

**National Climate Summary – Summer 2006/07: A Chilly One**

**Temperature: Cold, especially in the North Island and the east of the South Island**

**Rainfall: Below normal in most regions, especially Waikato, Marlborough, and Otago; above normal in parts of Northland and Canterbury**

**Soil moisture: Severe deficits developed during February in the east from Gisborne to Otago, Auckland, Waikato, eastern Bay of Plenty, Wanganui, Manawatu, Wellington, and Nelson**

**Sunshine: Above normal in Northland and Westland; below normal in South Taranaki and North Canterbury**

Mean summer temperatures were well below average. The national average temperature of 15.7°C was 0.9°C below normal and the lowest for summer since 1992/93. December was particularly cold. Summer temperatures were as much as 1.5 °C below average in quite a few eastern areas from coastal Wairarapa to North Canterbury, as well as parts of King Country and Wellington. However, summer temperatures were near average in Nelson. Rainfall was below normal in the west of the North Island from Auckland to Taranaki, as well as Eastern Bay of Plenty, and much of the north, west, and south of the South Island, with less than 50 percent (half) of normal in parts of Waikato, Marlborough, and Otago. By the end of summer severe soil moisture deficits had developed in most eastern areas of both islands from Gisborne to Otago, and spread to Auckland, Waikato, Eastern Bay of Plenty, Wanganui, Manawatu, Wellington, and Nelson. Above average summer rainfall occurred in parts of Northland and Canterbury. Sunshine hours were above normal in Northland and Westland, and below normal in South Taranaki and North Canterbury. The overall summer climate pattern was dominated by more anticyclones in the south Tasman Sea producing more frequent cool southerly winds over the whole of New Zealand. At the same time, seas around New Zealand were about 1°C below normal.

**Major Highlights:**

- The highest temperature recorded during the summer was 33.4 °C recorded in Murchison on 7 February. The lowest temperature for the summer was -2.5 °C at The Chateau, Mt. Ruapehu on 10 December.

The highest wind gust was 167 km/h from the northwest recorded at Rock and Pillar, Otago, on 22 January

There were at several high rainfall/flood-producing events – one occurred in Christchurch (74 mm) and over Banks Peninsula on 20 December and in South Canterbury (with flooding in Ashburton) on the 29 December; another occurred in parts of Coromandel and Bay of Plenty on the 9 January, and over 200 mm occurred in parts of Northland over 5-7 February.

A hailstorm affected Riwaka on 1 December, with slight damage occurring to apples in some orchards.

Of the five main centres, Auckland was the warmest, driest, and sunniest, Dunedin the coolest, and Wellington the wettest. Summer temperatures were below average in all five main centres. Auckland was sunnier, cooler and much drier than normal; Hamilton much cooler and drier than normal; Wellington much cooler than normal; Christchurch much cooler, wetter and cloudier than normal; and Dunedin cooler and drier than normal.

**Temperature:** Seasonal mean temperatures were well below average throughout much of New Zealand. These were at least 1.0 °C below average over the North Island and the east of the South Island, and 1.5 °C below average in coastal Wairarapa, parts of King Country, Wellington, North Canterbury, and the Kaikoura Coast. Summer temperatures were near average in Nelson.

**Rainfall:** Summer rainfall was less than 50 percent (half) of normal in parts of Waikato, Marlborough, and Otago, and also below normal in the west of the North Island from Auckland to Taranaki, as well as Eastern Bay of Plenty, and much of the north, west, and south of the South Island. Rainfall was above normal in parts of Northland and Canterbury.

**Sunshine:** Summer sunshine hours and/or solar radiation were above normal in parts of Northland and Westland, and below normal in South Taranaki, and North Canterbury. Sunshine hours were near normal elsewhere.

**For further information, please contact:**

**Dr Jim Salinger – Principal Scientist – Climate, NIWA National Climate Centre, Auckland, Tel. (09) 375 2053, or (027) 521 9468 (mobile).**

**Stuart Burgess – Climatologist – NIWA National Climate Centre, Wellington, Tel. (04) 386 0569**

**TEMPERATURE: WELL BELOW AVERAGE THROUGHOUT MUCH OF NEW ZEALAND**

Seasonal mean temperatures were at least 1.0 °C below average throughout much of the North Island and the east of the South Island, and as much as 1.5 °C below average in coastal Wairarapa, parts of King Country, Wellington, North Canterbury, and the Kaikoura Coast. Temperatures were about 0.5°C below average in the west of the South Island, and near average in Nelson. The national average temperature of 15.7°C was 0.9°C below normal and the lowest for summer since 1992/93.

