



SUPPLEMENT

TO THE

NEW ZEALAND GAZETTE

OF

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CLIMATOLOGICAL TABLE

FOR DECEMBER 1983

NEW ZEALAND METEOROLOGICAL SERVICE

CLIMATOLOGICAL TABLE—Summary of the Records of Temperature, Rainfall, and Sunshine for December 1983

Table with columns: Station, Height of Station Above M.S.L., Air Temperature in Degrees Celsius (Means of A and B, Difference From Normal, Absolute Maximum and Minimum), Rainfall in Millimetres (Total Fall, No. of Rain Days, Difference From Normal, Maximum Fall), Bright Sunshine. Rows include stations like Cape Reinga, Kaitaia Airport, Warkworth, etc., with data for temperature, rainfall, and sunshine hours.

CLIMATOLOGICAL TABLE—Summary of the Records of Temperature, Rainfall, and Sunshine for December 1983—continued

Station	Height of Station Above M.S.L.	Air Temperature in Degrees Celsius								Rainfall in Millimetres				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
Metres	°C	°C	°C	°C	°C	°C	°C	°C	mm	mm	mm	Hrs			
Ashley Forest	107														
Rangiora	46	20.2	8.6	14.4	-0.7	30.5	8	4.0	1	110	17	+46	18	28	
Darfield	195														
Eyrewell Forest	158														
Christchurch Airport	30	19.7	9.5	14.6	-0.6	30.4	8	5.6	29	86	15	+38	19	9	
Templeton	46	19.5	8.9	14.2		30.6	8	4.9	31	69	10		19	9	
Christchurch	7														
Bromley Christchurch	9	19.1	10.5	14.8	-0.5	26.5	26	2.0	18	69	15	+16	19	16	
Mt Pleasant	137	18.6	10.5	14.6	-0.1	26.1	26	6.8	29	80	14	+32	16	16	
Lincoln	11	19.1	8.7	13.9	-1.0	28.2	8	4.7	19	87	14	+29	29	9	
Quail Island	75	18.2	10.4	14.3		25.7	26	6.4	29	60	15		19	16	
Akaroa	3	19.7	9.1	14.4		27.0	8	5.0	30	83	14		21	9	
Lake Tekapo	683	16.6	6.5	11.6	-2.1	24.5	8	0.5	15	67	12	+16	23	9	
Lake Pukaki	556	17.6	7.1	12.4	-1.1	23.9	8	1.9	29	117	19		43	8	
Fairlie	304	18.5	6.2	12.4		28.1	26	1.4	25	121	14		27	8	
Twizel	457	18.1	6.2	12.2	-1.9	25.7	8	0.0	25	118	16		42	9	
Ikawai	70	17.8	7.4	12.6	-1.0	26.0	26	1.0	25	89	13		25	9	
Geraldine	119	18.9	8.4	13.7		29.3	26	4.1	15	94	13		25	8	
Orari Estate	81	18.5	7.9	13.2	-0.9	29.0	8	3.8	24	104	13	+23	27	8	
Temuka	24														
Timaru Airport	26	18.0	7.8	12.9	-1.1	28.9	26	2.6	25	74	14	+8	17	8	
Adair	85	17.7				27.8	26			94	19	+25	29	8	
Timaru	17	18.4	9.3	13.9	-0.8	28.1	26	3.5	15	92	15	+23	19	8	
Waimate	61	18.0	8.7	13.4	-1.2	28.9	26	4.4	28	95	18	+24	26	8	
Aviemore	241	18.7	8.0	13.4		27.0	8	1.0	25	55	13	+2	22	8	
Kurow	207														
Oamaru Airport	30	17.1	8.3	12.7	-0.8	27.8	26			79	14	+21	19	9	
Knobs Flat	360														
Tara Hills Omarama	488	18.3	6.3	12.3	-1.8	25.5	6	0.0	28	69	14	+13	23	9	
