Ngā puna wai

Water supply

Greater Wellington
Te Pane Matua Taiao

Ko ā mātou mahi – What we do

Greater Wellington is responsible for collecting, treating and distributing safe and healthy drinking water to Wellington, Hutt, Upper Hutt and Porirua City councils. This work is carried out for Greater Wellington by Wellington Water Limited, a joint council-owned water management company. City and district councils are responsible for the distribution of water to households and businesses through their own networks. Providing the bulk water supply to the city councils involves managing an extensive network of infrastructure, ensuring safe, high-quality, secure and reliable water sources, and that our freshwater is sustainable.

Our priorities are focused on providing clean and sustainable drinking water and reducing water demand and providing bulk supply that is respectful to the environment.

Our priority is a bulk water supply that is robust, to ensure sufficient drinking water is available for the immediate future and for generations to come. We must also be able to cope with emergencies and the long-term impacts of climate change, while embracing the concept of Te Mana o te Wai on our source and ecology.

Risk prioritised investment balances future renewals and upgrade programmes giving us confidence in our investment decision making, increases our resilience and our ability to sustainably supply the district.

Did you know?

Last year central Government launched the **Three Waters Reform** to improve local government water service arrangements.

The Government's starting intention is to reform local government's three waters services into a small number of multi-regional entities with a bottom line of public ownership, however the size and design of these entities are yet to be determined.

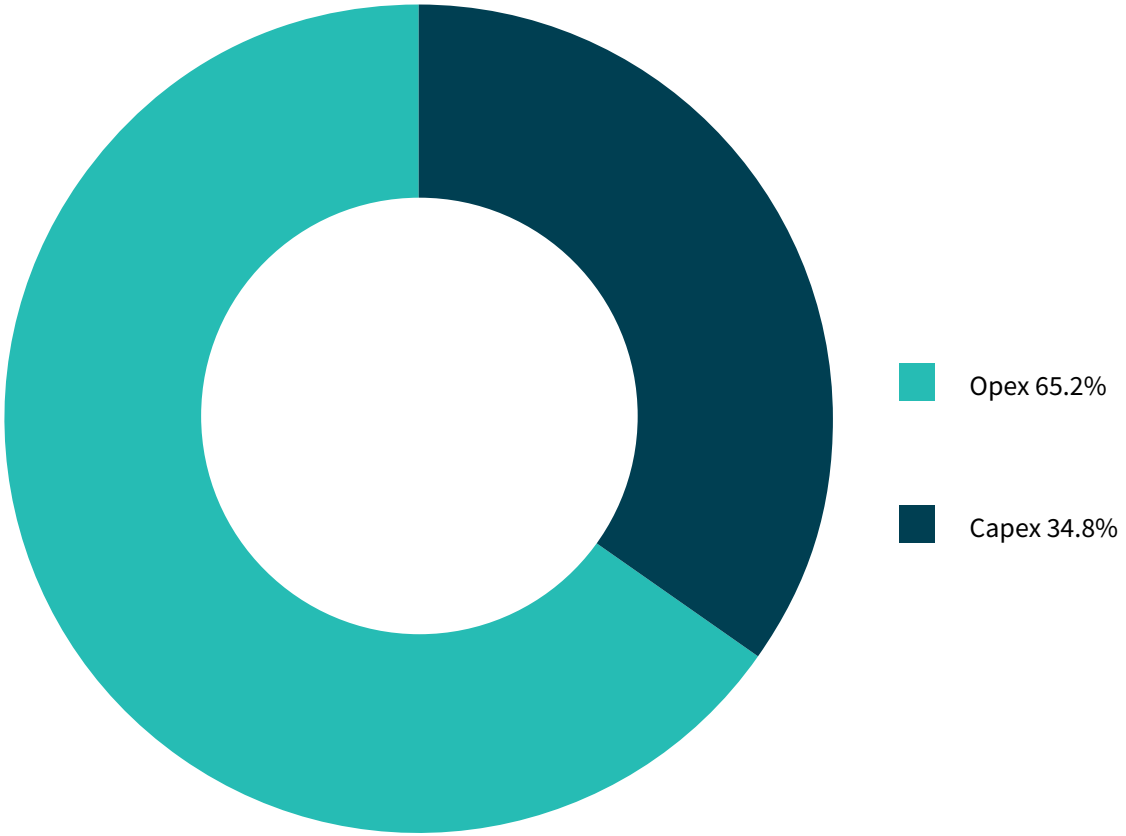
Drinking water supply is a critical service and will continue to be provided by Greater Wellington throughout the establishment and transfer period.

