



Thursday, 21 September 2023

Issue: 1379

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)	1287	635	1922	251	2173
Storage Change (GWh)	80	289	369	15	383

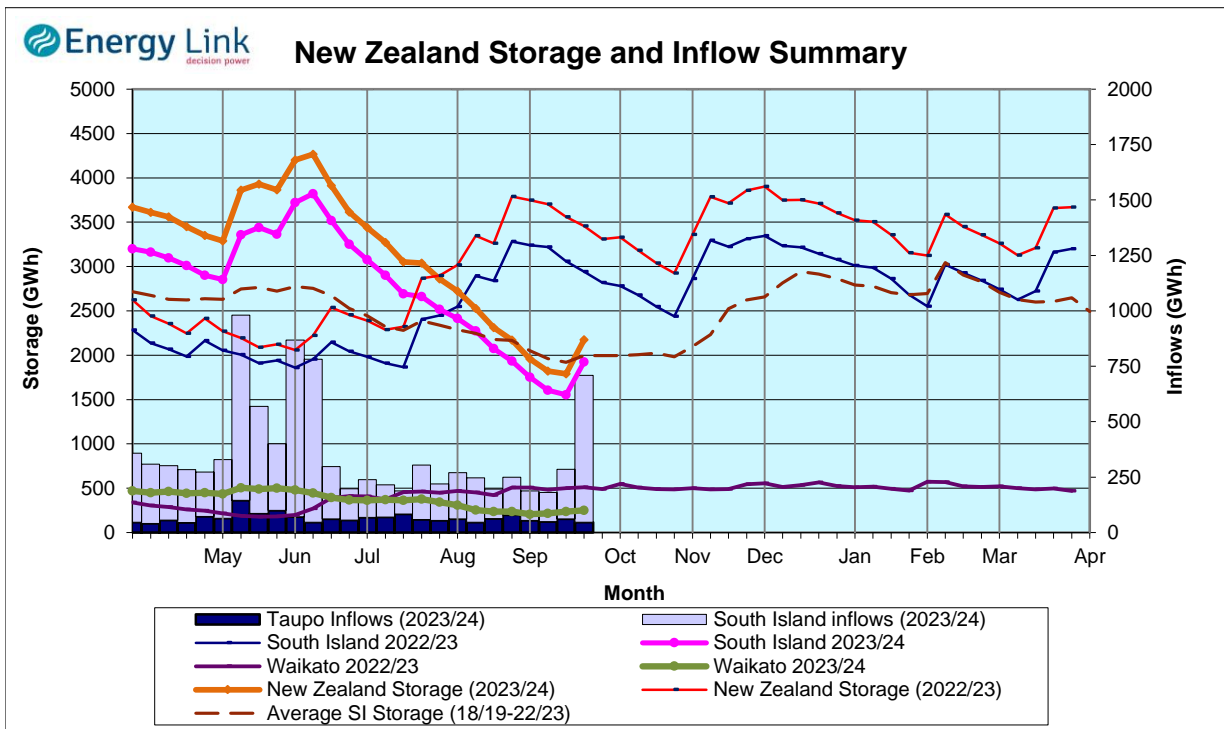
Note: SI Controlled; Tekapo, Pukaki and Hawea: SI Uncontrolled; Manapouri, Te Anau, Wanaka, Wakatipu

Transpower Security of Supply	South Island	North Island	New Zealand
Current Storage (GWh)	1794	251	2045

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 383.5 GWh over the last week. South Island controlled storage increased 6.6% to 1287 GWh; South Island uncontrolled storage increased 83.6% to 635 GWh; with Taupo storage increasing 6.2% to 251 GWh.



