

HydroWatch

Thursday, 04 April 2019

Issue: 1146

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)	2529	580	3109	166	3276
Storage Change (GWh)	207	-17	190	4	194

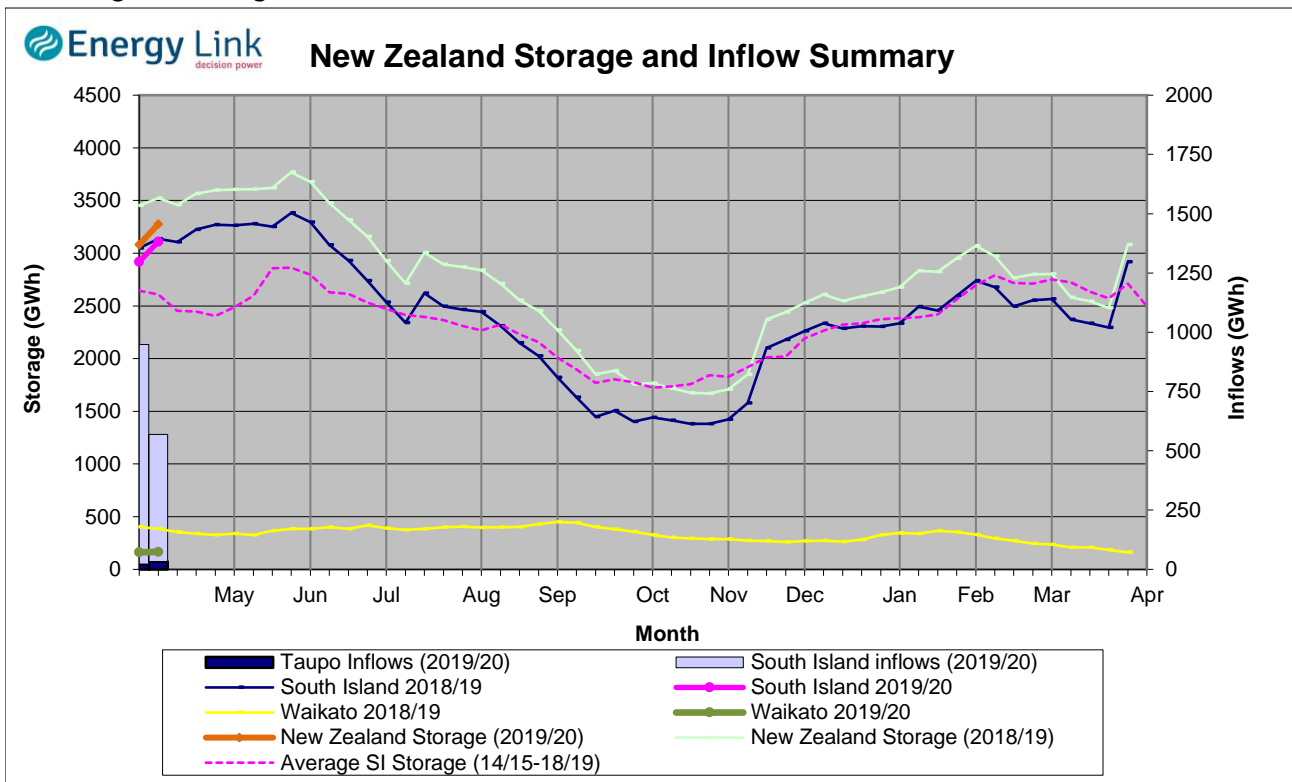
Note: SI Controlled; Tekapo, Pukaki and Hawea: SI Uncontrolled; Manapouri, Te Anau, Wanaka, Wakatipu

Transpower Security of Supply	South Island	North Island	New Zealand
Current Storage (GWh)	2938	166	3104

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 194.3 GWh over the last week. South Island controlled storage increased 8.9% to 2529 GWh; South Island uncontrolled storage decreased 2.8% to 580 GWh; with Taupo storage increasing 2.8% to 166 GWh.



