NRCS – Snow Survey & Water Supply Forecasting

Water Availability Task Force Meeting August 20th, 2013

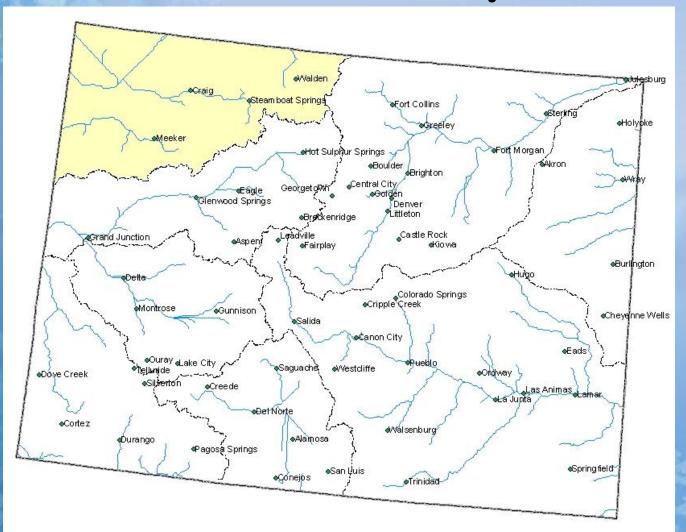
Mage Hultstrand

Assistant Snow Survey Supervisor 720-544-2855

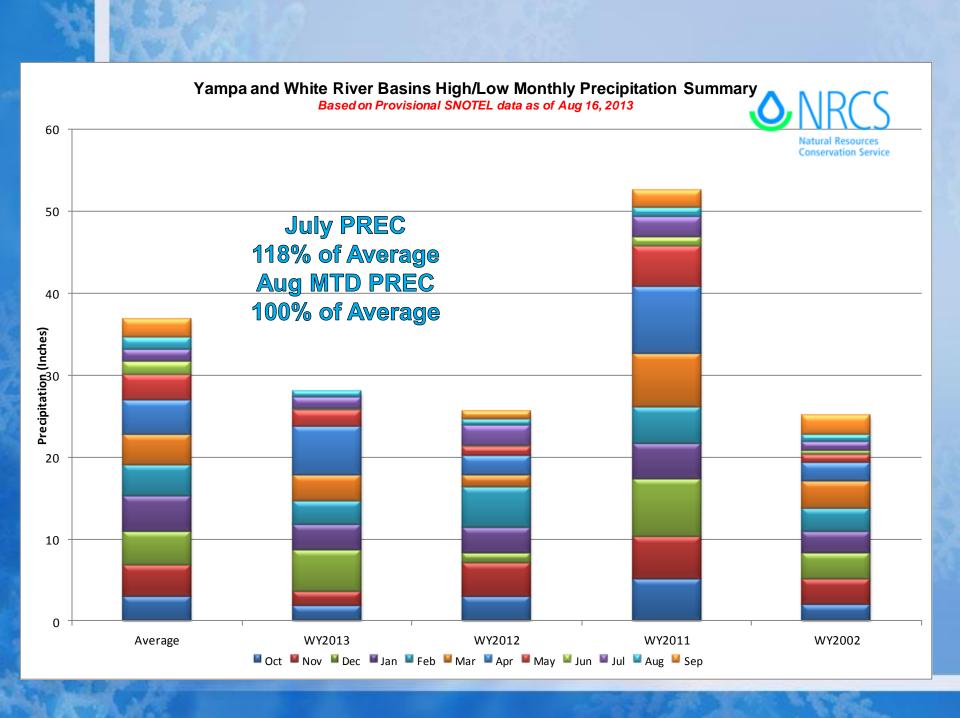
mage.hultstrand@co.usda.gov

http://www.co.nrcs.usda.gov/snow/

Yampa, White & North Platte River Basins Summary

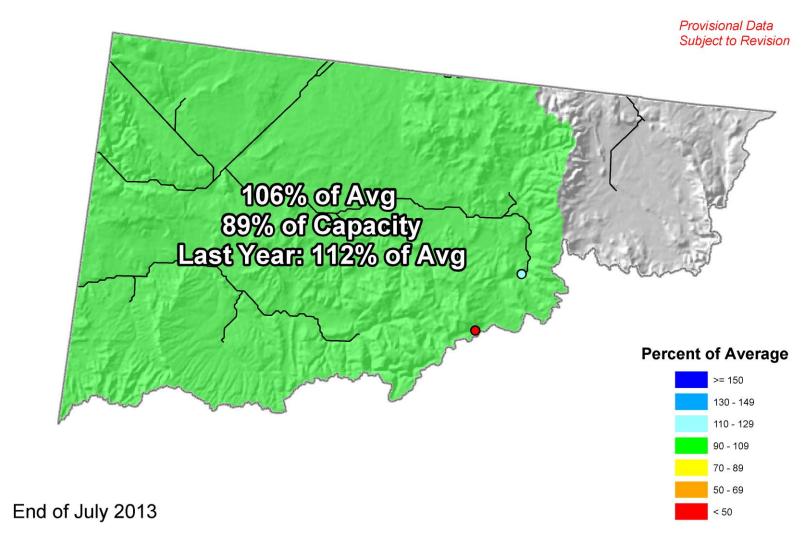


Yampa and White River Basins High/Low Year-to-Date Precipitation Summary Based on Provisional SNOTEL data as of Aug 16, 2013 Current as Pct of Average: 83% Conservation Service Current as Pct of Last Year: 116% Current as Pct of Average Annual Total: 76% Average as Pct of Average Annual Total: 92%
Pct of Avg Needed to Reach Avg Annual Total: 293% 50 Year-to-Date Precipitation (inches) 10 Oct 01 Feb 01 Nov 01 Dec 01 Jan 01 Mar 01 Apr 01 May 01 Jun 01 Jul 01 Aug 01 Sep 01 Average WY2002 WY2011 WY2012 **W**Y2013 Mininum Median Maximum

