

The third-warmest June on record, unusually dry and sunny for many

Temperature	June temperatures were well above average (>1.20°C) for much of the South Island except in parts of Tasman and Marlborough where temperatures were above average (+0.51°C to +1.20°C). As a whole, the country observed well above average, above average, or near average temperatures (-0.50°C to 0.49°C). No location observed below average temperatures (-1.20°C to -0.51°C) on either Island.
Rainfall	Rainfall was well below normal (<50%) for much of Gisborne, southern Hawke's Bay, and Wairarapa. Rainfall was also well below normal in central and northern Canterbury and much of Otago and eastern Southland. Pockets of above normal rainfall (120-149%) were observed in parts of the Bay of Plenty, eastern Waikato and the north of Otago. Rainfall was near normal (80-119%) elsewhere.
Sunshine	Sunshine was above normal (110-124%) in Southland, the West Coast, Otago, and Canterbury with sections of well above normal sunshine (>125%). The majority of the North Island also observed above or well above normal sunshine. Sunshine was near normal (90-109%) or below normal (75-89%) in Tasman, Nelson, Marlborough, parts of Taranaki, Manawatu-Whanganui, and northern Northland.
Soil Moisture	As of 1 July 2016, soil moisture levels were below normal for this time of year for large parts of Gisborne, Hawke's Bay, the Wairarapa as well as central and northern parts of Canterbury. Soil moisture levels for the remainder of the country were near normal for this time of year.

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June 2016 climate in the six main centres
Highlights and extreme events

Overview

During the month of June 2016, air pressure was higher than normal over and to the east of New Zealand while lower than normal pressures existed to the south-west of the country. This pressure set up led to a prevalence of winds from a northerly direction. In addition to frequent winds from the north, warmer than usual sea surface temperatures persisted around New Zealand, especially to the west and north. Much like the past several months, these two factors worked in tandem to bring unusually mild temperatures to the country. As a result, Christchurch (Riccarton) and Dunedin had their warmest June on record. Many climate stations in New Zealand recorded above average (0.51°C to 1.20°C) or well above average (>1.20°C) temperatures during June, with several locations experiencing record or near-record warmth (particularly in the South Island). The nationwide average

temperature in June 2016 was 10.2°C¹ (1.6°C above the 1981-2010 June average from NIWA's seven station temperature series which begins in 1909), making June 2016 the third-warmest June on record using this series. The first 6 months of 2016 have all been warmer than average and January to June 2016 is the warmest such period in the seven station series temperature history with a departure from average of +1.4°C.

Much like May, the warmer than usual ocean surrounding New Zealand not only contributed to unseasonable warmth on land but also created an environment that was more conducive for strong storms. However, unlike May, record high monthly rainfall was rare, though several one-day maximum or near maximum rainfall extremes did occur, speaking to the isolated nature of the downpours. Much of eastern Southland and Otago received well below normal rainfall (<50%) during the month. Most notably, Nugget Point (Otago) experienced its driest June since records began in 1930. Middle and northern Canterbury, sheltered from a wind that was most predominantly coming from the northwest, also received well below normal rainfall with a small pocket in the Waimakariri and Hurunui Districts observing less than 20% of normal. After a dry start to June, portions of the east coast of the North Island experienced downpours as the month concluded. A few strong areas of low pressure moved from the northwest to southeast across the North Island during the latter stages of the month, resulting in near-record 1-day rainfall in some parts of the eastern North Island. Despite a few rounds of flooding, highlighted by Auckland's wettest June hour in recorded history on 29 June (25.4 mm), much of the northern North Island received near normal (80-119%) rainfall during June.

Soil moisture levels at the beginning of June were well below normal for this time of year for large parts of Gisborne, Hawke's Bay, the Wairarapa as well as central and northern parts of Canterbury. Below normal rainfall continued during June for many of these locations, meaning below normal soil moisture levels persisted in these parts. On 1 July 2016, the east coast of both islands continued to exhibit the most abnormally dry soils anywhere in the country with most other places experiencing near normal soil moisture levels for this time of the year.

June sunshine hours were above normal (110-125%) across much of the country with parts of the east coast of both Islands experiencing well above normal (>125%) sunshine. The north of the South Island, south of the North Island, and north of the North Island observed near normal (90-109%) sunshine. Timaru and Balclutha had their second-sunniest June on record while Invercargill had its fourth-sunniest June. Queenstown had its third-sunniest June on record with records dating back to 1930.

Further Highlights:

- The highest temperature was 25.1°C, observed at Napier on 10 June.
- The lowest temperature was -8.2°C, observed at Mt Cook Airport on 7 June.
- The highest 1-day rainfall was 141 mm, recorded at Otamatuna on 22 June.
- The highest wind gust was 172 km/h, observed at Cape Turnagain on 10 June.
- Of the six main centres in June 2016, Auckland was the warmest and tied with Wellington as the wettest, Christchurch was sunniest, driest and coolest, and Dunedin was the cloudiest.
- Of the available, regularly reporting sunshine observation sites, the sunniest four locations in 2016 so far (1 January 30 June) were Richmond (1440 hours), Blenheim (1324 hours), New Plymouth (1284 hours) and Takaka (1263 hours).

¹ Interim value

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Temperature: A mild June with plenty of records

The theme of unusual warmth during May carried into June, with above average (+0.51°C to +1.20 °C) or well above average (>1.20°C) temperatures recorded by most climate stations in the country. No locations observed below average temperatures (-1.20°C to -0.51°C). Many locations experienced record or near record mean, mean maximum and mean minimum high temperatures. Most notably, Dunedin and Christchurch (Riccarton) had their warmest June since records began in 1947 and 1863 respectively. The nationwide average temperature in June 2016 was 10.2°C (1.6°C above the 1981-2010 June average from NIWA's seven station temperature series which begins in 1909), making June 2016 the third-warmest June on record using this series. With that, the first six months of 2016 are officially the warmest start to any year on NIWA's seven station record.

