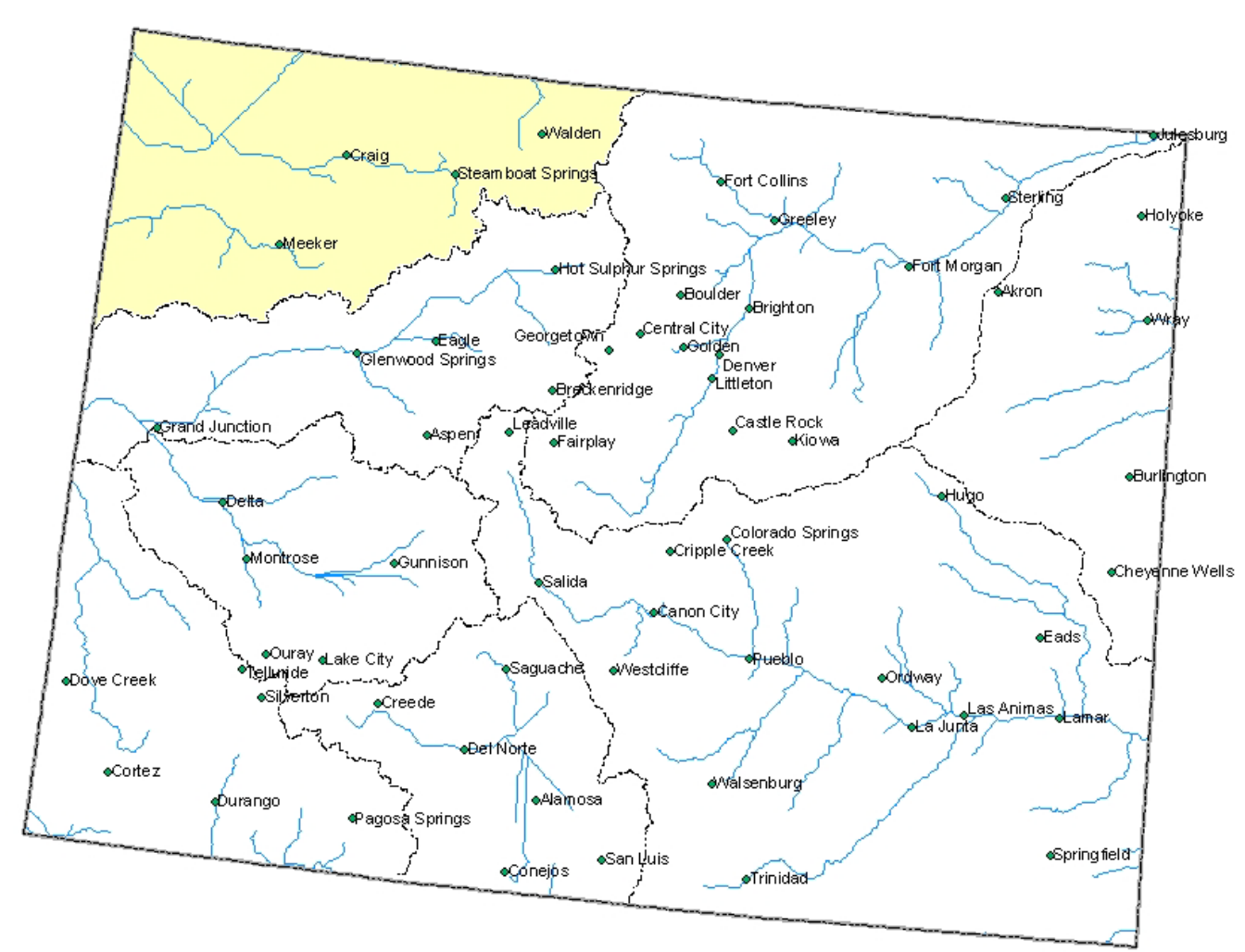
Water Availability Task Force Meeting
February 18th, 2015

NRCS Snow Survey and Water Supply Forecasting Program

Brian Domonkos
Colorado Snow Survey Supervisor
720-544-2852
http://www.nrcs.usda.gov/wps/portal/nrcs/main/co/snow/

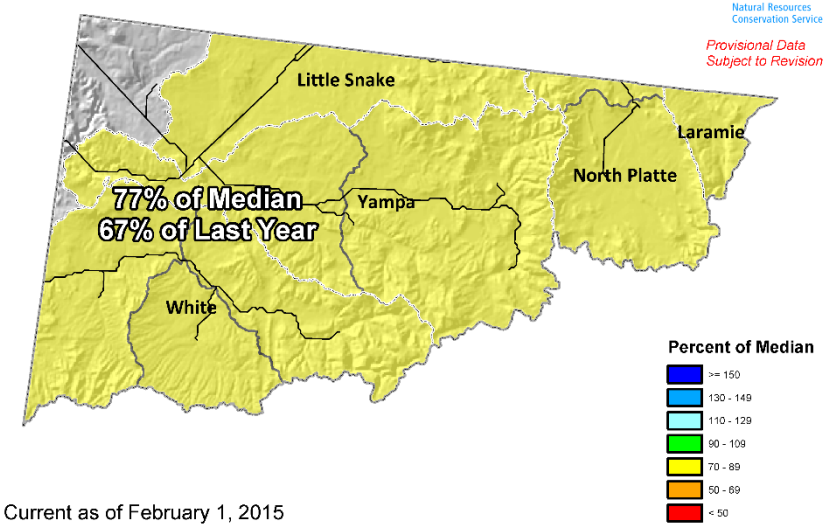
Yampa, White & North Platte River Basins Summary



USDA United States Department of Agriculture

Colorado Snow Surveys

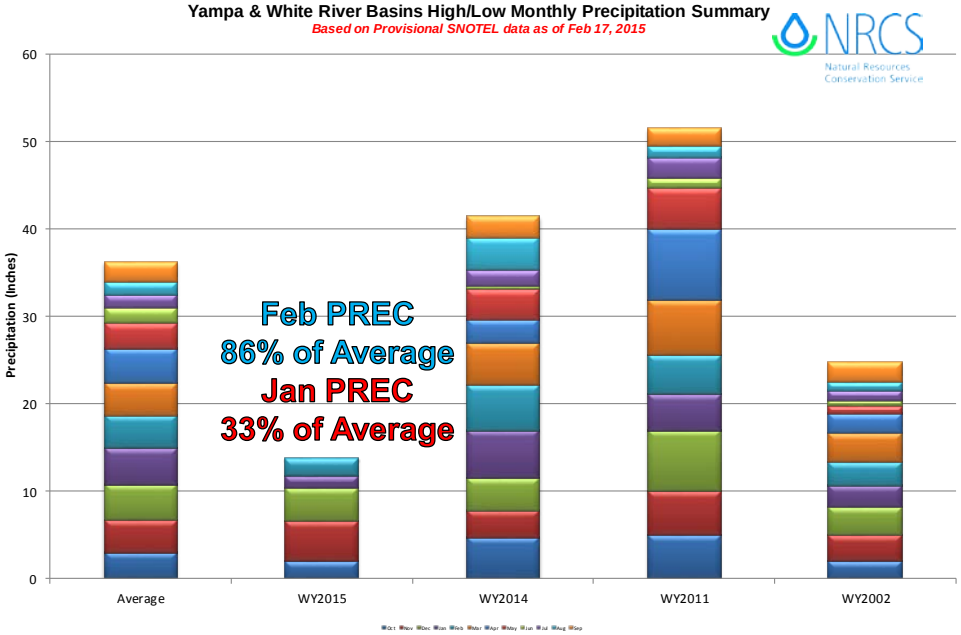
Yampa, White and North Platte River Basins Snowpack Map



Current as of February 1, 2015

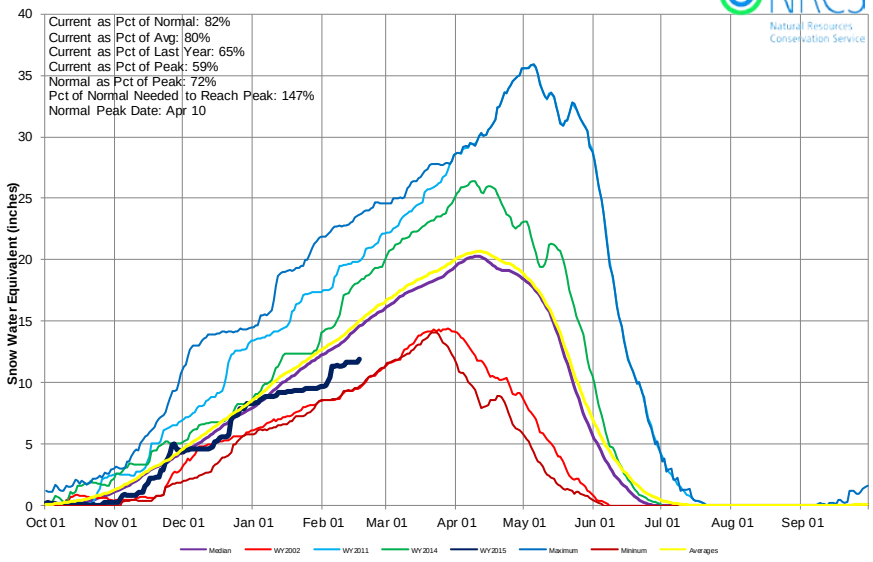
Yampa & White River Basins High/Low Monthly Precipitation Summary

Based on Provisional SNOTEL data as of Feb 17, 2015



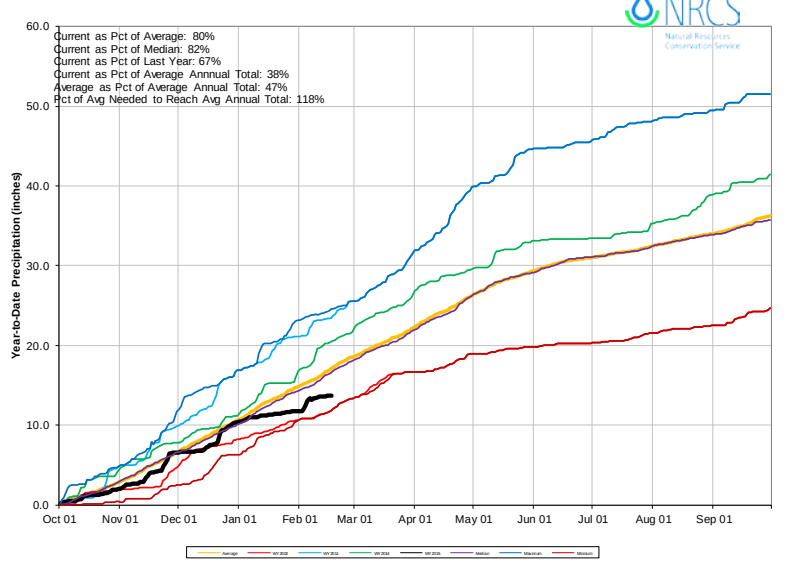
Yampa, White & North Platte River Basins High/Low Snowpack Summary

Based on Provisional SNOTEL data as of Feb 17, 2015



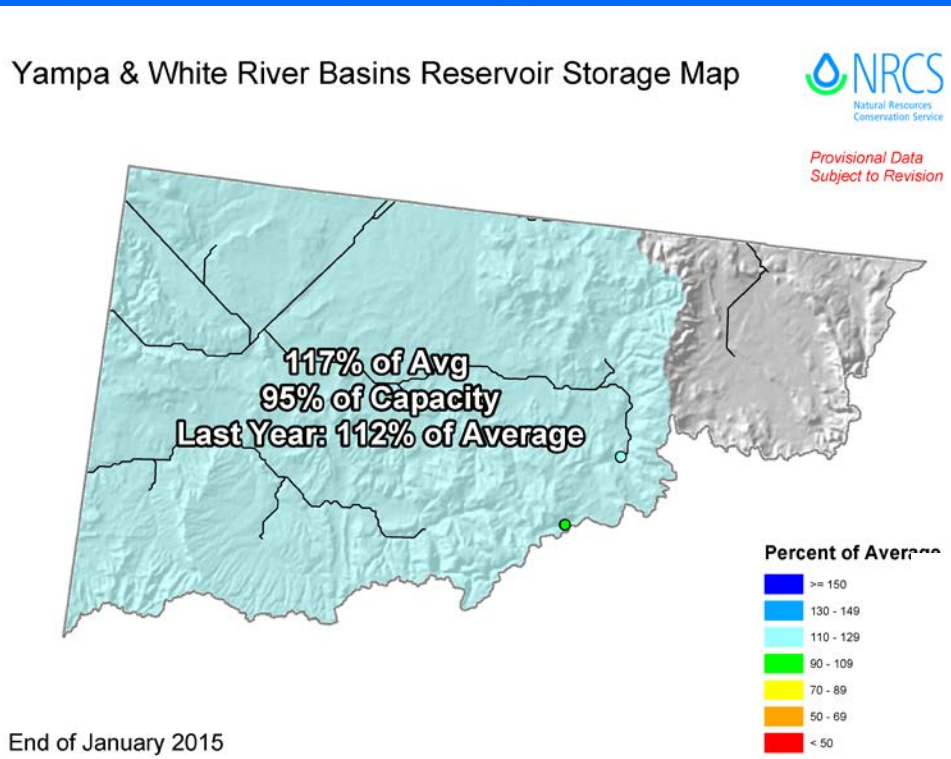
Yampa & White River Basins High/Low Year-to-Date Precipitation Summary

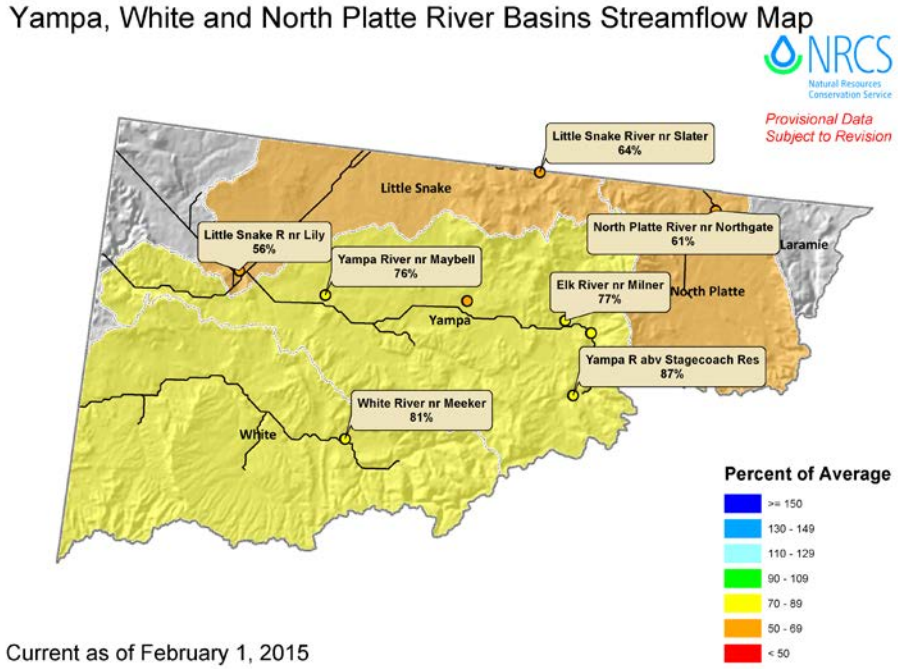
Based on Provisional SNOTEL data as of Feb 17, 2015



USDA
United States Department of Agriculture

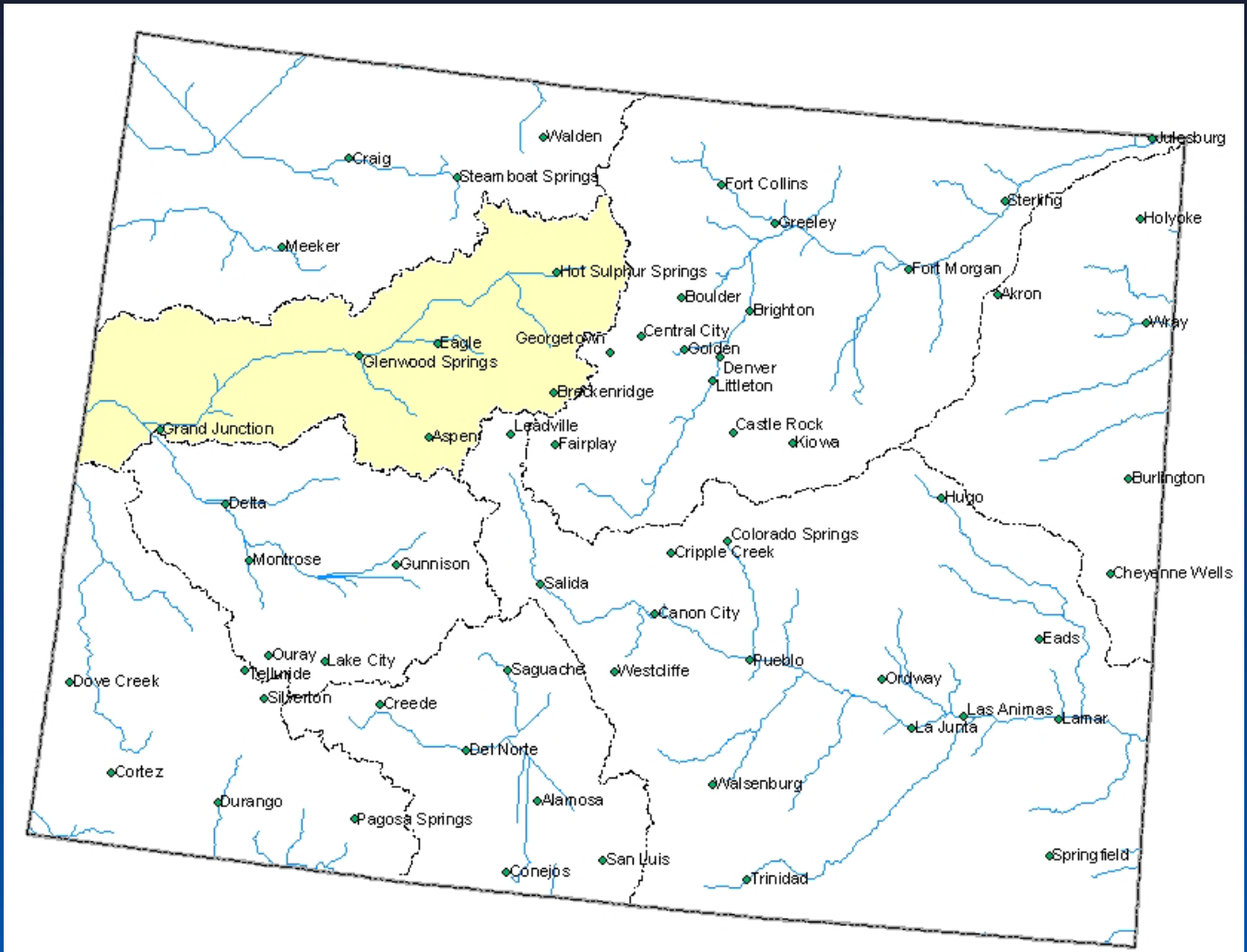
Colorado Snow Surveys





- Snowpack
  - Ranked 25/30 years
  - This year currently compares most closely to 2012

