



SUPPLEMENT

TO THE

NEW ZEALAND GAZETTE

OF

THURSDAY 13 MARCH 1980

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CLIMATOLOGICAL TABLE FOR JANUARY 1980

LAND & DEEDS OFFICE

20 MAR 1980

GISBORNE

NEW ZEALAND METEOROLOGICAL SERVICE

CLIMATOLOGICAL TABLE—Summary of the Records of Temperature, Rainfall, and Sunshine for January 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.			Maximum	Date	Minimum	Date				Amount	Date	
Metres	°C	°C	°C	°C	°C	°C	°C	°C	mm	mm	mm	mm	mm		
Cape Reinga	191	21.5	15.2	18.4	+0.2	24.9	14	9.9	18	51	17	-10	10	21	..
Kaitaia Airport	80	23.1	15.3	19.2	+0.0	26.7	28	10.8	5	225	14	+146	44	21	202
Aupouri Forest	69	22.5	16.2	19.4	+0.0	25.2	27	11.6	18	201	12	+140	38	20	..
Kerikeri Aerodrome	150	23.5	14.2	18.9	..	29.3	14	8.5	18	180	13	..	46	22	..
Umawera	50	23.9	14.8	19.4	..	28.4	26	10.3	3	179	15	..	30	21	..
Kaikohe	204	22.4	14.5	18.5	+0.1	27.5	14	9.1	18	181	11	..	37	15	172
Waiotemarama	229	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Waipoua Forest	88	23.0	13.3	18.2	+0.6	27.5	30	8.5	5	153	16	+74	42	21	..
Dargaville	20	23.7	14.3	19.0	+0.7	27.6	26	9.4	1	138	12	+72	50	21	183
Waitangi Forest	55	23.6	14.8	19.2	-0.1	28.4	14	9.5	18	138	13	+74	51	22	211
Glenbervie Forest	107	23.5	12.9	18.2	+0.7	28.1	15	7.0	4	131	11	+42	37	21	..
Whangarei Airport	37	23.8	15.2	19.5	-0.1	28.4	15	10.1	18	143	12	+69	46	21	..
Whangarei	29	24.4	14.7	19.6	+0.4	30.0	15	9.8	3	145	10	..	46	21	190*
Marsden Power Station	3	23.9	15.5	19.7	-0.1	29.7	14	10.9	18	189	16	..	57	21	..
Mokohinau	102	..	16.1	..	..	..	..	7.0	18	65	10	+12	28	15	..
Te Hana	10	24.1	12.3	18.2	..	27.4	15	6.8	4	126	9	..	36	15	..
Leigh	27	21.9	15.3	18.6	-0.2	24.9	30	9.5	18	171	10	+111	68	21	201
Warkworth	72	23.2	13.3	18.3	+0.2	26.9	11	9.3	18	133	13	..	36	21	..
Oyster Point	0	23.3	14.7	19.0	..	27.4	11	8.6	4	100	14	..	35	21	..
Woodhill Forest	30	22.8	14.2	18.5	+0.3	27.3	11	9.0	4	104	13	+33	24	21	..
Riverhead Forest	28	23.5	13.8	18.7	+0.9	27.4	11	8.4	4	93	11	+12	25	21	..
Kumeu	32	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Whenuapai	26	23.4	14.5	19.0	+0.9	26.9	11	9.9	4	82	13	+8	20	21	..
Albert Park, Auckland	49	23.3	16.4	19.9	+0.4	26.6	15	11.5	18	96	13	+32	22	15	193*
Owairaka, Auckland	41	..	..	..	..	..	..	..	..	90	15	+21	17	21	..
Port Fitzroy	4	23.1	15.1	19.1	+0.2	26.7	29	9.8	4	120	11	+26	38	22	..
Coromandel	43	23.6	14.3	19.0	..	27.4	30	7.6	4	132	12	..	31	22	..
Whangapoua Forest	4	24.2	13.4	18.8	+0.6	29.2	15	7.5	4	127	12	+15	27	22	..
Thames	3	23.6	15.9	19.8	+0.4	27.3	15	8.7	4	99	13	+33	25	21	167
Tairua Forest	3	23.7	14.2	19.0	+0.3	29.0	21	8.0	4	88	9	-9	23	21	..
Paeroa	4	25.2	14.3	19.8	+1.4	30.4	11	6.7	4	111	14	+40	25	21	..
Waihi	91	23.5	13.8	18.7	+0.4	28.4	11	7.5	4	115	14	-2	25	21	173
Te Aroha	12	24.3	14.8	19.6	+0.3	29.5	31	7.9	4	113	12	+19	23	21	..