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Storage (GWh)	Manapouri	Clutha	Waitaki	Waikato	NZ
This Week	408	315	2385	166	3276
Last Week	400	329	2190	162	3081
% Change	2.2%	-4.2%	8.9%	2.8%	6.3%
Inflow (GWh)	Manapouri	Clutha	Waitaki	Waikato	NZ
This Week	101	91	342	34	569
Last Week	264	202	461	22	949
% Change	-61.6%	-54.8%	-25.7%	54.1%	-40.1%

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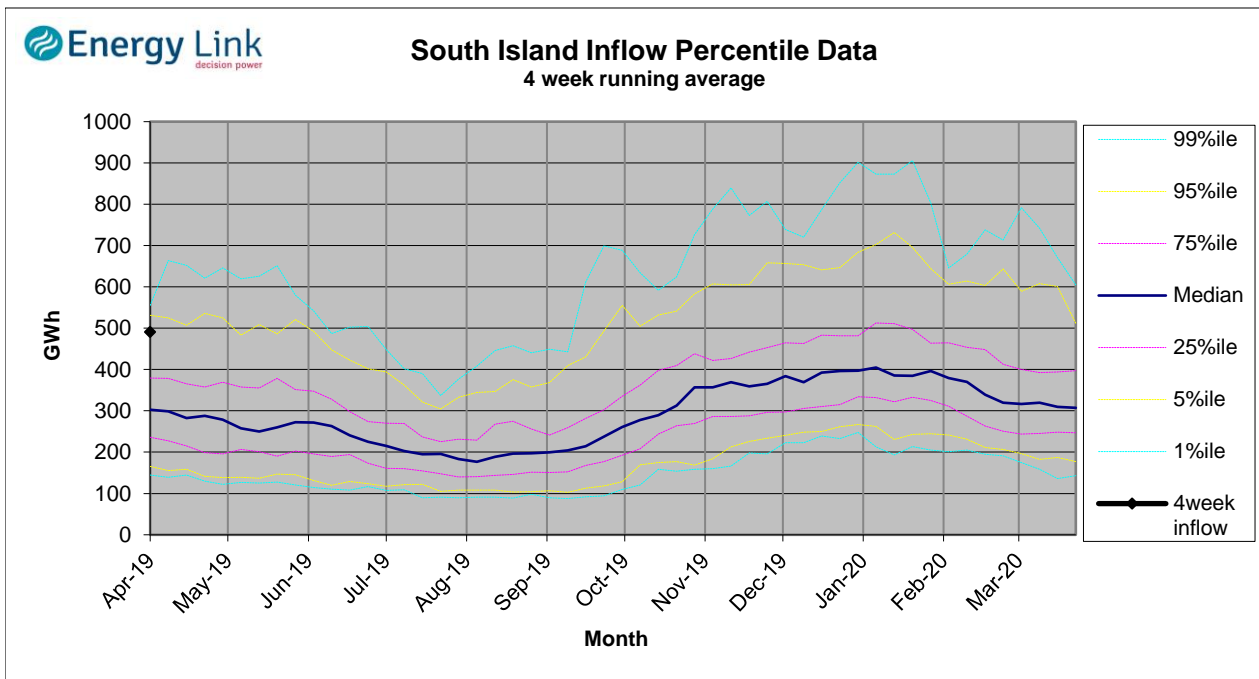
Lake Levels and Outflows

Catchment	Lake	Level (m. asl)	Storage (GWh)	Outflow (cumecs)	Outflow Change
Manapouri	Manapouri	178.01	127	44	11
	Te Anau	202.74	281		
Clutha	Wakatipu	310.18	70	258	121
	Wanaka	278.12	101	404	
	Hawea	341.96	144	14	
Waitaki	Tekapo	707.89	572		189
	Pukaki	532.25	1813		
Waikato	Taupo	356.26	166		-80

