

NATIONAL CLIMATE CENTRE

Tuesday 1 July 2008

National Climate Summary – June 2008: Warm in most places especially south of South Island; Wet in Waikato and North Canterbury and dry in Marlborough and Otago

- Temperature: Warm overall; inland South Canterbury and Otago more than 1.5 °C above average;
- Rainfall: Below normal rainfall (around 50% of normal) in north of South Island and Otago; above normal (around 150% or more of normal) in North Canterbury, inland Manawatu, the Central Plateau and Waikato;
- Sunshine: Above normal hours of bright sunshine recorded for most of country.

June, in contrast to May, was much warmer than average in places especially inland South Canterbury and Otago, with temperatures 1.5 to 2°C above average. Average daily maximum temperatures were between 2 and 3°C above average in these same areas. The national average temperature of 8.9°C was 0.5 °C above average, and only slightly cooler than May. Record high extreme daily maximum temperatures occurred in a few South Island locations. It was much sunnier than normal in eastern areas of the North Island, the north of the South Island, Tekapo, Central Otago and Southland.

Rainfall was below normal in Nelson, Marlborough and Otago, with totals around 50% of normal for the month of June. In contrast, rainfall in North Canterbury, inland Manawatu, the Central Plateau, Waikato, and eastern Auckland was well above normal for the month, being between 140 and 190% of normal. In terms of other extremes, the weather got very boisterous from the 22nd to the 29th, with thunderstorms, hail, lightning and high winds affecting the upper North Island through to the 27th, then strong southerlies bringing snow to the Central Plateau on the 28th, and gale force winds in the Wellington area on the 29th. More anticyclones than normal occurred in the Tasman Sea and to the east of New Zealand, with stronger westerlies over New Zealand and to the south.

Further Highlights:

- The highest temperature during June 2008 was 23.1°C recorded at Waipara West on the 15th. This was only 0.9°C below the record South Island temperature for June of 24.0°C recorded at Kaikoura and Temuka on 2 June 1976. Westport Airport, Haast, Appleby, Blenheim Research Centre and Tekapo recorded their highest ever June maximum air temperatures.
- The lowest air temperature during the month was -7.5°C recorded at Hanmer Forest on the 8th.
- The highest 1-day rainfall was 152 mm recorded at Milford Sound on the 6th.
- The highest wind gust for the month was 183 km/h at Hicks Bay on the 18th.
- Of the five main centres, Auckland was the warmest and the wettest. Wellington the sunniest, Christchurch the coldest, and Dunedin the driest.

Temperature: Mean temperatures were particularly warm in inland South Canterbury and Otago, being 1.5 to 2 °C above average. Western and northern North Island areas were also warmer than normal for June (by between 0.5 to 1 °C).

Rainfall: Rainfall was about half (50 percent) of normal in Nelson/Marlborough and Otago, and about one and a half (150%) times normal or more in North Canterbury, inland Manawatu, Central Plateau, Waikato, and eastern Auckland.

Sunshine: June totals of bright sunshine were above average (at least 110 percent of normal) throughout much of the country. Sunshine totals were well above average (125 percent or more of normal) in Hawke's Bay, Wairarapa, eastern Marlborough, Tekapo, Central Otago and Southland.

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TEMPERATURE: WARM – ABOVE AVERAGE IN MOST AREAS

The national average temperature of 8.9°C was 0.5 °C above average. Mean temperatures were particularly high in inland South Canterbury and Otago, being 1.5 to 2 °C above average. Western and northern North

Island areas were also warmer than normal for June (by between 0.5 to 1 °C). Mean temperatures were between 0.5 to 1 °C lower than average in coastal southern Hawke’s Bay. Average daily maximum temperatures were more than 2 °C above average in Leigh, Mt Cook, Darfield, Queenstown and Wanaka; and over 3°C above average in Lake Tekapo. Average daily minimum temperatures were more than 2°C above average in Kaitaia, Dargaville, North Shore, and Whitianga but were lower than normal (by as much as 1 °C) in southern Hawke’s Bay and Tararua District.

Near record high mean daily air temperatures were recorded at:

Location	Mean air temperature (°C)	Departure from Normal	Year Records began	Comments
Kaikohe	12.9	+1.4	1973	3 rd highest
Milford Sound	7.3	+1.6	1935	4 th highest
Puysegur Point	10.2	+1.8	1978	2 nd highest
Arthurs Pass	4.1	+1.5	1978	4 th highest
Mt Cook	4.9	+1.8	1930	4 th highest
Wanaka Airport	5.8	+2.0	1973	3 rd equal highest
Queenstown Airport	5.6	+2.0	1969	2 nd highest
Alexandra	5.7	+2.3	1927	4 th highest
Clyde	5.3	+2.1	1947	3 rd highest
Invercargill Airport	7.2	+1.6	1948	2 nd highest

Near record high mean maximum daily air temperatures were recorded at:

Location	Mean maximum air temperature (°C)	Departure from Normal	Year Records began	Comments
Haast	12.9	+1.5	1950	2 nd equal highest
Milford Sound	11.1	+1.6	1935	Highest
Puysegur Point	12.3	+1.6	1978	Highest
Hanmer Forest	12.7	+2.5	1906	4 th equal highest
Mt Cook	9.6	+2.3	1930	3 rd equal highest
Tekapo	9.9	+3.0	1928	3 rd highest
Fairlie	12.5	+2.1	1925	4 th highest
Wanaka Airport	10.4	+1.9	1973	4 th highest
Queenstown Airport	10.6	+2.6	1969	Highest
Alexandra	11.7	+3.7	1929	2 nd highest
Clyde	10.9	+2.7	1947	2 nd equal highest
Invercargill Airport	11.3	+1.6	1948	2 nd highest

