APPENDIX B Some morphometric parameters of named lakes with areas ⩾1.0 km², and some smaller lakes, in New Zealand (compiled by D.J. Lowe and J.D. Green).

Gaps indicate uncertainty or that accurate data are unavailable. Note that lakes with fluctuating levels (e.g., those used for hydro-electric purposes, or near coasts) have varying parameters. Table based mainly on Irwin (1975) with some data from Cunningham et al. (1953), Irwin (1972), Jolly & Brown (1975), Irwin & Pickrill (1983), Howard-Williams & Vincent (1984), Boswell et al. (1985), Livingstone et al. (1986), N.Z.O.I. Lake Chart series, N.Z. Topographical Map Series NZMS1 (1:63 360) and NZMS260 (1:50 000), and other sources.

Lake name †‡	Lake type*	Area (km²)	Max. length (km)	Max. width (km)	Max. depth (m)	Mean depth (volume/ area in m)	Max. altitude§ (m)	Location (refers to Appendix A)
North Island								
Arapuni	D	13.8	6.5	0.9	~53		111	D2
Aroarotamahine	V	0.10	0.72	0.25	22.3	12.2	3	V1
Atiamuri	D	1.7	4.7	0.4	28.5	~11.6	255	D2
Awaatua Arm, Rerewhakaaitu	V	0.15	0.6	0.26	31.0	17	438	V1
Casey's Dam	D	1.5	3.7	1.5			170	D1
Hamilton (Rotoroa)	RP	0.54	1.3	0.5	6.5		34	R2
Hatuma	T?	2.0	2.4	1.1			130	R4
Horowhenua	W	3.9	3.3	2.0	1.8	1.3	9	W2
Karapiro	D	5.4	11.0	0.9	30.5	~11.0	54	D2
Kuratau	D	1.4	3.4	0.7	⩾~3.9		440	V1
Mangakaware	R	0.13	0.68	0.32	4.8	2.9	30	R2
Maraetai	D	4.2	7.2	1.2	61.0	~29.3	188	D2
Maratoto	RP	0.16	0.7	0.4	7.1	3.4	52	R2
Matahina	D	2.6	7.2	1.1	52.1		76	R3
Moawhango	D	4			~25		853	V1
Mokeno	W	1.7	3.9	0.9			10	W1
Ngahewa	V	0.11	0.5	0.3	7.5	3.5	411	V1
Ngapouri (Opouri)	V	0.26	0.7	0.5	25.0	13.5	477	V1
Ngaroto	R	1.3	2.0	1.2	3.5	2.9	38	R2
Ohakuri	D	7.2	7.5	2.0	39.5	~19.6	289	D2
Ohia	W	3.7	2.6	2.0	1		<30	W1
Okareka	V	3.5	2.8	1.9	33.5	18.4	355	V1
Okaro	V	0.28	0.7	0.6	18.0	11.5	412	V1
Okataina	V	10.8	6.2	5.0	78.5	44.0	311	V1
Omapere	V	11.6	4.6	3.5	1.9		240	V2
Onoke	B	7.1	3.3	2.8	2.0		1	B2
Otamangakau	D	1.8		9.0			665	V1
Ototoa	W	1.4	2.5	1.0	27.5	12.3	64	W1
Pukepuke Lagoon	W	0.17	0.7	0.4	1.2	0.6	<30	W2
Pupuke	V	1.6	1.3	1.0	55.0¶	34	10	D1
Pouarua	L?	1.2	2.1	0.8			745	V1
Poukawa	TP	1.6	1.7	1.3	1		21	R4
Rangatea (drained)	R	1.1	1.3	1.1			1	R6
Rerewhakaaitu (main lake)	V	7.4	3.8	3.7	15	6	438	V1
Rotoaira	V	15.3	6.3	3.6	14.6	8.1	564	V1
Rotoehu	V	8.1	4.6	4.0	13.5	8.3	295	V1
Rotoiti 20†	V	34.3	15.0	3.6	93.5	33	279	V1
Rotokakahi (Green)	V	4.5	4.3	1.7	32.0	17.7	394	V1
Rotokawa	V	0.53	1.3	0.7	27.0	2.8	350	V1
Rotoma	V	11.2	5.2	4.7	83	38.6	316	V1
Rotomahana	V	8.0	6.2	2.8	112.4	51	339	V1
Rotomanuka	R	0.14	0.64	0.36	8.7	5.0	40	R2
Rotongaio	B	0.34	1.1	0.4	22	11.4	357	V1
Rotongaro	R	3.3	2.5	2.0	3.3		<30	R2
Rotorangi	D		46	0.5			78	L2
Rotorua 11	V	79.8	12.1	9.7	44.5	10	280	V1

