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## Wyoming's Climate: February 2011

The climate of February 2011 was marked by bitter cold temperatures in the first half of the month. This was especially true in the basin country of southeastern Wyoming, where several daily minimum temperature and all-time-low temperature records were broken or tied. Mountain snowpack remains high compared with much of the previous decade, and we continue to chip away at lingering drought impacts in the western portion of Wyoming.

On January 31 of this year a strong cold front passed through the state. In the wake of this arctic airmass, portions of the state saw temperatures plummet to  $-30^{\circ}\text{F}$  and below. Severe cold was most prominent in the southeastern corner of the state, where Rawlins tied its all-time-record low of  $-36^{\circ}\text{F}$  on February 2. Though its all-time-record low of  $-50^{\circ}\text{F}$  (recorded on 1/12/63) was never in danger, Laramie's low on the 2<sup>nd</sup> did reach a daily record of  $-39^{\circ}\text{F}$ . On this same date, Shirley Basin in northern Albany County fell to  $-48^{\circ}\text{F}$ , the second lowest temperature ever recorded at this site (since 1978). The coldest temperature ever recorded at Shirley Basin occurred on 2/3/11, with a low of  $-48^{\circ}\text{F}$ .

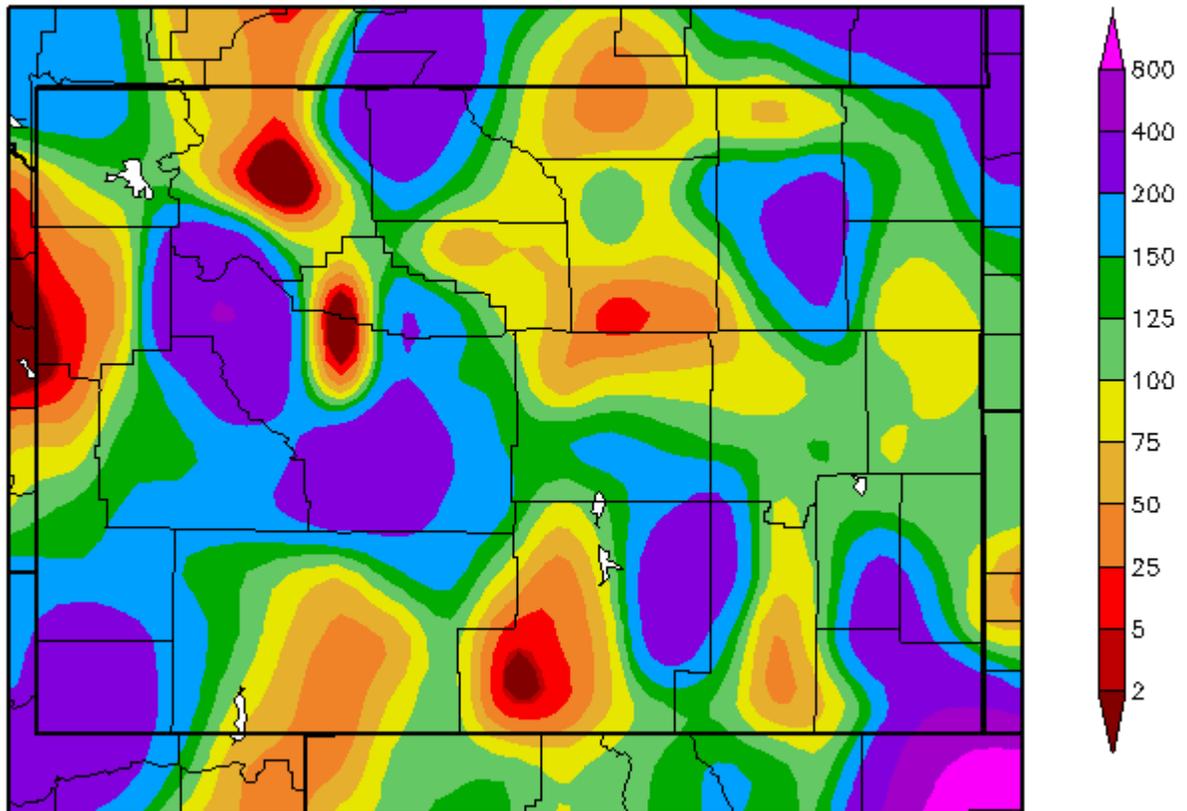
As is often the case, February precipitation was highly variable across the state. For example, portions of the Powder and Tongue River basin in northeast Wyoming received  $< 65\%$  of historical average precipitation for the month (compared to 1971-2000), while portions of the Green River basin in the west received upwards of  $200\%$ . Measured as a percent of historical average, the greatest amounts of precipitation tended to be in the state's high-mountain areas. However, unlike most previous months in this water year (October through September), many lower-elevations stations also received significant precipitation. Of particular note were snowfall totals in Fremont County, where the city of Riverton experienced its seventh-wettest February since record keeping began in 1907.

