



Waikato, Waikato 50 and Waikato A Water Treatment Plants 2025-2026 Annual Report

Final September 2026

QUALITY INFORMATION

Document	Annual Report
Date	1 October 2026
Name and position of originator	Maxine van den Berg, Senior Environmental Scientist
Report directory	Water Supply\Treatment\STWKO\00 - Site General\Statutory Compliance\RMA\Annual Report\2026

REVISION HISTORY

Rev	Revision Date	Name	Position	Signature
1	29/09/2026	Michiel Jonker	Environmental Care Manager	
2		Ryan Wood	Operations Controller	

APPROVED

Date	Name	Position	Signature
	Michiel Jonker	Environmental Care Manager	

CONSENT CHANGE AND MONITORING HISTORY

Change type	Description	Effective date	Reference/condition	Reporting / monitoring implications
Management plan update	Resource consent management plan update in accordance with AUTH960089.01.05, AUTH131259.01.02, AUTH137497.02.01, AUTH960092.01.04 and AUTH142778.01.01.	July 2023	See consents (conditions requiring management plans)	Next iteration due in 2027.
Management plan update	Discharge management plan update in accordance with AUTH137497.01.01 and AUTH142778.01.01	December 2024	Condition 10 (AUTH142778.01.01); equivalent condition in AUTH137497.01.01	Next iteration due 2026

EXECUTIVE SUMMARY

This annual report summarises Watercare's monitoring, operational performance and resource consent compliance for the Waikato, Waikato 50 and Waikato A WTPs from 1 July 2025 to 30 June 2026. The WTPs were compliant with most consent and management plan requirements, with non-compliance limited to operational discharge quality and discharge volume exceedances. Key findings are summarised below.

- **Water take:** The combined daily net take limit of 300,000 m³/day was not exceeded. Net takes ranged from 8 to 140,986 m³/day, and Waikato River flow at Rangiriri remained above the low-flow restriction trigger.
- **Instantaneous abstraction:** The combined instantaneous take limit of 5,650 L/s was not exceeded; the maximum recorded rate was 2,098 L/s on 1 November 2025.
- **Raw water quality:** Raw water turbidity was more variable than the previous year, with a median of 17.70 NTU, a 90th percentile of 39.39 NTU and more frequent high-turbidity events.
- **Discharge quality:** Routine discharge monitoring met pH, fluoride, soluble aluminium and free available chlorine limits. TSS exceeded the 50 mg/L limit on three routine sampling occasions associated with BAC works, wastewater recycle tank overflows and clarifier cleaning.
- **Discharge volumes:** Waikato WTP operational discharges averaged 9,163 m³/day, with one exceedance on 22 April 2026 during BAC 7 media replacement/backwashing. Waikato 50 WTP recorded one discharge volume exceedance on 28 August 2025.
- **Unplanned, maintenance and off-spec discharges:** Unplanned discharges were returned to the Waikato River via the off-spec pipeline, with no chlorinated or fluoridated water reported. Maintenance discharges were managed on site or tested before discharge, and no treated off-spec water discharges occurred.
- **Intake structure monitoring:** The intake screen survey recorded no fish impingement, no visible screen damage and no openings greater than 2.5 mm. Smelt larvae density was below the investigation threshold, and no gold clam was found in the penstock.
- **Cultural and ecological initiatives:** Watercare continued to engage with Tangata Whenua Liaison Group to progress with drafting the Cultural Indicators Monitoring Plan, and submitted the Aquatic Habitat Enhancement Plan and Haywards Landing Ecological Enhancement Plan for Waikato Regional Council review.
- **Stormwater, incidents and pest controls:** No adverse stormwater effects, equipment failures, chemical spills or maintenance-related adverse environmental effects were identified. Existing treatment barriers and site protocols continue to manage invasive species transfer risk.
- **Water conservation:** No leakages were reported from the Waikato 1 Treated Watermain, and Watercare continued its water efficiency programme, including leakage detection, pressure management and demand-reduction initiatives.
- **Overall compliance:** The Waikato, Waikato 50 and Waikato A WTPs were compliant across most consent conditions assessed. Non-compliance was limited to operational discharge quality and discharge volume exceedances under AUTH137497.01.01 and AUTH142778.01.01.

TABLE OF CONTENTS

1	Introduction	7
1.1	Background	7
1.2	Scope	7
1.3	Additional Details	7
2	Operational details.....	9
2.1	Current operations	9
3	Methodology.....	11
3.1	Monitoring.....	11
3.2	Data handling and analysis	11
3.3	Compliance criteria.....	12
4	Results.....	13
4.1	Raw water quality.....	13
4.2	Waikato River flow rate and take volumes	13
4.3	Waikato River instantaneous take rate and water velocity	15
4.4	Effects of the intake structure.....	15
4.4.1	Fish entrainment and impingement on intake screens	15
4.4.2	Effect of the intake structure on fish migration	16
4.4.3	Effect of screen sparging.....	16
4.5	Cultural indicators monitoring and ecological enhancement	16
4.5.1	Tangata Whenua Liaison Group.....	16
4.5.2	Cultural Indicators Monitoring Plan (CIMP).....	16
4.5.3	Aquatic Habitat Enhancement Plan.....	17
4.5.4	Ecological Enhancement Plan- Haywards Landing.....	17
4.6	Types of discharges to the Waikato River	18
4.6.1	Operational discharges	18
4.6.2	Stormwater discharges	18
4.7	Quality of operational discharges.....	18
4.7.1	Planned process discharges	18
4.7.2	Unplanned process discharges	22
4.7.3	Maintenance discharges	22
4.8	Volume of operational discharges.....	23
4.8.1	Waikato WTP.....	23
4.8.2	Waikato 50 WTP.....	23

4.9	Treated off-spec water discharges	24
4.10	Stormwater discharges.....	24
5	Water conservation	26
5.1	Leakages from the raw water pipeline	26
5.2	Water efficiency programme	26
6	Measures to prevent pests in water	27
7	Environmental incidents	27
8	Conclusion.....	28

Appendix A.	Raw water quality data
Appendix B.	Process discharge quality
Appendix C.	Chemical bunds discharges
Appendix D.	Volume of Waikato WTP operational discharges
Appendix E.	Data sources
Appendix A.	Screen entrainment survey report

LIST OF FIGURES

Figure 2-1: Waikato WTP site overview	10
Figure 4-1: Turbidity of raw water taken from the Waikato River 2025-2026.	13
Figure 4-2: Total and net intake volumes of the Waikato and Waikato 50 WTPs.....	14
Figure 4-3: Waikato River flow at Rangiriri for the reporting period 2025-2026.	14
Figure 4-4: Max daily instantaneous take rates of the Waikato and Waikato 50 WTPs 2025-2026. ...	15
Figure 4-5: Discharge water quality for fluoride for the reporting period 2025-2026.	19
Figure 4-6: Discharge water quality for soluble aluminium for the reporting period 2025-2026.	20
Figure 4-7: Discharge water quality for total suspended solids for the reporting period 2025-2026...	20
Figure 4-8: Discharge water quality for pH for the monitoring period 2025 - 2026.....	21
Figure 4-9: Discharge water quality for chlorine for the monitoring period 2025 - 2026.	21
Figure 4-10: Daily discharge volumes for Waikato WTP.....	23
Figure 4-11: Discharge outlet location into the Wairiri Stream. View looking upstream.....	24
Figure 4-12: Discharge outlet location into the Wairiri Stream. View looking downstream.....	25

LIST OF TABLES

Table 1.1-1: Abbreviations	vi
Table 1.3-1: Resource consent conditions requiring an annual report.	7
Table 1.3-2: Waikato WTP Management Plans	8
Table 3.1-1: Water quality standards for operational discharges	11
Table 3.3-1: Compliance assessment criteria	12
Table 5.2-1: Resource consent compliance summary for 2025-2026	28

ABBREVIATIONS

For ease of reading, this report uses abbreviations for some technical terms. Table 1.1-1 lists these abbreviations.

Table 1.1-1: Abbreviations

Abbreviation	Description
WTP	Water treatment plant
BAC	Biologically Activated Carbon
TSS	Total suspended solids
Watercare	Watercare Services Limited
PAT	Planned Abstraction Table
TWLG	Tangata Whenua Liaison Group
CIMP	Cultural Indicators Monitoring Plan

1 INTRODUCTION

1.1 Background

The Waikato Water Treatment Plant (WTP) is Watercare's second-largest WTP in New Zealand. Located on Hayward Road, Tuakau, it abstracts water from the Waikato River. The Waikato River is New Zealand's longest river, with a catchment area of 14,260 km², and provides a reliable water source. The site also includes the smaller Waikato 50 WTP, while the Waikato A WTP is currently under construction, with work on the new pump station well advanced. The resource consent for these works took effect in January 2023.

Below is a summary of the historic upgrades to the WTP giving the plant its current water capacity:

- 2002 - Maximum capacity of 45 MLD.
- 2004 - Upgrades increased WTP capacity to 75 MLD.
- 2011 - WTP capacity increased to 90 MLD.
- 2013 – Further upgrades to Waikato WTP increased the capacity to 110MLD.
- 2014- Further upgrades leading to overall capacity to 174MLD.
- 2016 – Addition of fifth clarifier and sand separation units increasing capacity to 175 MLD.
- 2019 – In response to the Auckland drought, Watercare planned and built a smaller plant, now known as Waikato 50 WTP, to provide an additional 50 MLD of treatment capacity. Waikato 50 WTP operates when required and has been commissioned in July in each of the past two years to support water supply security ahead of the summer period. This brings the total capacity to 225 MLD continuously and 260 MLD for up to six hours.

1.2 Scope

This report presents the routine and environmental monitoring that has been undertaken between 1 July 2025 to 30 June 2026. The report assesses compliance with relevant consent conditions, management plans and key restoration projects.

1.3 Additional Details

To operate, the WTPs hold resource consents that permit raw water take from the Waikato River, discharges of treated off-spec water, stormwater, and process discharges. The resource consents and numbers of the respective conditions which require an annual report are presented in Table 1.3-1. Table 1.3-2 summarises the relevant managements plans that the WTP operates under.

Table 1.3-1: Resource consent conditions requiring an annual report.

Resource Consent	Resource consent type	Condition
AUTH960089.01.05	Water Take (from Waikato River)	20
AUTH131259.01.02	Water Take (from Waikato River)	B, P
960090	Diversion of Water (from culverts of an unnamed tributary through the intake and Waikato treatment plant)	18
AUTH960092.01.04	Works in a Watercourse (intake structure and discharges)	25
AUTH137497.01.01	Discharge to Water (process water discharges into the Waikato River)	14
AUTH142778.01.01	Discharge to Water (off-spec and process water from STW50 into the Waikato River)	13

Table 1.3-2: Waikato WTP Management Plans

Resource Consent	Management Plan	Condition
AUTH137497.01.01	Discharge Management Plan	10
	Resource Consent Management Plan	10
AUTH142127.02.01	Aquatic Habitat Enhancement Plan	11
	Under WRC review	
	Cultural Monitoring Indicators Plan	K -P
BOI consent	Ecological Enhancement Plan (Haywards Landing)	C, D
	Under WRC review	
	Fish Management Plan	33

2 OPERATIONAL DETAILS

2.1 Current operations

Raw water is drawn from the Waikato River through four wedge wire intake screens that remove debris and protect aquatic life. The intake screens are submerged in the river, marked on the surface with two buoys and is approximately 25m from the true right bank of the Waikato River. The Waikato 50 WTP intake is approximately 20 m from the true right bank of the river, and it has two AWMA retrievable intake screens alongside the associated floating pump station. Both intake areas are screened with a mesh aperture size of 1.5mm in diameter.

The screened water flows into a wet well, where pumps transfer it via a raw water pipeline to the treatment plant. Screen cleaning is supported by an air scour system and periodic diver maintenance to maintain flow and prevent pump damage. The water then passes through sand separators, which remove grit and heavy solids using centrifugal force. Separated sand is dewatered and disposed of, while the clarified water continues to treatment.

Aluminium sulphate (alum) is added to coagulate fine particles, allowing them to be removed in the clarifiers, where most solids, turbidity, colour, and organic matter are removed. The clarified water enters ultrafiltration membranes, which act as a physical barrier to remove protozoa, pathogens, and other microscopic particles. It then passes through BAC filters, where granular activated carbon removes taste, odour, and dissolved organic compounds.

Following filtration, the water is disinfected in chlorine contact tanks before being stored in treated water tanks. The drinking water is then transferred by treated water pumps to regional reservoirs for distribution across the Auckland network.



Figure 2-1: Waikato WTP site overview

3 METHODOLOGY

3.1 Monitoring

Monitoring of the WTP is undertaken in accordance with the requirements of resource consents listed in Table 1.3-1. The monitoring programme aligns with the approved discharge management plan (DMP) and fish management plan (FMP). These include the following:

- The Planned Abstraction Table (PAT) sets the target abstraction rate for the WTP, considering current water demand, available source water and wider water supply system requirements. Operationally the PAT to guide how much water is abstracted from the Waikato River at any given time.
- Raw water quality is continuously monitored by calibrated instruments measuring pH, turbidity, temperature, dissolved oxygen, dissolved organics, conductivity and UV. These measurements help optimise treatment process if there are rapid changes to the river water quality.
- The intake screens are cleaned through an air scour system that uses pressurized air to purge the screens and dislodging any debris stuck on the wedge wires.
- The intake structures are inspected twice a year by a deep diving company. This is expanded on in section 4.4.1 of this report. Effects of the intake structure, including fish entrainment and impingement on the intake screens, the effect of the intake structure on fish migration, and the effect of screen sparging on the environment and river ecology.
- Waikato River flow, intake volumes and abstraction rates at the WTP.
- Water quality and volumes of operational discharges to the Waikato River, including process, maintenance and treated off-spec water discharges are monitoring against the limits set out in resource consents AUTH137497.01.01 and AUTH142778.01.01 (Table 3.1-1).
- Leakages from the water pipeline.
- An overview of water conservation activities.

Table 3.1-1: Water quality standards for operational discharges

Water quality parameter	Units	Consent limit
pH	pH units	6.5 – 9
Chlorine (FAC)	mg/L	≤ 0.25
Fluoride	mg/L	≤ 2
Total suspended solids	mg/L	≤ 50
Soluble aluminium	mg/L	≤ 4.0

3.2 Data handling and analysis

- Field sampling follows standardised protocols for sample collection, preservation, and transport (chain of custody forms, chilled storage). Grab samples are taken by operating staff at the WTP.
- Flow meters and UV sensors are calibrated at intervals consistent with manufacturer recommendations and consent conditions.
- Data and operational staff entries are stored on site and transposed into Watercare's digital data base. Details of data sources are provided in Appendix E.

- The WTP flow setpoint is determined by how many raw pumps are in use and the flow of water.

3.3 Compliance criteria

The assessment of the WTP performance considers:

- Results of the annual compliance monitoring period.
- Recorded incidents and complaints.
- Annual site inspection.

Watercare assesses compliance with the consent using the same compliance rating system utilised by Waikato Regional Council (Table 3.3-1).

Table 3.3-1: Compliance assessment criteria

Rating	Detail
Full Compliance	Watercare has achieved full compliance with all relevant consent conditions, plan rules, regulations and national environmental standards.
Low Risk Non-Compliance	Watercare has not complied with all the resource consent conditions and non-compliant with some of the relevant consent conditions, plan rules, regulations and national environmental standards. Non-compliance carries a low risk of adverse environmental effects or is technical in nature (e.g. failure to submit a monitoring report).
Moderate non-compliance	Watercare has not complied with the consent condition. Non-compliance with most of the relevant consent conditions, plan rules, regulations and national environmental standards, where there are some environmental consequences and/or there is a moderate risk of adverse environmental effects.
Significant non-compliance.	Watercare has not complied with the consent condition. Watercare has assessed the non-compliance as having the potential to cause significant adverse effects on the environment. Alternatively, since the last audit, there is evidence of repeat Category 3 non-compliance.

4 RESULTS

4.1 Raw water quality

There is no requirement in the existing resource consents to monitor the raw water quality, however Watercare monitors the water quality taken from the Waikato River and is included as a requirement in the current resource consent monitoring plan. A summary of the results for the ongoing raw water sampling programme is provided in Appendix A. These samples and tests are carried out by the Watercare Laboratory Services (WLS).

Turbidity of the raw water is also measured on a continuous basis using an online turbidimeter. Results from the online turbidimeter are summarised in Figure 4-1. The data shows that raw water turbidity was generally low in the beginning of the monitoring period with 4 definitive spikes. The later end of the monitoring period had more intermittent spikes throughout the second half of the reporting period. The median value of 17.70 NTU and a 90th percentile of 39.39 NTU indicates higher fluctuations compared to last year. There were 1565 instances where turbidity exceeded 100 NTU, measured at 1-minute intervals over the year. This marks a notable increase compared to the 296 instances recorded in 2024-2025. There were multiple occasions where the recorded turbidity level reached just below 500 NTU. The frequency of elevated turbidity measurements was greater than in the previous reporting period, indicating greater variability in raw water turbidity during 2025–2026. The available monitoring data do not, however, identify the source of individual elevated turbidity events.

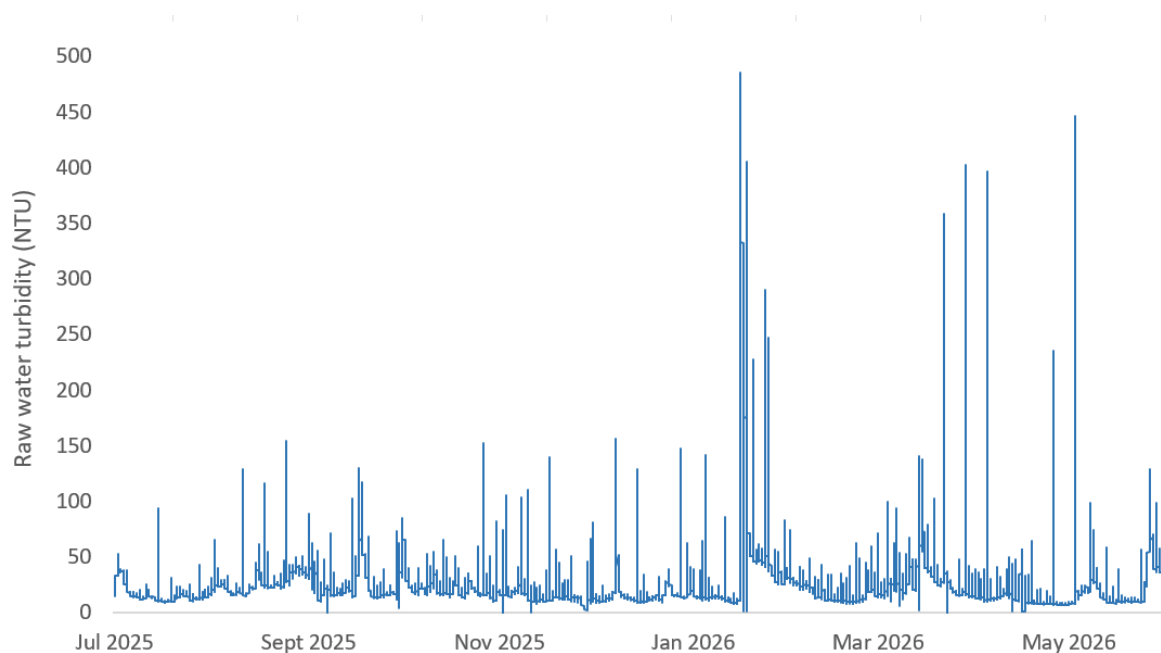


Figure 4-1: Turbidity of raw water taken from the Waikato River 2025-2026.

4.2 Waikato River flow rate and take volumes

Resource consents AUTH960089.01.05 and AUTH131259.01.02, authorise a combined maximum daily net take of 300,000 m³ of water from the Waikato River for municipal supply purposes. The new resource consent facilitates the construction and operation of a new WTP that can utilise the additional abstraction volumes, which is currently in the planning phase. Watercare does not

currently have the production capacity to exceed the maximum daily net take. The abstraction rate did not exceed the consented limits for this monitoring period and is displayed in Figure 4-2. Net take volumes ranged between 8 m³/day to 140,986 m³/day. The water abstracted was treated primarily at the Waikato WTP, with Waikato 50 WTP out of service for several months of the reporting period. If the seven-day rolling average flow of the Waikato River at Rangiriri falls below 163.53 m³/s for 10 or more consecutive days, the average daily net takes over any consecutive two-day period must not exceed 127,500 m³ for water taken under the secondary consent, or 277,500 m³ when considering both consents combined. The minimum flow at Rangiriri was 231.75 m³ in this reporting period, displayed in Figure 4-3. The river appears to be highly variable with the largest flow event recorded in October 2025 with approximately 1,050 m³/s

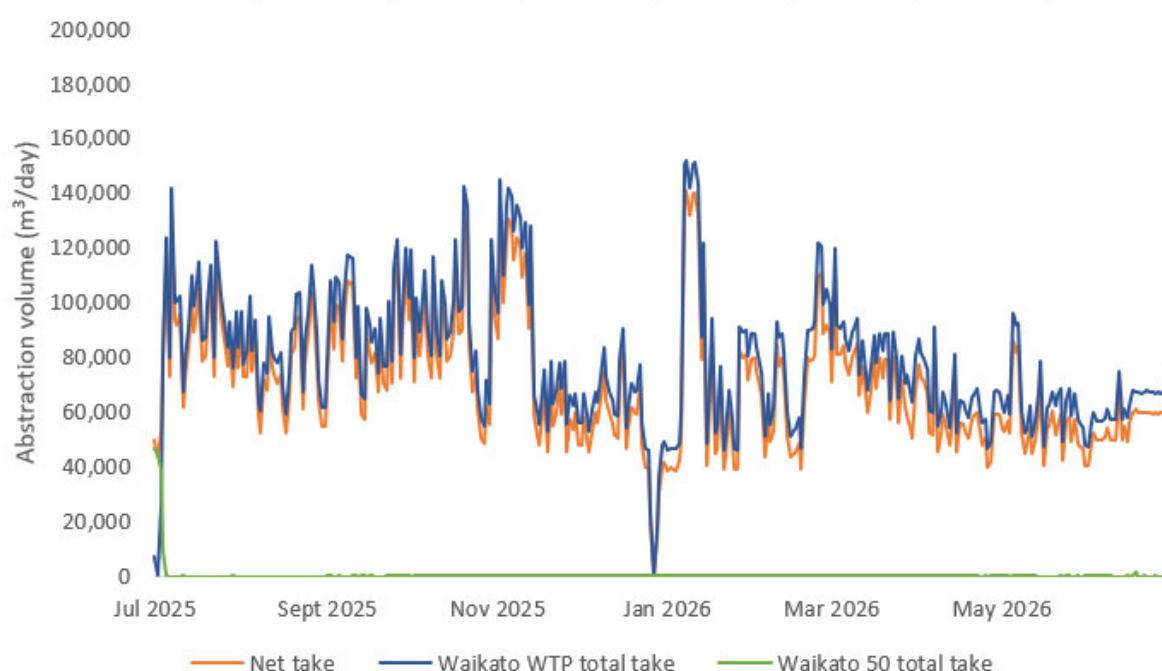


Figure 4-2: Total and net intake volumes of the Waikato and Waikato 50 WTPs.

