

# NRCS – Snow Survey & Water Supply Forecasting

Mike Gillespie

Colorado Flood Task Force Meeting  
March 12, 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.

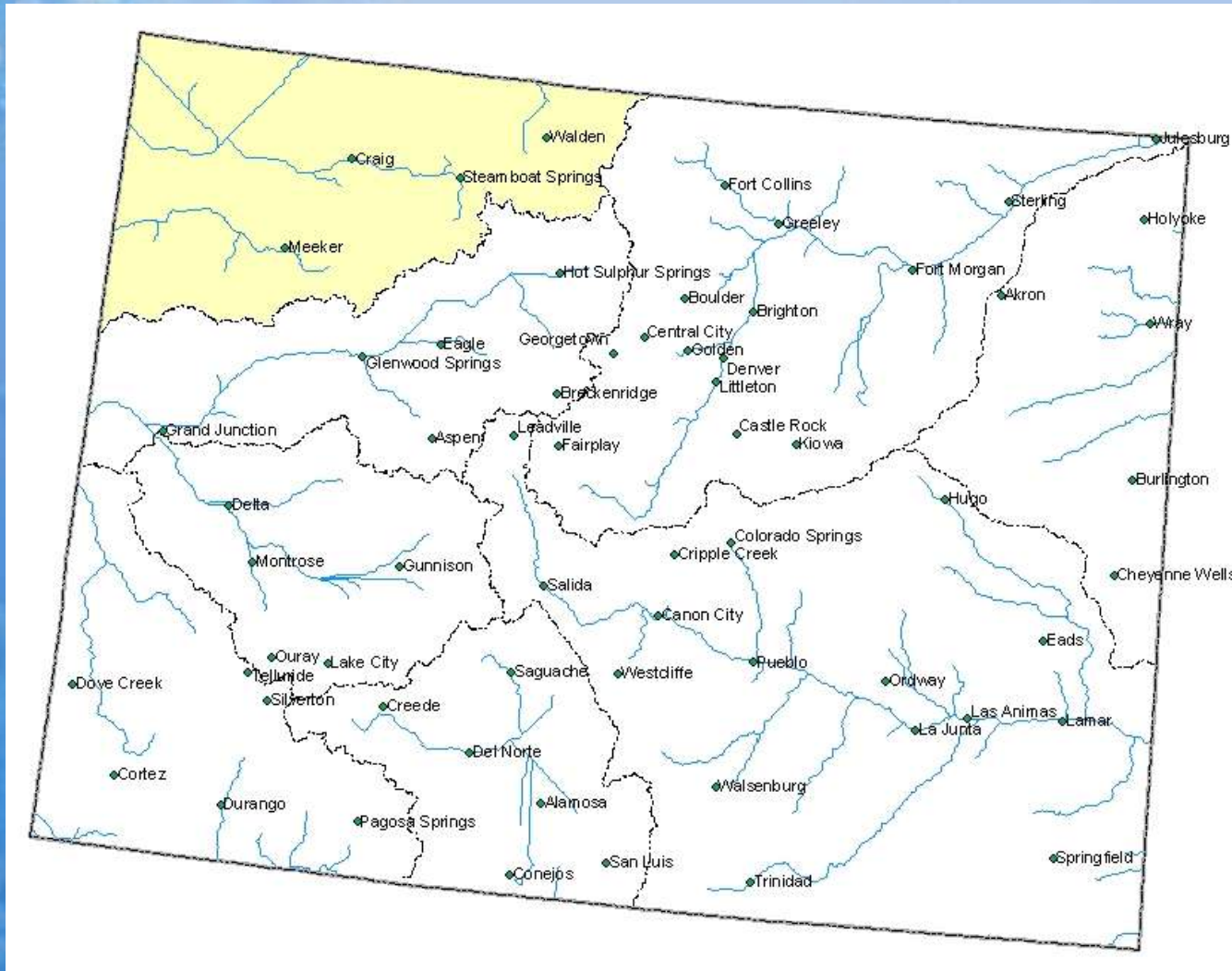
November – Below average precipitation statewide. Minimal gains in mountain snowpack.

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 – Holding our own (just barely)!

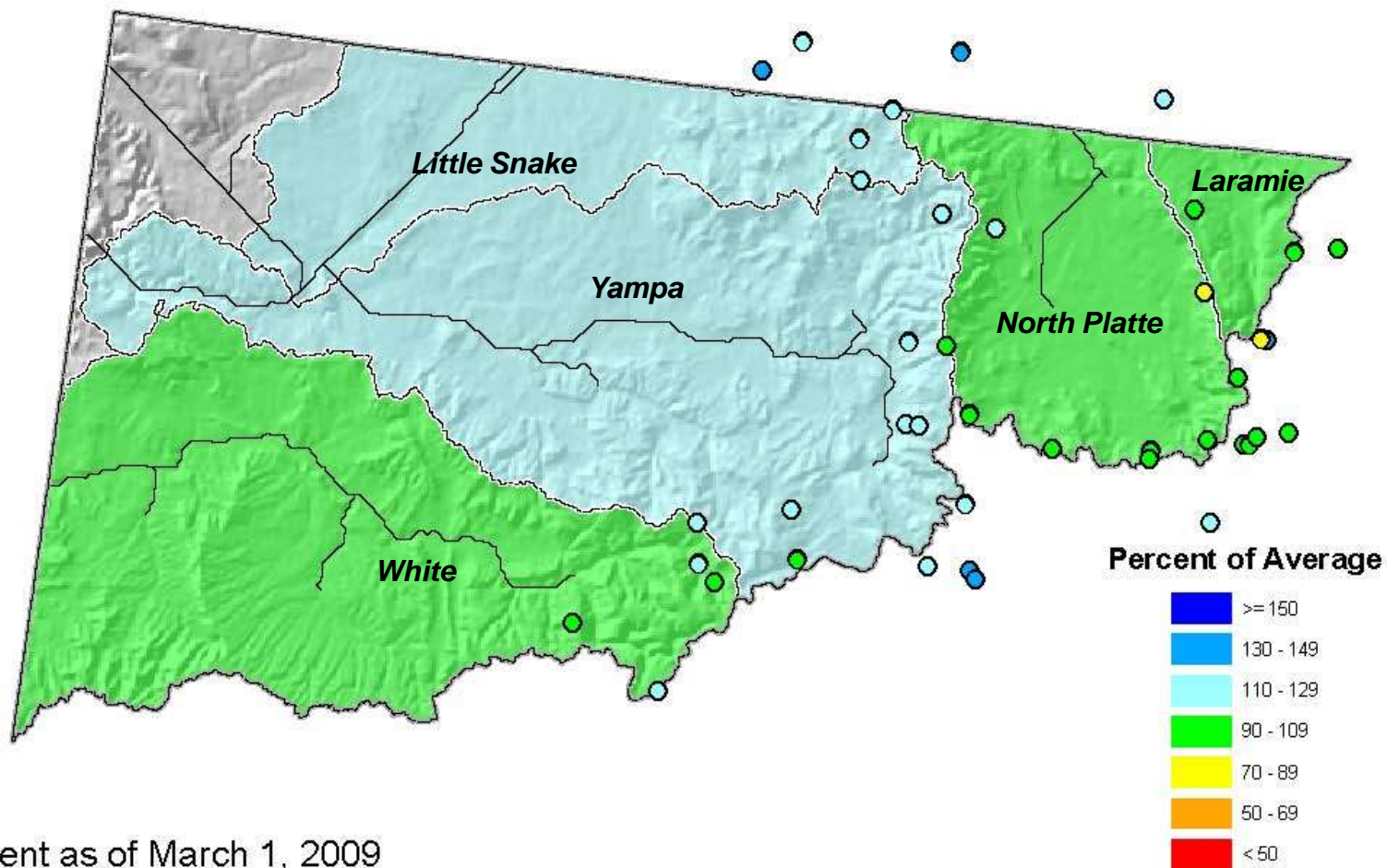
# Yampa, White & North Platte River Basins Summary





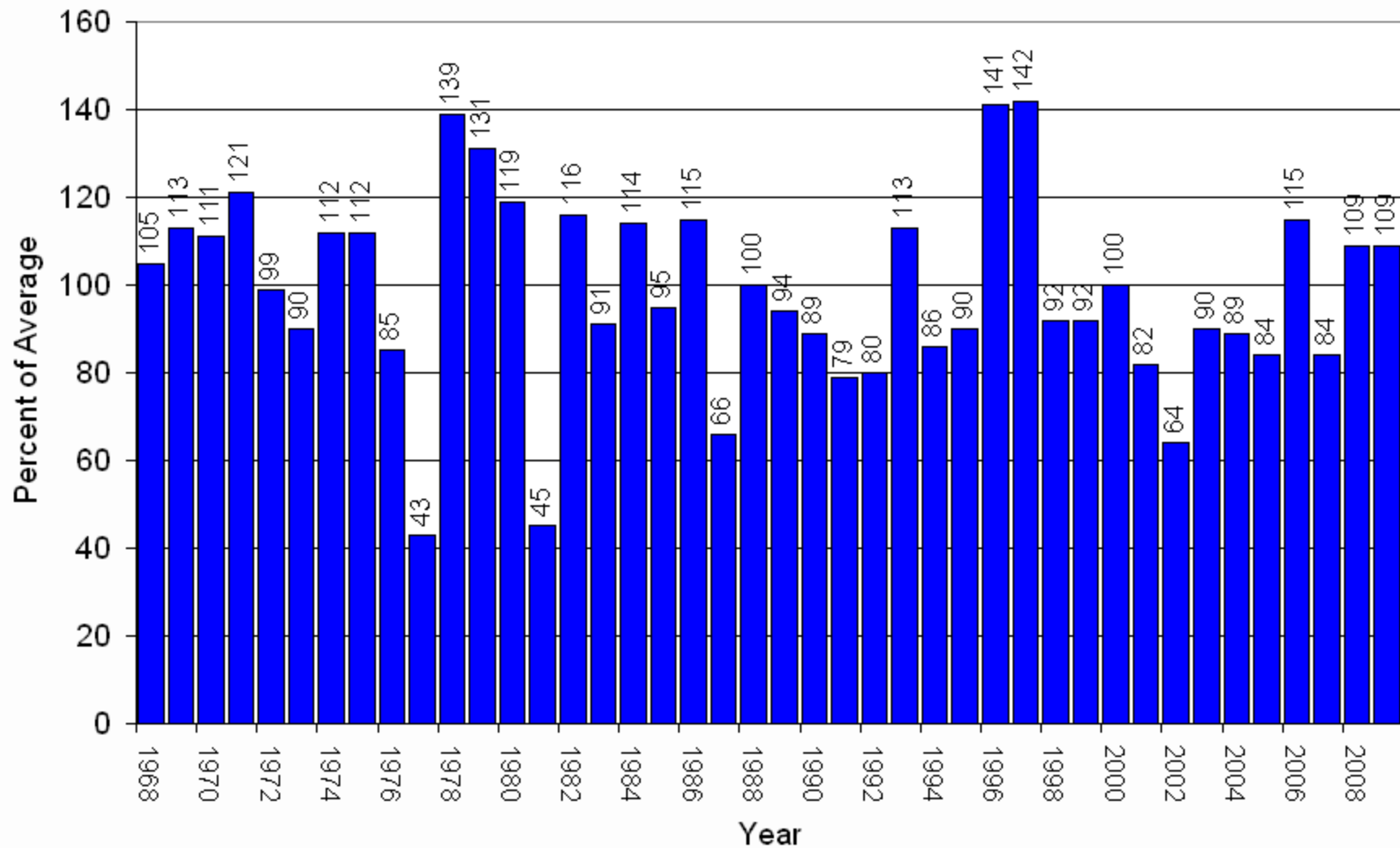
# Yampa, White and North Platte River Basins Snowpack Map

*Provisional Data  
Subject to Revision*



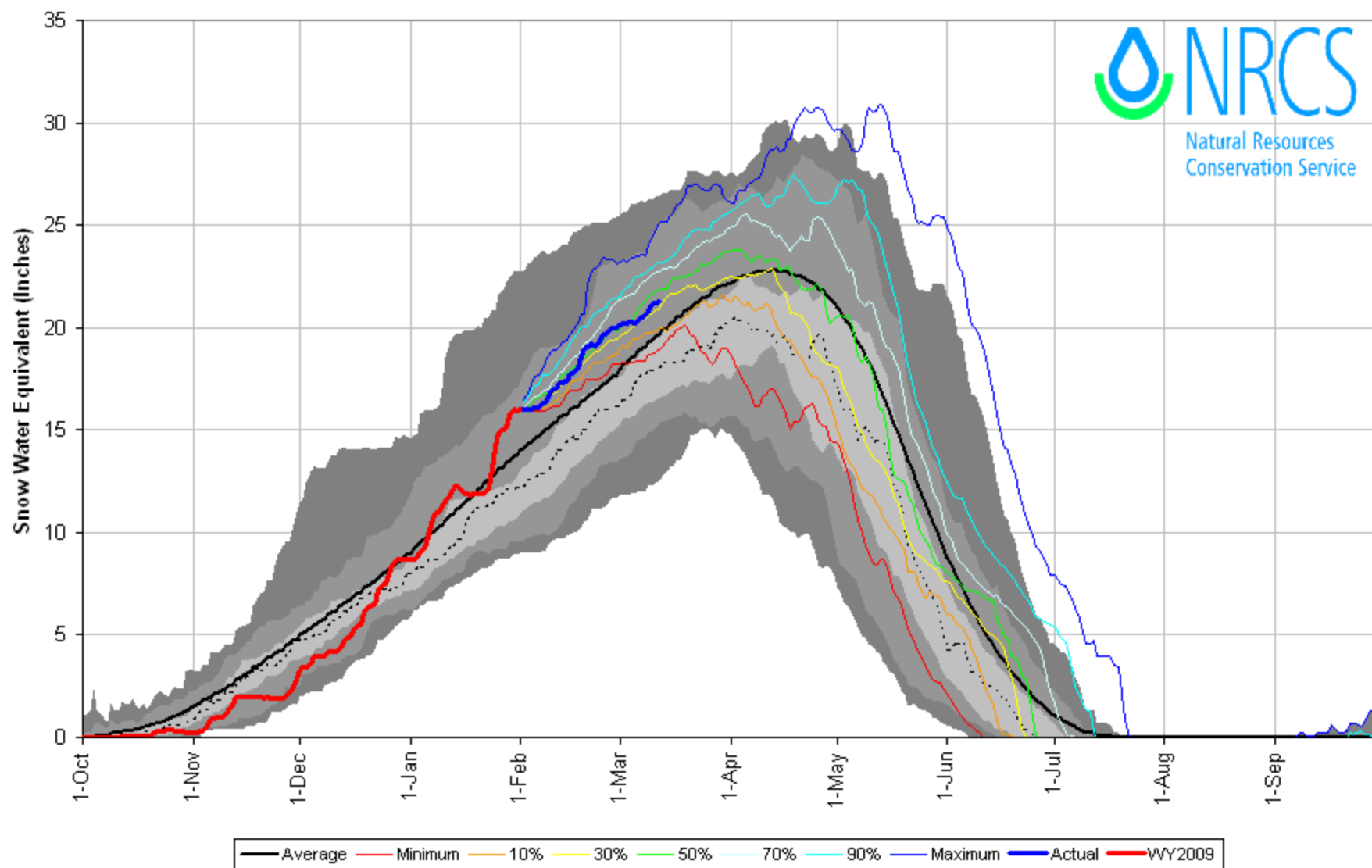
Current as of March 1, 2009

# March 1 Total Yampa & White River Basins Snowpack



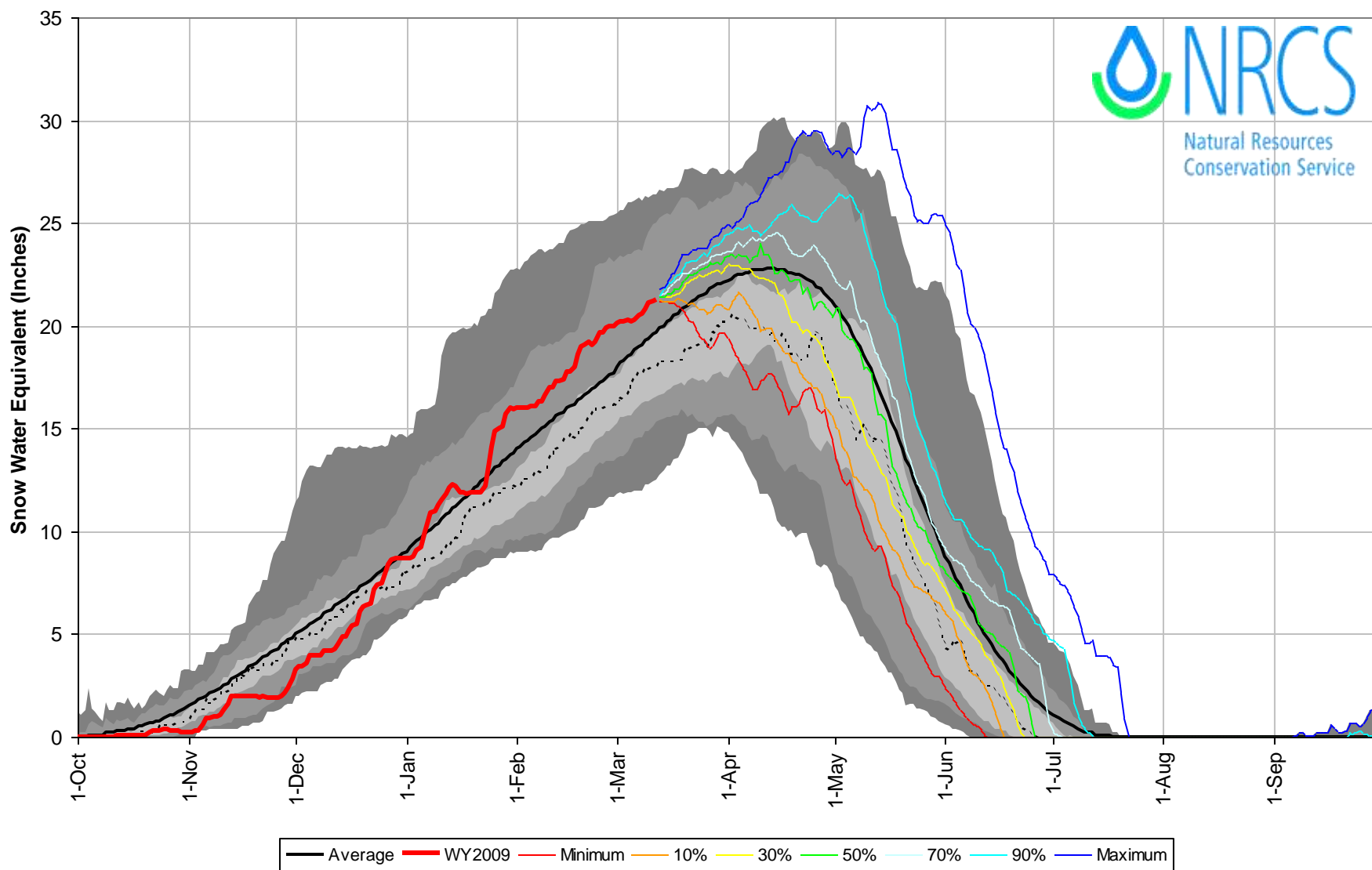
## Yampa and White River Basins with Non-Exceedence Projections

*Based on Provisional SNOTEL Data as of Mar 12, 2009*



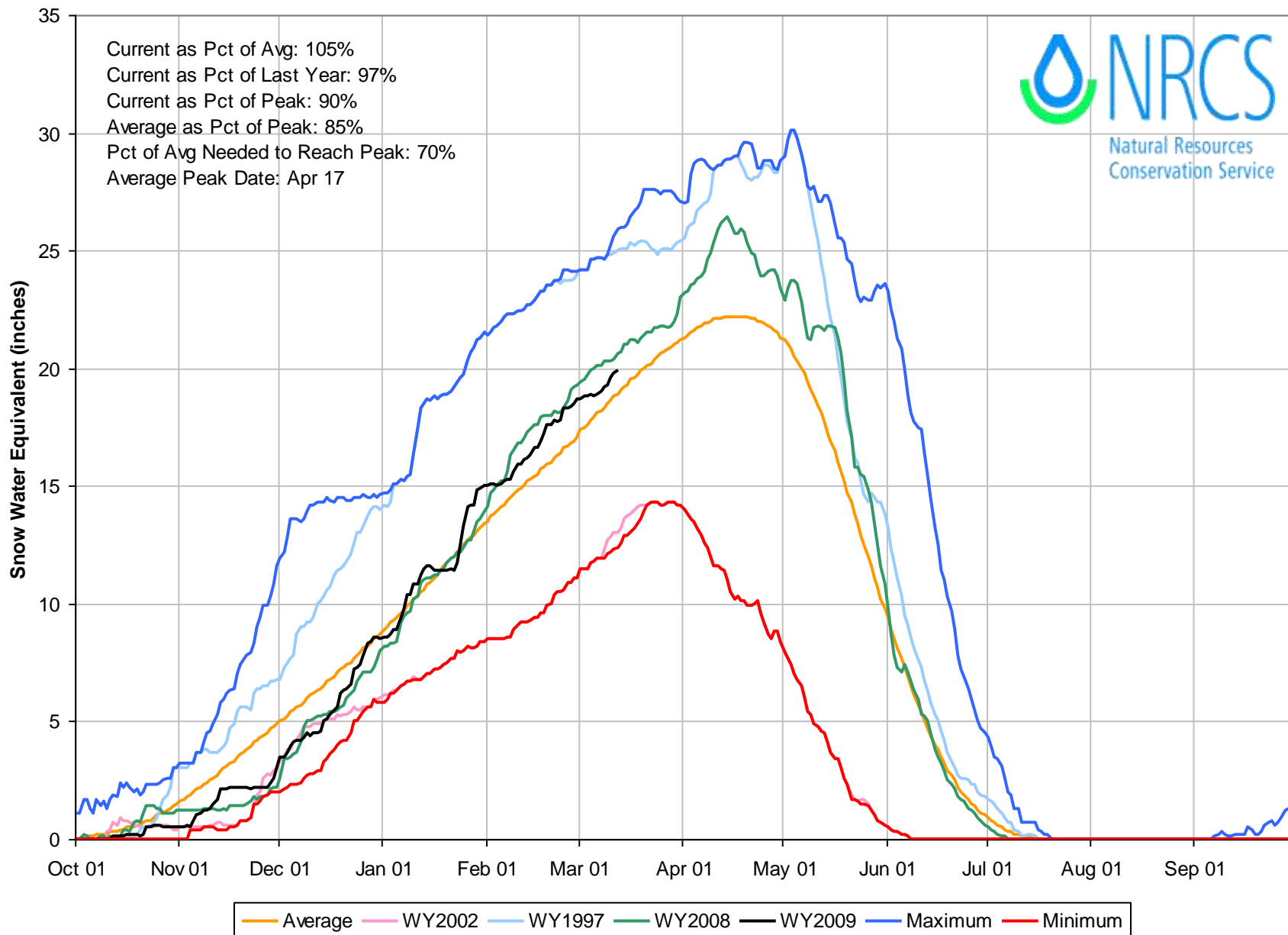
## Yampa and White River Basins with Non-Exceedence Projections

*Based on Provisional SNOTEL Data as of Mar 12, 2009*



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

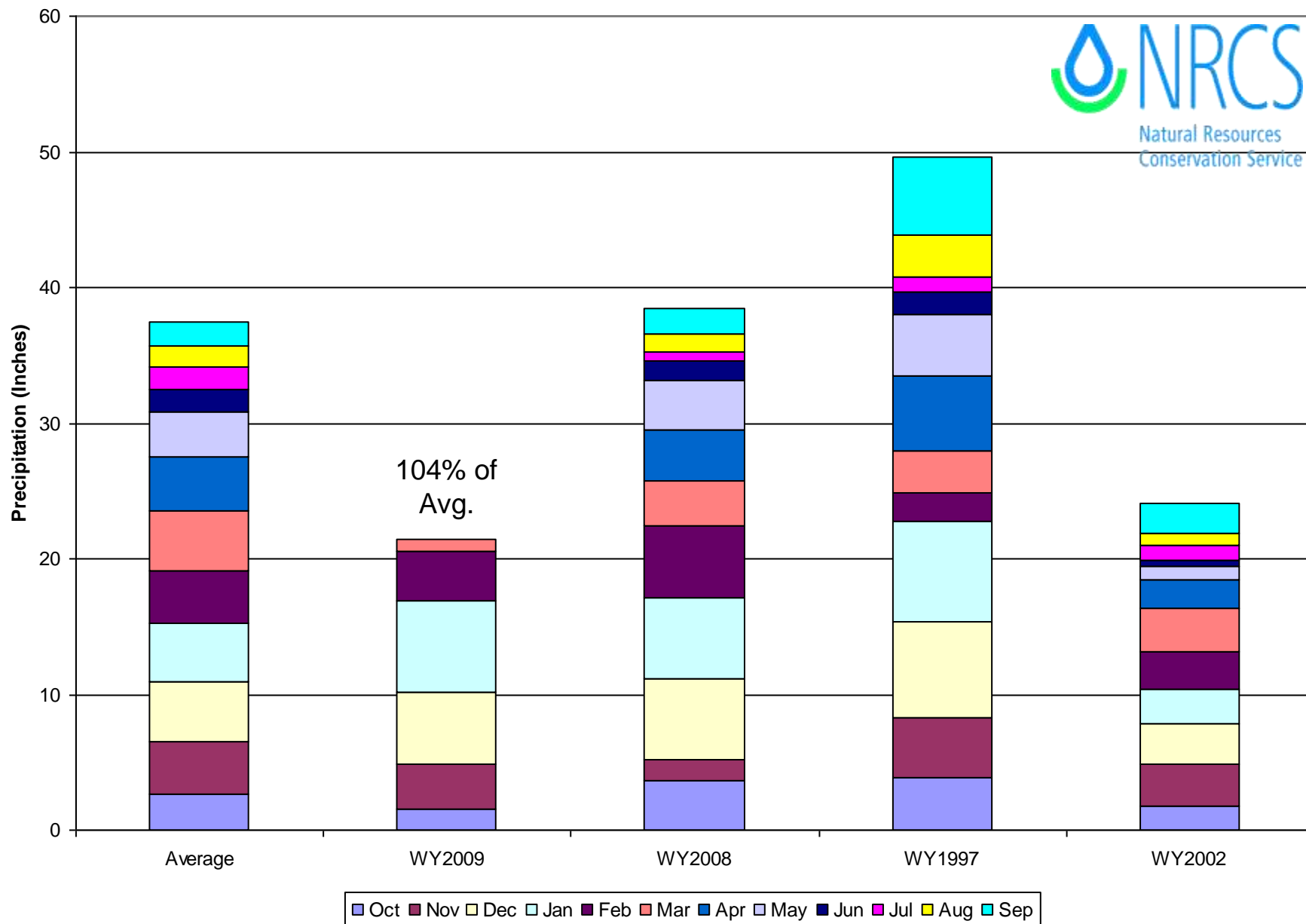
*Based on Provisional SNOTEL data as of Mar 12, 2009*





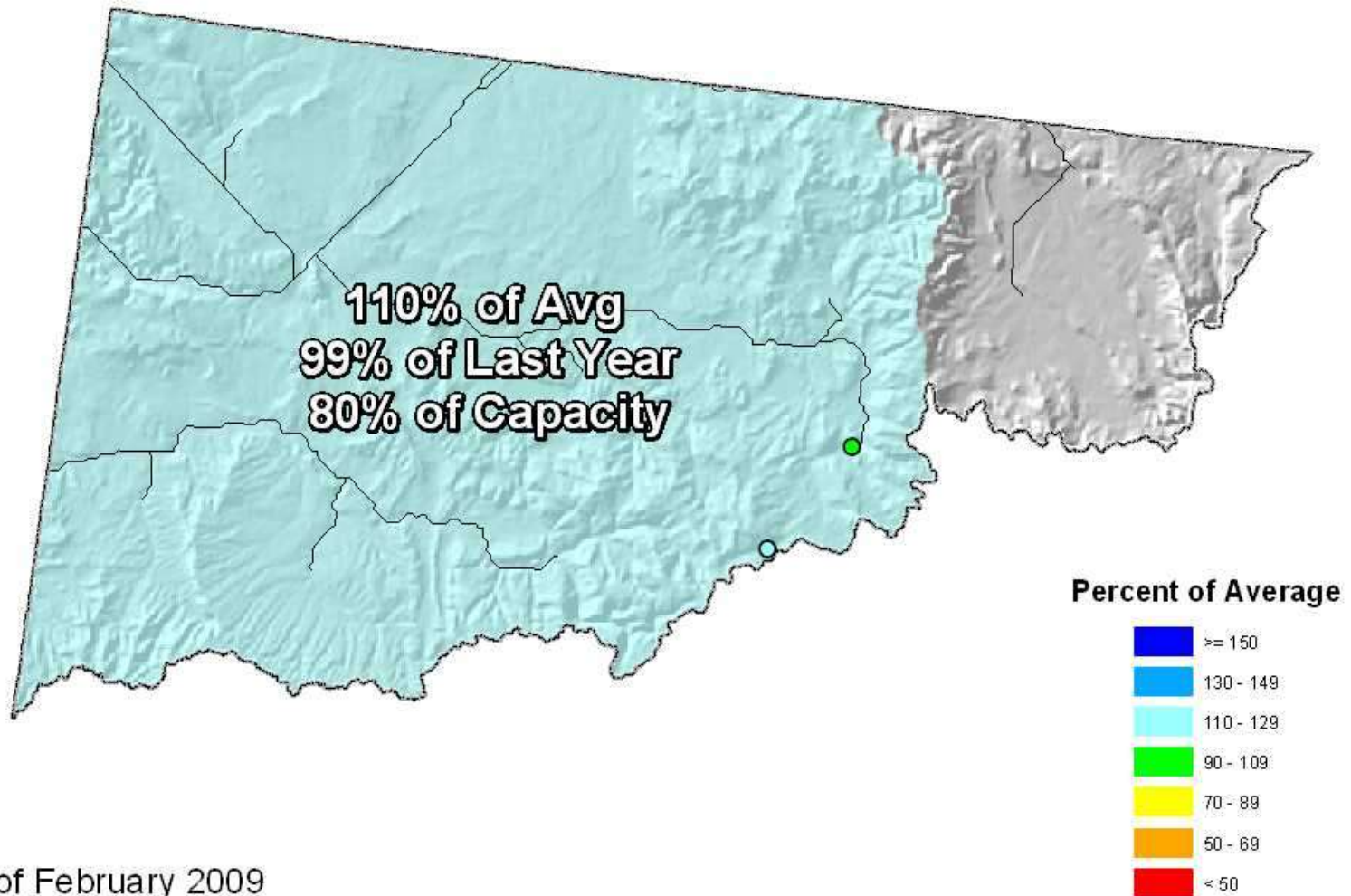
# Yampa and White River Basins High/Low Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of Mar 12, 2009*



# Yampa & White River Basins Reservoir Storage Map

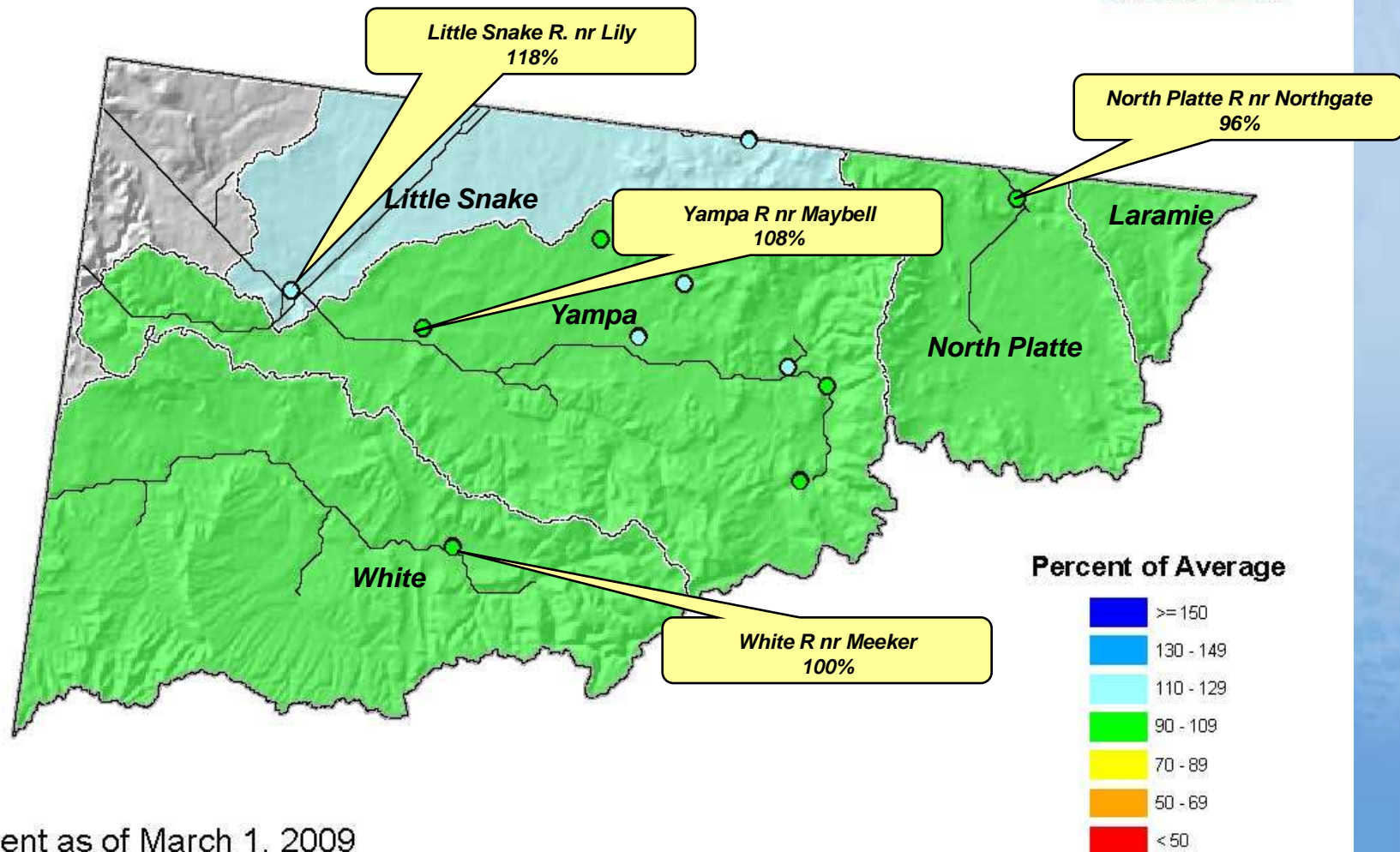
*Provisional Data  
Subject to Revision*



