

Water Supply

Community Outcomes

Mana Oranga / Economic well-being

Flourishing communities with a diverse economy, innovative people and resilient infrastructure.

Mana Taiao / Environmental well-being

Sustainable communities that manage resources in a way that improves our environment for future generations.

Why we do it

Water is essential for the health and wellbeing of the population. Water supply is the most critical infrastructure service we provide as water is required in large volumes to sustain domestic, agricultural and industrial customers. We are committed to providing water sustainably and reducing water use through effective abstraction, treatment and demand management strategies.

Sustainable water supplies preserve the resource for future generations and high quality infrastructure helps to ensure that we support the economic, environmental, cultural and social well-beings of the community.

What we do

Our water supplies provide more than 28million litres of drinking water each day to residential, agricultural and industrial customers from eight urban and two rural water supply schemes. Our assets include ten water treatment facilities, 38 reservoirs and 650km of water mains. These assets have a replacement value in excess of \$247 million.

Water is sourced from some of the many streams that run from Taranaki Maunga to the sea, or from boreholes where there is insufficient surface water of suitable quality. Our water abstraction activities are regulated by the Taranaki Regional Council, which administers consents issued under the Resource Management Act 1991. The conditions attached to the renewal of these consents as they expire are becoming more stringent, making it increasingly important to accurately measure where our water goes. This requires continually improving asset and demand management so we can justify the water we take from the environment.

Water is treated to ensure it is free from bacteria, protozoa and chemical contamination, and eight of our ten water treatment plants fully meet the new drinking water quality standards, with two plants needing some upgrade to fully comply with the new standards. The Waverley and Kāpuni water supply schemes are fluoridated. Chlorination is now viewed as essential for the safety of public water systems and we have been upgrading our water treatment systems accordingly. The characteristics of the Pātea bore water mean the treatment plant will require a major upgrade to ensure that chlorination is effective, and it will be fluoridated at that time.

Having at least 24 hours of treated water storage capacity allows the water treatment plants to be turned down during and following heavy rainfall events, as flood water can be difficult to treat. Adequate storage capacity also provides resilience in the event of natural disasters or emergencies that could affect our water supplies. We are working to ensure all of our systems have sufficient storage capacity. To achieve this, we have included funding to construct new reservoirs in Ōpunakē, Waverley and at the Eltham water treatment plant.

Looking Ahead

Water leakage and loss are impacting the water take consents we hold with the Taranaki Regional Council. This will be partly addressed through pipe renewal projects, and a leak detection programme to identify leaks

on both our reticulation assets and private properties. In years one and two of this plan we have budgeted for additional resources to reduce leakage and loss and water demand.

Pātea has a vulnerable supply due to its full reliance on bore water and the unsuitability of the nearby river water. High residential water demand and low rates of aquifer recharge during dry summers can potentially hinder the continued supply of the bore water. These issues may result in an increase in water restrictions and/or metering for new or all residential connections.

Due to changes in compliance standards, we are required to upgrade the Pātea and Ōpunakē water treatment plants. The Pātea upgrade has been budgeted for in years one to three and the Ōpunakē upgrade in years one and two.

We are working to identify additional water sources to meet an increasing demand for water and our highest priorities are Waverley and Kāpuni. These are respectively budgeted in years one (Waverley) and five and six (Kāpuni).

Key Capital Projects

Water demand management

There will be an on-going focus to better manage our accounting for water consumption. We will require increased trunk main metering to determine where our water goes, as part of our leak minimisation and renewal planning. We also need to improve our existing demand management programme, including further water metering of some properties to ensure water consumption is fair and equitable. We have set challenging targets for unaccounted water that we will continue to benchmark against other councils in the annual Water New Zealand National Performance Review.

Lead infrastructure for the South Taranaki Business Park

We require lead infrastructure for the South Taranaki Business Park and surrounds.

Reservoir replacements

Reservoir replacements are planned for the Eltham, Waimate West, Waverley and Rāhotu water supplies. The new reservoirs will also help us to increase capacity.

Ōpunakē Water coagulation and optimisation (discolouration)

Historical complaints throughout Ōpunakē about discoloured (brown) water is suspected to be caused by high levels of iron and manganese in the source water. We plan to continue with the scheduled works to improve the current situation.

Ongoing pipe upgrades

We have focussed and continue to focus on condition assessment of asbestos cement water mains. Condition assessment work on our asbestos cement pipes has allowed a renewals programme to be developed based on the size and pressure class of the pipes.

What you can expect from us?

Water intake, treatment, storage and reticulation assets are critical to providing safe and secure water to users. They require effective inspection, condition monitoring, maintenance and renewal programmes to provide the most cost-effective lifecycle for the assets. We are actively improving our scheduling processes for these activities, to minimise reactive-based works through preventative maintenance and early interventions. We have specific goals that are linked to our water safety plans, which have been provided to Taumata Arowai.

Intakes, bores and water treatment plants require ongoing inspection and condition assessment to run at peak performance. We are working on increasing the resilience of intakes to flooding events, as the water can become untreatable during these events and river-borne sand can block intakes, preventing water abstraction.

The installation of remote monitoring has given us greater visibility and faster response to reduce the failure rates of meters for large users. We will improve our meter replacement programme to better reflect the established lifecycle of meters. Likewise, our meter-backflow project has demonstrated a number of users who were taking excessive amounts of water from our network, and we plan to continue auditing demand for extra-ordinary users to ensure that they are being fairly charged for water.

