

CLIMATOLOGICAL TABLE—Summary of the Records of Temperature, Rainfall, and Sunshine for January 1964—continued

Station	Height of Station Above M.S.L.	Air Temperatures in Degrees (Fahrenheit)								Rainfall in Inches				Bright Sunshine	
		Means of		Mean of A and B	Difference From Normal	Absolute Maximum and Minimum				Total Fall	No. of Rain Days	Difference From Normal	Maximum Fall		
		A Max.	B Min.			Maximum	Date	Minimum	Date				Amount		Date
LATE RETURNS															
Tauranga, Dec 1963	12	71.4	54.2	62.8	+0.7	78.3	11	43.2	4	8.81	14	+5.4	2.36	15	232
Taumarunui, Dec 1963	562	73.2	50.4	61.8	+0.7	85.2	9	39.5	27	2.98	14	-0.9	0.88	15	226
Mangamutu, Pahiatua, Dec 1963	380	65.7	50.5	58.1	..	74.0	8	36.2	5	4.13	18	-0.1*	0.66	30	..
Temuka, Dec 1963	80	67.3	46.6	57.0	..	86.1	5	33.4	3	1.18	6	..	0.43	9	..
Mount John, Dec 1963	3,370	63.6	39.9	51.8	..	77.9	5	32.1	13	0.79
Lake Pukahi, Dec 1963	1,660	67.1	39.5	53.3	..	83.0	5	18.0	22	1.02	4	..	0.55	19	..
Queenstown, Dec 1963	1,080	66.1	46.4	56.2	-1.7	80.9	5	39.5	24	1.51	10	-0.9	0.37	29	244

NOTE—At stations where departures from normal have an asterisk, the temperature record has been maintained for less than 10 years, the rainfall record for less than 20 years. Rainfall normals have been revised and now refer to the standard period 1921–50. Where observations are not available for the whole period, or where the site of the rain gauge has been changed, the normals are partly interpolated.

NOTES ON THE WEATHER FOR JANUARY 1964

General: Barometers were low over the country, especially for the first three weeks, and January 1964 will be remembered for the exceptionally strong and persistent winds from a westerly quarter during this period, giving rise to most unpleasant conditions for holidaymakers. January was also a cool month in most places and very dry in eastern districts.

Farmers were finding conditions much too dry in Northland after several months of below-average rainfall, and dairy cows were losing condition. Elsewhere stock were mainly in good condition, but haymaking was delayed in many places by the unsettled weather. In Otago and Southland crops were affected by the unusually cool spell.

Strong gales were reported in many districts on the 7th and 8th.

Rainfall: Rainfall was less than half the average value in Gisborne, Hawke's Bay, and most of Canterbury, also in central Northland, eastern Wairarapa, the Kaikoura coast, and northern Central Otago. On parts of the Kaikoura coast it was by far the driest January in many years of record, with total falls as low as a quarter of an inch.

Greatest excesses above average were recorded in north-west Nelson and inland Buller, with falls more than double the normal value. Other areas with rainfall at least 50 per cent above average were coastal Buller, north Westland, the Marlborough Sounds, and parts of Fiordland.

Thunderstorm activity was unusually high during the month, especially on the 7th and 8th.

Temperatures: Over the greater part of the country temperatures were 2–3 degrees below average. However, in Northland, Gisborne, Hawke's Bay, Marlborough, and the Canterbury Plains and coast they were close to average. In the Alps and Fiordland this was the coldest January since about 1939, with temperatures 4–6 degrees below average and the snow-line much lower than usual.

Snow was reported at the Homer Tunnel and to comparatively low levels in the Southern Lakes district and Central Otago on the 2nd. Some of these districts also reported snow on the hills on the 11th and 12th.

Sunshine: There were unusually wide variations in sunshine. In Buller, Westland, Otago, and Southland it was 40–90 hours below average, with record low totals at Gore and Invercargill. By contrast, Gisborne, Hawke's Bay, and Wairarapa were favoured with 35–55 hours above normal.

Weather Sequence: A deep depression passed over Campbell Island during the first two days of the month, and the associated cold front brought rain to the greater part of the country. However, Canterbury, eastern districts from Wairarapa to Gisborne, and Northland received very little. Temperatures were cold in the far south, with snow at the Homer Tunnel and to comparatively low

levels in the Southern Lakes district and Central Otago. The pattern of westerly weather continued for the next four days, with pressures very low to the south and troughs crossing the country. Rain was now confined mainly to the West Coast, but other districts such as Southland, Taranaki, and Northland received some showers at times.

The pattern remained somewhat similar for the next week. A particularly deep depression passed close to Campbell Island during the 7th and 8th and with the passage of the associated trough of low pressure over New Zealand a small centre formed to the east. There was a south-westerly change, with rain spreading to most districts again; but Wairarapa, Hawke's Bay, Gisborne, and Northland still remained dry. Gales and thunderstorms were reported in many places. During the next four days the main centre of low pressure moved to the south-east, and further troughs of low pressure crossed the country. Some rain occurred in most districts, but in Northland it was mainly light showers. A weak ridge of high pressure brought one day of fair weather on the 13th, except for some light rain in Bay of Plenty and Nelson.

Pressures were falling again over the south Tasman Sea; and in addition from the 14th to the 16th a deep depression moved across the South Island from the central Tasman Sea. The whole country received rain, except for Canterbury. In Northland it was welcomed as the best rain for many weeks. The westerly pattern soon returned. On the 17th and 18th the weather improved, but some showers were still reported; only in Fiordland and south Westland was there rain of any consequence. A trough which crossed the country during the next two days was accompanied by rain in western and northern districts of the South Island and in western districts of the North Island, with some violent thunderstorms, especially in the Auckland and Taranaki Provinces. Rain spread to nearly all districts on the 21st as a deep depression passed over Southland, and some strong gales were reported in Cook Strait.

Pleasanter conditions, with less wind, were experienced over most of the North Island from the 22nd to the 26th during the slow passage of an anticyclone. However, persistent westerlies still buffeted the South Island and the Cook Strait area. The weather remained unsettled in Fiordland, and at times the rain spread to Westland and Buller. A few light showers were also reported in Southland and south Otago and in the Wanganui-Egmont area.

During the last five days of the month an anticyclone covered the South Tasman Sea and extended on to New Zealand, with lighter winds now also over the South Island. Temperatures became warmer; and the weather was fine apart from a few showers on the 27th, mainly about the Otago coast, and some rain developing during the 31st in Southland, south Westland, and south Otago.

R. G. SIMMERS, Director.

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New Zealand Government Railways—Schedule of Civil Engineering and Building Contracts of £10,000 or More in Value

Name of Work	Successful Tenderer	Amount of Tender Accepted
		£ s. d.
Erection of spray paint booths at Woburn Workshops	Quality Homes Ltd., P.O. Box 33, Lower Hutt	10,907 11 0
Formation, drainage, and sealing of station yard and approach roads, Tokoroa	Messrs Grayburn Contracts Ltd., P.O. Box 220, Tokoroa	18,470 5 11

A. T. GANDELL, General Manager.

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Name of Work	Successful Tenderer	Amount of Tender Accepted
		£ s. d.
Construction of loading shelter, Gracefield	P. J. Wishart, P.O. Box 50, Johnsonville	12,865 0 0

A. T. GANDELL, General Manager.