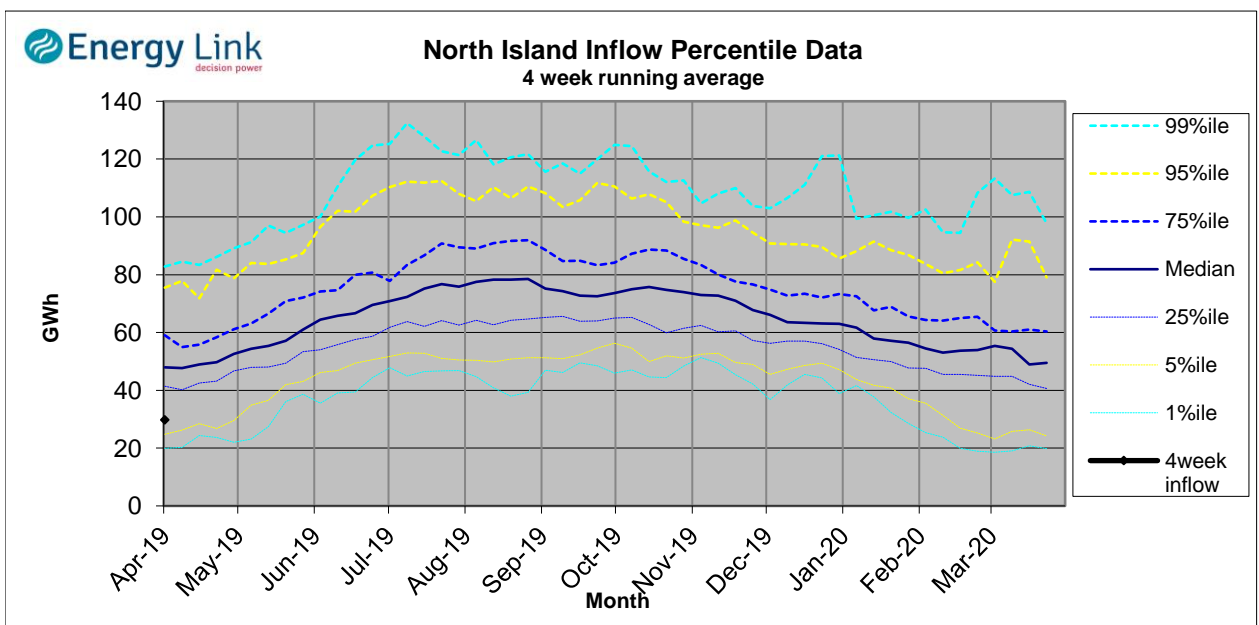
Inflow Summary

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.

