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Wyoming's Climate: June 2011

Record snowpack and high water continued to dominate Wyoming's climate related news in June 2011. Statewide average snow water equivalent (SWE) at the beginning of the month sat at 327% of historical average (compared against values for the period 1971-2000), with end-of-month readings topping 1527% of average! While the latter value is highly skewed by the fact that it is unusual for many reporting sites to still have snow at this time of year, these measurements still give us a meaningful indication of how out of the ordinary this water year (October through September) has been in the high country.

Of course with high snowpack comes the potential for flooding. To date spring and early summer 2011 runoff has accounted for almost \$4.5 million in damage across the state. While this number may seem small to many of our neighbors, this equates to a substantial economic impact in a state with only 500,000 people. That said, Wyoming was extremely fortunate in avoiding what could have been an epic disaster. Though this year's snowpack had certainly set the stage for more widespread and serious flooding, a relatively cool early June helped keep the snow in place. Moreover, significant late-season snowstorms and rain-on-snow events were rare to non-existent. Overall, the state dodged a major bullet.

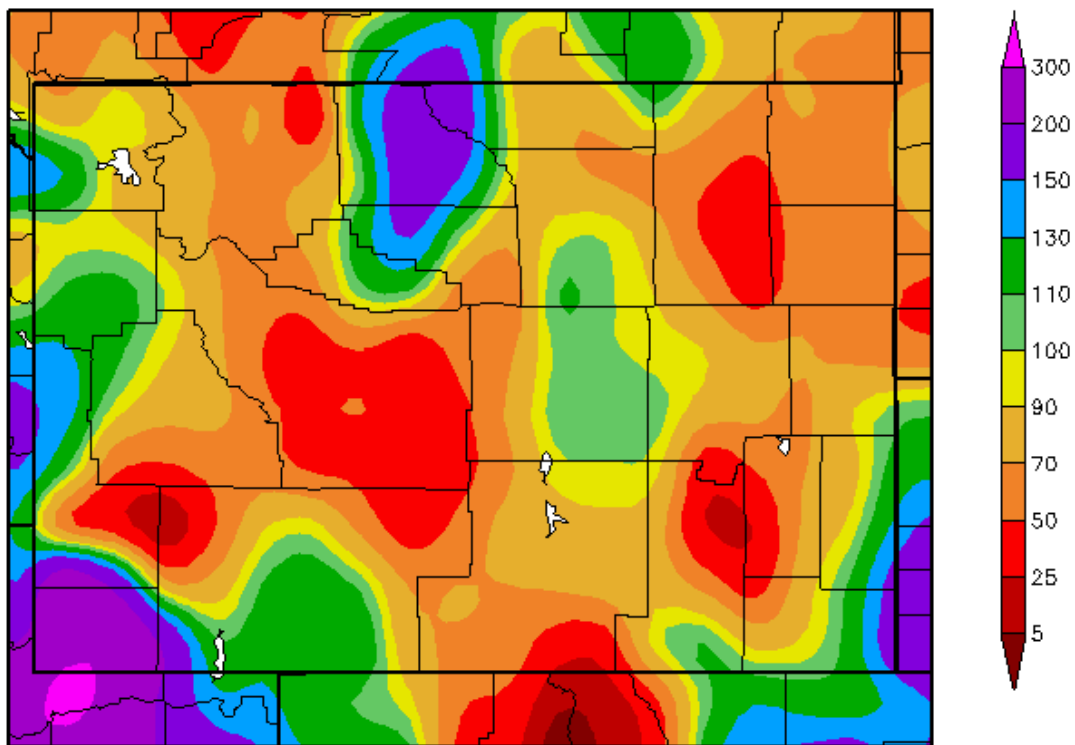
In terms of new precipitation, June 2011 was actually on the dry side across much of Wyoming. Fremont County and many other parts of the Wind and Bighorn River basins in central Wyoming reported 50-70 % of historical average precipitation (vs. 1971-200) for the month. Likewise, portions of Carbon County in southeast Wyoming reported as little as 25% of historical average. However, as alluded to above, this lack of precipitation in Carbon County was welcome for a change, as these same areas saw some of the worst damage from snowmelt-related flooding.