Colorado River Basin Summary



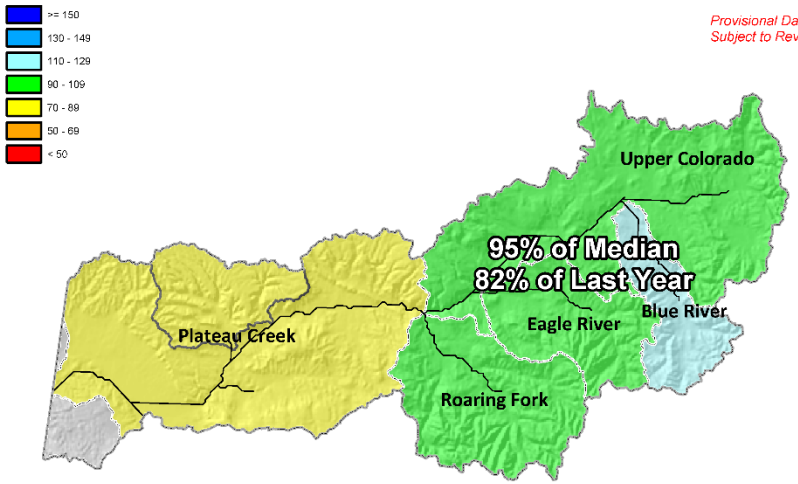
USDA United States Department of Agriculture

Colorado Snow Surveys

Colorado River Basin Snowpack Map

NRCS Natural Resources Conservation Service

Provisional Data Subject to Revision

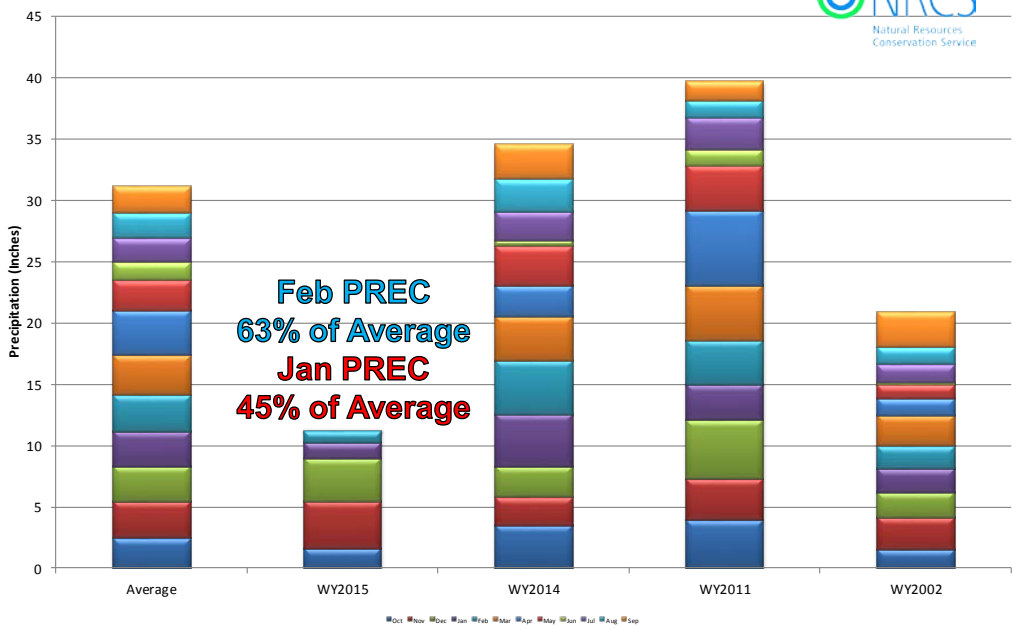


Current as of February 1, 2015

Upper Colorado River Basin High/Low Monthly Precipitation Summary

Based on Provisional SNOTEL data as of Feb 17, 2015

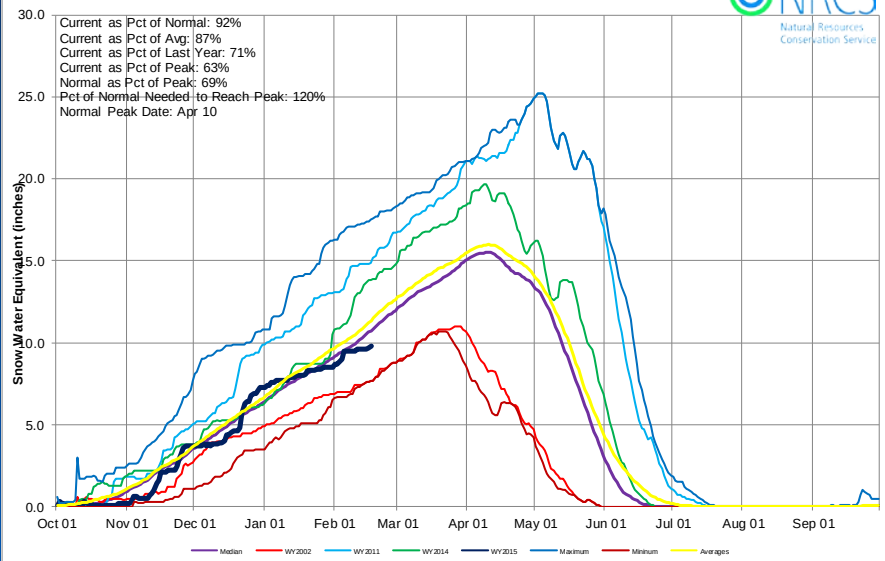
NRCS Natural Resources Conservation Service



Upper Colorado River Basin High/Low Snowpack Summary

Based on Provisional SNOTEL data as of Feb 17, 2015

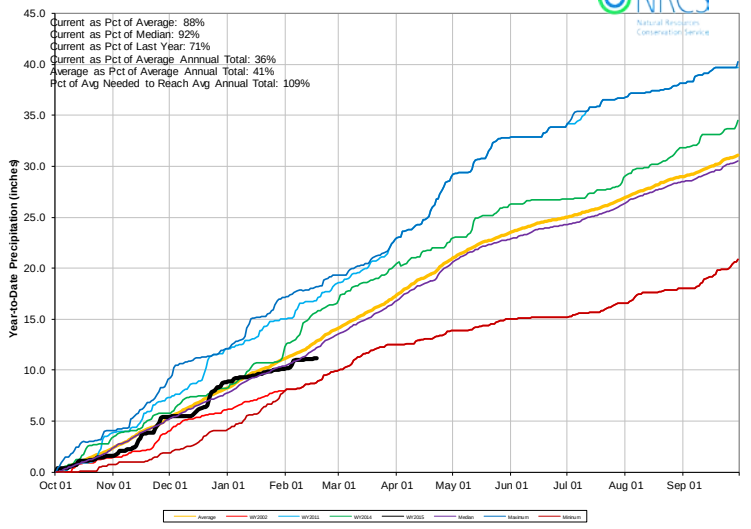
NRCS Natural Resources Conservation Service



Upper Colorado River Basin High/Low Year-to-Date Precipitation Summary

Based on Provisional SNOTEL data as of Feb 17, 2015

NRCS Natural Resources Conservation Service



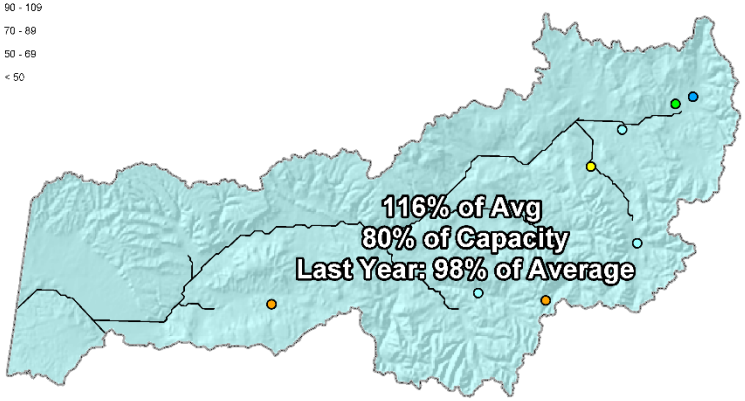
Colorado River Basin Reservoir Storage Map

NRCS Natural Resources Conservation Service

Provisional Data Subject to Revision

Percent of Average

- >= 150
- 130 - 149
- 110 - 129
- 90 - 109
- 70 - 89
- 50 - 69
- < 50



End of January 2015

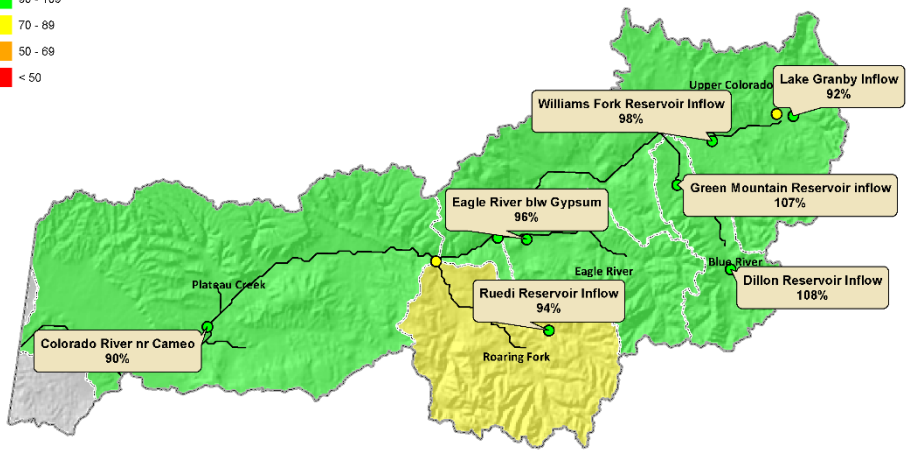
Colorado River Basin Streamflow Forecast Map

NRCS Natural Resources Conservation Service

Provisional Data Subject to Revision

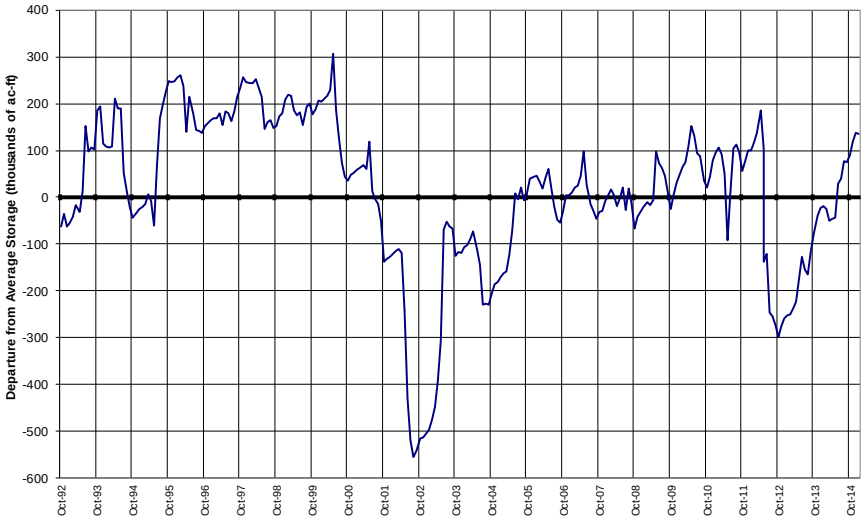
Percent of Average

- >= 150
- 130 - 149
- 110 - 129
- 90 - 109
- 70 - 89
- 50 - 69
- < 50



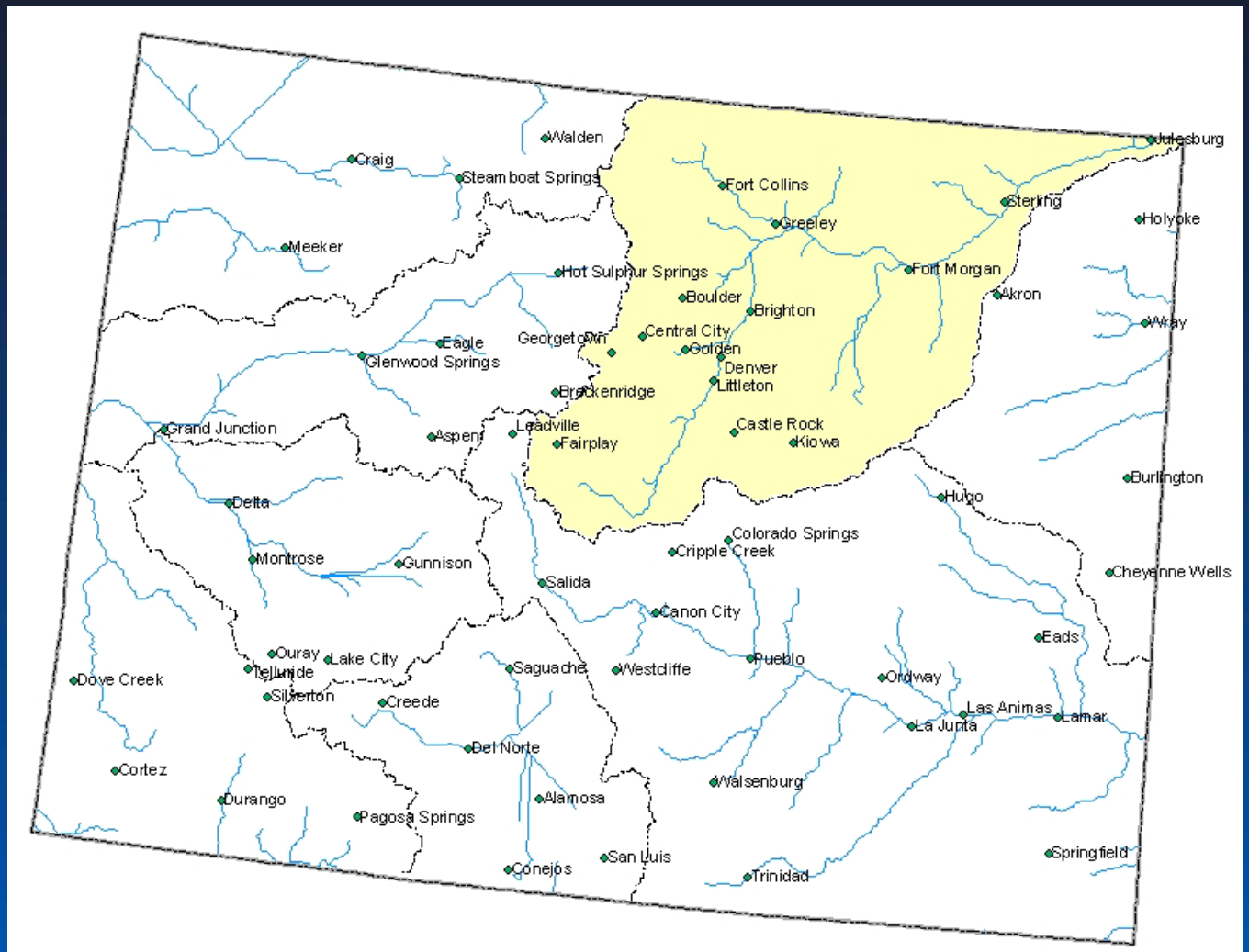
Current as of February 1, 2015

COLORADO RIVER BASIN
Reservoir Storage
Departure from Average



- Snowpack
  - Ranked 22/34 years
  - This year currently compares most closely to 1983,1987, 2003, 2004, 1999
  - 1983 recovered to be the 10th highest snowpack peak of 34 years

South Platte River Basin Summary



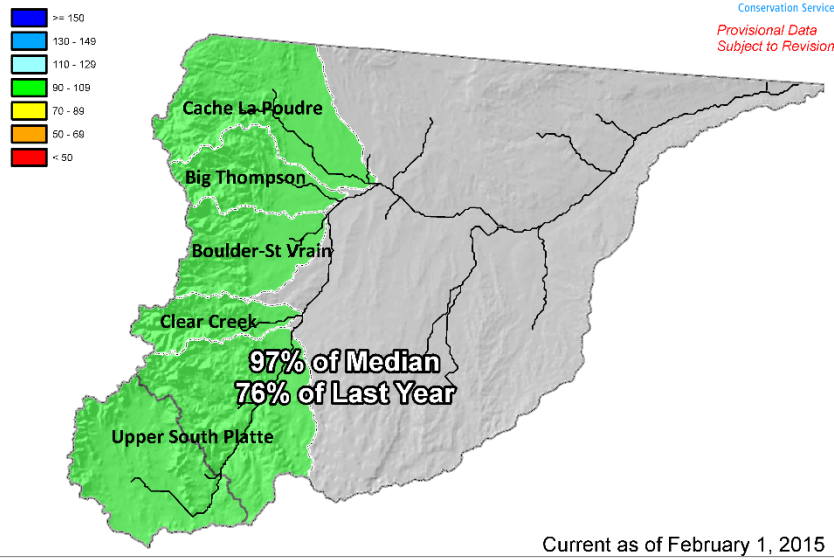
USDA
United States Department of Agriculture

Colorado Snow Surveys

South Platte River Basin Snowpack Map

NRCS Natural Resources Conservation Service

Provisional Data Subject to Revision

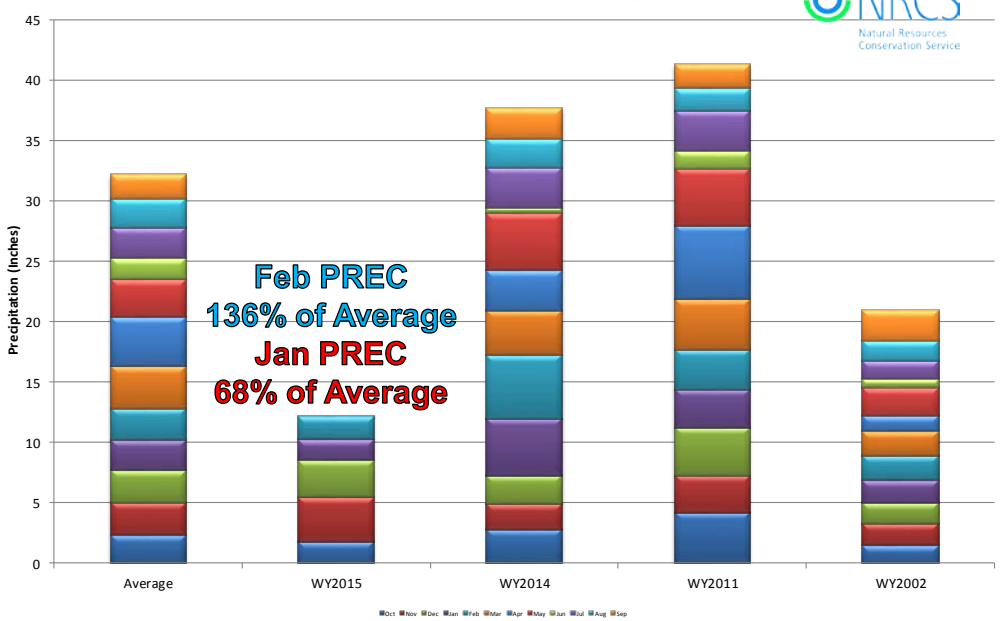


Current as of February 1, 2015

South Platte River Basin High/Low Monthly Precipitation Summary

Based on Provisional SNOTEL data as of Feb 17, 2015

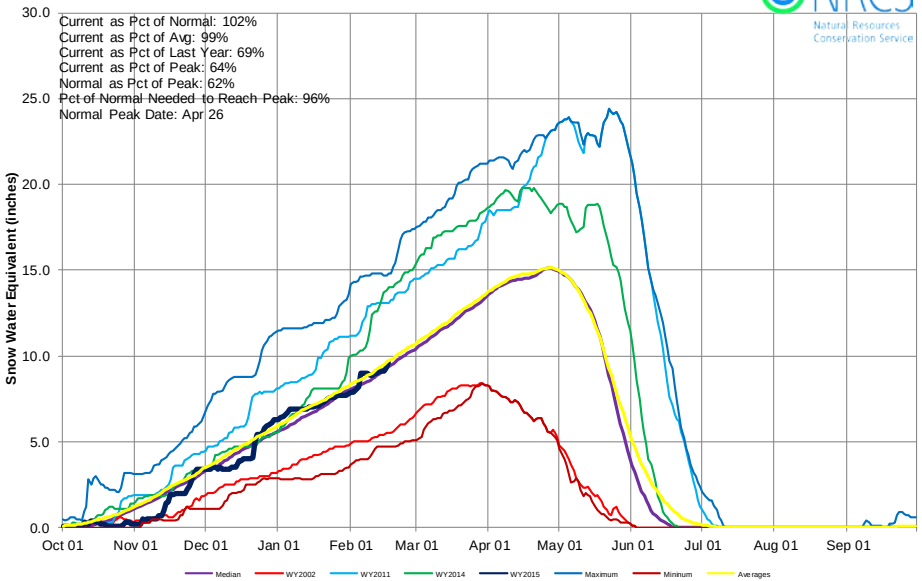
NRCS Natural Resources Conservation Service



