

New Zealand's hottest month on record

Temperature	Mean temperatures were well above average (>1.20°C of average) throughout New Zealand. Temperatures were more than 2°C above the January average for most of the country, and parts of Southland, Otago, West Coast, Kapiti Coast and Taranaki observed mean temperatures more than 4°C above average. Periodic hot spells resulted in numerous locations observing record or near-record extreme maximum temperatures for January.
Rainfall	Rainfall was above normal (120-149% of normal) or well above normal (>149% of normal) throughout much of the top half of the South Island, as well as many areas of the North Island. Rainfall was below normal (50-79% of normal) or well below normal (<50% of normal) for much of Southland, Otago, and Hawke's Bay.
Soil Moisture	As of 31 January, soils were drier than normal for the time of year across large parts of Southland, Otago, the West Coast and Taranaki, as well as southern and eastern parts of the North Island. Soil moisture was above normal for eastern parts of Northland, Auckland, Bay of Plenty and Nelson.

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Overview

January 2018 was characterised by higher than normal sea level pressure to the east of New Zealand, and lower than normal sea level pressure to the west of the country. This pressure setup delivered more northerly-quarter winds than normal. Sea surface temperatures (SSTs) in New Zealand coastal waters and the Tasman Sea remained considerably higher than normal throughout the month.

The combination of more frequent northerly-quarter winds and higher than normal SSTs had a profound influence on air temperatures observed throughout the country during January. The nationwide average temperature in January 2018 was 20.3°C (3.1°C above the 1981-2010 January average from NIWA's seven station temperature series which began in 1909). January 2018 was the hottest month on record for New Zealand using the seven-station series, surpassing the previous record of February 1998 when the nationwide average temperature recorded was 19.6°C. The exceptional and persistent warmth during the month meant mean temperatures were well above average (>1.20°C of average) throughout New Zealand. Notably, over half of New Zealand's regularly reporting stations observed mean temperatures at least 3°C above their January average.

January was a contrasting month for rainfall, as relatively few observation stations recorded near normal rainfall overall (80-119% of normal). The predominant northerly-quarter airflows delivered a steady stream of relatively humid air over the country. This combined with strong daytime heating to cause frequent convective (relatively short-duration, high intensity) rainfall events, particularly over inland parts of the North Island. In addition, several low pressure systems brought periods of persistent rainfall, particularly to northeastern parts of the North Island, Nelson and Tasman Districts. Rainfall was above normal (120-149% of normal) or well above normal (>149% of normal) throughout much of the top half of the South Island, and in many areas of the North Island. It was an exceptionally wet month in Christchurch and the Tasman District, where rainfall was more than three times higher than normal for January. In contrast, southern and inland parts of the South Island were relatively sheltered from the humid northerly-quarter airflows, and observed a relatively dry month as a result. Below normal (50-79% of normal) or well below normal (<50% of normal) rainfall was observed throughout Southland, parts of Otago, Mt Cook and Arthur's Pass. Rainfall was also below normal for coastal parts of Hawke's Bay.

By the end of January, soil moisture levels were below or well below normal for the time of year across many southern and western parts of the South Island. This was largely due to a relative lack of rainfall and exceptionally warm temperatures observed in these areas. Notably, the Government announced a medium-scale adverse drought event for the Grey and Buller Districts on 10 January. This drought classification was extended to include Otago and Southland on 30 January. Soils were also drier than normal for the time of year for many eastern and southern parts of the North Island, as well as Taranaki. Soil moisture levels were above normal for eastern parts of Northland, Auckland, Bay of Plenty and Nelson. Meanwhile, soil moisture levels were typically near normal for the time of year for remaining parts of the country.

Further Highlights:

- The highest temperature was 37.6°C, observed at Clyde on 30 January.
- The lowest temperature was 1.0°C, observed at Manapouri on 7 January.
- The highest 1-day rainfall was 223 mm, recorded at Takaka on 17 January.
- The highest wind gust was 143 km/h, observed at Mt Kaukau (Wellington) on 6 January.
- Of the six main centres in January 2018, Auckland was the warmest, Dunedin was the sunniest, driest and coldest, Tauranga was the wettest and Hamilton was the least sunny.
- Of the available automatic sunshine observation sites, the sunniest four locations in 2018 so far (1 January – 31 January) are Cromwell (277 hours), Akaroa (272 hours), Lake Tekapo (271 hours) and Paraparaumu (267 hours).

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Temperature: Exceptional record-breaking warmth

January 2018 (New Zealand mean temperature 20.3°C; 3.1°C higher than the 1981-2010 January average) was New Zealand's hottest month on record, which of course means it was additionally the country's hottest January on record. The previous hottest January was observed in 1956, when the mean temperature was 19.0°C (1.9°C higher than the 1981-2010 January average). January 2018 is the fourth month in the 21st century to have a nationwide temperature more than 2.0°C above average (after February 2016, May 2016 and December 2017).

Temperatures were well above average (>1.20°C of average) for the entire country, and locations in every region recorded either their record or near-record January temperature on record. Notably, Christchurch and Hokitika observed their hottest January since records began in 1863 and 1866, respectively. Gore's mean temperature for January 2018 was 19.2°C (4.8°C higher than its January average); which is equal to the average daily maximum temperature for January in the town.

