# HydroWatch

## Thursday, 13 July 2023 Issue: 1369

*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) | **2405** | **286** | **2690** | **363** | | **3054** |
| Storage Change (GWh) | -143 | -67 | -211 | -7 | | -217 |

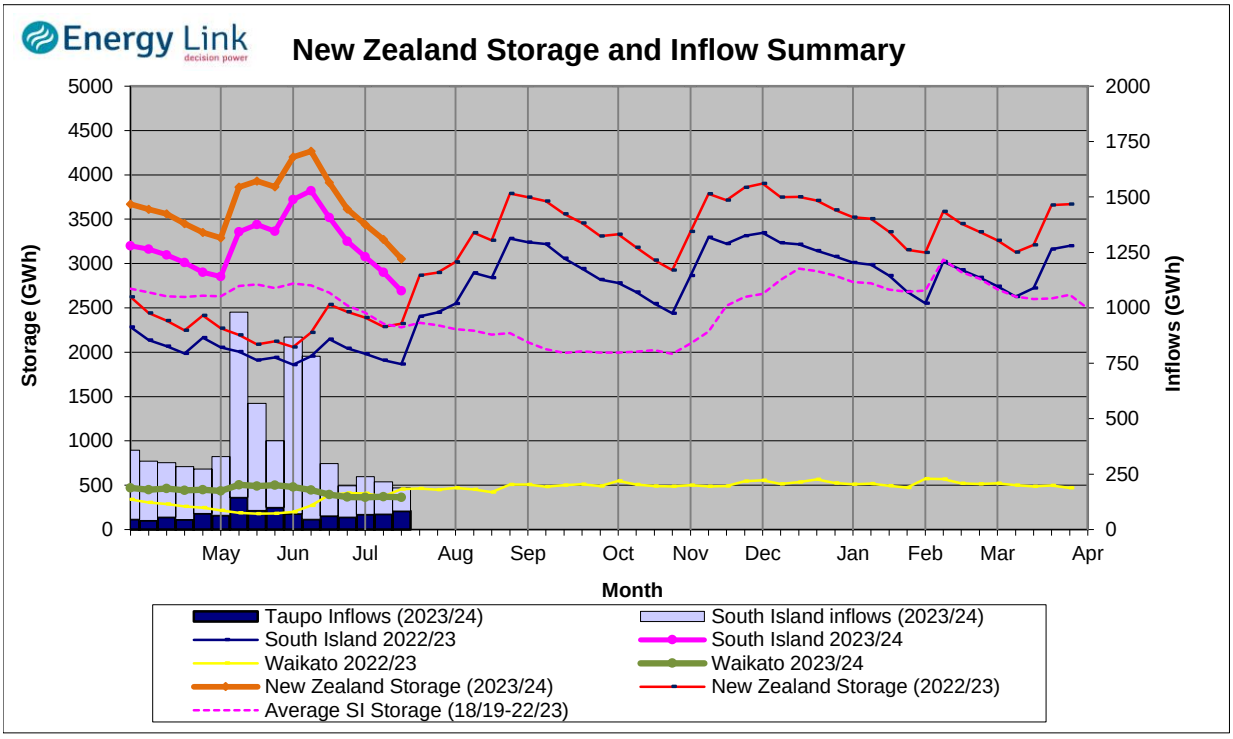
Note: SI Controlled; Tekapo, Pukaki and Hawea: SI Uncontrolled; Manapouri, Te Anau, Wanaka, Wakatipu

| **Transpower Security of Supply** | South Island | North Island | | New Zealand |
|---|---|---|---|---|
| **Current Storage (GWh)** | **2634** | **363** | | **2997** |

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 217 GWh over the last week. South Island controlled storage decreased 5.6% to 2405 GWh; South Island uncontrolled storage decreased 19% to 286 GWh; with Taupo storage decreasing 1.8% to 363 GWh.




