



Drinking Water Quality  
Management Plan Report 2024/2025

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## 1. INTRODUCTION

Balonne Shire Council is a registered water service provider (SPID 6) providing drinking water services to approximately 9,000 customers. Balonne Shire Council services an area of 31,104 km<sup>2</sup>, and with an estimated population of 4,334 people (Australian Bureau of Statistics, 2021 census). We supply potable water to 6 separate drinking water schemes in St George, Dirranbandi, Bollon, Thallon, Hebel and Mungindi as shown in Figure 1.

The township of St George also has a non-potable water scheme (Dual Reticulation). As this water is non-potable, the Act provisions do not apply to this part of the scheme, and the water quality for this scheme is not discussed in this report.



FIGURE 1: BALONNE SHIRE COUNCIL: LOCATION OF WATER SUPPLY SCHEMES

As required under the *Water Supply (Safety and Reliability) Act 2008* (the Act), Balonne Shire Council developed a drinking water quality management plan (DWQMP) that met the requirements of the Act.

This report is a regulatory requirement that details how Council has implemented the DWQMP and provides details of the verification monitoring undertaken in our drinking water schemes.

The structure of this report follows the requirements of s142 of the Act.

## 2. SUMMARY OF SCHEMES OPERATED

TABLE 1: SUMMARY OF SCHEMES

Scheme	Water Source	Treatment processes	Treatment capacity	Towns supplied
St George	GAB Bore	N/A	N/A	St George
Dirranbandi	Balonne River /GAB Bore	Flocculation, Clarification, Filtration, Closed-circuit Cooling, Disinfection	1.0 ML/day	Dirranbandi
Bollon	GAB Bore	N/A	N/A	Bollon
Thallon	GAB Bore	N/A	N/A	Thallon
Hebel	GAB Bore	N/A	N/A	Hebel
Mungindi	Barwon River	Treated water provided by Moree Plains Shire Council	N/A	Mungindi

## 3. ACTIONS TO IMPLEMENT THE PLAN

The Balonne Shire Council DWQMP describes how we operate the drinking water services for each of the 6 drinking water schemes and details the operational steps that we take to ensure that our customers receive safe drinking water.

During 2024-2025 Balonne Shire Council operated the schemes as described, implementing the operational monitoring program, taking actions to ensure water quality targets are met, and undertaking verification monitoring for all schemes (detailed in Section 8).

Council operators ensured the treatment processes operated as described as in the DWQMP.

*Further, we continued to progress items that had been identified in the Risk Management Improvement Program (RMIP) to ensure that we continually improved our processes, and the water quality to our customers. This includes working on actions that were identified in a 2021 Risk Assessment review.*

Notable improvements that have been undertaken include:

### 1) All Locations

- Asset condition assessments undertake in conjunction with SWQWSA. Providing alignment of future capital works.
- SOP Review ongoing.
- Incident reporting training undertaken on an annual basis.
- SWIM Local data collection system training.
- Continue the composition of site specific Standard Operating Procedures.
- Audit of DWQMP completed, with good feedback provided to Council.

### 2) St George

- Finalisation of Smart Metering business case – preparing to go to market.
- Barlee & Marie Street water main upgrades (AC to PVC).

### 3) Dirranbandi

- Designs completed for upgrade of Water Treatment Plant Switchboard with installation to occur in 2025/26 financial year.
- 4) Mungindi
  - Installation of a Bore completed.
  - Additional water main upgrades completed to loop all dead ends in reticulation system.
- 5) Bollon
  - Mary Street water main upgrades (PVC).

#### 4. REVIEWS

Council has undertaken a review of its DWQMP Revision O on 16/01/2025, with the next review currently underway. The anticipated delivery date of the review is 01/03/2026. Key changes will be actions highlighted in the recent audit findings.

#### 5. AUDITS

A DWQMP audit was undertaken during the 2024/25 financial year. Virdis Consultants were engaged and completed the audit as part of a SWQWSA joint procurement.

