

National Climate Summary – June 2004

- **Temperature:** Very warm, especially in the east from Wairarapa to Central Otago
- **Rainfall:** Extremely dry in North Canterbury, but above average in many western regions
- **Sunshine:** Sunny over much of the in the North Island, but cloudier than usual in Westland as well as Motueka and Queenstown

June 2004 was the 5th warmest on record, temperatures being well above average, especially in the east from Wairarapa to Central Otago, by 1.5–2.5°C. More northwesterlies produced the milder temperatures. These caused well below average rainfall in some eastern South Island districts, with less than 10 mm recorded in some places, but above average rainfall in many western regions. It was sunny over much of the North Island and inland South Canterbury, but sunshine totals were less than usual in Westland as well as Motueka and Queenstown. Despite the warmth, a few cold wintry outbreaks occurred. The June climate pattern was due to more frequent depressions (“lows”) in the south Tasman Sea, and more anticyclones (“highs”) over and east of northern New Zealand with northwesterlies more prevalent.

Highlights

- The highest June 2004 temperature was 22.5°C, recorded at Darfield on the 4th. The lowest temperature for the month was –7.0°C, recorded at Fairlie and St. Bathans on the 13th.
- Significant rainfall occurred in northwestern districts of the South Island on the 15th, 18th, and 20th, with surface flooding after several days of rainfall to the 21st; closing some central North Island roads. Rainfall and flooding affected the East Cape/Gisborne region on the 29th and 30th. The same storm produced gales in Hawke’s Bay, where power was cut off from 11,000 homes.
- Snowfall occurred in the central North Island on the 1st, closing the Desert Road. Further cold southwesterlies produced heavy snowfall in Central Otago, Arthur’s Pass, Nelson Lakes, and the Ruapehu/Tongariro district of the central North Island on the 22nd, resulting in the closure of several high country roads. Motorists were also stuck in the snow, and some Central Otago schools closed.
- High winds buffeted exposed parts of Auckland on the 22nd, felling trees and lifting roof tiles. Electrical storms and thick hail also occurred in parts of the upper North Island.
- Auckland was the sunniest and Christchurch the driest main centre. Rainfall was below average in Wellington, Christchurch, and Dunedin, and near average in Auckland. Temperatures were above average in all four centres, especially Christchurch. Sunshine hours were above normal in Auckland and Wellington, and near normal in the other two main centres.

Temperature: The June national average temperature of 9.8°C was 1.3°C above normal, and 5th highest for June since reliable measurements commenced in the 1850s. Only June 2003 (10.3°C), 1971 (10.3°C), 1916 (9.9°C), and 2002 (9.8°C) were warmer. Mean temperatures were above average everywhere, being 1.5 to 2.5°C above average throughout much of the eastern South Island from Marlborough to Central Otago as well as Wairarapa.

Rainfall: Rainfall was above average in the western North Island from the King Country to Manawatu, and the west of the South Island from Buller to Fiordland, as well as in the Gisborne high country, eastern Bay of Plenty, Hawke’s Bay, Nelson, inland South Canterbury, Southern Lakes, Central Otago, and coastal Southland. It was very wet with rainfall almost 200 percent (twice) average in parts of King Country, Buller, Westland, and Fiordland. Rainfall was less than 25 percent (a quarter) of average in north Canterbury and along the Kaikoura Coast. Totals were also below average in coastal areas of Otago.

Sunshine: Sunshine hours were above normal over much of the North Island, as well as inland South Canterbury, below normal in Westland, and well below normal in Motueka and Queenstown.

For further information, please contact:

Dr Jim Salinger – Senior Climate Scientist, NIWA National Climate Centre, Auckland,
Tel. (09) 375 2053 (Business) 025 540 707 (mobile)
or Stuart Burgess – Climatologist, NIWA Wellington Tel. (04) 386 0569

Detailed report follows

Much warmer than normal overall, especially in the east

Mean temperatures were 1.5 to 2.5°C above average throughout much of the eastern South Island from Marlborough to Central Otago, as well as Wairarapa, at least 1.0°C above normal throughout much of the North Island, and 0.5 to 0.9°C above normal in Northland, Bay of Plenty, and the west of the South Island.

High June mean air temperatures were recorded at:

Location	Mean temperature	Departure from average (°C)	Records began	Comments
New Plymouth Airport	11.9	+1.6	1944	Well above average
East Taratahi	9.6	+2.1	1973	3 rd highest
Ohakune	7.3	+1.5	1994	3 rd highest
Farewell Spit	12.1	+2.4	1971	3 rd highest
Blenheim Research	10.1	+2.2	1986	3 rd highest
Hanmer Forest	7.3	+2.6	1906	3 rd equal highest
Kaikoura	10.9	+2.2	1964	2 nd highest
Winchmore	7.8	+1.8	1950	3 rd equal highest
Rangiora	8.5	+2.3	1965	Highest
Christchurch Airport	8.1	+1.9	1954	Highest
Lincoln	8.6	+2.2	1881	3 rd highest
Tara Hills	4.8	+2.5	1950	3 rd highest
Wanaka Airport	5.8	+2.0	1992	3 rd highest
Dunedin Airport	6.8	+1.5	1963	Well above average
Lauder	5.5	+2.7	1982	3 rd highest
Clyde	5.0	+1.5	1983	3 rd equal highest

Well below average rainfall in North Canterbury

Rainfall was less than 25 percent (a quarter) of average in North Canterbury and along the Kaikoura Coast, less than 50 percent (half) of average in central Marlborough and coastal South Canterbury, and less than 75 percent (three quarters) of average in coastal areas of Otago.

