

# HydroWatch

Thursday, 28 March 2019

Issue: 1145

A weekly summary relating to New Zealand hydro storage and inflows.

Compiled by Energy Link Ltd.

Storage Summary	South Island Controlled	South Island Uncontrolled	South Island Total	North Island Taupo	Total Storage
Current Storage (GWh)	<b>2322</b>	<b>597</b>	<b>2919</b>	<b>162</b>	<b>3081</b>
Storage Change (GWh)	333	290	623	-22	602

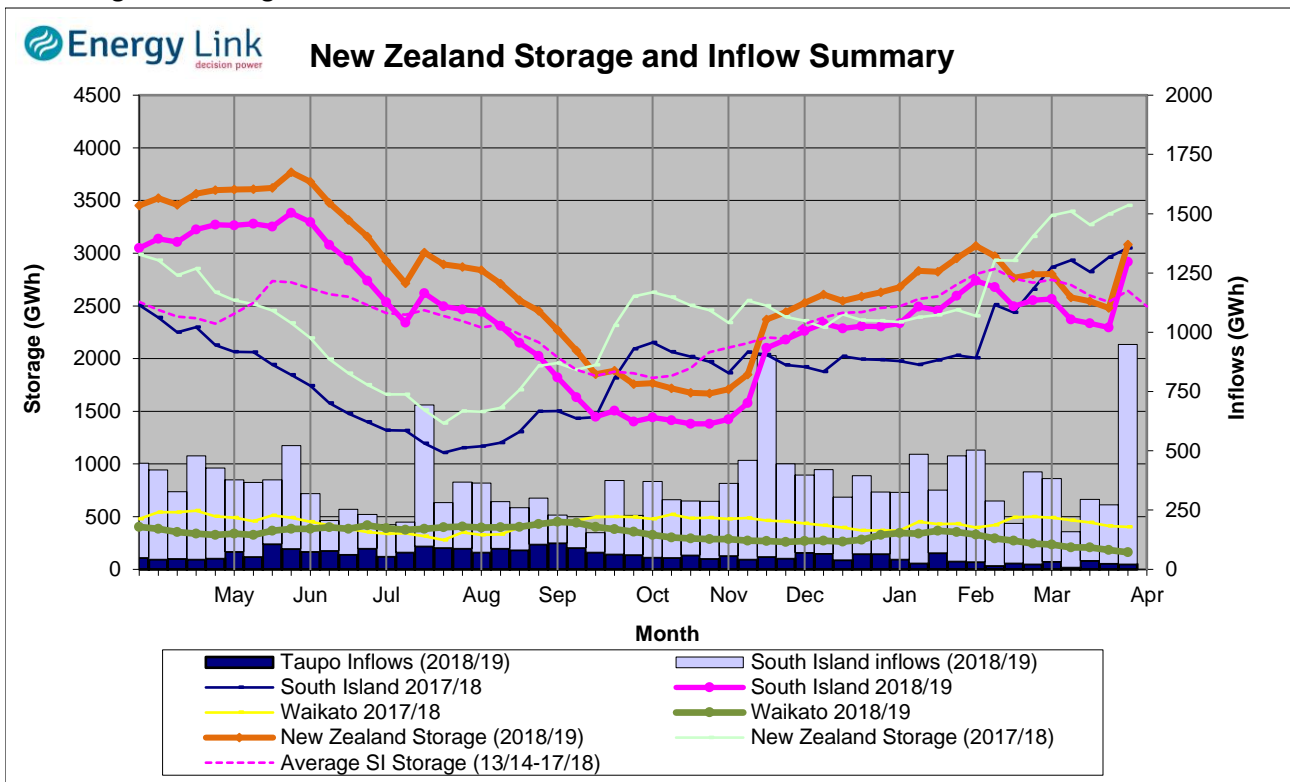
Note: SI Controlled; Tekapo, Pukaki and Hawea: SI Uncontrolled; Manapouri, Te Anau, Wanaka, Wakatipu

Transpower Security of Supply	South Island	North Island	New Zealand
Current Storage (GWh)	<b>2722</b>	<b>162</b>	<b>2884</b>

Note: These figures are provided to align with Transpower's Security of Supply information. However due to variances in generation efficiencies and timing, storage may not exactly match Transpower's figures.

