



Waikato District Council

REPORT ON COMPLIANCE WITH THE DRINKING-WATER STANDARDS FOR
NEW ZEALAND 2005 (REVISED 2018)

PERIOD 1ST JULY 2020 – 30TH JUNE 2021





EXECUTIVE SUMMARY

An official assessment of the performance of **Waikato District Council** as a “water supplier” against the Drinking Water Standards for New Zealand 2005 (Revised 2018) (DWSNZ) has been completed for the annual compliance period being **1st July 2020 – 30th June 2021**. The assessment was undertaken by the Wai Comply Assessment Unit with the final result(s) of the assessment detailed within this report.

As a water supplier under the Health Act, Waikato District Council is required to meet Part 2A of the Health Act 1956 which includes a duty to comply with the DWSNZ (Section 69V of the Act). Waikato District Council contracts the provision of three waters to Watercare Services Limited. The Drinking Water Assessor as per their designated functions (Section 69ZL of the Act) conducted an assessment of Watercare Services Limited against the DWSNZ. This report details ‘how’ water supplies managed by Watercare Services Limited in the Waikato District Council region have performed against the DWSNZ as determined by the Drinking Water Assessor.

Overall, the Drinking Water Assessor’s assessment of the Waikato District Council supplies performance against the DWSNZ as:

Huntly (HUN002) Water Supply: Compliant	Raglan (RAG001) Water Supply: Compliant
Ngaruawahia (NGA002) Water Supply: Compliant	Te Akau (TEA009) Water Supply: Non-compliant
Onewhero (ONE004) Water Supply: Compliant	Te Kauwhata (TEK001) Water Supply: Compliant
Port Waikato (POR005) Water Supply: Compliant	Pokeno (POK001) Water Supply: Compliant (Distribution Zone Only¹)
Tuakau (TUA002) Water Supply: Compliant (Distribution Zone Only¹)	

The body of the report details performance for each water supply against each of the applicable DWSNZ determinands being *bacterial, protozoal, chemical, cyanotoxin, and radiological*.

¹ Pokeno and Tuakau Distribution Zones connected to Watercare (Auckland) Water Treatment Plants.



INTRODUCTION

WAI COMPLY LIMITED

Wai Comply Limited is a drinking-water compliance advisory company which was setup in 2017 to service the drinking-water industry. The Wai Comply Assessment Unit (WCAU) is a branch of Wai Comply which is specifically accredited by International Accreditation NZ (IANZ) as an inspection body to perform drinking-water assessment activities as per the Health Act 1956 (the Act). The WCAU is also the branch of Wai Comply that the Drinking Water Assessors (DWA) operate under. This team of DWAs have been appointed by the Ministry of Health to perform functions under the Act for any water supplier in NZ. It is through the WCAU that the assessment of performance of a water supplier is undertaken.

The WCAU area of operation encompasses the whole of New Zealand and focuses on some of the largest suppliers in New Zealand being Watercare (including Auckland and Waikato Regions), Wellington Water, Christchurch City Council and Dunedin City Council.

SUMMARY OF THE REPORT

The 'Report on Drinking-Water Compliance' was derived from information specifically provided by Watercare Services Limited (Watercare Waikato) acting on behalf of the Waikato District Council as part of the council's duty as a water supplier under the Health Act 1956 to demonstrate compliance with the DWSNZ for the year ending 30th June 2021.

The assessment of Waikato District Council water supplies performance against the DWSNZ was undertaken by WCAU personnel who performed a variety of assessment and inspection approaches which included.

- Remotely based documentation reviews (i.e., desktop assessments of compliance reports), *and*
- Direct communication with water supplier stakeholders (email, phone, and videoconference), seeking clarification and guidance on matters defined within the compliance documents/reports, *and*
- Virtual audits reviewing the accuracy, efficacy, and validity of electronic compliance data (specifically a review of water supply compliance reports and Drinking Water Online compliance summaries), *and*
- Face-to-face quarterly compliance meetings held between the DWA and water supplier stakeholders with which compliance matters were discussed, and assessment outcomes (decisions) provisionally determined.

The 'Report on Drinking-Water Compliance' does not reflect the effects of events that occurred after the date of the defined assessment period (1st July 2020 – 30th June 2021).