| **Thursday, 13 July 2023** | | | | | | |
|---|---|---|---|---|---|---|
| Storage (GWh) | Manapouri | Clutha | Waitaki | Waikato | | NZ |
| **This Week** | **229** | **210** | **2251** | **363** | | **3054** |
| Last Week | 277 | 255 | 2369 | 370 | | 3271 |
| % Change | -17.4% | -17.5% | -5.0% | -1.8% | | -6.6% |
| Inflow (GWh) | | | | | | |
| **This Week** | **34** | **21** | **48** | **84** | | **187** |
| Last Week | 47 | 35 | 62 | 70 | | 215 |
| % Change | -27.7% | -40.0% | -22.8% | 19.5% | | -12.9% |

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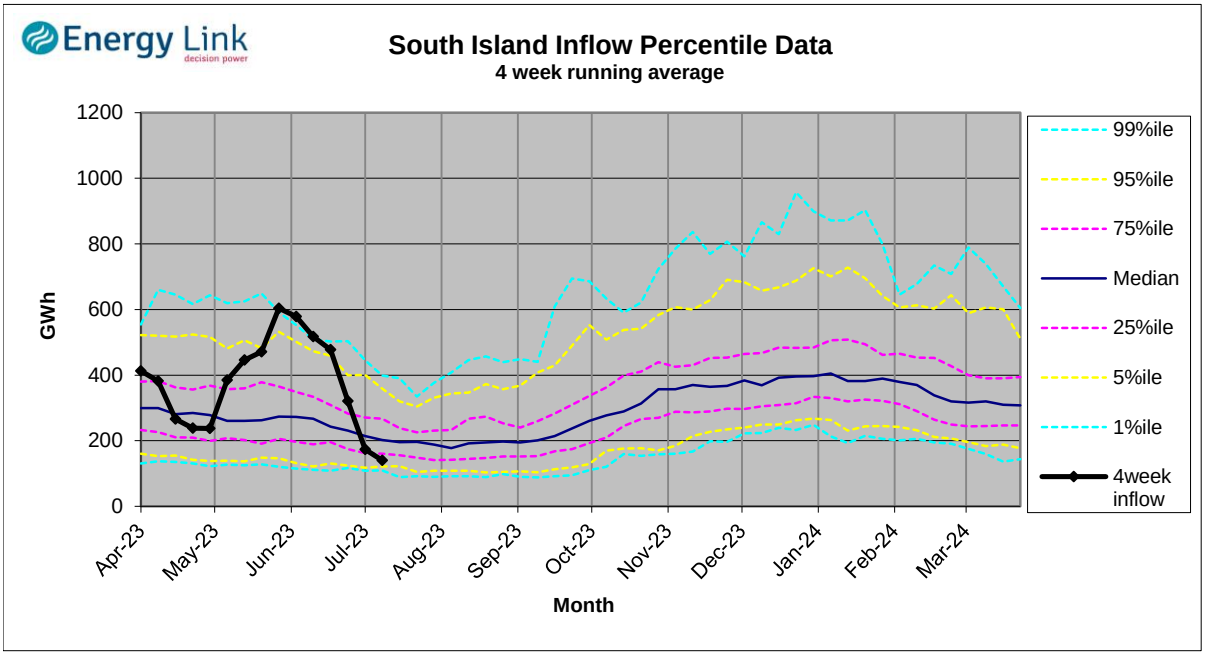
## Lake Levels and Outflows

| Catchment | Lake | Level (m. asl) | Storage (GWh) | Outflow (cumecs) | Outflow Change |
|---|---|---|---|---|---|
| Manapouri | Manapouri | 177.51 | 97 | 14 | 1 |
| | Te Anau | 201.74 | 132 | | |
| Clutha | Wakatipu | 309.56 | 23 | 100 | -29 |
| | Wanaka | 276.75 | 33 | 131 | -36 |
| | Hawea | 342.23 | 154 | 191 | 19 |
| Waitaki | Tekapo | 708.80 | 670 | | |
| | Pukaki | 530.56 | 1581 | | |
| Waikato | Taupo | 356.74 | 363 | | |

