Drinking Water Service Annual Report

Rockhampton Regional Council

SPID: 493

1 July 2024 to 30 June 2025

Document Management

Report approved by	Manager Fitzroy River Water
Report reviewed by	Senior Environmental Scientist
Report owned by	Water Quality Officer

This report has been prepared in accordance with the Drinking Water Quality Management Plan Report Guidance Notes

Definitions and glossary of terms

ADWG	Australian Drinking Water Guidelines (2011). Published by the National Health and Medical Research Council of Australia
$CaCO_3$	Calcium carbonate
CCTV	Closed-circuit television
DLGWV	Department of Local Government, Water and Volunteers
DOC	Dissolved organic carbon
DWQMP	Drinking Water Quality Management Plan. 2021 approved version
E. coli	*Escherichia coli*, a microorganism that may not directly represent a hazard to human health but indicates the presence of recent faecal contamination.
Event	Means anything that has happened to FRW or FRW's water service that has escalated beyond FRW's ability to control and FRW believe, or are concerned, that public health may be adversely impacted as a result.
FRW	Fitzroy River Water
GWTP	Water treatment plant for the Rockhampton Water Supply Scheme
Incident	Means non-compliance with water quality criteria, e.g. exceeding an ADWG health guideline value and the standards in the Public Health Regulation 2005
L	Litre
LOR	Limit of resolution
LSC	Livingstone Shire Council
mg/L	Milligrams per litre
ML/d	Megalitres per day
MPN/100ml	Most probable number per 100 millilitres
MMWTP	Water treatment plant for the Mount Morgan Water Supply Scheme
mm3/L	Cubic millimetres per litre
N/A	Not applicable
ND	Not detected
NOM	Natural Organic Matter
NTU	Nephelometric turbidity units
PFBS	Perfluorobutane sulfonic acid
PFOA	Perfluorooctanoic acid
PFHxS	Perfluorohexane sulfonate
PFOS	Perfluorooctane sulfonate
PCU	Platinum Color Units
Regulator	The chief executive of the DLGWV is the Regulator under the *Water Supply (Safety and Reliability) Act 2008*
RMIP	Risk Management Improvement Program
RRC	Rockhampton Regional Council
RRR	Residual Risk Rating
SPID	Service provider identification
THM	Trihalomethanes
µg/L	Micrograms per litre
µS/cm	MicroSiemens per centimetre
<	Less than
>	Greater than
°C	Degree Celcius

Table of Contents

List of Tables

List of Figures

1 Introduction

This is the Drinking Water Quality Management Plan (DWQMP) report for Rockhampton Regional Council (RRC) for the financial year 2024-25.

RRC through its commercial unit Fitzroy River Water (FRW) is a registered service provider with identification (SPID) number 493. RRC is operating under an approved DWQMP to ensure consistent supply of safe, high quality drinking water in order to protect public health. This is done through the proactive identification and minimisation of public health-related risks associated with the production and supply of drinking water.

This DWQMP report includes:

- the activities undertaken over the 2024-25 financial year in operating our drinking water service.
- a drinking water quality summary.
- a summary of our performance in implementing the 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 offices.

2 Summary of schemes operated

This report relates to the drinking water supply schemes which RRC owned and operated from 1 July 2024 to 30 June 2025. Table 1 lists the water supply schemes covered in this report.

The direct physical link of localities within the Livingstone Shire Council (LSC) to the Rockhampton Water Supply Scheme (RWSS) means that some LSC communities are partially or fully served by the water infrastructure operated by RRC. Only the performance of water supply schemes for which RRC has ownership, operating and maintenance responsibility, that is, drinking water supplied to RRC ratepayers during this reporting period, is detailed in this report.

Table 1: Summary of schemes

Scheme Name	Water Source	Treatment Process	Treatment Capacity	Serviced Population	Towns Supplied
Rockhampton	Fitzroy River	Pre-oxidation (optional), coagulation, flocculation, sedimentation, filtration, pH correction and disinfection	140ML/d	75394	Rockhampton, Gracemere
Mount Morgan	No. 7 Dam	Coagulation, sedimentation, filtration, pH correction and disinfection	2.6 ML/d	2132	Mount Morgan, Baree

3 DWQMP implementation

The actions undertaken to implement the DWQMP are summarised below.

DWQMP updates

FRW Treatment and Compliance staff meet every month to discuss water (and sewerage) issues. This provides the opportunity to refer to the DWQMP and emphasise the importance of using this plan. The monthly meetings are chaired by the Coordinator Treatment Operations.

One of the key agenda items in these monthly meetings is to report on the water quality performance of the two water supply schemes and the overall management of risks to water quality. The monthly meetings also report on the condition of the water sources (Fitzroy River and No. 7 Dam) and provide an update on projects and strategies that can directly or indirectly affect water quality.

RMIP implementation

Specific improvements to the drinking water services provided by FRW have been achieved through the implementation of the Risk Management Improvement Program (RMIP). Section 10 of the DWQMP outlines 32 identified risks, categorised as follows: eight (8) within the RWSS, ten (10) within the Mount Morgan Water Supply Scheme (MMWSS), and fourteen (14) applicable to the whole system. Of these, 16 risks are classified as high, 13 as medium, and 3 as low. All were considered to represent unacceptable levels of risk due to their moderate Residual Risk Ratings (RRR). Additionally, the program includes components with low residual risk ratings—specifically risk items R20 and MM22—which have been flagged for investigative monitoring. Significant progress has been made during this reporting period to mitigate these risks, as detailed in Table 2.