End of February 2009

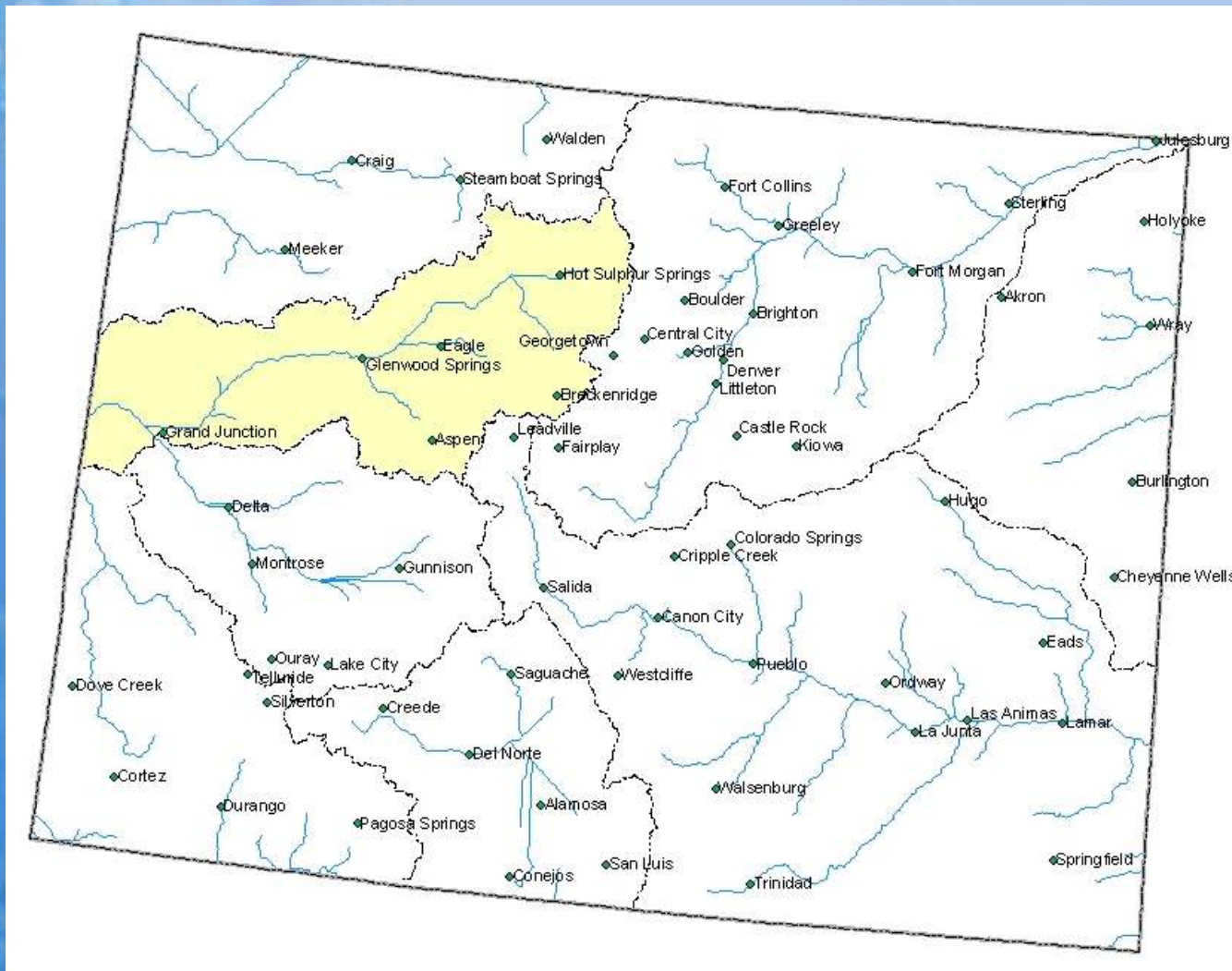
# Yampa, White and North Platte River Basins Streamflow Map

*Provisional Data  
Subject to Revision*



Current as of March 1, 2009

# Colorado River Basin Summary



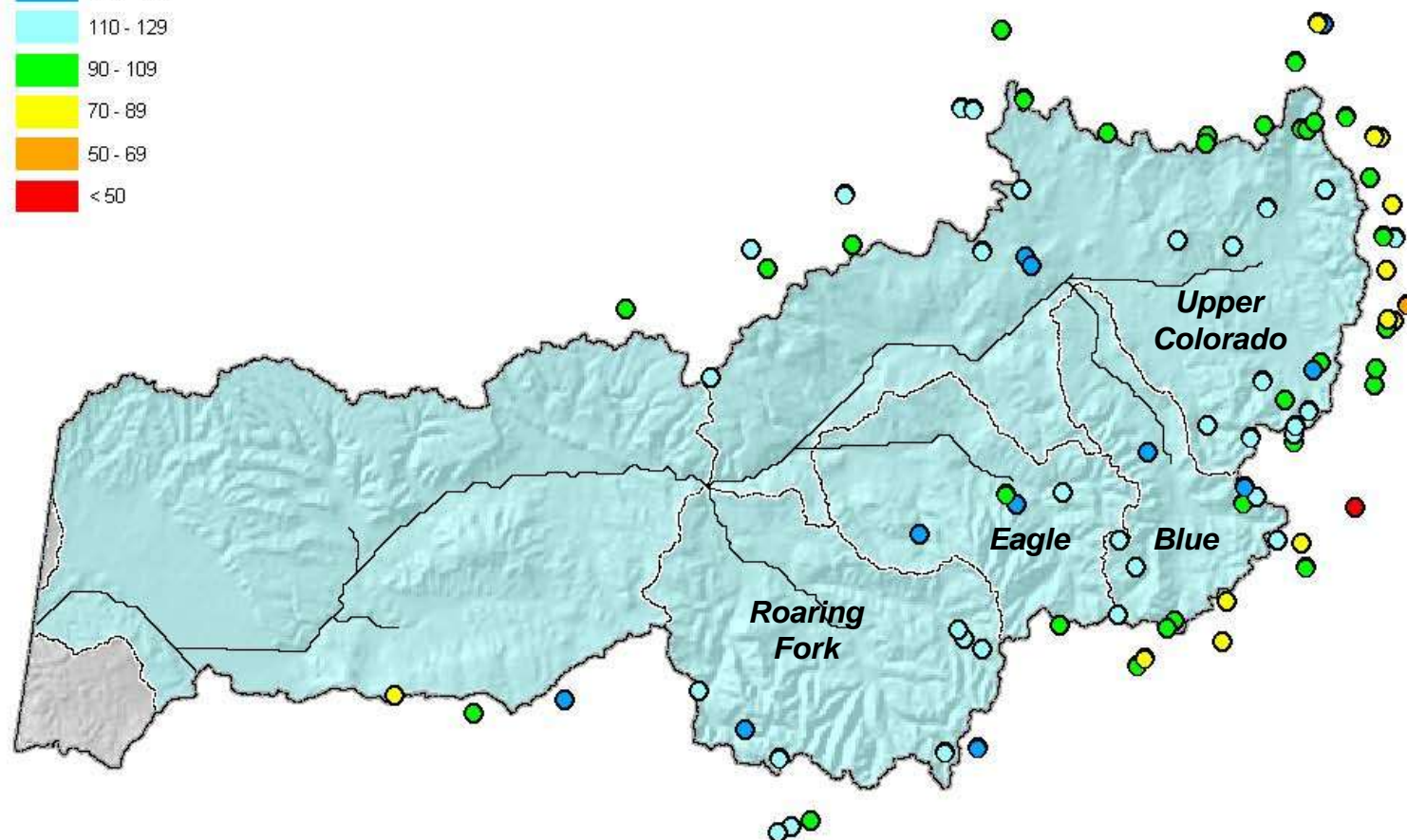


# Colorado River Basin Snowpack Map

Percent of Average

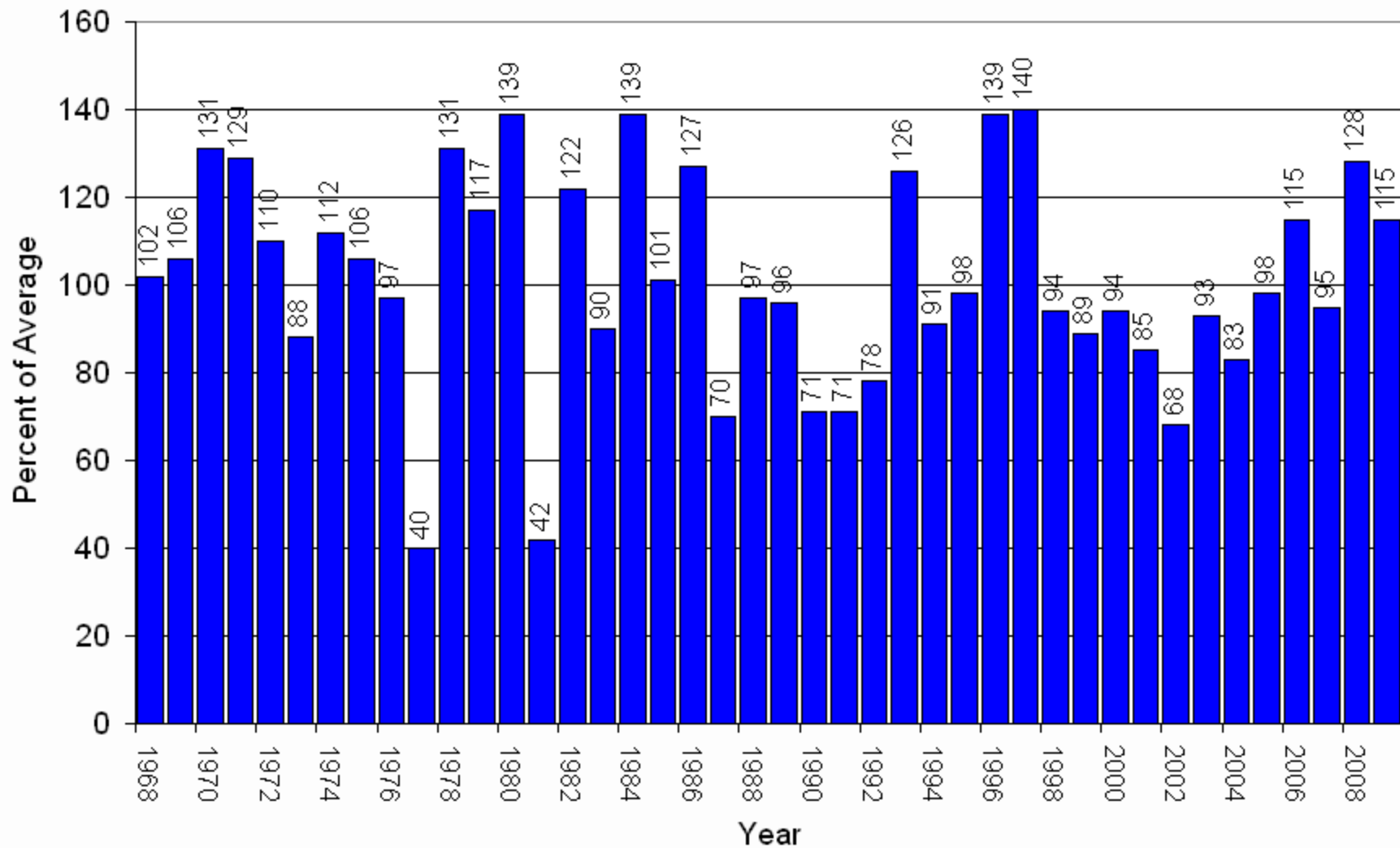


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Subject to Revision*



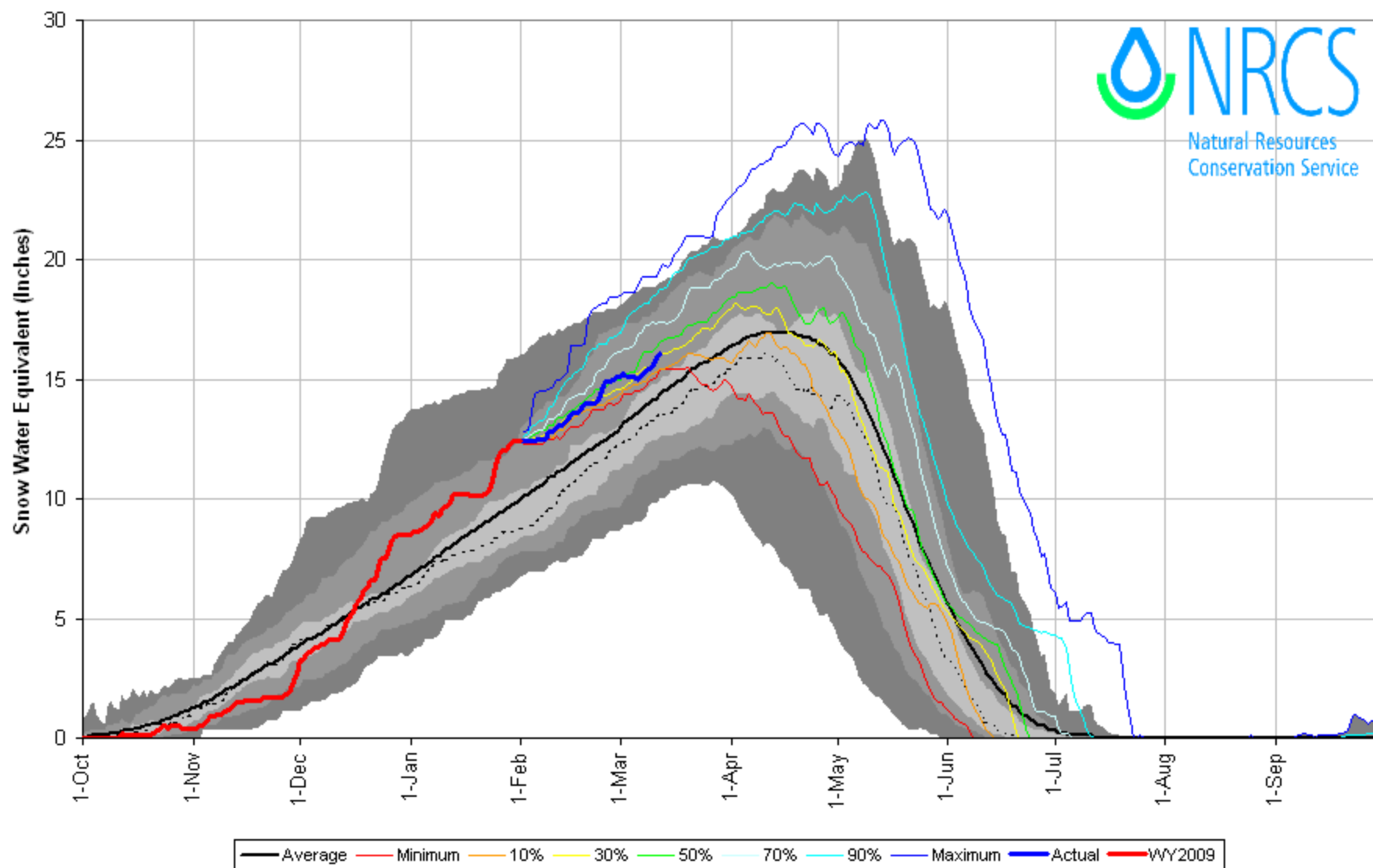
Current as of March 1, 2009

# March 1 Total Colorado River Basin Snowpack



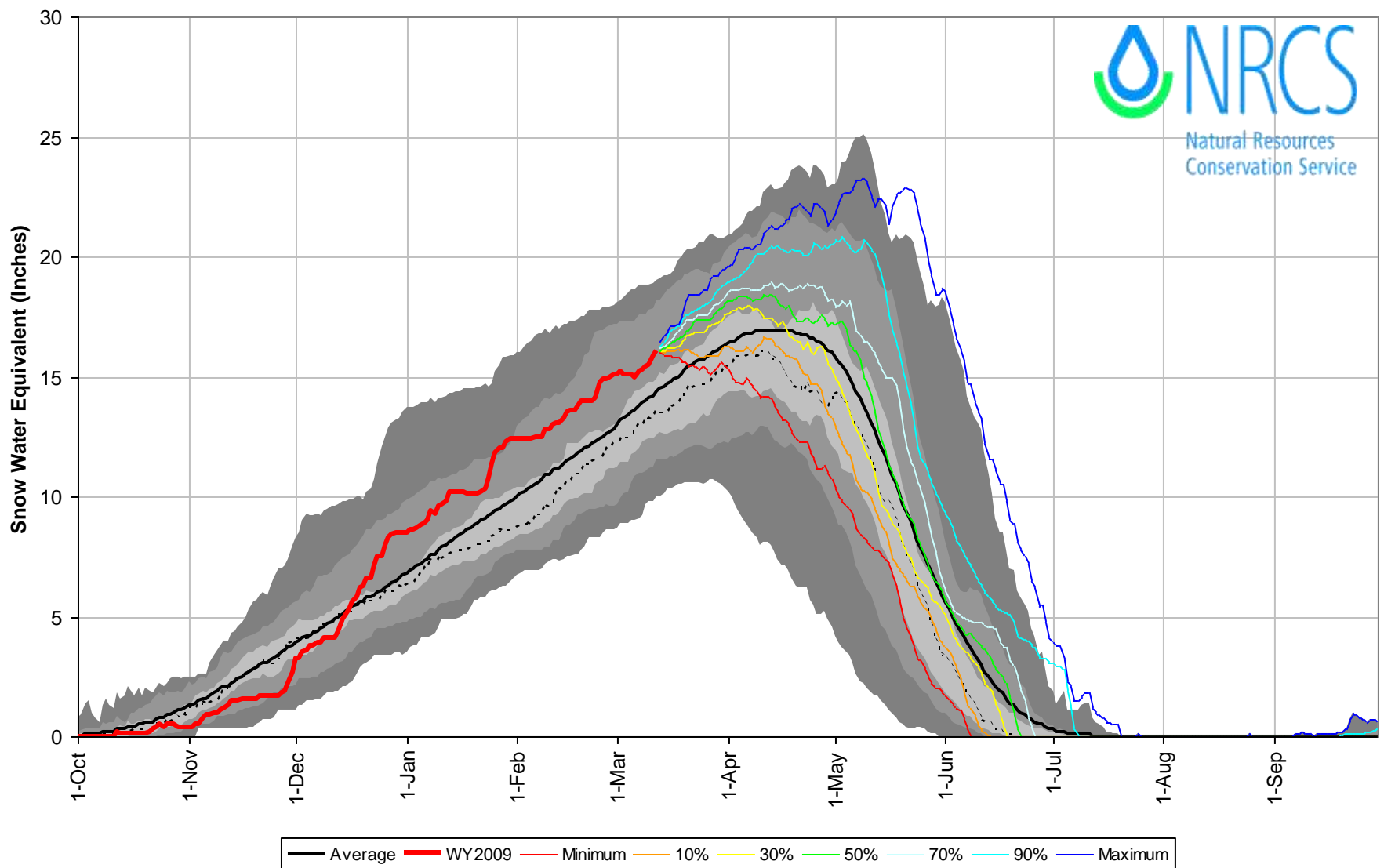
## Colorado River Basin with Non-Exceedence Projections

*Based on Provisional SNOTEL Data as of Mar 12, 2009*



## Colorado River Basin with Non-Exceedence Projections

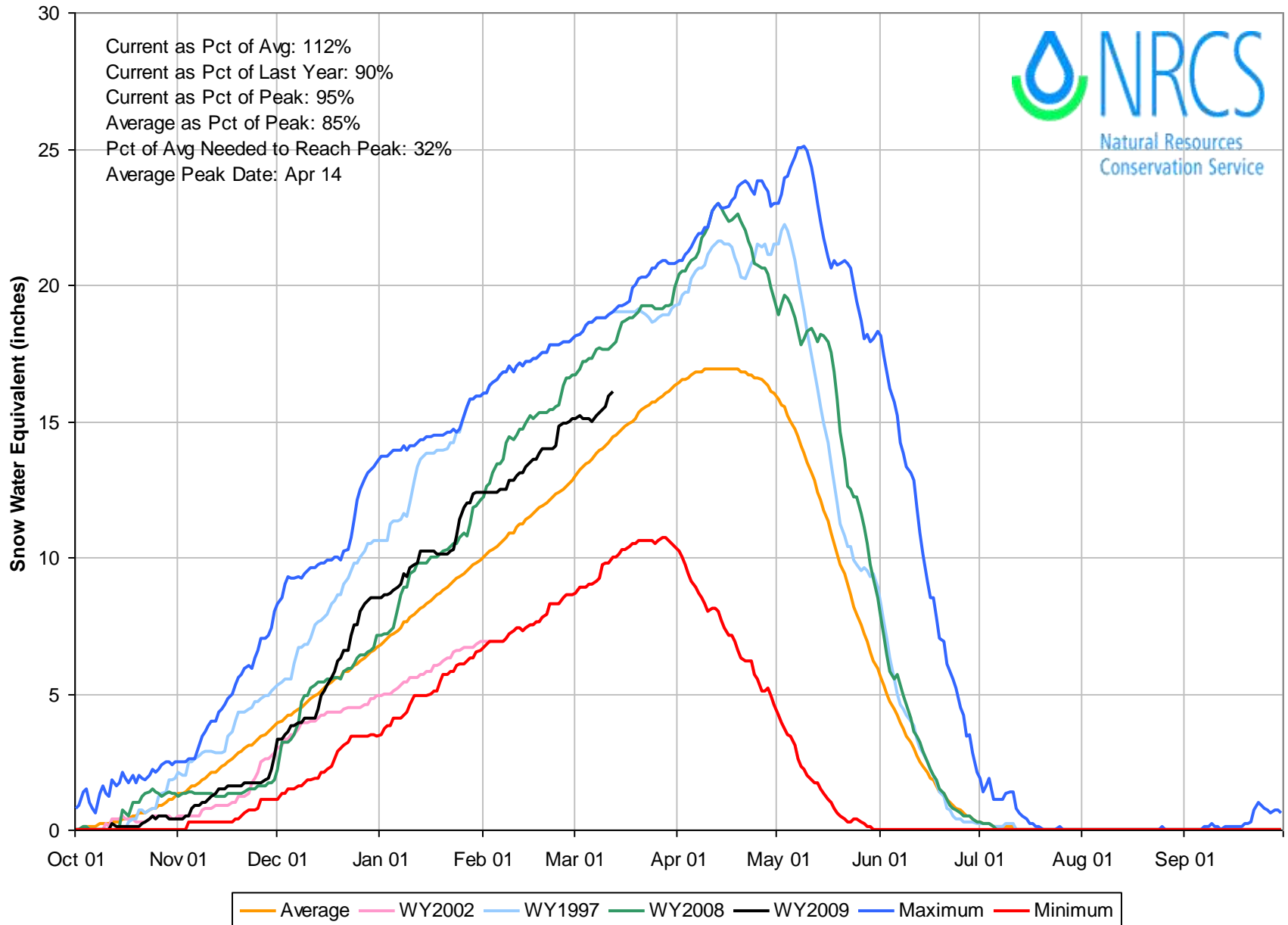
*Based on Provisional SNOTEL Data as of Mar 12, 2009*





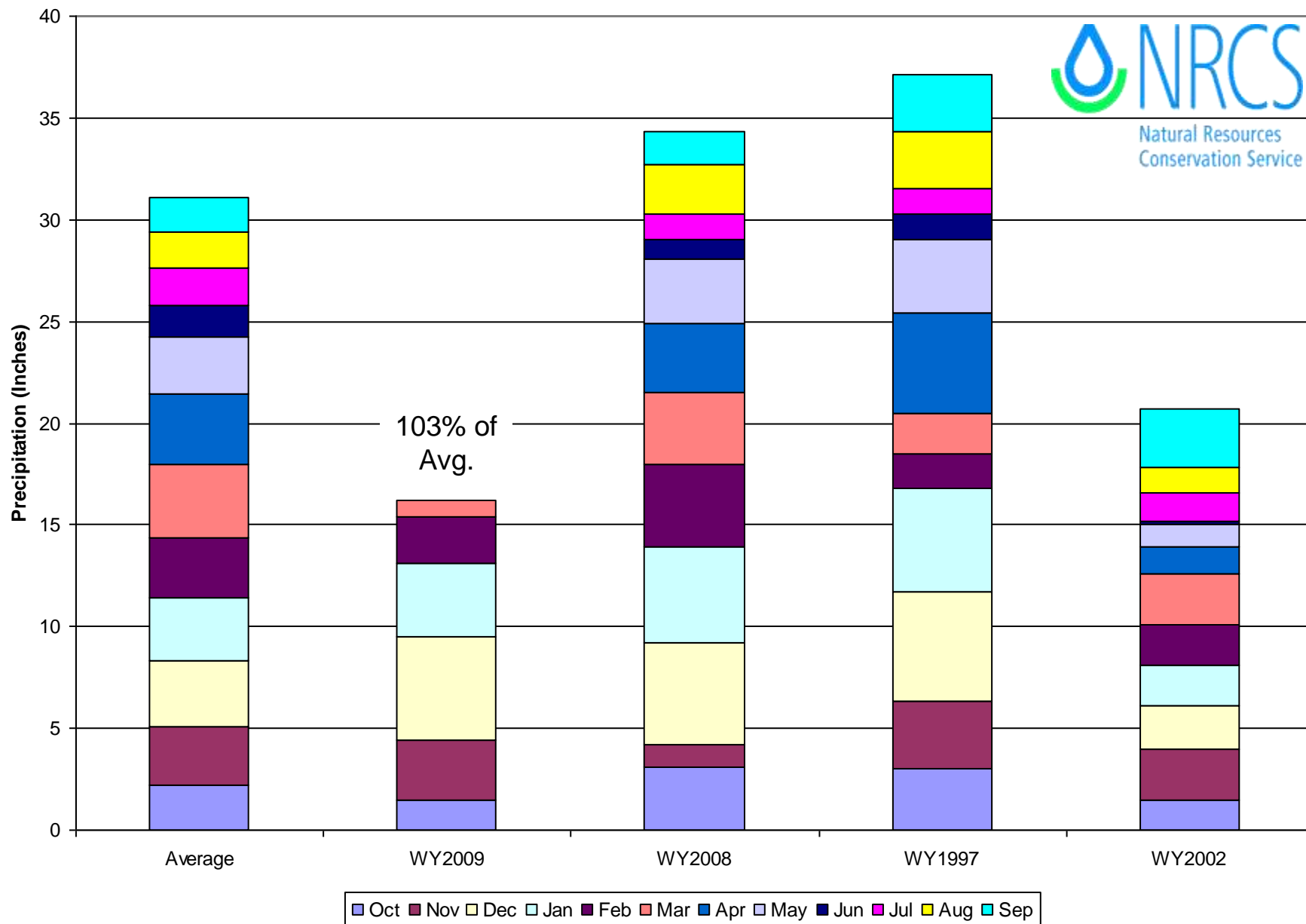
## Upper Colorado River Basin High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of Mar 12, 2009*



# Upper Colorado River Basin High/Low Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of Mar 12, 2009*

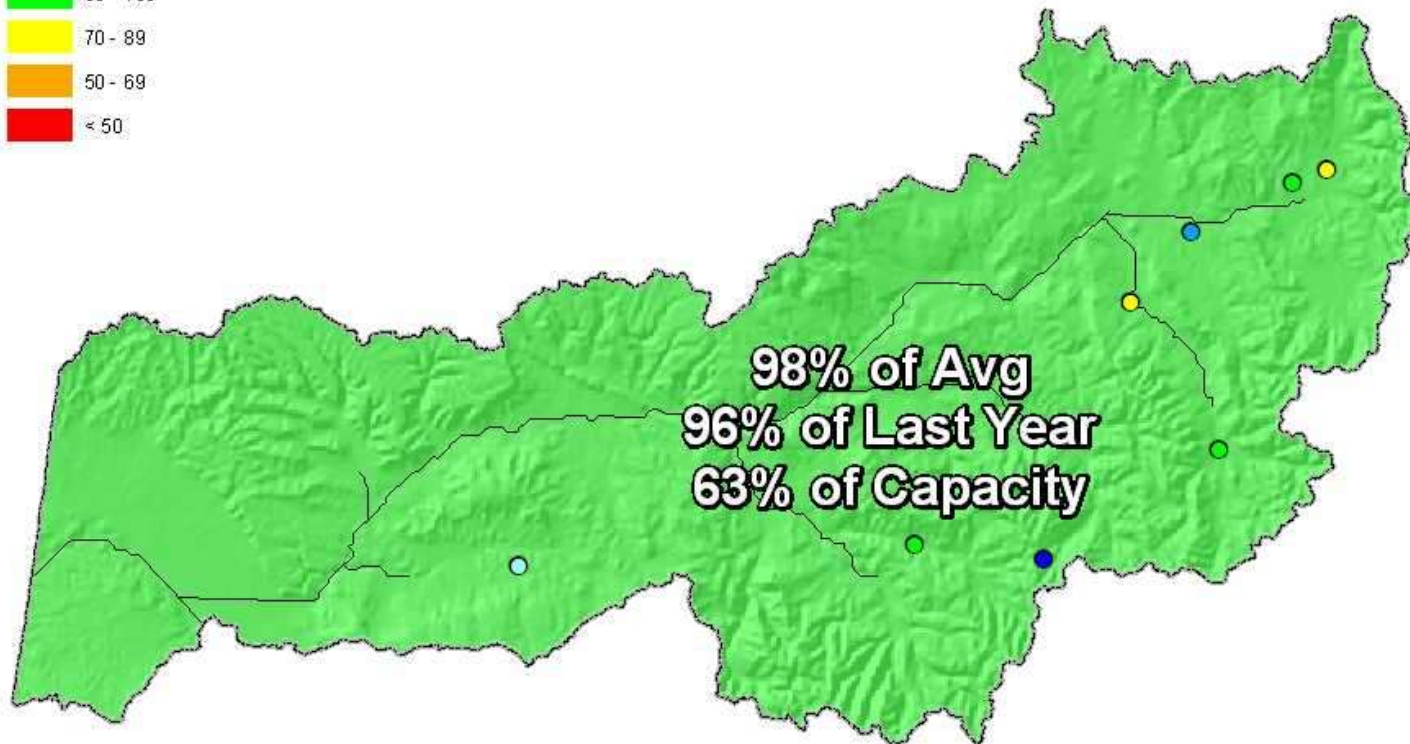


# Colorado River Basin Reservoir Storage Map

## Percent of Average



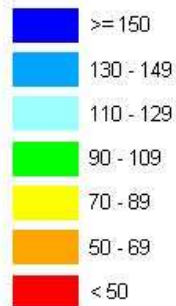
*Provisional Data  
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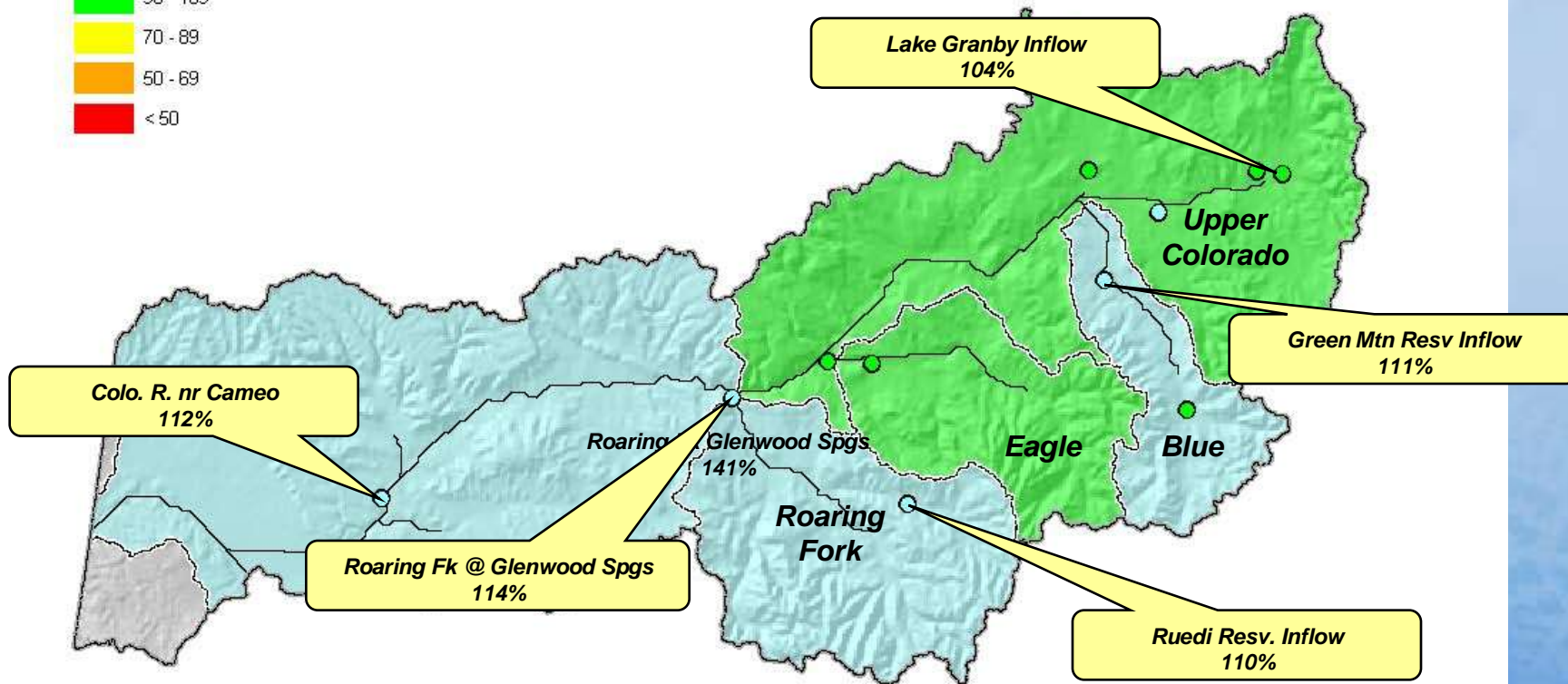
End of February 2009

