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Waiuku Water Treatment Plants
2024-2025 Annual Report

Final - September 2025

Watercare
An Auckland Council Organisation

QUALITY INFORMATION

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Revision History

Rev	Revision Date	Name	Position	Signature
1	29/09/2025	Michiel Jonker	Environmental Care Manager	
2		Ryan Wood	Operations Controller	
3		Tom Wallace	Production Manager South	

Approved

Date	Name	Position	Signature
29/09/2025	Michiel Jonker	Environmental Care Manager	

Executive Summary

Watercare Services Limited (Watercare) operates three water treatment plants in the Waiuku area. These treatment plants use water from three bores in the following locations:

- Waiuku Road
- Victoria Avenue
- The corner of Cornwall and Kitchener Roads.

The resource consents that enable this activity requires Watercare to monitor water quality, water volume taken and water level. This report details the results for 1 July 2024 – 30 June 2025 (inclusive).

During the compliance monitoring period, abstraction from the Waiuku Rd, Victoria Ave and Cornwall-Kitchener bores were within consented limits. The cumulative annual abstraction and rolling five-year cumulative abstraction from the Waiuku Rd bore also remained within consented limits.

Water levels and water quality monitoring results have remained relatively consistent. One round of monitoring was missed in October 2024.

There was no indication of saline intrusion in the aquifer.

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1 Introduction

1.1 Background

Watercare Services Limited (Watercare) operated three water treatment plants (WTPs) in the Waiuku area. The Cornwall Road and Victoria Ave WTPs are in the Auckland Council region, while the Waiuku WTP is within the Waikato Regional Council boundary.

Watercare uses these bores to supply potable water to the surrounding townships including Waiuku itself. The bores are located at Waiuku Rd, Victoria Avenue, and the corner of Cornwall and Kitchener Roads. Operation of the WTPs is permitted in accordance with Auckland Council Resource Consent WAT60071034 and Waikato Regional Council Resource Consent AUTH135970.01.01. These consents were granted on 14 August and 28 August 2017, respectively.

Watercare has installed Bore ID 30000 (11 Cornwall Rd), but the bore is not yet in service. No water was abstracted from the 11 Cornwall Rd bore in 2024-2025.

1.2 Consent requirements

The report fulfils condition 13 of consent AUTH135970.01.01 and condition 17 of WAT60071034. To fulfil these conditions, this report covers:

- Water taken by volume
- The combined water taken by volume from all bores
- Water level in the production and observation bore
- Water quality sampling for saline intrusion.

2 Abstraction

2.1 Daily takes

Table 1 summarises the daily bore abstraction for 1 July 2024 to 30 June 2025 and Figure 1 displays daily abstraction from all three bores over the compliance monitoring period. Abstraction from Victoria Ave and Waiuku Rd bores were consistently below their consented maximum limits.

Table 1: Summary statistics for daily bore abstraction for the reporting period 2024- 2025

Bore	Average (m^3/day)	Maximum (m^3/day)	Limit (m^3/day)
Cornwall	960	1,524	2,500
Victoria	406	815	1,500
Waiuku	704	769	1,680
Combined Waiuku-Cornwall	1,639	2,197	-

