

FEBRUARY 2011 DROUGHT UPDATE

Water Availability Task Force Co-Chairs

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Executive Summary

La Niña conditions continue to persist, influencing Colorado weather with above average moisture in the northern mountains. The southern portion of the state has seen a drop in precipitation over the last month and conditions in the region will be closely monitored over the coming weeks for deteriorating conditions. Statewide reservoir storage remains strong and water providers continue to be in a “wait and see” mode. The next 2-3 months will give a better indication of what conditions can be expected throughout the spring and early irrigation season.

- The eastern plains of Colorado have received below normal precipitation since the beginning of the water year in October 2010. Although recent storms have brought some moisture, overall precipitation remains below average.
- The basins in the southwest corner of the state: the San Miguel, Dolores, Animas, and San Juan, received heavy snowfall in late December but have received well below average precipitation in January and February. While the basin remains near normal for the water year, this is largely skewed due to well above average precipitation prior to the New Year. This region will continue to be closely monitored for deteriorating conditions in the coming weeks.
- Statewide snowpack has decreased slightly since January 1 but remains above average at 116%. Five of eight basins are above 100% of average. The North Platte has the highest percent snowpack at 131% of average; the Colorado, Gunnison, Yampa/White and South Platte sit at 127%, 120%, 124%, and 122% of average, respectively. The basins in the southwest corner of the state: the San Miguel, Dolores, Animas, and San Juan, and the Arkansas basin are all near normal at 100% and 105% of average respectively. The Rio Grande basin has fallen below normal at 86%.
- According to the U.S. Drought Monitor, 58% of the state is now experiencing D0, D1 or D2 status, which represents abnormally dry, drought moderate and drought severe conditions respectively. The drought conditions that have covered the eastern plains of the state throughout the fall have continued to deteriorate with D0, D1 and D2 covering much of Colorado east of the divide. A small portion of Huerfano County has recently experienced moisture that has brought some relief from the D2 conditions. However this region is still experiencing D1 conditions.
- The February 1st traditional SWSI values¹ range from +0.1 in the San Miguel/Dolores/Animas/ San Juan Basin to +2.9 in the South Platte Basin. All other basin show positive values. The traditional SWSI values are partly influenced by reservoir storage and may not fully represent conditions in the region.
- The revised SWSI values for the west slope,² which rely on stream flow forecasts and a smaller spatial scale, show a range of values -0.08 in the southwestern part of the states to +2.63 in the Yampa/ White river basin and represent near normal to abundant supplies.

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.

FEBRUARY 2011 DROUGHT UPDATE

U.S. Drought Monitor

February 15, 2011

Valid 7 a.m. EST

Colorado

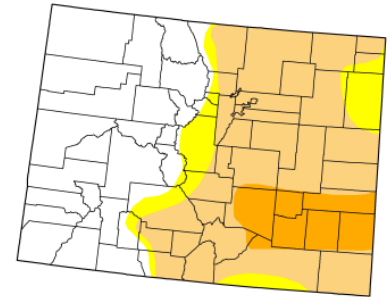
The adjacent map shows the U.S. Drought Monitor for Colorado as of February 15, 2011. The plains region of Colorado continues to experience sustained D0- D1 (abnormally dry – drought severe) drought conditions for the eleventh month in a row, with D2 conditions continuing in portions of Bent, Huerfano and Pueblo counties for the third month.

The experimental long term forecast calls for continued dry conditions across much of Colorado through June. The northwest corner of the State continues to have the best chance for average or above average precipitation.

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	41.65	58.35	49.57	8.93	0.00	0.00
Last Week (02/08/2011 map)	41.65	58.35	49.57	10.13	0.00	0.00
3 Months Ago (11/16/2010 map)	30.29	69.71	38.67	0.00	0.00	0.00
Start of Calendar Year (12/28/2010 map)	40.40	59.60	49.57	10.13	0.00	0.00
Start of Water Year (09/26/2010 map)	28.86	71.14	10.70	0.00	0.00	0.00
One Year Ago (02/09/2010 map)	68.18	31.82	0.00	0.00	0.00	0.00

Intensity:

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



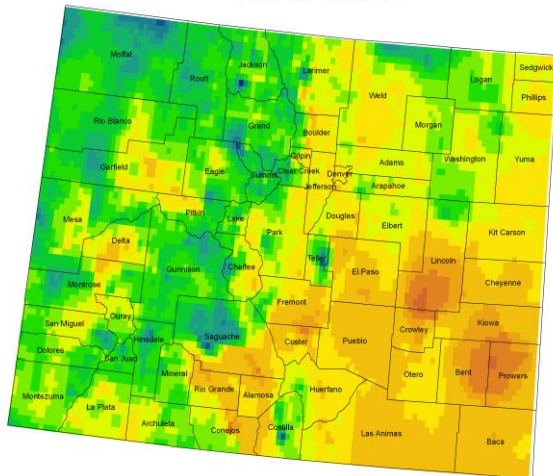
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

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



Released Thursday, February 17, 2011
M. Rosencrans, CPC/NOAA

Colorado Water Year 2011 Precipitation as Percentage of Normal Oct 10 - Jan 11



awy_jan_pn_co

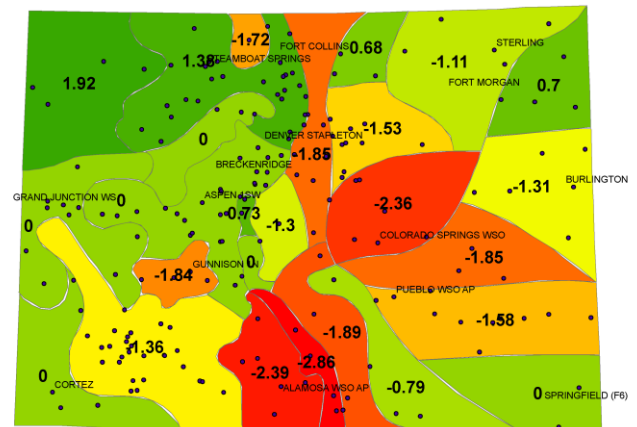
%normal

- 0
- 1 - 10
- 11 - 20
- 21 - 30
- 31 - 50
- 51 - 70
- 71 - 90
- 91 - 110
- 111 - 130
- 131 - 150
- 151 - 170
- 171 - 200
- 201 - 250
- 251 - 300
- 300+

The adjacent map shows precipitation for the water year thus far (October 2010- January 2011). The eastern plains of Colorado, which have seen below average precipitation this water year, are well below normal. Continued monitoring of this region will be critical as irrigation season approaches.

The state map to the left shows the Modified Palmer Drought Severity Index (MPDSI). It illustrates the dryness that is impacting the eastern plains and Rio Grande river basin. The Rio Grande ranges between -2.39 and -2.86, the driest in the state. PMDI of -2.0 to -2.99 reflects moderate drought. The Rio Grande and the San Luis Valley received near or below normal precipitation in January and is now below normal for the water year. Snowpack in the Rio Grande is currently 80% of average. This is an area that will be monitored closely for deteriorating conditions in the coming weeks.

Modified Palmer Drought Severity Index for Colorado January 2011



NOTE:

The next WATF meeting is scheduled for March 17, 9:30-11:30am.

April's WATF meeting is scheduled for April 14, 9:30-11:30am.

All meetings will be held at the Colorado Division of Wildlife, 6060 Broadway, Denver.