DRINKING WATER SERVICE

ANNUAL REPORT

2024/2025

Service Provider Identification Number	**SP485**
Name	**Gympie Regional Council**
Address	**2 Caledonian Hill** **Gympie QLD 4570**
Telephone	**1300 307 800**
Website	**www.gympie.qld.gov.au**
Local Government Area covered by this plan	**Gympie Regional Council**
Water Supply Schemes covered by this plan	**Amamoor, Cooloola Cove, Goomeri, Gympie, Imbil, Kandanga, Kilkivan and Rainbow Beach**

GYMPIE REGIONAL COUNCIL

Revision	Revision Date	Details	Authorised
0.0	20/11/2025	Draft	Mark Scanlan
1.0	10/12/2025	Reviewed	Peter Willey
2.0	12/12/2025	Approved	Emma Fisher

ABOUT THIS REPORT

The Gympie Regional Council 2024/2025 Drinking Water Service Annual Report documents the performance of Council's drinking water service with respect to water quality, and implementation of the DWQMP as required under the *Water Supply (Safety and Reliability) Act 2008*, and shows how we have been implementing key improvement actions detailed in our approved DWQMP.

This report assists the regulator to determine whether the approved DWQMP and any approval conditions have been complied with and provides a mechanism to report publicly on our performance in managing drinking water quality. It also allows us to meet our legislative obligations under the *Water Supply (Safety and Reliability) Act 2008*.

REPORTING REQUIREMENTS

Under the *Water Supply (Safety and Reliability) Act 2008*, water service providers must prepare a Drinking Water Service Annual Report each financial year. This report must include:

- The actions taken by Gympie Regional Council to implement its DWQMP
- Details of Gympie Regional Council's compliance with drinking water quality criteria
- Details of any water quality incidents reported to the regulator
- Details of any customer complaints related to water service.
- The outcome of any DWQMP Review undertaken
- A summary of DWQMP audit findings and recommendations

TELL US WHAT YOU THINK

A copy of this Drinking Water Service Annual report is available to view on Council's website.

If you would like to provide feedback on this report, please contact us via:

WEBSITE

www.gympie.qld.gov.au

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Chapter 1. About us

Gympie Regional Council is responsible for delivering drinking water, recycled water, and sewerage services to approximately 36,000 customers in the Gympie Region.

Our 6,898km^2 geographical area includes the towns of Amamoor, Cooloola Cove, Tin Can Bay, Goomeri, Gympie, Imbil, Kandanga, Kilkivan and Rainbow Beach.

We provide water services through the management of an extensive network, including:

- 8 water treatment plants
- 14 active reservoirs and 6 offline reservoirs
- 6 pump stations
- 492 kilometres of pipeline.

Chapter 2. Our service area

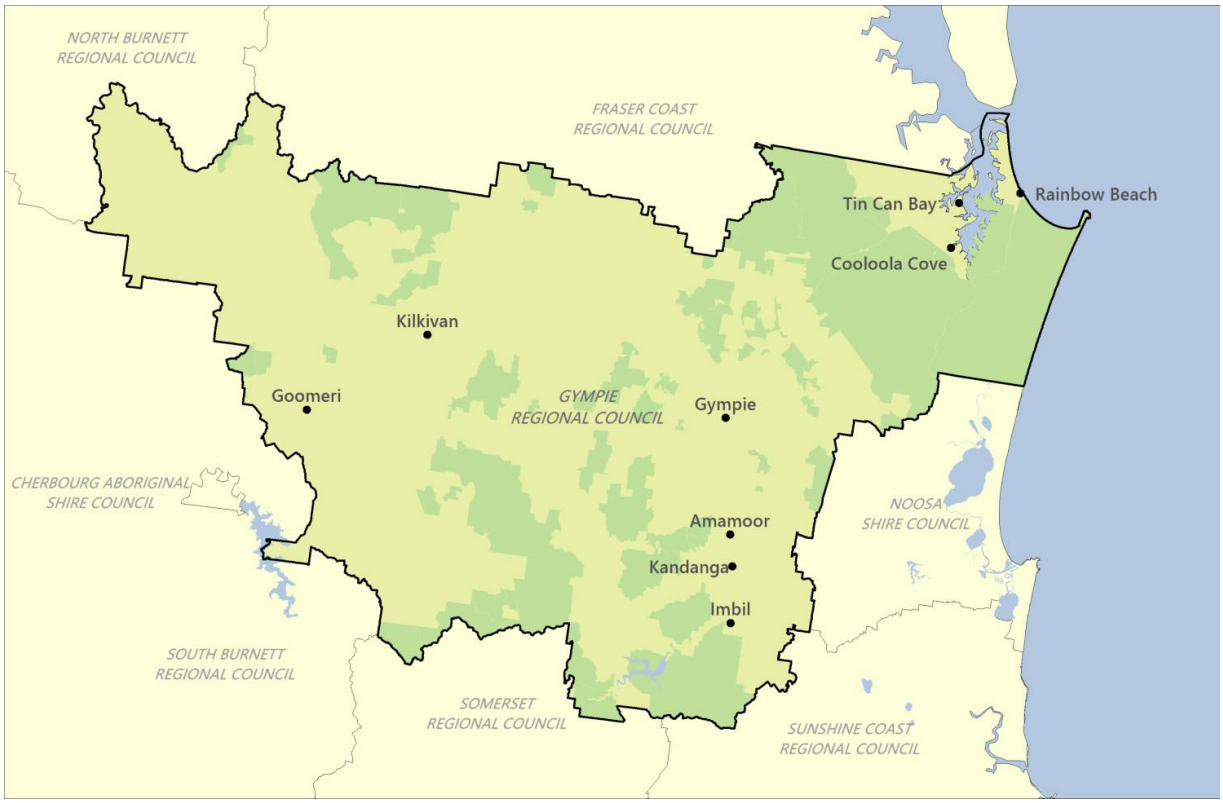

Figure 1 - Gympie Regional Council supply area

2.1 Our Network

We supply around 4,000 megalitres of drinking water to approximately 15,000 residential and commercial properties. Drinking water is delivered to our customers via 8 separate network water supply schemes as listed below:

The schemes begin at raw water source (surface and groundwater) and include water treatment, water storage, trunk and distribution pipe networks, pumps, chlorination systems and water meters. Gympie is the largest scheme, supplying 66 percent of the region's connected customers.

Table 1 – Network overview

Scheme Name	Water Source	Treatment processes	Treatment capacity	Towns supplied
Amamoor Water	Amamoor Creek	Coagulation, pre-oxidation, filtration, UV treatment and chlorine disinfection	0.5 ML/day based on 20-hour operation	Amamoor
Cooloola Cove Water	Teewah Creek	pH adjustment, Coagulation, flocculation, filtration, chlorine disinfection and fluoridation	3.6ML/day based on 20-hour operation	Cooloola Cove and Tin Can Bay
Goomeri Water	Kinbombi Off-Stream Ponds 4 x Bores within Mary Basin	Coagulation, flocculation, ozone treatment, BAC filter, UV treatment and chlorine disinfection	0.2 ML/day based on 20-hour operation	Goomeri
Gympie Water	Mary River (3464ML per annum Borumba Dam)	Coagulation, flocculation, filtration, chlorine disinfection and fluoridation	18ML/day based on 20-hour operation	Gympie
Imbil Water	Yabba Creek (160ML per annum Borumba Dam)	Coagulation, pre-oxidation, filtration UV treatment and chlorine disinfection	0.230 ML/day based on 20-hour operation	Imbil
Kandanga Water	Kandanga Creek	Coagulation, pre-oxidation, filtration, UV treatment and chlorine disinfection	0.5 ML/day based on 20-hour operation	Kandanga
Kilkivan Water	5 x Production Bores located within Burnett Basin	Filtration, reverse osmosis and chlorine disinfection	0.14 ML/day based on 20-hour operation	Kilkivan
Rainbow Beach Water	4 production bores located within the Cooloola Sand Mass	pH adjustment, filtration, chlorine disinfection	2.52 ML/day based on 20-hour operation	Rainbow Beach

Chapter 3. Drinking Water Quality Performance

3.1 Legislative requirements

The supply of safe and reliable drinking water in Queensland is regulated by various state legislation, including the *Water Supply (Safety and Reliability) Act 2008* and the *Public Health Act 2005*.

Under the *Water Supply (Safety and Reliability) Act 2008*, a drinking water service provider may only carry out a registered drinking water service in accordance with an approved Drinking Water Quality Management Plan (DWQMP).

Under the *Public Health Act 2005*, Queensland Health has regulated the standards for drinking water quality related to *E. coli* and fluoride. These standards, together with the health guideline levels in the 'Australian Drinking Water Guidelines 2011' – updated September 2022 (ADWG), have been incorporated under the *Water Supply (Safety and Reliability) Act 2008* as water quality criteria for drinking water in Queensland.

3.2 Water quality performance summary

For the 2024/25 reporting period, Gympie Regional Council met the prescribed microbiological standards for all eight drinking water schemes.

Table 2 summarises how our drinking water schemes performed over 1 July 2024 to 30 June 2025, against each category of water quality performance:

Table 2 - Drinking water performance summary

Scheme	Microbiological	Chemical
Amamoor	✓	×
Cooloola Cove	✓	✓
Goomeri	✓	✓
Gympie	✓	✓
Imbil	✓	×
Kandanga	✓	×
Kilkivan	✓	×
Rainbow Beach	✓	✓

3.3 Microbiological assessment (E. coli)

Over 2024/25 seven drinking water schemes achieved 100 per cent compliance with legislative *E. coli* requirements, with the exception of Gympie which achieved 99.2 per cent compliance. The standard for drinking water in Queensland requires no detection of E. coli in 98 per cent of samples collected over a 12 month period. The minimum number of samples required to be taken is detailed in the *Queensland Public Health Regulation 2005 Schedule 3A*.

E. coli water quality compliance details are provided in Appendix A, including the month-by-month performance.

3.4 Health-related chemical assessment

We use a risk management approach to drinking water quality which allows us to identify the substances that may pose a risk to public health. The verification monitoring program analyses these substances which are continuously assessed against ADWG health-related limits and operational control triggers.

Four of the eight water schemes complied with all of the health-related chemical limit values defined in the ADWG. The exceptions include Amamoor water, Goomeri water, Imbil Water, and Kandanga Water. Health assessment of water quality compliance details are provided in Appendices B and C.

3.5 Verification monitoring program

To verify that we deliver safe drinking water, the Council's Environmental Health Department collects samples from the respective networks and sends the samples to a National Association of Testing Authorities (NATA) accredited laboratory for water analyses. These samples are collected from 31 dedicated sample points across the service region. The water quality data is reviewed and compared against prescribed requirements in the legislation and the ADWG.

3.6 Aesthetic assessment

Our routine verification monitoring program is important for us to verify that we provide safe drinking water to our customers. We take advantage of the program to continuously assess non-health related parameters which contribute to the way our water tastes, smells and appears. We aim to meet the ADWG aesthetic guidelines where possible, however providing safe drinking water is our overriding priority.

Chapter 4. Notifying The Regulator

Under sections 102 and 102A of the *Water Supply (Safety and Reliability) Act 2008*, Gympie Regional Council is required to immediately inform the Regulator if the quality of water supplied does not comply with the water quality criteria as specified in the ADWG.

In the event that Gympie Regional Council becomes aware of a reportable incident, we notify the Regulator within the required timeframe.

On detection of a water quality issue, Council will:

- initiate further sampling in the affected zone
- undertake a comprehensive investigation to determine the factors that may have attributed to the event, and
- initiate responsive corrective actions e.g. flushing of water mains.

4.1 Reportable events

For the year 2024/2025, the reportable events were:

1. Amamoor Creek (High turbidity & colour) - 14/08/2024

Event Description	Weather event caused raw water at Amamoor Creek to become untreatable due to increased turbidity and colour.
Immediate actions	During this event, the plant was isolated and 26 kL of treated water was imported from Gympie WTP. No public health notification required.
Preventative actions	Not applicable

2. Kandanga WTP (Elevated turbidity& colour) – 25/10/2024

Event Description	Final water samples returned elevated turbidity and colour caused by post-treatment oxidation linked to reduced filter backwash frequency.
Immediate actions	Plant was shut down and issue traced to iron buildup in filter media. 45 kL of treated water imported from Gympie WTP on Sunday 27th and Monday 28th. Backwash frequency increased and operations were returned to normal. No public health notification required.
Preventative actions	Filter media was super chlorinated prior to filter media replacement.

3. Amamoor WTP (High turbidity & Colour) – 18/11/2024

Event Description	A weather event caused raw water at Amamoor Creek to become untreatable due to increased turbidity and colour.
Immediate actions	Treatment Plant was taken off-line and 13 kL of water was imported from Gympie WTP. No public health notification was required.
Preventative actions	Not applicable

4. Goomeri WTP (Ozone shutdown) – 26/11/2024

Event Description	Ozone generator repeatedly faulted due to overheating.
Immediate actions	A leak was identified in the coil inside the water tank which affected cooling. A contractor was engaged to install a new ozone chiller unit.
Preventative actions	Not applicable

5. Goomeri WTP (Turbidity exceedance) – 13/12/2024

Event Description	Elevated turbidity detected in final treated water. This was caused by a change in raw water source due to a cyanobacteria bloom.
Immediate actions	The WTP was taken offline. Consultants were requested to review interlocks and alarms.
Preventative actions	A temporary treated-water-to-waste line was installed before the CWT valve to allow process changes without sending water to the CWT. Consultants reviewed interlocks and alarms.

6. Gympie Water Network (E. Coli detected) – 3/2/2025

Event Description	A verification sample returned an E. coli result of 2 MPN/100mL and Coliforms of 3 MPN/100mL (chlorine 0.41 mg/L).
Immediate actions	A follow up sample was taken the same day which returned a result of 0 for both E.coli and coliforms.
Preventative actions	Ensure samples are collected as per procedure.

7. Amamoor WTP, Kandanga WTP, Imbil WTP (Chlorate exceedances) - 02/02/2025

Event Description	Routine chlorate testing results exceeded the Queensland Health recommended level of 0.8mg/L.
Immediate actions	Standard operating procedures for refilling chlorine storage tanks were modified at each WTP to control chlorine age.
Preventative actions	No Applicable

8. Goomeri WTP (Reduced Frequency of Cyanobacteria Testing) - 24/03/2025

Event Description	While not sourcing from surface waters, blue green algae sampling was reduced from twice weekly to fortnightly.
Immediate actions	Surface water not sourced until blue green algae concentration reduced to acceptable level, then sample frequency resumed as normal.
Preventative actions	Not applicable.

9. Amamoor Water, Imbil Water, Kandanga Water (THM exceedance) - 18/03/2025

Event Description	Routine monthly testing identified THM exceedances at Kandanga Imbil and Amamoor.
Immediate actions	Weekly follow-up THM sampling has commenced to confirm levels are trending down. Amamoor and Kandanga THMs returned within ADWG limits.
Preventative actions	Council is investigating treatment improvements, including carbon filtration to reduce chlorine demand.

