

Water storage dams vs hydro-electric dams

Poster
12D

Unlike hydro-electric dams which are designed to create energy, Watercare's dams exist to store water and provide Aucklanders with a reliable water source.

Hydro-electric dams

- Hydro-electric dams, like the one in Roxburgh, Central Otago, use water passing through them to generate power. The more water passing through a dam, the more energy is produced.
- Once the water has gone through the dam turbines, it flows into a river below.
- Hydro-electric dams have release gates to control reservoir levels.



Hydro dam and power station in Roxburgh, Central Otago.
Photo credit: Kelisi, Wikimedia Commons.

Water supply dams

- Water from our water supply dams flows by large pipes to the nearest water treatment plant, where it's processed to make it safe to drink.
- These dams do not have release gates. When they reach capacity, the dams are designed to spill into an engineered spillway.
- To make sure our dams do not adversely affect the downstream environment, we release a small flow of water downstream at some of our dams to maintain flora and fauna habitats. This 'compensation flow' supports the environment when our dams are not full and spilling.
- During heavy rainfall, water supply dams actually minimise the likelihood and impact of downstream flooding by capturing the water.



Mangatangi Dam in the Hunua Ranges.