

National Climate Summary – May 2008: Cold; Record dry and calm in the west and over much of the South Island; Wet in the east of the North Island

- Temperature: Cold overall; Very cold in inland areas of both islands especially at night;
- Rainfall: Record low rainfall in Kapiti, Nelson and Marlborough and the Tekapo basin; double average in Gisborne and Hawke's Bay;
- Sunshine: Very sunny in the west of both islands; below average in Gisborne and Hawke's Bay

May was a cold month, with the national average temperature of 9.6°C being 1.1°C below average. This made it almost 4°C lower than mean air temperatures in April, and the coldest May since 1992. Mean temperatures were particularly cold in inland South Island areas being 1.5 to 2°C below average, and also in central North Island areas. It was particularly cold at night in central and south western areas of the North Island, and inland South Island areas, with daily average minimum temperatures at least 2°C below average. It was especially sunny in western areas with record totals recorded in the Waikato and Manawatu. In contrast it was very cloudy in the east of the North Island. It was much frostier than normal, with ground frosts of 5°C or more occurring on 24 days in some inland areas.

Manawatu/Horowhenua, and the north, western and alpine areas of the South Island endured extreme low rainfall. Totals were a mere tenth (10 percent) of normal in Kapiti, Nelson and central Marlborough, Tekapo and Timaru, with monthly totals of less than 10 mm making it the driest May on record in these places. May totals were less than half (50 percent) of normal throughout other western and alpine areas and the Manawatu. By contrast, rainfall was double normal (200 percent) in the east of the North Island.

In terms of other extremes it was a very quiet month, with few high intensity rainfall events. Winds were also much lighter than normal in many areas. Anticyclones dominated the weather patterns, and were much more frequent than normal to the south and southeast of the South Island. These blocked the progression of lows, which were much more frequent to the north east of the North Island. Between these features, more easterly winds than normal occurred over the North Island, with much lighter winds than normal over the South Island. There were about 5 days less of strong winds than normal in many areas.

Further Highlights:

- The highest temperature during April 2008 was 21.5°C recorded at Cheviot on the 8th. The lowest air temperature during the month was -7.7°C recorded at Albert Burn in Central Otago on the 4th.
- The highest 1-day rainfall was 84 mm recorded in Khyber Pass Road, Auckland on the 4th.
- The highest wind gust for the month was 183 km/h at Mokohinau Island on the 11th, in strong easterly conditions.
- Of the five main centres, Auckland was the warmest and the wettest. Hamilton was by far the sunniest, and Christchurch the driest and coldest.

Rainfall: Rainfall was only one tenth (10 percent) of normal in Kapiti, Nelson/Marlborough and only half (50 percent) of normal throughout other western areas and alpine South Island areas. Double (200 percent) of normal rainfall occurred in the east of the North Island.

Temperature: Mean temperatures were between 1.5 and 2°C below average in inland areas of both islands, and 1°C below average in most other areas. Night time minimum temperatures were especially low in the west of the North Island, and inland South Island areas.

Sunshine: Above average sunshine hours (at least 110 percent of normal) occurred in the west of both islands and inland areas of the South Island. Sunshine totals were well below normal in the east of the North Island.

For further information, please contact:

**Dr Jim Salinger – Principal Scientist – Climate, NIWA National Climate Centre, Auckland,
Tel. (09) 375 2053 (work) or (027) 521 9468 (mobile) or (09) 576 9468 (Home).**

RAINFALL: EXTREMELY LOW IN THE NORTH AND ALPINE AREAS OF THE SOUTH ISLAND, KAPITI AND MANAWATU, ABOVE AVERAGE IN THE EAST OF THE NORTH ISLAND

Rainfall was extremely low in the north, alpine areas and west of the South Island. Totals were a mere tenth (10 percent) of normal in Kapiti, Nelson and central Marlborough, Tekapo and Timaru, with monthly totals of less than 10 mm in these location, making it the driest May on record. May totals were less than half (50 percent) normal throughout other western and alpine areas and the Manawatu. Rainfall was three-quarters (75 percent) of normal in other western areas of the North Island, and throughout much of the remainder of the South Island. In contrast double (200 percent) normal rainfall occurred in the east of the North Island.

