

# ASSET MANAGEMENT PLAN

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## WATER





# OVERVIEW

## 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 that we have a variety of sources from which to supply safe drinking water to our community.

We provide a good-quality water supply that meets the Drinking Water Standards for New Zealand in a sustainable and responsible way to residential, industrial and commercial properties in Ashhurst, Bunnythorpe, Longburn and Palmerston North.

With a growing population and climate change becoming more apparent, coupled with important changes in legislation, this area will experience significant change over the next few years.

### **Taumata Arowai**

In 2019, the Taumata Arowai-Water Services Regulator Bill was introduced to Parliament with the purpose to establish a new regulatory body by the same name. Initially, Taumata Arowai will be responsible for administering and enforcing a new drinking water regulatory system and a small number of complementary functions relating to improving the environmental performance of wastewater and stormwater networks.

## This Asset Management Plan outlines how we plan to 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 assets to:

- Provide clean, safe drinking water to our communities
- Achieve our strategic outcomes as set by Goal 4: An Eco City and the Eco City Strategy
- Meet the levels of service we have committed to
- Plan for growth and adjust to other drivers such as climate change and new legislation
- Improve asset knowledge and monitor performance
- Minimise risk
- Plan operations



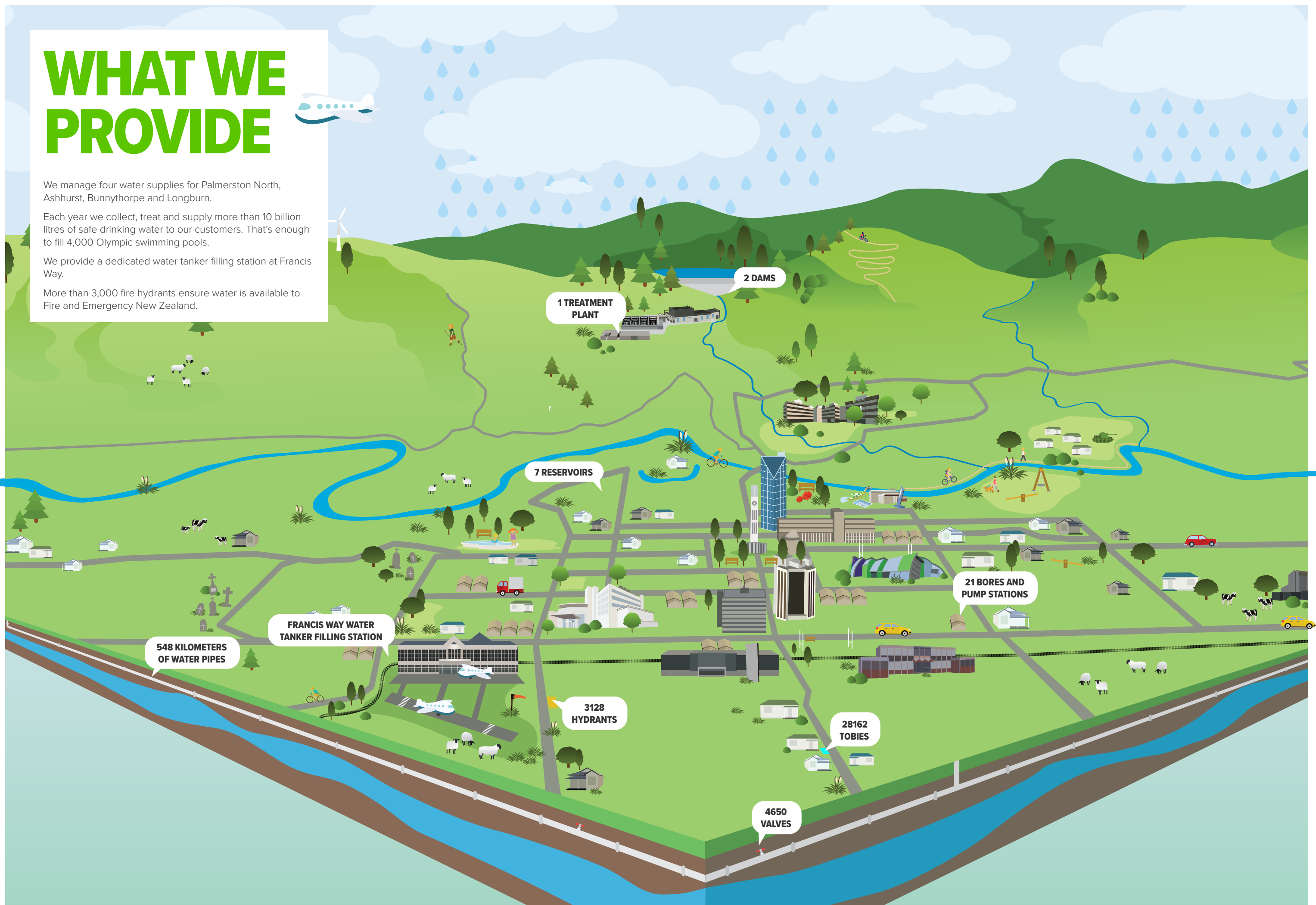
# WHAT WE PROVIDE

We manage four water supplies for Palmerston North, Ashhurst, Bunnythorpe and Longburn.

Each year we collect, treat and supply more than 10 billion litres of safe drinking water to our customers. That's enough to fill 4,000 Olympic swimming pools.

We provide a dedicated water tanker filling station at Francis Way.

More than 3,000 fire hydrants ensure water is available to Fire and Emergency New Zealand.



# EVERYONE IS A CUSTOMER



RESIDENTIAL



VISITORS



INDUSTRIAL



RURAL



EDUCATION



FIRE AND  
EMERGENCY  
NEW ZEALAND



HEALTHCARE



COUNCIL



DEVELOPERS



COMMERCIAL

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

Each day Palmerston North uses up to 36 million litres of water – that is enough to fill the outdoor pool at The Lido 14 times! Two-thirds of our water comes from the Turitea Dam, and the remainder from groundwater.

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 Massey University and the Linton Army Camp.

Our customers approval rating is improving. Between 2018 and 2019 complaints dropped by 40%.

**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 standards will likely come into effect

Changes to the Drinking Water Standards have been proposed. If adopted, these could impact our activity by requiring:

- Tighter regulation of treatment plant performance;
- Enhanced treatment of bore water, and;
- Specific residual disinfectant standards in the network.

