

Water Supply

Southern, Western, Northwestern Zones

DRINKING WATER SAFETY PLAN

2025



Community Code	SOU009 Southern; WES014 Western; NOR013 Northwestern
Source Code	N/A
Treatment Plant Code	N/A
Zone Code	SOU009SO Southern; WES014WE Western; NOR013 Northwestern

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Table 1: Document Control Record.

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Table 2: Document Distribution List.

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Executive Summary

This Drinking Water Safety Plan (DWSP) has been developed using the *New Zealand Drinking Water Safety Plan Framework* and provides a comprehensive review of the Southern, Western and Northwestern water supply zones. It outlines how public health risks within these zones are managed and summarises compliance requirements necessary to ensure the delivery of safe and reliable drinking water.

The Southern, Western, and Northwestern supplies are owned by Waikato District Council (WDC) and operated by Watercare Services Limited (Watercare). The abstraction and treatment of water for these zones, along with the associated DWSP, are the responsibility of Hamilton City Council (HCC). A formal agreement between HCC and WDC governs the supply and acceptance of potable water. Under this agreement, HCC supplies up to 12,000 m³/day for distribution across the district.

WDC and Watercare adhere to the six principles of drinking-water safety, which are embedded into all systems, processes, and behaviours:

- 1) Embrace a high standard of care
- 2) Protect source water
- 3) Maintain multiple barriers against contamination
- 4) Change precedes contamination
- 5) Suppliers must own the safety of drinking-water
- 6) Apply a preventive risk management approach.

This DWSP satisfies the legislative requirements of the *Water Services Act 2021* and must be viewed alongside the *Watercare Waikato General DWSP (Version 1.0; Appendix 1)*. It will be reviewed and updated regularly to reflect changes in infrastructure, operations, or risk profiles, ensuring ongoing compliance and continuous improvement in drinking water safety.

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Amendments

Requests for amendments or revisions of the manual are submitted to the document controller, who is responsible for reviewing requests and implementing changes to the document. Amendments and updates are documented in the *Table 1: Document Control Record*. Amendments or revisions of the document will result in a new version number and updated date in the footer.

1. Assessment of the Southern, Western & Northwestern Drinking-Water Supplies

Table 3: Water Supply Details.

Supply Details – Southern Districts Zone	
Hinekōrako Community Code	SOU009
Hinekōrako Zone Code	SOU009SO
Supply Owner	Waikato District Council
Population Served by Supply	8,830 (based on 2025 active metered connections)
Supply Details – Western Districts Zone	
Hinekōrako Community Code	WES014
Hinekōrako Zone Code	WES014WE
Supply Owner	Waikato District Council
Population Served by Supply	120 (based on 2025 active metered connections)
Supply Details – Northwestern Districts Zone	
Hinekōrako Community Code	NOR013
Hinekōrako Zone Code	NOR013NO
Supply Owner	Waikato District Council
Population Served by Supply	30 (based on 2025 active metered connections)
Source Details – Waiora WTP, Hamilton	
Easting: 2713006	Northing: 6374633
Source	Waikato River
Hinekōrako Code	S00041
Consent	RC held by Hamilton City Council.
Treatment – Waiora WTP, Hamilton	
Hinekōrako Community Code	TP00066
Treatment Processes	Clarification, Filtration, Ultraviolet (UV) Disinfection, Chlorination, Activated Carbon

Water Supply System Description

Drinking water is supplied from the HCC WTP located on Waiora Terrace. Water is sourced from the Waikato River and undergoes treatment including clarification, filtration, chlorination and UV disinfection.

Southern Districts Distribution Zone

The Southern Districts Distribution zone supplies water to Tamahere, Matangi, Gordonton, Newstead, and Eureka. Water is delivered through multiple supply points, each monitored by individual bulk water meters located at:

- Matangi Road / Silverdale Road, Matangi.
- Newell Road / State Highway 1, Tamahere.
- Nevada Road, Newstead.
- Ruakura Road, Newstead.
- Powells Road, Powells.
- Crosby Road, Gordonton/Puketaha.

Water is sourced from the HCC reticulation system and delivered to customers by the WDC under a restricted supply arrangement. This arrangement relies on pressure provided by the HCC network.