South Platte River Basin High/Low Snowpack Summary

Based on Provisional SNOTEL data as of Feb 17, 2015

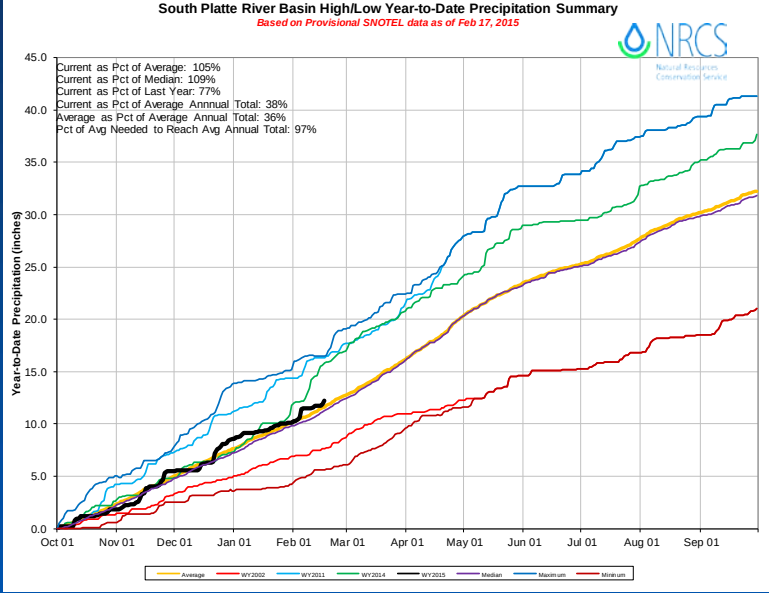
NRCS Natural Resources Conservation Service



South Platte River Basin High/Low Year-to-Date Precipitation Summary

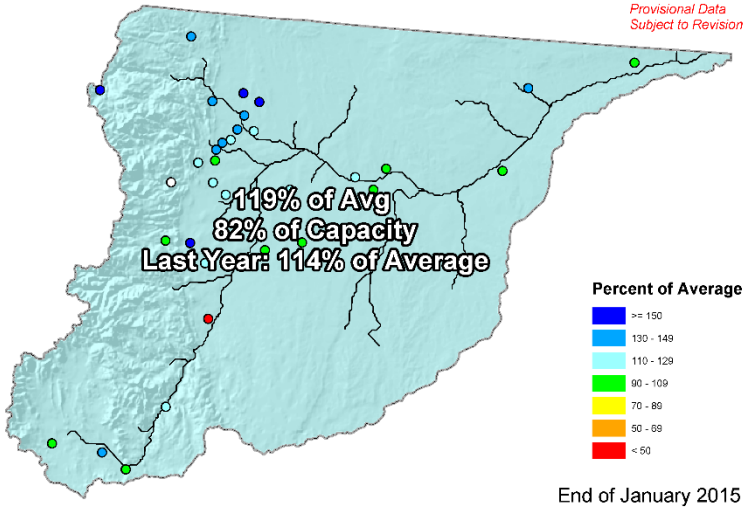
Based on Provisional SNOTEL data as of Feb 17, 2015

NRCS Natural Resources Conservation Service

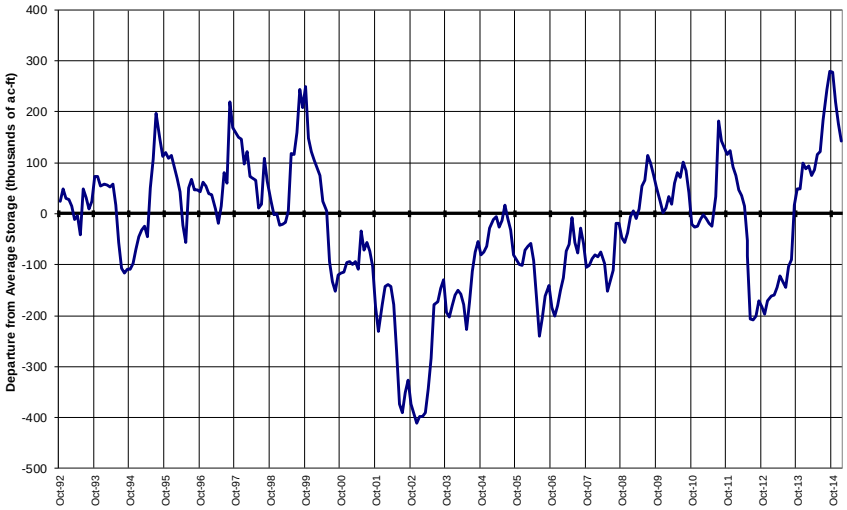


Colorado Snow Surveys

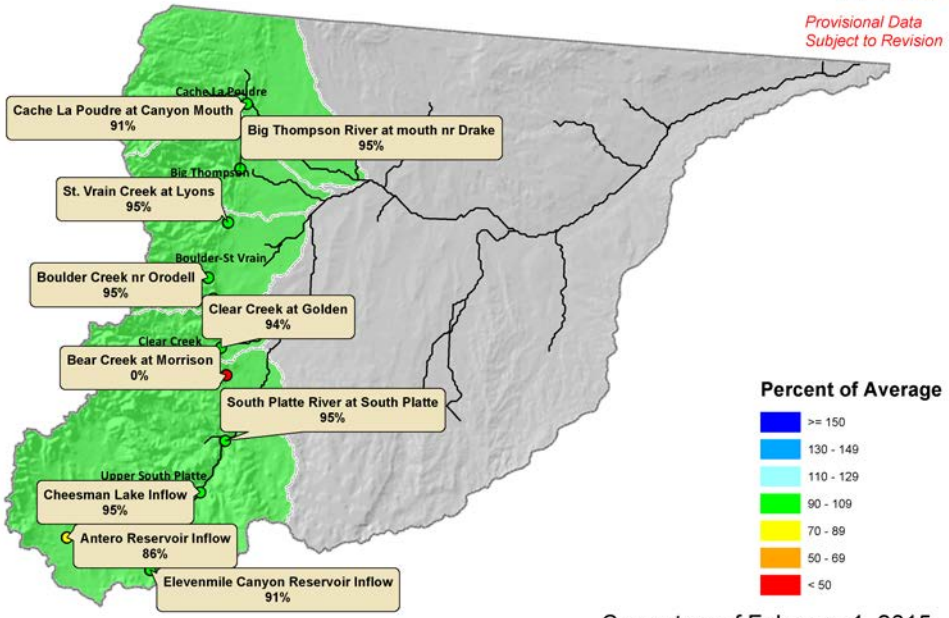
South Platte River Basin Reservoir Storage Map



End of January 2015



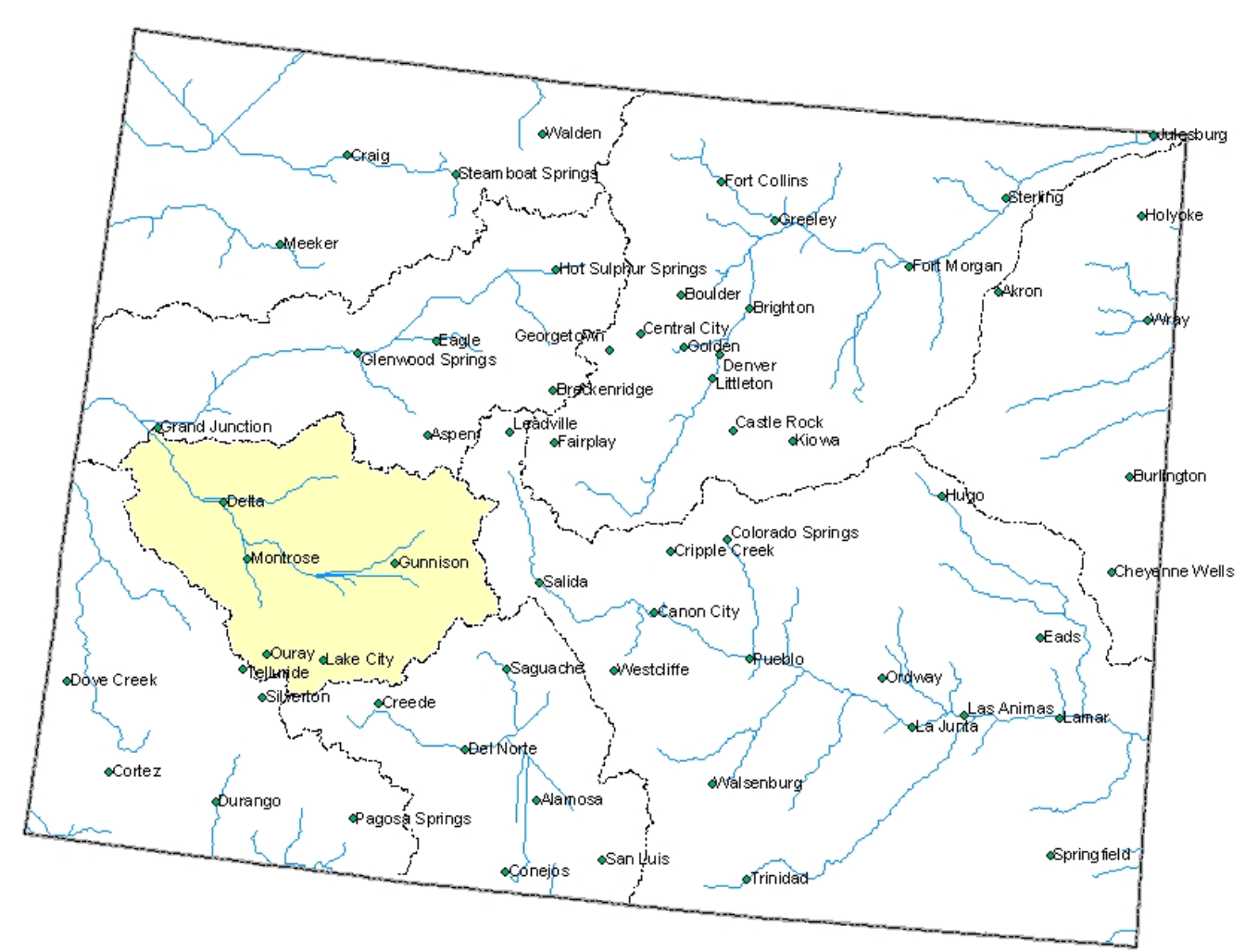
South Platte River Basin Streamflow Forecast Map



Current as of February 1, 2015

- Snowpack
  - Ranked 17/35 years
  - This year currently compares most closely to 1993,1989, 2000

Gunnison River Basin Summary



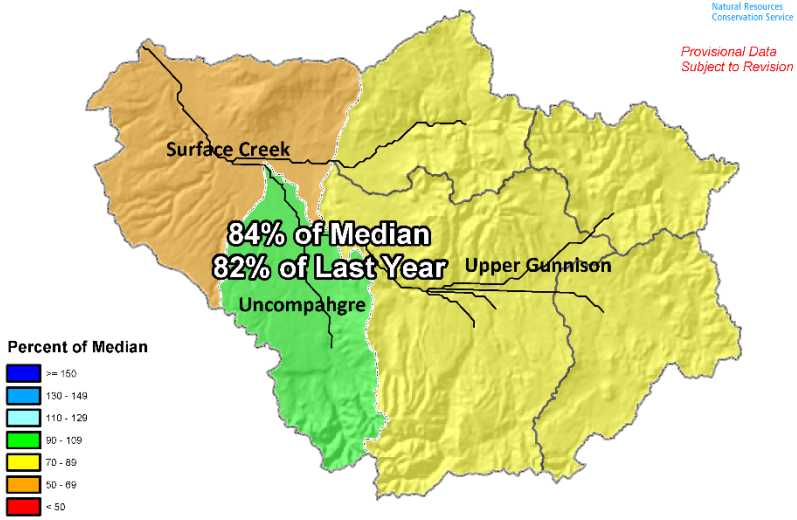
USDA United States Department of Agriculture

Colorado Snow Surveys

Gunnison River Basin Snowpack Map

NRCS Natural Resources Conservation Service

Provisional Data Subject to Revision

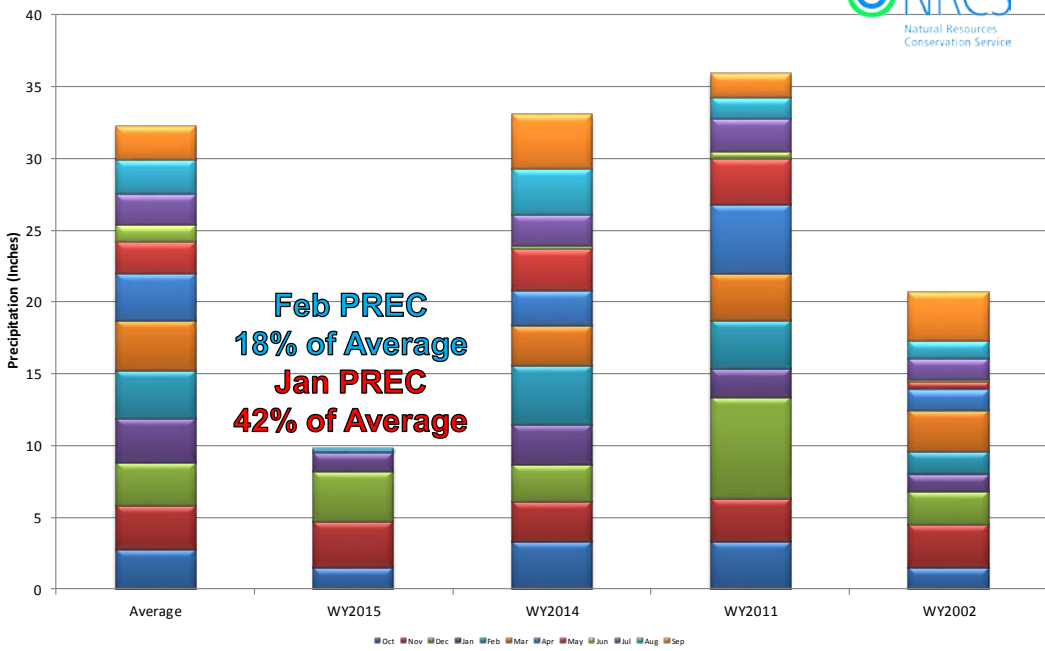


Current as of February 1, 2015

Gunnison River Basin High/Low Monthly Precipitation Summary

Based on Provisional SNOTEL data as of Feb 17, 2015

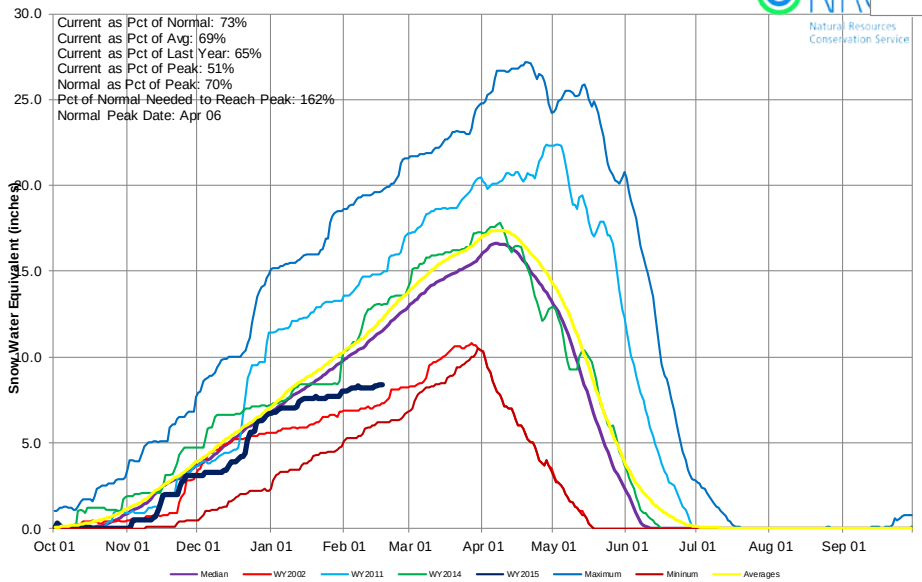
NRCS Natural Resources Conservation Service



Gunnison River Basin High/Low Snowpack Summary

Based on Provisional SNOTEL data as of Feb 17, 2015

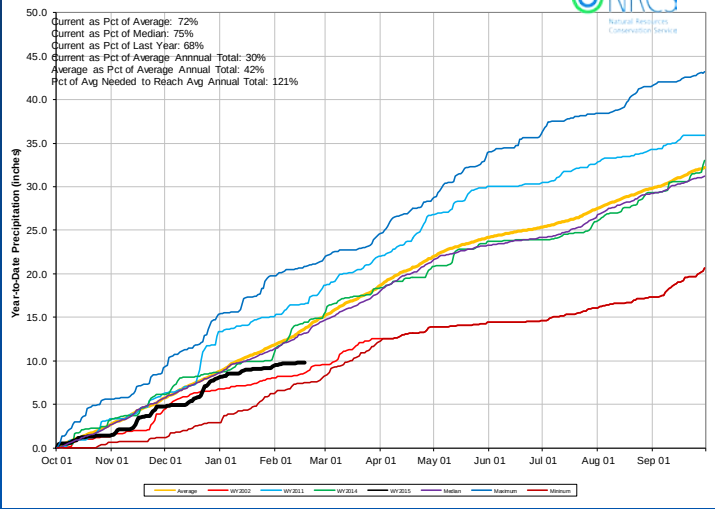
NRCS Natural Resources Conservation Service