### New Zealand Summary

Total storage increased 601.7 GWh over the last week. South Island controlled storage increased 16.8% to 2322 GWh; South Island uncontrolled storage increased 94.5% to 597 GWh; with Taupo storage decreasing 11.8% to 162 GWh.



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Storage (GWh)	Manapouri	Clutha	Waitaki	Waikato	NZ
<b>This Week</b>	<b>400</b>	<b>329</b>	<b>2190</b>	<b>162</b>	<b>3081</b>
Last Week	231	197	1869	184	2480
% Change	73.4%	67.5%	17.2%	-11.8%	24.3%
Inflow (GWh)	Manapouri	Clutha	Waitaki	Waikato	NZ
<b>This Week</b>	<b>264</b>	<b>202</b>	<b>461</b>	<b>22</b>	<b>949</b>
Last Week	28	50	168	26	272
% Change	830.0%	305.1%	174.7%	-14.4%	249.3%

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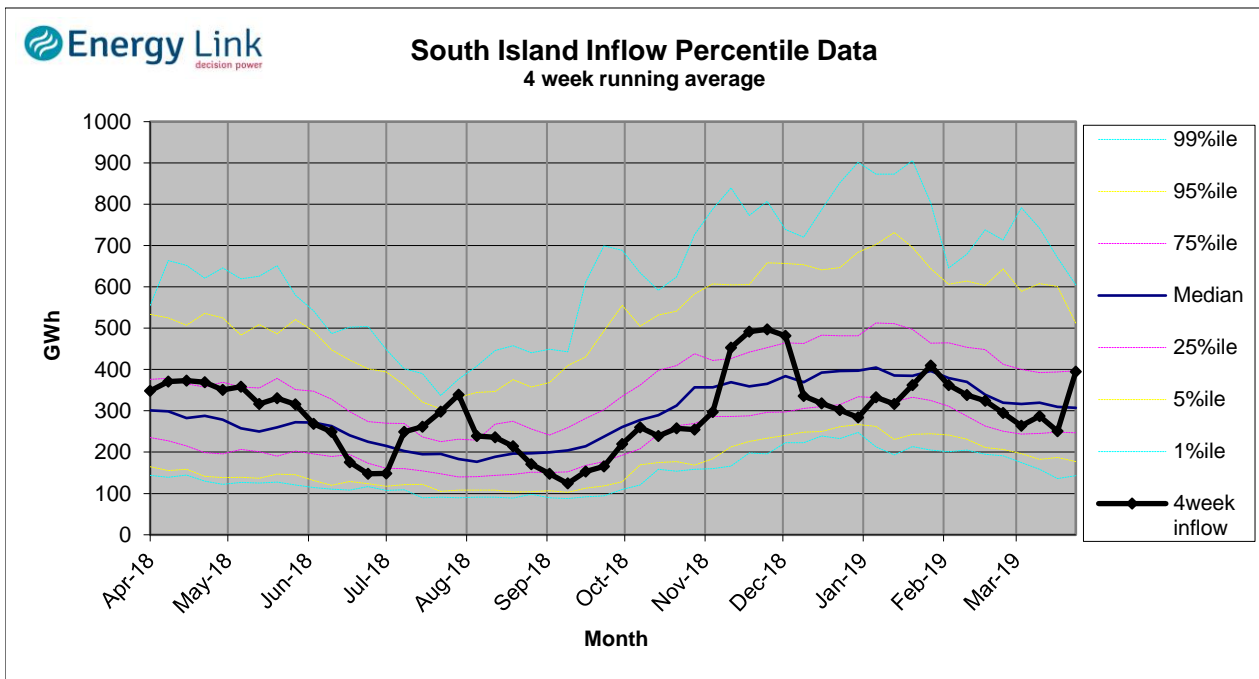
Lake Levels and Outflows

Catchment	Lake	Level (m. asl)	Storage (GWh)	Outflow (cumecs)	Outflow Change
Manapouri	Manapouri	177.74	111	33	16
	Te Anau	202.79	289		
Clutha	Wakatipu	310.30	79	137	16
	Wanaka	278.45	118	215	
	Hawea	341.65	132	93	
Waitaki	Tekapo	707.35	516		53
	Pukaki	531.24	1674		
Waikato	Taupo	356.25	162		-22

