

Drinking Water Service Annual Report

Mareeba Shire Council

SPID: **557**

Financial year to which report relates:

2021-22

65 Rankin Street
PO Box 154
MAREEBA QLD 4880

Glossary of terms

ADWG 2011	Australian Drinking Water Guidelines (2011) Ver 3.6. Published by the National Health and Medical Research Council of Australia
<i>E. coli</i>	<i>Escherichia coli</i> , a bacterium which is considered to indicate the presence of faecal contamination and therefore potential health risk
HACCP	Hazard Analysis and Critical Control Points certification for protecting drinking water quality
mg/L	Milligrams per litre
MSC	Mareeba Shire Council
NTU	Nephelometric Turbidity Units
MPN/100mL	Most probable number per 100 millilitres
CFU/100mL	Colony forming units per 100 millilitres
<	Less than
>	Greater than

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1 Introduction

This is the Drinking Water Quality Management Plan (DWQMP) report for Mareeba Shire Council (MSC) for the financial year 2021–2022.

MSC is a registered service provider with identification (SPID) number 557. MSC is operating under an approved DWQMP 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 related risks associated with drinking water.

This DWQMP report includes:

- ◆ the activities undertaken over the financial year in operating all MSC's drinking water services
- ◆ drinking water quality summary
- ◆ summary of the MSC Water and Waste Department's performance in implementing the MSC approved DWQMP

This report is submitted to the Regulator to fulfil MSC's regulatory requirement and is also made available to MSC's customers through its website or for inspection upon request at Council's Rankine St office.

2 Summary of scheme/s operated

Table 1 – Summary of schemes

Scheme	Water Source	Treatment processes	Treatment capacity ¹
Chillagoe	Bores (3)	Filtration and chlorination	0.5 ML/d
Dimbulah	SunWater Irrigation Channel	Filtration and chlorination	1.2 ML/d
Mareeba	Barron River (SunWater Supplemented)	Coagulation, flocculation, clarification, filtration and chlorination	14.5 ML/d
Kuranda	Barron River (SunWater Supplemented)	Coagulation, flocculation, clarification, filtration and chlorination	2.0 ML/d

3 DWQMP implementation

Water and Wastewater staff met monthly to discuss all aspects of the supply and delivery of drinking water. The meetings were chaired by the Manager Water and Waste.

During the reporting period two trainee treatment plant operators were recruited. In the induction process the trainee operators were introduced to the DWQMP and have an ongoing role in implementing it.

The actions undertaken to implement the DWQMP improvement program are summarised below.

¹ Maximum sustainable capacity

The actions undertaken to implement the risk management improvement program are discussed in Table 2.

Table 2 – Risk management improvement program implementation status (previous water year, current and projected 1 year situation)

Scheme	Area	Mitigated	Proposed Measures	Proposed	Completion	Status
Chillagoe	Storage and Reticulation Hazards	MODERATE	Installing a pressure leakage management system on proposed lines.	Operational	2023-2024	Tonkin Consulting creating a new water model for all of MSC
	Treatment Plant Hazards	LOW	Raw and Clear Water Inline Turbidity Analysers	\$55,000	2022	Completed
Dimbulah	Storage and Reticulation Hazards	MODERATE	Installing a pressure leakage management system on proposed lines.	Operational	2023	Tonkin Consulting creating a new water model for all of MSC
Kuranda	Storage and Reticulation Hazards	MODERATE	Installing a pressure leakage management system on proposed lines.	Operational	2023	Tonkin Consulting creating a new water model for all of MSC
Mareeba	Storage and Reticulation Hazards	MODERATE	Analyse network model and perform pressure and flow tests.	Operational	2023	Tonkin Consulting creating a new water model for all of MSC
		MODERATE	Installing a pressure leakage management system on proposed lines.	Operational	2023	To be in conjunction with Water Booster pressure System Installation Project
		VERY HIGH	Install pressure booster system at Mareeba WTP to service the southern area.	\$3,500,000	2023-204	Project to go to tender march 2023
	Treatment Plant Hazards	MODERATE	Streaming current coming online.	\$30,000		Completed
		MODERATE	Possible SCADA integration.	Operational	2023	In Progress. To be completed end of F23
		HIGH	Clear Water Booster Pump Station	\$3,082,950	2023-204	Project to go to tender march 2023
		HIGH	Clarifier Infrastructure Process Improvements	\$340,000	2023-2024	Design underway inconjunction with new chemical dosing trials
		HIGH	Raw Water Pump Station Upgrade	\$792,540	2023-2024	Project to go to tender March 2023
		HIGH	Filtration Upgrade Project	\$7,603,830	2023/25	Currently out to tender
	Shire Wide	System Wide Hazards	MODERATE	Ongoing annual infrastructure and software updates and improvements	\$80,000	Ongoing
		VERY HIGH	Assess training needs through internal audits and general feedback: training, multiskilling, job swapping, traineeships & relief staff.	Operational	Ongoing	In Progress, through HR

