



LOGAN
WATER

Drinking Water Service Annual Report 2022/23





Accessing the Report

This report is available to the public via the City of Logan website and copies may be provided to members of the public upon request. Logan Water understands that our community is made up of people from more than 217 different cultures, if you have any difficulty in understanding this report an interpretation service is available on 131 450.

Feedback

If you have any feedback about this report or the services that Logan Water provides, you can contact us on 3412 3412 or via email at council@logan.qld.gov.au.

Acknowledgement of Country

We acknowledge the Yugambah people as the Traditional Custodians of the country on which we work. We honour Elders past and present, whose knowledge and wisdom has ensured the continuation of culture and traditional practices.

We respect the deep cultural and spiritual connections that our local peoples have with the land and water, and its importance to cultural vitality, life and identity.

Contents

About Logan Water	4
A message from the Group Manager	5
1 Introduction	6
2022/23 in review	7
2 Delivering water to our community.	8
2.1 The water supply network.	9
2.2 Our water supply zones	10
3 Managing safe drinking water	12
3.1 Our legislative obligations.	12
3.2 Our approach to managing drinking water quality	12
3.3 Verifying drinking water quality	13
3.4 Summary assessment of drinking water compliance	13
4 Improving Drinking Water Quality	14
5 Notifying the Regulator	20
6 Customer satisfaction	22
6.1 Water quality complaints performance 2022/23	24
7 Drinking Water Quality Management Plan review and audit activities.	26
7.1 DWQMP regular review	27
7.2 DWQMP regular audit	27
8 Appendices	28
Appendix A – Seqwater Grid Map	28
Appendix B – Summary of Compliance with Water Quality Criteria – <i>E. coli</i>	30
Appendix C – Summary of Compliance with Water Quality Criteria – Health	31
Appendix D – Summary of Compliance with Water Quality Criteria – Aesthetic	38
Appendix E – Glossary	39

About Logan Water

Our purpose

As a water service provider, Logan Water provides safe, reliable and sustainable water and wastewater services for the benefit of the Logan community. We are a water utility focused on reliable, cost-effective, high-grade service delivery.

Our ambition is to realise sustainable opportunities for the City of Logan to be stronger, greener, and smarter. Our commitment to innovative technology and integrated ways of working creates a future worth investing in.

Our vision

Reliable. Sustainable. Committed.

Our Ambitions and Objectives

Our strategic objectives provide the focus for achievement of our ambitions. They drive our priority setting, resource allocation, capability requirements and budgeting activities.

Effortless Customer Experience

- › We ensure our customers get what they need and expect
- › We deliver, what we say is what we do

Resilient Infrastructure

- › We provide infrastructure to meet the growth challenges of the future

Future-Ready People

- › We trust each other to drive a safe and supportive culture
- › We are one innovative and high performing team
- › We make Logan Water a great place to Work

Enhanced Sustainability

- › We drive long term viability by managing cost, service and commercial return
- › We enhance our natural and built environment
- › We measure and improve our performance, systems, and information



A message from the Group Manager



On behalf of Logan Water, I am pleased to present the *2022/23 Drinking Water Service Annual Report*.

This report updates our customers and communities on the quality of the drinking water supplied to the City of

Logan during the 12-month period from 1 July 2022 to 30 June 2023.

Throughout this 12-month period, Logan Water upheld its commitment to achieve compliance with the *Australian Drinking Water Guidelines* and Public Health Regulation 2018 (Qld).

To ensure we meet this commitment, we verify the quality of the drinking water supply via a comprehensive monitoring program that also allows us to identify potential water quality issues and improvements to benefit our customers and communities.

In 2022/23, we distributed more than 24,000 megalitres of drinking water, that's equivalent to 9,600 Olympic sized swimming pools, and conducted more than 64,000 tests.

I am pleased to report that the testing undertaken by the Logan City Council Laboratory showed that the quality of our drinking water supply continued to meet the stringent standards of the *Australian Drinking Water Guidelines* and Public Health Regulation 2018 (Qld).

This outcome reflects our commitment to implementing a best-practice approach to managing the supply of drinking water and our drinking water distribution network.

In 2022/23, we invested \$21 million in our water assets. This investment included the creation of new assets, upgrades of existing assets and the connection of 72km of drinking water mains. This work aims to reduce the likelihood of disruptions to our customers' water service, whilst providing an enhanced water quality outcome.

We also continued to collaborate with our South-East Queensland water supply partners to improve how we maintain disinfection in the drinking water supply across the region.

But it's not all about the past. We understand the importance of exemplifying social and environmental responsibility. To that end, we are investing in additional solar power and battery energy storage to distribute green energy for our water operations and provide green energy to Council.

We also continued to standardise and integrate our processes and systems to enable the continuous management of our end-to-end maintenance activities. These enhancements give us the ability to capture and use our data and metrics to measure and improve business performance and customer outcomes.

As an organisation we may be 11 years old, but our foundation is built on over 150 years of water and wastewater services in South-East Queensland.

As a custodian of these essential services, we are committed to making them sustainable, affordable, reliable and resilient.

A handwritten signature in blue ink, appearing to read 'Mike Basterfield', with a long, sweeping underline.

Mike Basterfield
Group Manager Logan Water



Introduction

Under section 95 of the *Water Supply (Safety and Reliability) Act 2008* (the Act), Logan City Council is a drinking water service provider (SPID542) and must prepare a drinking water quality management plan (DWQMP). The purpose of the DWQMP is to protect public health.

Logan Water, as a commercial unit of Logan City Council, is required to prepare a Drinking Water Service Annual Report¹ to comply with the requirements of sections 141 and 142 of the Act. The purpose of the report is to demonstrate to our customers, stakeholders, and the Water Supply Regulator (the Director-General of the Department of Regional Development, Manufacturing and Water) that we have satisfactorily implemented the approved DWQMP each financial year.

The Report must be submitted to the Water Supply Regulator within 120 business days from the end of the relevant financial year.

Logan Water's 2022/23 Report:

- › summarises the activities undertaken in operating our drinking water service
- › details our water quality performance and compliance with drinking water quality criteria,
- › summarises drinking water quality incidents reported to the Regulator,
- › details drinking water quality related customer complaints, and
- › includes actions taken to implement our DWQMP.

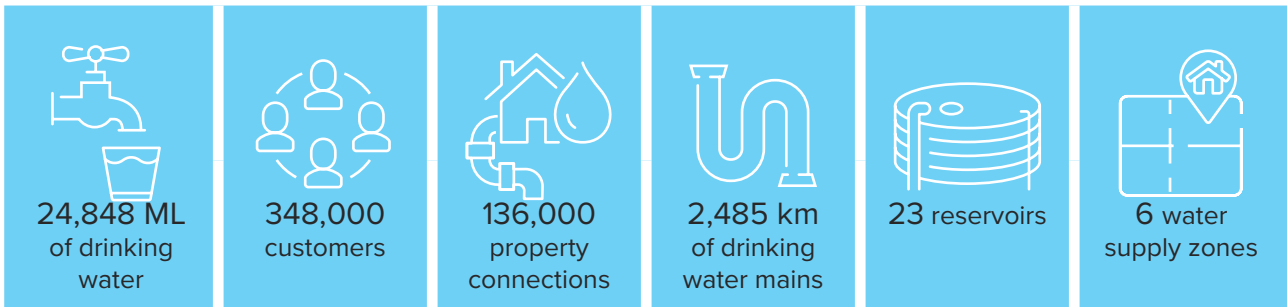
This report assists the Water Supply Regulator to determine compliance with Logan City Council's approved DWQMP and relevant approval conditions.

This Report has been prepared in accordance with the [Guideline for the preparation, review, and audit of DWQMPs](#).

¹ Formerly known as the Drinking Water Quality Management Plan Annual Report

2022/23 in review

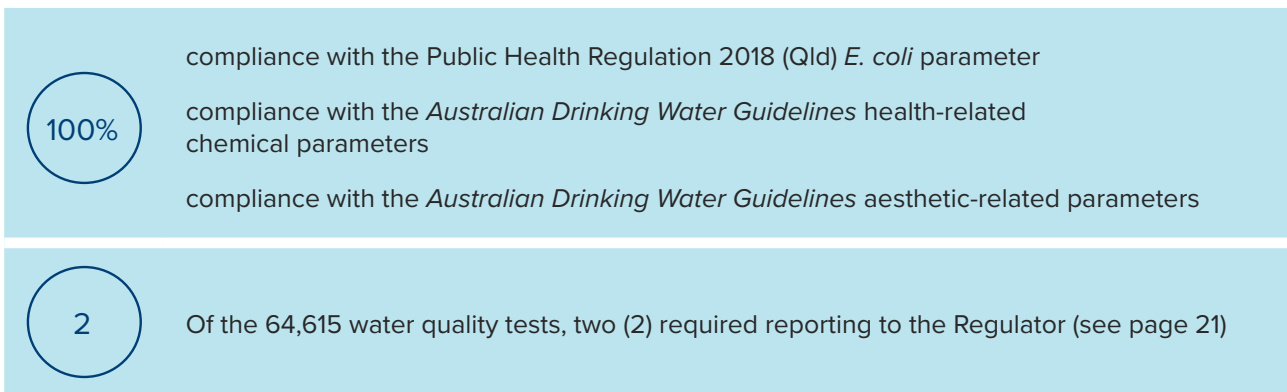
Drinking water quality operations



We monitored and verified the quality of the drinking water supply through



Drinking water quality performance



2

Delivering water to our community

We provide drinking water services to 348,000 customers within the Logan City Council service area.

