

Water Supply

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What we do

Council operates and maintains the Gisborne water supply from its source supply being the Mangapoike Dams, Te Arai Bush Intake and the Waipaoa River, via water treatment infrastructure at Waingake and Waipaoa to the water reticulation network, including reservoirs,

pump stations and the connections from the street mains to all serviced property boundaries. At commercial metered connections Council owns the water meter and backflow preventer and charges for water used.

The Gisborne city system provides water to communities adjacent to the Waingake bulk water-main, which includes the communities of Manutuke and Papatu Road. Parts of the Poverty Bay flats adjacent to the Waipaoa bulk water-main are also supplied.

The following communities are reticulated by Council administered supplies:

- Gisborne city, including parts of Manutuke and Makaraka
- Te Karaka (augmented supply with private rainwater tanks)
- Whatatutu (augmented supply with private rainwater tanks).

Asset Summary Overview of the Public Water Supply System

Description	Gisborne City	Te Karaka	Whatatutu	Total
Population Served	31,660	493	280	32,483
No. of Service Connections	13,132	161	42	13,335
Length of Reticulation [km's]	267.7	4.1	2.7	274.5
No. of Pump Stations	8	1	1	10
No. of Fire Hydrants	1517	0	0	1517
No. of Valves	1801	31	22	1854
How Water Sourced	Dams, Rivers	Bores	Bores	
Total Volume of Water Produced [m ³ /a]	5.7M	36,500	11,960	M5.75
Total Volume of Water Sold [m ³ /a]	2M	0	0	2M
Average Volume of Water produced [m ³ /d]	15,500	142	33	15675
Replacement Value (\$-000)	182,520	346	227	183,135
Depreciated Replacement Value (\$-000)	100,379	68	24	100,514

Safe drinking water has a significant health benefit to the community in both quality and quantity. The community agrees this is a significant activity for Council. To ensure water quality, we treat water to the New Zealand Drinking Water Standards and consistently meet this standard for Gisborne city. We have suitably qualified and trained staff operating on a 24/7 basis to help ensure compliance.

We also aim to deliver to our customers consistent flow, pressure and ensure adequate storage of water required for Gisborne city's emergency fire-fighting services and emergency management in the event of natural or system emergencies.

The following area communities are reticulated by non-Council administered supplies:

- Te Puia Springs.

All other areas are non-reticulated, private supply systems sourced from roof catchments, groundwater bores/springs or surface water and not Council administered or Council owned.

Why we do it

To provide a continuous, sustainable, safe water supply and provide assured availability of water for fire-fighting purposes to the Gisborne city supply area and the townships of Te Karaka and Whatatutu.

Key components:

- Provide potable water for domestic, commercial and industrial purposes.

- Provide water for fire protection.
- Provide water to public service providers and community facilities such as schools, hospitals, sporting facilities and grounds etc.

This activity contributes to the following Community Outcomes

- **Tairāwhiti Tangata**
- **Tairāwhiti Taonga**

Where are we now

- The activity is being delivered using in-house resources and managing a number of external resources – predominantly Fulton Hogan for network maintenance and Opus International Consultants for specific engineering consultancy services.
- Continuous process improvements to the Waingake water treatment plant combined with excellent raw water quality from the Mangapoike water catchments ensure a consistent supply of compliant drinking water. Regular upkeep and maintenance of the Waipaoa Augmentation Plant ensures that a back-up supply during times of peak water demand or emergencies is ready to kick in.
- Ongoing hydraulic modelling is being carried out to identify network capacity issues and ensure the requirements of the New Zealand Firefighting practice are met.
- Condition and performance assessments for all assets are being carried out to aid with an informed decision making process in regards to network renewals and upgrades.
- Council operates a robust pricing model to fairly identify costs between industrial users who are metered and residential users who are rated. Residential users are more at risk of water restrictions before industrial users are also asked to conserve water.

Challenges and Opportunities

Future challenges and opportunities facing the activity:

- **Freshwater Plan:** The proposed draft Freshwater Plan is likely to impact on the Te Arai and Waipaoa River source water takes, which is likely to cause supply/demand issues due to possible water take limitations. This would cause a faster draw-down of Mangapoike dam storage, in particular during extended dry periods. This will need to be supported by a demand management strategy once the requirements of the Freshwater Plan are known.
- **Industrial and residential peak water demand:** At periods of peak water demand the system is under

significant pressure to service the large industrial users in full production, when at the same time there is competition from residential customers for water to irrigate.

