

Wastewater

Community Outcomes

Mana Taiao / Environmental well-being

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

Mana Oranga / Economic well-being

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

Why we do it

This activity is about the safe disposal of wastewater and protecting the public health of our communities by taking domestic sewage and industrial wastes and treating them before discharging the treated effluent to the environment. The National Policy Statement for Freshwater has increased our communities' expectation for cleaner waterways, making our environmental performance even more important. Ensuring the quality and adequacy of our wastewater services is also a requirement of the Local Government Act 2002.

The alternative to a Council-provided sewerage system is the use of septic tanks. These are suitable for rural properties where the cost of a reticulated system would be too expensive because of the distances involved. However, a large number of septic tanks in an area, particularly an urban area, can lead to excessive contaminants seeping into the ground and waterways.

High quality, resilient wastewater infrastructure supports the District's industries and businesses, to ensure the economic, environmental, cultural and social well-beings of the community are protected for future generations.

What we do

We have eight urban wastewater schemes that transfer wastewater from domestic, commercial and industrial customers to wastewater treatment plants where it is treated and safely disposed of to natural waters (streams, rivers or the ocean) or by application to land. The discharges are regulated by the Taranaki Regional Council (TRC), who grants resource consents that state the quality and volumetric and other conditions that must be met.

In order to better manage the specific nature of industrial wastewater, we introduced a Trade Waste Bylaw in 2017. This controls the non-domestic waste we accept and how much customers pay for the service. Managing these waste streams is essential to operating our treatment plants as efficiently and effectively as possible.

Oxidation ponds are the predominant treatment process at our wastewater treatment plants, with treated effluent being discharged to an adjacent watercourse. There are some exceptions though; the treated effluent from Eltham and Hāwera discharges through the Fonterra sea outfall at Whareroa, and the Ōpunakē treatment plant discharges to land. The new Waiinu wastewater treatment system uses filtration and UV disinfection to fully treat wastewater prior to discharge to the environment. Best practical options (BPO) studies and industry studies have indicated that this level of technology will likely need to be used more widely across New Zealand in the future.

Like most sewer networks around New Zealand, our sewer reticulation suffers from rainwater getting into the pipes, either from the direct connection of roofs or paved areas or from ground water infiltrating into buried pipes through defects such as cracks. The impact of this is that sewers may exceed their hydraulic capacity and overflow, or we may exceed the volumetric discharge limits of resource consents, resulting in enforcement

action against us. Ongoing management of these issues is a top priority, both to protect the health of the community and the environment and to ensure we can demonstrate our environmental compliance.

Likewise, the TRC is becoming stricter on uncontrolled emergency discharges of untreated wastewater to the environment, and this is being seen at the time of renewal of discharge consents.

Looking Ahead

The majority of wastewater collection and treatment systems have sufficient capacity for the next ten years. Our biggest future challenges will be to reduce the levels of inflow and infiltration into our pipe network, and to upgrade wastewater treatment plants to meet the Government's current freshwater standards. The expenditure for wastewater is increasing significantly over the life of this plan, with \$43 million budgeted for tertiary treatment.

We have established a programme of sewer CCTV inspections, network smoke testing and private property inspections to assess the condition of sewers and develop a prioritised schedule of pipes to be repaired, replaced or relined, and to remove illegal stormwater diversion into the sewer system. Allowance has been made during the next three years for a further \$9 million to be spent on sewer rehabilitation to reduce the amount of rainfall-derived inflow and infiltration and achieve the performance targets we have set.

Managing sludge levels in our oxidation ponds is a very important part of maintaining effective treatment, with those taking significant trade waste loads being the most critical. The ponds at Eltham, Hāwera and possibly Manaia are likely to require ongoing sludge maintenance, with other ponds needing intermittent desludging.

Low levels of potentially harmful organisms (norovirus) in shellfish were found after monitoring near the marine outfall in Hāwera in mid-2017. This can be infectious to humans, resulting in sickness for a few days. We are working with Iwi and the TRC on possible long-term solutions, including additional treatment at the treatment plant, an increased monitoring regime and an intensified public warning system. We have highlighted in our Infrastructure Strategy that the treatment plant upgrades will help to minimise re-occurrences of the norovirus reappearing. Renewal of our discharge resource consents may require works to improve the treatment of sewage to comply with new consent conditions.

Future Projects

The main projects to be undertaken during the next ten years are:

- Tertiary treatment at the wastewater treatment plants in Hāwera, Pātea, Kaponga, Manaia and Waverley.
- Renewal of wastewater pipes.
- Building a new anaerobic lagoon at the wastewater treatment plant in Hawera.
- An intensive programme of CCTV inspection of sewers followed by the rehabilitation of faults using sewer relining techniques or physical repairs or replacements. This will form a major part of the project to reduce the amount of rainwater entering the wastewater network.
- Ōpunakē wetland soakage field enhancements.
- Renewal of the discharge resource consents for Waverley, Manaia, Pātea, Eltham and Hāwera discharges.
- Implementation of a fairer charging methodology for trade waste customers.
- Installation of additional flow metering and the development of dry-and-wet weather models of the urban wastewater reticulation networks.
- Assessment and extensive renewal of wastewater pump stations, to comply with new regulations.
- Standby generators at key pump stations, including Eltham and Ōpunakē.
- Tertiary treatment of wastewater prior to discharge to the environment, in line with upcoming freshwater reforms.
- Upgrade of treatment plants following BPO Reports generated during the consent renewal process.

