

National Climate Summary – February 2008: A Northland flood, but generally a very dry North Island

- Rainfall: Very wet in Northland, and north and central Canterbury; dry over the remainder of the North Island
- Soil moisture: Significant deficits in many North Island areas, Marlborough, and the southeast of the South Island
- Temperature: Above average in western areas, especially South Island southwest
- Sunshine: Extremely high in the south, and also the southwest of the North Island.

February was a month of contrasts.

Rainfall was 50% (half) or less of normal over much of the North Island from Manukau southwards, and in coastal Otago and parts of Southland. As a result, severe soil moisture deficits (more than 130 mm) persisted in Waikato, parts of Bay of Plenty, South Taranaki and northern Manawatu, Hawke's Bay, Wairarapa, as well as Marlborough, and parts of south Canterbury, Otago and Southland.

In contrast, rainfall was at least twice (double) normal in Northland, and north and central Canterbury. A low east of Canterbury produced 30 – 70 mm in Canterbury. Wet northeasterlies on the 23rd and 24th produced 200 – 237 mm in the hills between Kaeo and Kaikohe with some flooding near Kaeo. The same system brought gale northeasterly winds to Northland and Auckland.

February temperatures were above average in western areas, especially in Fiordland, whilst these were near average on the north of the South Island, and the northeast of the North Island. The national average temperature of 17.7°C was 0.5°C above average.

Once again Otago and Southland basked in very sunny conditions.

The month's overall climate pattern was produced by many more lows from the sub tropics and west of New Zealand producing light more north easterlies over the country.

Further Highlights:

- The lowest air temperature during the month was -1.1 °C recorded at Hanmer Forest on the 6th. The highest temperature during February 2008 was 33.6 °C recorded at Christchurch Airport on the 1st.
- A low crossed the South Island on 11/12th triggering thunderstorms with heavy rain, hail and flash flooding in the Canterbury foothills and north Canterbury. These same thunderstorms produced 64 mm at Amberley and 77 mm at Rangiora. A deluge of 23 mm in one hour occurred in Lower Hutt.
- Another subtropical low brought between 200 and 240 mm to the hills between Kaeo and Kaikohe on 22 and 23rd, with wind gusts as high as 145 km/h at Cape Reinga, the highest wind gust for the month. This produced some flooding to Kaeo and blacked out the power to 500 homes north of Wellsford.
- Of the five main centres, Auckland was the warmest, Hamilton the driest, Christchurch the wettest and Wellington the sunniest.

Rainfall: February 2008 rainfall was less than 50 percent (half) of normal in many central and southern areas of the North Island, central Marlborough, coastal Otago and Southland, and only 25 percent (a quarter) of normal in coastal Wairarapa. In contrast totals of 200 percent (double) or more of normal occurred in eastern Northland, and north and central Canterbury.

Temperature: Mean temperatures were at least 0.5 °C above average in the southwest of the South Island, and 0.5°C above average in other western areas of New Zealand.

Sunshine: Sunshine hours were 115 percent of normal from Taranaki to Kapiti, and in Southland and Otago. Sunshine totals were close to, or slightly above average in other areas.

For further information, please contact:

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RAINFALL: BELOW NORMAL IN MOST OF THE NORTH ISLAND, EXTREMELY HIGH IN EASTERN NORTHLAND AND PARTS OF CANTERBURY

February 2008 rainfall was less than 50 percent (half) of normal in many central and southern areas of the North Island, central Marlborough, coastal Otago and Southland, and only 25 percent (a quarter) of normal in coastal Wairarapa and parts of the central plateau. In other South Island areas rainfall was closer to normal.

Near or record low February rainfall was recorded at:

Location	February Rainfall (mm)	Percentage of normal	Year records began	Comments
Waiouru MWD	15	26	1951	3 rd lowest

In contrast, extremely high rainfall occurred in eastern Northland, and near Christchurch, where 200 or 300 percent of normal occurred.

Near or record high February rainfall was recorded at:

Location	February Rainfall (mm)	Percentage of normal	Year records began	Comments
Kerikeri EWS	300	322	1982	3 rd highest
Kerikeri Airport	297	263	1979	3 rd highest
Kaikohe AWS	254	276	1973	2 nd highest
Winchmore EWS	119	225	1947	3 rd highest
Rangiora EWS	147	333	1965	Highest
Christchurch Airport	122	296	1944	3 rd highest

TEMPERATURE: AGAIN ABOVE AVERAGE

Mean temperatures were 0.5 °C above average in the western areas of New Zealand, and closer to average in other areas. The national average temperature was 17.7°C, 0.5°C above average.

SUNSHINE: RECORD HIGH VALUES IN THE SOUTH, BELOW NORMAL IN NORTHLAND

Sunshine hours were 115 percent of normal from Taranaki to Kapiti, and in Southland and Otago. Sunshine totals were close to, or slightly above average in other areas.

Near or record February sunshine hours were recorded at:

Location	February Sunshine (hours)	Percentage of normal	Year records began	Comments
New Plymouth	256	115	1933	3 rd highest

FEBRUARY'S CLIMATE IN THE FIVE MAIN CENTRES

Auckland was the warmest and Hamilton the driest of the five main centres. Christchurch was the wettest, and Wellington the sunniest. Rainfall was very high in Christchurch, but below normal in Hamilton and Wellington. Temperatures were above normal in Hamilton and Wellington. Sunshine hours were above above normal in Wellington and Dunedin.

February 2008 main centre climate statistics:

Location	Feb. mean temp. (°C)	Dep. from normal (°C)		Feb. rainfall (mm)	% of normal		Feb. Sunshine (hours)	% of normal	
Auckland	20.1	+0.2	Near normal	74 ^a	114	Near normal	191	96	Normal
Hamilton	19.1	+0.4	Above normal	26	39	Well below normal	186	94	Normal
Wellington	17.7	+0.6	Above normal	54	88	Below normal	223 ^c	107	Above normal
Christchurch ^b	16.9	+0.1	Near normal	122 ^c	296	3 rd highest	204	104	Near normal
Dunedin	15.5	+0.3	Near normal	62	101	Near normal	178	116	Above normal

^a Owairaka ^b Christchurch Airport ^c 1-day missing

HIGHLIGHTS AND EXTREME EVENTS

• **Temperature**

The lowest air temperature during the month was -1.1 °C recorded at Hanmer Forest on the 6th. The highest temperature during February 2008 was 33.6 °C recorded at Christchurch Airport on the 1st.

• **High winds**

On the 16th strong southwesterlies with gusts of 126 km/h were recorded on Banks Peninsula.

Wind speeds of 145 km/hr occurred at Cape Reinga from the north east on the 22nd. This was the highest for the month. On the same day 110 km/h occurred at Tiritiri.

• **High rainfall**

A low crossed the South Island on 11/12th triggering thunderstorms with heavy rain, hail and flash flooding in the Canterbury foothills and north Canterbury. These same thunderstorms produced 64 mm at Amberley and 77 mm at Rangiora. A deluge of 23 mm in one hour occurred in Lower Hutt.

A subtropical low brought between 200 and 240 mm to the hills between Kaeo and Kaikohe on 22 and 23rd, which caused minor flooding in Kaeo.

• **Severe Soil Moisture Deficits**

By the last day of February severe soil moisture deficits (more than 130 mm) had persisted in the Hauraki plains, parts of the Waikato, southern Taranaki and northern Manawatu, in the east from Napier to the Wairarapa, central Marlborough, and in parts of Otago and Southland. Much of the remainder of the North Island, except Northland were recording significant soil moisture deficit, as well as Nelson, and much of Otago and Southland.

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