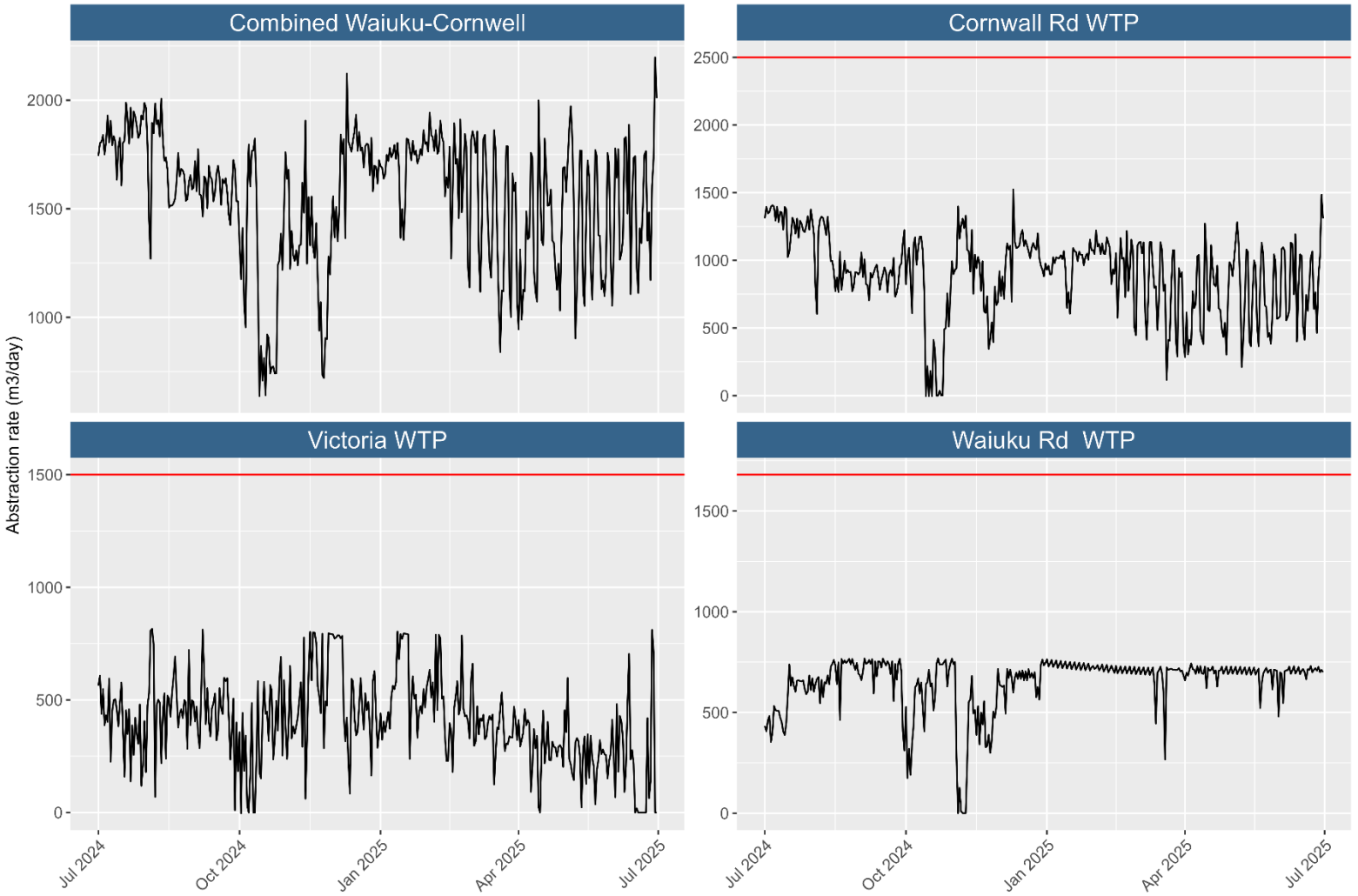

Figure 1: Line graphs showing the abstraction data for 2024-2025, Waiuku WTPs.

2.2 Cumulative takes

Table 2 summarises annual abstraction for 2024-2025. Watercare's cumulative abstraction limit for the Waiuku Road bore did not exceed the 12-month consented limit of 614,880 m^3, neither is Watercare likely to breach the cumulative limit of 2,000,000 m^3 set for the first five years of the consent (active from August 2017).

Table 2: Summary statistics for annual abstraction

Bore	Abstraction (m^3)	Limit (m^3)
Annual take from Waiuku Rd	237,580	614,880
Waiuku Rd bore over first 5 years	1,247,695*	2,000,000
Annual take (all bores combined)	713,689	1,453,000

***Note:** Compliance period is July 2020-July 2025. Reported results is the rolling five-year total

2.3 Bore water levels

Figure 2 shows manual and online water level measurements of the three production bores during 2024-2025.

As illustrated in the figure, the water levels in the Cornwall Rd and Victoria Ave bores showed a slight decrease (~7 m) during the reporting period, while the Waiuku Rd bore showed a slight increase. Since the Cornwall and Victoria bores are shallower than the Waiuku bore, they are more sensitive to weather variations and likely have shorter recharge rates. The Waiuku Rd bore variation is more likely responding to long term potential variations and will have to be monitored in the following year to confirm this trending.