Table 2: Risk management improvement program implementation status

Risk No.	RRR	Proposed Action	Responsible Officer	Status	Completion Timeframe	Comment
Rockhampton WSS						
R02	H12	Finalise UV Concept Design Report	Manager Water and Wastewater	In progress	1-2 years (by 31/12/2027)	This timeframe for the Design Report is fine. We have the draft now.
R06	L3	Implement a PAC dosing framework – for BGA	Coordinator Treatment Operations	In progress	1-2 years (by 31/12/2027)	Once Ops manual is completed this will be the second stage. Still on target for current timeframe
R08	M6	Undertake Needs Assessment and climate change risk assessment for the Barrage (e.g. height and structure)	Manager Water & Wastewater	In progress	1-2 years (by 31/12/2027)	Stage 1 being finalised. Moving into Stage 2 (Preliminary Evaluation).
R11	M8	UVA online monitoring will be implemented and used to control ACH dosing	Coordinator Treatment Operations	In progress	1-2 years (by 31/12/2027)	Project inception underway. Likely install 25/26 financial year.
R11	M8	Implement rapid toxin testing	Senior Environmental Scientist	In progress	1-2 years (by 31/12/2027)	Work instruction being written
R23	H10	Verify CT at Glenmore WTP	Coordinator Treatment Operations	In progress	1-2 years (by 31/12/2027)	Online CT calculations to be added to SCADA for real time CT value. Timeframe still current
R23	H10	Clean out the Clear Water Tanks when water consumption is low	Coordinator Mech, Elec and Gen Maintenance	Not started	1-2 years (by 31/12/2027)	Clear well clean out is in the planning stages

Table 2: Risk management improvement program implementation status (continued)

R38	M8	Undertake a capacity and functionality check on Glenmore WTP service water system	Coordinator Treatment Operations	Not started	1-2 years (by 31/12/2027)	Project inception underway. Completion ~ end 2025. Note this includes air capacity also.
Mount Morgan WSS						
MM07	L3	Construct and commission the Mount Morgan pipeline	Manager Major Projects	In progress	1-2 years (by 31/12/2027)	Project still on track to be completed by end of 2025
MM27/MM28	H10	Review/repair gap sealing around roof hatches	Coordinator Engineering	Complete	12/04/2024	-
MM27/MM28	H10	Additional training to be provided in the Reservoir Inspection checklist	Coordinator Engineering	Not started	1-2 years (by 31/12/2027)	
MM41	H12	Undertake THM formation potential testing	Senior Environmental Scientist	In progress	1-2 years (by 31/12/2027)	Work instruction being written
MM41	H12	Undertake PAC dosing trials/jar tests to review ability for increased DOC/NOM removal at Glenmore WTP	Coordinator Treatment Operations	In progress	1-2 years (by 31/12/2027)	We now have DOC testing kits onsite.
MM41	H12	Implement in-house THM/TOC/DOC method, increase monitoring frequency and identify fastest turnaround time for external NATA lab for THM analysis	Coordinator Treatment Operations	In progress	1-2 years (by 31/12/2027)	TOC/DOC/THM testing kits onsite.
MM42	H12	Pipe loop study to assess the extent of pH shift in the pipeline	Senior Environmental Scientist	In progress	1-2 years (by 31/12/2027)	Currently underway

Table 2: Risk management improvement program implementation status (continued)

MM42	H12	Prepare a Commissioning Plan for the pipeline	Manager Major Projects	In progress	1-2 years (by 31/12/2027)	Draft commissioning plan has been submitted by contractor; however Council have provided substantial comments back which still require further updates.
MM42	H12	Acceptable water quality limits / specification to be developed	Senior Environmental Scientist	Completed	28/05/2025	-
MM43	M6	Implement sodium hypochlorite testing program (% strength)	Coordinator Treatment Operations	Not started	1-2 years (by 31/12/2027)	
Whole of System / All Schemes						
R25 / MM27	H10	Repair roof of identified high risk reservoirs from 2024 DWQMP Audit to prevent animal access or contaminant entry via roof run-off.	Coordinator Engineering	Not started	1-2 years (by 31/12/2027)	Initial repairs to Nagle, MM South and Res C complete. Ongoing minor repairs at MM South and Res C under way. Yaamba Res repairs underway, completion ~ September 2025.
R25 / MM27/MM28	H10	Establish renewal framework to develop triggers for renewals	Coordinator Engineering	Not started	1-2 years (by 31/12/2027)	Condition rating standardisation underway. Integration into renewal framework to be completed over next 12 months.
R25/R26/MM27/MM28	H10	Review budget allocation processes to ensure budget available for reservoir repairs	Coordinator Engineering	Not started	1-2 years (by 31/12/2027)	Submitted as part of 25/26 budget submission. Repairs covered by operational budget submission. Roof replacements under Capital budget delayed due to budget constraints.

Table 2: Risk management improvement program implementation status (continued)

R25/R26/MM27/MM28	H10	Replace roof of any identified high-risk reservoirs from 2024 DWQMP Audit	Coordinator Engineering	In progress.	3-5 years (by 31/12/2030)	Due for completion by end of 29/30 financial year. Design commenced.
R25/R26/MM27/MM28	H10	Standardise reservoir design including roof and hatches	Coordinator Engineering	Not started	3-5 years (by 31/12/2030)	To be addressed as part of roof upgrades.
R30/R32/MM32/MM33	M6	Network water quality assessment to be undertaken, including risks and mitigation strategy (incl. water age, DBPs, temperature)	Coordinator Engineering	In progress	1-2 years (by 31/12/2027)	Scope prepared. To be completed in 25/26 financial year.
R30/MM32	M6	Undertake a review of water sampling locations including consideration of water age	Coordinator Engineering	In progress	1-2 years (by 31/12/2027)	Scope prepared. To be completed in 25/26 financial year.
R33/MM35	M6	Carry out physical security upgrades (e.g. fencing)	Coordinator Engineering	In progress	3-5 years (by 31/12/2030)	In progress. Tender for first stage security fence install to be released within coming weeks. Design of entry upgrades underway. Key / swipe card rollout underway (early stages). Staged rollout, completion 28/29 financial year.
R28/MM30	M6	Develop procedure for hygienic work practices on live assets (including WTP as well as network)	Senior Environmental Scientist	In progress	1-2 years (by 31/12/2027)	Work instruction being written
R33/MM35	M6	Install additional CCTV in identified high risk sites	Coordinator Engineering	Not started	3-5 years (by 31/12/2030)	Not yet started. Part of Physical Security Project. Aim to complete by end of 25/26 financial year.

