

Warmest May on record

Temperature	Temperatures were well above average (>1.20°C above average) for most of the country, and at least 2°C higher than average in parts of every region, except for Northland.
Rainfall	Rainfall was above normal (120-149% of normal) or well above normal (>149% of normal) for Northland, Auckland, Waikato, Bay of Plenty, Taranaki, parts of Manawatū-Whanganui, Wellington, Tasman, Nelson, northern Marlborough, West Coast, inland Otago and western Southland. Rainfall was below normal (50-79% of normal) or well below normal (<50% of normal) in parts of Gisborne, Hawke's Bay, much of Canterbury, and northern Otago.
Soil Moisture	At the end of May, soils were wetter than normal for parts of Gisborne, Manawatū-Whanganui, northern Marlborough, eastern Canterbury near Christchurch, and inland Otago. Drier than normal soils were prominent for coastal parts of North Otago and South Canterbury.

Click on the link to jump to the information you require:

[Overview](#)

[Temperature](#)

[Rainfall](#)

[May 2023 climate in the six main centres](#)

[Highlights and extreme events](#)

Overview

It was the warmest May on record in Aotearoa New Zealand. The nationwide average temperature in May 2023 was 13.1°C. This is 2.0°C above the 1991-2020 May average from NIWA's seven station temperature series which begins in 1909. Of the five warmest Mays on record, all have occurred since 2011. May 2023 mean sea level air pressure (MSLP) was lower than normal over the Tasman Sea, and higher than normal east of New Zealand. Overall, this resulted in more northerly and northeasterly airflows than usual over much of the country. The first eight days of the month were exceptionally warm for the time of year, and dozens of locations observed record or near-record high daily maximum and minimum temperatures during this period (see *Highlights and extreme events* for further details). The warmth persisted for the month overall, and monthly temperatures were above average (0.51-1.20°C above average) or well above average (>1.20°C above average) in every region of New Zealand.

It was the second warmest May on record in terms of sea surface temperatures near the South Island, where a marine heatwave delayed the seasonal transition to colder temperatures. The widespread nature of May's exceptional warmth, both on land and in the sea, have been exacerbated by climate change.

May rainfall was abundant for many parts of the country, with above normal (120-149% of normal) or well above normal (>149% of normal) totals observed in Northland, Auckland, Waikato, Bay of Plenty, Taranaki, parts of Manawatū-Whanganui, Wellington, Tasman, Nelson, northern Marlborough, West Coast, inland Otago and western Southland. The wettest locations compared to normal were Kaikohe, Rotorua, and Motueka, which recorded 377%, 342%, and 206% of normal May rainfall, respectively. In contrast, rainfall was below normal (50-79% of normal) or well below normal (<50% of normal) in parts of Gisborne, Hawke’s Bay, much of Canterbury, and northern Otago. It was particularly dry in Oamaru, where just 24 mm of rainfall (32% of normal for May) was recorded.

Further Highlights:

- The highest temperature was 27.0°C, observed at Waiau on 3 May.
- The lowest temperature was -5.2°C, observed at Middlemarch on 16 May.
- The highest 1-day rainfall was 241 mm, recorded at Milford Sound on 2 May.
- The highest wind gust was 169 km/h, observed at Secretary Island on 10 May, and South West Cape on 26 May.
- Of the six main centres in May 2023, Auckland was the warmest, Tauranga was the wettest and sunniest, Christchurch was the coolest and driest, and Wellington was the least sunny.
- Of the available, regularly reporting sunshine observation sites, the sunniest four locations in 2023 so far are Taranaki (1101 hours), Central Otago (1100 hours), Mackenzie Basin (1096 hours) and West Coast (1060 hours).

For further information, please contact:

Gregor Macara
 Climate Scientist, NIWA Wellington
 Tel. 04 386 0509

Temperature: Record or near-record warmth throughout Aotearoa

Temperatures were higher than average throughout the country in May, with dozens of locations setting record or near-record high mean, mean daily maximum, and mean daily minimum temperatures.

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

Location	Mean air temp. (°C)	Departure from normal (°C)	Year records began	Comments
High records or near-records				
Te Puke	14.4	1.7	1973	Highest
Whakatāne	15.2	2.5	1974	Highest
Tūrangi	11.3	1.7	1968	Highest
Martinborough	13.3	2.4	1986	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.