Seqwater, a Queensland Government statutory body and bulk water supply authority, supplies water from the dams, weirs, and water treatment plants that it manages. Logan Water then distributes the treated water to your property via a network of reservoirs, pumps, and pipes across six water supply zones. The key responsibilities of Seqwater and Logan Water are summarised Table 1.

Table 1: Key Seqwater and Logan Water responsibilities	
Seqwater	Logan Water
<ul style="list-style-type: none"> > Catchment management > Raw water treatment (including fluoridation). > Clear water storage > Bulk water transport to defined transfer points > Monitoring of raw and treated water supply, including fluoridation 	<ul style="list-style-type: none"> > Receipt of bulk treated water from Seqwater at defined transfer points > Delivery to customers through Logan Water’s distribution network > Operation and maintenance of the distribution network, reservoirs, pump stations, and several secondary disinfection facilities > Monitoring of drinking water quality performance throughout the distribution network

The entire process from raw water source to your meter is known as ‘Catchment to consumer’. See Figure 1.

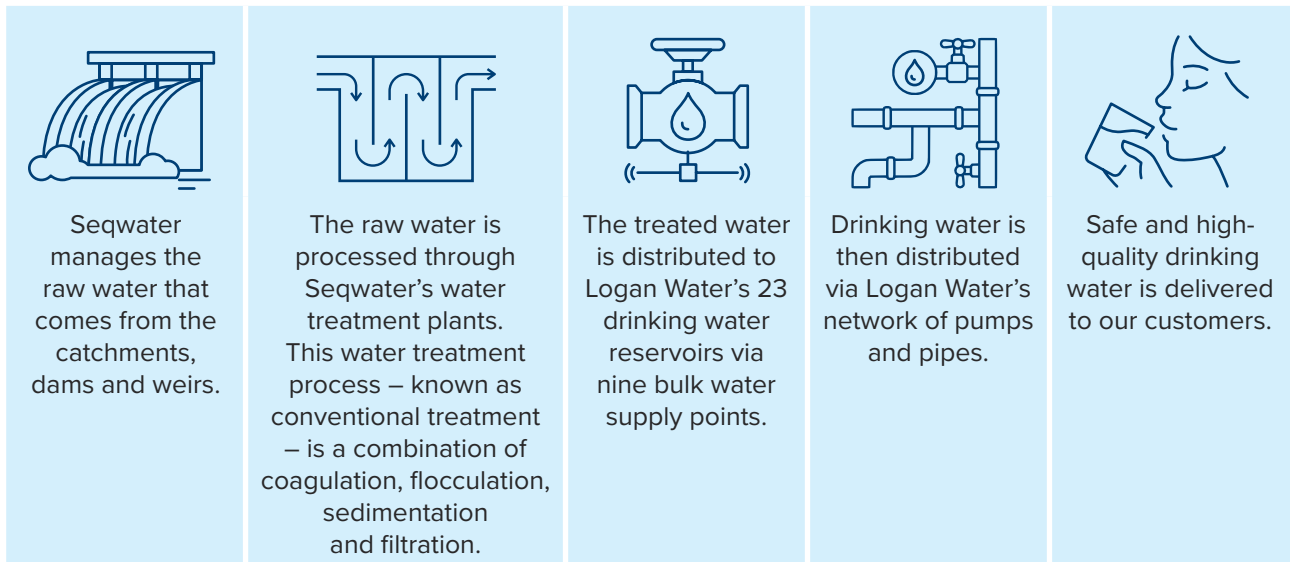


Figure 1: Catchment to consumer

2.1 The water supply network

Logan Water is supplied clean, treated drinking water through the South East Queensland (SEQ) Water Supply Network Grid (the Grid), which is managed and operated by Seqwater, as shown in Appendix A Seqwater Grid Map. Water may be sourced from various sources throughout the Grid, dependent on operational supply requirements. For example, treated water may be supplied via the Eastern Pipeline Interconnector (EPI) and may flow west to supply Logan Water or east to supply Redlands City Council. In practice, most of Logan City Council's treated water is supplied from the Mt Crosby Water Treatment Plant (WTP).

An overview of Logan Water's drinking water supply network is provided in Table 2.

Overview	Description
Responsibility	Delivery of clean, treated water from bulk supply points (transfer points) to customer meters.
Area	957 square kilometres
Population	363,057 ²
Population connected to water supply network	346,306
Residential water connections	131,468
Commercial and industrial connections	5,756
Seqwater's primary WTP's (and respective catchments)	<ul style="list-style-type: none"> > Mt Crosby (Wivenhoe Dam via Brisbane River) > North Stradbroke Island (North Stradbroke Island Bores) > Capalaba (Tingalpa Dam) > Molendinar (Hinze Dam) > Gold Coast desalination plant (seawater off Tugun, Gold Coast)
Logan Water's Supply Network Schematic	<ul style="list-style-type: none"> > Indicating key water supply zones and supplying reservoirs, with latest updates in Logan Water's SCADA and GIS systems. > Refer to Appendix B – Logan Water Supply Network Schematic
Bulk Supply Points (transfer points)	<ul style="list-style-type: none"> > Compton Road meter via Kuraby reservoir inlet main > Trinder Park pump station via Kuraby Reservoir > Illaweena bulk meters (3) via Kuraby Reservoir > EPI supply via Kimberley Park Reservoir > Southern Regional Water Pipeline (SRWP) supply via Teviot Road Offtake > SRWP supply via New Beith Offtake (Pub Lane Offtake) > Gold Coast supply via Stanmore Pump Station

² Population as reported on Home | City of Logan | Community profile (id.com.au)

2.2 Our water supply zones

Logan Water operates six defined water supply zones (WSZ). A WSZ can be defined as an area of the water distribution network with shared bulk water supply sources. Logan Water's WSZs and the associated suburbs are shown in Table 3.

Water Supply Zone	Main Suburbs	Partial Suburbs
Greenbank	Boronia Heights, Browns Plains, Forestdale, Greenbank, Heritage Park, Hillcrest, Park Ridge, Regents Park	Berrinba, Chambers Flat, Crestmead, Logan Reserve, Munruben, Park Ridge South
Kimberley Park	Carbrook, Cornubia, Loganholme, Shailer Park, Tanah Merah	Slacks Creek
Logan East	Bannockburn, Bahrs Scrub, Beenleigh, Belivah, Bethania, Edens Landing, Holmview, Mount Warren Park, Waterford, Windaroo, Wolffdene,	Eagleby
Logan South	Cedar Grove, Cedar Vale, Chambers Flat, Flagstone, Jimboomba, Logan Village, Maclean, Mundoolun, Munruben, New Beith, North Maclean, Park Ridge South, Stockleigh, Veresdale Scrub, Woodhill, Yarrabilba	Greenbank
Marsden	Crestmead, Logan Reserve, Loganlea, Marsden, Meadowbrook, Waterford West	Berrinba, Heritage Park, Kingston, Park Ridge
Springwood	Berrinba, Daisy Hill, Eagleby, Kingston, Logan Central, Priestdale, Rochedale South, Slacks Creek Springwood, Underwood, Woodridge	Loganholme, Marsden, Shailer Park, Tanah Merah, Underwood

Operational needs may require changes to our network which could result in some suburbs being serviced by an alternative WSZ. If there is an expected change to your water quality, we will advise customers when a network configuration change may impact their water supply.

There may be some properties which are not connected to our drinking water network, this means that these residents do not receive drinking water directly to their properties.

If you would like to know which WSZ services your suburb or property, please contact us on 3412 3412.



3

Managing safe drinking water

3.1 Our legislative obligations

The supply of safe and reliable drinking water in Queensland is regulated by various pieces of state legislation, including the *Water Supply (Safety and Reliability) Act 2008* (Qld) (the Act), the *South-East Queensland Water (Distribution and Retail Restructuring) Act 2009* (Qld), the *Public Health Act 2005* (Qld), the Public Health Regulation 2018 (Qld), and the *Water Fluoridation Act 2008* (Qld).

Under the Act, 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* (Qld) and *Water Fluoridation Act 2008* (Qld), Queensland Health (QHealth) regulates the standards for drinking water quality related to *E. coli* and fluoride³, respectively. These standards, together with the health guideline levels in the *Australian Drinking Water Guidelines 2011*⁴ (ADWG), comprise water quality criteria for drinking water in Queensland, as set out in the Act.

3.2 Our approach to managing drinking water quality

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. Our methodology is based on the ADWG – *Framework for Management of Drinking Water Quality*. There are 12 elements within the framework, as shown in Figure 2.

