

# NRCS – Snow Survey & Water Supply Forecasting

Mike Gillespie

Water Availability Task Force Meeting  
May 21, 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.

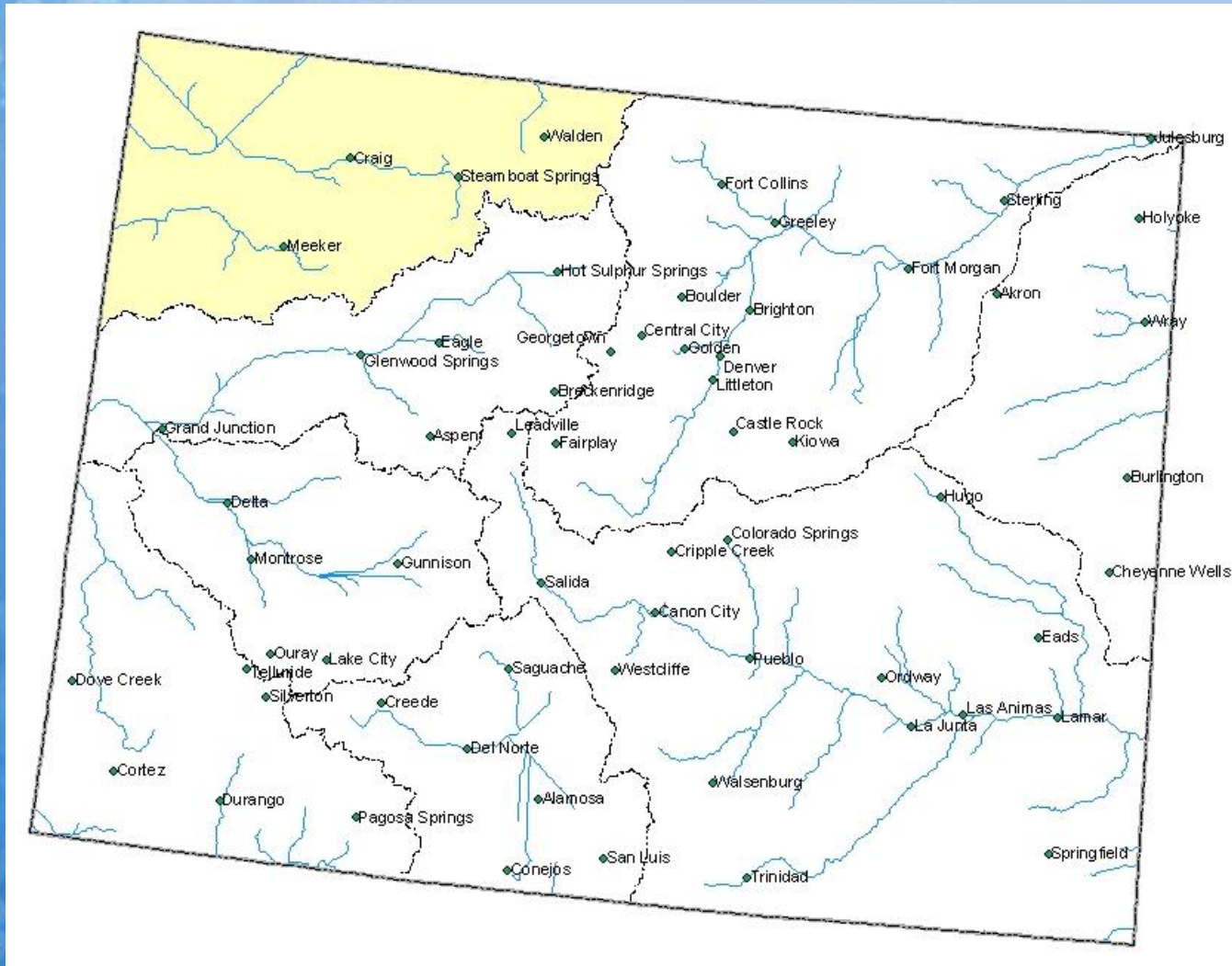
December – Cold again with improved snowfall especially across southern basins.

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

February and March – El Niño pattern continues...

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

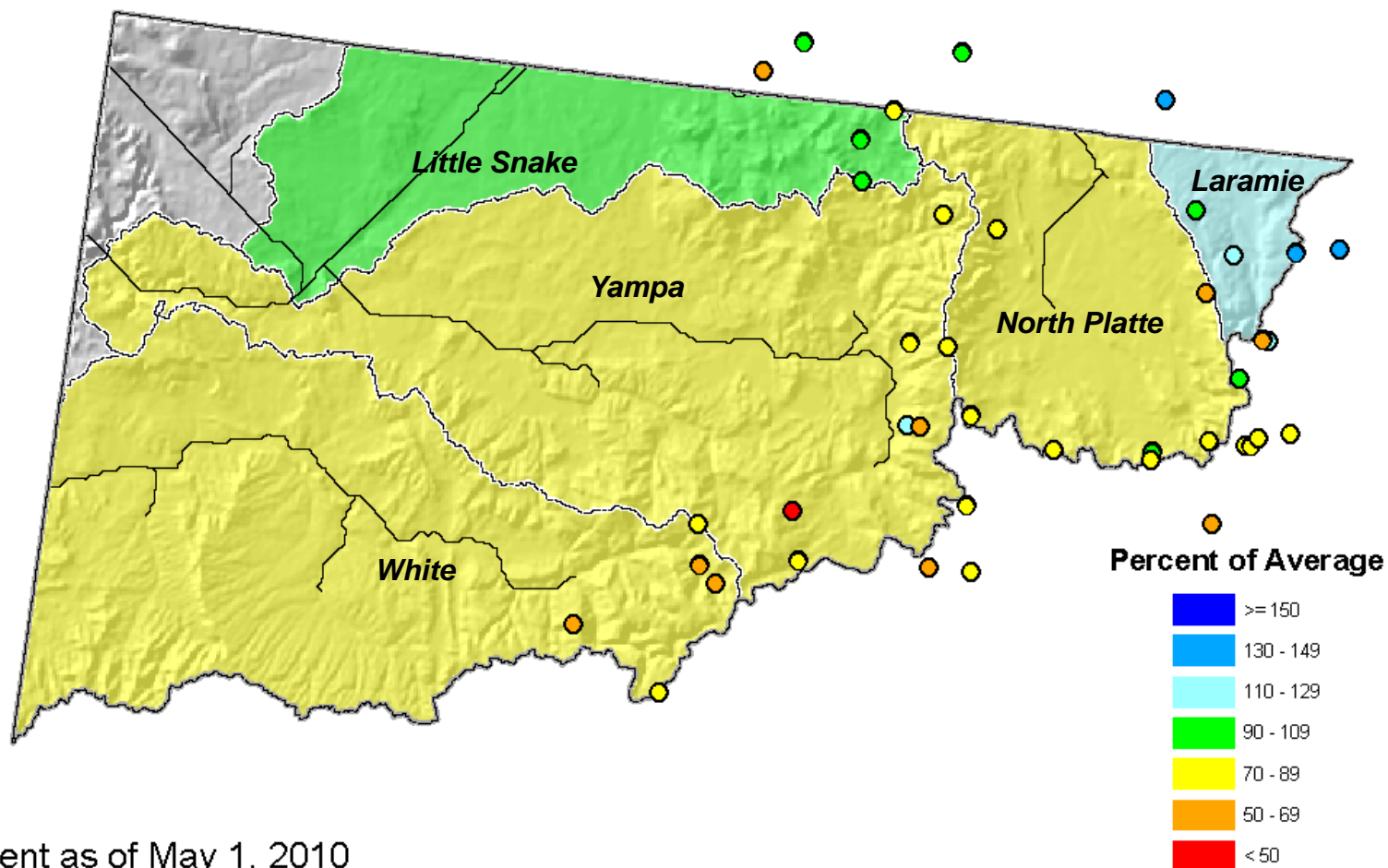
# Yampa, White & North Platte River Basins Summary





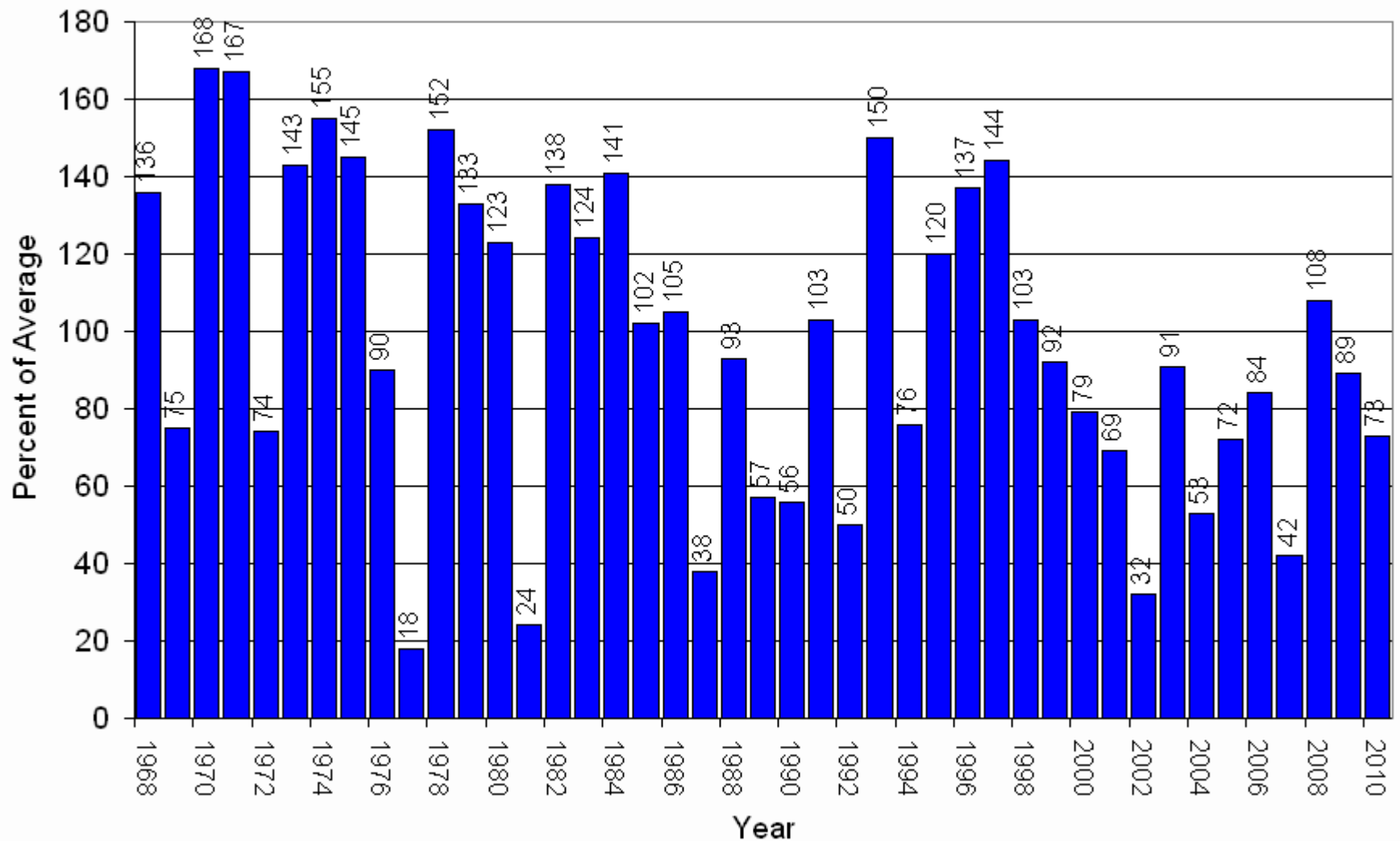
# Yampa, White and North Platte River Basins Snowpack Map

*Provisional Data  
Subject to Revision*



Current as of May 1, 2010

## May 1 Total Yampa & White River Basins Snowpack



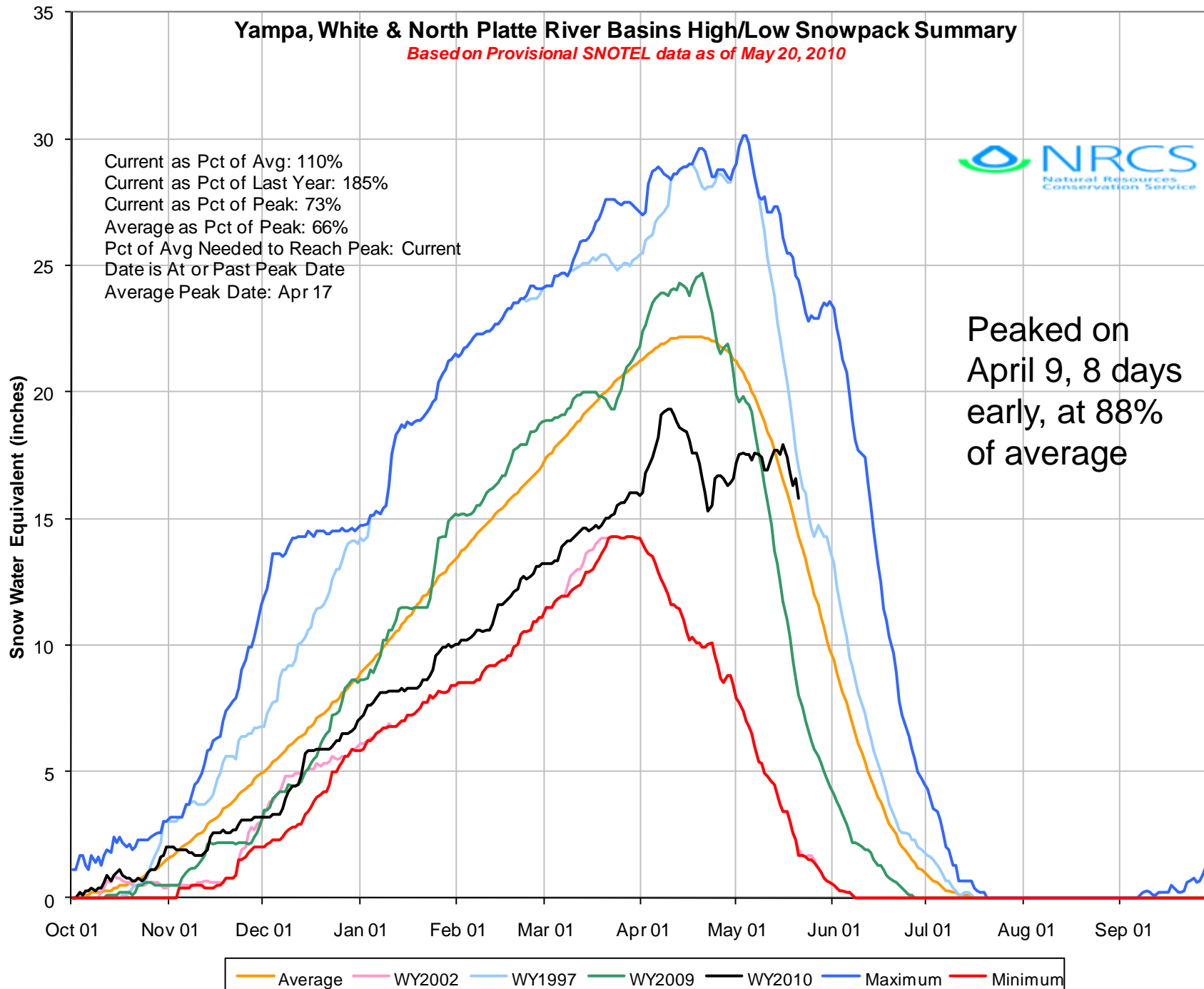
# Yampa, White & North Platte River Basins High/Low Snowpack Summary

Based on Provisional SNOTEL data as of May 20, 2010



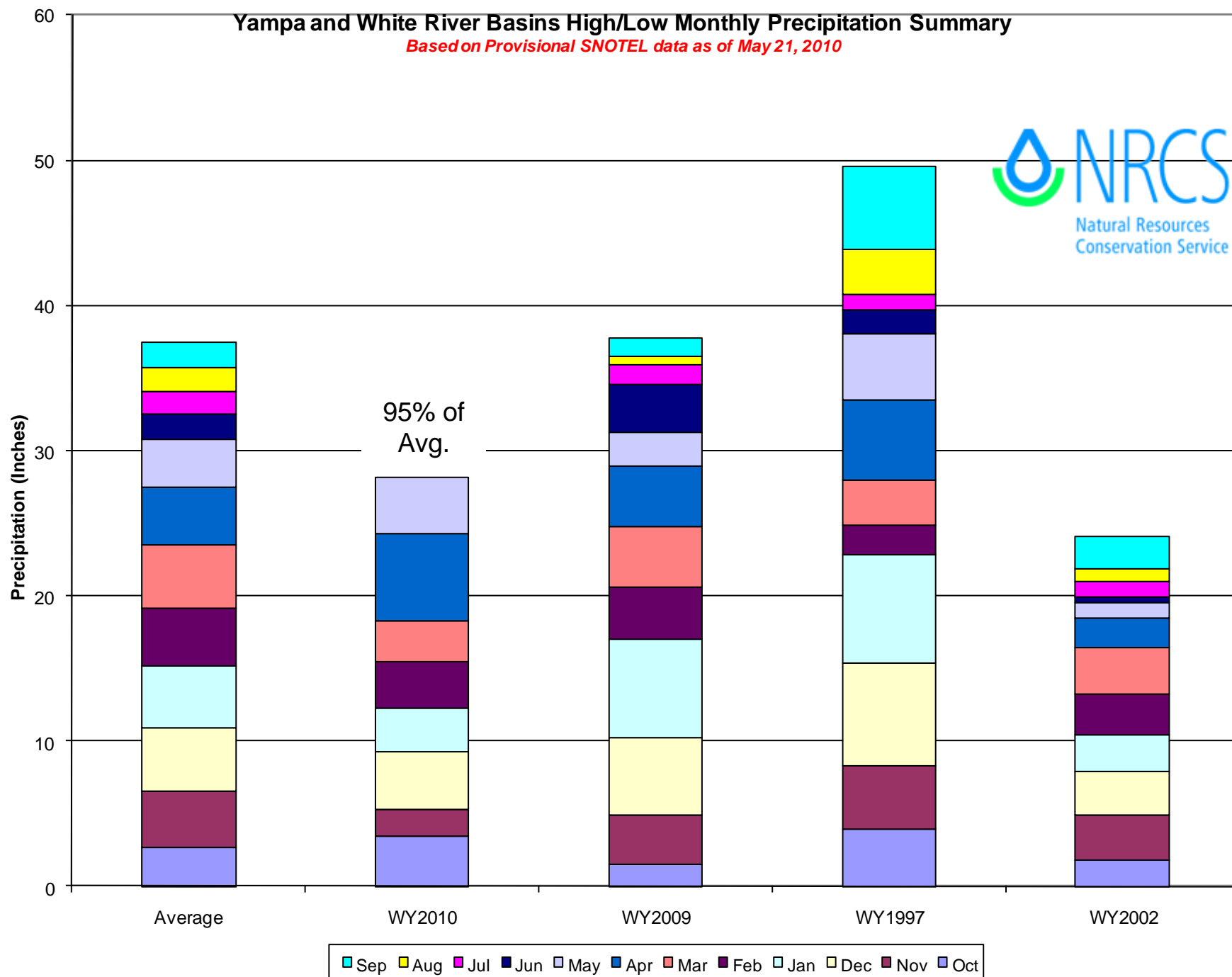
Current as Pct of Avg: 110%  
Current as Pct of Last Year: 185%  
Current as Pct of Peak: 73%  
Average as Pct of Peak: 66%  
Pct of Avg Needed to Reach Peak: Current  
Date is At or Past Peak Date  
Average Peak Date: Apr 17

Peaked on  
April 9, 8 days  
early, at 88%  
of average



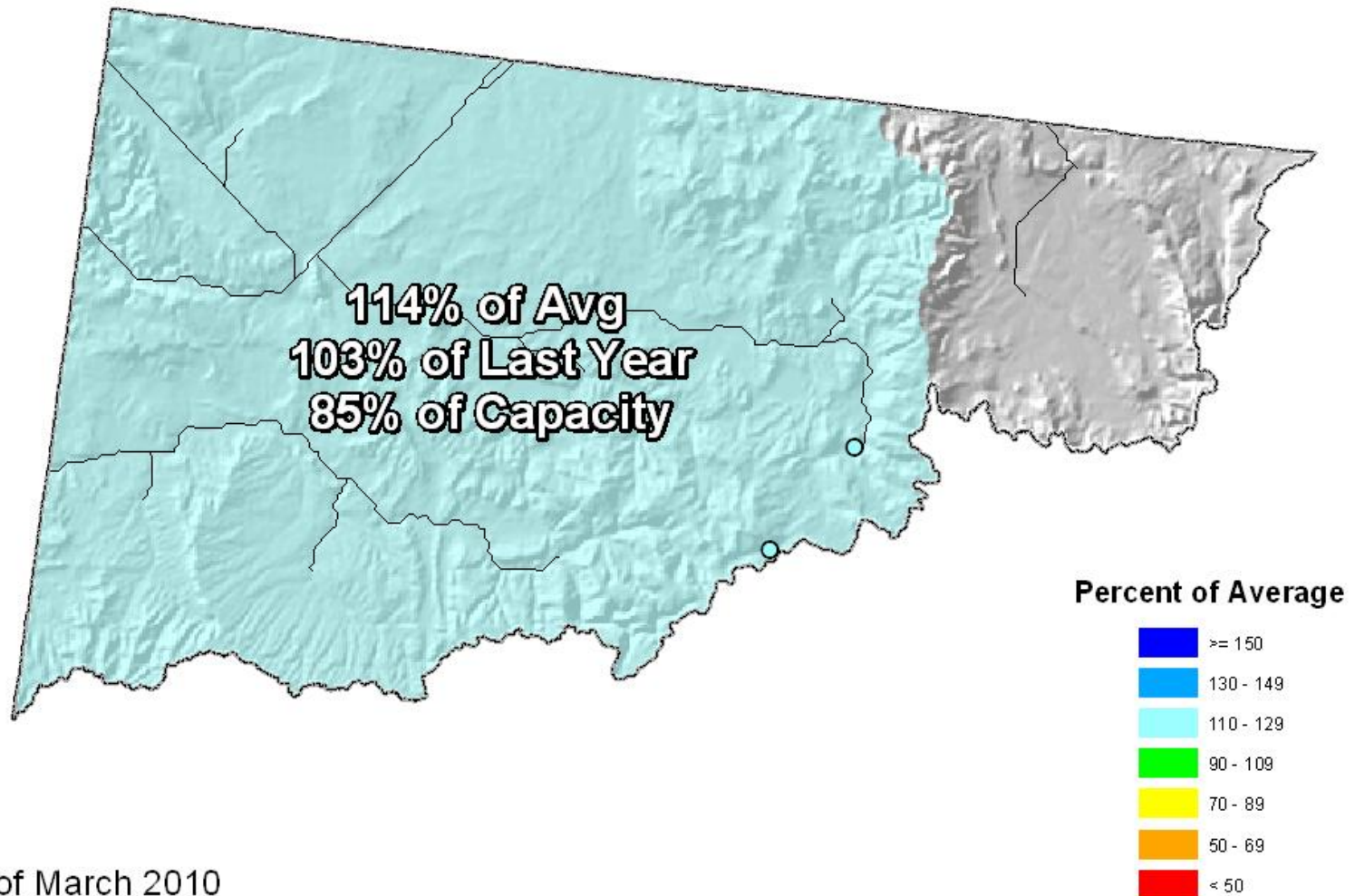
# Yampa and White River Basins High/Low Monthly Precipitation Summary

Based on Provisional SNOTEL data as of May 21, 2010



# Yampa & White River Basins Reservoir Storage Map

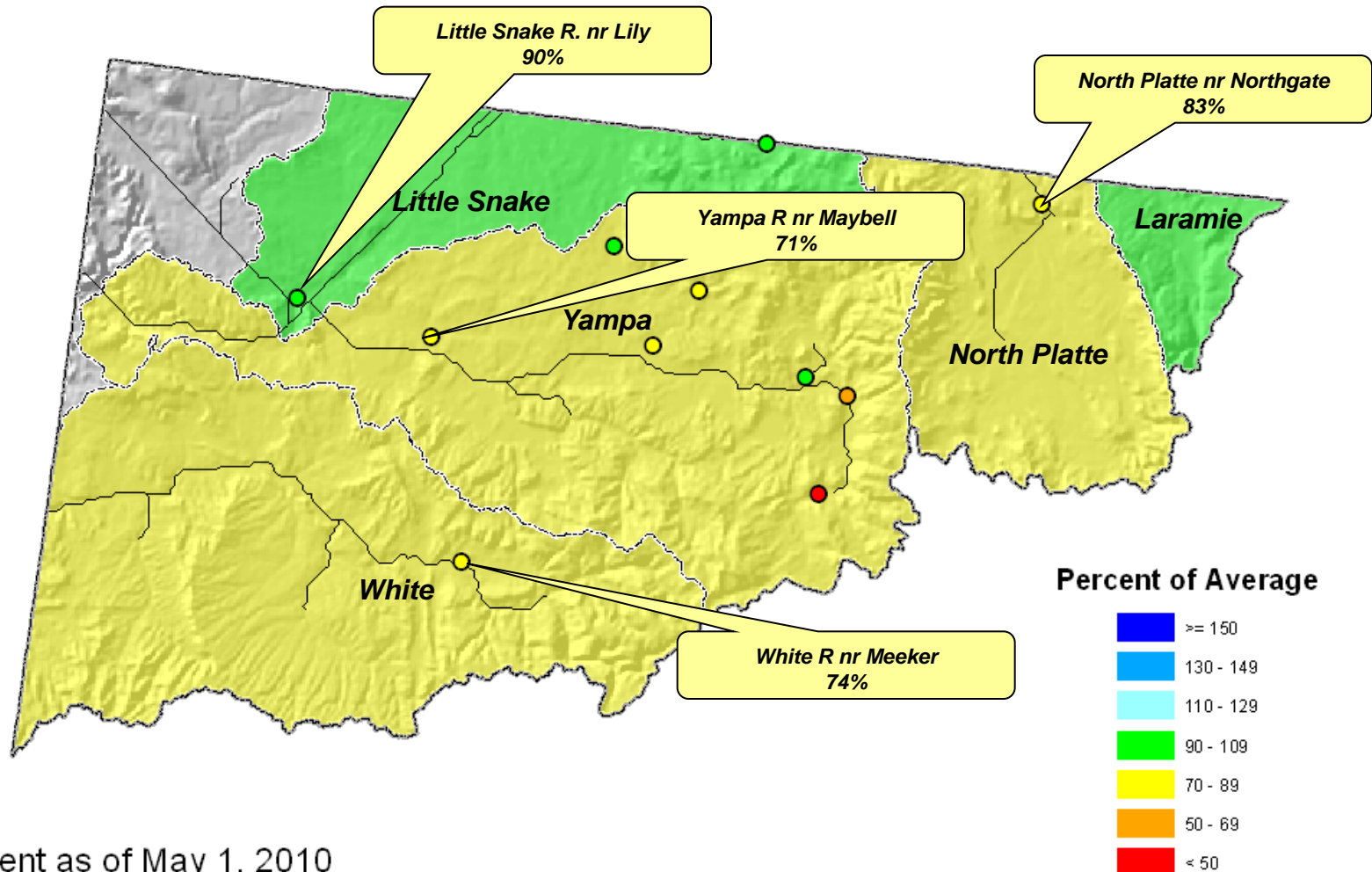
*Provisional Data  
Subject to Revision*





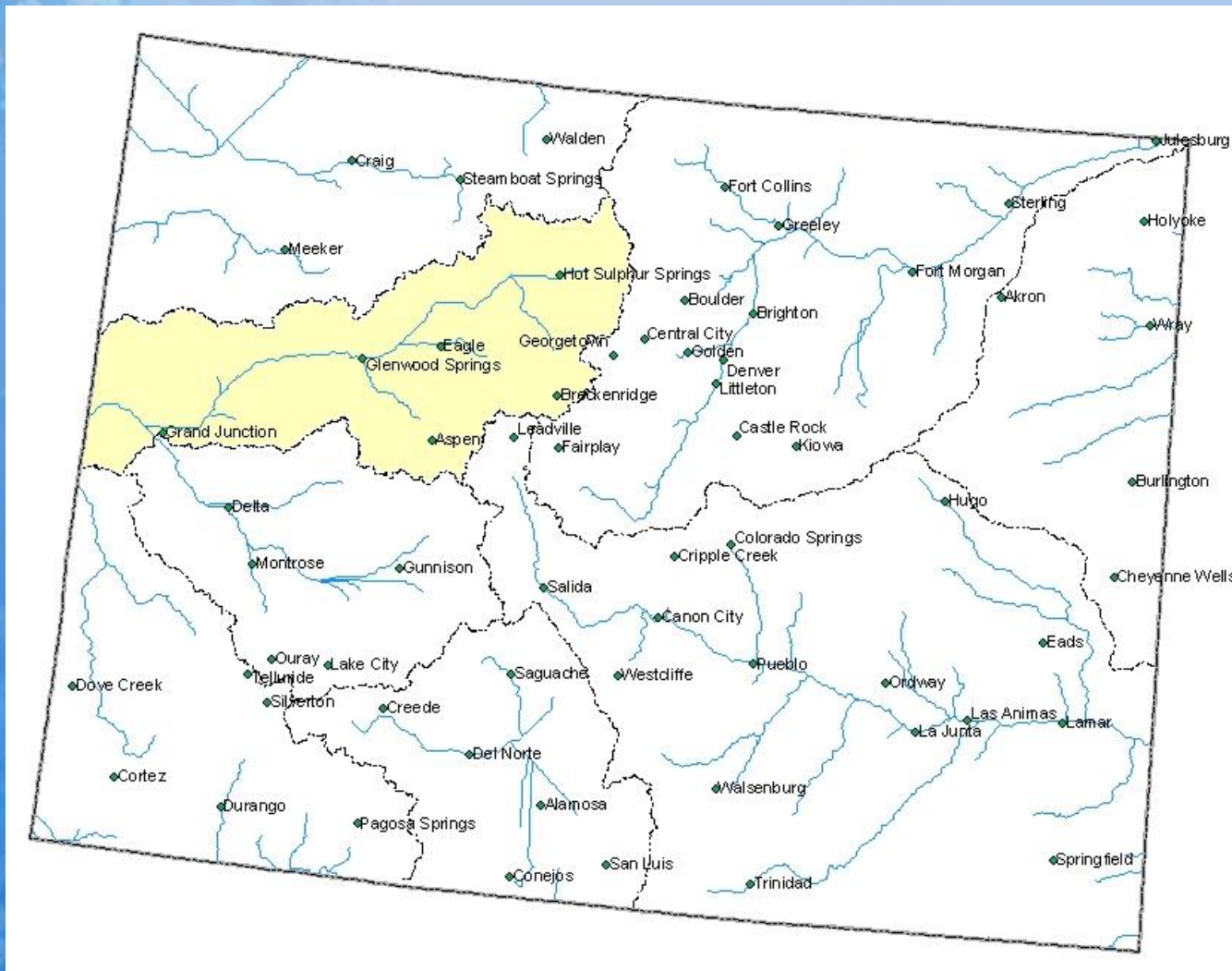
# Yampa, White and North Platte River Basins Streamflow Map

