



DSC DWQMP ANNUAL REPORT

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CONTENTS

1.0 INTRODUCTION	1
1.1. Summary of Schemes Operated	1
2.0 ACTIONS TAKEN TO IMPLEMENT THE DWQMP	2
2.1. Risk Management Improvement Program.....	3
Table 2: Diamantina Shire Council Risk Management Improvement Program implementation status.....	3
3.0 WATER QUALITY MONITORING – COMPLIANCE WITH QUALITY CRITERIA	5
3.1. Bedourie Drinking Water Quality Summary 2023- 2024 Financial Year	6
3.2. Birdsville Drinking Water Quality Summary 2023 - 2024 Financial Year	11
3.3. Bedourie and Birdsville ADWG Aesthetic and Health Exceedances	17
3.3.1. Bedourie	17
3.3.2. Birdsville	17
3.4. Summary of Water Quality Within the Schemes	17
3.4.1. Bedourie	17
3.4.2. Birdsville	17
3.5. <i>E.coli</i> Verification and Operational Monitoring.....	18
3.6. Missed Verification and Operational Monitoring	18
4.0 INCIDENTS REPORTED TO THE REGULATOR	19
5.0 CUSTOMER COMPLAINTS REGARDING WATER QUALITY	20
6.0 DWQMP REVIEW OUTCOMES	20
7.0 DWQMP AUDIT FINDINGS	20
8.0 DSC CUSTOMER SERVICE STANDARDS REVIEW	20

TABLES

Table 1: Summary of schemes.....	1
Table 2: Diamantina Shire Council Risk Management Improvement Program implementation status.....	3
Table 3: Bedourie Source Water verification monitoring results.	6
Table 4: Bedourie Distribution System verification monitoring results.....	8
Table 5: Bedourie Distribution System in-house operational monitoring.	10
Table 6: Bedourie <i>E.coli</i> Annual Value compliance table.	10
Table 7: Birdsville Source Water verification monitoring results.	11
Table 8: Birdsville Distribution System verification monitoring results.....	13
Table 9: Birdsville Distribution System in-house operational monitoring.	15
Table 10: Birdsville <i>E.coli</i> Annual Value compliance table.	16
Table 11: Water quality incidents reported to the Regulator for the 2023 - 2024 Financial Year.	19

1.0 INTRODUCTION

This is the Drinking Water Quality Management Plan (DWQMP) Annual Report for Diamantina Shire Council (DSC) for the 2023 -2024 Financial Year. This annual report will assist the Regulator in determining whether the approved DWQMP (including any approval conditions) have been complied with. It also provides a mechanism for service providers to publicly report their performance in managing drinking water quality.

DSC is a registered Service Provider with Identification (SPID) number 42. It operates under an approved DWQMP to ensure a consistent supply of safe, quality drinking water and protect public health. This is done through proactive identification and minimisation of public health-related risks associated with drinking water.

Note that DSC applied for a DWQMP Amendment in October 2023, which was approved in August 2024. However, as this report is for the 2023-2024 Financial Year, it will detail Council's management of the drinking water schemes under the old 2022 DWQMP Amendment, which was in effect during the reporting period.

This annual report includes the following:

- Activities undertaken over the financial year in operating Council's drinking water services;
- A summary of the Bedourie and Birdsville drinking water quality for the 2023-24 Financial Year;
- A summary of Council's performance in implementing the approved DWQMP;
- Incidents reported to the Regulator;
- Customer complaints;
- Review outcomes and audit findings.

This report will be accessible to the public through the DSC website or upon request at the Council office located in Bedourie.

1.1. Summary of Schemes Operated

DSC is a small Drinking Water Service Provider, as defined in the *Water Supply (Safety and Reliability) Act 2008*. Diamantina Shire covers an area of 95,000km² with an overall population of approximately 268 people which swells significantly during the cooler months due to travelling tourists. There are two operational water schemes within the Shire in the towns of Bedourie and Birdsville; the Shire's administration centre is located in Bedourie. Both schemes are characterised by deep artesian bores bringing hot water to the surface under pressure. For both schemes, the only treatment required is cooling. Bedourie's water is sourced from two bores, approximately 400m deep, with water that surfaces at approximately 45°C. Birdsville's bore water is sourced from one 1200m deep bore with water that surfaces at approximately 98°C.

