

Site Compliance Report

Site No: REG603969
Site Owner: Waikato District Council
Site Name: Ngaruawahia Water Supply: Ngaruawahia
Date of Assessment: 1 July 2022 to 30 June 2023

1 INTRODUCTION

The following resource consents are held for the site:

Resource Consent	Status	Description	Commenced	Expiry
AUTH108157.01.01	Expired	Discharge filter backwash and sedimentation tank sludge per day to an unnamed tributary of the Waipa River	12/01/2011	12/01/2018
AUTH118756.01.01	Current	Placement of a 300 mm water intake structure on the bed of the Waikato River and associated bed disturbance, use and maintenance of the structure for Ngaruawahia water supply purposes, and removal of the existing water intake structure	21/10/2008	22/10/2043
AUTH146239.01.01	Current	Discharge process water including filter backwash and clear water to the Mangarata Stream	13/03/2024	11/03/2044

This report examines the level of compliance of Waikato District Council with the selected conditions of the resource consents.

2 BACKGROUND

Watercare Services Limited (WSL) operates the Ngaruawahia water take and treatment plant under a contractual arrangement with the Waikato District Council (WDC) on behalf of the Ngaruawahia community.

Water is abstracted from the Waikato River via an intake near the domain and pumped to the water treatment plant (WTP) in Brownlee Road. Following treatment it is pumped up hill to the storage reservoirs in the Hakirimata hills. The Ngaruawahia WTP is now linked by pipeline to the Huntly water reticulation system so water can be taken and moved between the two towns as necessary to meet demand and provide cover for times when one or other of the systems is under maintenance or suffering from an issue that prevents their use.

Because of that the consent for the take is now combined with the Huntly water take and the two remaining consents audited here cover the intake structure and the backwash discharge from the WTP. The backwash discharge consent had expired and was being operated under S124 authorisation whilst the consent holder arranges an alternative disposal system by discharging to the wastewater sewer. The replacement consent for the discharge of process water and backwash to the wastewater sewer system (AUTH146239.01.01) was granted on 13 March 2024.

As this compliance audit assessment covers the period from 1 July 2022 to 20 June 2023, the backwash water remained discharging to the unnamed tributary of the Waipa River during the assessed period. As a result, no assessment was undertaken against consent 146239.

There is also an occasional discharge of treated but off spec water and sediment from the reservoirs into the same tributary further up the hills. This discharge is operated under its authorisation and WDC were recently directed to place a sign explaining this process to the public as a footpath passes the location of the discharge and WRC has received complaints about this process when it occurs. The discharge contains a very low volume of chlorine as would be added to the drinking water supply to minimise bacterial growth within the reticulation system.



Figure 1. Aerial view of the area featuring the location of the water treatment plant

2.1 PREVIOUS COMPLIANCE HISTORY

Waikato District Council and the associated Ngaruawahia Water Treatment Plant have received the following enforcement:

- Abatement Notice (EAC3715) requiring the cessation of the unlawful discharge of any water treatment chemicals to the environment. Served on 9 February 2016 (doc#382073).
- Formal Warning (EAC3523) for permitting the unlawful discharge of hydrofluorosilicic acid, into the Mangarata Stream. Served on 9 February 2016 (doc#3820577).

The previous compliance audit assessment for the 2021-22 period, found Waikato District Council and the associated Ngaruawahia Water Treatment Plant to be in Moderate Non-Compliance with the assessed conditions of the consents.

Continued non-compliance matters are yet to be rectified and will be highlighted throughout this compliance audit report.

Date Period	Site Compliance
1 July 2021 to 30 June 2022	Moderate Non-Compliance

3 COMPLIANCE ASSESSMENT

Unless otherwise specified in this document this assessment covers the period from **1 July 2022 to 30 June 2023**.

This compliance assessment has been undertaken based on the submitted annual report by the consent holder, monitoring data supplied throughout the compliance period and any site inspections undertaken. Some administration, duplicate or irrelevant conditions have been omitted for brevity.

Please note that a description of the classification system used to describe compliance status is given in Appendix 1 of this report.