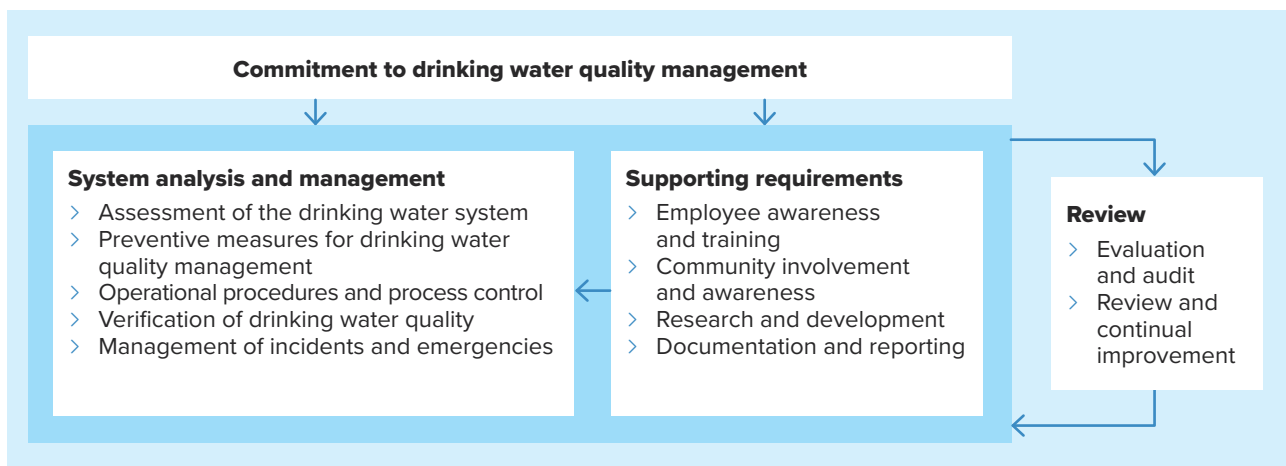


Figure 2: Framework for the management of drinking water quality

³ Low levels of fluoride occur naturally in many water sources. As Seqwater adds fluoride to the Logan Water drinking water supply, we are required to test for this chemical compound.

⁴ Version 3.8, update September 2022

3.3 Verifying drinking water quality

A critical component of drinking water quality management is verifying that the water we supply to the Logan community meets the strict standards articulated in the relevant legislation and regulations. We assure the quality of the drinking water supply through our Drinking Water Quality Verification Monitoring Program (VMP).

The VMP is a comprehensive program designed to maximise visibility of drinking water quality as it travels through the 2,485km of water mains that service our community. The VMP alerts us to emergent changes or sudden occurrences which may impact the drinking water, allowing us to manage the quality of the product we supply to our customers. The VMP provides us with confidence in the product we deliver and supports our commitment to maintain protection barriers and prevent contamination.

3.4 Summary assessment of drinking water compliance

The Logan City Council Laboratory⁵ performs our sampling and analytical requirements. In 2022/23, the Laboratory routinely sampled from 109 drinking water sample points, collecting over 2,800 samples, and performing over 64,000 tests of the drinking water supply. The drinking water quality parameters were monitored and reviewed in accordance with Queensland legislative requirements and the ADWG.

To determine drinking water compliance, the VMP results are assessed against:

- > water quality criteria specified by the Regulator in the [Water Quality and Reporting Guideline for a Drinking Water Service](#);
- > health guideline values in the ADWG; and
- > drinking water quality criteria as required by the Public Health Regulation 2018.

Monitoring during 2022/23 was carried out in accordance with Logan Water’s approved VMP.

In 2022/23, we met the prescribed health-related and aesthetic⁶ standards for all six (6) water supply zones. See Table 4.

Water Supply Zone	<i>E. coli</i>	Health	Aesthetic	Logan Water’s performance against the <i>E.coli</i>, health and aesthetic requirements can be found in Appendices B-D.
Greenbank	✓	✓	✓	
Kimberley Park	✓	✓	✓	
Logan East	✓	✓	✓	
Logan South	✓	✓	✓	
Marsden	✓	✓	✓	
Springwood	✓	✓	✓	

⁵ The Logan City Council Laboratory is accredited by the National Association of Testing Authorities (NATA).

⁶ The aesthetic standards address how the drinking water appears, tastes and smells.

4

Improving Drinking Water Quality

Logan Water strives for continual improvement in its drinking water quality management practices. As our methodology is aligned to the *ADWG – Framework for Management of Drinking Water Quality*, this enables us to strive for best practice drinking water quality management in a systematic, focused and measurable manner. Our progress during 2022/23 is described below.

Element 1 – Commitment to drinking water quality management

In 2022/23, we commenced review of our **Drinking Water Quality Policy Statement** which underpins our commitment to manage the drinking water distribution network to provide high-quality drinking water services that ensure the protection of public health and the environment.

We were also actively engaged in an accommodation project aimed at transforming and renovating our laboratory facility. This project, which continues through 2024, will enhance the laboratory workspace and enable us to introduce new services that align with our clients' evolving needs.

During the reporting period, we also continued to participate in a regional collaboration with Seqwater, Unitywater and Urban Utilities to deliver regional and system-wide improvements and enhanced drinking water quality outcomes.

Element 2 – Assessment of the drinking water supply system

In June 2023, Logan Water undertook an extensive review of its whole-of-network drinking water quality risk assessment. This review included a refreshed approach to assessing and categorising drinking water quality risks, identifying opportunities for improvement and development of a new Risk Management Improvement Program, to be implemented in January 2024.

The Common Information System (CIS) project, established in 2021/22, continued during the reporting period. The CIS is a tool designed to provide efficient access to valuable data from a variety of sources and allows greater assessment and evidence-based decision making throughout the business. In 2022/23, this project incorporated new data sources, merged existing data sources into one platform, and has seen a step-change in how we undertake data acquisition and analysis. This project will continue to incorporate new data sources through 2023/24.

The Critical Infrastructure Security Upgrade Plan activities also continued during the reporting period. We have installed and commissioned the Cyberlock product at 85% of our operational sites. The Cyberlock is an electronic, programmable smart key that cannot be duplicated and provides enhanced security controls regarding asset access. Implementation of the Cyberlock product on the remaining sites will be completed during 2023/24, will all new sites to be fitted with the product as they are brought on-line.

Element 3 – Preventative measures for drinking water quality management

Every year, Logan Water undertakes an extensive asset maintenance and renewals program to ensure we continue to protect the integrity of both the water asset and the drinking water we supply to the City of Logan.

In 2022/23, the following activities were undertaken on our drinking water reservoirs:

- > 27 external reservoir inspections,
- > 23 internal reservoir inspections,
- > 16 internal reservoir cleans,
- > 12 reservoir gutter cleans, and
- > 4 reservoir roof cleans.

In addition to the specific reservoir maintenance program, we also completed 853 jobs related to inspection, maintenance and renewal of assets such as, but not limited to, water pump stations, chlorine dosing facilities, water quality analysers, asset telemetry systems, and pressure leakage management sites.

To ensure the integrity of our assets we also undertake the following calibration and performance checks:

- > water quality analysers are serviced every six months,
- > Chlorine Dosing Facility (CDF) analysers are checked for accuracy weekly, and
- > network analysers are checked fortnightly.

CDFs are serviced every four months. Three of which are a minor service, this is primarily an inspection and pump calibration, parts are replaced if required.

The fourth service is a major. This is a full overhaul: pump and valve components are replaced, flexible dosing lines are replaced, pressure control valve settings are checked, dosing quills are removed and cleaned.

No unexpected issues were detected in 2022/23.



Element 4 – Operational procedures and process control

In 2022/23, Logan Water continued to build its capability to manage controlled access to the water distribution network through expansion of the Network Isolations & Interactions Team. This team is responsible for the creation and approval of Interim Operation Plans (IOP). IOPs detail how a potable water asset or facility will perform its core function while maintenance and renewal activities occur, with the aim to reduce customer service disruption and protect water quality. In 2022/23, the Network Isolations & Interactions Team managed 439 water-related IOPs.

We also commenced preparation for the implementation of a new Laboratory Information Management System (LIMS) within the lab. This LIMS system will be able to improve our existing workflows by significantly reducing manual processes. Moreover, it will offer our clients real-time access to their results and will greatly enhance the accessibility and management of data.

Element 5 – Verification of drinking water quality

Logan Water is required to achieve compliance with the *Australian Drinking Water Guidelines* and Public Health Regulation 2018 (Qld). To ensure we achieve compliance, we undertake extensive monitoring of our drinking water distribution network.

In 2022/23, the Logan City Council Laboratory routinely sampled from 109 drinking water sample points, collecting over 2,800 samples, and performing over 64,000 tests of the drinking water supply. The drinking water quality parameters were monitored and reviewed in accordance with Queensland legislative requirements and the ADWG.

This verification is also supported by the operation of 111 water quality analyser probes installed across our network. These probes are linked to our SCADA system and provide near-time data which allow us to monitor and verify the quality of the drinking water.

Element 6 – Management of Incidents and Emergencies

In August 2022 and June 2023, Logan Water participated in the annual All Agencies Emergency Management Group collaborative team training event called Exercise Hydra. This bi-annual exercise, facilitated by Seqwater, validates how South East Queensland (SEQ) Water Service Providers work collaboratively to support delivery of water services to SEQ communities during emergency events, such as flooding.

We also continued the review of Logan Water's Incident Management Plan and associated Toolkit to ensure it remains relevant and enables Logan Water's Incident Management Team to respond quickly and appropriately to emergency events.



Element 7 – Employee awareness and training

At Logan Water we recognise the importance of committing to employee development by delivering training that is relevant to specific roles, whilst also drawing on an individual's interests and career aspirations.

In 2022/23, 108 field crew workers received a variety of training related to water assets. Each crew member was given the knowledge and tools required to ensure they undertake their work safely, protect the asset, reduce customer disruption and maintain clean high-quality water quality.