Ngawi	15.8	2.4	1972	Highest
Napier	14.9	2.5	1870	Highest
Wairoa	14.9	2.4	1964	Highest
Wellington (Kelburn)	13.9	1.9	1928	Highest
Ohakune	11.3	2.7	1962	Highest
Waiouru	9.6	2.4	1962	Highest
Arapito	13.8	2.6	1978	Highest
Hokitika	12.6	2.1	1866	Highest
Brothers Island	14.5	1.6	1997	Highest
Kaikōura	13.7	2.3	1963	Highest
Waipara West	12.9	2.4	1973	Highest
Rangiora	11.9	2.5	1965	Highest
Orari Estate	10.4	1.8	1972	Highest
Waimate	11.2	2.3	1908	Highest
Tautuku	11.0	1.9	1976	Highest
Chatham Island	13.6	2.5	1878	Highest
Purerua	16.3	1.3	1983	2nd-highest
Whangārei	16.1	1.3	1967	2nd-highest
Auckland (Whenuapai)	15.3	1.7	1945	2nd-highest
Auckland (Western Springs)	16.2	2.1	1948	2nd-highest
Whitianga	15.4	1.8	1962	2nd-highest
Tauranga	15.3	1.7	1913	2nd-highest
Taupō	12.5	2.7	1949	2nd-highest
Motu	11.1	1.9	1990	2nd-highest
Auckland (Māngere)	15.8	1.6	1959	2nd-highest
Whatawhata	14.3	1.7	1952	2nd-highest
Hamilton (Ruakura)	14.2	2.2	1906	2nd-highest
Hamilton (Airport)	13.8	1.9	1946	2nd-highest
Waikeria	13.6	1.8	1957	2nd-highest
Te Kuiti	13.6	2.0	1959	2nd-highest
Lower Retaruke	12.6	2.2	1966	2nd-highest
Masterton	13.1	2.0	1906	2nd-highest
Waipawa	12.5	1.8	1945	2nd-highest
Paraparaumu	14.4	2.4	1953	2nd-highest
Levin	14.1	2.3	1895	2nd-highest
Wellington (Airport)	14.6	1.9	1962	2nd-highest
Upper Hutt (Trentham)	12.8	2.0	1939	2nd-highest
Hāwera	13.9	2.3	1977	2nd-highest
Takaka	12.8	1.9	1978	2nd-highest
Westport	13.5	1.8	1937	2nd-highest
Reefton	11.4	2.3	1960	2nd-highest
Greymouth	13.2	2.2	1947	2nd-highest
Ōkārīto	12.2	1.5	1982	2nd-highest
Milford Sound	10.8	2.1	1934	2nd-highest
Motueka	12.5	2.1	1956	2nd-highest
Appleby	12.6	2.5	1932	2nd-highest
Nelson	13.2	2.0	1862	2nd-highest
Cheviot	11.3	1.7	1982	2nd-highest

Lincoln	12.0	2.2	1881	2nd-highest
Akaroa	13.2	1.7	1978	2nd-highest
Le Bons Bay	12.2	1.8	1984	2nd-highest
Wānaka	9.4	1.9	1955	2nd-highest
Nugget Point	10.8	1.9	1970	2nd-highest
Campbell Island	7.4	0.9	1991	2nd-highest
Kaitaia	16.7	1.9	1948	3rd-highest
Kerikeri	15.7	1.2	1945	3rd-highest
Leigh	17.1	3.6	1966	3rd-highest
Kawerau	14.0	1.4	1954	3rd-highest
Rotorua	12.5	1.6	1964	3rd-highest
Pukekohe	14.7	1.2	1969	3rd-highest
Port Taharoa	15.9	1.6	1973	3rd-highest
Taumarunui	12.7	2.2	1947	3rd-highest
New Plymouth	14.5	1.8	1944	3rd-highest
Dannevirke	12.3	2.0	1951	3rd-highest
Hicks Bay	15.6	1.4	1969	3rd-highest
Gisborne	14.4	1.6	1905	3rd-highest
Hastings	13.5	1.6	1965	3rd-highest
Māhia	14.6	1.4	1990	3rd-highest
Stratford	12.4	1.6	1960	3rd-highest
Whanganui	14.5	1.8	1937	3rd-highest
Haast	12.1	1.6	1949	3rd-highest
Medbury	10.2	1.2	1927	3rd-highest
Mt Cook (Airport)	8.5	2.4	1929	3rd-highest
Christchurch	12.1	2.4	1863	3rd-highest
Lake Tekapo	8.5	2.1	1927	3rd-highest
Pukaki (Airport)	7.6	1.5	1972	3rd-highest
Timaru	10.7	2.0	1885	3rd-highest
Dunedin (Musselburgh)	11.7	2.1	1947	3rd-highest
Oban (Stewart Island)	11.0	2.0	1975	3rd-highest
Kaikohe	15.1	1.0	1973	4th-highest
Dargaville	15.8	1.3	1943	4th-highest
Whakatu	13.3	2.0	1965	4th-highest
Palmerston North	13.4	1.7	1928	4th-highest
Franz Josef	11.6	1.8	1953	4th-highest
Secretary Island	12.4	1.2	1985	4th-highest
Waiau	11.2	1.8	1974	4th-highest
Winchmore	10.5	1.5	1949	4th-highest
Oamaru	10.9	1.6	1967	4th-highest
Waipounamu	8.6	1.4	1980	4th-highest
Roxburgh	10.2	1.5	1950	4th-highest
Gore	9.9	2.0	1907	4th-highest
South West Cape	11.1	1.5	1991	4th-highest
Low records or near-records				
None observed				