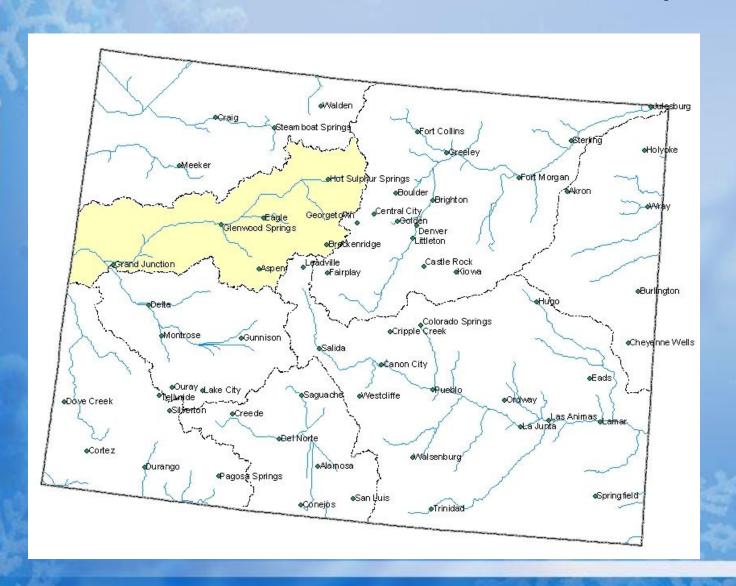


Yampa & White River Basins Reservoir Storage Map



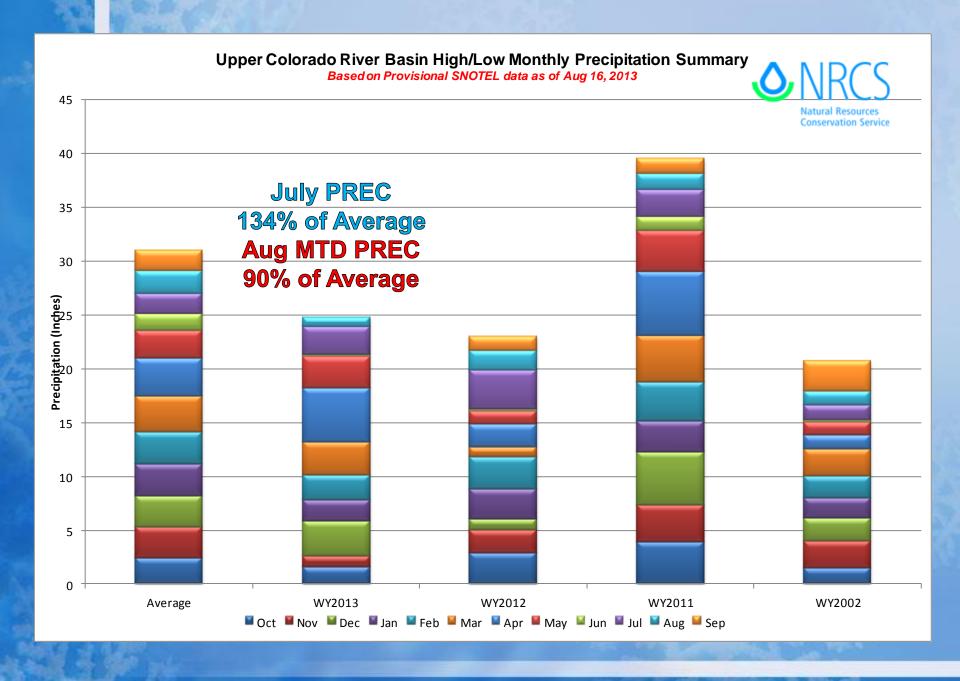


Colorado River Basin Summary



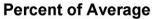
Upper Colorado River Basin High/Low Year-to-Date Precipitation Summary

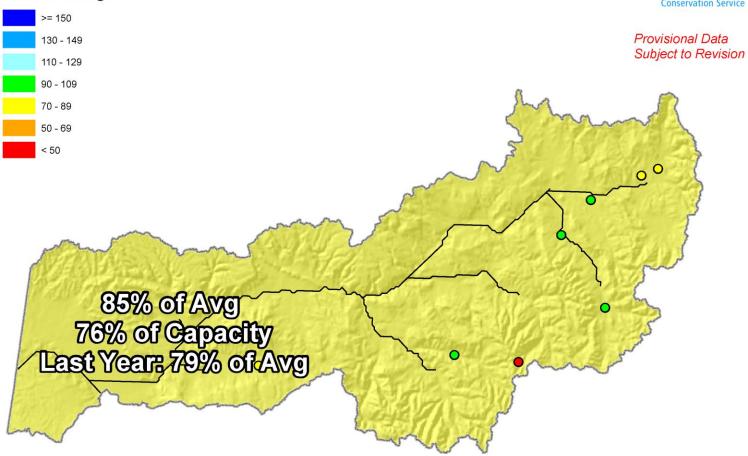
Based on Provisional SNOTEL data as of Aug 16, 2013 Current as Pct of Average: 89% Conservation Service Current as Pct of Last Year: 119% Current as Pct of Average Annnual Total: 80% Average as Pct of Average Annual Total: 90%
Pct of Avg Needed to Reach Avg Annual Total: 207% 35 Year-to-Date Precipitation (inches) 10 5 Oct 01 Nov 01 Dec 01 Jan 01 Feb 01 Mar 01 Apr 01 May 01 Jun 01 Jul 01 Aug 01 Sep 01 WY2002 WY2011 WY2012 **W**Y2013 Median Mininum Average Maximum



Colorado River Basin Reservoir Storage Map

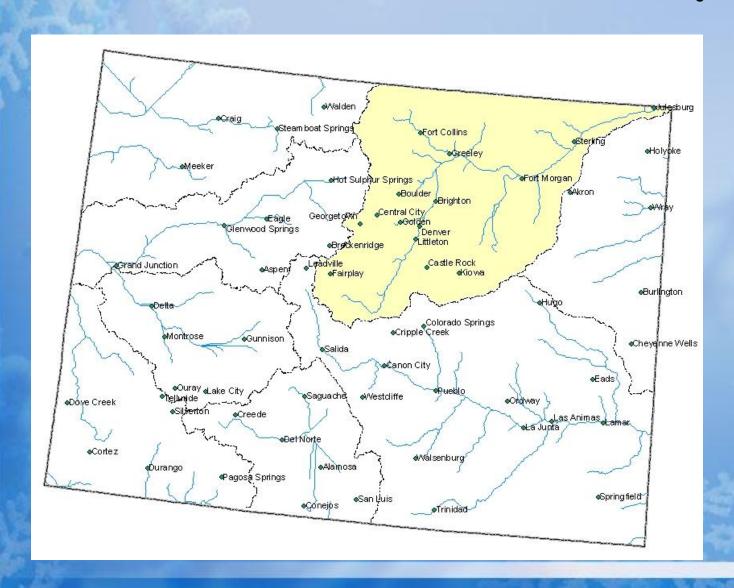






End of July 2013

South Platte River Basin Summary



South Platte River Basin High/Low Year-to-Date Precipitation Summary Based on Provisional SNOTEL data as of Aug 19, 2013 Current as Pct of Average: 89% Conservation Service Current as Pct of Last Year: 111% Current as Pct of Average Annnual Total: 82% Average as Pct of Average Annual Total: 91% Pct of Avg Needed to Reach Avg Annual Total: 211% 35 Year-to-Date Precipitation (inches) 10 5 Oct 01 Dec 01 Jan 01 Feb 01 Mar 01 Apr 01 May 01 Jun 01 Jul 01 Aug 01 Sep 01 Nov 01 Average WY2002