10. Kandanga Water (Low chlorine residual) - 22/04/2025

Event Description	Chlorine residuals in the Kandanga reticulation network were consistently low.
Immediate actions	Chlorine dosing was increased to improve chlorine residual in the reticulation network. Residual levels were monitored closely to ensure levels remained safe for consumers
Preventative actions	Supernatant recirculation at the plant was stopped to reduce organics and metals consuming free chlorine. SCADA alerts were added to track chlorine trends.

11. Imbil Water (Low chlorine residual) - 23/04/2025

Event Description	Chlorine residuals in the Imbil reticulation network were consistently low.
Immediate actions	Chlorine dosing was increased to improve chlorine residual in the reticulation network. Residual levels were monitored closely to ensure levels remained safe for consumers.
Preventative actions	Council is progressing replacement of media filters to improve water quality and reduce chlorine demand.

Chapter 5. Managing Water Safety

Gympie Regional Council is committed to providing safe, reliable drinking water from source to our customers' tap. We endeavor to ensure a consistent and reliable supply of high quality and safe drinking water to our customers through risk management and robust planning approach.

5.1 Drinking Water Quality Management Plan review

Gympie Regional Council operates with an approved DWQMP that is reviewed every two years.

The next review is required to be carried out by 6 January 2026.

5.2 Drinking Water Quality Management Plan audit

As required by the *Water Supply (Safety and Reliability) Act 2008*, Gympie Regional Council is operating its drinking water service under an approved DWQMP. Northern Water Management Pty Ltd conducted the regular audit of Gympie Regional Council's Registered Water Supply Services operating under its approved DWQMP in July 2025.

The scope of the audit was in accordance with Department of Local Government, Water and Volunteers (DLGWV) Guideline for the preparation, review, and audit of drinking water quality management plans.

The audit reported a very high level of compliance during the audit period.

Ten minor non-conformances were identified in the 2025 DWQMP audit. The recommendations from these non-conformances are as follows:

1. Parameter Coverage:
    a. Ensure that the chlorine residual in the various reticulation systems are above the minimum ADWG level of 0.2 mg/L.
    b. Ensure that turbidity levels are below threshold
    c. Ensure that THMs are below threshold
2. Pesticides
    a. Ensure that all pesticide results are reported in the annual report
    b. Ensure that all pesticide results are recorded in SWIMLocal
3. Reagent Management
    a. Replace all expired buffers/reagents/standards
4. Instrument Calibration
    a. Recalibrate the ABB flow meters at Gympie WTP
5. Operational Sampling – Field monitoring instruments and Regime:
    a. Repair Filter No. 4 turbidity meter at Gympie WTP.
6. SCADA Set Points
    a. Ensure that all SCADA Set Points align with the DWQMP

7. RMIP Implementation
    a. Ensure that the RMIP actions that are due are closed out by the due date. There are many actions due as of the date of the 2025 audit.

Chapter 6. Managing the customer's water quality experience

6.1 Customer Service Standards

Gympie Regional Council operates with approved Customer Services Standards, the latest version was compiled in December 2024 and is reviewed every five years.

6.2 Water Quality Complaints

Gympie Regional Council receives various water quality enquiries throughout the year. When a customer is dissatisfied with the efforts of Gympie Regional Council to address a water quality issue and remedial action is required, these enquiries are classified as 'water quality complaints'.

Water quality complaints are captured, recorded and monitored to help identify any trends and possible areas of improvement in the operation, maintenance and management of the Gympie Regional Council water supply network.

There was nil water quality complaint recorded during 2024/25.

Chapter 7. Risk management approach

The approved DWQMP follows industry best practice in that all water quality hazards have been identified, risk assessed, and where necessary, improvements have been committed to.

The risk management improvement program (RMIP) used during this reporting period was the version included with the DWQMP approved on 29 May 2024.

The below dot points and Tables 18 to 26 (Appendix C) outline the progress against this RMIP.

Significant projects undertaken within this year include:

- Water reservoirs – Construction of new reservoir at Jones Hill completed and commissioned.
- Gympie WTP – Repair work commenced on Jones Hill WTP sedimentation tank.
- Rainbow Beach Reticulation – Replacement of Water main at Kurana Street
- Replacement of chlorine analysers at Gympie WTP, Goomeri WTP, and Kilkivan WTP.

Glossary

ADWG	Australian Drinking Water Guidelines 2011 – updated November 2018 published by the National Health and Medical Research Council of Australia.
Bulk Water	The treated water supplied from the Queensland Bulk Water Authority (Seqwater) to distributor retailers, including Gympie Regional Council.
cfu/100mL	Colony Forming Units per 100 millilitres.
Disinfectant	An agent that destroys or inhibits the activity of microorganisms which cause disease. Gympie Regional Council uses chlorine.
DWQMP	Drinking Water Quality Management Plan as required under the *Water Supply (Safety and Reliability) Act 2008*.
E. coli	*Escherichia coli*, a bacterium whose presence in water indicates that the water may be contaminated by faecal matter and therefore there is the potential to cause illness when people drink the water.
km	Kilometre, which is 1,000 metres.
Megalitre (ML)	One million litres.
mg/L	Milligrams per litre.
MPN/100mL	Most Probable Number per 100 millilitres.
Network	An arrangement or system of pipes, pumps and reservoirs used for distributing water.
NTU	Nephelometric Turbidity Unit- a measure of turbidity which is the cloudiness or haziness of water caused by particles that are generally invisible to the naked eye. The measurement of turbidity is a key test of water quality.
Reservoir	A water tower or tank used for the storage of treated water within the water distribution system.
QFSS	Queensland Forensic and Scientific Services, Health Support Queensland.
Scheme	The system distributing drinking water to customers.
Seqwater	Queensland Bulk Water Supply Authority, trading as Seqwater. The bulk drinking water provider for Gympie Regional Council.
SCADA	Supervisory Control and Data Acquisition, which are computer-based control systems for water facilities including WTPs.
Stakeholder	All those who are either affected by or who can affect the activities of an organisation, namely customers, governments, regulators, the media, non-government organisations, local residents and employees.
The Regulator	The Chief Executive of Department of Regional Development Manufacturing and Water (DRDMW); previously Department of Natural Resources Mines and Energy (DNRME).
THMs	Total Trihalomethanes - a group of disinfection by-products that generally form when chlorine is used to disinfect drinking water.
WTP	Water Treatment Plant.

Appendices

Appendix A: Water Quality Compliance – E. coli

Table 3 - Overall E.coli compliance

Scheme	Number of samples required	Actual number of samples	Number of E.coli detections	Required performance %	Actual performance %	E. coli Compliant
Amamoor	12	24	0	98	100.0%	✓
Cooloola Cove	60	106	0	98	100.0%	✓
Goomeri	12	26	0	98	100.0%	✓
Gympie	96	123	1	98	99.2%	✓
Imbil	12	24	0	98	100.0%	✓
Kandanga	12	24	0	98	100.0%	✓
Kilkivan	12	22	0	98	100.0%	✓
Rainbow Beach	60	97	0	98	100.0%	✓

The *Public Health Regulation 2005* (the regulation) requires that 98 per cent of samples taken in a 12-month period should contain no *E. Coli*. This requirement is referred to as the 'annual value' in Schedule 3A of the regulation.

Table 4 – Amamoor E.coli compliance

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	2	2	2	2	2	2	2	2	2	2	2	2
No. of samples collected in which E.coli is detected (i.e. a failure)	0	0	0	0	0	0	0	0	0	0	0	0
No. of samples collected in previous 12 month period	24	24	24	24	24	24	24	24	24	24	24	24
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	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**

Table 5 - Cooloola Cove E.coli compliance

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	10	9	9	10	9	5	9	9	9	9	9	9
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	108	110	110	111	111	108	107	107	107	106	106	106
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	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**

Table 6 - Goomeri E.coli compliance

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	2	2	2	2	2	2	4	2	2	2	2	2
No. of samples collected in which E.coli is detected (i.e. a failure)	0	0	0	0	0	0	0	0	0	0	0	0
No. of samples collected in previous 12 month period	24	24	24	24	24	24	26	26	26	26	26	26
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	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**

Table 7 - Gympie E.coli compliance

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	12	10	10	12	10	6	11	11	10	11	10	10
No. of samples collected in which E.coli is detected (i.e. a failure)	0	0	0	0	0	0	0	1	0	0	0	0
No. of samples collected in previous 12 month period	127	127	127	128	127	124	123	124	124	123	123	123
No. of failures for previous 12 month period	0	0	0	0	0	0	0	1	1	1	1	1
% of samples that comply	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	99.2%	99.2%	99.2%	99.2%	99.2%
Compliance with 98% annual value	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**

Table 8 - Imbil E.coli compliance

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	2	2	2	2	2	2	2	2	2	2	2	2
No. of samples collected in which E.coli is detected (i.e. a failure)	0	0	0	0	0	0	0	0	0	0	0	0
No. of samples collected in previous 12 month period	25	25	25	25	25	25	24	24	24	24	24	24
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	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**

Table 9 - Kandanga E.coli compliance

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	2	2	2	2	2	2	2	2	2	2	2	2
No. of samples collected in which E.coli is detected (i.e. a failure)	0	0	0	0	0	0	0	0	0	0	0	0
No. of samples collected in previous 12 month period	24	24	24	24	24	24	24	24	24	24	24	24
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	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**

Table 10 - Kilkivan E.coli compliance

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	2	2	2	2	2	0	2	2	2	2	2	2
No. of samples collected in which E.coli is detected (i.e. a failure)	0	0	0	0	0	0	0	0	0	0	0	0
No. of samples collected in previous 12 month period	24	24	24	24	24	22	22	22	22	22	22	22
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	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**

Table 11 - Rainbow Beach E.coli compliance

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	9	8	8	9	10	4	8	8	8	9	8	8
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	100	99	99	101	102	99	98	98	97	97	97	97
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	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**

Appendix B: Water Quality Compliance – Operational Monitoring

Table 12 - Amamoor Water - Operational monitoring

Parameter	Location	Samples Required	Samples Taken	Minimum	Maximum	Median	Average	STD	5th Percentile	95th Percentile	ADWG Value (H)	ADWG Value (A)	No. of Exceedances	Units
Aluminium	WTP	26	24	0.007	0.065	0.041	0.04	0.0174	0.01	0.065		0.2	0	mg/L
Chlorine Residual	WTP	365	364	1.34	4.98	2.93	3.02	0.896	1.84	4.71	5		0	mg/L
Colour	WTP	365	364	0	21	3	4	3.7	1	11		15	4	HU
Hardness	WTP	26	24	80	226	180	171	31.3	106	196		200	1	mg/L
Iron	WTP	26	24	0.001	0.097	0.003	0.008	0.0192	0.001	0.01		0.3	0	mg/L
Manganese	WTP	26	24	<0.050	<0.050						0.1	0.05	0	mg/L
pH	WTP	26	24	7.2	7.89	7.55	7.55	0.163	7.3	7.78			0	
Turbidity	WTP	365	364	0.01	0.23	0.1	0.1	0.039	0.04	0.17	0.5	5	0	NTU
Chlorine Residual	Reticulation	104	88	0.03	2.41	0.96	0.95	0.518	0.07	1.81	5		0	mg/L

Table 13 - Cooloola Cove Water – Operational Monitoring

Parameter	Location	Samples Required	Samples Taken	Minimum	Maximum	Median	Average	STD	5th Percentile	95th Percentile	ADWG Value (H)	ADWG Value (A)	No. of Exceedances	Units
Alkalinity	WTP	12	12	24.00	50.00	38.00	39.00	7.50	28.00	49.00			0	mg/L
Aluminium	WTP	12	12	0.01	0.07	0.03	0.03	0.02	0.01	0.06		0.2	0	mg/L
Chlorine Residual	WTP	365	365	1.72	3.45	2.69	2.66	0.29	2.15	3.07	5		0	mg/L
Colour	WTP	365	365	1.00	1.00	1.00	1.00	0.0	1.00	1.00		15	0	HU
Fluoride	WTP	365	365	0.04	0.89	0.76	0.74	0.11	0.57	0.85	1.5		0	mg/L
Hardness	WTP	12	12	6.00	10.00	9.00	9.00	1.60	6.00	10.00		200	0	mg/L
Iron	WTP	12	12	0.02	0.06	0.03	0.03	0.02	0.02	0.06		0.3	0	mg/L
Manganese	WTP	12	12	<0.050	0.04	0.03	0.03	0.01	0.03	0.03	0.5	0.1	0	mg/L
pH	WTP	365	365	6.80	7.60	7.00	7.04	0.10	6.90	7.20			0	
Turbidity	WTP	365	365	0.00	0.50	0.03	0.03	0.04	0.0	0.08	0.5	5	0	NTU
Chlorine Residual	Reticulation	260	265	0.09	2.10	1.06	1.10	0.48	0.38	1.82	5		0	mg/L

Table 14 - Goomeri Water - Operational monitoring

Parameter	Location	Samples Required	Samples Taken	Minimum	Maximum	Median	Average	STD	5th Percentile	95th Percentile	ADWG Value (H)	ADWG Value (A)	No. of Exceedances	Units
Conductivity	WTP	365	365	324	1564	994	1158	280.5	919	1553			0	µS/cm
Treat Hard	WTP	26	365	170	606	324	379	127.8	238	584		200	362	mg/L
Alkalinity	WTP	26	26	122	358	234	240	84.6	141	354			0	mg/L
Aluminium	WTP	26	26	0.000	0.084	0.0	0.011	0.02	0.0	0.045		0.2	0	mg/L
Chlorine Residual	WTP	365	365	0.55	3.02	1.24	1.3	0.298	1.01	1.85	5		0	mg/L
Colour	WTP	365	365	0	6	0	0	0.3	0	0		15	0	HU
Iron	WTP	26	26	<0.020	0.09	0.01	0.016	0.0164	0.01	0.03		0.3	0	mg/L
Manganese	WTP	26	26	0.011	0.08	0.025	0.027	0.0112	0.025	0.025	0.5	0.1	0	mg/L
pH	WTP	365	365	7.21	7.85	7.56	7.56	0.115	7.37	7.73			0	
Turbidity	WTP	365	365	0.00	0.56	0.05	0.06	0.054	0.01	0.14	0.5	5	0	NTU
Chlorine Residual	Reticulation	208	208	0.1	1.71	0.73	0.73	0.312	0.24	1.18	5		0	mg/L