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

Location	Mean maximum air temp. (°C)	Departure from normal (°C)	Year records began	Comments
High records or near-records				
Paraparaumu	18.0	2.2	1953	Highest
Palmerston North	18.1	2.1	1928	Highest
Levin	18.4	2.4	1895	Highest
Ohakune	15.5	2.3	1962	Highest
Arapito	17.9	2.0	1978	Highest
Reefton	15.4	1.7	1960	Highest
Campbell Island	9.7	1.3	1991	Highest
Chatham Island	16.5	2.5	1878	Highest
Motu	15.8	2.0	1990	2nd-highest
Ngawi	18.3	2.2	1972	2nd-highest
Wairo	20.0	2.3	1964	2nd-highest
Wellington (Kelburn)	16.3	1.7	1928	2nd-highest
Wellington (Airport)	17.1	1.7	1962	2nd-highest
Hāwera	17.2	1.8	1977	2nd-highest
Greymouth	16.6	2.1	1947	2nd-highest
Milford Sound	14.1	1.6	1934	2nd-highest
Appleby	17.4	1.0	1932	2nd-highest
Waipara West	18.3	2.7	1973	2nd-highest
Nugget Point	13.6	1.9	1970	2nd-highest
Tautuku	14.9	2.0	1976	2nd-highest
Waiau	17.6	1.8	1974	Equal 2nd-highest
Whatawhata	18.1	1.3	1952	3rd-highest
Lower Retaruke	16.7	1.6	1966	3rd-highest
Whakatu	19.6	2.3	1965	3rd-highest
Upper Hutt (Trentham)	17.3	1.8	1939	3rd-highest
Westport	16.8	1.3	1937	3rd-highest
Ōkārīto	15.8	0.8	1982	3rd-highest
Secretary Island	14.8	1.1	1985	3rd-highest
Brothers Island	16.0	1.3	1997	3rd-highest
Middlemarch	15.4	2.5	2000	3rd-highest
Cromwell	15.5	2.3	1949	3rd-highest
Gore	14.6	2.7	1907	3rd-highest
Taupō	16.3	1.9	1949	4th-highest
Te Kuiti	18.1	1.2	1959	4th-highest
New Plymouth	17.8	1.3	1944	4th-highest
Waiouru	13.1	1.6	1962	4th-highest
Whanganui	18.5	2.1	1937	4th-highest
Kaikōura	16.8	2.3	1963	4th-highest
Mt Cook (Airport)	13.4	2.2	1929	4th-highest
Rangiora	17.0	1.9	1965	4th-highest
Windsor	16.1	2.1	2000	4th-highest
Dunedin (Airport)	15.9	2.2	1962	4th-highest
Dunedin (Musselburgh)	15.5	2.3	1947	4th-highest
Waipounamu	13.9	1.5	1980	4th-highest

Oban (Stewart Island)	14.2	1.8	1975	4th-highest
Balclutha	14.5	1.8	1964	4th-highest
South West Cape	13.2	1.6	1991	4th-highest
Low records or near-records				
None observed				

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

Location	Mean minimum air temp. (°C)	Departure from normal (°C)	Year records began	Comments
High records or near-records				
Kaitaia	13.9	2.7	1948	Highest
Kerikeri	12.3	2.2	1945	Highest
Purerua	13.4	1.7	1983	Highest
Auckland (Whenuapai)	11.8	2.5	1945	Highest
Auckland (Western Springs)	12.9	2.7	1948	Highest
Whitianga	11.5	3.0	1962	Highest
Tauranga	12.0	2.6	1913	Highest
Te Puke	11.0	3.2	1973	Highest
Whakatāne	11.7	4.2	1974	Highest
Kawerau	9.8	2.6	1954	Highest
Hamilton (Ruakura)	9.9	3.1	1906	Highest
Hamilton (Airport)	9.5	2.7	1946	Highest
Tūrangi	7.1	3.0	1968	Highest
Martinborough	8.9	3.0	1986	Highest
Ngawi	13.3	2.5	1972	Highest
Wairoa	9.7	2.3	1964	Highest
Māhia	12.5	2.0	1990	Highest
Wellington (Kelburn)	11.5	2.1	1928	Highest
Waiouru	6.2	3.1	1962	Highest
Arapito	9.8	3.3	1978	Highest
Hokitika	9.3	2.8	1866	Highest
Haast	9.0	2.1	1949	Highest
Milford Sound	7.4	2.5	1934	Highest
Brothers Island	12.9	1.8	1997	Highest
Kaikōura	10.6	2.3	1963	Highest
Mt Cook Village	4.0	2.7	1929	Highest
Winchmore	5.6	2.1	1949	Highest
Rangiora	6.7	3.0	1965	Highest
Christchurch	7.7	3.1	1863	Highest
Lincoln	7.8	3.0	1881	Highest
Akaroa	9.6	2.1	1978	Highest
Le Bons Bay	9.9	2.3	1984	Highest
Timaru	6.7	2.5	1885	Highest
Waimate	6.4	2.6	1908	Highest
Nugget Point	8.0	1.9	1970	Highest
Whangārei	12.9	1.7	1967	2nd-highest
Rotorua	9.1	2.5	1964	2nd-highest
Taupō	8.7	3.5	1949	2nd-highest