Regarding temperatures for June 2011, much of the state averaged 2-3 °F below normal (vs. 1971-2000) for the month. Several stations in the western half of the state reported particularly cool values, with sites in Sublette County and the Yellowstone and Grand Teton National Park regions running 4-5 °F below normal. The end of June did bring a substantial warm up to many parts of the state, with near normal to above normal temperatures expected into early July.

According to the US Drought Monitor (<http://www.drought.unl.edu/dm/monitor.html>) Wyoming remained "drought free" again for the month of June. Since January 2000 there have been less than 12 months total when the state has enjoyed a similar US Drought Monitor status. Heading into July 2011 the focus remains on snowmelt-driven runoff and flooding. With the Wind River at Riverton, WY exceeding record stage on July 1-2 and the Yellowstone River at Fishing Bridge expected to do the same by July 9 or 10, it could be a wild month.

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

Percent of Normal Precipitation (%) 6/1/2011 - 6/30/2011

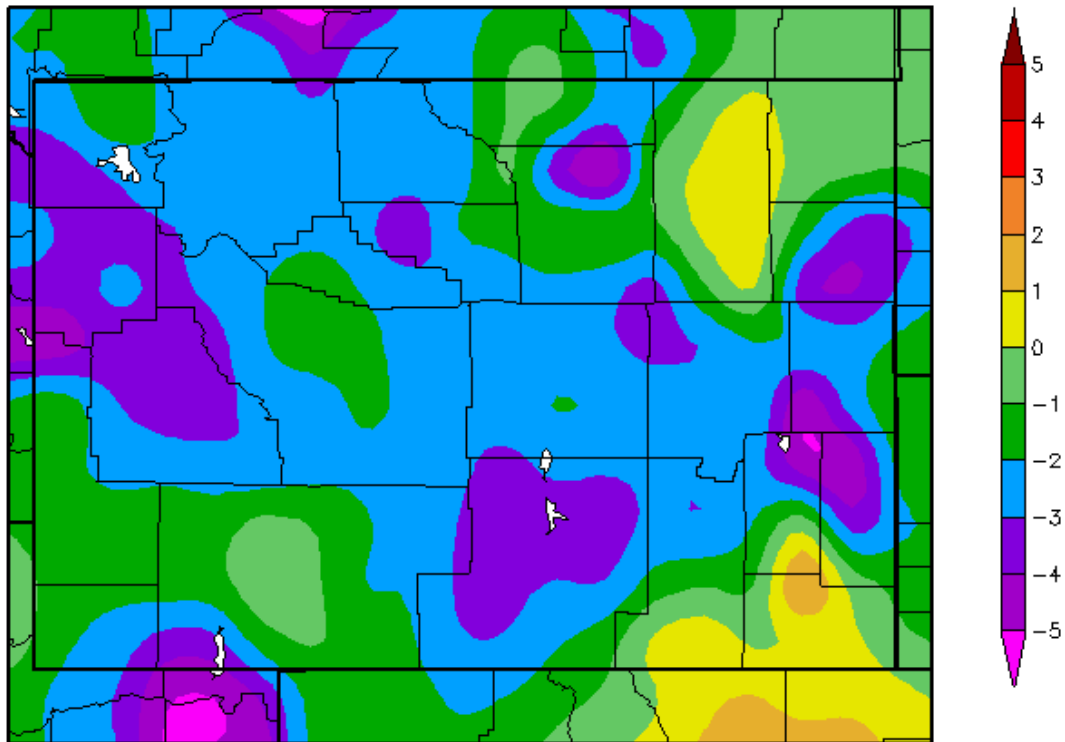


Generated 7/5/2011 at HPRCC using provisional data.

Regional Climate Centers

Map showing June 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)
6/1/2011 – 6/30/2011



Generated 7/5/2011 at HPRCC using provisional data.

Regional Climate Centers

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