



DRINKING WATER SERVICE ANNUAL REPORT 2025

Douglas Shire Council

SPID: 558

Reporting period: 1 July 2024 – 30 June 2025

December 2025

DOUGLAS **SHIRE**
COUNCIL

Improving Environmental Performance
Ngaral Kulji Bubungu - Eastern Kuku Yalanji
Pulmpa dakit jarral-a-kaling - Yirrganydji

This report has been prepared in accordance with the *Guideline for the preparation, review and audit of drinking water management plans V3*.

Document Information

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Drinking Water Service Annual Report 2025

1. Introduction

This report has been prepared to comply with section 142 of the *Water Supply (Safety and Reliability) Act 2008* (the Act). It documents the performance of Douglas Shire Council as a Drinking Water Service Provider (SPID 558) during the financial year 2024-2025. Council operates under a Drinking Water Quality Management Plan (DWQMP) approved under section 95 of the Act to ensure consistent supply of safe drinking water to protect public health. The DWQMP in force during the reporting period is V4.2, dated May 2024.

This Drinking Water Service Annual Report includes:

- the activities undertaken over the financial year in operating our drinking water service;
- drinking water quality summary; and
- summary of our performance in implementing our approved DWQMP.

This report provides a mechanism to publicly relay Council's performance in managing drinking water services and drinking water quality. The report is submitted to the Department of Local Government, Water and Volunteers (DLGWV) (the Regulator) to fulfil the Council's regulatory requirement and, is also made available on Council website or for inspection upon request at the Council office.

2. Summary of schemes operated

Council operates two water supply schemes that source water from highly protected catchments (Whyanbeel and Mossman/Port Douglas schemes). The third scheme currently sources water from the Daintree bore (Daintree scheme). All schemes treat water to Australian Drinking Water Guideline (ADWG) standards utilising a combination of ultrafiltration and chlorination. Additionally, Daintree scheme utilises a calcite filter and Whyanbeel scheme sodium carbonate dosing for pH adjustment (Table 1).

Table 1. Summary of the three drinking water schemes.

Scheme	Water Source	Treatment Processes	Connected Properties	Towns Supplied
Daintree	Daintree Bore	Calcite filter (Daintree bore), pre-filtration, ultrafiltration, chlorination	51	Daintree Township
Mossman/Port Douglas	Rex Creek	Pre-filtration, ultrafiltration, chlorination	6,711	Mossman, North Mossman, Port Douglas, Craiglie, Newell Beach, Cooya Beach, Cassowary, Mowbray
Whyanbeel	Little Falls Creek	Pre-filtration, ultrafiltration, chlorination, sodium carbonate pH adjustment	764	Whyanbeel, Miallo, Bamboo, Rocky Point, Port Douglas Views, Wonga Beach

3. Report requirement notice

This report has been prepared to comply with Drinking Water Quality Management Plan Guidelines (V3.9) section 9 and submitted to the Regulator as per the report requirement notice. Furthermore, the report includes information about compliance with the approved DWQMP.

4. DWQMP implementation

DWQMP is a public health-based risk management plan that demonstrates how public health risks to drinking water services are managed. All relevant staff are made aware of the DWQMP, and the plan is used as a tool when assessing different aspects of drinking water management. The Council Water and Wastewater team meet regularly to share updates and data, discuss matters relating to water quality, treatment operations and opportunities for improvement. This provides the chance to refer to the approved DWQMP and emphasise the importance of using the plan.

Opportunities for improvement are managed and monitored within the Risk Management Improvement Program (RMIP). Through the risk assessment process, Council identifies risks to the drinking water schemes that require improvements over time. These are detailed within the approved DWQMP. The actions undertaken and current status of the improvement actions can be viewed in [Appendix A: Implementation of the DWQMP \(v 4.3\) Risk Management Improvement Program](#).

Additionally, the DWQMP includes Critical Control Points (CCP) which ensure that operators become aware of potential issues faster and can respond and rectify any issues in a timely manner. CCP compliance is continually monitored via Supervisory Control and Data Acquisition (SCADA) control system and operational checks are performed by plant operators and reviewed by the Team Leader.

5. Verification monitoring

Drinking water verification monitoring is undertaken weekly to ensure Council provides safe drinking water across the drinking water network. Verification monitoring consists of both internal and external monitoring. External analyses are undertaken by a National Association of Testing Authorities (NATA) certified laboratory, and all data is reviewed in a timely manner and recorded in Council's data management system.