Auckland (Māngere)	12.7	2.0	1959	2nd-highest
Pukekohe	11.3	1.7	1969	2nd-highest
Whatawhata	10.5	2.1	1952	2nd-highest
Port Taharoa	13.5	2.5	1973	2nd-highest
Waikeria	9.2	2.7	1957	2nd-highest
Te Kuiti	9.2	2.9	1959	2nd-highest
Taumarunui	8.3	2.9	1947	2nd-highest
Lower Retaruke	8.5	2.9	1966	2nd-highest
Masterton	8.5	2.7	1906	2nd-highest
Hicks Bay	12.9	1.8	1969	2nd-highest
Paraparaumu	10.7	2.5	1953	2nd-highest
Wellington (Airport)	12.1	2.0	1962	2nd-highest
Stratford	9.0	2.1	1960	2nd-highest
Hāwera	10.6	2.7	1977	2nd-highest
Takaka	8.3	2.9	1978	2nd-highest
Westport	10.3	2.5	1937	2nd-highest
Ōkārīto	8.6	2.2	1982	2nd-highest
Franz Josef	7.5	2.3	1953	2nd-highest
Motueka	7.5	3.0	1956	2nd-highest
Nelson	9.4	2.8	1862	2nd-highest
Cape Campbell	11.5	1.4	1953	2nd-highest
Orari Estate	5.2	1.9	1972	2nd-highest
Windsor	4.3	1.8	2000	2nd-highest
Oamaru	6.7	1.9	1967	2nd-highest
Tautuku	7.1	1.9	1976	2nd-highest
Chatham Island	10.7	2.6	1878	2nd-highest
Cape Reinga	14.3	1.1	1951	3rd-highest
Kaikohe	12.4	1.4	1973	3rd-highest
Dargaville	12.4	1.3	1943	3rd-highest
Leigh	14.1	4.6	1966	3rd-highest
New Plymouth	11.2	2.3	1944	3rd-highest
Mt Ruapehu Chateau	3.8	1.7	2000	3rd-highest
Castlepoint	11.7	1.6	1972	3rd-highest
Levin	9.7	2.2	1895	3rd-highest
Ohakune	7.0	2.9	1962	3rd-highest
Whanganui	10.5	1.5	1937	3rd-highest
Reefton	7.4	2.9	1960	3rd-highest
Greymouth	9.8	2.3	1947	3rd-highest
Appleby	7.7	3.9	1932	3rd-highest
Blenheim	7.7	1.8	1932	3rd-highest
Arthurs Pass	4.6	2.6	1973	3rd-highest
Cheviot	5.4	1.8	1982	3rd-highest
Ashburton	6.3	2.7	1928	3rd-highest
Waipara West	7.6	2.2	1973	3rd-highest
Lake Tekapo	3.3	1.9	1927	3rd-highest
Ranfurly	2.2	1.8	1897	3rd-highest
Dunedin (Musselburgh)	7.8	1.7	1947	3rd-highest
Waipounamu	3.4	1.3	1980	3rd-highest

Mokohinau	15.5	1.2	1994	4th-highest
Matamata	9.2	3.0	1999	4th-highest
Gisborne	9.8	1.9	1905	4th-highest
Napier	10.5	3.0	1870	4th-highest
Hastings	8.1	1.8	1965	4th-highest
Upper Hutt (Trentham)	8.3	2.2	1939	4th-highest
Secretary Island	10.1	1.4	1985	4th-highest
Culverden	5.3	1.9	1928	4th-highest
Medbury	4.2	0.9	1927	4th-highest
Pukaki (Airport)	1.8	1.7	1972	4th-highest
Te Anau	5.7	3.2	1963	4th-highest
Roxburgh	5.8	1.3	1950	4th-highest
Oban (Stewart Island)	7.7	2.0	1975	4th-highest
Low records or near-records				
None observed				

Rainfall: Wet for many, but dry in eastern parts of both islands

May airflow patterns delivered frequent northerly and northeasterly winds, which were associated with moisture-laden airmasses arriving from the sub-tropics. Ten locations observed their wettest May on record, spanning regions as far north as Northland to as far south as Southland. Hokitika recorded 609 mm of rain (241% of the normal May rainfall), making it the town's wettest May since records began in 1866. It was a relatively dry month for eastern parts of both islands, as well as some inland parts of Canterbury. Pukaki Airport (near Twizel) recorded 26 mm of rainfall – its fourth-lowest May rainfall total since records began there in 1972.

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

Location	Rainfall total (mm)	Percentage of normal	Year records began	Comments
High records or near-records				
Kaitaia	357	257	1948	Highest
Kaikohe	590	377	1956	Highest
Rotorua	446	342	1963	Highest
Auckland (Airport)	271	226	1959	Highest
Port Taharoa	203	154	1973	Highest
Stratford	343	173	1960	Highest
Hokitika	609	241	1866	Highest
Motueka	367	302	1943	Highest
Tara Hills	127	283	1949	Highest
Manapouri (Airport)	279	267	1961	Highest
Kerikeri	379	218	1935	2nd-highest
Purerua	226	177	1983	2nd-highest
Whangaparaoa	226	192	1946	2nd-highest
Auckland (Whenuapai)	313	249	1943	2nd-highest
Auckland (Albany)	256	217	1966	2nd-highest
Te Puke	356	239	1973	2nd-highest
Whakatāne	331	280	1952	2nd-highest

Taupō	214	269	1949	2nd-highest
Tūrangi	254	196	1968	2nd-highest
Takaka	361	202	1976	2nd-highest
Ōkārīto	442	173	1981	2nd-highest
Lake Moeraki	673	192	1985	2nd-highest
Hamilton (Airport)	214	184	1935	3rd-highest
Hāwera	187	180	1977	3rd-highest
Manapouri (West Arm Jetty)	713	172	1971	3rd-highest
Lumsden	144	174	1982	3rd-highest
Warkworth	267	194	1966	4th-highest
Matamata	184	169	1951	4th-highest
Whatawhata	251	158	1952	4th-highest
Secretary Island	613	161	1985	4th-highest
Appleby	210	242	1932	4th-highest
Alexandra	72	206	1922	4th-highest
Low records or near-records				
Pukaki (Airport)	26	45	1972	4th-lowest

May climate in the six main centres

It was a very warm May for all main centres, but especially in Wellington, which observed its warmest May on record. Rainfall was well above normal in Auckland, Hamilton and Tauranga, above normal in Wellington and Dunedin, and near normal in Christchurch. Of the six main centres in May 2023, Auckland was the warmest, Tauranga was the wettest and sunniest, Christchurch was the coolest and driest, and Wellington was the least sunny.