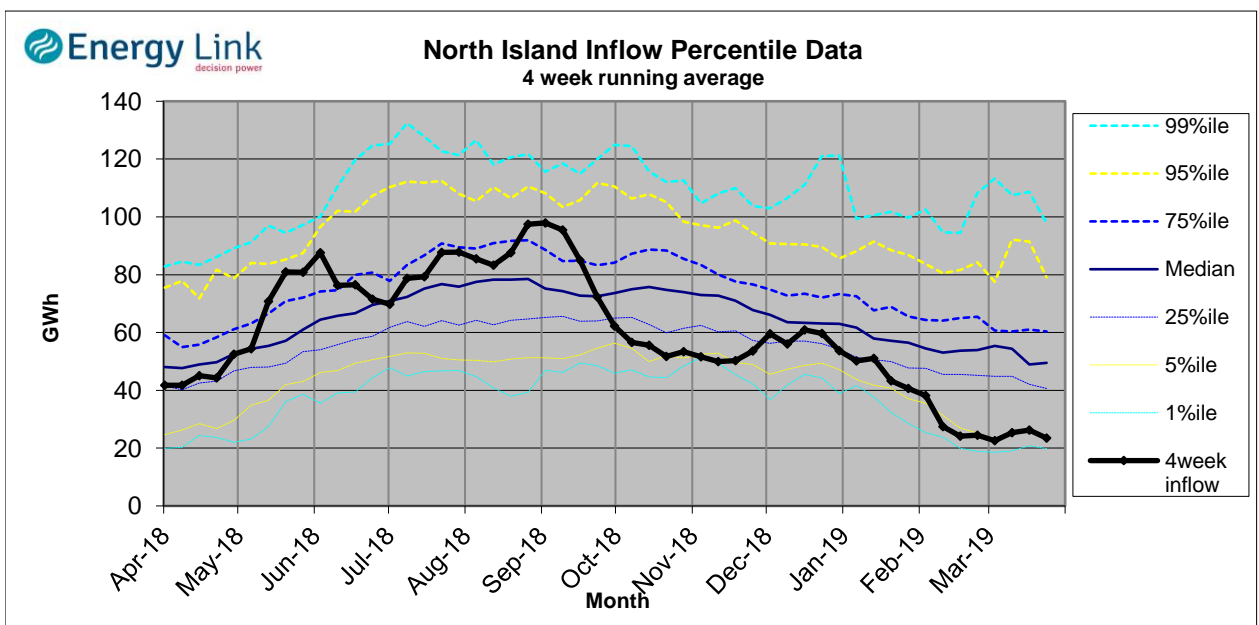
Inflow Summary

The two charts below represent where current inflows are in relation to historic inflow patterns. The percentile values have been calculated using all inflows since 1931.

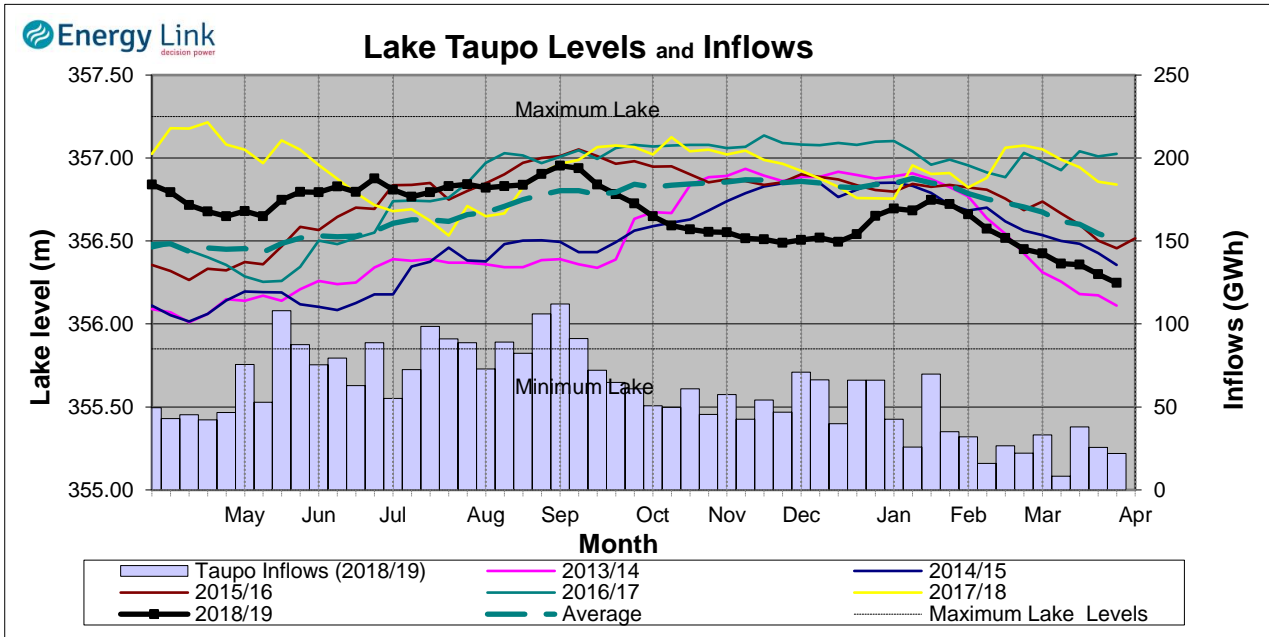
**South Island Inflows -** The past four weeks of S. I. inflows rank as the 23rd wettest on record.