Lake name †‡	Lake type*	Area (km^2)	Max. length (km)	Max. width (km)	Max. depth (m)	Mean depth (volume/ area in m)	Max. altitude§ (m)	Location (refers to Appendix A)
Rotowhero	V	0.03	0.25	0.14	14	5	380	(V1)
Runanga	TR	1.7	3.4	0.6			37	R4
Taharoa (Kaipara)	W	2.1	2.6	1.3	37.0		70	W1
Taharoa (Kawhia)	W	2.1	2.8	1.2	⩾~9.2		<30	W1
Tarawera 17	V	41.0	11.4	9.0	87.5	57.0	298	V1
Taupo 1 10‡	V	622.6	40.5	29.5	162.8	98	357	V1
Te Opai	R	2.8	2.4	1.5			1	R6
Tikitapu (Blue)	V	1.4	1.6	1.3	27.5	19.1	418	V1
Tutira	L	1.5	2.5	1.2	42	21	155	L1
Upper Mangatawhiri	D	1.2	2.9	1.5			163	D1
Waahi	R	5.4	4.2	2.6	5.0		9	R2
Waikaramu	W	1.9	2.0	1.5			<30	W1
Waikare 19	R	34.4	10.0	6.0	1.6		9	R2
Waikareiti	L?	3.4	3.3	2.1	75		900	L1
Waikaremoana 15 7	L	55.7	16.0	11.1	248.0	93	581	L1
Waipapa	D	1.2	5.5	0.3	16.5	~14	127	D2
Waiparera	W	1.3	1.4	1.0	6.5	3.2	<30	W1
Wairarapa 10	R	80.7	18.2	9.6	2.5	1.5	2	R6
Whakaki	B	4.6	4.1	1.7			<30	B1
Whakamaru	D	7.2	15.0	1.0	38	~10.2	226	D2
Whangape	R	12.0	8.1	4.5	2.8	1.5	6	R2
South Island								
Ada	L	2.5	4.9	0.9			55	G1s
Adelaide	G	1.7	2.2	0.9			951	G1s
Ahaura	G(L?)	1.8	2.7	1.0	⩾33		260	G1n
Alabaster	R	4.2	6.0	0.9	71.0		18	G1s
Alexandrina	G	5.8	6.9	1.3	27		730	G1c
Alice	G	1.7	2.8	0.9			55	G1s
Aviemore	D	24.8	17.6	4.5	62		270	D6
Benmore 12†	D	74	26.1	6.1	91.2		360	D6
Brunner 18	G	36.1	9.4	6.8	109.3	51	85	G1n
Cadman	G	1.7	2.7	0.7			9	G1s
Christabel	L	2.4	3.7	1.0	~80?		651	G1n
Clearwater (Tripp)	G	2.0	3.8	1.1	19.0		667	G1c
Cobb Reservoir	D	1.6	5.9	0.3	20?		808	G2
Coleridge 8‡	GR	32.9	17.8	3.4	200	99	507	G1n
Diamond	GR	1.7	2.4	1.4	23.8		338	G1s
Ellery	GT	2.5	4.7	1.1			15	G1s
Ellesmere 5	B	180	26.3	12.9	4		1	B4
Emma (Acland)	G	1.6	1.9	1.5	3		656	G1c
Falls Dam	D	1.2	2.2	1.0		9.2	560	D7
Forsyth	B	5.6	7.6	1.3	4.1		2	B4
George	B?	1.5	1.8	1.3			nearSL	W4
Grasmere	GR	0.6	1.5	0.6	15.0	7.8	583	G1n
Grassmere	B	13.4	5.5	3.6	shallow		near SL	R7
Grave	G?	1.7	2.8	0.9			107	G1s
Green	G	5.0	2.9	2.4			838	G1s
Greenland Reservoir	D	3.0	3.9	2.1			740	D7
Gunn	GR	1.7	3.8	0.9	84.3		479	G1s
Hakapoua	G	5.0	5.9	1.0			<30	G1s
Hankinson	G	2.5	5.5	0.8			207	G1s
Haupiri	G	2.1	2.6	1.2	⩾17		170	G1n
Hauroko 13 1	G	68.3	33.7	7.8	462		155	G1s
Hawea 7 4	G	141	41.9	10.4	384		342	G1c
Hayes	G	2.0	3.1	1.1	33.3	18.7	327	G1s