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Storage (GWh)	Manapouri	Clutha	Waitaki	Waikato	NZ
<b>This Week</b>	506	177	1239	251	2173
Last Week	281	96	1176	237	1790
% Change	79.9%	84.5%	5.4%	6.2%	21.4%
Inflow (GWh)	Manapouri	Clutha	Waitaki	Waikato	NZ
<b>This Week</b>	329	133	199	47	709
Last Week	100	63	61	61	285
% Change	229.2%	111.0%	227.2%	-23.2%	148.5%

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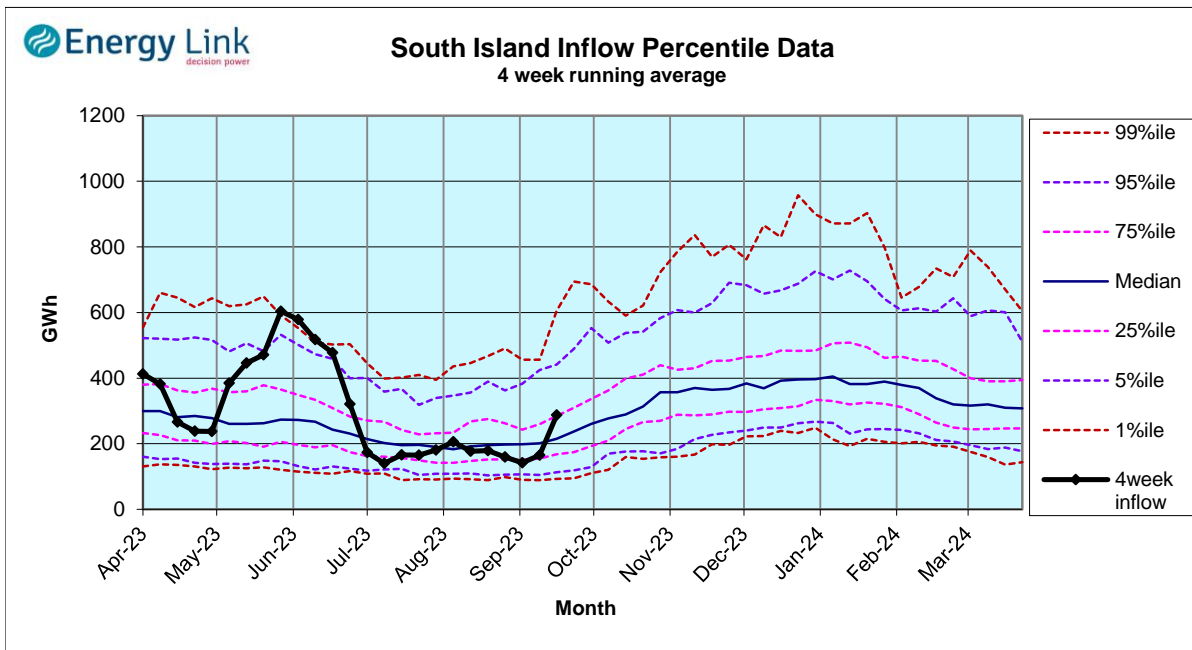
Lake Levels and Outflows

Catchment	Lake	Level (m. asl)	Storage (GWh)	Outflow (cumecs)	Outflow Change
Manapouri	Manapouri	178.57	161	49	37
	Te Anau	203.17	346		
Clutha	Wakatipu	309.95	53	130	49
	Wanaka	277.60	76	188	70
	Hawea	339.38	49	17	0
Waitaki	Tekapo	705.60	337		
	Pukaki	525.44	902		
Waikato	Taupo	356.47	251		