Gunnison River Basin High/Low Year-to-Date Precipitation Summary

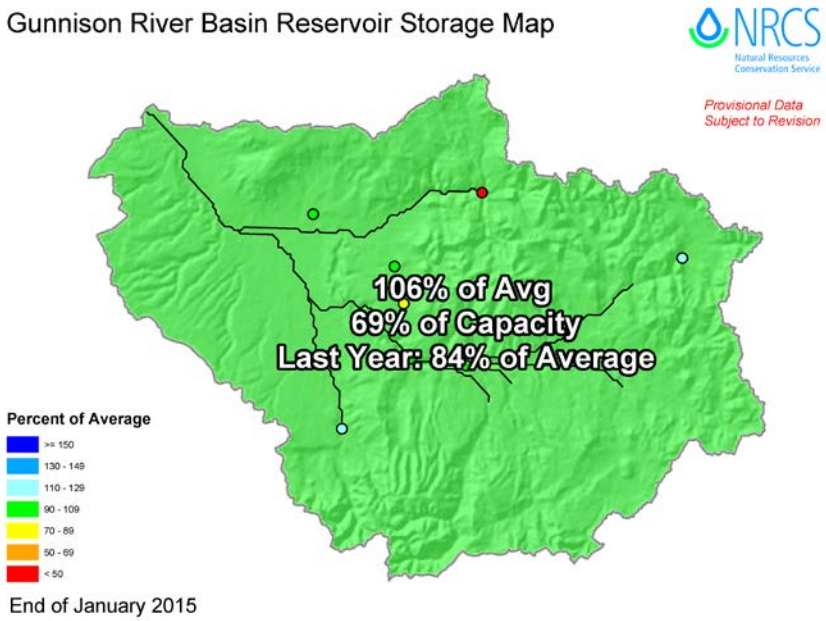
Based on Provisional SNOTEL data as of Feb 17, 2015

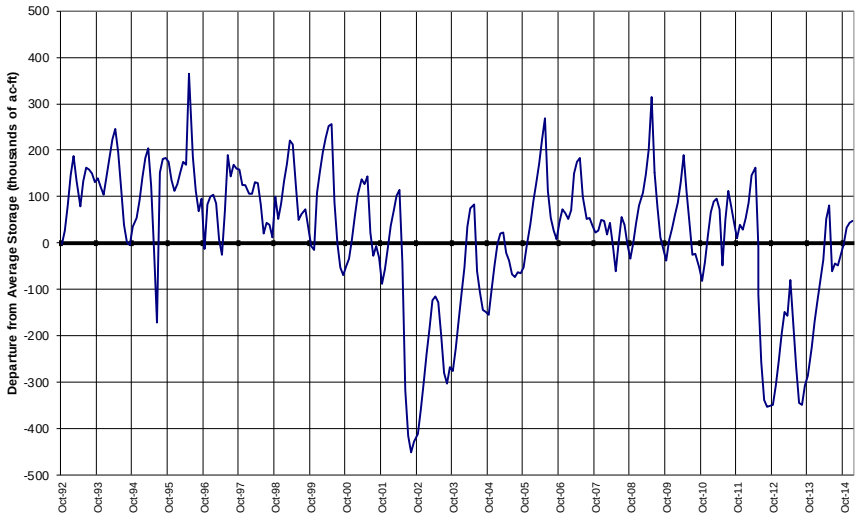
NRCS Natural Resources Conservation Service



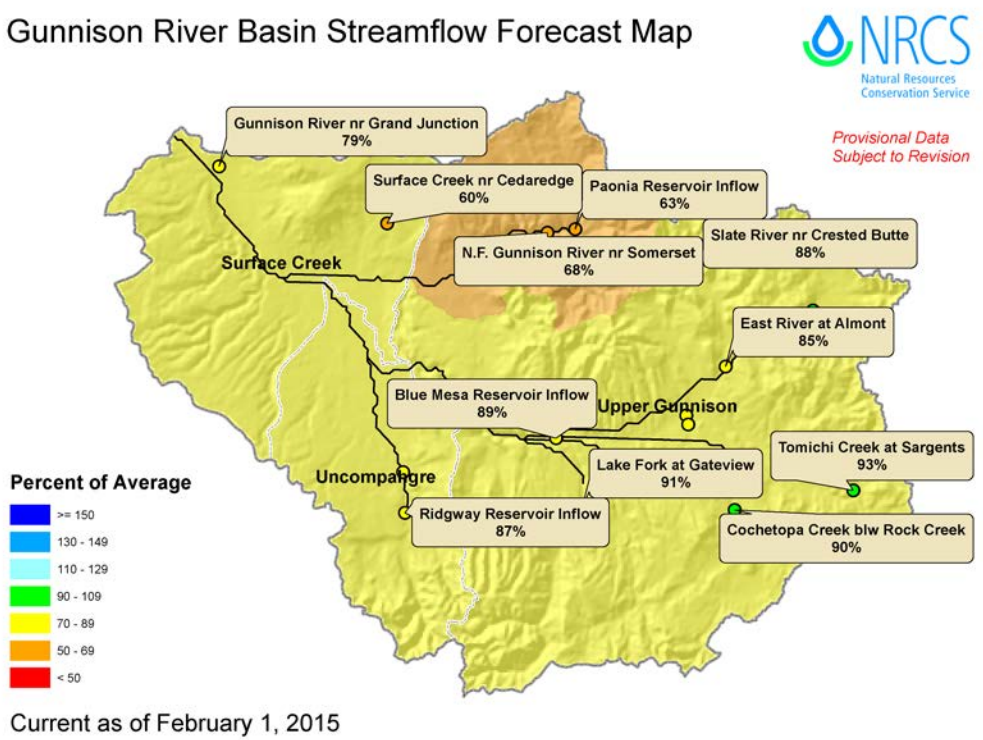
Colorado Snow Surveys

Gunnison River Basin Reservoir Storage Map



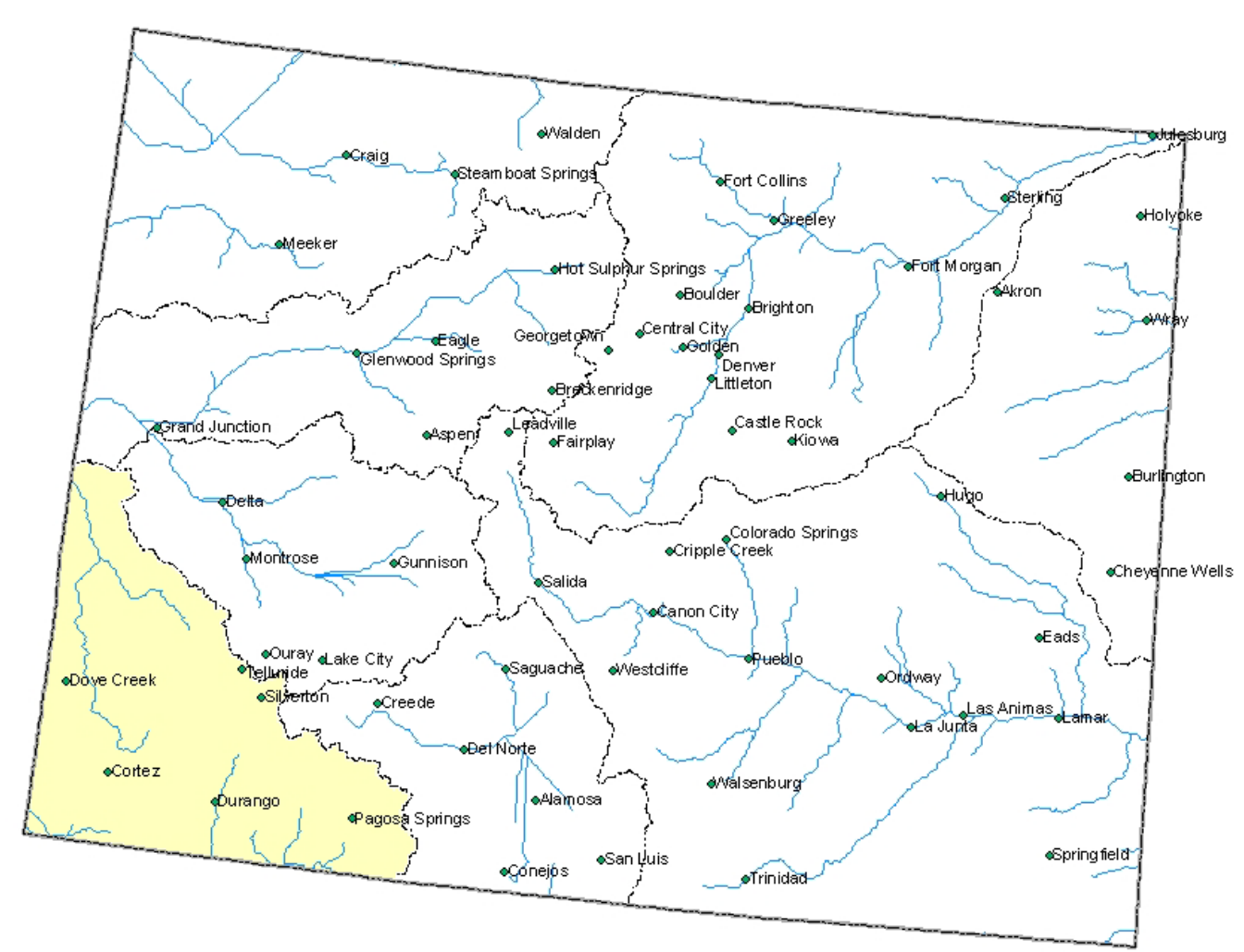


Gunnison River Basin Streamflow Forecast Map



- Snowpack
  - Ranked 32/35 years
  - This year currently compares most closely to 2013, 2000, 1991
  - Both 2000 & 1991 recovered quite well with snowpack peaking near 93% of the normal snowpack peak.

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



USDA
United States Department of Agriculture

Colorado Snow Surveys

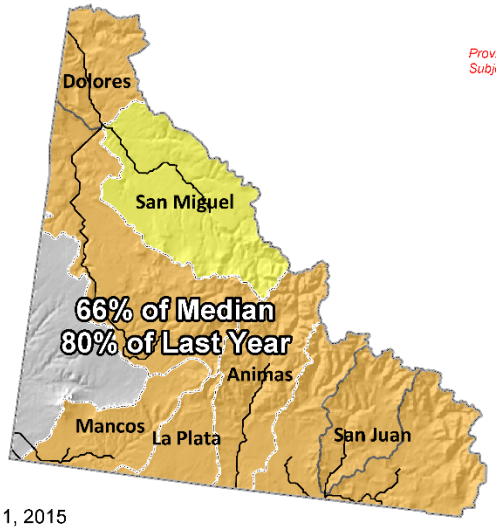
San Miguel, Dolores, Animas and San Juan River Basins Snowpack Map

NRCS Natural Resources Conservation Service

Provisional Data Subject to Revision

Percent of Median

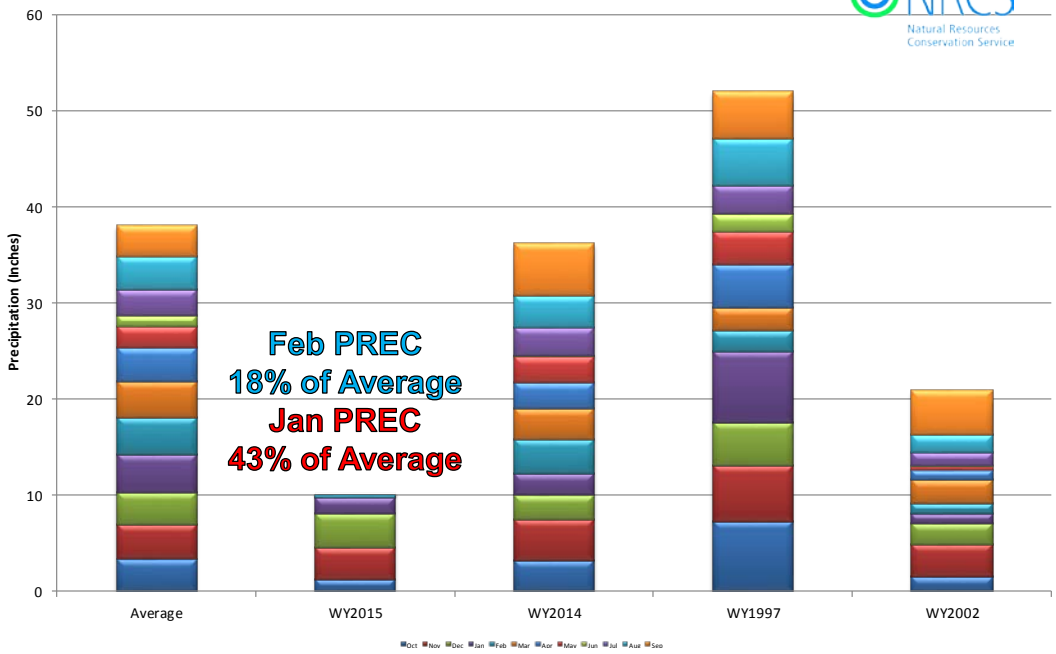
- >= 150
- 130 - 149
- 110 - 129
- 90 - 109
- 70 - 89
- 50 - 69
- < 50



Current as of February 1, 2015

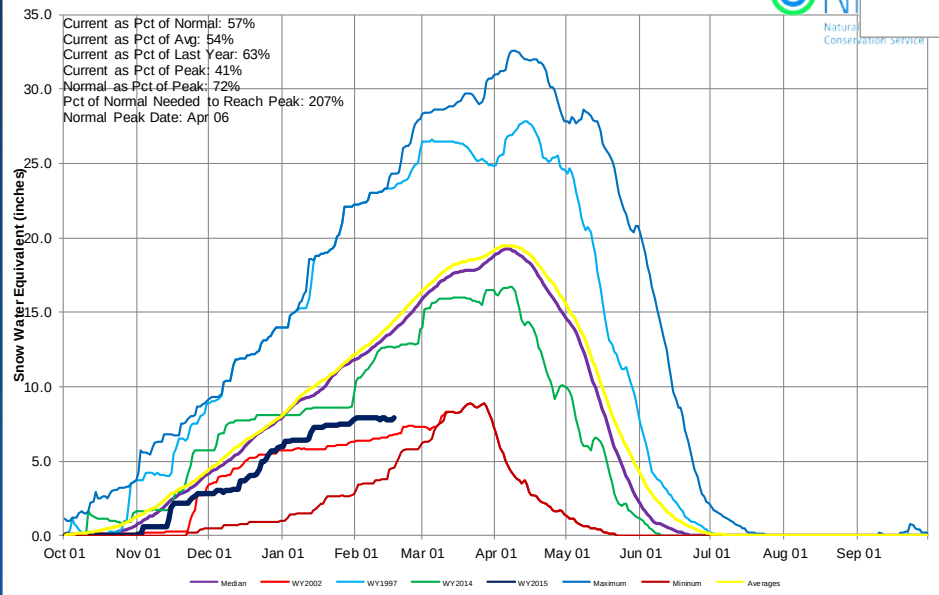
San Miguel, Dolores, Animas & San Juan River Basins High/Low Monthly Precipitation Summary

NRCS Natural Resources Conservation Service



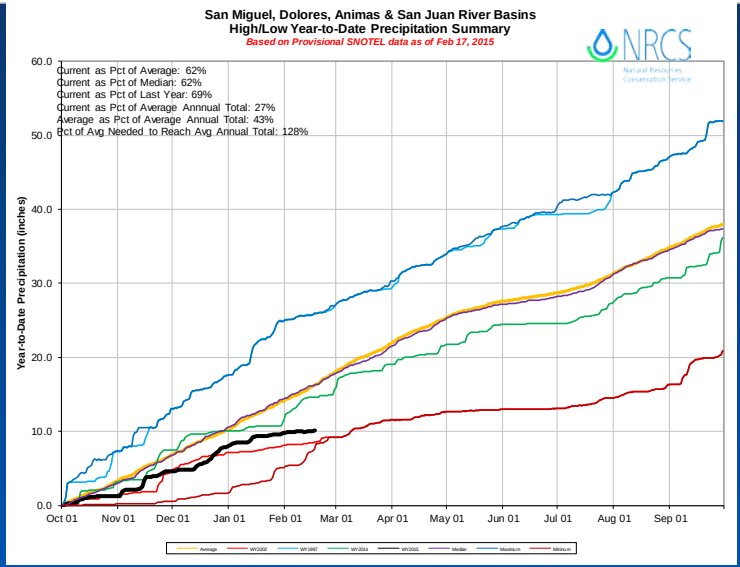
San Miguel, Dolores, Animas and San Juan River Basins High/Low Snowpack Summary

Based on Provisional SNOTEL data as of Feb 17, 2015



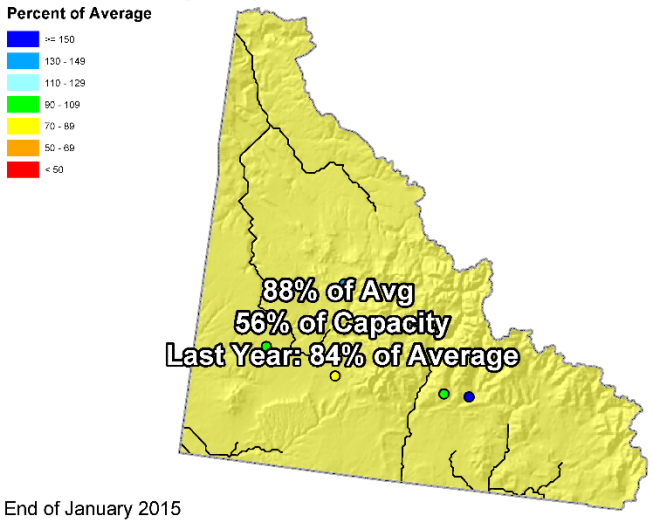
San Miguel, Dolores, Animas & San Juan River Basins High/Low Year-to-Date Precipitation Summary

