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Wyoming's Climate: March 2011

March 2011 brought continued snowfall to the high mountains of Wyoming. Valley and basin precipitation was highly variable, and temperatures were generally near- to slightly-above historical averages. Given ample snowpack and reservoir storage, hydrologic (i.e., water supply) drought impacts were almost absent from the state. The development of drought impacts in lower-elevation rangelands and other non-irrigated areas remains a possibility depending on spring rains and snowfall.

Generally speaking, conditions in central Wyoming were dry for the month, while far western and northern portions of the state were noticeably wet. For example, multiple locations in Fremont County (west-central Wyoming) received < 25 % of historical average precipitation (vs. 1971-2000). The city of Riverton was particularly dry, with a total of 0.09" of precipitation. In contrast, several stations in neighboring Teton County reported > 150 % of monthly average precipitation. The town of Bondurant in far northwestern Sublette County received almost 200 % of its historical average, while stations just 20-30 miles to the south reported 50 % of average. Located in north-central Wyoming, Sheridan received almost 175 % of historical average precipitation for the month, and several locations in the far northeast corner of the state (e.g., Sundance) reported > 150 %. Sharp contrasts between high- and low-elevation sites were also seen in many areas. In southeastern Wyoming, high elevation (9,000-10,500') NRCS-SNOTEL observing stations in the Medicine Bow Mountains reported roughly 150-200 % of historical average precipitation. On the other hand, located just below the Medicine Bows at 7,200', Laramie came in at 53 % of average.

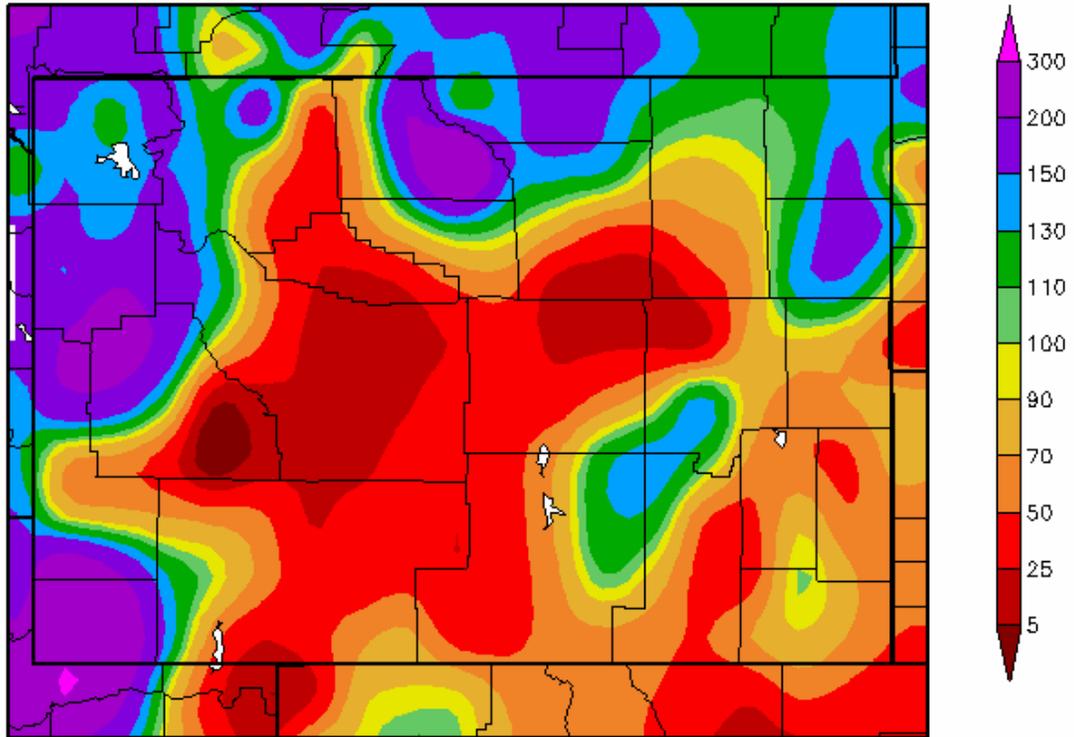
When combined with 1) near-average to above-average high country precipitation in previous months and 2) near average temperatures, March snowfall contributed to strong snowpack numbers for the month. As measured on March 31, statewide average snow water equivalent (SWE) topped 115% (vs. 1971-200). Values for this same date last year averaged around 80 %. At the level of individual river basins, the Wind River drainage was the driest in the state with 102 % of average SWE. The Upper North Platte and Bear River drainages tied for the state's wettest with 139 % of average.