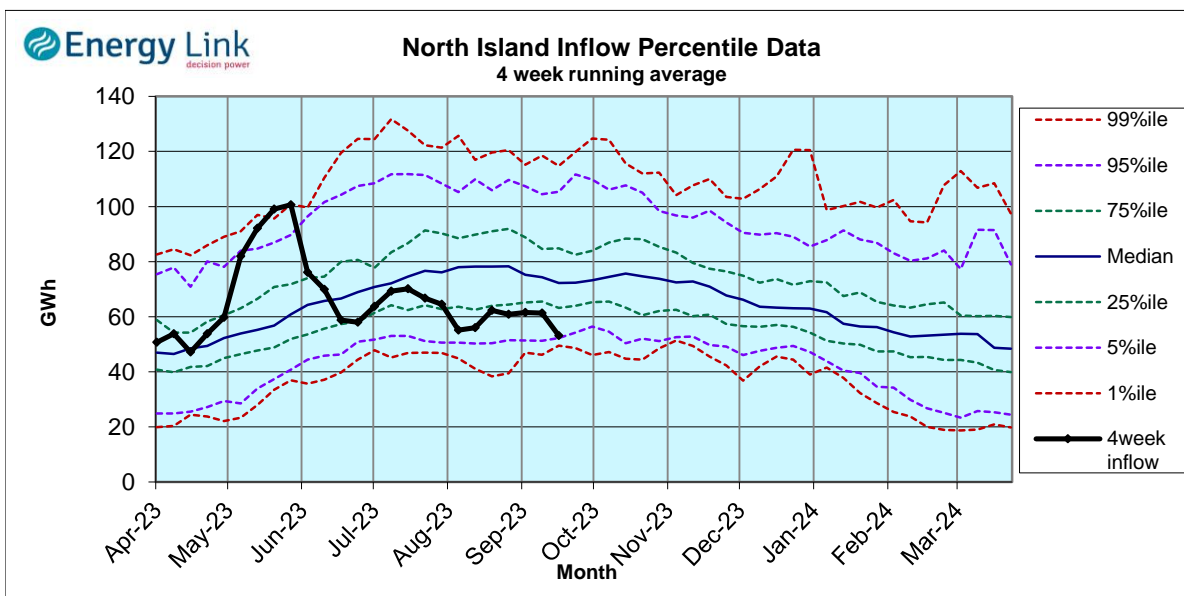
Inflow Summary

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.

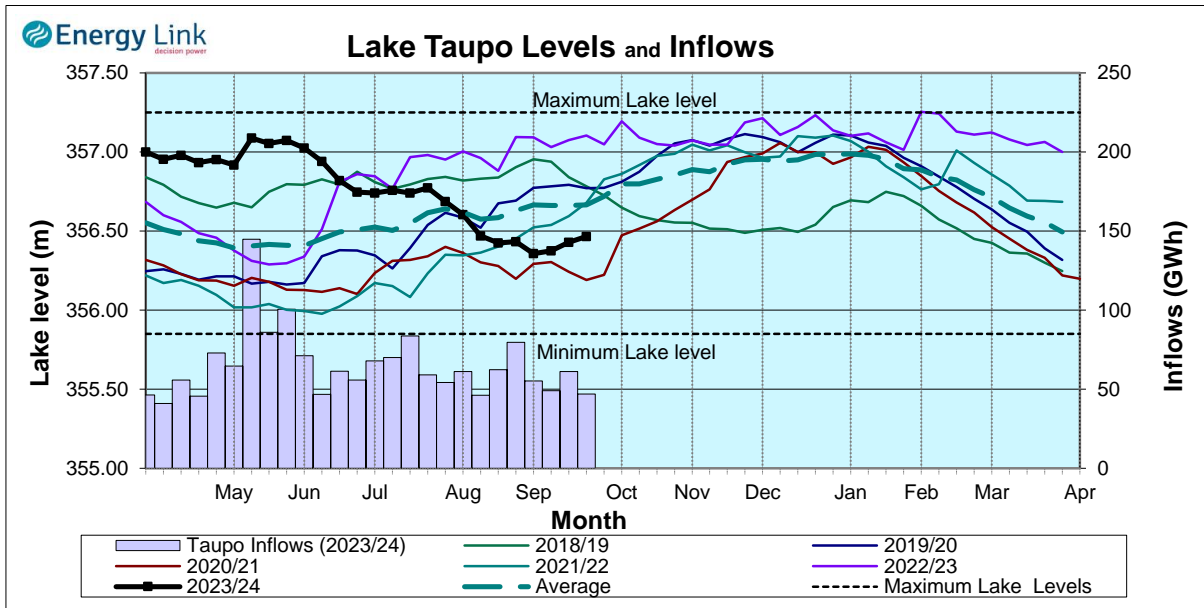
**South Island Inflows** - The past four weeks of S. I. inflows rank as the 23rd wettest on record.