May 2023 main centre climate statistics:

Temperature			
Location	Mean temp. (°C)	Departure from normal (°C)	Comments
Auckland ^a	15.8	+1.5	2nd-highest on record
Tauranga ^b	15.3	+1.7	2nd-highest on record
Hamilton ^c	13.8	+1.9	2nd-highest on record
Wellington ^d	13.9	+1.9	Highest on record
Christchurch ^e	11.1	+1.8	Well above average
Dunedin ^f	11.7	+2.1	3rd-highest on record
Rainfall			
Location	Rainfall (mm)	% of normal	Comments
Auckland ^a	232	209	Well above normal
Tauranga ^b	254	218	Well above normal
Hamilton ^c	214	184	Well above normal
Wellington ^d	164	136	Above normal
Christchurch ^e	55	95	Near normal
Dunedin ^f	90	141	Above normal
Sunshine			
Location	Sunshine (hours)		
Auckland ^a	124		
Tauranga ^b	135		
Hamilton ^g	117		
Wellington ^d	102		
Christchurch ^e	114		
Dunedin ^f	114		

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

Highlights and extreme events

Rain and slips

The highest 1-day rainfall was 241 mm, recorded at Milford Sound on 2 May.

From 1 May, a subtropical low directed an atmospheric river over the North Island. Over the following 10 days, this atmospheric river would wax and wane in strength, but nevertheless continue to deliver periods of heavy rainfall and thunderstorms across large swathes of the North Island and the western and northern South Island. During this time, parts of the North Island and South Island recorded 1-2 times their May normal rainfall, including Kaikohe receiving 372 mm (237% of the May normal), Nelson with 167 mm (194% of the May normal), Whangārei with 178 mm (158% of the May normal), and Auckland with 133 mm (120% of the May normal).

On 3 May, the eastern Bay of Plenty experienced heavy rainfall, and the roads to Tāneatua and Rūātoki (south of Whakatāne) were impassable due to slips.

The top of the South Island was also hit by several days of heavy rainfall. Twenty-nine people were evacuated in Riwaka after the Brooklyn Stream breached its banks on 5 May. SH60 was closed due to flooding in some areas, and several slips and rockfalls affected many sections of roads. The Maitai River threatened to burst its banks several times. As the rain persisted into 9 May, flooding was reported on the Wai-iti River, between Belgrove and Wakefield. SH6 was closed by flooding between Havelock and Rai Valley.

On 9 May, a state of emergency was declared in Auckland after a series of showers and thunderstorms delivered more than 40 mm of rain in an hour to some areas. Parts of SH1 were closed due to flooding during the evening rush hour. Many workplaces sent their employees home, with at least 17 schools closing due to the deluge. Farther north, thunderstorms brought flash flooding to Northland, and 29 mm fell in 30 minutes at Kaikohe. The flash flooding impacted a group of secondary school students and their teachers, who were exploring the Abbey Caves (Whangārei) during a field trip on 9 May. One student died as a result of the flooding.

Also on 9 May, areas of flooding and slips were observed in the Bay of Plenty. Rotorua observed 109 mm of rainfall in 24 hours, the wettest May day there in 13 years.

On 21 May, a low pressure system and front produced heavy rainfall that led to mandatory evacuations in the central North Island at Marton. Multiple state highways closed because of slips and flooding, as Tutaenui stream and Turakina River burst their banks. Surface flooding was reported in parts of Whanganui and Manawatū, which closed SH3 between Warrengate Road and Whanganui. SH1 at Mangaweka was blocked by a slip.

On 27 May, heavy downpours caused surface flooding in parts of Wellington, particularly in Newtown, Kilbirnie and Lyall Bay. The heavy rainfalls were associated with passing bands of convective clouds and were relatively localised. For example, Wellington Airport recorded 18.9 mm of rain in the hour to 11:00 a.m., whereas 3.4 mm was recorded over the same period in the suburb of Kelburn.

On 29 May, Waihi Beach residents were evacuated after widespread flooding, resulting from heavy downpours associated with passing thunderstorms. Cabins were lifted off their foundations at the local

holiday park, with fences knocked over and asphalt lifted. Flooding closed SH25 between Waihi and Whiritoa.

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
Mokohinau	98	9th	1994	Highest
Hamilton (Airport)	79	9th	1935	Highest
Whanganui	62	20th	1937	Highest
Chatham Island	78	30th	1878	Highest
Auckland (Whenuapai)	112	9th	1943	2nd-highest
Auckland (Albany)	83	9th	1966	2nd-highest
Auckland (Airport)	94	9th	1959	2nd-highest
Hamilton (Ruakura)	83	9th	1907	2nd-highest
Motueka	137	5th	1956	2nd-highest
Auckland (Western Springs)	89	9th	1948	3rd-highest
Whakatāne	104	2nd	1952	3rd-highest
Milford Sound	241	2nd	1929	3rd-highest
Manapouri (Airport)	45	10th	1963	3rd-highest
Kaikohe	88	9th	1956	4th-highest
Whangaparaoa	73	9th	1946	4th-highest
Taupō	64	9th	1949	4th-highest
Queenstown	49	8th	1890	Equal 4th-highest

Temperatures

The highest temperature was 27.0°C, observed at Waiau on 3 May.

