

## Cold and dry for much of the country

<b>Temperature</b>	Temperatures were below average (0.51-1.20°C below average) or well below average (>1.20°C below average) for most of the country. Overall, it was New Zealand's coldest May in 15 years.
<b>Rainfall</b>	Rainfall was below normal (50-79% of normal) or well below normal (<50% of normal) for most of the South Island, southern and western parts of the North Island, Bay of Plenty, and parts of Waikato and Northland. Rainfall was above normal (120-149% of normal) or well above normal (>149% of normal) for isolated parts of Auckland, and eastern parts of the North Island including Gisborne, Hawke's Bay, and southern Wairarapa.
<b>Soil Moisture</b>	At the end of May, soils were drier than normal for northern, eastern, and inland parts of the South Island, and western and southern parts of the North Island from southern Taranaki to the Greater Wellington region (excluding Wellington city). Soils were wetter than normal about Māhia Peninsula.

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### Overview

May 2024 mean sea level air pressure (MSLP) was higher than normal over much of Aotearoa New Zealand and the Tasman Sea, and lower than normal to the east of the country. This resulted in more southwesterly airflows than usual over the country, and reduced mean wind speeds for many parts. These southwesterlies contributed to relatively cold temperatures for the month, with New Zealand observing its coldest May since 2009. The nationwide average temperature in May 2024 was 9.8°C. This is 1.3°C below the 1991-2020 May average from NIWA's seven station temperature series which begins in 1909.

It was a dry month for many parts of the country. Rainfall was below normal (50-79% of normal) or well below normal (<50% of normal) for the majority of the South Island, northern and western parts of the Greater Wellington region, Manawatū-Whanganui, Taranaki, Bay of Plenty, much of Waikato, and northern and eastern parts of Northland. In contrast, rainfall was above normal (120-149% of normal) or well above normal (>149% of normal) for small pockets of Auckland, coastal Gisborne, Hawke's Bay, and coastal South Wairarapa. Rainfall was near normal (80-119% of normal) in western parts of Northland, much of Auckland, parts of northern Waikato, Wellington, and southern Southland.

The lack of rainfall was accompanied by clear skies for many parts of the country, resulting in relatively high sunshine hours for the time of year. Tauranga and Mount Cook Village each observed their sunniest May on record. Whangārei, Paraparaumu, Franz Josef, and Queenstown observed their second-highest total sunshine hours for May, respectively.

**Further Highlights:**

- The highest temperature was 23.4°C, observed at Whakatu on 6 May.
- The lowest temperature was -9.7°C, observed at Cass (inland Canterbury) on 10 May.
- The highest 1-day rainfall was 130 mm, recorded at Leigh on 20 May.
- The highest wind gust was 152 km/h, observed at Secretary Island on 29 May.
- Of the six main centres in May 2024, Auckland was the warmest, Tauranga was the sunniest, Dunedin was the driest and least sunny, Christchurch was the coolest, and Wellington was the wettest.
- Of the available, regularly reporting sunshine observation sites, the sunniest four locations in 2024 so far are Marlborough (1265 hours), wider Nelson (1251 hours), Bay of Plenty (1220 hours) and Taranaki (1218 hours).

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## Temperature: New Zealand’s coldest May in 15 years

Temperatures were lower than average throughout the country in May. Approximately 35% of New Zealand’s regularly reporting stations observed mean minimum temperatures that were at least 2°C below average, and frosts were a regular occurrence for inland areas. Christchurch and Timaru observed their lowest mean minimum temperature for May, with records beginning in 1863 and 1885, respectively. The prevalence of clear skies, lighter winds, and drier than usual soils in many areas likely contributed to enhanced radiative cooling, and the resulting low overnight temperatures.

**Record<sup>1</sup> or near-record mean air temperatures for May were recorded at:**

Location	Mean air temp. (°C)	Departure from normal (°C)	Year records began	Comments
<b>High records or near-records</b>				
None observed				
<b>Low records or near-records</b>				
Motu	8.1	-1.1	1990	3rd-lowest
Whakatu	10.2	-1.1	1965	3rd-lowest
Ōkārito	9.4	-1.3	1982	3rd-lowest

<sup>1</sup> The rankings (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>.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.