Exceptions include properties in rural areas such as Tauwhare Pa, Gordonton Village, and Matangi Village, which are grandparented full-pressure supplies. All restricted supply properties are required to have onsite storage tanks.

Two network reservoirs are located in Matangi and Newstead. Residual chlorine boosting is achieved via sodium hypochlorite dosing occurs at booster stations in Newstead, Newell Road and Puketaha. Reservoir details are provided in the *Reservoir Register (Appendix 2)*.

Western District Distribution Zone

The Western District Distribution Zone services the semi-rural lifestyle properties of the Stonebridge subdivision, located adjacent to Wallace Road.

The lower area of the zone receives water directly from the HCC distribution system, relying on existing network pressure. A local reservoir and small booster pump station maintain adequate pressure in the higher elevation areas of the subdivision.

There is currently no telemetry or online monitoring installed within the Western District Distribution Zone.

Northwestern District Distribution Zone

The Northwestern District Distribution Zone services rural and lifestyle properties located at Ruffell Road and Te Kowhai Road. It operates under a restricted supply arrangement, relying on pressure from the HCC reticulation system. All properties are required to have onsite storage tanks.

There are no storage reservoirs, booster pump stations, online monitoring, or telemetry currently installed in this supply zone.

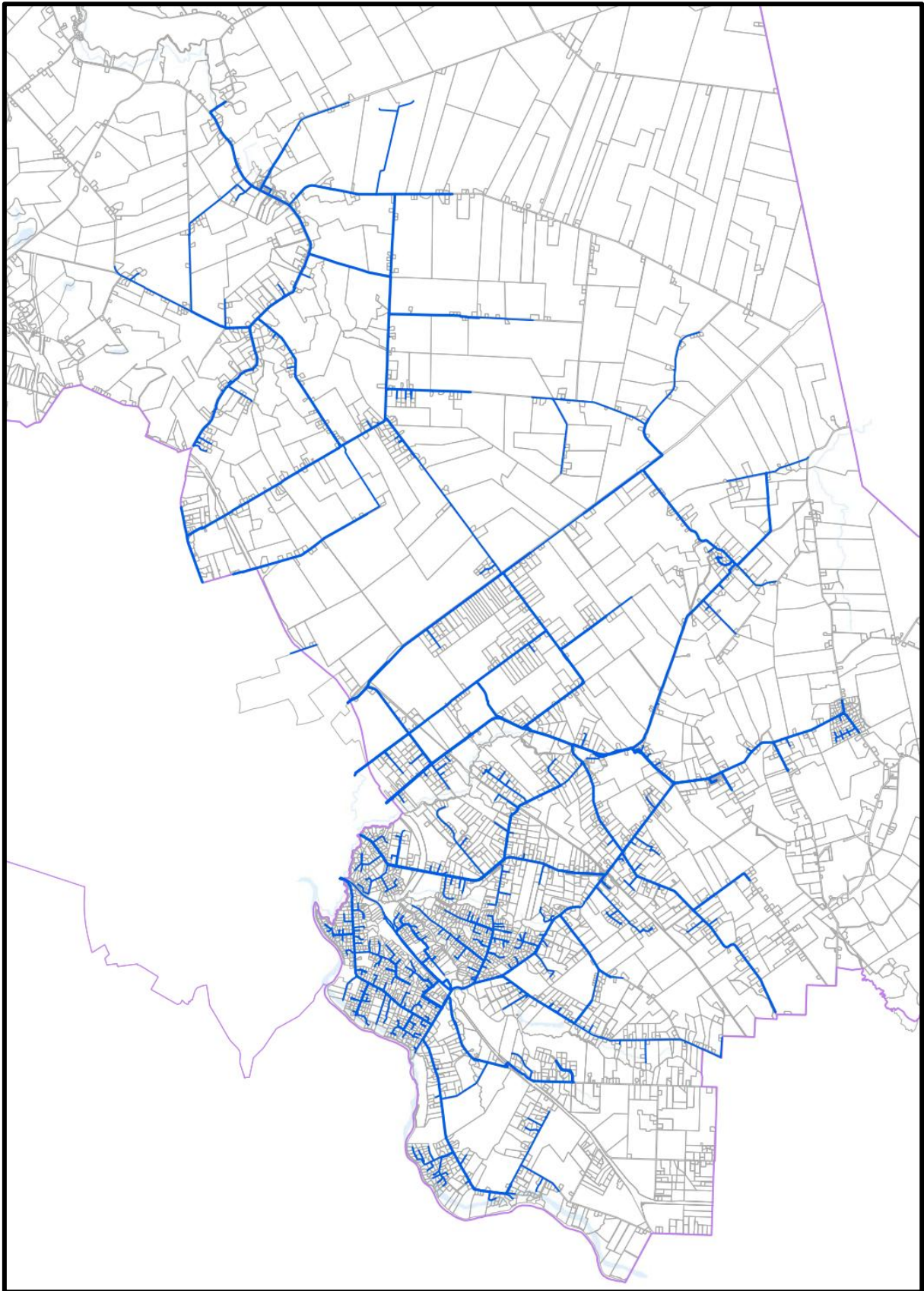


Figure 1: Southern District Zone Supply Location.

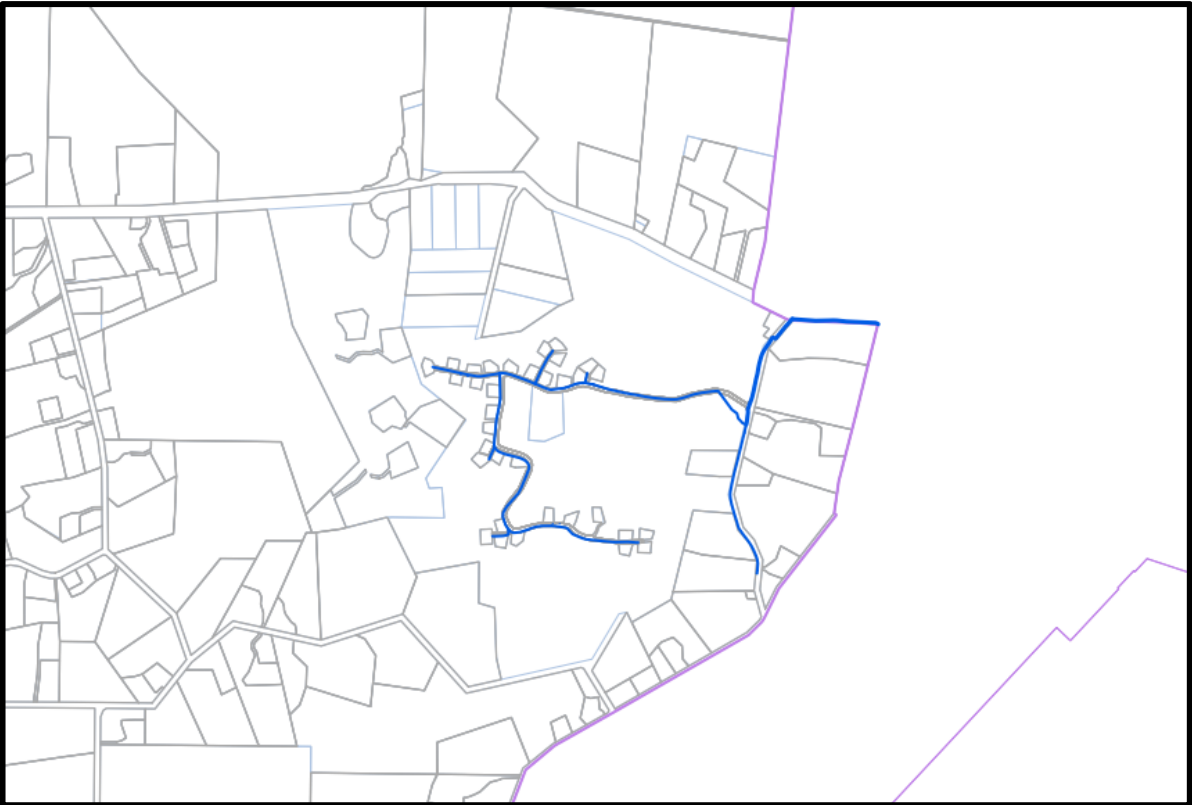


Figure 2: Western District Zone Supply Location.