The lowest temperature was -5.2°C, observed at Middlemarch on 16 May.

From 1-3 May, a blocking high situated to the east of New Zealand directed a warm and moist flow of air from the subtropics. This resulted in a series of exceptionally warm days and nights. Aided by foehn winds, some areas saw temperatures as high as 10°C above the average for May. Dozens of locations had record or near-record high May temperatures (both daily minimum and maximum temperatures).

A burst of warm air due to a prolonged northerly air flow led to another stretch of record or near-record breaking temperatures from 6-9 May.

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

Location	Extreme maximum (°C)	Date of extreme temperature	Year records began	Comments
High records or near-records				
Hamilton (Ruakura)	24.3	2nd	1906	Highest
Hamilton (Airport)	23.5	2nd	1946	Highest
Taumarunui	23.1	2nd	1947	Highest
New Plymouth	22.1	1st	1944	Highest
Martinborough	23.8	8th	1986	Highest
Ngawi	23.6	8th	1972	Highest

Hāwera	21.4	2nd	1977	Highest
Waiouru	20.2	2nd	1962	Highest
Whanganui	24.7	1st	1937	Highest
Arapito	24.5	1st	1978	Highest
Ōkārito	21.4	1st	1982	Highest
Franz Josef	23.2	1st	1953	Highest
Ranfurly	22.7	2nd	1897	Highest
Manapouri (Airport)	21.3	3rd	1963	Highest
Queenstown	23.0	3rd	1871	Highest
Cromwell	24.0	3rd	1949	Highest
Tapanui	23.7	3rd	1900	Highest
Invercargill	23.8	3rd	1905	Highest
Tiwai Point	21.9	3rd	1970	Highest
Oban (Stewart Island)	20.9	3rd	1975	Highest
Haast	21.5	1st	1949	Equal highest
Balclutha	24.0	3rd	1964	Equal highest
Mokohinau	21.5	2nd	1994	2nd-highest
Whatawhata	23.2	2nd	1952	2nd-highest
Palmerston North	24.0	8th	1918	2nd-highest
Levin	24.0	2nd	1895	2nd-highest
Wellington (Airport)	21.9	8th	1962	2nd-highest
Westport	24.1	1st	1937	2nd-highest
Hokitika	23.0	1st	1866	2nd-highest
Greymouth	23.5	1st	1947	2nd-highest
Windsor	23.8	3rd	2000	2nd-highest
Waipounamu	21.8	3rd	1980	2nd-highest
Clyde	25.0	3rd	1978	2nd-highest
Gore	23.1	3rd	1907	2nd-highest
Campbell Island	14.8	3rd	1991	2nd-highest
Leigh	25.6	2nd	1966	Equal 2nd-highest
Te Kuiti	24.0	2nd	1959	Equal 2nd-highest
Waiau	27.0	3rd	1974	Equal 2nd-highest
Tautuku	24.0	3rd	1976	Equal 2nd-highest
Dargaville	24.2	1st	1943	3rd-highest
Taupō	21.1	2nd	1949	3rd-highest
Waikeria	23.4	2nd	1957	3rd-highest
Paraparaumu	22.4	3rd	1953	3rd-highest
Upper Hutt (Trentham)	22.9	8th	1939	3rd-highest
Ohakune	20.8	8th	1962	3rd-highest
Reefton	21.6	1st	1960	3rd-highest
Hanmer Forest	25.7	2nd	1906	3rd-highest
Cheviot	26.0	2nd	1982	3rd-highest
Middlemarch	23.8	2nd	2000	3rd-highest
Nugget Point	21.5	3rd	1970	3rd-highest
Lower Retaruke	21.9	2nd	1966	Equal 3rd-highest
Pukaki (Airport)	21.3	6th	1972	Equal 3rd-highest
Chatham Island	19.2	5th	1878	Equal 3rd-highest
Kaitaia	23.9	2nd	1948	4th-highest

Purerua	22.1	1st	1983	4th-highest
Tūrangi	21.3	2nd	1968	4th-highest
Culverden	25.5	2nd	1928	4th-highest
Wānaka	20.9	3rd	1955	4th-highest
Oamaru	24.1	3rd	1967	4th-highest
Lauder	22.6	3rd	1924	4th-highest
Alexandra	23.4	3rd	1928	4th-highest
Stratford	20.2	1st	1960	Equal 4th-highest
Waipara West	25.9	3rd	1973	Equal 4th-highest
Lake Tekapo	20.9	2nd	1925	Equal 4th-highest
Oamaru	23.3	6th	1967	Equal 4th-highest
Low records or near-records				
Secretary Island	7.9	10th	1989	4th-lowest

