Friends of Lake Hayes Society Inc.

Chair's Annual Report

For the year ending September 2026

Introduction

It is with great pleasure that I write this year's annual report. It feels like this year is a true milestone and turning point in terms of landowner engagement and support.

The Wai Whakaata Lake Hayes Strategy process is now complete, with the strategy ratified by both ORC and QLDC. This is a significant milestone after years of collaborative development involving ORC, Queenstown Lakes District Council (QLDC), iwi, the Department of Conservation (DOC), Friends of Lake Hayes (FOLH), landowners, and the wider community. FOLH's lake health focus remains as strong as ever, but now sits as one part of a wider set of community activities across the catchment, including plantings, biodiversity, and amenity values.

The community engagement culminated in an extremely well-attended meeting with landowners, community groups, and councils in June. This event enabled stakeholders to hear directly from the multi-agency Strategy Group (led by ORC and chaired by Jana Davis) and contribute their own perspectives on the way forward. What was clear is that there is now have a shared vision across the broader community. The reason why this signals a milestone, is that it feels like we're now all pulling in the same direction. With positive activity being driven through a variety of channels and stakeholders. This level of support materially changes what can be achieved in improving the health of Lake Hayes and we are now all witnessing these improvements first hand. There is still more to do, but we are energised by the broader engagement we are now seeing across the community.

Community meeting with landowners, community groups, and councils – June 2026

Lake health: a positive year

It has been a genuinely encouraging year for the lake. The lake has been clear and blue for the past 18 months, with water clarity measured by Secchi depth consistently higher than equivalent months in past. Feedback from lake users, a good gauge of amenity value, has been overwhelmingly positive. Rowers, swimmers, fishers and walkers alike have commented on how good the lake is looking and feeling.

Trout recovery

Trout have thrived this year, a strong recovery from the run of fish kills in previous years caused as habitat conditions improved in both the lake and their spawning grounds in Mill creek. Spawning numbers and trout conditions continued to improve, a real vote of confidence in the lake's underlying health.

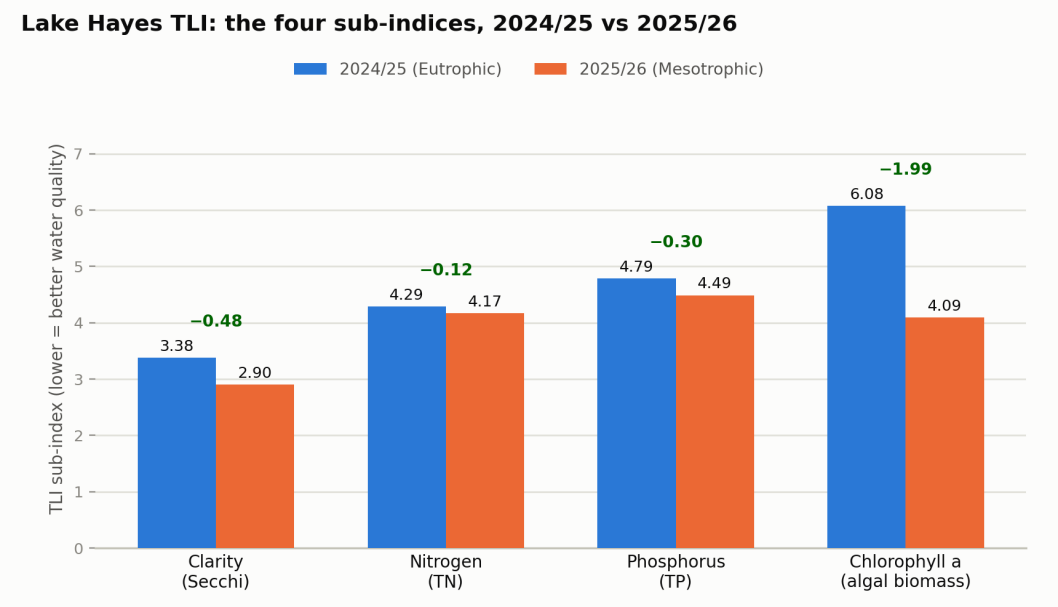
Dissolved oxygen and nutrients

Buoy data currently shows dissolved oxygen ranging from 92–105% (bottom to top of the water column) prior to stratification. These are the highest levels recorded since monitoring began. Phosphorus at winter turnover this year was 0.058 g/m³, down from 0.12 g/m³ last year, attributable to lower anoxia and lower levels of rotting organic matter. Chlorophyll/algae activity through the entire water column over the past 18 months has been at its lowest level since the lake buoy inception – a good sign heading into spring.

Trophic status

We are awaiting ORC's formal review of the lake's trophic status, but the evidence points to Lake Hayes being well on its way from its historic eutrophic classification toward mesotrophic, our target state. Once achieved the aim to hold the lake at mesotrophic state over the long term.

