Kāpiti Coast
DISTRICT COUNCIL
Me Huri Whakamuri, Ka Titiro Whakamua

Kāpiti Coast Water Conservation Report 2025/26

FINAL

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Revision History

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on behalf of	Kāpiti Coast District Council		

Executive Summary

Overview

Kāpiti Coast District Council (the Council) is committed to providing a safe reliable service and achieving the adopted water conservation target. This Water Conservation Report has been prepared to:

- Document performance against the 490 litres/person/day (L/p/d) peak water target and water conservation management activities in 2025/26.
- Meet the reporting requirements of the consents governing the operation of Paekākāriki, Waikanae, Hautere and Ōtaki water supply schemes.
- Set out the proposed water conservation work programme for 2026/27.

Key water conservation activities in 2025/26

In 2025/26, the Council focused on continued use of water meter-based charging to encourage efficient water use; continued assistance to the district's residents to reduce water use and repair leaks; and monitoring network performance and targeted leak location and repair activities.

District peak water met 490 L/p/d again in 2025/26

At a district level, peak demand stayed well below the 490 L/p/d target. The Waikanae, Raumati and Paraparaumu (WPR), Paekākāriki met the 490 L/p/d target. The peak demand in Ōtaki was 533 L/p/d; however, considering reservoir commissioning, the next highest peak was only 480L/p/d, so technically within the target. The target does not specifically apply to Hautere as this is a restricted rural water supply scheme where each connection has a specified allocation (as opposed to "on-demand").

Table 1 shows the 2025/26 peak demand (L/p/d). The data is adjusted each year to reflect updated population projections. **Figure 1** shows district wide water use throughout the year, showing evidence of a large leak in the Paraparaumu network towards the end of the financial year. District wide water usage has decreased from 2024/25, which reflects the Council's continued effects in leak detection and demand management.

Year	Ōtaki (L/p/d)	Hautere (L/p/d)	WPR (L/p/d)	Paekākāriki (L/p/d)	District-wide (L/p/d)
2017/18	543.9	1137.9	371.7	517.9	398.7
2018/19	497.0	1026.4	383.0	566.5	399.6
2019/20	504.1	1029.5	404.7	637.1	426.7
2020/21	507.1	969.7	388.1	415.3	406.5
2021/22	612.9	964.0	417.7	368.4	445.4
2022/23	578.2	975.6	440.8	426.7	445.5
2023/24	518.8	972.9	365.7	415.5	379.6
2024/25	481.8	1076.4	344.4	482.8	361.7
2025/26	533.2	976.2	358.2	418.3	358.9
Target reached		N/A			

Table 1: Comparing peak daily demand for each water supply and the Kāpiti Coast District

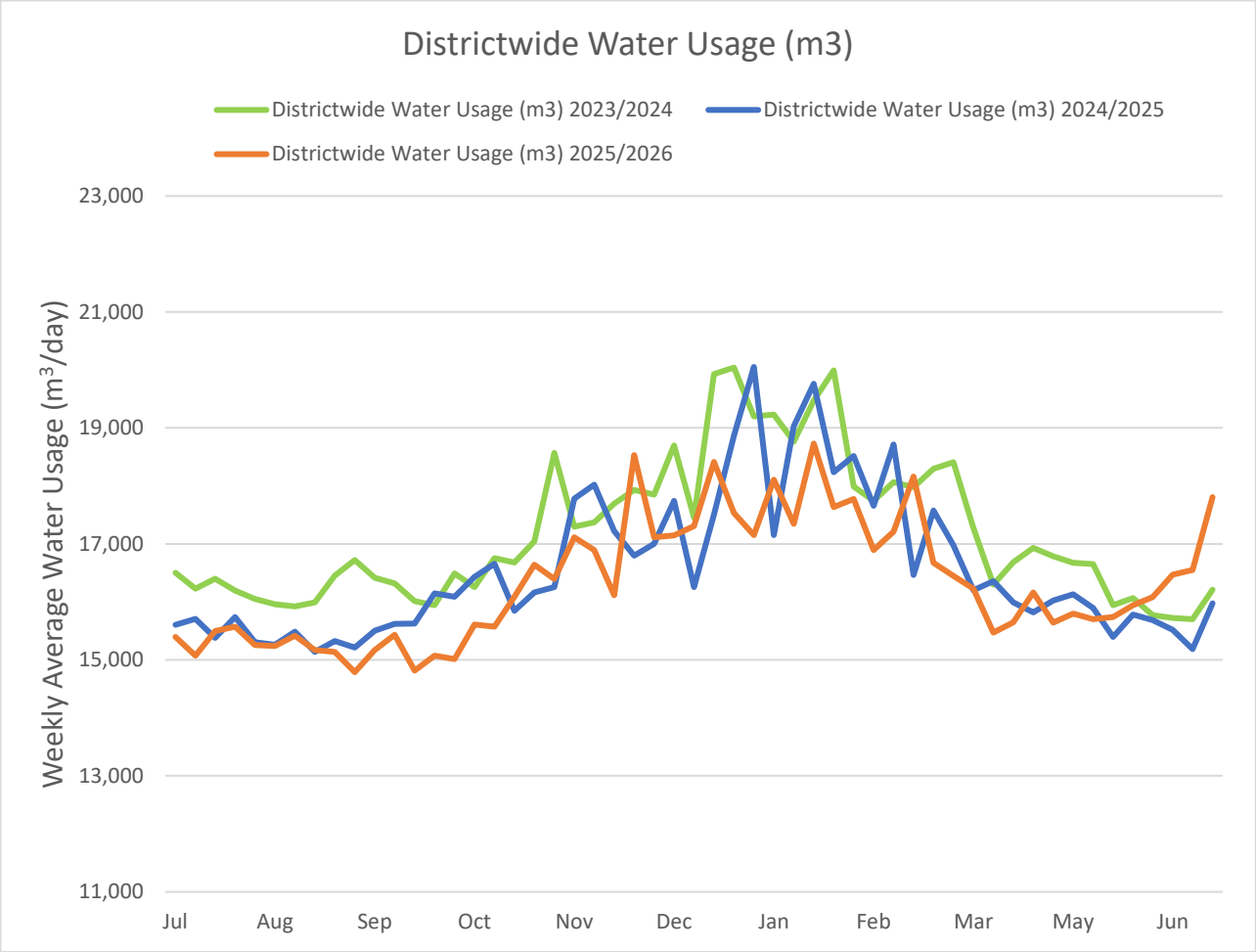

Figure 1: Comparing the District water demand for the last three years.

Investigating and repairing public and private leaks

The Council commissioned leak detection across much of the network including all of Ōtaki & Paekākāriki, Te Moana Road DMA and Hemi Street, Matai DMA, Raumati DMA and parts of the Hautere Supply. The investigations covered 178 km, 38% of the 471 km of water networks. The leak investigations identified approximately 495 litres/minute or approximately 710 m³/day district wide of water savings. Onsite rainwater tanks are installed for the developments recently completed and made mandatory for the development being approved. This helps in water conservation, stormwater retention and delayed release towards mitigating the flooding risk. The was also a large leak detected in the reporting period at the Ōtaki racecourse of approximately 100 m3 per day.

Estimated water loss lower in 2025/26 than 2024/25

The Council uses the Water loss Benchmark approach to estimate water loss for our water supply schemes. **Table 2** summarises the estimated daily water loss for the district over the last three years. In 2025/26, the Council reduced slightly both peak and average daily water losses, with a peak annual reduction of approximately 0.8% and an average demand reduction of approximately 1.5% with waterloss decreasing by approximately 4.2%.

The results for each scheme are set out in Section 4 of this report.[1]

District Wide	2023/24	2024/25	2025/26
Peak day	(21,749 m^3/day) or 380 L/p/d	(21,349 m^3/day) or 362 L/p/d	(21,181 m^3/day) or 359 L/p/d
Average day	(17,186 m^3/day) or 300 L/p/d	(16,548 m^3/day) or 280 L/p/d	(16,301 m^3/day) or 276 L/p/d
Current Annual Water Loss	1,314,300 m^3 annually or 191 L/conn/day	1,318,300 m^3 annually or 192 L/conn/day	1,263,200 m^3 annually or 181 L/conn/day
International Leakage Index (ILI)	2.7 (B Band)	2.7 (B Band)	2.5 (B Band)

Table 2: Comparing the performance of The Council water supplies[2]

The Council will continue to engage specialist leak detection contractors to carry out acoustic leak surveys for 2026/27. The scope of works includes an acoustic ground survey by water zone to test all fittings (meters, valves, hydrants, etc., where practical) using acoustic leak detection instruments.

Work programme for 2026/27

The Council's focus for 2026/2027 will be to:

- Locate and repair leaks in the Ōtaki, WPR and Paekākāriki, including finding and repairing the large leak in Paraparaumu identified towards the end of the financial year.
- Monitor water zones in Hautere network and undertake investigations as needed.
- Continue water mains and laterals renewal programme based on risk conditions and performance information.
- Continue to support the community to use water, wisely.
- Implement long-range, wide area (LoRa) remote metering network and trial installation on high usage properties and multi-primary/check meters to identify leakage.
- Continue installing smart meters on properties with difficult access.

A total of $660,000 funding is available in 2026/27 for water conservation, water metering, leak repair and demand management activities. **Table 12** on Page 23 provides more detail on each Council budget related to sustainable water management.

[1] The previous years leakage figures have been adjusted following a comprehensive audit and we have backdated data and this shows an increase from previously reported figures.

[2] The Council now includes Hautere Water Supply in reported figures.

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1 Introduction

1.1 Introduction

This report provides a summary of the Council's progress towards achieving the Kāpiti Coast district's water conservation target of 490 litres per person per day (L/p/d) and provides details of water conservation and demand management activities undertaken in 2025/26 and proposed for 2026/27. This report covers the four water supplies managed by the Council, being Ōtaki Supply, Hautere Water Supply, Waikanae Supply (servicing Waikanae, Paraparaumu and Raumati (WPR)) and Paekākāriki Water Supply.

1.2 Background

The 2002 Sustainable Water Management Strategy (the "Strategy") sets out the Council's vision for water management in the district to 2052. The Strategy recognises that sustainable water management is a district-wide issue and needs to account for residential growth and economic development. The Strategy set a peak water target of 400 L/p/d by 2013/14, with an additional 90 litres for leakage. To reach the target, the Council recognised households, schools and businesses, and the Council itself each play its part.

In 2010, the Council developed the Water Conservation Plan to ensure the community reached the 490 L/p/d per peak day target by 2016. The Water Conservation Plan contains a series of water demand management measures to achieve the target. There are seven action areas in the plan:

- **Council leadership** – The Council needs to demonstrate throughout its activities that is walking the talk. The Council also recognised its role in supporting residents and businesses with good information on saving water.
- **Better data, better results** – with better information on where the water is being used and lost, the Council can better target resources for better outcomes.
- **Managing leaks in public networks and private property** – fixing leaks provides more capacity for future generations.
- **Regulation** – The Council uses the District Plan to ensure new homes should meet the 490 l/p/d target, including requiring all new builds to install rainwater tanks. The Water Supply bylaw to manage summer demand, water pricing and minimising wastage.
- **Financial Assistance** – The Council offers an "interest-free" targeted rate for households to install rainwater or greywater systems to offset public water use. It also offers rates subsidy for hardship.
- **Education** – The Council recognised the importance of students of all ages understanding the importance of their water supply and the role water has in local life.
- **Technical innovation** – The Council recognised the importance of new ideas and technology in assisting local businesses, and residents save water.

The Council met the 490 L/p/day target in 2015/16 with the introduction of water metering and continues to meet this target in 490 L/p/day on a district-wide basis. In addition to the peak water target, the Council's water take resource consents for the district water supply requires the Council to prepare a Water Conservation Report that tracks compliance with the peak target and provides details of water demand management measures in the district.

2 Consent requirements

Several Greater Wellington Regional Council (GWRC) consents held by the Council for the Paekākāriki, WPR and Ōtaki supplies have water conservation consent conditions. The relevant consent conditions that this report addresses are listed below.

WGN130331 [32355] – Paekākāriki Water Supply groundwater and surface take

The Water Permit WGN130331 [3255] does not explicitly require an Annual Water Conservation Report for the Paekākāriki Supply, but the Council will provide the information to be consistent with the Hautere, Ōtaki and Waikanae supply reporting.

WGN160082 [39118] – Hautere Rural Water Supply groundwater take

Condition 7 requires the Council to produce an Annual Water Conservation Report that details water conservation initiatives and leak detection work for the year and planned works for the coming year.

WGN130103 [41283] – Waikanae Water Supply groundwater take

Condition 4 requires the Council to implement water conservation and water demand management measures as necessary to achieve the reductions in water demand necessary to reduce maximum peak daily water demand to 490 l/p/d for the Waikanae, Paraparaumu and Raumati supply area.

WGN130103 [41284] – Waikanae Water Supply surface water take

Condition 4 requires the Council to implement of water conservation and water demand management measures as necessary to achieve the reductions in water demand necessary to reduce maximum peak daily water demand to 490 l/p/d for the Waikanae, Paraparaumu and Raumati supply area.

Condition 25 requires the Council to submit an Annual Water Conservation Report to GWRC by 30 September each year. The Annual Water Conservation Report shall be made available to the public on the Council's website by 30 September each year. **Table 3** lists the matters that the Annual Water Conservation Report is required to address and the relevant sections of this report.

