



**Annual Drinking
Water Quality Report**
2023



Helen, service delivery Tennant Creek

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Glossary of Acronyms

Acronym	Description
ADWG	Australian Drinking Water Guidelines September 2022
AROWS	Adelaide River Off-stream Water Storage
AS/NZS	Australian/New Zealand Standards
AWA	Australian Water Association
CDU	Charles Darwin University
DEPWS	Department of Environment, Parks and Water Security
DIPL	Department of Infrastructure, Planning and Logistics
DITT	Department of Industry, Tourism and Trade
DTF	Department Treasury and Finance
DTFHC	Department of Territory Families, Housing and Communities
DWQMS	Drinking Water Quality Management System
EDR	Electrodialysis Reversal
HBT	Health-Based Targets
IES	Indigenous Essential Services
IMT	Incident Management Team
mCDI	membrane Capacitive De-Ionisation
MoU	Memorandum of understanding
NA	Not applicable
NM	Not measured
NHMRC	National Health and Medical Research Council
NT	Northern Territory
NWGA	National Water Guidelines Australia
PAM	Primary amoebic meningoencephalitis
PFAS	Per- and poly-fluoroalkyl substances
SCADA	Supervisory control and data acquisition
TDS	Total dissolved solids
THMs	Trihalomethanes
USCW	Utilities Support Contract Worker
UV	Ultraviolet
WSP	Water Safety Plan
WTP	Water Treatment Plant

Units of Measurement

Abbreviation	Description
Bq/L	becquerels per litre
HU	Hazen unit
GL	gigalitres
mg/L	milligrams per litre
mSv/yr	millisieverts per year
ML	megalitres
MPN	most probable number
orgs/L	organisms per Litre
µg/L	micrograms per litre
µS/cm	microsiemens per centimetre

Scientific Abbreviations

Abbreviation	Description
<i>B. pseudomallei</i>	<i>Burkholderia pseudomallei</i>
CaCO₃	calcium carbonate
<i>E. coli</i>	<i>Escherichia coli</i>
<i>N. fowleri</i>	<i>Naegleria fowleri</i>

From the Chief Executive Officer



Power and Water is embracing a sustainable future with innovation, including water security and quality solutions that support economic and community growth opportunities.

2023 was a year of significant milestones, success and challenges for our passionate and experienced experts working together to deliver safe, secure and reliable services to Territorians, every day.

In recent years, we have made significant improvements to the way we monitor and report on water quality across the Northern Territory. This information is central to informing our planning and program delivery to enhance water quality, reliability and security.

We are proud of the role we play and through this annual report we hold ourselves accountable to continue to improve our services for the benefit of our customers and community.

In 2023, Power and Water was excited to support the launch of the Northern Territory (NT) Government's Territory Water Plan. This is the NT's first whole-of-government strategic plan for water, aiming to deliver water security while balancing economic development with environmental and cultural protections. The plan addresses legislative reform, infrastructure delivery, science, cultural knowledge and community engagement. We are working collaboratively with the NT Government and the communities we serve to realise the benefits of these strategic priority actions.

We are also working with the Australian and NT Governments to deliver the Darwin Region Water Supply Infrastructure Program. This includes two major projects in the return to service of Manton Dam and the development of the Adelaide River Off-Stream Water Storage (AROWS) project.

In an important step forward, Power and Water advertised tenders for the delivery of the Manton Dam project in 2023 and we expect to award this contract in late April 2024. We are also listening to our customers about the project through a Community Reference Group and direct engagement with stakeholders.

Across the Territory a number of remote communities rely on groundwater, which can be hard, taste salty and may have other naturally occurring minerals including nitrate, fluoride and uranium. We continue to invest in research to develop and evaluate technologies that offer solutions that suit the NT.

Our program of water quality improvements is ongoing through the NT Government's \$28 million investment program. As part of this, our water quality experts worked alongside industry partner Clean TeQ Water to successfully deliver the Laramba Water Treatment Plant on time and on budget, reducing the level of naturally occurring uranium in the drinking water to below the Australian Drinking Water Guidelines.

This innovative project was officially opened by the Laramba community in April 2023, delivering improved water quality for the 300 residents. The project was recognised at the 2023 Chief Minister's Awards and also received an NT Australian Water Association Infrastructure Project Innovation Award.

A number of water security projects are underway in remote communities including Beswick, Maningrida, Wadeye, Umbakumba and Angurugu. In partnership with the Australian Government, planning works are progressing to improve water quality in Alpururulam and Ampilatwatja.



Aerial view of Darwin River dam

In Katherine, we started operating Australia's largest PFAS treatment using ion exchange technology. This water treatment solution supports safe drinking water for the community, meeting future demand over a 30-year planning horizon.

Our 'That's My Water!' Bush School education program was conducted in the water stressed communities of Yuendumu, Yuelamu, Numbulwar and Maningrida. The highly successful program aims to reduce water demand by educating and inspiring the next generation to save water, report leaks and be agents of change within their school and their community.

Our people again showed that they are up to the challenge of providing water and wastewater services in challenging conditions to Territorians. This was on display during a significant flooding event that impacted Kalkarindji, Daguragu, Yarralin, Pigeon Hole and Palumpa in early 2023. The team worked tirelessly to safely restore and repair infrastructure and services to enable residents to return home.

While a lot has been achieved, there is still more to do.

In the coming year, our priority focus areas will include securing alternative water sources and infrastructure improvements to address water quality in Beswick and Nauiyu.

We will also carry out investigations to ensure disinfection reliability to improve health-based targets in identified communities.

I congratulate all of our people for their ongoing efforts and achievements in making a difference to the lives of Territorians.

In partnership with industry and government agencies, we will continue to work to develop new technologies and deliver projects that enhance water security and quality for customers right across the Northern Territory.

Djuna Pollard
Chief Executive Officer,
Power and Water Corporation



Partnerships

Power and Water collaborates with various stakeholders for the provision of safe drinking water to all customers and the protection of public health. This is primarily achieved by building effective partnerships with multiple governmental agencies.

Power and Water partnerships

Power and Water has a responsibility to provide customers with safe drinking water in accordance with sound commercial practices and, its operating licence through the *Water Supply and Sewerage Services Act 2000 (NT)*. Services to its remote customers are delivered under the *Power and Water Corporation Act 1987 (NT)* and *Indigenous Essential Services Agreement*. The Northern Territory and Australian Government agencies partnering with Power and Water in protecting water quality are:

NT Health

A *Memorandum of Understanding between the NT Health and the Power and Water Corporation for drinking water (MoU)* formalises public health accountabilities and responsibilities. NT Health has important responsibilities in protecting public health under the *Public and Environmental Health Act 2011 (NT)* and other relevant legislation. The MoU defines the regulatory role of NT Health for drinking water quality in the Northern Territory.

Department of Territory Families, Housing and Communities (DTFHC)

Power and Water, through its subsidiary Indigenous Essential Services Pty Ltd (IES) works in partnership with DTFHC to provide electricity, water and sewerage services to 72 remote communities. IES is funded through a service agreement with DTFHC. Through the service agreement, water is supplied to 72 communities and sewerage services are provided to 57 communities. In addition, 17 outstations or homelands are connected and have access to water supply. Delivering safe drinking water is a key priority. Power and Water manages water quality through the Drinking Water Quality Management System. Based on risk, improvements are identified for DTFHC to approve and fund.

Department of Environment, Parks and Water Security (DEPWS)

DEPWS performs a regulatory role to control pollution and leads the development of the

Northern Territory Government's regulatory framework for water. The Office of Water Security within DEPWS provides whole-of-government coordination across agencies for the reform agenda inherent in the Territory Water Plan.

Department of Infrastructure, Planning and Logistics (DIPL)

DIPL protects water quality through appropriate land use planning and the regulation of private plumbing. DIPL has a key role in major infrastructure project delivery including the IES headworks program and is the lead agency for the delivery of the AROWS project.

Department of Industry, Tourism and Trade (DITT)

DITT undertakes independent analyses of water samples at laboratories in Darwin and Alice Springs.

National Water Grid Authority (NWGA)

Invests in water infrastructure projects that ensure the long-term viability of communities and economy.

National Indigenous Australian Agency

Funds projects aimed at helping indigenous Australians.

Indigenous Essential Services

The delivery of water and sewerage services to remote communities are provided by Power and Water through its wholly-owned, not-for-profit subsidiary Indigenous Essential Services Pty Ltd (IES). IES is funded through a service level agreement with the Department of Territory Families, Housing and Communities (DTFHC). Funding is limited due to ongoing recurrent budgets that are set by DTFHC, and for additional capital projects, IES requests funds through DTFHC and Department of Treasury and Finance (DTF) which are balanced against other priorities. Through the service level agreement, water is supplied to 72 communities with 57 of these communities also receiving sewerage services. In addition there are 17 outstations or homelands that are connected to access water supply.

Securing Darwin's Water Supply

Manton Dam Return to service

Built in the 1940s with a storage capacity of 14,000 megalitres (ML), Manton Dam was Darwin's primary source of water until Darwin River Dam was commissioned in 1972. It was opened to recreation by the Northern Territory Government in the late 1980s and has been maintained since then as a potential future water supply source.

With demand for water in the region expected to double by 2050, and water storage levels in Darwin River Dam becoming increasingly affected by climate change and evaporation, it's clear we need to plan for longer term.

As part of the Darwin Region Water Supply Infrastructure Program, Power and Water is working to return Manton Dam to service as an operational drinking water supply source.

Manton Dam will continue to be a recreational resource for the Darwin community. Power and Water will apply additional treatment measures to ensure the dam meets stringent drinking water quality standards. A recreation management plan for the reservoir will be developed in collaboration with the NT Government.

This project will deliver on the first stage of the multi-source Darwin Region Water Supply Infrastructure Program to secure additional water resources, increase, and diversify emergency supply options and maintain customer service levels.

The delivery of the Manton Return to Service project is over a two year period with commissioning of the project expected to commence by mid-2025.

The plan to deliver:

- A 20ML/d Water Treatment Plant at Strauss and access road.
- A new 22km DN600 delivery pipeline from Manton Dam to the Strauss Water Treatment Plant.
- A new pump station at Manton Dam, upgrades to the existing inlet tower at Manton Dam and associated civil, mechanical, and electrical work.

Outcomes that will be met when initiatives are delivered:

- The project will provide an additional 7.3GL of water a year into the Darwin system at around 20ML/d.
- The additional water source will improve the resilience of the Darwin system providing a separate water source.
- The additional water source will support future economic growth across the Darwin region.
- Opportunity for private investment in the Middle Arm Sustainable Development Precinct, and future agricultural and horticultural projects.

Once Manton Dam is returned to service, it will provide an additional 7,300ML a year into the Darwin region water supply system.

Strauss Water Storage and Treatment Facility

Power and Water plans to develop the Strauss Water Treatment and Storage Facility on approximately 42ha of land adjacent to the intersection of the Stuart Highway and Cox Peninsula Road. The site is strategically located at the intersection of the transmission mains from Darwin River Dam and the planned water transmission main from Manton Dam. It provides an ideal location for major water storage to service future residential development in the area and will house new water storage and water treatment facilities to be developed in the short term.

Water treatment will at first be sized to cater for water from Manton Dam only. The planning and design of the treatment facility will allow for expansion so as to provide whole of-system treatment for the Darwin region water supply in the future. Preliminary design of the treatment process and planning of the site layout are complete and further planning and investigation is underway.



Manton dam spilling over the wall during the wet season

Land acquisition has commenced, and Power and Water is working with the NT Government to address the requirements of the Native Title Act.

Adelaide River Off-stream Water Storage (AROWS)

The AROWS project is a long-term solution to supply more water to the Darwin region.

In the Darwin region, 85% of our water supply comes from the Darwin River Dam, which is currently operating at capacity. The remaining 15% is provided through groundwater resources.

The total demand for water in the Darwin region is expected to more than double by 2050 to 100 gigalitres per year.

New water supply infrastructure is needed to help the Territory's population to grow and to meet our goal of becoming a \$40 billion economy by 2030.

Located north of Lake Bennett, the project will take advantage of a naturally occurring basin made up of a ridge formation that can hold water next to Adelaide River. Two main containment barriers will be constructed at low points of the basin so that water can be stored.

The Adelaide River will supply AROWS with water via a controlled pump system during Darwin's wettest months. Water will then be stored in the AROWS basin, then pumped via a new pipeline adjacent to Stuart Highway to the proposed Strauss Water Treatment Plant for distribution.

Current modelling shows that AROWS can hold around 250GL of water at full supply level (FSL) and will supply 60.2GL per year to the Darwin region. By comparison, Darwin River Dam holds 303GL of water at FSL but can only supply 32GL per year.

AROWS is an innovative and sustainable large scale water storage project. There will be no dam infrastructure built across the Adelaide River that will impede the flow of the river, minimising the impact on the environment.

Before a commitment can be made to fund and deliver the AROWS project, a rigorous planning and approvals phase will be undertaken. This 3-to-4 year phase includes engaging with the community, undertaking detailed studies and science, and working with the regulator to ensure strict environmental conditions can be met.

Drinking Water Quality Report 2023

Power and Water is responsible for providing safe and reliable water and sewerage services across the Northern Territory (NT). Power and Water's Drinking Water Policy commits to providing safe drinking water to our customers in line with the health and aesthetic values set out in the Australian Drinking Water Guidelines (ADWG) and are working towards achieving full compliance.

An annual drinking water quality report is published in accordance with the Memorandum of Understanding (MoU) with NT Health. The report provides transparent information on drinking water quality for our customers across the communities we serve.

The annual drinking water quality report assesses water quality for a total of 91 water supply schemes:

- 5 major and 14 minor urban centres; and
- 72 remote communities.

This report is split into two sections:

- **Section 1 Framework for Drinking Water Quality Management**
- **Section 2 Drinking Water Quality and Performance**
- **Part A Urban Major and Minor Centres**
- **Part B Remote Communities**

Each part contains 3 components:

- i) Your drinking water profile per community
- ii) Your drinking water characteristics:
 - a. Microbiological
 - b. Health exceedances
 - c. Other health parameters
 - d. Radiological
 - e. Aesthetic exceedances
- iii) Customer satisfaction and demand management

Followed by appendices:

- **Appendix A: Description of data**
- **Appendix B: Urban major and minor data Assessments**
- **Appendix C: Remote Communities data Assessments**
- **Appendix B and C each contain:**
 - i) Microbiological data assessments
 - ii) Radiological data assessments
 - iii) Health data summary
 - iv) Aesthetic data summary
 - v) Individual water quality results



Dan, field supervisor Katherine

Section 1

Framework for Drinking Water Quality Management



Australian Drinking Water Guidelines

The Australian Drinking Water Guidelines (ADWG)

provide the primary reference on drinking water quality in Australia. They provide a framework for the good management of drinking water supplies. The implementation of the framework assures safety at point of use.

The ADWG are published by the National Health and Medical Research Council in collaboration with the Natural Resource Management Ministerial Council. The ADWG are developed based on the best available scientific evidence regarding both the health and aesthetic aspects of drinking water quality. The guidelines do not define mandatory legally enforceable standards for drinking water quality. Implementation of the guidelines is at the discretion of each State and Territory. No minimum standards for drinking water quality have been set in licenced areas pursuant to Section 45 of the *Water Supply and Sewerage Services Act 2000 (NT)* or for areas not subject to the Act. However the MoU between NT Health, Power and Water and IES for drinking water adopt the ADWG as the primary reference for quality and management of drinking water.

The ADWG describe a preventative, risk management approach that encompasses all steps in water supply – from catchment to consumer.

The ADWG Framework for Management of Drinking Water Quality defines this preventative, integrated approach. The framework outlines 4 general areas for ensuring the provision of safe drinking water:

- organisational commitment to drinking water quality management
- system analysis and management
- supporting requirements
- review processes for continual improvement.

Across these 4 areas, the framework outlines 12 elements considered good practice for the integrated management of drinking water supplies.

Together, these elements comprise a proactive approach for ensuring safe and reliable drinking water to the community. There are rolling revisions to ensure the ADWG represent the latest scientific evidence on good quality drinking water. All assessments made in this report are made against version 3.8, updated in September 2022. New versions of the guidelines are adopted in a planned way with an agreed transition date in accordance with the MoU.

The ADWG describe a preventative, risk management approach that encompasses all steps in water supply – from catchment to consumer.

Applying the ADWG Framework

Power and Water is applying the Framework for Management of Drinking Water Quality in accordance with the ADWG.

Table 1 – Framework for management of drinking water quality

ADWG elements	Drinking Water Quality Management System
<p>1. Commitment to drinking water quality</p>	<ul style="list-style-type: none"> • Power and Water’s Drinking Water Quality Policy is in place stating the commitment to providing safe drinking water to consumers in line with the health and aesthetic values set out in the Australian Drinking Water Guidelines and to work towards achieving full compliance. The policy statement was reviewed in 2021 and is approved by the Board. • Power and Water collaborates with various stakeholders for the provision of safe drinking water to all customers and the protection of public health.
<p>2. Assessment of the drinking water supply system</p>	<ul style="list-style-type: none"> • A Barrier Risk Assessment for all 91 schemes is completed on a 3-year basis. • Water Safety Assessments, have been completed for all 91 schemes, inclusive of on ground HBT assessment.
<p>3. Preventive measures for drinking water quality management</p>	<ul style="list-style-type: none"> • Multiple barriers from catchment to meter exist across the water supply system. • Monitored critical limits are in place for critical control points. • Maintaining chlorine free residual through the distribution system, which provides protection against further contamination and limits regrowth problems, is a key focus for Power and Water.
<p>4. Operational procedures and process control</p>	<ul style="list-style-type: none"> • Water quality procedures are in place to support reliable achievement of the target criteria, critical limits and water quality objectives. • Supervisory Control and Data Acquisition (SCADA) is used to allow continuous monitoring and control of water assets and infrastructure, including for the management of water quality, in urban centres and many of the remote centres and is being progressively implemented at the remaining remote centres (subject to funding). • Trigger Action Response Plans are established for all schemes. • Processes are in place to make sure that water infrastructure procurement complies with Australian Standard / New Zealand Standard 4020: Testing of products for use in contact with drinking water.
<p>5. Verification of drinking water quality</p>	<ul style="list-style-type: none"> • An annual drinking water quality monitoring program is developed and delivered in consultation with NT Health. • Water samples collected are submitted to laboratories that are accredited by the National Association of Testing Authorities or that are able to meet reporting limits agreed to with NT Health. • Drinking water quality data is managed systematically in the Envirosys database with trending and alerting functions. • Processes are in place to capture customer feedback, to ensure appropriate responses are developed and delivered to customers.

ADWG elements	Drinking Water Quality Management System
6. Management of incidents and emergencies	<ul style="list-style-type: none"> • A Drinking Water Quality Incident Management Procedure guides Power and Water through all water quality incidents. • The Notification Protocol for Drinking Water Quality Incidents ensures NT Health is informed of critical events. • All high risk events are investigated and reviewed quarterly to ensure continuous improvement.
7. Employee awareness and training	<ul style="list-style-type: none"> • Ongoing training in water quality awareness is delivered for employees with Fluoride training carried out in 2023. • Service delivery employees complete certification through the National Water Training Package. • Utilities Support Contract Worker (USCW) are trained by contract holders.
8. Community involvement and awareness	<ul style="list-style-type: none"> • The Power and Water website contains information on water quality, including the Drinking Water Quality Policy statement, and information on water treatment methods and Annual Drinking Water Quality Reports. • Participate in interagency remote information forums under the Territory Water Plan. • The That's My Water education program continued to be rolled out in urban and remote schools, to promote the safe and sustainable use of water.
9. Research and development	<ul style="list-style-type: none"> • Power and Water collaborates with universities, water utilities and external research providers to generate new knowledge and provide solutions to technology challenges in the NT. See section "Research" on page 38 for information on recent research projects.
10. Documentation and reporting	<ul style="list-style-type: none"> • The Annual Drinking Water Quality Report details performance against the ADWG and provides an objective account of the quality of water supplied to customers. • Power and Water manages documentation through the Drinking Water Quality Management System, document control framework, and electronics record management systems.
11. Evaluation and audit	<ul style="list-style-type: none"> • The 3 year Safe Water Plan outlines our commitments to continuous improvement of our Drinking Water Quality Management System. • Independent audits of the Drinking Water Quality Management System are undertaken 3 yearly in accordance with the Safe Water Plan 2023-2025. • Good Practice Guide audits of schemes are undertaken as actions under the water quality improvement plan or at design review. • Long term water quality is trended in the Envirosys system and reviewed as a component of the Barrier Risk Assessment. • Technical committee reviews drinking water quality events quarterly.
12. Review and Continual improvement	<ul style="list-style-type: none"> • The Drinking Water Security Steering Committee, which is chaired by the Chief Executive Officer, provides oversight of the Drinking Water Quality Management System. • Power and Water delivered year one of the Safe Water Plan for 2023-2025 that guides the drinking water quality management system improvements for the next 3 years.

Health-Based Targets

Power and Water and its subsidiary IES adopted the Water Services Association of Australia HBT to assess microbial risk in drinking water and have been conducting on-ground risk assessments based on this approach for both urban and remote communities.

In 2022, ADWG were updated to include guidance on microbial HBT. Previously, quantitative health-based guidance only existed for radiological and chemical parameters in the form of water quality standards. The new microbial targets assist water regulators and suppliers in managing risks from microorganisms found in drinking water. HBT provide a quantitative measure of the microbial safety of drinking water.

The HBT approach adopted in the ADWG to manage risk from enteric pathogens ensures that drinking water treatment is proportional to the risk of contamination in the source water. That is, source water from heavily-impacted catchments will require a higher level of treatment in comparison to source water from protected catchments in order to achieve safe drinking water.

Specifically, the approach involves the following stages:

1. Defining a **risk-based benchmark of safety**
2. Assessing the level of contamination and assigning a **source water category**
3. Assessing **treatment need** based on source water category
4. Ensuring the treatment need is met.

Where the treatment need is not met, there is a HBT shortfall that needs to be addressed with new control measures. The higher the magnitude of the HBT shortfall, the higher the risk to water safety. The data assessment of a HBT assessment are considered along a water safety continuum (**Figure 1**).

HBT are consistent with the first guiding principle of the ADWG that ***the greatest risk to consumers of drinking water are pathogenic micro-organisms, and protection of water sources and treatment are of paramount importance and must never be compromised.***

The HBT process also supports the framework for the ADWG:

- identifying key risks
- ensuring multiple barriers are in place.

Chlorine disinfection is the single process that has the greatest impact on drinking water safety. It is highly effective against bacterial pathogens, and greatly reduces the numbers of viral and most protozoan pathogens. For this reason, ensuring the reliability of existing disinfection barriers continues to be of the utmost priority for the protection of public health.

Figure 1 – HBT Water Safety Continuum





Drinking water on Larrakia Country

This approach moves away from the reliance solely on the presence/absence of indicator microorganisms to verify safety of supply. This is an important step change that recognises that reliance on retrospective analysis of minute fractions of the total volume of water supplied has limited benefit in assuring the microbial safety of supply to customers at all times.

Power and Water has completed HBT assessments for all 91 drinking water supplies. At this time, 11 urban supplies and 57 remote supplies have been assessed as meeting HBT.

HBT assessments are not intended as a pass/fail metric and immediate compliance with the tolerable health outcome target is not expected under the ADWG. It is also recognised that it will be more challenging for some drinking water suppliers to meet this target when servicing regional and remote areas.

Power and Water has adopted a conservative approach to HBT assessments. For supplies where there is limited supporting evidence, a higher risk

may be assumed with action required to improve our understanding of the risk. The greatest gains in reducing the risk of a waterborne disease outbreak due to enteric pathogens in water supplies will be achieved by targeting improvements for supplies with higher HBT shortfalls. Power and Water is working collaboratively with NT Health on the assessment of risk for water supplies assessed as not meeting HBT. This collaborative process required under the ADWG enables prioritisation of improvements that can address identified HBT shortfalls in both urban and remote communities.

This new guidance from ADWG will continue to drive Power and Water's water quality improvement planning. Taking a risk-based approach that will systematically address HBT shortfalls by identifying, validating and bringing online lower risk sources, eliminating hazards within source catchments that are increasing the risk of the source or by installing additional treatment barriers appropriate to the source water category.

The Multiple Barrier Approach

The multiple barrier approach, adopted by Power and Water requires ***‘the drinking water system must have, and continuously maintain, robust multiple barriers appropriate to the level of potential contamination facing the raw water supply’***. It is a guiding principle of the ADWG framework and universally recognised as the foundation for ensuring safe drinking water.

The strength of multiple barriers is that a failure of one barrier may be compensated for by the remaining barriers, minimising the likelihood of contaminants passing through the entire treatment system.

The first barrier for the supply of safe drinking water is source protection. Advocating for the primacy of drinking water quality over other land uses is a key component of Power and Water’s Drinking Water Quality Policy. Implementing effective measures to protect source waters from contamination avoids the need for expensive, complicated water treatment.

Power and Water also maintains strict standards for assets used to supply customers to maintain a closed and protected system.

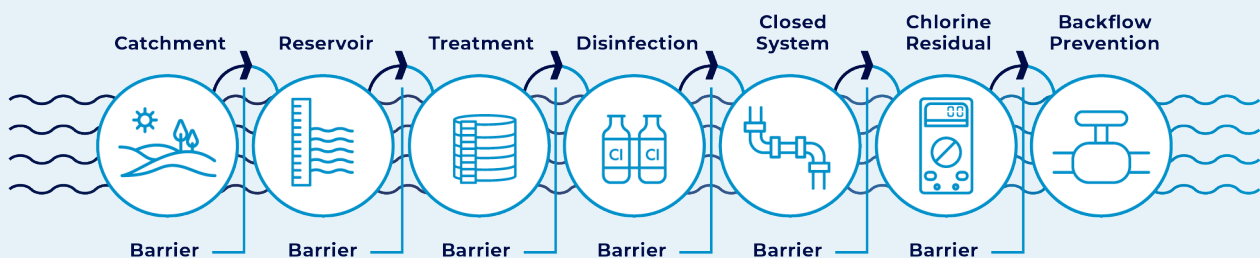
Our DevelopmentServices team work with property developers to ensure appropriate materials and methods of construction are used for new assets that are gifted to Power and Water, for example in a new subdivision.

Backflow Prevention forms a final barrier that protects our treated drinking water from an undesirable reverse flow, from a potentially contaminated source, back into the drinking

water supply. Backflow can occur when there is pressure differential between the Power and Water network and a customers plumbing. This can include events, when there is a loss of network pressure due to a main break, maintenance shut down, or if there is a large draw on the network, such as during a firefighting event. Backflow can also occur when a cross-connection is made with bores, tanks, pressure pumps, and other equipment on the customers side of the water connection. In accordance with Australia Standards and national plumbing requirements, Power and Water requires the installation of backflow prevention at the property boundary to prevent this from occurring.

‘the drinking water system must have, and continuously maintain, robust multiple barriers appropriate to the level of potential contamination facing the raw water supply’

Figure 2 – A typical multiple barrier system



From catchment to consumer multiple barriers to ensure safe drinking water



Quinton, water & sewer reticulation technician

Water treatment and disinfection

In conjunction with other barriers to protect the water source, chlorination is a vital defence against microbiological contamination. Chlorine is the preferred disinfectant as it is very effective at killing bacteria, and reasonably effective at inactivating viruses and many protozoa. Additionally, maintaining residual chlorine throughout the distribution system can provide protection against further contamination and limit regrowth problems.

Additional water treatment

In addition to the potential for microbiological contamination, the interaction between water stored for long periods in deep aquifers and surrounding geology can result in a wide range of naturally occurring minerals and deposits in the water. The physical and chemical characteristics of the water can exceed ADWG health or aesthetic guidelines in some communities.

Power and Water currently operate 9 advanced water treatment plants:

In the major and minor urban centres:

- Biological treatment in Adelaide River.
- pH correction and mineral balancing in Borroloola.
- PFAS and conventional water treatment in Katherine.
- Reverse Osmosis (Membrane) filtration in Yulara.

Across the remote communities:

- Three (3) EDR (Electrodialysis Reversal) plants in Ali Curung, Kintore and Yuelamu.
- Filtration in Bulla.
- Ion exchange in Laramba.

Water quality barriers are shown in **Table 2** for the major and minor urban centres and in **Table 3** for remote communities.

Table 2 – Water quality barriers in urban centres

Community	Source Water	Protected Catchment	Treatment	Disinfection	Fluoridation
Adelaide River	GW	no	biological	sodium hypochlorite	no
Alice Springs	GW	yes	nil	chlorine gas	naturally occurring fluoride levels above 0.5mg/L
Batchelor	GW	no	nil	sodium hypochlorite	no
Borroloola	GW	yes	pH correction & filtration	chlorine gas	no
Cox Peninsula	GW	yes	nil	sodium hypochlorite & UV	no
Daly Waters	GW	no	nil	sodium hypochlorite	no
Darwin	GW & SW	no	nil	chlorine gas, sodium hypochlorite and UV*	yes
Elliott	GW	no	nil	sodium hypochlorite & UV	naturally occurring fluoride levels above 0.5mg/L
Gunn Point	GW	yes	nil	sodium hypochlorite	no
Katherine	GW & SW	no	PFAS & conventional	chlorine gas	yes
Kings Canyon	GW	yes	nil	sodium hypochlorite	naturally occurring fluoride levels above 0.5mg/L
Larrimah	GW	yes	nil	sodium hypochlorite	no
Mataranka	GW	no	nil	chlorine gas	no
Newcastle Waters	GW	no	nil	sodium hypochlorite	naturally occurring fluoride levels above 0.5mg/L
Pine Creek	GW & SW	no	nil	chlorine gas	naturally occurring fluoride levels above 0.5mg/L
Tennant Creek	GW	yes	nil	chlorine gas	naturally occurring fluoride levels above 0.5mg/L
Ti Tree	GW	yes	nil	sodium hypochlorite	naturally occurring fluoride levels above 0.5mg/L
Timber Creek	GW	yes	nil	chlorine gas	naturally occurring fluoride levels above 0.5mg/L
Yulara	GW	yes	membrane	chlorine gas	no

*Only for one bore

- GW** Groundwater
- SW** Surface Water
- nil** Water source does not require additional water treatment
- biological** Sand filtration with Iron fixing bacteria for removal of Iron
- conventional filtration** Conventional Water Treatment (Coagulation, Flocculation and Filtration) Process to remove contaminants
- membrane** A type of filtration system
- UV** Ultraviolet Disinfection
- PFAS** ECT2 (Emerging Compound Treatment Technology) for removal of PFAS (poly-fluoroalkyl substances)

Table 3 – Water quality barriers in remote communities

Community	Source Water	Protected Catchment	Treatment	Disinfection	Chlorine Analyser	Fluoridation
Acacia Larrakia	GW	yes	nil	sodium hypochlorite	yes	no
Ali Curung	GW	yes	electrodialysis reversal	sodium hypochlorite	no	naturally occurring fluoride levels above 0.5mg/L
Alpurrurulam	GW	yes	nil	sodium hypochlorite	no	naturally occurring fluoride levels above 0.5mg/L
Amanbidji	GW	yes	nil	sodium hypochlorite	yes	no
Amoonguna	GW	yes	nil	sodium hypochlorite	no	no
Ampilatwatja	GW	yes	nil	sodium hypochlorite	no	no
Angurugu	GW	no	nil	chlorine gas	yes	fluoride added to Water Supply
Areyonga	GW	yes	nil	sodium hypochlorite	yes	no
Atitjere	GW	yes	nil	sodium hypochlorite	no	naturally occurring fluoride levels above 0.5mg/L
Barunga	GW	yes	nil	sodium hypochlorite	no	no
Belyuen	GW	no	nil	sodium hypochlorite	yes	no
Beswick	GW	yes	nil	sodium hypochlorite	no	no
Binjari	GW	yes	nil	sodium hypochlorite	no	no
Bulla	GW & SW	no	filtration	UV & sodium hypochlorite	yes	naturally occurring fluoride levels above 0.5mg/L
Bulman	GW	yes	nil	sodium hypochlorite	no	no
Canteen Creek	GW	no	nil	sodium hypochlorite	no	naturally occurring fluoride levels above 0.5mg/L
Daguragu	GW	no	nil	sodium hypochlorite	no	no
Engawala	GW	no	nil	sodium hypochlorite	no	naturally occurring fluoride levels above 0.5mg/L
Finke	GW	no	nil	sodium hypochlorite	no	no
Galiwinku	GW	no	nil	chlorine gas	yes	no
Gapuwiyak	GW	yes	nil	sodium hypochlorite	no	no
Gunbalanya	GW	yes	nil	chlorine gas	yes	no
Gunyangara	GW	yes	nil	sodium hypochlorite	yes	no
Haasts Bluff	GW	yes	nil	sodium hypochlorite	no	naturally occurring fluoride levels above 0.5mg/L
Hermannsburg	GW	yes	nil	sodium hypochlorite	no	no
Imangara	GW	no	nil	sodium hypochlorite	no	naturally occurring fluoride levels above 0.5mg/L
Imanpa	GW	yes	nil	sodium hypochlorite	no	naturally occurring fluoride levels above 0.5mg/L

Table 3 – Water quality barriers in remote communities

Community	Source Water	Protected Catchment	Treatment	Disinfection	Chlorine Analyser	Fluoridation
Jilkminggan	GW	no	nil	sodium hypochlorite	yes	no
Kalkarindji	GW	no	nil	chlorine gas	no	no
Kaltukatjara	GW	yes	nil	sodium hypochlorite	no	no
Kintore	GW	no	electrodialysis reversal	sodium hypochlorite	no	no
Kybrook Farm	GW	yes	nil	sodium hypochlorite	yes	naturally occurring fluoride levels above 0.5mg/L
Lajamanu	GW	yes	nil	sodium hypochlorite	yes	no
Laramba	GW	yes	ion exchange	sodium hypochlorite	no	naturally occurring fluoride levels above 0.5mg/L
Maningrida	GW	yes	nil	chlorine gas	yes	fluoride added to Water Supply
Manyallaluk	GW	yes	nil	sodium hypochlorite	no	fluoride added to Water Supply
Milikapiti	GW	yes	nil	sodium hypochlorite	yes	no
Milingimbi	GW	yes	nil	sodium hypochlorite	no	no
Milyakburra	GW	yes	nil	sodium hypochlorite	no	no
Minjilang	GW	yes	nil	sodium hypochlorite	no	no
Minyerri	GW	yes	nil	sodium hypochlorite	yes	no
Mt Liebig	GW	yes	nil	sodium hypochlorite	yes	naturally occurring fluoride levels above 0.5mg/L
Naiyu	GW	yes	nil	sodium hypochlorite	yes	no
Nganmarriyanga	GW	yes	nil	sodium hypochlorite	no	no
Ngukurr	GW	yes	nil	chlorine gas	yes	no
Nturiya	GW	yes	nil	UV	no	naturally occurring fluoride levels above 0.5mg/L
Numbulwar	GW	no	nil	chlorine gas	yes	no
Nyirripi	GW	yes	nil	sodium hypochlorite	no	naturally occurring fluoride levels above 0.5mg/L
Papunya	GW	yes	nil	sodium hypochlorite	no	naturally occurring fluoride levels above 0.5mg/L
Peppimenarti	GW	yes	nil	sodium hypochlorite	no	naturally occurring fluoride levels above 0.5mg/L
Pigeon Hole	GW	no	nil	sodium hypochlorite	no	no
Pirlangimpi	GW	yes	nil	UV & sodium hypochlorite	yes	no
Pmara Jutunta	GW	yes	nil	sodium hypochlorite	no	naturally occurring fluoride levels above 0.5mg/L

Table 3 – Water quality barriers in remote communities

Community	Source Water	Protected Catchment	Treatment	Disinfection	Chlorine Analyser	Fluoridation
Ramingining	GW	yes	nil	sodium hypochlorite	no	no
Rittarangu	GW	yes	nil	sodium hypochlorite	yes	no
Robinson River	GW	no	nil	UV & sodium hypochlorite	yes	naturally occurring fluoride levels above 0.5mg/L
Santa Teresa	GW	yes	nil	sodium hypochlorite	no	no
Tara	GW	yes	nil	sodium hypochlorite	no	naturally occurring fluoride levels above 0.5mg/L
Titjikala	GW	no	nil	sodium hypochlorite	no	naturally occurring fluoride levels above 0.5mg/L
Umbakumba	GW	yes	nil	sodium hypochlorite	yes	fluoride added to Water Supply
Wadeye	GW	yes	nil	chlorine gas	yes	fluoride added to Water Supply
Wallace Rockhole	GW	yes	nil	sodium hypochlorite	yes	naturally occurring fluoride levels above 0.5mg/L
Warruwi	GW	no	nil	sodium hypochlorite	no	no
Weemol	GW	no	nil	sodium hypochlorite	no	no
Willowra	GW	yes	nil	sodium hypochlorite	no	naturally occurring fluoride levels above 0.5mg/L
Wilora	GW	yes	nil	UV	no	naturally occurring fluoride levels above 0.5mg/L
Wurrumiyanga	GW	yes	nil	chlorine gas	yes	fluoride added to Water Supply
Wutunugurra	GW	yes	nil	sodium hypochlorite	no	no
Yarralin	GW	yes	nil	sodium hypochlorite	yes	no
Yirrkala	GW	yes	nil	sodium hypochlorite	no	no
Yuelamu	GW	yes	electrodialysis reversal	sodium hypochlorite	no	naturally occurring fluoride levels above 0.5mg/L
Yuendumu	GW	yes	nil	sodium hypochlorite	yes	naturally occurring fluoride levels above 0.5mg/L

GW	Groundwater
SW	Surface Water
nil	Water source does not require additional water treatment
filtration	Process to remove particles/contaminants
UV	Ultraviolet Disinfection
electrodialysis reversal	Advanced membrane de-salination technology
ion exchange	Resin technology used to soften water & reduce uranium levels

Verification of Drinking Water Quality

Power and Water conducts a comprehensive verification program for drinking water quality for the assessment of the overall performance of the system and to ensure the ultimate quality of drinking water supplied to customers is safe. This entails both monitoring of drinking water quality and assessing customer satisfaction.

The benefits of a robust verification process is that it provides:

- a useful indication of problems within the water supply system (particularly the distribution system) and the necessity for any immediate short-term corrective actions or incident and emergency response.
- confidence for customers and regulators regarding the quality of the water supplied. Power and Water monitors a comprehensive range of parameters including microbial, physical, chemical and radiological characteristics to assess water quality against ADWG.

Water quality monitoring

Power and Water's drinking water quality monitoring program is developed in consultation with NT Health and is approved by the Chief Health Officer. This incorporates a comprehensive description of the water quality monitoring undertaken and is inclusive of all communities. It details the locations of water sampling points, the frequency of sampling, the types of samples to be collected, specifies sample preservation techniques to be employed and sample bottles to be used, and specifies which laboratories will be used to perform water quality analysis.

Power and Water's drinking water quality monitoring program is developed in consultation with NT Health and is approved by the Chief Health Officer.

The extensive monitoring program requires the collection of thousands of operational and verification samples across the Northern Territory. Water is routinely sampled at specific locations in the water supply system and then sent to accredited laboratories for analysis.

Remote community water samples are primarily collected by USCW and transported back to Darwin or Alice Springs by light aircraft.

Operational monitoring

Operational monitoring is used to trigger immediate short-term corrective action or to inform long-term planning or evaluations. Source water and treatment performance monitoring are important components of operational monitoring as they provide an indication of disinfection performance. Detailed studies and investigations help increase the understanding of the drinking water quality for each supply system. The extensive data and information from our operational monitoring program is used internally and is not reported here.

Verification (compliance) monitoring

Verification monitoring of water quality parameters is the final check that the barriers and preventative measures implemented to protect public health are working effectively. Verification data is used for assessing conformance with the ADWG, compliance with agreed levels of service, and as a trigger for short-term corrective action if required.

Section 2 of this report provides more details and an assessment of the verification data collected for this reporting period.

Microbiological parameters

Disease-causing organisms, or pathogens, pose an immediate risk to public health. The risk from pathogens in water supplies can vary significantly in a short period of time, therefore frequent microbiological monitoring is required for an assessment.

The analytical procedures used to detect pathogens are complex and specific for each pathogen. Indicator organisms are used to determine if contamination has occurred.

The following indicator organisms are monitored:

- *Escherichia coli* (*E. coli*) indicates faecal contamination from warm-blooded animals including humans and hence the potential for the presence of disease-causing micro-organisms.
- total coliforms indicate the range of bacteria found in many soil and aquatic environments and can provide a measure of disinfection and the cleanliness of the drinking water supply system more generally.

The ADWG stipulate that no *E. coli* should be detected in drinking water. The guidelines also include the requirement that rigorous corrective action be undertaken and documented in response to an *E. coli* detection to prevent potential recurrences of faecal contamination.

N. fowleri is a free-living amoeboflagellate found in soil and aquatic environments in the Northern Territory. *N. fowleri* is almost harmless to drink and not associated with faecal contamination. However, when water contaminated with *N. fowleri* is forced into the nasal passages, this pathogen causes a usually fatal disease known as primary amoebic meningoencephalitis.

A level of chlorine is maintained in all distribution systems to control *N. fowleri*. The ADWG recommend controlling *N. fowleri* by maintaining a minimum chlorine free level of 0.5mg/L.

Power and Water has continued to investigate for the presence of the pathogen *B. pseudomallei*, the agent responsible for the disease melioidosis, and works closely with the Menzies School of Health Research to identify drinking water characteristics likely to be at risk.

The data assessment of monitoring for these indicator organisms and pathogens are presented in **Section 2**.

Chemical parameters (health)

Numerous chemical parameters are monitored to indicate the water quality supplied to customers. A wide range of measurable characteristics, compounds or constituents can be found in water and may affect its quality. The data assessment for the typical health-related chemical parameters are presented in tables in the appendices.

Chemical parameters (aesthetic)

Similar to health analysis, aesthetic parameters (such as taste, odour, and colour) are evaluated by assessing compliance across a range of parameters. This segment focuses on the sensory characteristics, which, while not necessarily health-threatening, are crucial for consumer acceptance and comfort. Aesthetic qualities can significantly influence public perception and confidence in water supply. Ensuring water meets aesthetic standards is vital for maintaining public trust and ensuring water is appealing to consumers, which indirectly supports hydration and health.

Water Quality Improvement Initiatives

Improving HBT shortfalls

HBT assessments are not intended as a pass/fail metric, instead they provide the basis for assessing the level of treatment required to manage source water microbial risks. The magnitude of HBT shortfalls, should be used to prioritise improvements.

Solutions to identified HBT shortfalls can range from investment in treatment upgrades to utilising better quality source waters, or eliminating hazards that can impact source water risk profiles. Planning investigations are required to identify the appropriate solution on a case-by case basis.

It is expected that implementing HBT assessment methods into drinking water management will take time. As a result of Power and Water proactively adopting HBT assessment methods, prior to its introduction in the ADWG in September 2022, a number of capital investment projects are already underway to address shortfalls for urban centres.

These include:

- **Darwin groundwater:** Planning for secondary disinfection (UV) is underway and is expected to be delivered by 2025-2026.
- **Katherine:** Secondary disinfection (UV) planning is underway, to be delivered by 2024-2025.
- **Batchelor:** Investigation is underway for potential connection to a better water quality source.
- **Adelaide River:** Connection to a better water quality source in 2023-2024.
- **Pine Creek:** Investigation is underway for potential connection to a better water quality source.

For our remote communities, more time was required to complete detailed on-site Water Source Assessments. In 2022-2023, all on ground assessments were completed. The assessments will inform additional operational changes and planning for capital upgrades.

Chemical treatment upgrades

Delivery of Katherine PFAS Treatment Plant

Power and Water completed commissioning of the new Emerging Compounds Treatment Technologies (ECT2) water treatment plant, to secure Katherine's drinking water supply.

The plant commenced normal operations in November 2023, treating water from 4 groundwater bores and removing PFAS from Katherine's ground-water supply. It is producing high quality drinking water with PFAS below ADWG.

The plant, the largest in Australia, contains 3 treatment trains that are capable of treating up to 5ML of water each per day. With one train in standby, the plant can produce 10ML per day from the bore field which is then blended with surface water to supply safe drinking water to Katherine customers.

[Visit the Power and Water website for more information about Katherine's water supply.](#)

Delivery of Laramba Water Treatment Plant

Laramba water supply contains naturally occurring levels of uranium that exceed the ADWG.

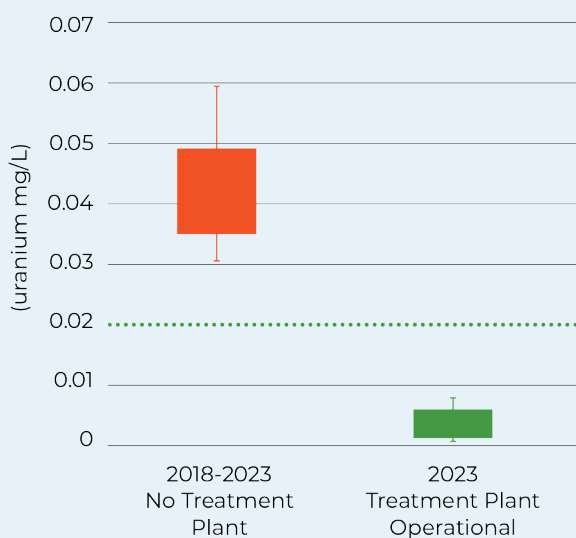
In response to community concern, Power and Water engaged Clean TeQ Water to design and construct an ion-exchange treatment plant for the removal of uranium from the drinking water supply. The investment was part of the Northern Territory Governments \$28 million drinking water quality commitment, to address critical water supply infrastructure needs in remote communities experiencing water stress and water quality issues.

Construction of the water treatment plant was completed in December 2022 and supply of treated water to the community commenced on 17 April 2023 after an 8-week validation period. Initial monitoring data from the treatment plant confirms the removal of uranium from the drinking water supply to below ADWG guideline levels. Routine monitoring is ongoing and necessary to ensure the long-term performance of the treatment plant with regards to the removal of uranium from Laramba's drinking water.



Megan, Henri, Nazrul, Djuna, Brent, Stephen and Michael accepting Chief Ministers award for Laramba treatment plant

Figure 3 – Uranium levels in Laramba pre and post treatment plant 2018-2023 compared to ADWG (0.02mg/L)



Since the Laramba treatment plant became operational on 17 April 2023, the concentrations have decreased considerably and are below ADWG. This demonstrates the effectiveness of the treatment plant in significantly lowering potential health risks for the community.

Figure 3 shows the concentration of uranium in drinking water prior to installation of the treatment plant, and post installation in 2023.

Disinfection reliability upgrades

Chlorine disinfection is our primary treatment barrier for protection against disease causing microorganisms in our drinking water supplies and is particularly effective against bacteria and viruses. To ensure no *E. coli* is detected in water supplied to customers there should be no disinfection failures e.g. the treatment barrier is verified as maintained continuously.

An assessment of disinfection reliability and operational effectiveness of existing disinfection barriers has been undertaken. Power and Water’s water quality improvement program is now driving systematic upgrades of disinfection systems in remote communities.

These upgrades aim to reduce the risk of failure of the disinfection systems that could result in the supply of un-disinfected or inadequately disinfected water to our customers.

Disinfection system upgrades commenced in Yirrkala in 2023. Bulman and Weemol are scheduled for similar upgrades during 2023-2024, with upgrades to Milyakburra, Minjilang and Yarralin in the planning phase for 2024-2025.

These upgrades have focused on providing dosing systems with improved redundancy features such as duty-standby dosing pumps, chlorine analysers to verify safety of supply, SCADA and communications for improved visibility. An independent review of the chlorine disinfection standard design is currently underway to ensure good practice.

Tank upgrades

Tank upgrades support the multi-barrier approach by providing a closed system, helping to maintain positive network pressure (to reduce the risk of backflow) and achieve disinfection outcomes, by extending chlorine contact times. Tanks may be elevated or installed with new pipes and pumping systems.

New water tanks were delivered to Ramingining and Numbulwar during 2022-2023.

Maningrida is scheduled to receive a new ground level tank during 2023-2024.

A new pressure pump system was installed in Yirrkala in 2022-2023 to improve pressure outcomes for the community.

Projects to address health exceedances

In addition to investing in research projects that offer potential solutions to common chemical water quality source challenges the following projects have been undertaken or planned to address ADWG health exceedances in remote communities:

- **Alpurrurulam:** A project is planned to equip new bores to address high levels of naturally occurring fluoride, with funding from the National Indigenous Australians Agency.
- **Beswick:** Due to high levels of naturally occurring antimony, an alternative source with preferential quality will be included in a funding submission to the National Water Grid Authority.
- **Bulla:** UV system upgrades required to treat the surface water source were completed in 2023. This allows for the blending of surface water from the river, with the groundwater that has elevated barium. Blending is used to maintain barium below the ADWG under normal operations.
- **Naiyu:** An investigation of fluctuating manganese levels has been undertaken and water source and treatment options are in the planning phase for 2023-2024 and 2024-2025.

Research Projects

Power and Water collaborates with universities, water utilities and external research providers to generate new knowledge and provide solutions.

Power and Water has been working to make water treatment technology ready for the remote conditions of the Territory. Research and development help Power and Water to continually improve and ensure the ongoing capability to meet the drinking water quality requirements. Simplifying water treatment technologies has been the goal of two pilot scale trials.

Desalination using Membrane Capacitive Deionisation (mCDI)

The application of mCDI is to reduce elevated Total Dissolved Solids (TDS) and other heavy metals has been trialled at Ali Curung. The trial was successfully concluded in 2023, allowing Power and Water to improve the understanding of the real-world application of the technology. A manuscript documenting the outcomes of this research has been submitted to a scientific journal for consideration.

Nitrate removal using electrochemical water technology

Laboratory prototypes were constructed and tested throughout 2023 allowing researchers to improve the design of the technology. The improvements are being applied to the design of a larger prototype planned for construction in 2024. To continue the development in real world conditions the prototype will be deployed at Pmara Jutunta.

Study of Biofilms in partnership with Charles Darwin University (CDU)

Biofilm growth inside pipes and fittings may harbour opportunistic pathogens and provide a pathway for them to contaminate water supplies. The study assessed biofilm growth on commonly used materials within the water distribution system, including speciation and the impact of growth on pipe surfaces. It is hoped that these results will inform asset material selection and future maintenance requirements.



Ramingining elevated water storage tank

Section 2

Drinking Water Quality and Performance

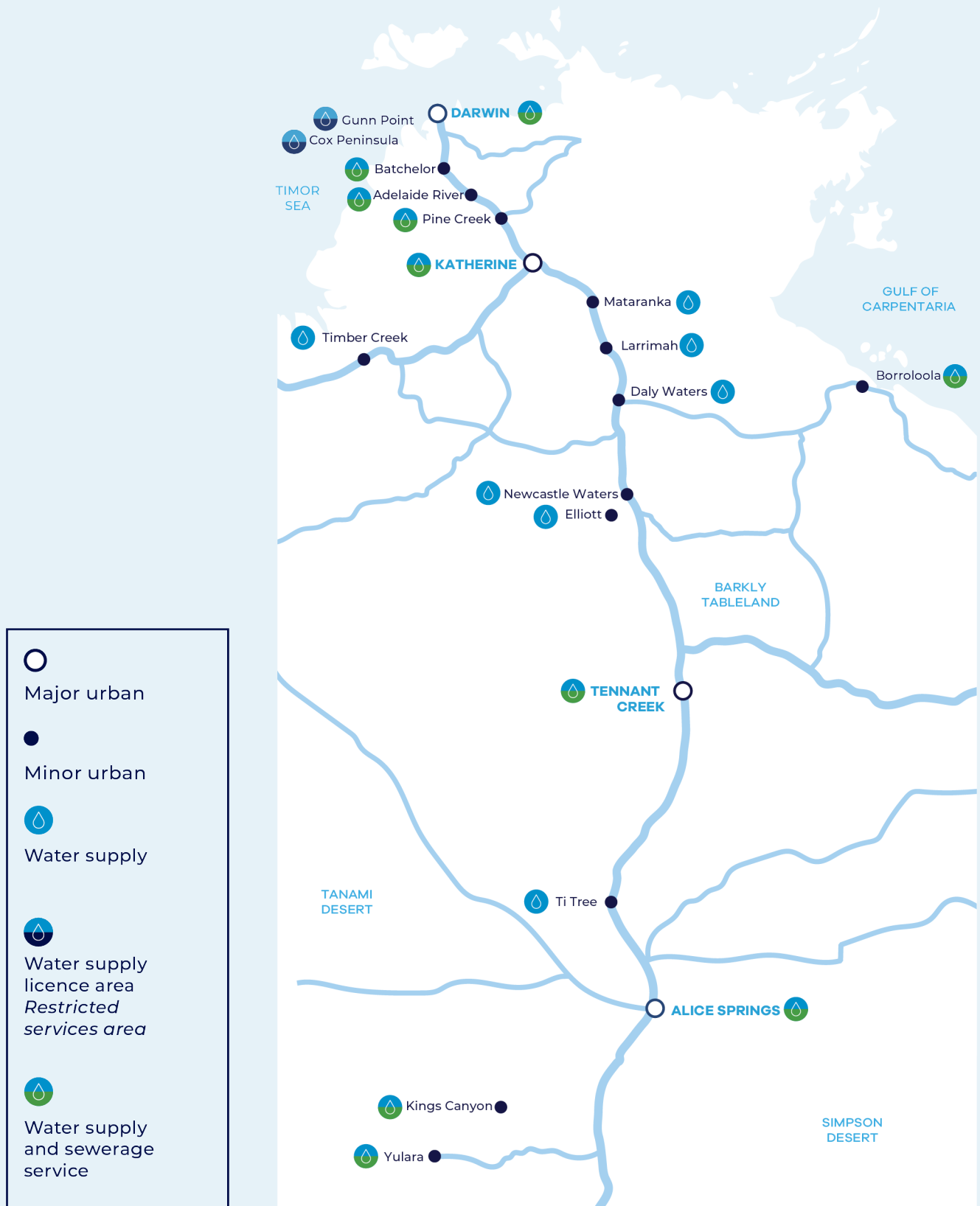


Jess, water treatment engineer

Part A

Urban Major and Minor Centres

Figure 4 – Drinking water supply systems in urban centres



Your Drinking Water Profile

This section of the report summarises the drinking water quality assessments for all urban centres in a transparent way for our customers.

The profiles provide a visual overview of the drinking water quality of your community including microbial detections and any exceedances of the health or aesthetic guideline values of the ADWG. The presence or absence of *E. coli* is the primary microbiological indicator.

