



Dam and spillway complete. Reservoir filling in stages, September 2023.

Message from CEO

As the spring rain arrives, the Waimea Community Dam reservoir is starting to fill in stages. The dam is performing as expected and, with sufficient rainfall over the next few months, we expect to provide water to shareholders and the community this summer.

The dam and spillway were completed in early 2023. After commissioning the temporary river diversion pipe and valves, we closed the diversion culvert and reservoir on 26 May 2023.

Testing at the dam progressed well through the winter, with the dam reservoir being ready for filling in August. Over July and August, the reservoir had been managed to a very low water level to allow the sealing concrete plug and isolating valve to be installed.

The reservoir is now being filled in stages by keeping the water level at hold points for extended periods to allow for testing and engineering measurements. When it rains, there will be times when water will need to be released to return the reservoir to a set level. When ready, the reservoir level will be built up to the next hold point. We will assess and

verify dam performance as it fills. We are, so far, comfortable with how the dam is performing. It is doing what we expected and contemplated. (See overleaf for more about the dam's resilience.)

We expect to complete the pipework in December 2023 and commission the facility in early 2024, two years later than originally planned. We are almost there.

A warming climate and more moisture in the atmosphere means greater storm intensities and an increase of rain, with consequently drier soils. Catching the storms and releasing the water during the dry periods, such as the expected upcoming windy and dry El Niño summer, provides the region with resilience and confidence of water supply to underpin our growing community and businesses.

Between the geology, COVID-19 and weather, we have certainly had our fair share of challenges. The shareholders and community should be assured we have put an extraordinary effort into providing the region with a dam constructed under difficult circumstances, to appropriate and

contemporary standards, as efficiently and cost effectively as possible.

I am proud of the engineering our team has undertaken to solve the numerous geological challenges. I am also proud of how we completed a mechanical design during construction and then procured equipment and expertise from around the world during an incredibly difficult COVID-19 period.

I appreciate the dam has been a big and challenging infrastructure project for a small region to fund and undertake, but this legacy asset will soon support and underpin our region for many generations to come. Particularly so in the face of the impacts of climate change. We should all be proud of what we are doing for our community.

Thank you for your ongoing support.