4 Verification monitoring - water quality information and summary

This section discusses the compliance with the water quality criteria.

Table 3 displays all the tested parameters for the previous water year (1 Jul 2020 - 30 Jun 2021) that have a maximum permissible Health Guideline value (there are listed in Table 10.6 of the ADWG (Ver. 3.5)).

There were no exceedances.

Table 3 – Drinking water quality performance - verification monitoring

Scheme Name	Parameter	No. Samples Collected	No. Samples Detected	UOM	Exceedance Value (ADWG)	Min	Max	Average (Mean)	LOR	NATA Lab
Chillagoe	Aldrin	9	0	µg/L	0.3				<0.01	CRC Lab Services
Chillagoe	Aluminium	9	0	mg/L	c				<0.005	CRC Lab Services
Chillagoe	Ammonia	0	0	mg/L N	c				<0.02	CRC Lab Services
Chillagoe	Antimony	9	0	mg/L	0.003				<0.001	CRC Lab Services
Chillagoe	Arsenic	9	9	mg/L	0.01	0.002	0.0033	0.002	<0.001	CRC Lab Services
Chillagoe	Azinphos Methyl	4	0	µg/L	30				<0.02	CRC Lab Services
Chillagoe	Barium	9	9	mg/L	2	0.051	0.08	0.065	<0.001	CRC Lab Services
Chillagoe	Beryllium	9	0	mg/L	0.06				<0.001	CRC Lab Services
Chillagoe	Boron	9	0	mg/L	4				<0.05	CRC Lab Services
Chillagoe	Bromophos-ethyl	9	0	µg/L	10				<0.1	CRC Lab Services
Chillagoe	Cadmium	9	9	mg/L	0.002	0.0001	0.0001	0.00010	<0.0001	CRC Lab Services
Chillagoe	Carbophenothion	4	0	µg/L	0.5				<0.02	CRC Lab Services
Chillagoe	Chlorfenvinphos (Z)	4	0	µg/L					<0.02	CRC Lab Services
Chillagoe	Chloride	9	9	mg/L	c	11	94	24.9	<0.1	CRC Lab Services
Chillagoe	Free Chlorine	9	9	mg/L	5	0.79	1.1	0.951	<0.01	CRC Lab Services
Chillagoe	Chlorpyrifos	9	0	µg/L	10				<0.02	CRC Lab Services
Chillagoe	Chromium	9	4	mg/L	0.05	0.0002	0.0003	0.000	<0.001	CRC Lab Services
Chillagoe	Copper	9	9	mg/L	2	0.008	0.044	0.023	<0.001	CRC Lab Services
Chillagoe	DDT (total)	4	0	µg/L	9				<0.01	CRC Lab Services
Chillagoe	Diazinon	9	0	µg/L	4				<0.01	CRC Lab Services
Chillagoe	Dichlorvos	9	0	µg/L	5				<0.2	CRC Lab Services
Chillagoe	Dieldrin	9	0	µg/L	0.3				<0.01	CRC Lab Services
Chillagoe	Dimethoate	9	0	µg/L	7				<0.02	CRC Lab Services
Chillagoe	Endosulfan (sum)	9	0	µg/L	20				<0.01	CRC Lab Services
Chillagoe	Ethion	9	0	µg/L	4				<0.02	CRC Lab Services
Chillagoe	Fenamiphos	9	0	µg/L	0.5				<0.01	CRC Lab Services
Chillagoe	Fenthion	9	0	µg/L	7				<0.05	CRC Lab Services
Chillagoe	Fluoride	9	9	mg/L	1.5	0.1	0.14	0.120	<0.02	CRC Lab Services
Chillagoe	Heptachlor	9	0	µg/L	0.3				<0.005	CRC Lab Services
Chillagoe	Heptachlor epoxide	9	0	µg/L	0.3				<0.01	CRC Lab Services
Chillagoe	Iron	9	0	mg/L	c				<0.01	CRC Lab Services
Chillagoe	Lead	9	9	mg/L	0.01	0.0005	0.004	0.002	<0.001	CRC Lab Services
Chillagoe	Malathion	9	0	µg/L	70				<0.02	CRC Lab Services
Chillagoe	Manganese	9	4	mg/L	0.5	0.0003	0.0065	0.002	<0.001	CRC Lab Services
Chillagoe	Mercury	9	0	µg/L	1				<0.1	CRC Lab Services
Chillagoe	Methoxychlor	9	0	µg/L	300				<0.01	CRC Lab Services
Chillagoe	Molybdenum	9	0	mg/L	0.05				<0.005	CRC Lab Services
Chillagoe	Monocrotophos	9	0	µg/L	2				<0.02	CRC Lab Services