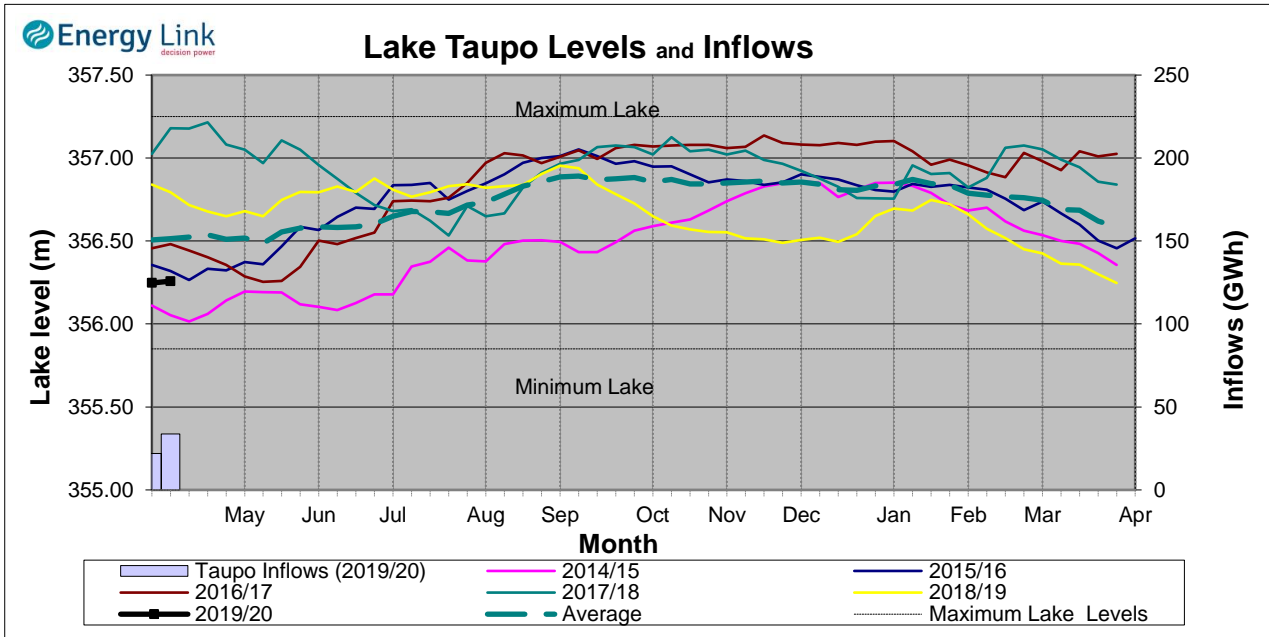
South Island Inflows - #N/A



North Island Inflows - #N/A



Waikato System

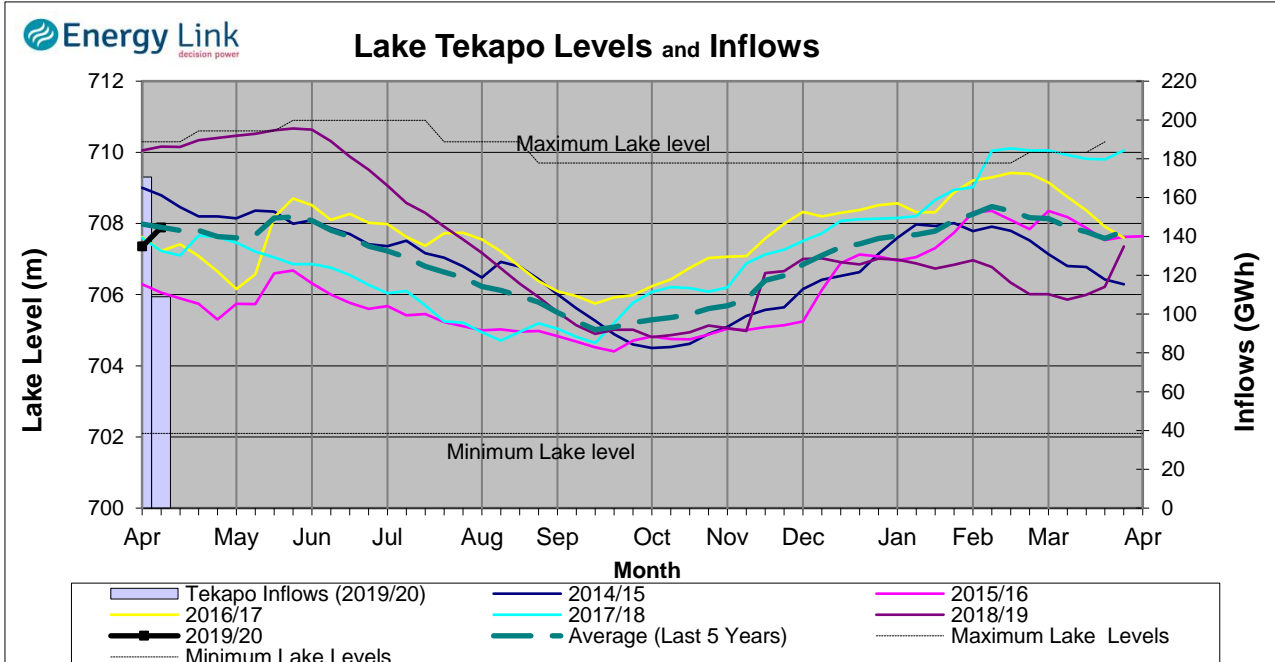


Lake Levels - Lake Taupo storage increased to 29.1% of nominal full at 166 GWh.

Inflows - Inflows increased 54.1% to 34 GWh.

Generation - Average generation decreased 11.5% to 282.6 MW.