*Provisional Data  
Subject to Revision*



Current as of May 1, 2010

# Colorado River Basin Summary

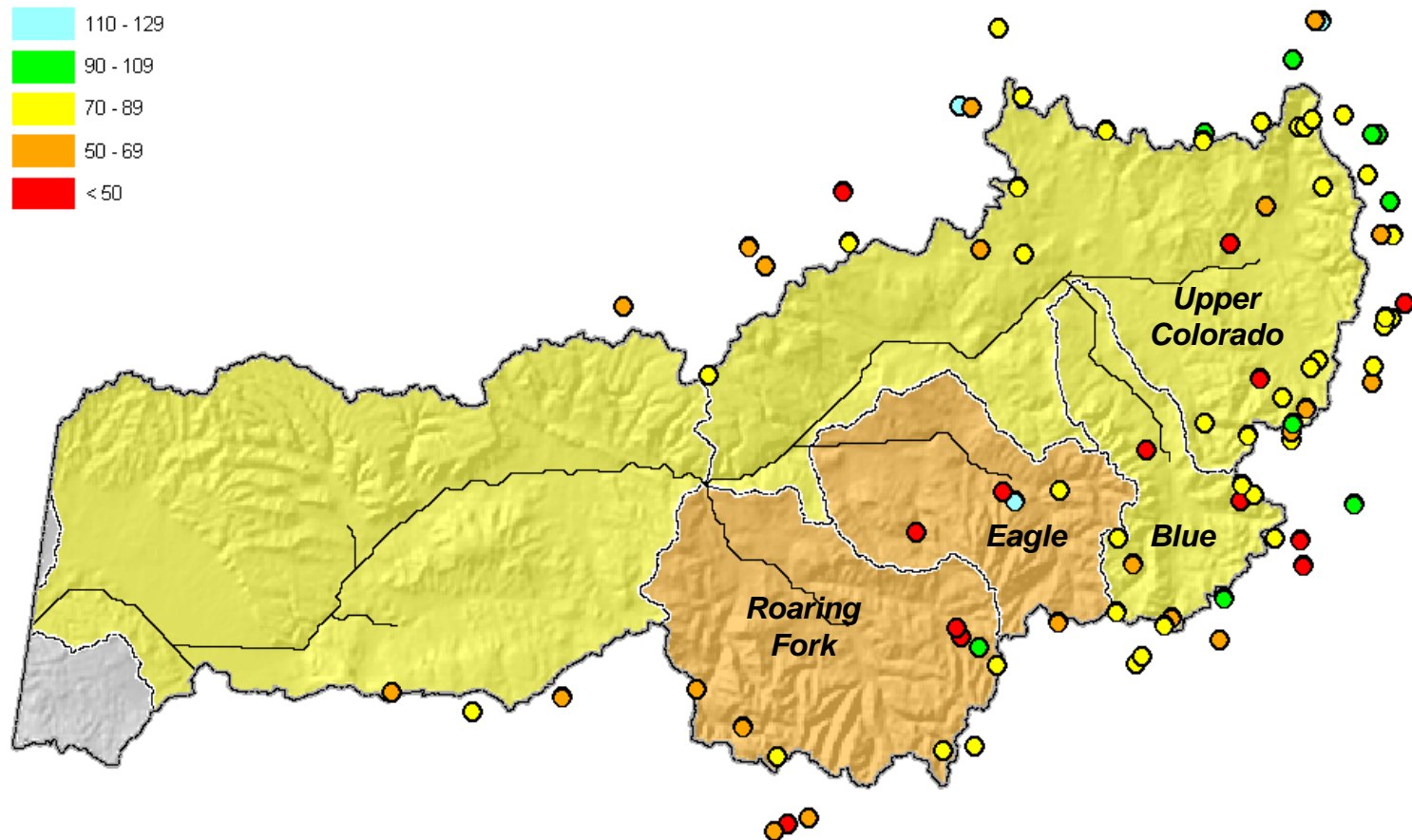


# Colorado River Basin Snowpack Map

## Percent of Average

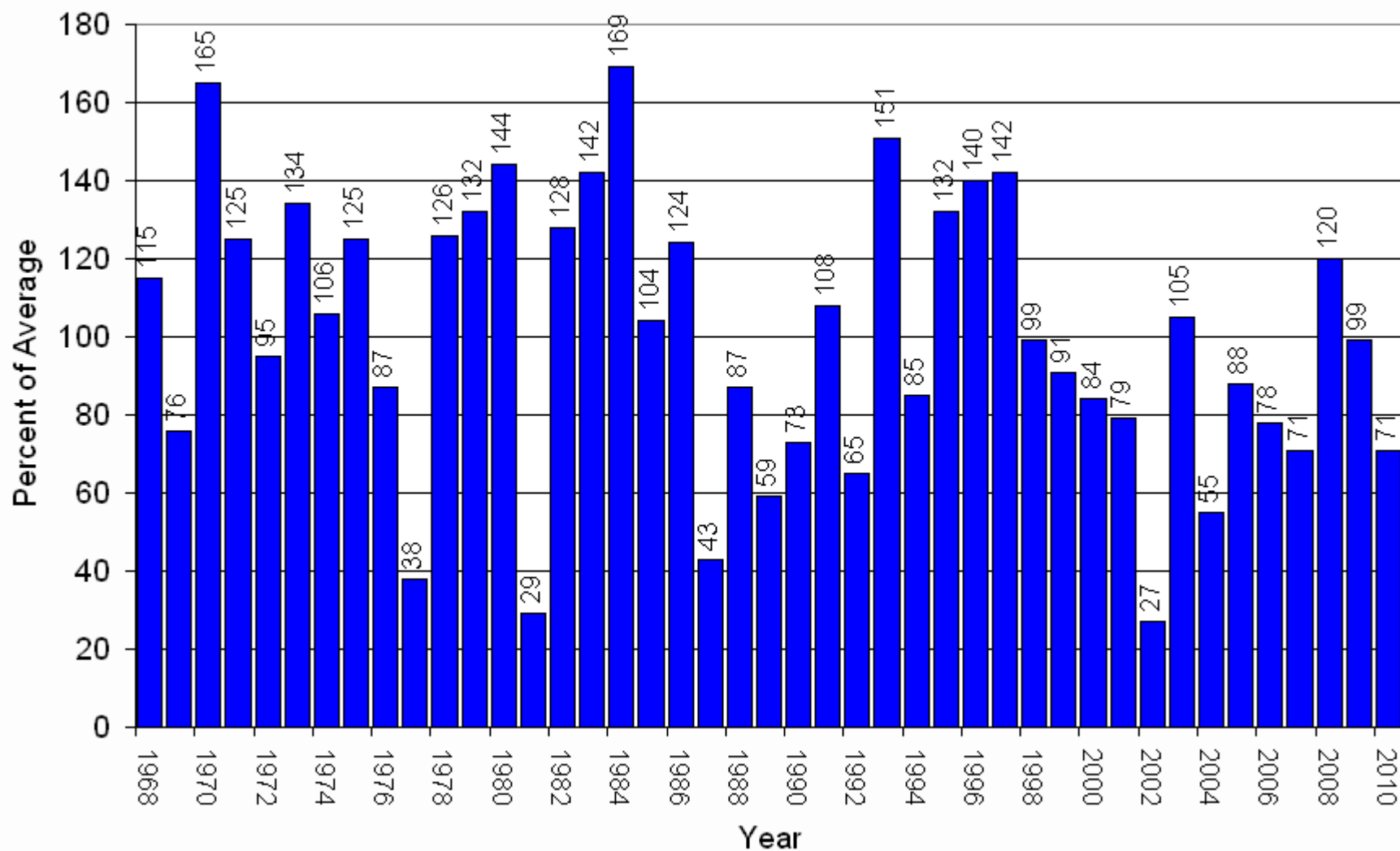


*Provisional Data  
Subject to Revision*



Current as of May 1, 2010

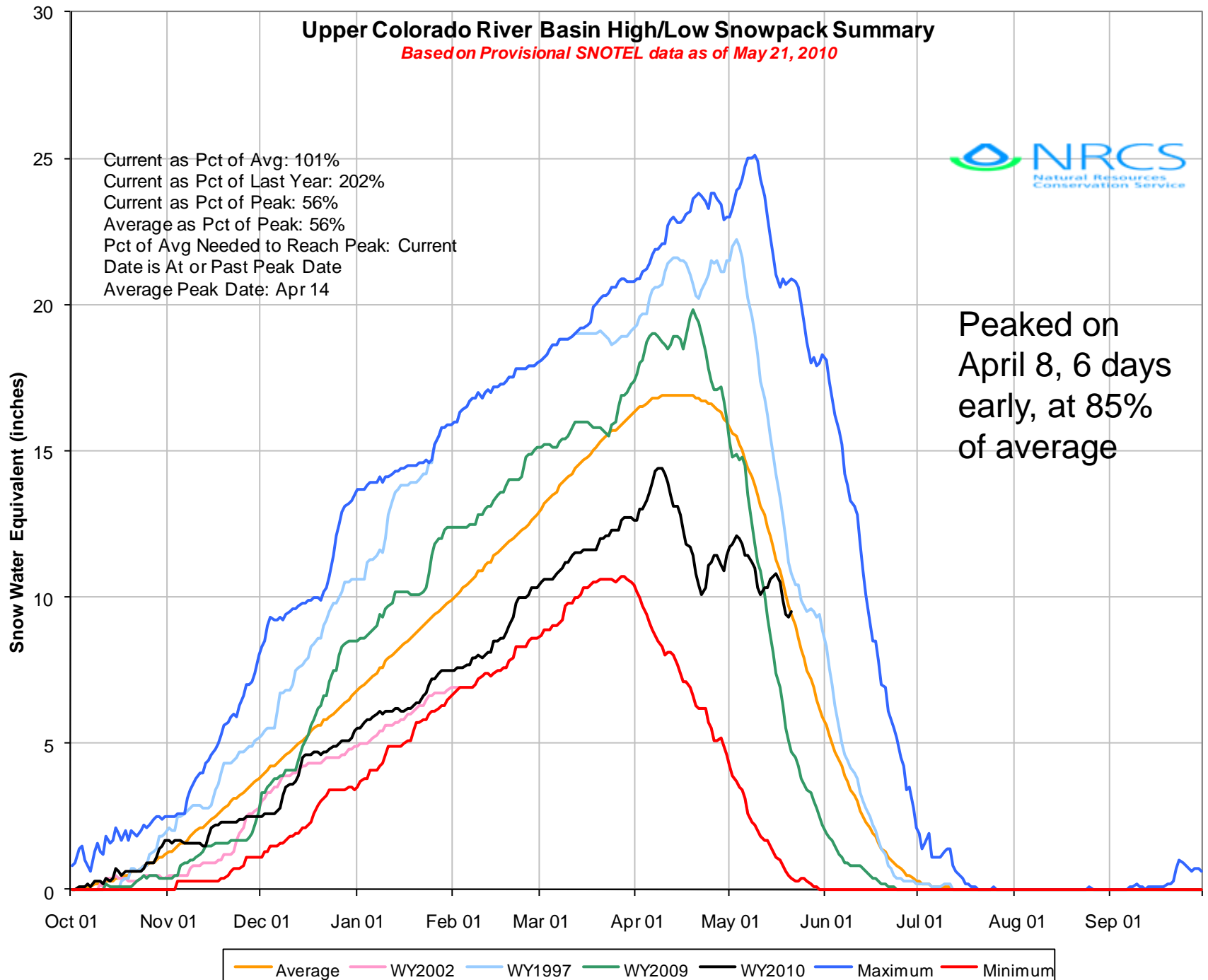
## May 1 Total Colorado River Basin Snowpack





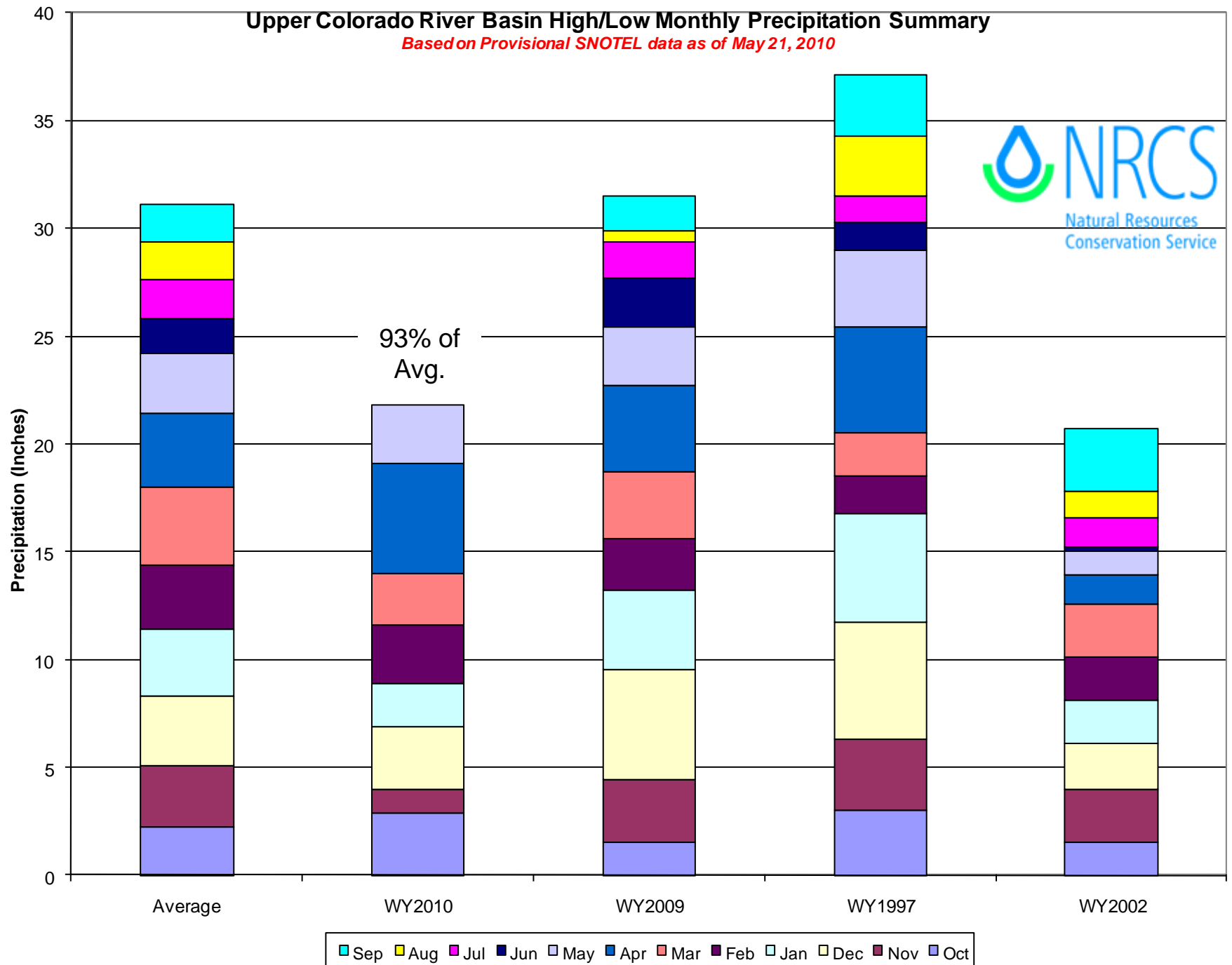
## Upper Colorado River Basin High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of May 21, 2010*



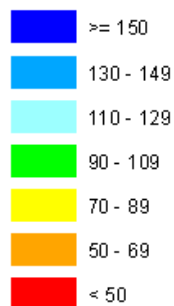
# Upper Colorado River Basin High/Low Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of May 21, 2010*

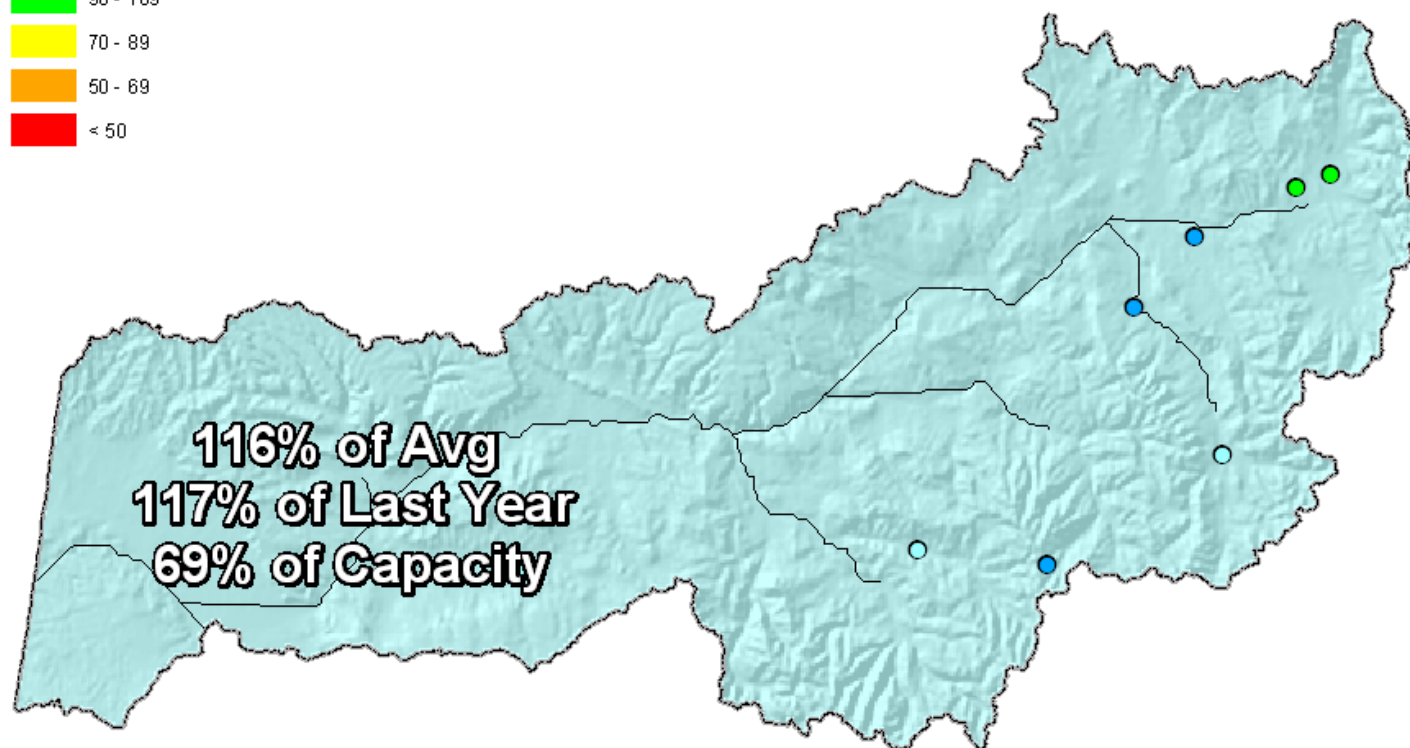


# Colorado River Basin Reservoir Storage Map

## Percent of Average

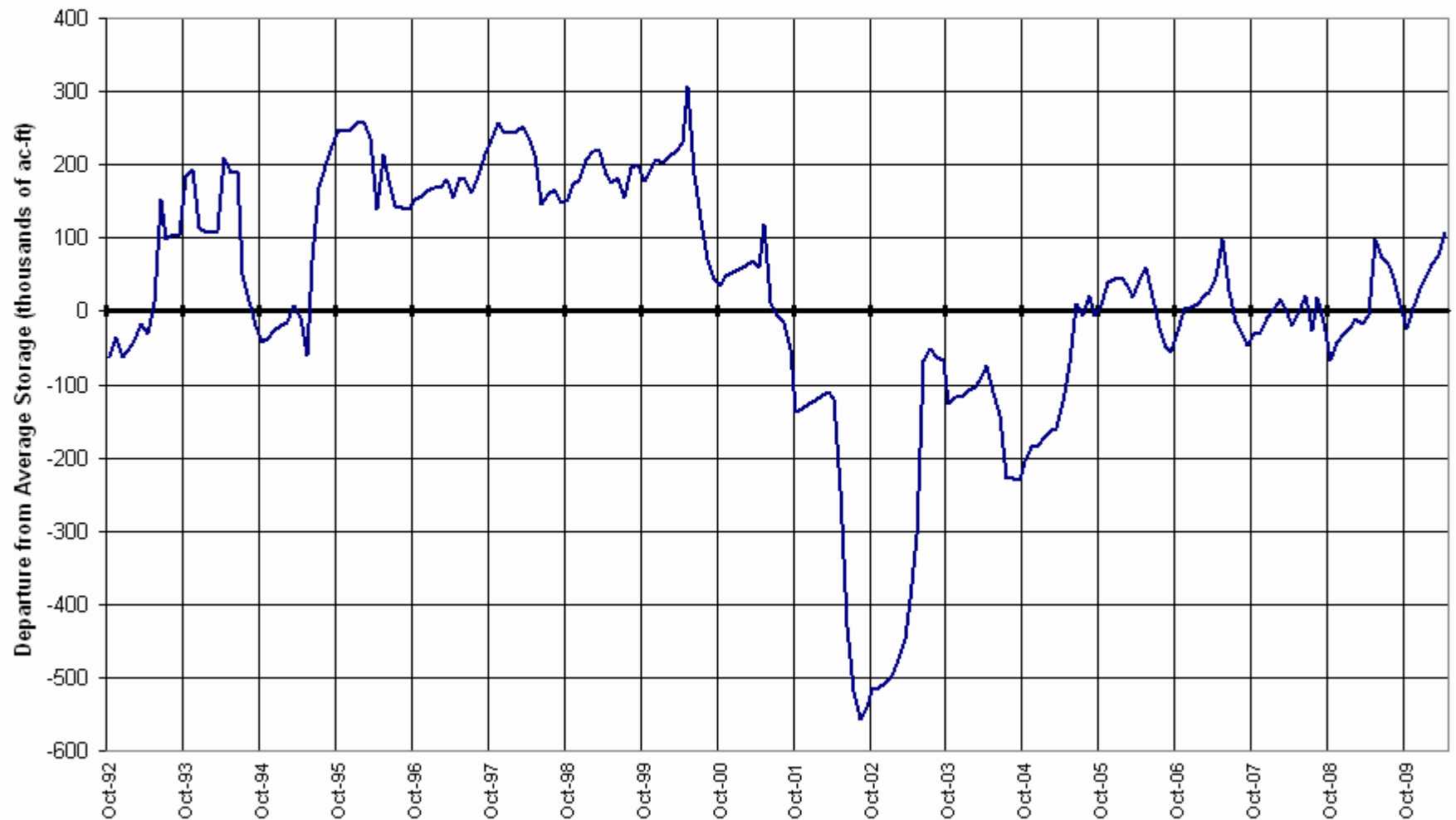


*Provisional Data  
Subject to Revision*



End of April 2010

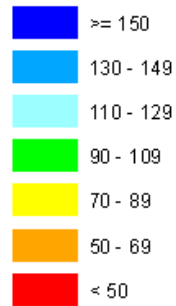
COLORADO RIVER BASIN  
Reservoir Storage  
Departure from Average