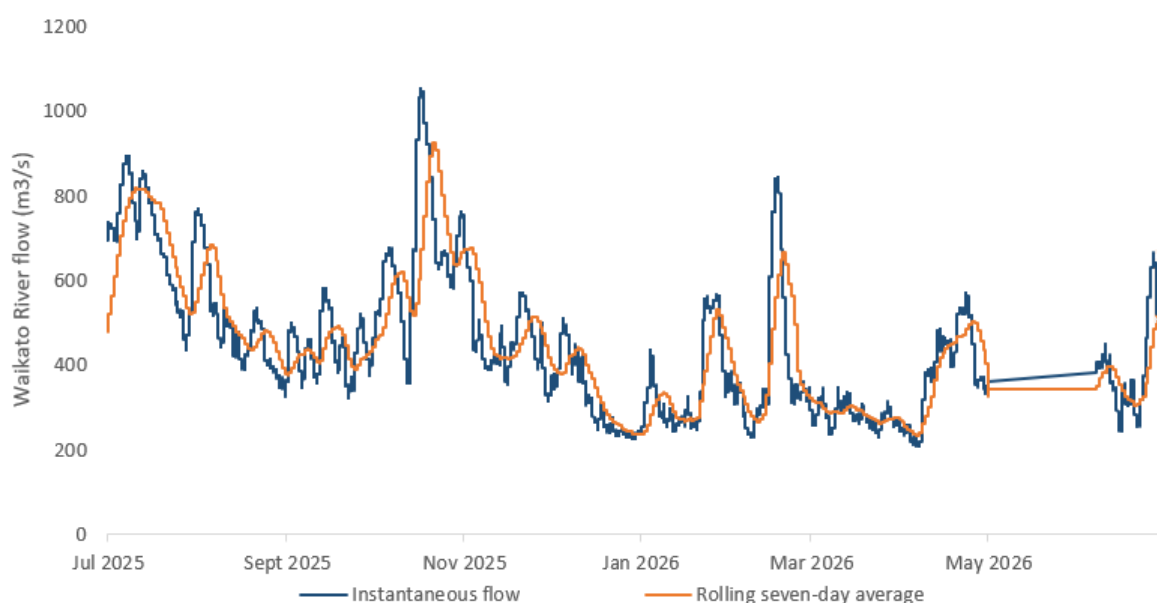


Figure 4-3: Waikato River flow at Rangiriri for the reporting period 2025-2026.

4.3 Waikato River instantaneous take rate and water velocity

Resource consents, AUTH960089.01.05 and AUTH131259.01.02, authorise a maximum instantaneous rate of 2,450 L/s and 3.2 m³/s (3,200 L/s) respectively, for a combined maximum of 5,650 L/s. Water velocity must not exceed 0.15 m/s. The four Waikato WTP intake screens each have an approximate designed intake rate capacity of 745 L/s, allowing a maximum intake rate of 2,980 L/s. The two Waikato 50 intake screens each have a designed maximum flow rate of 347 L/s, or 694 L/s for the whole intake structure. Across both WTP intake structures, the maximum instantaneous take capacity for the reporting period was 2,098 L/s. This is much lower than the previous reporting period of 3,674 L/s. The Waikato and Waikato 50 WTP intake screens each have a designed maximum intake velocity of 0.15 m/s.

The instantaneous take rate was not exceeded in the reporting period, with a maximum instantaneous take rate of 2,098 L/s on 1 November 2025. The average daily maximum instantaneous take across the period was 1,166 L/s. The data is displayed in Figure 4-4.

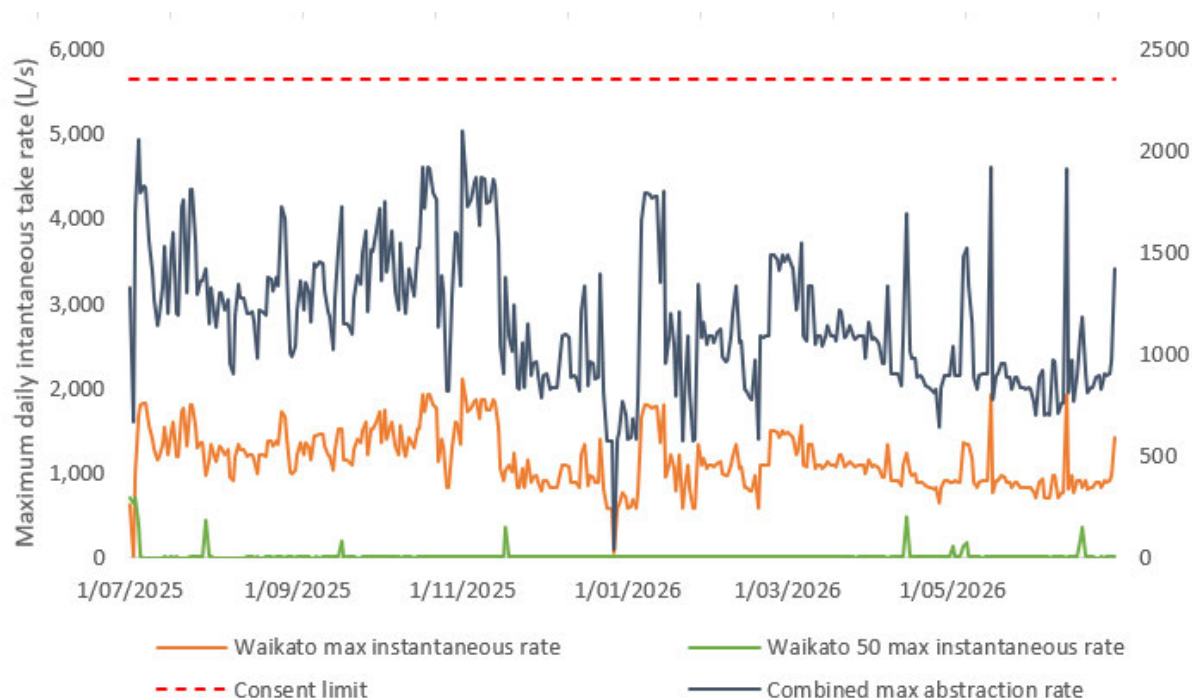


Figure 4-4: Max daily instantaneous take rates of the Waikato and Waikato 50 WTPs 2025-2026.

4.4 Effects of the intake structure

4.4.1 Fish entrainment and impingement on intake screens

The Waikato WTP intake structure has been designed to prevent fish entrainment and impingement, and this is confirmed in the approved “Fisheries Management Plan (MFPv3 2007)” (FMP), section “3.2.2 Impingement” and “3.2.3 Entrainment”. Results of the required monitoring defined in the FMP are described below. Quarterly intake screen cleaning takes place every year.

Underwater (SCUBA) video of the exterior of the intake screens and an ichthyoplankton (fish eggs and larvae) entrainment survey in the intake wet well was carried out on 12 November 2025 and 3

June 2026 by Tonkin + Taylor and Deep Dive Division/NZDS. A copy of the survey report is provided in Appendix F. The key findings were:

- The screen clearance from the riverbed in Autumn 2026 was 4.8 m below Screen 1 and 3.6 m below Screen 2, 3.1 m below Screen 3 and 2.6 m below Screen 4. This is greater than the measures in Autumn 2025 which suggests that sediment has been washed downstream from the site or redistributed across the river channel over the winter period.
- The water velocities measured during the Autumn 2026 survey was 0.59m/s at screen 1, 0.56m/s at screen 2, and 0.56m/s at screen 4. A reading was not taken for screen 3 due to a reporting error at the time of the survey.
- No fish impingement was recorded on any of the intake screens during the survey.
- No visible damage to the screens or openings greater than 2.5 mm were recorded, therefore no repairs or replacement are necessary.
- Build-up of algae was moderate or moderate-high for all screens.
- The density of smelt larvae in the penstock was 0.7 smelt/m³, which is well below the maximum density threshold (1.9 smelt/m³) that would require further investigation. In accordance with the FMP, no further sampling is required in winter 2027.
- No gold clam (*Corbicula fluminea*) was found in the penstock (these are known to be present in the area).

4.4.2 Effect of the intake structure on fish migration

The intake structure and location were designed to minimise effects on fish migration, as discussed in section 4.4.1 (Upstream Migrations) of the FMP. No further monitoring is considered necessary.

4.4.3 Effect of screen sparging

The air compressor used for sparging has been fitted with oil/filter traps to ensure oil does not discharge through the intake screens. Oil/filter traps are maintained on a regular basis.

Screen sparging is generally carried out daily to maintain the intake screens as required, based on abstraction rates and raw water conditions. There have been no changes to the installed screens nor their operation over the reporting period. No further monitoring is deemed necessary.

4.5 Cultural indicators monitoring and ecological enhancement

4.5.1 Tangata Whenua Liaison Group

Resource consent AUTH131259.01.02 requires the invitation of Te Whakakitenga o Waikato Incorporated and Te Taniwha o Waikato to participate in a Waikato River water take “Tangata Whenua Liaison Group” (TWLG). The first meeting with the TWLG occurred in December 2022 and a second meeting in August 2023. No meeting occurred in 2024, but one took place in October 2025. An overview of WTP performance and consent matters was provided prior to the meetings. Watercare aim to schedule the next meeting in November 2026.

4.5.2 Cultural Indicators Monitoring Plan (CIMP)

The CIMP is required by resource consent, AUTH131259.01.02, under conditions K – O.

The purpose of the plan is to identify key cultural values and indicators that may be affected by the operation of the existing Waikato WTP and its related activities, including the take of water from the

Waikato River. This will give Watercare and WRC an understanding of cultural effects of the activities authorised by these consents.

In 2021, the TWLG discussed preliminary ideas for preferred cultural indicators; however, no kaitiaki advisors were appointed at that time to implement a Cultural Indicators Monitoring Plan. In 2025, several cultural monitoring ideas were proposed to key TWLG members. A hui held in June 2026 considered the appointment and scope of kaitiaki advisors for developing the CIMP. Watercare is currently finalising a draft CIMP for submission to Waikato Regional Council by September 2026. On 12 August 2026, Watercare met with TTOW, Waikato-Tainui and kaitiaki advisors to workshop the draft CIMP. The hui confirmed the following key matters, which require additional time to fully incorporate into the CIMP:

- The draft provides a useful starting point but needs to be expanded to include both cultural and technical monitoring components.
- The effected areas of the Waikato River water take extended beyond the immediate treatment plant footprint; it extended into much of the lower Waikato River.
- A broader cultural monitoring governance model (rōpū) should be explored.
- Kaitiaki advisors will spend further time to collaborate on the revisions to the CIMP draft for Watercare review and discussion in September 2026.
- Watercare identified that there is a potential overlap between the CIMP work and the existing initiatives underway (Kāwanata), Haywards Landing - ecological enhancement and the Aquatic habitat enhancement of Wairiri stream.

4.5.3 Aquatic Habitat Enhancement Plan

As part of the resource consent, AUTH42127.02.01, to construct the Waikato 50 Plant and the treated water rising main, Watercare committed to developing and implementing an Aquatic Habitat Enhancement Plan (AHEP). The plan addresses the direct aquatic habitat impacts on the Wairiri stream disturbance and diversion activities. Condition 11 and 12 of resource consent, AUTH42127.02.01 outlines the full scope of the intended plan.

On the 14 July 2026, Watercare submitted a final AHEP to Waikato Regional Council for review. The intention is to commence the infill planting across stages one and two early winter 2027 with other preliminary actions such as localised weed control for the remainder of 2026. Waikato Regional Council approved the AHEP on the 23 September 2026. A further updated on progress with Stages 1 and 2 will be provided in the next annual report.

4.5.4 Ecological Enhancement Plan- Haywards Landing

The Ecological Enhancement Plan for Haywards Landing is a requirement of resource consent XX and the wider Kāwanata agreement with Waikato Tainui. Annual funding of \$2 million to the Waikato River Clean-up Trust began in 2023 and will partly support the transformation of Haywards Landing. During this reporting period, the January 2026 payment was completed. The plan was originally due by January 2025, within two years of the consent commencing. Waikato Regional Council approved a joint extension request from Watercare and Te Whakakitenga o Waikato Incorporated, setting a revised due date of 31 October 2025. Watercare submitted the final Ecological Enhancement Plan for Haywards Landing to Waikato Regional Council for review on 10 June 2026. The plan will be presented at the next TWLG meeting, scheduled for November 2026.

4.6 Types of discharges to the Waikato River

4.6.1 Operational discharges

Resource consents AUTH137497.01.01 and AUTH142778.01.01 authorise discharges of “*process water and/or other water*” and “*off-spec and process water*” from the Waikato and Waikato 50 WTPs, respectively, to the Waikato River. These include treatment-process discharges, typically called “process discharges”, as well as maintenance discharges. To distinguish these from process discharges, this report collectively refers to all discharges authorised under these consents as “operational discharges”, including the following:

- **Planned process discharges:** These discharges occur through the off-spec pipeline because of routine treatment plant processes. These include supernatant discharges from solids dewatering, membrane cleaning or backwash, and backwash or filter-to-waste discharges from the activated carbon filters.
- **Unplanned process discharges:** these may occur when there is a failure of control instruments and/or infrastructure resulting in overflows or rapid draining to prevent further damage. These are primarily discharged to the Waikato River via the off-spec pipeline but can also overflow into Wairiri Stream (referred to as the “unnamed tributary” in the resource consents) through two overflow points.
- **Maintenance discharges:** these are also discharged via the off-spec pipeline and include tank cleaning, replacement or commissioning of plant equipment or infrastructure, and periodical discharge of rainwater from chemical containment bunds.
- **Off-spec discharges:** these are discharged via the off-spec pipeline and comprises partially treated or fully treated water that does not comply with the standards established by the Water Services Act 2021.

4.6.2 Stormwater discharges

Authorised by resource consent AUTH137497.03.01, these discharges include stormwater from the WTP which is directed into a detention pond. When full, the detention pond discharges to the Wairiri Stream that runs adjacent to the WTP and flows into the Waikato River.

4.7 Quality of operational discharges

4.7.1 Planned process discharges

Samples of operational discharges are taken weekly from the off-spec pipeline and tested by WLS. Given these samples are taken once a week, they are representative of the planned process discharges which occur on a continuous basis. The off-spec pipeline discharges directly to the Waikato River and has two overflow points to the Wairiri Stream. The operating staff did not report any overflows to the stream in this reporting period. No glycerine discharges occurred in this monitoring period.

Sample results for the reporting period are provided in Appendix C. Figure 4-8 shows that pH remained consistent throughout the monitoring period. Soluble aluminium (Figure 4-6), fluoride (Figure 4-5) and free available chlorine (Figure 4-9) results were generally stable, with occasional outliers in March and May 2026. The highest fluoride concentration was 0.33 mg/L, recorded on 22

April 2026, while the highest free available chlorine concentration was 0.2 mg/L, recorded on 28 April 2026.

As shown in Figure 4-7, there were three occasions when total suspended solids exceeded the consent limit of 50 mg/L during routine monitoring. On the 8 August 2025 the recorded TSS value was 50 mg/L and was not considered an exceedance in this reporting period.

- **30 June 2026** – Off-Spec discharge as part of the BAC 8 commission testing. These discharges are part of the decommissioning process during the initial backwash phase and conditions stages of the new media replacement. The replacement of the new BAC media often releases residual carbon fines. This resulted in two discharges to the river with exceeded TSS results. The TSS results were 62 mg/L (12pm) and 52 mg/L (2pm).
- **23 March 2026** – BAC 3 backwashing that caused an overflow from the wastewater recycle tank. This resulted in the elevated TSS sample result recorded as 70 mg/L.
- **22 October 2025** - Overflow from the wastewater recycle tank as part of normal plant operations. The recorded TSS sample was 110 mg/L.
- **12 August 2025** – Routine cleaning of clarifier 1 added extra loading on the sludge thickeners causing imbalance in the polymer dosing resulting in turbid supernatant spilling over into the off-spec discharge. The recorded TSS sample was 81 mg/L.

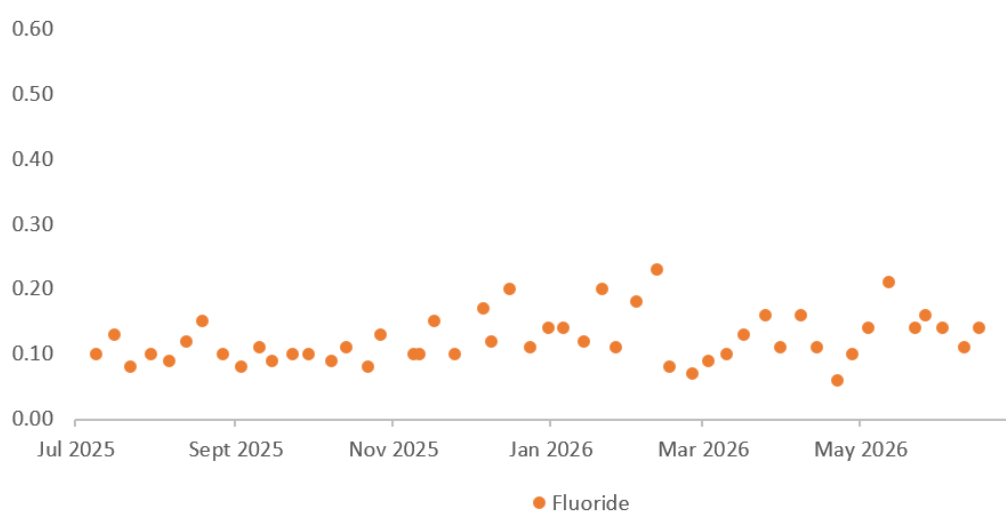


Figure 4-5: Discharge water quality for fluoride¹ for the reporting period 2025-2026.

¹ The consent limit for fluoride is 2 mg/L.

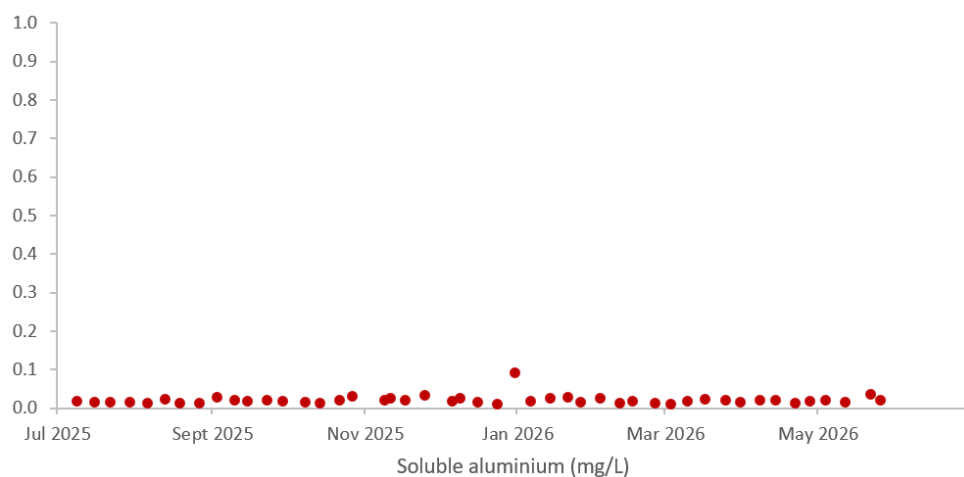


Figure 4-6: Discharge water quality for soluble aluminium² for the reporting period 2025-2026.

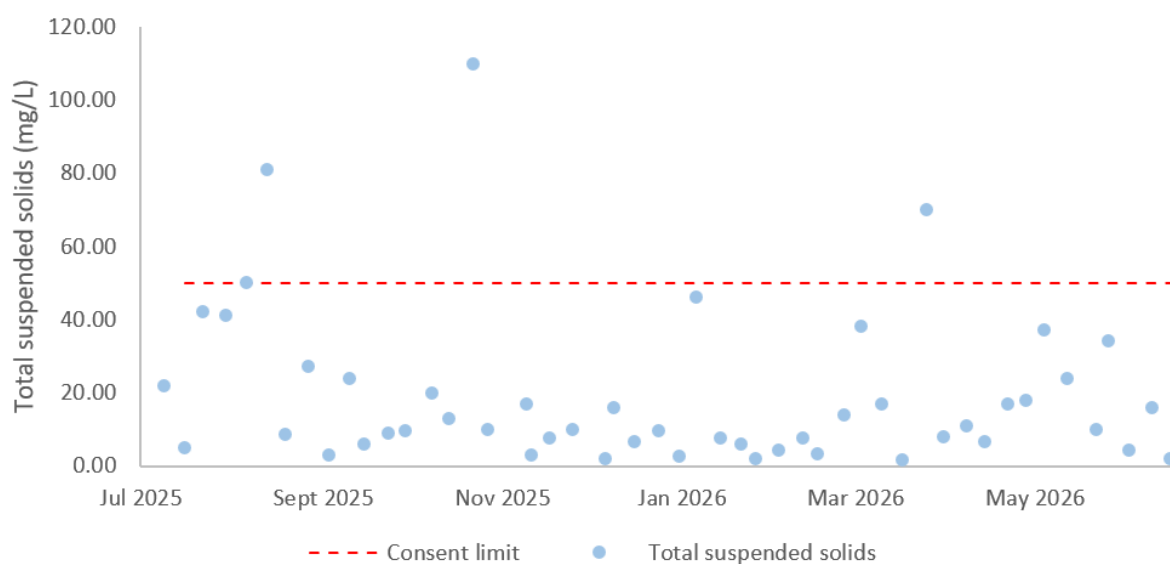


Figure 4-7: Discharge water quality for total suspended solids for the reporting period 2025-2026.