Tekapo



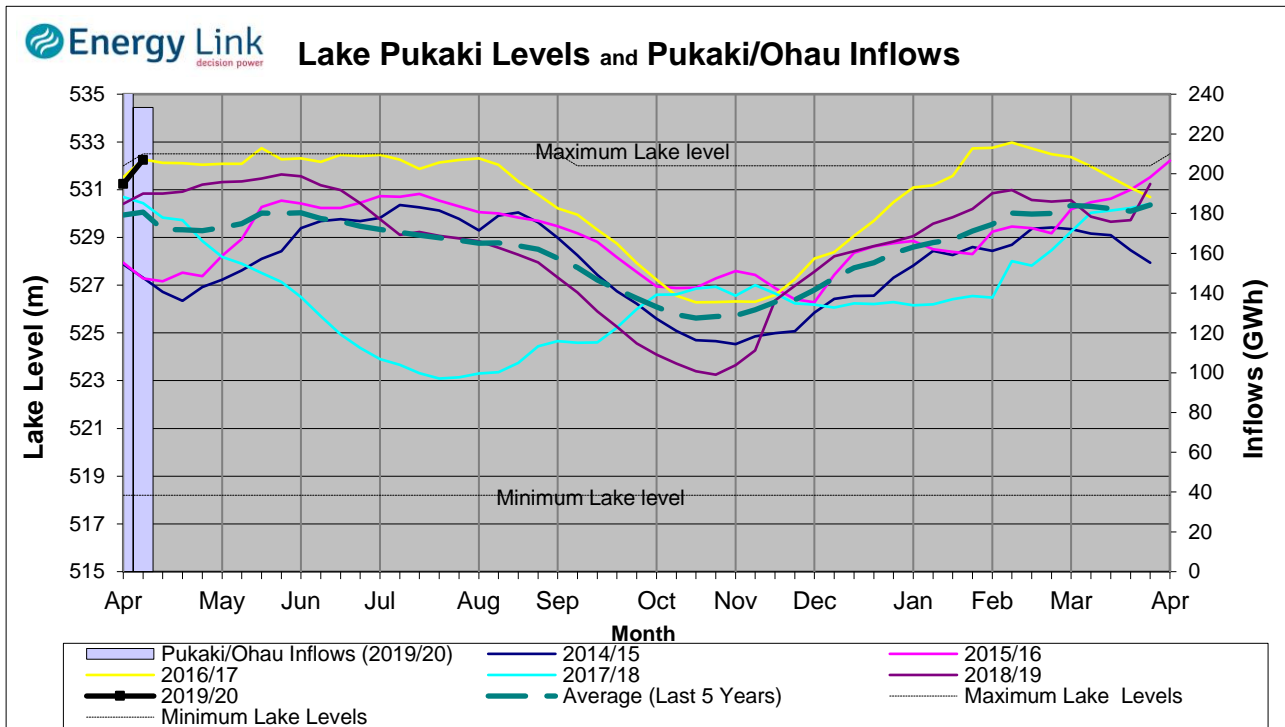
Lake Levels - Lake Tekapo ended the week 76% nominally full with storage increasing to 572 GWh.

Inflows - Inflows into tekapo decreased 36.2% to 109 GWh.

Generation - Average Tekapo generation decreased 2.1% to 112.3 MW.

Hydro Spill - Lake Tekapo did not spill.

Waitaki System



Lake Levels - Lake Pukaki ended the week 102% nominally full with storage increasing to 1813 GWh.

