

Drinking Water Quality Management Plan Annual report

2022-2023

LAKELAND



Cook Shire Council

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Glossary of terms

ADWG 2011	Australian Drinking Water Guidelines (2011). Published by the National Health and Medical Research Council of Australia
DWQMP	Drinking Water Quality Management Plan
E. coli	Escherichia coli, a bacterium which is considered to indicate the presence of faecal contamination and therefore potential health risk
mg/L	Milligrams per litre
μg/L	Micrograms per litre
NTU	Nephelometric Turbidity Units
HU	Hazen units
μS/cm	Micro Siemens per centimetre
MPN/100mL	Most probable number per 100 millilitres
CFU/100mL	Colony forming units per 100 millilitres
<	Less than
>	Greater than
NATA Lab	Accredited by the National Association of Testing Authorities of Australia. Cook Shire Council currently uses the Cairns Regional Council Laboratory as its NATA registered Lab.
CCP's	Critical Control Point
RMIP	Risk Management Improvement Program

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1. Introduction

This is the Drinking Water Quality Management Plan (DWQMP) report for Cook Shire Council for the financial year 2022-2023 for the Lakeland Water Scheme.

Cook Shire Council is a registered service provider with identification (SPID) number 511. Cook Shire Council is operating under an approved DWQMP version 5.0 to ensure consistent supply of safe quality drinking water in order to protect public health. This is done through proactive identification and minimisation of public health risks associated with drinking water.

The DWQMP Annual Report includes:

- · The activities undertaken over the financial year in operating our drinking water service
- Drinking water quality summary
- Summary of our performance in implementing our approved DWQMP

This report is submitted to the Regulator to fulfil our regulatory requirement, and is also made available to our customers through our website or for inspection upon request at Council office.

Lakeland has been identified as a potential growth area due to the fertile agricultural land around the town. The suggested Palmer River Dam which will provide water to Lakeland for irrigation may lead to further growth in the town. Cook Shire Council is undertaking a future planning study for Lakeland including water and wastewater. This will include small, medium and large growth scenarios.

2. Overview of Operations

Lakeland's Water was sourced from 3 bores, 2 located within the Lakeland Compound (1/RP741362) (East and West Bore) and the 3rd being Army bore which is situated on the road reserve on the Peninsular Development Road.

Water is pumped from the East and West bores to a ground level Reservoir and is chlorinated. Three pressure pumps are used to maintain pressure within the reticulation system. Army Bore is used as a backup bore if required.

Lakeland currently has 44 water connections:

Residential 61%
Commercial 14%
Industrial 14%
Council 9%
Institutional 2%

3. Actions taken to implement the DWQMP

Water and Wastewater department staff meet fortnightly to discuss the department's operational issues. This provided an opportunity to refer to the approved DWQMP and emphasise the importance of using the plan. These meetings are chaired by the Manager of Water and Wastewater and the Team Leader.

Cook Shire Council adopted the Drinking Water Quality Policy in September 2019. This policy confirms Councils management of water quality through the on-going implementation of the DWQMP.

Standard Operating Procedures were updated in the 2021. Training of staff in procedures is on-going. Individual actions taken for the Lakeland Water Scheme are listed in the table below.

Capital funding applications are submitted to Council each year, however are not always successful. This can cause delays in delivering Councils Risk Management Improvements.

Scheme	Component	Improvement Action and Origin of Action	Target Date	Actions undertaken to date	Status and revised target date	Responsible officer
Lakeland	Water supply	Investigate other aquifers for new bore	30 th June 2024	Masterplan for Lakeland kicked off in Jan 2023. This included the planning for the future Water and Wastewater	30 th June 2024	Director Infrastructure
Lakeland	System Wide	Meter replacement program	30 th June 2023	Meters over 15 years old replaced in Lakeland	On-going	Manager W&WW
Lakeland	Reticulation	Chlorate Sampling	On-going	No chlorate detected above 0.8 mg/L	On-going	Manager W&WW
Lakeland	Reticulation	Pesticides	On-going	Continue to monitor pesticides. Not pesticides detected.	On-going	Manager W&WW
Lakeland	Cybersecurity	Cybersecurity Strategy	June 2023	Cybersecurity analysis of Cook Shire Councils cybersecurity related risks was undertaken. This aligned with the cybersecurity KPI's from the water supply regulator	Investigation is done. Waiting for report	Manager Water & Wastewater/IT Manager

4. Compliance with water quality criteria for drinking water

All drinking water in Lakeland met the recommended values in the Australian Drinking Water Guidelines and the Public Health Regulation.

