



LAND & DEEDS OFFICE

24 FEB 1981

SUPPLEMENT

TO THE

NEW ZEALAND GAZETTE

OF

THURSDAY, 12 FEBRUARY 1981

Published by Authority

WELLINGTON: WEDNESDAY, 18 FEBRUARY 1981

CLIMATOLOGICAL TABLE FOR DECEMBER 1980

NEW ZEALAND METEOROLOGICAL SERVICE

CLIMATOLOGICAL TABLE—Summary of the Records of Temperature, Rainfall, and Sunshine for December 1980

Station	Height of Station Above M.S.L.	Air Temperature in Degrees Celsius								Rainfall in Millimetres				Bright Sunshine Hrs	
		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.			Maxim-um	Date	Mini-mum	Date				Amount		Date
Metres	°C	°C	°C	°C	°C	°C	°C	°C	mm	mm	mm	mm	Hrs		
Cape Reinga	191	20.1	13.4	16.8	+0.0	23.2	29	10.6	3	28	11	-30	16	19	..
Kaitia Airport	80	21.4	13.2	17.3	-0.4	26.1	14	9.0	5	143	15	+49	30	25	187
Aupouri Forest	69	20.8	14.3	17.6	-0.4	23.8	18	11.0	3	85	10	+5	17	20	..
Kaitia	8	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Kerikeri Aerodrome	150	22.4	12.0	17.2	..	27.0	16	8.0	2	91	16	..	15	23	..
Umawera	50	21.6	13.0	17.3	..	26.5	14	7.1	12	98	16	..	29	22	..
Kaikohe	204	20.9	12.5	16.7	+0.0	27.6	14	8.4	12	231	18	..	78	23	162
Waiotemarama	229	18.7	12.1	15.4	..	23.6	18	9.6	2	169	17	..	46	19	..
Waipoua Forest	88	19.8	11.7	15.8	-0.5	25.3	18	7.6	12	171	17	+69	55	23	..
Dargaville	20	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Waitangi Forest	55	22.3	12.7	17.5	-0.4	27.5	13	9.0	12	66	14	-23	18	22	200
Glenbervie Forest	107	21.5	11.3	16.4	+0.3	26.4	15	4.6	12	154	14	+40	47	30	..
Whangarei Airport	37	22.2	13.5	17.9	-0.1	27.4	18	8.7	12	90	12	-4	39	30	..
Whangarei	29	22.3	12.9	17.6	-0.1	28.5	15	7.8	12	74	10	..	17	27	158*
Marsden Power Station	3	22.9	..	..	..	26.7	18	..	..	35	17	..	14	22	..
Poua	97	20.2	13.6	16.9	..	25.7	18	10.5	7	113	11	..	41	23	..
Leigh	27	20.2	14.4	17.3	+0.2	22.5	16	10.8	7	85	11	+19	38	22	182
Warkworth	72	20.9	12.3	16.6	+0.2	24.5	17	4.5	7	75	14	..	16	22	..
Oyster Point	0	21.0	13.0	17.0	..	27.9	19	5.8	7	60	14	..	15	19	..
Woodhill Forest	30	20.5	12.8	16.7	-0.1	25.3	18	5.9	4	97	17	+11	35	22	..
Riverhead Forest	28	20.9	11.6	16.3	-0.2	25.0	17	4.0	4	145	11	+48	76	22	..
Kumeu	32	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Whenuapai	26	21.1	13.0	17.1	+0.3	25.2	17	6.6	4	96	15	+7	49	22	..
Albert Park, Auckland	49	21.6	14.3	18.0	+0.0	25.7	17	10.2	4	109	12	+25	72	22	214*
OWairaka, Auckland	41	21.0	13.6	17.3	+0.1	24.6	17	7.4	7	101	14	+12	51	22	..
Port Fitzroy	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Coromandel	43	21.5	12.8	17.2	..	25.2	18	6.1	12	77	13	..	25	22	..
Whangapoua Forest	4	22.4	12.3	17.4	+0.6	27.1	18	5.6	4	80	9	-34	25	22	..
Thames	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tairua Forest	3	21.5	12.5	17.0	-0.3	26.2	15	6.1	12	134	13	+12	29	25	..
Paeroa	4	23.4	12.7	18.1	+1.0	27.9	14	5.6	12	144	16	+50	46	25	..
Waihi	91	21.4	12.4	16.9	-0.1	25.5	15	5.2	12	166	13	+26	45	25	141
Te Aroha	12	22.1	13.1	17.6	-0.2	26.8	15	6.8	3	259	14	+155	83	25	..
