

NRCS – Snow Survey & Water Supply Forecasting

Mike Gillespie

Joint Water Availability Task Force and
Colorado Flood Task Force Meeting
April 20, 2010

The 2008 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.

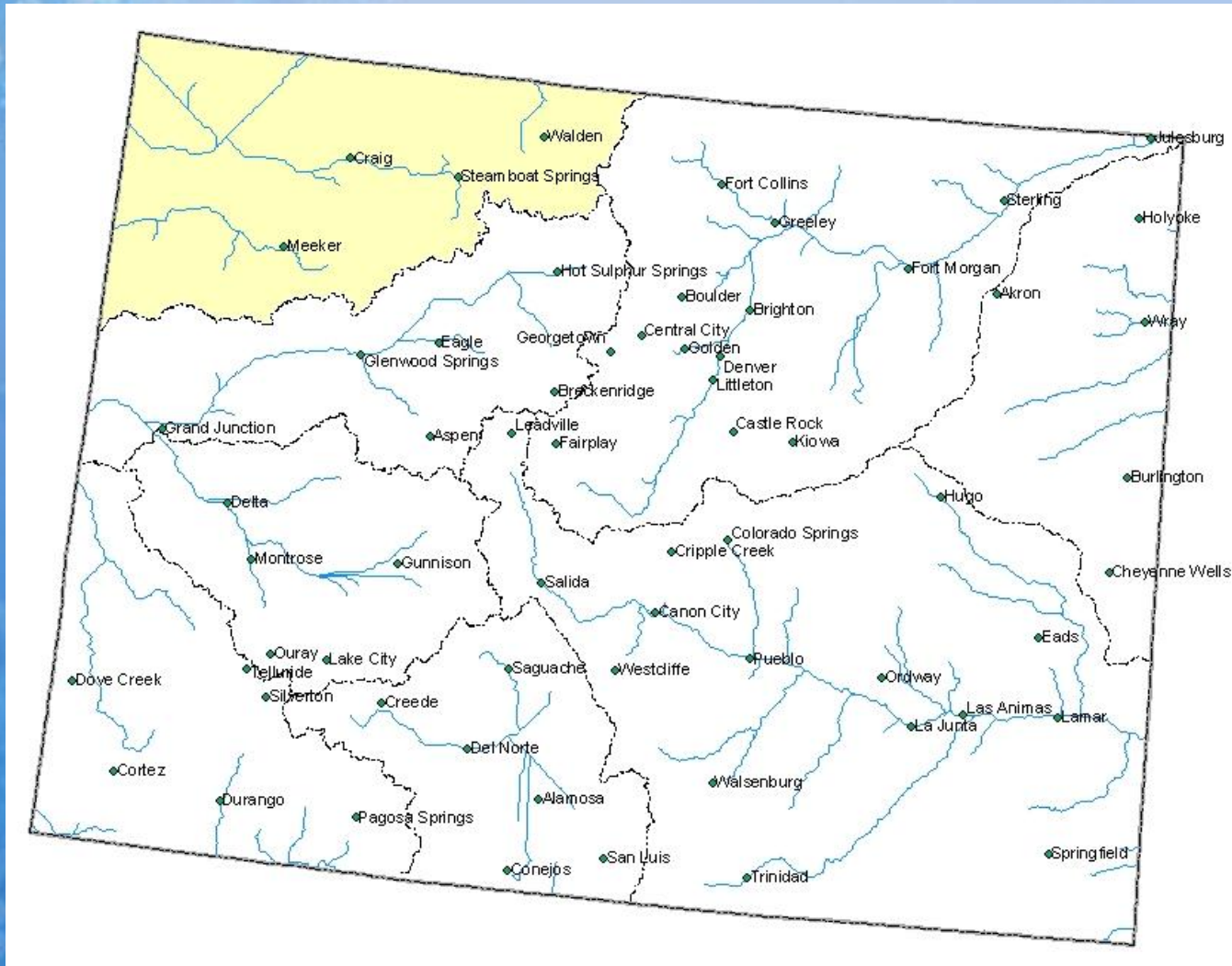
December – Cold again with improved snowfall especially across southern basins.

January – Warm and dry with a comeback during the last 10 days

February and March – El Niño pattern continues...

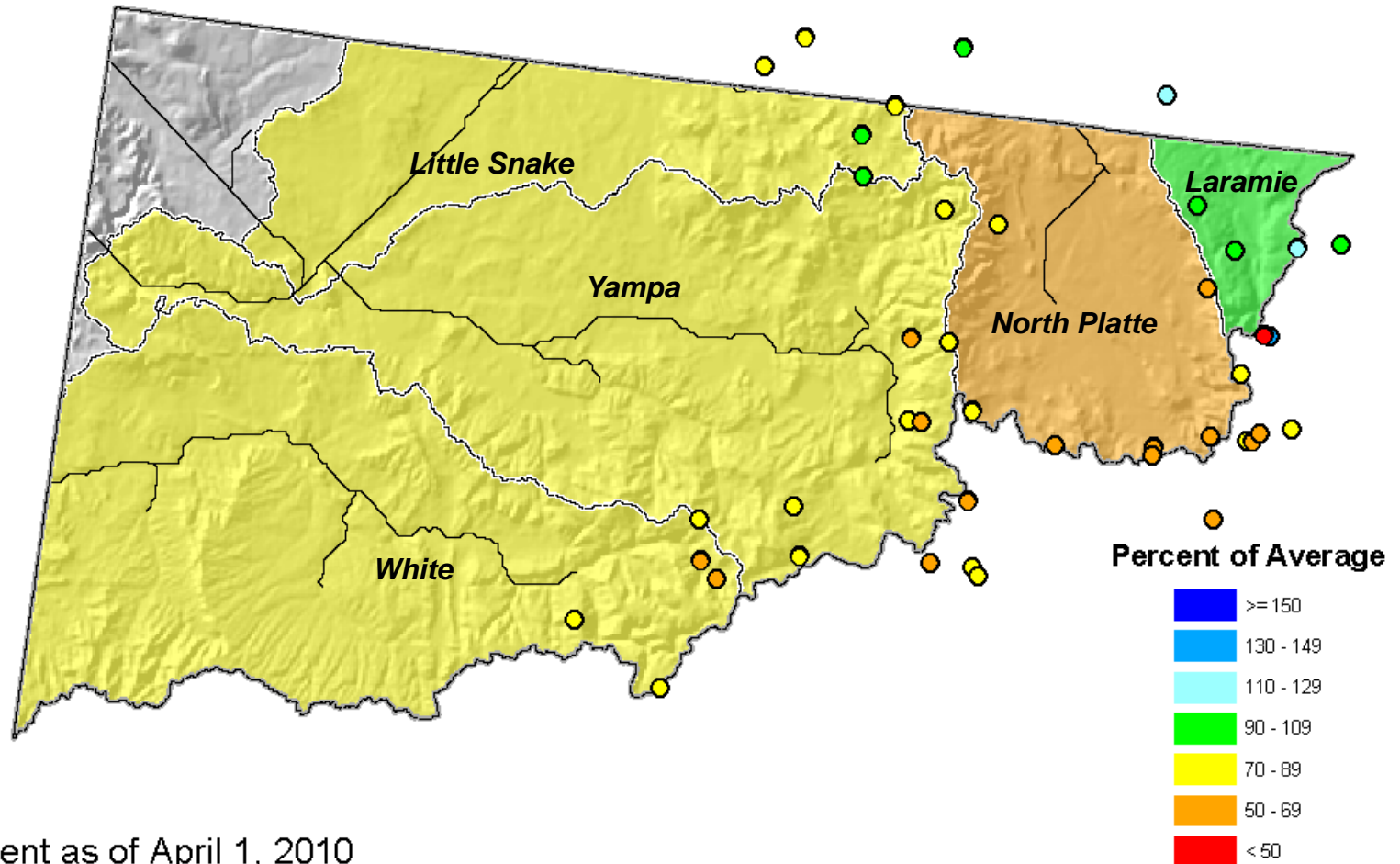
April – Northern Shift to El Niño...Too little too late?

Yampa, White & North Platte River Basins Summary



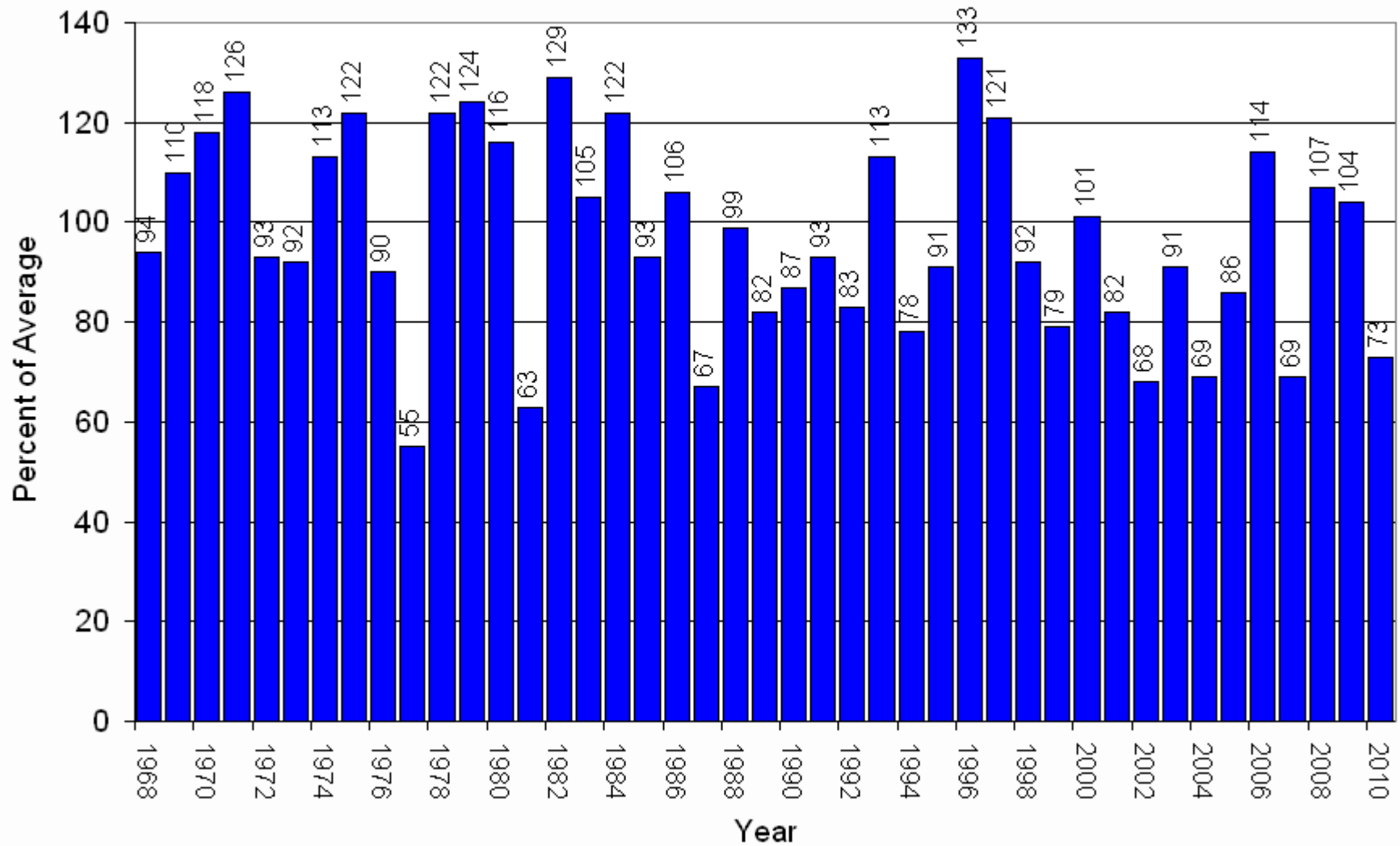
Yampa, White and North Platte River Basins Snowpack Map

*Provisional Data
Subject to Revision*



Current as of April 1, 2010

April 1 Total Yampa & White River Basins Snowpack



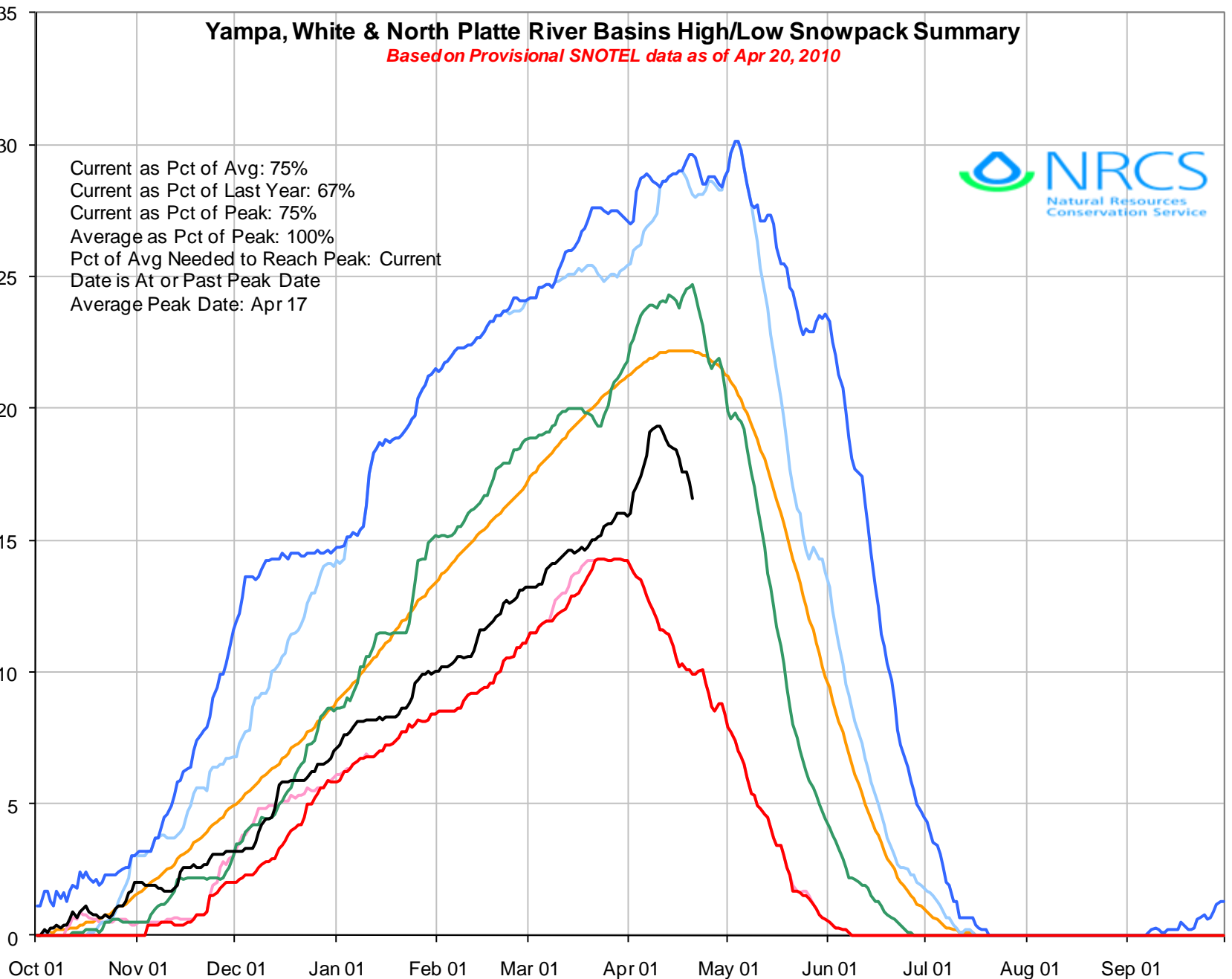
Yampa, White & North Platte River Basins High/Low Snowpack Summary

Based on Provisional SNOTEL data as of Apr 20, 2010



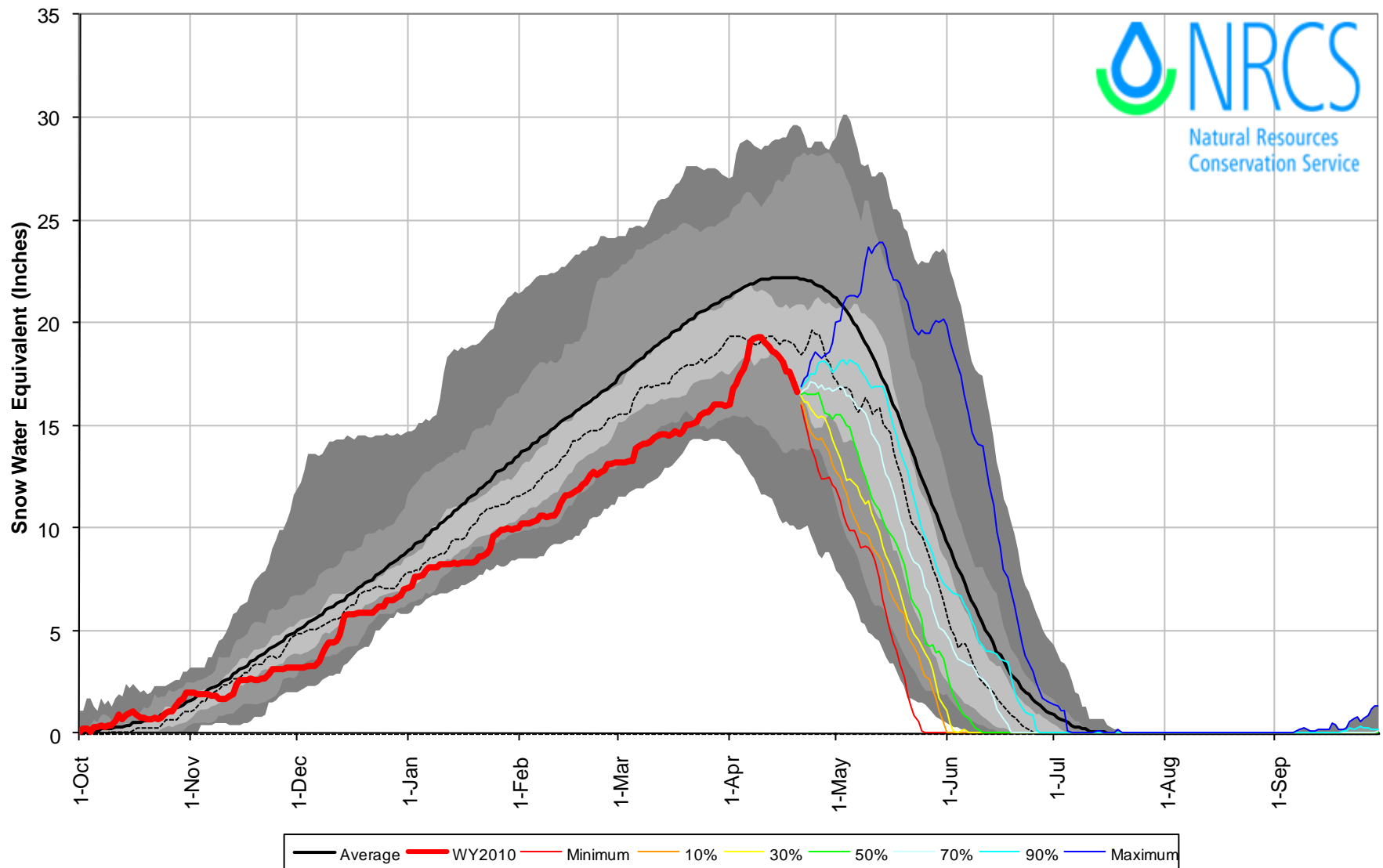
Current as Pct of Avg: 75%
Current as Pct of Last Year: 67%
Current as Pct of Peak: 75%
Average as Pct of Peak: 100%
Pct of Avg Needed to Reach Peak: Current
Date is At or Past Peak Date
Average Peak Date: Apr 17

Snow Water Equivalent (inches)



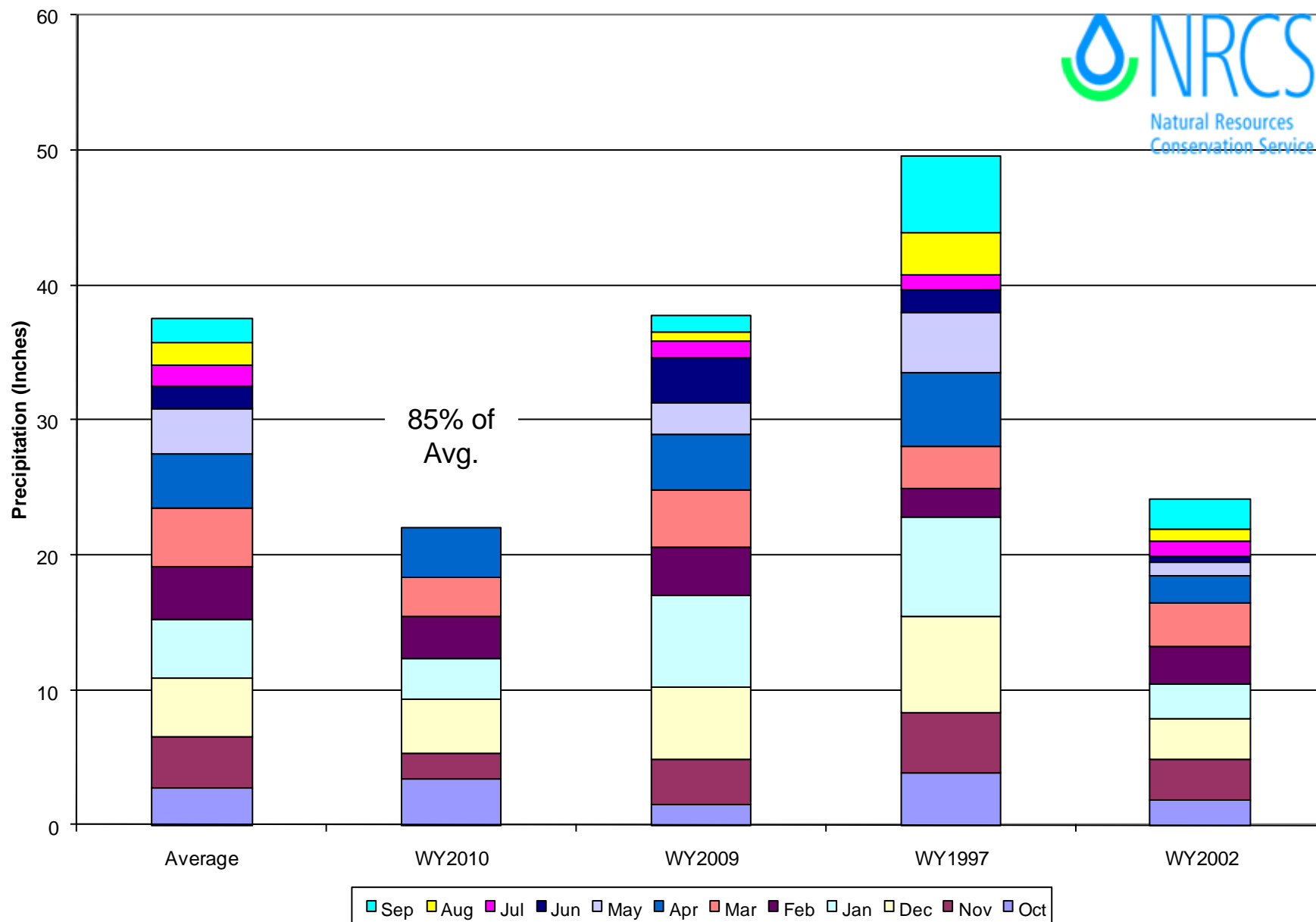
Average WY2002 WY1997 WY2009 WY2010 Maximum Minimum

Based on Provisional SNOTEL Data as of Apr 20, 2010



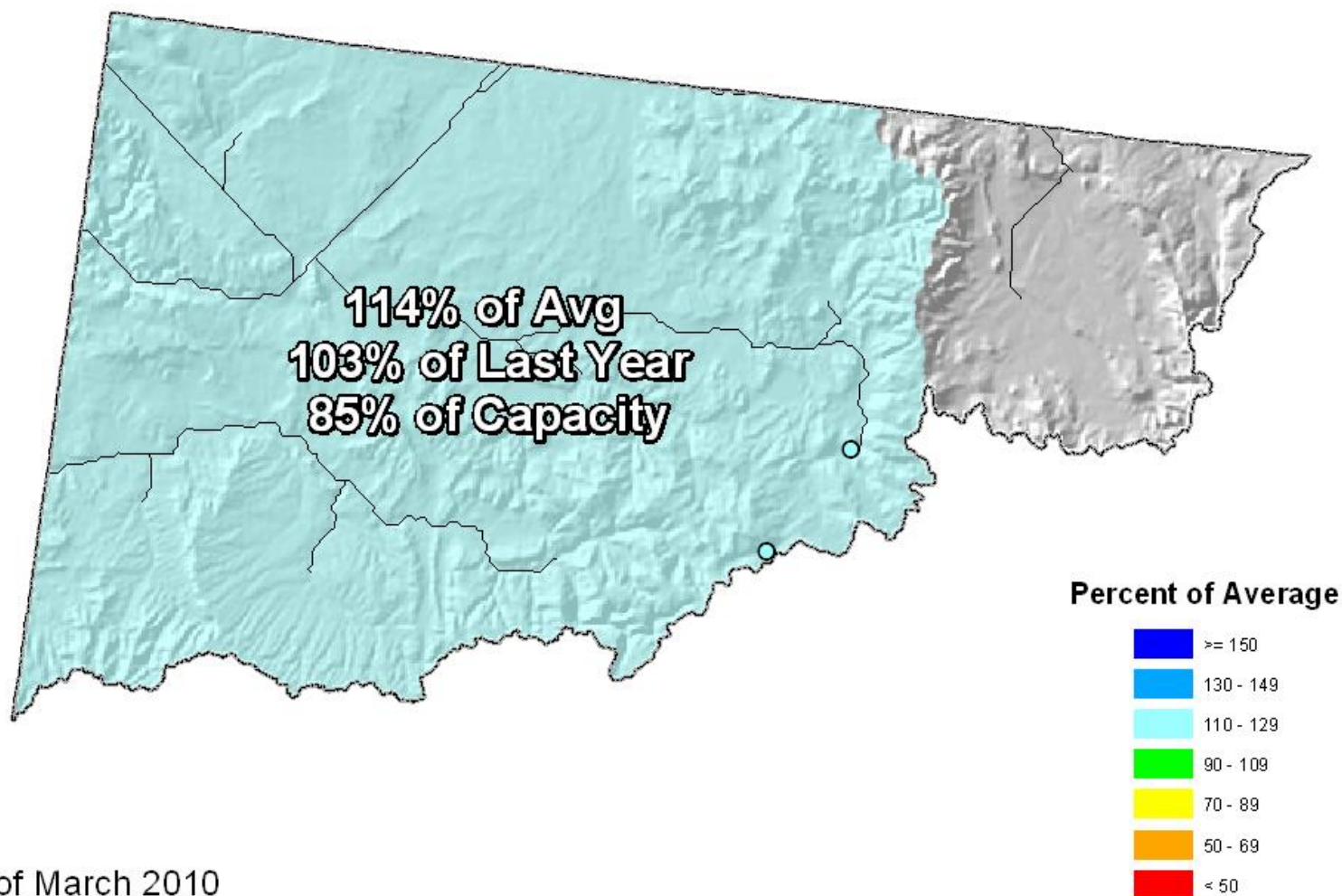
Yampa and White River Basins High/Low Monthly Precipitation Summary

Based on Provisional SNOTEL data as of Apr 20, 2010



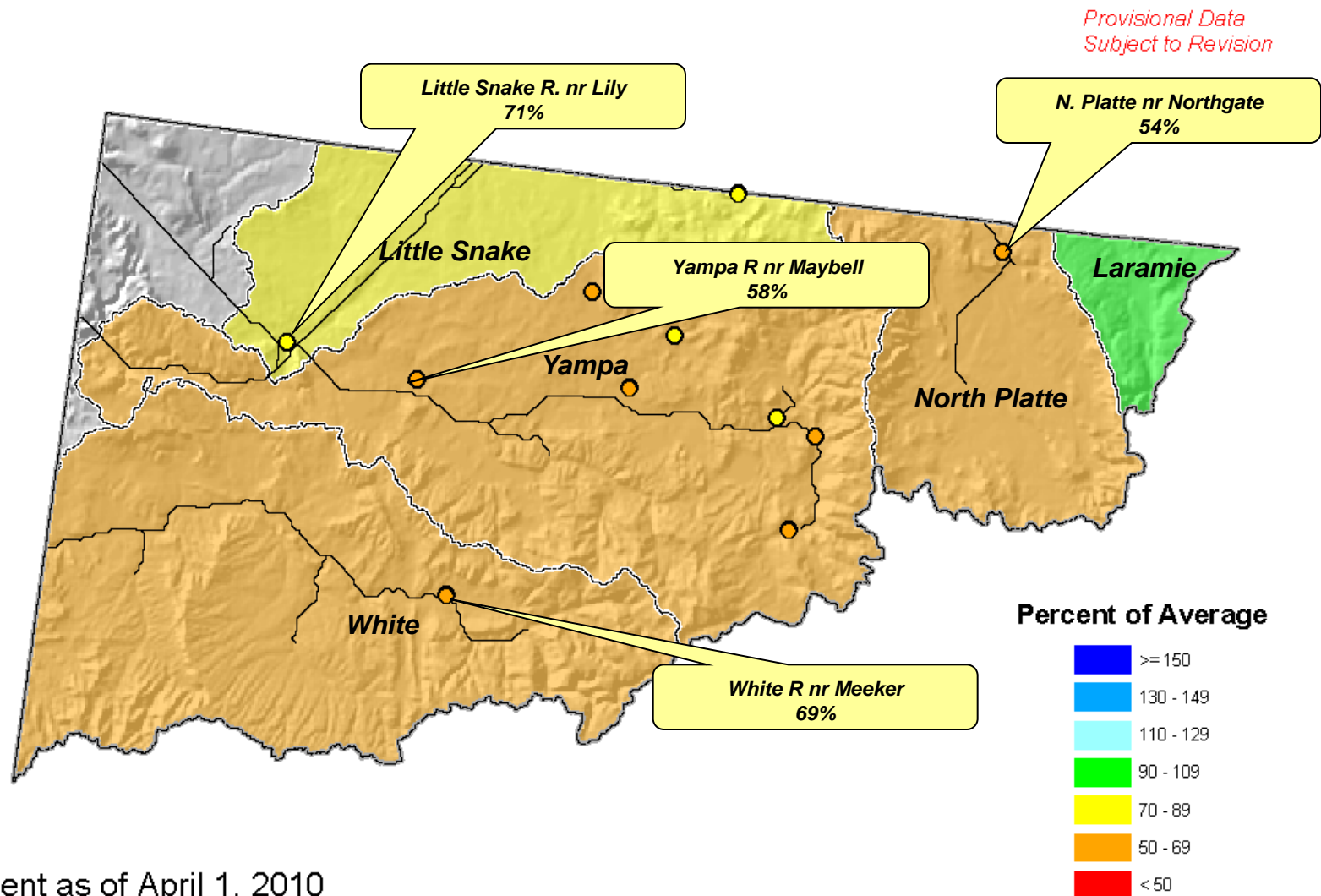
Yampa & White River Basins Reservoir Storage Map