AUTH108157.01.01 - Water - other

Activity Authorised: Discharge filter backwash and sedimentation tank sludge per day to an unnamed tributary of the Waipa River		
Condition No.	Description	
2	The maximum volume of filter backwash water and sedimentation tank sludge to be discharged to the unnamed tributary of the Waipa River shall be 350 cubic metres per day and the rate of discharge shall not exceed 4 litres per second.	
Evidence	<p>Upon request, the records were submitted to Waikato Regional Council (WRC) for the period from January to July 2023 (doc#28768298). Within this period, discharging volume of 366.5 and 354.6 cubic metres per day were identified on 24 February 2023 and 25 May 2023 respectively, exceeding the consent limit.</p> <p>The consent holder indicated that the rate of discharge did not exceed 220 cubic metres per hour (i.e. 61.1 litres per second), which looks to exceed the consent limit of 4 litres per second.</p>	
Status Reasoning		
Action Required	Ensure the maximum daily discharge volume shall be 350 cubic metres per day and the rate of discharge shall not exceed 4 litres per second.	Low Risk Non-Compliance
4	The consent holder shall manage the discharge to, as far as practicable, achieve the following quality parameters within 6 months of the commencement of this consent and for the duration of this consent thereafter: (a) Suspended solids concentration in the discharge of less than 25 grams per cubic metre; (b) Total aluminium concentration in the discharge of less than 1.5 grams per cubic metre; (c) pH of the discharge between 6 and 9 pH units. Should three consecutive monitoring results show that the discharge does not meet these quality objectives, the consent holder shall provide a written report to the Waikato Regional Council, within 3 months of the third monitoring result being analysed, providing reasons for the contaminant levels and methods that will be used to bring the discharge to within the quality objectives stated in this consent. The concentration measurements shall be made on 24 hour composite samples to accurately reflect the discharge quality to the tributary.	
Evidence	<p>Upon request, the backwash data was submitted to WRC (doc#29106196).</p> <p>Monitoring was undertaken on 30 September 2022, 21 December 2022 and 29 March 2023 for the required parameters (doc#29105720).</p> <p>In both the December and March monitoring rounds, exceedances of total aluminium (1.5 g/m³ or 1.5 mg/L) and total suspended solids (25 g/m³ or 25 mg/L) consent limits were identified. Details are as follows:</p> <ul style="list-style-type: none"> - 12 December 2022: total aluminium of 26 mg/L, TSS of 142 mg/L. - 29 March 2023: total aluminium of 8.2 mg/L, TSS of 54.8 mg/L. <p>Full compliance with pH values.</p> <p>Only two consecutive monitoring results show that the discharge does not meet these quality objectives, which does not trigger the requirement for a written report. Subject to the sampling results in the next scheduled routine monitoring in July 2024, a written report may be required if exceedances are recorded.</p>	
Status Reasoning		
Action Required	Ensure discharge meets quality objectives as specified in this condition. If the next round of monitoring identified an exceedance, provide a written report detailing the reason for contaminant levels and an action plan with timeframes for reducing contaminant concentrations to within the limits specified by this consent. The report is required to be submitted within 3 months of receiving result.	Low Risk Non-Compliance

