

Gladstone Area Water Board

Drinking Water Quality Management Plan Annual Report 2020/2021



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DOCUMENT STATUS

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GLOSSARY OF TERMS

Term	Description
ADWG 2011	Australian Drinking Water Guidelines (2011). Published by the National Health and Medical Research Council of Australia
<i>E. coli</i>	<i>Escherichia coli</i> , a bacterium which may indicate the presence of faecal contamination and therefore potential health risk
HACCP	Hazard Analysis and Critical Control Points assessment for protecting drinking water quality
mg/L	Milligrams per litre
NTU	Nephelometric Turbidity Units
MPN/100mL	Most probable number per 100 millilitres
CFU/100mL	Colony forming units per 100 millilitres
<	Less than
>	Greater than

1 INTRODUCTION

Gladstone Area Water Board's (GAWB's) amended Drinking Water Quality Management Plan (DWQMP), approved on 27 September 2021, addresses the requirements of section 95(3) of the *Water Supply (Safety & Reliability) Act 2008 (WSSRA)* to ensure safe drinking water for its customers. The Plan was first reviewed in 2014 and amendments approved on 28th May 2014. The Plan was reviewed again in early 2016, without the need for an amendment. Subsequently, The Regulator has approved the amended DWQMP in September 2020. The most recent amendment of GAWB's DWQMP was received by the Department of Regional Development, Manufacturing and Water on 30 August and 15 September 2021. The resulting approval notice was issued on 27 September 2021.

Gladstone Area Water Board (GAWB) is the bulk water provider for the Gladstone region, supplying drinking water services to the Gladstone Regional Council (GRC) (for reticulation to the city of Gladstone, the towns of Calliope, Tannum Sands, Benaraby and Mt Larcom) and to major industrial facilities located around Gladstone. GAWB also supplies a small number of domestic connections directly off the GAWB trunk mains.

Safe drinking water is essential to sustaining a healthy community. GAWB provides safe drinking water at a cost reasonable to the consumer. GAWB employs a multiple barrier system to ensure safe drinking water for its customers, using risk management methods consistent with the National Health and Medical Research Council's (NHMRC) Australian Drinking Water Guidelines 2011 (ADWG).

1.1 Registered Service Details

GAWB is a registered Water Service Provider (WSP) under the WSSRA, and is regulated by the Department of Regional Development, Manufacturing and Water. Powers under WSSRA have been delegated to the officers of the relevant section of the department; RDMW is the primary contact for communications regarding the DWQMP, including reporting requirements under the approval terms and conditions.

In addition, pursuant to section 1084 of the *Water Act 2000 (Water Act)*, GAWB is taken to be a Category 1 Water Authority from 1 July 2000 and is responsible to the Minister for Regional Development Manufacturing and Water. GAWB operates as a commercialised statutory authority with the function of carrying out water activities and has a key objective to ensure its operations are as efficient as possible, with its prices being cost reflective. GAWB's WSP details are provided in Table 1.1 below.

Table 1.1: Water Service Provider information for Gladstone Area Water Board

Information Required	Details
SPID	200
Service Provider Name	Gladstone Area Water Board
Contact Details	PO Box 466 Gladstone QLD 4680 136 Goonoon St (p) 07 4976 3000 (fax) 07 4972 5632 www.gawb.qld.gov.au
Name of Schemes	Gladstone Water Treatment Plant Scheme Yarwun Water Treatment Plant Scheme

1.2 Purpose of this Report

The purpose of this report is to summarise the performance of GAWB against criteria detailed in its DWQMP. As per the Regulator's reporting guidelines, this Report:

- Documents the actions undertaken by GAWB to implement the DWQMP;
- Summarises any non-compliances and incidents under section 102 and 102A of the WSSRA;
- Summarises the results of the verification water quality monitoring program undertaken by GAWB;
- Summarises customer satisfaction and GAWB's response to any complaints regarding drinking water quality; and
- Summarises any reviews of the DWQMP.

2 OVERVIEW OF OPERATIONS 2020/2021

GAWB operates two drinking water schemes, from which it provides bulk drinking water to the Gladstone Regional Council (GRC) for reticulation to domestic users and to various industrial customers.

The table below details GAWB's potable water customer connections of its two schemes as of 2020/2021.

GAWB's current drinking water connection details

Customer	Number of Metered Connections
Gladstone WTP Scheme	
Boyne Smelters Limited	2
Gladstone Regional Council	9
Queensland Alumina Limited	2
APLNG	1
GLNG	1
QCLNG	1
Non-commercial connections	34
Yarwun WTP Scheme	
Cement Australia	2
Gladstone Regional Council	6
Jemena	1
Orica	3
Aurizon	2
WICET	2
Rio Tinto Aluminium Yarwun	3
TOTAL	69

2.1 Gladstone WTP Scheme

Drinking water supplied from the Gladstone scheme is treated at the Gladstone WTP and then distributed to GAWB's customers either directly off the mains or from the outlet of seven service reservoirs. Gladstone WTP services the requirements of the Gladstone Regional Council drinking water reticulation system for the City of Gladstone and surrounding townships (a population of about 63,400 – Source Gladstone Regional Council Annual report 2020/2021) a number of industrial customers and 34 residential customers.

Treatment Process and Delivery Network

Gladstone WTP conventional water treatment process has a nominal capacity of 55ML per day at 20 hours availability, and consists of parallel up-flow clarification and Dissolved Air Flotation (DAF) processes which can be operated together or independently of one another.

The plant has six operating modes, allowing either or both plants to be run and the filters can be configured in such a way as to keep the process streams separate or run water from either or both plants over all filters. Direct filtration modes on the plant are disabled and can only be operated manually with direct management approval.

Once filtered, water is corrected for pH and disinfected with sodium hypochlorite in two clear water wells, after which the process streams rejoin, and the fully treated water enters the 2.25ML clear water contact tank.

During 2020/2021, GWTP produced approximately 10.3 gigalitres of drinking water, as can be seen in the table below. Average production was approximately half of the capacity of the plant, with maximum day approximately 85.3% of plant capacity. Water is delivered either directly to a number of GRC reservoirs, or into GAWBs distribution system, which includes a number of reservoirs and rechlorination facilities.

Water quality

GAWB undertakes comprehensive operational and verification monitoring of water quality. The operational monitoring is concentrated around the quality of source water and the treatment process, and includes daily measurements throughout the plant as well as online monitoring through the process and of re-chlorination facilities. There have been only minor changes to the operational monitoring program since development of the DWQMP.