**North Island Inflows -** The past four weeks of N. I. inflows rank as the 5th driest on record.



# Waikato System

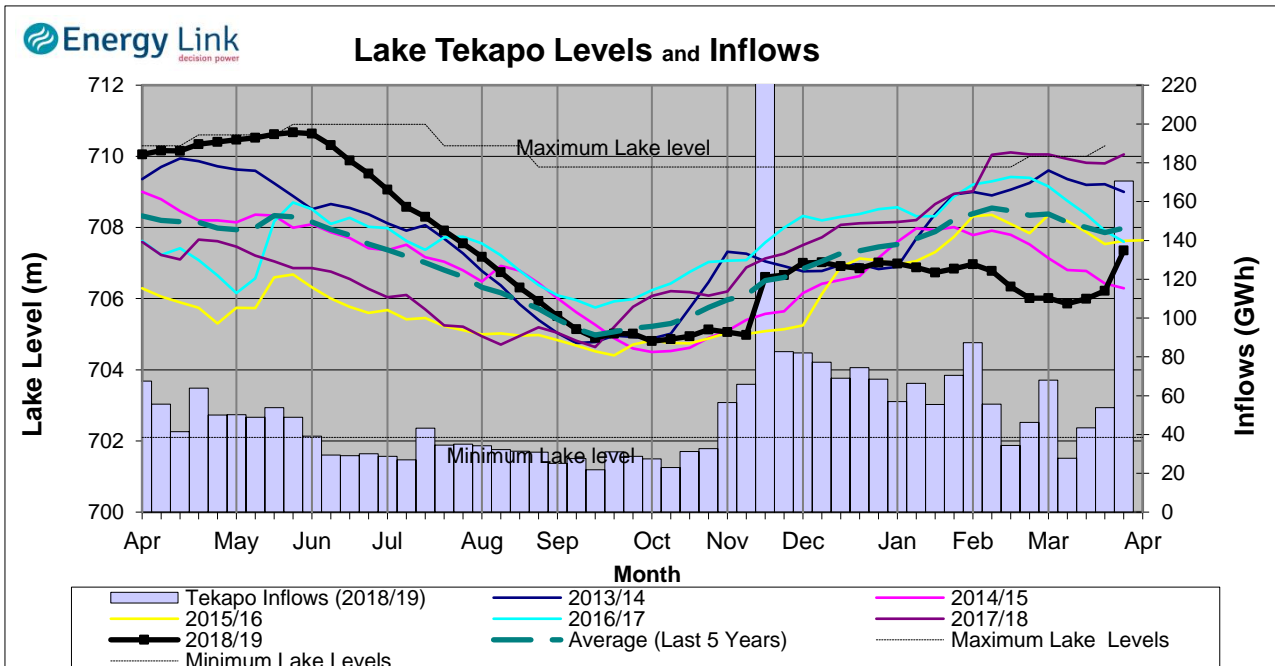


**Lake Levels** - Lake Taupo storage fell to 28.4% of nominal full at 162 GWh.

