



UNIVERSITY
OF WYOMING
Wyoming State Climate Office
Dept 3943, 1000 E. University Ave.
Laramie, Wyoming 82071
Phone: (307) 766-6651
Email: stateclim@wrds.uwyo.edu

Wyoming's Climate: September 2010

September 2010 was characterized by marked dryness across the state of Wyoming. Precipitation totals at most observing stations ranked in the lowest 10th percentile for the month, and multiple stations received only a trace to no measurable rainfall at all. In terms of percentages of historical averages for the month, most of the state received 25% or less. Located in the southeastern corner of the state, Cheyenne—the state capitol and home to the largest human population (population 57,000)—recorded measurable precipitation on only one occasion. The resulting 0.1” total for the month ranked as the third driest in 120+ years of observations, with only extreme years such as 1879 (0.0” for the month) rivaling this lack of rainfall. This is even more remarkable when one considers that of the 36 CoCoRaHS (<http://www.cocorahs.org/state.aspx?state=wy>) observers in or around Cheyenne, only two reported totals of greater than 0.1” for the entire month. Likewise, nearby Laramie received only 0.06” and Casper, our second largest municipality (population 55,000), only 0.28”.

Moving west and into some of the less populated areas of the state, the story was much the same. Typical of southwestern Wyoming, Rock Springs experienced the 7th driest September on record. Worland, an agricultural and energy-production hub in north-central Wyoming, saw its 9th driest September. Even stations in the normally wet northwest corner of the state were noticeably dry. The Lake Yellowstone station in Yellowstone National Park, for example, measured only 0.34” for the month.

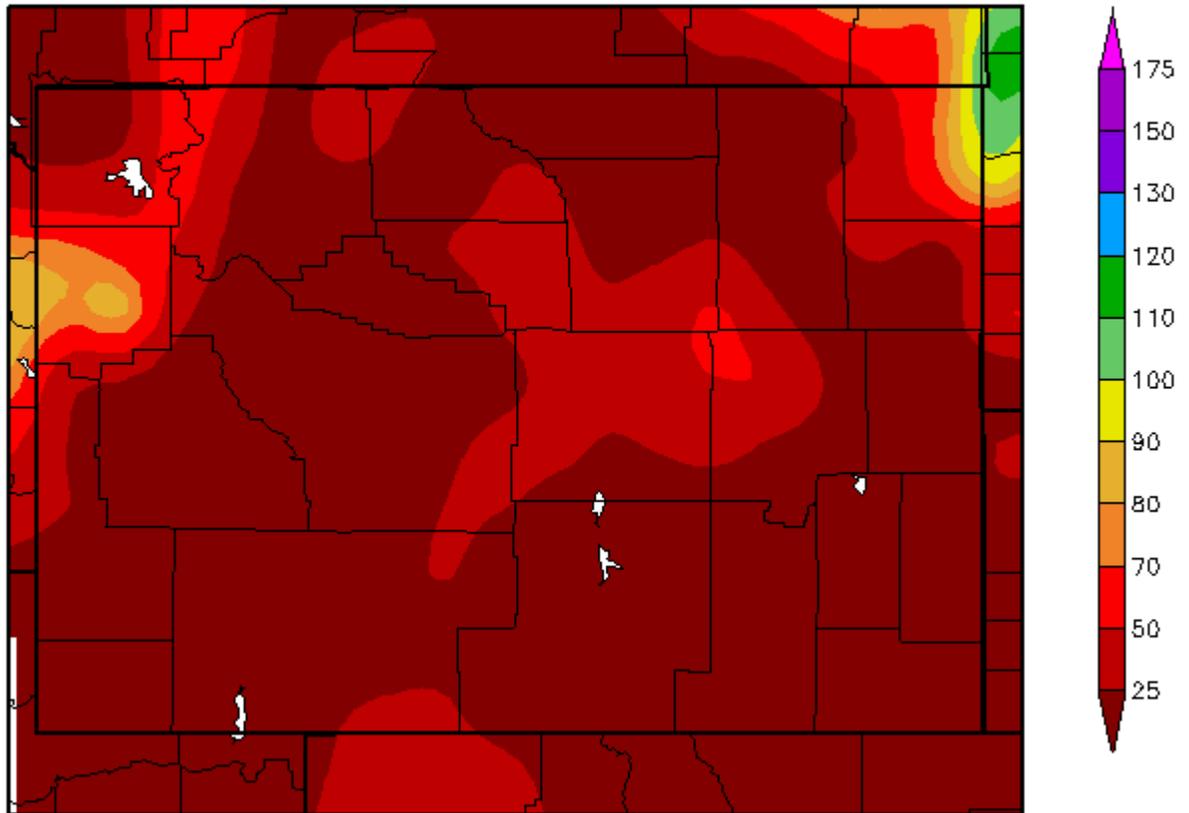
While not as extreme as the dryness experienced in September, conditions were generally warmer-than-average across the state. Departures ranged from 1 to 2.5° F above average, with a few scattered locations reporting > 4° F warmer. Of particular note are the numerous maximum daily temperature records that were set on both September 26th and 28th. Locations across the state broke record highs on these dates, while September 17-18 also brought record warmth to many stations.