Record or near-record high mean maximum (daytime) and mean minimum (night-time) temperatures were also observed in every region of the country. Mean maximum temperatures for January 2018 were highest about Central Otago, where Cromwell and Clyde observed maximum temperatures above 30°C on 21 and 20 days, respectively. On average, these towns would usually observe 6 days above 30°C in an entire year.

Record¹ or near-record mean air temperatures for January were recorded at:

Location	Mean air temp. (°C)	Departure from normal (°C)	Year records began	Comments
High records or near-records				
Cape Reinga	20.3	1.3	1951	Highest
Kaitaia	21.6	2.2	1948	Highest
Kerikeri	21.1	1.9	1945	Highest
Dargaville	21.8	2.7	1943	Highest
Whangarei	22.2	2.2	1967	Highest
Mokohinau	21.8	2.0	1994	Highest
Leigh	22.6	3.1	1966	Highest
Whangaparaoa	21.9	2.3	1982	Highest
Auckland (Whenuapai)	22.1	3.1	1945	Highest
Auckland (Western Springs)	22.2	2.8	1948	Highest
Whitianga	22.0	3.1	1962	Highest
Paeroa	22.2	2.6	1947	Highest
Tauranga	22.1	2.6	1913	Highest
Te Puke	21.2	2.9	1973	Highest
Whakatane	21.5	2.6	1974	Highest

¹ 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.

Rotorua	20.1	2.6	1964	Highest
Taupo	20.6	3.5	1949	Highest
Motu	18.9	3.4	1990	Highest
Auckland (Airport)	22.5	2.7	1959	Highest
Pukekohe	21.6	3.0	1969	Highest
Whatawhata	21.6	3.3	1952	Highest
Hamilton	21.4	3.1	1946	Highest
Port Taharoa	21.5	2.4	1973	Highest
Te Kuiti	21.8	3.5	1959	Highest
Taumarunui	21.7	3.6	1947	Highest
New Plymouth	20.9	3.3	1944	Highest
Lower Retaruke	20.9	3.4	1966	Highest
Masterton	21.9	4.5	1906	Highest
Takapau Plains	20.0	3.1	1962	Highest
Dannevirke	21.1	3.8	1951	Highest
Martinborough	21.1	3.2	1986	Highest
Ngawi	21.6	2.9	1972	Highest
Hicks Bay	20.8	2.3	1969	Highest
Gisborne	22.2	3.2	1905	Highest
Napier	21.7	2.9	1870	Highest
Hastings	22.7	4.1	1965	Highest
Waipawa	21.3	3.1	1945	Highest
Wairoa	23.0	3.8	1964	Highest
Mahia	19.9	1.6	1990	Highest
Paraparaumu	21.2	3.9	1953	Highest
Palmerston North	21.8	4.0	1928	Highest
Levin	22.2	4.6	1895	Highest
Wellington (Kelburn)	20.4	3.5	1927	Highest
Wellington (Airport)	20.9	3.0	1962	Highest
Upper Hutt (Trentham)	20.1	3.0	1939	Highest
Stratford	20.1	4.2	1960	Highest
Hawera	20.4	4.0	1977	Highest
Ohakune	18.7	3.3	1962	Highest
Waiouru	17.6	3.7	1962	Highest
Whanganui	22.1	3.8	1937	Highest
Takaka	20.7	3.5	1978	Highest
Farewell Spit	21.2	3.4	1971	Highest
Westport	20.3	4.0	1937	Highest
Arapito	20.6	4.0	1978	Highest
Hokitika	19.7	4.1	1866	Highest
Reefton	21.2	4.3	1960	Highest
Greymouth	19.8	3.7	1947	Highest
Franz Josef	18.6	3.5	1953	Highest
Haast	18.9	4.2	1949	Highest
Milford Sound	19.3	4.1	1934	Highest
Secretary Island	18.8	4.0	1985	Highest
Puysegur Point	17.6	3.8	1978	Highest
Motueka	21.2	3.5	1956	Highest

Appleby	19.6	2.2	1932	Highest
Blenheim	20.7	2.6	1932	Highest
Brothers Island	18.7	2.3	1997	Highest
Waiau	20.6	3.2	1974	Highest
Cheviot	19.6	2.9	1982	Highest
Mt Cook (Airport)	18.5	3.9	1929	Highest
Rangiora	19.3	2.6	1965	Highest
Christchurch	19.9	2.7	1863	Highest
Akaroa	21.0	3.5	1978	Highest
Lake Tekapo	18.5	3.4	1927	Highest
Orari Estate	18.5	2.1	1972	Highest
Tara Hills	19.7	3.4	1949	Highest
Wanaka	21.8	4.6	1955	Highest
Ranfurly	19.3	4.2	1897	Highest
Oamaru	17.6	2.1	1967	Highest
Dunedin (Airport)	19.1	3.9	1962	Highest
Dunedin (Musselburgh)	18.1	2.8	1947	Highest
Manapouri (West Arm Jetty)	18.9	4.3	1971	Highest
Manapouri (Airport)	19.4	4.7	1963	Highest
Queenstown	21.0	4.7	1871	Highest
Lumsden	18.9	4.1	1982	Highest
Cromwell	22.1	4.4	1949	Highest
Lauder	21.0	4.8	1924	Highest
Alexandra	21.7	3.7	1929	Highest
Clyde	21.7	4.3	1978	Highest
Gore	19.2	4.8	1907	Highest
Invercargill	18.0	3.9	1905	Highest
Tiwai Point	17.9	3.4	1970	Highest
Balclutha	17.9	2.8	1964	Highest
Nugget Point	16.9	2.8	1970	Highest
South West Cape	16.5	3.4	1991	Highest
Hamilton (Ruakura)	21.3	2.9	1906	2nd-highest
Castlepoint	19.9	2.1	1972	2nd-highest
Paraparaumu	20.8	3.5	1953	2nd-highest
Nelson	21.2	3.4	1862	2nd-highest
Richmond	21.3	3.3	1862	2nd-highest
Hanmer Forest	18.9	2.9	1906	2nd-highest
Kaikoura	18.2	1.5	1963	2nd-highest
Arthurs Pass	16.9	3.6	1973	2nd-highest
Medbury	20.2	2.7	1927	2nd-highest
Waipara West	19.7	2.0	1973	2nd-highest
Lincoln	19.3	2.4	1881	2nd-highest
Waimate	18.1	2.2	1908	2nd-highest
Oamaru	17.4	2.1	1967	2nd-highest
Roxburgh	20.2	3.8	1950	2nd-highest
Kaikohe	20.5	1.9	1973	3rd-highest
Turangi	19.2	2.1	1968	3rd-highest
Culverden	20.0	2.6	1928	3rd-highest

