Please contact drought@centennialvalleyassociation.org if you have any questions, comments, or suggestions.

Greetings from the Centennial Valley Association!

Welcome to the winter Water Report! Winter reports look slightly different, as we do not include information such as streamflow, fire reports, or CVA rain gauge data. Instead, we include information like snow water equivalent and snow depth.

The month of November brought colder temperatures and snowfall to the Centennial Valley. Each SNOTEL Station in the Centennial Valley received at least 3.4 inches of precipitation this month and all stations are above 123% of median snow water equivalent. Montana is still experiencing drought conditions despite winter precipitation. Eighty-eight percent (88%) of Montana is currently experiencing drought conditions while 100% of Beaverhead County is experiencing drought, a number that has not changed since August.

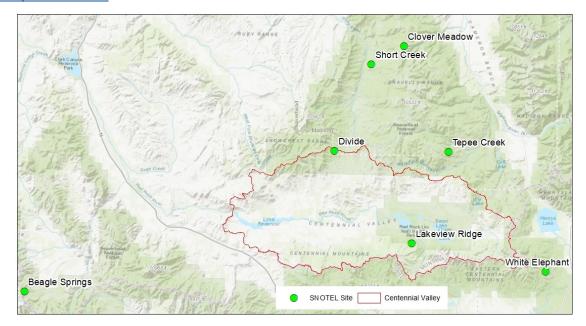
Weather in the Centennial will stay cold through the beginning of December with lows in the single digits and wind chills at or below zero. Slight chances of snow remain throughout the remainder of this week. Hopefully cold weather and more snow accumulation help increase our snowpack this winter!

As always, please don't hesitate to reach out to drought@centennialvalleyassociation.org if you have any suggestions as to how to make these reports more useful to you. Enjoy your holiday season and stay warm!

Snowpack and Precipitation Data - As of November 30th, 2022

There are seven Natural Resources Conservation Service (NRCS) SNOTEL sites that surround the Centennial Valley (below). Percent of median for precipitation accumulation for the month of November ranged from 103% (Beagle Springs) to 177% (Tepee Creek). Percent of median for snow water equivalent ranged from 123% (Clover Meadow) to 200% at Short Creek. The White Elephant station received the most precipitation (10.9") and the Beagle Springs station received the least precipitation (3.4"). The White Elephant Station has the deepest snow depth (36") and Lakeview Ridge has the lowest snow depth (13").

Source: NRCS Report Generator



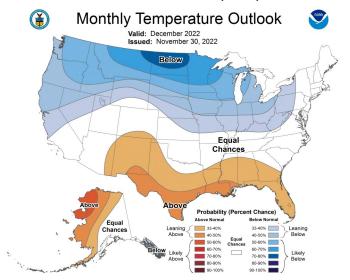
Snowpack and Precipitation Data - End of Day Values for November 30th, 2022

	Precipitation Accumulation (in)	Median Precipitation Accumulation (1991-2020) (in)	Precipitation Accumulation % of Median (1991-2020)	Snow Water Equivalent (in)	Median Snow Water Equivalent (1991-2020)	Snow Water Equivalent % of Median (1991-2020)	Snow Depth (in)
Beagle Springs (8,850 ft)	3.4	3.3	103%	3.3	2.2	150%	17
Clover Meadow (8,600 ft)	6.8	5.7	119%	5.9	4.8	123%	26
Divide (7,800 ft)	5.8	3.4	171%	3.9	2.2	177%	16
Lakeview Ridge (7,400 ft)	7.6	4.4	173%	3.3	2.0	165%	13
Short Creek (7,000 ft)	3.9	3.0	130%	2.8	1.4	200%	14
Tepee Creek (8,000 ft)	7.6	4.3	177%	5.4	3.1	174%	26
White Elephant (7,710 ft)	10.9	7.2	151%	8.2	5.2	158%	36
Red Rock BLM RAWS	0.35	-	-	-	-	-	-
Lakeview Rain Gauge	0.64	-	-	-	-	-	-

Precipitation and Temperature Outlook - December 2022

The temperature outlook for Montana has a 50-80% chance of being below normal. Montana has a 33-50% chance of above normal precipitation in December.

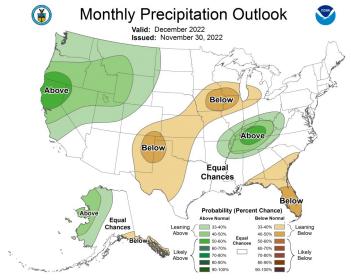
Source: NWS NOAA Climate Prediction Center

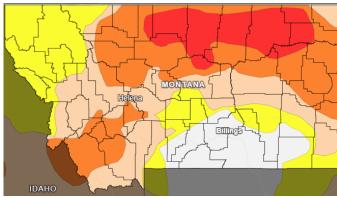


Drought Data - November 2022

Drought conditions have improved slightly through the month of November. Currently, 88% of Montana is experiencing some level of drought compared to 89.6% in October. The percentage of the state experiencing extreme drought has decreased, albeit very slightly, from 15.6% in October to 15.5% in November. Currently, 100% of Beaverhead County is experiencing drought, which has not changed since August. The Centennial Valley is currently listed as experiencing moderate drought conditions.

Source: National Integrated Drought Information System

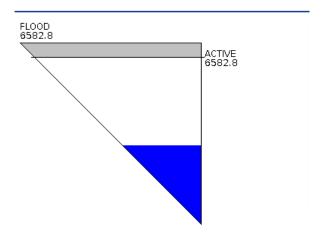




<u>Lima Reservoir Data - As of December 4th, 2022</u>

As of December 4th, the Lima Reservoir has a pool elevation of 6564.8 feet and is 21.9% full. The reservoir inflow and outflow data is not available at this time. On October 31st, the Lima Reservoir had a pool elevation of 6564.21 feet and was 20.7% full. The reservoir inflow was 83.0 CFS and the outflow was 3.1 CFS.

Water Users Irrigation Company Current Reservoir Data for Lima Reservoir, MT



Daily Reservoir Data as of 12/04/2022

Source: Bureau of Reclamation

Pool Elevation is 6564.8 Feet Reservoir Storage is 18386.4 Acre-Feet Reservoir Inflow is 998877. CFS Reservoir Outflow is 998877, CFS Reservoir is 21.9 % Full* Reservoir Flood Control Pool is filled 0.0 %

Note: 998877. Indicates A Missing Value

"Pink snow is a red flag for the West's water"

An article published by High Country News dives into algal blooms that are causing snow in Glacier National Park to turn red, leading to more heat absorption and quicker melting. This quick snowmelt can become a problem for late-season flows. Check out the article by Kylie Mohr.

Link: https://www.hcn.org/issues/54.12/north-water-pink-snow-is-a-red -flag-for-the-wests-water/







Summary and Outlook

Are you interested in learning about present drought conditions and how Montana will be impact. drought in the coming months? Register at the link below for the free North Central U.S. Climate and Drought Summary and Outlook webinar on December 15th.

> Link: https://www.mtwatersheds.org/events/north-central-u-sclimate-and-drought-summary-and-outlook-6/

If you have any questions, comments, or trouble interpreting the data, please contact drought@centennialvalleyassociation.org!



Helpful Links:

Montana Drought Status Percentage NRCS SNOTEL Report Generator **USGS Streamflow Data** Lima Reservoir Palmer Drought Severity Index **BLM Weather Station**

Winter Weather in the Centennial Valley