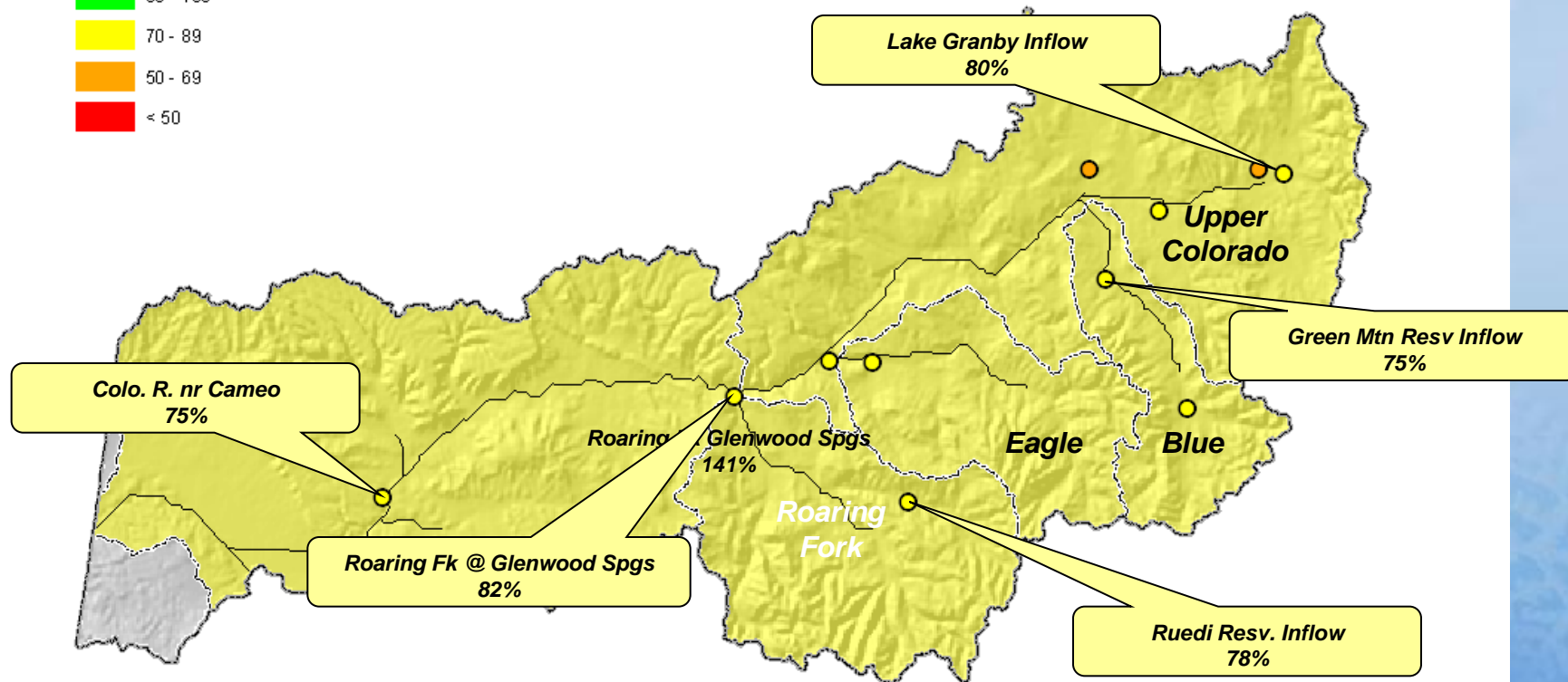


# Colorado River Basin Streamflow Forecast Map

## Percent of Average

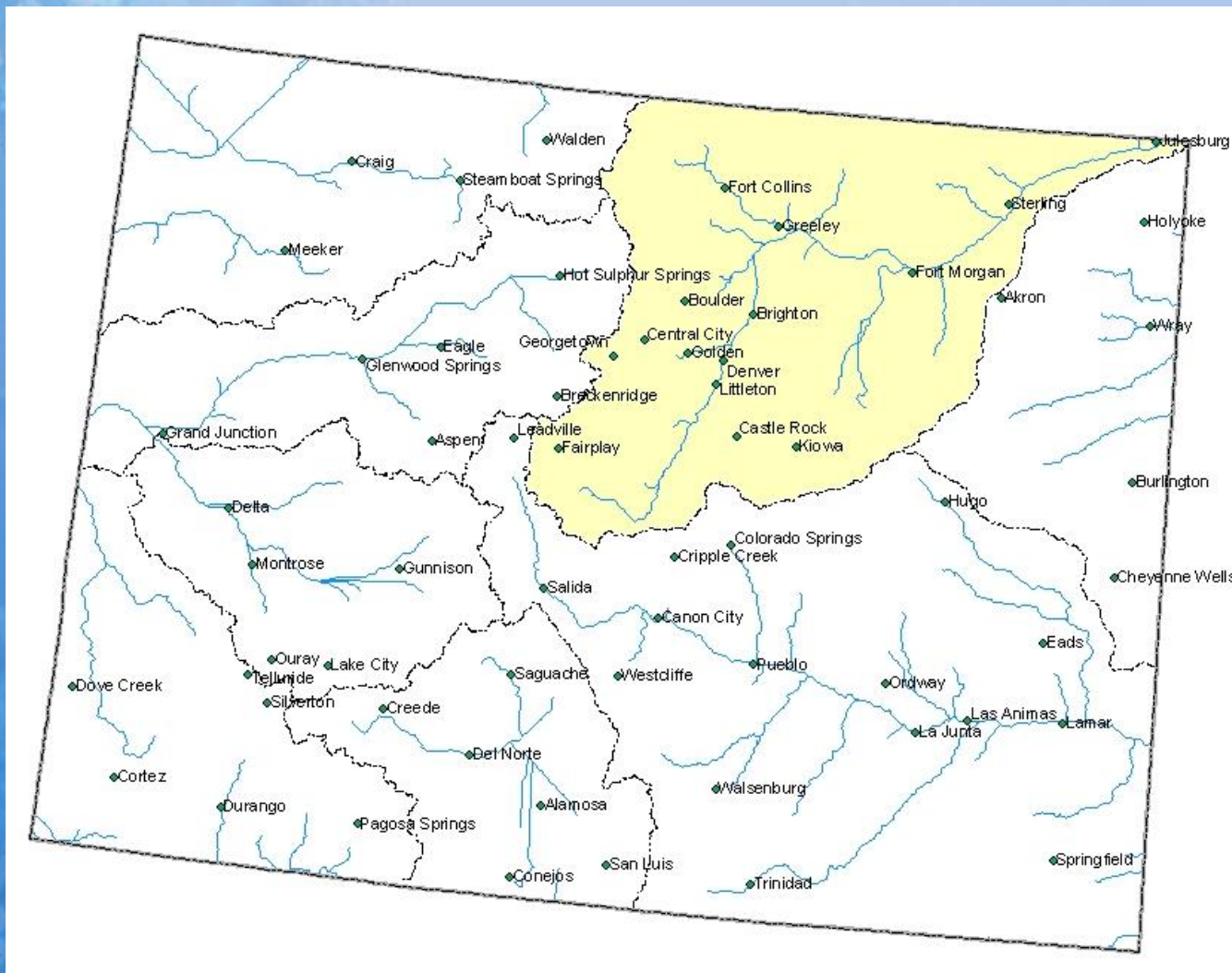


*Provisional Data  
Subject to Revision*



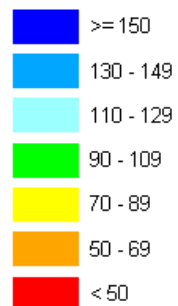
Current as of May 1, 2010

# South Platte River Basin Summary

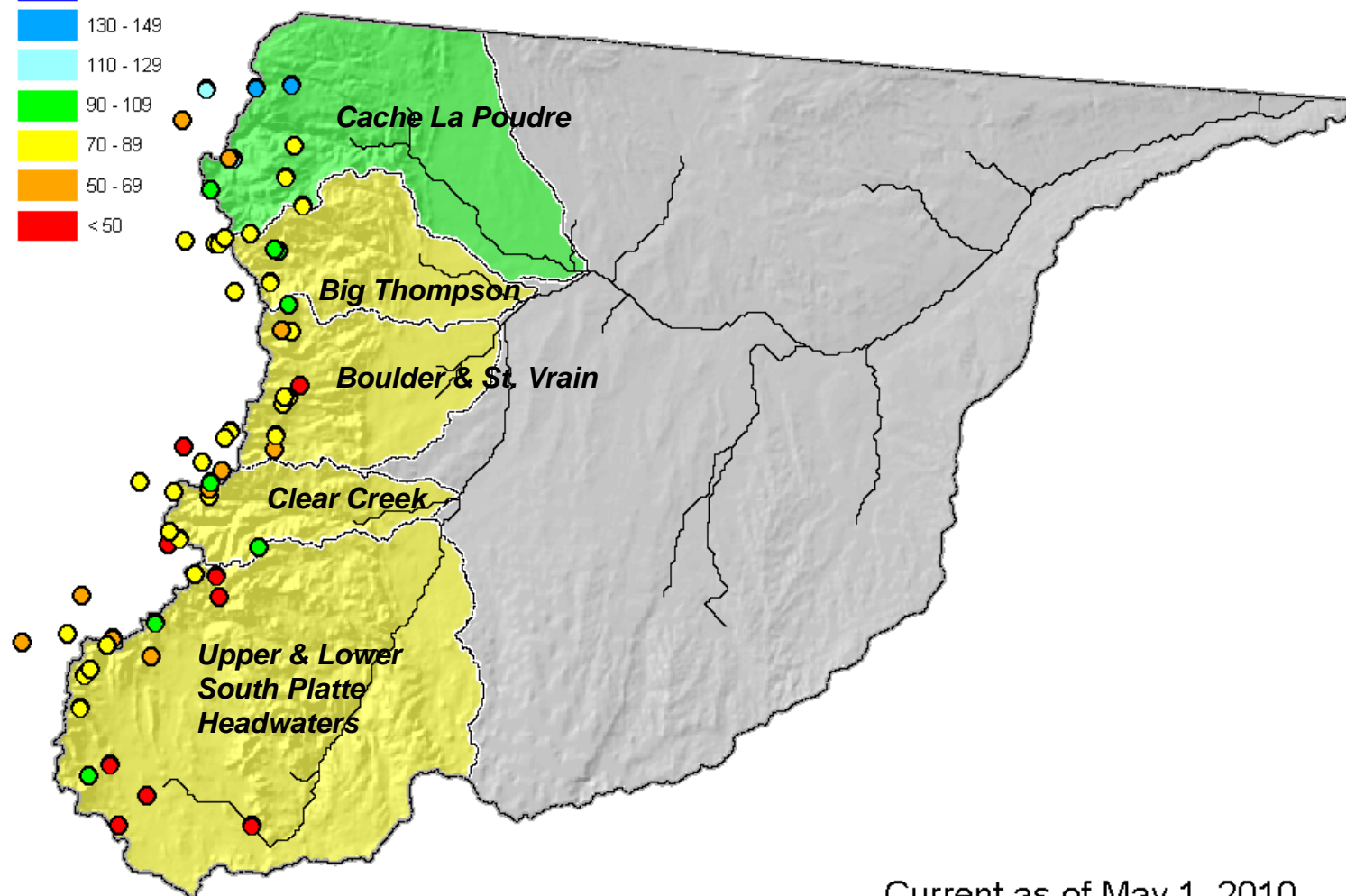


# South Platte River Basin Snowpack Map

Percent of Average

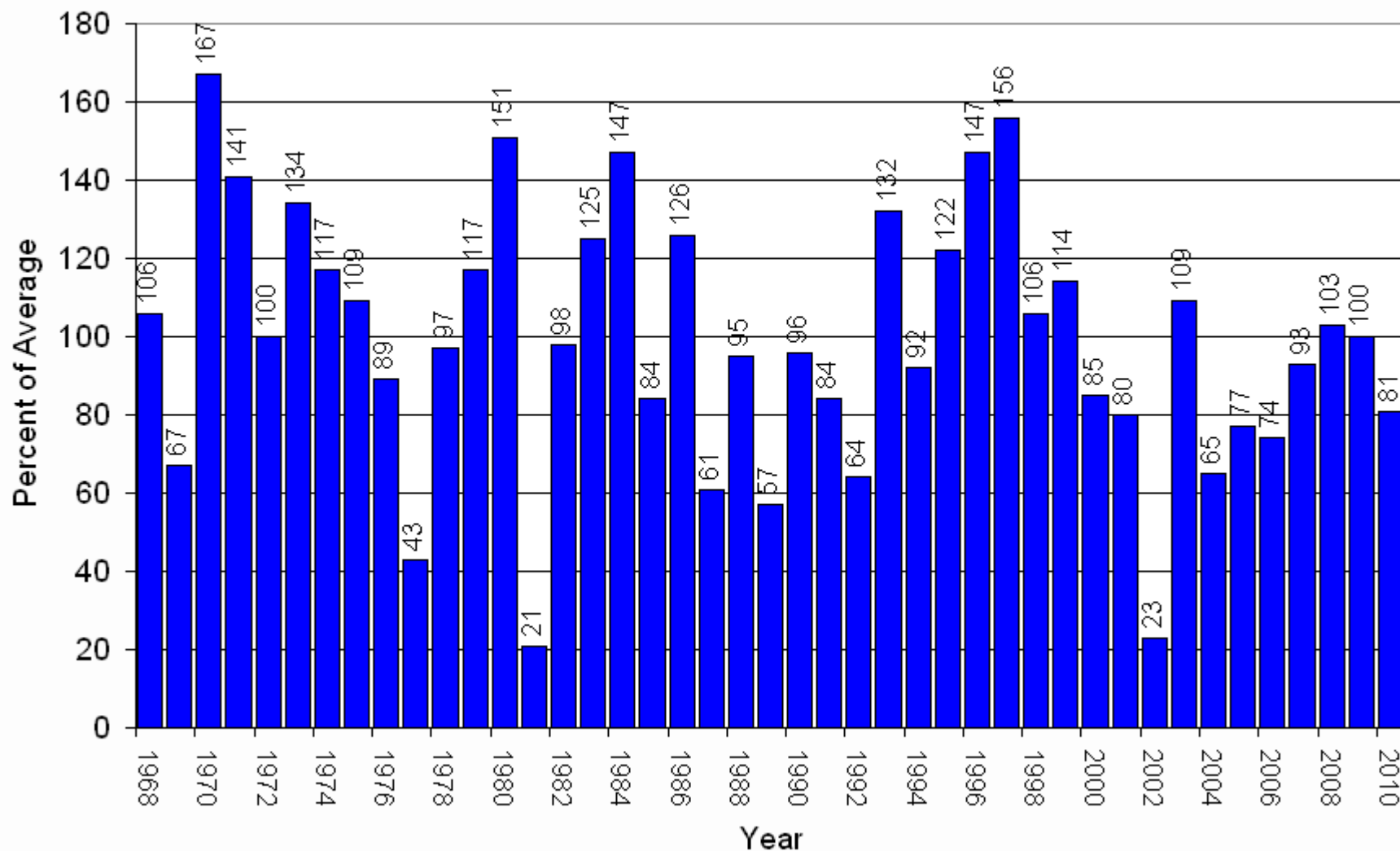


*Provisional Data  
Subject to Revision*



Current as of May 1, 2010

## May 1 Total South Platte River Basin Snowpack





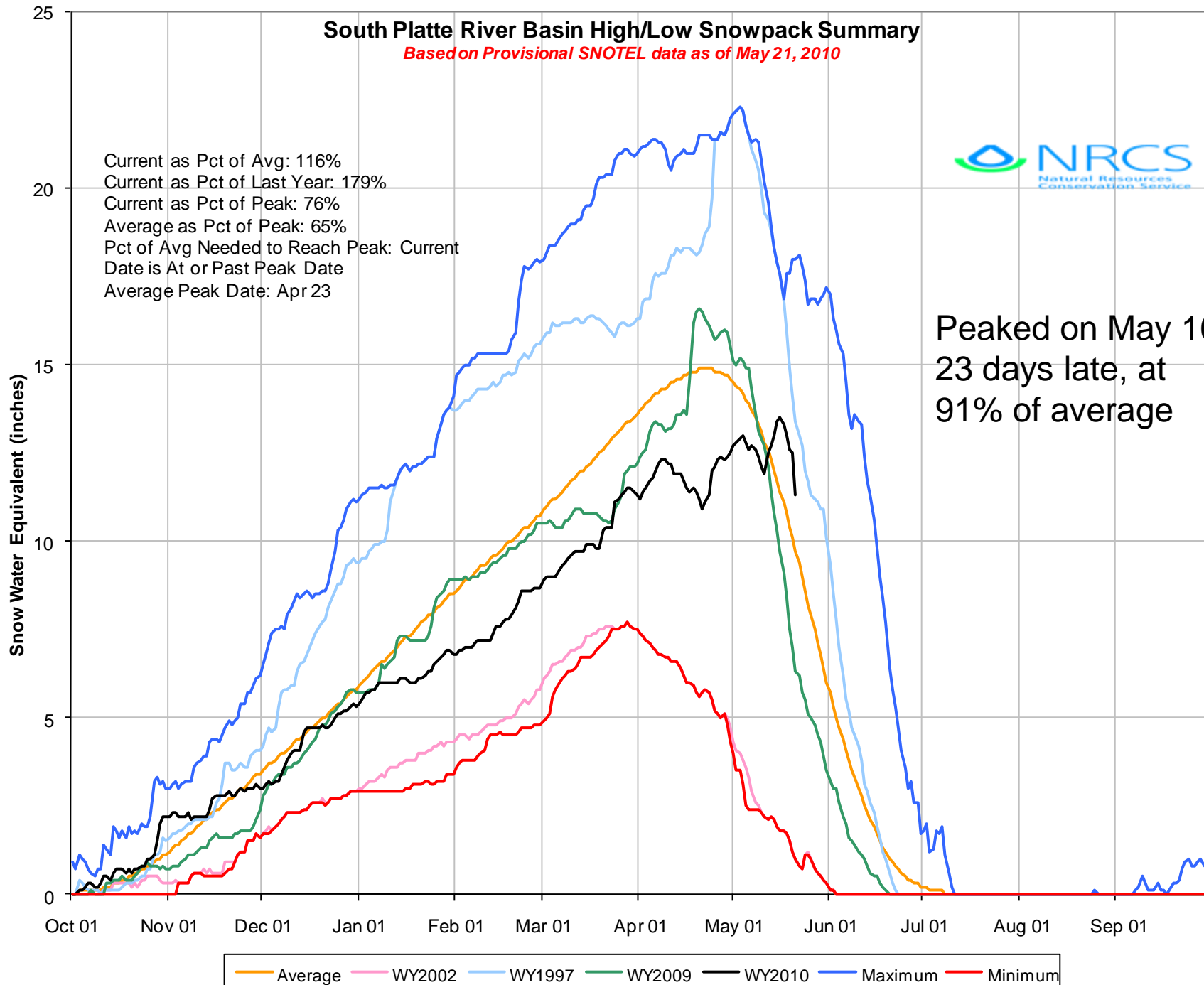
## South Platte River Basin High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of May 21, 2010*



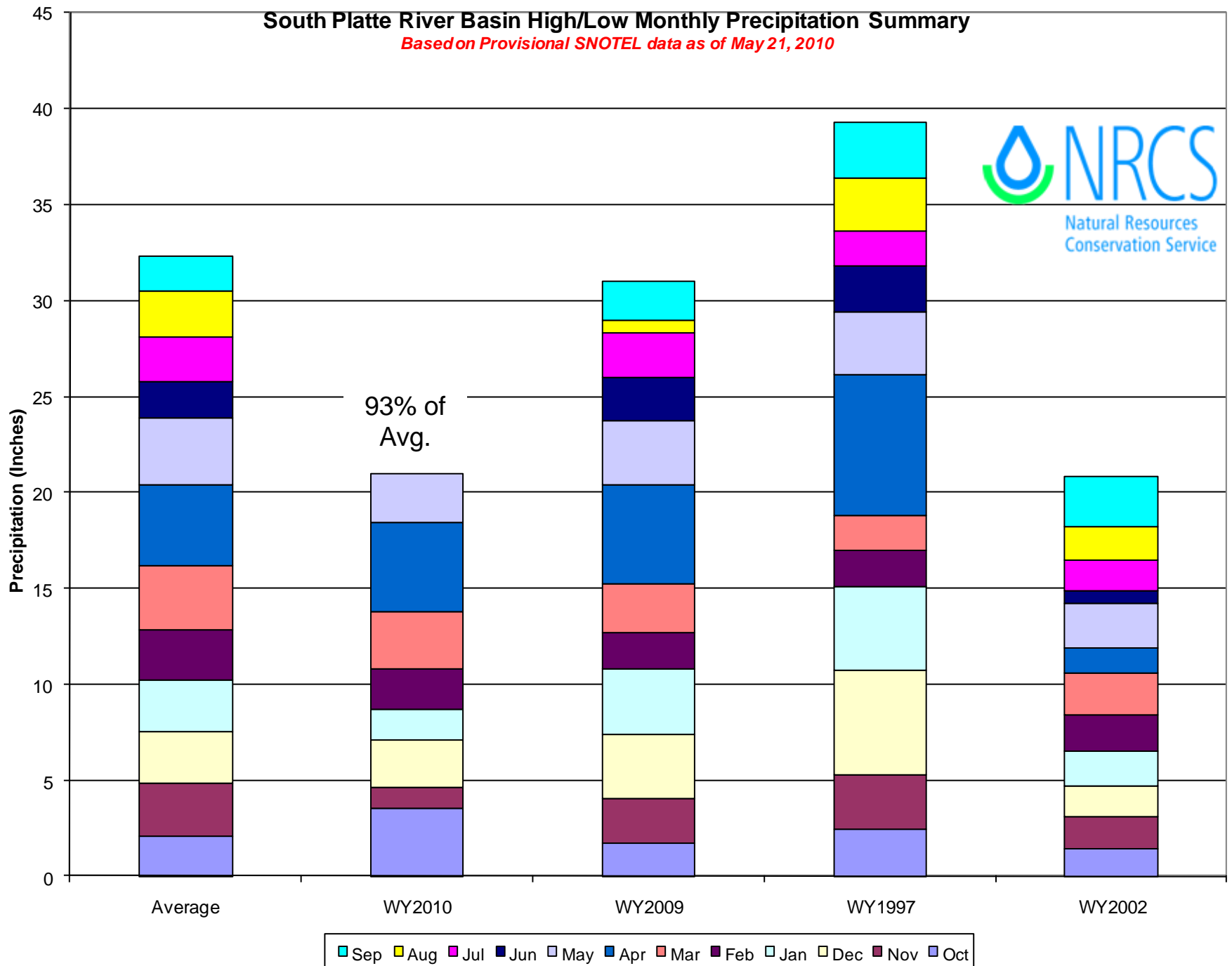
Current as Pct of Avg: 116%  
Current as Pct of Last Year: 179%  
Current as Pct of Peak: 76%  
Average as Pct of Peak: 65%  
Pct of Avg Needed to Reach Peak: Current  
Date is At or Past Peak Date  
Average Peak Date: Apr 23

Peaked on May 16,  
23 days late, at  
91% of average



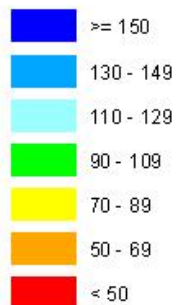
# South Platte River Basin High/Low Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of May 21, 2010*

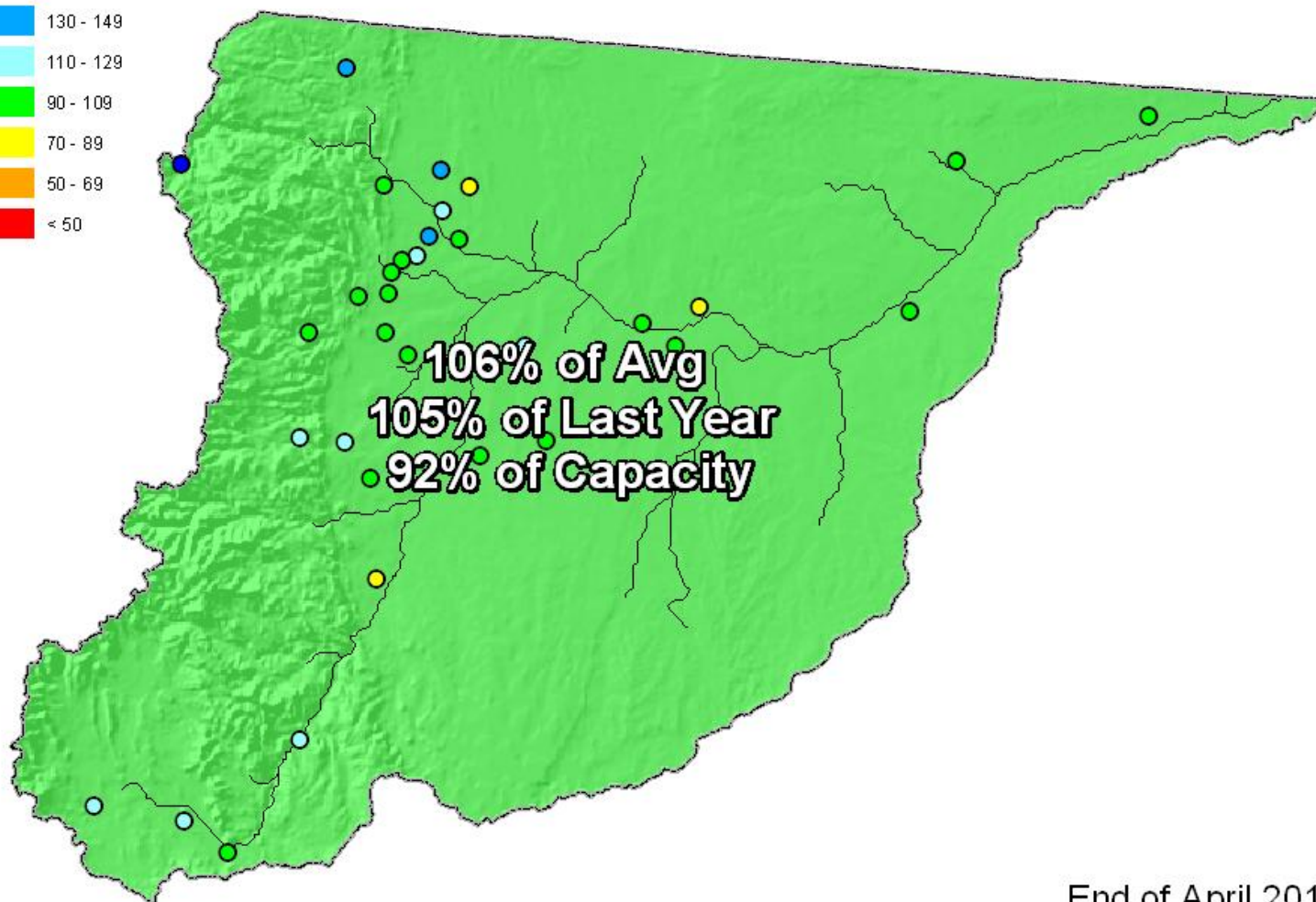


# South Platte River Basin Reservoir Storage Map

## Percent of Average



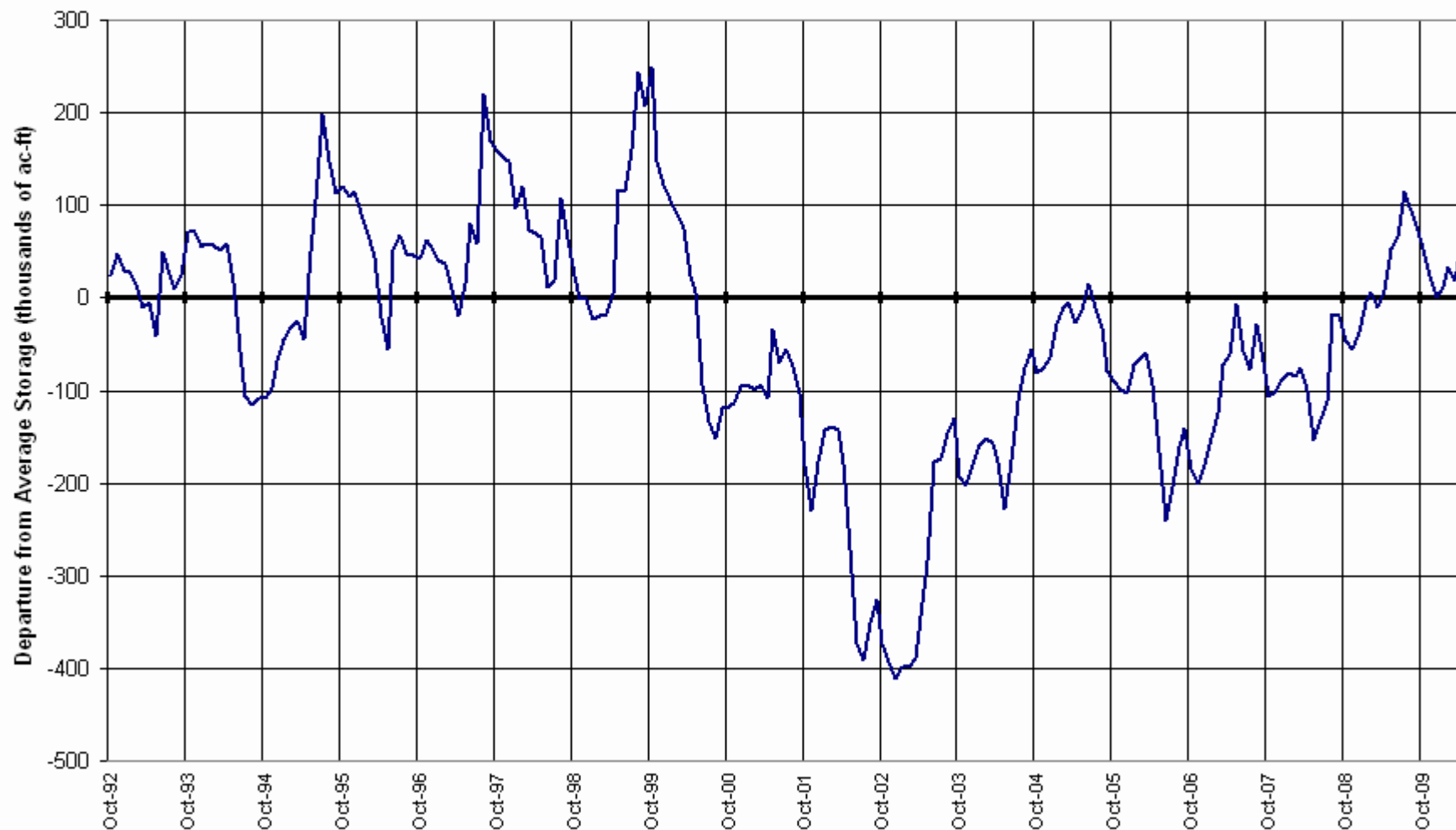
*Provisional Data  
Subject to Revision*



End of April 2010

## SOUTH PLATTE RIVER BASIN

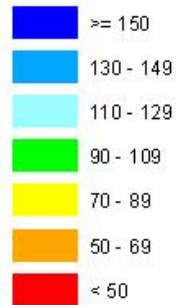
Reservoir Storage  
Departure from Average