Maximum

Median

Mininum

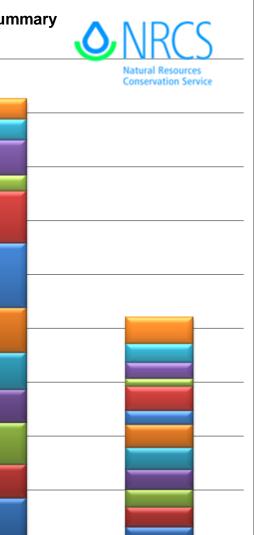
WY2011

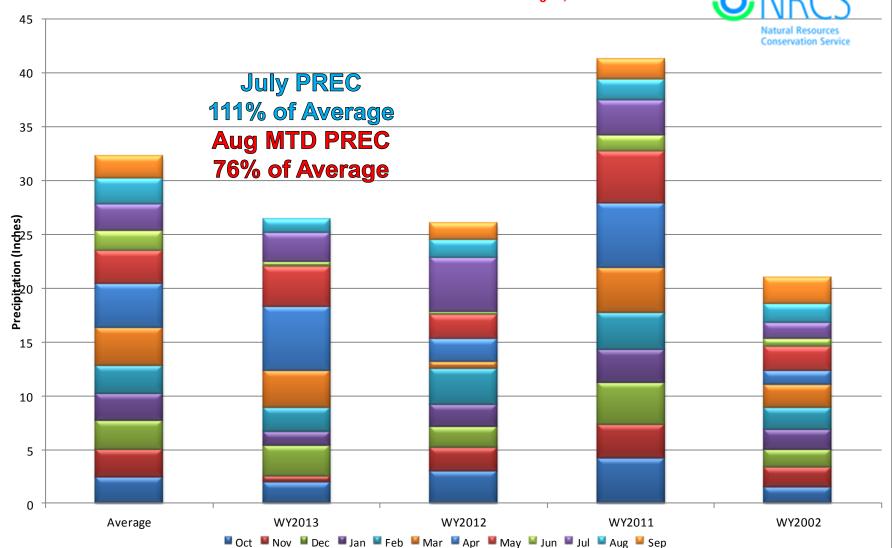
WY2012

WY2013

South Platte River Basin High/Low Monthly Precipitation Summary

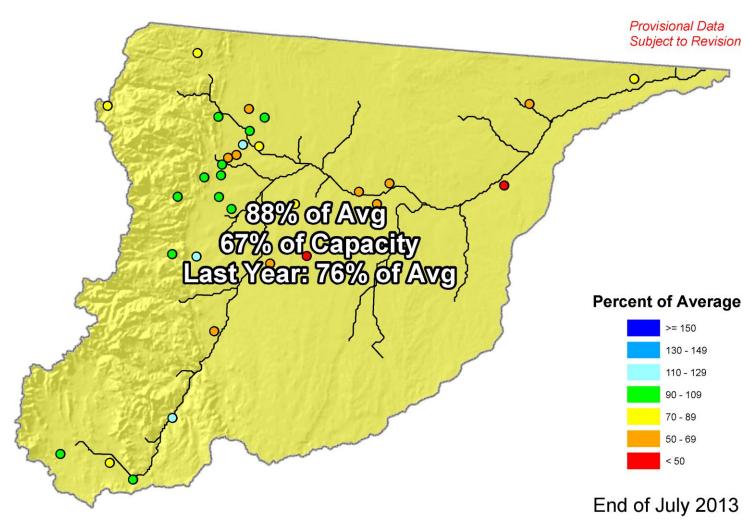
Based on Provisional SNOTEL data as of Aug 19, 2013