To maintain compliance with these proposed changes will require investment in treatment assets, systems and staff resources.

## Our infrastructure is aging

Our water supply infrastructure is aging leading to an increasing backlog of assets requiring renewal. Currently there is \$2M worth of pipes that have an extreme risk threat. Funding from the Water Reform programme provides us with an opportunity to reduce this backlog.

## Condition assessments

There are gaps in our asset information regarding completeness, condition and value. This can make it more difficult to know we're renewing the right water pipes at the right time. There is an unacceptable risk threat from aging assets. We have a further \$54M worth of pipes that we should be actively managing. Obtaining more condition data would help prioritise the replacement of these assets.

Our understanding of equipment assets is limited and requires a review of asset criticality.

## Increasing compliance costs

Water Safety Plans are "living" documents where we actively manage our risks to provide safe drinking water.

We also have several resource consents that will need to be renewed in the next 10 years.

The cost to keep these up to date and compliant has increased.

## Some assets are vulnerable

We have been improving the resilience of the water supplies but there are still some actions we can take:

- To make the most of the recent upgrades to the microwave communication links we need to upgrade telemetry equipment at some facilities.
- We have limited backup power supply for our bore stations.
- The Turitea Water Treatment Plant needs some specific seismic strengthening.

The raw water mains from the Turitea Lower Dam to the water treatment plant are due for rehabilitation.

## Growth is occurring faster than planned for

Our current Water Supply Development Plan has been an essential planning tool, but growth has been occurring faster than anticipated. We are also identifying new opportunities to increase resilience and need to update the Water Supply Development Plan more often.

## Fire fighting deficiencies

Modelling has identified several areas of the network that do not meet our fire fighting level of service and need to be upgraded.

## Minor health and safety issues

Inspections of the Upper Turitea dam under drains have been put on hold until we can improve access for safety reasons.

## Opportunities in the Turitea water supply catchment

There is a stand of mature commercial pine trees in the Turitea Catchment. Given that log prices are favourable, these should be harvested.



# WHAT'S OUR PLAN?

### Maintain our compliance record

In order to maintain compliance with drinking water standards and resource consents we have budgeted for:

- Anticipated treatment upgrades;
- Updating of Water Safety Plans; and
- Renewal of resource consents.

### Use growth to increase resilience

As the City grows towards Bunnythorpe (KiwiRail development) and Longburn (Kāhātangiata plan change) there are opportunities to connect the small village supplies to the City and provide more resilience.

