

April 1, 2024

Dear Precipitation Observer,

Each year, we reach out to our amazing volunteer citizen scientists with a summary of the previous year's weather, observation tips for the upcoming year, and a note of thanks.

2023 Weather Summary:

2023 started out snowy and cool, leading to a deep snowpack that produced widespread spring flooding across Minnesota as it melted. By mid-May, things dried out substantially, with bouts of occasionally very hot weather contributing to statewide drought conditions, as large fires in Canada brought thick smoke into the state at times. Heavy summer rains and severe thunderstorm events were hard to come by, but an outbreak of intense hailstorms on August 11th became a rare "Billion-Dollar Disaster." Beneficial rains during September and October reduced but did not erase drought conditions, and December featured a record-setting blast of holiday warmth and wetness, pushing the month to abnormal extremes to close out the year.

Overall, 2023 ended up much warmer than normal throughout Minnesota, making the top-10 at or top-15 at most locations. Precipitation totals varied widely around the state, though with drier-than-normal conditions on average. Duluth, however, had 32.99 inches of precipitation, which is in the upper 25% of all years. The Twin Cities, St. Cloud, and Rochester all finished in the upper half of their respective precipitation histories. International Falls, on the other hand, finished below the 35th percentile, and the three-generation observatory at Milan, in western Minnesota, finished drier than about 67% of all years in its record.

With the record warm December, it was also one of the wettest Decembers on record statewide, with an average statewide precipitation total of just over two inches. Interestingly, the last three Decembers have been much wetter than normal. The largest rain event right was right around the Christmas Holiday, when large areas of the state saw one to three inches of rain. This soaked into the ground and replenished ground moisture that will be available this spring.

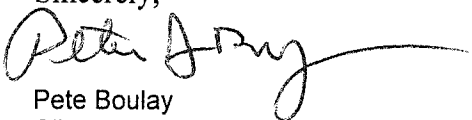
Observation Tips:

The 2023 listing of monthly precipitation totals for locations in your county should depict your measurements. If your data are missing, or if inaccurate values are shown for you, please let us know. Contact: peter.boulay@state.mn.us or 651-296-4214.

The enclosed **annual** observation form is for your personal records only. Please use the **monthly** forms to report data to the network administrator. You can also provide your data on-line. To learn how contact: peter.boulay@state.mn.us. Your data, and data from all of our volunteers, can be viewed on the State Climatology Office Web Site www.climateapps.dnr.state.mn.us

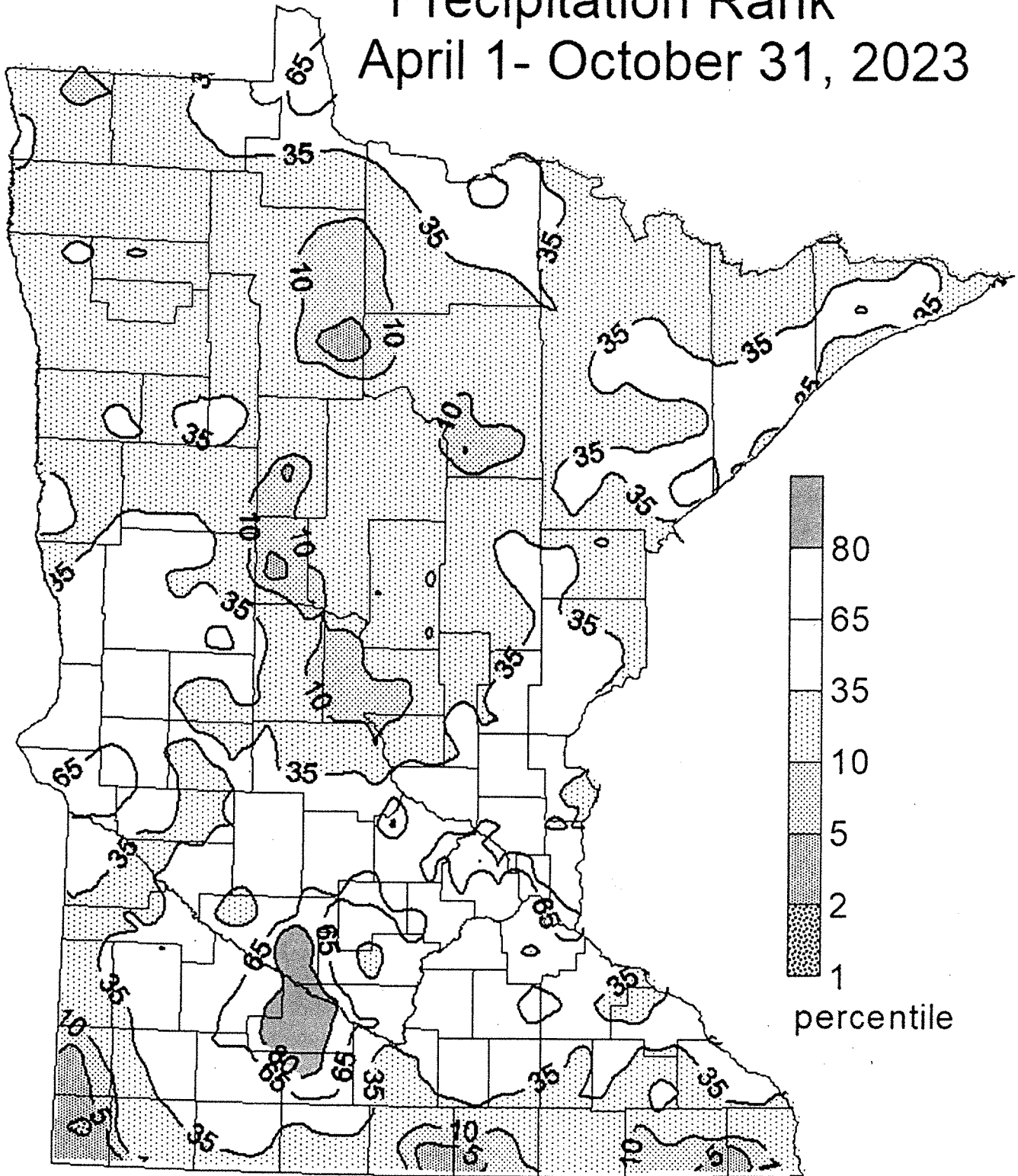
Thank you for contributing your data to the statewide precipitation archive. We appreciate your time and your hard work. The data you provide is critical to our understanding and appreciation of Minnesota's dynamic weather patterns.

Sincerely,



Pete Boulay
Climatologist
DNR-Climatology

Precipitation Rank April 1- October 31, 2023



DNR State Climatology Office

This map depicts the precipitation ranking for April 1- October 31, 2023 compared to the period of record. Historical ranking maps depict annual precipitation totals as they rank when compared to annual totals over the modern record. The values presented are percentiles. A ranking near zero indicates the year was drier than any found during the period of record. A ranking near 100 designates that the year was wetter than any found on record. A ranking of 50 is equivalent to the "median", a measure of central tendency.