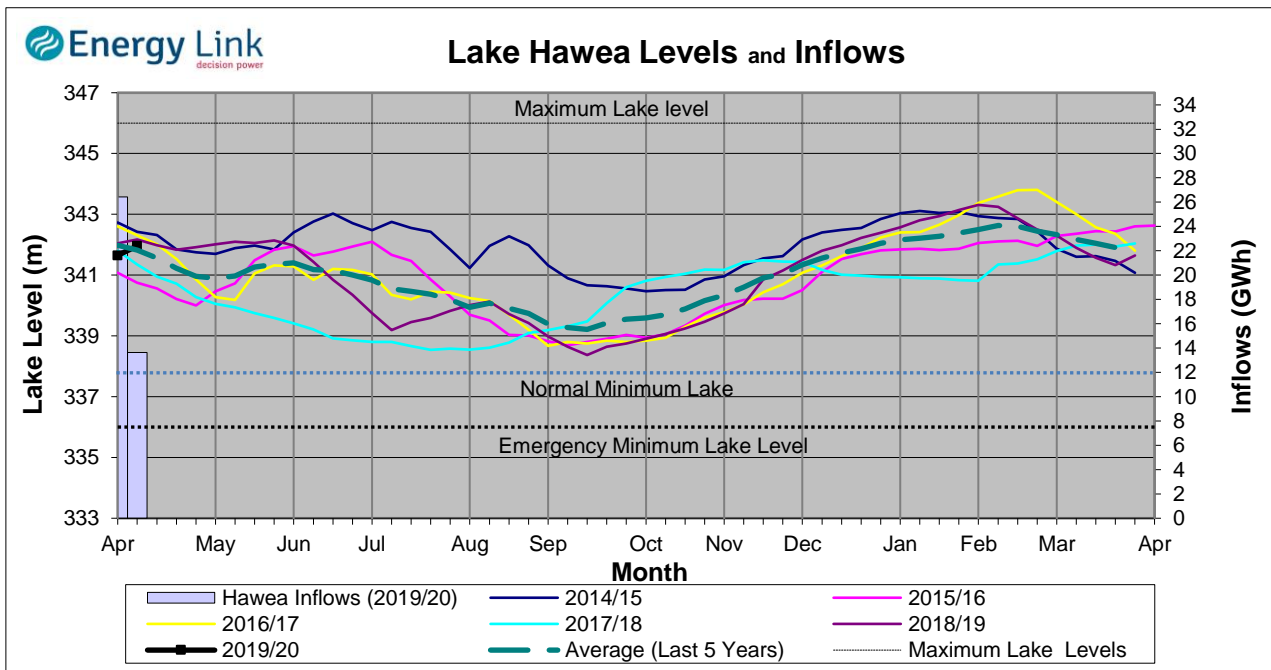
Inflows - Inflows into the Waitaki System decreased 19.6% to 233 GWh.

Generation - Average Waikati generation increased 16.4% to 922.8 MW.

Hydro Spill - Lake Pukaki did not spill.

River Flows - Flows from the Ahuriri River fell to 37.4 cumecs while Waitaki River flows were higher than last week averaging 383.6 cumecs.