South Platte River Basin Reservoir Storage Map



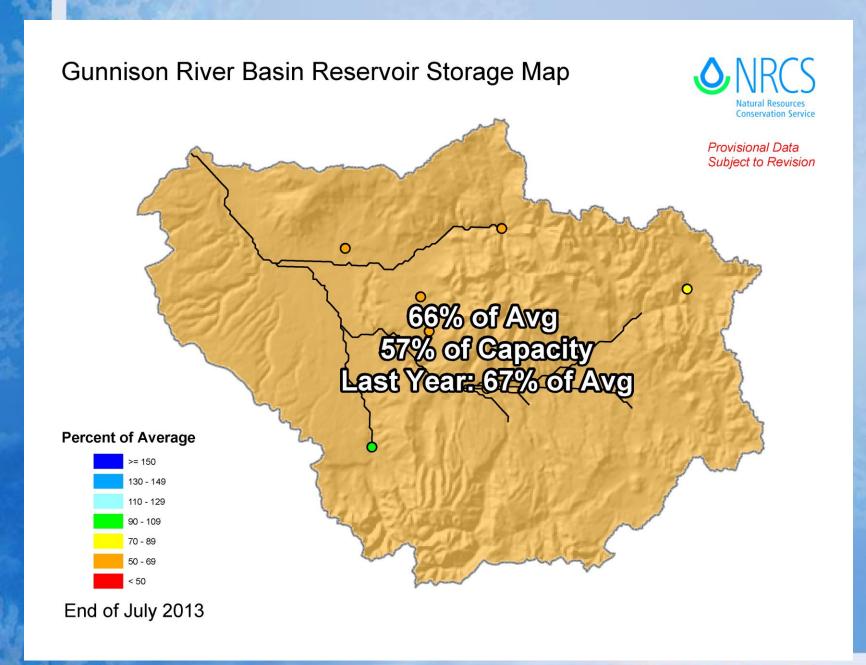


Gunnison River Basin Summary

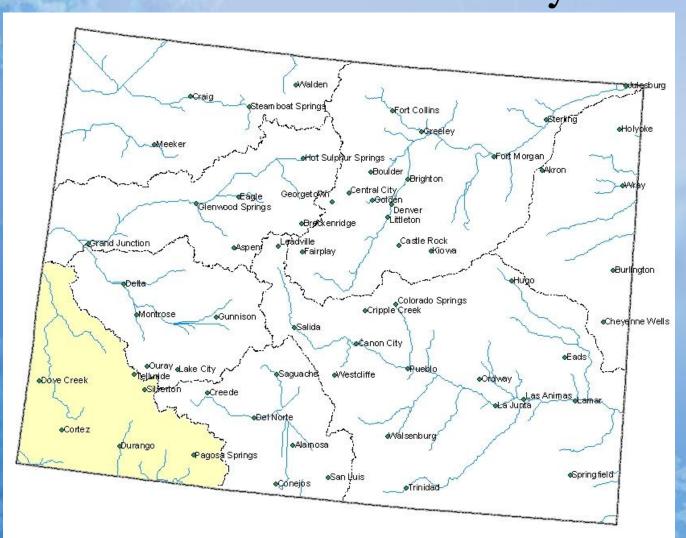


Gunnison River Basin High/Low Year-to-Date Precipitation Summary Based on Provisional SNOTEL data as of Aug 16, 2013 50 Current as Pct of Average: 81% Conservation Service Current as Pct of Last Year: 110% Current as Pct of Average Annnual Total: 72% Average as Pct of Average Annual Total: 89% Pct of Avg Needed to Reach Avg Annual Total: 258% 40 35 Year-to-Date Precipitation (inches) 10 5 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 WY2011 WY2012 **─**WY2013 Median Maximum Mininum

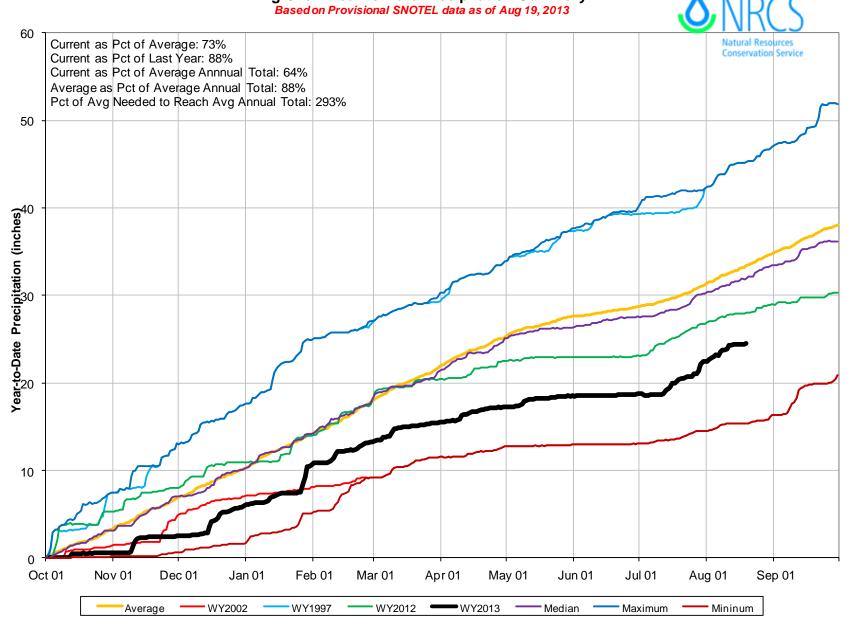
Gunnison River Basin High/Low Monthly Precipitation Summary Based on Provisional SNOTEL data as of Aug 16, 2013 40 Conservation Service **July PREC** 35 149% of Average Aug MTD PREC 30 117% of Average 25 Precipitation (Inches) 10 5 0 Average WY2013 WY2012 WY2011 WY2002 ■ Oct ■ Nov ■ Dec ■ Jan ■ Feb ■ Mar ■ Apr ■ May ■ Jun ■ Jul ■ Aug ■ Sep