² The consent limit for soluble aluminium concentrations is 4mg/L.

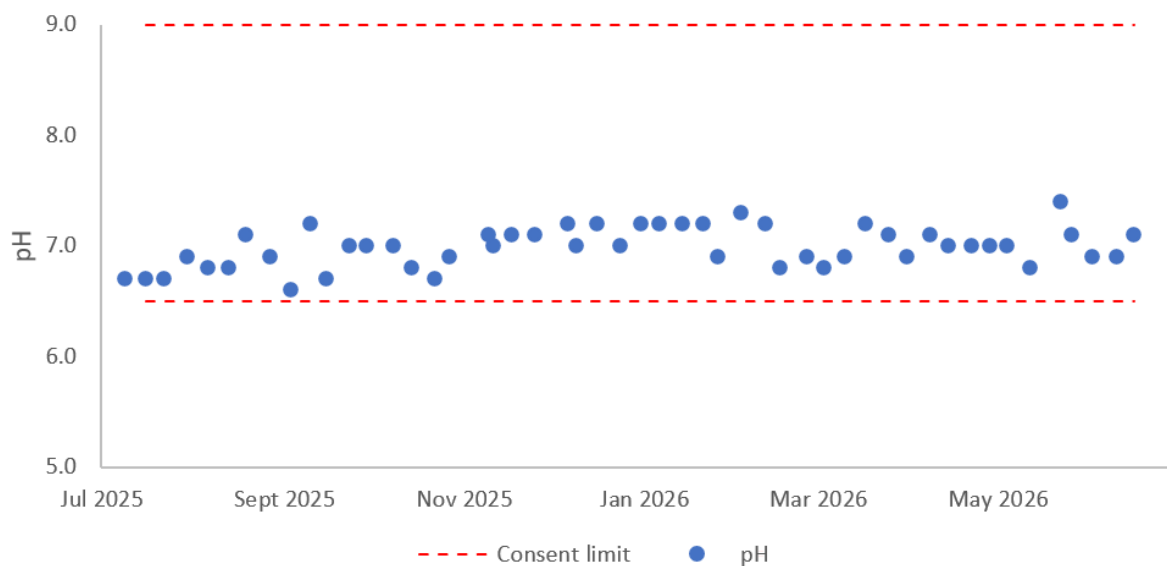


Figure 4-8: Discharge water quality for pH for the monitoring period 2025 - 2026.

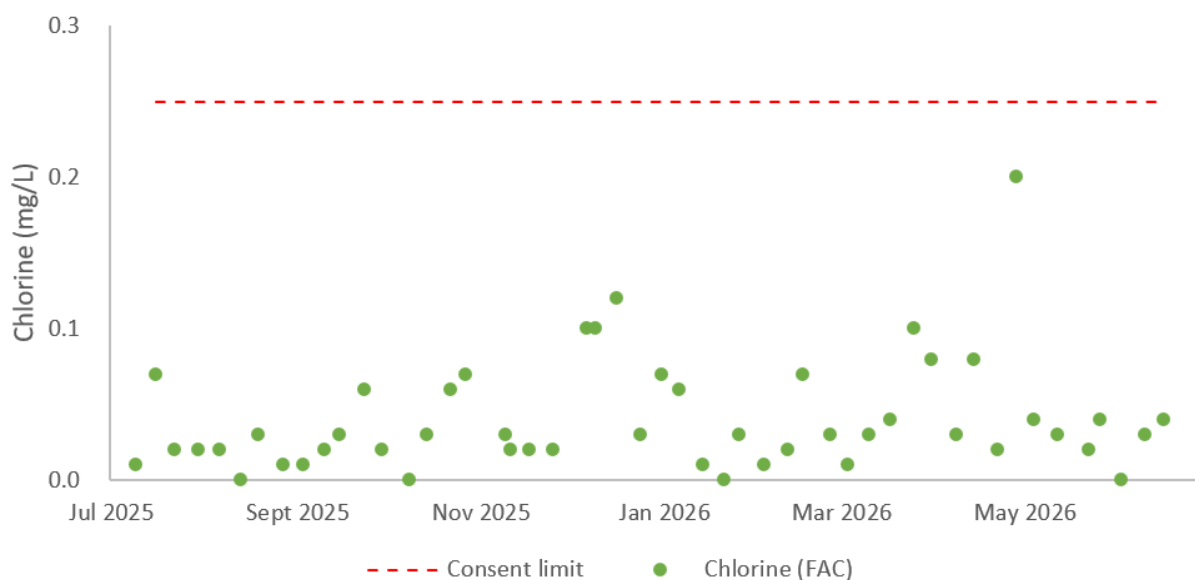


Figure 4-9: Discharge water quality for chlorine for the monitoring period 2025 - 2026.

4.7.2 Unplanned process discharges

As the unplanned process discharges are intermittent and unpredictable in nature, they are not always captured by routine weekly sampling. Notwithstanding this, the following is noted about unplanned discharges:

- Unplanned process discharges result from the Membrane Inlet Channel (MIC) and activated carbon filter overflows, which occur on average between two to three times per week and results on an average discharge volume of approximately 137 m³ each time
- No unplanned discharges contained chlorinated or fluoridated water
- The discharges made were all returned to the Waikato River via the off-spec pipeline
- Water that is discharged from the MIC has been coagulated and passed through the clarifiers
- Water that is discharged from the activated carbon filters inlet channel has passed through the membranes but not the activated carbon
- The pH of the water at the activated carbon filters inlet channel is between six and seven.

4.7.3 Maintenance discharges

In addition to the weekly monitoring by WLS, some sampling and testing is also carried out by the WTP operators during maintenance activities. The laboratory at the WTP is not IANZ accredited, however, they provide a useful indication of the water quality for these irregular, low volume/short duration discharges which can often happen outside of the routine sampling days.

The maintenance activities and results from in-house testing of discharges are summarised as follows:

- **Draining of chemical bunds:** Stormwater collected in the chemical bunds can only be drained by manual operation of a valve, the position of which is monitored by the plant control system and will generate an alarm if the valve is left open for more than 30 minutes. The water collected in the chemical containment bunds is tested for contaminants to confirm it meets discharge criteria before the bunds are drained to the off-spec pipeline. If the discharge criteria are not met, then a vacuum truck is used to remove the water in the containment bunds and dispose off-site. The water quality results for all tests are presented in Appendix C, including bund contents removed via truck. Water was removed via truck on several days throughout the reporting period, and all discharges to the environment met the consent criteria.
- **Draining of clarifiers:** Clarifier cleaning is managed using a geobag dewatering system that captures all sand and silt, while the resulting filtrate is routed to the sludge treatment process. The entire operation is contained on-site, with no discharge to the river.

4.8 Volume of operational discharges

4.8.1 Waikato WTP

Resource consent AUTH137497.01.01 for the Waikato WTP establishes a daily discharge volume limit of 20,000 m³ for the operational discharges or an instantaneous discharge rate not exceeding 2,450 L/s. As described in section 3.1, these include the planned and unplanned process discharges, as well as maintenance discharges.

The volume of total process discharges is calculated by adding all planned and unplanned discharges from the various parts of the treatment process and then subtracting the wastewater that is recycled back to the treatment plant. The maintenance discharges (e.g., from chemical bunds and clarifier drains) are then added to the process total to estimate the total daily volume of operational discharges. The volume for each clarifier draining event is typically between 400 to 600 m³, and so an average of 500 m³ has been used as an estimate for each event.

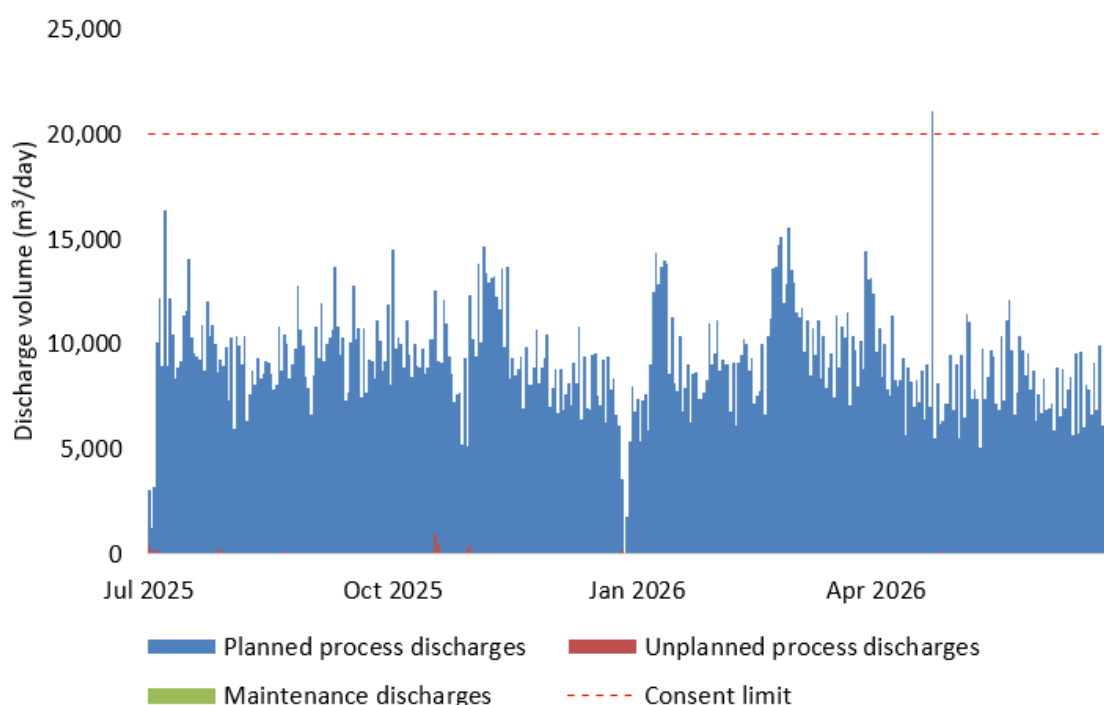


Figure 4-10: Daily discharge volumes for Waikato WTP.

The daily volumes for the operational discharges are detailed in Appendix D. During the reporting period, the average total daily discharge volume was 9,163 m³, and a cumulative total of 3,344,573 m³. There was one day where the Waikato WTP exceeded its individual discharge limit. This was on the 22 April 2026 with a discharge volume of 21,101 m³. On this day, the BAC 7 was off for media replacement and nozzle inspection. Throughout this replacement there were more backwashes than normal which contributed to the high discharge volume.

4.8.2 Waikato 50 WTP

Annual reporting of the Waikato 50 discharge volumes is not required by AUTH142778.01.01. However, condition 13 requires a summary of any non-compliances identified in each reporting period. In this monitoring period (2025-2026), there was one day where the Waikato 50 WTP

exceeded its individual discharge limit and this was on the 28 August 2025 with a discharge volume of 6429.8 m³.

4.9 Treated off-spec water discharges

There were no discharges of the off-spec treated water (authorised under resource consent AUTH142778.01.01) during the reporting period.

4.10 Stormwater discharges

Stormwater runoff from the WTP is discharged to the Wairiri Stream via a treatment pond, designed to ensure discharges do not exceed a total suspended solids concentration of 50 g/m³. No process discharges are connected to the installed stormwater pipework system. Stormwater from the grounds surrounding the WTP is diverted through collection drains that discharge to a culvert downstream of the detention pond to minimise the flow through the WTP stormwater system. Stormwater collected in the exterior chemical bunded areas are isolated, monitored and drained directly to the off-spec pipeline as described in Section 4.7.3.

No erosion or scouring was evident at the point of discharge. The discharge point has large gravel rocks (see Figure 4-11 and Figure 4-12), which slow high volume discharges and mitigate erosion.

The Wairiri Stream banks are gently sloping. Vegetation is limited in some sections of the stream, with small grasses and scrub. In other sections of the stream, vegetation is more developed with Mānuka, and various grasses close to the main path of the stream. There was no evidence of vegetation slumping because of discharges to the unnamed stream. Overall, no adverse effects from the stormwater discharges were identified during the 2025-2026 reporting period.



Figure 4-11: Discharge outlet location into the Wairiri Stream. View looking upstream.



Figure 4-12: Discharge outlet location into the Wairiri Stream. View looking downstream.

5 WATER CONSERVATION

5.1 Leakages from the raw water pipeline

There were no leakages from the Waikato 1 Treated Watermain between 1 July 2025 and 30 June 2026.

5.2 Water efficiency programme

Watercare has published the Water Management Plan in June 2026. The report focuses on reducing Auckland's overall water demand by improving water-use efficiency, reducing leakage, and helping customers use water more wisely. Watercare aims to ensure a secure and resilient water supply for future population growth while delaying the need for costly new water supply infrastructure through conservation and smarter water management.

- **Smart meter rollout:** Watercare will aim to provide near real-time water-use data and identify customer leaks early.
- **Leak detection and reduction programme:** The aim is through active leak monitoring, repairs, and network management.
- **Pressure management programme:** This is to reduce water losses and minimise pipe failures.
- **District Metered Areas (DMAs)** to better track water movement throughout the network and quickly locate losses.
- **Commercial and industrial water efficiency programmes:** This will be targeting Auckland's highest water users.
- **Customer education and behaviour change initiatives:** This is to encourage conservation and efficient water use.
- **Water reuse and alternative water source:** This is aimed at reducing demand for treated drinking water where appropriate.
- **School and community engagement programmes:** This will improve water literacy and promote long-term conservation behaviours.

More details on the water management initiatives and forecast report for the WTP, please find more details on our website³.

³ <https://www.watercare.co.nz/home/about-us/what-we-do/reports-and-publications-environmental-reporting>

6 MEASURES TO PREVENT PESTS IN WATER

Condition 10 of consent AUTH960089.01.05 requires the WTP to adopt all practicable means to ensure invasive plant and animal pests are not transferred to the Auckland Region. The WTP has been designed to prevent animal pests and invasive plants from entering the treated water. For example, all treated water must pass through the membranes that have a pore size of 0.035 microns, which is substantially smaller than any animal or plant. All treated water storage tanks in the treatment plant and along the pipeline have sealed access hatches that prevent entry of foreign matter.

In addition, the treated water pipeline has been designed to always operate under positive pressure, therefore preventing the possibility of ingress of groundwater, invasive plants or pests. Procedural controls are in place during maintenance works that require a drain-down to secure the empty sections and prevent ingress.

The invasive gold clam, *Corbicula fluminea* was first detected within the sand separators on 20 February 2024. As stated above, the treatment processes within the plant do not allow transfer of any animal species into the Auckland Region. Watercare has established protocols onsite to ensure the gold clams are not spread to Auckland through other means and continues to work with the Ministry for Primary Industries, Waikato Regional Council and Auckland Council to ensure best practice.

7 ENVIRONMENTAL INCIDENTS

There were no equipment failures, chemical spills or maintenance activities undertaken in the reporting period that resulted in any observed adverse environmental effects.

8 CONCLUSION

This report presents annual monitoring data for resource consents AUTH960089.01.05, AUTH131259.01.02, 960090, AUTH137497.02.01, AUTH960092.01.04, AUTH137497.03.01, AUTH137497.01.01 and AUTH142778.01.01.

The Waikato WTP exceeded the total suspended solids discharge limit specified in AUTH137497.01.01 during routine sampling on three occasions, with investigations finding causes were the thickener 3 valve, the wastewater recycle tank or unknown causes. Three additional instances occurred over two days during a BAC 3 media replacement project, where the total suspended solids exceeded the discharge limit before entering the off-spec pipeline. These instances were detected through non-routine onsite sampling. These exceedances were unlikely to have caused any adverse effects due to their relatively short duration and the relatively large background variation in total suspended solids in the receiving environment.

Discharge volume exceedances at the Waikato WTP occurred on one day throughout the reporting period, with a maximum discharge of 28,315 m³ on 6 April 2026, primarily related to the BAC 3 media replacement. Additional discharge exceedances occurred at the Waikato 50 WTP, caused by the run-to-waste process and a fault with an inlet valve.

The Waikato, Waikato 50 and Waikato A WTPs were fully compliant across all other consents for the conditions considered in this report as shown in Table 5.2-1.

Table 5.2-1: Resource consent compliance summary for 2025-2026

Consent	Consent subcategory	Compliance status
AUTH960089.01.05	Water Take from Waikato River	Compliant
AUTH131259.01.02	Water Take from Waikato River	Compliant
960090	Diversion of water from culverts of an unnamed tributary	Compliant
AUTH137497.02.01	Discharge from back washing of intake screens into the Waikato River	Compliant
AUTH960092.01.04	Land Use intake structure and discharges	Compliant
AUTH137497.03.01	Discharge of stormwater into the Waikato River	Compliant
AUTH137497.01.01	Discharge of process and other water into the Waikato River	Non-compliant
AUTH142778.01.01	Discharge of off-spec and process water into the Waikato River	Non-compliant

Appendix A. Raw water quality data

Intake Source	Component	Units	Min	Max	Average
Waikato	1080 (Sodium fluoroacetate)	mg/L	0	0	0
Waikato	1-1-1-2-tetrachloroethan	mg/L	0	0	0
Waikato	1-1-1-Trichloro-2-propanone	mg/L	0	0	0
Waikato	1-1-1-trichloroethane	mg/L	0	0	0
Waikato	1-1-2-2-tetrachloroethan	mg/L	0	0	0
Waikato	1-1-2-trichloroethane	mg/L	0	0	0
Waikato	1-1-Dichloro-2-propanone	mg/L	0	0	0
Waikato	1-1-dichloroethane	mg/L	0	0	0
Waikato	1-1-dichloroethene	mg/L	0	0	0
Waikato	1-1-dichloropropene	mg/L	0	0	0
Waikato	1-2-3-trichlorobenzene	mg/L	0	0	0
Waikato	1-2-3-trichloropropane	mg/L	0	0	0
Waikato	1-2-4-trichlorobenzene	mg/L	0	0	0
Waikato	1-2-4-trimethylbenzene	mg/L	0	0	0
Waikato	1-2-dibromo-3-chloroprop	mg/L	0	0	0
Waikato	1-2-dibromoethane	mg/L	0	0	0
Waikato	1-2-dichlorobenzene	mg/L	0	0	0
Waikato	1-2-dichloroethane	mg/L	0	0	0
Waikato	1-2-dichloroethene (cis and trans)	mg/L	0	0	0
Waikato	1-2-dichloropropane	mg/L	0	0	0
Waikato	1-3-5-trimethylbenzene	mg/L	0	0	0
Waikato	1-3-dichlorobenzene	mg/L	0	0	0
Waikato	1-3-dichloropropane	mg/L	0	0	0
Waikato	1-3-dichloropropene (cis and trans)	mg/L	0	0	0
Waikato	1-4-dichlorobenzene	mg/L	0	0	0
Waikato	2-2-dichloropropane	mg/L	0	0	0
Waikato	2-3-4-6-tetrachlorophenol	mg/L	0	0	0
Waikato	2-4-5-trichlorophenol	mg/L	0	0	0
Waikato	2-4-5-Trichlorophenoxyacetic	mg/L	0	0	0
Waikato	2-4-6 trichloroanisole	ng/L	0	0	0
Waikato	2-4-6-trichloroanisole	ng/L	0	0	0
Waikato	2-4-6-trichlorophenol	mg/L	0	0	0
Waikato	2-4-dichlorophenol	mg/L	0	0	0
Waikato	2-4-Dichlorophenoxyacetic acid	mg/L	0	0.00012	3.52941E-06
Waikato	2-4-dimethylphenol	mg/L	0	0	0
Waikato	2-4-dinitrotoluene	mg/L	0	0	0
Waikato	2-6-dichlorophenol	mg/L	0	0	0
Waikato	2-6-dinitrotoluene	mg/L	0	0	0
Waikato	2-chloronaphthalene	mg/L	0	0	0
Waikato	2-chlorophenol	mg/L	0	0	0
Waikato	2-chlorotoluene	mg/L	0	0	0
Waikato	2-isobutyl-3-methoxypyrazine	ng/L	0	0	0
Waikato	2-isopropyl-3-methoxypyrazine	ng/L	0	0	0

Intake Source	Component	Units	Min	Max	Average
Waikato	2-methylisoborneol	ng/L	0	5.30	0.24
Waikato	2-methylnaphthalene	mg/L	0	0	0
Waikato	2-methylphenol	mg/L	0	0	0
Waikato	2-nitrophenol	mg/L	0	0	0
Waikato	4-(2-4-Dichlorophenoxy) butano	mg/L	0	0	0
Waikato	4-4-DDD	mg/L	0	0	0
Waikato	4-4-DDE	mg/L	0	0	0
Waikato	4-4-DDT	mg/L	0	0	0
Waikato	4-bromophenylphenyl ether	mg/L	0	0	0
Waikato	4-Chloro-3-methylphenol	mg/L	0	0	0
Waikato	4-chlorophenylphenyl ether	mg/L	0	0	0
Waikato	4-chlorotoluene	mg/L	0	0	0
Waikato	4-methylphenol	mg/L	0	0	0
Waikato	abs254	abs units	0.03	0.35	0.16
Waikato	Acenaphthene	mg/L	0	0	0
Waikato	Acenaphthylene	mg/L	0	0	0
Waikato	Acetochlor	µg/L	0	0	0
Waikato	Achnanthes spp. biovolume	µm ³ /mL	4200	4200	4200
Waikato	Achnanthes spp. cells	cells/mL	28	28	28
Waikato	Achnanthes spp. colonies	colonies/ mL	28	28	28
Waikato	Achnanthidium spp. biovolume	µm ³ /mL	2600	540000	70572.22
Waikato	Achnanthidium spp. cells	cells/mL	28	5600	752.53
Waikato	Achnanthidium spp. colonies	colonies/ mL	28	5600	723.053
Waikato	Actinastrum spp. biovolume	µm ³ /mL	1300	28000	6402.86
Waikato	Actinastrum spp. cells	cells/mL	56	1200	286.83
Waikato	Actinastrum spp. colonies	colonies/ mL	28	360	99.22
Waikato	Acutodesmus spp. biovolume	µm ³ /mL	13000	53000	28250
Waikato	Acutodesmus spp. cells	cells/mL	110	450	258
Waikato	Alachlor	µg/L	0	0	0
Waikato	Aldicarb	µg/L	0	0	0
Waikato	Aldrin	mg/L	0	0	0
Waikato	Algae and Cyanobacteria biovolume	µm ³ /mL	51000	12000000	1060525. 42
Waikato	Algae and Cyanobacteria cell count	cells/mL	360	13000	3831.35
Waikato	Algae and Cyanobacteria colony count	colonies/ mL	130	6800	1202.03
Waikato	Alkalinity Total	mg/L	26	39	33.11
Waikato	Alpha-Chlordane	mg/L	0	0	0
Waikato	Aluminium	mg/L	0.016	4.10	0.50
Waikato	Ammonia	mg/L	0	0.050	0.019
Waikato	AMPA	µg/L	0	0	0
Waikato	Amphora spp. biovolume	µm ³ /mL	60000	60000	60000

