

University of Waterloo Weather Station Annual Summary - 2005

The top weather story for the region was the hot, hot summer we experienced in 2005. The temperature was warmer than average from June until well into the fall, during the summer the daily high temperature was warmer than average 68 out of 93 days.

Another example of just how hot it was this summer was the number of days the temperature went above 30 degrees. There were a total of 17 of those days during the year (7 in June, 7 in July and 3 in August) while we would only expect 7 during an average year. It is also a big contrast to 2004 when it didn't happen once.

It would have been difficult to predict the warm summer based on the temperatures during the beginning of the year. The winter months of 2005 were colder than average, particularly during 2 cold stretches: one during late January (the temperature of -32.3°C recorded on January 27th at 7:45 am was the coldest every recorded at the station) and another from mid-February to mid-March. In fact, it was the coldest March we have ever recorded in the 8 year history of the weather station.

Overall, the spring was a bit warmer than average, but within that we saw lower than average temperatures in May. Then came the six month run of warmer than average temperatures, June and September were the months that were the most above their averages, but every month between June and November were significantly warmer than average. This trend reversed in the last month of the year with December recording lower than average temperatures.

The average temperature for 2005 was about half a degree above the long term average. This is the second warmest year we have recorded at the University of Waterloo Weather Station (1999 had a higher average temperature).

The total precipitation for 2005 was 812.4 mm, this compares to the average of 904.0 mm making it a below average year (the average range goes from 847.4 mm to 982.3 mm). This is despite the fact that the year produced the highest precipitation ever recorded during a single month (127.9 mm in November) and the highest precipitation ever recorded during a single day (59.2 mm on July 16th).

The year started out wet with above average precipitation until mid-March. The reason for the below average precipitation for the year was principally because of a very dry spell we experienced during the spring. May only had about 30% of the average precipitation and June just over 50%. During a 30 day stretch between May and June only 11.0 mm fell compared to an average of 70 mm during that time.

The dry spell ended on July 15th and for the rest of the year the precipitation was pretty close to average. However this wasn't enough to overcome the precipitation deficit created during the spring.

Summary for 2005 (averages from 1970-2000 data for the Waterloo Wellington Airport):

Average Daily High Temperature: 12.51 °C (average 11.86 °C)

Average Daily Low Temperature: 2.19 °C (average 1.67 °C)

Total Precipitation: 812.4 mm (average 907.9 mm)

Extremes for 2005 (all time weather station extreme in brackets):

Highest Temperature:

34.1°C July 13 3:00 pm (35.4°C Aug 8, 2001 4:30 pm)

Highest Humidex:

41.5 June 24 3:00 pm (44.9 July 1, 2002 2:45 pm)

Lowest Temperature:

-32.3°C Jan 27 7:45 am (NEW EXTREME)

Lowest Windchill:

-30.5 Jan 22, 2:45 pm (-37.2 Jan 14, 1999 4:15 am)

Greatest temperature drop in 15 minutes:

-4.5 °C Aug 10 12:15 pm (-5.1°C Feb 9, 2001 11:15 pm)

Greatest temperature drop in 60 minutes:

-9.4 °C July 14 2:15-3:15 pm (-9.8°C July 17, 1999 11:15-12:15 pm)

Greatest temperature rise in 15 minutes:

4.3 °C Jan 30 9:00 am (8.6°C Jan 2, 2001 6:15 am)

Greatest temperature rise in 60 minutes:

10.0 °C Jan 30 8:30-9:30 am (12.2°C Jan 2, 2001 4:45-5:45 am)

Highest Precipitation in 15 minutes:

14.2 mm July 14 3:00 pm (16.2 mm Jun 27, 1999 4:45 pm)

Highest Precipitation in 60 minutes:

26.4 mm Aug 19 5:00 - 6:00 am (36.7 mm Jun 16, 1998 1:15-2:15 pm)

Highest 15 minute average wind speed:

10.2 m/s Nov 6 2:15 pm (12.4 m/s March 9, 2002 6:30 pm)

First time the temperature went below 0 after the summer:

Oct 20 2:00 am (Latest ever recorded)

Frank Seglenieks

frseglen@uwaterloo.ca

University of Waterloo Weather Station Coordinator