Le Bons Bay	17.3	1.9	1984	3rd-highest
Timaru	18.3	2.3	1885	3rd-highest
Low records or near-records				
None observed				

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

Location	Mean maximum air temp. (°C)	Departure from normal (°C)	Year records began	Comments
High records or near-records				
Whangarei	26.2	1.7	1967	Highest
Mokohinau	24.0	1.8	1994	Highest
Auckland (Whenuapai)	26.0	2.4	1945	Highest
Whitianga	26.1	2.2	1962	Highest
Motu	23.8	3.3	1990	Highest
Auckland (Airport)	26.1	2.5	1959	Highest
Masterton	27.7	3.7	1906	Highest
Takapau Plains	24.9	2.0	1962	Highest
Dannevirke	26.1	3.6	1951	Highest
Martinborough	26.5	2.9	1986	Highest
Ngawi	25.8	3.2	1972	Highest
Hastings	27.2	3.3	1965	Highest
Waipawa	27.0	2.5	1945	Highest
Wairoa	28.4	3.9	1964	Highest
Paraparaumu	24.8	3.6	1953	Highest
Palmerston North	26.6	3.7	1928	Highest
Levin	26.6	4.6	1895	Highest
Wellington (Kelburn)	23.5	3.2	1927	Highest
Wellington (Airport)	24.0	2.8	1962	Highest
Upper Hutt (Trentham)	24.9	2.9	1939	Highest
Stratford	24.1	3.3	1960	Highest
Hawera	23.9	3.5	1977	Highest
Ohakune	24.2	3.0	1962	Highest
Whanganui	26.1	3.6	1937	Highest
Takaka	25.7	2.7	1978	Highest
Farewell Spit	24.6	2.9	1971	Highest
Westport	23.9	4.0	1937	Highest
Arapito	25.1	4.0	1978	Highest
Reefton	27.0	4.1	1960	Highest
Greymouth	22.9	3.1	1947	Highest
Haast	22.3	3.9	1949	Highest
Milford Sound	23.8	4.1	1934	Highest
Puysegur Point	20.5	4.0	1978	Highest
Motueka	25.9	2.6	1956	Highest
Brothers Island	20.9	2.2	1997	Highest
Hanmer Forest	27.0	3.6	1906	Highest
Waiau	27.1	2.9	1974	Highest

Mt Cook (Airport)	24.4	4.0	1929	Highest
Akaroa	26.0	3.0	1978	Highest
Wanaka	28.3	4.5	1955	Highest
Ranfurly	26.8	4.8	1897	Highest
Dunedin (Airport)	25.3	4.3	1962	Highest
Manapouri (West Arm Jetty)	24.1	4.5	1971	Highest
Manapouri (Airport)	26.2	5.3	1963	Highest
Queenstown	28.0	5.7	1871	Highest
Lumsden	26.6	6.0	1982	Highest
Cromwell	29.9	5.5	1949	Highest
Lauder	29.1	6.0	1924	Highest
Clyde	29.9	5.8	1978	Highest
Alexandra	29.1	3.9	1929	Highest
Gore	26.1	6.9	1907	Highest
Invercargill	24.0	5.2	1905	Highest
Tiwai Point	22.0	4.1	1970	Highest
Balclutha	23.6	3.3	1964	Highest
South West Cape	19.6	3.5	1991	Highest
Leigh	26.0	3.5	1966	2nd-highest
Whangaparaoa	25.1	1.8	1982	2nd-highest
Te Kuiti	26.7	2.5	1959	2nd-highest
New Plymouth	24.1	2.6	1944	2nd-highest
Hokitika	23.3	3.8	1866	2nd-highest
Secretary Island	22.0	3.8	1985	2nd-highest
Medbury	26.4	2.3	1927	2nd-highest
Cheviot	25.0	1.9	1982	2nd-highest
Lake Tekapo	25.2	3.4	1927	2nd-highest
Tara Hills	27.1	3.7	1949	2nd-highest
Dunedin (Musselburgh)	21.5	2.6	1947	2nd-highest
Five Rivers	25.7	5.1	1982	2nd-highest
Roxburgh	26.6	3.5	1950	2nd-highest
Nugget Point	20.6	2.6	1970	2nd-highest
Taupo	25.6	2.9	1949	3rd-highest
Whatawhata	26.5	3.2	1952	3rd-highest
Hicks Bay	23.7	2.0	1969	3rd-highest
Gisborne	27.5	2.9	1905	3rd-highest
Waiouru	22.5	2.9	1962	3rd-highest
Franz Josef	23.0	3.3	1953	3rd-highest
Blenheim	26.1	1.9	1932	3rd-highest
Oamaru	21.6	1.7	1967	3rd-highest
Taumarunui	26.9	2.8	1947	4th-highest
Arthurs Pass	21.5	3.2	1973	4th-highest
Low records or near-records				
None observed				