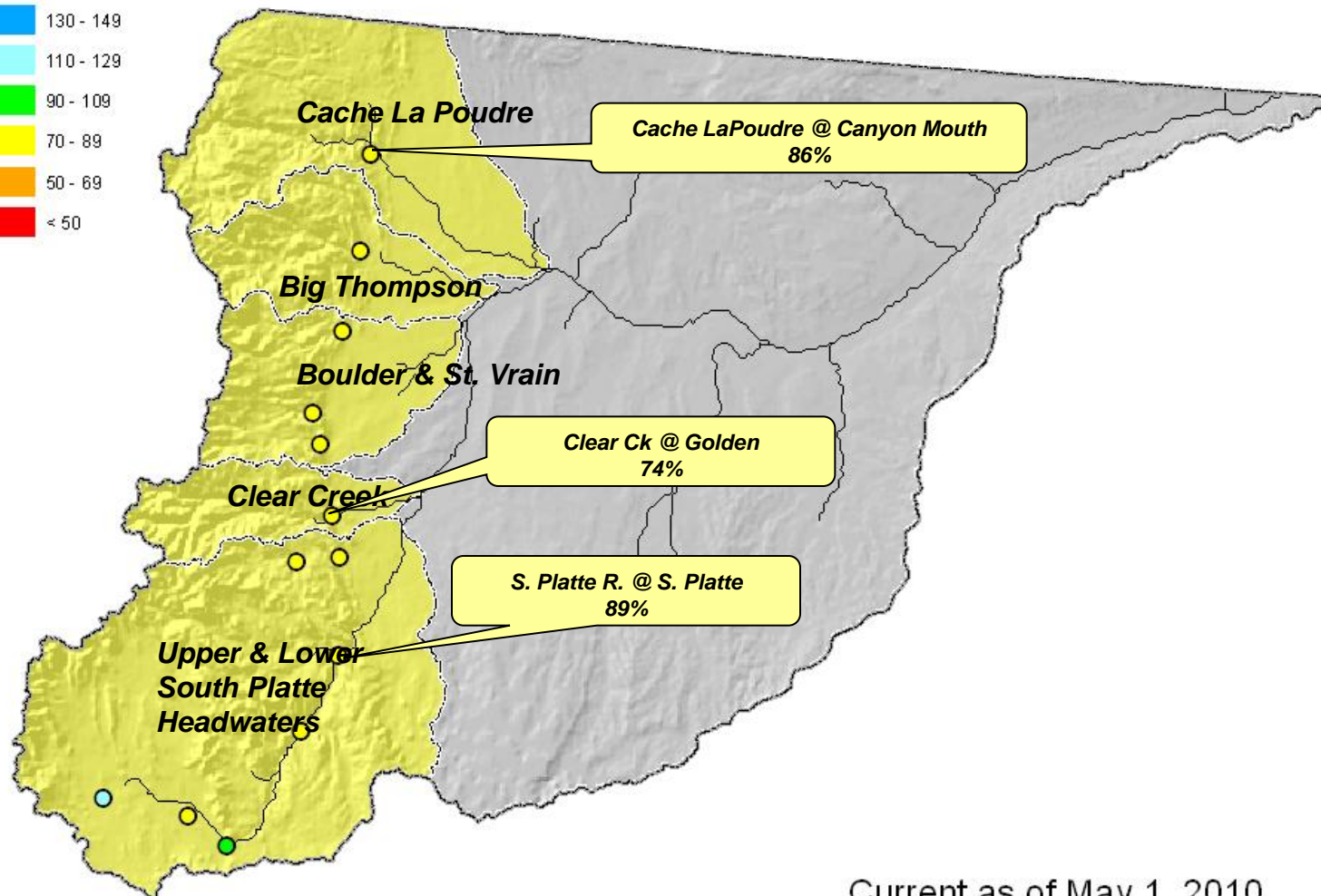


# South Platte River Basin Streamflow Forecast Map

Percent of Average

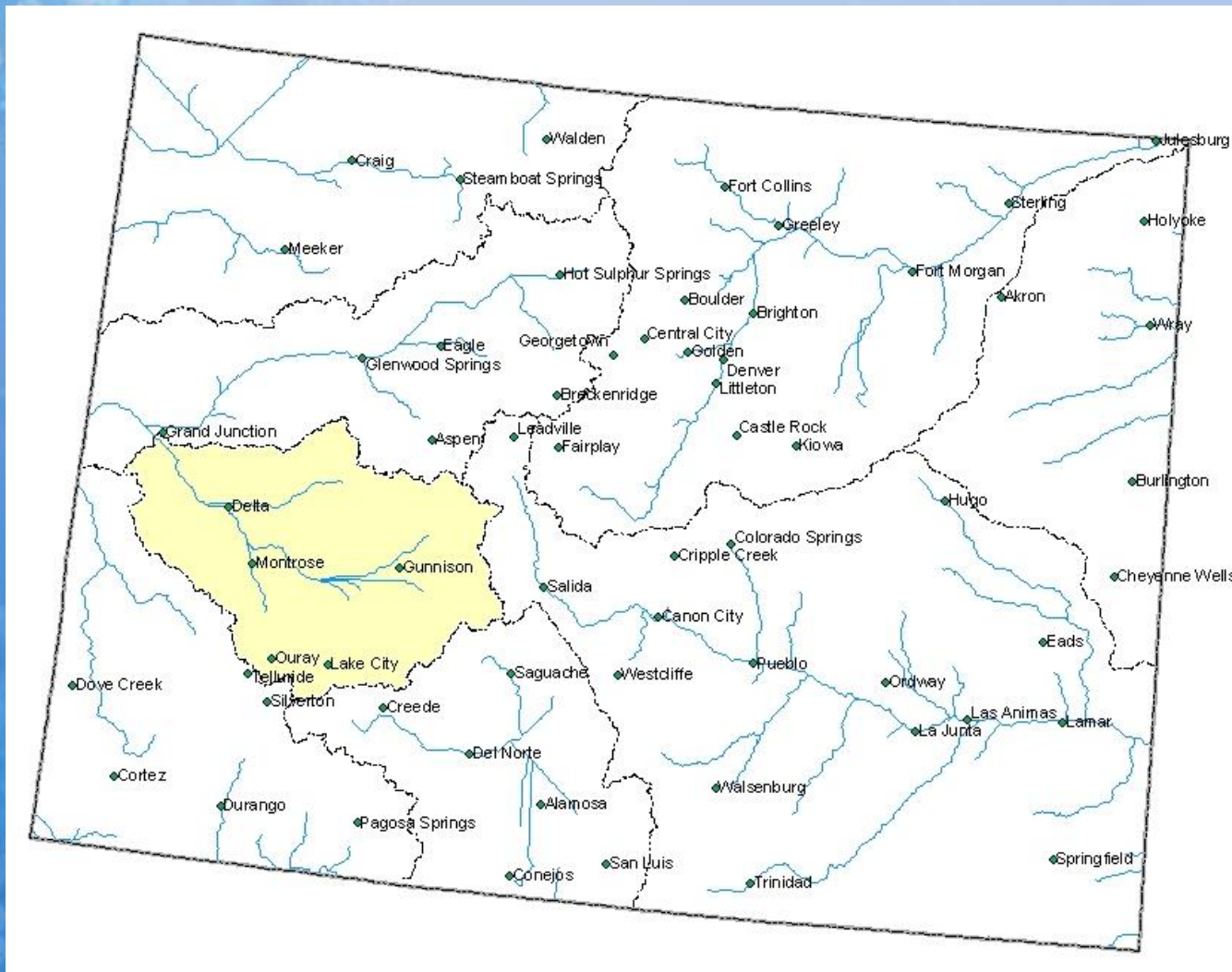


*Provisional Data  
Subject to Revision*



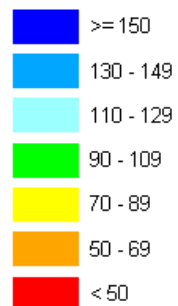
Current as of May 1, 2010

# Gunnison River Basin Summary

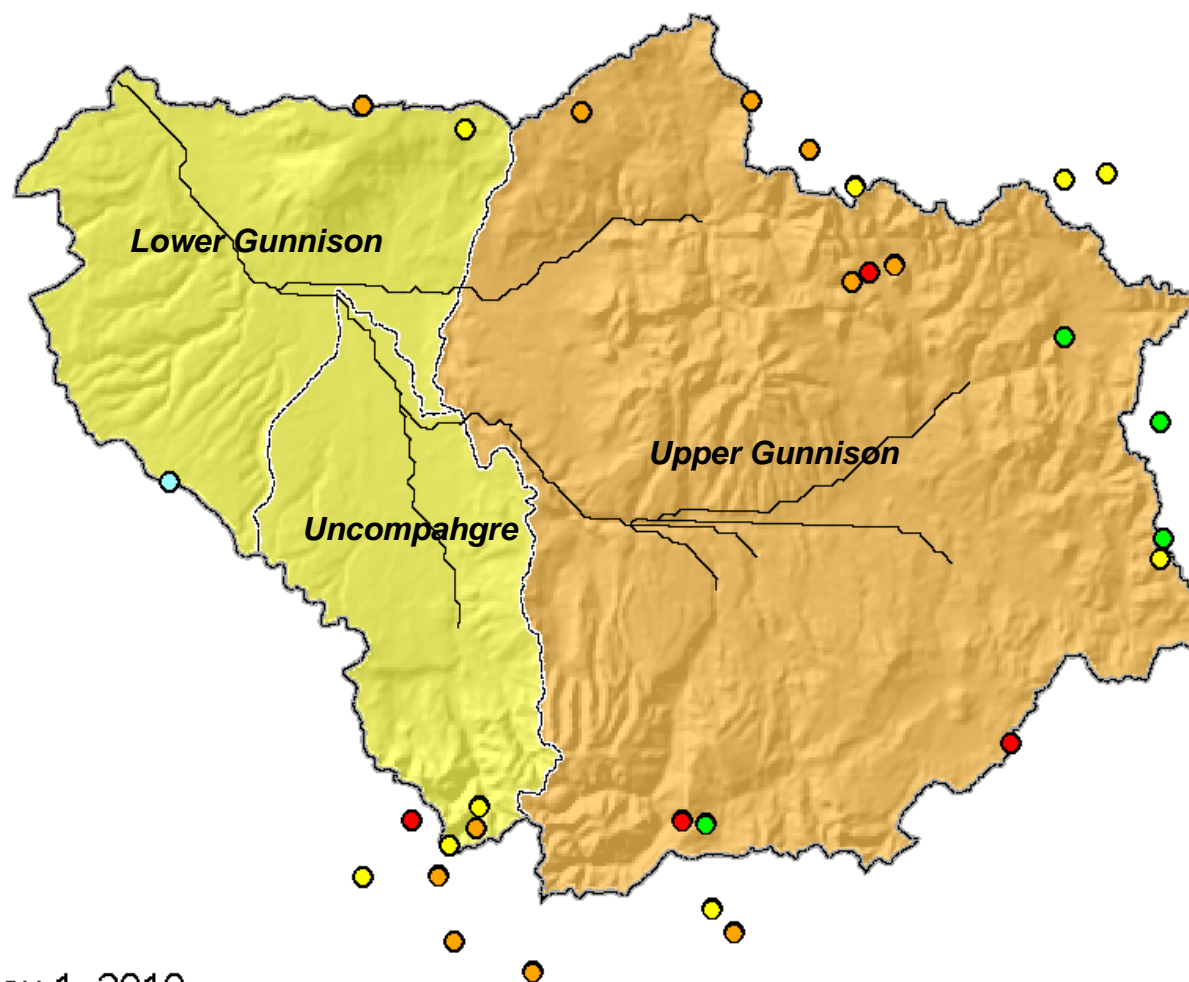


# Gunnison River Basin Snowpack Map

Percent of Average

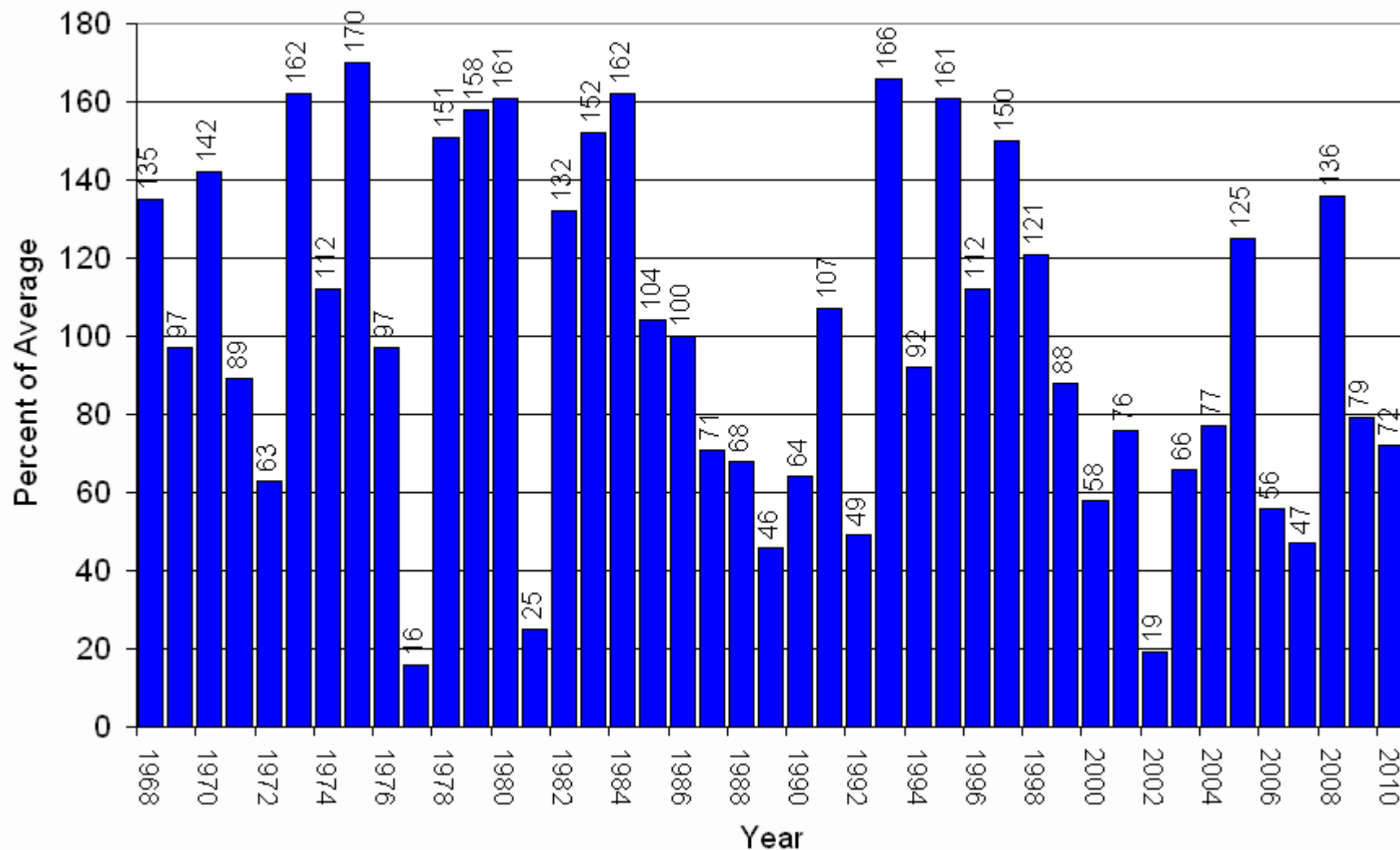


*Provisional Data  
Subject to Revision*



Current as of May 1, 2010

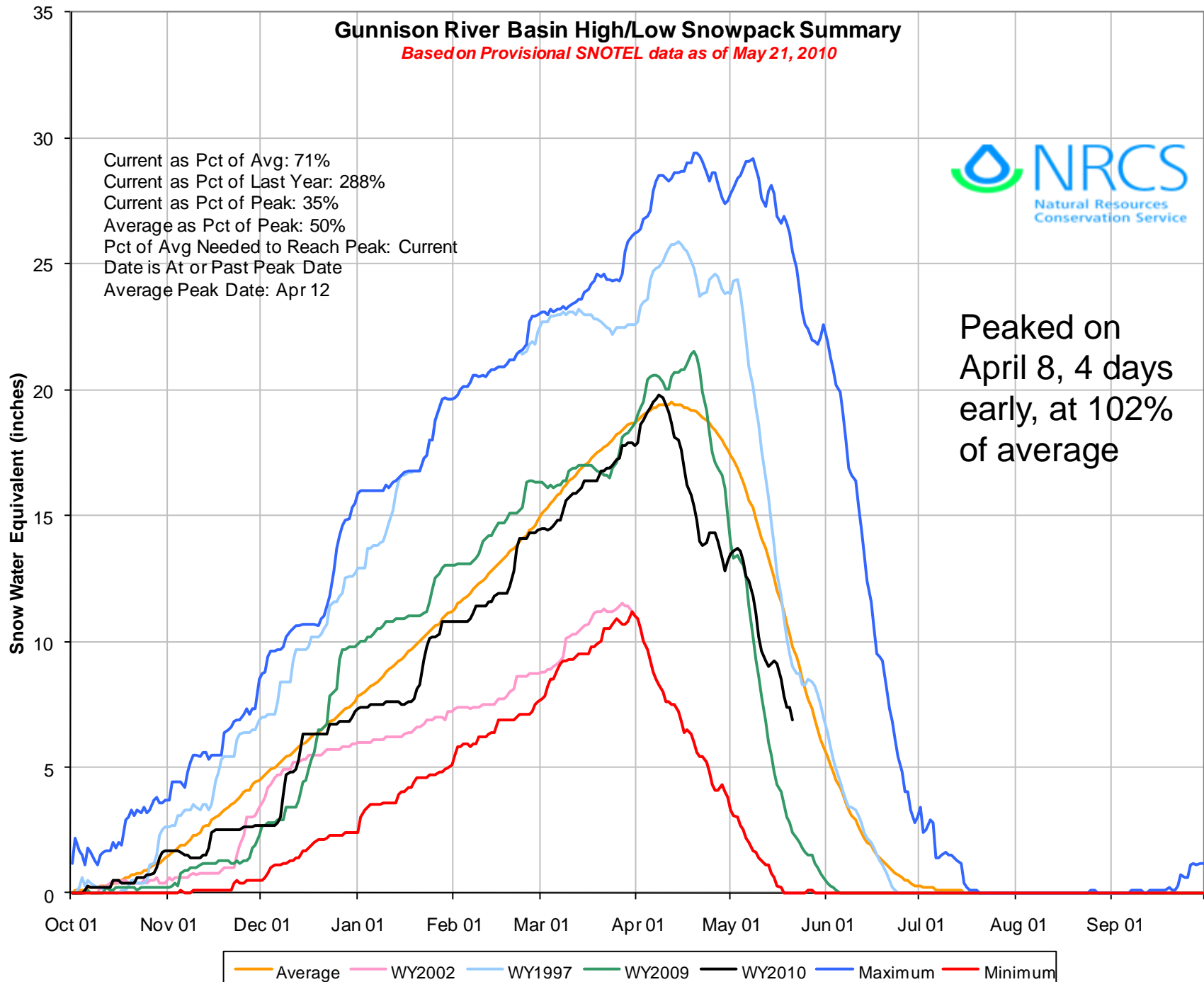
# May 1 Total Gunnison River Basin Snowpack





## Gunnison River Basin High/Low Snowpack Summary

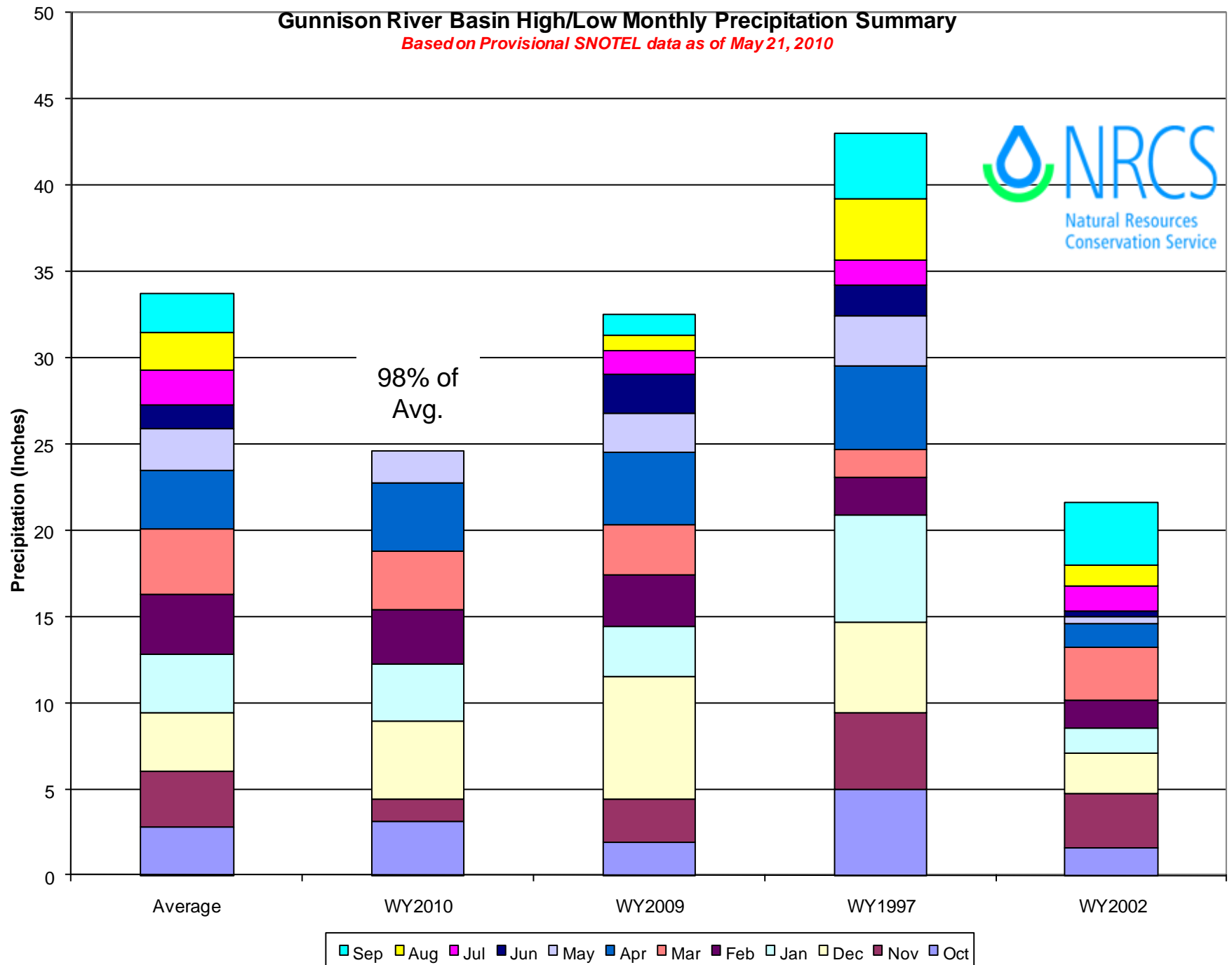
*Based on Provisional SNOTEL data as of May 21, 2010*





# Gunnison River Basin High/Low Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of May 21, 2010*

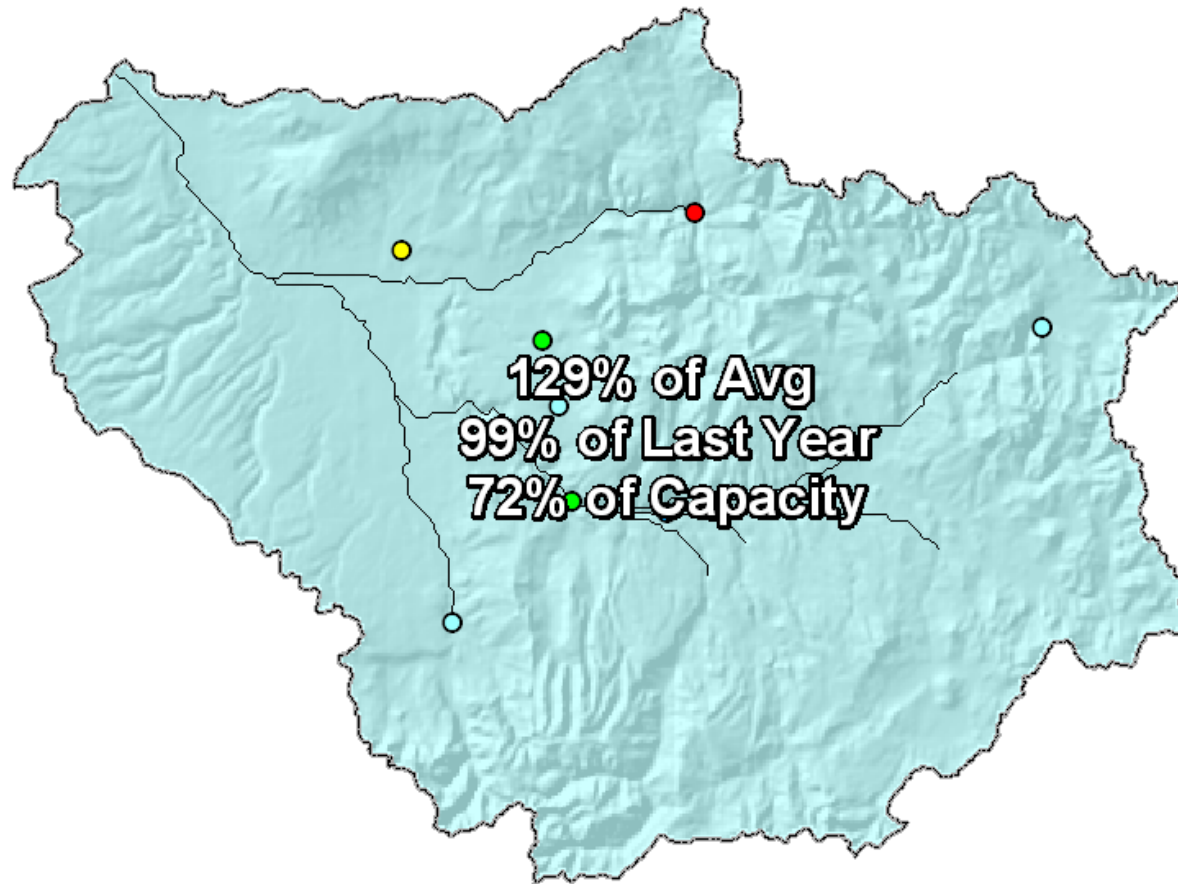


# Gunnison River Basin Reservoir Storage Map

## Percent of Average



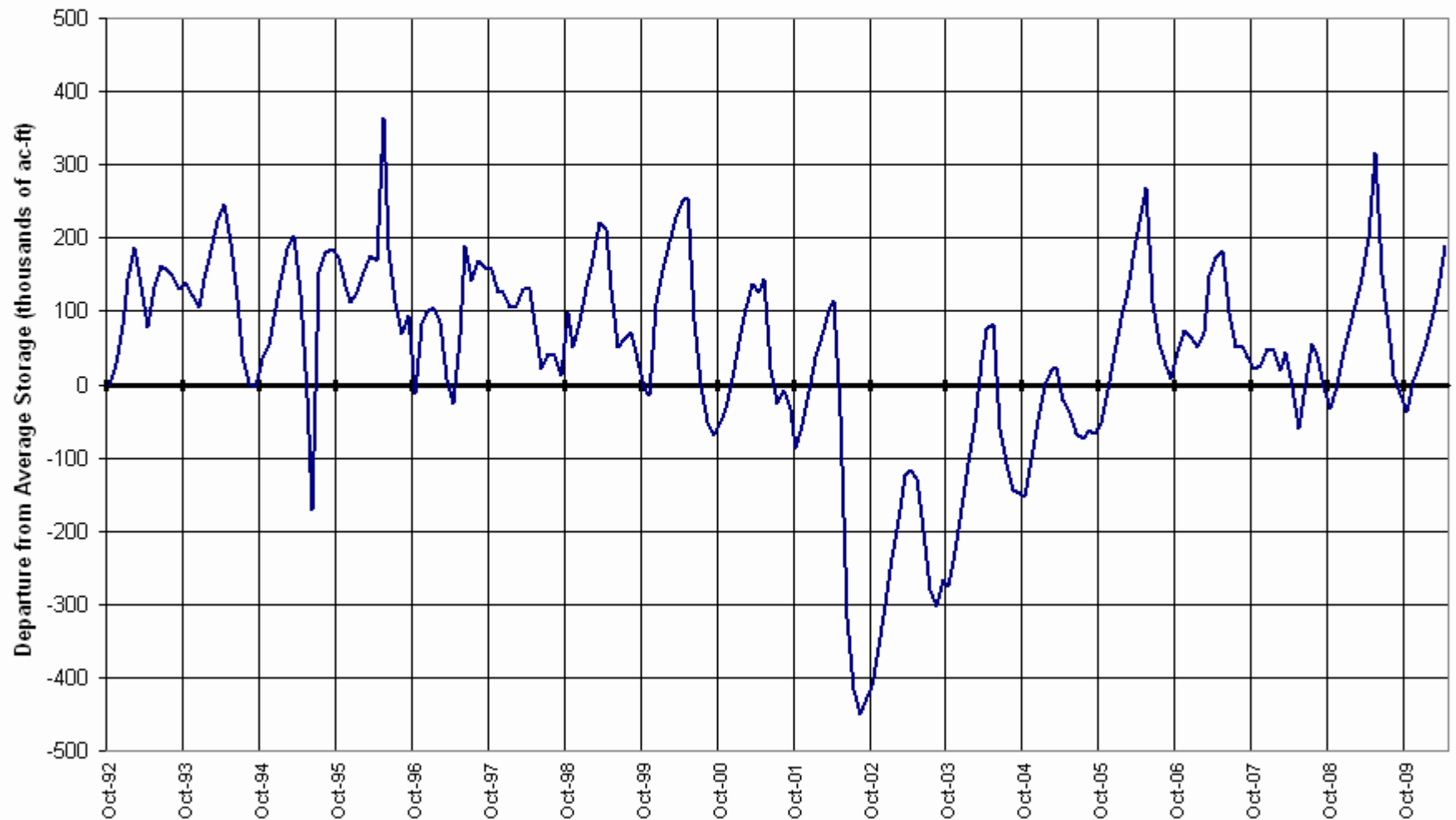
*Provisional Data  
Subject to Revision*