Weekly training for our Duty Officers commenced in mid-2023. Our Duty Officers form the backbone of the water and wastewater services we provide to the Logan communities. They are responsible for monitoring the operation of the reservoirs, water pump stations and pipes that supply homes and businesses with water. The weekly training covers any new or updated procedures and provides an opportunity for refresher training as required.

We also commenced the review of our Hy5 training suite. This training provides our field crews with the knowledge on how to prevent contamination of the drinking water supply while working on drinking water assets. The revised training will be rolled-out to all field crew workers and their supervisors in the first quarter of 2024.



Element 8 – Community involvement and awareness

In 2022/23, we continued to utilise our Water Wagon to support numerous community events. The Water Wagon enables us to provide free, chilled tap water whilst educating our community about the benefits of choosing tap water, including the money they will save and how they can reduce the environmental impact of single-use plastic bottles. In 2022/23, the Water Wagon attended 13 events and delivered 4,688L of free chilled tap water to our community. In addition to the Water Wagon, we supported seven small community events by setting-up the 'Tap Cafe'. The café is a smaller version of the Water Wagon, offering an option of natural flavoured water using fruits and cold brew teas.

Recognising that many newly arrived migrants and culturally diverse community members don't know that it is safe to use and consume Logan's tap water, we supported TAFE Queensland's Adult English Migrant Program to help educate the students. The community education and behaviour change program has been developed using cultural appropriate engagement materials tailored to the audience. Over the four sessions the newly arrived migrants are provided with an overview of Logan Water and our responsibilities. We also provided information and advice on how their actions can impact their homes and our water infrastructure.

During these sessions, students learned practical actions they can take to be healthy, save money and minimise impacts to the environment by 'Choosing Tap'.

Element 9 – Research and development

We made significant progress regarding the Reservoir Aeration Investigation Project initiated in 2021/22. The purpose of this project is to identify an effective reservoir aeration design for optimised THM removal. In 2022/23, the trial site and technology solution were agreed, and design work has commenced. This project will continue through 2023/24.

Element 10 – Documentation and record keeping

Logan Water continued to develop its capabilities using Office365. This included the use of various Office365 applications in conjunction with SharePoint to enhance collaboration during the development and review of corporate documents such as, but not limited to, procedures, processes, protocols, forms, and templates.

Element 11 – Evaluation and audit

Our DWQMP is subject to a regulatory audit on a four-year cycle. There was no requirement to conduct this audit during 2022/23. The next regulatory audit of Logan Water's approved DWQMP must be conducted by 30 June 2025.

Element 12 – Review and Continual Improvement

We commenced the regular review of the DWQMP. The revised Plan must be submitted to the Regulator by no later than 29 January 2024.





REGINA
City
Council

5

Notifying the Regulator

Our reporting obligation

Under section 102 of the *Water Supply (Safety and Reliability) Act 2008* (Qld), Logan Water is required to immediately notify the Regulator if the quality of water supplied from the drinking water service does not comply with the water quality criteria as specified in the ADWG or by the Regulator.

There are two categories which apply to Logan Water:

- > 'incident', and
- > 'event'.

An 'incident' is described as a detection of *Escherichia coli* (*E. coli*), and/or an exceedance of a health guideline value in the ADWG. An 'event' includes, but is not limited to, detections of parameters with no guideline values in the ADWG, for example chlorate.

Notifications to the Regulator

Our water quality incidents represent the number of times a water quality sample did not meet the ADWG parameters, resulting in the immediate notification of the incident to the Regulator.

In 2022/23, we took over 2,800 water samples and conducted more than 64,000 water quality tests. Of those samples, two (2) tests did not meet the Regulatory requirements, requiring us to report these to the Regulator. Refer Table 6.

Table 6: Water quality incidents and events reported to the Regulator 1 July 2022 to 30 June 2023

Date and category	Water Supply Zone	Description	Immediate corrective actions	Investigation outcome and further actions
18/10/22 – Incident	Logan East	<p>Incident</p> <p>The non-compliance was a detection of <i>E. coli</i> from a routine sample taken at DSP086, a drinking water sample point at 96 Teys Road, Holmview.</p> <p>1MPN <i>E.coli</i> organisms per 100ml was detected.</p> <p>Total chlorine residual at time of sampling was 0.3mg/L</p> <p>Follow-up samples exhibited no continued presence of <i>E. coli</i> and supply met ADWG (health) guidelines.</p>	<p>An Incident Management Team was mobilised to manage the incident.</p> <p>Consulted Seqwater to eliminate potential upstream contributing factors.</p> <p>Undertook targeted flushing of the network downstream of DSP086.</p> <p>Resampled at initial detection site, Mt Warren Reservoir and downstream assets within affected DMA063.</p>	<p>No adverse customer impact was associated with this event.</p> <p>Continue investigation into suitability of location of drinking water sample point to ensure location is representative of the drinking water network.</p>
15/05/22 – Event	Kimberley Park	<p>A detection of 0.85 mg/L chlorate from a routine sample taken at DSP026, a drinking water sample point at the Hideaway Mt reservoir.</p> <p>Responsive sampling exhibited chlorate levels below the Queensland Health interim guideline value for chlorate of 0.8mg/L</p>	<p>The sodium hypochlorite dosing unit chemical tank servicing Hideaway Mt reservoir was emptied, cleaned and refilled with new sodium hypochlorite.</p> <p>In addition, the reservoir was drained and the connection between the sodium hypochlorite dosing unit chemical tank and the reservoir was flushed before the reservoir was filled.</p>	<p>No adverse customer impact was associated with this event.</p> <p>We continue to investigate best-practice management of chlorate and correlation with temperature fluctuations, chlorine concentration and sodium hypochlorite age.</p>

6

Customer satisfaction

We recognise the value of community engagement in building trust as a provider of an essential service, and the delivery of service excellence. We recognise that members of our community may need to provide feedback if our service fails to meet their expectations and we encourage our community to contact us if they have any concerns about their water quality.

As a service provider we are committed to providing safe, consistent, and reliable water to our customers, and we recognise the value in the feedback of our customers to help identify possible areas of improvement in the operation, maintenance, and management of our drinking water network. Complaints are classified into four categories, as shown in Table 7.

Table 7: Water quality complaint categories

Water quality complaint category	Description
Appearance	Unexpected events such as broken water mains or firefighting could result in discoloured water. This is due to deposits that build up over time being disturbed by the change in the water flow and direction. If your water looks white or milky, it could be due to recent maintenance, which can trap air bubbles in pipes.
Taste/odour	Taste and odour complaints can vary widely based on the customer's perception. The most common taste and odour complaint descriptions included chlorine, metallic and chemical tastes.
Suspected health	All calls received from customers who suspect their drinking water may be associated with an illness they are experiencing.
Other	This classification captures complaints that do not fall within the standard Logan Water categories.



6.1 Water quality complaints performance 2022/23

In 2022/23, we received 274 water quality complaints. This is a 21% reduction in water quality complaints from 2021/22. Since 2018/19, we have seen a 37% reduction in water quality complaints.

Water quality complaints in 2022/23 followed a typical pattern, with 49% related to discoloured water. Taste and odour complaints were the next prevalent at 37% and can vary widely based on a customer's perception. The most common complaint descriptions included chlorine, metallic and chemical. Our Drinking Water Quality and Network Quality teams investigated these enquiries by assessing recent water quality results in the area, undertaking additional water quality testing, further consultation with the customer and identifying any maintenance works that may have contributed to the change. Each investigation determined there was no risk to public health.

Suspected health complaints accounted for 15% of complaints in 2022/23. These complaints came from customers who suspected their drinking water may be associated with an illness or adverse health condition they were experiencing. Our Drinking Water Quality team investigated each complaint related to perceived illness, typically by testing at the customer's tap. During 2022/23, we could not confirm that the drinking water from our water supply network was linked to an illness complaint.

The breakdown of water quality complaints by type and water supply zone is shown in Figures 3 and 4, with Figure 5 showing performance from 1 July 2018 to 30 June 2023.