Conditions	Section in this Annual Report
a) Summary of the consent holder's progress towards achieving its water conservation target of 490 L/p/d;	Executive Summary
b) Details of peak summer daily use expressed as L/p/d;	3.1
c) Outcomes of any water conservation measures to reduce peak demand, including but not limited to water meters;	4.1 – 4.7
d) A discussion of any reduction in peak daily demand;	3.2
e) Details of any increases in population;	6.1
f) Investigations and work completed to identify and fix leaking water pipes;	4.2
g) Details of any planned work to identify and fix leaking water pipes in the coming year.	5.3

Table 3: Condition 25 of consent WGN130103 [41285]

WGN050025 [33147] – Waikanae back-up water supply groundwater take

Condition 15b requires the Council's Annual Report submitted by 31 July to include measures undertaken to investigate, implement and manage water conservation methods to reduce water demand on the Kāpiti Coast, including the introduction of water meters, any increase in population, any reduction in peak daily water demand and the achieved results of these measures.

WGN180451 [35578] [40014] [38467] – Ōtaki Water Supply groundwater take

Condition 24 requires the Council to submit an Annual Water Conservation Report prior to 30 September each year, to the Manager. **Table 4** lists the matters that the Annual Water Conservation Report is required to address and the relevant sections of this report.

Conditions	Section in this Annual Report
a) A summary of water conservation management measures undertaken, including initiatives to support reductions in water consumption, and water use efficiencies; and	Executive Summary
b) A summary of the consent holder's progress towards achieving its water conservation target of 490 litres/person/day; and	3.2.3
c) Details of peak summer daily water use, expressed as litres/person/day; and	3.2.3
d) Outcomes of any water conservation measures to reduce peak demand, including but not limited to water meters; and	3.2.3
e) Every three years assessment of leak reduction measures undertaken in the last 3 years, and a schedule of planned leak reduction works for the next three years, accompanied by an assessment against the leak reduction targets specified in the certified Ōtaki Water Management Plan and Ōtaki Drought Management Plan and any subsequent certified revisions or amendments; and	N/A
f) Investigations and work completed to identify and fix leaking water pipes;	3.2.3
g) Details of any increases in population.	5.3

Table 4: Condition 34 of consent WGN180451 [35578] [40014] [38467]

3 Peak day and water loss performance for 2025/26

3.1 District peak water use target met for 2025/26

The Kāpiti Coast community maintained the district level peak water target in 2025/26 without the Council introducing water restrictions. The successes in leak detection and water conservation management meant average daily demand decreased from 16,548 m^3/day in 2024/25 to 16,301 m^3/day in 2025/26, and peak use decreased from 21,349 m^3/day to 21,181 m^3/day.

Table 5 shows the gross daily peak water use for 2025/26 and the preceding eight years for the four water supplies. The Council achieved the 490 L/p/d target for the district and for WPR and Paekākāriki. The peak demand in Ōtaki was 533 L/p/d. However, this peak demand was during commissioning of the reservoir, where water was taken to fill the reservoir, above the daily demand. The next highest day was approximately 480 L/p/d, meaning the target would have otherwise been achieved. Hautere did not meet the target as it's a restricted rural scheme with high levels of agricultural use.

Year	Ōtaki L/p/d	Hautere L/p/d	WPR L/p/d	Paekākāriki L/p/d	District-wide L/p/d
2017/18	543.9	1137.9	371.7	517.9	398.7
2018/19	497.0	1026.4	383.0	566.5	399.6
2019/20	504.1	1029.5	404.7	637.1	426.7
2020/21	507.1	969.7	388.1	415.3	406.5
2021/22	612.9	964.0	417.7	368.4	445.4
2022/23	578.2	975.6	440.8	426.7	445.5
2023/24	518.8	972.9	365.7	415.5	379.6
2024/25	481.8	1076.4	344.4	482.8	361.7
2025/26	533.2	976.2	358.2	418.3	358.9
Target reached for 2025/26		N/A			

Table 5: Peak consumption for each water supply since 2017/18

3.2 Performance of each water supply over 2025/26

3.2.1 Overview

This section sets out more detail for the performance of each supply, including:

- A graph comparing daily demand for last three years.
- Average and peak daily demand in cubic meters per day (m^3/day) and L/p/d.
- Annual consumption summary of each supply (residential, commercial and leakage).
- Number of days the supply was over the 490 L/p/d target.
- The Current Annual Water Loss (CARL), being the amount of water lost through leakage for the year as a daily amount (results by supply available for the first time this year).

- The International Leakage Index (ILI) grading of the supply.[3]
- The World Bank Institute performance band and their recommended actions for that band.

The Council has updated the method for how water consumption and water loss is reported over the past few years. The Council shifted from using the reservoirs' flows for Raumati, Paraparaumu and Waikanae to the flows leaving the Waikanae Water Treatment Plant (WTP). The plant meters are more accurate, and the reporting now includes any potential losses in the mains supplying water to the reservoirs. The Council is now also sanity checking very high and very low demand days to ensure the recorded flows are accurate. Using the new method, the Council updated historic data for consistency.

3.2.2 District-wide results for last three years

The district-wide peak target of 490 L/p/d was met in 2025/26. **Figure 2** and **Table 6** show the water use trends over the past three years. The data shows a clear decrease in water usage over the past three years due to improved leak detection and water demand management measures. Please note the effects of a large leak emerging in the Paraparaumu network on quarter four usage (discussed further in **Section 3.2.5**).

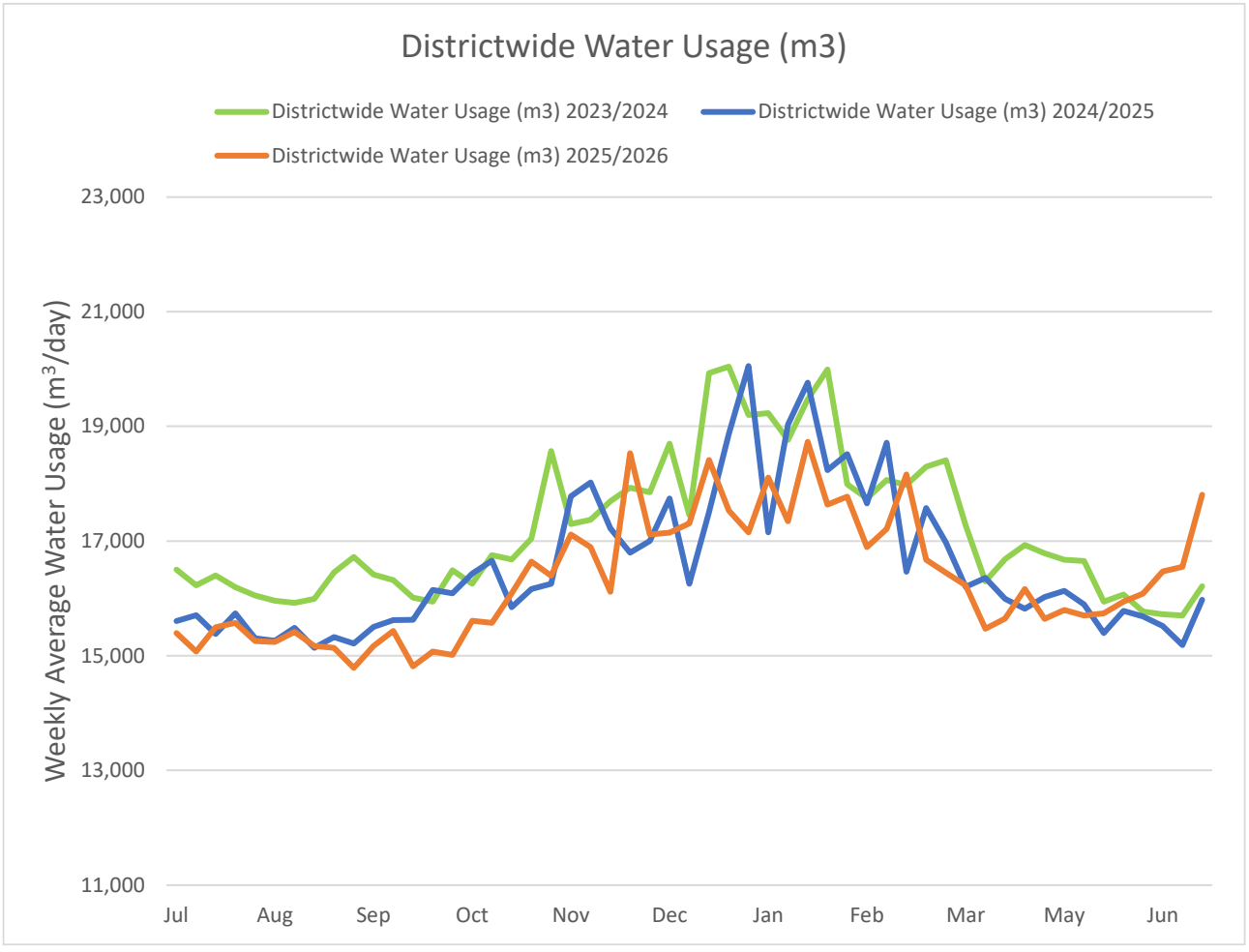


Figure 2: Changes in District-wide water demand for the last three years

[3] ILI is the ratio between the amount of water lost for the year and the annual amount of unavoidable water loss. The lower the ratio, the better performing the network is for water loss.

District Wide	2023/24	2024/25	2025/26
Peak day	(21,749 m^3/day) or 380 L/p/d	(21,349 m^3/day) or 362 L/p/d	(21,181 m^3/day) or 359 L/p/d
Average day	(17,186 m^3/day) or 300 L/p/d	(16,548 m^3/day) or 286 L/p/d	(16,301 m^3/day) or 282 L/p/d
Current Annual Water Loss	1,314,300 m^3 annually or 191 L/conn/day	1,318,300 m^3 annually or 192 L/conn/day	1,263,200 m^3 annually or 181 L/conn/day
International Leakage Index (ILI)	2.7 (B Band)	2.7 (B Band)	2.5 (B Band)

Table 6: Performance of the Council water supplies for last three years

Figure 3 shows the peak and average daily use in Kāpiti per year since 2014/15. The average daily water use is remaining constant, and the peak daily water use is fluctuating but has decreased in 2025/26.

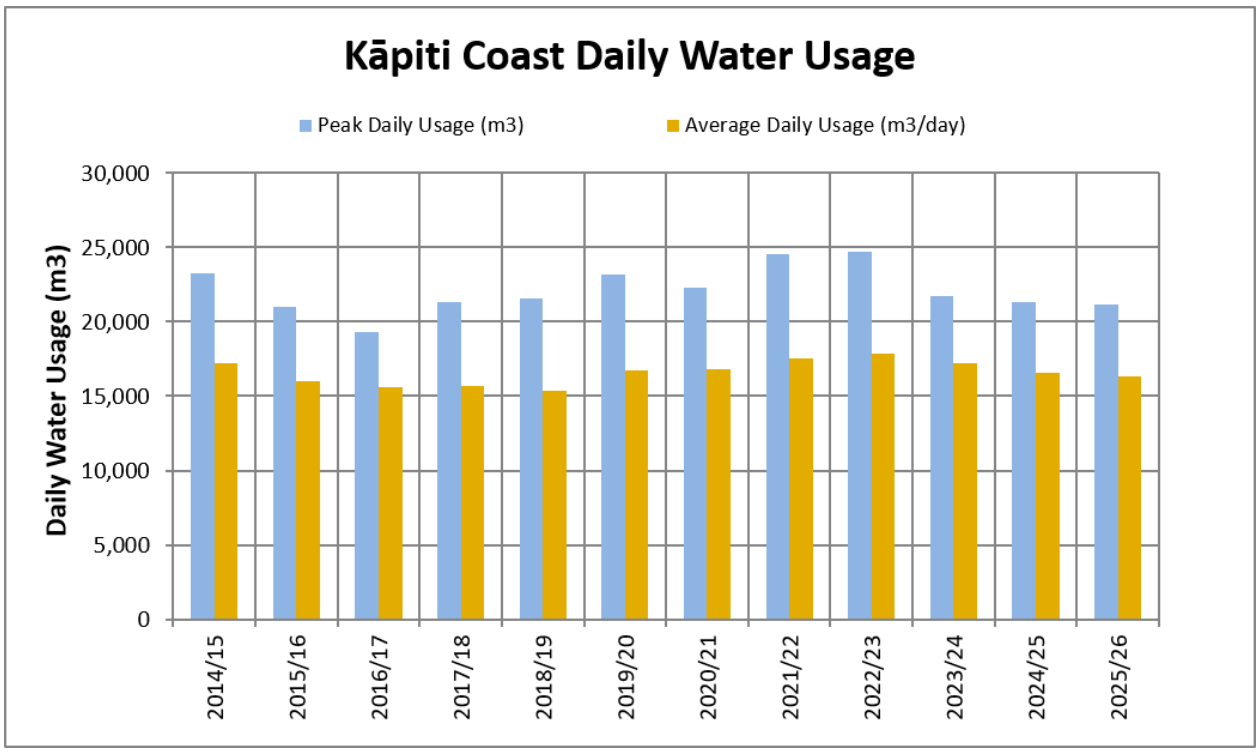


Figure 3: Peak and average daily water useage in Kāpiti (2014/15-2025/26)

Figure 4 shows the Current Annual Real Losses (CARL) for Kāpiti Coast. Losses have decreased by around 4.2% over the past year, and this is largely due to a decrease in losses within the Ōtaki network to be discussed further in this report.

