

National Climate Summary – February 2007:

Very dry and sunny in many regions; west-east temperature contrasts

**Rainfall: Well below normal in most regions, flood producing rainfall in Northland,
Soil moisture: Severe deficits in eastern regions from Gisborne to Otago, as well as Auckland,
Waikato, Eastern Bay of Plenty, Wanganui, Manawatu, Wellington, and Nelson
Temperature: Above average in western and inland South Island regions, below average in
many northern and eastern regions,
Sunshine: Extremely sunny in the west of the South Island**

February was very dry with 50 percent (half) or less of normal rainfall in many regions of New Zealand. Ranfurly (North Otago) had no measurable rainfall in February. Rainfall totalled only 0.4 mm (1% of normal) at Lake Tekapo, making it the driest February there in over 80 years. Mt Cook Village recorded its driest February in over 75 years. Less than 10 mm of rain occurred in parts of Auckland, Nelson, Tekapo, and in North and Central Otago. Severe soil moisture deficits (of at least 130 mm) occurred in February in all eastern regions from Gisborne to Central Otago, as well as Auckland, Waikato, Eastern Bay of Plenty, Wanganui, Manawatu, Wellington, and Nelson (all more severe than normal for the time of year). Significant soil moisture deficits (at least 110 mm) affected many other North Island regions. Only in Northland was rainfall well above normal due to three days of wet flood-producing weather from the 5th through 7th. Temperatures were above average for the second month running in parts of Westland and the Southern Lakes district. Temperatures were also above average in Buller and Nelson. However, temperatures were below average in many northern and eastern regions, and in north Canterbury they were below average for the third consecutive month. The national average temperature of 17.0 °C was 0.2 °C below normal. Sunshine hours were well above normal in the west of the South Island, Hokitika recording its sunniest February in 93 years of measurement, and more February sunshine than most other major towns and cities. Anticyclones ('highs') were very much more frequent than normal southwest of the South Island, extending ridges of high pressure onto New Zealand. This pattern produced more frequent southeasterlies than usual over much of the country.

Other Highlights:

The highest temperatures during February 2007 was 33.4 °C recorded at Murchison on the 7th.
The lowest air temperature during the month was 0.3 °C recorded at Manapouri Airport on the 24th.
Very high flood-producing rainfall (over 200 mm in some areas) occurred throughout Northland and parts of Waikato over the 5-7th.
A wind gust of 141 km/h from the northwest was recorded at Southwest Cape on the 25th.
Auckland was the warmest and driest, and Wellington the sunniest, of the five main centres. Rainfall was below normal in all five main centres. Temperatures were near normal in Hamilton, and below normal in the other four centres. Sunshine hours were above normal in Auckland, Wellington, and Dunedin, and near normal in the other main centres.

Rainfall: Rainfall totals were 25 percent (a quarter) or less of normal in parts of Auckland, Taupo, Eastern Bay of Plenty, Marlborough, Nelson, Westland, inland South Canterbury, North and Central Otago, and 50 percent (half) or less of normal in many other regions. In contrast, rainfall was 200 percent (twice) or more of normal throughout much of Northland, and also above normal in Tauranga.

Temperature: Mean temperatures were 0.5 °C or more above average in Buller, parts of Westland, Nelson, Central Otago, and the Southern Lakes district. In contrast, temperatures were 0.5 °C or more below average in many eastern regions from Gisborne to north Canterbury, as well as Northland, and Wellington.

Sunshine: Sunshine hours were above normal in many northern and western regions, especially in the west of the South Island, as well as Otago and Southern Lakes, and below normal along the Kaikoura Coast.

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).

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

RAINFALL: WELL BELOW NORMAL OVER MUCH OF THE COUNTRY, WELL ABOVE NORMAL IN NORTHLAND

Rainfall totals were 25 percent (a quarter) or less of normal in parts of Auckland, Taupo, Eastern Bay of Plenty, Marlborough, Nelson, Westland, inland South Canterbury, North and Central Otago, and 50 percent (half) or less of normal in many other regions. Offshore, rainfall was less than 50 percent of normal (and lowest on record for February) on Campbell Island.

Near or record low February rainfall was recorded at:

Location	February Rainfall (mm)	Percentage Of normal	Year Records began	Comments
Warkworth	18	24	1973	Equal 3 rd lowest
Auckland, Owairaka	9	13	1949	Equal lowest
Rotorua Airport	13	14	1964	Equal 3 rd lowest
Taupo Airport	10	15	1976	3 rd lowest
Motu	21	21	1991	Lowest
Pukekohe	7	8	1970	2 nd lowest
East Taratahi	16	32	1973	3 rd lowest
Martinborough	11	25	2002	Lowest
Hicks Bay	28	37	1991	Equal 2 nd lowest
Hokitika Airport	29	17	1964	Lowest
Franz Josef	52	14	1983	Lowest
Blenheim Research	10	23	1986	3 rd lowest
Awatere Valley	7	23	2001	2 nd lowest
Arthurs Pass	15 ^b	6	1907	2 nd lowest
Mt Cook Village	13	5	1930	Lowest
Lake Tekapo	0.4	1	1926	Lowest
Tara Hills	2	6	1950	Equal lowest
Wanaka Airport	4	9	1993	Lowest
Ranfurlly	0.0	0	1976	Lowest
Middlemarch	7	15	1916	Equal 3 rd lowest
Manapouri Airport	25	30	1991	3 rd lowest
Lauder	7	16	1943	2 nd lowest
Clyde	7	22	1984	2 nd lowest
Ettrick	20	33	1985	3 rd lowest
Campbell Island	48	45	1942	Lowest

^b2-days missing

In contrast, rainfall was 200 percent (twice) or more of normal throughout much of Northland due to three days of high rainfall at the start of the month, and more than 125 percent (one and a quarter) of normal in Tauranga.

High February rainfall was recorded at:

Location	February Rainfall (mm)	Percentage Of normal	Year Records began	Comments
Kaitaia Observatory	171	222	1986	3 rd highest
Kerikeri EWS	193	207	1982	Well above normal
Kaikohe	245	267	1973	3 rd highest
Dargaville	152	199	1905	Well above normal

TEMPERATURE: BELOW AVERAGE IN MANY NORTHERN AND EASTERN REGIONS, ABOVE AVERAGE IN WESTERN AND INLAND SOUTH ISLAND REGIONS

Mean temperatures were 0.5 °C or more above average in Buller, parts of Westland, Nelson, Central Otago, and the Southern Lakes district. In contrast, temperatures were 0.5 °C or more below average in many eastern regions from Gisborne to north Canterbury, as well as Northland, and Wellington. Temperatures were near average in most other regions. The national average temperature was 17.0 °C (0.2°C below normal).

SUNSHINE: ABOVE AVERAGE IN MANY NORTHERN AND WESTERN REGIONS

February sunshine hours and/or solar radiation were more than 110 percent of normal in many northern and western regions, especially in the west of the South Island, as well as Otago and Southern Lakes. Solar radiation was less than 90 percent of normal along the Kaikoura Coast.

Near record high February sunshine hours were recorded at:

Location	February Sunshine (hrs)	Percentage of normal	Year Records began	Comments
Arapito	207 ^a	120	1980	Equal 3 rd highest
Hokitika	261	142	1913	Highest

^a1-day missing

FEBRUARY'S CLIMATE IN THE FIVE MAIN CENTRES

Auckland was the warmest and driest, and Wellington the sunniest, of the five main centres. Rainfall was below normal in all five main centres. Temperatures were near normal in Hamilton, and below normal in the other four centres. Sunshine hours were above normal in Auckland, Wellington, and Dunedin, and near normal in the other main centres.

February 2007 main centre climate statistics:

Location	Feb. Mean Temp. (°C)	Dep. from normal (°C)		Feb. rainfall (mm)	% of Normal		Feb. Sunshine (hours)	% of Normal	
Auckland	19.6	-0.3	Below normal	9 ^a	13	Equal lowest	228	115	Above normal
Hamilton	18.5	-0.2	Near normal	27	40	Below normal	196	99	Near normal
Wellington	16.5	-0.6	Below normal	17	27	Well below normal	239	114	Above normal
Christchurch	16.2 ^b	-0.6	Below normal	25	60	Below normal	197 ^b	101	Near normal
Dunedin	14.8 ^c	-0.4	Below normal	23	37	Well below normal	170	111	Above normal

^a Owairaka ^b Christchurch Airport ^c Dunedin Airport 9

HIGHLIGHTS AND EXTREME EVENTS

Temperature

The highest temperature during February 2007 was 33.4 °C recorded at Murchison on the 7th. The lowest air temperature during the month was 0.3 °C recorded at Manapouri Airport on the 24th.

High rainfall

There were several high rainfall events, with at least 75 mm in 24 hours. These were:

Date	Region	Location	Rainfall (mm)	Other comments
5-7 Feb.	Northland	Cape Reinga	152	91 mm in 6 hours
		Kaitiaia Airport	186	
		Kerikeri Airport	184	
	Waikato	Kaikohe	206	80 mm in 3 hours
		Dargaville	124	
8 Feb.	Fiordland	Milford Sound	82	SH1 closed due to the washed out Mitimiti Bridge approach near Te Kao (40 km south of Cape Reinga), restricting access to northern areas (500 people isolated).
12 Feb.	Buller	Westport Airport	94	

High winds

A wind gust of 141 km/h from the northwest was recorded at Southwest Cape on the 25th.

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);

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

Geoff Baird, NIWA Communications Manager Tel. (04) 386-0543 or (027) 229-6314.

www.niwascience.co.nz/ncc

Copyright NIWA 2007. All rights reserved.