Filter operation is a Critical Control Point (CCP) in the treatment process and the turbidity of each filter is monitored continuously using online turbidity meters. The target filtrate turbidity is less than 0.1 nephelometric turbidity units (NTU) during normal operation (not including backwash or filter ripening). During the course of 2020/21, the GWTP consistently produced filtered waters of 0.07 NTU (Average - based on measurements taken with SCADA.)

Verification monitoring focuses on the finished product as it leaves the plant and is delivered to customer supply points. This includes weekly monitoring of parameters to verify effective disinfection and less-frequent monitoring of parameters which have been identified as having a lower risk in the drinking water. In terms of water quality, water delivered from the GWTP and transmission network achieved 100% compliance against ADWG health criteria. A full list of parameters and summary results can be found in Appendix A.

GWTP 2020/21 Performance		
Water production per annum	10,285.53 ML	
Average daily production	28.2 ML	
Maximum daily production	46.9 ML	3rd Dec 2020
Minimum daily production	17.61 ML	9 Aug 2020
Filtered water turbidity (NTU)	0.07	Average
Water Quality Compliance ADWG	100% compliance	

*Fluoridation has since ceased on 28th August 2016 as per Gladstone Regional Council directive.

2.2 Yarwun WTP Scheme

Drinking water supplied from the Yarwun scheme is treated at the Yarwun WTP which can be partially or fully supplemented with drinking water from the Gladstone scheme via an interconnection between the two systems, commissioned in early 2017. Drinking water is distributed to GAWB's customers either directly off the mains or from the outlet of two service reservoirs. GRC reticulates the water to domestic users after the points of supply.

Treatment Process and Delivery Network

The Yarwun WTP, located on Reid Road in the Yarwun Industrial Estate, has a total current design capacity of 5 megalitres per day based on 20hrs availability.

Yarwun WTP conventional treatment is a single stream process with one clarifier and 3 mono-media filters, pH correction, and chlorine disinfection. The plant is unattended and operates automatically, with daily operator visits to conduct general duties, monitoring and maintenance. The plant PLC and SCADA control system supervises all necessary functions and will shut the plant down automatically in the event of equipment failure or power loss. Online monitors are used throughout the system to facilitate control of the process.

Yarwun WTP services the requirements of the GRC and a number of industrial customers. Water is pumped from Yarwun WTP to the Mt Miller reservoir and then gravitates to the Boat Creek PS, supplying several industrial customers with process and drinking water. Water is then pumped to East End Reservoir, where it is re-chlorinated and supplied to the GRC for reticulation.

Since early 2017 the Gladstone and Yarwun systems have been interconnected to provide greater resilience to both YWTP and the network. There are several modes of interconnection operation, which GAWB can use to suit the needs of operation.

To ensure a disinfectant residual is maintained through to customer supply points GAWB practices supplementary disinfection at the East End Reservoir, where sodium hypochlorite is dosed to a set point in a recirculation stream from the reservoir. The chlorine residual is continuously monitored, with alarms for low and high dose relayed back to the treatment plant.

During 2020/21 YWTP produced approximately 0.91 gigalitres of drinking water, as can be seen in the table below. The average daily production was 2.5 ML/day with maximum day production 4.4 ML.

Water quality

GAWB undertakes comprehensive operational and verification monitoring of water quality. The operational monitoring is concentrated around the quality of source water and the treatment process, and includes daily measurements throughout the plant as well as online monitoring through the process and delivery network. There have been only minor changes to the operational monitoring program since development of the DWQMP.

Filter operation is a Critical Control Point (CCP) in the treatment process at YWTP and the combined turbidity of the three filters is monitored continuously using an online turbidity meter. The target filtrate turbidity is less than 0.1 nephelometric turbidity units (NTU) during normal operation (that is, not including backwash or filter ripening). During the course of 2020/21 and under normal operation, the YWTP consistently produced filtered waters of 0.04 NTU (Average - based on measurements taken with SCADA).

Verification monitoring focuses on the finished product as it leaves the plant and is delivered to customer supply points. This includes weekly monitoring of parameters to verify effective disinfection and less-frequent monitoring of parameters which have been identified as having a lower risk in the drinking water. In terms of water quality, the YWTP and distribution network achieved 100% compliance against ADWG criteria. A full list of parameters and summary results can be found in Appendix A.

Measure	YWTP 2020/21 Performance	
Water production per annum	907.066 ML	
Average daily production	2.5 ML	
Maximum daily production	4.4 ML	08 May 2021
Minimum daily production	0.00 ML	15 January 2021
Filtered water turbidity (NTU)	0.05	Average
Water Quality Compliance ADWG	100% compliance	

3 ACTIONS TAKEN TO IMPLEMENT THE DWQMP

During the development of its Drinking Water Quality Management Plan, GAWB identified a number of improvement actions in management of source water, in the treatment process at both of its plants and in the operations of its network, to improve the risks to drinking water quality.

The table below lists the outstanding improvement actions identified during the review of the DWQMP, target dates for completion and current status.

Item No.	Scheme Component / Sub-component	Action(s)	Target date	Status	Comments
Y3.1	YWTP	Raw and clearwater turbidity meter upgrades	June 2021	Complete	End of life replacement of existing turbidity sensors
	Cybersecurity	Improvements to GAWB's Information Security Management System (GAWB IT Department)		Complete	<ul style="list-style-type: none"> ▪ GAWB has implemented 24x7x365 Security Operations Centre (SOC) and Security Incident and Event Management (SIEM) service through a managed service provider ▪ GAWB has established a Information Security Management System (ISMS) which acts as a framework across all GAWB systems GAWB has deployed a managed end point security solution on corporate GAWB assets; It is in process of developing a suitable end point security solution for the OT assets (due by 30.06.2021) ▪ Regular vulnerability assessments are completed and identified issues are rectified ▪ GAWB has refreshed its all staff cybersecurity awareness training and its targeted to be completed by the staff members by 31.01.2021; and ▪ GAWB is planning to conduct its annual penetration testing, this is scheduled for completion by 31.06.2021
	Development of Water Quality Database for Analysing the Verification Monitoring Data	Improvements to GAWB's Data Management System.		Complete	The Data base has been trialled and is currently under review to get it fully operational.

