

Runoff forecast showing promise

Mountain snowpack better this winter as wet period begins

By Keith E. Domke
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After almost a decade, there just may be a little light at the end of Fremont County's drought tunnel. The latest outlook from the National Weather Service Riverton office shows that through spring, most of central and western Wyoming should see improvement in current drought conditions. The reason for the optimism is the snowpack accumulating in the mountain regions is at more than 90 percent of average, with the traditionally wettest months of the year yet to come.

According to the local NWS, snow water equivalents increased during January and into mid-February in the Wind River drainages from 80 to 85 percent of normal to 96 percent last week. Currently, NWS hydrologist Jim Fahey said, the percentage stands at 91.

The latest water supply forecast indicates most of the state will see normal to above-normal streamflow volumes during the spring runoff. Inflows to almost all the major reservoirs this spring and summer are expected to be near normal.

"Over the short term, this is very good news," Fahey said Tuesday. "This year, we've had significant earlier snowfall, so we're sitting pretty good heading into our traditional wettest time of year."

However, the National Weather Service predicts the temperature outlook for spring indicates a 30 to 40 percent chance of warmer-than-normal temperatures. If this forecast materializes, the higher spring streamflows won't last through later stages in the year when water also is needed.

"We're in a good situation now, but we can't have it (snowpack) melt too early or quickly," Fahey said. "With Mother Nature, you never know."

The spring precipitation outlook calls for a 50-50 chance for above-normal levels.

"At least it's not a below-normal forecast," Fahey said. "Even if we get average precipitation amounts through the spring, with the snowpack we already have, we'll be in much better shape than the past couple of years."

Fahey said he has talked to several farmers and ranchers in the area who told him they can't remember in recent memory a better snowpack for this time of year.

"They're saying they haven't seen as good a snowpack this early in quite a while," he said. "That's certainly encouraging."

"If we can keep the level at better than 90 percent, then we should have a good runoff."

Statistics

According to statistics compiled by Fahey, Riverton averages 4.64 inches of precipitation in the March-June calendar period, which is 53 percent of the 8.71-inch annual average. As far as snowfall goes, Fremont County's largest city typically gets 12.1 inches from March through May, or 36 percent of the yearly 33.7 average.

In Lander, 6.84 inches of precipitation is the average accumulation from March through June, or 51 percent of the annual 13.43 total. About 44.7 inches of snow falls on average from March through May, which translates to 43 percent of the 104.1 30-year average.

Fahey also said a key statistic to look at is snow water equivalent at Townsend Creek, a reporting station in the Wind River Mountains in the Popo Agie water shed.

"It's in a lower level of the Wind Rivers, but a good indicator," Fahey said.

He said snow water equivalent is measured twice a month, at the beginning and middle stages. From the October through June snow season, an average of 40.6 inches of SWE is measured. Of that, between 56 and 60 percent of that accumulates from April through June. Exact averages are 6.8 (first of the month) and 7.7 inches (mid-month) in April, 8.6 and 9.9 inches in May and 7.3 and 4.1 inches in June.

"We can get a lot of snow during these months," he said. "The spring months are critical for us." Currently, he said, the level is at 6.4 inches or 0.5-inch below average, which measures to 93 percent of normal.

Basin outlook

The February Wyoming Basin Outlook report shows that Fremont County's three big reservoirs — Boysen, Bull Lake and Pilot Butte — are sitting at 64, 37 and 79 percent of capacity, respectively.

However, average snow water equivalent has increased over this time last year. The Wind River above Dubois is at 98 percent of average, but at a 139 percent level from last year at this time. The Little Wind River is at 83 percent of average, but is at 121 percent from last year. The Popo Agie drainage equivalent is at about 81 percent of normal, but 119 percent from last year.

The Wind River Basin above Boysen Reservoir is sitting at about 89 percent of snow water equivalent average, but is at 127 percent from last year.

Depending on snowpack and precipitation, streamflow averages are expected to be closer to normal in the county through the September runoff period.

The Wind River above Bull Lake Creek is predicted to be at 85 percent of average and at 81 percent of average at Riverton. The Little Popo Agie River near Lander is expected to be at about 91 percent of average. The South Fork of the Little Wind River near Fort Washakie is expected to be close to 100 percent, and the Little Wind River near Riverton is projected to be at 91 percent. Boysen Reservoir inflow should be about 77 percent of average.

Conditions

About three inches of snow fell in both Lander and Riverton Monday and overnight into Tuesday, NWS statistics showed. The recent snowfall increased Riverton's 2007-08 season total to 28.5 inches. In Lander, 63.9 inches of snow has fallen this season.

Both numbers are a few inches above the 30-year averages — 7.1 inches above in Riverton and 6.3 inches above in Lander.

The short-term forecast calls for a dry period until the weekend, when a chance of rain and snow is forecast for Saturday night and into Sunday. Highs should be in the 40s with lows in the teens to lower 20s.

Fremont County is in its eighth year of a drought and remains listed in the "severe" category, according to the local NWS office.