- **Security of supply risks:** Land stability risks surrounding the Waingake trunk pipeline alignment need to be assessed. The planned harvesting of mature pine trees in the water catchments is likely to significantly increase the risk of land instability.
- **Climate change:** Climate change predicts similar annual rainfall, higher intensity rain events but longer lengths between actual rain events and even more draughts. As part of a planned demand strategy Council will need to review existing and future water infrastructure requirements and the implications to the security of supply.
- **Land Use:** There is also a possible change in agriculture/horticulture land use and therefore a change in water requirements and competition for water.
- **Demographics:** The demographics for Tairāwhiti identifies a static and ageing population. The historic trend of the rural townships is an incremental declining population. This may result in lower volume demand for the aspects of the water activity that service the rural townships (reticulation and treatment at Te Karaka and Whatatutu) while still retaining the demand for modern, quality services.

What are our plans for the next ten years ?

What have we been doing?	What will we do in years 1-10?
<ul style="list-style-type: none"> Upgrade to Te Karaka water supply. Continued replacement and renewals of water mains. 	<p>Years 1-3</p> <ul style="list-style-type: none"> Renewal of 580m section of Waingake water pipeline. Progress above ground repairs to the water pipeline and bridges to and from Waingake treatment plant. Commence replacement of asbestos cement pipes within Gisborne city which have reached the end of their useful life. Complete Whatatutu township water treatment upgrades subject to successful capital assistance funding from the Ministry of Health. Undertake Tuaraki Road water supply upgrade to include supply as part of the water serviced area at Manutuke Allocate \$50,000 to investigate the feasibility of water supplies to rural townships. <p>Years 1-10</p> <ul style="list-style-type: none"> Continue replacement of asbestos cement pipes within Gisborne city. Complete above ground repairs to the water pipeline and bridges, to and from Waingake treatment plant.
<p>We will achieve these plans by:</p> <p>Effective activity management planning and reporting, developing a professional framework for staff and a communications plan for the activity.</p>	

Levels of Service and Performance Measures

Level of Service	Performance measure	Results 2013/14	Target Years 1-3	Target Years 4-10
We provide water supply infrastructure that meets the needs of our community now and into the future by delivering safe, clean water in a sustainable manner.	The percentage of residents satisfied with the water supply system as found in the Annual Resident Satisfaction Survey.	67%	70%	80%
	Customer Satisfaction - The total number of complaints received by the local authority about any of the following: a) drinking water clarity b) drinking water taste c) drinking water odour d) drinking water pressure or flow e) continuity of supply, and f) the local authority's response to any of these issues expressed per 1000 connections to the local authority's networked reticulation system.	46.5 per 1000 connections	<50 per 1000 connections	<50 per 1000 connections
	Demand Management - The average consumption of drinking water per day per resident within the territorial authority district.	<330 l/p/d	308	295
	Fault Response Times - Where Council attends a call-out in response to a fault or unplanned interruption to its networked reticulation system, the following median response times measured: a) attendance for urgent call-outs: from the time that Council receives notification to the time that service personnel reach the site, and b) resolution of urgent call-outs: from the time that Council receives notification to the time that service personnel confirm resolution of the fault or interruption.	Measured but not reported	Urgent a) 2 Hour b) 8 Hours Routine c) 8 hours d) 2 days	Urgent a) 2 Hour b) 8 Hours Routine c) 8 hours d) 2 days