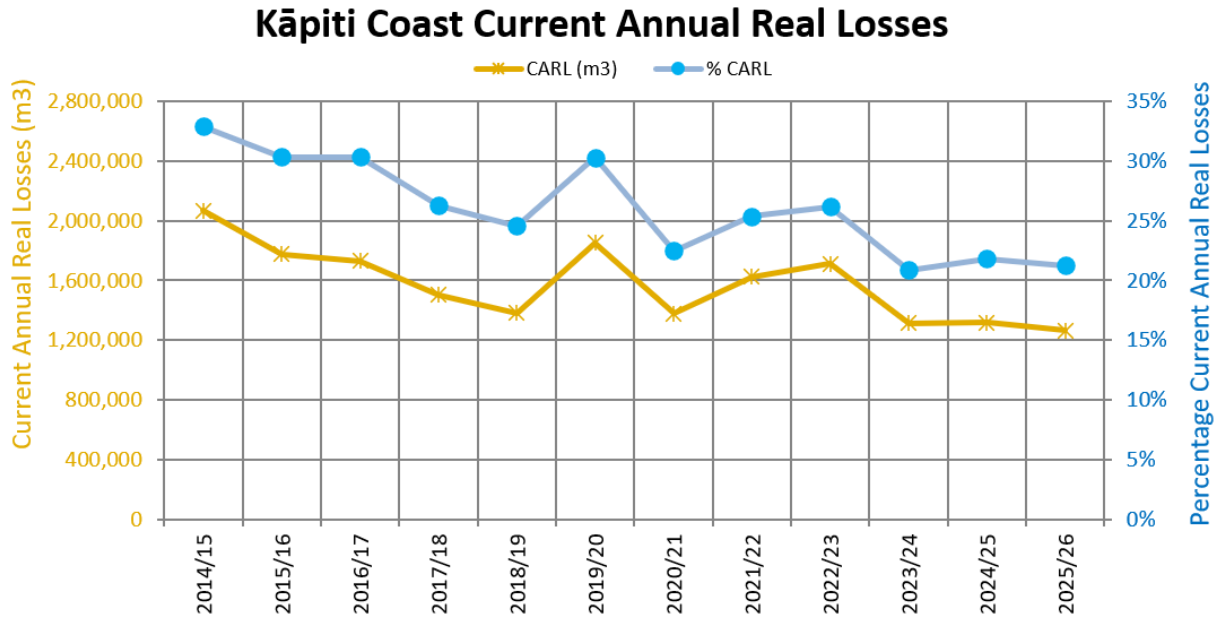


Figure 4: Current Annual Real Losses (CARL) since 2014/15

Note that the methodology used to calculate residential and non-residential usage has been refined as we look to roll out water metering into the new Datascape environment and this methodology has been back-dated to 2020. Refer to **Appendix D** for more information on how usage is calculated.

3.2.3 Ōtaki Water Supply

Figure 5 and **Table 7** show the changes in the Ōtaki Water Supply over the last three years. The peak target was not met in Ōtaki in 2025/26 due to Council filling the new Ōtaki reservoir during commissioning. The next peak day was 480 L/p/d, meaning the target would have otherwise been achieved. The average daily use has also dropped from 359 L/p/d in 2024/25 to 342 L/p/d in 2025/26. **Table 6** shows efforts to reduce leaks over the past few years have started to make a tangible difference in overall water demand in the network. The Internation Leakage Index (ILI) shows a large drop from 3.1 to 2.4, which is the lowest level in years.

Council contractors swept 77% of the entire network over the 2025/26 spring/summer and found an estimated 700m^3/day from a mixture of private and public sources; approximately 300m^3/day of this was within the Ōtaki network. The Ōtaki Māori Racecourse was leaking at over 100m^3/day, with leaks now found and repaired. The Council repaired all identified leaks within the public network.

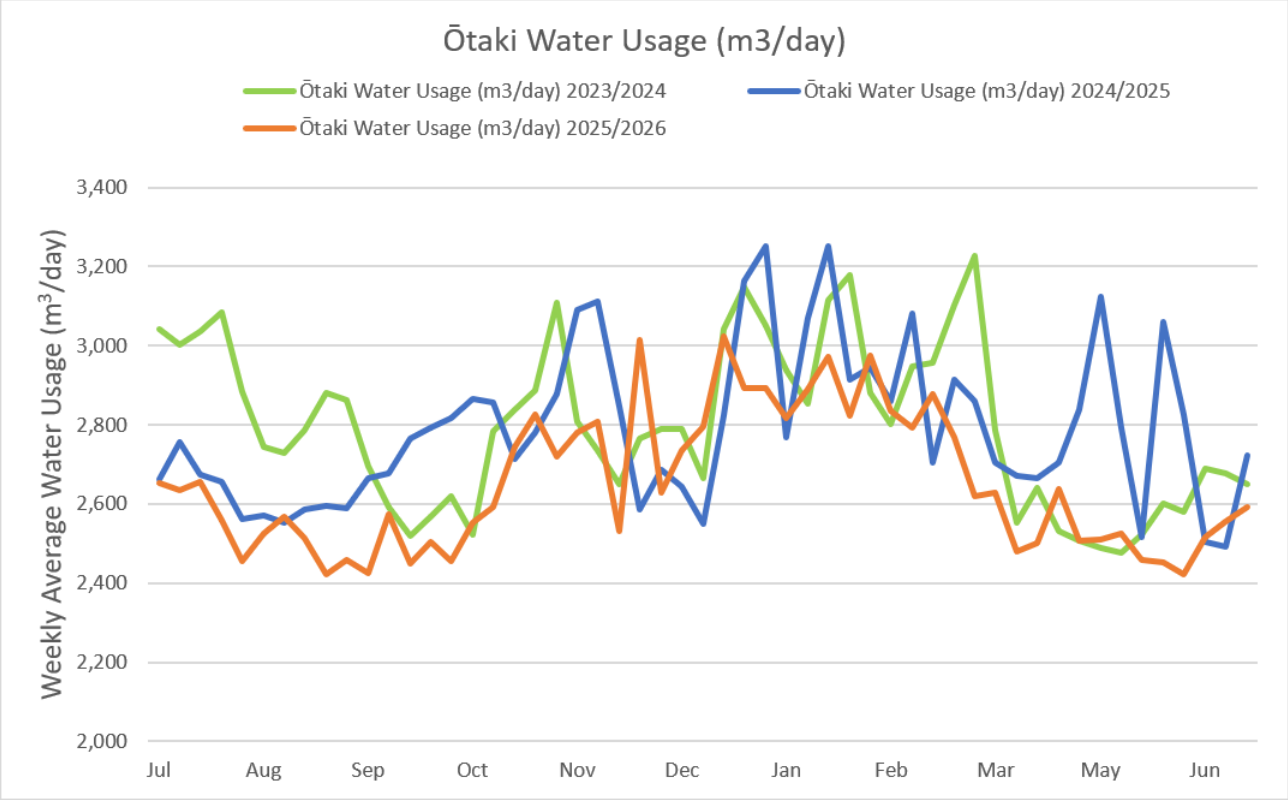


Figure 5: Changes in the Ōtaki Water Supply over the last three years

Ōtaki Supply	2023/24	2024/25	2025/26
Peak day	3,902 m^3/day 519 L/p/d	3,738 m^3/day 482 L/p/d	4,138 m^3/day 533 L/p/d
Days over 490 L/p/d target	1	0	1
Average day	2,801 m^3/day 372 L/p/d	2,789 m^3/day 359 L/p/d	2,653 m^3/day 342 L/p/d
Current Annual Water Loss	301,700m^3 annually (219 litres/conn/day)	242,300 m^3 annually (177 litres/conn/day)	181,100 m^3 annually (132 litres/conn/day)
International Leakage Index (ILI)	3.9 (B Band)	3.1 (B Band)	2.4 (B Band)

Table 7. Performance of Ōtaki Water Supply for last three years

Figure 6 shows Ōtaki water usage by demand type. Leakage continues to be high in Ōtaki; however it has started decreasing over the past two years in response to leak detection and repair efforts. Note the real water losses reduced by a further 61,200 m^3 over 2025/26.

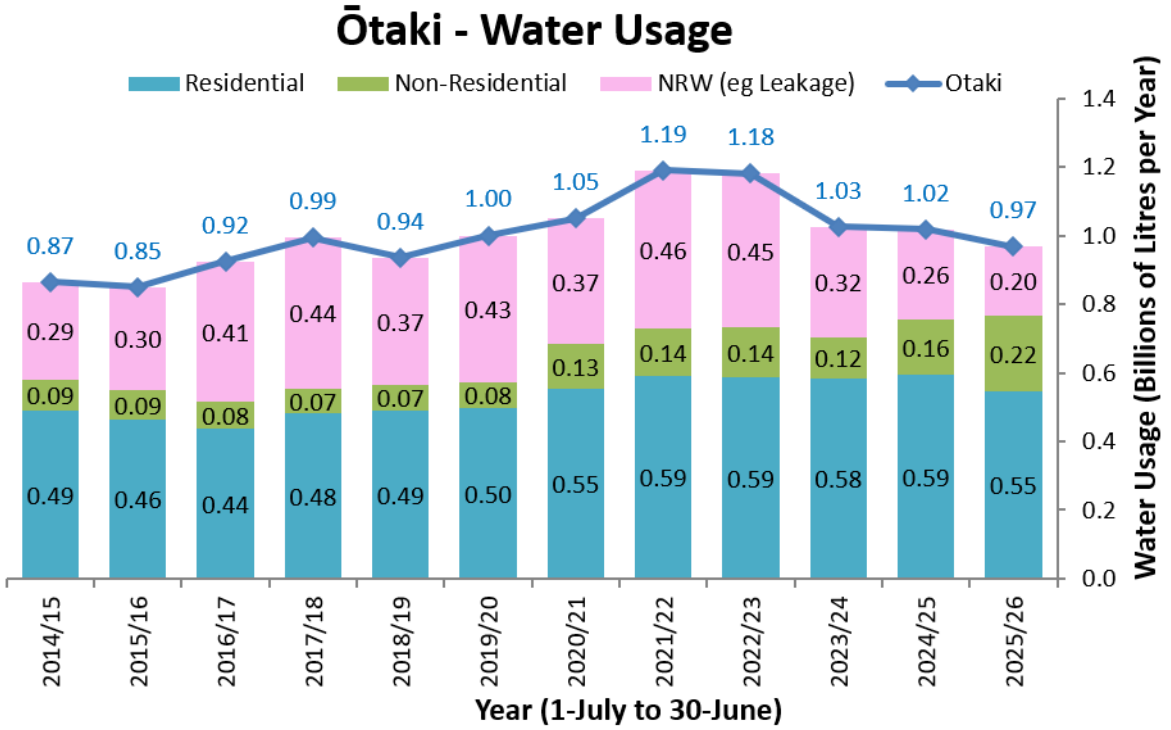


Figure 6: Water use in Ōtaki by demand (2014/15 – 2025/26)

3.2.4 Hautere Water Supply

The Hautere Water Supply is a restricted supply, where the Council restricts water to each property (in multiples of 1000 L/day, depending on allocation). Each customer must provide a tank to contain the water and a pump to provide an on-demand supply to the household for 5 days of supply. Hautere is 51% lifestyle blocks and 39% farming (Primary), 8% residential and 2% community by property type. The properties in the water supply scheme are un-metered so an assumption has been made that water usage is matching the supply allocation with 30% system leakage.

Figure 7 tracks water use in Hautere over the past three years, and **Table 7** shows key water use indicators for 2025/26. Council noticed night flows were increasing over March 2026; and the reservoirs levels were dropping quickly. Council investigated, repaired a damaged pipe and by late April, flows returned to normal.

The district wide peak daily demand target of 490 L/p/d does not apply to the Hautere Water Scheme. Instead WGN160082 requires the Council to undertake water conservation measures and active leak detection when the Ōtaki River flow falls below 4,120 L/s. The Council set up a digital water conservation trigger using data from GWRC's "Ōtaki Flow at the Pukehinau Site."

Table 8 and **Figure 8** show that, over 2025/26, the Ōtaki River did drop below the 4,120 L/s trigger in late May 2026 for two days. It appears regauging of the river occurred as the river jumped 2,000 L with no rainfall (the yellow circle area in **Figure 8**). Council therefore didn't implement any water conservation measures.