Record² or near-record mean air temperatures for June were recorded at:

Location	Mean air temp. (°C)	Departure from normal (°C)	Year records began	Comments
High records or near-records				
Kaikohe	14.1	2.3	1973	Highest
Puysegur Point	10.2	1.6	1978	Highest
Christchurch (Riccarton)	9.6	2.7	1863	Highest
Orari	7.1	1.5	1972	Highest
Oamaru	8.6	1.5	1908	Highest
Dunedin (Musselburgh)	9.0	1.7	1947	Highest
Lumsden	6.6	1.9	1982	Highest
Gore	7.4	2.1	1971	Highest
Tiwai Point	9.6	2.7	1970	Highest
South West Cape	9.6	1.8	1991	Highest
Mokohinau	15.1	1.1	1994	2nd-highest
Whatawhata	12.4	2.4	1952	2nd-highest
Masterton	10.5	2.6	1992	2nd-highest
Ngawi	13.0	1.7	1972	2nd-highest
Milford Sound	8.0	2.1	1934	2nd-highest

² The rankings (1st, 2nd, 3rd.etc) in all Tables in this summary are relative to climate data from a *group* of nearby stations, some of which may no longer be operating. The current climate value is compared against all values from any member of the group, without any regard for homogeneity between one station's record, and another. This approach is used due to the practical limitations of performing homogeneity checks in real-time.