For more information visit: www.dia.govt.nz/three-waters-reform-programme

This group of activities contributes to the Community Outcomes:

- **Thriving environment**
  Water supply is respectful to the environment that we live in
- **Connected communities**
  The region has sufficient water supply that is of high quality and safe
- **Resilient future**
  Bulk water supply is sustainable to the community as our environment changes

Ten year average spend on CAPEX and OPEX for Water Supply



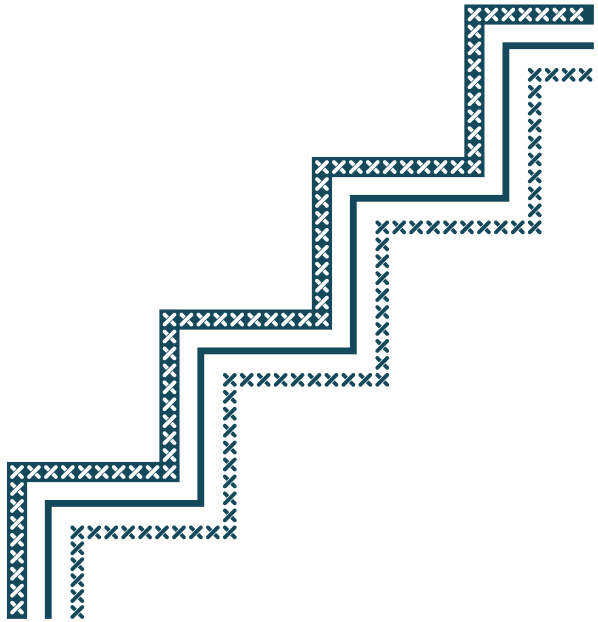
Relationship with mana whenua and mātāwaka

Tāngata whenua play a strong role planning for capacity of resources, water and ensuring the mauri of our environment is maintained. Working with tāngata whenua iwi is critical to our ability to deliver many of our water supply projects. Te Mana o te Wai recognises and realises the mana of our waters. Te Mana o te Wai is a concept for managing all waters in a way that prioritises the health and wellbeing of the water (quantity, quality and ecology).

Te Mana o te Wai is a cloak over all Greater Wellington bulk water supply work, freshwater regulation and Resource Management Act (RMA) activities functions and duties.

All persons and duties in these functions must give effect to Te Mana o te Wai. This whole system approach recognises Te Ao Maori world view and the fundamentals of tikianga, matauranga Māori and kaitaikitanga, (to name a few).

Two iwi groups have joined the committee overseeing Wellington Water Limited. Te Rūnanga Toa Rangatira Inc. and Taranaki Whānui now each have a seat on the Wellington Water Limited Committee, which also comprises a single member of each shareholding council.