TABLE 2: AUDIT FINDINGS

Compliance Codes	Number of findings	
Compliant	13	<p>The auditor concluded based on the results of the audit that:</p> <ul style="list-style-type: none"><li>• data in the annual report was conveyed accurately</li><li>• the DWMS was largely implemented, however, there were issues with preventive measures and the Risk Management Improvement Plan (RMIP)</li><li>• relevance of the plan accurately reflected the water supply system</li><li>• the objectives of the audit were fulfilled without any issues.</li></ul>
Minor Non-Compliance	2	
Major Non-Compliance	0	
No requirement	1	

##### 5.1 AUDIT FINDINGS

The audit was carried out as described in the *Audit Methodology* of the *DWQMP Regular Audit Report*. The completed Audit Checklist is in the report, which provides the detailed findings for the audit. These findings have been summarised in the following subsections.

##### Accuracy of Monitoring and Performance Data

Compliance grade by component:

- Verification data generated - **Compliant**
- Data Accuracy in the DWQMP (annual) Reports - **Compliant**
- Data Accuracy in periodic reports - **No Requirement**

*There was full compliance noted for this audit area.*

##### Compliance with the Plan and its Conditions

Compliance grade by component:

- Implementation of preventive measures - **Minor Non-Compliance**
- Implementation of operational and maintenance procedures - **Compliant**
- Implementation of process for managing incidents and emergencies - **Compliant**

- Implementation of operational and verification monitoring programs - **Compliant**
- Implementation of the risk management improvement program - **Minor Non-Compliance**
- Reviews undertaken - **Compliant**
- Maintaining records - **Compliant**

*There were two minor non-conformances noted for this audit area.*

#### **Relevance of the Plan**

Compliance grade by component:

- Service description and details of infrastructure - **Compliant**
- Catchment characteristics and water quality information - **Compliant**
- Risk assessment and risk management - **Compliant**
- Incident Management - **Compliant**
- Operational and verification monitoring - **Compliant**
- Improvement Plan - **Compliant**

*There was full compliance noted for this audit area.*

## **5.2 AUDIT CONCLUSIONS**

The audit objectives were completed successfully with a high level of compliance noted.

There was no major non-conformance identified to indicate imminent threat to public health from water quality.

Overall, BSC demonstrated a commitment to maintaining drinking water safety.

Preventive measures have been broadly implemented across the schemes. However, a minor non-compliance was identified in the Mungindi supply arrangement, where the existing water supply agreement with Moree Plains Shire Council lacks defined water quality parameters and clear incident communication protocols. It is recommended that the agreement be updated or supplemented with a standalone operational protocol.

Operational and verification monitoring programs are robust and compliant with DWQMP requirements. Data integrity was confirmed across all reviewed parameters, with accurate and consistent reporting in the annual report. Staff are generally well-trained, and procedures are in place for data collection and incident management. An opportunity for improvement was identified in formalising water quality training within the annual training workshop.

The Operations and Maintenance (O&M) procedures have been updated and are accessible to field staff, reflecting recent investments in procedural clarity and site-specific documentation. However, further consideration should be given to enhancing the mains break/flushing procedure to include chlorine disinfection where appropriate, and to formalising a corporate document management policy.

The Risk Management Improvement Plan (RMIP) element had a minor non-compliance. It requires further development to clearly link actions to the risk assessment, include monitoring responsibilities and timelines, and ensure consistent tracking. Despite this, BSC has demonstrated a commitment to ongoing improvement and risk mitigation.

Addressing the identified gaps and implementing the recommended actions will further enhance the effectiveness and resilience of BSC's drinking water quality system

## 6. DRINKING WATER INCIDENTS

Section 102 of the Act refers to the reporting requirements when a provider is aware that their water quality exceeds the water quality criteria. The water quality criteria refer to the health guideline values in the current version of the Australian Drinking Water Guidelines, plus any other requirement from Queensland Department of Health or the Department of Local Government, Water and Volunteers as stated in their regulations.

There have been Two (2) incidents reported to the Regulator in the 24/25 Financial year.

- Dirranbandi Water Supply – November 2024 – Loss of power supply due to bushfire
- Mungindi Water Supply – January 2025 High Turbidity

## 7. CUSTOMER COMPLAINTS

In 2023/2024 there were a total of 2 customer complaints related to the quality of water in our drinking water supplies. These are included in the table below.