Near record high mean minimum daily air temperatures were recorded at:

Location	Mean minimum air temperature (°C)	Departure from Normal	Year Records began	Comments
Dargaville	10.1	+2.3	1943	Highest
Puysegur Point	8.1	+2.0	1978	Highest
Wanaka Airport	1.1	+2.0	1973	4 th highest

RAINFALL: BELOW NORMAL IN MARLBOROUGH AND OTAGO, ABOVE AVERAGE WAIKATO AND NORTH CANTERBURY

Rainfall was below normal in Nelson, Marlborough and Otago, with totals around 50% of normal for the month of June. In contrast, rainfall in North Canterbury, inland Manawatu, Waikato, and eastern Auckland was well above normal for the month, by between 140 and 160% of normal, and almost double (200%) of normal at Waiouru.

SUNSHINE: ABOVE AVERAGE HOURS OF BRIGHT SUNSHINE IN NORTH AND CENTRAL SOUTH ISLAND

June totals of bright sunshine were above average (at least 110 percent of normal) throughout much of the country. Sunshine totals were well above average (125 percent or more of normal) in Hawke's Bay, Wairarapa, eastern Marlborough, Tekapo, Central Otago and Southland.

Near or record June sunshine hours were recorded at:

Location	June Sunshine (hours)	Percentage of normal	Year records began	Comments
Tekapo	145	151	1928	5 th highest

JUNE'S CLIMATE IN THE FIVE MAIN CENTRES

All the main centres were warmer than normal for June, with Auckland the warmest. There was a very strong north-to-south gradient in rainfall over the month, with Auckland and Hamilton receiving over 150 mm, while Dunedin was the driest of the main centres, receiving only 33 mm. Auckland and Christchurch received near normal sunshine for June, with the other three being above normal. Wellington was the sunniest location.

June 2008 main centre climate statistics:

Location	June mean temp. (°C)	Dep. from normal (°C)		June rainfall (mm)	% of normal		June Sunshine (hours)	% of normal	
Auckland	12.6	1.0	Above average	162 ^a	116	Near normal	116 ^c	104	Near normal
Hamilton	9.8	0.6	Above average	161	137	Above normal	122 ^d	118	Above normal
Wellington	10.4	0.9	Above average	136	93	Near normal	123	125	Above normal
Christchurch ^b	6.8	0.6	Above average	89	143	Above normal	114	96	Near normal
Dunedin	8.0	0.9	Above average	33	47	Well below normal	109	126	Above normal

^a Owairaka ^b Christchurch Airport ^c Mangere ^d Ruakura

HIGHLIGHTS AND EXTREME EVENTS

• Temperature

The highest temperature during June 2008 was 23.1°C recorded at Waipara West on the 15th, the highest June temperature on record at this location. This is only 0.9 °C below the highest ever South Island June temperature of 24.0 recorded on 2 June 1976 at Kaikoura and Temuka.

Near record high extreme maximum daily air temperatures were recorded at:

Location	Extreme maximum temperature (°C)	Year Records began	Comments
Westport Airport	19.0	1937	Highest
Haast	19.0	1950	Highest
Milford Sound	16.6	1935	3 rd highest
Appleby	20.7	1932	Highest
Blenheim Research Centre	21.3	1932	Highest
Blenheim Airport	20.5	1941	3 rd highest
Tekapo	18.5	1928	Highest

The lowest air temperature during the month was -7.5°C recorded at Hanmer Forest on June 8th.

• High winds and tornadoes

The highest wind gust for the month was 183 km/h at Hicks Bay on the 18th.

High winds affected flights into Queenstown on 7 June, and brought trees down in Central Otago. Westerlies and north westerlies gusted up to 110 km/h at Gore, 120 km/h at Kelburn and 170 km/h at Castlepoint.

A mini-tornado damaged properties in Papamoa near Tauranga on 22nd June in blustery northerlies, damaging the roofs of three homes in one street.

Strong cold southwesterlies gusted to 124 km/h at Awakino (Taranaki) and 100 km/h in Auckland on the 24th. Very blustery westerlies and southwesterlies produced gusts up to 147 km/h at Awakino on the 26th, 132 km/h at Manukau Heads and 133 km/h at Cape Reinga on the 27th.

Strong southerlies brought winds gusting as high as 148 km/h in the Wellington region on the 29th, causing 7 metre swells in Cook Strait, cancelling interisland ferries and regional flights in and out of Wellington Airport.

• Heavy rain and flooding

40 to 50 mm of rain in Wellington and the Hutt Valley up to 5 pm on the 29th produced some local flooding of roads, with slips closing Paekakariki Hill road.

• Snowfall

Snow fell from Southland to the Kaikoura coast on 7th June, with up to 20 cm lying in the Maniototo, snow flurries in Dunedin, and snow flakes in Christchurch closing the airport for a few hours. Porters Pass road closed.

Snow fell to 200 metres in Southland on 24th June, with snow and sleety conditions to low levels in the east of the South Island.

Snow closed roads around Ruapehu including the Desert Road on the 28th, after heavy snow fell on the Central Plateau.

• Thunder and lightning

Hail and thunder occurred from Wanganui to Auckland on the 24th, and blustery southwesterlies on the 25th and 26th produced thunder, lightning and hail from Taranaki to Auckland. Lightning cut power to 4000 Waitara residents.

A flash lightning storm brought down trees, power lines and lifted roofs in south east Auckland on the morning of the 27th.

On the 28th, hail storms lashed Auckland.

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