*Provisional Data
Subject to Revision*



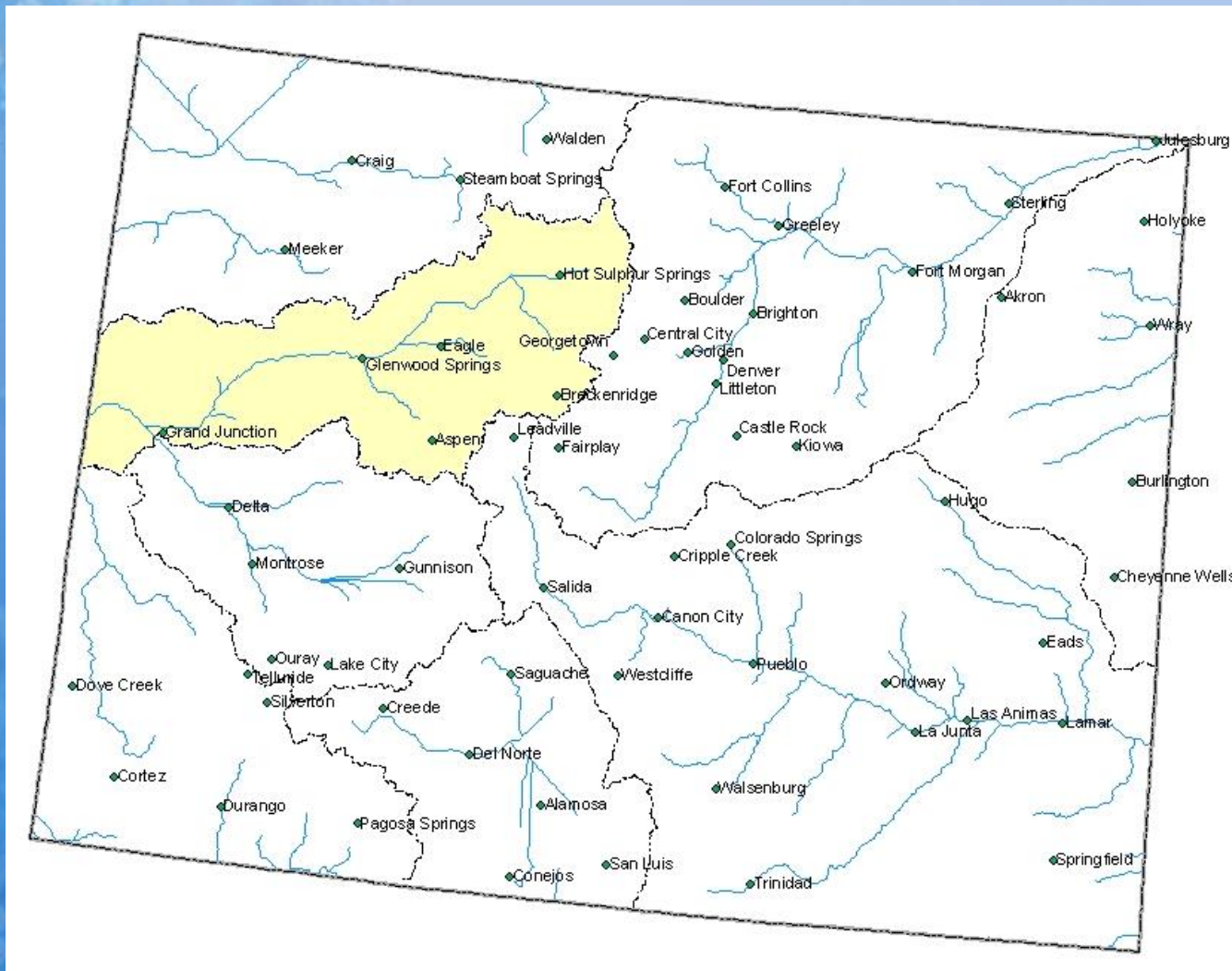
End of March 2010

Yampa, White and North Platte River Basins Streamflow Map



Current as of April 1, 2010

Colorado River Basin Summary

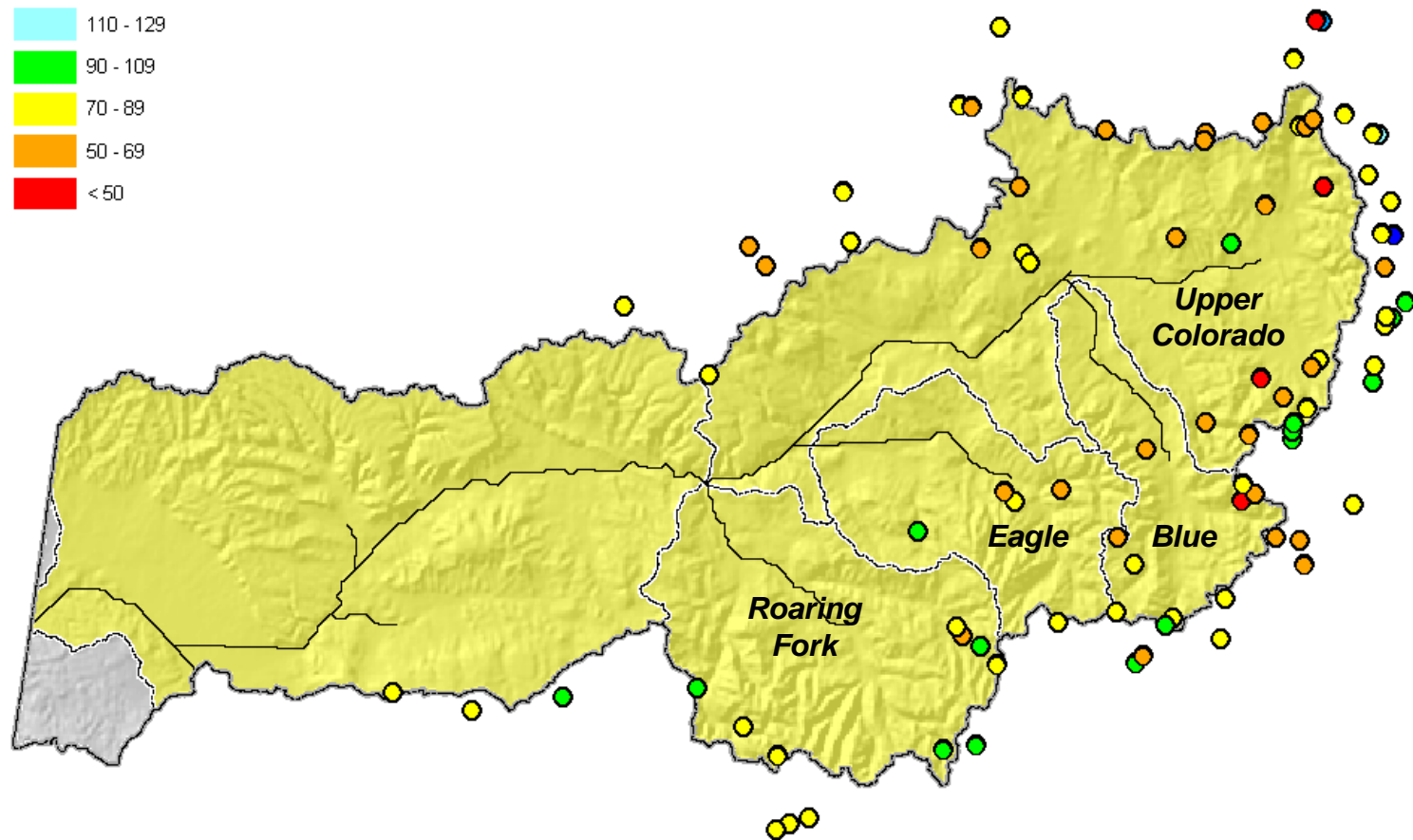


Colorado River Basin Snowpack Map

Percent of Average

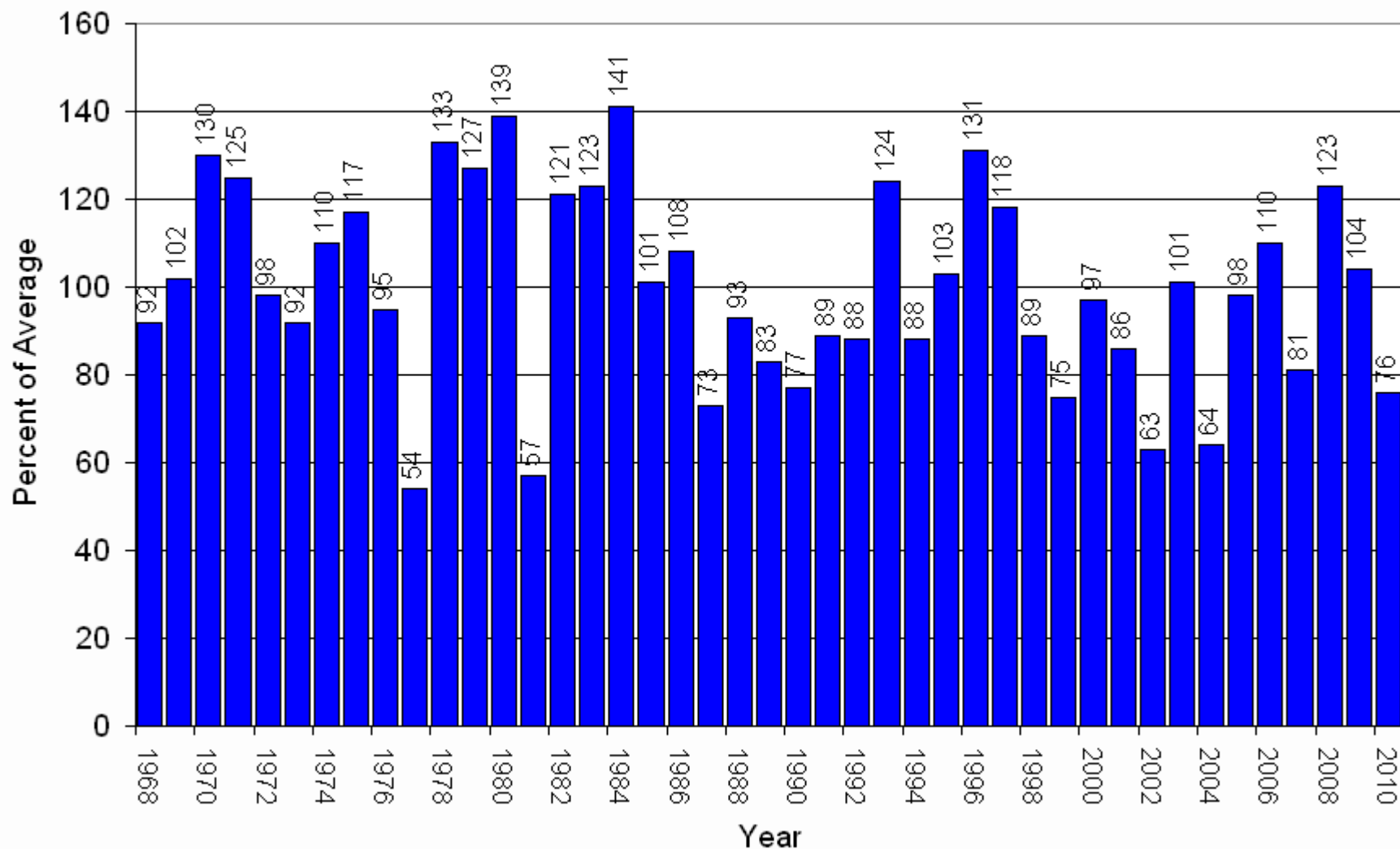


*Provisional Data
Subject to Revision*



Current as of April 1, 2010

April 1 Total Colorado River Basin Snowpack

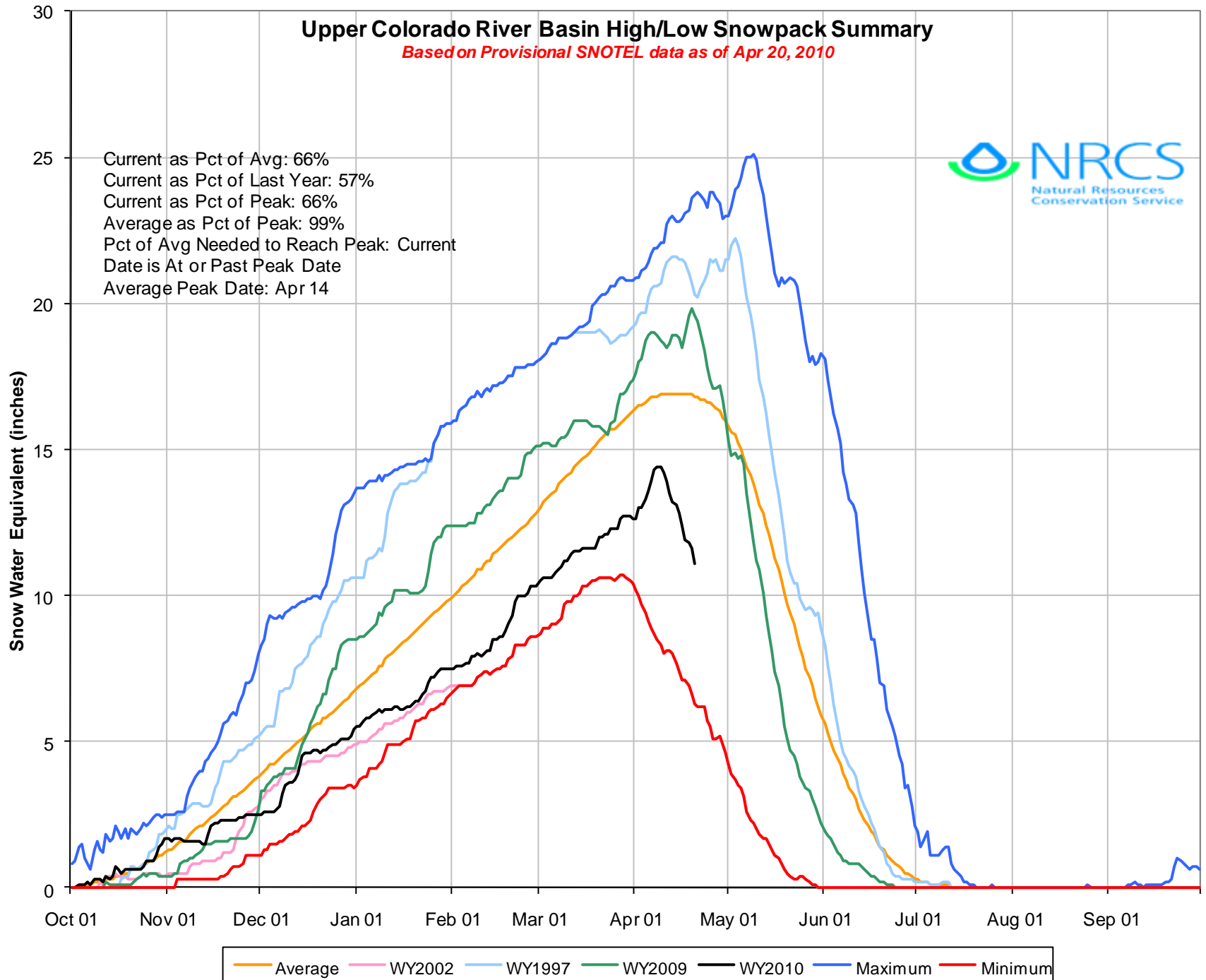


Upper Colorado River Basin High/Low Snowpack Summary

Based on Provisional SNOTEL data as of Apr 20, 2010

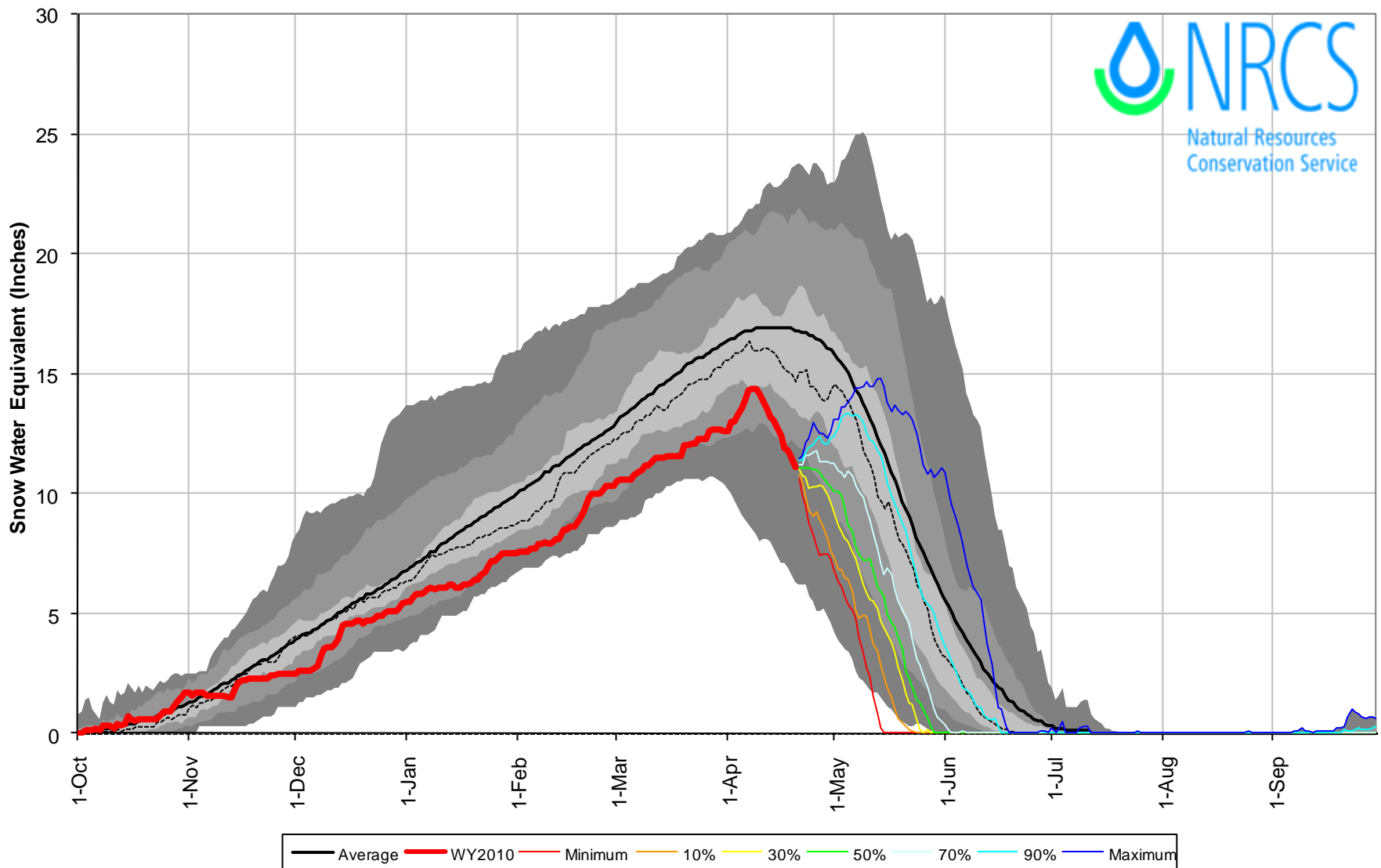


Current as Pct of Avg: 66%
Current as Pct of Last Year: 57%
Current as Pct of Peak: 66%
Average as Pct of Peak: 99%
Pct of Avg Needed to Reach Peak: Current
Date is At or Past Peak Date
Average Peak Date: Apr 14



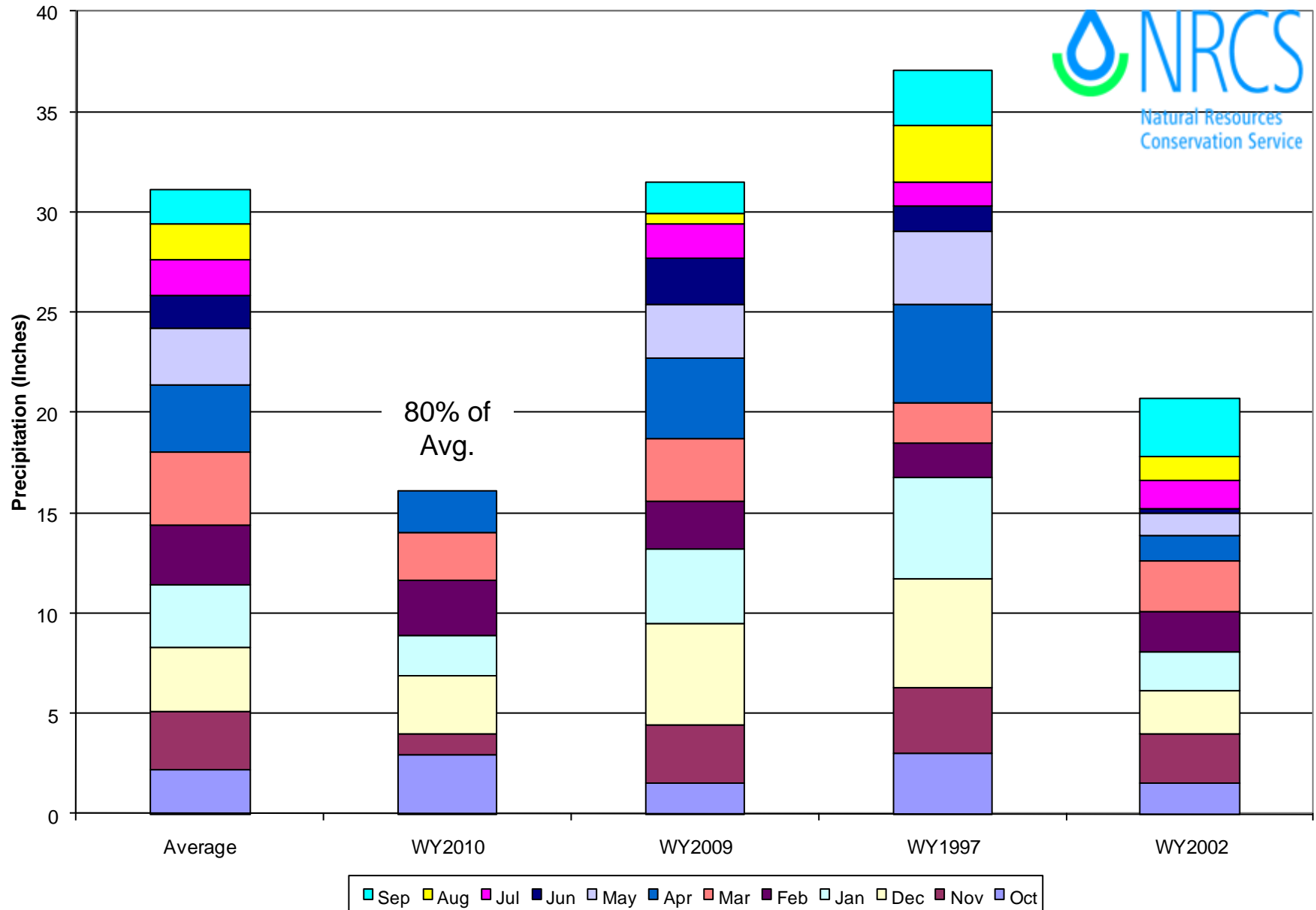
Colorado River Basin with Non-Exceedence Projections

Based on Provisional SNOTEL Data as of Apr 20, 2010



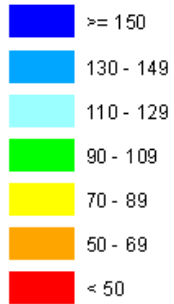
Upper Colorado River Basin High/Low Monthly Precipitation Summary