**North Island Inflows** - The past four weeks of N. I. inflows rank as the 7th driest on record.



## Waikato System

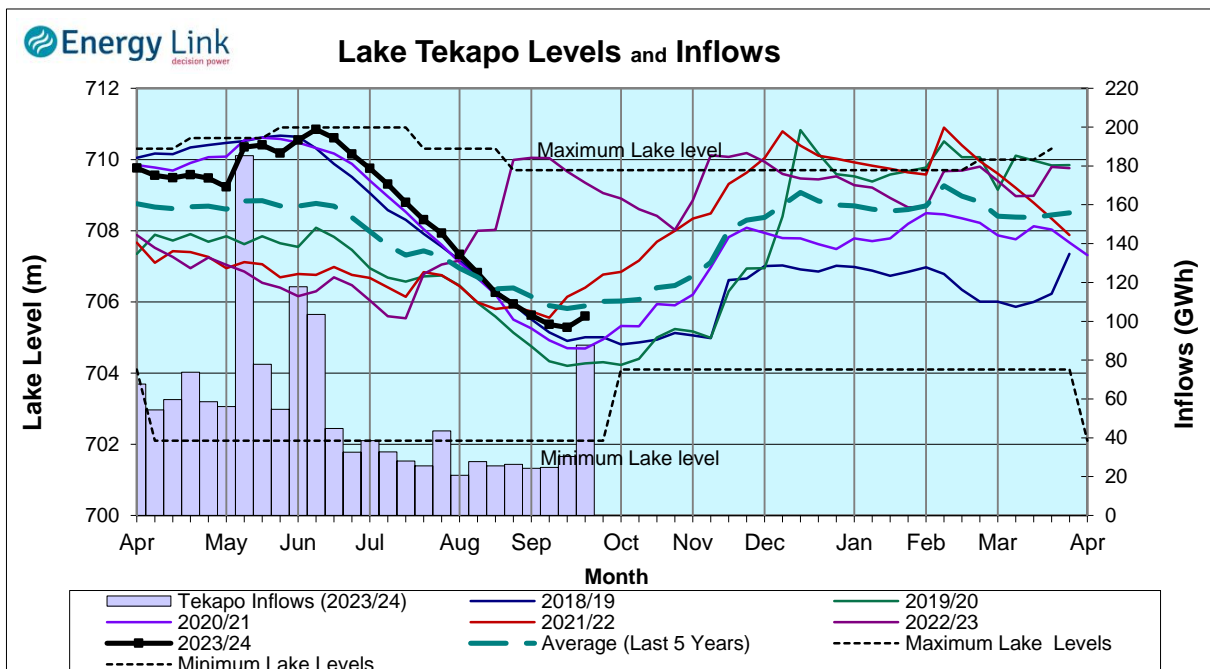


**Lake Levels** - Lake Taupo storage increased to 44% of nominal full at 251 GWh.

**Inflows** - Inflows decreased 23.2% to 47 GWh.

**Generation** - Average generation decreased 12.1% to 294.6 MW.

## Tekapo



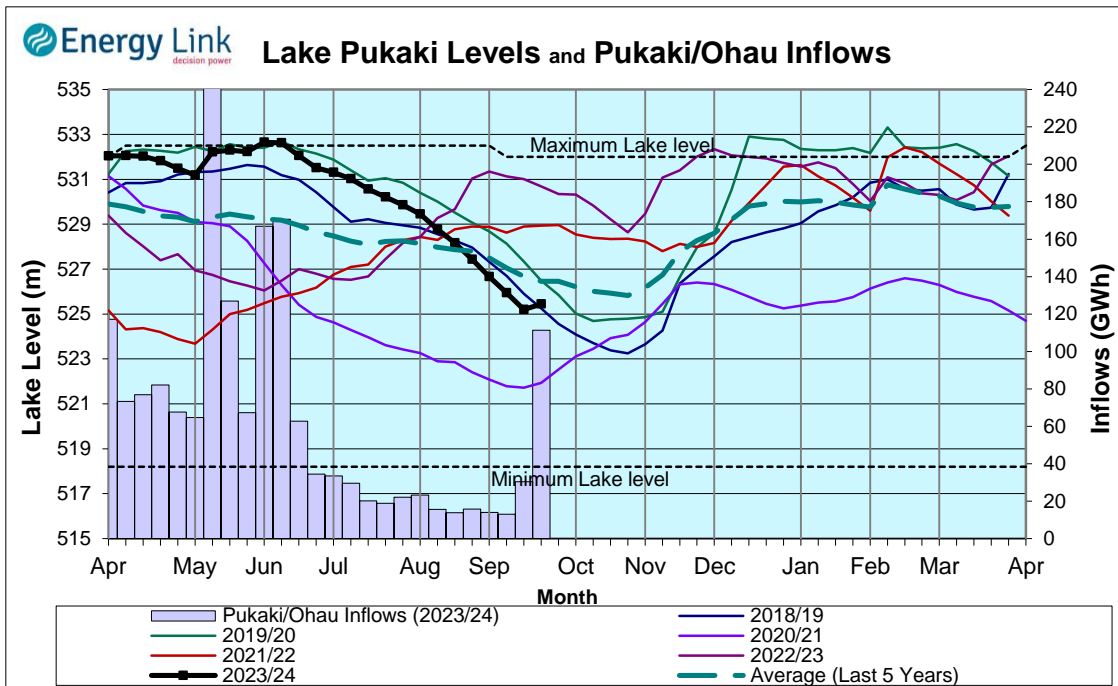
**Lake Levels** - Lake Tekapo ended the week 47% nominally full with storage increasing to 337 GWh.