Ngā mihi,

Mike Scott

Waimea Water Ltd CEO

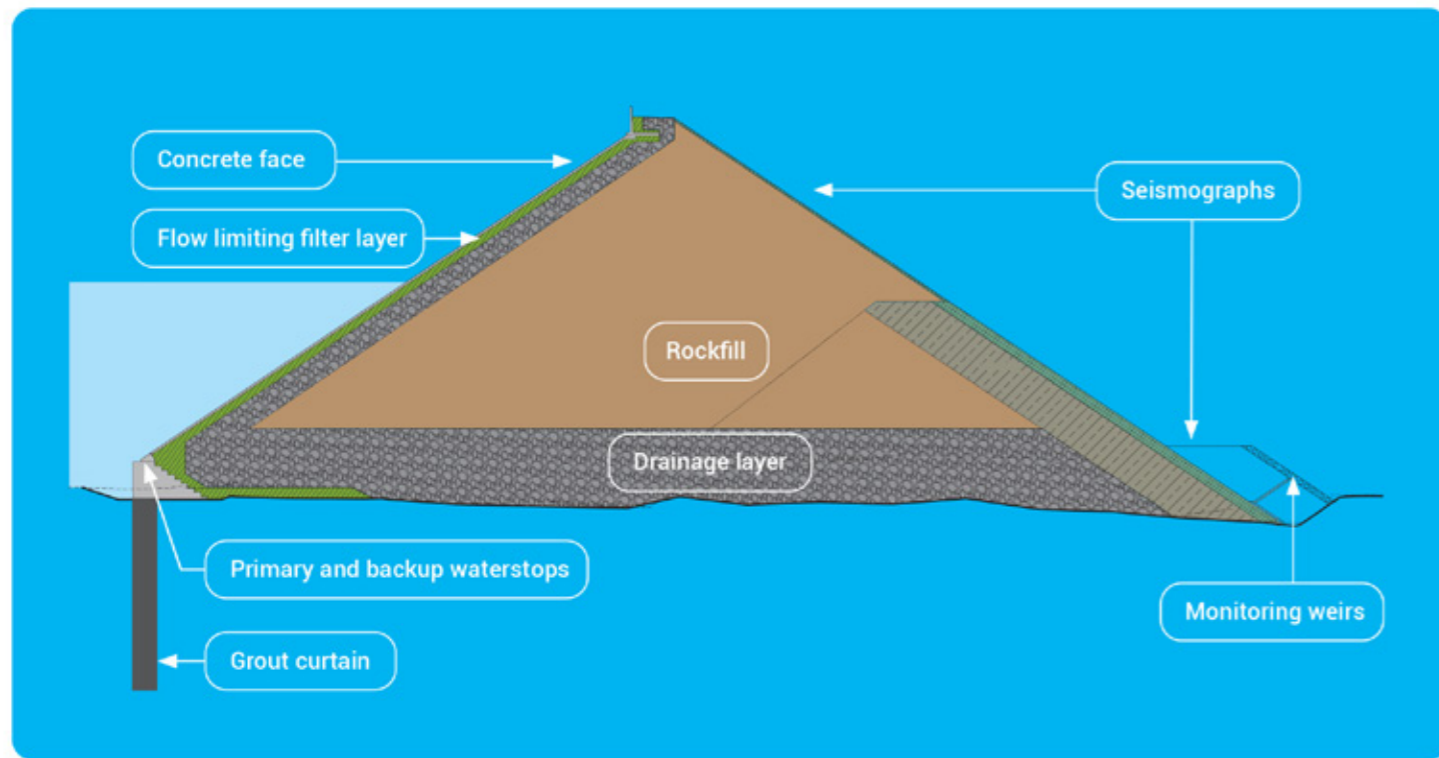
Dam resilience

The dam has been designed for resilience – from its reinforced concrete face, erosion-resistant and flexible rockfill, drainage chimney and blanket, flow-limiting filter layer under the upstream face to reduce leaks and movement over time, to its grout curtain, which is a barrier that helps protect the foundation of a dam from seepage.

As the dam becomes operational, surveillance instrumentation and processes will ensure issues are detected early, so they can be monitored closely and rectified as appropriate.

For example, there is:

1. Real-time monitoring of reservoir and spillway levels and outflows.
2. Real-time monitoring of seepage and flows through the drainage layer and from beneath the spillway into the monitoring weirs.
3. Real-time monitoring of water levels and flow through the dam and beneath the spillway using piezometers.
4. Real-time leak detection at the plinth (the leading upstream edge) using thermistors.
5. Observation wells from the dam crest through the embankment to measure seepage levels and monitor rockfill performance.
6. Seismographs to measure earthquake loads.
7. Regular surveying of the dam for deformation, and surveying of reservoir for slope stability.
8. Onsite cameras for remote monitoring.
9. Regular comprehensive inspections.



Dam budget remains at \$198.2M

In February 2023, we forecast a \$198.2M budget to finish the dam, and this remains our budget estimate.

The project has cost \$98M more than initially budgeted due to the encountered geology, the mechanical works and greater engineering, project and contract management costs.

Dam completion: January 2024

Delays in the construction programme mean the dam will be completed in January 2024, two years behind original schedule. Delays have been due to:

- a) COVID-19, floods and design changes.
- b) The dam structures taking longer than planned to complete.
- c) An increase in time forecast to complete the river diversion and mechanical works.
- d) Delays to quality assurance requirements and subsequent dam safety and regulatory approval.

Weather, and specifically lack of rainfall, is now the predominant risk of further delays.

	Original Plan	Expected
Diversion culvert and reservoir closure (SP-1)	27 Oct 2021	26 May 2023 Actual
Full reservoir and service		December 2023 Forecast
Completion (SP-2)	23 Jan 2022	January 2024 Forecast

Community showcase

Waimea Water is returning to the Richmond Mall this October. Come and learn more about the Waimea Community Dam, and see the latest photos and videos.



Young visitors to the Richmond Mall display in March 2023.

Bridge and reservoir naming

A highlight this year was the Ngāti Koata blessing of the reservoir and bridges in June. Ngāti Koata named the reservoir and two of the bridges. The spillway bridge was named after Nick Patterson.



Ngāti Koata representatives bless Te Kurawai o Pūhanga.

Te Kurawai o Pūhanga | Reservoir

PUHANGA HEMI TUPAEA

Just as a dam creates a reservoir of water that will be a life force for this area way into the future, Puhanga Hemi Tupaea of Ngāti Koata, Ngāti Kuia, and Ngāti Toa from Te Taihū (top of the South Island), holds a reservoir of knowledge in traditional Māori arts, crafts, music, and tikanga.

