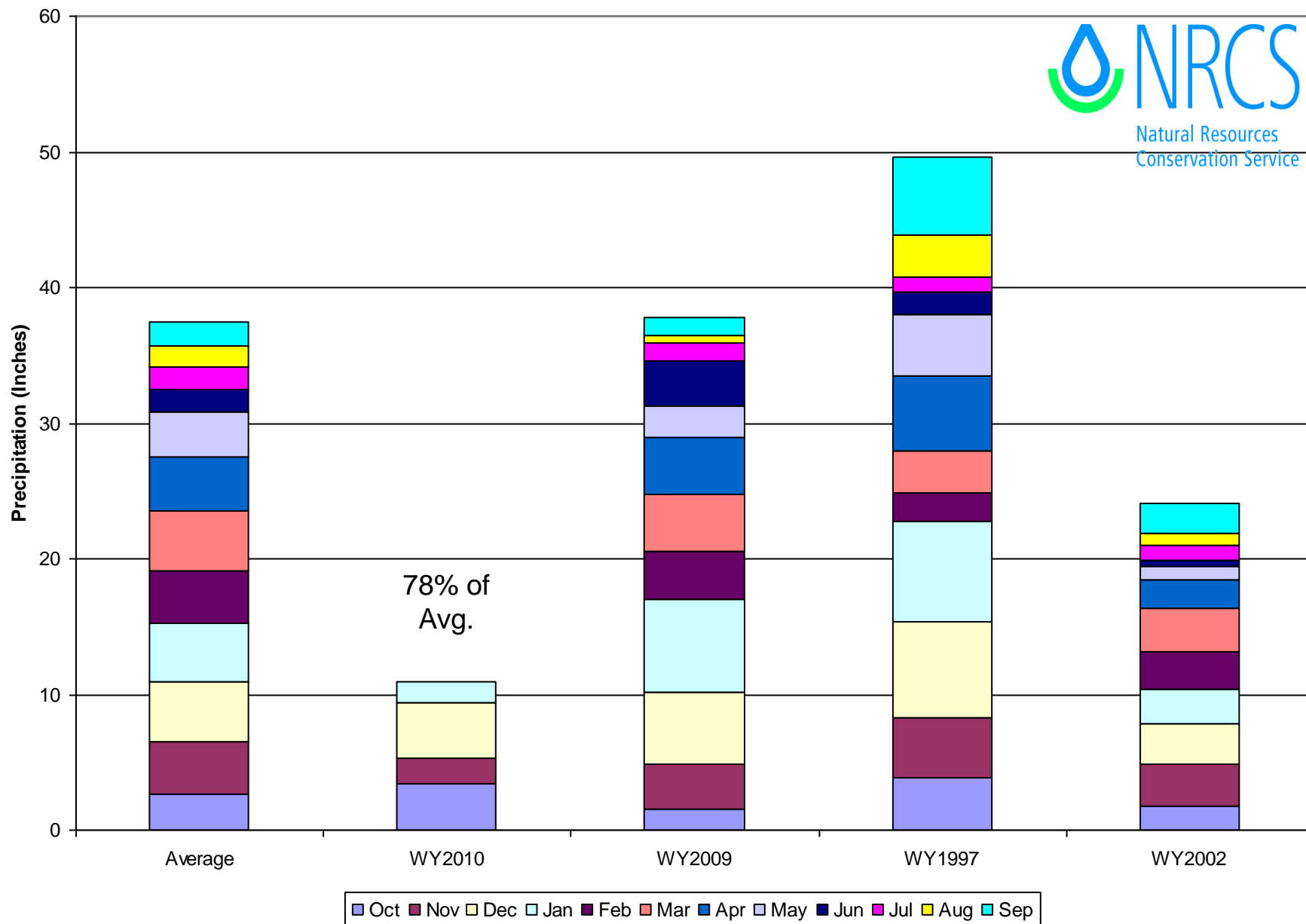
Yampa, White & North Platte River Basins with Non-Exceedence Projections

Based on Provisional SNOTEL Data as of Jan 22, 2010



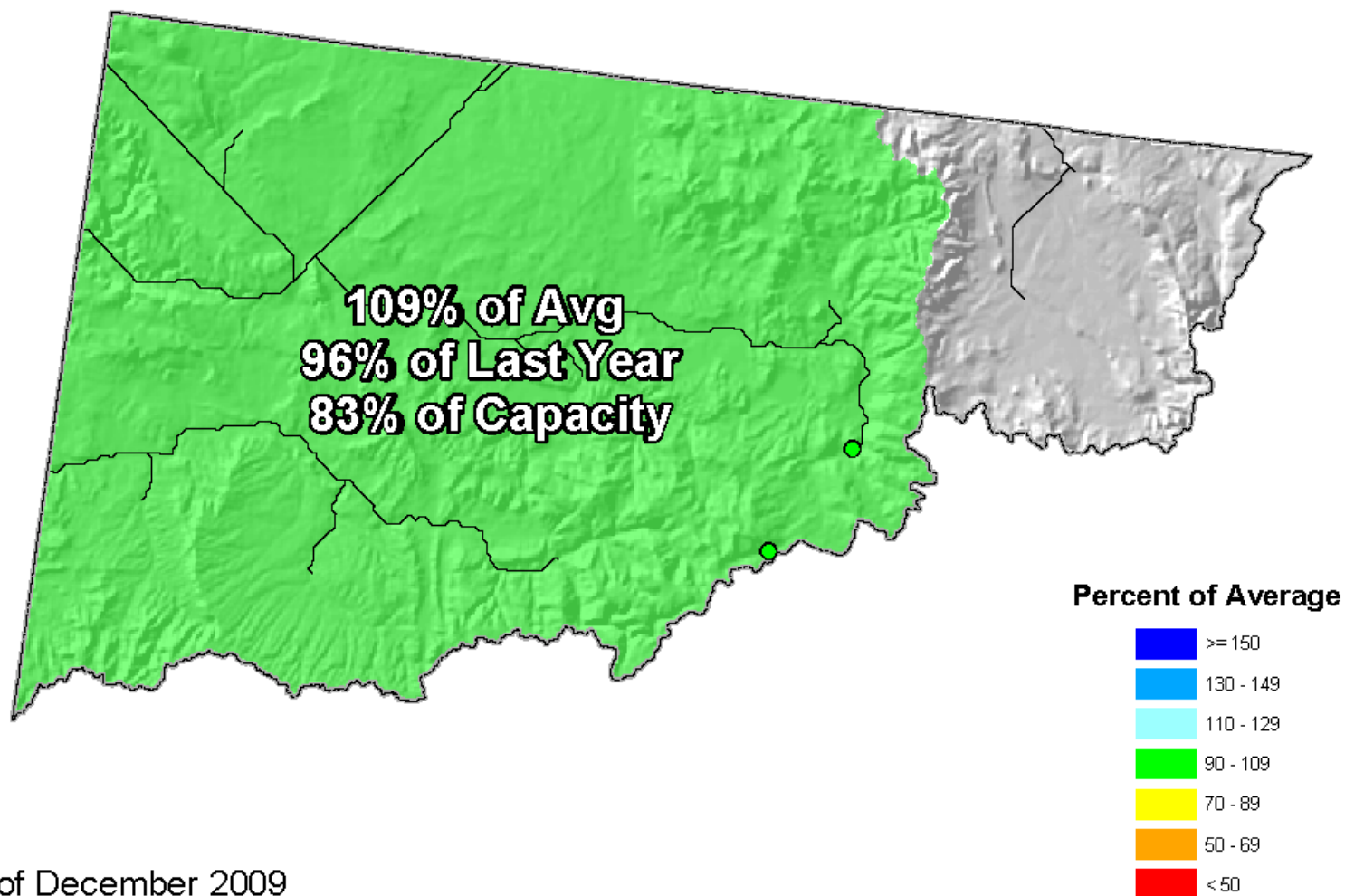
Yampa and White River Basins High/Low Monthly Precipitation Summary

Based on Provisional SNOTEL data as of Jan 22, 2010



Yampa & White River Basins Reservoir Storage Map

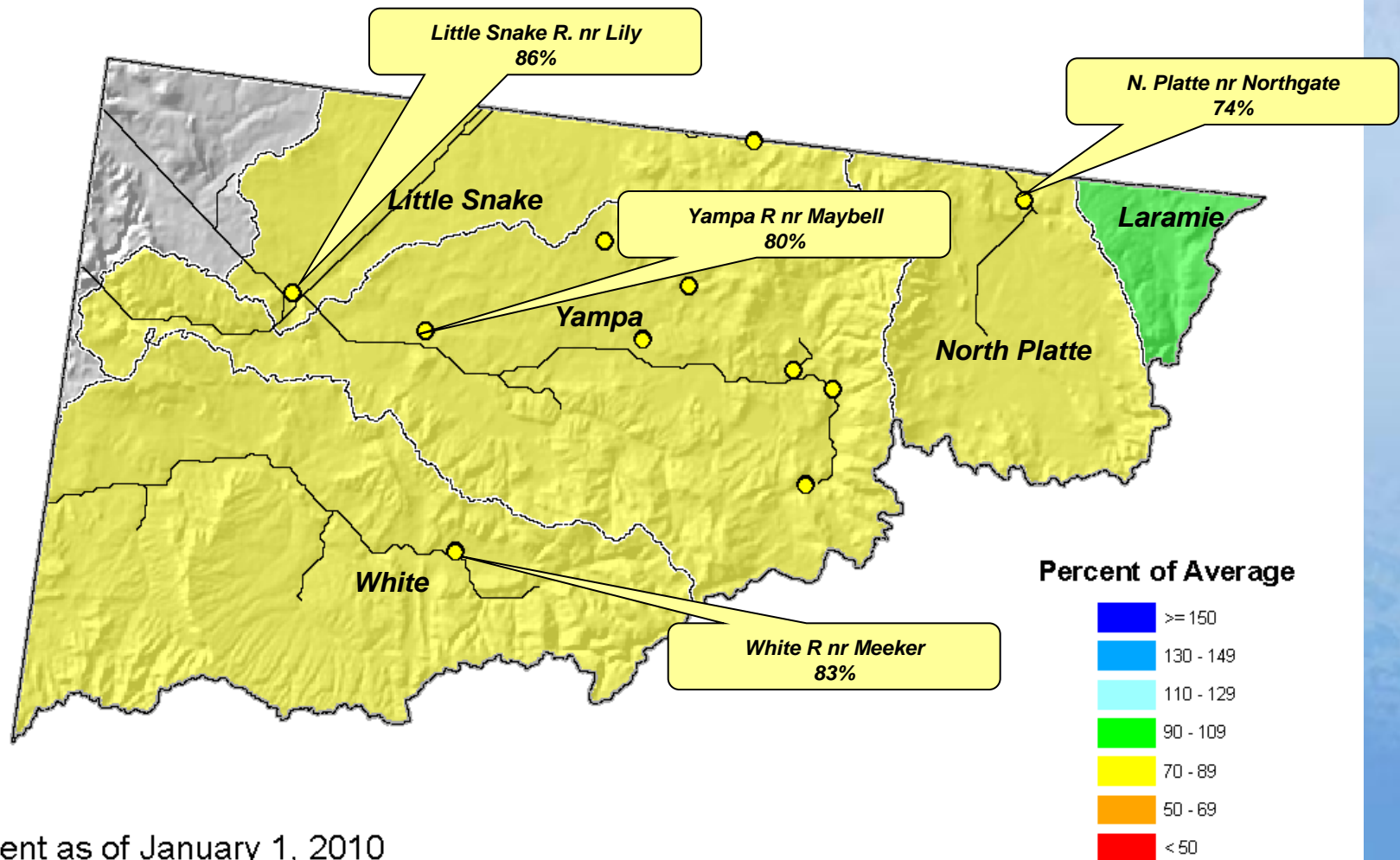
*Provisional Data
Subject to Revision*



End of December 2009

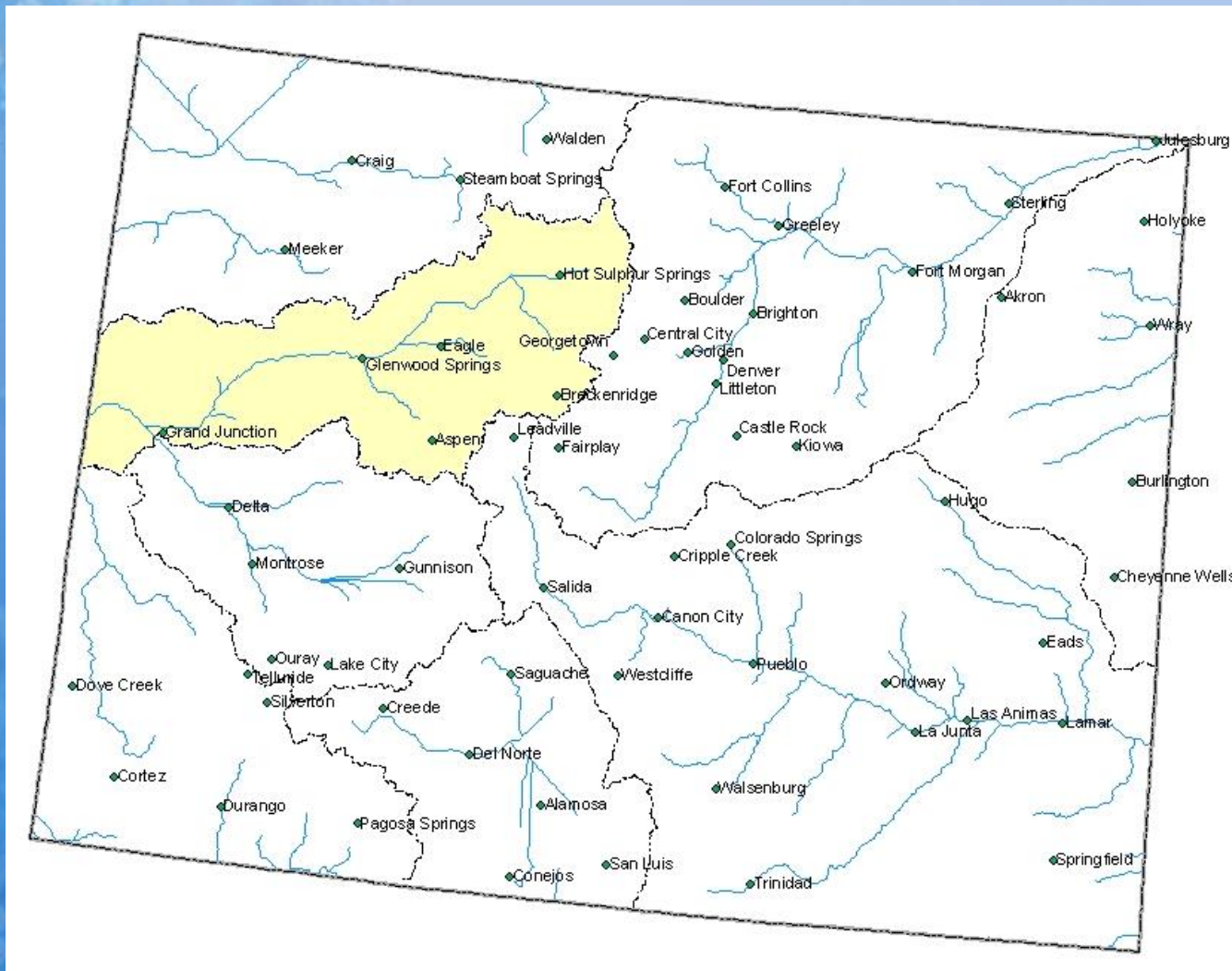
Yampa, White and North Platte River Basins Streamflow Map

*Provisional Data
Subject to Revision*



Current as of January 1, 2010

Colorado River Basin Summary

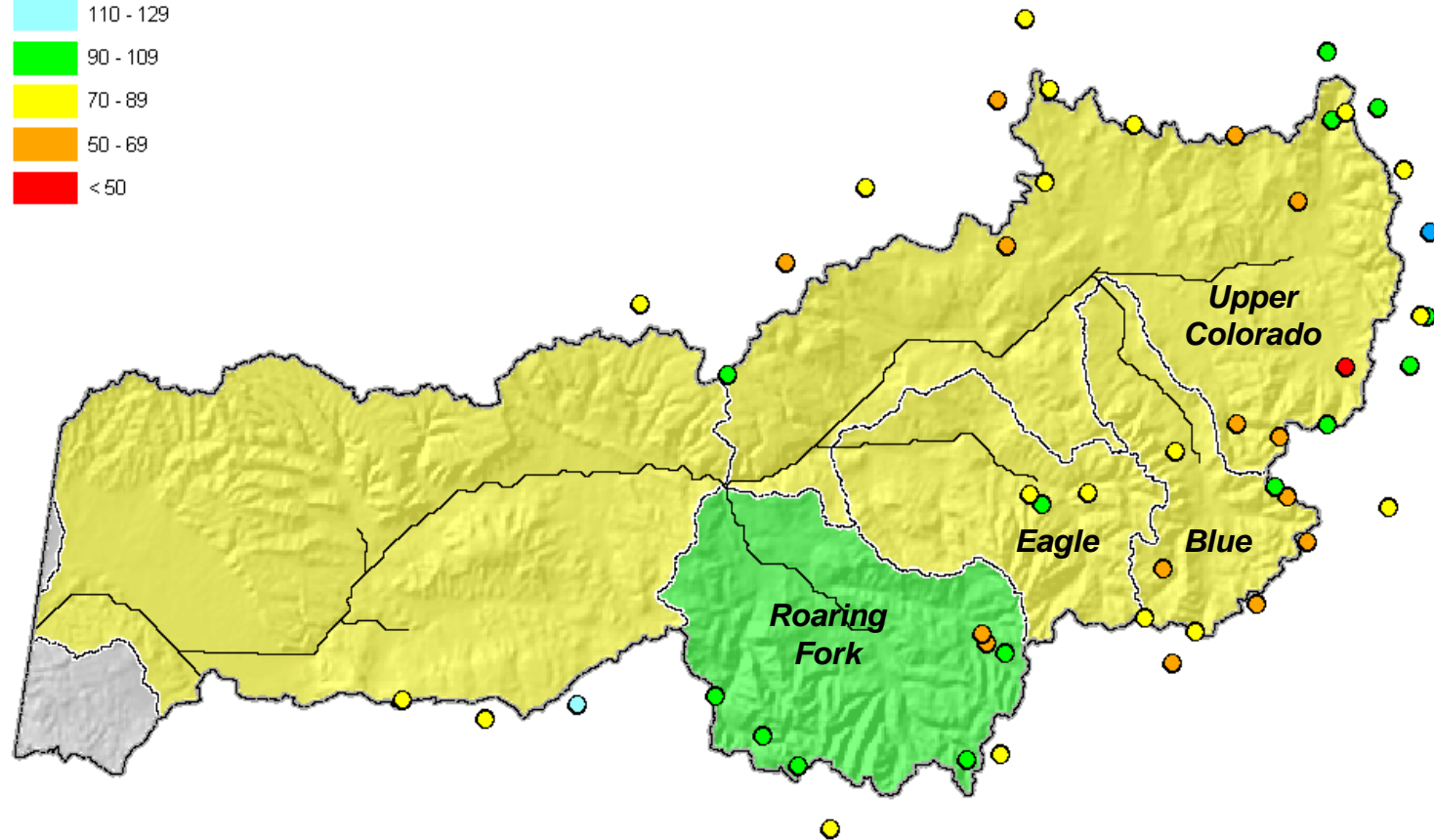


Colorado River Basin Snowpack Map

Percent of Average

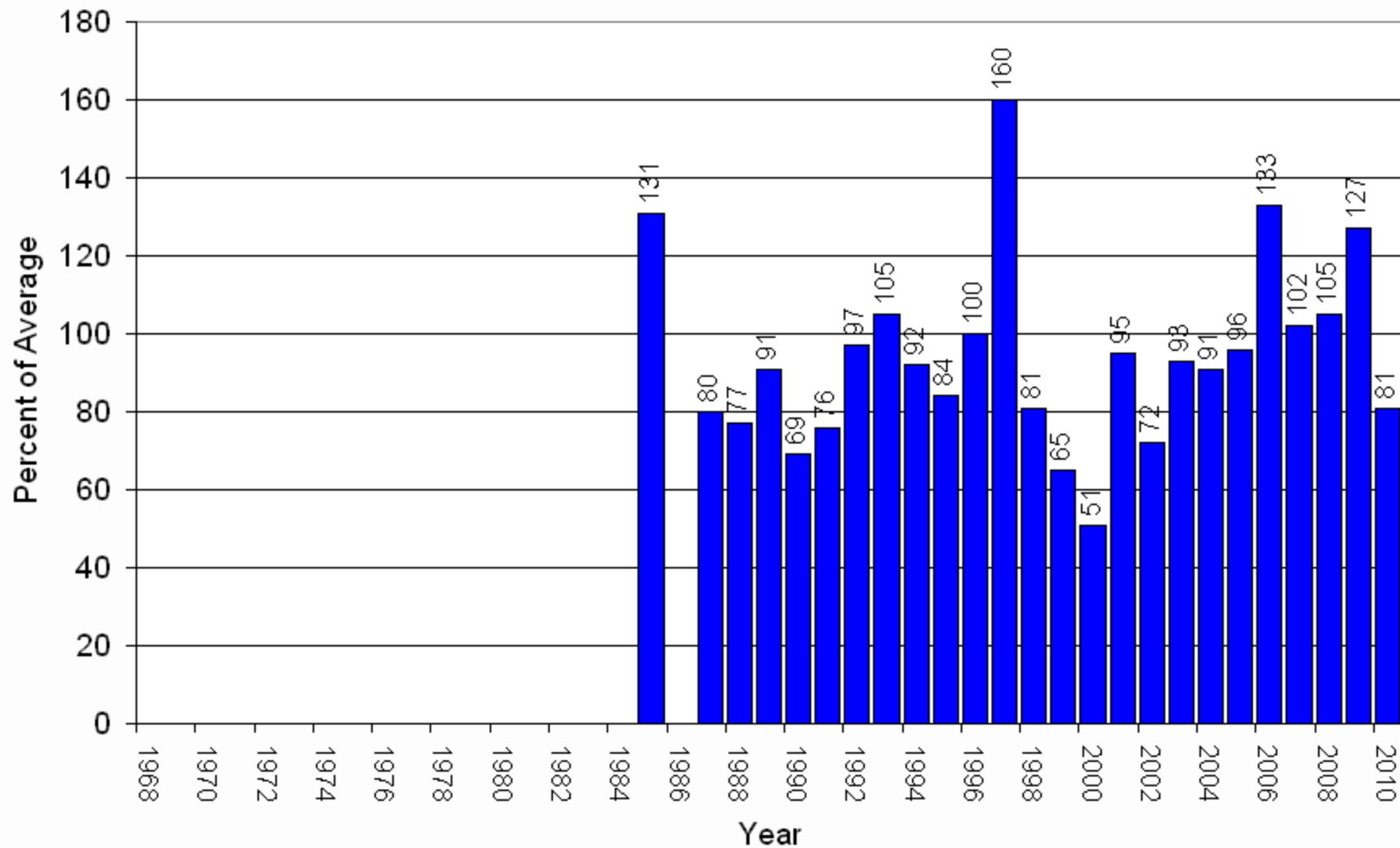


*Provisional Data
Subject to Revision*



Current as of January 1, 2010

January 1 Total Colorado River Basin Snowpack



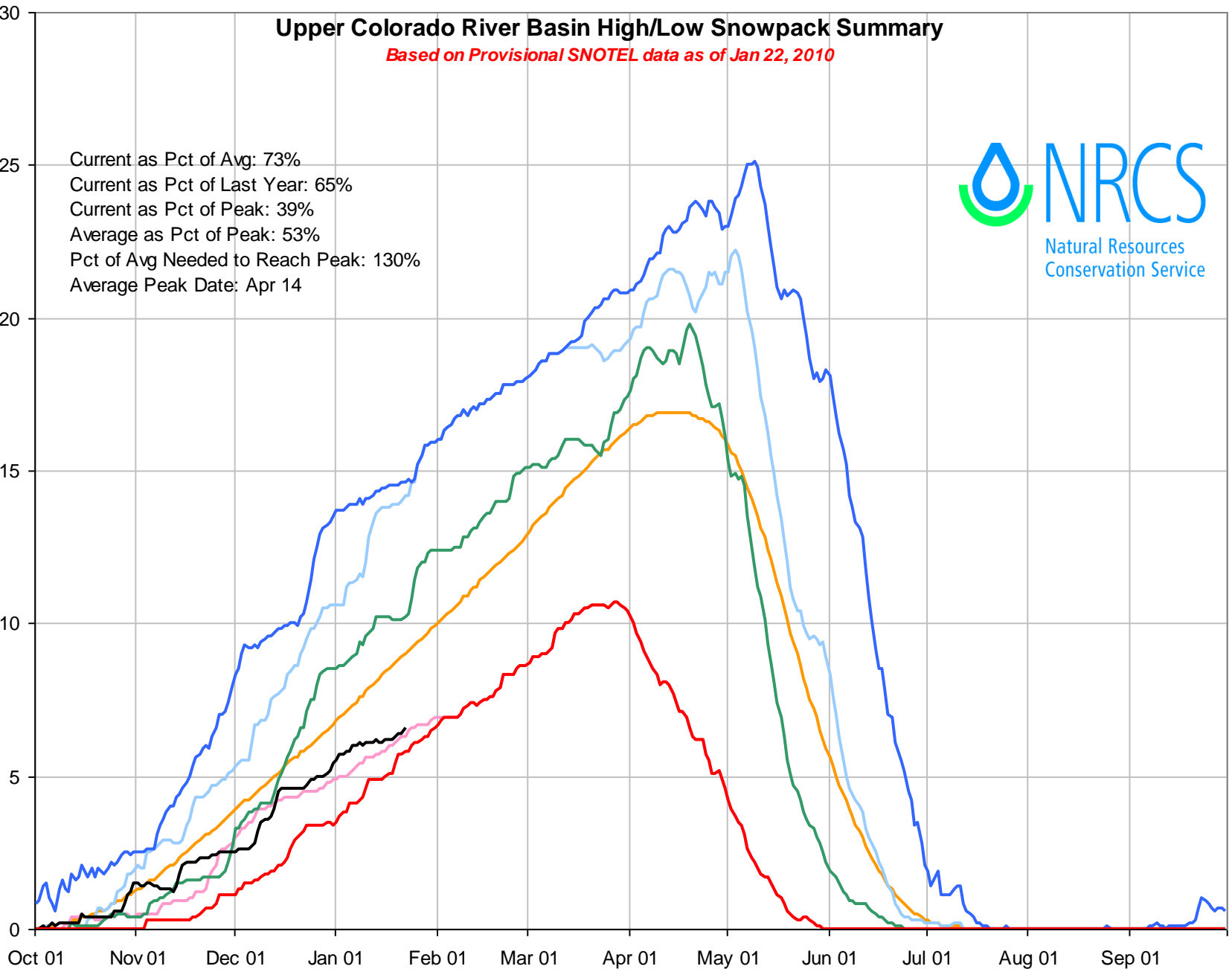
Upper Colorado River Basin High/Low Snowpack Summary

Based on Provisional SNOTEL data as of Jan 22, 2010



Current as Pct of Avg: 73%
Current as Pct of Last Year: 65%
Current as Pct of Peak: 39%
Average as Pct of Peak: 53%
Pct of Avg Needed to Reach Peak: 130%
Average Peak Date: Apr 14

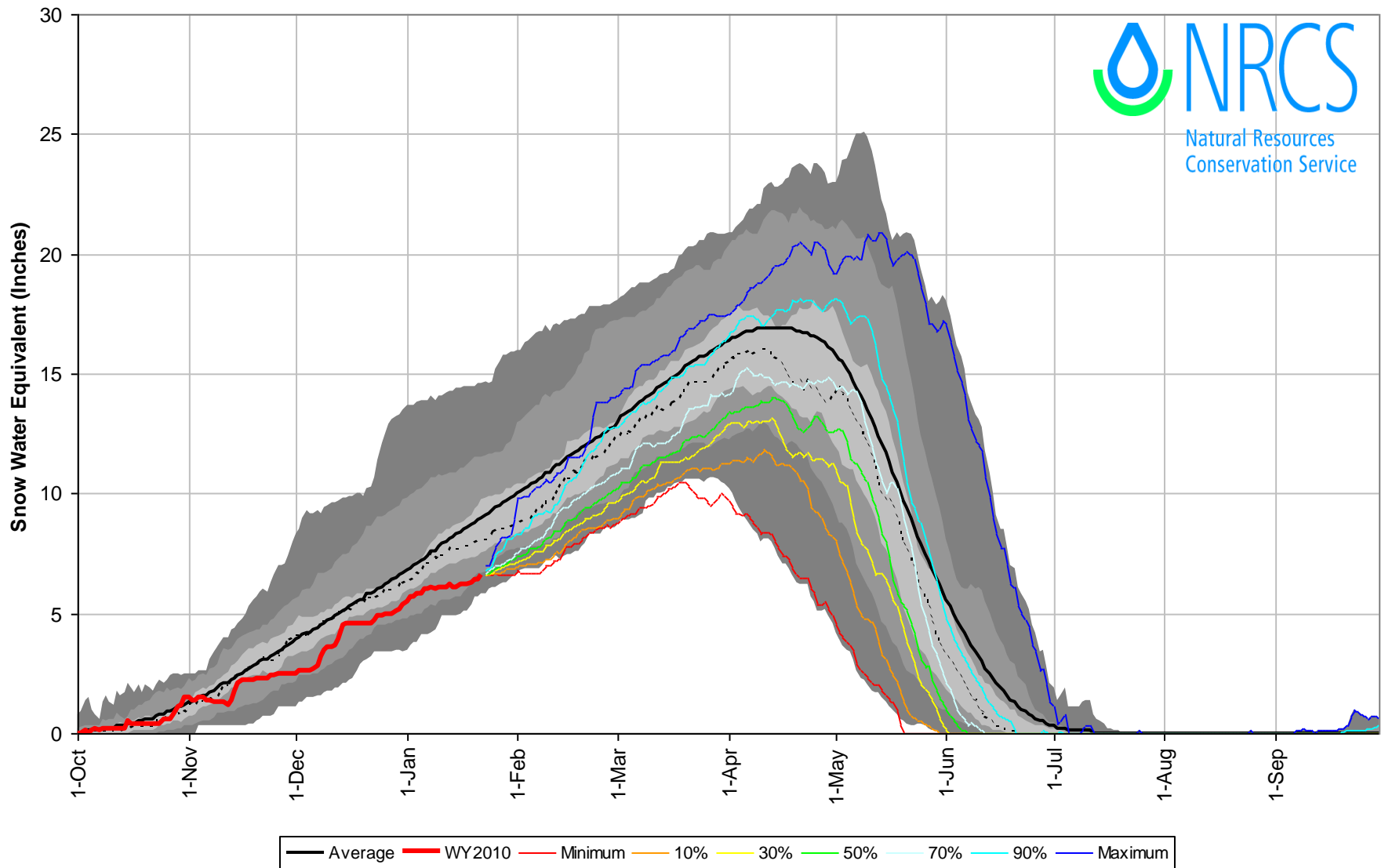
Snow Water Equivalent (inches)