Opportunities and challenges

Opportunities

- Embracing and realising Te Mana o te Wai and managing all waters in a way that prioritises the health and wellbeing of our water (quantity, quality and ecology) alongside a kaupapa Māori approach in our work programmes and services
- Community awareness of the value of water supply services and their provision will drive proactive leak detection and effective water conservation initiatives
- The establishment of a regulator and the broader reform process to ensure a consistent standard of safe and reliable drinking water across the country, but also health and wellbeing of all waters across the whole water cycle
- Climate change impacts are being felt now and within the lifetime of this LTP will be felt more keenly. This requires deliberate, evidence-based decisions in the short term, to enable our long term, well-planned adaptation approach, including how, and where, we deliver water assets and services
- Government progress on its infrastructure priorities of transport, housing and water, through new delivery mechanisms such as Te Waihanga (Infrastructure Commission) and Taumata Arowai (water services regulator) is promoting approaches to infrastructure that are adaptive, optimised and future oriented – collaborative, with consideration for long-term use, and lifetime cost and demand factors

Challenges

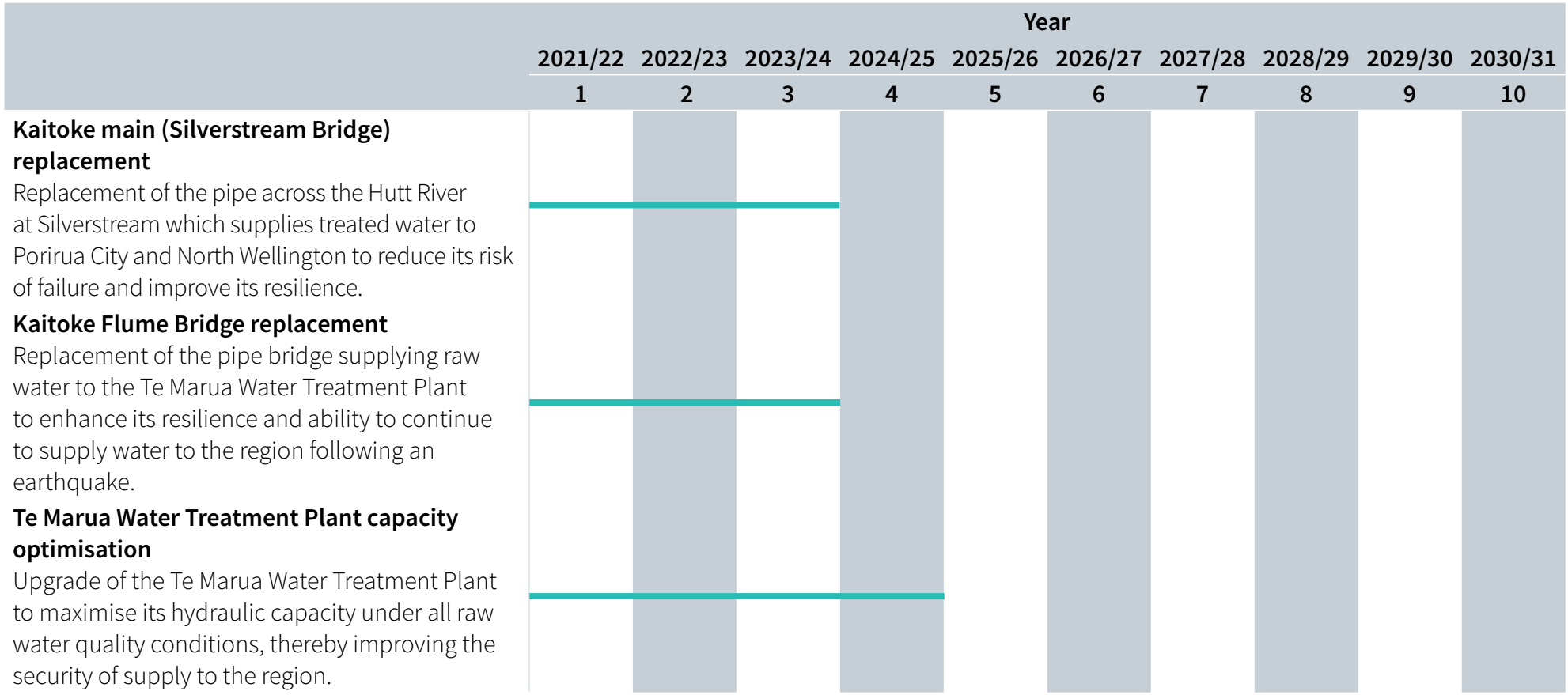
- Regulatory reforms, stricter water quantity and quality rules, decarbonisation, adapting to climate change, natural disasters, urban growth and demand and the structural ageing of infrastructure all require changes to what was business-as-usual service delivery
- We are not meeting our one in 50 year drought resilience level of service. Changes in climate, water shortages during drought years and as demand from increases in population will contribute to our ability to meet current and future demand
- Funding and delivery of a significant capital work programme to maintain levels of service and support growth
- Reducing emissions associated with the abstraction, treatment and supply of drinking water and well as construction of new carbon intensive (concrete, steel) assets
- Skills shortage at all levels of the engineering industry from experienced consultants and contractors, to skilled labour are limiting the availability of contractors and consultants to progress programmed works. The limited availability is also leading to increased costs and timeframes for delivery