Based on Provisional SNOTEL data as of Feb 17, 2015



Colorado Snow Surveys

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

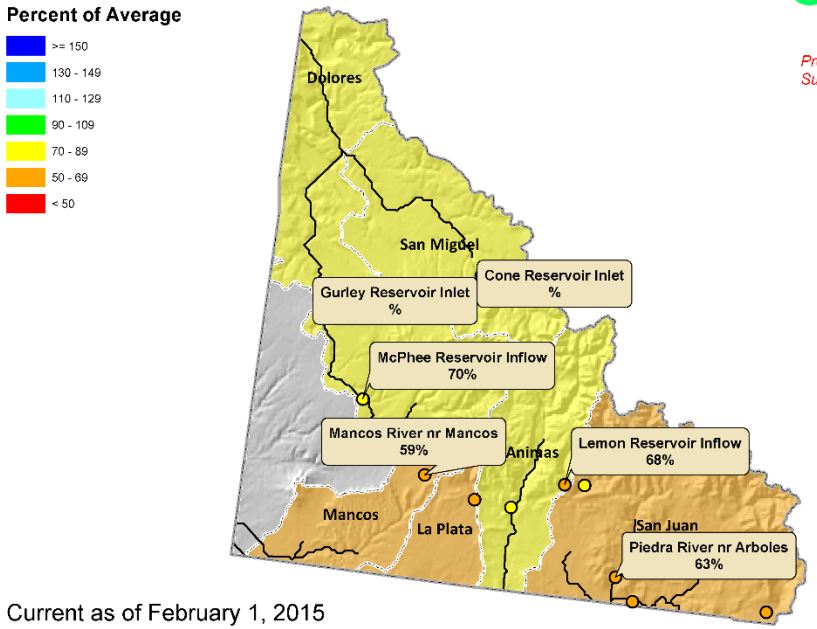


NRCS Natural Resources Conservation Service

Provisional Data Subject to Revision

End of January 2015

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

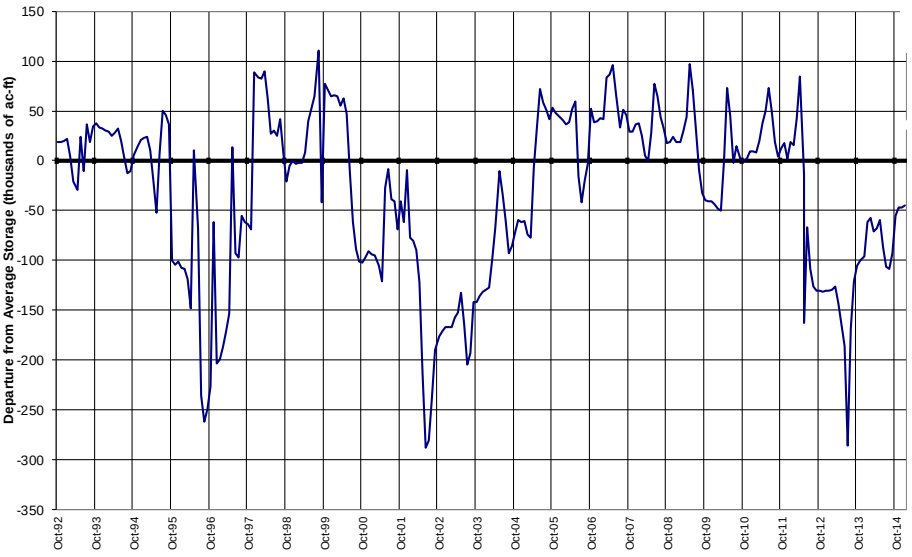


NRCS Natural Resources Conservation Service

Provisional Data Subject to Revision

Current as of February 1, 2015

SAN MIGUEL, DOLORES, ANIMAS AND SAN JUAN RIVER BASINS
Reservoir Storage
Departure from Average



Snowpack

- Ranked 25/29 years
- This year currently compares most closely to 2006, 1996
- Both years saw above normal snowfall during March but did not top out near the normal peak

Upper Rio Grande Basin Summary

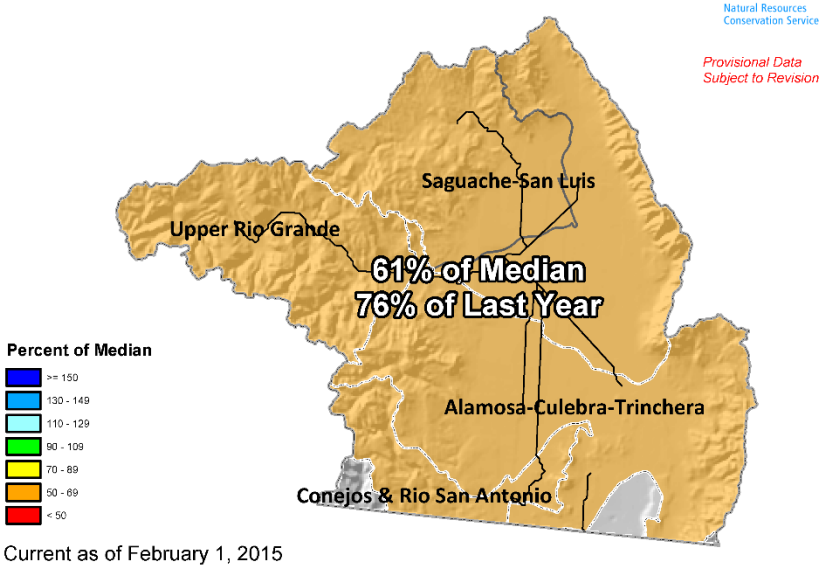
USDA
United States Department of Agriculture

Colorado Snow Surveys

Upper Rio Grande Basin Snowpack Map

NRCS Natural Resources Conservation Service

Provisional Data Subject to Revision

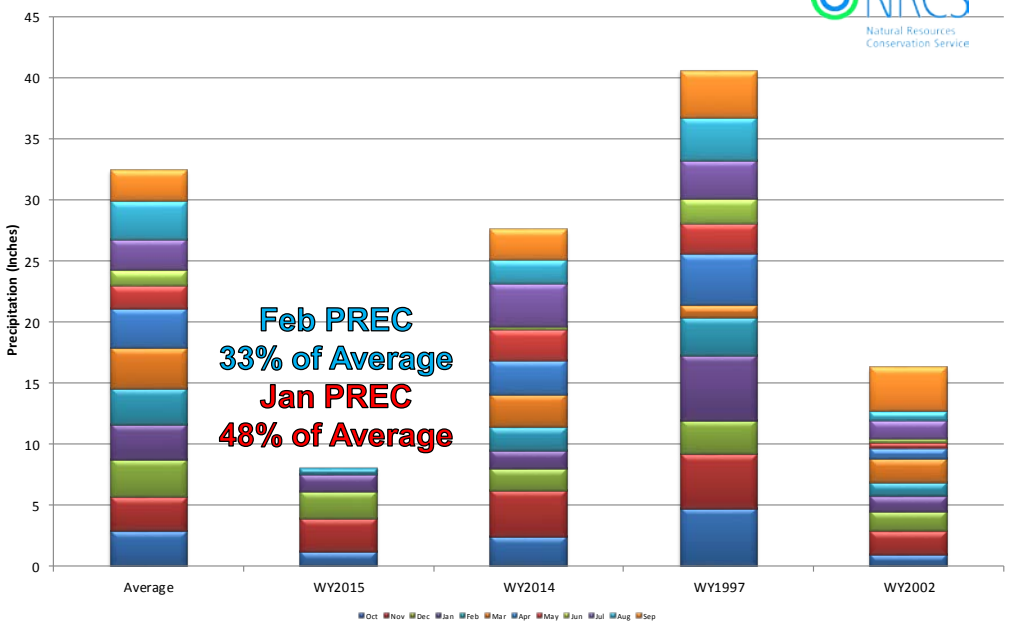


Current as of February 1, 2015

Upper Rio Grande Basin High/Low Monthly Precipitation Summary

Based on Provisional SNOTEL data as of Feb 17, 2015

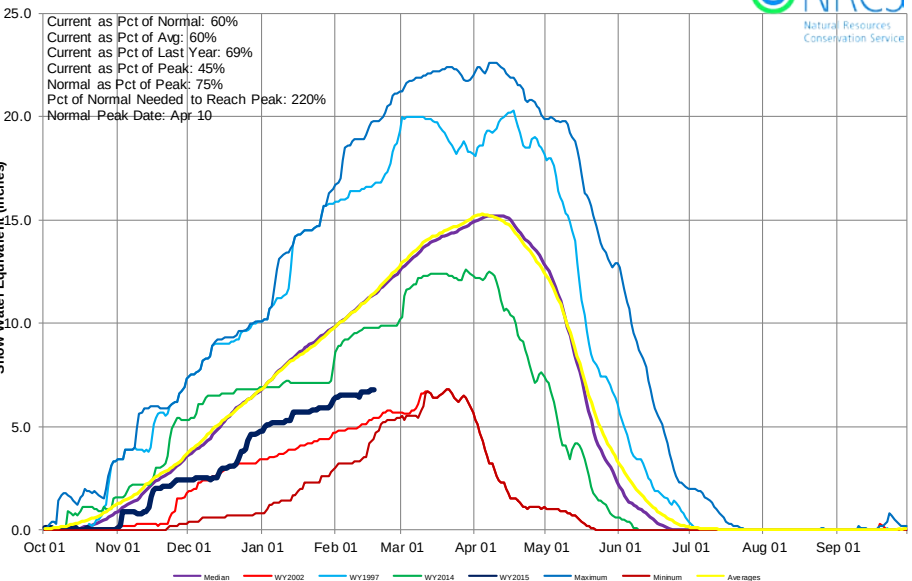
NRCS Natural Resources Conservation Service



Upper Rio Grande Basin High/Low Snowpack Summary

Based on Provisional SNOTEL data as of Feb 17, 2015

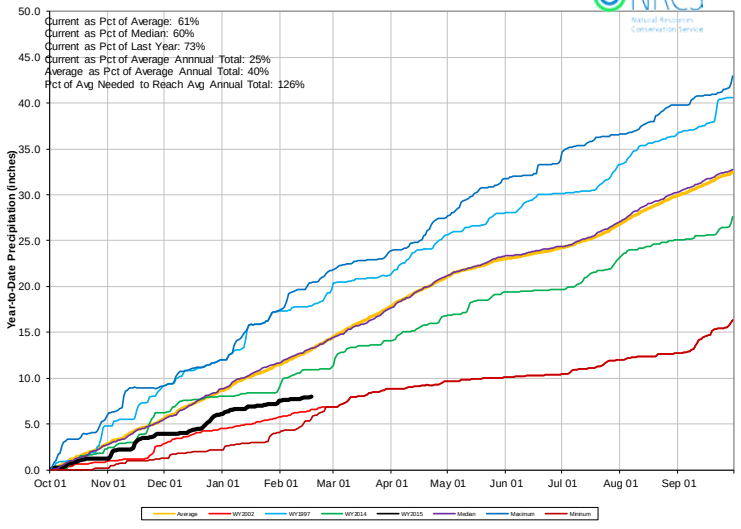
NRCS Natural Resources Conservation Service



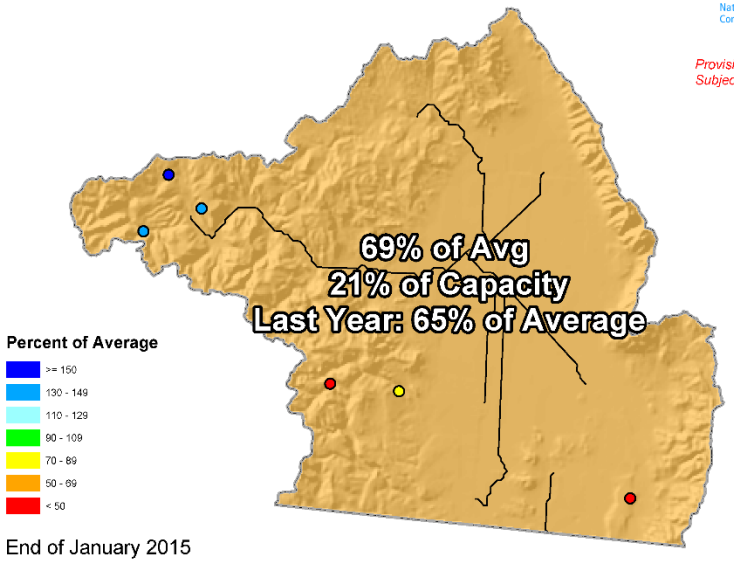
Upper Rio Grande Basin High/Low Year-to-Date Precipitation Summary

Based on Provisional SNOTEL data as of Feb 17, 2015

NRCS Natural Resources Conservation Service

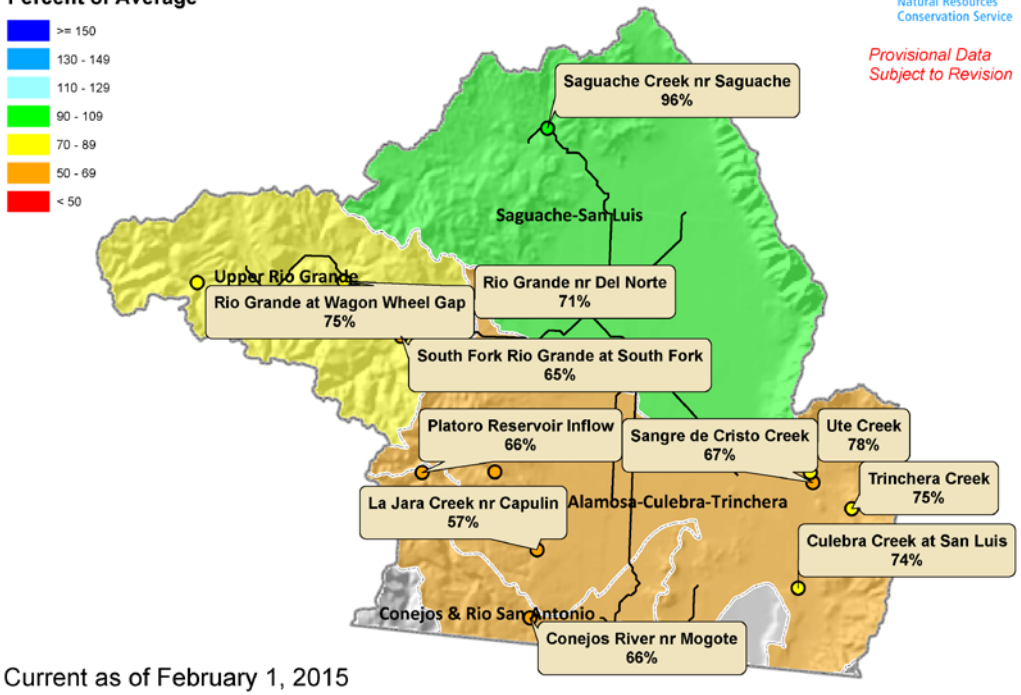


Upper Rio Grande Basin Reservoir Storage Map



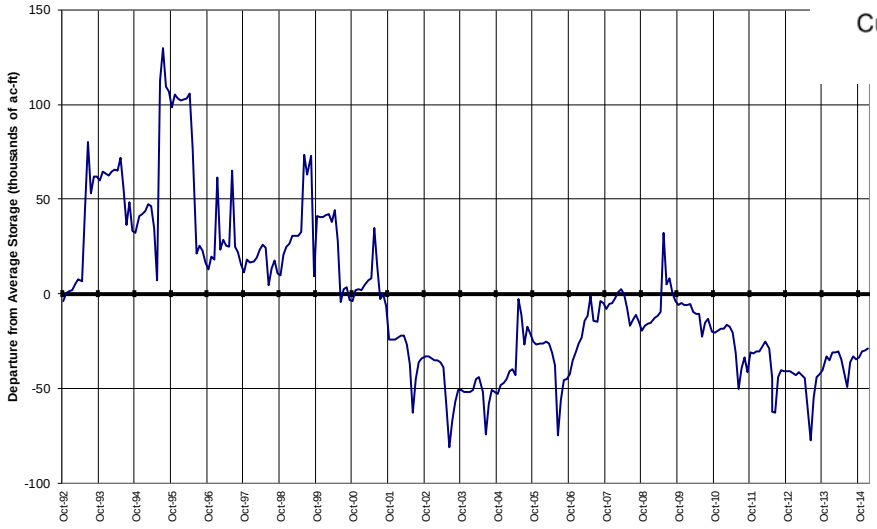
End of January 2015

Upper Rio Grande Basin Streamflow Forecast Map



Current as of February 1, 2015

UPPER RIO GRANDE BASIN
Reservoir Storage
Departure from Average



- Snowpack
  - Ranked 24/32 years
  - This year currently compares most closely to 2003, 1996
  - These two years saw great storms in late Feb & early Mar but again were not able to make up for “current” deficits

Arkansas River Basin Summary

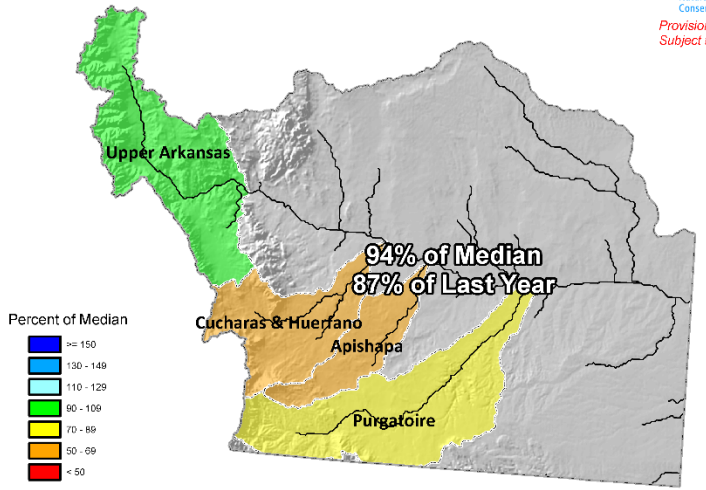
USDA
United States Department of Agriculture

Colorado Snow Surveys

Arkansas River Basin Snowpack Map

NRCS Natural Resources Conservation Service

Provisional Data Subject to Revision

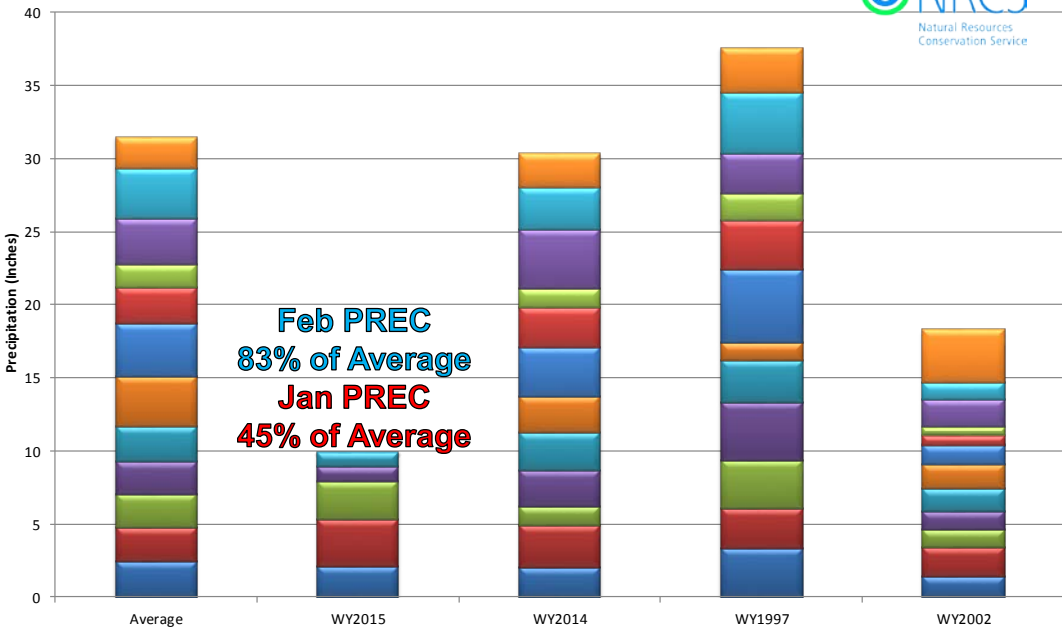


Current as of February 1, 2015

Arkansas River Basin High/Low Monthly Precipitation Summary

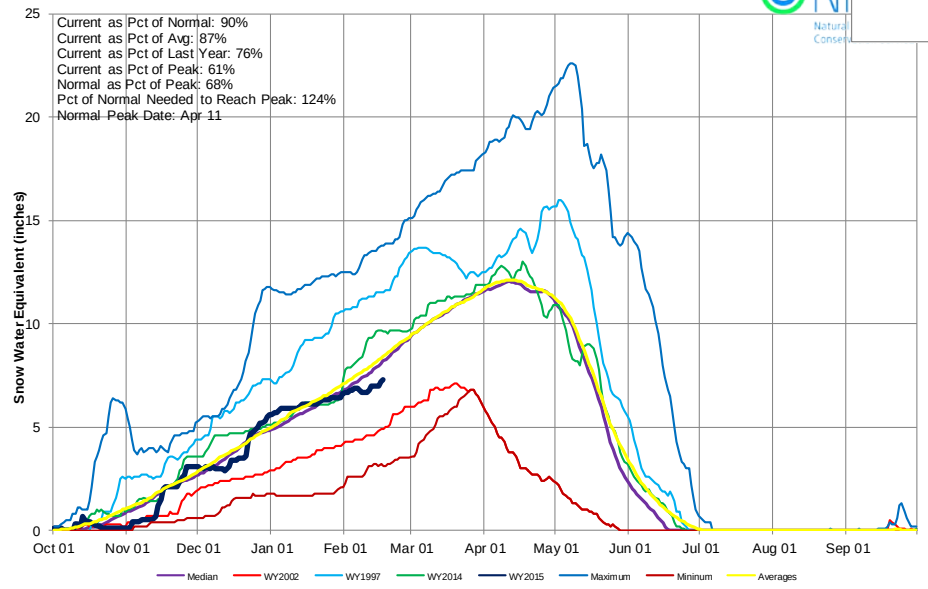
Based on Provisional SNOTEL data as of Feb 17, 2015

