

Delivering our strategy

Assets and infrastructure performance report

High-performing infrastructure

Unplanned wastewater interruptions

The number of unplanned wastewater network interruptions caused by bursts and chokes is a measure of the integrity of the system. We aim to keep them fewer than 10 for every 1000 properties. The result for the year was 9.3 for the Auckland region.

Dry-weather overflows

Dry-weather overflows are generally caused by incorrect disposal of wet-wipes, fats, oils and grease down the wastewater network which lead to blockages in the pipes resulting in wastewater overflows.

The number of wastewater overflows from our retail network during dry weather is a measure of the network's capability to meet current demand. The result for the year was 0.55 dry-weather overflows per 1000 connections, which is well under the target of 5 or fewer.

Wet-weather overflows

Wet-weather overflows are caused by heavy rain and are a mixture of stormwater (rainwater run-off from roofs and roads) and wastewater. In heavy rain, the stormwater that drains from the average roof is equivalent to the wastewater flows from more than 40 households.

The number of wet-weather overflows for the transmission network (bulk mains) per number of discharge locations was 1.46, which is within the target of 2 or fewer overflows.

The Central Interceptor Wastewater Tunnel and the Western Isthmus Water Quality Improvement Programme are examples of projects underway that will add capacity to the wastewater network, protect the environment from overflows and cater for Auckland's growth.

Effective asset management

Water loss

Water loss is the difference between the volume of water produced and the volume of water sold, allowing for a percentage of water produced for operational and firefighting purposes. For 2019/20, the result was 13.2%, against a target of 13% or less.

Portions of our non-revenue water are also attributed to meter inaccuracy at our bulk supply points and theft. However, leaks are the biggest contributor to our non-revenue water figures.

This year, we are reporting real water loss percentages for the period February 2019 to January 2020. This is due to the lack of up-to-date meter-reading data during the national lockdown period and subsequent alert levels, which meant our meter readers could not enter properties to access the water meters.

Leaks are unavoidable for all water networks around the world. There were more leaks on our water network this year compared to previous years. This was due to two factors: the extended hot and dry weather led to the ground contracting around the pipes, causing more cracks and breaks; the amount of construction happening across Auckland and consequently more instances of third-party damage to our pipes. While Auckland's network is one of the top performers in New Zealand in terms of real water loss, we know there is room for improvement, and we are committed to reducing the volumes of water lost in the future.

We began a proactive programme of leak detection targeting the Maungakiekie, Auckland Airport, Konini and Khyber bulk supply zones, since they have the highest percentage of non-revenue water in the network. Over 1140 kilometres of water pipes have been investigated for leaks using acoustic leak detection technology. We have identified and fixed leaks contributing to an estimated 2.35 million litres of water loss per day. We aim to have checked 6000 kilometres of pipes – almost two thirds of our network – by July next year.

Bulk supply zone	Kilometres checked	Leaks found	Estimated volume saved (MLD)
Auckland Airport	260	127	0.40
Maungakiekie	394	390	1.00
Konini	299	180	0.60
Khyber	187	121	0.35

We also introduced additional district metered areas (DMA) in the Maungakiekie and Manukau bulk supply zone and more are planned for 2020/21. DMAs are discrete areas of a water distribution network. DMAs allow us to measure water consumption at a suburb level and enable more accurate total volume of water analysis, and better identification of unbilled uses.