

**NATIONAL CLIMATE CENTRE
WEDNESDAY 5 JANUARY 2006**

National Climate Summary – December 2005

Rainfall: Wet in the north and west of the North Island, especially Northland, western Bay of Plenty, and Wanganui; below normal in Hawke's Bay and Marlborough

Soil moisture: Significant deficits in eastern regions from Hawke's Bay to Otago, as well as Kapiti, Wellington and Nelson

Temperatures: Well above average in most places, third warmest December on record

Sunshine: Normal or below normal throughout New Zealand

Contrasts in rainfall occurred in December, with extremely high totals in northern parts of Northland, western Bay of Plenty, and Wanganui (highest in 115 years of record), and comparatively low totals in parts of Hawke's Bay and coastal Marlborough. Significant soil moisture deficits occurred in eastern regions from Hawke's Bay to Otago, as well as Kapiti, Wellington and Nelson, being severe in parts of Marlborough and Central Otago. Temperatures were remarkably high throughout the nation. The national average temperature was 17.5 °C, 1.9 °C above average. This was the warmest December in 71 years (18.5 °C in 1934), and third warmest since reliable records commenced in the mid 1860s (December 1872 had 17.8 °C). Sunshine hours were normal or below normal throughout New Zealand. December mean sea level pressures were well below average in the Australian Bight, extending troughs of low pressure ('lows') toward New Zealand. This pattern produced more frequent warm northerlies over the North Island and more northeasterly airflow than average over the South Island.

Other Highlights:

The highest temperatures during December 2005 were 31.7 °C recorded at Darfield on the 30th, and 31.5 °C at Napier Airport on the 31st. The lowest temperature for the month was 1.5 °C at Chateau Ruapehu on the 25th.

Periods of high rainfall affected parts of the North Island from Northland to Wanganui between the 13th and 17th.

The highest wind gust for the month was 137 km/h from the northwest, at Castlepoint on the 4th.

Damaging hailstorms occurred in Southland on both the 5th and 15th.

Damaging tornadoes, or tornado-like winds occurred in Rotorua on the 6th, and Southland on the 15th.

Lightning strikes left many people temporarily without power in Taranaki on the 6th.

Of the four main centres Christchurch was the driest, and Dunedin wettest. Rainfall was above average in Dunedin, near average in Auckland and Wellington, and below average in Christchurch. Temperatures were above average in all four main centres. Sunshine hours were near average in Auckland and Wellington, and below average in Christchurch and Dunedin.

Rainfall:

Rainfall was least 300 percent (triple) of normal in northern parts of Northland, and at least 200 percent (twice) of normal in western Bay of Plenty, and Wanganui. It was also wetter than average in Thames, inland Bay of Plenty, Waikato, King Country, southern Taranaki, Manawatu, coastal parts of south Canterbury, and western and inland Southland. Rainfall was less than 50 percent of normal in parts of Hawke's Bay, and also below normal in Marlborough.

Temperature: Mean temperatures were at least 1.5 °C above average throughout much of New Zealand. They were 3.0 °C or more above average in parts of Otago, and Southland, and at least 2.0 °C above average in eastern Bay of Plenty, the west of the North Island from Manawatu to Wellington, and most of the South Island.

Sunshine: Sunshine hours were 80 percent or less of normal in Waikato, King Country, Nelson, and coastal north Canterbury, and less than 90 percent of normal in Taranaki, inland Canterbury, and Otago. They were near normal elsewhere.

For further information, please contact:

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WET IN THE NORTH AND WEST OF THE NORTH ISLAND, ESPECIALLY NORTHLAND, WESTERN BAY OF PLENTY AND WANGANUI

Rainfall was least 300 percent (triple) of normal in northern parts of Northland, and at least 200 percent (twice) of normal in western Bay of Plenty, and Wanganui. It was also wetter than average, with totals at least 125 percent (one and a quarter) of normal in Thames, inland Bay of Plenty, Waikato, King Country, southern Taranaki, Manawatu, coastal parts of south Canterbury, and western and inland Southland.

Near or record high December rainfall was recorded at:

Location	December Rainfall (mm)	Percentage of normal	Year records began	Comments
Cape Reinga	177	306	1919	Highest
Tauranga Airport	189	218	1898	Well above average
Lower Retaruke	228	177	1966	3 rd highest
Wanganui	196	279	1890	Highest
Ranfurlly	116	213	1975	3 rd highest
Lumsden	190	208	1986	2 nd highest

BELOW NORMAL RAINFALL IN HAWKE'S BAY AND MARLBOROUGH

Rainfall was less than 50 percent of normal in parts of Hawke's Bay, and less than 75 percent of normal rainfall in Marlborough.

ONE OF THE WARMEST DECEMBERS ON RECORD TEMPERATURES WELL ABOVE AVERAGE IN MOST REGIONS

Mean temperatures were at least 1.5 °C above average throughout much of New Zealand. However, they were 3.0 °C or more above average in parts of Otago, and Southland, and at least 2.0 °C above average in eastern Bay of Plenty, the west of the North Island from Manawatu to Wellington, and most of the South Island. Mean daily minima were 2.5 to 3.0 °C or more above average throughout much of the South Island.