Regarding high-country snowpack, by the end of February the statewide average for snow water equivalent (SWE) was at  $114\%$  of historical average (compared to 1971-2000), which is far better than the  $73\%$  of average we saw at the same time last year. The Shoshone basin in the northwest corner of Wyoming had the lowest SWE of any drainage in the state, but values still topped  $98\%$  of average. The Upper Bear basin in the far southwest had the highest value recorded for any drainage in the state at  $136\%$  of average SWE.

According to the U.S. Drought Monitor, Wyoming remained nearly drought free through the month of February 2011 (see <http://www.drought.unl.edu/dm/monitor.html>). February wetness in Fremont County led to the removal of an "abnormally dry" designation from that area. This designation had been in place due to a combination of lingering drought impacts and a lack of low-elevation moisture over the course of this water year.

*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](http://www.wrds.uwyo.edu/sco/climate_office.html). Special thanks to the National Weather Service's Cheyenne and Riverton Offices and the NRCS Casper Office for supplying much of the data used in this report.*

## Percent of Normal Precipitation (%) 2/1/2011 – 2/28/2011

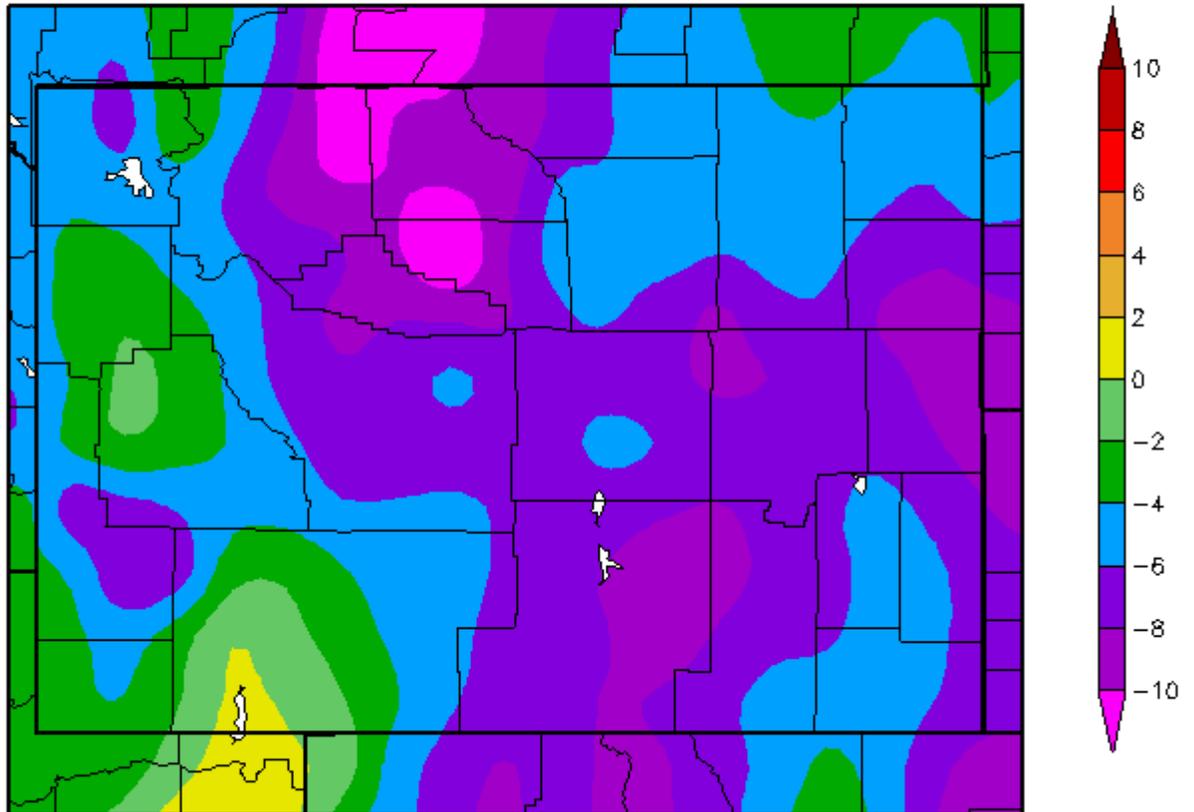


Generated 3/2/2011 at HPRCC using provisional data.

Regional Climate Centers

**Map showing February 2011 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) 2/1/2011 – 2/28/2011



Generated 3/2/2011 at HPRCC using provisional data.

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**Map showing mean February 2011 temperatures as departures from historical averages (vs. 1971-2000 “normal period) for Wyoming. Courtesy of the High Plains Regional Climate Center.**