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

Location	Extreme minimum (°C)	Date of extreme temperature	Year records began	Comments
High records or near-records				
Kaitaia	20.2	1st	1948	Highest
Kaikohe	17.8	1st	1973	Highest
Purerua	18.6	3rd	1983	Highest
Whangārei	19.0	6th	1967	Highest
Auckland (Western Springs)	19.2	2nd	1971	Highest
Whitianga	18.8	5th	1971	Highest
Matamata	17.0	4th	1999	Highest
Tauranga	18.8	5th	1941	Highest
Te Puke	17.8	3rd	1973	Highest
Whakatāne	18.7	3rd	1975	Highest
Rotorua	16.7	2nd	1972	Highest
Taupō	16.4	2nd	1950	Highest
Auckland (Airport)	18.3	4th	1961	Highest
Hamilton (Airport)	17.4	4th	1946	Highest
Port Taharoa	17.9	6th	1974	Highest
Waikeria	17.2	4th	1972	Highest
Tūrangi	15.8	2nd	1968	Highest
Mt Ruapehu Chateau	11.4	2nd	2000	Highest
Ngawi	18.8	3rd	1972	Highest
Hāwera	16.7	3rd	1977	Highest
Ohakune	15.4	3rd	1972	Highest
Waiouru	14.2	2nd	1972	Highest
Westport	16.8	2nd	1966	Highest
Arapito	15.8	2nd	1978	Highest
Greymouth	15.9	2nd	1972	Highest
Ōkārīto	16.4	3rd	1983	Highest
Franz Josef	15.7	3rd	1953	Highest
Haast	15.9	3rd	1949	Highest
Motueka	16.1	7th	1972	Highest

Nelson	17.4	3rd	1862	Highest
Appleby	16.4	2nd	1941	Highest
Brothers Island	16.2	3rd	1997	Highest
Arthurs Pass	12.3	9th	1973	Highest
Akaroa	18.1	4th	1978	Highest
Dunedin (Airport)	13.2	3rd	1972	Highest
Auckland (Whenuapai)	18.2	4th	1951	Equal highest
Hamilton (Ruakura)	17.2	4th	1940	Equal highest
Wellington (Kelburn)	17.0	3rd	1931	Equal highest
Stratford	15.2	2nd	1972	Equal highest
Motu	14.9	2nd	1990	2nd-highest
Te Kuiti	16.7	1st	1959	2nd-highest
Waipawa	16.7	2nd	1945	2nd-highest
Wairoa	17.9	4th	1972	2nd-highest
Paraparaumu	16.8	6th	1972	2nd-highest
Wellington (Airport)	17.6	3rd	1972	2nd-highest
Takaka	15.9	2nd	1978	2nd-highest
Hokitika	15.6	9th	1866	2nd-highest
Rangiora	14.3	4th	1972	2nd-highest
Christchurch	15.1	9th	1863	2nd-highest
Lincoln	15.8	9th	1881	2nd-highest
Timaru	13.4	4th	1885	2nd-highest
Waimate	12.9	4th	1908	2nd-highest
Whangaparaoa	17.9	2nd	1982	Equal 2nd-highest
Taumarunui	16.2	1st	1947	Equal 2nd-highest
Masterton	17.2	4th	1943	Equal 2nd-highest
Hicks Bay	17.9	4th	1972	Equal 2nd-highest
Gisborne	18.1	2nd	1940	Equal 2nd-highest
Māhia	16.7	2nd	1990	Equal 2nd-highest
Balclutha	11.2	4th	1972	Equal 2nd-highest
Chatham Island	15.1	5th	1878	Equal 2nd-highest
Cape Reinga	17.8	1st	1971	3rd-highest
Dargaville	17.7	1st	1951	3rd-highest
Mokohinau	18.8	2nd	1994	3rd-highest
Palmerston North	16.4	2nd	1940	3rd-highest
Reefton	14.5	3rd	1972	3rd-highest
Milford Sound	13.1	4th	1935	3rd-highest
Oamaru	12.3	4th	1972	3rd-highest
Nugget Point	12.9	4th	1972	3rd-highest
Campbell Island	9.8	29th	1991	3rd-highest
Kerikeri	18.5	1st	1952	Equal 3rd-highest
Kawerau	17.0	3rd	1954	Equal 3rd-highest
New Plymouth	17.3	6th	1944	Equal 3rd-highest
Napier	18.8	3rd	1940	Equal 3rd-highest
Whanganui	16.8	4th	1972	Equal 3rd-highest
Secretary Island	15.0	3rd	1988	Equal 3rd-highest
Kaikōura	15.6	9th	1972	Equal 3rd-highest
Richmond	16.2	3rd	1862	4th-highest

Christchurch (Airport)	14.6	9th	1863	4th-highest
Orari Estate	10.9	4th	1972	4th-highest
Waipounamu	9.6	27th	1980	4th-highest
Oban (Stewart Island)	12.4	6th	1975	4th-highest
Tautuku	11.8	5th	1976	4th-highest
South West Cape	13.1	6th	1991	4th-highest
Leigh	18.2	3rd	1966	Equal 4th-highest
Takapau Plains	15.0	2nd	1972	Equal 4th-highest
Le Bons Bay	15.0	4th	1984	Equal 4th-highest
Dunedin (Musselburgh)	12.8	3rd	1947	Equal 4th-highest
Low records or near-records				
None observed				

Wind

The highest wind gust was 169 km/h, observed at Secretary Island on 10 May, and South West Cape on 26 May.

On 20 May, strong winds brought down trees and caused power outages in parts of New Plymouth. Farther north, the Auckland Harbour Bridge was closed several times as wind gusted to 111 km/h at Manukau Heads. At least seven domestic flights were cancelled while a number of other flights were delayed. In parts of western Auckland, Coromandel, and Bay of Plenty, around 3000 properties were without power.

