

## JULY 2010 DROUGHT UPDATE

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### Executive Summary

July has been a dry month across Colorado as each basin has experienced less than average precipitation for the month. Continued drought conditions persist in portions of the Colorado, Rio Grande and San Miguel/Dolores basins. Reservoir storage remains strong across the state despite less than average spring runoff. However, water providers are aware that continued dry conditions, increased demand and the lack of fall precipitation can change the status of reservoir storage quickly and consequently, they continue to monitor the situation.

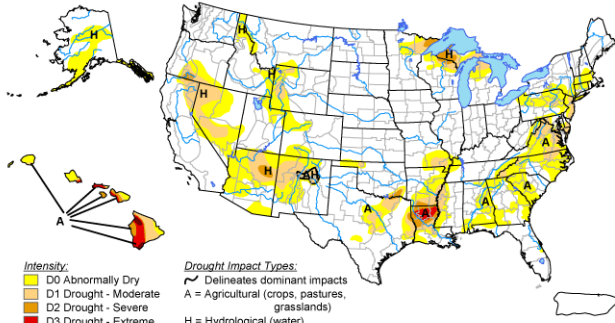
- All seven basins have received below average precipitation in July. Despite many basins experiencing a dry June and July, five of the seven basins have recorded precipitation levels at least 90% of average for the current water year. The Arkansas and the San Miguel/Dolores basins have received the lowest amount of precipitation in the state since the beginning of the water year, experiencing 84% and 80% of average respectively.
  - The Gunnison, San Miguel/Dolores and Rio Grande basins have experienced at least three straight months of drier than average conditions. The San Miguel/Dolores basin has recorded less than average precipitation for the past five months after receiving above average snowfall over the winter.
  - Statewide reservoir storage is 106% of average at the end of June. Individually, six of the seven basins are at or above 100% of average storage. The Upper Rio Grande basin is the lowest in the state with 81% of average storage. The basin has been experiencing its third month of receiving below average precipitation.
  - Water providers in attendance at the July 19 Water Availability Task Force meeting reported that their respective reservoirs were in good shape and they were hoping for a strong monsoon season to provide moisture. Most providers also expressed concern for the next water year if Colorado does not receive average or above average fall moisture.
  - The U.S. Drought Monitor continues to show the Northwest part of the state, the Colorado basin and the southern central mountains experiencing D0 “Moderate” drought conditions. The Water Availability Task Force continues to closely monitor these areas.
  - The State of Colorado’s DRAFT Drought Mitigation and Response Plan is now available on the CWCB website for public comment. The public comment period on the mitigation plan, the response plan, as well as all associated appendices and documentation, will officially close on August 20, 2010. The Drought Plan was comprehensively revised to comply with the FEMA’s 3-year planning cycle and is a part of the State’s Natural Hazard Mitigation Plan. The revision process has resulted in a State Drought Plan that uses state of the art planning techniques to prepare Colorado for drought. The plan also includes a groundbreaking vulnerability assessment of state assets, as well as various sectors affected by drought.
  - The SWSI values statewide range from -1.5 to +3.5. The South Platte basin had the highest SWSI value at +3.5. The lowest value, -1.5, belongs to the Rio Grande basin which is down from June’s value of +1.0.<sup>1</sup>
- \* SWSI values are currently 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.

<sup>1</sup> 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 future 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.

