

**Asset Management Plan**  
Executive Summary

# Water



## Asset Management Plan Executive Summary

# Water

**Manaaki whenua, manaaki tangata, haere whakamua.  
Tihei mauri ora!**

**No reira, e te haukainga Rangitāne, nei rā te mihi nui ki a koutou e pupuri nei i te mauri o te whenua me ngā wai e rere atu e rere mai.**

**Tēnā koutou, tēnā koutou, tēnā tātou katoa.**

Water is a taonga and in Palmerston North we are fortunate to have a variety of sources from which we supply safe drinking water to our communities.

We provide high-quality water supplies to residential, industrial and commercial properties in Palmerston North, Ashurst, Bunnythorpe, Longburn and Linton.

The majority of the drinking water we supply meets the new Drinking Water Quality Assurance Rules. The way we treat water hasn't changed, but the new rules require us to have reservoirs or ultraviolet (UV) treatment at our bores to store water for a period of time before it enters the city water pipes. Like most Council's around the country, we do not have these in place but are planning work to meet these new requirements.

The supply of drinking water is undergoing significant change across New Zealand, through Three Waters reform. Coupled with a growing population, the water space is expected to undergo significant change in the short to medium term.

Taumata Arowai became New Zealand's dedicated regulator of drinking water, when the Water Services Act came into effect on 15 November 2022. In 2024, it will also assume oversight for wastewater and stormwater networks, becoming the three waters regulator for Aotearoa.

The Government is progressing three waters reforms so that three waters services will be provided by ten publicly-owned water service entities by July 2026. The reforms are designed to protect public health and wellbeing, improve environmental outcomes, economic growth and job creation, housing and urban development, adaptation to the impacts of climate change, building resilience to natural hazards, and upholding iwi/Māori rights and interests relating to water services.

Under the National Policy Statement for Freshwater Management 2020, we must give effect to the hierarchy of obligations and six principles of Te Mana o te Wai.

## **Rangitāne O Manawatū expresses this in their Te Mana o te Wai statement and objectives. The Te Mana o te Wai statement is:**

The most significant quality that flows through wai is mauri. The mauri is generated throughout the catchment and is carried through the connected tributaries, groundwater, wetlands and lagoons. It is the most crucial element that binds the physical, traditional and spiritual elements of all things together, generating, nurturing and upholding all life, including that of Rangitāne o Manawatū. The health and well-being of Rangitāne is inseparable from the health and well-being of wai. The Manawatū Awa, its catchment, tributaries and connections, wetlands and lagoons are taonga and valued for the traditional abundance of mahinga kai and natural resources.

## **This Asset Management Plan outlines how we will manage and invest in our water assets for the next 30 years**

### **Scope of this plan**

This Plan informs our 10 Year Plan, Financial Strategy and 30 Year Infrastructure Strategy. It supports us in the management of our water supply assets to:

- Provide safe drinking water to our communities
- Achieve our strategic outcomes as set by Goal 4: A sustainable and resilient city
- Meet the agreed levels of service,
- Plan for growth and other drivers such as new legislation and climate change,
- Improve asset knowledge and monitor performance,
- Minimise risk
- Plan operations

# What we provide

We supply more than 10 trillion litres of safe drinking water to our community each year. We manage water for our city in what we call four key supply areas - Palmerston North City, Ashhurst, Bunnythorpe and Longburn. We also provide a dedicated filling station for water tankers, located in Roslyn.

There are more than 3,000 fire-hydrants located throughout the city, that provide water for putting out fires in our city.

We have a number of bores dotted around the city already and are planning to construct several new bores to ensure we continue to have enough and a resilient supply as our city grows.