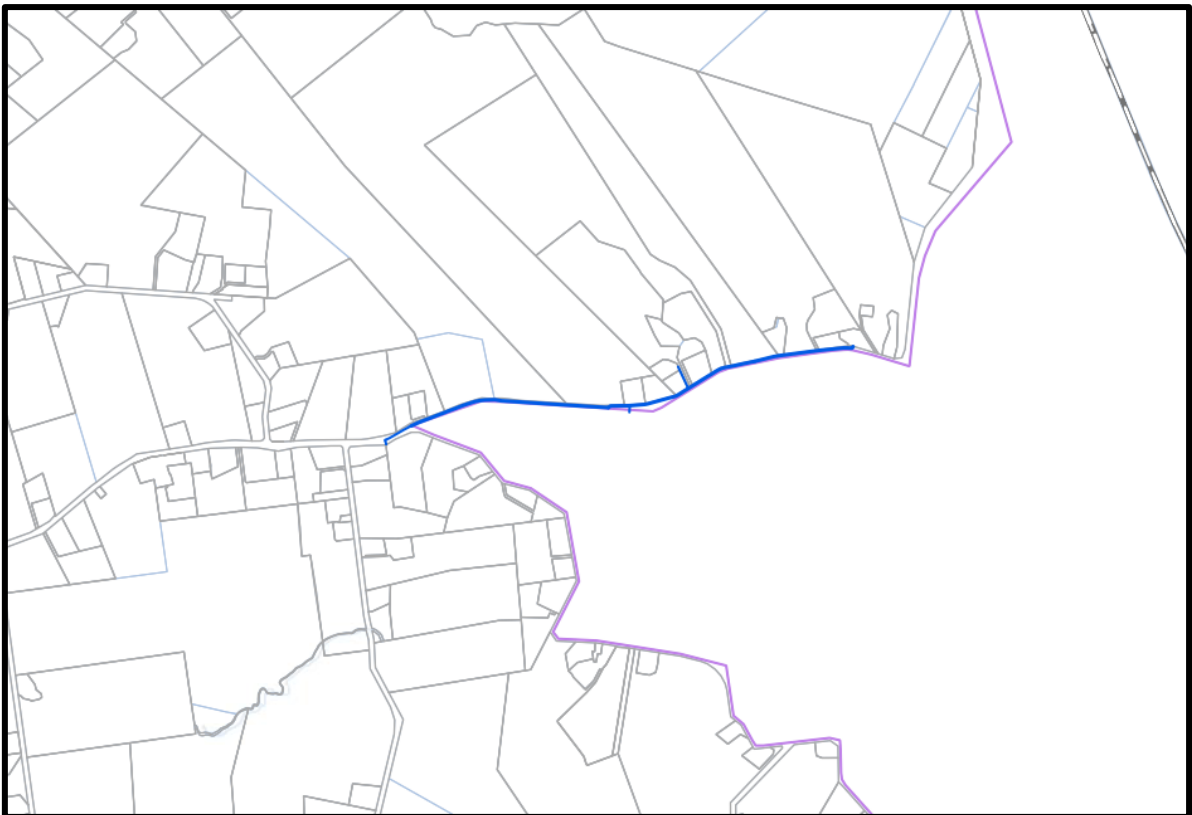


Figure 3: Northwestern District Zone Supply Location.