Average WY2002 WY1997 WY2009 WY2010 Maximum Minimum

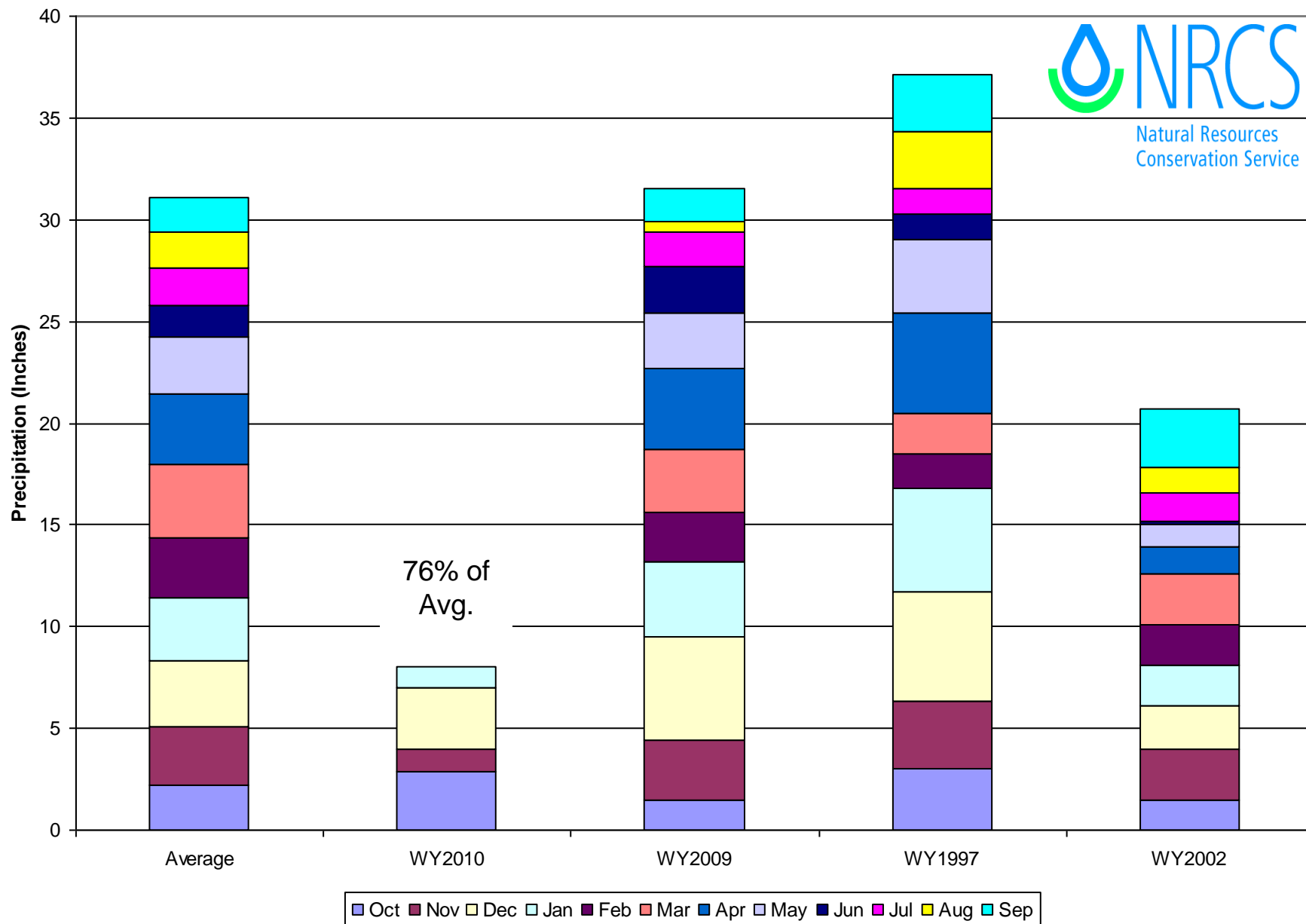
Colorado River Basin with Non-Exceedence Projections

Based on Provisional SNOTEL Data as of Jan 22, 2010



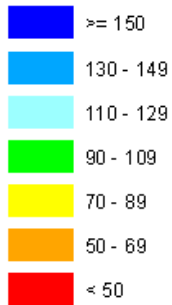
Upper Colorado River Basin High/Low Monthly Precipitation Summary

Based on Provisional SNOTEL data as of Jan 22, 2010

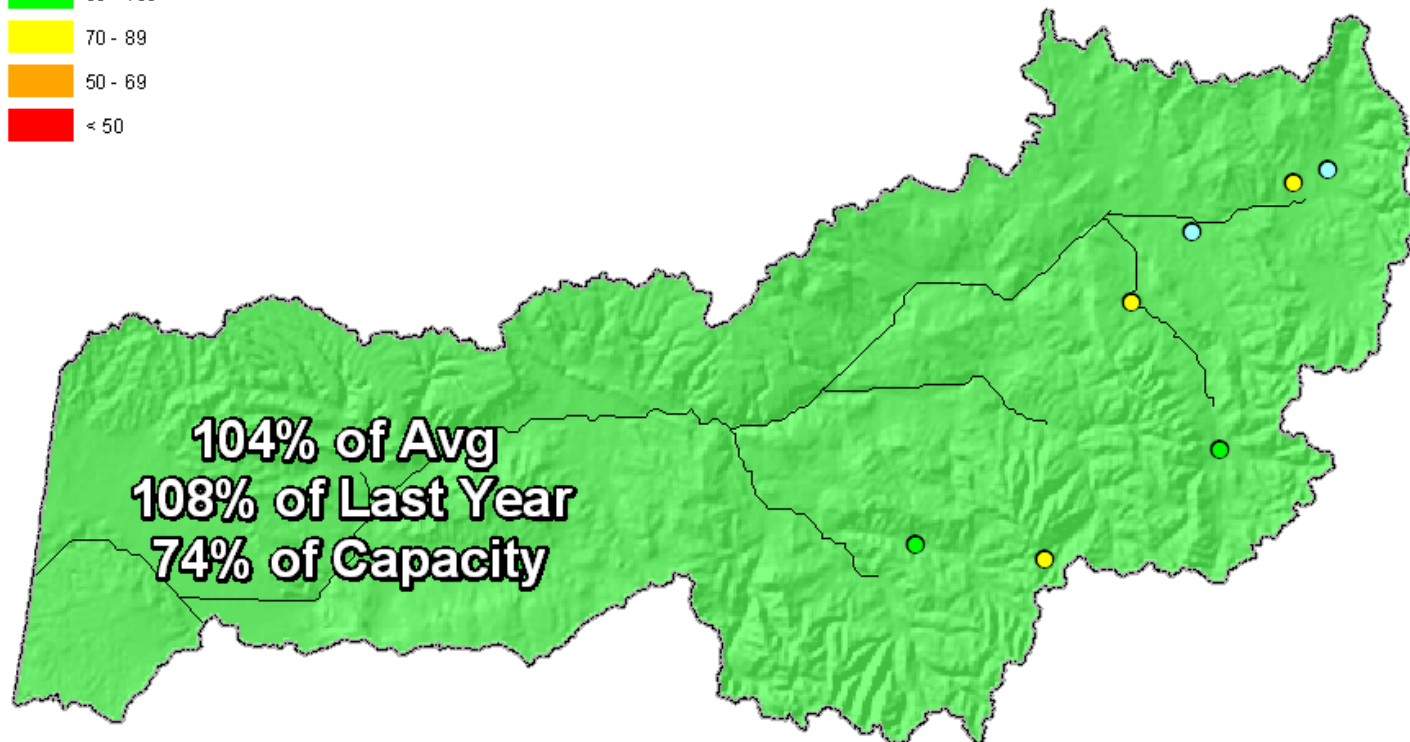


Colorado River Basin Reservoir Storage Map

Percent of Average



*Provisional Data
Subject to Revision*

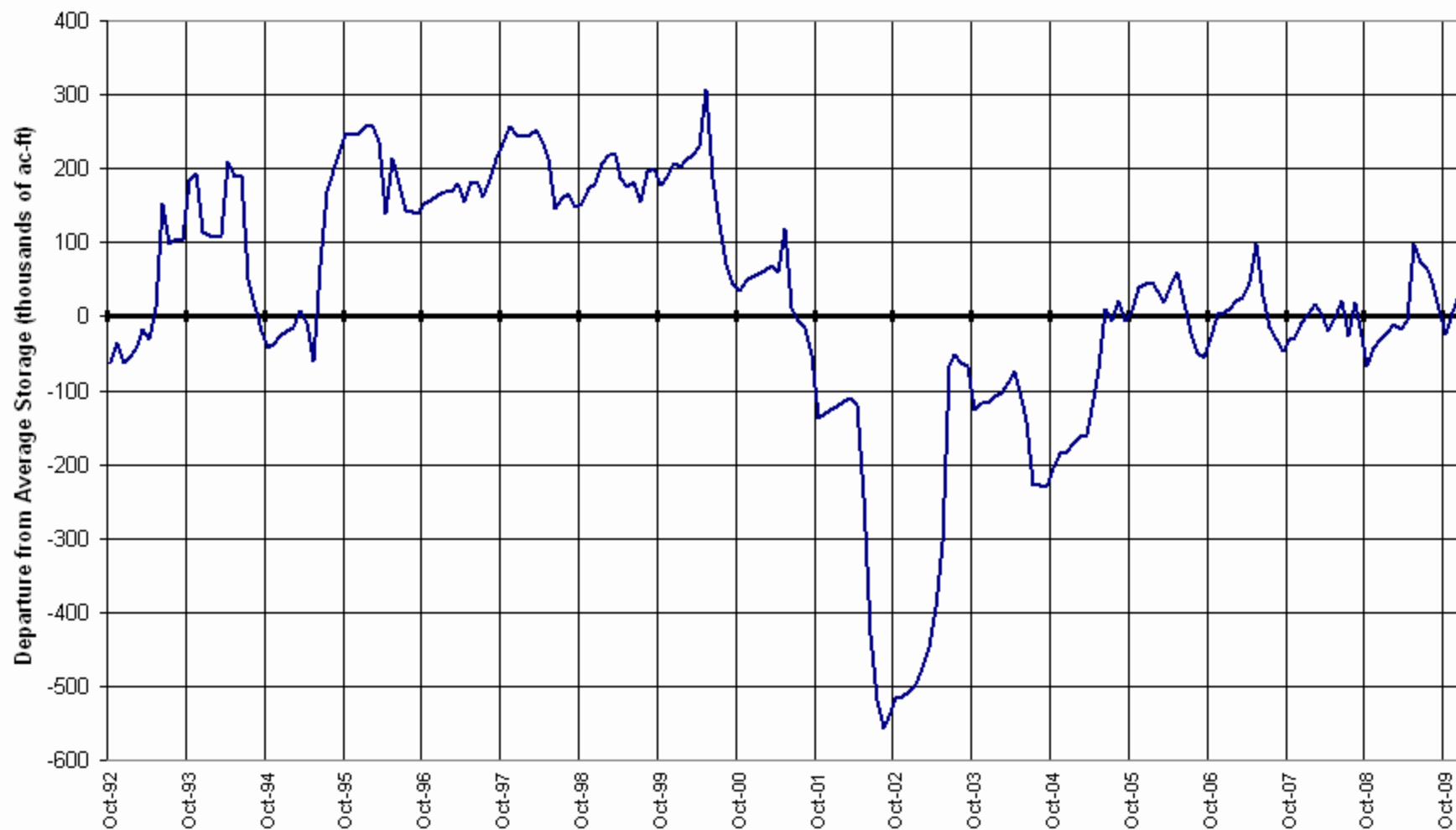


End of December 2009

COLORADO RIVER BASIN

Reservoir Storage

Departure from Average

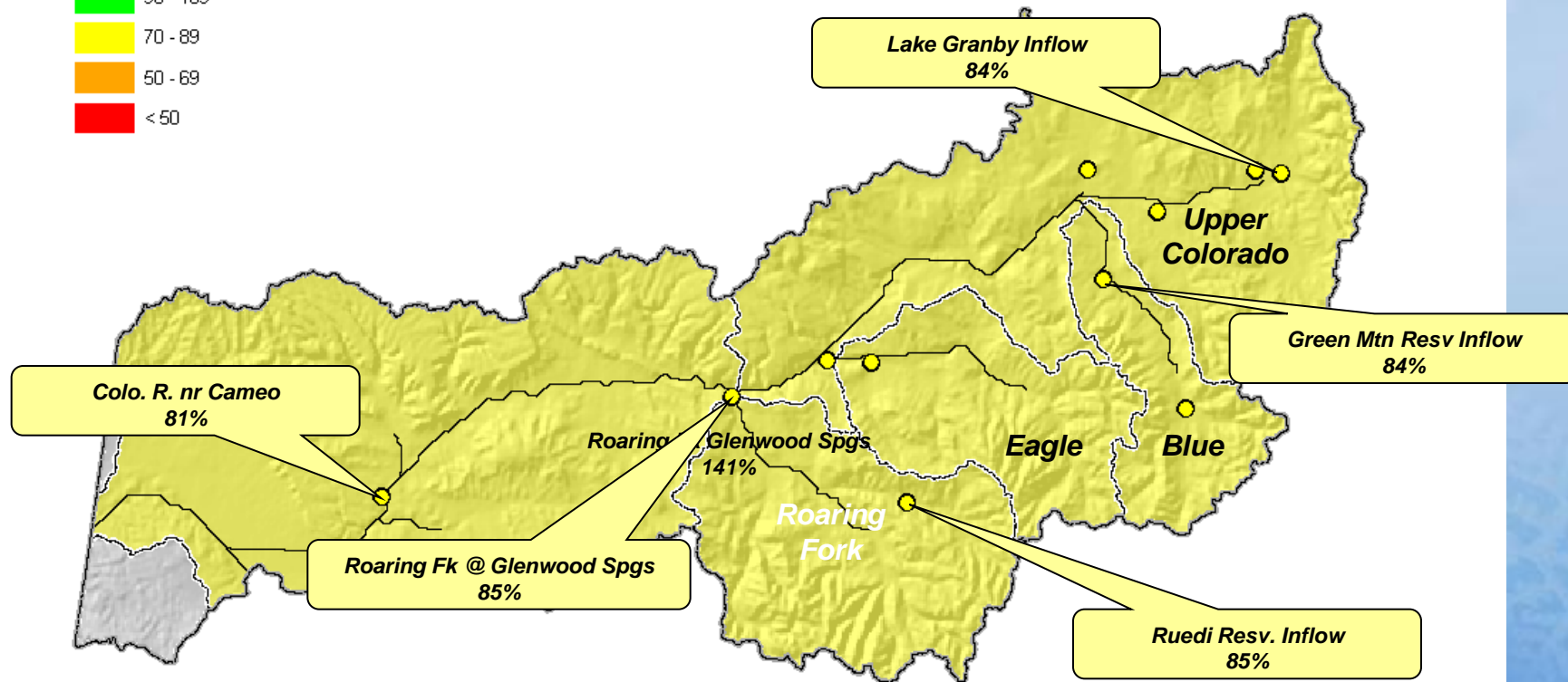


Colorado River Basin Streamflow Forecast Map

Percent of Average

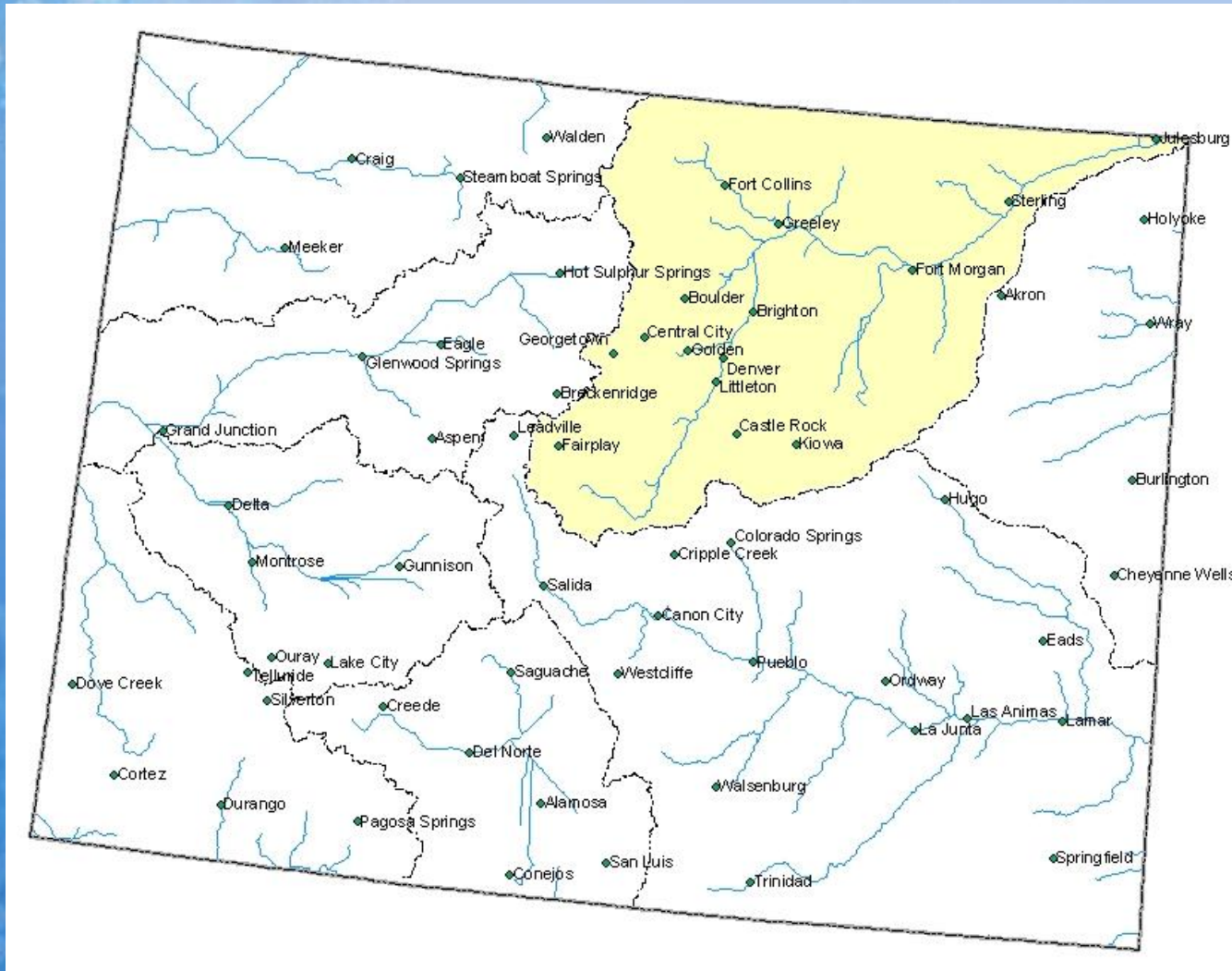


*Provisional Data
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Current as of January 1, 2010

South Platte River Basin Summary

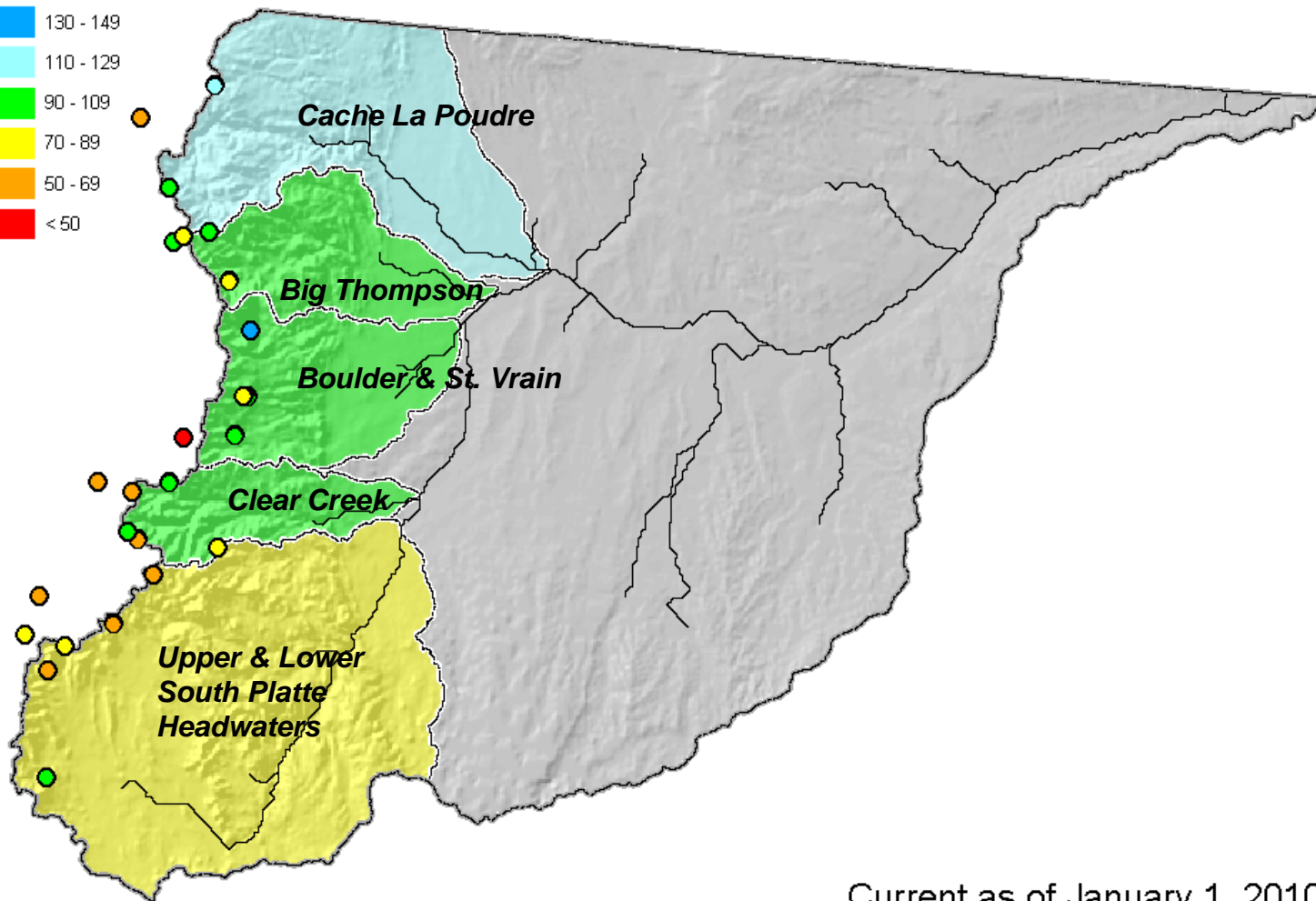


South Platte River Basin Snowpack Map

Percent of Average

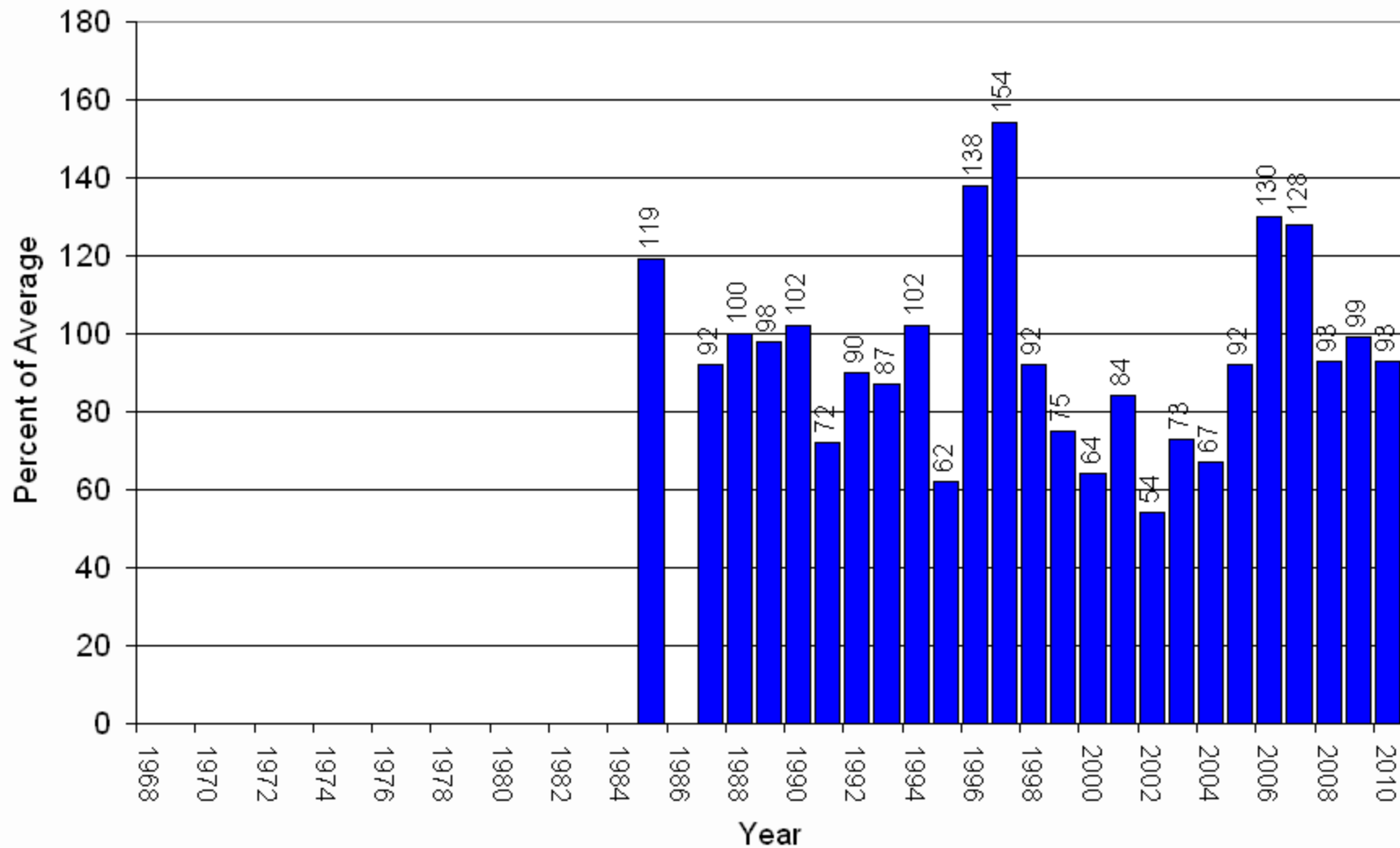


*Provisional Data
Subject to Revision*



Current as of January 1, 2010

January 1 Total South Platte River Basin Snowpack



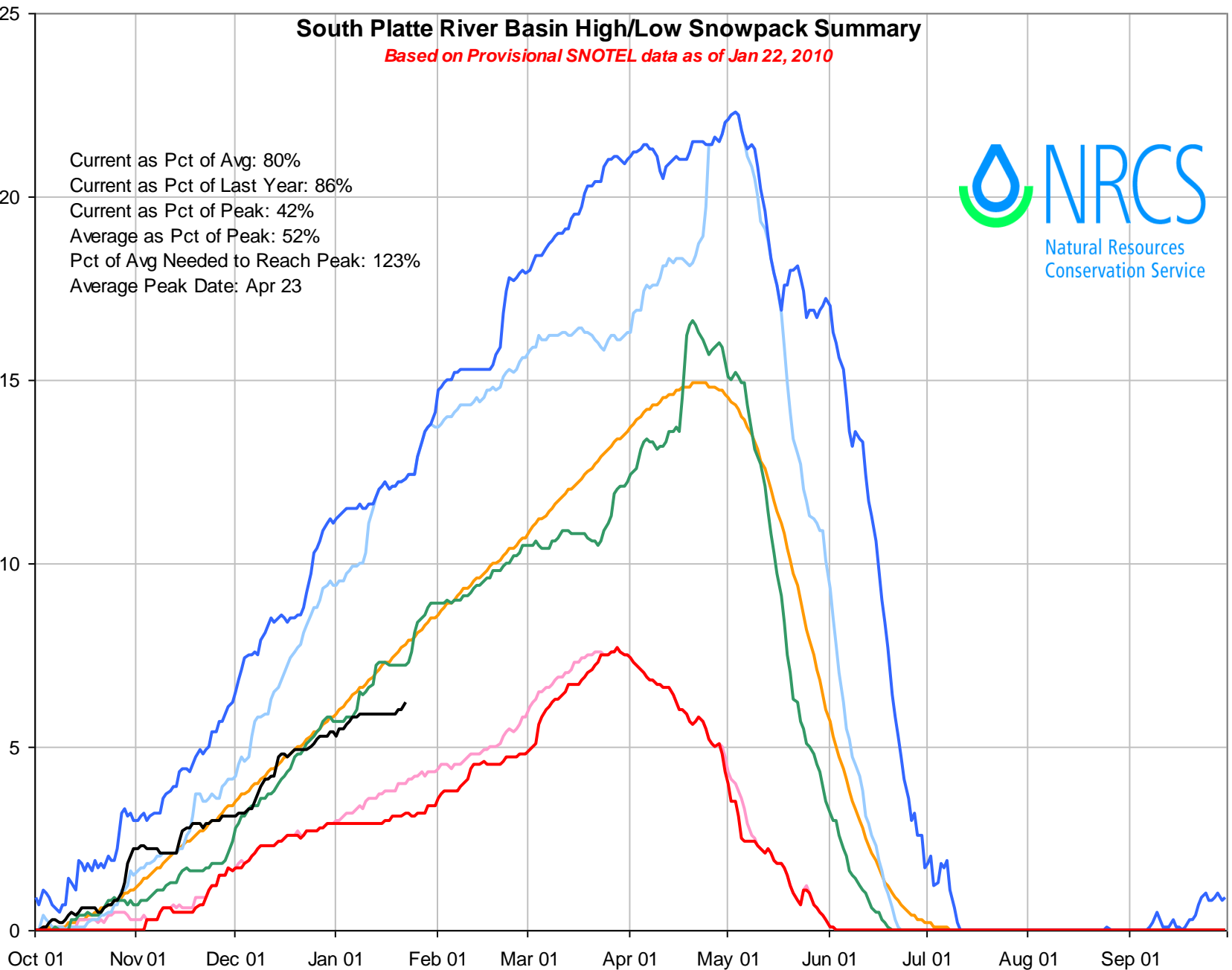
South Platte River Basin High/Low Snowpack Summary

Based on Provisional SNOTEL data as of Jan 22, 2010



Current as Pct of Avg: 80%
Current as Pct of Last Year: 86%
Current as Pct of Peak: 42%
Average as Pct of Peak: 52%
Pct of Avg Needed to Reach Peak: 123%
Average Peak Date: Apr 23

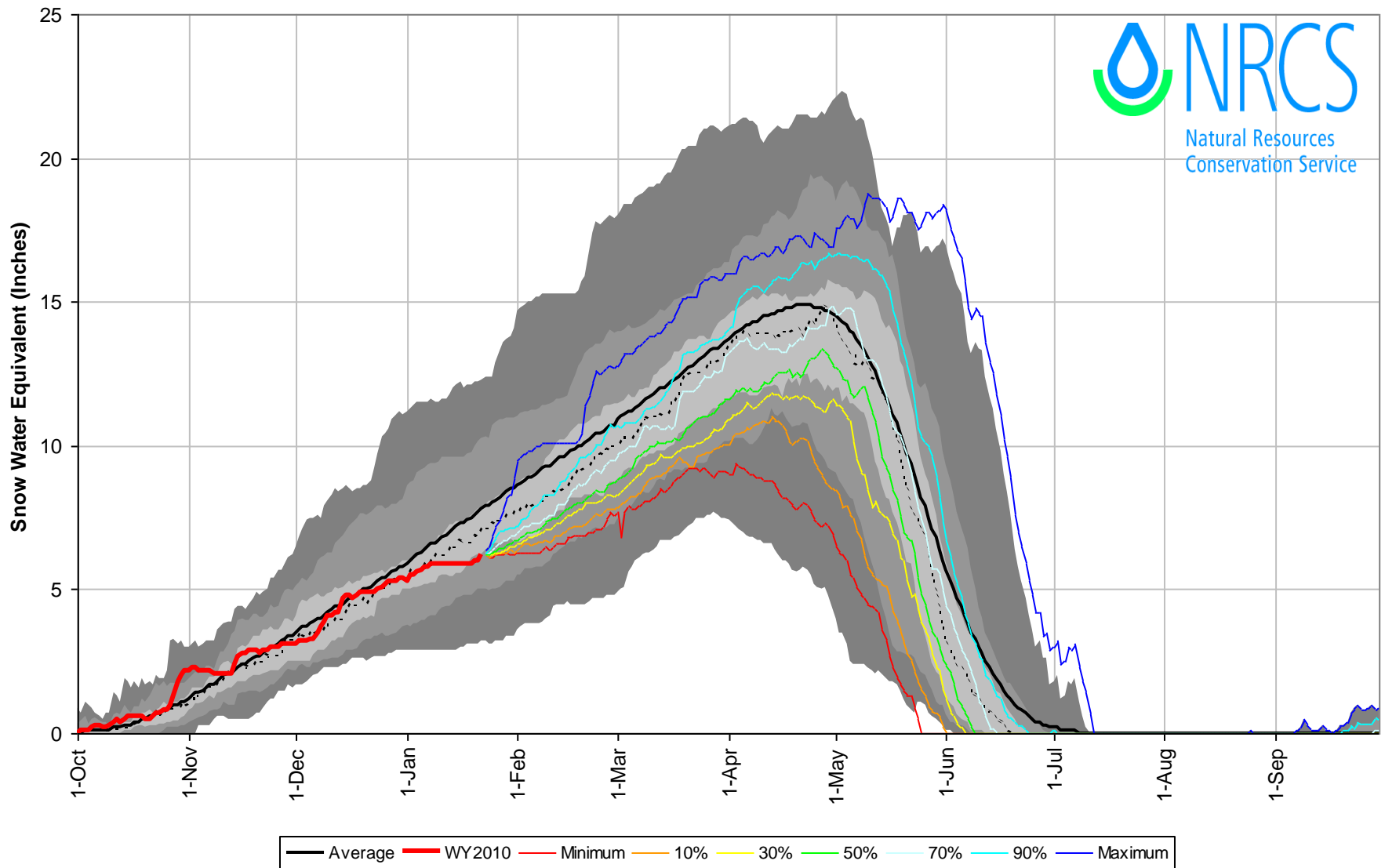
Snow Water Equivalent (inches)