An updated Trophic Level Index (TLI) calculation, using the Burns et al. (2000) method applied to ORC's monthly monitoring data at mid-lake, confirms this. Lake Hayes' TLI improved from 4.64 (Eutrophic) in the 2024/25 water year to 3.91 (Mesotrophic) in 2025/26 – a full trophic class improvement in a single year.



Lake Hayes TLI sub-indices, 2024/25 vs 2025/26 (lower = better water quality)

All four drivers improved, but clarity (Secchi depth) stands out: it is now well below the eutrophic threshold, an outcome of both the sharp fall in algal biomass (chlorophyll a) and a genuine reduction in sediment reaching the lake from the catchment. This is a very encouraging result – and it is a sensitive one. Holding the lake in this mesotrophic state depends on continuing to drive down, or at minimum hold, sediment loads at their current low levels.

Lake health is a journey, not a destination. Climatic headwinds and stormwater management set against a backdrop of more homes being built in the catchment, many on steep slopes overlooking the lake. Given this we cannot afford to become complacent.

This year's flood event and catchment resilience

This year's El Niño weather pattern has already made its presence felt, with August ending in a 7 cumec flood in the Mill Creek catchment. This event was on a similar scale to the last major flood in 2020. More Importantly though, the catchment's flood defences held. These defences include: the new Millbrook wetland, the Ayrburn flood plain dam, the Hills lowland paddocks, and the flooding of Mill Creek into the new north-end wetland zone. These worked together to take an estimated 1–2 cumecs off the flood peak, while also retaining a significant proportion of the sediment load within the catchment rather than allowing it to reach the lake.

Millbrook wetland absorbing floodwater during the Mill Creek flood event

Floodwater moving into the Hayes north wetland zone

Left to right: Threepwood water trap during the flood; Ayrburn flood plain; the Hills paddocks in the wider catchment

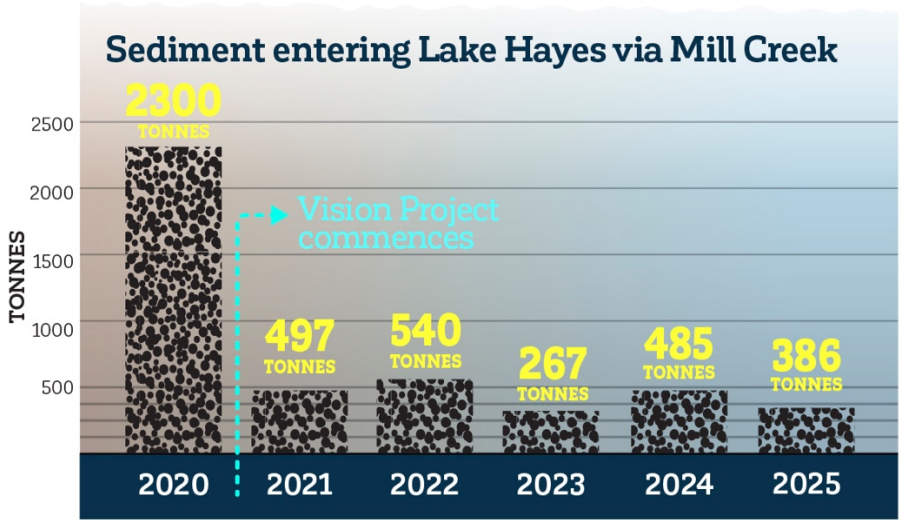
Floodwater at the Wai Whakaata walking track, north end of the lake

Sediment extraction work carried out over the last five years also paid off: peak turbidity during this event was roughly half that recorded during the 2020 flood. Taken together, we expect the data to show a reduction of around 50% in the sediment and phosphorus load reaching the lake compared with equivalent past events.

It is a genuinely positive year overall, but the recent floods are affecting clarity in the short term, and we are very much in wait-and-see mode on how resilient these lake health gains prove to be. Spring has only just started; climate pressure is expected, but the rolling budget numbers give us hope there is enough resilience built into the lake system now. Further more an anticipated windy spring should also help hold back anoxia.

Sediment management

Sediment management remains one of the most important levers for lake health, and this year saw sediment extraction activity peak. The Dagg family removed approximately 1,000 tonnes from their land, while Millbrook removed a further 5,000 tonnes. This was a huge commitment from the Millbrook community and we thank them for stepping up. *(These numbers appear in 2026).*



Sediment entering Lake Hayes via Mill Creek, 2020–2025 (source: savelakehayes.org.nz)

As the chart shows, sediment loads entering the lake via Mill Creek have fallen dramatically since the Vision Project began in 2021. It came from a high of 2,300 tonnes in 2020 to 386 tonnes in 2025. FOLH's long-term target, based on historical data and lake health observation, is to limit total sediment arriving at the lake to 300 tonnes per annum on average rolling 5-year basis. EL Nino weather and associated floods this year are signalling 5-600 tonnes this year.