End of April 2010

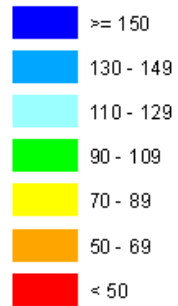
## GUNNISON RIVER BASIN

### Reservoir Storage Departure from Average

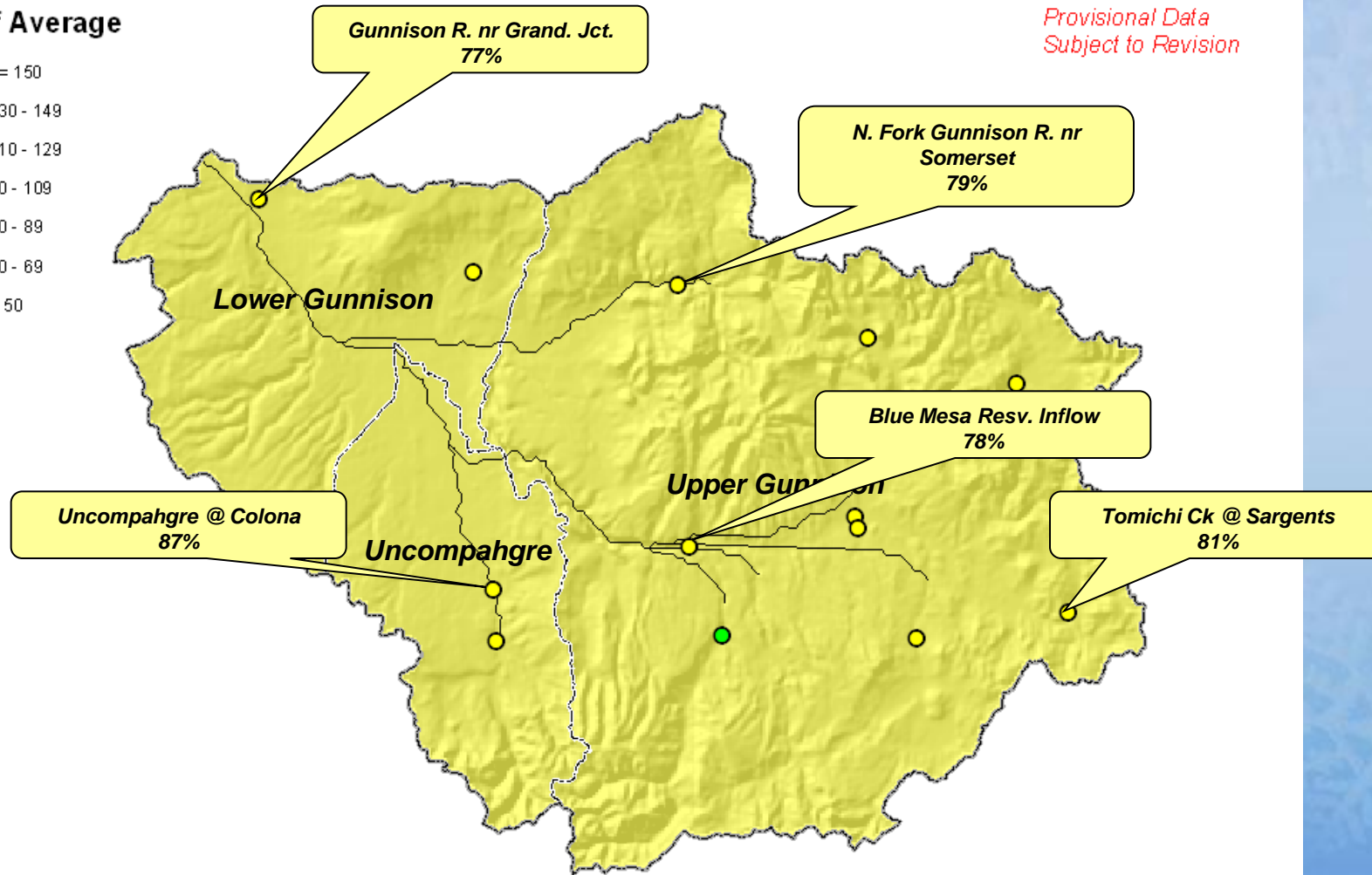


# Gunnison River Basin Streamflow Forecast Map

## Percent of Average

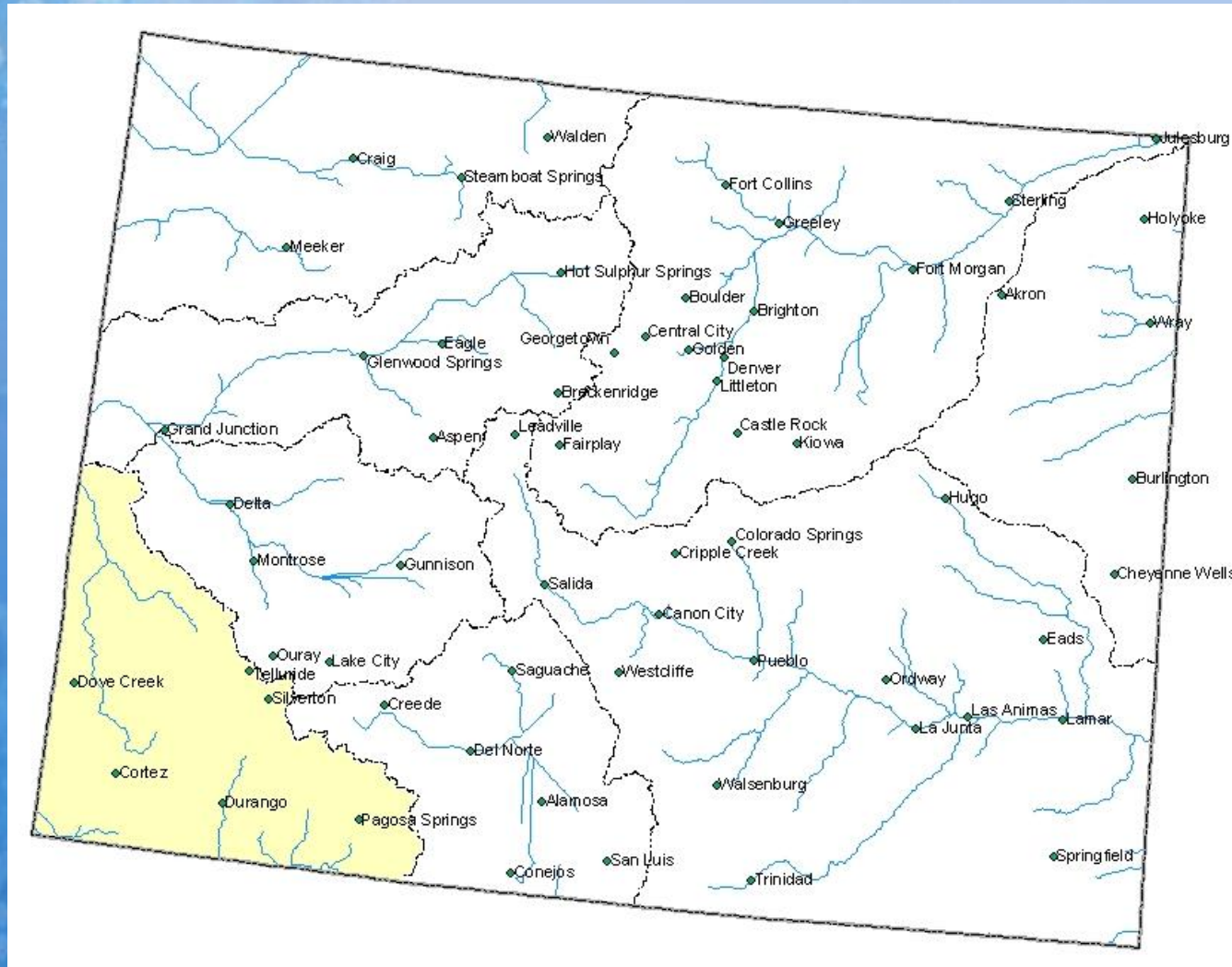


*Provisional Data  
Subject to Revision*



Current as of May 1, 2010

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



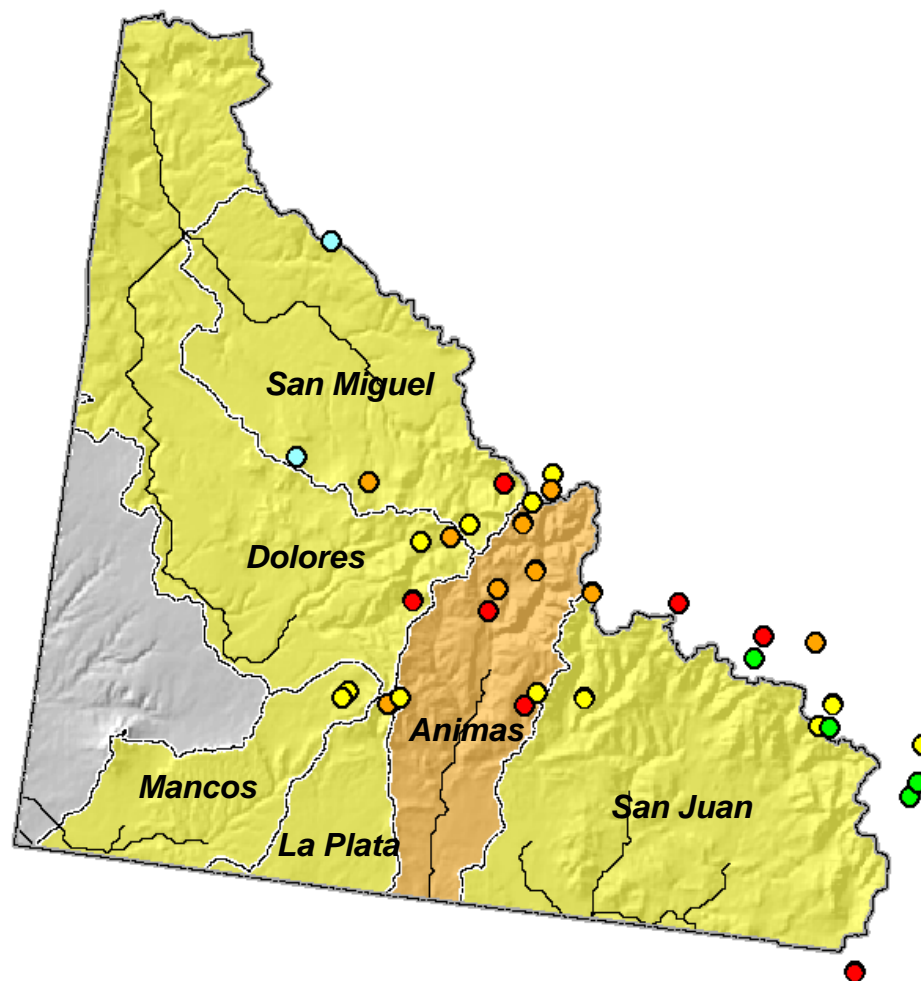


# San Miguel, Dolores, Animas and San Juan River Basins Snowpack Map

Percent of Average

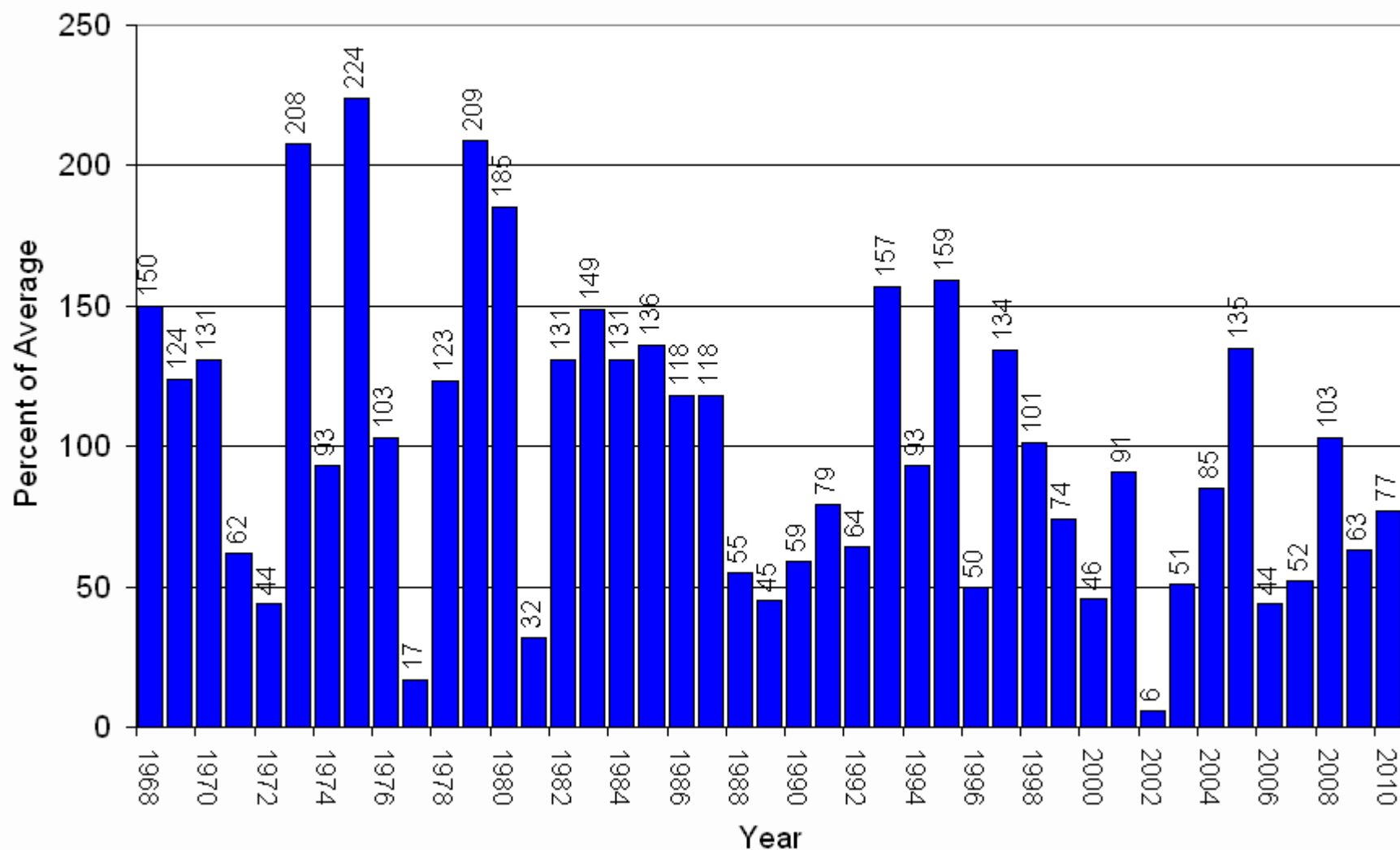


*Provisional Data  
Subject to Revision*



Current as of May 1, 2010

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



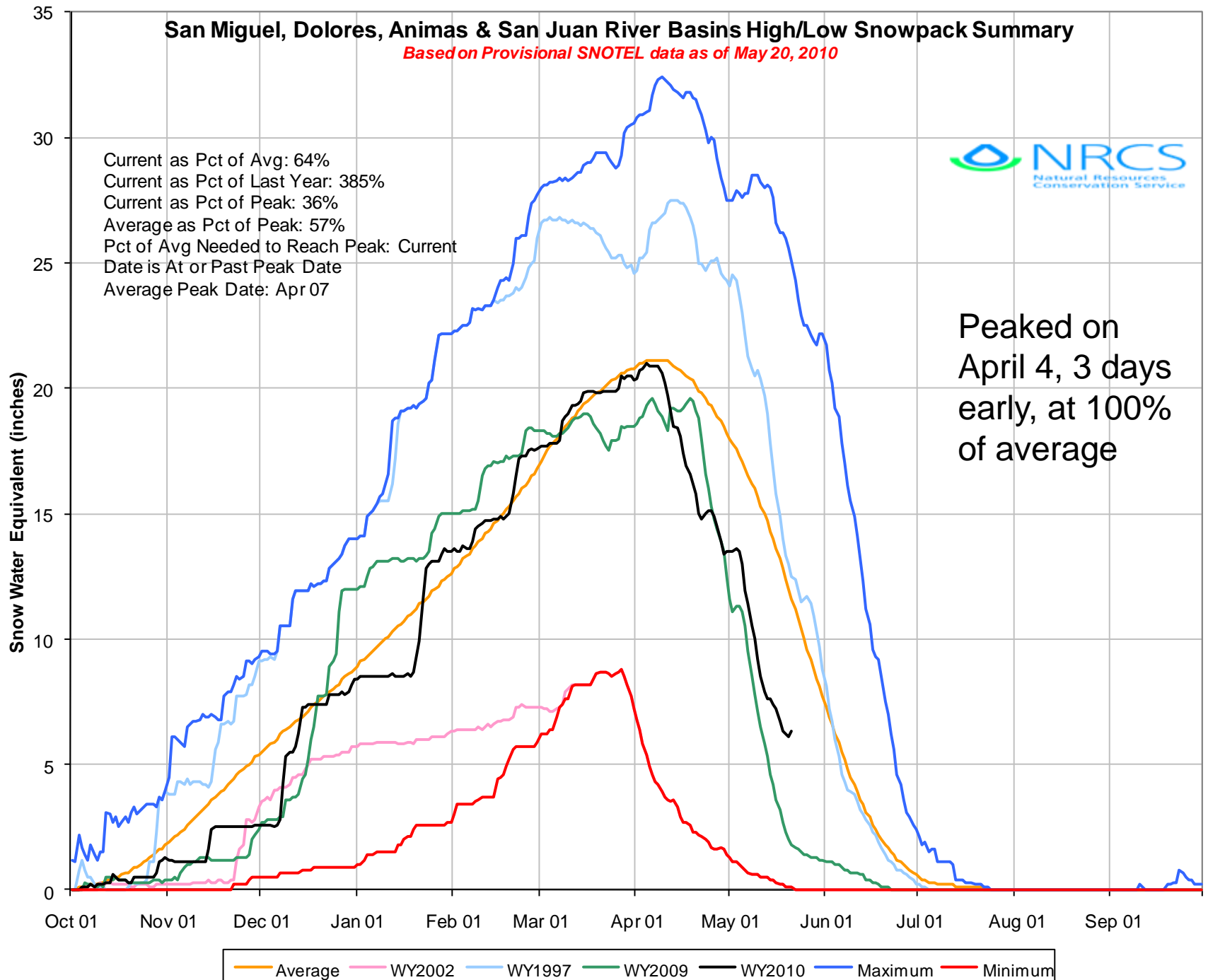
# San Miguel, Dolores, Animas & San Juan River Basins High/Low Snowpack Summary

Based on Provisional SNOTEL data as of May 20, 2010



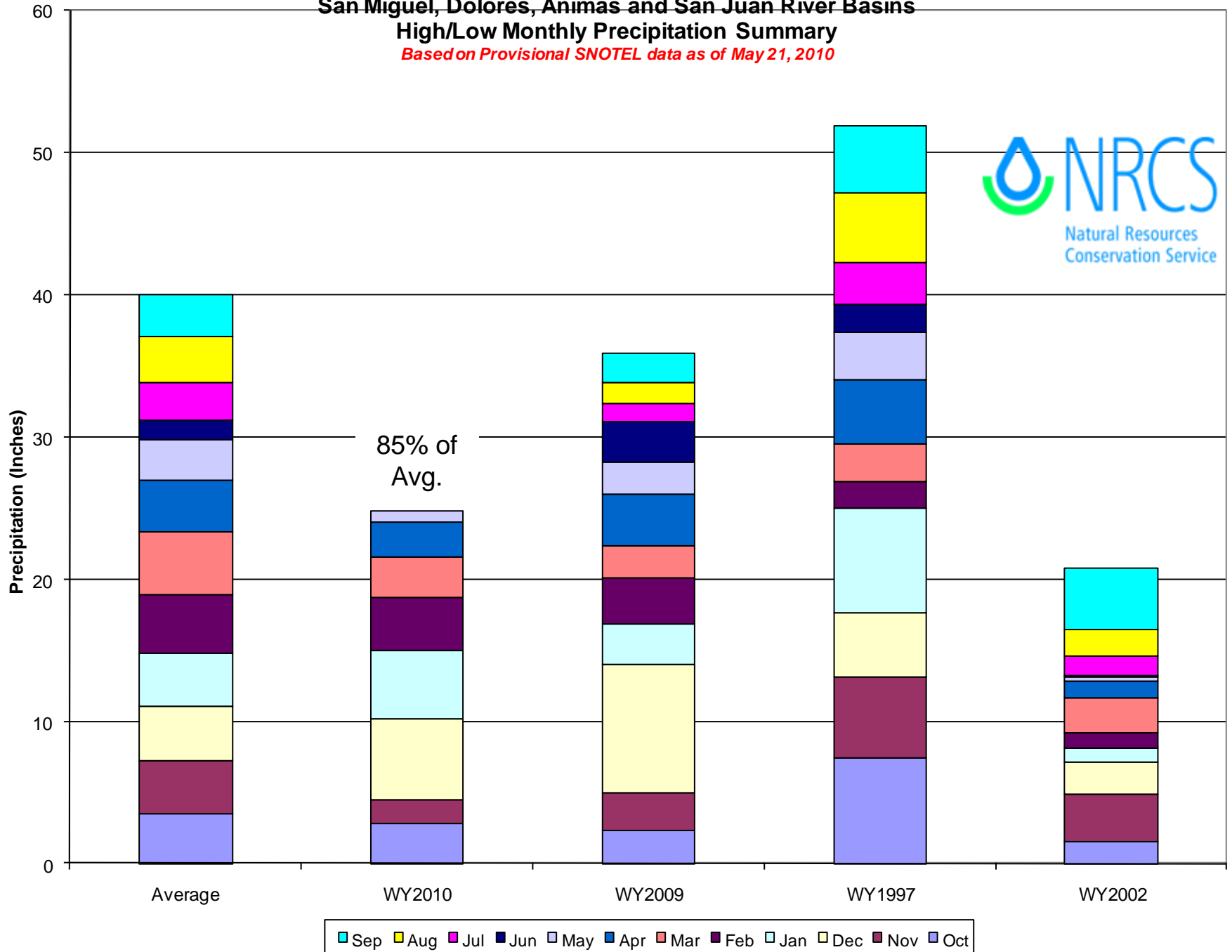
Current as Pct of Avg: 64%  
Current as Pct of Last Year: 385%  
Current as Pct of Peak: 36%  
Average as Pct of Peak: 57%  
Pct of Avg Needed to Reach Peak: Current  
Date is At or Past Peak Date  
Average Peak Date: Apr 07

Peaked on  
April 4, 3 days  
early, at 100%  
of average



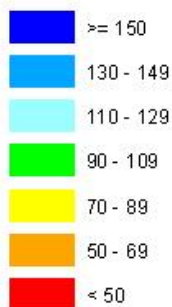
# San Miguel, Dolores, Animas and San Juan River Basins High/Low Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of May 21, 2010*