Cape Campbell 11.6 1.4 1953 2nd-highest Kaikoura 11.2 2.1 1963 2nd-highest Lincoln 8.8 2.1 1881 2nd-highest Le Bons Bay 10.3 2.0 1984 2nd-highest Ranfurly 4.7 1.9 1975 2nd-highest Nugget Point 8.2 1.4 1970 2nd-highest Waipawa 9.1 0.9 1945 3rd-highest Wellington (Airport) 11.9 1.4 1962 3rd-highest Wellington (Airport) 11.9 1.4 1962 3rd-highest Wellington (Airport) 11.9 1.4 1962 3rd-highest Hawera 11.2 1.7 1977 3rd-highest Wellington (Airport) 11.9 1.4 1982 3rd-highest Wellington (Airport) 11.9 1.9 1973 3rd-highest Wellington (Airport) 11.9 1.9 1973 3rd-highest W	Secretary Island	10.8	1.4	1985	2nd-highest
Lincoln 8.8 2.1 1881 2nd-highest Le Bons Bay 10.3 2.0 1984 2nd-highest Ranfurly 4.7 1.9 1975 2nd-highest Nugget Point 8.2 1.4 1970 2nd-highest Waipawa 9.1 0.9 1945 3rd-highest Wellington (Airport) 11.9 1.4 1962 3rd-highest Wellington (Airport) 11.9 1.4 1962 3rd-highest Wellington (Airport) 11.9 1.4 1962 3rd-highest Wellington (Airport) 11.9 1.4 1982 3rd-highest Hawera 11.2 1.7 1977 3rd-highest Cheviot 8.1 1.9 1973 3rd-highest Waipara 9.9 1.9 1973 3rd-highest Waipara 6.1 2.0 1955 3rd-highest Invercargill 7.8 1.9 1905 3rd-highest Wahngaparaoa 13.	Cape Campbell	11.6	1.4	1953	2nd-highest
Le Bons Bay 10.3 2.0 1984 2nd-highest Ranfurly 4.7 1.9 1975 2nd-highest Nugget Point 8.2 1.4 1970 2nd-highest Waipawa 9.1 0.9 1945 3rd-highest Wellington (Airport) 11.9 1.4 1962 3rd-highest Hawera 11.2 1.7 1977 3rd-highest Cheviot 8.1 1.4 1982 3rd-highest Waipara West 9.9 1.9 1973 3rd-highest Wanaka 6.1 2.0 1955 3rd-highest Invercargill 7.8 1.9 1905 3rd-highest Whangaparaoa 13.8 1.2 1982 4th-highest Martinborough 9.8 1.2 1986 4th-highest Mahia 12.2 1.4 1990 4th-highest Paraparaumu 11.4 1.7 1953 4th-highest Hokitika 9.8 1.6	Kaikoura	11.2	2.1	1963	2nd-highest
Ranfurly 4.7 1.9 1975 2nd-highest Nugget Point 8.2 1.4 1970 2nd-highest Waipawa 9.1 0.9 1945 3rd-highest Wellington (Airport) 11.9 1.4 1962 3rd-highest Hawera 11.2 1.7 1977 3rd-highest Cheviot 8.1 1.4 1982 3rd-highest Waipara West 9.9 1.9 1973 3rd-highest Wanaka 6.1 2.0 1955 3rd-highest Invercargill 7.8 1.9 1905 3rd-highest Whangaparaoa 13.8 1.2 1982 4th-highest Wehnigaparaoa 13.8 1.2 1982 4th-highest Martinborough 9.8 1.2 1986 4th-highest Mahia 12.2 1.4 1990 4th-highest Paraparaumu 11.4 1.7 1953 4th-highest Farewell Spit 12.1	Lincoln	8.8	2.1	1881	2nd-highest
Nugget Point 8.2 1.4 1970 2nd-highest Waipawa 9.1 0.9 1945 3rd-highest Wellington (Airport) 11.9 1.4 1962 3rd-highest Hawera 11.2 1.7 1977 3rd-highest Cheviot 8.1 1.4 1982 3rd-highest Waipara West 9.9 1.9 1973 3rd-highest Wanaka 6.1 2.0 1955 3rd-highest Invercargill 7.8 1.9 1905 3rd-highest Whangaparaoa 13.8 1.2 1982 4th-highest Whartinborough 9.8 1.2 1986 4th-highest Mahia 12.2 1.4 1990 4th-highest Paraparaumu 11.4 1.7 1953 4th-highest Farewell Spit 12.1 1.6 1971 4th-highest Westport 10.8 1.5 1937 4th-highest Hokitika 9.8 1.6 1866 4th-highest Hokitika 9.8 1.6	Le Bons Bay	10.3	2.0	1984	2nd-highest
Waipawa 9.1 0.9 1945 3rd-highest Wellington (Airport) 11.9 1.4 1962 3rd-highest Hawera 11.2 1.7 1977 3rd-highest Cheviot 8.1 1.4 1982 3rd-highest Waipara West 9.9 1.9 1973 3rd-highest Wanaka 6.1 2.0 1955 3rd-highest Invercargill 7.8 1.9 1905 3rd-highest Whangaparaoa 13.8 1.2 1982 4th-highest Te Puke 11.4 1.4 1973 4th-highest Martinborough 9.8 1.2 1986 4th-highest Mahia 12.2 1.4 1990 4th-highest Paraparaumu 11.4 1.7 1953 4th-highest Farewell Spit 12.1 1.6 1971 4th-highest Westport 10.8 1.5 1937 4th-highest Hokitika 9.8 1.6 1866 4th-highest Mt Cook Village 4.9 1.6	Ranfurly	4.7	1.9	1975	2nd-highest
Wellington (Airport) 11.9 1.4 1962 3rd-highest Hawera 11.2 1.7 1977 3rd-highest Cheviot 8.1 1.4 1982 3rd-highest Waipara West 9.9 1.9 1973 3rd-highest Wanaka 6.1 2.0 1955 3rd-highest Invercargill 7.8 1.9 1905 3rd-highest Whangaparaoa 13.8 1.2 1982 4th-highest Welington 9.8 1.2 1982 4th-highest Martinborough 9.8 1.2 1986 4th-highest Mahia 12.2 1.4 1990 4th-highest Paraparaumu 11.4 1.7 1953 4th-highest Parewell Spit 12.1 1.6 1971 4th-highest Westport 10.8 1.5 1937 4th-highest Hokitika 9.8 1.6 1866 4th-highest Mt Cook Village 4.9 1.6 1929 4th-highest Tara Hills 4.6 1.7 <td>Nugget Point</td> <td>8.2</td> <td>1.4</td> <td>1970</td> <td>2nd-highest</td>	Nugget Point	8.2	1.4	1970	2nd-highest
Hawera 11.2 1.7 1977 3rd-highest Cheviot 8.1 1.4 1982 3rd-highest Waipara West 9.9 1.9 1973 3rd-highest Wanaka 6.1 2.0 1955 3rd-highest Invercargill 7.8 1.9 1905 3rd-highest Whangaparaoa 13.8 1.2 1982 4th-highest Te Puke 11.4 1.4 1973 4th-highest Martinborough 9.8 1.2 1986 4th-highest Mahia 12.2 1.4 1990 4th-highest Paraparaumu 11.4 1.7 1953 4th-highest Farewell Spit 12.1 1.6 1971 4th-highest Westport 10.8 1.5 1937 4th-highest Hokitika 9.8 1.6 1866 4th-highest Hokitika 9.8 1.6 1929 4th-highest Mt Cook Village 4.9 1.6 1929 4th-highest Manapouri 6.5 2.3 19	Waipawa	9.1	0.9	1945	3rd-highest
Cheviot 8.1 1.4 1982 3rd-highest Waipara West 9.9 1.9 1973 3rd-highest Wanaka 6.1 2.0 1955 3rd-highest Invercargill 7.8 1.9 1905 3rd-highest Whangaparaoa 13.8 1.2 1982 4th-highest Te Puke 11.4 1.4 1973 4th-highest Martinborough 9.8 1.2 1986 4th-highest Mahia 12.2 1.4 1990 4th-highest Paraparaumu 11.4 1.7 1953 4th-highest Farewell Spit 12.1 1.6 1971 4th-highest Westport 10.8 1.5 1937 4th-highest Hokitika 9.8 1.6 1866 4th-highest Reefton 8.0 2.1 1960 4th-highest Mt Cook Village 4.9 1.6 1929 4th-highest Manapouri 6.5 2.3 1963 4th-highest Low records or near-records	Wellington (Airport)	11.9	1.4	1962	3rd-highest