Based on Provisional SNOTEL data as of Apr 20, 2010

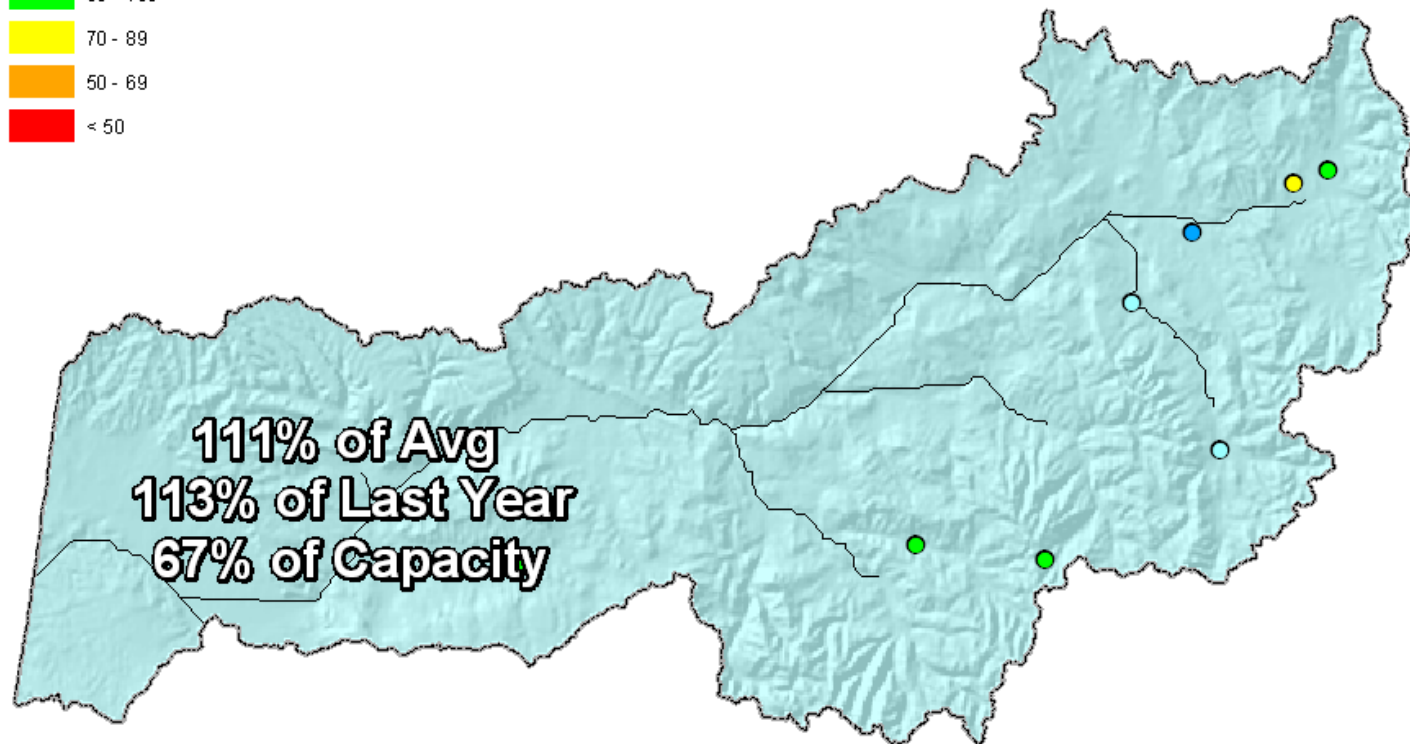


Colorado River Basin Reservoir Storage Map

Percent of Average

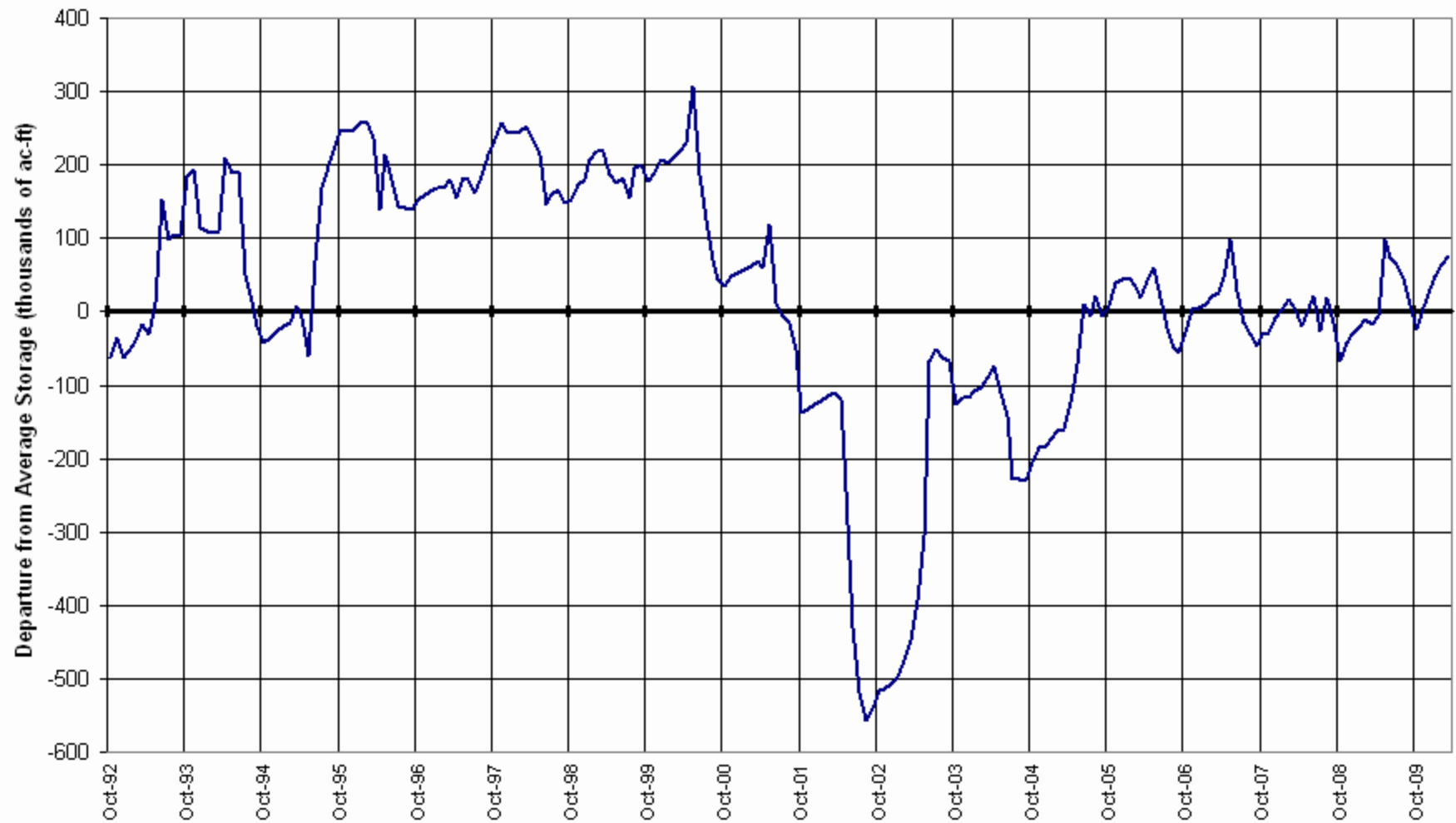


*Provisional Data
Subject to Revision*



End of March 2010

COLORADO RIVER BASIN
Reservoir Storage
Departure from Average

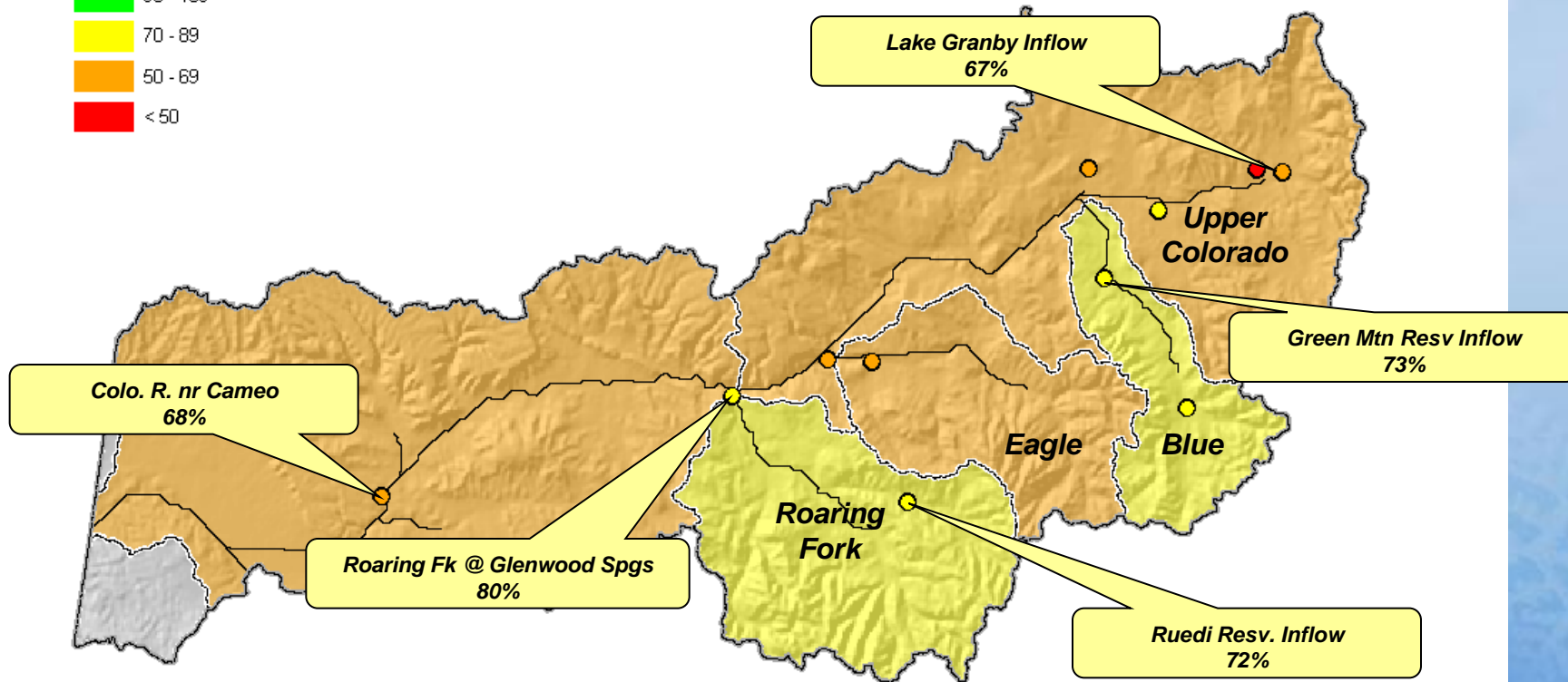


Colorado River Basin Streamflow Forecast Map

Percent of Average

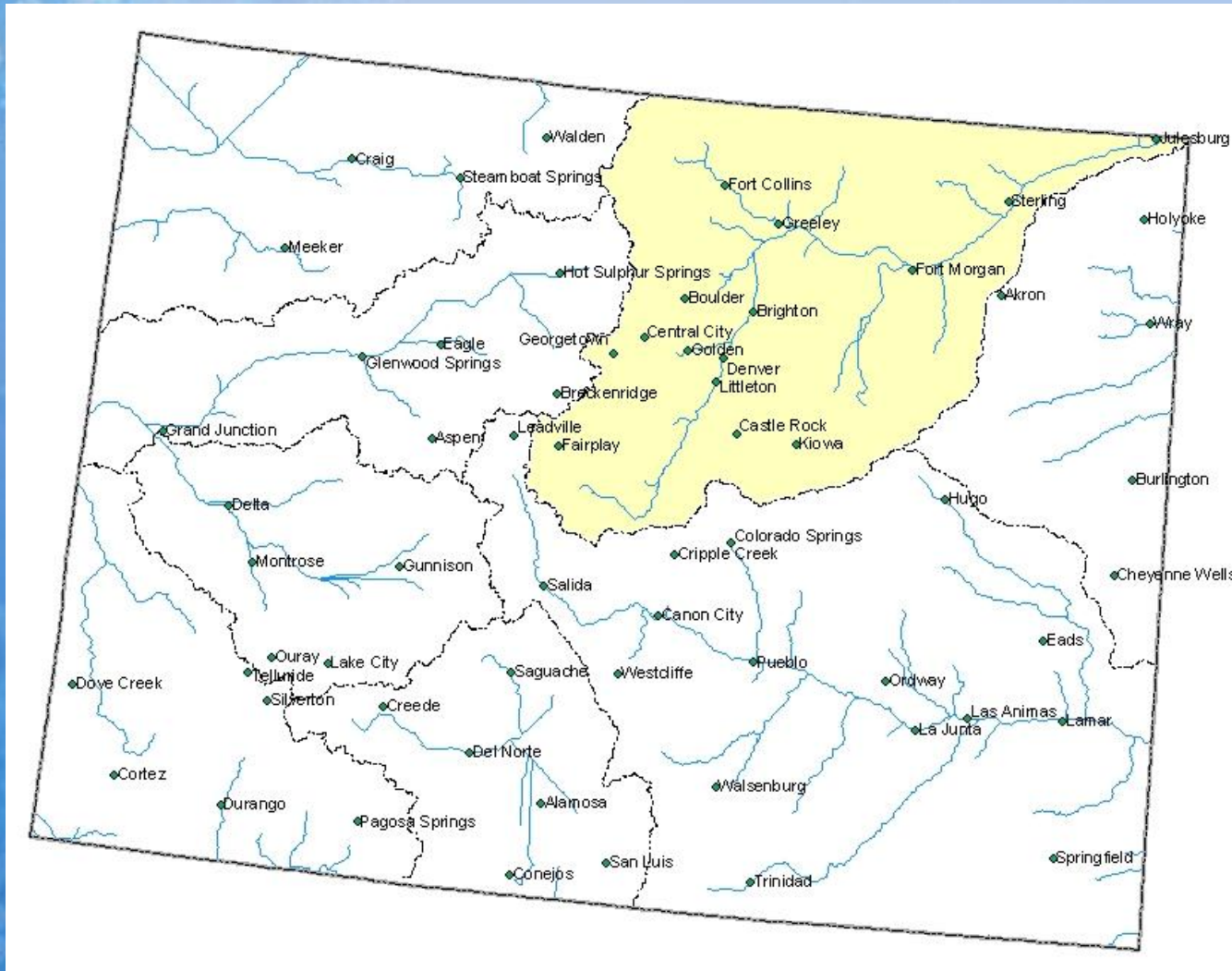


*Provisional Data
Subject to Revision*



Current as of April 1, 2010

South Platte River Basin Summary

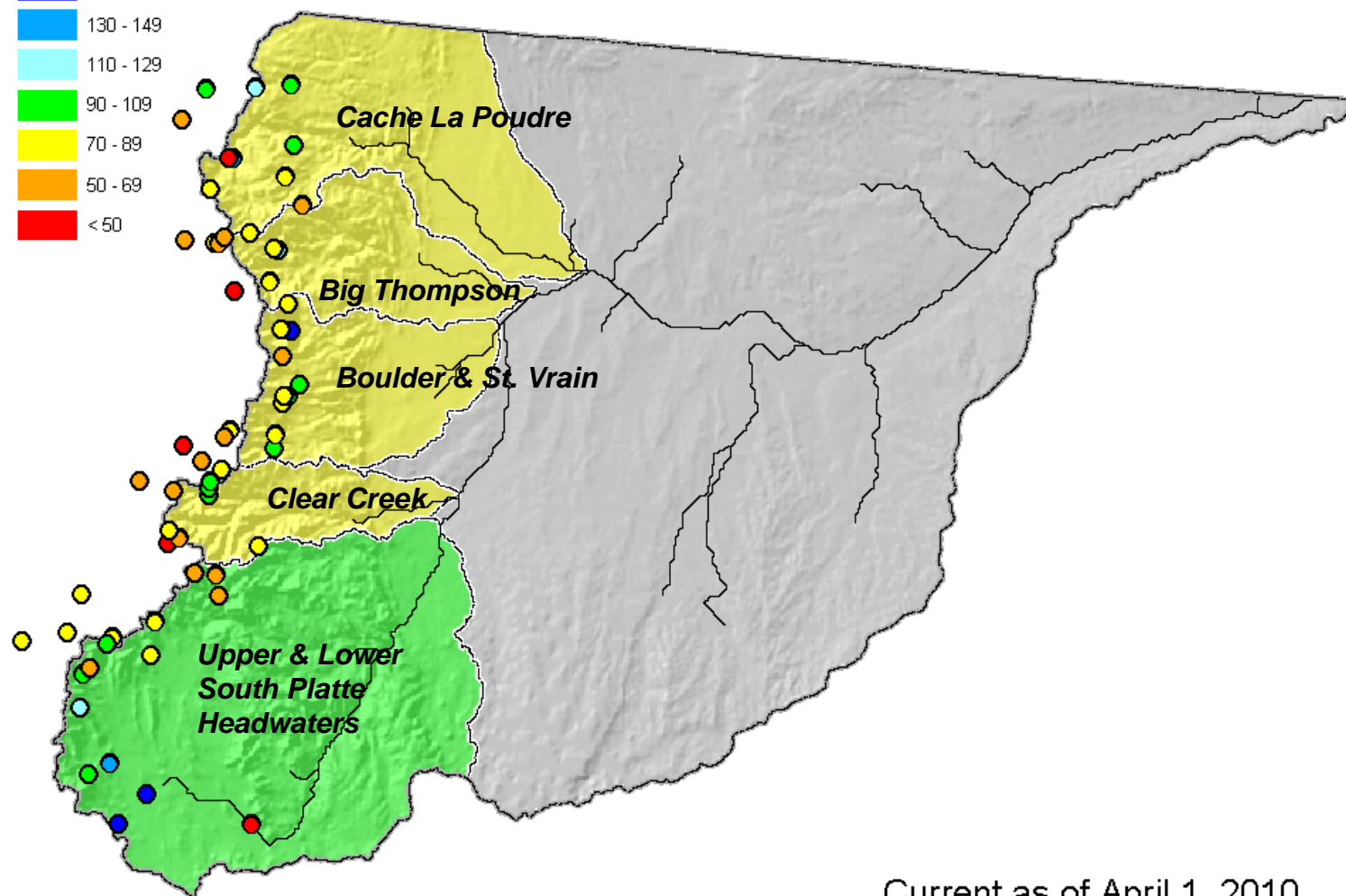


South Platte River Basin Snowpack Map

Percent of Average

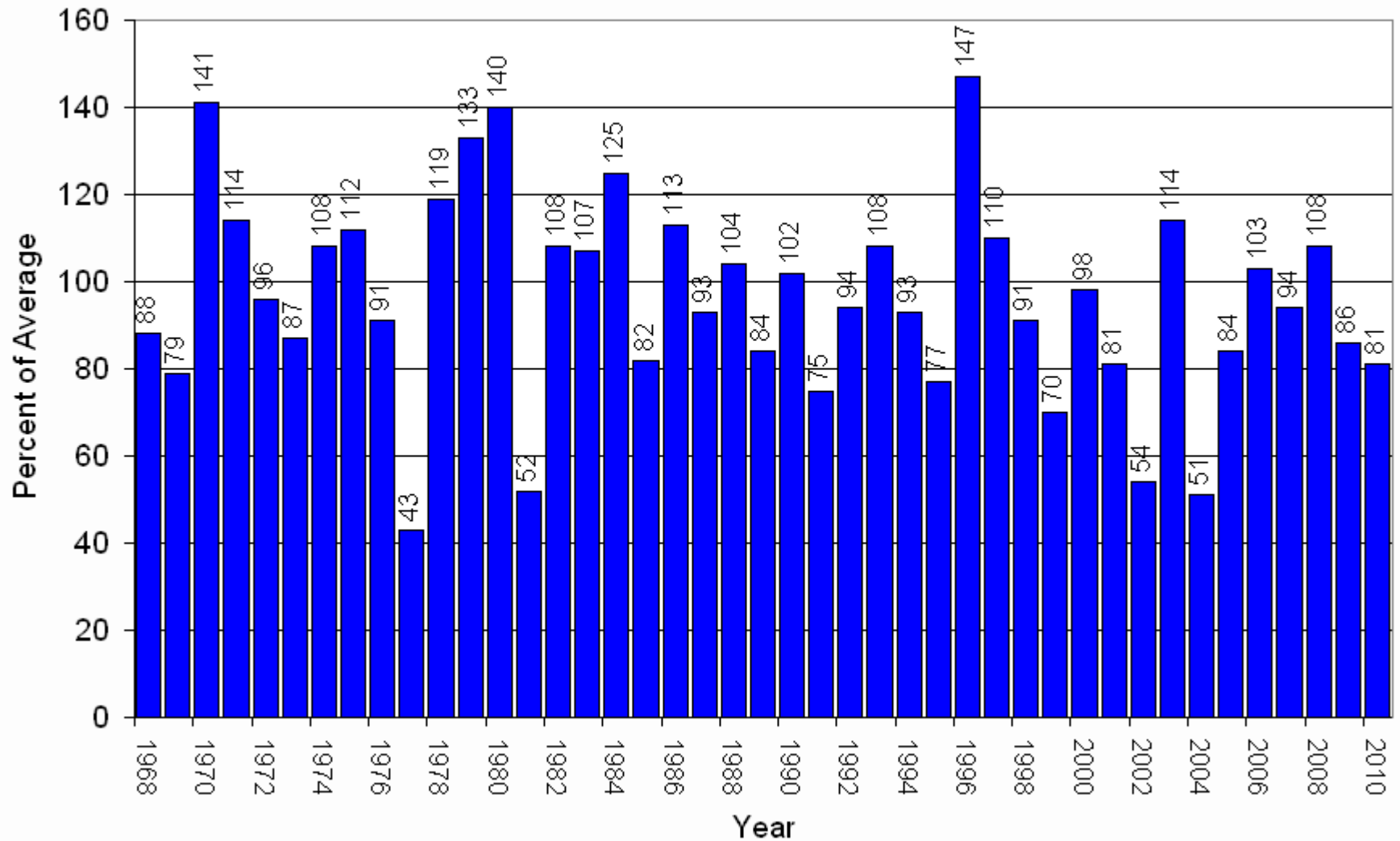


*Provisional Data
Subject to Revision*



Current as of April 1, 2010

April 1 Total South Platte River Basin Snowpack

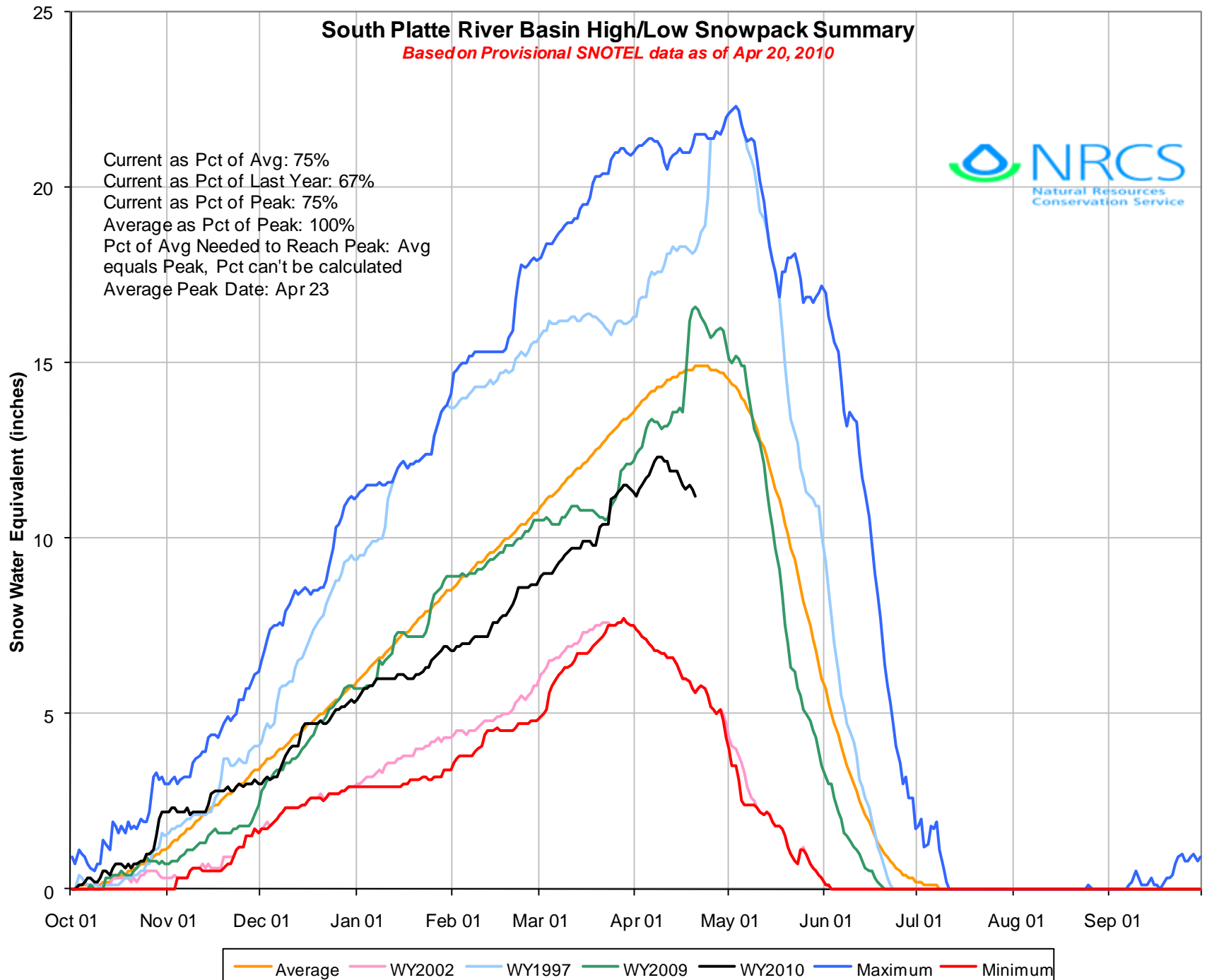


South Platte River Basin High/Low Snowpack Summary

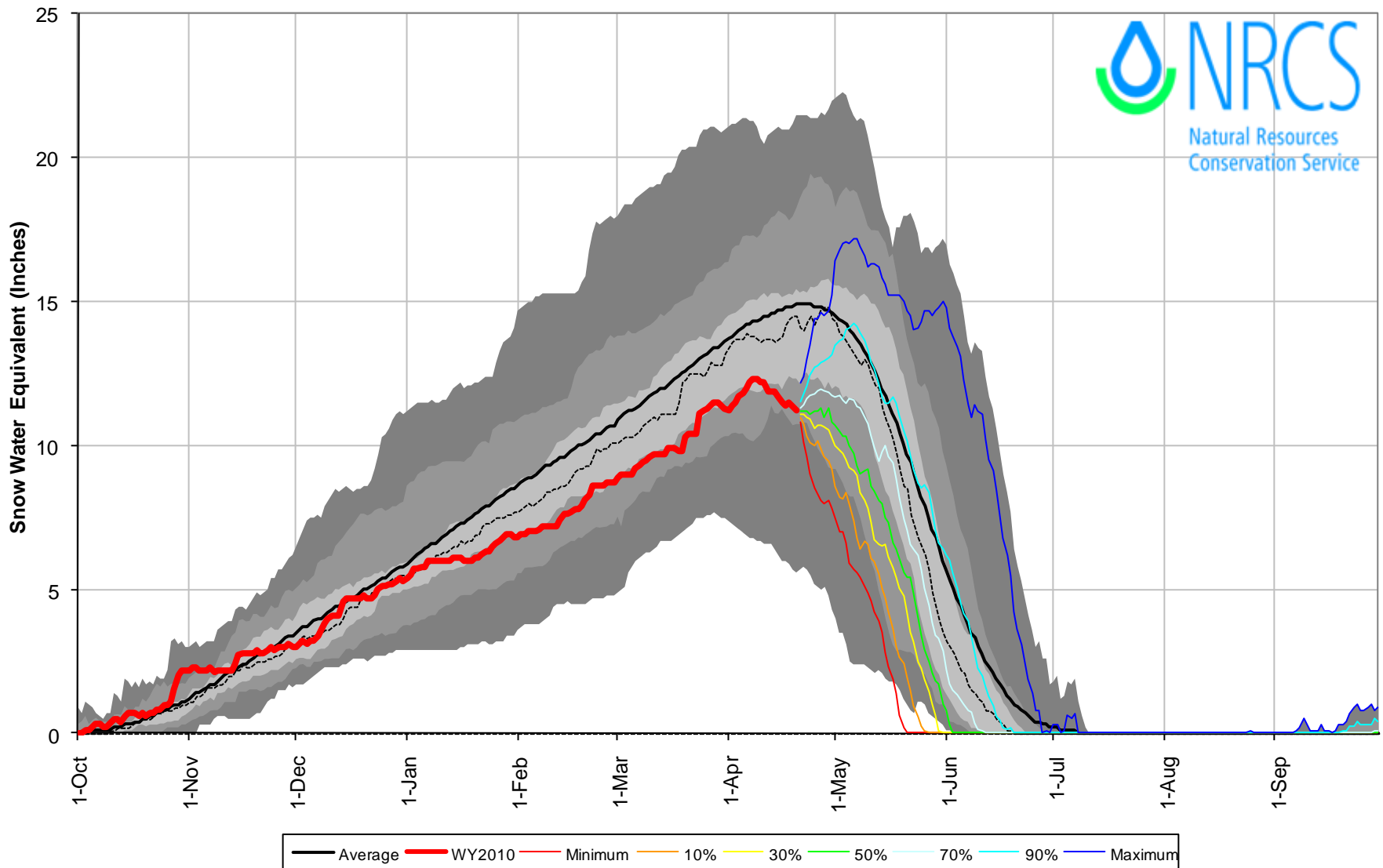
Based on Provisional SNOTEL data as of Apr 20, 2010



Current as Pct of Avg: 75%
Current as Pct of Last Year: 67%
Current as Pct of Peak: 75%
Average as Pct of Peak: 100%
Pct of Avg Needed to Reach Peak: Avg
equals Peak, Pct can't be calculated
Average Peak Date: Apr 23