Katikati	2	21.5	12.4	17.0	..	25.4	17	5.5	2	196	13	..	56	25	..
Tauranga	2	21.2	13.6	17.4	+0.0	26.7	17	9.0	12	159	14	..	33	22	..
Tauranga Airport	4	21.3	12.5	16.9	-0.3	26.1	17	7.3	12	149	13	+45	33	22	164
Te Puke	91	21.0	11.8	16.4	-0.2	26.9	17	6.6	5	217	11	..	63	22	..
Rotoehu Forest	72	21.4	10.7	16.1	-0.1	27.5	17	4.0	5	260	11	+125	83	22	..
Edgecumbe	5	21.8	12.0	16.9	+0.1	27.0	16	7.8	5	133	13	..	52	22	..
Whakatane	2	21.7	12.9	17.3	-0.3	28.0	17	8.5	12	136	11	+39	54	22	204
Whakatane Airport	6	21.0	11.9	16.5	..	24.7	16	6.2	3	133	14	..	56	22	..
Port Ohope	9	20.8	13.3	17.1	..	25.0	29	9.0	12	109	12	..	36	22	194
Kinleith	383	19.9	10.3	15.1	-0.4	25.0	15	2.9	2	142	14	+21	33	19	..
Tokoroa	305	21.1	10.3	15.7	-0.1	25.9	27	2.0	2	176	13	..	42	23	..
Tikitere	338	19.6	11.0	15.3	..	25.3	15	5.0	2	170	12	..	49	22	..
Kawerau	30	23.0	12.8	17.9	+0.2	29.5	17	7.8	3	137	11	-3	58	22	..
Te Teko	8	23.4	11.7	17.6	+0.2	29.2	16	6.0	5	129	13	+10	53	22	197
Whakarewarewa	307	20.5	11.0	15.8	-0.1	27.8	15	5.4	2	185	14	+53	42	22	..
Rotorua Airport	287	20.4	10.7	15.6	-0.3	26.6	15	3.7	2	148	13	+21	42	22	201
Tarawera Forest	61	22.3	11.3	16.8	+0.2	29.6	29	4.4	3	146	11	-17	59	22	..
Waiotapu Forest	435	19.7	9.5	14.6	-0.7	26.5	15	2.8	3	124	13	+12	31	22	..
Atiamuri Power Station	253	21.7	10.3	16.0	+0.0	27.0	13	2.2	2	142	15	+20	29	25	..
Kaingaroa Forest	544	19.6	8.8	14.2	-0.3	27.8	15	2.7	3	127	14	+0	25	25	..
Murupara	198	22.4	10.9	16.7	..	29.3	15	4.0	7	147	12	+23	26	25	..
Wairapukao Forest	437	20.7	7.4	14.1	-0.8	28.2	15	0.0	3	174	13	+57	39	25	..
Taupo	376	21.0	9.8	15.4	-0.1	28.8	15	2.2	7	153	13	+41	62	19	172
Wairakei Power Station	342	21.3	9.6	15.5	-0.2	28.2	15	4.0	2	168	14	+49	50	19	..
Wairakei Research Station	402	21.4	9.2	15.3	+0.3	27.8	15	3.3	3	155	15	+41	44	19	..
Minginui Forest	366	21.1	8.9	15.0	-0.1	29.5	15	-1.6	7	265	15	+130	56	9	..
Taupo Airport	407	20.7	9.4	15.1	..	28.0	15	1.2	7	147	12	..	63	19	..
Waimihia Forest	743	17.8	7.4	12.6	-0.3	27.0	15	0.0	22	198	11	+53	63	19	..
Opotiki	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Waimana	37	22.0	11.6	16.8	-0.1	26.6	17	4.9	3	151	15	+21	45	20	..
Mangere, Auckland	4	20.6	14.0	17.3	-0.2	24.7	18	7.0	7	79	15	-2	51	22	186
Otara, Auckland	12	21.1	13.1	17.1	+0.2	24.7	17	6.1	7	72	15	-7	26	22	..
Orere Point	30	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Auckland Airport	8	20.6	14.2	17.4	-0.2	24.7	18	8.8	7	103	14	+19	35	22	212
Ardmore	30	21.1	12.2	16.7	+0.0	25.2	17	6.0	12	105	12	+14	33	27	..
Pukekohe	82	20.4	12.2	16.3	-0.1	24.3	18	7.2	12	127	18	..	34	19	158
Maioro Forest	52	20.1	13.1	16.6	-0.2	24.4	24	7.4	12	161	16	+64	47	23	..
Hunua	122	20.8	11.3	16.1	..	28.5	29	5.0	4	87	15	..	24	28	..
Maramarua Forest	38	21.8	11.3	16.6	+0.3	26.2	15	3.7	12	67	15	-30	14	20	..
Te Kauwhata	32	21.3	12.7	17.0	+0.0	25.7	18	7.9	4	85	19	-6	33	23	137
Ruakura, Hamilton	40	21.2	11.7	16.5	+0.3	25.1	15	5.2	3	92	13	+3	19	23	175