Waipara West 9.9 1.9 1973 3rd-highest Wanaka 6.1 2.0 1955 3rd-highest Invercargill 7.8 1.9 1905 3rd-highest Whangaparaoa 13.8 1.2 1982 4th-highest Te Puke 11.4 1.4 1973 4th-highest Martinborough 9.8 1.2 1986 4th-highest Mahia 12.2 1.4 1990 4th-highest Paraparaumu 11.4 1.7 1953 4th-highest Farewell Spit 12.1 1.6 1971 4th-highest Westport 10.8 1.5 1937 4th-highest Hokitika 9.8 1.6 1866 4th-highest Reefton 8.0 2.1 1960 4th-highest Mt Cook Village 4.9 1.6 1929 4th-highest Tara Hills 4.6 1.7 1949 4th-highest Manapouri 6.5 2.3 1963 4th-highest Low records or near-records <td>Hawera</td> <td>11.2</td> <td>1.7</td> <td>1977</td> <td>3rd-highest</td>	Hawera	11.2	1.7	1977	3rd-highest
Wanaka 6.1 2.0 1955 3rd-highest Invercargill 7.8 1.9 1905 3rd-highest Whangaparaoa 13.8 1.2 1982 4th-highest Te Puke 11.4 1.4 1973 4th-highest Martinborough 9.8 1.2 1986 4th-highest Mahia 12.2 1.4 1990 4th-highest Paraparaumu 11.4 1.7 1953 4th-highest Farewell Spit 12.1 1.6 1971 4th-highest Westport 10.8 1.5 1937 4th-highest Hokitika 9.8 1.6 1866 4th-highest Reefton 8.0 2.1 1960 4th-highest Mt Cook Village 4.9 1.6 1929 4th-highest Tara Hills 4.6 1.7 1949 4th-highest Manapouri 6.5 2.3 1963 4th-highest Low records or near-records	Cheviot	8.1	1.4	1982	3rd-highest
Total	Waipara West	9.9	1.9	1973	3rd-highest
Whangaparaoa 13.8 1.2 1982 4th-highest Te Puke 11.4 1.4 1973 4th-highest Martinborough 9.8 1.2 1986 4th-highest Mahia 12.2 1.4 1990 4th-highest Paraparaumu 11.4 1.7 1953 4th-highest Farewell Spit 12.1 1.6 1971 4th-highest Westport 10.8 1.5 1937 4th-highest Hokitika 9.8 1.6 1866 4th-highest Reefton 8.0 2.1 1960 4th-highest Mt Cook Village 4.9 1.6 1929 4th-highest Manapouri 6.5 2.3 1963 4th-highest Lauder 5.3 2.3 1924 4th-highest	Wanaka	6.1	2.0	1955	3rd-highest
Te Puke 11.4 1.4 1973 4th-highest Martinborough 9.8 1.2 1986 4th-highest Mahia 12.2 1.4 1990 4th-highest Paraparaumu 11.4 1.7 1953 4th-highest Farewell Spit 12.1 1.6 1971 4th-highest Westport 10.8 1.5 1937 4th-highest Hokitika 9.8 1.6 1866 4th-highest Reefton 8.0 2.1 1960 4th-highest Mt Cook Village 4.9 1.6 1929 4th-highest Tara Hills 4.6 1.7 1949 4th-highest Manapouri 6.5 2.3 1963 4th-highest Lauder 5.3 2.3 1924 4th-highest Low records or near-records	Invercargill	7.8	1.9	1905	3rd-highest
Martinborough 9.8 1.2 1986 4th-highest Mahia 12.2 1.4 1990 4th-highest Paraparaumu 11.4 1.7 1953 4th-highest Farewell Spit 12.1 1.6 1971 4th-highest Westport 10.8 1.5 1937 4th-highest Hokitika 9.8 1.6 1866 4th-highest Reefton 8.0 2.1 1960 4th-highest Mt Cook Village 4.9 1.6 1929 4th-highest Tara Hills 4.6 1.7 1949 4th-highest Manapouri 6.5 2.3 1963 4th-highest Lauder 5.3 2.3 1924 4th-highest	Whangaparaoa	13.8	1.2	1982	4th-highest
Mahia 12.2 1.4 1990 4th-highest Paraparaumu 11.4 1.7 1953 4th-highest Farewell Spit 12.1 1.6 1971 4th-highest Westport 10.8 1.5 1937 4th-highest Hokitika 9.8 1.6 1866 4th-highest Reefton 8.0 2.1 1960 4th-highest Mt Cook Village 4.9 1.6 1929 4th-highest Tara Hills 4.6 1.7 1949 4th-highest Manapouri 6.5 2.3 1963 4th-highest Lauder 5.3 2.3 1924 4th-highest	Te Puke	11.4	1.4	1973	4th-highest
Paraparaumu 11.4 1.7 1953 4th-highest Farewell Spit 12.1 1.6 1971 4th-highest Westport 10.8 1.5 1937 4th-highest Hokitika 9.8 1.6 1866 4th-highest Reefton 8.0 2.1 1960 4th-highest Mt Cook Village 4.9 1.6 1929 4th-highest Tara Hills 4.6 1.7 1949 4th-highest Manapouri 6.5 2.3 1963 4th-highest Lauder 5.3 2.3 1924 4th-highest Low records or near-records	Martinborough	9.8	1.2	1986	4th-highest
Farewell Spit 12.1 1.6 1971 4th-highest Westport 10.8 1.5 1937 4th-highest Hokitika 9.8 1.6 1866 4th-highest Reefton 8.0 2.1 1960 4th-highest Mt Cook Village 4.9 1.6 1929 4th-highest Tara Hills 4.6 1.7 1949 4th-highest Manapouri 6.5 2.3 1963 4th-highest Lauder 5.3 2.3 1924 4th-highest Low records or near-records	Mahia	12.2	1.4	1990	4th-highest
Westport 10.8 1.5 1937 4th-highest Hokitika 9.8 1.6 1866 4th-highest Reefton 8.0 2.1 1960 4th-highest Mt Cook Village 4.9 1.6 1929 4th-highest Tara Hills 4.6 1.7 1949 4th-highest Manapouri 6.5 2.3 1963 4th-highest Lauder 5.3 2.3 1924 4th-highest Low records or near-records	Paraparaumu	11.4	1.7	1953	4th-highest
Hokitika 9.8 1.6 1866 4th-highest Reefton 8.0 2.1 1960 4th-highest Mt Cook Village 4.9 1.6 1929 4th-highest Tara Hills 4.6 1.7 1949 4th-highest Manapouri 6.5 2.3 1963 4th-highest Lauder 5.3 2.3 1924 4th-highest Low records or near-records	Farewell Spit	12.1	1.6	1971	4th-highest
Reefton 8.0 2.1 1960 4th-highest Mt Cook Village 4.9 1.6 1929 4th-highest Tara Hills 4.6 1.7 1949 4th-highest Manapouri 6.5 2.3 1963 4th-highest Lauder 5.3 2.3 1924 4th-highest Low records or near-records	Westport	10.8	1.5	1937	4th-highest
Mt Cook Village 4.9 1.6 1929 4th-highest Tara Hills 4.6 1.7 1949 4th-highest Manapouri 6.5 2.3 1963 4th-highest Lauder 5.3 2.3 1924 4th-highest Low records or near-records	Hokitika	9.8	1.6	1866	4th-highest
Tara Hills 4.6 1.7 1949 4th-highest Manapouri 6.5 2.3 1963 4th-highest Lauder 5.3 2.3 1924 4th-highest Low records or near-records	Reefton	8.0	2.1	1960	4th-highest
Manapouri 6.5 2.3 1963 4th-highest Lauder 5.3 2.3 1924 4th-highest Low records or near-records	Mt Cook Village	4.9	1.6	1929	4th-highest
Lauder 5.3 2.3 1924 4th-highest Low records or near-records	Tara Hills	4.6	1.7	1949	4th-highest
Low records or near-records	Manapouri	6.5	2.3	1963	4th-highest
	Lauder	5.3	2.3	1924	4th-highest
None observed	Low records or near-records				
	None observed				