Item No.	Scheme Component / Sub-component	Action(s)	Target date	Status	Comments
G3.1	GWTP	Filter Media Replacement Project 2021/2022, Filters 1-8	April 2022	In Progress	Risk Assessments for Gladstone Scheme in 2016&2020 identified that Filter Media Replacement is due in 2021/2022.
G6.14	GWTP	Pipe/Valve (RPZ) Replacement		Complete	RPZ Valve Maintenance/Replacement to Industrial Customers

4 COMPLIANCE WITH WQ CRITERIA FOR DRINKING WATER

The results from the verification monitoring program have been compared against the levels of the water quality criteria specified by the Regulator in the *Water Quality and Reporting Guideline for a Drinking Water Service* and are summarised in Appendix A, Table A1. As can be seen, GAWB drinking water is compliant with the ADWG 2011 and meets the water quality criteria specified by the Queensland Water Supply Regulator

The reported statistics do not include results derived from quality control, blank or repeat samples, or from emergency or investigative samples undertaken in response to an elevated result.

Consistency of monitoring results over the 2020/21 period with previous years demonstrates a level of surveillance consistent and appropriate with the risks to drinking water quality. GAWB far exceeds the number of *E. coli* samples required to be taken under the Public Health Act 2005 according to population by almost threefold. The below table provides a summary of verification monitoring conducted for the 2020/2021 year. The figures in the below table take into account the full distribution (Gladstone and Yarwun), including water treatment plant outlets. The actual number of samples taken versus the sampling program reflects shutdowns and access issues, whereby sampling was not appropriate during various plant and network shutdowns or because safe access to sites was not available during sampling runs.

Scheme name	Parameter	No of samples required to be collected (as per the approved DWQMP)	No of samples actually collected	Water quality criteria		No of non-compliant samples	Comments
Gladstone	Free Chlorine	624	509	Health guideline limit	<5mg/l	0	
Gladstone	Dissolved Oxygen	624	450	Aesthetic guideline limit - treated water only	>85%	34	34 Samples were found to be less than 85%
Gladstone	pH	624	506	Aesthetic guideline limit	6.5 - 8.5 pH Unit	0	
Gladstone	Turbidity	624	511	Aesthetic guideline limit	<5NTU	0	
Gladstone	Colour	144	64	Aesthetic guideline limit	<15HU	0	Colour Determination occurred only at 6 sites in addition to WTP Outlet
Gladstone	Hardness	4	4	Recommended limit	<200mg/l	0	
Gladstone	Total dissolved solids	4	4	Recommended limit	<600mg/l	0	
Gladstone	Bromate	20	4	Health Guideline	0.02mg/L	0	Bromate is analysed only at GWTP outlet.
Gladstone	Chlorate	260	196	WHO Interim Health Guideline	0.7 mg/L	0	
Gladstone	Aluminium	144	131	Aesthetic guideline limit	<0.2mg/l	0	
Gladstone	Arsenic (Total)	48	44	Health guideline limit	0.01mg/l	0	
Gladstone	Ba,Cd,Cr,Cu,Pb,Hg,Ni,Se,Zn (total)	432	396	Health and Aesthetic guideline limit	Various depending on metal	0	
Gladstone	Cyanide	4	4	Health guideline limit	<0.08mg/l	0	Cyanide analysis performed only at WTP outlet, Verification Program shall be reviewed accordingly
Gladstone	Iron	184	167	Aesthetic guideline limit	<0.3mg/l	0	
Gladstone	Manganese	184	167	Aesthetic guideline limit	<0.1mg/l	0	
Gladstone	THM's	156	121	Health guideline limit	<0.25mg/l	0	
Gladstone	Cyanobacteria	52	47	No guideline limit		0	
Gladstone	<i>E. coli</i>	624	520	Health guideline limit	0mg/l in any 100ml sample	0	

Scheme name	Parameter	No of samples required to be collected (as per the approved DWQMP)	No of samples actually collected	Water quality criteria		No of non-compliant samples	Comments
Yarwun	Free Chlorine	416	373	Health guideline limit	<5mg/l	0	
Yarwun	Dissolved Oxygen	416	326	Aesthetic guideline limit	>85%	18	18 samples were found to be <85%
Yarwun	pH	416	372	Aesthetic guideline limit	6.5 - 8.5 pH Unit	0	
Yarwun	Turbidity	416	373	Aesthetic guideline limit	<5NTU	0	
Yarwun	Colour (number reduced in amended DWQMP)	24	21	Aesthetic guideline limit	<15HU	0	Colour determination occurred
Yarwun	Hardness	4	4	Recommended limit	<200mg/l	0	
Yarwun	Total dissolved solids	4	4	Recommended limit	<600mg/l	0	
Yarwun	Aluminium	84	73	Aesthetic guideline limit	<0.2mg/l	0	
Yarwun	Arsenic (Total)	28	28	Health guideline limit	0.01mg/l	0	
Yarwun	Ba,Cd,Cr,Cu,Pb,Hg,Ni,Se,Zn (total)	252	251	Health and Aesthetic guideline limit	Various depending on metal	0	
Yarwun	Chlorate	104	87	WHO Interim Health Guideline	0.7mg/L	2	Has Reported to the Regulator on exceedances.
Yarwun	Bromate	8	8	Health Guideline	0.02mg/L	0	
Yarwun	Cyanide	4	4	Health guideline limit	<0.08mg/l	0	Cyanide Analysis performed only at GWTP Outlet
Yarwun	Iron	124	109	Aesthetic guideline limit	<0.3mg/l	0	
Yarwun	Manganese	124	109	Aesthetic guideline limit	<0.1mg/l	0	
Yarwun	THM's	84	73	Health guideline limit	<0.25mg/l	0	
Yarwun	Cyanobacteria	52	47	No guideline limit		0	
Yarwun	<i>E. coli</i>	468	427	Health guideline limit	0mg/l in any 100ml sample	0	

5 NOTIFICATIONS TO THE REGULATOR

During the 2020 /21 FY, GAWB communicated once with the Regulator regarding detection of Chlorate within the Yarwun Transmission. This parameter has no water quality criteria(i.e no standards prescribed in the Public Health Regulation 2018, no criteria prescribed in the Water Quality and Reportign Guidline for a Drinking Water Service, no guideline limit in the current version of ADWG). The issue was managed under GWB's approved Drinking Water Quality Management Plan, and investigations determined there was no health risk from the detection as advised in communication with DRDMW.

The Reporting of parameters with interim guidelines such as Chlorate shall be reported to the Regulator within 24 hrs of becoming aware of the exceedance as per the New DWQMP Reporting Guidelines which are yet to be published in 2022, which GAWB shall be obligated.