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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	
°C	°C	°C	°C	°C	°C	°C	°C	mm	mm	mm	mm	Hrs			
Whatawhata	104	20.2	12.2	16.2	-0.1	25.0	28	6.5	12	134	16	+20	37	23	137
Rukuhia	66	..	11.6	..	..	..	..	6.7	3	100	18	+3	27	19	149
Hamilton Airport	50	21.6	10.5	16.1	+0.1	25.5	15	4.0	3	103	13	+14	27	19	..
Cambridge	76	21.4	11.1	16.3	..	25.4	15	4.3	3	84	16	..	16	26	..
Port Taharoa	27	20.1	13.6	16.9	-0.7	24.5	18	7.8	12	147	15	..	41	19	..
Mohakatino Station Mokau	46	19.4	12.8	16.1	-0.1	23.7	26	6.5	12	70	16	-80	25	19	..
Arapuni Power Station	123	21.9	11.5	16.7	-0.1	..	..	5.5	12	105	17	-7	27	23	..
Waikeria	46	21.6	10.9	16.3	..	25.8	15	3.3	9	168	16	..	33	19	..
Te Kuiti	61	21.6	11.6	16.6	+0.1	26.5	15	4.3	12	165	18	+46	62	19	133
Pureora Forest	549	18.3	8.3	13.3	-0.3	23.8	15	0.5	12	229	15	+72	98	19	..
Taumarunui	171	22.2	11.0	16.6	-0.2	29.4	15	2.3	12	122	19	-8	41	19	154
Omata	61	..	..	..	..	..	..	..	..	..	..	..	..	..	..
New Plymouth	55	..	..	..	..	..	..	..	..	..	..	..	..	..	..
New Plymouth Airport	27	19.2	12.2	15.7	+0.1	23.7	26	6.0	12	121	17	-11	24	21	174
Tikorangi	77	19.2	11.5	15.4	..	23.4	24	5.4	12	135	18	..	19	26	..
Te Wera Forest	180	19.4	10.1	14.8	+0.1	23.0	24	1.0	12	94	16	-51	18	23	..
Lower Retaruke	223	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Turangi	366	20.8	9.3	15.1	-0.2	29.2	15	1.8	2	185	13	..	72	19	168
Chateau, Mt Ruapehu	1119	16.5	5.7	11.1	+0.9	25.7	15	-1.6	12	201	19	-63	84	19	..
Mangamutu, Pahiatua	116	19.6	10.6	15.1	-0.4	25.0	18	1.5	7	115	15	-9	38	1	..
Mt Bruce Reserve	305	19.1	9.8	14.5	+0.3	25.6	15	0.5	12	189	13	..	67	27	..
Waingawa, Masterton	114	20.6	9.4	15.0	-0.7	28.7	15	1.9	12	113	14	+37	48	23	144
Kopua	311	18.7	10.4	14.6	-0.3	25.9	18	1.4	7	283	14	+174	56	27	..
Waipukurau	137	20.4	10.6	15.5	-0.5	29.6	15	0.2	7	275	15	+199	83	27	142*
Dannevirke	207	19.4	11.1	15.3	+0.0	25.9	18	1.9	7	160	13	+41	49	23	144
Porangahau	8	20.4	12.6	16.5	..	29.8	15	4.3	7	110	15	..	20	9	..
Castlepoint	3	19.4	13.2	16.3	-0.1	27.9	15	8.0	2	148	10	+74	53	23	..
Ngaumu Forest	244	19.9	9.4	14.7	+0.1	28.5	15	0.5	12	211	13	+125	62	27	..
Tauherenikau, Alloa	43	20.6	9.8	15.2	-0.7	28.3	14	2.2	8	127	13	+43	42	27	..
Gladstone, Arahura	116	20.2	9.6	14.9	-0.4	26.8	14	1.1	12	136	11	+67	50	27	..
Waiorongomai	21	18.8	11.4	15.1	-0.4	25.2	14	3.1	7	80	14	-34	31	23	..
Cape Palliser	10	19.7	12.9	16.3	+0.0	28.9	15	6.7	2	60	13	-19	24	23	..
East Cape	17	20.0	13.9	17.0	-0.5	26.0	16	9.5	3	176	15	+95	101	26	..
Ruatoria	61	23.1	12.3	17.7	+0.2	34.0	16	6.7	8	359	14	+240	159	26	..
Mangatu Forest	182	22.0	11.8	16.9	+0.1	31.6	15	5.7	3	473	17	+379	106	26	..
Manutuke Gisborne	9	21.6	12.6	17.1	+0.0	32.6	16	6.0	3	204	15	+140	60	26	..
Gisborne Airport	4	22.3	12.9	17.6	+0.3	33.6	15	5.0	3	177	15	+113	52	26	180
Onepoto, Waikaremoana	643	..	9.4	..	..	..	..	4.5	7	527	18	+375	108	26	..
Wharerata Forest	439	18.2	10.4	14.3	..	30.9	16	5.9	3	786	18	..	275	26	..
Esk Forest	427	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Kaweka Forest	414	19.5	11.1	15.3	-0.2	31.7	15	4.5	7	462	17	..	113	27	..
Napier Airport	2	20.6	12.0	16.3	..	28.0	16	5.4	3	255	16	+186	58	27	..
Napier	2	21.3	12.9	17.1	-0.5	28.6	17	5.7	7	228	16	+164	64	27	152
Hastings	12	22.1	12.2	17.2	-0.3	31.3	15	5.2	7	176	17	+123	62	27	..
Havelock North	9	21.0	10.9	16.0	-0.4	29.8	16	3.2	7	189	16	+128	57	27	149
Gwavas Forest	335	19.5	8.8	14.2	-0.3	30.0	15	1.1	7	412	16	+295	121	27	..
Makaretu	335	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Mohaka Forest	286	20.1	10.7	15.4	-0.5	32.0	15	5.4	7	457	19	+338	107	9	..
Frasertown, Wairoa	8	21.6	12.7	17.2	-0.3	33.5	15	7.2	3	306	16	+202	71	26	..
Wairoa	20	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Portland Island	78	18.9	13.6	16.3	-0.6	26.8	16	7.9	10	116	18	+58	29	9	..
Kapiti Island	16	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Paraparaumu Airport	7	19.1	11.8	15.5	-0.2	25.4	25	3.0	12	33	17	-53	13	23	192
Flockhouse, Bulls	9	19.4	11.4	15.4	-0.3	24.4	19	2.5	12	46	15	-38	22	23	..
Ohakea	48	19.5	11.9	15.7	-0.5	23.8	18	4.8	12	33	11	-56	11	23	176
Wharite Peak	914	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Kairanga Palmerston North	15	19.8	11.4	15.6	-0.2	24.1	18	1.6	12	46	14	..	23	23	155
Palmerston North Airport	45	19.7	10.9	15.3	-0.3	24.4	18	0.7	12	43	9	-54	23	23	..
Palmerston North D S I R	34	19.6	12.1	15.9	-0.2	24.6	18	4.0	12	55	14	-49	19	27	129
Massey University	61	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Foxton	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Waitarere Forest	3	19.2	12.1	15.7	-0.1	24.8	25	2.6	12	18	11	-61	11	23	..
Levin	46	19.4	11.9	15.7	+0.1	24.5	25	4.1	12	24	17	-75	6	23	168
Taita, Lower Hutt	65	18.6	11.1	14.9	-0.5	24.2	25	3.3	12	70	15	-32	25	23	151
Avalon, Lower Hutt	15	18.7	11.9	15.3	-0.3	24.5	25	4.5	12	64	13	-22	23	23	..
Kelburn, Wellington	125	17.3	11.2	14.3	-0.9	23.2	25	4.8	12	84	16	-2	42	23	175
Somes Island	43	17.5	12.0	14.8	..	23.5	25	6.2	12	81	13	..	46	23	..
Gracefield, Lower Hutt	34	18.1	11.8	15.0	-0.7	23.6	25	4.6	12	68	13	-23	26	23	..
Wainuiomata	82	18.2	10.8	14.5	-0.4	23.0	25	2.5	7	208	15	..	90	23	..
Wellington Airport	6	18.5	12.1	15.3	-0.7	24.5	25	6.0	12	87	13	+13	61	23	..
Kaitoke	223	18.2	9.3	13.8	-0.2	24.5	14	0.0	12	304	20	+141	95	23	132
Wallaceville	56	19.2	10.5	14.9	-0.4	24.0	13	1.3	12	76	16	-21	38	23	151
Cape Egmont	8	18.5	12.8	15.7	-0.1	22.5	27	7.4	12	100	16	-7	32	23	..
Stratford Mountain House	846	15.8	6.5	11.2	+0.0	24.0	13	..	..	302	17	-203	72	23	..
Stratford Dem. Farm	311	18.3	22.7	25	108	11	-62	32	23	179
Manaia Dem. Farm	98
Normanby	122	18.3	10.7	14.5	..	22.8	17	1.6	12	91	15	..	35	23	..