Table 1: Summary of schemes.

Scheme	Water Source	Treatment	Pop. Served	No. Conns	Demand
Bedourie	Artesian Bore Water	Cooling	150	70	281 KL/d
Birdsville	Artesian Bore Water	Cooling	110	70	394 KL/d

2.0 ACTIONS TAKEN TO IMPLEMENT THE DWQMP

The implementation of DSC's DWQMP has provided Council with an operational framework to manage the water supply systems of Bedourie and Birdsville, ensuring greater surety for the supply of safe drinking water for the Shire. The risk management components of the DWQMP have been a priority for DSC in providing a safe and reliable water source for the local population and visitors.

Table 2 below provides a status summary of Diamantina Shire's Risk Management Improvement Program (RMIP). The RMIP is an integral part of the DWQMP as it identifies the main risk factors and mitigation measures associated with Council's drinking water schemes. During the 2023 - 2024 Financial Year, Council completed four of its six RIMP items.

2.1. Risk Management Improvement Program

Table 2: Diamantina Shire Council Risk Management Improvement Program implementation status.

Scheme	Hazard/Hazardous Event	Improvement Actions	Target Date	Comments	Status/Revised Target Date	Responsible Officer
Birdsville	Heating of water in the exposed cooling pond.	The pipe between the cooling pond and ground-level reservoir is to be insulated.	Dec 22	This item has been put on hold. DSC are in the process of upgrading the Birdsville water compound, with a proposal to construct new cooling ponds; once completed, this will address the hazard. A newly revised target date has been set for this project of December 2024, set to coincide with the completion of the cooling pond upgrades.	Ongoing, new target completion date of Dec 2024.	Director of Infrastructure Services.
Birdsville	Elevated Fluoride levels in the source water.	Update the Fluoride factsheet so it is more comprehensible to the general public.	Jun 22	The Fluoride factsheet was updated in April 2023.	Completed.	Director of Infrastructure Services.
Birdsville	Elevated Fluoride levels in the source water.	Continue to inform residents of the elevated Fluoride in Birdsville's source water and undertake biannual verification monitoring.	Dec 23	Verification monitoring was completed in November 2023 and September 2024.	Completed/Ongoing.	Director of Infrastructure Services.
Bedourie & Birdsville	Elevated Gross Alpha, Gross Beta and Uranium levels in the source water.	Radiological monitoring of source water.	Dec 23	Four rounds of external verification monitoring have been conducted for Bedourie and Birdsville. To date, there have been no exceedances of the ADWG aesthetic or health values for these parameters. Council will continue to monitor these parameters at 6-month intervals.	Completed.	Director of Infrastructure Services.
Birdsville	Pathogenic ingress to the distribution system from the cross-connection of untreated river water.	Implementation of monthly operational monitoring for Turbidity.	Dec 23	Operational monitoring has been implemented since July 2018. To date, there have been no exceedances of the ADWG aesthetic value for Turbidity, suggesting no cross-contamination within the distribution system. Council will continue with Monthly Turbidity monitoring.	Completed.	Director of Infrastructure Services.

Scheme	Hazard/Hazardous Event	Improvement Actions	Target Date	Comments	Status/Revised Target Date	Responsible Officer
Birdsville	Pathogenic ingress into the reservoirs.	Operational <i>E.coli</i> and Total Coliform monitoring of new location downstream from the two reservoirs.	Dec 22	Council are yet to commence operational monitoring from this new location.	Ongoing, new completion date of Dec 2024.	Director of Infrastructure Services.

3.0 WATER QUALITY MONITORING – COMPLIANCE WITH QUALITY CRITERIA

Council undertakes monthly, in-house operational testing in Bedourie and Birdsville, in addition to weekly visual inspections of all drinking water infrastructure (bores, reservoirs, cooling ponds etc.). Council also sends out water samples to an external laboratory twice a year as part of its verification monitoring program.