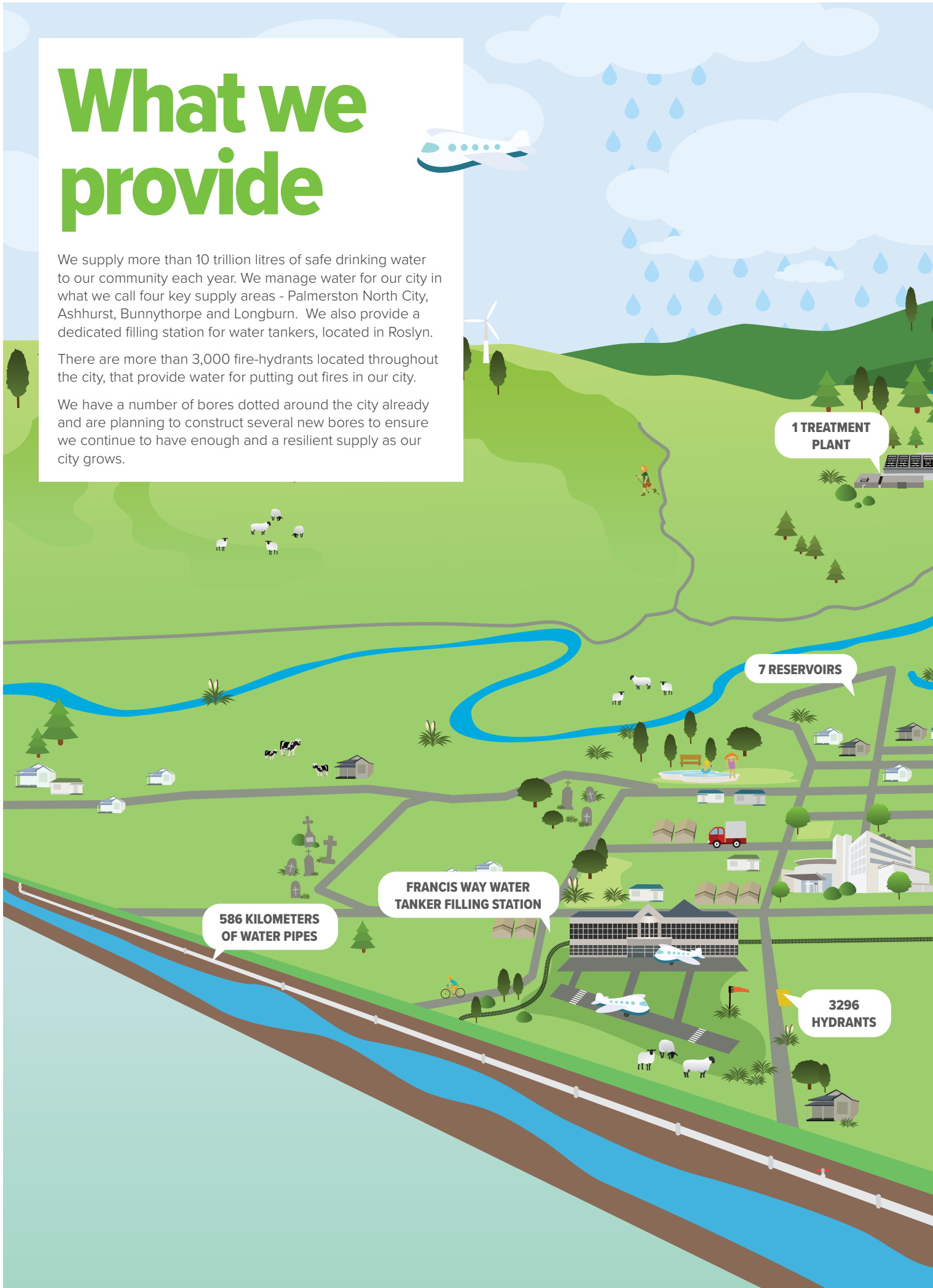
**1 TREATMENT PLANT**

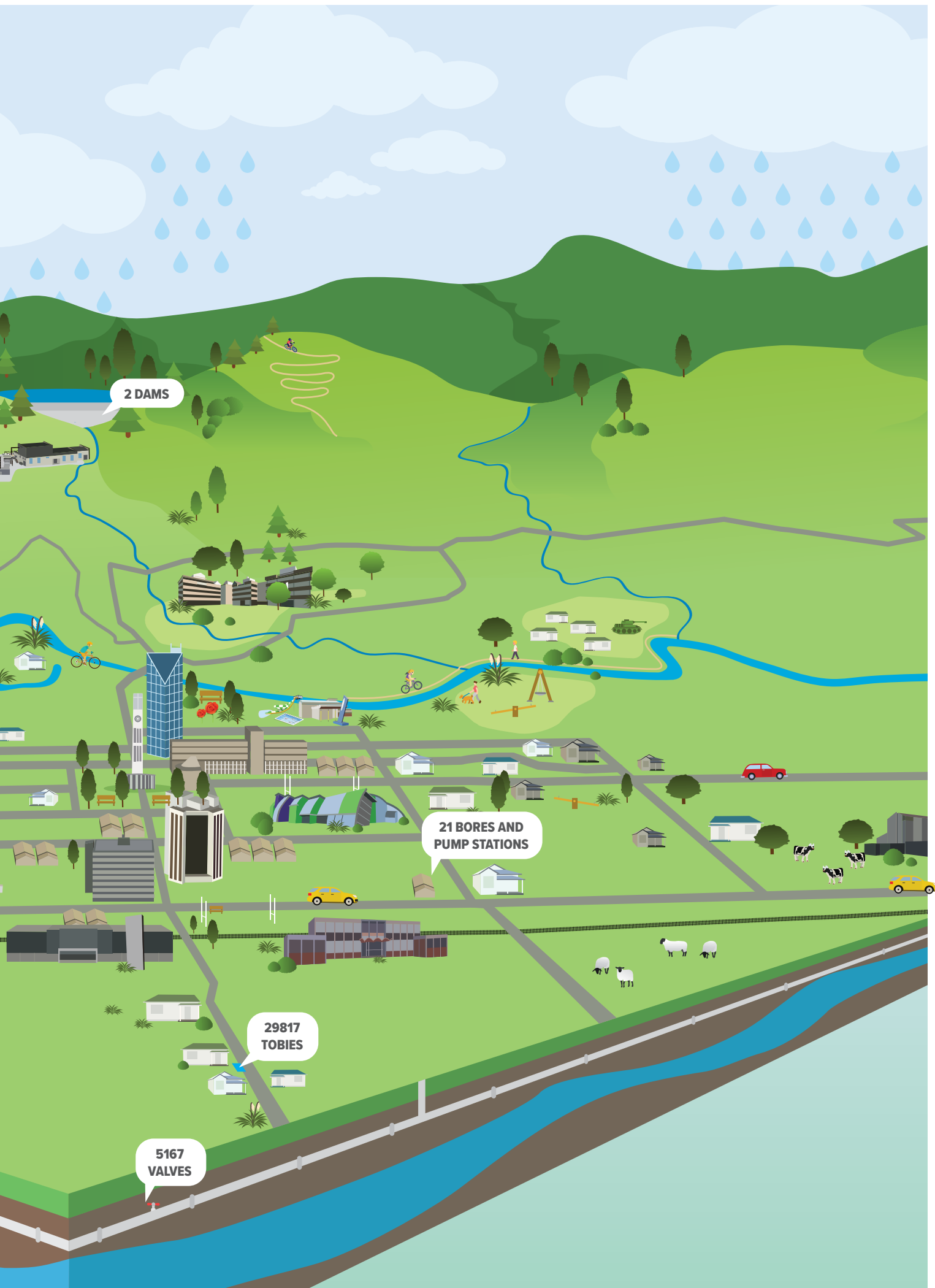
**7 RESERVOIRS**

**586 KILOMETERS OF WATER PIPES**

**FRANCIS WAY WATER TANKER FILLING STATION**

**3296 HYDRANTS**





2 DAMS

21 BORES AND PUMP STATIONS

29817 TOBIES

5167 VALVES

# Everyone is a customer



Residential



Visitors



Industrial



Rural



Education sector



Fire and  
Emergency  
New Zealand



Healthcare



Council



Developers



Commercial

Our customers value having access to a safe and readily available drinking water. They want to be able to turn on the tap and have safe water to go about their daily activities.