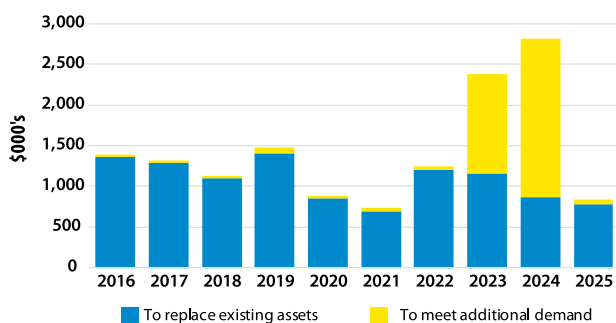
	c) attendance for non-urgent call-outs: from the time that Council receives notification to the time that service personnel reach the site, and d) resolution of non-urgent call-outs: from the time that Council receives notification to the time that service personnel confirm resolution of the fault or interruption.			
	Maintenance of the reticulation network - The percentage of real water loss from the local authority's networked reticulation system.	New Mandatory Measure	<15% of Total Consumption measured every 5 years	<15% of Total Consumption measured every 5 years
	Safety of Drinking Water - The extent to which the local authority's drinking water supply complies with: a) part 4 of the drinking-water standards (bacteria compliance criteria), and b) part 5 of the drinking-water standards (protozoal compliance criteria).	Gisborne City a.100% b. 100% Te Karaka a. 0% b. 0% Whatatutu a.0% b. 0%	Gisborne City a.100% b. 100% Te Karaka a.100% b. 100% Whatatutu a.100% b. 0%	Gisborne City a.100% b.100% Te Karaka a.100% b.100% Whatatutu a.100% b.100%

Forecast Activity Cost Statement

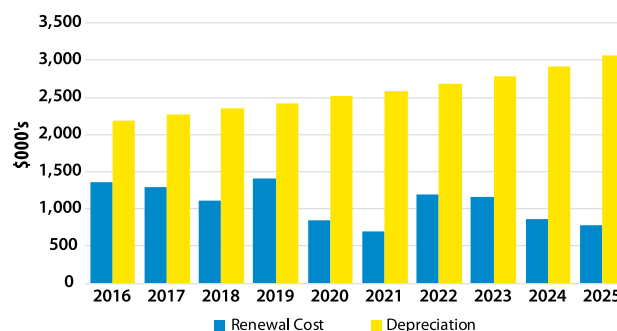
OPERATING REVENUE AND EXPENDITURE (\$000)	Budget 2015/16	Budget 2016/17	Budget 2017/18	Budget 2018/19	Budget 2019/20	Budget 2020/21	Budget 2021/22	Budget 2022/23	Budget 2023/24	Budget 2024/25
Operating Non Exchange Revenue	0	0	0	0	0	0	0	0	0	0
Operating Exchange Revenue	2,590	2,654	2,724	2,797	2,878	2,964	3,056	3,157	3,265	3,382
Operating Expenditure	4,991	4,947	5,282	5,222	5,420	5,601	5,834	6,166	6,527	6,847
Net Cost of Service	2,401	2,292	2,558	2,425	2,542	2,636	2,778	3,008	3,262	3,465

CAPITAL EXPENDITURE (\$000)	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
- to meet additional demand	28	30	32	65	37	39	43	1,216	1,941	54
- to improve level of service	0	0	0	0	0	0	0	0	0	0
- to replace existing assets	1,361	1,291	1,102	1,408	848	688	1,199	1,160	867	780
Capital Projects	1,389	1,321	1,134	1,473	884	727	1,241	2,377	2,808	834

Total Capital Projects



Depreciation v renewal capital assets



Capital Expenditure 2015-2025

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Description	LOS	Total Cost	2015/16 \$000s	2016/17 \$000s	2017/18 \$000s	2018/19 \$000s	2019/20 \$000s	2020/21 \$000s	2021/22 \$000s	2022/23 \$000s	2023/24 \$000s	2024/25 \$000s
Watermain Renewals and Upgrade	GROWTH MAINTAIN	6,188	20	184	521	944	523	524	1,023	1,025	746	678
Waingake Watermain Upgrades	MAINTAIN	3,826	640	1,105	579	493	323	162	173	133	118	100
Taruheru Block Water Extension	GROWTH	1,582	0	0	0	0	0	0	0	481	1,101	0
Booster Station and Reservoir Supply main	GROWTH	1,480	0	0	0	0	0	0	0	689	791	0
Whatatutu Water Supply Upgrades	MAINTAIN	550	550	0	0	0	0	0	0	0	0	0
Local Urban Upgrades	GROWTH MAINTAIN	413	29	32	34	36	39	41	45	49	52	56
Manutuke - Tuaraki Road Reticulation Extension	MAINTAIN	150	150	0	0	0	0	0	0	0	0	0
Totals		14,189	1,389	1,321	1,134	1,473	885	727	1,241	2,377	2,808	834