Sections 4.1 and 4.2 below summarises all operational and verification monitoring for the Bedourie and Birdsville schemes undertaken during the reporting period, while Section 4.3 outlines any potential water quality issues encountered by Council.

3.1. Bedourie Drinking Water Quality Summary 2023- 2024 Financial Year

Table 3: Bedourie Source Water verification monitoring results.

Parameters	Units	Samples Tested FY	Summary of Results					ADWG Value			
			Maximum Value	Mean Value	Minimum Values	Std Dev	95 th %	Health	Exceedances	Aesthetic	Exceedances
<i>E.coli</i>	CFU/100mL	4	0	0	0	0	0	1	0		
Total Coliforms	CFU/100mL	4	0	0	0	0	0				
Conductivity	µS/cm	4	886	873.5	862	9.206	884.8				
Dissolved Organic Carbon	mg/L	4	1	1	1	0	1				
Dissolved Oxygen	mg/L	4	10.5	9.35	7.9	1.128	10.485				
pH	mg/L	4	8.3	8.15	8	0.112	8.285			≥6.5 & ≤ 8.5	0
Total Dissolved Solids	mg/L	4	530	510	480	18.708	528.5			600	0
Turbidity	NTU	4	0.5	0.5	0.5	0	0.5			5	0
Aluminium	mg/L	4	0.003	0.0025	0.002	0.0005	0.003			0.2	0
Chloride	mg/L	4	85	79.5	75	4.153	84.55			250	0
Fluoride	mg/L	4	0.7	0.65	0.6	0.05	0.7	1.5	0		
Selenium	mg/L	2	0.001	0.001	0.001	0	0.001	0.01	0		
Sodium	mg/L	4	210	197.5	190	8.292	208.5			180	4
Arsenic	mg/L	2	0.0005	0.0005	0.0005	0	0.0005	0.01	0		
Cadmium	mg/L	2	0.00005	0.00005	0.00005	0	0.00005	0.002	0		
Chromium	mg/L	2	0.005	0.005	0.005	0	0.005	0.05	0		

Parameters	Units	Samples Tested FY	Summary of Results					ADWG Value			
			Maximum Value	Mean Value	Minimum Values	Std Dev	95 th %	Health	Exceedances	Aesthetic	Exceedances
Copper	mg/L	2	0.008	0.0045	0.001	0.0035	0.00765			1	0
Lead	mg/L	2	0.003	0.0016	0.0002	0.0014	0.00286	0.01	0		
Mercury	mg/L	2	0.0001	0.0001	0.0001	0	0.0001	0.001	0		
Nickel	mg/L	2	0.0005	0.0005	0.0005	0	0.0005	0.02	0		
Zinc	mg/L	2	0.013	0.007	0.001	0.006	0.0124	3	0		
Total Iron	mg/L	4	0.15	0.1	0.052	0.0377	0.1455			0.3	0
Soluble Iron	mg/L	4	0.15	0.1	0.05	0.0381	0.1455				
Total Manganese	mg/L	4	0.014	0.01325	0.012	0.000829	0.014	0.5	0	0.1	0
Soluble Manganese	mg/L	4	0.014	0.013	0.011	0.001225	0.014				
Uranium	mg/L	4	0.001	0.001	0.001	0	0.001	0.017	0		
Gross Alpha	Bq/L	4	0.048	0.0345 ± 0.027	0.019	0.0105 ± 0.001	0.0467 ± 0.279			0.5	0
Gross Beta	Bq/L	4	0.07	0.0595 ± 0.041	0.04	0.0086 ± 0.001	0.0694 ± 0.0419			0.5	0
Aesthetic Guideline Exceedance											
Health Guideline Exceedance											

Table 4: Bedourie Distribution System verification monitoring results.