Katikati	2	..	14.2	..	..	..	..	7.7	4	85	12	..	21	21	..
Tauranga	2	22.1	15.5	18.8	+0.0	27.3	13	10.4	6	81	8	..	20	22	..
Tauranga Airport	4	22.9	14.4	18.7	+0.1	27.4	13	9.4	4	82	8	-2	26	22	186
Te Puke	91	23.2	13.2	18.2	+0.0	28.4	13	8.2	4	85	10	..	28	22	..
Rotochu Forest	72	22.9	12.2	17.6	+0.0	28.7	13	5.9	3	102	8	+3	38	22	..
Edgecumbe	5	23.5	13.7	18.6	+0.5	30.4	13	7.1	3	83	..	..	30	21	..
Whakatane	2	23.6	14.5	19.1	+0.2	32.0	14	8.5	13	88	11	+7	43	22	193
Whakatane Airport	6	23.0	13.8	18.4	..	30.9	13	7.3	3	91	10	..	40	22	..
Port Ohope	9	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Kinleith	383	21.8	12.4	17.1	+0.3	27.0	11	7.3	3	156	12	+52	56	21	..
Tokoroa	305	22.6	..	..	..	28.0	30	..	..	172	14	..	58	21	..
Tikitere	338	21.3	13.0	17.2	..	27.2	11	7.8	4	102	9	..	25	21	..
Kawerau	30	23.9	14.0	19.0	-0.3	30.2	13	7.4	3	95	10	-17	35	21	..
Te Teko	8	24.7	12.9	18.8	-0.1	31.5	13	6.2	4	89	11	-5	33	21	174
Whakarewarewa	307	22.1	12.7	17.4	+0.2	28.3	31	7.6	3	103	12	+4	31	21	..
Rotorua Airport	287	22.2	13.2	17.7	+0.2	27.6	11	8.3	4	101	14	+4	25	21	183
Tarawera Forest	61	24.4	13.4	18.9	+0.9	30.6	13	6.5	3	102	11	-28	32	22	..
Waiotapu Forest	435	21.3	11.4	16.4	-0.2	26.7	31	5.2	4	88	11	-6	31	21	..
Atiamuri Power Station	253	22.9	..	..	..	28.9	30	..	..	135	14	+54	48	21	..
Kaingaroa Forest	544	21.0	11.1	16.1	+0.1	26.8	31	5.3	7	97	11	-17	32	21	..
Murupara	198	23.5	12.7	18.1	..	29.3	13	6.8	3	107	12	+3	26	21	..
Broadlands	305	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Wairapukao Forest	437	22.0	9.7	15.9	-0.4	28.2	31	3.1	7	116	17	+12	27	21	..
Taupo	376	23.0	11.7	17.4	+0.5	30.1	30	5.4	4	137	16	+56	45	16	177
Wairakei Power Station	342	22.9	11.8	17.4	+0.2	28.8	30	5.0	4	116	15	+27	25	21	..
Wairakei Research Station	402	22.8	10.8	16.8	+0.4	29.0	30	3.7	4	127	15	+41	27	21	..
Minginui Forest	366	22.5	11.5	17.0	+0.6	28.9	30	4.0	4	179	18	+62	48	8	..
Taupo Airport	407	21.9	11.8	16.9	..	27.5	31	4.5	5	110	14	..	30	16	..
Waimihia Forest	743	19.0	9.7	14.4	+0.1	26.0	30	3.8	4	189	17	+77	40	16	..
Opotiki	6	22.3	14.2	18.3	+0.1	26.2	14	8.5	3	91	9	+2	39	22	176
Waimana	37	24.2	12.6	18.4	-0.3	31.0	14	6.5	4	139	13	+27	49	22	..
Mangere, Auckland	4	23.1	15.7	19.4	+0.4	27.0	11	11.6	4	76	16	+12	16	21	188
Otara, Auckland	12	23.6	14.7	19.2	+0.9	27.5	28	9.3	4	78	13	+14	15	15	..
Orere Point	30	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Auckland Airport	8	23.2	15.6	19.4	+0.4	27.1	11	11.5	4	79	13	+13	15	21	208
Ardmore	30	23.7	13.9	18.8	+0.6	27.5	11	7.0	4	109	12	+33	22	17	..
Pukekohe	82	22.5	13.9	18.2	+0.2	26.7	11	8.5	4	125	17	..	24	22	159
Maoro Forest	52	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hunua	122	22.7	12.9	17.8	..	28.8	31	7.0	4	125	13	..	33	15	..
Mercer	35	23.8	13.9	18.9	..	28.8	11	6.9	4	98	11	..	25	21	..
Maramarua Forest	38	24.0	12.4	18.2	+0.5	29.0	11	5.0	4	121	13	+55	27	17	..