**Inflows** - Inflows into tekapo increased 187.8% to 88 GWh.

**Generation** - Average Tekapo generation increased 50.4% to 116.2 MW.

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

## Waitaki System



**Lake Levels** - Lake Pukaki ended the week 51% nominally full with storage increasing to 902 GWI

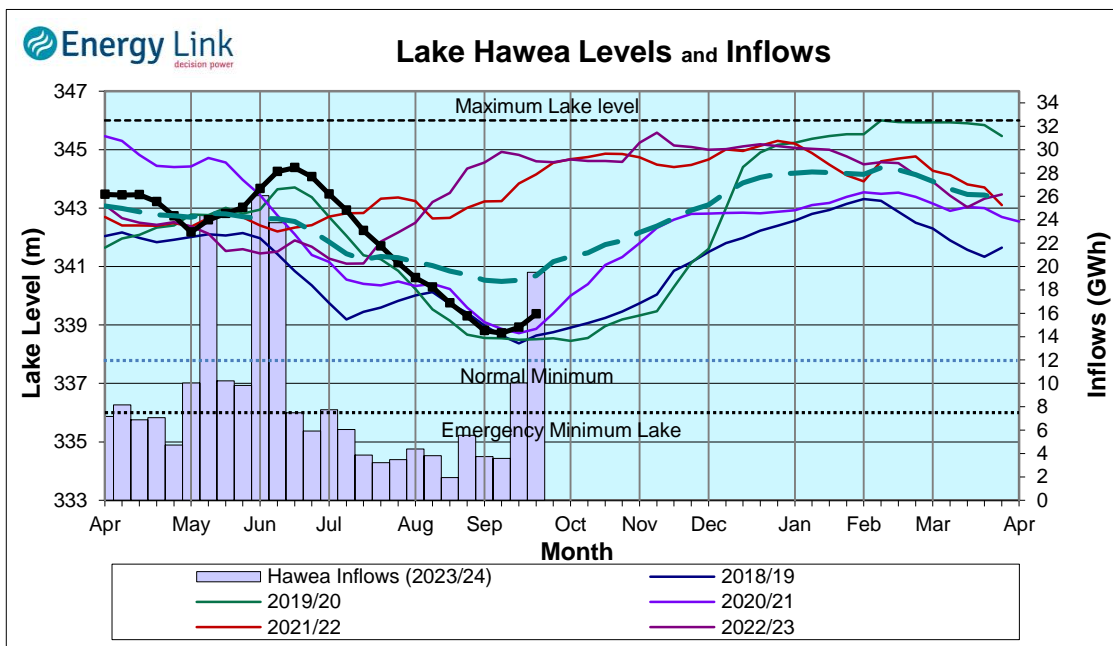
**Inflows** - Inflows into the Waitaki System increased 266.6% to 111 GWh.

**Generation** - Average Waitaki generation decreased 21.1% to 770 MW.

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

**River Flows** - Flows from the Ahuriri River increased to 33.3 cumecs while Waitaki River flows were lower than last week averaging 316.2 cumecs.

