

TAPPED IN

Bringing you news, updates and information from Watercare



Mayor Phil Goff opened the new biological nutrient removal (BNR) facility at the Māngere Wastewater Treatment Plant on 1 June 2018. The \$141-million project expands the plant's treatment capacity so it can cater for a further 250,000 residents.

Focusing on future flushes

Did you know that the average Auckland household produces 675 litres of wastewater per day?

At the moment, our water and wastewater networks have sufficient capacity to allow 45,000 new homes and businesses to connect. But with the population of the Auckland region expected to grow by more than one million people over the next 30 years, the number of properties connected to our networks will nearly double. That's a lot more wastewater that will need to be collected and treated.

To ensure we can continue to provide safe, reliable water and wastewater services as the region grows, we need to invest significantly in upgrades and new infrastructure. Over the next 10 years, we will be spending \$5.5 billion to provide capacity for a further 195,000 connections; this includes \$3.6 billion of investment in our wastewater infrastructure and assets.

We currently have a number of wastewater projects under way or planned, including spending more than \$270 million upgrading our wastewater services to south-west Auckland and the \$127-million Army Bay Wastewater Treatment Plant outfall replacement project.

Our biggest infrastructure project to date is the \$1.2-billion Central Interceptor, which is critical to providing additional wastewater capacity for growth. It will also significantly reduce wet-weather overflows into the Waitematā Harbour and replace an ageing asset. Originating in Western Springs, the 4.5m-diameter, 13km wastewater tunnel will wind its way beneath residential and industrial suburbs, and then the Manukau Harbour, before terminating at the Māngere Wastewater Treatment Plant. It will have a storage capacity of 200,000 cubic metres – that's the same volume as 80 Olympic-sized swimming pools!

We fund and finance these projects through a combination of revenue (including service charges), infrastructure growth charges and new borrowings. We do not receive any funding from Auckland Council or the Government, nor do we pay a dividend to Auckland Council.

You can read about our projects at www.watercare.co.nz/About-us/Projects-around-Auckland

FAST FACTS

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Wondering about wastewater?

Each time you flush the toilet, pull the plug from a sink or have a shower, the water drains into a wastewater pipe on your property. These connect to the public wastewater network, which carries your household wastewater to be treated at a wastewater treatment plant.

Wastewater can include household and business chemicals, paint and medicines. These can be harmful to our health, our harbours and waterways, so effective treatment is very important.

How do we treat your wastewater?

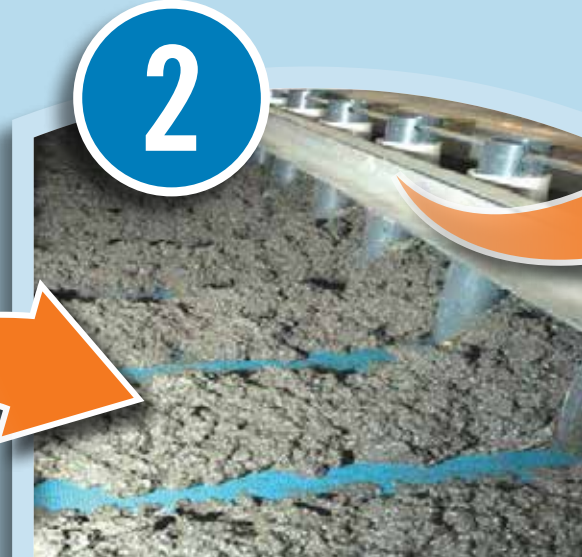
Each day, we collect about 400 million litres of wastewater. Over 90 per cent of it goes to our wastewater treatment plants at Māngere and Rosedale. You can see how we treat wastewater at these plants below.

The rest is treated at smaller treatment plants.



1 Screening

Before treatment, raw wastewater goes through screens to filter out any solids such as rags, debris and other objects. Rotating drum screens feed this material on to a conveyor and deposit it in a large bin. Trucks then take it out to landfill.



2 Separating solids from liquid

The wastewater goes into sedimentation tanks where sand and grit are removed, and any solids (sludge) sink to the bottom.

The sludge is then thickened and pumped to anaerobic digesters, where it is stabilised. We remove the remaining water to make biosolids – ready for disposal or reuse (see the sidebar to the right for more information about how we are reusing biosolids). The liquid then moves to the next treatment stage.



