

HydroWatch

Thursday, 22 September 2016

Issue: 1014

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)	1735	375	2110	494	2604
Storage Change (GWh)	-56	-17	-72	27	-46

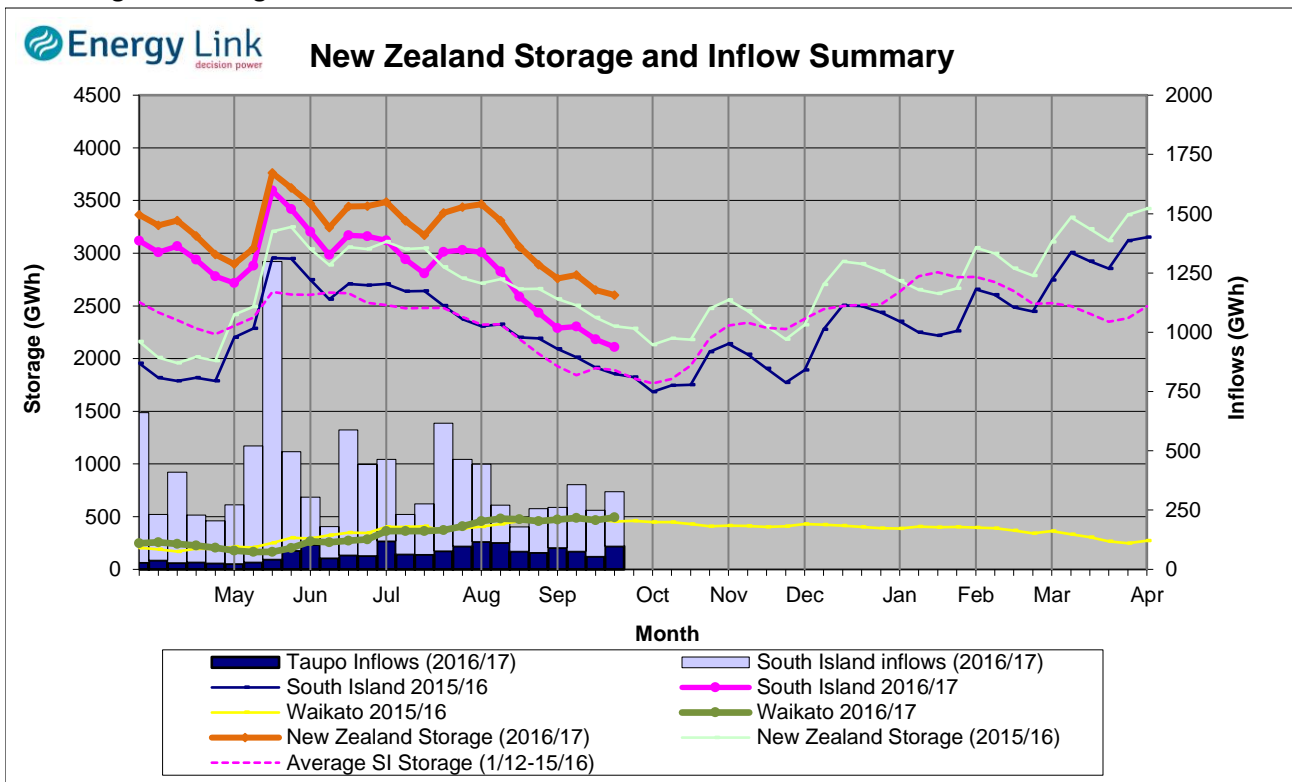
Note: SI Controlled; Tekapo, Pukaki and Hawea: SI Uncontrolled; Manapouri, Te Anau, Wanaka, Wakatipu

Transpower Security of Supply	South Island	North Island	New Zealand
Current Storage (GWh)	2029	494	2522

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 decreased 45.8 GWh over the last week. South Island controlled storage decreased 3.1% to 1735 GWh; South Island uncontrolled storage decreased 4.3% to 375 GWh; with Taupo storage increasing 5.7% to 494 GWh.