The following results for Lakeland are in Appendix A:

Table 2B: Lakeland Reticulation – Metals (NATA Lab)

Table 2C: Lakeland Reticulation – E.coli (Annan WTP and NATA Lab verification)

Table 2D: Lakeland Reticulation – Physical Chemical including free chlorine – (CSC Annan WTP Lab)

Table 2E: Lakeland Reticulation – Trihalomethanes and chlorates (NATA Lab)

Table 3A: Lakeland Treated Water Final – Physical Chemical (NATA Lab)

Table 3B: Lakeland Treated Water Final - Metals (NATA Lab)

Table 3C: Lakeland Treated Water Final – Free Chlorine – (CSC Annan WTP Lab and online analyser)

Table 3D: Lakeland Treated Water Final – E.coli (CSC Annan WTP plus NATA verification)

Table 4A: Lakeland Raw Water - Physical Chemical (NATA Lab)

Table 4B: Lakeland Raw Water - Metals (NATA Lab)

Table 4C: Lakeland Raw Water – E.coli monitoring (CSC Annan WTP Lab)

Table 4D: Lakeland Raw Water - Pesticide Results (NATA Lab)

Table 5: Reticulation E. coli 12 Month Rolling Average

Table 6: Gross alpha and Gross beta activity - 40K

Note: results do not show < signs as SWIM reports do not recognize or count the result.

Table 1: Location of sampling sites within Lakeland's water reticulation network.

Sample Location Name	Street Name	Site Chosen Because	GPS Coordinates *
SES	Peninsular Development Road	Towards the end of the line	15°51'42.27"S - 144°51'21.53"E
MRD Depot	Cooktown Development Road	Ease of access, Central	15°51'32.22"S - 144°51'27.84"E
Lakeland Library	Sesame Street	Ease of access, Central	15°51'31.05"S - 144°51'18.66"E
Wash Down Bay	Peninsular Development Road	End of the Line	15°51'49.78"S - 144°51'28.11"E
Lakeland Lodge	Back Street	Northern end of Town	15°51'23.10"S - 144°51'19.75"E

All reticulation sampling for all parameters are collected from these fixed sites for the reasons listed.

5. Notifications to the Regulator

There were no incidents reported to the regulator in the 2022-2023 financial year.

6. Customer complaints related to water quality

There were no water quality complaints in the 2022-2023 financial year.

7. DWQMP review outcomes

Version 4.5 was approved on the 17 June 2021. A review of the DWQMP was due in the 2021 - 2022 financial year and was submitted to the Regulator in June 2022 (Version 5). This version of the plan was approved on the 07/09/2022. Version 5 is now the current version of the plan for this Annual Report.

The Verification and Operational Monitoring changed in Version 5. Physical/chemical and metals analysis was better targeted and parameters that have not been detected for many years are no longer tested for. The tables in Appendix 1 reflect this with different requirements for sample analysis.

8. DWQMP audit findings

No audits were conducted in the 2022 – 2023 financial year. The next round of audits is due in 2024 – 2025.

9. Additional sampling

Gross alpha and Gross beta activity 40K samples were also taken once this financial year. The results are in Table 6. A further sample will be taken in August 2023 and reported in the next Annual report. If the samples indicate there is no concerns with Gross alpha and Gross beta, then sampling for these parameters will not be included in future sampling schedules.

Appendix A – Summary of compliance with water quality criteria

Table 2A: Lakeland Reticulation – Physical Chemical (NATA Lab)