THE FULL ANNUAL REPORT

This report details the WCAU's assessment findings (decisions relating to compliance) as an inspection body and regulatory officer (DWA) based directly on the information provided by stakeholders as per the audit and assessment processes specified above. This report further aligns with the information entered in the Ministry of Health 'Annual Survey of Drinking-water Quality 2020-2021' contained in Drinking Water Online which in-turn will populate the 'Annual Report on Drinking-water Quality'. The Ministry's report will be publicly released within a year.

WATER SUPPLIER'S RESPONSIBILITY FOR THE REPORT ON DRINKING-WATER COMPLIANCE

Watercare Waikato, on behalf of the Water Supplier is responsible for preparing the information to demonstrate achievement of compliance against the DWSNZ. This includes preparing performance data, sample results and analysis, exception reporting, and event response management (referred to as transgressions) to allow the assessor to perform their audit/assessment functions.



ASSESSORS RESPONSIBILITY

The WCAU’s responsibility is to perform assessments of water suppliers as per the functions contained within Section 69ZL of the Act. The compliance decisions detailed in this report are based on WCAU’s accredited procedures which give effect to the Act’s requirements. Other than personnel performing the role of a DWA, the WCAU has no relationship with, or interests in the Council or its subsidiaries and controlled entities.

DWSNZ COMPLIANCE OUTCOMES

WATER SUPPLY ELECTED COMPLIANCE

Within section 3.1.1 of the DWSNZ, the steps necessary for bacterial, protozoal, cyanotoxin, chemical and radiological compliance with the DWSNZ has been summarised. Included in this section is the following statement on page 14:

“For each supply component water suppliers must elect the compliance criteria they intend to achieve in order to demonstrate compliance with the DWSNZ. Any changes to the elected compliance criteria must be agreed with the DWA.”

In order to ensure this part of the compliance process was carried out, the DWA engaged with Watercare Waikato in October 2020 and received two files that outlined Watercare Waikato’s elected compliance criteria for all water treatment plants (WTP) and distribution zones it is responsible for. For simplicity and transparency, the table below summarises the compliance criteria that was both elected by Watercare Waikato and used to guide the assessment of the DWSNZ by the DWA.

Water Supply	Component	Bacterial Criterion	Protozoal Section	Cyanotoxin Section	Chemical	Radiological Section
Huntly (HUN002)	Huntly WTP	2A	5.4 & 5.8	7	Fluoride	
	Huntly Zone	6A				
	Rotongaro Zone	6A				
Ngaruawahia (NGA002)	Ngaruawahia WTP	2A	5.4 & 5.8	7	Fluoride	
	Hopuhopu Zone	6A				
	Horotiu Zone	6A				
	Ngaruawahia Zone	6A				
	Taupiri Zone	6A				
Onewhero (ONE004)	Onewhero WTP	Section 10 (Water Safety Plan)				
	Onewhero Zone	6A				
Port Waikato (POR005)	Port Waikato WTP	Section 10 (Water Safety Plan)				
	Port Waikato Zone	6A				
Raglan (RAG001)	Raglan WTP	2A	5.16			
	Raglan Zone	6A				
Te Akau (TEA009)	Te Akau WTP	Section 10 (Water Safety Plan)				
	Te Akau Zone	6A				
Te Kauwhata (TEK001)	Whangamarino WTP	2A	5.4, 5.8 & 5.16	7	Fluoride	




Water Supply	Component	Bacterial Criterion	Protozoal Section	Cyanotoxin Section	Chemical	Radiological Section
	Te Kauwhata/ Rangiriri Zone	6A				
	Whangamarino Rural/ Meremere Zone	6A				
Pokeno (POK001) ²	Pokeno Zone	6A				
Tuakau (TUA002) ²	Tuakau North Zone	6A				
	Tuakau South Zone	6A				

WATER SUPPLY COMPLIANCE SUMMARY BY DETERMINAND

Understanding the elected compliance criteria for each water supply/treatment plant/distribution zone outlined in the preceding section and the corresponding requirements for each DWSNZ criteria/section, the DWAs have completed assessments throughout the 2020-2021 compliance year (1st July 2020 to 30th June 2021). These assessments were carried out formally on quarterly frequencies (as outlined in the report ‘Introduction’), and the table below outlines the final results by ‘determinand’.

In order to efficiently communicate the results, where possible the components have been grouped and includes a corresponding percentage.

