

September 2010 DROUGHT UPDATE

Water Availability Task Force Co-Chairs

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Executive Summary

Following a warm August with relatively normal precipitation; the month of September has been warm and dry across Colorado. Each of the seven basins has experienced less than average precipitation for the month and temperatures have also been above average for this time of year. Drought conditions have expanded across much of the northern half of the state and in the Rio Grande Basin. Despite above average temperatures and dry conditions, reservoir storage remains strong. However, water providers are aware that continued hot and dry conditions and a lack of fall precipitation can change the status of reservoir storage quickly; consequently, they continue to closely monitor the situation.

- All seven basins have received below average precipitation thus far in September, and no significant precipitation is forecast for the remainder of the month. Despite this, six of the seven basins have recorded precipitation levels of at least 90% of average for the current water year. The San Miguel/Dolores basins have received the lowest amount of precipitation this water year, with 88% of average.
- Recent storms have alleviated dry spring conditions in The Gunnison Basin. This basin is now at 96% of average for the water year. The 2010 water year ends September 30, 2010.
- Statewide reservoir storage is 103% of average. Individually, six of the seven basins are at or above 100% of average storage. The Yampa and the Upper Rio are both below 90% with the Yampa at 88% of average and the Upper Rio Grande basin the lowest in the state with 84% of average storage.
- The U.S. Drought Monitor shows an expanded area of D0 drought conditions in Colorado. The drought D0 conditions that have covered the Northwest part of the state throughout the summer have been extended into the Front Range corridor and parts of the North Eastern Plains. 53.77% of the state is now experiencing D0 status, which represents “abnormally dry” conditions. The Water Availability Task Force continues to closely monitor these areas.
- The SWSI values statewide range from -1.3 to +3.0. The South Platte basin had the highest SWSI value at +3.0. The lowest value, -1.3, belongs to the Gunnison basin; however this is only current through the end of August and does not represent recent moisture that this basin has received.¹
- The newly revised SWSI for September indicates shows values ranging from +3.16 for the Mancos watershed to -2.65 in the Roaring Fork. This index, which reflects recent moisture, also shows the Gunnison Basin with SWSI values ranging from +1.3 (N. Fork Gunnison) to -1.3 (Uncompahgre).²
- Water providers in attendance at the September 27th Water Availability Task Force meeting reported that above average temperatures and below average precipitation in September have lead to above average September water demand in some communities.
- The Colorado Water Conservation Board approved the revised 2010 Drought Mitigation and Response Plan at its September board meeting in Grand Junction. The 2010 plan updates the previous statewide drought plans and incorporates a new vulnerability assessment to flag potential problem areas. This plan will now be incorporated into the broader statewide Natural Hazard Mitigation Plan, which will then go to Governor Ritter and the Federal Emergency Management Agency (FEMA) for approval.

¹ Traditional SWSI values are based on streamflow, reservoir storage and precipitation for the summer period (May-October). The values range from a high of +4.0, which indicates an abundant supply to a low of -4.0, which indicates severe drought. A value of 0.0 indicates a near normal supply. Traditional SWSI values will be presented alongside the Revised SWSI as the transition to the new calculation is completed.

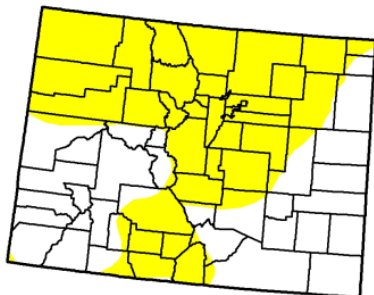
² Colorado was the first state to develop a methodology for calculating the Surface Water Supply Index (SWSI) in the 1980's but in the early 1990s the Natural Resource Conservation Service (NRCS) refined the SWSI calculation to address the subjectivity of the original computation. The use of streamflow forecasts in the NRCS updated SWSI is an objective, statistical assessment of the data relating to snowmelt runoff. Additionally, the revised methodology provides a more stable month to month transition and utilizes a higher spatial resolution improving from four digit hydrologic units (seven values statewide) to eight digit hydrologic units (37 values statewide). This shift enables more detailed evaluation of the regions that are most effected by drought at any given time. The revised SWSI calculations are now available for western Colorado and will be presented in drought updates. Statewide figures will be available on a monthly basis beginning in the spring 2011, when the State of Colorado will fully adopt the new methodology. The scale of +4.0, which indicates an abundant supply to a low of -4.0, which indicates severe drought will remain the same.