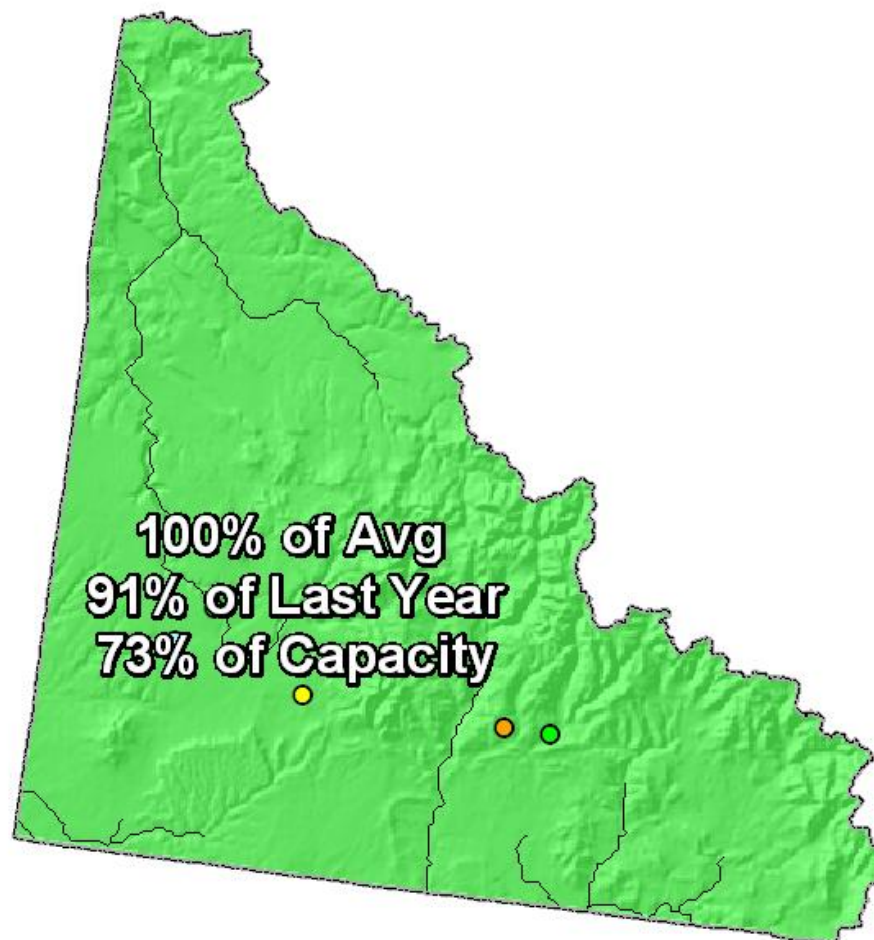


# San Miguel, Dolores, Animas and San Juan River Basins Reservoir Storage Map

Percent of Average



*Provisional Data  
Subject to Revision*

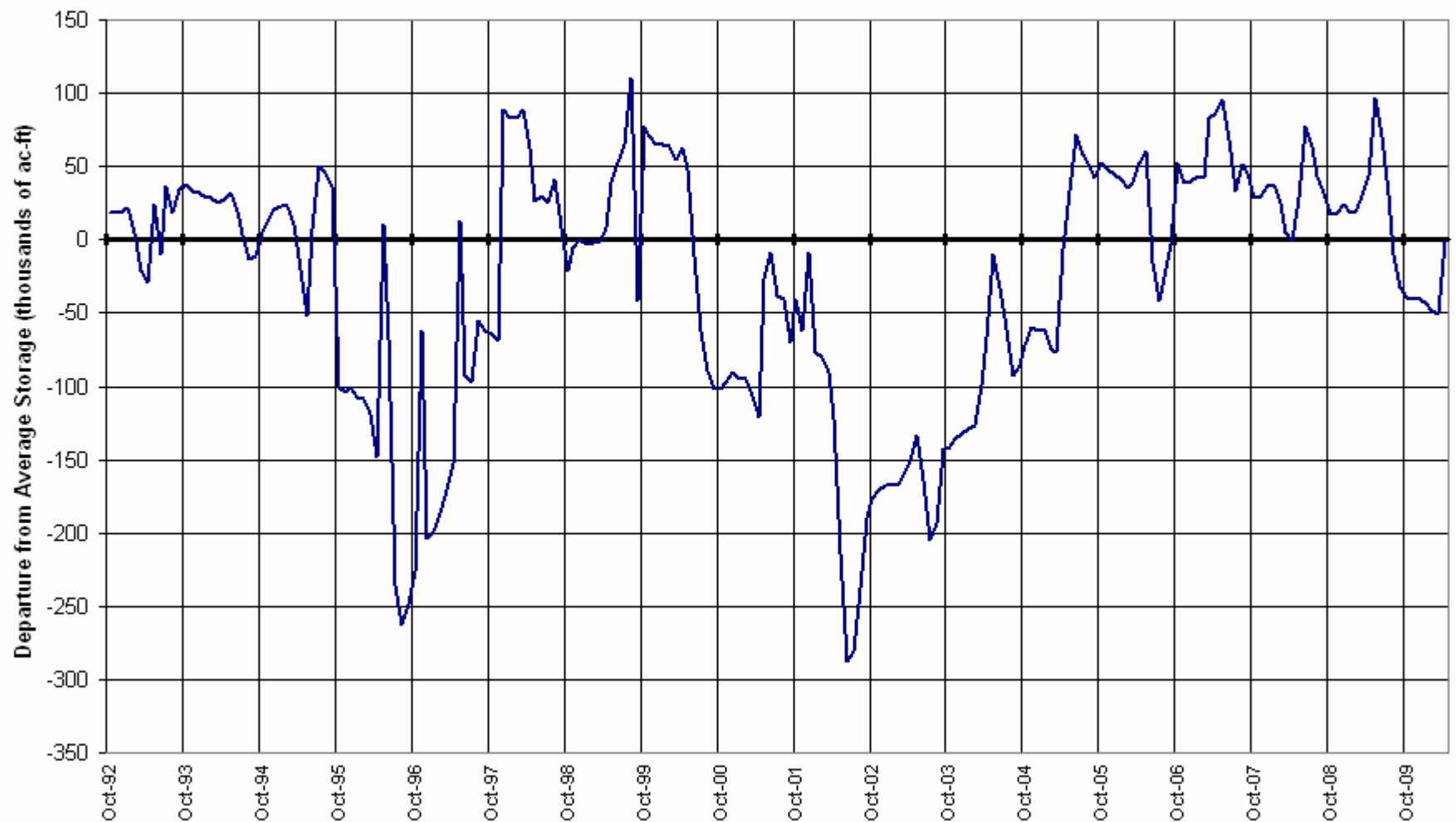


End of April 2010



# SAN MIGUEL, DOLORES, ANIMAS AND SAN JUAN RIVER BASINS

## Reservoir Storage Departure from Average

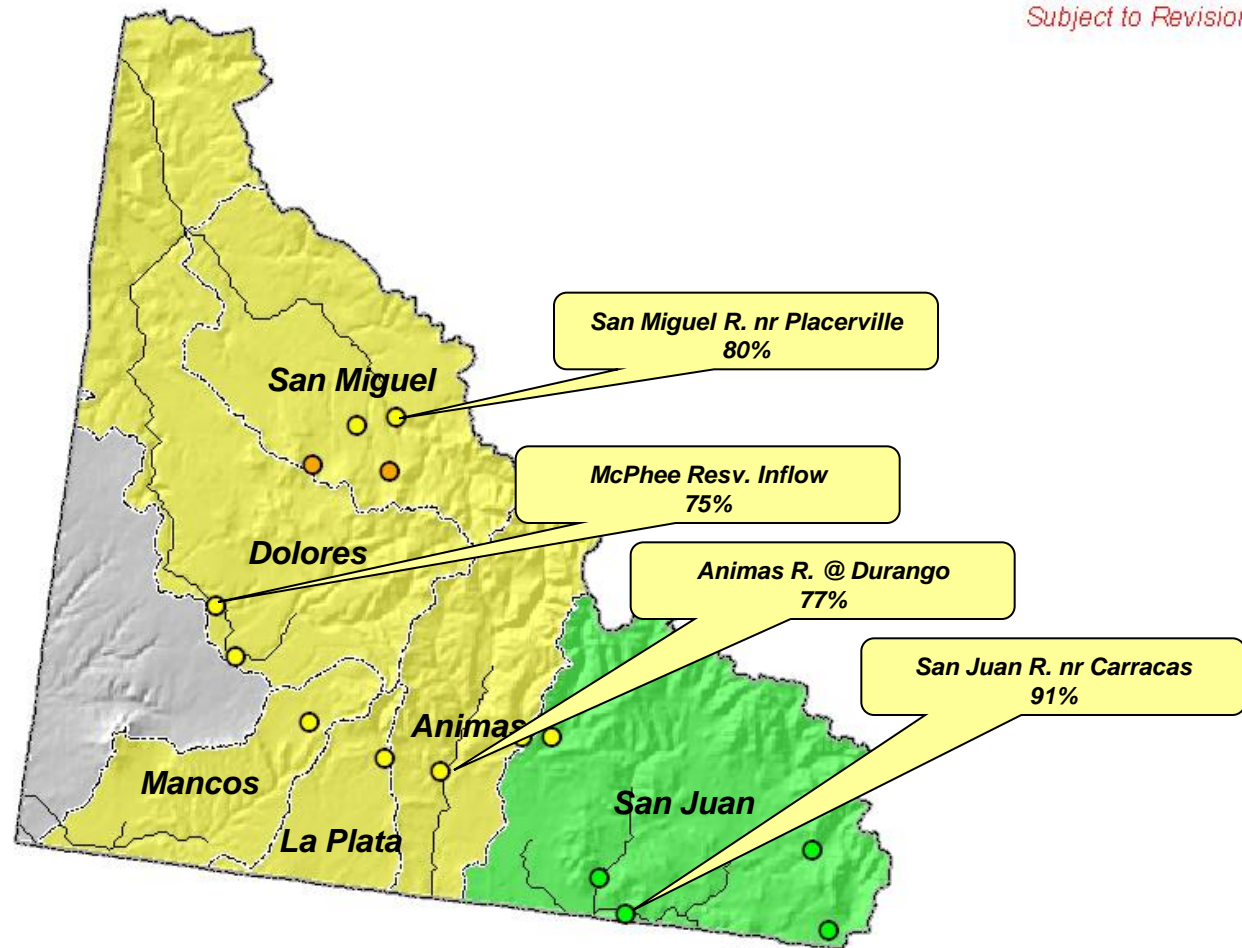


# San Miguel, Dolores, Animas and San Juan River Basins Streamflow Forecast Map

Percent of Average

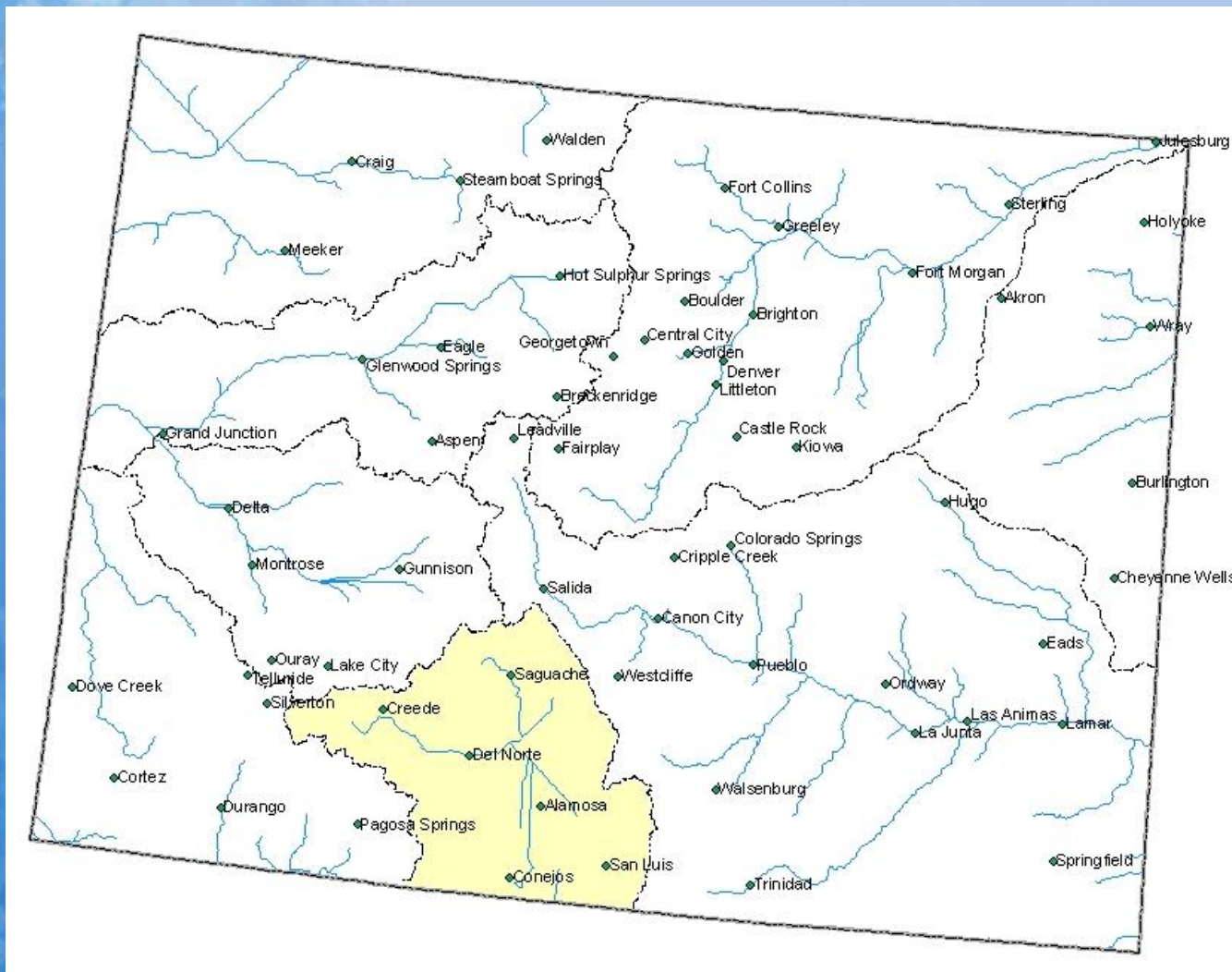


*Provisional Data  
Subject to Revision*



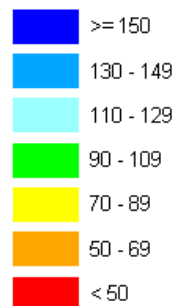
Current as of May 1, 2010

# Upper Rio Grande Basin Summary

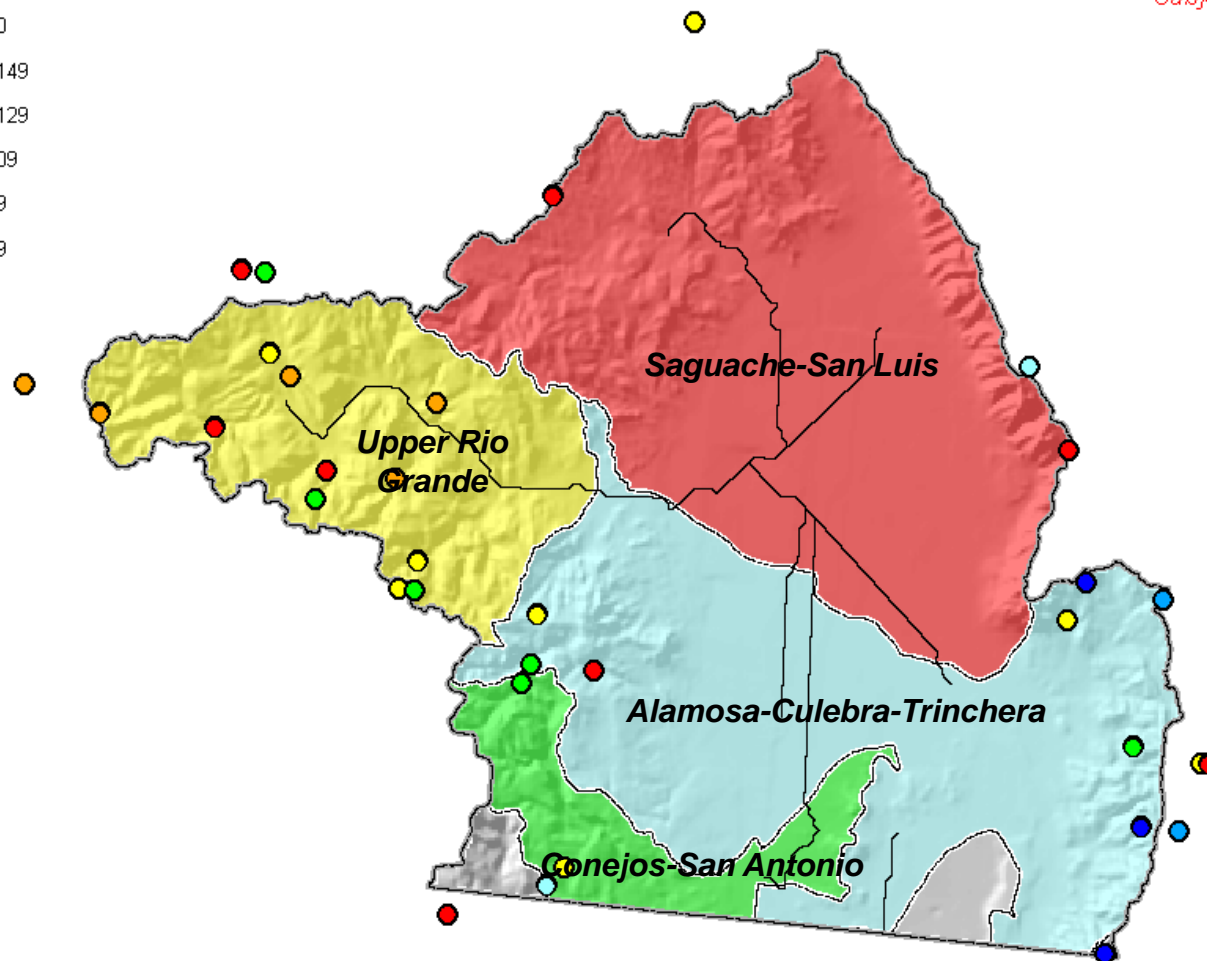


# Upper Rio Grande Basin Snowpack Map

## Percent of Average

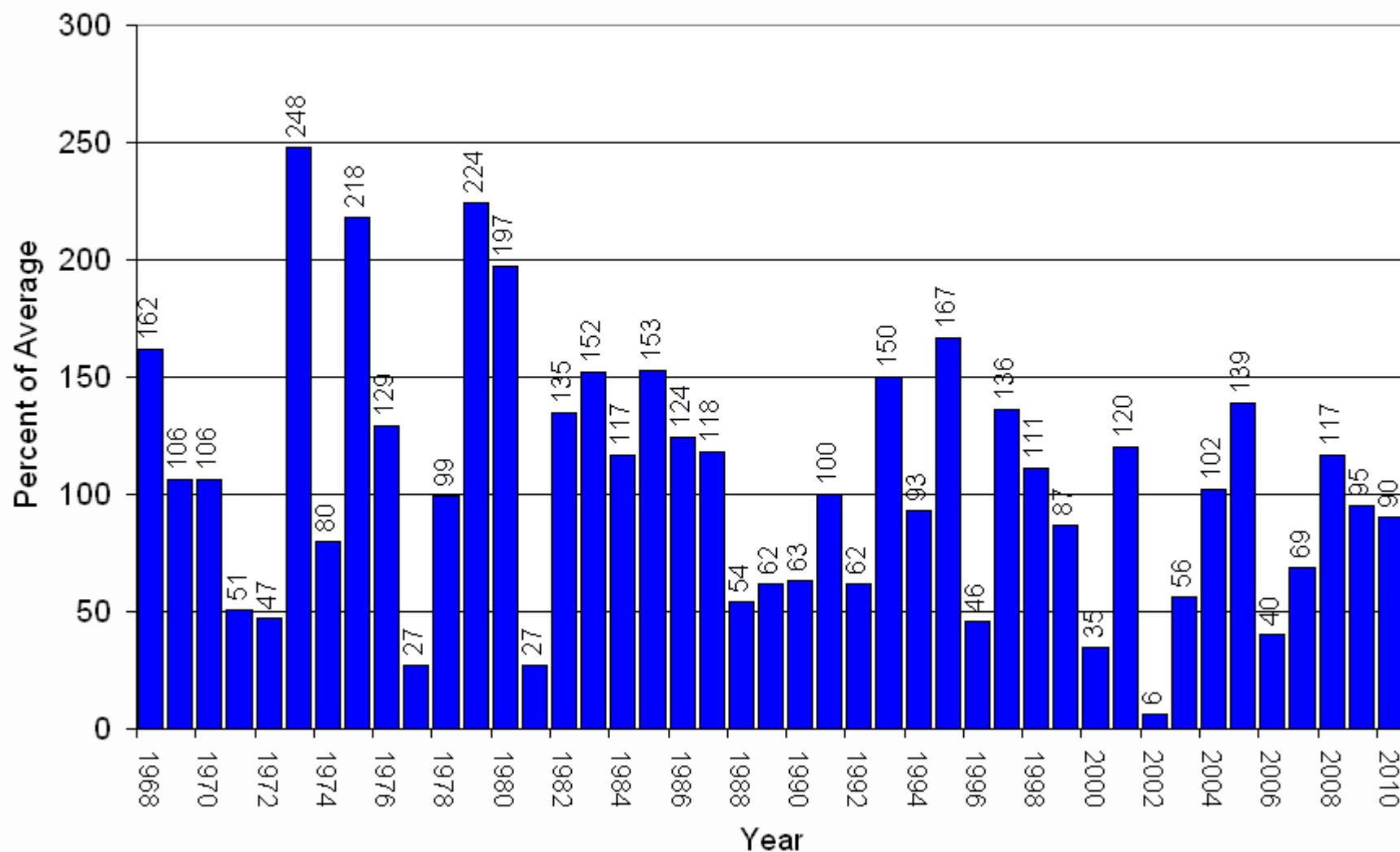


*Provisional Data  
Subject to Revision*



Current as of May 1, 2010

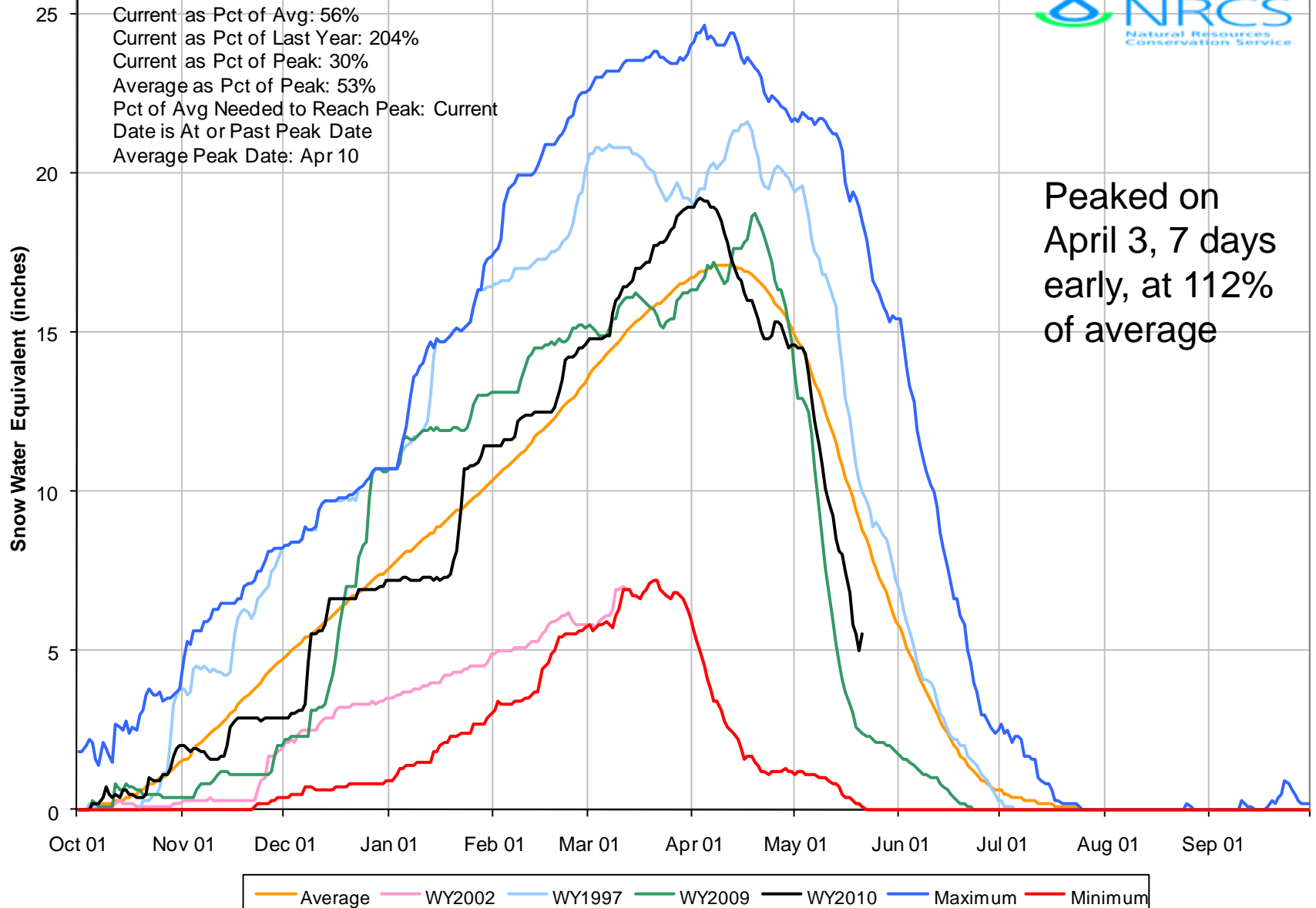
## May 1 Total Upper Rio Grande Basin Snowpack





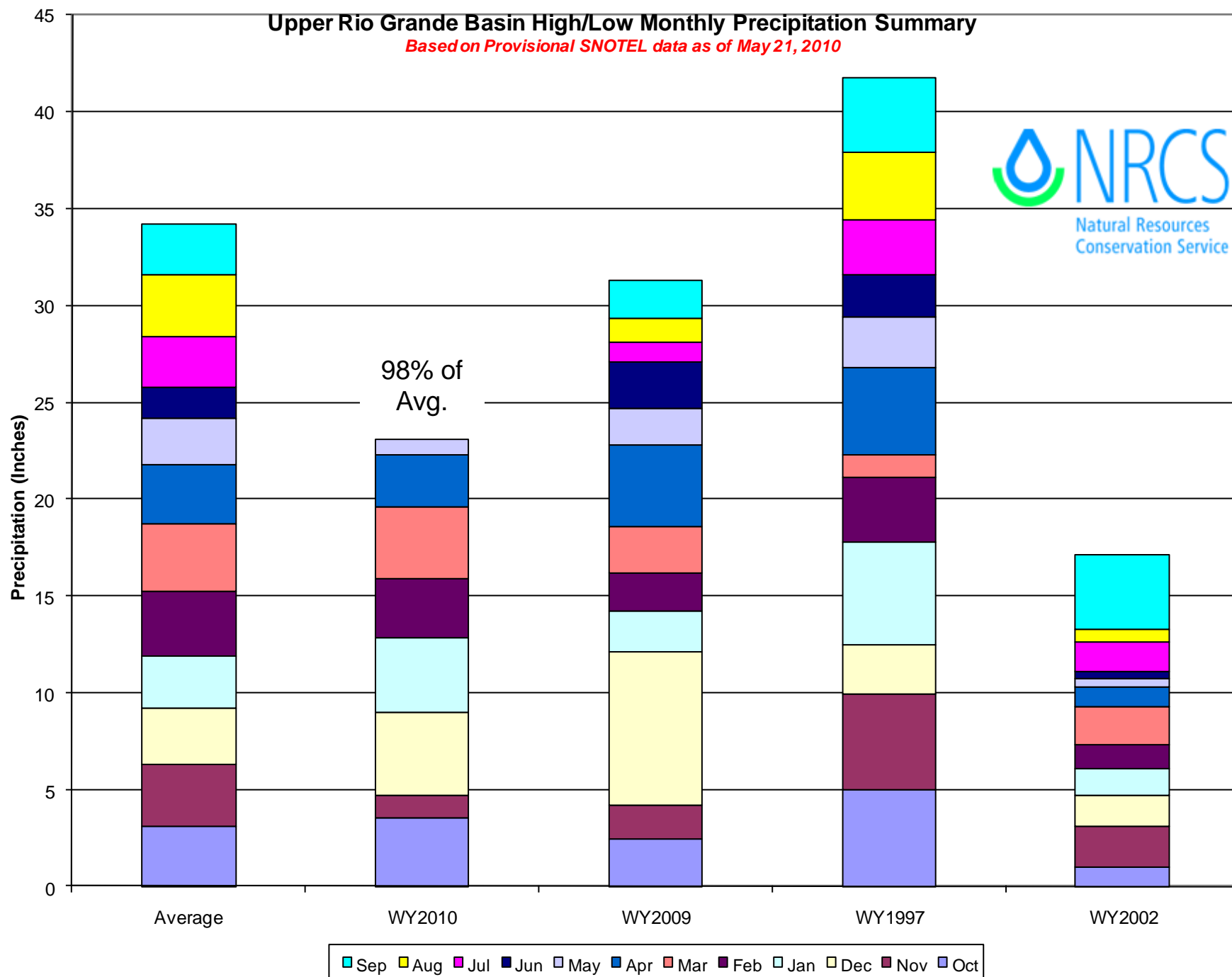
## Upper Rio Grande Basin High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of May 20, 2010*



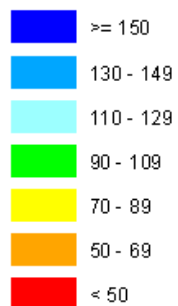
# Upper Rio Grande Basin High/Low Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of May 21, 2010*

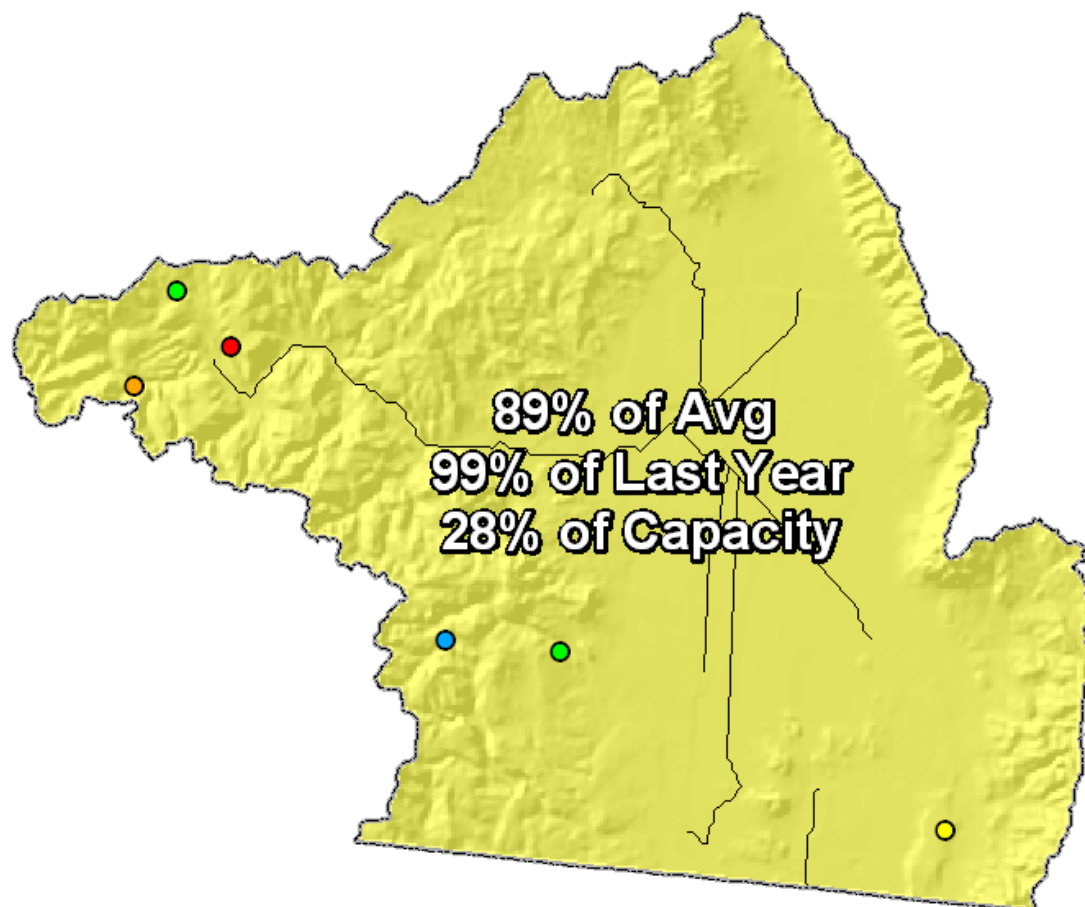


# Upper Rio Grande Basin Reservoir Storage Map

## Percent of Average

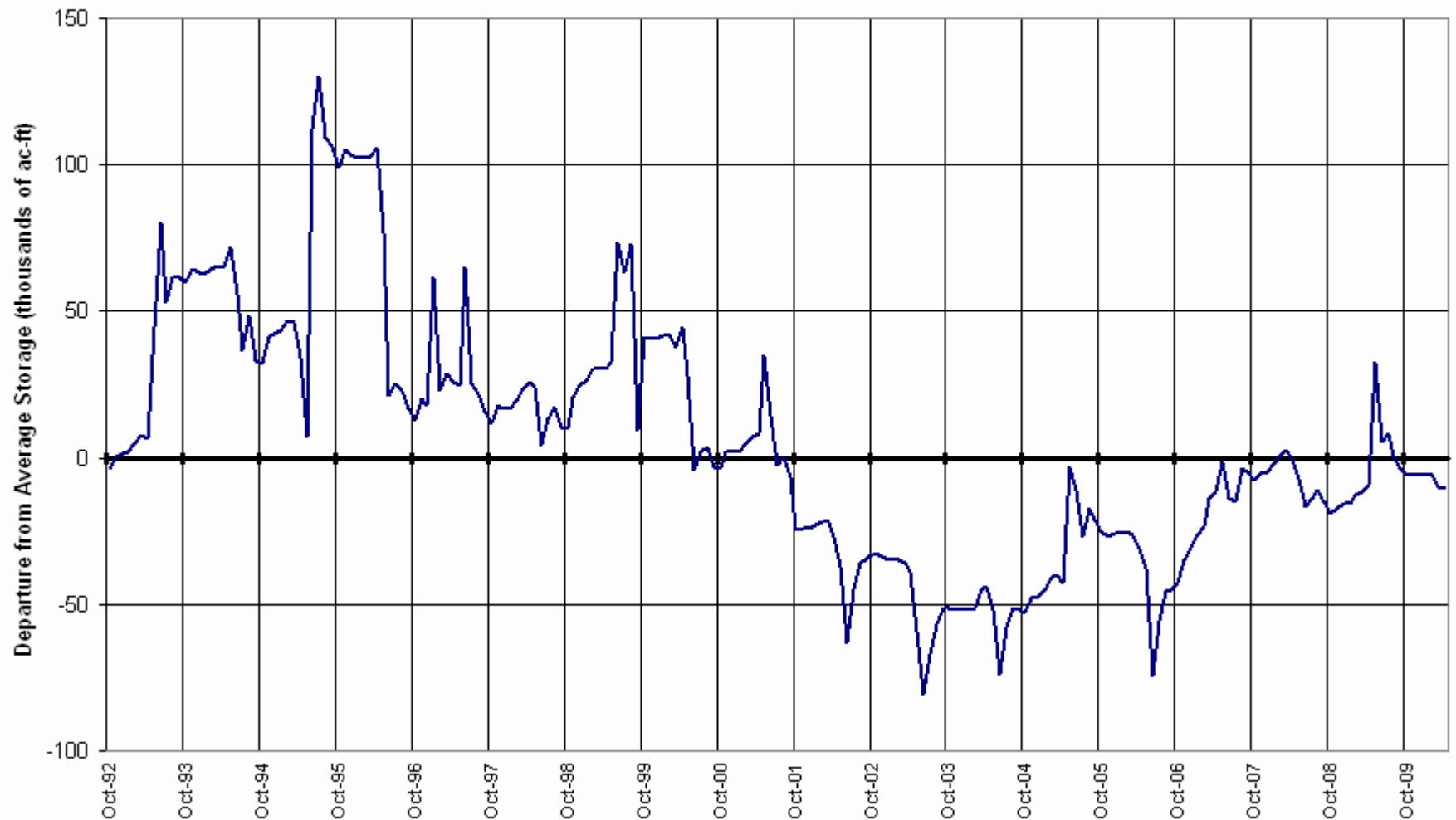


*Provisional Data  
Subject to Revision*



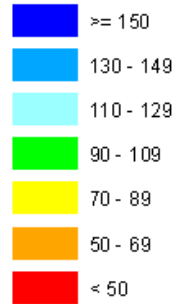
End of April 2010

UPPER RIO GRANDE BASIN  
Reservoir Storage  
Departure from Average

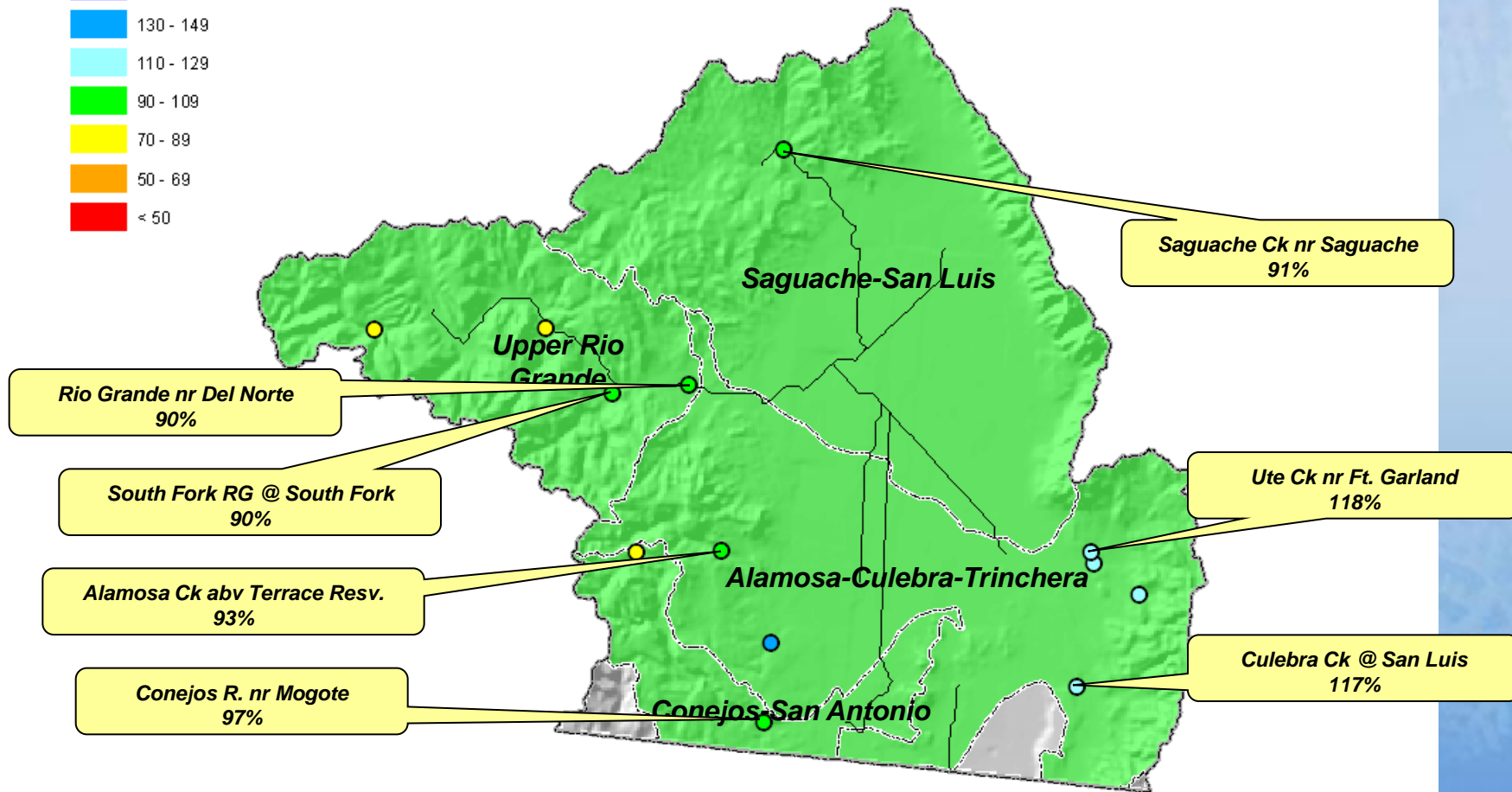


# Upper Rio Grande Basin Streamflow Forecast Map

## Percent of Average



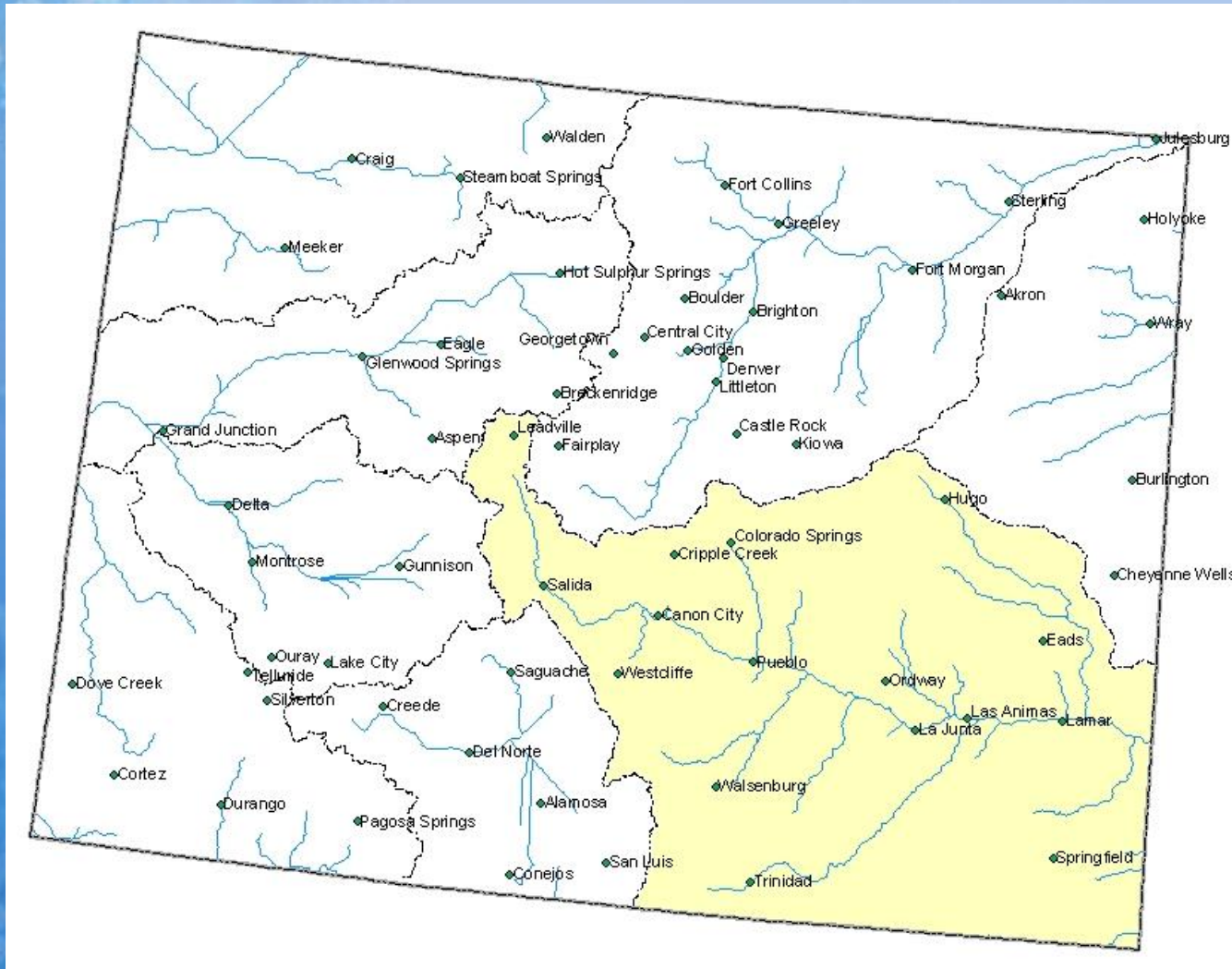
*Provisional Data  
Subject to Revision*



