

**National Climate Summary – Summer 2005/06**

**Rainfall: Extremely high in Bay of Plenty and Taupo; normal or below normal in many other regions**

**Soil moisture: Early significant deficits in eastern areas of the country, spreading to some other parts of North Island later**

**Temperature: Above average overall with very hot conditions in central Otago on a few days**

**Sunshine: Sunny in Wellington, Westland, and coastal areas of Otago and Southland**

Summer rainfall was extremely high in parts of Bay of Plenty and Taupo. Many locations within these regions recorded more than 150 percent of (one and a half times) normal rainfall, and totals of 400 to 550 mm during the season. Rainfall was also well above normal in Wanganui, and parts of Southland. Rainfall was near or below normal in many other regions. Early significant soil moisture deficits developed in eastern areas of both islands, and spread in late summer to Northland, Auckland and Manawatu. The national average temperature of 17.2 °C was 0.6 °C above normal and the highest for summer since 1998/99, mainly due to an unusually warm December. Sunshine hours were above normal for summer in Wellington, Westland, and coastal areas of Otago and Southland. The overall summer climate pattern was mixed, being dominated by more frequent northerlies in December, westerlies over the South Island in January, and south easterlies in the northeast of the North Island in February.

**Major Highlights:**

- The highest temperature recorded during the summer was 36.1 °C recorded at Alexandra on 29 January. The lowest temperature for the summer was -1.9 °C at The Chateau, Mt. Ruapehu on 24 February.

There were at least three high rainfall/flood-producing events – one with damaging winds in the Coromandel, Thames/Hauraki Plains over 24-25 January, another in Rotorua on 28 January, and another in Bay of Plenty over 8-11 February.

A mix of thunderstorms, damaging hail and a tornado affected Southland on 5 December, thunderstorms and a tornado in Taranaki on 6 December, tornado-like winds and intense hail in Southland on 15 December, thunderstorms and damaging hail in Canterbury on 5 February, and tornado-like winds in Taranaki on 8 February.

On 2-4 January, winds gusted to 165 km/h from the northwest at Mt. Kaukau; gales buffeted Wellington. Gales also blew in Southland.

Of the five main centres, Hamilton was the wettest, and Wellington the sunniest. Rainfall was above average in Hamilton, below average in Auckland, and near average in the three other main centres. Temperatures were above average in all five main centres. Summer sunshine hours were above average in Wellington and Dunedin, near average in Auckland and Christchurch, and below average in Hamilton.

**Rainfall:** Summer rainfall was approximately 150 percent of normal in Bay of Plenty, Taupo, Wanganui, and parts of Southland. Rainfall was also above normal in parts of Coromandel, Waikato, south Taranaki, Nelson, and north Otago. In contrast, rainfall was below normal in parts of Auckland, north Taranaki, Hawke's Bay, Wairarapa, the Kaikoura Coast, inland south Canterbury, and Central Otago.

**Temperature:** Seasonal mean temperatures were above average throughout much of New Zealand, especially Bay of Plenty, Hawke's Bay, central Wairarapa, Horowhenua, Nelson, coastal Otago, and Southland.

**Sunshine:** Sunshine hours were above normal in Wellington, Westland, and coastal areas of Otago and Southland, and below normal in Waikato.

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**HIGH SUMMER RAINFALL IN BAY OF PLENTY, TAUPO, WANGANUI, AND SOUTHLAND; AVERAGE OR BELOW AVERAGE RAINFALL IN MOST OTHER REGIONS**

Rainfall was well above average, being approximately 150 percent of normal in Bay of Plenty, Taupo, Wanganui, and parts of Southland. Rainfall was also above normal, at least 125 percent (one and a quarter times) in parts of Coromandel, Waikato, south Taranaki, Nelson, and north Otago. In contrast, rainfall was less than 75 percent of (three quarters) normal in parts of Auckland, north Taranaki, Hawke’s Bay, Wairarapa, the Kaikoura Coast, inland south Canterbury, and Central Otago. Summer rainfall was near normal elsewhere.

**Near or record high summer rainfall was recorded at:**

Location	Summer 2005/06 rainfall (mm)	Percentage of normal	Year Records began	Comments
Whakatane Airport	426	164	1974	3 <sup>rd</sup> highest
Taupo Airport	440	165	1976	Highest

**ABOVE AVERAGE TEMPERATURES IN MOST REGIONS**

Seasonal mean temperatures were 0.5 to 0.9 °C above average throughout much of New Zealand. However, they were more than 1.0 °C above average in parts of Bay of Plenty, Hawke’s Bay, central Wairarapa, Horowhenua, Nelson, coastal Otago, and Southland.

