

Appendix 2
Proposed Seasonal Lake Operating Regime

SEASONAL LAKE OPERATING REGIME TRUSTPOWER LIMITED MR. LENNIE PALMER

1. PROPOSED SEASONAL OPERATING REGIME

1.1 The current minimum operating range on Lake Kaniere is -0.20m. What TrustPower propose are “summer” and “winter” exceedance zones, where the duration of time in these zones is limited. Figure 1 and Table 1 below illustrate the proposed ranges; and it is described as follows;

- Summer months defined as November to March inclusive. Below a lake level of 0.30m there will be a 20% allowance for level exceedance, and a 10% exceedance for levels below 0.10m. Over this summer period this equates to a maximum (cumulative period) of 30.2 days below a lake level of 0.30m, including a maximum of 15.1 days below 0.10m.
- Winter months defined as April to October inclusive. Below a lake level of 0.10m there will be a 20% allowance for level exceedance. This equates to a maximum of 42.8 days over this winter period.
- A minimum operating level of -0.20m.

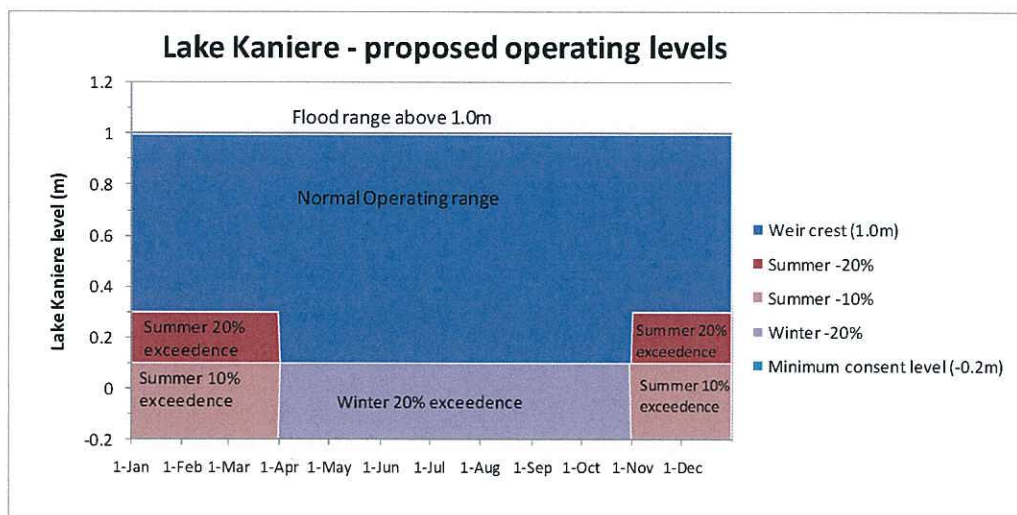


Figure 1. Proposed Lake Kaniere seasonal levels with exceedance limits. Note that time spent in the Summer 10% exceedance zone counts for the 20% range as well.

	“Summer period”	“Winter period”
Seasonal months	November-March	April -October
Seasonal level	0.30m	0.10m
Exceedance limit	20%	20%
Seasonal level	0.10m	
Exceedance limit	10%	
Minimum level	-0.20	-0.20

Table 1. Proposed Lake Kaniere seasonal levels with exceedance limits. Note that time spent in the Summer 10% exceedance zone counts for the 20% range as well.

- 1.2 The exceedance zones were designed to limit lake draw-down especially in the higher recreational value summer period, whilst allowing some operational flexibility for periods of low flows or high prices. It also allows the flexibility of tracking up out of the winter to summer range, and issues of level measurement and compliance to set minimum levels.
- 1.3 Using the above seasonal limits the model was run to provide a comparison of the percent of time the lake was less than 0.3m, 0.2m, 0.1m and greater than 1.0m between the current operation of the lake (Actual), the application as lodged (W8M8_Existing) and with the seasonal limits in place (W8M8_Seasonal). This is shown in Table 2 below.

Annual exceedance	Percent of Time (Maximum % in any year)	Percent of Time (Maximum % in any year)	Percent of Time (Maximum % in any year)	Percent of Time at Spill (Maximum % in any year)
	<0.3m	<0.2m	<0.1m	>1.0m
Actual	4	2	<1	4
W8M8_Existing levels	41	28	14	8
W8M8_Seasonal	27	16	5	11
Summer exceedance				
	<0.3m	<0.2m	<0.1m	>1.0m
Actual	1	<1	0	48
W8M8_Existing levels	30	18	7	15
W8M8_Seasonal	8 (20)	<1	0 (10)	20
Winter exceedance				
	<0.3m	<0.2m	<0.1m	>1.0m
Actual	7	4	1	38
W8M8_Existing levels	49	34	19	3
W8M8_Seasonal	41	27	8 (20)	4

Table 2. Comparison of lake levels for the current situation and the proposal as lodged and including the seasonal limits.