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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
Te Kauwhata	Metres 32	24.0	14.1	19.1	+0.8	29.0	29	9.5	4	75	10	+11	20	21	179
Ruakura, Hamilton	40	23.4	12.5	18.0	+0.5	28.0	29	6.4	4	143	10	+72	37	21	187
Whatawhata	104	23.0	13.3	18.2	+0.6	27.8	29	6.9	4	146	15	+65	41	21	171
Rukuhia	66	23.4	13.6	18.5	+0.5	27.7	28	8.0	4	174	13	+103	40	21	182
Hamilton Airport	50	23.6	12.4	18.0	+0.9	28.5	28	7.1	4	154	12	+83	41	21	..
Cambridge	76	23.5	13.2	18.4	..	28.5	29	6.3	4	118	12	..	40	21	..
Port Taharoa	27	22.8	16.0	19.4	+0.9	26.2	29	12.2	4	100	15	..	27	21	..
Mohakatino Station Mokau	46	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Arapuni Power Station	123	24.2	13.0	18.6	+0.3	29.1	30	6.5	4	137	11	+56	58	21	..
Waikeria	46	23.8	12.8	18.3	..	29.5	30	6.0	4	125	11	..	44	21	..
Te Kuiti	61	23.6	12.9	18.3	+0.5	29.2	30	8.4	3	143	16	+52	32	21	163
Pureora Forest	549	20.2	10.5	15.4	+0.4	26.1	30	2.0	19	188	16	+74	42	16	..
Taumarunui	171	24.1	12.1	18.1	+0.0	30.6	30	5.0	5	169	17	+80	43	22	175
Omata	61	20.8	..	..	..	25.3	29	..	..	120	12	..	28	19	..
New Plymouth	55	21.3	13.9	17.6	..	26.7	29	9.8	26	151	17	..	32	19	..
New Plymouth Airport	27	21.1	14.3	17.7	+0.8	25.0	29	10.4	6	116	15	+9	33	19	200
Tikorangi	77	21.1	13.2	17.2	..	26.0	29	9.0	5	160	15	..	48	19	..
Te Wera Forest	180	21.4	12.0	16.7	+0.9	27.4	29	4.4	6	241	15	+119	78	19	..
Lower Retaruke	223	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Turangi	366	21.2	12.3	16.8	-0.1	28.4	31	5.4	6	166	17	..	48	22	189
Chateau, Mt Ruapehu	1119	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Mangamutu, Pahiatua	116	21.5	12.5	17.0	+0.3	26.0	29	7.4	7	107	17	+13	29	16	..
Mt Bruce Reserve	305	21.1	10.9	16.0	+0.5	29.5	30	6.5	7	307	16	..	72	19	..
Waingawa, Masterton	114	23.1	12.0	17.6	+0.5	30.3	30	6.9	26	102	13	+38	21	19	199
Kopua	311	21.8	12.4	17.1	+0.9	28.4	27	7.0	18	54	12	-37	15	22	..
Waipukurau	137	24.9	13.0	19.0	+1.6	32.0	27	8.6	18	37	8	-29	16	22	186*
Dannevirke	207	22.1	12.8	17.5	+0.7	28.4	27	7.5	18	85	15	+9	28	1	173
Castlepoint	3	22.0	15.2	18.6	+0.8	29.1	30	9.8	18	48	9	-16	11	3	..
Ngaumu Forest	244	22.7	11.1	16.9	+1.0	30.3	30	2.6	21	48	11	-26	16	3	..
Tauherenikau, Alloa	43	22.7	12.0	17.4	+0.2	28.0	13	6.6	26	156	11	+80	35	16	..
Gladstone, Arahura	116	22.4	11.9	17.2	+0.5	29.6	30	7.7	22	70	9	+12	19	3	..
Waiorongomai	21	20.6	13.1	16.9	+0.3	27.0	29	8.9	18	204	13	+110	64	19	..
Cape Palliser	10	21.5	14.8	18.2	+1.1	28.8	30	7.9	3	82	10	+11	17	17	..
East Cape	17	22.5	15.4	19.0	+0.2	28.6	15	10.1	19	46	12	-43	16	22	..
Ruatoria	61	25.6	14.0	19.8	+1.2	32.7	27	8.0	19	81	10	-46	52	22	..
Mangatu Forest	182	23.9	13.5	18.7	+0.5	31.6	28	8.4	18	90	10	-4	32	16	..
Manutuke Gisborne	9	24.0	13.6	18.8	+0.5	30.8	27	6.8	19	67	7	-4	26	1	..
Gisborne Airport	4	24.5	14.2	19.4	+0.8	31.2	27	8.6	19	88	7	+14	51	1	230
Onepoto, Waikaremoana	643	21.1	11.7	16.4	+0.5	30.7	28	7.4	6	100	15	-50	24	16	..
Wharerata Forest	439	20.8	12.9	16.9	..	33.5	27	7.5	3	182	8	..	136	4	..
Esk Forest	427	..	13.0	..	..	..	..	8.4	7	73	8	-44	29	16	..
Kaweka Forest	414	22.9	13.2	18.1	+1.2	30.2	27	7.1	18	41	10	..	12	21	..
Napier Airport	2	24.2	14.3	19.3	..	33.6	27	8.8	18	21	11	-35	9	21	..
Napier	2	..	15.1	..	..	..	..	10.4	18	25	9	-26	10	21	223
Hastings	12	25.0	14.7	19.9	+1.1	33.8	27	10.0	3	30	8	-36	11	22	..
Havelock North	9	24.5	13.2	18.9	+1.2	33.5	27	7.5	3	31	11	-25	13	22	230
Gwavas Forest	335	23.1	10.7	16.9	+1.0	30.5	27	6.8	18	45	10	-54	17	1	..
Makaretu	335	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Mohaka Forest	286	23.1	13.2	18.2	+1.1	30.9	31	8.8	4	32	13	-68	11	21	..
Frasertown, Wairoa	8	24.4	14.5	19.5	+0.7	31.8	27	9.6	8	64	6	-38	35	4	..
Wairoa	20	..	14.3	..	..	..	..	9.4	7	61	10	..	28	4	228
Portland Island	78	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Kapiti Island	16	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Paraparaumu Aerodrome	7	20.2	12.8	16.5	-0.3	23.9	9	6.5	6	156	13	+87	52	22	208
Flockhouse, Bulls	9	21.5	12.7	17.1	+0.1	25.4	27	8.4	9	70	16	+6	18	16	..
Ohakea	48	21.9	13.5	17.7	+0.2	26.6	27	9.1	18	69	16	-2	20	16	199
Wharite Peak	914	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Kairanga Palmerston North	15	22.1	12.5	17.3	+0.3	26.1	27	8.7	5	72	13	..	30	16	189
Palmerston North Airport	45	22.2	12.3	17.3	+0.4	26.8	27	7.4	4	75	15	-4	22	16	..
Palmerston North D S I R	34	21.9	13.5	17.7	+0.4	26.4	29	9.4	18	61	15	-23	14	16	172
Massey University	61	21.9	13.2	17.6	..	26.2	31	9.3	18	63	16	-23	15	16	..
Foxton	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Waitare Forest	3	20.7	13.0	16.9	-0.3	24.0	30	6.2	6	112	14	+51	24	19	..
Levin	46	20.8	13.0	16.9	+0.1	25.1	29	7.3	5	165	18	+89	41	19	199
Porirua	94	20.6	..	..	..	23.4	30	..	..	120	11	+30	40	19	..
Taita, Lower Hutt	65	20.5	13.1	16.8	+0.1	25.5	29	8.0	3	197	11	+108	66	19	212
Avalon, Lower Hutt	15	20.8	13.8	17.3	+0.4	25.0	29	8.6	3	187	12	+113	63	19	..
Kelburn, Wellington	125	19.7	13.4	16.6	+0.2	23.5	30	7.8	3	96	10	+15	28	19	216
Somes Island	43	19.4	13.9	16.7	..	23.0	30	8.0	3	96	15	..	34	19	..
Gracefield, Lower Hutt	34	20.1	14.0	17.1	+0.1	24.8	29	8.2	3	131	11	+50	46	19	..
Wainuiomata	82	20.3	12.9	16.6	+0.4	25.0	29	7.5	6	160	12	..	45	19	..
Wellington Airport	6	20.4	14.2	17.3	+0.1	24.9	30	8.7	3	87	12	+21	25	19	..
Kaitoke	223	20.0	11.9	16.0	+0.8	26.2	29	6.6	9	371	13	+231	168	19	216
Wallaceville	56	20.9	12.5	16.7	+0.2	26.0	29	7.2	29	233	12	+147	94	19	210
Cape Egmont	8	20.8	14.0	17.4	+0.3	25.0	30	8.3	6	105	19	+6	26	19	..
Stratford Mountain House	846	17.7	8.5	13.1	+0.4	24.6	15	4.1	6	673	16	+256	270	19	..
Stratford Dem. Farm	311	20.4	11.0	15.7	+0.2	25.9	29	6.0	20	216	14	+81	55	19	164