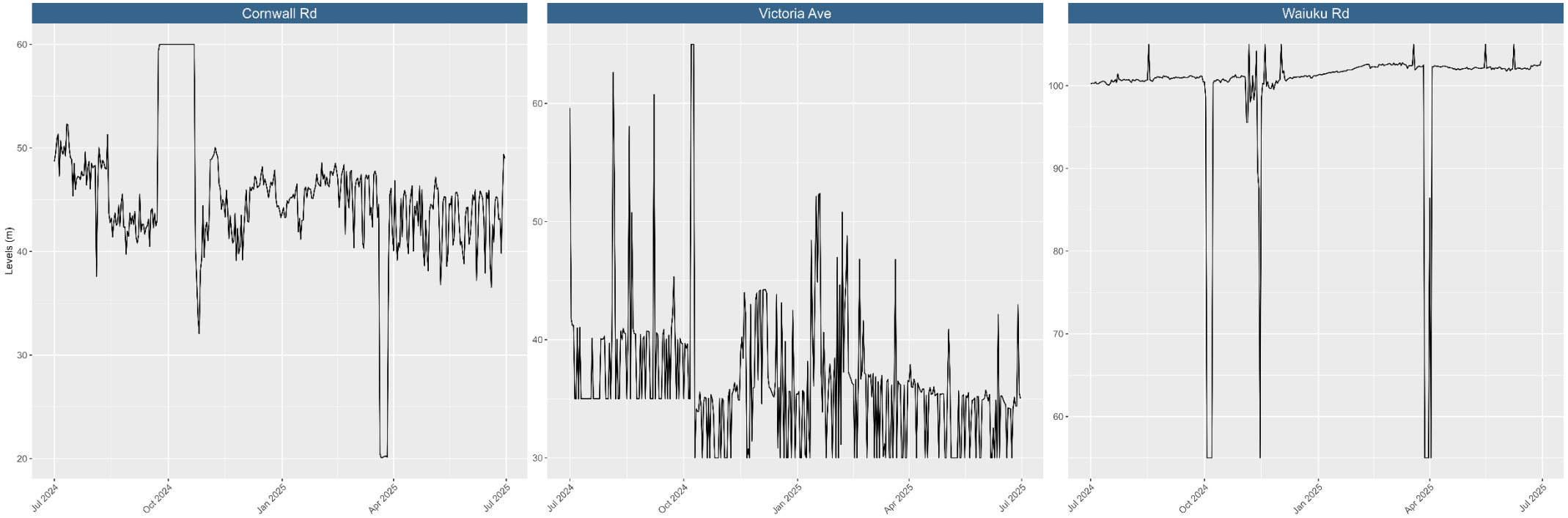

Figure 2: Production bore levels, Waiuku WTPs 2024-2025

2.4 Water quality results

Figure 3 shows water quality monitoring results for the production bores over the compliance monitoring period. Monitoring focused on key saline intrusion indicators – electrical conductivity, chloride, and sulphate – in line with the Water Quality Monitoring Plan (WQMP). All parameters remained well below consented trigger thresholds and were consistent with historical trends, providing assurance that abstraction is not adversely affecting aquifer quality. One scheduled October 2024 round was missed, but all other quarterly samples were completed. All other results remained consistent with previous periods and stayed well below the trigger levels specified in the WQMP.