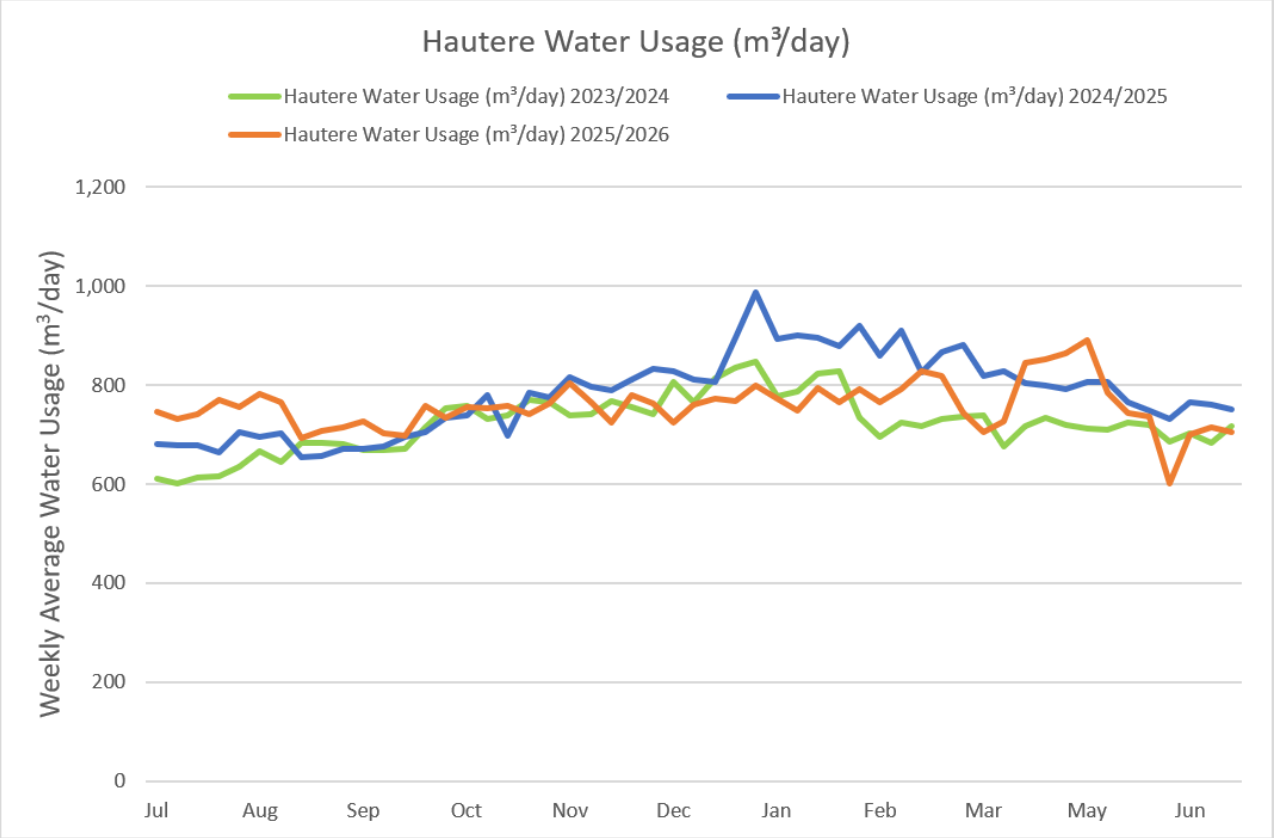


Figure 7: Changes in the Hautere Water Supply over the past three years

Hautere	2023/24	2024/25	2025/26
Peak day	895 m³/day 973 l/p/d	1,012 m³/day 1,076 l/p/d	918 m³/day 976 l/p/d
Dates Ōtaki River Fell Below 4,120 l/s	None	None	21 & 22 May 2026
Average day	710 m³/day 771 l/p/d	771 m³/day 820 l/p/d	759 m³/day 807 l/p/d
Current Annual Water Loss	54,100 m³/year (584 litres/conn/day)	76,100 m³/year (823 litres/conn/day)	71,600 m³/year (612 litres/conn/day)
International Leakage Index (ILI)	2.4 (B band)	3.5 (B band)	3.1 (B band)

Table 8: Summary of Hautere Water Supply performance for 2025/26

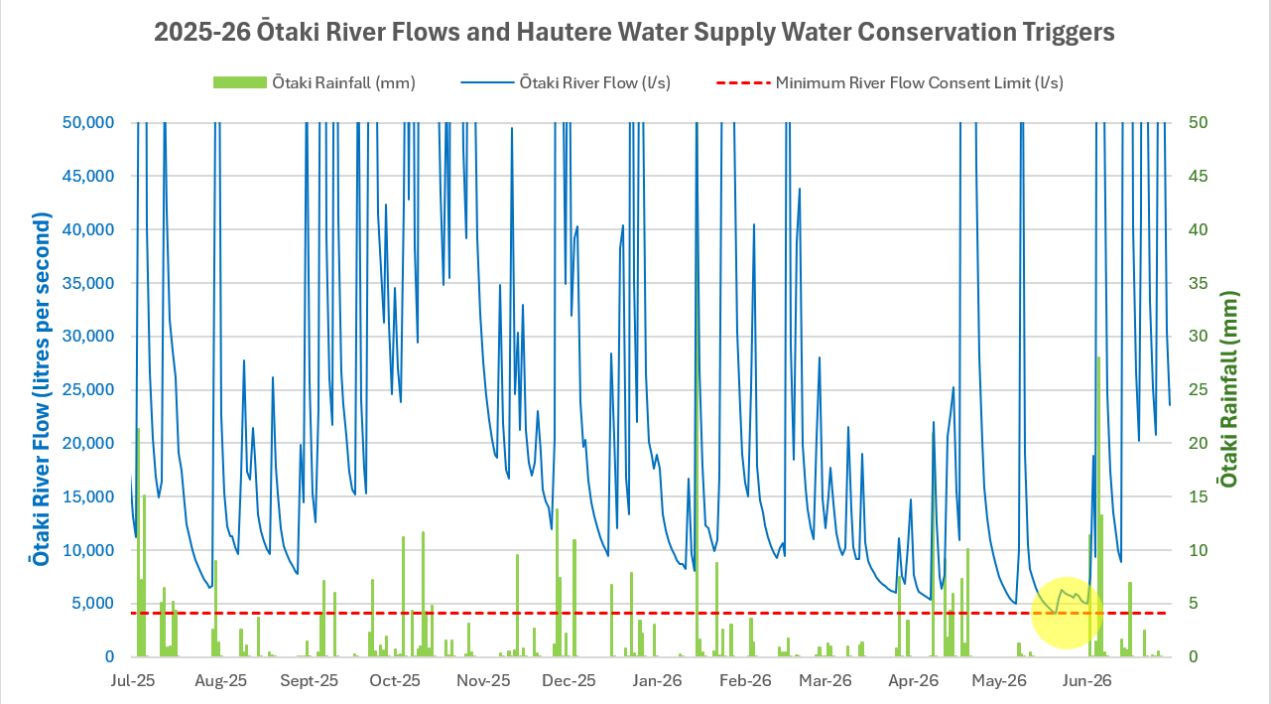


Figure 8: Ōtaki River flow compared to rainfall data

3.2.5 Waikanae/Paraparaumu/Raumati Water Supply

Figure 9 and **Table 9** track water use in WPR over the past three years. The Council met the peak target of 490 L/p/d for 2025/26, as with previous years. Annual water losses increased this year from 152 litres/connection/day in 2024/25 to 153 litres/connection/day. The likely cause is a large leak that started in the Paraparaumu network that emerged from March 2026. You can see the water use increasing in Autumn 2026 when demand should be falling.

Before the large leak emerged (November 2025 to March 2026), Council leak contractors looked for leaks in two zones in Waikanae (Hemi DMA and Te Moana DMA) and two zones in Paraparaumu (Raumati DMA and Matai DMA). In total 121 km was investigated or 21% of the overall WPR network. The leak sweep identified 290 m^3/day within private property and the public network. Council notified owners and scheduled the repairs on the public networks.

In late May 2026, the Water Treatment Plant Manager noticed higher than expected demand for Autumn and suspected there could be a leak of up to 1,000m^3/day going missing in the Paraparaumu Network. Due to the suspected leak size, Council initiated leak investigations but only one service provider was available to offer limited assistance. The Contractor agreed to look for leaks on mains larger than 200mm across the Riwai, Mazengarb and Kāpiti Zones. The Contractor was able to commit resources towards a full leak investigation from July 2026. To date, approximately 400m^3/day leak detected but Council continues to look for the large leak.[4]

[4] Note that the leak was discovered and repaired in August 2026.

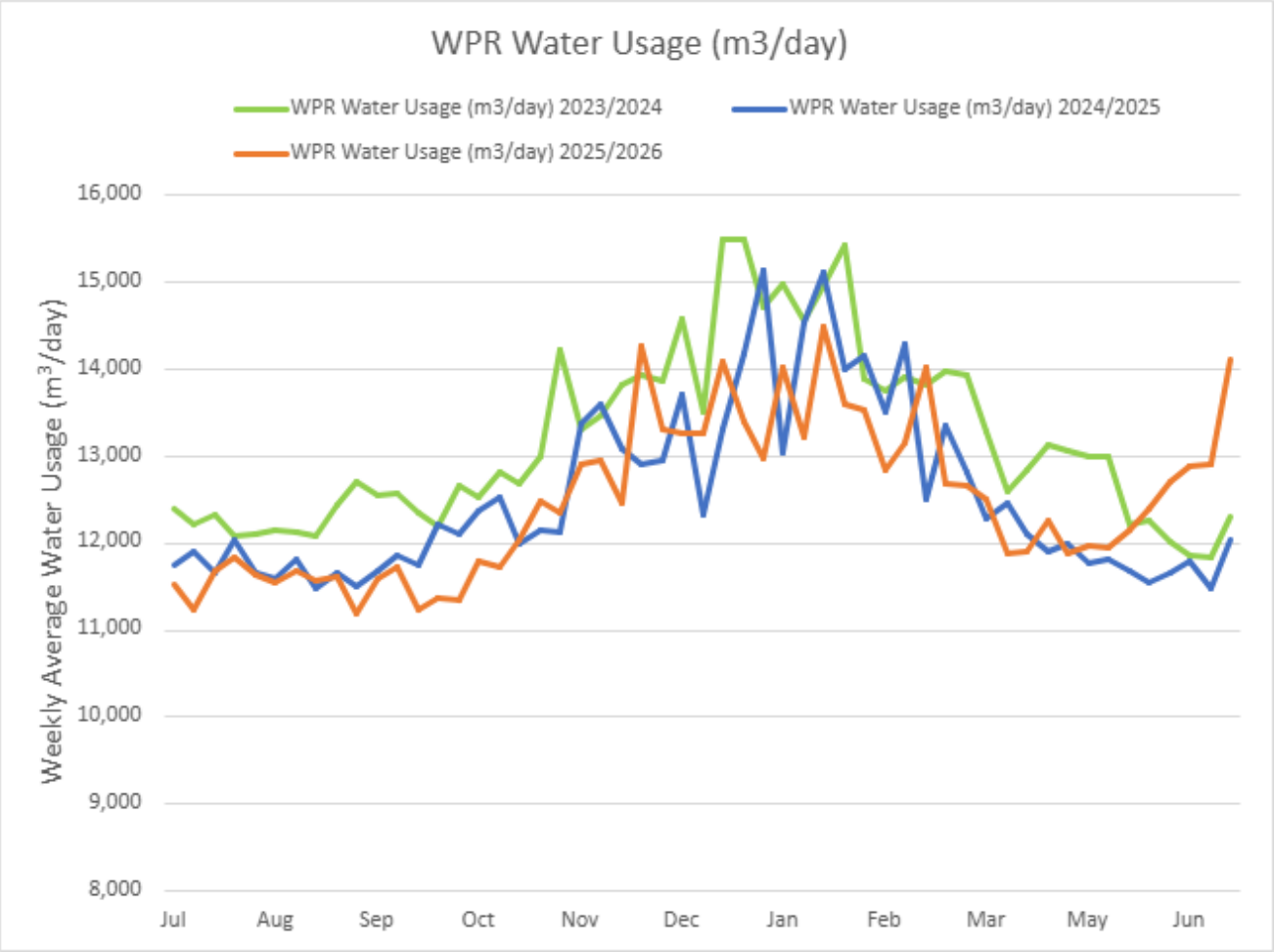


Figure 9: Changes in the WPR Water Supply for the last three years

WPR Supply	2023/24	2024/25	2025/26
Peak day	17,235 m³/day 366 L/p/d	16,735 m³/day 344 L/p/d	17,405 m³/day 358 L/p/d
Days over 490 L/p/d target	0	0	0
Average day	13,197 m³/day 280 L/p/d	12,548 m³/day 258 L/p/d	12,466 m³/day 257 L/p/d
Current Annual Water Loss	910,500 m³ annually or 146 L/conn/day	952,400 m³ annually or 152 L/conn/day	958,700 m³ annually or 153 L/conn/day
International Leakage Index (ILI)	2.4 (B band)	2.5 (B band)	2.5 (B band)

Table 9: Performance of WPR water supply for last three years

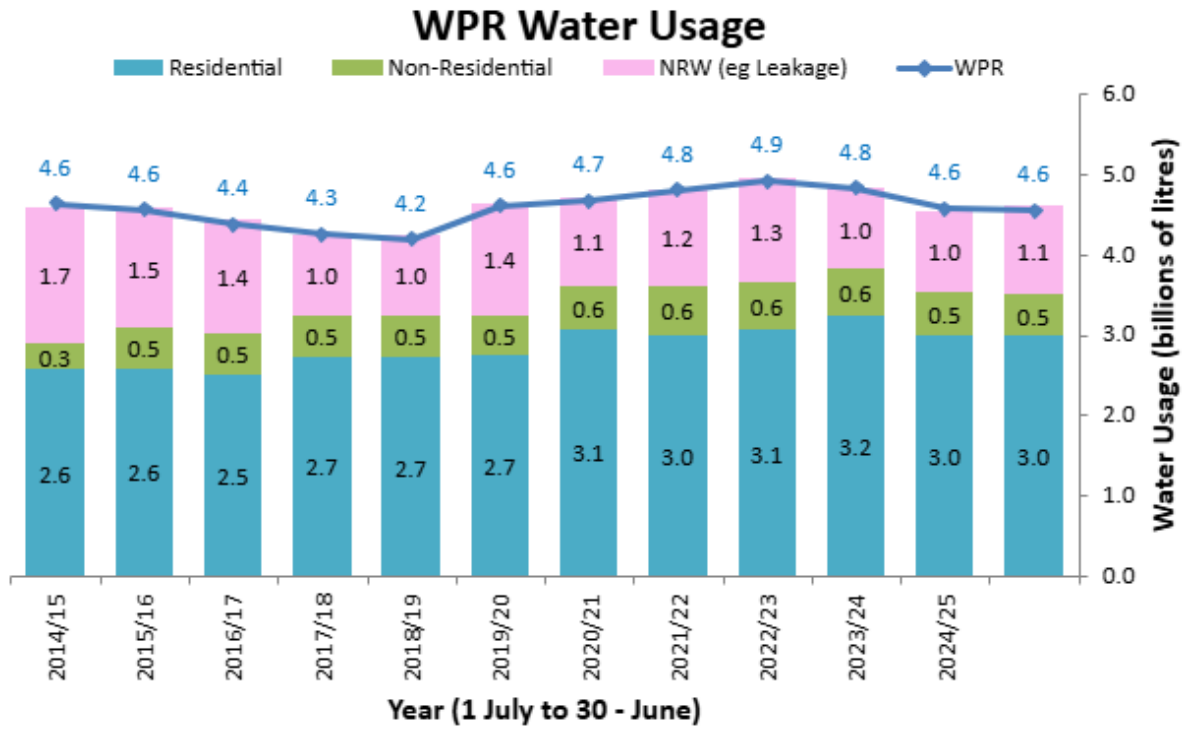


Figure 10. Water use in WPR by demand (2014/15 – 2025/26)

3.2.6 Paekākāriki Water Supply

Figure 11 and **Table 10** track water use in Paekākāriki over the past three years. The peak target of 490 L/p/d was met in Paekākāriki for 2025/26. **Figure 12** shows water use by demand. Despite the network wide survey in September 2025 finding 60 m^3/day of leakage, the overall leakage has increased in 2025/26. The Council will continue sweeping the network in 2026/27 to further reduce leakage.