During the financial year 2024-2025, Council undertook verification monitoring in accordance with the requirements of the approved and relevant DWQMP. During the reporting period, all physical, chemical, and microbiological parameters were within the ADWG health guideline values and the standards of the *Public Health Regulation 2005*. Water quality data is presented in [Appendix B: Water quality data 2024-25](#).

6. Notifications of drinking water quality incidents and events to the Regulator

Douglas Shire Council sent a notification to Water Supply Regulation at the Department of Local Government, Water and Volunteers (LGWV) on 18 December 2024 for an event where a plastic smell and taste were reported (DWI-558-24-11613). The initial report was raised due to a customer complaint. As part of the event, Council undertook pipeline flushing, sampling, testing and external investigation to the root cause of the taste/odour event. Water quality results showed compliance to ADWG health guideline values and the standards of the *Public Health Regulation 2005*. Hence, it was concluded that the water quality event was of no health risk to customers and was only of an aesthetic nature. Although the external investigation did not find documented evidence to confirm

the root cause of taste/odour event, the investigation identified elevated temperatures and water age, as well as variable pipe materials present within both reticulation mains and customer properties as the likely causes.

7. Customer complaints

Douglas Shire Council values customer feedback. During the reporting period, there was one substantiated water quality complaint related to taste/odour of the water (Table 2). The complaint was followed by a notification of event to the regulator, as outlined in section 6. Although the issue was resolved, Council will monitor the situation and intends to reduce the risks of reoccurrence.

Table 2. Drinking water quality complaints during the financial year 2024-2025.

Scheme	Health concern	Discoloured Water	Taste and Odour	Other	Total
Daintree	0	0	0	0	0
Mossman / Port Douglas	0	0	0	0	0
Whyanbeel	0	0	1	0	1

8. DWQMP review

While DWQMP V4.2 (dated May 2024) was the relevant DWQMP during the reporting period, Council has a more recent DWQMP (V.4.3) which was approved on 30 June 2025 by the Regulator. To best report the status of improvement actions, version 4.3. was utilised in the [Appendix A: Implementation of the DWQMP \(v 4.3\) Risk Management Improvement Program](#). The next regular review of the approved DWQMP must be conducted by 30 June 2026.

9. DWQMP audit

A DWQMP audit was completed in March 2025 by a consultant from Water Futures Pty Ltd, who are Exemplar Global certified drinking water quality management system auditors. The audit report was submitted to the Regulator on 15 May 2025. The purpose of the audit was to:

- Audit the monitoring and performance data provided to the regulator under the plan;
- Assess the service provider's compliance with the plan; and
- Assess the relevance of the plan in relation to the provider's drinking water service.

No nonconformities with the Act and Regulation were noted during the audit. However, a number of opportunities for improvement (OFIs) were identified during the audit. The audit noted that the Council had made excellent progress within the audit period with respect to reducing risks and innovating in water quality management. Table 3 provides a summary of results presented against auditable elements.

Table 3. Summary of DWQMP audit results

Topic area	Compliance
Audit topic	Summary of compliance status
Verify accuracy of monitoring and performance data communicated to DRDMW	
Verification monitoring	Compliant
Operational monitoring	Compliant
Additional monitoring and performance data (if any) as provided in the Annual Report	Not applicable
Assessment of compliance with the DWQMP	
Implementation of all preventive measures for Managing hazards and hazardous events (Including those applied in the distribution/reticulation network)	Compliant As OFIs DSC may wish to consider: Additional undercover storage space at the depot for large parts would be helpful to reduce degradation of parts. In the meantime, finding out from suppliers what parts can be stored outdoors, in what conditions, and for how long, would help prioritise the use of limited storage space.
Implementation of operational and maintenance procedures (including instrument calibration), including availability and currency of the procedures	Compliant As OFIs DSC may wish to consider: Developing an evidence-based approach for extending the life of reagents and standards past their warranted expiry dates could reduce costs whilst maintaining a defensible position on their use.
Implementation of the process for managing incidents and emergencies including reporting requirements to the regulator	Compliant
Implementation of the operational (including critical control points, as relevant) and verification monitoring programs	Compliant
Implementation of the risk management improvement program	Compliant
Maintaining records using the systems as described	Compliant
Assessment of compliance with DWQMP conditions	
Reporting incidents in relation to events that are beyond the control of the service provider and have the potential to impact public health and for failing to meet water quality criteria as defined in the approval notice, and whether preventative measures taken were adequate to control the hazard	Compliant
Undertaking regular reviews at the frequency specified in the approval notice	Compliant
The provision and conditions in the approval notice	Compliant