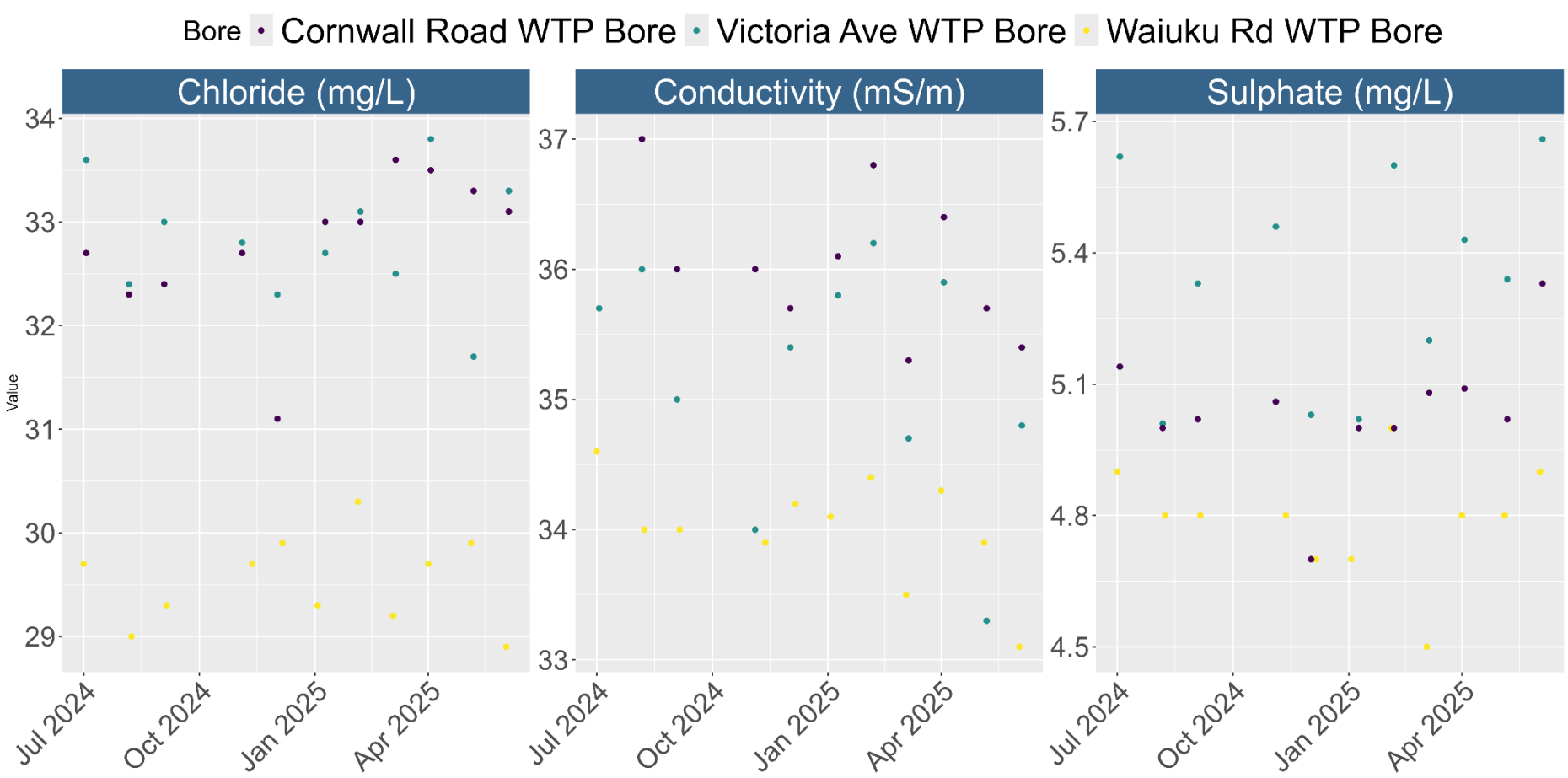

Figure 3 Water quality monitoring at Waiuku WTPs 2024-2025

3 Historical trends

3.1 Abstraction

Figure 4 illustrates the long-term extraction volumes from each of the three production bores, as well as the combined total. The data presented in Figure 4 indicate periodic fluctuations in volume, with alternating periods of slight increases and decreases. In recent years, Victoria Road has experienced a modest rise in extraction volume, while Waiuku Rd has remained consistent, similar to Cornwall Rd, except for the 2024-2025 reporting period during which Cornwall Rd saw a decrease of approximately 38%.

The distribution of water abstracted from each bore to supply the Waiuku community varies, though recent data show totals below 1,000,000 m³ per year, with a further decline to under 750,000 m³ per year in this reporting period. This reduction primarily reflects decreased abstraction from the Cornwall bore.