— Average — WY2002 — WY1997 — WY2009 — WY2010 — Maximum — Minimum

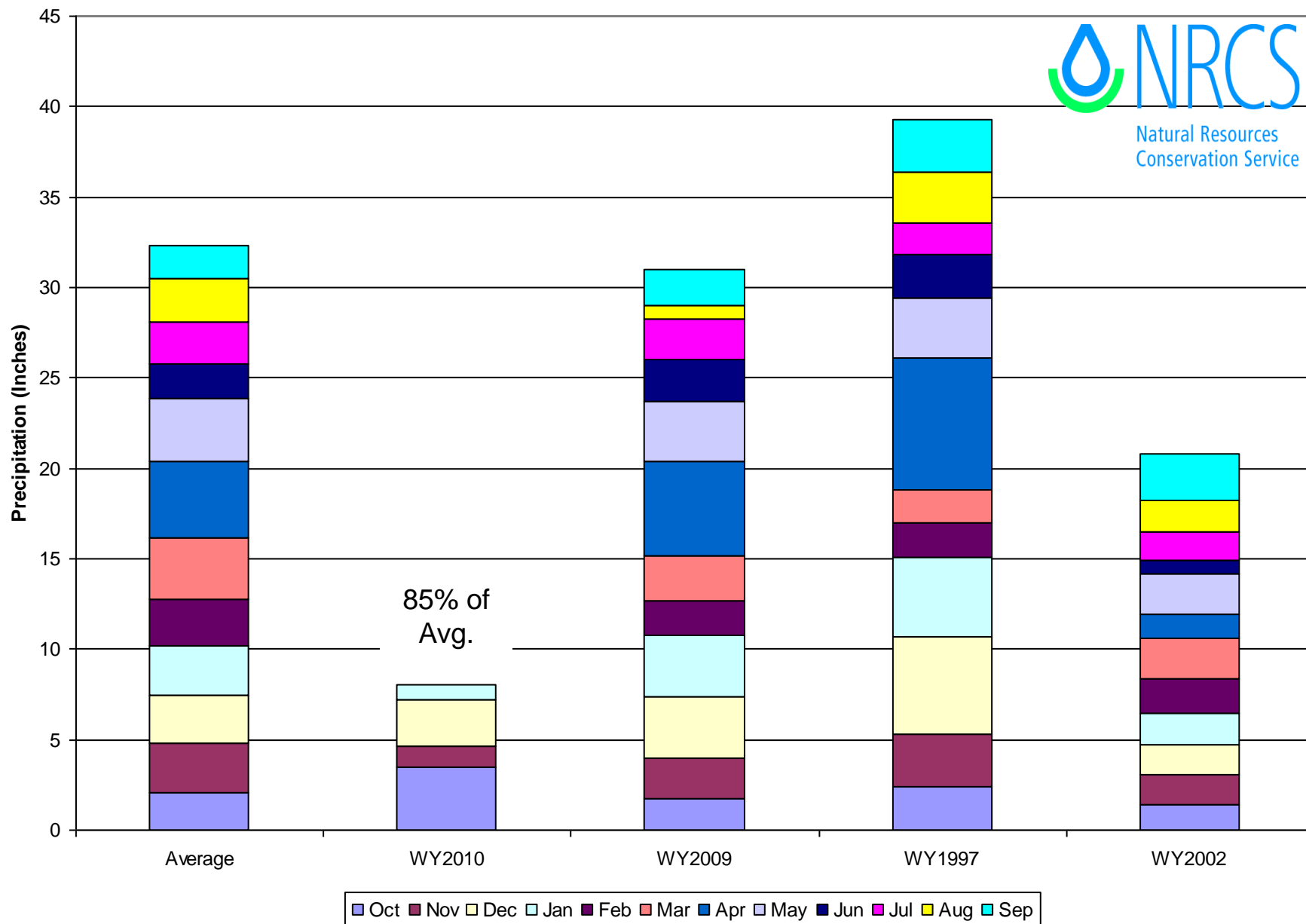
South Platte River Basin with Non-Exceedence Projections

Based on Provisional SNOTEL Data as of Jan 22, 2010



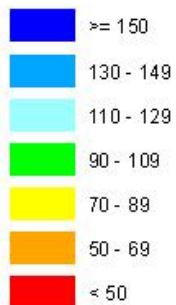
South Platte River Basin High/Low Monthly Precipitation Summary

Based on Provisional SNOTEL data as of Jan 22, 2010

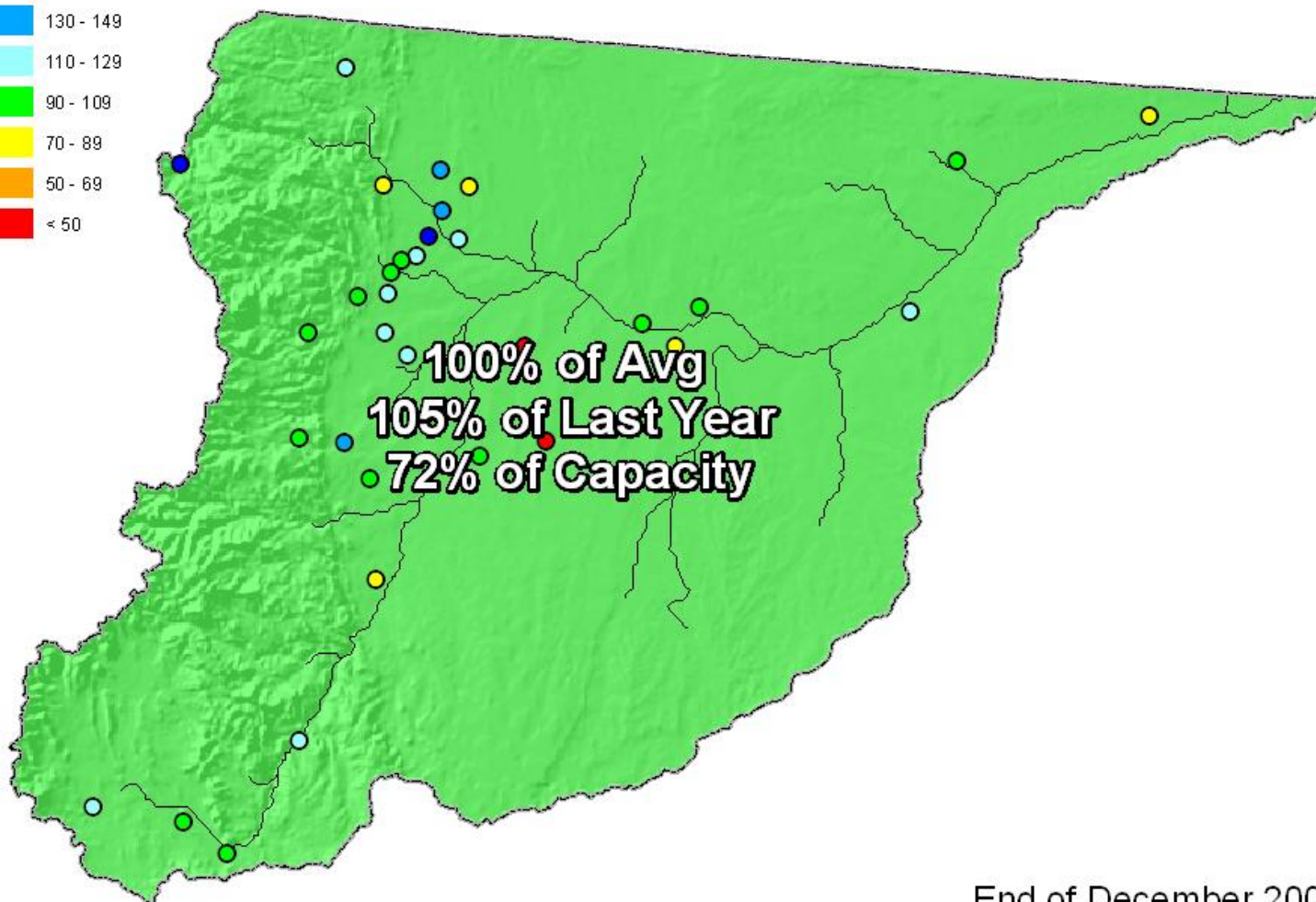


South Platte River Basin Reservoir Storage Map

Percent of Average



*Provisional Data
Subject to Revision*

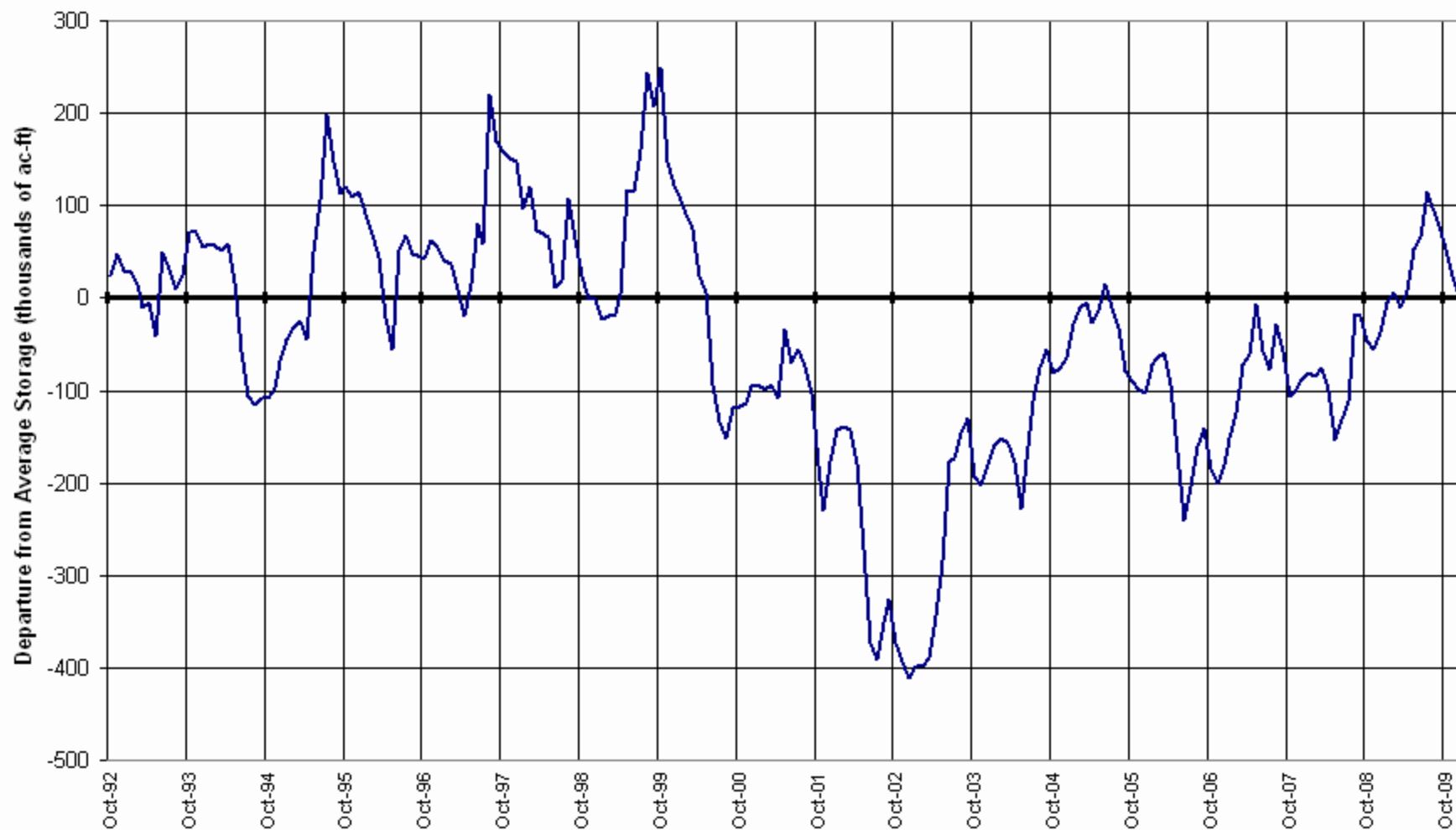


End of December 2009

SOUTH PLATTE RIVER BASIN

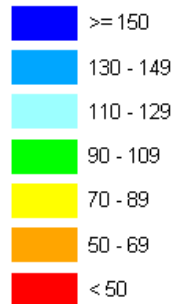
Reservoir Storage

Departure from Average

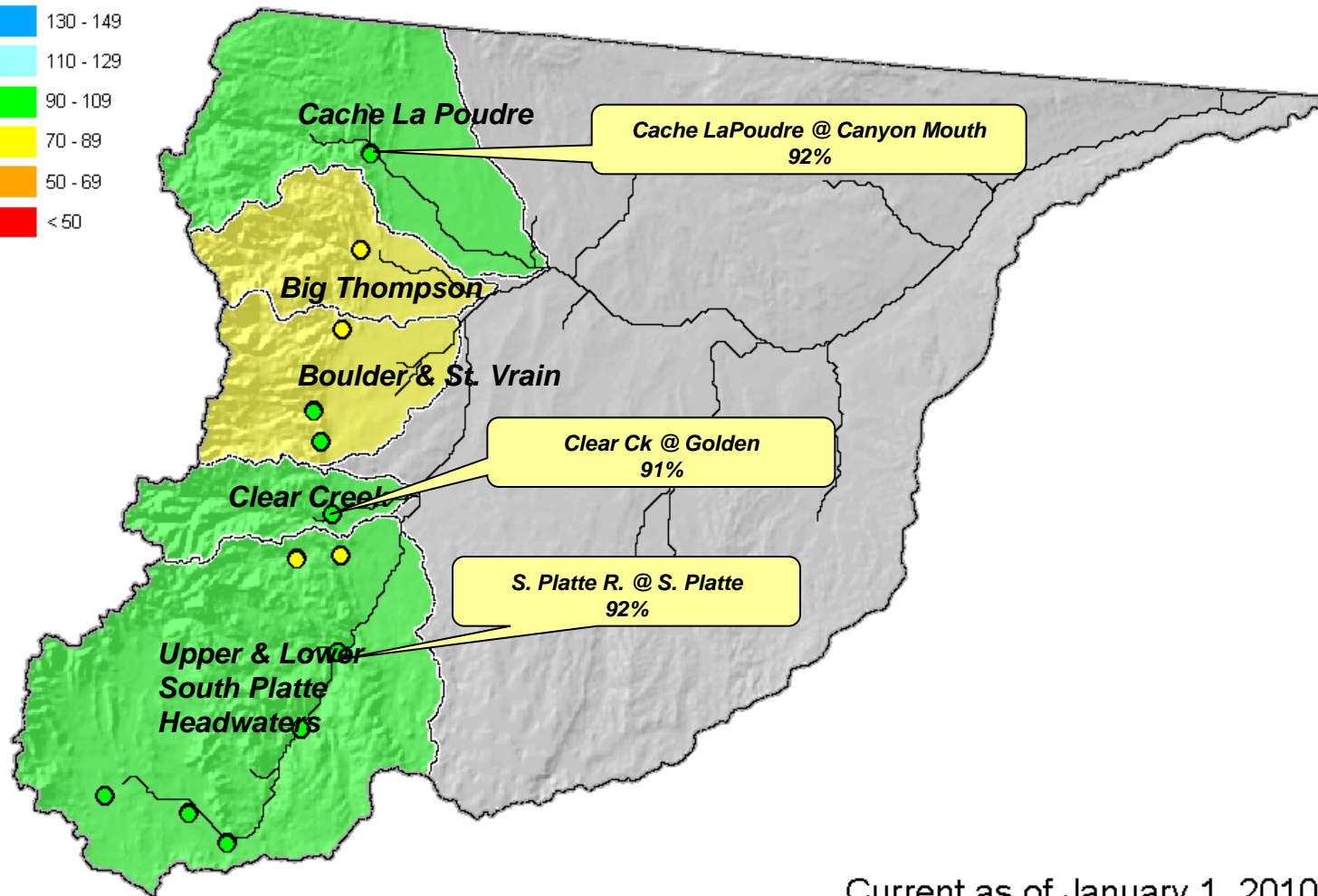


South Platte River Basin Streamflow Forecast Map

Percent of Average

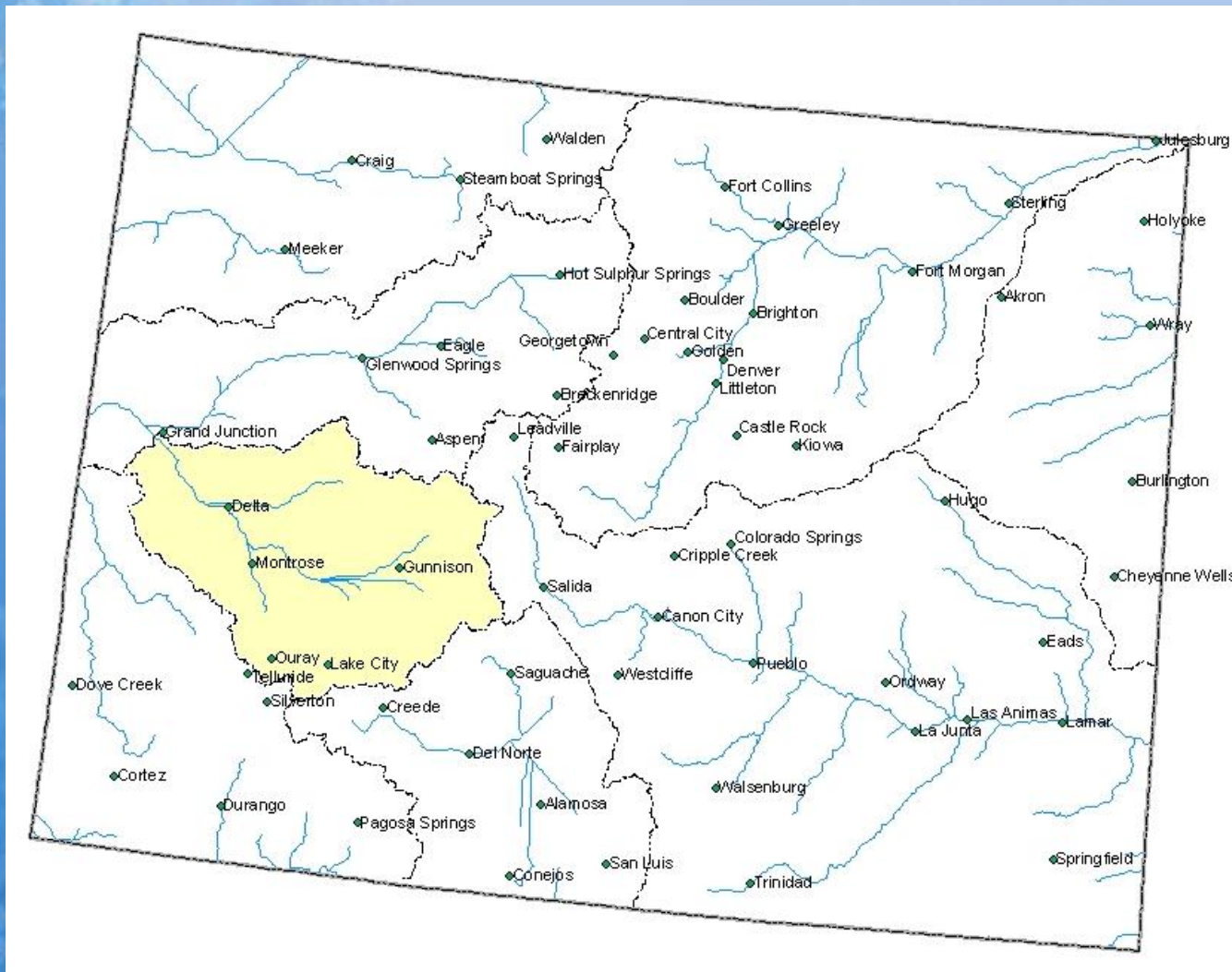


*Provisional Data
Subject to Revision*



Current as of January 1, 2010

Gunnison River Basin Summary

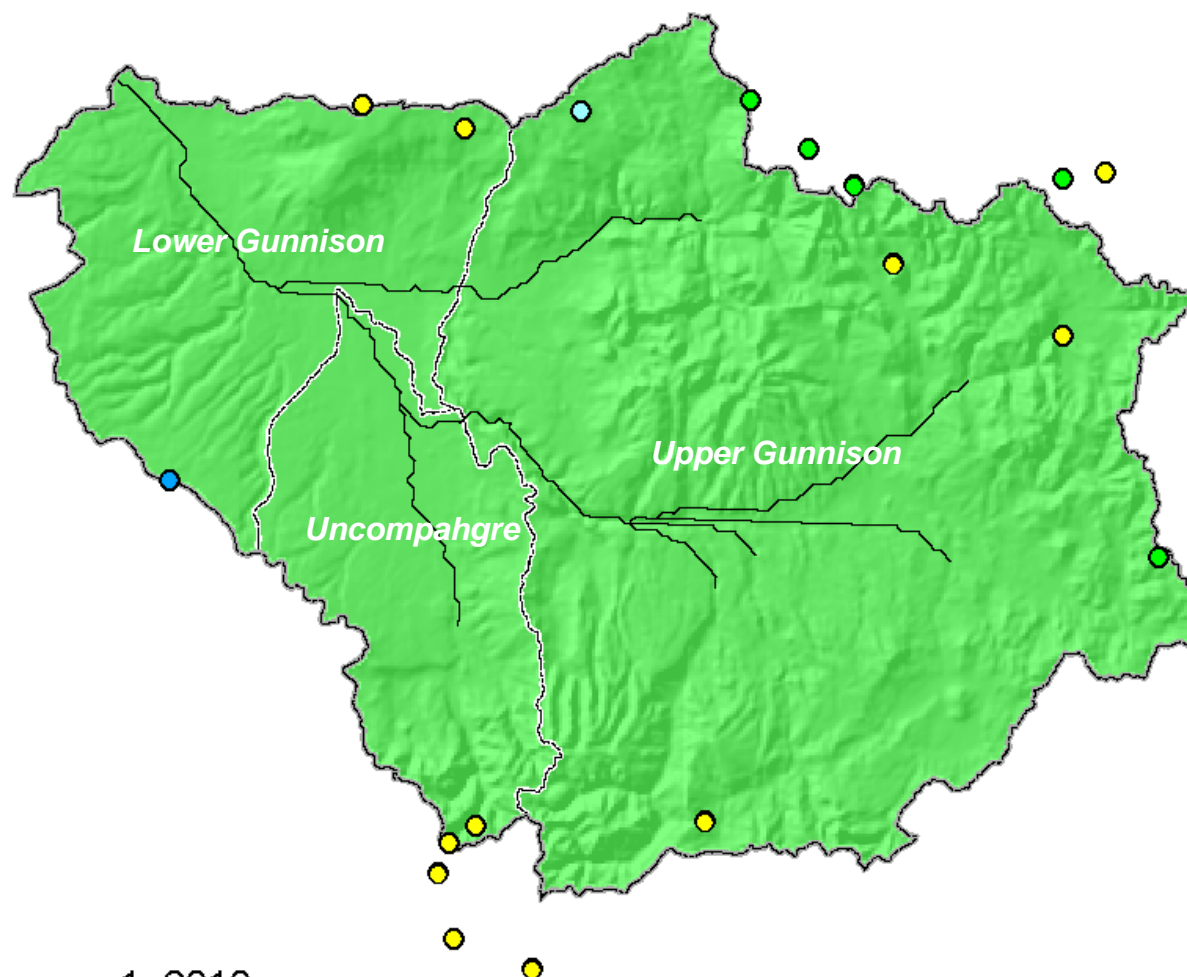


Gunnison River Basin Snowpack Map

Percent of Average

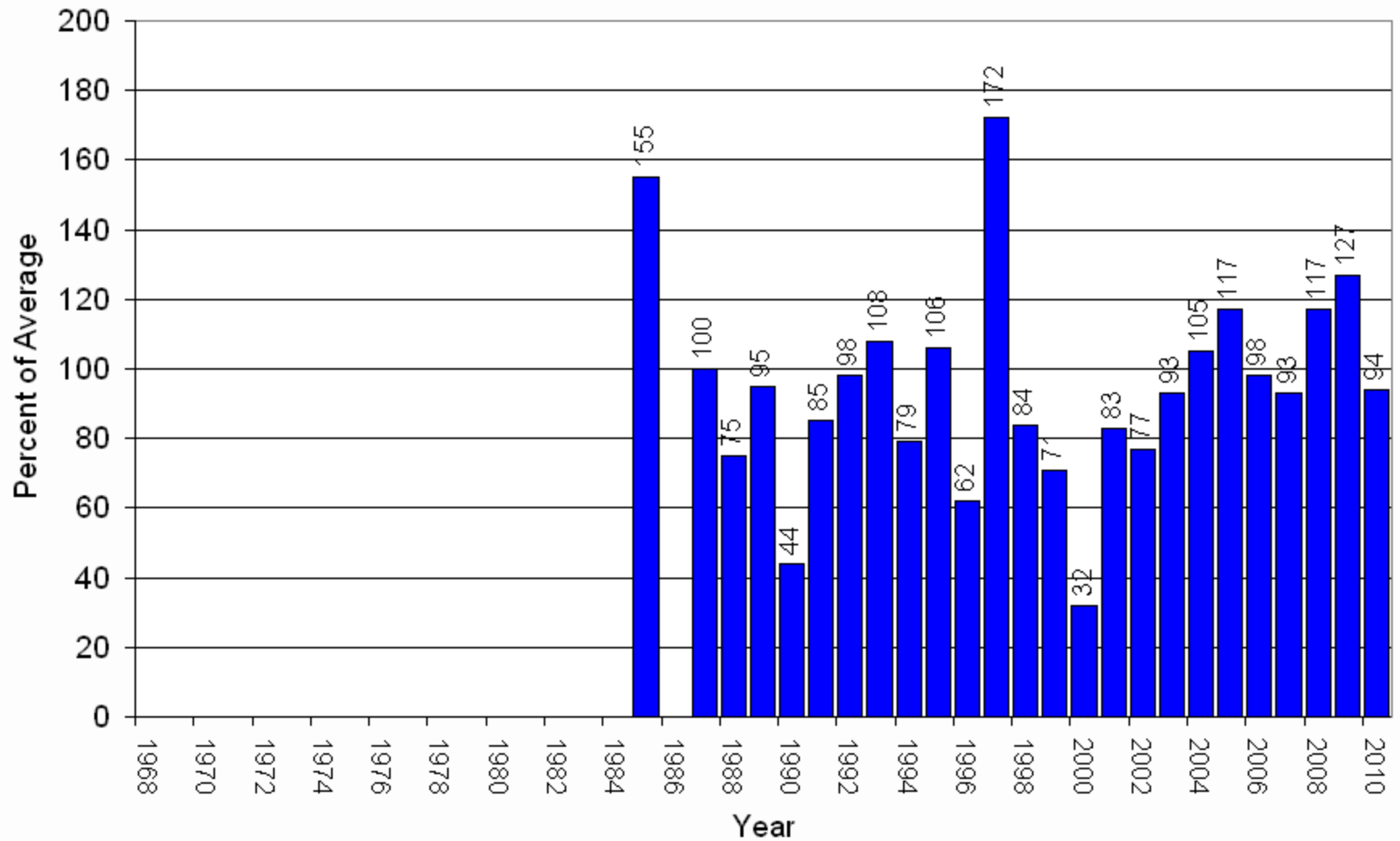


*Provisional Data
Subject to Revision*



Current as of January 1, 2010

January 1 Total Gunnison River Basin Snowpack



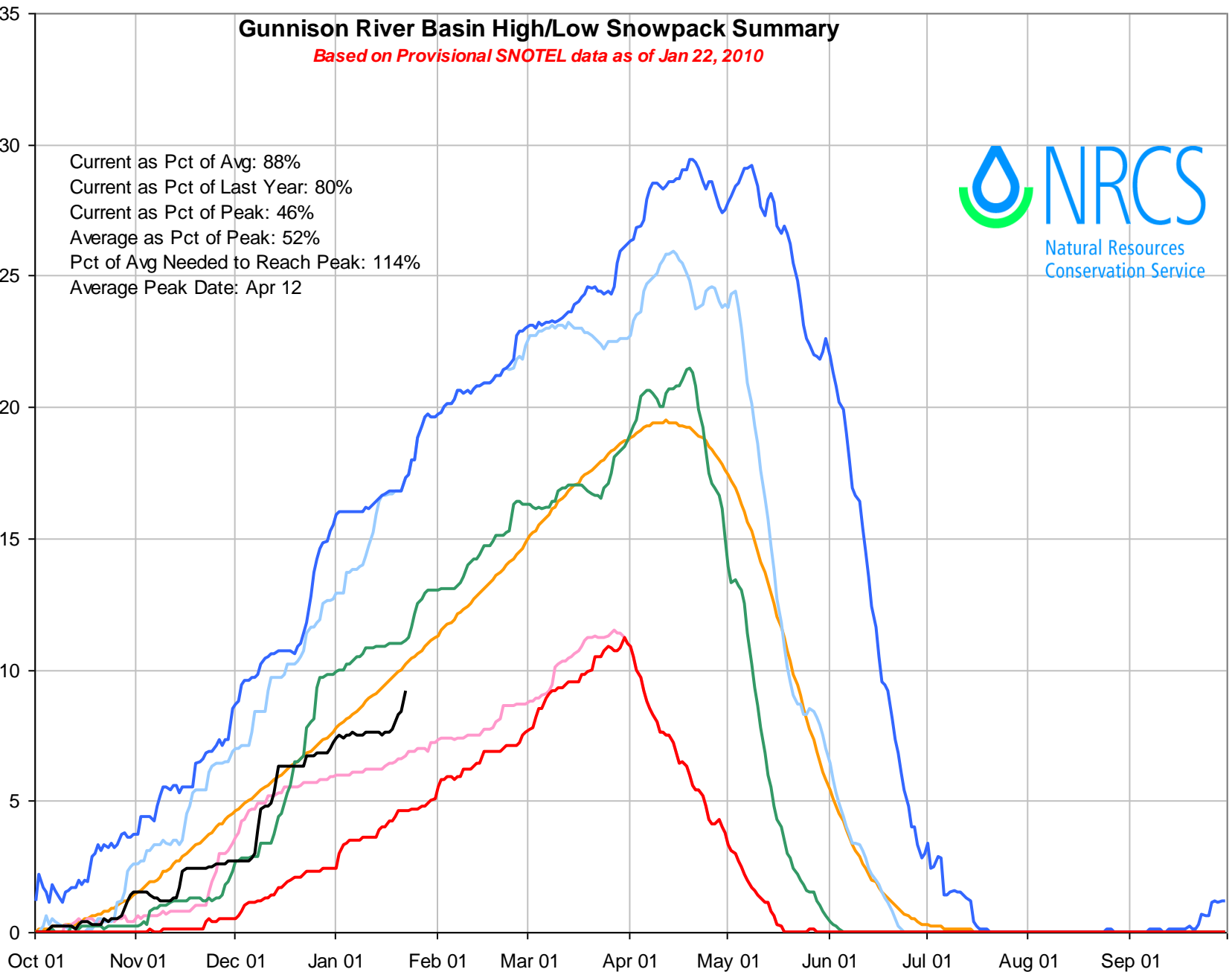
Gunnison River Basin High/Low Snowpack Summary

Based on Provisional SNOTEL data as of Jan 22, 2010

Current as Pct of Avg: 88%
Current as Pct of Last Year: 80%
Current as Pct of Peak: 46%
Average as Pct of Peak: 52%
Pct of Avg Needed to Reach Peak: 114%
Average Peak Date: Apr 12