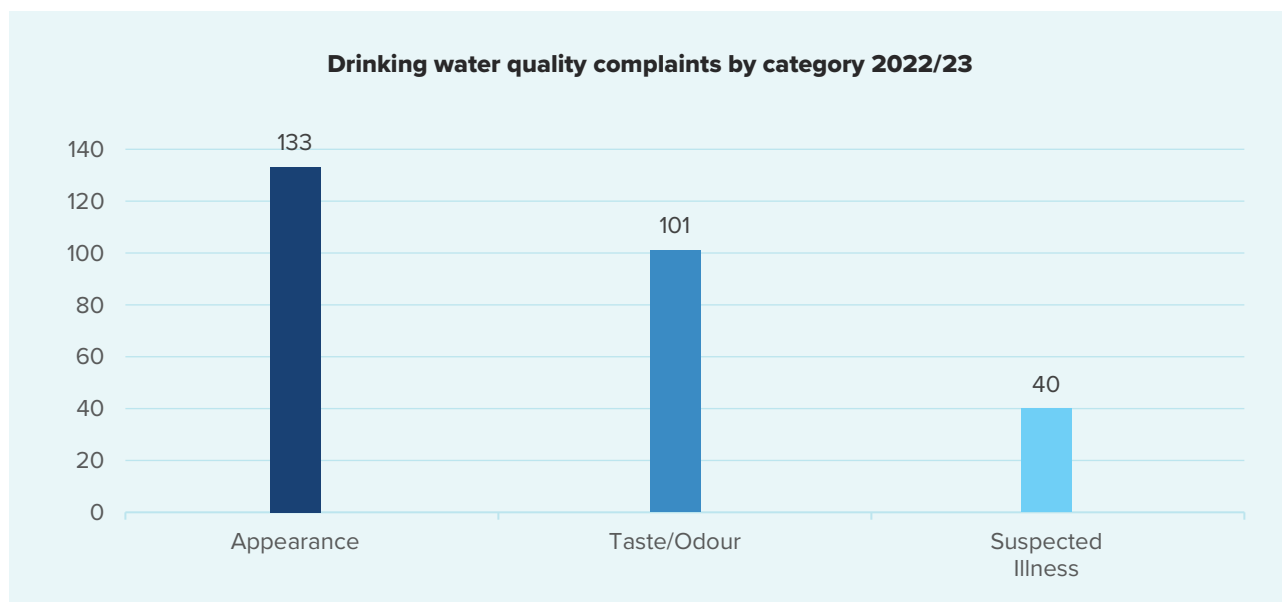


Figure 3: Drinking water quality complaints by category – 2022/23

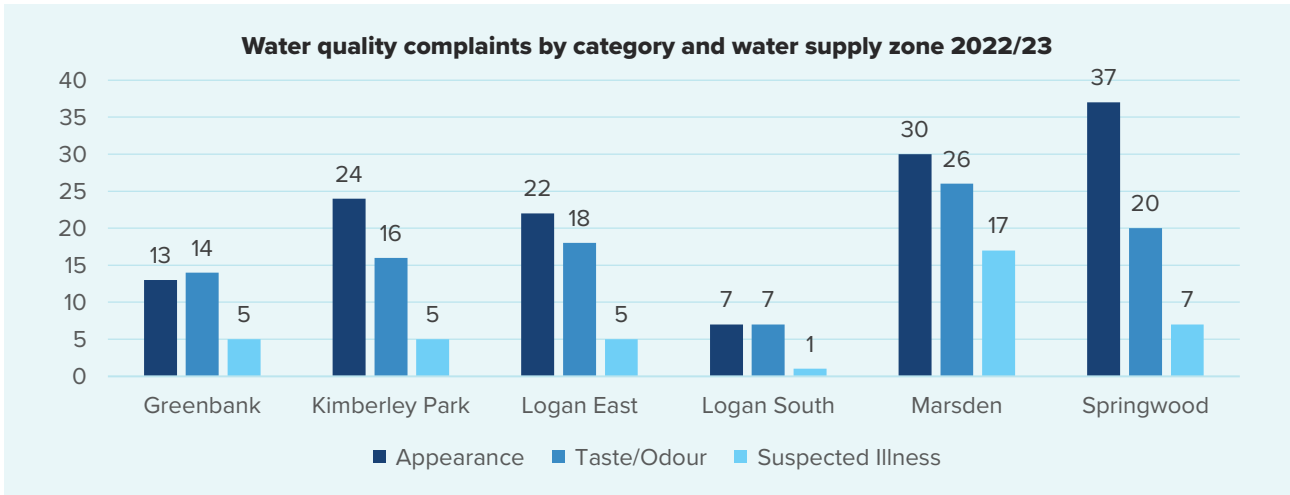


Figure 4: Drinking water quality complaints by category and water supply zone – 2022/23

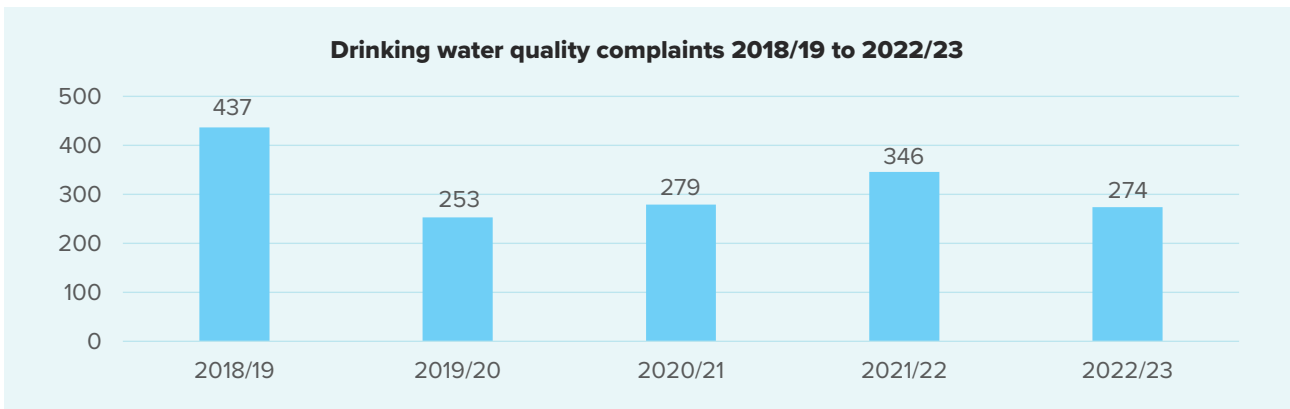


Figure 5: Total drinking water quality complaints – 2018/19 to 2022/23

As a Water Service Provider, we are required under section 575A of the *Water Supply (Safety and Reliability) Act 2008* to publish our performance against Queensland Government performance indicators. One of these performance indicators is “Number of drinking water quality complaints per 1,000 property connections”. To assist with assessing our performance, we have set a performance standard of less than or equal to five water quality complaints per 1,000 property connections. In 2022/23, we remained well under this standard, as shown in Figure 6.

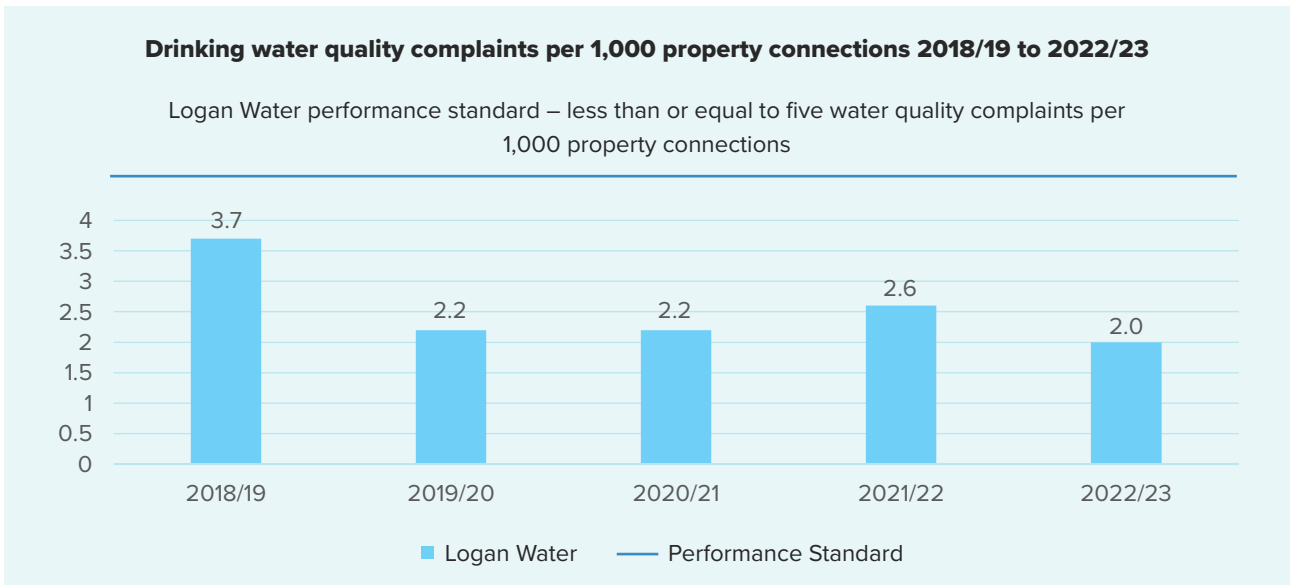


Figure 6: Drinking water quality complaints per 1,000 property connections – 2018/19 to 2022/23





Drinking Water Quality Management Plan review and audit activities

7.1 DWQMP regular review

We commenced the regular review of the DWQMP. The revised Plan must be submitted to the Regulator no later than 13 February 2024.

7.2 DWQMP regular audit

We are required to carry out an audit of our approved DWQMP on a four-year cycle. The next regulatory audit of Logan Water's approved DWQMP must be conducted by 30 June 2025.















Appendices

Appendix A – Seqwater Grid Map

Seqwater Grid Map as at September 2022.