Urban centres have varied monitoring requirements due to localised conditions and so the number of monitoring parameters may be different per centre. The drinking water quality monitoring program was implemented in all centres (zero required parameters identified as not measured).

The urban major and minor centre profiles show:

- (i) 100% free of *E. coli* for all urban centres
- (ii) One health exceedance for nitrate in Ti-Tree
- (iii) Multiple aesthetic exceedances, most commonly chlorine. Centres with more than one aesthetic exceedance are; Alice Springs (1), Daly Waters (5), Elliott (3), Gunn Point (3), Kings Canyon (3), Larrimah (3), Mataranka (2), Newcastle Waters (2), Tennant Creek (2), Timber Creek (2), Ti Tree (3).

All exceedances are described in more detail in **'your drinking water characteristics'** or refer to individual water quality assessments in Appendix B.

Figure 5 – Alice Springs drinking water profile



Figure 6 – Adelaide River drinking water profile



Figure 7 – Batchelor drinking water profile



Figure 8 – Borroloola drinking water profile



Figure 9 – Cox Peninsula drinking water profile



Figure 10 – Daly Waters drinking water profile

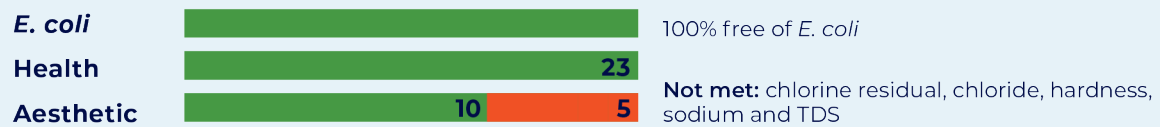


Figure 11 – Darwin drinking water profile



Figure 12 – Elliott drinking water profile



Figure 13 – Gunn Point drinking water profile

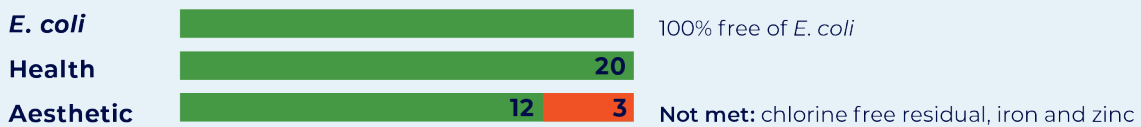


Figure 14 – Katherine drinking water profile

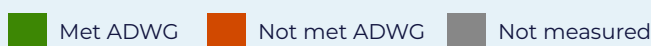


Figure 15 – Kings Canyon drinking water profile

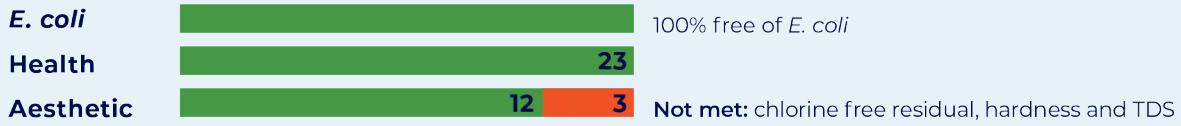


Figure 16 – Larrimah drinking water profile

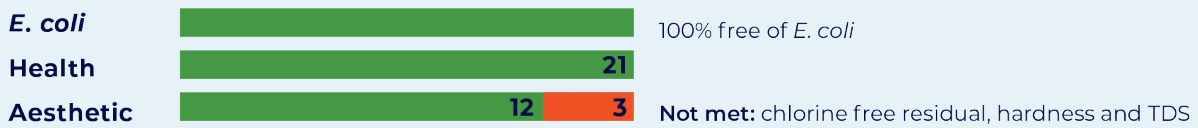


Figure 17 – Mataranka drinking water profile

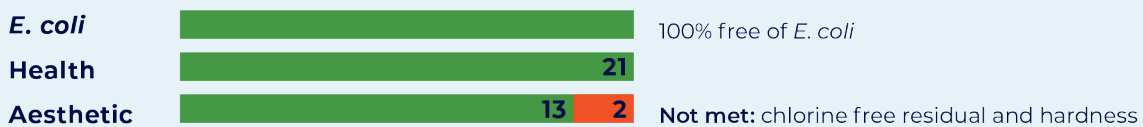


Figure 18 – Newcastle Waters drinking water profile

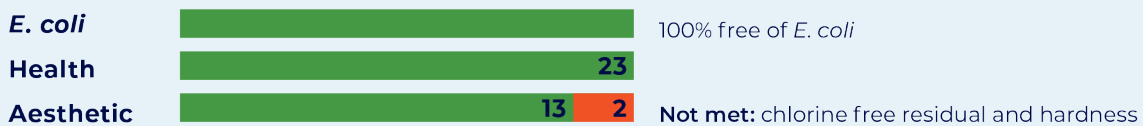


Figure 19 – Pine Creek drinking water profile



Figure 20 – Tennant Creek drinking water profile

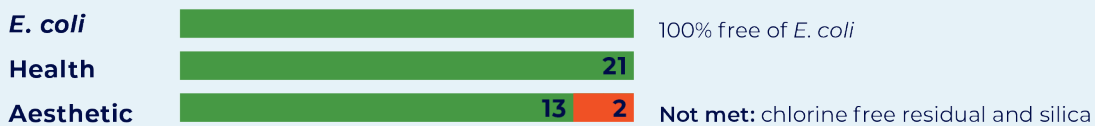


Figure 21 – Timber Creek drinking water profile

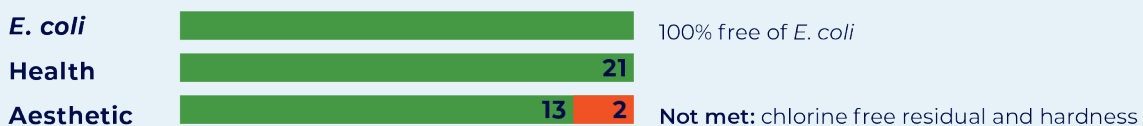


Figure 22 – Ti Tree drinking water profile

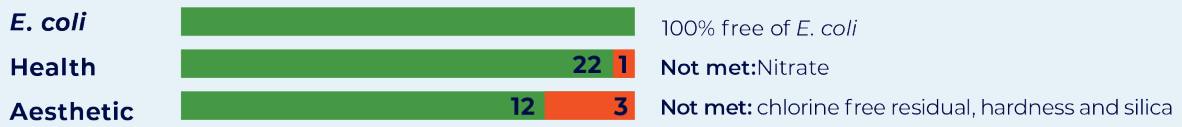


Figure 23 – Yulara drinking water profile



■ Met ADWG
 ■ Not met ADWG
 ■ Not measured



Trevor, senior headworks planning engineer

Your Drinking Water Characteristics

Microbiological

Monitoring

Bacterial indicators are used for verifying the effectiveness of treatment and to assess the microbiological cleanliness of the water. Monitoring for indicator bacteria provides a useful way to verify that the barriers to protect public health are working effectively.

Monitoring program

Power and Water’s drinking water monitoring program requires that samples representative of the quality of water supplied to consumers be collected and analysed for *E. coli* at a minimum frequency. The data assessment from this monitoring are used to demonstrate compliance and are reported as verification of the microbiological quality. Operational monitoring for bacteria provides the detailed information needed to maintain a treatment process within defined parameters (process control). The sample collection performance for individual centres for the 2022-2023 reporting period is presented in **Table 14** in the appendices.

Limitations of monitoring

Microbiological verification monitoring is not intended to provide an absolute measure of safety because of the inherent sampling and analysis limitations. Samples only ever represent a small percentage of the total water consumed. Analytical methods take substantial time to produce a result, which means the water is already consumed before a result is received.

Compliance performance

Performance can be regarded as satisfactory if over the preceding 12 months:

- at least the minimum number of programmed samples has been tested for *E. coli*
- samples tested are representative of the quality of water supplied to consumers
- no samples had *E. coli* detections.

Figure 24 – *E. coli* detections by urban centre from 2019 (left dot) to 2023 (right dot)



Figure 24 shows where *E. coli* detections by urban centre were detected in the last 5 years. Red markers indicate confirmed *E. coli* detection within that year. During the 2022-2023 reporting period, there was one *E. coli* detection in the urban centre of Elliott. Initial sample collected exceeded ADWG, however re-sampling resulted in nil detection.



Rachael, headworks planning engineer at Darwin River dam

B. pseudomallei

Power and Water's drinking water monitoring program has included *B. pseudomallei*, the agent responsible for melioidosis, since its detection in Darwin rural private supplies in 2010. Chlorination is used to control this pathogen. Despite being ubiquitous in the tropics, understanding of *B. pseudomallei* in a drinking water context is still developing. Power and Water works closely with Menzies School of Health Research to identify water supplies at risk of contamination.

Monitoring shows that B. pseudomallei was not detected in the Darwin regions water supply within the monitoring period.

N. fowleri

Most waterborne diseases are caused by organisms originating in the gut of humans or other animals. However, many organisms of environmental origin that are not normally associated with the gastrointestinal system are found in water and some of these organisms may, under certain circumstances, cause disease in humans. Such organisms include the protozoan *N. fowleri*.

N. fowleri is an organism that lives naturally in warm, freshwater bodies and soil. It can be found in warm, stagnant bodies of water including lakes, hot springs, irrigation canals, poorly maintained

swimming pools and spas, and garden hoses or sprinklers containing stagnant water. It is a naturally occurring organism in the Northern Territory.

N. fowleri causes the waterborne disease primary amoebic meningoencephalitis (PAM). This disease occurs when water contaminated with *N. fowleri* enters the body through the nose or, rarely, through a damaged eardrum. The disease cannot be contracted by drinking water containing *N. fowleri*.

The detection of *N. fowleri* in the Darwin distribution system in 2005 prompted Power and Water to undertake extensive monitoring of water supplies and to implement procedures to control this amoeba.

An effective chlorine residual maintained throughout the distribution system provides protection and limits the regrowth of *N. fowleri*. Chlorine free residual at 0.5mg/L or higher will control *N. fowleri*, provided the disinfectant persists at that concentration throughout the water supply system. Power and Water target a higher chlorine free residual of 1mg/L at the disinfection point.

During the reporting period, Power and Water conducted the routine *N. fowleri* monitoring program, collecting more than 290 samples from the major and minor centres of Alice Springs, Cox Peninsula, Darwin and Gunn Point, Katherine, Tennant Creek and Yulara. There were no *N. fowleri* detected in any centre.

There were no N. fowleri detected in any centre.

Health exceedances

A summary of the health data can be found in **Table 16. Tables 18-36** in **Appendix B**, show the results for health-related, aesthetic and other parameters for urban major and minor centres. One health exceedance occurred in this reporting period for nitrate in Ti Tree.

Nitrate

Nitrate concentrations in groundwater in the Northern Territory come from a variety of natural sources. Termite mounds, nitrogen fixing bacteria and plants contribute to the soil nitrate levels.

Nitrate concentration above 50mg/L are a health consideration for formula-fed infants younger than 3 months. Adults and children over 3 months can safely consume water with nitrate up to 100mg/L.

Ti Tree drinking water has an average nitrate concentration of 50mg/L and 95th percentile concentrations of 60mg/L. NT Health gives regular advice to Ti Tree customers that the water should not be used for bottle-fed infants, and Power and Water provides an alternative supply for these customers.

Power and Water is undertaking research on electrochemical water technology in Pmara Jutunta and if the trial is successful this technology may be considered suitable for removal of nitrates.

Other health parameters

Fluoride

Fluoride naturally occurs in groundwater supplies and is present in most food and beverage products, and in toothpaste. In the correct amounts, fluoride in drinking water helps build strong, healthy teeth that resist decay. The concentration of natural fluoride in Territory groundwater supplies depends on the type of soil and rock that the water comes into contact with.

Generally, surface water sources have low natural fluoride concentrations whereas groundwater sources may have relatively high levels. Fluoride concentrations in drinking water are recommended by the ADWG to not exceed 1.5mg/L. There were no fluoride exceedances across the major and minor urban centres for this reporting period. In 2022 Tennant Creek had an historical exceedance for fluoride (1.6mg/L).

Power and Water operates fluoridation systems for Darwin and Katherine customers. NT Health has a position statement noting the optimal fluoride concentration for water fluoridation is dependent on the average maximum air temperature. For average maximum air temperatures between 26.3°C and 32°C, the optimal fluoride concentration is between 0.6mg/L and 0.7mg/L. The 2 fluoridation plants target 0.6mg/L of fluoride in the water supply.

THMs

For this reporting period, THMs in all urban major and minor centres water supplies were assessed, showing levels below ADWG of 0.25mg/L. Darwin's surface water supply, had the highest THM levels of 0.097mg/L, due to organic carbon reacting with chlorine. Centres relying on groundwater which are lower in organic compounds also have lower THM concentrations, with a maximum of 0.013mg/L in this reporting period.

Pesticides

The pesticide monitoring program focuses on 50 commonly used pesticides, including glyphosate, organochlorine, organophosphate and triazine pesticides, insecticides and acidic herbicides. Although monitored for several years, pesticides have rarely been detected in Northern Territory water supplies, despite use in some areas. Due to these results, pesticide monitoring during 2022-2023 was restricted to Darwin and Katherine water supplies.

These supplies are considered potentially vulnerable to pesticide contamination with agricultural activities and rubbish dumping close to production bores and surface water sources. For this reporting period, no pesticides were detected in these areas.

Good management of surface water sources and bores reduces the risk of drinking water becoming contaminated with pesticides. Bores are required to be constructed to standards that ensure bore head integrity and prevent surface water (potentially containing pesticides) from entering the bore.



Craig, service delivery Katherine inspecting PFAS treatment plant

These supplies are considered potentially vulnerable to pesticide contamination with agricultural activities and rubbish dumping close to production bores and surface water sources. For this reporting period, no pesticides were detected in these areas.

Per- and poly-fluoroalkyl substances (PFAS)

PFAS has been detected in four water sources since investigative sampling kicked off in 2016 – Katherine, Pine Creek, Adelaide River and Batchelor. As soon as Power and Water were aware of the presence of this emerging contaminant, efforts have been made to reduce the detected concentration to as low as reasonably practicable.

In the case of Katherine, the groundwater supply was completely removed from production until treatment options were introduced to ensure PFAS was below guideline levels.

At Pine Creek, Adelaide River and Batchelor, bores have been taken offline to manage concentrations of PFAS. Bores with PFAS detected at elevated levels, approaching guideline values, have been removed from service, and sampling is undertaken at an increased frequency.

Lead

Lead is not routinely found in the source water across the Northern Territory and therefore not detected in most of the water samples collected. Where it was detected, it did not exceed the ADWG 0.01mg/L. Instead, lead can leach from common household plumbing materials due to corrosion of solder and brass fittings. A practical measure used to reduce lead contamination is to run taps and fittings after long periods of inactivity for about 2 seconds to flush them.



Engawala water storage tank

Radiological

Radiological assessments for all urban communities can be found in **Table 15** Appendix B. **These results show that all urban supplies have dose levels that are below 1mSv/year.**

The ADWG establishes clear procedures for calculating radiological doses, classifying response levels and describing operational and monitoring responses for each level. The majority of urban communities are in response level 1 (Dose Level < 0.3mSv/year). The response at this level is to continue routine monitoring.

Two urban centres are in response level 2 (Dose Level 0.3 – 1mSv/year): **Borrooloola** at 0.32 mSv/year and **Kings Canyon** at 0.91 mSv/year. At this response level, the ADWG recommendation is to consider increasing the frequency of monitoring in agreement with the relevant health authority.

The frequency of monitoring at Kings Canyon has been increased from quarterly to monthly to ensure that the radiation dose levels remain below the ADWG. Borrooloola's water supply has stable levels of natural occurring radionuclides and the frequency of monitoring has not been increased.

Table 4 – ADWG radiological response levels

Response level	Dose level (mSv/year)	Responses
1	<0.3	1. Gross alpha and gross beta screening values (corrected for Potassium-40) and/or the operational dose value are not exceeded. Continue routine monitoring.
2	0.3 to 1	1. Evaluate dose and if required, perform assessments based on local conditions. 2. Consider the need to increase the frequency of monitoring in agreement with relevant health authorities or drinking water regulators based on if the operational dose value is exceeded.
3	1 to 10	1. Consult with relevant health authorities or drinking water regulators. 2. Assess in detail possible protective measures e.g. remedial/protective actions, taking into account potential cost-effectiveness of actions. 3. Implement appropriate remedial/protective measures on the basis of the cost-benefit evaluation.
4	>10	1. Water not suitable for consumption on the basis of radioactivity levels. 2. Consult with relevant health authorities or drinking water regulators. 3. Intervention is expected and protective measures must be taken to reduce doses to below the reference level of 1 mSv/year.



Aesthetic exceedances

Aesthetic parameters are characteristics associated with the acceptability of water to the consumer in terms of appearance (colour), taste and odour of the water. The number of centres with exceedances of aesthetic parameters are summarised in **Table 5** adjacent.

Chloride

Chloride ions are found naturally in both surface water and ground waters sources. Chloride is produced when various salts dissolve in water e.g. sodium chloride (table salt). Groundwater typically has higher levels of chloride which are not easily removed with conventional water treatment, often requiring expensive reverse osmosis processes. There is no ADWG health based guideline for chloride, but for palatability (taste) the aesthetic guideline is 250mg/L. Chloride may also affect corrosion of pipes and fittings. Daly Waters was the only centre to exceed the aesthetic guideline with a chloride concentration of 280mg/L.

Table 5 – Number of centres with aesthetic exceedances

Parameter	Centres with exceedances
Chloride	1 out of 19
Chlorine-free	19 out of 19
Hardness	9 out of 19
Iron	1 out of 19
Silica	2 out of 19
Sodium	1 out of 19
TDS	4 out of 19
Zinc	1 out of 19



Tennant Creek 4ML water storage tank at sunrise

Chlorine Free

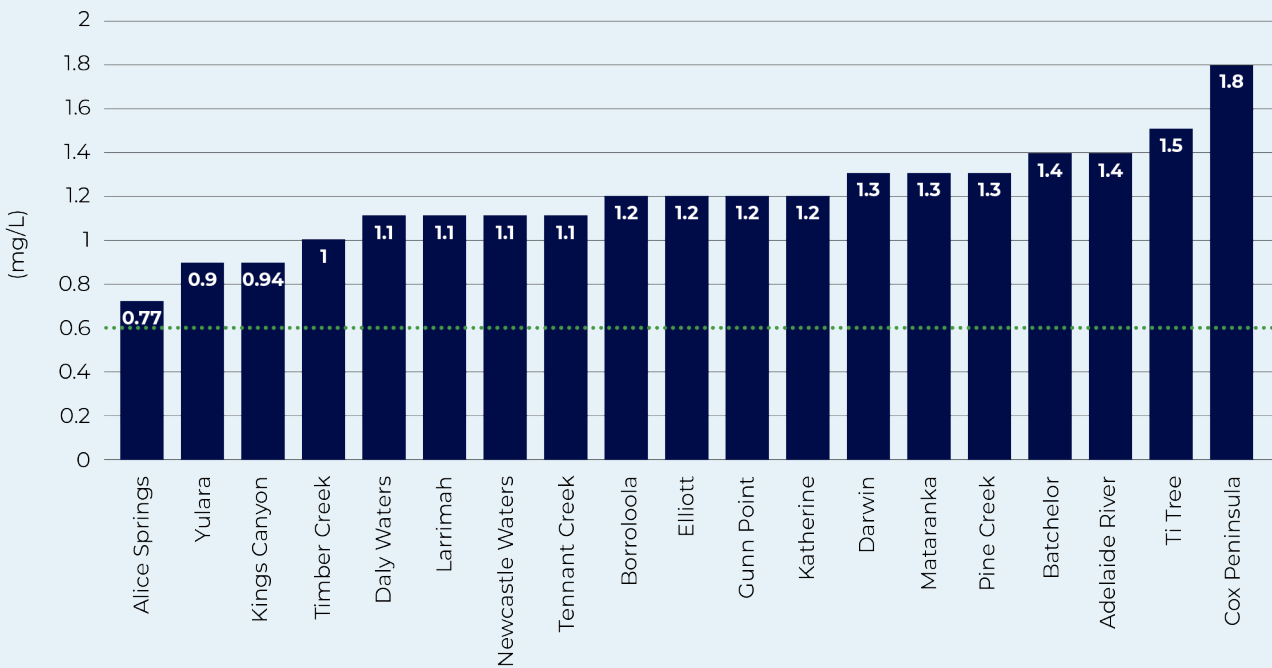
Chlorine has an odour threshold in drinking water of about 0.6mg/L (used as the aesthetic ADWG). However, some people are particularly sensitive and can detect amounts as low as 0.2mg/L. For health considerations ADWG is 5mg/L.

Figure 25 shows chlorine free residuals ranging from 0.77mg/L in Alice Springs to 1.8mg/L in Cox Peninsula.

Following initial disinfection, maintaining a chlorine free residual in the distribution system provides additional protection from potential contamination

(e.g. backflow), pipeline breaks and opportunistic pathogens. In general a chlorine free residual of between 0.2 and 0.5mg/L is adequate. However control of *N. fowleri* in warmer climates, requires a concentration of at least 0.5mg/L. For this reason Power and Water target a chlorine free residual of at least 1mg/L at the disinfection point to ensure a safe water supply and maintain adequate chlorine residual levels all the way to the customer. This results in the odour threshold value of 0.6 mg/L being exceeded for most centres, but the priority for Power and Water is provision of drinking water free of pathogens.

Figure 25 – Urban centres with average chlorine free residuals greater than ADWG (0.6mg/L)



Hardness

Hardness is primarily the amount of calcium and magnesium ions in water and is expressed as a CaCO₃ equivalent. Soft water or water low in total calcium and magnesium ions may also cause corrosion in pipes, although this will depend on other physical and chemical characteristics such as pH, alkalinity and dissolved oxygen. The ADWG recommend hardness levels below 200mg/L to minimise scaling in hot water systems. Hard water or water with CaCO₃ levels above 500mg/L may lead to excessive scaling of pipes, taps and fittings. High hardness requires more soap to achieve a lather and can impact infrastructure and kitchen appliances such as kettles.

Figure 26 shows the average hardness for all urban centres on the ADWG degree of hardness scale. This identifies centres such as Cox Peninsula, Gunn Point and Darwin as having soft water and at the other end of the scale centres such as Larrimah and Daly Waters as having high hardness and potential for severe scaling. Urban centres with good quality hardness include Borroloola, Katherine, Pine Creek Adelaide River, Tennant Creek and Batchelor. Centres such as Darwin and Katherine use blending of surface and groundwater to balance hardness. In Borroloola mineral filters balance pH and hardness levels.

Table 6 – ADWG degrees of hardness

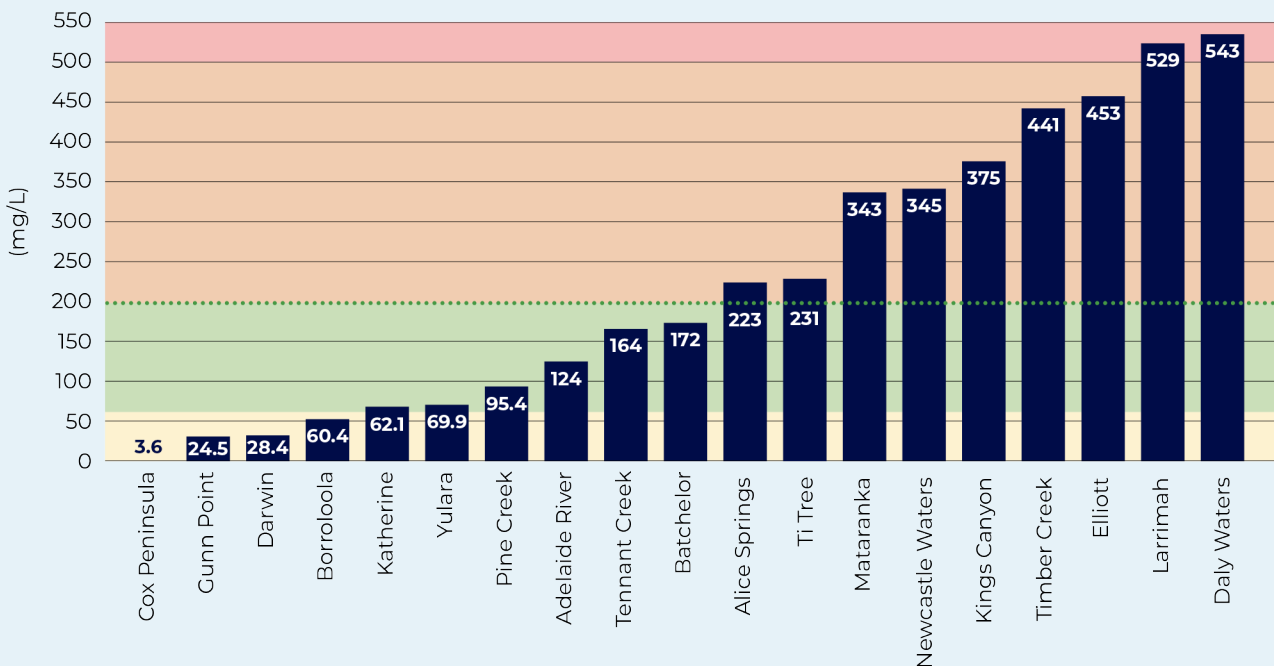
mg/L	Hardness
<60	Soft but possibly corrosive
60-200	Good quality
200-500	Increasing scaling problems
>500	Severe Scaling

Iron

Iron has a taste threshold of about 0.3mg/L in water and becomes undesirable above 3mg/L.

High iron concentrations give water a rust-brown appearance and can stain laundry and plumbing fittings. Options for reducing iron levels include preferencing water sources low in iron, blending, infrastructure changes to maximise iron oxidation and settling, as well as water treatment options such as filtration. Flushing of distribution systems can significantly impact the iron levels supplied to the community. Gunn Point was the only centre to exceed the aesthetic guideline with an iron concentration of 0.32mg/L.

Figure 26 – Average hardness across all urban centres against ADWG (200mg/L) degrees of hardness



pH

Based on the need to reduce corrosion and encrustation in pipes and fittings, the pH of drinking water should be between 6.5 and 8.5, per ADWG. Typically, groundwater supplies near the coast are described as corrosive (low pH), as the water is drawn from relatively shallow aquifers and has naturally low pH and hardness levels. Whilst somewhat corrosive, the disinfection properties of chlorine tend to be more effective at low pH values. For comparison orange juice has a pH of 3.8 and some carbonated soft drinks have a pH of 2.5. **Figure 27** shows the range of pH across the urban major and minor centres.

Silica

Like manganese, silica, or silicon dioxide, occurs naturally in groundwater. Dissolved silica can deposit on surfaces such as glass and metals resulting in silica build-up. To minimise this undesirable scale, the concentration of silica in drinking water is recommended by the ADWG to not exceed 80mg/L. **Figure 28** shows the concentration of Silica in Tennant Creek and Ti Tree that exceeds the ADWG.

Figure 28 – Centres with silica levels greater than ADWG (80mg/L)

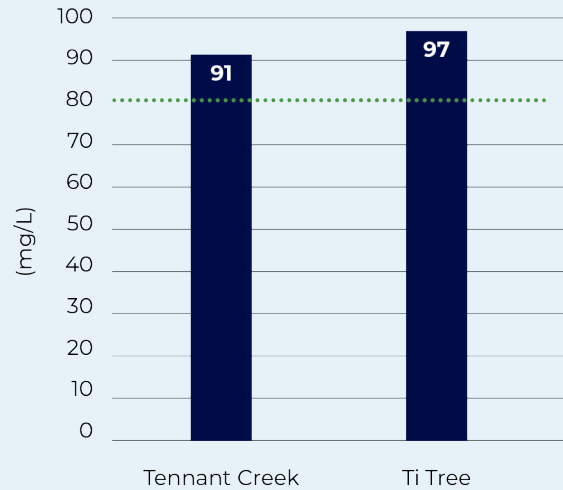
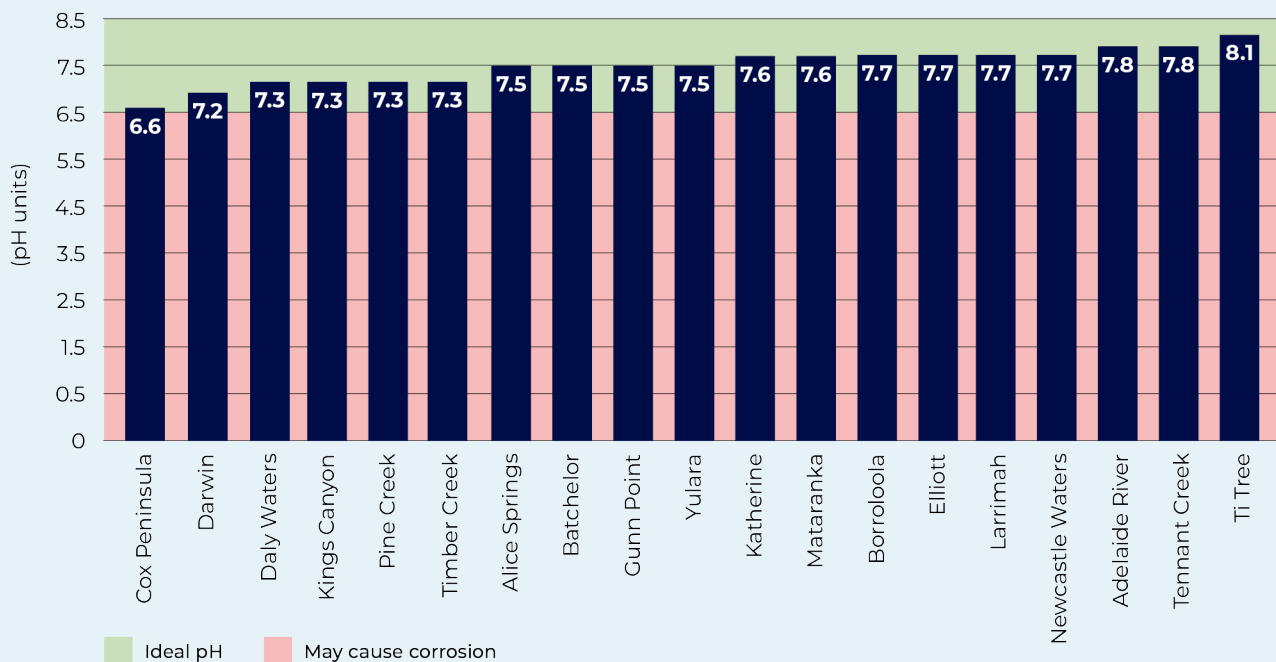


Figure 27 – Urban centres pH levels compared to ADWG (6.5-8.5)



Sodium

Sodium concentration in drinking water is recommended by the ADWG to not exceed 180mg/L to avoid salty tasting water. The sodium ion is widespread in water due to the high solubility of sodium salts and the abundance of mineral deposits. Daly Waters was the only centre to exceed the ADWG with a concentration of 196mg/L.

TDS

TDS affects how water tastes i.e. palatability. Water with low TDS can taste flat while water with TDS above 600mg/L can taste salty.

TDS is comprised of inorganic salts and small amounts of organic matter dissolved in water: sodium, potassium, calcium, magnesium, chloride, sulphate, bicarbonate, carbonate, silica, organic matter, fluoride, iron, manganese, nitrate and phosphate. It can co-occur with high hardness e.g. centres such as Larrimah and Daly Waters.

Figure 29 shows average TDS ranging from 30mg/L in Cox Peninsula (Good) to 1170mg/L in Daly Waters (Poor). No urban centres had unpalatable levels of TDS greater than 1200mg/L. The majority of urban centres have good TDS < 600mg/L. Elliott and Kings Canyon have Fair TDS, while Larrimah and Daly Waters have Poor TDS. There are no urban centres with unacceptable TDS levels.

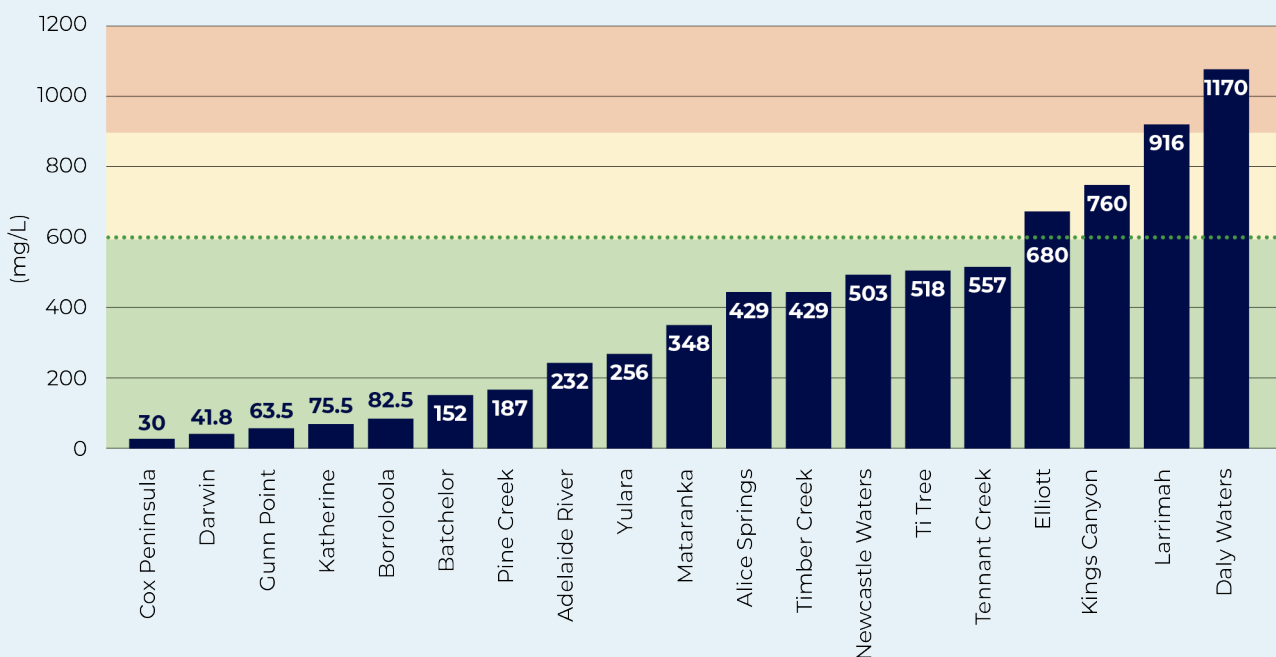
Zinc

ADWG's for zinc relate to a taste threshold (3mg/L). In surface and ground waters, the concentration of zinc from natural leaching is usually less than 0.01 mg/L. Tap water can contain much higher concentrations as a result of corrosion of zinc-coated pipes and fittings. Gunn Point was the only centre to exceed the ADWG for Zinc (3.2mg/L).

Table 7 – ADWG TDS levels of palatability

TDS (mg/L)	Palatability
0-600	Good
600-900	Fair
900-1200	Poor
>1200	Unacceptable (unpalatable)

Figure 29 – Average TDS across all urban centres against ADWG (600mg/L) TDS levels of palatability



Customer satisfaction

Monitoring customer observations and complaints can provide valuable information on potential problems that may not have been identified by performance monitoring of the water supply system.

Customers usually log observations and concerns on water quality through our call centre, which is attended to on priority by our field technicians. The majority of these observations are related to discoloured water due to repairs within the area or weather related and usually clear up naturally or are assisted by flushing the water supply system.

Where a customer raises a complaint, it is generally around the aesthetic quality of the water such as appearance, taste or odour. Typically, complaints relate to issues that might be observed more than once, and these are investigated by our water quality team. Water samples are collected for analysis where required and reported back to the customer. Like other Australian drinking water providers, Power and Water records all water quality complaints made by its customers and reports them to the National Water Commission for the National Performance Report.

For 2022-2023 there were a total of 138 observations of water quality faults logged and 16 complaints. The majority of these were for the Darwin region.

The trend for faults and complaints in **Figure 30** show that most are recorded during the wet season, corresponding with rainfall. This is expected due to stratification, where layers can develop, creating different profiles within the body of water and result in sudden changes in water quality.

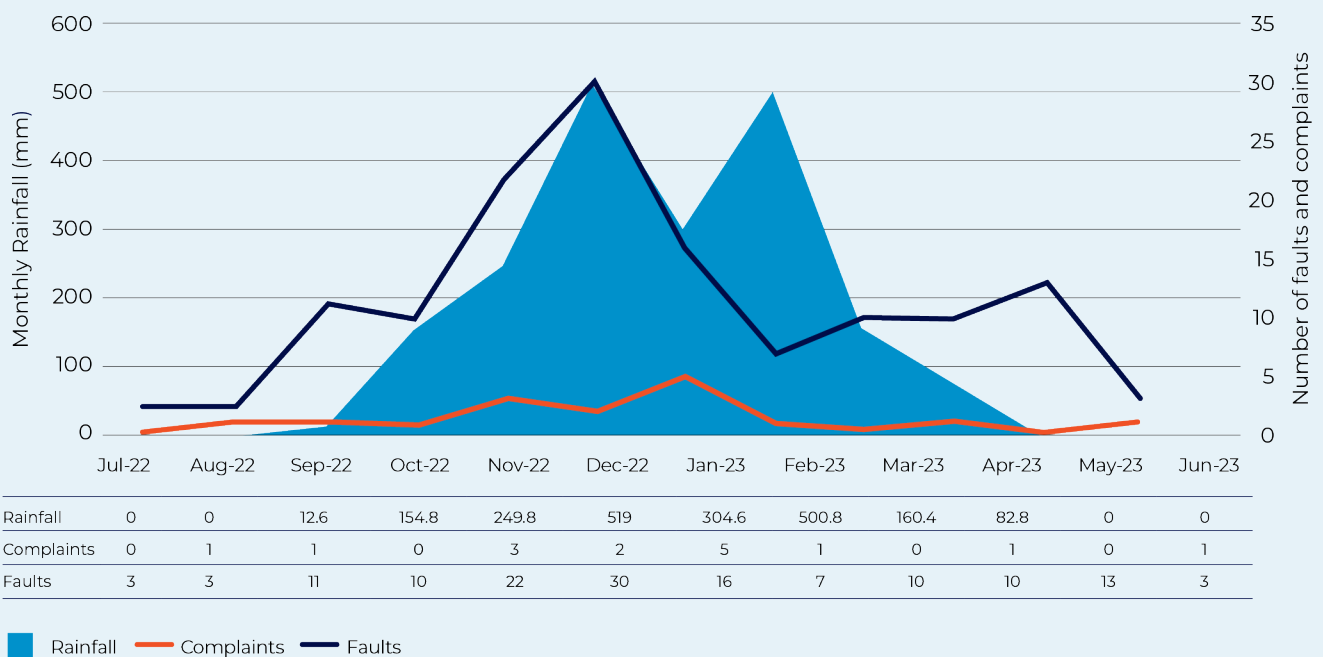
For the Darwin River Reservoir, destratification occurs once the surface temperature cools during a monsoonal event or when the dry season trade winds and cool nights arrive. The layers mix and produce discoloured water throughout the reservoir. Low quality anoxic water (water with no dissolved oxygen) from the depths of the reservoir mixes with the surface water and is drawn into the supply. Iron and manganese entering the distribution system oxidise and precipitate out of solution, creating discoloured water.

Notifications about stratification events are regularly posted on our website, Facebook and X (Twitter) to keep customers informed.

Demand management

The Living Water Smart Program continues to support economic growth in the Darwin region by promoting sustainable water demand, with more than 500ML of water savings achieved during 2022-2023.

Figure 30 – Trend showing rainfall and number of faults and complaints for northern urban centres





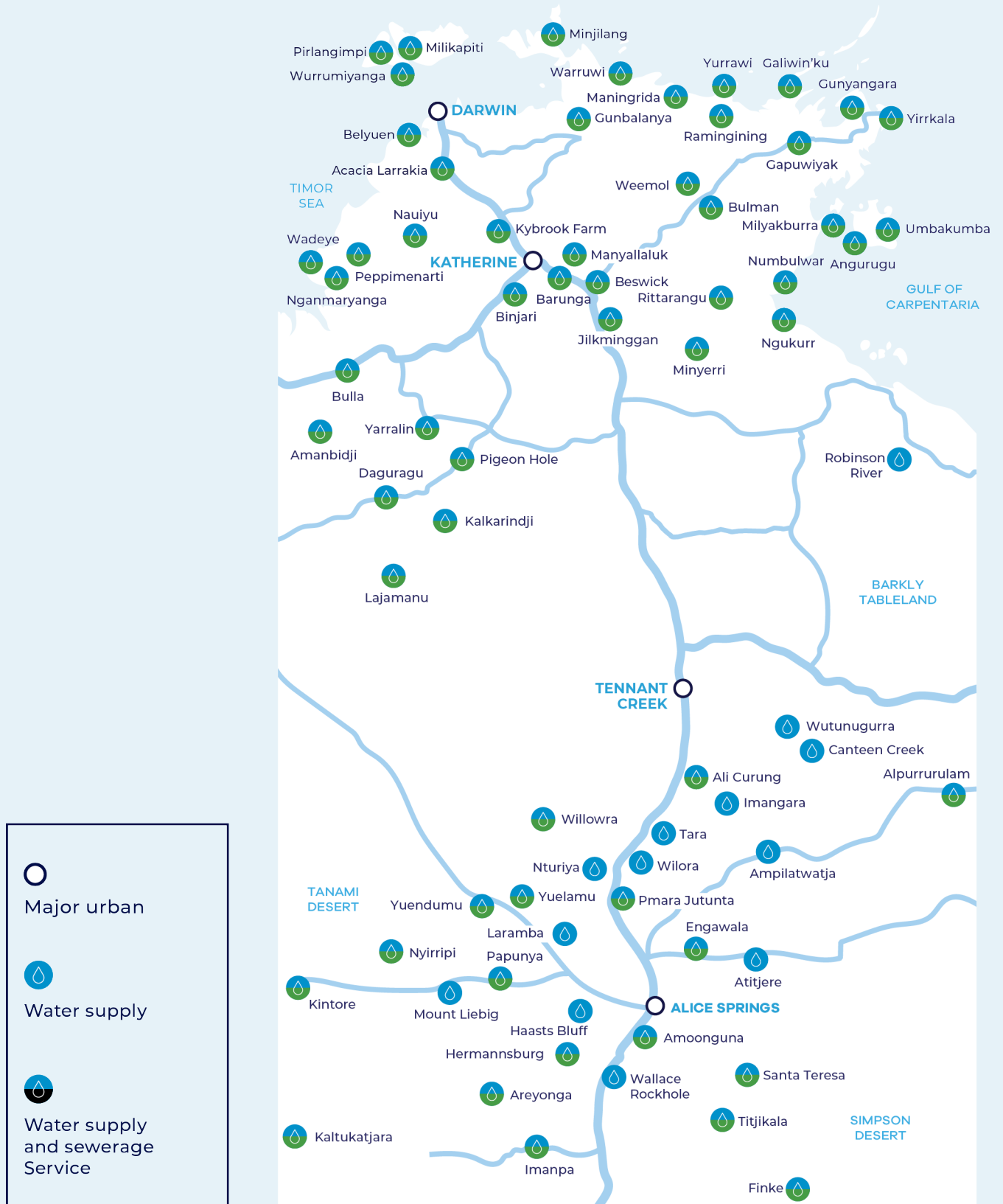
Darwin River dam spillway overflowing during the wet season

Part B

Remote communities



Figure 31 – Drinking water supply systems in remote communities





Cail, engaging with customers in Warruwi on water demand

Your Drinking Water Profile

This section of the report summarises the drinking water quality assessments for all remote communities in a transparent way for our customers.

The profiles provide a visual overview of the drinking water quality of your community including microbial detections and any exceedances of the health or aesthetic guideline values of the ADWG. The presence or absence of *E. coli* is the primary microbiological indicator.

Different communities can have varied monitoring requirements due to localised conditions, hence the number of monitoring parameters may be different per profile.

The drinking water quality monitoring program was mostly implemented. Some water quality parameters for the communities of Amoonguna, Barunga, Finke, Hermannsburg, Kaltukatjara, Maningrida, Santa Teresa, Titjikala and Wadeye were not captured within the 2022-2023 reporting period and are displayed as not measured within your profile. Power and Water have reviewed the causes of the missed samples for each community and are taking all appropriate measures to ensure all communities are sampled as per our commitments under the approved monitoring program for the 2023-24 report.

The data presented in Appendix C for these communities are from the previous reporting period (2021-2022). The water quality results for these communities had no health exceedances. However, there were some aesthetic exceedances for chlorine, hardness, iron and pH.

The remote community profiles show:

- i) Four *E. coli* detections in; Maningrida, Nturiya, Pigeon Hole and Ramingining. Pigeon Hole was the only confirmed detection, which occurred due to an extreme flooding event. A boiled water advice was issued by NT Health.
- ii) Health parameters not met include; Alpururulam (fluoride 1.7mg/L), Beswick (antimony 0.009mg/L), Bulla (barium 20mg/L), Laramba (uranium 0.04mg/L), Nauiyu (manganese 3mg/L), Nyrippi (fluoride 1.7mg/L).
- iii) Across the 72 remote communities multiple aesthetic parameters were not met, most commonly chlorine.

All exceedances are described in more detail in 'your drinking water characteristics' or refer to individual water quality assessments in **Appendix C**.

Figure 32 – Acacia Larrakia drinking water profile

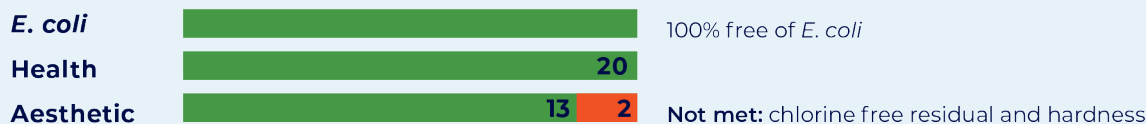


Figure 33 – Alpururulam drinking water profile

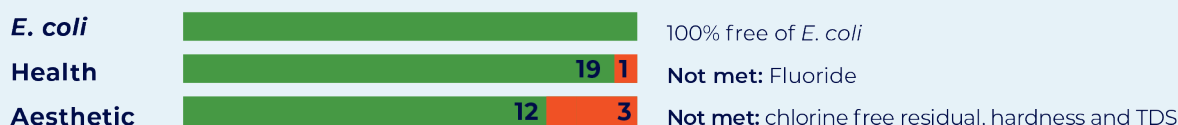


Figure 34 – Ali Curung drinking water profile

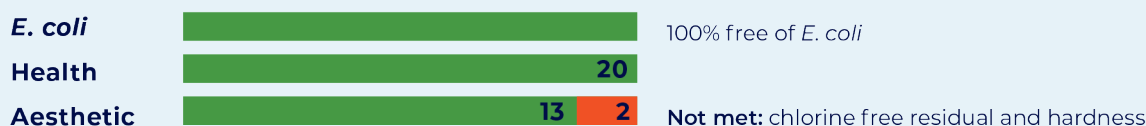


Figure 35 – Amanbidji drinking water profile

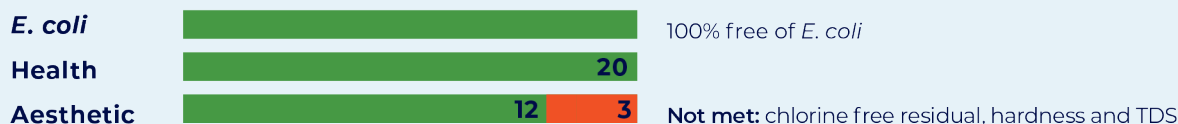


Figure 36 – Amoonguna* drinking water profile

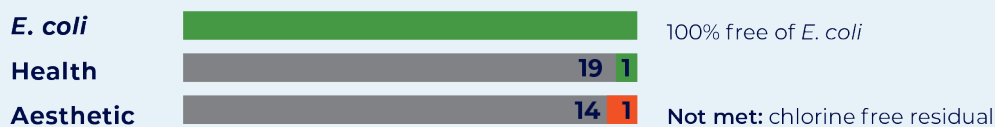
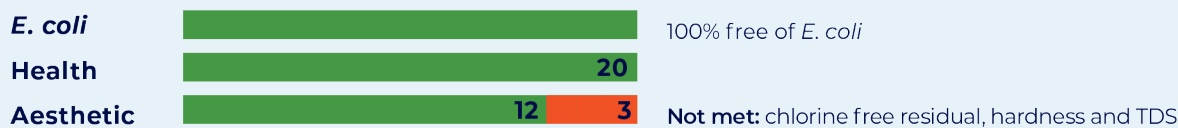


Figure 37 – Ampilatwatja drinking water profile



*Communities with a number of parameters not measured for 2022-2023 reporting period



Figure 38 – Angurugu drinking water profile

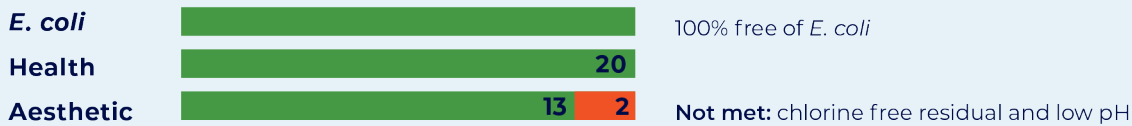


Figure 39 – Areyonga drinking water profile

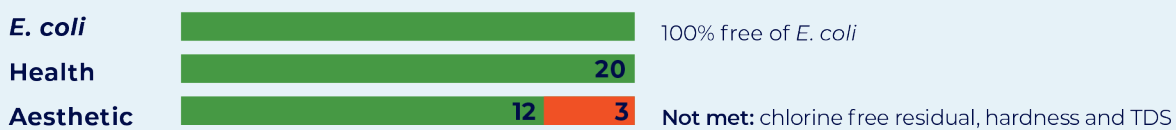


Figure 40 – Atitjere drinking water profile

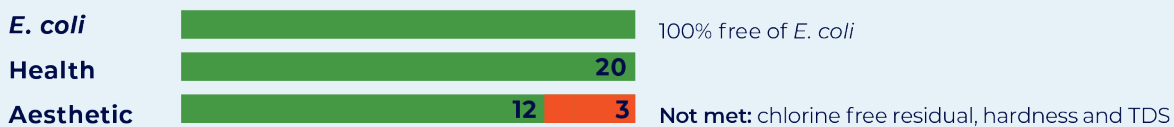


Figure 41 – Barunga* drinking water profile



Figure 42 – Belyuen drinking water profile

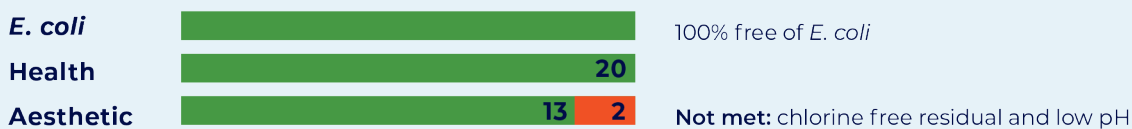
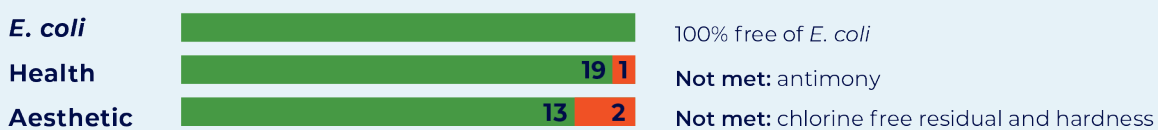


Figure 43 – Beswick drinking water profile



*Communities with a number of parameters not measured for 2022-2023 reporting period



Figure 44 – Binjari drinking water profile

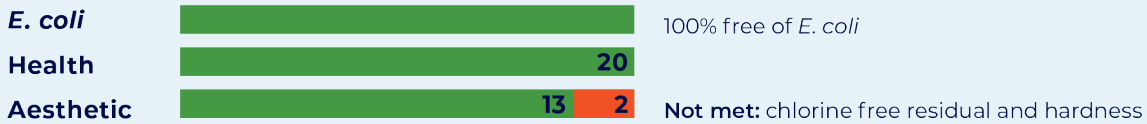


Figure 45 – Bulla drinking water profile

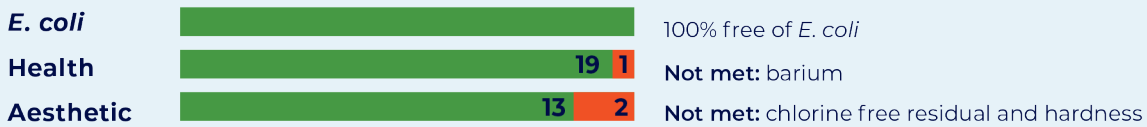


Figure 46 – Bulman drinking water profile

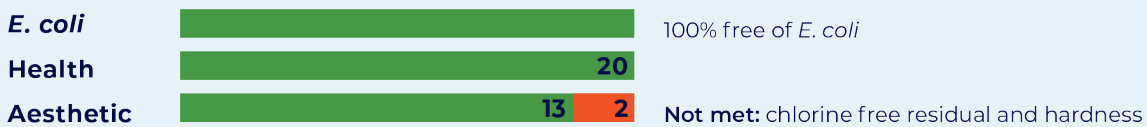


Figure 47 – Canteen Creek drinking water profile

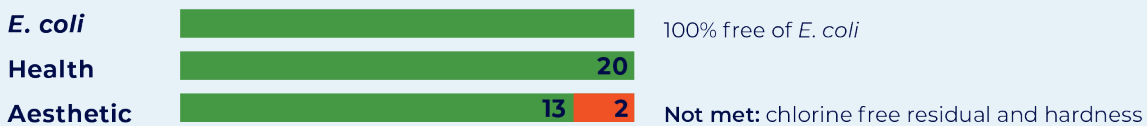


Figure 48 – Daguragu drinking water profile

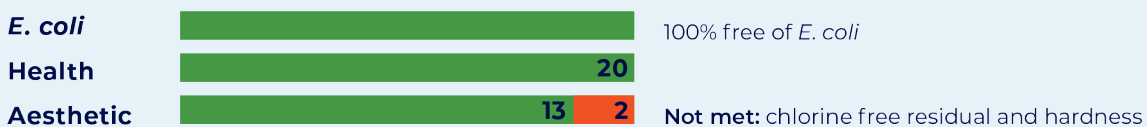
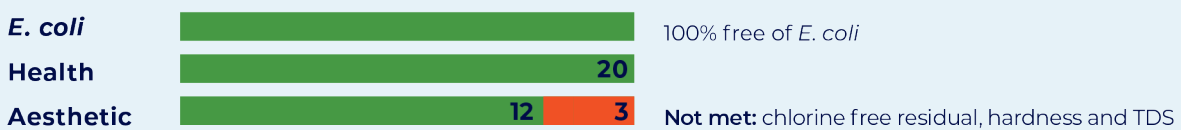