6 CUSTOMER SATISFACTION

GAWB monitors customer satisfaction of water quality by maintaining a register of complaints. Complaints are reported to the Minister in the 'Key Performance Measures' section of GAWB's Quarterly Reports on its Performance Plan for the financial year. During 2020/21 year, GAWB did not record any complaints about water quality from its customers, including GRC, industrial customers or the small number of reticulation customers on GAWB's network.

The Gladstone Regional Council (GRC) reticulates bulk drinking water produced by GAWB to domestic users. Consumer feedback on quality or supply of drinking water from domestic users is generally managed by the GRC, who maintain a database of customer feedback. In practice, GAWB will assist the regional council with enquiries on water quality where applicable, and escalate issues internally if there is cause. In response to previous concerns from GRC regarding Bromate in the treated water system, GAWB now monitors Bromates on a quarterly basis as part of the verification monitoring program. During 2020/21, there were no detections of Bromate within the system.

Additionally, GAWB has worked in conjunction with GRC to investigate chlorates in the distribution, and possible ways to decrease the levels of chlorate in parts of GRC's system.

In general, industrial customers use the bulk of their treated water reservation for process water (e.g. in boilers) and to provide drinking water to their sites. GAWB maintains an open and responsive relationship with its customers. GAWB receives several enquiries each year from current or potential customers for information on the quality of water, to inform the design of processing plant. During 2020/21, GAWB's industrial drinking water customers did not report any water quality complaints to GAWB.

7 FINDINGS AND RECOMMENDATIONS OF THE DWQMP AUDITOR

GAWB arranged for Viridis Consultants to conduct a regular audit of the DWQMP on the 2^{1st} and 2^{2nd} January 2020. The purpose of the audit was to verify the accuracy of the monitoring and performance data provided to the Regulator and assess compliance with the DWQMP. It also aims to assess the relevance of the DWQMP in relation to the service provided. A summary of outcomes of the audit are provided below. Completed Tasks are highlighted in yellow, while the remainder of the recommendations identified are in progress.

Improvement Recommendation	Recommendation or OFI	Status
Migrate jar test template into Tech One (AMS) system to ensure all jar testing records are maintained	OFI	In progress
Develop a procedure for compiling, sorting and analysing the verification monitoring data for the DWQMP Annual report, including sites to include or except as per the DWQMP	Recommendation	Complete
Develop a process to undertake periodic checks of SCADA alarms including shutdowns	Recommendation	In progress
Document the review process key steps including: triggers for a review, nature (comprehensive or minor), and essential inputs	Recommendation	Complete
Review of Risk Assessment Register for DWQMP for 2020/21 FY is Complete and Improvement Actions Identified.		
Align the filtration CCP critical limit with the ADWG (ie 0.5NTU)	Recommendation	In progress
Develop a framework to guide the decision on the selection of intake level	OFI	In progress
Ensure that all relevant procedure are easily accessible through the document management system	OFI	In progress
Review the inhouse reservoir visit program/checklist to include water quality aspects in periodic inspections (eg vermin proof checking)	OFI	Complete
Scheduled Inspections are carried out as per the Work Orders Generated in Financial system.		
Review the DWQ Emergency management plan to include cybersecurity	OFI	In progress
Include tracking of improvements identified in the DWQMP as part of the DWQ Weekly meetings spreadsheet	OFI	In progress
Consider additional hazards for completeness of risk register: PFAS Opportunistic pathogens Cybersecurity Staff and contractor skills and qualifications Yarwun WTP – pre chlorination step	OFI	Complete
Include a justification on the selection of the CCP critical limit values in the DWQMP	OFI	In progress
Periodically check all CCP limits to ensure they are consistent with the Documentation	Recommendation	In Progress
Investigate the Possibility of using Tablets/PDA devices for field Technicians performing water sampling and for the results to get logged directly into the Database/spread sheet	Recommendation	In Progress

APPENDIX A – SUMMARY OF COMPLIANCE WITH WATER QUALITY CRITERIA

The results from the verification monitoring program have been compared against the levels of the water quality criteria specified by the Regulator in the *Water Quality and Reporting Guideline for a Drinking Water Service* and are summarised in Table A1. As can be seen, GAWB drinking water is compliant with the ADWG 2011 and meets the water quality criteria specified by the Office of the Water Supply Regulator

The reported statistics do not include results derived from quality control, blank or repeat samples, or from emergency or investigative samples undertaken in response to an elevated result. Nor does it include results from booster stations not considered to be direct customer offtakes as per recommendation by the DWQMP auditors. All 'less than' results have been analysed as having a value of zero (0), consistent with the quarterly reporting requirements of the QWSR.

Consistency of monitoring results over the 2020-21 period with previous years demonstrates a level of surveillance consistent and appropriate with the risks to drinking water quality.