Current as of May 1, 2010

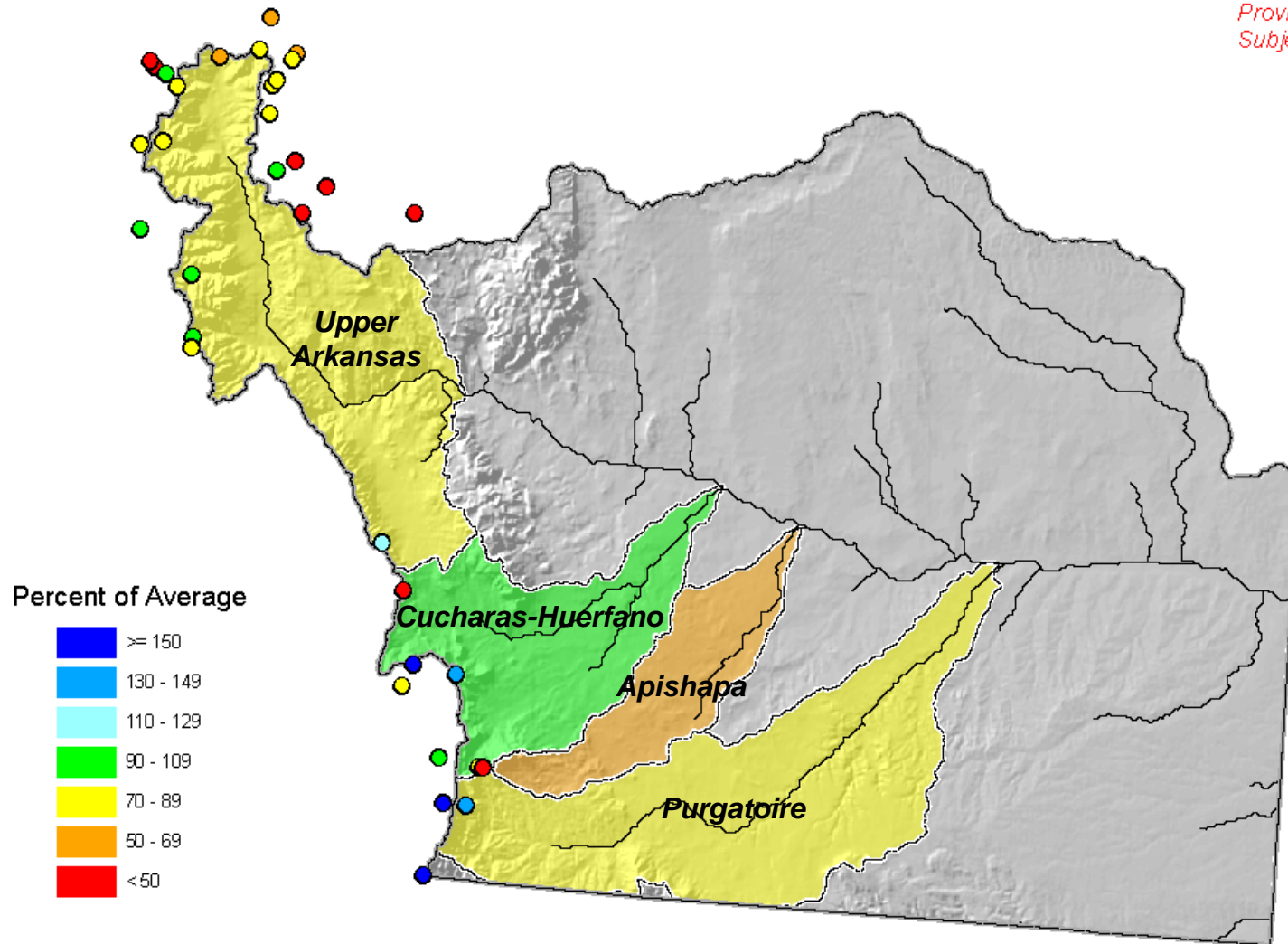


# Arkansas River Basin Summary



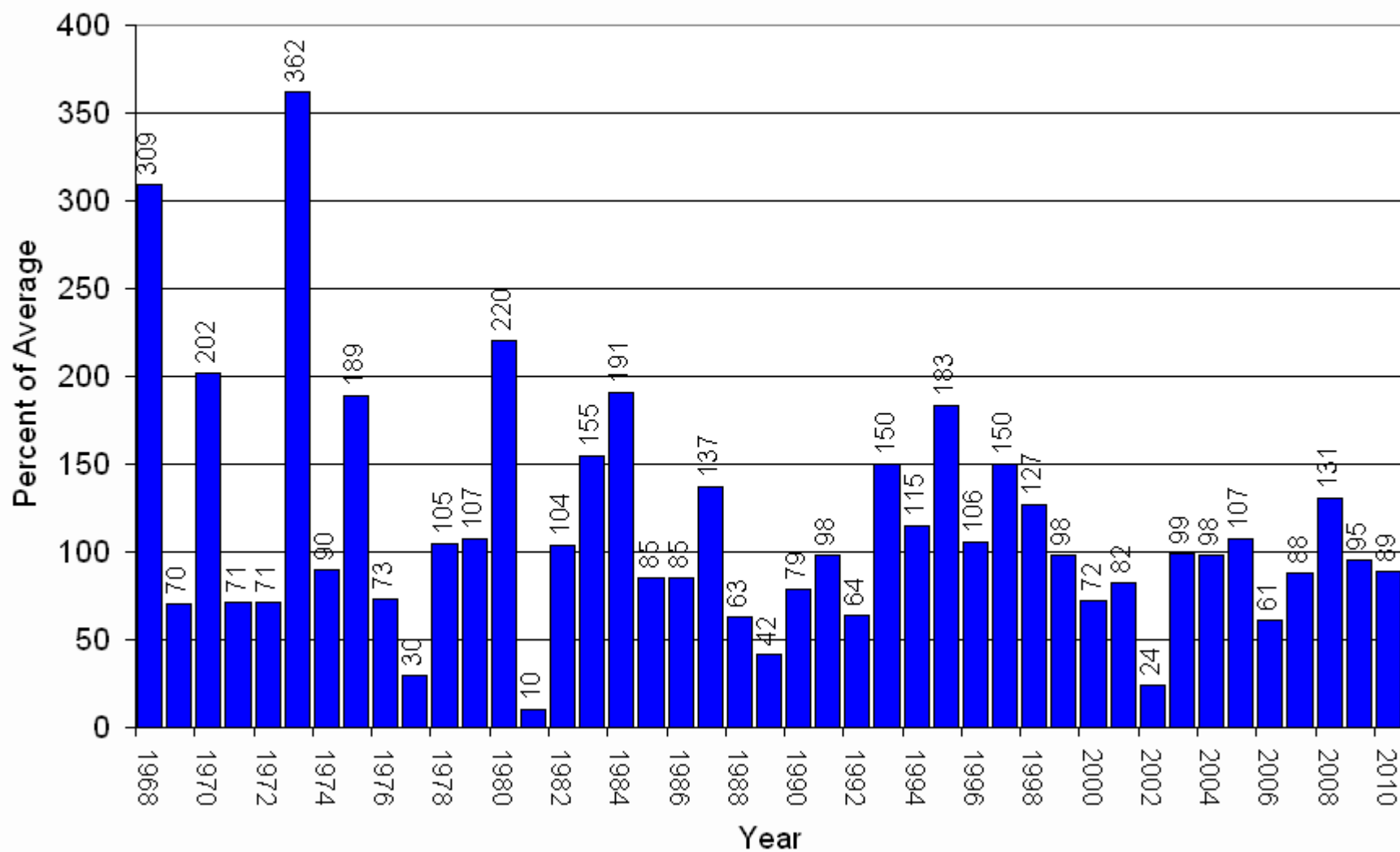
# Arkansas River Basin Snowpack Map

*Provisional Data  
Subject to Revision*



Current as of May 1, 2010

## May 1 Total Arkansas River Basin Snowpack



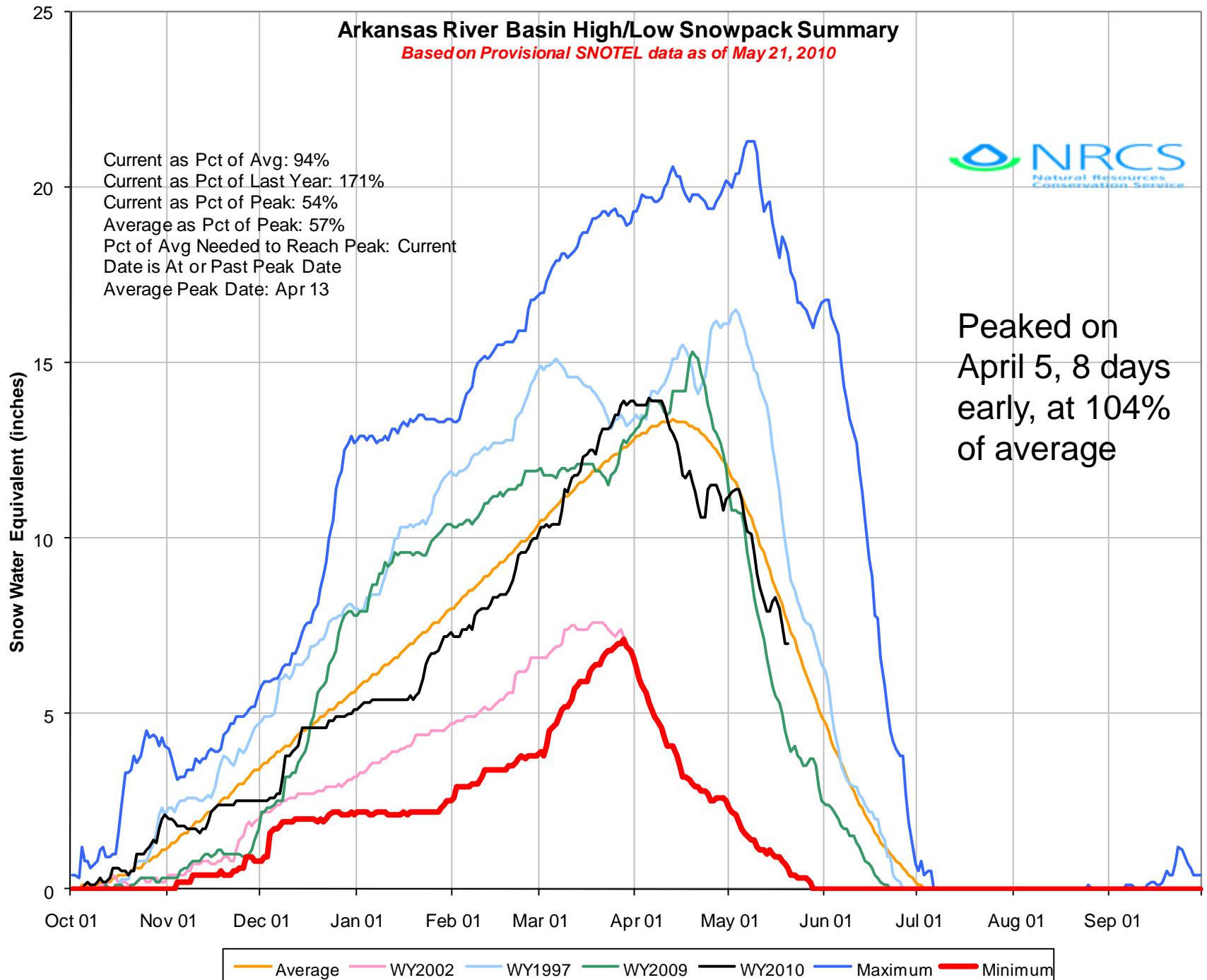
## Arkansas River Basin High/Low Snowpack Summary

Based on Provisional SNOTEL data as of May 21, 2010



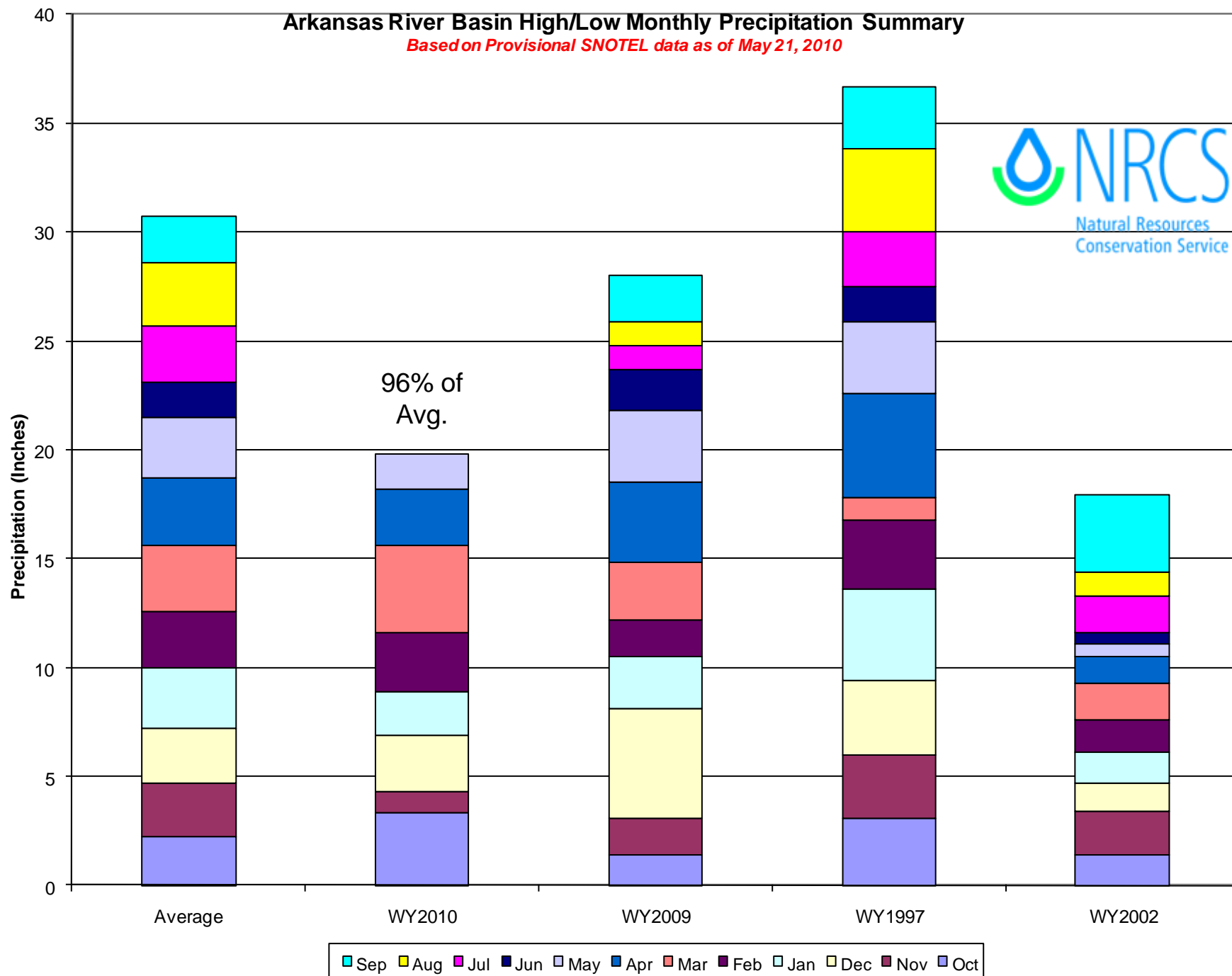
Current as Pct of Avg: 94%  
Current as Pct of Last Year: 171%  
Current as Pct of Peak: 54%  
Average as Pct of Peak: 57%  
Pct of Avg Needed to Reach Peak: Current  
Date is At or Past Peak Date  
Average Peak Date: Apr 13

Peaked on  
April 5, 8 days  
early, at 104%  
of average



# Arkansas River Basin High/Low Monthly Precipitation Summary

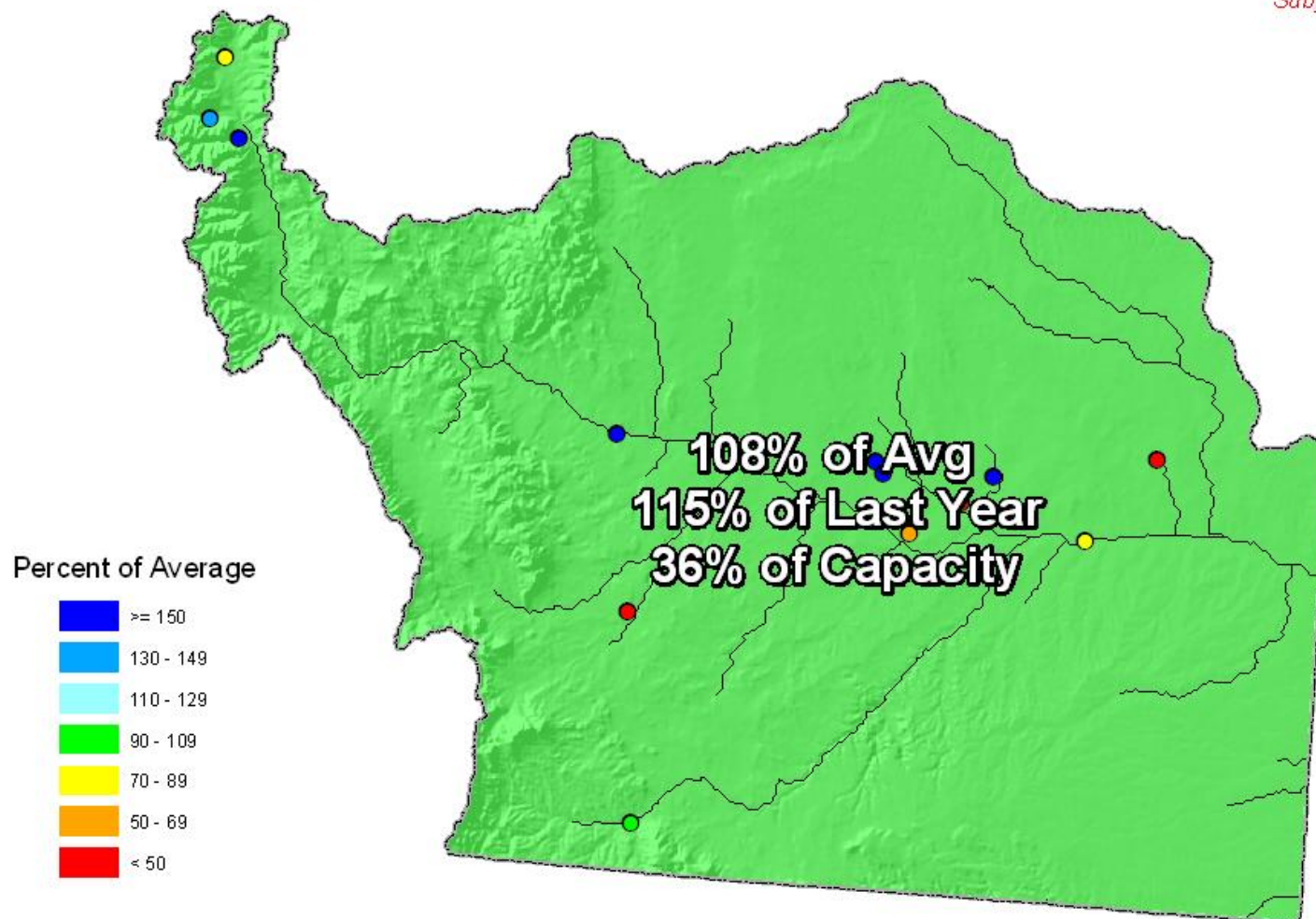
*Based on Provisional SNOTEL data as of May 21, 2010*





# Arkansas River Basin Reservoir Storage Map

*Provisional Data  
Subject to Revision*



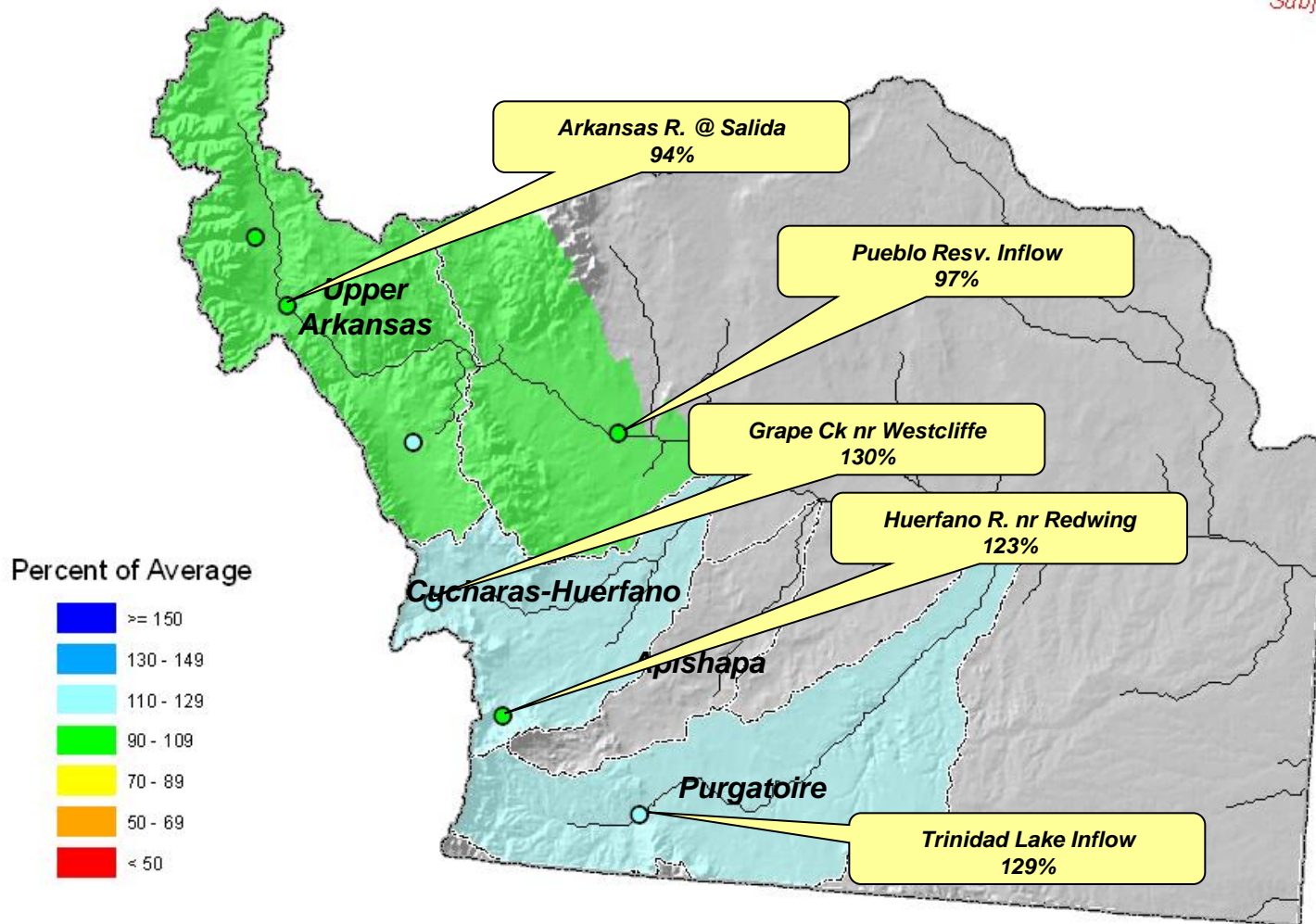
End of April 2010

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



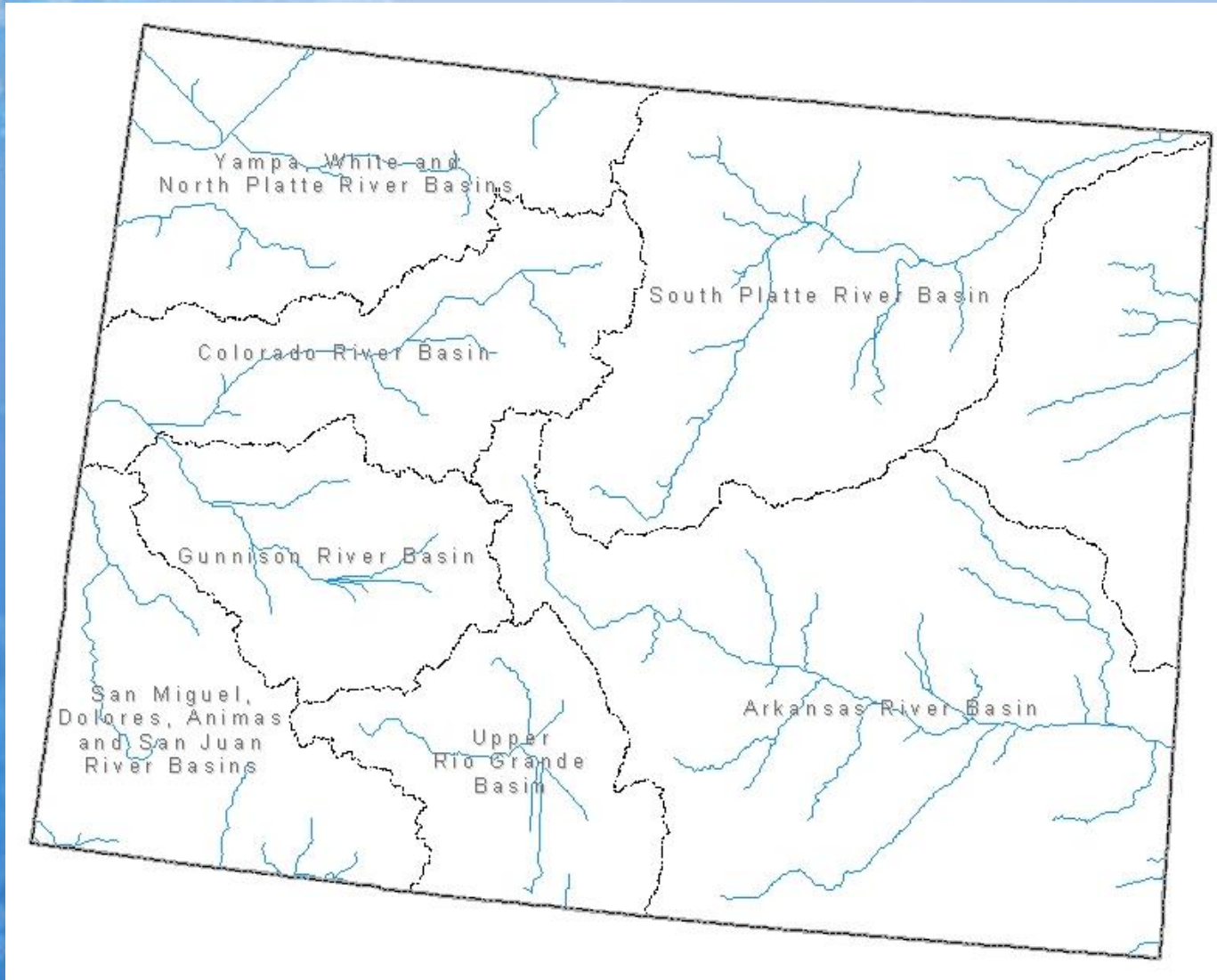
# Arkansas River Basin Streamflow Forecast Map