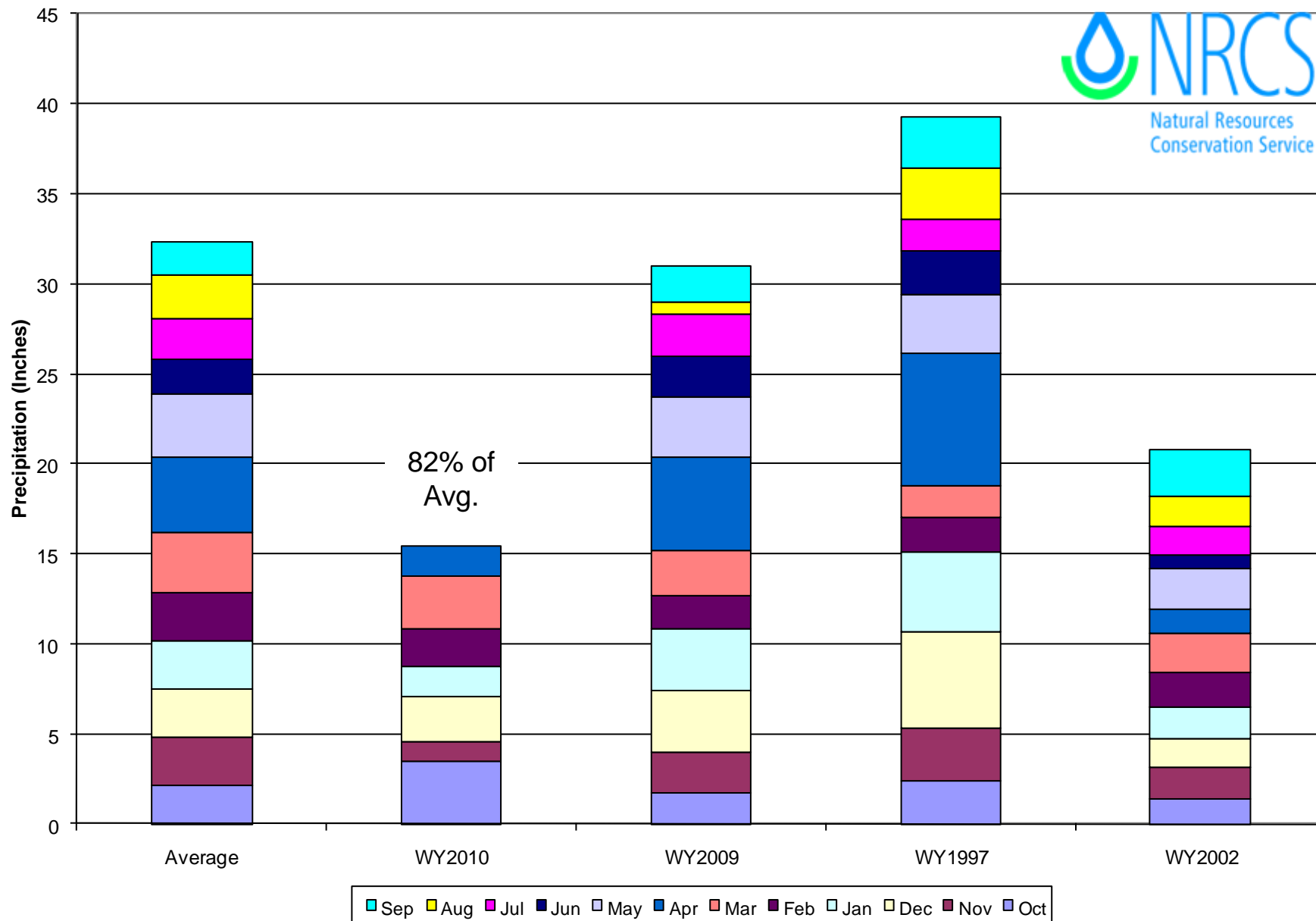


Based on Provisional SNOTEL Data as of Apr 20, 2010



South Platte River Basin High/Low Monthly Precipitation Summary

Based on Provisional SNOTEL data as of Apr 20, 2010

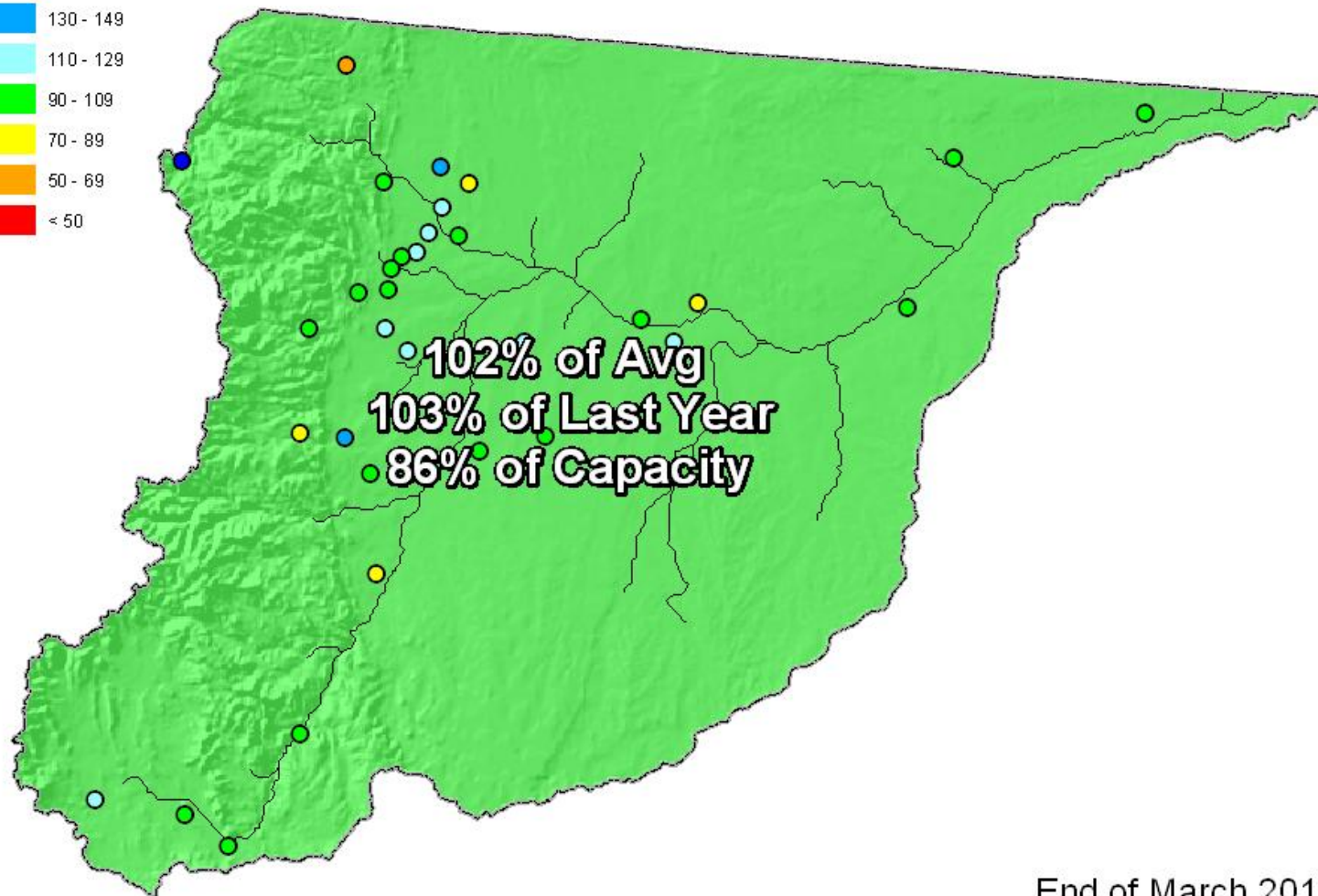


South Platte River Basin Reservoir Storage Map

Percent of Average



*Provisional Data
Subject to Revision*

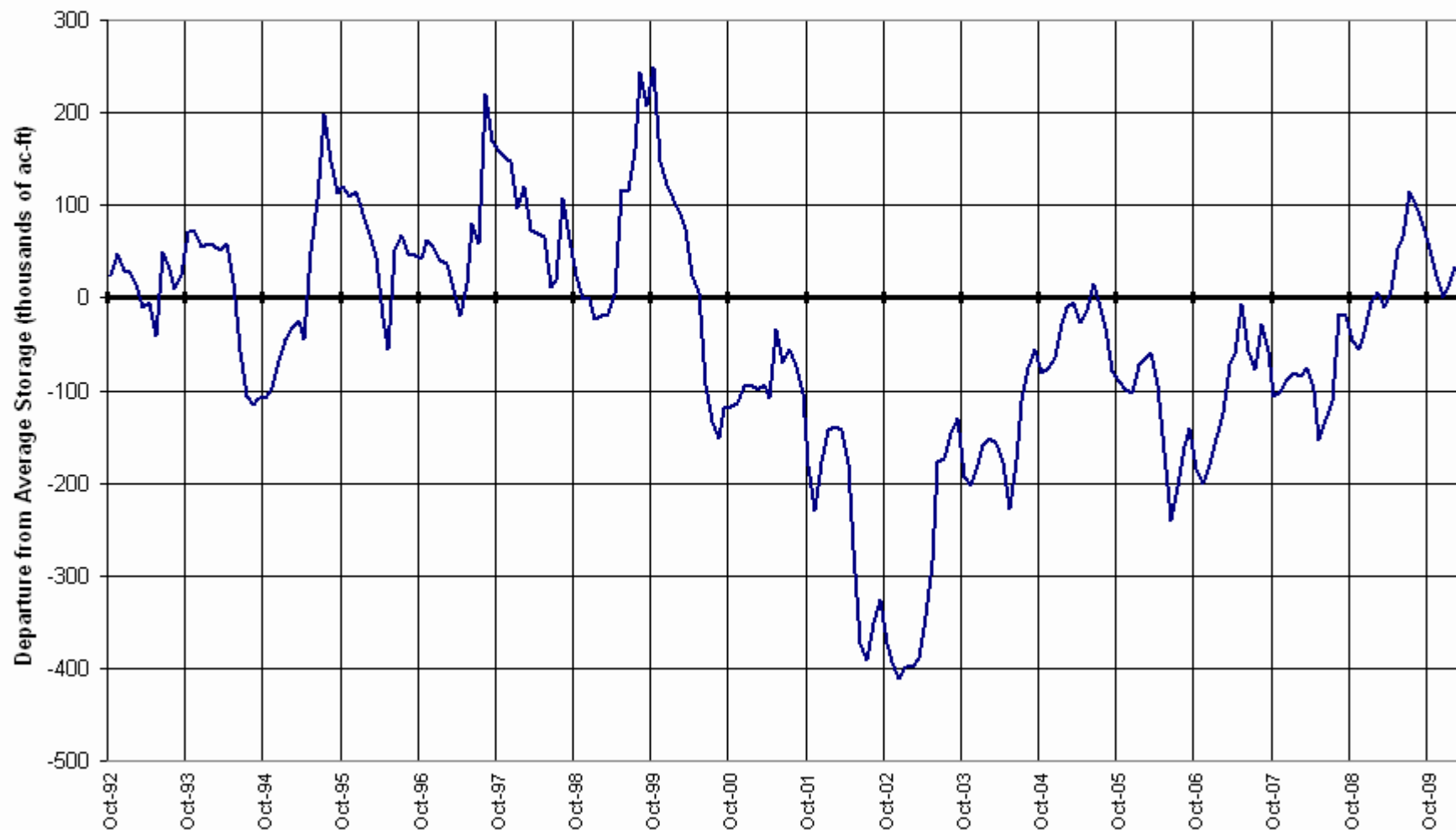


End of March 2010

SOUTH PLATTE RIVER BASIN

Reservoir Storage

Departure from Average

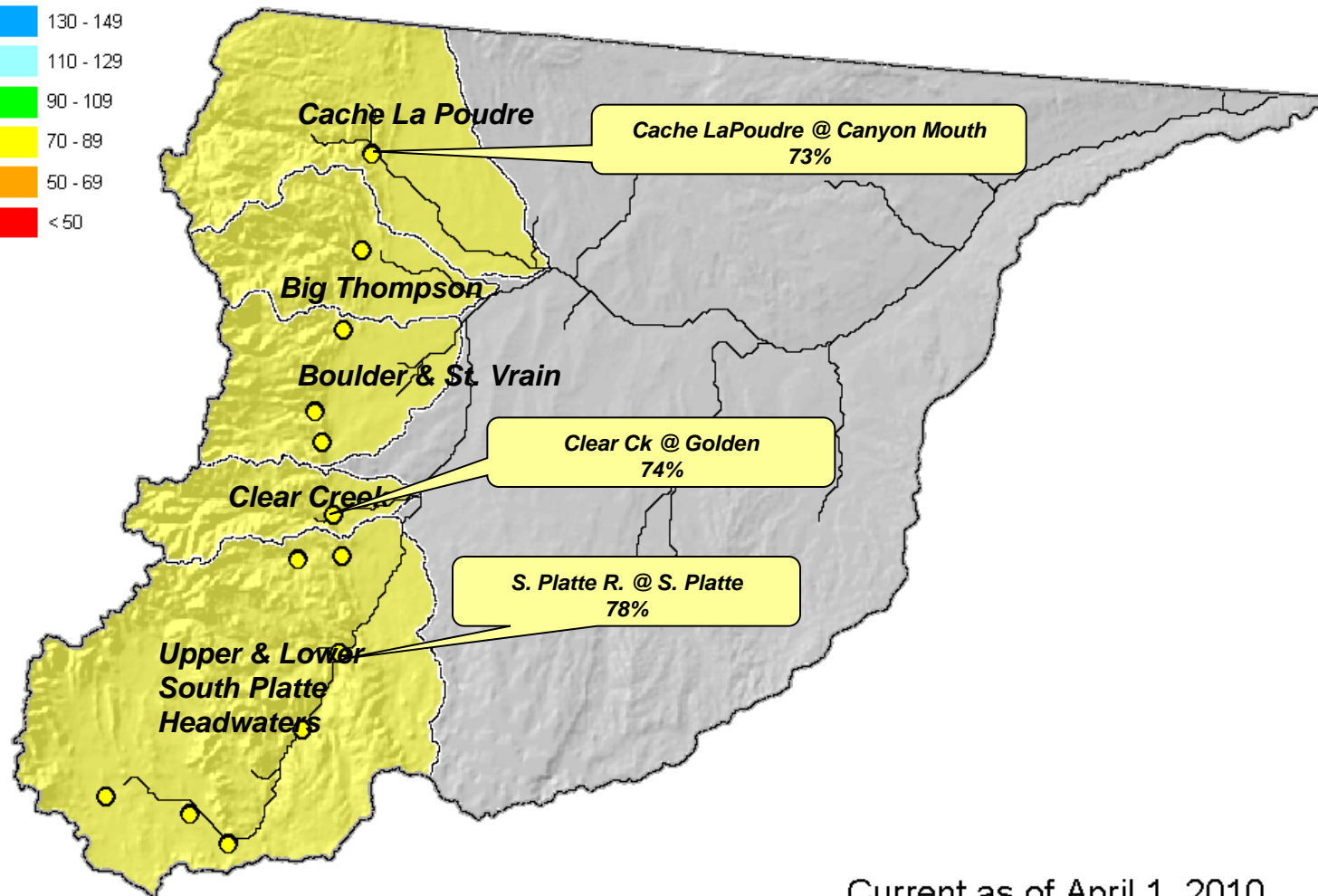


South Platte River Basin Streamflow Forecast Map

Percent of Average

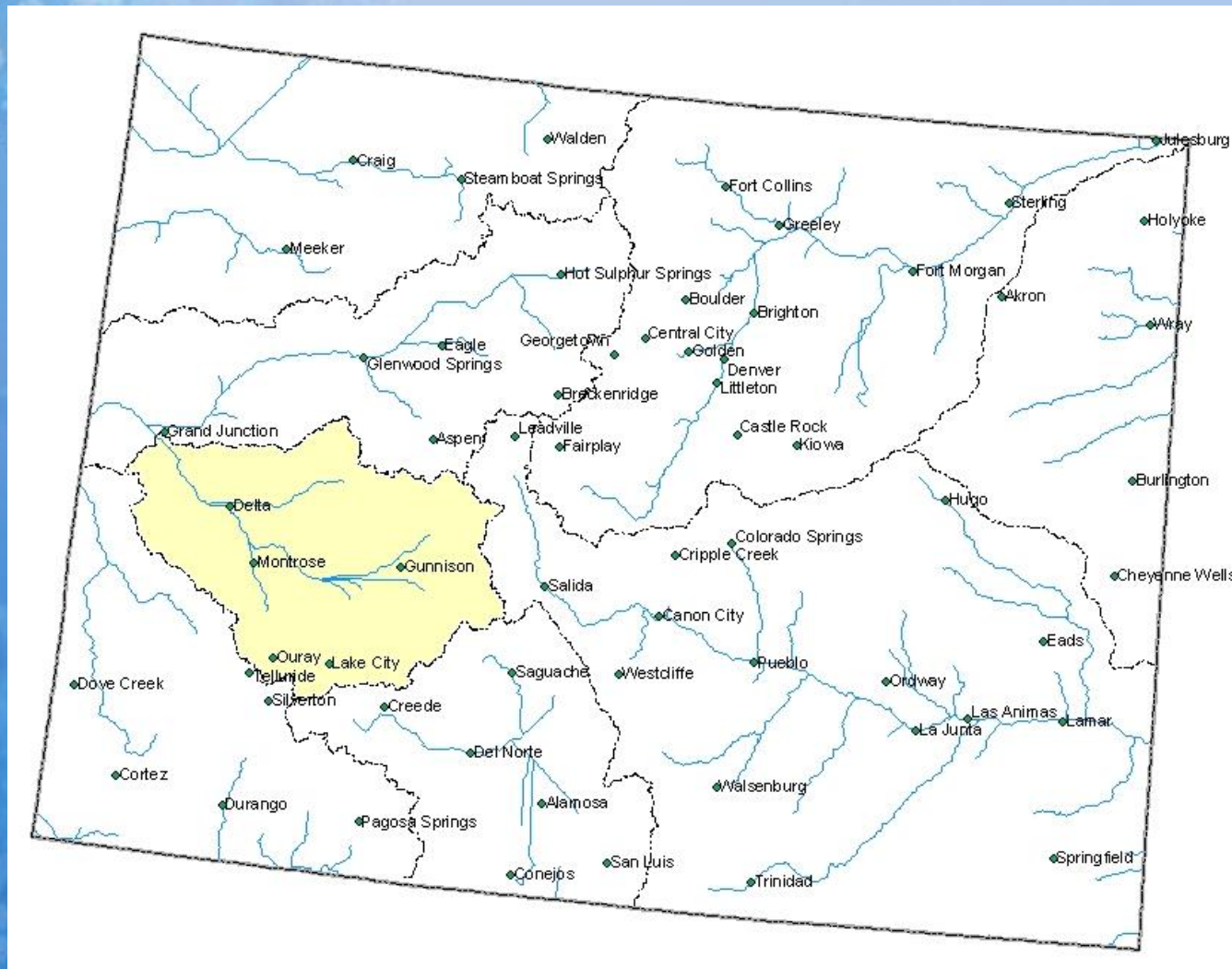


*Provisional Data
Subject to Revision*



Current as of April 1, 2010

Gunnison River Basin Summary

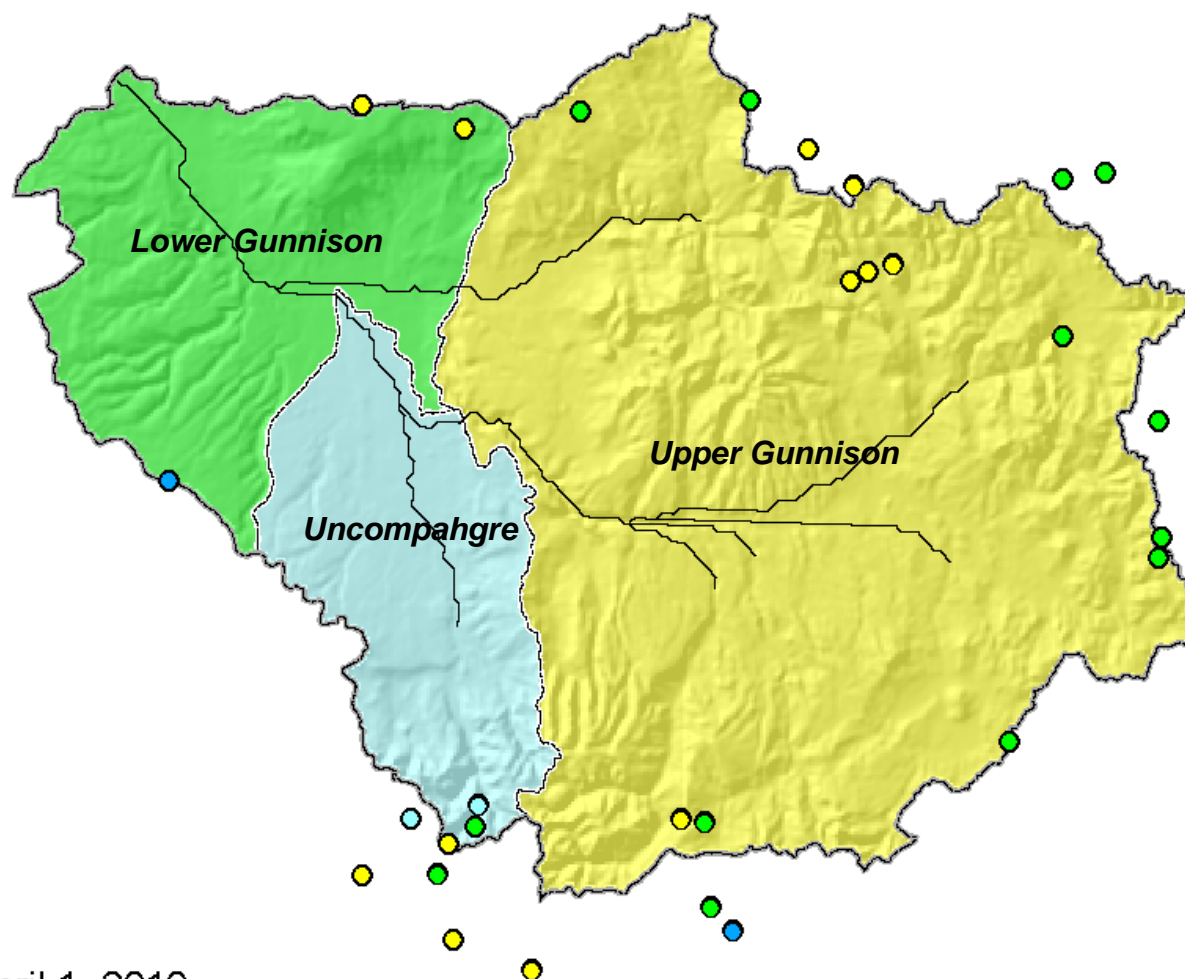


Gunnison River Basin Snowpack Map

Percent of Average

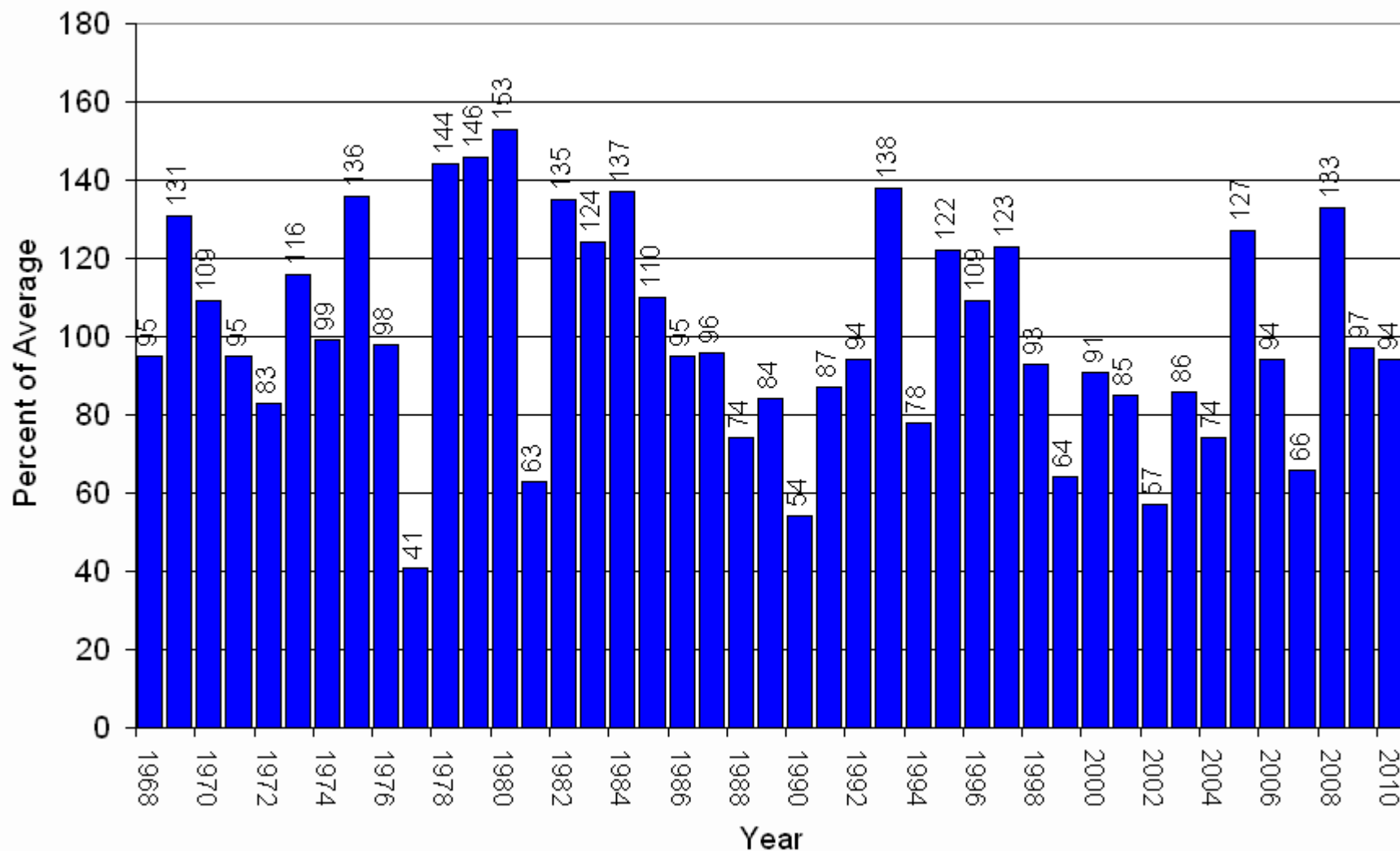


*Provisional Data
Subject to Revision*



Current as of April 1, 2010

April 1 Total Gunnison River Basin Snowpack



Gunnison River Basin High/Low Snowpack Summary

Based on Provisional SNOTEL data as of Apr 20, 2010

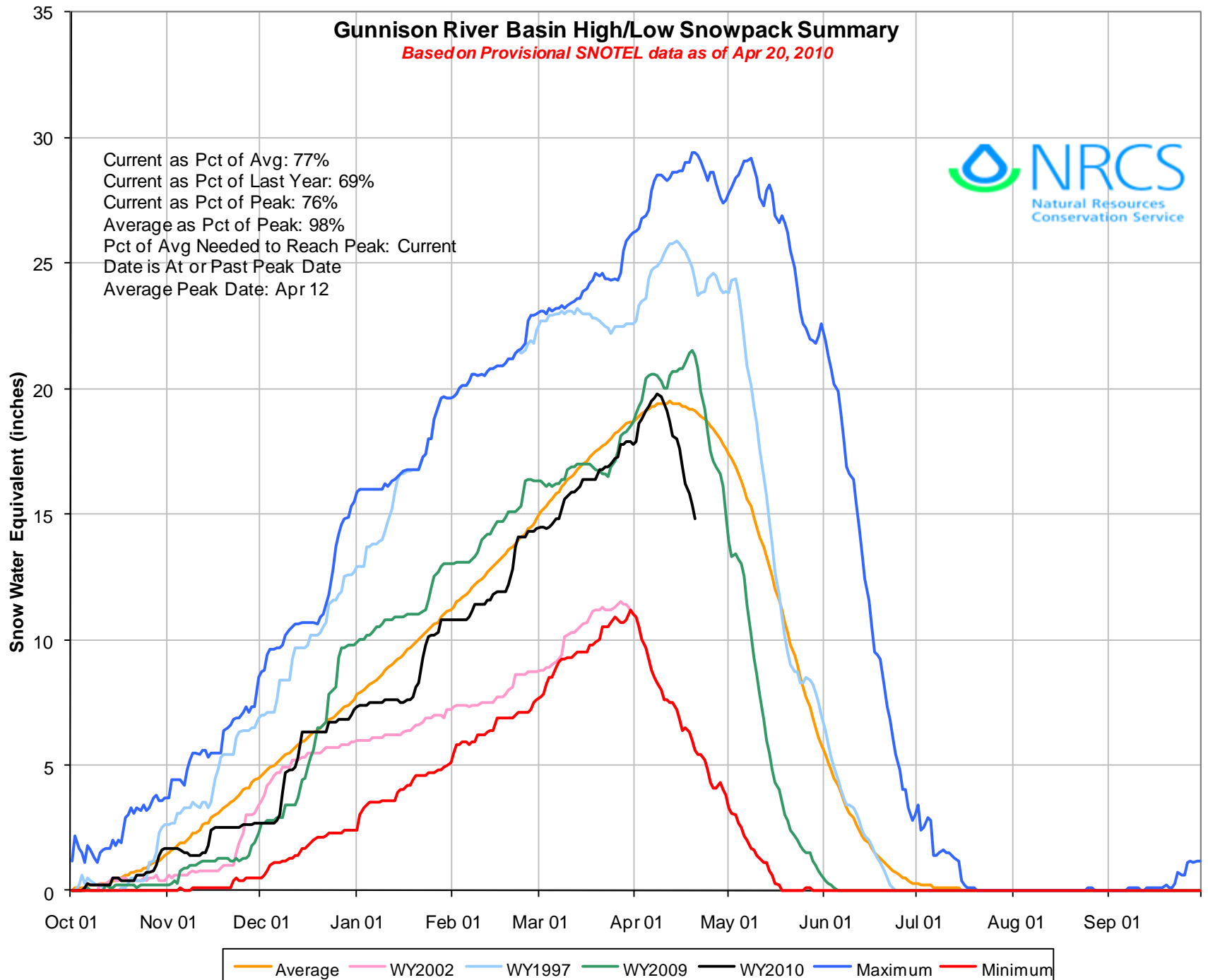


Current as Pct of Avg: 77%
Current as Pct of Last Year: 69%
Current as Pct of Peak: 76%
Average as Pct of Peak: 98%
Pct of Avg Needed to Reach Peak: Current
Date is At or Past Peak Date
Average Peak Date: Apr 12

Snow Water Equivalent (inches)

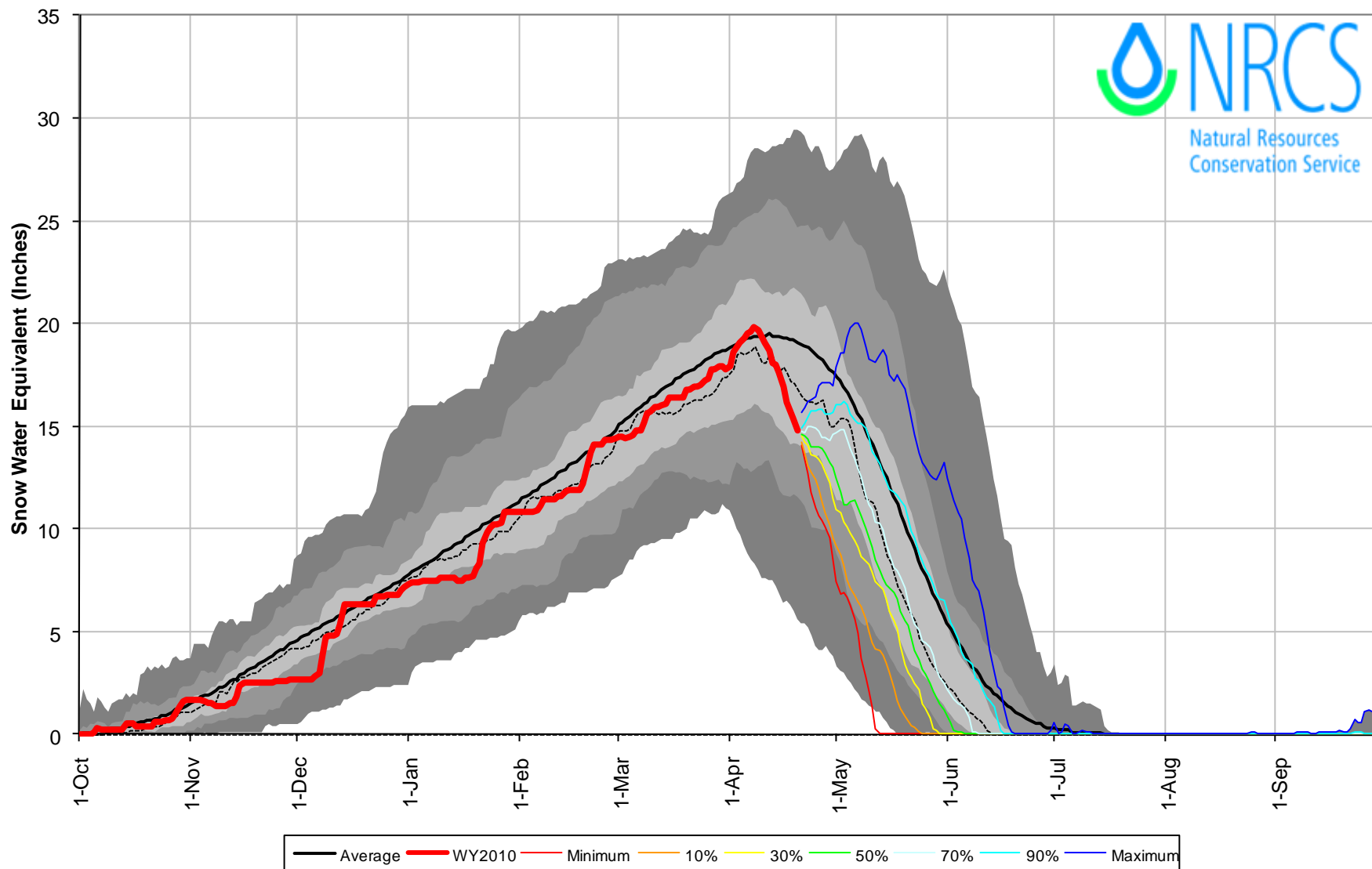
Oct 01 Nov 01 Dec 01 Jan 01 Feb 01 Mar 01 Apr 01 May 01 Jun 01 Jul 01 Aug 01 Sep 01

Average WY2002 WY1997 WY2009 WY2010 Maximum Minimum



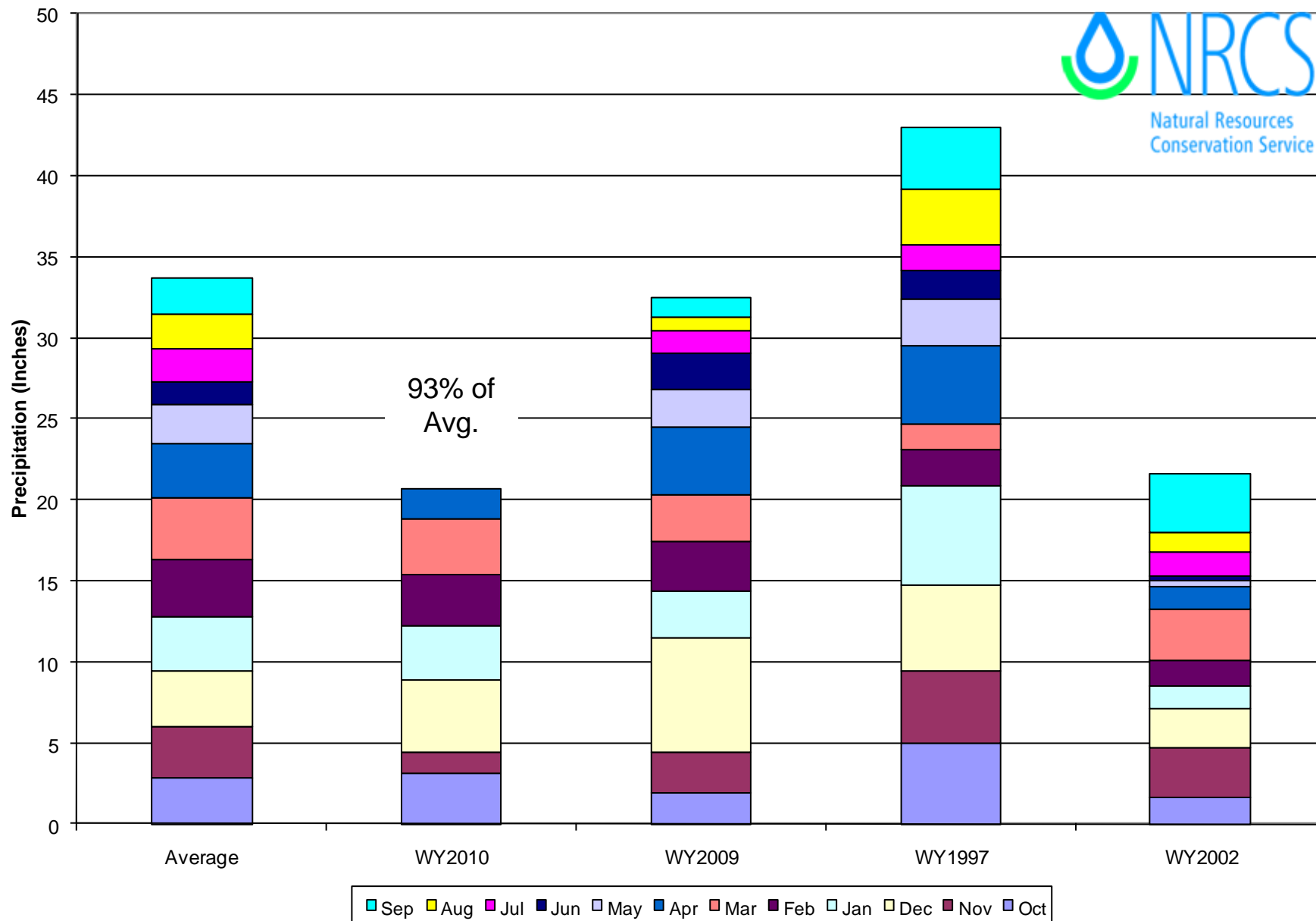
Gunnison River Basin with Non-Exceedence Projections