Intake Source	Component	Units	Min	Max	Average
Waikato	Anabaena spp.(4µm wide) biovolume	µm³/mL	45000	45000	45000
Waikato	Anabaena spp.(4µm wide) cells	cells/mL	1500	1500	1500
Waikato	Anatoxin-a	µg/L	0	0	0
Waikato	Anatoxins-Total	µg/L	0	0	0
Waikato	Anatoxins-Total (AIXTEQ)	µg/L	0	0	0
Waikato	Ankistrodesmus spp. biovolume	µm³/mL	37	700	184.2
Waikato	Ankistrodesmus spp. cells	cells/mL	28	530	139.4
Waikato	Ankyra spp. biovolume	µm³/mL	2000	2000	2000
Waikato	Ankyra spp. colonies	colonies/mL	28	28	28
Waikato	Anthracene	mg/L	0	0	0
Waikato	Antimony	mg/L	0	0	0
Waikato	Aphanizomenon spp. biovolume	µm³/mL	7800	180000	42966.70
Waikato	Aphanizomenon spp. cells	cells/mL	230	5500	1305
Waikato	Aphanizomenon spp. colonies	colonies/mL	28	360	120.33
Waikato	Aphanocapsa spp.(Large>1µm) biovolume	µm³/mL	670	670	670
Waikato	Aphanocapsa spp.(Large>1µm) cells	cells/mL	340	340	340
Waikato	Aphanocapsa spp.(Large>1µm) colonies	colonies/mL	28	28	28
Waikato	Arsenic	mg/L	0.004	0.0170	0.010
Waikato	Asterionella spp. biovolume	µm³/mL	16000	680000	137952.3
Waikato	Asterionella spp. cells	cells/mL	28	1200	232.14
Waikato	Asterionella spp. colonies	colonies/mL	11	390	83.82
Waikato	Atrazine	µg/L	0	0	0
Waikato	Atrazine desethyl	µg/L	0	0	0
Waikato	Atrazine desisopropyl	µg/L	0	0	0
Waikato	Aulacoseira spp. (Small<12µm) biovolume	µm³/mL	6700	630000	64921.21
Waikato	Aulacoseira spp. (Small<12µm) cells	cells/mL	28	2600	290.74
Waikato	Aulacoseira spp. (Small<12µm) colonies	colonies/mL	9	610	80.45
Waikato	Aulacoseira spp.(Large>20µm) biovolume	µm³/mL	67000	800000	254625
Waikato	Aulacoseira spp.(Large>20µm) cells	cells/mL	56	670	212.5
Waikato	Aulacoseira spp.(Large>20µm) colonies	colonies/mL	28	140	52.35
Waikato	Azaconazole	µg/L	0	0	0
Waikato	Azinphos methyl	µg/L	0	0	0
Waikato	BaP Equivalent	mg/L	0	0	0

Intake Source	Component	Units	Min	Max	Average
Waikato	Barium	mg/L	0.02	0.043000002	0.025576923
Waikato	Benalaxyl	µg/L	0	0	0
Waikato	Bentazone	mg/L	0	0	0
Waikato	benzene	mg/L	0	0	0
Waikato	Benzo(a)anthracene	mg/L	0	0	0
Waikato	Benzo(a)pyrene	mg/L	0	0	0
Waikato	Benzo(b)fluoranthene	mg/L	0	0	0
Waikato	Benzo(ghi)perylene	mg/L	0	0	0
Waikato	Benzo(k)fluoranthene	mg/L	0	0	0
Waikato	Beryllium	mg/L	0	0.000081	7.46154E-06
Waikato	BHC alpha	mg/L	0	0	0
Waikato	BHC beta	mg/L	0	0	0
Waikato	BHC delta	mg/L	0	0	0
Waikato	bis(2-chloroethoxy)methane	mg/L	0	0	0
Waikato	bis(2-chloroethyl) ether	mg/L	0	0	0
Waikato	bis(2-chloroisopropyl) ether	mg/L	0	0	0
Waikato	Bis(2-ethylhexyl)adipate	mg/L	0	0	0
Waikato	bis(2-ethylhexyl)phthalate	mg/L	0	0.0032	6.15385E-05
Waikato	Bitertanol	µg/L	0	0	0
Waikato	Boron	mg/L	0.09	0.19	0.13
Waikato	Botryococcus spp. biovolume	µm³/mL	21000	23000	22000
Waikato	Botryococcus spp. cells	cells/mL	250	270	260
Waikato	Bromacil	µg/L	0	0	0
Waikato	Bromate	mg/L	0	0	0
Waikato	Bromide	mg/L	0.03	0.072	0.04
Waikato	BromoaceticAcid	mg/L	0	0	0
Waikato	bromobenzene	mg/L	0	0	0
Waikato	BromochloroaceticAcid	mg/L	0	0	0
Waikato	Bromochloroacetonitrile	mg/L	0	0	0
Waikato	bromodichloromethane	mg/L	0	0	0
Waikato	bromoform	mg/L	0	0.0015	7.83784E-05
Waikato	bromomethane	mg/L	0	0	0
Waikato	Butachlor	µg/L	0	0	0
Waikato	Butylbenzyl phthalate	mg/L	0	0	0
Waikato	Cadmium	mg/L	0	0	0
Waikato	Calcium	mg/L	6	8.90	7.19
Waikato	Calcium Hardness	mg/L	0.039	22	17.35
Waikato	Carbaryl	µg/L	0	0	0
Waikato	Carbazole	mg/L	0	0	0
Waikato	Carbofuran	µg/L	0	0	0
Waikato	carbon tetrachloride	mg/L	0	0	0

Intake Source	Component	Units	Min	Max	Average
Waikato	Ceratium spp. biovolume	µm³/mL	570000	570000	570000
Waikato	Ceratium spp. cells	cells/mL	28	28	28
Waikato	Ceratium spp. colonies	colonies/mL	28	28	28
Waikato	Chlamydomonas spp. (Small <12 biovolume	µm³/mL	2500	39000	7650
Waikato	Chlamydomonas spp. (Small <12 u colonies	colonies/mL	27	420	81.59
Waikato	Chlamydomonas spp. (Small <12 um) cells	cells/mL	27	420	81.59
Waikato	Chlamydomonas spp.(Large>12um) biovolume	µm³/mL	5700	23000	12580
Waikato	Chlamydomonas spp.(Large>12um) cells	cells/mL	19	74	40.8
Waikato	Chlamydomonas spp.(Large>12um) colonies	colonies/mL	19	74	40.8
Waikato	Chloralhydrate	mg/L	0	0	0
Waikato	Chlorate	mg/L	0	0.031	0.0039
Waikato	Chlorfluazuron	µg/L	0	0	0
Waikato	Chloride	mg/L	11.60	16.70	14.05
Waikato	Chlorite	mg/L	0	0	0
Waikato	ChloroaceticAcid	mg/L	0	0	0
Waikato	chlorobenzene	mg/L	0	0	0
Waikato	chloroform	mg/L	0	0	0
Waikato	chloromethane	mg/L	0	0	0
Waikato	Chlorophyll	mg/L	0	0.028	0.0065
Waikato	Chloropicrin	mg/L	0	0	0
Waikato	Chlorpyrifos	µg/L	0	0	0
Waikato	Chlorpyrifos methyl	µg/L	0	0	0
Waikato	Chlortoluron	µg/L	0	0	0
Waikato	Chromium	mg/L	0	0.0024	0.0007
Waikato	Chroococcus spp.(6µm wide) biovolume	µm³/mL	3600	3600	3600
Waikato	Chroococcus spp.(6µm wide) cells	cells/mL	220	220	220
Waikato	Chroococcus spp.(6µm wide) colonies	colonies/mL	28	28	28
Waikato	Chroomonas spp. biovolume	µm³/mL	3500	88000	15711.11
Waikato	Chroomonas spp. cells	cells/mL	28	700	124.08
Waikato	Chroomonas spp. colonies	colonies/mL	28	700	124.08
Waikato	Chrysene	mg/L	0	0	0
Waikato	cis-1-2-dichloroethylene	mg/L	0	0	0
Waikato	cis-1-3-dichloropropene	mg/L	0	0	0
Waikato	cis-permethrin	mg/L	0	0	0
Waikato	Closterium spp.(Medium>100um) biovolume	µm³/mL	97000	140000	118500

Intake Source	Component	Units	Min	Max	Average
Waikato	Closterium spp.(Medium>100um) cells	cells/mL	19	28	23.5
Waikato	Closterium spp.(Medium>100um) colonies	colonies/mL	19	28	23.5
Waikato	Closterium spp.(Small<100um) biovolume	µm³/mL	48000	150000	119000
Waikato	Closterium spp.(Small<100um) cells	cells/mL	9	28	22.4
Waikato	Closterium spp.(Small<100um) colonies	colonies/mL	9	28	22.4
Waikato	CNCl	mg/L	0	0	0
Waikato	Cocconeis spp. biovolume	µm³/mL	6400	77000	26796.78
Waikato	Coelastrum spp. biovolume	µm³/mL	870	3500	1746.70
Waikato	Coelastrum spp. cells	cells/mL	56	220	110.70
Waikato	Coelastrum spp. colonies	colonies/mL	28	28	28
Waikato	Colorseed Cryptosporidium recovery	%	10	46	24
Waikato	Colour	Hazen Units	5	40	17.94
Waikato	Conductivity	mS/m	12.20	17.60038	14.011856
Waikato	Confirmed Cryptosporidium per 10L	/10 L	0	0	0
Waikato	Confirmed Giardia count		0	0	0
Waikato	Confirmed Giardia per 10L	/10 L	0	0	0
Waikato	Copper	mg/L	0.00051	0.0033	0.001
Waikato	Crucigenia spp. biovolume	µm³/mL	680	1200	960
Waikato	Crucigenia spp. cells	cells/mL	74	130	104.70
Waikato	Crucigenia spp. colonies	colonies/mL	19	37	28
Waikato	Cryptomonas spp. biovolume	µm³/mL	5000	200000	47537.04
Waikato	Cryptomonas spp. cells	cells/mL	9	360	87.204
Waikato	Cryptomonas spp. colonies	colonies/mL	9	360	87.204
Waikato	Cyanazine	µg/L	0	0	0
Waikato	Cyanide	mg/L	0	0.0079	0.000303
Waikato	Cyanobacteria biovolume	µm³/mL	0	400000	63364.41
Waikato	Cyanobacteria cell count	cells/mL	0	12000	1933.73
Waikato	Cyanobacteria colony count	colonies/mL	0	810	140.13
Waikato	Cyclotella spp. biovolume	µm³/mL	1600	19000	8800
Waikato	Cylindrospermopsin	µg/L	0	0	0
Waikato	Cylindrospermopsin (CYL TEQ)	µg/L	0	0	0
Waikato	Cylindrospermopsis spp. biovolume	µm³/mL	4200	15000	7800
Waikato	Cylindrospermopsis spp. cells	cells/mL	280	970	522.5

Intake Source	Component	Units	Min	Max	Average
Waikato	Cylindrospermopsis spp. colonies	colonies/mL	28	82	48.5
Waikato	Cymbella spp.(Large>100um) biovolume	µm³/mL	1000000	1000000	1000000
Waikato	Cymbella spp.(Large>100um) cells	cells/mL	28	28	28
Waikato	Cymbella spp.(Large>100um) colonies	colonies/mL	28	28	28
Waikato	Cymbella spp.(Small<20um) biovolume	µm³/mL	6900	28000	9300
Waikato	Desmidium spp. biovolume	µm³/mL	25000	25000	25000
Waikato	Desmidium spp. cells	cells/mL	990	990	990
Waikato	Desmidium spp. colonies	colonies/mL	490	490	490
Waikato	Desmodesmus (cf) spp. biovolume	µm³/mL	9200	9200	9200
Waikato	Desmodesmus (cf) spp. colonies	colonies/mL	28	28	28
Waikato	Desmodesmus spp.(Large>5um) biovolume	µm³/mL	6200	43000	31366.70
Waikato	Desmodesmus spp.(Large>5um) cells	cells/mL	28	190	139.70
Waikato	Desmodesmus spp.(Small<5um) biovolume	µm³/mL	360	20000	8117.14
Waikato	Desmodesmus spp.(Small<5um) cells	cells/mL	14	780	312.60
Waikato	Desmodesmus spp.(Small<5um) colonies	colonies/mL	14	200	92.18
Waikato	Diatoma spp. biovolume	µm³/mL	43	43	43
Waikato	Diatoma spp. cells	cells/mL	27	27	27
Waikato	Diatoma spp. colonies	colonies/mL	27	27	27
Waikato	Diazinon	µg/L	0	0	0
Waikato	Dibenzo(ah)anthracene	mg/L	0	0	0
Waikato	Dibenzofuran	mg/L	0	0	0
Waikato	Dibromoacetic Acid	mg/L	0	0	0
Waikato	Dibromoacetonitrile	mg/L	0	0	0
Waikato	dibromochloromethane	mg/L	0	0	0
Waikato	dibromomethane	mg/L	0	0	0
Waikato	Dicamba	mg/L	0	0	0
Waikato	Dichloroacetic Acid	mg/L	0	0	0
Waikato	Dichloroacetonitrile	mg/L	0	0	0
Waikato	dichlorodifluoromethane	mg/L	0	0	0
Waikato	Dichlorprop	mg/L	0	0	0
Waikato	Dichlorvos	µg/L	0	0	0
Waikato	Dieldrin	mg/L	0	0	0
Waikato	Diethyl phthalate	mg/L	0	0	0
Waikato	Difenoconazole	µg/L	0	0	0

Intake Source	Component	Units	Min	Max	Average
Waikato	Dihydroanatoxin-a	µg/L	0	0	0
Waikato	Dimethoate	µg/L	0	0	0
Waikato	Dimethyl phthalate	mg/L	0	0	0
Waikato	Di-n-butyl phthalate	mg/L	0	0	0
Waikato	Dinobryon spp. biovolume	µm ³ /mL	4600	58000	28783.33
Waikato	Dinobryon spp. cells	cells/mL	55	700	349.17
Waikato	Di-n-octyl phthalate	mg/L	0	0	0
Waikato	Dinoseb	mg/L	0	0	0
Waikato	Diphenylhydrazine	mg/L	0	0	0
Waikato	Diquat	µg/L	0	0	0
Waikato	Dissolved Organic Carbon DOC	mg/L	1.40	5.65	2.99
Waikato	Dissolved Reactive Phosphorus	mg/L	0.012	0.027	0.021412
Waikato	Diuron	µg/L	0	0	0
Waikato	Dolichospermum spp.(4µm wide) biovolume	µm ³ /mL	2100	200000	44364.29
Waikato	Dolichospermum spp.(4µm wide) cells	cells/mL	70	6500	1470.63
Waikato	Dolichospermum spp.(4µm wide) colonies	colonies/mL	5.60	530	103.69
Waikato	Dolichospermum spp.(6µm wide) biovolume	µm ³ /mL	23000	370000	119875
Waikato	Dolichospermum spp.(6µm wide) cells	cells/mL	230	3700	1198.75
Waikato	Endosulfan I	mg/L	0	0	0
Waikato	Endosulfan II	mg/L	0	0	0
Waikato	Endosulfan sulfate	mg/L	0	0	0
Waikato	Endrin	mg/L	0	0	0
Waikato	Endrin aldehyde	mg/L	0	0	0
Waikato	Epichlorohydrin	mg/L	0	0	0
Waikato	Epithemia spp. biovolume	µm ³ /mL	1500	8800	4527.2
Waikato	Escherichia coli	MPN/100 mL	52	1800	396.38
Waikato	ethylbenzene	mg/L	0	0	0
Waikato	ethylchloride	mg/L	0	0	0
Waikato	Eudorina spp.(Small<10um) biovolume	µm ³ /mL	19000	69000	44000
Waikato	Eudorina spp.(Small<10um) cells	cells/mL	140	500	320
Waikato	Euglena spp.(Large>50um) biovolume	µm ³ /mL	17000	50000	33500
Waikato	Euglena spp.(Large>50um) cells	cells/mL	9	27	18
Waikato	Euglena spp.(Large>50um) colonies	colonies/mL	9	27	18
Waikato	Euglena spp.(Small<50um) biovolume	µm ³ /mL	13000	150000	42000
Waikato	Euglena spp.(Small<50um) cells	cells/mL	17	200	55.3

Intake Source	Component	Units	Min	Max	Average
Waikato	Euglena spp.(Small<50um) colonies	colonies/ mL	17	200	55.3
Waikato	Eunotia spp.(Medium>100um) biovolume	µm³/mL	150000	1500000	825000
Waikato	Eunotia spp.(Medium>100um) cells	cells/mL	28	280	154
Waikato	Eunotia spp.(Medium>100um) colonies	colonies/ mL	28	28	28
Waikato	Eunotia spp.(Small<50um) biovolume	µm³/mL	36000	73000	48333.33
Waikato	Fenoprop (Silvex)	mg/L	0	0	0
Waikato	Fenpropimorph	µg/L	0	0	0
Waikato	Fluazifop butyl	µg/L	0	0	0
Waikato	Fluometuron	µg/L	0	0	0
Waikato	Fluoranthene	mg/L	0	0	0
Waikato	Fluorene	mg/L	0	0	0
Waikato	Fluoride	mg/L	0.080	0.180	0.130
Waikato	fluorotrichloromethane	mg/L	0	0	0
Waikato	Flusilazole	µg/L	0	0	0
Waikato	Fluvalinate tau	µg/L	0	0	0
Waikato	Formaldehyde	mg/L	0	0.026	0.005
Waikato	Fragilaria spp. biovolume	µm³/mL	3800	44000	18733.33
Waikato	Fragilaria spp. cells	cells/mL	56	640	273.83
Waikato	Frustulia spp. biovolume	µm³/mL	2900	17000	10175
Waikato	Furalaxyl	µg/L	0	0	0
Waikato	Gamma-chlordane	mg/L	0	0	0
Waikato	geosmin	ng/L	0	490	25.94
Waikato	Glenodinium spp. biovolume	µm³/mL	670	4000	1780
Waikato	Glufosinate	µg/L	0	0	0
Waikato	Glyphosate	µg/L	0	0	0
Waikato	Gomphonema spp. biovolume	µm³/mL	1700	20000	7231.25
Waikato	Gyrosigma spp. biovolume	µm³/mL	7000	21000	14000
Waikato	Gyrosigma spp. cells	cells/mL	9	28	18.67
Waikato	Gyrosigma spp. colonies	colonies/ mL	9	28	18.67
Waikato	Haloxfop methyl	µg/L	0	0	0
Waikato	Hantzschia spp. biovolume	µm³/mL	7400	23000	15200
Waikato	Heptachlor	mg/L	0	0	0
Waikato	Heptachlor epoxide	mg/L	0	0	0
Waikato	Hexachlorobenzene	mg/L	0	0	0
Waikato	Hexachlorobutadiene	mg/L	0	0	0
Waikato	Hexachlorocyclopentadiene	mg/L	0	0	0
Waikato	Hexachloroethane	mg/L	0	0	0
Waikato	Hexaconazole	µg/L	0	0	0
Waikato	Hexazinone	µg/L	0	0	0
Waikato	Homoanatoxin-a	µg/L	0	0	0

Intake Source	Component	Units	Min	Max	Average
Waikato	HPC	cfu/mL	300	1100	700
Waikato	Hydroxyatrazine	µg/L	0	0	0
Waikato	Imazapyr	µg/L	0	0	0
Waikato	Indeno(1-2-3-c-d)pyrene	mg/L	0	0	0
Waikato	Iodide	mg/L	0.0012	0.003	0.00225
Waikato	IPBC	µg/L	0	0	0
Waikato	Iron	mg/L	0.100	3	0.66
Waikato	Isophorone	mg/L	0	0	0
Waikato	iso-propylbenzene	mg/L	0	0	0
Waikato	Isoproturon	µg/L	0	0	0
Waikato	Kirchneriella spp. biovolume	µm³/mL	310	610	460
Waikato	Kirchneriella spp. colonies	colonies/ mL	28	28	28
Waikato	Kresoxim methyl	µg/L	0	0	0
Waikato	Lead	mg/L	0.00014	0.0011	0.000395
Waikato	Leptolyngbya spp. biovolume	µm³/mL	3200	3200	3200
Waikato	Leptolyngbya spp. cells	cells/mL	300	300	300
Waikato	Leptolyngbya spp. colonies	colonies/ mL	28	28	28
Waikato	Limnothrix spp. cells	cells/mL	870	870	870
Waikato	Limnothrix spp. colonies	colonies/ mL	28	28	28
Waikato	Lindane (BHC gamma)	mg/L	0	0	0
Waikato	Linuron	µg/L	0	0	0
Waikato	Lithium	mg/L	0.027	0.063	0.044
Waikato	Lontrel	mg/L	0	0	0
Waikato	m- & p-xylene	mg/L	0	0	0
Waikato	Magnesium	mg/L	2.10	3	2.629
Waikato	Magnesium Hardness	mg/L	0.029	12	10.533
Waikato	Malathion	µg/L	0	0	0
Waikato	Mallomonas spp. biovolume	µm³/mL	2100	58000	13318.18
Waikato	Mallomonas spp. cells	cells/mL	9	250	57.167
Waikato	Mallomonas spp. colonies	colonies/ mL	9	250	57.167
Waikato	Manganese	mg/L	0.0031	0.130	0.034
Waikato	MCPA	mg/L	0	0	0
Waikato	MCPB	mg/L	0	0	0
Waikato	Mecoprop (MCP)	mg/L	0	0	0
Waikato	Melosira spp. biovolume	µm³/mL	34000	67000	50500
Waikato	Melosira spp. colonies	colonies/ mL	28	28	28
Waikato	Mercury	mg/L	0	0	0
Waikato	Merismopedia spp. (Small < 1 µm) biovolume	µm³/mL	99	1600	419.83