Table 2: Risk management improvement program implementation status (continued)

R34	M6	Review critical spares for treatment and rechlorination assets	Coordinator Engineering	Not started	3-5 years (by 31/12/2030)	Underway for highest criticality items. Structured review to commence ~ August 2025.
W06	M5	Expand swimlocal to include daily monitoring	Senior Environmental Scientist	In progress	1-2 years (by 31/12/2027)	Currently underway
W08	L3	Improve signage of chemical tanks, develop procedure for chemical deliveries and acceptance	Coordinator Treatment Operations	In progress	1-2 years (by 31/12/2027)	
W13	M6	Undertake 12 months investigative monitoring for metals in the water supply systems to 'scan' for any evidence of deteriorating fittings. Sampling sites (RWSS – 8 sites/month (rotational) MMWSS – 2 sites/month (rotational))	Senior Environmental Scientist	Not started	1-2 years (by 31/12/2027)	Will Start in July 2025

4 Verification monitoring – water quality information and summary

This section discusses the compliance with the water quality criteria. The drinking water verification monitoring program results for the period of 1 July 2024 to 30 June 2025 have been thoroughly assessed against the regulatory water quality criteria outlined in the Water Quality and Reporting Guidelines for a Drinking Water Service. This evaluation included comparisons to the health and aesthetic guideline values stipulated in the current *Australian Drinking Water Guidelines* (ADWG) and the standards set forth in the Public Health Regulation 2018. The drinking water verification monitoring program for this reporting period was carried out as per Section 8.2 of the DWQMP. The reported statistics presented in Tables 3 to 6 do not include results from repeat samples undertaken in response to an elevated result or from event-related or investigative samples. The fluoride data presented in Tables 3 and 4 are for naturally occurring fluoride only, as RRC discontinued fluoridating water on 17 June 2013 in accordance with the *Water Fluoridation Regulation*. Radionuclides testing was conducted during this reporting period, and all results were within ADWG health guideline values. Pesticides were tested in both potable and source water. All pesticide results complied with ADWG health guideline values.

There was one exceedance of the ADWG health guideline value during this reporting period. This occurred in the RWSS at the Glenmore Water Treatment Plant (GWTP), where turbidity in potable water measured 2.3 NTU due to a filter performance issue. Corrective actions were implemented immediately, including filter inspection and operational adjustments, and subsequent verification samples were compliant. Tables 7 and 8 present the reticulation verification monitoring results for the Mount Morgan and Rockhampton Water Supply Schemes. For the MMWSS, all parameters monitored in the reticulation system complied with the ADWG health and aesthetic guideline values, with no exceedances recorded. For the RWSS, all parameters also complied with the ADWG health and aesthetic guideline values. Chlorate concentrations ranged from 0.113 mg/L to 0.331 mg/L, well below the ADWG health guideline of 0.7 mg/L, and chlorite remained below the detection limit of <0.005 mg/L. Colour was consistently below 3 PCU, within the aesthetic guideline of 15 PCU, and free chlorine levels were maintained within the operational range of 0.2–5 mg/L. No exceedances were recorded for any parameter in either reticulation network during the reporting period.

With the exception of the single turbidity exceedance at GWTP, all verification monitoring results for this reporting period complied with the ADWG and the Public Health Regulation 2018.

Cyanobacteria and cyanobacteria toxin

During monthly monitoring of Fitzroy River Source Water 50 raw water samples were collected over the period July 2024 to June 2025, with a maximum total blue-green algae count of 151920 cells/mL. The maximum count of potentially toxic biovolume was 2.1921 mm3/L. The monthly monitoring for No. 7 Dam saw 16 raw water samples collected between the period of July 2024 to the June 2025 with the maximum total blue-green algae counted was 174300 cells/mL. The maximum count of potentially toxic biovolume count was 0.2573 mm3/L. Toxin testing was conducted, there was none recorded.

Table 3: Rockhampton Water Supply Scheme quality performance - verification monitoring Source Water

Source Water Glenmore Water Treatment Plant (***Rockhampton WSS)***							
Data obtained from sampling July 2024 - June 2025							
Parameter	No. of Samples Required	No. of Samples Taken	Minimum	Maximum	Median	Average	Units
Acid Soluble Aluminium	12	16	0.065	0.616	0.195	0.237	mg/L
Arsenic	1	1	0.001	0.001	0.001	0.001	mg/L
Barium	1	3	0.038	0.161	0.161	0.12	mg/L
Beryllium	1	3	<0.001	<0.001	<0.001	0.001	mg/L
Cadmium	1	1	<0.0001	<0.0001	<0.0001	0.0001	mg/L
Calcium	12	15	5	13	9	9	mg/L
Chloride	12	17	15	43	26	27	mg/L
Chromium	1	1	0.004	0.004	0.004	0.004	mg/L
Colour (True)	12	17	20	90	80	73	PCU
Copper	12	12	<0.001	0.008	0.004	0.005	mg/L
Electrical Conductivity @ 25°C	12	17	126	270	187	189	µS/cm
Fluoride	12	17	<0.1	0.1	<0.1	0.1	mg/L
Gross alpha	1	2	<0.1	<0.1	<0.0	0.1	Bq/L
Gross beta	1	2	<0.1	<0.1	<0.1	0.1	Bq/L
Heterotrophic Plate Count	12	12	675	23000	5500	6918.8	CFU/ml
Iron	12	14	0.26	5	2.81	2.62	mg/L
Lead	12	13	<0.001	0.002	<0.001	0.001	mg/L
Magnesium	12	15	4	11	6	6	mg/L
Manganese	12	14	0.021	0.108	0.078	0.065	mg/L
Mercury	1	1	<0	<0	<0	0	mg/L
Nickel	1	1	0.005	0.005	0.005	0.005	mg/L
Nitrate as N	12	17	0.03	0.23	0.09	0.11	mg/L
Nitrite as N	12	17	<0.01	<0.01	<0.01	0.01	mg/L
Pesticides - various*	1	2	-	-	-	-	-
Perfluorobutane sulfonic acid (PFBS)	1	4	<0	<0	<0	0	µg/L
Perfluorohexane sulfonic acid (PFHxS	1	4	<0	<0	<0	0	µg/L
Perfluorooctane sulfonic acid (PFOS)	1	4	<0	<0	<0	0	µg/L
Perfluorooctanoic acid (PFOA)	1	4	<0	<0	<0	0	µg/L
pH Value	12	17	6.7	7.7	7.3	7.2	pH Unit
Potassium	12	15	2	6	4	4	mg/L
Selenium	1	3	<0	<0	<0	0	mg/L
Sodium	12	15	13	24	21	20	mg/L
Sulfate as SO4 - Turbidimetric	12	17	<1	7	4	4	mg/L
Total Alkalinity as CaCO3	12	17	30	82	50	52	mg/L
Total Blue-Green Algae	-	17	0	36370	750	4745	cells/ml
Total Coliforms	12	12	1299.7	77010	3262.5	11203.2	MPN/100ml
Total Dissolved Solids @180°C	12	17	96	253	173	183	mg/L
Total Hardness as CaCO3	12	17	27	80	42	45	mg/L
Total Organic Carbon	4	7	8	14	12	11	mg/L
Turbidity	12	17	3.2	348	49.5	100.87	NTU
Zinc	12	13	<0.005	0.081	0.008	0.014	mg/L