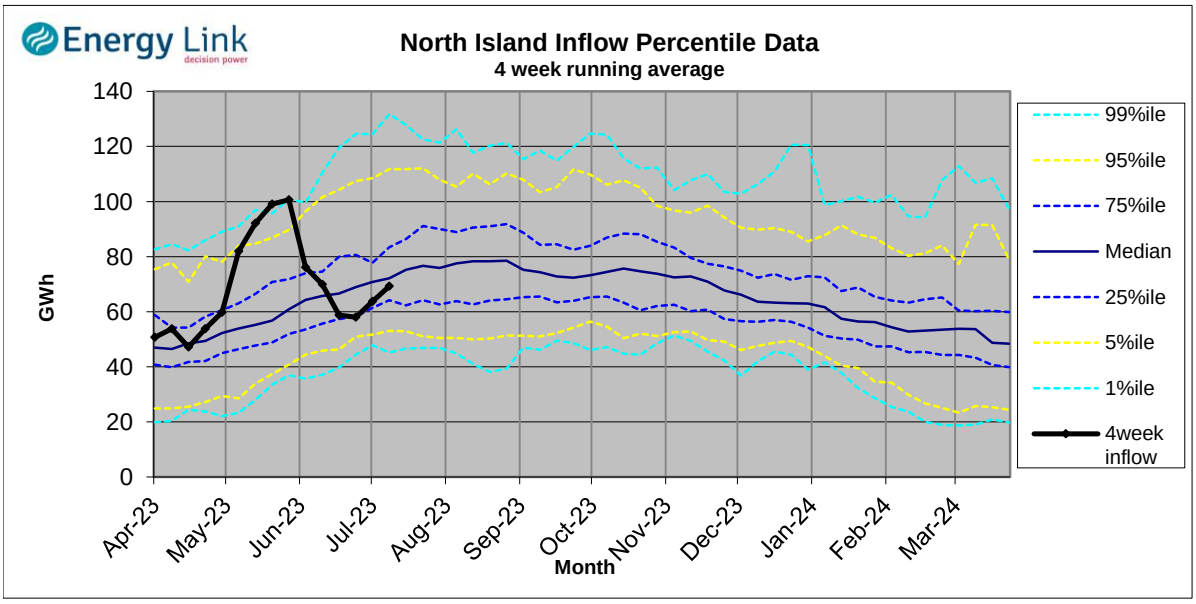
## Inflow Summary

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.