Record or near-record mean maximum air temperatures for June were recorded at:

Location	Mean maximum air temp. (°C)	Departure from normal (°C)	Year records began	Comments
High records or near-records				
Lincoln	17.2	2.4	1973	Highest
Le Bons Bay	16.4	2.3	1952	Highest
Orari	16.0	2.7	1992	Highest
Timaru	15.5	2.4	1945	Highest
Tara Hills	11.8	2.2	1934	Highest
Ranfurly	12.7	1.8	1978	Highest
Dunedin (Musselburgh)	10.5	2.9	1929	Highest
Manapouri	16.0	4.0	1863	Highest
Queenstown	13.0	2.0	1972	Highest
Lumsden	13.0	1.7	1885	Highest
Gore	13.4	2.8	1947	Highest
Invercargill	11.2	2.9	1963	Highest
Tiwai Point	11.6	2.5	1982	Highest

Balclutha	12.8	2.9	1905	Highest
Nugget Point	14.5	4.5	1970	Highest
South West Cape	11.5	1.6	1964	Highest
Campbell Island	11.6	1.8	1991	Highest
Kaitaia	17.5	1.3	1948	2nd-highest
Kaikohe	16.5	1.1	1994	2nd-highest
Whangarei	16.4	1.6	1974	2nd-highest
Mokohinau	15.3	2.0	1986	2nd-highest
Whangaparaoa	15.6	1.9	1972	2nd-highest
Whakatane	16.8	1.8	1969	2nd-highest
Rotorua	17.3	2.1	1905	2nd-highest
Motu	16.1	2.1	1937	2nd-highest
Auckland (Mangere)	14.7	1.6	1937	2nd-highest
Whatawhata	13.2	1.2	1985	2nd-highest
Te Kuiti	13.8	2.2	1974	2nd-highest
Turangi	14.8	2.3	1982	2nd-highest
Masterton	15.3	2.5	1973	2nd-highest
Takapau Plains	11.6	2.8	1971	2nd-highest
Dannevirke	8.1	0.9	1991	2nd-highest
Waione	15.2	1.3	1959	3rd-highest
Martinborough	14.2	1.9	1951	3rd-highest
Ngawi	15.5	1.8	1991	3rd-highest
Hicks Bay	16.9	2.4	1870	3rd-highest
Gisborne	16.8	2.4	1965	3rd-highest
Napier	17.2	2.3	1964	3rd-highest
Hastings	15.0	1.7	1990	3rd-highest
Waipawa	15.2	2.0	1953	3rd-highest
Wairoa	15.0	1.7	1895	3rd-highest
Mahia	14.7	1.8	1977	3rd-highest
Paraparaumu	15.4	1.3	1978	3rd-highest
Levin	12.3	2.2	1960	3rd-highest
Hawera	13.2	1.6	1949	3rd-highest
Wanganui	15.4	1.7	1941	3rd-highest
Takaka	13.3	2.4	1906	3rd-highest
Westport	14.3	2.3	1963	3rd-highest
Reefton	14.0	2.7	1928	3rd-highest
Haast	14.1	2.5	1881	3rd-highest
Milford Sound	13.1	2.2	1984	3rd-highest
Secretary Island	9.8	1.9	1949	3rd-highest
Puysegur Point	10.3	2.4	1975	3rd-highest
Blenheim	10.9	1.4	1970	3rd-highest
Hanmer Forest	16.1	1.0	1982	4th-highest
Kaikoura	13.9	1.3	1964	4th-highest
Waiau	12.6	1.6	1990	4th-highest
Cheviot	16.7	1.4	1959	4th-highest
Mt Cook	13.1	1.1	1968	4th-highest
Winchmore	13.6	1.5	1962	4th-highest
Waipara West	10.9	2.6	1871	4th-highest

Christchurch (Riccarton)	17.4	1.3	1967	Equal 4th- highest
Low records or near-records				
None observed				