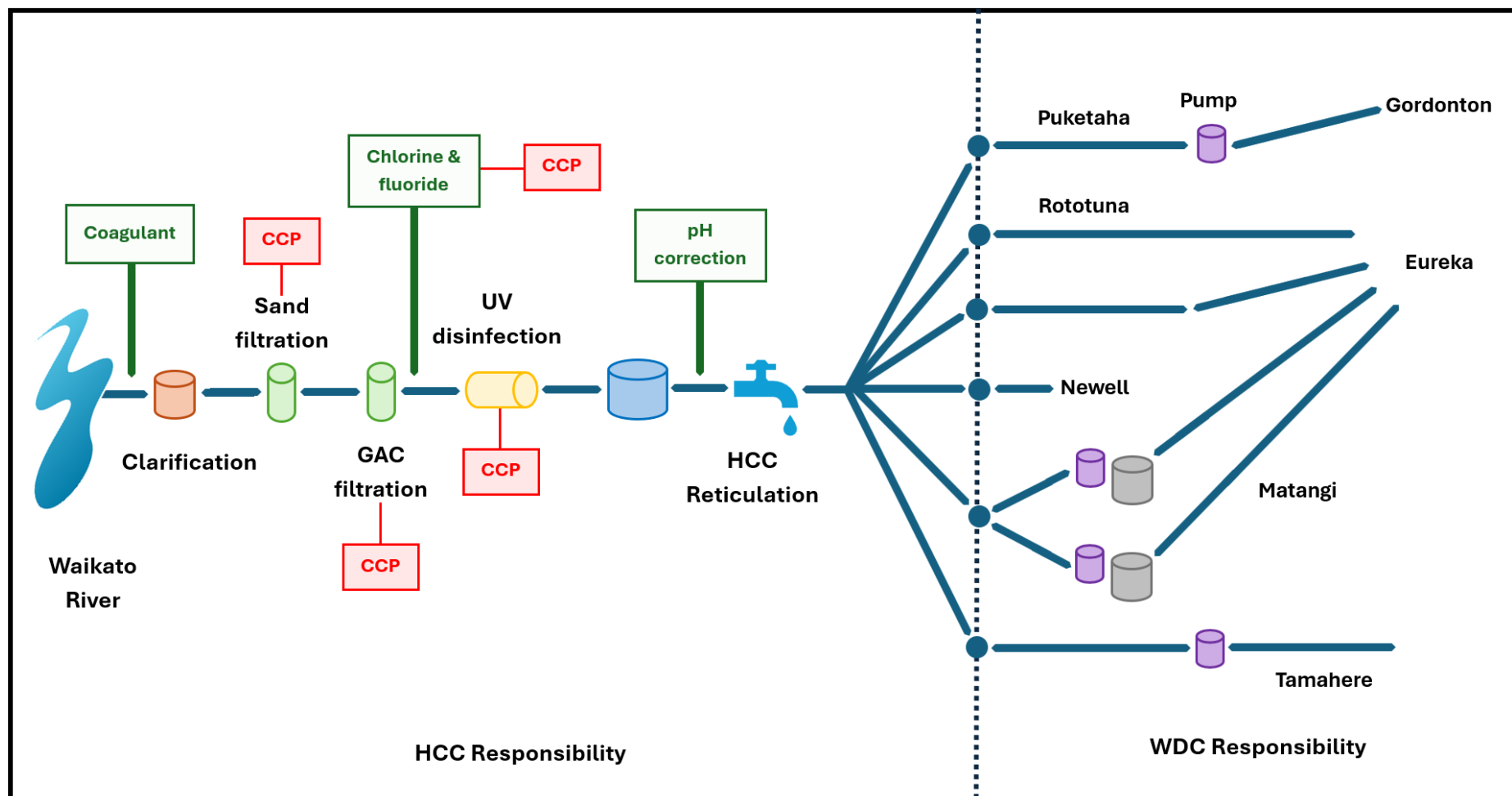


Figure 4: Water Supply Flow Diagram.

2. Risk Identification and Preventive Measures

A qualitative risk assessment of the Southern, Western and Northwestern distribution zones is detailed in the *Water Supply Risk Table (Appendix 3)*. The table identifies potential public health risks across the entire supply system, with each hazardous event assessed based on its likelihood and consequence, and includes the following components:

- Supply of Water
- Reticulation
- Other
- Delivery Pumps
- Storage Reservoirs

A multiple barrier approach is used to manage these risks. This approach ensures that if one barrier fails, others remain in place to maintain the safety and reliability of the supply. Key barriers include physical treatment processes, chemical dosing, operational monitoring, and system redundancies.

As part of this approach, Critical Control Points (CCPs) are established at key stages of the treatment process. These are process barriers and monitoring points designed to detect and respond to deviations that could compromise water safety. Each CCP has defined operational limits and is monitored at a frequency that ensures timely detection of any failures.

CCPs apply to the Waiora WTP which supplies the Southern, Western, and Northwestern zones, and are detailed in the relevant DWSP overseen by HCC.

The location of CCPs are shown in the supply flow diagram.

Table 4: Barriers and Preventative Measures in place at the Waiora WTP.