**110 different types of pesticides were tested in the source water*

Table 4: Rockhampton Water Supply Scheme quality performance – verification monitoring Potable Water

Potable Water Glenmore Water Treatment Plant (***Rockhampton WSS***)										
Data obtained from sampling July 2024 - June 2025										
Parameter	No. of Samples Required	No. of Samples Taken	Minimum	Maximum	Median	Average	ADWG Value		No. of Exceedances	Units
							Health	Asthetic		
Acid Soluble	12	12	0.007	0.024	0.013	0.014	No limit	0.2	0	mg/L
Arsenic	1	1	<0.001	<0.001	<0.001	0.001	0.01	No limit	0	mg/L
Barium	1	3	0.018	0.028	0.018	0.021	2	No limit	0	mg/L
Beryllium	1	3	<0.001	<0.001	<0.001	0.001	0.06	No limit	0	mg/L
Cadmium	1	1	<0.0001	<0.0001	<0.0001	0.0001	0.002	No limit	0	mg/L
Calcium	12	14	8	14	10	11	No limit	No limit	0	mg/L
Chlorate*	0	13	<0.005	0.331	<0.005	0.072	0.7	No limit	0	mg/L
Chloride	12	14	24	43	34	35	No limit	250	0	mg/L
Chlorite*	0	13	<0.005	0.219	<0.005	0.022	0.8	No limit	0	mg/L
Chromium	1	1	<0.001	<0.001	<0.001	0.001	0.05	No limit	0	mg/L
Colour (True)	12	14	2	6	2	3	No limit	15	0	PCU
Copper	12	13	0.001	0.019	0.003	0.004	2	1	0	mg/L
Electrical Conductivity @ 25°C	12	14	161	283	220	224	No limit	No limit	0	µS/cm
Fluoride	12	14	<0.1	0.1	<0.1	0.1	1.5	No limit	0	mg/L
Iron	12	14	<0.05	<0.05	<0.05	0.05	No limit	0.3	0	mg/L
Lead	12	13	<0.001	<0.001	<0.001	0.001	0.005	No limit	0	mg/L
Magnesium	12	14	5	11	7	7	No limit	No limit	0	mg/L
Manganese	12	14	<0.001	0.03	0.002	0.006	0.1	0.05	0	mg/L
Mercury	1	1	<0	<0	<0	0	0.001	No limit	0	mg/L
Nickel	1	1	0.001	0.001	0.001	0.001	0.02	No limit	0	mg/L
Nitrate as N	12	14	0.03	0.23	0.09	0.1	50	No limit	0	mg/L
Nitrite as N	12	14	<0.01	<0.01	<0.01	0.01	3	No limit	0	mg/L
Pesticides - various*	1	2	-	-	-	-	various	various	0	-
PFBS	1	4	<0	<0	<0	0	1	No limit	0	µg/L
PFHxS	1	4	<0	<0	<0	0	0.03	No limit	0	µg/L
PFOS	1	4	<0	<0	<0	0	0.008	No limit	0	µg/L
PFOA	1	4	<0	<0	<0	0	0.2	No limit	0	µg/L
pH Value	12	14	6.7	7.8	7.4	7.4	No limit	6.5-8.5	0	pH Unit
Potassium	12	14	3	6	3	4	No limit	No limit	0	mg/L
Selenium	1	3	<0	<0	<0	0	0.004	No limit	0	mg/L
Sodium	12	14	13	24	21	21	No limit	180	0	mg/L
Sulfate as SO4 - Turbidimetric	12	14	1	6	3	3	500	250	0	mg/L
Total Alkalinity as CaCO3	12	14	35	72	48	53	No limit	No limit	0	mg/L
Total Dissolved Solids @180°C	12	14	96	164	138	136	No limit	600	0	mg/L
Total Hardness as CaCO3	12	14	40	76	52	55	No limit	200	0	mg/L
Total Organic Carbon	4	4	3	5	4	4	No limit	No limit	0	mg/L
Total THMs	4	5	0.021	0.065	0.04	0.04	0.25	No limit	0	mg/L
Turbidity	12	14	<0.10	2.3	0.2	0.38	<1 NTU	5 NTU	1	NTU
Zinc	12	13	<0.005	0.01	<0.005	0.005	No limit	3	0	mg/L

**88 different types of pesticides were tested in the potable water*

Table 5: Mount Morgan Water Supply Scheme quality performance – verification monitoring Source Water