Appendix A: Implementation of the DWQMP (v 4.3) Risk Management Improvement Program

Scheme	Ref in DWQMP v4.3	Treatment Stage	Hazardous Event	Improvement actions	Target timeframe	Comments	Status
Mossman	5MW/ 7MW	Intake	Turbidity/ storm events/ blocked Johnson screen	Redesign of intake at Rex Creek	2026	Project progressing under Work Order WO6439, expected delivery cost of \$630k	Progressing
Whyanbeel	5MW/ 7MW	Intake	Turbidity/ storm events	Future planning for redesign of intake at Whyanbeel	2027	Funding application approved under QRA Water and Sewerage Infrastructure Program for intake improvements, design and construction planning to commence in 2026	Progressing
Mossman	6M/ 33MW/ 35MW/ 37MW	Intake/ Whole of system	Failure of supply/ raw water main break/ severe weather event	Mossman River intake - to be commissioned by 2027, WO6536 budget \$16.4M joint funded with state and federal government)	2027	Procurement for Design and Construct (D&C) contract currently underway with contract award expected in early 2026.	Progressing
All	4DW	Intake	Failed infrastructure	Asset maintenance program	2027	Asset maintenance program purchased, being implemented through Asset Management Steering Group	Progressing
Mossman	8 MW	Prefilters	Failed infrastructure/ blocked pre-filters	New hydrocyclones	2026	Funding application approved under QRA Water and Sewerage Infrastructure Program for hydrocyclones, design and construction planning to commence in 2026	Progressing
Mossman and Whyanbeel	23 MW	Storage	Reservoir capacity lost/ limited storage capacity	Build system capacity and reticulation interlinkages	2027	Design nearing completion for Cooya Reservoirs, construction to commence in 2026	Progressing

Mossman and Whyanbeel	29 MW	Reticulation	Protozoa/ backflow – e.g. from customer meters or standpipes	Design and install designated water filling stations within Shire	2026	Design of filling station underway. Potential sites have been selected, with further engineering to be undertaken including costings	Progressing
Daintree	36D/ 43D	Whole of system	Failure of supply/ drought	Second bore and permanent backup power supply for bore	2027	Funding application approved under QRA Water and Sewerage Infrastructure Program for second bore and power supply, design and construction planning to commence in 2026	Progressing
Mossman and Whyanbeel	37MW/ 38MW	Whole of system	Failure of supply/ flood/ landslide/ cyclone	Raw water and treated water storage upgrades	2027	Funding application approved under QRA Water and Sewerage Infrastructure Program for raw water reservoir, design and construction planning to commence in 2026	Progressing
All	39MW	Whole of system	Failure of supply/ flood/ landslide/ cyclone	Develop Level 5 restrictions	2025	Level 5 Water Restriction Level 5 developed	Finalised
All	40 MW	Whole of system	Operator error/ loss of knowledge	Organisational learning management system (Pulse) to be implemented.	2026	Organisational learning management system (Pulse) implemented, to be rolled out for training compliance monitoring	Ongoing
All	44A	Whole of system	Operator error/ loss of knowledge	Reviewing SOPs with operators for update and for training.	Ongoing	SOPs review and training progressed during 2024-2025	Ongoing
All	44A	Whole of system	Operator error/ loss of knowledge	Planning to implement the Assetic maintenance system to capture all reactive break down program maintenance	2028	Assetic currently used for reactive maintenance in the reticulation network, further system improvements being implemented through Asset Management Steering Group	Progressing

All	45A	Whole of system	Sabotage/ Terrorism/ Cyber security incident	Implementing expert recommendations	Ongoing	Cyber security assessment undertaken. Many improvement actions implemented. In discussions with SCADA providers to ensure risk management into the future.	Ongoing
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Appendix B: Water quality data 2024-25

Daintree water supply scheme – Verification monitoring results 2024-2025

Parameter	No. of samples required to be collected (as per the approved DWQMP)	No. of samples actually collected and tested	ADWG health guideline value	No. of non-compliant samples	Summary of results		
					Min	Max	Avg
Chlorate (mg/L)	4	4	N/A	N/A	0.1	0.341	0.219
Chlorine (mg/L)	26	26	5	0	0.48	1.43	1.11
Colour (PCU)	12	13	N/A	N/A	<1	<1	<1
Copper (mg/L)	12	13	2	0	0.007	0.042	0.017
<i>E. coli</i> (MPN/100mL)	26	39	<1	0	<1	<1	<1
Iron (mg/L)	12	13	N/A	N/A	<0.015	<0.05	0.016
Lead (mg/L)	12	13	0.01	0	0.0004	0.0040	0.0016
Manganese (mg/L)	12	13	0.5	0	0.0014	0.0093	0.0038
pH (pH units)	26	39	N/A	N/A	5.69	7.10	6.39
Turbidity (NTU)	12	17	N/A	N/A	0.01	0.31	0.08

Daintree water supply scheme *E. coli* compliance with annual value.