# Colorado River Basin Streamflow Forecast Map

Percent of Average



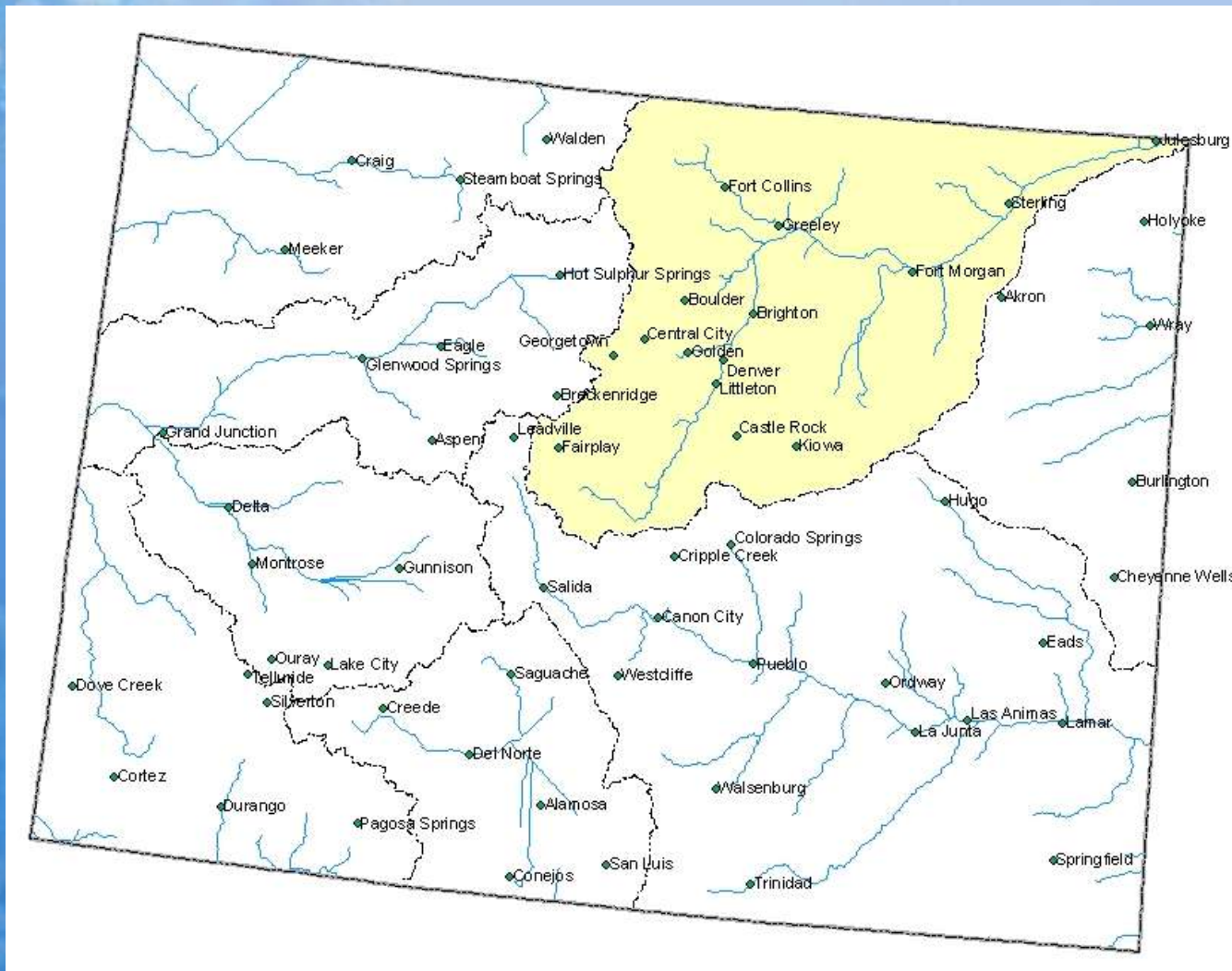
*Provisional Data  
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Current as of March 1, 2009

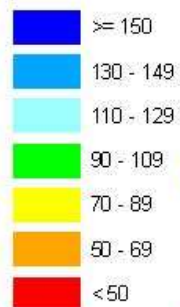


# South Platte River Basin Summary

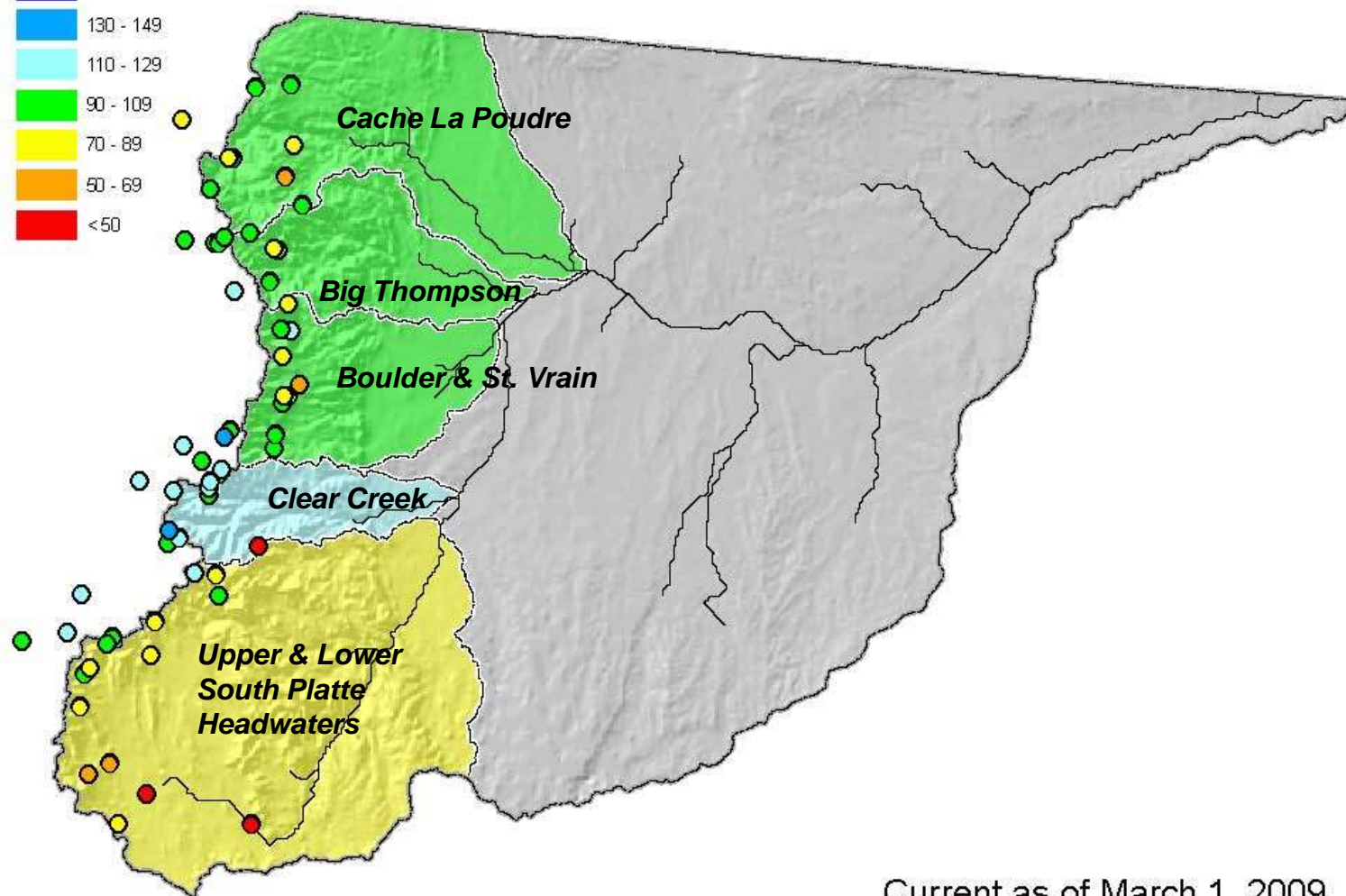


# South Platte River Basin Snowpack Map

Percent of Average

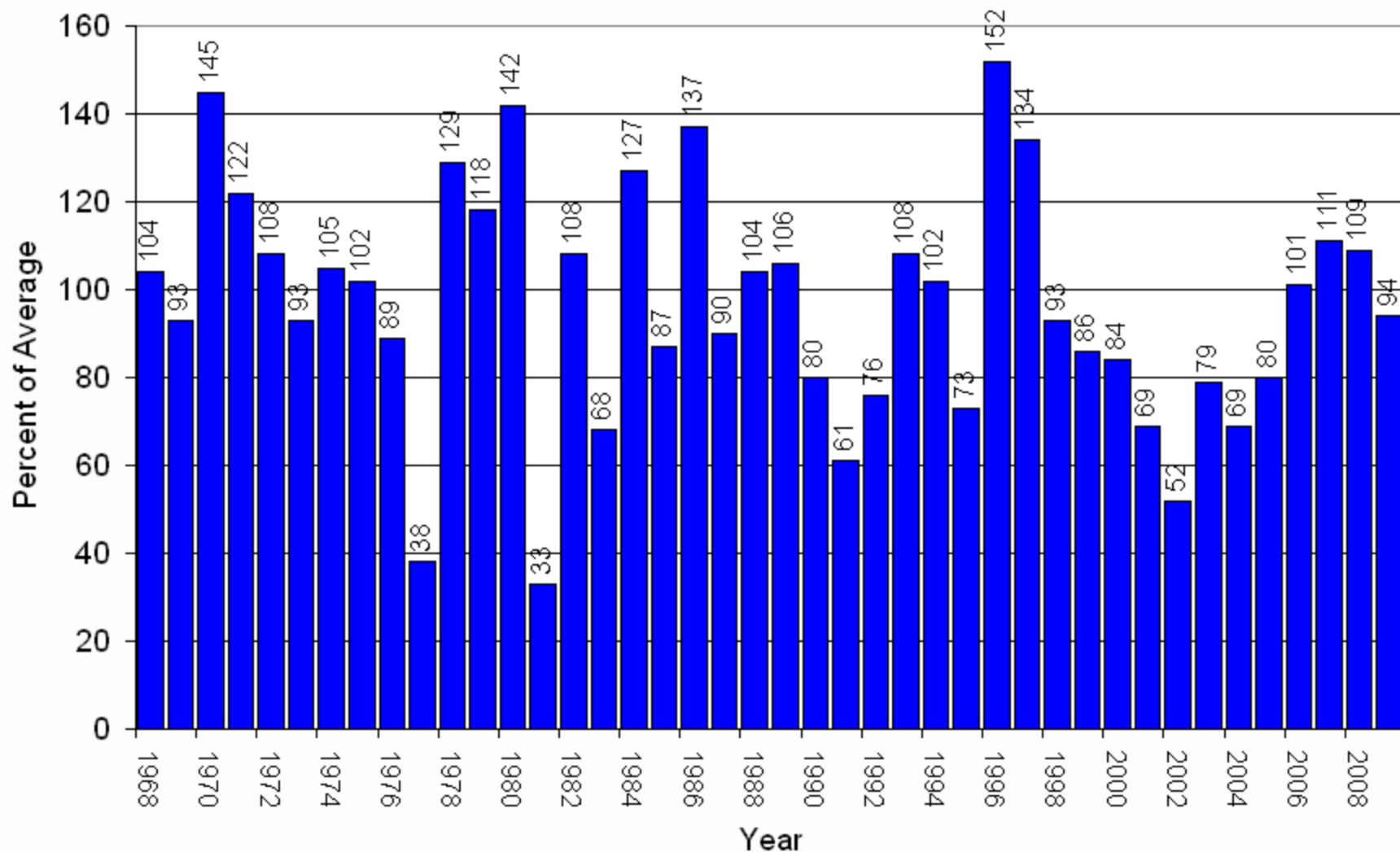


*Provisional Data  
Subject to Revision*



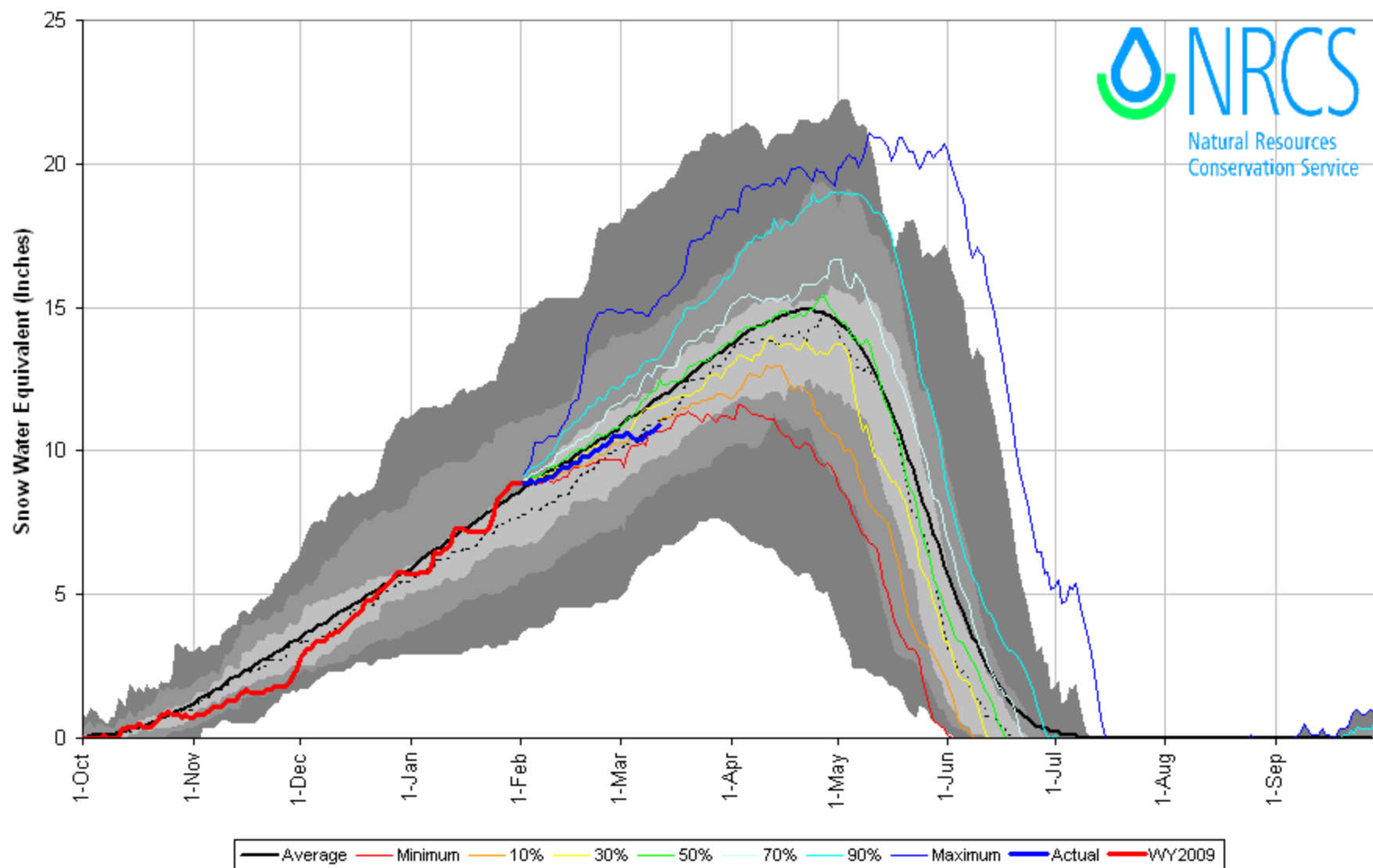
Current as of March 1, 2009

March 1 Total South Platte River Basin Snowpack



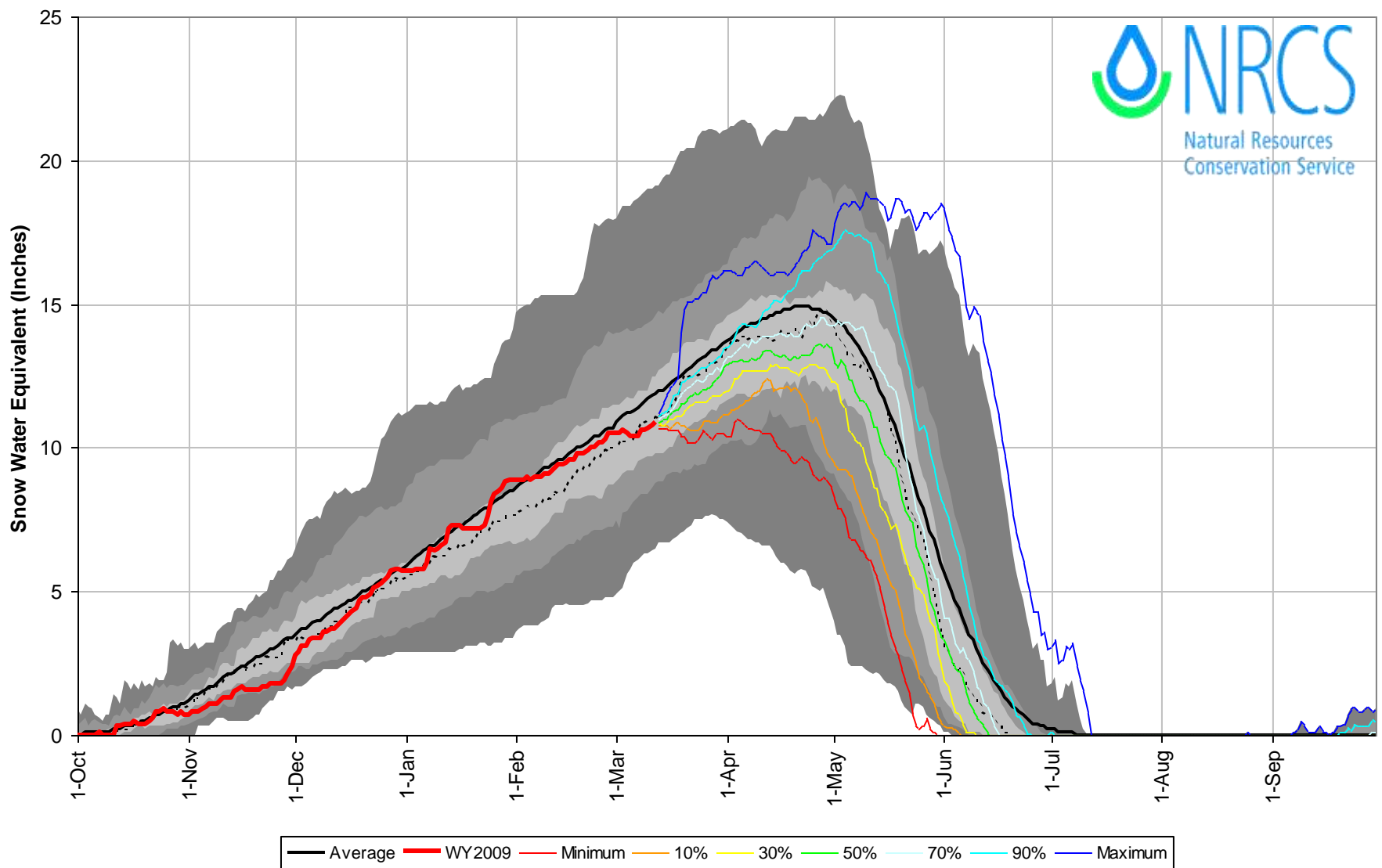
## South Platte River Basin with Non-Exceedence Projections

*Based on Provisional SNOTEL Data as of Mar 12, 2009*



## South Platte River Basin with Non-Exceedence Projections

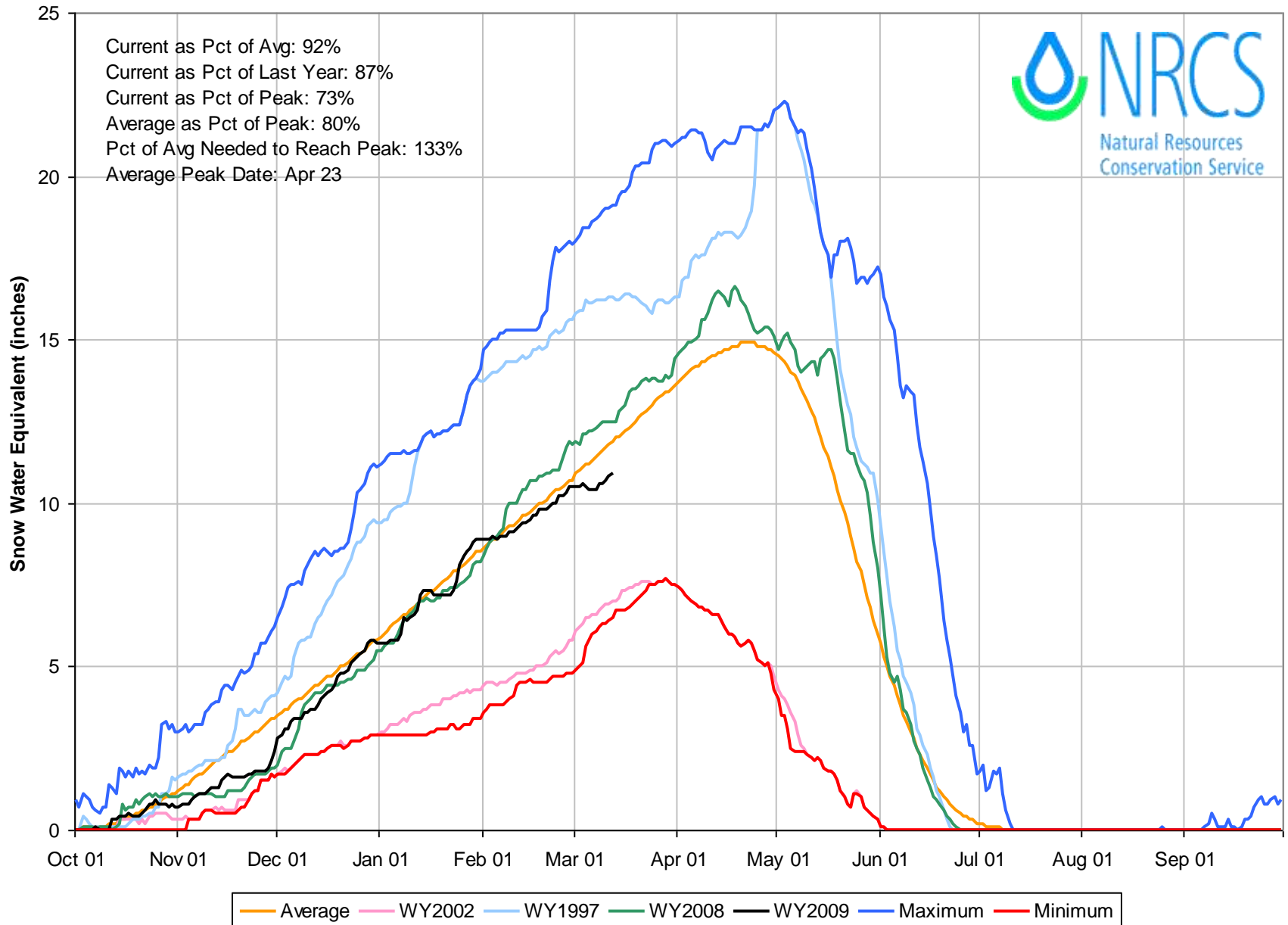
*Based on Provisional SNOTEL Data as of Mar 12, 2009*





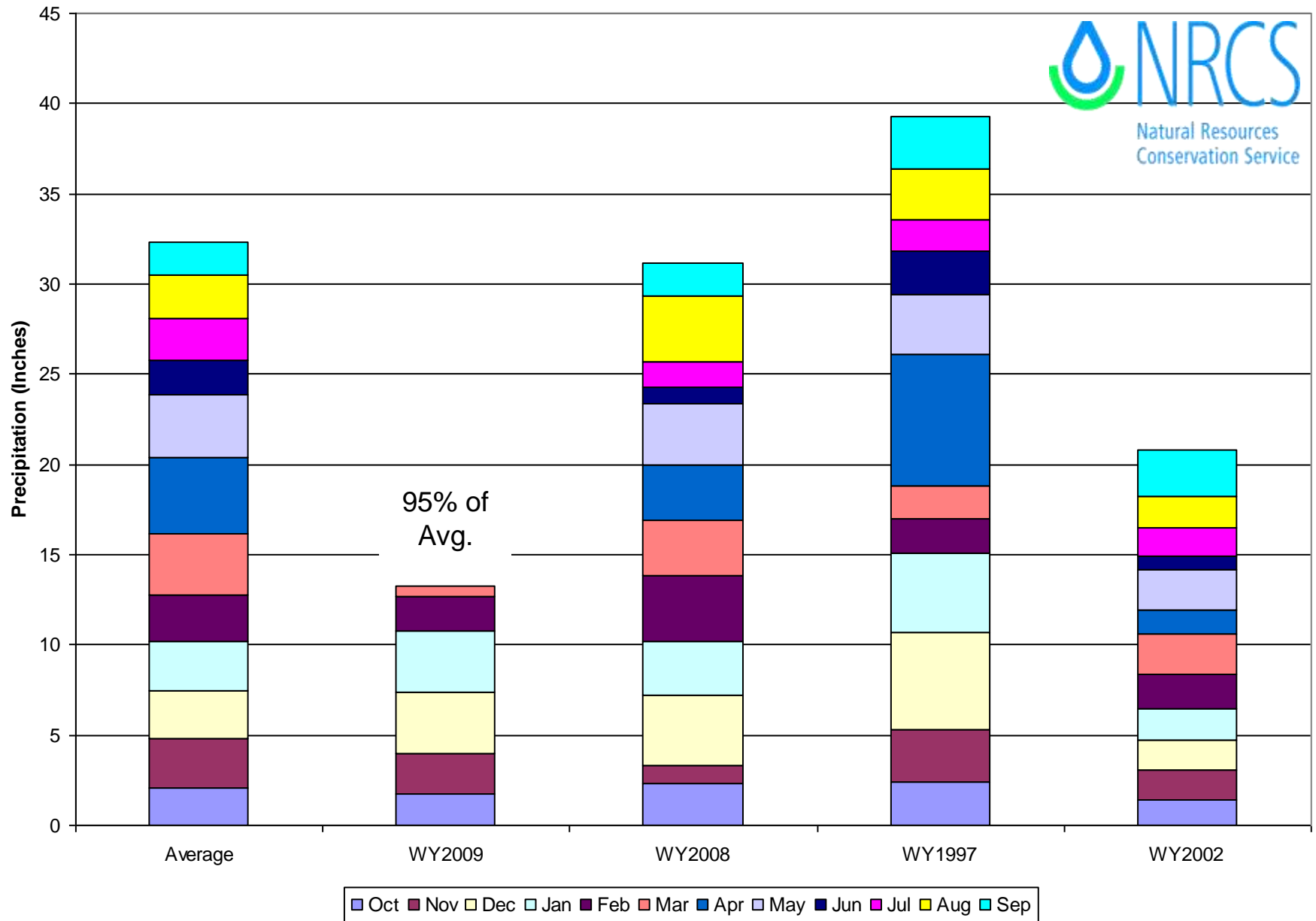
## South Platte River Basin High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of Mar 12, 2009*



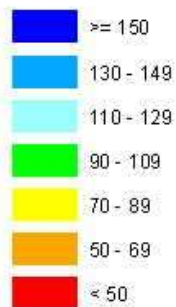
# South Platte River Basin High/Low Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of Mar 12, 2009*

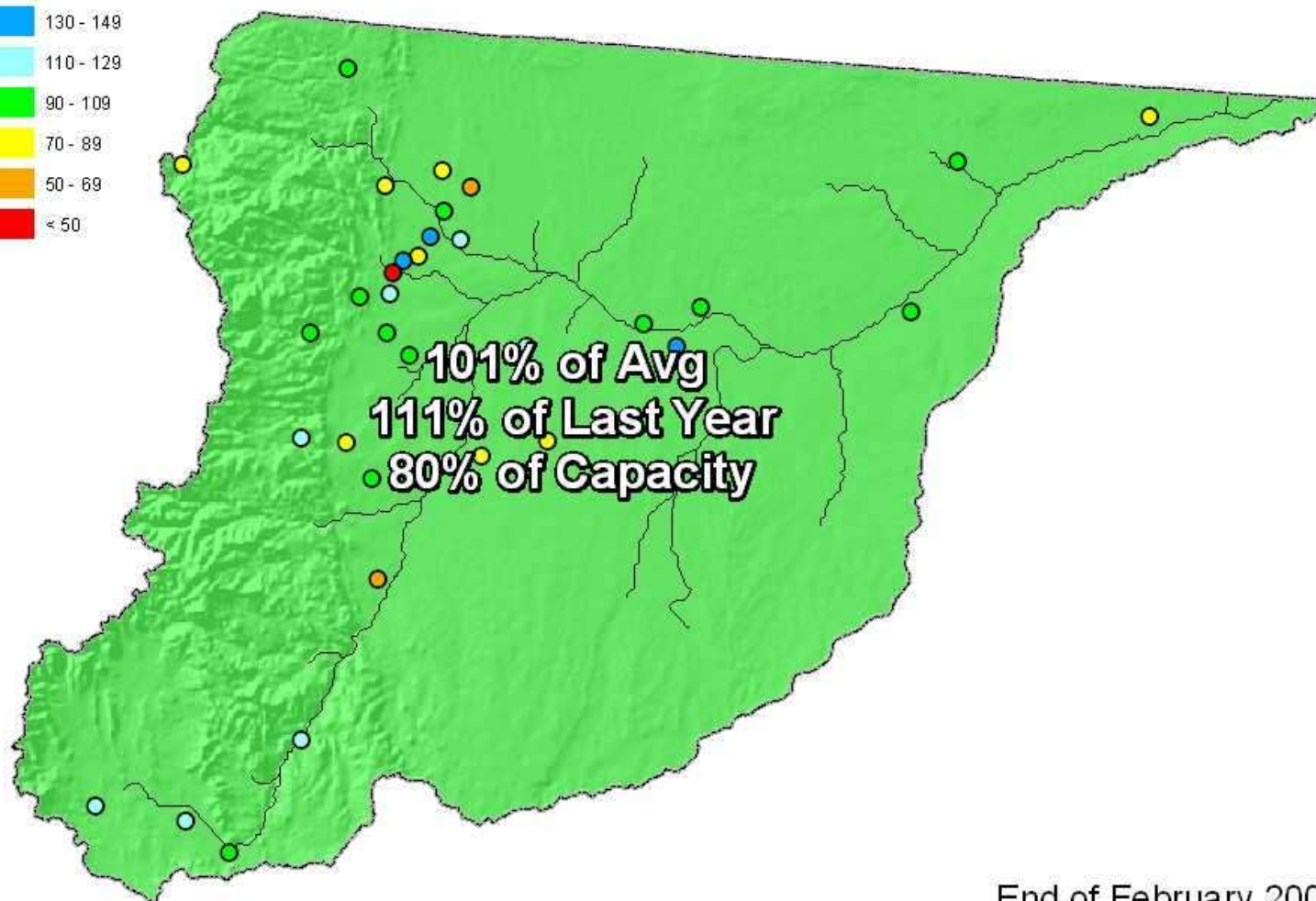


# South Platte River Basin Reservoir Storage Map

Percent of Average



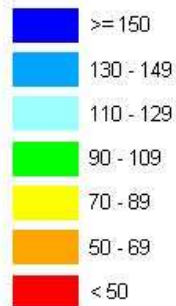
*Provisional Data  
Subject to Revision*