		No of samples	No of Samples	!	Summary of Result	s	ADWQ Guidelines	No of Samples	exceeding ADWG
Parameter	Unit	required to be collected	collected	Min. Value	Max. Value	Avg. Value	Value (2011)	Health	Aesthetic
Alkalinity	mg/L as CaCO3	2	2	210.0	240.0	225.0	-	-	-
Calcium	mg/L	4	4	23.0	25.0	23.8	-	-	-
Chloride	mg/L	2	2	44.0	51.0	47.5	< 250 mg/L	-	0
Colour	HU	4	4	1.0	1.8	1.2	< 15 HU	-	0
Electrical Conductance	μS/cm	4	4	530.0	600.0	555.0	-	-	-
Fluoride	mg/L	2	2	0.20	0.26	0.23	< 1.5 mg/L	0	-
Magnesium	mg/L	4	4	25.0	28.0	26.25	-	-	-
рН	pH units	4	4	7.70	8.00	7.85	6.5-8.5	-	0
Potassium	mg/L	2	2	1.60	1.70	1.65	-	-	-
Salinity	mg/L	4	4	254.0	293.0	268.5	-	-	-
SAR		2	2	1.70	2.00	1.85	-	-	-
Silicon	mg/L	4	4	72.0	77.0	74.8	-	-	-
Sodium	mg/L	2	2	50.0	60.0	55.0	< 180 mg/L	-	0
Sulphate	mg/L	2	2	1.3	2.9	2.1	< 250 mg/L	0	0
Total Dissolved Solids	mg/L	2	2	330.0	350.0	340.0	< 600 mg/L	-	0
Total Hardness	mg/L as CaCO3	4	4	160.0	180.0	167.5	< 200 mg/L	-	0
Turbidity	NTU	4	4	0.1	0.5	0.3	< 5 NTU	_	0

Table 2B: Lakeland Reticulation – Metals (NATA Lab)

Date Sampled - 01/07/20	Date Sampled - 01/07/2022 - 30/06/2023											
		No of Samples	No of Samples		Summary of Result	s	ADWQ Guidelines	No of Samples exceeding ADWG				
Parameter	Unit	required to be collected	collected	Min. Value	Max. Value	Avg. Value	Value (2011)	Health	Aesthetic			
Arsenic	mg/L	2	2	0.0014	0.0015	0.0015	0.01 mg/L	0	-			
Barium	mg/L	2	2	0.011	0.013	0.012	< 2 mg/L	0	-			
Beryllium	mg/L	2	2	0.0001	0.0001	0.0001	< 0.06 mg/L	0	-			
Cadmium	mg/L	2	2	0.0001	0.0001	0.0001	< 0.002 mg/L	0	-			
Chromium	mg/L	2	2	0.0005	0.0005	0.0005	< 0.05 mg/L	0	-			
Cobalt	mg/L	2	2	0.0005	0.0005	0.0005	-	-	-			
Copper	mg/L	2	2	0.0090	0.0160	0.0125	< 2 mg/L	0	0			
Iron	mg/L	2	2	0.0150	0.0150	0.0150	< 0.3 mg/L	-	0			
Lead	mg/L	2	2	0.0005	0.0005	0.0005	< 0.01 mg/L	0	-			
Manganese	mg/L	2	2	0.0002	0.0002	0.0002	< 0.5 mg/L	0	0			
Mercury	μg/L	2	2	0.0600	0.0600	0.0600	<1.0 μg/L	0	-			
Nickel	mg/L	2	2	0.0005	0.0005	0.0005	< 0.02 mg/L	0	-			
Selenium	mg/L	2	2	0.0020	0.0020	0.0020	< 0.01 mg/L	0	-			
Vanadium	mg/L	2	2	0.0183	0.0253	0.0218	-	-	-			
Zinc	mg/L	2	2	0.0090	0.0130	0.0110	< 3.0 mg/L	-	0			

Table 2C: Lakeland Reticulation – E.coli (CSC Annan WTP Lab plus NATA verification)

Date Sample	Date Sampled - 01/07/2022 - 30/06/2023												
	Parameter	Sampling Location	No of samples required to be taken	No of samples taken	No of samples with E.coli detected	Public Health Regulation standard (2018)	Laboratory						
E.coli and Coliforms	E.coli – MPN/100ml	5 set Locations within	52	52	0	0	Annan WTP						
E.coli and Coliforms	E. coli cfu/100ml	the Lakeland Reticulation (Table 1)	4	4	0	<1 CFU/100ml	Cairns Regional Council						

Table 2D: Lakeland Reticulation – Physical Chemical – (CSC Annan WTP Lab)

Date Sampled - 01/07/2022 - 30/06/2023										
		No of samples	No of Samples	Summary of Results						
Parameter	Unit	required to be collected	collected	Min. Value	Max. Value	Avg. Value				
Free chlorine residual	mg/L	12	12	0.37	0.69	0.53				
Colour	mg/L	12	12	0.00	8.00	2.00				
Electrical Conductivity	mg/L	12	12	522.0	610.0	555.2				
рН	mg/L	12	12	6.90	7.48	7.14				
Turbidity	mg/L	12	12	0.07	0.92	0.34				
Alkalinity	mg/L	6	6	175.0	205.0	184.1				