Scheme Name	Parameter	No. Samples Collected	No. Samples Detected	UOM	Exceedance Value (ADWG)	Min	Max	Average (Mean)	LOR	NATA Lab
Chillagoe	Nickel	9	0	mg/L	0.02				<0.001	CRC Lab Services
Chillagoe	Nitrate	0	0	mg/L N	50				<0.01	CRC Lab Services
Chillagoe	Nitrite	0	0	mg/L N	3				<0.01	CRC Lab Services
Chillagoe	Parathion	9	0	µg/L	20				<0.2	CRC Lab Services
Chillagoe	Parathion-methyl	9	0	µg/L	0.7				<0.5	CRC Lab Services
Chillagoe	pH	9	9		c	7.3	8	7.77	<0.1	CRC Lab Services
Chillagoe	Selenium	9	0	mg/L	0.01				<0.005	CRC Lab Services
Chillagoe	Silver	9	1	mg/L	0.1	0.0011	0.0011	0.001	<0.001	CRC Lab Services
Chillagoe	Total Chlordane (sum)	9	0	µg/L	2				<0.01	CRC Lab Services
Chillagoe	Turbidity	9	2	NTU	c	0.1	0.5	0.3	<0.1	CRC Lab Services
Chillagoe	Uranium	9	8	mg/L	0.02	0.001	0.0012	0.001	<0.005	CRC Lab Services
Chillagoe	Zinc	9	9	mg/L	c	0.01	0.037	0.023	<0.005	CRC Lab Services
Dimbulah	Aldrin	9	0	µg/L	0.3				<0.01	CRC Lab Services
Dimbulah	Aluminium	9	4	mg/L	c	0.013	0.02	0.017	<0.005	CRC Lab Services
Dimbulah	Antimony	9	0	mg/L	0.003				<0.001	CRC Lab Services
Dimbulah	Arsenic	9	8	mg/L	0.01	0.0003	0.001	0.001	<0.001	CRC Lab Services
Dimbulah	Azinphos Methyl	4	0	µg/L	30				<0.02	CRC Lab Services
Dimbulah	Barium	9	9	mg/L	2	0.007	0.016	0.013	<0.001	CRC Lab Services
Dimbulah	Beryllium	9	0	mg/L	0.06				<0.001	CRC Lab Services
Dimbulah	Boron	9	0	mg/L	4				<0.05	CRC Lab Services
Dimbulah	Bromophos-ethyl	9	0	µg/L	10				<0.1	CRC Lab Services
Dimbulah	Cadmium	9	0	mg/L	0.002				<0.0001	CRC Lab Services
Dimbulah	Carbophenothion	4	0	µg/L	0.5				<0.02	CRC Lab Services
Dimbulah	Chlorfenvinphos (Z)	4	0	µg/L					<0.02	CRC Lab Services
Dimbulah	Chloride	9	9	mg/L	c	11	13	11.9	<0.1	CRC Lab Services
Dimbulah	Free Chlorine	9	9	mg/L	5	0.82	1.5	1.2	<0.01	CRC Lab Services
Dimbulah	Chlorpyrifos	9	0	µg/L	10				<0.02	CRC Lab Services
Dimbulah	Chromium	9	0	mg/L	0.05				<0.001	CRC Lab Services
Dimbulah	Copper	9	9	mg/L	2	0.002	0.008	0.005	<0.001	CRC Lab Services
Dimbulah	DDT (total)	4	0	µg/L	9				<0.01	CRC Lab Services
Dimbulah	Diazinon	9	0	µg/L	4				<0.01	CRC Lab Services
Dimbulah	Dichlorvos	9	0	µg/L	5				<0.2	CRC Lab Services
Dimbulah	Dieldrin	9	0	µg/L	0.3				<0.01	CRC Lab Services
Dimbulah	Dimethoate	9	0	µg/L	7				<0.02	CRC Lab Services
Dimbulah	Endosulfan (sum)	9	0	µg/L	20				<0.01	CRC Lab Services
Dimbulah	Ethion	9	0	µg/L	4				<0.02	CRC Lab Services
Dimbulah	Fenamiphos	9	0	µg/L	0.5				<0.01	CRC Lab Services
Dimbulah	Fenthion	9	0	µg/L	7				<0.05	CRC Lab Services
Dimbulah	Fluoride	9	9	mg/L	1.5	0.03	0.16	0.072	<0.02	CRC Lab Services
Dimbulah	Heptachlor	9	0	µg/L	0.3				<0.005	CRC Lab Services
Dimbulah	Heptachlor epoxide	9	0	µg/L	0.3				<0.01	CRC Lab Services
Dimbulah	Iron	9	0	mg/L	c				<0.01	CRC Lab Services
Dimbulah	Lead	9	2	mg/L	0.01	0.0005	0.001	0.001	<0.001	CRC Lab Services
Dimbulah	Malathion	9	0	µg/L	70				<0.02	CRC Lab Services