Secretary Island	10.0	-1.2	1985	3rd-lowest
Pukaki (Airport)	4.0	-2.1	1972	3rd-lowest
Manapouri (Airport)	5.2	-2.0	1963	3rd-lowest
South West Cape	8.4	-1.2	1991	3rd-lowest
Mokohinau Island	15.4	-0.5	1994	4th-lowest
Matamata	10.9	-0.7	1999	4th-lowest
Port Taharoa	13.0	-1.3	1973	4th-lowest
Tūrangi	7.9	-1.7	1968	4th-lowest
Mt Ruapehu Chateau	5.4	-0.7	2000	4th-lowest
Brothers Island	12.3	-0.6	1997	4th-lowest
Winchmore	6.5	-2.5	1949	4th-lowest
Rangiora	7.5	-1.9	1965	4th-lowest
Christchurch	6.9	-2.4	1863	4th-lowest
Windsor	7.0	-1.2	2000	4th-lowest
Waipounamu	6.5	-0.7	1980	4th-lowest

**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
<b>High records or near-records</b>				
None observed				
<b>Low records or near-records</b>				
Te Anau	9.2	-2.6	1963	2nd-lowest
South West Cape	10.2	-1.4	1991	2nd-lowest
Mokohinau Island	17.0	-0.5	1994	3rd-lowest
Puysegur Point	11.4	-1.3	1978	3rd-lowest
Akaroa	13.5	-2.0	1978	3rd-lowest
Māhia	14.3	-1.5	1990	4th-lowest
Ōkārīto	14.0	-1.0	1982	4th-lowest
Waipounamu	11.2	-1.2	1980	4th-lowest

**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
<b>High records or near-records</b>				
None observed				
<b>Low records or near-records</b>				
Whakatu	2.9	-2.4	1965	Lowest
Medbury	-0.6	-3.9	1927	Lowest
Waiau	0.0	-3.1	1974	Lowest
Winchmore	0.1	-3.4	1949	Lowest
Christchurch	0.5	-3.4	1863	Lowest
Timaru	0.0	-2.5	1885	Lowest
Windsor	0.4	-2.1	2000	Lowest
Pururu	10.4	-1.3	1983	2nd-lowest

Motu	2.3	-2.2	1990	2nd-lowest
Waipawa	2.9	-2.1	1945	2nd-lowest
Secretary Island	6.9	-1.8	1985	2nd-lowest
Mt Cook (Airport)	-2.3	-3.4	1929	2nd-lowest
Rangiora	1.1	-2.6	1965	2nd-lowest
Pukaki (Airport)	-2.3	-2.4	1972	2nd-lowest
Oamaru	2.0	-1.8	1967	2nd-lowest
Manapouri (Airport)	-0.6	-3.1	1963	2nd-lowest
Clyde	-2.0	-2.8	1978	2nd-lowest
Warkworth	7.0	-2.3	1966	3rd-lowest
Matamata	4.7	-1.5	1999	3rd-lowest
Rotorua	4.5	-2.1	1964	3rd-lowest
Taumarunui	2.5	-2.1	1947	3rd-lowest
Tūrangi	1.7	-2.4	1968	3rd-lowest
Takapau Plains	3.7	-1.8	1962	3rd-lowest
Ōkārīto	4.8	-1.6	1982	3rd-lowest
Appleby	1.7	-2.1	1932	3rd-lowest
Brothers Island	10.3	-0.8	1997	3rd-lowest
Hanmer Forest	-1.3	-2.3	1906	3rd-lowest
Orari Estate	0.6	-2.7	1972	3rd-lowest
Tara Hills	-2.3	-3.2	1949	3rd-lowest
Wānaka	-0.1	-2.9	1955	3rd-lowest
South West Cape	6.6	-1.1	1991	3rd-lowest
Whangārei	8.0	-1.5	1967	4th-lowest
Waikeria	2.9	-3.6	1957	4th-lowest
Te Kuiti	4.0	-2.3	1959	4th-lowest
Mt Ruapehu Chateau	0.9	-1.2	2000	4th-lowest
Masterton	2.4	-1.9	1906	4th-lowest
Martinborough	3.8	-2.1	1986	4th-lowest
Māhia	9.4	-1.1	1990	4th-lowest
Upper Hutt (Trentham)	3.7	-2.4	1939	4th-lowest
Milford Sound	2.4	-2.5	1934	4th-lowest
Cheviot	1.0	-2.6	1982	4th-lowest
Cromwell	-1.4	-3.6	1949	4th-lowest
Alexandra	-1.4	-2.7	1929	4th-lowest