Water Scheme	Number of water Quality Complaints received.	Comments
St George	2	Odour – Complaints of this nature are normal due to the use of GAB bore water supply

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## 8. WATER QUALITY INFORMATION

Balonne Shire Council undertakes water quality monitoring to ensure that the water quality that we provide to our customers is safe. The following pages provide detail of the treated/reticulated water quality for 2024/2025 for the range of parameters tested. These results are extracted from SWIM Local, and statistics calculated from the extracted data for the appropriate time range. Averages including results under limit of detection (LOD) are calculated using 0.5 x LOD and only given if result is over LOD.

### 8.1 WATER QUALITY – ST GEORGE

TABLE 2: TREATED AND RETICULATED WATER QUALITY - ST GEORGE

Parameter	E. coli (MPN/ 100mL)	Turbidity	Chlorate	pH	Total Hardness (as CaCO <sub>3</sub> 11)	Alkalinity	TDI	TDS (mg/L)	Colour (True)	Sodium	Potassium	HPC	Pseudo- monas
ADWG Health Guideline Value	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ADWG Aesthetic Value	NA	5	NA	6.5-8.5	200	NA	NA	600	15	180	NA	NA	NA
Minimum	-	<1	0.03	8.4	8	273	668	537	<8.0	197	2	<10	1
Maximum	-	<1	0.3	8.52	10	290	700	563	<8.0	216	2.2	<10	1
Average	ND	<1	0.12	8.48	9	283	685	550	<8.0	205	2.12	<10	1
Number of Samples	51	3	3	4	5	5	5	5	3	5	5	1	1
Parameter	Calcium	Magnesium	Chloride	Fluoride (mg/L)	Nitrate (mg/L)	Sulphate (mg/L)	Iron (mg/L)	Manganese (mg/L)	Zinc (mg/L)	Aluminium (mg/L)	Copper (mg/L)	THMs (mg/L)	
ADWG Health Guideline Value	NA	NA	NA	1.5	50	NA	NA	0.5	NA	NA	2	0.25	
ADWG Aesthetic Value	NA	NA	250	NA	NA	250	0.3	0.1	311	0.2	1	NA	
Minimum	3	0.03	87	0.34	0.05	47	<0.01	<0.007	0.03	<0.03	0.003	-	
Maximum	4	0.5	88	0.36	0.3	49	<0.01	0.009	0.06	0.03	0.033	-	
Average	3	0.158	87	0.353	0.19	47.6	<0.01	0.0078	0.053	0.03	0.0108	-	
Number of Samples	5	5	5	3	5	5	5	5	4	3	4	-	

There have been no *E. coli* detections, and the rolling compliance value is 100%.



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## 8.2 WATER QUALITY – DIRRANBANDI

TABLE 3: TREATED AND RETICULATED WATER QUALITY - DIRRANBANDI

Parameter	E. coli (MPN/ 100mL)	Turbidity	Chlorate	pH	Total Hardness (as CaCO <sub>3</sub> )	Alkalinity	TDI	TDS (mg/L)	Colour (True)	Sodium	Potassium	HPC	Pseudo- monas
ADWG Health Guideline Value	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ADWG Aesthetic Value	NA	5	NA	6.5-8.5	200	NA	NA	600	15	180	NA	NA	NA
Minimum	-	<1	0.31	8.2	21	135	297	233	<8.0	72	3.5	<10	<1
Maximum	-	<1	0.63	8.49	33	340	675	500	<8.0	190	4.3	<10	<10
Average	ND	<1	0.47	8.354	27	224	464	351	<8.0	126	3.9	<10	-
Number of Samples	54	4	2	5	5	5	5	5	3	5	5	3	2
Parameter	Calcium	Magnesium	Chloride	Fluoride (mg/L)	Nitrate (mg/L)	Sulphate (mg/L)	Iron (mg/L)	Manganese (mg/L)	Zinc (mg/L)	Aluminium (mg/L)	Copper (mg/L)	THMs (mg/L)	
ADWG Health Guideline Value	NA	NA	NA	1.5	50	NA	NA	0.5	NA	NA	2	0.25	
ADWG Aesthetic Value	NA	NA	250	NA	NA	250	0.7	0.1	7	0.2	1	NA	
Minimum	5	1.8	39	0.34	0.34	2.7	<0.01	0.001	0.01	<0.03	<0.002	0.082	
Maximum	8	3.2	66	0.54	3	5	0.091	0.003	0.06	0.05	<0.003	0.082	
Average	7	2.594	50	0.43	1.588	3.74	0.026	0.0016	0.048	0.04	<0.0028	0.082	
Number of Samples	5	5	5	3	5	5	5	5	4	3	4	1	

There have been no *E. coli* detections, and the rolling compliance value is 100%.