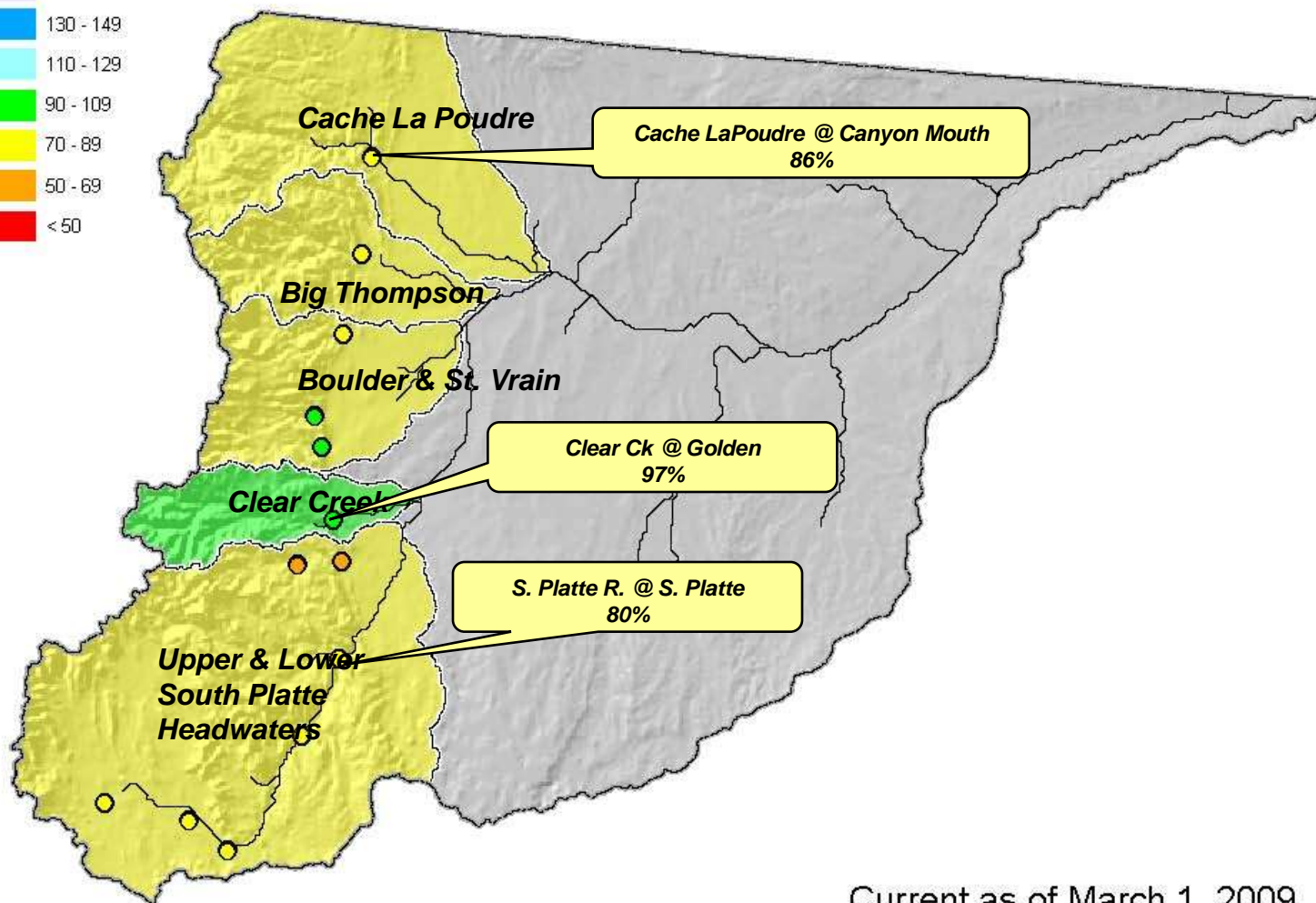
End of February 2009

# South Platte River Basin Streamflow Forecast Map

Percent of Average



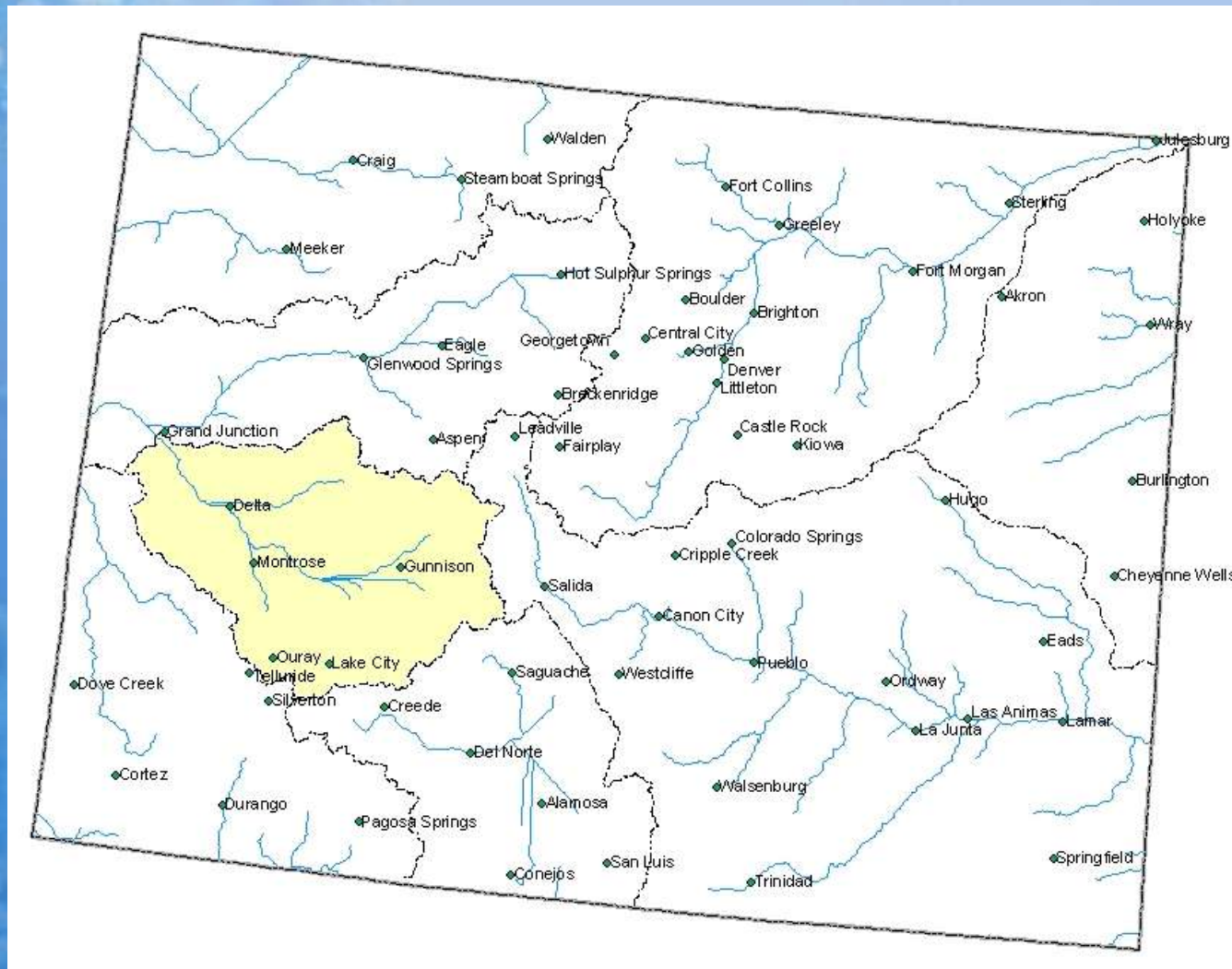
*Provisional Data  
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Current as of March 1, 2009



# Gunnison River Basin Summary



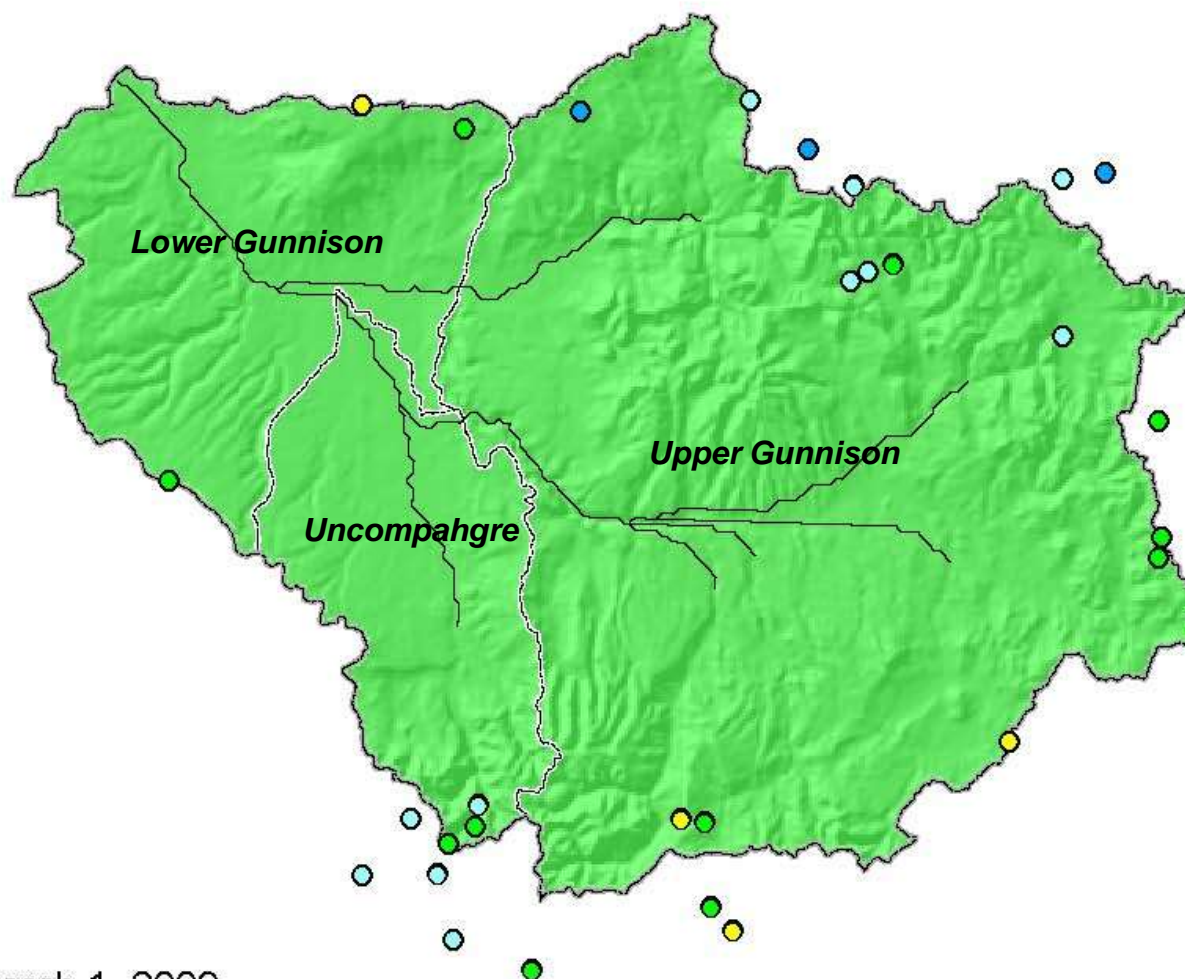


# Gunnison River Basin Snowpack Map

Percent of Average

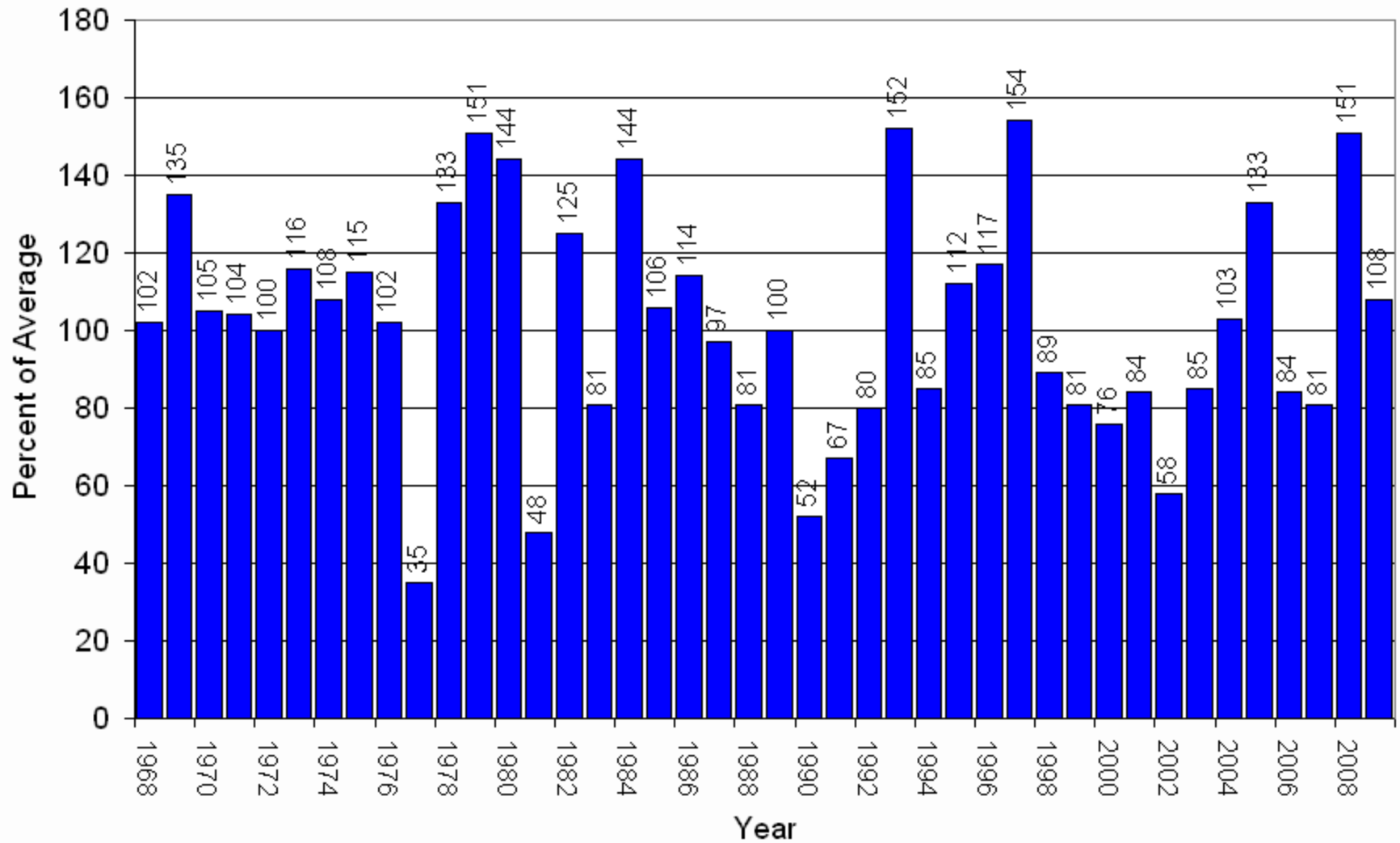


*Provisional Data  
Subject to Revision*



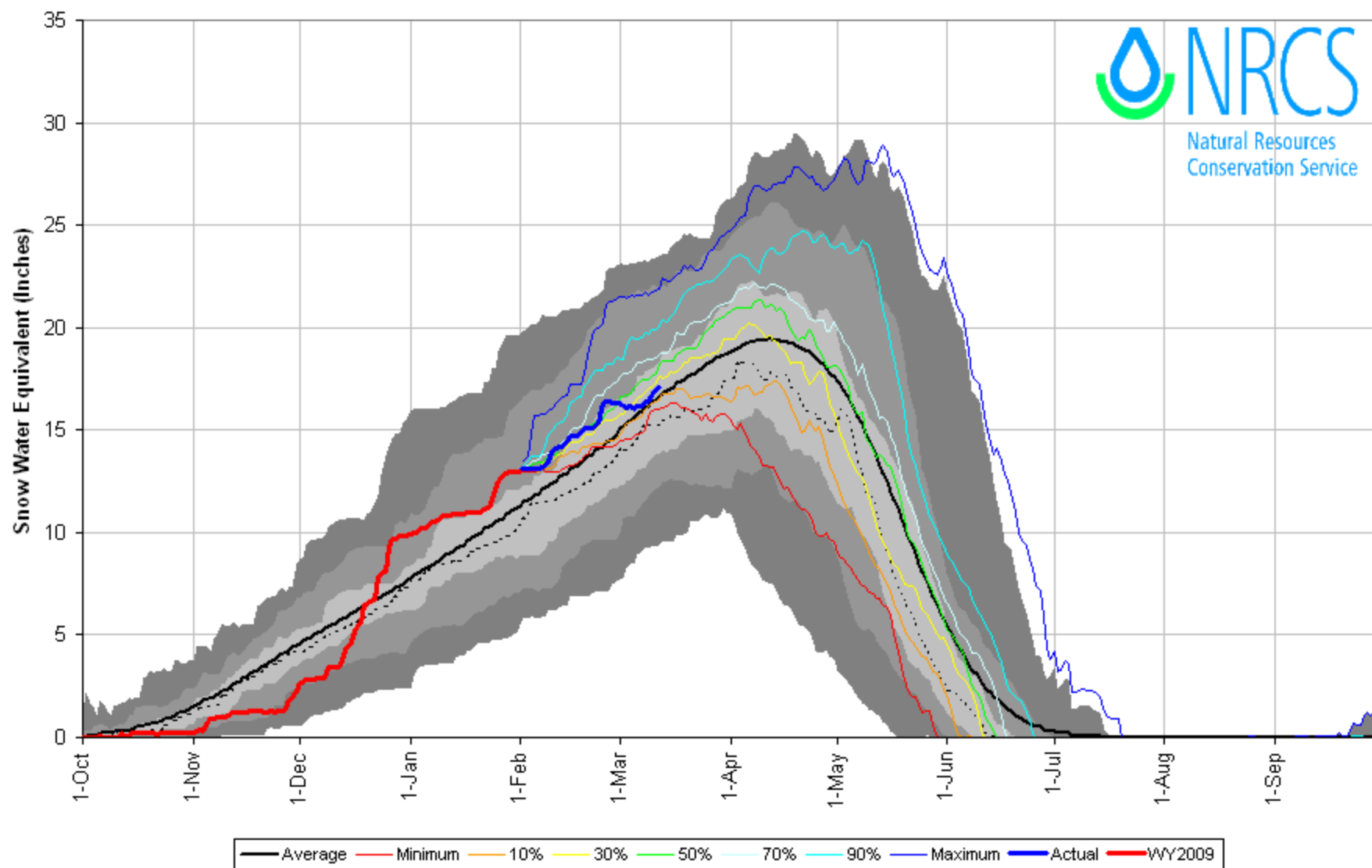
Current as of March 1, 2009

# March 1 Total Gunnison River Basin Snowpack



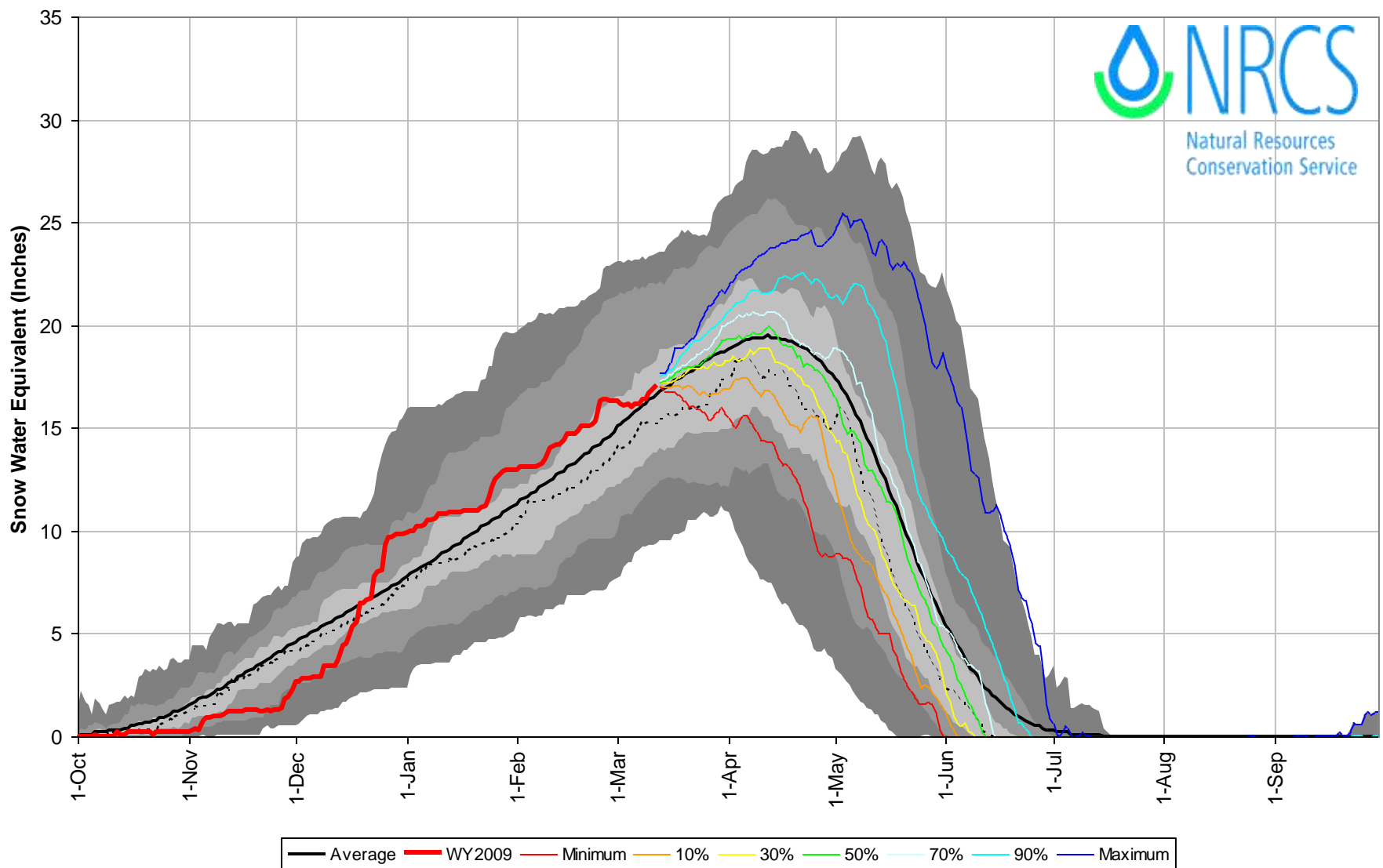
## Gunnison River Basin with Non-Exceedence Projections

*Based on Provisional SNOTEL Data as of Mar 12, 2009*



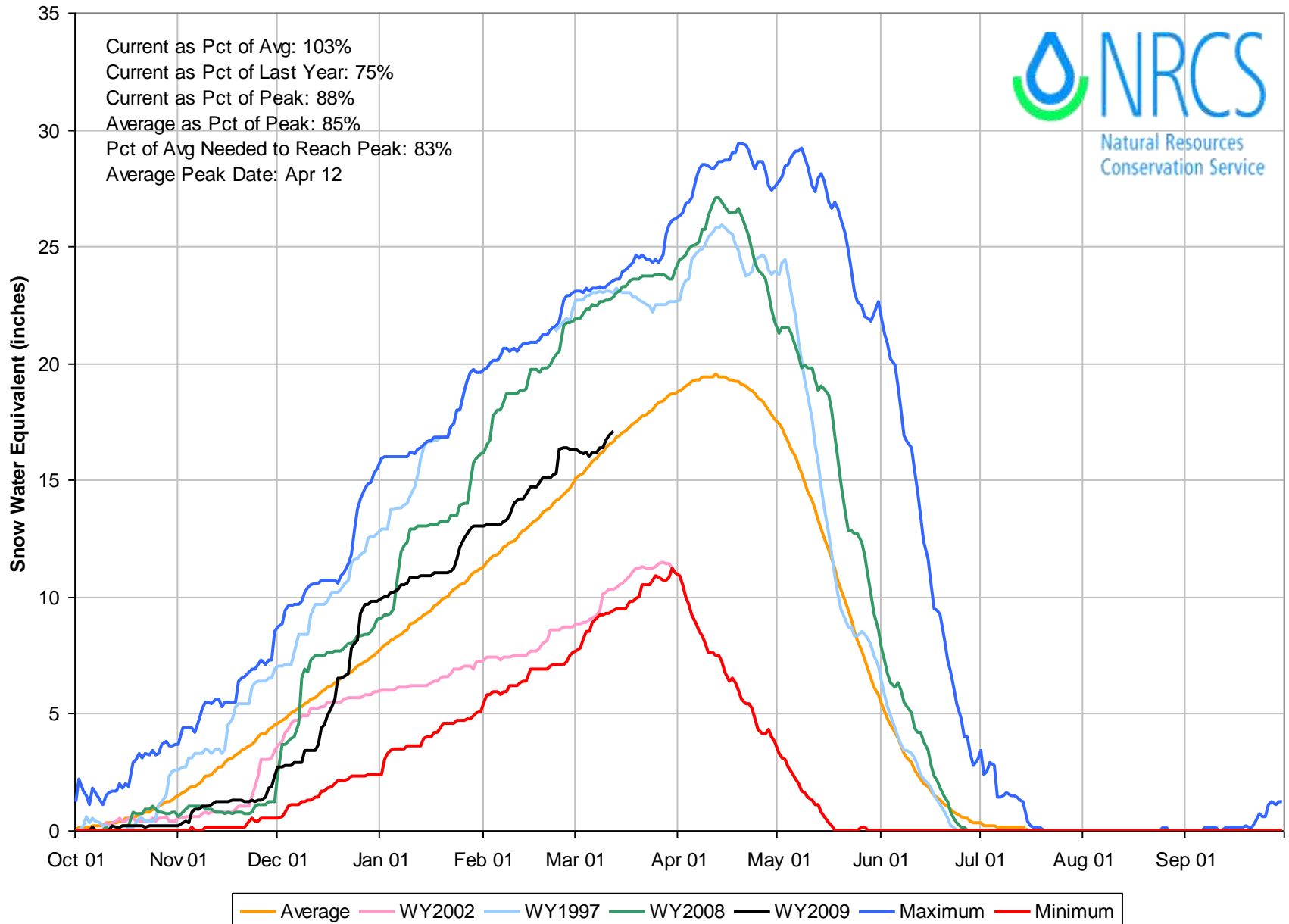
## Gunnison River Basin with Non-Exceedence Projections

*Based on Provisional SNOTEL Data as of Mar 12, 2009*



## Gunnison River Basin High/Low Snowpack Summary

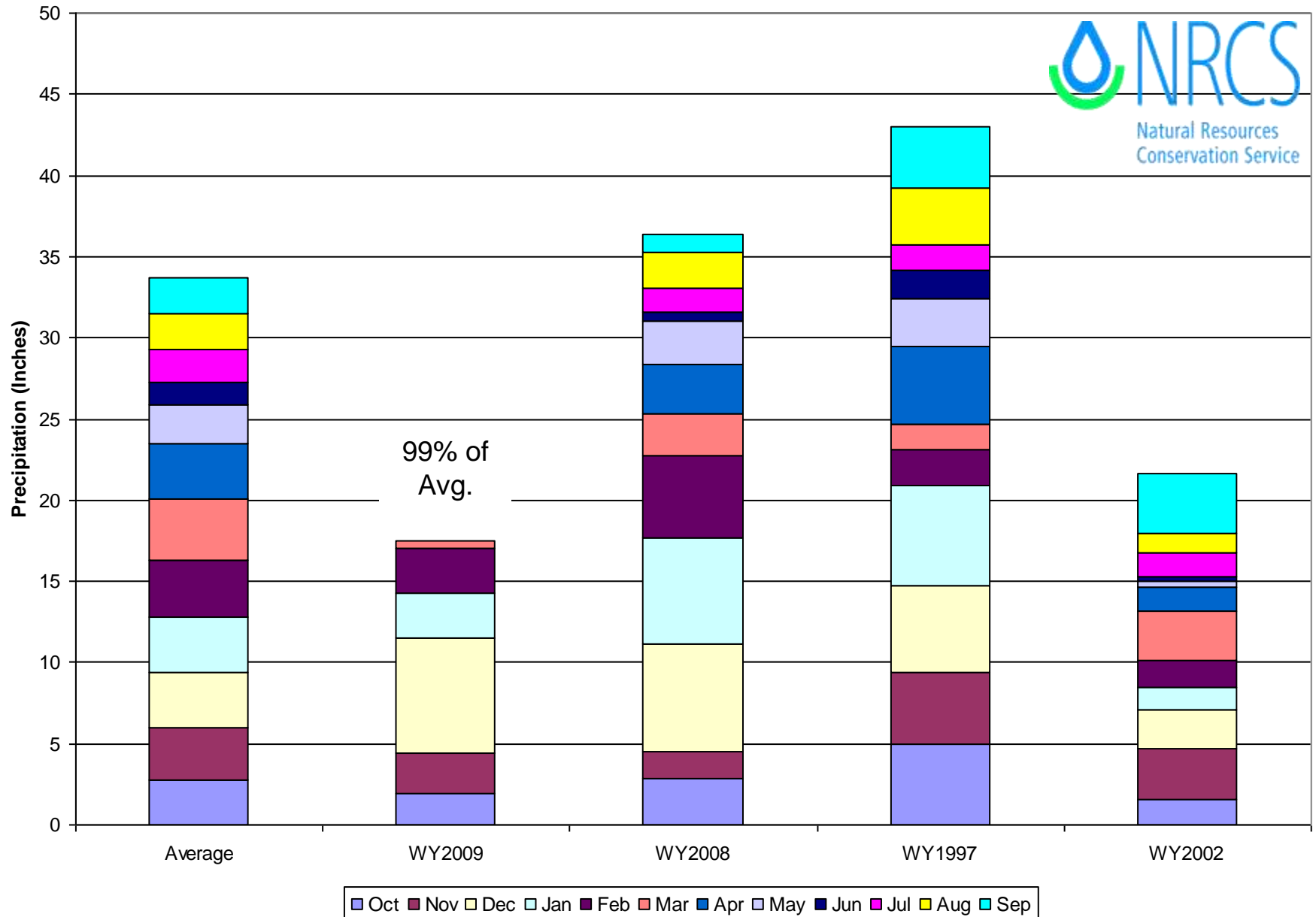
*Based on Provisional SNOTEL data as of Mar 12, 2009*





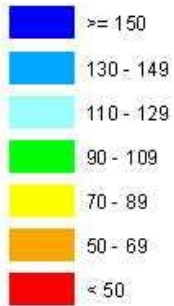
# Gunnison River Basin High/Low Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of Mar 12, 2009*



