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Wyoming's Climate: October 2011

Streamflow

Streamflow conditions for October remained good with normal and often above normal flows being seen in all portions of the state.

Precipitation

The first snows of the season fell across Wyoming this month and with them came some relief from the dryness of the previous months. With some early winter storms came some wet snowfalls which gave the southeast quarter of the state normal to well-above normal precipitation. The same held true for the northwest quarter, especially in the Bighorn basin which saw several stations at 300% or more of normal. The above normal precipitation extended over the Bighorns into Sheridan and Johnson counties where only a few stations had totals just under normal. Southwestern and northeastern Wyoming did not fare as well and precipitation relative to normal decreased towards the South Dakota border with Sundance receiving less than 50% of normal.

In the Southwest it was similar with places like Rawlins, the Bitter Creek area, and Rock Springs receiving in the range of 70% to 90% of normal. Green River was an exception and was in the 150% to 200% range. Areas such as Fontenelle and La Barge were on the dry end and totaled less than 50% of normal.

While snow fell in many parts of the state this month, the southeastern portion saw the heaviest falls with monthly snowfall totals from CoCoRaHS stations as high as 18" in the Cheyenne area. Albany and Carbon counties were also well-hit with totals generally from 6" to 14".

Temperature

Although October saw a change of the seasons and the introduction of a few heavy snow storms, temperatures for the most part remained above normal to well-above normal. The southeast portion of the state was generally normal to about 2°F above normal whereas the rest of the state saw average temperatures that were somewhat more, with several stations 3°F to 4°F above normal.

While still showing an above normal temperature for the month, Laramie was the cold spot in the nation on the 27th when the temperature dropped to -16F during an hour-long cold spell that started around 0600.

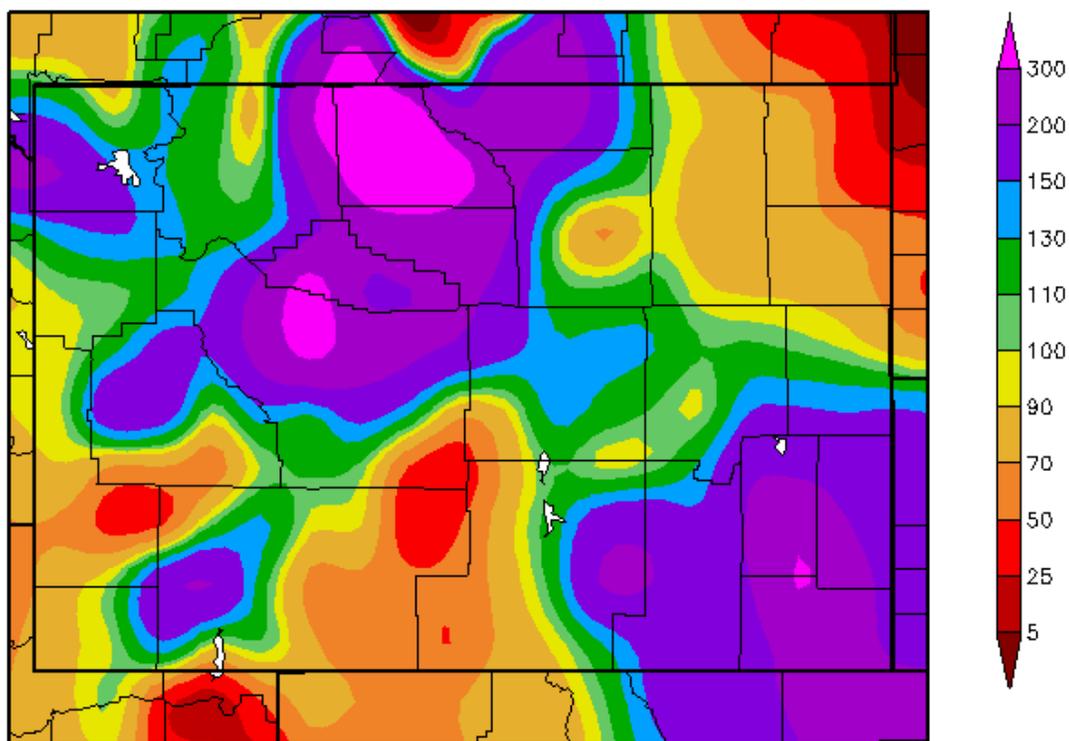
Winds were light at the time but a shift from a southerly direction to a more west wind caused the temperature to drop 17 degrees (F) in about 15 minutes. When the wind direction changed to coming from a bearing of ~260° it aligned to blow along the length of the Big Hollow which is a