KEY:  = Compliant / Achieved  = Non-compliant / Not achieved

Huntly (HUN002) Water Supply			
Overall Compliance	Component	Determinand	Compliance Requirements
	Water Treatment Plant	Bacterial	Water treatment plant has achieved compliance with requirements for drinking-water disinfected with chlorine .
		Protozoal	Water treatment plant has achieved compliance with Rapid Sand Filtration requirements.
		Cyanotoxin	Water treatment plant has achieved compliance with Cyanotoxin and Cyanobacteria requirements.
		Chemical	Water treatment plant has achieved compliance with Fluoride requirements.
	Distribution Zones	Bacterial	Distribution zones have achieved compliance with E.coli requirements.

² Pokeno and Tuakau Distribution Zones connected to Watercare (Auckland) Water Treatment Plants.



Ngaruawahia (NGA002) Water Supply			
Overall Compliance	Component	Determinand	Compliance Requirements
	Water Treatment Plant	Bacterial	Water treatment plant has achieved compliance with requirements for drinking-water disinfected with chlorine .
		Protozoal	Water treatment plant has achieved compliance with Rapid Sand Filtration requirements.
		Cyanotoxin	Water treatment plant has achieved compliance with Cyanotoxin and Cyanobacteria requirements.
		Chemical	Water treatment plant has achieved compliance with Fluoride requirements.
	Distribution Zones	Bacterial	Distribution zones have achieved compliance with E.coli requirements.

Onewhero (ONE004) Water Supply			
Overall Compliance	Component	Determinand	Compliance Requirements
	Water Treatment Plant	Bacterial	Section 10 – DWSNZ Compliance ACHIEVED due to approved WSP being in place. Treatment includes filtration, ultraviolet disinfection and chlorination.
		Protozoal	
	Distribution Zone	Bacterial	Distribution zone has achieved compliance with E.coli requirements.

Port Waikato (POR005) Water Supply			
Overall Compliance	Component	Determinand	Compliance Requirements
	Water Treatment Plant	Bacterial	Section 10 – DWSNZ Compliance ACHIEVED due to approved WSP being in place. Treatment includes filtration, ultraviolet disinfection and chlorination.
		Protozoal	
	Distribution Zone	Bacterial	Distribution zone has achieved compliance with E.coli requirements.

Raglan (RAG001) Water Supply			
Overall Compliance	Component	Determinand	Compliance Requirements
	Water Treatment Plant	Bacterial	Water treatment plant has achieved compliance with requirements for drinking-water disinfected with chlorine .
		Protozoal	Water treatment plant has achieved compliance with UV Disinfection requirements.
	Distribution Zone	Bacterial	Distribution zone has achieved compliance with E.coli requirements.



Te Akau (TEA009) Water Supply			
Overall Compliance	Component	Determinand	Compliance Requirements
	Water Treatment Plant	Bacterial Protozoal	Section 10 – DWSNZ Compliance NOT ACHIEVED due to approved WSP not being in place for part of the compliance year. See Identified non-compliances and water supply events of significance below.
	Distribution Zone	Bacterial	Distribution zone has achieved compliance with <i>E.coli</i> requirements.

Te Kauwhata (TEK001) Water Supply			
Overall Compliance	Component	Determinand	Compliance Requirements
	Water Treatment Plant	Bacterial	Water treatment plant has achieved compliance with requirements for drinking-water disinfected with chlorine.
		Protozoal	Water treatment plant has achieved compliance with Rapid Sand Filtration and UV Disinfection requirements.
		Cyanotoxin	Water treatment plant has achieved compliance with Cyanotoxin and Cyanobacteria requirements.
		Chemical	Water treatment plant has achieved compliance with Fluoride requirements.
	Distribution Zones	Bacterial	Distribution zones have achieved compliance with <i>E.coli</i> requirements.

DWSNZ PERFORMANCE ASSESSMENT

IDENTIFIED NON-COMPLIANCE(S)

The following comments relate to issued *non-compliances* as identified in section headed ‘Water Supply Compliance Summary by Determinand’.

Te Akau (TEA009) Water Supply			
Supply Component	Determinand	DWSNZ Requirement	Summary of Non-compliance
Te Akau WTP (TP02142)	Bacterial and Protozoal	Section 10 (Small Water Supplies)	<p>WTP is unable to demonstrate compliance against DWSNZ due to the following reasons:</p> <ul style="list-style-type: none"> - Approved WSP not in place to allow Section 10 DWSNZ Compliance option to be utilised. Note new WSPs were submitted however version 2.0 not approved. - Other DWSNZ Compliance options (Sections 4-5) requirements not able to be adequately met. <p>Compliance decision with background information communicated via formal letter emailed to Watercare (Waikato) on 02/08/2021 named ‘2021-08-02_WCWK_DWSNZ Compliance Statement Te Akau_JT_v1’.</p>



WATER SUPPLY EVENTS OF SIGNIFICANCE

A number of water supply events of significance occurred during the compliance period and have been briefly described below. It should be noted that these events may not be strictly linked to DWSNZ compliance.