# Gunnison River Basin Reservoir Storage Map

## Percent of Average



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Subject to Revision*



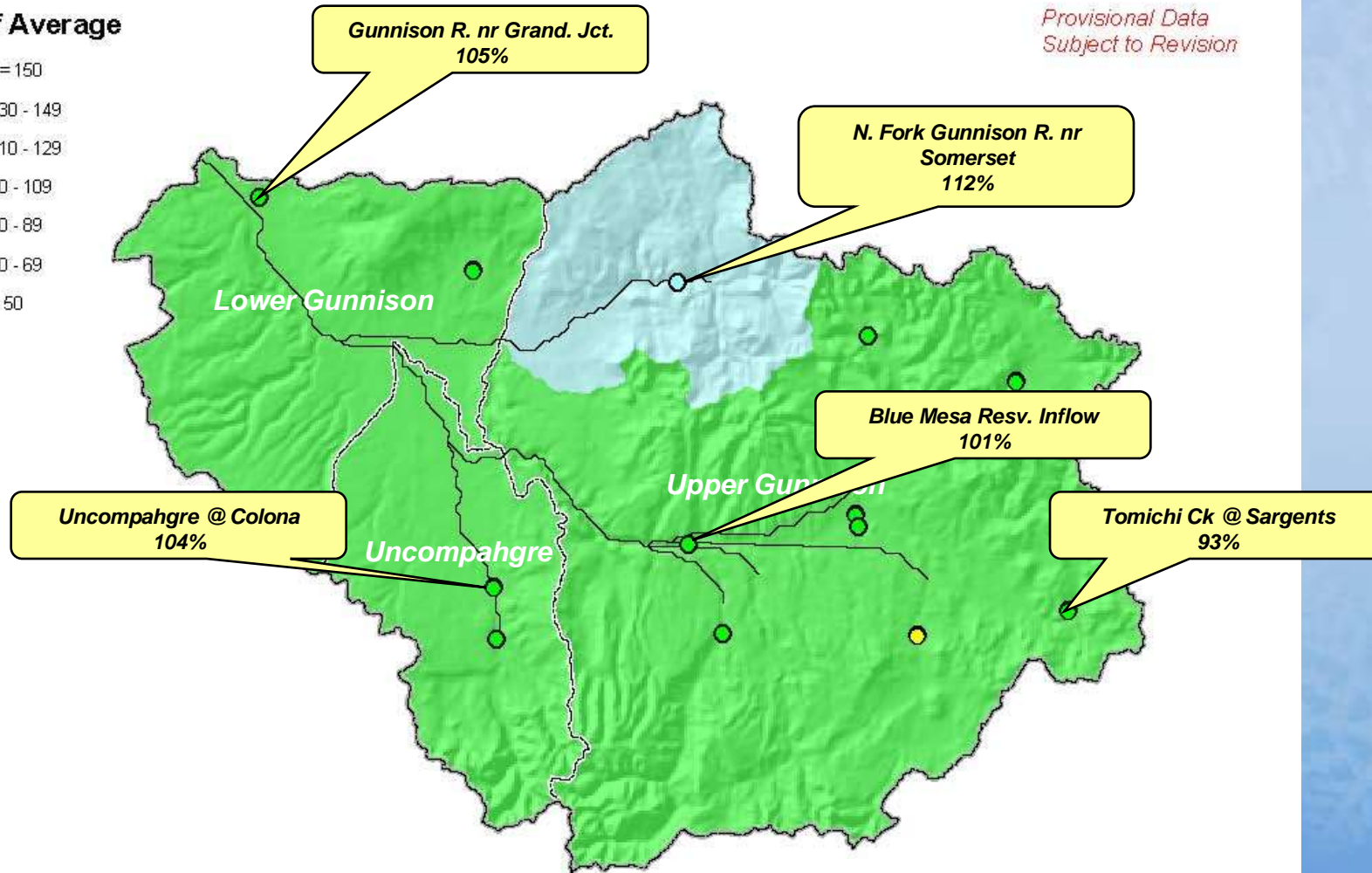
End of February 2009

# Gunnison River Basin Streamflow Forecast Map

## Percent of Average

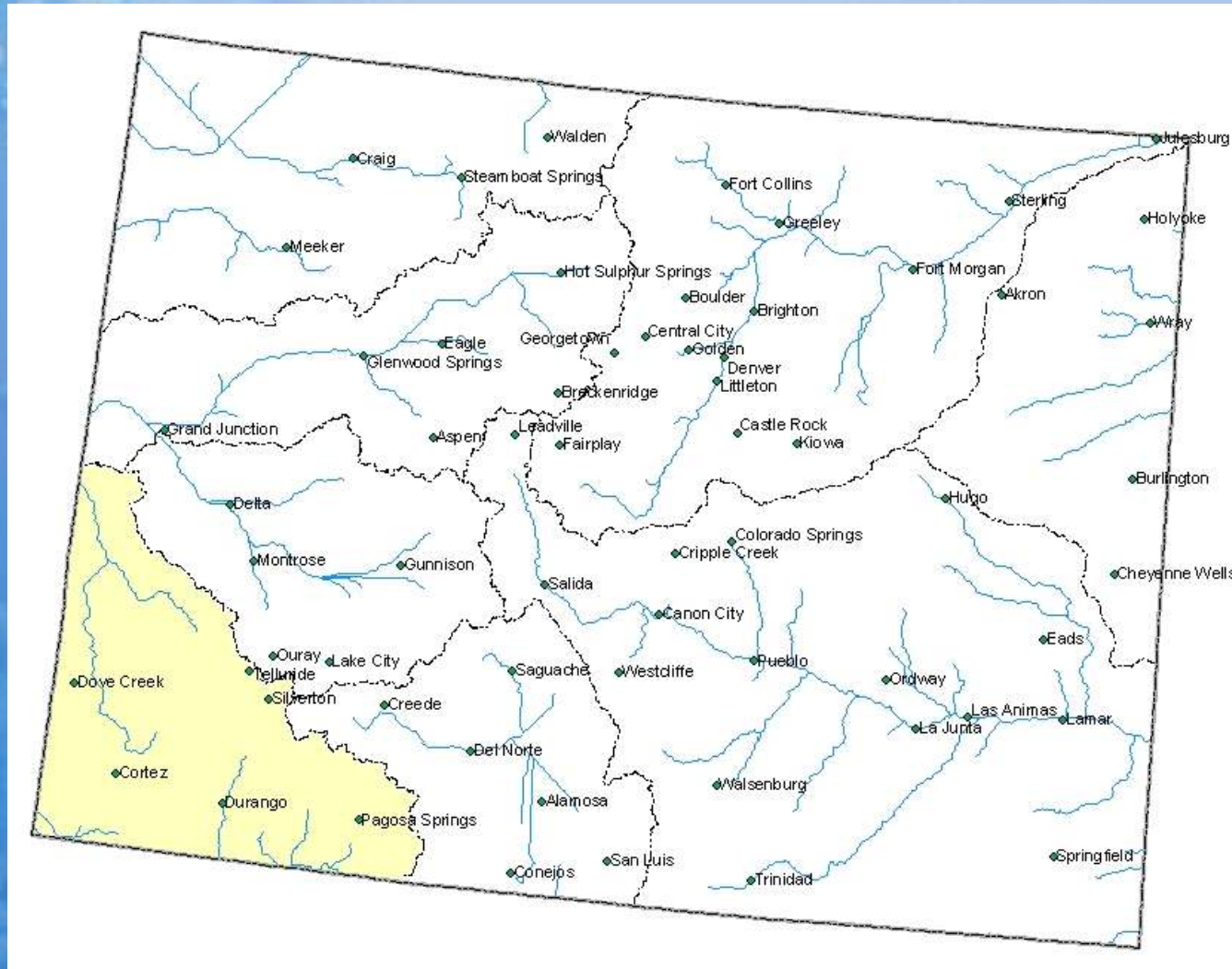


*Provisional Data  
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Current as of March 1, 2009

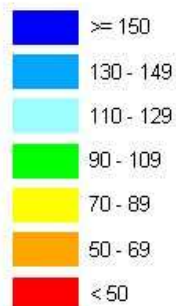
# San Miguel, Dolores, Animas & San Juan River Basins Summary



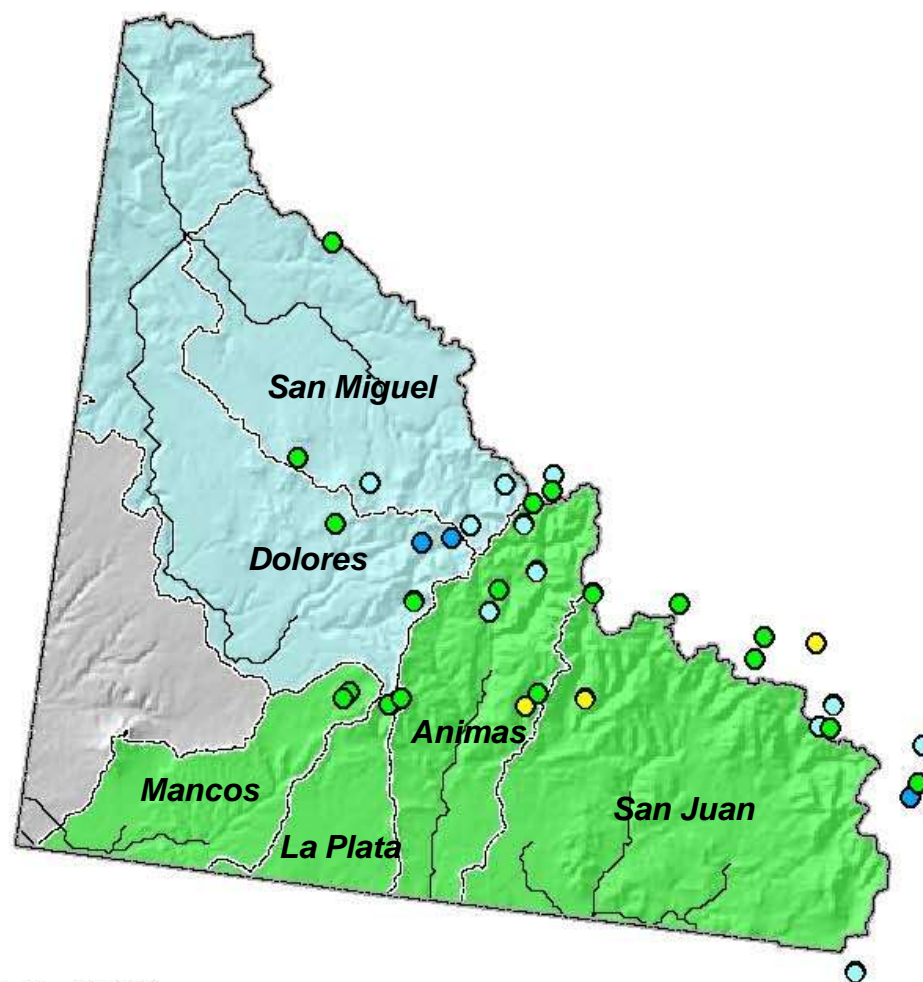


# San Miguel, Dolores, Animas and San Juan River Basins Snowpack Map

Percent of Average



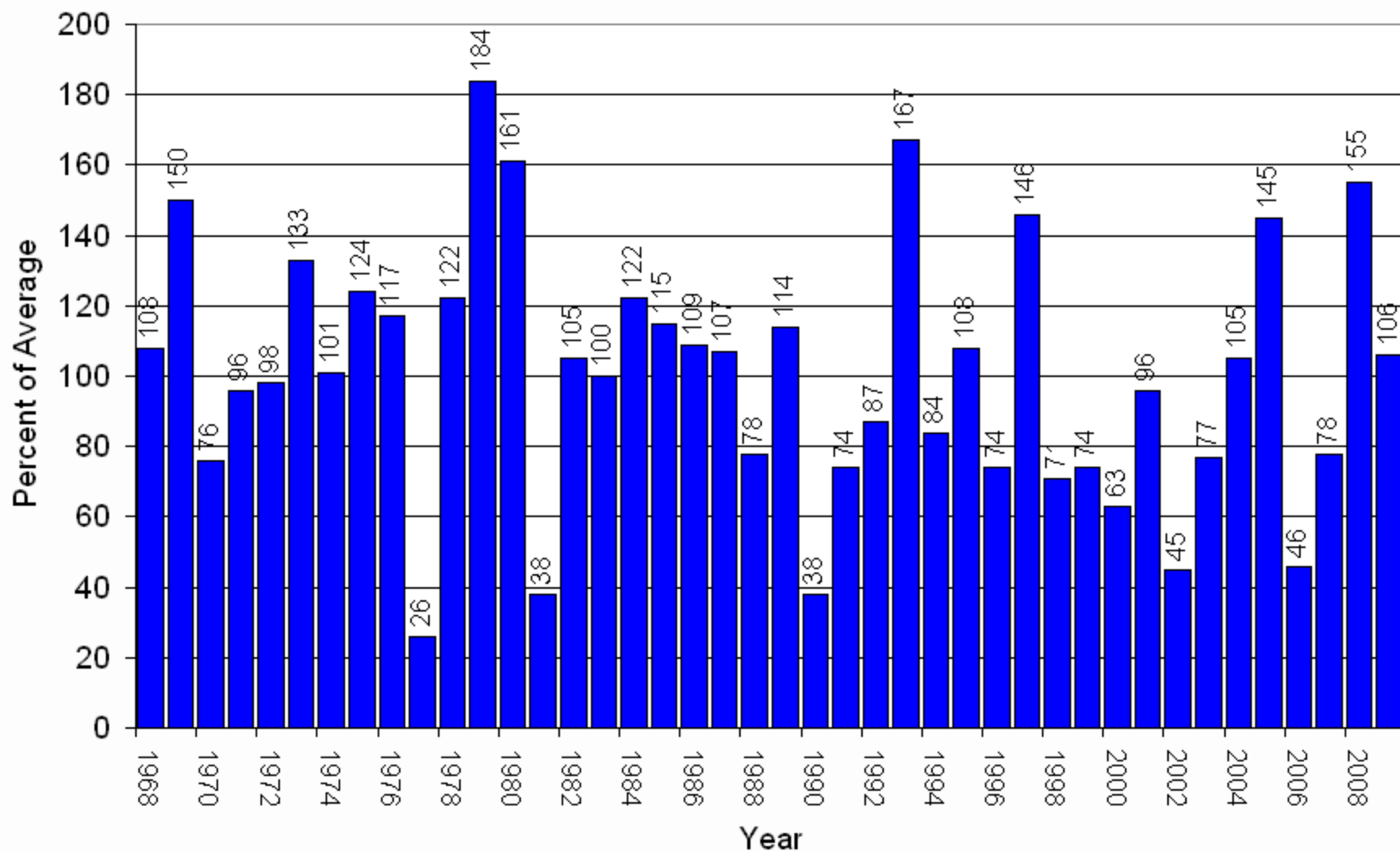
*Provisional Data  
Subject to Revision*



Current as of March 1, 2009

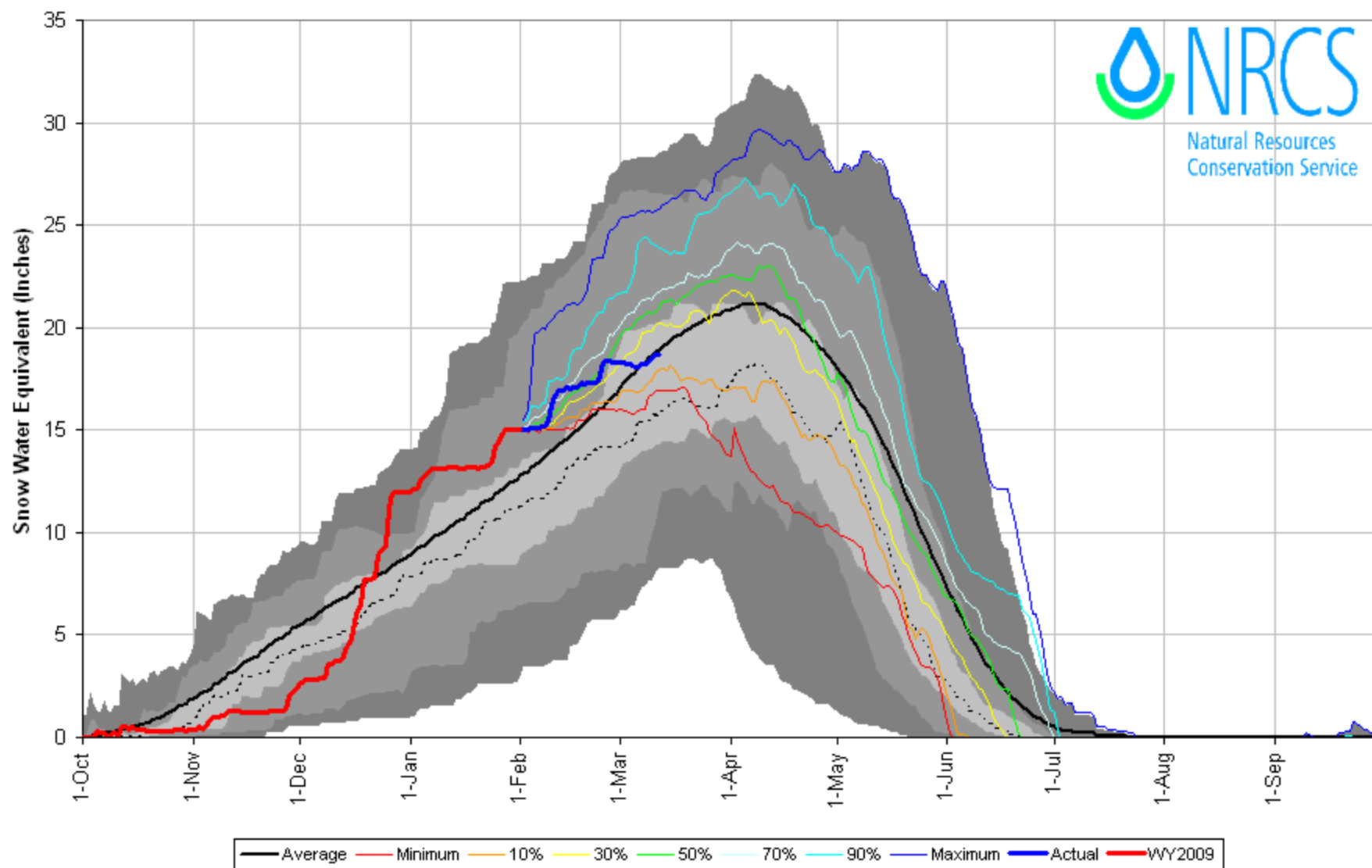


# March 1 Total San Miguel, Dolores, Animas & San Juan River Basins Snowpack



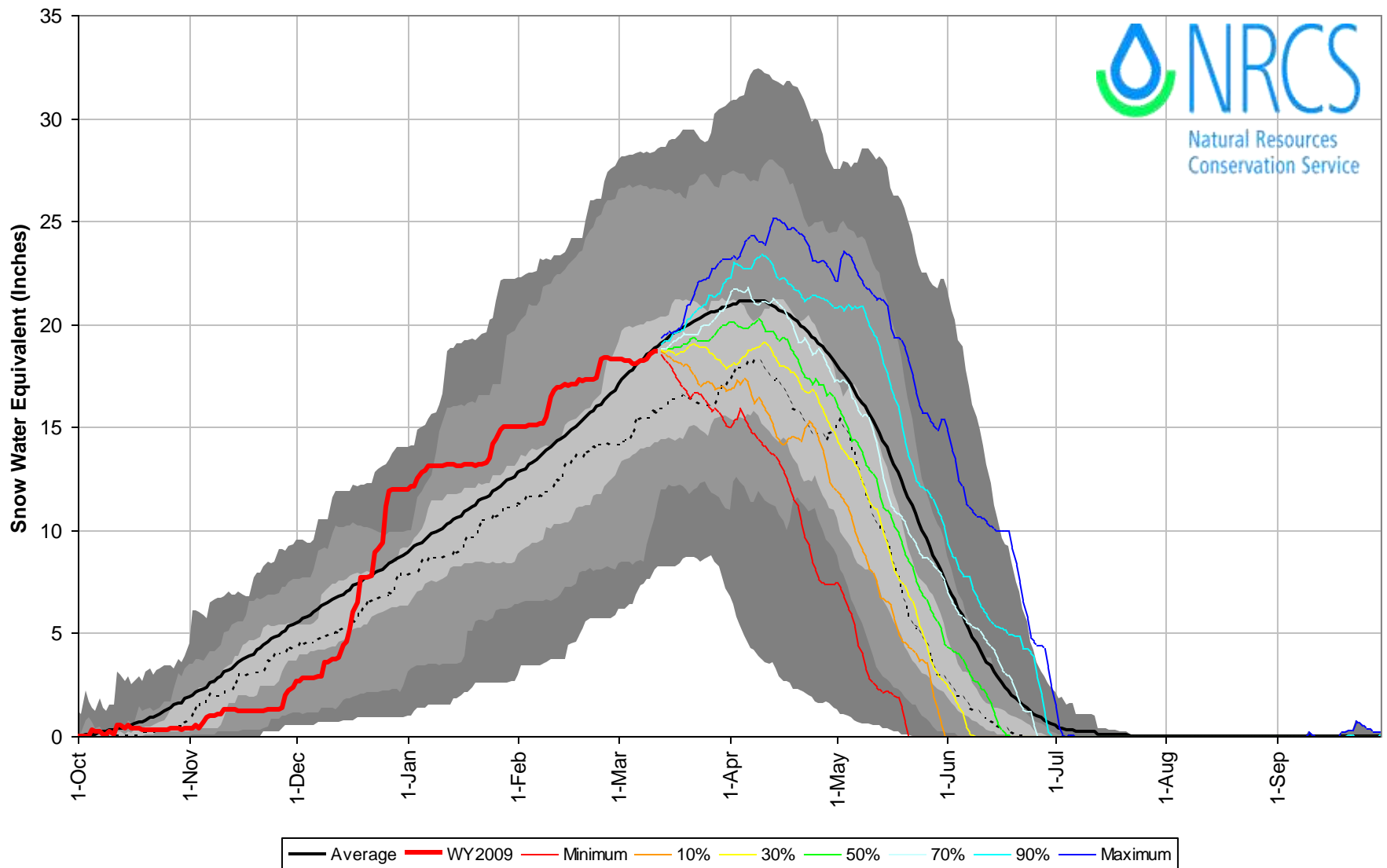
## San Miguel, Dolores, Animas & San Juan River Basins with Non-Exceedence Projections

*Based on Provisional SNOTEL Data as of Mar 12, 2009*



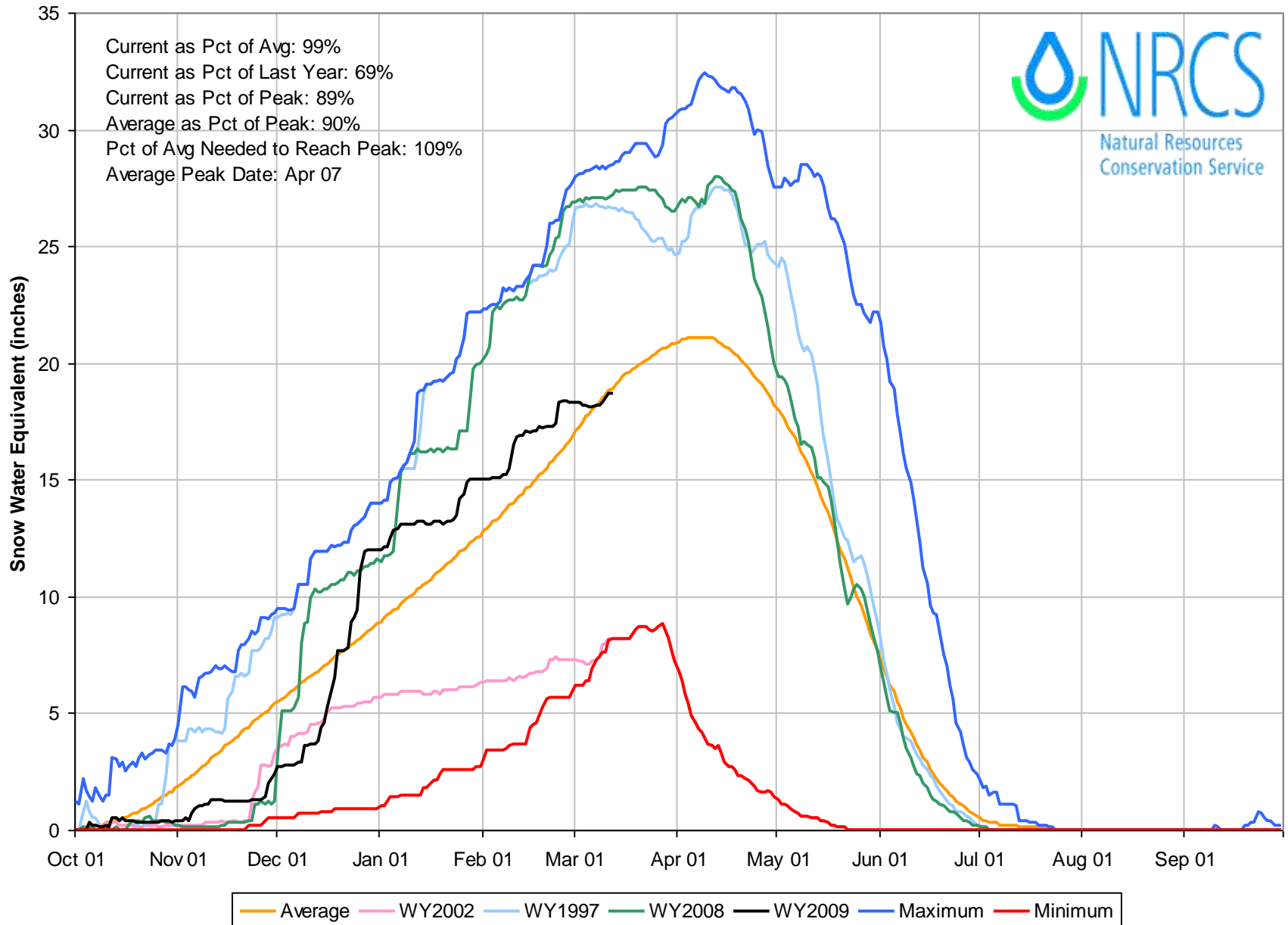
# San Miguel, Dolores, Animas & San Juan River Basins with Non-Exceedence Projections

*Based on Provisional SNOTEL Data as of Mar 12, 2009*



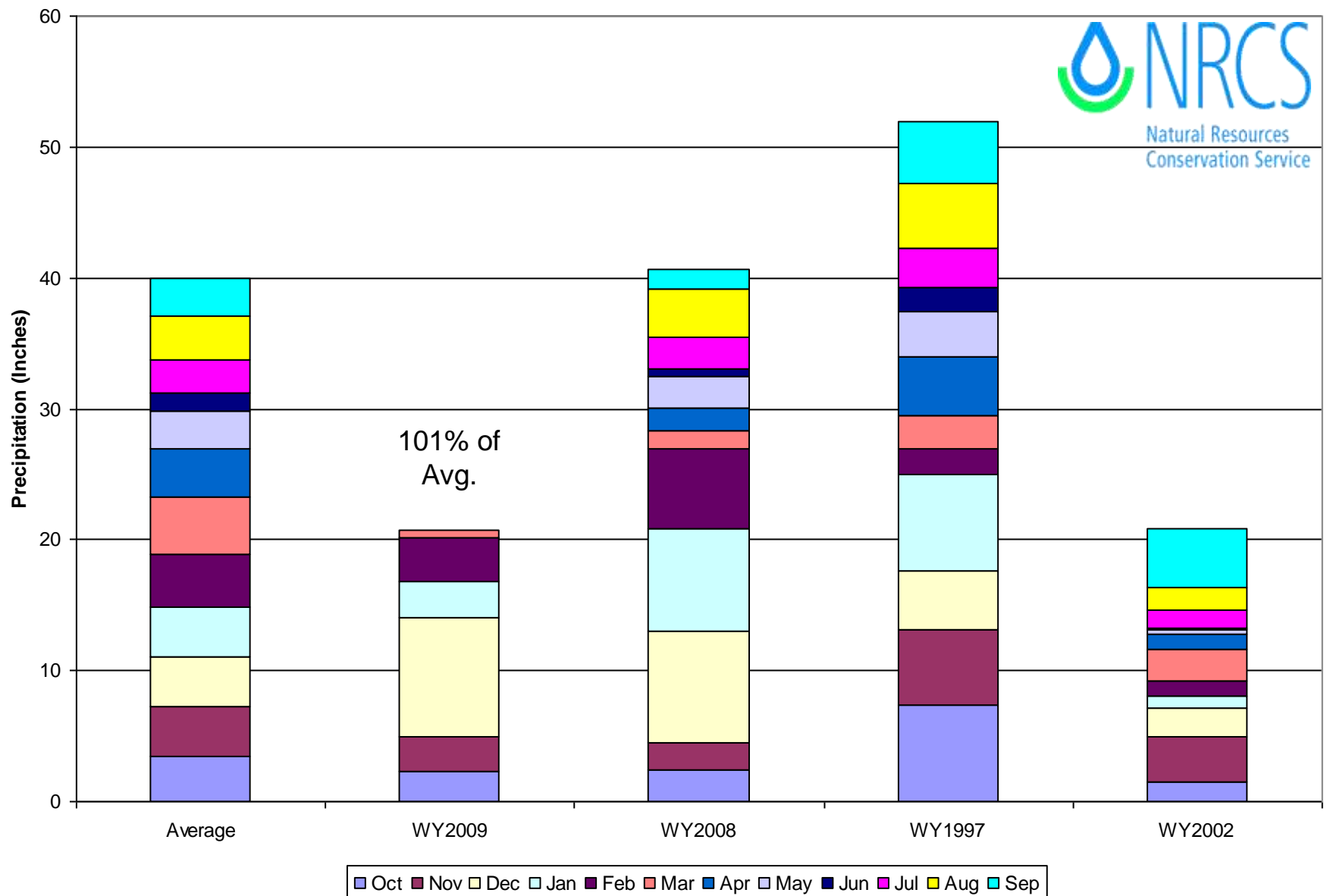
# San Miguel, Dolores, Animas & San Juan River Basins High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of Mar 12, 2009*



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

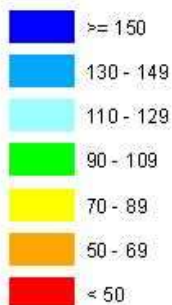
*Based on Provisional SNOTEL data as of Mar 12, 2009*



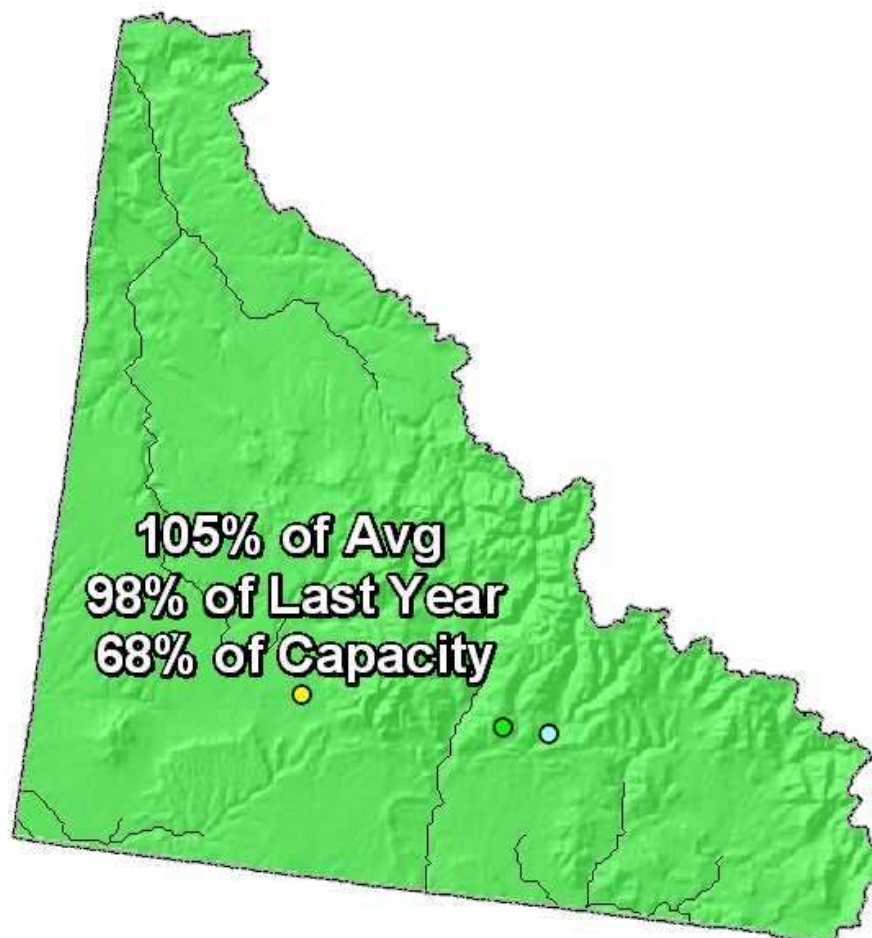


# San Miguel, Dolores, Animas and San Juan River Basins Reservoir Storage Map

Percent of Average



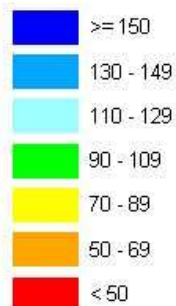
*Provisional Data  
Subject to Revision*