Table 15 - Gympie Water - Operational monitoring

Parameter	Location	Samples Required	Samples Taken	Minimum	Maximum	Median	Average	STD	5th Percentile	95th Percentile	ADWG Value (H)	ADWG Value (A)	No. of Exceedances	Units
FH Chlorine Res	WTP	365	365	1.8	4.64	2.98	3.01	0.501	2.26	3.94	5		0	mg/L
FH pH	WTP	365	365	6.6	7.5	7	7.02	0.14	6.8	7.2			0	
Aluminium	WTP	26	24	0.001	0.056	0.027	0.028	0.0146	0.008	0.054		0.2	0	mg/L
Chlorine Residual	WTP	365	360	1.94	4.84	3.36	3.38	0.462	2.61	4.13	5		0	mg/L
Colour	WTP	365	365	1	4	1	1	0.5	1	2		15	0	HU
Fluoride	WTP	365	357	0.06	0.91	0.78	0.71	0.223	0.07	0.87	1.5		0	mg/L
Hardness	WTP	26	24	28	112	67	73	22.3	36	102		200	0	mg/L
Iron	WTP	26	24	0.001	0.01	0.004	0.005	0.0028	0.001	0.01		0.3	0	mg/L
Manganese	WTP	26	24	<0.050	<0.050	0.025	0.025	0.0	0.025	0.025	0.5	0.1	0	mg/L
Turbidity	WTP	365	365	0.01	0.17	0.12	0.12	0.022	0.08	0.15	0.5	5	0	NTU
Chlorine Residual	Reticulation	572	567	0.03	3.12	1.16	1.2	0.529	0.43	2.16	5		0	mg/L

Table 16 - Imbil Water - Operational monitoring

Parameter	Location	Samples Required	Samples Taken	Minimum	Maximum	Median	Average	STD	5th Percentile	95th Percentile	ADWG Value (H)	ADWG Value (A)	No. of Exceedances	Units
Aluminium	WTP	26	24	0.003	0.108	0.027	0.04	0.0288	0.011	0.096		0.2	0	mg/L
Chlorine Residual	WTP	365	364	2.03	5.94	4.3	4.17	0.697	2.91	4.96	5		0	mg/L
Colour	WTP	365	364	1	31	12	11	5.5	2	20		15	73	HU
Hardness	WTP	26	24	64	188	107	116	34	71	165		200	0	mg/L
Iron	WTP	26	24	0.001	0.039	0.006	0.009	0.0098	0.001	0.034		0.3	0	mg/L
Manganese	WTP	26	24	<0.050	<0.050	0.025	0.025	0.0	0.025	0.025	0.5	0.1	0	mg/L
pH	WTP	26	24	7.1	7.73	7.36	7.38	0.164	7.16	7.62			0	
Turbidity	WTP	365	364	0.01	0.34	0.11	0.12	0.066	0.03	0.24	0.5	5	0	NTU
UVT	WTP	52	7	80	85	83	82.9	1.95	80.3	85			0	%
Chlorine Residual	Reticulation	104	109	0.02	2.32	0.56	0.65	0.459	0.06	1.41	5		0	mg/L

Table 17 - Kandanga Water - Operational monitoring

Parameter	Location	Samples Required	Samples Taken	Minimum	Maximum	Median	Average	STD	5th Percentile	95th Percentile	ADWG Value (H)	ADWG Value (A)	No. of Exceedances	Units
Aluminium	WTP	26	24	0.013	0.095	0.028	0.037	0.0234	0.015	0.09		0.2	0	mg/L
Chlorine Residual	WTP	365	364	1.99	4.99	3.91	3.89	0.819	2.58	4.95	5		0	mg/L
Colour	WTP	365	364	1	20	3	4	3.8	1	12		15	2	HU
Hardness	WTP	26	24	24	208	180	165	41.4	100	200		200	1	mg/L
Iron	WTP	26	24	0.001	0.141	0.003	0.009	0.0282	0.001	0.009		0.3	0	mg/L
Manganese	WTP	26	24	0.01	<0.050	0.025	0.024	0.0031	0.025	0.025	0.5	0.1	0	mg/L
pH	WTP	26	24	7.1	7.8	7.48	7.48	0.165	7.28	7.75			0	
Turbidity	WTP	365	364	0.01	0.27	0.07	0.08	0.043	0.03	0.15	0.5	5	0	NTU
UVT	WTP	52	5	92	96	93	93.6	1.52	92.2	95.6			0	%
Chlorine Residual	Reticulation	104	106	0.01	1.83	0.39	0.57	0.502	0.03	1.4	5		0	mg/L
Aluminium	WTP	26	24	0.013	0.095	0.028	0.037	0.0234	0.015	0.09		0.2	0	mg/L

Table 18 - Kilkivan Water - Operational monitoring

Parameter	Location	Samples Required	Samples Taken	Minimum	Maximum	Median	Average	STD	5th Percentile	95th Percentile	ADWG Value (H)	ADWG Value (A)	No. of Exceedances	Units
Conductivity	WTP	365	365	451	899	578	582	81.8	469	698			0	µS/cm
Alkalinity	WTP	26	26	110	180	147	146	18.3	115	172			0	mg/L
Aluminium	WTP	26	26	0.000	0.037	0.0	0.007	0.0115	0.0	0.03		0.2	0	mg/L
Chlorine Residual	WTP	365	365	0.75	2.2	1.13	1.16	0.167	0.99	1.47	5		0	mg/L
Colour	WTP	365	365	0	0	0	0	0.0	0	0		15	0	HU
Iron	WTP	26	26	<0.002	0.09	0.01	0.019	0.0216	0.01	0.07		0.3	0	mg/L
pH	WTP	365	365	7.04	7.72	7.38	7.38	0.113	7.2	7.57			0	
Turbidity	WTP	365	365	0.03	0.13	0.06	0.06	0.018	0.03	0.09	0.5	5	0	NTU
Chlorine Residual	Reticulation	208	208	0.36	54	0.74	1.19	4.298	0.44	1.08	5		0	mg/L

Table 19 - Rainbow Beach Water - Operational monitoring

Parameter	Location	Samples Required	Samples Taken	Minimum	Maximum	Median	Average	STD	5th Percentile	95th Percentile	ADWG Value (H)	ADWG Value (A)	No. of Exceedances	Units
Alkalinity	WTP	12	12	142	182	167	164	12	145	181			0	mg/L
Aluminium	WTP	12	12	0.013	0.079	0.028	0.034	0.02	0.014	0.072		0.2	0	mg/L
Chlorine Residual	WTP	365	365	0.66	1.31	0.92	0.94	0.109	0.81	1.16	5		0	mg/L
Colour	WTP	365	365	1	1	1	1	0.0	1	1		15	0	HU
Hardness	WTP	12	12	8	174	10	24	47.4	8	86		200	0	mg/L
Iron	WTP	12	12	0.04	0.1	0.05	0.054	0.0183	0.04	0.089		0.3	0	mg/L
Manganese	WTP	12	12	<0.050	0.077	0.025	0.029	0.015	0.025	0.048	0.5	0.1	0	mg/L
pH	WTP	365	365	6.8	7.4	7.1	7.07	0.127	6.9	7.3			0	
Turbidity	WTP	365	365	0.05	0.4	0.21	0.22	0.068	0.12	0.36	0.5	5	0	NTU
Chlorine Residual	Reticulation	156	159	0.26	0.97	0.63	0.62	0.131	0.39	0.82	5		0	mg/L

Appendix C: Water Quality Compliance – Verification Monitoring

Table 20 - Amamoor Water - Verification monitoring

Parameter	Location	Samples Required	Samples Taken	Minimum	Maximum	Median	Average	STD	5th Percentile	95th Percentile	ADWG Value (H)	ADWG Value (A)	No. of Exceedances	Units
Aluminium	WTP	2	2	<0.03	<0.03	0.02	0.02	0.0	0.02	0.02		0.2	0	mg/L
Alkalinity	WTP	2	2	170	200	185	185	21.2	172	199			0	mg/L
Boron	WTP	2	2	0.04	0.05	0.05	0.05	0.007	0.04	0.05	4		0	mg/L
Conductivity	WTP	2	2	550	560	555	555	7.1	551	560			0	µS/cm
Copper	WTP	2	2	<0.003	<0.003	0.002	0.002	0.0	0.002	0.002	2	1	0	mg/L
Fluoride	WTP	2	2	0.07	0.09	0.08	0.08	0.014	0.07	0.09	1.5		0	mg/L
Iron	WTP	2	2	<0.01	<0.01	0.01	0.01	0.0	0.01	0.01		0.3	0	mg/L
Manganese	WTP	2	2	<0.001	<0.001	0.001	0.001	0.0	0.001	0.001	0.5	0.1	0	mg/L
pH	WTP	2	2	7.78	8.09	7.94	7.94	0.219	7.8	8.07			0	
Sodium	WTP	2	2	32	40	36	36	5.7	32	40		180	0	mg/L
Sulphate	WTP	2	2	8.7	17	12.9	12.9	5.87	9.1	16.6			0	mg/L
Total Dissolved Solids	WTP	2	2	310	320	315	315	7.1	311	320		600	0	mg/L
Hardness	WTP	2	2	193	230	212	212	26.2	195	228		200	1	mg/L
True Colour	WTP	2	2	<8	<8	4	4	0.0	4	4		15	0	Hazen
Turbidity	WTP	2	2	<1	<1	1	1	0.0	1	1	0.5	5	0	NTU
Zinc	WTP	2	2	<0.06	<0.06	0.03	0.03	0.0	0.03	0.03		3	0	mg/L
Nitrate	WTP	2	2	0.16	0.55	0.36	0.36	0.276	0.18	0.53	50		0	mg/L
Aluminium - Metals	WTP	1	1	0.14	0.14	0.14	0.14	null	0.14	0.14		0.2	0	mg/L
Arsenic - Metals	WTP	1	1	0.0008	0.0008	0.0008	0.0008	null	0.0008	0.0008	0.01		0	mg/L
Cadmium - Metals	WTP	1	1	<0.0001	<0.0001	0.0001	0.0001	null	0.0001	0.0001	0.002		0	mg/L
Chromium - Metals	WTP	1	1	0.0006	0.0006	0.0006	0.0006	null	0.0006	0.0006	0.05		0	mg/L
Copper - Metals	WTP	1	1	0.009	0.009	0.009	0.009	null	0.009	0.009	2	1	0	mg/L
Iron - Metals	WTP	1	1	<0.0050	<0.0050	0.0025	0.0025	null	0.0025	0.0025		0.3	0	mg/L
Manganese - Metals	WTP	1	1	0.0012	0.0012	0.0012	0.0012	null	0.0012	0.0012	0.5	0.1	0	mg/L
Nickel - Metals	WTP	1	1	0.001	0.001	0.001	0.001	null	0.001	0.001	0.02		0	mg/L
Lead - Metals	WTP	1	1	0.0003	0.0003	0.0003	0.0003	null	0.0003	0.0003	0.005		0	mg/L
Zinc - Metals	WTP	1	1	0.004	0.004	0.004	0.004	null	0.004	0.004		3	0	mg/L
Aluminium	Reticulation	1	2	<0.03	<0.03	0.02	0.02	0.0	0.02	0.02		0.2	0	mg/L
Alkalinity	Reticulation	1	2	180	200	190	190	14.1	181	199			0	mg/L
Boron	Reticulation	1	2	0.04	0.05	0.05	0.05	0.007	0.04	0.05	4		0	mg/L
Conductivity	Reticulation	1	2	560	560	560	560	0.0	560	560			0	µS/cm
Copper	Reticulation	1	2	0.006	0.011	0.009	0.009	0.0035	0.006	0.011	2	1	0	mg/L

Fluoride	Reticulation	1	2	0.08	0.09	0.09	0.09	0.007	0.08	0.09	1.5		0	mg/L
Iron	Reticulation	1	2	<0.01	<0.01	0.01	0.01	0.0	0.01	0.01		0.3	0	mg/L
Manganese	Reticulation	1	2	<0.001	<0.001	0.001	0.001	0.0	0.001	0.001	0.5	0.1	0	mg/L
pH	Reticulation	1	2	8.03	8.19	8.11	8.11	0.113	8.04	8.18			0	
Sodium	Reticulation	1	2	33	41	37	37	5.7	33	41		180	0	mg/L
Sulphate	Reticulation	1	2	8.9	17	13	13	5.73	9.3	16.6			0	mg/L
Total Dissolved Solids	Reticulation	1	2	320	320	320	320	0.0	320	320		600	0	mg/L
Hardness	Reticulation	1	2	195	233	214	214	26.9	197	231		200	1	mg/L
True Colour	Reticulation	1	2	<8	<8	4	4	0.0	4	4		15	0	Hazen
Turbidity	Reticulation	1	2	<1	<1	1	1	0.0	1	1		5	0	NTU
Zinc	Reticulation	1	2	<0.06	<0.06	0.03	0.03	0.0	0.03	0.03		3	0	mg/L
Nitrate	Reticulation	1	2	0.13	0.58	0.36	0.36	0.318	0.15	0.56	50		0	mg/L
Aluminium - Metals	Reticulation	0	1	0.038	0.038	0.038	0.038	null	0.038	0.038		0.2	0	mg/L
Arsenic - Metals	Reticulation	0	1	0.0009	0.0009	0.0009	0.0009	null	0.0009	0.0009	0.01		0	mg/L
Cadmium - Metals	Reticulation	0	1	<0.0001	<0.0001	0.0001	0.0001	null	0.0001	0.0001	0.002		0	mg/L
Chromium - Metals	Reticulation	0	1	0.0004	0.0004	0.0004	0.0004	null	0.0004	0.0004	0.05		0	mg/L
Copper - Metals	Reticulation	0	1	0.007	0.007	0.007	0.007	null	0.007	0.007	2	1	0	mg/L
Chlorine Residual	Reticulation	24	26	0.12	3.1	1	1.1	0.6	0.41	1.82	5		0	mg/L
Chlorate	Reticulation	12	11	0.32	2.13	0.77	0.8955	0.6345	0.4	2.13	0.8		3	mg/L
Trihalomethane	Reticulation	12	15	96	510	150	193	115.8	99	404	250		3	µg/L
Iron - Metals	Reticulation	0	1	0.007	0.007	0.007	0.007	null	0.007	0.007		0.3	0	mg/L
Manganese - Metals	Reticulation	0	1	0.0004	0.0004	0.0004	0.0004	null	0.0004	0.0004	0.5	0.1	0	mg/L
Nickel - Metals	Reticulation	0	1	0.0009	0.0009	0.0009	0.0009	null	0.0009	0.0009	0.02		0	mg/L
Lead - Metals	Reticulation	0	1	0.0003	0.0003	0.0003	0.0003	null	0.0003	0.0003	0.005		0	mg/L
Zinc - Metals	Reticulation	0	1	0.004	0.004	0.004	0.004	null	0.004	0.004		3	0	mg/L