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

Location	Mean minimum air temp. (°C)	Departure from normal (°C)	Year records began	Comments
High records or near-records				
Kaitaia	18.0	2.9	1948	Highest
Kerikeri	17.4	3.3	1945	Highest
Dargaville	18.1	3.1	1943	Highest
Whangarei	18.7	3.1	1967	Highest
Mokohinau	19.7	2.4	1994	Highest
Leigh	19.1	2.6	1966	Highest
Auckland (Whenuapai)	18.2	3.9	1945	Highest
Auckland (Western Springs)	18.4	3.2	1948	Highest
Whitianga	18.2	4.4	1962	Highest
Paeroa	17.7	3.7	1947	Highest
Tauranga	18.9	3.8	1913	Highest
Te Puke	17.5	4.4	1973	Highest
Whakatane	18.1	4.3	1974	Highest
Rotorua	16.2	3.4	1964	Highest
Taupo	15.5	4.1	1949	Highest
Motu	14.1	3.7	1990	Highest
Auckland (Mangere)	19.0	3.1	1959	Highest
Pukekohe	17.4	3.4	1969	Highest
Whatawhata	16.7	3.5	1952	Highest
Hamilton	16.5	4.1	1946	Highest
Port Taharoa	18.6	3.3	1973	Highest
Te Kuiti	16.9	4.4	1959	Highest
Taumarunui	16.5	4.5	1947	Highest
Turangi	14.2	3.0	1968	Highest
New Plymouth	17.8	4.1	1944	Highest
Lower Retaruke	15.8	4.5	1966	Highest
Masterton	16.2	5.4	1906	Highest
Takapau Plains	15.1	4.1	1962	Highest
Dannevirke	16.1	3.9	1951	Highest
Martinborough	15.6	3.3	1986	Highest
Ngawi	17.4	2.6	1972	Highest
Hicks Bay	17.8	2.5	1969	Highest
Gisborne	17.2	3.3	1905	Highest
Napier	17.5	3.8	1870	Highest
Hastings	18.2	4.8	1965	Highest
Waipawa	15.6	3.7	1945	Highest
Wairoa	17.5	3.6	1964	Highest
Mahia	17.2	2.5	1990	Highest
Paraparaumu	17.6	4.2	1953	Highest
Palmerston North	17.0	3.9	1928	Highest
Levin	17.8	4.7	1895	Highest
Wellington (Kelburn)	17.2	3.7	1927	Highest
Wellington (Airport)	17.7	3.0	1962	Highest

Upper Hutt (Trentham)	15.3	3.1	1939	Highest
Stratford	16.1	5.0	1960	Highest
Hawera	16.9	4.4	1977	Highest
Ohakune	13.3	3.6	1962	Highest
Waiouru	12.8	4.4	1962	Highest
Whanganui	18.2	4.2	1937	Highest
Takaka	15.7	4.3	1978	Highest
Farewell Spit	17.8	3.9	1971	Highest
Westport	16.6	4.0	1937	Highest
Arapito	16.0	3.9	1978	Highest
Hokitika	16.1	4.3	1866	Highest
Reefton	15.4	4.5	1960	Highest
Greymouth	16.7	4.3	1947	Highest
Franz Josef	14.2	3.8	1953	Highest
Haast	15.4	4.4	1949	Highest
Milford Sound	14.9	4.4	1934	Highest
Secretary Island	15.6	4.1	1985	Highest
Puysegur Point	14.8	3.6	1978	Highest
Motueka	16.6	4.6	1956	Highest
Nelson	17.5	4.3	1862	Highest
Appleby	15.5	3.1	1932	Highest
Blenheim	16.0	3.4	1932	Highest
Brothers Island	16.4	2.2	1997	Highest
Kaikoura	15.1	2.1	1963	Highest
Arthurs Pass	12.3	4.1	1973	Highest
Culverden	14.4	3.8	1928	Highest
Medbury	13.9	2.9	1927	Highest
Cheviot	14.2	3.8	1982	Highest
Mt Cook Village	12.7	3.8	1929	Highest
Ashburton	14.2	3.2	1928	Highest
Waipara West	14.0	2.5	1973	Highest
Rangiora	15.1	3.9	1965	Highest
Christchurch	15.3	3.4	1863	Highest
Lincoln	14.9	3.3	1881	Highest
Akaroa	16.1	4.1	1978	Highest
Le Bons Bay	14.0	2.3	1984	Highest
Orari Estate	14.2	3.8	1972	Highest
Timaru	14.4	2.7	1885	Highest
Waimate	13.9	3.2	1908	Highest
Oamaru	13.8	3.1	1967	Highest
Tara Hills	12.2	3.0	1949	Highest
Wanaka	15.2	4.6	1955	Highest
Ranfurlly	11.8	3.7	1897	Highest
Dunedin (Airport)	12.9	3.5	1962	Highest
Dunedin (Musselburgh)	14.7	3.1	1947	Highest
Te Anau	13.3	4.3	1963	Highest
Manapouri (West Arm Jetty)	13.6	4.1	1971	Highest
Queenstown	14.0	3.8	1871	Highest