TE AKAU WATER TREATMENT PLANT BROMATE/CHLORATE EXCEEDANCES AND UPGRADE

Throughout the assessment period, multiple notifications of Bromate and Chlorate results exceeding the maximum acceptable values (MAV) outlined in the DWSNZ were received. These notifications related to the Te Akau (TEA009) Water Supply where the source of the contamination was noted to be linked to the Sodium Hypochlorite solution used for residual disinfection. The following information regarding the transgressions are of note:

- Bromate (MAV = 0.01 mg/L)
 - First transgression = 19/08/2020
 - Last transgression = 09/01/2021
 - Maximum concentration = 0.029 mg/L
- Chlorate (MAV = 0.8 mg/L)
 - First transgression = 15/12/2020
 - Last transgression = 08/04/2021
 - Maximum concentration = 2.0 mg/L

Additional information was provided during each event which included immediate actions, additional sampling results and longer-term remedial actions. Several event investigation reports captured and summarised much of this additional information also.

One longer-term but temporary remedial action included a change in the source water for the Te Akau supply from the problematic Te Akau WTP to a tankered supply. This tanker supply would be setup to source treated drinking-water via a Ministry of Health approved and registered water tanker (Allen's United Waikato Ltd) from the Raglan Water Supply and discontinue any localised treatment.

In line with this new water supply setup, a modified sampling programme was created, and a Water Safety Plan (WSP) developed ('Te Akau Water Supply Water Safety Plan – Version 3.0, June 2021'). This WSP was subsequently approved and since the change of source in April 2021, no Bromate or Chlorate issues have been experienced. No other water supply continuity (major outage) or DWSNZ compliance related issues have been notified since the change of source in April.

PORT WAIKATO DISTRIBUTION ZONE TRIHALOMETHANE SUM RATIO EXCEEDANCE

In February 2021, notification was received regarding a Trihalomethanes ratio result that exceeded the maximum acceptable value outlined in the DWSNZ (maximum ratio of 1). This notification related to the Port Waikato Distribution Zone (POR005PW) with a Trihalomethane ratio result of 1.37. Additional information was provided with immediate actions and additional sampling results included in the Event Investigation Report. In this instance a Priority 2 determinand status was not issued.

HUNTLY TREATMENT PLANT FILTERED WATER HIGH TURBIDITY

In June 2021, notification was received regarding a high turbidity event in water leaving the filters at the Huntly WTP (TP00132). This was due to a valve being opened in error. The event occurred for approximately two minutes and immediate action was taken to shut the plant down. Adequate remedial actions were undertaken, The Huntly plant also utilises ultraviolet disinfection as an additional preventive measure in conjunction with chlorination.



EXCLUSIONS

Wai Comply took over the assessment of the Watercare Waikato water supplies on 1st September 2020, and as such collaborated with the Waikato District Health Board and Auckland Regional Public Health Service for the July and August 2020 assessment. Therefore, Wai Comply’s full assessment methodology applied from 01/09/2020-30/06/2021.

This report also does not include the assessment of the following water supply components and reference should be made to the determination(s) as outlined below:

- **Ardmore (TP00129) & Waikato (TP02337) Water Treatment Plants** – Watercare Services Limited (Auckland) WTPs providing bulk supply to Waikato District Council’s Pokeno (POK001) and Tuakau (TUA002) zones. Full assessment for these WTPs has been completed by the WCAU for Watercare Services Limited (Auckland) and determinations can be found in their ‘Report on Compliance with the DWSNZ 2020-2021’.
- **North-western District (NOR013), Western District (WES014) and Southern District (SOU009) zones** – Waikato District Council zones source bulk water from Hamilton City Council’s Waioara (TP00066) WTP. Full assessment of these zones has been completed by the Waikato Drinking-water Assessment Service and determinations can be found in the ‘Annual Compliance Surveys 2020-2021’ in Drinking Water Online.

CONCLUSION

The results in this report relate only to the compliance of the above listed treatment plants and distribution zones.