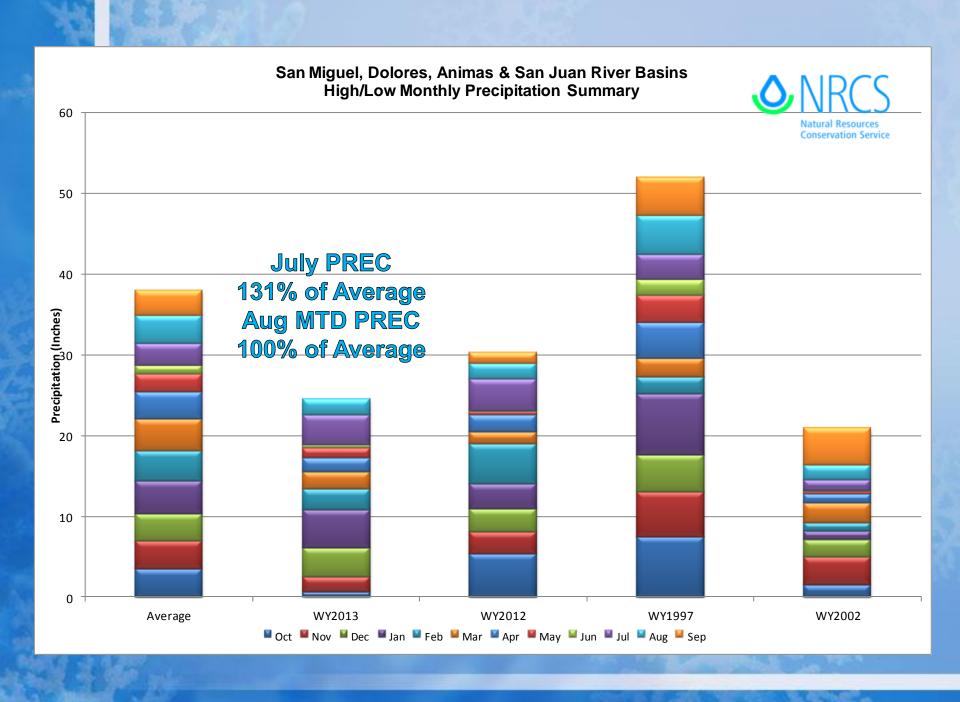


San Miguel, Dolores, Animas & San Juan River Basins Summary



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



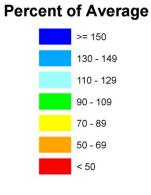


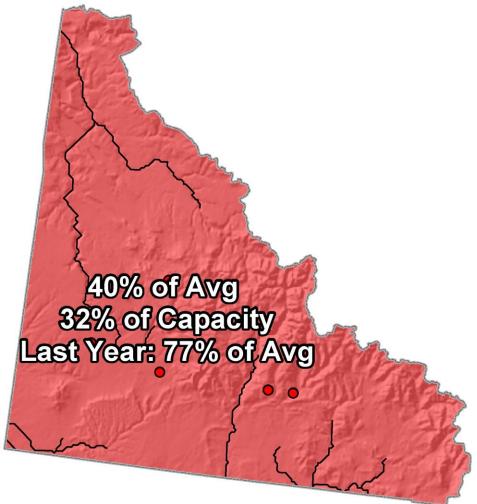
San Miguel, Dolores, Animas and San Juan River Basins

Reservoir Storage Map



Provisional Data Subject to Revision





End of July 2013

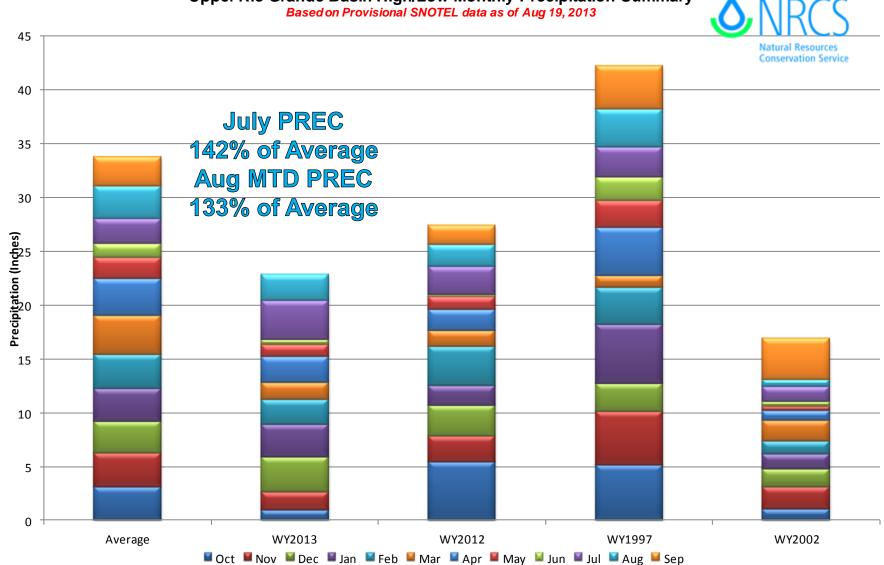
Upper Rio Grande Basin Summary

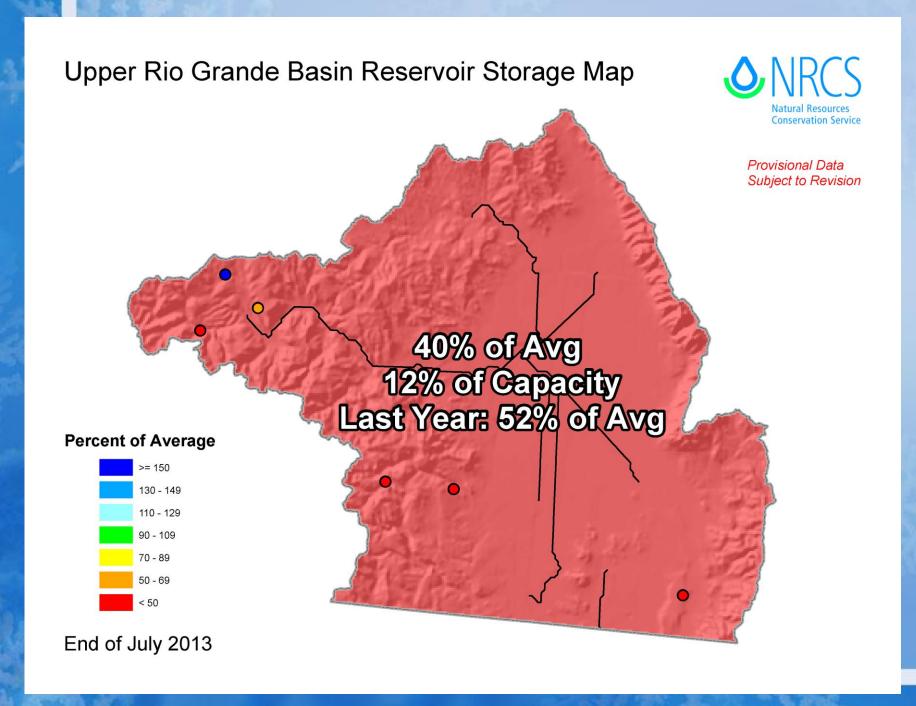


Upper Rio Grande Basin High/Low Year-to-Date Precipitation Summary

Based on Provisional SNOTEL data as of Aug 19, 2013 50 Current as Pct of Average: 77% Conservation Service Current as Pct of Last Year: 92% Current as Pct of Average Annnual Total: 67% Average as Pct of Average Annual Total: 88% Pct of Avg Needed to Reach Avg Annual Total: 275% 40 35 Year-to-Date Precipitation (inches) 10 5 0 Dec 01 May 01 Sep 01 Oct 01 Nov 01 Jan 01 Feb 01 Mar 01 Apr 01 Jun 01 Jul 01 Aug 01 WY2012 Average WY2002 WY1997 WY2013 Median Maximum Mininum

Upper Rio Grande Basin High/Low Monthly Precipitation Summary





Arkansas River Basin Summary



Arkansas River Basin High/Low Year-to-Date Precipitation Summary Based on Provisional SNOTEL data as of Aug 16, 2013 45 Current as Pct of Average: 82% Conservation Service Current as Pct of Last Year: 107% Current as Pct of Average Annnual Total: 72% Average as Pct of Average Annual Total: 88%
Pct of Avg Needed to Reach Avg Annual Total: 239% 35 Year-to-Date Precipitation (inches) 10 5