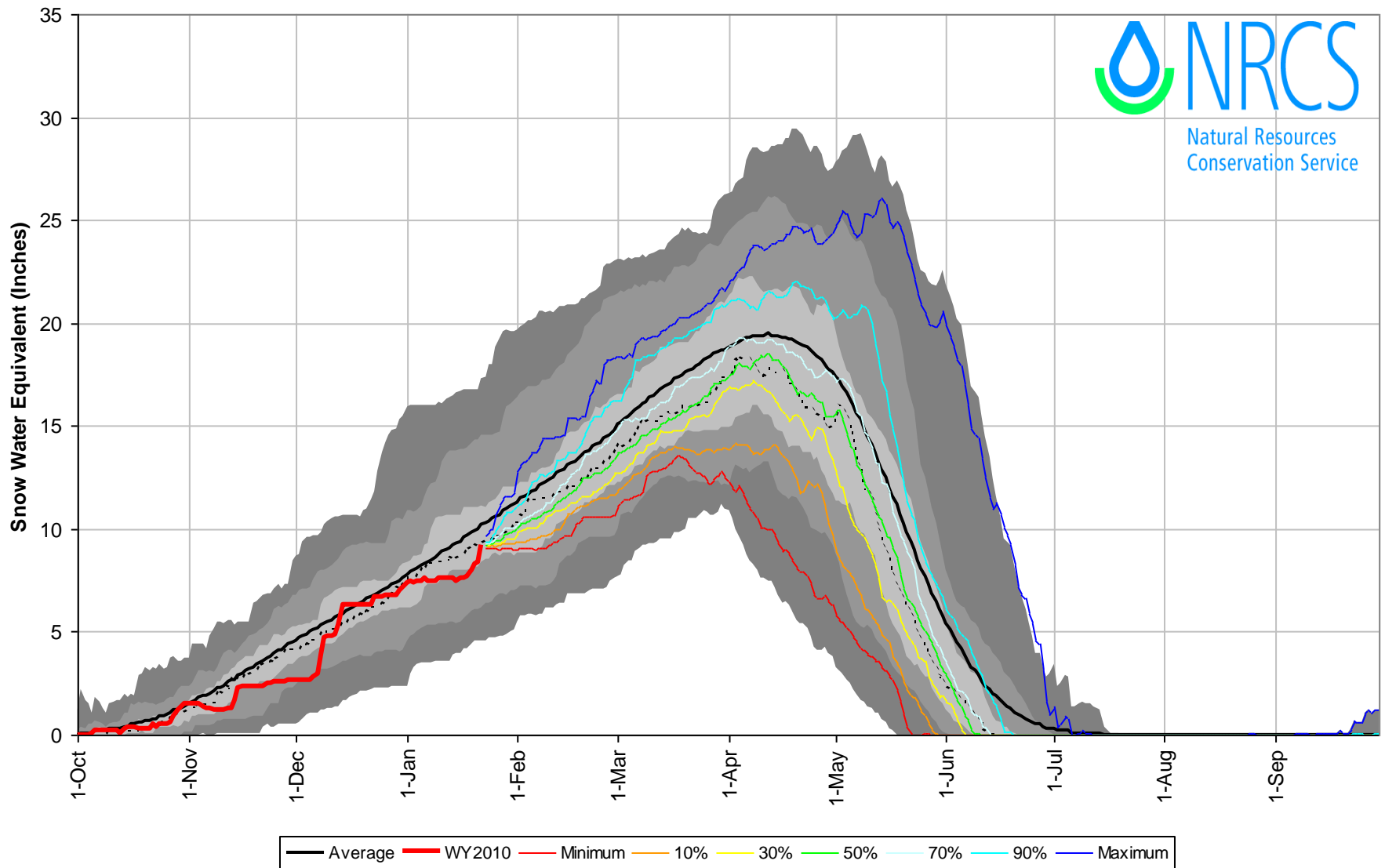
Snow Water Equivalent (inches)



— Average — WY2002 — WY1997 — WY2009 — WY2010 — Maximum — Minimum

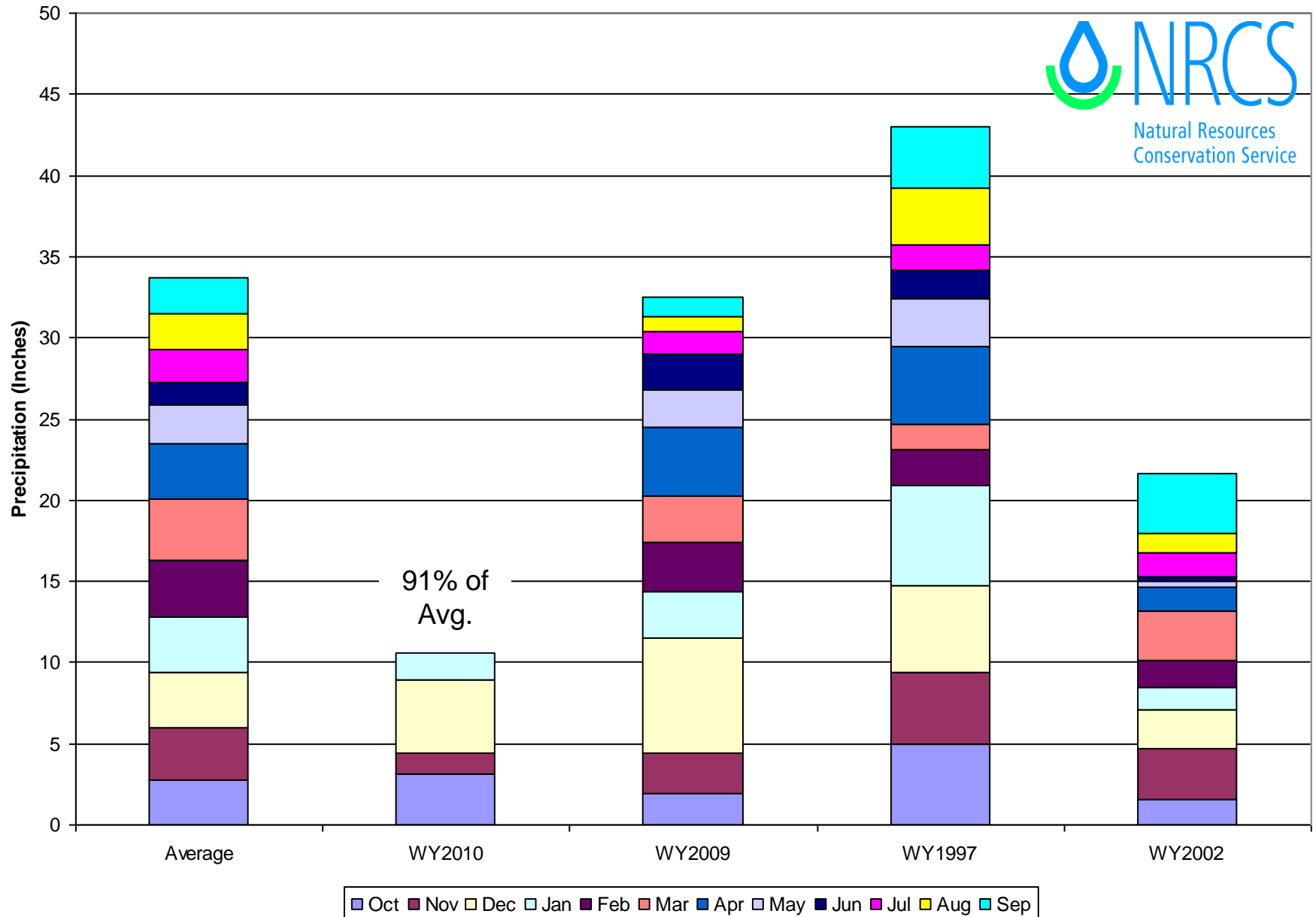
Gunnison River Basin with Non-Exceedence Projections

Based on Provisional SNOTEL Data as of Jan 22, 2010



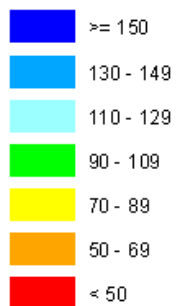
Gunnison River Basin High/Low Monthly Precipitation Summary

Based on Provisional SNOTEL data as of Jan 22, 2010

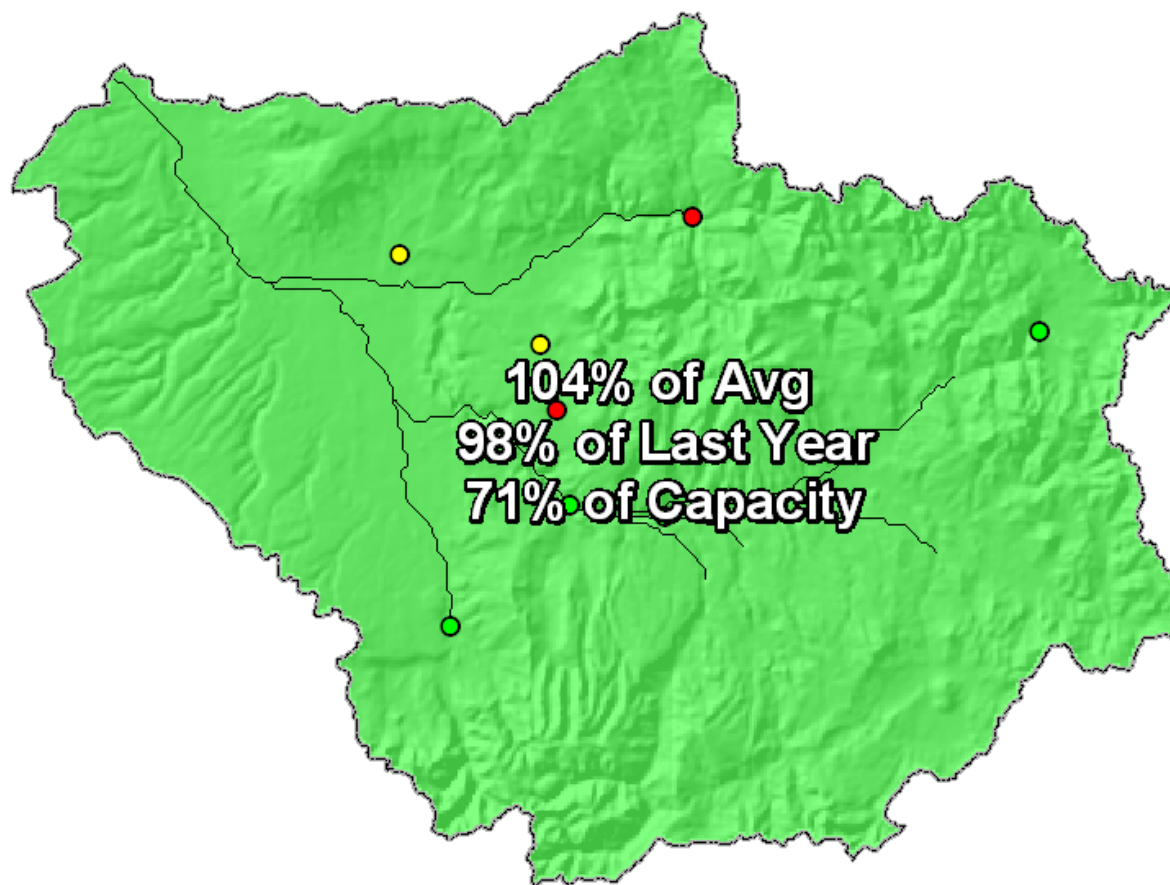


Gunnison River Basin Reservoir Storage Map

Percent of Average



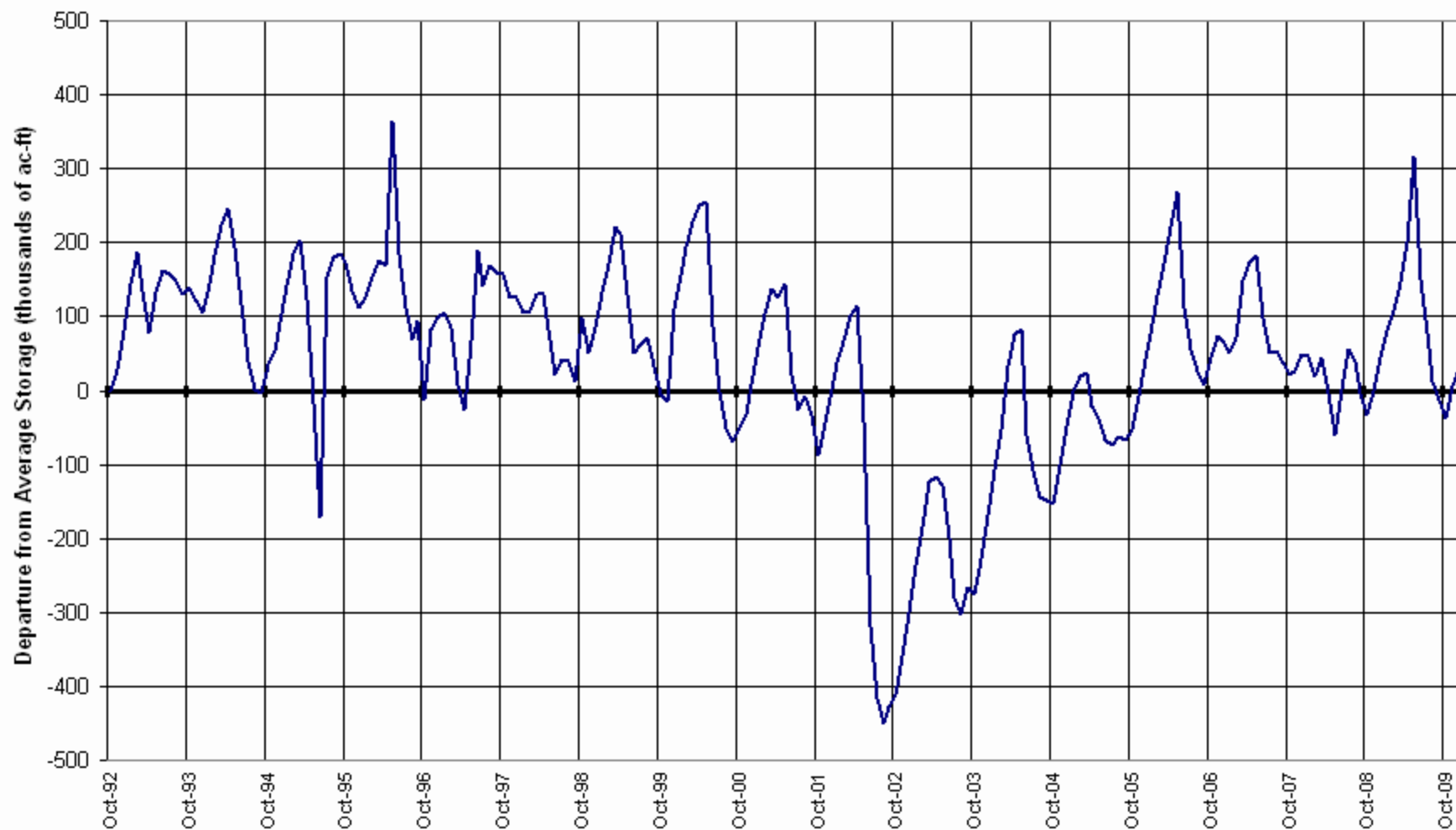
*Provisional Data
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End of December 2009

GUNNISON RIVER BASIN

Reservoir Storage Departure from Average

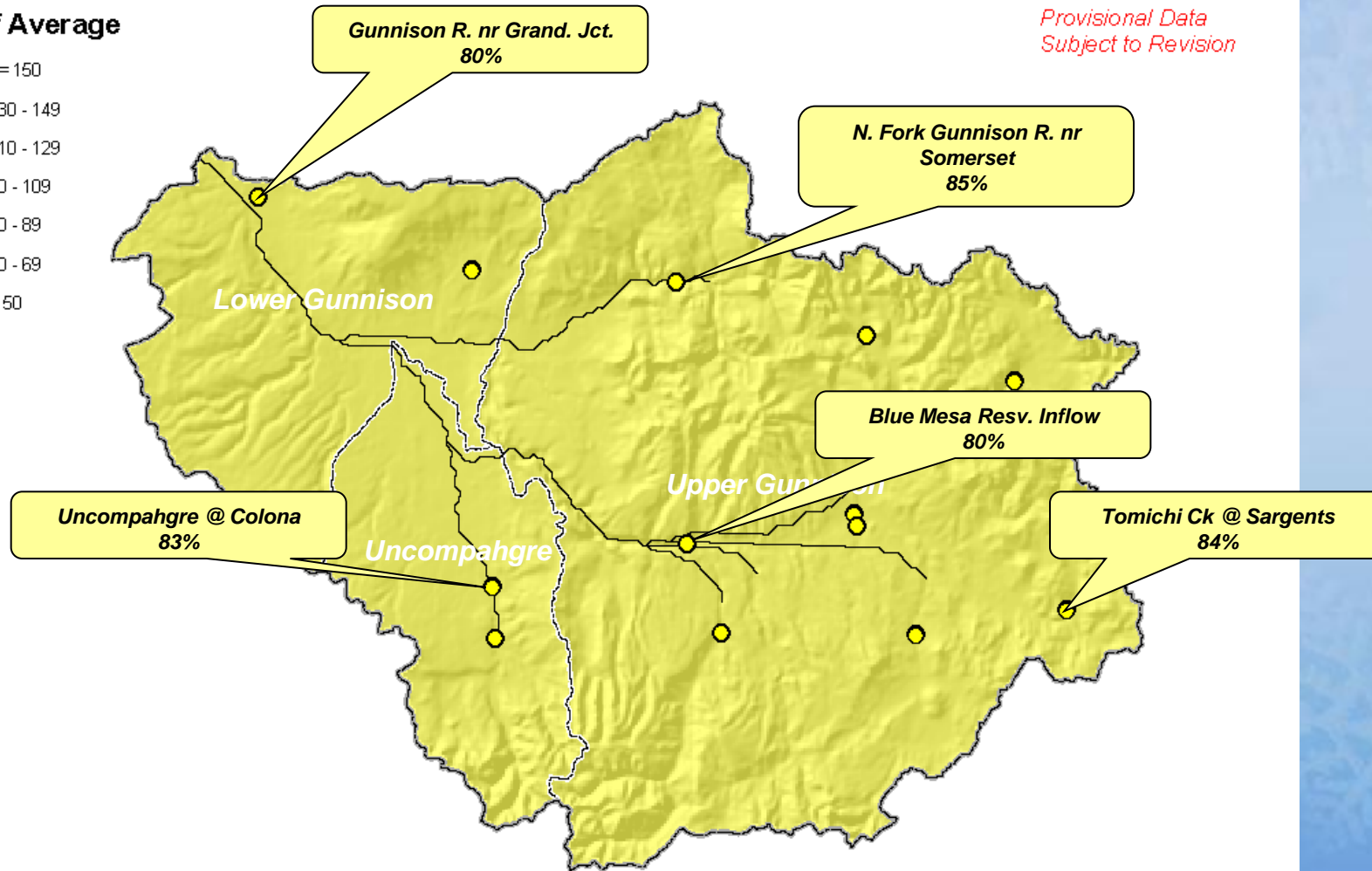


Gunnison River Basin Streamflow Forecast Map

Percent of Average

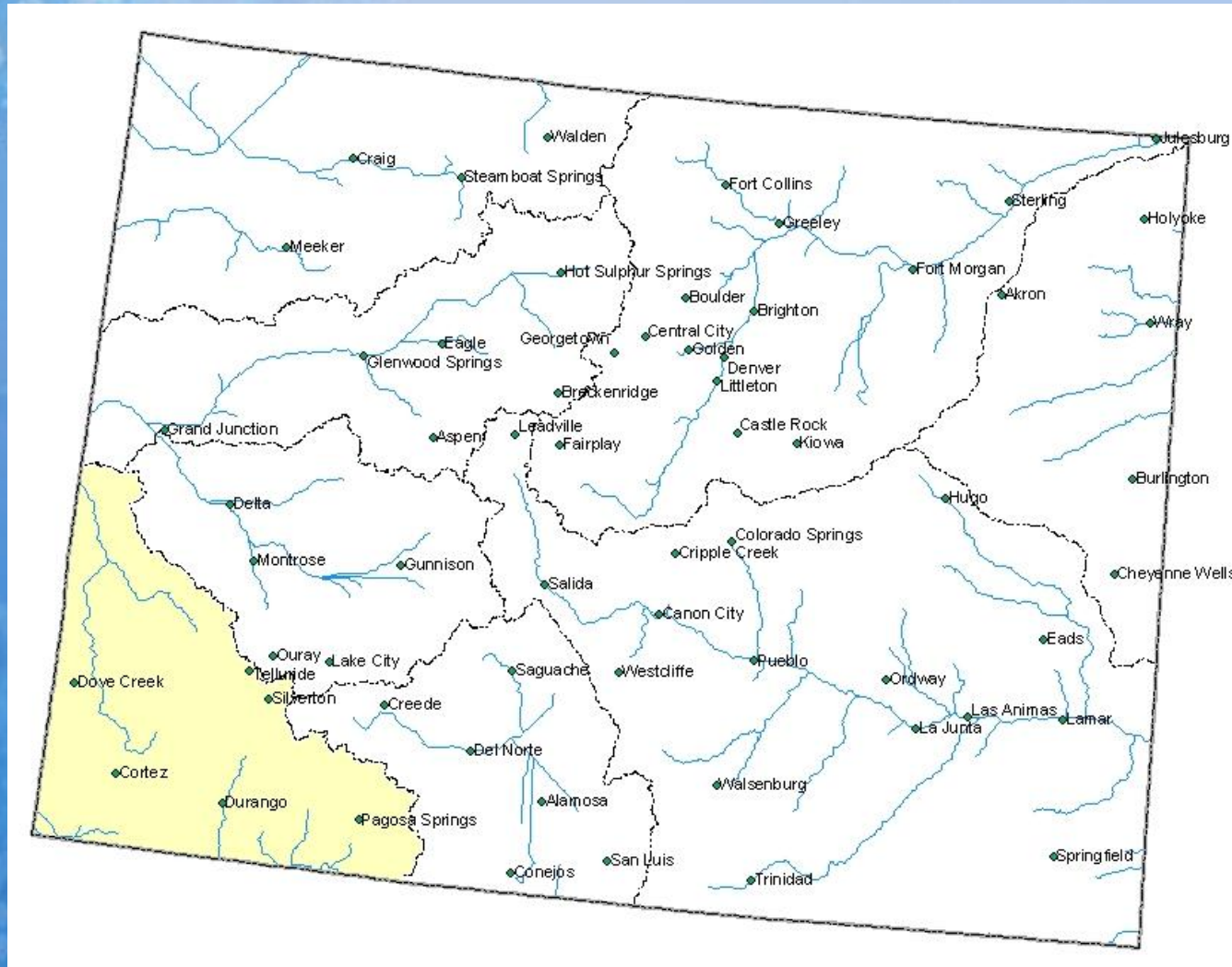


*Provisional Data
Subject to Revision*



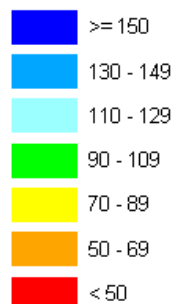
Current as of January 1, 2010

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



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

Percent of Average

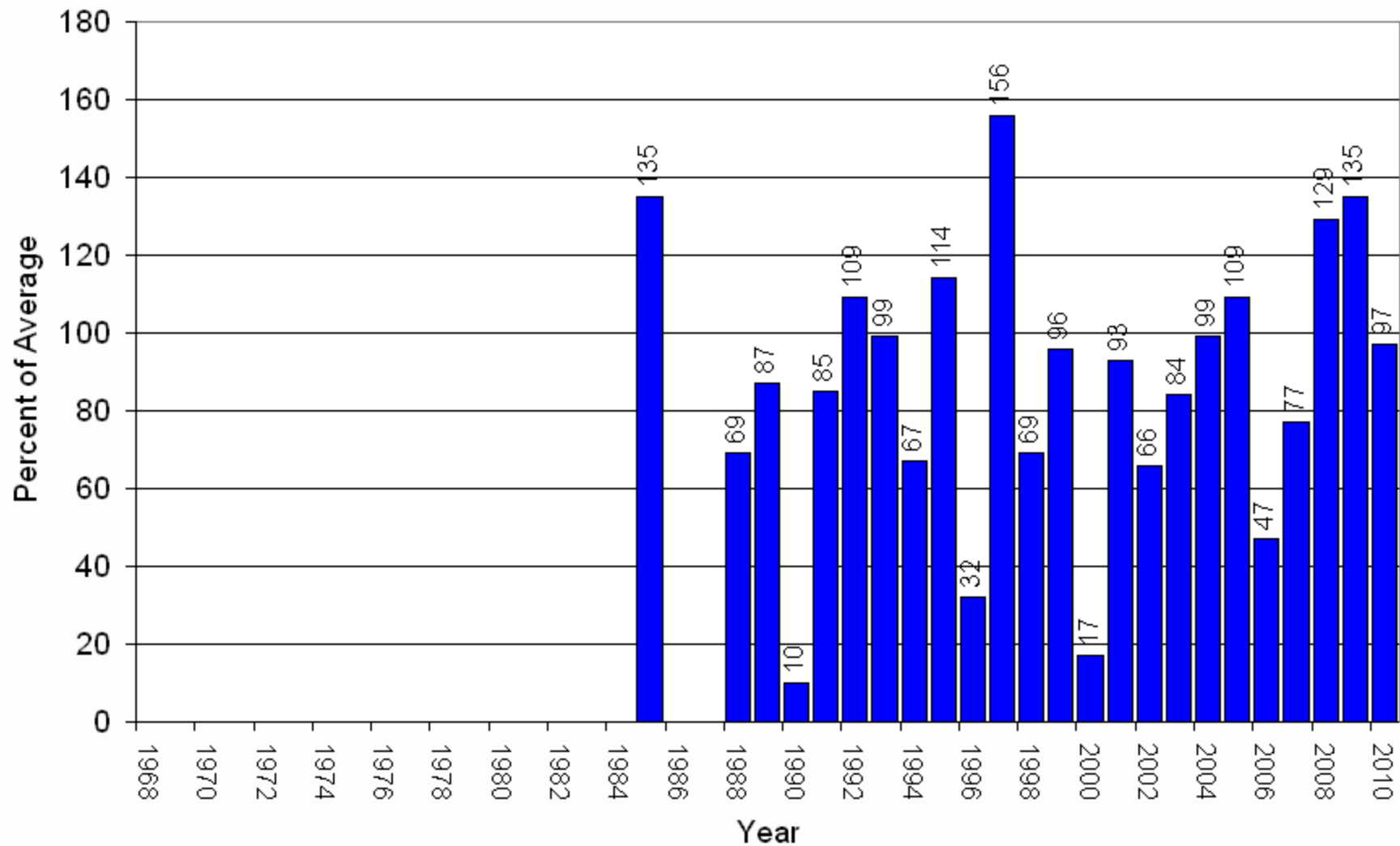


*Provisional Data
Subject to Revision*



Current as of January 1, 2010

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



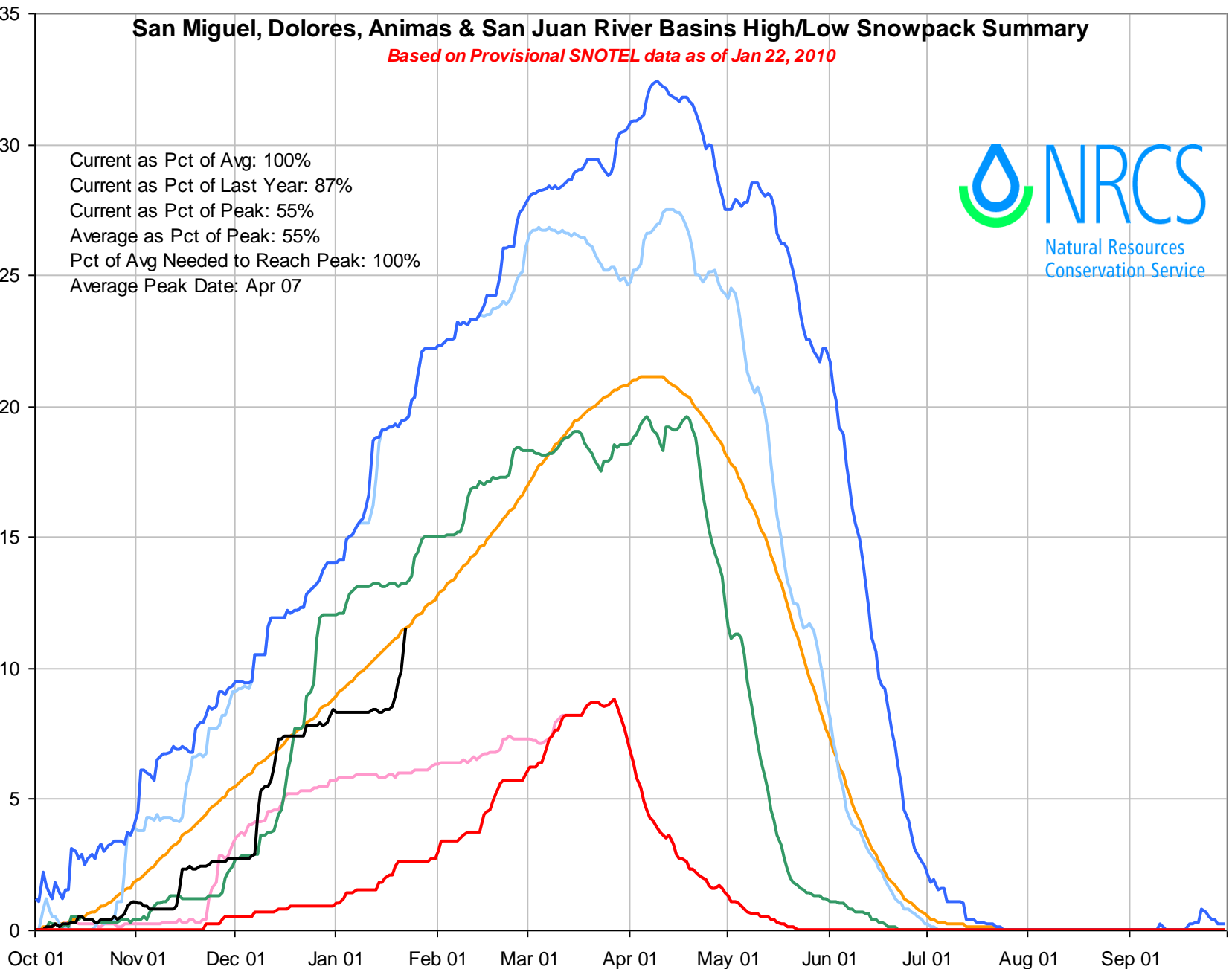
San Miguel, Dolores, Animas & San Juan River Basins High/Low Snowpack Summary

Based on Provisional SNOTEL data as of Jan 22, 2010



Current as Pct of Avg: 100%
Current as Pct of Last Year: 87%
Current as Pct of Peak: 55%
Average as Pct of Peak: 55%
Pct of Avg Needed to Reach Peak: 100%
Average Peak Date: Apr 07