We will continue to improve our networks so they are more resilient to natural disasters. This includes back-up generators for pumps so they can operate during power outages and removal of vegetation around critical structures such as intakes and pipe bridges.

Significant Negative Effects

Activity	Well-Being	Significant Effect	Mitigation
Over-extraction of water from rivers	Mana Taiao/ Environmental Well-being Mana Tangata/Social Well-being Mana Mauri / Cultural Well-being	Over-extraction of water and reducing river flows can impact negatively on the ecosystems of rivers.	Effective compliance and monitoring of resource consent conditions. Apply the Taranaki Regional Council principles set out in the Regional Fresh Water Plan when considering permission to abstract water from streams and bores.
Delivery of contaminated water	Mana Tangata/Social Well-being	Potential delivery of contaminated water.	Effective emergency response plans, operational procedures and monitoring of raw water supplies. Public Health Risk Management Plans. Treatment of ground water supplies.
Insufficient water capacity	Mana Tangata/Social Well-being	Insufficient water supplies during times of drought or emergency.	Demand management is used to reduce water demand during drought or emergency.

			<p>24 hours' water storage is available for all schemes.</p> <p>Investigations to improve the security of supply through finding and developing additional water resources.</p>
--	--	--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

DRAFT

Water Supply

Level of Service	Performance Measure <i>C=customer measure</i>	Target	Target	Target	Target
		2021/22	2022/23	2023/24	Years 4 - 10
	<i>T=technical measure</i>				
The water supply is accessible and reliable.	(C) Number of complaints received about continuity of supply (per 1,000 connections).	≤ 10	≤ 10	≤ 10	≤ 10
	<i>DIA Performance Measure 4d</i>				
	(T) Median response time for service personnel to attend urgent call-out.	≤ 2 hrs	≤ 2 hrs	≤ 2 hrs	≤ 2 hrs
	<i>DIA Performance Measure 3a</i>				
	(T) Median response time for service personnel to resolve urgent call-out (P1 < 250 mm diameter main).	≤ 5 hrs	≤ 5 hrs	≤ 5 hrs	≤ 5 hrs
	<i>DIA Performance Measure 3b - New Measure</i>				
	(T) Median response time for service personnel to resolve urgent call-out (P1 ≥ 250 mm diameter main).	≤ 9 hrs	≤ 9 hrs	≤ 9 hrs	≤ 9 hrs
	<i>DIA Performance Measure 3b</i>				
	(T) Median response time for service personnel to attend non-urgent call-out (P2).	≤ 2 days	≤ 2 days	≤ 2 days	≤ 2 days

	DIA Performance Measure 3c - New Measure				
	(T) Median response time for service personnel to attend non-urgent call-out (P3).	≤ 5 days	≤ 5 days	≤ 5 days	≤ 5 days
	DIA Performance Measure 3c				
	(T) Median response time for service personnel to resolve non-urgent call-out (P2).	≤ 2 days	≤ 2 days	≤ 2 days	≤ 2 days
	DIA Performance Measure 3d				
	(T) Median response time for service personnel to resolve non-urgent call-out (P3).	≤ 5 days	≤ 5 days	≤ 5 days	≤ 5 days
	DIA Performance Measure 3d				
Water supplied is clean and healthy.	(T) Extent of compliance with current NZ Drinking Water Standards (for bacteria).	10/10	10/10	10/10	10/10
	DIA Performance Measure 1a				
Water supplied is clean and healthy.	(T) Extent of compliance with NZ Drinking Water Standards (for protozoa).	10/10	10/10	10/10	10/10
	DIA Performance Measure 1b				
The water supply is managed sustainably	(T) % Water Losses.	≤ 13%	≤ 12.5%	≤ 12%	≤ 11.5%

(maintenance of the reticulation network)	<i>DIA Performance Measure 2</i>				
The water supply is managed sustainably (cont.).	(T) Average consumption of drinking water per day per resident. <i>DIA Performance Measure 5</i>	≤ 390 L/c/d	≤ 380 L/c/d	≤ 370 L/c/d	≤ 370 L/c/d
Consumers are satisfied with the Water Supply service.	(C) Number of complaints received about drinking water clarity (per 1,000 connections). <i>DIA Performance Measure 4a</i>	≤ 3	≤ 3	≤ 3	≤ 3
Consumers are satisfied with the Water Supply service.	(C) Number of complaints received about drinking water taste (per 1,000 connections). <i>DIA Performance Measure 4a</i>	≤ 3	≤ 3	≤ 3	≤ 3
Consumers are satisfied with the Water Supply service.	(C) Number of complaints received about drinking water odour (per 1,000 connections). <i>DIA Performance Measure 4b</i>	≤ 3	≤ 3	≤ 3	≤ 3
Consumers are satisfied with the Water Supply service.	(C) Number of complaints received about drinking water pressure or flow (per 1,000 connections). <i>DIA Performance Measure 4c</i>	≤ 5	≤ 4	≤ 4	≤ 4

(C) Number of complaints received about response to the above (per 1,000 connections).	≤ 2	≤ 2	≤ 2	≤ 2
<i>DIA Performance Measure 4e</i>				
(C) Total number of complaints (per 1000 connections).	≤ 24	≤ 22	≤ 20	≤ 20
<i>DIA Performance Measures 4a-4e</i>				
(C) % of consumers are satisfied with the Water Supply overall.	$\geq 80\%$	$\geq 80\%$	$\geq 80\%$	$\geq 80\%$

DRAFT