She has spent a lifetime feeding, sharing, instructing, and gifting to those she connects with. Those connections are strong, and they enrich and add beauty to the lives of others. Her creative designs are woven into the panels and paintings around several marae in Aotearoa, but especially in the whareniui, Kākati, at Whakatū Marae, Nelson.



Her tukutuku design, Whakaaro Kotahi, seen in the whareniui is also on the New Zealand \$100 note. The Ngāti Koata Trust logo is also her design, which she gifted to a fledgling entity that has grown in strength over the decades. Her songs of tūpuna, experiences, and connections, both past and present, uplift, educate, and inspire.

Te Arawhiti o Renata | Downstream Bridge

RENATA TE KAWHAKI

Renata Te Kawhaki (also known as Renata Te Kauwhata, Renata Te Morehu, Renata Te Kawharu, and Renata Te Pau) was successful in building bridges between two cultures. Originally from Kāwhia; his father was involved in the main heke or migration south to Te Taihū. Renata was known as a 'Lover of Peace.'

He was recognised for his service as a pilot for the NZ Company boats at the time of the settlers' migration, in 1840, by "navigating them through the potentially dangerous passageway into the safe Nelson harbour."

Renata was married several times, including to Erama Wauwau, Raiha Mokena and Ngatangi or Peita Renata. He was survived by several whāngai (adopted) children. He was a staunch supporter of establishing a Native School at Whangarae, where he lived for most of his later life. When he passed away in 1901, at the age of 87, he was recognised and honoured by his people with an inscription on his headstone "...the last great chief of the Ngāti Koata tribe." His tangihanga was attended by large numbers from both the Māori and Pākehā communities.



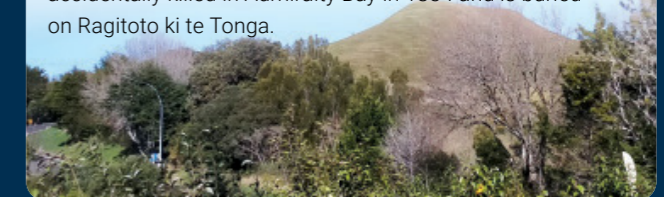
Te Arawhiti o Mauriri | Upstream Bridge

MAURIRI

Mauriri, a great-great-grandson of Koata, was born in Aotea 1770s during a time of extensive conflict. An accomplished warrior and an expert in forest lore, Mauriri was among the Ngāti Koata who left their ancestral homelands c. 1820, initially making their way to Taranaki.

Scouts, considered the 'eyes and ears', advanced before the main party to determine the best route forward. Mauriri is identified as the principal scout for Ngāti Koata in their main heke, Te Heke Whirinui, from Taranaki to the Kapiti Coast. He had two wives and at least four children. One of his sons, Matiu Te Mako, was a key figure in the initial taking of Kapiti Island and the establishment of the Ngāti Koata outpost at Waiorua. During the battle of Waiorua c 1824, Tawhi, a Ngāti Koata youth of high rank was seized by Kurahaupō warriors and taken to Te Taihū. Mauriri commanded one of two waka that pursued them. Tawhi was returned and a tuku or offer of territory was given by Tūtepourangi to Ngāti Koata who became the first of the northern iwi to settle in Te Taihū. Just as a bridge provides safe passage over obstacles, Mauriri helped facilitate the safe passage of his people to Te Taihū.

Mauriri settled in Motueka with his second wife who was of Ngāti Rārua descent. He also made a tuku of territory to Ngāti Rārua from Motueka westwards. Mauriri was accidentally killed in Admiralty Bay in 1834 and is buried on Ragitoto ki te Tonga.