# JULY 2010 DROUGHT UPDATE

## U.S. Drought Monitor

July 20, 2010  
Valid 6 a.m. EDT



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

**Drought Impact Types:**  
 ~ Delineates dominant impacts  
 A = Agricultural (crops, pastures, grasslands)  
 H = Hydrological (water)

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

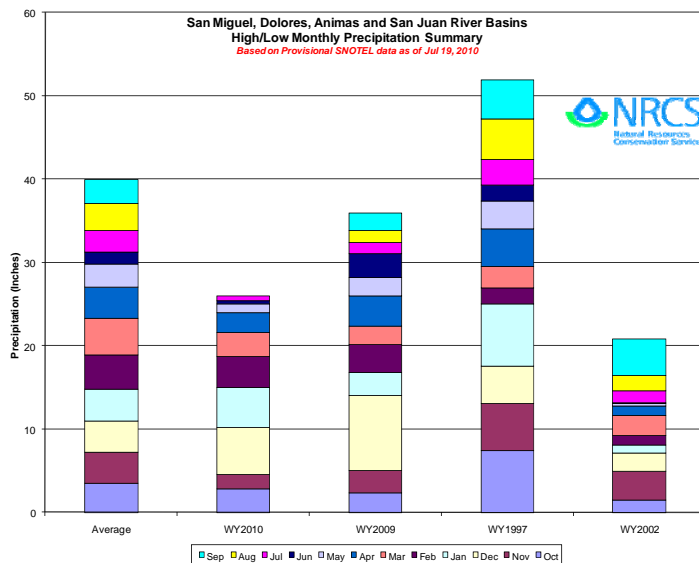
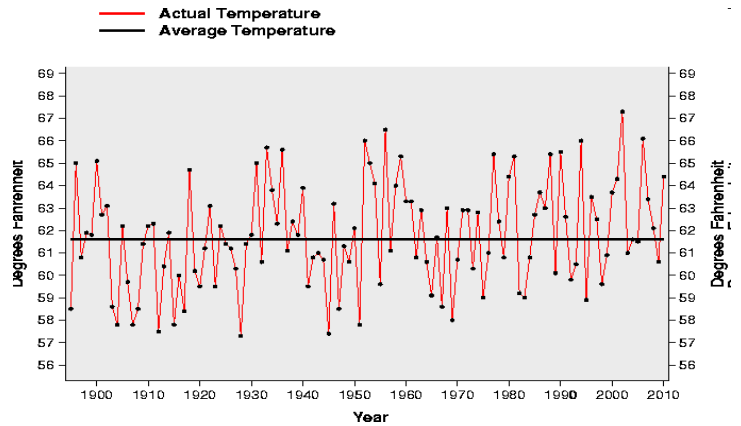
<http://drought.unl.edu/dm>

USDA  
 NCEP  
 NOAA  
 NWS  
 NCEP/CPC

Released Thursday, July 22, 2010  
 Author: Anthony Artusa, NOAA/NWS/NCEP/CPC

The adjacent map shows the U.S. Drought Monitor as of July 20, 2010. The northwest region of Colorado continues to experience D0 “Abnormally Dry” drought conditions for the seventh month in a row. A portion of the southwestern part of the state also continues to be categorized as D0 drought condition after experiencing several drier than average months. Monsoon moisture will be needed in the Rio Grande basin to neutralize impacts to cropland and rangeland that have resulted from dry conditions.

The adjacent map shows the June average temperature for history for Colorado from 1895-2010. Last month was the 18<sup>th</sup> warmest June on record with an average statewide temperature of 64.4 degrees. Temperature is one of the driving forces in evapotranspiration (ET) and increased temperatures can result in increased rates of ET. ET is the combined process of evaporation from the Earth’s surface and transpiration from vegetation.



The graph to the left shows the precipitation summary in the San Miguel/Dolores basin for the 2010 Water Year as of July 19 2010. The graph shows that February was the last month the basin experienced an average amount of precipitation. The last five months show below normal precipitation amounts comparable to 2002, which is the far right bar. However, unlike 2002, reservoir storage in the basin is at 109% of average.

**NOTE:** The maps and graphics depicted in this report were those presented at the July 19, 2010 meeting and may have been updated since the meeting. All presentations are available at the CWCB website – [www.cwcb.state.co.us](http://www.cwcb.state.co.us)

**The next WATF meeting is tentatively scheduled for August 25, 2010. The meeting location and time is to be determined.**