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Metres	°C	°C	°C	°C	°C	°C	°C	mm	mm	mm	mm	Hrs			
Patea	43	18.4	12.4	15.4	-0.3	24.5	19	5.0	12	64	10	-12	36	23	..
Ohakune Junction	629	17.9	7.9	12.9	..	26.5	15	-0.3	12	92	13	..	19	23	..
Karioi	648	18.3	7.8	13.1	-0.3	26.8	15	-1.1	12	99	14	-10	29	27	..
Waiouru	823	16.9	6.6	11.8	-0.1	24.3	14	-2.1	12	105	17	-2	21	8	..
Waiouru Military Camp	823	16.1	6.6	11.4	-0.2	24.3	15	-1.0	12	128	18	+6	32	27	..
Taihape	433	19.8	9.0	14.4	+0.1	27.0	15	0.3	12	119	20	..	46	27	..
Kahui, Taihape	518	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Wanganui	22	19.6	12.5	16.1	-0.4	25.6	25	5.2	12	40	14	-49	11	23	153
Wanganui Airport	9	19.2	12.1	15.7	..	26.1	25	4.0	7	34	13	..	9	23	..
Farewell Spit	3	20.2	12.0	16.1	+0.3	24.5	13	5.6	9	41	7	-48	23	8	..
Totaranui	10	20.8	11.2	16.0	..	24.2	19	5.5	9	43	7	..	17	23	..
Westport Airport	2	18.5	11.3	14.9	+0.4	24.1	26	6.8	9	93	16	-92	38	18	220
Cobb Dam	823	17.5	6.6	12.1	+0.6	26.0	14	1.2	9	24	9	-139	8	23	..
Arapito	20	19.2	10.7	15.0	..	26.5	26	5.0	9	53	9	..	14	18	190
Karamea	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Lake Rotoroa	443	21.2	8.1	14.7	..	27.6	14	1.6	10	20	7	..	7	18	..
Lake Rototoi	634	20.6	7.7	14.2	+1.2	28.6	14	-0.2	10	11	6	-106	4	16	..
Hokitika Airport	39	18.9	10.5	14.7	+0.8	25.0	27	5.1	10	89	14	-145	37	18	239
Reefton	198	22.1	9.5	15.8	+0.8	28.0	14	2.6	10	66	15	-99	32	18	..
Barrytown	30	18.7	11.8	15.3	..	23.7	28	7.6	6	125	13	..	66	18	..
Totara Flat	77	22.0	9.5	15.8	+1.0	28.1	15	2.7	9	60	13	-97	26	18	..
Greymouth	4	18.9	11.6	15.3	+0.7	26.2	28	6.0	9	65	16	-148	31	18	218
Otira Substation	383	19.4	..	..	..	27.0	26	..	..	171	11	-261	93	18	..
Springs Junction	421	20.5	8.3	14.4	..	27.1	14	2.7	10	69	11	-116	45	18	..
Hari Hari	45	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Franz Josef	122	19.1	9.6	14.4	+0.7	28.5	25	3.2	1	311	15	-144	153	18	..
Fox Glacier	152	19.0	9.6	14.3	..	25.5	25	4.5	9	256	18	-132	113	18	..
Milford Sound	3	18.5	10.2	14.4	+1.1	25.6	27	4.6	9	512	12	-42	152	15	..
Puysegur Point	43	15.7	9.7	12.7	..	21.0	14	5.5	1	93	25	-92	16	7	..
Stephens Island	187	16.5	11.1	13.8	..	20.4	13	2.4	9	19	13	-42	9	23	..
Riwaka, Motueka	8	21.2	10.7	16.0	+0.1	24.9	19	3.7	9	33	5	-58	19	8	224
Tapawera	146	22.4	9.0	15.7	..	28.4	13	2.3	9	35	8	..	12	22	..
Appleby	17	20.8	11.2	16.0	+0.0	26.3	25	4.0	9	22	4	-44	19	8	..
Nelson Airport	2	20.9	11.7	16.3	+0.7	25.7	27	4.1	9	28	6	-46	15	8	239
Rai Valley	79	20.1	9.1	14.6	-0.5	28.4	13	1.1	10	95	8	-50	49	18	..
Moutere Hills	110	21.1	11.9	16.5	+0.6	27.8	13	5.7	9	27	6	-54	17	8	..
Blenheim Airport	27	21.0	10.2	15.6	-0.5	28.9	15	2.4	9	35	5	-18	13	8	..
Blenheim	4	21.4	10.7	16.1	-0.3	27.2	15	3.1	10	23	7	-28	8	8	185