## Clutha System



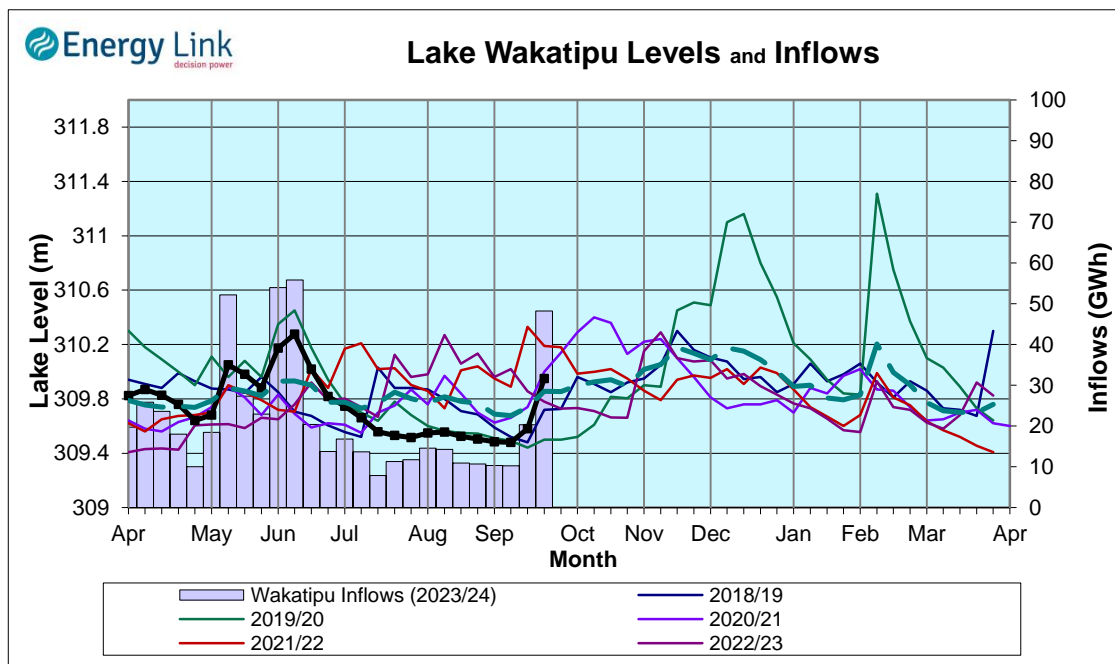
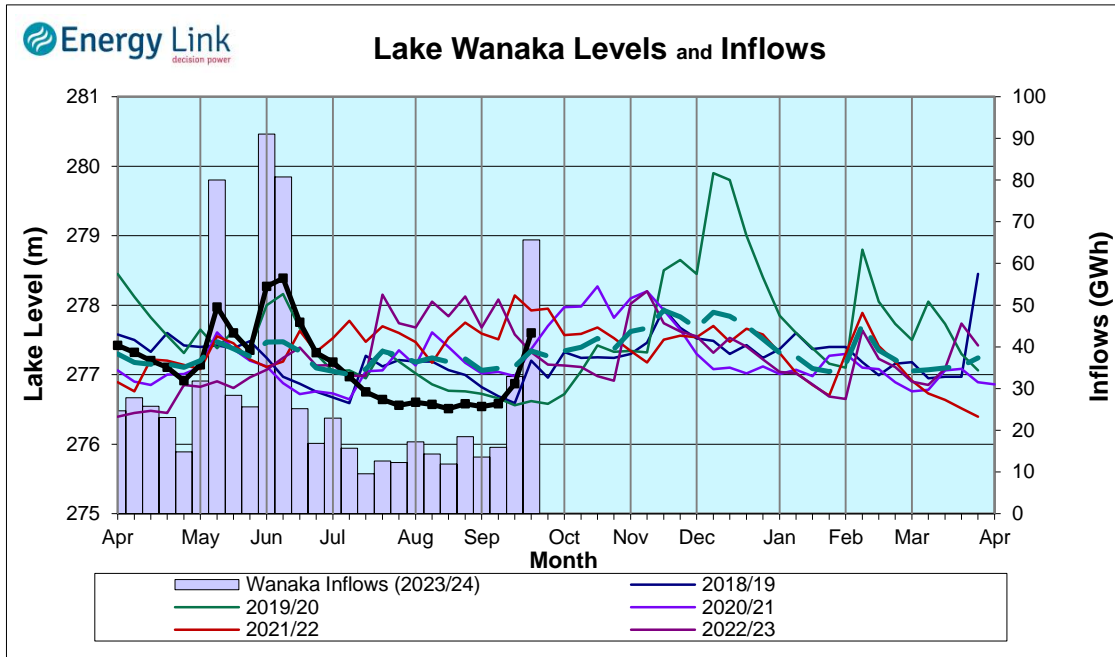
**Lake Levels** - Total storage for the Clutha System increased by 84.5% to 177 GWh. Lakes Hawea, Wanaka and Wakatipu ended the week 16.4%, 66% and 50% nominally full respectively.