Scheme Name	Parameter	No. Samples Collected	No. Samples Detected	UOM	Exceedance Value (ADWG)	Min	Max	Average (Mean)	LOR	NATA Lab
Dimbulah	Manganese	9	8	mg/L	0.5	0.0002	0.002	0.001	<0.001	CRC Lab Services
Dimbulah	Mercury	9	0	µg/L	1				<0.1	CRC Lab Services
Dimbulah	Methoxychlor	9	0	µg/L	300				<0.01	CRC Lab Services
Dimbulah	Molybdenum	9	0	mg/L	0.05				<0.005	CRC Lab Services
Dimbulah	Monocrotophos	9	0	µg/L	2				<0.02	CRC Lab Services
Dimbulah	Nickel	9	2	mg/L	0.02	0.0006	0.0048	0.003	<0.001	CRC Lab Services
Dimbulah	Parathion	9	0	µg/L	20				<0.2	CRC Lab Services
Dimbulah	Parathion-methyl	9	0	µg/L	0.7				<0.5	CRC Lab Services
Dimbulah	pH	9	9		c	7	7.5	7.3	<0.1	CRC Lab Services
Dimbulah	Selenium	9	0	mg/L	0.01				<0.005	CRC Lab Services
Dimbulah	Silver	9	0	mg/L	0.1				<0.001	CRC Lab Services
Dimbulah	Total Chlordane (sum)	9	0	µg/L	2				<0.01	CRC Lab Services
Dimbulah	Uranium	9	0	mg/L	0.02				<0.005	CRC Lab Services
Dimbulah	Zinc	9	2	mg/L	c	0.007	0.018	0.013	<0.005	CRC Lab Services
Mareeba	Aldrin	9	0	µg/L	0.3				<0.01	CRC Lab Services
Mareeba	Aluminium	9	3	mg/L	c	0.017	0.026	0.020	<0.005	CRC Lab Services
Mareeba	Antimony	9	0	mg/L	0.003				<0.001	CRC Lab Services
Mareeba	Arsenic	9	8	mg/L	0.01	0.0003	0.0006	0.000	<0.001	CRC Lab Services
Mareeba	Azinphos Methyl	4	0	µg/L	30				<0.02	CRC Lab Services
Mareeba	Barium	9	9	mg/L	2	0.007	0.011	0.009	<0.001	CRC Lab Services
Mareeba	Beryllium	9	0	mg/L	0.06				<0.001	CRC Lab Services
Mareeba	Boron	9	0	mg/L	4				<0.05	CRC Lab Services
Mareeba	Bromophos-ethyl	9	0	µg/L	10				<0.1	CRC Lab Services
Mareeba	Cadmium	9	0	mg/L	0.002				<0.0001	CRC Lab Services
Mareeba	Carbophenothion	4	0	µg/L	0.5				<0.02	CRC Lab Services
Mareeba	Chlorfenvinphos (Z)	4	0	µg/L					<0.02	CRC Lab Services
Mareeba	Chloride	9	9	mg/L	c	11	18	14.0	<0.1	CRC Lab Services
Mareeba	Free Chlorine	9	9	mg/L	5	0.4	1.9	1.3	<0.01	CRC Lab Services
Mareeba	Chlorpyrifos	9	0	µg/L	10				<0.02	CRC Lab Services
Mareeba	Chromium	9	1	mg/L	0.05	0.0007	0.0007	0.001	<0.001	CRC Lab Services
Mareeba	Copper	9	9	mg/L	2	0.003	0.049	0.015	<0.001	CRC Lab Services
Mareeba	DDT (total)	4	0	µg/L	9				<0.01	CRC Lab Services
Mareeba	Diazinon	9	0	µg/L	4				<0.01	CRC Lab Services
Mareeba	Dichlorvos	9	0	µg/L	5				<0.2	CRC Lab Services
Mareeba	Dieldrin	9	0	µg/L	0.3				<0.01	CRC Lab Services
Mareeba	Dimethoate	9	0	µg/L	7				<0.02	CRC Lab Services
Mareeba	Endosulfan (sum)	9	0	µg/L	20				<0.01	CRC Lab Services
Mareeba	Ethion	9	0	µg/L	4				<0.02	CRC Lab Services
Mareeba	Fenamiphos	9	0	µg/L	0.5				<0.01	CRC Lab Services
Mareeba	Fenthion	9	0	µg/L	7				<0.05	CRC Lab Services
Mareeba	Fluoride	9	9	mg/L	1.5	0.03	0.08	0.05	<0.02	CRC Lab Services
Mareeba	Heptachlor	9	0	µg/L	0.3				<0.005	CRC Lab Services
Mareeba	Heptachlor epoxide	9	0	µg/L	0.3				<0.01	CRC Lab Services
Mareeba	Iron	9	0	mg/L	c				<0.01	CRC Lab Services