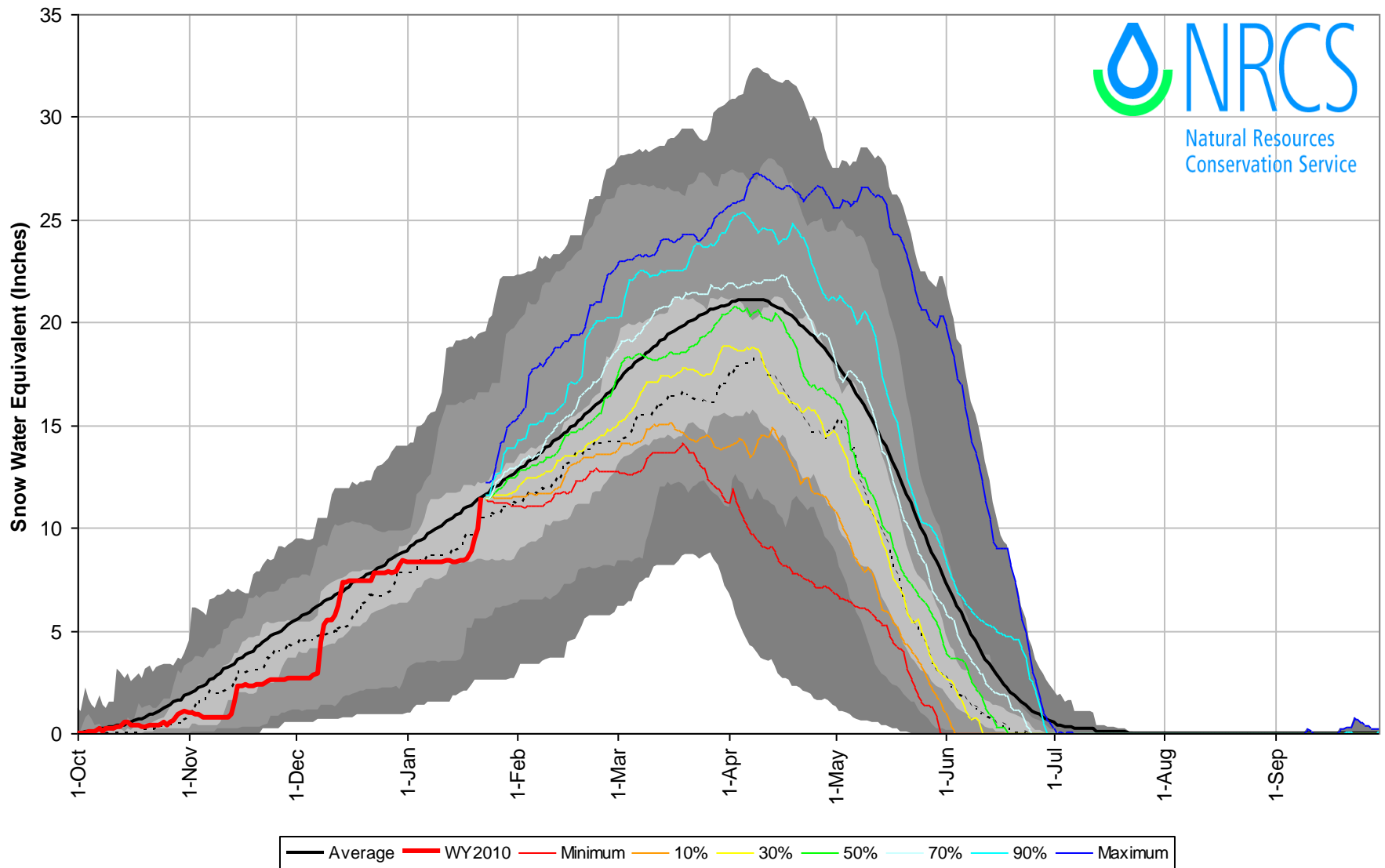
Snow Water Equivalent (inches)



— Average — WY2002 — WY1997 — WY2009 — WY2010 — Maximum — Minimum

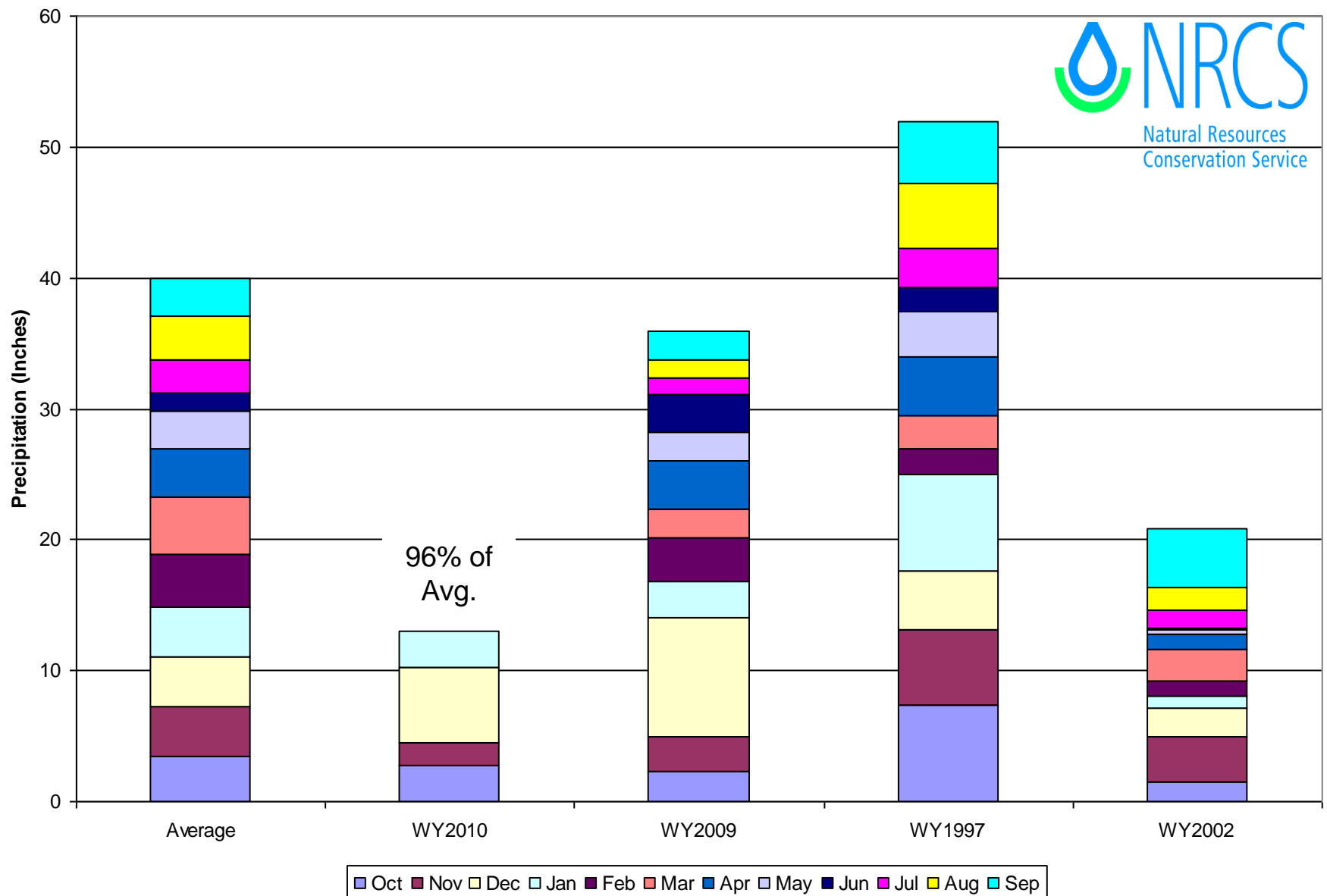
San Miguel, Dolores, Animas & San Juan River Basins with Non-Exceedence Projections

Based on Provisional SNOTEL Data as of Jan 22, 2010



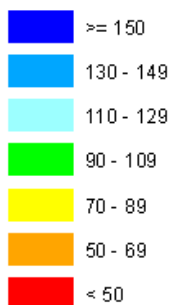
San Miguel, Dolores, Animas and San Juan River Basins High/Low Monthly Precipitation Summary

Based on Provisional SNOTEL data as of Jan 22, 2010

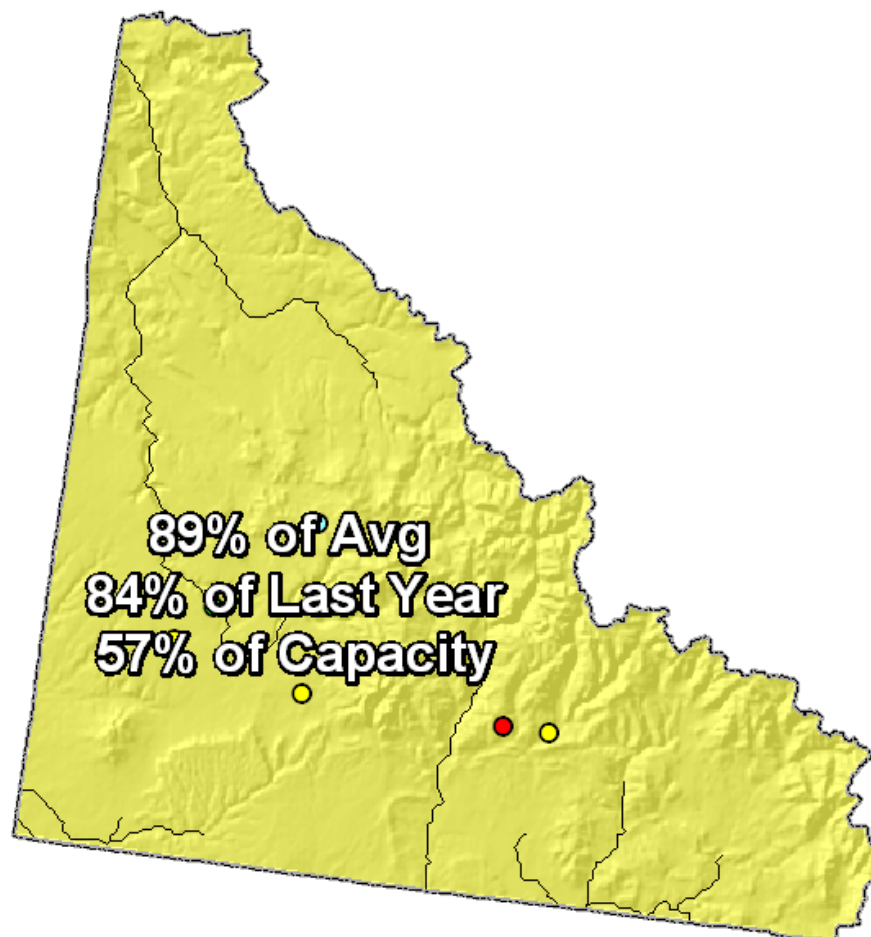


San Miguel, Dolores, Animas and San Juan River Basins Reservoir Storage Map

Percent of Average



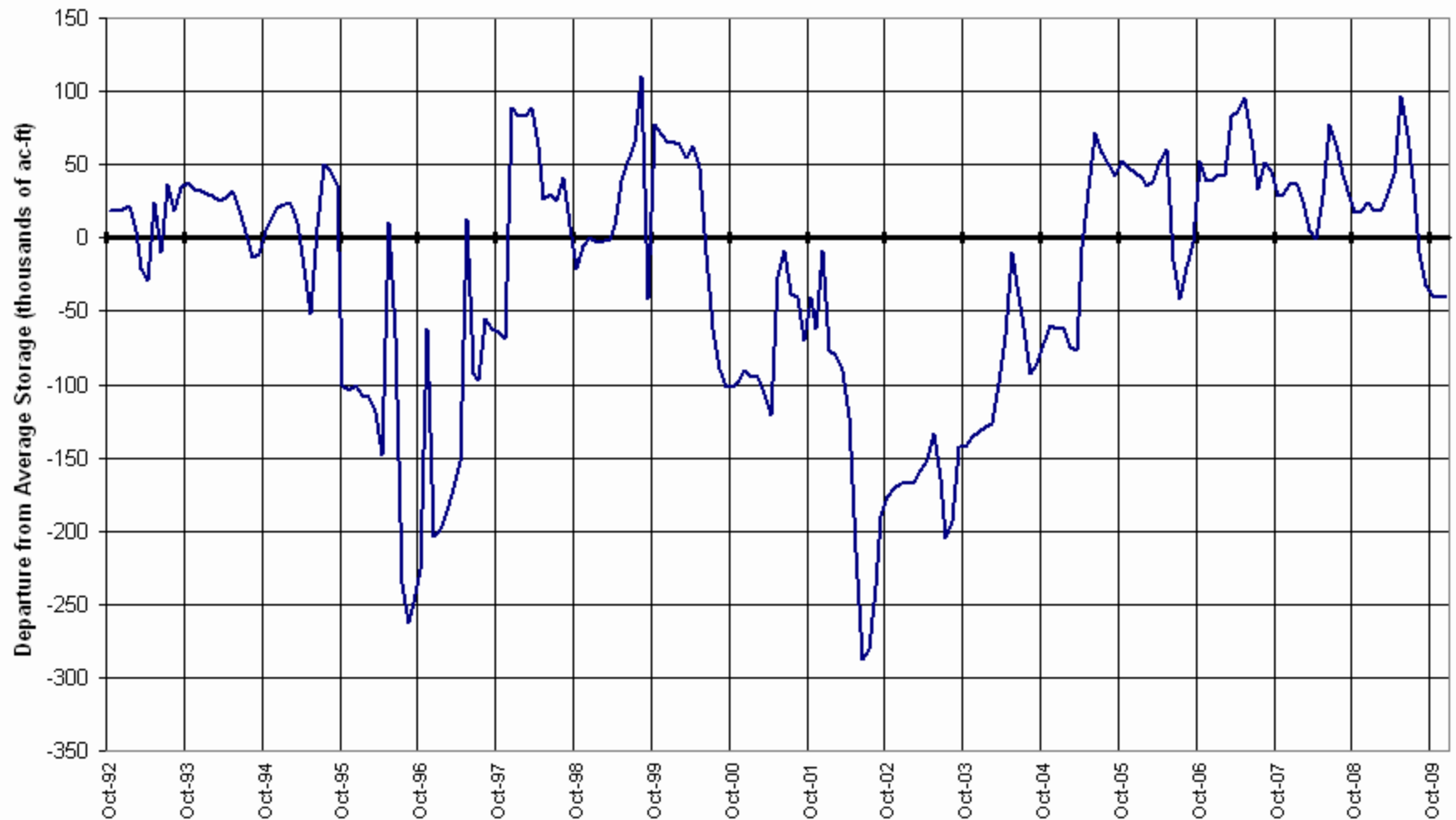
*Provisional Data
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End of December 2009

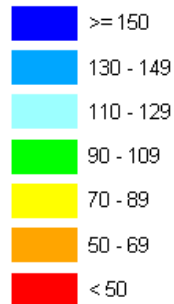
SAN MIGUEL, DOLORES, ANIMAS AND SAN JUAN RIVER BASINS

Reservoir Storage Departure from Average

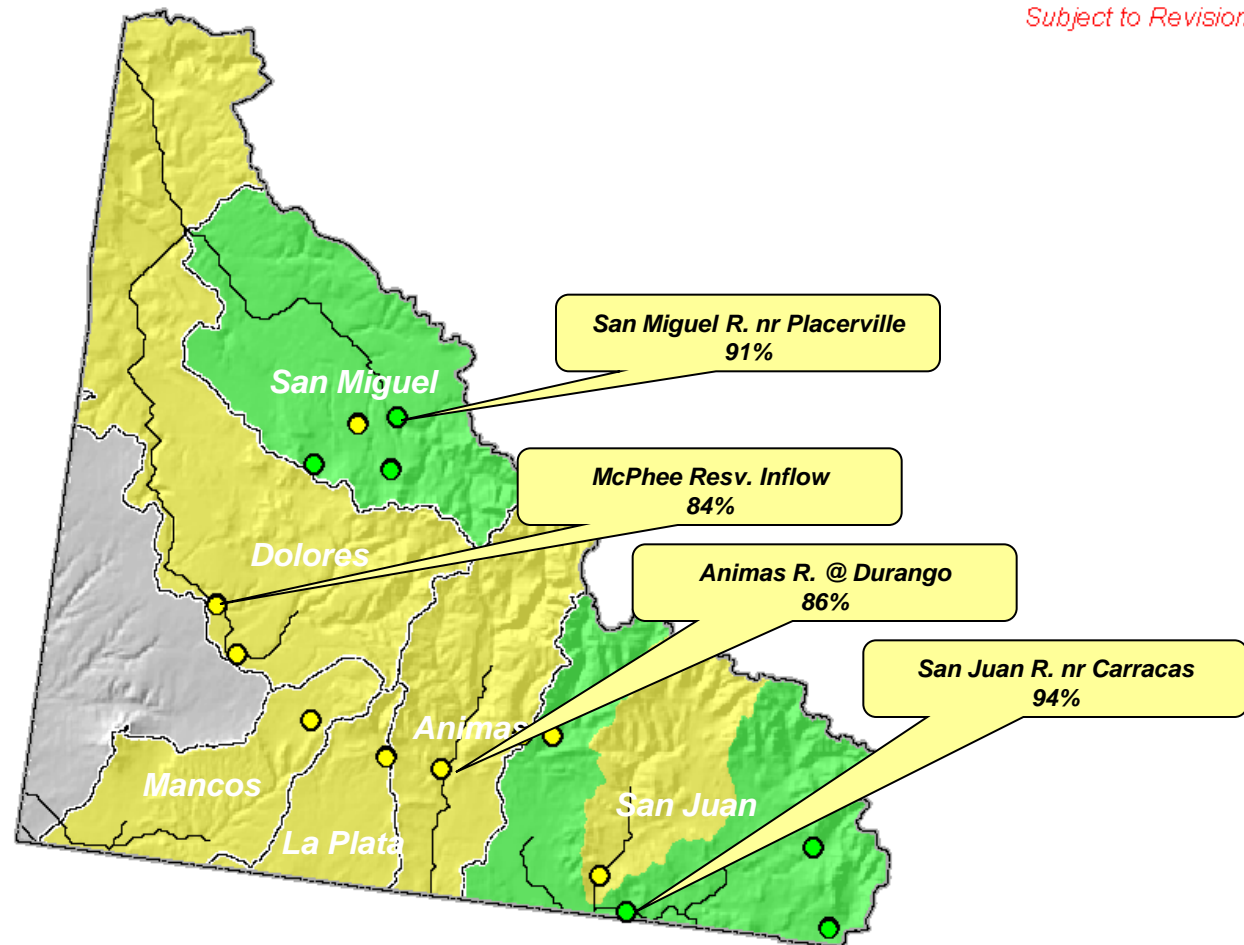


San Miguel, Dolores, Animas and San Juan River Basins Streamflow Forecast Map

Percent of Average

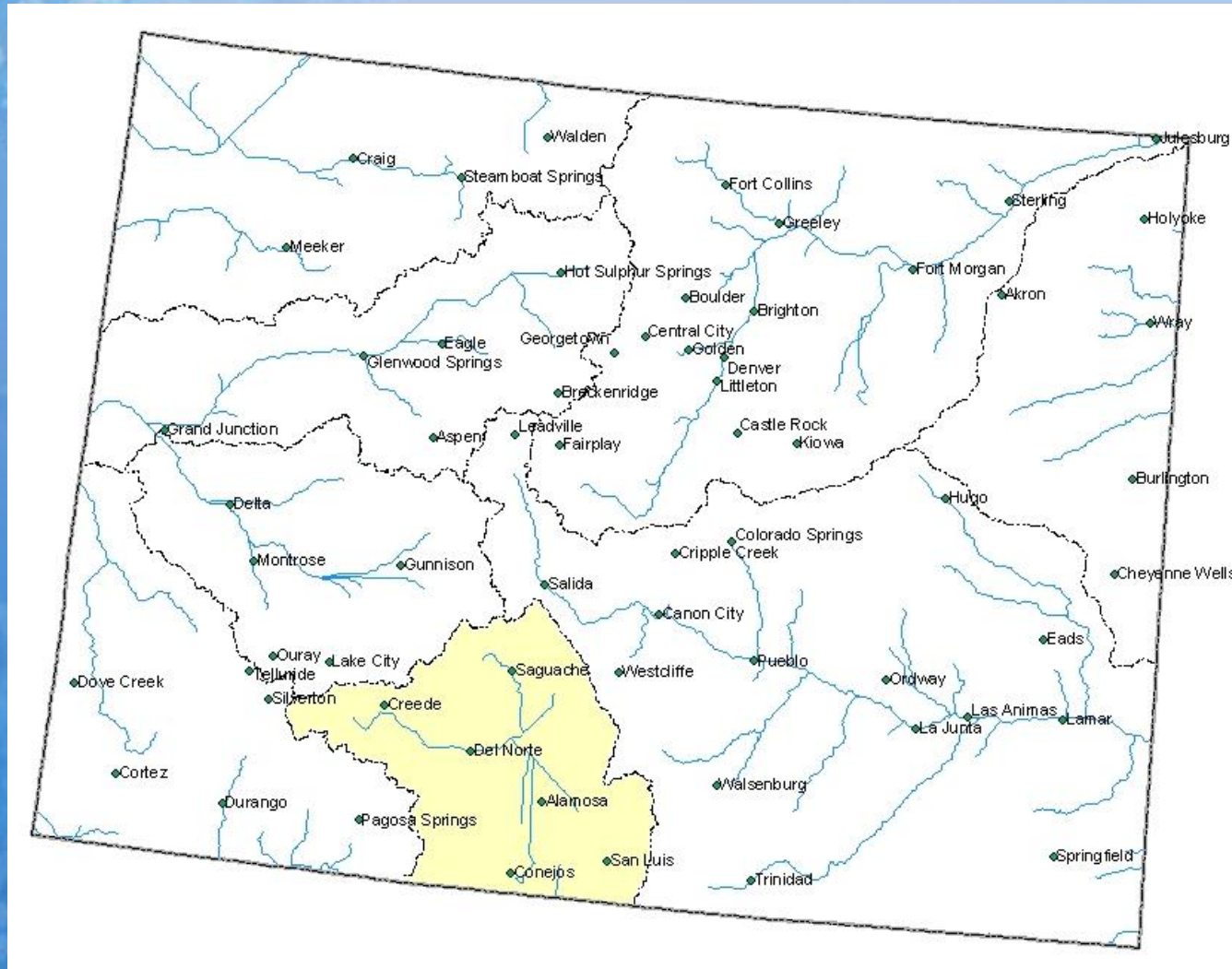


*Provisional Data
Subject to Revision*



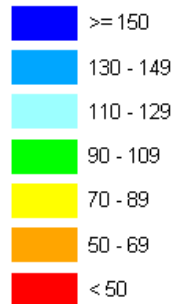
Current as of January 1, 2010

Upper Rio Grande Basin Summary

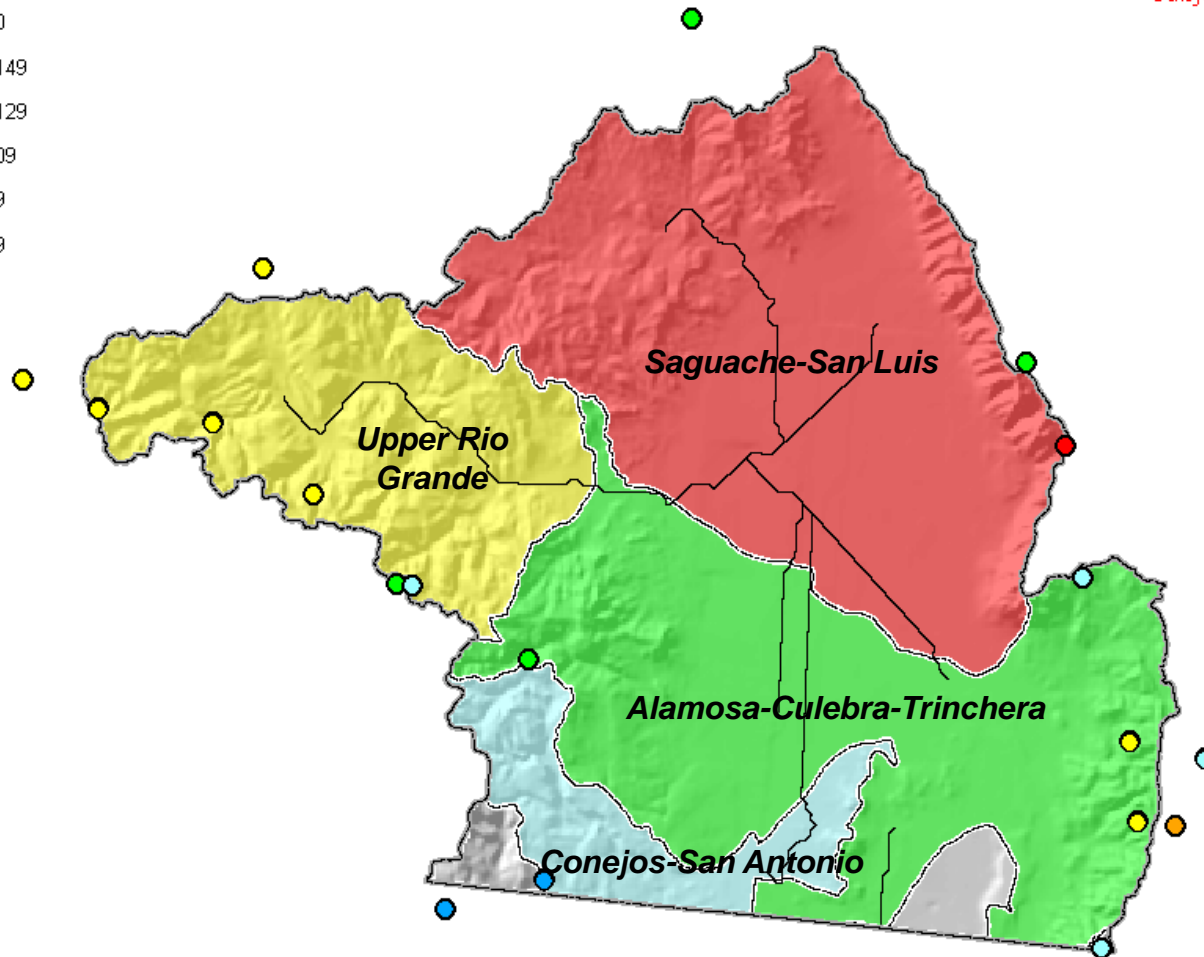


Upper Rio Grande Basin Snowpack Map

Percent of Average

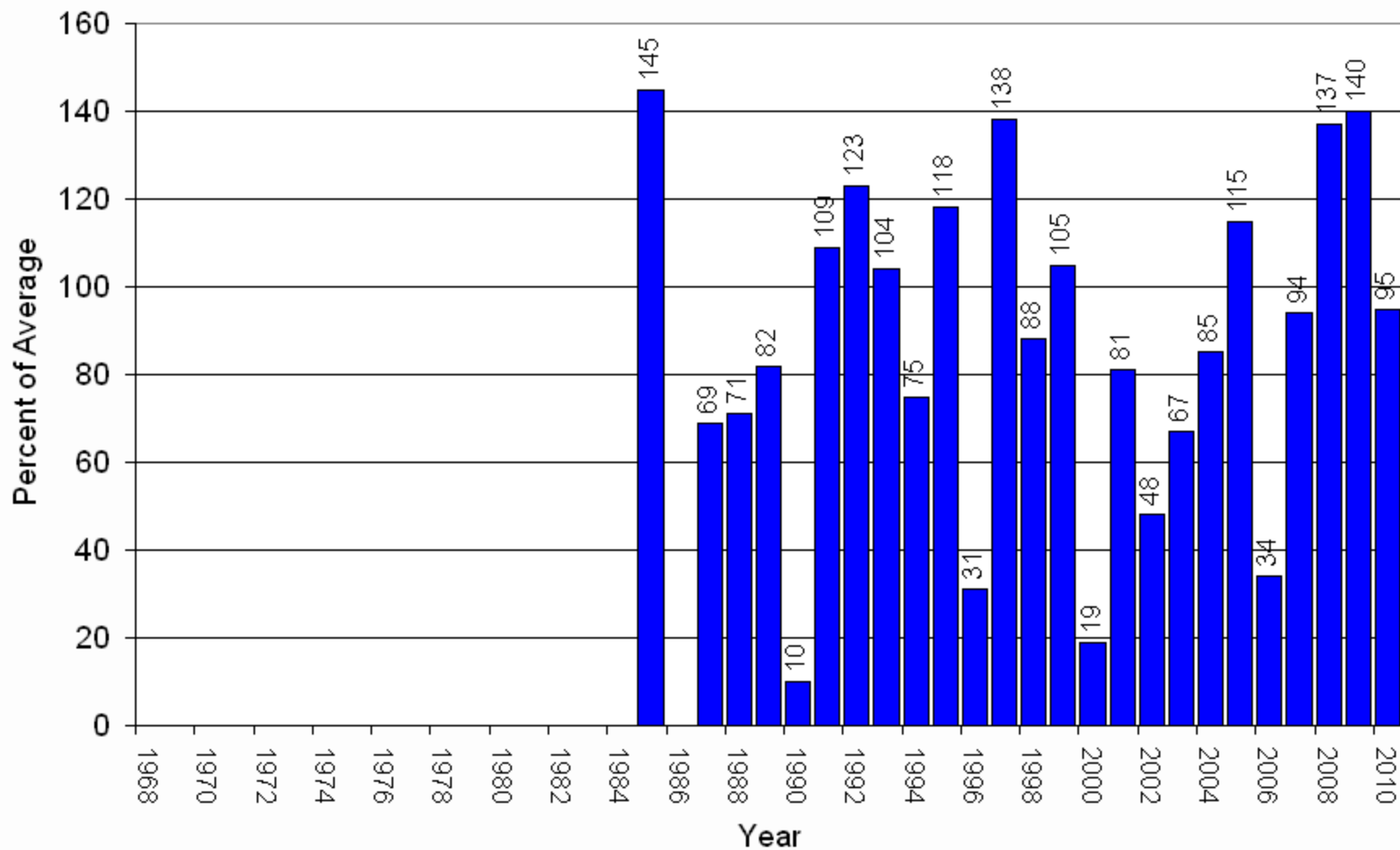


*Provisional Data
Subject to Revision*



Current as of January 1, 2010

January 1 Total Upper Rio Grande Basin Snowpack



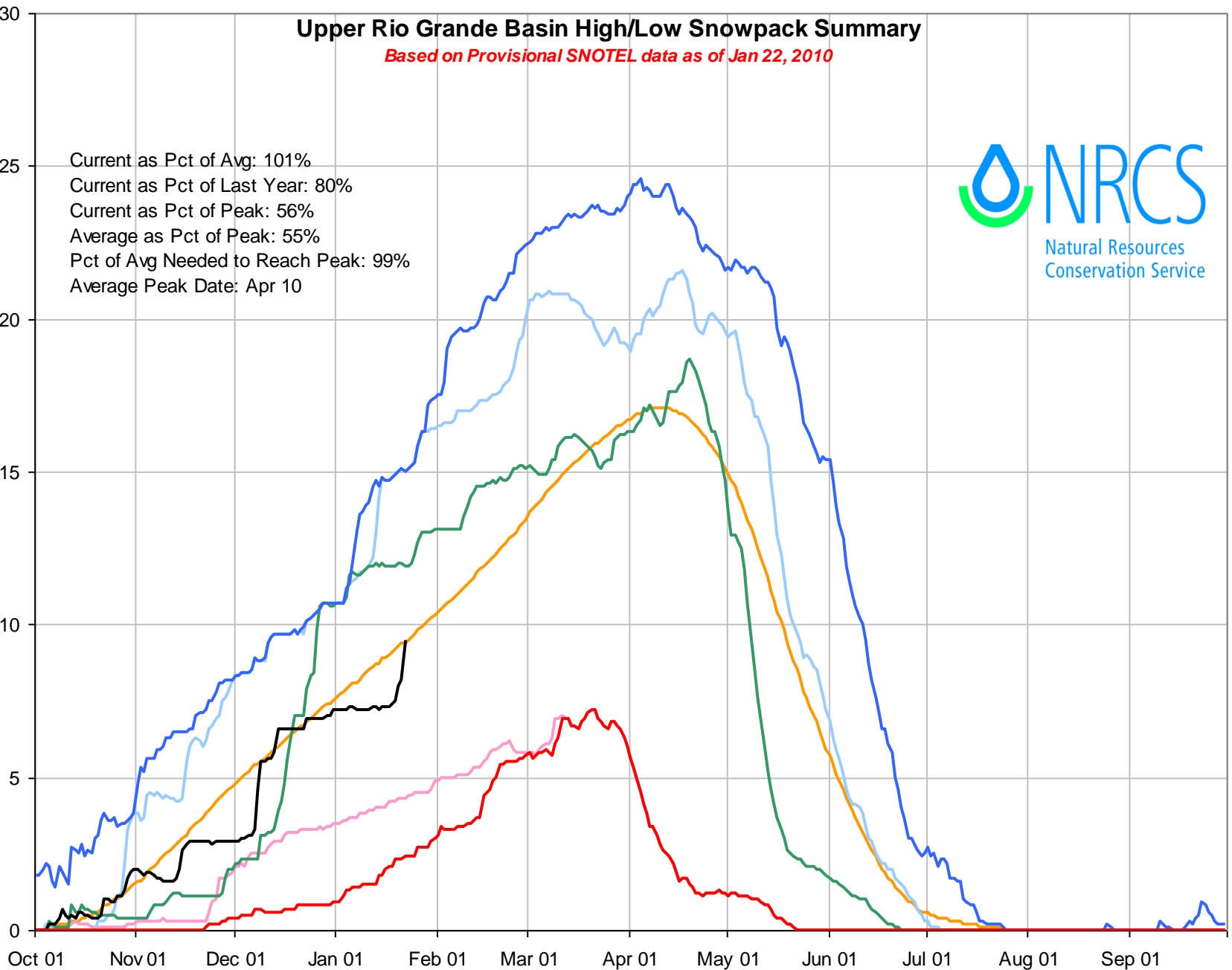
Upper Rio Grande Basin High/Low Snowpack Summary