Figure 49 – Engawala drinking water profile



*Communities with a number of parameters not measured for 2022-2023 reporting period



Figure 50 – Finke* drinking water profile

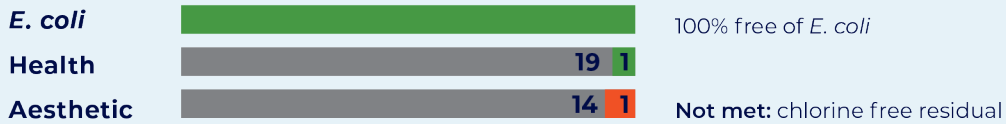


Figure 51 – Galiwinku drinking water profile

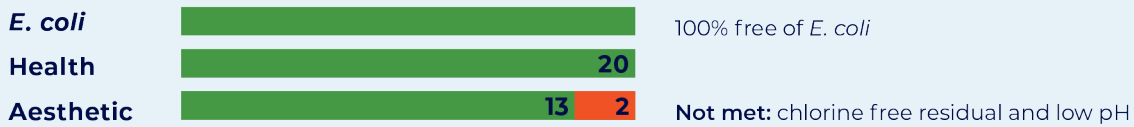


Figure 52 – Gapuwiyak drinking water profile

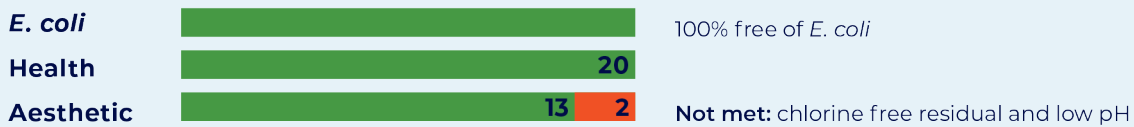


Figure 53 – Gunbalanya drinking water profile

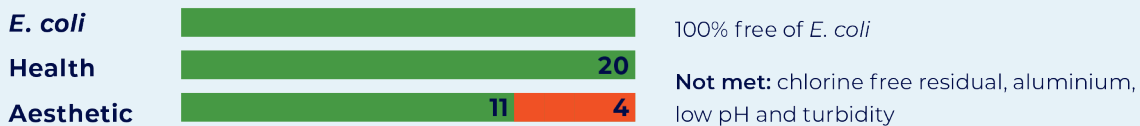


Figure 54 – Gnyangara drinking water profile



Figure 55 – Haasts Bluff drinking water profile



*Communities with a number of parameters not measured for 2022-2023 reporting period

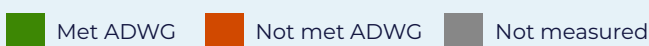


Figure 56 – Hermannsburg* drinking water profile

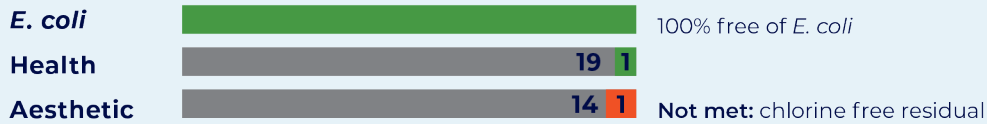


Figure 57 – Imangara drinking water profile

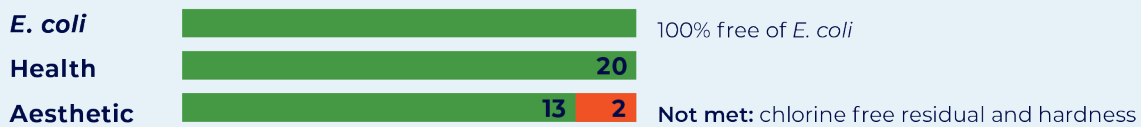


Figure 58 – Imanpa drinking water profile

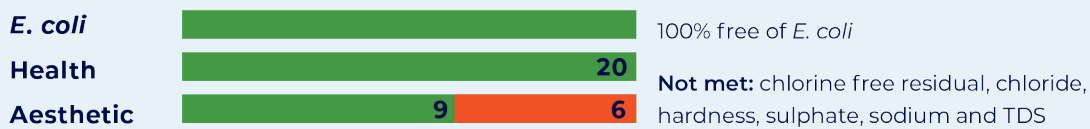


Figure 59 – Jilkminggan drinking water profile



Figure 60 – Kalkarindji drinking water profile

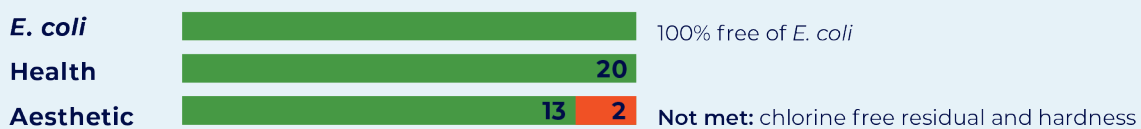


Figure 61 – Kaltukatjara* drinking water profile



*Communities with a number of parameters not measured for 2022-2023 reporting period



Figure 62 – Kintore drinking water profile

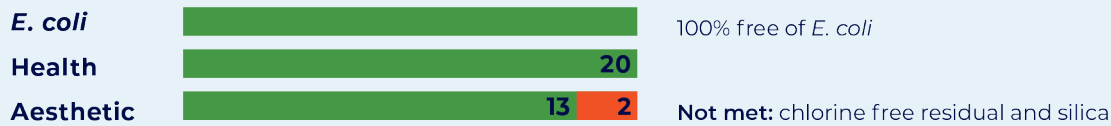


Figure 63 – Kybrook Farm drinking water profile



Figure 64 – Lajamanu drinking water profile

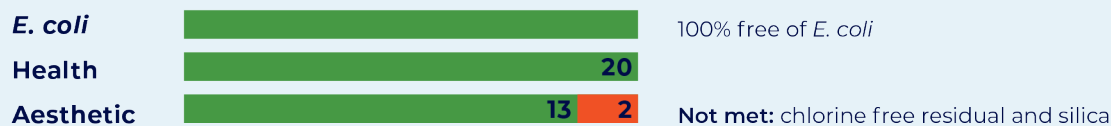


Figure 65 – Laramba drinking water profile

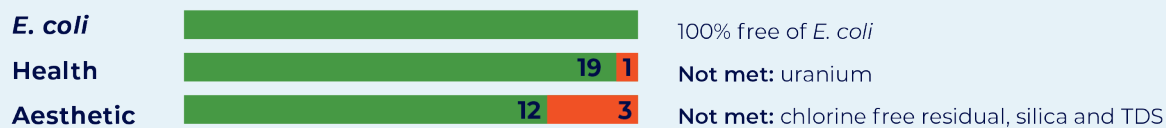


Figure 66 – Maningrida* drinking water profile

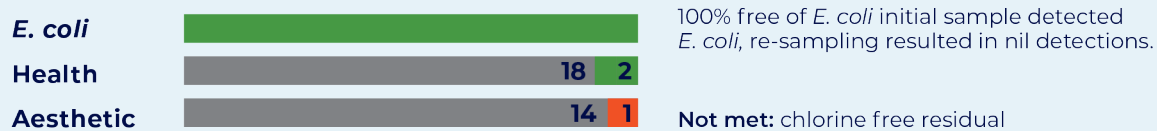
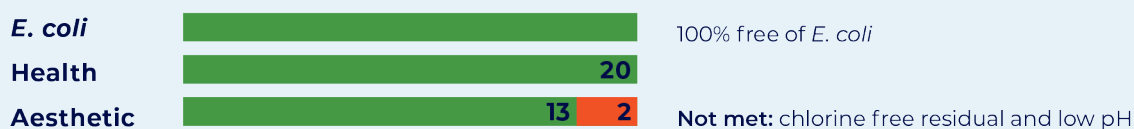


Figure 67 – Manyallaluk drinking water profile



*Communities with a number of parameters not measured for 2022-2023 reporting period



Figure 68 – Milikapiti drinking water profile

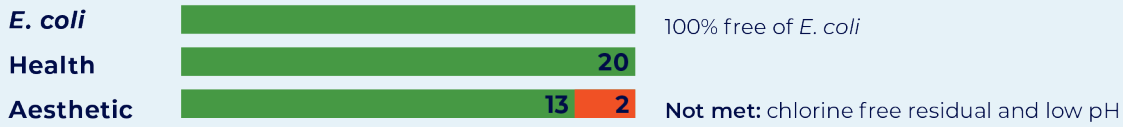


Figure 69 – Milingimbi drinking water profile

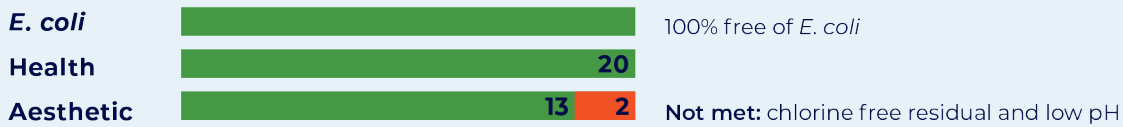


Figure 70 – Milyakburra drinking water profile

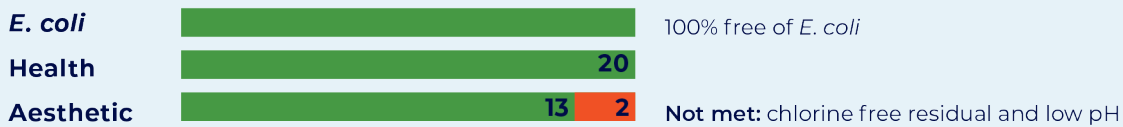


Figure 71 – Minjilang drinking water profile

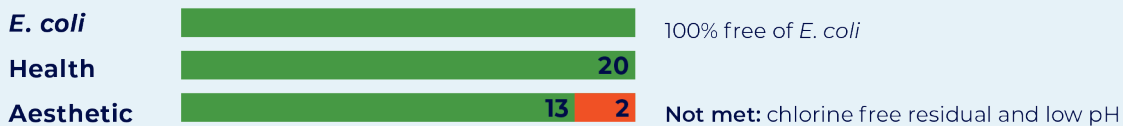


Figure 72 – Minyerri drinking water profile

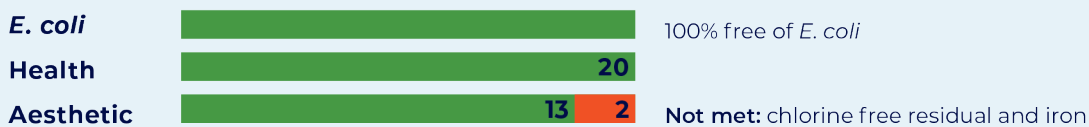


Figure 73 – Mt Liebig drinking water profile



*Communities with a number of parameters not measured for 2022-2023 reporting period



Figure 74 – Nauiyu drinking water profile



Figure 75 – Nganmariyanga drinking water profile

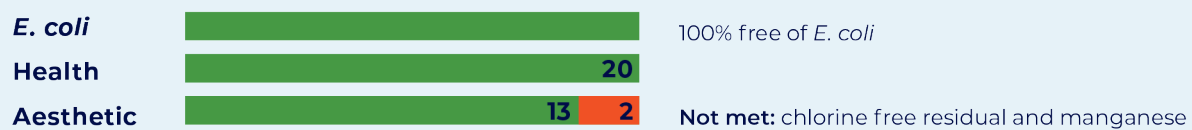


Figure 76 – Ngukurr drinking water profile

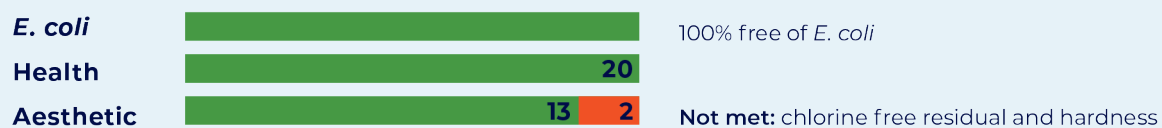


Figure 77 – Nturiya drinking water profile

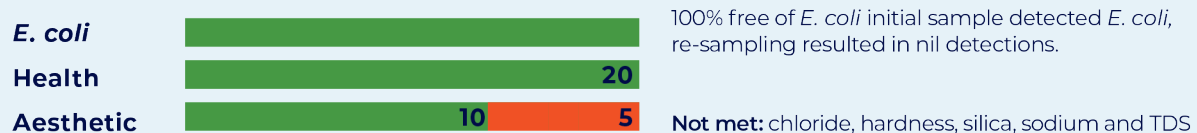


Figure 78 – Numbulwar drinking water profile

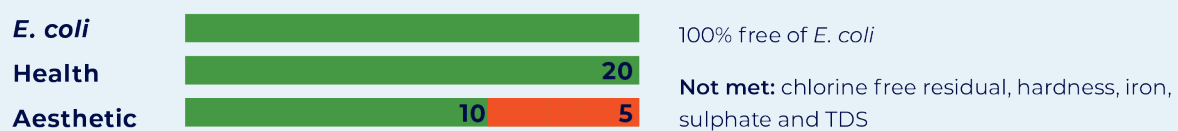


Figure 79 – Nyirripi drinking water profile



*Communities with a number of parameters not measured for 2022-2023 reporting period

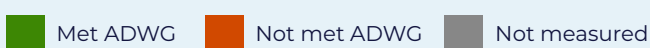


Figure 80 – Papunya drinking water profile



Figure 81 – Peppimenarti drinking water profile

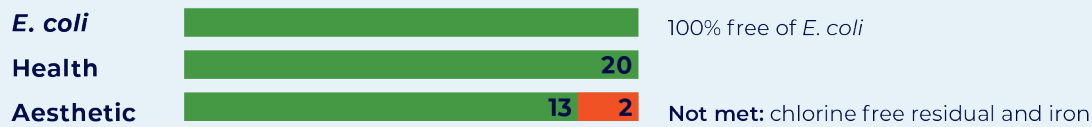


Figure 82 – Pigeon Hole drinking water profile

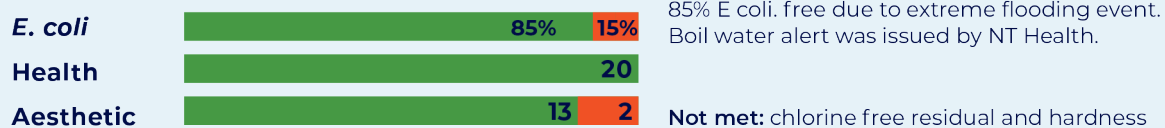


Figure 83 – Pirlangimpi drinking water profile

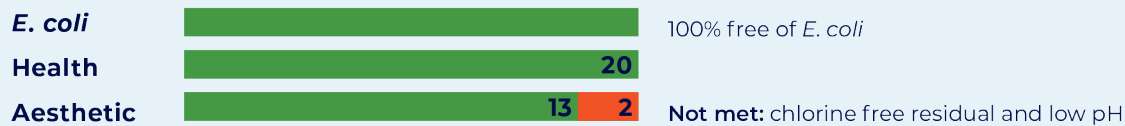


Figure 84 – Pmara Jutunta drinking water profile

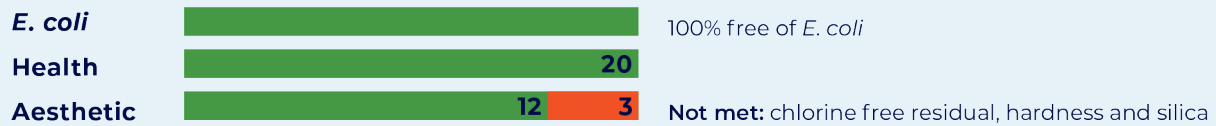
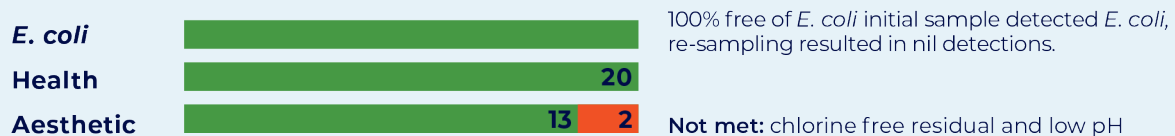


Figure 85 – Ramingining drinking water profile



*Communities with a number of parameters not measured for 2022-2023 reporting period

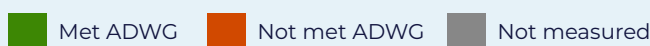


Figure 86 – Rittarangu drinking water profile

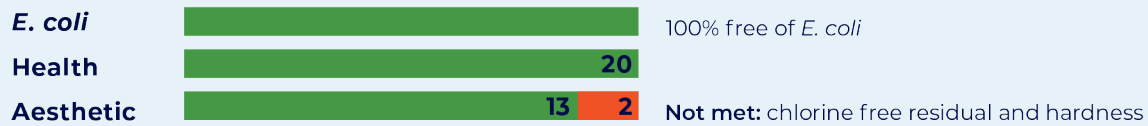


Figure 87 – Robinson River drinking water profile

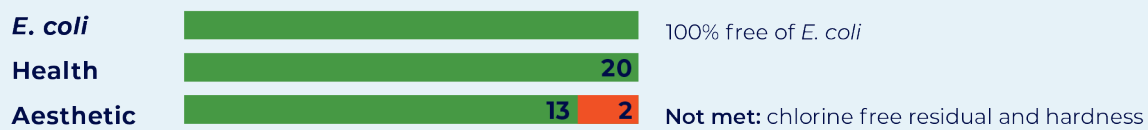


Figure 88 – Santa Teresa* drinking water profile

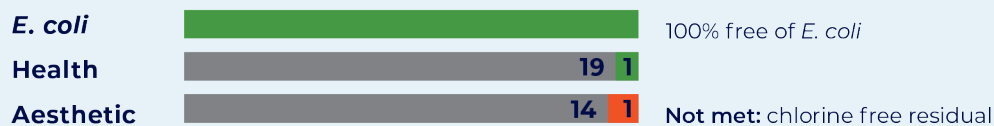


Figure 89 – Tara drinking water profile

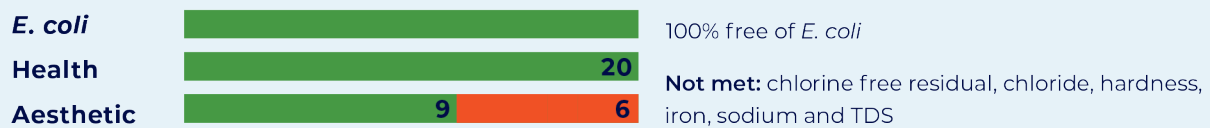
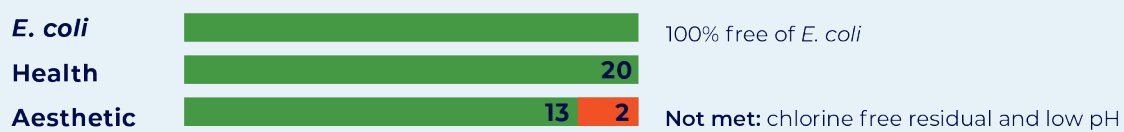


Figure 90 – Titjikala* drinking water profile



Figure 91 – Umbakumba drinking water profile



*Communities with a number of parameters not measured for 2022-2023 reporting period



Figure 92 – Wadeye* drinking water profile



Figure 93 – Wallace Rockhole drinking water profile

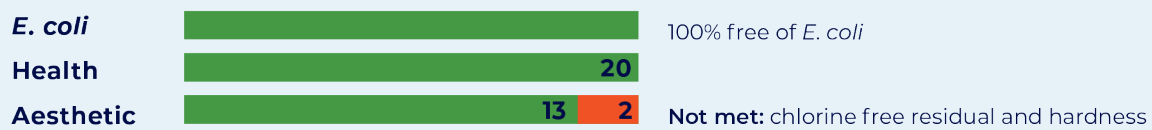


Figure 94 – Warruwi drinking water profile

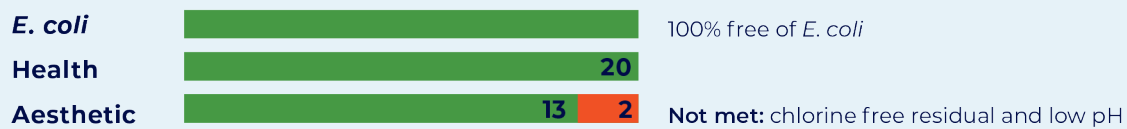


Figure 95 – Weemol drinking water profile

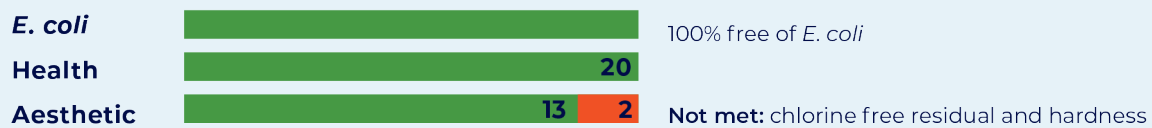


Figure 96 – Willowra drinking water profile



Figure 97 – Wilora drinking water profile



*Communities with a number of parameters not measured for 2022-2023 reporting period



Figure 98 – Wurrumiyanga drinking water profile

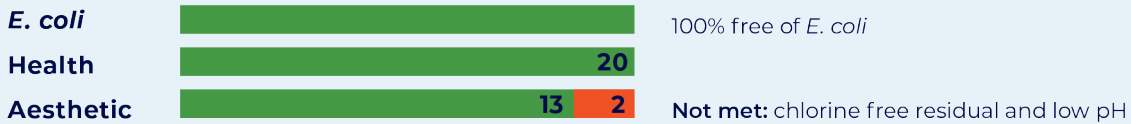


Figure 99 – Wutunugurra drinking water profile



Figure 100 – Yarralin drinking water profile

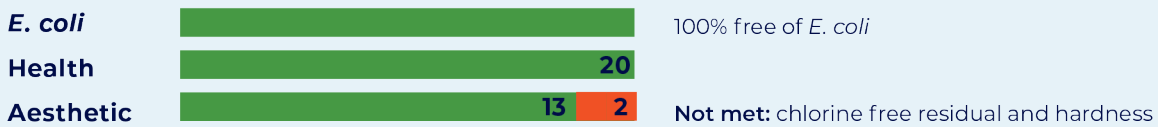


Figure 101 – Yirrkala drinking water profile

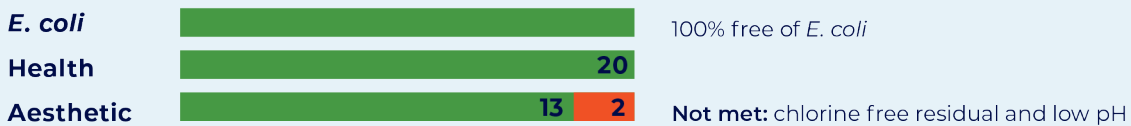



Figure 102 – Yuelamu drinking water profile



Figure 103 – Yuendumu drinking water profile



*Communities with a number of parameters not measured for 2022-2023 reporting period

 Met ADWG  Not met ADWG  Not measured



Galiwinku (Elcho Island) water storage tanks

Your Drinking Water Characteristics

Microbiological

Monitoring

Bacterial indicators are used for verifying the effectiveness of treatment and to assess the microbiological cleanliness of the water.

Monitoring for indicator bacteria provides a useful way to verify that the barriers to protect public health are working effectively.

Monitoring program

Power and Water's drinking water monitoring program requires samples, representative of the quality of water supplied to consumers, be collected and analysed for *E. coli* at a minimum frequency. The data assessment from this monitoring are used to demonstrate compliance and are reported as verification of the microbiological quality.

Operational monitoring for bacteria provides the detailed information needed to maintain a treatment process within defined parameters (process control). The sample collection performance for individual communities for the 2022-2023 reporting period is presented in **Table 37** in the appendices.

Limitations of monitoring

Microbiological verification monitoring is not intended to provide an absolute measure of safety because of the inherent sampling and analysis limitations. Samples only ever represent a small percentage of the total water consumed. Analytical methods take substantial time to produce a result, which means the water is already consumed before a result is received.

Compliance performance

Performance can be regarded as satisfactory if over the preceding 12 months:

- At least the minimum number of programmed samples has been tested for *E. coli*
- Samples tested are representative of the quality of water supplied to consumers
- No samples had *E. coli* detections.

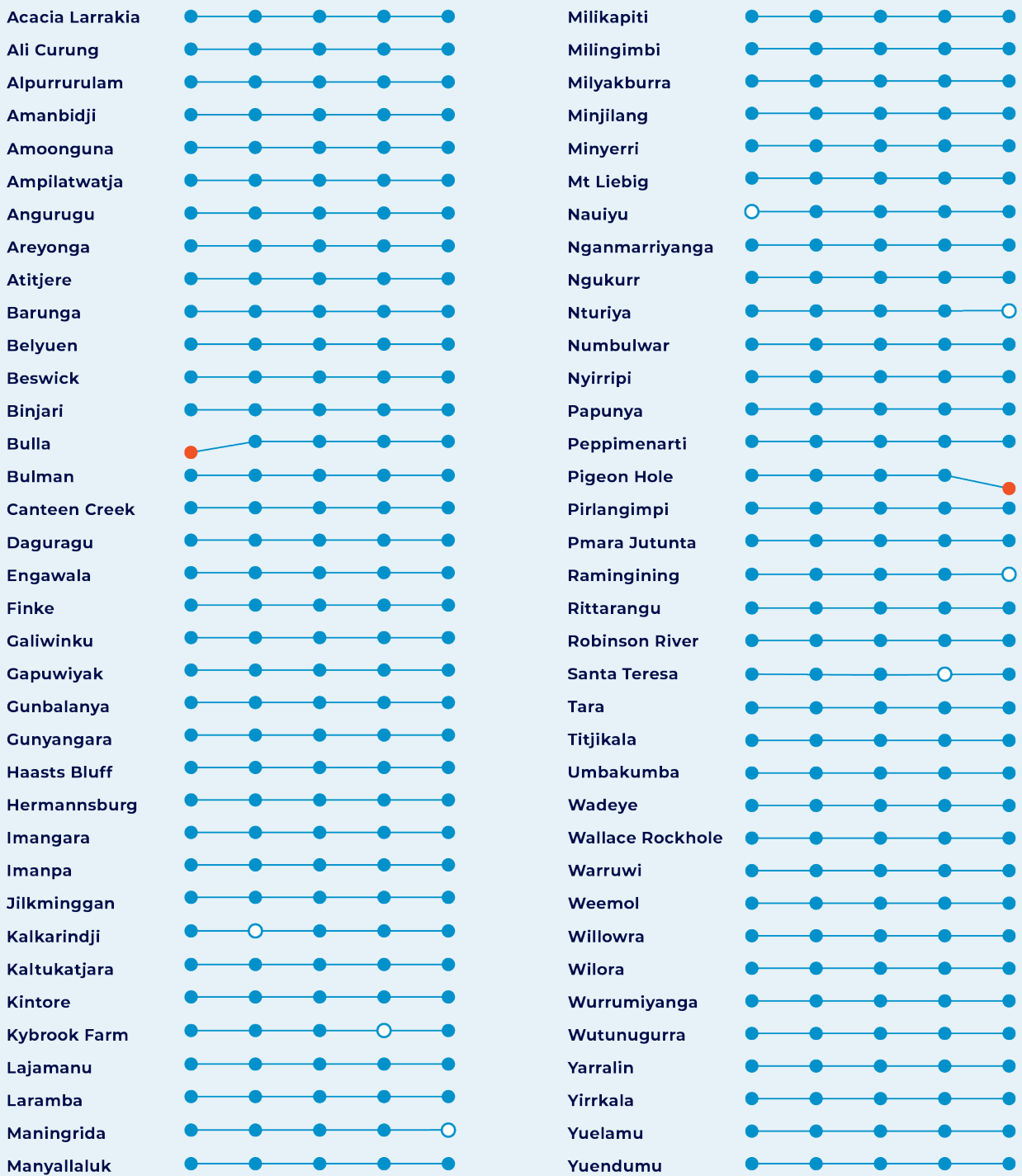
Figure 104 shows where *E. coli* was detected by community in the last 5 years. Red markers indicate less than 100% for that year i.e. there was at least 1 *E. coli* detection. During the 2022-2023 reporting period, *E. coli* was detected in 4 remote communities, Maningrida, Nturiya, Pigeon Hole and Ramingining. Follow up *E. coli* sampling resulted in no detection for 3 of the 4 communities.

E. coli detection at Pigeon Hole

During an extreme flooding event, power was lost to the disinfection system causing raw water being supplied to community. Due to this event a Boil Water advice was issued by NT Health. After power was restored, retesting was carried out with a result = <1.0 MPN/100mL.

During the 2022-2023 reporting period, E. coli was detected in 4 remote communities, Maningrida, Nturiya, Pigeon Hole and Ramingining. Follow up E. coli sampling resulted in no detection for 3 of the 4 communities.

Figure 104 – *E. coli* detections by community from 2019 (left dot) to 2023 (right dot)



● No *E. coli* detected for reporting period ○ Detection of *E. coli* was not verified when re-sampled
 ● At least one *E. coli* detection for reporting period



Simon, water & sewer technician Alice Springs

Health exceedances

Tables 44-115 in Appendix C, show the results for health-related, aesthetic and other parameters for remote communities. A summary of the health data by region can be found in Tables 39-42. There were 6 health exceedances across 6 different communities for this reporting period, shown in Table 8.

Table 8 – Health exceedances in remote communities

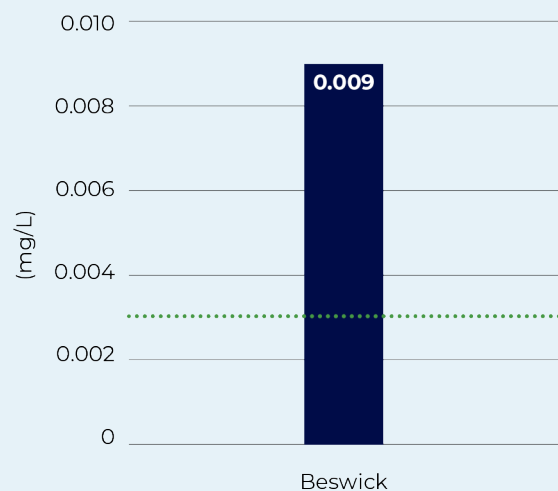
Centre	Parameter	GV* (mg/L)	Value (mg/L)
Beswick	Antimony	0.003	0.009
Bulla	Barium	2	20
Alpurrurulam	Fluoride	1.5	1.7
Nyirripi	Fluoride	1.5	1.7
Naiyu	Manganese	0.5	3
Laramba	Uranium	0.02	0.04

* Guideline value

Antimony

Antimony occurs naturally in the ground and through the dissolution of minerals and ores in the water. Antimony concentrations in drinking water are recommended by the ADWG to not exceed 0.003mg/L. Testing showed that 71 of 72 communities were below this guideline. Beswick returned concentrations between 0.007-0.009mg/L for the reporting period, with increased samples collected on a quarterly basis to monitor the antimony levels in Beswick's water supply. An alternative source with preferential quality will be included in a funding submission to the National Water Grid Authority.

Figure 105 – Antimony level in Beswick compared to ADWG (0.003mg/L)





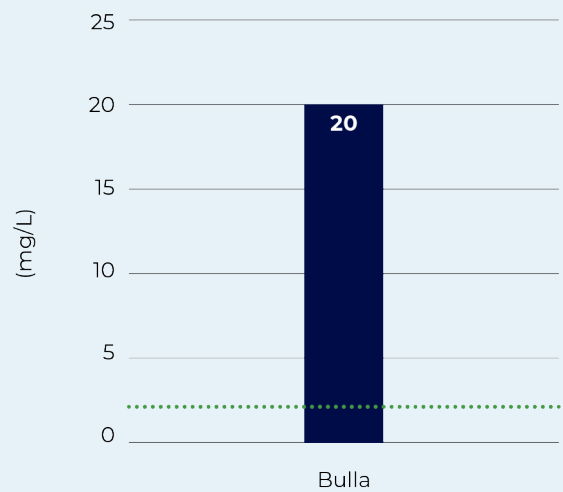
Pmara Jutunta bore

Barium

Barium occurs naturally in the ground and through the dissolution of minerals and ores in the water. Barium concentrations in drinking water are recommended by the ADWG to not exceed 2mg/L. Testing showed that 71 of 72 communities were below this guideline. For this reporting period, barium levels in Bulla ranged between 0.2mg/L and 20mg/L (average 10mg/L). Because of the naturally high levels of barium in the groundwater, samples are being collected on a monthly basis to monitor levels in the water supply.

Under normal operations, when surface water treatment is possible, blending of groundwater with surface water maintains barium levels below the ADWG. This minimises exposure to barium through drinking water. However, surface water cannot be used in situations where the surface water treatment system is offline. This can occur due to flooding in the river or technical issues with the treatment system.

Figure 106 – Barium level in Bulla compared to ADWG (2mg/L)



Fluoride

Fluoride naturally occurs in groundwater supplies and is present in most food and beverage products and in toothpaste. In the correct amounts, fluoride in drinking water helps build strong, healthy teeth that resist decay.

The concentration of natural fluoride in Territory groundwater supplies depends on the type of soil and rock that the water comes into contact with. Generally, surface water sources have low natural fluoride concentrations whereas groundwater sources may have relatively high levels.

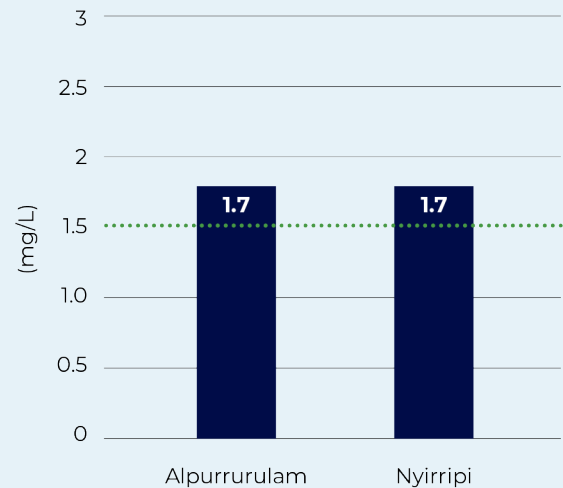
Fluoride concentrations in drinking water are recommended by the ADWG to not exceed 1.5mg/L. Concentration above 1.5mg/L can cause dental fluorosis ('mottling' of teeth) in children up to 6-8 years old. The majority of communities in the southern and Barkly regions have naturally occurring fluoride levels of between 0.5mg/L and 1.5mg/L. **Figure 107** shows fluoride levels in Alpururulam and Nyirripi with levels of 1.7mg/L slightly exceed the ADWG of 1.5mg/L. The ADWG indicates for concentrations ranging from 1.5-2mg/L, mild to moderate mottling of the teeth may occur.

In Alpururulam alternative production bores have been drilled but not yet equipped. Initial water quality samples suggest improved quality, however further monitoring is required to better understand local aquifer characteristics. Funding for the project to equip new bores has been secured through the National Indigenous Australians Agency.

In contrast to the southern and Barkly regions, most water supplies in the northern and Katherine regions have naturally low fluoride levels (less than 0.5mg/L). This is due to the nature of the shallow groundwater supplies and use of surface water supplies in some communities. Power and Water operates fluoridation systems in 5 remote communities in the northern region to help improve oral health in these communities.

The majority of communities in the southern and Barkly regions have naturally occurring fluoride levels of between 0.5mg/L and 1.5mg/L.

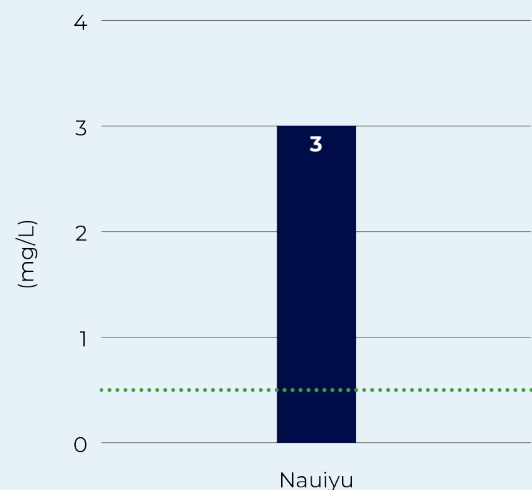
Figure 107 – Fluoride levels in Alpururulam and Nyirripi compared to ADWG (1.5mg/L)



Manganese

Manganese occurs naturally in the ground and through the dissolution of minerals and ores in the water. Manganese concentrations in drinking water are recommended by the ADWG to not exceed 0.1mg/L based on aesthetic considerations or 0.5mg/L based on health considerations. For this reporting period, maximum manganese concentrations in the community of Nauiyu exceeded the health-based guideline value for manganese with a maximum recorded concentration of 3mg/L (average 0.5mg/L). Water source and treatment options are in the planning phase for 2023-2024 and 2024-2025. As of 2024 Power and Water is providing an alternative water supply to bottled fed infants at Nauiyu.

Figure 108 – Manganese level in Nauiyu compared to ADWG (0.5mg/L)



Other health parameters

Nitrate

Nitrate concentrations in drinking water are recommended by the ADWG to not exceed 50mg/L for infants younger than 3 months, although levels up to 100mg/L can be safely consumed in adults. Nitrate occurs naturally in the Northern Territory with elevated levels partially attributed to nitrogen fixing by native vegetation and cyanobacteria crusts on soils. Termite mounds appear to be a significant nitrate source, possibly due to presence of nitrogen-fixing bacteria in many termite species and the nitrogen-rich secretions used to build mounds.

Power and Water has installed Advanced Water Treatment systems in Ali Curung, Yuelamu and Kintore to reduce nitrate levels to below the guideline of 50mg/L.

Other remote communities that typically have high levels of nitrate, include Pmara Jutunta (which has the same water source as minor centre Ti Tree) and Nturiya. Research trial on nitrate removal using electrochemical water technology is planned to be constructed and deployed to Pmara Jutunta in 2024. For this reporting period these 2 communities did not exceed the ADWG for nitrate. NT Health gives regular advice to customers and Power and Water provide an alternative water supply to bottle fed infants in the communities of Ti Tree and Nturiya.

Uranium

Uranium is widely distributed in geological formations, where it is found in groundwater aquifers surrounded by granite rocks and in sedimentary rock, like sandstone. Uranium concentrations in drinking water are recommended by the ADWG to not exceed 0.02mg/L.

Figure 109 shows uranium was present in the southern community of Laramba prior to the new treatment plant being online, at a concentration of 0.04mg/L and above the ADWG of 0.02mg/L. Power and Water has investigated the natural uranium occurrence in the surrounding groundwater sources and there are no nearby options for new water sources without uranium.

Other remote communities such as Yuendumu and Nturiya have elevated uranium present only in some bores. This allows Power and Water to blend low and high uranium level water sources to maintain uranium levels below the guideline value.

Figure 109 – Uranium level in Laramba compared to ADWG (0.02mg/L)



Laramba uranium levels

The exceedances for uranium in Laramba for this reporting period are prior to the installation of the treatment plant which commenced operation on the 17 April 2023. See **Figure 3** under Treatment Upgrades to see further information regarding water quality since installation of the water treatment plant.

Routine monitoring is ongoing to ensure the long-term performance of the treatment plant for the removal of uranium from Laramba's drinking water.

Radiological

Radiological assessments for all remote communities can be found in **Table 38** Appendix C. **These results show that all remote community supplies have dose levels that are below 1mSv/year.**

The ADWG establishes clear procedures for calculating radiological doses, classifying response levels and describing operational and monitoring responses for each level. The majority of remote communities are in response level 1 (Dose Level <0.3mSv/year). The response at this level is to continue routine monitoring.

Two remote communities are in response level 2 (Dose Level 0.3 – 1mSv/year): **Binjari** at 0.66mSv/year and **Tara** at 0.32mSv/year. At this response level, the ADWG recommendation is to consider increasing the frequency of monitoring in agreement with the relevant health authority.

The frequency of monitoring at Binjari has been increased from annually to quarterly to ensure that the radiation dose levels remain below the ADWG. Tara's water supply has stable levels of natural occurring radionuclides and the frequency of monitoring has not been increased however is reviewed annually.

These results show that all remote community supplies have dose levels that are below 1mSv/year.

Table 9 – ADWG radiological response levels

Response level	Dose level (mSv/year)	Responses
1	<0.3	1. Gross alpha and gross beta screening values (corrected for Potassium-40) and/or the operational dose value are not exceeded. Continue routine monitoring.
2	0.3 to 1	1. Evaluate dose and if required, perform assessments based on local conditions. 2. Consider the need to increase the frequency of monitoring in agreement with relevant health authorities or drinking water regulators based on if the operational dose value is exceeded.
3	1 to 10	1. Consult with relevant health authorities or drinking water regulators. 2. Assess in detail possible protective measures e.g. remedial/protective actions, taking into account potential cost-effectiveness of actions. 3. Implement appropriate remedial/protective measures on the basis of the cost-benefit evaluation.
4	>10	1. Water not suitable for consumption on the basis of radioactivity levels. 2. Consult with relevant health authorities or drinking water regulators. 3. Intervention is expected and protective measures must be taken to reduce doses to below the reference level of 1 mSv/year.



Two Tank Hill - Tennant Creek water storage tanks

Aesthetic exceedances

Aesthetic parameters are characteristics associated with the acceptability of water to the consumer in terms of appearance (colour), taste and odour. Exceedances for aesthetic parameters are summarised in **Table 10** below.

Apart from chlorine free, the most common aesthetic exceedances in remote communities are hardness (35 communities), pH (19 communities) and TDS (17 communities).

Table 10 – Aesthetic exceedances in remote communities

Parameter	Centres with exceedances
Aluminium	1 out of 72
Chloride	8 out of 72
Chlorine	70 out of 72
Hardness as CaCO ₃	35 out of 72
Iron	5 out of 72
Manganese	2 out of 72
pH	19 out of 72
Silica	8 out of 72
Sodium	6 out of 72
TDS	17 out of 72

Aluminium

Naturally occurring levels of aluminium occur across all Territory groundwater supplies, with the levels varying based on different soil geologies. Despite aluminium being a significant component of daily intake through food and beverages for Australian adults, its contribution from drinking water is minimal, comprising less than 2% of total daily intake. Aluminium has no noticeable taste or odour, however at levels above 0.2mg/L can make water hazy or bluish in colour. Average aluminium in Gunbalanya of 0.37mg/L exceeds the aesthetic ADWG of 0.2mg/L.

Chlorine free

Chlorine free has an odour threshold in drinking water of about 0.6mg/L (used as the aesthetic ADWG). However, some people are particularly sensitive and can detect amounts as low as 0.2mg/L. For health considerations ADWG is 5mg/L.

Following initial disinfection, maintaining a chlorine free residual in the distribution system provides additional protection from potential contamination (e.g. backflow), pipeline breaks and opportunistic pathogens. In general, a chlorine free residual of between 0.2 and 0.5mg/L is adequate. However control of *N. fowleri* in warmer climates, requires a concentration of at least 0.5mg/L chlorine free. For this reason Power and Water target a chlorine free residual of at least 1mg/L at the disinfection point to ensure a safe water supply and maintain adequate chlorine residual levels all the way to the customer. This data assessment resulted in the odour threshold value of 0.6mg/L being exceeded for most communities, but the priority for Power and Water is provision of drinking water free of pathogens.

The communities of Nturiya and Wilora use alternative UV disinfection systems. Consequently, chlorine residual levels are not measured in Wilora and are not an effective measure for the effectiveness of the disinfection system in Nturiya.

The priority for Power and Water is provision of drinking water free of pathogens.



Ali Curung elevated water storage tank

Hardness

Hardness is primarily the amount of calcium and magnesium ions in water and is expressed as a CaCO₃ equivalent.

Soft water or water low in total calcium and magnesium ions may also cause corrosion in pipes, although this will depend on other physical and chemical characteristics such as pH, alkalinity and dissolved oxygen. The ADWG recommend hardness levels below 200mg/L to minimise scaling in hot water systems.

Hard water or water with CaCO₃ levels above 500mg/L may lead to excessive scaling of pipes, taps and fittings. High hardness requires more soap to achieve lather and can impact infrastructure and kitchen appliances such as kettles.

Degrees of hardness are described in **Table 11**. **Figures 110-112** show average hardness for remote communities in the Northern and Katherine, Barkly and Southern regions respectively greater than ADWG of 200mg/L.

Public acceptance of hardness can vary considerably among communities and is generally related to the hardness that the consumer has come to expect, which in turn is due to the source of the water.

Typically, across the Northern Territory, groundwater supplies close to the coast are described as ‘soft’, as the water is drawn from relatively shallow aquifers with naturally low pH and hardness levels. Inland water supplies are often described as ‘hard’, as the water is stored for longer periods in deeper aquifers resulting in water with higher levels of minerals.

Table 11 – ADWG degrees of hardness

Hardness	Properties
<60	Soft but possibly corrosive
60-200	Good quality
200-500	Increasing scaling problems
>500	Severe Scaling

Figure 110 – Northern and Katherine region communities degrees of hardness greater than ADWG (200mg/L)

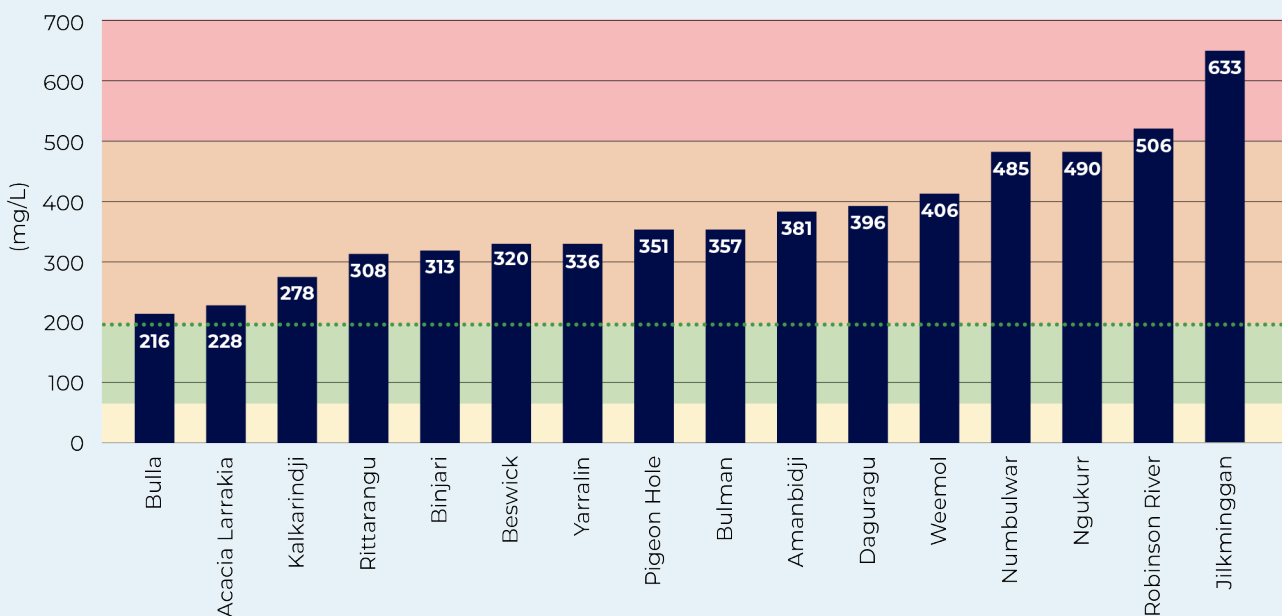


Figure 111 – Barkly region communities degrees of hardness greater than ADWG (200mg/L)

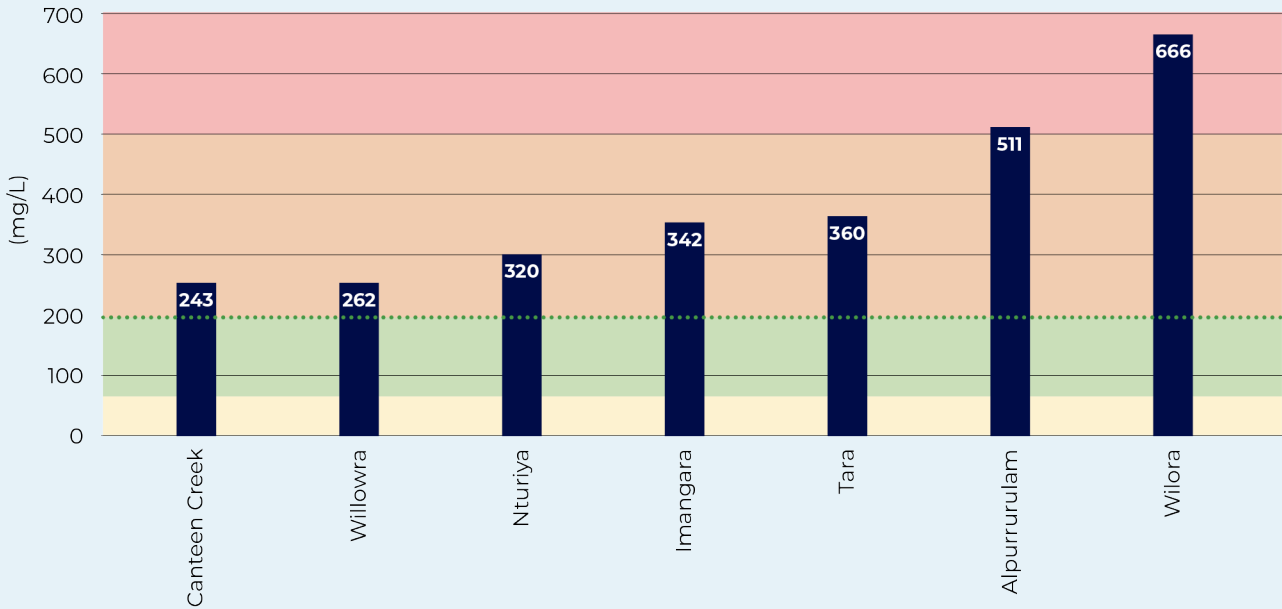
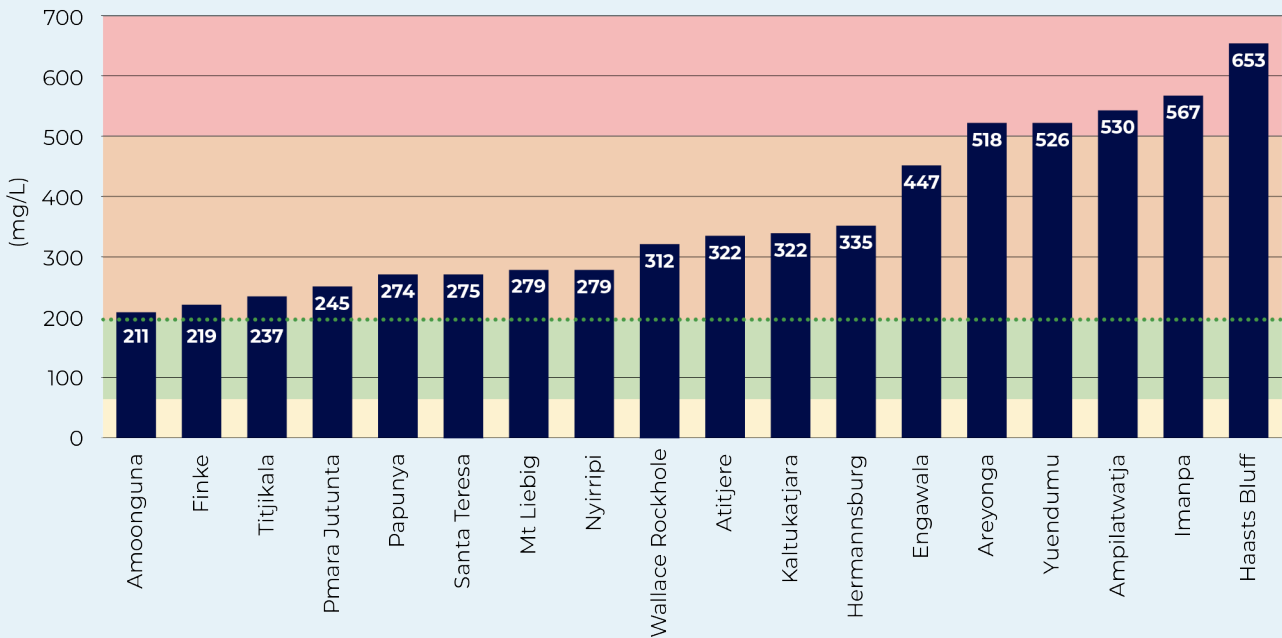


Figure 112 – Southern region communities degrees of hardness greater than ADWG (200mg/L)



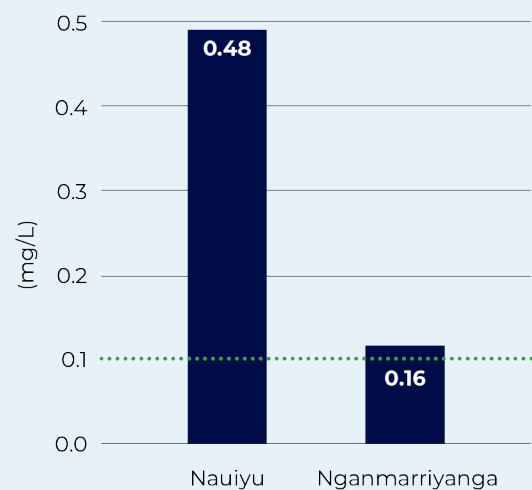


Ralph, senior project manager Alice Springs

Manganese

Manganese imparts an undesirable taste to water and stains plumbing fixtures and laundry. The ADWG recommend concentrations not exceed 0.5mg/L for health considerations and 0.1mg/L for aesthetic considerations. Manganese occurs naturally in the ground and through the dissolution of minerals and ores in the groundwater. For this reporting period, communities with average manganese above the ADWG of 0.1mg/L include Nauiyu and Nganmariyanga.

Figure 113 – Communities with manganese levels greater than ADWG (0.1mg/L)



Iron

Iron has a taste threshold of about 0.3mg/L in water and becomes undesirable above 3mg/L. High iron concentrations give water a rust-brown appearance and can stain laundry and plumbing fittings. Options for reducing iron levels include preferencing water sources low in iron, blending, infrastructure changes to maximise iron oxidation and settling, as well as water treatment options such as filtration. Flushing of distribution systems can significantly impact the iron levels supplied to the community. Communities with average iron levels above 0.3mg/L are shown in **Figure 114**.