Table 2E: Lakeland Reticulation – Trihalomethanes and Chlorates (NATA Lab)

Date Sampled - 01/07/202	Date Sampled - 01/07/2022 - 30/06/2023										
	Unit	No of Samples	No of Samples	Ç	Summary of Result	s	ADWQ Guidelines	No of Samples exceeding ADWG			
Parameter		required to be collected	collected	Min. Value	Max. Value	Avg. Value	Value (2011)	Health			
Chloroform	μg/L	4	4	<5	<5	<5	<250 μg/L	0			
Bromodichloromethane	μg/L	4	4	<5	<5	<5	<250 μg/L	0			
Dibromochloromethane	μg/L	4	4	<5	8	6	< 250 mg/L	0			
Bromoform	μg/L	4	4	9	12	10	<250 μg/L	0			
Total Trihalomethanes	μg/L	4	4	9	20	15	<250 μg/L	0			
Chlorate	mg/L	4	4	0.202	0.293	0.241	<0.8 mg/L*	0			

^{*}QH provisional guideline.

Table 3A: Lakeland Treated Water Final - Physical Chemical (NATA Lab)

Date Sampled - 01/07/202	Date Sampled - 01/07/2022 - 30/06/2023											
		No of Samples	No of Samples		Summary of Result	s	ADWQ Guidelines	No of Samples exceeding ADWG				
Parameter	Unit	required to be collected	collected	Min. Value	Max. Value	Avg. Value	Value (2011)	Health	Aesthetic			
Alkalinity	mg/L as CaCO3	2	2	210.0	240.0	225.0	-	-	-			
Calcium	mg/L	2	2	23.0	23.0	23.0	-	-	-			
Chloride	mg/L	2	2	45.0	50.0	47.5	< 250 mg/L	-	0			
Colour	HU	2	2	1.0	1.0	1.0	< 15 HU	-	0			
Electrical Conductance	μS/cm	2	2	520.0	570.0	545.0	-	-	-			
Fluoride	mg/L	2	2	0.20	0.27	0.24	< 1.5 mg/L	0	-			
Magnesium	mg/L	2	2	26.00	26.00	26.00	-	-	-			
pH	pH units	2	2	7.90	8.00	7.95	6.5-8.5	-	0			
Potassium	mg/L	2	2	1.70	1.80	1.75	-	-	-			
Salinity	psu	2	2	252.2	274.0	263.0	-	-	-			
SAR	SAR units	2	2	1.70	2.00	1.85	-	-	-			
Sodium	mg/L	2	2	51.0	60.0	55.5	< 180 mg/L	-	0			
Sulphate	mg/L	2	2	1.3	2.8	2.1	< 250 mg/L	0	0			
Total Dissolved Solids	mg/L	2	2	320.0	360.0	340.0	< 600 mg/L	-	0			
Total Hardness	mg/L as CaCO3	2	2	160.0	160.0	160.0	< 200 mg/L	-	0			
Turbidity	NTU	2	2	0.2	0.2	0.2	< 5 - NTU	-	0			

Table 3B: Lakeland Treated Water Final – Metals – (NATA Lab)

Date Sampled - 01/07/20	Date Sampled - 01/07/2022 - 30/06/2023											
		No of Samples	No of Samples		Summary of Result	s	ADWQ Guidelines	No of Samples	exceeding ADWG			
Parameter	Unit	required to be collected	collected	Min. Value	Max. Value	Avg. Value	Value (2011)	Health	Aesthetic			
Arsenic	mg/L	2	2	0.0013	0.0015	0.0014	0.01 mg/L	0	-			
Barium	mg/L	2	2	0.009	0.013	0.011	< 2 mg/L	0	-			
Beryllium	mg/L	2	2	0.0001	0.0001	0.0001	< 0.06 mg/L	0	-			
Cadmium	mg/L	2	2	0.0001	0.0001	0.0001	< 0.002 mg/L	0	-			
Chromium	mg/L	2	2	0.0005	0.0005	0.0005	< 0.05 mg/L	0	-			
Cobalt	mg/L	2	2	0.0005	0.0005	0.0005	-	-	-			
Copper	mg/L	2	2	0.0030	0.0050	0.0040	< 2 mg/L	0	0			
Iron	mg/L	2	2	0.0150	0.0150	0.0150	< 0.3 mg/L	-	0			
Lead	mg/L	2	2	0.0005	0.0005	0.0005	< 0.01 mg/L	0	-			
Manganese	mg/L	2	2	0.0002	0.0003	0.0003	< 0.1 mg/L	0	0			
Mercury	μg/L	2	2	0.0600	0.0600	0.0600	<1.0 μg/L					
Nickel	mg/L	2	2	0.0005	0.0005	0.0005	< 0.02 mg/L	0	-			
Selenium	mg/L	2	2	0.0020	0.0020	0.0020	< 0.01 mg/L	0	-			
Vanadium	mg/L	2	2	0.0176	0.0253	0.0215	-	-	-			
Zinc	mg/L	2	2	0.0080	0.0080	0.0080	< 3.0 mg/L	-	0			

