

National Climate Summary – July 2005

- **Temperature: Third warmest July on record**
- **Rainfall: Below average in many eastern districts from Wairarapa to Otago, above average in the north of the North Island**
- **Sunshine: Well above average in inland south Canterbury and coastal Otago, below average in Taranaki, Nelson, and Marlborough**

July, for many, was very much warmer, and windier than normal. The national average temperature of 9.1 °C was 1.2 °C above normal, and the third highest for July in reliable records dating back to the mid 1860s. Only July 1998 (9.6 °C) and July 2000 (9.3 °C) were warmer. There were only about half the average number of days with screen (air) frost in July in many North Island and most low lying/coastal South Island locations. Frostiness was also less frequent in inland South Island areas. Rainfall was well below normal in Wairarapa, and in much of Canterbury and Otago, with significant soil moisture deficits for the time of year in North and Central Otago. Rainfall was above normal in much of Northland, parts of Bay of Plenty, and along the Kaikoura coast. Sunshine hours were well above average in inland south Canterbury, and coastal Otago. However, they were well below average in Taranaki. During July, anticyclones ('highs') were often centred northeast of the North Island, while low pressures associated with depressions prevailed well south of the country. This pattern resulted in more frequent westerlies and north westerlies, especially over southern New Zealand. July's warmth was due to more wind (frequent northwesterlies), and generally cloudier than usual skies (especially overnight) for the time of year.

Other Highlights:

- High rainfall totalling 130 – 215 mm occurred over 4-6 July in inland and eastern parts of Northland with some flooding. High rainfall totalling 160 - 170 mm occurred in the high country of southern Coromandel and western Bay of Plenty, accompanied by severe electrical storms from Northland to Thames. Isolated, but heavy rainfall (about 100 mm) occurred on 19 July in the Kakanui Range (north Otago) causing the Kakanui River to reach its highest flood level since January 2002.
- High winds over 12/13 July damaged power lines on the Coromandel Peninsula over the night, leaving thousands of residents without electricity.
- The highest temperature during July 2005 was 22.0°C recorded in Hastings on the 15th. The lowest temperature for the month was -8.5°C, recorded at Middlemarch on the 15th.
- Of the four main centres Dunedin was the driest and sunniest, and Auckland the warmest. Rainfall was above average in Auckland, but below average in the three other main centres. Temperatures were much above average in all four centres. Sunshine hours were well above average in Dunedin, and below average in Auckland, Wellington, and Christchurch.

Temperature: Mean temperatures were 2°C above average in parts of Buller, Marlborough, and Central Otago, 1.5 °C above average throughout the remainder of the South Island; and about 1.0 °C above average in the North Island.

Rainfall: Rainfall was less than 50 percent (half) of normal rainfall in parts of Canterbury and Otago, and about 50 percent of normal in Wairarapa. Totals were also below normal around Rotorua. Rainfall was 150-175 percent of normal in much of Northland, parts of Bay of Plenty, and along the Kaikoura coast.

Sunshine: Sunshine hours were at least 120 percent of average in inland south Canterbury, and coastal Otago, and more than 110 percent of average in Southland. However, they were less than 80 percent of average in Taranaki, and less than 90 percent of average in Nelson, and Marlborough.

For further information, please contact:

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ABOVE AVERAGE TEMPERATURES THROUGHOUT NEW ZEALAND

July was warmer than usual, with mean temperatures about 1.0 °C above average throughout much of the North Island, and 1.5 °C above average throughout much of the South Island. The largest anomalies were in parts of Buller, Marlborough, and Central Otago, with mean temperatures about 2.0 °C above average. Overnight minimum temperatures were generally about 1.5°C above average. They were almost 3.0 °C above average in Paeroa and Nelson.

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

Location	Mean temperature	Departure from average (°C)	Records Began	Comments
Dargaville	12.6	+1.4	1943	2 nd highest
Whangarei Airport	12.6	+1.5	1968	3 rd highest
Paeroa	11.0	+1.8	1947	Well above average
Pukekohe	11.5	+1.6	1970	2 nd highest
Hamilton Airport	9.7	+1.5	1971	Well above average
Wanganui, Spriggens Pk	11.0	+1.6	1937	2 nd highest
Takaka	9.2	+1.7	1986	2 nd highest
Farewell Spit	11.1	+2.2	1937	Highest
Nelson Airport	8.9	+1.9	1943	3 rd highest
Blenheim Research	9.7	+2.3	1986	Highest
Blenheim Airport	8.8	+1.8	1941	2 nd highest
Hanmer Forest	6.4	+2.3	1906	2 nd highest
Mt Cook Village	3.8	+1.6	1929	Well above average
Winchmore	7.1	+1.6	1950	2 nd equal highest
Lincoln	7.7	+1.6	1987	3 rd highest
Lake Tekapo	3.2	+1.5	1927	Well above average
Tara Hills	4.2	+2.2	1950	Highest
Wanaka Airport	5.0	+1.4	1992	Highest
Dunedin Airport	6.3	+1.2	1963	Highest
Queenstown	5.6	+1.5	1872	2 nd highest
Queenstown Airport	4.6	+1.4	1872	Well above average
Lauder	3.7	+2.0	1986	Highest
Clyde	4.9	+2.0	1983	2 nd highest
Invercargill Airport	6.6	+1.4	1948	Highest