*Provisional Data  
Subject to Revision*



Current as of May 1, 2010

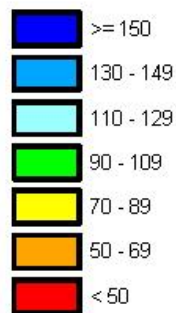
# Colorado Statewide Summary



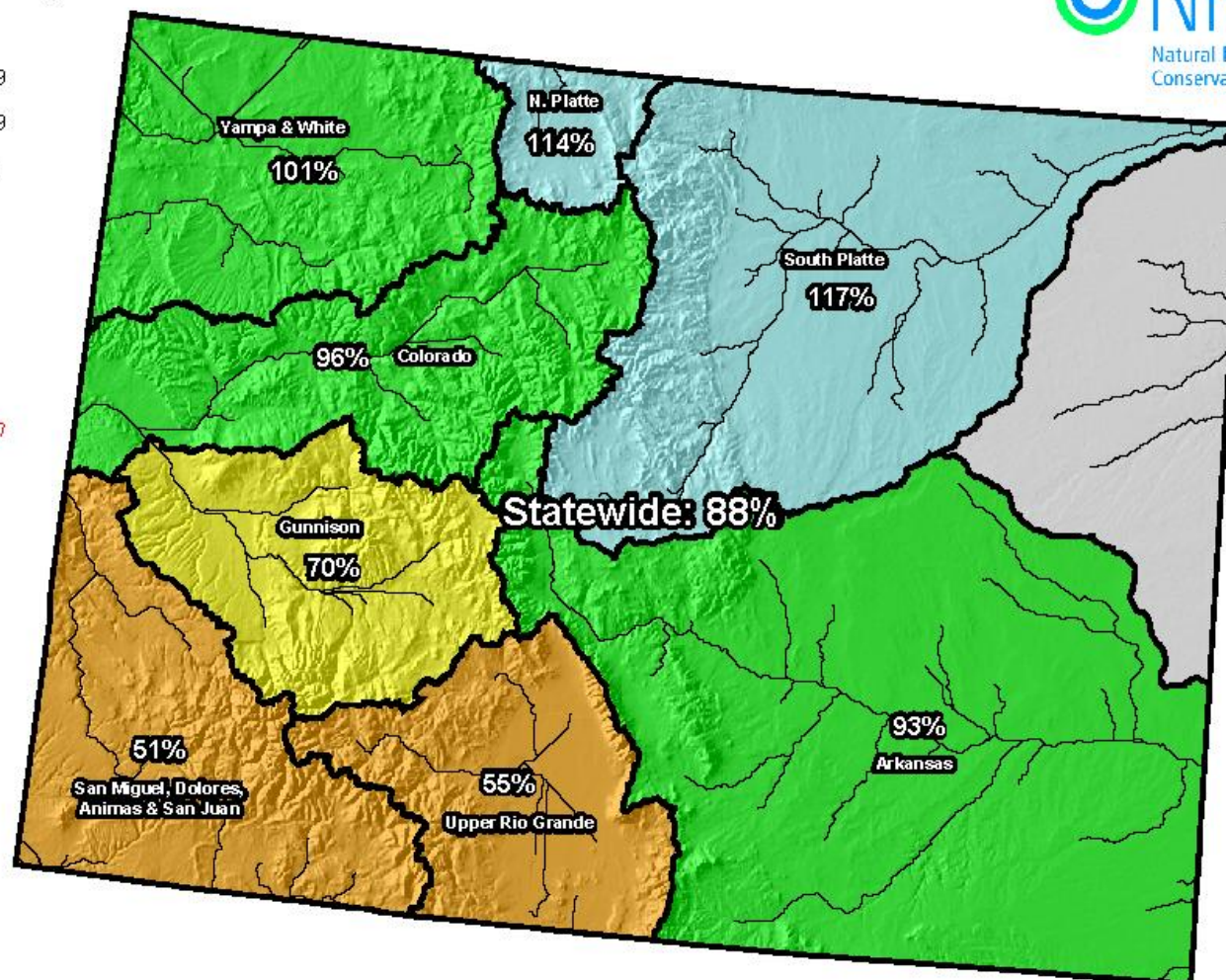


# Colorado SNOTEL Snowpack Update Map

Percent of Average



*Provisional Data  
Subject to Revision*



Current as of May 20, 2010

\*Data may not provide a valid measure of conditions

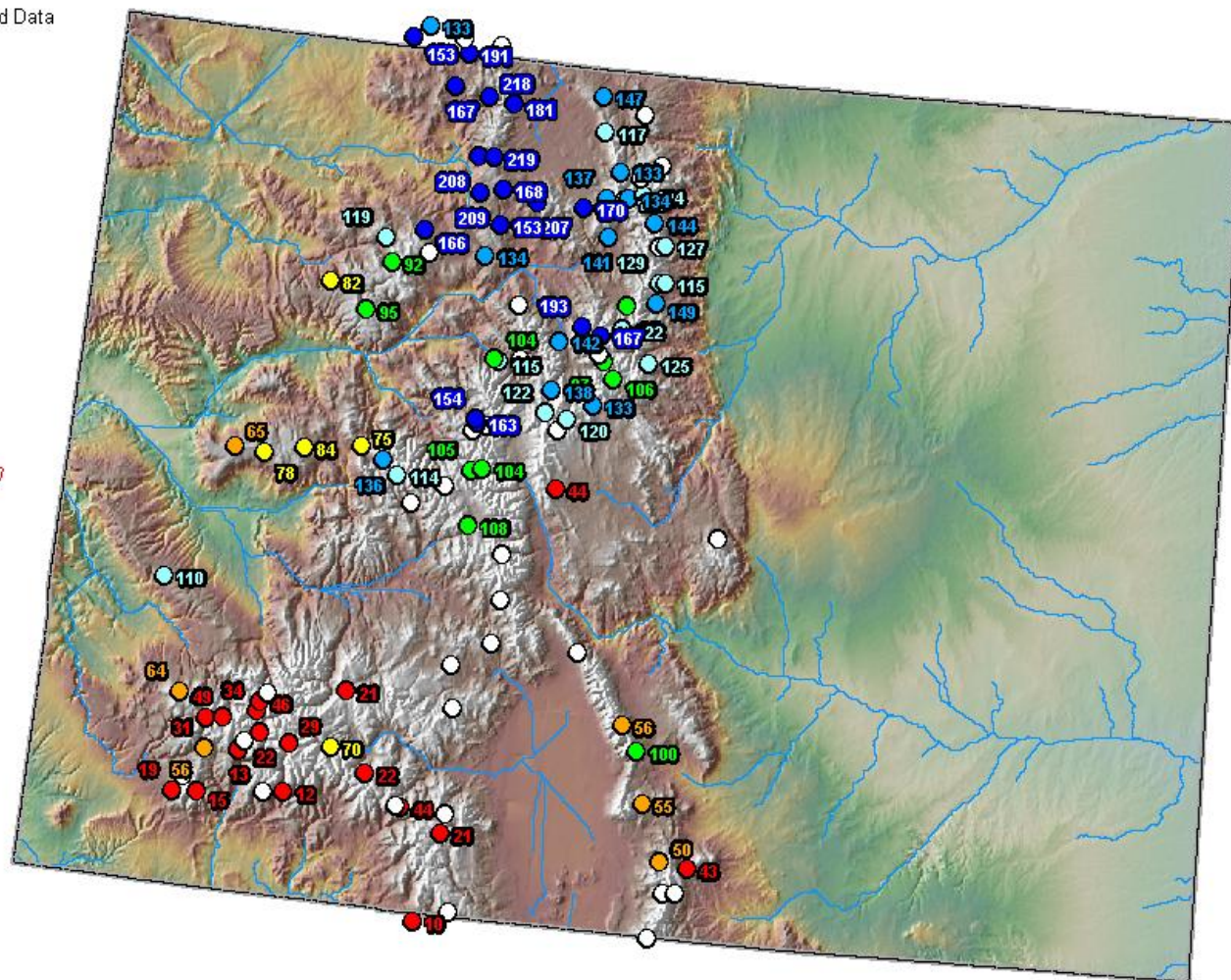


# Colorado SNOTEL Month-to-Date Precipitation

Percent of Average

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

*Provisional Data  
Subject to Revision*

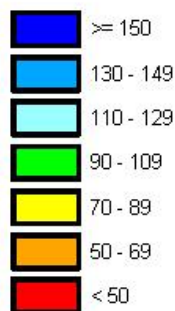


Current as of May 21, 2010

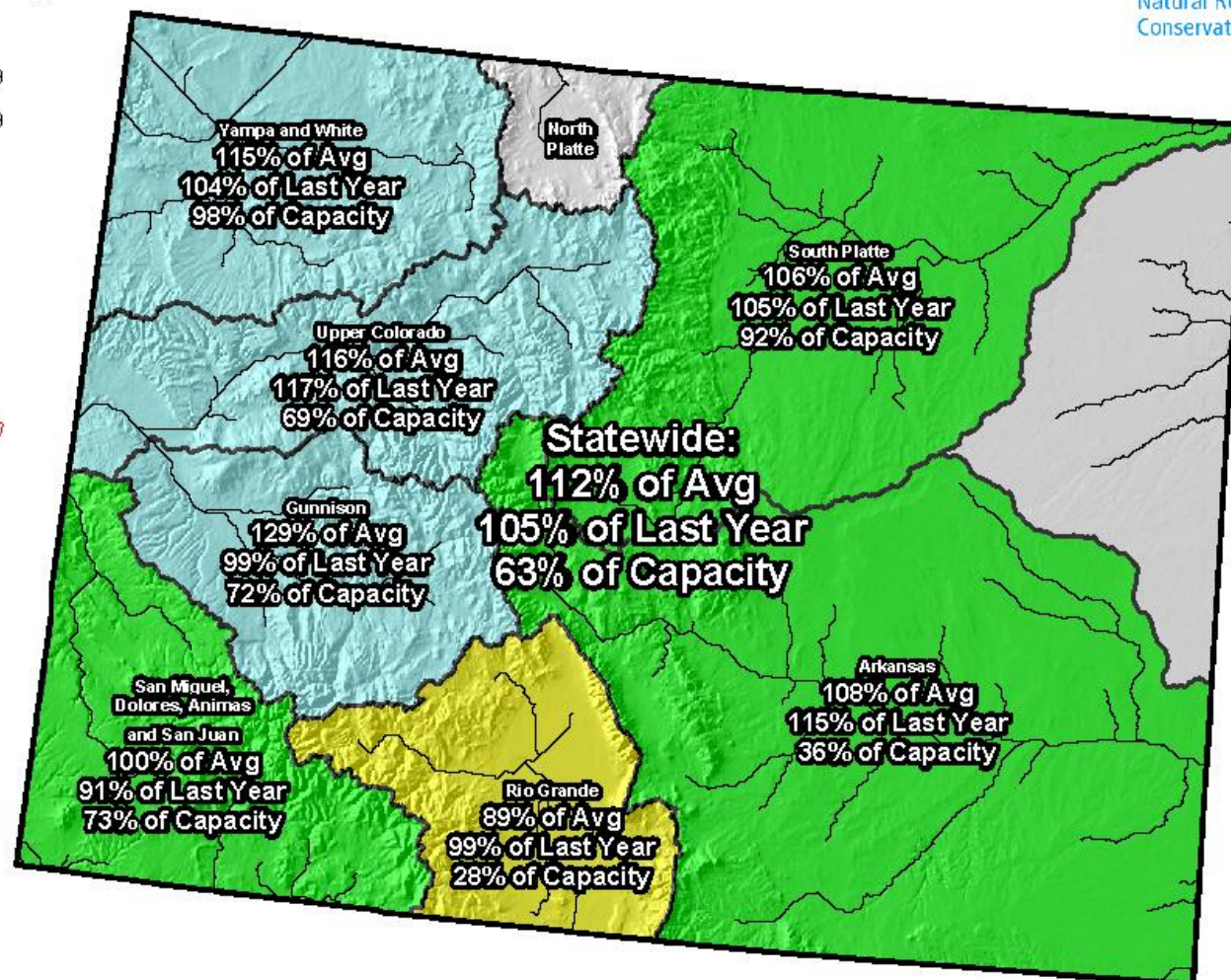


# Colorado Reservoir Storage Map

## Percent of Average



*Provisional Data  
Subject to Revision*

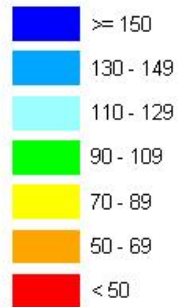


End of April 2010

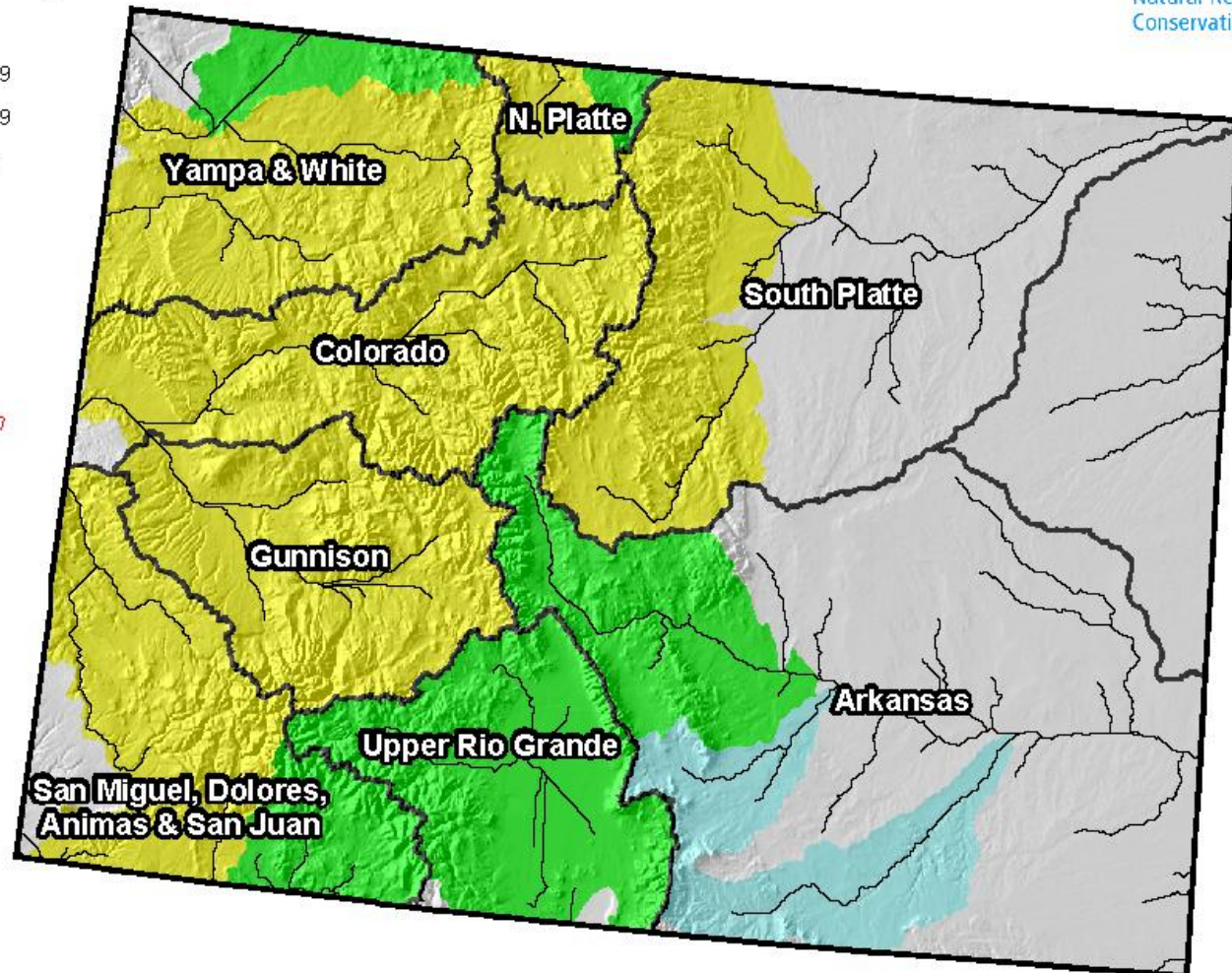
# Colorado Streamflow Forecast Map



## Percent of Average



*Provisional Data  
Subject to Revision*



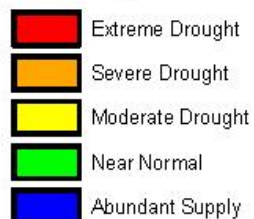
Current as of May 1, 2010



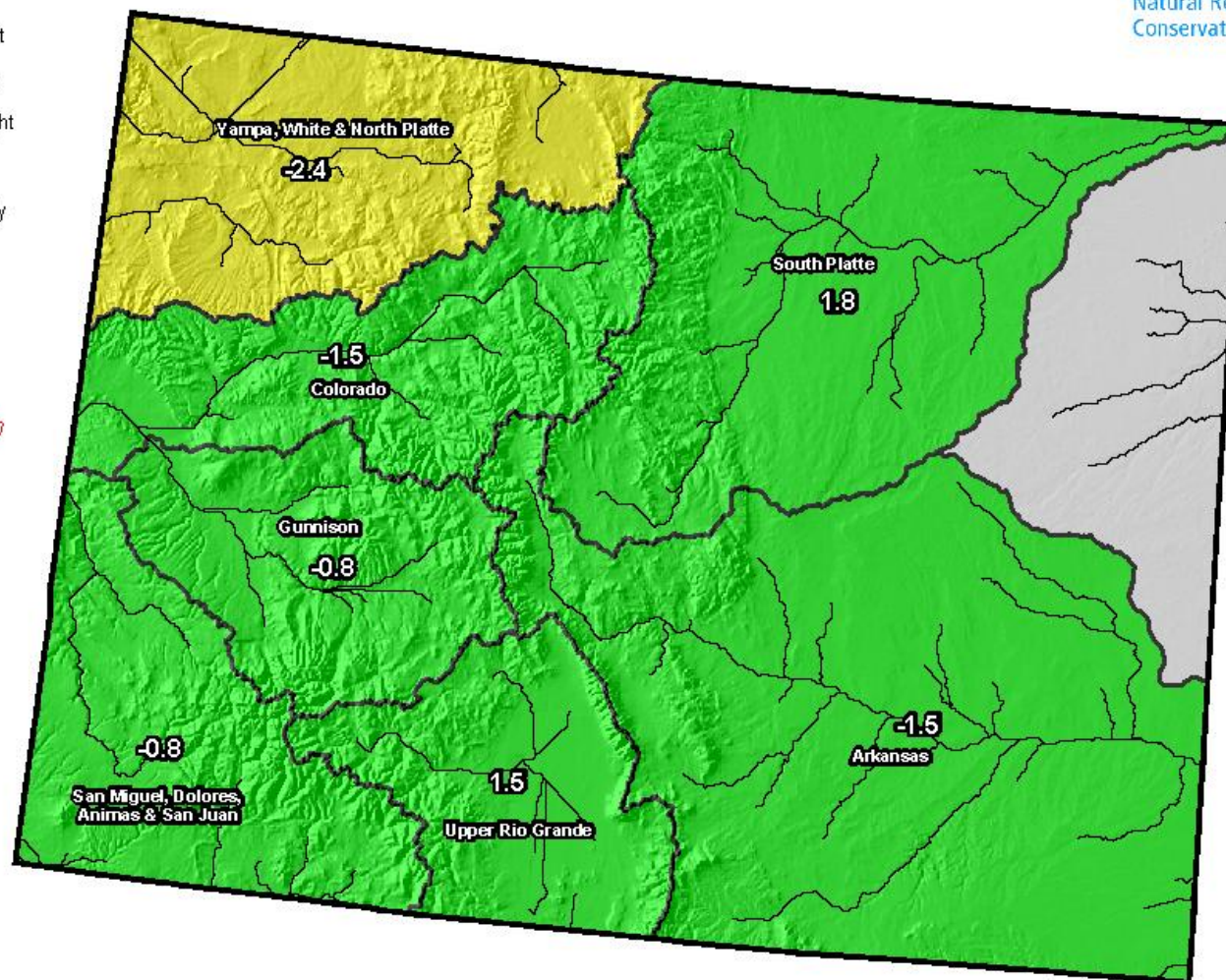
# Colorado Surface Water Supply Index (SWSI) Map



## Legend



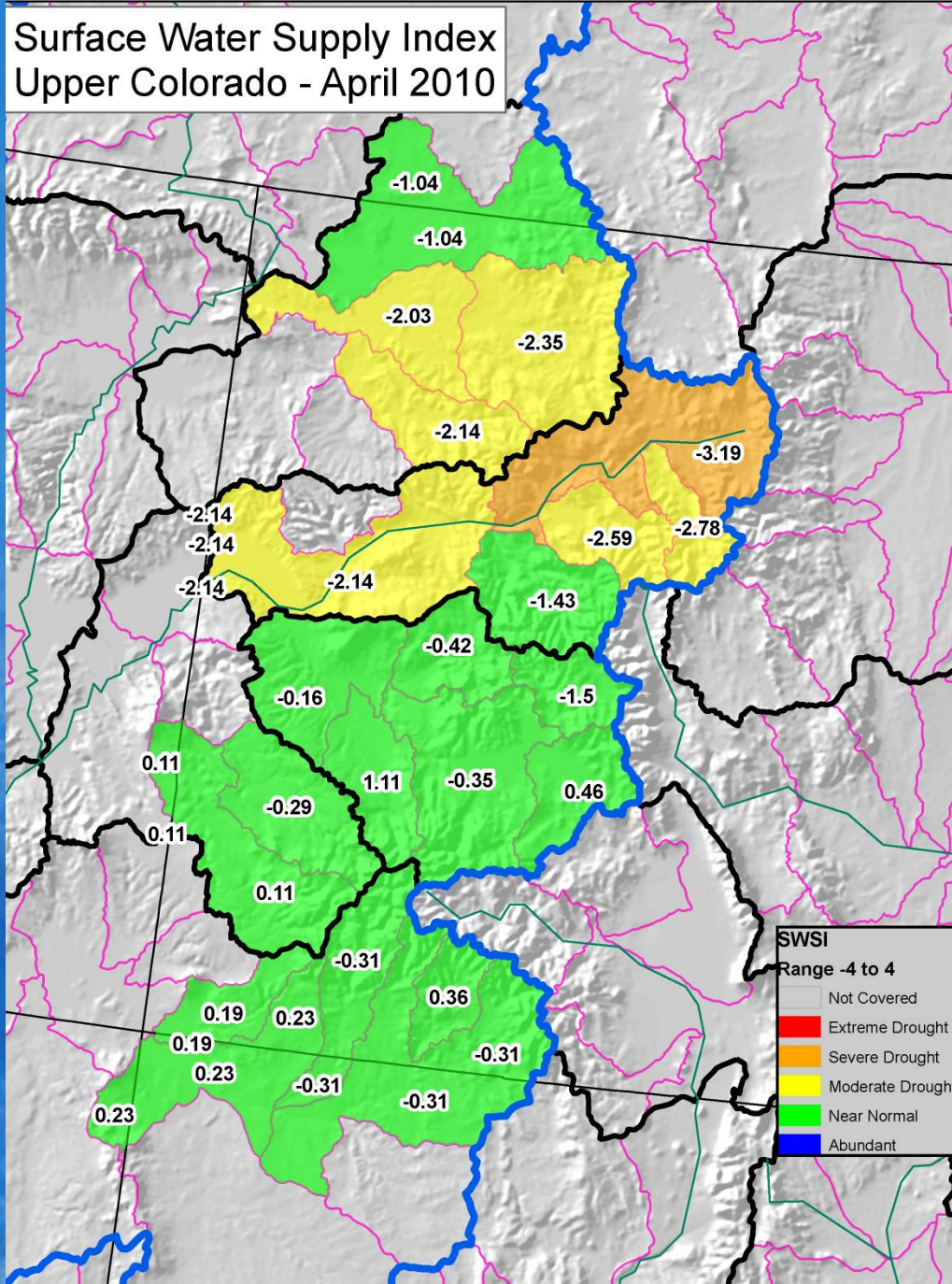
*Provisional Data  
Subject to Revision*



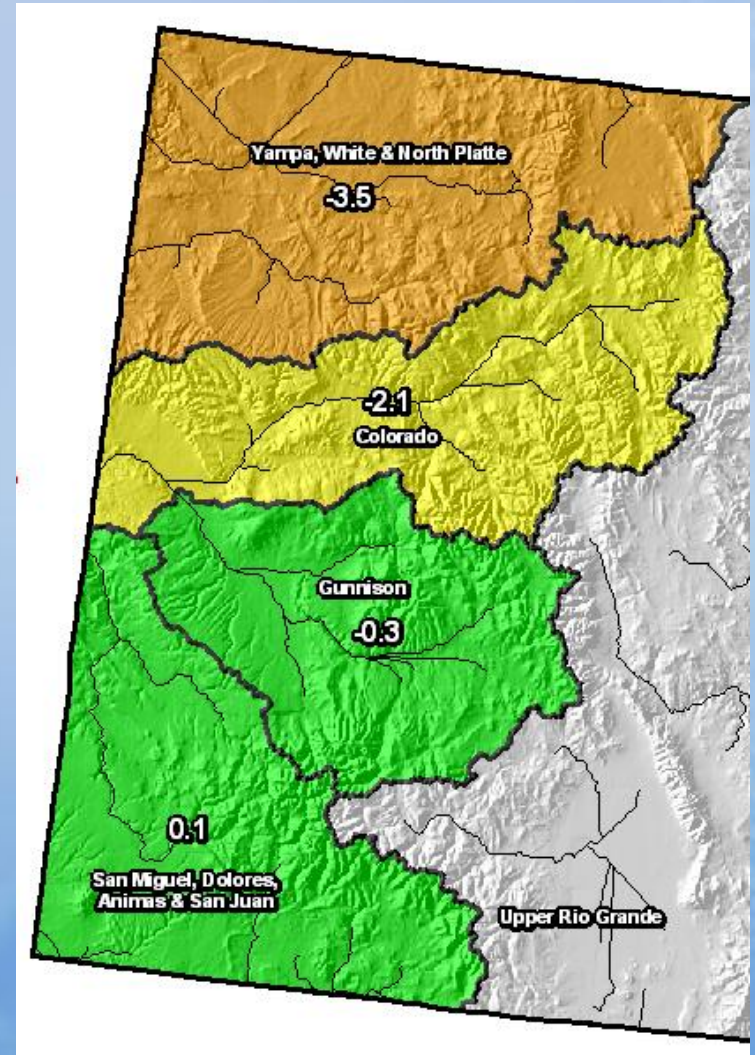
Current as of May 1, 2010



# Surface Water Supply Index Upper Colorado - April 2010

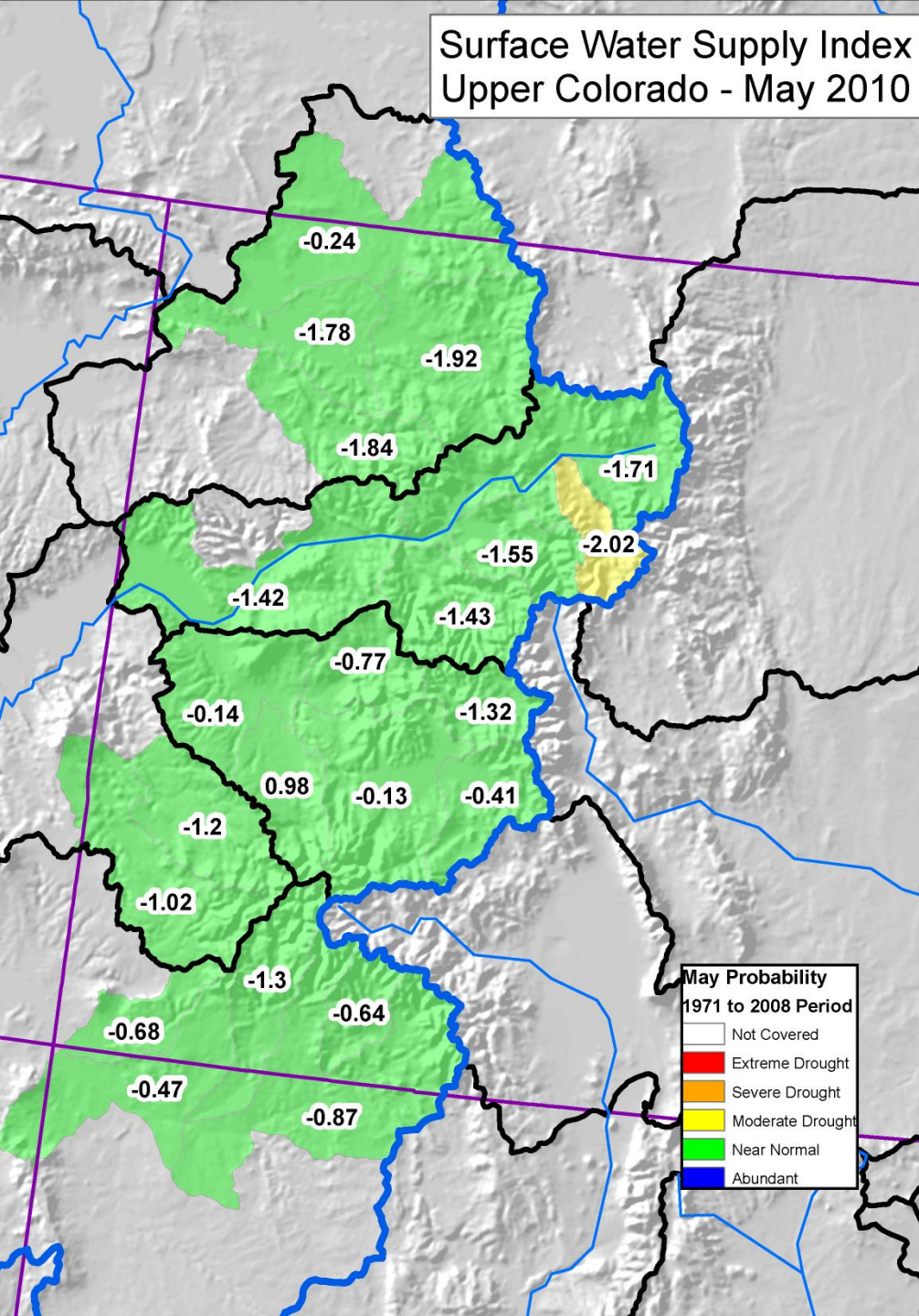


# Current Colorado SWSI April 2010





Surface Water Supply Index  
Upper Colorado - May 2010



Current Colorado SWSI  
May 2010