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

Location	Extreme wind gust (km/h)	Date of extreme gust	Year records began	Comments
Secretary Island	169	10th	1994	Highest
Hanmer Forest	165	15th	1995	Highest
Kaikohe	85	20th	1986	2nd-highest
Auckland (Western Springs)	76	11th	1994	2nd-highest
South West Cape	169	26th	1991	2nd-highest
Dargaville	104	20th	1997	Equal 2nd-highest
Tūrangi	102	20th	1973	Equal 2nd-highest
Upper Hutt (Trentham)	85	30th	1999	Equal 2nd-highest
Mokohinau	117	20th	1994	3rd-highest
Puysegur Point	159	26th	1986	3rd-highest
Hamilton (Ruakura)	74	20th	1996	Equal 3rd-highest
Mt Cook (Airport)	133	26th	2000	Equal 3rd-highest
Te Puke	56	10th	1987	Equal 4th-highest
Stratford	80	20th	2002	Equal 4th-highest

Lightning, hail, and tornadoes

On 10 May, thunderstorms hit Auckland and parts of the North Island. Auckland's Sky Tower took a direct hit by a lightning strike, and hail was reported in the city. A tornado was reported in south Taranaki, near Eltham.

On 11 May, hail was observed in Wellington as a strong southerly change triggered heavy showers. From 10-11 May, over 12,000 lightning strikes were observed near or over New Zealand.

On 22 May, scattered thunderstorm brought heavy rain and gusty winds to parts of the North Island. Over 1500 lightning strikes were observed near or over the North Island.

Snow and ice

On 11 May, a cold front brought the coldest day since October 2022 for large parts of the South Island, with snow down to around 400 metres for parts of Southland, Queenstown-Lakes District and the Mackenzie Basin. The Crown Range Road was closed during the morning. Farther north, the Desert Road (SH1) was also closed due to snow.

Cloud and fog

On 1 May, at least 24 domestic flights were cancelled due to foggy conditions at Christchurch, Dunedin, and Invercargill.

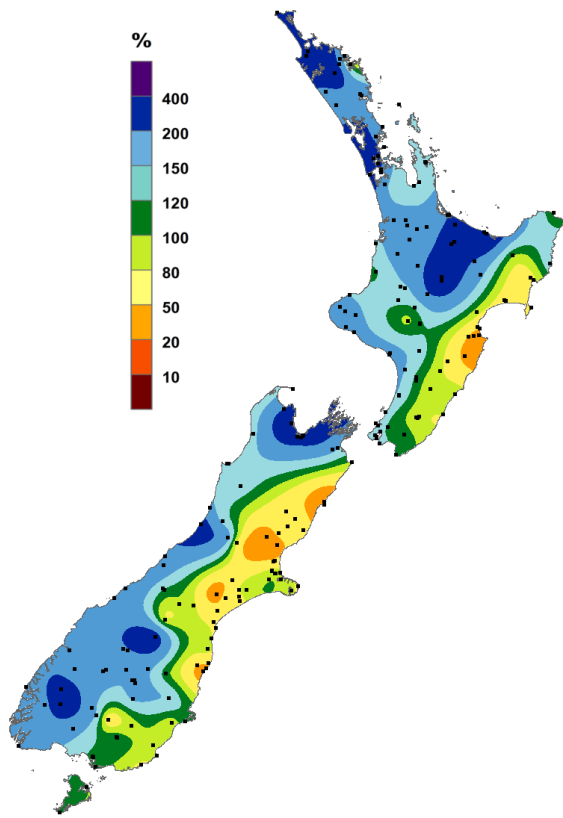
On 26 May, fog at Auckland Airport disrupted several flights.

For further information, please contact:

Gregor Macara

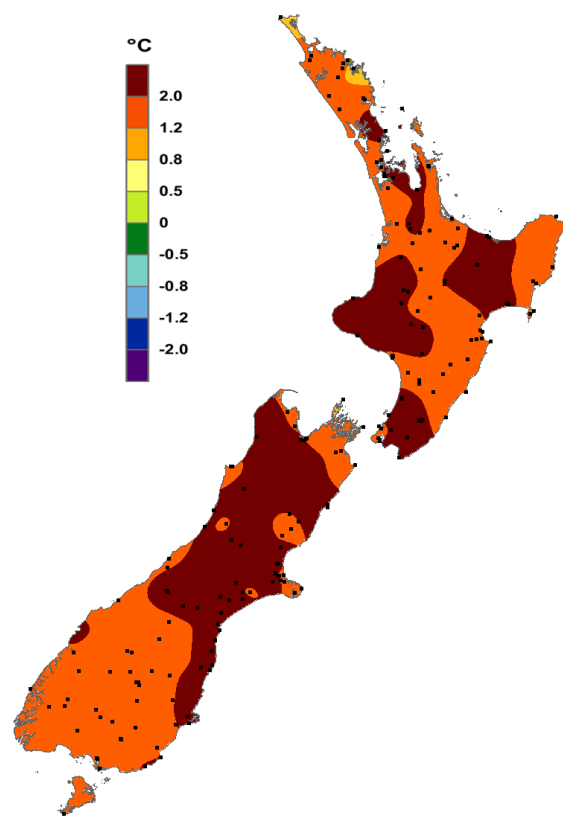
Climate Scientist, NIWA Wellington

Tel. 04 386 0509



May rainfall

Expressed as a percentage of the 1991-2020 normal.



May temperature

Expressed as a departure from the 1991-2020 average in degrees Celsius.

<https://www.niwa.co.nz/our-science/climate>

© Copyright NIWA 2023.

All rights reserved. Information presented in this summary is based on data available at the time of publication, which is subject to ongoing quality assurance procedures.