Lake Hawea	350	17.6	7.6	12.6	-2.8	22.9	5	2.4	15	65	14	+7	28	8	
Wanaka	296	19.4	8.5	14.0	-1.4	25.9	6	2.9	15	63	14	+12	26	8	
Queensberry	277	19.3	8.5	13.9		26.8	6	2.3	15	51	13		22	8	
Bendigo	200	20.3	8.7	14.5		27.8	6	2.1	29	43	12		23	8	
Naseby	607	16.2	4.9	10.6		23.3	21	-1.7	25	110	14		41	8	
Windsor	88														
Oamaru	5														
Ranfurly	427														
Herbert Forest	61	17.3	6.6	12.0	-1.1	25.8	26	2.9	25	98	17	+32	21	8	
Palmerston	21	17.0	8.1	12.6	-0.5	24.0	26	3.1	21	73	14		19	8	
Cherry Farm Hospital	6	16.7	8.2	12.5	-0.6	27.5	26	2.5	21	101	17	+45	24	27	
Taiaroa Head	72														
Invermay, Taieri	30	17.4	8.3	12.9		25.3	26	3.9	21	112	21		26	27	
Berwick Forest	18	17.0	7.6	12.3	-0.9	23.6	26	2.5	21	131	20	+60	31	27	
Dunedin Airport	1	16.9	8.2	12.6	-0.7	23.3	1	1.5	21	112	16	+56	25	8	
Musselburgh Dunedin	2	16.0	9.7	12.9	-0.9	23.3	26	6.0	28	93	20	+22	21	8	
Te Anau	215	16.2	6.9	11.6	-1.2	27.3	21	0.8	15	146	18	+57	26	8	
West Arm, Manapouri	232	15.4	7.1	11.3	-1.2	25.5	21	3.0	28	410	25		49	1	
Borland Burn	183	16.7	5.6	11.2		27.5	21	1.3	28	178	19		30	8	
Queenstown	329	18.6	8.5	13.6	-0.7	25.0	6	3.5	15	54	17	-10	14	8	
Queenstown Airport	349	17.2	7.4	12.3	-1.4	26.2	21	2.4	15	53	13	-2	17	8	
Otama	183														
Cromwell Sub Stn	213	19.9	8.8	14.4		28.5	6	3.4	21	38	12		19	8	
Cromwell	213	20.1	8.5	14.3	-1.7	28.7	6	2.4	15	43	16	+7	15	8	
Northburn	210	20.0	8.8	14.4		27.5	6	3.5	15	26	15		11	8	
Lauder	370	18.3	6.7	12.5		26.4	6	-0.6	25	77	17		19	8	
Clyde Dam	160	19.6	8.9	14.3		26.7	6	4.1	15	59	14		32	8	
Ophir	305														
Moa Creek	427									52	9	+11	12	8	
Clyde	171	19.8	8.3	14.1		27.2	26	2.0	15	51	14		25	8	
Alexandra	141	20.0	8.7	14.4		27.5	5			30	9		17	7	
Roxburgh Power Stn	110	18.3	8.1	13.2	-1.8	26.5	26	3.0	28	74	15	+28	32	8	
Ettrick	83	19.0	8.2	13.6		27.0	21	3.0	15	105	17		19	8	
Deep Stream	396														
Beaumont	46	17.5	8.1	12.8		26.2	21	3.5	21	111	22	+22	22	8	
Mahinerangi Dam	396	14.3	6.2	10.3	-1.3	22.5	21	1.7	21	159	20	+68	37	8	
Tapanui	226	15.8	7.4	11.6	-1.9	25.8	21	3.9	15	140	21	+61	28	8	
Taieri Mouth	15	15.8	8.0	11.9	-0.3	23.3	26	2.5	21	102	16	+41	20	2	
Tuatapere	27	16.8	7.6	12.2		23.9	21	3.5	30	135	24		27	8	
Otautau	55	16.7	7.2	12.0	-1.0	24.9	21	2.9	4	126	23	+42	20	2	
Winton	44														
Gore	123	16.0	8.1	12.1	-1.2	24.6	21	4.2	15	107	23		23	27	
Hokonui Forest	46	17.2	7.7	12.5	-1.0	26.6	21	3.1	15	136	23	+47	21	8	
Woodlands	47	16.4	7.6	12.0	-1.1	25.9	21	2.6	4	160	28		21	2	
Invercargill Airport	0	15.8	8.0	11.9	-0.7	23.9	21	2.1	15	161	24	+72	23	2	
Tiwai Point, Bluff	5	15.6	9.1	12.4	-0.9	21.1	1	6.4	25	104	21		16	23	