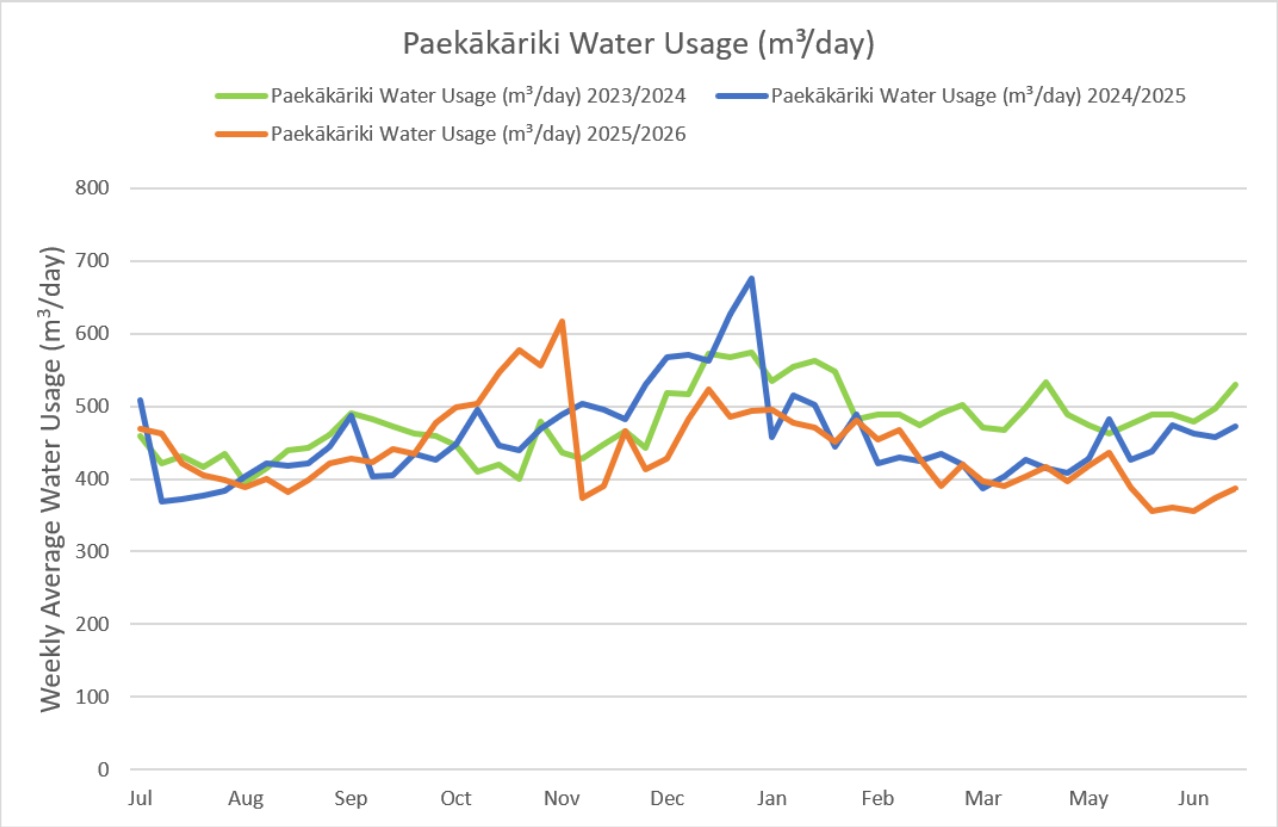


Figure 11. Changes in the Paekākāriki Supply water demand for the last three years

Paekākāriki	2023/24	2024/25	2025/26
Peak day	715 m^3/day 416 L/p/d	840 m^3/day 483 L/p/d	728 m^3/day 418 L/p/d
Days over 490 L/p/d target	0	0	0
Average day	476 m^3/day 277 L/p/d	458 m^3/day 263 L/p/d	441 m^3/day 253 L/p/d
Current Annual Water Loss	48,000 m^3 annually 193 L/conn/day	47,500 m^3 annually 188 L/conn/day	51,800 m^3 annually 210 L/conn/day
International Leakage Index (ILI)	2.8 (B band)	2.8 (B band)	3.1 (B band)

Table 10. Performance of Paekākāriki water supplies for last three years

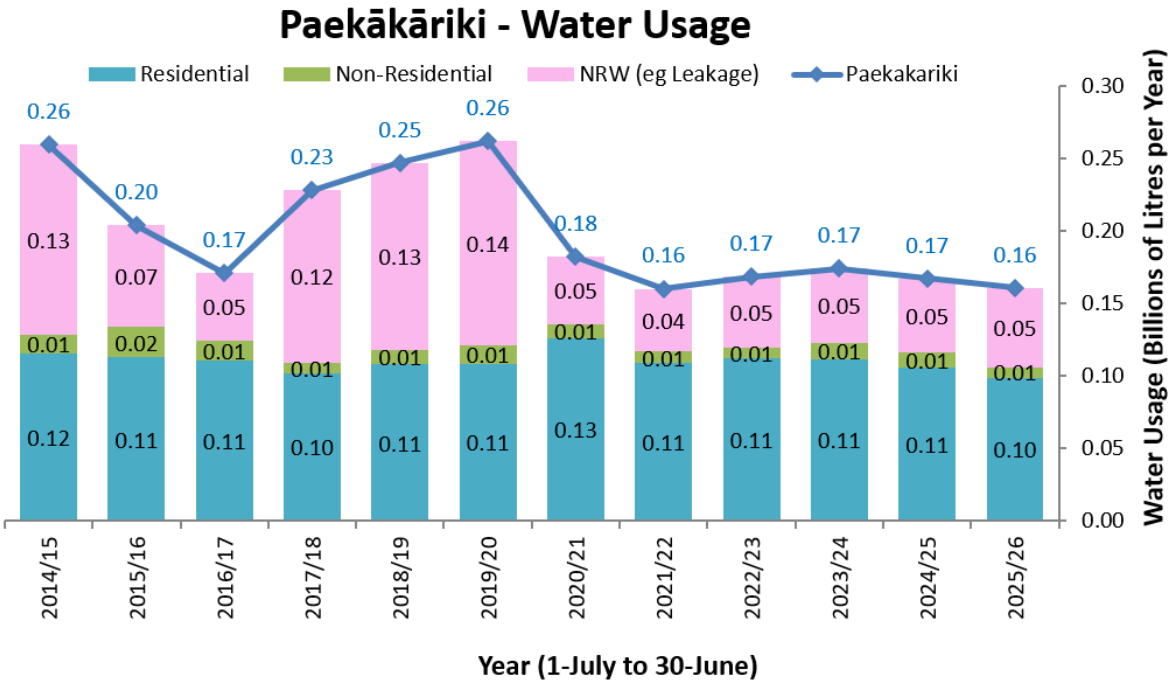


Figure 12. Changes in the Paekākāriki Supply water demand for 2014/15 – 2025/26

4 Water conservation and demand management 2025/26

4.1 Ongoing demand management activities

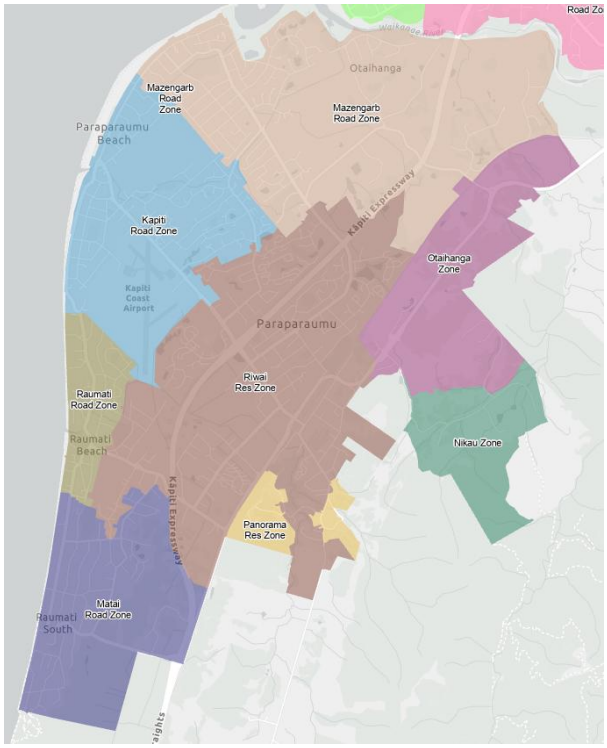
The Council implements several ongoing water conservation activities, including keeping the community informed, managing the Council's own water use, understand water use trends and leakages, education and fostering awareness. These measures are described in **Appendix B** and are typically the same year-to-year.

4.2 Finding and repairing public and private leaks

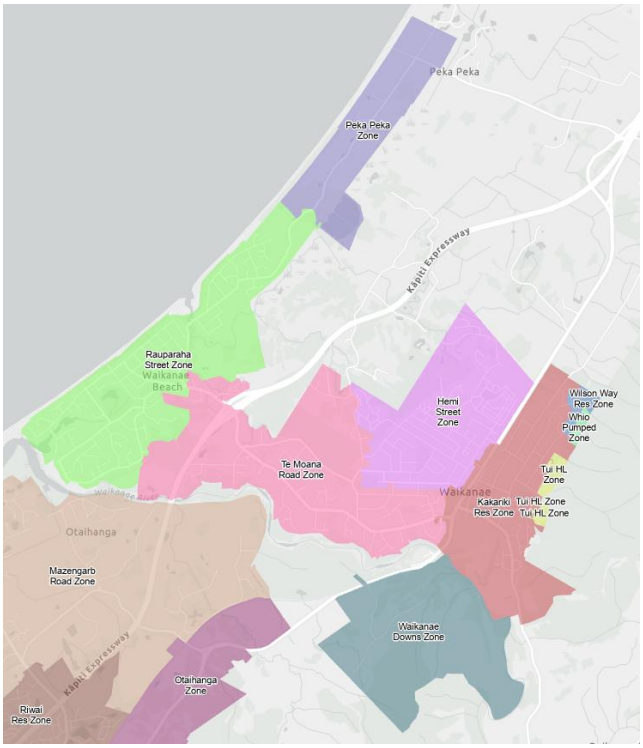
Over 2025/26, the Council informed properties with suspected leaks and investigated approximately 18% of the district's supplies for leaks. The Council investigated 6 of the 23 zones, which resulted in 38% of the network length being surveyed for leakage.

4.2.1 Results from planned 2025/26 leak detection

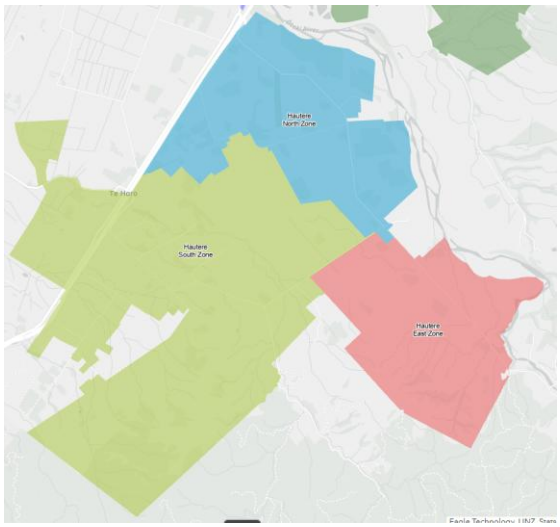
The Council commissioned leak detection across Paekākāriki, Raumati, Matai, Ōtaki Beach, Ōtaki Main, Te Moana and Hemi Zones. The investigations covered 178 km, 38% of the 489 km of water networks. The leak investigations identified approximately 495 litres/minute or 713 m^3/day district wide.



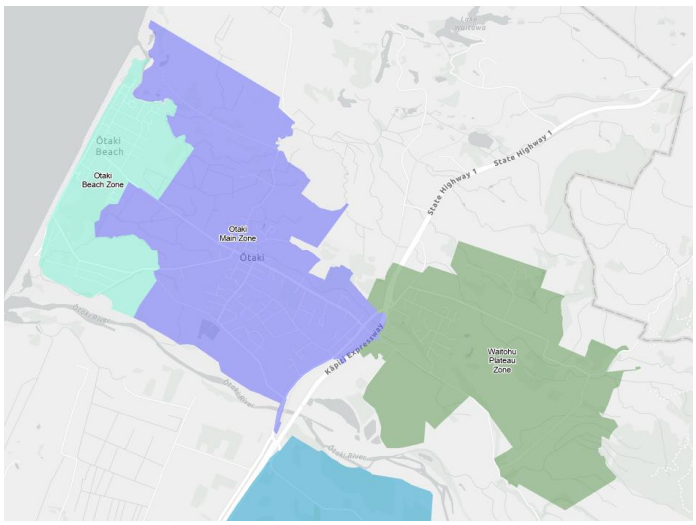
Paraparaumu and Raumati DMA Zones



Waikanae DMA Zones



Hautere DMA Zones



Ōtaki DMA Zones

4.2.2 Reactive renewal work undertaken by the Council

Table 11 shows the reactive work undertaken by the Council in 2025/26 on the public networks to resolve leaks as they arose, compared to previous years.