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		A Max.	B Min.			Maximum	Date	Minimum	Date				Amount		Date
Metres	°C	°C	°C	°C	°C	°C	°C	°C	mm	mm	mm	mm	mm		
Manaia Dem. Farm	98	20.6	12.4	16.5	+0.3	26.7	27	4.7	6	121	12	+42	24	16	208
Normanby	122	21.0	12.3	16.7	..	25.5	15	4.1	6	82	20	..	21	1	..
Patea	43	20.9	13.9	17.4	+0.3	26.5	15	9.5	18	93	11	-1	37	19	..
Ohakune Junction	629	19.5	10.1	14.8	..	26.5	11	4.0	6	145	16	..	49	16	..
Karioi	648	20.6	10.0	15.3	+0.6	27.2	30	5.9	26	99	14	+25	30	16	..
Waiouru	823	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Waiouru Military Camp	823	18.5	9.0	13.8	+0.9	24.2	30	3.6	26	97	13	+18	29	22	..
Taihape	433	22.2	9.3	15.8	-0.6	29.4	30	3.0	24	68	13	..	24	22	..
Kahui, Taihape	518	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Wanganui	22	22.0	14.1	18.1	+0.4	29.5	27	8.9	18	57	13	-12	23	17	208
Wanganui Airport	9	21.5	13.7	17.6	..	29.2	27	8.0	5	54	11	..	16	17	..
Farewell Spit	3	21.4	13.0	17.2	+0.5	27.9	13	9.0	4	159	14	+85	65	19	..
Totaranui	10	21.7	12.2	17.0	..	29.4	14	8.0	3	176	9	..	88	19	..
Westport Airport	2	19.8	12.3	16.1	+0.4	24.2	10	8.2	5	310	17	+155	68	24	197
Cobb Dam	823	18.1	7.6	12.9	-0.1	26.3	13	2.9	4	183	12	+66	57	19	..
Arapito	20	..	11.9	..	..	..	..	7.5	4	259	14	..	57	19	157
Karamea	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Lake Rotoroa	443	20.4	8.5	14.5	..	27.6	30	2.4	5	289	14	..	62	16	..
Lake Rototiti	634	19.8	8.1	14.0	-0.3	29.0	30	3.2	22	267	15	+170	68	16	..
Hokitika Airport	39	19.5	11.7	15.6	+0.5	23.0	11	5.2	4	331	18	+100	79	26	191
Reefton	198	22.0	10.4	16.2	+0.0	28.8	30	4.4	5	337	18	+187	75	24	..
Totara Flat	77	21.6	10.4	16.0	+0.1	27.4	9	3.3	4	348	17	+203	83	24	..
Greymouth	4	19.8	12.0	15.9	+0.2	23.0	31	6.4	18	401	17	+203	95	24	171
Otira Substation	383	..	8.8	..	..	..	..	4.0	5	742	19	+343	123	16	..
Springs Junction	421	20.7	9.2	15.0	..	28.8	30	1.1	5	384	17	+216	68	17	..
Hari Hari	45	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Franz Josef	122	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Fox Glacier	152	19.8	10.1	15.0	..	24.7	30	3.9	18	537	19	+132	154	26	..
Milford Sound	3	18.7	10.3	14.5	+0.0	23.7	10	4.1	18	708	21	+177	155	26	..
Puysegur Point	43	17.1	10.4	13.8	..	23.4	29	6.9	4	223	21	+27	41	16	..
Stephens Island	187	17.9	12.8	15.4	..	20.2	30	6.0	24	101	15	+45	54	19	..
Riwaka, Motueka	8	22.5	11.4	17.0	+0.0	28.8	15	7.8	26	85	9	+11	29	22	242
Tapawera	146	23.0	9.8	16.4	..	31.5	13	4.5	4	101	12	..	29	19	..
Golden Downs Forest	274	21.8	9.5	15.7	-0.1	29.5	13	4.2	5	118	11	+24	29	19	..
Appleby	17	21.6	12.1	16.9	-0.5	26.4	13	8.0	18	66	7	+2	24	22	..
Nelson Airport	2	21.7	12.5	17.1	+0.1	26.7	13	8.2	6	77	11	+3	32	22	246
Rai Valley	79	22.6	10.1	16.4	-0.1	30.5	13	3.8	4	231	9	+96	115	19	..