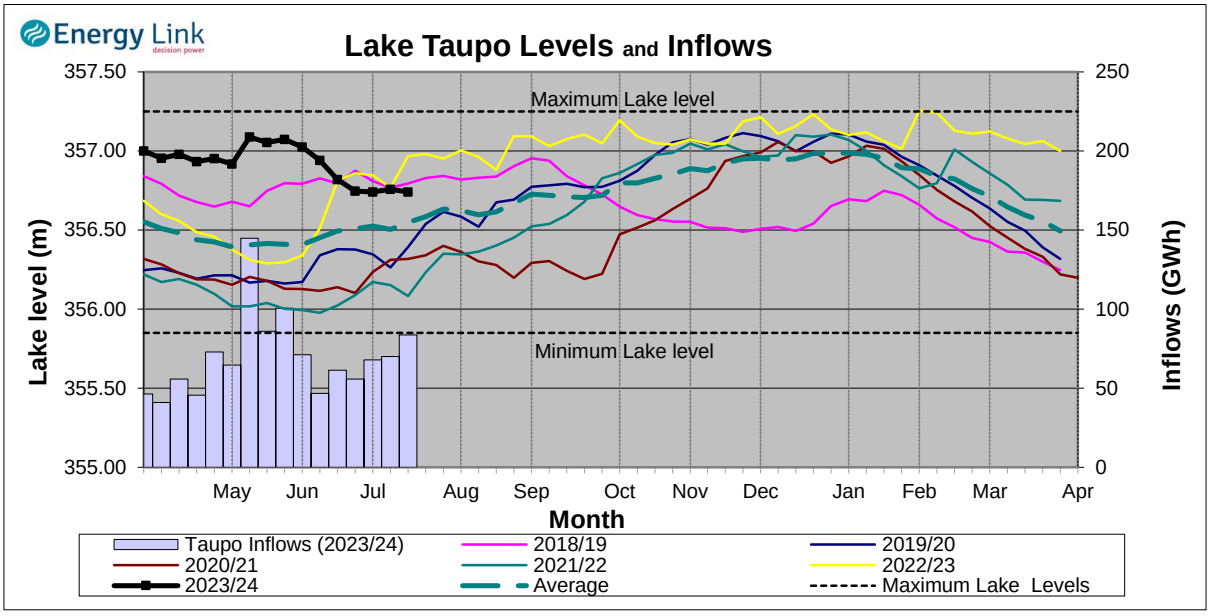
**South Island Inflows -** The past four weeks of S. I. inflows rank as the 14th driest on record.