Near or record low May rainfall was recorded at:

Location	May Rainfall (mm)	Percentage of normal	Year records began	Comments
Paraparaumu Airport	12	12	1945	Lowest
Wallaceville	36	28	1924	4 th lowest
Westport Airport	68	34	1944	3 rd lowest
Hokitika Airport	89	37	1866	2 nd lowest
Franz Josef	72	17	1928	2 nd lowest
Riwaka, Motueka	3	3	1943	Lowest
Nelson Airport	8	11	1941	Lowest
Appleby	6	7	1932	Lowest
Blenheim	4	7	1927	Lowest
Blenheim Airport	8	13	1941	Lowest
Awatere Valley	8	11	2001	Very low
Tekapo	7	14	1925	Lowest
Timaru Airport	6	13	1957	3 rd lowest

TEMPERATURE: COLD – WELL BELOW AVERAGE IN INLAND SOUTH ISLAND AREAS

The national average temperature of 9.6°C was 1.1°C below average. This made it almost 4°C lower than mean air temperatures in April. Mean temperatures were particularly cold in inland South Island areas being 1.5 to 2°C below average, and also in central North Island areas. Mean temperatures were 1°C below average in Auckland, the southern half of the North Island and many South Island areas. Only in the west of the South Island were they closer to average. Daily maximum temperatures were up to 2°C below average in Kaikoura, Banks Peninsula and Central Otago, and over 1°C below average in the east of the North Island, and the remainder of inland and eastern areas of the South Island. Daily minimum temperatures were over 2°C below average in the west of the North Island from Taranaki to Wellington, Nelson, Marlborough McKenzie Basin, and Central Otago. In other central North Island areas, and throughout much of the South Island these were at least 1°C below average.

Near record low mean daily air temperatures were recorded at:

Location	Mean maximum air temperature (°C)	Departure from Normal	Year Records began	Comments
----------	-----------------------------------	-----------------------	--------------------	----------

Taupo	7.8	-1.6	1962	Lowest
Castlepoint	11.0	-1.8	1985	3 rd lowest
Waiouru	5.5	-1.5	1962	3 rd lowest
Wanganui Airport	10.8	-1.4	1988	2 nd lowest
Tekapo	3.8	-2.2	1927	4 th lowest
Queenstown Airport	4.6	-2.0	1969	3 rd lowest
Lumsden	5.4	-1.9	1982	2 nd lowest

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

Location	Mean maximum air temperature (°C)	Departure from Normal	Year Records began	Comments
Kaikoura	12.0	-2.2	1964	3 rd lowest
Le Bons Bay	11.3	-1.7	1937	4 th lowest
Tara Hills, Omarama	9.2	-2.4	1950	2 nd lowest
Wanaka Airport	10.0	-2.5	1970	Lowest
Dunedin Airport	11.4	-1.7	1961	4 th lowest
Lumsden	10.4	-1.7	1982	3 rd lowest

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

Location	Mean minimum air temperature (°C)	Departure from Normal	Year Records began	Comments
Taupo Airport	2.3	-2.1	1991	Lowest
Te Kuiti	3.8	-2.5	1959	Lowest
Palmerston North Airport	4.3	-2.3	1962	Lowest
Palmerston North	4.8	-2.6	1928	3 rd lowest
Levin	4.1	-3.0	1896	3 rd lowest
Wallaceville	2.9	-3.1	1940	Lowest
Waiouru	0.4	-2.5	1962	Lowest
Wanganui	5.9	-2.6	1937	2 nd lowest
Wanganui Airport	6.1	-2.6	1988	Lowest
Blenheim Airport	1.5	-2.9	1941	Lowest
Tekapo	-1.2	-2.3	1927	4 th lowest
Queenstown Airport	-0.6	-2.4	1969	2 nd lowest
Lumsden	0.4	-2.3	1982	Equal lowest
Alexandra	-1.0	-2.6	1929	3 rd lowest