Moutere Hills	101	21.9	12.8	17.4	+0.1	28.6	13	8.0	18	72	7	-2	30	22	..
Blenheim Airport	27	23.8	11.6	17.7	+0.3	32.5	31	5.4	4	46	8	-7	15	19	..
Blenheim	4	23.7	12.5	18.1	+0.5	31.2	31	7.8	6	51	9	+0	17	19	241
Waihopai Power Station	262	23.3	11.0	17.2	+0.1	33.2	31	4.3	5	71	7	+2	14	17	..
Vernon Lagoons	2	23.1	11.2	17.2	+0.4	29.8	31	5.8	8	49	9	..	15	19	220
Lake Grassmere	2	21.7	13.9	17.8	+0.7	26.2	12	8.5	3	46	7	-2	25	2	219
Cape Campbell	3	19.8	13.7	16.8	+0.9	23.0	20	8.7	3	38	7	-10	16	2	..
Hanmer Forest	387	22.3	9.0	15.7	+0.1	32.6	30	0.0	5	114	10	+28	49	2	187
Molesworth	893	20.0	6.4	13.2	-0.9	29.8	30	-1.6	5	118	10	+65	43	2	..
Kaikoura	99	20.6	13.0	16.8	+0.8	28.6	30	7.5	3	61	9	-8	21	22	202
Arthurs Pass	738	17.2	6.5	11.9	..	24.5	1	0.0	5	587	17	+277	104	26	..
Balmoral Forest	198	23.3	10.9	17.1	+0.8	35.0	30	2.4	5	47	10	+1	23	2	..
Hawarden	244	23.0	10.7	16.9	..	33.7	30	1.7	5	72	..	..	29	2	..
Waiou	137	23.9	11.0	17.5	..	36.1	30	3.0	6	80	11	..	45	2	..
The Hermitage, Mt Cook	765	18.8	8.4	13.6	-0.5	27.0	29	0.4	3	778	20	+377	249	26	144
Mt John	1027	17.5	8.1	12.8	-0.6	25.7	13	-0.5	3	97	9	+46	49	2	243
Craigieburn Forest	914	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Lake Coleridge	364	21.6	9.4	15.5	+0.0	30.4	31	2.0	5	117	14	+56	56	2	..
Highbank Power Station	336	20.7	10.6	15.7	+0.3	31.0	13	4.4	5	82	14	-7	46	2	222
Hororata Substation	192	22.2	9.6	15.9	-0.1	34.7	30	1.2	18	112	15	+41	54	2	..
Winchmore	160	21.9	9.4	15.7	+0.1	34.1	30	2.6	5	125	12	+64	77	2	..
Peel Forest	274	21.5	9.0	15.3	..	32.9	30	2.6	5	55	15	..	18	2	..
Ashburton	101	23.1	10.7	16.9	+0.2	37.1	30	3.3	5	127	11	+63	89	2	205
Waipara	64	24.0	11.6	17.8	..	36.2	30	3.5	7	66	..	..	48	2	..
Ashley Forest	107	20.6	10.9	15.8	-0.4	29.5	31	6.0	18	93	10	+29	67	2	178
Rangiora	46	21.9	10.4	16.2	-0.3	31.4	31	4.1	5	108	11	+60	65	2	..
Darfield	195	23.3	10.5	16.9	+0.4	34.2	30	2.3	18	117	12	+48	67	2	..
Eyrewell Forest	158	22.3	9.4	15.9	-0.3	32.7	30	1.0	5	128	10	+52	76	2	..
Christchurch Airport	30	22.3	11.3	16.8	+0.2	32.1	31	3.5	18	139	9	+93	110	2	206
Templeton	46	21.9	10.6	16.3	..	31.8	31	3.6	18	172	10	..	147	2	..
Christchurch	7	22.5	12.0	17.3	+0.5	33.5	31	5.4	18	136	10	+85	106	2	..
Bromley, Christchurch	9	21.7	12.9	17.3	+0.5	31.0	31	7.7	18	93	11	+45	62	2	..
Mt Pleasant	137	21.2	12.5	16.9	+0.7	30.5	31	7.5	4	120	12	+72	84	2	..
Lincoln	11	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Broadfield, Lincoln	12	..	..	..	..	..	..	..	..	130	12	..	104	2	..
Akaroa	3	22.4	11.5	17.0	..	33.0	30	5.7	5	168	5	..	111	2	..
Lake Tekapo	683	20.0	8.4	14.2	-1.1	28.0	13	0.0	4	123	9	+72	74	2	244
Lake Pukaki	556	20.2	9.4	14.8	+0.0	29.6	30	2.2	18	114	15	..	55	2	..
Fairlie	304	21.3	8.2	14.8	..	33.7	30	1.6	28	112	9	..	73	2	..
Twizel	457	21.7	8.5	15.1	-0.5	30.5	30	1.8	5	118	10	..	55	2	..

