only a small portion of the power is utilised, which is sure to be the condition with the majority of the places examined.

Name.	Drainage-area.	Run-off per Square Mile of Drainage-area.	Lakes' Area in Water-shed.	Flow per Second.	Head.	Horse-power.
	Sq. m.	Ft.	Sq. m.	Cub. ft.	Ft.	
Wairua	241·5	1·1	None	275	150	11,000
Mangakahia	33·2	1·12	None	375	150	
Okere Falls	192	2·61	35	500	106	75,000
Huka Falls	1,287	3·91	240	5,000	66·6	34,840
Aratiatia Rapids ...	1,287	3·91	...	5,000	110	62,480
Orakei Korako ...	1,287	3·91	None	5,000	100	56,800
Rainbow Falls... ...	1,287	3·91	None	5,000	30	17,000
Atiamuri	2,014	2·48	None	5,000	50	28,400
Rotoaira	48	1·748	6	84	525	5,000
Rangitikei	1,224	1·753	None	2,144	200	48,710
Manawatu ...	1,252	0·800	None	1,000	50	5,680
Waikaremoana ...	166·4	4·16	23	692	1,000	78,600
Wairoa	473	1·098	None	520	125	7,384
Waimakariri	978	2·42	None	2,000	90	20,440
Lake Coleridge ...	380	4·42	13	1,675	469	94,677
Rakaia	1,013	4·94	13	5,000	50	56,800
Lake Heron	66	4·55	2	300	250	8,520
Rangitata	608	4·92	...	3,000	100	34,080
Opihi	135	0·89	...	120	60	817
Lake Tekapo	611	8·35	34	5,100	555	320,396
Lake Ohau	420	13·8	24	5,800	250	164,720
Ohau River	...	...	...	5,800	100	65,888
Lake Pukaki	523	12·95	31	6,800	50	38,624
Waitaki	...	...	...	17,700	30	60,321
Clutha	...	...	...	22,000	50	124,960
Manuherikia	820	0·61	None	500	410	23,288
Lake Hawea	560	9·81	42	5,500	192	119,961
Lake Wanaka	1,024	17·58	69	18,000	...	...
Lake Wakatipu ...	1,176	10·2	110	12,000	50	68,160
Shotover	184	5·44	None	1,000	75	8,520
Lake Te Anau... ...	1,356	1·77	142	2,400	700	190,848
Lake Manapouri ...	1,750	1·72	50	3,000	600	204,480
Waiau	3,561	1·06	182	3,790	50	21,520
Waiau	3,653	1·23	194	4,390	50	24,935
Lake Monowai ...	9,216	6·5	12·8	600	250	17,040
Otira	6·45	24·8	None	160	500	9,088
Rolleston	5·55	43·4	None	240	500	13,632
Lake Kanieri	16	3·88	5·9	62	200	704
Inangahua	442	...	None	...	...	...
Buller	1,754	1·14	28	2,000	100	22,720
Rotoroa	170	4·42	8·96	7,500	400	34,080
Wairau	686	14·5	None	10,000	25	28,400
Awatere	504	1·9	None	1,000	50	5,680

Wairua Falls.—In the Wairua River, in Whangarei County, about fourteen miles from Whangarei and eighty-four miles from Auckland. It has the great advantage of being the nearest to the great industrial centre of Auckland. Surveys were not complete, so that the total possibilities could not be passed on. The locality made a great impression regarding its possibilities, and is well worth a complete survey. I have used only a head of 150 ft. in the calculations, but if the surveys show it is possible—and I think it is—a dam 30 ft. to 50 ft. high can be built, giving the benefits of storage and increasing the possible development, if eighteen-hour service is sufficient, to more than 15,000-horse power, which would make it an excellent place to develop at once for the Auckland service. This depends somewhat on what can be done with the waters of the Mangakahia; if they can be diverted into this reservoir the figures given above are very conservative.

The main disadvantage under which this locality labours is that it is somewhat remote, and that machinery and material will have to be rehandled several times. This, however, is not prohibitive. One great advantage is the presence of the cement-works near Whangarei, which can supply an excellent grade of cement, and also utilise a good deal of power when the plant is in operation.

I would recommend that complete surveys be made here as soon as possible. There should be contours run every 10 ft. from the possible power-house locations, which it is thought should be on the north side of the river, up to the falls and to a level of 50 ft. above them. From the falls up the stream on both sides contours should be run every 10 ft. up to a level of 50 ft. above the falls.