Intake Source	Component	Units	Min	Max	Average
Waikato	Merismopedia spp.(Small<1um) cells	cells/mL	330	5200	1383.33
Waikato	Merismopedia spp.(Small<1um) colonies	colonies/mL	9	28	24.67
Waikato	Metaxyl	µg/L	0	0	0
Waikato	Methoxychlor	mg/L	0	0	0
Waikato	methylene chloride	mg/L	0	0	0
Waikato	Metolachlor	µg/L	0	0	0
Waikato	Metribuzin	µg/L	0	0	0
Waikato	Metsulfuron	µg/L	0	0	0
Waikato	Micractinium spp. biovolume	µm³/mL	15000	15000	15000
Waikato	Micractinium spp. cells	cells/mL	150	150	150
Waikato	Micractinium spp. colonies	colonies/mL	38	38	38
Waikato	Microcystin-LR	µg/L	0	0.035999999	0.000610169
Waikato	Microcystin-RR	µg/L	0	0.017000001	0.000288136
Waikato	Microcystins/Nodularin-Total (MC-LR TEQ)	µg/L	0	0.050000001	0.000847458
Waikato	Microcystins-Total	µg/L	0	0.050000001	0.000847458
Waikato	Microcystins-Total (MC-LR TEQ)	µg/L	0	0.050000001	0.000847458
Waikato	Microcystin-YR	µg/L	0	0	0
Waikato	Microcystis spp. biovolume	µm³/mL	60000	60000	60000
Waikato	Microcystis spp. cells	cells/mL	1100	1100	1100
Waikato	Molinate	µg/L	0	0	0
Waikato	Molybdenum	mg/L	0	0.00039	0.000158462
Waikato	Monoraphidium spp. biovolume	µm³/mL	11	1000	175.7096774
Waikato	Monoraphidium spp. cells	cells/mL	9	830	139.875
Waikato	Monoraphidium spp. colonies	colonies/mL	9	830	139.875
Waikato	Mougeotia spp. biovolume	µm³/mL	300000	450000	375000
Waikato	Myclobutanil	µg/L	0	0	0
Waikato	Naphthalene	mg/L	0	0	0
Waikato	Navicula spp.(Large>50um) biovolume	µm³/mL	11000	33000	25666.66667
Waikato	Navicula spp.(Large>50um) cells	cells/mL	9	28	21.66666667
Waikato	Navicula spp.(Large>50um) colonies	colonies/mL	9	28	21.66666667
Waikato	Navicula spp.(Medium>20um) biovolume	µm³/mL	10000	42000	22000

Intake Source	Component	Units	Min	Max	Average
Waikato	Navicula spp.(Small<20um) biovolume	µm³/mL	5300	56000	14372
Waikato	Navicula spp.(Small<20um) cells	cells/mL	19	190	49.92
Waikato	Navicula spp.(Small<20um) colonies	colonies/mL	19	190	49.92
Waikato	n-butylbenzene	mg/L	0	0	0
Waikato	Nickel	mg/L	0.00011	0.0015	0.0005
Waikato	Nitrate	mg/L	0.26	0.99	0.55
Waikato	Nitrite	mg/L	0	0.007	0.0034
Waikato	Nitrite-Nitrate Nitrogen	mg/L	0.260	0.990	0.551
Waikato	Nitrobenzene	mg/L	0	0	
Waikato	Nitzschia spp.(Large>50um) biovolume	µm³/mL	11000	81000	24571.43
Waikato	Nitzschia spp.(Large>50um) cells	cells/mL	19	140	40.875
Waikato	Nitzschia spp.(Large>50um) colonies	colonies/mL	19	140	40.875
Waikato	Nitzschia spp.(Small<10um) biovolume	µm³/mL	1200	7500	2333.33
Waikato	n-nitrosodi-n-propylamine	mg/L	0	0	0
Waikato	n-nitrosodiphenylamine	mg/L	0	0	0
Waikato	Nodularin	µg/L	0	0	0
Waikato	Norflurazon	µg/L	0	0	0
Waikato	n-propylbenzene	mg/L	0	0	0
Waikato	Oocystis spp. biovolume	µm³/mL	7000	7000	7000
Waikato	Oocystis spp. colonies	colonies/mL	28	28	28
Waikato	Oryzalin	µg/L	0	0	0
Waikato	Oxadiazon	µg/L	0	0	0
Waikato	o-xylene	mg/L	0	0	0
Waikato	Paclobutrazol	µg/L	0	0	0
Waikato	Paraquat	µg/L	0	0	0
Waikato	Parathion Ethyl	µg/L	0	0	0
Waikato	Pediastrum spp. biovolume	µm³/mL	11000	68000	37866.67
Waikato	Pediastrum spp. cells	cells/mL	73	450	246.87
Waikato	Pendimethalin	µg/L	0	0	0
Waikato	Pentachlorophenol	mg/L	0	0	0
Waikato	Perchlorate	mg/L	0	0.0012	2.06897E-05
Waikato	Peridinium spp. biovolume	µm³/mL	9900000	9900000	9900000
Waikato	pH	pH unit	7	7.90	7.34
Waikato	Phacus spp. biovolume	µm³/mL	76000	76000	76000
Waikato	Phacus spp. cells	cells/mL	28	28	28
Waikato	Phacus spp. colonies	colonies/mL	28	28	28
Waikato	Phenanthrene	mg/L	0	0	0

Intake Source	Component	Units	Min	Max	Average
Waikato	Phenol	mg/L	0	0	0
Waikato	Pheophytin	mg/L	0.0008	0.0087	0.004
Waikato	Phormidium spp.(5µm wide) biovolume	µm³/mL	34000	34000	34000
Waikato	Phormidium spp.(5µm wide) cells	cells/mL	420	420	420
Waikato	Phormidium spp.(5µm wide) colonies	colonies/mL	28	28	28
Waikato	Picloram	mg/L	0	0	0
Waikato	Pinnularia spp. biovolume	µm³/mL	11000	64000	27000
Waikato	Pirimicarb	µg/L	0	0	0
Waikato	Pirimiphos methyl	µg/L	0	0	0
Waikato	p-isopropyl toluene	mg/L	0	0	0
Waikato	Planktolyngbya spp. biovolume	µm³/mL	3900	54000	19514.29
Waikato	Planktolyngbya spp. cells	cells/mL	130	1800	661.43
Waikato	Planktolyngbya spp. colonies	colonies/mL	27	190	69.23
Waikato	Potassium	mg/L	2.30	3.60	3.08
Waikato	Presumptive Cryptosporidium per 10L	/10 L	0	0.71	0.24
Waikato	Presumptive Giardia per 10L	/10 L	0	4.30	1.43
Waikato	Primisulfuron methyl	µg/L	0	0	0
Waikato	Prochloraz	µg/L	0	0	0
Waikato	Prometryn	µg/L	0	0	0
Waikato	Propachlor	µg/L	0	0	0
Waikato	Propanil	µg/L	0	0	0
Waikato	Propazine	µg/L	0	0	0
Waikato	Propiconazole	µg/L	0	0	0
Waikato	Pseudanabaena spp. biovolume	µm³/mL	1900	10000	4533.33
Waikato	Pseudanabaena spp. cells	cells/mL	190	1000	453.33
Waikato	Pyrene	mg/L	0	0	0
Waikato	Pyriproxyfen	µg/L	0	0	0
Waikato	Quizalofop ethyl	µg/L	0	0	0
Waikato	Raphidiopsis spp. biovolume	µm³/mL	1700	1700	1700
Waikato	Raphidiopsis spp. cells	cells/mL	1400	1400	1400
Waikato	Raphidiopsis spp. colonies	colonies/mL	28	28	28
Waikato	Rhoicosphenia spp. biovolume	µm³/mL	28000	28000	28000
Waikato	Romeria spp. biovolume	µm³/mL	13000	13000	13000
Waikato	Romeria spp. cells	cells/mL	140	140	140
Waikato	Romeria spp. colonies	colonies/mL	28	28	28
Waikato	Salinity	ppt	0	0.70	0.021
Waikato	Scenedesmus spp.(Large>5um) biovolume	µm³/mL	16000	21000	20000

Intake Source	Component	Units	Min	Max	Average
Waikato	Scenedesmus spp.(Large>5um) colonies	colonies/mL	28	28	28
Waikato	Scenedesmus spp.(Small<5um) biovolume	µm³/mL	1800	11000	5155.56
Waikato	Scenedesmus spp.(Small<5um) cells	cells/mL	56	340	156
Waikato	sec-butylbenzene	mg/L	0	0	0
Waikato	Selenium	mg/L	0	0	0
Waikato	Silicon	mg/L	27	41	34.62
Waikato	Silver	mg/L	0	0	0
Waikato	Simazine	µg/L	0	0	0
Waikato	Simetryn	µg/L	0	0	0
Waikato	Skeletonema spp. biovolume	µm³/mL	890	190000	23072.07
Waikato	Skeletonema spp. cells	cells/mL	19	4000	485.23
Waikato	Skeletonema spp. colonies	colonies/mL	9	1300	156
Waikato	Sodium	mg/L	11	17	14.38461538
Waikato	Sphaerocystis spp. biovolume	µm³/mL	4700	7800	6250
Waikato	Sphaerocystis spp. cells	cells/mL	170	280	225
Waikato	Sphaerocystis spp. colonies	colonies/mL	28	28	28
Waikato	Staurastrum spp. biovolume	µm³/mL	1500000	11000000	6250000
Waikato	Staurastrum spp. cells	cells/mL	19	140	79.5
Waikato	Staurastrum spp. colonies	colonies/mL	9	140	74.5
Waikato	styrene	mg/L	0	0	0
Waikato	Sulfentrazone	µg/L	0	0	0
Waikato	Sulphate	mg/L	7.639999867	14.39999962	9.99500004
Waikato	SUM- Tetra- & trichloroethane	mg/L	0	0	0
Waikato	SUM- THM	mg/L	0	0.0015	7.83784E-05
Waikato	Sum of atrazine + its metabolites	µg/L	0	0	0
Waikato	Surirella spp. biovolume	µm³/mL	33000	33000	33000
Waikato	Surirella spp. cells	cells/mL	28	28	28
Waikato	Surirella spp. colonies	colonies/mL	28	28	28
Waikato	Synedra spp. biovolume	µm³/mL	110000	1100000	300967.7419
Waikato	Synedra spp. cells	cells/mL	19	190	50.625
Waikato	Synedra spp. colonies	colonies/mL	19	190	50.625
Waikato	Synura spp. biovolume	µm³/mL	22000	420000	85000
Waikato	Synura spp. cells	cells/mL	28	530	109.3571429

Intake Source	Component	Units	Min	Max	Average
Waikato	Synura spp. colonies	colonies/ mL	28	190	59.35714 286
Waikato	Tabellaria spp. biovolume	µm³/mL	150000	150000	150000
Waikato	Tabellaria spp. colonies	colonies/ mL	28	28	28
Waikato	TCMIB	µg/L	0	0	0
Waikato	Tebuconazole	µg/L	0	0	0
Waikato	Temperature	°C	21.79999 924	23	22.43333 308
Waikato	Terbacil	µg/L	0	0	0
Waikato	Terbufos	µg/L	0	0	0
Waikato	Terbumeton	µg/L	0	0	0
Waikato	Terbuthylazine	µg/L	0	0	0
Waikato	Terbuthylazine desethyl	µg/L	0	0	0
Waikato	Terbutryn	µg/L	0	0	0
Waikato	tert-butyl benzene	mg/L	0	0	0
Waikato	tetrachloroethylene	mg/L	0	0	0
Waikato	Tetrastrum spp. biovolume	µm³/mL	7100	7100	7100
Waikato	Tetrastrum spp. cells	cells/mL	37	37	37
Waikato	Tetrastrum spp. colonies	colonies/ mL	9	9	9
Waikato	Thiabendazole	µg/L	0	0	0
Waikato	Thiobencarb	µg/L	0	0	0
Waikato	Tin	mg/L	0	0.0001	3.84615E- 06
Waikato	TKN	mg/L	0.119999 997	0.519999 981	0.285384 613
Waikato	toluene	mg/L	0	0	0
Waikato	Total Coliforms	MPN/100 mL	280	24000	5467.884 615
Waikato	Total Hardness	mg/L	0.07	34	28.002
Waikato	Total Nitrogen	mg/L	0.34	1.40	0.78
Waikato	Total Organic Carbon TOC	mg/L	1.60	5.70	3.37
Waikato	Total Phosphorus	mg/L	0.04	0.10	0.062
Waikato	Total potential toxic biovolume	µm³/mL	0	26000	1629.42
Waikato	Total Zooplanktons	/ mL	0	0	0
Waikato	Trachelomonas spp. biovolume	µm³/mL	5500	66000	20886.20 69
Waikato	trans-1-2-dichloroethene	mg/L	0	0	0
Waikato	trans-1-3-dichloropropen	mg/L	0	0	0
Waikato	trans-permethrin	mg/L	0	0	0
Waikato	Triazophos	µg/L	0	0	0
Waikato	Tribonema spp. biovolume	µm³/mL	120000	240000	195000
Waikato	Trichloroacetic Acid	mg/L	0	0	0
Waikato	Trichloroacetonitrile	mg/L	0	0	0

Intake Source	Component	Units	Min	Max	Average
Waikato	trichloroethylene	mg/L	0	0	0
Waikato	Triclopyr	mg/L	0	0	0
Waikato	Turbidity	NTU	0.2000	45	12.64
Waikato	Ulothrix spp. biovolume	µm³/mL	29000	29000	29000
Waikato	Ulothrix spp. cells	cells/mL	55	55	55
Waikato	Ulothrix spp. colonies	colonies/ mL	28	28	28
Waikato	Uranium	mg/L	0.000025	0.00011	4.71923E-05
Waikato	vinyl chloride	mg/L	0	0	0
Waikato	Woronichinia spp. biovolume	µm³/mL	2800	2800	2800
Waikato	Woronichinia spp. colonies	colonies/ mL	14	14	14
Waikato	Xylenes (Total)	mg/L	0	0	0
Waikato	Zinc	mg/L	0.001	0.008	0.003
Waikato	Acutodesmus spp. colonies	colonies/ mL	28	110	70.2
Waikato	Amphora spp. cells	cells/mL	56	56	56
Waikato	Amphora spp. colonies	colonies/ mL	56	56	56
Waikato	Anabaena spp.(4µm wide) colonies	colonies/ mL	56	56	56
Waikato	Ankistrodesmus spp. colonies	colonies/ mL	9	110	38.8
Waikato	Ankyra spp. cells	cells/mL	56	56	56
Waikato	Botryococcus spp. colonies	colonies/ mL	27	56	41.5
Waikato	Cocconeis spp. cells	cells/mL	9	110	38.63
Waikato	Cocconeis spp. colonies	colonies/ mL	9	110	38.63
Waikato	Colorseed Giardia recovery	%	4	60	27
Waikato	Cyclotella spp. cells	cells/mL	9	110	47.5
Waikato	Cyclotella spp. colonies	colonies/ mL	9	110	47.5
Waikato	Cymbella spp.(Small <20µm) cells	cells/mL	28	110	37.11
Waikato	Cymbella spp.(Small <20µm) colonies	colonies/ mL	28	110	37.11
Waikato	Desmodesmus (cf) spp. cells	cells/mL	110	110	110
Waikato	Desmodesmus spp.(Large>5µm) colonies	colonies/ mL	28	56	39
Waikato	Dinobryon spp. colonies	colonies/ mL	28	110	62
Waikato	Dolichospermum spp.(6µm wide) colonies	colonies/ mL	28	170	100.25
Waikato	Epithemia spp. cells	cells/mL	9	56	28.67

Intake Source	Component	Units	Min	Max	Average
Waikato	Epithemia spp. colonies	colonies/ mL	9	56	28.67
Waikato	Eudorina spp.(Small<10um) colonies	colonies/ mL	28	56	42
Waikato	Eunotia spp.(Small<50um) cells	cells/mL	27	56	37
Waikato	Eunotia spp.(Small<50um) colonies	colonies/ mL	27	56	37
Waikato	Fragilaria spp. colonies	colonies/ mL	28	110	59.92
Waikato	Frustulia spp. cells	cells/mL	9	56	32.75
Waikato	Frustulia spp. colonies	colonies/ mL	9	56	32.75
Waikato	Glenodinium spp. cells	cells/mL	9	56	24.67
Waikato	Glenodinium spp. colonies	colonies/ mL	9	56	24.67
Waikato	Gomphonema spp. cells	cells/mL	9	110	39.94
Waikato	Gomphonema spp. colonies	colonies/ mL	9	84	38.25
Waikato	Hantzschia spp. cells	cells/mL	28	84	56
Waikato	Hantzschia spp. colonies	colonies/ mL	28	84	56
Waikato	Kirchneriella spp. cells	cells/mL	28	56	42
Waikato	Melosira spp. cells	cells/mL	28	56	42
Waikato	Microcystis spp. colonies	colonies/ mL	56	56	56
Waikato	Mougeotia spp. cells	cells/mL	56	83	69.5
Waikato	Mougeotia spp. colonies	colonies/ mL	28	56	42
Waikato	Navicula spp.(Medium>20um) cells	cells/mL	28	110	59
Waikato	Navicula spp.(Medium>20um) colonies	colonies/ mL	28	110	59
Waikato	Nitzschia spp.(Small<10um) cells	cells/mL	27	170	51.76
Waikato	Nitzschia spp.(Small<10um) colonies	colonies/ mL	27	170	51.76
Waikato	Oocystis spp. cells	cells/mL	56	56	56
Waikato	Pediastrum spp. colonies	colonies/ mL	9	56	31
Waikato	Peridinium spp. cells	cells/mL	84	84	84
Waikato	Peridinium spp. colonies	colonies/ mL	84	84	84
Waikato	Pinnularia spp. cells	cells/mL	14	84	35.5
Waikato	Pinnularia spp. colonies	colonies/ mL	14	84	35.5
Waikato	Pseudanabaena spp. colonies	colonies/ mL	19	56	31.17
Waikato	Rhoicosphenia spp. cells	cells/mL	56	56	56

Intake Source	Component	Units	Min	Max	Average
Waikato	Rhoicosphenia spp. colonies	colonies/ mL	56	56	56
Waikato	Scenedesmus spp.(Large>5um) cells	cells/mL	83	110	104.6
Waikato	Scenedesmus spp.(Small<5um) colonies	colonies/ mL	28	84	45.89
Waikato	Suspended Solids	mg/L	7.20	57	18.39
Waikato	Tabellaria spp. cells	cells/mL	56	56	56
Waikato	Total Dissolved Solids	mg/L	93	170	119.56
Waikato	Total Solids	mg/L	110	180	139.43
Waikato	Trachelomonas spp. cells	cells/mL	9	110	35.79
Waikato	Trachelomonas spp. colonies	colonies/ mL	9	110	35.79
Waikato	Tribonema spp. cells	cells/mL	55	110	89.75
Waikato	Tribonema spp. colonies	colonies/ mL	28	56	35
Waikato	Woronichinia spp. cells	cells/mL	170	170	170
Waikato 50	1080 (Sodium fluoroacetate)	mg/L	0	0	0
Waikato 50	1-1-1-2-tetrachloroethan	mg/L	0	0	0
Waikato 50	1-1-1-Trichloro-2-propanone	mg/L	0	0	0
Waikato 50	1-1-1-trichloroethane	mg/L	0	0	0
Waikato 50	1-1-2-2-tetrachloroethan	mg/L	0	0	0
Waikato 50	1-1-2-trichloroethane	mg/L	0	0	0
Waikato 50	1-1-Dichloro-2-propanone	mg/L	0	0	0
Waikato 50	1-1-dichloroethane	mg/L	0	0	0
Waikato 50	1-1-dichloroethene	mg/L	0	0	0
Waikato 50	1-1-dichloropropene	mg/L	0	0	0
Waikato 50	1-2-3-trichlorobenzene	mg/L	0	0	0
Waikato 50	1-2-3-trichloropropane	mg/L	0	0	0
Waikato 50	1-2-4-trichlorobenzene	mg/L	0	0	0
Waikato 50	1-2-4-trimethylbenzene	mg/L	0	0	0
Waikato 50	1-2-dibromo-3-chloroprop	mg/L	0	0	0

Intake Source	Component	Units	Min	Max	Average
Waikato 50	1-2-dibromoethane	mg/L	0	0	0
Waikato 50	1-2-dichlorobenzene	mg/L	0	0	0
Waikato 50	1-2-dichloroethane	mg/L	0	0	0
Waikato 50	1-2-dichloroethene (cis and trans)	mg/L	0	0	0
Waikato 50	1-2-dichloropropane	mg/L	0	0	0
Waikato 50	1-3-5-trimethylbenzene	mg/L	0	0	0
Waikato 50	1-3-dichlorobenzene	mg/L	0	0	0
Waikato 50	1-3-dichloropropane	mg/L	0	0	0
Waikato 50	1-3-dichloropropene (cis and trans)	mg/L	0	0	0
Waikato 50	1-4-dichlorobenzene	mg/L	0	0	0
Waikato 50	2-2-dichloropropane	mg/L	0	0	0
Waikato 50	2-3-4-6-tetrachlorophenol	mg/L	0	0	0
Waikato 50	2-4-5-trichlorophenol	mg/L	0	0	0
Waikato 50	2-4-5-Trichlorophenoxyacetic	mg/L	0	0	0
Waikato 50	2-4-6-trichloroanisole	ng/L	0	0	0
Waikato 50	2-4-6-trichlorophenol	mg/L	0	0	0
Waikato 50	2-4-dichlorophenol	mg/L	0	0	0
Waikato 50	2-4-Dichlorophenoxyacetic acid	mg/L	0	0	0
Waikato 50	2-4-dimethylphenol	mg/L	0	0	0
Waikato 50	2-4-dinitrotoluene	mg/L	0	0	0
Waikato 50	2-6-dichlorophenol	mg/L	0	0	0
Waikato 50	2-6-dinitrotoluene	mg/L	0	0	0
Waikato 50	2-chloronaphthalene	mg/L	0	0	0
Waikato 50	2-chlorophenol	mg/L	0	0	0