**Inflows** - Inflows decreased 14.4% to 22 GWh.

**Generation** - Average generation decreased 9% to 319.2 MW.

# Tekapo



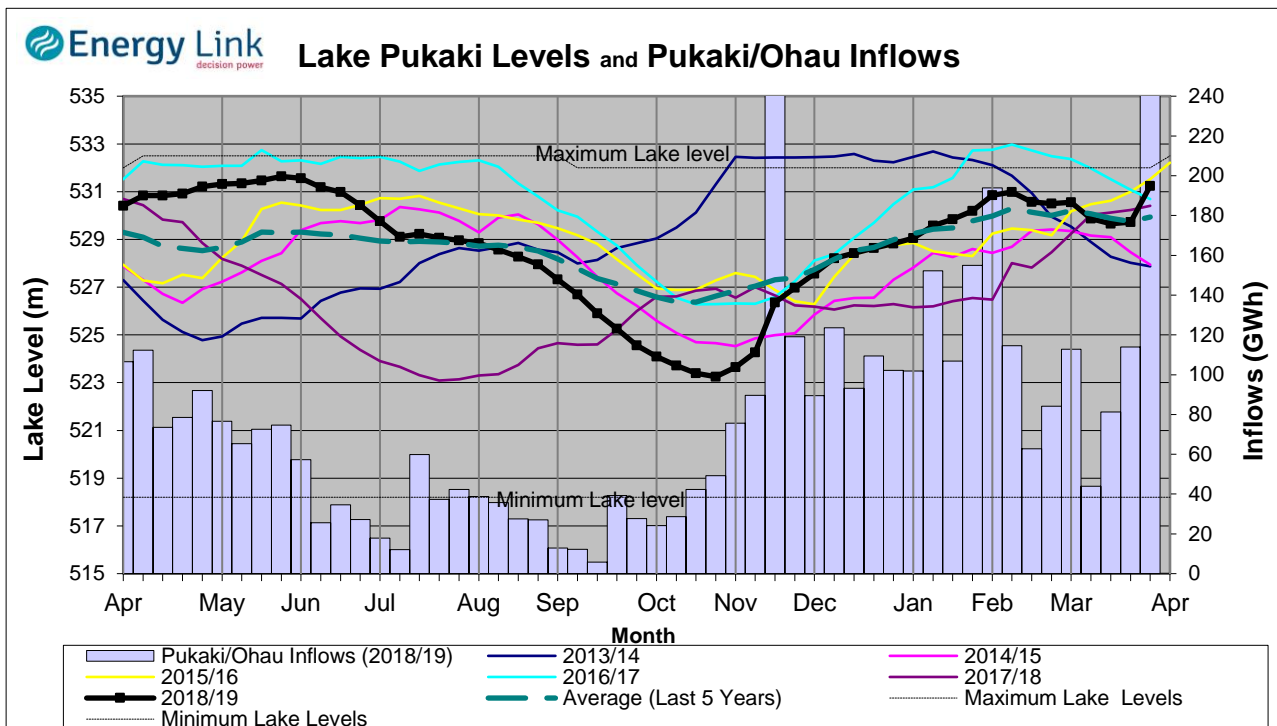
**Lake Levels** - Lake Tekapo ended the week 68% nominally full with storage increasing to 516 GWh.