Key Capital Projects

The Council is planning to undertake the following key capital projects. The full list of capital projects can be found in the Chapter “Our Costs in Detail”.

Description	Year	Total (\$)	Funding Source
CCTV Inspection of Sewer Conditions	Over 10 years	\$2m	Renewals
Tertiary treatment WWTP – Hāwera, Pātea, Kaponga, Manaia & Waverley	Over 10 years	\$43.2m	Capital
Wastewater pipe renewals	Over 10 years	\$25m	Renewals
Hāwera new anaerobic lagoon	Years 1 to 4	\$6.3m	Renewals
South Taranaki Business Park wastewater	Years 1 to 3	\$3.8m	Capital
Treatment plant renewals	Over 10 years	\$2.7m	Renewals
Ōpunakē wetland soakage field enhancements	Year 1	\$495k	Renewals

Significant Negative Effects

Activity	Well-Being	Significant Effect	Mitigation
Wastewater overflow	<p>Mana Taiao/ Environmental Well-being</p> <p>Mana Oranga/Economic Well-being</p> <p>Mana Tangata/Social Well-being</p> <p>Mana Mauri / Cultural Well-being</p>	<p>Overflows of untreated sewage from the wastewater network due to blockages, pump station or other plant malfunction, electrical failure for pump stations, inflow/infiltration of stormwater into the sewerage network and/or insufficient capacity pose a potential serious risk to the health, social and cultural wellbeing of the community and the environment.</p>	<p>Compliance with resource consents. Regular monitoring and implementation of the Inflow and Infiltration Management Plan.</p> <p>Continuing our maintenance programme and environmental controls.</p> <p>Providing emergency storage capacity at pump stations for sewage overflow.</p> <p>Backup electrical generators at key pump stations.</p>

Wastewater discharge	<p>Mana Taiao/ Environmental Well-being</p> <p>Mana Tangata/Social Well-being</p>	Discharge of sewage through the outfalls may cause environmental and health issues.	<p>Compliance with resource consents.</p> <p>Regular monitoring of plant performance, the ocean outfall and environment.</p> <p>Rāhui on collection of seafood and public information campaigns implemented immediately.</p>
Unmonitored trade waste	<p>Mana Taiao/ Environmental Well-being</p> <p>Mana Tangata/Social Well-being</p> <p>Mana Oranga/Economic Well-being</p>	Unmonitored trade waste discharges pose a significant risk to wastewater infrastructure, the health and safety of operations staff and the health and wellbeing of the community and the environment.	<p>Trade Waste Officer employed to monitor compliance with Trade Waste Bylaw 2017.</p> <p>Penalties can be imposed by the Council for any breaches of the Trade Waste Bylaw 2017.</p> <p>Maintaining and operating our plants effectively.</p> <p>Building of collaborative approach with the major industries.</p>
Odour from sewerage and trade waste	<p>Mana Taiao/ Environmental Well-being</p> <p>Mana Tangata/Social Well-being</p>	Odours produced from the collection and treatment of trade waste and domestic sewage can be offensive.	<p>Management of trade waste in terms of the Trade Waste Bylaw.</p> <p>Maintaining and operating our pump stations, pipelines and plants effectively</p>

Wastewater

Level of Service	Performance Measure	Target	Target	Target	Target
	<i>C=customer measure</i>	2021/22	2022/23	2023/24	Years 4 - 10
	<i>T=technical measure</i>				
Sewage is managed without risk to public health	(T) Median response time for service personnel to attend overflow. <i>DIA Performance Measure 3a</i>	≤ 2 hrs	≤ 2 hrs	≤ 2 hrs	≤ 2 hrs
	(T) Median response time for service personnel to resolve overflow. <i>DIA Performance Measure 3b</i>	≤ 5 hrs	≤ 5 hrs	≤ 5 hrs	≤ 5 hrs
	(C) Number of customer complaints per year relating to odours from wastewater pump stations or treatment facilities (per 1,000 connections). <i>DIA Performance Measure 4a</i>	≤ 1	≤ 1	≤ 1	≤ 1
	(C) Number of complaints received about sewerage system faults (per 1,000 connections). <i>DIA Performance Measure 4b</i>	≤ 39	≤ 38	≤ 37	≤ 37
	(C) Number of complaints received about sewerage system blockages (per 1,000 connections).	≤ 15	≤ 14	≤ 13	≤ 13

	DIA Performance Measure 4c				
	(C) Number of complaints received about response to issues (per 1,000 connections).	≤ 3	≤ 3	≤ 3	≤ 3
	DIA Performance Measure 4d				
Sewage is managed without risk to public health.	(C) Total number of complaints (per 1000 connections).	≤ 52	≤ 51	≤ 50	≤ 50
	DIA Performance Measure 4a-4d				
	(T) Number of dry weather overflows per 1,000 connections.	≤ 1	≤ 1	≤ 1	≤ 1
	DIA Performance Measure 1				
	(T) Number of abatement notices received for discharges.	≤ 1	≤ 1	≤ 1	≤ 1
	DIA Performance Measure 2a				
	(T) Number of infringement notices received for discharges.	0	0	0	0
	DIA Performance Measure 2b				

Sewage does not affect the quality of the environment.	(T) Number of enforcement orders received for discharges. <i>DIA Performance Measure 2c</i>	0	0	0	0
	(T) Number of convictions received for discharges. <i>DIA Performance Measure 2d</i>	0	0	0	0
Residents are satisfied with Wastewater services overall.	(C) % of consumers satisfied with the Wastewater services overall.	≥ 85%	≥ 85%	≥ 85%	≥ 85%

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