Parameters	Units	Samples Tested FY	Summary of Results					ADWG Value			
			Maximum Value	Mean Value	Minimum Values	Std Dev	95 th %	Health	Exceedances	Aesthetic	Exceedances
<i>E.coli</i>	CFU/100mL	2	0	0	0	0	0	1	0		
Total Coliforms	CFU/100mL	2	0	0	0	0	0				
Conductivity	µS/cm	2	879	865.5	852	13.5	877.65				
Dissolved Organic Carbon	mg/L	2	1	1	1	0	1				
Dissolved Oxygen	mg/L	2	10.8	9.2	7.6	1.6	10.64				
pH	mg/L	2	8.1	8.05	8	0.05	8.095			≥6.5 & ≤ 8.5	0
Total Dissolved Solids	mg/L	2	540	505	470	35	536.5			600	0
Turbidity	NTU	2	0.5	0.5	0.5	0	0.5			5	0
Aluminium	mg/L	2	0.003	0.0025	0.002	0.0005	0.00295			0.2	0
Chloride	mg/L	2	81	77.5	74	3.5	80.65			250	0
Fluoride	mg/L	2	0.7	0.7	0.7	0	0.7	1.5	0		
Selenium	mg/L	1	0.001	0.001	0.001	0	0.001	0.01	0		
Sodium	mg/L	2	210	200	190	10	209			180	2
Arsenic	mg/L	1	0.0005	0.0005	0.0005	0	0.0005	0.01	0		
Cadmium	mg/L	1	0.00005	0.00005	0.00005	0	0.00005	0.002	0		
Chromium	mg/L	1	0.0005	0.0005	0.0005	0	0.0005	0.05	0		
Copper	mg/L	1	0.004	0.004	0.004	0	0.004			1	0

Parameters	Units	Samples Tested FY	Summary of Results					ADWG Value			
			Maximum Value	Mean Value	Minimum Values	Std Dev	95 th %	Health	Exceedances	Aesthetic	Exceedances
Lead	mg/L	1	0.0006	0.0006	0.0006	0	0.0006	0.01	0		
Mercury	mg/L	1	0.0001	0.0001	0.0001	0	0.0001	0.001	0		
Nickel	mg/L	1	0.0005	0.0005	0.0005	0	0.0005	0.02	0		
Zinc	mg/L	1	0.006	0.006	0.006	0	0.006	3	0		
Total Iron	mg/L	2	0.14	0.13	0.12	0.01	0.139			0.3	0
Soluble Iron	mg/L	2	0.13	0.125	0.12	0.005	0.1295				
Total Manganese	mg/L	2	0.014	0.0135	0.013	0.0005	0.01395	0.5	0	0.1	
Soluble Manganese	mg/L	2	0.014	0.014	0.014	0	0.014				
Uranium	mg/L	2	0.001	0.001	0.001	0	0.001	0.017	0		
Gross Alpha	Bq/L	2	0.04 ± 0.029	0.04 ± 0.029	0.04 ± 0.029	0	0.04 ± 0.029			0.5	0
Gross Beta	Bq/L	2	0.048 ± 0.043	0.0425 ± 0.043	0.037 ± 0.043	0	0.0475 ± 0.043			0.5	0
Aesthetic Guideline Exceedance											
Health Guideline Exceedance											

Table 5: Bedourie Distribution System in-house operational monitoring.

Parameters	Units	Sampling Frequency	No. of Samples to be Tested as per DWQMP	No. of Samples Tested in FY	Summary of Results					ADWG Value			
					Max Value	Mean Value	Min Value	STD	95 th Percentile	Health	Exceedances	Aesthetic	Exceedances
<i>E.coli</i>	CFU/100mL	Monthly	36	36	0	0	0	0	0	1	0		
Total Coliforms	CFU/100mL	Monthly	36	33	0	0	0	0	0				
Turbidity	NTU	Monthly	36	12	1.8	1.0167	0.3	0.44	1.64			5	0
Aesthetic Guideline Exceedance													
Health Guideline Exceedance													

Table 6: Bedourie *E.coli* Annual Value compliance table.