**Near or record high summer mean air temperatures were recorded at:**

Location	Mean temperature	Departure from average (°C)	Records Began	Comments
Whakatane Airport	19.3	+1.2	1974	Equal 2 <sup>nd</sup> highest
Motu	16.5	+1.4	1990	2 <sup>nd</sup> highest
Napier Airport	19.2	+0.9	1973	Equal 3 <sup>rd</sup> highest
Levin	18.1	+1.1	1895	Equal 3 <sup>rd</sup> highest
Raoul Island	22.9	+1.0	1940	2 <sup>nd</sup> highest

**SUNNY IN WELLINGTON, WESTLAND, AND COASTAL OTAGO AND SOUTHLAND**

Sunshine hours were about 110 percent of normal in Wellington, Westland, and coastal areas of Otago and Southland, and 90 percent of normal in Waikato. Totals were near normal elsewhere.

**SUMMER CLIMATE IN THE FIVE MAIN CENTRES**

Of the five main centres, Hamilton was the wettest, and Wellington the sunniest. Rainfall was above average in Hamilton, below average in Auckland, and near average in the three other main centres. Temperatures were above average in all five main centres, most strongly in Wellington. Summer sunshine hours were above average in Wellington and Dunedin, near average in Auckland and Christchurch, and below average in Hamilton.

Location	Summer Mean Temp. (°C)	Dep. from normal (°C)	Summer rainfall (mm)	% of normal	Summer Sunshine (hours)	% of normal

Auckland <sup>a</sup>	19.5	+0.3	Above average	135	65	Below average	666	104	Near average
Hamilton	18.3	+0.4	Above average	289	120	Above average	570	87	Below average
Wellington	17.3	+0.9	Above average	224	102	Near average	758	111	Above average
Christchurch <sup>b</sup>	17.0	+0.4	Above average	114	87	Near average	629	97	Near average
Dunedin	15.4	+0.7	Above average	220	102	Near average	546	109	Above average

a Mangere, b Christchurch Airport

## HIGHLIGHTS AND EXTREME EVENTS

### Temperature

The highest temperature recorded during the summer was 36.1 °C recorded at Alexandra on 29 January. Heat wave conditions prevailed in Central Otago for the 27<sup>th</sup>, 28<sup>th</sup> and 29<sup>th</sup> January with 36°C being recorded in Alexandra, and again on the 10<sup>th</sup> and 19<sup>th</sup> February with temperatures reaching 32°C.

The lowest temperature for the summer was -1.9 °C at The Chateau, Mt. Ruapehu on 24 February.

### High rainfall

13-17 December: rainfall totalled 50 to 100 mm or more over Northland, Thames, Bay of Plenty, and Taranaki.

24-25 January: A depression of tropical origin produced substantial rainfall in Northland, Coromandel, Waikato, Bay of Plenty, and Nelson, with at least 50 mm in many areas. Higher rainfall, totalling 140 mm was recorded at Rotorua Airport over the 24 hour period to 9 am on 25 January, and reports of 260 mm in 14 hours were noted in the Coromandel Peninsula. Surface flooding, occurred throughout these regions, creating hazardous driving conditions for motorists.

28 January: High rainfall, totalling 74 mm, was recorded at Taupo Airport in the 24 hours to 9 am 29 January. The same weather system produced 66 mm of rainfall in Rotorua in the 3-hours from 9 pm, and 32 mm in the hour to 11 pm on 28 January, along with a severe thunderstorm, and surface flooding throughout the district.

8-11 February: High rainfall, totalling 182 mm and 125 mm, was recorded at Whakatane Airport and Rotorua Airport respectively, in the 48 hours to 9 am 11 February. SH2 at Matata was closed due to slips and surface flooding. Major flooding occurred on farmland around Awakeri and Taneatua.

### Hail, thunderstorms, strong winds and tornadoes

5 December: Marble-sized hailstones occurred during thunderstorms in Waimatuku, Southland, after which four tornadoes were sighted, with some damage to property.

6 December: Sudden and brief tornado-like winds occurred in Rotorua damaging property. Frequency lightning strikes occurred in Taranaki on the same day, leaving over 3000 people temporarily without power.

15 December: Tornado-like winds and intense hail also occurred at Heddon, Southland felling trees and destroying crops.

2-4 January: Winds gusted to 165 km/h from the northwest at Mt. Kaukau, mean speeds reaching 115 (violent storm) and 128 km/h (hurricane force) respectively; gales buffeted Wellington city.

24-25 January: Gale force easterlies affected Auckland, and Coromandel, with thousands of homes on the Coromandel Peninsula and the Thames/Hauraki Plains losing power due to fallen branches or trees. A truck was even overturned.

5 February: A violent thunderstorm occurred over Waterton and Pendarves (near Ashburton) between 2 am and 3 am, hail ruining millions of dollars worth of kale, raddish, squash, and onion crops.

8 February: Tornado-like winds blew through Oakura Beach Holiday Park, Taranaki at about 4 am, toppling a caravan.

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