**North Island Inflows -** The past four weeks of N. I. inflows rank as the 40th driest on record.



## Waikato System

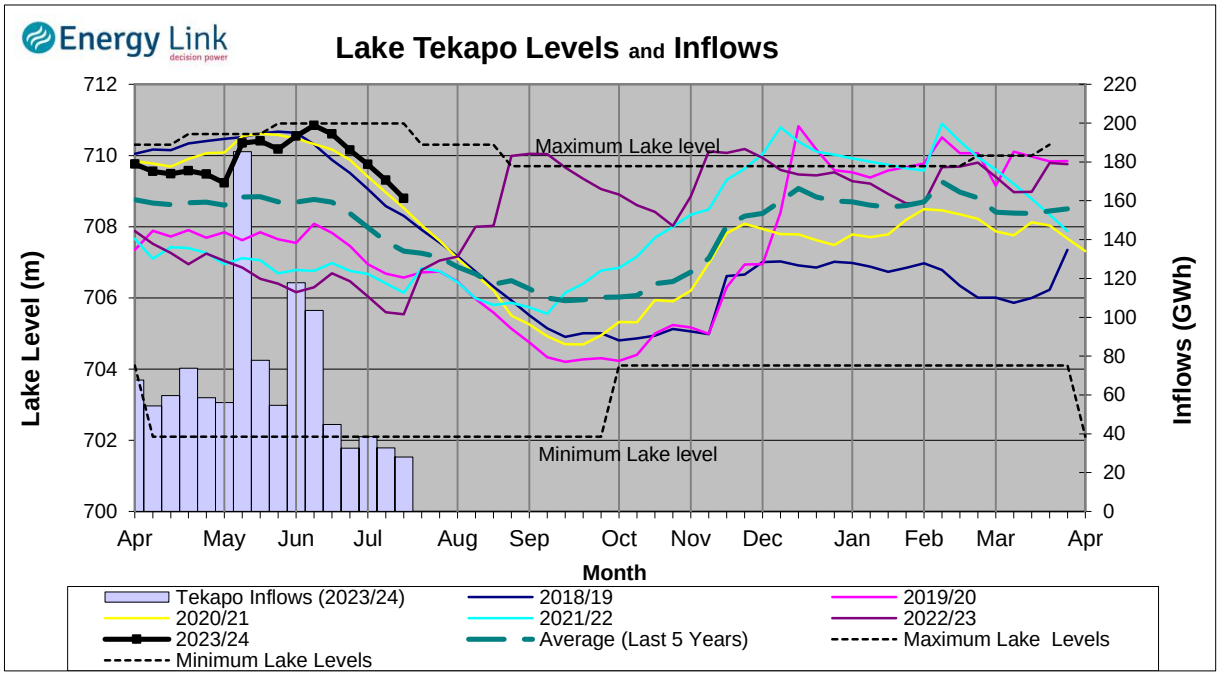



**Lake Levels -** Lake Taupo storage fell to 63.7% of nominal full at 363 GWh.

**Inflows -** Inflows increased 19.5% to 84 GWh.

**Generation -** Average generation increased 21.8% to 574.5 MW.

## Tekapo



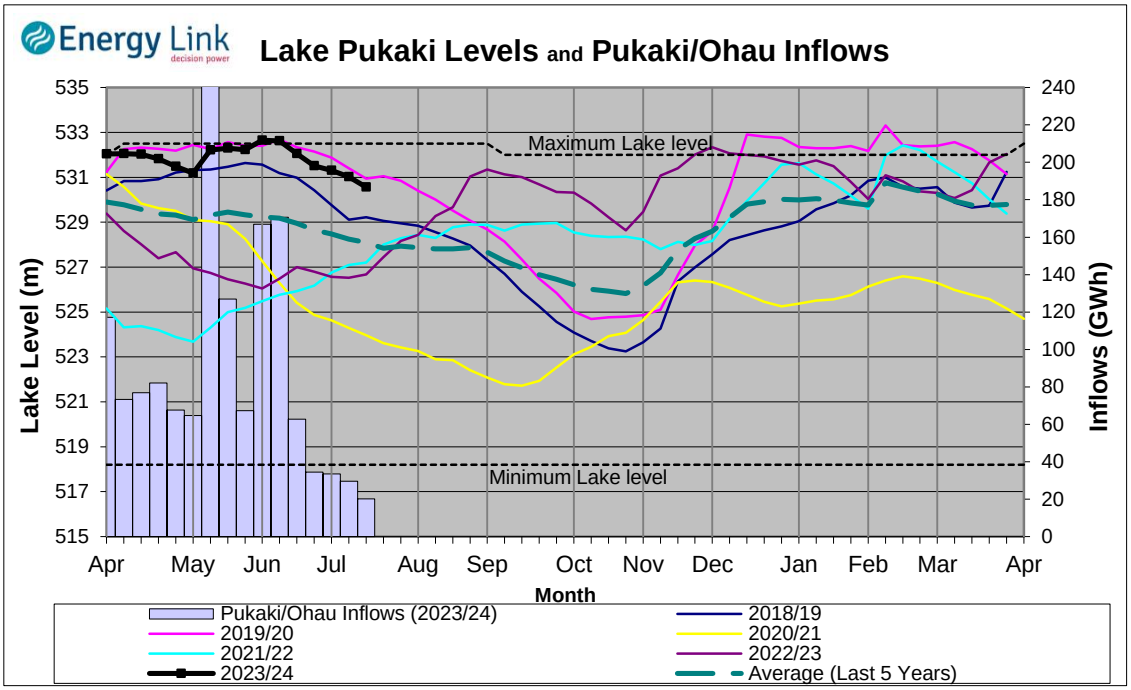

**Lake Levels -** Lake Tekapo ended the week 79% nominally full with storage falling to 670 GWh.

**Inflows -** Inflows into tekapo decreased 14.4% to 28 GWh.

**Generation -** Average Tekapo generation increased 1.2% to 176.4 MW.

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