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

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.			Maximum	Date	Minimum	Date				Amount	Date	
	Metres	°C	°C	°C	°C	°C	°C	°C	°C	mm		mm	mm	mm	Hrs
Ikawai	70	20.5	10.0	15.3	+0.2	32.0	30	3.5	5	51	8	..	10	2	..
Geraldine	119	22.0	10.6	16.3	..	34.6	30	4.5	5	135	10	..	107	2	..
Orari Estate	81	21.6	10.1	15.9	-0.1	34.3	30	3.7	5	193	13	+119	154	2	..
Temuka	24	20.6	10.3	15.5	-0.1	32.5	30	4.5	5	159	11	+98	111	2	..
Timaru Airport	26	20.4	9.9	15.2	-0.3	32.6	30	3.6	5	120	10	+62	79	2	..
Adair	85	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Timaru	17	21.2	11.7	16.5	+0.5	30.2	30	4.9	18	94	11	+36	54	2	195
Waimate	61	20.8	11.2	16.0	+0.0	32.8	30	6.5	6	42	8	-19	14	2	..
Kurow	207	21.2	10.4	15.8	..	34.0	30	4.2	5	76	15	..	42	2	..
Oamaru Airport	30	19.6	10.7	15.2	+0.2	30.4	30	6.9	3	48	11	-10	17	2	169
Tara Hills, Oamarua	488	21.2	9.1	15.2	-0.6	30.1	13	3.2	5	106	8	+42	36	15	207
Lake Hawea	350	20.1	10.1	15.1	-1.8	27.1	10	3.1	18	97	12	+28	33	2	..
Wanaka	296	22.2	10.3	16.3	-0.4	30.2	13	1.4	4	102	12	+44	24	26	..
Queensberry	277	21.9	10.6	16.3	..	29.4	13	1.8	4	93	15	..	23	26	..
Bendigo	200	23.1	10.6	16.9	..	30.7	11	1.3	4	83	15	..	26	2	..
Naseby Forest	610	19.5	7.2	13.4	-0.2	30.5	30	-2.4	4	84	11	+10	39	2	..
Ranfurlly	427	20.5	7.8	14.2	..	31.3	30	-1.0	4	62	11	..	24	2	162
Herbert Forest	61	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Palmerston	21	20.0	9.8	14.9	+0.4	32.3	30	2.5	4	95	11	..	25	14	165
Cherry Farm Hospital	6	19.2	9.8	14.5	+0.1	30.7	30	4.7	4	119	11	+61	31	14	..
Taiaroa Head	72	17.2	11.3	14.3	+0.4	26.4	30	6.0	17	71	15	+7	26	14	..
Invermay, Taieri	30	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Berwick Forest	18	20.1	9.5	14.8	+0.2	33.7	30	4.5	5	139	18	+63	54	16	..
Dunedin Airport	1	20.0	9.5	14.8	+0.2	33.1	30	4.5	10	111	17	+50	38	14	152
Musselburgh, Dunedin	2	18.5	11.5	15.0	+0.0	27.5	30	5.5	18	115	20	+41	35	14	154
Te Anau	215	..	..	..	..	..	..	..	..	..	..	..	..	..	..
West Arm, Manapouri	232	18.2	9.5	13.9	+0.0	25.9	10	5.3	22	496	23	..	113	26	..
Borland Burn	183	20.0	..	..	..	29.2	13	..	..	209	22	..	42	16	..
Queenstown	329	21.2	10.3	15.8	-0.1	29.8	13	5.5	22	140	15	+66	34	16	186
Queenstown Airport	349	19.7	8.6	14.2	-1.2	28.0	13	3.3	22	129	13	+61	34	16	..
Cromwell	213	22.6	10.3	16.5	-1.1	31.5	13	1.7	4	74	12	+31	18	26	211
Northburn	210	22.5	10.5	16.5	..	30.8	13	2.3	4	71	16	..	17	2	..
Clyde Dam	160	22.6	11.1	16.9	..	31.6	30	3.7	4	72	17	..	21	16	..
Ophir	305	22.8	8.7	15.8	-0.1	30.5	30	2.7	3	50	10	-3	19	2	..
Moa Creek	427	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Earnsclough	152	22.7	10.1	16.4	+0.1	32.4	13	1.0	4	74	15	+28	26	16	..
Alexandra	141	22.7	10.8	16.8	-0.4	31.5	30	2.2	4	67	16	+21	19	16	197
Roxburgh Power Station	110	22.2	9.6	15.9	-0.4	32.0	30	2.0	4	115	12	+62	40	16	..
Moa Flat	410	19.3	7.9	13.6	+0.3	27.7	30	1.6	4	224	15	+138	112	16	..
Mahinerangi Dam	396	17.8	8.0	12.9	-0.2	28.2	30	3.2	4	191	18	+94	68	16	..
Tapanui	226	19.8	9.0	14.4	-0.2	29.5	30	3.8	3	217	15	+128	67	16	..
Rankleburn Forest	255	19.2	8.6	13.9	+0.3	30.8	30	4.2	4	290	17	+196	111	16	..
Taieri Mouth	15	18.3	9.6	14.0	+0.5	32.4	30	4.0	5	125	18	+46	56	16	..
Otautau	55	19.7	8.9	14.3	+0.3	29.0	31	3.7	22	226	17	+135	77	16	158
Winton	44	19.9	9.2	14.6	+0.1	28.5	29	3.5	22	172	15	+108	66	16	173
Gore	123	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hokonui Forest	46	20.3	9.2	14.8	+0.1	28.8	29	3.3	4	200	15	+114	82	16	..
Woodlands	47	19.6	9.1	14.4	+0.6	27.7	29	3.5	4	143	18	..	78	16	..
Invercargill Airport	0	19.1	9.1	14.1	+0.4	27.5	29	3.5	9	151	16	+62	73	16	172
Tiwai Point, Bluff	5	18.6	10.2	14.4	+0.2	25.8	30	5.0	4	138	17	..	50	16	..
Stewart Island	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Milton	18	19.3	9.8	14.6	+0.0	32.0	30	4.0	28	155	17	+86	80	16	..
Finegand, Balclutha	6	19.8	10.1	15.0	+0.5	31.7	30	3.8	5	147	..	..	77	16	177
Owaka	5	18.6	9.0	13.8	..	30.1	30	3.0	4	134	18	..	50	16	..
Nugget Point	129	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tautuku	61	18.2	9.8	14.0	..	30.5	30	5.0	20	182	20	..	100	16	..
Rarotonga Airport	7	28.6	23.9	26.3	+0.5	30.8	6	20.4	24	590	24	+331	161	26	142
Raoul Island	38	25.3	19.7	22.5	+0.9	26.9	14	15.5	19	43	13	-48	14	17	270
Waitangi, Chatham Island	44	18.8	12.5	15.7	+1.3	22.4	1	6.1	16	48	15	-5	13	3	146
Campbell Island	15	12.5	7.3	9.9	+0.6	16.4	29	1.4	6	88	22	-36	17	30	112
Nandi Airport, Fiji	15	31.6	22.8	27.2	+0.1	34.1	2	20.1	24	302	17	..	117	14	230
Totokoitu, Rarotonga	9	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Scott Base, Antarctica	16	-2.5	-8.2	-5.4	-0.3	2.7	17	-13.9	13	..	..	..	..	..	..
LATE RETURNS AND CORRECTIONS															
Whangarei 11/1979	29	21.4	11.7	16.6	+0.5	25.0	29	7.4	16	134	15	..	43	19	..
Oyster Point 12/1979	0	21.4	12.1	16.8	..	27.0	25	7.8	5	149	16	..	40	25	..
Owairaka, Auckland 12/1979	41	21.9	12.9	17.4	+0.2	25.3	24	9.4	6	144	15	+55	33	26	..
Whangapoua Forest 12/1979	4	23.5	11.5	17.5	+0.7	27.0	24	7.5	23	83	12	-31	19	6	..
Paeroa 12/1979	4	24.1	12.2	18.2	+1.1	28.4	25	7.5	28	117	11	+23	39	31	..
Tokoroa 12/1979	305	21.4	9.5	15.5	-0.3	25.2	10	3.0	28	190	14	..	55	26	..
Broadlands 11/1979	305	19.5	8.7	14.1	..	22.9	25	0.8	16	142	..	..	..	..	..
Broadlands 12/1979	305	21.4	8.3	14.9	..	25.7	24	2.4	5	105	..	..	..	..	..
Waimihia Forest 12/1979	743	17.4	7.7	12.6	-0.3	22.0	17	1.6	8	212	16	+67	56	26	..
Mangere, Auckland 12/1979	4	21.7	14.3	18.0	+0.5	25.7	25	10.5	5	106	15	+25	35	26	254
Omata 11/1979	61	18.7	12.5	15.6	+1.3	20.5	28	9.0	17	169	14	..	61	11	..

