

THE WEATHER IN NEW ZEALAND IN DECEMBER 1982

General—December was a cool month, dry in northern and eastern areas of the North Island and the north of the South Island but wet elsewhere.

Winds from a westerly quarter were most frequent in both the north and south of the country this month. Auckland had westerly or south-westerly winds on 22 days while Invercargill had 24 days with westerly or north-westerly winds. Strong to gale force winds were widespread on the 12th and 13th and caused structural damage to energy installations in Taranaki and damage to berry fruit crops in Hawke's Bay and stonefruit in the Levin-Otaki area.

Farmers reported good grass growth in areas with good rainfall this month but in drier areas, especially the north and east of the North Island, feed became scarce and cows were dried off early.

A hailstorm in the Christchurch area on the 7th caused considerable damage to market gardens. Losses have been estimated to be as high as \$20,000 on some farms.

Rainfall—Rainfall was above normal in western and southern areas of the North Island and for all of the South Island except Nelson, Marlborough, and the Kaikoura Coast. Eastern areas of the North Island were very dry; Gisborne Airport recorded 11 mm and Napier Airport only 9 mm of rainfall for the month. In contrast western areas of both Islands were very wet. In the North Island Paraparaumu Airport had 250 percent of normal rainfall while Palmerston North and Ohakea had 170 percent and 180 percent respectively. In the South Island western areas had between 125 percent and 160 percent of normal, while some areas around Dunedin and Alexandra had more than twice their normal December rainfall.

Heavy rainfall associated with a slow-moving frontal system crossing the country between the 11th and 13th, caused extensive surface flooding in the south of the North Island. Two people drowned near Pauatahanui, 30 kilometres north of Wellington, when the car they were travelling in was swept away in floodwaters.

There was flooding in Southland on the 24th and in southern Wairarapa on the 26th, again due to frontal activity.

Temperatures—Apart from isolated areas of Northland, Gisborne, and the Kaikoura Coast, where mean temperatures were normal, the whole country was cooler than usual in December. Mean temperatures in the south of the North Island and south and west of the South Island were between 1°C and 2°C below average, with Taupo, New Plymouth, Ohakea, and Wellington recording their lowest mean temperatures for December for 30 years. The rest of the country had temperatures less than 1°C below average.

There were several cold spells contributing to the low temperatures this month. Between the 1st and 3rd mean temperatures for the country were as much as 7°C below average, and there were frosts in some inland areas on the 1st. On the 12th temperatures were between 5°C and 10°C below average in the South Island and 2°C–5°C below in the North Island. The last week of the month was very cool. Temperatures in the North Island were 2°C–4°C below average and 3°C–7°C below average in the South Island. Snow fell on high ground in the South Island on the 25th and in both Islands on the 26th.

Sunshine—Eastern areas of both Islands had more sunshine than normal this month. Western, central, and southern regions had average or slightly less than average sunshine for December. Among

those stations with the greatest departures in sunshine for the month were: Timaru (+42 hours), Christchurch (+36 hours), Gisborne (+30 hours), Dunedin (–30 hours), Wellington (–22 hours), and Invercargill (–21 hours).

THE WEATHER SEQUENCE FOR DECEMBER 1982

1–7 December

A ridge of high pressure over the South Island at the beginning of the month moved north-east of the country on the 3rd as a cold front from the Tasman Sea passed over New Zealand accompanied by rain. The front was followed by a large anticyclone which crossed the country on the 4th. A shallow trough of low pressure to the west of the country brought rain to western districts of both Islands as it crossed on the 5th. A weak west to south-west airstream followed the front with showers along the west coast of the South Island, and mostly dry, mild weather elsewhere.

8–14 December

A complex depression developed near the east coast of Australia during the 8th, while a ridge of high pressure and fine weather covered New Zealand. This system moved slowly eastward. A cold front associated with the depression spread rain into most western areas by the 11th. During the 11th pressures rose quickly in the western Tasman Sea as an anticyclone moved east of Tasmania. The airflow over the eastern Tasman Sea turned south-westerly and these conditions spread over New Zealand during the 12th, bringing colder, showery weather. The south-westerly conditions had moderated by the 14th as the anticyclone moved north-east towards northern New Zealand.

15–21 December

During this period a belt of high pressure remained just to the north of the North Island, while disturbed westerlies covered most of the country. Weak, transient cold fronts in the westerly airstream brought brief periods of rain to the west of the South Island. Frontogenesis occurred during the 19th and 20th over the north-west Tasman Sea and central New Zealand. Some heavy falls of rain were reported in southern districts of the North Island and parts of southern Wairarapa were flooded on the 21st.

22–31 December

The cold front brought rain to the rest of the North Island as it moved off the country during the afternoon of the 22nd. Another cold front approached the south-west of New Zealand late on the 23rd. It remained slow moving over southern New Zealand on the 24th, accompanied by very heavy falls of rain about the Alps. Local flooding resulted in parts of Southland. The front moved north-east over the rest of the country on the 25th and 26th bringing widespread rain, and snow about the mountains. Further localised flooding resulted on the 26th in southern Wairarapa. Behind the cold front a south-west airflow spread over the country. Scattered showers occurred chiefly in southern districts of the South Island, with mainly fine, cool weather predominating elsewhere.

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