Variations in abstraction volumes among the three bores can be attributed to factors such as plant capacity and operational performance, including maintenance activities.

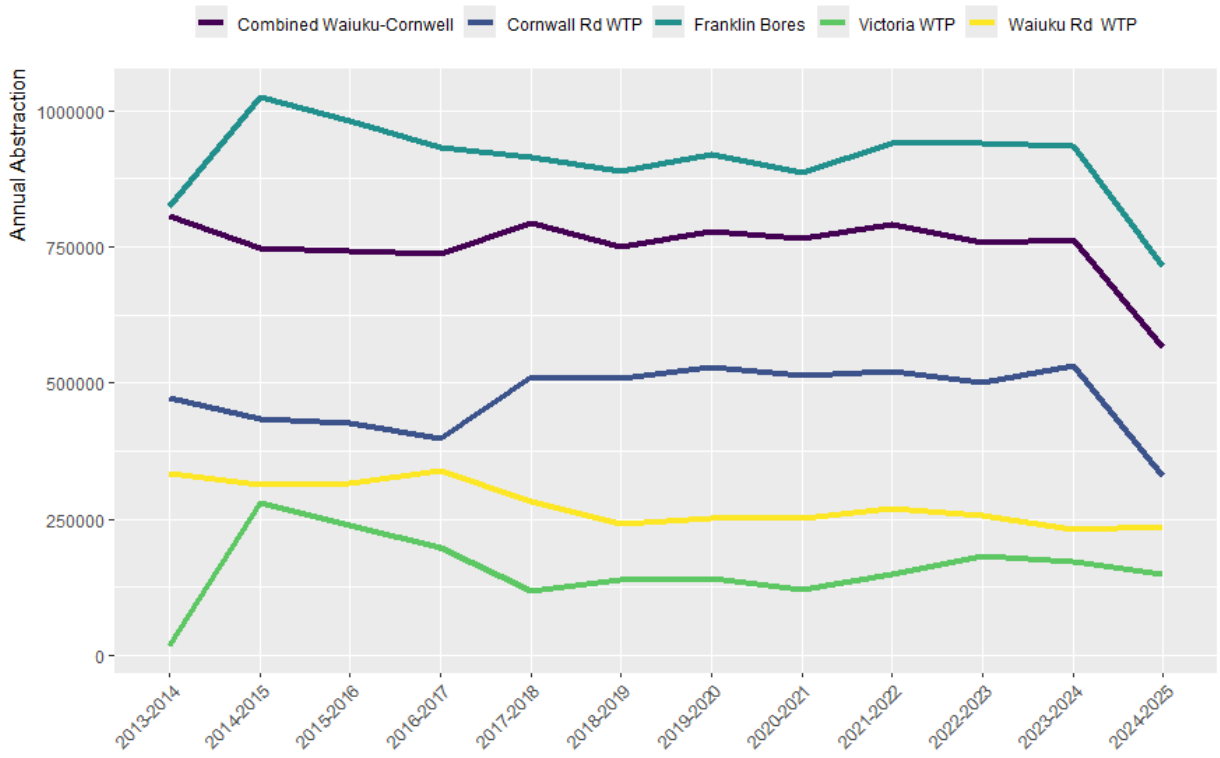

Figure 4: Long-term annual abstraction from 2013-2025(m³/year), Waiuku WTPs.

3.2 Water quality

Figure 5 shows the long-term water quality trends for the three production bores. All three production bores showed a rising trend for sulphate from approximately 3.0 mg/L to 5.0 mg/L between 2003 and 2011, but sulphate concentrations have been stable since. The 2024-2025 results are in line with previous observations, except for a slight increase in Chloride for the last two monitoring periods. No trends in conductivity were observed. Based on these observations, there is no evidence of saline intrusion.