Significant negative effects and how we will address them

Water supply infrastructure for the collection, storage, treatment and distribution of water can have a negative effect on environmental wellbeing through water abstraction levels in groundwater and in rivers, and the use of electricity for treating and pumping water. A new supply could also result in an increase in these effects as well as on indigenous biodiversity.

We will address this by identifying the environmental impacts of existing water supply activities and very closely monitoring these through resource consents and an ISO 14001 accredited environmental management system. We are also reducing our impacts by continuing to use electricity and chemicals more efficiently and by encouraging people to use water wisely.

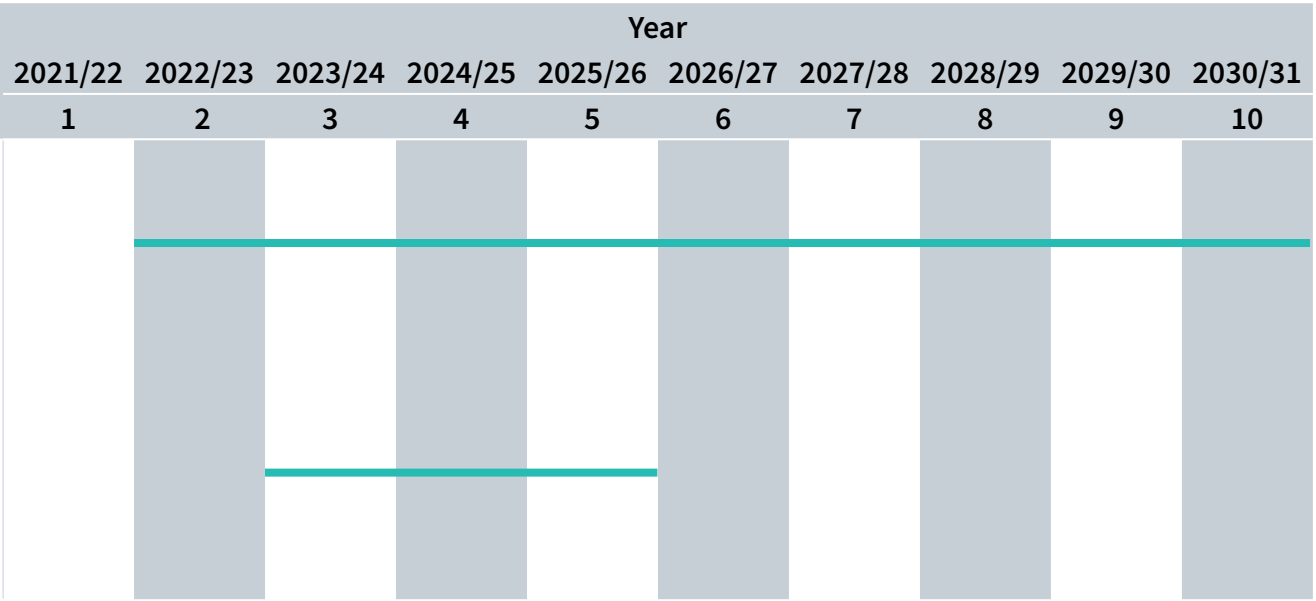
Ko ngā kaupapa me ngā hōtaka matua o te rōpū Puna Wai – Projects and key programmes of the Water supply activity group