Based on Provisional SNOTEL Data as of Apr 20, 2010



Gunnison River Basin High/Low Monthly Precipitation Summary

Based on Provisional SNOTEL data as of Apr 20, 2010

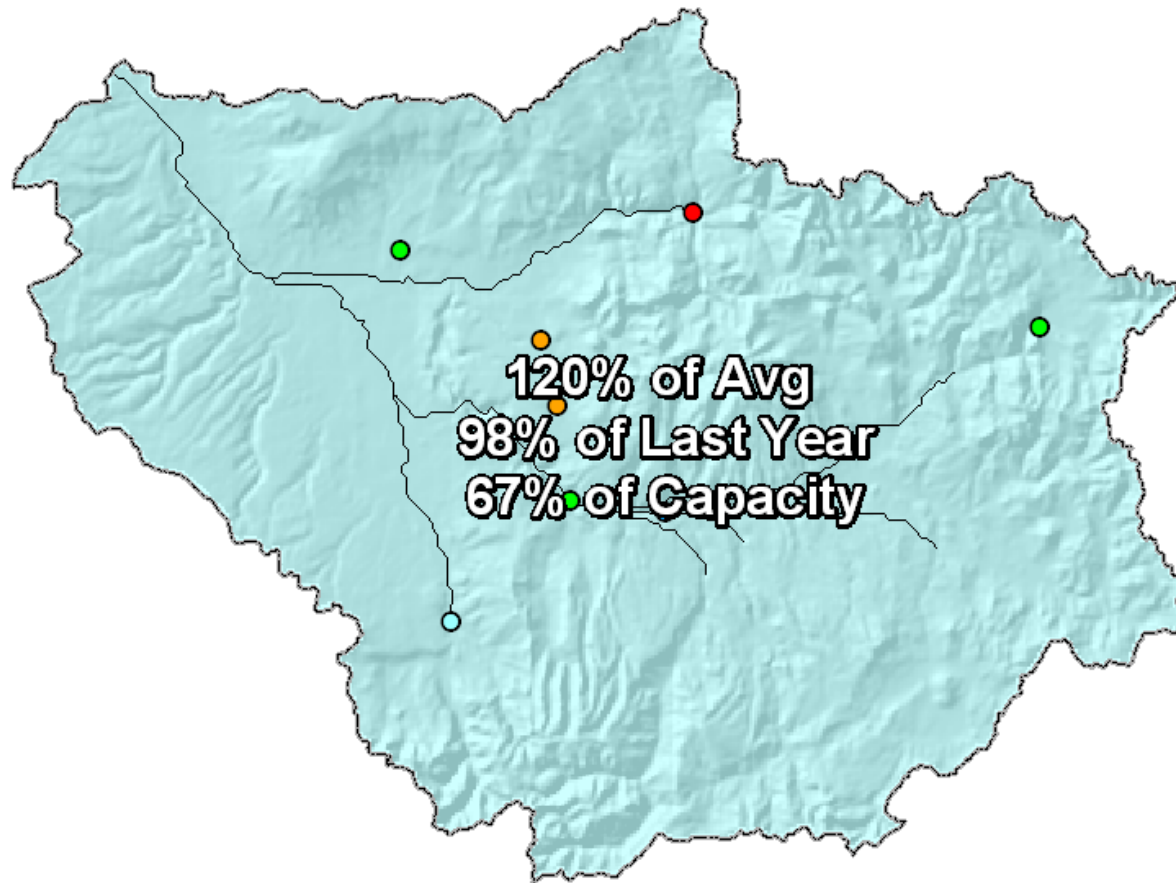


Gunnison River Basin Reservoir Storage Map

Percent of Average



*Provisional Data
Subject to Revision*

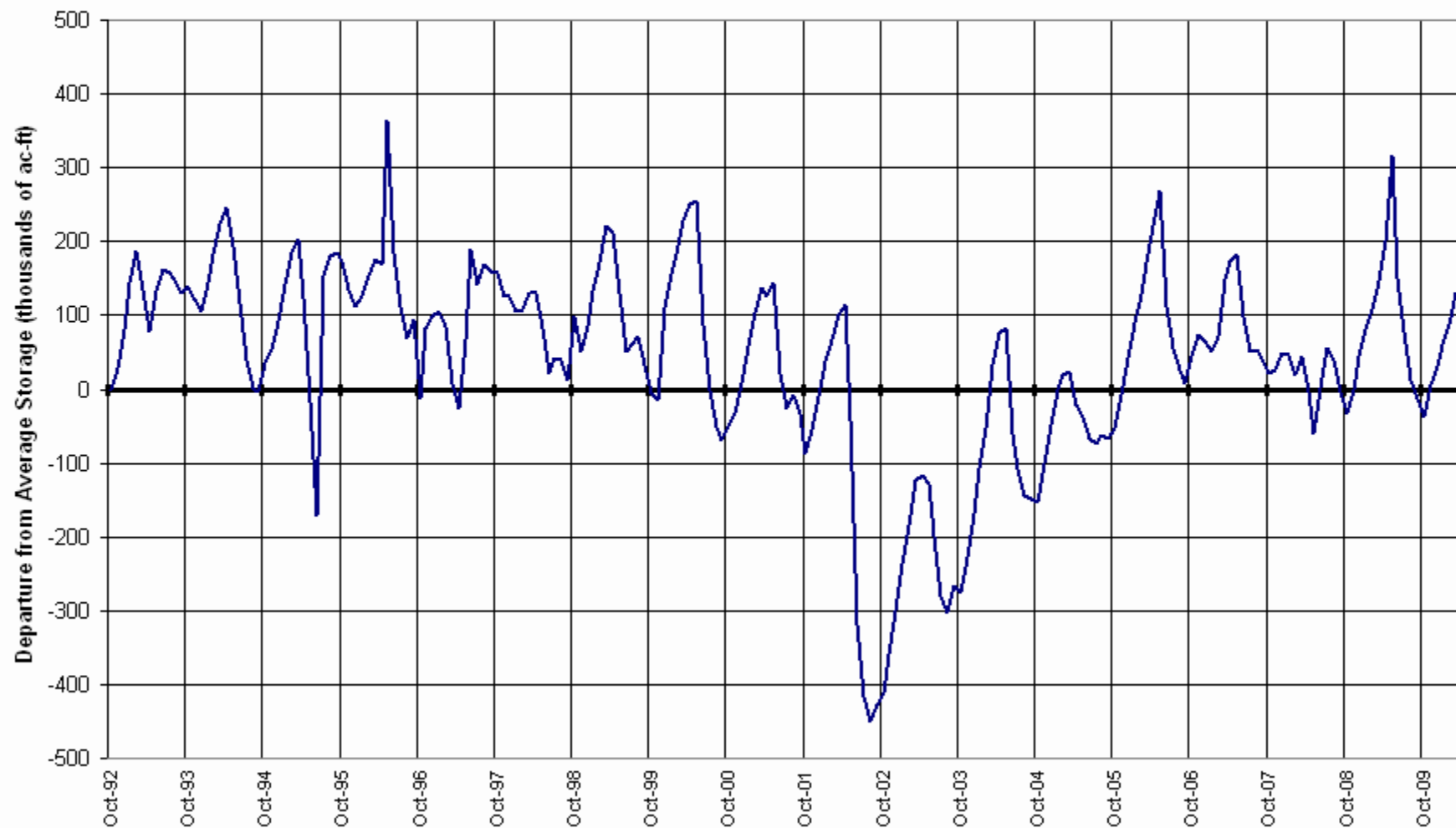


End of March 2010

GUNNISON RIVER BASIN

Reservoir Storage

Departure from Average

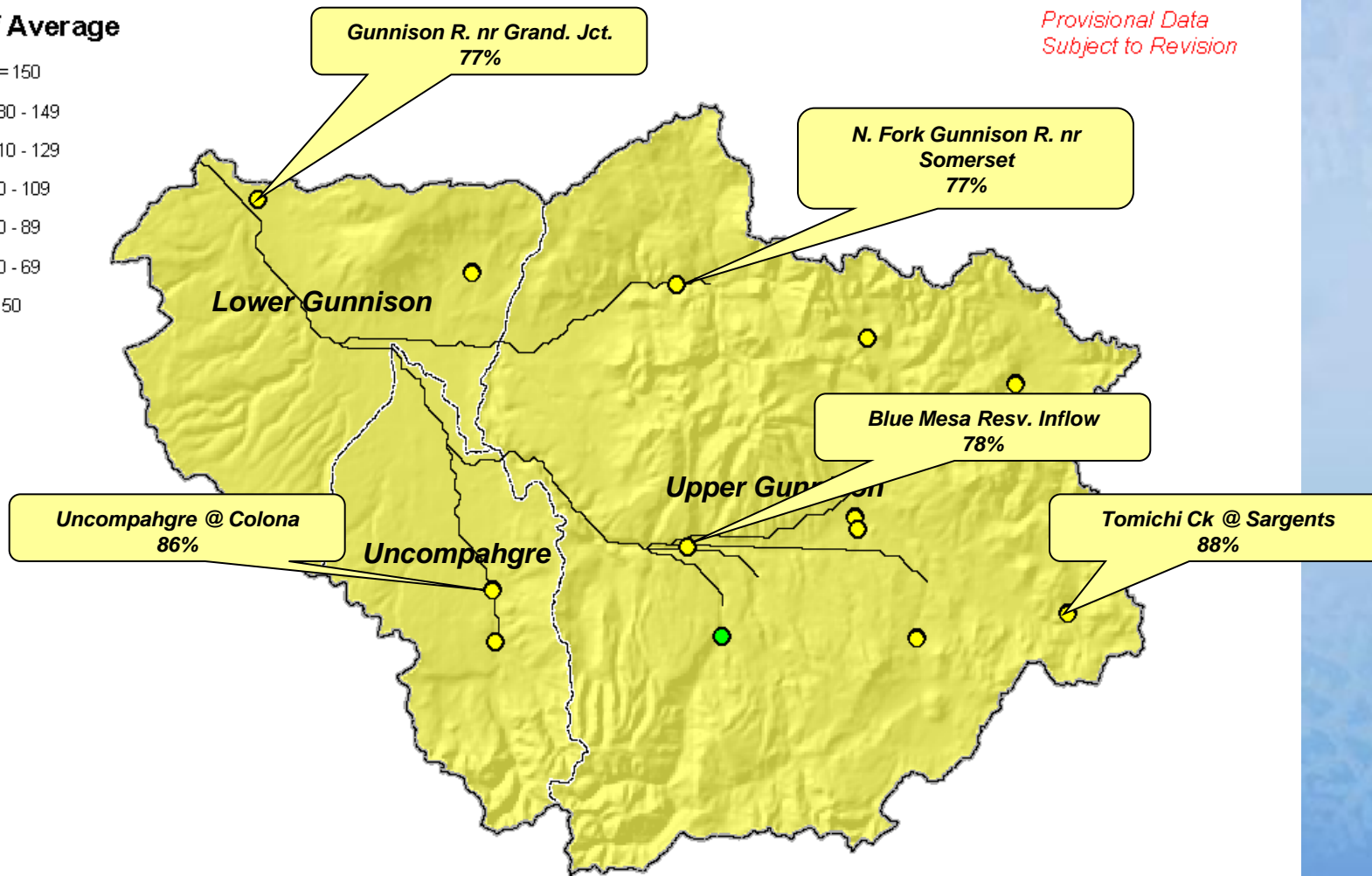


Gunnison River Basin Streamflow Forecast Map

Percent of Average

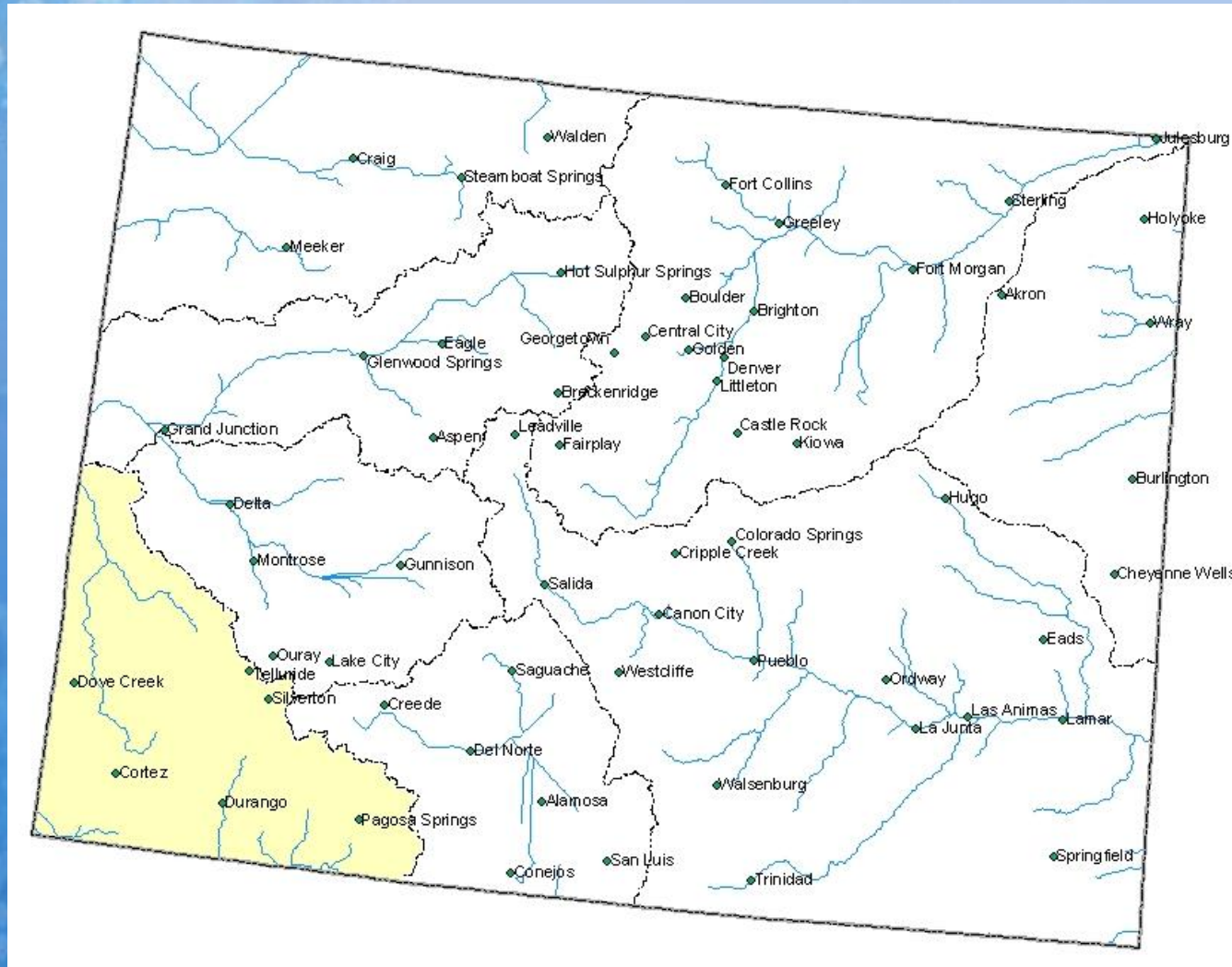


*Provisional Data
Subject to Revision*



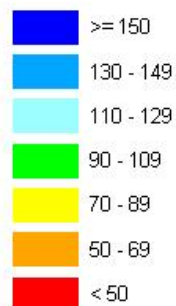
Current as of April 1, 2010

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

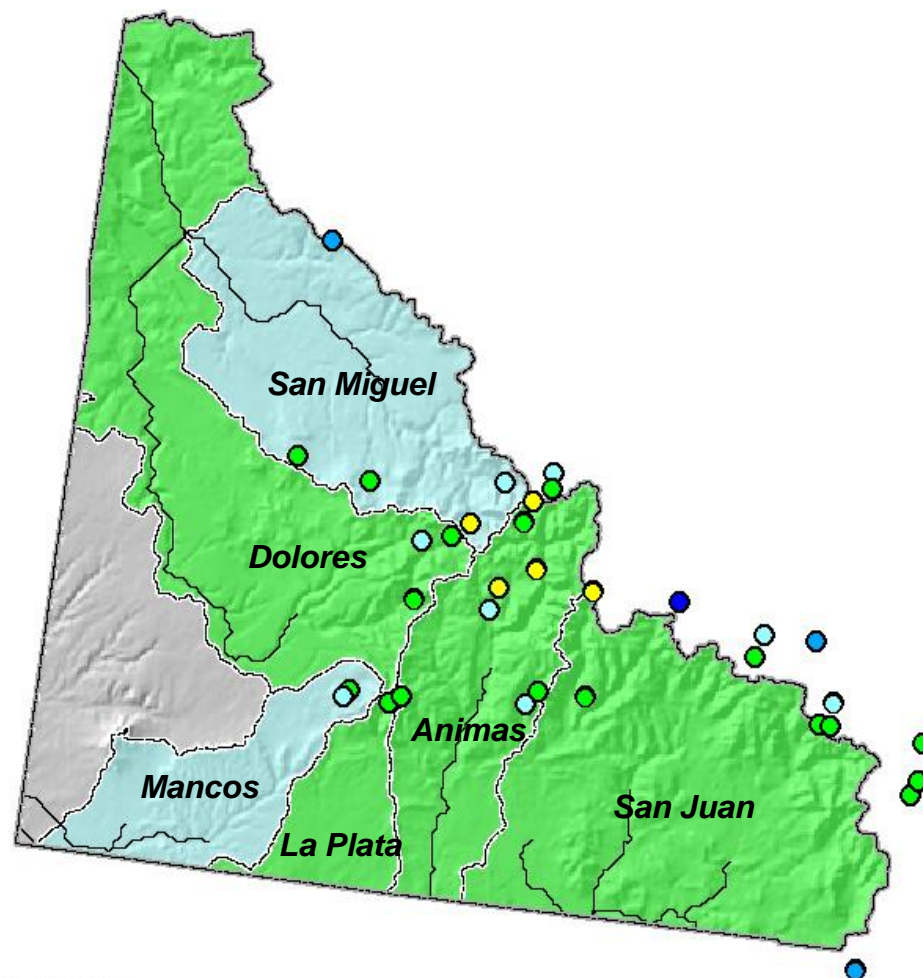


San Miguel, Dolores, Animas and San Juan River Basins Snowpack Map

Percent of Average

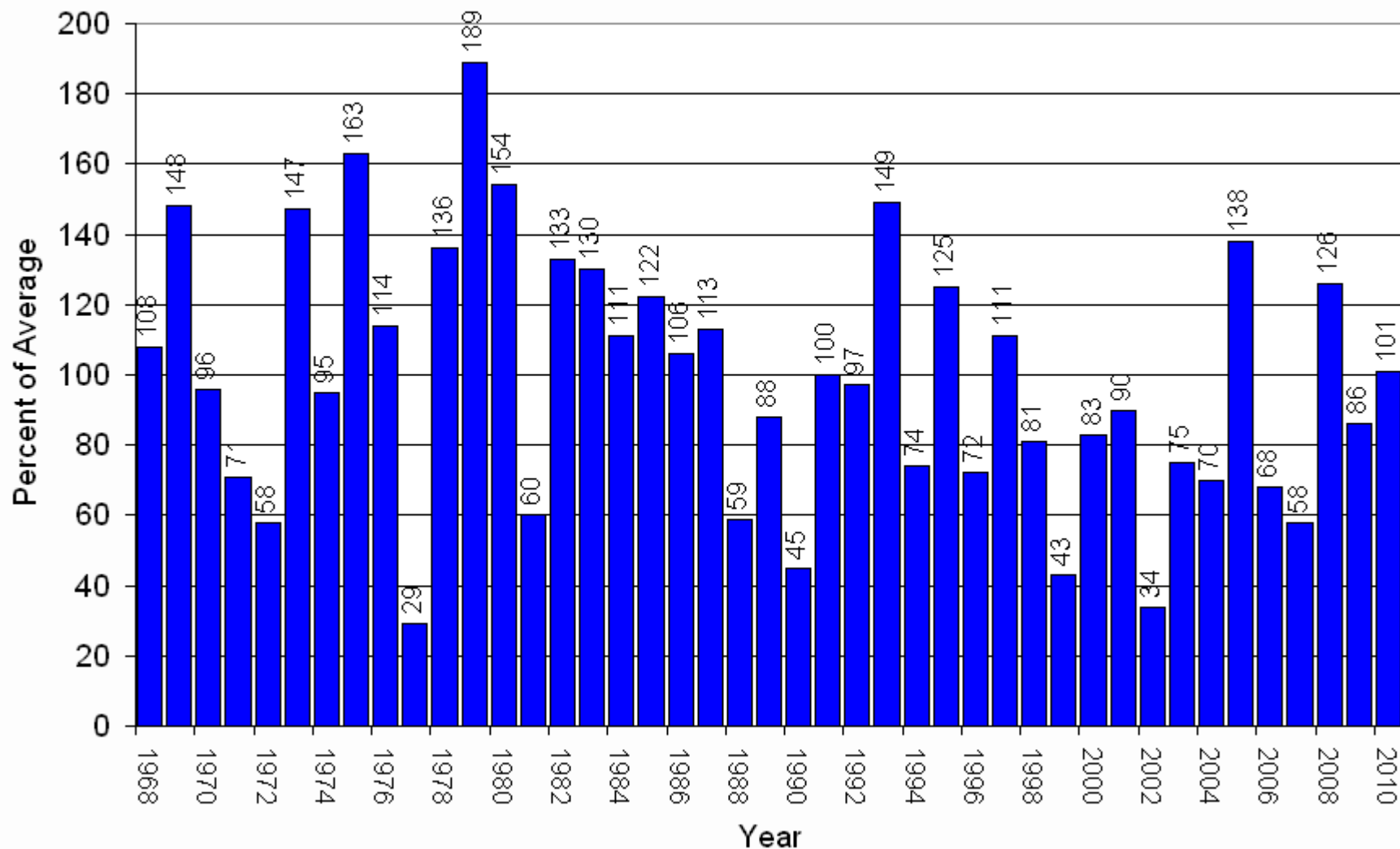


*Provisional Data
Subject to Revision*



Current as of April 1, 2010

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



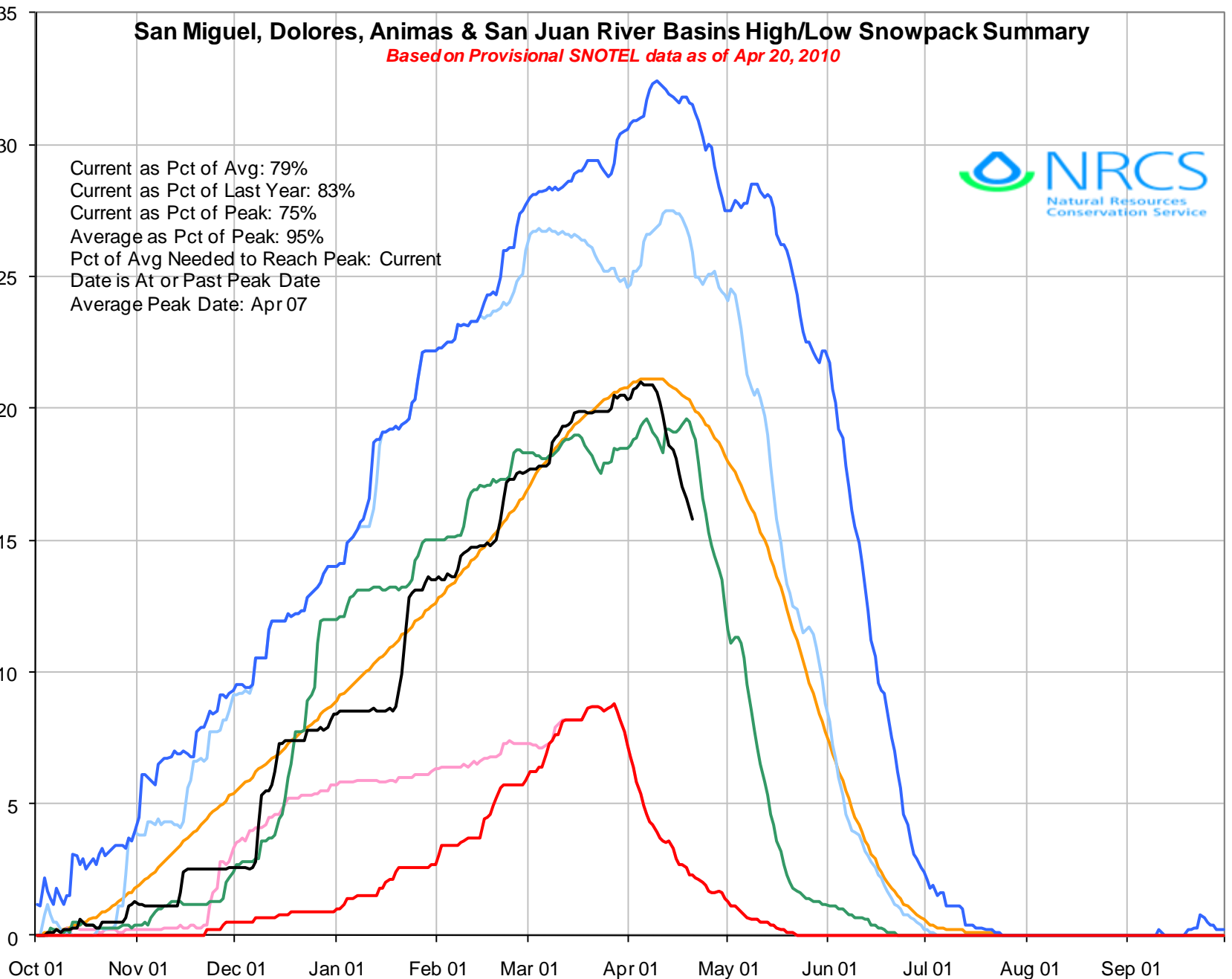
San Miguel, Dolores, Animas & San Juan River Basins High/Low Snowpack Summary

Based on Provisional SNOTEL data as of Apr 20, 2010



Current as Pct of Avg: 79%
Current as Pct of Last Year: 83%
Current as Pct of Peak: 75%
Average as Pct of Peak: 95%
Pct of Avg Needed to Reach Peak: Current
Date is At or Past Peak Date
Average Peak Date: Apr 07

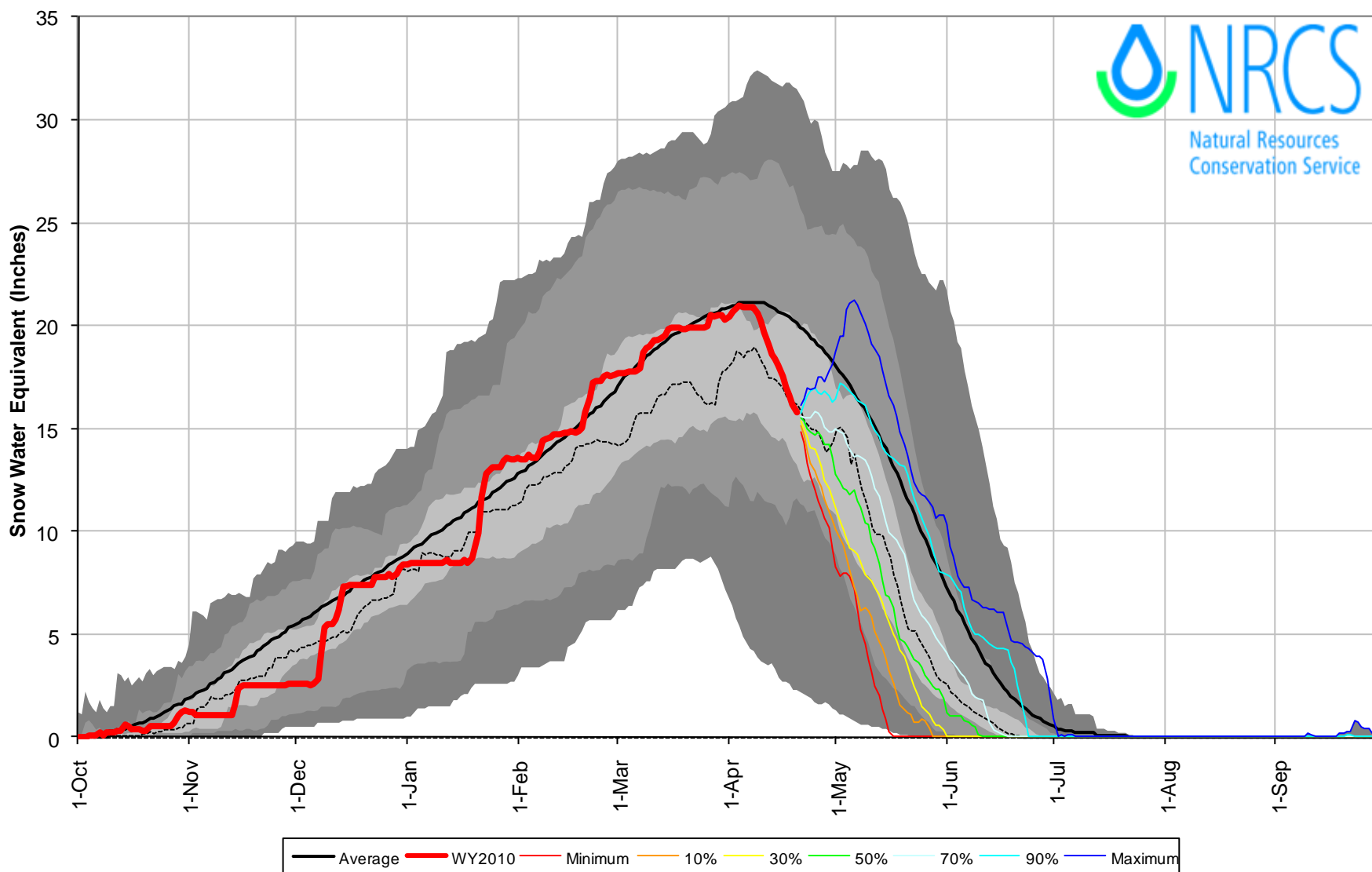
Snow Water Equivalent (inches)



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

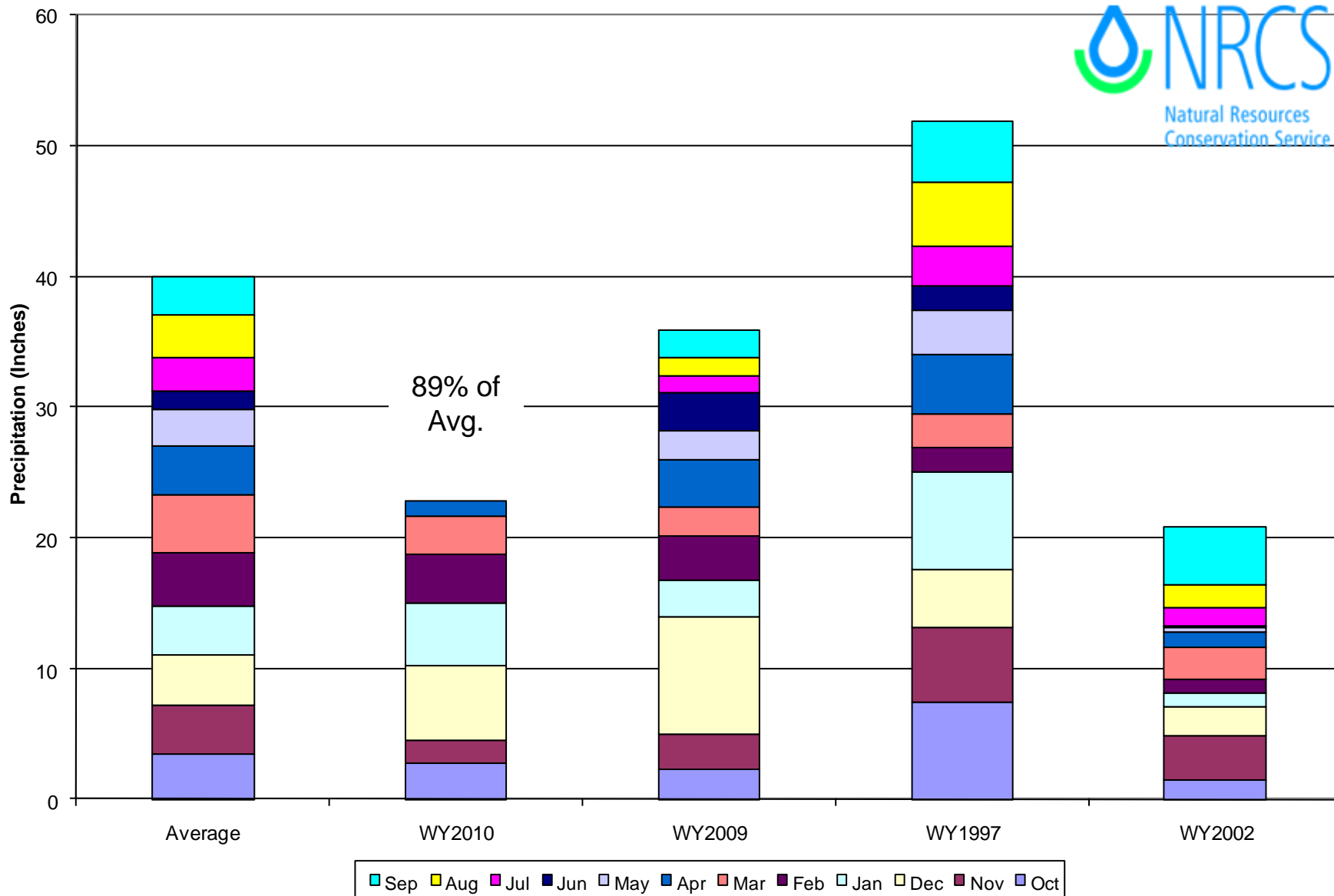
San Miguel, Dolores, Animas & San Juan River Basins with Non-Exceedence Projections

Based on Provisional SNOTEL Data as of Apr 20, 2010



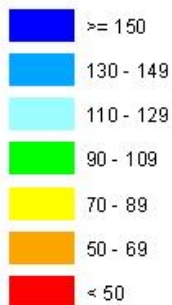
San Miguel, Dolores, Animas and San Juan River Basins High/Low Monthly Precipitation Summary