Silica

Like manganese, silica, or silicon dioxide, occurs naturally in groundwater. Dissolved silica can deposit on surfaces such as glass and metals resulting in silica build-up. To minimise this undesirable scale, the concentration of silica in drinking water is recommended by the ADWG to not exceed 80mg/L. Communities where silica levels exceeded the guideline are shown in **Figure 115**.

Figure 114 – Communities with iron levels greater than ADWG (0.3mg/L)

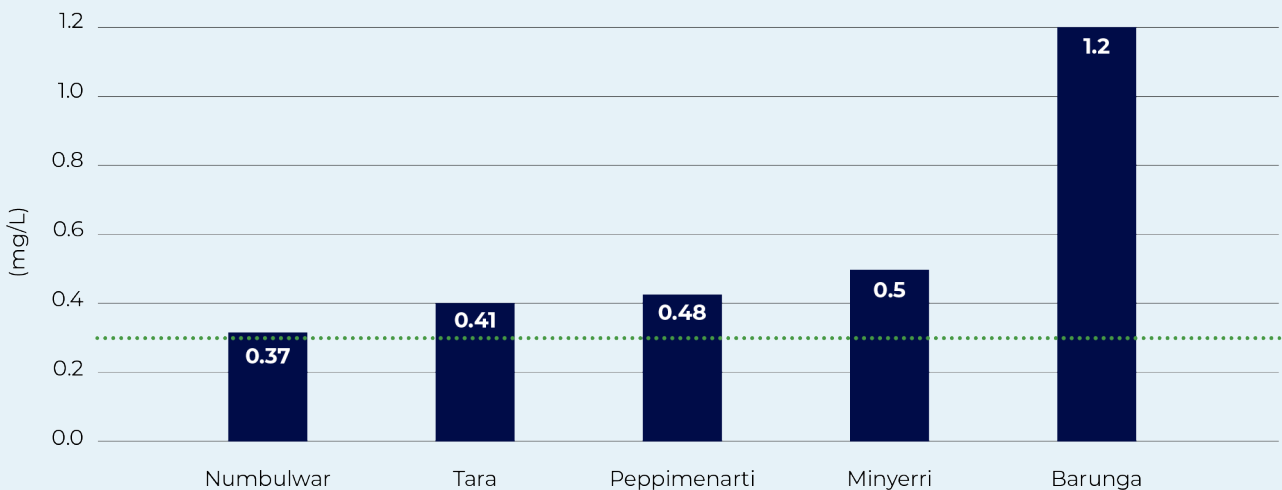
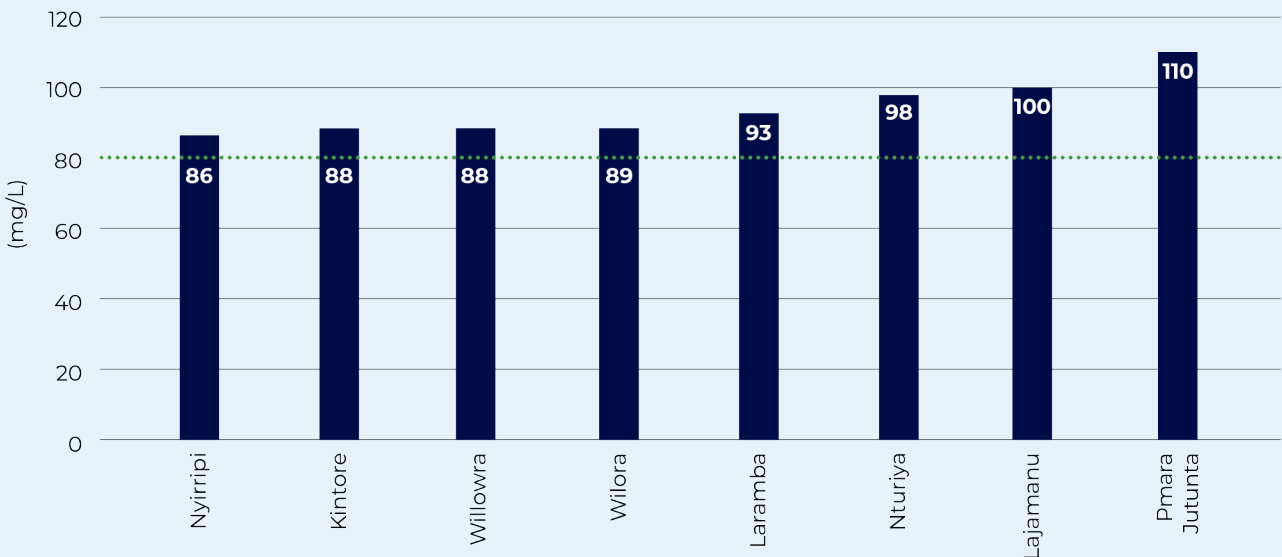


Figure 115 – Communities with silica levels greater than ADWG (80mg/L)



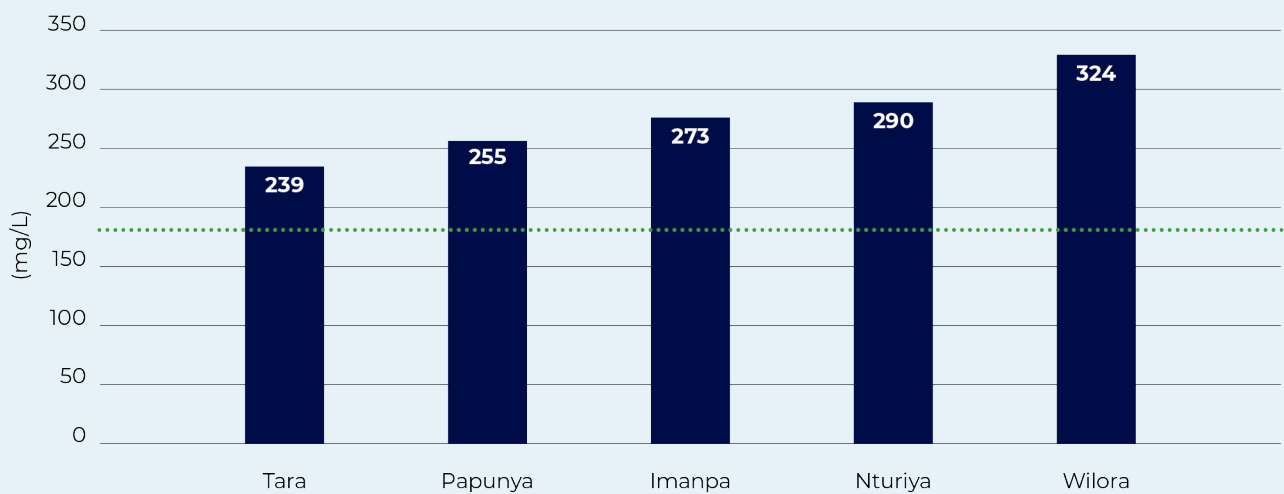


Two Tank Hill - Tennant Creek water storage tanks

Sodium

Sodium concentration in drinking water is recommended by the ADWG to not exceed 180mg/L to avoid salty tasting water. The sodium ion is widespread in water due to the high solubility of sodium salts and the abundance of mineral deposits.

Figure 116 – Communities with sodium levels greater than ADWG (180mg/L)





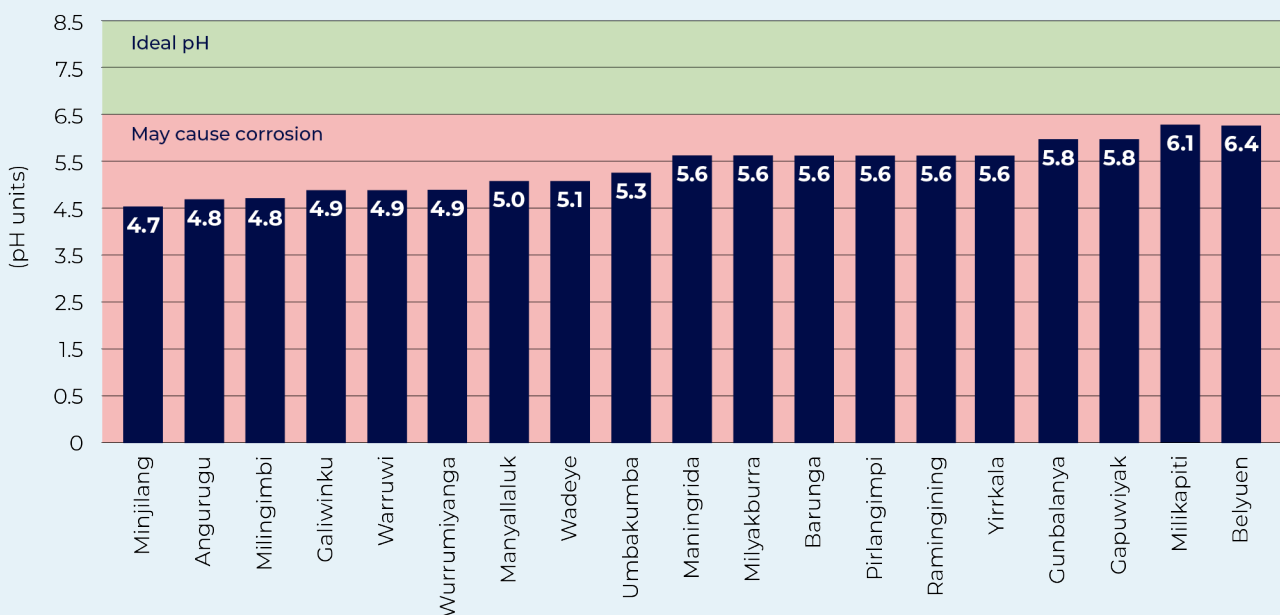
pH

Based on the need to reduce corrosion and encrustation in pipes and fittings, the pH of drinking water should be between 6.5 and 8.5, per ADWG. Typically, groundwater supplies near the coast are described as corrosive (low pH), as the water is drawn from relatively shallow aquifers and has naturally low pH and hardness levels.

Whilst somewhat corrosive, the disinfection properties of chlorine tend to be more effective at low pH values. For comparison orange juice has a pH of 3.8 and some carbonated soft drinks have a pH of 2.5.

Communities with pH below 6.5 are show below in **Figure 117** below.

Figure 117 – Communities with pH levels outside ADWG (6.5-8.5)



TDS

TDS affects how water tastes i.e. palatability. Water with low TDS can taste flat while water with TDS above 600mg/L can taste salty.

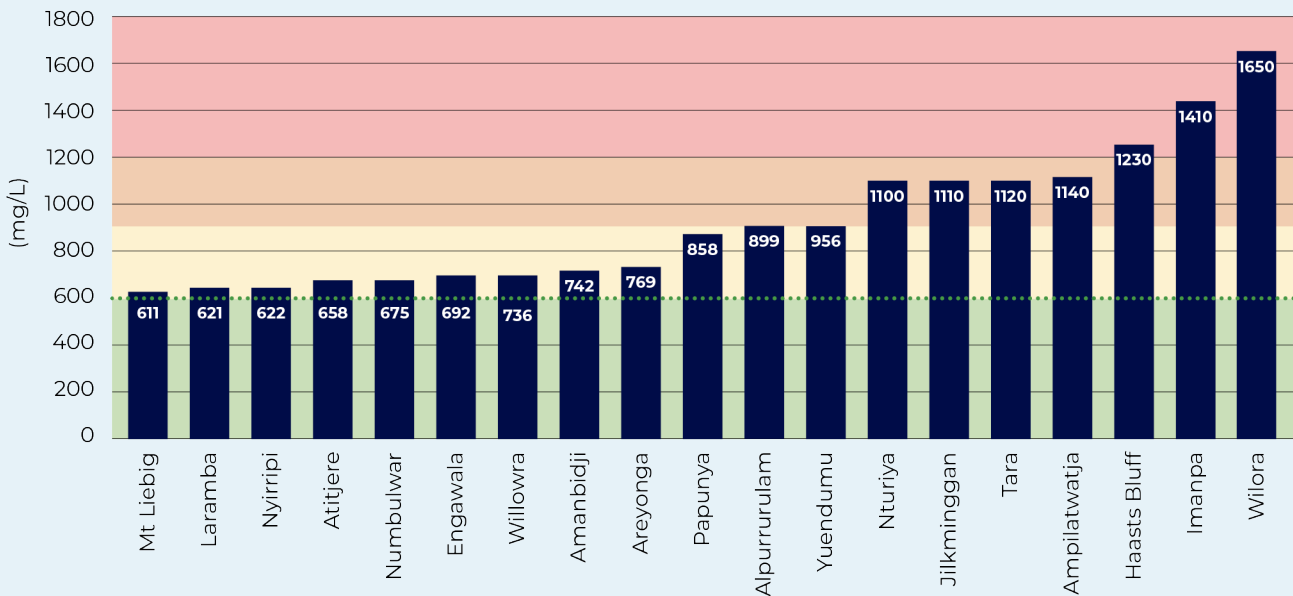
TDS is comprised of inorganic salts and small amounts of organic matter dissolved in water: sodium, potassium, calcium, magnesium, chloride, sulphate, bicarbonate, carbonate, silica, organic matter, fluoride, iron, manganese, nitrate and phosphate. It can co-occur with high hardness e.g. communities in **Figure 108**.

Figure 118 shows average TDS ranging from 611mg/L in Mt Liebig (fair) to 1650mg/L in Wilora (unpalatable). The majority of remote communities have good TDS < 600mg/L. Only three remote communities, Haasts Bluff, Imanpa and Wilora had unpalatable levels of TDS greater than 1200mg/L. Mt Liebig, Laramba, Nyirripi, Atitjere, Numbulwar and Engawala have Fair TDS, while Yuendumu, Nturiya, Jilkminggan, Tara and Ampilatwatja have Poor TDS.

Table 12 – ADWG TDS levels of palatability

TDS (mg/L)	Palatability
0-600	Good
600-900	Fair
900-1200	Poor
>1200	Unacceptable (unpalatable)

Figure 118 – Communities with TDS palatability greater than ADWG (600mg/L)





Talia, customer experience and operation

Customer satisfaction

Monitoring customer observations and complaints can provide valuable information on potential problems that may not have been identified by performance monitoring of the water supply system.

Customers usually log observations and concerns through our fault process, which is typically attended to on the same day by our field technicians. Majority of these faults are related to discoloured water due to repairs within the area or are weather related and usually clear up naturally or are assisted by flushing the water system.

These complaints usually relate to more than a once off issue, whether it be aesthetic aspects of appearance, taste or odour. These are investigated by our water quality team by taking water samples for analysis where required and reported back to the customer.

Power and Water is continuing to improve our response to complaint reporting from customers in remote communities. Power and Water encourage customers to contact our call centre on 1800 245 092 when dissatisfied with quality so we can record and investigate.

Demand management

Nineteen of 72 remote communities have either an extreme inherent risk or very high inherent risk of water source failure. However demand management has helped to prevent any of these remote communities experiencing water source failure over the past 12 months.

Improvement continues to be implemented in managing the 6 remote communities with Extreme risk of source sustainability. These include:

- An Incident Management Team (IMT) was stood up in Yuelamu in 2020 for risk of source failure within days. This has not eventuated since Demand Management has alleviated this risk.
- Power and Water's support for additional Equivalent Tenement (ET) to ease overcrowding in Yuendumu and Yuelamu was possible with Demand Management's engagement in managing the overall demand.
- Improved water pressure in households in Waruwi and Robinson River was achieved through leak detection and repair on the distribution main.

The 'That's My Water!' Bush Schools water efficiency education program was conducted in the 3 highest risk communities (Yuendumu, Yuelamu and Numbulwar) and in Maningrida. The program aims to reduce water demand in communities by improving water stewardship and educating and inspiring the next generation of water users to save water, report leaks and to be agents of change within their school and the broader community.

Appendix A

Description of Data



Kate & Tash, Hydrogeologists

Sampling location and frequency

The drinking water quality monitoring program endorsed by NT Health, outlines where, how often and what water samples are taken. This ensures a good understanding of the water supplied at different points in the system. It's important to collect enough samples over time, covering different seasons and conditions, to accurately evaluate the water's characteristics and detect any changes or trends that might affect its quality.

The locations and frequencies for collecting water samples in the monitoring program are based on recommendations from the ADWG, taking into account factors like the risk of contamination or microbial growth in the distribution system, as well as the size of the water supply system and the number of people it serves.

Water quality data

Water quality data collected for this reporting period have been analysed following the recommendations provided by the ADWG to assess microbial, health, and aesthetic parameters:

- Twelve months of data have been used.
- For microbial analysis data assessment, *E. coli* are reported for each community, detailing the number of samples collected and the percentage of samples that were free of *E. coli* detections.
- In the health parameter assessments, the 95th percentile calculation is primarily utilised when comparing data assessment to guideline values. However, in cases where there are insufficient data points (less than 19), the assessment of health guidelines involves considering the maximum value.
- For aesthetic parameters, the average of the previous 12 months' monitoring data assessment is compared to the aesthetic guideline value.

Significant figures

Health: Calculations for acceptable levels of substances in drinking water (ADWG guideline values) are consistent with standard rounding conventions, with inbuilt safety margins.

For example, precision to a single significant figure and rounding to the nearest whole number (e.g. 1.5 = 2). Quoting more significant figures misrepresents the degree of precision and may lead to unfounded concern when guidelines exceed at a second or third significant figure.

Aesthetic: The calculated average data assessment, when evaluated against aesthetic guideline values, are rounded to one more significant figure than the guidelines themselves. This method is employed to offer a more transparent representation of the data, indicating the extent to which the monitoring data assessment deviate from the aesthetic guideline values. Raw data assessment and other statistical representations, such as minimum and maximum values, were intentionally left unrounded as per the guidance of the ADWG.

Explanation of tables

Water quality data assessment are presented in the tables in **Appendices B-C**:

- An explanation for some of the table headings is given in **Table 13**.
- Numbers shaded orange represent exceedances of the ADWG.
- For calculations where a measurement is below the detection limit, a value of half the detection limit is used for that measurement.

Table 13 – Definition of ADWG measurements

Summary Statistic	Definition
Minimum	The minimum value measured
Maximum	The maximum value measured
Average	The average of all sample measurements
95th percentile	The value at or below which 95% of measurements can be found
ADWG	The ADWG guideline value

Appendix B

Urban Major and Minor Centres Data Assessments



Carmichael water storage tank Alice Springs

Table 14 – Urban major and minor centre microbiological summary

Centre	Sample Count	Number of detections	% of samples free of <i>E. coli</i>
Adelaide River	157	0	100
Alice Springs	104	0	100
Batchelor	100	0	100
Borroloola	144	0	100
Cox Peninsula	53	0	100
Daly Waters	36	0	100
Darwin	582	0	100
Elliott	158	1	99.37%
Gunn Point	13	0	100
Katherine	104	0	100
Kings Canyon	144	0	100
Larrimah	36	0	100
Mataranka	48	0	100
Newcastle Waters	24	0	100
Pine Creek	156	0	100
Tennant Creek	104	0	100
Ti Tree	36	0	100
Timber Creek	36	0	100
Yulara	52	0	100

Table 15 – Urban major & minor centre radiological summary

Centre	Radiological mSv/year	Response Level
Adelaide River	0.03	1
Batchelor	0.03	1
Borroloola	0.32	2
Daly Waters	0.07	1
Elliott	0.16	1
Kings Canyon	0.91	2
Larrimah	0.07	1
Mataranka	0.04	1
Newcastle Waters	0.14	1
Pine Creek	0.03	1
Ti Tree	0.07	1
Timber Creek	0.18	1

Table 16 – Urban health data assessment summary

	Analysis	Antimony (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Beryllium (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Chlorine Free Residual (mg/L)	Chromium (mg/L)	Copper (mg/L)	Fluoride (mg/L)	Lead (mg/L)	Manganese (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Nitrate as NO ₃ (UV screening) (mg/L)	Nitrate (mg/L)*	Perfluoro-octanoic acid (PFOA) (ug/L)	Selenium (mg/L)	Sum (PFHxS + PFOS) (ug/L)	Silver (mg/L)	Trihalo-methanes (mg/L)	Uranium (mg/L)
Community	ADWG Health	0.003	0.01	2	0.06	4	0.002	5	0.05	2	1.5	0.01	0.5	0.001	0.05	0.02	50	3	0.56	0.01	0.07	0.1	0.25	0.02
Adelaide River	Sample Count	36	36	36	36	36	36	157	36	36	4	36	36	36	36	36	4	4	12	36	36	12	2	36
	Maximum	0.0008	0.002	<0.05	<0.001	0.04	<0.0002	3	<0.005	0.03	0.36	0.002	0.03	<0.0001	<0.005	<0.002	0.9	<0.3	<0.01	<0.001	<0.01	<0.01	<0.005	<0.00005
	95th Percentile	0.0003	0.002	0.03	0.0005	0.04	0.0001	2	0.003	0.03	N/A	0.002	0.007	0.00005	0.003	0.001	N/A	N/A	N/A	0.0005	0.005	N/A	N/A	0.00003
Alice Springs	Sample Count	4	4	4	4	4	4	104	4	4	4	4	4	4	4	4	4	4	NM	4	NM	4	2	4
	Maximum	<0.0002	<0.0005	0.1	<0.001	0.2	<0.0002	1	<0.005	0.07	0.55	<0.001	<0.005	<0.0001	<0.005	<0.002	8	<0.3	NM	0.001	NM	<0.01	<0.005	0.008
	95th Percentile	N/A	N/A	N/A	N/A	N/A	N/A	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NM	N/A	NM	N/A	N/A	N/A
Batchelor	Sample Count	5	5	5	5	5	5	100	5	5	6	5	5	5	5	5	6	6	12	5	5	12	3	5
	Maximum	<0.0002	<0.0005	<0.05	<0.001	0.02	<0.0002	2	<0.005	0.02	<0.1	<0.001	<0.005	<0.0001	<0.005	<0.002	2	<0.3	<0.01	<0.001	<0.01	<0.01	<0.005	0.0002
	95th Percentile	N/A	N/A	N/A	N/A	N/A	N/A	2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Borroloola	Sample Count	7	7	7	7	7	7	144	7	7	7	7	7	7	7	7	6	6	1	7	7	1	3	7
	Maximum	<0.0002	<0.0005	<0.05	<0.001	0.04	<0.0002	2	<0.005	0.6	<0.1	<0.001	0.4	<0.0001	<0.005	0.01	0.9	<0.3	<0.0005	<0.001	<0.01	<0.0003	<0.005	0.0003
	95th Percentile	N/A	N/A	N/A	N/A	N/A	N/A	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cox Peninsula	Sample Count	2	2	2	2	2	2	53	2	2	2	2	2	2	2	2	2	2	1	2	2	1	NM	2
	Maximum	<0.0002	<0.0005	<0.05	<0.001	0.02	<0.0002	2	<0.005	<0.01	0.13	<0.001	<0.005	<0.0001	<0.005	<0.002	0.8	<0.3	<0.0005	<0.001	<0.01	<0.0003	NM	<0.00005
	95th Percentile	N/A	N/A	N/A	N/A	N/A	N/A	2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NM	N/A
Daly Waters	Sample Count	9	9	9	9	9	9	36	9	9	8	9	9	9	9	9	8	8	1	9	9	1	2	9
	Maximum	<0.0002	<0.0005	0.1	<0.001	0.3	<0.0002	1	<0.005	0.2	0.19	<0.001	<0.005	<0.0001	<0.005	0.003	10	<0.3	<0.0005	0.002	<0.01	<0.0003	0.01	0.004
	95th Percentile	N/A	N/A	N/A	N/A	N/A	N/A	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Darwin	Sample Count	16	16	16	16	16	16	582	16	16	68	16	16	16	16	16	16	16	1	16	1	16	10	16
	Maximum	<0.0002	<0.0005	<0.05	<0.001	<0.02	<0.0002	2	<0.005	0.2	0.79	0.002	0.08	<0.0001	<0.005	<0.002	0.7	<0.3	<0.0005	<0.001	<0.0003	<0.01	0.1	<0.00005
	95th Percentile	N/A	N/A	N/A	N/A	N/A	N/A	2	N/A	N/A	0.77	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Elliott	Sample Count	5	5	5	5	5	5	159	5	5	5	5	5	5	5	5	5	5	1	5	5	1	3	5
	Maximum	<0.0002	<0.0005	0.2	<0.001	0.3	<0.0002	2	<0.005	0.03	0.84	<0.001	<0.005	<0.0001	<0.005	<0.002	10	<0.3	<0.0005	0.001	<0.01	<0.0003	<0.005	0.006
	95th Percentile	N/A	N/A	N/A	N/A	N/A	N/A	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Gunn Point	Sample Count	2	2	2	2	2	2	11	2	2	2	2	2	2	2	2	2	2	NM	2	NM	2	NM	2
	Maximum	<0.0002	<0.0005	<0.05	<0.001	<0.02	0.001	2	<0.005	<0.01	0.18	0.002	0.02	<0.0001	<0.005	<0.002	0.4	<0.3	NM	<0.001	NM	<0.01	NM	<0.00005
	95th Percentile	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NM	N/A	NM	N/A	NM	N/A
Katherine	Sample Count	4	4	4	4	4	4	104	4	4	71	4	4	4	4	4	8	8	12	4	12	4	4	4
	Maximum	<0.0002	<0.0005	<0.05	<0.001	0.02	<0.0002	1	<0.005	0.04	0.72	<0.001	<0.005	<0.0001	<0.005	<0.002	0.7	<0.3	<0.01	<0.001	<0.01	<0.01	0.03	<0.00005
	95th Percentile	N/A	N/A	N/A	N/A	N/A	N/A	1	N/A	N/A	0.66	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Kings Canyon	Sample Count	4	4	4	4	4	4	144	4	4	4	4	4	4	4	4	4	4	1	4	4	1	2	4
	Maximum	<0.0002	0.001	<0.05	<0.001	0.3	<0.0002	1	0.01	0.09	0.58	<0.001	<0.005	0.0004	<0.005	0.007	3	<0.3	<0.0005	0.002	<0.01	<0.0003	0.006	0.002
	95th Percentile	N/A	N/A	N/A	N/A	N/A	N/A	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Larrimah	Sample Count	6	6	6	6	6	6	36	6	6	6	6	6	6	6	6	6	6	NM	6	NM	6	2	6
	Maximum	<0.0002	<0.0005	0.07	<0.001	0.2	<0.0002	1	<0.005	0.03	0.23	<0.001	<0.005	<0.0001	<0.005	<0.002	3	<0.3	NM	0.001	NM	<0.01	<0.005	0.002
	95th Percentile	N/A	N/A	N/A	N/A	N/A	N/A	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NM	N/A	NM	N/A	N/A	N/A
Mataranka	Sample Count	4	4	4	4	4	4	47	4	4	4	4	4	4	4	4	4	4	NM	4	NM	4	2	4
	Maximum	<0.0002	<0.0005	0.1	<0.001	0.06	<0.0002	2	<0.005	0.02	0.24	<0.001	<0.005	<0.0001	<0.005	<0.002	0.6	<0.3	NM	<0.001	NM	<0.01	<0.005	0.0006
	95th Percentile	N/A	N/A	N/A	N/A	N/A	N/A	2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NM	N/A	NM	N/A	N/A	N/A
Newcastle Waters	Sample Count	6	6	6	6	6	6	24	6	6	6	6	6	6	6	6	6	6	1	6	6	1	3	6
	Maximum	<0.0002	<0.0005	0.3	<0.001	0.3	<0.0002	1	<0.005	0.04	0.96	<0.001	<0.005	<0.0001	<0.005	<0.002	9	<0.3	<0.0005	<0.001	<0.01	<0.0003	<0.005	0.005
	95th Percentile	N/A	N/A	N/A	N/A	N/A	N/A	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pine Creek	Sample Count	39	39	39	39	39	39	156	39	39	9	39	39	39	39	39	9	9	12	39	39	12	3	39
	Maximum	0.0007	0.01	<0.05	<0.001	0.3	<0.0002	2	<0.005	0.8	0.63	0.001	0.3	<0.0001	<0.005	<0.002	1	<0.3	<0.01	0.002	<0.01	<0.01	<0.005	0.003
	95th Percentile	0.0003	0.006	0.03	0.0005	0.02	0.0001	2	0.003	0.5	N/A	0.001	0.06	0.00005	0.003	0.001	N/A	N/A	N/A	0.0005	0.005	N/A	N/A	0.0002
Tennant Creek	Sample Count	2	2	2	2	2	2	104	2	2	35	2	2	2	2	2	10	10	NM	2	NM	2	2	2
	Maximum	<0.0002	0.002	0.05	<0.001	0.5	<0.0002	1	<0.005	<0.01	1.5	0.002	<0.005	<0.0001	<0.005	<0.002	30	<0.3	NM	0.002	NM	<0.01	<0.005	0.007
	95th Percentile	N/A	N/A	N/A	N/A	N/A	N/A	1	N/A	N/A	1.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NM	N/A	NM	N/A	N/A	N/A
Timber Creek	Sample Count	10	10	10	10	10	10	36	9	9	12	9	9	9	9	9	12	12	NM	9	NM	9	2	9
	Maximum	0.001	0.001	1	<0.001	0.1	<0.001	1	<0.005	0.07	1.3	0.001	<0.005	<0.0001	<0.005	<0.002	1	<0.3	NM	<0.001	NM	<0.01	<0.005	0.002
	95th Percentile	N/A	N/A	N/A	N/A	N/A	N/A	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NM	N/A	NM	N/A	N/A	N/A
Ti Tree	Sample Count	6	6	6	6	6	6	36	6	6	36	6	6	6	6	6	36	36	2	6	6	2	2	6
	Maximum	<0.0002	0.001	0.1	<0.001	0.5	<0.0002	2	<0.005	<0.01	0.88	<0.001	<0.005	<0.0001	<0.005	<0.002	60	3	<0.0005	0.002	<0.01	<0.0003	<0.005	0.007
	95th Percentile	N/A	N/A	N/A	N/A	N/A	N/A	2	N/A	N/A	0.86	N/A	N/A	N/A	N/A	N/A	60	0.3	N/A	N/A	N/A	N/A	N/A	N/A
Yulara	Sample Count	4	4	4	4	4	4	52	4	4	4	4	4	4	4	4	4	4	NM	4	NM	4	2	4
	Maximum	<0.0002	<0.0005	<0.05	<0.001	0.8	<0.0002	1	<0.005	<0.01	0.16	<0.001	<0.005	<0.0001	<0.005	<0.002	30	<0.3	NM	<0.001	NM	<0.01	<0.005	0.0002
	95th Percentile	N/A	N/A	N/A	N/A	N/A	N/A	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NM	N/A	NM	N/A	N/A	N/A

NM Not measured as is not required under the monitoring program N/A Not applicable

* Nitrite concentration (NO₂ mg/L) result is a conversion from Nitrite as nitrogen (NO₂-N mg/L). Converting from nitrite as nitrogen (NO₂-N) to standard nitrite concentration (NO₂), the factor 3.284 is obtained by dividing the molecular weight of nitrite by the molecular weight of nitrogen (46 g/mole ÷ 14 g/mole = 3.284).

Table 17 – Urban aesthetic data assessment summary

Community	Analysis	Aluminium (mg/L)	Chloride (mg/L)	Chlorine Free Residual (mg/L)	Copper (mg/L)	Hardness as CaCO ₃ (mg/L as CaCO ₃)	Iron (mg/L)	Manganese (mg/L)	pH	Sulphate (mg/L)	Silica (mg/L)	Sodium (mg/L)	Total Dissolved Solids Dried at 180c (mg/L)	True Colour (HU)	Turbidity (NTU)	Zinc (mg/L)
	ADWG Aesthetics	0.2	250	0.6	1	200	0.3	0.1	6.5 - 8.5	250	80	180	600	15	5	3
Adelaide River	Average	0.0054	27	1.4	0.011	124	0.01	0.0019	7.8	0.33	26	46	232	1.5	0.67	0.012
Alice Springs	Average	0.0076	70	0.77	0.037	223	0.011	0.0025	7.5	47.2	18	81	429	1	0.41	0.013
Batchelor	Average	0.008	4	1.4	0.014	172	0.014	0.0016	7.5	0.15	18	4.46	152	1.17	0.59	0.007
Borrooloola	Average	0.02	10	1.2	0.1	60.4	0.05	0.06	7.7	0.52	14	6.71	82.5	1.5	0.75	0.004
Cox Peninsula	Average	0.011	5	1.8	0.0068	3.6	0.014	0.0022	6.6	0.225	23	5.59	30	1.5	0.54	0.028
Daly Waters	Average	0.003	280	1.1	0.04	543	0.03	0.00062	7.3	151	36	196	1170	1.13	0.63	0.019
Darwin	Average	0.0096	6	1.3	0.032	28.4	0.089	0.026	7.2	0.15	10	3.43	41.8	2.06	1.3	0.0063
Elliott	Average	0.012	140	1.2	0.015	453	0.0064	0.0012	7.7	27.4	49	86	680	1.2	0.56	0.0046
Gunn Point	Average	0.0063	10	1.2	0.004	24.5	0.32	0.015	7.5	0.465	10	10.6	63.5	1.5	1.6	3.2
Katherine	Average	0.011	4	1.2	0.031	62.1	0.01	0.0017	7.6	1.74	11	9.74	75.5	1.25	0.38	0.005
Kings Canyon	Average	0.03	200	0.94	0.038	375	0.03	0.0015	7.3	163	21	104	760	1	0.58	0.037
Larrimah	Average	0.005	180	1.1	0.014	529	0.026	0.0011	7.7	87.2	41	127	916	1	0.64	0.009
Mataranka	Average	0.0063	21	1.3	0.0097	343	0.0055	0.0014	7.6	0.323	27	16.6	348	1	0.4	0.0078
Newcastle Waters	Average	0.0063	40	1.1	0.016	345	0.0065	0.0014	7.7	6.07	58	51.8	503	1.33	0.29	0.0072
Pine Creek	Average	0.0057	5	1.3	0.055	95.4	0.03	0.013	7.3	0.21	45	29.4	187	1.56	0.74	0.0083
Tennant Creek	Average	0.0063	70	1.1	0.0065	164	0.0055	0.0014	7.8	31	91	121	557	1.5	0.41	0.012
Timber Creek	Average	0.0055	36	1	0.02	441	0.0091	0.001	7.3	0.15	23	22.6	451	1.08	0.38	0.0074
Ti Tree	Average	0.0072	71	1.5	0.0059	231	0.0068	0.0014	8.1	32.1	97	67.9	518	1.53	0.42	0.006
Yulara	Average	0.0044	67	0.9	0.0021	69.9	0.004	0.00081	7.5	43.7	11	54.2	256	1	0.24	0.0025

Table 18 – Water quality assessment for Adelaide River

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	36	<0.0002	0.0008	0.0001	0.0003
Arsenic (mg/L)	0.01	N/A	36	0.0008	0.002	0.001	0.002
Barium (mg/L)	2	N/A	36	0.006	<0.05	0.01	0.03
Beryllium (mg/L)	0.06	N/A	36	<0.0001	<0.001	0.0002	0.0005
Boron (mg/L)	4	N/A	36	0.02	0.04	0.02	0.04
Cadmium (mg/L)	0.002	N/A	36	<0.00005	<0.0002	0.00005	0.0001
Chlorine Free Residual (mg/L)	5	N/A	157	0.8	3	1	2
Chromium (mg/L)	0.05	N/A	36	<0.0002	<0.005	0.0009	0.003
Copper (mg/L)	2	N/A	36	<0.0005	0.03	0.01	0.03
Fluoride (mg/L)	1.5	N/A	4	0.32	0.36	0.34	N/A
Lead (mg/L)	0.01	N/A	36	<0.0001	0.002	0.0004	0.002
Manganese (mg/L)	0.5	N/A	36	<0.0005	0.03	0.002	0.007
Mercury (mg/L)	0.001	N/A	36	<0.0001	<0.0001	0.00005	0.00005
Molybdenum(mg/L)	0.05	N/A	36	<0.0001	<0.005	0.001	0.003
Nickel (mg/L)	0.02	N/A	36	<0.0005	<0.002	0.0005	0.001
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	4	<0.1	0.9	0.5	N/A
Nitrite mg-NO ₂ /L*	3	N/A	4	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.1	N/A	N/A
Perfluorooctanoic acid (PFOA) (ug/L)	0.56	N/A	12	<0.0005	<0.01	0.001	N/A
Selenium (mg/L)	0.01	N/A	36	<0.0002	<0.001	0.0002	0.0005
Silver (mg/L)	0.1	N/A	36	<0.0001	<0.01	0.002	0.005
Sum (PFHxS + PFOS) (ug/L)	0.07	N/A	12	<0.0003	<0.01	0.004	N/A
Trihalomethanes (mg/L)	0.25	N/A	2	<0.005	<0.005	0.003	N/A
Uranium (mg/L)	0.02	N/A	36	0.00002	<0.00005	0.00002	0.00003
Aesthetic							
Aluminium (mg/L)	N/A	0.2	36	<0.005	<0.02	0.0054	N/A
Chloride (mg/L)	N/A	250	4	27	28	27	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	157	0.81	3	1.4	N/A
Copper (mg/L)	N/A	1	36	<0.0005	0.032	0.011	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	4	121	127	124	N/A
Iron (mg/L)	N/A	0.3	36	<0.002	0.068	0.01	N/A
Manganese (mg/L)	N/A	0.1	36	<0.0005	0.03	0.0019	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	4	7.36	8.16	7.8	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	4	<0.3	0.54	0.33	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	4	25.5	27.2	26	N/A
Sodium (Na) (mg/L)	N/A	180	4	31	55	46	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	4	187	255	232	N/A
True Colour (HU)	N/A	15	4	<2	<2	1.5	N/A
Turbidity (lab) (NTU)	N/A	5	4	0.17	1.8	0.67	N/A
Zinc (mg/L)	N/A	3	36	<0.001	0.032	0.012	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	4	150	200	180	N/A
Apparent Colour (HU)	N/A	N/A	4	<2	6	2.5	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	4	180	240	220	N/A
Bromine (mg/L)	N/A	N/A	36	0.056	0.4	0.066	N/A
Calcium (Ca) (mg/L)	N/A	N/A	4	18.2	19.1	19	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	4	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	4	390	510	470	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	4	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	36	<0.01	<0.1	0.036	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	4	18.3	19.3	19	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	4	<0.1	0.2	0.13	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	4	<0.1	0.2	0.13	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	4	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	4	1.3	1.5	1.4	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	4	45	46	46	N/A
Tin (mg/L)	N/A	N/A	36	<0.0002	<0.01	0.0017	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	157	<1	<1	N/A	N/A

Table 19 – Water quality assessment for Alice Springs

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	4	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	4	0.0003	<0.0005	0.0003	N/A
Barium (mg/L)	2	N/A	4	0.09	0.1	0.1	N/A
Beryllium (mg/L)	0.06	N/A	4	<0.0001	<0.001	0.0003	N/A
Boron (mg/L)	4	N/A	4	0.1	0.2	0.1	N/A
Cadmium (mg/L)	0.002	N/A	4	<0.00005	<0.0002	0.00006	N/A
Chlorine Free Residual (mg/L)	5	N/A	104	0.3	1	0.8	1
Chromium (mg/L)	0.05	N/A	4	0.002	<0.005	0.002	N/A
Copper (mg/L)	2	N/A	4	0.02	0.07	0.04	N/A
Fluoride (mg/L)	1.5	N/A	4	0.44	0.55	0.49	N/A
Lead (mg/L)	0.01	N/A	4	0.0003	<0.001	0.0005	N/A
Manganese (mg/L)	0.5	N/A	4	<0.0005	<0.005	0.003	N/A
Mercury (mg/L)	0.001	N/A	4	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	4	0.001	<0.005	0.002	N/A
Nickel (mg/L)	0.02	N/A	4	<0.0005	<0.002	0.0008	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	4	7	8	7	N/A
Nitrite mg-NO ₂ /L*	3	N/A	4	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.3	N/A	N/A
Selenium (mg/L)	0.01	N/A	4	0.001	0.001	0.001	N/A
Silver (mg/L)	0.1	N/A	4	<0.0001	<0.01	0.003	N/A
Trihalomethanes (mg/L)	0.25	N/A	2	<0.005	<0.005	0.003	N/A
Uranium (mg/L)	0.02	N/A	4	0.007	0.008	0.008	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	4	<0.005	<0.02	0.0076	N/A
Chloride (mg/L)	N/A	250	4	70	71	70	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	104	0.33	1.06	0.77	N/A
Copper (mg/L)	N/A	1	4	0.0182	0.07	0.037	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	4	220	225	223	N/A
Iron (mg/L)	N/A	0.3	4	<0.002	0.024	0.011	N/A
Manganese (mg/L)	N/A	0.1	4	<0.0005	<0.005	0.0025	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	4	7.32	7.58	7.5	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	4	45	49.5	47.2	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	4	17.2	17.9	18	N/A
Sodium (Na) (mg/L)	N/A	180	4	76.8	85.3	81	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	4	422	437	429	N/A
True Colour (HU)	N/A	15	4	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	4	0.27	0.67	0.41	N/A
Zinc (mg/L)	N/A	3	4	0.005	0.02	0.013	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	4	220	240	230	N/A
Apparent Colour (HU)	N/A	N/A	4	<2	<2	1.3	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	4	270	290	280	N/A
Bromine (mg/L)	N/A	N/A	4	0.2	0.304	0.25	N/A
Calcium (Ca) (mg/L)	N/A	N/A	4	48.4	51	50	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	4	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	4	630	820	760	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	4	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	4	0.04	<0.1	0.045	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	4	23.6	24.2	24	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	4	1.5	1.9	1.7	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	4	1.5	1.9	1.7	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	4	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	4	6.2	6.7	6.5	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	4	120	120	120	N/A
Tin (mg/L)	N/A	N/A	4	<0.0002	<0.01	0.0026	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	104	<1	<1	N/A	N/A

Table 20 – Water quality assessment for Batchelor

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	5	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	5	<0.0002	<0.0005	0.0002	N/A
Barium (mg/L)	2	N/A	5	0.005	<0.05	0.02	N/A
Beryllium (mg/L)	0.06	N/A	5	<0.0001	<0.001	0.0003	N/A
Boron (mg/L)	4	N/A	5	0.02	0.02	0.02	N/A
Cadmium (mg/L)	0.002	N/A	5	<0.00005	<0.0002	0.00007	N/A
Chlorine Free Residual (mg/L)	5	N/A	100	0.8	2	1	2
Chromium (mg/L)	0.05	N/A	5	0.0004	<0.005	0.002	N/A
Copper (mg/L)	2	N/A	5	<0.01	0.02	0.01	N/A
Fluoride (mg/L)	1.5	N/A	6	<0.1	<0.1	0.05	N/A
Lead (mg/L)	0.01	N/A	5	0.0001	<0.001	0.0004	N/A
Manganese (mg/L)	0.5	N/A	5	<0.0005	<0.005	0.002	N/A
Mercury (mg/L)	0.001	N/A	5	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	5	<0.0001	<0.005	0.002	N/A
Nickel (mg/L)	0.02	N/A	5	<0.0005	<0.002	0.0008	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	6	1	2	2	N/A
Nitrite mg-NO ₂ /L*	3	N/A	6	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.1	N/A	N/A
Perfluorooctanoic acid (PFOA) (ug/L)	0.56	N/A	12	<0.0005	<0.01	0.001	N/A
Selenium (mg/L)	0.01	N/A	5	<0.0002	<0.001	0.0004	N/A
Silver (mg/L)	0.1	N/A	5	<0.0001	<0.01	0.003	N/A
Sum (PFHxS + PFOS) (ug/L)	0.07	N/A	12	<0.001	<0.01	0.006	N/A
Trihalomethanes (mg/L)	0.25	N/A	3	<0.005	<0.005	0.003	N/A
Uranium (mg/L)	0.02	N/A	5	0.00008	0.0002	0.0002	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	5	0.005	<0.02	0.008	N/A
Chloride (mg/L)	N/A	250	6	4	14	4	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	100	0.82	1.75	1.4	N/A
Copper (mg/L)	N/A	1	5	<0.01	0.02	0.014	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	6	154	191	172	N/A
Iron (mg/L)	N/A	0.3	5	0.004	0.04	0.014	N/A
Manganese (mg/L)	N/A	0.1	5	<0.0005	<0.005	0.0016	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	6	7.45	7.64	7.5	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	6	<0.3	<0.3	0.15	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	6	17.3	18.8	18	N/A
Sodium (Na) (mg/L)	N/A	180	6	3.98	4.93	4.46	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	6	110	186	152	N/A
True Colour (HU)	N/A	15	6	<2	<2	1.17	N/A
Turbidity (lab) (NTU)	N/A	5	6	0.19	1.2	0.59	N/A
Zinc (mg/L)	N/A	3	5	0.006	0.014	0.007	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	6	150	340	190	N/A
Apparent Colour (HU)	N/A	N/A	6	<2	11	3.7	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	6	180	230	200	N/A
Bromine (mg/L)	N/A	N/A	5	0.012	<0.1	0.028	N/A
Calcium (Ca) (mg/L)	N/A	N/A	6	12	17.8	15	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	6	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	6	300	420	350	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	6	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	5	<0.01	<0.1	0.023	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	6	28	36.9	33	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	6	0.3	0.5	0.37	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	6	0.3	0.5	0.37	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	6	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	6	0.3	0.4	0.37	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	6	7	23	11	N/A
Tin (mg/L)	N/A	N/A	5	<0.0002	<0.01	0.003	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	100	<1	<1	N/A	N/A

Table 21 – Water quality assessment for Borroloola

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	7	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	7	<0.0002	<0.0005	0.0002	N/A
Barium (mg/L)	2	N/A	7	0.03	<0.05	0.03	N/A
Beryllium (mg/L)	0.06	N/A	7	0.0001	<0.001	0.0003	N/A
Boron (mg/L)	4	N/A	7	0.03	0.04	0.03	N/A
Cadmium (mg/L)	0.002	N/A	7	<0.00005	<0.0002	0.00008	N/A
Chlorine Free Residual (mg/L)	5	N/A	144	0.6	2	1	1
Chromium (mg/L)	0.05	N/A	7	0.0002	<0.005	0.001	N/A
Copper (mg/L)	2	N/A	7	0.002	0.6	0.1	N/A
Fluoride (mg/L)	1.5	N/A	7	<0.1	<0.1	0.05	N/A
Lead (mg/L)	0.01	N/A	7	<0.0001	<0.001	0.0003	N/A
Manganese (mg/L)	0.5	N/A	7	0.002	0.4	0.06	N/A
Mercury (mg/L)	0.001	N/A	7	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	7	<0.0001	<0.005	0.001	N/A
Nickel (mg/L)	0.02	N/A	7	<0.0005	0.01	0.002	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	6	<0.1	0.9	0.5	N/A
Nitrite mg-NO ₂ /L*	3	N/A	6	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.1	N/A	N/A
Perfluorooctanoic acid (PFOA) (ug/L)	0.56	N/A	1	<0.0005	<0.0005	0.0003	N/A
Selenium (mg/L)	0.01	N/A	7	<0.0002	<0.001	0.0003	N/A
Silver (mg/L)	0.1	N/A	7	<0.0001	<0.01	0.002	N/A
Sum (PFHxS + PFOS) (ug/L)	0.07	N/A	1	<0.0003	<0.0003	0.0002	N/A
Trihalomethanes (mg/L)	0.25	N/A	3	<0.005	<0.005	0.003	N/A
Uranium (mg/L)	0.02	N/A	7	0.0002	0.0003	0.0003	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	7	0.01	0.1	0.02	N/A
Chloride (mg/L)	N/A	250	6	10	11	10	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	144	0.64	1.63	1.2	N/A
Copper (mg/L)	N/A	1	7	0.002	0.6	0.1	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	6	41.3	79.9	60.4	N/A
Iron (mg/L)	N/A	0.3	7	<0.002	0.3	0.05	N/A
Manganese (mg/L)	N/A	0.1	7	0.002	0.4	0.06	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	7	7.58	7.89	7.7	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	6	0.39	0.69	0.52	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	6	13.5	14.4	14	N/A
Sodium (Na) (mg/L)	N/A	180	6	6.28	7.05	6.71	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	6	68	101	82.5	N/A
True Colour (HU)	N/A	15	6	<2	4	1.5	N/A
Turbidity (lab) (NTU)	N/A	5	6	0.16	3.4	0.75	N/A
Zinc (mg/L)	N/A	3	7	0.002	<0.01	0.004	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	7	38	78	59	N/A
Apparent Colour (HU)	N/A	N/A	6	<2	8	2.8	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	7	46	95	72	N/A
Bromine (mg/L)	N/A	N/A	7	0.03	<0.1	0.04	N/A
Calcium (Ca) (mg/L)	N/A	N/A	6	14.9	30.5	23	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	7	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	7	120	200	160	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	7	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	7	<0.01	<0.1	0.03	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	6	0.9	1	0.97	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	6	<0.1	0.2	0.13	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	6	<0.1	0.2	0.13	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	6	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	6	1.2	1.3	1.3	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	6	16	18	17	N/A
Tin (mg/L)	N/A	N/A	7	<0.0002	<0.01	0.002	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	144	<1	<1	N/A	N/A

Table 22 – Water quality assessment for Cox Peninsula

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	2	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	2	<0.0002	<0.0005	0.0002	N/A
Barium (mg/L)	2	N/A	2	0.01	<0.05	0.02	N/A
Beryllium (mg/L)	0.06	N/A	2	0.0002	<0.001	0.0004	N/A
Boron (mg/L)	4	N/A	2	0.02	0.02	0.02	N/A
Cadmium (mg/L)	0.002	N/A	2	<0.00005	<0.0002	0.00006	N/A
Chlorine Free Residual (mg/L)	5	N/A	53	1	2	2	2
Chromium (mg/L)	0.05	N/A	2	0.0004	<0.005	0.001	N/A
Copper (mg/L)	2	N/A	2	0.009	<0.01	0.007	N/A
Fluoride (mg/L)	1.5	N/A	2	0.11	0.13	0.12	N/A
Lead (mg/L)	0.01	N/A	2	0.0002	<0.001	0.0004	N/A
Manganese (mg/L)	0.5	N/A	2	0.002	<0.005	0.002	N/A
Mercury (mg/L)	0.001	N/A	2	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	2	<0.0001	<0.005	0.001	N/A
Nickel (mg/L)	0.02	N/A	2	0.0005	<0.002	0.0008	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	2	0.1	0.8	0.5	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.1	N/A	N/A
Perfluorooctanoic acid (PFOA) (ug/L)	0.56	N/A	1	<0.0005	<0.0005	0.0003	N/A
Selenium (mg/L)	0.01	N/A	2	<0.0002	<0.001	0.0003	N/A
Silver (mg/L)	0.1	N/A	2	<0.0001	<0.01	0.003	N/A
Sum (PFHxS + PFOS) (ug/L)	0.07	N/A	1	<0.0003	<0.0003	0.0002	N/A
Uranium (mg/L)	0.02	N/A	2	0.00002	<0.00005	0.00002	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	2	0.011	<0.02	0.011	N/A
Chloride (mg/L)	N/A	250	2	5	8	5	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	53	1.2	2.21	1.8	N/A
Copper (mg/L)	N/A	1	2	0.0086	<0.01	0.0068	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	2	3.1	4.1	3.6	N/A
Iron (mg/L)	N/A	0.3	2	0.017	<0.02	0.014	N/A
Manganese (mg/L)	N/A	0.1	2	0.0018	<0.005	0.0022	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	2	6.26	6.93	6.6	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	2	<0.3	<0.3	0.225	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	2	22.9	24	23	N/A
Sodium (Na) (mg/L)	N/A	180	2	4.06	7.12	5.59	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	2	28	32	30	N/A
True Colour (HU)	N/A	15	2	<2	<2	1.5	N/A
Turbidity (lab) (NTU)	N/A	5	2	0.39	0.68	0.54	N/A
Zinc (mg/L)	N/A	3	2	0.025	0.03	0.028	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	<20	<20	10	N/A
Apparent Colour (HU)	N/A	N/A	2	<2	10	5.5	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	10	12	11	N/A
Bromine (mg/L)	N/A	N/A	2	0.024	<0.1	0.037	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	0.6	0.8	0.7	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	41	44	43	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	<0.01	<0.1	0.028	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	0.4	0.5	0.45	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.075	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	<0.1	0.2	0.13	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	2	1	1.2	1.1	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	9	14	12	N/A
Tin (mg/L)	N/A	N/A	2	<0.0002	<0.01	0.0026	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	53	<1	<1	N/A	N/A

Table 23 – Water quality assessment for Daly Waters

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	9	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	9	<0.0002	<0.0005	0.0002	N/A
Barium (mg/L)	2	N/A	9	0.06	0.1	0.07	N/A
Beryllium (mg/L)	0.06	N/A	9	<0.0001	<0.001	0.0001	N/A
Boron (mg/L)	4	N/A	9	0.3	0.3	0.3	N/A
Cadmium (mg/L)	0.002	N/A	9	<0.00005	<0.0002	0.00003	N/A
Chlorine Free Residual (mg/L)	5	N/A	36	0.6	1	1	1
Chromium (mg/L)	0.05	N/A	9	0.0005	<0.005	0.001	N/A
Copper (mg/L)	2	N/A	9	0.01	0.2	0.04	N/A
Fluoride (mg/L)	1.5	N/A	8	0.18	0.19	0.18	N/A
Lead (mg/L)	0.01	N/A	9	<0.0001	<0.001	0.0005	N/A
Manganese (mg/L)	0.5	N/A	9	<0.0005	<0.005	0.0006	N/A
Mercury (mg/L)	0.001	N/A	9	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	9	<0.0001	<0.005	0.0004	N/A
Nickel (mg/L)	0.02	N/A	9	0.002	0.003	0.002	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	8	8	10	9	N/A
Nitrite mg-NO ₂ /L*	3	N/A	8	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.3	N/A	N/A
Perfluorooctanoic acid (PFOA) (ug/L)	0.56	N/A	1	<0.0005	<0.0005	0.0003	N/A
Selenium (mg/L)	0.01	N/A	9	0.002	0.002	0.002	N/A
Silver (mg/L)	0.1	N/A	9	<0.0001	<0.01	0.0006	N/A
Sum (PFHxS + PFOS) (ug/L)	0.07	N/A	1	<0.0003	<0.0003	0.0002	N/A
Trihalomethanes (mg/L)	0.25	N/A	2	<0.005	0.01	0.008	N/A
Uranium (mg/L)	0.02	N/A	9	0.003	0.004	0.003	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	9	<0.005	<0.02	0.003	N/A
Chloride (mg/L)	N/A	250	8	280	300	280	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	36	0.63	1.43	1.1	N/A
Copper (mg/L)	N/A	1	9	0.01	0.161	0.04	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	8	407	588	543	N/A
Iron (mg/L)	N/A	0.3	9	0.004	0.115	0.03	N/A
Manganese (mg/L)	N/A	0.1	9	<0.0005	<0.005	0.00062	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	8	7.18	7.38	7.3	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	8	128	163	151	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	8	33.4	40.9	36	N/A
Sodium (Na) (mg/L)	N/A	180	8	189	214	196	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	8	1090	1200	1170	N/A
True Colour (HU)	N/A	15	8	<2	<2	1.13	N/A
Turbidity (lab) (NTU)	N/A	5	8	0.22	1.8	0.63	N/A
Zinc (mg/L)	N/A	3	9	0.005	0.053	0.019	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	8	400	420	410	N/A
Apparent Colour (HU)	N/A	N/A	8	<2	29	7.8	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	8	490	520	500	N/A
Bromine (mg/L)	N/A	N/A	9	0.4	1.32	0.76	N/A
Calcium (Ca) (mg/L)	N/A	N/A	8	75	145	130	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	8	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	8	2000	2100	2100	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	8	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	9	0.06	<0.1	0.068	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	8	52	55.4	54	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	8	1.9	2.3	2.1	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	8	1.9	2.3	2.1	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	8	<0.1	<0.1	0.056	N/A
Potassium (K) (mg/L)	N/A	N/A	8	20.9	22.2	22	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	8	460	490	480	N/A
Tin (mg/L)	N/A	N/A	9	<0.0002	<0.01	0.00064	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	36	<1	<1	N/A	N/A