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		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
Metres	°C	°C	°C	°C	°C	°C	°C	°C	mm	mm	mm	Hrs			
Stewart Is	3	14.7	8.1	11.4	..	20.7	1	4.2	17	120	29	..	19	23	..
Milton	18	16.8	8.0	12.4	-0.9	23.4	26	1.4	21	110	20	+41	30	8	..
Clinton School	120	15.9	8.0	12.0	..	22.7	1	2.2	21	113	25	..	20	2	..
Finch and Balclutha	6	16.6	8.3	12.5	-0.7	23.0	1	3.8	21	109	21	..	25	2	121
Owaka	5	15.9	8.5	12.2	..	23.2	8	1.3	21	105	21	..	18	2	..
Nugget Point	129	14.5	8.2	11.4	-0.6	20.6	26	4.9	28	99	25	+23	18	2	..
Tautuku	61	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Nandi Airport, Fiji	19	31.4	22.7	27.1	+0.5	34.1	29	19.8	10	298	16	..	95	7	169
Rarotonga Airport	7	28.1	22.7	25.4	+0.6	30.7	3	17.8	8	280	16	+54	97	10	199
Totokoitu, Rarotonga	9	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Raoul Is	38	22.6	17.8	20.2	-0.3	24.6	29	13.4	1	72	10	-17	36	7	185
Campbell Is	15	11.0	5.6	9.1	+0.5	15.6	21	2.6	28	135	26	+33	17	23	89
Waitangi, Chatham Is	44	16.3	11.1	13.7	+0.3	19.5	19	7.4	6	113	18	+47	27	20	156
Scott Base Antarctica	16	-1.5	-8.7	-5.2	+0.1	6.0	15	-18.5	3	..	..	..	..	..	..
LATE RETURNS AND CORRECTIONS															
Umawera 11/1983	9	20.8	9.0	14.9	-0.8	24.5	11	3.0	16	55	5	-44	23	6	..
Whangarei 11/1983	29	20.7	10.6	15.7	-0.4	25.4	8	5.8	16	44	6	..	10	22	185*
Little Barrier Is 11/1983	2	19.6	12.5	16.1	..	21.5	11	9.6	23	46	12	-56	11	6	..
Thames 10/1983	3	18.9	12.0	15.5	+0.9	22.3	21	6.5	16	162	18	+53	35	22	..
Thames 11/1983	3	20.2	10.6	15.4	-0.9	23.6	5	6.7	29	55	12	-39	24	21	..
Port Ohope 11/1983	9	19.7	12.3	16.0	..	23.0	12	4.3	16	48	7	..	14	7	205
Opoiki 11/1983	6	19.5	11.2	15.4	+0.5	22.0	9	5.0	23	81	10	-8	34	8	170
Huntly 10/1983	34	18.3	11.4	14.9	..	21.9	25	5.3	18	127	23	..	32	5	..
Huntly 11/1983	34	20.3	11.1	15.7	..	23.8	8	3.3	23	45	7	..	20	7	..
Whatawhata 11/1983	104	..	9.4	..	..	..	..	4.0	24	63	11	-56	38	7	187
Port Taharoa 09/1983	27	16.2	10.3	13.3	+1.0	19.0	25	4.0	16	147	..	..	..	..	..
Port Taharoa 10/1983	27	17.9	12.0	15.0	+1.0	22.0	21	7.4	18	202	..	..	..	..	..
Omata 11/1983	61	17.7	10.6	14.2	-0.1	20.5	29	4.5	23	85	9	..	26	7	..
Hukanui 11/1983	235	16.9	7.6	12.3	..	20.0	11	-0.4	2	160	17	+0	36	3	..
Waingawa Masterton 11/1983	114	18.5	7.7	13.1	-0.5	23.0	9	0.9	2	49	15	-20	17	8	136