Source Water Mount Morgan Treatment Plant (***Mount Morgan WSS)***							
Data obtained from sampling July 2024 - June 2025							
Parameter	No. of Samples Required	No. of Samples Taken	Minimum	Maximum	Median	Average	Units
Acid Soluble Aluminium	12	14	<0.005	0.2	0.029	0.062	mg/L
Arsenic	1	1	<0.001	<0.001	<0.001	0.001	mg/L
Barium	1	3	0.008	0.01	0.008	0.009	mg/L
Beryllium	1	3	<0.001	<0.001	<0.001	0.001	mg/L
Cadmium	1	1	<0.0001	<0.0001	<0.0001	0.0001	mg/L
Calcium	12	14	7	16	10	10	mg/L
Chloride	12	14	15	28	18	20	mg/L
Chromium	1	1	<0.001	<0.001	<0.001	0.001	mg/L
Colour (True)	12	14	25	100	40	51	PCU
Copper	12	13	<0.001	0.009	0.004	0.004	mg/L
Electrical Conductivity @ 25°C	12	14	125	234	164	165	µS/cm
Fluoride	12	14	<0.1	<0.1	<0.1	0.1	mg/L
Gross alpha	1	2	<0.1	<0.1	<0.0	0.1	Bq/L
Gross beta	1	2	<0.1	<0.1	<0.1	0.1	Bq/L
Heterotrophic Plate Count	12	13	655	33500	8500	10631.9	CFU/mL
Iron	12	14	0.12	2.51	0.66	0.86	mg/L
Lead	12	13	<0.001	0.001	<0.001	0.001	mg/L
Magnesium	12	14	5	8	6	6	mg/L
Manganese	12	14	0.041	0.524	0.068	0.12	mg/L
Mercury	1	1	<0	<0	<0	0	mg/L
Nickel	1	1	<0.001	<0.001	<0.001	0.001	mg/L
Nitrate as N	12	14	<0.01	0.19	0.03	0.06	mg/L
Nitrite as N	12	14	<0.01	0.03	<0.01	0.01	mg/L
Pesticides - various*	1	2	-	-	-	-	-
Perfluorobutane sulfonic acid (PFBS)	1	4	<0	<0	<0	0	µg/L
Perfluorohexane sulfonic acid (PFHxS)	1	4	<0	<0	<0	0	µg/L
Perfluorooctane sulfonic acid (PFOS)	1	4	<0	<0	<0	0	µg/L
Perfluorooctanoic acid (PFOA)	1	4	<0	<0	<0	0	µg/L
pH Value	12	14	6.7	7.9	7.3	7.4	pH Unit
Potassium	12	14	2	3	2	2	mg/L
Selenium	1	3	<0	<0	<0	0	mg/L
Sodium	12	14	11	20	14	15	mg/L
Sulfate as SO4 - Turbidimetric	12	14	<1	3	2	2	mg/L
Total Alkalinity as CaCO3	12	14	42	81	54	57	mg/L
Total Blue-Green Algae	-	16	590	174300	6435	33528	cells/mL
Total Coliforms	12	13	866.4	98040	6867	26168.1	MPN/100mL
Total Dissolved Solids @180°C	12	14	90	151	115	119	mg/L
Total Hardness as CaCO3	12	14	36	73	48	48	mg/L
Total Organic Carbon	4	4	10	12	11	11	mg/L
Turbidity	12	14	1.7	53.1	3.6	11.46	NTU
Zinc	12	13	<0.005	0.03	0.006	0.009	mg/L

**110 different types of pesticides were tested in the source water*

Table 6: Mount Morgan Water Supply Scheme quality performance – verification monitoring Potable Water

Potable Water Mount Morgan Water Treatment Plant (***Mount Morgan WSS***)										
Data obtained from sampling July 2024 - June 2025										
Parameter	No. of Samples Required	No. of Samples Taken	Minimum	Maximum	Median	Average	ADWG Value		No. of Exceedances	Units
							Health	Asthetic		
Acid Soluble Aluminium	12	12	0.013	0.039	0.022	0.025	No limit	0.2	0	mg/L
Arsenic	1	1	<0.001	<0.001	<0.001	0.001	0.01	No limit	0	mg/L
Barium	1	3	0.008	0.011	0.008	0.009	2	No limit	0	mg/L
Beryllium	1	3	<0.001	<0.001	<0.001	0.001	0.06	No limit	0	mg/L
Cadmium	1	1	<0.0001	<0.0001	<0.0001	0.0001	0.002	No limit	0	mg/L
Calcium	12	14	8	16	10	10	No limit	No limit	0	mg/L
Chlorate	0	7	0.04	0.137	0.069	0.077	0.7	No limit	0	mg/L
Chloride	12	14	17	25	22	21	No limit	250	0	mg/L
Chlorite	0	7	<0.005	<0.005	<0.005	0.005	0.8	No limit	0	mg/L
Chromium	1	1	<0.001	<0.001	<0.001	0.001	0.05	No limit	0	mg/L
Colour (True)	12	14	<1	5	2	2	No limit	15	0	PCU
Copper	12	13	<0.001	0.003	0.002	0.002	2	1	0	mg/L
Electrical Conductivity @ 25°C	12	14	343	434	373	375	No limit	No limit	0	µS/cm
Fluoride	12	14	<0.1	0.1	<0.1	0.1	1.5	No limit	0	mg/L
Iron	12	14	<0.05	0.06	<0.05	0.05	No limit	0.3	0	mg/L
Lead	12	13	<0.001	<0.001	<0.001	0.001	0.005	No limit	0	mg/L
Magnesium	12	14	4	8	6	6	No limit	No limit	0	mg/L
Manganese	12	14	<0.001	0.012	0.002	0.004	0.1	0.05	0	mg/L
Mercury	1	1	<0	<0	<0	0	0.001	No limit	0	mg/L
Nickel	1	1	<0.001	<0.001	<0.001	0.001	0.02	No limit	0	mg/L
Nitrate as N	12	14	<0.01	0.42	0.03	0.08	50	No limit	0	mg/L
Nitrite as N	12	14	<0.01	<0.01	<0.01	0.01	3	No limit	0	mg/L
Pesticides - various*	1	2	-	-	-	-	various	various	0	-
PFBS	1	4	<0	<0	<0	0	1	No limit	0	µg/L
PFHxS	1	4	<0	<0	<0	0	0.03	No limit	0	µg/L
PFOS	1	4	<0	<0	<0	0	0.008	No limit	0	µg/L
PFOA	1	4	<0	<0	<0	0	0.2	No limit	0	µg/L
pH Value	12	14	6.9	8	7.5	7.5	No limit	6.5-8.5	0	pH Unit
Potassium	12	14	2	3	2	2	No limit	No limit	0	mg/L
Selenium	1	3	<0	<0	<0	0	0.004	No limit	0	mg/L
Sodium	12	14	55	68	60	61	No limit	180	0	mg/L
Sulfate as SO4 - Turbidimetric	12	14	65	87	72	74	500	250	0	mg/L
Total Alkalinity as CaCO3	12	14	57	105	74	76	No limit	No limit	0	mg/L
Total Dissolved Solids @180°C	12	14	195	269	220	222	No limit	600	0	mg/L
Total Hardness as CaCO3	12	14	34	68	50	48	No limit	200	0	mg/L
Total Organic Carbon	4	4	3	6	4	4	No limit	No limit	0	mg/L
Total THMs	4	4	0.057	0.094	0.084	0.08	0.25	No limit	0	mg/L
Turbidity	12	14	<0.10	0.5	0.15	0.18	<1 NTU	5 NTU	0	NTU
Zinc	12	13	<0.005	0.01	<0.005	0.006	No limit	3	0	mg/L

