

National Climate Summary – January 2005

- **Soil moisture: Severe deficits in Gisborne, Hawke's Bay, and north Canterbury, significant deficits in many other regions**
- **Rainfall: Below average in many areas, especially eastern Bay of Plenty, above average in the south of the North Island, central Marlborough, and parts of Otago**
- **Temperature: Cool at first, warm later; several heat-waves**
- **Sunshine: average for most, sunny in the east of the North Island**

Relatively cool conditions prevailed during the first ten days of January. However, weather more typical of summer occurred later, the last ten days of the month being very much warmer. Although the January national average temperature of 16.9°C was 0.2°C below normal, it was considerably higher than the December 2004 national average temperature of 13.4°C. Soil moisture deficits became severe in Gisborne, Hawke's Bay, and north Canterbury, and developed in Northland, Auckland, Bay of Plenty, Taranaki, Wanganui, and Wairarapa. Rainfall was below average in many areas, especially eastern Bay of Plenty. In contrast, rainfall was above average in southern Wairarapa, the Kapiti and Upper Hutt districts, and central Marlborough. Sunshine hours were generally above average in the east of the North Island, as well as north Taranaki, Golden Bay, and West Otago. Anticyclones ('highs') were prevalent over and to the east of New Zealand. Most depressions kept well to the north, west, and southeast of New Zealand.

Highlights:

- The highest January 2005 temperatures were 36.2°C recorded at Darfield on the 15th, and 34.4°C recorded in Murchison on the 27th. Both locations experienced extended heat-waves. Darfield maximum temperatures were 30.0°C or higher on 4 consecutive days from the 13th-16th. Murchison maximum temperatures were 30.0°C or higher on 4 consecutive days from the 24th-27th.
- The lowest temperature for the month was -1.0°C, recorded at Wreys Bush (Southland) on both the 9th and 10th, and at Arthurs Pass on the 18th.
- Rainfall totalling 50-100 mm occurred in Kapiti, Horowhenua, Manawatu, and the Hutt Valley on the 5th, with totals exceeding 300 mm in the Tararuas. This caused flash floods on the Kapiti coast. 23 houses near the Waikanae River, which breached its banks, were evacuated, and roads out of Wellington, including SH1 at Paekakariki were closed for a time.
- Of the four main centres Christchurch was both the sunniest and the driest, with near normal temperatures. Auckland was cooler and drier than average, with near average sunshine hours. Wellington was cooler and wetter than average, with near average sunshine hours, and Dunedin was cooler and drier than average with below average sunshine hours.

Rainfall: Rainfall was well below average (less than 25 percent of normal) throughout eastern Bay of Plenty, and less than 50 percent of normal throughout western Bay of Plenty, much of Northland, Auckland, Coromandel, the Kaikoura Coast, and in north Canterbury. It was also drier than average in Waikato, Ruapehu/Tongariro, Taranaki, Wanganui, and Westland. Rainfall was above average in southern Wairarapa, the Kapiti and Upper Hutt areas, as well as central Marlborough.

Temperature: Mean temperatures were at least 0.5°C below average in Northland and Auckland, about 0.5°C above average in Otago and Southland, and near average elsewhere. The national average temperature was 16.9°C, which was 0.2°C below average.

Sunshine: Sunshine hours were generally above average in the east of the North Island, as well as parts of Taranaki, Golden Bay, and West Otago. However, they were near average elsewhere.

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**BELOW AVERAGE RAINFALL IN MANY AREAS, ESPECIALLY BAY OF PLENTY
ABOVE AVERAGE RAINFALL IN THE SOUTH OF THE NORTH ISLAND, CENTRAL
MARLBOROUGH, AND PARTS OF OTAGO**

Rainfall was well below average (less than 25 percent of normal) in eastern Bay of Plenty, and less than 50 percent of normal in western Bay of Plenty and throughout much of Northland, Auckland, Coromandel, the Kaikoura Coast, and in north Canterbury. It was also drier than average, with less than 75 percent of normal rainfall in Waikato, Ruapehu/Tongariro, Taranaki, Wanganui, and Westland. In contrast, rainfall was above average (at least 125 percent of normal) in southern Wairarapa, the Kapiti and Upper Hutt areas, as well as central Marlborough. Rainfall was generally near average elsewhere.