Table 21 - Cooloola Cove Water - Verification monitoring

Parameter	Location	Samples Required	Samples Taken	Minimum	Maximum	Median	Average	STD	5th Percentile	95th Percentile	ADWG Value (H)	ADWG Value (A)	No. of Exceedances	Units
Aluminium	WTP	2	2	<0.03	<0.03	0.02	0.02	0.0	0.02	0.02		0.2	0	mg/L
Alkalinity	WTP	2	2	22.00	34.00	28.00	28.00	8.50	23.00	33.00			0	mg/L
Boron	WTP	2	2	<0.02	<0.02	0.01	0.01	0.0	0.01	0.01	4		0	mg/L
Conductivity	WTP	2	2	240.00	290.00	265.00	265.00	35.40	243.00	288.00			0	µS/cm
Copper	WTP	2	2	<0.003	<0.003	0.00	0.00	0.0	0.00	0.00	2	1	0	mg/L
Fluoride	WTP	2	2	0.85	0.85	0.85	0.85	0.0	0.85	0.85	1.5		0	mg/L
Iron	WTP	2	2	<0.01	<0.01	0.01	0.01	0.0	0.01	0.01		0.3	0	mg/L
Manganese	WTP	2	2	<0.001	<0.001	0.00	0.00	0.0	0.00	0.00	0.5	0.1	0	mg/L
pH	WTP	2	2	6.80	6.90	6.85	6.85	0.07	6.81	6.90			0	
Sodium	WTP	2	2	46.00	57.00	52.00	52.00	7.80	47.00	56.00		180	0	mg/L
Sulphate	WTP	2	2	53.00	63.00	58.00	58.00	7.07	53.50	62.50			0	mg/L
Total Dissolved Solids	WTP	2	2	140.00	170.00	155.00	155.00	21.20	142.00	169.00		600	0	mg/L
Hardness	WTP	2	2	7.00	7.00	7.00	7.00	0.10	7.00	7.00		200	0	mg/L
True Colour	WTP	2	2	<8	<8	4.00	4.00	0.0	4.00	4.00		15	0	Hazen
Turbidity	WTP	2	2	<1	2.00	1.00	1.00	1.10	1.00	2.00	0.5	5	0	NTU
Zinc	WTP	2	2	<0.06	<0.06	0.03	0.03	0.00	0.03	0.03		3	0	mg/L
Nitrate	WTP	2	2	<0.30	0.16	0.16	0.16	0.01	0.15	0.16	50		0	mg/L
Aluminium - Metals	WTP	1	1	0.02	0.02	0.02	0.02	null	0.02	0.02		0.2	0	mg/L
Arsenic - Metals	WTP	1	1	<0.0001	<0.0001	0.00	0.00	null	0.00	0.00	0.01		0	mg/L
Cadmium - Metals	WTP	1	1	<0.0001	<0.0001	0.00	0.00	null	0.00	0.00	0.002		0	mg/L
Chromium - Metals	WTP	1	1	<0.0001	<0.0001	0.00	0.00	null	0.00	0.00	0.05		0	mg/L
Copper - Metals	WTP	1	1	<0.0010	<0.0010	0.00	0.00	null	0.00	0.00	2	1	0	mg/L
Chlorine Residual	WTP	12	12	2.32	3.28	2.58	2.66	0.28	2.32	3.09	5		0	
Trihalomethane	WTP	0	1	53.00	53.00	53.00	53.00	null	53.00	53.00	250		0	
Iron - Metals	WTP	1	1	0.01	0.01	0.01	0.01	null	0.01	0.01		0.3	0	mg/L
Manganese - Metals	WTP	1	1	0.00	0.00	0.00	0.00	null	0.00	0.00	0.5	0.1	0	mg/L
Nickel - Metals	WTP	1	1	0.00	0.00	0.00	0.00	null	0.00	0.00	0.02		0	mg/L
Lead - Metals	WTP	1	1	<0.0001	<0.0001	0.00	0.00	null	0.00	0.00	0.01		0	mg/L
Zinc - Metals	WTP	1	1	0.01	0.01	0.01	0.01	null	0.01	0.01		3	0	mg/L
Aluminium	Reticulation	1	6	<0.03	0.19	0.02	0.06	0.07	0.02	0.17		0.2	0	mg/L
Alkalinity	Reticulation	1	6	<1	37.00	27.00	21.00	16.40	1.00	37.00			0	mg/L
Boron	Reticulation	1	6	<0.02	<0.02	0.01	0.01	0.0	0.01	0.01	4		0	mg/L
Conductivity	Reticulation	1	6	81.00	310.00	270.00	217.00	106.10	82.00	305.00			0	µS/cm
Copper	Reticulation	1	6	<0.003	0.01	0.00	0.01	0.00	0.00	0.01	2	1	0	mg/L

Fluoride	Reticulation	1	6	<0.02	0.86	0.78	0.55	0.42	0.01	0.85	1.5		0	mg/L
Iron	Reticulation	1	6	<0.01	0.17	0.02	0.05	0.07	0.01	0.15		0.3	0	mg/L
Manganese	Reticulation	1	6	<0.001	0.00	0.00	0.00	0.00	0.00	0.00	0.5	0.1	0	mg/L
pH	Reticulation	1	6	4.47	6.93	6.79	6.11	1.14	4.56	6.92			0	
Sodium	Reticulation	1	6	11.00	59.00	52.00	40.00	22.60	11.00	59.00		180	0	mg/L
Sulphate	Reticulation	1	6	1.70	68.00	60.50	42.80	31.85	1.80	67.00			0	mg/L
Total Dissolved Solids	Reticulation	1	6	40.00	180.00	160.00	126.00	65.80	41.00	178.00		600	0	mg/L
Hardness	Reticulation	1	6	6.00	9.00	7.00	7.00	1.10	6.00	9.00		200	0	mg/L
True Colour	Reticulation	1	6	<8	220.00	4.00	59.00	91.40	4.00	195.00		15	0	Hazen
Turbidity	Reticulation	1	6	<1	1.00	1.00	1.00	0.20	1.00	1.00		5	0	NTU
Zinc	Reticulation	1	6	<0.06	<0.06	0.03	0.03	0.0	0.03	0.03		3	0	mg/L
Nitrate	Reticulation	1	6	<0.30	0.16	0.15	0.15	0.01	0.15	0.16	50		0	mg/L
Aluminium - Metals	Reticulation	0	3	0.01	0.17	0.02	0.07	0.09	0.01	0.15		0.2	0	mg/L
Arsenic - Metals	Reticulation	0	3	<0.0001	<0.0001	0.00	0.00	0.0	0.00	0.00	0.01		0	mg/L
Cadmium - Metals	Reticulation	0	3	<0.0001	<0.0001	0.00	0.00	0.0	0.00	0.00	0.002		0	mg/L
Chromium - Metals	Reticulation	0	3	<0.0001	0.00	0.00	0.00	0.00	0.00	0.00	0.05		0	mg/L
Copper - Metals	Reticulation	0	3	<0.0010	0.02	0.00	0.01	0.01	0.00	0.02	2	1	0	mg/L
Chlorine Residual	Reticulation	60	99	0.30	2.30	1.44	1.39	0.41	0.70	1.95	5		0	mg/L
Chlorate	Reticulation	12	12	0.75	0.94	0.83	0.84	0.07	0.75	0.93	0.8		0	mg/L
Trihalomethane	Reticulation	12	26	27.00	240.00	50.00	60.00	42.10	31.00	100.00	250		0	µg/L
Iron - Metals	Reticulation	0	3	<0.0050	0.18	0.03	0.07	0.10	0.01	0.16		0.3	0	mg/L
Manganese - Metals	Reticulation	0	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.5	0.1	0	mg/L
Nickel - Metals	Reticulation	0	3	<0.0001	0.00	0.00	0.00	0.00	0.00	0.00	0.02		0	mg/L
Lead - Metals	Reticulation	0	3	<0.0001	0.00	0.00	0.00	0.00	0.00	0.00	0.01		0	mg/L
Zinc - Metals	Reticulation	0	3	<0.0010	0.04	0.01	0.02	0.02	0.00	0.03		3	0	mg/L

Table 22 - Goomeri Water - Verification monitoring

Parameter	Location	Samples Required	Samples Taken	Minimum	Maximum	Median	Average	STD	5th Percentile	95th Percentile	ADWG Value (H)	ADWG Value (A)	No. of Exceedances	Units
Aluminium	WTP	2	2	<0.03	<0.03	0.02	0.02	0.0	0.02	0.02		0.2	0	mg/L
Alkalinity	WTP	2	2	170	340	255	255	120.2	179	332			0	mg/L
Boron	WTP	2	2	0.03	0.05	0.04	0.04	0.014	0.03	0.05	4		0	mg/L
Conductivity	WTP	2	2	950	1100	1025	1025	106.1	958	1093			0	µS/cm
Copper	WTP	2	2	0.007	0.011	0.009	0.009	0.0028	0.007	0.011	2	1	0	mg/L
Fluoride	WTP	2	2	0.19	0.23	0.21	0.21	0.028	0.19	0.23	1.5		0	mg/L
Iron	WTP	2	2	<0.01	<0.01	0.01	0.01	0.0	0.01	0.01		0.3	0	mg/L
Manganese	WTP	2	2	<0.001	0.001	0.001	0.001	0.0004	0.001	0.001	0.5	0.1	0	mg/L
pH	WTP	2	2	7.7	8.2	7.95	7.95	0.354	7.73	8.18			0	
Sodium	WTP	2	2	89	94	92	92	3.5	89	94		180	0	mg/L
Sulphate	WTP	2	2	8.2	10	9.1	9.1	1.27	8.3	9.9			0	mg/L
Total Dissolved Solids	WTP	2	2	480	630	555	555	106.1	488	623		600	1	mg/L
Hardness	WTP	2	2	247	389	318	318	100.4	254	382		200	2	mg/L
True Colour	WTP	2	2	<8	<8	4	4	0.0	4	4		15	0	Hazen
Turbidity	WTP	2	2	<1	<1	1	1	0.0	1	1	0.5	5	0	NTU
Zinc	WTP	2	2	<0.06	<0.06	0.03	0.03	0.0	0.03	0.03		3	0	mg/L
Nitrate	WTP	2	2	0.86	1	0.93	0.93	0.099	0.87	0.99	50		0	mg/L
Aluminium - Metals	WTP	1	1	0.003	0.003	0.003	0.003	null	0.003	0.003		0.2	0	mg/L
Arsenic - Metals	WTP	1	1	0.0052	0.0052	0.0052	0.0052	null	0.0052	0.0052	0.01		0	mg/L
Cadmium - Metals	WTP	1	1	<0.0001	<0.0001	0.0001	0.0001	null	0.0001	0.0001	0.002		0	mg/L
Chromium - Metals	WTP	1	1	<0.0001	<0.0001	0.0001	0.0001	null	0.0001	0.0001	0.05		0	mg/L
Copper - Metals	WTP	1	1	0.008	0.008	0.008	0.008	null	0.008	0.008	2	1	0	mg/L
Iron - Metals	WTP	1	1	<0.0050	<0.0050	0.0025	0.0025	null	0.0025	0.0025		0.3	0	mg/L
Manganese - Metals	WTP	1	1	0.0016	0.0016	0.0016	0.0016	null	0.0016	0.0016	0.5	0.1	0	mg/L
Nickel - Metals	WTP	1	1	0.0007	0.0007	0.0007	0.0007	null	0.0007	0.0007	0.02		0	mg/L
Lead - Metals	WTP	1	1	0.0002	0.0002	0.0002	0.0002	null	0.0002	0.0002	0.005		0	mg/L
Zinc - Metals	WTP	1	1	0.006	0.006	0.006	0.006	null	0.006	0.006		3	0	mg/L
Aluminium	Reticulation	1	4	<0.03	<0.03	0.02	0.02	0.0	0.02	0.02		0.2	0	mg/L
Alkalinity	Reticulation	1	4	170	340	255	255	98.1	170	340			0	mg/L
Boron	Reticulation	1	4	0.03	0.05	0.04	0.04	0.012	0.03	0.05	4		0	mg/L
Conductivity	Reticulation	1	4	950	1100	1025	1025	86.6	950	1100			0	µS/cm
Copper	Reticulation	1	4	0.003	0.011	0.006	0.006	0.0036	0.003	0.01	2	1	0	mg/L
Fluoride	Reticulation	1	4	0.19	0.23	0.22	0.21	0.021	0.19	0.23	1.5		0	mg/L
Iron	Reticulation	1	4	<0.01	<0.01	0.01	0.01	0.0	0.01	0.01		0.3	0	mg/L

Manganese	Reticulation	1	4	<0.001	0.001	0.001	0.001	0.0003	0.001	0.001	0.5	0.1	0	mg/L
pH	Reticulation	1	4	7.7	8.2	7.97	7.96	0.247	7.72	8.19			0	
Sodium	Reticulation	1	4	89	94	92	92	2.6	89	94		180	0	mg/L
Sulphate	Reticulation	1	4	8.2	10	9.2	9.1	1.01	8.2	10			0	mg/L
Total Dissolved Solids	Reticulation	1	4	480	630	560	558	83.8	482	630		600	2	mg/L
Hardness	Reticulation	1	4	247	389	321	319	79.4	248	389		200	2	mg/L
True Colour	Reticulation	1	4	<8	<8	4	4	0.0	4	4		15	0	Hazen
Turbidity	Reticulation	1	4	<1	<1	1	1	0.0	1	1		5	0	NTU
Zinc	Reticulation	1	4	<0.06	<0.06	0.03	0.03	0.0	0.03	0.03		3	0	mg/L
Nitrate	Reticulation	1	4	0.77	1	0.93	0.91	0.113	0.78	1	50		0	mg/L
Aluminium - Metals	Reticulation	0	2	0.003	0.003	0.003	0.003	0.0	0.003	0.003		0.2	0	mg/L
Arsenic - Metals	Reticulation	0	2	0.0051	0.0052	0.0052	0.0052	0.00007	0.0051	0.0052	0.01		0	mg/L
Cadmium - Metals	Reticulation	0	2	<0.0001	<0.0001	0.0001	0.0001	0.0	0.0001	0.0001	0.002		0	mg/L
Chromium - Metals	Reticulation	0	2	<0.0001	<0.0001	0.0001	0.0001	0.0	0.0001	0.0001	0.05		0	mg/L
Copper - Metals	Reticulation	0	2	0.004	0.008	0.006	0.006	0.00283	0.0042	0.0078	2	1	0	mg/L
Chlorine Residual	Reticulation	24	26	0.19	1.54	0.85	0.8	0.287	0.31	1.17	5		0	mg/L
Chlorate	Reticulation	12	10	0.19	0.793	0.415	0.4876	0.22622	0.1945	0.7705	0.8		0	mg/L
Trihalomethane	Reticulation	0	15	36	310	220	188	77.7	49	275	250		0	µg/L
Iron - Metals	Reticulation	0	2	<0.0050	0.007	0.0048	0.0048	0.00318	0.0027	0.0068		0.3	0	mg/L
Manganese - Metals	Reticulation	0	2	0.0016	0.0016	0.0016	0.0016	0.0	0.0016	0.0016	0.5	0.1	0	mg/L
Nickel - Metals	Reticulation	0	2	0.0007	0.0007	0.0007	0.0007	0.0	0.0007	0.0007	0.02		0	mg/L
Lead - Metals	Reticulation	0	2	0.0002	0.0002	0.0002	0.0002	0.0	0.0002	0.0002	0.005		0	mg/L
Zinc - Metals	Reticulation	0	2	0.003	0.006	0.0045	0.0045	0.00212	0.0032	0.0059		3	0	mg/L

