



2011 Annual Report Snow Survey Program

This report contains fiscal year activity for the state of Colorado from the time period of October 2010 to September 2011.

Who We Are

NRCS provides technical and financial assistance to help agricultural producers and others care for the land.

NRCS has six mission goals that include high quality, productive soils; clean and abundant water; healthy plant and animal communities; clean air; an adequate energy supply; and working farms and ranchlands.

Vision

Productive Lands -
Healthy Environment

Mission

Helping People Help the Land

“In 2011, Colorado’s weather was dominated by a La Nina weather pattern, bringing snowpack levels to Colorado that had not been seen since 1983.”

Snow Survey Supervisor


United States Department of Agriculture
Natural Resources Conservation Service
Helping People Help the Land

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The Program

Snow Survey and Water Supply Forecasting works with water users and managers to provide information on water availability across our multi-state region.

In this region (CO, AZ, NM, and southern WY), there are 178 automated SNOTEL (SNOWpack TELEmetry) sites including 112 in Colorado. The SNOTEL data is supplemented by data collected manually at snow courses located in high mountain watersheds. There are 156 manually measured snow courses in our region and 106 in Colorado.

Streamflow forecasts are updated monthly during the winter months, allowing water users and resource managers to plan for changing streamflow conditions and water supplies.

2010 Summary

Colorado’s weather in 2011 was dominated by a La Nina weather pattern. This weather pattern brought snowpack levels to Colorado that had not been seen since 1983.

By January 1, water year totals were above average in all basins, and statewide water year totals were 136% of average.

By February 1, the Colorado snowpack was trending downward. January was a dry month for most of Colorado, and extremely dry in portions of southwestern Colorado. Statewide snowpack levels on February 1st had decreased to 117% of average. This decrease highlights the drastic decrease in snowpack averages within the Gunnison, San Juan, Animas, Dolores and San Miguel Basins. These basins snowpack’s had decreased 32% to 38% from the previous month. As of February 1, reservoirs in the state have exceeded the average storage by 128,000 acre-feet.

At the beginning of May, the strong La Nina was still dominating the Colorado weather patterns. The month of April brought record snowfall to the majority of basins. Tower SNOTEL site located near Steamboat Springs recorded record snowfall with 72.6 inches of water equivalent.

The snow course on Cameron Pass measured 48 inches of water equivalent, which exceeded any measurements at the site that date back to 1936. The La Nina pattern may have set records in the northern basins but it also kept areas in the south close to or slightly below average.

Continued wet conditions during the month of May contributed to increased runoff volumes forecasts throughout much of Colorado. The northern basins were expecting above average streamflow volumes while the San Juan, Animas, Dolores, and San Miguel forecasts were below average.

The Rio Grande Basin missed a majority of the wet May weather and had the lowest runoff forecast in the state; Sangre de Cristo Creek was only expected to produce 50% of average.

By the end of Water Year 2011, reservoir storage in Colorado was at 100% of average. The northern basins above average storage offset the below average basins. Reservoirs in the Arkansas Basin were at 87% of average and the Upper Rio Grande reservoirs were at just 47% of average.

For More Information

More information about the Snow Survey program can be found at www.co.nrcs.usda.gov/snow/index.html.