Kaitoke main (Silverstream Bridge) replacement
Replacement of the pipe across the Hutt River at Silverstream which supplies treated water to Porirua City and North Wellington to reduce its risk of failure and improve its resilience.

Kaitoke Flume Bridge replacement
Replacement of the pipe bridge supplying raw water to the Te Marua Water Treatment Plant to enhance its resilience and ability to continue to supply water to the region following an earthquake.

Te Marua Water Treatment Plant capacity optimisation
Upgrade of the Te Marua Water Treatment Plant to maximise its hydraulic capacity under all raw water quality conditions, thereby improving the security of supply to the region.



Gear Island and Waterloo wells replacement
Replacement of the boreholes at Gear Island and Waterloo which are approaching the end of their service life to reduce the risk of their failure and interruptions to supply.

Te Marua Water Treatment Plant Clarifiers upgrades
Upgrades of the clarifiers at the Te Marua Water Treatment Plant to improve their resilience and ability to continue to treat and supply water to the region following an earthquake.

Ko ngā inenga mahi – Performance measures

Community Outcome	Strategic Priorities	Key Result Areas	Levels of Service	Performance Measures	Baseline (2019/20)	2021/22 Target	2022/23 Target	2023/24 Target	2024-31 Target
Thriving Environment	A clean, safe and sustainable future drinking water supply		Provide water that is safe, and pleasant to drink	Compliance with part 4 of the drinking water standards (bacteria compliance criteria)[23]	100%	Compliant	Compliant	Compliant	Compliant
				Compliance with part 5 of the drinking water standards (protozoal compliance criteria)[23]	100%	Compliant	Compliant	Compliant	Compliant
				Customer satisfaction: number of complaints regarding water clarity, taste, odour, pressure/flow, and supply[23]	0	<20 complaints per 1,000 connections	<20 complaints per 1,000 connections	<20 complaints per 1,000 connections	<20 complaints per 1,000 connections
				Number of waterborne disease outbreaks	0	0	0	0	0
Resilient Future	Reduce water demand to support a sustainable water supply to avoid unnecessary investment in significant new water supply infrastructure	Support the reduction of the overall bulk water supply to the four metropolitan cities by 25 percent by 2030	Provide a continuous and secure bulk water supply	Average consumption of drinking water per day per resident within the TA districts[23]	369.8 L/d/p	<375 L/d/p	<375 L/d/p	<375 L/d/p	<375 L/d/p

23 Non-Financial Performance Measures Rules 2013, Water Supply (DIA Mandatory Measure).

Community Outcome	Strategic Priorities	Key Result Areas	Levels of Service	Performance Measures	Baseline (2019/20)	2021/22 Target	2022/23 Target	2023/24 Target	2024-31 Target
Resilient Future	Reduce water demand to support a sustainable water supply to avoid unnecessary investment in significant new water supply infrastructure	Support the reduction of the overall bulk water supply to the four metropolitan cities by 25 percent by 2030	Provide a continuous and secure bulk water supply	Maintenance of the reticulation network: Percentage of real water loss from the networked reticulation system[23]	0.07%	+/- 0.25%	+/- 0.25%	+/- 0.25%	+/- 0.25%
				Response times to attend urgent call-outs in response to a fault or unplanned interruption to the network reticulation system[23]	Time to reach site: 0 min Time to confirm resolution: 0 hours	Time to reach site: <90min Time to confirm resolution: <8 hours	Time to reach site: <90min Time to confirm resolution: <8 hours	Time to reach site: <90min Time to confirm resolution: <8 hours	Time to reach site: <90min Time to confirm resolution: <8 hours
				Response times to attend non-urgent call-outs in response to a fault or unplanned interruption to the network reticulation system[23]	Time to reach site: 0.9 hours Time to confirm resolution: 1.25 days	Time to reach site: <72 hours Time to confirm resolution: <20 days	Time to reach site: <72 hours Time to confirm resolution: <20 days	Time to reach site: <72 hours Time to confirm resolution: <20 days	Time to reach site: <72 hours Time to confirm resolution: <20 days
				Number of events in the bulk water supply preventing the continuous supply of drinking water to consumers	0	0	0	0	0
				Sufficient water is available to meet normal demand except in a drought with a severity of greater than or equal to 1 in 50 years	6.9%	<2%	<2%	<2%	<2%