**88 different types of pesticides were tested in the potable water*

Table 7: Rockhampton Water Supply Scheme – *Reticulation*

Potable Water Reticulation (***Rockhampton WSS***)										
Data obtained from sampling July 2024 - June 2025										
Parameter	No. of Samples Required	No. of Samples Taken	Minimum	Maximum	Median	Average	ADWG Value		No. of Exceedances	Units
							Health	Asthetic		
Chlorate	4	4	0.113	0.331	0.169	0.196	0.7	No Value	0	mg/L
Chlorite	4	4	<0.005	<0.005	<0.005	0.005	0.8	No Value	0	mg/L
Colour (True)	156	220	<0	3	0	0	No Value	15	0	PCU
Electrical Conductivity @ 25°C	156	230	172	985	250	263	No Value	No Value	0	µS/cm
Free Chlorine	416	426	0.16	2.19	0.89	0.89	0.1 - 5	No Value	0	mg/L
pH Value	156	229	5.6	8.4	7.5	7.5	No Value	6.5-8.5	0	pH Unit
Total Trihalomethanes	4	5	0.14	0.233	0.174	0.177	0.25	No Value	0	mg/L
Turbidity	156	218	0.08	4.86	0.25	0.4	<1	5	0	NTU

Table 8: Mount Morgan Water Supply Scheme – *Reticulation*

Potable Water Reticulation (***Mount Morgan WSS***)										
Data obtained from sampling July 2024 - June 2025										
Parameter	No. of Samples	No. of Samples	Minimum	Maximum	Median	Average	ADWG Value		No. of Exceedances	Units
							Health	Asthetic		
Chlorate	2	2	0.222	0.254	0.238	0.238	0.7	No Value	0	mg/L
Chlorite	2	2	<0.005	<0.005	<0.005	0.005	0.8	No Value	0	mg/L
Colour (True)	52	60	<0	<2	0	0	No Value	15	0	PCU
Electrical Conductivity @ 25°C	52	65	319	841	409	430	No Value	No Value	0	µS/cm
Free Chlorine	104	106	0.03	1.48	0.72	0.72	0.1 - 5	No Value	0	mg/L
pH Value	52	65	5.6	8.1	7.4	7.4	No Value	6.5-8.5	0	pH Unit
Total Trihalomethanes	2	3	0.111	0.159	0.132	0.134	0.25	No Value	0	mg/L
Turbidity	52	60	0.08	3.43	0.3	0.5	<1	5	0	NTU

Table 9: Rockhampton Water Supply Scheme – *E. coli* performance with annual value

Rockhampton Water Supply Scheme												
Month	July 2024	Aug 2024	Sept 2024	Oct 2024	Nov 2024	Dec 2024	Jan 2025	Feb 2025	Mar 2025	Apr 2025	May 2025	June 2025
No. of samples collected	45	45	45	36	36	36	45	47	45	37	37	45
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	371	416	461	479	479	479	477	488	497	489	490	499
No. of failures for previous 12 month period	1	1	1	1	1	1	0	0	0	0	0	0
% of samples that comply	99.7%	99.8%	99.8%	99.8%	99.8%	99.8%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Compliance with 98% annual value	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES

Table 10: Mount Morgan Water Supply Scheme – *E. coli* performance with annual value

Mount Morgan Water Supply Scheme												
Month	July 2024	Aug 2024	Sept 2024	Oct 2024	Nov 2024	Dec 2024	Jan 2025	Feb 2025	Mar 2025	Apr 2025	May 2025	June 2025
No. of samples collected	15	15	15	12	12	12	15	12	15	12	12	15
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	127	142	157	163	163	163	161	160	162	159	159	162
No. of failures for previous 12 month period	1	1	1	1	1	1	0	0	0	0	0	0
% of samples that comply	99.2%	99.3%	99.4%	99.4%	99.4%	99.4%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Compliance with 98% annual value	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES

5 Incidents reported to the Regulator.

For this reporting period, there were six incidents reported to the Regulator as required under Sections 102 or 102A of the *Water Supply (Safety and Reliability) Act 2008.*

Report date	Scheme / location	Parameter / issue	Immediate corrective actions and Preventive actions
13 September 2024	Rockhampton	Missed sampling	Data has been inputted into SwimsLocal data base and is doubled checked to ensure all sampling requirements are met
2 October 2024	Rockhampton	A positive result for pesticides was identified	Sampling of potable water was enacted to ensure that treatment processes are working. Pesticide testing has moved from yearly to quarterly.
20 November 2024	Rockhampton/ Mount Morgan	Missed sampling	External labatory was contacted as there was a wrong code being used which made the testing of metals
26 November 2024	Rockhampton	High chlorine event	High chlorine (3.98 mg/L) was detected within the RWSS. Installation of additional depolox units at Agnes St reservoir.
26 January 2025	Rockhampton	High NTU & metals event	A reservoir at Agnes St ran low and flushed dirty water into network. New sensors fitted at reservoir and maintenance schedule refined.
12 February 2025	Rockhampton	NTU >1 at Glenmore treatment plant	An issue with coagulation issue happened at Glenmore treatment plant due to programming issue. The SCADA system was debugged, and additional training was provided to all staff members.