Table 23 - Gympie Water - Verification monitoring

Parameter	Location	Samples Required	Samples Taken	Minimum	Maximum	Median	Average	STD	5th Percentile	95th Percentile	ADWG Value (H)	ADWG Value (A)	No. of Exceedances	Units
Aluminium	WTP	2	2	<0.03	<0.03	0.02	0.02	0.0	0.02	0.02		0.2	0	mg/L
Alkalinity	WTP	2	2	43	74	59	59	21.9	45	72			0	mg/L
Boron	WTP	2	2	0.02	0.02	0.02	0.02	0.0	0.02	0.02	4		0	mg/L
Conductivity	WTP	2	2	260	330	295	295	49.5	264	327			0	µS/cm
Copper	WTP	2	2	<0.003	<0.003	0.002	0.002	0.0	0.002	0.002	2	1	0	mg/L
Fluoride	WTP	2	2	0.56	0.67	0.62	0.62	0.078	0.57	0.66	1.5		0	mg/L
Iron	WTP	2	2	<0.01	<0.01	0.01	0.01	0.0	0.01	0.01		0.3	0	mg/L
Manganese	WTP	2	2	0.001	0.002	0.002	0.002	0.0007	0.001	0.002	0.5	0.1	0	mg/L
pH	WTP	2	2	6.84	6.95	6.9	6.9	0.078	6.85	6.94			0	
Sodium	WTP	2	2	28	32	30	30	2.8	28	32		180	0	mg/L
Sulphate	WTP	2	2	21	23	22	22	1.41	21.1	22.9			0	mg/L
Total Dissolved Solids	WTP	2	2	150	190	170	170	28.3	152	188		600	0	mg/L
Hardness	WTP	2	2	52	91	72	72	27.6	54	89		200	0	mg/L
True Colour	WTP	2	2	<8	<8	4	4	0.0	4	4		15	0	Hazen
Turbidity	WTP	2	2	<1	<1	1	1	0.0	1	1	0.5	5	0	NTU
Zinc	WTP	2	2	<0.06	<0.06	0.03	0.03	0.0	0.03	0.03		3	0	mg/L
Nitrate	WTP	2	1	<0.30	0.82	0.49	0.49	0.474	0.18	0.79	50		0	mg/L
Aluminium - Metals	WTP	1	1	0.018	0.018	0.018	0.018	null	0.018	0.018		0.2	0	mg/L
Arsenic - Metals	WTP	1	1	0.0002	0.0002	0.0002	0.0002	null	0.0002	0.0002	0.01		0	mg/L
Cadmium - Metals	WTP	1	1	<0.0001	<0.0001	0.0001	0.0001	null	0.0001	0.0001	0.002		0	mg/L
Chromium - Metals	WTP	1	1	0.0002	0.0002	0.0002	0.0002	null	0.0002	0.0002	0.05		0	mg/L
Copper - Metals	WTP	1	1	0.002	0.002	0.002	0.002	null	0.002	0.002	2	1	0	mg/L
Chlorine Residual	WTP	12	12	1.19	3.37	2.37	2.38	0.681	1.38	3.27			0	
Iron - Metals	WTP	1	1	<0.0050	<0.0050	0.0025	0.0025	null	0.0025	0.0025		0.3	0	mg/L
Manganese - Metals	WTP	1	1	0.002	0.002	0.002	0.002	null	0.002	0.002	0.5	0.1	0	mg/L
Nickel - Metals	WTP	1	1	0.0008	0.0008	0.0008	0.0008	null	0.0008	0.0008	0.02		0	mg/L
Lead - Metals	WTP	1	1	<0.0001	<0.0001	0.0001	0.0001	null	0.0001	0.0001	0.005		0	mg/L
Zinc - Metals	WTP	1	1	0.016	0.016	0.016	0.016	null	0.016	0.016		3	0	mg/L
Aluminium	Reticulation	1	6	<0.03	<0.03	0.02	0.02	0.0	0.02	0.02		0.2	0	mg/L
Alkalinity	Reticulation	1	6	42	74	56	56	12.8	42	72			0	mg/L
Boron	Reticulation	1	6	0.02	0.03	0.02	0.02	0.004	0.02	0.03	4		0	mg/L
Conductivity	Reticulation	1	6	250	330	295	290	30.3	253	325			0	µS/cm
Copper	Reticulation	1	6	<0.003	0.058	0.004	0.013	0.0223	0.002	0.046	2	1	0	mg/L
Fluoride	Reticulation	1	6	0.56	0.77	0.67	0.67	0.069	0.58	0.75	1.5		0	mg/L

Iron	Reticulation	1	6	<0.01	<0.01	0.01	0.01	0.0	0.01	0.01		0.3	0	mg/L
Manganese	Reticulation	1	6	<0.001	0.002	0.001	0.001	0.0005	0.001	0.002	0.5	0.1	0	mg/L
pH	Reticulation	1	6	6.73	7.11	6.89	6.9	0.135	6.75	7.07			0	
Sodium	Reticulation	1	6	28	34	30	30	2.4	28	34		180	0	mg/L
Sulphate	Reticulation	1	6	17	23	21.5	21	2.28	17.8	23			0	mg/L
Total Dissolved Solids	Reticulation	1	6	140	190	170	165	17.6	143	185		600	0	mg/L
Hardness	Reticulation	1	6	50	91	69	69	16.3	51	88		200	0	mg/L
True Colour	Reticulation	1	6	<8	<8	4	4	0.0	4	4		15	0	Hazen
Turbidity	Reticulation	1	6	<1	<1	1	1	0.0	1	1		5	0	NTU
Zinc	Reticulation	1	6	<0.06	<0.06	0.03	0.03	0.0	0.03	0.03		3	0	mg/L
Nitrate	Reticulation	1	6	<0.30	0.82	0.68	0.6	0.246	0.24	0.81	50		0	mg/L
Aluminium - Metals	Reticulation	0	3	0.016	0.018	0.018	0.0173	0.00115	0.0162	0.018		0.2	0	mg/L
Arsenic - Metals	Reticulation	0	3	0.0002	0.0004	0.0002	0.0003	0.00012	0.0002	0.0004	0.01		0	mg/L
Cadmium - Metals	Reticulation	0	3	<0.0001	<0.0001	0.0001	0.0001	0.0	0.0001	0.0001	0.002		0	mg/L
Chromium - Metals	Reticulation	0	3	0.0002	0.0003	0.0002	0.0002	0.00006	0.0002	0.0003	0.05		0	mg/L
Copper - Metals	Reticulation	0	3	0.002	0.049	0.003	0.018	0.02685	0.0021	0.0444	2	1	0	mg/L
Chlorine Residual	Reticulation	100	128	0.04	3.98	1.29	1.37	0.703	0.44	2.81	5		0	mg/L
Chlorate	Reticulation	12	12	0.13	0.81	0.69	0.58	0.251	0.14	0.8	0.8		0	mg/L
Trihalomethane	Reticulation	12	12	16	240	73	87	58.5	28	185	250		0	µg/L
Iron - Metals	Reticulation	0	3	<0.0050	0.005	0.0025	0.0033	0.00144	0.0025	0.0048		0.3	0	mg/L
Manganese - Metals	Reticulation	0	3	0.0009	0.002	0.0013	0.0014	0.00056	0.0009	0.0019	0.5	0.1	0	mg/L
Nickel - Metals	Reticulation	0	3	0.0006	0.0008	0.0007	0.0007	0.0001	0.0006	0.0008	0.02		0	mg/L
Lead - Metals	Reticulation	0	3	<0.0001	0.0005	0.0001	0.0002	0.00025	0.0001	0.0005	0.005		0	mg/L
Zinc - Metals	Reticulation	0	3	0.002	0.016	0.003	0.007	0.00781	0.0021	0.0147		3	0	mg/L

Table 24 - Imbil Water - Verification monitoring

Parameter	Location	Samples Required	Samples Taken	Minimum	Maximum	Median	Average	STD	5th Percentile	95th Percentile	ADWG Value (H)	ADWG Value (A)	No. of Exceedances	Units
Aluminium	WTP	2	2	<0.03	<0.03	0.02	0.02	0.0	0.02	0.02		0.2	0	mg/L
Alkalinity	WTP	2	2	110	130	120	120	14.1	111	129			0	mg/L
Boron	WTP	2	2	0.03	0.03	0.03	0.03	0.0	0.03	0.03	4		0	mg/L
Conductivity	WTP	2	2	380	500	440	440	84.9	386	494			0	µS/cm
Copper	WTP	2	2	0.005	0.009	0.007	0.007	0.0028	0.005	0.009	2	1	0	mg/L
Fluoride	WTP	2	2	0.09	0.1	0.1	0.1	0.007	0.09	0.1	1.5		0	mg/L
Iron	WTP	2	2	<0.01	<0.01	0.01	0.01	0.0	0.01	0.01		0.3	0	mg/L
Manganese	WTP	2	2	<0.001	0.001	0.001	0.001	0.0004	0.001	0.001	0.5	0.1	0	mg/L
pH	WTP	2	2	7.36	7.44	7.4	7.4	0.057	7.36	7.44			0	
Sodium	WTP	2	2	31	37	34	34	4.2	31	37		180	0	mg/L
Sulphate	WTP	2	2	6.1	6.2	6.2	6.2	0.07	6.1	6.2			0	mg/L
Total Dissolved Solids	WTP	2	2	220	270	245	245	35.4	223	268		600	0	mg/L
Hardness	WTP	2	2	123	160	142	142	26.2	125	158		200	0	mg/L
True Colour	WTP	2	2	<8	<8	4	4	0.0	4	4		15	0	Hazen
Turbidity	WTP	2	2	<1	<1	1	1	0.0	1	1	0.5	5	0	NTU
Zinc	WTP	2	2	<0.06	<0.06	0.03	0.03	0.0	0.03	0.03		3	0	mg/L
Nitrate	WTP	2	2	0.26	1.2	0.73	0.73	0.665	0.31	1.15	50		0	mg/L
Aluminium - Metals	WTP	1	1	0.031	0.031	0.031	0.031	null	0.031	0.031		0.2	0	mg/L
Arsenic - Metals	WTP	1	1	0.0006	0.0006	0.0006	0.0006	null	0.0006	0.0006	0.01		0	mg/L
Cadmium - Metals	WTP	1	1	<0.0001	<0.0001	0.0001	0.0001	null	0.0001	0.0001	0.002		0	mg/L
Chromium - Metals	WTP	1	1	0.0002	0.0002	0.0002	0.0002	null	0.0002	0.0002	0.05		0	mg/L
Copper - Metals	WTP	1	1	0.007	0.007	0.007	0.007	null	0.007	0.007	2	1	0	mg/L
Iron - Metals	WTP	1	1	0.013	0.013	0.013	0.013	null	0.013	0.013		0.3	0	mg/L
Manganese - Metals	WTP	1	1	0.012	0.012	0.012	0.012	null	0.012	0.012	0.5	0.1	0	mg/L
Nickel - Metals	WTP	1	1	0.0013	0.0013	0.0013	0.0013	null	0.0013	0.0013	0.02		0	mg/L
Lead - Metals	WTP	1	1	0.0014	0.0014	0.0014	0.0014	null	0.0014	0.0014	0.005		0	mg/L
Zinc - Metals	WTP	1	1	0.012	0.012	0.012	0.012	null	0.012	0.012		3	0	mg/L
Aluminium	Reticulation	1	2	<0.03	<0.03	0.02	0.02	0.0	0.02	0.02		0.2	0	mg/L
Alkalinity	Reticulation	1	2	13	110	62	62	68.6	18	105			0	mg/L
Boron	Reticulation	1	2	0.03	0.03	0.03	0.03	0.0	0.03	0.03	4		0	mg/L
Conductivity	Reticulation	1	2	370	490	430	430	84.9	376	484			0	µS/cm
Copper	Reticulation	1	2	0.005	0.006	0.006	0.006	0.0007	0.005	0.006	2	1	0	mg/L
Fluoride	Reticulation	1	2	0.09	0.1	0.1	0.1	0.007	0.09	0.1	1.5		0	mg/L
Iron	Reticulation	1	2	<0.01	<0.01	0.01	0.01	0.0	0.01	0.01		0.3	0	mg/L

Manganese	Reticulation	1	2	<0.001	<0.001	0.001	0.001	0.0	0.001	0.001	0.5	0.1	0	mg/L
pH	Reticulation	1	2	7.16	7.76	7.46	7.46	0.424	7.19	7.73			0	
Sodium	Reticulation	1	2	30	38	34	34	5.7	30	38		180	0	mg/L
Sulphate	Reticulation	1	2	6	6.3	6.2	6.2	0.21	6	6.3			0	mg/L
Total Dissolved Solids	Reticulation	1	2	210	270	240	240	42.4	213	267		600	0	mg/L
Hardness	Reticulation	1	2	117	158	138	138	29	119	156		200	0	mg/L
True Colour	Reticulation	1	2	<8	<8	4	4	0.0	4	4		15	0	Hazen
Turbidity	Reticulation	1	2	<1	<1	1	1	0.0	1	1		5	0	NTU
Zinc	Reticulation	1	2	<0.06	<0.06	0.03	0.03	0.0	0.03	0.03		3	0	mg/L
Nitrate	Reticulation	1	2	0.15	1.2	0.68	0.68	0.742	0.2	1.15	50		0	mg/L
Aluminium - Metals	Reticulation	0	1	0.013	0.013	0.013	0.013	null	0.013	0.013		0.2	0	mg/L
Arsenic - Metals	Reticulation	0	1	0.0007	0.0007	0.0007	0.0007	null	0.0007	0.0007	0.01		0	mg/L
Cadmium - Metals	Reticulation	0	1	<0.0001	<0.0001	0.0001	0.0001	null	0.0001	0.0001	0.002		0	mg/L
Chromium - Metals	Reticulation	0	1	0.0002	0.0002	0.0002	0.0002	null	0.0002	0.0002	0.05		0	mg/L
Copper - Metals	Reticulation	0	1	0.007	0.007	0.007	0.007	null	0.007	0.007	2	1	0	mg/L
Chlorine Residual	Reticulation	24	26	0.02	1.26	0.55	0.53	0.411	0.03	1.08	5		0	mg/L
Chlorate	Reticulation	12	11	0.34	1.52	0.91	0.9245	0.40859	0.41	1.52	0.8		6	mg/L
Trihalomethane	Reticulation	12	15	180	420	250	283	85.6	187	407	250		7	µg/L
Iron - Metals	Reticulation	0	1	0.009	0.009	0.009	0.009	null	0.009	0.009		0.3	0	mg/L
Manganese - Metals	Reticulation	0	1	0.0096	0.0096	0.0096	0.0096	null	0.0096	0.0096	0.5	0.1	0	mg/L
Nickel - Metals	Reticulation	0	1	0.0011	0.0011	0.0011	0.0011	null	0.0011	0.0011	0.02		0	mg/L
Lead - Metals	Reticulation	0	1	0.0007	0.0007	0.0007	0.0007	null	0.0007	0.0007	0.005		0	mg/L
Zinc - Metals	Reticulation	0	1	0.002	0.002	0.002	0.002	null	0.002	0.002		3	0	mg/L