Scheme Name	Parameter	No. Samples Collected	No. Samples Detected	UOM	Exceedance Value (ADWG)	Min	Max	Average (Mean)	LOR	NATA Lab
Mareeba	Lead	9	0	mg/L	0.01				<0.001	CRC Lab Services
Mareeba	Malathion	9	0	µg/L	70				<0.02	CRC Lab Services
Mareeba	Manganese	9	7	mg/L	0.5	0.0002	0.0011	0.000	<0.001	CRC Lab Services
Mareeba	Mercury	9	0	µg/L	1				<0.1	CRC Lab Services
Mareeba	Methoxychlor	9	0	µg/L	300				<0.01	CRC Lab Services
Mareeba	Molybdenum	9	0	mg/L	0.05				<0.005	CRC Lab Services
Mareeba	Monocrotophos	9	0	µg/L	2				<0.02	CRC Lab Services
Mareeba	Nickel	9	1	mg/L	0.02	0.0005	0.0005	0.001	<0.001	CRC Lab Services
Mareeba	Parathion	9	0	µg/L	20				<0.2	CRC Lab Services
Mareeba	Parathion-methyl	9	0	µg/L	0.7				<0.5	CRC Lab Services
Mareeba	pH	9	9		c	7.6	7.9	7.8	<0.1	CRC Lab Services
Mareeba	Selenium	9	0	mg/L	0.01				<0.005	CRC Lab Services
Mareeba	Silver	9	0	mg/L	0.1				<0.001	CRC Lab Services
Mareeba	Total Chlordane (sum)	9	0	µg/L	2				<0.01	CRC Lab Services
Mareeba	Turbidity	9	7	NTU	c	0.1	0.4	0.1	<0.1	CRC Lab Services
Mareeba	Uranium	9	0	mg/L	0.02				<0.005	CRC Lab Services
Mareeba	Zinc	9	4	mg/L	c	0.009	0.023	0.016	<0.005	CRC Lab Services
Kuranda	Aldrin	9	0	µg/L	0.3				<0.01	CRC Lab Services
Kuranda	Aluminium	9	2	mg/L	c	0.015	0.018	0.017	<0.005	CRC Lab Services
Kuranda	Antimony	9	0	mg/L	0.003				<0.001	CRC Lab Services
Kuranda	Arsenic	9	8	mg/L	0.01	0.0003	0.0005	0.000	<0.001	CRC Lab Services
Kuranda	Azinphos Methyl	4	0	µg/L	30				<0.02	CRC Lab Services
Kuranda	Barium	9	9	mg/L	2	0.009	0.017	0.012	<0.001	CRC Lab Services
Kuranda	Beryllium	9	0	mg/L	0.06				<0.001	CRC Lab Services
Kuranda	Boron	9	0	mg/L	4				<0.05	CRC Lab Services
Kuranda	Bromophos-ethyl	9	0	µg/L	10				<0.1	CRC Lab Services
Kuranda	Cadmium	9	0	mg/L	0.002				<0.0001	CRC Lab Services
Kuranda	Carbophenothion	4	0	µg/L	0.5				<0.02	CRC Lab Services
Kuranda	Chlorfenvinphos (Z)	4	0	µg/L					<0.02	CRC Lab Services
Kuranda	Chloride	9	9	mg/L	c	14	21	18	<0.1	CRC Lab Services
Kuranda	Free Chlorine	9	9	mg/L	5	0.47	2.3	1.5	<0.01	CRC Lab Services
Kuranda	Chlorpyrifos	9	0	µg/L	10				<0.02	CRC Lab Services
Kuranda	Chromium	9	2	mg/L	0.05	0.0002	0.0003	0.000	<0.001	CRC Lab Services
Kuranda	Copper	9	9	mg/L	2	0.004	0.043	0.012	<0.001	CRC Lab Services
Kuranda	DDT (total)	4	0	µg/L	9				<0.01	CRC Lab Services
Kuranda	Diazinon	9	0	µg/L	4				<0.01	CRC Lab Services
Kuranda	Dichlorvos	9	0	µg/L	5				<0.2	CRC Lab Services
Kuranda	Dieldrin	9	0	µg/L	0.3				<0.01	CRC Lab Services
Kuranda	Dimethoate	9	0	µg/L	7				<0.02	CRC Lab Services
Kuranda	Endosulfan (sum)	9	0	µg/L	20				<0.01	CRC Lab Services
Kuranda	Ethion	9	0	µg/L	4				<0.02	CRC Lab Services
Kuranda	Fenamiphos	9	0	µg/L	0.5				<0.01	CRC Lab Services
Kuranda	Fenthion	9	0	µg/L	7				<0.05	CRC Lab Services
Kuranda	Fluoride	9	9	mg/L	1.5	0.04	0.05	0.046	<0.02	CRC Lab Services

