

Weather Data summary for April 2020 for the Blenheim Meteorological station located at Grovetown Park Campus of the Marlborough Research Centre.

April 2020 was warmer than average. Sunshine hours were well above average. Rainfall was well below average for the fourth month in a row and Marlborough is still in the grips of a drought. Soil moisture was also well below average.

Table 1: Weekly temperatures, rainfall and sunshine during April 2020

	Mean Maximum	Mean Minimum	Mean	Rainfall (mm)	Sunshine (hours)
1 – 7 April	19.8 (+1.0)	9.3 (+1.3)	14.5 (+1.0)	0	46.7
8 – 14 April	19.1 (+0.3)	8.9 (+0.9)	14.0 (+0.5)	9.2	53.5
15 – 21 April	19.3 (+0.5)	5.5 (-2.5)	12.4 (-1.1)	13.8	57.9
22 – 28 April	21.3 (+2.5)	7.5 (-0.5)	14.4 (+0.9)	1.2	56.2
29 – 30 April (2 days)	22.5 (+3.7)	4.5 (-3.5)	13.5 (=)	0	19.3
April 2020	20.1 (+1.3°C)	7.6 (-0.4°C)	13.8 (+0.3°C)	24.2 (47%)	233.4 (123%)
Long-term Average 1986-2019	18.8°C	8.0°C	13.5°C	51.7 mm	190.4 hours

Sunshine

233.4 hours sunshine for April was 123% of the long-term average for April of 190.4 hours (1986-2019)

April 2019 recorded 211.2 hours sunshine.

April 2018 recorded 188.0 hours sunshine.

April 2017 recorded 169.2 hours sunshine.

April 2016 recorded 238.3 hours sunshine.

April 2020 is now the fifth sunniest April on record for Blenheim, for the 91 years 1930-2020. Only slightly below the total in April 2016. The sunniest April on record is 1986 with a total of 240 hours.

Daily average sunshine during April was 7.78 hours; this is an extra 1.43 hours each day compared to the long-term average.

There were no days during April 2020 that recorded zero hours sunshine. Only 9 days out of 30 recorded less than the long-term average daily total of 6.3 hours.

Total sunshine for Blenheim from January to April 2020 is 983.3 hours, 108% of the long-term average of 913.7 hours (1986-2019). This is the sixth sunniest January to April on record (1930-2020). Sunniest on record is 2019 with 1044 hours.

Blenheim was the sunniest town in New Zealand during April with 233.4 hours, but only 1.6 hours Richmond's total of 231.8 hours. However, Whakatane is still in first place for 2020 with a lead of 112.9 over Blenheim. Blenheim is in fourth place behind New Plymouth and Richmond.

Rainfall

24.2 mm of rain in April was 47% of the long-term average for April of 51.7 mm (1986-2019).

April 2019 rainfall was 80.2 mm.

April 2018 rainfall was 52.2 mm.

April 2017 rainfall was 131.4 mm.

April 2016 rainfall was 25.6 mm.

January (0.2 mm), February (8.6 mm), March (11.2 mm) and April (24.2 mm) have all recorded low rainfall totals. Total rainfall January to April 2020 is 44.2 mm. This is the third lowest January to April total on record for the 91 years 1930-2020 (Table 2). Lowest total was in 1939, which only recorded 20.8 mm. It is interesting to note that of

the 10 lowest January to April totals on record over the last 91 years that five of the 10 lowest totals have occurred since the year 2000.

Table 2: Ten lowest January to April rainfall totals on record for Blenheim for the 91 years 1930 to 2020

Year	Rainfall (mm)
1939	20.8
2001	40.4
2020	44.2
2003	79.6
1973	84.0
2010	87.0
1950	100.8
1982	103.0
2015	109.0
1981	115.0

The current dry period of weather began on 21 December 2019. Only 44.2 mm rain has been recorded in Blenheim over the 132 days from 21 December 2019 to 30 April 2020. This is 22% of the long-term average of 202 mm; i.e. over this 132 day period Blenheim has accumulated a rainfall deficit of 157.8 mm (202 mm – 44.2 mm = 157.8 mm).

As reported last month, the Minister of Agriculture Damian O'Connor declared a drought for the entire North Island and parts of the South Island (Tasman, Marlborough, Kaikoura, North Canterbury and the Chatham Islands) on 12 March 2020. At the end of April 2020 central Marlborough is still in the grips of a drought. Last month I stated that Marlborough needed a substantial amount of rainfall during April to break the drought. Although there was some rainfall in Blenheim in April the deficit only worsened.

Average rainfall for the four autumn/winter months May to August is 62 mm. In order for the deficit to be recovered over the next four months Blenheim would need to receive 101 mm rain each month. Given that this is highly unlikely to happen it is probable that Blenheim will go into Spring in September with a continuing rainfall deficit.

Soil moisture (5-35 cm depth)

Average shallow soil moisture for April 2020 was 16.3%. This was the second lowest April average over the 18 years 2003-2019. To put this into perspective, the average shallow soil moisture for April 2019 was 32.8%; double what it was in 2020.

Temperature

Mean temperature of 13.8°C was 0.3°C above the long-term average temperature for April of 13.5°C (1986-2019).

April 2019 mean temperature was 13.2°C.

April 2018 mean temperature was 13.7°C.

April 2017 mean temperature was 14.0°C.

April 2016 mean temperature was 13.9°C.

The data in Table 1 indicate that all four weeks in April recorded above average daily maximum temperatures. The final 10 days of the month produced some stunning daytime maximum temperatures well above the April average. So much so that the last day of the month produced the warmest maximum temperature. However, while the days were warm the overnight minimums in the second half of April were well below average. With warm days and cool nights the daily range in temperature during April of 12.5°C was 1.7°C above average.

Frosts and Coldest and Hottest days during April

The coldest morning in April was the 15th with a ground frost of -2.1°C and an air minimum of 0.9°C. There were two ground frosts in April.

The hottest day was 30 April with a maximum temperature of 23.4°C.

Wind Run

April 2020 recorded slightly above average daily wind-run of 226.2 km compared to the long-term average of 218.3 km. This is only the second April in the ten years 2011 to 2020 to have recorded above average wind-run. April 2020 was far windier than April 2019 when average daily wind-run was only 167.8 km.

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