

Auckland Market Opportunity – water recycling and recovery

Name Water recycling and recovery plants

Sector Green economy

Sub-sector Clean tech, waste management

Project size Auckland water usage is approximately 400,000,000 L/day. Generally about 25% or 100,000,000 L/day of this is for non-residential purposes. According to Watercare, categories that show clear increases in water usage are food and beverage manufacturing, industry, concrete and material manufacturing.

Looking for Auckland needs innovative water solutions to combat predicted future water shortages by 2050. Large scale water recycling and re-use facilities to help solve Auckland's growing water demand. Solutions could be at the macro city level but could also be targeted at industrial and commercial users.

Web-links

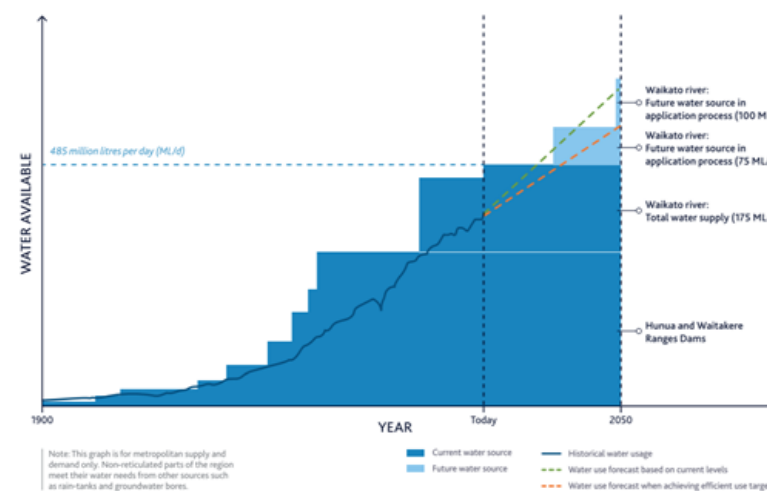
- <https://niwa.co.nz/our-science/climate/information-and-resources/clivar/scenarios>
- <https://niwa.co.nz/news/aucklands-drought-most-extreme-in-modern-times>
- <https://www.watercare.co.nz/Water-and-wastewater/Drought-response/Water-restriction-FAQs-for-businesses>

New plants are required for large-scale residential and commercial water recycling and re-use as part of the solution to rapidly increasing water consumption.

Summary

Climate forecasters predict warmer, and drier future summers for Auckland. Large increases in population, combined with increased commercial and residential water use, have led to rapidly increased water demand. Water supplies were pushed beyond current supply capacity in summer 2020. Water restrictions were subsequently imposed. Investigations are underway into new solutions for a drier future. Possible solutions could involve recycling and re-using existing water at scale.

Water supply and demand in metropolitan Auckland





Background

More than half of New Zealand's population growth between 2013 and 2043 will be in Auckland. Over the next 35 years, the Auckland population serviced by the metropolitan water system is expected to increase by 800,000 from 1.41 million to 2.2 million, based on Auckland Council's medium growth projection. This will create significant additional demand for water, meaning investment will be needed for new water sources, water treatment capacity and networks.

Collectively, scientists already know that the chances of having longer consecutive spells of lower rainfall are increasing. Summertime maximum temperatures are rising significantly over the North Island of New Zealand, where Auckland is situated. Long-term patterns are showing how drought events like the summer 2020 are increasingly more likely to occur with climate change.

Watercare Services Limited (Watercare) is the water and wastewater service provider for Auckland. Watercare owns and operates the water treatment plants, and the distribution network. As the water and wastewater services supplier for Auckland, Watercare is planning for increased water demand and will lay out the required new water sources and infrastructure projects in its Asset Management Plan.

According to Auckland's Mayor "Longer term, major changes to increase our water supply resilience in the face of the impact of climate change will be necessary. These include consent to draw much more water from the Waikato, measures to incentivise use of roof rainwater for gardens, consideration of upgrading water from the Māngere Treatment Plant to a potable standard, desalination and reducing water loss through leakage".

New technologies are required to recycle and repurpose Auckland's residential and commercial water waste to lower overall water demand. With increasing population and rates of urbanisation, compounded by climate change, these technologies could form part of the multi-faceted water shortage solution.



Looking for

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