Table 24 – Water quality assessment for Darwin

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	16	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	16	<0.0002	<0.0005	0.0002	N/A
Barium (mg/L)	2	N/A	16	0.02	<0.05	0.02	N/A
Beryllium (mg/L)	0.06	N/A	16	<0.0001	<0.001	0.0003	N/A
Boron (mg/L)	4	N/A	16	0.008	<0.02	0.01	N/A
Cadmium (mg/L)	0.002	N/A	16	<0.00005	<0.0002	0.00006	N/A
Chlorine Free Residual (mg/L)	5	N/A	582	0.04	2	1	2
Chromium (mg/L)	0.05	N/A	16	<0.0002	<0.005	0.001	N/A
Copper (mg/L)	2	N/A	16	0.004	0.2	0.03	N/A
Fluoride (mg/L)	1.5	N/A	68	<0.1	0.79	0.62	0.77
Lead (mg/L)	0.01	N/A	16	0.0002	0.002	0.0007	N/A
Manganese (mg/L)	0.5	N/A	16	0.02	0.08	0.03	N/A
Mercury (mg/L)	0.001	N/A	16	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	16	<0.0001	<0.005	0.001	N/A
Nickel (mg/L)	0.02	N/A	16	<0.0005	<0.002	0.0006	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	16	<0.1	0.7	0.2	N/A
Nitrite mg-NO ₂ /L*	3	N/A	16	<0.3	<0.3	0	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N//A	N/A	0.1	N/A	N/A
Perfluorooctanoic acid (PFOA) (ug/L)	0.56	N/A	1	<0.0005	<0.0005	<0.0005	N/A
Selenium (mg/L)	0.01	N/A	16	<0.0002	<0.001	0.0003	N/A
Silver (mg/L)	0.1	N/A	16	<0.0001	<0.01	0.003	N/A
Sum (PFHxS + PFOS) (ug/L)	0.07	N/A	1	<0.0003	<0.0003	<0.0003	N/A
Trihalomethanes (mg/L)	0.25	N/A	10	0.06	0.1	0.07	N/A
Uranium (mg/L)	0.02	N/A	16	0.00001	<0.00005	0.00002	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	16	0.005	<0.02	0.0096	N/A
Chloride (mg/L)	N/A	250	16	6	8	6	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	582	0.04	2.12	1.3	N/A
Copper (mg/L)	N/A	1	16	0.0038	0.223	0.032	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	16	19.6	39.9	28.4	N/A
Iron (mg/L)	N/A	0.3	16	0.04	0.249	0.089	N/A
Manganese (mg/L)	N/A	0.1	16	0.015	0.083	0.026	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	16	6.83	7.59	7.2	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	16	<0.3	<0.3	0.15	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	16	6.63	12.1	10	N/A
Sodium (Na) (mg/L)	N/A	180	16	2.76	4.35	3.43	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	16	24	61	41.8	N/A
True Colour (HU)	N/A	15	16	<2	4	2.06	N/A
Turbidity (lab) (NTU)	N/A	5	16	0.7	2.6	1.3	N/A
Zinc (mg/L)	N/A	3	16	0.002	0.013	0.0063	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	16	<20	33	21	N/A
Apparent Colour (HU)	N/A	N/A	16	9	26	16	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	16	20	40	29	N/A
Bromine (mg/L)	N/A	N/A	16	0.04	<0.1	0.052	N/A
Calcium (Ca) (mg/L)	N/A	N/A	16	3.4	9.1	5.6	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	16	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	16	54	100	75	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	16	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	16	<0.01	<0.1	0.033	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	16	2.7	4.6	3.5	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	16	<0.1	<0.1	0.072	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	16	<0.1	<0.1	0.072	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	16	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	16	16	0.7	0.79	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	16	16	9	11	N/A
Tin (mg/L)	N/A	N/A	16	16	<0.0002	0.0026	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	582	<1	<1	N/A	N/A

Table 25 – Water quality assessment for Elliott

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	5	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	5	0.0002	<0.0005	0.0002	N/A
Barium (mg/L)	2	N/A	5	0.1	0.2	0.1	N/A
Beryllium (mg/L)	0.06	N/A	5	<0.0001	<0.001	0.0002	N/A
Boron (mg/L)	4	N/A	5	0.3	0.3	0.3	N/A
Cadmium (mg/L)	0.002	N/A	5	<0.00005	<0.0002	0.00006	N/A
Chlorine Free Residual (mg/L)	5	N/A	159	0.9	2	1	1
Chromium (mg/L)	0.05	N/A	5	0.0003	<0.005	0.001	N/A
Copper (mg/L)	2	N/A	5	0.008	0.03	0.02	N/A
Fluoride (mg/L)	1.5	N/A	5	0.8	0.84	0.82	N/A
Lead (mg/L)	0.01	N/A	5	<0.0001	<0.001	0.0004	N/A
Manganese (mg/L)	0.5	N/A	5	<0.0005	<0.005	0.001	N/A
Mercury (mg/L)	0.001	N/A	5	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	5	0.001	<0.005	0.002	N/A
Nickel (mg/L)	0.02	N/A	5	0.001	<0.002	0.001	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	5	10	10	10	N/A
Nitrite mg-NO ₂ /L*	3	N/A	5	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.3	N/A	N/A
Perfluorooctanoic acid (PFOA) (ug/L)	0.56	N/A	1	<0.0005	<0.0005	0.0003	N/A
Selenium (mg/L)	0.01	N/A	5	0.001	0.001	0.001	N/A
Silver (mg/L)	0.1	N/A	5	<0.0001	<0.01	0.002	N/A
Sum (PFHxS + PFOS) (ug/L)	0.07	N/A	1	<0.0003	<0.0003	0.0002	N/A
Trihalomethanes (mg/L)	0.25	N/A	3	<0.005	<0.005	0.003	N/A
Uranium (mg/L)	0.02	N/A	5	0.006	0.006	0.006	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	5	<0.005	0.04	0.012	N/A
Chloride (mg/L)	N/A	250	5	140	150	140	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	159	0.86	2.2	1.2	N/A
Copper (mg/L)	N/A	1	5	0.0079	0.03	0.015	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	5	433	463	453	N/A
Iron (mg/L)	N/A	0.3	5	0.002	<0.02	0.0064	N/A
Manganese (mg/L)	N/A	0.1	5	<0.0005	<0.005	0.0012	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	5	7.53	7.73	7.7	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	5	25	31.5	27.4	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	5	47.9	50.3	49	N/A
Sodium (Na) (mg/L)	N/A	180	5	81.8	89.1	86	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	5	628	727	680	N/A
True Colour (HU)	N/A	15	5	<2	<2	1.2	N/A
Turbidity (lab) (NTU)	N/A	5	5	0.33	0.84	0.56	N/A
Zinc (mg/L)	N/A	3	5	0.002	<0.01	0.0046	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	5	370	380	380	N/A
Apparent Colour (HU)	N/A	N/A	5	<2	<2	1.4	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	5	450	470	460	N/A
Bromine (mg/L)	N/A	N/A	5	0.5	0.542	0.51	N/A
Calcium (Ca) (mg/L)	N/A	N/A	5	98.7	108	110	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	5	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	5	1300	1300	1300	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	5	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	5	0.04	<0.1	0.046	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	5	45.2	46.9	46	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	5	2.7	3.1	2.9	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	5	2.7	3	2.9	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	5	<0.1	<0.1	0.06	N/A
Potassium (K) (mg/L)	N/A	N/A	5	21.5	23.2	22	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	5	230	240	240	N/A
Tin (mg/L)	N/A	N/A	5	<0.0002	<0.01	0.0021	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	159	<1	4	N/A	N/A

Table 26 – Water quality assessment for Gunn Point

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	2	<0.0002	<0.0002	0.0002	N/A
Arsenic (mg/L)	0.01	N/A	2	<0.0002	<0.0005	0.0002	N/A
Barium (mg/L)	2	N/A	2	0.02	<0.05	0.02	N/A
Beryllium (mg/L)	0.06	N/A	2	<0.0001	<0.001	0.0003	N/A
Boron (mg/L)	4	N/A	2	0.01	<0.02	0.01	N/A
Cadmium (mg/L)	0.002	N/A	2	0.0009	0.001	0.001	N/A
Chlorine Free Residual (mg/L)	5	N/A	11	0.7	2	1	N/A
Chromium (mg/L)	0.05	N/A	2	<0.0002	<0.005	0.001	N/A
Copper (mg/L)	2	N/A	2	0.003	<0.01	0.004	N/A
Fluoride (mg/L)	1.5	N/A	2	<0.1	0.18	0.12	N/A
Lead (mg/L)	0.01	N/A	2	0.002	0.002	0.002	N/A
Manganese (mg/L)	0.5	N/A	2	0.01	0.02	0.01	N/A
Mercury (mg/L)	0.001	N/A	2	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	2	<0.0001	<0.005	0.001	N/A
Nickel (mg/L)	0.02	N/A	2	0.001	<0.002	0.001	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	2	0.1	0.4	0.3	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.1	N/A	N/A
Selenium (mg/L)	0.01	N/A	2	<0.0002	<0.001	0.0003	N/A
Silver (mg/L)	0.1	N/A	2	<0.0001	<0.01	0.003	N/A
Uranium (mg/L)	0.02	N/A	2	<0.00001	<0.00005	0.00002	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	2	<0.005	<0.02	0.0063	N/A
Chloride (mg/L)	N/A	250	2	10	12	10	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	11	0.73	2.4	1.2	N/A
Copper (mg/L)	N/A	1	2	0.003	<0.01	0.004	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	2	17.9	31.1	24.5	N/A
Iron (mg/L)	N/A	0.3	2	0.28	0.358	0.32	N/A
Manganese (mg/L)	N/A	0.1	2	0.0149	0.015	0.015	N/A
pH (lab) (pH units)	N/A	6.5 - 8.5	2	7.42	7.52	7.5	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	2	<0.3	0.78	0.465	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	2	9.59	10.8	10	N/A
Sodium (Na) (mg/L)	N/A	180	2	9.88	11.3	10.6	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	2	61	66	63.5	N/A
True Colour (HU)	N/A	15	2	<2	<2	1.5	N/A
Turbidity (lab) (NTU)	N/A	5	2	1.4	1.7	1.6	N/A
Zinc (mg/L)	N/A	3	2	2.44	3.86	3.2	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	25	36	31	N/A
Apparent Colour (HU)	N/A	N/A	2	14	28	21	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	31	44	38	N/A
Bromine (mg/L)	N/A	N/A	2	0.016	<0.1	0.033	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	3.7	6.2	5	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	95	110	100	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	<0.01	<0.1	0.028	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	2.1	3.8	3	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.075	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.075	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	2	0.2	0.5	0.35	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	17	20	19	N/A
Tin (mg/L)	N/A	N/A	2	<0.0002	<0.01	0.0026	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	13	<1	<1	N/A	N/A

Table 27 – Water quality assessment for Katherine

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	4	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	4	<0.0002	<0.0005	0.0002	N/A
Barium (mg/L)	2	N/A	4	0.01	<0.05	0.02	N/A
Beryllium (mg/L)	0.06	N/A	4	<0.0001	<0.001	0.0003	N/A
Boron (mg/L)	4	N/A	4	0.01	0.02	0.02	N/A
Cadmium (mg/L)	0.002	N/A	4	<0.00005	<0.0002	0.00006	N/A
Chlorine Free Residual (mg/L)	5	N/A	104	0.9	1	1	1
Chromium (mg/L)	0.05	N/A	4	<0.0002	<0.005	0.001	N/A
Copper (mg/L)	2	N/A	4	0.02	0.04	0.03	N/A
Fluoride (mg/L)	1.5	N/A	71	0.22	0.72	0.45	0.66
Lead (mg/L)	0.01	N/A	4	0.0002	<0.001	0.0004	N/A
Manganese (mg/L)	0.5	N/A	4	<0.0005	<0.005	0.002	N/A
Mercury (mg/L)	0.001	N/A	4	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	4	<0.0001	<0.005	0.001	N/A
Nickel (mg/L)	0.02	N/A	4	<0.0005	<0.002	0.0008	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	8	0.4	0.7	0.5	N/A
Nitrite mg-NO ₂ /L*	3	N/A	8	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.1	N/A	N/A
Perfluorooctanoic acid (PFOA) (ug/L)	0.56	N/A	12	<0.0005	<0.01	0.0007	N/A
Selenium (mg/L)	0.01	N/A	4	<0.0002	<0.001	0.0003	N/A
Silver (mg/L)	0.1	N/A	4	<0.0001	<0.01	0.003	N/A
Sum (PFHxS + PFOS) (ug/L)	0.07	N/A	12	<0.0003	<0.01	0.0006	N/A
Trihalomethanes (mg/L)	0.25	N/A	4	0.006	0.03	0.02	N/A
Uranium (mg/L)	0.02	N/A	4	<0.00001	<0.00005	0.00002	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	4	0.01	<0.02	0.011	N/A
Chloride (mg/L)	N/A	250	8	4	6	4	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	104	0.86	1.46	1.2	N/A
Copper (mg/L)	N/A	1	4	0.02	0.04	0.031	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	0.3	4	0.003	<0.02	0.01	N/A
Iron (mg/L)	N/A	0.3	8	<0.01	0.034	0.0093	N/A
Manganese (mg/L)	N/A	0.1	4	<0.0005	<0.005	0.0017	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	8	7.31	7.85	7.6	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	8	<0.3	3.51	1.74	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	8	7.3	16	11	N/A
Sodium (Na) (mg/L)	N/A	180	8	8.49	11.1	9.74	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	8	28	105	75.5	N/A
True Colour (HU)	N/A	15	8	<2	<2	1.25	N/A
Turbidity (lab) (NTU)	N/A	5	8	0.18	0.97	0.38	N/A
Zinc (mg/L)	N/A	3	4	0.002	<0.01	0.005	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	8	53	88	68	N/A
Apparent Colour (HU)	N/A	N/A	8	<2	5	2.3	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	8	65	110	83	N/A
Bromine (mg/L)	N/A	N/A	4	0.016	<0.1	0.034	N/A
Calcium (Ca) (mg/L)	N/A	N/A	8	11	18.6	15	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	8	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	8	66	210	150	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	8	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	4	<0.01	<0.1	0.028	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	8	4.4	7.9	6.2	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	8	0.1	0.1	0.1	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	8	0.1	0.2	0.11	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	8	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	8	0.6	1.2	1	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	8	7	11	9.1	N/A
Tin (mg/L)	N/A	N/A	4	<0.0002	<0.01	0.0026	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	104	<1	<1	N/A	N/A

Table 28 – Water quality assessment for Kings Canyon

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	4	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	4	0.0009	0.001	0.001	N/A
Barium (mg/L)	2	N/A	4	0.02	<0.05	0.02	N/A
Beryllium (mg/L)	0.06	N/A	4	<0.0001	<0.001	0.0003	N/A
Boron (mg/L)	4	N/A	4	0.2	0.3	0.3	N/A
Cadmium (mg/L)	0.002	N/A	4	<0.00005	<0.0002	0.00007	N/A
Chlorine Free Residual (mg/L)	5	N/A	144	0.6	1	0.9	1
Chromium (mg/L)	0.05	N/A	4	0.005	0.01	0.008	N/A
Copper (mg/L)	2	N/A	4	0.004	0.09	0.04	N/A
Fluoride (mg/L)	1.5	N/A	4	0.5	0.58	0.54	N/A
Lead (mg/L)	0.01	N/A	4	0.0003	<0.001	0.0006	N/A
Manganese (mg/L)	0.5	N/A	4	<0.0005	<0.005	0.002	N/A
Mercury (mg/L)	0.001	N/A	4	0.0004	0.0004	0.0004	N/A
Molybdenum(mg/L)	0.05	N/A	4	0.002	<0.005	0.002	N/A
Nickel (mg/L)	0.02	N/A	4	0.006	0.007	0.006	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	4	2	3	2	N/A
Nitrite mg-NO ₂ /L*	3	N/A	4	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.2	N/A	N/A
Perfluorooctanoic acid (PFOA) (ug/L)	0.56	N/A	1	<0.0005	<0.0005	0.0003	N/A
Selenium (mg/L)	0.01	N/A	4	0.002	0.002	0.002	N/A
Silver (mg/L)	0.1	N/A	4	<0.0001	<0.01	0.003	N/A
Sum (PFHxS + PFOS) (ug/L)	0.07	N/A	1	<0.0003	<0.0003	0.0002	N/A
Trihalomethanes (mg/L)	0.25	N/A	2	<0.005	0.006	0.004	N/A
Uranium (mg/L)	0.02	N/A	4	0.002	0.002	0.002	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	4	<0.02	0.072	0.03	N/A
Chloride (mg/L)	N/A	250	4	200	230	200	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	144	0.62	1.24	0.94	N/A
Copper (mg/L)	N/A	1	4	0.0036	0.0948	0.038	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	4	363	385	375	N/A
Iron (mg/L)	N/A	0.3	4	<0.02	0.081	0.03	N/A
Manganese (mg/L)	N/A	0.1	4	<0.0005	<0.005	0.0015	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	4	7.05	7.66	7.3	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	4	159	166	163	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	4	20	21.2	21	N/A
Sodium (Na) (mg/L)	N/A	180	4	100	107	104	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	4	706	819	760	N/A
True Colour (HU)	N/A	15	4	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	4	0.28	1.1	0.58	N/A
Zinc (mg/L)	N/A	3	4	0.02	0.05	0.037	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	4	130	130	130	N/A
Apparent Colour (HU)	N/A	N/A	4	<2	5	2.5	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	4	150	160	150	N/A
Bromine (mg/L)	N/A	N/A	4	1	1.4	1.2	N/A
Calcium (Ca) (mg/L)	N/A	N/A	4	72.1	78.2	75	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	4	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	4	1300	1400	1400	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	4	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	4	0.15	0.4	0.25	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	4	44.4	46	45	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	4	0.4	0.6	0.5	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	4	0.4	0.6	0.5	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	4	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	4	22.6	23.7	23	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	4	330	390	350	N/A
Tin (mg/L)	N/A	N/A	4	<0.0002	<0.01	0.0026	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	144	<1	<1	N/A	N/A

Table 29 – Water quality assessment for Larrimah

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	6	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	6	<0.0002	<0.0005	0.0002	N/A
Barium (mg/L)	2	N/A	6	0.05	0.07	0.06	N/A
Beryllium (mg/L)	0.06	N/A	6	<0.0001	<0.001	0.0002	N/A
Boron (mg/L)	4	N/A	6	0.2	0.2	0.2	N/A
Cadmium (mg/L)	0.002	N/A	6	<0.00005	<0.0002	0.00005	N/A
Chlorine Free Residual (mg/L)	5	N/A	36	0.5	1	1	1
Chromium (mg/L)	0.05	N/A	6	<0.0002	<0.005	0.0009	N/A
Copper (mg/L)	2	N/A	6	0.004	0.03	0.01	N/A
Fluoride (mg/L)	1.5	N/A	6	0.13	0.23	0.19	N/A
Lead (mg/L)	0.01	N/A	6	<0.0001	<0.001	0.0004	N/A
Manganese (mg/L)	0.5	N/A	6	<0.0005	<0.005	0.001	N/A
Mercury (mg/L)	0.001	N/A	6	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	6	<0.0001	<0.005	0.0009	N/A
Nickel (mg/L)	0.02	N/A	6	<0.0005	<0.002	0.0005	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	6	2	3	2	N/A
Nitrite mg-NO ₂ /L*	3	N/A	6	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.2	N/A	N/A
Selenium (mg/L)	0.01	N/A	6	0.001	0.001	0.001	N/A
Silver (mg/L)	0.1	N/A	6	<0.0001	<0.01	0.002	N/A
Trihalomethanes (mg/L)	0.25	N/A	2	<0.005	<0.005	0.003	N/A
Uranium (mg/L)	0.02	N/A	6	0.002	0.002	0.002	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	6	<0.005	<0.02	0.005	N/A
Chloride (mg/L)	N/A	250	6	180	200	180	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	36	0.53	1.31	1.1	N/A
Copper (mg/L)	N/A	1	6	0.0038	0.0266	0.014	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	6	518	539	529	N/A
Iron (mg/L)	N/A	0.3	6	0.003	0.088	0.026	N/A
Manganese (mg/L)	N/A	0.1	6	<0.0005	<0.005	0.0011	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	6	7.45	7.93	7.7	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	6	77.7	106	87.2	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	6	37.9	43.2	41	N/A
Sodium (Na) (mg/L)	N/A	180	6	119	135	127	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	6	887	957	916	N/A
True Colour (HU)	N/A	15	6	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	6	0.27	1.4	0.64	N/A
Zinc (mg/L)	N/A	3	6	0.006	0.012	0.009	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	6	410	460	440	N/A
Apparent Colour (HU)	N/A	N/A	6	<2	6	2.3	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	6	500	560	530	N/A
Bromine (mg/L)	N/A	N/A	6	0.5	0.85	0.63	N/A
Calcium (Ca) (mg/L)	N/A	N/A	6	118	131	120	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	6	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	6	1500	1600	1600	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	6	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	6	0.07	<0.1	0.058	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	6	50.1	57.4	53	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	6	0.5	0.6	0.57	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	6	0.5	0.6	0.57	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	6	<0.1	<0.1	0.067	N/A
Potassium (K) (mg/L)	N/A	N/A	6	12.1	13.4	13	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	6	300	330	310	N/A
Tin (mg/L)	N/A	N/A	6	<0.0002	<0.01	0.0017	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	36	<1	<1	N/A	N/A

Table 30 – Water quality assessment for Mataranka

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	4	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	4	0.0002	<0.0005	0.0002	N/A
Barium (mg/L)	2	N/A	4	0.1	0.1	0.1	N/A
Beryllium (mg/L)	0.06	N/A	4	<0.0001	<0.001	0.0003	N/A
Boron (mg/L)	4	N/A	4	0.05	0.06	0.05	N/A
Cadmium (mg/L)	0.002	N/A	4	<0.00005	<0.0002	0.00006	N/A
Chlorine Free Residual (mg/L)	5	N/A	47	1	2	1	2
Chromium (mg/L)	0.05	N/A	4	<0.0002	<0.005	0.001	N/A
Copper (mg/L)	2	N/A	4	0.007	0.02	0.01	N/A
Fluoride (mg/L)	1.5	N/A	4	0.22	0.24	0.23	N/A
Lead (mg/L)	0.01	N/A	4	0.0001	<0.001	0.0003	N/A
Manganese (mg/L)	0.5	N/A	4	<0.0005	<0.005	0.001	N/A
Mercury (mg/L)	0.001	N/A	4	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	4	<0.0001	<0.005	0.001	N/A
Nickel (mg/L)	0.02	N/A	4	<0.0005	<0.002	0.0006	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	4	0.4	0.6	0.5	N/A
Nitrite mg-NO ₂ /L*	3	N/A	4	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.1	N/A	N/A
Selenium (mg/L)	0.01	N/A	4	<0.0002	<0.001	0.0003	N/A
Silver (mg/L)	0.1	N/A	4	<0.0001	<0.01	0.003	N/A
Trihalomethanes (mg/L)	0.25	N/A	2	<0.005	<0.005	0.003	N/A
Uranium (mg/L)	0.02	N/A	4	0.0005	0.0006	0.0006	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	4	<0.005	<0.02	0.0063	N/A
Chloride (mg/L)	N/A	250	4	21	22	21	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	47	0.95	1.64	1.3	N/A
Copper (mg/L)	N/A	1	4	0.0073	0.0166	0.0097	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	4	331	355	343	N/A
Iron (mg/L)	N/A	0.3	4	<0.002	<0.02	0.0055	N/A
Manganese (mg/L)	N/A	0.1	4	<0.0005	<0.005	0.0014	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	4	7.47	7.69	7.6	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	4	<0.3	0.66	0.323	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	4	24.6	28.9	27	N/A
Sodium (Na) (mg/L)	N/A	180	4	15.6	17.4	16.6	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	4	319	367	348	N/A
True Colour (HU)	N/A	15	4	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	4	0.2	0.66	0.4	N/A
Zinc (mg/L)	N/A	3	4	<0.01	0.011	0.0078	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	4	320	330	330	N/A
Apparent Colour (HU)	N/A	N/A	4	<2	<2	1.5	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	4	400	410	410	N/A
Bromine (mg/L)	N/A	N/A	4	0.098	0.2	0.16	N/A
Calcium (Ca) (mg/L)	N/A	N/A	4	78.2	87.6	84	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	4	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	4	540	700	630	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	4	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	4	<0.01	<0.1	0.028	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	4	31.3	33.2	33	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	4	0.1	0.1	0.1	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	4	0.1	0.1	0.1	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	4	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	4	5.8	6.2	6	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	4	34	37	35	N/A
Tin (mg/L)	N/A	N/A	4	<0.0002	<0.01	0.0026	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	48	<1	<1	N/A	N/A

Table 31 – Water quality assessment for Newcastle Waters

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	6	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	6	0.0004	<0.0005	0.0004	N/A
Barium (mg/L)	2	N/A	6	0.2	0.3	0.2	N/A
Beryllium (mg/L)	0.06	N/A	6	<0.0001	<0.001	0.0003	N/A
Boron (mg/L)	4	N/A	6	0.2	0.3	0.3	N/A
Cadmium (mg/L)	0.002	N/A	6	<0.00005	<0.0002	0.00006	N/A
Chlorine Free Residual (mg/L)	5	N/A	24	0.9	1	1	1
Chromium (mg/L)	0.05	N/A	6	0.0007	<0.005	0.002	N/A
Copper (mg/L)	2	N/A	6	0.006	0.04	0.02	N/A
Fluoride (mg/L)	1.5	N/A	6	0.86	0.96	0.9	N/A
Lead (mg/L)	0.01	N/A	6	<0.0001	<0.001	0.0004	N/A
Manganese (mg/L)	0.5	N/A	6	<0.0005	<0.005	0.001	N/A
Mercury (mg/L)	0.001	N/A	6	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	6	0.003	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	6	<0.0005	<0.002	0.0007	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	6	8	9	9	N/A
Nitrite mg-NO ₂ /L*	3	N/A	6	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.3	N/A	N/A
Perfluorooctanoic acid (PFOA) (ug/L)	0.56	N/A	1	<0.0005	<0.0005	0.0003	N/A
Selenium (mg/L)	0.01	N/A	6	0.0005	<0.001	0.0005	N/A
Silver (mg/L)	0.1	N/A	6	<0.0001	<0.01	0.003	N/A
Sum (PFHxS + PFOS) (ug/L)	0.07	N/A	1	<0.0003	<0.0003	0.0002	N/A
Trihalomethanes (mg/L)	0.25	N/A	3	<0.005	<0.005	0.003	N/A
Uranium (mg/L)	0.02	N/A	6	0.005	0.005	0.005	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	6	<0.005	<0.02	0.0063	N/A
Chloride (mg/L)	N/A	250	6	40	46	40	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	24	0.86	1.33	1.1	N/A
Copper (mg/L)	N/A	1	6	0.0055	0.04	0.016	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	6	337	351	345	N/A
Iron (mg/L)	N/A	0.3	6	<0.002	<0.02	0.0065	N/A
Manganese (mg/L)	N/A	0.1	6	<0.0005	<0.005	0.0014	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	6	7.62	7.75	7.7	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	6	4.02	8.19	6.07	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	6	56.7	59.7	58	N/A
Sodium (Na) (mg/L)	N/A	180	6	50.2	52.4	51.8	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	6	481	523	503	N/A
True Colour (HU)	N/A	15	6	<2	<2	1.33	N/A
Turbidity (lab) (NTU)	N/A	5	6	0.2	0.57	0.29	N/A
Zinc (mg/L)	N/A	3	6	0.005	0.012	0.0072	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	6	370	380	380	N/A
Apparent Colour (HU)	N/A	N/A	6	<2	7	2.8	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	6	450	470	460	N/A
Bromine (mg/L)	N/A	N/A	6	0.15	0.6	0.3	N/A
Calcium (Ca) (mg/L)	N/A	N/A	6	77.4	81.4	80	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	6	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	6	900	920	910	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	6	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	6	0.03	<0.1	0.04	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	6	34.8	35.9	35	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	6	1.9	2	2	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	6	1.9	2	2	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	6	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	6	31.1	31.7	31	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	6	66	76	70	N/A
Tin (mg/L)	N/A	N/A	6	<0.0002	<0.01	0.0026	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	24	<1	<1	N/A	N/A

Table 32 – Water quality assessment for Pine Creek

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	39	<0.0002	0.0007	0.0001	0.0003
Arsenic (mg/L)	0.01	N/A	39	<0.0005	0.01	0.004	0.006
Barium (mg/L)	2	N/A	39	0.009	<0.05	0.02	0.03
Beryllium (mg/L)	0.06	N/A	39	<0.0001	<0.001	0.0002	0.0005
Boron (mg/L)	4	N/A	39	<0.005	0.3	0.02	0.02
Cadmium (mg/L)	0.002	N/A	39	<0.00005	<0.0002	0.00005	0.0001
Chlorine Free Residual (mg/L)	5	N/A	156	0.8	2	1	2
Chromium (mg/L)	0.05	N/A	39	<0.0002	<0.005	0.0008	0.003
Copper (mg/L)	2	N/A	39	0.005	0.8	0.06	0.5
Fluoride (mg/L)	1.5	N/A	9	0.51	0.63	0.56	N/A
Lead (mg/L)	0.01	N/A	39	<0.0001	0.001	0.0003	0.001
Manganese (mg/L)	0.5	N/A	39	0.0009	0.3	0.01	0.06
Mercury (mg/L)	0.001	N/A	39	<0.0001	<0.0001	0.00005	0.00005
Molybdenum(mg/L)	0.05	N/A	39	0.0001	<0.005	0.0009	0.003
Nickel (mg/L)	0.02	N/A	39	<0.0005	<0.002	0.0005	0.001
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	9	0.3	1	0.6	N/A
Nitrite mg-NO ₂ /L*	3	N/A	9	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.1	N/A	N/A
Perfluorooctanoic acid (PFOA) (ug/L)	0.56	N/A	12	<0.0005	<0.01	0.0007	N/A
Selenium (mg/L)	0.01	N/A	39	<0.0002	0.002	0.0003	0.0005
Silver (mg/L)	0.1	N/A	39	<0.0001	<0.01	0.002	0.005
Sum (PFHxS + PFOS) (ug/L)	0.07	N/A	12	<0.0003	<0.01	0.002	N/A
Trihalomethanes (mg/L)	0.25	N/A	3	<0.005	<0.005	0.003	N/A
Uranium (mg/L)	0.02	N/A	39	0.00007	0.003	0.0002	0.0002
Aesthetic							
Aluminium (mg/L)	N/A	0.2	39	<0.005	0.04	0.0057	N/A
Chloride (mg/L)	N/A	250	9	5	11	5	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	156	0.79	1.82	1.3	N/A
Copper (mg/L)	N/A	1	39	0.0047	0.8	0.055	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	9	85.3	104	95.4	N/A
Iron (mg/L)	N/A	0.3	39	<0.002	0.44	0.03	N/A
Manganese (mg/L)	N/A	0.1	39	0.0009	0.285	0.013	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	9	6.89	7.96	7.3	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	9	<0.3	0.45	0.21	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	9	44.3	47.1	45	N/A
Sodium (Na) (mg/L)	N/A	180	9	25.2	35.6	29.4	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	9	163	215	187	N/A
True Colour (HU)	N/A	15	9	<2	<2	1.56	N/A
Turbidity (lab) (NTU)	N/A	5	9	0.24	2.3	0.74	N/A
Zinc (mg/L)	N/A	3	39	0.003	0.053	0.0083	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	9	130	150	140	N/A
Apparent Colour (HU)	N/A	N/A	9	<2	21	5.9	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	9	160	190	170	N/A
Bromine (mg/L)	N/A	N/A	39	0.02	1.14	0.079	N/A
Calcium (Ca) (mg/L)	N/A	N/A	9	10.1	14.3	12	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	9	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	9	180	350	290	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	9	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	39	<0.01	<0.1	0.038	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	9	14.6	16.7	16	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	9	0.1	0.2	0.12	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	9	0.1	0.2	0.13	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	9	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	9	1.3	1.6	1.5	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	9	9	18	13	N/A
Tin (mg/L)	N/A	N/A	39	<0.0002	<0.01	0.0016	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	156	<1	<1	N/A	N/A

Table 33 – Water quality assessment for Ti Tree

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	6	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	6	0.001	0.001	0.001	N/A
Barium (mg/L)	2	N/A	6	0.05	0.1	0.07	N/A
Beryllium (mg/L)	0.06	N/A	6	<0.0001	<0.001	0.0003	N/A
Boron (mg/L)	4	N/A	6	0.3	0.5	0.4	N/A
Cadmium (mg/L)	0.002	N/A	6	<0.00005	<0.0002	0.00006	N/A
Chlorine Free Residual (mg/L)	5	N/A	36	1	2	2	2
Chromium (mg/L)	0.05	N/A	6	0.002	<0.005	0.002	N/A
Copper (mg/L)	2	N/A	6	0.005	<0.01	0.006	N/A
Fluoride (mg/L)	1.5	N/A	36	0.68	0.88	0.79	0.86
Lead (mg/L)	0.01	N/A	6	0.0002	<0.001	0.0004	N/A
Manganese (mg/L)	0.5	N/A	6	<0.0005	<0.005	0.001	N/A
Mercury (mg/L)	0.001	N/A	6	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	6	0.0006	<0.005	0.002	N/A
Nickel (mg/L)	0.02	N/A	6	<0.0005	<0.002	0.0007	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	36	30	60	50	60
Nitrite mg-NO ₂ /L*	3	N/A	36	<0.3	3	0.3	0.3
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	2	N/A	N/A
Perfluorooctanoic acid (PFOA) (ug/L)	0.56	N/A	2	<0.0005	<0.0005	0.0003	N/A
Selenium (mg/L)	0.01	N/A	6	0.002	0.002	0.002	N/A
Silver (mg/L)	0.1	N/A	6	<0.0001	<0.01	0.003	N/A
Sum (PFHxS + PFOS) (ug/L)	0.07	N/A	2	<0.0003	<0.0003	0.0002	N/A
Trihalomethanes (mg/L)	0.25	N/A	2	<0.005	<0.005	0.003	N/A
Uranium (mg/L)	0.02	N/A	6	0.006	0.007	0.007	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	6	<0.005	<0.02	0.0072	N/A
Chloride (mg/L)	N/A	250	36	71	77	71	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	36	1.31	1.65	1.5	N/A
Copper (mg/L)	N/A	1	6	0.0051	<0.01	0.0059	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	36	213	243	231	N/A
Iron (mg/L)	N/A	0.3	6	<0.002	<0.02	0.0068	N/A
Manganese (mg/L)	N/A	0.1	6	<0.0005	<0.005	0.0014	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	36	7.72	8.53	8.1	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	36	24.8	37.8	32.1	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	36	84.5	108	97	N/A
Sodium (Na) (mg/L)	N/A	180	36	61.7	72.8	67.9	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	36	442	587	518	N/A
True Colour (HU)	N/A	15	36	<2	5	1.53	N/A
Turbidity (lab) (NTU)	N/A	5	36	0.15	1.3	0.42	N/A
Zinc (mg/L)	N/A	3	6	0.003	<0.01	0.006	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	35	200	210	210	N/A
Apparent Colour (HU)	N/A	N/A	36	<2	8	2.4	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	35	240	260	250	N/A
Bromine (mg/L)	N/A	N/A	6	0.1	0.35	0.21	N/A
Calcium (Ca) (mg/L)	N/A	N/A	36	48	58.1	54	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	35	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	36	800	850	830	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	35	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	6	0.07	0.2	0.12	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	36	21.5	25	23	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	36	6.8	13	11	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	36	6.8	14	11	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	36	<0.1	1.2	0.083	N/A
Potassium (K) (mg/L)	N/A	N/A	36	18.7	21.9	21	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	36	120	130	120	N/A
Tin (mg/L)	N/A	N/A	6	<0.0002	<0.01	0.0026	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	36	<1	<1	N/A	N/A

Table 34 – Water quality assessment for Tennant Creek

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	2	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	2	0.002	0.002	0.002	N/A
Barium (mg/L)	2	N/A	2	<0.05	0.05	0.04	N/A
Beryllium (mg/L)	0.06	N/A	2	<0.0001	<0.001	0.0003	N/A
Boron (mg/L)	4	N/A	2	0.5	0.5	0.5	N/A
Cadmium (mg/L)	0.002	N/A	2	<0.00005	<0.0002	0.00006	N/A
Chlorine Free Residual (mg/L)	5	N/A	104	0.9	1	1	1
Chromium (mg/L)	0.05	N/A	2	0.001	<0.005	0.002	N/A
Copper (mg/L)	2	N/A	2	0.008	<0.01	0.006	N/A
Fluoride (mg/L)	1.5	N/A	35	1.2	1.5	1.4	1.5
Lead (mg/L)	0.01	N/A	2	<0.001	0.002	0.001	N/A
Manganese (mg/L)	0.5	N/A	2	<0.0005	<0.005	0.001	N/A
Mercury (mg/L)	0.001	N/A	2	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	2	0.001	<0.005	0.002	N/A
Nickel (mg/L)	0.02	N/A	2	<0.0005	<0.002	0.0006	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	10	30	30	30	N/A
Nitrite mg-NO ₂ /L*	3	N/A	10	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.7	N/A	N/A
Selenium (mg/L)	0.01	N/A	2	0.002	0.002	0.002	N/A
Silver (mg/L)	0.1	N/A	2	<0.0001	<0.01	0.003	N/A
Trihalomethanes (mg/L)	0.25	N/A	2	<0.005	<0.005	0.003	N/A
Uranium (mg/L)	0.02	N/A	2	0.007	0.007	0.007	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	2	<0.005	<0.02	0.0063	N/A
Chloride (mg/L)	N/A	250	10	70	97	70	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	104	0.89	1.32	1.1	N/A
Copper (mg/L)	N/A	1	2	0.0079	<0.01	0.0065	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	10	159	171	164	N/A
Iron (mg/L)	N/A	0.3	2	<0.002	<0.02	0.0055	N/A
Manganese (mg/L)	N/A	0.1	2	<0.0005	<0.005	0.0014	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	10	7.63	8.55	7.8	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	10	25.8	34.2	31	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	10	83.7	99.9	91	N/A
Sodium (Na) (mg/L)	N/A	180	10	116	124	121	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	10	507	591	557	N/A
True Colour (HU)	N/A	15	10	<2	4	1.5	N/A
Turbidity (lab) (NTU)	N/A	5	10	0.16	1	0.41	N/A
Zinc (mg/L)	N/A	3	2	0.01	0.014	0.012	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	10	260	270	270	N/A
Apparent Colour (HU)	N/A	N/A	10	<2	7	3	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	10	270	330	320	N/A
Bromine (mg/L)	N/A	N/A	2	0.2	0.332	0.27	N/A
Calcium (Ca) (mg/L)	N/A	N/A	10	24.5	27.2	26	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	10	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	10	910	990	960	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	10	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	0.09	0.3	0.2	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	10	23.1	25.5	24	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	10	6.5	7.8	7.1	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	10	6.5	7.8	7.1	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	10	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	10	27.1	30.7	29	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	10	120	160	150	N/A
Tin (mg/L)	N/A	N/A	2	<0.0002	<0.01	0.0026	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	104	<1	<1	N/A	N/A

Table 35 – Water quality assessment for Timber Creek

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	10	<0.0002	0.001	0.0002	N/A
Arsenic (mg/L)	0.01	N/A	10	0.001	0.001	0.001	N/A
Barium (mg/L)	2	N/A	10	<0.001	1	1	N/A
Beryllium (mg/L)	0.06	N/A	10	<0.0001	<0.001	0.0002	N/A
Boron (mg/L)	4	N/A	10	0.03	0.1	0.1	N/A
Cadmium (mg/L)	0.002	N/A	10	<0.00005	<0.001	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	36	0.8	1	1	1
Chromium (mg/L)	0.05	N/A	9	<0.0002	<0.005	0.0009	N/A
Copper (mg/L)	2	N/A	9	0.004	0.07	0.02	N/A
Fluoride (mg/L)	1.5	N/A	12	1.3	1.3	1.3	N/A
Lead (mg/L)	0.01	N/A	9	0.0002	0.001	0.0007	N/A
Manganese (mg/L)	0.5	N/A	9	<0.0005	<0.005	0.001	N/A
Mercury (mg/L)	0.001	N/A	9	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	9	0.0003	<0.005	0.001	N/A
Nickel (mg/L)	0.02	N/A	9	<0.0005	<0.002	0.0005	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	12	0.4	1	0.8	N/A
Nitrite mg-NO ₂ /L*	3	N/A	12	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.1	N/A	N/A
Selenium (mg/L)	0.01	N/A	9	<0.0002	<0.001	0.0002	N/A
Silver (mg/L)	0.1	N/A	9	<0.0001	<0.01	0.002	N/A
Trihalomethanes (mg/L)	0.25	N/A	2	<0.005	<0.005	0.003	N/A
Uranium (mg/L)	0.02	N/A	9	0.002	0.002	0.002	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	9	<0.005	<0.02	0.0055	N/A
Chloride (mg/L)	N/A	250	12	36	41	36	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	36	0.81	1.26	1	N/A
Copper (mg/L)	N/A	1	9	0.0036	0.07	0.02	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	12	368	490	441	N/A
Iron (mg/L)	N/A	0.3	9	<0.002	0.02	0.0091	N/A
Manganese (mg/L)	N/A	0.1	9	<0.0005	<0.005	0.001	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	12	7.04	8.1	7.3	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	12	<0.3	<0.3	0.15	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	12	21	25.7	23	N/A
Sodium (Na) (mg/L)	N/A	180	12	20.4	25.7	22.6	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	12	428	485	451	N/A
True Colour (HU)	N/A	15	12	<2	<2	1.08	N/A
Turbidity (lab) (NTU)	N/A	5	12	0.15	1.3	0.38	N/A
Zinc (mg/L)	N/A	3	9	0.002	0.018	0.0074	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	12	430	440	440	N/A
Apparent Colour (HU)	N/A	N/A	12	<2	<2	1.1	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	12	520	540	530	N/A
Bromine (mg/L)	N/A	N/A	10	0.012	0.12	0.066	N/A
Calcium (Ca) (mg/L)	N/A	N/A	12	39.2	75.5	67	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	12	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	12	900	920	910	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	12	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	9	0.01	<0.1	0.037	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	12	61	73.3	66	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	12	0.1	0.2	0.17	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	12	0.1	0.3	0.19	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	12	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	12	6.4	7.8	7	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	12	59	68	64	N/A
Tin (mg/L)	N/A	N/A	9	<0.0002	<0.01	0.0017	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	36	<1	<1	N/A	N/A

Table 36 – Water quality assessment for Yulara

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	4	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	4	<0.0002	<0.0005	0.0001	N/A
Barium (mg/L)	2	N/A	4	0.004	<0.05	0.009	N/A
Beryllium (mg/L)	0.06	N/A	4	<0.0001	<0.001	0.0002	N/A
Boron (mg/L)	4	N/A	4	0.7	0.8	0.7	N/A
Cadmium (mg/L)	0.002	N/A	4	<0.00005	<0.0002	0.00004	N/A
Chlorine Free Residual (mg/L)	5	N/A	52	0.7	1	0.9	1
Chromium (mg/L)	0.05	N/A	4	<0.0002	<0.005	0.0008	N/A
Copper (mg/L)	2	N/A	4	0.0006	<0.01	0.002	N/A
Fluoride (mg/L)	1.5	N/A	4	0.12	0.16	0.14	N/A
Lead (mg/L)	0.01	N/A	4	<0.0001	<0.001	0.0002	N/A
Manganese (mg/L)	0.5	N/A	4	<0.0005	<0.005	0.0008	N/A
Mercury (mg/L)	0.001	N/A	4	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	4	<0.0001	<0.005	0.0007	N/A
Nickel (mg/L)	0.02	N/A	4	<0.0005	<0.002	0.0004	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	4	20	30	20	N/A
Nitrite mg-NO ₂ /L*	3	N/A	4	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.7	N/A	N/A
Selenium (mg/L)	0.01	N/A	4	0.0003	<0.001	0.0004	N/A
Silver (mg/L)	0.1	N/A	4	<0.0001	<0.01	0.001	N/A
Trihalomethanes (mg/L)	0.25	N/A	2	<0.005	<0.005	0.003	N/A
Uranium (mg/L)	0.02	N/A	4	0.0001	0.0002	0.0001	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	4	<0.005	<0.02	0.0044	N/A
Chloride (mg/L)	N/A	250	4	67	78	67	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	52	0.65	1.02	0.9	N/A
Copper (mg/L)	N/A	1	4	0.0006	<0.01	0.0021	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	4	65.4	73.1	69.9	N/A
Iron (mg/L)	N/A	0.3	4	<0.002	<0.02	0.004	N/A
Manganese (mg/L)	N/A	0.1	4	<0.0005	<0.005	0.00081	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	4	7.4	7.63	7.5	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	4	37.8	47.1	43.7	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	4	9.99	12.5	11	N/A
Sodium (Na) (mg/L)	N/A	180	4	51.8	56.1	54.2	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	4	216	280	256	N/A
True Colour (HU)	N/A	15	4	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	4	0.15	0.36	0.24	N/A
Zinc (mg/L)	N/A	3	4	0.001	<0.01	0.0025	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	4	22	26	24	N/A
Apparent Colour (HU)	N/A	N/A	4	<2	<2	1.3	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	4	27	32	29	N/A
Bromine (mg/L)	N/A	N/A	4	0.188	0.3	0.22	N/A
Calcium (Ca) (mg/L)	N/A	N/A	4	14.8	16.9	16	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	4	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	4	420	490	460	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	4	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	4	0.03	<0.1	0.045	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	4	6.9	7.5	7.2	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	4	4	5.8	4.8	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	4	4	5.9	4.8	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	4	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	4	6.4	7.2	6.8	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	4	110	130	120	N/A
Tin (mg/L)	N/A	N/A	4	<0.0002	<0.01	0.0013	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	52	<1	<1	N/A	N/A

* Nitrite concentration (NO_2 mg/L) result is a conversion from Nitrite as nitrogen ($\text{NO}_2\text{-N}$ mg/L). Converting from nitrite as nitrogen ($\text{NO}_2\text{-N}$) to standard nitrite concentration (NO_2), the factor 3.284 is obtained by dividing the molecular weight of nitrite by the molecular weight of nitrogen ($46 \text{ g/mole} \div 14 \text{ g/mole} \approx 3.284$).