Five Rivers	11.6	2.7	1982	Highest
Lauder	12.9	3.6	1924	Highest
Alexandra	14.6	3.7	1929	Highest
Roxburgh	13.9	4.2	1950	Highest
Gore	13.0	3.4	1907	Highest
Invercargill	12.2	2.6	1905	Highest
Tiwai Point	13.7	2.7	1970	Highest
Nugget Point	13.3	3.1	1970	Highest
South West Cape	13.4	3.4	1991	Highest
Cape Reinga	17.7	1.8	1951	2nd-highest
Kaikohe	17.0	2.8	1973	2nd-highest
Whangaparaoa	18.7	2.8	1982	2nd-highest
Hamilton (Ruakura)	15.8	2.9	1906	2nd-highest
Castlepoint	16.9	2.6	1972	2nd-highest
Richmond	17.2	3.7	1862	2nd-highest
Waiau	14.2	3.6	1974	2nd-highest
Lake Tekapo	11.9	3.5	1927	2nd-highest
Cromwell	14.2	3.2	1949	2nd-highest
Clyde	13.5	2.7	1978	2nd-highest
Whakatu	16.6	4.5	1870	3rd-highest
Oamaru	13.6	2.4	1967	3rd-highest
Balclutha	12.1	2.1	1964	3rd-highest
Cape Campbell	16.1	2.0	1953	Equal 2nd-highest
Low records or near-records				
None observed				

Rainfall: Wet month for many but dry in the south

Rainfall was above normal (120-149% of normal) or well above normal (>149% of normal) throughout much of the top half of the South Island, as well as many areas of the North Island. As a result, soil moisture was typically above normal for eastern parts of Northland, Auckland, Bay of Plenty and Nelson by the end of the month. The wet month contrasted to a relatively dry end to 2017 in many areas. For example, the North Shore (Auckland) observed a total of 275 mm of rain for January 2018, which was higher than the combined rainfall of the previous four months (256 mm from September to December 2017).

In contrast, rainfall was below normal (50-79% of normal) or well below normal (<50% of normal) for much of Southland, Otago, and Hawke's Bay. As of 31 January, soils were drier than normal for the time of year across large parts of Southland, Otago, the West Coast and Taranaki, as well as southern and eastern parts of the North Island.

Record or near-record January rainfall totals² were recorded at:

Location	Rainfall total (mm)	Percentage of normal	Year records began	Comments
High records or near-records				
Takaka	473	361	1976	Highest
Motueka	301	366	1943	Highest
Appleby	331	445	1932	Highest
Auckland (North Shore)	275	367	1966	2nd-highest
Hamilton (Ruakura)	275	347	1905	2nd-highest
Farewell Spit	310	337	1874	2nd-highest
Richmond	244	317	1862	3rd-highest
Waipara West	121	210	1973	3rd-highest
Te Puke	210	198	1973	4th-highest
Waiouru	177	210	1950	4th-highest
Nelson	233	303	1862	4th-highest
Low records or near-records				
South West Cape Aws	47	43	1991	2nd-lowest
Manapouri (West Arm Jetty)	124	26	1971	3rd-lowest

² Rainfall totals are rounded to the nearest whole number.

January climate in the six main centres

January was an exceptionally warm month, with well above average temperatures observed at all main centres. In addition, it was the hottest January on record in all main centres. Rainfall was well above normal in Auckland, Tauranga, and Christchurch, whereas Dunedin observed below normal rainfall. Of the six main centres in January 2017, Auckland was the warmest, Dunedin was the sunniest, driest and coldest, Tauranga was the wettest and Hamilton was the least sunny.

January 2018 main centre climate statistics:

Temperature			
Location	Mean temp. (°C)	Departure from normal (°C)	Comments
Auckland ^h	22.5	+2.7	Hottest January on record
Tauranga ^b	22.1	+2.6	Hottest January on record
Hamilton ^c	21.4	+3.1	Hottest January on record
Wellington ^d	20.4	+3.5	Hottest January on record
Christchurch ^e	19.9	+2.7	Hottest January on record
Dunedin ^f	18.1	+2.8	Hottest January on record
Rainfall			
Location	Rainfall (mm)	% of normal	Comments
Auckland ^a	121	198	Well above normal
Tauranga ^b	136	173	Well above normal
Hamilton ^c	112	136	Above normal
Wellington ^d	86	114	Near normal
Christchurch ^e	115	320	Well above normal
Dunedin ^f	54	74	Below normal
Sunshine			
Location ³	Sunshine (hours)		
Auckland ^a	212		
Tauranga ^b	198		
Hamilton ^g	188		
Wellington ^d	210 ⁴		
Christchurch ^e	221		
Dunedin ^f	236 ⁴		

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

^h Auckland Aero

³ Tauranga, Wellington and Christchurch record sunshine using Campbell-Stokes manual sunshine recorders, whereas Auckland, Hamilton and Dunedin record sunshine with high-precision electronic sensors.