23 Non-Financial Performance Measures Rules 2013, Water Supply (DIA Mandatory Measure).

He kupu mō te Tahua – Funding impact statements

WATER SUPPLY PROSPECTIVE FUNDING IMPACT STATEMENT FOR THE YEAR ENDING 30 JUNE

	2020/21 Budget $000s	2021/22 Plan $000s	2022/23 Plan $000s	2023/24 Plan $000s	2024/25 Plan $000s	2025/26 Plan $000s	2026/27 Plan $000s	2027/28 Plan $000s	2028/29 Plan $000s	2029/30 Plan $000s	2030/31 Plan $000s
Sources of operating funding											
General rate	-	-	-	-	-	-	-	-	-	-	-
Targeted rate	-	-	-	-	-	-	-	-	-	-	-
Subsidies and grants for operating purposes	-	-	-	-	-	-	-	-	-	-	-
Fees and charges	-	-	-	-	-	-	-	-	-	-	-
Fines, infringement fees, and other receipts[1]	36,609	39,881	43,284	46,261	48,676	51,246	53,621	55,612	57,670	59,965	61,902
Total operating funding	**36,609**	**39,881**	**43,284**	**46,261**	**48,676**	**51,246**	**53,621**	**55,612**	**57,670**	**59,965**	**61,902**
Applications of operating funding											
Payments to staff and suppliers	22,232	23,863	25,564	27,158	27,816	28,665	29,720	30,441	31,380	32,541	33,366
Finance costs	5,097	5,001	5,454	5,912	6,264	6,361	6,200	6,147	6,371	6,724	6,811
Internal charges and overheads applied	2,469	2,831	2,914	2,978	3,021	3,056	3,106	3,178	3,245	3,308	3,291
Total applications of operating funding	**29,798**	**31,695**	**33,932**	**36,048**	**37,101**	**38,082**	**39,026**	**39,766**	**40,996**	**42,573**	**43,468**
Surplus/(deficit) of operating funding	**6,811**	**8,186**	**9,352**	**10,213**	**11,575**	**13,164**	**14,595**	**15,846**	**16,674**	**17,392**	**18,434**
Sources of capital funding											
Subsidies and grants for capital expenditure	-	-	-	-	-	-	-	-	-	-	-
Increase / (decrease) in debt	27,162	29,931	32,571	20,384	32,217	18,610	21,004	11,267	9,253	9,143	12,707
Investment redemption	-	5,000	-	-	-	-	-	-	-	-	-
Total sources of capital funding	**27,162**	**34,931**	**32,571**	**20,384**	**32,217**	**18,610**	**21,004**	**11,267**	**9,253**	**9,143**	**12,707**
Applications of capital funding											
Capital expenditure											
- to meet additional demand	-	-	-	-	-	-	-	-	-	-	-
- to improve the level of service	7,919	12,976	14,217	11,410	3,810	2,378	-	-	-	-	-
- to replace existing assets	23,502	22,271	24,763	16,120	36,720	25,922	31,895	23,165	21,742	22,099	26,507
Increase / (decrease) in investments	3,061	7,870	2,943	3,067	3,262	3,474	3,704	3,948	4,185	4,436	4,634
Increase / (decrease) in reserves	(509)	-	-	-	-	-	-	-	-	-	-
Total applications of capital funding	**33,973**	**43,117**	**41,923**	**30,597**	**43,792**	**31,774**	**35,599**	**27,113**	**25,927**	**26,535**	**31,141**
Surplus/(deficit) of funding	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Water supply levy	35,860	39,319	42,674	45,609	47,891	50,315	52,529	54,331	56,241	58,362	60,183
Depreciation on Water Supply assets	15,969	16,369	17,055	15,977	16,386	17,075	17,409	17,837	18,110	18,269	18,607