## Rainfall: Dry for most, but wet in eastern parts of the North Island

Nearly 30% of New Zealand’s regularly reporting stations observed less than half of their usual May rainfall. It was especially dry in Middlemarch, where 5 mm of rainfall was recorded (just 7% of the town’s normal May rainfall). Notably, Hokitika observed its driest May since records there began in 1866. In contrast, Māhia received 223% of its normal May rainfall.

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

Location	Rainfall total (mm)	Percentage of normal	Year records began	Comments
<b>High records or near-records</b>				
Māhia	223	223	1990	2nd-highest

Low records or near-records				
Mt Ruapehu Chateau	68	27	2000	Lowest
Hokitika	48	20	1866	Lowest
Ōkārito	61	24	1981	Lowest
Paraparaumu	29	30	1945	2nd-lowest
Tākaka	21	12	1976	2nd-lowest
Lake Moeraki	100	29	1985	2nd-lowest
Appleby	9	10	1932	2nd-lowest
Mt Cook Airport	50	13	1928	2nd-lowest
Arapito	79	40	1978	3rd-lowest
Reefton	30	17	1960	3rd-lowest
Franz Josef	73	20	1926	3rd-lowest
Motueka	28	23	1943	3rd-lowest
Middlemarch	5	7	1896	3rd-lowest
Arthurs Pass	66	17	1906	4th-lowest
Manapouri (West Arm Jetty)	160	39	1971	4th-lowest

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## May climate in the six main centres

It was a cold May for all main centres. Christchurch's mean air temperature of 6.9°C was the city's fourth-lowest mean air temperature for May, with records there beginning in 1863. Rainfall was well below normal in Dunedin, where 38% of its normal May rainfall total was recorded. Tauranga had its sunniest May since records began in 1932. Of the six main centres in May 2024, Auckland was the warmest, Tauranga was the sunniest, Dunedin was the driest and least sunny, Christchurch was the coolest, and Wellington was the wettest.

### May 2024 main centre climate statistics:

Temperature			
Location	Mean temp. (°C)	Departure from normal (°C)	Comments
Auckland <sup>a</sup>	13.0	-1.3	Well below average
Tauranga <sup>b</sup>	12.7	-0.9	Below average
Hamilton <sup>c</sup>	10.2	-1.7	Well below average
Wellington <sup>d</sup>	10.6	-1.4	Well below average
Christchurch <sup>e</sup>	6.9	-2.4	4th-lowest on record
Dunedin <sup>f</sup>	8.8	-0.8	Below average
Rainfall			
Location	Rainfall (mm)	% of normal	Comments
Auckland <sup>a</sup>	124	111	Near normal
Tauranga <sup>b</sup>	64 <sup>2</sup>	55	Below normal
Hamilton <sup>c</sup>	102	87	Near normal
Wellington <sup>d</sup>	135	93	Near normal
Christchurch <sup>e</sup>	40	68	Below normal
Dunedin <sup>f</sup>	24	38	Well below normal
Sunshine			
Location	Sunshine (hours)		
Auckland <sup>a</sup>	176 <sup>3</sup>		
Tauranga <sup>b</sup>	215		
Hamilton <sup>g</sup>	176		
Wellington <sup>d</sup>	144		
Christchurch <sup>e</sup>	164		
Dunedin <sup>f</sup>	92 <sup>2</sup>		

<sup>a</sup> Māngere <sup>b</sup> Tauranga Airport <sup>c</sup> Hamilton Airport <sup>d</sup> Kelburn <sup>e</sup> Christchurch Airport <sup>f</sup> Musselburgh <sup>g</sup> Ruakura

<sup>2</sup> Missing one day of data.

<sup>3</sup> Missing three days of data.

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## Highlights and extreme events

### Rain and slips

The highest 1-day rainfall was 130 mm, recorded at Leigh on 20 May.