Jul 01

Maximum

Jun 01

Median

Aug 01

Sep 01

Mininum

Oct 01

Nov 01

Average

Dec 01

Jan 01

WY2002

Feb 01

WY1997

Mar 01

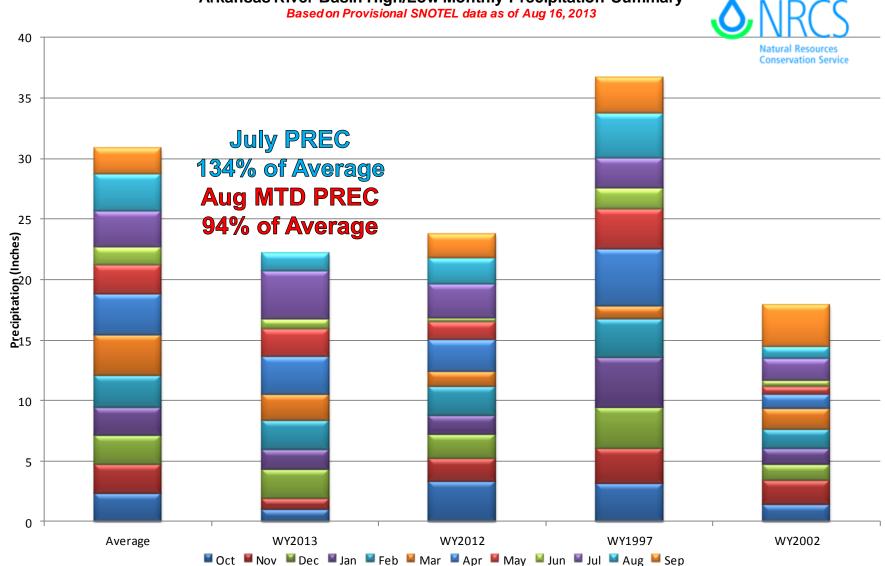
WY2012

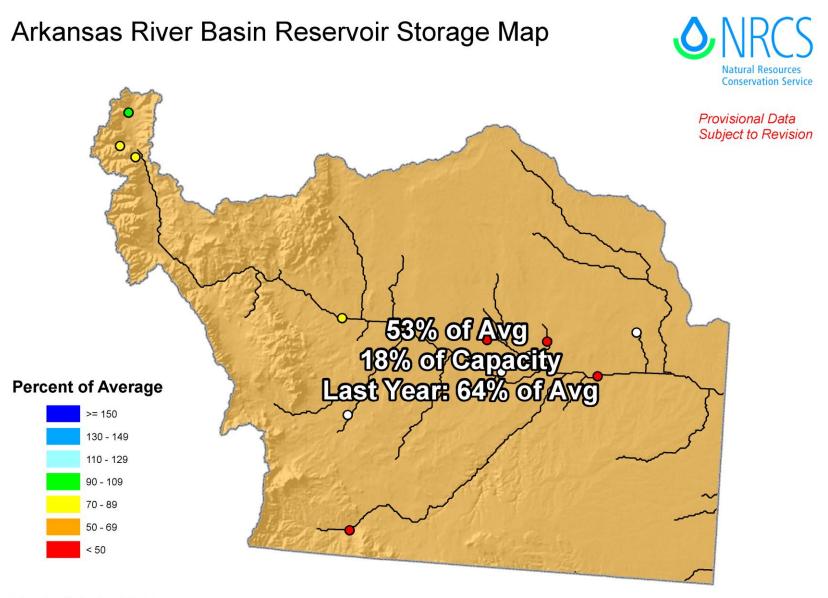
Apr 01

WY2013

May 01

Arkansas River Basin High/Low Monthly Precipitation Summary





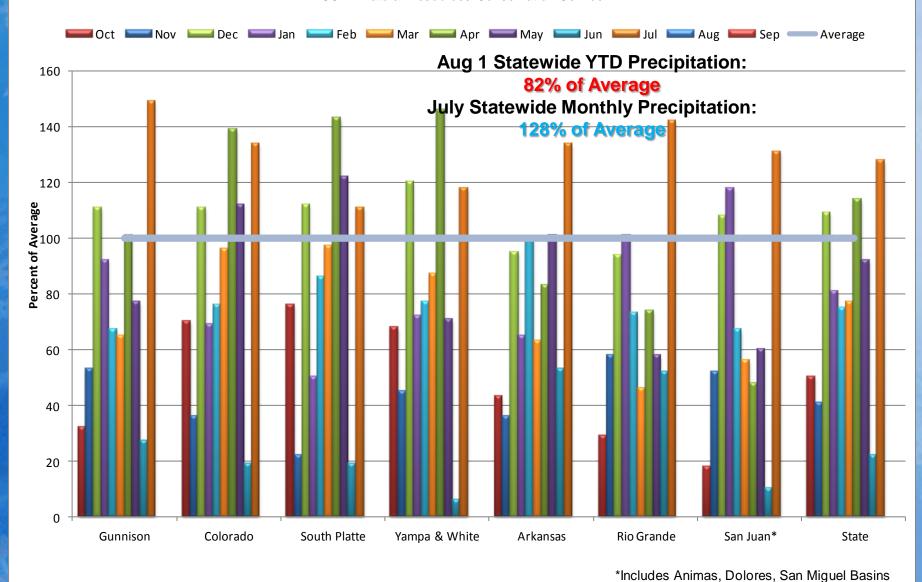
End of July 2013

Colorado Statewide Summary