Scheme name	Scheme component	Parameter	Units	Frequency of sampling	Total No. samples collected	No. of samples in which parameter was detected	No. of samples exceeding water quality criteria	Min	Max	Average (Mean)	95 th %tile	Limit of reporting	Laboratory name
Lake Awoonga	Source Water	4.4'-DDD	µg/L	Q	4	0	0	0.0	0.0	0.0	0.0	0.5	ALS
Lake Awoonga	Source Water	4.4'-DDE	µg/L	Q	4	0	0	0.0	0.0	0.0	0.0	0.5	ALS
Lake Awoonga	Source Water	4.4'-DDT	µg/L	Q	4	0	0	0	0	0	0	2	ALS
Lake Awoonga	Source Water	Acenaphthene	µg/L	Q	4	0	0	0	0	0	0	1	ALS
Lake Awoonga	Source Water	Acenaphthylene	µg/L	Q	4	0	0	0	0	0	0	1	ALS
Lake Awoonga	Source Water	Aldrin	µg/L	Q	4	0	0	0.0	0.0	0.0	0.0	0.5	ALS
Lake Awoonga	Source Water	alpha-BHC	µg/L	Q	4	0	0	0.0	0.0	0.0	0.0	0.5	ALS
Lake Awoonga	Source Water	alpha-Endosulfan	µg/L	Q	4	0	0	0.0	0.0	0.0	0.0	0.5	ALS
Lake Awoonga	Source Water	beta-BHC	µg/L	Q	4	0	0	0.0	0.0	0.0	0.0	0.5	ALS
Lake Awoonga	Source Water	beta-Endosulfan	µg/L	Q	4	0	0	0.0	0.0	0.0	0.0	0.5	ALS
Lake Awoonga	Source Water	cis-Chlordane	µg/L	Q	4	0	0	0.0	0.0	0.0	0.0	0.5	ALS
Lake Awoonga	Source Water	delta-BHC	µg/L	Q	4	0	0	0.0	0.0	0.0	0.0	0.5	ALS
Lake Awoonga	Source Water	Dieldrin	µg/L	Q	4	0	0	0.0	0.0	0.0	0.0	0.5	ALS
Lake Awoonga	Source Water	Endosulfan sulfate	µg/L	Q	4	0	0	0.0	0.0	0.0	0.0	0.5	ALS
Lake Awoonga	Source Water	Endrin	µg/L	Q	4	0	0	0.0	0.0	0.0	0.0	0.5	ALS
Lake Awoonga	Source Water	Endrin aldehyde	µg/L	Q	4	0	0	0.0	0.0	0.0	0.0	0.5	ALS
Lake Awoonga	Source Water	Endrin ketone	µg/L	Q	4	0	0	0.0	0.0	0.0	0.0	0.5	ALS
Lake Awoonga	Source Water	gamma-BHC	µg/L	Q	4	0	0	0.0	0.0	0.0	0.0	0.5	ALS
Lake Awoonga	Source Water	Heptachlor	µg/L	Q	4	0	0	0.0	0.0	0.0	0.0	0.5	ALS
Lake Awoonga	Source Water	Heptachlor epoxide	µg/L	Q	4	0	0	0.0	0.0	0.0	0.0	0.5	ALS
Lake Awoonga	Source Water	Hexachlorobenzene (HCB)	µg/L	Q	4	0	0	0.0	0.0	0.0	0.0	0.5	ALS
Lake Awoonga	Source Water	Methoxychlor	µg/L	Q	4	0	0	0	0	0	0	2	ALS
Lake Awoonga	Source Water	Sum of Aldrin + Dieldrin	µg/L	Q	4	0	0	0.0	0.0	0.0	0.0	0.5	ALS
Lake Awoonga	Source Water	Sum of DDD + DDE + DDT	µg/L	Q	4	0	0	0.0	0.0	0.0	0.0	0.5	ALS
Lake Awoonga	Source Water	Total Chlordane (sum)	µg/L	Q	4	0	0	0.0	0.0	0.0	0.0	0.5	ALS
Lake Awoonga	Source Water	trans-Chlordane	µg/L	Q	4	0	0	0.0	0.0	0.0	0.0	0.5	ALS

Scheme name	Scheme component	Parameter	Units	Frequency of sampling	Total No. samples collected	No. of samples in which parameter was detected	No. of samples exceeding water quality criteria	Min	Max	Average (Mean)	95 th %tile	Limit of reporting	Laboratory name
Lake Awoonga	Source Water	Azinphos Methyl	µg/L	Q	4	0	0	0.0	0.0	0.0	0.0	0.5	ALS
Lake Awoonga	Source Water	Bromophos-ethyl	µg/L	Q	4	0	0	0.0	0.0	0.0	0.0	0.5	ALS
Lake Awoonga	Source Water	Carbophenothion	µg/L	Q	4	0	0	0.0	0.0	0.0	0.0	0.5	ALS
Lake Awoonga	Source Water	Chlorfenvinphos	µg/L	Q	4	0	0	0.0	0.0	0.0	0.0	0.5	ALS
Lake Awoonga	Source Water	Chlorpyrifos	µg/L	Q	4	0	0	0.0	0.0	0.0	0.0	0.5	ALS
Lake Awoonga	Source Water	Chlorpyrifos-methyl	µg/L	Q	4	0	0	0.0	0.0	0.0	0.0	0.5	ALS
Lake Awoonga	Source Water	Demeton-S-methyl	µg/L	Q	4	0	0	0.0	0.0	0.0	0.0	0.5	ALS
Lake Awoonga	Source Water	Diazinon	µg/L	Q	4	0	0	0.0	0.0	0.0	0.0	0.5	ALS
Lake Awoonga	Source Water	Dichlorvos	µg/L	Q	4	0	0	0.0	0.0	0.0	0.0	0.5	ALS
Lake Awoonga	Source Water	Dimethoate	µg/L	Q	4	0	0	0.0	0.0	0.0	0.0	0.5	ALS
Lake Awoonga	Source Water	Ethion	µg/L	Q	4	0	0	0.0	0.0	0.0	0.0	0.5	ALS
Lake Awoonga	Source Water	Fenamiphos	µg/L	Q	4	0	0	0.0	0.0	0.0	0.0	0.5	ALS
Lake Awoonga	Source Water	Fenthion	µg/L	Q	4	0	0	0.0	0.0	0.0	0.0	0.5	ALS
Lake Awoonga	Source Water	Malathion	µg/L	Q	4	0	0	0.0	0.0	0.0	0.0	0.5	ALS
Lake Awoonga	Source Water	Monocrotophos	µg/L	Q	4	0	0	0	0	0	0	2	ALS
Lake Awoonga	Source Water	Parathion	µg/L	Q	4	0	0	0	0	0	0	2	ALS
Lake Awoonga	Source Water	Parathion-methyl	µg/L	Q	4	0	0	0	0	0	0	2	ALS
Lake Awoonga	Source Water	Pirimphos-ethyl	µg/L	Q	4	0	0	0	0	0	0	0.5	ALS
Lake Awoonga	Source Water	Prothiofos	µg/L	Q	4	0	0	0.0	0.0	0.0	0.0	0.5	ALS
Lake Awoonga	Source Water	Dissolved Oxygen	%	W	216	216	0	34.3	104.3	81.24	102.7	0.1	Internal
Lake Awoonga	Source Water	pH	pH Unit	W	94	94	1	6.67	8.85	7.7	8.0	0.1	Internal
Lake Awoonga	Source Water	Turbidity	NTU	W	95	95	0	0.71	4.51	1.60	3.34	0.1	Internal
Lake Awoonga	Source Water	Hardness	mg/L	Q	8	8	0	70	84	78	82.95	1	Internal
Lake Awoonga	Source Water	Total Dissolved Solids	mg/L	Q	8	8	0	140	177	156	176	10	ALS
Lake Awoonga	Source Water	Arsenic	mg/L	Q	4	4	0	0.0009	0.0013	0.0011	0.0013	0.0002	ALS
Lake Awoonga	Source Water	Barium	mg/L	Q	4	4	0	0.0083	0.0129	0.0112	0.013	0.0005	ALS
Lake Awoonga	Source Water	Cadmium	mg/L	Q	8	0	0	0.0000	0.0000	0.0000	0.0000	0.00005	ALS
Lake Awoonga	Source Water	Chromium	mg/L	Q	4	0	0	0.000	0.0000	0.0000	0.0000	0.0002	ALS
Lake Awoonga	Source Water	Copper	mg/L	Q	4	4	0	0.0008	0.0009	0.00083	0.0009	0.0005	ALS
Lake Awoonga	Source Water	Lead	mg/L	Q	4	0	0	0.0000	0.0000	0.0000	0.0000	0.0001	ALS