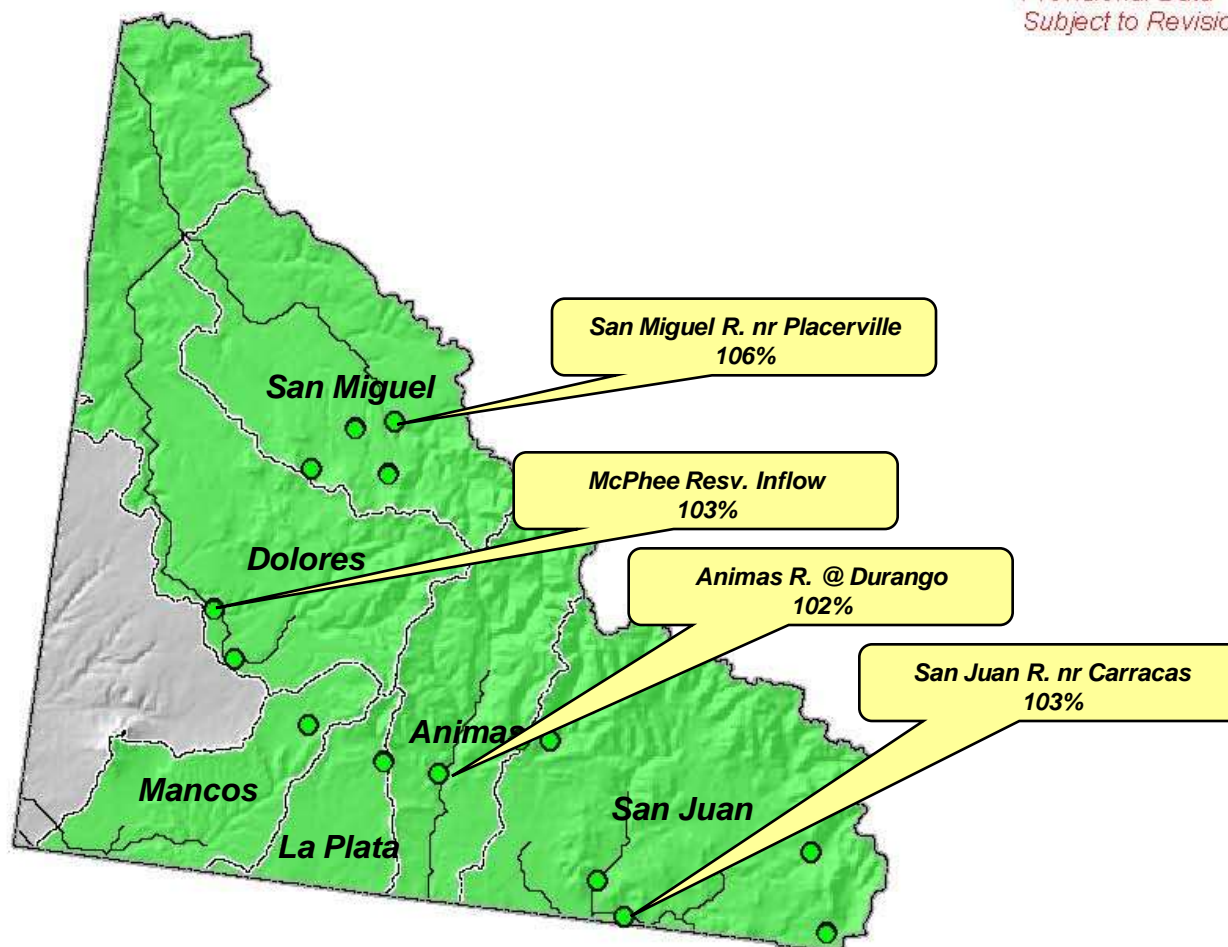
End of February 2009

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

Percent of Average

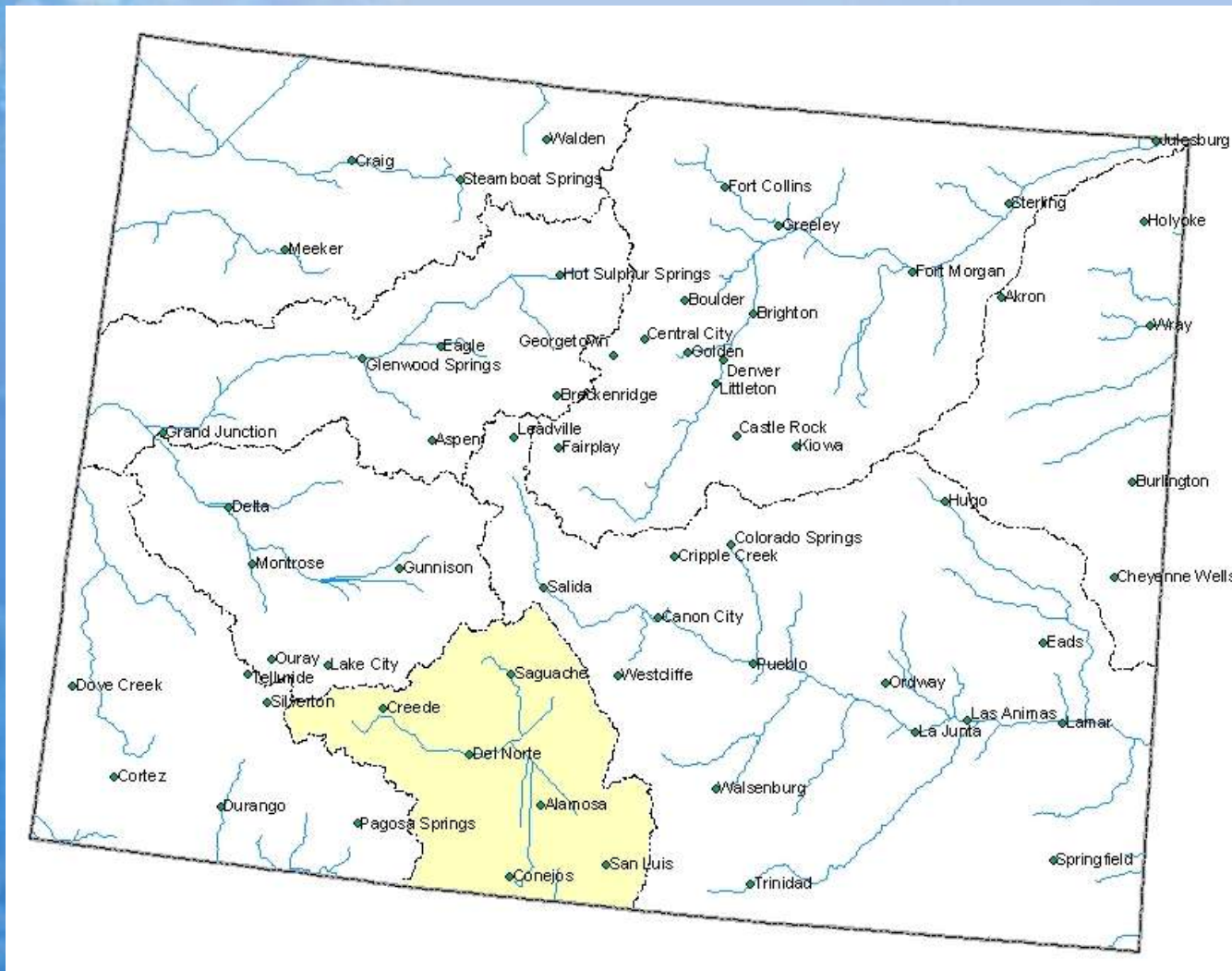


*Provisional Data  
Subject to Revision*



Current as of March 1, 2009

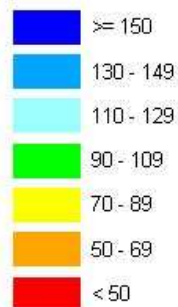
# Upper Rio Grande Basin Summary



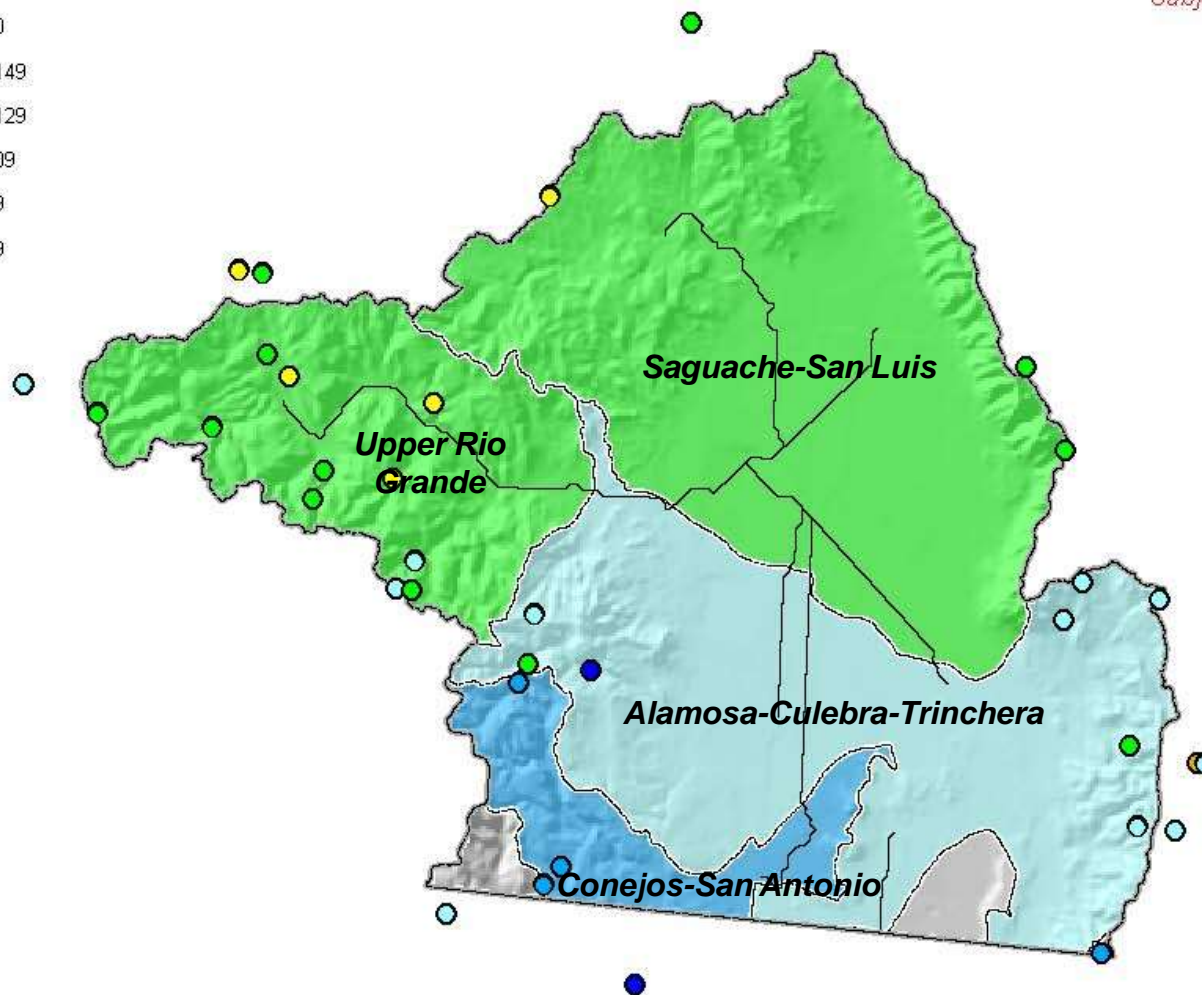


# Upper Rio Grande Basin Snowpack Map

Percent of Average

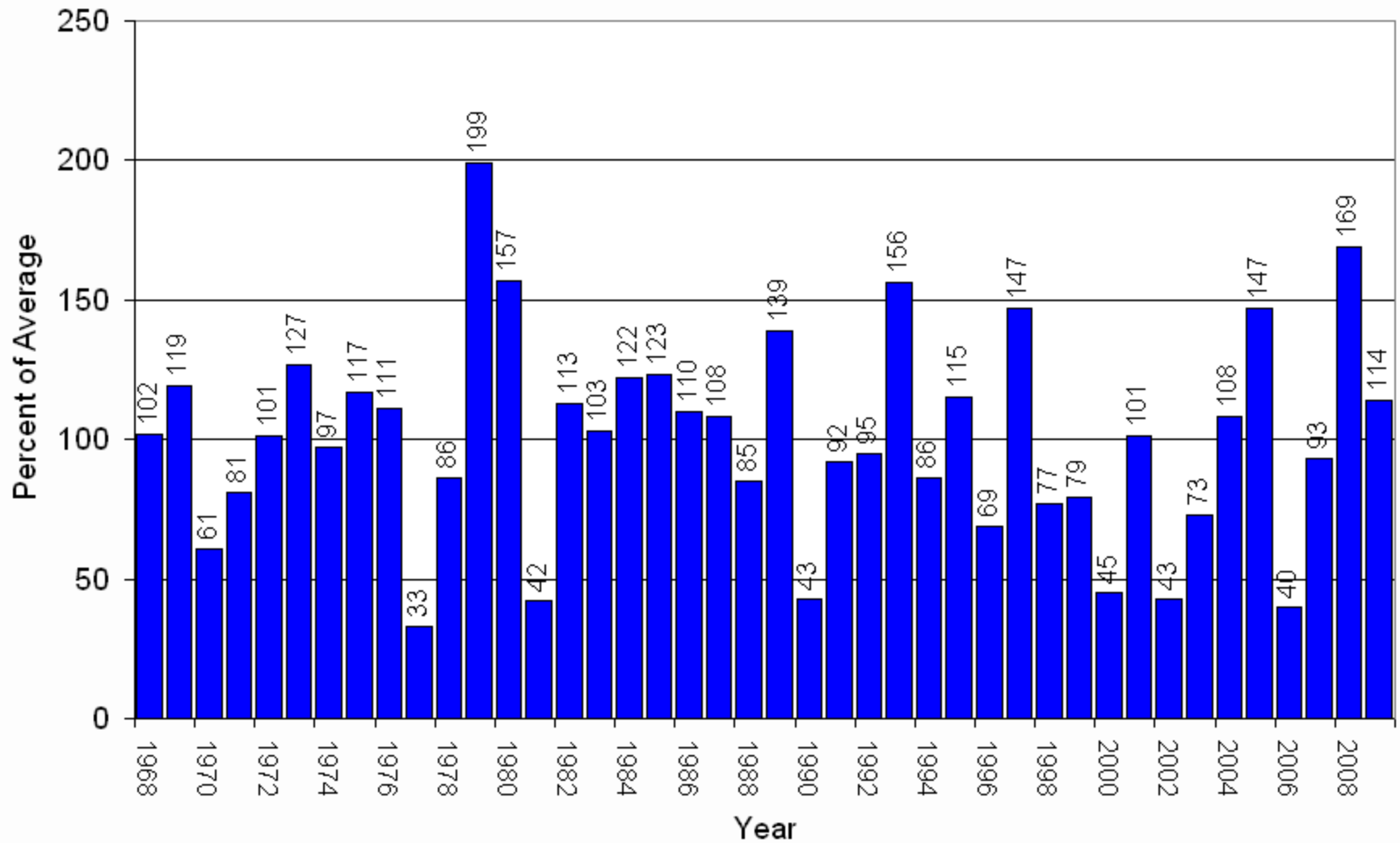


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Subject to Revision*



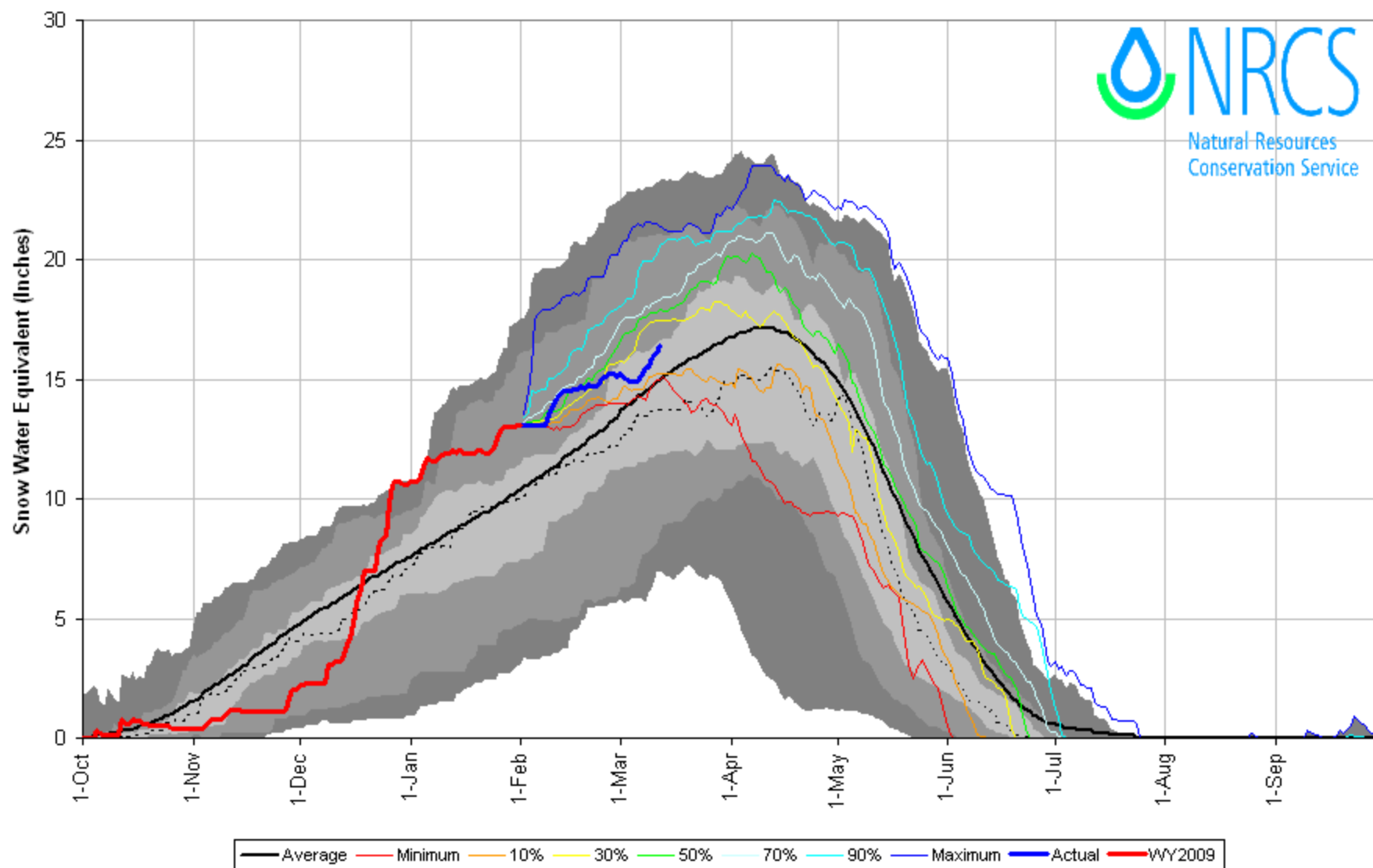
Current as of March 1, 2009

### March 1 Total Upper Rio Grande Basin Snowpack

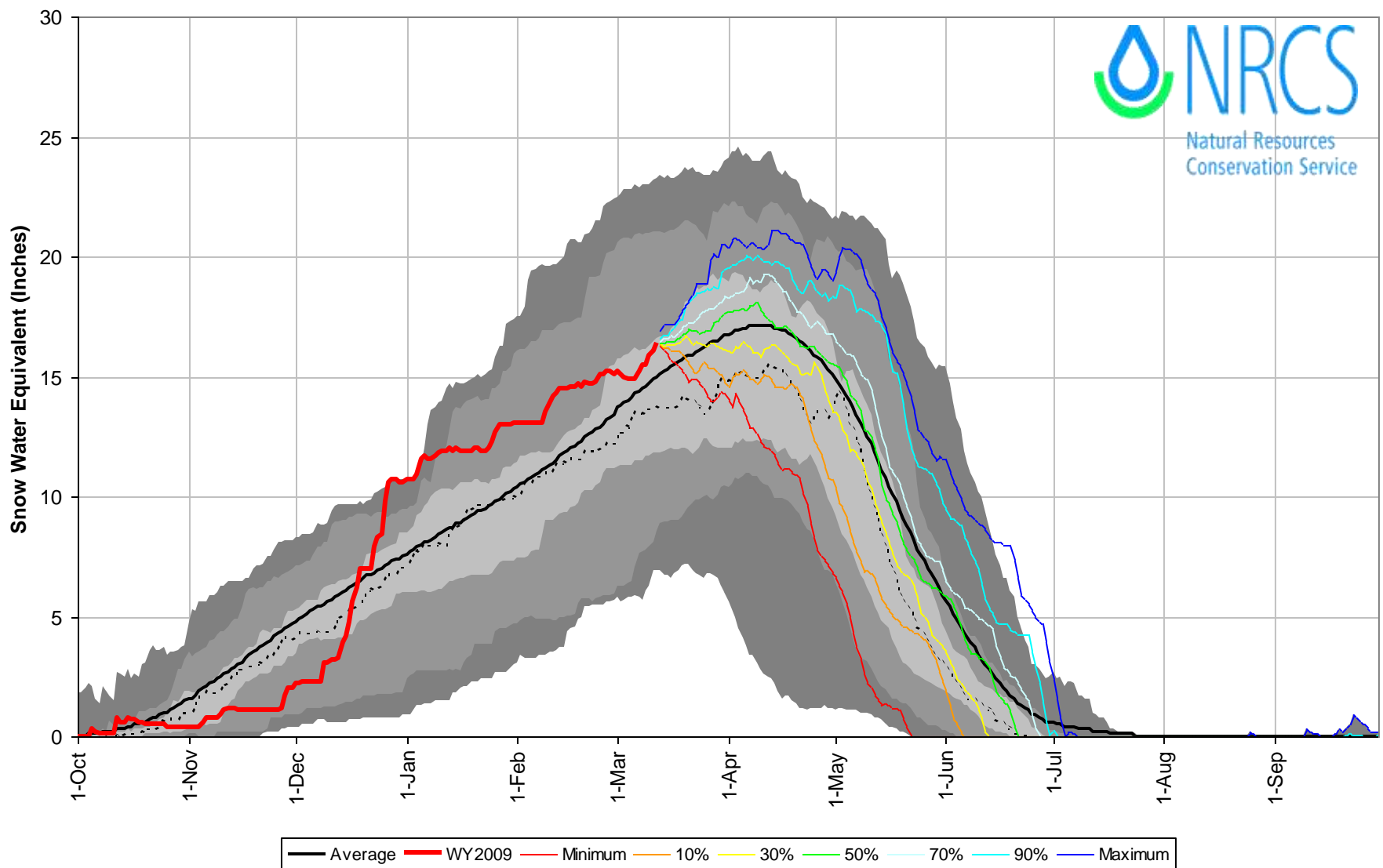




*Based on Provisional SNOTEL Data as of Mar 12, 2009*

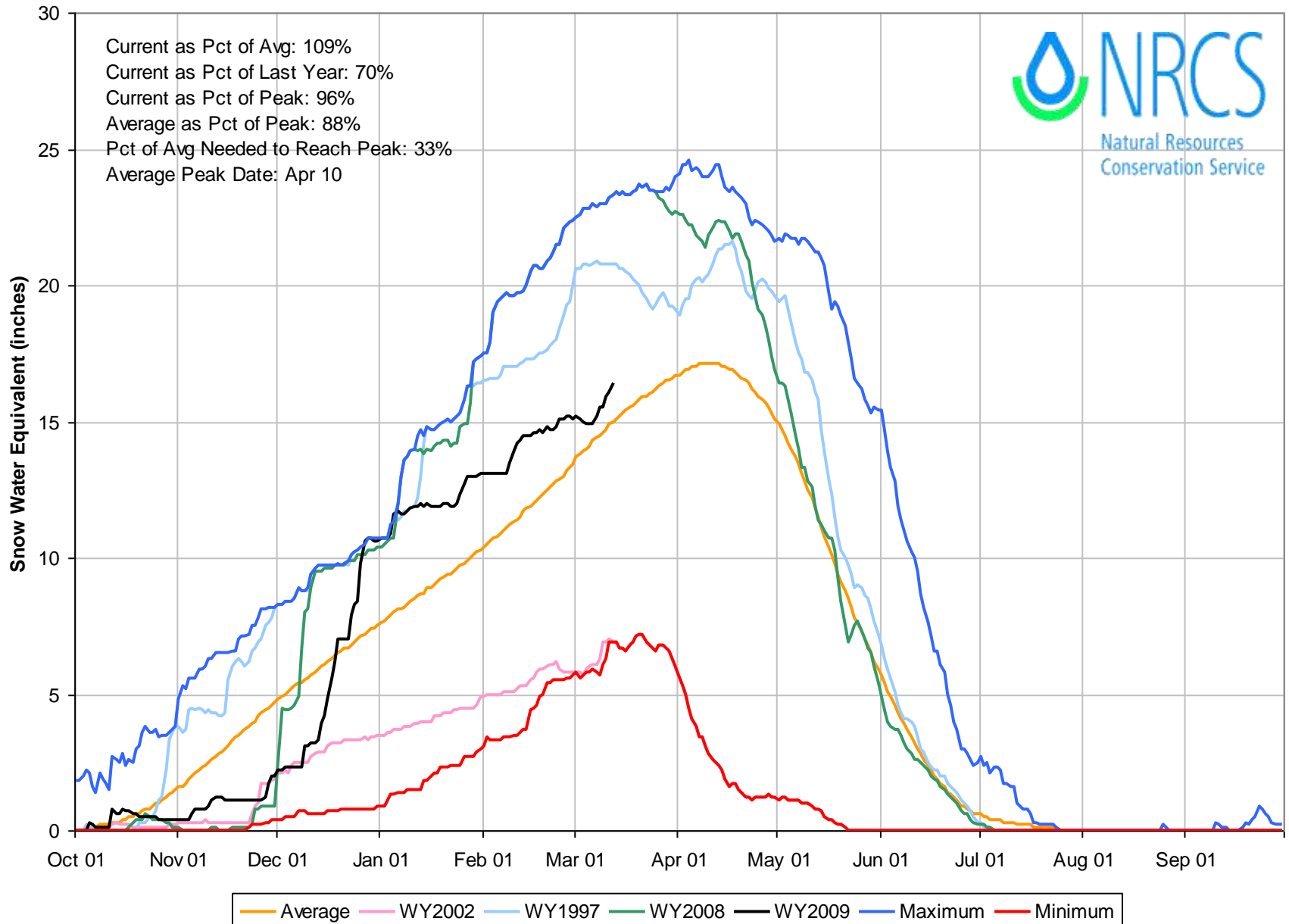


**Based on Provisional SNOTEL Data as of Mar 12, 2009**



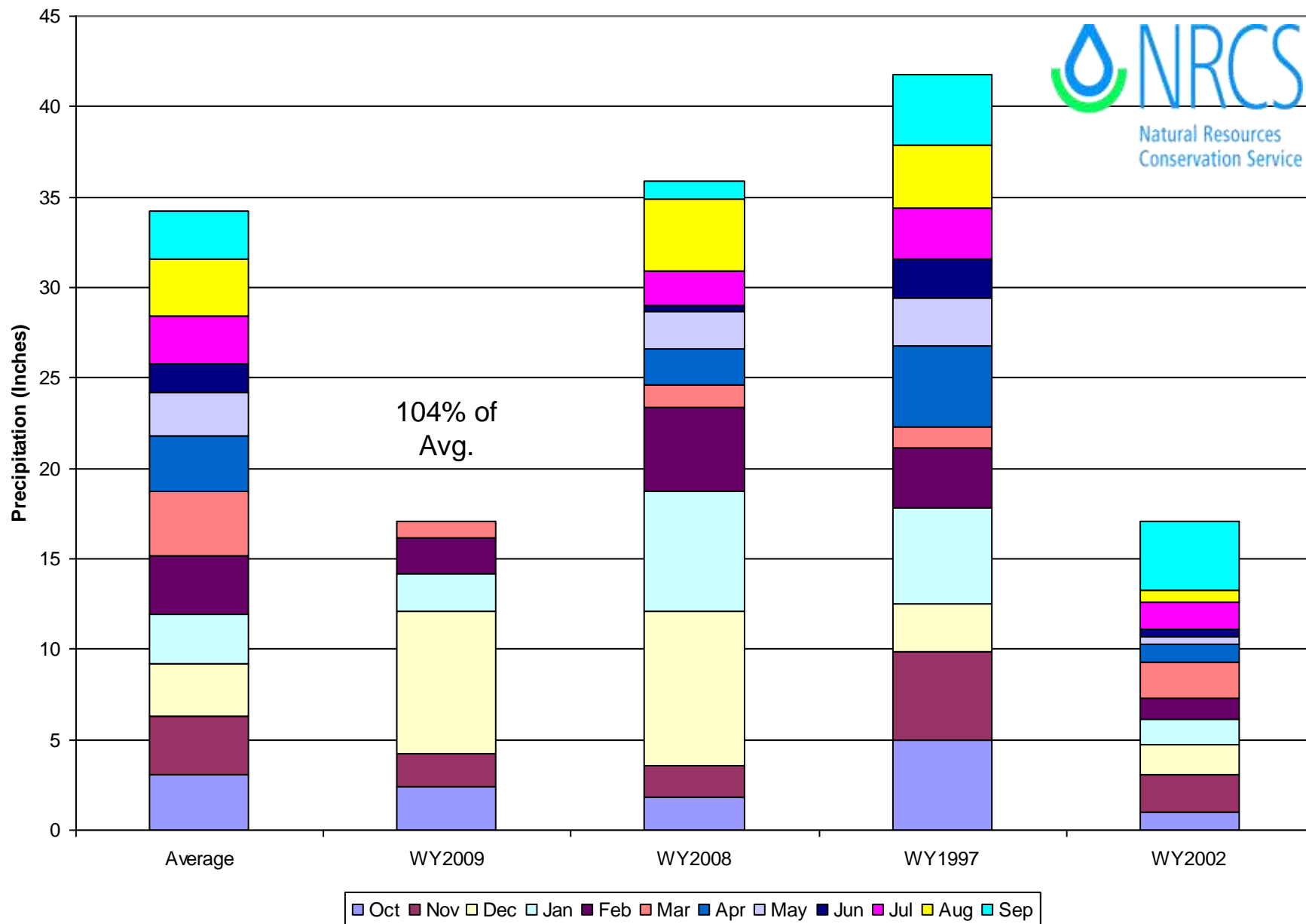
## Upper Rio Grande Basin High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of Mar 12, 2009*



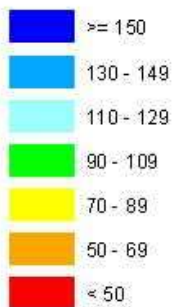
# Upper Rio Grande Basin High/Low Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of Mar 12, 2009*