Ruatoria 11/1983	61	20.2	11.1	15.7	+0.0	27.1	10	5.0	2	28	10	-86	10	14	..
Wharite Peak 11/1983	914	11.4	4.8	8.1	-0.1	16.3	17	1.1	24	124	16	-39	44	8	..
Kairanga Palmerston N 11/1983	15	18.6	7.8	13.2	-0.6	22.4	11	0.8	2	38	9	..	12	8	171
Palmerston N D S I R 11/1983	34	18.5	9.0	13.8	-0.4	23.2	8	3.4	25	54	11	-25	12	7	144
Kaitoke 11/1983	223	16.0	7.9	12.0	+0.0	20.0	9	-1.3	2	238	20	+68	60	5	119
Wallaceville 11/1983	56	16.9	8.5	12.7	-0.7	19.5	7	1.3	2	185	13	+83	46	5	145
Kapuni 07/1983	173	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Kapuni 08/1983	173	..	4.3	..	..	17.6	11	-0.5	27	70	14	..	20	24	..
Kapuni 09/1983	173	15.2	7.8	11.5	..	18.2	8	2.7	29	79	15	..	17	8	..
Kapuni 10/1983	173	..	..	..	..	..	..	..	..	123	..	..	..	..	..
Kapuni 11/1983	173	..	..	..	..	..	..	..	..	61	11	..	15	7	..
Manaia Dem Farm 11/1983	98	17.4	8.3	12.9	-0.4	22.0	17	2.2	29	44	10	-47	15	7	194
Taihape 11/1983	433	18.7	7.6	13.2	+0.9	23.2	17	0.7	29	52	12	..	19	8	..
Kahui, Taihape 11/1983	518	17.3	7.6	12.5	-0.3	23.2	8	2.7	29	47	7	..	26	8	..
Arapito 11/1983	20	17.3	9.1	13.2	..	20.0	4	3.5	21	189	16	..	60	5	159
Springs Junction 11/1983	421	..	..	..	..	..	..	..	..	161	..	-63	..	..	..
Fox Glacier 11/1983	152	16.3	7.4	11.9	..	21.1	4	2.9	20	458	19	-2	197	17	..
Puyssegur Point 11/1983	43	14.4	8.6	11.5	..	22.7	4	6.2	20	79	18	-124	19	17	..
Stephens Is 11/1983	187	14.5	10.2	12.4	..	17.1	14	6.4	15	78	19	+14	20	8	..
Wither Hills Blenheim 09/1983	32	15.4	5.4	10.4	+0.0	21.0	30	0.0	4	93	13	+37	23	30	..
Fairlie 11/1983	304	17.5	6.3	11.9	..	24.5	16	-0.3	21	21	11	..	5	21	..
Temuka 11/1983	24	17.8	7.0	12.4	-0.4	26.0	10	2.7	2	26	5	-38	12	13	..
Kurow 11/1983	207	18.0	8.3	13.2	..	26.1	16	3.2	21	20	13	..	6	2	..
Naseby 11/1983	607	16.2	3.7	10.0	..	23.0	5	-1.8	15	24	8	..	9	19	..
Windsor 11/1983	88	17.0	8.0	12.5	..	24.0	10	4.0	19	13	6	..	6	19	..
Ranfurlly 11/1983	427	17.2	5.0	11.1	..	23.3	4	-1.5	15	11	5	..	4	2	..
Cherry Farm Hospital 10/1983	6	15.1	6.3	10.7	+0.4	20.7	2	-0.7	4	60	18	+14	11	30	..
Cherry Farm Hospital 11/1983	6	16.9	7.5	12.2	+0.3	25.0	10	2.0	15	33	14	-25	16	19	..
Taiaroa Head 11/1983	72	14.5	8.3	11.4	+0.1	22.0	5	3.0	1	30	12	-36	17	19	..
Deep Stream 11/1983	396	15.6	4.3	10.0	..	23.1	4	-3.3	15	35	13	..	14	19	..
Clinton School 11/1983	120	16.8	5.7	11.3	..	24.8	4	0.1	15	47	12	..	23	19	..