South East Queensland Water Grid

Legend

	Northern Pipeline Interconnector		Bulk Water Storage Reservoirs
	Western Corridor Recycled Water Scheme		Water Treatment Plants (WTP) - connected to grid
	Southern Regional Water Pipeline		Water Treatment Plants (WTP) - off-grid
	Eastern Pipeline Interconnector		Water Treatment Plants (WTP) - other
	Network Integration Pipeline		Purified Recycled Water Treatment Plants
	Other bulk water pipelines connecting the SEQ Water Grid		Desalination Plant
	Local Government boundary		Power Stations

Water Treatment Plants (WTP)

1	Amity Point
2	Beauesert
3	Boonah Kalbar
4	Canungra
5	Capalaba
6	Dayboro
7	Dunwich
8	Esk
9	Ewen Maddock
10	Hinze Dam
11	Image Flat
12	Jimna
13	Kenilworth
14	Kilcoy
15	Kirkleagh
16	Kooralbyn
17	Landers Shute
18	Linville
19	Lowood
20	Maroon Dam
21	Molendinar
22	Moogerah

23	Mount Crosby East Bank
24	Mount Crosby West Bank
25	Mudgeeraba
26	Noosa
27	North Pine
28	North Stradbroke (Minjerribah)
29	Point Lookout
30	Rathdowney
31	Somerset Dam (Township)
32	Wivenhoe Dam

Desalination Plant

33	Gold Coast
----	------------

Purified Recycled Water Treatment Plants

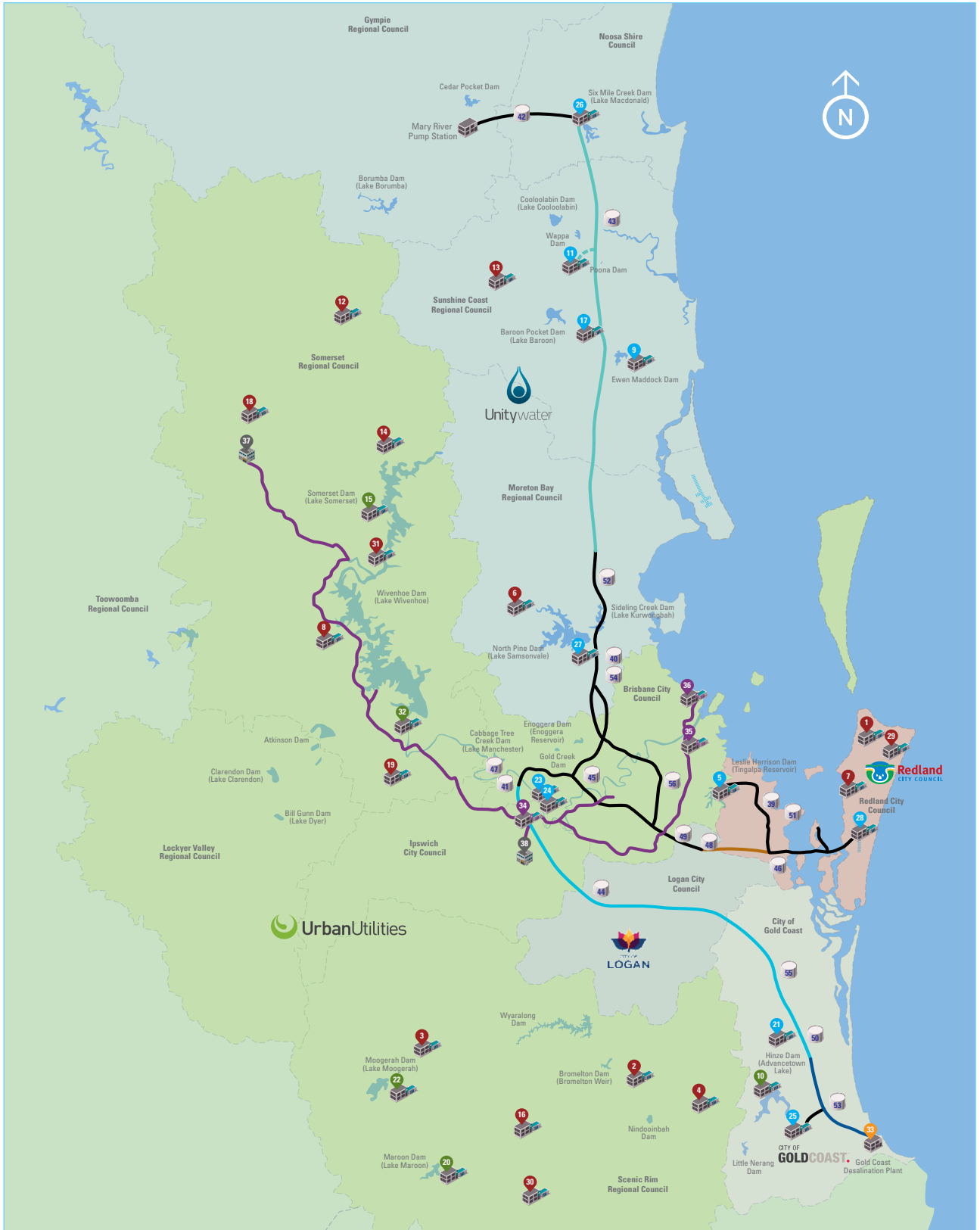
34	Bundamba
35	Gibson Island
36	Luggage Point

Power Stations

37	Tarong
38	Swanbank

Reservoirs

39	Alexandra Hills
40	Aspley
41	Camerons Hill
42	Cooroola
43	Ferntree
44	Greenbank
45	Green Hill
46	Heinemann Road
47	Holts Hill
48	Kimberley Park
49	Kuraby
50	Molendinar
51	Mt Cotton
52	Narangba
53	Robina
54	Sparkes Hill
55	Stapylton
56	Wellers Hill



Appendix B – Summary of Compliance with Water Quality Criteria – *E. coli*

Water Supply Zone	Number of samples required	Number of samples taken	Number of samples <i>E.coli</i> detected	Required performance (%)	Actual Performance (%)	Compliant
Greenbank	172	327	0	98	100	Y
Kimberley Park	88	167	0	98	100	Y
Marsden	160	382	0	98	100	Y
Springwood	312	589	0	98	100	Y
Logan East	148	565	1	98	99.82	Y
Logan South	232	864	0	98	100	Y
Overall	1,112	2,894	1	98	99.96	Y

Year	2022						2023					
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
No. of samples collected	224	281	222	259	252	197	284	227	227	215	283	223
No. of samples collected in which <i>E. coli</i> is detected	0	0	0	1	0	0	0	0	0	0	0	0
No. of samples collected in previous 12-month period	2,731	2,772	2,789	2,836	2,830	2,826	2,861	2,887	2,892	2,892	2,896	2,894
No. of failures in previous 12-month period	1	1	1	2	2	2	2	1	1	1	1	1
% compliance in previous 12-month period	99.96	99.96	99.96	99.93	99.93	99.93	99.93	99.97	99.97	99.97	99.97	99.97
Compliance with 98% annual value	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
% compliance for month	100	100	100	100	100	100	100	100	100	100	100	100

Appendix C – Summary of Compliance with Water Quality Criteria – Health

Table 10: Water quality compliance – health-based chemical performance – Overall								
Parameter	Unit	ADWG Health Guideline	Number of tests	Number of exceedances	Minimum	Maximum	95%ile	Compliance with ADWG
Arsenic, Total	mg/L	0.01	663	0	0.0005	0.001	0.0005	✓
Barium, Total	mg/L	2	663	0	0.004	0.037	0.034	✓
Beryllium, Total	mg/L	0.06	663	0	0.0005	0.0005	0.0005	✓
Boron, Total	mg/L	4	663	0	0.01	0.549	0.2875	✓
Cadmium, Total	mg/L	0.002	663	0	0.0005	0.0005	0.0005	✓
Chlorine, Free	mg/L	5	2890	0	0.025	2.18	1.42	✓
Chlorine, Total	mg/L	5	2893	0	0.025	4.4	3.2	✓
Chromium, Total	mg/L	0.05	663	0	0.0005	0.001	0.001	✓
Copper, Total	mg/L	2	663	0	0.0005	0.036	0.013	✓
Fluoride	mg/L	1.5	675	0	0.1	1.08	1.03	✓
Lead, Total	mg/L	0.01	663	0	0.0005	0.003	0.001	✓
Manganese, Total	mg/L	0.5	663	0	0.0005	0.091	0.0082	✓
Molybdenum, Total	mg/L	0.05	663	0	0.0005	0.001	0.001	✓
Nickel, Total	mg/L	0.02	663	0	0.0005	0.002	0.001	✓
Nitrate-N	mg/L	11.3	675	0	0.05	1.2	0.82	✓
Nitrite-N	mg/L	0.9	675	0	0.05	0.5	0.321	✓
Selenium, Total	mg/L	0.01	663	0	0.005	0.005	0.005	✓
Total THM	ug/L	0.25	1817	0	0.1	0.2	0.14	✓
Chlorate	mg/L	0.8	583	1	0.01	0.853	0.5594	N/A

While the ADWG does not stipulate a health guideline for Chlorate, Queensland Health has provided an Interim Guideline value of 0.8 mg/L. Logan Water had one exceedance in May 2023 in the Kimberley Park water supply zone.