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

Location	Mean temperature	Departure from average (°C)	Records Began	Comments
Kaitaia Observatory	18.0	-1.1	1985	2 <sup>nd</sup> lowest
Kerikeri EWS	17.8	-1.0	1981	Lowest
Mokohinau Island	18.7	-0.9	1972	Equal 3 <sup>rd</sup> lowest
Auckland, Henderson	18.4	-0.9	1985	2 <sup>nd</sup> lowest
Auckland, Owairaka	17.8	-1.1	1949	Equal 3 <sup>rd</sup> lowest
Taupo Airport	15.5	-0.9	1976	Equal 3 <sup>rd</sup> lowest
Taumarunui	16.3	-1.5	1947	Equal 2 <sup>nd</sup> lowest
Castlepoint	15.8	-1.9	1972	Lowest
Hicks Bay	17.4	-1.1	1990	2 <sup>nd</sup> lowest
Whakatu	16.5	-1.4	1982	3 <sup>rd</sup> lowest
Mahia	16.8	-1.3	1990	2 <sup>nd</sup> lowest
Wellington, Kelburn	14.9	-1.6	1928	Equal 3 <sup>rd</sup> lowest
Blenheim Research	16.7	-0.9	1985	Equal 3 <sup>rd</sup> lowest
Kaikoura	14.5	-1.7	1963	Lowest
Christchurch Airport	15.0	-1.6	1953	Equal 2 <sup>nd</sup> lowest
Clyde	15.5	-1.1	1983	Equal 2 <sup>nd</sup> lowest
Ettrick	14.3	-1.8	1985	Equal lowest
Gore	12.9	-1.0	1987	2 <sup>nd</sup> lowest

**RAINFALL: BELOW NORMAL IN MOST REGIONS, ABOVE NORMAL IN NORTHLAND AND PARTS OF CANTERBURY**

Rainfall was less than 75 percent (three quarters) of normal in the west of the North Island from Auckland to Taranaki, as well as Eastern Bay of Plenty, and much of the north, west, and south of the South Island. Waikato, Marlborough, and parts of Otago were the driest regions, some locations recording less than 50 percent (half) of their normal summer rainfall. Rainfall was at least 125 percent (one and a quarter times) of normal in parts of Northland and Canterbury. Summer rainfall was near normal elsewhere.

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

Location	Summer 2006/07 rainfall (mm)	Percentage of normal	Year Records began	Comments
Pukekohe	130	46	1986	3 <sup>rd</sup> lowest
Awatere Valley	50	43	2001	Lowest
Tara Hills	69	51	1949	3 <sup>rd</sup> lowest
Wanaka Airport	70	45	1992	2 <sup>nd</sup> lowest

**SUNSHINE: ABOVE AVERAGE IN NORTHLAND AND WESTLAND; BELOW AVERAGE IN SOUTH TARANAKI, AND NORTH CANTERBURY**

Summer sunshine hours and/or solar radiation were more than 110 percent of normal in parts of Northland and Westland, and less than 90 percent of normal in South Taranaki, and North Canterbury. Sunshine hours were near normal elsewhere.

**SUMMER CLIMATE IN THE FIVE MAIN CENTRES**

Of the five main centres, Auckland was easily the warmest, driest, and sunniest, Dunedin the coolest, and Wellington the wettest. Summer temperatures were below average in all five main centres, especially Wellington and Christchurch. Rainfall was above normal in Christchurch, near normal in Wellington, and below normal in Auckland, Hamilton, and Dunedin. Summer sunshine was above normal in Auckland, below normal in Christchurch, and near normal in the three other centres.

Location	Summer Mean Temp. (°C)	Dep. from normal (°C)		Summer rainfall (mm)	% of normal		Summer Sunshine (hours)	% of normal	
Auckland <sup>a</sup>	18.3	-1.0	Below average	112	48	Well below normal	680	106	Above normal
Hamilton	17.1	-0.8	Below average	170	71	Below normal	605	93	Near normal
Wellington	14.9	-1.6	Well below average	212	96	Near normal	676	99	Near normal
Christchurch <sup>b</sup>	15.0	-1.6	Well below average	162	124	Above normal	582	90	Below normal
Dunedin	13.8	-1.0	Below average	165	77	Below normal	482	96	Near normal

a Mangere, b Christchurch Airport

**HIGHLIGHTS AND EXTREME EVENTS**

**Temperature**

The highest temperature recorded during the summer was 33.4 °C recorded in Murchison on 7 February. The lowest temperature for the summer was -2.5 °C at The Chateau, Mt. Ruapehu on 10 December.

### **High rainfall**

20 December: Rainfall totalled over 70 mm in Christchurch and 50 mm on Banks Peninsula.  
19 December: Over 75 mm in Whitianga.  
29 December: Over 80 mm in Ashburton, producing flooding.  
9 January: About 60 mm occurred on the Coromandel and in Western Bay of Plenty.  
5-7 February: Between 150 to over 200 mm of rain fell in much of northern Northland, with 91 mm in 6 hours at Cape Reinga. SH1 was closed by a washed out bridge access near Te Kao, restricting access. Further south, Whatawhata received 112 mm on the same day.

### **Snowfall**

Arthur's Pass was closed due to snowfall over the night of 30 November/1 December. Sleet and snow were observed at Porters Pass on 30 December.

### **Hailstorm**

A hailstorm hit Riwaka at about 2pm on 1 December, with slight damage occurring to apples in some orchards.

### **Strong winds**

A wind gust of 167 km/h from the northwest was recorded at Rock and Pillar, Otago, on 22 January.

### **For further information, please contact:**

**Dr Jim Salinger – Principal Scientist – Climate, NIWA National Climate Centre, Auckland,**  
Tel. (09) 375 2053, or (027) 521 9468 (mobile)

**Stuart Burgess – Climatologist – NIWA National Climate Centre, Wellington, Tel. (04) 386 0569, or**  
**Geoff Baird, NIWA Communications Manager Tel. (04) 385-0543 or (025) 229 6314.**

**[www.niwa.co.nz/ncc](http://www.niwa.co.nz/ncc)**

**Copyright NIWA 2006. All rights reserved.**