The "normal" refers to the present site of the instruments. Standard period for normals is 1941-1970. No normals are available for stations with only short records.

*Indicates that the sunshine recorder is not located at the station but is in the near vicinity.

A rainday is a day with rainfall equal to or greater than 0.1 mm.

Where the extremes of temperature and rainfall have occurred more than once during the month, the date of the first occurrence is given.

THE NEW ZEALAND WEATHER IN DECEMBER 1983

General—December was a cool, changeable month and many areas recorded very high rainfalls. A deep low, which moved slowly southwards across the New Zealand area between the 6th and 13th, made a large contribution to the high rainfall totals. Flooding occurred in parts of the Coromandel Peninsula, the Bay of Plenty and the Nelson area, closing roads and damaging bridges. Warm north-easterlies associated with the low gave high temperatures in some central parts of New Zealand during this period.

Strong winds were more frequent than usual, especially at Auckland where the highest December frequency of strong winds since 1958 was recorded. South-westerlies were more frequent than usual over the whole country and south-easterlies were unusually common at Invercargill.

During the 14th large hailstones (the size of marbles) were reported in parts of Marlborough and in the Whakatane district, causing serious damage to crops. Hailstorms on Christmas Eve and on Boxing Day caused some damage at Oamaru and Weston.

Farmers reported good pasture and crop growth in most areas although some western parts of the North Island were a little dry. Farms on the east coast of the North Island are reported to be recovering from the drought of last summer and autumn.

Rainfall—Rainfalls varied widely from area to area during December but many parts of the country, particularly the north of the North Island, recorded very high rainfalls. For example Warkworth, Auckland, Whakatane and Kawerau all recorded their highest December rainfalls in at least 10 years while Nelson and Invercargill recorded more rain than in any December since the early 1940s. On the other hand much of the central North Island, and some inland parts of the South Island, recorded considerably less rain than usual. Kinleith, with little more than half of its usual December rain, recorded its lowest December total since 1973.

Temperature—Overall, temperatures were cooler than usual in most places, although Palmerston North was slightly warmer than normal. Inland parts of the South Island recorded temperatures between 1°C and 2°C cooler than usual. The remainder of the South Island experienced temperatures between 0.5°C and 1°C below average while over the North Island temperatures ranged between average and 1°C below average.

For most of the month temperatures throughout New Zealand were cool. On the 9th and 10th maximum temperatures in many parts of the South Island were between 9°C and 12°C below average. However there were some warm periods early in the month and on the 8th south-western parts of the North Island recorded maximum temperatures between 5°C and 9°C above average.

Sunshine—Although parts of the Waikato, Taranaki, and Canterbury recorded a little more sunshine than usual, December was a cloudy month in most parts of New Zealand. Dunedin and Invercargill recorded only about 80 percent of their usual December sunshine and Invercargill's total of 145 hours was its lowest for December since 1959.

THE WEATHER SEQUENCE, DECEMBER 1983

1-7 December

A large anticyclone moved slowly north-east off New Zealand during the 1st and 2nd as a cold front moved on to the South Island. The front gave some rain to southern and western parts of the South Island during the 1st and 2nd and more widespread rain over New Zealand during the 3rd. The front became slow-moving over Northland and the Bay of Plenty during the 4th, bringing further rain to these areas while the weather over the remainder of the country became fine, although cool. An anticyclone intensified over the South Island during the 5th, giving fine weather to most of New Zealand. However a deep low which had formed in the Coral Sea moved gradually south-east towards New Zealand and during the 6th rain became widespread over the North Island. The rain spread over the South Island on the 7th, while gale force north-easterlies affected northern and eastern areas of the North Island.

8-14 December

The low moved slowly south during the 8th and warm, moist north-easterlies gave further rain in most places. On the 9th the low became slow-moving west of New Zealand and a strong cold southerly airstream spread over the South Island and the south of the North Island. The low remained slow-moving west of the South Island during the 10th, 11th and 12th before crossing the South Island and moving away to the south-east on the 13th. During this period the weather remained unsettled and cool, with rain in most parts of the country and some areas received heavy falls. During the 14th a cold front moved quickly north-east across the South Island giving further rain in most places.

15-21 December

The cold front moved quickly north-east off the North Island on the 15th and a narrow ridge spread over New Zealand giving generally fine, cool weather. However a cold front moved across the South Island on the 16th, bringing widespread rain. The front moved quickly east across the North Island during the 17th with some showers in western areas but fine weather elsewhere. Another cold front moved across the South Island during the 18th and over the North Island during the 19th bringing further rain to western areas but only a few showers east of the main ranges. A cool southerly airstream spread over New Zealand as the front moved away and apart from a few showers in eastern areas the weather over New Zealand became fine.

22-31 December

A series of cold fronts moved quickly north-east across New Zealand during the 22nd, 23rd, and 24th in a strong south-westerly flow, giving some heavy rain about and west of the South Island high country but only a few showers over the North Island. Apart from a few showers about and west of the Southern Alps the weather on Christmas Day was dry, but cool. During the 26th a cold front moved across the South Island bringing rain to areas about and west of the high country but fine, warm weather in the east. A south-westerly flow spread over the country as the low moved away to the east on the 27th. During the 28th a cold front moved north-east across New Zealand, followed by a cool southerly airstream which gave a few showers to eastern areas but fine weather elsewhere. A large anticyclone spread over the country on the 30th and apart from a few isolated showers the weather on the final two days of 1983 was fine.

(N.Z. Met.S. Pub. 107)

J. S. HICKMAN, Director.