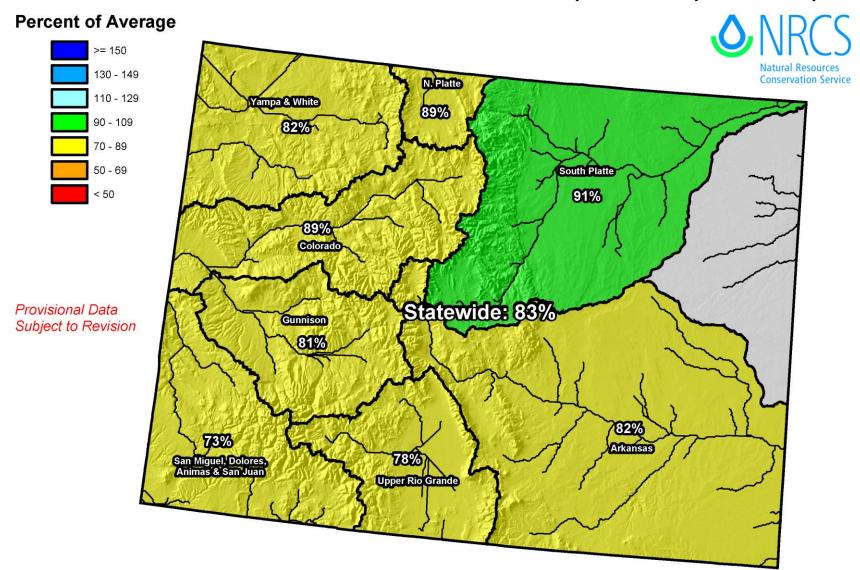


Colorado Monthly Precipitation Summary for WY2013

USDA Natural Resources Conservation Service



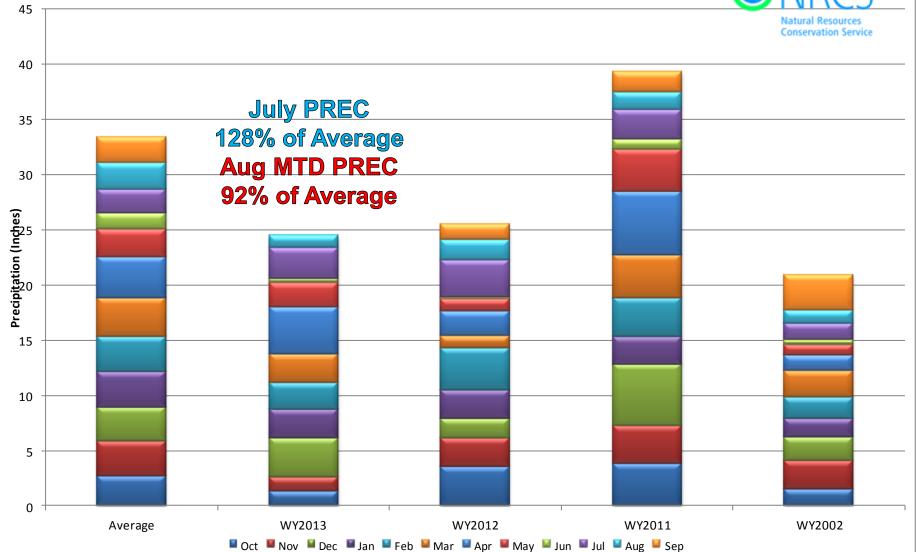
Colorado SNOTEL Water Year-to-Date Precipitation Update Map



Colorado Statewide High/Low Monthly Precipitation Summary

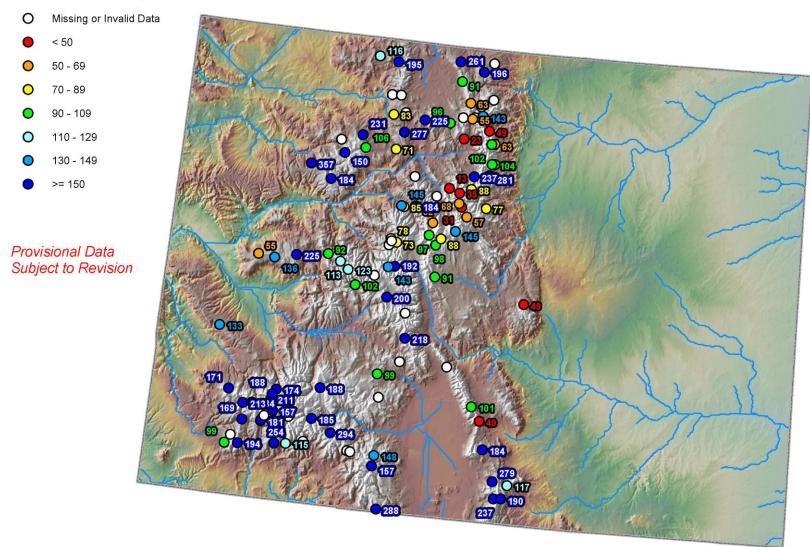
Based on Provisional SNOTEL data as of Aug 16, 2013