"" Because it is possible that nitrate and nitrite may occur simultaneously in drinking-water, and the 2 have a common toxic effect (methaemoglobinaemia), these compounds should be considered together when judging compliance with the ADWG. The sum of the ratios of the concentration (C) of each to its guideline value (GV) should not exceed unity (WHO 2007). This is a standard screening risk assessment approach based on the assumption of dose additivity. Thus, for infants:

$$(\text{C_nitrate}/\text{GV_nitrate}) + (\text{C_nitrite}/\text{GV_nitrite}) < 1 = (\text{C_nitrate}/50\text{mg/L}) + (\text{C_nitrite}/3\text{mg/L}) < 1$$



Denotes exceedance

Appendix C

Remote Community Data Assessments



Cabbage Gum pump station, Tennant Creek

Table 37 – Remote community microbiological summary

Community	Sample Count	Number of detections	% of samples free of <i>E. coli</i>	Community	Sample Count	Number of detections	% of samples free of <i>E. coli</i>
Acacia Larrakia	36	0	100%	Milikapiti	36	0	100%
Ali Curung	33	0	100%	Milingimbi	139	0	100%
Alpurrurulam	35	0	100%	Milyakburra	36	0	100%
Amanbidji	21	0	100%	Minjilang	36	0	100%
Amoonguna	36	0	100%	Minyerri	36	0	100%
Ampilatwatja	36	0	100%	Mt Liebig	36	0	100%
Angurugu	141	0	100%	Naiyu	40	0	100%
Areyonga	35	0	100%	Nganmariyanga	33	0	100%
Atitjere	27	0	100%	Ngukurr	180	0	100%
Barunga	36	0	100%	Nturiya	39	1	97.44%
Belyuen	37	0	100%	Numbulwar	146	0	100%
Beswick	35	0	100%	Nyirripi	39	0	100%
Binjari	22	0	100%	Papunya	36	0	100%
Bulla	42	0	100%	Peppimenarti	33	0	100%
Bulman	30	0	100%	Pigeon Hole	20	3	85%
Canteen Creek	33	0	100%	Pirlangimpi	36	0	100%
Daguragu	20	0	100%	Pmara Jutunta	36	0	100%
Engawala	33	0	100%	Ramingining	163	2	98.77%
Finke	30	0	100%	Rittarangu	57	0	100%
Galiwinku	188	0	100%	Robinson River	31	0	100%
Gapuwiyak	144	0	100%	Santa Teresa	33	0	100%
Gunbalanya	141	0	100%	Tara	33	0	100%
Gunyangara	36	0	100%	Titjikala	36	0	100%
Haasts Bluff	36	0	100%	Umbakumba	36	0	100%
Hermannsburg	33	0	100%	Wadeye	255	0	100%
Imangara	33	0	100%	Wallace Rockhole	27	0	100%
Imanpa	36	0	100%	Waruwi	27	0	100%
Jilkminggan	36	0	100%	Weemol	36	0	100%
Kalkarindji	33	0	100%	Willowra	33	0	100%
Kaltukatjara	36	0	100%	Wilora	33	0	100%
Kintore	39	0	100%	Wurrumiyanga	135	0	100%
Kybrook Farm	35	0	100%	Wutunugurra	33	0	100%
Lajamanu	33	0	100%	Yarralin	30	0	100%
Laramba	33	0	100%	Yirrkala	190	0	100%
Maningrida	240	1	99.58%	Yuelamu	30	0	100%
Manyallaluk	35	0	100%	Yuendumu	30	0	100%

Table 38 – Remote community radiological summary

Centre	Radiological mSv/year	Response Level	Centre	Radiological mSv/year	Response Level
Acacia Larrakia	0.04	1	Milikapiti	0.06	1
Alpurrurulam	0.15	1	Milingimbi	0.05	1
Ali Curung	0.05	1	Milyakburra	0.06	1
Amanbidji	0.07	1	Minjilang	0.07	1
Amoonguna	0.23	1	Minyerri	0.06	1
Ampilatwatja	0.15	1	Mt Liebig	0.07	1
Angurugu	0.07	1	Naiyu	0.04	1
Areyonga	0.15	1	Nganmariyanga	0.04	1
Atitjere	0.11	1	Ngukurr	0.07	1
Barunga	0.07	1	Nturiya	0.13	1
Belyuen	0.09	1	Numbulwar	0.04	1
Beswick	0.07	1	Nyirripi	0.11	1
Binjari	0.66	2	Papunya	0.11	1
Bulla	0.17	1	Peppimenarti	0.04	1
Bulman	0.04	1	Pigeon Hole	0.07	1
Canteen Creek	0.17	1	Pirlangimpi	0.06	1
Daguragu	0.11	1	Pmara Jutunta	0.07	1
Engawala	0.07	1	Ramingining	0.06	1
Finke	0.09	1	Rittarangu	0.06	1
Galiwinku	0.04	1	Robinson River	0.06	1
Gapuwiyak	0.04	1	Santa Teresa	0.11	1
Gunbalanya	0.06	1	Tara	0.32	2
Gunyangara	0.06	1	Titjikala	0.1	1
Haasts Bluff	0.2	1	Umbakumba	0.07	1
Hermannsburg	0.07	1	Wadeye	0.04	1
Imangara	0.15	1	Wallace Rockhole	0.13	1
Imanpa	0.22	1	Waruwi	0.06	1
Jilkminggan	0.13	1	Weemol	0.04	1
Kalkarindji	0.15	1	Willowra	0.15	1
Kaltukatjara	0.06	1	Wilora	0.29	1
Kintore	0.04	1	Wurrumiyanga	0.04	1
Kybrook Farm	0.04	1	Wutunugurra	0.11	1
Lajamanu	0.06	1	Yarralin	0.09	1
Laramba	0.19	1	Yirrkala	0.06	1
Maningrida	0.08	1	Yuelamu	0.07	1
Manyallaluk	0.04	1	Yuendumu	0.23	1

Figure 119 – Regional map

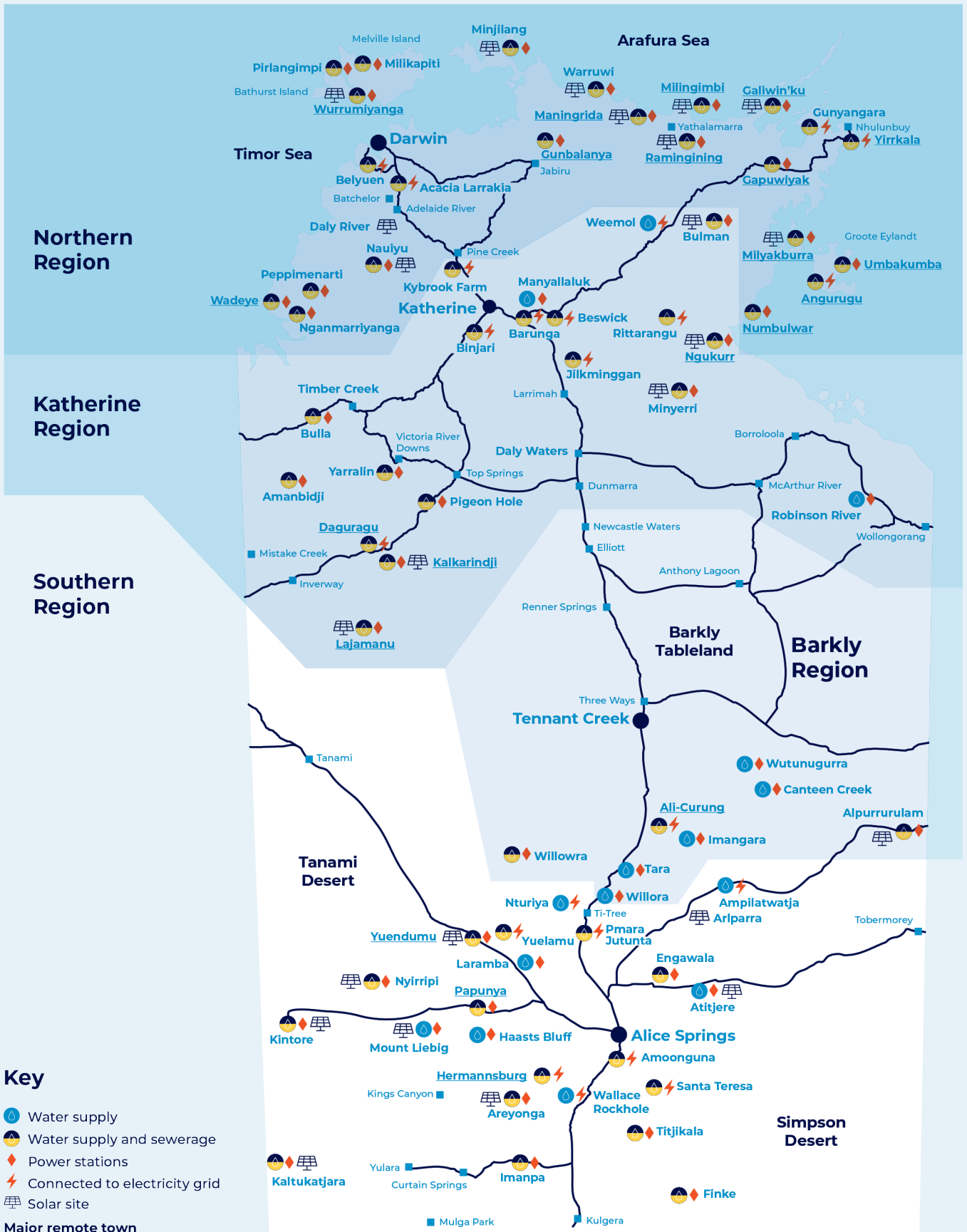


Table 42 – Health data assessment for remote communities in Southern region

Community	Analysis	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Chlorine Free Residual	Chromium	Copper	Fluoride	Lead	Manganese	Mercury	Molybdenum	Nickel	Nitrate as NO ₃ (UV screening)	Nitrate	Selenium	Silver	Uranium	
		(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
	ADWG Health	0.003	0.01	2	0.06	4	0.002	5	0.05	2	1.5	0.01	0.5	0.001	0.05	0.02	50	3	0.01	0.1	0.02	
Amoonguna*	Sample Count	6	6	6	6	6	6	26	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	Maximum	<0.0002	<0.0005	0.1	<0.001	0.1	<0.0002	1	<0.005	0.04	0.47	<0.001	<0.005	<0.0001	<0.005	<0.002	8	<0.3	0.001	<0.01	0.009	
	95th Percentile	N/A	N/A	N/A	N/A	N/A	N/A	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ampilatwatja	Sample Count	2	2	2	2	2	2	33	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Maximum	<0.0002	<0.0005	<0.05	<0.001	0.4	<0.0002	2	<0.005	0.02	1.2	<0.001	<0.005	<0.0001	<0.005	<0.002	30	<0.3	0.002	<0.01	0.009	
	95th Percentile	N/A	N/A	N/A	N/A	N/A	N/A	2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Areyonga	Sample Count	2	2	2	2	2	2	30	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Maximum	<0.0002	<0.0005	0.1	<0.001	0.2	<0.0002	1	<0.005	0.02	0.43	<0.001	<0.005	<0.0001	<0.005	0.004	7	<0.3	0.001	<0.01	0.01	
	95th Percentile	N/A	N/A	N/A	N/A	N/A	N/A	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Atitjere	Sample Count	2	2	2	2	2	2	27	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Maximum	<0.0002	<0.0005	0.05	<0.001	0.2	<0.0002	1	<0.005	<0.01	0.62	<0.001	<0.005	<0.0001	<0.005	<0.002	30	<0.3	0.003	<0.01	0.007	
	95th Percentile	N/A	N/A	N/A	N/A	N/A	N/A	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Engawala	Sample Count	2	2	2	2	2	2	33	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Maximum	<0.0002	<0.0005	0.2	<0.001	0.2	<0.0002	2	<0.005	<0.01	0.63	<0.001	<0.005	<0.0001	<0.005	<0.002	20	<0.3	0.002	<0.01	0.003	
	95th Percentile	N/A	N/A	N/A	N/A	N/A	N/A	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Finke*	Sample Count	2	2	2	2	2	2	30	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Maximum	<0.0002	0.0005	0.2	<0.001	0.08	<0.0002	1	<0.005	<0.01	0.2	<0.001	<0.005	<0.0001	<0.005	<0.002	9	<0.3	<0.001	<0.01	0.003	
	95th Percentile	N/A	N/A	N/A	N/A	N/A	N/A	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Haasts Bluff	Sample Count	2	2	2	2	2	2	35	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Maximum	<0.0002	0.0004	0.04	<0.0001	0.3	<0.00005	2	0.002	0.01	0.51	0.0008	0.008	<0.0001	0.0002	0.005	9	<0.3	0.002	<0.0001	0.01	
	95th Percentile	N/A	N/A	N/A	N/A	N/A	N/A	2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hermannsburg	Sample Count	2	2	2	2	2	2	33	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Maximum	<0.0002	<0.0005	<0.05	<0.001	0.2	<0.0002	1	<0.005	<0.01	0.4	<0.001	<0.005	<0.0001	<0.005	<0.002	5	<0.3	<0.001	<0.01	0.004	
	95th Percentile	N/A	N/A	N/A	N/A	N/A	N/A	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Imanpa	Sample Count	6	6	6	6	6	6	12	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	Maximum	<0.0005	<0.0005	<0.05	<0.001	0.9	<0.0002	2	<0.005	0.02	0.86	<0.001	0.01	<0.0002	<0.005	0.005	30	<0.3	0.006	<0.01	0.01	
	95th Percentile	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Kaltukatjara	Sample Count	2	2	2	2	2	2	36	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Maximum	<0.0002	<0.0005	<0.05	<0.001	0.1	<0.0002	2	<0.005	0.02	0.4	<0.001	<0.005	<0.0001	<0.005	<0.002	0.2	<0.3	<0.001	<0.01	<0.00001	
	95th Percentile	N/A	N/A	N/A	N/A	N/A	N/A	2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Kintore	Sample Count	8	8	8	8	8	8	24	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	Maximum	<0.0002	<0.0005	<0.05	<0.001	0.3	<0.0002	2	<0.005	0.06	0.33	0.002	<0.005	<0.0001	<0.005	<0.002	10	<0.3	<0.001	<0.01	0.0003	
	95th Percentile	N/A	N/A	N/A	N/A	N/A	N/A	2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Laramba	Sample Count	18	18	18	18	18	18	33	18	18	18	18	18	18	18	18	18	18	18	18	18	18
	Maximum	0.0008	0.001	0.2	<0.001	0.6	<0.0002	2	<0.005	0.1	1.1	0.002	<0.005	<0.0001	<0.005	<0.002	40	<0.3	0.004	<0.01	0.04	
	95th Percentile	N/A	N/A	N/A	N/A	N/A	N/A	2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mt Liebig	Sample Count	2	2	2	2	2	2	36	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Maximum	<0.0002	<0.0005	0.05	<0.001	0.3	<0.0002	1	<0.005	<0.01	1.1	<0.001	<0.005	<0.0001	<0.005	<0.002	20	<0.3	0.002	<0.01	0.006	
	95th Percentile	N/A	N/A	N/A	N/A	N/A	N/A	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nyirripi	Sample Count	8	8	8	8	8	8	39	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	Maximum	<0.0002	0.002	0.1	<0.001	0.4	<0.0002	2	<0.005	0.4	1.7	<0.001	<0.005	0.0002	<0.005	<0.002	30	<0.3	0.003	<0.01	0.01	
	95th Percentile	N/A	N/A	N/A	N/A	N/A	N/A	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Papunya	Sample Count	2	2	2	2	2	2	30	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Maximum	<0.0002	0.0004	0.09	<0.0001	0.3	<0.00005	1	0.002	0.008	1	0.0002	<0.0005	<0.0001	0.003	0.0009	20	<0.3	0.005	<0.0001	0.008	
	95th Percentile	N/A	N/A	N/A	N/A	N/A	N/A	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pmara Jutunta	Sample Count	2	2	2	2	2	2	33	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Maximum	<0.0002	0.001	0.07	<0.0001	0.3	<0.00005	2	0.002	0.005	0.8	0.0003	<0.0005	<0.0001	0.0007	<0.0005	40	<0.3	0.002	<0.0001	0.006	
	95th Percentile	N/A	N/A	N/A	N/A	N/A	N/A	2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Santa Teresa	Sample Count	4	4	4	4	4	4	30	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	Maximum	<0.0002	<0.0005	0.5	<0.001	0.06	<0.0002	2	<0.005	<0.01	0.2	<0.001	<0.005	<0.0001	<0.005	<0.002	8	<0.3	0.003	<0.01	0.004	
	95th Percentile	N/A	N/A	N/A	N/A	N/A	N/A	2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Titjikala*	Sample Count	2	2	2	2	2	2	33	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Maximum	<0.0002	0.001	0.3	<0.001	0.1	<0.0002	2	<0.005	<0.01	0.6	<0.001	<0.005	<0.0001	<0.005	<0.002	10	<0.3	<0.001	<0.01	0.004	
	95th Percentile	N/A	N/A	N/A	N/A	N/A	N/A	2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Wallace Rockhole	Sample Count	2	2	2	2	2	2	6	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Maximum	<0.0002	0.0005	<0.05	<0.001	0.4	<0.0002	1	0.04	0.03	0.82	<0.001	<0.005	<0.0001	<0.005	0.002	20	<0.3	0.004	<0.01	0.006	
	95th Percentile	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Yuelamu	Sample Count	13	13	13	13	13	13	30	13	13	9	13	13	13	13	13	9	9	13	13	13	13
	Maximum	<0.0002	<0.0005	<0.05	<0.001	1	<0.0002	2	<0.005	0.1	0.8	0.002	<0.005	<0.0001	<0.005	<0.002	6	<0.3	<0.001	<0.01	0.008	
	95th Percentile	N/A	N/A	N/A																		

Table 43 – Aesthetic data assessment summary for all remote communities

Community	Analysis	Aluminium (mg/L)	Chloride (mg/L)	Chlorine Free Residual (mg/L)	Copper (mg/L)	Hardness as CaCO ₃ (mg/L as CaCO ₃)	Iron (mg/L)	Manganese (mg/L)	pH (pH units)	Sulphate (mg/L)	Silica (mg/L)	Sodium (mg/L)	Total Dissolved Solids Dried at 180c (mg/L)	True Colour (HU)	Turbidity (NTU)	Zinc (mg/L)
	ADWG Aesthetics	0.2	250	0.6	1	200	0.3	0.1	6.5 - 8.5	250	80	180	600	15	5	3
Acacia Larrakia	Average	0.065	5	1.3	0.005	228	0.085	0.0025	7.8	0.15	21	4.45	201	1	2.6	0.005
Alpurrurulam	Average	0.01	193	1.1	0.031	511	0.023	0.0016	7.5	73.4	64	144	899	1.2	0.68	0.013
Ali Curung	Average	0.0047	45.8	1	0.019	24.1	0.0069	0.00084	7.5	9.88	58	78.6	272	1	0.29	0.019
Amanbidji	Average	0.01	96.5	1	0.0075	381	0.03	0.025	8	109	27	141	742	2.5	0.77	0.005
Amoonguna*	Average	0.01	71.8	0.81	0.028	211	0.0063	0.0025	7.6	36	16	81.9	411	1	0.33	0.013
Ampilatwatja	Average	0.01	190	1.2	0.013	531	0.005	0.0025	7.7	236	38	145	1140	1	0.33	0.0075
Angurugu	Average	0.01	11	1.2	0.02	4.25	0.005	0.0038	4.8	0.255	12	6.28	48	1	0.39	0.005
Areyonga	Average	0.01	145	1	0.013	518	0.005	0.0025	7.8	99	18	71	769	1	0.21	0.01
Atitjere	Average	0.01	130	1.1	0.005	322	0.019	0.0025	8	137	35	123	658	1	0.75	0.005
Barunga*	Average	0.01	6	1.2	0.015	4.95	1.2	0.0025	5.6	0.15	16	3.56	27	1	2.4	0.025
Belyuen	Average	0.01	5.5	1.4	0.005	7.35	0.06	0.028	6.4	0.15	41	8.62	58.5	2	0.62	0.01
Beswick	Average	0.018	6	1.1	0.11	320	0.032	0.0011	7.5	0.15	24	5.81	291	1	1.3	0.02
Binjari	Average	0.01	8	1	0.015	313	0.028	0.0025	8.2	2.18	27	8.24	326	1	0.38	0.012
Bulla	Average	0.0079	73.1	1.3	0.013	216	0.1	0.066	8.1	0.15	17	50.2	349	5.09	1.5	0.018
Bulman	Average	0.01	9	1.2	0.005	357	0.005	0.0025	7.6	0.15	24	8.35	328	1	0.2	0.0075
Canteen Creek	Average	0.01	115	1.1	0.02	243	0.016	0.0025	7.4	37.5	60	109	554	5	0.82	0.013
Daguragu	Average	0.01	19	1.1	0.005	296	0.005	0.0025	7.7	0.15	27	32.6	342	1	0.27	0.013
Engawala	Average	0.01	120	1.2	0.005	447	0.0095	0.0025	7.6	47.1	65	73.1	692	1	0.22	0.015
Finke*	Average	0.01	160	1.1	0.005	219	0.022	0.0025	7.9	59.7	16	92.8	503	1	0.44	0.045
Galiwinku	Average	0.01	10	1.2	0.015	3.25	0.005	0.0025	4.9	1.08	13	5.93	31.5	1	0.93	0.005
Gapuwiyak	Average	0.01	9	1.3	0.005	4.6	0.019	0.0025	5.8	0.15	12	6.84	32.5	1	0.25	0.06
Gunbalanya	Average	0.37	5	1.4	0.0075	4	0.29	0.01	5.8	0.54	14	2.86	21	2.5	5.6	0.005
Gunyangara	Average	0.01	15.5	1.2	0.005	5.4	0.069	0.0025	7.2	0.15	11	9.42	39	1	0.37	0.005
Haasts Bluff	Average	0.0048	345	1.2	0.0076	653	0.24	0.0047	7.6	251	59	174	1230	1	2.3	0.03
Hermannsburg	Average	0.01	110	1.2	0.005	335	0.029	0.0025	8	53	14	66.2	480	1	0.51	0.02
Imangara	Average	0.01	83.5	1.2	0.02	342	0.005	0.0025	7.6	16.3	80	48.3	538	1	0.2	0.02
Imanpa	Average	0.005	417	1.3	0.0094	567	0.013	0.0049	8	261	17	273	1410	1.17	0.63	0.025
Jilkminggan	Average	0.01	220	1.1	0.005	633	0.013	0.068	7.3	165	49	153	1110	1	1.1	0.0088
Kalkarindji	Average	0.01	26	1.2	0.0075	278	0.005	0.0025	7.6	2.76	24	33.6	345	1	0.27	0.013
Kaltukatjara	Average	0.01	84.5	1.1	0.015	322	0.063	0.0038	7.9	52.4	12	56.9	455	1.5	1.1	0.02
Kintore	Average	0.0081	34.4	1	0.022	45.3	0.005	0.0019	7.3	3.83	88	58.6	250	1	0.55	0.0058
Kybrook Farm	Average	0.0048	9.75	0.99	0.003	150	0.01	0.0037	7.2	0.15	42	49.6	275	1.5	0.63	0.0065
Lajamanu	Average	0.01	50	1.2	0.05	194	0.02	0.0025	8.3	6.23	100	48.2	402	1	0.36	0.0075
Laramba	Average	0.0058	94	1.3	0.021	182	0.011	0.0013	7.7	32.8	93	129	621	1.06	0.32	0.057
Maningrida*	Average	0.01	9	1.3	0.018	7.3	0.005	0.0025	5.6	0.15	15	5.63	21.5	1	0.29	0.005
Manyallaluk	Average	0.01	10.5	1.1	0.02	4.8	0.005	0.0025	5	0.15	22	5.04	27.5	1	0.2	0.023

Table 43 – Aesthetic data assessment summary for all remote communities

Community	Analysis	Aluminium (mg/L)	Chloride (mg/L)	Chlorine Free Residual (mg/L)	Copper (mg/L)	Hardness as CaCO ₃ (mg/L as CaCO ₃)	Iron (mg/L)	Manganese (mg/L)	pH (pH units)	Sulphate (mg/L)	Silica (mg/L)	Sodium (mg/L)	Total Dissolved Solids Dried at 180c (mg/L)	True Colour (HU)	Turbidity (NTU)	Zinc (mg/L)
ADWG Aesthetics	0.2	250	0.6	1	200	0.3	0.1	6.5 - 8.5	250	80	180	600	15	5	3	
Milikapiti	Average	0.01	9.5	1.3	0.018	3.85	0.15	0.0025	6.1	1.11	12	11.1	38.5	1	1.3	0.013
Milingimbi	Average	0.096	87	1.1	0.078	32.9	0.005	0.01	4.8	5.21	17	45	158	1	0.4	0.044
Milyakburra	Average	0.01	58.5	1.1	0.11	14.6	0.043	0.018	5.6	2.31	16	30.6	104	2	0.35	0.038
Minjilang	Average	0.12	19.5	1.2	0.013	3.25	0.005	0.0025	4.7	2.96	12	12.9	44	1	0.21	0.055
Minyerri	Average	0.004	14	1.2	0.024	121	0.5	0.097	7.4	6.39	34	23.4	195	1.2	2.1	0.018
Mt Liebig	Average	0.01	110	1.1	0.0075	279	0.039	0.0025	7.7	88.2	54	103	611	1	0.54	0.0075
Naiyu	Average	0.005	4.67	1.2	0.0026	121	0.14	0.48	7.9	0.15	38	16.6	176	2.83	6.9	0.0062
Nganmariyanga	Average	0.01	28	1.2	0.005	83.8	0.2	0.16	7.8	13.2	43	42.3	205	1	2.5	0.005
Ngukurr	Average	0.0051	196	1	0.053	490	0.005	0.00084	7.7	3.57	26	52.6	600	1.25	0.46	0.0031
Nturiya	Average	0.003	340	0.4	0.01	300	0.01	0.0004	7.8	210	98	290	1100	1	0.3	0.03
Numbulwar	Average	0.0048	40.8	1.4	0.0032	485	0.37	0.068	7.8	267	19	23.4	675	3.23	0.94	0.0025
Nyirripi	Average	0.0063	127	1.1	0.066	279	0.0096	0.0014	8	32.1	86	94.4	622	1.13	0.6	0.0036
Papunya	Average	0.0025	185	1.1	0.005	274	0.016	0.00025	7.9	71.9	72	255	858	1	0.26	0.0035
Peppimenarti	Average	0.005	17.5	1.2	0.0044	32.4	0.48	0.057	7	1.73	21	15.6	90.3	4	3.8	0.008
Pigeon Hole	Average	0.01	13	1.1	0.005	351	0.005	0.0025	7.4	0.15	56	26.9	409	1	0.31	0.005
Pirlangimpi	Average	0.01	4.5	1.2	0.013	0.5	0.005	0.0025	5.6	0.15	9.3	4.05	20	1	0.27	0.005
Pmara Jutunta	Average	0.0025	73.5	1.4	0.0051	245	0.005	0.00025	7.8	37.7	110	72.2	515	1.5	0.76	0.011
Ramingining	Average	0.01	8.67	1.3	0.0075	4.37	0.0067	0.0025	5.6	0.15	14	5.77	21	1	0.37	0.015
Rittarangu	Average	0.01	23.5	0.9	0.005	308	0.005	0.0025	7.5	0.15	22	13.4	310	1	0.25	0.005
Robinson River	Average	0.005	51.1	1.1	0.0031	506	0.026	0.001	8	0.15	38	21.3	477	1	0.58	0.0032
Santa Teresa	Average	0.01	11.8	1.2	0.0063	275	0.0083	0.0025	7.7	1.94	18	8.15	298	1	0.26	0.005
Tara	Average	0.01	375	1.1	0.09	360	0.41	0.013	7.8	152	25	239	1120	1.5	4	0.22
Titjikala*	Average	0.01	28.5	1.2	0.005	237	0.005	0.0025	8	7.95	32	30.2	322	1	0.35	0.005
Umbakumba	Average	0.01	59.5	1.1	0.03	17.3	0.014	0.025	5.3	2.31	12	33.5	110	4	0.42	0.005
Wadeye	Average	0.01	6.67	1.2	0.03	2.33	0.06	0.0025	5.1	0.15	15	5.21	31.7	1	0.26	0.013
Wallace Rockhole	Average	0.01	150	1.1	0.018	312	0.029	0.0025	7.6	62.6	11	92.7	587	1	0.47	0.015
Warruwi	Average	0.08	47	1.4	0.015	21.4	0.011	0.0025	4.9	4.62	11	21.7	91.5	1	0.31	0.005
Weemol	Average	0.01	8.5	1.1	0.013	406	0.005	0.0025	7.3	0.15	32	9.37	388	1	0.29	0.018
Willowra	Average	0.0048	170	1.1	0.019	262	0.005	0.00079	8.1	71	88	136	736	1.25	0.45	0.012
Wilora	Average	0.02	517	NR	0.017	666	0.013	0.0031	8.1	216	89	324	1650	1.17	0.8	0.054
Wurrumiyanga	Average	0.01	6.67	1.2	0.053	1.37	0.012	0.0025	4.9	0.15	14	4.24	20	1	0.47	0.047
Wutunugurra	Average	0.01	43	1.2	0.03	190	0.008	0.0025	7.2	5.36	64	33.3	277	1	0.68	0.025
Yarralin	Average	0.01	12	1.1	0.005	336	0.005	0.0025	8.3	0.15	32	13.5	368	1	0.25	0.028
Yirrkala	Average	0.01	12.7	1.2	0.013	4.37	0.011	0.0067	5.6	0.85	12	7.46	24.3	1.33	0.3	0.005
Yuelamu	Average	0.0067	27.7	1.1	0.027	51.5	0.028	0.0016	8.2	6.84	73	50.1	231	1	0.42	0.059
Yuendumu	Average	0.0051	271	1	0.014	526	0.015	0.0013	7.8	126	16	133	956	1.18	0.56	0.075

Table 44 – Water quality data assessment for Acacia Larrakia

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	2	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	2	0.001	0.001	0.001	N/A
Barium (mg/L)	2	N/A	2	<0.05	<0.05	0.03	N/A
Beryllium (mg/L)	0.06	N/A	2	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	2	<0.02	<0.02	0.01	N/A
Cadmium (mg/L)	0.002	N/A	2	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	36	0.9	2	1	1
Chromium (mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	2	<0.01	<0.01	0.005	N/A
Fluoride (mg/L)	1.5	N/A	2	<0.1	<0.1	0.05	N/A
Lead (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Manganese (mg/L)	0.5	N/A	2	<0.005	<0.005	0.003	N/A
Mercury (mg/L)	0.001	N/A	2	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	2	<0.002	<0.002	0.002	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	2	1	2	1	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.1	N/A	N/A
Selenium (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Silver (mg/L)	0.1	N/A	2	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	2	0.0004	0.0004	0.0004	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	2	<0.02	0.1	0.065	N/A
Chloride (mg/L)	N/A	250	2	5	6	5	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	36	0.92	1.56	1.3	N/A
Copper (mg/L)	N/A	1	2	<0.01	<0.01	0.005	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	2	225	230	228	N/A
Iron (mg/L)	N/A	0.3	2	<0.02	0.16	0.085	N/A
Manganese (mg/L)	N/A	0.1	2	<0.005	<0.005	0.0025	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	2	7.81	7.82	7.8	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	2	<0.3	<0.3	0.15	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	2	21	21.3	21	N/A
Sodium (Na) (mg/L)	N/A	180	2	4.32	4.57	4.45	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	2	190	212	201	N/A
True Colour (HU)	N/A	15	2	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	2	0.75	4.5	2.6	N/A
Zinc (mg/L)	N/A	3	2	<0.01	<0.01	0.005	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	210	220	220	N/A
Apparent Colour (HU)	N/A	N/A	2	2	18	10	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	260	260	260	N/A
Bromine (mg/L)	N/A	N/A	2	0.014	0.016	0.015	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	45.9	47.6	47	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	410	420	420	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	26.8	27	27	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	0.3	0.3	0.3	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	0.3	0.3	0.3	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	2	1.6	1.6	1.6	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	9	10	9.5	N/A
Tin (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	36	<1	<1	N/A	N/A

Table 45 – Water quality data assessment for Ali Curung

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	12	<0.0002	0.0007	0.0002	N/A
Arsenic (mg/L)	0.01	N/A	12	<0.0002	0.003	0.0007	N/A
Barium (mg/L)	2	N/A	12	0.001	0.08	0.02	N/A
Beryllium (mg/L)	0.06	N/A	12	<0.0001	<0.001	0.0002	N/A
Boron (mg/L)	4	N/A	12	0.7	0.8	0.8	N/A
Cadmium (mg/L)	0.002	N/A	12	<0.00005	<0.0002	0.00004	N/A
Chlorine Free Residual (mg/L)	5	N/A	14	0.9	1	1	N/A
Chromium (mg/L)	0.05	N/A	12	<0.0002	<0.005	0.001	N/A
Copper (mg/L)	2	N/A	12	0.0007	0.06	0.02	N/A
Fluoride (mg/L)	1.5	N/A	12	0.7	1	0.85	N/A
Lead (mg/L)	0.01	N/A	12	<0.0001	0.003	0.001	N/A
Manganese (mg/L)	0.5	N/A	12	<0.0005	<0.005	0.0008	N/A
Mercury (mg/L)	0.001	N/A	12	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	12	<0.0001	<0.005	0.001	N/A
Nickel (mg/L)	0.02	N/A	12	<0.0005	0.005	0.001	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	12	10	20	20	N/A
Nitrite mg-NO ₂ /L*	3	N/A	12	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.5	N/A	N/A
Selenium (mg/L)	0.01	N/A	12	<0.0002	0.003	0.0007	N/A
Silver (mg/L)	0.1	N/A	12	<0.0001	<0.01	0.001	N/A
Uranium (mg/L)	0.02	N/A	14	0.00005	0.01	0.002	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	12	<0.005	<0.02	0.0047	N/A
Chloride (mg/L)	N/A	250	12	27	54	37.2	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	15	0.91	1.24	1	N/A
Copper (mg/L)	N/A	1	12	0.0007	0.0621	0.019	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	12	3.3	10.3	6.25	N/A
Iron (mg/L)	N/A	0.3	8	<0.01	0.022	0.0071	N/A
Manganese (mg/L)	N/A	0.1	12	<0.0005	<0.005	0.00084	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	12	6.96	8.07	7.5	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	12	3.72	7.2	5.08	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	12	51.8	65.3	58	N/A
Sodium (Na) (mg/L)	N/A	180	12	58.3	86	66.8	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	12	97	312	224	N/A
True Colour (HU)	N/A	15	8	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	8	0.19	0.48	0.29	N/A
Zinc (mg/L)	N/A	3	12	0.006	0.06	0.019	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	12	79	120	98	N/A
Apparent Colour (HU)	N/A	N/A	8	<2	4	1.5	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	12	97	140	120	N/A
Bromine (mg/L)	N/A	N/A	14	<0.1	0.68	0.38	N/A
Calcium (Ca) (mg/L)	N/A	N/A	12	0.5	1.5	0.97	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	12	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	12	320	490	370	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	12	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	14	0.05	0.4	0.18	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	12	0.5	1.6	0.93	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	12	2.7	5.2	3.7	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	12	2.7	5.2	3.7	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	12	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	12	10.6	15.9	12	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	12	45	90	61	N/A
Tin (mg/L)	7N/A	N/A	12	<0.0002	<0.01	0.0013	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	33	<1	<1	N/A	N/A

Table 46 – Water quality data assessment for Alpururulam

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	10	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	10	0.002	0.002	0.002	N/A
Barium (mg/L)	2	N/A	10	0.08	0.1	0.09	N/A
Beryllium (mg/L)	0.06	N/A	10	<0.0001	<0.001	0.0003	N/A
Boron (mg/L)	4	N/A	10	0.2	0.3	0.3	N/A
Cadmium (mg/L)	0.002	N/A	10	<0.00005	<0.0002	0.00007	N/A
Chlorine Free Residual (mg/L)	5	N/A	33	0.9	1	1	1
Chromium (mg/L)	0.05	N/A	10	0.0004	<0.005	0.002	N/A
Copper (mg/L)	2	N/A	10	0.01	0.09	0.03	N/A
Fluoride (mg/L)	1.5	N/A	10	1	1.7	1.6	N/A
Lead (mg/L)	0.01	N/A	10	0.0003	0.005	0.001	N/A
Manganese (mg/L)	0.5	N/A	10	<0.0005	<0.005	0.002	N/A
Mercury (mg/L)	0.001	N/A	10	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	10	0.003	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	10	0.0005	<0.002	0.0009	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	10	2	4	3	N/A
Nitrite mg-NO ₂ /L*	3	N/A	10	2	3	2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.9	N/A	N/A
Selenium (mg/L)	0.01	N/A	10	0.001	0.002	0.002	N/A
Silver (mg/L)	0.1	N/A	10	<0.0001	<0.01	0.003	N/A
Uranium (mg/L)	0.02	N/A	10	0.01	0.01	0.01	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	10	<0.005	0.04	0.01	N/A
Chloride (mg/L)	N/A	250	10	180	200	193	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	33	0.92	1.36	1.1	N/A
Copper (mg/L)	N/A	1	10	0.01	0.0868	0.031	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	10	495	543	511	N/A
Iron (mg/L)	N/A	0.3	10	0.003	0.14	0.023	N/A
Manganese (mg/L)	N/A	0.1	10	<0.0005	<0.005	0.0016	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	10	7.4	7.7	7.5	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	10	61.5	79.2	73.4	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	10	60.1	68.1	64	N/A
Sodium (Na) (mg/L)	N/A	180	10	141	152	144	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	10	846	933	899	N/A
True Colour (HU)	N/A	15	10	<2	<2	1.2	N/A
Turbidity (lab) (NTU)	N/A	5	10	0.21	1.4	0.68	N/A
Zinc (mg/L)	N/A	3	10	0.007	0.058	0.013	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	10	440	460	450	N/A
Apparent Colour (HU)	N/A	N/A	10	<2	4	1.7	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	10	540	560	550	N/A
Bromine (mg/L)	N/A	N/A	10	0.2	0.898	0.64	N/A
Calcium (Ca) (mg/L)	N/A	N/A	10	65.8	73.8	68	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	10	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	10	1300	1700	1600	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	10	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	10	0.09	0.3	0.15	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	10	79.5	87.2	82	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	10	0.5	0.8	0.61	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	10	0.4	0.8	0.6	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	10	<0.1	<0.1	0.055	N/A
Potassium (K) (mg/L)	N/A	N/A	10	7.2	8	7.5	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	10	300	330	320	N/A
Tin (mg/L)	N/A	N/A	10	<0.0002	<0.01	0.003	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	35	<1	<1	N/A	N/A

Table 47 – Water quality data assessment for Amanbidji

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	2	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	2	0.001	0.002	0.001	N/A
Barium (mg/L)	2	N/A	2	0.2	0.2	0.2	N/A
Beryllium (mg/L)	0.06	N/A	2	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	2	0.4	0.5	0.5	N/A
Cadmium (mg/L)	0.002	N/A	2	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	18	0.8	1	1	N/A
Chromium (mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	2	<0.01	<0.01	0.008	N/A
Fluoride (mg/L)	1.5	N/A	2	0.26	0.26	0.26	N/A
Lead (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Manganese (mg/L)	0.5	N/A	2	0.01	0.04	0.03	N/A
Mercury (mg/L)	0.001	N/A	2	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	2	<0.002	0.004	0.003	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	2	0.3	0.4	0.4	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.2	N/A
Σ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.1	N/A	N/A
Selenium (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Silver (mg/L)	0.1	N/A	2	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	2	0.0009	0.0009	0.0009	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	2	<0.02	<0.02	0.01	N/A
Chloride (mg/L)	N/A	250	2	96	97	96.5	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	18	0.82	1.35	1	N/A
Copper (mg/L)	N/A	1	2	<0.01	<0.01	0.0075	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	2	376	385	381	N/A
Iron (mg/L)	N/A	0.3	2	0.028	0.032	0.03	N/A
Manganese (mg/L)	N/A	0.1	2	0.01	0.04	0.025	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	2	7.99	8.03	8	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	2	108	110	109	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	2	27	27.2	27	N/A
Sodium (Na) (mg/L)	N/A	180	2	140	142	141	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	2	725	759	742	N/A
True Colour (HU)	N/A	15	2	2	3	2.5	N/A
Turbidity (lab) (NTU)	N/A	5	2	0.44	1.1	0.77	N/A
Zinc (mg/L)	N/A	3	2	<0.01	<0.01	0.005	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	410	420	420	N/A
Apparent Colour (HU)	N/A	N/A	2	3	7	5	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	500	510	510	N/A
Bromine (mg/L)	N/A	N/A	2	0.172	0.178	0.18	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	58.5	62	60	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	1300	1300	1300	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	55.9	56	56	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	0.1	0.1	0.1	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	0.1	0.1	0.1	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	2	4	4.1	4.1	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	160	160	160	N/A
Tin (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	21	<1	<1	N/A	N/A

Table 48 – Water quality data assessment for Amoonguna

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	6	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	6	<0.0005	<0.0005	0.0003	N/A
Barium (mg/L)	2	N/A	6	0.1	0.1	0.1	N/A
Beryllium (mg/L)	0.06	N/A	6	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	6	0.1	0.1	0.1	N/A
Cadmium (mg/L)	0.002	N/A	6	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	36	0.6	1	0.8	1
Chromium (mg/L)	0.05	N/A	6	<0.005	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	6	0.01	0.04	0.03	N/A
Fluoride (mg/L)	1.5	N/A	6	0.5	0.5	0.5	N/A
Lead (mg/L)	0.01	N/A	6	<0.001	<0.001	0.0005	N/A
Manganese (mg/L)	0.5	N/A	6	<0.005	<0.005	0.003	N/A
Mercury (mg/L)	0.001	N/A	6	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	6	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	6	<0.002	<0.002	0.001	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	6	7	8	8	N/A
Nitrite mg-NO ₂ /L*	3	N/A	6	<0.3	<0.3	0.2	N/A
Σ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.3	N/A	N/A
Selenium (mg/L)	0.01	N/A	6	0.001	0.001	0.001	N/A
Silver (mg/L)	0.1	N/A	6	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	6	0.008	0.009	0.008	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	6	<0.02	<0.02	0.01	N/A
Chloride (mg/L)	N/A	250	6	71	73	71.8	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	36	0.59	1.01	0.81	N/A
Copper (mg/L)	N/A	1	6	0.01	0.04	0.028	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	6	200	221	211	N/A
Iron (mg/L)	N/A	0.3	6	<0.01	0.013	0.0063	N/A
Manganese (mg/L)	N/A	0.1	6	<0.005	<0.005	0.0025	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	6	7.62	7.67	7.6	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	6	34.5	37.5	36	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	6	15.4	17.7	16	N/A
Sodium (Na) (mg/L)	N/A	180	6	79.2	84.9	81.9	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	6	389	441	411	N/A
True Colour (HU)	N/A	15	6	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	6	0.24	0.48	0.33	N/A
Zinc (mg/L)	N/A	3	6	<0.01	0.04	0.013	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	6	230	240	240	N/A
Apparent Colour (HU)	N/A	N/A	6	<2	<2	1.3	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	6	290	290	290	N/A
Bromine (mg/L)	N/A	N/A	6	0.146	0.2	0.17	N/A
Calcium (Ca) (mg/L)	N/A	N/A	6	45.2	51.8	49	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	6	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	6	800	810	810	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	6	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	6	0.02	0.05	0.033	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	6	20.8	22.7	22	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	6	1.6	1.8	1.8	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	6	1.6	1.8	1.7	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	6	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	6	5.8	6.2	5.9	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	6	120	120	120	N/A
Tin (mg/L)	N/A	N/A	6	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	36	<1	<1	N/A	N/A

Table 49 – Water quality data assessment for Ampilatwatja

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	2	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	2	<0.0005	<0.0005	0.0004	N/A
Barium (mg/L)	2	N/A	2	<0.05	<0.05	0.03	N/A
Beryllium (mg/L)	0.06	N/A	2	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	2	0.3	0.4	0.4	N/A
Cadmium (mg/L)	0.002	N/A	2	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	33	0.9	2	1	2
Chromium (mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	2	<0.01	0.02	0.01	N/A
Fluoride (mg/L)	1.5	N/A	2	1.2	1.2	1.2	N/A
Lead (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Manganese (mg/L)	0.5	N/A	2	<0.005	<0.005	0.003	N/A
Mercury (mg/L)	0.001	N/A	2	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	2	<0.002	<0.002	0.001	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	2	30	30	30	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.2	N/A
Σ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.1	N/A	N/A
Selenium (mg/L)	0.01	N/A	2	0.002	0.002	0.002	N/A
Silver (mg/L)	0.1	N/A	2	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	2	0.009	0.009	0.009	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	2	<0.02	<0.02	0.01	N/A
Chloride (mg/L)	N/A	250	2	190	190	190	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	33	0.9	2	1.2	N/A
Copper (mg/L)	N/A	1	2	<0.01	0.02	0.013	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	2	500	500	531	N/A
Iron (mg/L)	N/A	0.3	2	<0.02	<0.02	0.005	N/A
Manganese (mg/L)	N/A	0.1	2	<0.005	<0.005	0.0025	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	2	7.7	7.7	7.7	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	2	230	240	236	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	2	38	38	38	N/A
Sodium (Na) (mg/L)	N/A	180	2	140	150	145	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	2	1100	1200	1140	N/A
True Colour (HU)	N/A	15	2	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	2	0.3	0.4	0.33	N/A
Zinc (mg/L)	N/A	3	2	<0.01	<0.01	0.0075	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	300	300	300	N/A
Apparent Colour (HU)	N/A	N/A	2	<2	<2	1	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	400	400	370	N/A
Bromine (mg/L)	N/A	N/A	2	0.5	0.6	0.56	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	100	100	110	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	2000	2000	1700	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	0.1	0.1	0.12	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	60	60	60	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	6	6	6.4	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	6	6	6.4	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	2	20	30	25	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	300	300	320	N/A
Tin (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	N/A	<1	<1	N/A	N/A

Table 50 – Water quality data assessment for Angurugu

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	2	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	2	<0.0005	<0.0005	0.0003	N/A
Barium (mg/L)	2	N/A	2	<0.05	<0.05	0.03	N/A
Beryllium (mg/L)	0.06	N/A	2	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	2	0.02	0.02	0.02	N/A
Cadmium (mg/L)	0.002	N/A	2	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	141	0.8	2	1	2
Chromium (mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	2	0.02	0.02	0.02	N/A
Fluoride (mg/L)	1.5	N/A	44	<0.1	0.75	0.24	0.68
Lead (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Manganese (mg/L)	0.5	N/A	2	<0.005	<0.005	0.004	N/A
Mercury (mg/L)	0.001	N/A	2	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	2	<0.002	<0.002	0.001	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	2	0.6	0.6	0.6	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.1	N/A	N/A
Selenium (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Silver (mg/L)	0.1	N/A	2	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	2	0.00003	0.00004	0.00004	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	2	<0.02	<0.02	0.01	N/A
Chloride (mg/L)	N/A	250	2	11	11	11	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	141	0.78	1.61	1.2	N/A
Copper (mg/L)	N/A	1	2	0.02	0.02	0.02	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	2	4.1	4.4	4.25	N/A
Iron (mg/L)	N/A	0.3	2	<0.01	<0.01	0.005	N/A
Manganese (mg/L)	N/A	0.1	2	<0.005	<0.005	0.0038	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	2	4.73	4.79	4.8	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	2	<0.3	0.36	0.255	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	2	11.6	11.8	12	N/A
Sodium (Na) (mg/L)	N/A	180	2	6.12	6.43	6.28	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	2	38	58	48	N/A
True Colour (HU)	N/A	15	2	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	2	0.33	0.45	0.39	N/A
Zinc (mg/L)	N/A	3	2	<0.01	<0.01	0.005	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	<20	<20	10	N/A
Apparent Colour (HU)	N/A	N/A	2	2	5	3.5	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Bromine (mg/L)	N/A	N/A	2	0.022	0.022	0.022	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	0.5	0.6	0.55	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	54	54	54	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	0.7	0.7	0.7	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	0.1	0.1	0.1	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	0.1	0.1	0.1	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	2	0.2	0.3	0.25	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	19	19	19	N/A
Tin (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	141	<1	<1	N/A	N/A

Table 51 – Water quality data assessment for Areyonga

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	2	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	2	<0.0005	<0.0005	0.0003	N/A
Barium (mg/L)	2	N/A	2	0.1	0.1	0.1	N/A
Beryllium (mg/L)	0.06	N/A	2	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	2	0.2	0.2	0.2	N/A
Cadmium (mg/L)	0.002	N/A	2	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	30	0.8	1	1	1
Chromium (mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	2	<0.01	0.02	0.01	N/A
Fluoride (mg/L)	1.5	N/A	2	0.42	0.43	0.4	N/A
Lead (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Manganese (mg/L)	0.5	N/A	2	<0.005	<0.005	0.003	N/A
Mercury (mg/L)	0.001	N/A	2	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	2	0.004	0.004	0.004	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	2	7	7	7	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.1	N/A	N/A
Selenium (mg/L)	0.01	N/A	2	0.001	0.001	0.001	N/A
Silver (mg/L)	0.1	N/A	2	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	2	0.009	0.01	0.01	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	2	<0.02	<0.02	0.01	N/A
Chloride (mg/L)	N/A	250	2	140	150	145	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	30	0.81	1.25	1	N/A
Copper (mg/L)	N/A	1	2	<0.01	0.02	0.013	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	2	516	520	518	N/A
Iron (mg/L)	N/A	0.3	2	<0.01	<0.01	0.005	N/A
Manganese (mg/L)	N/A	0.1	2	<0.005	<0.005	0.0025	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	2	7.77	7.8	7.8	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	2	98.1	99.9	99	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	2	18.3	18.5	18	N/A
Sodium (Na) (mg/L)	N/A	180	2	70.7	71.3	71	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	2	741	797	769	N/A
True Colour (HU)	N/A	15	2	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	2	0.2	0.22	0.21	N/A
Zinc (mg/L)	N/A	3	2	0.01	0.01	0.01	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	340	340	340	N/A
Apparent Colour (HU)	N/A	N/A	2	<2	<2	1	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	420	420	420	N/A
Bromine (mg/L)	N/A	N/A	2	0.382	0.414	0.4	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	98.5	99.1	99	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	1200	1200	1200	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	0.05	0.06	0.055	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	65.5	66.2	66	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	1.5	1.6	1.6	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	1.5	1.6	1.6	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	2	8.7	8.8	8.8	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	240	250	250	N/A
Tin (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	35	<1	<1	N/A	N/A

Table 52 – Water quality data assessment for Atitjere

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	2	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	2	<0.0005	<0.0005	0.0003	N/A
Barium (mg/L)	2	N/A	2	0.05	0.05	0.05	N/A
Beryllium (mg/L)	0.06	N/A	2	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	2	0.1	0.2	0.1	N/A
Cadmium (mg/L)	0.002	N/A	2	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	27	0.9	1	1	1
Chromium (mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	2	<0.01	<0.01	0.005	N/A
Fluoride (mg/L)	1.5	N/A	2	0.62	0.62	0.62	N/A
Lead (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Manganese (mg/L)	0.5	N/A	2	<0.005	<0.005	0.003	N/A
Mercury (mg/L)	0.001	N/A	2	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	2	<0.002	<0.002	0.001	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	2	30	30	30	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.1	N/A	N/A
Selenium (mg/L)	0.01	N/A	2	0.003	0.003	0.003	N/A
Silver (mg/L)	0.1	N/A	2	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	2	0.007	0.007	0.007	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	2	<0.02	<0.02	0.01	N/A
Chloride (mg/L)	N/A	250	2	130	130	130	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	27	0.87	1.26	1.1	N/A
Copper (mg/L)	N/A	1	2	<0.01	<0.01	0.005	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	2	321	323	322	N/A
Iron (mg/L)	N/A	0.3	2	0.014	0.024	0.019	N/A
Manganese (mg/L)	N/A	0.1	2	<0.005	<0.005	0.0025	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	2	8.01	8.05	8	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	2	137	137	137	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	2	34.9	35.3	35	N/A
Sodium (Na) (mg/L)	N/A	180	2	123	123	123	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	2	650	665	658	N/A
True Colour (HU)	N/A	15	2	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	2	0.6	0.9	0.75	N/A
Zinc (mg/L)	N/A	3	2	<0.01	<0.01	0.005	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	220	220	220	N/A
Apparent Colour (HU)	N/A	N/A	2	<2	<2	1.5	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	270	270	270	N/A
Bromine (mg/L)	N/A	N/A	2	0.442	0.482	0.46	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	51.3	51.9	52	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	1100	1200	1200	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	0.04	0.04	0.04	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	46.8	46.9	47	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	6.4	6.5	6.5	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	6.4	6.5	6.5	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	2	9.3	9.5	9.4	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	210	210	210	N/A
Tin (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	27	<1	<1	N/A	N/A

Table 53 – Water quality data assessment for Barunga

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	2	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	2	<0.0005	<0.0005	0.0003	N/A
Barium (mg/L)	2	N/A	2	<0.05	<0.05	0.03	N/A
Beryllium (mg/L)	0.06	N/A	2	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	2	<0.02	<0.02	0.01	N/A
Cadmium (mg/L)	0.002	N/A	2	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	36	0.6	2	1	2
Chromium (mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	2	0.01	0.02	0.02	N/A
Fluoride (mg/L)	1.5	N/A	2	<0.1	<0.1	0.05	N/A
Lead (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Manganese (mg/L)	0.5	N/A	2	<0.005	<0.005	0.003	N/A
Mercury (mg/L)	0.001	N/A	2	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	2	<0.002	<0.002	0.001	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	2	0.2	0.4	0.3	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.1	N/A	N/A
Selenium (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Silver (mg/L)	0.1	N/A	2	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	2	0.0001	0.0001	0.0001	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	2	<0.02	<0.02	0.01	N/A
Chloride (mg/L)	N/A	250	2	5	7	6	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	36	0.59	1.88	1.2	N/A
Copper (mg/L)	N/A	1	2	0.01	0.02	0.015	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	2	4.8	5.1	4.95	N/A
Iron (mg/L)	N/A	0.3	2	0.046	2.43	1.2	N/A
Manganese (mg/L)	N/A	0.1	2	<0.005	<0.005	0.0025	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	2	5.55	5.67	5.6	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	2	<0.3	<0.3	0.15	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	2	15.9	16.8	16	N/A
Sodium (Na) (mg/L)	N/A	180	2	3.49	3.63	3.56	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	2	21	33	27	N/A
True Colour (HU)	N/A	15	2	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	2	0.32	4.4	2.4	N/A
Zinc (mg/L)	N/A	3	2	0.02	0.03	0.025	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	<20	<20	10	N/A
Apparent Colour (HU)	N/A	N/A	2	2	92	47	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	10	13	12	N/A
Bromine (mg/L)	N/A	N/A	2	0.012	0.014	0.013	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	0.6	0.9	0.75	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	32	38	35	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	0.7	0.8	0.75	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.075	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.075	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	2	0.7	0.7	0.7	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	8	11	9.5	N/A
Tin (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	36	<1	<1	N/A	N/A

Table 54 – Water quality data assessment for Belyuen

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	2	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	2	0.002	0.004	0.003	N/A
Barium (mg/L)	2	N/A	2	<0.05	<0.05	0.03	N/A
Beryllium (mg/L)	0.06	N/A	2	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	2	0.02	0.02	0.02	N/A
Cadmium (mg/L)	0.002	N/A	2	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	37	0.7	5	1	2
Chromium (mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	2	<0.01	<0.01	0.005	N/A
Fluoride (mg/L)	1.5	N/A	2	0.29	0.29	0.29	N/A
Lead (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0008	N/A
Manganese (mg/L)	0.5	N/A	2	0.01	0.05	0.03	N/A
Mercury (mg/L)	0.001	N/A	2	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	2	<0.002	<0.002	0.001	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	2	0.5	0.6	0.6	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.2	N/A
Σ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.1	N/A	N/A
Selenium (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Silver (mg/L)	0.1	N/A	2	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	2	0.001	0.002	0.001	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	2	<0.02	<0.02	0.01	N/A
Chloride (mg/L)	N/A	250	2	5	6	5.5	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	37	0.72	5.1	1.4	N/A
Copper (mg/L)	N/A	1	2	<0.01	<0.01	0.005	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	2	6.6	8.1	7.35	N/A
Iron (mg/L)	N/A	0.3	2	0.042	0.078	0.06	N/A
Manganese (mg/L)	N/A	0.1	2	0.01	0.045	0.028	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	2	6.39	6.47	6.4	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	2	<0.3	<0.3	0.15	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	2	41.3	41.3	41	N/A
Sodium (Na) (mg/L)	N/A	180	2	8.53	8.71	8.62	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	2	55	62	58.5	N/A
True Colour (HU)	N/A	15	2	2	2	2	N/A
Turbidity (lab) (NTU)	N/A	5	2	0.5	0.74	0.62	N/A
Zinc (mg/L)	N/A	3	2	0.01	0.01	0.01	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	22	23	23	N/A
Apparent Colour (HU)	N/A	N/A	2	4	8	6	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	27	28	28	N/A
Bromine (mg/L)	N/A	N/A	2	0.008	0.01	0.009	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	1.5	1.6	1.6	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	58	63	61	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	0.7	1	0.85	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	0.1	0.1	0.1	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	0.1	0.1	0.1	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	2	3.8	4.1	4	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	8	10	9	N/A
Tin (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	37	<1	<1	N/A	N/A

Table 55 – Water quality data assessment for Beswick

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	6	0.007	0.009	0.008	N/A
Arsenic (mg/L)	0.01	N/A	6	0.007	0.007	0.007	N/A
Barium (mg/L)	2	N/A	6	0.1	0.2	0.1	N/A
Beryllium (mg/L)	0.06	N/A	6	<0.0001	<0.001	0.0002	N/A
Boron (mg/L)	4	N/A	6	0.01	0.02	0.02	N/A
Cadmium (mg/L)	0.002	N/A	6	0.00005	<0.0002	0.00007	N/A
Chlorine Free Residual (mg/L)	5	N/A	34	0.7	2	1	2
Chromium (mg/L)	0.05	N/A	6	<0.0002	<0.005	0.0009	N/A
Copper (mg/L)	2	N/A	6	0.1	0.1	0.1	N/A
Fluoride (mg/L)	1.5	N/A	4	<0.1	0.11	0.09	N/A
Lead (mg/L)	0.01	N/A	6	<0.0001	<0.001	0.0002	N/A
Manganese (mg/L)	0.5	N/A	6	<0.0005	<0.005	0.001	N/A
Mercury (mg/L)	0.001	N/A	6	<0.0001	0.0002	0.0002	N/A
Molybdenum(mg/L)	0.05	N/A	6	0.0006	<0.005	0.001	N/A
Nickel (mg/L)	0.02	N/A	6	<0.0005	<0.002	0.0005	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	4	0.2	0.3	0.3	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.1	N/A	N/A
Selenium (mg/L)	0.01	N/A	6	<0.0002	<0.001	0.0002	N/A
Silver (mg/L)	0.1	N/A	6	<0.0001	<0.01	0.002	N/A
Uranium (mg/L)	0.02	N/A	6	0.0002	0.0003	0.0002	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	6	<0.005	0.048	0.018	N/A
Chloride (mg/L)	N/A	250	4	5	7	6	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	34	0.67	1.73	1.1	N/A
Copper (mg/L)	N/A	1	6	0.102	0.12	0.11	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	4	308	327	320	N/A
Iron (mg/L)	N/A	0.3	4	<0.01	0.111	0.032	N/A
Manganese (mg/L)	N/A	0.1	6	<0.0005	<0.005	0.0011	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	4	7.39	7.59	7.5	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	4	<0.3	<0.3	0.15	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	4	23.3	24	24	N/A
Sodium (Na) (mg/L)	N/A	180	4	5.64	6.16	5.81	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	4	268	314	291	N/A
True Colour (HU)	N/A	15	4	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	4	0.67	2.1	1.3	N/A
Zinc (mg/L)	N/A	3	6	0.018	0.02	0.02	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	4	300	310	310	N/A
Apparent Colour (HU)	N/A	N/A	4	7	16	12	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	4	360	380	370	N/A
Bromine (mg/L)	N/A	N/A	6	0.022	<0.1	0.043	N/A
Calcium (Ca) (mg/L)	N/A	N/A	4	62.7	66.2	65	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	4	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	4	560	580	570	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	4	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	6	<0.01	<0.1	0.035	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	4	36.8	39.4	38	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	4	<0.1	<0.1	0.088	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	4	<0.1	<0.1	0.088	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	4	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	4	2	2.2	2.1	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	4	9	11	9.8	N/A
Tin (mg/L)	N/A	N/A	6	<0.0002	<0.01	0.0017	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	35	<1	<1	N/A	N/A