Low June rainfall was recorded at:

Location	June rainfall (mm)	Percentage of normal	Year records began	Comments
Hanmer Forest	29 ^a	28	1905	3 rd lowest
Kaikoura	8	11	1949	Lowest
Rangiora	4	6	1965	2 nd lowest
Christchurch Airport	6	9	1944	2 nd equal lowest
Lincoln	9	16	1881	3 rd equal lowest

a to 9am 28 June

Above average rainfall in many western regions

It was very wet with rainfall almost 200 percent (twice) of average in parts of King Country, Buller, Westland, and Fiordland. Rainfall was at least 125 percent (one and a quarter times) of average in the western North Island from King Country to Manawatu, and the west of the South Island from Buller to Fiordland, as well as the Gisborne high country, eastern Bay of Plenty, Hawke's Bay, Nelson, the Southern Alps, inland South Canterbury, Southern Lakes, Central Otago, and coastal Southland.

High June rainfall was recorded at:

Location	June rainfall (mm)	Percentage of normal	Year records began	Comments
Taumarunui	257 ^a	193	1914	Well above average
Hicks Bay	309	197	1991	Highest
Arapito	407 ^b	205	1978	2 nd highest
Reefton	322	185	1961	Well above average
Arthurs Pass	654 ^a	194	1917	3 rd highest
Haast	404	215	1941	Well above average
Milford Sound	872	198	1930	3 rd highest

^a to 9am 29 June

^b to 9am 28 June

Sunny over much of the North Island

Sunshine totals were at least 110 percent of normal over much of the North Island, as well as inland South Canterbury. Sunshine hours were much lower than normal in Motueka and Queenstown, below normal in Westland, and near normal in most other districts.

Near or record June sunshine was recorded at:

Location	June sunshine (hrs)	Percentage of normal	Year records began	Comments
Dargaville	118	130	1943	Well above average
Motueka, Riwaka	90	66	1965	Well below average
Lake Tekapo	139	144	1928	Well above average
Queenstown	53 ^a	71	1930	Well below average

^a to 29 June

June's climate in the four main centres

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

Location	June mean temp. (°C)	Dep. from normal (°C)		June rainfall (mm)	% of normal		June sunshine (hours)	% of normal	
Auckland	12.9 ^a	+1.2	Well above average	115 ^b	83	Near average	125 ^a	113	Above average
Wellington	10.5	+1.0	Above average	63	43	Well below average	104	105	Above average
Christchurch	8.1 ^c	+1.9	Well above average	6 ^c	9	2 nd equal lowest	116 ^c	97	Near average
Dunedin	8.0	+1.0	Above average	42	57	Below average	87	101	Near average

a Mangere b Mt. Albert c Christchurch Airport

Highlights and extreme events

- The highest June 2004 temperature was 22.5°C, recorded at Darfield on the 4th. The lowest temperature for the month was –7.0°C, recorded at Fairlie and St. Bathans on the 13th.
- Gale force northwesterlies buffeted Wellington on the 4th, with gusts to 135 km/h recorded atop Mt Kaukau.
- Significant high intensity rainfall totalling 106 mm occurred at Arapito on the 15th, 101 mm in Motueka on the 18th, and 96 mm at Westport on the 20th. Surface flooding, after several consecutive days of rainfall to the 21st closed SH43 between Stratford and Taumarunui, and SH32 between Tokoroa and Whakamaru. Flooding also occurred on SH1 between Taupo and Turangi. SH4 was blocked by a landslide 54 km north of Wanganui, and slips blocked a lane in the Manawatu Gorge. A slip also closed SH2 south of Opotiki in the eastern Bay of Plenty.
- Cold southwesterlies brought snowfall to the central North Island on 1 June, closing the Desert Road. Further cold southwesterlies produced heavy snowfall in Central Otago, Arthur's Pass, Nelson Lakes, and the Ruapehu/Tongariro district of the central North Island on June 22nd, resulting in the closure of SH94 between Te Anau and Milford Sound, SH1 between Waiouru and Rangipo, and other alternative routes SH49 between Ohakune and National Park, and the route to Whakapapa Village on Tuesday due to snow and ice, with motorists stranded in the snow. Some Central Otago schools were closed.
- High winds, with gusts to 130 km/h buffeted exposed parts of Auckland on June 22nd, felling trees and lifting roof tiles. Thunderstorms and thick hail also occurred in parts of the upper North Island, with lightning severely damaging an Auckland house, cracking the ceiling, destroying electrical connections and equipment, smashing glass windows, and damaging roofing tiles.
- Rainfall and flooding affected the East Cape/Gisborne region on the 29th and 30th, as a deep depression brought gale-force southeasterlies to the district. Rainfall totals of 150–180 mm were reported between Te Puia and Tologa Bay. Rainfall totalled 153 mm at Hicks Bay and over 50 mm in Gisborne on the 29th. A number of residents were evacuated due to flooding in Mangatuna. A large landslide blocked SH35 near Potaka, with damage to roads between Anaura Bay and Waihou Bay, and also near Wairoa. Gales also affected Hawke's Bay, where 11,000 homes were out of power due to fallen trees.

For further information, please contact:

**Dr Jim Salinger – Senior Climate Scientist,
NIWA's National Climate Centre, Auckland**

Tel. 0-9-375 2053 (Business) or 025 540 707 (mobile)

Stuart Burgess – Climatologist, NIWA, Wellington Tel. 0-4-386 0569

or Geoff Baird, NIWA Communications Manager Tel. 0-4-385 0543 or 025 229 6314

www.niwa.co.nz/ncc

© Copyright NIWA 2004. All rights reserved.