From 20-21 May, heavy rainfall occurred over northern and eastern parts of New Zealand. Fire and Emergency NZ received approximately 70 calls about weather-related events in Auckland, with homes flooded in St Heliers and Mount Wellington. Farther south, residents of Western Rd, Ngongotahā (western side of Lake Rotorua) were advised to evacuate due to surface flooding caused by the Ngongotahā Stream. A person needed rescuing near Ngakuru (south of Rotorua) as rising floodwaters trapped them in their vehicle. SH2 was closed between Wairoa and Bartletts due to flooding. Surface flooding was reported in parts of Christchurch, including Marine Parade in New Brighton.

### 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
Leigh	130	20th	1967	2nd-highest
Whangaparāoa	106	20th	1946	2nd-highest
Wellington (Kelburn)	82	1st	1928	3rd-highest
Waipara West	43	10th	1973	3rd-highest
Māhia	63	21st	1990	4th-highest

### Temperatures

The highest temperature was 23.4°C, observed at Whakatu (Hawke's Bay) on 6 May. The lowest temperature was -9.7°C, observed at Cass (inland Canterbury, near Castle Hill Village) on 10 May.

From 8-12 May a period of high atmospheric pressure and clear skies dominated New Zealand after the passage of a cold southerly front. Heavy frosts were observed in many areas, with 20 locations registering record or near-record low daily minimum temperatures for 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				
Manapouri (West Arm Jetty)	16.6	31st	1971	Highest
Waipounamu	20.0	31st	1980	Equal 4th-highest
Low records or near-records				
Motu	7.9	7th	1990	4th-lowest
Tautuku	5.9	20th	1976	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				
None observed				

Low records or near-records				
Tūrangi	-6.3	8th	1968	Lowest
Whakatu	-4.6	12th	1965	Lowest
Waipawa	-4.3	12th	1945	Equal lowest
Whitianga	-2.5	10th	1962	2nd-lowest
Rotorua	-3.3	12th	1964	2nd-lowest
Taumarunui	-5.3	12th	1947	2nd-lowest
Appleby	-6.3	10th	1932	2nd-lowest
Medbury	-7.7	10th	1927	2nd-lowest
Christchurch	-6.3	10th	1863	2nd-lowest
Cape Reinga	6.0	30th	1951	3rd-lowest
Paraparaumu	-2.9	10th	1953	3rd-lowest
Cheviot	-5.9	10th	1982	3rd-lowest
Rangiora	-5.0	10th	1965	3rd-lowest
Manapouri (Airport)	-5.7	9th	1963	3rd-lowest
Motu	-5.6	31st	1990	Equal 3rd-lowest
Te Kuiti	-2.8	10th	1959	Equal 3rd-lowest
Matamata	-2.7	12th	1999	4th-lowest
Martinborough	-2.9	10th	1986	4th-lowest
Tākaka	-1.6	10th	1978	4th-lowest
Motueka	-3.4	10th	1956	Equal 4th-lowest
Richmond	-3.3	10th	1862	Equal 4th-lowest
Middlemarch	-7.8	9th	2000	Equal 4th-lowest

## Wind

The highest wind gust was 152 km/h, observed at Secretary Island on 29 May.

On 21 May, strong winds brought down power lines in parts of western Bay of Plenty. Approximately 1,000 households were without power across Te Puke, Waihi, Paengaroa, and Matakana Island.

On 29 May, strong winds struck the upper North Island. Power outages caused by fallen trees affected at least 50,000 customers across Auckland and Waikato.

### 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
Auckland (Whenuapai)	113	29th	1972	Highest
Pukekohe	81	29th	1986	Highest
Te Kuiti	63	29th	2003	Highest
Tūrangi	127	17th	1973	Highest
Alexandra	109	29th	2001	Highest
Auckland (Western Springs)	78	29th	1994	2nd-highest
Auckland (Airport)	107	29th	1971	2nd-highest
Hamilton (Ruakura)	78	29th	1996	2nd-highest
Secretary Island	152	29th	1994	2nd-highest
Queenstown	93	8th	1972	2nd-highest
Mokohinau Island	117	29th	1994	3rd-highest



Port Taharoa	120	29th	1978	3rd-highest
Mt Ruapehu Chateau	106	29th	2000	3rd-highest
Oamaru	93	8th	1984	3rd-highest
Stratford	81	29th	2002	4th-highest
Tara Hills	82	8th	1985	4th-highest

### **Lightning, hail, and tornadoes**

On 15 May, at least 600 lightning strikes were recorded in the hour to 9:30 a.m. along and near the Coromandel Peninsula and western Bay of Plenty.