Near or record low January rainfall was recorded at:

Location	January rainfall (mm)	Percentage of normal	Year Records began	Comments
Warkworth	32	35	1973	3 rd lowest
Whangaparaoa	27	29	1989	2 nd lowest
Henderson, Auckland	28 ^a	32	1986	2 nd lowest
Whakatane Airport	8	9	1975	Lowest for January since 1998
Taupo Airport	13	17	1977	2 nd lowest
Port Taharoa	13	18	1975	Lowest
Hicks Bay	20	26	1992	2 nd lowest
Kaikoura	14	29	1950	Lowest for January since 1990

^a to 9am 31 Jan.

BELOW AVERAGE TEMPERATURES IN THE NORTH AND ABOVE AVERAGE IN THE SOUTH

Mean temperatures were at least 0.5°C below average in Northland and Auckland, about 0.5°C above average in Otago and Southland, and near average elsewhere. The national average temperature was 16.9°C, which was 0.2°C below average.

Near record low January mean air temperatures were recorded at:

Location	Mean temperature	Departure from average (°C)	Records Began	Comments
Warkworth	17.2	-1.5	1973	2 nd equal lowest

AVERAGE SUNSHINE FOR MOST, SUNNY IN THE EAST OF THE NORTH ISLAND

Sunshine hours were 110 percent of average or more throughout much of the east of the North Island, as well as north Taranaki, Golden Bay, and West Otago. Hours of bright sunshine were near average elsewhere.

JANUARY'S CLIMATE IN THE FOUR MAIN CENTRES

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

Location	January Mean Temp. (°C)	Dep. from normal (°C)		January rainfall (mm)	% of normal		January Sunshine (hours)	% of normal	
Auckland	19.0 ^a	-0.7	Below average	23 ^b	31	Well below average	235 ^a	102	Near average
Wellington	16.4	-0.4	Below average	85	118	Above average	235	96	Near average
Christchurch	17.2 ^c	0.0	Average	17 ^c	40	Well below average	248	108	Above average
Dunedin	14.7	-0.5	Below average	53	74	Below average	164	92	Below average

a-Mangere b Mt Albert c-Christchurch Airport

HIGHLIGHTS AND EXTREME EVENTS

• Temperature

The highest January 2005 temperatures were 36.2°C recorded at Darfield on the 15th (the 3rd highest January temperature in records back to 1939), and 34.4°C recorded in Murchison on the 27th (their 2nd highest January temperature in records back to 1999). Darfield maximum temperatures were 30.0°C or higher on 4 consecutive days from the 13th-16th. Murchison maximum temperatures were 30.0°C or higher on 4 consecutive days from the 24th-27th. January 31 was New Plymouth's hottest day for 30 years. The airport recorded 29.2°C, the highest there since January 1975 when 30.3°C was recorded.

The lowest temperature for the month was -1.0°C, recorded at Wreys Bush (Southland) on both the 9th and 10th, and at Arthurs Pass on the 18th. These were the lowest January temperatures at these sites since measurements commenced in 2001 and 1979 respectively.

• High rainfall

Rainfall totalling 50-100 mm occurred in Kapiti, Horowhenua, Manawatu, and the Hutt Valley, and Golden Bay on the 5th. Rainfall totals for 24 hours exceeded 300 mm in the Tararuas, and 230 mm and 100 mm were reported in Otaki in 12 and 3 hours respectively, with 124 mm and 74 mm reported in the Akatarawa Hills during the same periods. The Waitohu Valley Road Bridge was washed out during the high rainfall/flooding event. The flash floods on the Kapiti coast resulted in metre high (waist deep) water at Otaihanga, and 23 houses near the Waikanae River, which breached its banks, were evacuated. Roads out of Wellington, including SH1 at Paekakariki were closed for a time. Localised high, short period rainfall also affected eastern areas of Southland on the same day.

Localised high rainfall also resulted in flooding and landslips in South and West Otago over January 7-8, leaving one bridge closed, and several damaged. Reports of almost 60 mm in an hour were sighted, and 80 mm over 6 hours. The flooding also damaged roads and pasture, and resulted in stock losses.

Heavy rainfall on the afternoon of the 17th resulted in flooding in Dunedin, with totals of 9 mm in 5 minutes

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