Year	1/07/2023 - 30/06/2024												
	Month	July	August	September	October	November	December	January	February	March	April	May	June
Number of samples collected	3	3	3	3	5	3	3	3	3	3	3	3	5
Number of samples collected in which <i>E.coli</i> is detected	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of samples collected in the previous 12-month period	37	37	37	37	39	39	39	39	39	39	39	38	40
Number of failures for the previous 12-month period	0	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%	100.0%
Compliance with 98% annual value	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

3.2. Birdsville Drinking Water Quality Summary 2023 - 2024 Financial Year

Table 7: Birdsville Source Water verification monitoring results.

Parameters	Units	Samples Tested FY	Summary of Results					ADWG Value			
			Maximum Value	Mean Value	Minimum Values	Std Dev	95 th %	Health	Exceedances	Aesthetic	Exceedances
<i>E.coli</i>	CFU/100mL	2	0	0	0	0	0	1	0		
Total Coliforms	CFU/100mL	2	0	0	0	0	0				
Conductivity	µS/cm	2	805	801	797	4	804.6				
Dissolved Organic Carbon	mg/L	2	1	1	1	0	1				
Dissolved Oxygen	mg/L	2	10.7	10.25	9.8	0.45	10.655				
pH	mg/L	2	8.2	8.15	8.1	0.05	8.195			≥6.5 & ≤ 8.5	0
Total Dissolved Solids	mg/L	2	540	510	480	30	537			600	0
Turbidity	NTU	2	0.5	0.5	0.5	0	0.5			5	0
Aluminium	mg/L	2	0.046	0.0235	0.001	0.0225	0.04375			0.2	0
Chloride	mg/L	2	53	52.5	52	0.5	52.95			250	
Fluoride	mg/L	2	1.6	1.6	1.6	0	1.6	1.5	2		
Selenium	mg/L	1	0.001	0.001	0.001	0	0.001	0.01	0		
Sodium	mg/L	2	210	200	190	10	209			180	2
Arsenic	mg/L	1	0.0005	0.0005	0.0005	0	0.0005	0.01	0		
Cadmium	mg/L	1	0.00005	0.00005	0.00005	0	0.00005	0.002	0		

Parameters	Units	Samples Tested FY	Summary of Results					ADWG Value			
			Maximum Value	Mean Value	Minimum Values	Std Dev	95 th %	Health	Exceedances	Aesthetic	Exceedances
Chromium	mg/L	1	0.0005	0.0005	0.0005	0	0.0005	0.05	0		
Copper	mg/L	1	0.001	0.001	0.001	0	0.001			1	0
Lead	mg/L	1	0.0002	0.0002	0.0002	0	0.0002	0.01	0		
Mercury	mg/L	1	0.0001	0.0001	0.0001	0	0.0001	0.001	0		
Nickel	mg/L	1	0.0005	0.0005	0.0005	0	0.0005	0.02	0		
Zinc	mg/L	1	0.005	0.005	0.005	0	0.005	3	0		
Total Iron	mg/L	2	0.15	0.0825	0.015	0.0675	0.14325			0.3	0
Soluble Iron	mg/L	2	0.016	0.012	0.008	0.004	0.0156				
Total Manganese	mg/L	2	0.023	0.021	0.019	0.002	0.0228	0.5	0	0.1	
Soluble Manganese	mg/L	2	0.019	0.015	0.011	0.004	0.0186				
Uranium	mg/L	2	0.001	0.001	0.001	0	0.001	0.017	0		
Gross Alpha	Bq/L	2	0.055± 0.029	0.04 ± 0.0275	0.025± 0.026	0.015 ± 0.0015	0.0535 ± 0.029			0.5	0
Gross Beta	Bq/L	2	0.087± 0.047	0.06 ± 0.043	0.033± 0.039	0.027 ± 0.004	0.0843 ± 0.0466			0.5	0
Aesthetic Guideline Exceedance											
Health Guideline Exceedance											

Table 8: Birdsville Distribution System verification monitoring results.