Based on Provisional SNOTEL data as of Apr 20, 2010

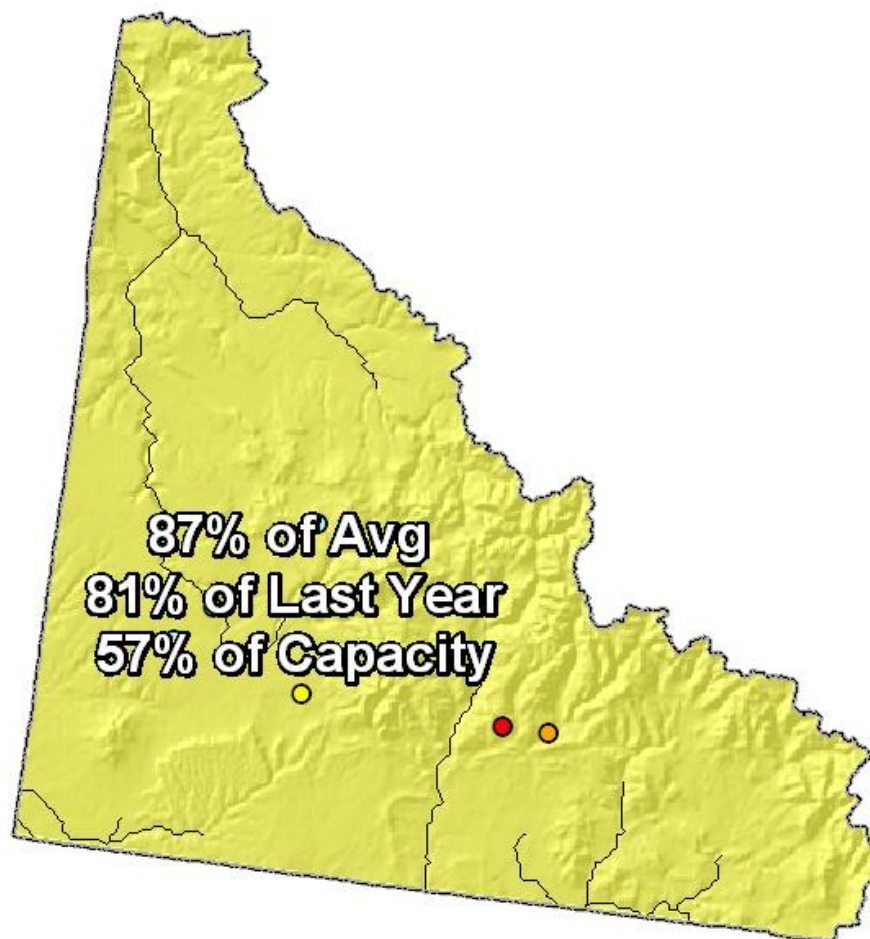


San Miguel, Dolores, Animas and San Juan River Basins Reservoir Storage Map

Percent of Average



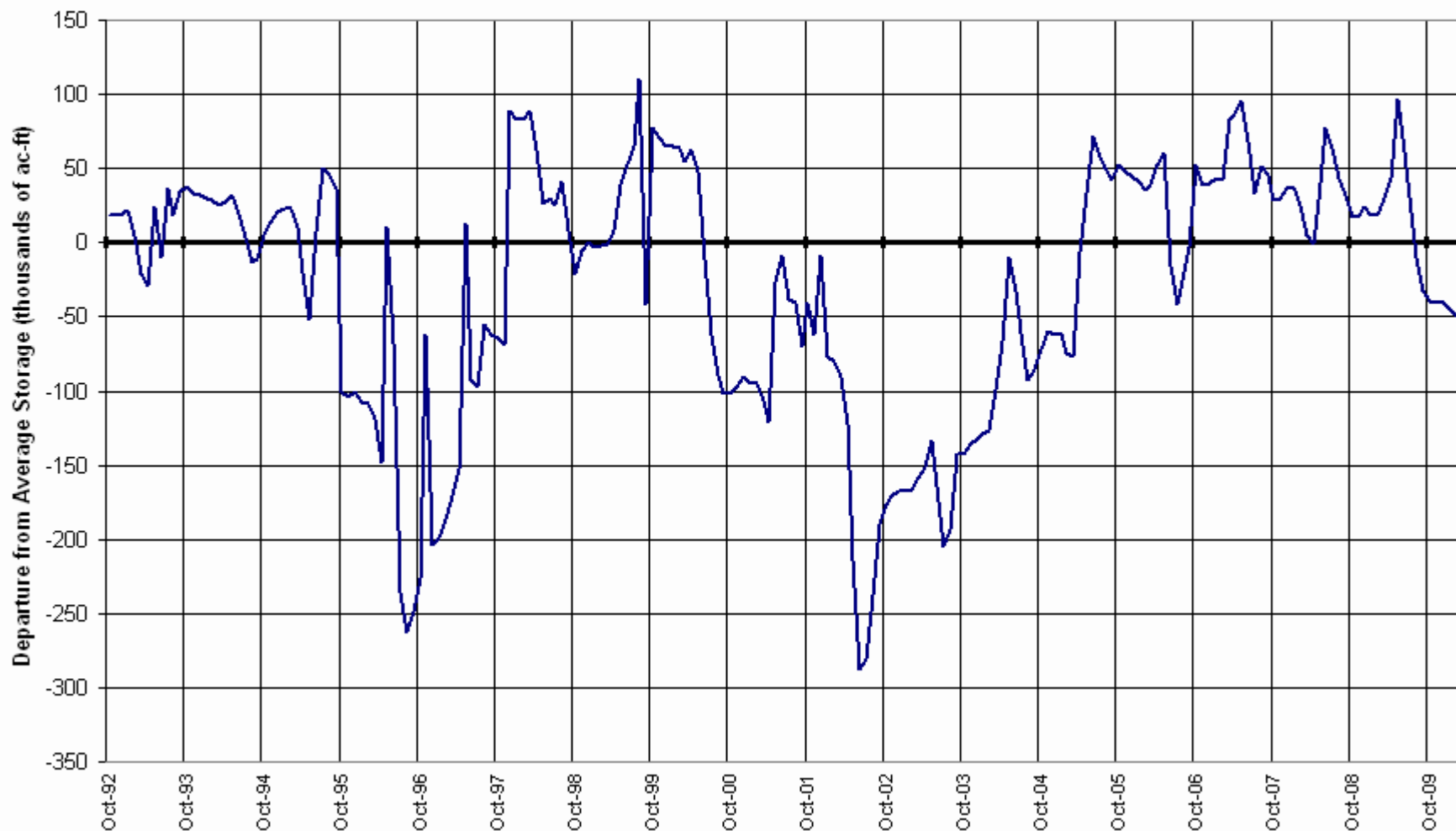
*Provisional Data
Subject to Revision*



End of March 2010

SAN MIGUEL, DOLORES, ANIMAS AND SAN JUAN RIVER BASINS

Reservoir Storage Departure from Average

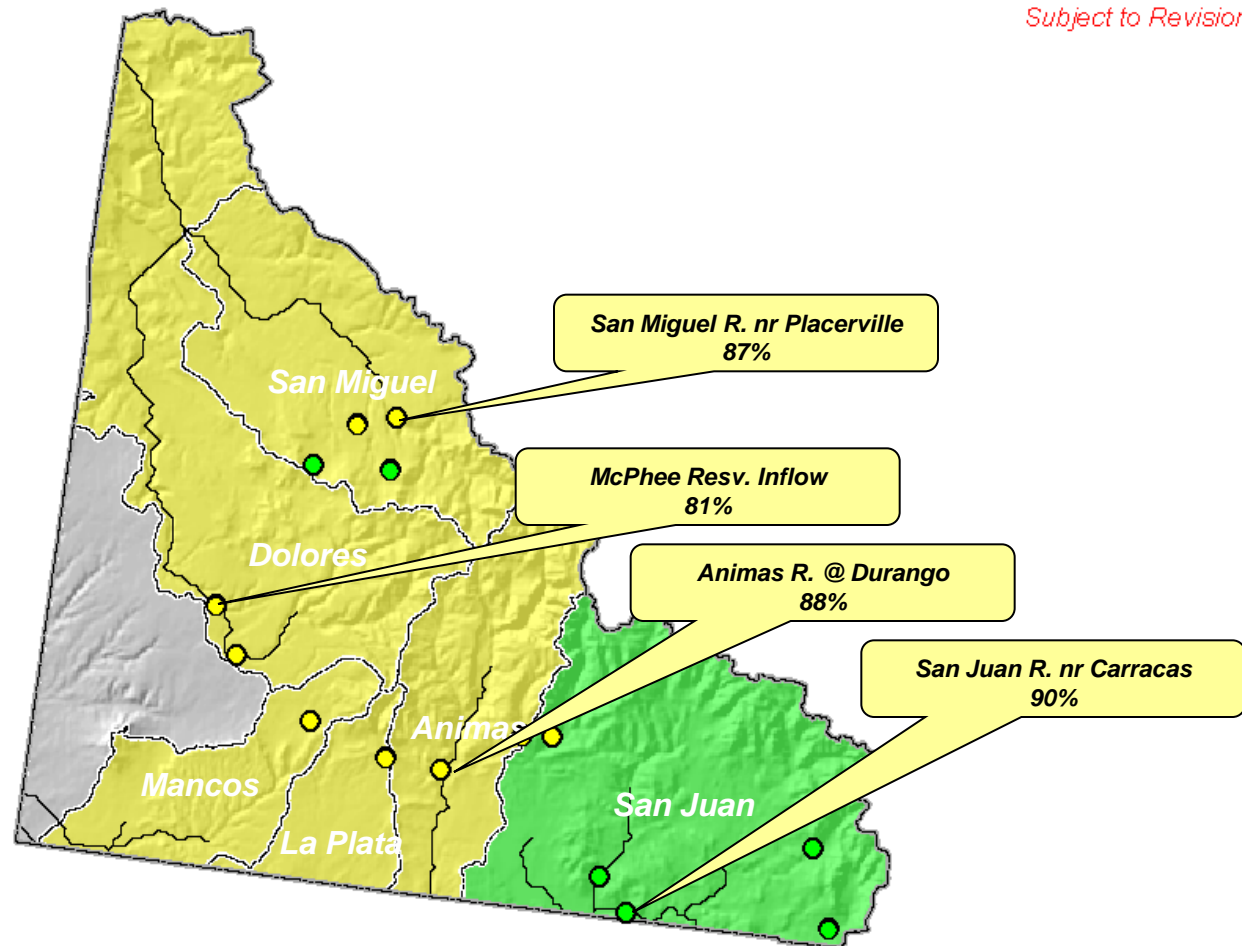


San Miguel, Dolores, Animas and San Juan River Basins Streamflow Forecast Map

Percent of Average

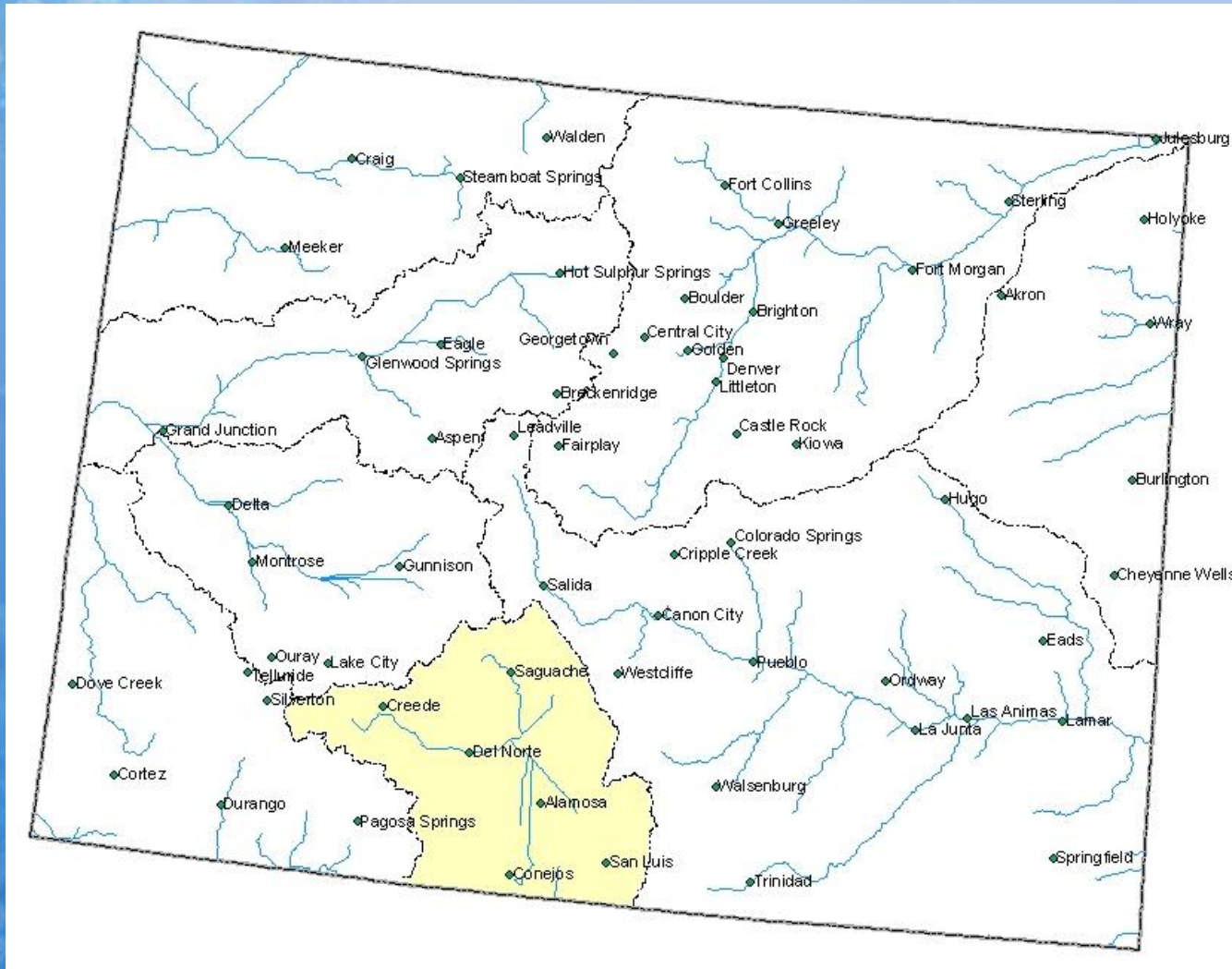


*Provisional Data
Subject to Revision*



Current as of April 1, 2010

Upper Rio Grande Basin Summary

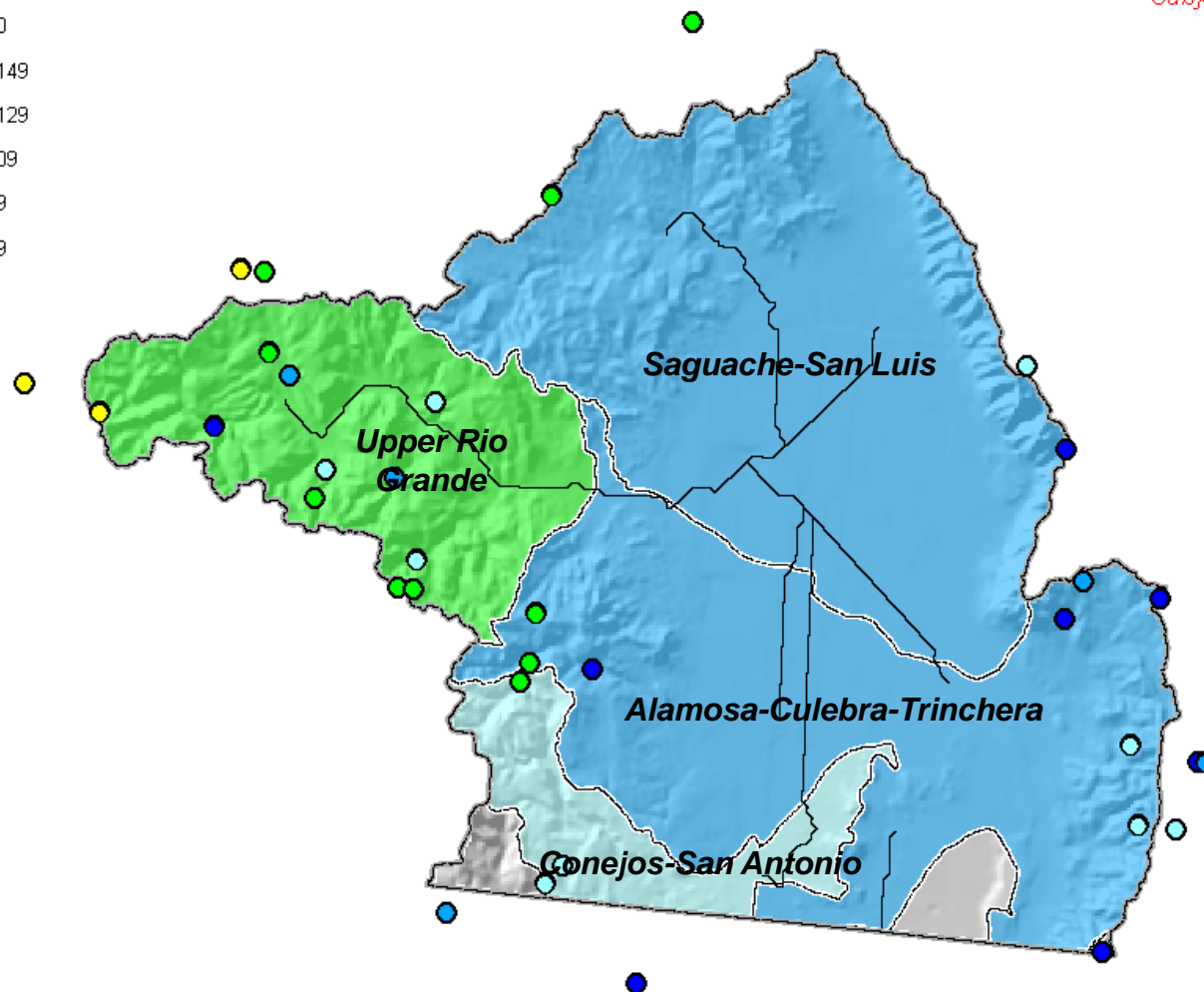


Upper Rio Grande Basin Snowpack Map

Percent of Average

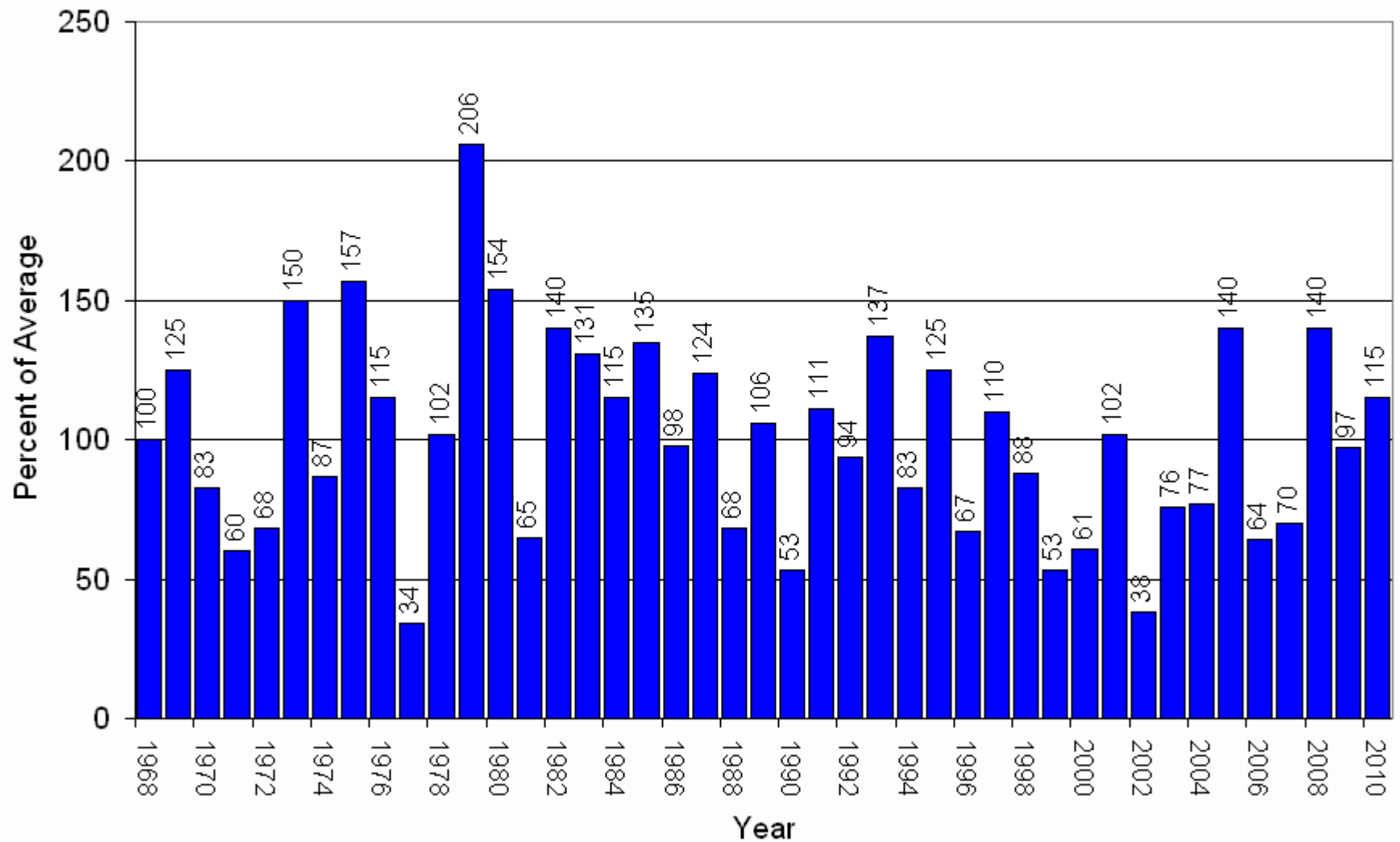


*Provisional Data
Subject to Revision*



Current as of April 1, 2010

April 1 Total Upper Rio Grande Basin Snowpack



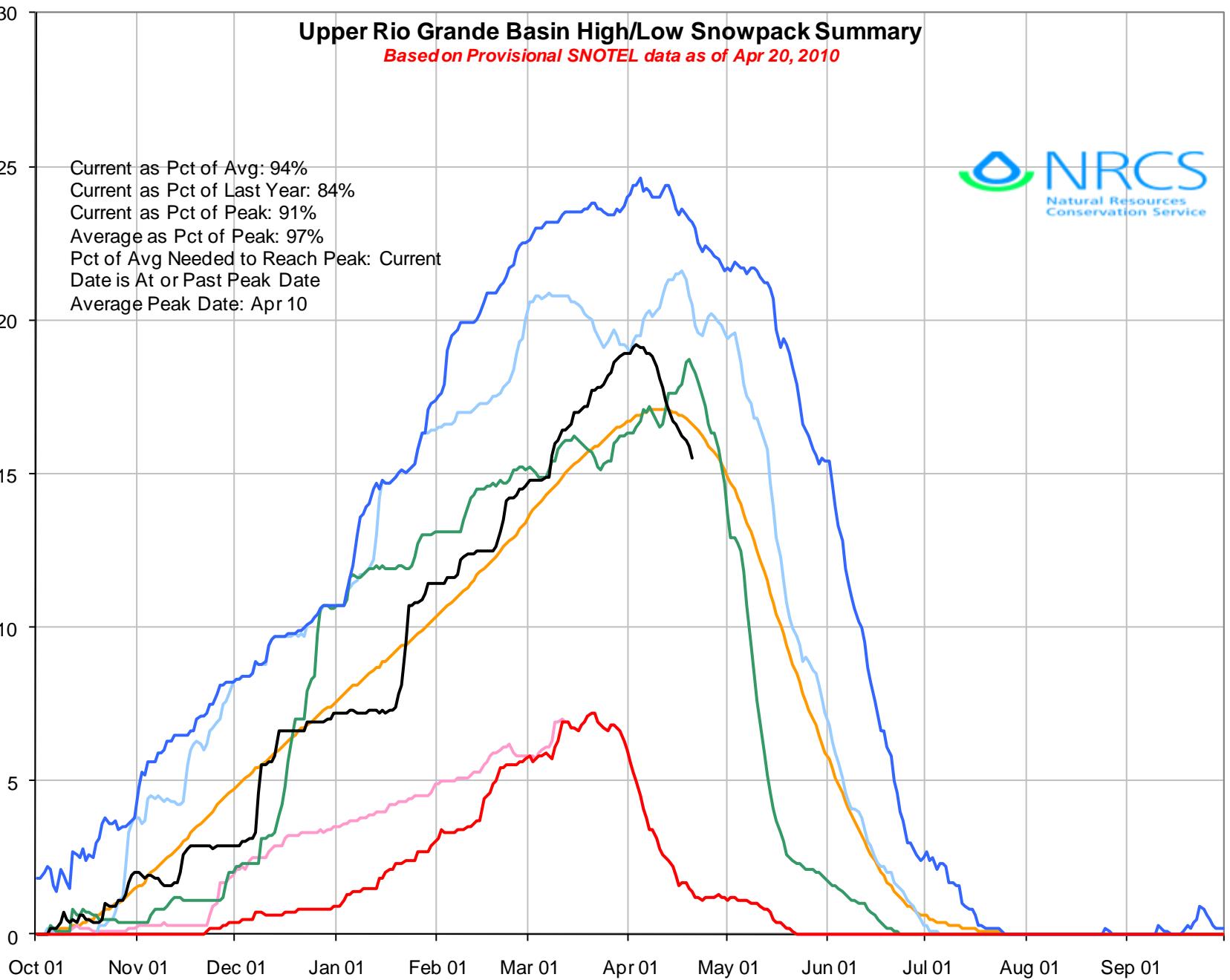
Upper Rio Grande Basin High/Low Snowpack Summary

Based on Provisional SNOTEL data as of Apr 20, 2010



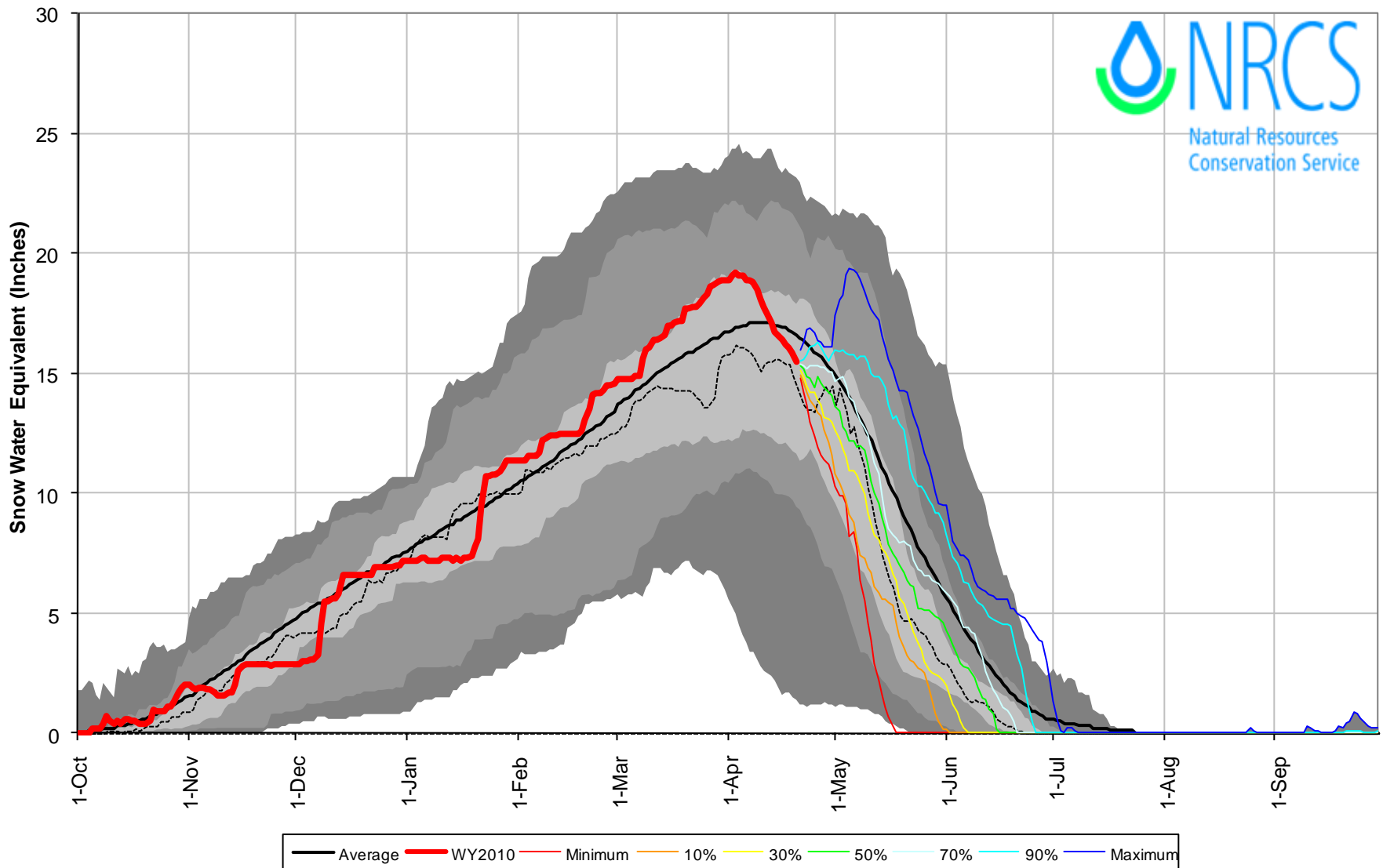
Current as Pct of Avg: 94%
Current as Pct of Last Year: 84%
Current as Pct of Peak: 91%
Average as Pct of Peak: 97%
Pct of Avg Needed to Reach Peak: Current
Date is At or Past Peak Date
Average Peak Date: Apr 10

Snow Water Equivalent (inches)



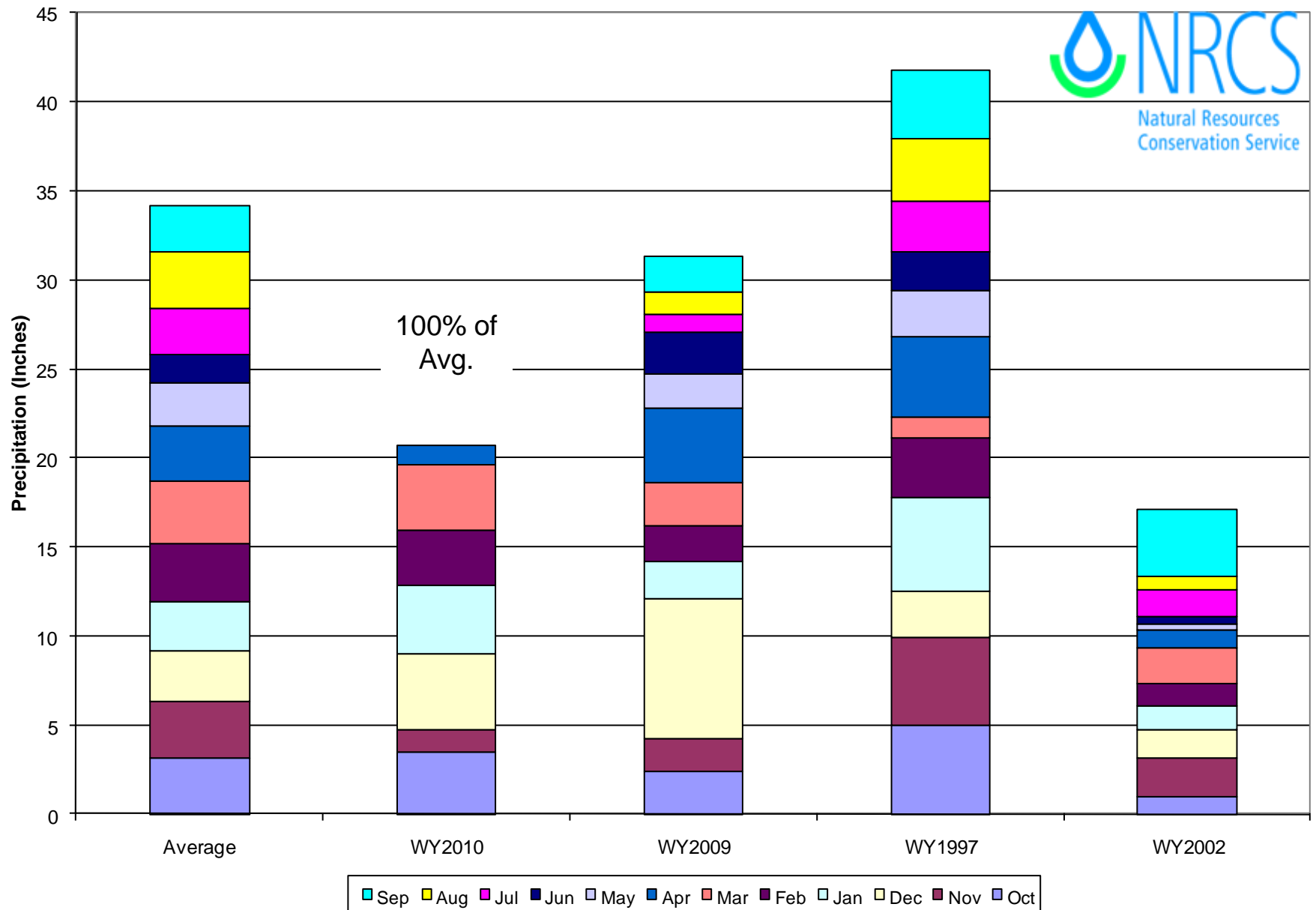
— Average — WY2002 — WY1997 — WY2009 — WY2010 — Maximum — Minimum