Table 3C: Lakeland Treated Water Final – Free Chlorine – (On-line chlorine analyser)

Date Sampled - 01/07/2022 - 30/06/2023										
Parameter	Unit	No of samples required to be	No of Commission		Summary of Result	s	ADWQ Guidelines	No of Samples exceeding ADWG		
Parameter	Onic	taken	No of Samples	Min. Value	Max. Value	Avg. Value	Value (2011)	Health	Aesthetic	
Free Chlorine Residual (on line analyser)	mg/L	365	365	0.39	0.78	0.52	<5	0	-	
Free Chlorine Residual (hand held analyser and recorded with E.coli results)	Mg/L	52	52	0.30	1.06	0.59	<5	0	-	

Table 3D: Lakeland Treated Water Final – E.coli monitoring (CSC Annan WTP Lab plus NATA verification)

Date Sampl	Date Sampled - 01/07/2022 - 30/06/2023									
	Parameter	Sampling Location	No of samples required to be taken	No of samples taken	No of samples with E.coli detected	Public Health Regulation standard (2018)	Laboratory			
E.coli and Coliforms	E.coli – MPN/100ml	Lakeland Water Treatment Plant	52	52	0	0	Annan WTP			
E.coli and Coliforms	E. coli cfu/100ml	Lakeland Water Treatment Plant	2	2	0	0	Cairns Regional Council			

Table 4A: Lakeland Raw Water - Physical Chemical (NATA Analysed)

Date Sampled - 01/07/2022 - 30/06/2023									
Parameter	1124	No of Samples No of Sample		Summary of Results					
	Unit	required to be collected	collected	Min. Value	Max. Value	Avg. Value			
Alkalinity	mg/L as CaCO3	2	2	220.0	230.0	225.0			
Calcium	mg/L	4	4	23.0	24.0	23.8			
Chloride	mg/L	2	2	43.0	49.0	46.0			
Colour	HU	4	4	0.0	1.0	0.8			
Electrical Conductance	μS/cm	4	4	530.0	600.0	552.5			
Fluoride	mg/L	2	2	0.20	0.25	0.23			
Magnesium	mg/L	4	4	26.0	28.0	26.5			
рН	pH units	4	4	7.50	7.80	7.63			
Potassium	mg/L	2	2	1.70	1.70	1.70			
Salinity	psu	4	4	254.0	290.0	266.8			
SAR	SAR units	2	2	1.70	1.90	1.80			
Silicon	mg/L	4	4	72.0	77.0	74.0			
Sodium	mg/L	2	2	50.0	58.0	54.0			
Sulphate	mg/L	2	2	1.1	2.8	2.0			
Total Dissolved Solids	mg/L	2	2	320.0	350.0	335.0			
Total Hardness	mg/L as CaCO3	4	4	160.0	180.0	170.0			
Turbidity	NTU	4	4	0.1	0.2	0.1			

Table 4B: Lakeland Raw Water – Metals (NATA Analysed)