Four Types of Barriers	Existing Preventive Measures Include:
Preventing hazards entering the raw water	<ul style="list-style-type: none">• Wedge wire intake screens• Arkal disk filters
Removing particles and hazardous chemicals from the water by physical treatment	<ul style="list-style-type: none">• Rapid sand filtration – CCP• GAC filtration - CCP
Killing or inactivating pathogens in the water by disinfection	<ul style="list-style-type: none">• UV disinfection – CCP• Chlorination with contact time – CCP
Maintaining the quality of the water in the distribution system	<ul style="list-style-type: none">• Residual disinfection maintained• Hygiene and construction codes of practice• Adequate network pressures maintained• Backflow prevention programme• Reservoirs protected from ingress• Online continuous SCADA monitoring and alarms

3. Compliance Monitoring and Reporting Requirements

The Southern District distribution zone is required to demonstrate compliance against the Drinking Water Quality Assurance Rules (2022), revised 29 November 2024 (DWQAR) Level 3. The reporting period is monthly, with compliance data submitted to Taumata Arowai within 10 working days following the end of each month.

The Western District distribution zone is required to demonstrate compliance against the DWQAR Level 2. The reporting period is quarterly, with compliance data submitted to Taumata Arowai within 20 working days following the end of each month.

The North-Western District distribution zone are required to demonstrate compliance against the DWQAR Level 1. Compliance is assessed annually, with data submitted to Taumata Arowai within 40 working days following the end of each calendar year.

Determinands listed in Table 3 are reported via API transfers from Water Outlook to Taumata Arowai's compliance database, Hinekorako. The sampling plan is detailed in *Appendix 4*.

Table 5: Monitoring Requirements for the Southern, Western and Northwestern distribution zones.

Population	Determinands	Compliance Limit	Hazard	DWQAR	Sampling Frequency	Compliance Period
10,750	FAC	0.2 mg/L	Microbiological	4.11.4 – D3.19 & D3.20	Table 35	1 Month
10,750	THM/HAA5	DWSNZ	DBPs	4.11.4 – D3.22	Table 37	1 Year
10,750	Plumbosolvent Metals	DWSNZ	Plumbosolvent Metals	4.11.4 – D3.24	Table 38	1 Year
10,750	<i>E. coli</i>	> 1.0/100mL	Microbiological	4.11.5 – D3.29	Table 39	1 Month
10,750	Total Coliforms	> 1.0/100mL	Microbiological	4.11.5 – D3.29	Table 39	1 Month

APPENDIX 1: GENERAL WATER SAFETY PLAN (VERSION 1.0)

Addresses the ten fundamental components for the provision of safe and secure drinking water across all WDC-owned water supplies in alignment with the *New Zealand Drinking Water Safety Plan Framework*.

Available at: <O:\Ops\Watercare Waikato\Water Safety Plans\1. DWSP General>

APPENDIX 2: RESERVOIR STORAGE MANAGEMENT PLAN

Details operational parameters and maintenance requirements for drinking water storage facilities, aligned with the *DWQAR D3.12*.

Available at: <O:\Ops\Watercare Waikato\Water Safety Plans\1. DWSP Southern, Western, Northwestern>

APPENDIX 3: WATER SUPPLY RISK TABLES

Summarises potential risks to drinking water quality for the Tuakau and Pookeno supply zones, supporting control prioritisation and improvement planning.

Available at: <O:\Ops\Watercare Waikato\Water Safety Plans\1. DWSP Southern, Western, Northwestern>

APPENDIX 4: DISTRIBUTION NETWORK SAMPLING PLAN

Outlines WDC's distribution network compliance monitoring schedule, reviewed annually per *DWQAR D3.18* and *D3.28*. Available at: <O:\Ops\Watercare Waikato\Water Safety Plans\1. DWSP Southern, Western, Northwestern>

APPENDIX 5: OPERATOR MONITORING AND MAINTENANCE SCHEDULE

Outlines a defined set of performance criteria used to assess and verify the functionality of key components within the water supply system. The Operator Monitoring and Maintenance Schedule is included in the General Drinking Water Safety Plan.

Available at: <O:\Ops\Watercare Waikato\Water Safety Plans\1. DWSP Southern, Western, Northwestern>

APPENDIX 6: STANDARD OPERATING PROCEDURES (SOPS)

Step-by-step instructions for routine tasks, maintenance activities, and incident response, ensuring compliance with regulatory requirements and best practice standards.

Available at: <O:\Ops\Watercare Waikato\1. CONTROL of WORKS\CONTROL OF WORKS\SOPs\Production\Water>