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Storage (GWh)	Manapouri	Clutha	Waitaki	Waikato	NZ
This Week	293	110	1706	494	2604
Last Week	315	102	1765	467	2649
% Change	-6.9%	8.3%	-3.3%	5.7%	-1.7%
Inflow (GWh)	Manapouri	Clutha	Waitaki	Waikato	NZ
This Week	73	58	99	98	328
Last Week	90	42	62	55	249
% Change	-18.7%	40.6%	59.5%	76.9%	31.9%

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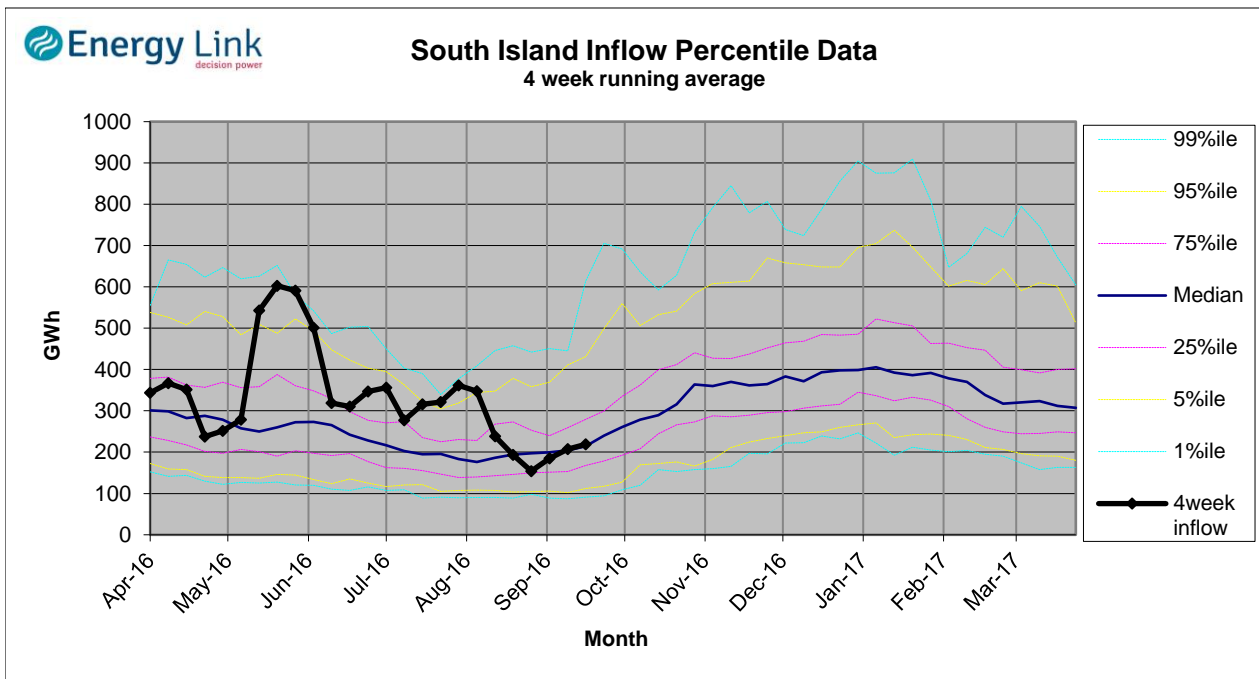
Lake Levels and Outflows

Catchment	Lake	Level (m. asl)	Storage (GWh)	Outflow (cumecs)	Outflow Change
Manapouri	Manapouri	177.56	100	13	-3
	Te Anau	202.15	193		
Clutha	Wakatipu	309.69	33	122	-1
	Wanaka	277.05	48	167	
	Hawea	338.85	29	32	
Waitaki	Tekapo	705.92	369		1
	Pukaki	528.75	1337		
Waikato	Taupo	357.06	494		-15