Scheme name	Scheme component	Parameter	Units	Frequency of sampling	Total No. samples collected	No. of samples in which parameter was detected	No. of samples exceeding water quality criteria	Min	Max	Average (Mean)	95 th %tile	Limit of reporting	Laboratory name
Lake Awoonga	Source Water	Mercury	mg/L	Q	4	0	0	0.0000	0.0000	0.0000	0.0000	0.0001	ALS
Lake Awoonga	Source Water	Nickel	mg/L	Q	4	1	0	0.0000	0.0000	0.0000	0.0000	0.0005	ALS
Lake Awoonga	Source Water	Selenium	mg/L	Q	4	0	0	0.0000	0.0000	0.0000	0.0000	0.0002	ALS
Lake Awoonga	Source Water	Zinc	mg/L	Q	4	0	0	0.000	0.002	0.0005	0.0017	0.001	ALS
Lake Awoonga	Source Water	Cyanide	mg/L	Q	8	0	0	0.000	0.000	0.000	0.000	0.004	ALS
Lake Awoonga	Source Water	Manganese-Dissolved	mg/L	W	107	9	0	0.0000	0.01	0.00021	0.0007	0.0005	ALS
Lake Awoonga	Source Water	Manganese-Total	mg/L	W	107	107	0	0.0005	0.0368	0.014	0.024	0.0005	ALS
Lake Awoonga	Source Water	Cyanobacteria	cells/mL	W	106	106	0	180	142690	8604.151	33902.5	1	Ecoscope
Lake Awoonga	Source Water	Escherichia coli	MPN/100mL	W	106	7	0	0	14	1.32	2.75	1	Ecoscope
Lake Awoonga	Source Water	Cryptosporidium	oocysts/L	Q	4	0	0	0	0	0	0	0.1	ALS
Lake Awoonga	Source Water	Giardia	cysts/L	Q	4	0	0	0	0	0	0	0.1	ALS
Lake Awoonga	Source Water	Total PAHs	µg/L	Q	4	0	0	0	0	0	0	0.5	ALS
GWTP	Treatment Plant	Free Chlorine	mg/L	W	47	47	0	1.45	2.8	2.1	2.4	0.1	Internal
GWTP	Treatment Plant	Dissolved Oxygen	%	W	42	42	0	66.6	98.5	85	89.7	0.1	Internal
GWTP	Treatment Plant	pH	pH Unit	W	48	48	0	6.83	7.4	7.2	7.3	0.1	Internal
GWTP	Treatment Plant	Turbidity	NTU	W	48	48	0	0.02	0.33	0.09	0.14	0.1	Internal
GWTP	Treatment Plant	Colour	TCU	M	11	11	0	2	3	2.1	3	1	ALS
GWTP	Treatment Plant	Hardness	mg/L	Q	4	4	0	74	84	80	84	1	ALS
GWTP	Treatment Plant	Total Dissolved Solids	mg/L	Q	4	4	0	166	174	171.8	174	10	ALS
GWTP	Treatment Plant	Aluminium	mg/L	M	11	11	0	0.031	0.071	0.058	0.071	0.005	ALS
GWTP	Treatment Plant	Arsenic	mg/L	Q	4	4	0	0.0004	0.0005	0.00045	0.0005	0.0002	ALS
GWTP	Treatment Plant	Barium	mg/L	Q	4	4	0	0.008	0.0129	0.011	0.013	0.0005	ALS
GWTP	Treatment Plant	Cadmium	mg/L	Q	4	0	0	0.00000	0.0000	0.00000	0.00000	0.00005	ALS
GWTP	Treatment Plant	Chromium	mg/L	Q	4	0	0	0.0000	0.0000	0.0000	0.0000	0.0002	ALS
GWTP	Treatment Plant	Copper	mg/L	Q	4	4	0	0.0000	0.0018	0.0012	0.002	0.0005	ALS
GWTP	Treatment Plant	Lead	mg/L	Q	4	0	0	0.0000	0.0000	0.0000	0.0000	0.0001	ALS
GWTP	Treatment Plant	Mercury	mg/L	Q	4	0	0	0.0000	0.0000	0.0000	0.0000	0.0001	ALS
GWTP	Treatment Plant	Nickel	mg/L	Q	4	0	0	0.0000	0.0000	0.0000	0.0000	0.0005	ALS
GWTP	Treatment Plant	Selenium	mg/L	Q	4	0	0	0.0000	0.0000	0.0000	0.0000	0.0002	ALS
GWTP	Treatment Plant	Zinc	mg/L	Q	4	0	0	0.005	0.012	0.009	0.012	0.001	ALS