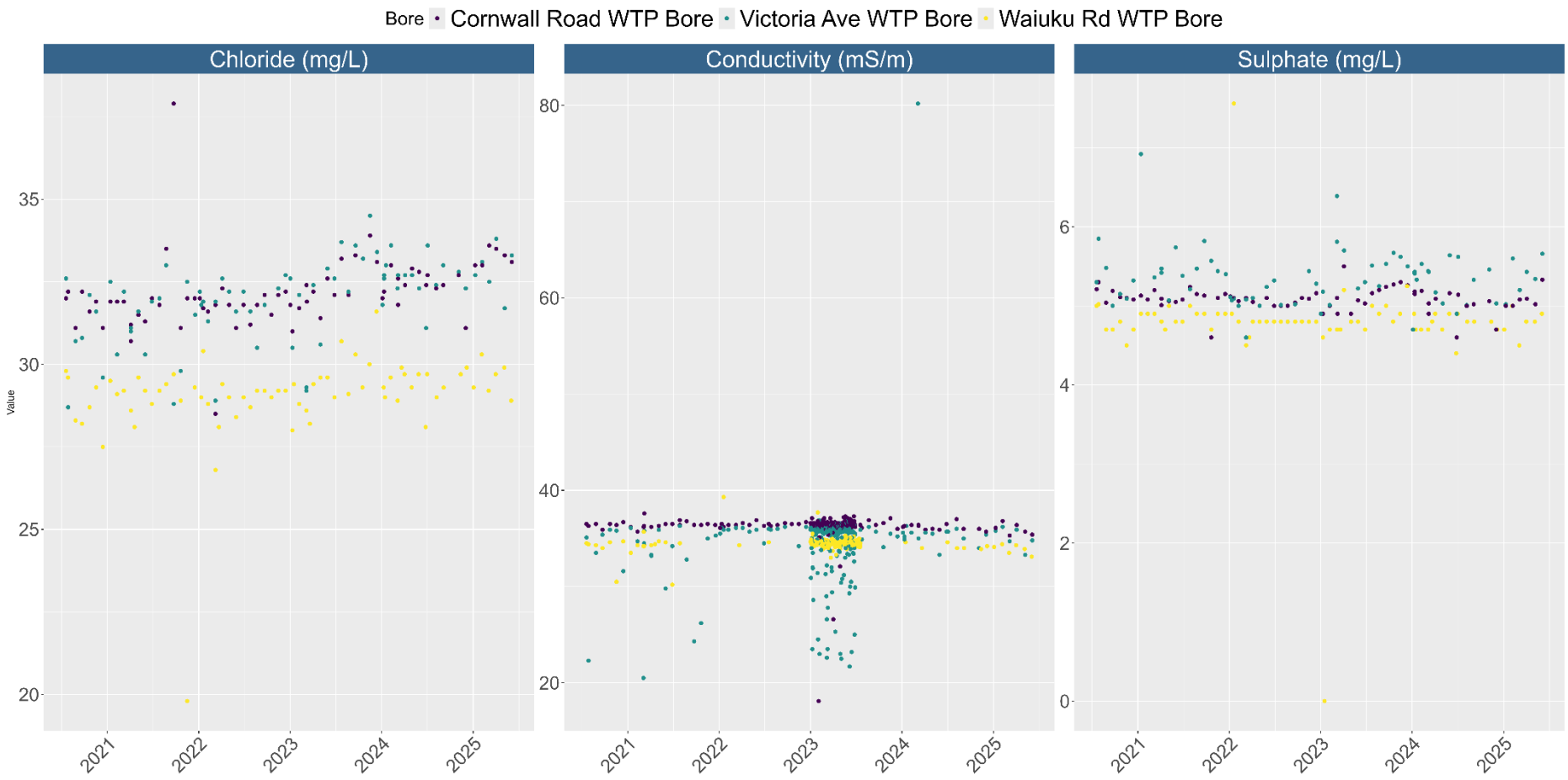

Figure 5 Long-term water quality monitoring at Waiuku WTPs (2020-2025).

4 Conclusions

During the compliance monitoring period from 1 July 2024 to 30 June 2025, abstraction from the Waiuku Rd, Victoria Ave and Cornwall bores remained within the consented limits. The cumulative annual abstraction and rolling five-year cumulative abstraction from the Waiuku Rd Bore also remained within consented limits.

Water levels and water quality monitoring results have remained relatively consistent, and there has been no indication of saline intrusion in the aquifer.