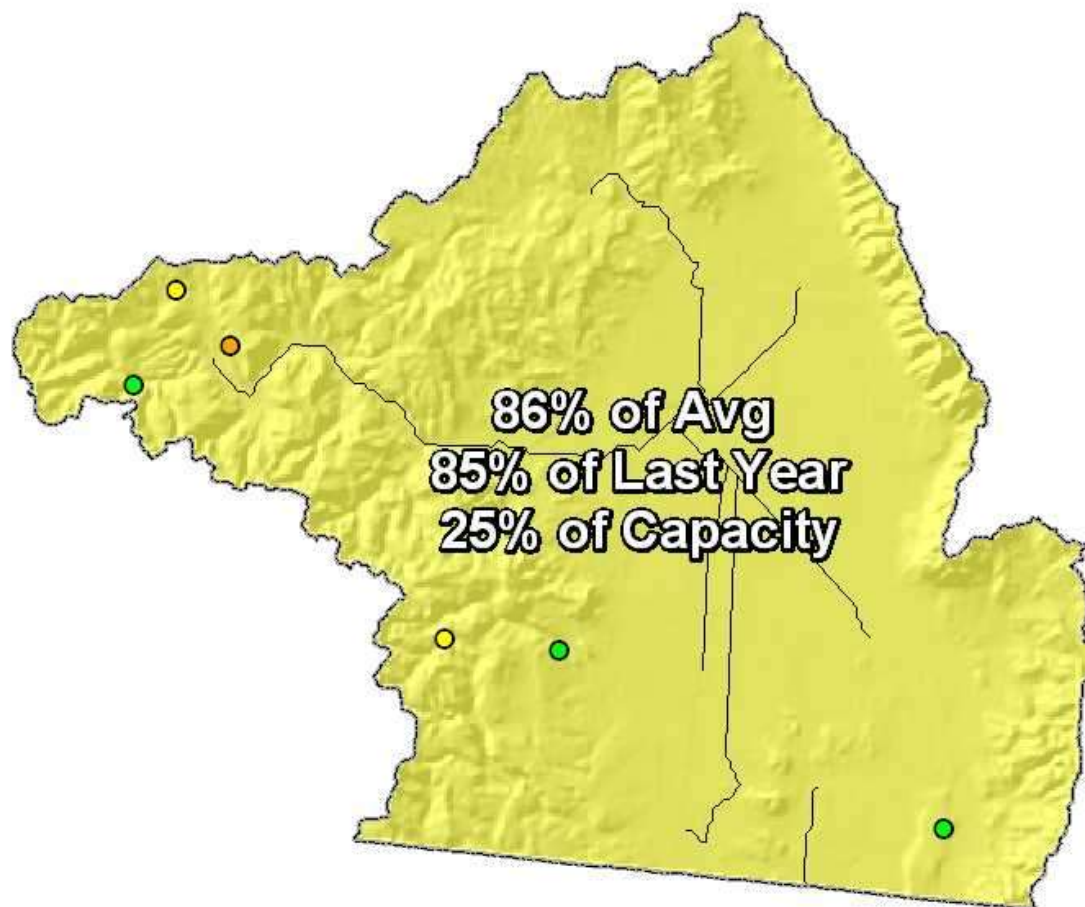


# Upper Rio Grande Basin Reservoir Storage Map

## Percent of Average



*Provisional Data  
Subject to Revision*



End of February 2009

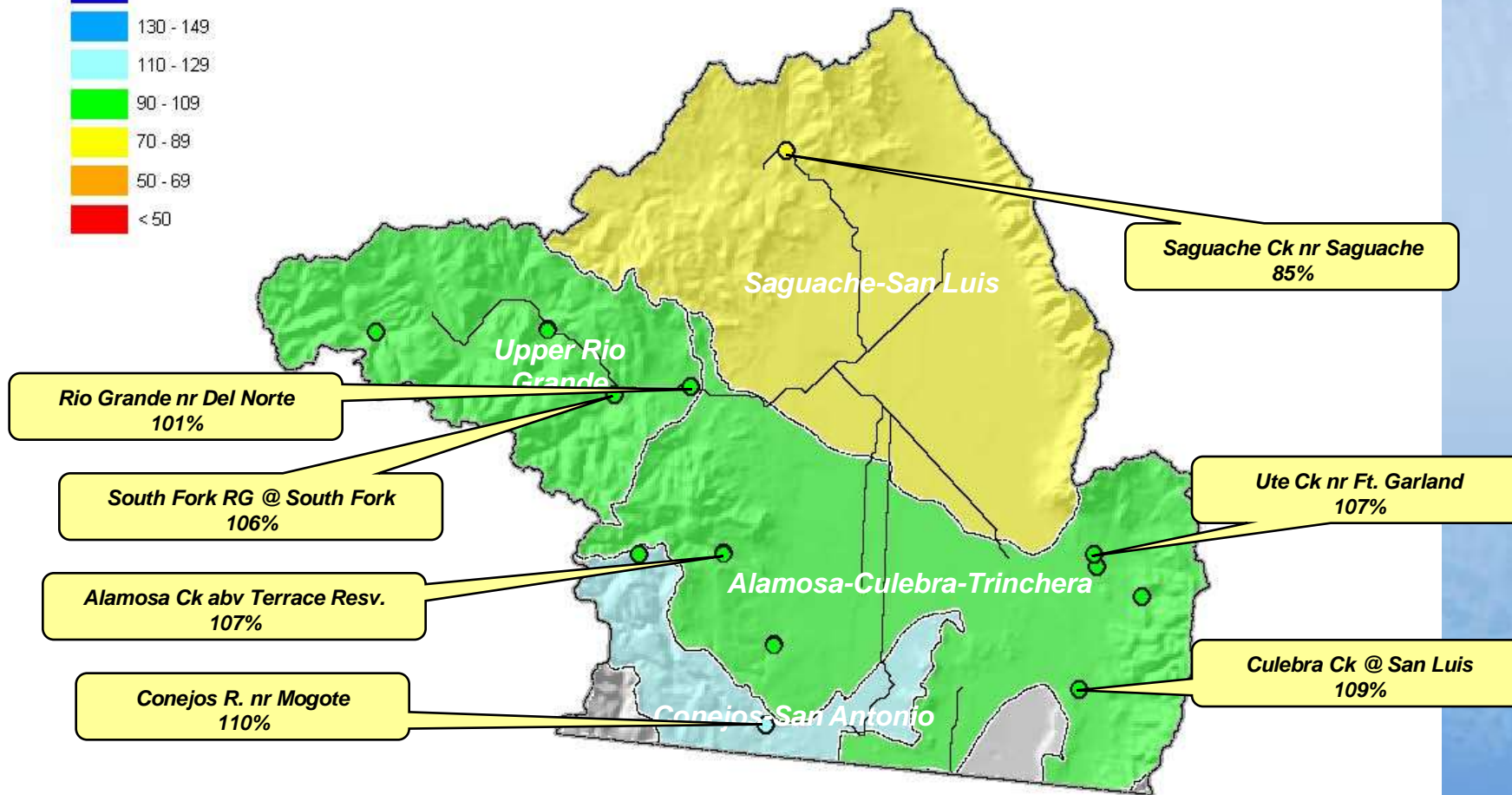


# Upper Rio Grande Basin Streamflow Forecast Map

Percent of Average

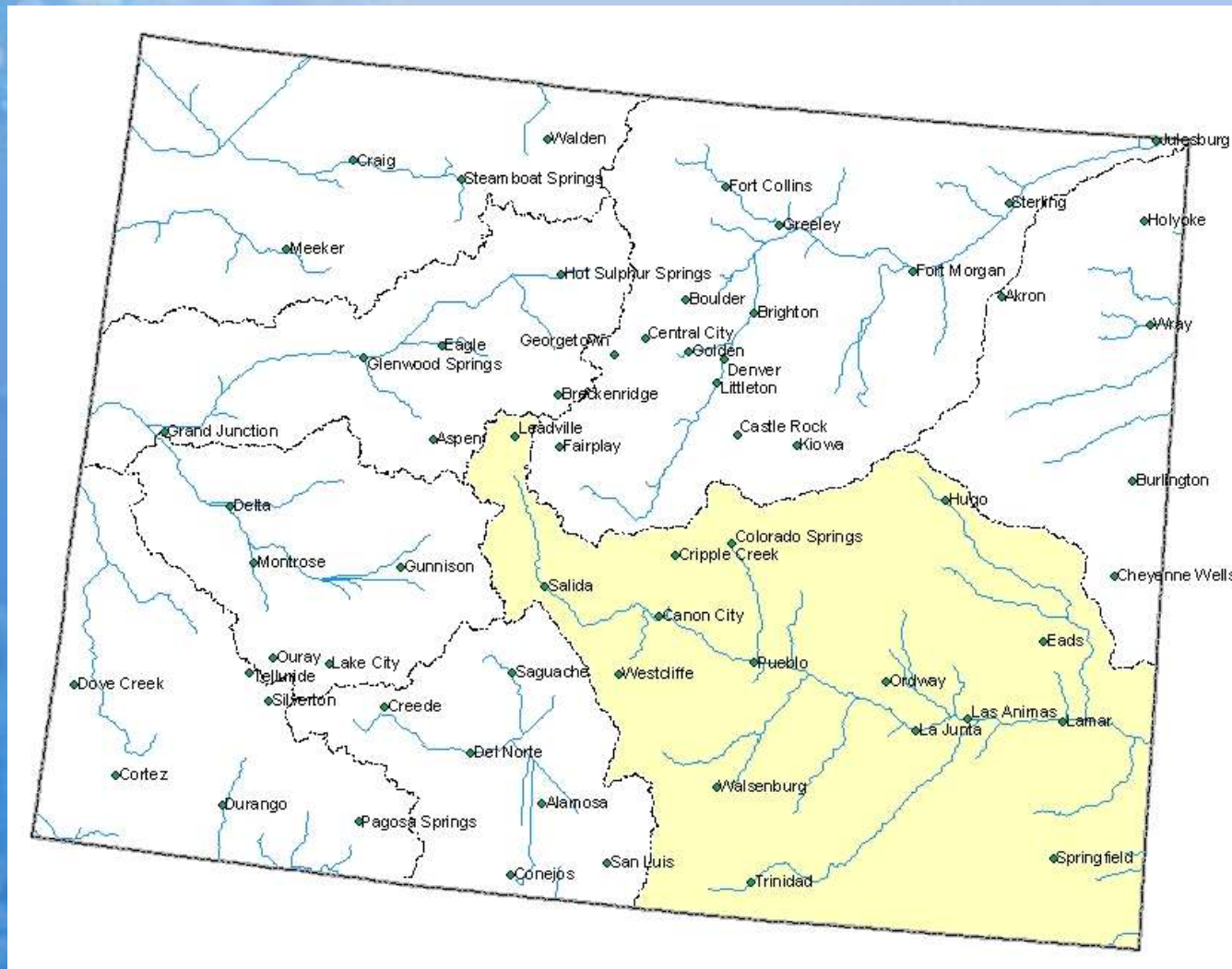


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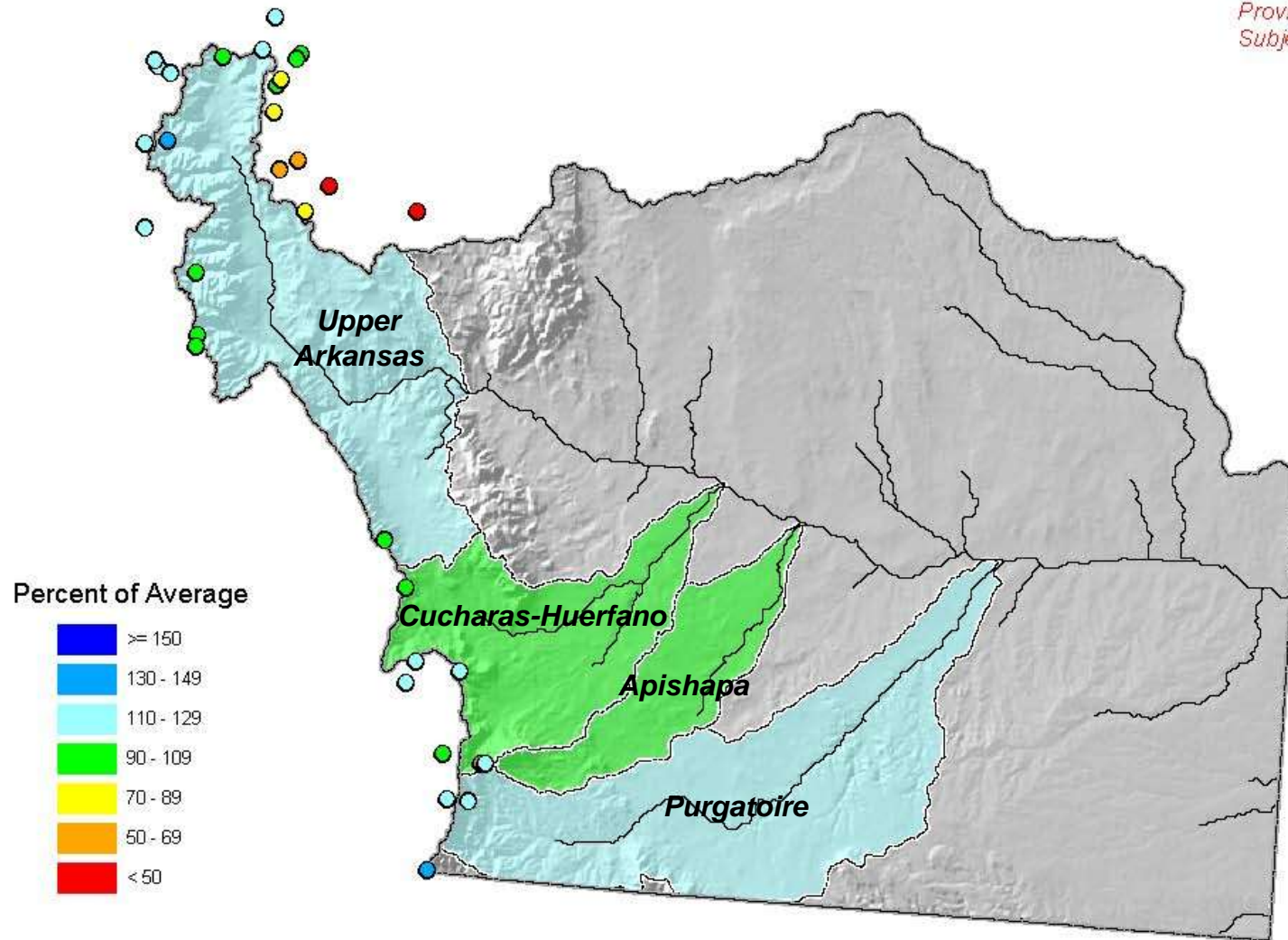
Current as of March 1, 2009

# Arkansas River Basin Summary



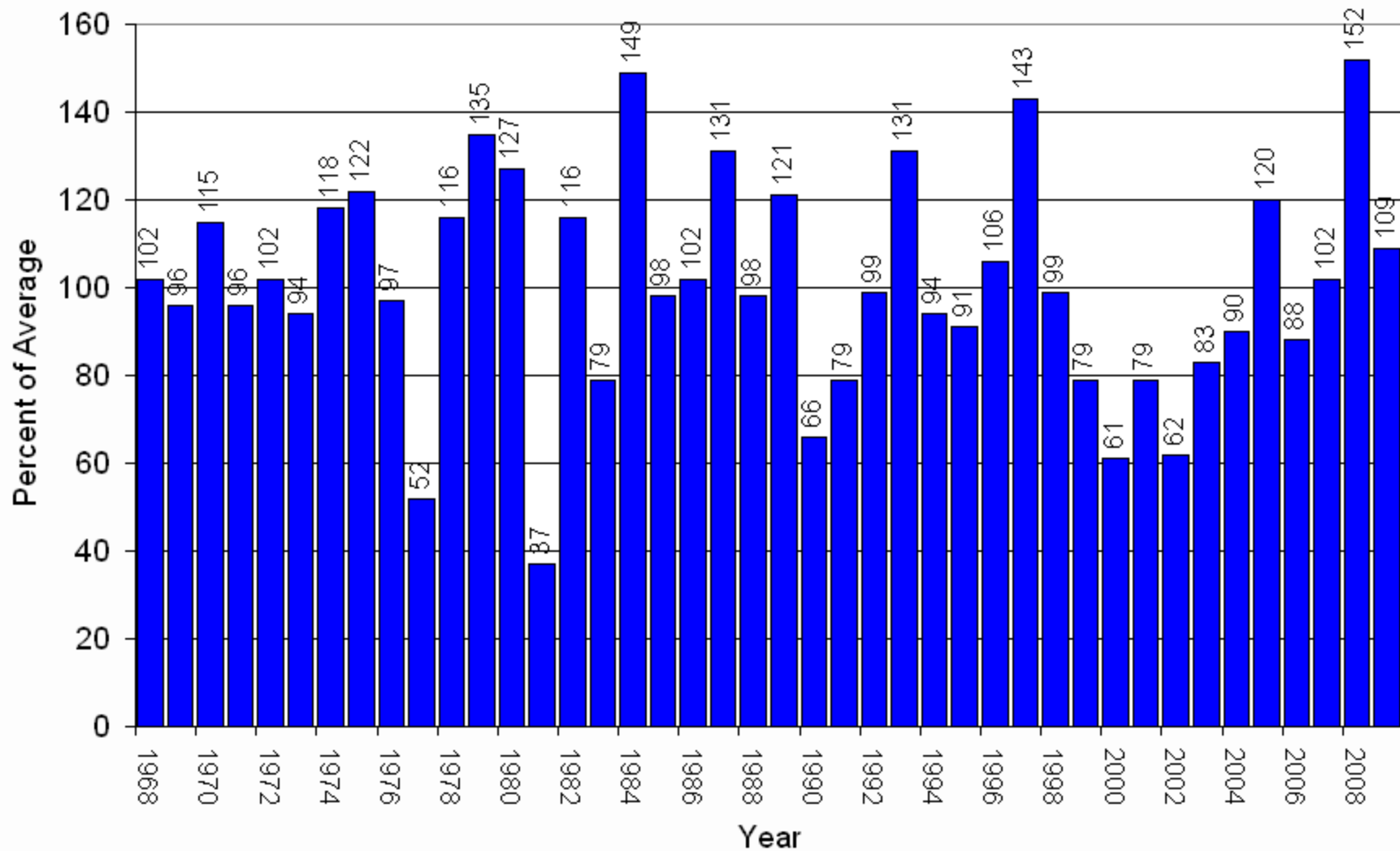
# Arkansas River Basin Snowpack Map

*Provisional Data  
Subject to Revision*



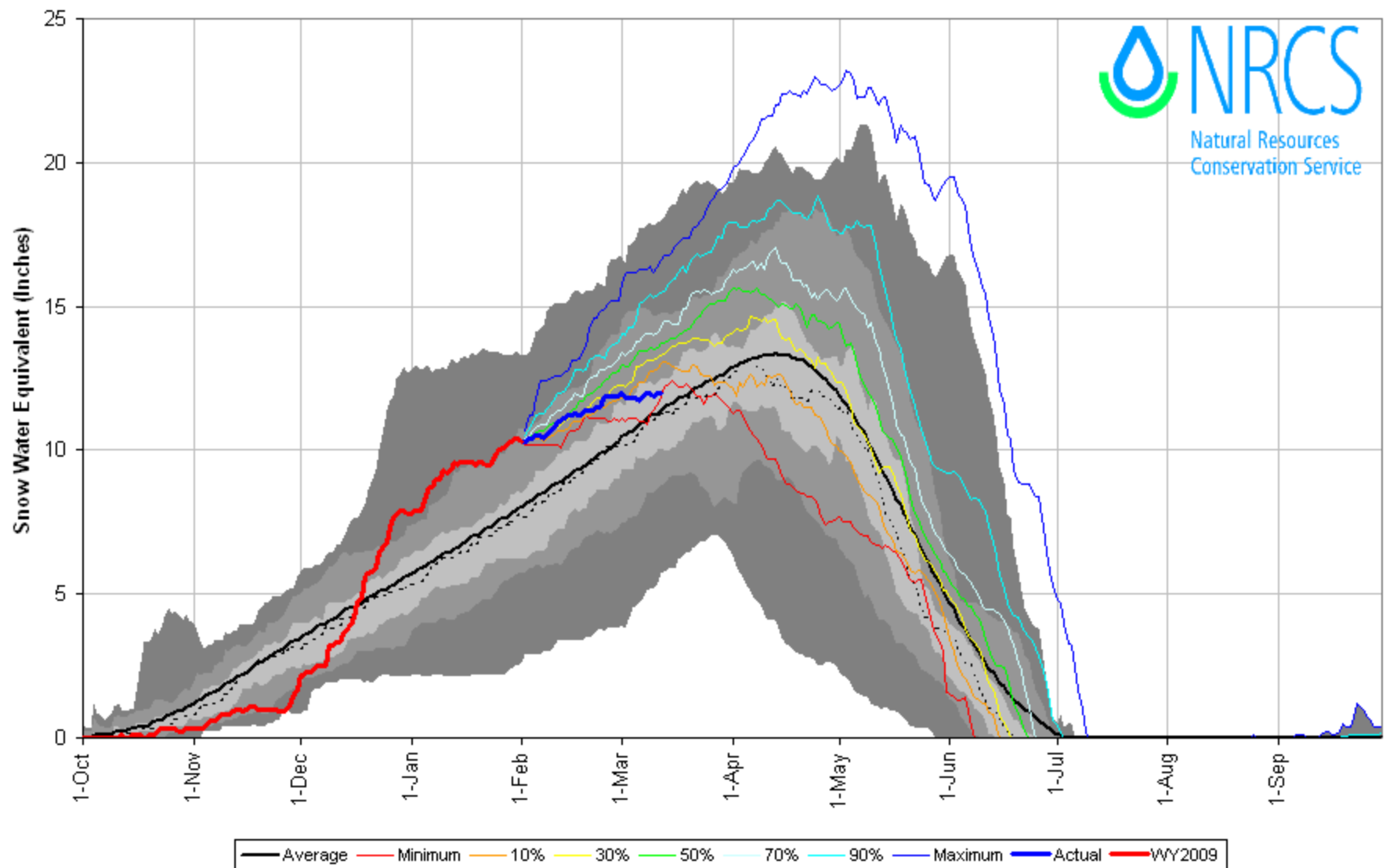
Current as of March 1, 2009

### March 1 Total Arkansas River Basin Snowpack





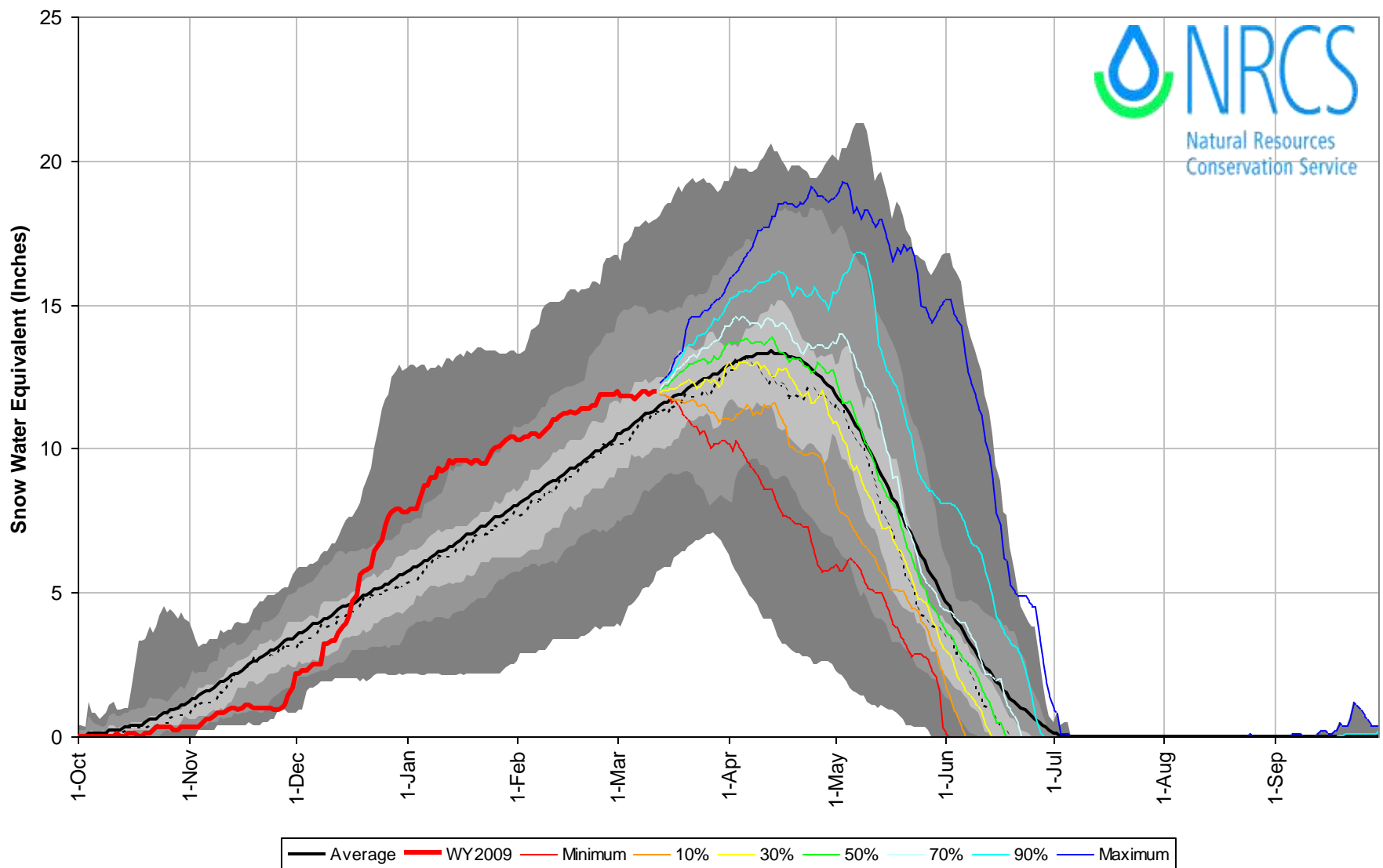
**Based on Provisional SNOTEL Data as of Mar 12, 2009**





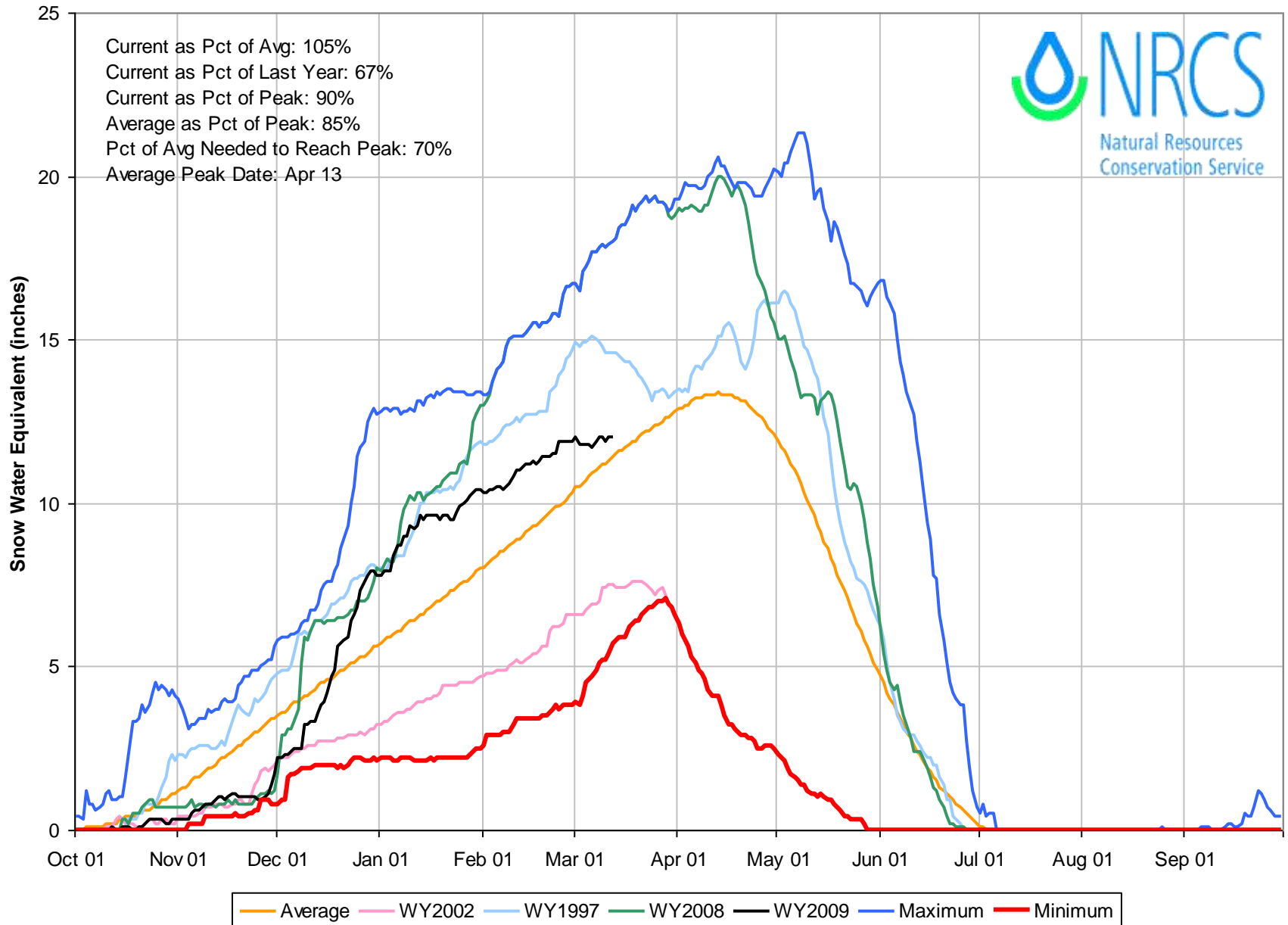
## Arkansas River Basin with Non-Exceedence Projections

*Based on Provisional SNOTEL Data as of Mar 12, 2009*



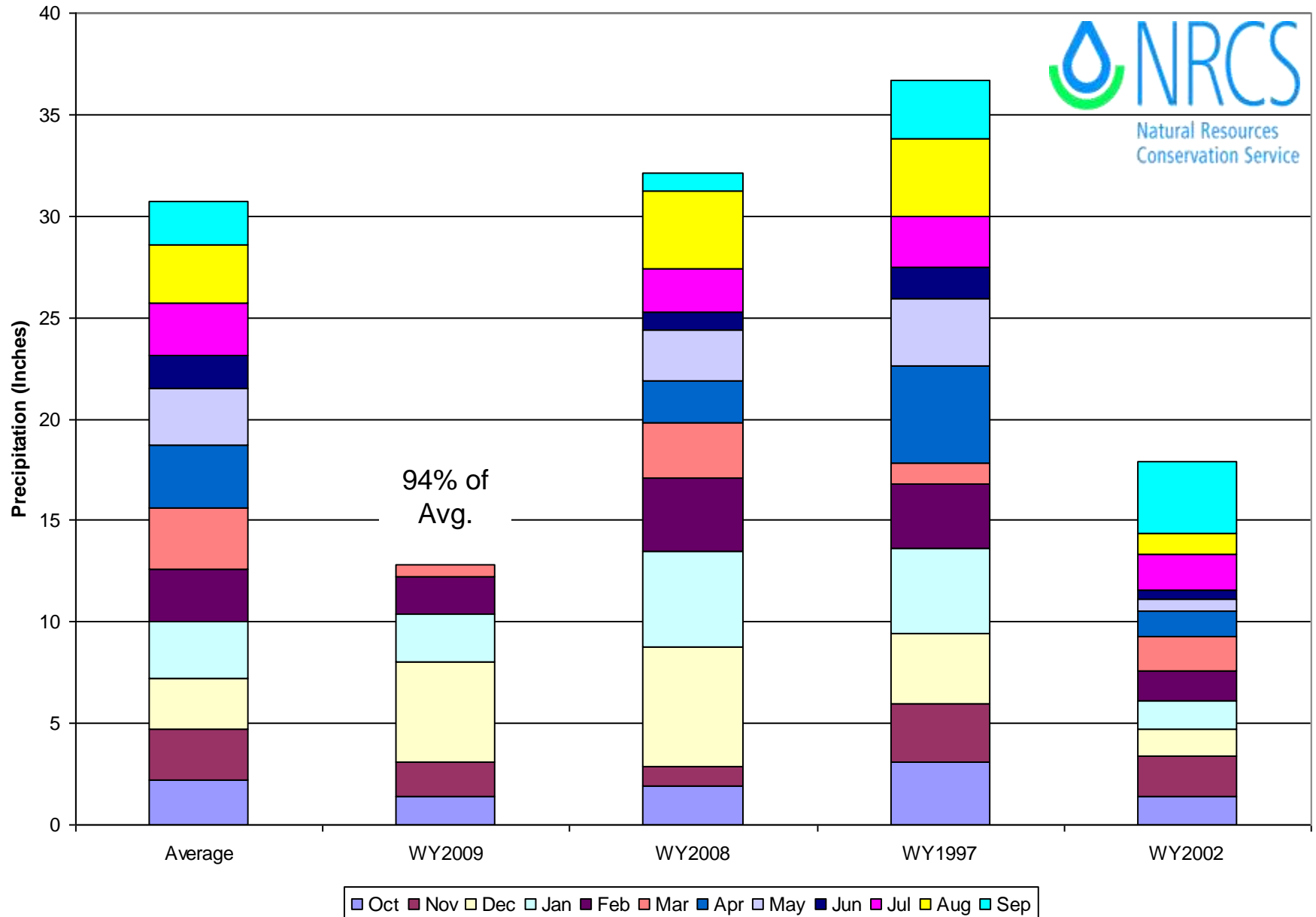
## Arkansas River Basin High/Low Snowpack Summary

*Based on Provisional SNOTEL data as of Mar 12, 2009*



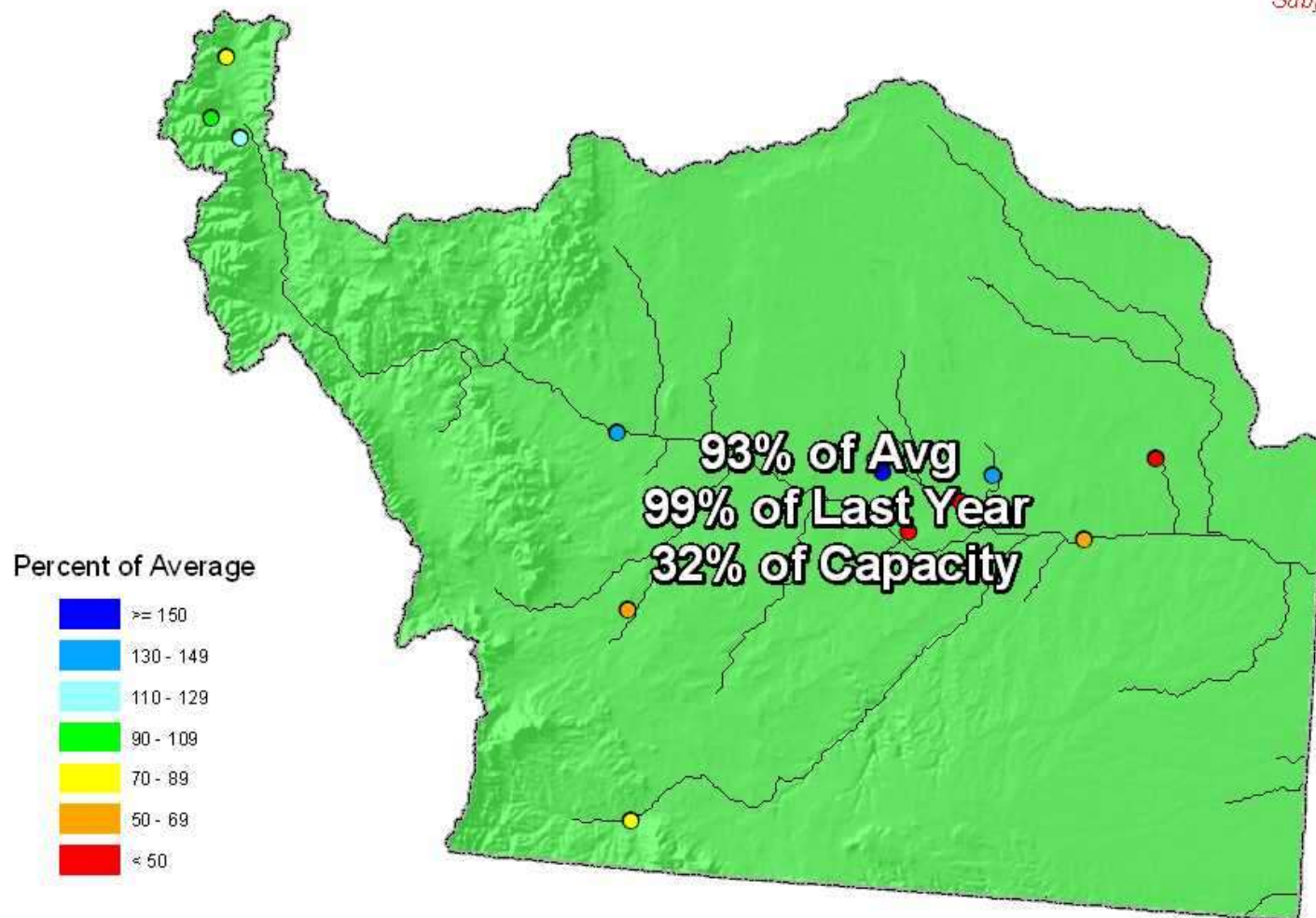
# Arkansas River Basin High/Low Monthly Precipitation Summary