Clutha System



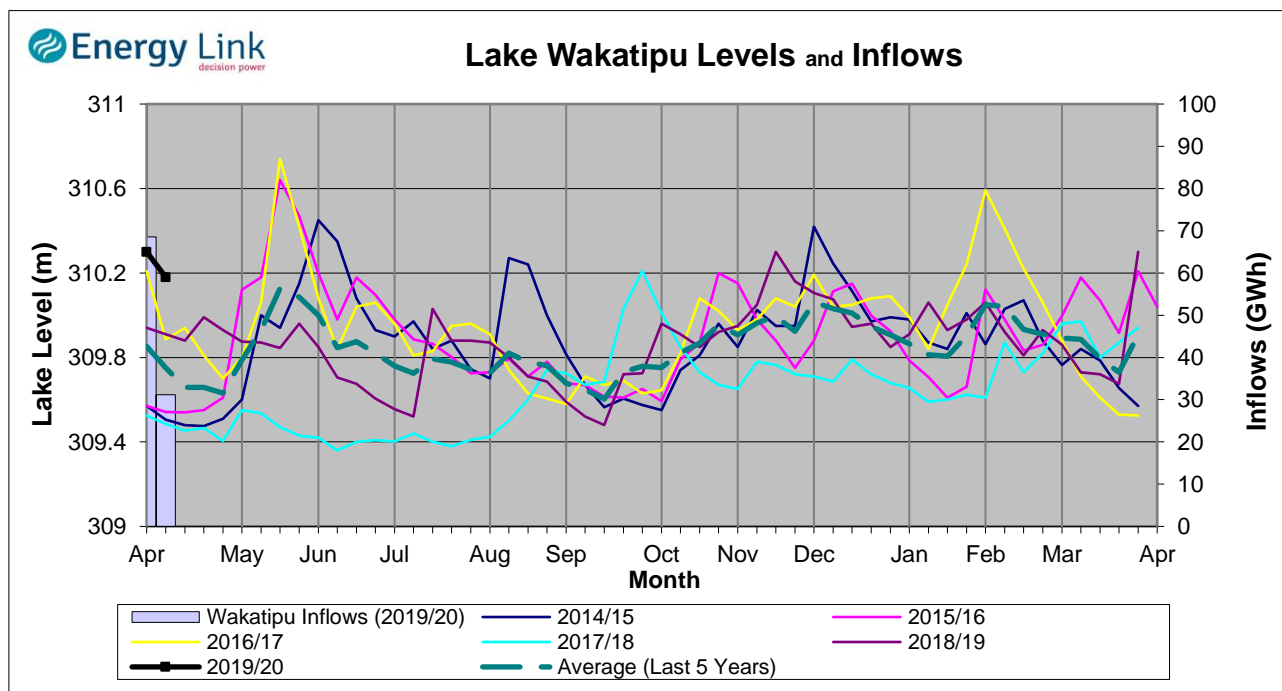
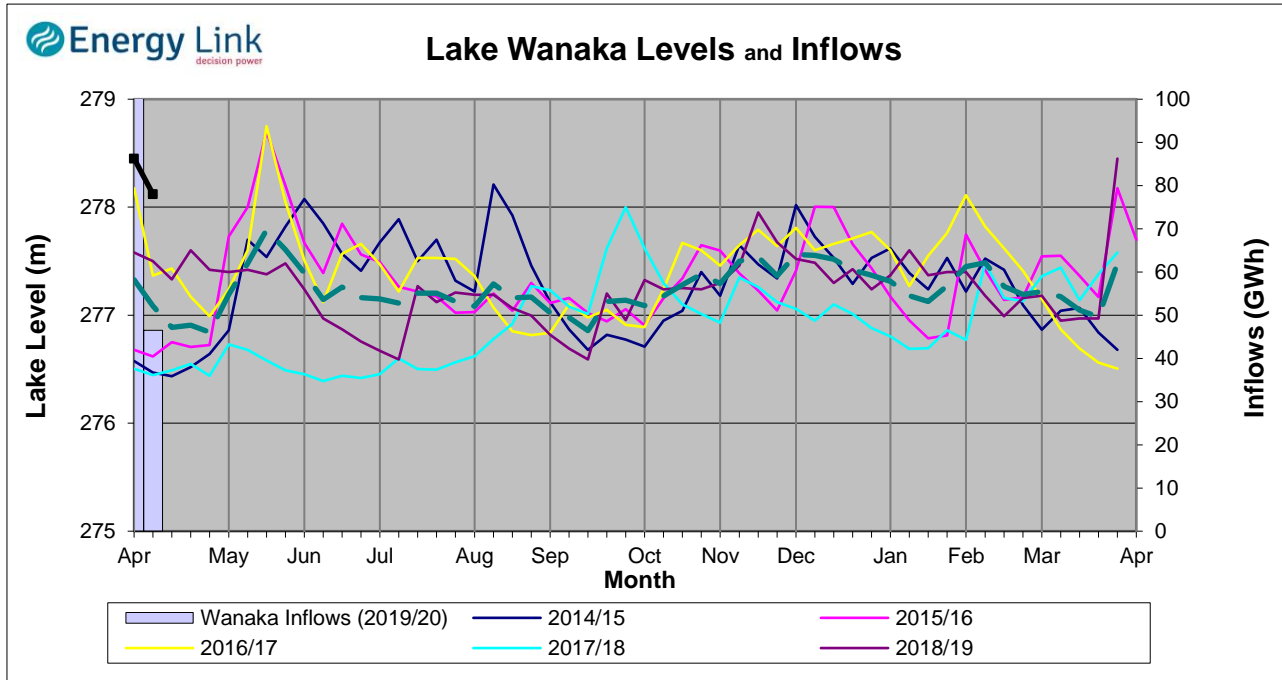
Lake Levels - Total storage for the Clutha System decreased 4.2% to 315 GWh. Lakes Hawea, Wanaka and Wakatipu ended the week 48.6%, 88.6% and 66.4% nominally full respectively.