Leak Type	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025	2025/2026
Burst Water Pipe	36	89	52	45	33	21
Leaking Fire Hydrant	27	17	16	19	20	6
Leaking Water Toby	122	80	54	65	81	27
Leaking Water Valve	4	1	3	6	4	6
Water Leak	545	596	756	718	697	765
Water Toby Fault	98	98	126	102	107	107
No Water Supply	79	81	85	115	107	109
Grand Total	**911**	**962**	**1092**	**1070**	**1049**	**1041**

Table 11: Reactive leak maintenance on each network over the 1 July – 30 June period for the past six years

Council has setup an app to record proactive leak detection 2025-26 Water Leaks by DMA App

Zones surveyed have been shown below along with the number of leaks located and repaired. We have set-up a remote metering system using LoRa in Hautere at the end of June 2025 and this will assist in identifying and managing leaks in this water supply zone.

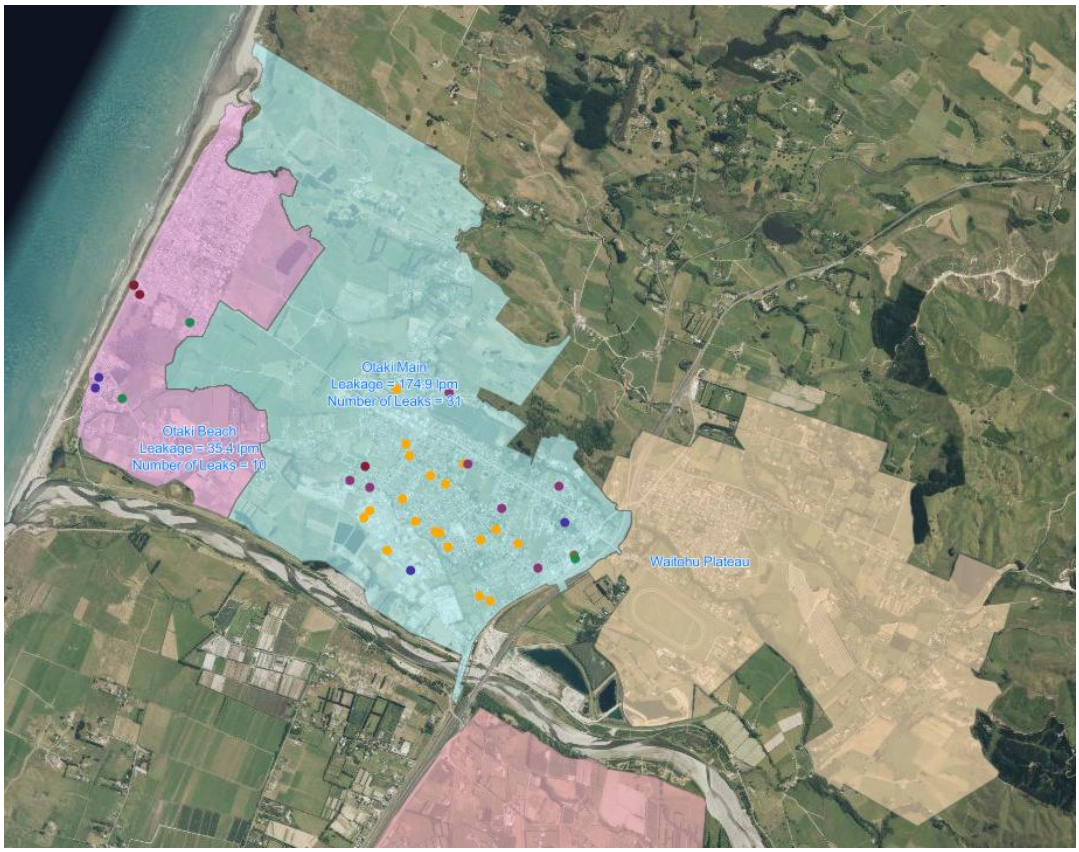


Figure 5: Leak survey areas – Ōtaki

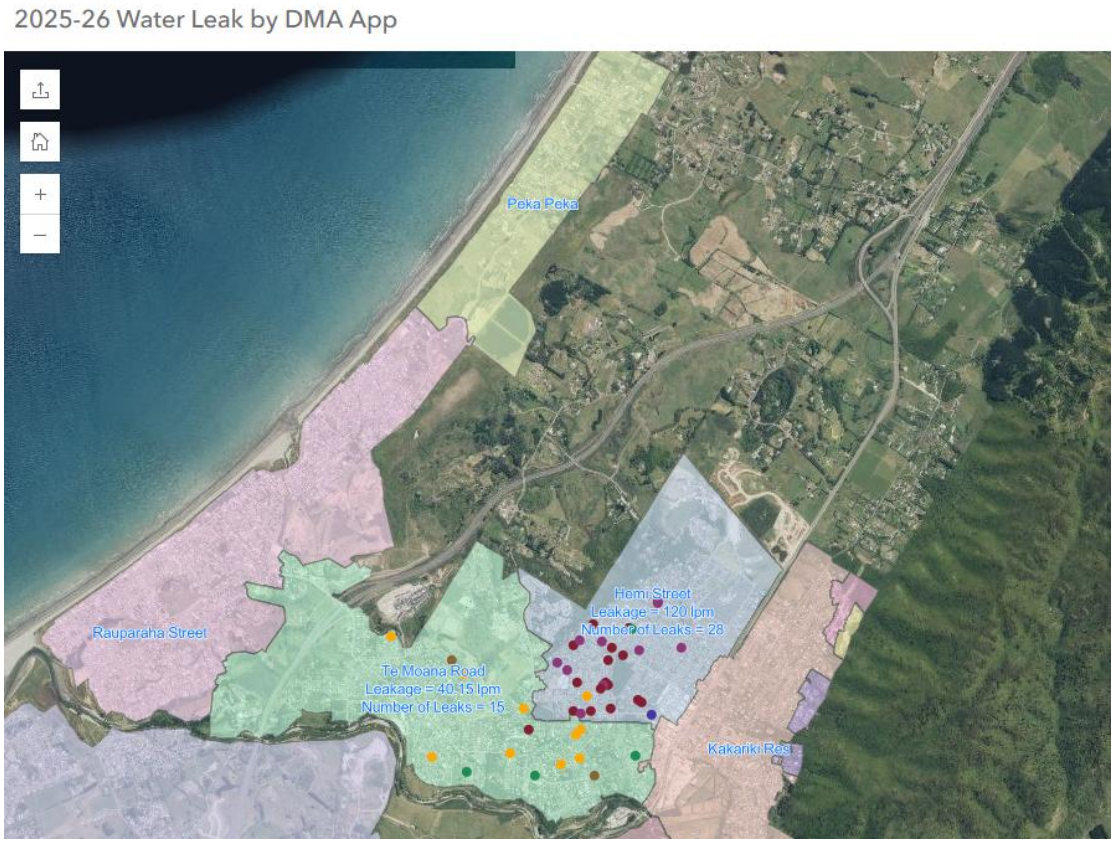


Figure 6: Leak survey areas – Waikanae

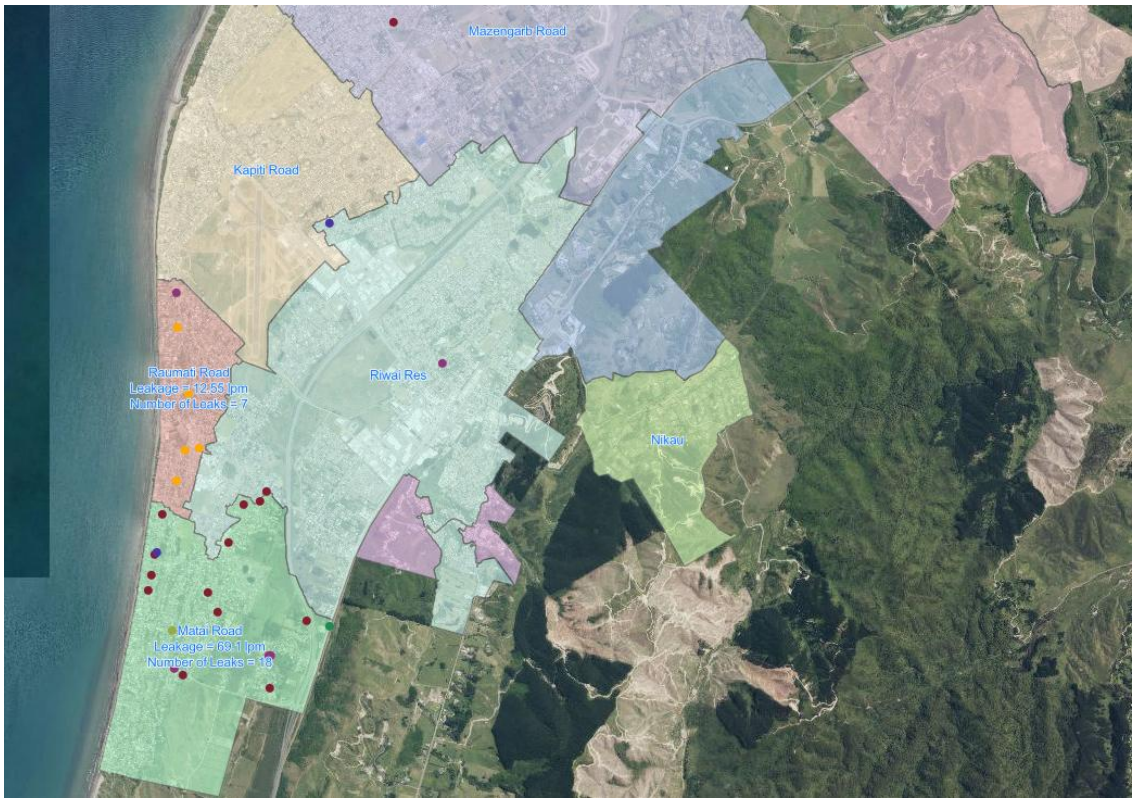


Figure 16: Leak survey areas – Paraparaumu and Raumati

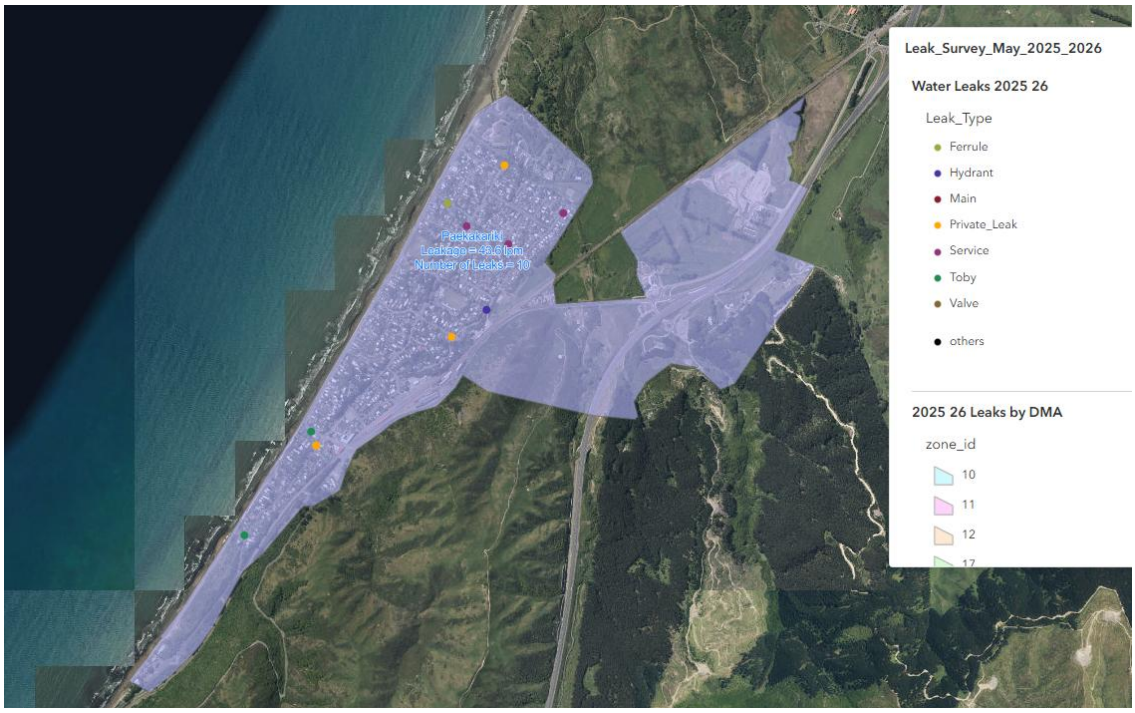


Figure 17: Leak survey areas - Paekākāriki

Figure 18 shows leak detection and associated costs since 2018/19. The number of leaks detected has progressively increased over this time.