Table 56 – Water quality data assessment for Binjari

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	3	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	3	0.002	0.002	0.002	N/A
Barium (mg/L)	2	N/A	3	0.2	0.2	0.2	N/A
Beryllium (mg/L)	0.06	N/A	3	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	3	0.04	0.04	0.04	N/A
Cadmium (mg/L)	0.002	N/A	3	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	21	0.8	2	1	2
Chromium (mg/L)	0.05	N/A	3	<0.005	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	3	<0.01	0.02	0.02	N/A
Fluoride (mg/L)	1.5	N/A	3	0.4	0.4	0.4	N/A
Lead (mg/L)	0.01	N/A	3	<0.001	<0.001	0.0007	N/A
Manganese (mg/L)	0.5	N/A	3	<0.005	<0.005	0.003	N/A
Mercury (mg/L)	0.001	N/A	3	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	3	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	3	<0.002	<0.002	0.001	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	3	<0.1	<0.1	0.07	N/A
Nitrite mg-NO ₂ /L*	3	N/A	3	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.1	N/A	N/A
Selenium (mg/L)	0.01	N/A	3	<0.001	<0.001	0.0005	N/A
Silver (mg/L)	0.1	N/A	3	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	3	0.001	0.001	0.001	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	3	<0.02	<0.02	0.01	N/A
Chloride (mg/L)	N/A	250	3	6	9	8	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	21	0.78	1.53	1	N/A
Copper (mg/L)	N/A	1	3	<0.01	0.02	0.015	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	3	307	317	313	N/A
Iron (mg/L)	N/A	0.3	3	0.025	0.031	0.028	N/A
Manganese (mg/L)	N/A	0.1	3	<0.005	<0.005	0.0025	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	3	8.11	8.26	8.2	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	3	<0.3	6.24	2.18	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	3	26.8	27.2	27	N/A
Sodium (Na) (mg/L)	N/A	180	3	7.18	8.8	8.24	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	3	317	343	326	N/A
True Colour (HU)	N/A	15	3	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	3	0.29	0.45	0.38	N/A
Zinc (mg/L)	N/A	3	3	<0.01	0.02	0.012	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	3	310	310	310	N/A
Apparent Colour (HU)	N/A	N/A	3	<2	<2	1.7	N/A
Bicarbonate (H CO ₃) (mg/L)	N/A	N/A	3	370	370	370	N/A
Bromine (mg/L)	N/A	N/A	3	0.03	0.054	0.045	N/A
Calcium (Ca) (mg/L)	N/A	N/A	3	71.6	75.8	74	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	3	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	3	610	610	610	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	3	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	3	<0.01	<0.01	0.005	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	3	30.9	31.4	31	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	3	<0.1	<0.1	0.05	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	3	<0.1	<0.1	0.05	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	3	<0.1	<0.1	0.067	N/A
Potassium (K) (mg/L)	N/A	N/A	3	4.2	4.3	4.3	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	3	10	15	13	N/A
Tin (mg/L)	N/A	N/A	3	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	22	<1	<1	N/A	N/A

Table 57 – Water quality data assessment for Bulla

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	34	<0.0002	0.0005	0.0001	0.0004
Arsenic (mg/L)	0.01	N/A	34	<0.0002	<0.0005	0.0002	0.0003
Barium (mg/L)	2	N/A	34	0.2	20	10	20
Beryllium (mg/L)	0.06	N/A	34	<0.0001	<0.001	0.0002	0.0005
Boron (mg/L)	4	N/A	34	0.06	0.3	0.2	0.3
Cadmium (mg/L)	0.002	N/A	34	<0.00005	0.0004	0.00006	0.0002
Chlorine Free Residual (mg/L)	5	N/A	42	0.8	2	1	2
Chromium (mg/L)	0.05	N/A	34	<0.0002	<0.005	0.001	0.003
Copper (mg/L)	2	N/A	34	<0.0005	0.1	0.01	0.09
Fluoride (F) (mg/L)	1.5	N/A	32	1.3	1.5	1.4	1.4
Lead (mg/L)	0.01	N/A	34	<0.0001	0.003	0.0004	0.002
Manganese (mg/L)	0.5	N/A	34	0.009	0.5	0.07	0.4
Mercury (mg/L)	0.001	N/A	33	<0.0001	<0.0001	0.00005	0.00005
Molybdenum (mg/L)	0.05	N/A	34	<0.0001	<0.005	0.0009	0.003
Nickel (mg/L)	0.02	N/A	34	<0.0005	0.003	0.0008	0.002
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	32	<0.1	3	0.3	2
Nitrite mg-NO ₂ /L *	3	N/A	32	<0.3	7	0.3	2
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	N/A	N/A	0.8
Selenium (mg/L)	0.01	N/A	34	<0.0002	<0.001	0.0002	0.0005
Silver (mg/L)	0.1	N/A	34	<0.0001	<0.01	0.002	0.005
Uranium (mg/L)	0.02	N/A	34	<0.00001	0.00008	0.00002	0.00004
Aesthetic							
Aluminium (mg/L)	N/A	0.2	34	<0.005	0.096	0.0079	N/A
Chloride (Cl) (mg/L)	N/A	250	32	37	120	73.1	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	42	0.82	1.81	1.3	N/A
Copper (mg/L)	N/A	1	34	<0.0005	0.124	0.013	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	32	188	230	216	N/A
Iron (mg/L)	N/A	0.3	32	0.021	0.467	0.1	N/A
Manganese (mg/L)	N/A	0.1	34	0.0085	0.53	0.066	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	32	7.73	8.62	8.1	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	32	<0.3	<0.3	0.15	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	32	12.7	20.3	17	N/A
Sodium (Na) (mg/L)	N/A	180	32	46.8	56.6	50.2	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	32	305	370	349	N/A
True Colour (HU)	N/A	15	32	<2	65	5.09	N/A
Turbidity (lab) (NTU)	N/A	5	32	0.36	12	1.5	N/A
Zinc (mg/L)	N/A	3	34	0.002	0.09	0.018	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	32	230	260	230	N/A
Apparent Colour (HU)	N/A	N/A	32	6	95	20	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	32	260	320	280	N/A
Bromine (mg/L)	N/A	N/A	33	<0.1	0.242	0.13	N/A
Calcium (Ca) (mg/L)	N/A	N/A	32	40.6	52.4	48	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	32	<10	<10	5.3	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	32	580	710	690	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	32	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	33	<0.01	0.3	0.043	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	32	20.8	24.9	23	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	32	<0.1	0.6	0.086	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	32	<0.1	0.6	0.092	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	32	<0.1	1.7	0.1	N/A
Potassium (K) (mg/L)	N/A	N/A	32	8.7	10.6	9.7	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	32	61	190	120	N/A
Tin (mg/L)	N/A	N/A	34	<0.0002	<0.01	0.0019	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	42	<1	<1	N/A	N/A

Table 58 – Water quality data assessment for Bulman

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	2	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	2	<0.0005	<0.0005	0.0003	N/A
Barium (mg/L)	2	N/A	2	<0.05	<0.05	0.03	N/A
Beryllium (mg/L)	0.06	N/A	2	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	2	0.02	0.02	0.02	N/A
Cadmium (mg/L)	0.002	N/A	2	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	27	0.8	2	1	2
Chromium (mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	2	<0.01	<0.01	0.005	N/A
Fluoride (mg/L)	1.5	N/A	2	0.12	0.12	0.12	N/A
Lead (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Manganese (mg/L)	0.5	N/A	2	<0.005	<0.005	0.003	N/A
Mercury (mg/L)	0.001	N/A	2	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	2	<0.002	<0.002	0.001	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	2	0.7	1	1	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.1	N/A	N/A
Selenium (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Silver (mg/L)	0.1	N/A	2	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	2	0.0003	0.0003	0.0003	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	2	<0.02	<0.02	0.01	N/A
Chloride (mg/L)	N/A	250	2	9	9	9	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	27	0.83	2.06	1.2	N/A
Copper (mg/L)	N/A	1	2	<0.01	<0.01	0.005	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	2	354	359	357	N/A
Iron (mg/L)	N/A	0.3	2	<0.01	<0.01	0.005	N/A
Manganese (mg/L)	N/A	0.1	2	<0.005	<0.005	0.0025	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	2	7.55	7.59	7.6	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	2	<0.3	<0.3	0.15	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	2	24	24	24	N/A
Sodium (Na) (mg/L)	N/A	180	2	8.23	8.46	8.35	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	2	323	333	328	N/A
True Colour (HU)	N/A	15	2	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	2	0.2	0.2	0.2	N/A
Zinc (mg/L)	N/A	3	2	<0.01	<0.01	0.0075	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	320	320	320	N/A
Apparent Colour (HU)	N/A	N/A	2	<2	<2	1	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	390	390	390	N/A
Bromine (mg/L)	N/A	N/A	2	0.028	0.03	0.029	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	72.1	73.5	73	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	620	620	620	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	42.2	42.6	42	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	0.2	0.3	0.25	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	0.2	0.3	0.25	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	2	2.6	2.6	2.6	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	14	15	15	N/A
Tin (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	30	<1	<1	N/A	N/A

Table 59 – Water quality data assessment for Canteen Creek

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	2	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	2	<0.0005	<0.0005	0.0004	N/A
Barium (mg/L)	2	N/A	2	0.2	0.2	0.2	N/A
Beryllium (mg/L)	0.06	N/A	2	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	2	0.2	0.3	0.3	N/A
Cadmium (mg/L)	0.002	N/A	2	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	32	0.8	2	1	2
Chromium (mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	2	0.02	0.02	0.02	N/A
Fluoride (mg/L)	1.5	N/A	2	0.59	0.59	0.59	N/A
Lead (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Manganese (mg/L)	0.5	N/A	2	<0.005	<0.005	0.003	N/A
Mercury (mg/L)	0.001	N/A	2	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	2	<0.002	<0.002	0.001	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	2	10	10	10	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.3	N/A	N/A
Selenium (mg/L)	0.01	N/A	2	0.002	0.002	0.002	N/A
Silver (mg/L)	0.1	N/A	2	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	2	0.003	0.003	0.003	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	2	<0.02	<0.02	0.01	N/A
Chloride (mg/L)	N/A	250	2	110	120	115	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	32	0.78	1.58	1.1	N/A
Copper (mg/L)	N/A	1	2	0.02	0.02	0.02	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	2	238	248	243	N/A
Iron (mg/L)	N/A	0.3	2	0.011	0.02	0.016	N/A
Manganese (mg/L)	N/A	0.1	2	<0.005	<0.005	0.0025	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	2	7.43	7.44	7.4	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	2	36.3	38.7	37.5	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	2	60.3	60.3	60	N/A
Sodium (Na) (mg/L)	N/A	180	2	108	110	109	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	2	549	558	554	N/A
True Colour (HU)	N/A	15	2	<2	9	5	N/A
Turbidity (lab) (NTU)	N/A	5	2	0.65	0.99	0.82	N/A
Zinc (mg/L)	N/A	3	2	<0.01	0.02	0.013	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	280	280	280	N/A
Apparent Colour (HU)	N/A	N/A	2	<2	85	43	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	340	340	340	N/A
Bromine (mg/L)	N/A	N/A	2	0.448	0.454	0.45	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	32.1	33.9	33	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	980	980	980	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	0.1	0.1	0.1	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	38.4	39.6	39	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	2.4	2.5	2.5	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	2.4	2.5	2.5	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	2	14.4	15	15	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	190	190	190	N/A
Tin (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	33	<1	<1	N/A	N/A

Table 60 – Water quality data assessment for Daguragu

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	2	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	2	0.001	0.002	0.001	N/A
Barium (mg/L)	2	N/A	2	0.05	0.05	0.05	N/A
Beryllium (mg/L)	0.06	N/A	2	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	2	0.1	0.1	0.1	N/A
Cadmium (mg/L)	0.002	N/A	2	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	20	0.7	2	1	2
Chromium (mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	2	<0.01	<0.01	0.005	N/A
Fluoride (mg/L)	1.5	N/A	2	0.26	0.26	0.26	N/A
Lead (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Manganese (mg/L)	0.5	N/A	2	<0.005	<0.005	0.003	N/A
Mercury (mg/L)	0.001	N/A	2	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	2	<0.002	0.004	0.003	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	2	3	4	3	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.2	N/A	N/A
Selenium (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Silver (mg/L)	0.1	N/A	2	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	2	0.002	0.002	0.002	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	2	<0.02	<0.02	0.01	N/A
Chloride (mg/L)	N/A	250	2	19	19	19	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	20	0.72	1.71	1.1	N/A
Copper (mg/L)	N/A	1	2	<0.01	<0.01	0.005	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	2	295	296	296	N/A
Iron (mg/L)	N/A	0.3	2	<0.01	<0.01	0.005	N/A
Manganese (mg/L)	N/A	0.1	2	<0.005	<0.005	0.0025	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	2	7.72	7.75	7.7	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	2	<0.3	<0.3	0.15	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	2	27	27.8	27	N/A
Sodium (Na) (mg/L)	N/A	180	2	32.4	32.7	32.6	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	2	339	345	342	N/A
True Colour (HU)	N/A	15	2	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	2	0.24	0.29	0.27	N/A
Zinc (mg/L)	N/A	3	2	<0.01	0.02	0.013	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	310	320	320	N/A
Apparent Colour (HU)	N/A	N/A	2	<2	<2	1	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	380	390	390	N/A
Bromine (mg/L)	N/A	N/A	2	0.084	0.11	0.097	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	59.3	59.6	59	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	650	650	650	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	<0.01	<0.01	0.0075	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	35.6	35.7	36	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	0.8	0.8	0.8	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	0.8	0.8	0.8	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	2	4	4	4	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	31	32	32	N/A
Tin (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	20	<1	<1	N/A	N/A

Table 61 – Water quality data assessment for Engawala

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	2	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	2	<0.0005	<0.0005	0.0003	N/A
Barium (mg/L)	2	N/A	2	0.2	0.2	0.2	N/A
Beryllium (mg/L)	0.06	N/A	2	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	2	0.2	0.2	0.2	N/A
Cadmium (mg/L)	0.002	N/A	2	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	33	0.8	2	1	1
Chromium (mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	2	<0.01	<0.01	0.005	N/A
Fluoride (mg/L)	1.5	N/A	2	0.63	0.63	0.63	N/A
Lead (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Manganese (mg/L)	0.5	N/A	2	<0.005	<0.005	0.003	N/A
Mercury (mg/L)	0.001	N/A	2	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	2	<0.002	<0.002	0.001	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	2	20	20	20	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.5	N/A	N/A
Selenium (mg/L)	0.01	N/A	2	0.002	0.002	0.002	N/A
Silver (mg/L)	0.1	N/A	2	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	2	0.003	0.003	0.003	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	2	<0.02	<0.02	0.01	N/A
Chloride (mg/L)	N/A	250	2	120	120	120	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	29	0.83	1.52	1.2	N/A
Copper (mg/L)	N/A	1	2	<0.01	<0.01	0.005	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	2	445	449	447	N/A
Iron (mg/L)	N/A	0.3	2	<0.01	0.014	0.0095	N/A
Manganese (mg/L)	N/A	0.1	2	<0.005	<0.005	0.0025	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	2	7.56	7.56	7.6	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	2	46.8	47.4	47.1	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	2	65.3	65.5	65	N/A
Sodium (Na) (mg/L)	N/A	180	2	72.5	73.7	73.1	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	2	684	699	692	N/A
True Colour (HU)	N/A	15	2	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	2	0.17	0.26	0.22	N/A
Zinc (mg/L)	N/A	3	2	0.01	0.02	0.015	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	330	330	330	N/A
Apparent Colour (HU)	N/A	N/A	2	<2	<2	1	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	400	400	400	N/A
Bromine (mg/L)	N/A	N/A	2	0.578	0.726	0.65	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	88.6	90.8	90	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	1000	1200	1100	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	0.08	0.1	0.09	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	54	54.3	54	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	5.4	5.5	5.5	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	5.4	5.5	5.5	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	2	7.4	7.5	7.5	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	190	190	190	N/A
Tin (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	33	<1	<1	N/A	N/A

Table 62 – Water quality data assessment for Finke

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	2	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	2	0.0005	0.0005	0.0005	N/A
Barium (mg/L)	2	N/A	2	0.2	0.2	0.2	N/A
Beryllium (mg/L)	0.06	N/A	2	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	2	0.08	0.08	0.08	N/A
Cadmium (mg/L)	0.002	N/A	2	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	30	1	1	1	1
Chromium (mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	2	<0.01	<0.01	0.005	N/A
Fluoride (mg/L)	1.5	N/A	2	0.2	0.2	0.2	N/A
Lead (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Manganese (mg/L)	0.5	N/A	2	<0.005	<0.005	0.003	N/A
Mercury (mg/L)	0.001	N/A	2	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	2	<0.002	<0.002	0.001	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	2	9	9	9	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.2	N/A
Σ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.3	N/A	N/A
Selenium (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Silver (mg/L)	0.1	N/A	2	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	2	0.003	0.003	0.003	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	2	<0.02	<0.02	0.01	N/A
Chloride (mg/L)	N/A	250	2	160	160	160	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	30	0.98	1.3	1.1	N/A
Copper (mg/L)	N/A	1	2	<0.01	<0.01	0.005	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	2	218	219	219	N/A
Iron (mg/L)	N/A	0.3	2	0.021	0.022	0.022	N/A
Manganese (mg/L)	N/A	0.3	2	<0.02	<0.02	0.015	N/A
pH (lab) (pH)	N/A	0.1	2	<0.005	<0.005	0.0025	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	6.5 - 8.5	2	7.87	7.88	7.9	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	250	2	59.4	60	59.7	N/A
Sodium (Na) (mg/L)	N/A	80	2	16	16.3	16	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	180	2	92.7	92.8	92.8	N/A
True Colour (HU)	N/A	600	2	495	510	503	N/A
Turbidity (lab) (NTU)	N/A	15	2	<2	<2	1	N/A
Zinc (mg/L)	N/A	5	2	0.42	0.45	0.44	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	110	110	110	N/A
Apparent Colour (HU)	N/A	N/A	2	<2	<2	1	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	140	140	140	N/A
Bromine (mg/L)	N/A	N/A	2	0.18	0.2	0.19	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	64.2	65.3	65	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	920	940	930	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	0.03	0.03	0.03	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	13.6	14	14	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	1.9	1.9	1.9	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	1.9	1.9	1.9	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	2	6.8	6.8	6.8	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	260	260	260	N/A
Tin (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	30	<1	<1	N/A	N/A

Table 63 – Water quality data assessment for Galiwinku

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	2	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	2	<0.0005	<0.0005	0.0003	N/A
Barium (mg/L)	2	N/A	2	<0.05	<0.05	0.03	N/A
Beryllium (mg/L)	0.06	N/A	2	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	2	<0.02	<0.02	0.02	N/A
Cadmium (mg/L)	0.002	N/A	2	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	186	0.8	2	1	1
Chromium (mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	2	0.01	0.02	0.02	N/A
Fluoride (mg/L)	1.5	N/A	2	<0.1	<0.1	0.05	N/A
Lead (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Manganese (mg/L)	0.5	N/A	2	<0.005	<0.005	0.003	N/A
Mercury (mg/L)	0.001	N/A	2	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	2	<0.002	<0.002	0.001	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	2	1	1	1	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.1	N/A	N/A
Selenium (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Silver (mg/L)	0.1	N/A	2	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	2	0.00003	0.00003	0.00003	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	2	<0.02	<0.02	0.01	N/A
Chloride (mg/L)	N/A	250	2	10	10	10	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	186	0.76	1.52	1.2	N/A
Copper (mg/L)	N/A	1	2	0.01	0.02	0.015	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	2	3.1	3.4	3.25	N/A
Iron (mg/L)	N/A	0.3	2	<0.01	<0.01	0.005	N/A
Manganese (mg/L)	N/A	0.1	2	<0.005	<0.005	0.0025	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	2	4.86	4.87	4.9	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	2	1.05	1.11	1.08	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	2	12.5	12.6	13	N/A
Sodium (Na) (mg/L)	N/A	180	2	5.91	5.95	5.93	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	2	31	32	31.5	N/A
True Colour (HU)	N/A	15	2	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	2	0.26	1.6	0.93	N/A
Zinc (mg/L)	N/A	3	2	<0.01	<0.01	0.005	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	<20	<20	10	N/A
Apparent Colour (HU)	N/A	N/A	2	<2	<2	1	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Bromine (mg/L)	N/A	N/A	2	0.016	0.026	0.021	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	0.1	0.2	0.15	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	46	48	47	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	0.7	0.7	0.7	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	0.3	0.3	0.3	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	0.3	0.3	0.3	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	2	0.3	0.3	0.3	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	17	17	17	N/A
Tin (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	188	<1	<1	N/A	N/A

Table 64 – Water quality data assessment for Gapuwiyak

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	2	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	2	<0.0005	<0.0005	0.0003	N/A
Barium (mg/L)	2	N/A	2	<0.05	<0.05	0.03	N/A
Beryllium (mg/L)	0.06	N/A	2	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	2	0.02	0.02	0.02	N/A
Cadmium (mg/L)	0.002	N/A	2	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	138	0.9	2	1	1
Chromium (mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	2	<0.01	<0.01	0.005	N/A
Fluoride (mg/L)	1.5	N/A	2	<0.1	<0.1	0.05	N/A
Lead (mg/L)	0.01	N/A	2	<0.001	0.002	0.001	N/A
Manganese (mg/L)	0.5	N/A	2	<0.005	<0.005	0.003	N/A
Mercury (mg/L)	0.001	N/A	2	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	2	<0.002	<0.002	0.001	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	2	2	2	2	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.1	N/A	N/A
Selenium (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Silver (mg/L)	0.1	N/A	2	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	2	0.00002	0.00003	0.00003	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	2	<0.02	<0.02	0.01	N/A
Chloride (mg/L)	N/A	250	2	9	9	9	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	138	0.91	1.51	1.3	N/A
Copper (mg/L)	N/A	1	2	<0.01	<0.01	0.005	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	2	4.4	4.8	4.6	N/A
Iron (mg/L)	N/A	0.3	2	0.013	0.025	0.019	N/A
Manganese (mg/L)	N/A	0.1	2	<0.005	<0.005	0.0025	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	2	5.78	5.78	5.8	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	2	<0.3	<0.3	0.15	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	2	11.6	11.7	12	N/A
Sodium (Na) (mg/L)	N/A	180	2	6.82	6.85	6.84	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	2	32	33	32.5	N/A
True Colour (HU)	N/A	15	2	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	2	0.21	0.29	0.25	N/A
Zinc (mg/L)	N/A	3	2	0.05	0.07	0.06	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	<20	<20	10	N/A
Apparent Colour (HU)	N/A	N/A	2	2	3	2.5	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Bromine (mg/L)	N/A	N/A	2	0.022	0.022	0.022	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	0.6	0.6	0.6	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	47	48	48	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	0.7	0.8	0.75	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	0.4	0.5	0.45	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	0.4	0.5	0.45	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	2	0.1	0.2	0.15	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	15	15	15	N/A
Tin (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	144	<1	<1	N/A	N/A

Table 65 – Water quality data assessment for Gunbalanya

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	2	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	2	<0.0005	<0.0005	0.0003	N/A
Barium (mg/L)	2	N/A	2	<0.05	<0.05	0.03	N/A
Beryllium (mg/L)	0.06	N/A	2	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	2	<0.02	<0.02	0.01	N/A
Cadmium (mg/L)	0.002	N/A	2	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	141	0.7	2	1	2
Chromium (mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	2	<0.01	<0.01	0.008	N/A
Fluoride (mg/L)	1.5	N/A	2	<0.1	<0.1	0.05	N/A
Lead (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Manganese (mg/L)	0.5	N/A	2	0.01	0.01	0.01	N/A
Mercury (mg/L)	0.001	N/A	2	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	2	<0.002	<0.002	0.001	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	2	0.5	0.6	0.6	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.1	N/A	N/A
Selenium (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Silver (mg/L)	0.1	N/A	2	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	2	0.00003	0.00004	0.00004	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	2	0.36	0.38	0.37	N/A
Chloride (mg/L)	N/A	250	2	5	5	5	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	141	0.68	1.7	1.4	N/A
Copper (mg/L)	N/A	1	2	<0.01	<0.01	0.0075	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	2	3.9	4.1	4	N/A
Iron (mg/L)	N/A	0.3	2	0.288	0.298	0.29	N/A
Manganese (mg/L)	N/A	0.1	2	0.01	0.01	0.01	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	2	5.8	5.84	5.8	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	2	0.42	0.66	0.54	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	2	13.4	13.8	14	N/A
Sodium (Na) (mg/L)	N/A	180	2	2.78	2.93	2.86	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	2	19	23	21	N/A
True Colour (HU)	N/A	15	2	2	3	2.5	N/A
Turbidity (lab) (NTU)	N/A	5	2	5.5	5.6	5.6	N/A
Zinc (mg/L)	N/A	3	2	<0.01	<0.01	0.005	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	<20	<20	10	N/A
Apparent Colour (HU)	N/A	N/A	2	56	56	56	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Bromine (mg/L)	N/A	N/A	2	0.036	0.036	0.036	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	0.4	0.5	0.45	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	14	26	20	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	0.7	0.7	0.7	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	0.1	0.1	0.1	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	0.1	0.1	0.1	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	2	0.3	0.3	0.3	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	8	8	8	N/A
Tin (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	141	<1	<1	N/A	N/A

Table 66 – Water quality data assessment for Gunyangara

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	2	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	2	<0.0005	<0.0005	0.0003	N/A
Barium (mg/L)	2	N/A	2	<0.05	<0.05	0.03	N/A
Beryllium (mg/L)	0.06	N/A	2	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	2	<0.02	<0.02	0.01	N/A
Cadmium (mg/L)	0.002	N/A	2	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	36	0.9	2	1	2
Chromium (mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	2	<0.01	<0.01	0.005	N/A
Fluoride (mg/L)	1.5	N/A	2	<0.1	<0.1	0.05	N/A
Lead (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Manganese (mg/L)	0.5	N/A	2	<0.005	<0.005	0.003	N/A
Mercury (mg/L)	0.001	N/A	2	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	2	<0.002	<0.002	0.001	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	2	0.4	0.4	0.4	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.1	N/A	N/A
Selenium (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Silver (mg/L)	0.1	N/A	2	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	2	<0.00001	<0.00001	0.000005	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	2	<0.02	<0.02	0.01	N/A
Chloride (mg/L)	N/A	250	2	15	16	15.5	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	36	0.9	1.5	1.2	N/A
Copper (mg/L)	N/A	1	2	<0.01	<0.01	0.005	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	2	5.4	5.4	5.4	N/A
Iron (mg/L)	N/A	0.3	2	0.021	0.117	0.069	N/A
Manganese (mg/L)	N/A	0.1	2	<0.005	<0.005	0.0025	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	2	7.21	7.22	7.2	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	2	<0.3	<0.3	0.15	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	2	11	11	11	N/A
Sodium (Na) (mg/L)	N/A	180	2	9.27	9.57	9.42	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	2	36	42	39	N/A
True Colour (HU)	N/A	15	2	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	2	0.25	0.48	0.37	N/A
Zinc (mg/L)	N/A	3	2	<0.01	<0.01	0.005	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	<20	<20	10	N/A
Apparent Colour (HU)	N/A	N/A	2	2	8	5	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Bromine (mg/L)	N/A	N/A	2	0.028	0.032	0.03	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	1.5	1.5	1.5	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	71	72	72	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	0.4	0.4	0.4	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	0.1	0.1	0.1	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	0.1	0.1	0.1	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	2	0.3	0.3	0.3	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	25	26	26	N/A
Tin (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	36	<1	<1	N/A	N/A

Table 67 – Water quality data assessment for Haasts Bluff

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	2	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	2	0.0002	0.0004	0.0003	N/A
Barium (mg/L)	2	N/A	2	0.04	0.04	0.04	N/A
Beryllium (mg/L)	0.06	N/A	2	<0.0001	<0.0001	0.00005	N/A
Boron (mg/L)	4	N/A	2	0.3	0.3	0.3	N/A
Cadmium (mg/L)	0.002	N/A	2	<0.00005	<0.00005	0.00003	N/A
Chlorine Free Residual (mg/L)	5	N/A	35	0.9	2	1	2
Chromium (mg/L)	0.05	N/A	2	0.0006	0.002	0.001	N/A
Copper (mg/L)	2	N/A	2	0.005	0.01	0.008	N/A
Fluoride (mg/L)	1.5	N/A	2	0.51	0.51	0.51	N/A
Lead (mg/L)	0.01	N/A	2	0.0001	0.0008	0.0005	N/A
Manganese (mg/L)	0.5	N/A	2	0.001	0.008	0.005	N/A
Mercury (mg/L)	0.001	N/A	2	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	2	0.0002	0.0002	0.0002	N/A
Nickel (mg/L)	0.02	N/A	2	0.005	0.005	0.005	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	2	8	9	8	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.3	N/A	N/A
Selenium (mg/L)	0.01	N/A	2	0.002	0.002	0.002	N/A
Silver (mg/L)	0.1	N/A	2	<0.0001	<0.0001	0.00005	N/A
Uranium (mg/L)	0.02	N/A	2	0.01	0.01	0.01	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	2	<0.005	0.007	0.0048	N/A
Chloride (mg/L)	N/A	250	2	340	350	345	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	35	0.86	1.77	1.2	N/A
Copper (mg/L)	N/A	1	2	0.005	0.0102	0.0076	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	2	651	654	653	N/A
Iron (mg/L)	N/A	0.3	2	0.042	0.434	0.24	N/A
Manganese (mg/L)	N/A	0.1	2	0.001	0.0083	0.0047	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	2	7.58	7.63	7.6	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	2	251	251	251	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	2	58.6	59.7	59	N/A
Sodium (Na) (mg/L)	N/A	180	2	173	174	174	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	2	1220	1230	1230	N/A
True Colour (HU)	N/A	15	2	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	2	0.55	4	2.3	N/A
Zinc (mg/L)	N/A	3	2	0.025	0.034	0.03	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	230	230	230	N/A
Apparent Colour (HU)	N/A	N/A	2	17	24	21	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	280	280	280	N/A
Bromine (mg/L)	N/A	N/A	2	1.8	2.3	2.1	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	125	125	130	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	2100	2100	2100	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	0.4	0.5	0.45	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	82.2	82.9	83	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	1.8	2	1.9	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	1.8	2	1.9	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	2	32.4	32.5	32	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	560	580	570	N/A
Tin (mg/L)	N/A	N/A	2	<0.0002	<0.0002	0.0001	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	36	<1	<1	N/A	N/A

Table 68 – Water quality data assessment for Hermannsburg

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	2	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	2	<0.0005	<0.0005	0.0004	N/A
Barium (mg/L)	2	N/A	2	<0.05	<0.05	0.03	N/A
Beryllium (mg/L)	0.06	N/A	2	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	2	0.1	0.2	0.2	N/A
Cadmium (mg/L)	0.002	N/A	2	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	33	1	1	1	1
Chromium (mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	2	<0.01	<0.01	0.005	N/A
Fluoride (mg/L)	1.5	N/A	2	0.4	0.4	0.4	N/A
Lead (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Manganese (mg/L)	0.5	N/A	2	<0.005	<0.005	0.003	N/A
Mercury (mg/L)	0.001	N/A	2	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	2	<0.002	<0.002	0.001	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	2	5	5	5	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.2	N/A	N/A
Selenium (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Silver (mg/L)	0.1	N/A	2	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	2	0.004	0.004	0.004	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	2	<0.02	<0.02	0.01	N/A
Chloride (mg/L)	N/A	250	2	110	110	110	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	33	0.99	1.47	1.2	N/A
Copper (mg/L)	N/A	1	2	<0.01	<0.01	0.005	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	2	334	336	335	N/A
Iron (mg/L)	N/A	0.3	2	0.02	0.038	0.029	N/A
Manganese (mg/L)	N/A	0.1	2	<0.005	<0.005	0.0025	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	2	7.94	7.97	8	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	2	52.5	53.4	53	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	2	14.2	14.4	14	N/A
Sodium (Na) (mg/L)	N/A	180	2	66	66.3	66.2	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	2	436	523	480	N/A
True Colour (HU)	N/A	15	2	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	2	0.4	0.62	0.51	N/A
Zinc (mg/L)	N/A	3	2	0.01	0.03	0.02	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	240	240	240	N/A
Apparent Colour (HU)	N/A	N/A	2	2	4	3	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	290	290	290	N/A
Bromine (mg/L)	N/A	N/A	2	0.25	0.268	0.26	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	69.1	69.9	70	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	940	940	940	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	0.07	0.08	0.075	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	39.1	39.2	39	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	1	1.1	1.1	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	1	1.1	1.1	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	2	7.3	7.4	7.4	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	180	180	180	N/A
Tin (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	33	<1	<1	N/A	N/A

Table 69 – Water quality data assessment for Imangara

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	2	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	2	0.001	0.001	0.001	N/A
Barium (mg/L)	2	N/A	2	0.4	0.5	0.4	N/A
Beryllium (mg/L)	0.06	N/A	2	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	2	0.3	0.3	0.3	N/A
Cadmium (mg/L)	0.002	N/A	2	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	30	0.9	2	1	2
Chromium (mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	2	0.02	0.02	0.02	N/A
Fluoride (mg/L)	1.5	N/A	2	0.75	0.83	0.79	N/A
Lead (mg/L)	0.01	N/A	2	<0.001	0.002	0.001	N/A
Manganese (mg/L)	0.5	N/A	2	<0.005	<0.005	0.003	N/A
Mercury (mg/L)	0.001	N/A	2	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	2	<0.002	<0.002	0.001	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	2	10	10	10	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.3	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.3	N/A	N/A
Selenium (mg/L)	0.01	N/A	2	0.001	0.002	0.002	N/A
Silver (mg/L)	0.1	N/A	2	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	2	0.01	0.01	0.01	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	2	<0.02	<0.02	0.01	N/A
Chloride (mg/L)	N/A	250	2	83	84	83.5	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	30	0.92	1.53	1.2	N/A
Copper (mg/L)	N/A	1	2	0.02	0.02	0.02	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	2	342	342	342	N/A
Iron (mg/L)	N/A	0.3	2	<0.01	<0.01	0.005	N/A
Manganese (mg/L)	N/A	0.1	2	<0.005	<0.005	0.0025	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	2	7.62	7.64	7.6	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	2	15.3	17.3	16.3	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	2	79.2	80.2	80	N/A
Sodium (Na) (mg/L)	N/A	180	2	45.3	51.2	48.3	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	2	515	560	538	N/A
True Colour (HU)	N/A	15	2	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	2	0.19	0.2	0.2	N/A
Zinc (mg/L)	N/A	3	2	0.02	0.02	0.02	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	320	330	330	N/A
Apparent Colour (HU)	N/A	N/A	2	<2	<2	1	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	390	410	400	N/A
Bromine (mg/L)	N/A	N/A	2	0.244	0.286	0.27	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	49.7	53.5	52	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	910	940	930	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	0.16	0.19	0.18	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	50.6	52.8	52	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	2.2	2.6	2.4	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	2.2	2.5	2.4	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.075	N/A
Potassium (K) (mg/L)	N/A	N/A	2	32.6	35.5	34	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	140	140	140	N/A
Tin (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	33	<1	<1	N/A	N/A

Table 70 – Water quality data assessment for Imanpa

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	6	<0.0002	<0.0005	0.0002	N/A
Arsenic (mg/L)	0.01	N/A	6	0.0003	<0.0005	0.0003	N/A
Barium (mg/L)	2	N/A	6	0.02	<0.05	0.02	N/A
Beryllium (mg/L)	0.06	N/A	6	<0.0001	<0.001	0.0002	N/A
Boron (mg/L)	4	N/A	6	0.6	0.9	0.8	N/A
Cadmium (mg/L)	0.002	N/A	6	<0.00005	<0.0002	0.00005	N/A
Chlorine Free Residual (mg/L)	5	N/A	12	0.9	2	1	N/A
Chromium (mg/L)	0.05	N/A	6	0.004	<0.005	0.004	N/A
Copper (mg/L)	2	N/A	6	0.006	0.02	0.009	N/A
Fluoride (mg/L)	1.5	N/A	6	0.77	0.86	0.81	N/A
Lead (mg/L)	0.01	N/A	6	<0.0001	<0.001	0.0002	N/A
Manganese (mg/L)	0.5	N/A	6	0.003	0.01	0.005	N/A
Mercury (mg/L)	0.001	N/A	6	<0.0001	<0.0002	0.00007	N/A
Molybdenum(mg/L)	0.05	N/A	6	0.0004	<0.005	0.001	N/A
Nickel (mg/L)	0.02	N/A	6	0.002	0.005	0.004	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	6	20	30	20	N/A
Nitrite mg-NO ₂ /L*	3	N/A	6	<0.3	<0.3	0.2	N/A
Σ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.7	N/A	N/A
Selenium (mg/L)	0.01	N/A	6	0.003	0.006	0.004	N/A
Silver (mg/L)	0.1	N/A	6	<0.0001	<0.01	0.002	N/A
Uranium (mg/L)	0.02	N/A	6	0.01	0.01	0.01	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	6	<0.005	<0.02	0.005	N/A
Chloride (mg/L)	N/A	250	6	400	430	417	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	12	0.9	1.51	1.3	N/A
Copper (mg/L)	N/A	1	6	0.0056	0.0181	0.0094	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	6	533	612	567	N/A
Iron (mg/L)	N/A	0.3	6	<0.01	0.035	0.013	N/A
Manganese (mg/L)	N/A	0.1	6	0.0029	0.01	0.0049	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	6	7.94	8.14	8	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	6	231	309	261	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	6	16.4	18.8	17	N/A
Sodium (Na) (mg/L)	N/A	180	6	262	284	273	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	6	1310	1490	1410	N/A
True Colour (HU)	N/A	15	6	<2	<2	1.17	N/A
Turbidity (lab) (NTU)	N/A	5	6	0.38	0.97	0.63	N/A
Zinc (mg/L)	N/A	3	6	0.006	0.07	0.025	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	6	200	210	210	N/A
Apparent Colour (HU)	N/A	N/A	6	<2	4	2.8	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	6	240	260	250	N/A
Bromine (mg/L)	N/A	N/A	6	0.714	2.1	1.3	N/A
Calcium (Ca) (mg/L)	N/A	N/A	6	108	128	120	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	6	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	6	2400	2500	2400	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	6	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	6	0.21	0.8	0.51	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	6	64	71.1	67	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	6	5.4	5.7	5.6	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	6	5.4	5.7	5.6	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	6	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	6	30.9	32.9	32	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	6	660	710	690	N/A
Tin (mg/L)	N/A	N/A	6	<0.0002	<0.01	0.0018	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	36	<1	<1	N/A	N/A

Table 71 – Water quality data assessment for Jilkminggan

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	4	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	4	<0.0005	<0.0005	0.0004	N/A
Barium (mg/L)	2	N/A	4	<0.05	<0.05	0.03	N/A
Beryllium (mg/L)	0.06	N/A	4	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	4	0.3	0.4	0.4	N/A
Cadmium (mg/L)	0.002	N/A	4	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	35	0.9	2	1	1
Chromium (mg/L)	0.05	N/A	4	<0.005	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	4	<0.01	<0.01	0.005	N/A
Fluoride (mg/L)	1.5	N/A	4	0.42	0.5	0.47	N/A
Lead (mg/L)	0.01	N/A	4	<0.001	<0.001	0.0005	N/A
Manganese (mg/L)	0.5	N/A	4	0.03	0.1	0.07	N/A
Mercury (mg/L)	0.001	N/A	4	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	4	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	4	<0.002	<0.002	0.001	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	4	<0.1	2	0.5	N/A
Nitrite mg-NO ₂ /L*	3	N/A	4	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.1	N/A	N/A
Selenium (mg/L)	0.01	N/A	4	<0.001	<0.001	0.0005	N/A
Silver (mg/L)	0.1	N/A	4	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	4	0.008	0.009	0.009	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	4	<0.02	<0.02	0.01	N/A
Chloride (mg/L)	N/A	250	4	220	220	220	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	35	0.9	1.5	1.1	N/A
Copper (mg/L)	N/A	1	4	<0.01	<0.01	0.005	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	4	591	682	633	N/A
Iron (mg/L)	N/A	0.3	4	<0.01	0.025	0.013	N/A
Manganese (mg/L)	N/A	0.1	4	0.025	0.12	0.068	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	4	7.19	7.44	7.3	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	4	160	169	165	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	4	47.9	49.9	49	N/A
Sodium (Na) (mg/L)	N/A	180	4	151	155	153	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	4	1100	1140	1110	N/A
True Colour (HU)	N/A	15	4	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	4	0.49	2.6	1.1	N/A
Zinc (mg/L)	N/A	3	4	<0.01	0.02	0.0088	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	4	490	500	500	N/A
Apparent Colour (HU)	N/A	N/A	4	7	11	8.5	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	4	600	610	610	N/A
Bromine (mg/L)	N/A	N/A	4	0.972	1.41	1.2	N/A
Calcium (Ca) (mg/L)	N/A	N/A	4	104	126	110	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	4	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	4	1500	2000	1800	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	4	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	4	0.07	0.16	0.12	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	4	80.5	89.2	85	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	4	<0.1	0.4	0.16	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	4	<0.1	0.3	0.14	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	4	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	4	19.9	22.5	21	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	4	360	370	360	N/A
Tin (mg/L)	N/A	N/A	4	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	36	<1	<1	N/A	N/A

Table 72 – Water quality data assessment for Kalkarindji

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	2	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	2	0.001	0.001	0.001	N/A
Barium (mg/L)	2	N/A	2	0.1	0.1	0.1	N/A
Beryllium (mg/L)	0.06	N/A	2	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	2	0.1	0.1	0.1	N/A
Cadmium (mg/L)	0.002	N/A	2	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	33	0.9	2	1	2
Chromium (mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	2	<0.01	<0.01	0.008	N/A
Fluoride (mg/L)	1.5	N/A	2	0.29	0.29	0.29	N/A
Lead (mg/L)	0.01	N/A	2	<0.001	0.004	0.002	N/A
Manganese (mg/L)	0.5	N/A	2	<0.005	<0.005	0.003	N/A
Mercury (mg/L)	0.001	N/A	2	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	2	<0.002	<0.002	0.001	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	2	5	5	5	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.2	N/A
Σ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.2	N/A	N/A
Selenium (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Silver (mg/L)	0.1	N/A	2	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	2	0.002	0.002	0.002	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	2	<0.02	<0.02	0.01	N/A
Chloride (mg/L)	N/A	250	2	26	26	26	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	33	0.89	1.87	1.2	N/A
Copper (mg/L)	N/A	1	2	<0.01	<0.01	0.0075	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	2	277	278	278	N/A
Iron (mg/L)	N/A	0.3	2	<0.01	<0.01	0.005	N/A
Manganese (mg/L)	N/A	0.1	2	<0.005	<0.005	0.0025	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	2	7.59	7.6	7.6	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	2	2.67	2.85	2.76	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	2	24.2	24.2	24	N/A
Sodium (Na) (mg/L)	N/A	180	2	33.6	33.6	33.6	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	2	342	347	345	N/A
True Colour (HU)	N/A	15	2	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	2	0.26	0.28	0.27	N/A
Zinc (mg/L)	N/A	3	2	<0.01	0.02	0.013	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	290	290	290	N/A
Apparent Colour (HU)	N/A	N/A	2	<2	<2	1	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	350	350	350	N/A
Bromine (mg/L)	N/A	N/A	2	0.08	0.088	0.084	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	58.4	58.7	59	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	640	640	640	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	0.01	0.01	0.01	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	31.9	31.9	32	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	1	1.1	1.1	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	1	1.1	1.1	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	2	4.6	4.7	4.7	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	43	44	44	N/A
Tin (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	33	<1	<1	N/A	N/A

Table 73 – Water quality data assessment for Kaltukatjara

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	2	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	2	<0.0005	<0.0005	0.0003	N/A
Barium (mg/L)	2	N/A	2	<0.05	<0.05	0.03	N/A
Beryllium (mg/L)	0.06	N/A	2	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	2	0.1	0.1	0.1	N/A
Cadmium (mg/L)	0.002	N/A	2	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	36	0.7	2	1	2
Chromium (mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	2	0.01	0.02	0.02	N/A
Fluoride (mg/L)	1.5	N/A	2	0.4	0.4	0.4	N/A
Lead (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Manganese (mg/L)	0.5	N/A	2	<0.005	<0.005	0.004	N/A
Mercury (mg/L)	0.001	N/A	2	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	2	<0.002	<0.002	0.001	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	2	<0.1	0.2	0.1	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.1	N/A	N/A
Selenium (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Silver (mg/L)	0.1	N/A	2	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	2	<0.00001	<0.00001	0.000005	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	2	<0.02	<0.02	0.01	N/A
Chloride (mg/L)	N/A	250	2	83	86	84.5	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	36	0.65	1.66	1.1	N/A
Copper (mg/L)	N/A	1	2	0.01	0.02	0.015	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	2	321	323	322	N/A
Iron (mg/L)	N/A	0.3	2	0.039	0.087	0.063	N/A
Manganese (mg/L)	N/A	0.1	2	<0.005	<0.005	0.0038	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	2	7.89	7.89	7.9	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	2	52.2	52.5	52.4	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	2	12.4	12.4	12	N/A
Sodium (Na) (mg/L)	N/A	180	2	56.7	57	56.9	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	2	453	457	455	N/A
True Colour (HU)	N/A	15	2	<2	<2	1.5	N/A
Turbidity (lab) (NTU)	N/A	5	2	0.53	1.6	1.1	N/A
Zinc (mg/L)	N/A	3	2	0.02	0.02	0.02	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	240	240	240	N/A
Apparent Colour (HU)	N/A	N/A	2	4	8	6	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	290	290	290	N/A
Bromine (mg/L)	N/A	N/A	2	0.316	0.316	0.32	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	65.5	65.6	66	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	820	820	820	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	0.1	0.1	0.1	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	38.2	38.7	38	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	2	12	12.2	12	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	140	140	140	N/A
Tin (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	36	<1	<1	N/A	N/A

Table 74 – Water quality data assessment for Kintore

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	8	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	8	<0.0002	<0.0005	0.0002	N/A
Barium (mg/L)	2	N/A	8	0.004	<0.05	0.02	N/A
Beryllium (mg/L)	0.06	N/A	8	<0.0001	<0.001	0.0004	N/A
Boron (mg/L)	4	N/A	8	0.1	0.3	0.2	N/A
Cadmium (mg/L)	0.002	N/A	8	<0.00005	<0.0002	0.00008	N/A
Chlorine Free Residual (mg/L)	5	N/A	24	0.7	2	1	2
Chromium (mg/L)	0.05	N/A	8	<0.0002	<0.005	0.002	N/A
Copper (mg/L)	2	N/A	8	<0.01	0.06	0.02	N/A
Fluoride (mg/L)	1.5	N/A	8	0.28	0.33	0.31	N/A
Lead (mg/L)	0.01	N/A	8	0.0004	0.002	0.0006	N/A
Manganese (mg/L)	0.5	N/A	8	<0.0005	<0.005	0.002	N/A
Mercury (mg/L)	0.001	N/A	8	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	8	<0.0001	<0.005	0.002	N/A
Nickel (mg/L)	0.02	N/A	8	<0.0005	<0.002	0.0008	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	8	10	10	10	N/A
Nitrite mg-NO ₂ /L*	3	N/A	8	<0.3	<0.3	0.2	N/A
Σ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.3	N/A	N/A
Selenium (mg/L)	0.01	N/A	8	0.0004	<0.001	0.0005	N/A
Silver (mg/L)	0.1	N/A	8	<0.0001	<0.01	0.004	N/A
Uranium (mg/L)	0.02	N/A	8	0.00003	0.0003	0.0001	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	8	<0.005	<0.02	0.0081	N/A
Chloride (mg/L)	N/A	250	8	27	37	34.4	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	24	0.73	1.72	1	N/A
Copper (mg/L)	N/A	1	8	<0.01	0.06	0.022	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	8	24.5	54.1	45.3	N/A
Iron (mg/L)	N/A	0.3	8	<0.01	<0.01	0.005	N/A
Manganese (mg/L)	N/A	0.1	8	<0.0005	<0.005	0.0019	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	8	6.75	7.53	7.3	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	8	2.07	5.37	3.83	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	8	82.4	90.1	88	N/A
Sodium (Na) (mg/L)	N/A	180	8	50.6	62.1	58.6	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	8	185	278	250	N/A
True Colour (HU)	N/A	15	8	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	8	0.19	1.2	0.55	N/A
Zinc (mg/L)	N/A	3	8	0.004	<0.01	0.0058	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	8	88	110	110	N/A
Apparent Colour (HU)	N/A	N/A	8	<2	4	1.5	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	8	110	140	130	N/A
Bromine (mg/L)	N/A	N/A	8	0.3	0.582	0.48	N/A
Calcium (Ca) (mg/L)	N/A	N/A	8	3.7	8.8	7.3	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	8	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	8	300	390	370	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	8	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	8	0.03	0.3	0.088	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	8	3.7	7.8	6.6	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	8	2.1	3.1	2.8	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	8	2.1	3.1	2.8	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	8	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	8	1.5	2	1.8	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	8	44	60	57	N/A
Tin (mg/L)	N/A	N/A	8	<0.0002	<0.01	0.0038	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	39	<1	<1	N/A	N/A

Table 75 – Water quality data assessment for Kybrook Farm

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	2	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	2	0.002	0.002	0.002	N/A
Barium (mg/L)	2	N/A	2	0.01	0.02	0.02	N/A
Beryllium (mg/L)	0.06	N/A	2	<0.0001	<0.0001	0.00005	N/A
Boron (mg/L)	4	N/A	2	0.01	0.02	0.01	N/A
Cadmium (mg/L)	0.002	N/A	2	<0.00005	<0.00005	0.00003	N/A
Chlorine Free Residual (mg/L)	5	N/A	35	0.8	1	1	1
Chromium (mg/L)	0.05	N/A	2	<0.0002	<0.0002	0.0001	N/A
Copper (mg/L)	2	N/A	2	0.002	0.004	0.003	N/A
Fluoride (mg/L)	1.5	N/A	4	0.7	0.78	0.74	N/A
Lead (mg/L)	0.01	N/A	2	0.0002	0.0004	0.0003	N/A
Manganese (mg/L)	0.5	N/A	2	<0.0005	0.007	0.004	N/A
Mercury (mg/L)	0.001	N/A	2	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	2	0.0003	0.0003	0.0003	N/A
Nickel (mg/L)	0.02	N/A	2	<0.0005	<0.0005	0.0003	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	4	<0.1	<0.1	0.05	N/A
Nitrite mg-NO ₂ /L*	3	N/A	4	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.1	N/A	N/A
Selenium (mg/L)	0.01	N/A	2	<0.0002	<0.0002	0.0001	N/A
Silver (mg/L)	0.1	N/A	2	<0.0001	<0.0001	0.00005	N/A
Uranium (mg/L)	0.02	N/A	2	0.0005	0.0005	0.0005	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	2	<0.005	0.007	0.0048	N/A
Chloride (mg/L)	N/A	250	4	5	12	9.75	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	35	0.78	1.25	0.99	N/A
Copper (mg/L)	N/A	1	2	0.002	0.0039	0.003	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	4	147	153	150	N/A
Iron (mg/L)	N/A	0.3	4	<0.01	0.02	0.01	N/A
Manganese (mg/L)	N/A	0.1	2	<0.0005	0.0071	0.0037	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	4	6.96	7.27	7.2	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	4	<0.3	<0.3	0.15	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	4	41.5	43.4	42	N/A
Sodium (Na) (mg/L)	N/A	180	4	42	54.2	49.6	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	4	244	286	275	N/A
True Colour (HU)	N/A	15	4	<2	<2	1.5	N/A
Turbidity (lab) (NTU)	N/A	5	4	0.17	1.2	0.63	N/A
Zinc (mg/L)	N/A	3	2	0.003	0.01	0.0065	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	4	220	240	230	N/A
Apparent Colour (HU)	N/A	N/A	4	<2	20	9.8	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	4	270	290	280	N/A
Bromine (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Calcium (Ca) (mg/L)	N/A	N/A	4	22.2	29.3	26	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	4	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	4	420	480	460	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	4	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	4	18	23.3	21	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	4	<0.1	<0.1	0.05	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	4	<0.1	<0.1	0.05	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	4	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	4	1.7	2	1.9	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	4	8	19	16	N/A
Tin (mg/L)	N/A	N/A	2	<0.0002	<0.0002	0.0001	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	35	<1	<1	N/A	N/A

Table 76 – Water quality data assessment for Lajamanu

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	2	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	2	<0.0005	<0.0005	0.0003	N/A
Barium (mg/L)	2	N/A	2	0.05	0.05	0.05	N/A
Beryllium (mg/L)	0.06	N/A	2	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	2	0.2	0.2	0.2	N/A
Cadmium (mg/L)	0.002	N/A	2	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	30	1	2	1	2
Chromium (mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	2	0.02	0.08	0.05	N/A
Fluoride (mg/L)	1.5	N/A	2	0.39	0.41	0.4	N/A
Lead (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Manganese (mg/L)	0.5	N/A	2	<0.005	<0.005	0.003	N/A
Mercury (mg/L)	0.001	N/A	2	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	2	<0.002	<0.002	0.001	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	2	4	4	4	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.2	N/A
Σ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.2	N/A	N/A
Selenium (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0008	N/A
Silver (mg/L)	0.1	N/A	2	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	2	0.0008	0.0009	0.0008	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	2	<0.02	<0.02	0.01	N/A
Chloride (mg/L)	N/A	250	2	50	50	50	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	30	0.99	1.54	1.2	N/A
Copper (mg/L)	N/A	1	2	0.02	0.08	0.05	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	2	192	196	194	N/A
Iron (mg/L)	N/A	0.3	2	<0.01	0.035	0.02	N/A
Manganese (mg/L)	N/A	0.1	2	<0.005	<0.005	0.0025	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	2	8.28	8.29	8.3	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	2	5.88	6.57	6.23	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	2	100	102	100	N/A
Sodium (Na) (mg/L)	N/A	180	2	47.9	48.4	48.2	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	2	399	404	402	N/A
True Colour (HU)	N/A	15	2	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	2	0.25	0.47	0.36	N/A
Zinc (mg/L)	N/A	3	2	<0.01	<0.01	0.0075	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	220	220	220	N/A
Apparent Colour (HU)	N/A	N/A	2	<2	<2	1.5	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	270	270	270	N/A
Bromine (mg/L)	N/A	N/A	2	0.262	0.28	0.27	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	29.9	30.4	30	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	620	620	620	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	0.07	0.08	0.075	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	28.6	29.2	29	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	0.9	0.9	0.9	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	0.9	0.9	0.9	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	2	5.6	5.7	5.7	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	82	82	82	N/A
Tin (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	33	<1	<1	N/A	N/A