Table 11: Water quality compliance – health-based chemical performance – Greenbank

Parameter	Unit	ADWG Health Guideline	Number of tests	Number of exceedances	Minimum	Maximum	95%ile	Compliance with ADWG
Arsenic, Total	mg/L	0.01	75	0	0.0005	0.001	0.0005	✓
Barium, Total	mg/L	2	75	0	0.005	0.033	0.029	✓
Beryllium, Total	mg/L	0.06	75	0	0.0005	0.0005	0.0005	✓
Boron, Total	mg/L	4	75	0	0.01	0.269	0.2665	✓
Cadmium, Total	mg/L	0.002	75	0	0.0005	0.001	0.0005	✓
Chlorine, Free	mg/L	5	325	0	0.025	1.72	1.28	✓
Chlorine, Total	mg/L	5	328	0	0.1	2.9	2.6	✓
Chromium, Total	mg/L	0.05	75	0	0.0005	0.0005	0.0005	✓
Copper, Total	mg/L	2	75	0	0.0005	0.019	0.0145	✓
Fluoride	mg/L	1.5	76	0	0.1	1.05	1.009	✓
Lead, Total	mg/L	0.01	75	0	0.0005	0.001	0.00075	✓
Manganese, Total	mg/L	0.5	75	0	0.0005	0.011	0.006	✓
Molybdenum, Total	mg/L	0.05	75	0	0.0005	0.001	0.0005	✓
Nickel, Total	mg/L	0.02	75	0	0.0005	0.001	0.001	✓
Nitrate-N	mg/L	11.3	76	0	0.1	0.74	0.5345	✓
Nitrite-N	mg/L	0.9	76	0	0.1	0.32	0.197	✓
Selenium, Total	mg/L	0.01	75	0	0.005	0.005	0.005	✓
Total THM	ug/L	0.25	261	0	0.04	0.2	0.159	✓
Chlorate	mg/L	0.8	64	0	0.051	0.784	0.598	N/A

While the ADWG does not stipulate a health guideline for Chlorate, Queensland Health has provided an Interim Guideline value of 0.8 mg/L.

Table 12: Water quality compliance – health-based chemical performance – Kimberley Park

Parameter	Unit	ADWG Health Guideline	Number of tests	Number of exceedances	Minimum	Maximum	95%ile	Compliance with ADWG
Arsenic, Total	mg/L	0.01	39	0	0.0005	0.001	0.00085	✓
Barium, Total	mg/L	2	39	0	0.007	0.035	0.035	✓
Beryllium, Total	mg/L	0.06	39	0	0.0005	0.0005	0.0005	✓
Boron, Total	mg/L	4	39	0	0.012	0.036	0.0327	✓
Cadmium, Total	mg/L	0.002	39	0	0.0005	0.001	0.0005	✓
Chlorine, Free	mg/L	5	168	0	0.025	2.09	1.4535	✓
Chlorine, Total	mg/L	5	168	0	0.07	3	2.0045	✓
Chromium, Total	mg/L	0.05	39	0	0.0005	0.001	0.001	✓
Copper, Total	mg/L	2	39	0	0.001	0.009	0.0057	✓
Fluoride	mg/L	1.5	39	0	0.1	1.07	1.061	✓
Lead, Total	mg/L	0.01	39	0	0.0005	0.001	0.00085	✓
Manganese, Total	mg/L	0.5	39	0	0.002	0.009	0.0077	✓
Molybdenum, Total	mg/L	0.05	39	0	0.0005	0.001	0.001	✓
Nickel, Total	mg/L	0.02	39	0	0.0005	0.001	0.001	✓
Nitrate-N	mg/L	11.3	39	0	0.24	0.94	0.92	✓
Nitrite-N	mg/L	0.9	39	0	0.1	0.47	0.27	✓
Selenium, Total	mg/L	0.01	39	0	0.005	0.005	0.005	✓
Total THM	ug/L	0.25	121	0	0.01	0.18	0.16	✓
Chlorate	mg/L	0.8	64	1	0.013	0.853	0.581	N/A

While the ADWG does not stipulate a health guideline for Chlorate, Queensland Health has provided an Interim Guideline value of 0.8 mg/L.

Table 13: Water quality compliance – health-based chemical performance – Logan East

Parameter	Unit	ADWG Health Guideline	Number of tests	Number of exceedances	Minimum	Maximum	95%ile	Compliance with ADWG
Arsenic, Total	mg/L	0.01	132	0	0.0005	0.001	0.0005	✓
Barium, Total	mg/L	2	132	0	0.005	0.029	0.028	✓
Beryllium, Total	mg/L	0.06	132	0	0.0005	0.0005	0.0005	✓
Boron, Total	mg/L	4	132	0	0.016	0.5	0.43945	✓
Cadmium, Total	mg/L	0.002	132	0	0.0005	0.001	0.0005	✓
Chlorine, Free	mg/L	5	553	0	0.025	1.65	1.28	✓
Chlorine, Total	mg/L	5	553	0	0.05	2.5	1.644	✓
Chromium, Total	mg/L	0.05	132	0	0.0005	0.001	0.0005	✓
Copper, Total	mg/L	2	132	0	0.001	0.022	0.018	✓
Fluoride	mg/L	1.5	132	0	0.16	1.06	0.97	✓
Lead, Total	mg/L	0.01	132	0	0.0005	0.001	0.001	✓
Manganese, Total	mg/L	0.5	132	0	0.0005	0.015	0.006	✓
Molybdenum, Total	mg/L	0.05	132	0	0.0005	0.001	0.0005	✓
Nickel, Total	mg/L	0.02	132	0	0.0005	0.001	0.001	✓
Nitrate-N	mg/L	11.3	132	0	0.14	0.77	0.173	✓
Nitrite-N	mg/L	0.9	132	0	0.14	0.36	0.25	✓
Selenium, Total	mg/L	0.01	132	0	0.005	0.005	0.005	✓
Total THM	ug/L	0.25	404	0	0.04	0.17	0.129	✓
Chlorate	mg/L	0.8	78	0	0.01	0.204	0.174	N/A

While the ADWG does not stipulate a health guideline for Chlorate, Queensland Health has provided an Interim Guideline value of 0.8 mg/L.

Table 14: Water quality compliance – health-based chemical performance – Logan South

Parameter	Unit	ADWG Health Guideline	Number of tests	Number of exceedances	Minimum	Maximum	95%ile	Compliance with ADWG
Arsenic, Total	mg/L	0.01	192	0	0.0005	0.001	0.0005	✓
Barium, Total	mg/L	2	192	0	0.004	0.019	0.011	✓
Beryllium, Total	mg/L	0.06	192	0	0.0005	0.0005	0.0005	✓
Boron, Total	mg/L	4	192	0	0.016	0.549	0.4045	✓
Cadmium, Total	mg/L	0.002	192	0	0.0005	0.001	0.0005	✓
Chlorine, Free	mg/L	5	875	0	0.025	2.18	1.63	✓
Chlorine, Total	mg/L	5	875	0	0.025	4.4	2.7	✓
Chromium, Total	mg/L	0.05	192	0	0.0005	0.001	0.001	✓
Copper, Total	mg/L	2	192	0	0.0005	0.022	0.007	✓
Fluoride	mg/L	1.5	203	0	0.44	1.06	1.04	✓
Lead, Total	mg/L	0.01	192	0	0.0005	0.002	0.001	✓
Manganese, Total	mg/L	0.5	192	0	0.0005	0.007	0.003	✓
Molybdenum, Total	mg/L	0.05	192	0	0.0005	0.001	0.0005	✓
Nickel, Total	mg/L	0.02	192	0	0.0005	0.001	0.0005	✓
Nitrate-N	mg/L	11.3	203	0	0.05	0.85	0.82	✓
Nitrite-N	mg/L	0.9	203	0	0.05	0.41	0.291	✓
Selenium, Total	mg/L	0.01	192	0	0.005	0.005	0.005	✓
Total THM	ug/L	0.25	572	0	0.03	0.15	0.13	✓
Chlorate	mg/L	0.8	276	0	0.039	0.696	0.508	N/A

While the ADWG does not stipulate a health guideline for Chlorate, Queensland Health has provided an Interim Guideline value of 0.8 mg/L.

Table 15: Water quality compliance – health-based chemical performance – Marsden

Parameter	Unit	ADWG Health Guideline	Number of tests	Number of exceedances	Minimum	Maximum	95%ile	Compliance with ADWG
Arsenic, Total	mg/L	0.01	88	0	0.0005	0.001	0.0005	✓
Barium, Total	mg/L	2	88	0	0.02	0.037	0.035	✓
Beryllium, Total	mg/L	0.06	88	0	0.0005	0.0005	0.0005	✓
Boron, Total	mg/L	4	88	0	0.02	0.06	0.054	✓
Cadmium, Total	mg/L	0.002	88	0	0.0005	0.001	0.0005	✓
Chlorine, Free	mg/L	5	382	0	0.025	1.51	0.78	✓
Chlorine, Total	mg/L	5	382	0	0.025	3.9	3.4	✓
Chromium, Total	mg/L	0.05	88	0	0.0005	0.001	0.0005	✓
Copper, Total	mg/L	2	88	0	0.001	0.008	0.00465	✓
Fluoride	mg/L	1.5	88	0	0.1	1.03	0.9865	✓
Lead, Total	mg/L	0.01	88	0	0.0005	0.001	0.001	✓
Manganese, Total	mg/L	0.5	88	0	0.001	0.045	0.011	✓
Molybdenum, Total	mg/L	0.05	88	0	0.0005	0.001	0.001	✓
Nickel, Total	mg/L	0.02	88	0	0.0005	0.002	0.001	✓
Nitrate-N	mg/L	11.3	88	0	0.05	0.92	0.73	✓
Nitrite-N	mg/L	0.9	88	0	0.05	0.5	0.4365	✓
Selenium, Total	mg/L	0.01	88	0	0.005	0.005	0.005	✓
Total THM	ug/L	0.25	149	0	0.07	0.15	0.13	✓
Chlorate	mg/L	0.8	75	0	0.01	0.526	0.238	N/A

While the ADWG does not stipulate a health guideline for Chlorate, Queensland Health has provided an Interim Guideline value of 0.8 mg/L.