Based on Provisional SNOTEL data as of Jan 22, 2010



Current as Pct of Avg: 101%
Current as Pct of Last Year: 80%
Current as Pct of Peak: 56%
Average as Pct of Peak: 55%
Pct of Avg Needed to Reach Peak: 99%
Average Peak Date: Apr 10

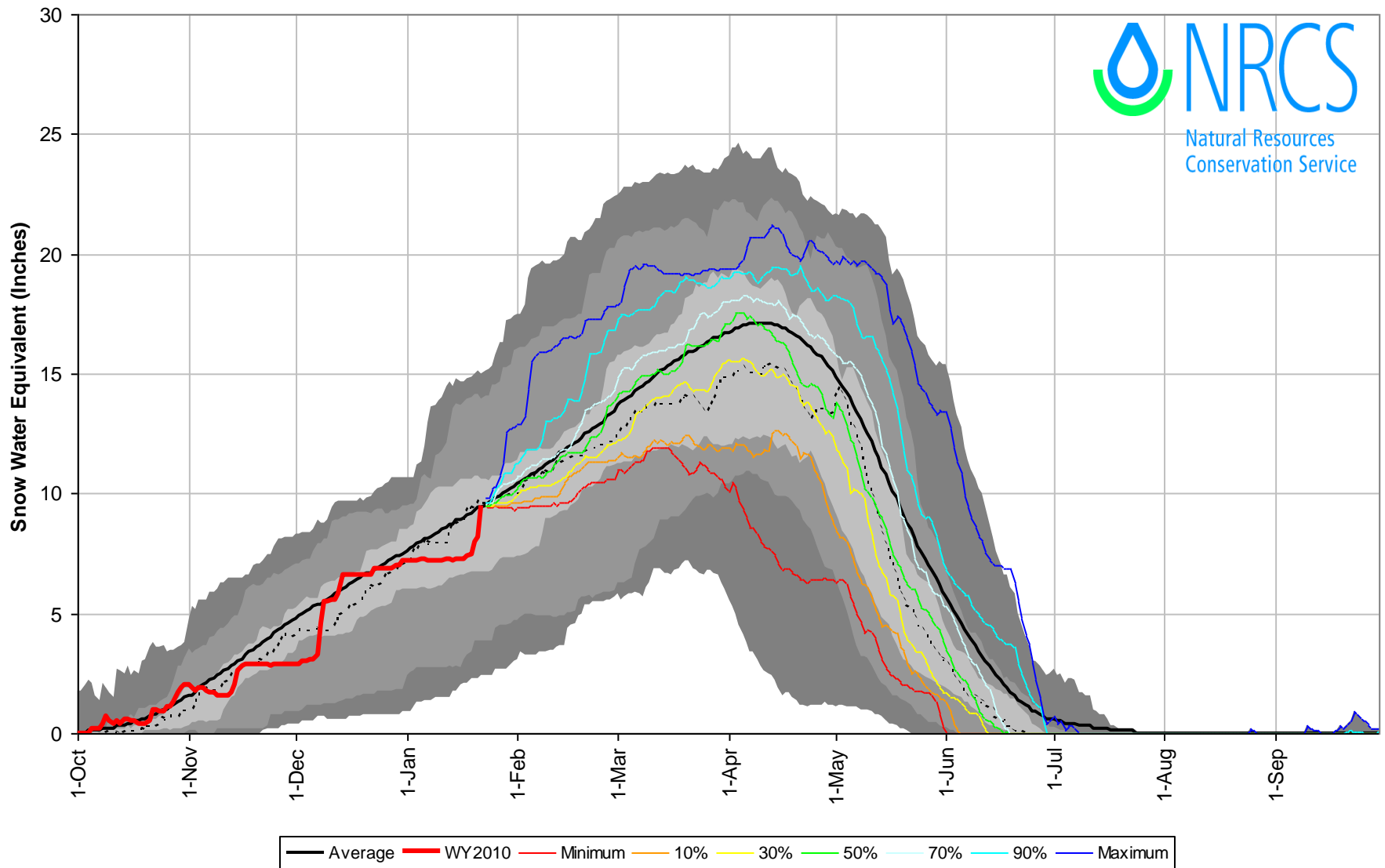
Snow Water Equivalent (inches)



— Average — WY2002 — WY1997 — WY2009 — WY2010 — Maximum — Minimum

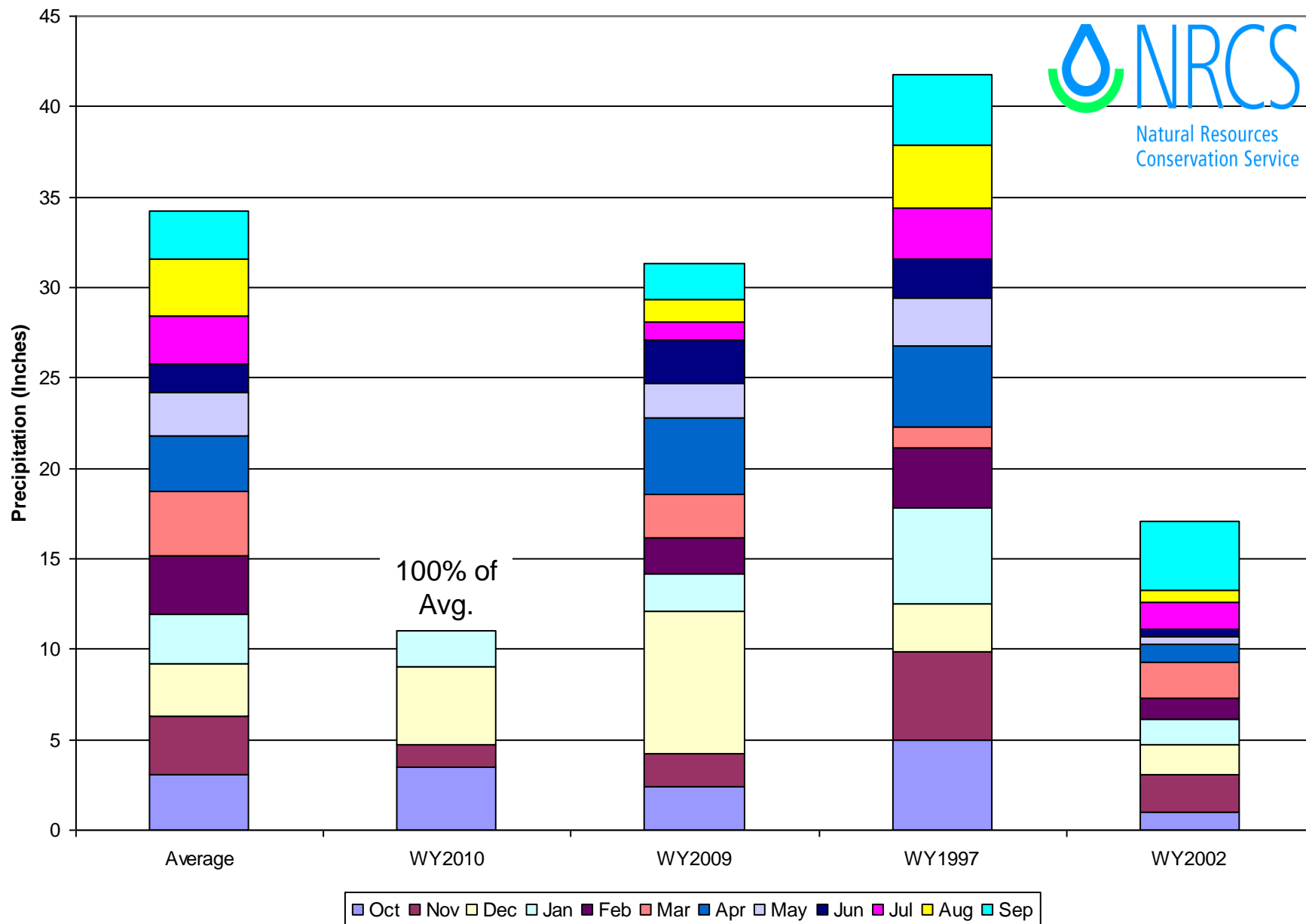
Upper Rio Grande Basin with Non-Exceedence Projections

Based on Provisional SNOTEL Data as of Jan 22, 2010



Upper Rio Grande Basin High/Low Monthly Precipitation Summary

Based on Provisional SNOTEL data as of Jan 22, 2010

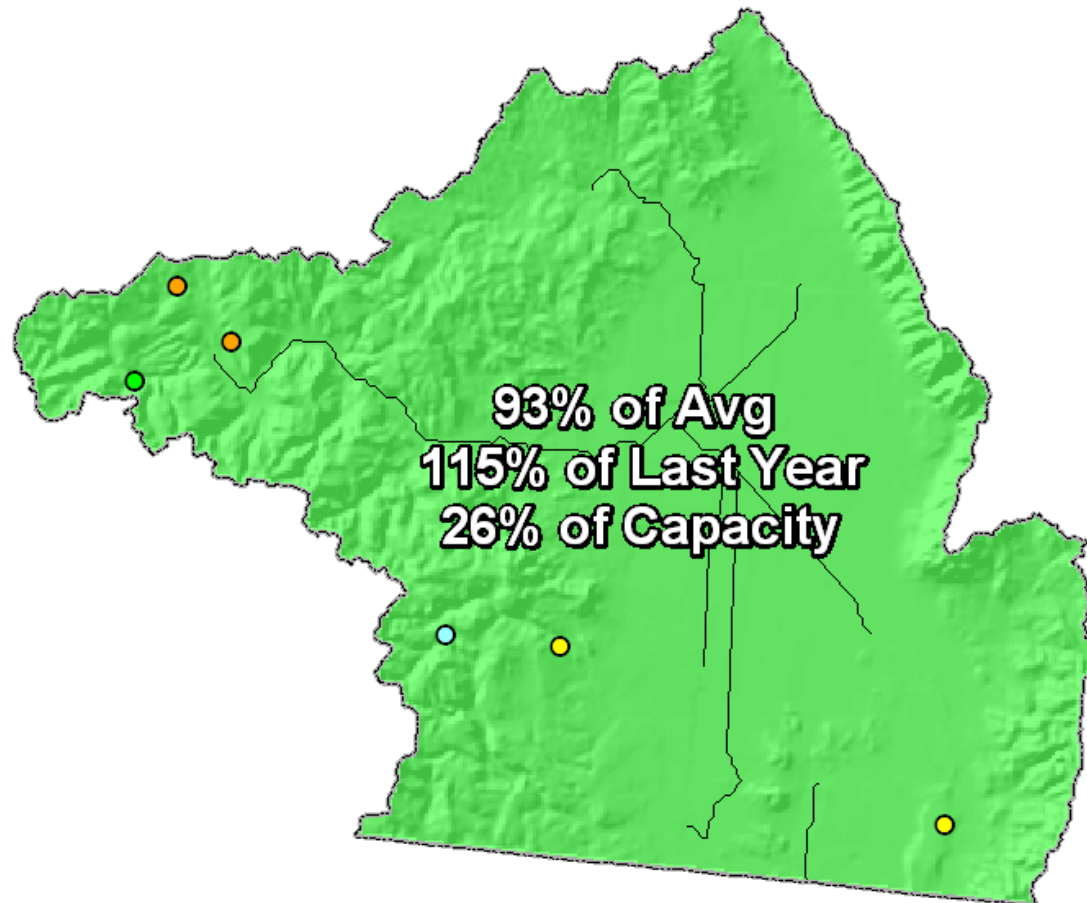


Upper Rio Grande Basin Reservoir Storage Map

Percent of Average

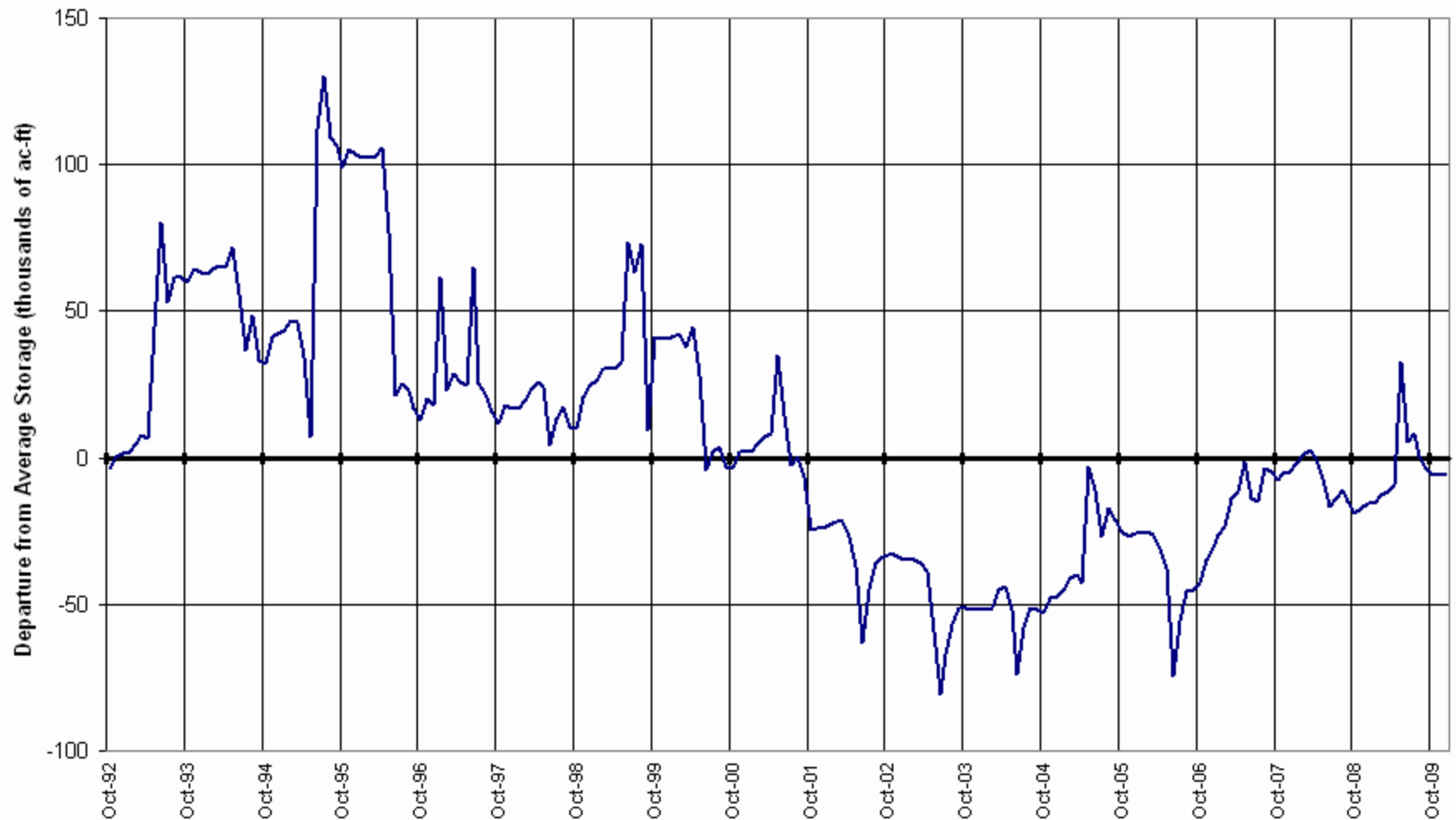


*Provisional Data
Subject to Revision*



End of December 2009

UPPER RIO GRANDE BASIN
Reservoir Storage
Departure from Average

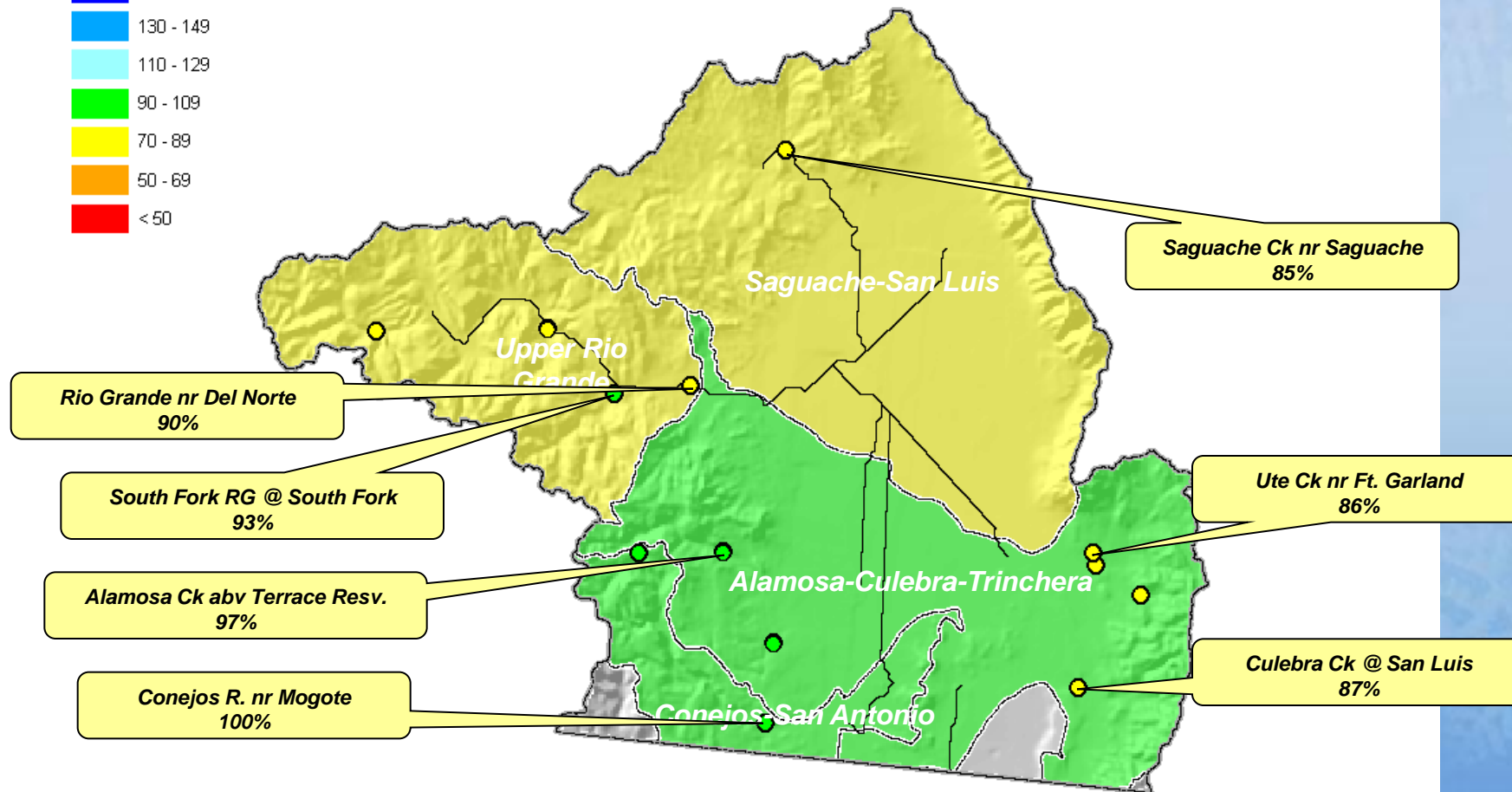


Upper Rio Grande Basin Streamflow Forecast Map

Percent of Average

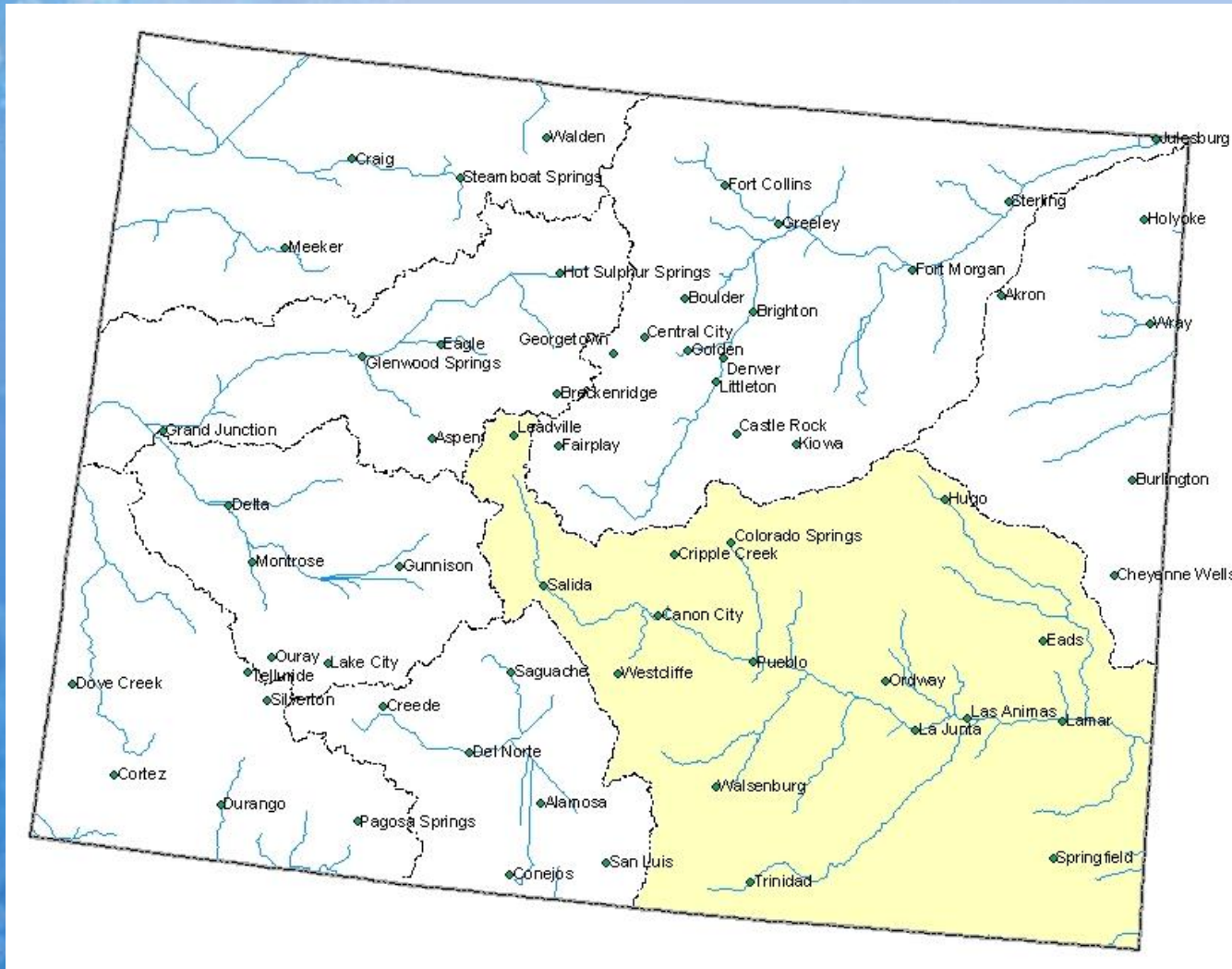


*Provisional Data
Subject to Revision*



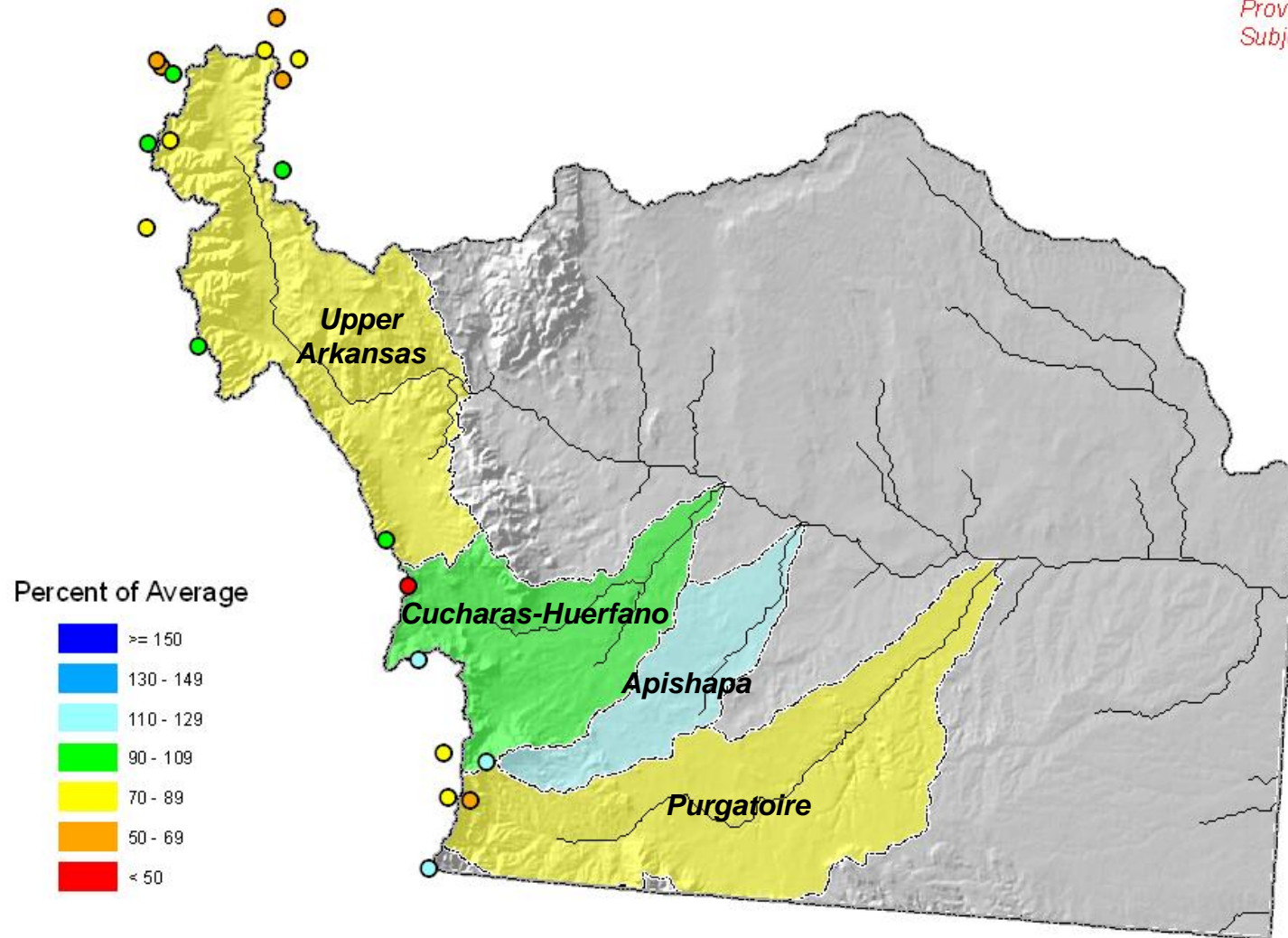
Current as of January 1, 2010

Arkansas River Basin Summary



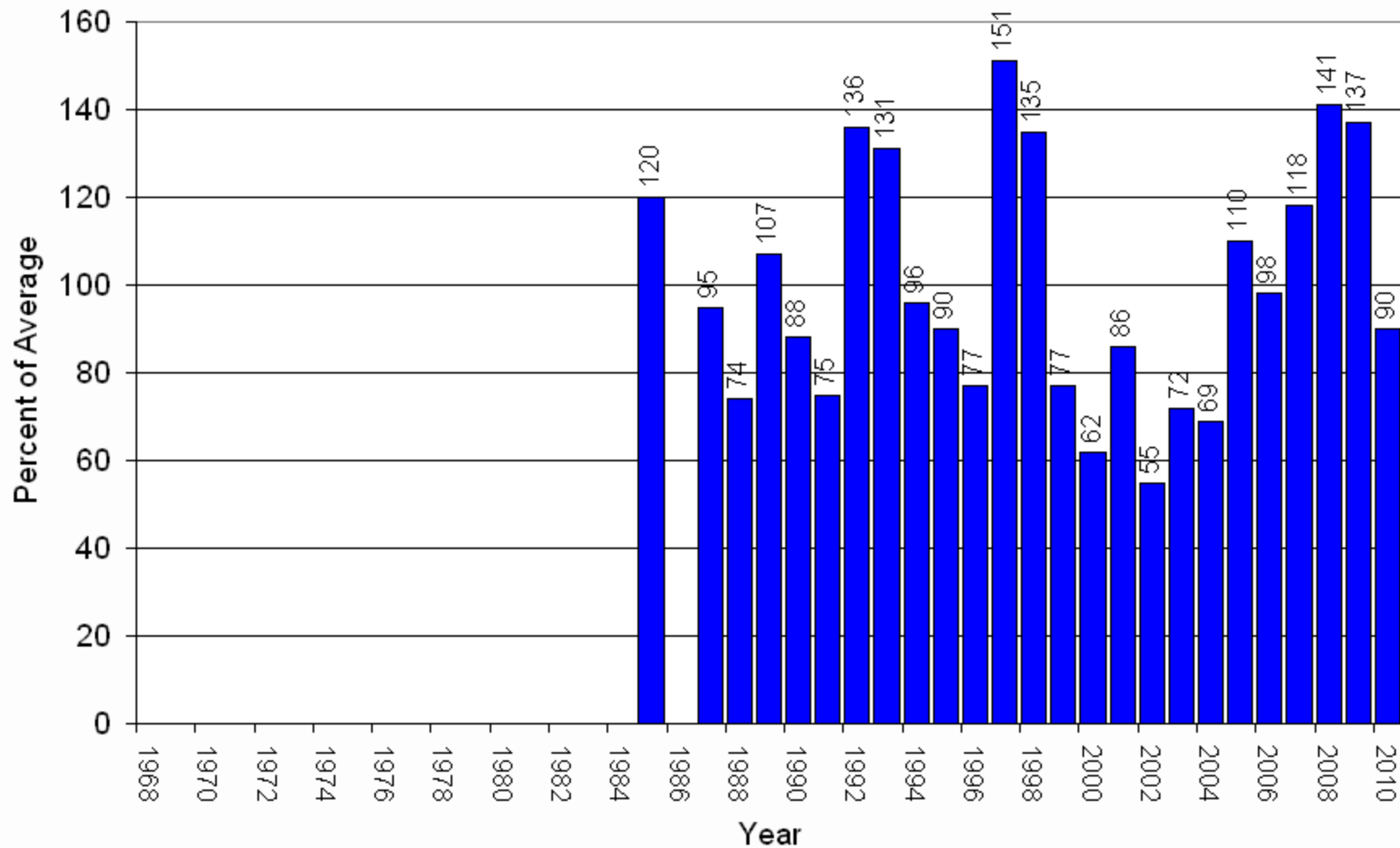
Arkansas River Basin Snowpack Map

*Provisional Data
Subject to Revision*



Current as of January 1, 2010

January 1 Total Arkansas River Basin Snowpack



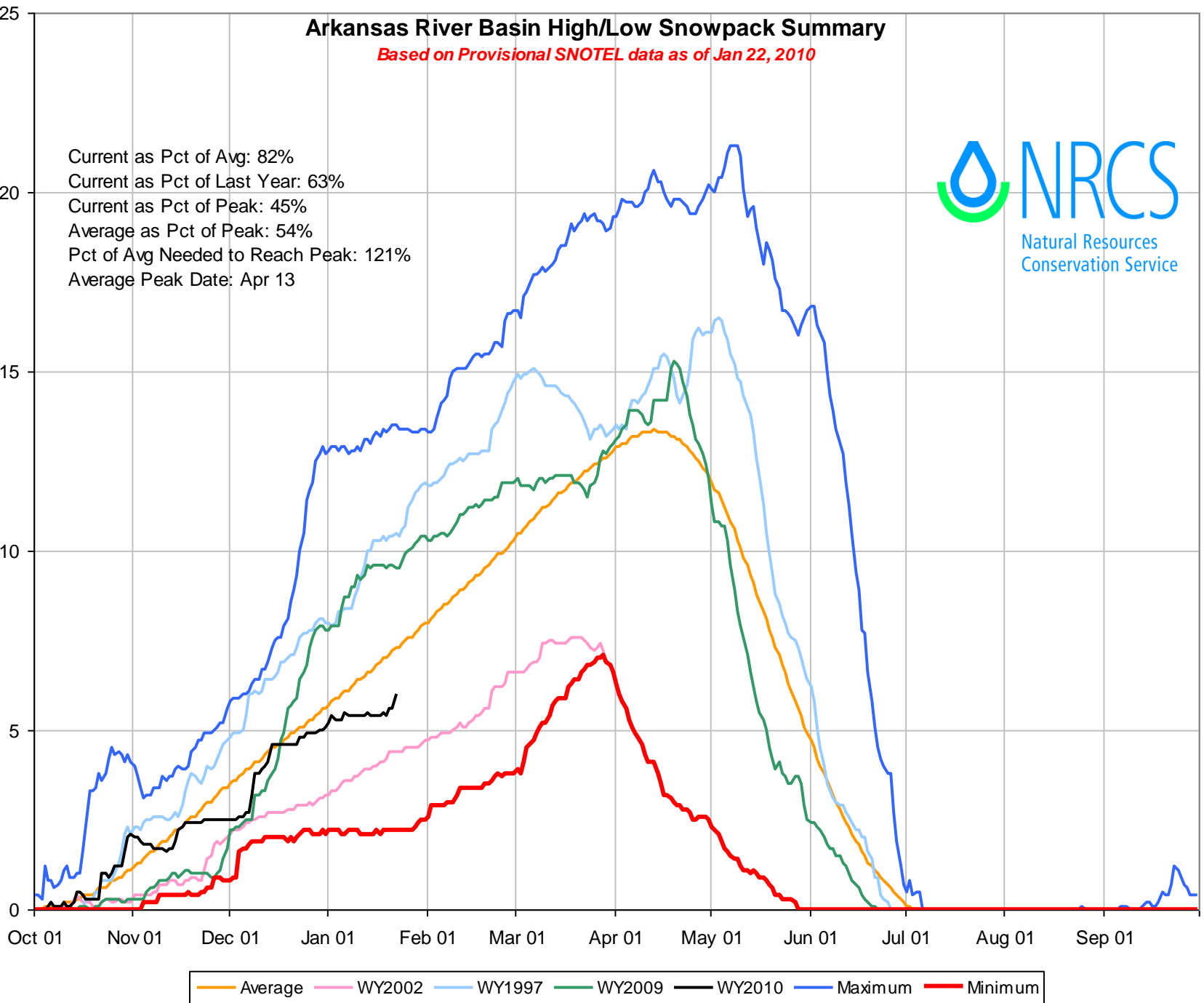
Arkansas River Basin High/Low Snowpack Summary