6 Customer complaints

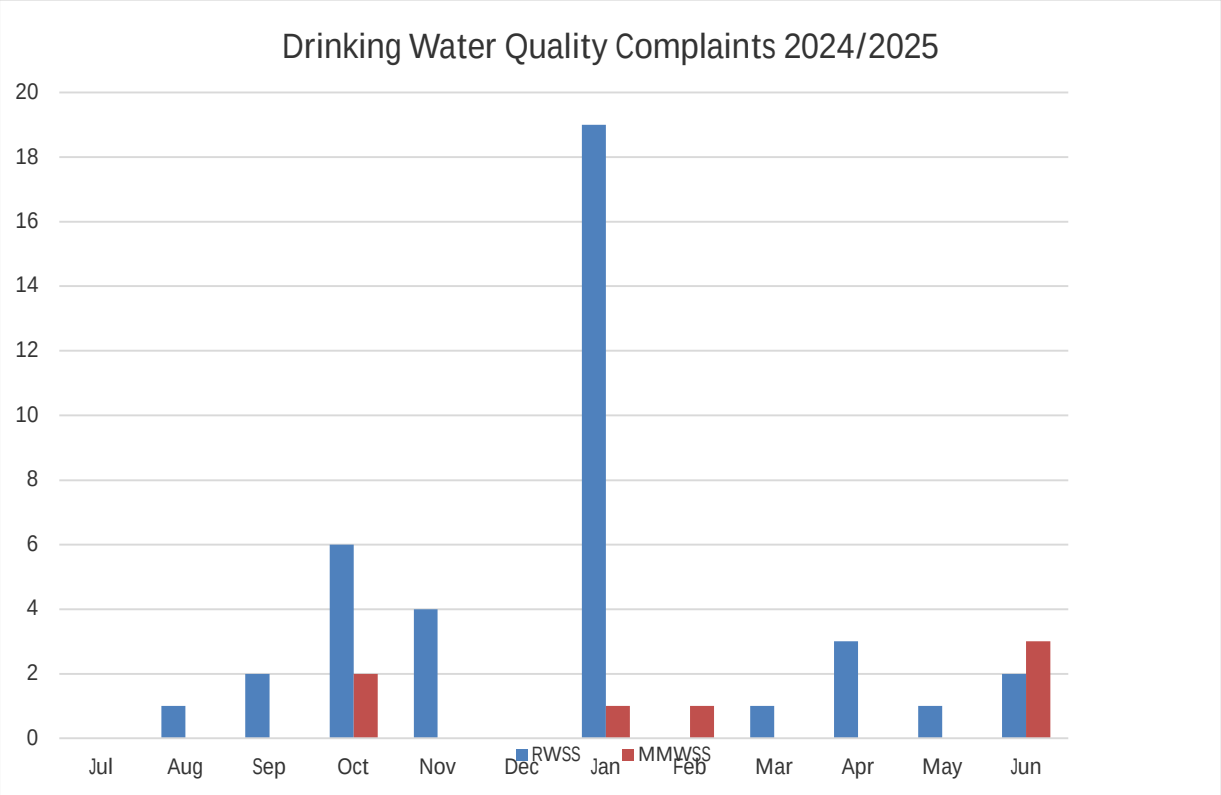
Rockhampton Regional Council is required to report on the number of drinking water quality complaints, general details of complaints and the responses undertaken.

Table 11 and Figure 1 provide a breakdown of the customer complaints relating to drinking water quality during this reporting period.

Table 11: Customer complaints about water quality

Scheme	Health concern	Taste and/or odour	Appearance and/or discoloured water	Total
Rockhampton	**0**	**2**	**37**	**39**
Mount Morgan	**0**	**5**	**2**	**7**
Total	**0**	**7**	**39**	**46**

Figure 1: Drinking water quality complaints received between 1 July 2024 and 30 June 2025 for the Rockhampton and Mount Morgan water supply schemes.



Possible health concern

Occasionally, customers report concerns that their drinking water may be linked to an illness they are experiencing. FRW investigates all such complaints, which typically involves sampling at the customer's tap and the nearest reticulation point for E. coli and conducting general physico-chemical testing. In addition, FRW maintains regular communication with Queensland Health to receive updates on any reports of suspected waterborne disease. During this reporting period, no confirmed cases of illness were identified as being associated with drinking water supplied from the Rockhampton or Mount Morgan water supply schemes.

Taste and/or odour.

During the reporting period, a total of 7 customer complaints were received regarding unfavourable taste and/or odour in the water supply. Of these, 2 complaints originated from the RWSS, and 5 complaints were reported from the MMWSS. The complaints in Rockhampton were isolated and investigated, with no underlying water quality issues identified. In Mount Morgan, taste and odour complaints were minor and typically associated with localised network conditions. All water quality testing confirmed that parameters remained within ADWG health guideline values throughout the reporting period.

Appearance and/or discoloured water

During the reporting period, a total of 39 customer complaints were received regarding water appearance and/or discolouration. Of these, 37 complaints originated from the RWSS and 2 complaints were reported from the MMWSS.