⁴ Missing one day of data.

Highlights and extreme events

Temperatures

January temperatures were very high throughout the month, and periods of exceptional heat resulted in dozens of stations observing record or near-record high daily maximum and daily minimum temperatures. Several locations observed temperatures among the highest ever recorded in New Zealand during January:

- Clyde; 37.6°C on 30 January – New Zealand’s 8th-highest January temperature on record. This was New Zealand’s hottest January temperature in 14 years, or since Darfield reached 38.4°C in January 2004. In addition, this was Clyde’s highest recorded temperature since records began in 1978.
- Middlemarch; 37.4°C on 30 January – New Zealand’s 10th- highest January temperature on record.
- Cheviot; 37.3°C on 30 January – New Zealand’s 11th-highest January temperature on record.
- Waiau; 37.0°C on 25 January and 30 January – New Zealand’s 14th-highest January temperature on record.

From 14-16 January, Invercargill recorded three consecutive days above 30°C, which is unprecedented in records going back to 1905. The city had never previously recorded consecutive days above 30°C. On 14 January, the city observed a maximum temperature of 32.3°C; its second-highest temperature on record for any month (the highest temperature recorded was 33.8°C on 2 January 1948). Invercargill recorded a total of 4 days above 30°C during January 2018. In the 112 years of records prior to this month, the city had exceeded 30°C just 14 times during January.

On 30 January, Masterton recorded 35.4°C, which was the highest temperature observed in the North Island during January 2018. This was Masterton’s highest recorded temperature for any month, in records which began in 1906.

Cromwell rounded out the month with 13 consecutive days above 30°C. During this period (19-31 January), the average daily maximum temperature was 33.1°C.

During January 2018, Queenstown observed 24 days when the maximum temperature exceeded 25.0°C, considerably more than the January average of 10 days. This was Queenstown’s highest monthly total of days exceeding 25.0°C; its previous record was 22 days observed in January 2008. On 29 January Queenstown’s temperature reached 34.2°C. This was Queenstown’s highest recorded temperature for any month, in records which began in 1871 (previous highest temperature was 34.1°C on 2 January 1948).

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

Location	Extreme maximum (°C)	Date of extreme temperature	Year records began	Comments
High records or near-records				
Cape Reinga	26.4	27th	1951	Highest
Mokohinau	27.1	25th	1994	Highest
Whangaparaoa	29.2	24th	1982	Highest

Whitianga	31.0	24th	1962	Highest
Masterton	35.4	30th	1906	Highest
Haast	29.4	5th	1949	Highest
Milford Sound	28.4	15th	1934	Highest
Secretary Island	27.9	11th	1985	Highest
Hanmer Forest	36.7	30th	1906	Highest
Medbury	35.7	25th	1927	Highest
Waiau	37.0	25th	1974	Highest
Cheviot	37.3	30th	1982	Highest
Ranfurlly	33.7	30th	1897	Highest
Oamaru	33.8	31st	1967	Highest
Dunedin (Airport)	35.0	16th	1962	Highest
Queenstown	34.2	29th	1871	Highest
Lumsden	32.3	14th	1982	Highest
Clyde	37.6	30th	1978	Highest
Tiwai Point	30.2	15th	1970	Highest
Balclutha	35.1	31st	1964	Highest
Nugget Point	34.2	31st	1970	Highest
Stratford	28.2	30th	1960	Equal highest
Puysegur Point	24.7	16th	1978	Equal highest
Cromwell	36.6	29th	1949	Equal highest
South West Cape	27.3	14th	1991	Equal highest
Auckland (Mangere)	29.6	12th	1959	2nd-highest
Ngawi	32.6	30th	1972	2nd-highest
Levin	30.9	29th	1895	2nd-highest
Hawera	28.2	16th	1977	2nd-highest
Farewell Spit	28.7	23rd	1971	2nd-highest
Arapito	27.6	25th	1978	2nd-highest
Brothers Island	26.1	29th	1997	2nd-highest
Waimate	34.5	31st	1908	2nd-highest
Tara Hills	34.8	29th	1949	2nd-highest
Wanaka	35.2	27th	1955	2nd-highest
Dunedin (Musselburgh)	34.2	31st	1947	2nd-highest
Lauder	35.8	29th	1924	2nd-highest
Alexandra	36.4	30th	1928	2nd-highest
Invercargill	32.3	14th	1905	2nd-highest
Manapouri (West Arm Jetty)	29.5	28th	1971	Equal 2nd-highest
Te Kuiti	30.9	26th	1959	3rd-highest
Dannevirke	30.4	30th	1951	3rd-highest
Palmerston North	32.1	29th	1918	3rd-highest
Akaroa	33.2	30th	1978	3rd-highest
Roxburgh	35.2	30th	1950	3rd-highest
Auckland (Whenuapai)	28.7	12th	1945	Equal 3rd-highest
Whatawhata	30.8	28th	1952	Equal 3rd-highest
Kaikohe	29.1	24th	1973	4th-highest
Pukekohe	29.9	28th	1969	4th-highest
Wellington (Kelburn)	28.5	29th	1928	4th-highest
Wellington (Airport)	28.2	29th	1962	4th-highest