*This report should be read in conjunction with the “Report on a drinking-water suppliers’ compliance with the Health Act 1956 duties” which gives a specific determination by the DWA as to whether **Waikato District Council** (the water supplier) and **Watercare Waikato** (the water supply operator) met the duties under “Section 69V – Duty to comply with Drinking-water Standards”.*

If you do not agree with the findings of this report a written appeal must be lodged with the Technical Manager of the Wai Comply Assessment Unit within two (2) months of receipt of this report. The Technical Manager will arrange for a review to be undertaken using the Ministry of Health appeals procedure.

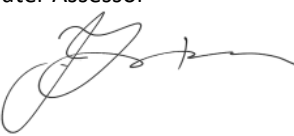
Information in this report may be provided to the Ministry of Health at their request. With the exception of the Ministry of Health, this report shall not be reproduced without the approval of the Wai Comply Assessment Unit and Waikato District Council.

Completed: 23/08/2021

Grant King
Drinking Water Assessor (Trainee)
Wai Comply Assessment Unit



ASSESSMENT REPORT INFORMATION

REPORT IDENTIFIER	2021-08-23_WCWK_S2_Report on Compliance with DWSNZ 2020-2021_Final_GK_V1
ORGANISATION	Wai Comply Limited PO Box 67008, Lepperton New Plymouth 4362
DRINKING WATER ASSESSOR(S)	Grant King (Trainee) Supervised by Josh Takao
ASSESSMENT DATE	01/07/2020-30/06/2021
DESCRIPTION OF ASSESSMENT WORK	Assessment of Compliance with the Drinking-water Standards for New Zealand 2005 (Revised 2018) for the sources, treatment plants and distribution zones owned by Waikato District Council (subject to exclusions listed within report.
WATER SUPPLY OWNER / PERSON RESPONSIBLE	Gavin Ion Chief Executive Waikato District Council Private Bag 544 Ngaruawahia 3742
ASSESSMENT METHOD	Standard specified in Health Act 1956 Standard assessment as per Scope Procedure 2
SITE OF ASSESSMENT	The overall assessment included the following locations: Desktop assessments Wai Comply Limited –Tauranga office. Onsite assessments Watercare Waikato 3 Pukete Rd, Te Rapa, Hamilton.
OMISSIONS FROM PROPOSED ASSESSMENT	Nil
SUB-CONTRACTED WORK	Nil
DOCUMENT CHECKED BY:	Josh Tākao Drinking Water Assessor 23/08/2021
RELEASE OF REPORT AUTHORISED BY:	Josh Tākao Drinking Water Assessor  Signature: 23/08/2021



APPENDIX A: DOCUMENTS AND INFORMATION

Date	Document & Description
07/01/2021	2021-01_Watercare_Waikato 2020 Q3_DW Compliance Update_Watercare amendments_JJT_v1 <i>Detailed notes on DWSNZ compliance performance for Watercare Waikato water supplies for the July to September 2020 period.</i>
07/05/2021	2021-05_WatercareWaikato_S2_2020Q4 DWSNZ Compliance Statement_FINAL_JJT_v1 <i>Formal provisional DWSNZ compliance statement on DWSNZ compliance performance for Watercare Waikato water supplies for the October to December 2020 period.</i>
19/04/2021	2021-04_WatercareWaikato_S2_2020Q4_Quarterly Meeting Notes Response_JJT_v1 <i>Detailed notes on DWSNZ compliance performance for Watercare Waikato water supplies for the October to December 2020 period.</i>
25/05/2021	2021-05_Watercare_Waikato_2021Q1 Compliance Meeting Notes_JJT_v1 <i>Detailed notes on DWSNZ compliance performance for Watercare Waikato water supplies for the January to March 2021 period.</i>
05/07/2021	2021-07_Watercare_WaikatoDC_S2_Te Akau Water Safety Plan v3_Report_FINAL_JJT_v1 <i>Report on adequacy of the Te Akau water supply's water safety plan</i>
28/07/2021	2021-07-28_WCWK_S2_2021Q2 Compliance Meeting Notes_JJT_v1 <i>Detailed notes on DWSNZ compliance performance for Watercare Waikato water supplies for the April to June 2021 period.</i>
02/08/2021	2021-08-02_WCWK_DWSNZ Compliance Statement Te Akau_JJT_v1 <i>Formal DWSNZ compliance statement on DWSNZ compliance performance for Te Akau water supply for the July 2020 to June 2021 period.</i>