**Inflows** - Inflows into tekapo increased 216.7% to 171 GWh.

**Generation** - Average Tekapo generation increased 78.2% to 114.8 MW.

**Hydro Spill** - Lake Tekapo did not spill.

## Waitaki System



**Lake Levels** - Lake Pukaki ended the week 94% nominally full with storage increasing to 1674 GWh.

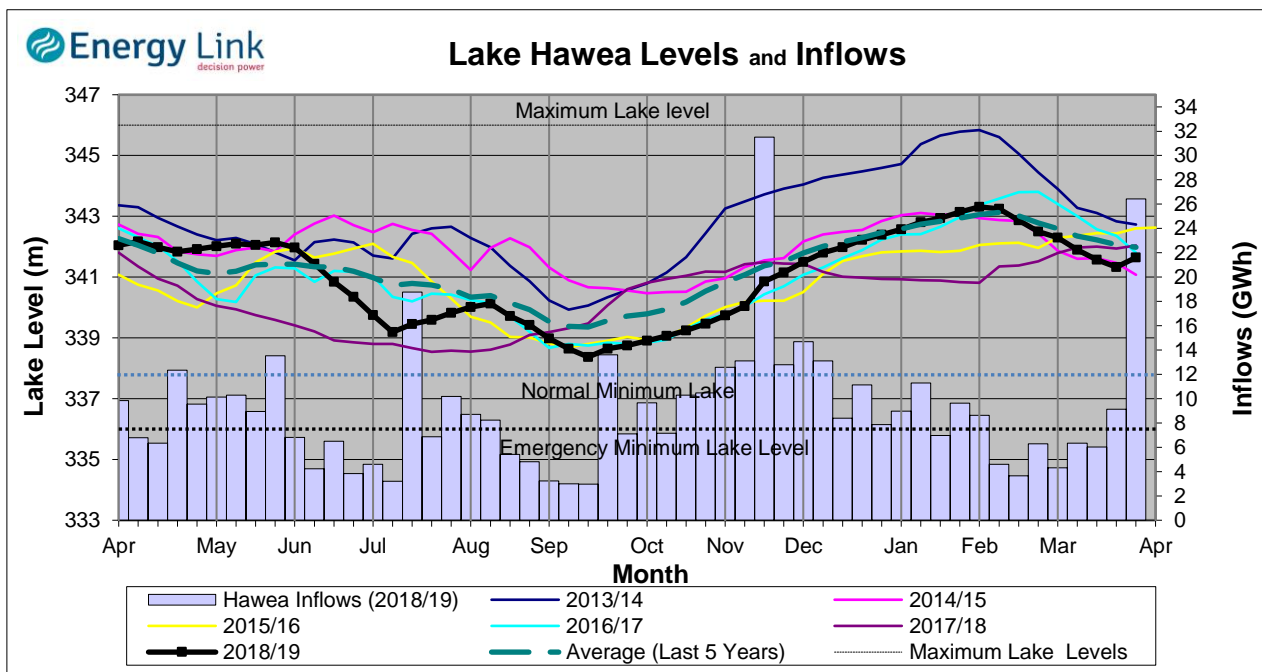
**Inflows** - Inflows into the Waitaki System increased 154.9% to 290 GWh.

**Generation** - Average Waikati generation decreased 8% to 792.6 MW.

**Hydro Spill** - Lake Pukaki did not spill.

**River Flows** - Flows from the Ahuriri River increased to 43.4 cumecs while Waitaki River flows were lower than last week averaging 328.4 cumecs.