NRCS Natural Resources Conservation Service



Arkansas River Basin High/Low Snowpack Summary

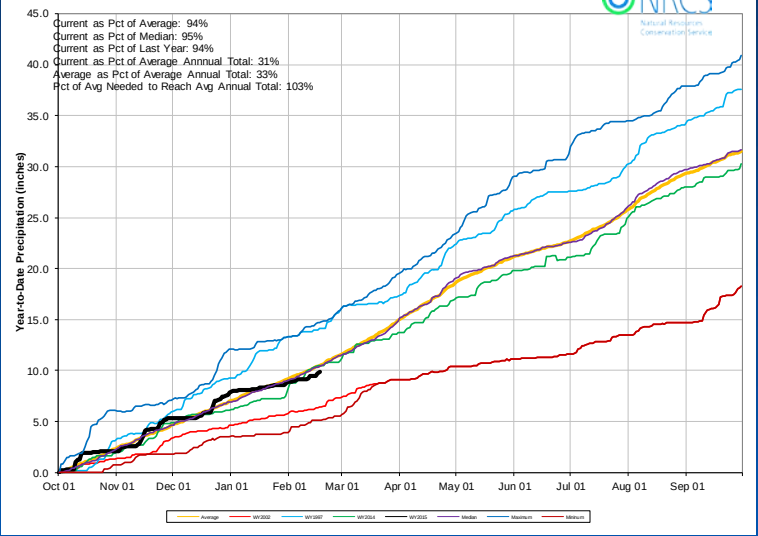
Based on Provisional SNOTEL data as of Feb 17, 2015



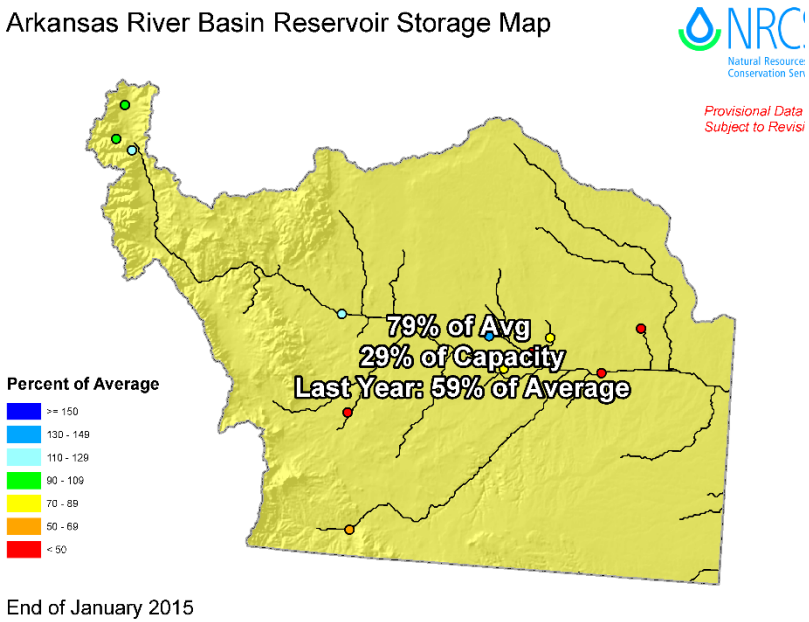
Arkansas River Basin High/Low Year-to-Date Precipitation Summary

Based on Provisional SNOTEL data as of Feb 17, 2015

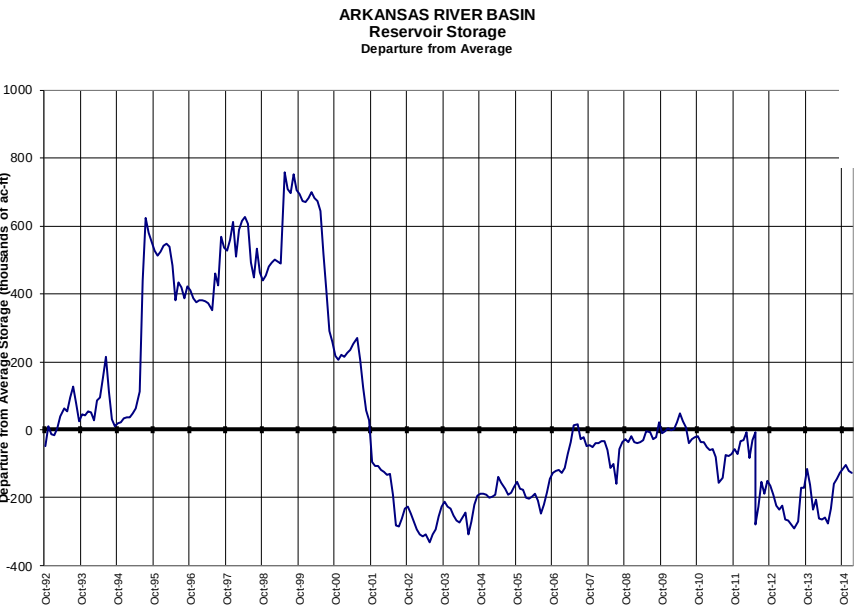
NRCS



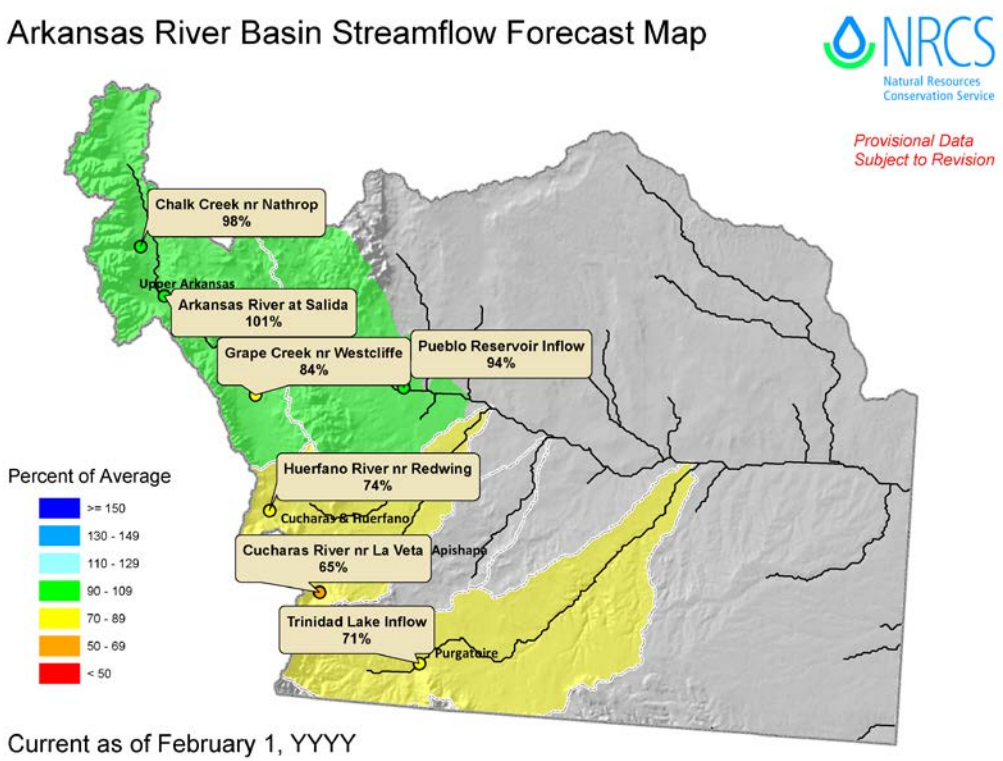
Arkansas River Basin Reservoir Storage Map



End of January 2015



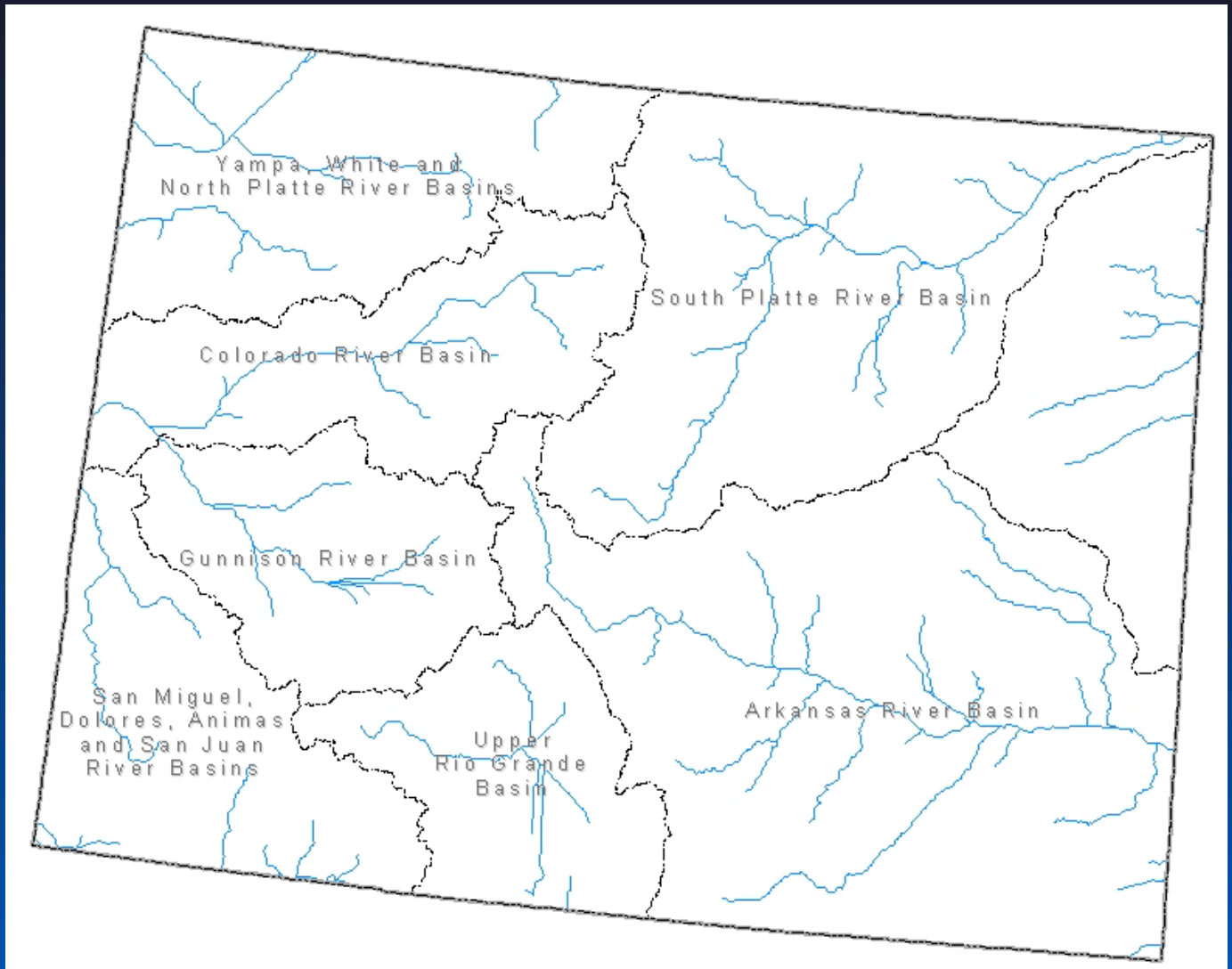
Arkansas River Basin Streamflow Forecast Map



Current as of February 1, YYYY

- Snowpack
  - Ranked 24/35 years
  - We have already surpassed 2002's peak snowpack 6.9 inches of SWE
  - This year currently compares most closely to 1999, 2006, 2012
  - 1983*

Colorado Statewide Summary



USDA
United States Department of Agriculture

Colorado Snow Surveys

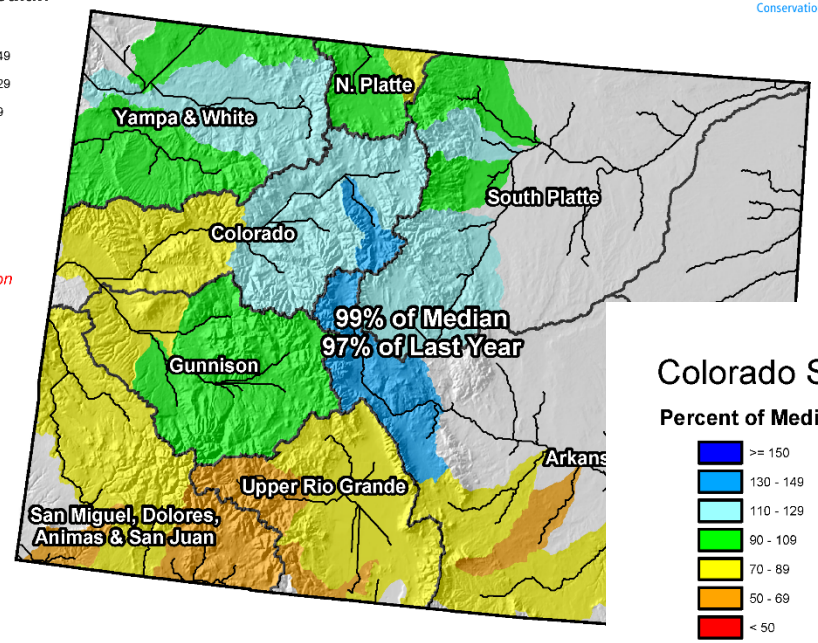
NRCS
Natural Resources Conservation Service