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U.S. Drought Monitor Colorado

September 21, 2010
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	46.2	53.8	0.0	0.0	0.0	0.0
Last Week (09/14/2010 map)	65.4	34.6	0.0	0.0	0.0	0.0
3 Months Ago (06/29/2010 map)	77.8	22.2	0.0	0.0	0.0	0.0
Start of Calendar Year (01/05/2010 map)	69.2	30.8	7.5	0.0	0.0	0.0
Start of Water Year (10/06/2009 map)	68.8	31.2	3.5	0.0	0.0	0.0
One Year Ago (09/22/2009 map)	68.8	31.2	2.1	0.0	0.0	0.0



Intensity:

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements

<http://drought.unl.edu/dm>

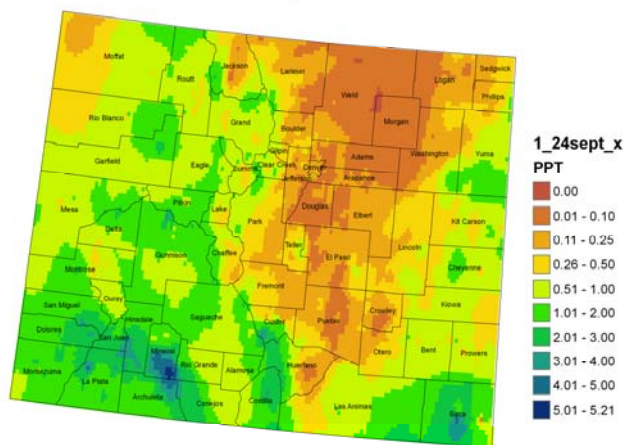


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Author: Richard Heim, NCDC/NOAA

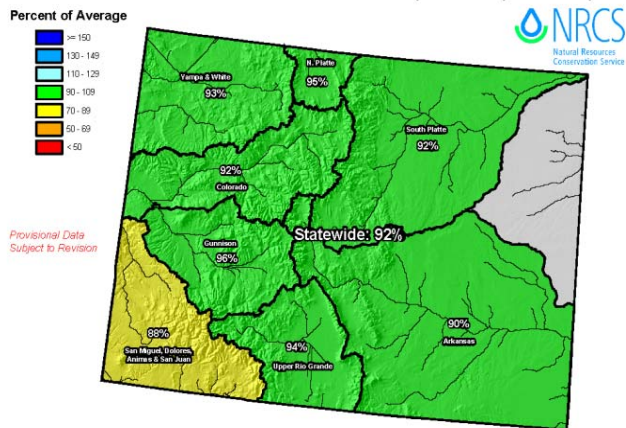
The adjacent map shows the U.S. Drought Monitor for Colorado as of September 27, 2010. The northwest region of Colorado continues to experience sustained D0 drought conditions for the ninth month in a row. While similar conditions have expanded into other portions of Northern Colorado. The Rio Grande Basin also continues to experience D0 conditions.

The adjacent map shows September precipitation through the 24th of the month. In the month of September the Southwest corner of the state has fared reasonably well receiving moderate amounts of rainfall. The northern Front Range has received little to no precipitation thus far in September. No significant precipitation is forecast for the remainder of September.

Colorado September 2010 Precipitation (in)
1 - 24 September 2010



Colorado SNOTEL Water Year-to-Date Precipitation Update Map



Current as of Sep 23, 2010

The map to the left shows the precipitation summary for the 2010 Water Year as of September 23, 2010. Unlike the image above, this map shows that precipitation for the period from October 1st, 2009 through September 23, 2010 was only slightly below normal statewide and within each of the individual basins. The San Miguel/ Dolores/ Animas/ San Juan River Basin had the least amount of cumulative precipitation during this water year, at 88% of average. All other basins received between 90 and 96% of average.

NOTE: The maps and graphics depicted in this report were presented at the September 27th, 2010 meeting and may have been updated since the meeting. All presentations are available at the CWCB website – www.cwcb.state.co.us

The next WATF meeting is scheduled for October 19th, 2010. The meeting location and time is to be determined. This will be a joint meeting with the Impact Task Force Chairs as outlined in the revised 2010 Colorado Drought Mitigation and Response Plan.