Table 25 - Kandanga Water - Verification monitoring

Parameter	Location	Samples Required	Samples Taken	Minimum	Maximum	Median	Average	STD	5th Percentile	95th Percentile	ADWG Value (H)	ADWG Value (A)	No. of Exceedances	Units
Aluminium	WTP	2	2	<0.03	<0.03	0.02	0.02	0.0	0.02	0.02		0.2	0	mg/L
Alkalinity	WTP	2	2	190	190	190	190	0.0	190	190			0	mg/L
Boron	WTP	2	2	0.03	0.04	0.04	0.04	0.007	0.03	0.04	4		0	mg/L
Conductivity	WTP	2	2	520	600	560	560	56.6	524	596			0	µS/cm
Copper	WTP	2	2	<0.003	0.005	0.003	0.003	0.0025	0.002	0.005	2	1	0	mg/L
Fluoride	WTP	2	2	0.07	0.11	0.09	0.09	0.028	0.07	0.11	1.5		0	mg/L
Iron	WTP	2	2	<0.01	<0.01	0.01	0.01	0.0	0.01	0.01		0.3	0	mg/L
Manganese	WTP	2	2	<0.001	0.24	0.12	0.12	0.1694	0.012	0.228	0.5	1	0	mg/L
pH	WTP	2	2	7.44	8.03	7.74	7.74	0.417	7.47	8			0	
Sodium	WTP	2	2	32	45	39	39	9.2	33	44		180	0	mg/L
Sulphate	WTP	2	2	4	11	7.5	7.5	4.95	4.4	10.7			0	mg/L
Total Dissolved Solids	WTP	2	2	300	330	315	315	21.2	302	329		600	0	mg/L
Hardness	WTP	2	2	208	209	209	209	0.7	208	209		200	2	mg/L
True Colour	WTP	2	2	<8	<8	4	4	0.0	4	4		15	0	Hazen
Turbidity	WTP	2	2	<1	2	1	1	1.1	1	2	0.5	5	1	NTU
Zinc	WTP	2	2	<0.06	<0.06	0.03	0.03	0.0	0.03	0.03		3	0	mg/L
Nitrate	WTP	2	2	0.05	0.62	0.34	0.34	0.403	0.08	0.59	50		0	mg/L
Aluminium - Metals	WTP	1	1	0.005	0.005	0.005	0.005	null	0.005	0.005		0.2	0	mg/L
Arsenic - Metals	WTP	1	1	0.0014	0.0014	0.0014	0.0014	null	0.0014	0.0014	0.01		0	mg/L
Cadmium - Metals	WTP	1	1	<0.0001	<0.0001	0.0001	0.0001	null	0.0001	0.0001	0.002		0	mg/L
Chromium - Metals	WTP	1	1	0.0005	0.0005	0.0005	0.0005	null	0.0005	0.0005	0.05		0	mg/L
Copper - Metals	WTP	1	1	0.015	0.015	0.015	0.015	null	0.015	0.015	2	1	0	mg/L
Iron - Metals	WTP	1	1	<0.0050	<0.0050	0.0025	0.0025	null	0.0025	0.0025		0.3	0	mg/L
Manganese - Metals	WTP	1	1	0.095	0.095	0.095	0.095	null	0.095	0.095	0.5	0.1	0	mg/L
Nickel - Metals	WTP	1	1	0.0026	0.0026	0.0026	0.0026	null	0.0026	0.0026	0.02		0	mg/L
Lead - Metals	WTP	1	1	0.0017	0.0017	0.0017	0.0017	null	0.0017	0.0017	0.005		0	mg/L
Zinc - Metals	WTP	1	1	0.013	0.013	0.013	0.013	null	0.013	0.013		3	0	mg/L
Aluminium	Reticulation	1	2	<0.03	<0.03	0.02	0.02	0.0	0.02	0.02		0.2	0	mg/L
Alkalinity	Reticulation	1	2	140	180	160	160	28.3	142	178			0	mg/L
Boron	Reticulation	1	2	0.03	0.03	0.03	0.03	0.0	0.03	0.03	4		0	mg/L
Conductivity	Reticulation	1	2	490	510	500	500	14.1	491	509			0	µS/cm
Copper	Reticulation	1	2	0.003	0.006	0.005	0.005	0.0021	0.003	0.006	2	1	0	mg/L
Fluoride	Reticulation	1	2	0.07	0.34	0.21	0.21	0.191	0.08	0.33	1.5		0	mg/L
Iron	Reticulation	1	2	<0.01	<0.01	0.01	0.01	0.0	0.01	0.01		0.3	0	mg/L

Manganese	Reticulation	1	2	<0.001	0.033	0.017	0.017	0.023	0.002	0.031	0.5	0.1	0	mg/L
pH	Reticulation	1	2	7.76	8.16	7.96	7.96	0.283	7.78	8.14			0	
Sodium	Reticulation	1	2	32	41	37	37	6.4	32	41		180	0	mg/L
Sulphate	Reticulation	1	2	12	13	12.5	12.5	0.71	12.1	13			0	mg/L
Total Dissolved Solids	Reticulation	1	2	270	290	280	280	14.1	271	289		600	0	mg/L
Hardness	Reticulation	1	2	151	202	177	177	36.1	154	199		200	0	mg/L
True Colour	Reticulation	1	2	<8	<8	4	4	0.0	4	4		15	0	Hazen
Turbidity	Reticulation	1	2	<1	<1	1	1	0.0	1	1		5	0	NTU
Zinc	Reticulation	1	2	<0.06	<0.06	0.03	0.03	0.0	0.03	0.03		3	0	mg/L
Nitrate	Reticulation	1	2	0.08	0.71	0.4	0.4	0.445	0.11	0.68	50		0	mg/L
Aluminium - Metals	Reticulation	0	1	0.008	0.008	0.008	0.008	null	0.008	0.008		0.2	0	mg/L
Arsenic - Metals	Reticulation	0	1	0.0015	0.0015	0.0015	0.0015	null	0.0015	0.0015	0.01		0	mg/L
Cadmium - Metals	Reticulation	0	1	<0.0001	<0.0001	0.0001	0.0001	null	0.0001	0.0001	0.002		0	mg/L
Chromium - Metals	Reticulation	0	1	0.0005	0.0005	0.0005	0.0005	null	0.0005	0.0005	0.05		0	mg/L
Copper - Metals	Reticulation	0	1	0.004	0.004	0.004	0.004	null	0.004	0.004	2	1	0	mg/L
Chlorine Residual	Reticulation	24	26	0.03	1.95	0.43	0.6	0.526	0.03	1.47	5		0	mg/L
Chlorate	Reticulation	12	11	0.22	1.78	1.24	1.1509	0.55255	0.22	1.78	0.8		9	mg/L
Trihalomethane	Reticulation	12	14	86	280	155	173	58.8	95	274	250		2	µg/L
Iron - Metals	Reticulation	0	1	0.011	0.011	0.011	0.011	null	0.011	0.011		0.3	0	mg/L
Manganese - Metals	Reticulation	0	1	0.044	0.044	0.044	0.044	null	0.044	0.044	0.5	0.1	0	mg/L
Nickel - Metals	Reticulation	0	1	0.0025	0.0025	0.0025	0.0025	null	0.0025	0.0025	0.02		0	mg/L
Lead - Metals	Reticulation	0	1	0.0004	0.0004	0.0004	0.0004	null	0.0004	0.0004	0.005		0	mg/L
Zinc - Metals	Reticulation	0	1	0.005	0.005	0.005	0.005	null	0.005	0.005		3	0	mg/L

Table 26 - Kilkivan Water - Verification monitoring

Parameter	Location	Samples Required	Samples Taken	Minimum	Maximum	Median	Average	STD	5th Percentile	95th Percentile	ADWG Value (H)	ADWG Value (A)	No. of Exceedances	Units
Aluminium	WTP	2	2	<0.03	<0.03	0.02	0.02	0.0	0.02	0.02		0.2	0	mg/L
Alkalinity	WTP	2	2	180	190	185	185	7.1	181	190			0	mg/L
Boron	WTP	2	2	0.05	0.05	0.05	0.05	0.0	0.05	0.05	4		0	mg/L
Conductivity	WTP	2	2	540	630	585	585	63.6	545	626			0	µS/cm
Copper	WTP	2	2	<0.003	<0.003	0.002	0.002	0.0	0.002	0.002	2	1	0	mg/L
Fluoride	WTP	2	2	0.07	0.7	0.39	0.39	0.445	0.1	0.67	1.5		0	mg/L
Iron	WTP	2	2	<0.01	<0.01	0.01	0.01	0.0	0.01	0.01		0.3	0	mg/L
Manganese	WTP	2	2	<0.001	0.001	0.001	0.001	0.0004	0.001	0.001	0.5	0.1	0	mg/L
pH	WTP	2	2	7.31	7.42	7.37	7.37	0.078	7.32	7.41			0	
Sodium	WTP	2	2	59	66	63	63	4.9	59	66		180	0	mg/L
Sulphate	WTP	2	2	4.5	6.1	5.3	5.3	1.13	4.6	6			0	mg/L
Total Dissolved Solids	WTP	2	2	290	340	315	315	35.4	293	338		600	0	mg/L
Hardness	WTP	2	2	147	170	159	159	16.3	148	169		200	0	mg/L
True Colour	WTP	2	2	<8	<8	4	4	0.0	4	4		15	0	Hazen
Turbidity	WTP	2	2	<1	<1	1	1	0.0	1	1	0.5	5	0	NTU
Zinc	WTP	2	2	<0.06	<0.06	0.03	0.03	0.0	0.03	0.03		3	0	mg/L
Nitrate	WTP	2	2	0.15	0.15	0.15	0.15	0.0	0.15	0.15	50		0	mg/L
Aluminium - Metals	WTP	1	1	<0.0030	<0.0030	0.0015	0.0015	null	0.0015	0.0015		0.2	0	mg/L
Arsenic - Metals	WTP	1	1	0.0005	0.0005	0.0005	0.0005	null	0.0005	0.0005	0.01		0	mg/L
Cadmium - Metals	WTP	1	1	<0.0001	<0.0001	0.0001	0.0001	null	0.0001	0.0001	0.002		0	mg/L
Chromium - Metals	WTP	1	1	<0.0001	<0.0001	0.0001	0.0001	null	0.0001	0.0001	0.05		0	mg/L
Copper - Metals	WTP	1	1	0.008	0.008	0.008	0.008	null	0.008	0.008	2	1	0	mg/L
Iron - Metals	WTP	1	1	<0.0050	<0.0050	0.0025	0.0025	null	0.0025	0.0025		0.3	0	mg/L
Manganese - Metals	WTP	1	1	<0.0001	<0.0001	0.0001	0.0001	null	0.0001	0.0001	0.5	0.1	0	mg/L
Nickel - Metals	WTP	1	1	0.0003	0.0003	0.0003	0.0003	null	0.0003	0.0003	0.02		0	mg/L
Lead - Metals	WTP	1	1	0.0002	0.0002	0.0002	0.0002	null	0.0002	0.0002	0.005		0	mg/L
Zinc - Metals	WTP	1	1	0.005	0.005	0.005	0.005	null	0.005	0.005		3	0	mg/L
Aluminium	Reticulation	1	2	<0.03	<0.03	0.02	0.02	0.0	0.02	0.02		0.2	0	mg/L
Alkalinity	Reticulation	1	2	190	190	190	190	0.0	190	190			0	mg/L
Boron	Reticulation	1	2	0.05	0.05	0.05	0.05	0.0	0.05	0.05	4		0	mg/L
Conductivity	Reticulation	1	2	550	630	590	590	56.6	554	626			0	µS/cm
Copper	Reticulation	1	2	0.097	0.12	0.109	0.109	0.0163	0.098	0.119	2	1	0	mg/L
Fluoride	Reticulation	1	2	0.07	0.07	0.07	0.07	0.0	0.07	0.07	1.5		0	mg/L
Iron	Reticulation	1	2	<0.01	<0.01	0.01	0.01	0.0	0.01	0.01		0.3	0	mg/L

Manganese	Reticulation	1	2	<0.001	<0.001	0.001	0.001	0.0	0.001	0.001	0.5	0.1	0	mg/L
pH	Reticulation	1	2	7.7	7.71	7.71	7.71	0.007	7.7	7.71			0	
Sodium	Reticulation	1	2	61	65	63	63	2.8	61	65		180	0	mg/L
Sulphate	Reticulation	1	2	4.5	6.1	5.3	5.3	1.13	4.6	6			0	mg/L
Total Dissolved Solids	Reticulation	1	2	300	340	320	320	28.3	302	338		600	0	mg/L
Hardness	Reticulation	1	2	152	174	163	163	15.6	153	173		200	0	mg/L
True Colour	Reticulation	1	2	<8	<8	4	4	0.0	4	4		15	0	Hazen
Turbidity	Reticulation	1	2	<1	<1	1	1	0.0	1	1		5	0	NTU
Zinc	Reticulation	1	2	<0.06	<0.06	0.03	0.03	0.0	0.03	0.03		3	0	mg/L
Nitrate	Reticulation	1	2	0.14	<0.30	0.15	0.15	0.007	0.14	0.15	50		0	mg/L
Aluminium - Metals	Reticulation	0	1	<0.0030	<0.0030	0.0015	0.0015	null	0.0015	0.0015		0.2	0	mg/L
Arsenic - Metals	Reticulation	0	1	0.0006	0.0006	0.0006	0.0006	null	0.0006	0.0006	0.01		0	mg/L
Cadmium - Metals	Reticulation	0	1	<0.0001	<0.0001	0.0001	0.0001	null	0.0001	0.0001	0.002		0	mg/L
Chromium - Metals	Reticulation	0	1	0.0001	0.0001	0.0001	0.0001	null	0.0001	0.0001	0.05		0	mg/L
Copper - Metals	Reticulation	0	1	0.13	0.13	0.13	0.13	null	0.13	0.13	2	1	0	mg/L
Chlorine Residual	Reticulation	24	24	0.05	1.07	0.69	0.66	0.249	0.11	0.98	5		0	mg/L
Chlorate	Reticulation	12	7	0.12	0.31	0.3	0.2357	0.09034	0.126	0.31	0.8		0	mg/L
Trihalomethane	Reticulation	12	12	14	36	27	25	7.8	14	35	250		0	µg/L
Iron - Metals	Reticulation	0	1	<0.0050	<0.0050	0.0025	0.0025	null	0.0025	0.0025		0.3	0	mg/L
Manganese - Metals	Reticulation	0	1	<0.0001	<0.0001	0.0001	0.0001	null	0.0001	0.0001	0.5	0.1	0	mg/L
Nickel - Metals	Reticulation	0	1	0.0005	0.0005	0.0005	0.0005	null	0.0005	0.0005	0.02		0	mg/L
Lead - Metals	Reticulation	0	1	0.0021	0.0021	0.0021	0.0021	null	0.0021	0.0021	0.005		0	mg/L
Zinc - Metals	Reticulation	0	1	0.04	0.04	0.04	0.04	null	0.04	0.04		3	0	mg/L