Intake Source	Component	Units	Min	Max	Average
Waikato 50	2-chlorotoluene	mg/L	0	0	0
Waikato 50	2-isobutyl-3-methoxypyrazine	ng/L	0	0	0
Waikato 50	2-isopropyl-3-methoxypyrazine	ng/L	0	0	0
Waikato 50	2-methylisoborneol	ng/L	0	0	0
Waikato 50	2-methylnaphthalene	mg/L	0	0	0
Waikato 50	2-methylphenol	mg/L	0	0	0
Waikato 50	2-nitrophenol	mg/L	0	0	0
Waikato 50	4-(2-4-Dichlorophenoxy) butano	mg/L	0	0	0
Waikato 50	4-4-DDD	mg/L	0	0	0
Waikato 50	4-4-DDE	mg/L	0	0	0
Waikato 50	4-4-DDT	mg/L	0	0	0
Waikato 50	4-bromophenylphenyl ether	mg/L	0	0	0
Waikato 50	4-Chloro-3-methylphenol	mg/L	0	0	0
Waikato 50	4-chlorophenylphenyl ether	mg/L	0	0	0
Waikato 50	4-chlorotoluene	mg/L	0	0	0
Waikato 50	4-methylphenol	mg/L	0	0	0
Waikato 50	abs254	abs units	0.24	0.24	0.24
Waikato 50	Acenaphthene	mg/L	0	0	0
Waikato 50	Acenaphthylene	mg/L	0	0	0
Waikato 50	Acetochlor	µg/L	0	0	0
Waikato 50	Alachlor	µg/L	0	0	0
Waikato 50	Aldicarb	µg/L	0	0	0
Waikato 50	Aldrin	mg/L	0	0	0
Waikato 50	Algae and Cyanobacteria biovolume	µm ³ /mL	22,0000	22,0000	22,0000

Intake Source	Component	Units	Min	Max	Average
Waikato 50	Algae and Cyanobacteria cell count	cells/mL	190	190	190
Waikato 50	Algae and Cyanobacteria colony count	colonies/mL	190	190	190
Waikato 50	Alkalinity Total	mg/L	29	29	29
Waikato 50	Alpha-Chlordane	mg/L	0	0	0
Waikato 50	Aluminium	mg/L	0.12	1.34	0.76
Waikato 50	Ammonia	mg/L	0.031	0.031	0.031
Waikato 50	AMPA	µg/L	0	0	0
Waikato 50	Anatoxin-a	µg/L	0	0	0
Waikato 50	Anatoxins-Total	µg/L	0	0	0
Waikato 50	Anatoxins-Total (AIXTEQ)	µg/L	0	0	0
Waikato 50	Anthracene	mg/L	0	0	0
Waikato 50	Antimony	mg/L	0	0	0
Waikato 50	Arsenic	mg/L	0.0084	0.0095	0.00895
Waikato 50	Atrazine	µg/L	0	0	0
Waikato 50	Atrazine desethyl	µg/L	0	0	0
Waikato 50	Atrazine desisopropyl	µg/L	0	0	0
Waikato 50	Azaconazole	µg/L	0	0	0
Waikato 50	Azinphos methyl	µg/L	0	0	0
Waikato 50	BaP Equivalent	mg/L	0	0	0
Waikato 50	Barium	mg/L	0.031	0.031	0.031
Waikato 50	Benalaxyl	µg/L	0	0	0
Waikato 50	Bentazone	mg/L	0	0	0
Waikato 50	benzene	mg/L	0	0	0
Waikato 50	Benzo(a)anthracene	mg/L	0	0	0

Intake Source	Component	Units	Min	Max	Average
Waikato 50	Benzo(a)pyrene	mg/L	0	0	0
Waikato 50	Benzo(b)fluoranthene	mg/L	0	0	0
Waikato 50	Benzo(ghi)perylene	mg/L	0	0	0
Waikato 50	Benzo(k)fluoranthene	mg/L	0	0	0
Waikato 50	Beryllium	mg/L	0.000051	0.000051	0.000051
Waikato 50	BHC alpha	mg/L	0	0	0
Waikato 50	BHC beta	mg/L	0	0	0
Waikato 50	BHC delta	mg/L	0	0	0
Waikato 50	bis(2-chloroethoxy)methane	mg/L	0	0	0
Waikato 50	bis(2-chloroethyl) ether	mg/L	0	0	0
Waikato 50	bis(2-chloroisopropyl) ether	mg/L	0	0	0
Waikato 50	Bis(2-ethylhexyl)adipate	mg/L	0	0	0
Waikato 50	bis(2-ethylhexyl)phthalate	mg/L	0	0	0
Waikato 50	Bitertanol	µg/L	0	0	0
Waikato 50	Boron	mg/L	0.119999 997	0.119999 997	0.119999 997
Waikato 50	Bromacil	µg/L	0	0	0
Waikato 50	Bromate	mg/L	0	0	0
Waikato 50	Bromide	mg/L	0.033	0.033	0.033
Waikato 50	Bromoacetic Acid	mg/L	0	0	0
Waikato 50	bromobenzene	mg/L	0	0	0
Waikato 50	Bromochloroacetic Acid	mg/L	0	0	0
Waikato 50	Bromochloroacetonitrile	mg/L	0	0	0
Waikato 50	bromodichloromethane	mg/L	0	0	0
Waikato 50	bromoform	mg/L	0	0	0

Intake Source	Component	Units	Min	Max	Average
Waikato 50	bromomethane	mg/L	0	0	0
Waikato 50	Butachlor	µg/L	0	0	0
Waikato 50	Butylbenzyl phthalate	mg/L	0	0	0
Waikato 50	Cadmium	mg/L	0	0	0
Waikato 50	Calcium	mg/L	7.599999 905	7.599999 905	7.599999 905
Waikato 50	Calcium Hardness	mg/L	19	19	19
Waikato 50	Carbaryl	µg/L	0	0	0
Waikato 50	Carbazole	mg/L	0	0	0
Waikato 50	Carbofuran	µg/L	0	0	0
Waikato 50	carbon tetrachloride	mg/L	0	0	0
Waikato 50	Chloralhydrate	mg/L	0	0	0
Waikato 50	Chlorate	mg/L	0	0	0
Waikato 50	Chlorfluzuron	µg/L	0	0	0
Waikato 50	Chloride	mg/L	13.19999 981	13.19999 981	13.19999 981
Waikato 50	Chlorite	mg/L	0	0	0
Waikato 50	Chloroacetic Acid	mg/L	0	0	0
Waikato 50	chlorobenzene	mg/L	0	0	0
Waikato 50	chloroform	mg/L	0	0	0
Waikato 50	chloromethane	mg/L	0	0	0
Waikato 50	Chlorophyll	mg/L	0.0011	0.0011	0.0011
Waikato 50	Chloropicrin	mg/L	0	0	0
Waikato 50	Chlorpyrifos	µg/L	0	0	0
Waikato 50	Chlorpyrifos methyl	µg/L	0	0	0
Waikato 50	Chlortoluron	µg/L	0	0	0

Intake Source	Component	Units	Min	Max	Average
Waikato 50	Chromium	mg/L	0.00096	0.00096	0.00096
Waikato 50	Chrysene	mg/L	0	0	0
Waikato 50	cis-1-2-dichloroethylene	mg/L	0	0	0
Waikato 50	cis-1-3-dichloropropene	mg/L	0	0	0
Waikato 50	cis-permethrin	mg/L	0	0	0
Waikato 50	CNCl	mg/L	0	0	0
Waikato 50	Cocconeis spp. biovolume	µm³/mL	38000	38000	38000
Waikato 50	Cocconeis spp. cells	cells/mL	56	56	56
Waikato 50	Cocconeis spp. colonies	colonies/mL	56	56	56
Waikato 50	Colorseed Cryptosporidium recovery	%	12	12	12
Waikato 50	Colorseed Giardia recovery	%	19	19	19
Waikato 50	Colour	Hazen Units	25	25	25
Waikato 50	Conductivity	mS/m	13.10000 038	13.10000 038	13.10000 038
Waikato 50	Confirmed Cryptosporidium per 10L	/10 L	1.899999 976	1.899999 976	1.899999 976
Waikato 50	Confirmed Giardia per 10L	/10 L	0	0	0
Waikato 50	Copper	mg/L	0.0019	0.0019	0.0019
Waikato 50	Cryptomonas spp. biovolume	µm³/mL	15000	15000	15000
Waikato 50	Cryptomonas spp. cells	cells/mL	28	28	28
Waikato 50	Cryptomonas spp. colonies	colonies/mL	28	28	28
Waikato 50	Cyanazine	µg/L	0	0	0
Waikato 50	Cyanide	mg/L	0	0	0
Waikato 50	Cyanobacteria biovolume	µm³/mL	0	0	0
Waikato 50	Cyanobacteria cell count	cells/mL	0	0	0
Waikato 50	Cyanobacteria colony count	colonies/mL	0	0	0

Intake Source	Component	Units	Min	Max	Average
Waikato 50	Cylindrospermopsin	µg/L	0	0	0
Waikato 50	Cylindrospermopsin (CYL TEQ)	µg/L	0	0	0
Waikato 50	Diazinon	µg/L	0	0	0
Waikato 50	Dibenzo(ah)anthracene	mg/L	0	0	0
Waikato 50	Dibenzofuran	mg/L	0	0	0
Waikato 50	Dibromoacetic Acid	mg/L	0	0	0
Waikato 50	Dibromoacetonitrile	mg/L	0	0	0
Waikato 50	dibromochloromethane	mg/L	0	0	0
Waikato 50	dibromomethane	mg/L	0	0	0
Waikato 50	Dicamba	mg/L	0	0	0
Waikato 50	Dichloroacetic Acid	mg/L	0	0	0
Waikato 50	Dichloroacetonitrile	mg/L	0	0	0
Waikato 50	dichlorodifluoromethane	mg/L	0	0	0
Waikato 50	Dichlorprop	mg/L	0	0	0
Waikato 50	Dichlorvos	µg/L	0	0	0
Waikato 50	Dieldrin	mg/L	0	0	0
Waikato 50	Diethyl phthalate	mg/L	0	0	0
Waikato 50	Difenoconazole	µg/L	0	0	0
Waikato 50	Dihydroanatoxin-a	µg/L	0	0	0
Waikato 50	Dimethoate	µg/L	0	0	0
Waikato 50	Dimethyl phthalate	mg/L	0	0	0
Waikato 50	Di-n-butyl phthalate	mg/L	0	0	0
Waikato 50	Di-n-octyl phthalate	mg/L	0	0	0
Waikato 50	Dinoseb	mg/L	0	0	0

Intake Source	Component	Units	Min	Max	Average
Waikato 50	Diphenylhydrazine	mg/L	0	0	0
Waikato 50	Diquat	µg/L	0	0	0
Waikato 50	Dissolved Organic Carbon DOC	mg/L	3.700000 048	3.700000 048	3.700000 048
Waikato 50	Dissolved Reactive Phosphorus	mg/L	0.028000 001	0.028000 001	0.028000 001
Waikato 50	Diuron	µg/L	0	0	0
Waikato 50	Endosulfan I	mg/L	0	0	0
Waikato 50	Endosulfan II	mg/L	0	0	0
Waikato 50	Endosulfan sulfate	mg/L	0	0	0
Waikato 50	Endrin	mg/L	0	0	0
Waikato 50	Endrin aldehyde	mg/L	0	0	0
Waikato 50	Epichlorohydrin	mg/L	0	0	0
Waikato 50	Escherichia coli	MPN/100 mL	1000	1000	1000
Waikato 50	ethylbenzene	mg/L	0	0	0
Waikato 50	ethylchloride	mg/L	0	0	0
Waikato 50	Fenoprop (Silvex)	mg/L	0	0	0
Waikato 50	Fenpropimorph	µg/L	0	0	0
Waikato 50	Fluazifop butyl	µg/L	0	0	0
Waikato 50	Fluometuron	µg/L	0	0	0
Waikato 50	Fluoranthene	mg/L	0	0	0
Waikato 50	Fluorene	mg/L	0	0	0
Waikato 50	Fluoride	mg/L	0.129999 995	0.129999 995	0.129999 995
Waikato 50	fluorotrichloromethane	mg/L	0	0	0
Waikato 50	Flusilazole	µg/L	0	0	0
Waikato 50	Fluvalinate tau	µg/L	0	0	0

Intake Source	Component	Units	Min	Max	Average
Waikato 50	Formaldehyde	mg/L	0	0	0
Waikato 50	Fragilaria spp. biovolume	µm³/mL	5700	5700	5700
Waikato 50	Fragilaria spp. cells	cells/mL	83	83	83
Waikato 50	Fragilaria spp. colonies	colonies/mL	83	83	83
Waikato 50	Furalaxyl	µg/L	0	0	0
Waikato 50	Gamma-chlordane	mg/L	0	0	0
Waikato 50	geosmin	ng/L	6.400000 095	6.400000 095	6.400000 095
Waikato 50	Glufosinate	µg/L	0	0	0
Waikato 50	Glyphosate	µg/L	0	0	0
Waikato 50	Haloxypop methyl	µg/L	0	0	0
Waikato 50	Heptachlor	mg/L	0	0	0
Waikato 50	Heptachlor epoxide	mg/L	0	0	0
Waikato 50	Hexachlorobenzene	mg/L	0	0	0
Waikato 50	Hexachlorobutadiene	mg/L	0	0	0
Waikato 50	Hexachlorocyclopentadiene	mg/L	0	0	0
Waikato 50	Hexachloroethane	mg/L	0	0	0
Waikato 50	Hexaconazole	µg/L	0	0	0
Waikato 50	Hexazinone	µg/L	0	0	0
Waikato 50	Homoanatoxin-a	µg/L	0	0	0
Waikato 50	Hydroxyatrazine	µg/L	0	0	0
Waikato 50	Imazapyr	µg/L	0	0	0
Waikato 50	Indeno(1-2-3-c-d)pyrene	mg/L	0	0	0
Waikato 50	Iodide	mg/L	0.0028	0.0028	0.0028
Waikato 50	IPBC	µg/L	0	0	0

Intake Source	Component	Units	Min	Max	Average
Waikato 50	Iron	mg/L	0.180000 007	1.299999 952	0.739999 98
Waikato 50	Isophorone	mg/L	0	0	0
Waikato 50	iso-propylbenzene	mg/L	0	0	0
Waikato 50	Isoproturon	µg/L	0	0	0
Waikato 50	Kresoxim methyl	µg/L	0	0	0
Waikato 50	Lead	mg/L	0.00061	0.00061	0.00061
Waikato 50	Lindane (BHC gamma)	mg/L	0	0	0
Waikato 50	Linuron	µg/L	0	0	0
Waikato 50	Lithium	mg/L	0.044	0.044	0.044
Waikato 50	Lontrel	mg/L	0	0	0
Waikato 50	m- &p-xylene	mg/L	0	0	0
Waikato 50	Magnesium	mg/L	2.5	2.5	2.5
Waikato 50	Magnesium Hardness	mg/L	10	10	10
Waikato 50	Malathion	µg/L	0	0	0
Waikato 50	Manganese	mg/L	0.023	0.090999 998	0.056999 999
Waikato 50	MCPA	mg/L	0	0	0
Waikato 50	MCPB	mg/L	0	0	0
Waikato 50	Mecoprop (MCP)	mg/L	0	0	0
Waikato 50	Mercury	mg/L	0	0	0
Waikato 50	Metalaxyl	µg/L	0	0	0
Waikato 50	Methoxychlor	mg/L	0	0	0
Waikato 50	methylene chloride	mg/L	0	0	0
Waikato 50	Metolachlor	µg/L	0	0	0
Waikato 50	Metribuzin	µg/L	0	0	0

Intake Source	Component	Units	Min	Max	Average
Waikato 50	Metsulfuron	µg/L	0	0	0
Waikato 50	Microcystin-LR	µg/L	0	0	0
Waikato 50	Microcystin-RR	µg/L	0	0	0
Waikato 50	Microcystins/Nodularin-Total (MC-LR TEQ)	µg/L	0	0	0
Waikato 50	Microcystins-Total	µg/L	0	0	0
Waikato 50	Microcystins-Total (MC-LR TEQ)	µg/L	0	0	0
Waikato 50	Microcystin-YR	µg/L	0	0	0
Waikato 50	Molinate	µg/L	0	0	0
Waikato 50	Molybdenum	mg/L	0	0	0
Waikato 50	Myclobutanil	µg/L	0	0	0
Waikato 50	Naphthalene	mg/L	0	0	0
Waikato 50	n-butylbenzene	mg/L	0	0	0
Waikato 50	Nickel	mg/L	0.00066	0.00066	0.00066
Waikato 50	Nitrate	mg/L	1.019999 981	1.019999 981	1.019999 981
Waikato 50	Nitrite	mg/L	0.002	0.002	0.002
Waikato 50	Nitrite-Nitrate Nitrogen	mg/L	1	1	1
Waikato 50	Nitrobenzene	mg/L	0	0	0
Waikato 50	n-nitrosodi-n-propylamine	mg/L	0	0	0
Waikato 50	n-nitrosodiphenylamine	mg/L	0	0	0
Waikato 50	Nodularin	µg/L	0	0	0
Waikato 50	Norflurazon	µg/L	0	0	0
Waikato 50	n-propylbenzene	mg/L	0	0	0
Waikato 50	Oryzalin	µg/L	0	0	0
Waikato 50	Oxadiazon	µg/L	0	0	0

Intake Source	Component	Units	Min	Max	Average
Waikato 50	o-xylene	mg/L	0	0	0
Waikato 50	Paclobutrazol	µg/L	0	0	0
Waikato 50	Paraquat	µg/L	0	0	0
Waikato 50	Parathion Ethyl	µg/L	0	0	0
Waikato 50	Pendimethalin	µg/L	0	0	0
Waikato 50	Pentachlorophenol	mg/L	0	0	0
Waikato 50	Perchlorate	mg/L	0	0	0
Waikato 50	pH	pHunit	7	7	7
Waikato 50	Phenanthrene	mg/L	0	0	0
Waikato 50	Phenol	mg/L	0	0	0
Waikato 50	Picloram	mg/L	0	0	0
Waikato 50	Pirimicarb	µg/L	0	0	0
Waikato 50	Pirimiphos methyl	µg/L	0	0	0
Waikato 50	p-isopropyl toluene	mg/L	0	0	0
Waikato 50	Potassium	mg/L	3.5	3.5	3.5
Waikato 50	Presumptive Cryptosporidium per 10L	/10 L	0.629999 995	0.629999 995	0.629999 995
Waikato 50	Presumptive Giardia per 10L	/10 L	0.629999 995	0.629999 995	0.629999 995
Waikato 50	Primisulfuron methyl	µg/L	0	0	0
Waikato 50	Prochloraz	µg/L	0	0	0
Waikato 50	Prometryn	µg/L	0	0	0
Waikato 50	Propachlor	µg/L	0	0	0
Waikato 50	Propanil	µg/L	0	0	0
Waikato 50	Propazine	µg/L	0	0	0
Waikato 50	Propiconazole	µg/L	0	0	0

Intake Source	Component	Units	Min	Max	Average
Waikato 50	Pyrene	mg/L	0	0	0
Waikato 50	Pyriproxyfen	µg/L	0	0	0
Waikato 50	Quizalofop ethyl	µg/L	0	0	0
Waikato 50	Salinity	ppt	0	0	0
Waikato 50	sec-butylbenzene	mg/L	0	0	0
Waikato 50	Selenium	mg/L	0	0	0
Waikato 50	Silicon	mg/L	33	33	33
Waikato 50	Silver	mg/L	0	0	0
Waikato 50	Simazine	µg/L	0	0	0
Waikato 50	Simetryn	µg/L	0	0	0
Waikato 50	Sodium	mg/L	13	13	13
Waikato 50	styrene	mg/L	0	0	0
Waikato 50	Sulfentrazone	µg/L	0	0	0
Waikato 50	Sulphate	mg/L	12.10000 038	12.10000 038	12.10000 038
Waikato 50	SUM- Tetra- & trichloroethane	mg/L	0	0	0
Waikato 50	SUM- THM	mg/L	0	0	0
Waikato 50	Sum of atrazine + its metabolites	µg/L	0	0	0
Waikato 50	Suspended Solids	mg/L	25	25	25
Waikato 50	Synedra spp. biovolume	µm ³ /mL	160000	160000	160000
Waikato 50	Synedra spp. cells	cells/mL	28	28	28
Waikato 50	Synedra spp. colonies	colonies/ mL	28	28	28
Waikato 50	TCMIB	µg/L	0	0	0
Waikato 50	Tebuconazole	µg/L	0	0	0
Waikato 50	Temperature	°C	14	14	14