# Waitaki System




**Lake Levels -** Lake Pukaki ended the week 86% nominally full with storage falling to 1581 GWh.

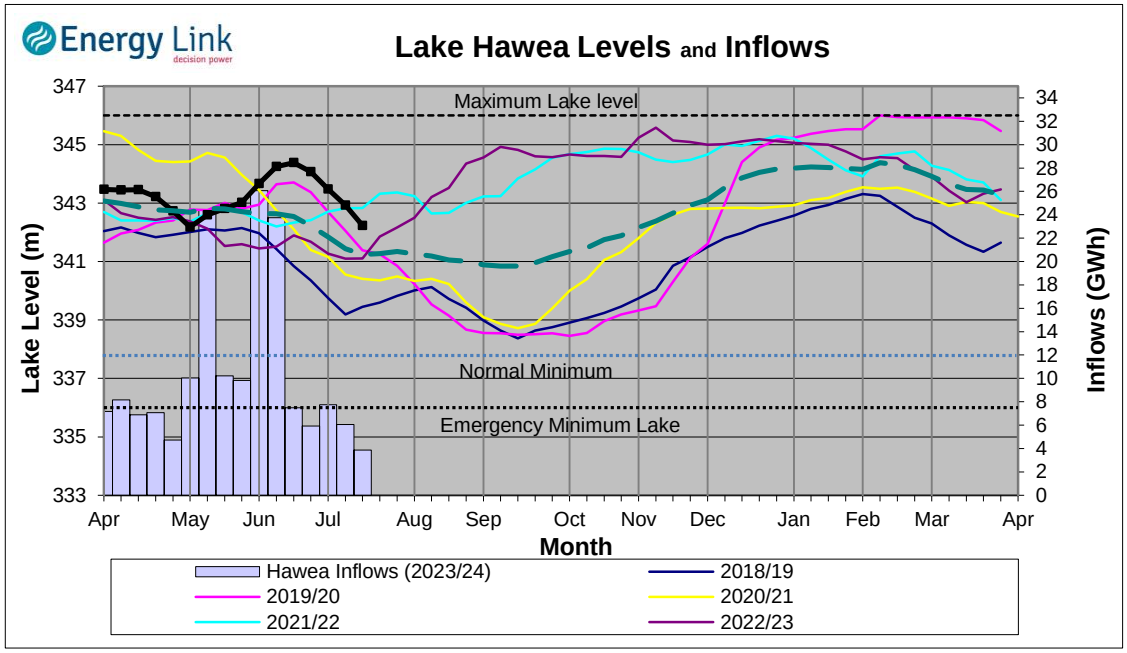
**Inflows -** Inflows into the Waitaki System decreased 32% to 20 GWh.

**Generation -** Average Waitaki generation increased 11.3% to 908.6 MW.

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

**River Flows -** Flows from the Ahuriri River fell to 16.3 cumecs while Waitaki River flows were higher than last week averaging 380.5 cumecs.

# Clutha System



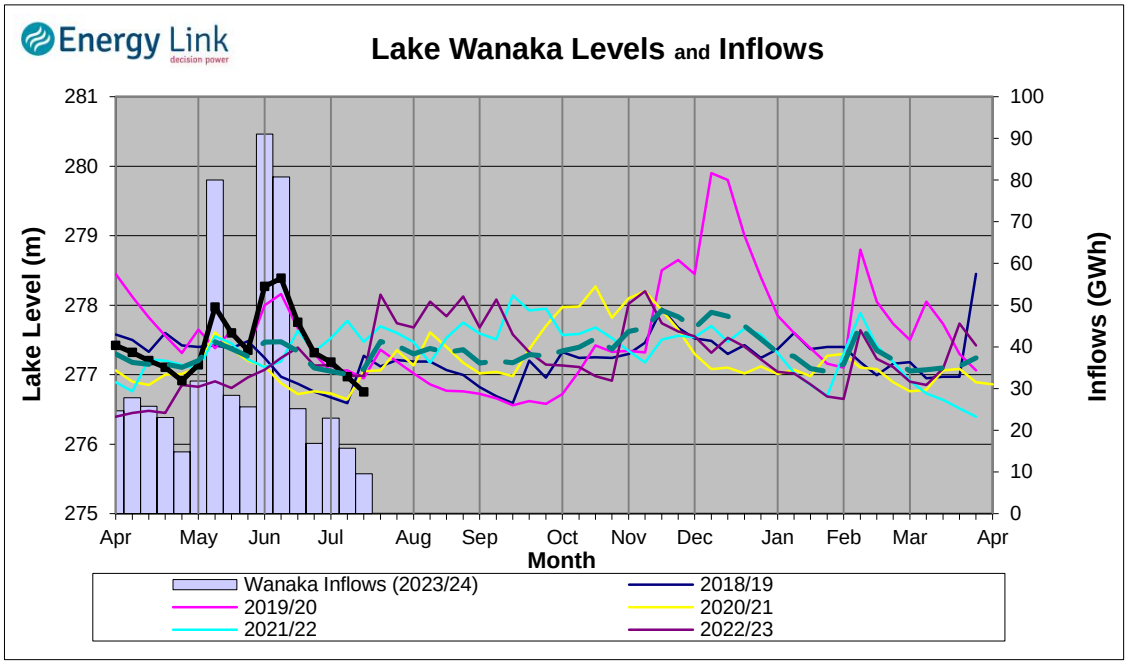
**Lake Levels -** Total storage for the Clutha System decreased 17.5% to 210 GWh. Lakes Hawea, Wanaka and Wakatipu ended the week 52%, 29% and 22% nominally full respectively.