Colorado SNOTEL Month-to-Date Precipitation

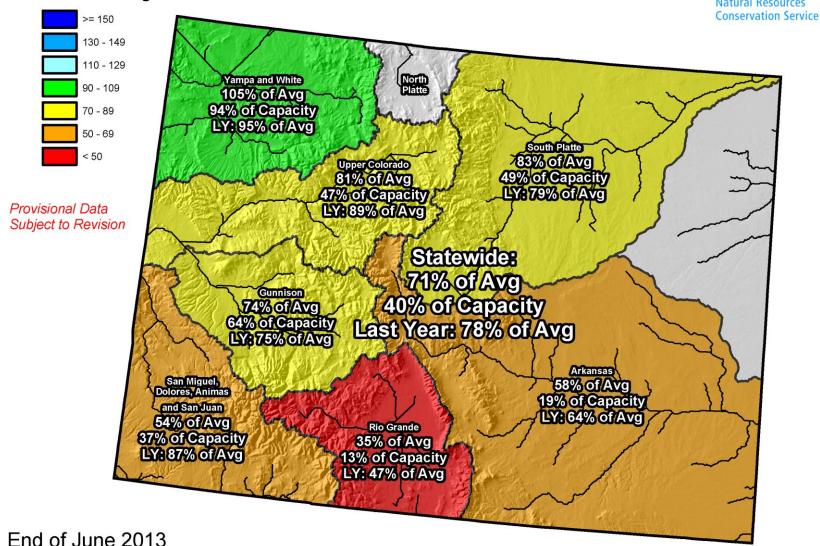
Percent of Average



Colorado Reservoir Storage Map

Natural Resources

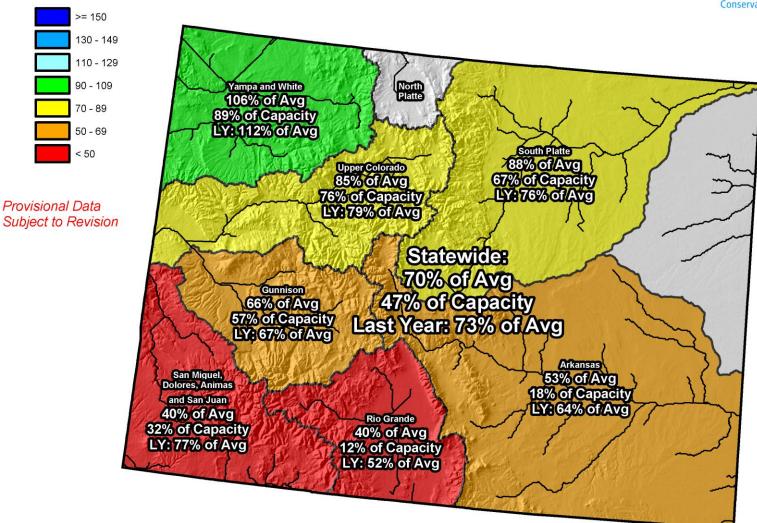
Percent of Average



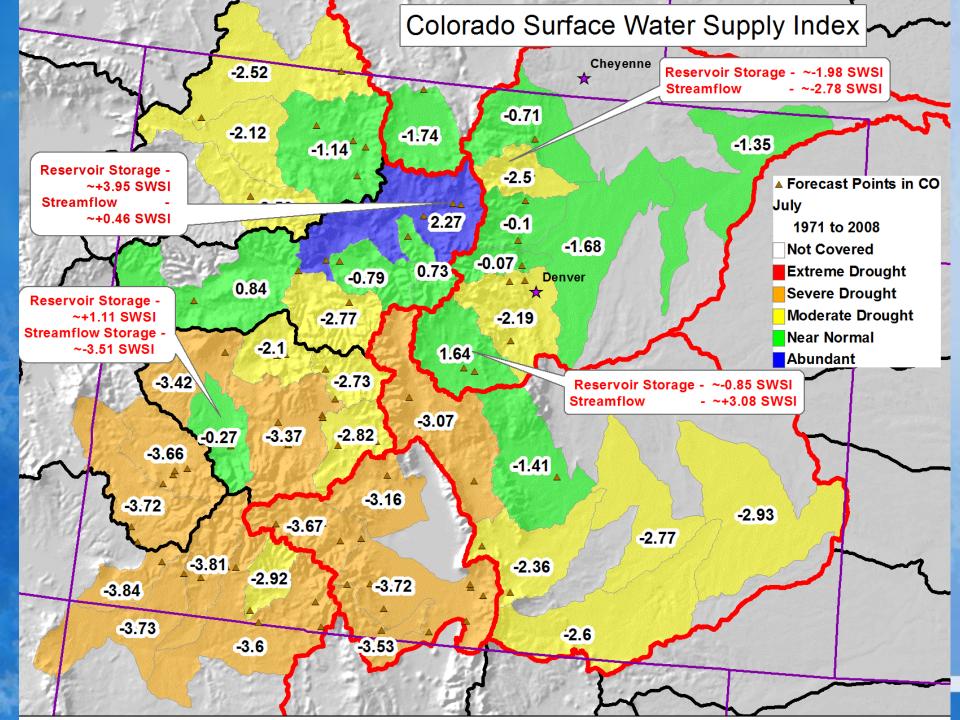
Colorado Reservoir Storage Map

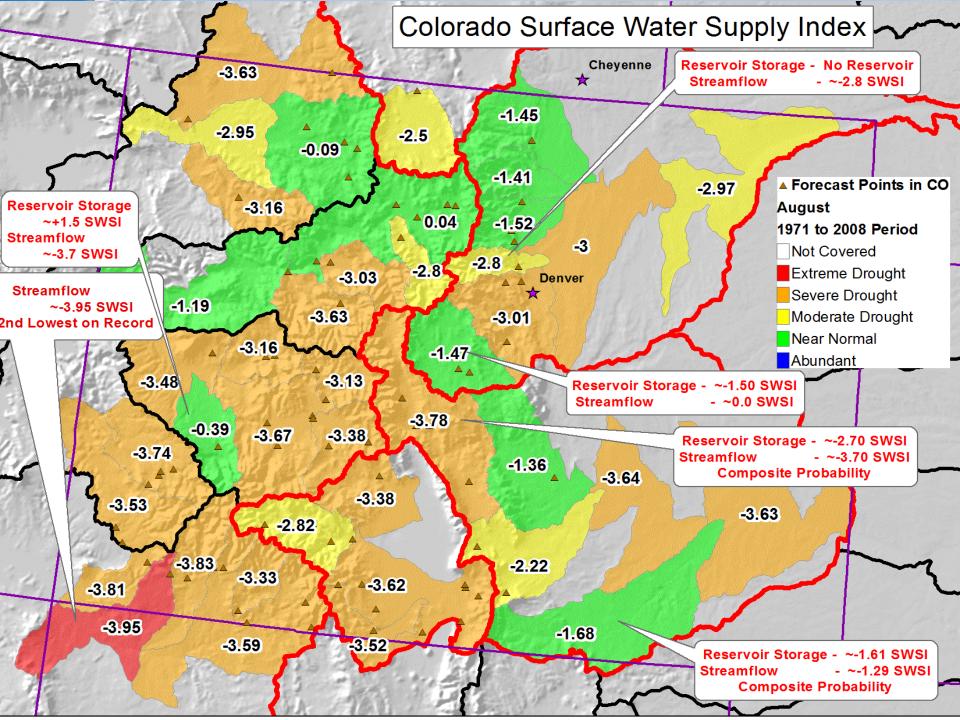


Percent of Average



End of July 2013





WY2013 Summary

- •DEC: SNOW! Finally. Storms in mid to late Dec boosted snowpack but it was not enough to reach normal conditions.
- •JAN: End of month storm increased the snowpack in Southwest basins.
- •FEB: Prec below average. The Snow we did receive was just enough to keep the snowpack from further declining.
- •MAR: Storms helped maintained snowpack but no boost.
- •APR: Multiple storm systems brought the snowpack up substantially and in some cases to near normal peaks. Really improved the northern basins but did not help the southern basins.
- •MAY: Above normal prec recorded for the South Platte, Upper Colorado and Arkansas basins. In the South Platte additional snow accumulation caused the basin to reach a second higher peak SWE in early March.
- •JUNE: Little to no precipitation received in the mountains during the month. Reservoir storage improved in some areas but did not recover to normal.
- •JULY: Well above average mountain precipitation across the state. Reservoir storage continues to drop especially in the southern part of the state.
- •AUG: Wet weather patterns continue, but not as large percentages compared to average as July so far.