Table 27 - Rainbow Beach Water - Verification monitoring

Parameter	Location	Samples Required	Samples Taken	Minimum	Maximum	Median	Average	STD	5th Percentile	95th Percentile	ADWG Value (H)	ADWG Value (A)	No. of Exceedances	Units
Aluminium	WTP	2	2	<0.03	<0.03	0.02	0.02	0.0	0.02	0.02		0.2	0	mg/L
Alkalinity	WTP	2	2	140	160	150	150	14.1	141	159			0	mg/L
Boron	WTP	2	2	<0.02	<0.02	0.01	0.01	0.0	0.01	0.01	4		0	mg/L
Conductivity	WTP	2	2	340	380	360	360	28.3	342	378			0	µS/cm
Copper	WTP	2	2	0.01	0.012	0.011	0.011	0.0014	0.01	0.012	2	1	0	mg/L
Fluoride	WTP	2	2	<0.02	<0.02	0.01	0.01	0.0	0.01	0.01	1.5		0	mg/L
Iron	WTP	2	2	0.02	0.03	0.03	0.03	0.007	0.02	0.03		0.3	0	mg/L
Manganese	WTP	2	2	<0.001	0.001	0.001	0.001	0.0004	0.001	0.001	0.5	0.1	0	mg/L
pH	WTP	2	2	7.09	7.4	7.25	7.25	0.219	7.11	7.38			0	
Sodium	WTP	2	2	78	89	84	84	7.8	79	88		180	0	mg/L
Sulphate	WTP	2	2	3.1	3.4	3.3	3.3	0.21	3.1	3.4			0	mg/L
Total Dissolved Solids	WTP	2	2	200	230	215	215	21.2	202	229		600	0	mg/L
Hardness	WTP	2	2	8	8	8	8	0.1	8	8		200	0	mg/L
True Colour	WTP	2	2	<8	<8	4	4	0.0	4	4		15	0	Hazen
Turbidity	WTP	2	2	<1	<1	1	1	0.0	1	1	0.5	5	0	NTU
Zinc	WTP	2	2	<0.06	<0.06	0.03	0.03	0.0	0.03	0.03		3	0	mg/L
Nitrate	WTP	2	2	0.27	0.42	0.35	0.35	0.106	0.28	0.41	50		0	mg/L
Aluminium - Metals	WTP	1	1	0.029	0.029	0.029	0.029	null	0.029	0.029		0.2	0	mg/L
Arsenic - Metals	WTP	1	1	0.0001	0.0001	0.0001	0.0001	null	0.0001	0.0001	0.01		0	mg/L
Cadmium - Metals	WTP	1	1	<0.0001	<0.0001	0.0001	0.0001	null	0.0001	0.0001	0.002		0	mg/L
Chromium - Metals	WTP	1	1	0.0002	0.0002	0.0002	0.0002	null	0.0002	0.0002	0.05		0	mg/L
Copper - Metals	WTP	1	1	0.014	0.014	0.014	0.014	null	0.014	0.014	2	1	0	mg/L
Chlorine Residual	WTP	12	15	0.28	1.24	0.86	0.8	0.228	0.47	1.09	5		0	
Iron - Metals	WTP	1	1	0.033	0.033	0.033	0.033	null	0.033	0.033		0.3	0	mg/L
Manganese - Metals	WTP	1	1	0.0017	0.0017	0.0017	0.0017	null	0.0017	0.0017	0.5	0.1	0	mg/L
Nickel - Metals	WTP	1	1	0.0002	0.0002	0.0002	0.0002	null	0.0002	0.0002	0.5		0	mg/L
Lead - Metals	WTP	1	1	0.0004	0.0004	0.0004	0.0004	null	0.0004	0.0004	0.02		0	mg/L
Zinc - Metals	WTP	1	1	0.011	0.011	0.011	0.011	null	0.011	0.011	0.005	3	0	mg/L
Aluminium	Reticulation	1	2	<0.03	<0.03	0.02	0.02	0.0	0.02	0.02		0.2	0	mg/L
Alkalinity	Reticulation	1	2	3	160	82	82	111	11	152			0	mg/L
Boron	Reticulation	1	2	<0.02	<0.02	0.01	0.01	0.0	0.01	0.01	4		0	mg/L
Conductivity	Reticulation	1	2	94	370	232	232	195.2	108	356			0	µS/cm
Copper	Reticulation	1	2	<0.003	0.017	0.009	0.009	0.011	0.002	0.016	2	1	0	mg/L
Fluoride	Reticulation	1	2	<0.02	<0.02	0.01	0.01	0.0	0.01	0.01	1.5		0	mg/L

Iron	Reticulation	1	2	<0.01	0.03	0.02	0.02	0.018	0.01	0.03		0.3	0	mg/L
Manganese	Reticulation	1	2	<0.001	0.004	0.002	0.002	0.0025	0.001	0.004	0.5	0.1	0	mg/L
pH	Reticulation	1	2	5.27	7.52	6.4	6.4	1.591	5.38	7.41			0	
Sodium	Reticulation	1	2	14	84	49	49	49.5	18	81		180	0	mg/L
Sulphate	Reticulation	1	2	2.8	3.4	3.1	3.1	0.42	2.8	3.4			0	mg/L
Total Dissolved Solids	Reticulation	1	2	55	220	138	138	116.7	63	212		600	0	mg/L
Hardness	Reticulation	1	2	8	8	8	8	0.2	8	8		200	0	mg/L
True Colour	Reticulation	1	2	<8	<8	4	4	0.0	4	4		15	0	Hazen
Turbidity	Reticulation	1	2	<1	<1	1	1	0.0	1	1		5	0	NTU
Zinc	Reticulation	1	2	<0.06	<0.06	0.03	0.03	0.0	0.03	0.03		3	0	mg/L
Nitrate	Reticulation	1	2	0.28	1.1	0.69	0.69	0.58	0.32	1.06	50		0	mg/L
Aluminium - Metals	Reticulation	0	1	0.024	0.024	0.024	0.024	null	0.024	0.024		0.2	0	mg/L
Arsenic - Metals	Reticulation	0	1	0.0001	0.0001	0.0001	0.0001	null	0.0001	0.0001	0.01		0	mg/L
Cadmium - Metals	Reticulation	0	1	<0.0001	<0.0001	0.0001	0.0001	null	0.0001	0.0001	0.002		0	mg/L
Chromium - Metals	Reticulation	0	1	0.0003	0.0003	0.0003	0.0003	null	0.0003	0.0003	0.05		0	mg/L
Copper - Metals	Reticulation	0	1	0.01	0.01	0.01	0.01	null	0.01	0.01	2	1	0	mg/L
Chlorine Residual	Reticulation	48	89	0.18	0.84	0.64	0.61	0.124	0.34	0.75	5		0	mg/L
Chlorate	Reticulation	12	12	0	0	0	0	0.0	0	0	0.8		0	mg/L
Trihalomethane	Reticulation	12	13	13	23	17	17	3.3	14	22	250		0	µg/L
Iron - Metals	Reticulation	0	1	0.027	0.027	0.027	0.027	null	0.027	0.027		0.3	0	mg/L
Manganese - Metals	Reticulation	0	1	0.0009	0.0009	0.0009	0.0009	null	0.0009	0.0009	0.5	0.1	0	mg/L
Nickel - Metals	Reticulation	0	1	0.0001	0.0001	0.0001	0.0001	null	0.0001	0.0001	0.02		0	mg/L
Lead - Metals	Reticulation	0	1	0.0009	0.0009	0.0009	0.0009	null	0.0009	0.0009	0.005		0	mg/L
Zinc - Metals	Reticulation	0	1	0.013	0.013	0.013	0.013	null	0.013	0.013		3	0	mg/L

Appendix D: Risk management improvement plan - progress

Table 28 - Progress against the risk management improvement program in the approved DWQMP

Site	Process Step	Primary hazard	Source of Hazard/Event	Primary Preventive Measure	Other Preventative Measures	(RMIP) Immediate (30/06/2022)	(RMIP) Short Term (30/06/2023)	(RMIP) Long Term (30/06/2027)	Comments updated 10/12/2025
Goomeri		Hardness/TDS	Naturally occurring	N/A	Ion exchange water softener (but not currently used)	Develop long term water supply & security strategy for Goomeri (incl. treatment processes for the available sources)			Whilst a high risk, this is lower priority as it is not based on a health outcome. Part of WSS / future program. Softener had issues with waste going to sewer, was removed Water Security Strategy Endorsed by Council January 2025 FY2526 -2627 Goomeri WTP Upgrade | Design & Deliver
Goomeri		Hardness/TDS	Naturally occurring		Ion exchange water softener (but not currently used)	Develop long term water supply & security strategy for Goomeri (incl. treatment processes for the available sources)	Consider installing softener on just bore water - & develop brine disposal	Consider installing softener on just bore water - & develop brine disposal	Whilst a high risk, this is lower priority as it is not based on a health outcome. Part of WSS/ future program. Softener had issues with waste going to sewer, was removed Water Security Strategy Endorsed by Council January 2025 FY2526 -2627 Goomeri WTP Upgrade | Design & Deliver
Goomeri	Bypass	All hazards	Accidental or deliberate use of bypass	Air gapped	Staff training - Not intentionally used	Investigate potential second bypass at WTP - lockout			looking into whether or not bypass is still there
Goomeri	Sand filtration	Protozoa (Crypto/ Giardia) (Gympie, Mary Valley, Kinbombi)	Filter breakthrough	Filtration OCP;	Combined filter outlet turbidity monitoring; Ozone system and UV disinfection		Filter replacement, install individual online turbidity meters		Filter media replaced 2019. Under review again 2021. UV system installed 2021. Filters replaced with meters on both stages 2024
Goomeri	Primary Disinfection (Hypo)	Bacteria/ Virus (Gympie, Mary Valley, Kinbombi)	Chlorine underdose	Chlorination OCP			Install additional chlorine monitoring prior to Clear Water Tanks		Additional monitoring will allow quicker response to dosing changes FY2526 -2627 Goomeri STP Chlorine Dosing Upgrade | Design

Goomeri	Primary Disinfection (Hypo)	Chlorate	Breakdown of sodium hypochlorite				Refer to Whole of System RMIP (Chlorate)		Queensland Government guidance released for chlorate <0.8 mg/L (2021) Recirc pump located in clear water tank running constantly to ensure chlorine mixing due to preferential draw down flows in the system. PD FY2526 -2627 Goomeri STP Chlorine Dosing Upgrade | Design Commenced Monthly Chlorate Monitoring
Goomeri	Water softener	Hardness/TDS	Naturally occurring	N/A	Ion exchange water softener (but not currently used)	Develop long term water supply & security strategy for Goomeri (incl. treatment processes for the available sources)			Whilst a high risk, this is lower priority as it is not based on a health outcome. Part of WSS/ future program. Softener had issues with waste going to sewer, was removed Water Security Strategy Endorsed by Council January 2025 FY2526 -2627 Goomeri WTP Upgrade | Design & Deliver
Goomeri		Chlorate	Breakdown of sodium hypochlorite				Refer to Whole of System RMIP (Chlorate)		Secondary dosing off-line (was after softener) Commenced monthly chlorate monitoring
Goomeri	Goomeri Reservoir	Bacteria/ Virus (Reticulation)	Ingress into Reservoir	Sealed storage, vermin proofed	Monitoring point at the reservoir; tank drained, cleaned and inspected in 2018	Refer to Whole of System RMIP (Reservoir ingress)	Refer to Whole of System RMIP (Reservoir ingress)	Refer to Whole of System RMIP (Reservoir ingress)	Reservoir cleaned 2021 and 2025 Condition assessment completed on 4/12/2025
Goomeri	Goomeri Reservoir	Disinfection byproducts (surface water)	Water age, low turnover		Ozone BAC		Investigate options for increasing turnover of reservoir		Manually monitoring reservoir every week THMs monitored monthly Hypo handling procedure for cleanout and filling
Kilkivan	Bypass	All hazards	Accidental or deliberate use of bypass	Marked (blue); signed on GIS	Staff training - Not intentionally used	Refer to Whole of System RMIP (Bypass) Investigate potential additional bypasses in the network	Refer to Whole of System RMIP (Bypass)		
Kilkivan	Disinfection (hypo)	Chlorine	Chlorine overdose	Chlorination CCP	Operational monitoring		Installation of chlorine instrumentation		Installation of chlorine instrumentation Kilkivan WTP Upgrade | Design & Start Delivery

Kilkivan	Disinfection (hypo)	Bacteria/Virus (Running Creek bore - Kilkivan)	Chlorine underdose	Chlorination CCP			Installation of chlorine instrumentation		Installation of chlorine instrumentation Kilkivan WTP Upgrade | Design & Start Delivery
Kilkivan	Disinfection (hypo)	Chlorate	Breakdown of sodium hypochlorite				Refer to Whole of System RMIP (Chlorate)		Queensland Government guidance released for chlorate <0.8 mg/L (2021) Commenced monthly chlorate monitoring in network
Cooloola TCB	Sand Filters	Protozoa (Crypto/ Giardia) (Teewah Creek)	Filter breakthrough	Filtration OCP			Investigate options for filter to waste		From previous RRMIP - Online monitoring and automated plant shutdown - filtered water turbidity (Cooloola TCB) - Completed
Cooloola TCB	Clear Water Storage	Bacteria/ Virus (Reticulation)	Ingress into tank	Sealed storage	Disinfection residual	Refer to Whole of System RMIP (Reservoir ingress); Clean and inspect CWS	Refer to Whole of System RMIP (Reservoir ingress)	Refer to Whole of System RMIP (Reservoir ingress)	Probable points of ingress - centre box gutter. No proactive maintenance at this time as there are safety issues for access (currently being addressed) Further review of capital program required to confirm timing, check with Roberto
Cooloola TCB	Clear Water Storage	Protozoa (Crypto/ Giardia) (Retic)	Ingress into tank	Sealed storage		Refer to Whole of System RMIP (Reservoir ingress); Clean and inspect CWS	Refer to Whole of System RMIP (Reservoir ingress)	Refer to Whole of System RMIP (Reservoir ingress)	Further review of capital program required to confirm timing, check with Roberto
Cooloola TCB		Protozoa (Crypto/ Giardia) (Retic)	Ingress into tank	Sealed storage			Planned to be decommissioned		Planned to be decommissioned Further review of capital program required to confirm timing, check with Roberto
Cooloola TCB		Protozoa (Crypto/ Giardia) (Retic)	Ingress into tank	Sealed storage			Planned to be decommissioned		Planned to be decommissioned Further review of capital program required to confirm timing, check with Roberto
Rainbow	Reservoirs	Bacteria/ Virus (Reticulation)	Ingress into tank	Sealed storages	Residual disinfection	Develop scope for Reservoir No.1 roof replacement	Replacement roof for Reservoir No.1		Central box gutters on reservoirs - will be engineered out over time Roof replaced reservoir #2 in 20/21. Further review of capital program required to confirm timing, check with Roberto
Rainbow	Reservoirs	Protozoa (Crypto/ Giardia) (Retic)	Ingress into tank	Sealed storages		Develop scope for Reservoir No.1 roof replacement	Replacement roof for Reservoir No.1		Central box gutters on reservoirs - will be engineered out over time Roof replaced reservoir #2 in 20/21. Further review of capital program required to confirm timing, check with Roberto