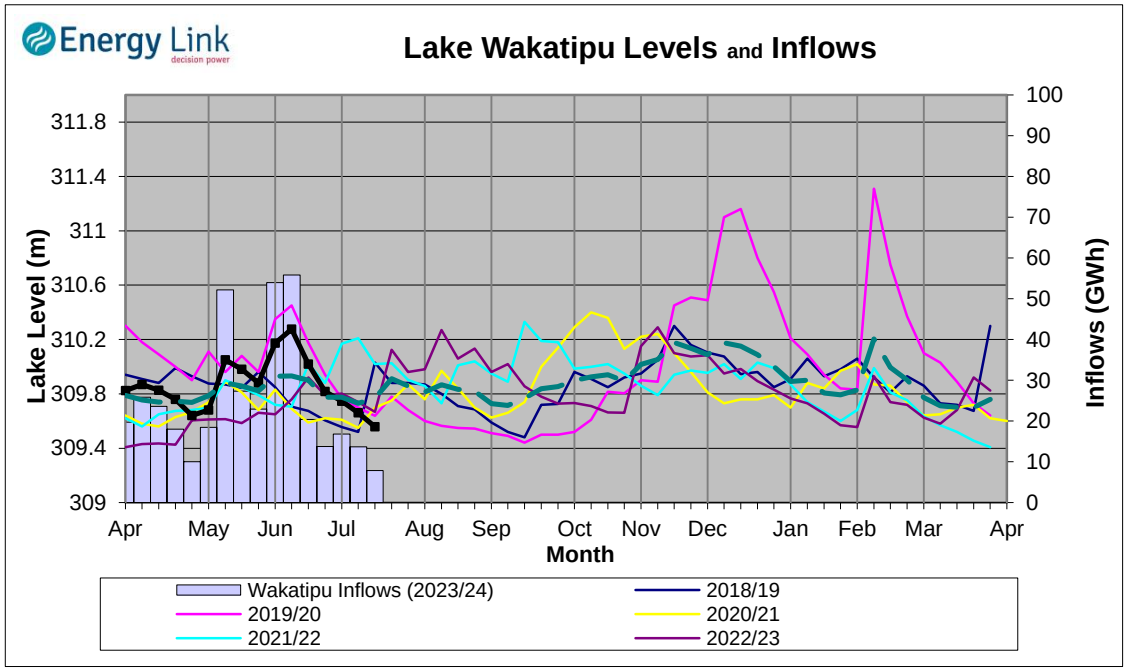
**Inflows -** Total Inflows into the Clutha System 40% lower at 21 GWh.