Each day Palmerston North, Bunnythorpe, Ashhurst and Longburn uses up to 30 million litres of water – that is enough to fill the outdoor pool at The Lido almost 12,000 times! Two-thirds of our water comes from the Turitea Dam, and the remainder from several groundwater bores.

We supply water to the boundary of homes and businesses, fire-fighting capacity from hydrants, and a filling station for rural tankers and construction work. We also promptly respond to breaks, leaks and quality issues with the service..

Currently we supply drinking water to Palmerston North City, Ashhurst, Bunnythorpe and Longburn. Properties outside these areas supply their own services and this includes some areas of Massey University and the Linton Army Camp, which is currently connecting to the our water supply.

Our customers approval rating is consistently high. In 2022 water service complaints were slightly higher than our target with the majority of complaints relating to tobies and water clarity.

**We have a strong partnership with mana whenua Rangitāne o Manawatū. Our stakeholders include; regulators (Public Health, Horizons and Taumata Arowai), Manawatū River leadership, adjoining councils and communities and central government.**

# We have some challenges + risks

## **New Drinking Water Quality Assurance Rules came into effect in November 2022.**

Changes require water suppliers to undertake the following:

- Tighter regulation of treatment plant performance and monitoring;
- Increased design standards for bore supplies, which may result in higher treatment requirements
- Specific residual disinfectant standards in the network.

To maintain compliance with the new rules we need to invest in treatment assets, bores, systems and staff resources.

## **Our infrastructure is aging**

Our water supply infrastructure is aging, which is leading to an increasing backlog of assets requiring renewal. About 8% of pipes have a condition rating of poor or worse.

There are gaps in our asset information including condition and value. This can make it difficult to prioritise our work programme. There is currently a high risk of failure for some of our aging assets.

A programme is being developed to improve information on asset condition. This will in turn provide a renewal programme to address risk in the short to medium term.

## **Some assets are vulnerable**

We have been improving the resilience of the water supplies but there are still actions to progress, including:

- Improve compliance of our water bores
- Continue with seismic strengthening at the Turitea Water Treatment Plant
- Investigate options to rehabilitate or replace one of the water mains from the Turitea Lower Dam to the water treatment plant,
- Investigate the provision of UV treatment contact tanks and/or storage at our bore sources, to achieve compliance with disinfection rules.

## **Growth**

Our current Water Supply Development Plan is an essential tool for planning residential and industrial growth areas. We also need to align this to the Government's National Policy Statement for Urban Development.

In order to cater for growth, resilience and new legislative requirements for disinfection we have included seven new bores sites in the 30-year plan.

## **Fire fighting**

Modelling has identified several areas of the network that do not meet fire-fighting levels of service and require capacity upgrades.

## **Sustainability**

We need to consider sustainability in:

- Turitea Reserve Management Plan and the enhancement of biodiversity in the Turitea Reserve,
- The operation of a fish capture and transfer facility in partnership with Rangitāne o Manawatū,
- Implementation of the Water Conservation Management Plan,
- Management of a global water-take Resource Consent approach which covers all the city water bores to manage water takes on a holistic basis and in balance with the Turitea water take,
- Optimisation of the operation for the Water Treatment Plant, bores, and pump stations.
- Signalling pressure reduction in the future to help reduce water loss through leaks, saving energy and extending asset life.