Scheme name	Scheme component	Parameter	Units	Frequency of sampling	Total No. samples collected	No. of samples in which parameter was detected	No. of samples exceeding water quality criteria	Min	Max	Average (Mean)	95 th %tile	Limit of reporting	Laboratory name
GWTP	Treatment Plant	Cyanide	mg/L	Q	4	0	0	0.000	0.000	0.000	0.000	0.004	ALS
GWTP	Treatment Plant	Iron	mg/L	M	47	13	0	0.000	0.01	0.0012	0.006	0.002	ALS
GWTP	Treatment Plant	Manganese-Dissolved	mg/L	W	47	4	0	0.0000	0.0009	0.000006	0.0005	0.0005	ALS
GWTP	Treatment Plant	Manganese-Total	mg/L	W	47	12	0	0.000	0.0018	0.0002	0.001	0.0005	ALS
GWTP	Treatment Plant	Trihalomethanes	µg/L	M	11	11	0	12	24	16	22.5	5	ALS
GWTP	Treatment Plant	Cyanobacteria	cells/mL	W	47	2	0	0	30	1.5	14	1	Ecoscope
GWTP	Treatment Plant	Escherichia coli	MPN/100mL	W	47	0	0	0	0	0	0	1	Ecoscope
GWTP	Treatment Plant	Chlorate	mg/L	W	42	42	0	0.033	0.206	0.096	0.174	0.005	ALS
GWTP Distribution	Transmission	Free Chlorine	mg/L	W	462	462	0	0.37	2.95	1.34	2.14	0.1	Internal
GWTP Distribution	Transmission	Dissolved Oxygen	%	W	408	408	0	75.1	100.1	88.6	96.1	0.1	Internal
GWTP Distribution	Transmission	pH	pH Unit	W	458	458	0	6.83	8.4	7.4	7.8	0.1	Internal
GWTP Distribution	Transmission	Turbidity	NTU	W	463	463	0	0.01	0.5	0.11	0.2	0.1	Internal
GWTP Distribution	Transmission	Colour	TCU	M	53	53	0	1	3	2.15	3	1.0	ALS
GWTP Distribution	Transmission	Aluminium	mg/L	M	110	110	0	0.033	0.096	0.054	0.065	0.005	ALS
GWTP Distribution	Transmission	Arsenic	mg/L	Q	37	37	0	0.0004	0.0006	0.00044	0.0005	0.0002	ALS
GWTP Distribution	Transmission	Barium	mg/L	Q	37	37	0	0.0083	0.0134	0.0111	0.0126	0.0005	ALS
GWTP Distribution	Transmission	Cadmium	mg/L	Q	37	0	0	0.0000	0.0000	0.0000	0.0000	0.0002	ALS
GWTP Distribution	Transmission	Chromium	mg/L	Q	37	9	0	0.0000	0.0011	0.00009	0.00031	0.0002	ALS
GWTP Distribution	Transmission	Copper	mg/L	Q	37	35	0	0.0000	0.0175	0.003	0.009	0.0005	ALS
GWTP Distribution	Transmission	Lead	mg/L	Q	37	17	0	0.0000	0.002	0.0002	0.00072	0.0001	ALS
GWTP Distribution	Transmission	Mercury	mg/L	Q	37	0	0	0.0000	0.0000	0.0000	0.0000	0.0001	ALS
GWTP Distribution	Transmission	Nickel	mg/L	Q	37	0	0	0.0000	0.0000	0.0000	0.0000	0.0005	ALS
GWTP Distribution	Transmission	Selenium	mg/L	Q	37	0	0	0.0000	0.0000	0.0000	0.0000	0.0002	ALS
GWTP Distribution	Transmission	Zinc	mg/L	Q	37	37	0	0.001	0.027	0.005	0.01	0.001	ALS
GWTP Distribution	Transmission	Iron	mg/L	M	110	86	0	0.000	0.05	0.006	0.02	0.002	ALS

Scheme name	Scheme component	Parameter	Units	Frequency of sampling	Total No. samples collected	No. of samples in which parameter was detected	No. of samples exceeding water quality criteria	Min	Max	Average (Mean)	95 th %tile	Limit of reporting	Laboratory name
GWTP Distribution	Transmission	Manganese	mg/L	M	110	35	0	0.000	0.005	0.0004	0.002	0.0005	ALS
GWTP Distribution	Transmission	Trihalomethanes	µg/L	M	110	110	0	26	152	90.11	139	5	ALS
GWTP Distribution	Transmission	Escherichia coli	MPN/100mL	W	473	0	0	0	0	0	0	1	Ecoscope
GWTP Distribution	Transmission	Chlorate	mg/L	W	154	154	0	0.044	0.598	0.196	0.515	0.005	ALS
YWTP	Water Treatment	Free Chlorine	mg/L	W	47	47	0	1.51	2.75	2.17	2.46	0.1	Internal
YWTP	Water Treatment	Dissolved Oxygen	%	W	41	41	0	71.5	94.6	84.8	91	0.1	Internal
YWTP	Water Treatment	pH	pH Unit	W	47	47	0	7.01	7.77	7.2	7.54	0.1	Internal
YWTP	Water Treatment	Turbidity	NTU	W	47	47	0	0.01	0.2	0.08	0.13	0.1	Internal
YWTP	Water Treatment	Colour	PCU	M	11	11	0	2	3	2.1	2.5	1	ALS
YWTP	Water Treatment	Hardness	mg/L	Q	4	4	0	70	82	75	81	1	ALS
YWTP	Water Treatment	Total Dissolved Solids	mg/L	Q	4	4	0	165	170	168	170	10	ALS
YWTP	Water Treatment	Aluminium	mg/L	M	11	11	0	0.027	0.053	0.041	0.05	0.005	ALS
YWTP	Water Treatment	Arsenic	mg/L	Q	4	4	0	0.0004	0.0004	0.0004	0.0004	0.0002	ALS
YWTP	Water Treatment	Barium	mg/L	Q	4	4	0	0.009	0.0124	0.011	0.0123	0.0005	ALS
YWTP	Water Treatment	Cadmium	mg/L	Q	4	0	0	0.00000	0.00000	0.00000	0.00000	0.00005	ALS
YWTP	Water Treatment	Chromium	mg/L	Q	4	1	0	0.0000	0.0026	0.0007	0.0022	0.0002	ALS
YWTP	Water Treatment	Copper	mg/L	Q	4	4	0	0.0012	0.0023	0.0015	0.0022	0.0005	ALS
YWTP	Water Treatment	Lead	mg/L	Q	4	0	0	0.0000	0.0000	0.000	0.0000	0.0001	ALS
YWTP	Water Treatment	Mercury	mg/L	Q	4	0	0	0.0000	0.0000	0.0000	0.0000	0.0001	ALS
YWTP	Water Treatment	Nickel	mg/L	Q	4	0	0	0.0000	0.000	0.000	0.000	0.0005	ALS
YWTP	Water Treatment	Selenium	mg/L	Q	4	0	0	0.0000	0.0000	0.0000	0.0000	0.0002	ALS
YWTP	Water Treatment	Zinc	mg/L	Q	4	4	0	0.001	0.003	0.002	0.003	0.001	ALS
YWTP	Water Treatment	Cyanide	mg/L	Q	4	0	0	0.000	0.000	0.000	0.000	0.004	ALS
YWTP	Water Treatment	Iron	mg/L	W	47	13	0	0.000	0.01	0.002	0.008	0.002	ALS
YWTP	Water Treatment	Manganese Dissolved	mg/L	W	47	11	0	0.0000	0.0011	0.0002	0.0008	0.0005	ALS
YWTP	Water Treatment	Manganese-Total	mg/L	W	47	15	0	0.000	0.0011	0.000217	0.0008	0.0005	ALS