5	The consent holder shall ensure that the discharge does not cause any of the following effects: (a) Conspicuous erosion or souring at the point of discharge; (b) The production of visible oil or grease films, scums or foams in the tributary to the Waikato River.																																																		
Evidence	WRC has not received any reports or complaints relating to the activities authorised by this condition.																																																		
Status Reasoning																																																			
Action Required	Full Compliance																																																		
9	Once every month for 6 consecutive months, and at four monthly intervals for (a) to (c), and annually for (d), thereafter, the consent holder shall take a representative sample of each of the clear water stream and back wash being discharged to the unnamed tributary of the Waikato River as authorised by this consent. The samples shall be analysed for: (a) pH (b) Total suspended solids (c) Total Aluminium (d) Dissolved Aluminium																																																		
Evidence	<p>Upon request, the backwash data at both locations, namely 'Backwash Outlet' and 'Outlet Clear Water Stream' were submitted to WRC (doc#29106196).</p> <p>Monitoring was undertaken on 30 September 2022, 21 December 2022 and 29 March 2023 for the required parameters and frequency (doc#29105720).</p> <p>It is noted that monitoring was not undertaken at four monthly intervals.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="5" style="background-color: black; color: white;">Backwash Outlet</th> </tr> <tr> <th style="width: 15%;">Date</th> <th style="width: 20%;">Dissolved Aluminium (mg/L)</th> <th style="width: 20%;">Total Aluminium (mg/L)</th> <th style="width: 15%;">pH</th> <th style="width: 30%;">Total Suspended Solids (mg/L)</th> </tr> </thead> <tbody> <tr> <td>30/09/2022</td> <td>0.067</td> <td>0.71</td> <td>7.5</td> <td>7</td> </tr> <tr> <td>21/12/2022</td> <td></td> <td>26</td> <td>7.6</td> <td>142</td> </tr> <tr> <td>29/03/2023</td> <td></td> <td>8.2</td> <td>7.8</td> <td>54.8</td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="5" style="background-color: black; color: white;">Outlet Clear Water Stream</th> </tr> <tr> <th style="width: 15%;">Date</th> <th style="width: 20%;">Dissolved Aluminium (mg/L)</th> <th style="width: 20%;">Total Aluminium (mg/L)</th> <th style="width: 15%;">pH</th> <th style="width: 30%;">Total Suspended Solids (mg/L)</th> </tr> </thead> <tbody> <tr> <td>30/09/2022</td> <td>0.094</td> <td>65</td> <td>7.4</td> <td>462</td> </tr> <tr> <td>21/12/2022</td> <td></td> <td>75</td> <td>7.8</td> <td>387</td> </tr> <tr> <td>29/03/2023</td> <td></td> <td>83</td> <td>8.3</td> <td>608</td> </tr> </tbody> </table>	Backwash Outlet					Date	Dissolved Aluminium (mg/L)	Total Aluminium (mg/L)	pH	Total Suspended Solids (mg/L)	30/09/2022	0.067	0.71	7.5	7	21/12/2022		26	7.6	142	29/03/2023		8.2	7.8	54.8	Outlet Clear Water Stream					Date	Dissolved Aluminium (mg/L)	Total Aluminium (mg/L)	pH	Total Suspended Solids (mg/L)	30/09/2022	0.094	65	7.4	462	21/12/2022		75	7.8	387	29/03/2023		83	8.3	608
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Action Required	Low Risk Non-Compliance																																																		
10	Results of the samples taken in accordance with condition 9 of this consent shall be forwarded to the Waikato Regional Council within one month of obtaining the results.																																																		
Evidence	<p>Only the September 2022 monitoring results were submitted to WRC on 2 November 2022 (doc#25093142), outside of the required timeframe.</p> <p>No other routine monitoring results were submitted to WRC. Results were only provided upon request.</p>																																																		
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11	The consent holder shall provide the Waikato Regional Council, on an annual basis, the daily discharge volume and daily discharge rate. Records shall be provided to the Waikato Regional Council by 1 August each year for the period 1 July of the preceding year to 30 June of the current year.																																																		
Evidence	Upon request, the records were submitted to WRC for the period from January to July 2023 on 18 March 2024 (doc#28768298).																																																		

	The consent holder indicated that they are still working on backfilling the remaining data (i.e. from July to December 2022), no data for this period has been submitted to WRC (doc#28766937). This is a continued non-compliance matter from the previous compliance audit assessment for 2021 - 2022 period.	
Status Reasoning		
Action Required	Please submit monitoring data to Council by 1 August each year for the period 1 July of the preceding year to 30 June of the current year as required by condition.	Low Risk Non-Compliance
14	All sample analyses shall be undertaken in accordance with the methods detailed in the "Standard Methods For The Examination Of Water And Waste Water, 1998" 20th edition by A.P.H.A. and A.W.W.A. and W.E.F., or any other method approved in advance by the Waikato Regional Council.	
Evidence	All sampling was analysed by Watercare Laboratory Services, complying with the requirements specified in this condition.	
Status Reasoning		
Action Required		Full Compliance
	Authorisation Compliance:	Low Risk Non-Compliance

AUTH118756.01.01 - Bed - structure

Activity Authorised: Placement of a 300 mm water intake structure on the bed of the Waikato River and associated bed disturbance, use and maintenance of the structure for Ngaruawahia water supply purposes, and removal of the existing water intake structure		
Condition No.	Description	
1	The activity authorised by this consent shall be undertaken in accordance with: i) The application for this resource consent ii) Further information received from Waikato District Council on the 10 October 2008 (Environment Waikato document 1380086), and iii) As identified in the resource consent conditions below.	
Evidence	The intake structure was installed in 2008. It has been operated and maintained in a satisfactory manner. The screens have been regularly inspected and cleaned. The most recent dive survey was conducted on 16 January 2024. The screens were cleaned, and no issues or damage were reported.	
Status Reasoning		
Action Required		Full Compliance
	Authorisation Compliance:	Full Compliance