Based on Provisional SNOTEL Data as of Apr 20, 2010



Upper Rio Grande Basin High/Low Monthly Precipitation Summary

Based on Provisional SNOTEL data as of Apr 20, 2010

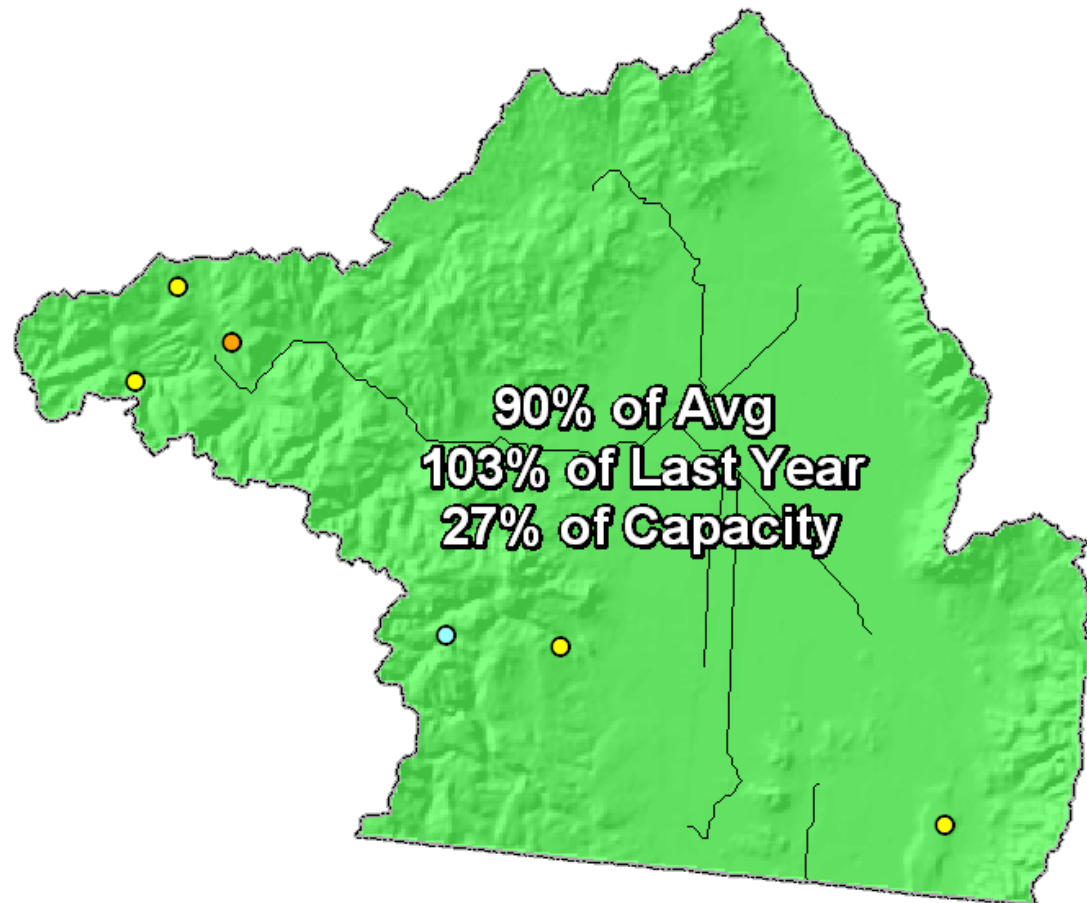


Upper Rio Grande Basin Reservoir Storage Map

Percent of Average

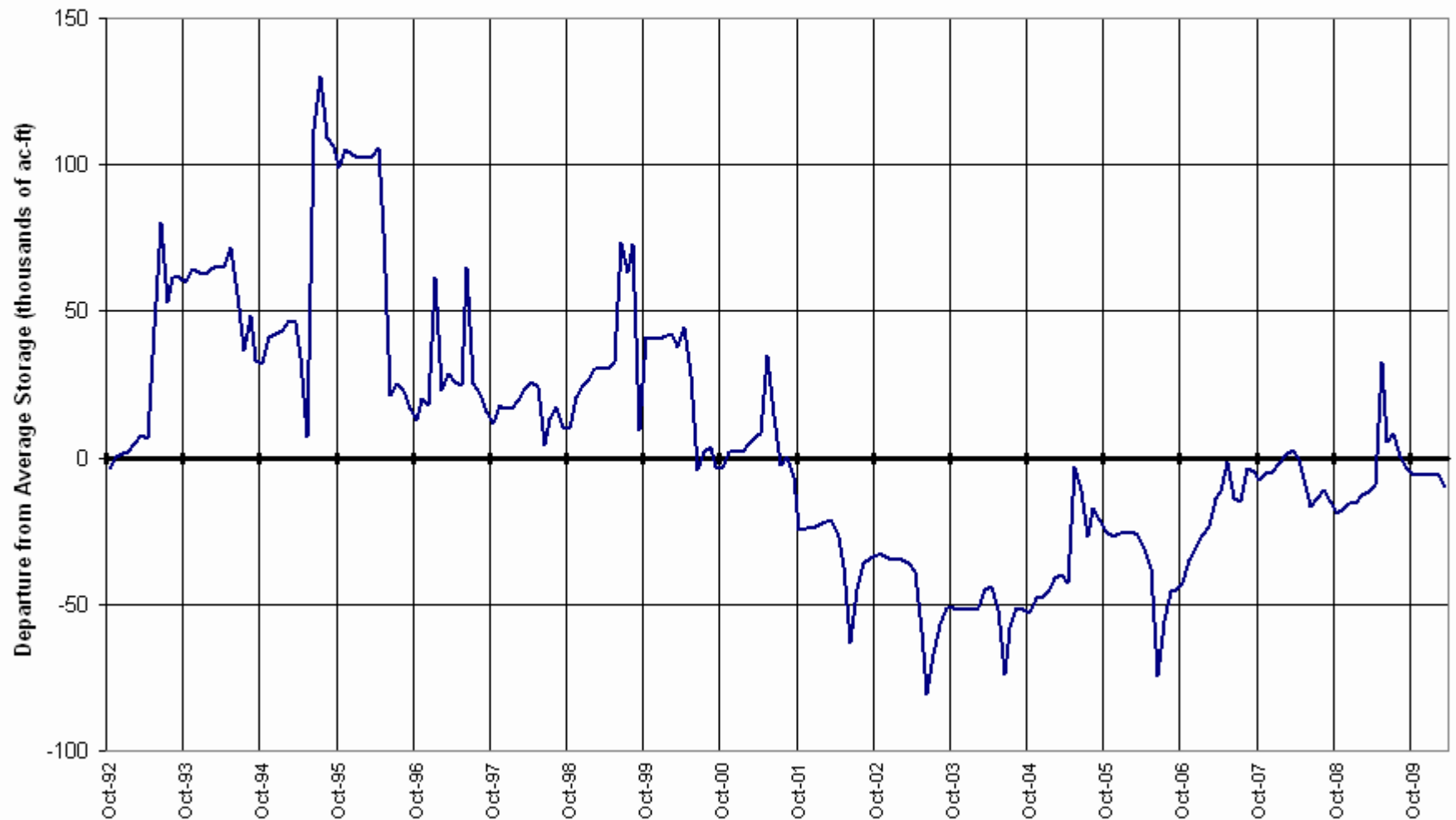


*Provisional Data
Subject to Revision*



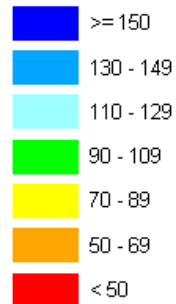
End of March 2010

UPPER RIO GRANDE BASIN
Reservoir Storage
Departure from Average

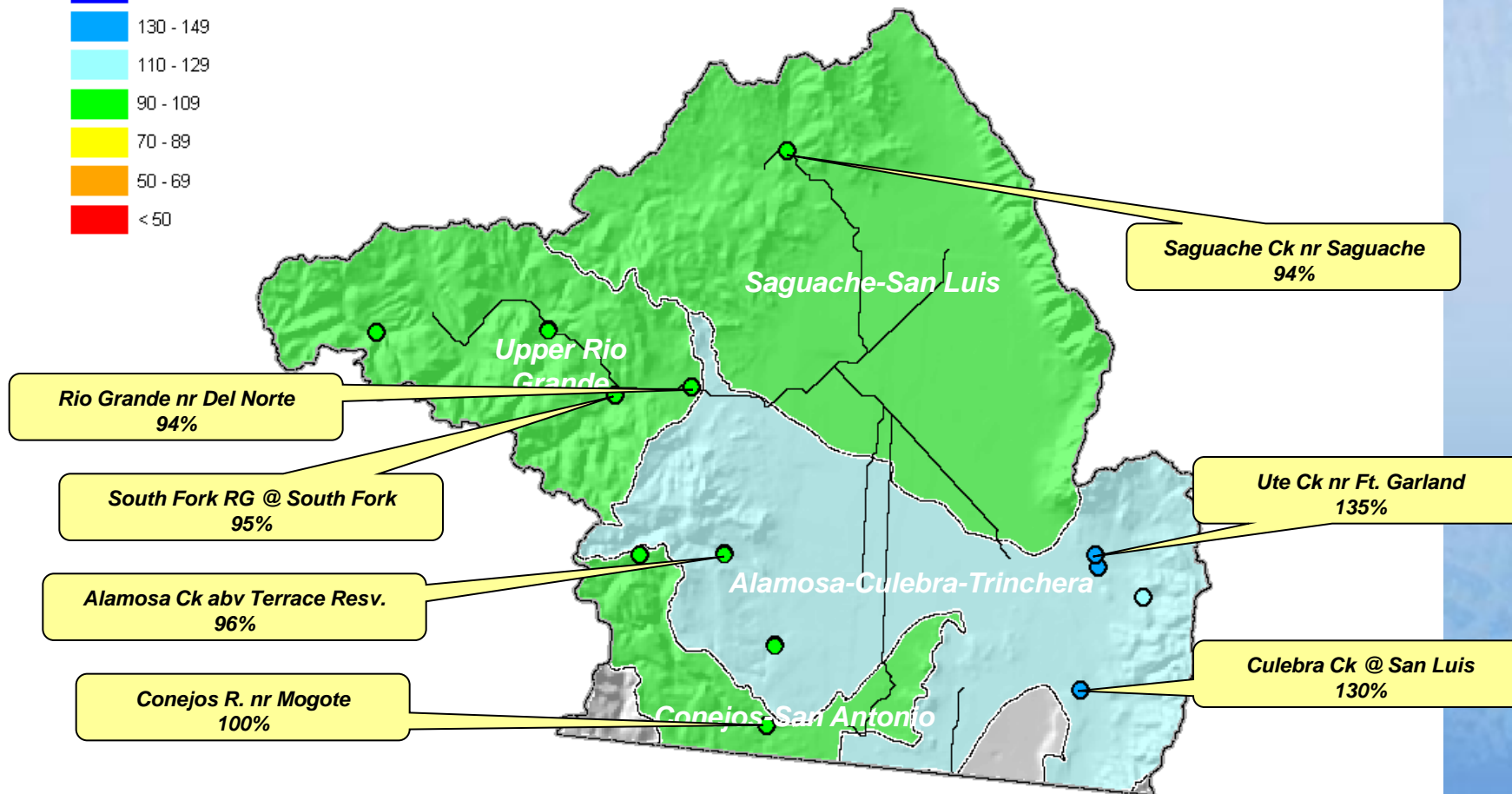


Upper Rio Grande Basin Streamflow Forecast Map

Percent of Average

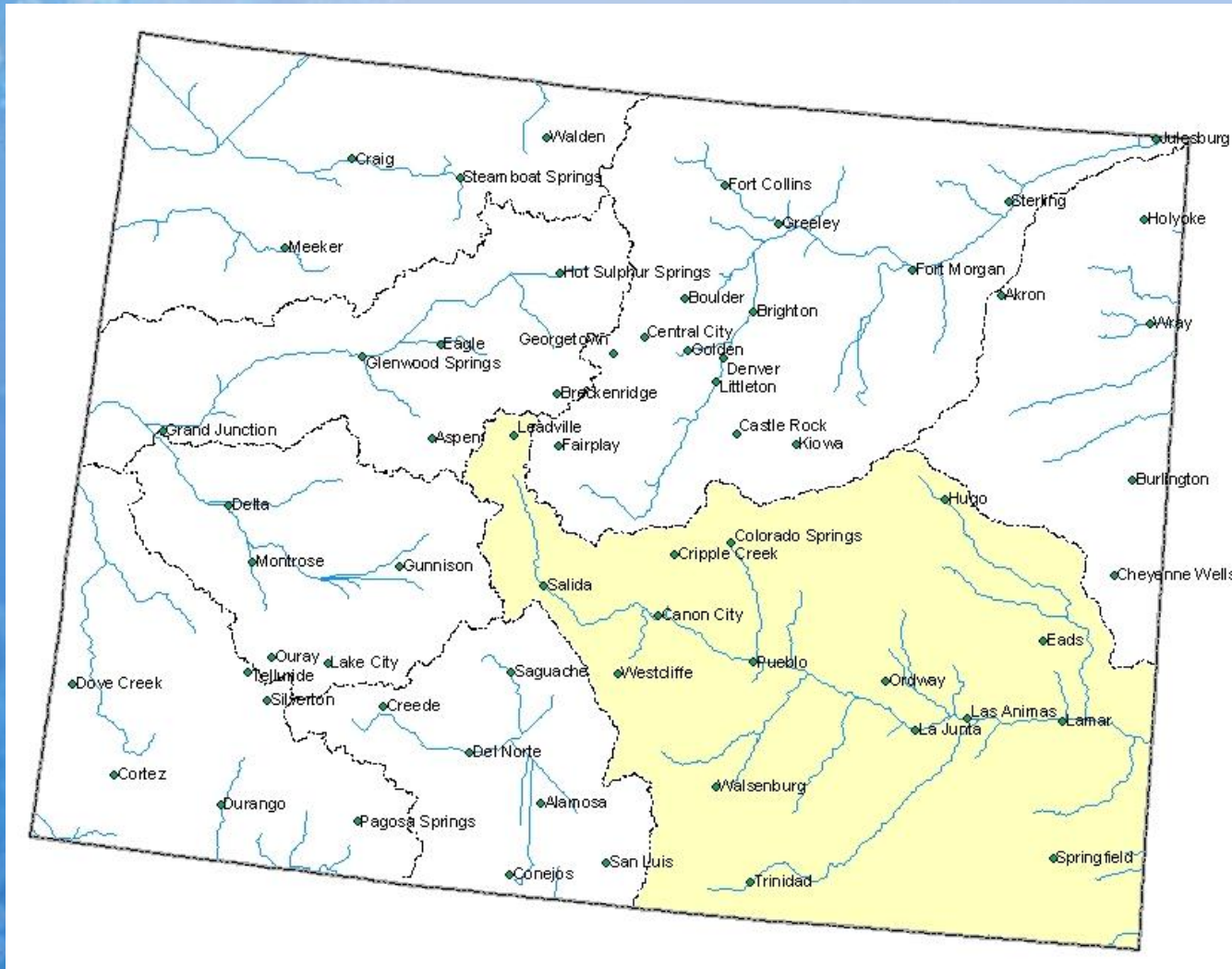


*Provisional Data
Subject to Revision*



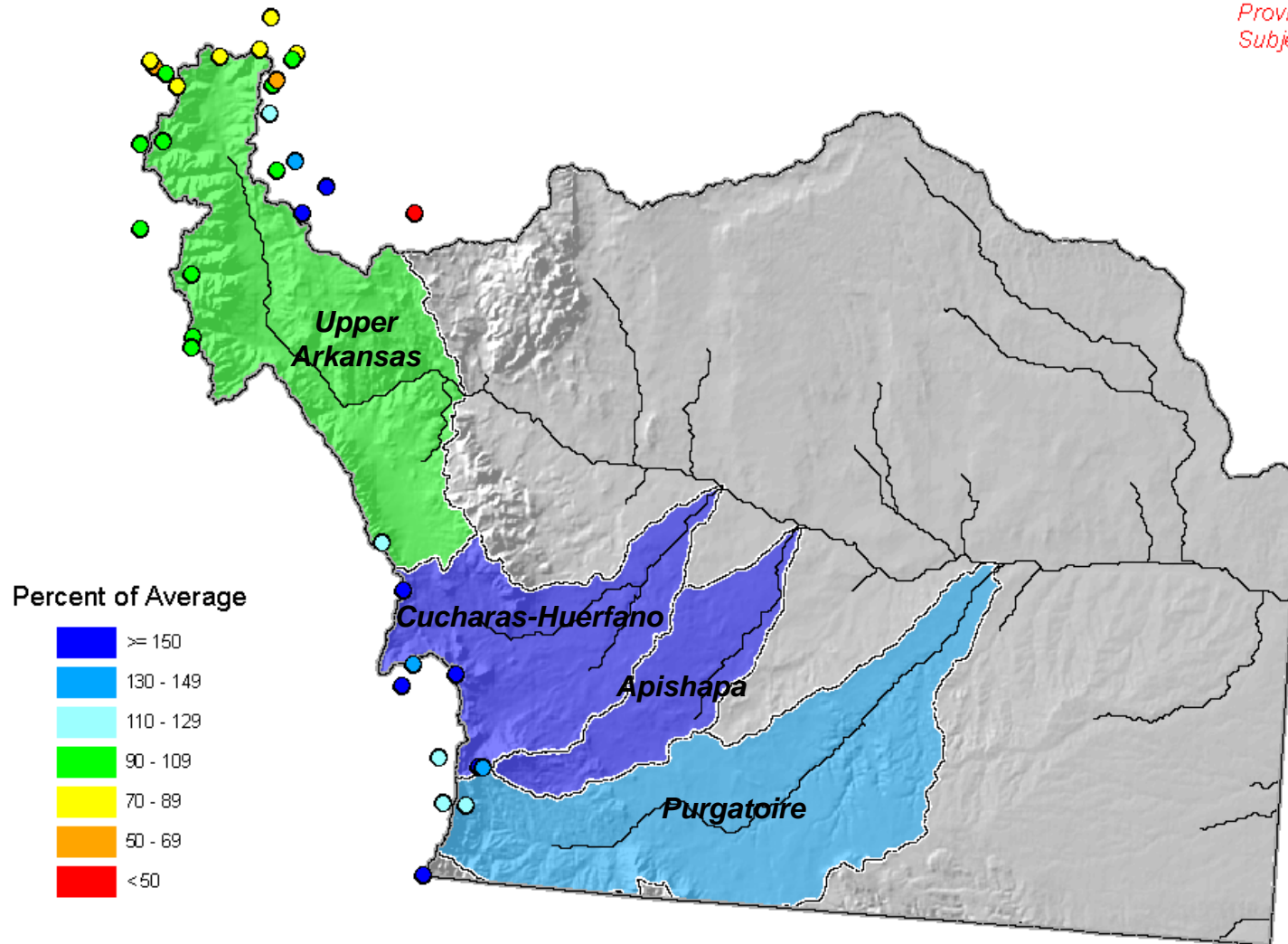
Current as of April 1, 2010

Arkansas River Basin Summary



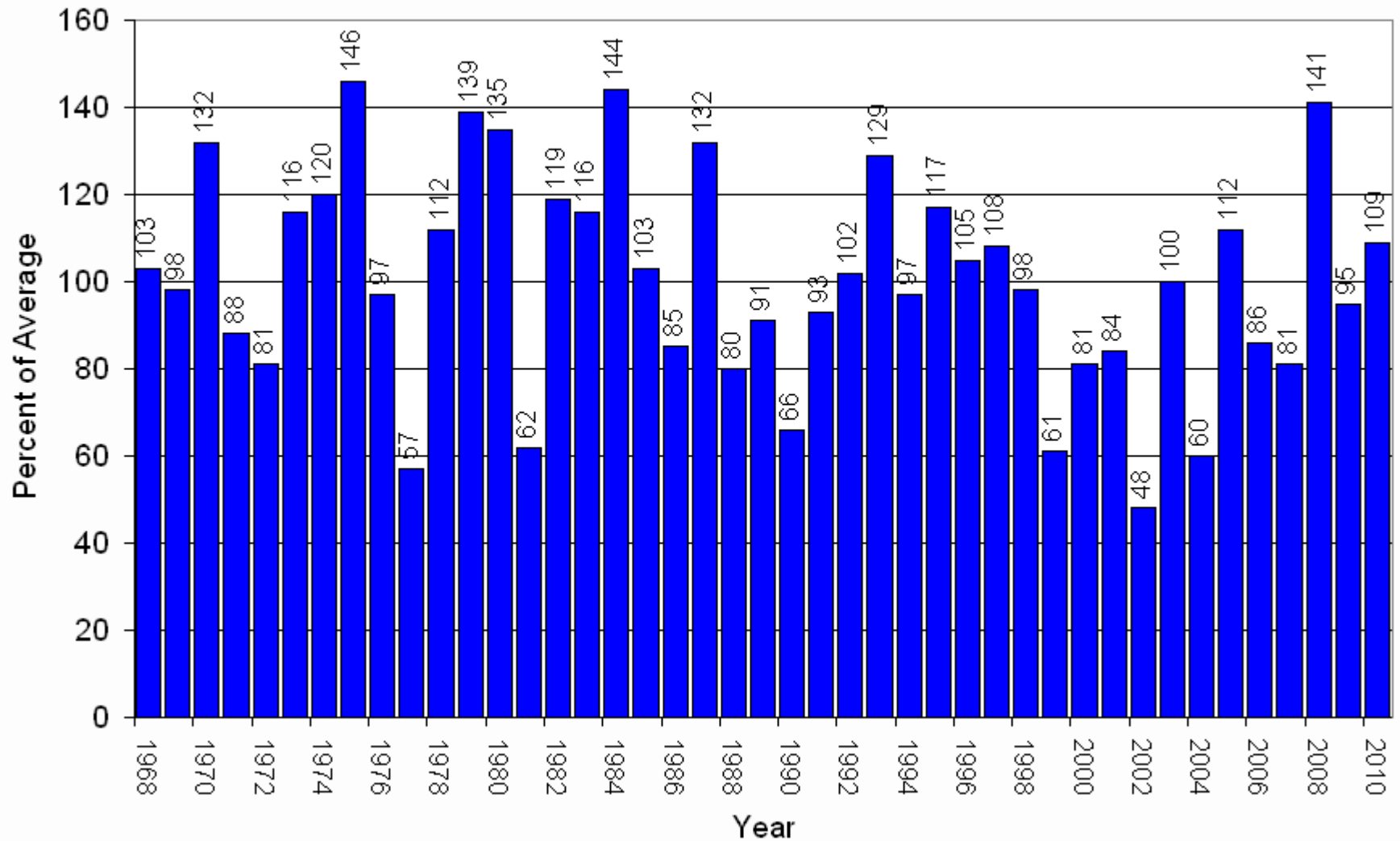
Arkansas River Basin Snowpack Map

*Provisional Data
Subject to Revision*



Current as of April 1, 2010

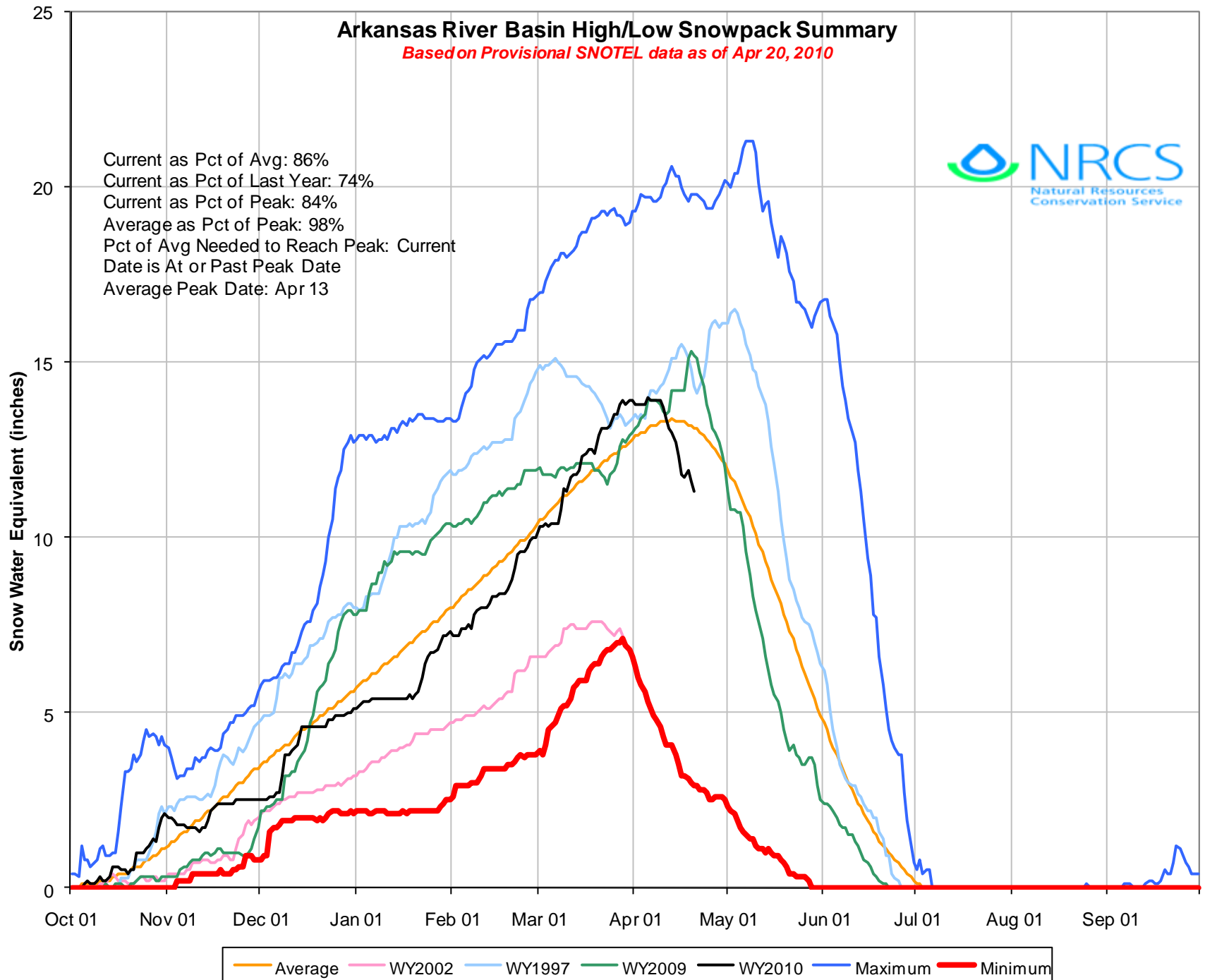
April 1 Total Arkansas River Basin Snowpack



Based on Provisional SNOTEL data as of Apr 20, 2010

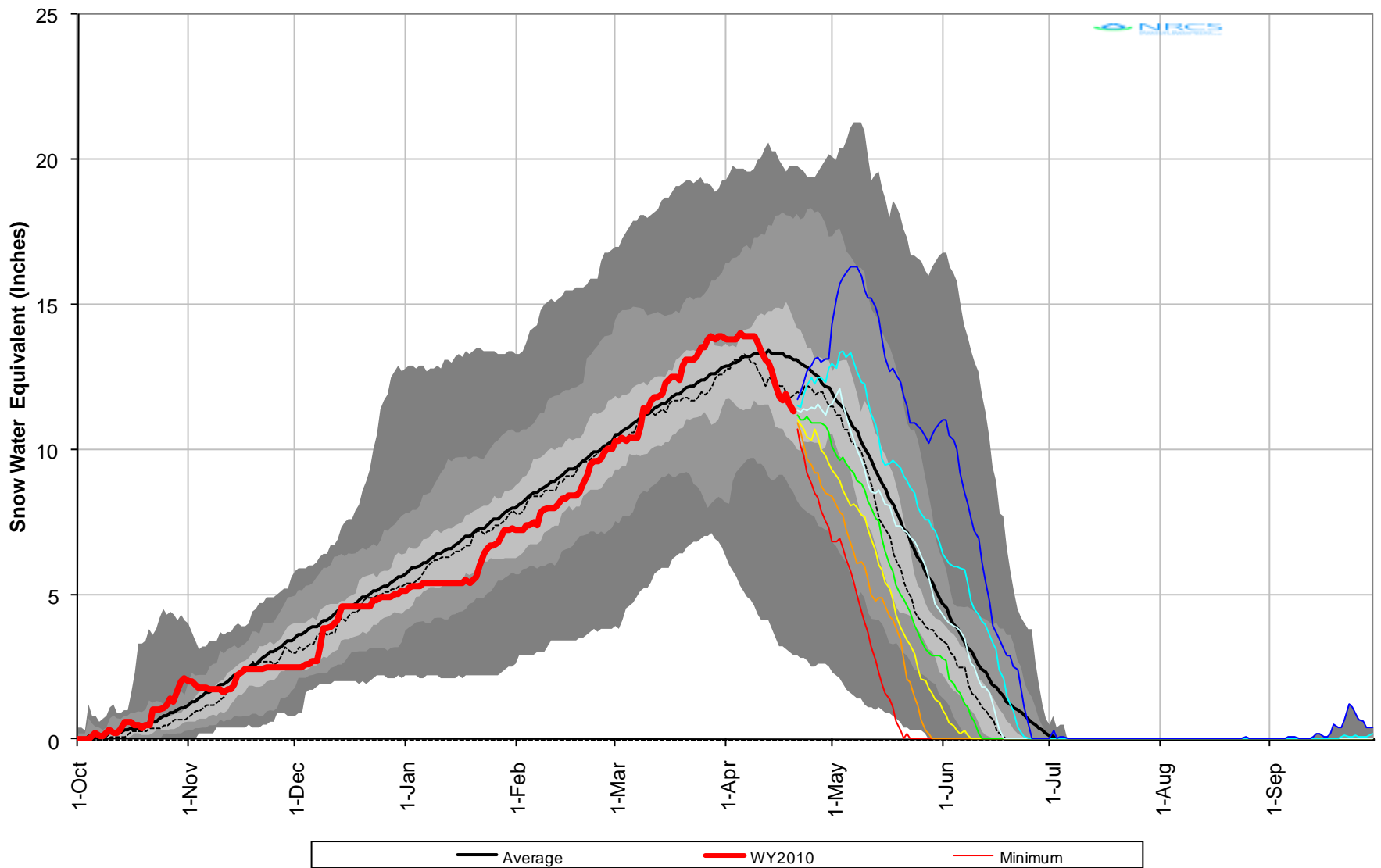


NRCS
Natural Resources
Conservation Service



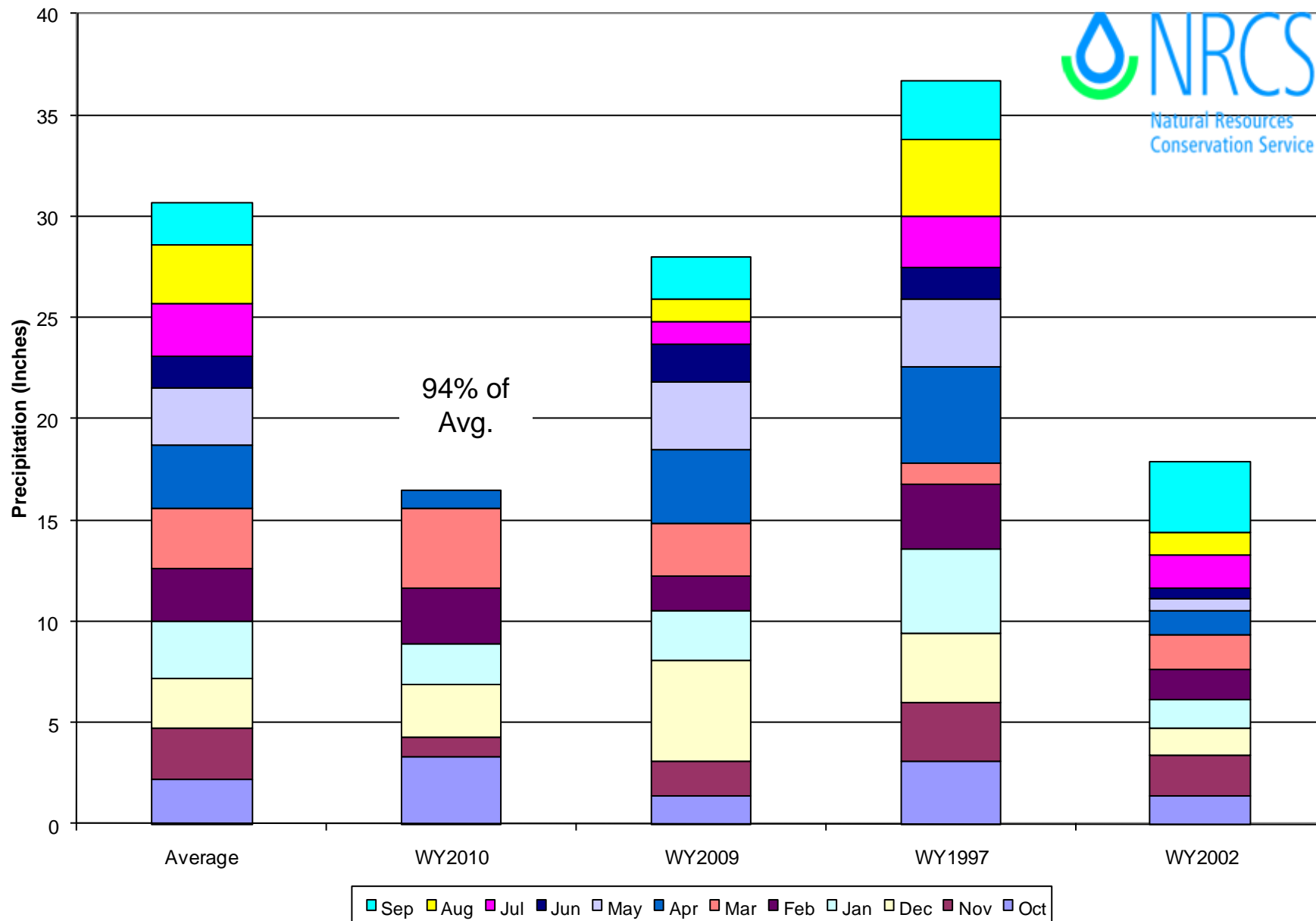
Arkansas River Basin with Non-Exceedence Projections

Based on Provisional SNOTEL Data as of Apr 20, 2010



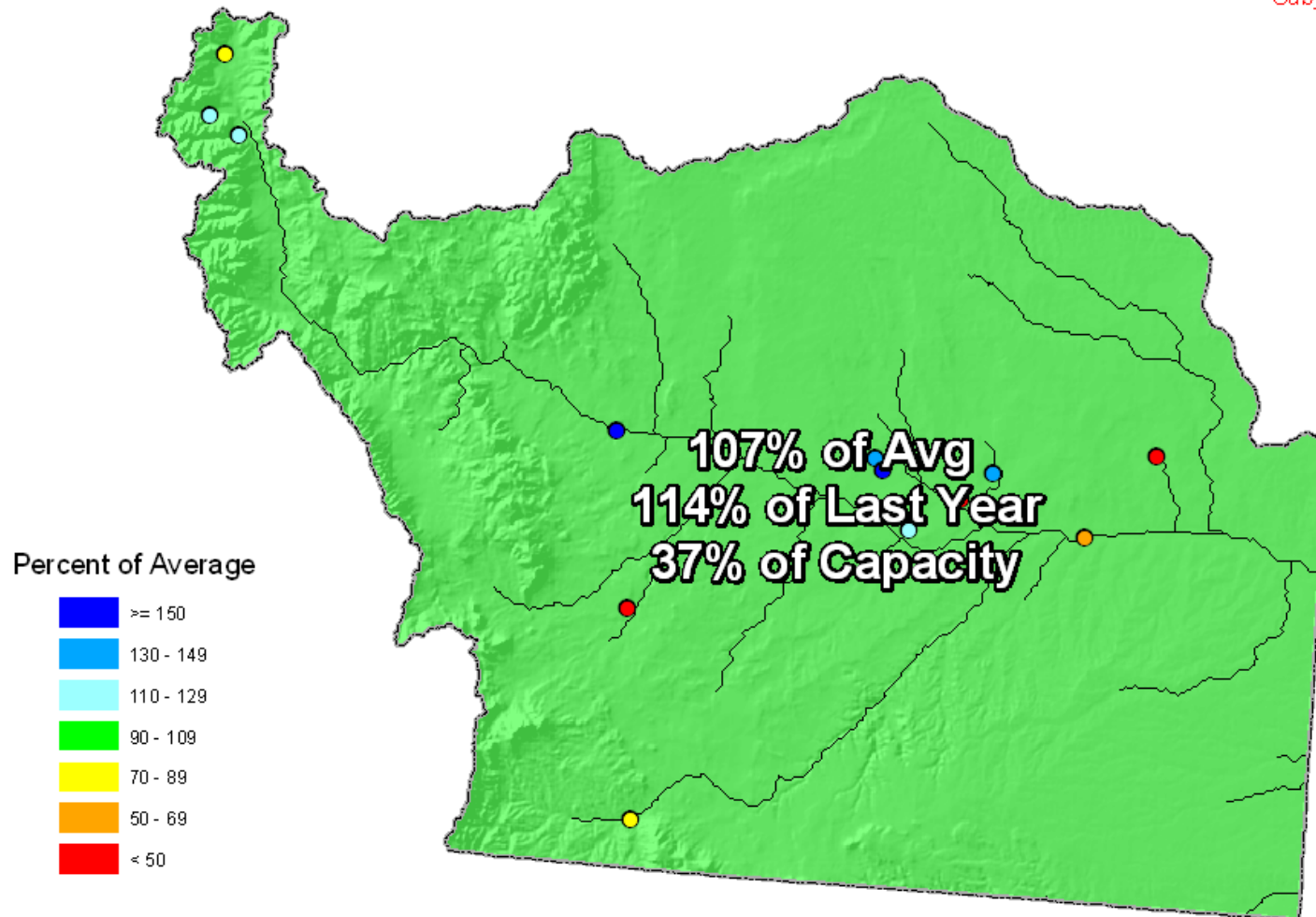
Arkansas River Basin High/Low Monthly Precipitation Summary