Waihopai Power Station	262	21.9	9.1	15.5	-0.1	30.5	15	2.0	10	24	8	-52	8	8	..
Vernon Lagoons	2	20.7	9.0	14.9	-0.6	25.6	15	2.1	10	28	9	..	7	8	171
Lake Grassmere	2	19.0	12.4	15.7	-0.2	26.0	19	6.8	12	31	9	-17	8	9	169
Cape Campbell	3	17.6	12.3	15.0	+0.3	20.5	20	8.0	12	51	9	+3	24	23	..
Hanmer Forest	387	20.0	7.9	14.0	-0.1	30.0	14	1.0	2	101	15	+2	21	10	136
Molesworth	893	19.4	5.9	12.7	+0.4	28.2	14	-1.5	12	19	5	-37	8	8	..
Kaikoura	108	17.8	11.0	14.4	-0.3	24.9	19	6.0	12	85	17	+11	36	9	161
Arthurs Pass	738	16.7	6.9	11.8	..	23.6	26	1.5	3	125	12	-213	76	18	..
Balmoral Forest	198	21.6	9.6	15.6	+0.9	30.5	14	0.6	3	28	11	-36	8	21	..
Hawarden	244	21.3	9.0	15.2	..	29.8	14	0.3	10	28	7	..	9	8	..
Waiau	137	21.7	9.5	15.6	..	32.5	14	2.7	12	50	12	..	9	9	..
The Hermitage, Mt Cook	765	19.9	8.1	14.0	+1.5	25.8	29	2.4	10	147	14	-239	56	18	185
Mt John	1027	17.9	..	..	..	24.2	30	..	..	20	4	-23	9	8	..
Craigieburn Forest	914	17.8	6.0	11.9	+0.3	25.0	14	-0.5	10	50	17	-69	14	21	..
Lake Coleridge	364	19.8	8.6	14.2	+0.2	27.6	12	2.7	10	33	11	-38	15	8	..
Highbank Power Station	336	19.0	8.4	13.7	-0.2	26.9	12	3.9	7	74	12	-20	22	8	176
Honorata Substation	192	21.2	9.0	15.1	+0.6	28.4	4	0.6	10	79	16	+3	34	21	..
Winchmore	160	20.6	9.1	14.9	+0.7	30.0	20	2.8	10	50	10	-26	17	21	..
Peel Forest	274	19.9	8.0	14.0	..	28.1	15	1.7	10	82	17	..	29	21	..
Ashburton	101	22.1	10.4	16.3	+1.1	30.1	4	2.9	10	59	9	-15	49	21	170
Waipara	64	21.9	10.4	16.2	..	30.6	14	2.3	10	31	8	..	8	8	..
Ashley Forest	107	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Rangiora	46	20.7	10.2	15.5	+0.4	29.1	19	2.6	10	38	11	-26	20	21	..
Darfield	195	21.4	9.0	15.2	+0.1	27.6	14	2.4	10	56	10	-20	26	21	..
Eyrewell Forest	158	20.8	..	..	..	28.0	19	..	..	55	9	-36	23	21	..
Christchurch Airport	30	20.7	11.0	15.9	+0.7	30.4	19	2.7	10	18	11	-30	8	8	209
Templeton	46	20.5	10.4	15.5	..	28.9	16	1.5	10	27	8	..	9	8	..
Christchurch	7	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Bromley, Christchurch	9	20.0	12.0	16.0	+0.7	28.5	19	5.8	10	12	6	-41	10	8	..
Mt Pleasant	137	19.6	11.3	15.5	+0.8	27.4	19	6.8	1	19	5	-29	16	8	..
Lincoln	11	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Akaroa	3	20.7	10.6	15.7	..	29.0	18	5.0	11	60	9	..	35	7	..
Lake Tekapo	683	..	7.6	..	..	..	..	1.8	10	20	4	-31	9	8	256
Lake Pukaki	556	20.4	8.5	14.5	+1.0	25.4	12	2.5	6	25	8	..	17	21	..
Fairlie	304	20.7	6.5	13.6	..	29.3	15	0.9	10	62	12	..	19	21	..
Twizel	457	21.8	7.7	14.8	+0.7	27.1	14	0.5	10	33	11	..	22	21	..
Ikawai	70	20.2	8.8	14.5	+0.9	29.5	14	2.5	10	11	4	..	4	7	..
Geraldine	119	20.8	9.4	15.1	..	30.0	15	2.5	10	95	12	..	54	21	..
Orari Estate	81	20.6	9.1	14.9	+0.8	31.7	15	2.0	10	71	15	-10	37	21	..