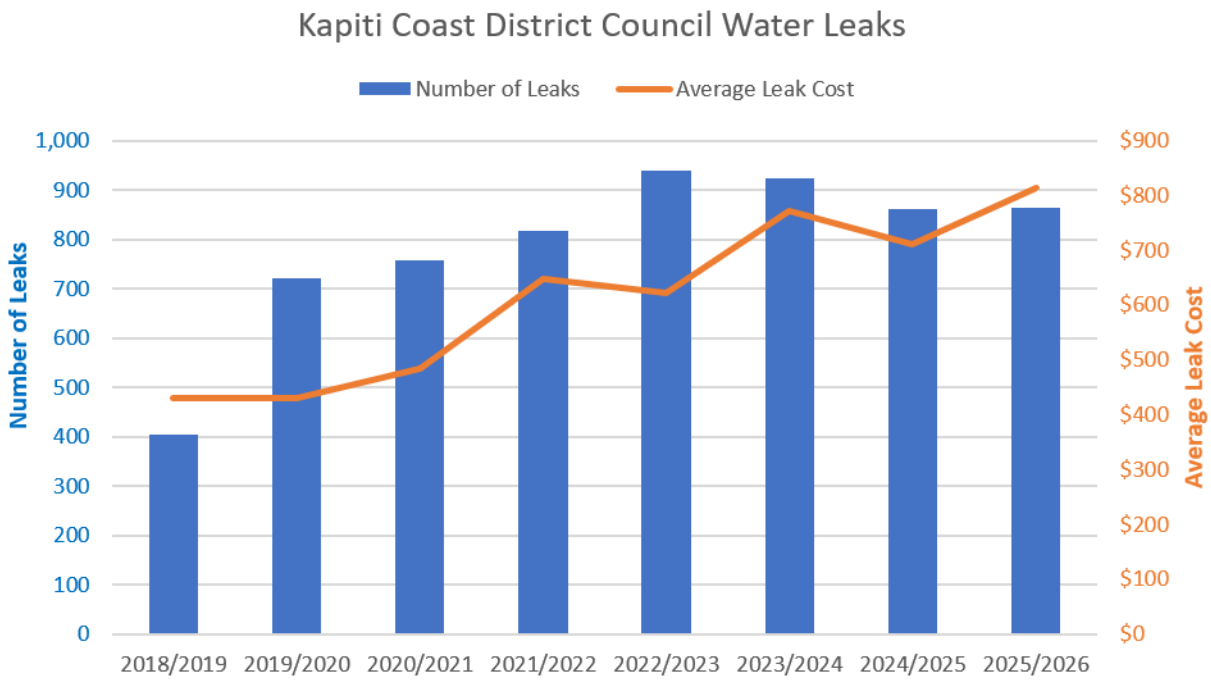


Figure 7. Leak detection and associated cost since 2018/19

4.3 Regulation

4.3.1 New homes

The Council approved 220 District Plan compliant homes and flats across the district water zones over the 2025/26 period. Since 2008, the Council has required all new homes with an on-demand connection to the Council water supply to include one of the following:

- 10,000 L of rainwater storage to supply the toilets and outside taps. When the rainwater level falls below 1,000 L, mains water will top up the tank at a rate of 600 litres/day.
- A greywater diversion device and a 4,000 L of rainwater storage to supply the toilets and outside taps. When the rainwater tank level falls below 1,000 L, mains water will top up the tank at a rate of 600 L/day.
- An alternative solution that demonstrates it can achieve the reduced peak water use targets.

In 2025/26 Council recognised higher density developments did not need 10,000 litre tanks for outdoor usage and they did not have enough space for greywater subsurface irrigation. For these properties, with evidence of additional water conservation measures, Council allows smaller sized rainwater tanks or large integrated underground tank/s connecting all properties.

4.4 Financial Incentives

4.4.1 Encouraging people to fix leaks on their property

In 2025/26, three hundred and forty-three (343) property owners received a remission of excess volumetric water rates charges resulting from private water leaks once the leak was repaired. The Council waivered a total of $275,000 (including GST) in private water leak remissions.

Property owners can apply for a credit on their water account if they can provide evidence of fixing their private leak. Successful applicants were not charged for the water lost to leaks. The aim was to encourage property owners to fix their leaks.

4.4.2 Providing financial support to those in need

Over 2025/26, the Council offered three schemes to assist residents in financial hardship:

- Rates Assistance – 1,359 successful applications.
- Temporary Rates Assistance related to water repairs (up to $300 towards hardship) – 18 successful applications.
- Water Rates Remission for vulnerable households relating to high water use – 3 successful applications.

5 Water Conservation and Demand Management Activities 2025/26

5.1 Council leadership

5.1.1 Keeping the community informed

5.1.1.1 Continue using website and Facebook page to keep people informed on water supply

The Council will ensure it keeps the information current and up to date on water. The Council's Facebook page and other channels will be used to inform the community and identify and answer any questions from the public.

5.1.1.2 Elected members and the Council staff will be kept up to date

Elected members and Council staff will continue to be kept up to date with developments in water.

5.1.2 Providing advice to the community on saving water

The Water Conservation Advisor will continue providing the free water conservation home visit service to offer advice (leaks and water use).

5.1.3 Reduce the Council water use

The Council will monitor and continue to seek ways to reduce water use at properties under its control using the information provided by water metering.

5.2 Better data, Better results

5.2.1 Zone metering

The Council will continue monitoring minimum night flows and prioritise leak detection.

5.2.2 Reporting water use and water leaks

The Council will provide a water balance on water used and lost over the year at the district and Supply level.

5.3 Reducing leakage in water supplies

5.3.1 Finding and repairing leaks on the public side of the reticulation network

Using information from the water-use monitoring and reporting tool, the Council will monitor zones weekly to prioritise zones for leak investigation and repairs. Council will look for the large leak in Paraparaumu in early 2026/27.

5.3.2 Finding and repairing private leaks

The Council will continue to proactively review the latest billing data for signs of leakage and approach property owners early if an issue is identified.

The Council will use its Water Supply Bylaw to request property owners to fix their private leaks within 21 days of notification. Property owners will still be able to apply for a credit on their water account due to fixing the leak. All identified leaks will be actively monitored, and outstanding leakage pursued.

5.4 Regulation

5.4.1 The Council's District Plan water demand management requirements

Council developed a draft Water Supply Bylaw and backflow policy but has decided to extend the current Bylaw for two years due to Local Government elections and implementing the requirements of Local Water Done Well. Council will re-evaluate in 2026/27 following the election.

5.5 Financial Assistance

5.5.1 Rates relief

Over 2026/27, the Council will continue to provide financial assistance to those in need. The following remissions will be available, being $340,000 (including GST):

- Rates Temporary Financial Assistance Remission provides up to $300 towards significant one-off costs causing financial hardship. This includes repairing leaks.
- The Rates Assistance Rates Remission provides up to $300 of rates remission.
- Water Rate Remission for Vulnerable Households provides rate remission up to $120 towards the cost of water for households with two or more dependents who receive the Working for Families Tax credit and meet other criteria.

5.6 Education

The Council will continue providing water education resources for local schools.

5.7 Fostering innovation

The Council will continue its "open for business" approach to companies developing new technology by providing feedback on any designs shown or legislation that may apply.

5.8 Investing in water demand management and leak reduction for 2026/27

Table 12 outlines the key funding allocations for water conservation, water metering and leak management work for 2026/27, excluding GST.

Activity (GL Code)	District-wide budget for 2026/27
Keeping community informed (18856)	$130,000
Financial assistance	$290,000
Water Meter Management	$100,000
Leak detection ($60k opex and $100k in capex)	$160,000
Total	**$660,000**

Table 12: Planned expenditure for 2026/27 for water demand management and leak reduction

6 Population changes

6.1 Population figures

The Council enlists SensePartners to provide population projections. It uses a similar process to estimate population by overlaying their forecasts over the water supply boundaries. These population were adjusted down based on the latest STATSNZ population estimates for Kāpiti and having a small effect of increasing per capita usage and leakage figures. The Sense Partners Zone Population used in previous years were adjusted to match the 2023 StatsNZ Population Projection and the intervening years were backdated to the 2018 Census figures.

Please note that there are no updated figures from the Census, Council maintained the same population numbers from last year.

Table 13 shows the population figures for each supply and the district (rounded to nearest 10 persons).

Year	Ōtaki	WPR	Paekākāriki	Hautere	District Total
2014/2015	6,370	40,350	1,730	860	49,310
2015/2016	6,570	41,550	1,750	860	50,730
2016/2017	6,760	42,760	1,770	860	52,160
2017/2018	6,950	43,960	1,790	870	53,570
2018/2019	7,020	44,300	1,790	870	53,970
2019/2020	7,090	44,650	1,780	880	54,370
2020/2021	7,150	44,990	1,760	890	54,770
2021/2022	7,220	45,330	1,740	890	55,160
2022/2023	7,280	45,680	1,720	900	55,560
2023/2024	7,520	47,130	1,720	920	57,300
2024/2025	7,760	48,590	1,740	940	59,020
2025/2026	7,760	48,590	1,740	940	59,020

Table 13: Population numbers connected to each water supply

6.2 Calculating per capita water consumption

The flow meters for reservoirs and zones report to the Council's SCADA system, where flows are recorded, and daily totals calculated. The Council calculates the daily per capita water consumption by dividing the daily reading by population to give an average water litres/person/day. This is recorded for the Ōtaki, Hautere, WPR and Paekākāriki.

Appendix A: Assessment of Environmental Effects

1.3 Meeting Water Conservation Targets

Council is implementing the Water Matters Strategy and working towards improving water conservation across the district. The district has historically been a high water consumer in comparison with other districts. The intention is to stabilise daily WPR consumption at 490 litres per person per day (L/person/day), which includes an allowance for water losses. This allowance is for unaccounted water lost from the reticulation, including unauthorised connections and loss through leaks from reservoirs, supply pipes, and connections.

RRwGW has been designed to deliver a peak of 490 L/person/day to an estimated population of between 53,120 and 65,940 by 2060.

"Litres per person per day" is a common measure but does not mean that all of this water is used by individuals at home. The measure is an average figure for all users, including homes, businesses, industry, schools, hospitals, Council facilities, fire fighting, etc.

Peak daily use across the WPR area currently stands at around 590 L/person/day. Within the WPR area, the peak use averages around 550 L/person/day (Paraparaumu/Raumati) and around 720 L/person/day (Waikanae). These usage figures include water losses.

The importance of water conservation has been an ongoing theme during the community consultation for this project, with both Council and the community raising a range of methods to achieve lower consumption rates of drinking water. Council's water conservation initiatives go hand-in-hand with the water supply project. Council has a wide range of conservation initiatives for reducing demand, from the Green Plumber and the Green Gardener services; the Eco Design Advisor; the Kāpiti Coast Sustainable Home and Garden Show, the Summer On The Coast programme, Plan Change 75 (requiring a water tank/ grey water system for any new or relocated dwelling), education in local schools, water metering and financial incentives that provide loans for installation of non-potable water systems. Water metering is a critical element of Council's conservation strategy.

The conservation target of 490 L/person/day forms a fundamental design assumption for the Kāpiti Water Supply Project. Council believes it is an important and realistic target and has implemented a range of measures to help ensure 'water wasters' and inefficient users of drinking water are mindful of the need to reduce consumption and use water wisely. However, should the target not be achieved by 2016, the benefit of the RRwGW scheme is that its staged delivery can be brought forward if required. Council is committed to seeing its water supply infrastructure and associated consents as part of a long-term framework for water abstraction, environmental monitoring and responsible management of the district's water resource.

Appendix B: Ongoing Water Conservation Measures

B1.1 Council Leadership

B1.1.1 Keeping the community informed

Online resources

The Council uses its website and Facebook page to inform the community and answer any question raised by the community. The website contains a range of resources, including:

- How to locate a leak
- How to read the water meter and monitor water use
- Good garden practice to create a water efficient garden

Up to date information for frontline staff

Customer services staff remain critical to answering residents' queries. As the front face of the Council, its important customer services team is able to field people's queries efficiently as they are received.

Water Conservation Advisor (WCA)

After each water meter reading cycle, the WCA investigated any property using more than 2,000 litres/day for possible leaks, misreads or high use. The Council sends a leak notice to any property with a leak.

In addition to the advice offered through the water conservation advisor service, a directory of local plumbers (including advice from consumer affairs on engaging a tradesman) was publicly available and included with all leak notifications.

The Council is also investigating any properties with reads that do not change. The Council replaced any faulty meters.

B1.1.2 Council managing its own use of water efficiently

Monitoring water use at the Council's properties

The Council has several properties it owns, manages on behalf of other government agencies or leases to businesses or community groups. The Council uses a water use database to monitor consumption on its properties. The Property Group and Community Service Group receive updates after each reading cycle on water use from each property. The data helps prioritise any maintenance needed, such as repairing leaks or replacing inefficient toilets or taps.

Making new buildings and renovations more water-efficient

When the Council builds new or renovates, it makes every effort to install water-efficient appliances where possible and to use rainwater for toilet flushing and outdoor use.

Minimising public water use on sports fields and amenity areas

All the major Council sports fields use onsite bores as a preferred source of water for irrigation. The Council selects summer hardy plants for much of its amenity planted areas and concentrates annuals around town centre areas. This reduces the amount of water needed in areas with high pedestrian activity.

B1.2 Better data, better results

B1.2.1 Understanding trends in water use and leakage

The Council monitors trends in water use and leakage.

Weekly leak monitoring

The Council uses a weekly minimum night flow "traffic light report" to assess the performance of each network at a District Metered Area (zone) level. Each week, the automated report provides feedback on the ILI performance in each zone, where:

- Anything lower than an ILI score of 2 is green.
- Anything between 2 and 4 is orange.
- Anything higher than 4 is red.