[1] This includes the Water supply levy charged to Wellington, Upper Hutt, Hutt and Porirua city councils

This statement is not an income statement. It excludes all non-cash transactions such as depreciation and valuations.

For more information on the revenue and financing mechanisms applicable to this group of activities, please refer to Greater Wellington's Revenue and Financing Policy.

All figures on this page exclude GST.

WATER SUPPLY PROSPECTIVE FUNDING INFORMATION FOR THE YEAR ENDING 30 JUNE

	2020/21 Budget $000s	2021/22 Plan $000s	2022/23 Plan $000s	2023/24 Plan $000s	2024/25 Plan $000s	2025/26 Plan $000s	2026/27 Plan $000s	2027/28 Plan $000s	2028/29 Plan $000s	2029/30 Plan $000s	2030/31 Plan $000s
Operating funding											
Water Supply	36,609	39,881	43,284	46,261	48,676	51,246	53,621	55,612	57,670	59,965	61,902
Total operating funding	**69,609**	**39,881**	**43,284**	**46,261**	**48,676**	**51,246**	**53,621**	**55,612**	**57,670**	**59,965**	**61,902**
Applications of operating funding											
Water Supply	29,798	31,695	33,932	36,048	37,101	38,082	39,026	39,766	40,996	42,573	43,468
Total applications of operating funding	**29,798**	**31,695**	**33,932**	**36,048**	**37,101**	**38,082**	**39,026**	**39,766**	**40,996**	**42,573**	**43,468**
Capital expenditure											
Water sources	-	-	-	-	-	-	-	-	-	-	-
Water treatment plants	3,979	10,579	16,886	19,956	19,325	8,497	6,512	7,399	6,881	6,534	6,588
Pipelines	9,892	14,326	15,726	2,279	-	-	-	-	-	-	-
Pump stations	1,405	440	3,275	1,351	4,456	6,833	8,646	4,419	3,146	3,481	7,842
Reservoirs	-	470	810	15	4,199	-	-	15	15	16	-
Monitoring and control	345	1,129	1,076	1,627	1,725	1,911	1,962	1,133	1,215	1,289	986
Seismic protection	2,610	-	-	-	-	-	-	-	-	-	-
Other	13,134	8,246	1,149	2,243	10,765	10,997	14,711	10,134	10,418	10,710	11,020
Capital project expenditure	**31,365**	**35,190**	**38,922**	**27,471**	**40,470**	**28,238**	**31,831**	**23,100**	**21,675**	**22,030**	**26,436**
Land and buildings	-	-	-	-	-	-	-	-	-	-	-
Plant and equipment	56	57	57	59	60	62	64	65	67	69	71
Vehicles	-	-	-	-	-	-	-	-	-	-	-
Total capital expenditure	**31,421**	**35,247**	**38,979**	**27,530**	**40,530**	**28,300**	**31,895**	**23,165**	**21,742**	**22,099**	**26,507**

This statement is not an income statement. It excludes all non-cash transactions such as depreciation and valuations.

For more information on the revenue and financing mechanisms applicable to this group of activities, please refer to Greater Wellington's Revenue and Financing Policy.

All figures on this page exclude GST.