Parameters	Units	Samples Tested FY	Summary of Results					ADWG Value			
			Maximum Value	Mean Value	Minimum Values	Std Dev	95 th %	Health	Exceedances	Aesthetic	Exceedances
<i>E.coli</i>	CFU/100mL	2	0	0	0	0	0	1	0		
Total Coliforms	CFU/100mL	2	0	0	0	0	0				
Conductivity	µS/cm	2	805	798.5	792	6.5	804.35				
Dissolved Organic Carbon	mg/L	2	1	1	1	0	1				
Dissolved Oxygen	mg/L	2	10.5	10.1	9.7	0.4	10.46				
pH	mg/L	2	8.2	8.1	8	0.1	8.19			≥6.5 & ≤ 8.5	0
Total Dissolved Solids	mg/L	2	550	530	510	20	548			600	0
Turbidity	NTU	2	0.5	0.5	0.5	0	0.5			5	0
Aluminium	mg/L	1	0.001	0.001	0.001	0	0.001			0.2	0
Chloride	mg/L	2	54	54	54	0	54			250	0
Fluoride	mg/L	2	1.6	1.6	1.6	0	1.6	1.5	2		
Selenium	mg/L	1	0.001	0.001	0.001	0	0.001	0.01	0		
Sodium	mg/L	2	200	195	190	5	199.5			180	2
Arsenic	mg/L	1	0.0005	0.0005	0.0005	0	0.0005	0.01	0		
Cadmium	mg/L	1	0.00005	0.00005	0.00005	0	0.00005	0.002	0		
Chromium	mg/L	1	0.0005	0.0005	0.0005	0	0.0005	0.05	0		
Copper	mg/L	1	0.001	0.001	0.001	0	0.001			1	0

Parameters	Units	Samples Tested FY	Summary of Results					ADWG Value			
			Maximum Value	Mean Value	Minimum Values	Std Dev	95 th %	Health	Exceedances	Aesthetic	Exceedances
Lead	mg/L	1	0.0002	0.0002	0.0002	0	0.0002	0.01	0		
Mercury	mg/L	1	0.0001	0.0001	0.0001	0	0.0001	0.001	0		
Nickel	mg/L	1	0.0005	0.0005	0.0005	0	0.0005	0.02	0		
Zinc	mg/L	1	0.001	0.001	0.001	0	0.001	3	0		
Total Iron	mg/L	2	0.015	0.0125	0.01	0.0025	0.01475			0.3	0
Soluble Iron	mg/L	2	0.013	0.0085	0.004	0.0045	0.01255				
Total Manganese	mg/L	2	0.018	0.017	0.016	0.001	0.0179	0.5	0	0.1	
Soluble Manganese	mg/L	2	0.018	0.017	0.016	0.001	0.0179				
Uranium	mg/L	2	0.001	0.001	0.001	0	0.001	0.017	0		
Gross Alpha	Bq/L	2	0.079± 0.035	0.059 ± 0.031	0.039± 0.027	0.02 ± 0.004	0.077 ± 0.0346			0.5	
Gross Beta	Bq/L	2	0.076± 0.042	0.062 ± 0.042	0.048± 0.042	0.014± 0.042	0.0746 ± 0.042			0.5	
Aesthetic Guideline Exceedance											
Health Guideline Exceedance											

Table 9: Birdsville Distribution System in-house operational monitoring.

Parameters	Units	Sampling Frequency	No. of Samples to be Tested as per DWQMP	No. of Samples Tested in FY	Summary of Results					ADWG Value			
					Max Value	Mean Value	Min Value	STD	95 th Percentile	Health	Exceedances	Aesthetic	Exceedances
<i>E.coli</i>	CFU/100mL	Monthly	48	36	0	0	0	0	0	1	0		
Total Coliforms	CFU/100mL	Monthly	48	36	0	0	0	0	0				
Turbidity	NTU	Monthly	48	12	2.3	1.86	1.5	0.256	2.3			5	0
Aesthetic Guideline Exceedance													
Health Guideline Exceedance													

Table 10: Birdsville *E.coli* Annual Value compliance table.