Intake Source	Component	Units	Min	Max	Average
Waikato 50	Terbacil	µg/L	0	0	0
Waikato 50	Terbufos	µg/L	0	0	0
Waikato 50	Terbumeton	µg/L	0	0	0
Waikato 50	Terbuthylazine	µg/L	0	0	0
Waikato 50	Terbuthylazine desethyl	µg/L	0	0	0
Waikato 50	Terbutryn	µg/L	0	0	0
Waikato 50	tert-butyl benzene	mg/L	0	0	0
Waikato 50	tetrachloroethylene	mg/L	0	0	0
Waikato 50	Thiabendazole	µg/L	0	0	0
Waikato 50	Thiobencarb	µg/L	0	0	0
Waikato 50	Tin	mg/L	0	0	0
Waikato 50	TKN	mg/L	0.469999 999	0.469999 999	0.469999 999
Waikato 50	toluene	mg/L	0	0	0
Waikato 50	Total Coliforms	MPN/100 mL	14000	14000	14000
Waikato 50	Total Dissolved Solids	mg/L	160	160	160
Waikato 50	Total Hardness	mg/L	29	29	29
Waikato 50	Total Nitrogen	mg/L	1.299999 952	1.299999 952	1.30
Waikato 50	Total Organic Carbon TOC	mg/L	4.199999 809	4.199999 809	4.20
Waikato 50	Total Phosphorus	mg/L	0.086000 003	0.086000 003	0.086000 003
Waikato 50	trans-1-2-dichloroethene	mg/L	0	0	0
Waikato 50	trans-1-3-dichloropropen	mg/L	0	0	0
Waikato 50	trans-permethrin	mg/L	0	0	0
Waikato 50	Triazophos	µg/L	0	0	0
Waikato 50	TrichloroaceticAcid	mg/L	0	0	0

Intake Source	Component	Units	Min	Max	Average
Waikato 50	Trichloroacetonitrile	mg/L	0	0	0
Waikato 50	trichloroethylene	mg/L	0	0	0
Waikato 50	Triclopyr	mg/L	0	0	0
Waikato 50	Turbidity	NTU	25	25	25
Waikato 50	Uranium	mg/L	0.000055	0.000055	0.000055
Waikato 50	vinyl chloride	mg/L	0	0	0
Waikato 50	Xylenes (Total)	mg/L	0	0	0
Waikato 50	Zinc	mg/L	0.0059	0.0059	0.0059

Appendix B. Process discharge quality

Sample Date	pH	Aluminium Soluble	Fluoride	Suspended Solids	FAC
	6 - 9	<4mg/L	<2mg/L	<100mg/L	<0.5
9/07/2025	6.70	0.02	0.10	22.00	0.01
16/07/2025	6.70	0.01	0.13	4.80	0.07
22/07/2025	6.70	0.01	0.08	42.00	0.02
30/07/2025	6.90	0.01	0.10	41.00	0.02
6/08/2025	6.80	0.01	0.09	50.00	0.02
13/08/2025	6.80	0.02	0.12	81.00	0.00
19/08/2025	7.10	0.01	0.15	8.40	0.03
27/08/2025	6.90	0.01	0.10	27.00	0.01
3/09/2025	6.60	0.03	0.08	2.80	0.01
10/09/2025	7.20	0.02	0.11	24.00	0.02
15/09/2025	6.70	0.02	0.09	5.80	0.03
23/09/2025	7.00	0.02	0.10	8.80	0.06
29/09/2025	7.00	0.02	0.10	9.60	0.02
8/10/2025	7.00	0.01	0.09	20.00	0.00
14/10/2025	6.80	0.01	0.11	13.00	0.03
22/10/2025	6.70	0.02	0.08	110.00	0.06
27/10/2025	6.90	0.03	0.13	10.00	0.07
9/11/2025	7.10	0.02	0.10	17.00	0.03
11/11/2025	7.00	0.02	0.10	2.80	0.02
17/11/2025	7.10	0.02	0.15	7.60	0.02
25/11/2025	7.10	0.03	0.10	10.00	0.02
6/12/2025	7.20	0.02	0.17	1.80	0.10
9/12/2025	7.00	0.03	0.12	16.00	0.10
16/12/2025	7.20	0.01	0.20	6.40	0.12
24/12/2025	7.00	0.01	0.11	9.60	0.03
31/12/2025	7.20	0.09	0.14	2.60	0.07
6/01/2026	7.20	0.02	0.14	46.00	0.06
14/01/2026	7.20	0.02	0.12	7.40	0.01
21/01/2026	7.20	0.03	0.20	5.90	0.00
26/01/2026	6.90	0.01	0.11	1.80	0.03
3/02/2026	7.30	0.03	0.18	4.20	0.01
11/02/2026	7.20	0.01	0.23	7.40	0.02
16/02/2026	6.80	0.02	0.08	3.30	0.07
25/02/2026	6.90	0.01	0.07	14.00	0.03
3/03/2026	6.80	0.01	0.09	38.00	0.01
10/03/2026	6.90	0.02	0.10	17.00	0.03
17/03/2026	7.20	0.02	0.13	1.60	0.04
25/03/2026	7.10	0.02	0.16	70.00	0.10
31/03/2026	6.90	0.01	0.11	8.00	0.08
8/04/2026	7.10	0.02	0.16	11.00	0.03
14/04/2026	7.00	0.02	0.11	6.40	0.08
22/04/2026	7.00	0.01	0.06	17.00	0.02

Sample Date	pH	Aluminium Soluble	Fluoride	Suspended Solids	FAC
	6 - 9	<4mg/L	<2mg/L	<100mg/L	<0.5
28/04/2026	7.00	0.02	0.10	18.00	0.20
4/05/2026	7.00	0.02	0.14	37.00	0.04
12/05/2026	6.80	0.01	0.21	24.00	0.03
22/05/2026	7.40	0.04	0.14	10.00	0.02
26/05/2026	7.10	0.02	0.16	34.00	0.04
2/06/2026	6.90	0.02	0.14	4.20	0.00
10/06/2026	6.90	0.01	0.11	16.00	0.03
16/06/2026	7.10	0.02	0.14	1.80	0.04
23/06/2026	7.40	0.04	0.33	7.70	0.03

Appendix C. Chemical bunds discharges

Date	Waikato WTP Source (Bund)	Volume Discharged (m3)	p H	Fluoride (g.m3)	Soluble Aluminium (g/m3)	TSS (50g/m 3)	Chlorine (mg/L)
12/07/2025	Hypo Washdown	3	8.5	0	0	4	0.1
12/07/2025	Sodium Hypochlorite	3	7.1	0	0	3	0.01
22/07/2025	Hypo Washdown	3	8.49	0	0	5	0.1
25/07/2025	Hypo Washdown	2	8	0	0	4	0.06
25/07/2025	Sodium Hypochlorite	2	7.3	0	0	4	0.02
25/07/2025	Aluminium Sulphate	2	5.1	0	2.3 above range	2	0.05
25/07/2025	Lime	2	7.8	0	0	2	0.04
25/07/2025	HFA	2	9.1	2.99	0	2	0.04
19/08/2025	Hypo Washdown	2	7.33	0	0	3	0.02
24/09/2025	Hypo Washdown	2.5	6.83	0	0	5	0.01
25/09/2025	Sodium Hypochlorite	2.5	7.89	0	0	2	0.02
25/09/2025	Aluminium Sulphate	2.5	6.86	0	0.084	3	0.02
25/09/2025	Lime	2.5	8.82	0	0	7	0.01
25/09/2025	HFA	2.5	7.03	above range	0	2	0.01
01/10/2025	Hypo Washdown	2	7.3	0	0	3	0.01
25/10/2025	Hypo Washdown	2	7.2	0	0	2	0.02
25/10/2025	Sodium Hypochlorite	2	7.2	0	0	4	0.02
25/10/2025	Aluminium Sulphate	2	7.2	0	0	4	0.01
25/10/2025	Lime	4	7.2	0	0	7	0.02
30/10/2025	Sodium Hypochlorite	3	6.9	0	0	4	0.03
30/10/2025	HFA	3	3.9	23	0	3	0.02
30/10/2025	Aluminium Sulphate	4	4.5	0	Above range	4	0.02
30/10/2025	Lime	4	6.9	0	0	4	0.01
06/11/2025	Hypo Washdown	8	6.58	0	0	8	0.02
24/11/2025	Sodium Hypochlorite	2	7.1	0	0	4	0.02
24/11/2025	Aluminium Sulphate	3	6.8	0	1.8	6	0.04
24/11/2025	Lime	5	6.8	0	0	4	0.02

Date	Waikato WTP Source (Bund)	Volume Discharged (m3)	p H	Fluoride (g.m3)	Soluble Aluminium (g/m3)	TSS (50g/m ³)	Chlorine (mg/L)
25/11/2025	Hypo Washdown	2	6.9	0	0	0	0.02
28/11/2025	Lime	3	8.45	0	0	40	0
23/12/2025	Hypo Washdown	2	6.9	0	0	3	0.02
23/12/2025	Sodium Hypochlorite	2	8.5	0	1.958	13	0.04
23/12/2025	Aluminium Sulphate	2	8.9	0	0	26	0.05
23/12/2025	Lime	2	7.3	0	0	5	0.04
05/01/2026	Hypo Washdown	1.5	6.89	0	0	3	0.01
12/01/2026	Hypo Washdown	2	8.9	0	0	3	0.03
19/01/2026	Sodium Hypochlorite	3	7.2	0	0	16	0.03
05/02/2026	Hypo Washdown	2	8.3	0	0	3	0.03
12/02/2026	Aluminium Sulphate	3	8.2	0	0.775	8	0
12/02/2026	Hypo Washdown	2	7.52	0	0	6	0.01
16/02/2026	Hypo Washdown	3	7.08	0	0	4	0
19/02/2026	Sodium Hypochlorite	1	6.66	0	0	33	0.04
19/02/2026	Lime	4	6.66	0	0	40	0.04
03/03/2026	Hypo Washdown	4	7.5	0	0	7	0.08
04/04/2026	Hypo Washdown	3	7.64	0	0	19	0.02
26/03/2026	Sodium Hypochlorite	3	7.91	0	0	6	0.1
26/03/2026	Lime	3	7.52	0	0	13	0
26/03/2026	Aluminium Sulphate	4	7.52	0	2.208	4	0.1
27/03/2026	Hypo Washdown	4	8.97			8	0.1
27/03/2026	Aluminium Sulphate	4	7.72		0.244	0	0.07
27/03/2026	Lime	4	7.33	0.26		1	0
09/04/2026	Sodium Hypochlorite	2	7.23	0	0	3	0.02
09/04/2026	Aluminium Sulphate	4	7.23	0	0.3	2	0.01
09/04/2026	Lime	3	7.23	0	0	5	0
15/04/2026	Sodium Hypochlorite	1.5	7.68	0	0	3	0.02

Date	Waikato WTP Source (Bund)	Volume Discharged (m3)	p H	Fluoride (g.m3)	Soluble Aluminium (g/m3)	TSS (50g/m3)	Chlorine (mg/L)
15/04/2026	Hypo Washdown	2	6.79	0	0	4	0.01
15/04/2026	Aluminium Sulphate	2	6.81	0	0.302	4	0.01
15/04/2026	Lime	2	8.72	0	0	7	0
23/04/2026	Hypo Washdown	2	8.02	0	0	3	0.01
23/04/2026	HFA	3	2.16	2.87	0	1	0.06
23/04/2026	Aluminium Sulphate	4	6.93	0	1.76	4	0.04
23/04/2026	Lime	3	6.93	0	0	4	0
30/04/2026	Hypo Washdown	3	7.01	0	0	3	0.07
05/05/2026	Lime	3	8.12	0	0	17	0
05/05/2026	HFA	3	2.1	2.84	0	4	0
28/05/2026	Hypo Washdown	3	6.6	0	0	16	0.11
03/06/2026	Aluminium Sulphate	5	6.65	0	0.022	2	0.04
03/06/2026	Lime	6	6.65	0	0	1	0.02
08/06/2026	Lime	3	8.6	0	0	25	0.02
25/06/2026	HFA	2	2.95	3.56	0	10	
25/06/2026	Sodium Hypochlorite	4	7.56	0	0	4	0.02
25/06/2026	Aluminium Sulphate	4	6.8	0	0.031	6	0.02
25/06/2025	Lime	4	6.8	0	0	11	0
25/06/2026	Hypo Washdown	2	6.8	0	0	2	0.05

Source: Operators' bund discharge log.

*Note: in-house test results measured at the Waikato Water Treatment Plant, which is not IANZ accredited.

Date	Waikato 50 WTP source (bund)	Volume discharged (m3)	pH	Fluoride (g/m3)	Soluble Aluminium (g/m3)	TSS (50g/m3)	Chlorine (mg/L)
28/12/2025	Sodium Hypochlorite	1.5	8.86	0	0	9	0.03
28/12/2025	Washdown Chamber	20	6.74	0	0.049	5	0.01
28/12/2025	PACL	1.5	7.7	0	0.049	4	0.03
29/01/2026	PACL	4	7.02	0	0.06	24	0
29/01/2026	Caustic	10	7.01	0	0	25	0
29/01/2026	Washdown Chamber	15	7.5	0	0	10	0.01
15/04/2026	Sodium Hypochlorite	2	7.72	0	0	1	0.02
15/04/2026	PACL	2	7.53	0	0.336	4	0.04
15/04/2026	Caustic	2	7.72	0	0	1	0.02
15/04/2026	Washdown Chamber	20	7.29	0	0.03	1	0.01
03/06/2026	Washdown Chamber	20	7.24	0	0	4	0.06
18/06/2026	PACL	15	8.45	0	0.394	4	0
18/06/2026	Sodium Hypochlorite	15	8.33	0	0	2	0.03

Source: Operators' bund discharge log.

*Note: in-house test results measured at the Waikato Water Treatment Plant, which is not IANZ accredited.

Appendix D. Volume of Waikato WTP operational discharges

Date	Process Discharges			Unplanned		Maintenance				
	Membrane Reject	Membrane Cleans	GAC Backwash	GAC Filter to Waste	Supernatant Discharge	WWrecycle	MIC Overflow	GAC Overflow	Chemical Bund	Total daily discharge
	(m3)	(m3)	(m3)	(m3)	(m3)	(m3)	(m3)	(m3)	(m3)	(m3)
1/07/2025	520	0	0	0	2494	43	345	0	0	3360
2/07/2025	0	0	0	0	1232	54	0	0	0	1232
3/07/2025	1300	130	0	0	1719	36	147	3	0	3299
4/07/2025	4355	650	2083	1406	1578	12	200	0	0	10273
5/07/2025	7085	910	1253	1151	1738	11	25	0	0	12162
6/07/2025	4485	910	1260	1054	1230	12	0	0	0	8939
7/07/2025	8125	650	3232	2573	1790	12	0	0	0	16369
8/07/2025	5980	390	411	808	1370	12	0	0	0	8960
9/07/2025	5915	715	2406	1712	1384	12	0	0	0	12132
10/07/2025	6175	130	1567	1172	1390	12	0	0	0	10434
11/07/2025	4095	260	1775	1226	1021	11	0	0	0	8377
12/07/2025	4355	520	1676	1164	1137	11	1	0	6	8860
13/07/2025	5135	585	1248	962	1259	12	0	0	0	9189
14/07/2025	6305	390	2088	1109	1472	12	0	0	0	11364
15/07/2025	5460	780	1251	2299	1789	12	0	0	0	11579
16/07/2025	6500	195	2083	3719	1504	12	0	0	0	14001
17/07/2025	6175	845	850	872	1576	12	0	0	0	10318
18/07/2025	4485	715	2083	985	1292	12	0	0	0	9561
19/07/2025	5005	455	1661	1018	1276	12	0	0	0	9415
20/07/2025	5395	390	1266	820	1404	12	0	0	0	9275
21/07/2025	5980	520	1658	1144	1583	12	0	0	0	10885
22/07/2025	4355	585	1269	1048	1487	13	0	0	3	8748
23/07/2025	6435	260	2093	1554	1687	13	0	0	0	12028
24/07/2025	6045	325	1266	1018	1728	13	0	0	0	10382
25/07/2025	5460	390	1681	1536	1803	13	0	0	10	10880

	Process Discharges			Unplanned			Maintenance			
26/07/2025	4875	910	1672	1280	1268	12	0	0	0	10004
27/07/2025	4550	65	1669	1219	1144	12	275	0	0	8923
28/07/2025	5070	520	1250	1138	1248	12	174	0	0	9400
29/07/2025	3900	715	2007	1132	1210	12	0	0	0	8965
30/07/2025	5135	455	1342	1567	1338	12	0	0	0	9836
31/07/2025	4485	195	827	584	1218	12	0	0	0	7308
1/08/2025	5200	520	2085	1244	1241	12	0	0	0	10290
2/08/2025	4485	390	0	0	1059	12	0	0	0	5934
3/08/2025	6175	585	1250	1302	1086	12	0	0	0	10398
4/08/2025	5590	520	1673	809	1325	12	0	0	0	9918
5/08/2025	4485	585	1246	1534	1178	12	0	0	0	9028
6/08/2025	5330	0	2095	1588	1316	12	0	0	0	10329
7/08/2025	3380	585	827	562	994	12	0	0	0	6348
8/08/2025	3120	585	1674	1242	948	12	0	0	0	7569
9/08/2025	4225	520	1668	1158	1161	12	0	0	0	8731
10/08/2025	3900	260	1252	1457	1201	12	0	0	0	8070
11/08/2025	5590	0	1244	1030	1473	12	0	0	0	9337
12/08/2025	4615	390	1246	687	1371	12	0	0	0	8309
13/08/2025	4290	455	1258	1363	1167	12	0	0	0	8532
14/08/2025	4420	195	2081	1265	1169	12	0	0	0	9131
15/08/2025	4875	325	1246	1440	1173	12	0	0	0	9059
16/08/2025	4485	195	1664	1189	998	12	0	0	0	8531
17/08/2025	3315	390	1670	1546	890	12	0	0	0	7810
18/08/2025	4290	325	1248	1067	1082	11	0	0	0	8013
19/08/2025	4875	845	2092	1698	1309	12	0	0	2	10820
20/08/2025	4810	520	1245	765	1361	12	0	0	0	8702
21/08/2025	5655	325	1672	1422	1372	12	86	0	0	10533
22/08/2025	5395	585	1253	1315	1449	12	0	0	0	9997

Process Discharges				Unplanned			Maintenance			
23/08/2025	3575	390	2088	1274	1005	12	0	0	0	8331
24/08/2025	4550	585	1256	1418	1189	12	0	0	0	8999
25/08/2025	5200	520	1262	890	1868	12	0	0	0	9740
26/08/2025	6305	325	2081	1782	2288	12	0	0	0	12781
27/08/2025	5915	650	1245	932	1913	11	1	0	0	10657
28/08/2025	4940	780	1665	1163	1380	11	0	0	0	9928
29/08/2025	4030	325	1673	1312	1039	11	0	0	0	8379
30/08/2025	3575	585	1663	1174	918	11	0	0	0	7915
31/08/2025	3510	325	1031	787	929	11	0	0	0	6582
1/09/2025	4225	260	1679	1058	1293	12	0	0	2	8517
2/09/2025	5265	585	1662	1887	1399	12	0	0	0	10798
3/09/2025	5070	260	1663	1074	1259	12	0	0	0	9326
4/09/2025	5785	455	2095	2162	1417	12	0	0	0	11914
5/09/2025	5590	455	832	613	1637	12	0	0	0	9128
6/09/2025	4875	455	1667	1678	1279	11	0	0	0	9954
7/09/2025	5460	520	1681	1175	1426	12	0	0	0	10262
8/09/2025	6240	390	1252	1225	1581	12	0	0	0	10688
9/09/2025	6110	780	2504	2259	1979	12	36	0	0	13667
10/09/2025	6565	325	1254	1020	1655	12	0	0	0	10819
11/09/2025	4420	130	2091	1563	1255	12	0	0	0	9459
12/09/2025	5135	390	1668	1662	1405	12	0	0	0	10260
13/09/2025	3705	585	1256	770	1001	12	0	0	0	7317
14/09/2025	3315	325	1668	1370	952	12	0	0	0	7629
15/09/2025	5265	260	1672	1524	1352	12	0	0	0	10073
16/09/2025	4550	520	2928	3531	1254	11	0	0	0	12783
17/09/2025	4290	260	2094	1935	1648	11	0	0	0	10227
18/09/2025	4550	325	2102	1874	1868	11	0	0	0	10720
19/09/2025	3835	585	826	577	1641	11	0	0	0	7463

Process Discharges				Unplanned			Maintenance			
20/09/2025	5005	260	2092	2051	1316	12	0	0	0	10724
21/09/2025	4095	390	1249	774	1138	12	0	0	0	7646
22/09/2025	3770	195	2096	2035	1162	11	0	0	0	9257
23/09/2025	5005	260	1259	997	1610	11	0	0	0	9131
24/09/2025	3900	325	1672	1219	1255	11	5	0	3	8378
25/09/2025	5005	975	1681	1968	1489	11	1	0	0	11118
26/09/2025	5785	195	1256	1231	1666	12	0	0	0	10133
27/09/2025	4160	390	1675	1333	1143	11	0	0	0	8701
28/09/2025	4875	520	1254	1151	1357	11	0	0	0	9157
29/09/2025	5590	390	2092	2170	1605	11	3	0	0	11850
30/09/2025	4615	390	845	737	1440	11	0	0	0	8027
1/10/2025	5850	390	1663	4653	1921	11	0	0	0	14476
2/10/2025	4160	390	1255	2718	1262	11	0	0	0	9785
3/10/2025	5200	260	1663	1707	1472	10	0	0	0	10302
4/10/2025	4485	195	2094	1885	1330	10	0	0	0	9989
5/10/2025	5200	520	833	820	1481	11	0	0	0	8855
6/10/2025	5460	260	1897	1888	1581	11	0	0	0	11086
7/10/2025	4225	975	1253	1150	1858	11	0	0	0	9461
8/10/2025	3640	195	1679	1755	1153	12	0	0	0	8422
9/10/2025	5395	130	1670	1225	1582	12	0	0	0	10002
10/10/2025	4095	455	1663	1372	1330	11	0	0	0	8915
11/10/2025	3575	910	1677	1517	1217	11	0	0	0	8896
12/10/2025	5005	130	1661	1467	1504	11	0	0	0	9766
13/10/2025	4810	65	1245	979	1434	11	0	0	0	8533
14/10/2025	4160	130	1669	1639	1291	11	0	0	0	8888
15/10/2025	4680	195	2086	1757	1516	11	0	0	0	10234
16/10/2025	4875	390	832	2303	1836	11	0	0	0	10237
17/10/2025	5590	520	1676	2096	2666	11	919	0	0	13468