Lake Tekapo	32.7	30th	1925	4th-highest
Manapouri (Airport)	30.4	29th	1963	4th-highest
Gore	33.4	14th	1907	4th-highest
Lower Retaruke	30.8	26th	1966	Equal 4th-highest
Low records or near-records				
None observed				

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

Location	Extreme minimum (°C)	Date of extreme temperature	Year records began	Comments
High records or near-records				
Mokohinau	21.2	29th	1994	Highest
Whangaparaoa	21.0	29th	1982	Highest
Whitianga	21.5	26th	1971	Highest
Ngawi	24.1	31st	1972	Highest
Paraparaumu	20.7	25th	1972	Highest
Wellington (Kelburn)	19.9	25th	1931	Highest
Wellington (Airport)	20.5	31st	1972	Highest
Farewell Spit	20.4	26th	1972	Highest
Reefton	18.3	25th	1972	Highest
Greymouth	19.8	25th	1972	Highest
Haast	19.1	25th	1949	Highest
Milford Sound	20.5	16th	1935	Highest
Secretary Island	19.2	24th	1988	Highest
Puysegur Point	21.0	31st	1978	Highest
Brothers Island	19.3	30th	1997	Highest
Wanaka	21.1	25th	1972	Highest
Dunedin (Airport)	21.5	16th	1972	Highest
Te Anau	19.6	25th	1973	Highest
Manapouri (West Arm Jetty)	18.3	30th	1972	Highest
Tiwai Point	17.8	28th	1972	Highest
Nugget Point	17.2	28th	1972	Highest
South West Cape	17.7	31st	1991	Highest
Cape Reinga	20.1	31st	1971	Equal highest
Tauranga	21.2	30th	1941	Equal highest
Te Puke	20.3	30th	1973	Equal highest
New Plymouth	20.5	31st	1944	Equal highest
Palmerston North	19.8	20th	1940	Equal highest
Takaka	19.5	27th	1978	Equal highest
Whakatane	21.3	30th	1975	2nd-highest
Mahia	20.5	21st	1990	2nd-highest
Levin	20.8	25th	1950	2nd-highest
Mt Cook (Airport)	20.1	31st	1929	2nd-highest
Orari Estate	18.5	16th	1972	2nd-highest
Balclutha	17.7	28th	1972	2nd-highest

Leigh	20.9	28th	1966	Equal 2nd-highest
Motueka	19.6	27th	1972	Equal 2nd-highest
Whanganui	20.4	26th	1972	3rd-highest
Westport	19.1	26th	1966	3rd-highest
Franz Josef	17.3	16th	1953	3rd-highest
Castlepoint	21.0	31st	1972	Equal 3rd-highest
Upper Hutt (Trentham)	19.2	24th	1972	Equal 3rd-highest
Paeroa	20.8	23rd	1971	4th-highest
Motu	17.7	24th	1990	4th-highest
Port Taharoa	20.9	25th	1974	4th-highest
Turangi	18.7	30th	1968	4th-highest
Stratford	18.2	23rd	1972	4th-highest
Oamaru	17.9	29th	1972	4th-highest
Dunedin (Musselburgh)	18.6	28th	1947	4th-highest
Rotorua	19.4	30th	1972	Equal 4th-highest
Whatawhata	19.8	26th	1952	Equal 4th-highest
Hamilton (Airport)	20.1	26th	1946	Equal 4th-highest
Hokitika	18.9	16th	1866	Equal 4th-highest
Low records or near-records				
None observed				

Rain and slips

On 5 January, heavy rain caused surface flooding in low lying areas about the Coromandel Peninsula. The rain caused slips which contributed to the closure of SH25 from Thames to Manaia, and the Waioeka Gorge in the eastern Bay of Plenty. The Pauanui water treatment plant was shut down temporarily due to excessive amounts of dirt and sediment in the river affecting the ability to produce clean drinking water. In Auckland, matches at the ASB Classic tennis event were suspended for two days by the persistent wet conditions. Farther south, SH1 north and south of Kaikoura was closed due to flooding and slips.

On 11 January, heavy rainfall caused flooding in Hokitika and Greymouth. Twelve Greymouth residents were forced to evacuate from their flooded homes.

On 13 January, heavy rainfall caused flooding in parts of Golden Bay. The Collingwood to Puponga Road was closed at the Taupata Bridge due to flooding, as were several other roads throughout the district. The Wharariki Stream (near Farewell Spit) flooded, and temporarily isolated campers at Wharariki Holiday Park.

On 17 and 18 January, heavy rain fell again in northern parts of the South Island, causing flooding, slips and road closures in Nelson and Tasman Districts.

On 23 January, a heavy downpour on Auckland's North Shore caused flash floods, with two people rescued from their vehicles after becoming stranded in floodwaters. A local wastewater system was overwhelmed by the deluge, and swimmers were warned to avoid Milford and Castor Bay beaches due to sewage contamination. The rain was heaviest in the hour between 8 a.m. to 9 a.m., when North Shore recorded a torrential 62.4 mm of rain. Heavy downpours of rain caused flooding for some

offices in the central business area of Whangarei. Seven Rangipo residents were rescued from their home at the base of Mt Tangariro after flash flooding struck their property.