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### 8.3 WATER QUALITY - BOLLON

TABLE 4: TREATED AND RETICULATED WATER QUALITY - BOLLON

Parameter	E. coli (MPN/ 100mL)	Turbidity	Chlorate	pH	Total Hardness (as CaCO <sub>3</sub> )	Alkalinity	TDI	TDS (mg/L)	Colour (True)	Sodium	Potassium	HPC	Pseudo- monas
ADWG Health Guideline Value	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ADWG Aesthetic Value	NA	5	NA	6.5-8.5	200	NA	NA	600	15	180	NA	NA	NA
Minimum	-	<1	0.03	7.9	1	156	733	560	<8.0	215	1.5	<10	<1
Maximum	-	<1	0.03	8.6	6	372	766	567	<8.0	225	1.8	EST 35	<10
Average	ND	<1	0.03	8.448	4	324	743	561	<8.0	220	1.66	21.66	-
Number of Samples	9	3	3	6	6	6	5	5	3	5	5	3	2
Parameter	Calcium	Magnesium	Chloride	Fluoride (mg/L)	Nitrate (mg/L)	Sulphate (mg/L)	Iron (mg/L)	Manganese (mg/L)	Zinc (mg/L)	Aluminium (mg/L)	Copper (mg/L)	THMs (mg/L)	
ADWG Health Guideline Value	NA	NA	NA	1.5	50	NA	NA	0.5	NA	NA	2	0.25	
ADWG Aesthetic Value	NA	NA	250	NA	NA	250	0.3	0.1	3	0.2	1	NA	
Minimum	2	<0.03	86	0.4	<0.05	5	0	0.008	0.06	<0.03	<0.00	-	
Maximum	2	0.5	88	0.43	0.3	5.6	0.032	0.012	0.1	<0.03	0.003	-	
Average	2	0.16	87	0.413	0.19	5.16	0.014	0.0102	0.07	<0.03	0.0022	-	
Number of Samples	5	5	5	3	5	5	6	5	4	3	5	-	

There have been no *E. coli* detections, and the rolling compliance value is 100%.

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## 8.4 WATER QUALITY - THALLON

TABLE 5: TREATED AND RETICULATED WATER QUALITY – THALLON

Parameter	E. coli (MPN/ 100mL)	Turbidity	Chlorate	pH	Total Hardness (as CaCO <sub>2</sub> 27)	Alkalinity	TDI	TDS (mg/L)	Colour (True)	Sodium	Potassium	HPC	Pseudo- monas
ADWG Health Guideline Value	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ADWG Aesthetic Value	NA	5	NA	6.5-8.5	200	NA	NA	600	15	180	NA	NA	NA
Minimum	-	<1	0.03	8.3	5	450	852	610	<8.0	244	2.1	<10	<1
Maximum	-	<1	0.3	8.53	6	503	944	670	<8.0	269	2.4	<10	<1
Average	ND	<1	0.21	8.436	6	475	888	635	<8.0	253	2.3	<10	<1
Number of Samples	11	3	3	5	5	5	5	5	3	5	5	2	1
Parameter	Calcium	Magnesium	Chloride	Fluoride (mg/L)	Nitrate (mg/L)	Sulphate (mg/L)	Iron (mg/L)	Manganese (mg/L)	Zinc (mg/L)	Aluminium (mg/L)	Copper (mg/L)	THMs (mg/L)	
ADWG Health Guideline Value	NA	NA	NA	1.5	50	NA	NA	0.5	NA	NA	2	0.25	
ADWG Aesthetic Value	NA	NA	250	NA	NA	250	0.227	0.1	227	0.2	1	NA	
Minimum	2	0.03	56	0.61	0.05	1.4	0.055	0.0008	<0.01	<0.03	<0.002	-	
Maximum	3	0.5	60	0.623	0.3	2	0.1	0.011	<0.06	<0.03	<0.003	-	
Average	2	0.19	58	0.69	0.19	1.68	0.071	0.0076	<0.048	<0.03	<0.0028	-	
Number of Samples	5	4	5	4	5	5	5	5	4	3	4	-	

There have been no *E. coli* detections, and the rolling compliance value is 100%.