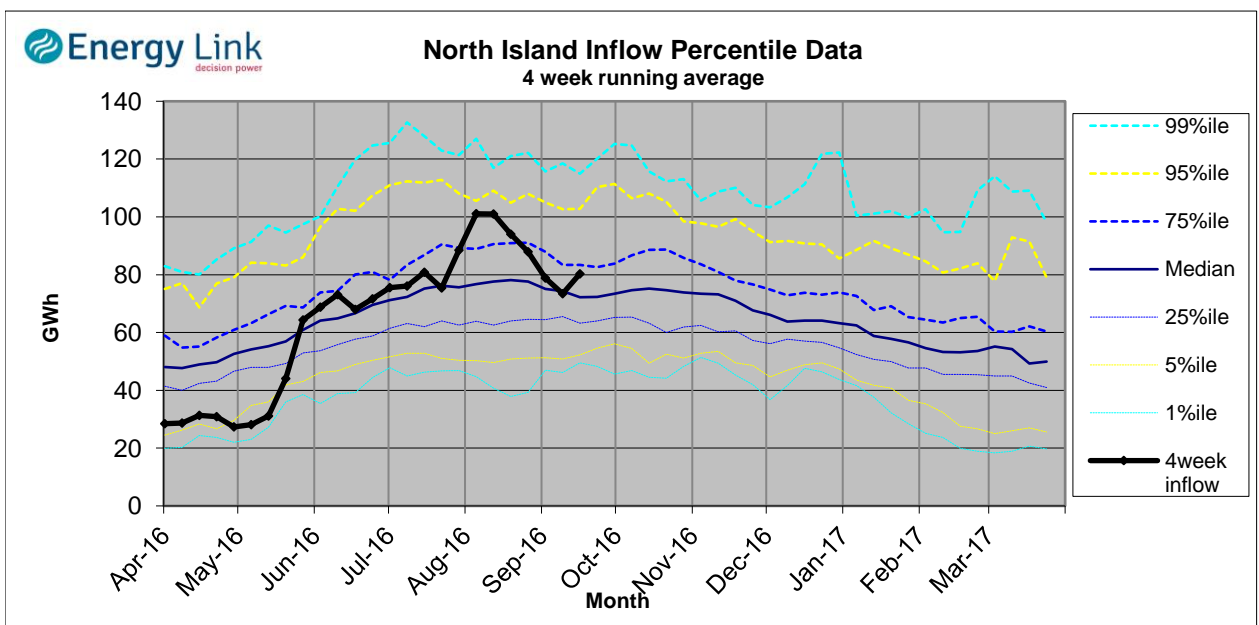
Inflow Summary

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.

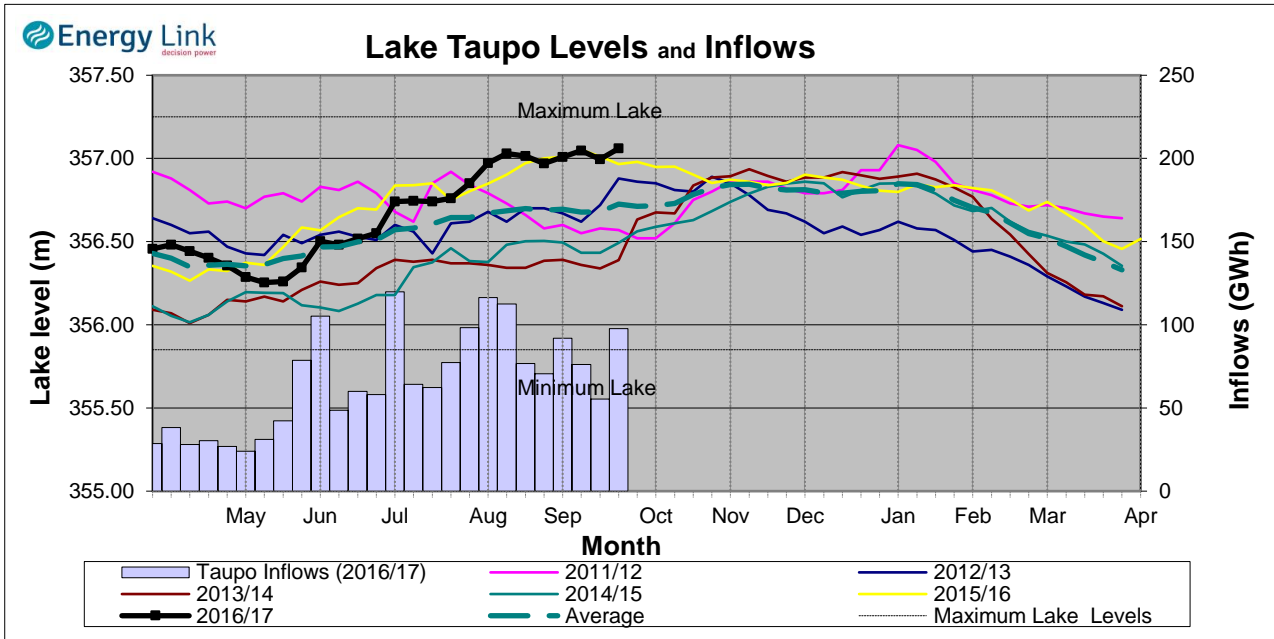
South Island Inflows - The past four weeks of S. I. inflows rank as the 40th wettest on record.