# What's our plan?

## Improve compliance with the new disinfection Rules

In order to improve compliance with the new Drinking Water Quality Assurance Rules, we have budgeted for:

- Treatment upgrades,
- New or updated resource consents,
- Water quality improvements in Ashhurst and Bunnythorpe,
- Water contact tanks/reservoirs and/or UV treatment at our groundwater bore sites.

## Collect condition and performance data

More investment is required to better understand the condition and performance of our assets to enable optimised capital decision making. Capital is where we borrow money for large or expensive upgrades and pay that debt off over time – just like a homeowner with a mortgage. The following initiatives are planned:

- Investigate district metering areas for installation and utilising specialist software for pressure and flow management to reduce leaks,
- Installing smart meters for our larger commercial customers to understand water consumption patterns and manage demand,
- Continued development of our modelling to improve understanding of operational performance and growth planning,
- Develop and implement a condition assessment programme for network assets to better inform our upgrades and renewals programme.

## Maintain existing levels of service

We plan to keep operating the existing services at the same level our residents and businesses are used to, while continuing to look for ways to improve operational efficiencies.

To respond to gaps in the fire fighting space, we are planning upgrades in some locations.

Asset condition and criticality data will be used to develop our prioritised asset renewals programmes.

## Climate Change

Our three climate change priorities are:

- Adapt to the predicted effects of climate change,
- Reduce emissions as efficiently as possible,
- Comply with changing regulations.

## Resilience

- Ongoing seismic strengthening of our water treatment plant,
- Improved water bore security and performance,
- Rehabilitate raw water mains from the Turitea Lower Dam to one of the water treatment plants.