In spite of these low precipitation totals and warm temperatures, drought remained a minor concern in most of Wyoming. September marks the beginning of what is often a dry fall season, and year-to-year variability in precipitation is notoriously high for this month. Moreover, this short-term dryness was often offset by very wet conditions in the late spring and early summer. Reservoir storage—the primary source of agricultural and municipal water in most of the state—also remained favorable. Parts of Sublette and Park Counties were classified as being in moderate drought during September (http://www.drought.unl.edu/dm/DM_west.htm), but this relates primarily to a lack of snowfall during the previous winter.

This report was prepared by the Wyoming State Climate Office, which is a division of the Wyoming Water Resources Data System at the University of Wyoming. More information can be

found at: <http://www.wrds.uwyo.edu> and http://www.wrds.uwyo.edu/sco/climate_office.html.
Special thanks to the National Weather Service's Cheyenne and Riverton Offices for supplying much of the data used in this report.

Percent of Normal Precipitation (%) 9/1/2010 - 9/30/2010

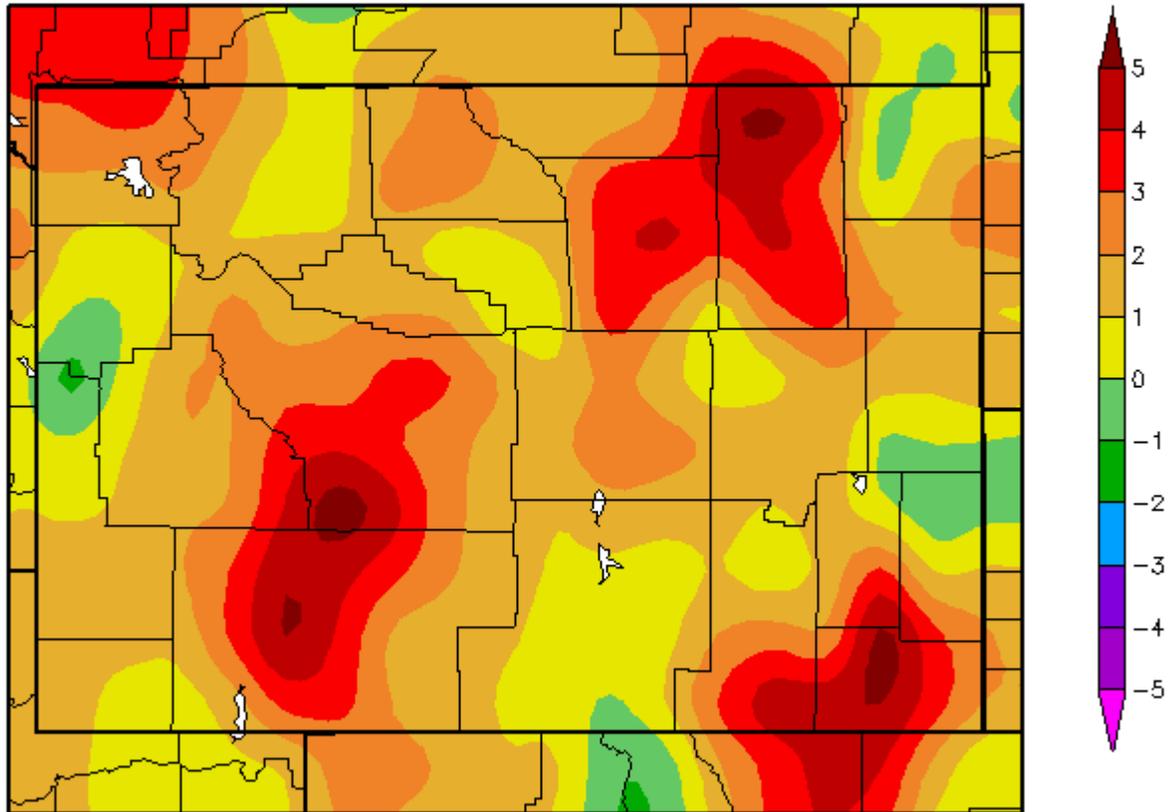


Generated 10/2/2010 at HPRCC using provisional data.

Regional Climate Centers

Map showing September 2010 precipitation as a percentage of historical averages (vs. 1971-2000 "normal period) for Wyoming. Courtesy of the High Plains Regional Climate Center.

Departure from Normal Temperature (F) 9/1/2010 - 9/30/2010



Generated 10/2/2010 at HPRCC using provisional data.

Regional Climate Centers

Map showing mean September 2010 temperatures as departures from historical averages (vs. 1971-2000 "normal period) for Wyoming. Courtesy of the High Plains Regional Climate Center.