Gympie		Loss of Supply	Asset failure - raw water tunnel	Reservoir storage	Disaster Management Plan	Undertake inspection of intake tunnel	Develop contingency plan for raw water tunnel bypass		If the raw water tunnel collapses, there is no raw water supply to the WTP; possibly could set up temporary/manual pumping line Water Security Strategy Endorsed by Council January 2025 condition assessment inspection of tunnel undertaken to investigate FY25/26 -onwards Gympie Water Resilience and Augmentation Program. Finalising feasibility and concept, progressing Alliance model
Gympie	Supernatant return	Protozoa (Crypto/ Giardia) (Gympie, Mary Valley, Kinbombi)	Concentration through waste recycle	Filtration CCP	Online monitoring of filtration		Investigate possibility of ceasing this practice and sending supernatant to sewer		8 L/s return ~ 4 % of total flow. Current operation being monitored, filter media assessment completed Water Security Strategy Endorsed by Council January 2025 FY25/26 -onwards Gympie Water Resilience and Augmentation Program. Finalising feasibility and concept, progressing Alliance model
Gympie	Bypass of filter	Protozoa (Crypto/ Giardia) (Gympie, Mary Valley, Kinbombi)	Bypass from sedimentation tank into clear water	Filter bypass - dead plate on the valve - capped.	Not used under normal circumstances	Refer to Whole of System RMIP (Bypass)	Refer to Whole of System RMIP (Bypass)		Whole of plant bypass? Filter bypass? Sedimnetation bypass for direct filtration being installed. FY25/26 -onwards Gympie Water Resilience and Augmentation Program. Finalising feasibility and concept, progressing Alliance model
Gympie		Protozoa (Crypto/ Giardia) (Gympie, Mary Valley, Kinbombi)	Failure of backwash procedure allowing dirty water to enter the Clear Water Tank	Operator training and awareness	Backwash Procedure (EWSI1104)		SCADA Lockout to prevent accidental initiation of backwash		

Gympie	Whole of WTP	Loss of Supply	Asset failure	Plant manned daily	Disaster Management Plan	Replacing flocculation paddles	Repair works for Jones Hill in-ground reservoir	FY 2526 Gympie WTP sedimentation tank upgrade	New Jones Hill Reservoir constructed and commissioned. Repair work commenced on Jones Hill in-ground reservoir/sedimentation tank. Water Security Strategy Endorsed by Council January 2025 FY25/26 -onwards Gympie Water Resilience and Augmentation Program. Finalising feasibility and concept, progressing Alliance model
Gympie	Re-chlorination (Ferguson Hill)	Chlorine	Overdosing	3 x per week Operator checks	Fixed dose rate into reservoir	Additional SCADA control in FY21/22			
Gympie	Reservoir Storage	Bacteria/ Virus (Reticulation)	Ingress into reservoirs - Jones Hill in-ground	Residual disinfection	Sealed storages	Refer to Whole of System RMIP (Reservoir ingress); Fill gaps underneath corrugations	Refer to Whole of System RMIP (Reservoir ingress)	Refer to Whole of System RMIP (Reservoir ingress)	new reservoir commissioned
Gympie	Reservoir Storage	Bacteria/ Virus (Reticulation)	Ingress into reservoirs - Penny Road and Noosa Road WPS	Sealed storages	Residual disinfection	Refer to Whole of System RMIP (Reservoir ingress)	Refer to Whole of System RMIP (Reservoir ingress)	Refer to Whole of System RMIP (Reservoir ingress)	Currently off-line Network review underway
Gympie	Reservoir Storage	Protozoa (Crypto/ Giardia) (Retic)	Ingress into reservoirs - Penny Road and Noosa Road WPS	Sealed storages		Refer to Whole of System RMIP (Reservoir ingress)	Refer to Whole of System RMIP (Reservoir ingress)	Refer to Whole of System RMIP (Reservoir ingress)	Currently off-line Network review underway
Gympie	Reservoir Storage	Bacteria/ Virus (Reticulation)	Ingress into reservoirs - other storages	Sealed storages	Residual disinfection	Refer to Whole of System RMIP (Reservoir ingress)	Refer to Whole of System RMIP (Reservoir ingress)	Refer to Whole of System RMIP (Reservoir ingress)	? Network review underway
Gympie	Reservoir Storage	Protozoa (Crypto/ Giardia) (Retic)	Ingress into reservoirs - other storages	Sealed storages		Refer to Whole of System RMIP (Reservoir ingress)	Refer to Whole of System RMIP (Reservoir ingress)	Refer to Whole of System RMIP (Reservoir ingress)	? Network review underway
Imbil		Chlorate	Sodium hypochlorite breakdown	High frequency deliveries of chlorine lowers risk of hypochlorite solution breakdown		Initial monitoring of sodium hypochlorite deliveries for chlorate. Water testing	Refer to Whole of System RMIP (Chlorate)		Queensland Government guidance released for chlorate <0.8 mg/L (2021) Monthly chlorate monitoring Changes in operating procedures to reduce chlorine degradation
Imbil		Loss of Supply	Filter breakthrough	Tankering water from Gympie		Develop strategy for Mary Valley WTP upgrade to operate in dirty raw water events (linked to THM investigation)	Develop strategy for Mary Valley WTP upgrade to operate in dirty raw water events		Connection at WTP to provide tankered water from Gympie to system Water Security Strategy Endorsed by Council January 2025 FY25/26 -onwards Gympie Water Resilience and Augmentation Program. Finalising feasibility and concept, progressing Alliance model

Imbil		Disinfection byproducts (surface water)	Reaction with organic matter and chlorine	Disinfection CCP	Control and monitoring of pre-dose to provide Fe and Mn removal without over-dosing	Complete investigation to develop THM control strategy.	Scope and implement upgrade works from preferred strategy	Scope and implement upgrade works from preferred strategy	Water Security Strategy Endorsed by Council January 2025 FY25/26 -onwards Gympie Water Resilience and Augmentation Program. Finalising feasibility and concept, progressing Alliance model
Imbil	UV Disinfection	Protozoa (Crypto/ Giardia) (Gympie, Mary Valley, Kinbombi)	UV failure	Fault alarm from UV system will interlock plant	Filtration - online monitoring and auto shutdown; Incident Management Plan		Update operational monitoring and CCP documents for all parameters required for effective disinfection		
Kandanga	Supernatant return	Protozoa (Crypto/ Giardia) (Gympie, Mary Valley, Kinbombi)	Supernatant return - concentration of oocysts	Filtration and UV	Develop concept design for excess supernatant disposal and implement.	Investigate local usage of supernatant or return to creek (if allowable)	Develop concept design for excess supernatant disposal and implement.		Water Security Strategy Endorsed by Council January 2025 FY25/26 -onwards Gympie Water Resilience and Augmentation Program. Finalising feasibility and concept, progressing Alliance model
Kandanga	Pre-chlorination	Disinfection byproducts (surface water)	Reaction with organic matter and chlorine	Chlorination OCP	Control and monitoring of pre-dose to provide Fe and Mn removal without over-dosing	Complete investigation to develop THM control strategy.	Scope and implement upgrade works from preferred strategy	Scope and implement upgrade works from preferred strategy	Gathering data for Action plan to reduce THMs
Kandanga	Pre-chlorination	Chlorate	Sodium hypochlorite breakdown	Twice per week deliveries of chlorine lowers risk of hypochlorite solution breakdown		Initial monitoring of sodium hypochlorite deliveries for chlorate. Water testing	Refer to Whole of System RMIP (Chlorate)		Queensland Government guidance released for chlorate <0.8 mg/L (2021) Monthly chlorate monitoring Changes in operating procedures to reduce chlorine degradation
Kandanga		Loss of Supply	Filter breakthrough	Tankering water from Gympie		Develop strategy for Mary Valley WTP upgrade to operate in dirty raw water events (linked to THM investigation)	Develop strategy for Mary Valley WTP upgrade to operate in dirty raw water events		Connection at WTP to provide tankered water from Gympie to system Water Security Strategy Endorsed by Council January 2025 FY25/26 -onwards Gympie Water Resilience and Augmentation Program. Finalising feasibility and concept, progressing Alliance model
Kandanga	UV Disinfection	Protozoa (Crypto/ Giardia) (Gympie, Mary Valley, Kinbombi)	UV failure	Fault alarm from UV system will interlock plant	Filtration - online monitoring and auto shutdown; Incident Management Plan		Update operational monitoring and CCP documents for all parameters required for effective disinfection		Network review underway
Amamoor	Supernatant return	Protozoa (Crypto/ Giardia) (Gympie, Mary Valley, Kinbombi)	Supernatant return - concentration of oocysts	Filtration and UV	Supernatent return is limited by pump flows.	Investigate local usage of supernatant or return to creek (if allowable)	Develop concept design for excess supernatant disposal and implement.		Water Security Strategy Endorsed by Council January 2025 FY25/26 -onwards Gympie Water Resilience and Augmentation Program. Finalising feasibility and concept, progressing Alliance model

Amamoor	Pre-chlorination	Disinfection byproducts (surface water)	Reaction with organic matter and chlorine	Chlorination OCP	Control and monitoring of pre-dose to provide Fe and Mn removal without over-dosing	Complete investigation to develop THM control strategy.	Scope and implement upgrade works from preferred strategy	Scope and implement upgrade works from preferred strategy	Gathering data for Action plan to reduce THMs
Amamoor	Pre-chlorination	Chlorate	Sodium hypochlorite breakdown	Twice per week deliveries of chlorine lowers risk of hypochlorite solution breakdown		Initial monitoring of sodium hypochlorite deliveries for chlorate. Water testing	Refer to Whole of System RMIP (Chlorate)		Queensland Government guidance released for chlorate <0.8 mg/L (2021) Monthly chlorate monitoring Changes in operating procedures to reduce chlorine degradation
Amamoor		Loss of Supply	Filter breakthrough	Tankering water from Gympie		Develop strategy for Mary Valley WTP upgrade to operate in dirty raw water events	Develop strategy for Mary Valley WTP upgrade to operate in dirty raw water events		Connection at WTP to provide tankered water from Gympie to system Water Security Strategy Endorsed by Council January 2025 FY25/26 -onwards Gympie Water Resilience and Augmentation Program. Finalising feasibility and concept, progressing Alliance model
Amamoor	UV Disinfection	Protozoa (Crypto/ Giardia) (Gympie, Mary Valley, Kinbombi)	UV failure	Fault alarm from UV system will interlock plant	Filtration - online monitoring and auto shutdown; Incident Management Plan		Update operational monitoring and CCP documents for all parameters required for effective disinfection		review controls and CCP procedures?
Amamoor	Reservoir Storage	Bacteria/ Virus (Reticulation)	Reservoir ingress	Sealed tank	Disinfectant residual	Refer to Whole of System RMIP (Reservoir ingress)	Refer to Whole of System RMIP (Reservoir ingress)	Refer to Whole of System RMIP (Reservoir ingress)	? Network review underway
Amamoor	Reservoir Storage	Protozoa (Crypto/ Giardia) (Retic)	Reservoir ingress	Sealed tank		Refer to Whole of System RMIP (Reservoir ingress)	Refer to Whole of System RMIP (Reservoir ingress)	Refer to Whole of System RMIP (Reservoir ingress)	? Network review underway
Whole of System Risks	Whole of System	Bacteria/ Virus (Reticulation)	Reservoir ingress	Reservoir integrity	Preventive maintenance programs (5 yearly cleaning unless required sooner, and external inspection); Draft Reservoir Inspection Procedure Disinfectant Residual	Finalise Reservoir Inspection Procedure	Investigate use of drones to inspect reservoir roofs	Program of reservoir hatch and ladder enclosure replacements (10 year capital program - ongoing)	Previously risk was split into two lines; as some reservoirs had not been inspected in many years. All have been internally inspected since 2017. Eventually all centre box gutters will be engineered out
Whole of System Risks	Whole of System	Protozoa (Crypto/ Giardia) (Retic)	Flood	Pressurised network	Repair as soon as possible, disaster management plan, leakage management software		Convert flow/pressure monitoring from external hosting to GRC SCADA		Flow meters are installed; issues with reverse flow monitoring
Whole of System Risks	Whole of System	Loss of Supply	PLC failure/ lightning strike/ rough power	Reservoir storage	Incident management plan; Disaster management plan		Review control systems at WTPs and consider additional backup/ protections		FY2526 SCADA New Assets | Packages 4 (Goomeri & Kilkivan) & 5 (Gympie) | Deliver Rainbow Beach WTP & STP Lightning Protection Upgrade | Deliver and part of LTFF

Whole of System Risks	Whole of System	All hazards	Human Error (either due to knowledge/training, resourcing or fatigue)	Staff training, fortnightly head operator/ reticulation meetings	All staff trained to Cert 3, CCPs, ongoing training, other procedures and work instructions; Water hygiene training	-	Roll out Aquacard training; Review all operational procedures listed in the DWQMP	Develop succession plan for operators; Install new verification monitoring locations (focus on reservoir outlets)	Chlorine monitoring installed at all reservoir outlets except Jones Hill
Whole of System Risks	Whole of System	Chlorate	Breakdown of sodium hypochlorite (not relevant for the gas chlorine schemes)	Various (refer to scheme risk assessments)	Less stock on hand at smaller schemes (some issues when chlorine usage drops)	Review/implement inventory control and testing of hypo quality at time of purchase.Water testing	Investigative monitoring for chlorate to determine need/frequency for inclusion in verification monitoring		Queensland Government guidance released for chlorate <0.8 mg/L (2021) Commenced monthly monitoring in schemes using sodium hypochlorite. Reviewing operating procedures to reduce risk of deterioration
Whole of System Risks	Whole of System	All hazards	Operation of a bypass valve allowing untreated water into the reticulation	Various (refer to scheme risk assessments)		Cap and clearly mark all bypass valves	Alter bypass pipework to include air gaps		Some have been capped, marked and/or removed, but not all
Whole of System Risks	Whole of System	Bacteria/ Virus (Reticulation)	Offline reservoir returned into service, supply of stagnant or potentially contaminated water to customers (with no chlorine residual barrier)	Dose chlorine, and undertake water quality testing before returning a reservoir to service.			Roll out Aquacard training		Cert III training for all operators in progress
Whole of System Risks	Whole of System	Bacteria/ Virus (Reticulation)	Cross contamination between sewer and water maintenance & operations	General staff awareness and training	Disinfectant residual; sewerage maintenance tools and equipment stay at the plant	Aquacard training for all Operations staff	Investigate supply options for 4% hypo		Most of network crew has completed aquacard training.