

University of Waterloo Weather Station Annual Summary - 2022

There was 1 big weather story for 2022: how dry it was throughout the year!

With only 580.3 mm of precipitation, it was the sixth driest year since weather records began the region in 1914 and the lowest total precipitation since the 540.4 mm in 1963 (by the way, the lowest on record was 399.0 mm in 1937). February was the only month that had above average precipitation, 3 months were in the average range, and the rest were all drier than average. Anyone who had a hard time keeping a garden alive or watching their grass turn brown will remember just how dry it was, particularly during the summer.

It was only a bit drier than average for the first three months of the year, then started the pattern we would see for the rest of the 2022. It was the driest April in the last 10 years, coming in at around 30 mm less than the average, while May was 20 mm less.

Then came the peak dryness during the months from June to September, overall for those months we had less than 40% of the average. June and July had the least precipitation since 2007 and 2001, respectively, while July, with only 18.7 mm, was the fifth driest July on record and the least amount for any month since March of 2014.

Continuing the pattern, August only saw a little more than half the average precipitation and was the driest since 2010. At only 22.2 mm of precipitation, September was the fourth driest for that month since records began in the region and we have to go back to 1998 to find one with less precipitation.

Then October and November were the driest since 2008 and 2012, respectively. December finally had very close to average precipitation, although it was close, as almost half of the month's total came during the last two days of the month.

Looking at temperature, the year started out with a very cold January, with an overall temperature that was almost 4 degrees below average. This was the most below average of any month since February of 2015. The low temperature of -32.4°C on the 29th was the second lowest temperature we have seen since the UW Weather station was established back in February of 1998 (the all-time low was -35.5°C on Feb 16, 2015).

During the next few months, the temperature swung back and forth between being warmer and colder than average. Here are a couple of notable days in first half of 2022: The high of 25.9°C on the 24th of April was the second highest April temperature in the last 10 years. While the high on June 21st of 34.1°C was the highest temperature since the 34.5°C on July 9, 2020 and it was also the highest June temperature since June 27, 2005 when it was 34.9°C .

The last six months of the year were much warmer at 1.2 degrees above average, with only July coming in below average (and that was only by 0.07 of a degree).

The most notable longer stretch of temperatures was a 2 week period at the end of October and the start of November when the average high was 16.3°C, which is about 8 degrees higher than the average for that period. The high of 23.4°C on November 5th was only the fourth time on record we have seen a November temperature above 23°C.

As far as the snowfall season of 2021-22, the total was 176.5 cm, well above the average of 159.7 cm. Between January 17 and 18, a total of 33.0 cm of snow came down, this was the second or third highest snowfall total for a single storm since we started measuring daily snowfall at the station in 2001. The single day total for the 17th was 22.5 cm making it the highest single day total since March 9, 2005 when we had 31.5 cm.

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Summary for 2022 (averages from 1981-2010 data for the Waterloo-Wellington Airport):

Average Daily High Temperature: 13.26°C (average 12.05°C)

Average Daily Low Temperature: 1.15°C (average 1.94°C)

Total Precipitation: 580.3 mm (average 916.3 mm)

As the UW Weather Station was not operating for most of 2022 no extremes are being reported