CLIMATOLOGICAL TABLE—Summary of the Records of Temperature, Rainfall, and Sunshine for December 1980—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			
Temuka	24	20.1	9.2	14.7	+0.4	31.6	15	3.0	10	14	7	-55	6	8	..
Timaru Airport	26	20.0	8.5	14.3	+0.3	31.8	15	2.1	10	11	8	-55	6	8	..
Adair	85	20.0	9.9	15.0	+1.1	30.8	15	5.5	10	17	8	-52	5	8	..
Timaru	17	21.0	10.5	15.8	+1.1	31.4	12	5.8	10	9	9	-60	2	5	198
Waimate	61	20.5	9.9	15.2	+0.6	31.5	15	4.8	10	13	7	-58	3	7	..
Kurou	207	21.9	9.0	15.5	..	29.8	14	2.9	6	21	8	..	15	21	..
Oamaru Airport	30	18.8	9.9	14.4	+0.9	28.9	15	4.5	10	13	6	-45	5	7	194
Tara Hills, Oamarua	488	22.5	7.8	15.2	+1.1	28.3	14	-1.2	9	17	11	-39	4	8	248
Lake Hawea	350	21.1	10.1	15.6	+0.2	27.0	26	3.7	6	19	8	-39	9	15	..
Wanaka	296	23.4	10.1	16.8	+1.4	29.4	26	1.6	6	17	7	-34	7	15	..
Queensberry	277	23.2	10.5	16.9	..	28.4	26	2.2	6	15	7	..	8	15	..
Bendigo	200	24.2	10.3	17.3	..	29.7	29	1.0	6	18	10	..	11	26	..
Naseby Forest	610	19.5	5.7	12.6	+0.4	26.2	14	-0.4	10	27	10	-31	11	21	..
Ranfurly	427	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Herbert Forest	61	19.7	8.2	14.0	+0.9	30.8	15	1.4	6	27	12	-39	12	7	..
Palmerston	21	19.8	8.9	14.4	+1.3	30.1	15	1.3	10	39	9	..	27	7	181
Cherry Farm Hospital	6	18.6	9.2	13.9	+0.8	30.4	15	3.0	6	47	12	-9	32	7	..
Taiaroa Head	72	16.1	10.1	13.1	+0.7	25.0	15	6.0	1	31	9	-30	21	7	..
Invermay, Taieri	30	18.9	9.3	14.1	..	28.0	15	4.1	10	47	10	..	22	7	184
Berwick Forest	18	19.8	9.3	14.6	+1.4	27.1	15	3.6	10	50	11	-21	17	30	..
Dunedin Airport	1	19.6	9.1	14.4	+1.1	27.6	16	3.6	10	50	12	-6	13	7	183
Musselburgh, Dunedin	2	17.5	10.7	14.1	+0.3	27.0	15	5.5	1	45	12	-26	23	7	180
Te Anau	215	20.5	8.5	14.5	+1.7	26.8	29	0.6	29	62	10	-27	26	18	239
West Arm, Manapouri	232	19.4	8.8	14.1	+1.6	28.5	26	3.9	1	227	14	..	55	1	..
Borland Burn	183	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Queenstown	329	22.1	10.1	16.1	+1.8	29.5	25	3.3	9	25	11	-39	9	15	252
Queenstown Airport	349	21.0	8.7	14.9	+1.2	29.0	14	0.8	9	28	10	-27	10	26	..
Otama	183	20.0	8.5	14.3	..	26.7	14	2.1	6	23	16	-51	5	21	..
Cromwell	213	23.7	10.7	17.2	+1.2	31.8	14	4.4	9	27	10	-9	14	26	250
Northburn	210	23.5	10.4	17.0	..	29.3	14	2.4	6	17	12	..	6	26	..
Clyde Dam	160	23.8	10.3	17.1	..	31.0	14	3.6	6	23	11	..	9	26	..
Ophir	305	22.7	8.1	15.4	+1.0	28.9	26	-0.5	6	29	8	-17	11	26	..
Moa Creek	427	21.8	6.4	14.1	+0.8	27.0	27	-2.5	1	19	8	-22	6	21	..
Earnsclough	152	23.8	9.2	16.5	+1.5	32.8	14	0.2	6	11	7	-22	5	21	..
Alexandra	141	23.6	10.4	17.0	+1.1	31.4	14	2.5	6	25	9	-5	10	26	246
Roxburgh Power Station	110	22.8	9.2	16.0	+1.0	33.0	14	1.0	6	40	6	-6	19	30	..
Mahinerangi Dam	396	17.7	7.0	12.4	+0.8	27.3	14	1.5	1	60	11	-31	15	30	..
Tapanui	226	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Rankleburn Forest	255	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Taieri Mouth	15	16.9	8.6	12.8	+0.6	26.0	15	4.0	10	47	9	-14	16	7	..
Tuatapere	27	19.4	8.6	14.0	..	29.0	14	2.5	6	39	12	..	12	14	..
Otautau	55	19.2	8.8	14.0	+1.0	27.7	14	0.9	9	47	15	-37	10	14	185
Winton	44	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Gore	123	19.0	9.0	14.0	+0.7	26.5	14	2.5	11	50	19	..	10	20	195
Hokonui Forest	46	19.9	8.6	14.3	+0.8	26.7	25	2.4	9	48	16	-41	9	1	..
Woodlands	47	18.9	8.6	13.8	+0.7	26.6	14	2.8	11	49	22	..	15	1	..
Invercargill Airport	0	17.7	9.0	13.4	+0.8	27.0	14	1.8	9	51	17	-38	14	1	195
Tiwai Point, Bluff	5	17.3	10.0	13.7	+0.4	26.5	14	5.1	1	44	16	..	15	14	..
Stewart Island	3	15.8	8.8	12.3	..	21.5	14	1.2	9	79	29	..	14	1	..
Milton	18	18.8	9.3	14.1	+0.8	27.1	15	4.2	1	55	10	-14	14	30	..
Fineland, Balclutha	6	19.3	9.5	14.4	+1.2	28.2	14	4.7	10	37	12	..	11	7	172
Owaka	5	18.0	9.2	13.6	..	27.8	14	5.2	6	60	20	..	14	19	..
Nugget Point	129	15.7	9.1	12.4	+0.4	24.9	14	3.4	1	43	24	-33	8	10	..
Tautuku	61	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Nandi Airport, Fiji	19	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Rarotonga Airport	7	27.9	22.4	25.2	+0.4	30.0	31	17.6	9	540	17	+314	294	10	174
Totokoitu, Rarotonga	9	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Raoui Island	38	22.3	16.9	19.6	-0.9	24.9	23	13.1	13	195	9	+106	109	12	238
Campbell Island	15	10.7	6.2	8.5	-0.1	12.9	22	1.6	1	95	25	-7	19	4	69
Waitangi, Chatham Island	44	17.1	11.0	14.1	+0.7	20.5	16	6.4	4	15	9	-51	10	28	165
Scott Base, Antarctica	16	-0.4	-6.7	-3.6	+1.7	4.4	31	-15.9	3	..	..	..	..	..	..