4 SUMMARY OF COMPLIANCE

Based on the conditions selected for monitoring, compliance has been assessed as:

Authorisation	Authorisation Description	Compliance Status
AUTH108157.01.01	Discharge filter backwash and sedimentation tank sludge per day to an unnamed tributary of the Waipa River	Low Risk Non-Compliance

AUTH118756.01.01	Placement of a 300 mm water intake structure on the bed of the Waikato River and associated bed disturbance, use and maintenance of the structure for Ngaruawahia water supply purposes, and removal of the existing water intake structure	Full Compliance
AUTH146239.01.01	Discharge process water including filter backwash and clear water to the Mangarata Stream	Not Assessed

Overall Site Compliance: Low Risk Non-Compliance

5 DISCUSSION AND CONCLUSIONS

Waikato District Council (WDC) have received an overall site compliance of Low Risk Non-Compliance for the Ngaruawahia Water Treatment Plan from 1 July 2022 to 30 June 2023 for the assessed conditions of consents. The low risk non-compliance matters relate to late submissions of data and exceedance of some of the monitoring data. Backwash discharge exceeded the consent limits of 350 cubic metres per day on two separate occasions and the discharge rate of 4 litres per second.

The backwash quality is also unsatisfactory and exceeded TSS and total aluminium consent limits. This is a continued non-compliance from the 2021-2022 compliance audit report. Another continued non-compliance matter from the previous audit report is late provision of sampling results, discharge volume and discharge rate. It is disappointing to see a continuation. It is the responsibility of the consent holder to comply with the conditions of consents at all times. The consent holder must ensure that all sample are submitted to Waikato Regional Council within the required timeframes and backwash quality meets quality objectives stipulated in the consent.

As the replacement Resource Consent 146239 was granted in March 2024, this is likely the last assessment against Resource Consent 108157. As a result, I do not consider it appropriate to consider further enforcement action at this time. However, in the next compliance period, an audit assessment will be undertaken against Resource Consent 146239. Should compliance with the Resource Consent not be achieved within the 2023/24 period, then directive and punitive enforcement actions shall be considered.

6 SUMMARY OF ACTIONS REQUIRED

The following actions are required to be undertaken:

Resource consent	Condition	Action Required
AUTH108157.01.01	2	Ensure the maximum daily discharge volume shall be 350 cubic metres per day and the rate of discharge shall not exceed 4 litres per second.
AUTH108157.01.01	4	Ensure discharge meets quality objectives as specified in this condition. If the next round of monitoring identified an exceedance, provide a written report detailing the reason for contaminant levels and an action plan with timeframes for reducing contaminant concentrations to within the limits specified by this consent. The report is required to be submitted within 3 months of receiving result.
AUTH108157.01.01	9	Undertake monitoring at four monthly intervals.
AUTH108157.01.01	10	Ensure to forward all sample results to WRC within one month of receipt as required by this condition.
AUTH108157.01.01	11	Please submit monitoring data to Council by 1 August each year for the period 1 July of the preceding year to 30 June of the current year as required by condition.

7 RECOMMENDATIONS FOR WAIKATO REGIONAL COUNCIL

- Recommend that this site remain as a Focus Area 1 for the 2023/24 period.
- Recommend that an audit assessment be undertaken against AUTH146239.01.01.
- Recommend that enforcement action be considered should compliance with the Resource Consents not be achieved within the 2023/24 compliance period.



April Zou
Monitoring Officer - RUD Environmental Compliance
Resource Use

Date: 6 May 2024

7.1 Decision

I have reviewed this audit report and agree with the recommendations.



Ed Prince
Acting Team Leader - RUD Environmental Compliance
Resource Use

Date: 7 May 2024

APPENDIX 1
Compliance Rating System

Compliance Status	Compliance Grade
	Not Assessed
	Full Compliance Full compliance with all relevant consent conditions, plan rules, regulations and national environmental standards.
	Low Risk Non-Compliance Non-compliance 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 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 Non-compliance with many of the relevant consent conditions, plan rules, regulations and national environmental standards, where there are significant environmental consequences and/or a high risk of adverse environmental effects.