**Generation -** Average generation was 11.2% lower at 437 MW.

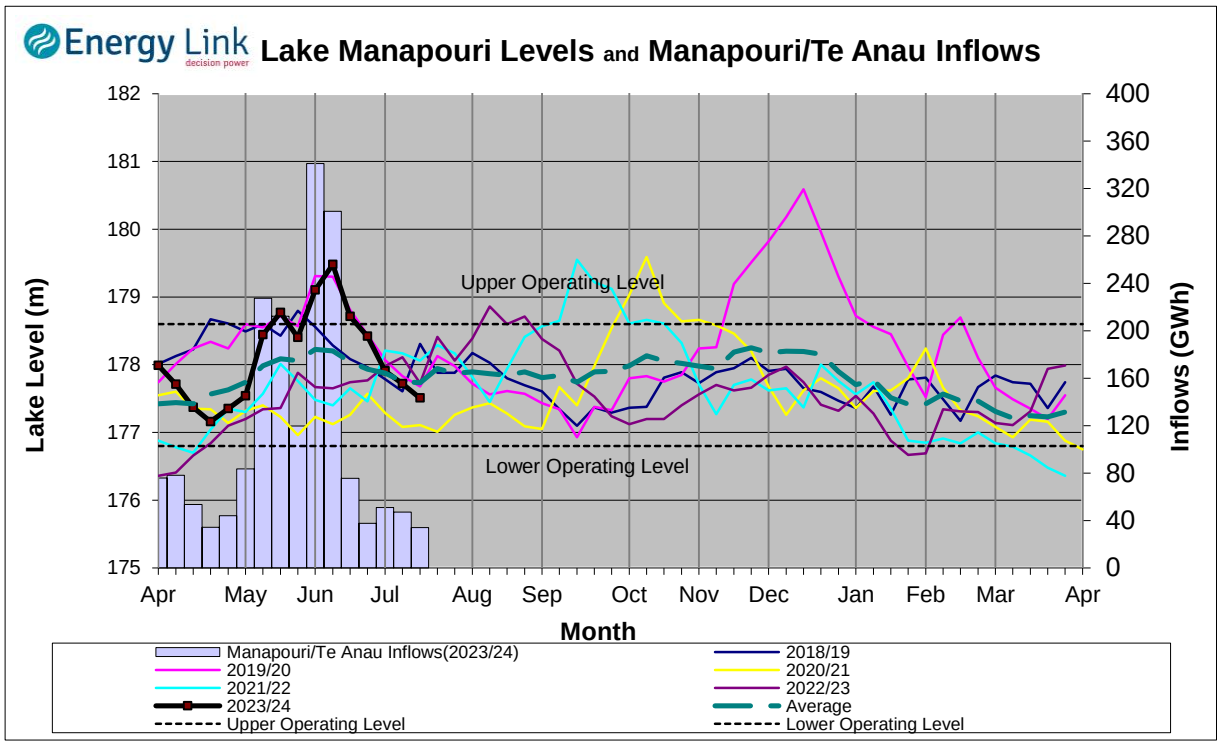
**Hydro Spill -** The was no estimated spill

**River Flows -** Total outflows from the lakes and Shotover River fell to 450.6 cumecs. This comprised of 191 cumecs from Lake Hawea, 131 cumecs from Lake Wanaka, 100 cumecs from Lake Wakatipu and 28 cumecs from the Shotover River.



## Manapouri System




**Lake Levels -** Total storage for the Manapouri System decreased 17.4% to 229 GWh with Lake Manapouri ending the week 59.9% nominally full and Lake Te Anau ending the week 47.8% nominally full.

**Inflows -** Total inflows into the Manapouri System decreased 27.7% to 34 GWh.

**Generation -** Average generation was 16.6% lower at 491 MW.

**Hydro Spill -** Estimated spill at the Mararoa Weir was 13.9 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 'Main operating range'.