Based on Provisional SNOTEL data as of Jan 22, 2010

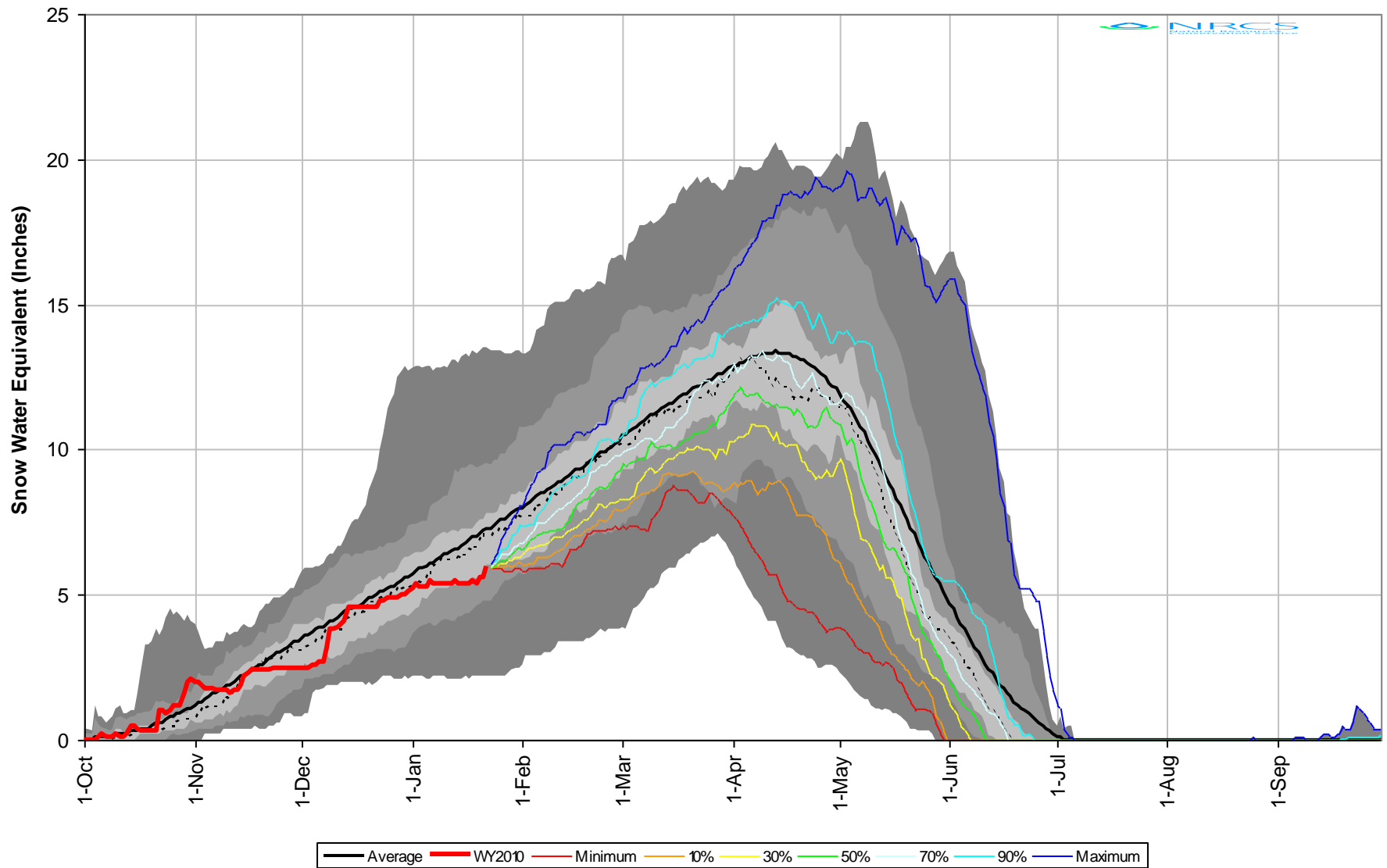


Current as Pct of Avg: 82%
Current as Pct of Last Year: 63%
Current as Pct of Peak: 45%
Average as Pct of Peak: 54%
Pct of Avg Needed to Reach Peak: 121%
Average Peak Date: Apr 13

Snow Water Equivalent (inches)

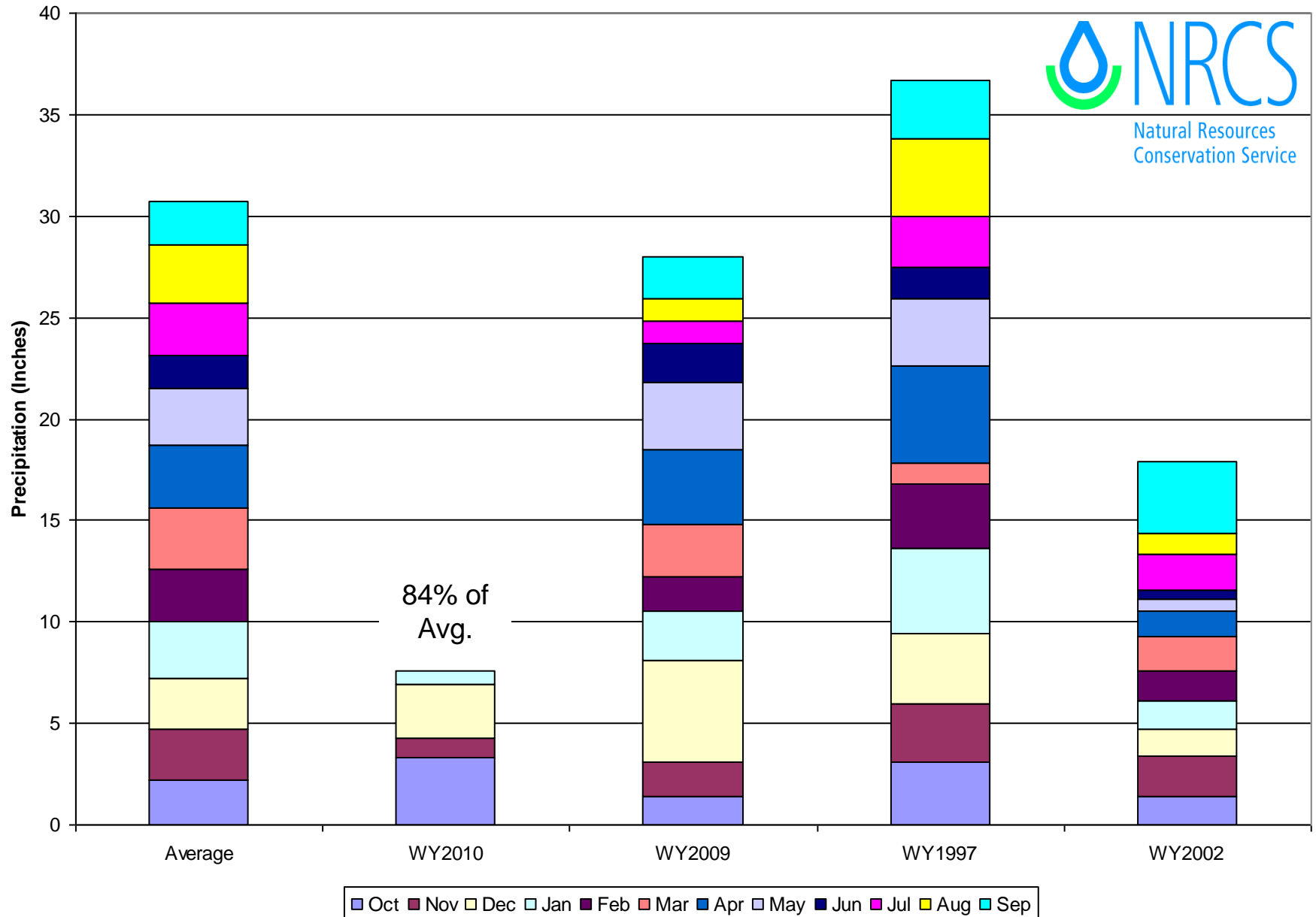


Based on Provisional SNOTEL Data as of Jan 22, 2010



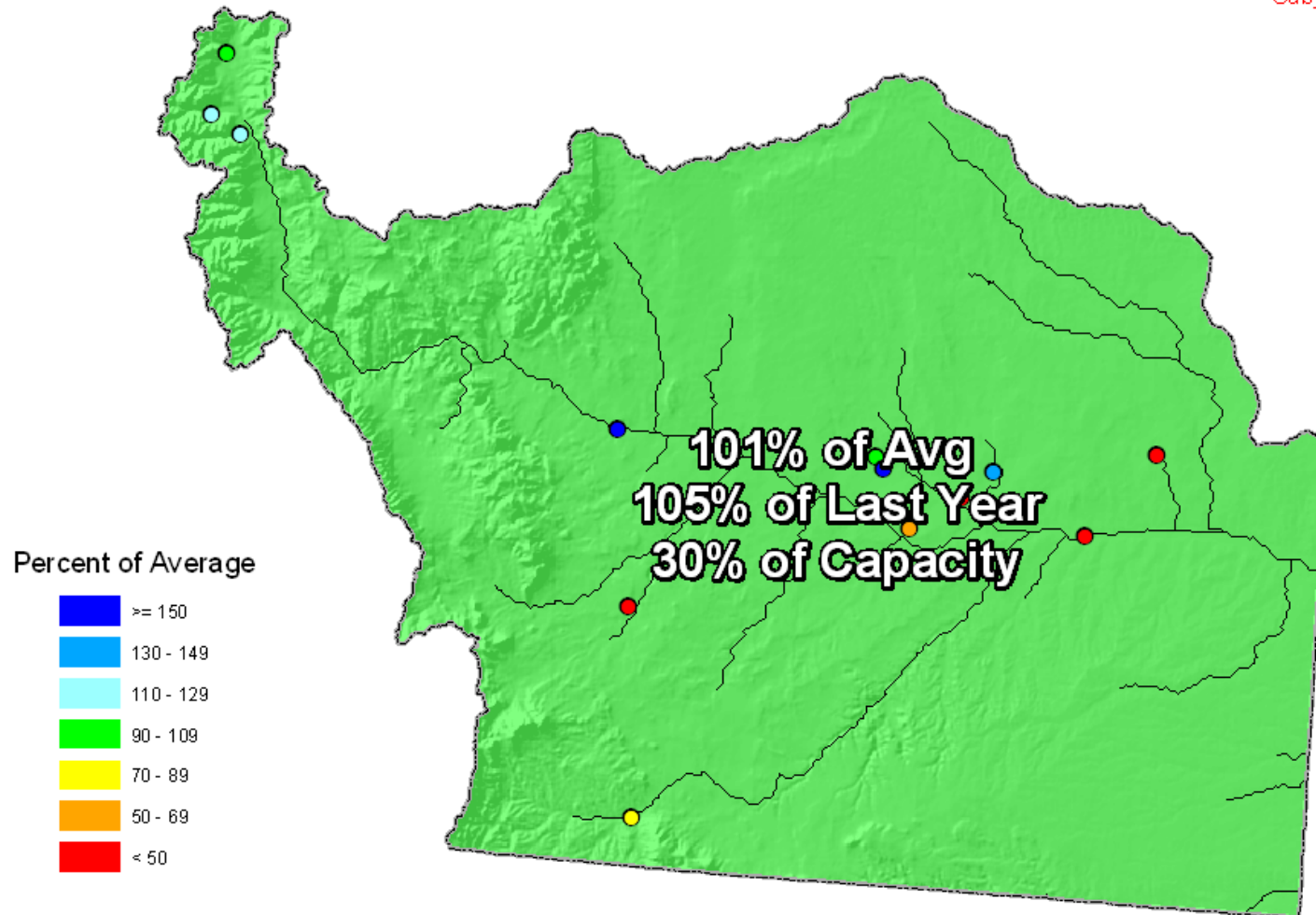
Arkansas River Basin High/Low Monthly Precipitation Summary

Based on Provisional SNOTEL data as of Jan 22, 2010



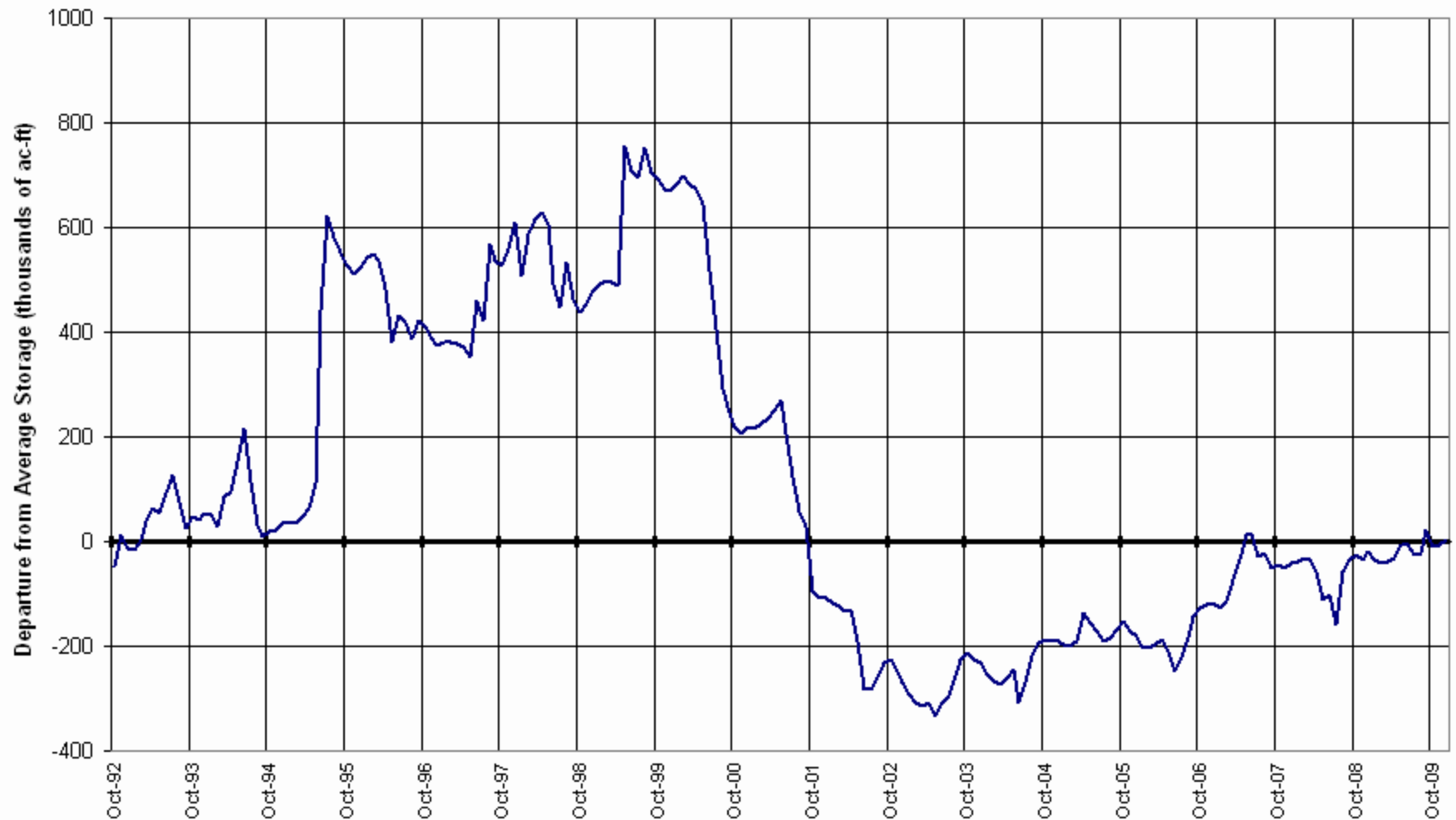
Arkansas River Basin Reservoir Storage Map

*Provisional Data
Subject to Revision*



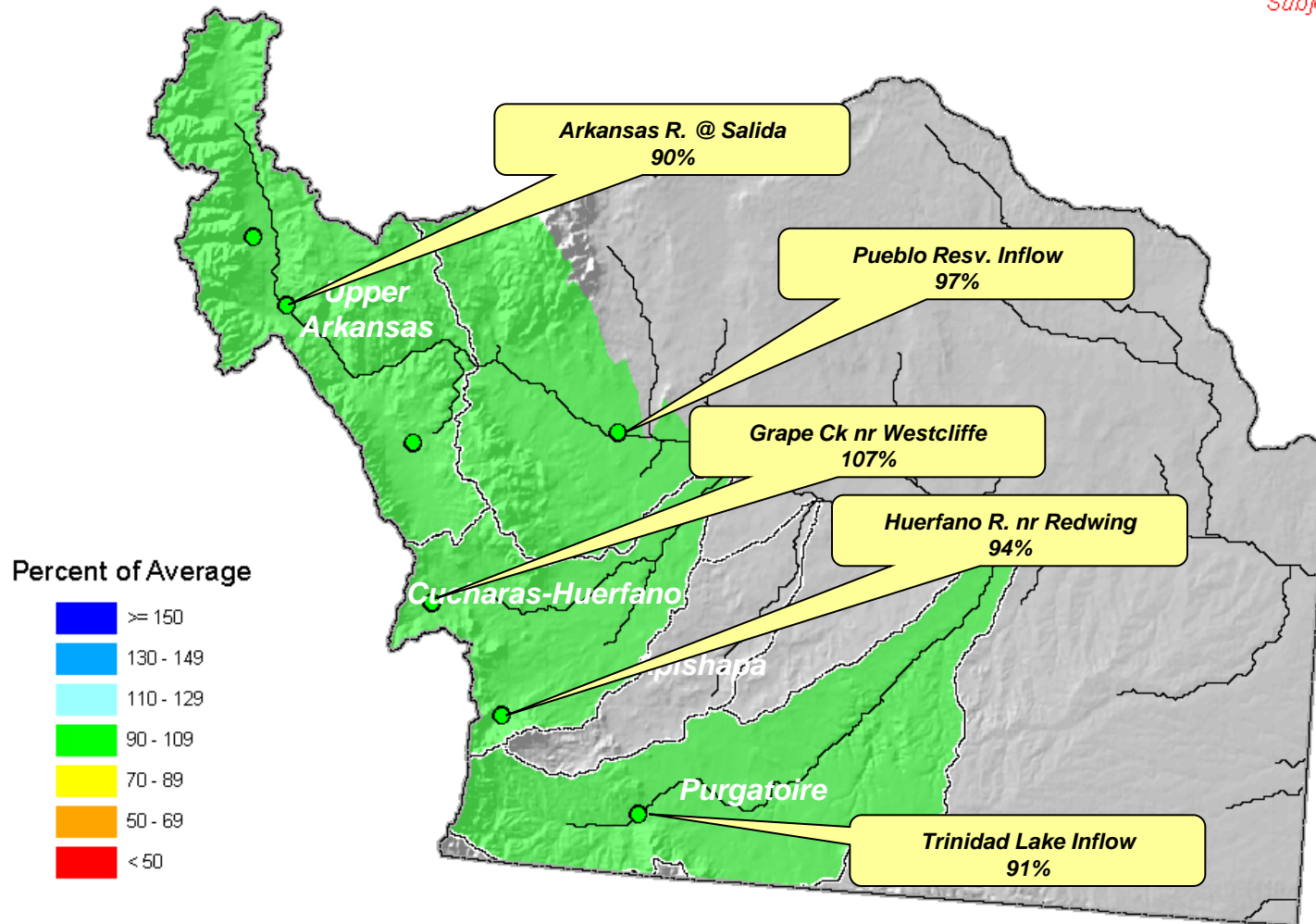
End of December 2009

ARKANSAS RIVER BASIN
Reservoir Storage
Departure from Average



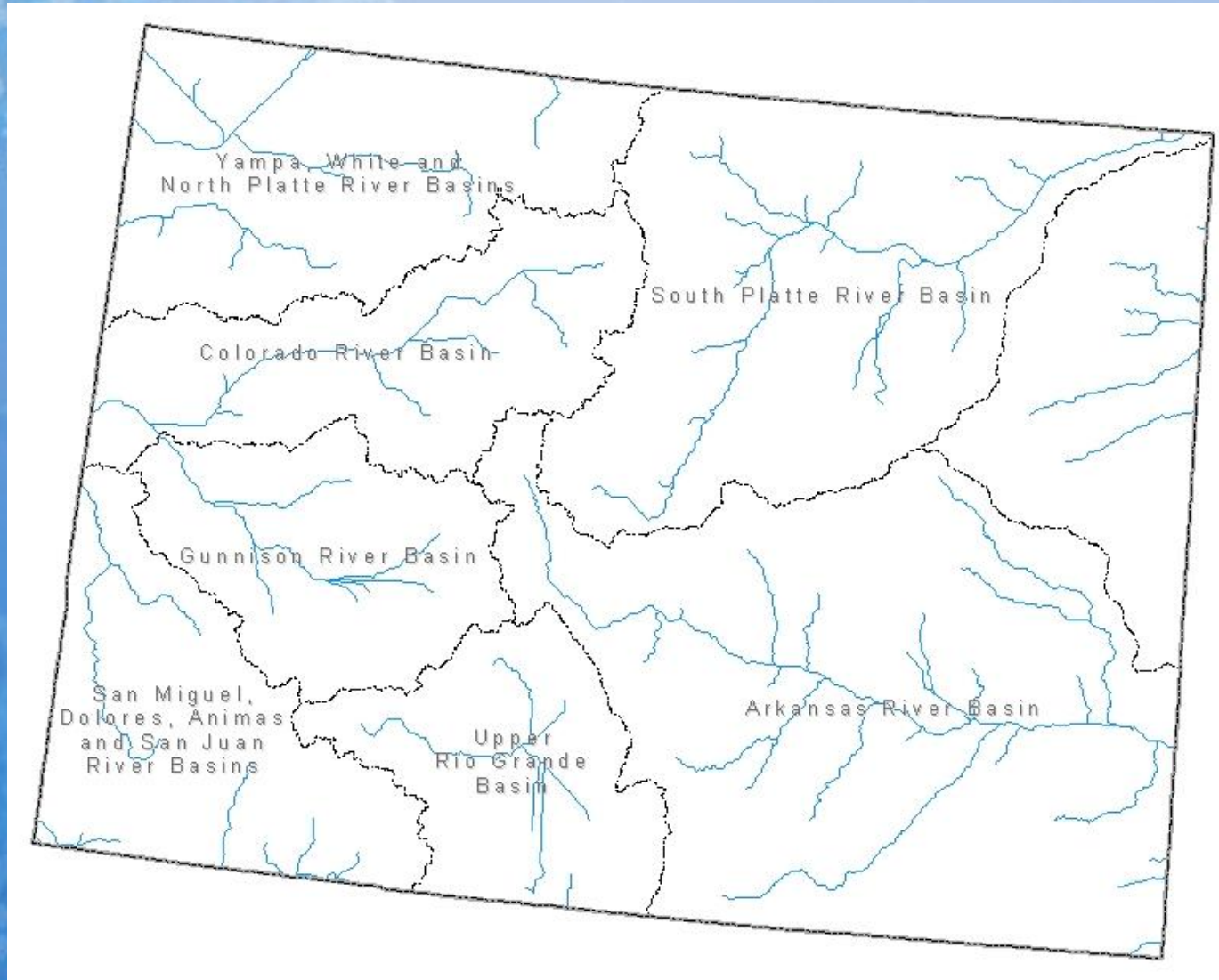
Arkansas River Basin Streamflow Forecast Map

*Provisional Data
Subject to Revision*



Current as of January 1, 2010

Colorado Statewide Summary

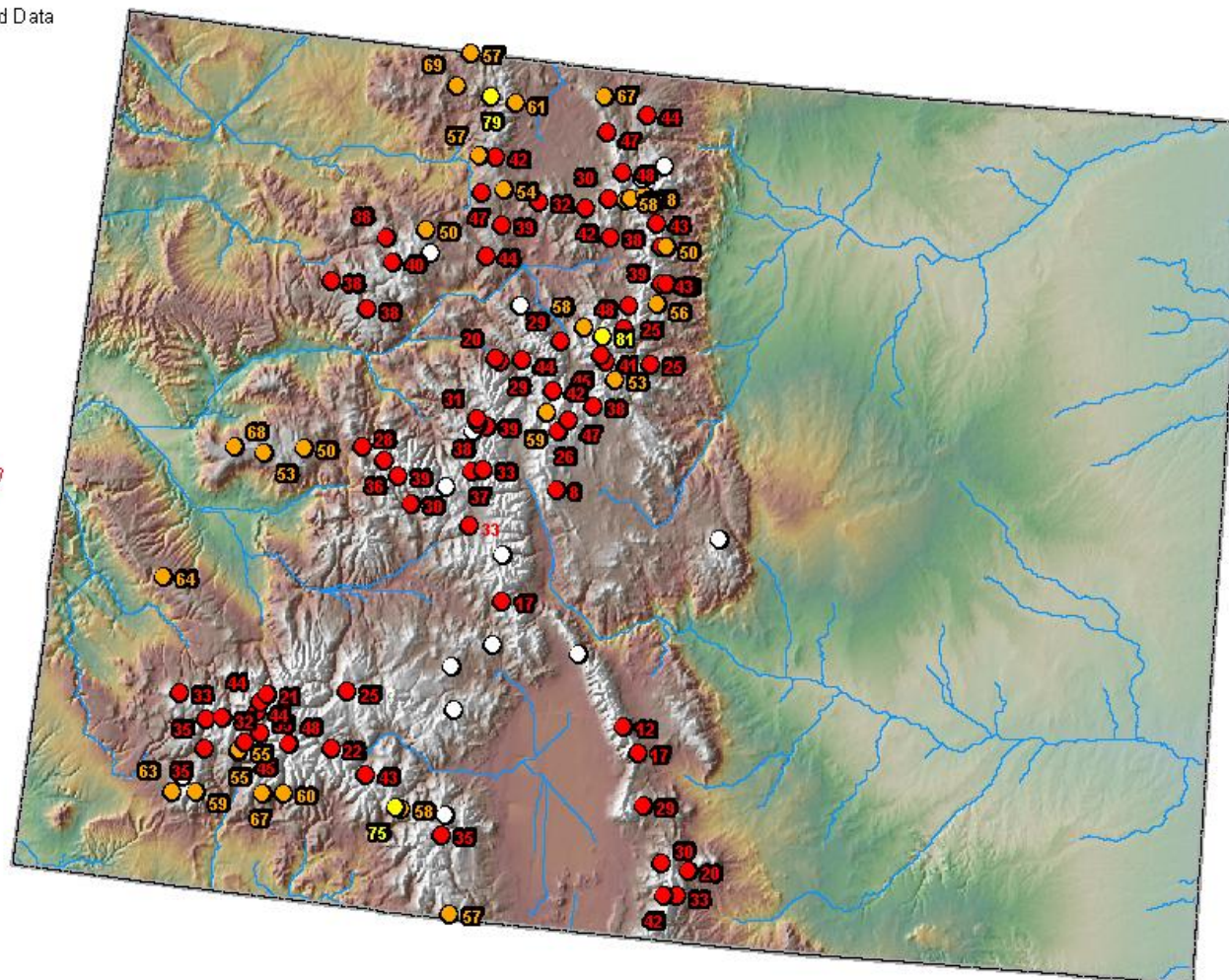


Colorado SNOTEL Month-to-Date Precipitation

Percent of Average

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

*Provisional Data
Subject to Revision*



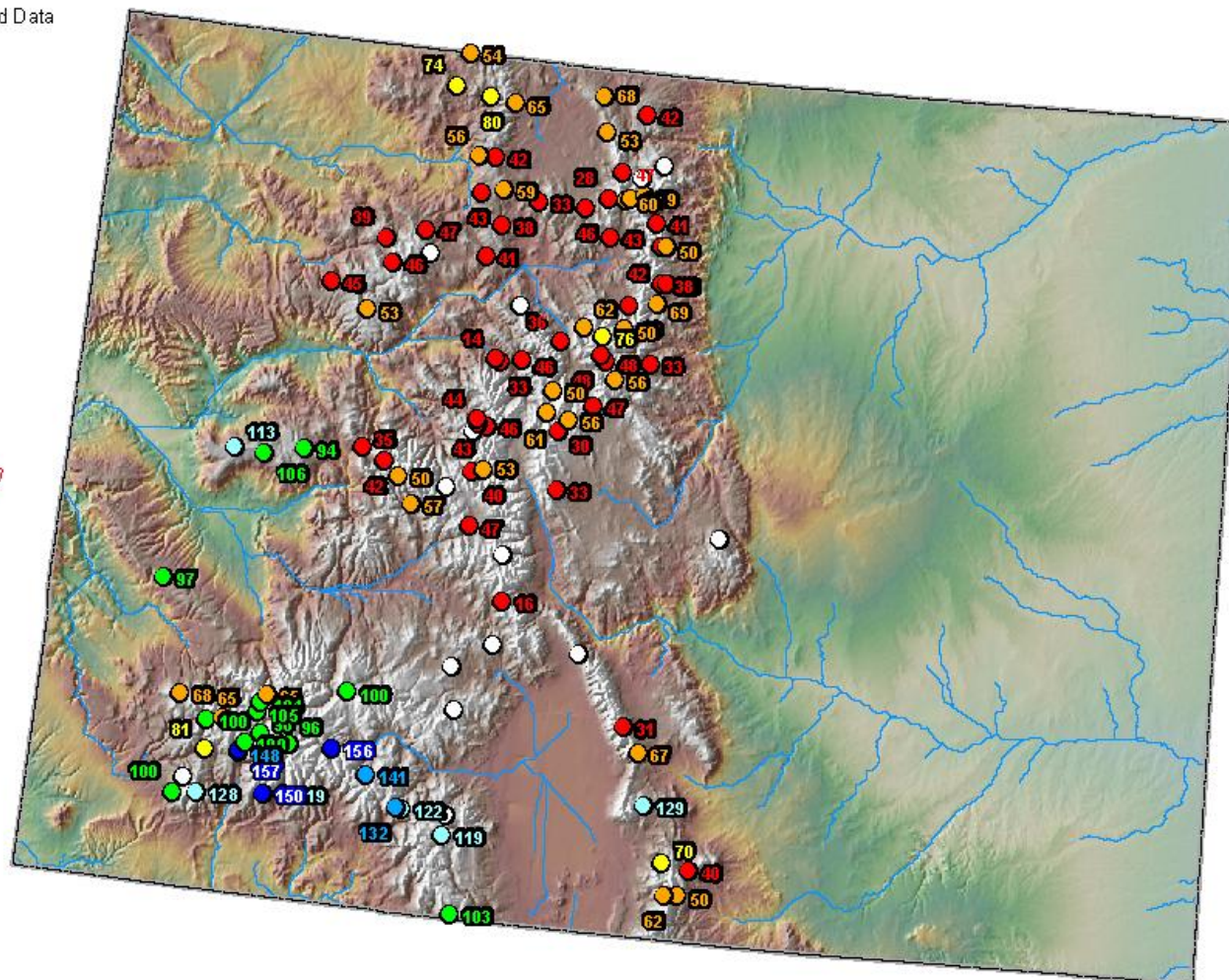
Current as of Jan 21, 2010

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

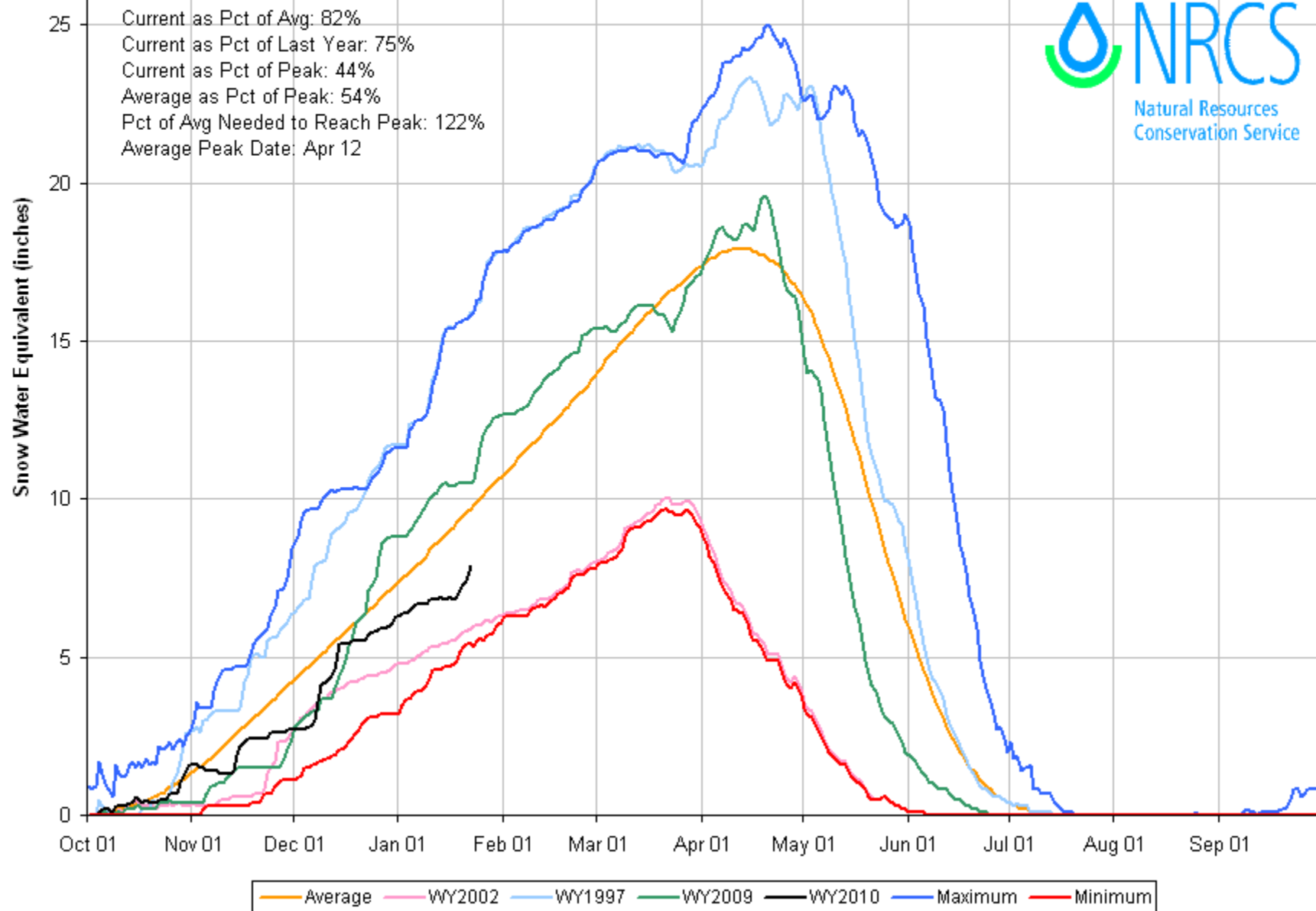
*Provisional Data
Subject to Revision*



Current as of Jan 22, 2010

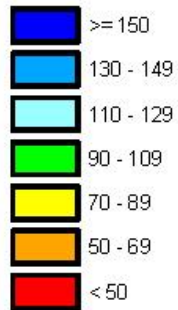
Colorado Statewide High/Low Snowpack Summary