Scheme Name	Parameter	No. Samples Collected	No. Samples Detected	UOM	Exceedance Value (ADWG)	Min	Max	Average (Mean)	LOR	NATA Lab
Kuranda	Heptachlor	9	0	µg/L	0.3				<0.005	CRC Lab Services
Kuranda	Heptachlor epoxide	9	0	µg/L	0.3				<0.01	CRC Lab Services
Kuranda	Iron	9	1	mg/L	c	0.016	0.016	0.016	<0.01	CRC Lab Services
Kuranda	Lead	9	1	mg/L	0.01	0.001	0.001	0.001	<0.001	CRC Lab Services
Kuranda	Malathion	9	0	µg/L	70				<0.02	CRC Lab Services
Kuranda	Manganese	9	7	mg/L	0.5	0.0032	0.0114	0.006	<0.001	CRC Lab Services
Kuranda	Mercury	9	0	µg/L	1				<0.1	CRC Lab Services
Kuranda	Methoxychlor	9	0	µg/L	300				<0.01	CRC Lab Services
Kuranda	Molybdenum	9	0	mg/L	0.05				<0.005	CRC Lab Services
Kuranda	Monocrotophos	9	0	µg/L	2				<0.02	CRC Lab Services
Kuranda	Nickel	9	2	mg/L	0.02	0.0005	0.0006	0.001	<0.001	CRC Lab Services
Kuranda	Parathion	9	0	µg/L	20				<0.2	CRC Lab Services
Kuranda	Parathion-methyl	9	0	µg/L	0.7				<0.5	CRC Lab Services
Kuranda	pH	9	9		c	7.6	7.9	7.8	<0.1	CRC Lab Services
Kuranda	Selenium	9	0	mg/L	0.01				<0.005	CRC Lab Services
Kuranda	Silver	9	0	mg/L	0.1				<0.001	CRC Lab Services
Kuranda	Total Chlordane (sum)	9	0	µg/L	2				<0.01	CRC Lab Services
Kuranda	Turbidity	9	8	NTU	c	0.1	0.2	0.113	<0.1	CRC Lab Services
Kuranda	Uranium	9	0	mg/L	0.02				<0.005	CRC Lab Services
Kuranda	Zinc	9	3	mg/L	c	0.01	0.013	0.012	<0.005	CRC Lab Services