Inflows - Total Inflows into the Clutha System 54.8% lower at 91 GWh.

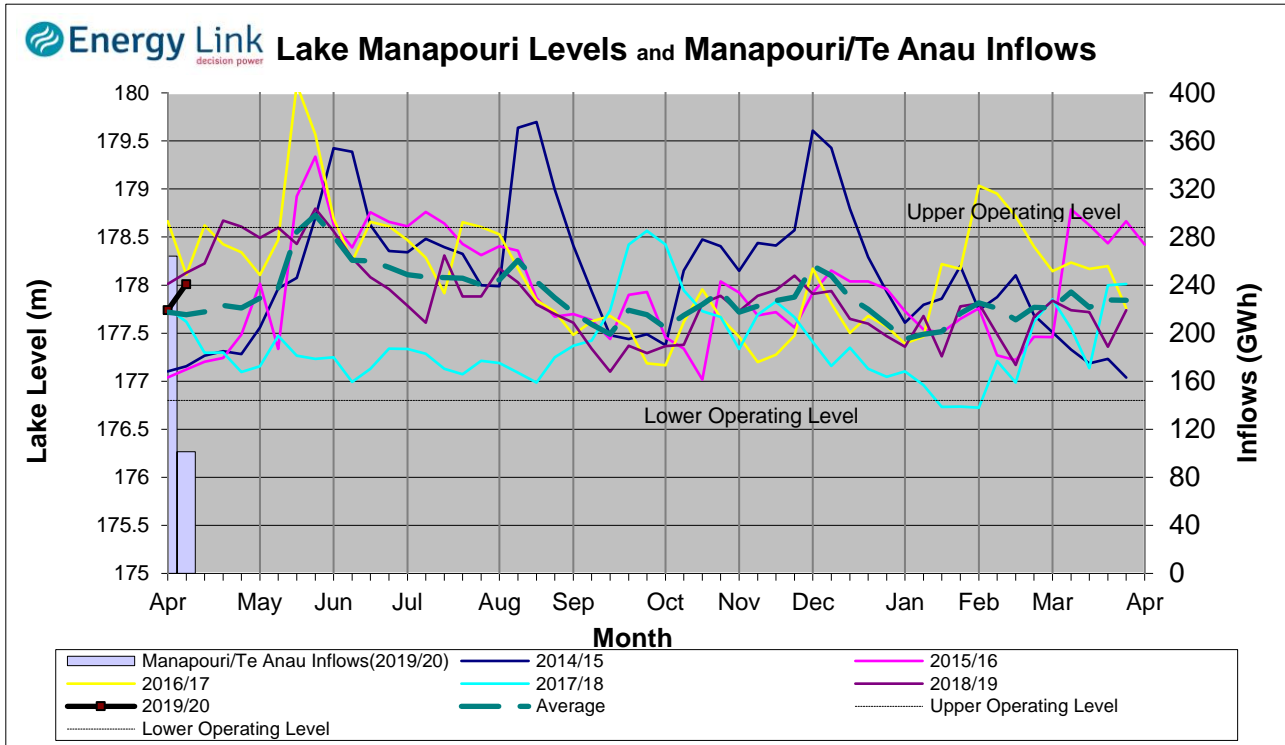
Generation - Average generation was 46% higher at 646 MW.

Hydro Spill - Estimate Spill is 23.4 cumecs.

River Flows - Total outflows from the lakes and Shotover River increased to 719.1 cumecs. This comprised of 14 cumecs from Lake Hawea, 404 cumecs from Lake Wanaka, 258 cumecs from Lake Wakatipu and 44 cumecs from the Shotover River.



Manapouri System



Lake Levels - Total storage for the Manapouri System increased by 2.2% to 408 GWh with Lake Manapouri ending the week 78.3% nominally full and Lake Te Anau ending the week 102.2% nominally full.

Inflows - Total inflows into the Manapouri System decreased 61.6% to 101 GWh.

Generation - Average generation was 10.3% lower at 506 MW.

Hydro Spill - Estimated spill at the Mararoa Weir was 44.1 cumecs.

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