Colorado Snowpack Map

Percent of Median

- >= 150
- 130 - 149
- 110 - 129
- 90 - 109
- 70 - 89
- 50 - 69
- < 50

Provisional Data Subject to Revision



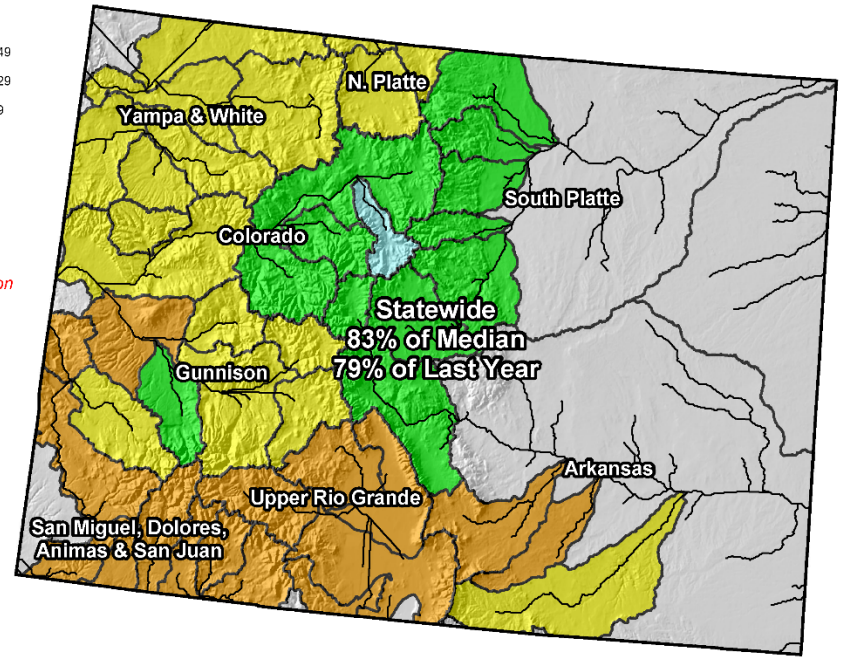
Current as of January 1, 2015

Colorado Snowpack Map

Percent of Median

- >= 150
- 130 - 149
- 110 - 129
- 90 - 109
- 70 - 89
- 50 - 69
- < 50

Provisional Data Subject to Revision

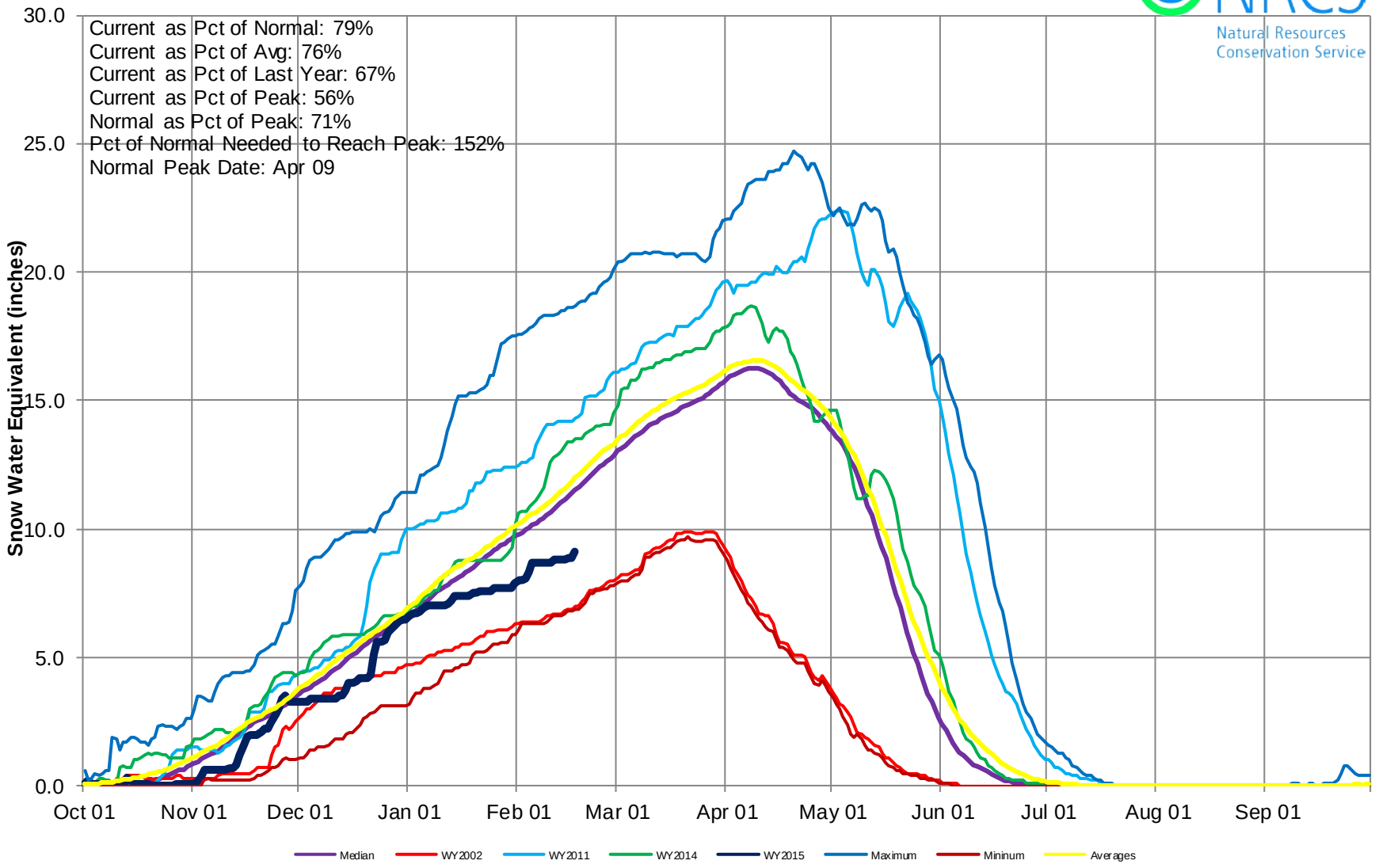


Current as of February 1, 2015

Colorado Statewide High/Low Snowpack Summary

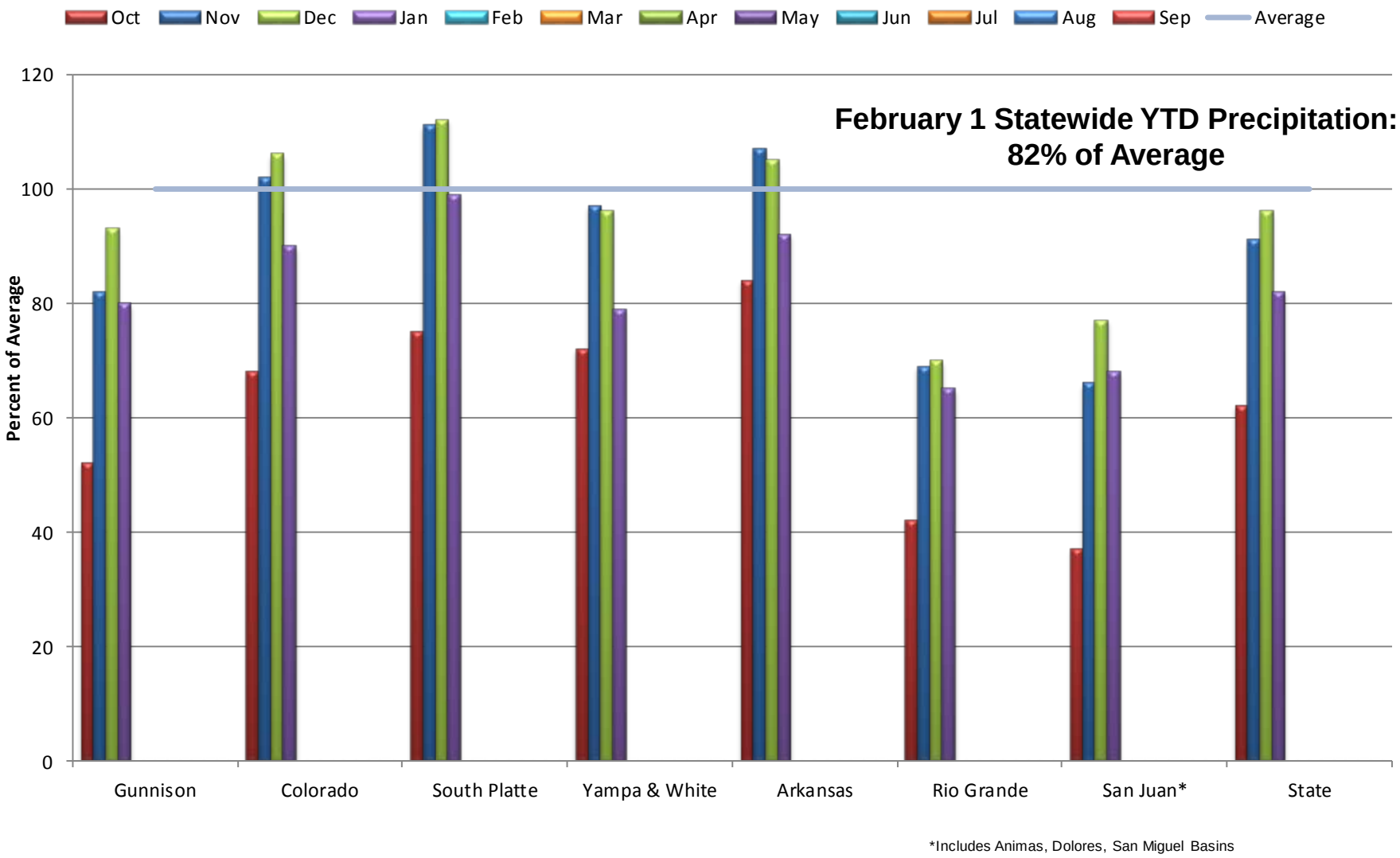
Based on Provisional SNOTEL data as of Feb 17, 2015

NRCS
Natural Resources Conservation Service



Colorado Year-to-Date Precipitation Summary for WY2015

USDA Natural Resources Conservation Service

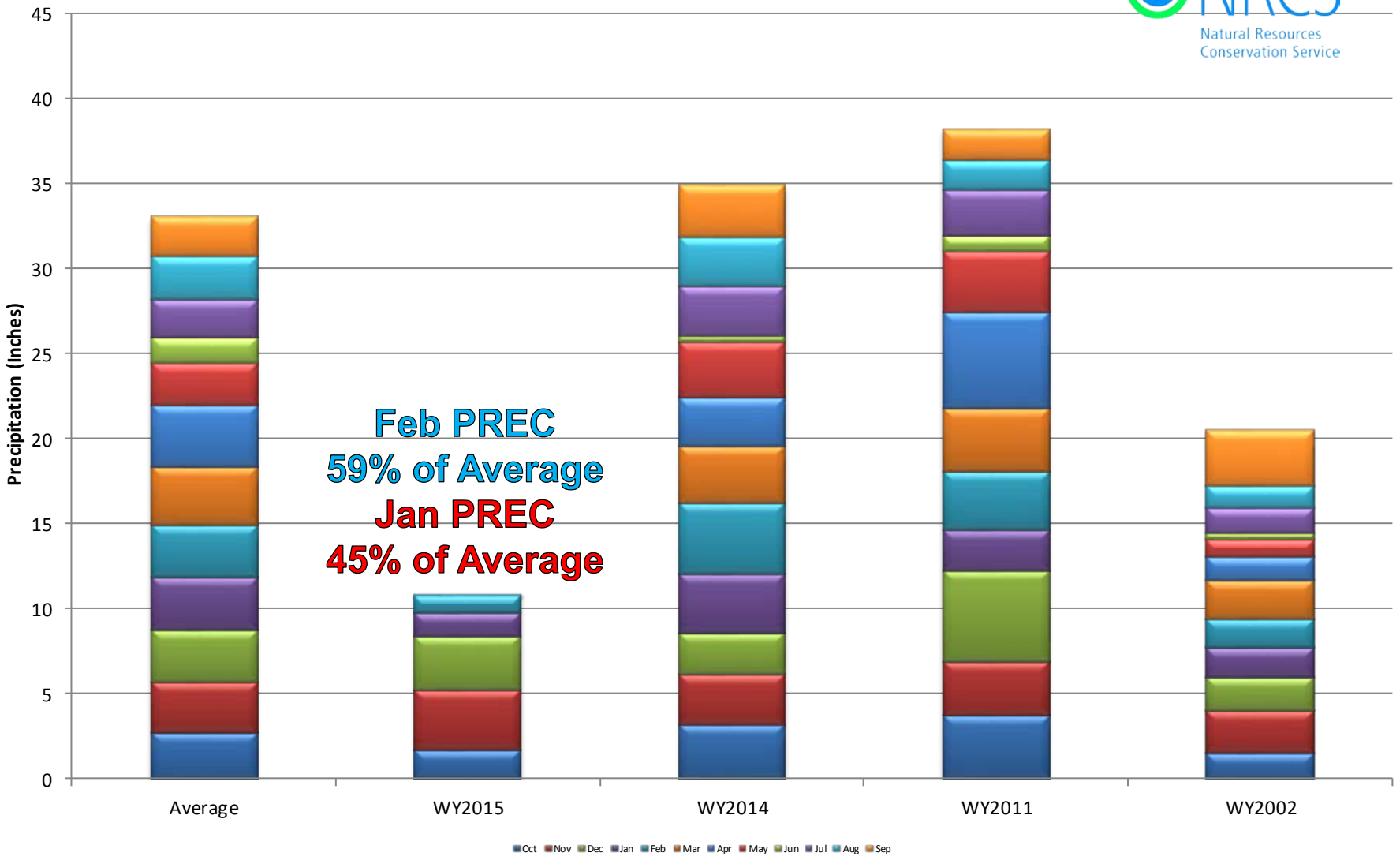


*Includes Animas, Dolores, San Miguel Basins

Colorado Statewide High/Low Monthly Precipitation Summary

Based on Provisional SNOTEL data as of Feb 17, 2015

NRCS Natural Resources Conservation Service

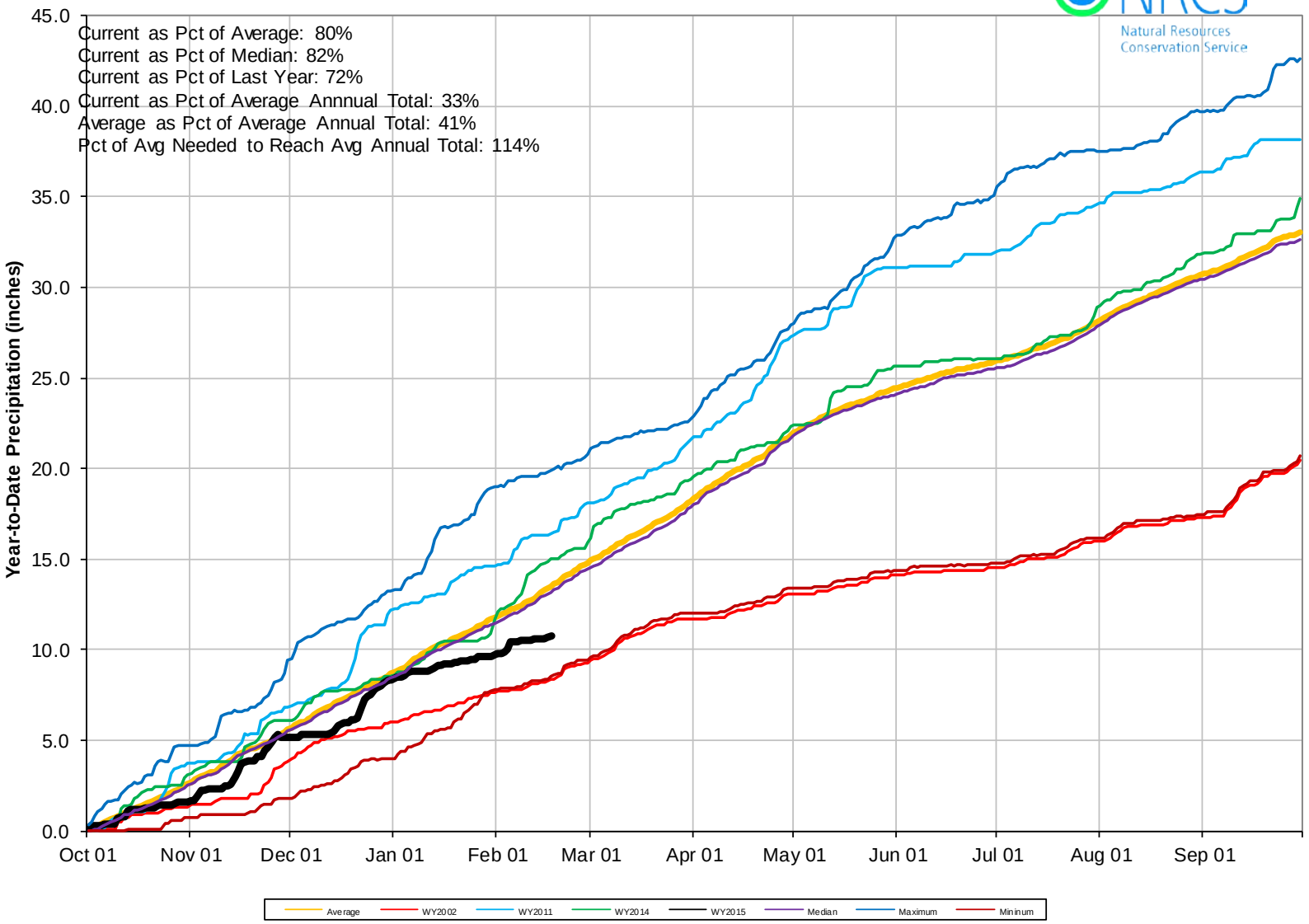


Colorado Statewide High/Low Year-to-Date Precipitation Summary

Based on Provisional SNOTEL data as of Feb 17, 2015

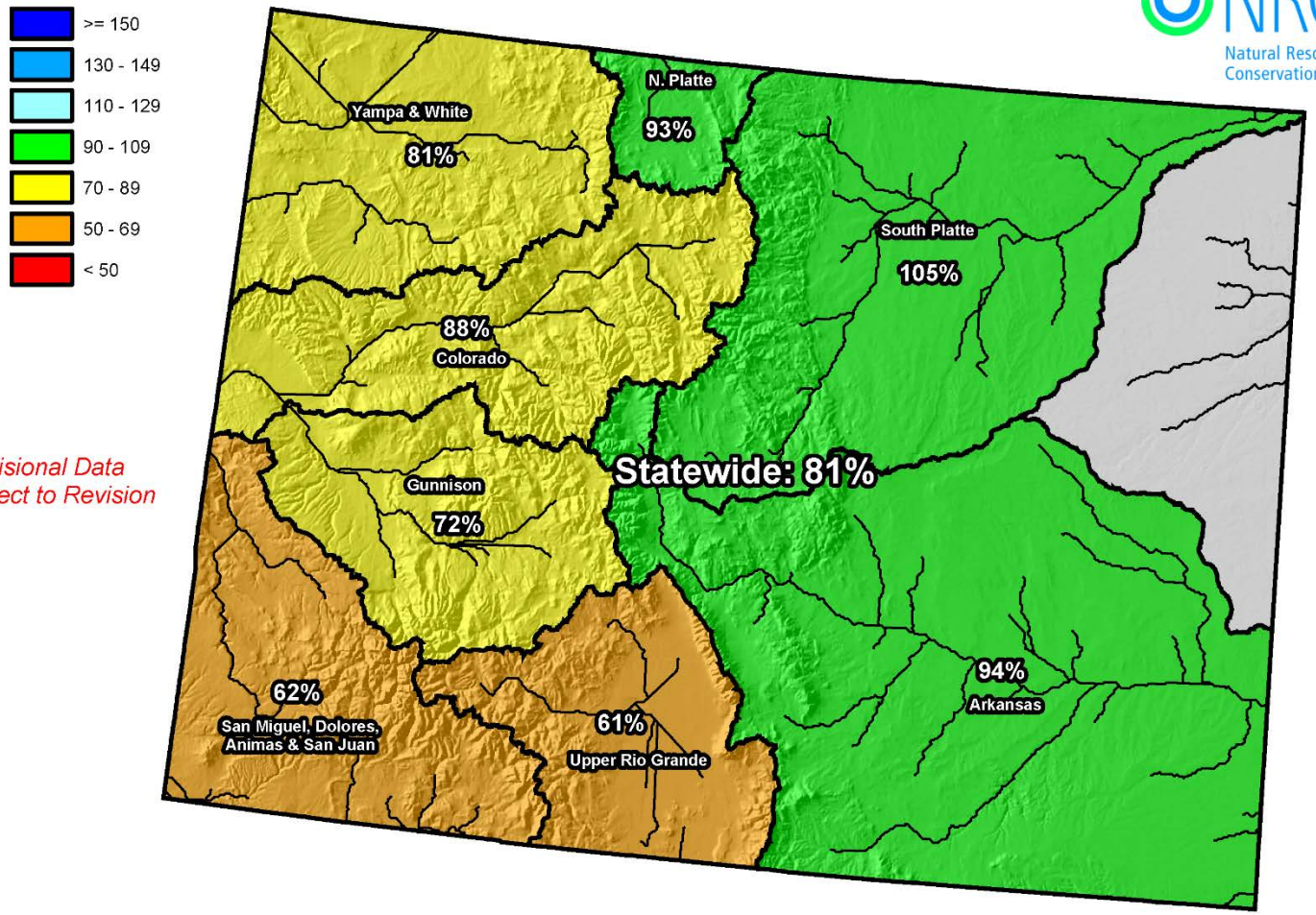
NRCS Natural Resources Conservation Service

Current as Pct of Average: 80%
Current as Pct of Median: 82%
Current as Pct of Last Year: 72%
Current as Pct of Average Annnual Total: 33%
Average as Pct of Average Annual Total: 41%
Pct of Avg Needed to Reach Avg Annual Total: 114%