*Based on Provisional SNOTEL data as of Mar 12, 2009*



# Arkansas River Basin Reservoir Storage Map

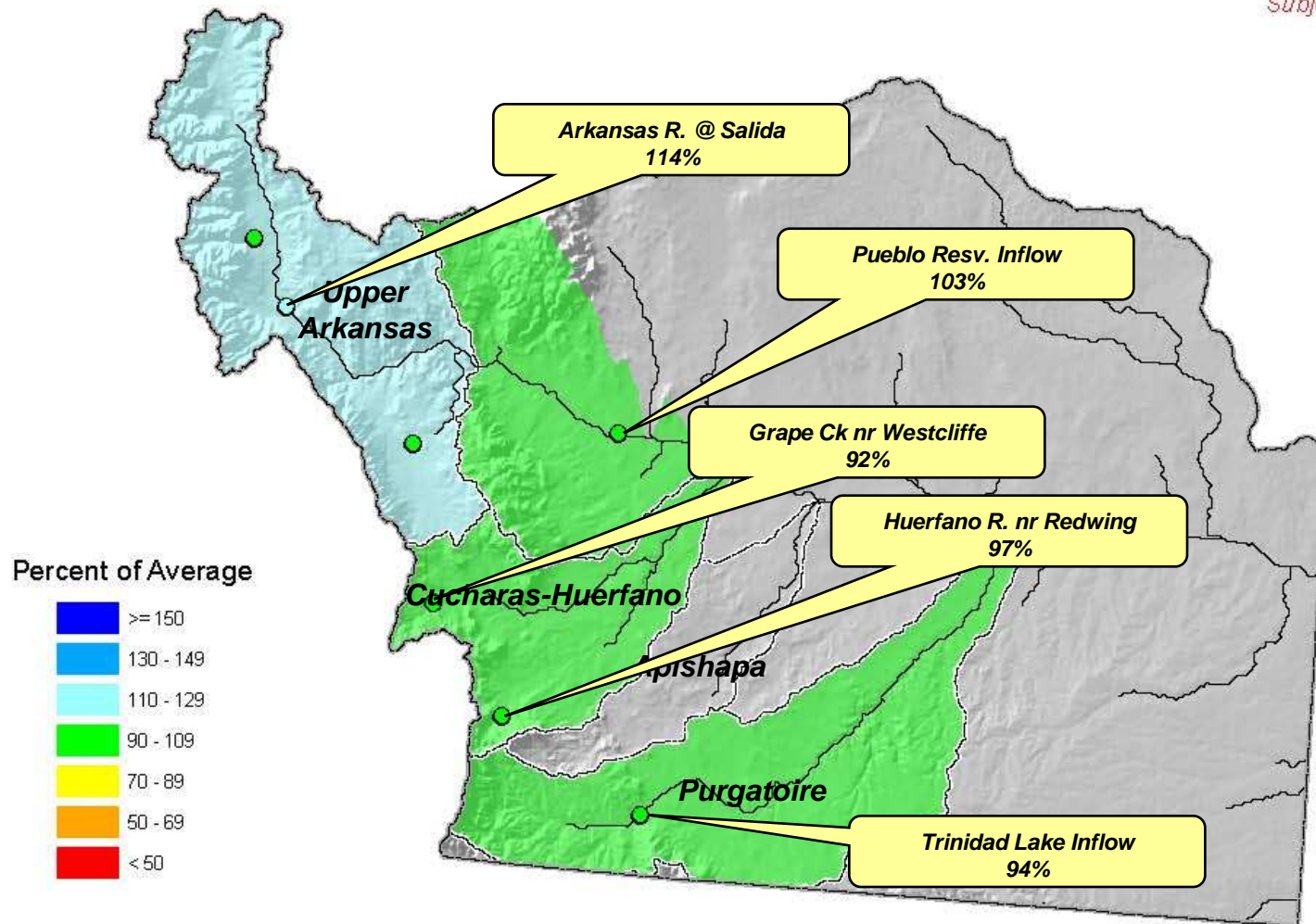
*Provisional Data  
Subject to Revision*



End of February 2009

# Arkansas River Basin Streamflow Forecast Map

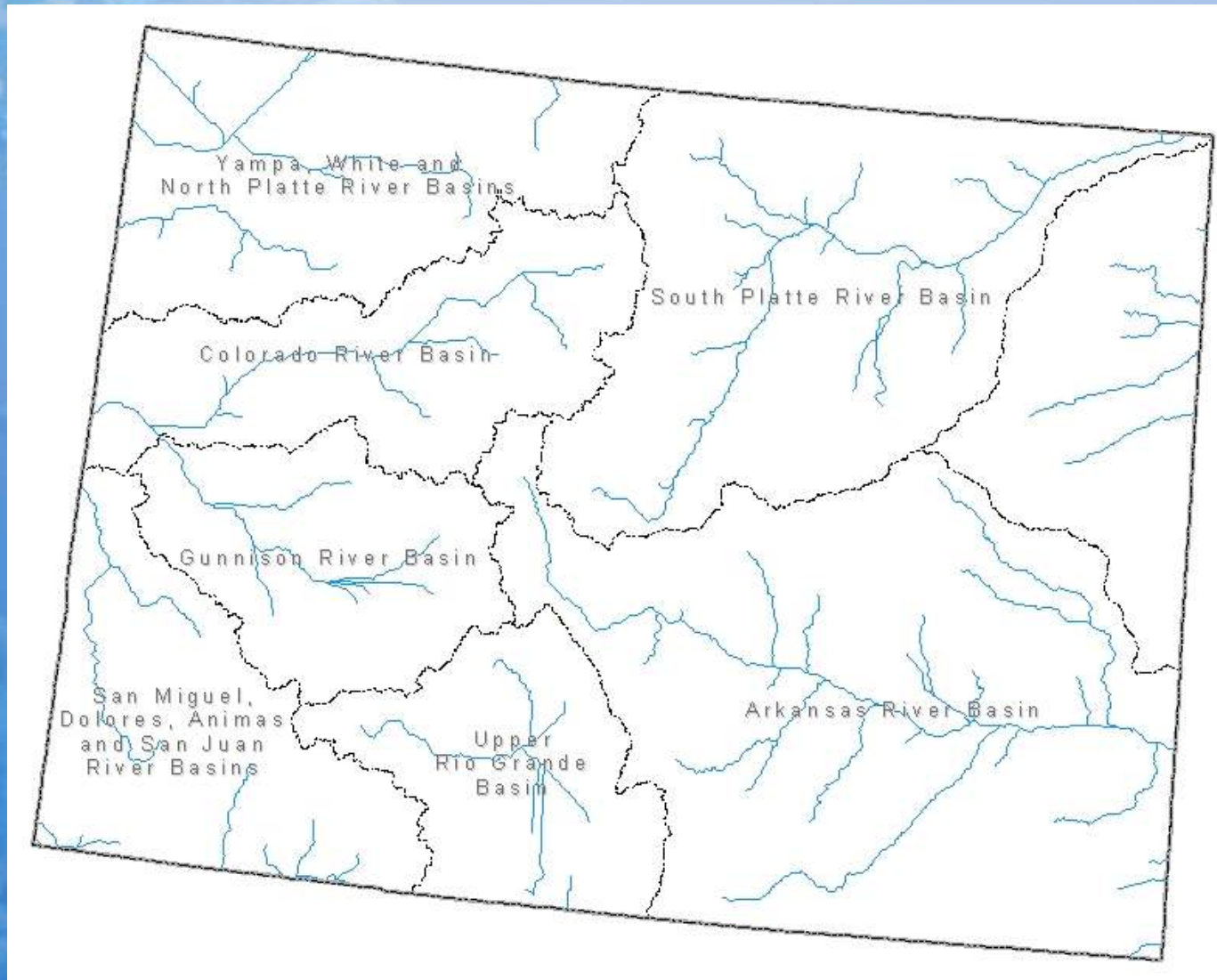
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Current as of March 1, 2009

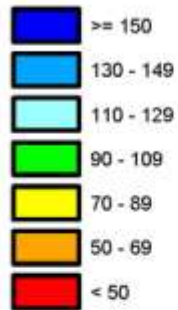


# Colorado Statewide Summary

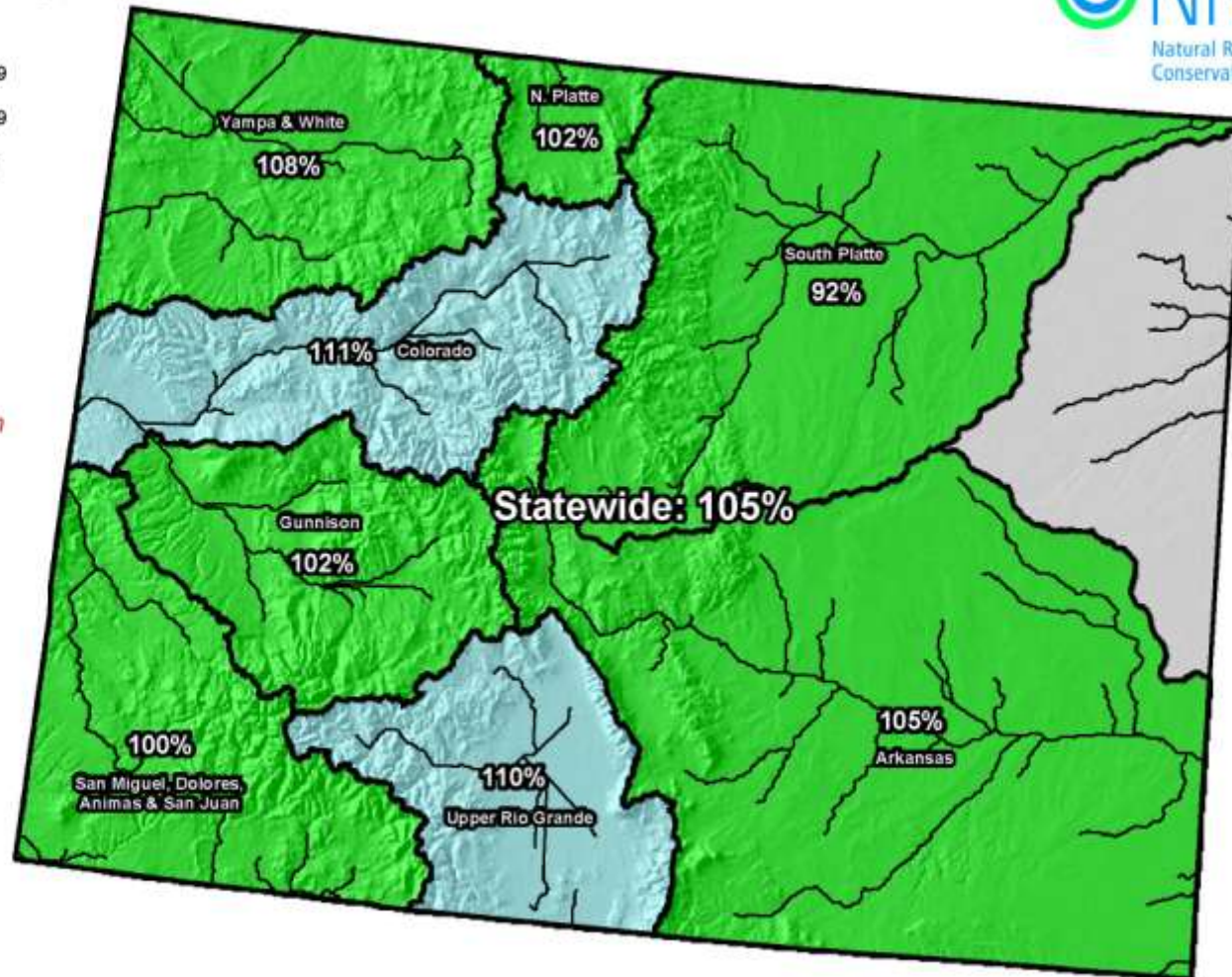


# Colorado SNOTEL Snowpack Update Map

Percent of Average



*Provisional Data  
Subject to Revision*



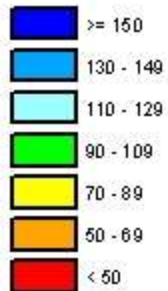
Current as of Mar 12, 2009

\*Data may not provide a valid measure of conditions

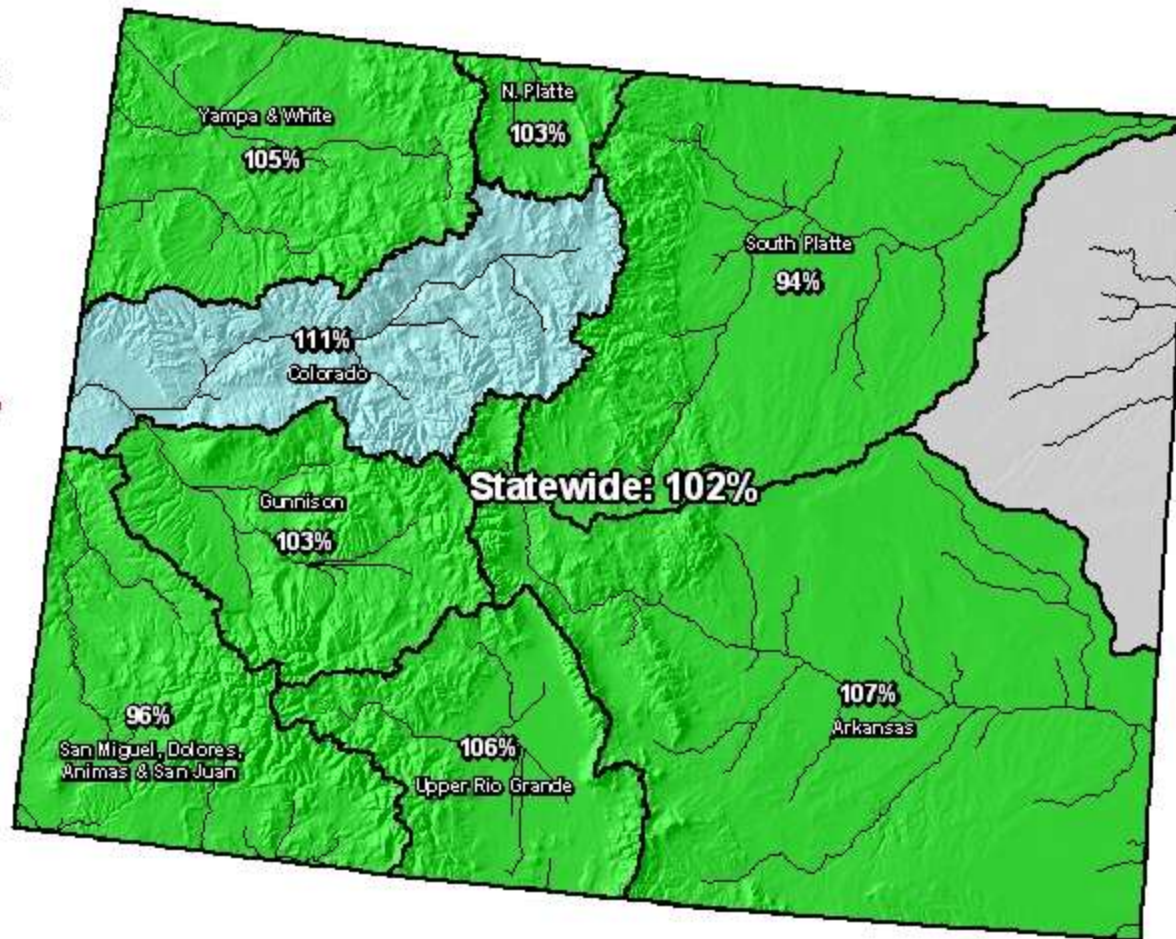


## Colorado SNOTEL April 1 Snowpack Projection Map\*

Percent of Average



*Provisional Data  
Subject to Revision*



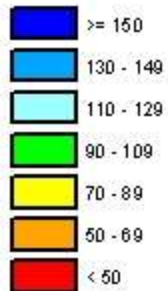
Current as of Mar 12, 2009

\*Based on 50% Non-Exceedence Projections

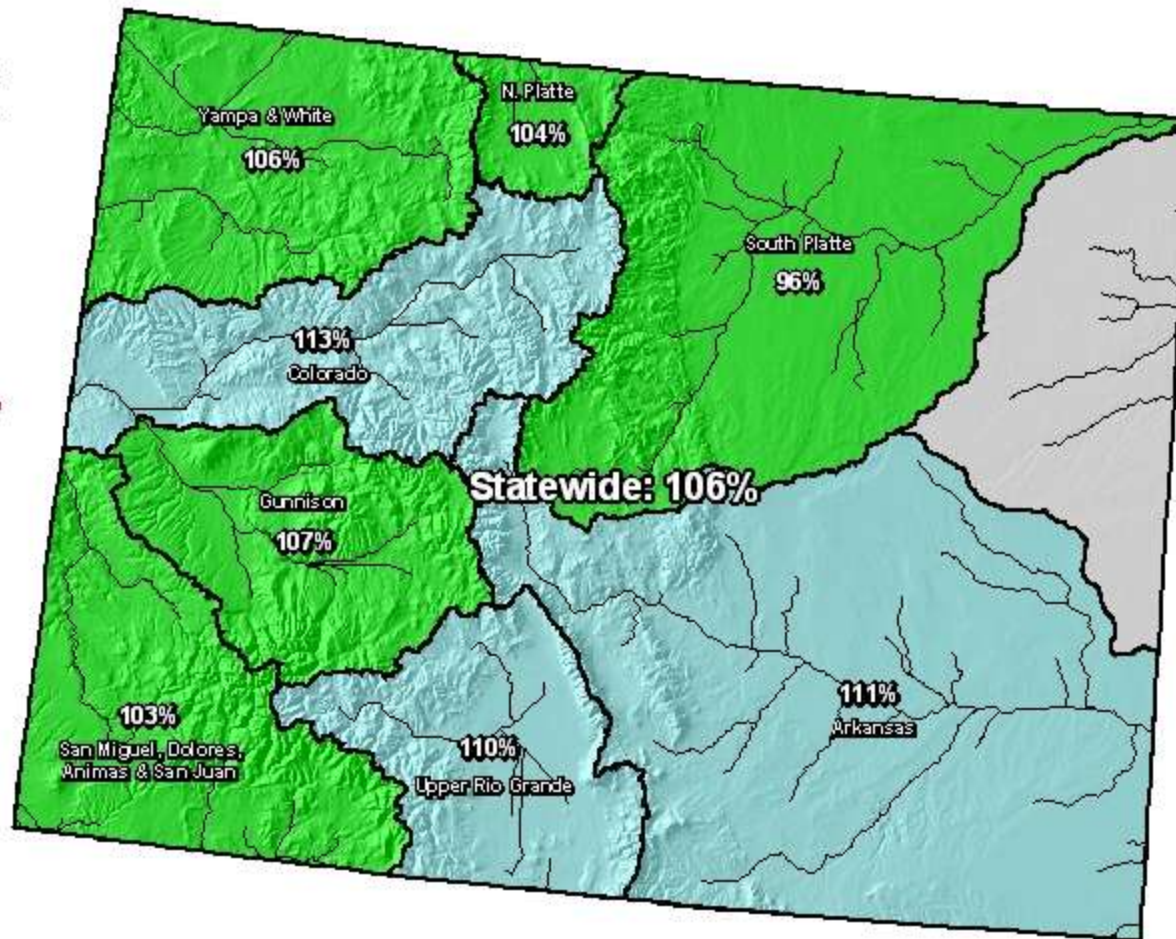
Future precipitation = Median

## Colorado SNOTEL April 1 Snowpack Projection Map\*

Percent of Average



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Current as of Mar 12, 2009

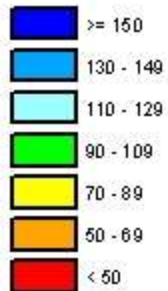
\*Based on 70% Non-Exceedence Projections

Future precipitation = Wetter 30% of the time

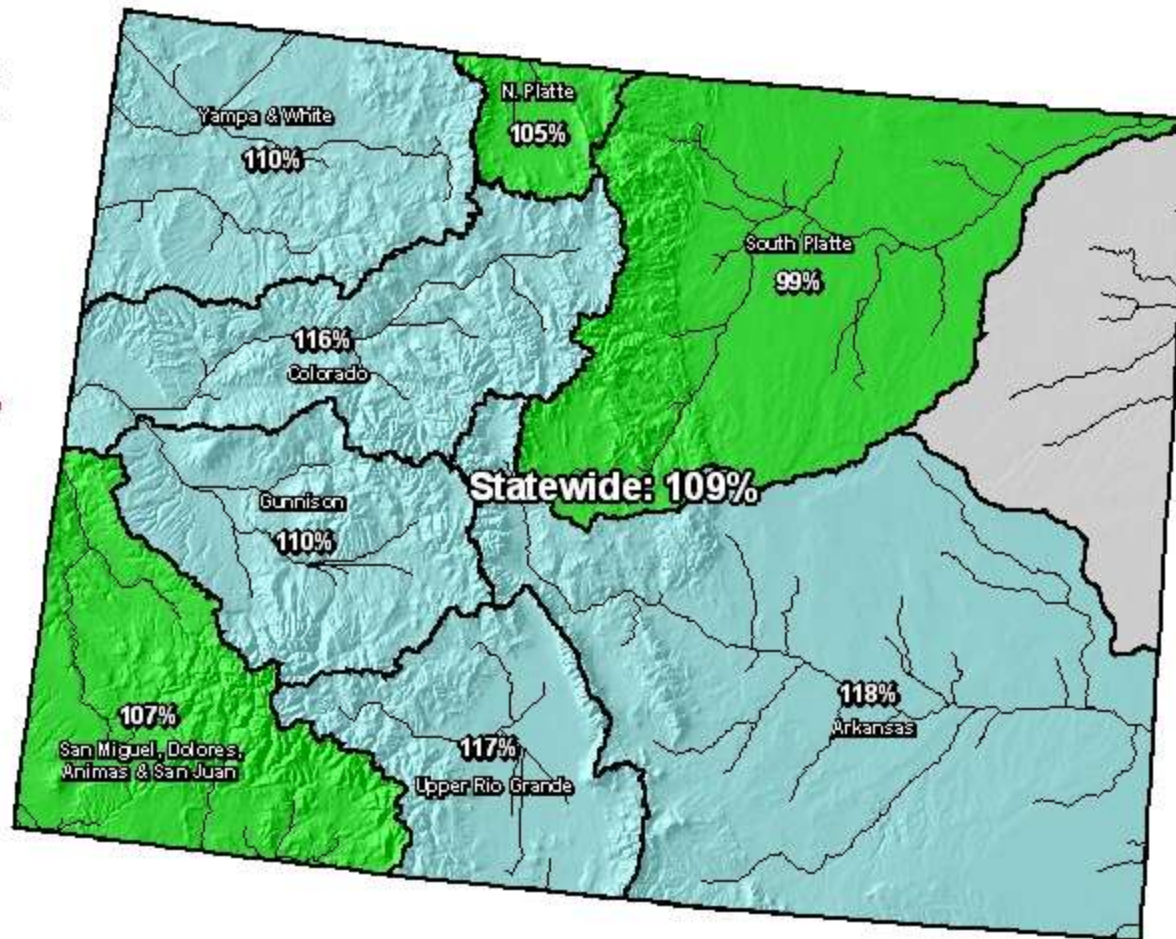


# Colorado SNOTEL April 1 Snowpack Projection Map\*

Percent of Average



*Provisional Data  
Subject to Revision*



Current as of Mar 12, 2009

\*Based on 90% Non-Exceedence Projections

Future precipitation = Wetter 10% of the time

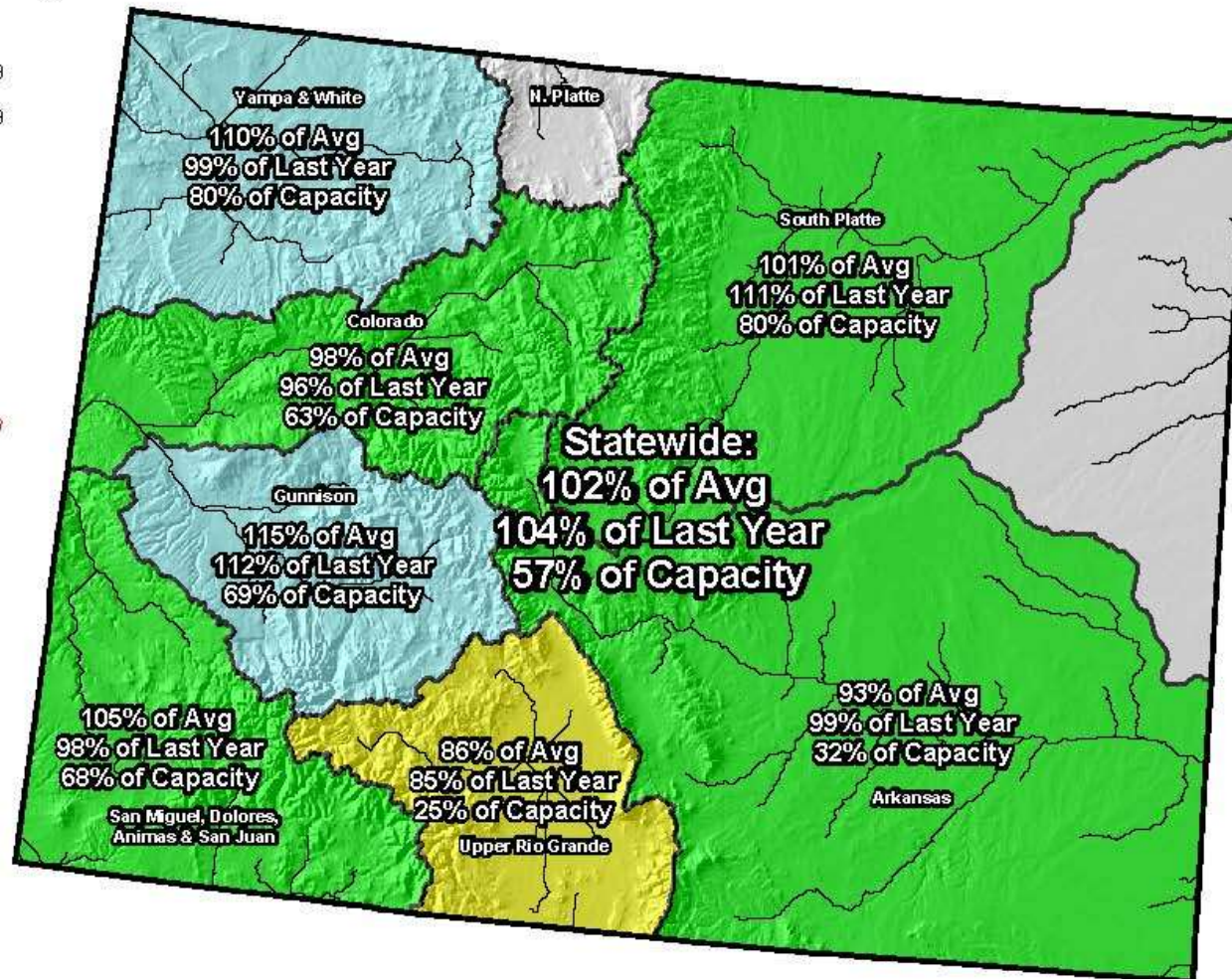


# Colorado Reservoir Storage Map

Percent of Average



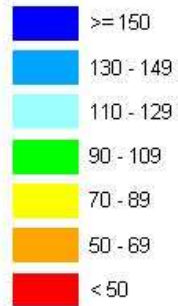
*Provisional Data  
Subject to Revision*



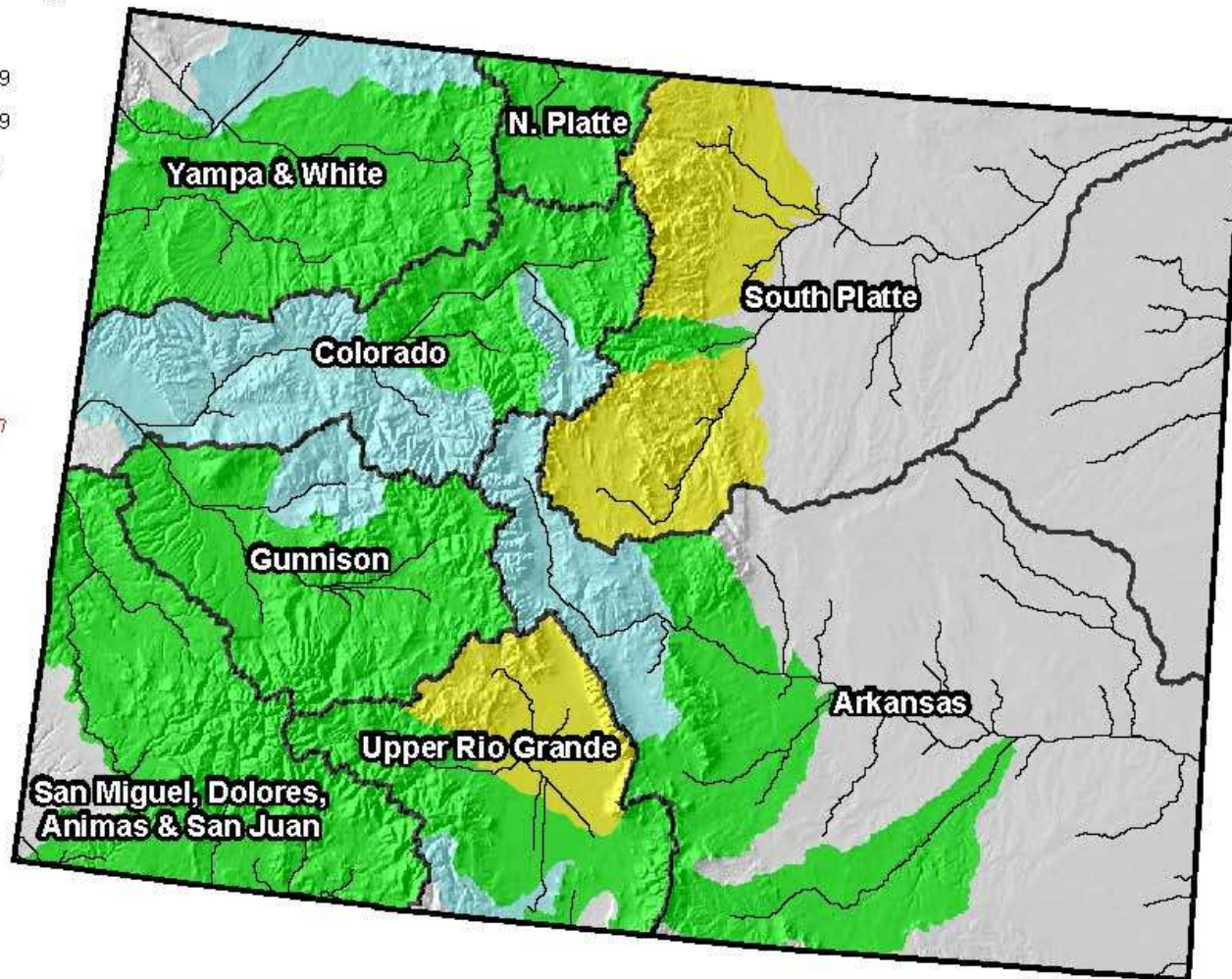
End of February 2009

# Colorado Streamflow Forecast Map

Percent of Average



*Provisional Data  
Subject to Revision*



Current as of March 1, 2009

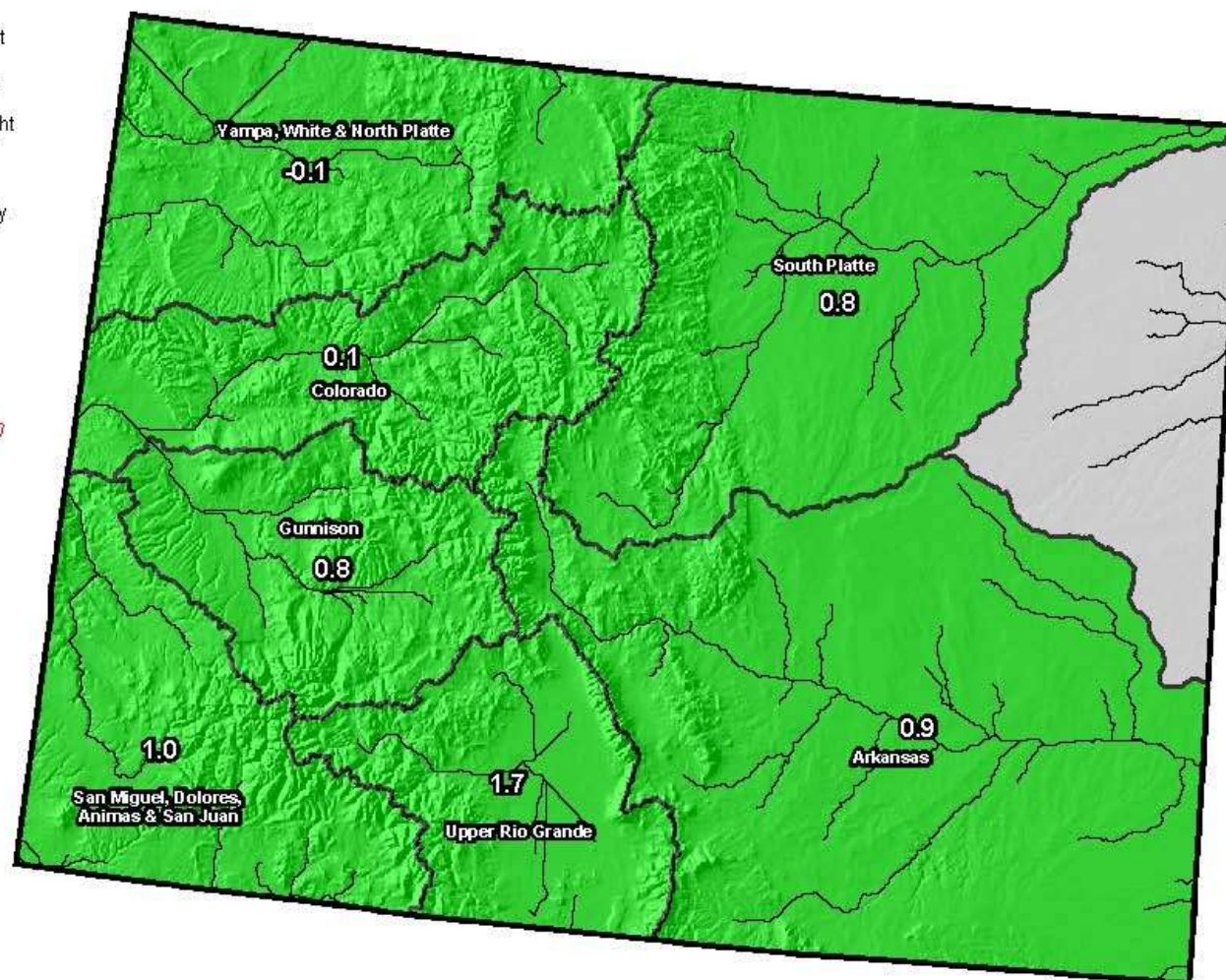


# Colorado Surface Water Supply Index (SWSI) Map

## Legend



*Provisional Data  
Subject to Revision*



Current as of March 1, 2009