Based on Provisional SNOTEL data as of Apr 20, 2010



Arkansas River Basin Reservoir Storage Map

*Provisional Data
Subject to Revision*



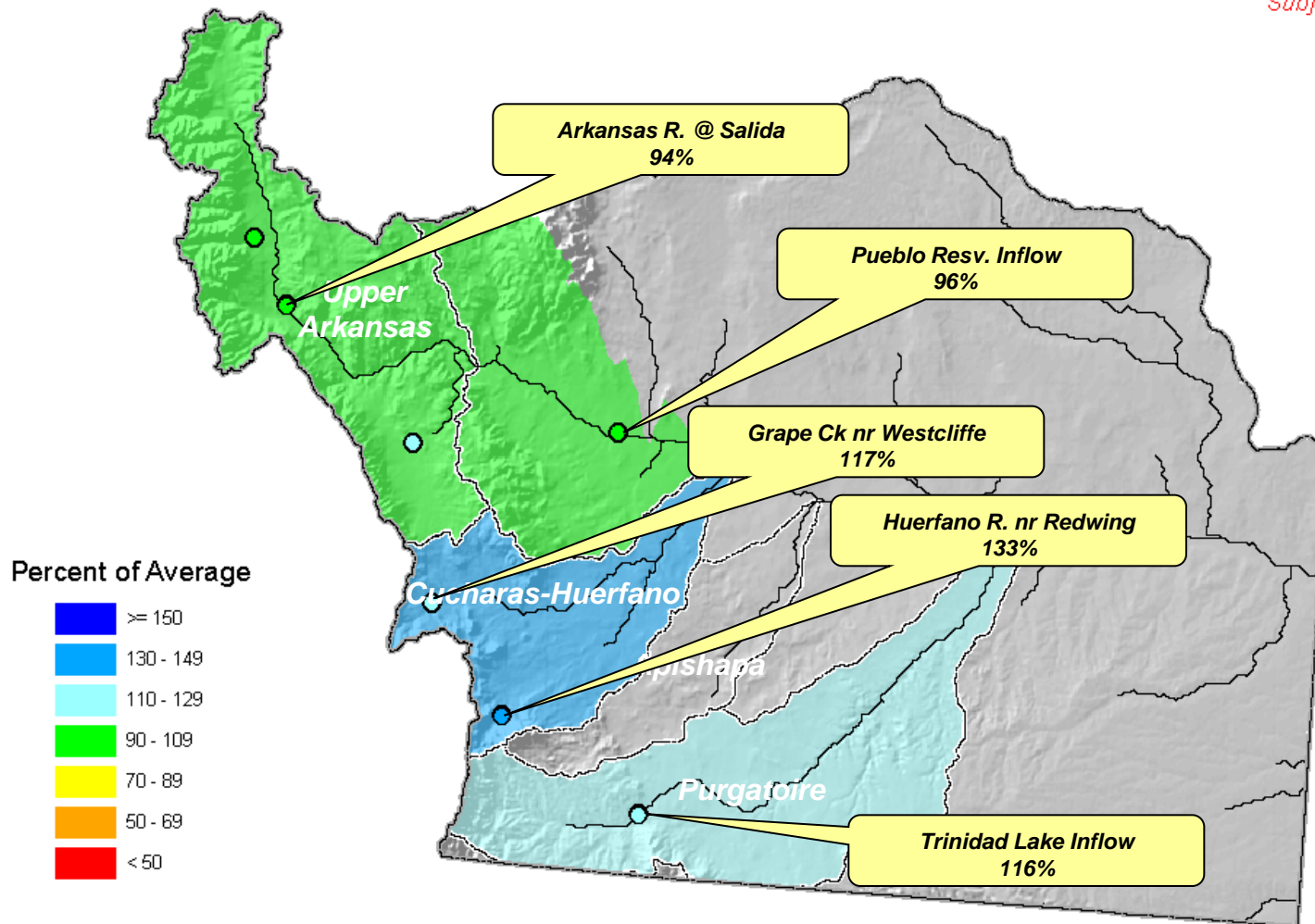
End of March 2010

ARKANSAS RIVER BASIN
Reservoir Storage
Departure from Average



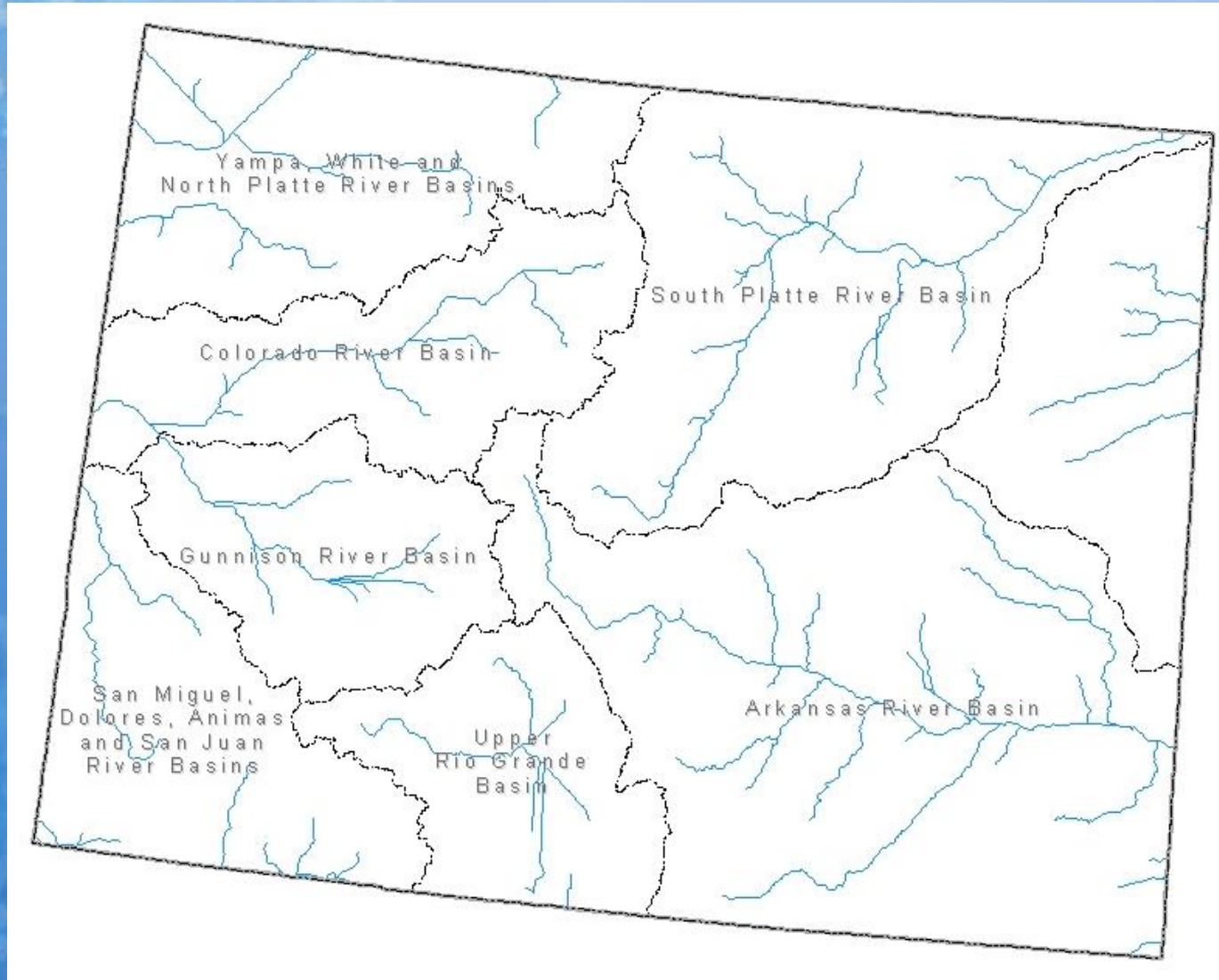
Arkansas River Basin Streamflow Forecast Map

*Provisional Data
Subject to Revision*



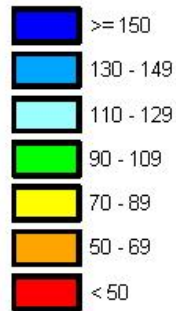
Current as of April 1, 2010

Colorado Statewide Summary

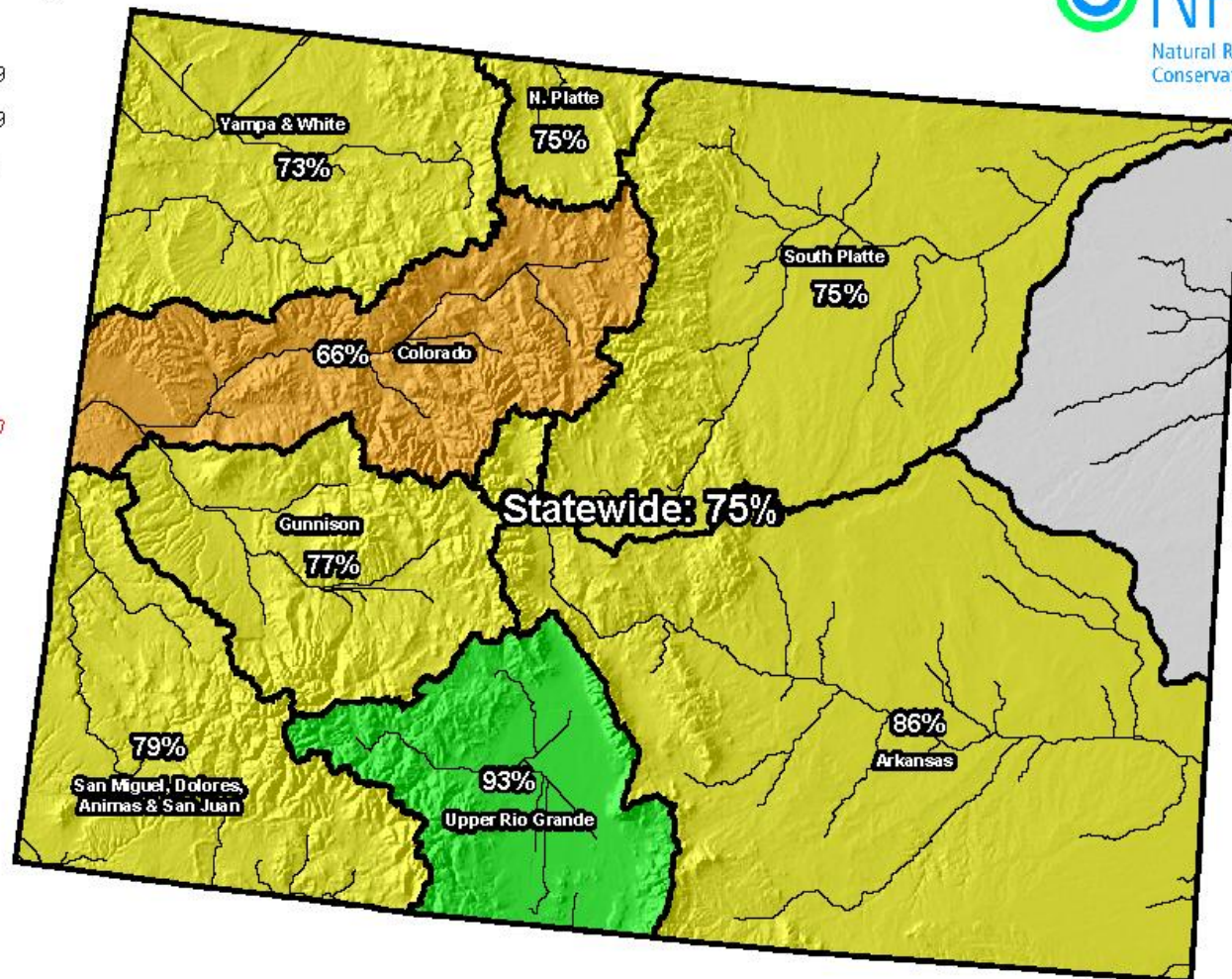


Colorado SNOTEL Snowpack Update Map

Percent of Average



*Provisional Data
Subject to Revision*



Current as of Apr 20, 2010

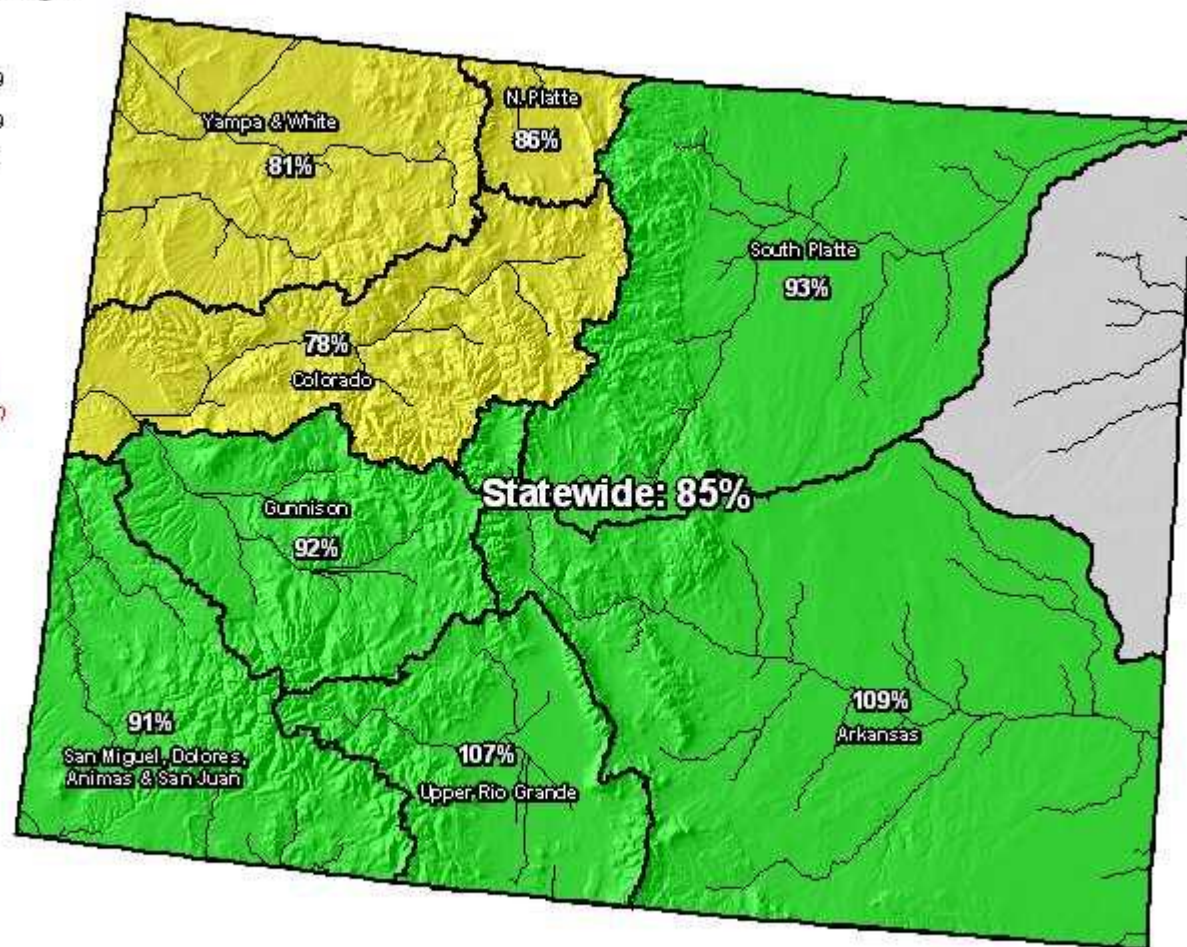
*Data may not provide a valid measure of conditions

Colorado SNOTEL May 1 Snowpack Projection Map*

Percent of Average



*Provisional Data
Subject to Revision*



Current as of Apr 20, 2010

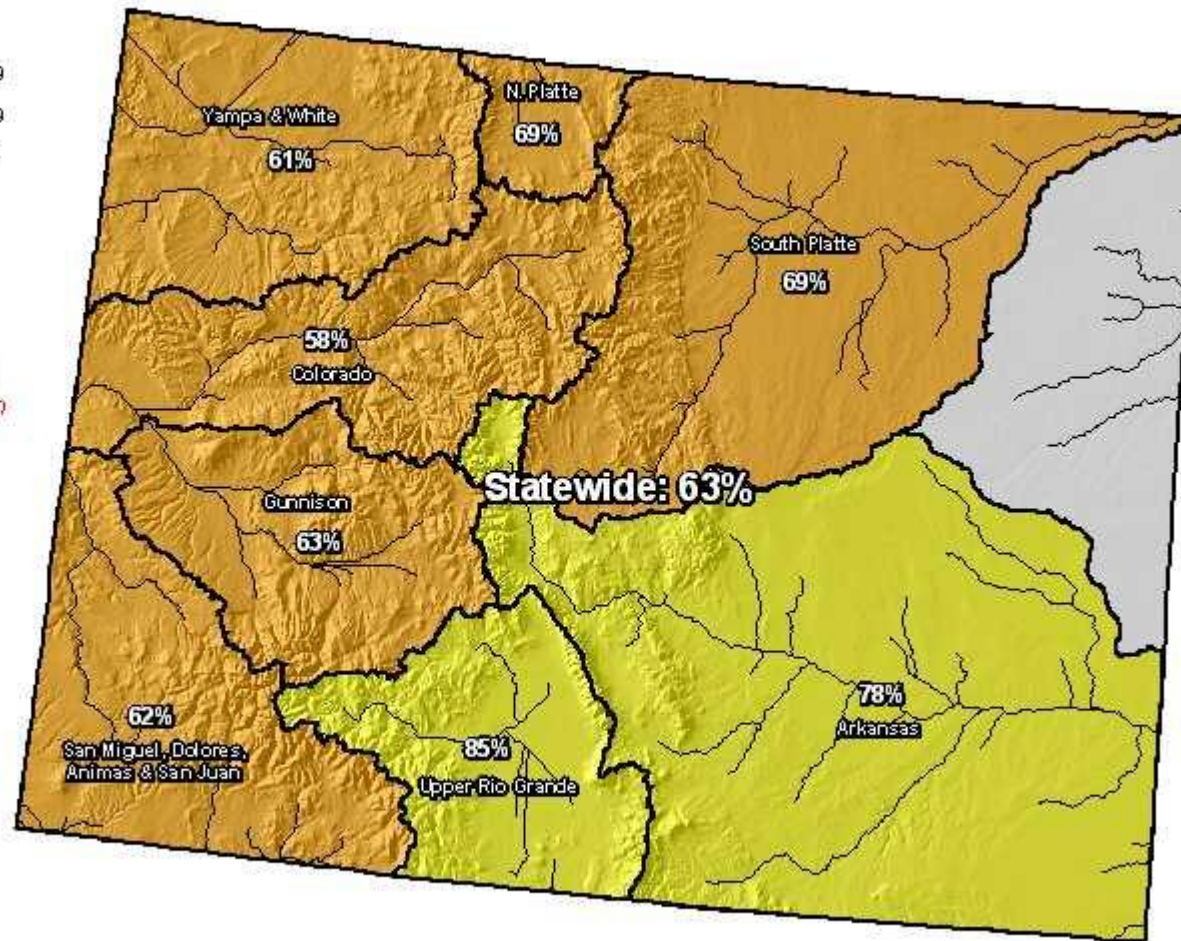
*Based on 90% Non-Exceedence Projections

Colorado SNOTEL May 1 Snowpack Projection Map*

Percent of Average



*Provisional Data
Subject to Revision*



Current as of Apr 20, 2010

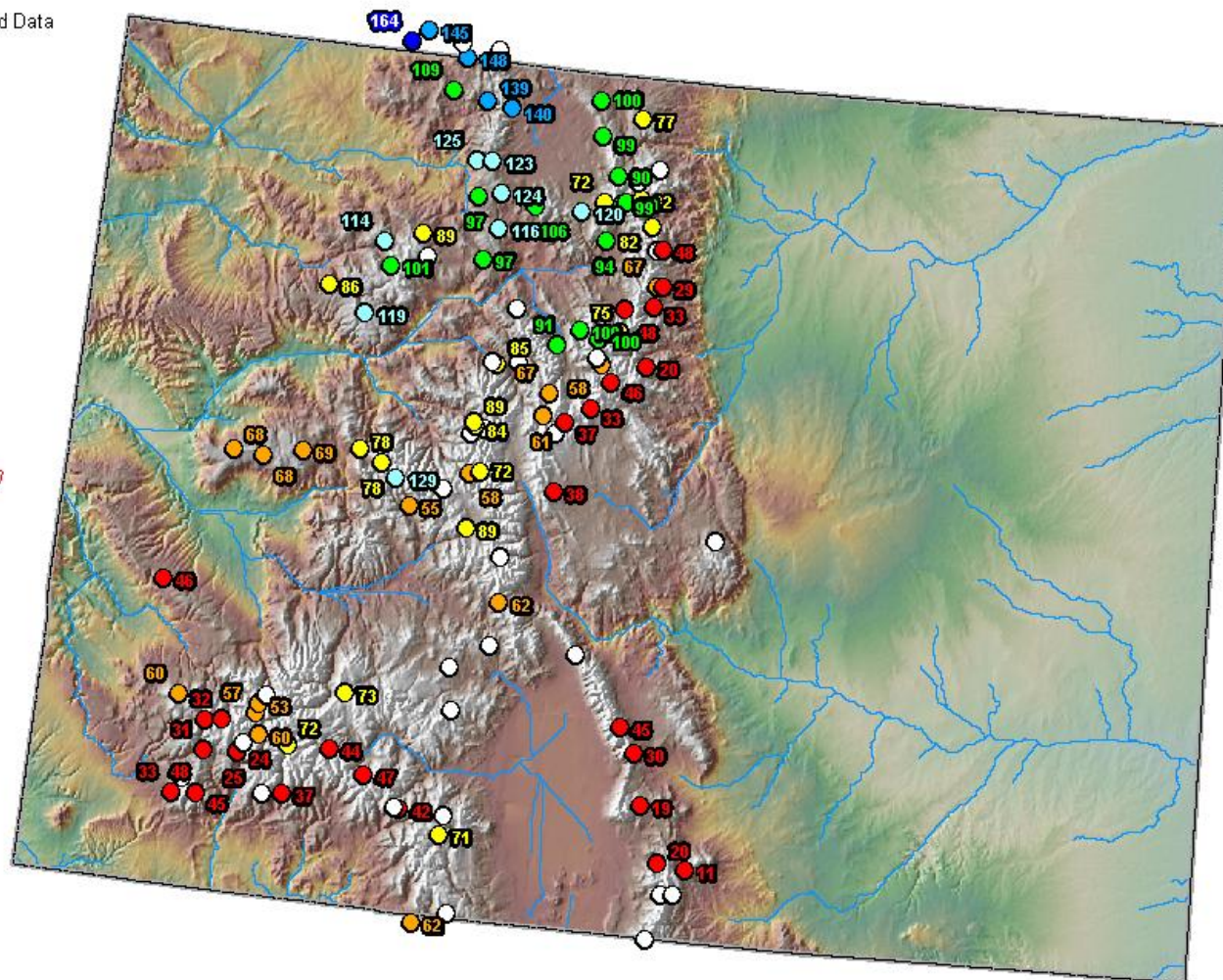
*Based on 30% Non-Exceedence Projections

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

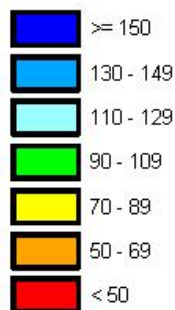
*Provisional Data
Subject to Revision*



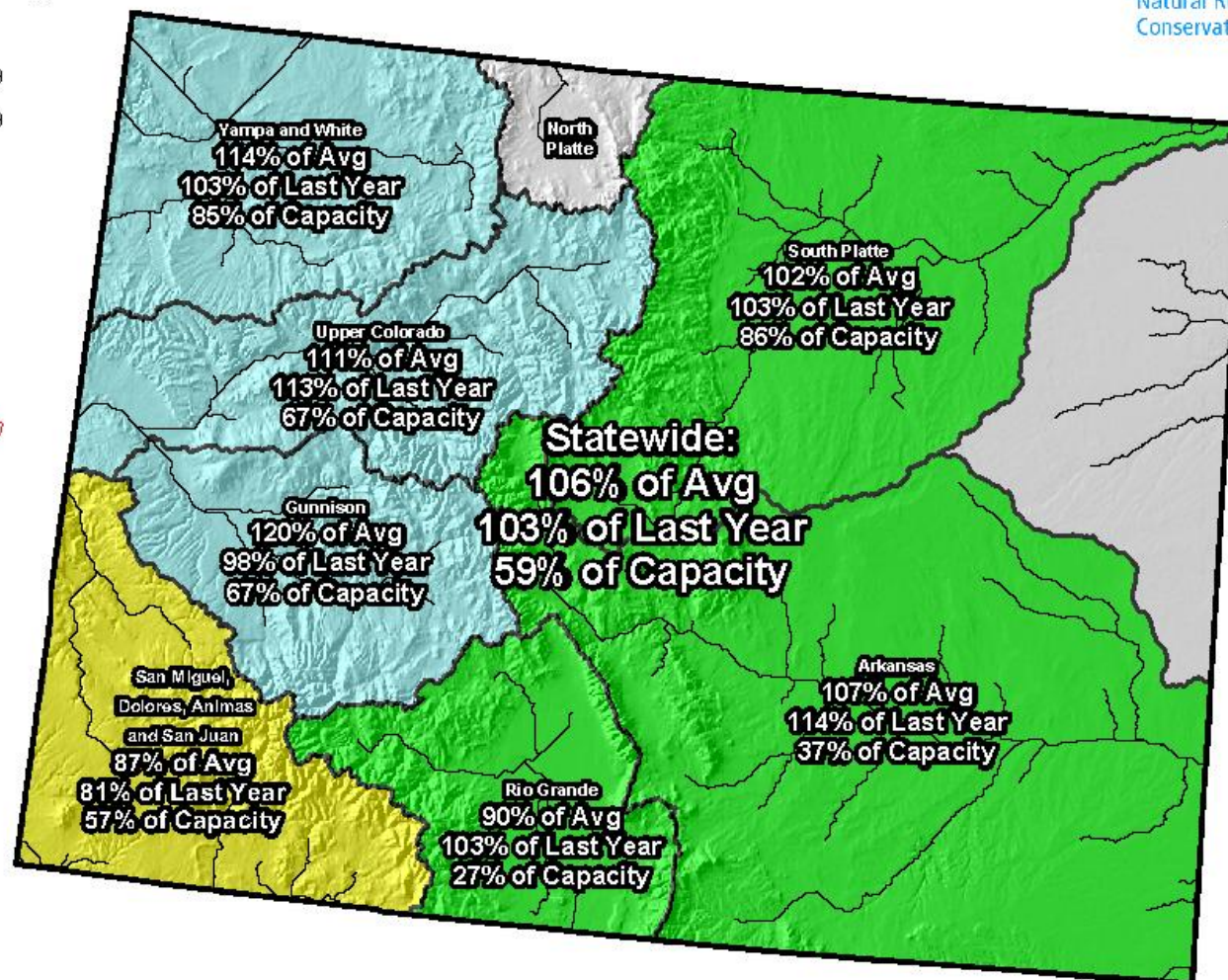
Current as of Apr 20, 2010

Colorado Reservoir Storage Map

Percent of Average



*Provisional Data
Subject to Revision*



End of March 2010

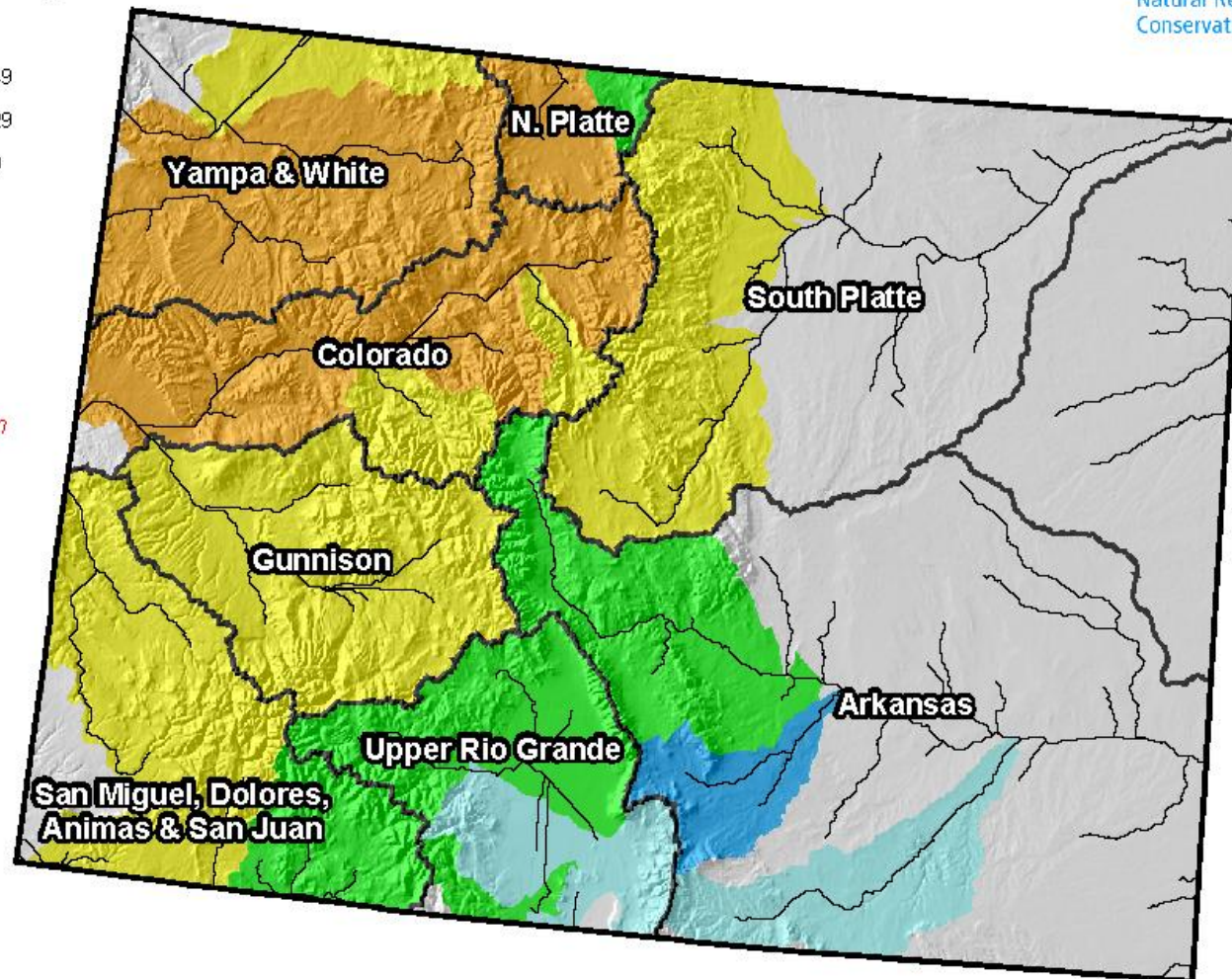
Colorado Streamflow Forecast Map



Percent of Average



*Provisional Data
Subject to Revision*

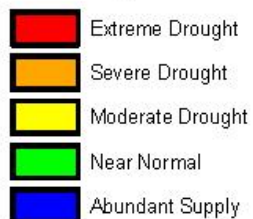


Current as of April 1, 2010

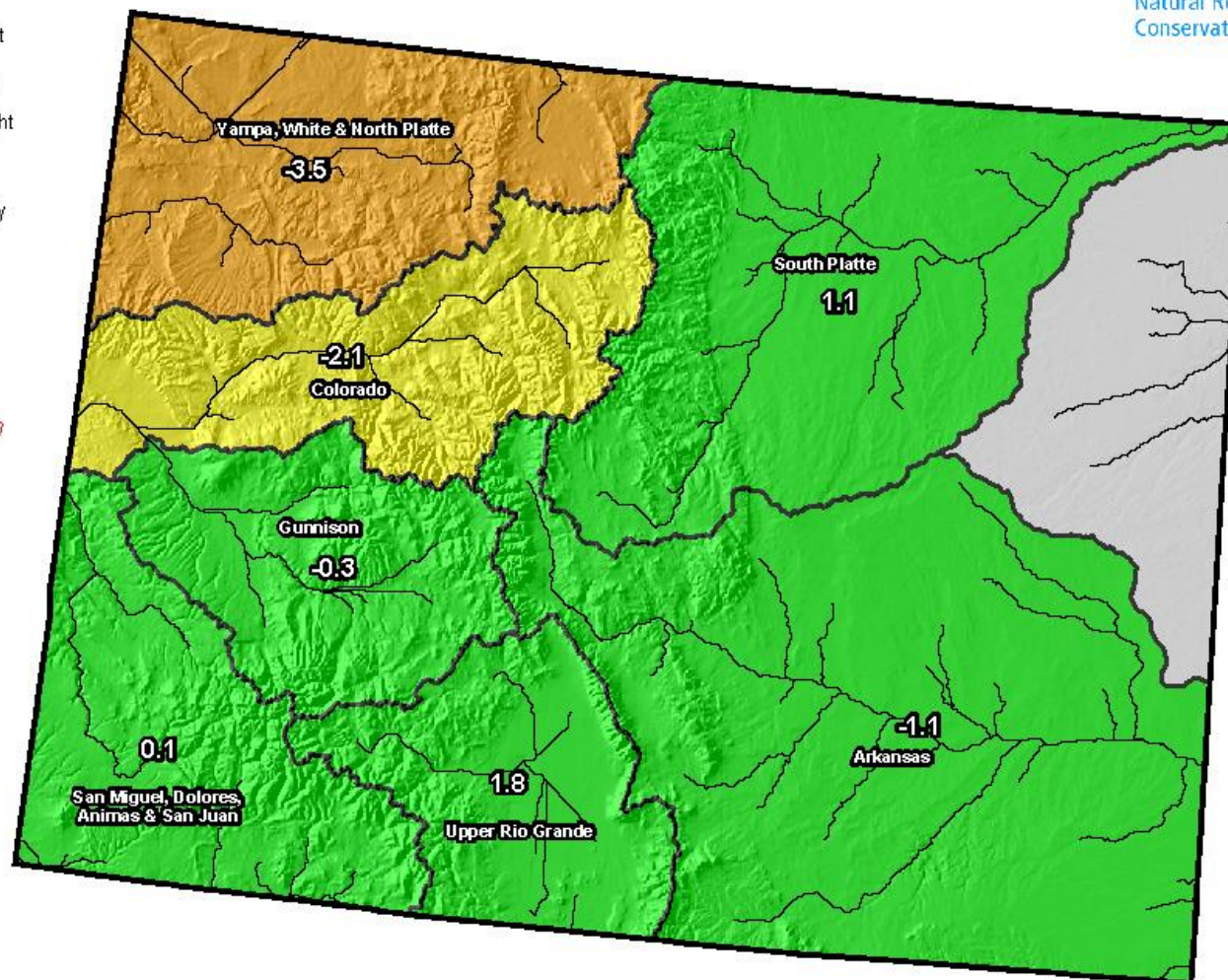
Colorado Surface Water Supply Index (SWSI) Map



Legend



*Provisional Data
Subject to Revision*



Current as of April 1, 2010