Colorado SNOTEL Water Year-to-Date Precipitation Update Map

Percent of Average



NRCS
Natural Resources Conservation Service

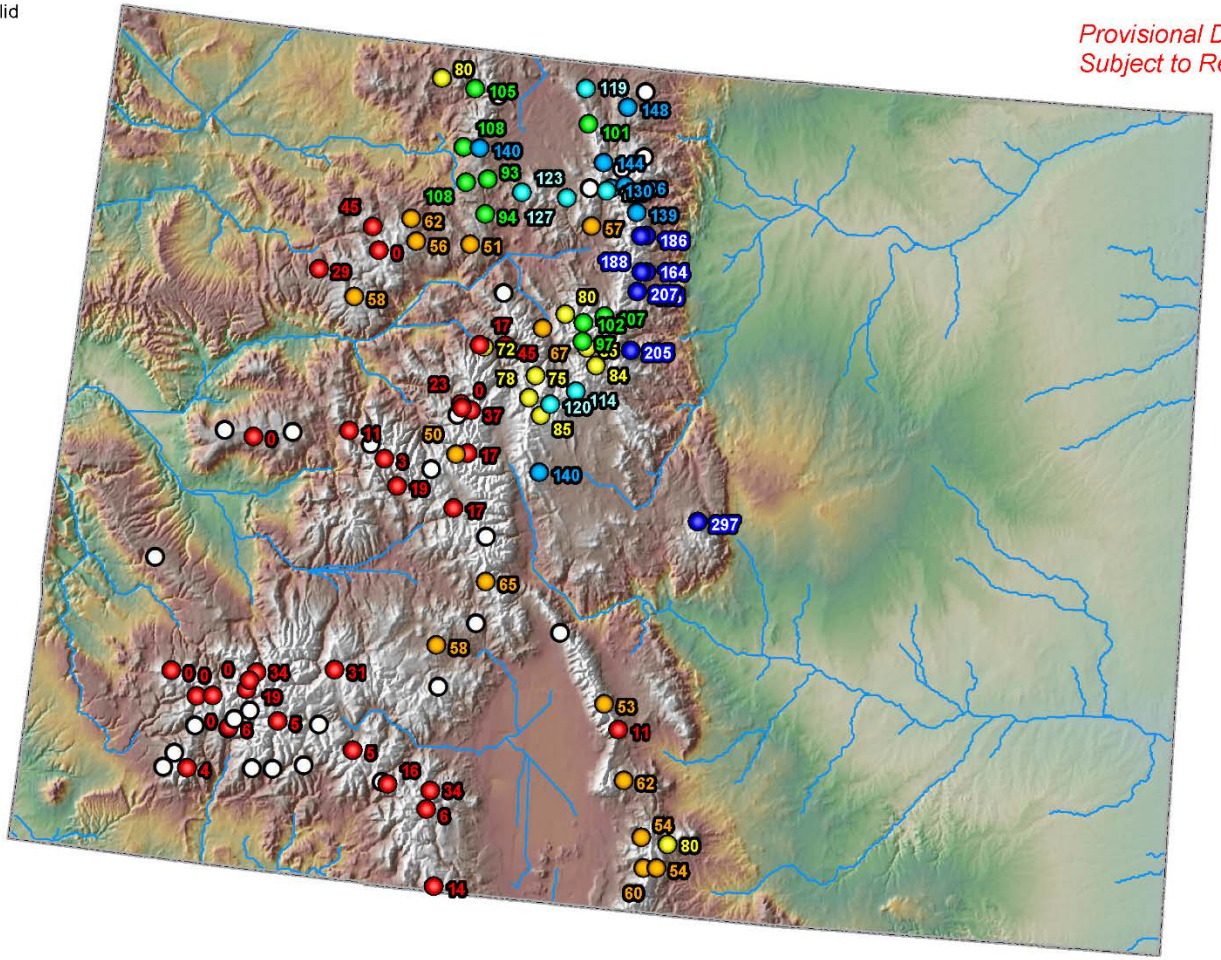
Provisional Data Subject to Revision

Current as of 02/17/2015

Colorado SNOTEL Month-to-Date Precipitation

Percent of Average

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



Provisional Data
Subject to Revision

Current as of 02 17, 2015

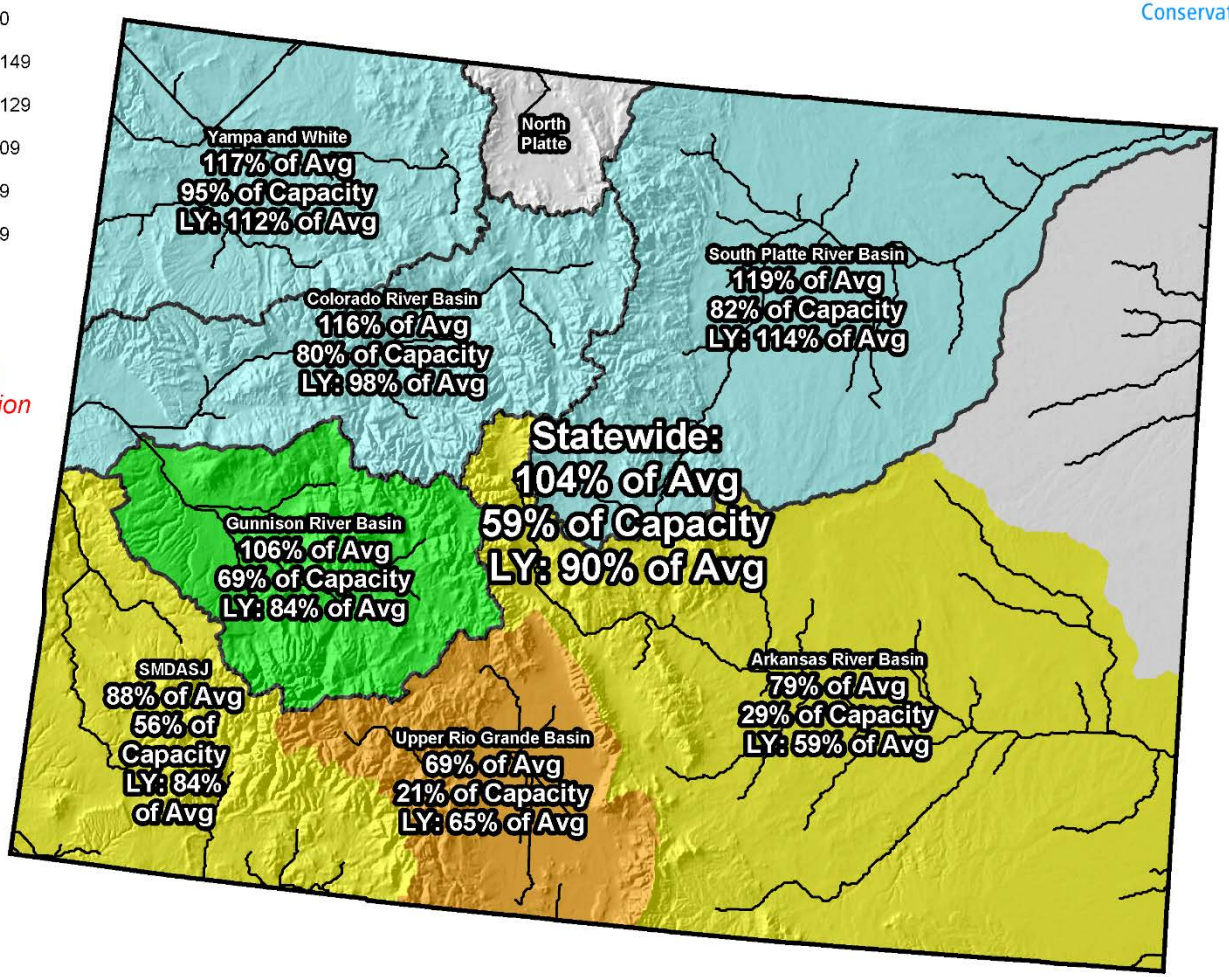
Colorado Reservoir Storage Map

NRCS Natural Resources Conservation Service

Percent of Average

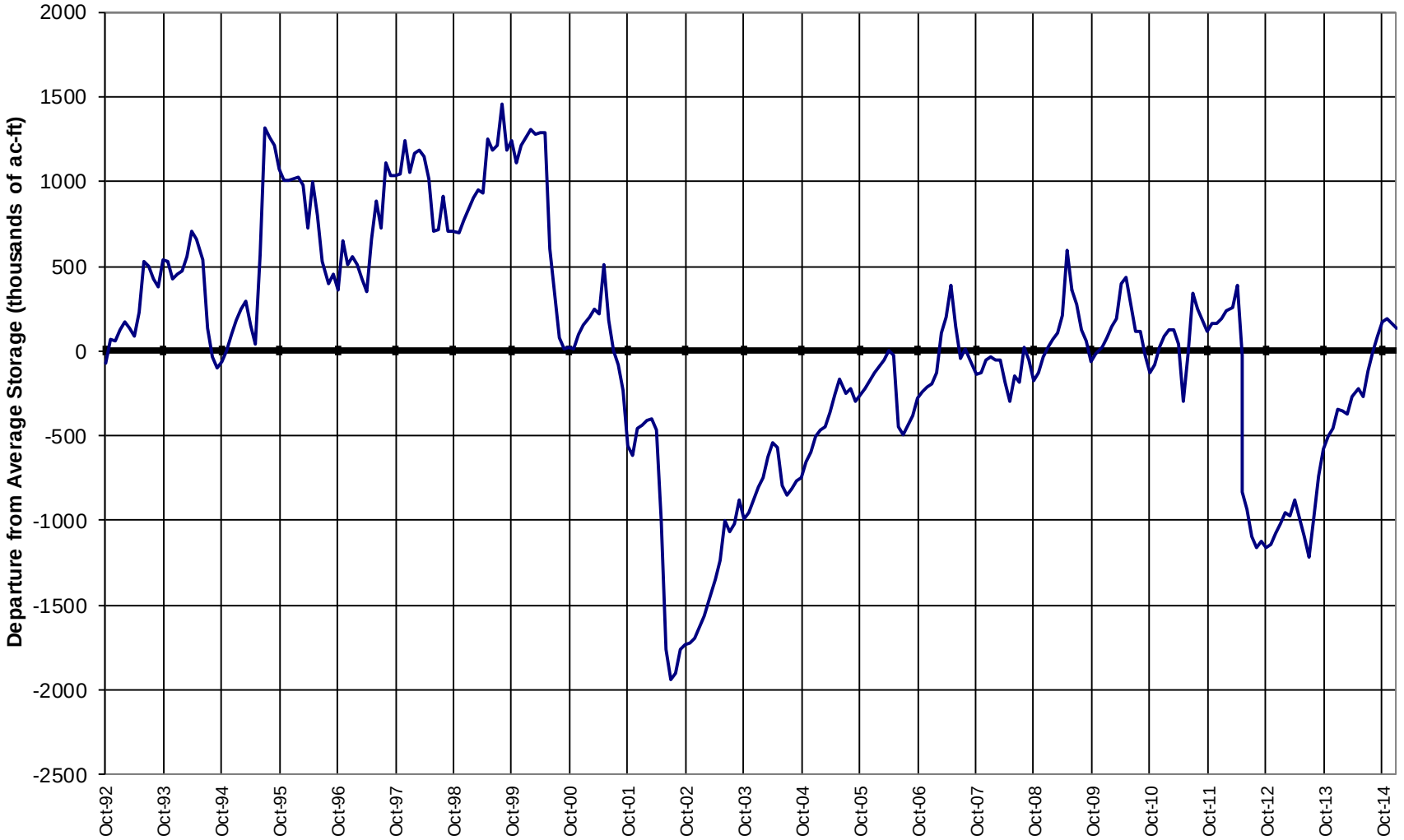
- >= 150
- 130 - 149
- 110 - 129
- 90 - 109
- 70 - 89
- 50 - 69
- < 50

Provisional Data Subject to Revision



End of January 2015

COLORADO STATEWIDE
Reservoir Storage
Departure from Average



Colorado Streamflow Forecast Map

NRCS Natural Resources Conservation Service

Percent of Average

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- 110 - 129
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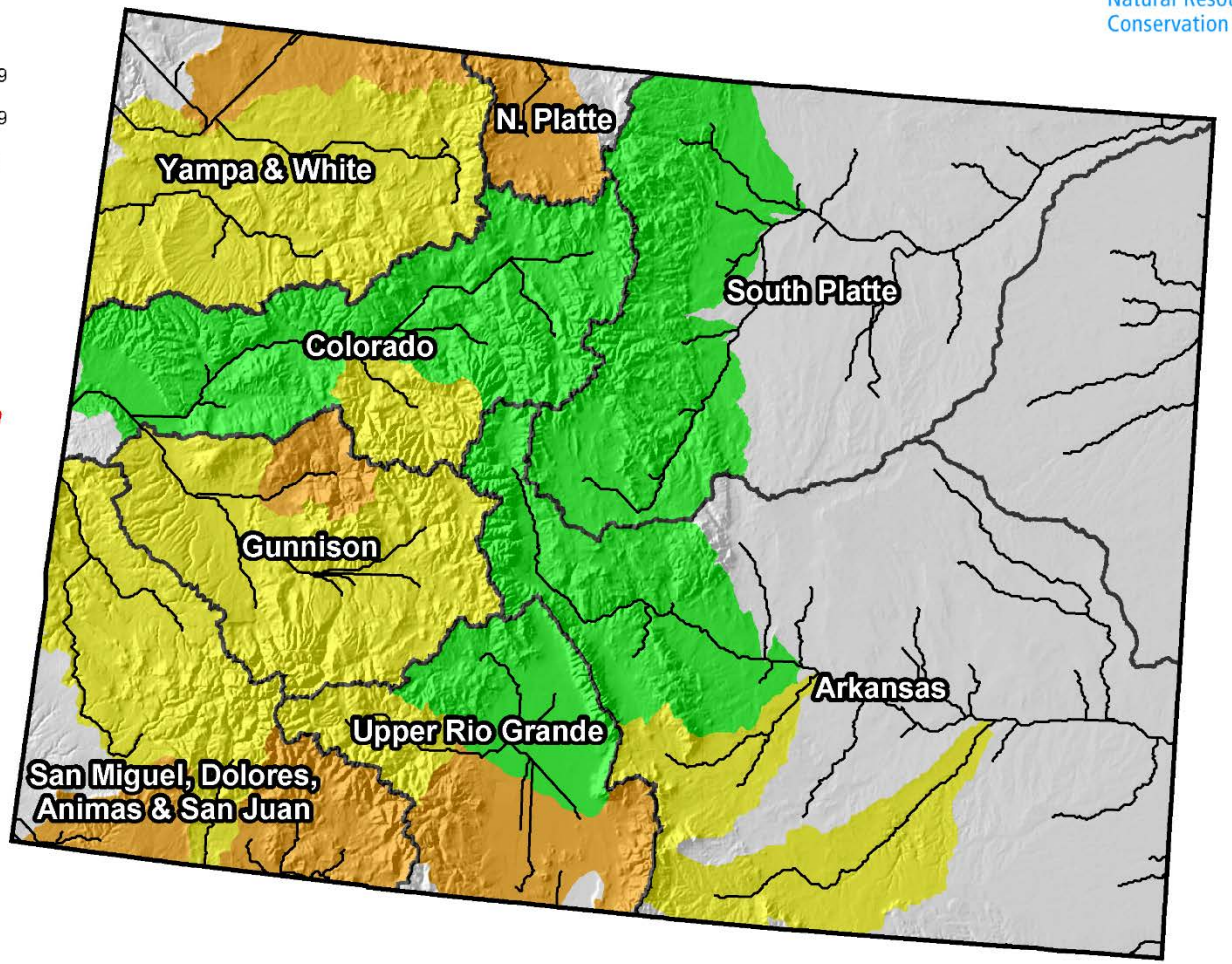
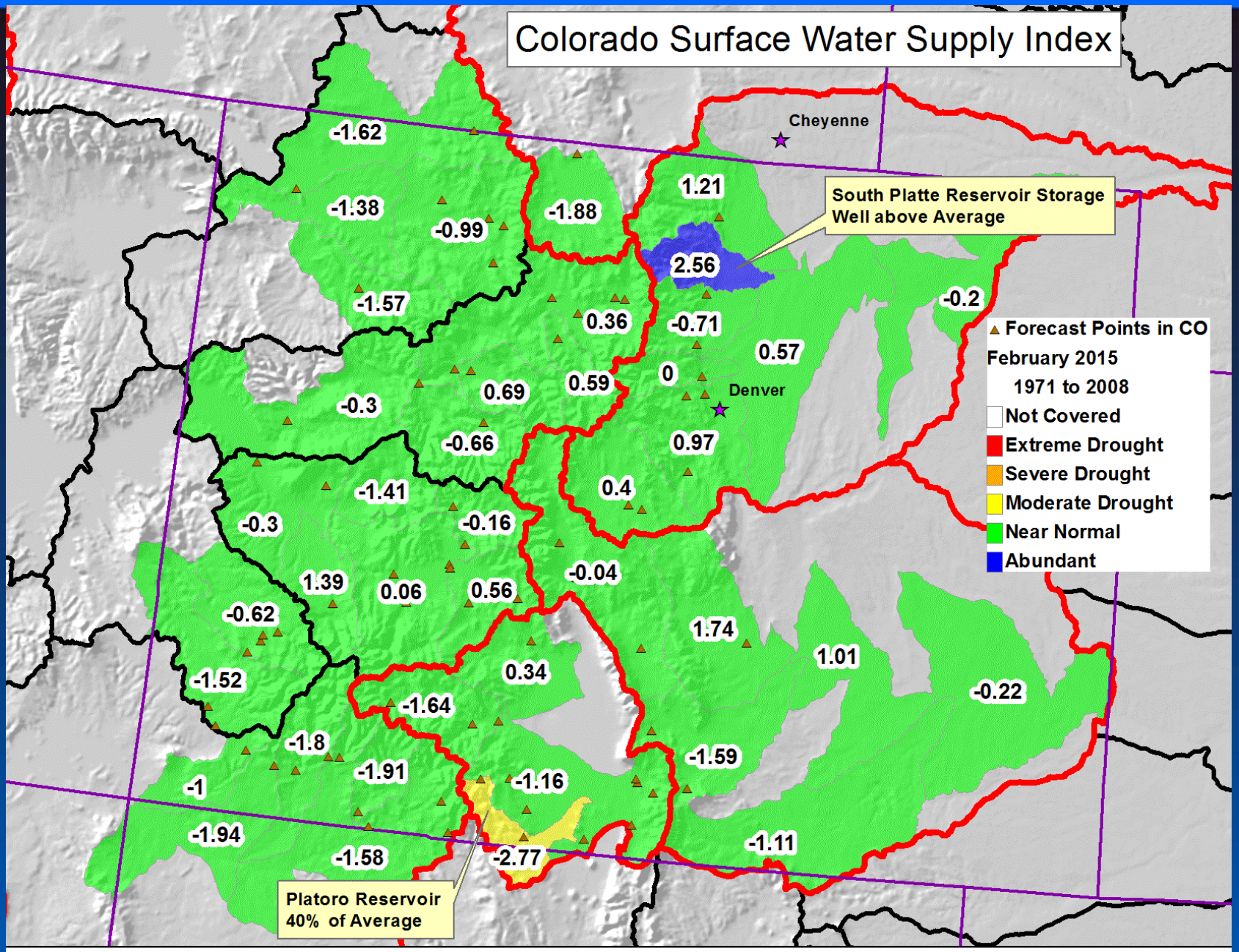
- 70 - 89
- 50 - 69
- < 50

Provisional Data Subject to Revision



Current as of February 1, 2015


Colorado Surface Water Supply Index
Cheyenne
Denver
South Platte Reservoir Storage
Well above Average
Platoro Reservoir
40% of Average
-1.62
-1.38
-0.99
-1.88
1.21
2.56
-0.2
-1.57
0.36
-0.71
0.57
0
0.59
0.69
-0.3
-0.66
0.97
0.4
-1.41
-0.3
-0.16
-0.04
1.39
0.06
0.56
-0.62
1.74
1.01
-0.22
0.34
-1.52
-1.64
-1.8
-1.59
-1.91
-1.16
-1
-1.94
-1.58
-2.77
-1.11
Forecast Points in CO
February 2015
1971 to 2008
Not Covered
Extreme Drought
Severe Drought
Moderate Drought
Near Normal
Abundant

Summary

- Snowpack
  - Statewide snowpack is ranked 27th of 30 years comparing to 2003, 1991, 2000, 2012 and 2013. Jan 2015 was lowest accumulation since 1986
  - Three of those five years were able to make it back to near normal peak snowpack conditions by April 10th.
  - At this point we have typically have 30% of the winter remaining
  - Snowpack is best in the northeast mountains, poorer west and worst in the south.
  - Colorado needs nearly 152% of average snowfall to return to normal
  - In the Gunnison River basin - from Jan 15th to yesterday - saw the lowest snowfall in the mountains dating back to the beginning of our product in 1981. Only 1991 saw nearly the same deficit.
- Reservoirs are slightly above average statewide
- As of February 1
  - Streamflow forecasts ranged from 108% to 49% of average.
  - Surprisingly SWSIs are all near normal

Water Availability Task Force Meeting
February 18th, 2015

NRCS Snow Survey and Water Supply Forecasting Program

Brian Domonkos
Colorado Snow Survey Supervisor
720-544-2852
http://www.nrcs.usda.gov/wps/portal/nrcs/main/co/snow/