AUTUMN 2017

TAPPED IN

Bringing you news, updates and information from Watercare

Project manager Sven Harlos oversees the construction of an additional biological nutrient removal (BNR) facility as part of the upgrade of the Mangere Wastewater Treatment Plant. Expected to be completed at the end of this year, this project will ensure our wastewater network is able to cater for expected increases in the region's population over the next few decades.

Supporting sustainable growth

Over the next 30 years, Auckland's population is expected to grow by one million people. Our challenge at Watercare is to accommodate this growth by expanding our water and wastewater infrastructure in an affordable, timely and environmentally-sound way.

At the moment, our networks have the capacity to allow 45,000 new homes. Over the next 10 years, we will invest $4.9 billion in upgrading and expanding our infrastructure to add capacity for a further 195,000 homes.

Currently, there are numerous major projects under way across Auckland. At the Mangere Wastewater Treatment Plant, we are carrying out a $141-million project to increase the biological nutrient removal (BNR) capacity. This will enable the plant to treat the wastewater from a further 250,000 people effectively, without compromising the health of the Manukau Harbour. This project will be completed at the end of this year.

In Glen Eden and Takapuna, we are constructing large wastewater storage tanks – at a cost of more than $40 million – to support localised growth and to reduce wet-weather overflows into the surrounding environments. These overflows occur when the volume of stormwater entering the wastewater network exceeds the capacity of the pipes.

In West Auckland, we are consulting with the community on the location of a new $300-million water treatment plant to replace the 90-year-old one in Titirangi. The existing plant treats water from four of the dams in the Waitakere Ranges, providing around 18% of Auckland's water. A new plant is needed to ensure we can continue to deliver 'Aa'-grade water to a growing community. If you are keen to find out more about this project and the consultation process, please visit www.watercare.co.nz and search for 'Huia Water Treatment Plant replacement'.

These projects represent just a snapshot of the work that is under way or being planned. We pay for these projects using the revenue we receive from our current customers (47%), infrastructure growth charges (21%) and borrowings (32%).

Given Watercare receives no funding from central or local government, it is essential that we deliver our projects in a way that is affordable to our customers. It is not efficient or economical to build treatment plants or pipes sized for 100 years from now. Instead, we ensure we understand what will be needed in the future, but, in practical terms, wherever possible, we deliver infrastructure that meets today's needs and can accommodate staged expansions.

A great example of infrastructure that supports staged expansions is the Waikato Water Treatment Plant. Since it was commissioned in the early 2000s we have increased its water production per day from 75 million litres to 125 million litres to 150 million litres as the community has grown. A further expansion will be completed by the end of next year. We have also submitted an application to the Waikato Regional Council to increase our water take from the Waikato River to meet future demand.

Watercare
An Auckland Council Organisation

In focus: Reducing wet-weather overflows in central Auckland

In central Auckland, wastewater and stormwater is managed in different ways in different areas: some have separated wastewater and stormwater networks; some have a wastewater network and allow stormwater to soak into the ground; and some collect both wastewater and stormwater in the same pipes. The latter are called combined networks and they are generally in older parts of the central city, where infrastructure dates back to the early 20th century.

Most of the time, combined networks move wastewater from private properties to the Mangere Wastewater Treatment Plant effectively. However, during heavy rainfall, when the volume of stormwater entering combined networks exceeds the capacity of the pipes, they are designed to release heavily-diluted wastewater and stormwater into the environment. This reduces the likelihood of overflows onto private property and helps to protect public health.

These are called wet-weather overflows. We are addressing these through a number of measures, including current work to separate stormwater from the wastewater network in Franklin Road in Ponsonby and our planned Central Interceptor.

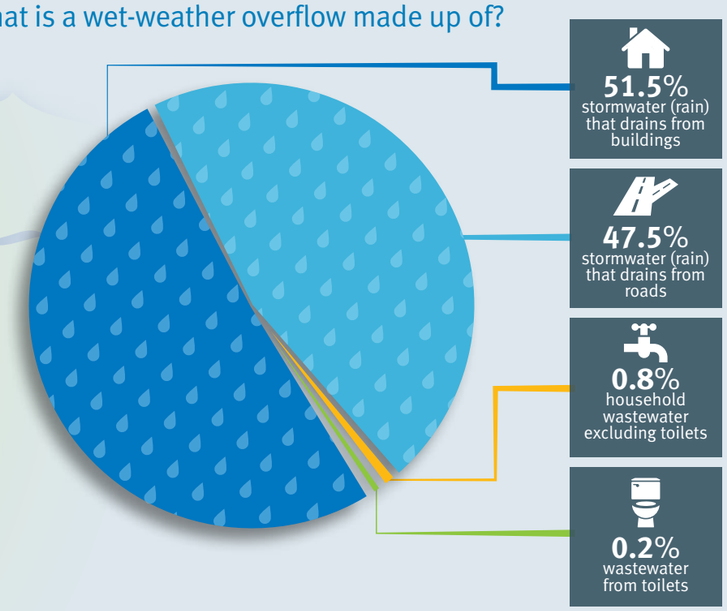
We're also working with Auckland Council to develop and implement strategies to efficiently manage wastewater and stormwater in the long-term: accommodating growth and substantially reducing wet-weather overflows. These strategies will be included in the draft 2018 Long-Term Plan by 30 June 2017, which will be distributed for public consultation. Together, we expect to spend around $2 billion over the next 20 years on measures that will significantly reduce both the volume and frequency of wet-weather overflows.

What is a wet-weather overflow?

Wet-weather overflows occur during periods of heavy rainfall, when the volume of stormwater entering the combined wastewater and stormwater network exceeds the capacity of our pipes.