**Inflows** - Total Inflows into the Clutha System 111% higher at 133 GWh.

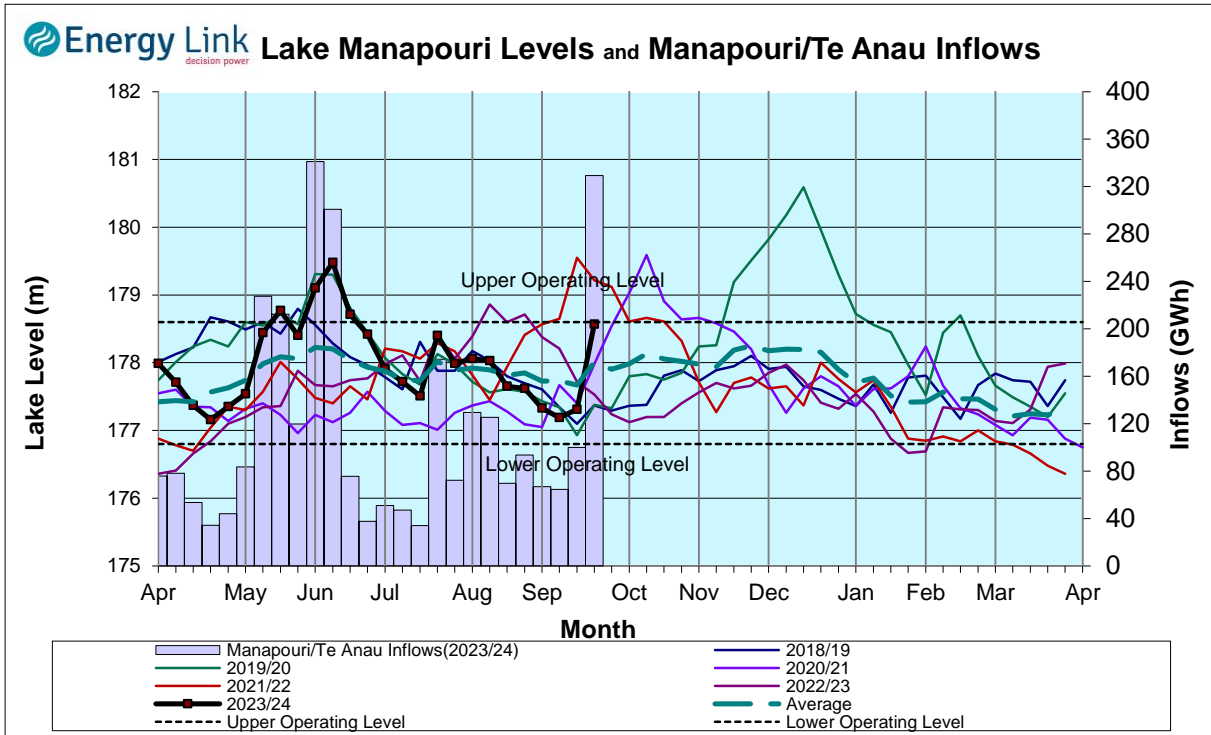
**Generation** - Average generation was 51.1% higher at 405 MW.

**Hydro Spill** - There was no estimated spill

**River Flows** - Total outflows from the lakes and Shotover River increased to 410.5 cumecs. This comprised of 17 cumecs from Lake Hawea, 188 cumecs from Lake Wanaka, 130 cumecs from Lake Wakatipu and 75 cumecs from the Shotover River.



### Manapouri System



**Lake Levels** - Total storage for the Manapouri System increased by 79.9% to 506 GWh with Lake Manapouri ending the week 98.9% nominally full and Lake Te Anau ending the week 125.5% nominally full.

**Inflows** - Total inflows into the Manapouri System increased 229.2% to 329 GWh.

**Generation** - Average generation was 21.7% higher at 565 MW.

**Hydro Spill** - Estimated spill at the Mararoa Weir was 49.3 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'.