Scheme name	Scheme component	Parameter	Units	Frequency of sampling	Total No. samples collected	No. of samples in which parameter was detected	No. of samples exceeding water quality criteria	Min	Max	Average (Mean)	95 th %tile	Limit of reporting	Laboratory name
YWTP	Water Treatment	Trihalomethanes	µg/L	M	11	11	0	14	24	17.7	22	5	ALS
YWTP	Water Treatment	Cyanobacteria	cells/mL	W	47	1	0	0	30	0.64	0.00	1	Ecoscope
YWTP	Water Treatment	Escherichia coli	MPN/100mL	W	47	0	0	0	0	0	0	1	Ecoscope
YWTP	Water Treatment	Chlorate	mg/L	W	43	43	1	0.074	0.895	0.3	0.64	0.005	ALS
YWTP	Water Treatment	Bromate	mg/L	Q	4	0	0	0	0	0	0	0	ALS
YWTP Distribution	Transmission	Free Chlorine	mg/L	W	326	326	0	0.35	2.4	1.2	1.8	0.1	Internal
YWTP Distribution	Transmission	Dissolved Oxygen	%	W	285	285	0	77.4	120.1	89.8	97.94	0.1	Internal
YWTP Distribution	Transmission	pH	pH Unit	W	325	325	0	7.0	8.5	7.6	8.1	0.1	Internal
YWTP Distribution	Transmission	Turbidity	NTU	W	326	326	0	0.01	1.39	0.11	0.2	0.1	Internal
YWTP Distribution	Transmission	Colour	TCU	M	10	10	0	2	3	2.1	2.6	1	ALS
YWTP Distribution	Transmission	Aluminium	mg/L	M	62	62	0	0.029	0.074	0.05	0.07	0.005	ALS
YWTP Distribution	Transmission	Arsenic	mg/L	Q	24	24	0	0.0003	0.0005	0.0004	0.0005	0.0002	ALS
YWTP Distribution	Transmission	Cadmium	mg/L	Q	23	0	0	0.00000	0.0000	0.00000	0.00000	0.00005	ALS
YWTP Distribution	Transmission	Chromium	mg/L	Q	24	7	0	0.0000	0.0017	0.0004	0.002	0.0002	ALS
YWTP Distribution	Transmission	Copper	mg/L	Q	24	23	0	0.0000	0.0081	0.003	0.0059	0.0005	ALS
YWTP Distribution	Transmission	Lead	mg/L	Q	24	15	0	0.0000	0.0003	0.00012	0.0003	0.0001	ALS
YWTP Distribution	Transmission	Mercury	mg/L	Q	24	0	0	0.0000	0.0000	0.0000	0.0000	0.0001	ALS
YWTP Distribution	Transmission	Nickel	mg/L	Q	24	0	0	0.0000	0.0000	0.0000	0.0000	0.0005	ALS
YWTP Distribution	Transmission	Selenium	mg/L	Q	24	0	0	0.0000	0.0000	0.0000	0.0000	0.0002	ALS
YWTP Distribution	Transmission	Zinc	mg/L	Q	24	23	0	0.000	0.007	0.003	0.006	0.001	ALS
YWTP Distribution	Transmission	Iron	mg/L	M	62	35	0	0.00	0.016	0.003	0.008	0.002	ALS
YWTP Distribution	Transmission	Manganese-Total	mg/L	M	62	7	0	0.0000	0.0014	0.00009	0.000695	0.0005	ALS
YWTP Distribution	Transmission	Trihalomethanes	µg/L	M	62	62	0	25	86	49.4	82	5	ALS
YWTP Distribution	Transmission	Escherichia coli	MPN/100mL	W	324	0	0	0	0	0	0	1	Ecoscope
YWTP Distribution	Transmission	Chlorate	mg/L	W	44	44	1	0.154	0.783	0.34	0.64	0.005	ALS

TABLES A2 AND A3 SUMMARISE THE MONTHLY RESULTS FOR ALL E.COLI VERIFICATION MONITORING UNDERTAKEN IN THE GLADSTONE AND YARWUN SYSTEMS.

Table A1 - Reticulation E. coli verification monitoring in Gladstone WTP Distribution. This includes the WTP Treated water, Distribution Network.

Gladstone WTP Distribution 2020/21												
Month	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21
No. Samples collected	30	38	50	44	42	44	38	31	53	48	55	47
No samples collected in which E. coli was detected	0	0	0	0	0	0	0	0	0	0	0	0
No samples collected in previous 12 month period	48	52	46	56	46	41	49	35	41	48	33	41
No samples in which E.coli detected for previous 12 month period	0	0	0	0	0	0	0	0	0	0	0	0
% samples that comply	100	100	100	100	100	100	100	100	100	100	100	100
Compliance with 98% annual value	100	100	100	100	100	100	100	100	100	100	100	100

Table A3 - Reticulation E. coli verification monitoring in Yarwun WTP Distribution. This includes the WTP Treated water, Distribution Network.

Yarwun WTP Distribution 2020 / 21												
Month	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21
No. Samples collected	21	23	32	28	27	27	24	16	35	28	28	35
No samples collected in which E. coli was detected	0	0	0	0	0	0	0	0	0	0	0	0
No samples collected in previous 12 month period	37	32	30	38	28	28	37	27	16	40	24	40
No samples in which E.coli detected for previous 12 month period	0	0	0	0	0	0	0	0	0	0	0	0
% samples that comply	100	100	100	100	100	100	100	100	100	100	100	100
Compliance with 98% annual value	100	100	100	100	100	100	100	100	100	100	100	100

8 OUTCOME OF THE REVIEW OF THE DWQMP

A review of the DWQMP is under way and shall be submitted in February 2022. All references to secondary or supporting documentation are currently being checked and updated as necessary. All schematics of GAWB's network are being updated to the most current available documents. A full review of GAWB's risk assessment is currently being completed.

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Gladstone Area Water Board

The Gladstone Area Water Board (GAWB) considers this document contains matters relating to the business and financial affairs of GAWB and its disclosure may be contrary to the public interest under section 49 and Schedule 4 of the *Right to Information Act 2009* (RTI Act). GAWB would therefore be substantially concerned if this document was to be released publicly. Given this, GAWB provides this copy of the Drinking Water Quality Management Plan Annual Report to the recipient agency on the understanding that if the agency receives a Right to Information (RTI) request that captures this document; it will formally consult with GAWB under section 37 of the RTI Act before a decision is made on the RTI request.