Patterson Bridge | Spillway

NICK PATTERSON

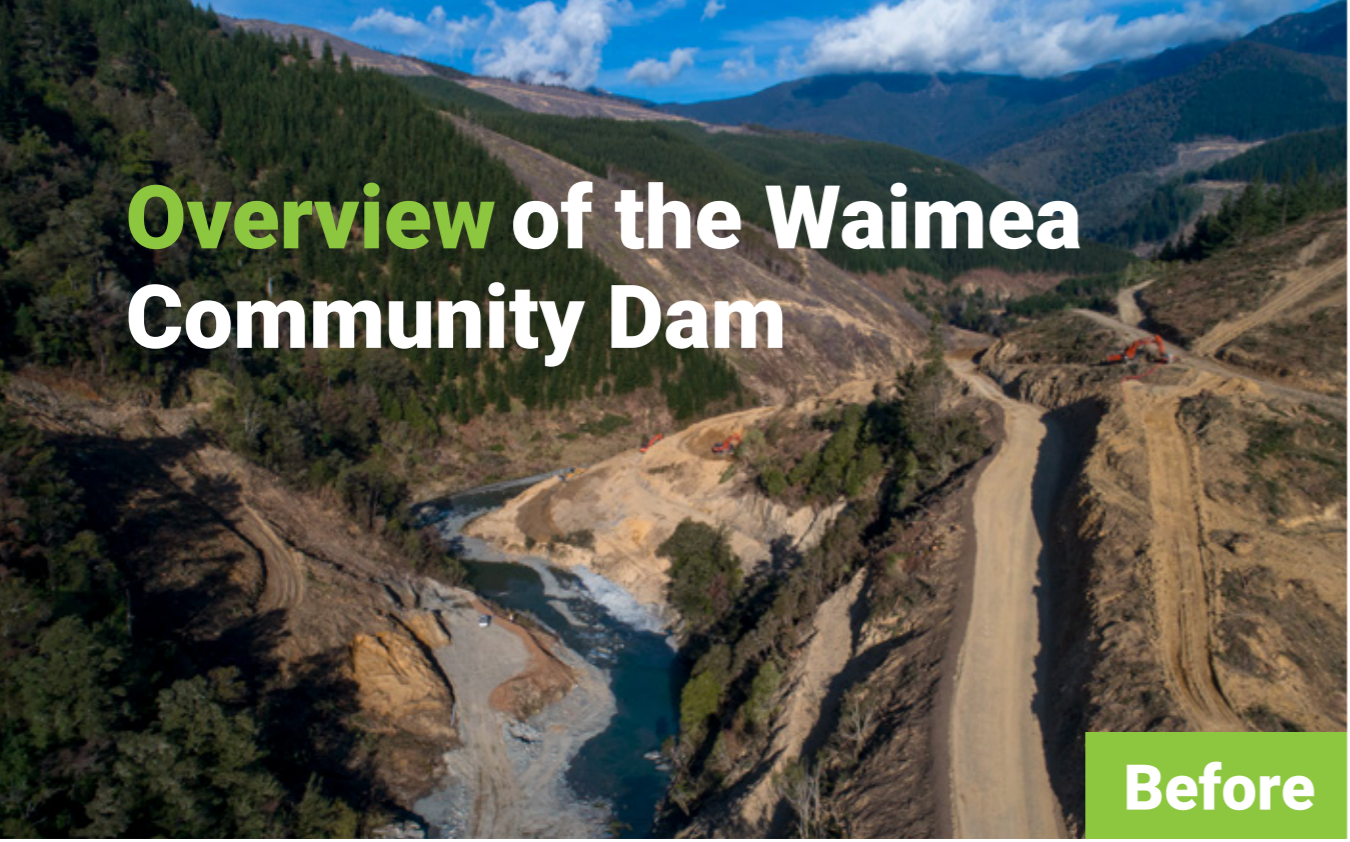
Nick (A.O.) moved to Nelson in the 1970s. He quickly established himself as a leader in the horticultural and wider Nelson community. He and his partners established Wai-West Horticulture in the 1980's growing a range of fruit crops on the Waimea Plains.

He recognised the certainty of water as a key factor in growing food crops to feed and support the local community, provide jobs, earn export revenue and boost the wider economic, social, and environmental needs. Nick was instrumental in establishing, along with other leading primary producers, Waimea irrigators Ltd (WIL), a group of irrigators profoundly affected by the seasonal shortages of water on the Waimea Plains.

He engaged with the wider irrigating community to find ways of funding its share of the Waimea Dam alongside the Tasman District Council (TDC). He was the symbolic bridge between the 225 irrigation shareholders (WIL) and Tasman District Council (TDC) to successfully establish this 100+ year community project.



Overview of the Waimea Community Dam



September 2023



The second of two stop logs being installed to close the Waimea Community Dam culvert, 26 May 2023.



Upstream of the reservoir, September 2023.



Reservoir filling, September 2023.



Pipework installation in the culvert.



Top of the spillway, September 2023.