[§] Reproduced from footnotes of Table 10.6 Guideline values for physical and chemical characteristics ADWG V3.6

HU = Hazen units; NTU = nephelometric turbidity units; THMs = trihalomethanes.

- a Aesthetic values are not listed if the compound does not cause aesthetic problems, or if the value determined from health considerations is the same or lower
- b If present at all in Australian drinking waters, concentrations of all organic compounds other than disinfection by-products are likely to be very low relative to the guideline value.
- c Insufficient data to set a guideline value based on health considerations.
- d The guideline value is below the limit of quantitation. Improved analytical procedures are required for this compound.
- e The concentration of all chlorination by-products can be minimised by removing naturally occurring organic matter from the source water, reducing the amount of chlorine added, or using an alternative disinfectant (which may produce other by-products). Action to reduce trihalomethanes and other by-products is encouraged, but must not compromise disinfection.
- f No corresponding fact sheet for these pesticides. Guideline values for these pesticides appeared in a previous version of the Guidelines and have been retained in Table 10.6 for information purposes only.

Note: All values are as 'total' unless otherwise stated.

Note: Routine monitoring for these compounds is not required unless there is potential for contamination of water supplies (e.g. accidental spillage).

x Refer to ADWG V3.6 FACT SHEETS DDT (1,1,1-trichloro-di-(4-chlorophenyl) ethane).

Table 4 – E. coli compliance with annual value

Year	Chillagoe											
	2021 - 2022											
Month	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
No. of samples collected	1	1	2	1	1	1	1	1	2	2	2	2
No. of samples collected in which E. coli 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	14	14	14	14	14	14	14	14	14	15	16	17
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%

Drinking water scheme:

Dimbulah

Year	2021-2022											
Month	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
No. of samples collected	4	4	6	4	4	5	4	4	5	4	4	5
No. of samples collected in which E. coli 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	54	54	54	54	54	54	54	54	54	54	54	54
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%

Drinking water scheme:

Mareeba

Year	2021-2022											
Month	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
No. of samples collected	8	8	11	8	8	10	8	8	11	8	8	10
No. of samples collected in which E. coli 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	106	106	106	106	106	106	106	106	108	106	106	108
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%

Drinking water scheme:

Kuranda

Year	2021-2022											
Month	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
No. of samples collected	8	8	11	8	8	10	10	8	11	8	8	10
No. of samples collected in which E. coli 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	104	104	106	106	106	106	108	108	108	108	108	108
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%

5 Incidents reported to the regulator

There were no water treatment or reticulation incidents reported to the Regulator during the previous water year.

6 Customer complaints

This section discusses details of any complaints received about the drinking water service

Table 5 – Customer complaints about water quality

Scheme	High Pressure	Aerated	Coloured or Dirty Water	Taste and/or Odour	No Water or Low Pressure	Totals
Chillagoe	0	0	1	0	3	4
Dimbulah	0	0	0	0	2	2
Mareeba	3	5	4	0	57	69
Kuranda	2	1	2	0	10	15
Totals	5	6	7	0	72	90

NOTES: The 'No Water' complaints generally relate to main breaks which were all attended to within the time stated in the MSC Customer Service Standards.

7 DWQMP review outcomes

The DWQMP was reviewed, updated and forwarded to the Water Supply Regulator for consideration on the 13th of May 2022.

As requested by the regulator, MSC made further amendments to the DWQMP, these were received on the 25th of July 2022.

Amendments included updates to population, usage and monitoring statistics.

On the 28th of July 2022 the amended DWQMP, Revision 6, dated July 2022 was approved and the Information Notice for the decision was given on the 2nd August 2022.

Reviews must be conducted every 2 years. The next review is due to be completed by the 1st April 2024.

8 DWQMP audit

The last DWQMP audit was 19th April 2021. Audits of the approved DWQMP must be conducted every 4 years. The next audit is due to be completed by the 30th of June 2025.