North Island Inflows - The past four weeks of N. I. inflows rank as the 30th wettest on record.



Waikato System

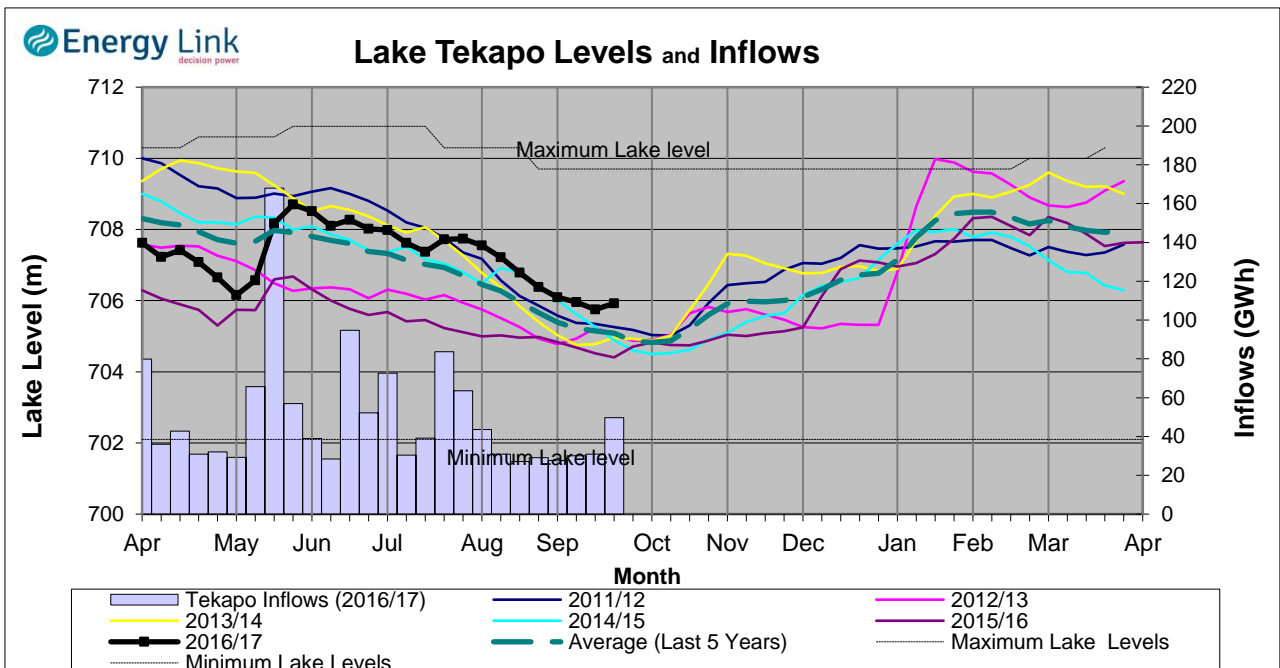


Lake Levels - Lake Taupo storage increased to 86.4% of nominal full at 494 GWh.

Inflows - Inflows increased 76.9% to 98 GWh.

Generation - Average generation decreased 4.6% to 468.6 MW.