### Collect more condition data to inform renewals

Better equipment and pipe condition data will either confirm our risk of failure profile as unacceptable or lower it. Either way, better data is needed to prioritise renewals for the current backlog. Better condition data will ensure fewer “surprises” and better resource planning.

### Maintain existing levels of service

We plan to keep operating the existing services at the same level and continue to look for ways to improve operational efficiency.

As mentioned, we have level of service gaps related to fire fighting and plan to close these by upgrading the network in several locations.

### Adjust our plan as needed

We will continue working with Central Government, Rangitāne o Manawātū and Councils in the Horizons Region to manage our drinking water activity and continue to be actively involved in discussions about a potential regional water agency.

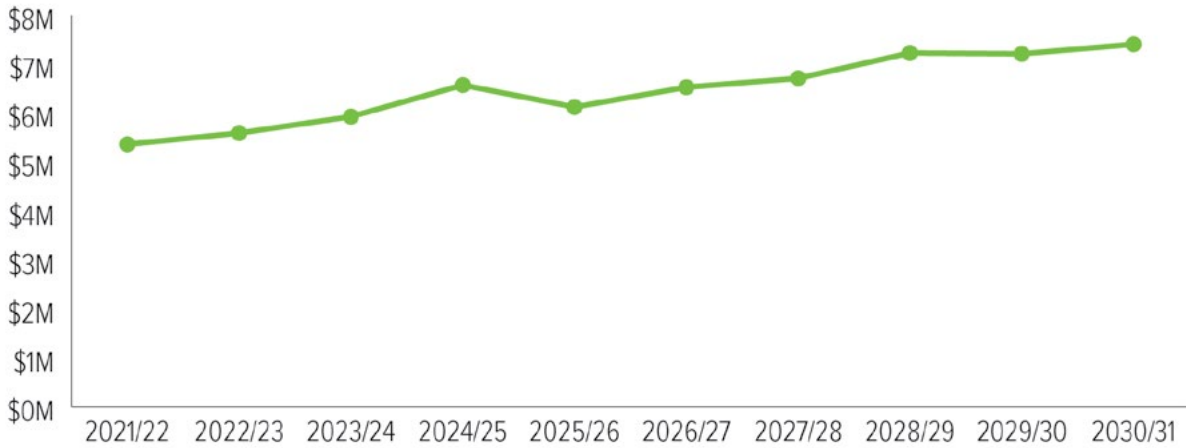
New asset condition data will be used to prioritise asset renewals. It is expected that as defects we get better condition information, we'll be able to make more informed decisions on our renewals.



# HOW MUCH WILL IT COST?

In order to continue to provide safe drinking water to existing and new customers, we need to invest in all areas of water collection, treatment and distribution.

## OPERATIONS + MAINTENANCE WATER ACTIVITY



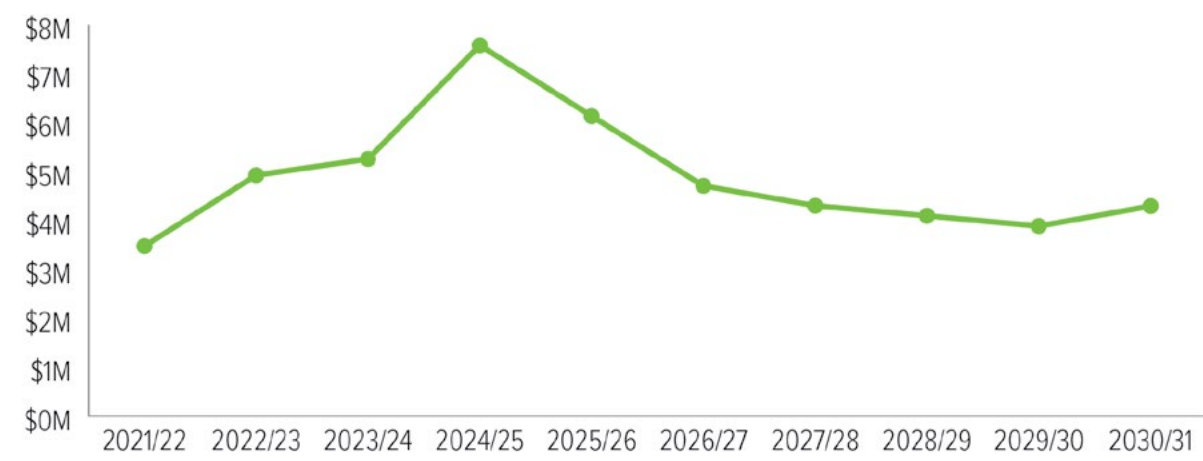
Operations and maintenance costs are forecast to rise slightly over the next 10 years. This is due to the construction of new assets as the city grows and maintaining our aged assets. Existing costs have been extrapolated to form our base budget.