Prolonged dry conditions prompted the Government to declare a medium-scale adverse drought event for the Grey and Buller districts on 10 January. This drought classification was extended to include Otago and Southland on 30 January. The lack of meaningful rainfall and persistent high temperatures saw elevated fire hazard conditions throughout Southland and Otago, particularly during the second-half of the month. As of 30 January, Central Otago volunteer fire brigades reported responding to 208 callouts during January alone; which is as many as would typically be attended during an entire year.

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

Location	Extreme 1-day rainfall (mm)	Date of extreme rainfall	Year records began	Comments
Mokohinau	395	18th	1994	Highest
Takaka	223	17th	1976	Highest
Hokitika	197	11th	1866	Highest
Farewell Spit	125	12th	1882	2nd-highest
Appleby	95	10th	1932	2nd-highest
Whatawhata	62	4th	1952	3rd-highest
Greymouth	113	11th	1947	4th-highest
Waipara West	42	10th	1973	4th-highest
Akaroa	43	5th	1977	Equal 4th-highest

Wind

On 5 January, strong winds brought down trees in Rotorua. A woman died after a tree fell onto the car she was occupying. Dozens of flights at Auckland, Tauranga, Gisborne and Rotorua were delayed or cancelled due to the stormy weather. The strong winds downed powerlines which resulted in 800 customers in Tauranga and Coromandel losing power. A combination of wind and high tides brought seawater inundation to the Northern Motorway and Tamaki Drive in Auckland, forcing the temporary closure of these roads. The Thames Coast Road (SH25) was closed after sustaining considerable damage from large waves.

On 23 January, very strong wind gusts were observed in Hawke’s Bay, associated with passing thunderstorms. Napier Airport recorded a maximum wind gust of 111 km/h – its highest January wind gust on record.

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

Location	Extreme wind gust (km/h)	Date of extreme gust	Year records began	Comments
Kaikohe	89	4th	1986	Highest
Dargaville	106	5th	1997	Highest
Auckland (Whenuapai)	96	4th	1972	Highest
Whakatane	95	5th	1974	Highest
Rotorua	91	5th	1972	Highest
Motu	104	5th	1991	Highest

Napier	111	23rd	1973	Highest
Mokohinau	119	5th	1994	Equal highest
Mahia	98	5th	1991	Equal 2nd-highest
Wanaka	83	31st	1992	Equal 2nd-highest
Kaitaia	93	5th	1972	3rd-highest
Whitianga	70	5th	1991	3rd-highest
Pukekohe	70	5th	1986	Equal 3rd-highest
Auckland (Western Springs)	74	5th	1994	4th-highest
Taupo	82	5th	1982	4th-highest
Hamilton (Ruakura)	72	5th	1991	Equal 4th-highest
Waiouru	96	5th	1970	Equal 4th-highest

Lightning and hail

On 12 January, approximately 4400 lightning strikes were recorded due to thunderstorm activity, with 1722 strikes recorded in the Gisborne and Hawke's Bay regions.

On 23 January, 1869 lightning strikes were recorded over central and eastern parts of the North Island, associated with the passage of an active frontal system.

On 26 January, more than 11,000 lightning strikes were recorded across New Zealand, predominantly about the Bay of Plenty, Waikato, and southern Marlborough. The strikes ignited tree fires in the Ohauti Hills behind Tauranga.

On 28 January, lightning strikes ignited fires near Lake Tennyson and Lake Sumner in north Canterbury.

Cloud and fog

On 11 January, low cloud and fog caused flight disruptions at Wellington Airport.

Snow and Ice

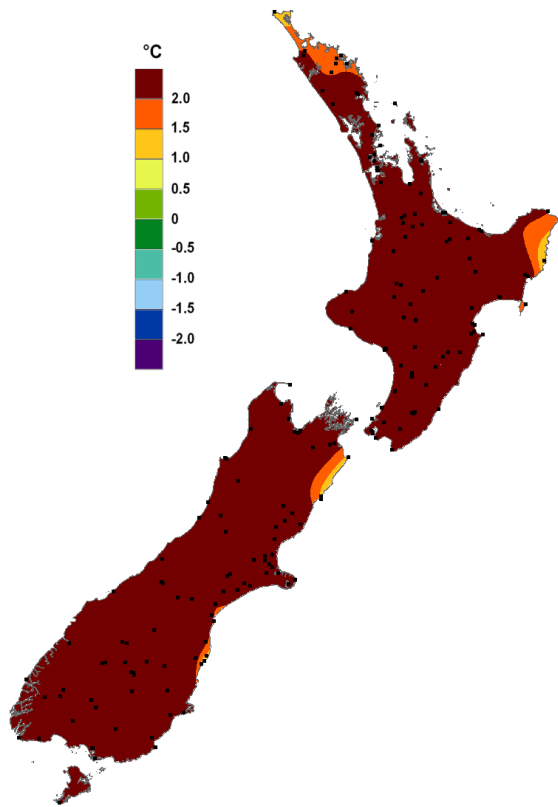
Towards the end of January, Otago University researchers and mountain guides reported considerably less snow than usual for the time of year in the mountains and icefields about the Aoraki/Mt Cook National Park. Prolonged warm and dry weather from as early as spring 2017 was thought to be the main cause of the relative lack of snow, which had resulted in increased rockfall activity.

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January 2018 mean temperature compared to the 30-year average (1981-2010 average).

January 2018 was New Zealand's hottest month on record (since 1909) using NIWA's seven-station series. Dozens of locations observed their record or near-record high mean temperature for January.

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