## Clutha System



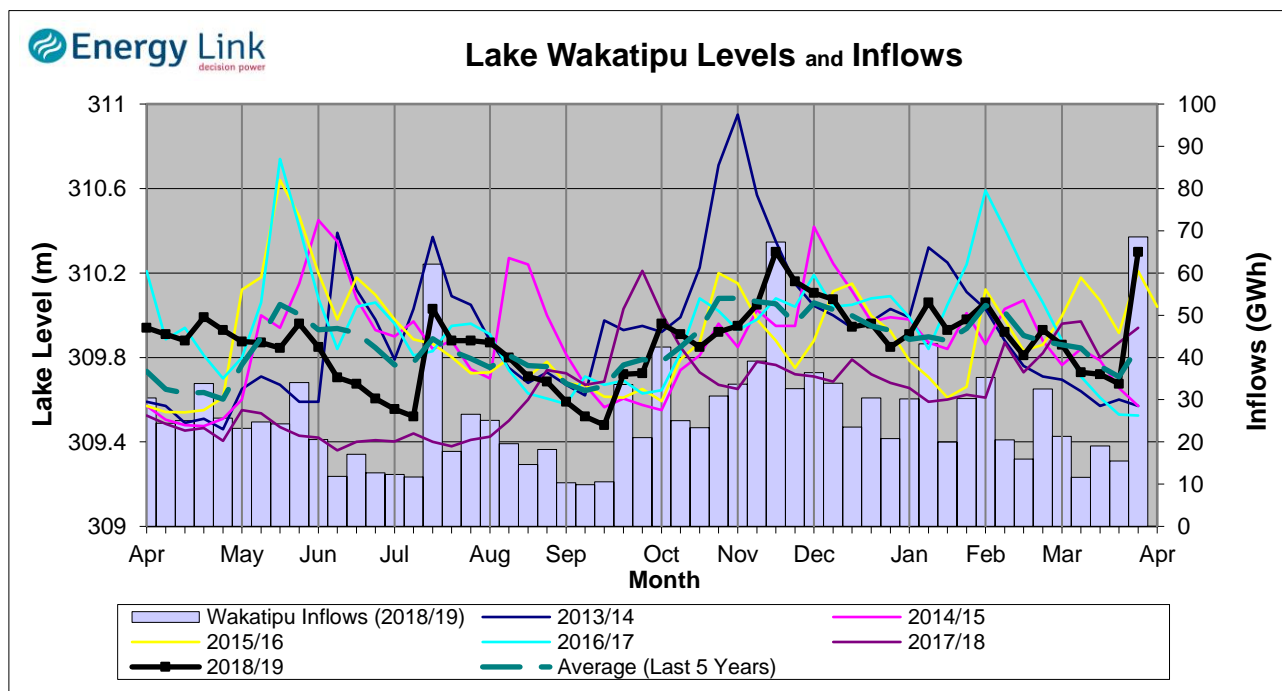
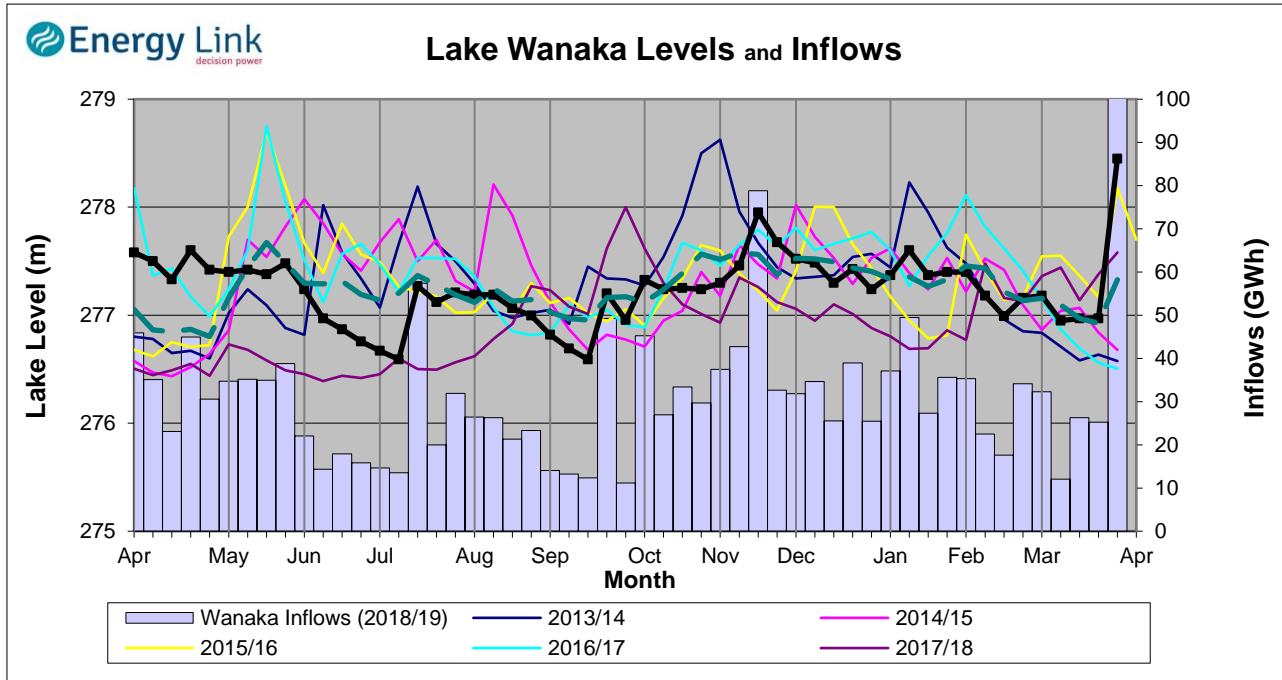
**Lake Levels** - Total storage for the Clutha System increased by 67.5% to 329 GWh. Lakes Hawea, Wanaka and Wakatipu ended the week 44.7%, 103% and 75% nominally full respectively.