LATE RETURNS AND CORRECTIONS

Kumeu 11/1980	32	18.3	11.2	14.8	..	23.4	4	2.5	11	151	22	..	46	7	..
Te Aroha 11/1980	12	19.8	11.8	15.8	+0.0	24.0	29	5.7	4	112	20	+13	26	7	..
Rotorua Airport 11/1980	287	18.2	8.5	13.4	-0.6	24.6	20	3.0	2	112	15	+13	31	4	223
Optiki 11/1980	6	19.5	9.4	14.5	-0.4	26.4	15	4.6	2	104	15	+15	18	30	211
Esk Forest 11/1980	427	18.4	7.8	13.1	-0.2	29.0	20	1.6	10	63	13	-41	15	5	..
Hastings 11/1980	12	21.3	9.0	15.2	-0.4	26.5	15	2.5	11	42	9	+1	23	8	..
Makaretu 11/1980	335	18.5	7.2	12.9	-0.4	28.8	20	0.1	11	57	16	..	17	8	..
Wharite Peak 11/1980	914	9.5	3.5	6.5	-1.7	16.0	4	-1.0	10	218	27	+55	34	8	..
Foxton 11/1980	3	..	..	..	..	..	..	..	..	102	18	+36	19	22	..
Karamea 10/1980	5	..	10.2	..	..	..	..	6.8	13	239	..	..	..	..	..
Karamea 11/1980	5	15.2	8.3	11.8	..	17.3	4	4.3	10	199	..	..	43	27	..
Tapawera 11/1980	146	18.3	5.9	12.1	..	28.5	19	-0.7	10	75	12	..	18	8	..
Rai Valley 11/1980	79	18.4	5.4	11.9	-1.4	27.6	19	-1.8	10	152	12	-16	37	4	..

CLIMATOLOGICAL TABLE—Summary of the Records of Temperature, Rainfall, and Sunshine for December 1980—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	B			Maximum	Date	Minimum	Date				Amount	Date	
		Max.	Min.	°C	°C	°C	°C	°C	°C	mm	mm	mm	Hrs		
LATE RETURNS AND CORRECTIONS															
Winchmore 11/1980	160	17.0	5.7	11.4	-1.1	25.2	19	-1.8	3	118	16	+52	29	7	..
Adair 11/1980	85	16.4	6.8	11.6	-1.1	27.5	19	1.5	10	57	16	+1	10	20	..
Dunedin Airport 11/1980	1	15.7	5.2	10.5	-1.4	29.2	19	-2.1	10	81	22	+23	15	24	159
Borland Burn 05/1980	183	12.5	2.7	7.6	..	17.8	9	-3.7	5	127	..	..	36	23	..
Borland Burn 06/1980	183	..	..	..	..	..	..	..	..	130	..	..	44	3	..
Borland Burn 08/1980	183	..	-1.0	..	..	..	..	-10.5	9	264	..	..	73	25	..
Borland Burn 09/1980	183	13.0	1.9	7.5	..	20.0	30	-3.0	9	148	..	..	28	21	..
Borland Burn 10/1980	183	..	..	..	..	..	..	..	..	95	..	..	..	..	..
Borland Burn 11/1980	183	..	..	..	..	..	..	..	..	101	..	..	..	..	..
Campbell Island 04/1980	15	10.1	6.3	8.2	+1.1	12.7	23	-0.1	9	67	27	-55	17	1	21
Campbell Island 08/1980	15	7.6	3.4	5.5	+0.5	10.1	31	-1.0	28	107	30	-2	15	15	11
Scott Base, Antarctica 10/1980	16	-16.7	-26.2	-21.5	+1.3	-4.6	30	-45.9	5	..	..	..	..	..	..
Scott Base, Antarctica 11/1980	16	-7.2	-14.6	-10.9	+1.1	-1.8	21	-22.2	9	..	..	..	..	..	..

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.

WEATHER NOTES FOR DECEMBER 1980

General—Pressures during December were below average over northern districts, but elsewhere were above with large anomalies being recorded in the area south of the country. Winds from the westerly quarter predominated over New Zealand except in the far north.

Many farmers reported reasonable grass growth, but exceptional growth was obtained on the east coast of the North Island due to mild wet conditions. In many areas of the country, haymaking was behind schedule.

Rainfall—The only areas to have above normal rainfall were Gisborne, Hawkes Bay, Wairarapa, parts of Northland, and the Bay of Plenty. Areas of Gisborne and Hawkes Bay had more than 250 percent of normal while many South Island regions had less than 40 percent of the average rainfall.

