Technical feasibility study for universal smart metering – the background

Demand for water in the Wellington Region is set to exceed supply and we cannot sustainably extract any more than we already do from our rivers and aquifer. Investing in a new water and expanding our water storage scheme and network upgrades are likely to be needed as early as 2025 unless we can reduce the amount of water we're using.

Without some kind of intervention or significant investment, the demand for water will continue to grow and expose the region's communities to the risk of severe shortages, particularly during summer. If we cannot reduce demand and growth continues on the current trajectory, we will need to build infrastructure to supply more water and take more from the environment, which is not sustainable.

Smart meters as an intervention

For this reason, Wellington Water is undertaking a technical feasibility study for universal smart metering. Data from water meters helps detect leaks and informs decisions about water conservation and leak management. It also helps customers understand their water footprint and see the benefit of efficiency. Around 27 million litres a day – 17 percent of the region's water – is lost via leaks in our aging pipe network and on private properties. Reducing leaks and conserving water may help defer a much larger investment in a new water source.

Detecting leaks early also avoids damaging and disruptive bursts. We would be able to plan and manage our services better, which would make the region's network more resilient to challenges posed by growth, drought and climate change. It would also keep more water in the natural environment.

The study

The feasibility study started in July 2022 and will take two years, will cover the strategic case for meters, the technical and practical feasibility and the options for implementation. It is just the first step in a comprehensive process. The goal is to determine the feasibility and best approach to smart metering across the region to inform any future decisions. The study does not look at volumetric charging of water.

The smart advantage

Smart meters measure water usage in the same way as traditional mechanical meters but allow for automated reporting via a wireless communication device. They can also provide householders with daily data on water usage and give alerts on high usage and potential leaks.

Wellington Water is carrying out this study on behalf of Greater Wellington Regional Council. It covers Wellington City, Hutt City, Upper Hutt City and Porirua City. South Wairarapa already has analogue water meters and a smart-meter trial on 250 properties has recently been completed in Greytown.

The concept of using smart meters to inform water conservation is supported by mana whenua. It aligns with 'Te Mahere Wai o Te Kāhui Taiao A Mana Whenua' a whaitua implementation plan to return mana to our freshwater bodies report prepared for Greater Wellington Regional Council.

The key dates for the smart metering technical feasibility study are:

Milestone	Date
Technical Feasibility study commenced	01 July 2022
Discussions with technology suppliers to understand options	December 2022 to March 2023
Engagement with other organisations that are working on meters/metering options	December 2022 to March 2023
Investigations, surveys and trials to validate existing water connection	April 2023 to May 2024
Formation of the technical report and an indicative business case	October 2022 to June 2024