

CLIMATOLOGICAL TABLE—continued  
Summary of the Records of Temperature, Rainfall, and Sunshine for November 1951—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.
	Ft.	°F.	°F.	°F.	°F.	°F.				In.		In.		Hrs.	
Akaroa .. .. .	150	..	..	..	..	..	..	..	..	..	..	..	..	..	
Lincoln .. .. .	36	65.8	43.0	54.4	-0.7	79.2	17	29.5	3	1.30	12	-0.67	0.24	26	186.6
The Hermitage .. .. .	2,510	56.5	39.6	48.0	-3.4	65.1	20	31.0	3	24.12	26	+10.23	4.75	28	89.2
Winchmore .. .. .	626	65.1	42.8	54.0	(-0.3)	73.8	11	30.0	3	2.21	15	..	0.77	28	..
Haast .. .. .	15	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Ashburton .. .. .	323	66.9	44.6	55.8	+0.1	73.8	11	31.4	3	2.31	10	-0.12	0.61	28	174.2
Fairlie .. .. .	1,004	64.5	40.5	52.5	-1.2	76.0	10	30.0	4	2.61	16	+0.18	0.75	19	..
Lake Tekapo .. .. .	2,400	59.9	40.0	50.0	-1.2	65.8	7	29.2	6	2.22	20	+0.51	0.58	11, 28	187.8
Timaru .. .. .	56	67.6	44.8	56.2	+0.7	81.0	29	35.7	3	1.74	11	-0.20	0.44	7	182.3
Adair .. .. .	200	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tara Hills .. .. .	1,600	62.3	41.7	52.0	(-1.4)	68.9	7	32.9	3	3.83	15	..	0.80	7	170.5
Milford Sound .. .. .	20	57.9	44.4	51.2	-1.1	66.6	25	37.2	5	26.94	25	+0.81	6.04	10	..
Waimate .. .. .	200	65.9	45.7	55.8	+0.4	77.5	17, 29	35.0	3	2.53	14	+0.35	0.48	22	151.9
Queenstown .. .. .	1,100	62.0	43.5	52.8	-1.1	68.6	7	37.6	6	3.90	21	+1.23	1.01	4	199.9
Cromwell .. .. .	720	65.3	44.1	54.7	(-0.7)	72.9	7	36.1	1, 3	2.51	17	..	0.78	7	..
Ophir .. .. .	1,000	65.0	43.3	54.2	+0.0	72.9	7	30.0	3	2.60	14	+1.22	0.93	7	..
Earnsclough .. .. .	500	66.2	43.6	54.9	(-0.8)	77.3	7	33.0	1	2.92	14	..	0.58	22	..
Waipiata .. .. .	1,550	61.0	41.7	51.4	-1.0	72.0	7	32.0	2	2.96	17	-1.35	0.85	7	169.1
Alexandra .. .. .	520	67.5	45.2	56.4	+0.0	79.0	7	36.2	1, 3	2.58	14	+1.42	0.58	7	171.4
Roxburgh Hydro .. .. .	350	66.6	44.5	55.6	..	77.0	11	37.2	19	2.78	18	..	0.60	12	..
Mid Dome .. .. .	1,252	62.2	42.2	52.2	..	71.0	6, 10	34.0	2, 3	4.16	19	..	0.83	23	..
Moa Flat, West Otago .. .. .	1,345	60.0	41.7	50.8	..	70.0	7	33.0	3	6.19	20	..	0.90	19	..
Manorburn Dam .. .. .	2,448	56.3	37.7	47.0	-1.1	66.0	7	31.0	1, 2	2.55	15	+0.57	0.72	7	..
Taieri .. .. .	80	63.5	44.4	54.0	+0.6	76.0	7	37.2	1	5.28	24	(+2.93)	0.68	24	115.3
Musselburgh, Dunedin .. .. .	5	61.9	46.8	54.4	-0.2	74.2	29	38.2	3	5.70	22	+3.07	0.85	24	131.9
East Gore .. .. .	245	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Gore .. .. .	240	65.2	44.3	54.8	(+1.3)	75.5	29	37.0	20	3.71	20	..	0.69	7	151.8
Otautau .. .. .	180	63.5	44.3	53.9	(+1.8)	71.0	16	36.5	23	4.24	14	..	0.66	22	..
Pebble Hills .. .. .	150	64.7	43.9	54.3	..	74.5	29	34.5	20	3.69	19	..	0.80	7	..
Invercargill .. .. .	32	62.6	44.5	53.6	+0.8	73.0	16	39.0	2, 16	3.35	21	-0.66	0.57	7	145.3
Invercargill South .. .. .	8	61.8	45.7	53.8	(+0.8)	76.8	16	38.5	19	3.75	21	-0.36	0.97	7	..
LATE RETURNS															
Waerenga-o-kuri .. .. .	1,130	60.9	45.1	53.0	+0.1	68.0	17, 26	34.3	8	5.11	20	..	1.08	7	..
Oct. 1951 .. .. .	2,660	52.2	39.4	45.8	..	64.2	25	26.4	29	5.55	25	..	0.73	26	..
Waiouru, Oct. 1951 .. .. .	15	57.0	43.9	50.4	(-1.2)	62.8	23	31.2	11	9.66	19	..	2.23	17	147.4
Haast, Oct. 1951 .. .. .	245	60.1	42.0	51.0	+0.3	74.0	25	32.0	28	4.42	17	+1.47	0.75	31	..
East Gore, Oct. 1951 .. .. .	245	60.1	42.0	51.0	+0.3	74.0	25	32.0	28	4.42	17	+1.47	0.75	31	..