Tekapo



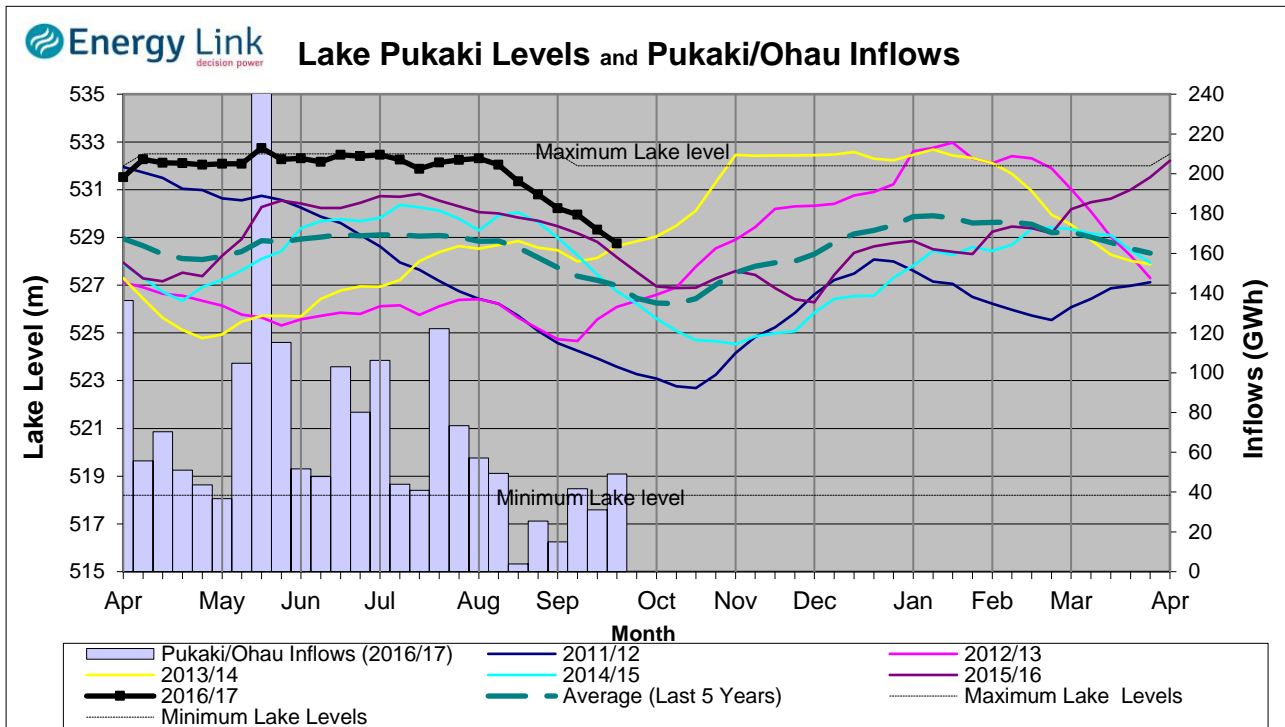
Lake Levels - Lake Tekapo ended the week 51% nominally full with storage increasing to 369 GWh.

Inflows - Inflows into tekapo increased 60.9% to 50 GWh.

Generation - Average Tekapo generation decreased 37.1% to 68.4 MW.

Hydro Spill - Lake Tekapo did not spill.

Waitaki System



Lake Levels - Lake Pukaki ended the week 75.2% nominally full with storage falling to 1337 GWh.