Year	1/07/2023 - 30/06/2024											
Month	July	August	September	October	November	December	January	February	March	April	May	June
Number of samples collected	3	3	3	3	5	3	3	3	3	3	3	5
Number of samples collected in which <i>E.coli</i> is detected	0	0	0	0	0	0	0	0	0	0	0	0
Number of samples collected in the previous 12-month period	37	37	37	37	39	39	39	39	39	39	38	40
Number of failures for the 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	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

3.3. Bedourie and Birdsville ADWG Aesthetic and Health Exceedances

3.3.1. Bedourie

The following ADWG aesthetic exceedances were reported in Bedourie's source water:

- Sodium (verification monitoring; 4 exceedances from 4 samples)

The following ADWG aesthetic exceedances were reported in Bedourie's distribution system:

- Sodium (verification monitoring; 2 exceedances from 2 samples)

There were no ADWG health exceedances identified within the Bedourie scheme during the reporting period.

3.3.2. Birdsville

The following ADWG aesthetic exceedances were reported in Birdsville's drinking water:

- Sodium (verification monitoring; 2 exceedances from 2 samples) – Source Water
- Sodium (verification monitoring; 2 exceedances from 2 samples) – Distribution System

The following ADWG health exceedances were reported in Birdsville's drinking water:

- Fluoride (verification monitoring; 2 exceedances from 2 samples) – Source Water
- Fluoride (verification monitoring; 2 exceedances from 2 samples) – Distribution System

3.4. Summary of Water Quality Within the Schemes

3.4.1. Bedourie

Bedourie's drinking water is not chlorinated, as it generally complies with the ADWG. For the reporting period, the only ADWG exceedances reported within the scheme were for Sodium (aesthetic exceedances). Elevated concentrations of Sodium are common within groundwater supplies. The ADWG aesthetic value for Sodium has been set at 180mg/L, based on the taste threshold for Sodium in water. In terms of health risks associated with the consumption of elevated levels of Sodium, there is evidence linking excess Sodium intake with cardiovascular disease, however, Sodium intake via the drinking water supply only makes a modest contribution when compared with an individual's total intake; therefore, no health guideline value has been set for Sodium concentrations in drinking water. It should also be noted that Bedourie's average Sodium concentration sits at 198 mg/L for the source water and 200 mg/L for the distribution system, which is only slightly above the ADWG aesthetic.

3.4.2. Birdsville

Similar to Bedourie, the Birdsville drinking water supply is not chlorinated, as the water generally complies with the ADWG. Birdsville also reported exceedances of the Sodium ADWG aesthetic in both the source water and distribution system. Like Bedourie, these exceedances are not considered a hazard for the scheme with the average source water concentration found to be 200 mg/L and the average distribution system concentration 195 mg/L, both slightly above the ADWG value.

Regarding ADWG health value exceedances, four Fluoride exceedances were reported within the Birdsville scheme. Elevated Fluoride levels are a natural characteristic of the Birdsville scheme and are associated with the area's underlying geology. As such, Fluoride exceedances are regularly identified within the scheme and reported as Drinking Water Incidents to the Regulator. This is discussed further in Section 4 below.

3.5. *E.coli* Verification and Operational Monitoring

Bacteriological sampling within the Bedourie and Birdsville drinking water schemes recorded no positive *E.coli* results for the reporting period. Therefore, both schemes have been compliant with the 98% *E.coli* value for the 2023-2024 Financial Year and are therefore compliant with Section 52(4) of the *Public Health Regulation 2018*.

3.6. Missed Verification and Operational Monitoring

During the reporting period, Council missed one round of verification monitoring for both the Bedourie and Birdsville schemes. This was attributed to a miscommunication between Council and the testing laboratory, resulting in Council not receiving the bottles needed for testing in time. Follow-up testing was conducted in September 2024; however, as this was technically not in line with Council's approved DWQMP, a Drinking Water event was raised with the Regulatory office for the non-conformance. This event is discussed in detail in Section 4 below.

Additionally, in-house operational monitoring for Turbidity was not conducted as per the DWQMP for Bedourie and Birdsville, with only one sample being tested per scheme monthly. As detailed in Section 6.1.1 of Council's 2022 DWQMP, in-house Turbidity was supposed to be tested for at the following frequencies:

- Bedourie – 3x samples per month (36 per year)
- Birdsville – 4x samples per month (48 per year)

The incorrect Turbidity monitoring can be attributed to further miscommunications between Council staff and will be rectified.