wind-scoured basin to the west of the airport. The surface elevations of two of the lakes that sit in its bottom about 3 miles to the west of the Laramie ASOS are about 150 feet lower than the ASOS. The wind pushed the cold air out of this sink and across the Airport station causing an hour-long deep cold. As the wind shifted again to come from a more southerly direction (and out of alignment with the Hollow) the temperature again started to rise.

The D0 (Abnormally Dry) category that had been introduced by the US Drought Monitor into the parts of Weston, Niobrara, Goshen, and Laramie counties was initially extended into converse, Natrona and the very northern part of Carbon counties during the first week of the month. Following the first snow storm of the season, it was removed and Wyoming was once again free of any D category for the remainder of October.

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

Percent of Normal Precipitation (%) 10/1/2011 – 10/31/2011

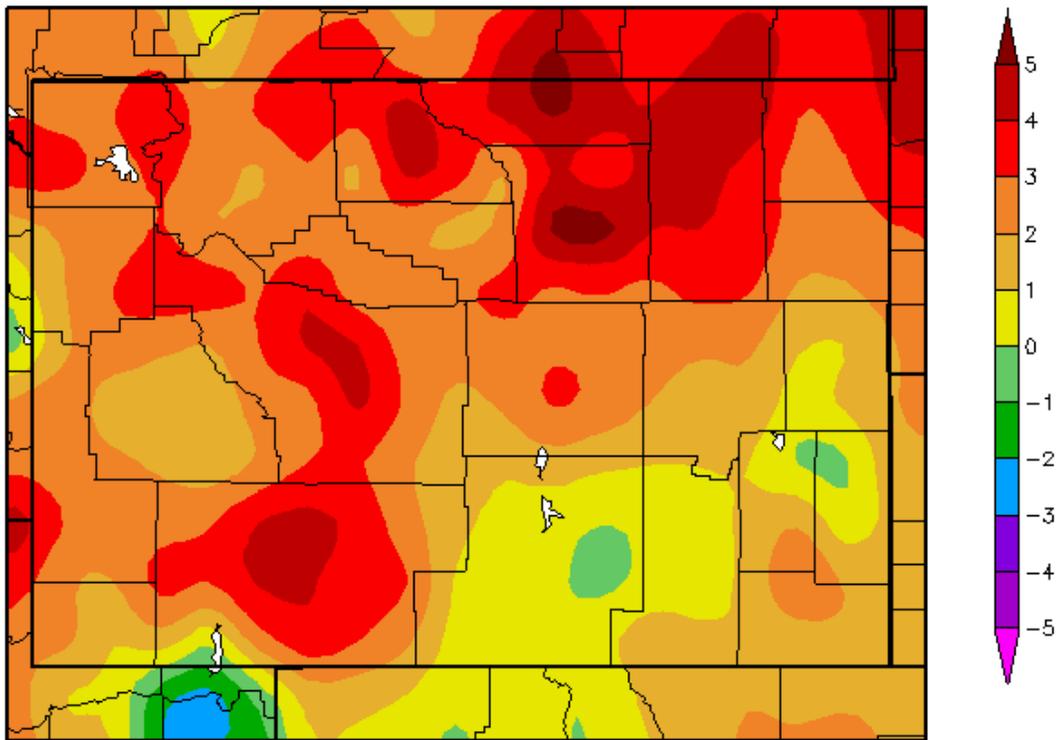


Generated 11/5/2011 at HPRCC using provisional data.

Regional Climate Centers

Map showing September 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)
10/1/2011 – 10/31/2011



Generated 11/5/2011 at HPRCC using provisional data.

Regional Climate Centers

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