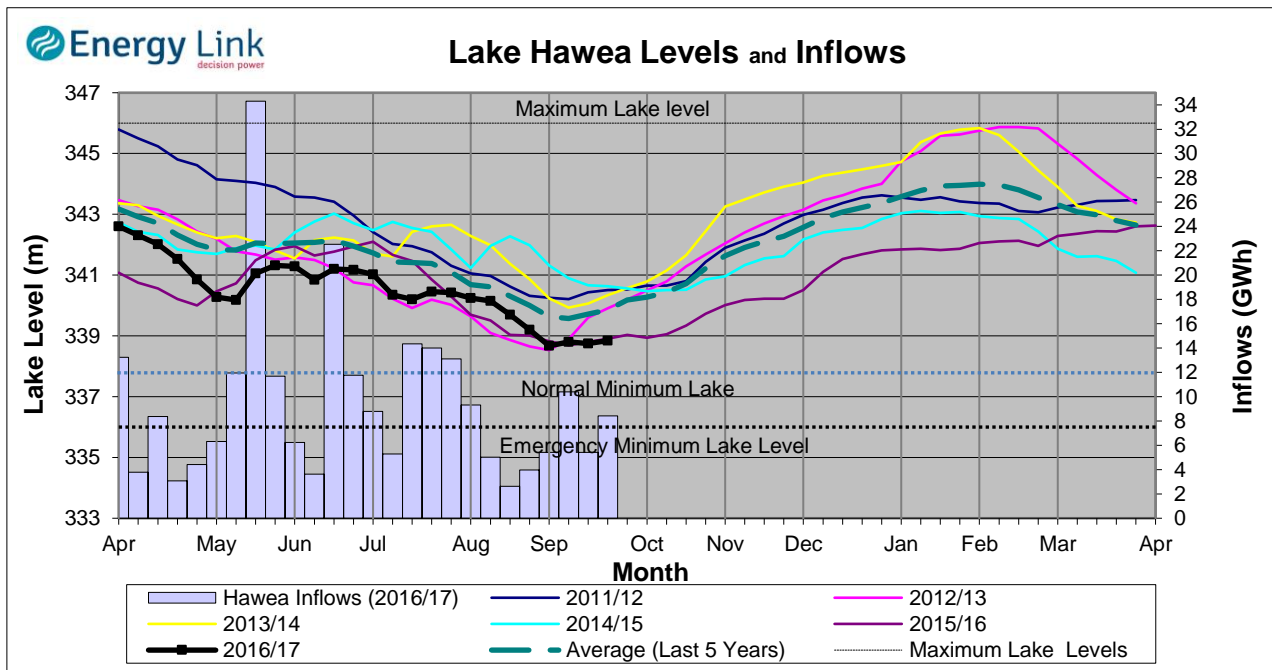
Inflows - Inflows into the Waitaki System increased 58.1% to 49 GWh.

Generation - Average Waikati generation decreased 0.8% to 975.2 MW.

Hydro Spill - Lake Pukaki did not spill.

River Flows - Flows from the Ahuriri River increased to 20.7 cumecs while Waitaki River flows were higher than last week averaging 421 cumecs.