Ayrburn has committed to a "super trap" as part of their recently consented Screen Hub project if it goes ahead. This trap will be a major advance in catchment resilience around sediment management. FOLH continues to support maintenance of the Vision Project traps and the reinstatement of additional traps near Mill Creek as it views this work as critical in maintaining low phosphorous levels in the lake.

On the down side given the EL Nino climate push we are expecting to see 5-600 tonnes of sediment this year. Indications are that will have either a neutral or neg phosphorous impact on overall system. Given the 5 years of losing phosphorous, the rolling 5-year average should still show more phosphorous leaving the system over last 5 years.

Riparian planting and wetlands

North-end wetland

FOLH, with the help of Queenstown Rotary, is now in its third year of maintaining the north-end wetland. This planting was originally established by Mana Tāhuna and funded by Rod Drury and Jobs for Nature project. As their funding ran out FOLH volunteers stepped in obtaining a community agreement with QLDC to ensure these plantings are properly maintained and that willows are kept at bay.

The results speak for themselves: the north-end wetland plantings have thrived. Further infill plantings and ongoing willow control are planned again this coming spring.

Lake outflow and Arrow River augmentation

The Arrow River augmentation project is now complete, enabling diversion of up to 4 million m³ of cool, low-nutrient water from the Arrow River via Mill Creek into Lake Hayes. The remaining task is to revisit water use consents to ensure they are properly aligned with the final flow rates being delivered.

Policy, planning and stormwater

District Plan Policy 24.2.4.2 is now semi-operational, guiding common-sense best practice in developments such as Waterfall Park and Ayrburn. Full QLDC adoption remains a priority for FOLH.

Stormwater remains one of the greatest ongoing risks to lake health. Current mapping has been updated but still requires checking. FOLH/ORC are leading a review to identify weaknesses. A fit-for-purpose stormwater strategy will be essential to embed resilience into the District Plan as development continues across the catchment.

Research and development

In response to the 2023 State of the Environment Report, FOLH secured $40,000 from the Sargood Bequest to investigate oxygen demand dynamics in Lake Hayes. This Master's project, established under Assoc. Prof. Marc Schallenberg, remains on track, with the student currently completing university papers, field work due in 2027, and thesis publication expected in early 2028.

Looking forward

Going forward, FOLH will focus on regular analysis of all lake and catchment data, and on nutrient budget reporting and health progress tracking that feeds directly into strategy, with FOLH contributing improvement ideas as this work continues.

We are also broadening our focus to the balance of the catchment beyond Mill Creek, with particular attention to:

- Morven Hill sub-catchment
- Bendemeer and lakefront catchment
- Speargrass sub-catchment
- Hogan Gully sub-catchment

FOLH will continue to measure these sub-catchments with a view to confirming improvements of sediment loads in these parts of the catchment.

The aim is to improve knowledge both within QLDC and among landowners of implementation guidelines under QLDC District Plan Policy 24.2.4.2, and of the effects relating to this policy across these areas.

We will also continue working with ORC to ensure that the now-ratified Wai Whakaata / Lake Hayes Strategy is properly referenced in the new ORC Land and Water Plan, which has been put on hold by the current government.

Acknowledgements

I extend my gratitude to:

- The FOLH Executive Team (9 members) for their dedication.
- Our membership base (~200 people) for their financial and in-kind support.
- The Sargood bequest for its ongoing generosity.
- An extra special thank you to Robyn La Roche, who has put in a huge amount of effort into FOLH's communications through our website, and who has recently updated the engine behind our donations and subscription payments.
- Dr. Marc Schallenberg and Prof. Brian McGlynn for their scientific guidance.
- Landowners, iwi, DOC, QLDC, ORC, and community partners for their active role in improving water quality.

Conclusion

This has been a genuinely positive year for Lake Hayes - clearer water, thriving trout, record dissolved oxygen levels, falling sediment loads, and catchment defences that held firm against a significant flood event. Together, our community and partners are making demonstrable progress toward restoring the ecological health of the lake.

That said, the recent floods are already affecting clarity, and we remain in wait-and-see mode on just how resilient these gains prove to be through the rest of spring and beyond. Lake health is finely balanced, and could easily tip back. Continued vigilance on stormwater management and land development in the upper catchment particularly around the wetlands and the intensive Ladies Mile development remains essential.

Embedding the best practice learned from the Ayrburn development into future land use change across the catchment will be key to safeguarding the progress we have made and building further water quality resilience.