NOTE.—At stations where departures from normal are in parentheses, the temperature record has been maintained for less than ten years, the rainfall record for less than twenty years, and the normals are partly interpolated.

NOTES ON THE WEATHER FOR NOVEMBER 1951

**General.**—Unsettled westerly weather persisted throughout November. Though rain can normally be expected at frequent intervals in late spring, the lack of settled weather since September makes the season rather backward. The absence of cold spells was some compensation.

Pasture growth was abundant, but more sunshine was needed to harden the grass and increase its nutritional value, especially for young lambs. Cattle appear to have fared better than in October. The programme for shearing and haymaking was considerably delayed. Orchardists appeared to be optimistic concerning the fruit crop, but most market gardeners did not find conditions to their liking.

**Rainfall.**—Rain was frequent during the month, and totals were generally much higher than the average, except in the Canterbury and Gisborne districts. There was also considerable thunderstorm activity. In spite of frequent and often heavy rain, no major flooding was reported.

Following a very wet October, the slight rainfall deficiency in Canterbury was of no significance, and rain was still frequent enough to hamper normal farming activities. Near Gisborne, however, the effect of the low rainfall was accentuated by the prevalence of strong, drying, westerly winds.

Near Blenheim, Dunedin, and Palmerston North, and in Central Otago, the rainfall was well over double the average, making it the wettest November in these parts for over thirty years.

**Temperatures.**—Mean temperatures were close to the November average, but with a slight positive anomaly in the North Island. Throughout the month there were no appreciable spells of either very warm or very cold weather.

**Sunshine.**—There was a noticeable lack of sunshine, except in the Gisborne and Northland districts, where totals were twenty to thirty hours above average. There was a deficiency, equivalent to at least an hour a day, over most of Taranaki, Wellington, Westland, and Otago.

**Weather Sequence.**—A front lying stationary across the middle of New Zealand at the beginning of the month was associated with a very deep depression centred far to the south. A wave deformation on the front resulted in the formation of a new depression which deepened rapidly and passed across the South Island on the 1st. Winds became strong to gale force, then turned temporarily to the south-west behind an active cold front which moved up from the

south on the 2nd. An anticyclone passed north of the Dominion on the 3rd, and, though there was some improvement in the north and east, the weather for the most part remained unsettled with frequent heavy showers in the west and south.

A ridge moving across from the west gave a brief clearance during the 6th. Next day a cold front from the south-west produced heavy rain over the South Island, but farther north there were only a few scattered showers. During the passage of another ridge fair weather predominated during the 8th and 9th.

Northerlies prevailed ahead of an extensive trough which passed slowly eastwards across New Zealand during the 11th and 12th accompanied by a broad band of rain. Heavy falls were recorded over much of the North Island, especially in the Rotorua district due to the development within the trough of a small depression which moved rapidly south-eastwards across the centre of the North Island during the night of the 12th.

Barometric pressures remained low over the South Tasman Sea and southern New Zealand, and the weather continued very unsettled. Rain was frequent and often heavy, especially in western districts, but only a few showers reached the plains of Canterbury and Hawke's Bay. A ridge brought a brief improvement on the 16th, but during that night heavy rain and thunder resulted from the passage of the trough associated with a deep depression centred to the south.

When a secondary depression crossed the Auckland Province on the 19th, rain extended over the whole of the North Island, but in the South Island there was a brief change to fair cool weather.

A deep depression from south of Tasmania moved rapidly across the South Tasman Sea on the 20th. While the associated cold front was crossing New Zealand on the 21st a secondary depression developed, later to pass over Otago on the 22nd. That afternoon thunderstorms were reported over a wide area of Otago and Canterbury.

Another deep and extensive depression crossed the South Island on the 24th with further heavy rain and thunder. After a change to cool south-westerlies a ridge associated with a weak anticyclone to the north brought a brief improvement early on the 27th. The same night conditions again deteriorated rapidly with the approach of another deep depression whose centre crossed Southland on the 29th. The latter caused general rain, except in coastal Hawke's Bay, with some heavy falls in and west of the South Island ranges.