Date Sampled – 01/07/2022 – 30/06/2023									
		No of Samples	No of Samples	Summary of Results					
Parameter	Unit	required to be collected	collected	Min. Value	Max. Value	Avg. Value			
Arsenic	mg/L	2	2	0.0014	0.0015	0.0015			
Barium	mg/L	2	2	0.011	0.012	0.011			
Beryllium	mg/L	2	2	0.0001	0.0001	0.0001			
Cadmium	mg/L	2	2	0.0001	0.0001	0.0001			
Chromium	mg/L	2	2	0.0005	0.0005	0.0005			
Cobalt	mg/L	2	2	0.0005	0.0005	0.0005			
Copper	mg/L	2	2	0.0030	0.0040	0.0035			
Iron	mg/L	2	2	0.0150	0.0150	0.0150			
Lead	mg/L	2	2	0.0005	0.0005	0.0005			
Manganese	mg/L	2	2	0.0008	0.0010	0.0009			
Mercury	mg/L	2	2	0.0600	0.0600	0.0600			
Nickel	mg/L	2	2	0.0005	0.0005	0.0005			
Selenium	mg/L	2	2	0.0020	0.0020	0.0020			
Vanadium	mg/L	2	2	0.0173	0.0244	0.0209			
Zinc	mg/L	2	2	0.0080	0.0080	0.0080			

Table 4C: Lakeland Raw Water – E.coli monitoring (CSC Annan WTP Lab)

Date Sampled - 01/07/2022 - 30/06/2023									
	Parameter	Sampling Location	Minimum	Maximum	Average	Number of samples taken	Laboratory		
E.coli and Coliforms	E.coli – MPN/100ml	Lakeland Bores (Raw)	0	8	0	52	Annan WTP		

Table 4D: Lakeland Raw Water – Pesticide Results (NATA Lab)

LRN:	1201293		Lakeland Retic/Bores - verification Monitorin					
			Date Sampled:	02-05-20		*		
Lakelai	nd - Army Bore		Received at Lab:	03-05-20	023 09:13am			
Metho	od	Analyte	Result		020000000000000000000000000000000000000	LOR Date Starte		
Organic	S							
94 Pesti	cides	4.4'-DDD		< 0.5	μg/L			
Pesti	icides	4.4'-DDE		< 0.5	µg/L			
Pesti	icides	4.4'-DDT		<2.0	μg/L			
Pesti	icides	Aldrin		< 0.5	µg/L			
Pesti	cides	alpha-BHC		< 0.5	μg/L			
Pesti	cides	alpha-Endosulfan		< 0.5	μg/L			
Pesti	icides	beta-BHC		< 0.5	µg/L			
Pesti	icides	beta-Endosulfan		< 0.5	μg/L			
Pesti	cides	cis-Chlordane		< 0.5	μg/L			
Pesti	cides	delta-BHC		< 0.5	µg/L			
Pesti	cides	Dieldrin		< 0.5	µg/L			
Pesti	icides	Endosulfan sulfate		< 0.5	µg/L			
Pesti	cides	Endrin		< 0.5	µg/L			
Pesti	cides	Endrin aldehyde		<0.5	μg/L			
Pesti	cides	Endrin ketone		< 0.5	μg/L			
Pesti	icides	gamma-BHC		< 0.5	μg/L			
Pesti	icides	Heptachlor		< 0.5	μg/L			
Pesti	cides	Heptachlor epoxide		< 0.5	µg/L			
Pesti	cides	Hexachlorobenzene (HCB)		<0.5	μg/L			
Pesti	icides	Methoxychlor		<2.0	µg/L			
Pesti	cides	Sum of Aldrin + Dieldrin		< 0.5	µg/L			
Pesti	cides	Sum of DDD + DDE + DDT		<0.5	µg/L			
Pesti	cides	trans-Chlordane		<0.5	µg/L			
Pesti	icides	Total Chlordane (sum)		< 0.5	µg/L			

Pesticide scan done yearly from Army Bore.

Table 5: Reticulation E. coli 12 Month Rolling Average

Lakeland					100				- 10			
Year						2022/	2023					
Month	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June
No. of samples collected	4	5	4	5	4	4	5	4	4	4	5	4
No. of samples collected in which <i>E. coli</i> is detected (i.e. a failure)	0	0	0	0	0	0	0	0	0	0	0	0
No. of samples collected in previous 12 month period	51	51	51	51	52	51	51	52	52	52	52	52
No. of failures for previous 12 month period	0	0	0	0	0	0	0	0	0	0	0	0
% of samples that comply	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Compliance with 98% annual value	YES											

Table 6: Gross Alpha and Gross beta activity – 40 K

Date Sampled - 06/02/2023								
Sample point	Sample point Unit Parameter							
Lakeland MRD Camp	Bq/L	Gross alpha	<0.05					
Lakeland MRD Camp	Bq/L	Gross beta activity – 40K	<0.10					