Clutha System



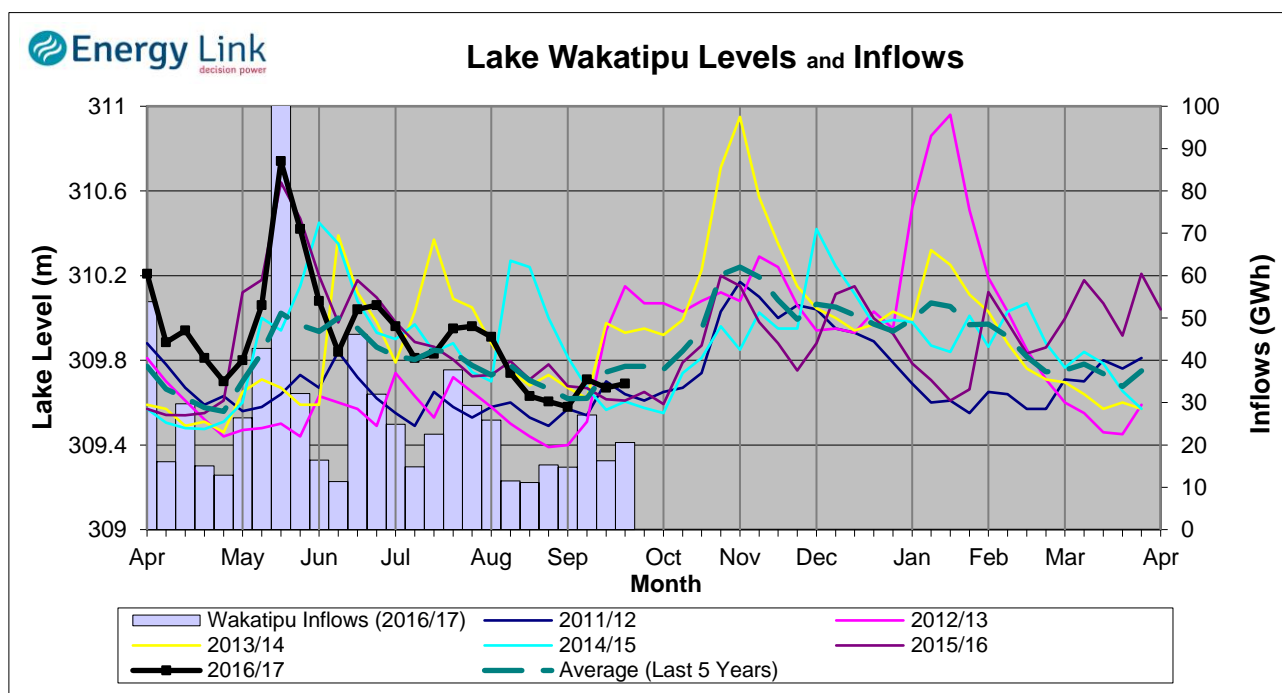
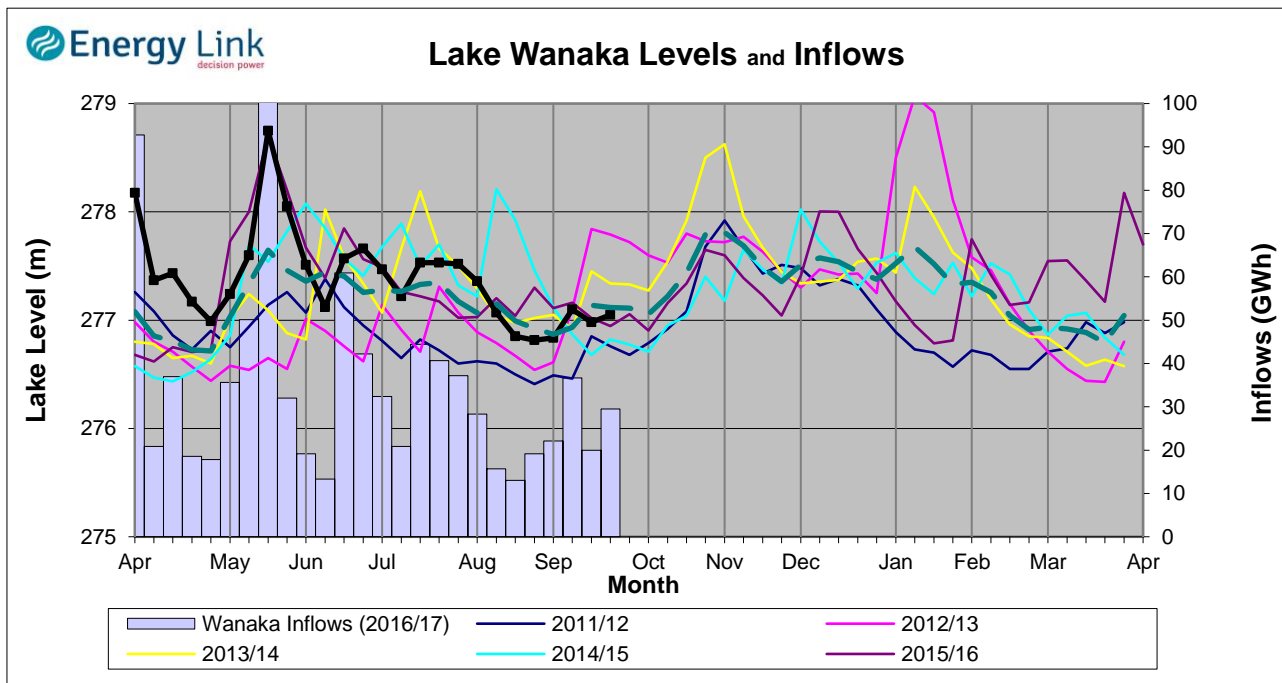
Lake Levels - Total storage for the Clutha System increased by 8.3% to 110 GWh. Lakes Hawea, Wanaka and Wakatipu ended the week 9.8%, 42.1% and 31.4% nominally full respectively.