The majority of appearance complaints in Rockhampton were linked to network disturbances, including flushing activities and maintenance works. A significant spike occurred in January 2025, following an incident on 26 January, when the Agnes Street reservoir ran low, causing discoloured water to enter the network. This issue was addressed by installing new sensors at the reservoir and refining the maintenance schedule to prevent recurrence. Other appearance complaints were associated with galvanised pipes within the network. FRW responded promptly to each complaint by flushing water mains to clear or refresh the supply and restore normal water quality. Additional water quality testing was carried out as required to confirm that all parameters remained within the expected range and that water quality complied with the ADWG health guideline values. These actions ensured that any disruptions were effectively managed and promptly resolved.

7 DWQMP review outcomes

A review of the Drinking Water Quality Management Plan (DWQMP) was completed in February 2025 to ensure the plan remains current and relevant to the operation of the drinking water service. One of the key drivers for this review was the upcoming commissioning of the Mount Morgan pipeline, scheduled to come online in late 2025.

To support this process, Bligh Tanner was engaged to assist with the review, providing specialist expertise to ensure the DWQMP continues to meet regulatory requirements and reflects operational changes within the water supply schemes. The review was conducted by:

- Chris Dunglison, Water Quality Officer
- Sean Hilton, Bligh Tanner, Associate Director, Water and Environment

- Dan Toon, Manager Water and Wastewater

Amendments to the DWQMP were approved by the Regulator in May 2025.

A summary of the outcomes of the review and how issues or changes raised in the review were actioned is provided in this section.

Table 12: DWQMP review outcomes

DWQMP Section	Findings	Outcomes	Status of actions	Responsible Officer
1 Registered service details	No changes to service provider or operator.	Not applicable.	Not applicable.	Not applicable.
2 Details of drinking water scheme infrastructure	Mount Morgan WTP refurbished and recommissioned. New Mount Morgan pipeline project added. Glenmore WTP capacity increased to 140 ML/d. Updated schematics and asset tables.	Infrastructure tables and schematics updated Pipeline integration documented. WTP capacities revised.	Completed and reflected in Version 8.	Coordinator Engineering, Water Services Manager
3 Catchment and Water Quality Information	Expanded descriptions of Fitzroy and Dee River catchments. New water quality data (e.g. pesticides, cyanobacteria, THMs). More detailed risk characterisation.	Catchment protection and water quality tables updated. Cyanobacteria and pesticide data included. New figures and tables added.	Completed and included in Section 3 of Version 8.	Water Quality Officer, Senior Environmental Scientist
4 Hazard identification and Risk Assessment	New risks introduced by pipeline and booster stations. Chlorine dosing and long detention time risks addressed.	- Risk register updated. - New CCPs defined for pipeline dosing. - Additional hazards added.	Completed and documented in Section 4–5.	Risk Management Team
5 Managing Risks	New maintenance requirements for pipeline and booster stations. Updated CCP limits for chlorination. UV disinfection added at Mount Morgan.	O&M manuals revised. CCP limits updated. UV system integrated into procedures.	Completed and reflected in Section 5.	Coordinator Engineering, Coordinator Treatment Operations

6 Incidents, Emergencies and corrective action	No structural changes, but updated contact details and emergency response triggers.	Emergency contact list updated. Chlorine residual alarms and interlocks reviewed.	Completed.	Water Quality Officer, Coordinator Treatment Operations
7 Service Wide Support – Information Management	No changes.	Not applicable.	Not applicable.	Not applicable
8 Operational and Verification Monitoring Programs	New monitoring points for pipeline and booster stations. Updated SCADA integration. UV and chlorine residual monitoring at Mount Morgan.	Operational monitoring program revised. SCADA alarms and interlocks updated.	Completed and reflected in Section 8.	Water Quality Officer, Coordinator Treatment Operations
9 Supporting Programs	Staff training expanded.	Training and awareness programs updated.	Completed.	Water Quality Officer, Coordinator Treatment Operations
10 Risk Management Improvement Program	New actions added for pipeline commissioning, UV disinfection, and SCADA upgrades.	RMIP revised to include new infrastructure and operational risks.	Completed and included in Section 10.	Risk Management Team
Appendices	Audit recommendations	Audit recommendations implemented.	Completed.	Risk Management Team

8 DWQMP audit findings

The third regular audit of the DWQMP was completed on 19th August 2024 through the engagement of Bligh Tanner, who are Exemplar Global certified drinking water quality management system auditors. The auditor submitted the audit report to the Regulator on 23rd August 2024. The purpose of the audit was to:

- verify whether the monitoring and performance data given to the regulator under the plan is accurate
- assess the providers compliance with the plan and the conditions, and
- assess the plan's relevance to the water service

The findings of the audit were that FRW was non-conforming in 8 of the 77 items assessed.

A summary of the auditor's findings includes:

- there was no major noncompliance to impact public health
- the operation of the Glenmore WTP was excellent, and the water quality is of very high standard

- the DWQMP requires rewriting to Version 8, including updates to process descriptions, Critical Control Points (CCPs), and hazard identification
- a reservoir roof and overflow integrity program has been initiated to address structural and contamination risks
- explicit controls and monitoring for chlorine dioxide (ClO_2), chlorate, and chlorite have been implemented to ensure compliance and safety
- verification monitoring schedules need to be confirmed and maintained over the Christmas period to ensure continuity
- document control processes are being strengthened to improve traceability, versioning, and audit readiness

Several improvement opportunities identified during the 2024 DWQMP audit have been incorporated into the latest revision of the DWQMP (2025). These updates include a full rewrite of the DWQMP to better document treatment processes and define Critical Control Points (CCPs), along with a more robust risk assessment that now includes chlorite, chlorate, and chlorine dioxide hazards. A reservoir roof and overflow integrity program has been initiated to address structural vulnerabilities and reduce contamination risks. Verification monitoring schedules have been strengthened to ensure sampling continuity over the Christmas period, and document control systems have been hardened to improve version tracking and regulatory compliance. These enhancements reflect Fitzroy River Water's ongoing commitment to continuous improvement and the delivery of safe, reliable drinking water to the community.