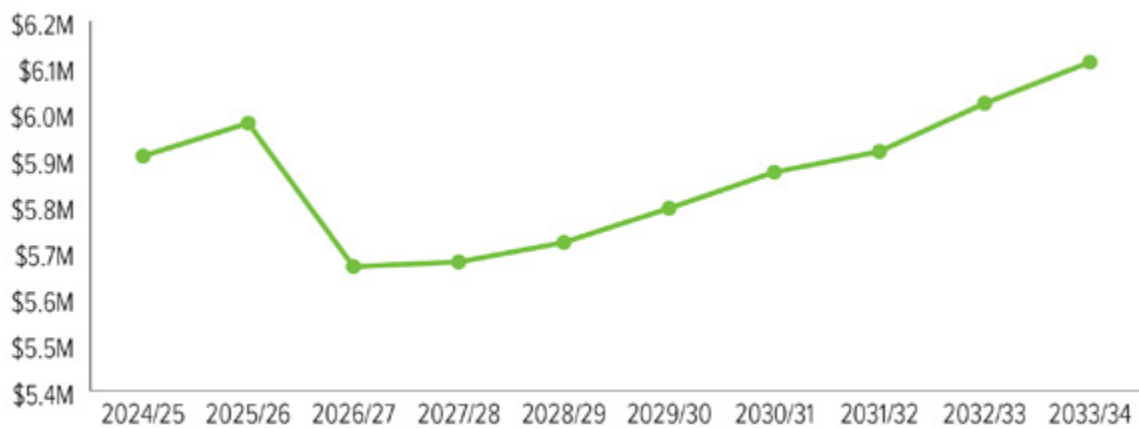




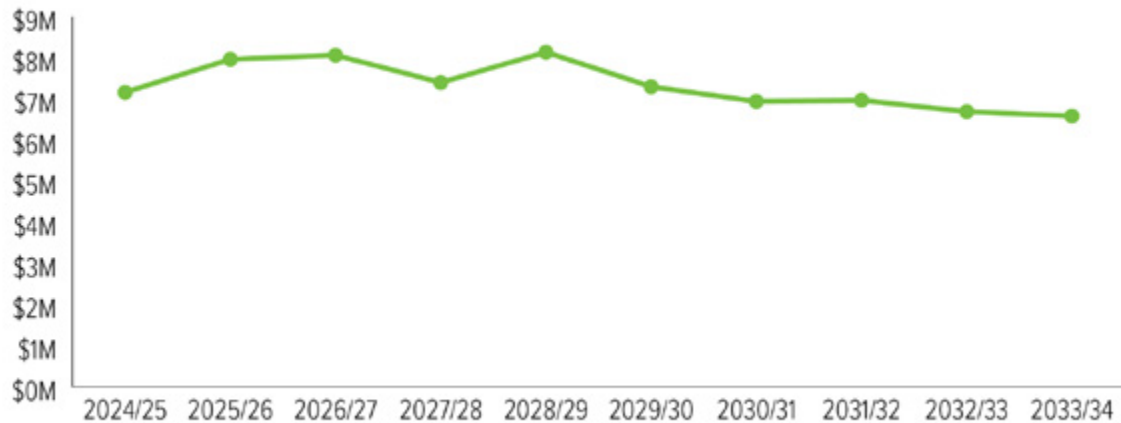
# How much will it cost?

## Operations and Maintenance

The largest proportion of operational expenditure is spent operating and maintaining our existing assets. Consequential operational expenditure (from the creation of new assets) increases steadily over the next decade due to the projected high volume of growth. Overall operations and maintenance expenditure is proposed to increase with most costs in water treatment.



## Renewals

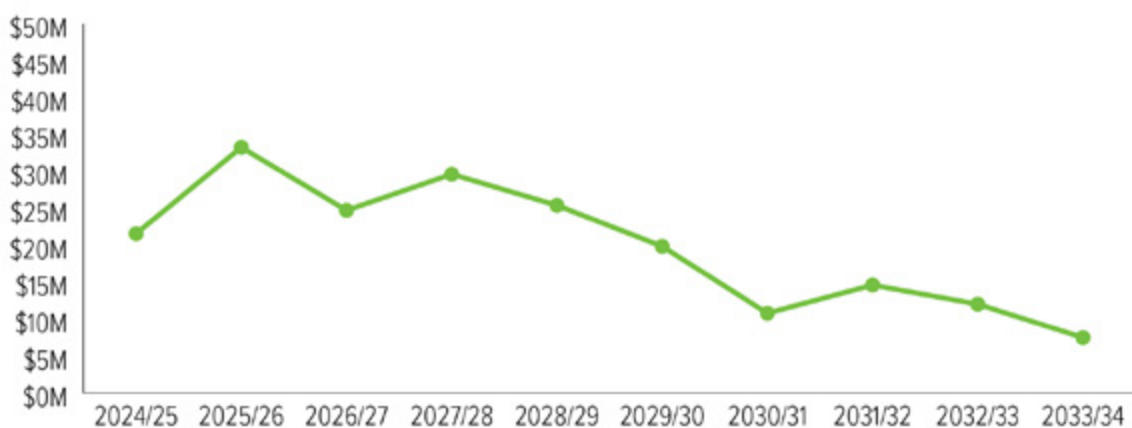


The majority of proposed expenditure is for replacement of our pipe network and other network assets. A couple of years ago we installed a duplicate main next to the original water main pipe to build resilience.

We are now looking to renew a section of the original water main so we can add extra resilience to our water network. We are also renewing the aging pipe networks in Longburn and Bunnythorpe.

Increased investment in renewal of water supply bore infrastructure is planned for the first three years to meet drinking water rules and improve bore head security.

## Capital new



A large portion of our capital new budget will be targeted at ensuring we comply with the new Drinking Water Regulations.

To align with Drinking Water Regulations, we need to replace our existing tobies with manifolds and upgrade our water supply bores and improve bore head security within the next three years.

Turitea Dams and the Turitea Water treatment plant will also be upgraded to improve resilience in the event of a natural disaster. Over the next 10 years we are proposing to spend at least \$10 million, and up to \$30 million, per year to ensure our water assets continue to provide the intended level of service.