Inflows - Total Inflows into the Clutha System 40.6% higher at 58 GWh.

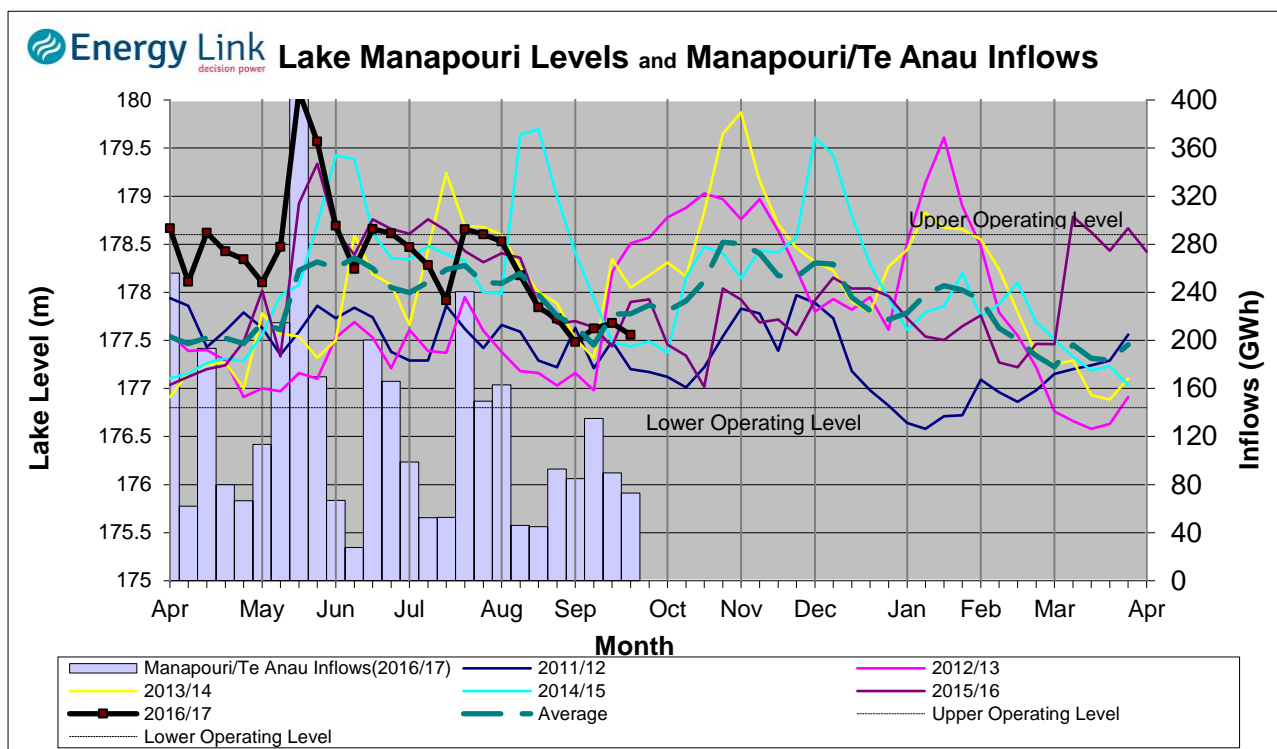
Generation - Average generation was 1.7% lower at 371 MW.

Hydro Spill - There was no estimated spill

River Flows - Total outflows from the lakes and Shotover River fell to 378 cumecs. This comprised of 32 cumecs from Lake Hawea, 167 cumecs from Lake Wanaka, 122 cumecs from Lake Wakatipu and 57 cumecs from the Shotover River.



Manapouri System



Lake Levels - Total storage for the Manapouri System decreased 6.9% to 293 GWh with Lake Manapouri ending the week 61.6% nominally full and Lake Te Anau ending the week 70.2% nominally full.

Inflows - Total inflows into the Manapouri System decreased 18.7% to 73 GWh.

Generation - Average generation was 0.6% lower at 565 MW.

Hydro Spill - Estimated spill at the Mararoa Weir was 12.7 cumecs.

Operating Range - Lakes Manapouri and Te Anau are operating in the middle of their respective 'Main operating range'.