In addition to the base budget and the impact of new assets we also have operational programmes. Most operational programmes are to target annual shortfalls in existing budgets that have been identified with building maintenance, the management of the Turitea water

supply catchment and asset condition assessments. This shortfall is estimated at a total of \$3.3M over ten years.

Other proposed budgets are associated with operating programmes covering discrete initiatives such as applications to renew resource consents, Water Supply Development Planning, Dam Safety Assurance and Water Safety Plans. These are important risk management and compliance-related actions that ensure and demonstrate that our water supplies are safe and secure.

## RENEWAL WATER ACTIVITY

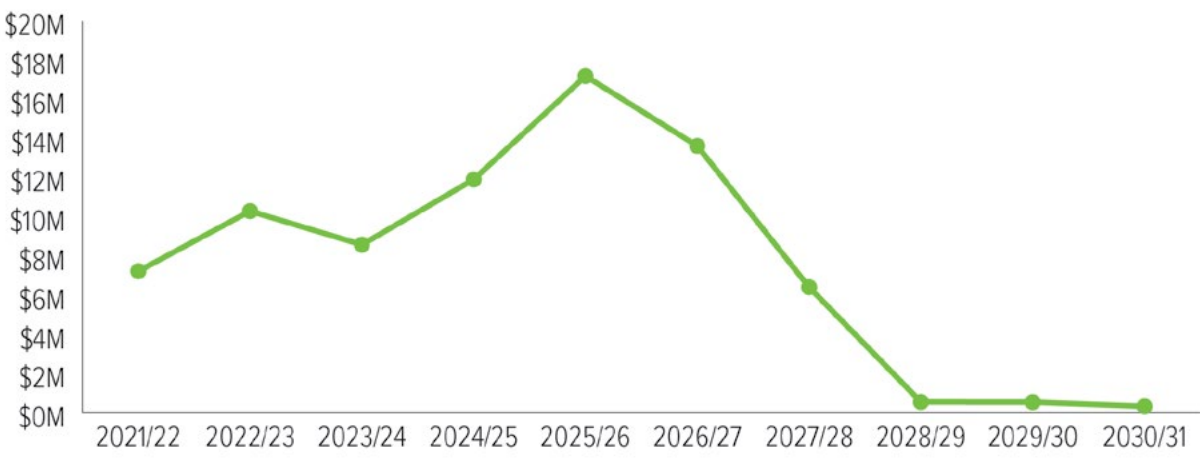


We are planning to spend approximately \$43M over the next ten years to renew our water assets. Most of this (\$33M) is associated with water mains. There is a backlog of renewals from under-investment in the past. Once this outstanding package of work has been addressed, it should result in fewer disruptions and lower maintenance costs as we settle into a more sustainable level of ongoing renewals.

Replacement of watermains forms a relative constant base work programme at \$2.3M per year on average. Renewal of our most critical mains to and from the Turitea Water Treatment Plant (\$2.9M) is a focus for 2024/25 and 2025/26.

Water supply bore renewals and equipment replacement at the Turitea Water Treatment Plant also form part of the budget at about \$3.5M for each programme.

## CAPITAL NEW EXPENDITURE WATER ACTIVITY



Significant investment (\$61.8M) is proposed in the first six years in order to provide for growth and address existing issues and risks already identified.

The development scenario for residential growth is based on meeting the needs of a growing population and includes the additional capacity required by the National Policy Statement for Urban Development Capacity. In order to provide for this level of growth, some \$22M of capital investment is needed, which equates to a third of the overall capital new budget. To meet the needs of the industry a further \$7M is needed, thus providing for growth equates to 36% of the total budget.

The most substantial new programme is to upgrade service connections at properties to reduce the risk of water contamination. This programme is spread over several years starting in 2022/23 and coming at a cost of \$13.3M.

Nearly another third of the proposed budget (\$20M) is required to increase the resilience of the network by way of additional trunk mains, reservoirs, generators and seismic strengthening works.

While we already provide safe drinking water, changes to the Drinking Water Standards require us to upgrade our treatment. We plan to invest \$8.4M in improving water treatment to meet the new Standards as well as improve water aesthetics.

Other more minor programmes in the first six years address water efficiency, revenue from new metered customers, fixing the last of the known firefighting capacity issues, and Health & Safety improvements.