BELOW AVERAGE RAINFALL IN MANY EASTERN DISTRICTS FROM WAIRARAPA TO OTAGO; ABOVE AVERAGE RAINFALL IN THE NORTH OF THE NORTH ISLAND

Rainfall was less than 50 percent (half) of normal rainfall in parts of Canterbury and Otago, and about 50 percent of normal in Wairarapa. Totals were 75 percent or less (three quarters) of normal around Rotorua. In contrast, rainfall was 150-175 percent of normal in much of Northland, parts of Bay of Plenty, and along the Kaikoura coast. Rainfall was near normal elsewhere.

Near record low July rainfall was recorded at:

Location	July Rainfall (mm)	Percentage of normal	Year records began	Comments
Lincoln	18	24	1881	Well below average
Le Bons Bay	26	22	1989	3 rd lowest
Lake Tekapo	8	15	1925	Well below average
Oamaru Airport	12	25	1941	Well below average
Ranfurlly	7	28	1975	3 rd lowest
Clyde	7	25	1983	3 rd equal lowest

Raoul Island	48	32	1940	2 nd lowest
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VERY SUNNY IN INLAND SOUTH CANTERBURY, AND OTAGO CLOUDIER IN TARANAKI, NELSON, AND MARLBOROUGH

Sunshine hours were at least 120 percent of average in inland south Canterbury, and coastal Otago, and more than 110 percent of average in Southland. However, they were less than 80 percent of average in Taranaki, and less than 90 percent of average in Nelson, and Marlborough. Hours of bright sunshine were near average elsewhere.

Near or record low July sunshine hours were recorded at:

Location	July sunshine (hours)	Percentage of normal	Year Records began	Comments
New Plymouth Airport	96	71	1973	2 nd lowest
Motueka, Riwaka	102	69	1965	Lowest

Near or record high July sunshine hours were recorded at:

Location	July sunshine (hours)	Percentage of normal	Year Records began	Comments
Lake Tekapo	142	131	1928	Well above average

JULY'S CLIMATE IN THE FOUR MAIN CENTRES

Of the four main centres Dunedin was the driest and sunniest, and Auckland the warmest. Rainfall was above average in Auckland, but below average in the three other main centres. Temperatures were much above average in all four centres. Sunshine hours were well above average in Dunedin, and below average in Auckland, Wellington, and Christchurch.

Location	July Mean Temp. (°C)	Dep. from normal (°C)		July rainfall (mm)	% of normal		July Sunshine (hours)	% of normal	
Auckland	12.1 ^a	+1.3	Above average	187 ^b	128	Above average	121 ^a	93	Below average
Wellington	9.9	+1.1	Above average	113	83	Below average	97	83	Below average
Christchurch	7.1 ^c	+1.2	Above average	37 ^c	51	Below average	112	90	Below average
Dunedin	7.7	+1.2	Above average	25	35	Well below average	126	125	Well above average

a Mangere b Mt Albert c Christchurch Airport

HIGHLIGHTS AND EXTREME EVENTS

- **Temperature**

The highest temperature during July 2005 was 22.0°C recorded in Hastings on the 15th. The lowest temperature for the month was -8.5°C, recorded at Middlemarch on the 15th.

- **High rainfall**

4-6 July: High rainfall totalling 130 – 215 mm occurred in inland and eastern parts of Northland, with some flooding, and several schools closed.

10 July: Surface flooding occurred near and about Matata, Bay of Plenty, after heavy rainfall, with truck drivers

having to be rescued.

17 July: High rainfall totalling 160 - 170 mm occurred in the high country of southern Coromandel and western Bay of Plenty, with a washout near Pauanui, north of Whangamata. The rainfall was accompanied by severe electrical storms from Northland to Thames, with some places recording 200 lightning strikes in an hour.

18 July: Rainfall totalling 80-90 mm occurred in Golden Bay and western Nelson.

19 July: Isolated, but heavy rainfall (about 100 mm), occurred in the Kakanui Range (north Otago) causing the Kakanui River to reach its highest flood level since January 2002.

- **High winds**

12/13 July: High winds damaged power lines on the Coromandel Peninsula overnight, leaving about 9000 residents without electricity, including the townships of Whitianga and Coromandel.

The highest wind gust for the month was 141 km/h from the west, recorded at South West Cape on the 11th.

- **Fog**

7-8 July: Dunedin Airport was closed with fog on both days.

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