Year	2024-2025											
Month	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June
No. of samples collected	4	3	3	3	3	3	5	3	3	3	3	3
No. of samples collected in which <i>E. coli</i> is detected (i.e. a failure)	0	0	0	0	0	0	0	0	0	0	0	0
No. of samples collected in previous 12-month period	41	40	40	40	40	40	40	39	39	39	39	39
No. of failures for previous 12-month period	0	0	0	0	0	0	0	0	0	0	0	0
% of samples that comply	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Compliance with 98% annual value	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Mossman/Port Douglas water supply scheme – Verification monitoring results 2024-25

Parameter	No. of samples required to be collected (as per the approved DWQMP)	No. of samples actually collected and tested	ADWG health guideline value	No. of non compliant samples	Summary of results		
					Min	Max	Avg
Alkalinity (mg/L as CaCO ₃)	36	38	N/A	N/A	<1	27.0	9.05
Chlorine (mg/L)	154	193	5	0	0.06	2.20	1.0
Colour (PCU)	84	91	N/A	N/A	<1	4.0	<1
Copper (mg/L)	84	90	2	0	0.001	0.187	0.013
<i>E. coli</i> (MPN/100mL)	190	320	<1	0	<1	<1	<1
Iron (mg/L)	84	91	N/A	N/A	0.01	0.08	0.02
Lead (mg/L)	84	91	0.01	0	0.0001	0.0066	0.00107
Manganese (mg/L)	84	91	0.5	0	0.0001	0.002	0.0004
pH (pH units)	190	322	N/A	N/A	5.46	8.80	6.72
Turbidity (NTU)*	84	97	N/A	N/A	0.01	1.21	0.09

Mossman/ Port Douglas water supply scheme *E. coli* compliance with annual value.

Year	2024-2025											
Month	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June
No. of samples collected	27	24	24	25	25	22	34		11	27	23	23
No. of samples collected in which <i>E. coli</i> is detected (i.e. a failure)	0	0	0	0	0	0	0	0	0	0	0	0
No. of samples collected in previous 12-month period	281	281	281	281	281	281	281	290	304	316	318	320
No. of failures for previous 12-month period	0	0	0	0	0	0	0	0	0	0	0	0
% of samples that comply	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Compliance with 98% annual value	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Whyanbeel water supply scheme – Verification monitoring results 2024-2025

Parameter	No. of samples required to be collected (as per the approved DWQMP)	No. of samples actually collected and tested	ADWG health guideline value	No. of non compliant samples	Summary of results		
					Min	Max	Avg
Alkalinity (mg/L as CaCO ₃)	12	13	N/A	N/A	11	16	13.69
Chlorine (mg/L)	52	64	5	0	0.2	1.43	0.98
Colour (PCU)	24	26	N/A	N/A	<1	1.10	0.56
Copper (mg/L)	24	26	2	0	0.001	0.028	0.008
<i>E. coli</i> (MPN/100mL)	64	99	<1	0	<1	<1	<1
Iron (mg/L)	24	26	N/A	N/A	<0.015	0.07	0.03
Lead (mg/L)	24	30	0.01	0	<0.0005	0.002	0.0006
Manganese (mg/L)	24	30	0.5	0	<0.0002	0.001	0.0005
pH (pH units)	64	103	N/A	N/A	6.79	8.51	7.66
Turbidity (NTU)*	24	35	N/A	N/A	0.01	1.6	0.21

Whyanbeel water supply scheme *E. coli* compliance with annual value.

Year	2024-2025											
Month	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June
No. of samples collected	8	7	7	8	7	8	10	8	8	12	8	8
No. of samples collected in which <i>E. coli</i> is detected (i.e. a failure)	0	0	0	0	0	0	0	0	0	0	0	0
No. of samples collected in previous 12-month period	99	99	99	99	99	99	99	99	99	99	99	99
No. of failures for previous 12-month period	0	0	0	0	0	0	0	0	0	0	0	0
% of samples that comply	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Compliance with 98% annual value	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y