Process Discharges				Unplanned			Maintenance			
18/10/2025	4355	585	1677	1121	1391	11	451	0	0	9580
19/10/2025	4550	650	1258	1249	1373	11	1	0	0	9081
20/10/2025	6435	715	1677	1397	1848	11	2	0	0	12074
21/10/2025	6045	325	1245	1481	1871	11	1	0	0	10969
22/10/2025	4095	195	2099	1532	1497	11	4	0	0	9423
23/10/2025	3380	585	1669	1646	1277	11	11	0	0	8569
24/10/2025	3575	65	1250	841	1466	11	0	0	0	7196
25/10/2025	2925	455	1668	1227	1301	11	0	0	10	7586
26/10/2025	2600	455	1683	1757	1161	11	0	0	0	7656
27/10/2025	2535	130	826	591	1124	11	0	0	0	5206
28/10/2025	3380	325	2094	2182	1366	11	0	0	0	9347
29/10/2025	2730	0	827	515	1067	13	286	0	0	5425
30/10/2025	5720	715	1673	2025	2146	11	358	0	14	12651
31/10/2025	5070	65	1667	1278	2145	11	0	0	0	10225
1/11/2025	4680	260	1258	1219	1974	11	0	0	0	9392
2/11/2025	6435	845	1679	1924	2887	12	0	0	0	13770
3/11/2025	5265	260	1247	956	2304	11	31	0	0	10064
4/11/2025	6630	325	2106	2256	3340	11	17	0	0	14674
5/11/2025	6110	910	1676	1384	3268	12	0	0	0	13348
6/11/2025	6435	390	1264	1647	3150	11	2	0	8	12896
7/11/2025	6110	390	2094	1741	2796	11	0	0	0	13131
8/11/2025	6175	910	1665	1499	2991	11	0	0	0	13241
9/11/2025	6240	390	1257	1350	2969	10	0	0	0	12206
10/11/2025	5590	390	1259	1238	3166	10	3	0	0	11646
11/11/2025	6175	455	2085	1953	2906	10	14	0	0	13589
12/11/2025	5070	260	1241	878	2370	10	0	0	0	9819
13/11/2025	6305	520	1686	2324	2808	10	0	0	0	13644
14/11/2025	3445	520	1254	899	2231	11	0	0	0	8350

Process Discharges				Unplanned			Maintenance			
15/11/2025	3250	0	2096	1762	2208	11	0	0	0	9316
16/11/2025	3120	130	1675	1434	2137	11	0	0	0	8496
17/11/2025	3445	65	1248	1969	2052	11	0	0	0	8779
18/11/2025	3705	260	1676	1593	2152	11	0	0	0	9386
19/11/2025	2795	0	1252	1110	1763	10	0	0	0	6920
20/11/2025	3705	390	1666	1760	2303	10	0	0	0	9823
21/11/2025	2925	260	1677	1262	1936	10	0	0	0	8061
22/11/2025	3250	130	1258	1457	1983	10	0	0	0	8077
23/11/2025	3445	780	1248	1184	2180	10	0	0	0	8836
24/11/2025	3315	0	2502	2486	2332	11	0	0	10	10644
25/11/2025	3900	390	834	740	2255	11	0	0	2	8121
26/11/2025	2925	390	2085	1865	1564	10	0	0	0	8829
27/11/2025	3185	390	2086	1904	1748	10	0	0	0	9313
28/11/2025	3445	390	2501	2877	1192	10	0	0	0	10404
29/11/2025	3250	130	1263	1101	1224	10	0	0	0	6968
30/11/2025	2990	455	1664	1632	1121	11	0	0	0	7862
1/12/2025	2925	650	1884	2144	1195	10	0	0	0	8798
2/12/2025	3380	0	940	1005	1333	10	0	0	0	6659
3/12/2025	2925	910	2082	1727	1173	10	1	1	0	8819
4/12/2025	2470	585	1263	1351	1157	11	0	0	0	6826
5/12/2025	3055	390	1660	1452	1060	11	0	0	0	7616
6/12/2025	3250	260	1676	1581	1338	10	0	0	0	8104
7/12/2025	3315	260	1250	994	1254	10	0	0	0	7073
8/12/2025	3640	260	2089	1673	1403	10	0	0	0	9066
9/12/2025	4420	585	410	764	1919	10	0	0	0	8098
10/12/2025	3835	130	2931	2434	1449	10	0	0	0	10779
11/12/2025	3575	325	421	712	1397	10	0	0	0	6430
12/12/2025	3380	0	2509	2174	1298	10	0	0	0	9361

		Process Discharges		Unplanned			Maintenance			
13/12/2025	2990	130	1249	1366	1193	11	0	0	0	6928
14/12/2025	3055	260	1255	1149	1162	11	0	0	0	6881
15/12/2025	3965	0	2101	1826	1551	11	0	0	0	9444
16/12/2025	4485	520	1251	1340	1963	11	0	0	0	9559
17/12/2025	2600	0	2098	1700	1115	11	0	0	0	7512
18/12/2025	3185	0	1253	1350	1275	11	0	0	0	7062
19/12/2025	3510	325	2096	1914	1426	11	0	0	0	9272
20/12/2025	2990	195	847	874	1373	10	0	0	0	6279
21/12/2025	3315	455	2089	2150	1367	11	0	0	0	9376
22/12/2025	3445	650	1251	949	1540	11	0	0	0	7835
23/12/2025	2860	130	2085	1784	1489	10	0	0	8	8356
24/12/2025	2665	195	1674	1134	976	10	0	0	0	6645
25/12/2025	2600	0	1245	1282	953	10	0	0	0	6080
26/12/2025	1235	260	842	638	556	10	185	0	0	3716
27/12/2025	0	0	0	0	54	10	0	0	0	54
28/12/2025	1105	0	0	281	382	10	0	0	0	1768
29/12/2025	1755	260	1612	937	790	10	32	0	0	5386
30/12/2025	2405	585	1950	1757	1252	10	41	0	0	7990
31/12/2025	2665	455	1402	1233	1035	10	41	0	0	6832
1/01/2026	2210	260	2104	1770	989	10	0	0	0	7332
2/01/2026	2405	260	833	841	991	10	0	0	0	5329
3/01/2026	2470	260	2083	1485	1000	10	0	0	0	7298
4/01/2026	2535	260	1664	2114	989	10	0	0	0	7563
5/01/2026	2405	195	1256	971	1008	10	0	0	2	5836
6/01/2026	2860	390	2094	2217	1459	10	1	0	0	9021
7/01/2026	7475	390	1257	907	2468	10	0	0	0	12497
8/01/2026	7345	455	1682	2321	2538	10	0	0	0	14340
9/01/2026	7280	455	1248	1396	2434	10	0	0	0	12813

Process Discharges				Unplanned			Maintenance			
10/01/2026	7475	260	1679	1659	2605	10	0	0	0	13678
11/01/2026	7670	195	1685	1846	2587	10	0	0	0	13983
12/01/2026	7085	715	1670	1785	2523	10	0	0	2	13779
13/01/2026	4290	195	1250	1110	1757	10	60	0	0	8662
14/01/2026	5525	325	1666	1578	2165	10	0	0	0	11259
15/01/2026	2600	195	2090	1966	1261	10	0	0	0	8112
16/01/2026	3445	260	1247	974	1790	10	0	0	0	7717
17/01/2026	4290	455	1674	1780	2134	10	0	0	0	10333
18/01/2026	2795	390	1262	982	1338	10	0	0	0	6768
19/01/2026	2730	520	1667	1651	1339	10	0	0	3	7910
20/01/2026	3770	0	1669	1559	2014	10	0	0	0	9012
21/01/2026	2665	0	1253	1085	1240	10	0	0	0	6243
22/01/2026	2860	390	2090	1913	1296	9	0	0	0	8549
23/01/2026	3445	455	1669	1443	1602	10	0	0	0	8614
24/01/2026	3055	325	1258	1238	1477	10	0	0	0	7353
25/01/2026	2535	520	1667	1381	1271	10	0	0	0	7374
26/01/2026	2600	0	2085	1824	1167	10	0	0	0	7676
27/01/2026	4160	455	834	760	2073	10	0	0	0	8282
28/01/2026	4485	195	2084	2196	1977	10	0	0	0	10938
29/01/2026	4290	260	831	1626	2033	10	0	0	0	9040
30/01/2026	3835	325	1674	1550	2146	10	0	0	0	9530
31/01/2026	4225	195	2509	2196	1994	10	0	0	0	11120
1/02/2026	4095	325	1251	1072	2002	10	0	0	0	8744
2/02/2026	3835	520	1668	1573	1645	10	0	0	0	9241
3/02/2026	4030	130	1665	1358	1861	9	0	0	0	9044
4/02/2026	3900	0	1662	1642	1778	10	0	0	0	8981
5/02/2026	2730	520	1253	910	1368	10	0	0	2	6783
6/02/2026	3380	65	2089	2038	1527	10	0	0	0	9099

		Process Discharges		Unplanned				Maintenance		
7/02/2026	3185	0	832	662	1392	10	0	0	0	6071
8/02/2026	3185	325	2251	1884	1472	10	0	0	0	9117
9/02/2026	4290	455	1534	1068	2133	10	0	0	0	9480
10/02/2026	4290	325	1253	1686	2688	10	0	0	0	10242
11/02/2026	4160	520	1666	1587	2039	10	0	0	0	9972
12/02/2026	4095	195	1240	1286	1923	10	0	0	2	8741
13/02/2026	2990	585	2086	2122	1534	10	0	0	0	9318
14/02/2026	2535	0	1663	1539	1402	9	0	0	0	7139
15/02/2026	2470	585	1675	1283	1537	10	0	0	0	7550
16/02/2026	2470	1170	1091	716	2324	10	0	0	3	7774
17/02/2026	3120	260	2255	1764	2558	10	0	0	0	9957
18/02/2026	2600	260	826	895	2069	10	0	0	0	6650
19/02/2026	3900	195	1667	1734	2900	10	0	0	5	10402
20/02/2026	4485	390	1667	1475	3157	10	0	0	0	11174
21/02/2026	4680	390	2503	2910	3065	10	0	0	0	13547
22/02/2026	4615	585	2504	2796	3140	11	0	0	0	13640
23/02/2026	4875	195	2962	3582	3095	10	0	0	0	14709
24/02/2026	5980	0	2500	2932	3675	10	0	0	0	15087
25/02/2026	5655	260	1267	1107	3682	10	0	0	0	11972
26/02/2026	4680	650	2098	1868	3513	10	0	0	0	12810
27/02/2026	5005	195	2941	3977	3385	10	0	0	0	15502
28/02/2026	4745	195	2937	2415	3232	10	0	0	0	13524
1/03/2026	3835	130	2512	3594	2837	10	0	0	0	12908
2/03/2026	5850	260	845	900	3597	10	0	0	0	11452
3/03/2026	4615	0	1662	1658	3303	11	0	0	4	11242
4/03/2026	4745	0	2097	1753	3090	11	0	0	3	11688
5/03/2026	4940	0	824	913	2929	10	0	0	0	9606
6/03/2026	4550	455	2086	1745	2257	11	0	0	0	11093

	Process Discharges			Unplanned			Maintenance			
7/03/2026	4160	195	1245	950	1935	10	0	0	0	8485
8/03/2026	4745	520	1673	1753	2058	10	0	0	0	10749
9/03/2026	4550	390	1252	1113	2123	10	0	0	0	9428
10/03/2026	4680	130	2091	1821	2363	10	0	0	0	11086
11/03/2026	3575	455	1248	1244	1806	10	0	0	0	8328
12/03/2026	4355	0	2082	1878	2047	10	0	0	0	10362
13/03/2026	3315	260	1252	1264	1771	10	0	0	0	7861
14/03/2026	3640	195	1681	1714	1642	10	0	0	0	8871
15/03/2026	3640	195	2111	1770	1808	10	0	0	0	9525
16/03/2026	4030	390	415	583	2031	10	0	0	0	7450
17/03/2026	4290	130	2511	2231	2163	10	0	0	0	11326
18/03/2026	4615	325	844	1009	2081	10	1	0	0	8875
19/03/2026	4680	455	1673	2093	1936	10	0	0	0	10837
20/03/2026	4550	455	1668	1419	2209	10	0	0	0	10301
21/03/2026	4745	390	2084	2173	2095	10	0	0	0	11486
22/03/2026	3380	0	1258	876	1581	10	0	0	0	7094
23/03/2026	4745	130	1663	1780	2030	10	0	0	0	10348
24/03/2026	3965	585	1670	1290	2177	10	0	0	0	9688
25/03/2026	3055	0	1682	1520	1682	10	0	0	0	7939
26/03/2026	4095	455	1680	1795	2115	10	0	0	10	10149
27/03/2026	3315	520	827	2328	1826	10	0	0	12	8828
28/03/2026	4030	0	1249	7245	1859	10	0	0	0	14382
29/03/2026	3705	0	1248	6390	1751	10	0	0	0	13094
30/03/2026	3445	0	1690	6330	1678	10	0	0	0	13143
31/03/2026	3965	0	2087	4117	2250	10	0	0	0	12418
1/04/2026	4875	650	842	999	2283	10	0	0	0	9649
2/04/2026	4420	390	2087	1786	2084	10	0	0	0	10767
3/04/2026	4095	325	1260	651	2050	10	0	0	0	8380

Process Discharges				Unplanned			Maintenance			
4/04/2026	4030	260	1669	2091	1971	10	0	0	0	10021
5/04/2026	3120	195	1662	1236	1600	11	0	0	0	7813
6/04/2026	2990	390	1247	1236	1657	10	0	0	0	7519
7/04/2026	4745	260	2092	1744	2493	10	0	0	0	11334
8/04/2026	2600	260	1246	2569	1610	9	0	0	0	8285
9/04/2026	2860	130	1680	1615	1655	9	0	0	9	7950
10/04/2026	3575	260	1266	1341	1857	9	0	0	0	8299
11/04/2026	3120	65	2506	1948	1701	10	0	0	0	9340
12/04/2026	2665	585	415	400	1559	10	0	0	0	5623
13/04/2026	2860	390	2072	1894	1678	10	0	0	0	8895
14/04/2026	3965	195	828	782	2420	10	0	0	0	8190
15/04/2026	2925	130	1289	1160	1486	10	0	0	8	6997
16/04/2026	2925	715	1619	1296	1728	10	0	0	0	8283
17/04/2026	3575	260	826	914	1612	10	0	0	0	7188
18/04/2026	3380	0	2096	1583	1694	10	0	0	0	8753
19/04/2026	3055	780	411	576	1587	10	0	0	0	6409
20/04/2026	3575	0	2083	1653	1728	11	0	0	0	9039
21/04/2026	3315	195	824	662	1984	11	0	0	0	6980
22/04/2026	3250	520	13591	1938	1791	11	0	0	0	21090
23/04/2026	3055	0	420	376	1634	11	0	0	12	5498
24/04/2026	2665	260	2081	1597	1522	11	0	0	0	8125
25/04/2026	2600	260	827	932	1579	11	0	0	0	6199
26/04/2026	2340	390	1244	965	1350	10	141	0	0	6430
27/04/2026	2275	195	1679	1594	1388	10	0	0	0	7131
28/04/2026	3445	0	822	810	2099	10	0	0	0	7176
29/04/2026	3445	65	2089	1998	1846	10	0	0	0	9443
30/04/2026	3835	130	415	612	1850	10	0	0	3	6845
1/05/2026	3185	195	2089	1798	1763	10	0	0	0	9030

Process Discharges				Unplanned			Maintenance			
2/05/2026	3185	0	410	296	1632	10	0	0	0	5523
3/05/2026	3185	390	2084	2047	1783	10	0	0	0	9489
4/05/2026	3185	0	818	801	1639	10	0	0	0	6443
5/05/2026	4810	195	1669	2056	2697	10	0	0	6	11433
6/05/2026	4745	390	1667	1827	2402	10	0	0	0	11031
7/05/2026	4550	390	0	0	2437	10	0	0	0	7361
8/05/2026	3250	390	1264	1134	1757	10	0	0	0	7794
9/05/2026	2600	0	1662	1615	1484	10	0	0	0	7361
10/05/2026	2665	260	407	151	1588	10	0	0	0	5070
11/05/2026	2990	130	2887	2033	1760	10	0	0	0	9801
12/05/2026	2860	390	1606	734	1791	10	0	0	0	7381
13/05/2026	3185	195	2236	1170	1655	10	0	0	0	8441
14/05/2026	3575	260	1970	1975	1895	10	0	0	0	9675
15/05/2026	4160	0	2180	934	2082	10	0	0	0	9356
16/05/2026	2860	0	1253	1651	1413	10	0	0	0	7177
17/05/2026	3380	65	828	804	1758	10	0	0	0	6834
18/05/2026	3250	260	3011	2040	1779	10	0	0	0	10340
19/05/2026	3315	260	1032	538	2163	10	0	0	0	7309
20/05/2026	3055	130	1720	4424	1776	10	0	0	0	11105
21/05/2026	3250	0	2027	4970	1833	10	0	0	0	12080
22/05/2026	3315	260	835	3358	1901	10	0	0	0	9668
23/05/2026	2535	195	1250	1192	1456	10	0	0	0	6628
24/05/2026	3120	130	1242	1356	1783	10	0	0	0	7631
25/05/2026	2990	650	1666	3187	1905	10	0	0	0	10399
26/05/2026	3120	260	1542	2822	1978	10	0	0	0	9722
27/05/2026	3185	195	834	2447	1863	10	0	0	0	8524
28/05/2026	3445	0	1669	2759	1670	10	0	0	3	9546
29/05/2026	2795	260	814	2404	1580	10	0	0	0	7853

Process Discharges				Unplanned			Maintenance			
30/05/2026	3055	260	2082	1730	1557	10	0	0	0	8684
31/05/2026	2535	195	1227	969	1411	10	0	0	0	6337
1/06/2026	2535	130	2067	1463	1406	10	0	0	0	7601
2/06/2026	2925	130	923	689	2012	10	0	0	0	6679
3/06/2026	3055	0	2066	1503	1684	10	0	0	11	8320
4/06/2026	2795	0	1226	1231	1612	10	0	0	0	6864
5/06/2026	2795	520	1250	683	1665	10	0	0	0	6913
6/06/2026	2730	390	1240	1181	1605	10	0	0	0	7146
7/06/2026	2795	0	830	598	1620	10	0	0	0	5843
8/06/2026	3185	130	2062	1704	1782	10	0	0	3	8866
9/06/2026	2795	390	833	505	2048	10	0	0	0	6571
10/06/2026	3185	0	2087	1743	1745	11	0	0	0	8760
11/06/2026	3380	0	826	754	1938	11	0	0	0	6898
12/06/2026	3835	130	1134	625	2129	10	0	0	0	7852
13/06/2026	3055	260	1773	1647	1657	10	0	0	0	8393
14/06/2026	3380	65	398	67	1746	10	0	0	0	5656
15/06/2026	2990	195	2518	2188	1632	10	0	0	0	9522
16/06/2026	3120	0	400	77	2102	10	0	0	0	5699
17/06/2026	2990	390	2488	1867	1889	10	0	0	0	9625
18/06/2026	3250	0	414	471	1855	10	0	0	0	5991
19/06/2026	3315	0	1654	1185	1867	10	0	0	0	8021
20/06/2026	3120	0	1654	1192	1850	10	0	0	0	7817
21/06/2026	3250	0	843	657	1845	10	0	0	0	6594
22/06/2026	3315	195	2065	1678	1874	10	0	0	0	9128
23/06/2026	3185	325	806	351	2156	10	0	0	0	6823
24/06/2026	3705	195	2098	2013	1902	10	0	0	0	9913
25/06/2026	3445	260	388	176	1824	10	0	0	20	6113
26/06/2026	3640	0	2193	1797	1822	10	0	0	0	9452

	Process Discharges			Unplanned				Maintenance		
27/06/2026	3640	130	813	451	1818	11	0	0	0	6852
28/06/2026	3315	260	1841	850	1850	11	0	0	0	8117
29/06/2026	4030	0	1991	1613	1915	10	0	0	0	9548
30/06/2026	3835	520	1778	851	2344	11	0	0	0	9327

Notes: (A) Wastewater recycle is presented as negative volumes because it is recirculated back to the treatment process and therefore subtracted from the total process discharges. (B) Volumes for each clarifier draining event is between 400 to 600 m³, and so an average of 500 m³ has been added for each event. (C) These volumes are for the total operational discharges allowed under Resource Consent AUTH137497.01.01. They do not include stormwater discharges or treated off-spec water discharges allowed under resource consents AUTH137497.03.01 and AUTH142778.01.01, respectively.

Appendix E. Data sources

Category	Parameter	Source platform	Tag/ID
Water quality	All raw water lab samples	Power BI	N/A
Water quality	Continuous turbidity	Pi	STWKO20_AI12/AI1/OUT.CV
Abstraction volume	Waikato WTP	Pi	STWKO51_FI01/AI1/PV.CV
Abstraction volume	Waikato 50 WTP	Pi	STW50_20_FIT_X01/AI1/PV.CV
Treated water volume	Waikato WTP	Pi	STWKO90_FI01/AI1/PV.CV
Discharge volume	Waikato 50 WTP	Pi	STW50_85_FIT_X05/AI1/OUT.CV
Rangiriri Flow	Instantaneous flow	Pi	Rangiriri Flow (EW)
Rangiriri Flow	Rolling seven-day average	Pi	Rangiriri_7dayAvg (EW)
Abstraction rate	Waikato WTP	Pi	STWKO51_FI01/AI1/PV.CV
Abstraction rate	Waikato 50 WTP	Pi	STW50_20_FIT_X01/AI1/PV.CV
Discharge quality	Routine	Business Objects/ Power BI	N/A
Discharge quality	Non-routine	Documents	Discharge to environment form
Discharge volume	Waikato WTP – process and unplanned	Pi	Please see source spreadsheet (“STWKO discharges summary”)
Discharge volume	Waikato WTP – clarifier drain	Discharge to environment record sheet (paper)	N/A
Discharge volume	Waikato 50	Pi	STW50_85_FIT_X05/AI1/OUT.CV
Chemical bund discharges	Waikato WTP and Waikato 50	Chemical bund discharge logs	N/A

Appendix F. Screen entrainment survey report