CLIMATOLOGICAL TABLE—Summary of the Records of Temperature, Rainfall, and Sunshine for January 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	mm	mm	mm	Hrs				
LATE RETURNS AND CORRECTIONS															
Omata 12/1979	61	19.6	13.2	16.4	+0.3	23.0	9	9.9	9	99	16	..	28	26	..
Ruatoria 12/1979	61	23.9	12.4	18.2	+0.7	30.8	24	6.8	28	124	14	+5	55	8	..
Makaretu 12/1979	335	22.4	9.8	16.1	+1.0	34.6	25	3.0	28	90	17	..	44	29	..
Wairoa 12/1979	20	..	12.4	..	..	..	..	8.5	28	219	12	..	69	8	249
Kairanga Palmerston North 12/1979	15	20.7	11.4	16.1	+0.3	27.4	25	5.1	16	127	16	..	58	26	211
Grasslds Palmerston North 12/1979	34	20.7	12.4	16.6	+0.5	27.3	25	6.2	16	114	15	+10	55	26	184
Foxton 12/1979	3	..	..	..	..	..	..	..	..	146	11	+65	50	26	198
Taita, Lower Hutt 12/1979	65	18.8	12.4	15.6	+0.2	23.6	10	7.5	9	168	17	+66	32	29	187
Kahui, Taihape 12/1979	518	20.0	9.4	14.7	+0.4	26.0	25	3.9	29	94	..	..	33	29	..
Hari Hari 11/1979	45	17.6	9.2	13.4	+1.2	20.6	27	4.9	12	326	21	-93	55	22	..
Hari Hari 12/1979	45	18.7	8.9	13.8	-0.3	23.6	31	1.9	8	681	19	+381	193	24	..
Franz Josef 12/1979	122	17.6	8.4	13.0	-0.7	23.0	31	4.5	5	907	19	+452	305	24	..
Lincoln 12/1979	11	21.9	9.9	15.9	+1.0	30.5	24	4.0	16	33	9	-25	9	2	249
Tara Hills, Omarama 12/1979	488	19.2	6.8	13.0	-1.1	28.0	16	-1.5	8	126	12	+70	70	24	213
Naseby Forest 12/1979	610	17.9	5.3	11.6	-0.6	25.2	17	-0.8	8	103	16	+45	28	24	..
Ranfurlly 12/1979	427	18.8	5.5	12.2	..	25.7	16	-1.3	8	84	16	..	31	2	178
Borland Burn 12/1979	183	18.1	..	..	..	27.5	16	..	..	119	25	..	32	1	..
Alexandra 12/1979	141	21.2	8.9	15.1	-0.8	28.6	16	1.4	8	97	16	+67	28	2	191
Winton 12/1979	44	18.4	8.0	13.2	-0.2	23.6	30	2.5	8	108	17	+42	22	12	182
Rarotonga Airport 12/1979	7	26.9	21.3	24.1	-0.7	28.9	28	16.6	20	282	14	+56	75	9	175
Campbell Island 11/1979	15	10.5	5.3	7.9	+0.7	13.2	21	-1.6	8	101	25	-6	27	12	109
Campbell Island 12/1979	15	12.2	6.7	9.5	+0.9	15.7	14	0.7	10	139	25	+37	19	5	..
Totokoitu, Rarotonga 12/1979	9	..	21.3	..	..	..	..	16.7	20	454	16	..	130	11	..
Scott Base, Antarctica 11/1979	16	-6.9	-14.7	-10.8	+1.2	0.0	30	-29.6	2	..	..	..	..	..	..

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 JANUARY 1980

General—Throughout January pressures were lower than normal over the whole of New Zealand, but slightly above average to the north and south of the country. There was an exceptionally high frequency of north-west winds in all districts, with a greater number of days than usual with high gusts in the Wellington region. Conditions were wetter and cloudier than usual in most areas, with temperatures slightly warmer than normal. Gales on the 2nd and 3rd, with winds gusting to 122 km/h, disrupted ferry and aircraft movements in Wellington.

Most farmers reported that grass growth had been very good for this time of the year. Wet weather had delayed shearing and haymaking in some districts, but stock condition was good, although in parts of the South Island lambs were slow to fatten.