SUNSHINE: SUNNY OVER THE WEST OF BOTH ISLAND AND INLAND SOUTH ISLAND AREAS, CLOUDY IN THE EAST OF THE NORTH ISLAND

Above average sunshine hours (at least 110 percent of normal) occurred in the west of both islands and inland areas of the South Island. It was particularly sunny in the Waikato, Taranaki, Manawatu and Horowhenua and the South Island west coast where sunshine hours were 120 percent or more of normal. Many other areas of New Zealand received normal sunshine totals. Only in the east of the North Island were sunshine totals well below average, with only 75 percent of normal.

Near or record May sunshine hours were recorded at:

Location	April Sunshine (hours)	Percentage of normal	Year records began	Comments
Ruakura	178	136	1936	2 nd highest
Palmerston North	155	148	1928	2 nd highest

MAY'S CLIMATE IN THE FIVE MAIN CENTRES

Auckland was the warmest and wettest, Hamilton and sunniest, and Christchurch the driest and coldest of the five main centres. Rainfall was near normal in Auckland and Dunedin, and below normal in the other centres. Temperatures were below normal in all centres. Sunshine hours were well above normal in Auckland and Hamilton, and near normal elsewhere.

May 2008 main centre climate statistics:

Location	Apr. mean temp. (°C)	Dep. from normal (°C)		May rainfall (mm)	% of normal		May Sunshine (hours)	% of normal	
Auckland	12.6	-1.2	Below average	106 ^a	103	Near normal	173	125	Well above normal
Hamilton	10.4	-1.3	Below average	84	84	Below normal	178	136	2 nd highest
Wellington	10.4	-1.1	Below average	100	86	Below normal	139	109	Near normal
Christchurch ^b	7.1	-1.8	Well below average	50 ^c	95	Near normal	145	103	Near normal
Dunedin	8.4	-0.9	Below average	68	98	Near normal	100	100	Near normal

^a Owhairaka ^b Christchurch Airport

HIGHLIGHTS AND EXTREME EVENTS

• Temperature

The highest temperature during May 2008 was 21.5°C recorded at Cheviot on the 8th.

The lowest air temperature during the month was -7.7°C recorded at Albert Burn in Central Otago on May 4th under clear skies.

It was much frostier than normal in May, with ground frosts of 5°C or more occurring on 24 days in some inland areas.

• High winds

The highest wind gust for the month was 183 km/h at Mokohinau Island on the 11th in strong easterly conditions.

• Lightning

A thunderstorm produced an intense lightning storm on May 3rd which 'fried' electrical systems in Lincoln, Canterbury.

• High rainfall and flooding

4 May

In Tauranga 83 mm occurred on May 4th in strong north easterlies. There was also 84 mm in Khyber Pass Road, Auckland which caused localised flooding in houses. 25 mm between 8.00 and 9.15 pm brought flash flooding in Greymouth.

• Snow

Snow fell on the Napier-Taupo highway overnight on May 5th.

On May 23-24th snowfall occurred across the alpine regions of the South Island with many ski fields reporting their first significant snow fall for the season. Reports of between 10-40 cm were not uncommon, with areas in central Otago receiving the most (e.g. Coronet Peak, The Remarkables, Cardrona and Treble Cone). Snow fall data collected at one of our new NIWA snow monitoring sites supported these reports with up to 48cm recorded at Albert Burn - a site situated at about 1280m and about 30km north of Treble Cone and about 20km east of Mt Aspiring.

- **Fog**

Fog on May 16th closed Auckland and Hamilton Airports. and central Otago.

For further information, please contact:

Dr Jim Salinger – Principal Scientist –NIWA National Climate Centre, Auckland,

Tel. (09) 375 2053 (work) or (027) 521 9468 (mobile) or (09) 576 9468 (home);

Dr James Renwick – Principal Scientist– NIWA National Climate Centre, Wellington, Tel. (04) 386 0343 or (021) 178 5550

www.niwascience.co.nz/ncc

Copyright NIWA 2008. All rights reserved.