3 Removing nutrients

This natural, chemical-free process uses ‘activated sludge’, which contains an army of micro-organisms. They eat the carbon in the liquid wastewater, and reduce the amount of phosphorus and nitrogen. These nutrients can pollute waterways and be toxic to fish.



4 Settling, filtering and disinfecting

The micro-organisms are removed as the wastewater passes through clarifiers and filter blocks containing anthracite, a very hard form of coal.

The liquid is then disinfected under powerful ultraviolet lamps. This results in a 10,000-fold reduction of harmful pathogens, bacteria and viruses. There are no chemical by-products, and it is safe for the environment.

Finally, the treated wastewater is safely discharged into the Manukau Harbour and Hauraki Gulf.

Our plants are always operating, treating wastewater so that it is safe to release back into the environment, even during extreme weather and power outages.

DID YOU KNOW?

Our wastewater network includes:

- 18 wastewater treatment plants
- 518 wastewater pump stations
- 7,999km of wastewater pipes
- 167,264 wastewater manholes



Rehabilitating Puketutu Island with biosolids

Biosolids are a product of the nutrient-rich, organic sludge produced when we treat wastewater. At our Māngere Wastewater Treatment Plant, we produce about 330 tonnes of treated biosolids a day. Instead of sending this to landfill, we truck it to neighbouring Puketutu Island.

Known as Te Motu a Hiaroa to Mana Whenua, the island is sacred to the people of Te Kawerau ā Maki, Te Waiohūa and Waikato-Tainui. It was the first permanent home of the crew of the Tainui waka in Aotearoa.

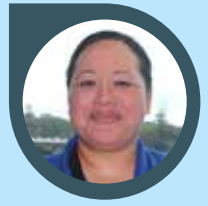
In the 1950s, the island was quarried for projects including the expansion of the nearby Auckland Airport. Thousands of tonnes of scoria and basalt rock were removed and the island’s volcanic cones disappeared.

Many years ago we bought a long-term lease on the island and then transferred its ownership to a trust with 12 iwi trustees. We are now rehabilitating the island by filling the former quarry with biosolids from the Māngere Wastewater Treatment Plant.

At the end of the project – not until 2049 – four small hills will be created to replicate the scoria cones that were quarried in the 1950s. The long-term goal is to create a recreational reserve on the island for everyone in the Auckland region to enjoy.



Ask Nisi



Here are Fern and Inca, who are frequent users of the park we maintain on Ascot and Greenwood Roads in Māngere. Their human Michael says, "Just wanted to pass on our thanks and gratefulness for such an awesome exercise area for our dogs and others."

If there's something you've been wondering about in regard to our water or wastewater services, ask Nisi by emailing asknisi@water.co.nz.

Our water and wastewater prices changed on 1 July, so the new prices will be on the bill that accompanies this newsletter.

The adjustment is necessary to cover our increased operating expenses and the need to fund capital expenditure to replace and upgrade infrastructure. This means we can continue to supply safe and reliable water and wastewater services now, as well as to cater for Auckland's growing population.

All of the money we receive from you goes into operating, maintaining and expanding our infrastructure. We do not receive any additional funding from Auckland Council or the Government, nor do we pay a dividend to Auckland Council.

For more information visit www.watercare.co.nz/Manage-account/Our-charges



You can do it online at watercare.co.nz

- Sign up for MyAccount, to make part and full payments online, opt for e-billing and view your transaction history.
- Apply for a partial credit online if you have fixed a water leak and think you may qualify for a leak allowance.
- Check our map for current water outages and report a fault with our quick and easy online form.
- If you're looking at working near our pipes on private land, apply for Works Over approval or connect to our water and wastewater services online.



Win!

Switch to e-billing and be in to win a water-efficient washing machine and other great prizes!

Visit www.watercare.co.nz/Manage-account/Set-up-e-billing to find out more.

(And, if you're a current e-bill customer, you're automatically in the draw.)

KEEP IN TOUCH

Tapped In is your newsletter. If you would like to talk to us about any stories from this edition or your ideas for future issues, we'd love to hear from you. To get in touch, please email our communications team at communications@watercare.co.nz. You can learn more about what we do at www.watercare.co.nz.