According to the U.S. Drought Monitor, Wyoming remained nearly drought free through the month of March 2011 (see <http://www.drought.unl.edu/dm/monitor.html>). Low country dryness warrants continued monitoring throughout much of the state. However, near- to above-average values for snowpack, streamflow and reservoir storage may lead to the removal of lingering pockets of "abnormally dry" conditions in the western portion of the state.

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, Billings, and Riverton Offices and the NRCS Casper Office for supplying much of the data used in this report.

Percent of Normal Precipitation (%)
3/1/2011 – 3/31/2011

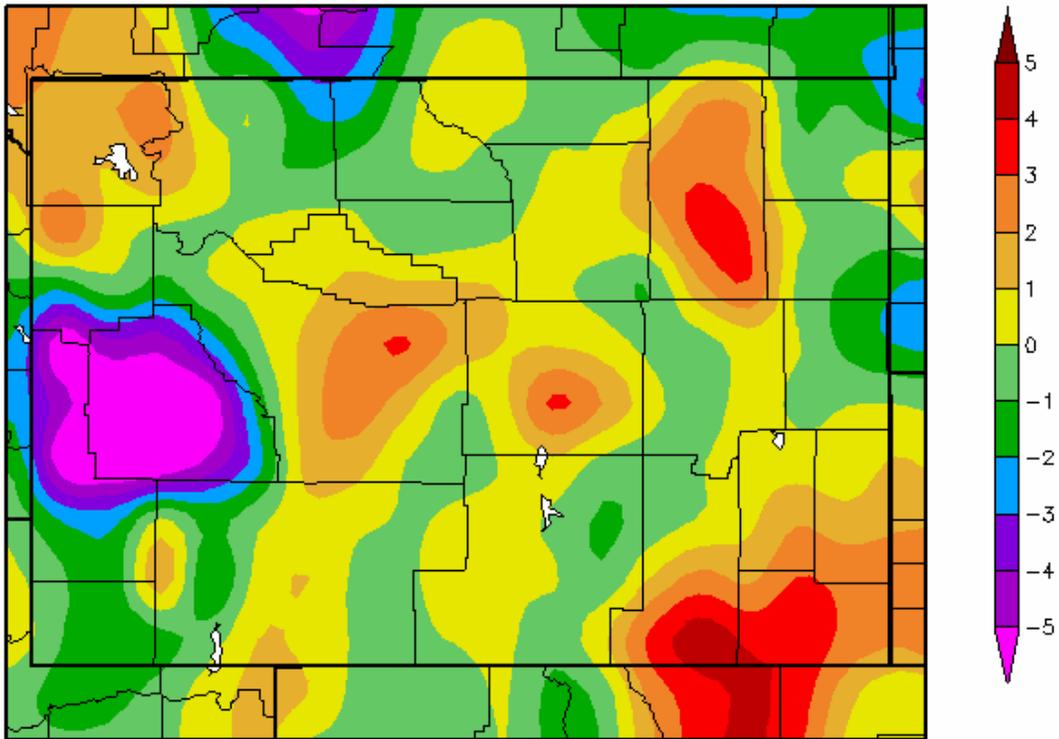


Generated 4/2/2011 at HPRCC using provisional data.

Regional Climate Centers

Map showing March 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)
3/1/2011 – 3/31/2011



Generated 4/2/2011 at HPRCC using provisional data.

Regional Climate Centers

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