The Council bases the grading on the World Bank's leak management bands shown in Table 12. In October, the Council reviewed the performance of each zone and selected those with consistently high ILI for leak detection. Any network with a grade higher than 2 has opportunities for future improvements.

Band	ILI Range	Guideline description of Real Loss Management Performance Categories
A	<2.0	Further loss reduction may be uneconomic unless there are shortages; careful analysis is needed to identify cost-effective leak management
B	2.0 to <40	Possibilities for further improvement consider pressure management, better active leakage control, better maintenance
C	4.0 to <8.0	Poor Leakage management, tolerable only of plentiful cheap resources; even then, analyse level and nature of leakage, intensify efforts
D	8.0 or more	Very inefficient use of resources, indicative of poor maintenance and system condition in general, leakage reduction programs imperative and high priority

Table 14: World Bank Institute Bands for Leak Management in Developed Countries

Figure 12 shows three examples from the Waikanae network. In this example, if the results remained unchanged, then Kakariki would be selected for leak investigation, Hemi may if budget permitted, and Te Moana would be left alone.



Figure 12: Examples of how the Council grades a zone's performance week to week

Undertake water balance reports for all water supplies

The Council uses the annual WaterNZ Bench loss tool for each water supply to show:

- Daily water loss.
- ILI grade and World Bank Band for leak management.
- World Bank's recommendations for further improvement.

Monitoring water use at the property level

The Council uses a reporting tool to analyse water use by the customer, zone, network, and District. The Council uses the tool to:

- identify properties with potential leaks or faulty meters.
- understand consumption by user type (such as households, schools, motels etc.); and
- feed annual water uses into the water balance model to determine annual water lost through leaks.

B1.2.2 Finding and repairing private leaks

After each billing cycle, the Council investigate properties with high reads. The Water Conservation Advisor visits the properties to assess if there is a leak, a misread or legitimate high use.

If there is a leak, the Council sends the property owner a leak notification letter to fix the issue within 21 day and a credit due to water loss application form (invites the property owner to apply for a credit on their water account if they fix the leak in a timely manner).

B1.3 Education

The Council has education resources on the website and water testing kits available for schools to use. Staff are available to talk with the school when requested.

B1.4 Fostering innovation

The Council continued its “open for business” approach to companies developing new technology by providing feedback on any designs shown or legislation that may apply.

Appendix C: Infrastructure Leakage Index Water Losses

Water New Zealand has put considerable thought to water network performance measures, which is captured in Water New Zealand's Water Loss Guidelines 2010.

Extract from Water New Zealand's Water Loss Guidelines 2010 – Page 17:

> Since the early 1980s, it has been recognised that percentages are unsuitable for assessing the operational efficiency of management of real losses (leakage and overflows) in distribution systems. This is because the calculated percentages are strongly influenced by the consumption of water in each system and variations in that consumption. Non-Revenue Water expressed as a per cent by volume of Water Supplied, although traditionally widely used, also suffers from similar significant problems to % Real Losses when used as a PI. Appendix C provides more information on this topic in the context of the range of consumption data in New Zealand.

Extract from Water New Zealand's Water Loss Guidelines 2010 – Page 18:

The Infrastructure Leakage Index (ILI) calculates the ratio between current annual real losses (m3/year) and unavoidable annual real losses (m^3/year) as defined in the Water New Zealand's Water Loss Guidelines 2010. While it can be a bit tricky to explain the concept of ILI calculation, the World Bank Institute leakage management bands give a clear measure of loss management performance for water networks.

Extract of band descriptions from Water New Zealand's Water Loss Guidelines 2010 – Page 18:

Table 2.3 World Bank Institute Bands for Leakage Management in Developed Countries

Band	ILI Range	Guideline Description of Real Loss Management Performance Categories for Developed Countries
A	< 2.0	Further loss reduction may be uneconomic unless there are shortages; careful analysis needed to identify cost-effective leakage management
B	2.0 to < 4.0	Possibilities for further improvement; consider pressure management, better active leakage control, better maintenance
C	4.0 to < 8.0	Poor leakage management, tolerable only if plentiful cheap resources; even then, analyse level and nature of leakage, intensify reduction efforts
D	8.0 or more	Very inefficient use of resources, indicative of poor maintenance and system condition in general, leakage reduction programs imperative and high priority

Around 2005, the IWA Performance Indicators Task Force began to consider the need to select the most appropriate PIs not only on the basis of Function (Financial, Operational, etc), but also to distinguish (Ref. 8) between:

- **Metric benchmarking** – for more demanding comparisons between Water Suppliers
- **Process benchmarking** –for setting targets and ongoing monitoring of progress towards those targets.

The 2008 Benchloss NZ manual recommends that:

- **Infrastructure Leakage Index** (Op 29) is preferable for **Metric** benchmarking, as it takes account of differences in system specific key parameters (mains length, number of service connections, customer meter location, average pressure)
- **Litres/service connection/day** (Op 27) or **kl/km of mains/day** (Op 28) **(depending upon service connection density)** is preferable for **Process** benchmarking of progress towards reaching target for reductions in Real Losses of a specific Water Supplier

Appendix D: Residential & Non-Residential Water Metering

Below shows a sample of older Access Database Report, which combined data using lookup tables to use information from the Rates Billing Spreadsheet, GIS and Access database readings. The new access Database Report information includes Primary meter type and the Check meter type.

- If the Connection ID is the same as the Asset ID then check type should be blank and the consumption refers to the Primary MP meter. The Connections column indicates the number of secondary connections i.e. Check and Check PH connections.
- If the Connection ID and the Asset ID are different then check type should be "Check' and the consumption refers to the Check meter.
- There are several Primary PH (Primary placeholder) connections where the there is no Primary meter at the boundary, in those cases all the secondary connections have a Check meter.
- Secondary connections with no Check meter (i.e. Check PH) are not included in the database table.
- [total Consumption] Y indicates that meter readings should be used for total consumption
- [Check Count] number of Check meters connected to Primary MP
- [Connections] number of connections Check and Check PH connected to MP
- [Deductions] Y indicates that not all connections have a Check meter, some connections are Deduction

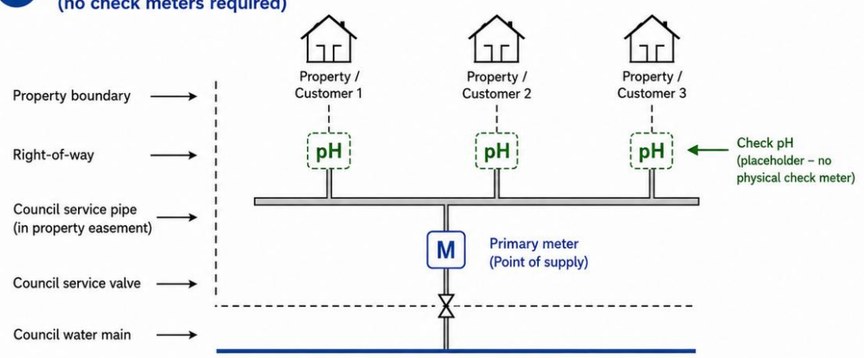
Example from Water Meter Access Database Table 2026

Connection_ID	KWSN00####
Asset_ID	KWSN00####
MeterSerial	13MC18####
Account	WW08####
Valuation ID	149603####
Primary Type	Primary
Check Type	
Total Consumption	Y
Check Count	
Connections	1
Deduction	
Date Installed	29/10/2013
Open Date	2/03/2023
Close Date	31/08/2023
Open Read	1,073
Close Read	1,103
Consumption	30
Days	182
Daily Consumption	0.16
Yearly Consumption	60.16
Comment	
Address	## Kotare Street
Water Zone	Kakariki Res
location	Waikanae
diameter	20
Housing	Box
Tarrif ID	20
Usage Code	91
Property Type	Residential: Single Unit (other than bach)
Residential	Y

Why usage calculations can vary

Billing and water-loss purposes may use different meters and different rules.

1 PRIMARY METER = THE CONNECTION
(no check meters required)



- Connection ID = Asset ID
- Primary meter consumption is used for billing
- All three customer connections are recorded as Check pH placeholders
- No physical check meters are installed
- Check Type = pH (placeholder)

M = Primary meter

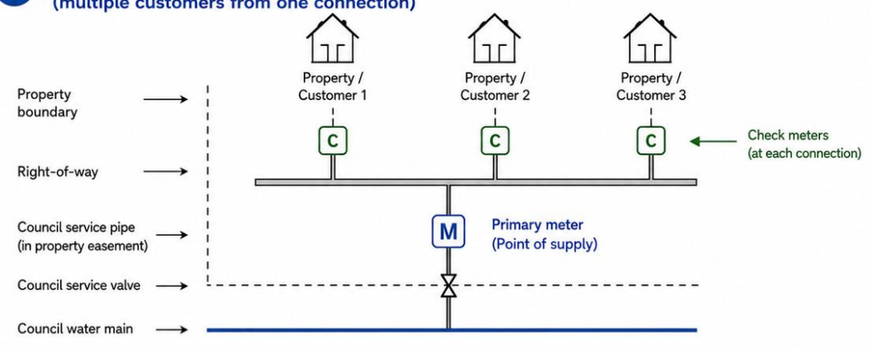
pH = Check pH (placeholder)

Billing calculations use the primary meter allocated to the connection. Where customer check meters are represented only as pH placeholders and no physical check meters exist, the diagram still shows the connection structure needed for billing and water-loss interpretation.

Why usage calculations can vary

Billing and water-loss purposes may use different meters and different rules.

2 PRIMARY METER WITH DOWNSTREAM CHECK METERS
(multiple customers from one connection)



- Connection ID ≠ Asset ID
- Check meter consumption is used for billing each customer
- Primary meter remains relevant for total site consumption
- Primary meter supports water-loss assessment
- Check Type = physical check meter

M = Primary (main site) meter

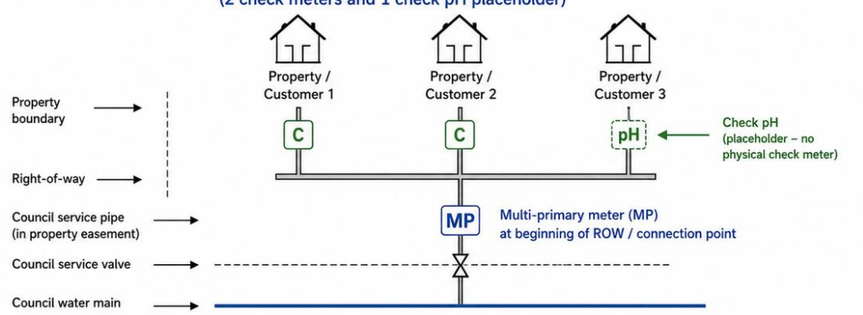
C = Check meter (customer connection)

Billing calculations use the check meter allocated to each customer connection. Water-loss calculations use the appropriate total-consumption meter and account for the relationship between primary and check meters. The resulting totals may therefore differ because the calculations serve different purposes.

Why usage calculations can vary

Billing and water-loss purposes may use different meters and different rules.

3 MULTI-PRIMARY METER WITH MIXED DOWNSTREAM CONNECTIONS
(2 check meters and 1 check pH placeholder)



≠ Connection ID ≠ Asset ID

C Check meter consumption is used for billing each metered customer

pH Check pH connections are not included as metered records

MP Multi-primary MP meter remains relevant for total site consumption and water-loss assessment

- [Check Count] = 2
- [Connections] = 3
- [Deductions] = Y
- [Total Consumption] = Y

Billing calculations use the meter allocated to each customer connection. Water-loss calculations use the appropriate total-consumption meter and account for the relationship between the MP meter and downstream connections; because one connection is a Check pH placeholder rather than a physical check meter, billing and water-loss totals may differ.

MP = Multi-primary meter

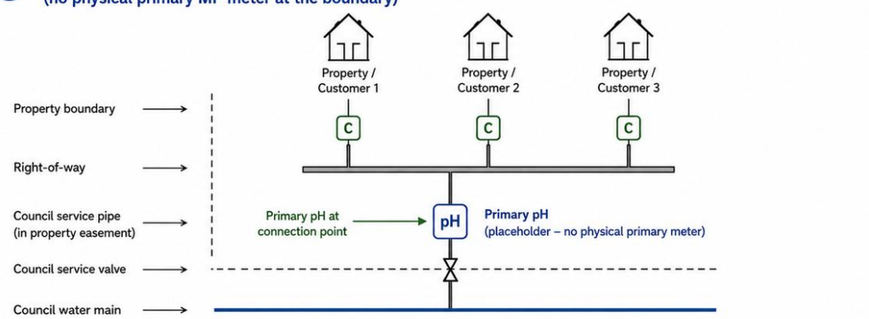
C = Check meter

pH = Check pH (placeholder)

Why usage calculations can vary

Billing and water-loss purposes may use different meters and different rules.

4 PRIMARY PLACEHOLDER WITH DOWNSTREAM CHECK METERS
(no physical primary MP meter at the boundary)



- Primary connection is a placeholder (Primary pH)
- All secondary connections have Check meters
- Connection ID and Asset ID differ for the downstream check-meter records
- Billing uses the Check meter consumption for each customer
- There is no physical primary MP meter for a boundary total-consumption reading
- Site total / water-loss assessment may be derived from downstream check-meter data
- [Check Count] = 3
- [Connections] = 3
- [Deductions] = N

pH = Primary pH (placeholder)

C = Check meter

Billing calculations use the check meter allocated to each customer connection. Where the primary connection is only a Primary pH placeholder and no physical primary MP meter exists, water-loss and total-consumption calculations may rely on downstream check-meter totals or other approved logic. This can create differences between billing and water-loss views.