Record or near-record mean minimum air temperatures for June were recorded at:

Location	Mean minimum	Departure from normal (°C)	Year records began	Comments
	air temp. (°C)			
High records or near-records				
Puysegur Point	7.8	1.5	1978	Highest
Cape Campbell	9.6	1.7	1953	Highest
Kaikoura	8.0	1.8	1963	Highest
Le Bons Bay	7.4	1.6	1984	Highest
Oamaru	4.0	1.4	1908	Highest
Nugget Point	5.5	1.3	1970	Highest
Kaikohe	11.0	2.2	1973	2nd-highest
Mokohinau	13.7	1.2	1994	2nd-highest
Secretary Island	8.4	1.5	1985	2nd-highest
Waipara West	4.6	1.5	1973	2nd-highest
South West Cape	7.7	1.8	1991	2nd-highest
Whatawhata	8.4	2.5	1952	3rd-highest
Masterton	4.9	2.4	1992	3rd-highest
Ngawi	10.4	1.6	1972	3rd-highest
Wellington (Airport)	9.2	1.3	1962	3rd-highest
Hawera	7.8	1.7	1977	3rd-highest
Ranfurly	-0.9	1.3	1975	3rd-highest
Alexandra	-0.1	1.1	1983	3rd-highest
Paraparaumu	7.6	1.5	1953	4th-highest
Farewell Spit	9.4	2.4	1971	4th-highest
Wanaka	2.0	2.1	1955	4th-highest
Lauder	0.2	2.1	1924	4th-highest
Gore	3.2	1.4	1971	4th-highest
Low records or near-records				
None observed				

Rainfall: Many places drier than normal, though still rounds of flooding

June had drier than normal conditions for much of the South Island, especially in the south and east. Much of eastern Southland and Otago received well below normal rainfall (<50%) during the month, as did middle and northern Canterbury. A small pocket in the Waimakariri and Hurunui Districts of northern Canterbury observed less than 20% of normal rainfall in June. In contrast to the dryness in the east of the South Island, a storm brought flooding rainfall to the western South Island between 9 and 11 June. Across the North Island, late-month downpours caused a few bouts of flooding; in fact, Auckland had its wettest June hour on record on 29 June (25.4 mm) which led to water inundation in

homes and businesses, especially in the west of the city. Despite the heavy downpours, many locations in the north of the North Island had near normal rainfall in June. Though eastern Gisborne, Hawke's Bay, and Wellington were sheltered from the predominant north-westerlies early in the month, the area had a few bouts of useful rain at the end of June. Even still, many of these places recorded below (50-79%) and well below (<50%) normal rainfall.

Record or near-record June rainfall totals were recorded at:

Location	Rainfall total (mm)	Percentage of normal	Year records began	Comments
High records or near-reco	rds			
Motu	364	148	1990	2nd-highest
Low records or near-recor	ds			
Nugget Point	21	25	1930	Lowest
Masterton	52	51	1992	2nd-lowest
Secretary Island	164	52	1985	3rd-lowest
Hanmer Forest	29	29	1905	3rd-lowest
Waipara West	14	26	1973	3rd-lowest
Lumsden	32	40	1982	3rd-lowest
Balclutha	16	28	1964	3rd-lowest

Sunshine: A sunny month overall

June sunshine hours were above normal (110-125%) across much of the country with parts of the east coast of both Islands experiencing well above normal (>125%) sunshine. Parts of the south and west of the South Island also had well above normal sunshine. Several locations in the South Island experienced near-record sunshine hours in June. Most notably it was the third-sunniest June on record in Invercargill with records extending back to 1913. The north of the South Island, south of the North Island, and north of the North Island observed near normal (90-109%) sunshine. Of the available, regularly reporting sunshine observation sites, the sunniest four locations in 2016 so far (1 January – 30 June) were Richmond (1440 hours), Blenheim (1324 hours), New Plymouth (1284 hours) and Takaka (1263 hours).

Record or near-record June sunshine hours were recorded at:

Location	Sunshine hours	Percentage of normal	Year records began	Comments	
High records or near-reco	rds				
Ashburton	159	137	1930	2nd-highest	
Timaru	164	135	1930	2nd-highest	
Balclutha	127	164	1964	2nd-highest	
Cheviot	147	161	1983	3rd-highest	
Lake Tekapo	153	113	1928	3rd-highest	
Queenstown	135	188	1930	3rd-highest	
Invercargill	114	145	1913	3rd-highest	
Low records or near-records					
None observed					

June climate in the six main centres

June temperatures were well above average (>1.20°C above the June average) for all main centres except Hamilton. Dunedin experienced its warmest June on record. Rainfall was above normal (120-149%) in Auckland and Hamilton, below normal (50-79%) in Dunedin and well below normal (<50%) in Christchurch. Below normal sunshine hours were observed in Tauranga, near normal sunshine hours were observed in Auckland and Hamilton while Dunedin, Christchurch, and Wellington had above normal sunshine hours. Of the six main centres in June 2016, Auckland was the warmest and tied with Wellington as the wettest, Christchurch was the driest, sunniest and coolest, and Dunedin was the cloudiest.