On 29 May, thunderstorms struck Auckland with hail being reported across parts of the city.

### **Snow and ice**

On 18 May, snow settled down to approximately 350 m above sea level over the lower South Island. Approximately 40 cm of snow was reported in Mount Cook Village, with 12 cm reported in St Bathans. The Remarkables and Coronet Peak ski fields near Queenstown reported 20 cm of snow, respectively.

### **Cloud and fog**

On 23 May, fog at Dunedin Airport caused disruption to several flights.

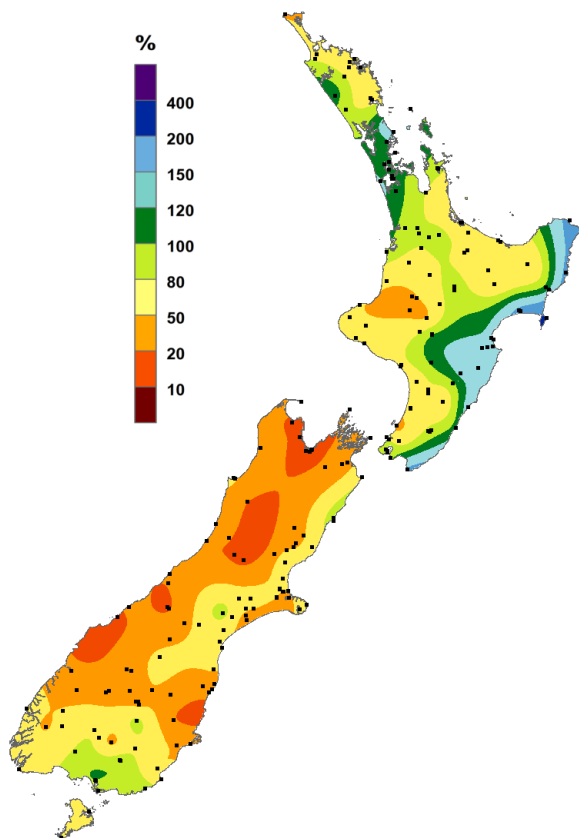
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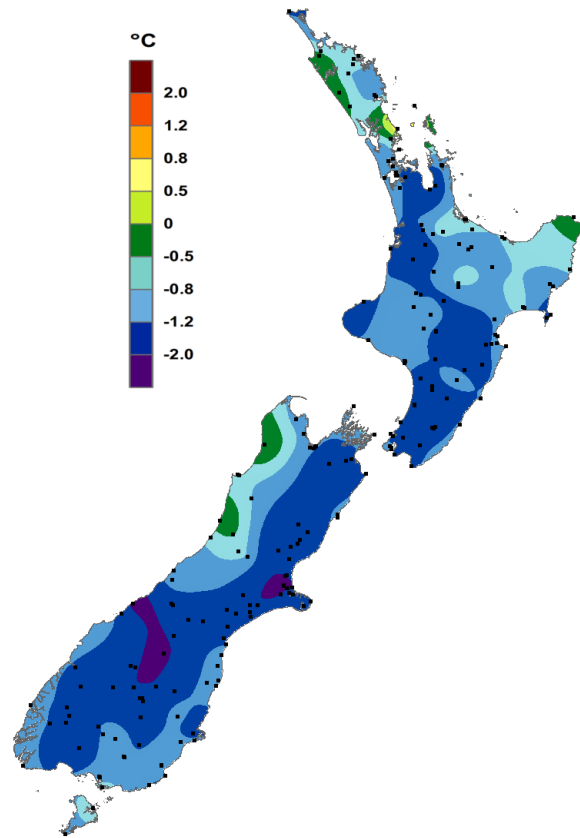
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### May rainfall

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>

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