4.0 INCIDENTS REPORTED TO THE REGULATOR

DSC had two ongoing Drinking Water Incidents during the reporting period, as detailed in Table 11 below.

Table 11: Water quality incidents reported to the Regulator for the 2023 - 2024 Financial Year.

Incident Date	Scheme	Issue	Preventative Actions	Investigation Report
Initially reported in February 2016, updates provided 6/12/2023 & 8/10/2024	Birdsville (DWI-7-42-00003)	Source and distribution of water Fluoride levels in exceedance of ADWG health guideline value.	Public notification and ongoing monitoring to ensure values are stable and remain only slightly above the ADWG health limit.	N/A, ongoing incident.
26/06/2024 (Incident Report submitted on 28/06/2024)	Bedourie & Birdsville (DWI-42-24-11033)	Missed Verification Monitoring caused by testing bottles not arriving in Diamantina in time to undertake testing.	Moving forward, Council will order bottles well in advance to ensure that they arrive on time for testing to be conducted as stipulated in Council's DWQMP.	Submitted via. email 22/10/2024, receipt obtained from Regulatory office 23/10/2024.

DSC has one ongoing incident for the naturally elevated levels of Fluoride within Birdsville's drinking water. The elevated fluoride levels are associated with the natural geology of the area and average approximately 1.7mg/L. Treatment to reduce Fluoride levels in the drinking water is not financially feasible due to the town's small population and considering that the concentration is only 12% above the ADWG health value of 1.5mg/L. The key issue associated with elevated Fluoride levels in Birdsville is dental fluorosis, primarily affecting children under the age of 6. Despite the frequent exceedance of Fluoride levels, 6-monthly verification monitoring has been deemed suitable for the Birdsville scheme as historical data has identified Fluoride concentrations to be within a consistent range. At this stage, Council's primary management strategy is to provide annual public notification to Birdsville residents to help the community understand the potential impacts of elevated Fluoride in the drinking water and to continue regular monitoring of the drinking water to ensure Fluoride concentrations remain only slightly above the ADWG health value.

The other incident that occurred throughout the reporting period was related to one round of missed 6-monthly verification monitoring. Council did not receive sample bottles in time from the laboratory and, therefore, were unable to complete their testing in the allotted timeframe stipulated in their DWQMP. Follow-up testing was conducted in September 2024, and this incident has now been resolved.

5.0 CUSTOMER COMPLAINTS REGARDING WATER QUALITY

There were no customer complaints made to Council regarding drinking water quality during the 2023 - 2024 Financial Year.

6.0 DWQMP REVIEW OUTCOMES

The last DWQMP Review was conducted during September 2024 and submitted to the Regulator on 27/09/2023. The Review identified the following updates that needed to be incorporated into Council's DWQMP:

- Contact details of the new CEO and Director of Works.
- Addition of the CEO's endorsement to the DWQMP.
- Addition of a new RMIP item for the review and update to operation and maintenance procedures.
- Updates to the RMIP to remove completed items and revise the timeframes of remaining items.
- Updates to the operational monitoring locations to ensure they are consistent with where Council are testing and that they encompass an adequate sample radius within each scheme.

In summary, the Review found the current DWQMP to be out of date and requiring an Amendment. Council applied for an Amendment to its DWQMP in October 2023, and it was formally approved in August 2024.

The next Review is scheduled for completion by 15/10/2025.

7.0 DWQMP AUDIT FINDINGS

The Bedourie and Birdsville drinking water schemes were audited in March 2022. The audit identified non-conformances and improvement items, which were incorporated into the 2023-24 DWQMP Amendment. The next DWQMP audit is set for completion by 30 June 2026.

8.0 DSC CUSTOMER SERVICE STANDARDS REVIEW

DSC did not undertake a review of their Customer Service Standards during the 2023-24 Financial Year. The next review is scheduled to be conducted in 2025.