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## 8.5 WATER QUALITY - HEBEL

TABLE 6: TREATED AND RETICULATED WATER QUALITY - HEBEL

Parameter	E. coli (MPN/ 100mL)	Turbidity	Chlorate	pH	Total Hardness (as CaCO <sub>3</sub> )	Alkalinity	TDI	TDS (mg/L)	Colour (True)	Sodium	Potassium	HPC	Pseudo- monas
ADWG Health Guideline Value	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ADWG Aesthetic Value	NA	5	NA	6.5-8.5	200	NA	NA	600	15	180	NA	NA	NA
Minimum	-	<1	0.03	8.6	5	379	741	540	<8.0	213	1.3	<10	2
Maximum	-	<1	0.03	8.7	5	393	756	559	<8.0	234	1.4	<10	2
Average	ND	<1	0.03	8.656	5	384	747	545	<8.0	221	1.34	<10	2
Number of Samples	11	3	3	5	5	5	5	5	3	5	5	2	1
Parameter	Calcium	Magnesium	Chloride	Fluoride (mg/L)	Nitrate (mg/L)	Sulphate (mg/L)	Iron (mg/L)	Manganese (mg/L)	Zinc (mg/L)	Aluminium (mg/L)	Copper (mg/L)	THMs (mg/L)	
ADWG Health Guideline Value	NA	NA	NA	1.5	50	NA	NA	0.5	NA	NA	2	0.25	
ADWG Aesthetic Value	NA	NA	250	NA	NA	250	0.15	0.1	15	0.2	1	NA	
Minimum	2	<0.011	66	0.44	0.05	0.3	0.02	0.0009	<0.006	<0.03	<0.002	-	
Maximum	2	0.2	67	0.47	2	1	0.051	0.012	<0.06	<0.03	0.003	-	
Average	2	0.06	66	0.457	0.55	0.48	0.037	0.0086	<0.034	<0.03	0.0028	-	
Number of Samples	5	4	5	3	5	5	5	5	4	3	4	-	

There have been no *E. coli* detections, and the rolling compliance value is 100%.

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## 8.6 WATER QUALITY – MUNGINDI

TABLE 7: TREATED AND RETICULATED WATER QUALITY - MUNGINDI

Parameter	E. coli (MPN/ 100mL)	Turbidity	Chlorate	pH	Total Hardness (as CaCO <sub>3</sub> )	Alkalinity	TDI	TDS (mg/L)	Colour (True)	Sodium	Potassium	HPC	Pseudo- monas
ADWG Health Guideline Value	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ADWG Aesthetic Value	NA	5	NA	6.5-8.5	200	NA	NA	600	19	180	NA	NA	NA
Minimum	-	<1	0.03	8.3	41	230	468	350	<8.0	112	3.4	<10	<1
Maximum	-	<1	0.07	8.39	120	266	544	394	<8.0	120	4.6	<10	<1
Average	ND	<1	0.043	8.328	69	248	501	368	<8.0	117	4.06	<10	<1
Number of Samples	46	4	3	5	5	5	5	5	3	5	5	2	1
Parameter	Calcium	Magnesium	Chloride	Fluoride (mg/L)	Nitrate (mg/L)	Sulphate (mg/L)	Iron (mg/L)	Manganese (mg/L)	Zinc (mg/L)	Aluminium (mg/L)	Copper (mg/L)	THMs (mg/L)	
ADWG Health Guideline Value	NA	NA	NA	1.5	50	NA	NA	0.5	NA	NA	2	0.25	
ADWG Aesthetic Value	NA	NA	250	NA	NA	250	0.19	0.1	19	0.2	1	NA	
Minimum	9	4.9	43	0.37	0.03	4.4	<0.01	0.001	<0.012	<0.03	<0.002	0.18	
Maximum	19	17.6	59	1	46	35	<0.1	0.002	<0.06	<0.03	0.003	0.18	
Average	13	9.14	51	0.777	9.346	12.34	<0.028	0.0014	<0.048	<0.03	0.0028	0.18	
Number of Samples	5	5	5	3	5	5	5	5	4	3	4	1	

There have been no *E. coli* detections, and the rolling compliance value is 100%.