June 2016 main centre climate statistics:

Temperature			
Location	Mean temp. (°C)	Departure from normal (°C)	Comments
Aucklanda	13.2	+1.4	Well above average
Tauranga ^b	12.3	+1.3	Well above average
Hamilton ^c	10.5	+1.1	Above average
Wellington ^d	11.5	+1.8	Well above average
Christchurch ^e	8.1	+1.7	Well above average
Dunedin ^f	9.0	+1.7	Well above average (highest on record)
Rainfall			
Location	Rainfall (mm)	% of normal	Comments
Aucklanda	142	120%	Above normal
Tauranga ^b	110 ³	96%	Near normal
Hamilton ^c	140	120%	Above normal
Wellington ^d	142	103%	Near normal
Christchurch ^e	23	40%	Well below normal
Dunedin ^f	33	57%	Below normal
Sunshine			
Location	Sunshine (hours)	% of normal	Comments
Auckland ^a	124	106%	Near normal
Tauranga ^b	108	80%	Below normal
Hamilton ^g	112	101%	Near normal
Wellington ^d	110	111%	Above normal
Christchurch ^e	137	117%	Above normal
Dunedin ^f	107³	113%	Above normal

^a Mangere ^b Tauranga Airport ^c Hamilton Airport ^d Kelburn ^e Christchurch Airport ^f Musselburgh ^g Ruakura

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³ Missing one day of data.

Highlights and extreme events

Rain and slips

On 9 June, heavy rain along New Zealand's West Coast near Greymouth caused a man and child to become trapped in a car while attempting to cross the Poerua River in Hari Hari near Greymouth. The man died, while the search for the toddler was called off on the 16th of June.

On 11 June, a kayaker was saved from drowning in a swollen Grey River following bouts of heavy rain.

On 12 June, heavy rain and strong winds disrupted traffic on both the main highways into Wellington. Traffic on State Highway 1 was briefly turned back between Otaki and Levin where surface flooding occurred. Slips reduced a part of State Highway 2 to one lane.

On 22 June, brief but torrential downpours caused surfacing flooding around Auckland during the afternoon and evening, forcing the evacuation of a motel in Tokoroa. A thunderstorm during the evening brought down trees along a state highway and flung a trampoline onto a roof.

On 23 June, a car crash on Auckland's Harbour Bridge may have been a result of extremely wet road conditions.

On 23 June, heavy rainfall in the Bay of Plenty led to surface flooding, distressing motorists and farmers. Some motorists were forced to push their vehicles through the floodwater, which was most significant in Whakatane and Pukehina.

On 23 June, heavy rain along the Coromandel Peninsula led to a slip on Highway 25 near Kuranui Bay, leaving one of the country's most well-travelled scenic highways with just one lane.

On 29 June, heavy rain in the Auckland region caused flash flooding, trapping one person in a factory and several people in their cars in West Auckland. A primary school was forced to close due to water and electrical damage. Several homes were also flooding, prompting removal of the floodwater by bucket and multiple fire service callouts. Some bus services were also impacted by the flooding. Between 1 and 2 p.m., Auckland (Mangere) had its wettest hour in June history with 25.4 mm worth of rain.

On 29 June, a deluge of rain caused flooding and slips in the Bay of Plenty, closing parts of the Tauranga Eastern Link.

Record or near-record May extreme 1-day rainfall totals were recorded at:

Location	Extreme 1-day rainfall (mm)	Date of extreme rainfall	Year records began	Comments
Motu	126	22nd	1990	Highest
Te Puke	117	22nd	1973	2nd-highest
Matamata	68	22nd	1951	3rd-highest

Temperatures

A cold snap affected New Zealand during the first few days of June. Widespread negative temperatures and frosts occurred across the South Island and parts of the North Island.

On 10 June, a foehn effect initiated by north-westerly winds contributed to record and near-record high minimum temperatures and high maximum temperatures at several eastern New Zealand locations.

Exceptionally warm weather during the day with the shortest amount of daylight made news headlines on the Winter Solstice, the 21st of June. Kaikoura set a daily record high of 18.2°C. Several cities, including Auckland, Christchurch, New Plymouth, Taupo, Tauranga, and Kaitaia then had their warmest 21st June overnight on record.

Record or near-record daily maximum air temperatures for June were recorded at:

Location	Extreme maximum (°C)	Date of extreme temperature	Year records began	Comments
High records or near-records				
Gisborne	23.2	10th	1905	Highest
Napier	25.1	10th	1868	Highest
Wairoa	24.2	10th	1964	Highest
Hanmer Forest	21.7	9th	1906	Highest
Christchurch (Riccarton)	23.1	10th	1863	Highest
Manapouri	18.2	9th	1963	Highest
Tiwai Point	21.9	9th	1970	Highest
South West Cape	18.0	21st	1991	Highest
Dannevirke	21.0	10th	1951	2nd-highest
Waione	21.8	10th	1991	2nd-highest
Hastings	24.4	10th	1965	2nd-highest
Mahia	20.0	11th	1990	2nd-highest
Cheviot	22.9	22nd	1982	2nd-highest
Lumsden	17.4	22nd	1982	2nd-highest
Waipawa	22.4	10th	1945	3rd-highest
Puysegur Point	17.3	8th	1978	3rd-highest
Hicks Bay	20.6	11th	1969	Equal 3rd-highest
Wellington (Airport)	18.3	9th	1962	Equal 3rd-highest
Kerikeri	21.1	10th	1981	4th-highest
Masterton	20.4	10th	1992	4th-highest
Kaikoura	23.5	10th	1963	4th-highest
Waiau	21.5	9th	1974	4th-highest
Mt Cook	17.9	14th	1929	4th-highest
Waipara West	22.1	22nd	1973	4th-highest
Ranfurly	17.2	22nd	1975	4th-highest
Invercargill	18.6	9th	1905	4th-highest
Low records or near-records				-
None observed				

Record or near-record daily minimum air temperatures for June were recorded at:

Location	Extreme	Date of	Year	Comments
	minimum (°C)	extreme temperature	records began	
High records or near-records		•	Ü	
Whangaparaoa	15.8	10th	1982	Highest
Auckland (Whenuapai)	16.4	10th	1951	Highest
Auckland (Lincoln Rd)	16.4	10th	1971	Highest
Whitianga	16.4	10th	1971	Highest
Paeroa	16.9	10th	1971	Highest
Tauranga	16.5	10th	1941	Highest
Te Puke	15.8	10th	1973	Highest
Whakatane	16.3	10th	1975	Highest
Port Taharoa	15.6	10th	1974	Highest
Masterton	14.6	23rd	1992	Highest
Waione	14.6	11th	1993	Highest
Reefton	11.7	23rd	1972	Highest
South West Cape	11.7	10th	1991	Highest
Farewell Spit	14.0	22nd	1972	Equal highest
Kaikohe	16.6	10th	1973	2nd-highest
Mokohinau	16.7	10th	1994	2nd-highest
Secretary Island	13.1	22nd	1988	2nd-highest
Puysegur Point	12.8	10th	1978	2nd-highest
Cheviot	10.6	24th	1982	2nd-highest
Ngawi	16.0	23rd	1972	Equal 2nd-highest
Nelson	13.5	23rd	1943	Equal 2nd-highest
Kerikeri	16.5	10th	1981	3rd-highest
Whangarei	16.3	10th	1967	3rd-highest
Hamilton	15.7	10th	1946	3rd-highest
Te Kuiti	15.2	10th	1959	3rd-highest
Hicks Bay	16.3	10th	1972	3rd-highest
Hastings	14.1	23rd	1972	3rd-highest
Motueka	11.9	23rd 23rd	1972	3rd-highest
Lumsden	10.7	18th	1982	3rd-highest
Rotorua	13.5	10th	1972	Equal 3rd-highest
Auckland	16.4	10th	1961	Equal 3rd-highest
Pukekohe	15.9	10th	1969	Equal 3rd-highest
Wanganui (Spriggens Park)	14.0	23rd	1972	Equal 3rd-highest
Haast	12.4	231d 22nd		Equal 3rd-highest
	15.8	10th	1949 1951	4th-highest
Dargaville Auckland (North Shore)	16.4	10th	1951	4th-highest
Whatawhata	15.6	10th		
			1952	4th-highest
Wairaa	13.5	23rd	1945	4th-highest
Wairoa	14.3	23rd	1972	4th-highest
Hawera	13.7	10th	1977	4th-highest
Kaitaia	16.5	10th	1948	Equal 4th-highest
Mahia	13.6	11th	1990	Equal 4th-highest

Stratford	12.2	10th	1972	Equal 4th-highest	
Low records or near-records					
None observed					

Wind

On 8 June, Mt Hutt ski field delayed its opening day by one day due to a forecast of strong winds.

On 21 and 22 June, Mt Hutt ski field was closed due to strong winds.

On 26 June, high winds blew over a truck's trailer on Napier-Taupo Road in Hawke's Bay.

On 27 June, strong low pressure passing over the north of the North Island resulted in high winds that blew over a tree and powerline in Helensville, northwest of Auckland. The wind also sent two trampolines flying onto roofs in West Auckland, which required fire fighter assistance to remove them. In additional, the wind ripped trees from their roots, causing about 500 houses to lose power in Coatesville, 900 houses in Titirangi, and 1200 houses in Greenhithe. Gusts of 150km/h occurred at Manukau Heads and 85km/h on the Auckland Harbour Bridge.

Record or near-record June extreme wind gusts were recorded at:

Location	Extreme wind gust (km/hr)	Date of extreme gust	Year records began	Comments
Motu	106	23rd	1991	2nd-highest
Oamaru Airport	83	25th	1984	2nd-highest
Castlepoint	152	10th	1972	3rd-highest
Wanganui	98	12th	1977	Equal 3rd-highest

Cloud and fog

On 16 June, flights en route to Hamilton were diverted to Tauranga and Rotorua as dense fog made for poor visibility across Waikato, particularly at Fieldays in Mystery Creek.

On 20 June, caution was advised on Hamilton area roads as thick fog blanketed much of the Waikato. Despite the fog, all flights out of Hamilton Airport were scheduled on time.

On 21 June, fog that was slow-to-depart, cancelled a mid-morning flight in Whangarei.

On 22 June, fog delayed flights into and out of Auckland.

On 30 June, fog caused disruptions to more than 40 flights at Auckland International Airport and delayed ferry services.

Snow and ice

On 1 June, snow on some of the alpine passes in the South Island forced vehicle drivers to carry chains.

On 22 June, Porters Ski Area in Canterbury delayed its opening due to mild temperatures.

Wanaka's Treble Cone ski area delayed its 23 June opening due to a lack of snow.

In Queenstown, Coronet Peak was forced to close due to a lack of snow from 22 June, after having already opened for the season with sufficient snow on 11 June.

On 30 June, Mt Ruapehu delayed its ski area opening due to a lack of snow.

For further information, please contact:

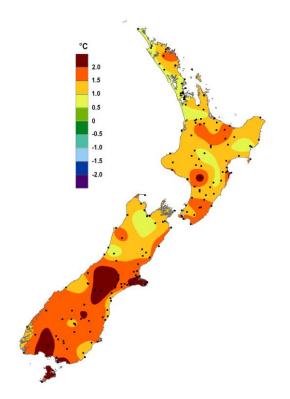
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June 2016 mean temperature, expressed as a departure from average (1981-2010 average).

It was the warmest June on record for many locations on New Zealand's South Island. June temperatures were well above average (>1.20°C) for all main centres.

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