Lake name †‡	Lake type*	Area (km^2)	Max. length (km)	Max. width (km)	Max. depth (m)	Mean depth (volume/ area in m)	Max. altitude§ (m)	Location (refers to Appendix A)
Heron	GR	6.3	6.6	3.1	36.2		678	G1c
Hilda	G	1.7	2.3	0.7			329	G1s
Hochstetter	G	6.6	4.9	3.0	16.8		256	G1n
Ianthe	G	4.4	3.4	2.3	30.1		30	G3
Johnson	G	0.28	0.9	0.3	27.0	17.1	392	G1s
Kangaroo	GR	1.1	2.0	0.7	⩾8.5		110	G1n
Kaniere 9	L	13.3	8.6	2.6	197.8		133	G1c
Kumara Reservoir	D	1.3	1.8	1.1			149	D5
Lady	GR	1.3	1.8	1.0	25		114	G1n
Lochnager	L	2.5	3.2	1.2			1068	G1s
Lyndon	GR	1.1	3.9	0.5	18.3		841	G1n
Macarthur	G	1.0	1.4	0.7			402	G1s
Mahinapua	GW	3.4	3.8	1.6	9.6		<20	G1c
Mahinerangi	D	18.6	21.5	3.4	29.8	6.2	391	D7
Manapouri 6 2	G	153	28.3	11.5	444	100.0	179	G1s
Manorburn Reservoir	D	1.6	3.8	2.6			740	D7
Mapourika	G	8.3	5.3	3.6	77.6		75	G3
Marchant	G	2.5	3.7	1.5	~100		46	G1s
Mason	G	1.0	2.2	0.7	38.5		676	G1n
Matheson	R	0.3	0.7	0.2	12		110	G3
Mavora, North	G	10.8	10.2	1.7	77.4		626	G1s
Mavora, South	G	1.2	2.2	0.8	40.0		613	G1s
McCrae	G?	1.1	1.4	1.0			897	G1n
McKellar	G?	1.0	3.2	0.6			625	G1s
McKerrow	GB	18.3	15.3	2.2	121.3		3	G1s
Moeraki	GW	2.2	3.3	1.1	41.5		<30	G3
Monk	G	1.7	2.3	0.8	⩾~100		582	G1s
Monowai	G	32.5	20.6	2.5	161		206	G1s
Mouat	G	1.5	2.4	0.7	17		171	G1s
Norwest	G	1.0	2.3	0.7			880	G1s
Ohau 14	G	61	16.8	5.1	129	65.9	519	G1c
Onslow	D	3.5	4.8	1.4			685	D7
Paringa	G	4.8	3.2	3.0	52.3		30	G3
Pearson	GR	1.8	3.7	1.2	17.0	7.3	589	G1n
Poerua	GR	2.2	4.2	1.0	6.7		119	G1n
Poolburn Reservoir	D	4.0	5.0	3.0			840	D7
Poteriteri 16	G	42.5	27.2	3.0			23	G1s
Pukaki 8	G	98.9	22.9	8	70	~47	497	G1c
Quill	G	0.53	1.1	0.1			985	G1s
Rakatu	G	1.0	2.0	0.8			200	G1s
Ronald	G	1.0	1.4	0.6			442	G1s
Rotoiti	G	9.2	8.5	2.6	82	49.5	618	G1n
Rotokino	G	1.4	2.6	1.1			30	G3
Rotoroa	G	21.4	14.4	2.9	145	96.5	451	G1n
Roxburgh	D	6	27.8	0.7	45	13.3	133	D7
Ruataniwha	D	3.4	~4	~2			~480	D6
Sheppard	G	1.2	2.3	0.9	21.0		582	G1n
Sumner	G	11.8	9.8	2.1	134.5		524	G1n
Taylor	G	1.9	3.1	0.9	40.5		582	G1n
Teardrop	G	1.0	1.0	0.7			280	G1s
Te Anau 2 3	G	352	60.0	28.6	417		203	G1s
Te Au	G	2.5	2.4	0.8	⩾~100		346	G1s
Tekapo 9	G	88	25.2	5.9	120	69	710	G1c
Tennyson	G	2.4	3.1	1.2			1100	G1n
Tuakitoto	R	3.4	4.3	1.4			near SL	R9

Appendix B

Lake name †‡	Lake type*	Area (km^2)	Max. length (km)	Max. width (km)	Max. depth (m)	Mean depth (volume/ area in m)	Max. altitude§ (m)	Location (refers to Appendix A)
Wahapo	GR	2.3	3.2	1.1	61		57	G3
Waihola	R	6.1	6.5	1.8	16		near SL	R8
Wainono	B	3.3	4.6	1.7			<5	B5
Waipori	R	2.3	2.5	1.6	1.0	0.75	near SL	R8
Waitaki	D	5.6	7.2	2.3	40		230	D6
Wakatipu 3 **5**	G	293	75.2	6.2	380.0	210.1	309	G1s
Wanaka 4 **6**	G	193	45.5	11.6	311		277	G1c
Wilmot	R	1.7	2.1	1.2			26	G3

* Most probable mode of origin of initial lake basin: T, tectonic; V, volcanic; G, glacial; L, landslide; P, phytogenic; R, riverine; W, wind-dune; B, barrier (shoreline); D, man-made dam. Some lakes have been markedly modified in various ways since their initial formation, particularly by river deposits (e.g., West Coast glacial lakes – area G3 in App. A) and by peat development (e.g., many riverine lakes); examples are indicated by double letters (refer to chapter 1).
† Ranking (given in roman numerals) according to area (largest 20 in New Zealand).
‡ Ranking (given in bold numerals) according to maximum depth (deepest 10 in New Zealand known at present).
§ Approximate in some instances (± 20 m).
¶ Depth given as 64 m on Sheet R 11 NZMS260 (1:50 000).

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