Table 16: Water quality compliance – health-based chemical performance – Springwood

Parameter	Unit	ADWG Health Guideline	Number of tests	Number of exceedances	Minimum	Maximum	95%ile	Compliance with ADWG
Arsenic, Total	mg/L	0.01	137	0	0.0005	0.001	0.0005	✓
Barium, Total	mg/L	2	137	0	0.010	0.036	0.035	✓
Beryllium, Total	mg/L	0.06	137	0	0.0005	0.0005	0.0005	✓
Boron, Total	mg/L	4	137	0	0.013	0.063	0.0554	✓
Cadmium, Total	mg/L	0.002	137	0	0.0005	0.001	0.0005	✓
Chlorine, Free	mg/L	5	587	0	0.025	1.39	0.327	✓
Chlorine, Total	mg/L	5	587	0	0.05	4.4	3.8	✓
Chromium, Total	mg/L	0.05	137	0	0.0005	0.001	0.0005	✓
Copper, Total	mg/L	2	137	0	0.001	0.036	0.027	✓
Fluoride	mg/L	1.5	137	0	0.100	1.08	1.03	✓
Lead, Total	mg/L	0.01	137	0	0.0005	0.003	0.001	✓
Manganese, Total	mg/L	0.5	137	0	0.001	0.091	0.011	✓
Molybdenum, Total	mg/L	0.05	137	0	0.0005	0.001	0.001	✓
Nickel, Total	mg/L	0.02	137	0	0.0005	0.002	0.001	✓
Nitrate-N	mg/L	11.3	137	0	0.050	1.2	0.9	✓
Nitrite-N	mg/L	0.9	137	0	0.050	0.48	0.352	✓
Selenium, Total	mg/L	0.01	137	0	0.005	0.005	0.005	✓
Total THM	ug/L	0.25	310	0	0.060	0.13	0.12	✓
Chlorate	mg/L	0.8	26	0	0.036	0.109	0.104	N/A

While the ADWG does not stipulate a health guideline for Chlorate, Queensland Health has provided an Interim Guideline value of 0.8 mg/L.

Appendix D – Summary of Compliance with Water Quality Criteria – Aesthetic

Parameter	Unit	Number of tests	Min result	Max result	Average	ADWG guideline	Compliance with ADWG
Alkalinity	mg/L	2879	11.36	125.76	66.75	No Limit	N/A
Aluminium, Total	mg/L	663	0.01	0.28	0.03	0.2	✓
Ammonia-N	mg/L	2850	0.02	0.48	0.09	0.5	✓
Bismuth, Total	mg/L	663	0.00	0.00	0.00	No Limit	N/A
Bromodichloromethane	mg/L	1817	0.00	0.06	0.03	No Limit	N/A
Bromoform	mg/L	1817	0.00	0.03	0.00	No Limit	N/A
Calcium Hardness	mg/L	663	32.90	110.20	62.57	No Limit	N/A
Calcium, Total	mg/L	663	13.18	44.13	25.06	No Limit	N/A
Chloride	mg/L	675	11.60	86.50	39	250	✓
Chloroform	mg/L	1817	0.00	0.12	0.05	No Limit	N/A
Cobalt, Total	mg/L	663	0.00	0.00	0.00	No Limit	N/A
Colour, Apparent	HU	675	1.50	83.07	2.03	No Limit	N/A
Colour, True	HU	675	1.50	1.50	2	15	✓
Conductivity	mS/cm	2879	160.20	882.00	361.49	No Limit	N/A
Iron, Total	mg/L	663	0.00	0.90	0.0	0.3	✓
Lithium, Total	mg/L	663	0.00	0.00	0.00	No Limit	N/A
Magnesium, Total	mg/L	663	0.50	18.39	8.31	No Limit	N/A
pH	pH units	2879	6.60	8.67	7.3	8.5	✓
Potassium, Total	mg/L	663	0.50	4.10	2.27	No Limit	N/A
Sodium, Total	mg/L	663	13.73	60.59	33	180	✓
Sulphate	mg/L	675	5.10	61.20	32	250	✓
TDS, Calculated	mg/L	2879	97.00	535.00	219	600	✓
Temperature	oC	2894	15.80	30.90	22.51	No Limit	N/A
Thallium, Total	mg/L	663	0.00	0.00	0.00	No Limit	N/A
Total Hardness	mg/L as CaCO ₃	663	40.90	177.30	97	200	✓
Turbidity	NTU	2852	0.05	8.35	0	5	✓
Zinc, Total	mg/L as CaCO ₃	663	0.01	0.02	0	3	✓

⁷ Aesthetic performance is assessed as the mean of the previous 12 months' monitoring results compared with the ADWG aesthetic guideline value (Source: Australian Drinking Water Guidelines, page 202)

Appendix E – Glossary

Word/phrase	Definition
<	Less than
>	Greater than
Ammonia (NH₃)	A highly soluble compound resulting from the decomposition of organic matter containing nitrogen. Ammonia will be detected in chloraminated water as it is a component of chloramine.
Australian Drinking Water Guidelines 2011 (ADWG)	The guidelines were developed by the National Health and Medical Research Council (NHMRC) and undergo rolling revision to ensure they represent the latest scientific evidence on good quality drinking water.
Bulk water	The treated water supplied from the Queensland Bulk Water Authority (Seqwater) to distributor retailers, including Logan Water.
Chloramination / chloramine	The application of chlorine and ammonia to create monochloramine (NH ₂ Cl), a stable disinfectant that is added to drinking water to inactivate bacteria or to oxidise undesirable compounds. Chloramines persist for a longer time than chlorine and as a result, are used in longer water distribution systems.
Chlorine – Free	The residual formed with chlorine dosage once all the chlorine demand has been satisfied. This chlorine is free to inactivate microorganisms.
Chlorine – Total	Total chlorine is the sum of combined and free chlorine including chloramine.
Colour (True)	Colour is mainly due to the presence of dissolved substances from organic matter in water, such as decaying leaves and vegetation. True colour refers to the colour of water after particles of organic matter have been removed through filtration and is the measurement of the extent to which light is absorbed by the water
Department of Regional Development, Manufacturing and Water	The Queensland Government department responsible for overseeing Queensland's water industries to ensure these essential services are provided to Queenslanders in a safe, efficient, and reliable way.
Disinfectant	An agent that inactivates microorganisms which cause disease. Urban Utilities uses either chlorine or chloramine.
Disinfection by-products (DBPs)	A group of by-products that may form under certain conditions when chlorine is used to disinfect drinking water.
Drinking water	Water that is suitable for human consumption.

Word/phrase	Definition
Drinking Water Quality Management Plan (DWQMP)	Drinking Water Quality Management Plan as required by the <i>Water Supply (Safety and Reliability) Act 2008</i> (Qld). The purpose of a DWQMP is to protect public health by implementing a risk-management system to manage the quality of drinking water.
<i>Escherichia coli</i> (E. coli)	A bacterium when present 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. <i>E. coli</i> can be killed by standard disinfection practices.
Fluoride (F)	Fluoride is regarded as a useful constituent of drinking water, particularly for the prevention of tooth decay. Concentration is maintained within the recommended levels set by QHealth.
Iron (Fe)	An element which, when found in water, can cause a brownish discolouration. Limits on the amount of iron in water are usually due to taste and appearance factors rather than any detrimental health effects.
km	kilometre, which is 1,000 metres
Megalitre (ML)	One million litres or 1,000 kilolitres
MPN/100mL	Most Probable Number per 100 millilitres
Naturally occurring	Present in the natural environment as minerals, elements, salts and other substances.
ng/L	Nanograms per litre
Network	An arrangement or system of pipes, pumps and reservoirs used for distributing water.
Nephelometric Turbidity Unit (NTU)	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.
pH	The pH value indicates if a substance is acidic, neutral, or alkaline. It is calculated from the number of hydrogen ions present and is measured on a scale from zero to 14. A pH greater than seven is alkaline, less than seven is acidic and seven is neutral. The pH of public water supplies should be slightly alkaline to minimise corrosion and stabilise disinfection.
Reservoir	A water tower or tank used for the storage of treated water within the water distribution system.

Word/phrase	Definition
Seqwater	Queensland Bulk Water Supply Authority, trading as Seqwater. The bulk drinking water provider for Logan Water.
The Regulator	See Department of Regional Development, Manufacturing and Water.
Trihalomethanes	A group of disinfection by-products that may form under certain conditions when chlorine is used to disinfect drinking water.
Turbidity	Refers to the presence of suspended solids in water causing a muddy or discoloured appearance. Turbidity is measured in Nephelometric Turbidity Units (NTU).
Verification Monitoring Program (VMP)	Water quality verification monitoring is used as the final check that the barriers and preventive measures used in protecting the public health from drinking water risks are performing effectively. Verification monitoring is used to verify the quality of drinking water supplied to Urban Utilities' customers as well as collecting data to complement future operational monitoring programs.
Water Quality Zone (WQZ)	The next level of categorisation below a WSZ. A WQZ shares the same disinfectant type (i.e. chloramine or chlorine)
Water Supply Zone (WSZ)	Defined as an area of the water distribution network with shared bulk water supply sources.
Water Treatment Plant (WTP)	A plant that improves water quality by removing impurities through filtration and disinfection.





logan.qld.gov.au/water-and-sewerage