Rain began to fall on the 22nd in Gisborne and Hawkes Bay and the heavy rain which followed during the next 7 days resulted in flooding in both Gisborne and Hawkes Bay. In the Gisborne region heavy rain in the ranges from the 23rd to 26th caused the Waipaoa River to rise on the 27th to about 9 m above the normal level, threatening to isolate the township of Te Karaka. The 48 hour rainfalls from 9 a.m. on the 25th to 9 a.m. on the 27th were at Otoko (257 mm), Te Karaka (109 mm), Gisborne (57 mm), Makaretu North (near the headwaters of the Waipaoa River) (148 mm), Kairoa (189 mm), and East Cape (111 mm).

In Hawkes Bay the Heretaunga Plains were flooded on the 28th when the Ngaruroro River burst its stopbanks at Twyford. An estimated 800 to 1000 hectares of orchard and market garden land were inundated with flood waters causing crops to be destroyed. At the height of the flood there was an estimated discharge of 2500 cusecs of water in the river at the Fernhill gauging station. The 7 day rainfall totals from 22nd to 28th are the highest ever recorded at many Hawkes Bay stations. These include Brentford (449 mm), Smedley (364 mm), Te Hau (380 mm), Tutira (281 mm) Blackburn (282 mm), Gwavas (277 mm), Springhill (255 mm), and Mount Vernon (218 mm).

It was also the wettest December since records started for many stations. Those with long records include, Otoko (1913), Rissington (1907), Te Mata (1889), Mokopeka (1891), Blackburn (1920), Hapua (1930), and Mount Vernon (1890). At Gwavas it was the wettest December since 1893, records began there in 1889.

On the other hand, along the east coast of the South Island, Timaru recorded its driest December since 1916. It was also the driest December since records were taken from 1965 at Woodend, and from 1964 at Coldstream.

Temperature—Over the North Island mean temperatures were generally below the December normal, while in the South Island they were above. In some east coast districts of the South Island they were warmer by more than 1°C.

During a warm spell in the middle of the month many east coast districts recorded maximum temperatures 30°C and above. These include Gisborne (33.6°C on the 15th), Mangatu Forest (31.6°C on the 15th), Mohaka Forest (32.0°C on the 15th), Hastings (31.3°C on the 15th), Kaweka (31.7°C on the 15th), Winchmore (30.0°C on the 20th), Waipara (30.6°C on the 14th), and Timaru (31.8°C on the 15th).

Warm temperatures were also recorded along the West Coast at the end of the month. At Franz Josef, 28.5°C was measured on the 25th, this being the highest December maximum since records began in 1953.

Sunshine—There was less sunshine than usual over the North Island and the north of the South Island. Elsewhere over the South

Island it was above average. Stations with below normal sunshine include Gisborne (58 hours), Blenheim (55 hours), Kelburn (49 hours), New Plymouth (48 hours), and Tauranga (38 hours). On the other hand stations to receive more than normal sunshine include Timaru (52 hours), Hokitika (34 hours), Westport (23 hours), and Dunedin (10 hours).

At Blenheim the 190 hours recorded was the lowest December total since records began in 1930. There have also been only two other occasions, 1966 and 1968, when 200 hours or less sunshine were measured. It was the dulllest month at Gisborne since 1968, there being only one other time (in 1951) when the sunshine total was less. Sunshine records were taken at Gisborne from 1937.

It was the sunniest month at Westport and Hokitika since 1974 and 1968 respectively.

DAILY WEATHER SEQUENCE FOR DECEMBER 1980

The trough of low pressure which originated near Lord Howe Island lay east of Cook Strait on the 1st and a south to south-west air flow spread over the country.

An anticyclone in the mid Tasman Sea on the 2nd extended a ridge of high pressure over southern New Zealand on the 3rd with fine though cool weather. The anticyclone and ridge moved east-north-east to lie north of the country by the 5th as a cold front with rain over the Tasman Sea approached the south-west. The front moved over New Zealand on the 5th and 6th bringing rain to most western and southern areas.

On the 8th a complex trough of low pressure lay over New Zealand accompanied by rain. During the 9th a depression formed within the trough east of Wairarapa and moved northwards along the east coast of the North Island during the 10th and lay well east of the country on the 11th. At the same time a ridge of high pressure south of the depression moved eastwards over the South Island. Fine weather occurred with the high pressure area but moderate falls of rain were reported with the low along the east coast during the 9th.

An anticyclone near Lord Howe Island on the 11th extended a ridge of high pressure over southern New Zealand. The high pressure area remained slow moving, and by the 15th the ridge lay just east of New Zealand. Apart from light showers in Fiordland dry weather occurred over the country.

A complex trough of low pressure on the 15th near Tasmania drifted slowly eastwards to lie south of the South Island on the 21st. A series of cold fronts crossed New Zealand during this time bringing rain mainly to the west and south of the country, but became widespread during the 17th and 18th.

A small depression formed off the West Coast during the afternoon of the 21st and moved north-eastwards to lie near Northland by the 23rd. A ridge of high pressure lay from Lord Howe Island, over the South Island to the area east of the North Island on the 23rd. Consequently the depression became almost stationary and persisted until the 29th. Heavy rain associated with the depression fell in parts of Auckland and the Bay of Plenty during the 22nd, in Gisborne on the 25th, 26th, and 28th, and in northern and central Hawkes Bay on the 26th, 27th, and 28th. Flooding occurred as a result of the rain in areas of Gisborne and Hawkes Bay.

A large anticyclone over the south Tasman Sea on the 28th lay over New Zealand on the 30th. Apart from scattered showers over Northland, and areas of morning drizzle over the South Island, there was dry weather.

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