**Inflows** - Total Inflows into the Clutha System 305.1% higher at 202 GWh.

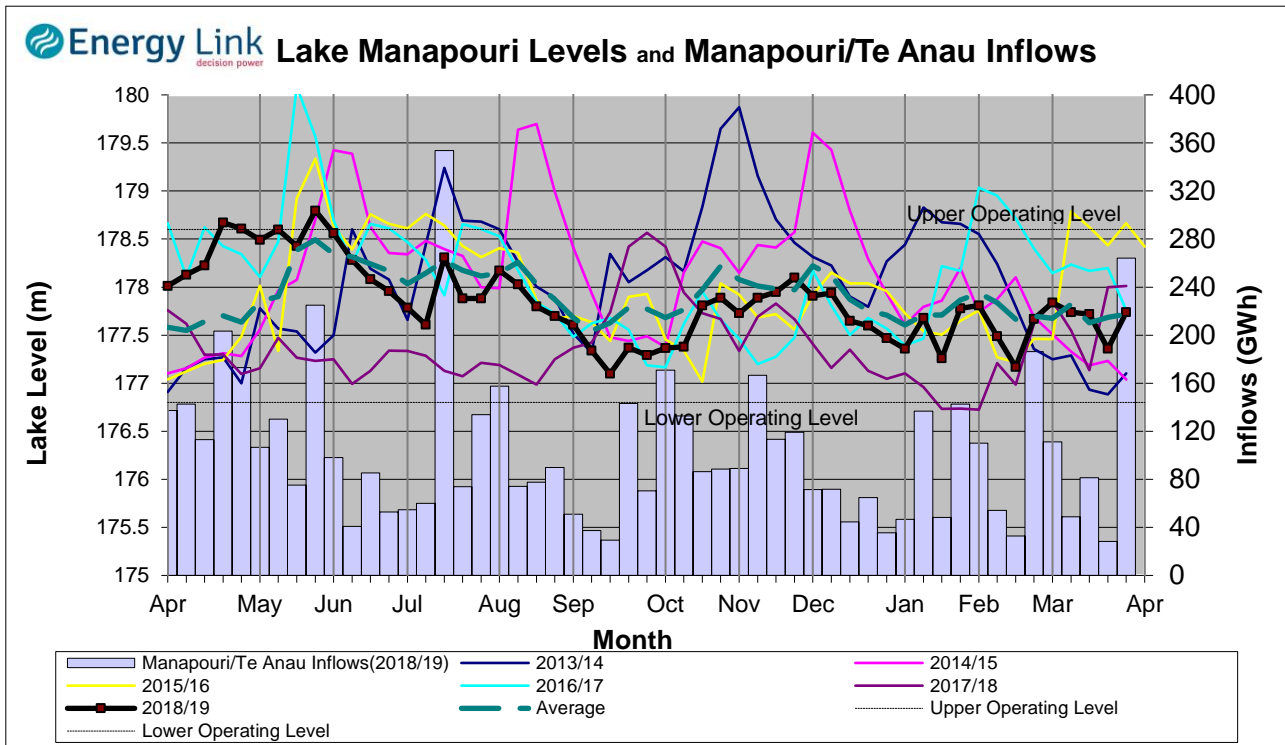
**Generation** - Average generation was 13.1% higher at 442 MW.

**Hydro Spill** - Estimate Spill is 15.6 cumecs.

**River Flows** - Total outflows from the lakes and Shotover River increased to 508 cumecs. This comprised of 93 cumecs from Lake Hawea, 215 cumecs from Lake Wanaka, 137 cumecs from Lake Wakatipu and 63 cumecs from the Shotover River.



### Manapouri System



**Lake Levels** - Total storage for the Manapouri System increased by 73.4% to 400 GWh with Lake Manapouri ending the week 68.3% nominally full and Lake Te Anau ending the week 104.9% nominally full.

**Inflows** - Total inflows into the Manapouri System increased 830% to 264 GWh.

**Generation** - Average generation was 6.9% higher at 564 MW.

**Hydro Spill** - Estimated spill at the Mararoa Weir was 32.7 cumecs.

**Operating Range** - Lake Manapouri is operating in the middle of its 'Main operating range' while Lake Te Anau is operating in the lower end of its 'High operating range'.