Based on Provisional SNOTEL data as of Jan 22, 2010

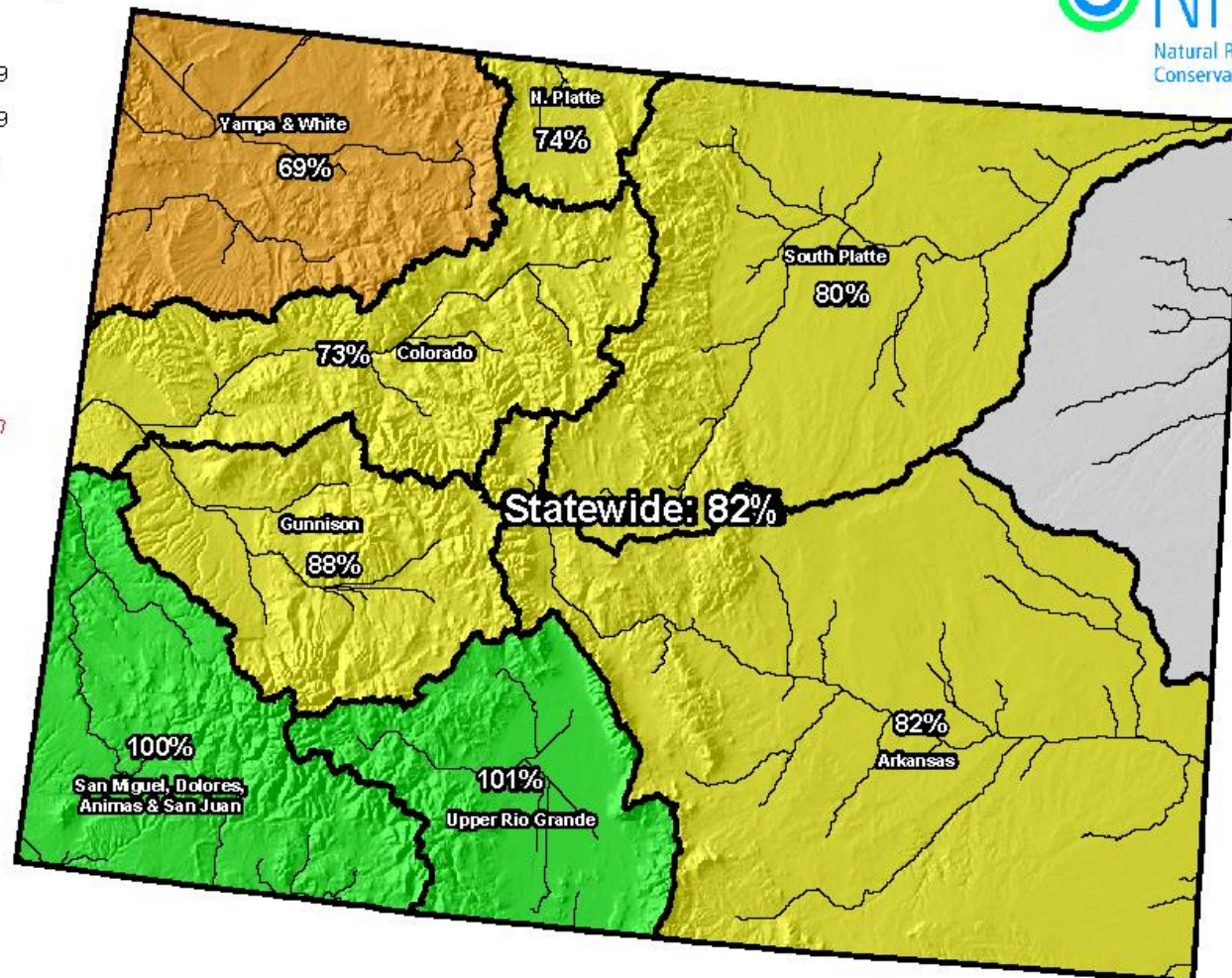


Colorado SNOTEL Snowpack Update Map

Percent of Average



*Provisional Data
Subject to Revision*

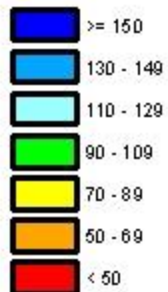


Current as of Jan 22, 2010

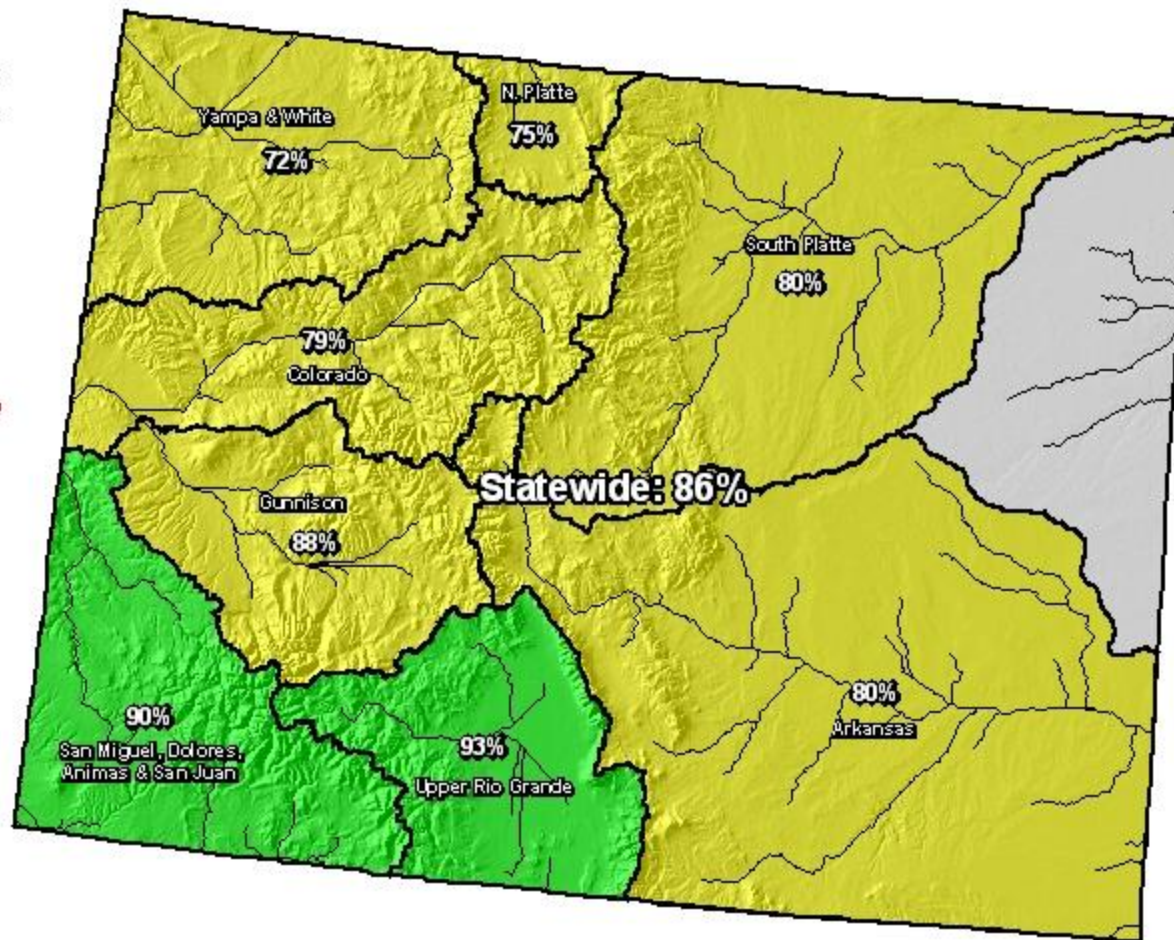
*Data may not provide a valid measure of conditions

Colorado SNOTEL April 1 Snowpack Projection Map*

Percent of Average



*Provisional Data
Subject to Revision*

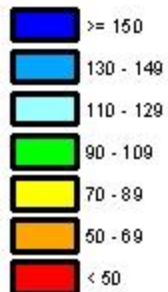


Current as of Jan 22, 2010

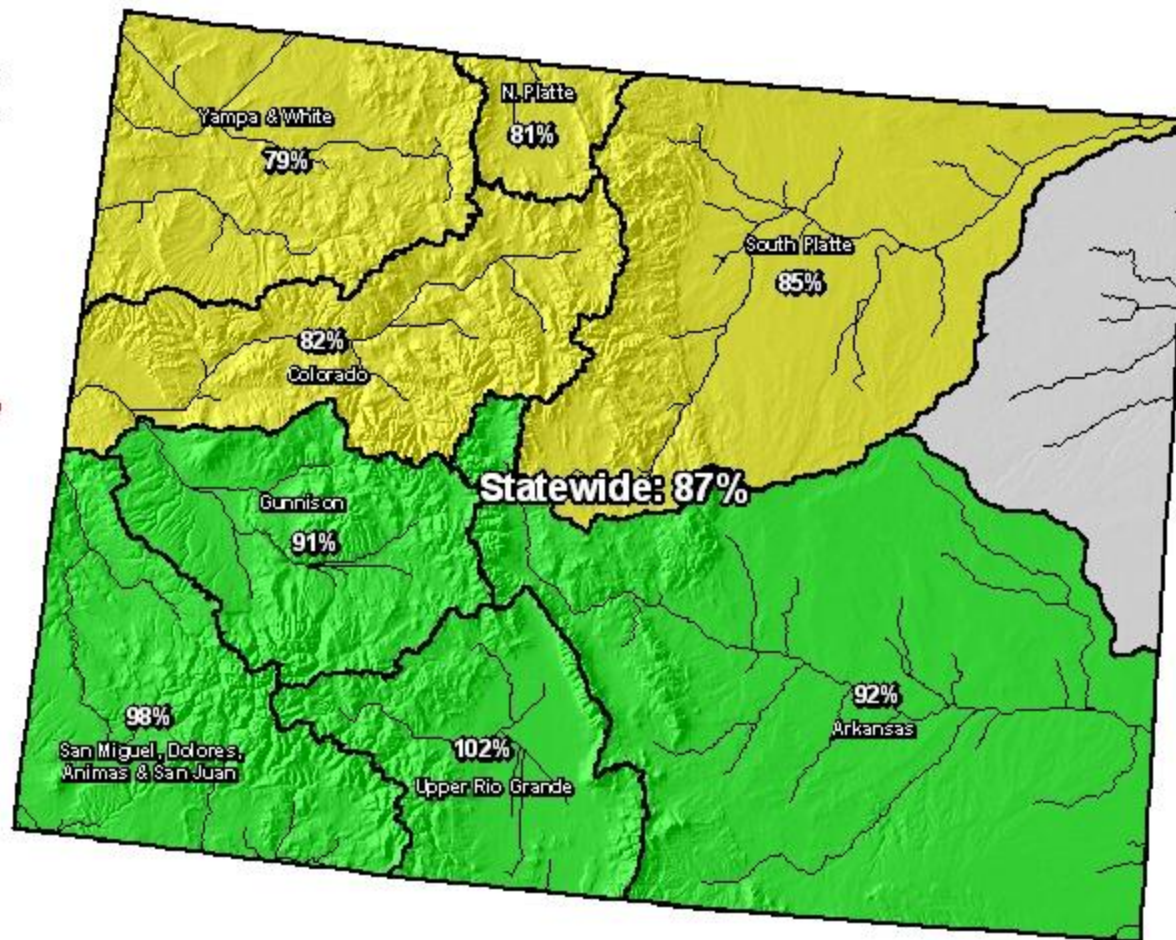
*Based on 30% Non-Exceedence Projections

Colorado SNOTEL April 1 Snowpack Projection Map*

Percent of Average



*Provisional Data
Subject to Revision*

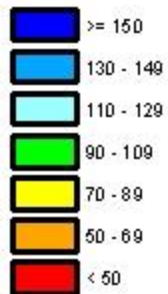


Current as of Jan 22, 2010

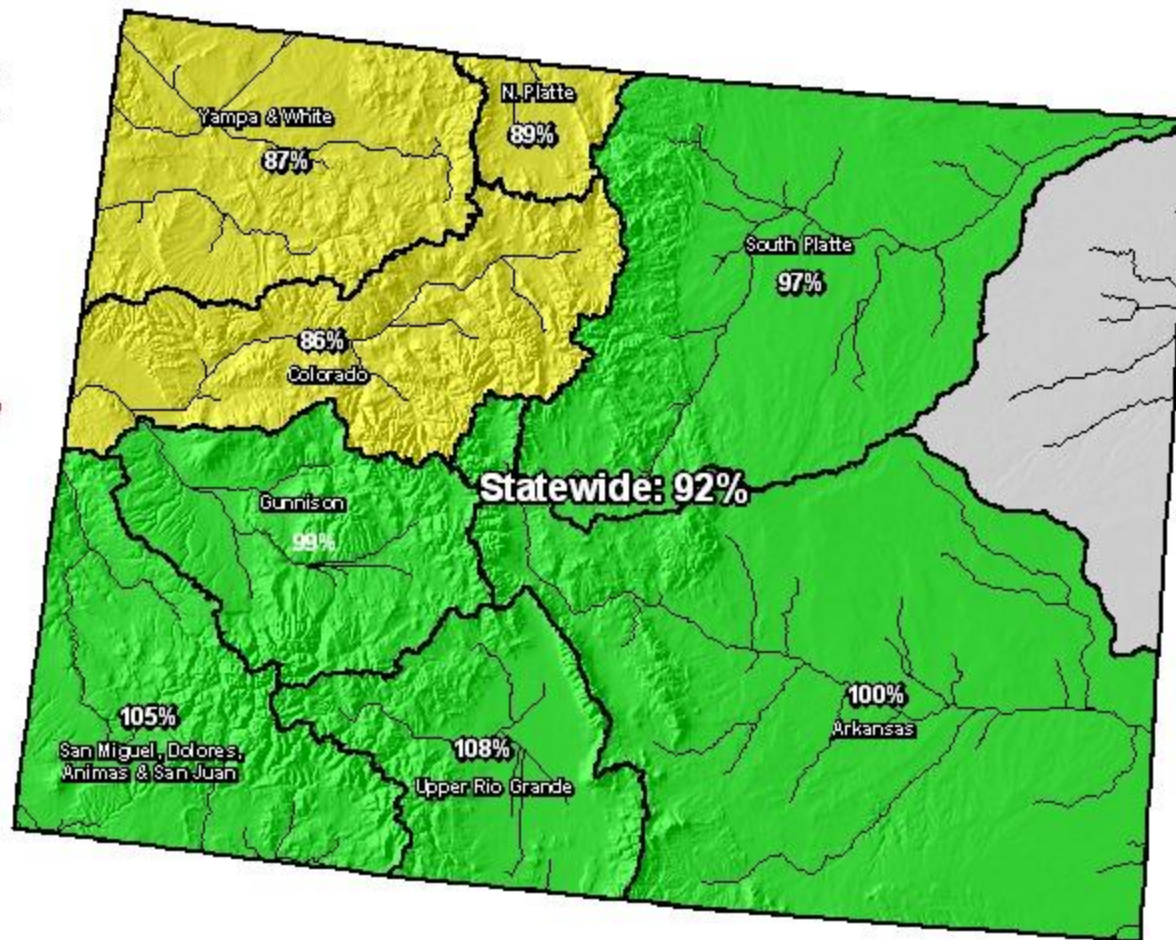
*Based on 50% Non-Exceedence Projections

Colorado SNOTEL April 1 Snowpack Projection Map*

Percent of Average



*Provisional Data
Subject to Revision*



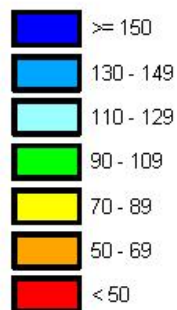
Current as of Jan 22, 2010

*Based on 70% Non-Exceedence Projections

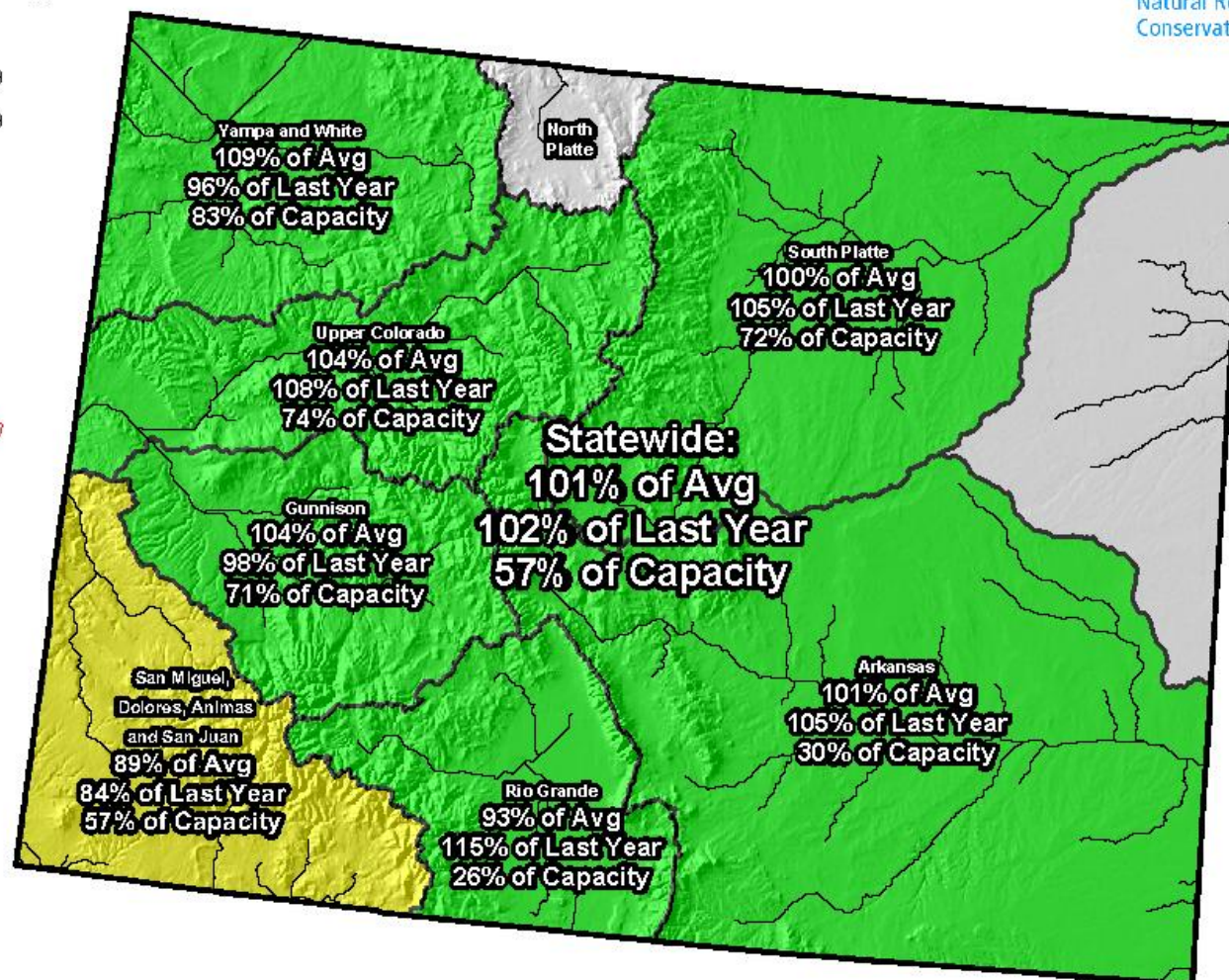
Colorado Reservoir Storage Map



Percent of Average



*Provisional Data
Subject to Revision*

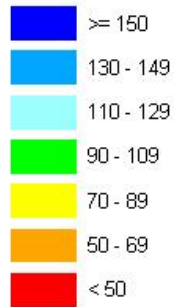


End of December 2009

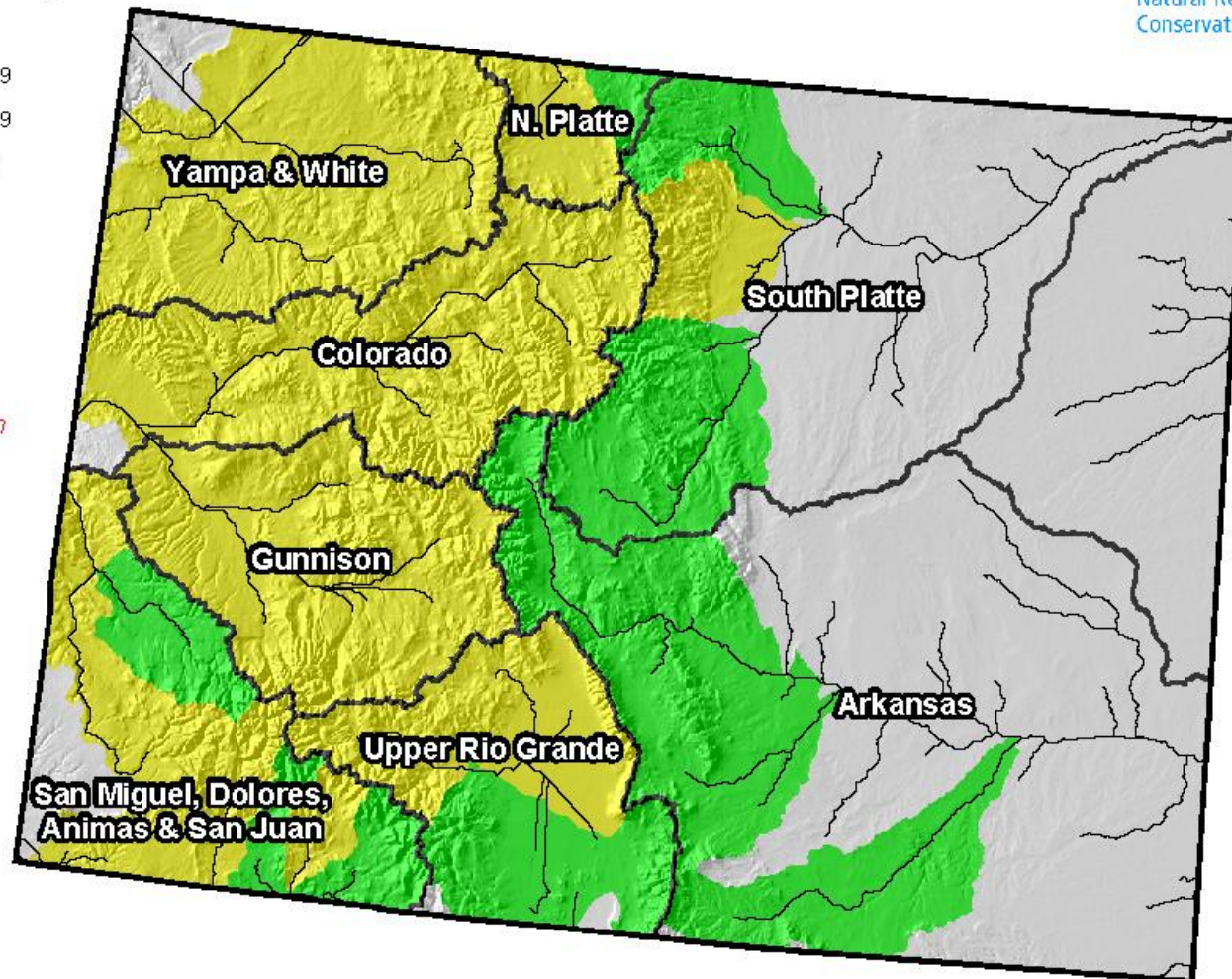
Colorado Streamflow Forecast Map



Percent of Average



*Provisional Data
Subject to Revision*

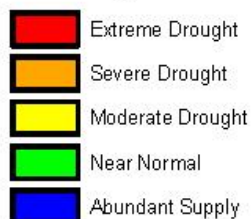


Current as of January 1, 2010

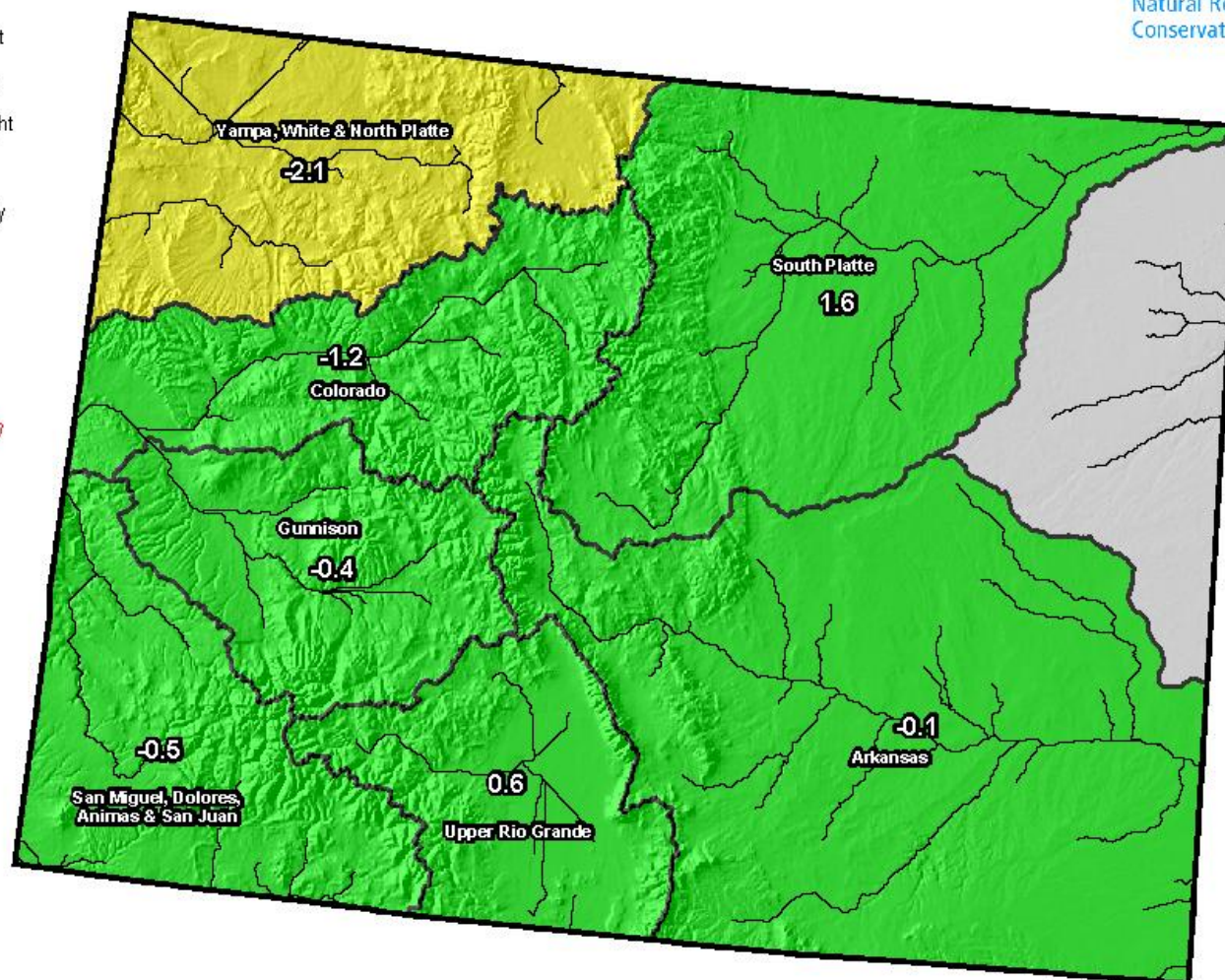
Colorado Surface Water Supply Index (SWSI) Map



Legend



*Provisional Data
Subject to Revision*



Current as of January 1, 2010