Rainfall—Areas recording below normal rainfall for the month were parts of Bay of Plenty, Poverty Bay, Hawke's Bay, Wairarapa, Taranaki, Manawatu, Nelson, Marlborough, and Canterbury. In some of the eastern districts of the North Island totals were less than 50 percent of the average. The wettest areas were Northland, Waikato, coastal Canterbury, inland Otago, and Southland. At Christchurch Airport 139 mm were recorded, making this the wettest January at this station since records began in 1944. A number of places along the Canterbury coast had monthly totals of between 200 and 300 percent above the normal value.

Heavy rain began to fall in the Christchurch area at 7 p.m. on the 2nd and rain continued to fall until about 11 p.m. on the 3rd. During the period of very heavy rain 108 mm were recorded in 12 hours, this being the highest ever recorded in 12 hours at this station in any month. The rain was accompanied by strong winds which uprooted trees and telephone poles. Many South Canterbury bridges were washed out and there was extensive flooding on the state highway to Kaikoura.

On the 16th heavy rain started to fall in Otago and Southland during the afternoon. Rivers in the area rose rapidly and some breached their banks. Gore was isolated from neighbouring towns, and Kelso and Maitara were evacuated. Roads and bridge approaches were washed out and there was widespread flooding throughout the area. At Kelso 116 mm of rain were recorded in the 24 hours up to 9 a.m. on the 17th.

Serious flooding occurred in the Greytown area on the 20th, when the Waiohine River breached its banks after heavy rain had fallen in the Tararua Ranges during the night. Many market gardens and orchards suffered extensive damage when they were inundated by flood waters.

Parts of Greymouth, Cobden and Blaketown were evacuated when heavy rain caused flooding in the area on the 24th and 25th. In the lower areas of Greymouth it was reported that the water at its peak was almost 2 metres deep submerging cars and flooding the central business area. There were no rainfall readings from Greymouth as the rain-gauge was flooded, but at Dobson 97 mm were measured in 48 hours up to 9 a.m. on the 25th, and at Atarau 120 mm in the same period.

Temperatures—Temperatures were above normal throughout New Zealand by 0.5°C to 1.0°C, the only areas below average being in inland Canterbury and Central Otago by the same amount. The coldest spell during the month was from the 3rd to 6th inclusive with daytime maximum temperatures below average by more than 5.0°C in eastern districts. During a warm spell at the end of the month they were above normal by 5.0°C to 10.0°C in the same areas.

Sunshine—The only areas with above normal sunshine for the month were in South Canterbury with an excess of approximately 10 hours. The cloudiest areas were in Bay of Plenty with deficits of more than 60 hours for the month. Many parts of the North Island were below average with 30 to 50 hours less sunshine than usual.

WEATHER SEQUENCE FOR JANUARY 1980

At the beginning of January the depression that had been crossing the North Island at the end of December continued to move eastwards, and a cold front was proceeding east towards the South Island. On the 2nd a small depression formed on the cold front, and this began to move east across the country. Rainfalls of 50 mm to 100 mm were recorded in Canterbury in 24 hours up to 9 a.m. on the 3rd, and moderate rain was reported in districts throughout the South Island and the southern half of the North Island. Gale force southerly winds were reported on the 2nd and 3rd in many parts of central New Zealand. By the 4th a ridge of high pressure extended onto the country and this persisted until the 7th. Temperatures were very cold in eastern districts on the 3rd and 4th, maximum daytime temperatures being as much as 10°C below normal.

On the 8th a depression of tropical origin had moved southwards into the Tasman Sea, and the ridge of high pressure over New Zealand had become weak, but fine weather prevailed throughout the country apart from isolated showers in both islands. The depression in the Tasman Sea continued to move south, but on the 11th the cold front associated with it had moved onto the South Island and was progressing northwards. In most districts light to moderate rain was recorded as the cold front crossed the country. Temperatures were warmer than usual along the east coast of New Zealand from the 11th to the 14th.

On the 14th a front moved across the South Island bringing light to moderate rain to areas west of the main ranges. Early on the 15th a depression formed in the north Tasman Sea and began to move towards New Zealand. By the morning of the 16th the depression had moved onto the West Coast and had deepened. More than 100 mm of rain were recorded in 24 hours in parts of Westland and inland Canterbury. Heavy falls were also reported in Fiordland, Southland, parts of Otago, Marlborough, and central districts of the North Island. Some stations west of the main ranges recorded 48-hour falls up to 9 a.m. on the 17th of nearly 200 mm. The only areas with light rain were parts of Hawke's Bay, Wairarapa, and coastal Canterbury. Temperatures were very cold throughout New Zealand on the 17th.

By the morning of the 18th the depression had moved to the east and was lying near the Chatham Islands. Later on the same day a depression with associated cold front moved towards the South Island from the Tasman Sea, and by the morning of the 19th the cold front had moved onto Fiordland. As this front crossed the country heavy rain was reported on the West Coast and in Wellington, parts of Manawatu, and Taranaki. Areas east of the main ranges reported no rain or only isolated showers. On the 21st a wave depression formed on a front in the Tasman Sea and this moved across the North Island early on the 22nd. In Northland, Auckland, and Bay of Plenty 24-hour falls of more than 30 mm were recorded up to 9 a.m. on the 22nd, and moderate rain throughout other North Island districts, and in the northern half of the South Island in the same period.

A depression in the Tasman Sea moved east and crossed the South Island on the 23rd, and this was followed by a trough of low pressure on the 24th. On the West Coast 24-hour falls of more than 50 mm were reported, with light to moderate falls throughout the South Island. A ridge of high pressure extended onto the North Island on the 25th, and this brought fine weather to most districts apart from the West Coast. Small disturbances in a westerly flow onto the South Island did bring some heavy rain to Fiordland and Westland until the 27th. Most of the country experienced fine weather until the end of the month. The only area with appreciable rainfall was Fiordland. From the 29th to 31st some east coast areas had daytime maximum temperatures of 5°C to more than 10°C above normal.

J. S. HICKMAN, Director.

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