This is different to dry-weather overflows, which occur when there is a build-up of fat or items like wet wipes in a pipe. These things don't break down in water. Instead, they form large, impenetrable clumps that block pipes and cause overflows.

What is a wet-weather overflow made up of?



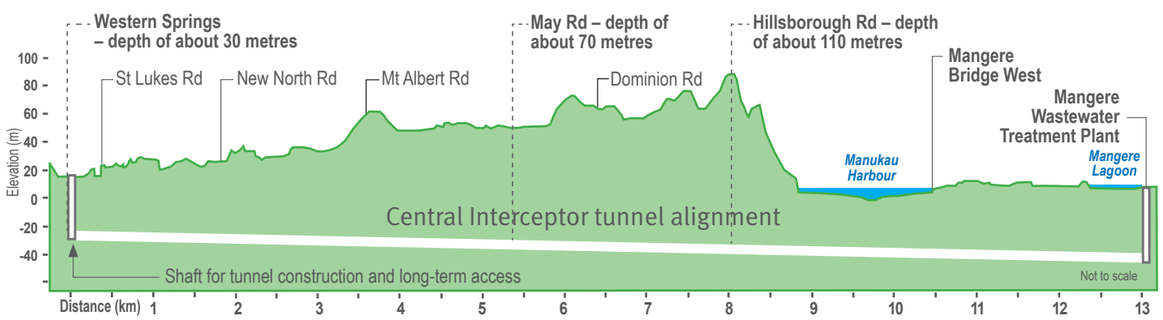
In the pipeline... Central Interceptor tunnel and link sewers ($920 million)

The 13-kilometre-long Central Interceptor (large pipe) and link sewers will convey wastewater from western and central suburbs to the Mangere Wastewater Treatment Plant.

It will free up capacity in the Orakei Interceptor and duplicate critical ageing sections of the Western Interceptor. This means it will accommodate growth in western, eastern and central suburbs.

Up to 4.5 metres in diameter, this large pipe will reduce the frequency and volume of overflows in its catchment area by 80%.

Construction will begin in 2019 and finish in 2026.



In the neighbourhood...

We are currently separating the stormwater from the wastewater network in Franklin Road, which will increase the capacity of the wastewater network and reduce the number of overflows in the area.

Will Auckland's growth affect overflows?

No. Our Central Interceptor and other shorter-term projects will significantly increase the capacity of the wastewater network in central Auckland, accommodating growth over the next 20 years.

These projects will deliver environmental benefits by substantially decreasing the frequency and volume of wet-weather overflows in central Auckland.

Who is responsible for wastewater and stormwater?

Watercare: wastewater

Auckland Council: stormwater

You pay Watercare for wastewater infrastructure through your monthly bills and Auckland Council for stormwater infrastructure through your property rates.

If you have wastewater overflowing on your property, or see wastewater overflowing on the street, contact us first – we're available 24 hours a day, 7 days a week. You can phone us at (09) 442 2222 and press 1, email us at faults@water.co.nz or free text 3130.

Addressing growth across the region

Throughout Auckland, we're investing in wastewater infrastructure to ensure we stay ahead of demand...

A snapshot of our current projects

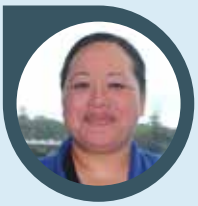
		Project description	To be completed in	Cost
Army Bay	1	A new wastewater treatment plant will replace old infrastructure and increase the wastewater network's capacity.	2018	$38m
Takapuna	2	A pump station and large storage tank are being built to support growth and reduce overflows in the Shoal Bay area.	2018	$28m
Glen Eden	3	A large wastewater storage tank is being built to support growth and reduce local overflows.	2017	$18m

We have a proud history of delivering large projects with good environmental outcomes:

		Project description	Completed in	Cost
Kohimarama	4	A wastewater storage tank was built and the local network was upgraded to support growth and reduce overflows.	2016	$12m
Swanson	5	A wastewater storage tank was built to increase the local network's capacity and reduce overflows.	2012	$10m
Kawakawa Bay	6	A wastewater treatment plant and local wastewater network were built to enable the decommissioning of private septic tanks, which had made Kawakawa Bay unsafe for swimming.	2012	$29m
Project Hobson	7	An old sewer pipe crossing Hobson Bay was replaced with a 3km-long tunnel that connects to a new pump station in the Orakei Domain. Overflows have virtually been eliminated from this part of the network.	2011	$121m

David, Matthew and Joel Harimate splashing in the water at Kawakawa Bay. Leakage from local septic tanks polluted this beach until we invested in the local wastewater network in 2011, enabling their removal. In November 2012, the beach was deemed safe for swimming for the first time in 10 years – and still continues to be enjoyed today.

Ask Nisi



"I notice that the 'About Watercare' page on your website shows you supply around 354 million litres of water to Aucklanders every day, and treat around 392 million litres of wastewater. I would say my household uses about the same amount of water as wastewater generated. Can you tell me how you arrived at the above figures in treating more water than you supply?"

There are two reasons why we treat a higher volume of wastewater than what we supply.

Firstly, there are around 8,000 homes in Auckland with private water supplies (rainwater tanks or bores) that are connected to our wastewater network.

Secondly, a large volume of stormwater enters our wastewater network, which needs to be treated at our wastewater treatment plants.

The Mangere Wastewater Treatment Plant treats about 75% of Auckland's wastewater.

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.

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 phone our communications team on (09) 442 2222 or email info@water.co.nz. You can learn more about what we do at www.watercare.co.nz.