Near or record high December mean air temperatures were recorded at:

Location	Mean temperature	Departure from average (°C)	Records Began	Comments
Whangarei Airport	19.8	+1.6	1967	Highest
Auckland, Henderson	19.4	+1.3	1985	Equal highest
Tauranga Airport	19.2	+1.7	1913	Highest
Whakatane Airport	19.1	+2.1	1974	Highest
Motu	16.2	+2.0	1990	Highest
Auckland Airport	19.6	+1.4	1962	Highest
Pukekohe	18.5	+1.5	1970	3 rd highest
Hamilton Airport	18.0	+1.5	1970	Well above average
New Plymouth Airport	17.7	+1.5	1944	Equal highest
Mt Ruapehu, Chateau	12.0	+1.5	1932	Well above average
East Taratahi	18.1	+2.9	1972	2 nd highest
Mahia	18.4	+1.3	1990	Highest
Paraparaumu Airport	17.6	+1.7	1953	Equal highest
Palmerston North EWS	18.3	+2.0	1928	2 nd highest
Levin	18.0	+2.1	1895	Equal highest
Wellington, Kelburn	17.4	+2.0	1928	2 nd highest
Wellington Airport	18.1	+1.7	1962	Equal highest
Wallaceville	17.7	+2.2	1939	Highest
Stratford	15.8	+1.5	1960	Well above average
Wanganui, Spriggens Park	18.8	+2.0	1937	Equal highest

Farewell Spit	18.4	+2.5	1972	Highest
Westport Airport	16.9	+1.9	1937	2 nd highest
Lake Rotoiti	15.2	+2.3	1965	Equal 2 nd highest
Hokitika Airport	16.7	+2.4	1963	Highest
Franz Josef	16.1	+2.6	1982	Highest
Milford Sound	16.3	+2.8	1934	2 nd highest
Puysegur Point	15.8	+3.2	1978	Highest
Stephens Island	16.8	+2.3	1973	Highest
Motueka, Riwaka	18.6	+2.5	1956	Highest
Nelson Airport	18.8	+2.6	1943	Highest
Blenheim Research	18.4	+1.7	1985	2 nd highest
Blenheim Airport	18.6	+2.3	1941	Equal highest
Arthurs Pass	13.7	+2.5	1978	Highest
Winchmore	16.9	+2.1	1949	2 nd highest
Rangiora	17.0	+1.6	1965	Well above average
Christchurch Airport	17.2	+1.5	1953	Well above average
Lincoln	17.2	+1.9	1881	Well above average
Timaru Airport	16.2	+1.7	1962	3 rd highest
Tara Hills	16.9	+2.5	1949	Equal highest
Wanaka Airport	18.3	+2.5	1992	Highest
Dunedin Airport	16.7	+2.9	1962	Highest
Dunedin, Musselburgh	15.5	+1.6	1947	2 nd highest
Manapouri Airport	15.8	+2.9	1991	Highest
Queenstown	17.8	+2.7	1871	3 rd highest
Lauder	17.3	+2.9	1981	Highest
Clyde	18.6	+2.8	1983	Highest
Ettrick	17.8	+2.3	1986	Highest
Gore	16.1	+2.6	1987	Highest
Invercargill Airport	16.4	+3.4	1948	Highest
Tiwai Point	16.3	+2.9	1970	Highest
Campbell Island	10.9	+2.1	1941	Highest

AVERAGE OR BELOW AVERAGE SUNSHINE THROUGHOUT MUCH OF NEW ZEALAND

Sunshine hours were 80 percent or less of normal in Waikato, King Country, Nelson, and coastal north Canterbury, and less than 90 percent of normal in Taranaki, inland Canterbury, and Otago. They were near normal elsewhere.

Near record December sunshine hours were recorded at:

Location	December sunshine (hours)	Percentage of normal	Year Records began	Comments
Taumarunui	122 ^a	66	1947	2 nd lowest
Christchurch Airport	151 ^b	68	1949	2 nd lowest

a missing 22 Dec. b missing 31 Dec.

DECEMBER'S CLIMATE IN THE FOUR MAIN CENTRES

Of the four main centres Christchurch was the driest, and Dunedin wettest. Rainfall was above average in Dunedin, near average in Auckland and Wellington, and below average in Christchurch. Temperatures were above average in all four main centres, especially Wellington. Sunshine hours were near average in Auckland, and Wellington, and below average in Christchurch and Dunedin.

Location	Dec. Mean Temp. (°C)	Dep. from normal (°C)		Dec. rainfall (mm)	% of normal		Dec. Sunshine (hours)	% of Normal	
Auckland	19.1	+1.0	Above average	96	106	Near average	220	105	Near average
Wellington	17.4	+2.0	2 nd highest	76	89	Near average	233	103	Near average
Christchurch	17.5	+1.4	Above average	36	73	Below average	151	68	Well below average
Dunedin	15.5	+1.6	2 nd highest	115	140	Above average	145	86	Below average

^a Auckland Airport

HIGHLIGHTS AND EXTREME EVENTS

Temperature

The highest temperatures during December 2005 were 31.7 °C recorded at Darfield on the 30th, and 31.5 °C at Napier Airport on the 31st. The lowest temperature for the month was 1.5 °C at Chateau Ruapehu on the 25th.

Rainfall

Rainfall totalled over 100 mm at Cape Reinga on the 13th, and over 50 mm in parts of Northland, Thames, Bay of Plenty, and Taranaki from the 15-17th. Torrential rainfall occurred in Wanganui during the afternoon on the 13th totalling 20 mm in 20 minutes.

High winds

The highest wind gust for the month was 137 km/h from the northwest, at Castlepoint on the 4th.

Hail, thunderstorms, and tornadoes

Marble-sized hailstones occurred during thunderstorms in Waimatuku, Southland on the 5th, after which four tornadoes were sighted, with some damage to property. Sudden and brief tornado-like winds occurred in Rotorua on the 6th damaging property. Frequency lightning strikes occurred in Taranaki on the same day, leaving over 3000 people temporarily without power. Tornado-like winds and intense hail also occurred at Heddon, Southland on the 15th, felling trees and destroying crops.

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