Table 77 – Water quality data assessment for Laramba

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	18	<0.0002	0.0008	0.0002	N/A
Arsenic (mg/L)	0.01	N/A	18	0.0005	0.001	0.0007	N/A
Barium (mg/L)	2	N/A	18	0.2	0.2	0.2	N/A
Beryllium (mg/L)	0.06	N/A	18	<0.0001	<0.001	0.0003	N/A
Boron (mg/L)	4	N/A	18	0.4	0.6	0.5	N/A
Cadmium (mg/L)	0.002	N/A	18	<0.00005	<0.0002	0.00006	N/A
Chlorine Free Residual (mg/L)	5	N/A	33	0.9	2	1	2
Chromium (mg/L)	0.05	N/A	18	<0.0002	<0.005	0.002	N/A
Copper (mg/L)	2	N/A	18	0.001	0.1	0.02	N/A
Fluoride (mg/L)	1.5	N/A	18	0.95	1.1	1	N/A
Lead (mg/L)	0.01	N/A	18	<0.0001	0.002	0.0004	N/A
Manganese (mg/L)	0.5	N/A	18	<0.0005	<0.005	0.001	N/A
Mercury (mg/L)	0.001	N/A	18	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	18	0.003	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	18	<0.0005	<0.002	0.0007	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	18	30	40	40	N/A
Nitrite mg-NO ₂ /L*	3	N/A	18	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.9	N/A	N/A
Selenium (mg/L)	0.01	N/A	18	0.003	0.004	0.003	N/A
Silver (mg/L)	0.1	N/A	18	<0.0001	<0.01	0.002	N/A
Uranium (mg/L)	0.02	N/A	18	<0.00005	0.04	0.03	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	18	<0.005	<0.02	0.0058	N/A
Chloride (mg/L)	N/A	250	18	46	120	94	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	33	0.92	1.66	1.3	N/A
Copper (mg/L)	N/A	1	18	0.0012	0.134	0.021	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	18	172	194	182	N/A
Iron (mg/L)	N/A	0.3	18	<0.01	0.06	0.011	N/A
Manganese (mg/L)	N/A	0.1	18	<0.0005	<0.005	0.0013	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	18	7.39	8.61	7.7	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	18	28.3	36	32.8	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	18	85.6	104	93	N/A
Sodium (Na) (mg/L)	N/A	180	18	122	138	129	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	18	583	658	621	N/A
True Colour (HU)	N/A	15	18	<2	<2	1.06	N/A
Turbidity (lab) (NTU)	N/A	5	18	0.18	0.94	0.32	N/A
Zinc (mg/L)	N/A	3	18	<0.01	0.12	0.057	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	18	260	300	300	N/A
Apparent Colour (HU)	N/A	N/A	18	<2	13	2.8	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	18	320	370	360	N/A
Bromine (mg/L)	N/A	N/A	18	0.2	0.5	0.34	N/A
Calcium (Ca) (mg/L)	N/A	N/A	18	34.5	38.8	36	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	18	<10	12	5.7	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	18	970	1100	1100	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	18	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	18	0.16	0.6	0.38	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	18	20.8	23.7	22	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	18	7.2	9.8	8.2	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	18	7.2	9.8	8.2	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	18	<0.1	<0.1	0.056	N/A
Potassium (K) (mg/L)	N/A	N/A	18	27.9	33.9	30	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	18	75	190	160	N/A
Tin (mg/L)	N/A	N/A	18	<0.0002	<0.01	0.0023	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	33	<1	<1	N/A	N/A

Table 78 – Water quality data assessment for Maningrida

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	2	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	2	<0.0005	<0.0005	0.0003	N/A
Barium (mg/L)	2	N/A	2	<0.05	<0.05	0.03	N/A
Beryllium (mg/L)	0.06	N/A	2	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	2	0.02	0.02	0.02	N/A
Cadmium (mg/L)	0.002	N/A	2	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	240	0.8	2	1	1
Chromium (mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	2	<0.01	0.03	0.02	N/A
Fluoride (mg/L)	1.5	N/A	94	<0.1	0.8	0.2	0.6
Lead (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Manganese (mg/L)	0.5	N/A	2	<0.005	<0.005	0.003	N/A
Mercury (mg/L)	0.001	N/A	2	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	2	<0.002	<0.002	0.001	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	2	0.5	0.7	0.6	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.2	N/A
Σ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.1	N/A	N/A
Selenium (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Silver (mg/L)	0.1	N/A	2	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	2	0.00006	0.00006	0.00006	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	2	<0.02	<0.02	0.01	N/A
Chloride (mg/L)	N/A	250	2	9	9	9	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	240	0.81	1.98	1.3	N/A
Copper (mg/L)	N/A	1	2	<0.01	0.03	0.018	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	2	6.6	8	7.3	N/A
Iron (mg/L)	N/A	0.3	2	<0.01	<0.01	0.005	N/A
Manganese (mg/L)	N/A	0.1	2	<0.005	<0.005	0.0025	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	2	5.4	5.7	5.6	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	2	<0.3	<0.3	0.15	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	2	14.7	15	15	N/A
Sodium (Na) (mg/L)	N/A	180	2	5.53	5.72	5.63	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	2	15	28	21.5	N/A
True Colour (HU)	N/A	15	2	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	2	0.24	0.33	0.29	N/A
Zinc (mg/L)	N/A	3	2	<0.01	<0.01	0.005	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	<20	<20	10	N/A
Apparent Colour (HU)	N/A	N/A	2	<2	<2	1	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Bromine (mg/L)	N/A	N/A	2	<0.05	<0.05	0.025	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	1.4	1.5	1.5	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	46	48	47	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	0.7	1.1	0.9	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	0.1	0.2	0.15	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	0.1	0.2	0.15	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	2	1.4	1.4	1.4	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	15	15	15	N/A
Tin (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	240	<1	2	N/A	N/A

Table 79 – Water quality data assessment for Manyallaluk

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	2	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	2	<0.0005	<0.0005	0.0003	N/A
Barium (mg/L)	2	N/A	2	<0.05	<0.05	0.03	N/A
Beryllium (mg/L)	0.06	N/A	2	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	2	<0.02	<0.02	0.01	N/A
Cadmium (mg/L)	0.002	N/A	2	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	35	0.7	2	1	1
Chromium (mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	2	0.02	0.02	0.02	N/A
Fluoride (mg/L)	1.5	N/A	2	<0.1	<0.1	0.05	N/A
Lead (mg/L)	0.01	N/A	2	<0.001	0.002	0.001	N/A
Manganese (mg/L)	0.5	N/A	2	<0.005	<0.005	0.003	N/A
Mercury (mg/L)	0.001	N/A	2	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	2	<0.002	0.01	0.007	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	2	0.9	2	1	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.2	N/A
Σ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.1	N/A	N/A
Selenium (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Silver (mg/L)	0.1	N/A	2	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	2	0.00006	0.00007	0.00007	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	2	<0.02	<0.02	0.01	N/A
Chloride (mg/L)	N/A	250	2	5	16	10.5	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	35	0.72	1.94	1.1	N/A
Copper (mg/L)	N/A	1	2	0.02	0.02	0.02	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	2	2.6	7	4.8	N/A
Iron (mg/L)	N/A	0.3	2	<0.01	<0.01	0.005	N/A
Manganese (mg/L)	N/A	0.1	2	<0.005	<0.005	0.0025	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	2	5	5.01	5	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	2	<0.3	<0.3	0.15	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	2	21.6	21.8	22	N/A
Sodium (Na) (mg/L)	N/A	180	2	4.97	5.1	5.04	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	2	27	28	27.5	N/A
True Colour (HU)	N/A	15	2	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	2	0.19	0.21	0.2	N/A
Zinc (mg/L)	N/A	3	2	<0.01	0.04	0.023	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	<20	<20	10	N/A
Apparent Colour (HU)	N/A	N/A	2	<2	<2	1	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Bromine (mg/L)	N/A	N/A	2	0.008	0.012	0.01	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	0.2	1.8	1	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	28	28	28	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	0.02	0.02	0.02	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	0.5	0.6	0.55	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	0.2	0.4	0.3	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	0.2	0.4	0.3	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	2	0.4	0.5	0.45	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	9	27	18	N/A
Tin (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	35	<1	<1	N/A	N/A

Table 80 – Water quality data assessment for Milikapiti

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	2	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	2	<0.0005	<0.0005	0.0003	N/A
Barium (mg/L)	2	N/A	2	<0.05	<0.05	0.03	N/A
Beryllium (mg/L)	0.06	N/A	2	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	2	0.02	0.04	0.03	N/A
Cadmium (mg/L)	0.002	N/A	2	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	36	1	2	1	2
Chromium (mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	2	<0.01	0.03	0.02	N/A
Fluoride (mg/L)	1.5	N/A	2	<0.1	<0.1	0.05	N/A
Lead (mg/L)	0.01	N/A	2	<0.001	0.004	0.002	N/A
Manganese (mg/L)	0.5	N/A	2	<0.005	<0.005	0.003	N/A
Mercury (mg/L)	0.001	N/A	2	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	2	<0.002	<0.002	0.001	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	2	0.7	0.7	0.7	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.1	N/A	N/A
Selenium (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Silver (mg/L)	0.1	N/A	2	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	2	<0.00001	0.00003	0.00002	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	2	<0.02	<0.02	0.01	N/A
Chloride (mg/L)	N/A	250	2	9	10	9.5	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	36	1	1.6	1.3	2
Copper (mg/L)	N/A	1	2	<0.01	0.03	0.018	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	2	3.7	4	3.85	N/A
Iron (mg/L)	N/A	0.3	2	<0.01	0.3	0.15	N/A
Manganese (mg/L)	N/A	0.1	2	<0.005	<0.005	0.0025	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	2	6.07	6.12	6.1	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	2	1.02	1.2	1.11	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	2	11.3	11.7	12	N/A
Sodium (Na) (mg/L)	N/A	180	2	11	11.2	11.1	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	2	38	39	38.5	N/A
True Colour (HU)	N/A	15	2	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	2	0.29	2.4	1.3	N/A
Zinc (mg/L)	N/A	3	2	<0.01	0.02	0.013	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	<20	<20	10	N/A
Apparent Colour (HU)	N/A	N/A	2	12	14	13	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	16	16	16	N/A
Bromine (mg/L)	N/A	N/A	2	0.016	0.016	0.016	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	0.5	0.6	0.55	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	64	65	65	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	0.6	0.6	0.6	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	0.1	0.2	0.15	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	0.1	0.2	0.15	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	2	0.8	0.9	0.85	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	16	16	16	N/A
Tin (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	36	<1	<1	N/A	N/A

Table 81 – Water quality data assessment for Milingimbi

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	3	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	3	<0.0002	<0.0005	0.0002	N/A
Barium (mg/L)	2	N/A	3	0.007	<0.05	0.02	N/A
Beryllium (mg/L)	0.06	N/A	3	0.0001	<0.001	0.0004	N/A
Boron (mg/L)	4	N/A	3	0.04	0.04	0.04	N/A
Cadmium (mg/L)	0.002	N/A	3	0.00006	<0.0002	0.00009	N/A
Chlorine Free Residual (mg/L)	5	N/A	137	0.6	2	1	2
Chromium (mg/L)	0.05	N/A	3	0.001	<0.005	0.002	N/A
Copper (mg/L)	2	N/A	3	0.003	0.2	0.08	N/A
Fluoride (mg/L)	1.5	N/A	2	<0.1	<0.1	0.05	N/A
Lead (mg/L)	0.01	N/A	3	<0.001	0.009	0.004	N/A
Manganese (mg/L)	0.5	N/A	3	0.003	0.03	0.01	N/A
Mercury (mg/L)	0.001	N/A	3	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	3	<0.0001	<0.005	0.002	N/A
Nickel (mg/L)	0.02	N/A	3	0.002	0.004	0.003	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	2	4	4	4	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.2	N/A	N/A
Selenium (mg/L)	0.01	N/A	3	<0.0002	<0.001	0.0004	N/A
Silver (mg/L)	0.1	N/A	3	<0.0001	<0.01	0.003	N/A
Uranium (mg/L)	0.02	N/A	3	0.0002	0.0003	0.0002	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	3	0.069	0.12	0.096	N/A
Chloride (mg/L)	N/A	250	2	83	91	87	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	137	0.55	1.61	1.1	2
Copper (mg/L)	N/A	1	3	0.0034	0.22	0.078	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	2	31.7	34	32.9	N/A
Iron (mg/L)	N/A	0.3	2	<0.01	<0.01	0.005	N/A
Manganese (mg/L)	N/A	0.1	3	0.0027	0.025	0.01	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	2	4.77	4.82	4.8	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	2	5.16	5.25	5.21	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	2	17	17.2	17	N/A
Sodium (Na) (mg/L)	N/A	180	2	43.1	46.8	45	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	2	153	163	158	N/A
True Colour (HU)	N/A	15	2	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	2	0.31	0.48	0.4	N/A
Zinc (mg/L)	N/A	3	3	<0.01	0.09	0.044	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	<20	<20	10	N/A
Apparent Colour (HU)	N/A	N/A	2	<2	4	2.5	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Bromine (mg/L)	N/A	N/A	3	0.172	0.3	0.22	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	4.3	4.7	4.5	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	330	340	340	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	3	<0.01	<0.1	0.02	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	5.1	5.4	5.3	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	0.9	0.9	0.9	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	0.9	0.9	0.9	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	2	0.8	0.8	0.8	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	140	150	150	N/A
Tin (mg/L)	N/A	N/A	3	<0.0002	<0.01	0.0034	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	139	<1	<1	N/A	N/A

Table 82 – Water quality data assessment for Milyakburra

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	2	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	2	<0.0005	<0.0005	0.0003	N/A
Barium (mg/L)	2	N/A	2	<0.05	<0.05	0.03	N/A
Beryllium (mg/L)	0.06	N/A	2	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	2	0.04	0.06	0.05	N/A
Cadmium (mg/L)	0.002	N/A	2	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	33	0.9	2	1	2
Chromium (mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	2	0.07	0.2	0.1	N/A
Fluoride (mg/L)	1.5	N/A	2	<0.1	<0.1	0.05	N/A
Lead (mg/L)	0.01	N/A	2	0.001	0.004	0.003	N/A
Manganese (mg/L)	0.5	N/A	2	0.005	0.03	0.02	N/A
Mercury (mg/L)	0.001	N/A	2	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	2	<0.002	<0.002	0.001	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	2	<0.1	<0.1	0.05	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.2	N/A
Σ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.1	N/A	N/A
Selenium (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Silver (mg/L)	0.1	N/A	2	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	2	0.00003	0.00003	0.00003	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	2	<0.02	<0.02	0.01	N/A
Chloride (mg/L)	N/A	250	2	53	64	58.5	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	33	0.87	1.73	1.1	2
Copper (mg/L)	N/A	1	2	0.07	0.15	0.11	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	2	14.6	14.6	14.6	N/A
Iron (mg/L)	N/A	0.3	2	0.042	0.044	0.043	N/A
Manganese (mg/L)	N/A	0.1	2	0.005	0.03	0.018	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	2	5.57	5.57	5.6	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	2	2.16	2.46	2.31	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	2	15.5	15.8	16	N/A
Sodium (Na) (mg/L)	N/A	180	2	30.6	30.6	30.6	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	2	96	112	104	N/A
True Colour (HU)	N/A	15	2	2	2	2	N/A
Turbidity (lab) (NTU)	N/A	5	2	0.33	0.37	0.35	N/A
Zinc (mg/L)	N/A	3	2	<0.01	0.07	0.038	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	<20	<20	10	N/A
Apparent Colour (HU)	N/A	N/A	2	3	8	5.5	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	<10	<10	7.5	N/A
Bromine (mg/L)	N/A	N/A	2	0.156	0.158	0.16	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	2.2	2.2	2.2	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	210	210	210	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	0.02	0.02	0.02	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	2.2	2.2	2.2	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	2	0.5	0.6	0.55	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	87	110	99	N/A
Tin (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	36	<1	<1	N/A	N/A

Table 83 – Water quality data assessment for Minjilang

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	2	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	2	<0.0005	<0.0005	0.0003	N/A
Barium (mg/L)	2	N/A	2	<0.05	<0.05	0.03	N/A
Beryllium (mg/L)	0.06	N/A	2	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	2	0.04	0.04	0.04	N/A
Cadmium (mg/L)	0.002	N/A	2	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	36	0.9	2	1	1
Chromium (mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	2	<0.01	0.02	0.01	N/A
Fluoride (mg/L)	1.5	N/A	2	<0.1	<0.1	0.05	N/A
Lead (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Manganese (mg/L)	0.5	N/A	2	<0.005	<0.005	0.003	N/A
Mercury (mg/L)	0.001	N/A	2	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	2	<0.002	<0.002	0.001	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	2	1	1	1	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.2	N/A
Σ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.1	N/A	N/A
Selenium (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Silver (mg/L)	0.1	N/A	2	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	2	0.0001	0.0001	0.0001	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	2	0.12	0.12	0.12	N/A
Chloride (mg/L)	N/A	250	2	19	20	19.5	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	36	0.89	1.51	1.2	N/A
Copper (mg/L)	N/A	1	2	<0.01	0.02	0.013	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	2	3.1	3.4	3.25	N/A
Iron (mg/L)	N/A	0.3	2	<0.01	<0.01	0.005	N/A
Manganese (mg/L)	N/A	0.1	2	<0.005	<0.005	0.0025	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	2	4.67	4.7	4.7	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	2	2.88	3.03	2.96	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	2	12.3	12.5	12	N/A
Sodium (Na) (mg/L)	N/A	180	2	12.8	13	12.9	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	2	42	46	44	N/A
True Colour (HU)	N/A	15	2	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	2	0.2	0.21	0.21	N/A
Zinc (mg/L)	N/A	3	2	0.05	0.06	0.055	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	<20	<20	10	N/A
Apparent Colour (HU)	N/A	N/A	2	<2	<2	1	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Bromine (mg/L)	N/A	N/A	2	0.072	0.096	0.084	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	0.1	0.2	0.15	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	93	94	94	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	0.7	0.7	0.7	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	0.2	0.3	0.25	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	0.2	0.3	0.25	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	2	0.1	0.1	0.1	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	32	34	33	N/A
Tin (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	36	<1	<1	N/A	N/A

Table 84 – Water quality data assessment for Minyerri

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	10	<0.0002	0.0007	0.0002	N/A
Arsenic (mg/L)	0.01	N/A	10	0.0004	0.003	0.001	N/A
Barium (mg/L)	2	N/A	10	0.3	0.3	0.3	N/A
Beryllium (mg/L)	0.06	N/A	10	<0.0001	<0.001	0.0001	N/A
Boron (mg/L)	4	N/A	10	0.1	0.2	0.1	N/A
Cadmium (mg/L)	0.002	N/A	10	<0.00005	<0.0002	0.00004	N/A
Chlorine Free Residual (mg/L)	5	N/A	36	0.8	2	1	2
Chromium (mg/L)	0.05	N/A	10	<0.0002	<0.005	0.0006	N/A
Copper (mg/L)	2	N/A	10	0.002	0.1	0.02	N/A
Fluoride (mg/L)	1.5	N/A	10	0.1	0.32	0.28	N/A
Lead (mg/L)	0.01	N/A	10	<0.0001	<0.001	0.0003	N/A
Manganese (mg/L)	0.5	N/A	10	0.03	0.3	0.1	N/A
Mercury (mg/L)	0.001	N/A	10	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	10	0.0001	<0.005	0.0006	N/A
Nickel (mg/L)	0.02	N/A	10	<0.0005	<0.002	0.0004	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	10	<0.1	2	0.4	N/A
Nitrite mg-NO ₂ /L*	3	N/A	10	<0.3	<0.3	0.2	N/A
Σ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.1	N/A	N/A
Selenium (mg/L)	0.01	N/A	10	<0.0002	<0.001	0.0002	N/A
Silver (mg/L)	0.1	N/A	10	<0.0001	<0.01	0.001	N/A
Uranium (mg/L)	0.02	N/A	10	<0.00001	<0.00005	0.00002	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	10	<0.005	<0.02	0.004	N/A
Chloride (mg/L)	N/A	250	10	11	20	14	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	36	0.8	1.53	1.2	2
Copper (mg/L)	N/A	1	10	0.0019	0.0953	0.024	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	10	95.2	129	121	N/A
Iron (mg/L)	N/A	0.3	10	0.165	0.872	0.5	N/A
Manganese (mg/L)	N/A	0.1	10	0.0256	0.255	0.097	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	10	7.18	7.51	7.4	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	10	3.78	8.94	6.39	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	10	31.9	36.8	34	N/A
Sodium (Na) (mg/L)	N/A	180	10	21.7	25.7	23.4	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	10	176	209	195	N/A
True Colour (HU)	N/A	15	10	<2	3	1.2	N/A
Turbidity (lab) (NTU)	N/A	5	10	0.25	7.4	2.1	N/A
Zinc (mg/L)	N/A	3	10	0.002	0.08	0.018	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	10	120	160	150	N/A
Apparent Colour (HU)	N/A	N/A	10	15	66	44	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	10	150	190	180	N/A
Bromine (mg/L)	N/A	N/A	10	0.046	0.2	0.07	N/A
Calcium (Ca) (mg/L)	N/A	N/A	10	20	29.5	27	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	10	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	10	330	370	350	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	10	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	10	<0.01	0.3	0.091	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	10	11	14	13	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	10	<0.1	0.4	0.11	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	10	<0.1	0.4	0.11	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	10	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	10	5.3	5.8	5.5	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	10	18	34	23	N/A
Tin (mg/L)	N/A	N/A	10	<0.0002	<0.01	0.0011	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	36	<1	<1	N/A	N/A

Table 85 – Water quality data assessment for Mt Liebig

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	2	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	2	<0.0005	<0.0005	0.0003	N/A
Barium (mg/L)	2	N/A	2	0.05	0.05	0.05	N/A
Beryllium (mg/L)	0.06	N/A	2	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	2	0.2	0.3	0.3	N/A
Cadmium (mg/L)	0.002	N/A	2	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	36	0.8	1	1	1
Chromium (mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	2	<0.01	<0.01	0.008	N/A
Fluoride (mg/L)	1.5	N/A	2	1	1.1	1	N/A
Lead (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Manganese (mg/L)	0.5	N/A	2	<0.005	<0.005	0.003	N/A
Mercury (mg/L)	0.001	N/A	2	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	2	<0.002	<0.002	0.001	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	2	20	20	20	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.5	N/A	N/A
Selenium (mg/L)	0.01	N/A	2	0.001	0.002	0.002	N/A
Silver (mg/L)	0.1	N/A	2	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	2	0.006	0.006	0.006	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	2	<0.02	<0.02	0.01	N/A
Chloride (mg/L)	N/A	250	2	110	110	110	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	36	0.79	1.24	1.1	N/A
Copper (mg/L)	N/A	1	2	<0.01	<0.01	0.0075	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	2	260	298	279	N/A
Iron (mg/L)	N/A	0.3	2	0.036	0.041	0.039	N/A
Manganese (mg/L)	N/A	0.1	2	<0.005	<0.005	0.0025	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	2	7.72	7.76	7.7	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	2	88.2	88.2	88.2	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	2	53.7	54.1	54	N/A
Sodium (Na) (mg/L)	N/A	180	2	102	103	103	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	2	588	633	611	N/A
True Colour (HU)	N/A	15	2	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	2	0.45	0.62	0.54	N/A
Zinc (mg/L)	N/A	3	2	<0.01	<0.01	0.0075	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	240	240	240	N/A
Apparent Colour (HU)	N/A	N/A	2	4	5	4.5	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	300	300	300	N/A
Bromine (mg/L)	N/A	N/A	2	0.418	0.504	0.46	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	53	67.8	60	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	1000	1100	1100	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	0.08	0.1	0.09	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	31.1	31.2	31	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	3.8	4	3.9	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	3.8	4	3.9	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	2	14.6	14.7	15	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	180	180	180	N/A
Tin (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	36	<1	<1	N/A	N/A

Table 86 – Water quality data assessment for Nauiyu

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	9	0.0003	0.0004	0.0004	N/A
Arsenic (mg/L)	0.01	N/A	9	0.003	0.005	0.004	N/A
Barium (mg/L)	2	N/A	9	0.03	<0.05	0.03	N/A
Beryllium (mg/L)	0.06	N/A	9	<0.0001	<0.001	0.0002	N/A
Boron (mg/L)	4	N/A	9	0.02	0.03	0.02	N/A
Cadmium (mg/L)	0.002	N/A	9	<0.00005	<0.0002	0.00005	N/A
Chlorine Free Residual (mg/L)	5	N/A	39	0.7	2	1	2
Chromium (mg/L)	0.05	N/A	9	<0.0002	<0.005	0.0009	N/A
Copper (mg/L)	2	N/A	9	<0.0005	<0.01	0.003	N/A
Fluoride (mg/L)	1.5	N/A	12	0.34	0.37	0.36	N/A
Lead (mg/L)	0.01	N/A	9	<0.0001	<0.001	0.0002	N/A
Manganese (mg/L)	0.5	N/A	9	0.01	3	0.5	N/A
Mercury (mg/L)	0.001	N/A	9	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	9	0.0004	<0.005	0.001	N/A
Nickel (mg/L)	0.02	N/A	9	<0.0005	<0.002	0.0007	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	12	<0.1	0.4	0.2	N/A
Nitrite mg-NO ₂ /L*	3	N/A	12	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.1	N/A	N/A
Selenium (mg/L)	0.01	N/A	9	<0.0002	<0.001	0.0002	N/A
Silver (mg/L)	0.1	N/A	9	<0.0001	<0.01	0.002	N/A
Uranium (mg/L)	0.02	N/A	9	0.00007	0.00009	0.00008	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	9	<0.005	<0.02	0.005	N/A
Chloride (mg/L)	N/A	250	12	4	6	4.67	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	39	0.7	2	1.2	N/A
Copper (mg/L)	N/A	1	9	<0.0005	<0.01	0.0026	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	12	100	100	121	N/A
Iron (mg/L)	N/A	0.3	9	<0.02	0.6	0.14	N/A
Manganese (mg/L)	N/A	0.1	9	0.01	3	0.48	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	12	7.5	8.5	7.9	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	12	<0.3	<0.3	0.15	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	12	34	43	38	N/A
Sodium (Na) (mg/L)	N/A	180	12	16	17	16.6	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	12	100	200	176	N/A
True Colour (HU)	N/A	15	12	<2	9	2.83	N/A
Turbidity (lab) (NTU)	N/A	5	12	0.8	30	6.9	N/A
Zinc (mg/L)	N/A	3	9	<0.001	0.03	0.0062	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	12	100	200	140	N/A
Apparent Colour (HU)	N/A	N/A	12	6	100	42	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	12	200	200	170	N/A
Bromine (mg/L)	N/A	N/A	9	0.02	<0.1	0.042	N/A
Calcium (Ca) (mg/L)	N/A	N/A	12	30	30	27	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	12	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	12	300	300	300	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	12	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	9	0.02	<0.1	0.04	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	12	10	10	13	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	12	<0.1	<0.1	0.063	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	12	<0.1	<0.1	0.067	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	12	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	12	0.9	1	1	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	12	6	9	7.6	N/A
Tin (mg/L)	N/A	N/A	9	<0.0002	<0.01	0.0017	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	40	<1	<1	N/A	N/A

Table 87 – Water quality data assessment for Nganmariyanga

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	2	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	2	0.002	0.002	0.002	N/A
Barium (mg/L)	2	N/A	2	0.2	0.2	0.2	N/A
Beryllium (mg/L)	0.06	N/A	2	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	2	0.02	0.02	0.02	N/A
Cadmium (mg/L)	0.002	N/A	2	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	33	0.8	2	1	2
Chromium (mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	2	<0.01	<0.01	0.005	N/A
Fluoride (mg/L)	1.5	N/A	2	0.26	0.26	0.26	N/A
Lead (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Manganese (mg/L)	0.5	N/A	2	0.08	0.2	0.2	N/A
Mercury (mg/L)	0.001	N/A	2	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	2	<0.002	<0.002	0.001	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	2	<0.1	<0.1	0.05	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.1	N/A	N/A
Selenium (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Silver (mg/L)	0.1	N/A	2	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	2	<0.00001	<0.00001	0.000005	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	2	<0.02	<0.02	0.01	N/A
Chloride (mg/L)	N/A	250	2	28	28	28	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	33	0.79	1.67	1.2	N/A
Copper (mg/L)	N/A	1	2	<0.01	<0.01	0.005	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	2	83.7	83.8	83.8	N/A
Iron (mg/L)	N/A	0.3	2	0.129	0.274	0.2	N/A
Manganese (mg/L)	N/A	0.1	2	0.08	0.24	0.16	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	2	7.79	7.82	7.8	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	2	13.1	13.3	13.2	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	2	42.8	43	43	N/A
Sodium (Na) (mg/L)	N/A	180	2	42.3	42.3	42.3	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	2	200	209	205	N/A
True Colour (HU)	N/A	15	2	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	2	1.4	3.6	2.5	N/A
Zinc (mg/L)	N/A	3	2	<0.01	<0.01	0.005	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	120	120	120	N/A
Apparent Colour (HU)	N/A	N/A	2	24	61	43	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	150	150	150	N/A
Bromine (mg/L)	N/A	N/A	2	0.11	0.118	0.11	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	24	24.1	24	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	370	380	380	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	5.7	5.8	5.8	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	2	6.5	6.5	6.5	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	47	47	47	N/A
Tin (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	33	<1	<1	N/A	N/A

Table 88 – Water quality data assessment for Ngukurr

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	8	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	8	<0.0002	<0.0005	0.0001	N/A
Barium (mg/L)	2	N/A	8	1	1	1	N/A
Beryllium (mg/L)	0.06	N/A	8	<0.0001	<0.001	0.0002	N/A
Boron (mg/L)	4	N/A	8	0.02	0.04	0.03	N/A
Cadmium (mg/L)	0.002	N/A	8	<0.00005	<0.0002	0.00004	N/A
Chlorine Free Residual (mg/L)	5	N/A	142	0.3	2	1	1
Chromium (mg/L)	0.05	N/A	8	<0.0002	<0.005	0.0007	N/A
Copper (mg/L)	2	N/A	8	0.001	0.4	0.05	N/A
Fluoride (mg/L)	1.5	N/A	8	0.18	0.19	0.18	N/A
Lead (mg/L)	0.01	N/A	8	<0.0001	<0.001	0.0002	N/A
Manganese (mg/L)	0.5	N/A	8	<0.0005	<0.005	0.0008	N/A
Mercury (mg/L)	0.001	N/A	8	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	8	<0.0001	<0.005	0.0007	N/A
Nickel (mg/L)	0.02	N/A	8	<0.0005	<0.002	0.0004	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	8	1	2	2	N/A
Nitrite mg-NO ₂ /L*	3	N/A	8	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.1	N/A	N/A
Selenium (mg/L)	0.01	N/A	8	<0.0002	<0.001	0.0002	N/A
Silver (mg/L)	0.1	N/A	8	<0.0001	<0.01	0.001	N/A
Uranium (mg/L)	0.02	N/A	8	0.0006	0.0007	0.0007	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	8	<0.005	<0.02	0.0051	N/A
Chloride (mg/L)	N/A	250	8	180	220	196	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	142	0.31	1.6	1	N/A
Copper (mg/L)	N/A	1	8	0.001	0.369	0.053	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	8	453	524	490	N/A
Iron (mg/L)	N/A	0.3	8	<0.01	<0.01	0.005	N/A
Manganese (mg/L)	N/A	0.1	8	<0.0005	<0.005	0.00084	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	8	7.52	7.75	7.7	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	8	<0.3	11	3.57	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	8	24.2	27.4	26	N/A
Sodium (Na) (mg/L)	N/A	180	8	46.8	59.1	52.6	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	8	558	640	600	N/A
True Colour (HU)	N/A	15	8	<2	<2	1.25	N/A
Turbidity (lab) (NTU)	N/A	5	8	0.13	1.3	0.46	N/A
Zinc (mg/L)	N/A	3	8	0.002	<0.01	0.0031	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	8	310	320	310	N/A
Apparent Colour (HU)	N/A	N/A	8	<2	48	14	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	8	370	390	380	N/A
Bromine (mg/L)	N/A	N/A	8	0.4	0.6	0.48	N/A
Calcium (Ca) (mg/L)	N/A	N/A	8	80.6	96.6	90	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	8	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	8	1100	1300	1200	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	8	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	8	0.02	<0.1	0.043	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	8	58.8	68.7	64	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	8	0.3	0.5	0.36	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	8	0.3	0.5	0.35	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	8	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	8	5.4	6.2	5.8	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	8	290	360	320	N/A
Tin (mg/L)	N/A	N/A	8	<0.0002	<0.01	0.0013	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	180	<1	<1	N/A	N/A

Table 89 – Water quality data assessment for Nturiya

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	2	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	2	<0.0002	<0.0002	0.0001	N/A
Barium (mg/L)	2	N/A	2	0.03	0.03	0.03	N/A
Beryllium (mg/L)	0.06	N/A	2	<0.0001	<0.0001	0.00005	N/A
Boron (mg/L)	4	N/A	2	0.5	0.5	0.5	N/A
Cadmium (mg/L)	0.002	N/A	2	<0.00005	<0.00005	0.00003	N/A
Chlorine Free Residual (mg/L)	5	N/A	35	0.02	1	0.4	1
Chromium (mg/L)	0.05	N/A	2	<0.0002	<0.0002	0.0001	N/A
Copper (mg/L)	2	N/A	2	0.001	0.02	0.01	N/A
Fluoride (mg/L)	1.5	N/A	2	1.1	1.1	1.1	N/A
Lead (mg/L)	0.01	N/A	2	0.0002	0.001	0.0007	N/A
Manganese (mg/L)	0.5	N/A	2	<0.0005	0.0006	0.0004	N/A
Mercury (mg/L)	0.001	N/A	2	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	2	0.0009	0.001	0.001	N/A
Nickel (mg/L)	0.02	N/A	2	<0.0005	<0.0005	0.0003	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	2	30	30	30	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.7	N/A	N/A
Selenium (mg/L)	0.01	N/A	2	0.002	0.003	0.002	N/A
Silver (mg/L)	0.1	N/A	2	<0.0001	<0.0001	0.00005	N/A
Uranium (mg/L)	0.02	N/A	2	0.009	0.01	0.01	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	2	<0.005	<0.005	0.003	N/A
Chloride (mg/L)	N/A	250	2	320	350	340	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	35	0.02	1.33	0.4	N/A
Copper (mg/L)	N/A	1	2	0.0011	0.0224	0.01	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	2	327	327	300	N/A
Iron (mg/L)	N/A	0.3	2	<0.01	0.012	0.01	N/A
Manganese (mg/L)	N/A	0.1	2	<0.0005	0.0006	0.0004	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	2	7.74	7.77	7.8	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	2	201	209	210	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	2	97.2	98	98	N/A
Sodium (Na) (mg/L)	N/A	180	2	284	286	290	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	2	1100	1140	1100	N/A
True Colour (HU)	N/A	15	2	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	2	0.23	0.38	0.3	N/A
Zinc (mg/L)	N/A	3	2	0.029	0.037	0.03	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	180	180	200	N/A
Apparent Colour (HU)	N/A	N/A	2	7	12	10	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	220	220	200	N/A
Bromine (mg/L)	N/A	N/A	2	2.8	2.9	3	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	80.7	80.9	80	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	2000	2000	2000	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	0.6	0.6	0.6	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	30.4	30.5	30	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	6	6.5	6	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	6	6.5	6	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	2	27	27	30	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	530	570	600	N/A
Tin (mg/L)	N/A	N/A	2	<0.0002	<0.0002	0.0001	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	39	<1	5	N/A	N/A

Table 90 – Water quality data assessment for Numbulwar

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	21	<0.0002	0.0005	0.0001	0.0005
Arsenic (mg/L)	0.01	N/A	21	0.0002	0.0007	0.0003	0.0007
Barium (mg/L)	2	N/A	21	0.2	0.3	0.2	0.3
Beryllium (mg/L)	0.06	N/A	21	<0.0001	<0.001	0.0002	0.0005
Boron (mg/L)	4	N/A	21	0.04	0.08	0.06	0.08
Cadmium (mg/L)	0.002	N/A	21	<0.00005	<0.0002	0.00005	0.0001
Chlorine Free Residual (mg/L)	5	N/A	146	0.9	2	1	2
Chromium (mg/L)	0.05	N/A	21	<0.0002	<0.005	0.0008	0.003
Copper (mg/L)	2	N/A	21	<0.0005	0.02	0.003	0.02
Fluoride (mg/L)	1.5	N/A	22	<0.1	0.13	0.11	0.13
Lead (mg/L)	0.01	N/A	21	<0.0001	<0.001	0.0002	0.0005
Manganese (mg/L)	0.5	N/A	21	0.03	0.2	0.07	0.2
Mercury (mg/L)	0.001	N/A	21	<0.0001	<0.0001	0.00005	0.00005
Molybdenum(mg/L)	0.05	N/A	21	0.0003	<0.005	0.001	0.003
Nickel (mg/L)	0.02	N/A	21	<0.0005	<0.002	0.0005	0.001
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	22	<0.1	1	0.2	1
Nitrite mg-NO ₂ /L*	3	N/A	22	<0.3	<0.3	0.2	0.2
Σ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.1	N/A	N/A
Selenium (mg/L)	0.01	N/A	21	<0.0002	<0.001	0.0002	0.0005
Silver (mg/L)	0.1	N/A	21	<0.0001	<0.01	0.001	0.005
Uranium (mg/L)	0.02	N/A	21	0.00004	0.0001	0.00007	0.0001
Aesthetic							
Aluminium (mg/L)	N/A	0.2	21	<0.005	<0.02	0.0048	N/A
Chloride (mg/L)	N/A	250	22	37	45	40.8	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	146	0.9	1.72	1.4	N/A
Copper (mg/L)	N/A	1	21	<0.0005	0.02	0.0032	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	22	401	533	485	N/A
Iron (mg/L)	N/A	0.3	22	0.131	0.971	0.37	N/A
Manganese (mg/L)	N/A	0.1	21	0.0266	0.195	0.068	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	22	7.59	8.36	7.8	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	22	202	318	267	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	22	15.2	22.3	19	N/A
Sodium (Na) (mg/L)	N/A	180	22	20.2	25.6	23.4	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	22	552	763	675	N/A
True Colour (HU)	N/A	15	22	<2	25	3.23	N/A
Turbidity (lab) (NTU)	N/A	5	22	0.47	2	0.94	N/A
Zinc (mg/L)	N/A	3	21	<0.001	<0.01	0.0025	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	22	160	180	170	N/A
Apparent Colour (HU)	N/A	N/A	22	7	70	29	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	22	190	220	200	N/A
Bromine (mg/L)	N/A	N/A	21	<0.1	0.6	0.17	N/A
Calcium (Ca) (mg/L)	N/A	N/A	22	129	171	160	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	22	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	22	880	1000	970	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	22	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	21	<0.01	<0.1	0.038	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	22	19.2	27	23	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	22	<0.1	0.2	0.07	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	22	<0.1	0.2	0.08	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	22	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	22	3	3.5	3.2	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	22	62	74	67	N/A
Tin (mg/L)	N/A	N/A	21	<0.0002	<0.01	0.0015	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	146	<1	<1	N/A	N/A

Table 91 – Water quality data assessment for Nyirripi

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	8	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	8	0.001	0.002	0.001	N/A
Barium (mg/L)	2	N/A	8	0.1	0.1	0.1	N/A
Beryllium (mg/L)	0.06	N/A	8	<0.0001	<0.001	0.0003	N/A
Boron (mg/L)	4	N/A	8	0.3	0.4	0.3	N/A
Cadmium (mg/L)	0.002	N/A	8	<0.00005	<0.0002	0.00006	N/A
Chlorine Free Residual (mg/L)	5	N/A	39	0.7	2	1	1
Chromium (mg/L)	0.05	N/A	8	0.0004	<0.005	0.001	N/A
Copper (mg/L)	2	N/A	8	0.001	0.4	0.07	N/A
Fluoride (mg/L)	1.5	N/A	8	1.6	1.7	1.6	N/A
Lead (mg/L)	0.01	N/A	8	<0.0001	<0.001	0.0003	N/A
Manganese (mg/L)	0.5	N/A	8	<0.0005	<0.005	0.001	N/A
Mercury (mg/L)	0.001	N/A	8	<0.0001	0.0002	0.00008	N/A
Molybdenum(mg/L)	0.05	N/A	8	0.0003	<0.005	0.001	N/A
Nickel (mg/L)	0.02	N/A	8	<0.0005	<0.002	0.0006	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	8	30	30	30	N/A
Nitrite mg-NO ₂ /L*	3	N/A	8	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.7	N/A	N/A
Selenium (mg/L)	0.01	N/A	8	0.002	0.003	0.002	N/A
Silver (mg/L)	0.1	N/A	8	<0.0001	<0.01	0.003	N/A
Uranium (mg/L)	0.02	N/A	8	0.009	0.01	0.009	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	8	<0.005	<0.02	0.0063	N/A
Chloride (mg/L)	N/A	250	8	83	160	127	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	39	0.71	1.54	1.1	N/A
Copper (mg/L)	N/A	1	8	0.0012	0.362	0.066	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	8	249	297	279	N/A
Iron (mg/L)	N/A	0.3	8	<0.01	0.042	0.0096	N/A
Manganese (mg/L)	N/A	0.1	8	<0.0005	<0.005	0.0014	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	8	7.9	8.09	8	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	8	30.3	33.6	32.1	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	8	83.5	92.4	86	N/A
Sodium (Na) (mg/L)	N/A	180	8	92.1	96.7	94.4	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	8	560	667	622	N/A
True Colour (HU)	N/A	15	8	<2	<2	1.13	N/A
Turbidity (lab) (NTU)	N/A	5	8	0.2	1.6	0.6	N/A
Zinc (mg/L)	N/A	3	8	0.002	<0.01	0.0036	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	8	250	280	260	N/A
Apparent Colour (HU)	N/A	N/A	8	<2	5	1.8	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	8	300	350	320	N/A
Bromine (mg/L)	N/A	N/A	8	0.2	0.318	0.25	N/A
Calcium (Ca) (mg/L)	N/A	N/A	8	51.5	60.5	57	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	8	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	8	930	1100	1000	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	8	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	8	0.06	0.2	0.12	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	8	29.2	36.2	33	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	8	5.6	6.3	5.8	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	8	5.6	6.3	5.8	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	8	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	8	26.3	30.1	29	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	8	140	270	210	N/A
Tin (mg/L)	N/A	N/A	8	<0.0002	<0.01	0.0026	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	39	<1	<1	N/A	N/A

Table 92 – Water quality data assessment for Papunya

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	2	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	2	0.0004	0.0004	0.0004	N/A
Barium (mg/L)	2	N/A	2	0.09	0.09	0.09	N/A
Beryllium (mg/L)	0.06	N/A	2	<0.0001	<0.0001	0.00005	N/A
Boron (mg/L)	4	N/A	2	0.3	0.3	0.3	N/A
Cadmium (mg/L)	0.002	N/A	2	<0.00005	<0.00005	0.00003	N/A
Chlorine Free Residual (mg/L)	5	N/A	30	0.8	1	1	1
Chromium (mg/L)	0.05	N/A	2	0.002	0.002	0.002	N/A
Copper (mg/L)	2	N/A	2	0.002	0.008	0.005	N/A
Fluoride (mg/L)	1.5	N/A	2	1	1	1	N/A
Lead (mg/L)	0.01	N/A	2	<0.0001	0.0002	0.0001	N/A
Manganese (mg/L)	0.5	N/A	2	<0.0005	<0.0005	0.0003	N/A
Mercury (mg/L)	0.001	N/A	2	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	2	0.003	0.003	0.003	N/A
Nickel (mg/L)	0.02	N/A	2	0.0008	0.0009	0.0009	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	2	20	20	20	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.5	N/A	N/A
Selenium (mg/L)	0.01	N/A	2	0.004	0.005	0.004	N/A
Silver (mg/L)	0.1	N/A	2	<0.0001	<0.0001	0.00005	N/A
Uranium (mg/L)	0.02	N/A	2	0.008	0.008	0.008	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	2	<0.005	<0.005	0.0025	N/A
Chloride (mg/L)	N/A	250	2	180	190	185	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	30	0.82	1.38	1.1	N/A
Copper (mg/L)	N/A	1	2	0.0023	0.0076	0.005	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	2	271	276	274	N/A
Iron (mg/L)	N/A	0.3	2	0.015	0.016	0.016	N/A
Manganese (mg/L)	N/A	0.1	2	<0.0005	<0.0005	0.00025	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	2	7.92	7.97	7.9	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	2	70.5	73.2	71.9	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	2	71.5	71.5	72	N/A
Sodium (Na) (mg/L)	N/A	180	2	254	256	255	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	2	843	873	858	N/A
True Colour (HU)	N/A	15	2	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	2	0.18	0.34	0.26	N/A
Zinc (mg/L)	N/A	3	2	0.003	0.004	0.0035	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	420	420	420	N/A
Apparent Colour (HU)	N/A	N/A	2	11	18	15	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	510	510	510	N/A
Bromine (mg/L)	N/A	N/A	2	1.2	1.5	1.4	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	56.8	58.1	57	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	1500	1500	1500	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	0.4	0.4	0.4	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	31.3	31.7	32	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	3.5	3.7	3.6	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	3.5	3.7	3.6	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	2	12.2	12.3	12	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	300	310	310	N/A
Tin (mg/L)	N/A	N/A	2	<0.0002	<0.0002	0.0001	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	36	<1	<1	N/A	N/A

Table 93 – Water quality data assessment for Peppimenarti

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	6	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	6	0.0003	<0.0005	0.0003	N/A
Barium (mg/L)	2	N/A	6	0.05	0.06	0.06	N/A
Beryllium (mg/L)	0.06	N/A	6	<0.0001	<0.001	0.0002	N/A
Boron (mg/L)	4	N/A	6	0.03	0.04	0.04	N/A
Cadmium (mg/L)	0.002	N/A	6	<0.00005	<0.0002	0.00005	N/A
Chlorine Free Residual (mg/L)	5	N/A	33	0.8	2	1	1
Chromium (mg/L)	0.05	N/A	6	<0.0002	<0.005	0.0009	N/A
Copper (mg/L)	2	N/A	6	0.004	<0.01	0.004	N/A
Fluoride (mg/L)	1.5	N/A	4	0.48	0.54	0.51	N/A
Lead (mg/L)	0.01	N/A	6	<0.0001	<0.001	0.0002	N/A
Manganese (mg/L)	0.5	N/A	6	0.05	0.06	0.06	N/A
Mercury (mg/L)	0.001	N/A	6	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	6	<0.0001	<0.005	0.0009	N/A
Nickel (mg/L)	0.02	N/A	6	<0.0005	<0.002	0.0005	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	4	0.2	0.5	0.4	N/A
Nitrite mg-NO ₂ /L*	3	N/A	4	<0.3	<0.3	0.2	N/A
Σ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.1	N/A	N/A
Selenium (mg/L)	0.01	N/A	6	<0.0002	<0.001	0.0002	N/A
Silver (mg/L)	0.1	N/A	6	<0.0001	<0.01	0.002	N/A
Uranium (mg/L)	0.02	N/A	6	<0.00001	<0.00005	0.00002	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	6	<0.005	<0.02	0.005	N/A
Chloride (mg/L)	N/A	250	4	17	19	17.5	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	33	0.8	1.5	1.2	N/A
Copper (mg/L)	N/A	1	6	0.0036	<0.01	0.0044	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	4	31.6	32.8	32.4	N/A
Iron (mg/L)	N/A	0.3	4	0.3	0.658	0.48	N/A
Manganese (mg/L)	N/A	0.1	6	0.05	0.0625	0.057	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	4	6.92	7.27	7	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	4	1.65	1.83	1.73	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	4	19.7	21.8	21	N/A
Sodium (Na) (mg/L)	N/A	180	4	15.5	15.9	15.6	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	4	83	97	90.3	N/A
True Colour (HU)	N/A	15	4	<2	8	4	N/A
Turbidity (lab) (NTU)	N/A	5	4	0.56	7.6	3.8	N/A
Zinc (mg/L)	N/A	3	6	0.008	<0.01	0.008	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	4	50	52	51	N/A
Apparent Colour (HU)	N/A	N/A	4	28	72	48	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	4	61	63	62	N/A
Bromine (mg/L)	N/A	N/A	6	0.032	<0.1	0.045	N/A
Calcium (Ca) (mg/L)	N/A	N/A	4	8.6	8.8	8.7	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	4	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	4	140	160	150	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	4	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	6	<0.01	<0.1	0.035	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	4	2.4	2.7	2.6	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	4	<0.1	<0.1	0.088	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	4	<0.1	<0.1	0.088	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	4	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	4	6.6	6.9	6.8	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	4	27	31	29	N/A
Tin (mg/L)	N/A	N/A	6	<0.0002	<0.01	0.0017	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	33	<1	<1	N/A	N/A

Table 94 – Water quality data assessment for Pigeon Hole

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	2	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	2	<0.0005	<0.0005	0.0003	N/A
Barium (mg/L)	2	N/A	2	<0.05	<0.05	0.03	N/A
Beryllium (mg/L)	0.06	N/A	2	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	2	0.1	0.1	0.1	N/A
Cadmium (mg/L)	0.002	N/A	2	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	18	0.7	2	1	N/A
Chromium (mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	2	<0.01	<0.01	0.005	N/A
Fluoride (mg/L)	1.5	N/A	2	0.27	0.27	0.27	N/A
Lead (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Manganese (mg/L)	0.5	N/A	2	<0.005	<0.005	0.003	N/A
Mercury (mg/L)	0.001	N/A	2	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	2	<0.002	<0.002	0.001	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	2	20	20	20	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.5	N/A	N/A
Selenium (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Silver (mg/L)	0.1	N/A	2	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	2	0.002	0.002	0.002	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	2	<0.02	<0.02	0.01	N/A
Chloride (mg/L)	N/A	250	2	13	13	13	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	18	0.71	1.96	1.1	N/A
Copper (mg/L)	N/A	1	2	<0.01	<0.01	0.005	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	2	351	351	351	N/A
Iron (mg/L)	N/A	0.3	2	<0.01	<0.01	0.005	N/A
Manganese (mg/L)	N/A	0.1	2	<0.005	<0.005	0.0025	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	2	7.37	7.38	7.4	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	2	<0.3	<0.3	0.15	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	2	55	56.3	56	N/A
Sodium (Na) (mg/L)	N/A	180	2	26.6	27.1	26.9	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	2	405	412	409	N/A
True Colour (HU)	N/A	15	2	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	2	0.28	0.33	0.31	N/A
Zinc (mg/L)	N/A	3	2	<0.01	<0.01	0.005	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	350	350	350	N/A
Apparent Colour (HU)	N/A	N/A	2	<2	<2	1	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	420	430	430	N/A
Bromine (mg/L)	N/A	N/A	2	0.086	0.09	0.088	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	79.6	79.7	80	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	710	710	710	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	0.01	0.01	0.01	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	36.8	36.9	37	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	3.5	3.6	3.6	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	3.5	3.6	3.6	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	2	2.2	2.3	2.3	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	21	21	21	N/A
Tin (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	20	<1	10	N/A	N/A

Table 95 – Water quality data assessment for Pirlangimpi

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	2	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	2	<0.0005	<0.0005	0.0003	N/A
Barium (mg/L)	2	N/A	2	<0.05	<0.05	0.03	N/A
Beryllium (mg/L)	0.06	N/A	2	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	2	<0.02	<0.02	0.01	N/A
Cadmium (mg/L)	0.002	N/A	2	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	36	0.9	2	1	1
Chromium (mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	2	<0.01	0.02	0.01	N/A
Fluoride (mg/L)	1.5	N/A	2	<0.1	<0.1	0.05	N/A
Lead (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Manganese (mg/L)	0.5	N/A	2	<0.005	<0.005	0.003	N/A
Mercury (mg/L)	0.001	N/A	2	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	2	<0.002	<0.002	0.001	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	2	0.4	0.5	0.5	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.2	N/A
Σ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.1	N/A	N/A
Selenium (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Silver (mg/L)	0.1	N/A	2	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	2	<0.00001	<0.00001	0.000005	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	2	<0.02	<0.02	0.01	N/A
Chloride (mg/L)	N/A	250	2	4	5	4.5	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	36	0.93	1.5	1.2	N/A
Copper (mg/L)	N/A	1	2	<0.01	0.02	0.013	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	2	<1	<1	0.5	N/A
Iron (mg/L)	N/A	0.3	2	<0.01	<0.01	0.005	N/A
Manganese (mg/L)	N/A	0.1	2	<0.005	<0.005	0.0025	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	2	5.55	5.59	5.6	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	2	<0.3	<0.3	0.15	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	2	9.2	9.33	9.3	N/A
Sodium (Na) (mg/L)	N/A	180	2	3.98	4.12	4.05	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	2	19	21	20	N/A
True Colour (HU)	N/A	15	2	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	2	0.22	0.32	0.27	N/A
Zinc (mg/L)	N/A	3	2	<0.01	<0.01	0.005	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	<20	<20	10	N/A
Apparent Colour (HU)	N/A	N/A	2	<2	3	2	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Bromine (mg/L)	N/A	N/A	2	0.008	0.01	0.009	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	0.1	0.1	0.1	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	22	22	22	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	0.1	0.1	0.1	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	0.1	0.1	0.1	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	0.1	0.1	0.1	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	2	0.1	0.2	0.15	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	7	8	7.5	N/A
Tin (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	36	<1	<1	N/A	N/A

Table 96 – Water quality data assessment for Pmara Jutunta

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	2	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	2	0.001	0.001	0.001	N/A
Barium (mg/L)	2	N/A	2	0.07	0.07	0.07	N/A
Beryllium (mg/L)	0.06	N/A	2	<0.0001	<0.0001	0.00005	N/A
Boron (mg/L)	4	N/A	2	0.3	0.3	0.3	N/A
Cadmium (mg/L)	0.002	N/A	2	<0.00005	<0.00005	0.00003	N/A
Chlorine Free Residual (mg/L)	5	N/A	33	1	2	1	2
Chromium (mg/L)	0.05	N/A	2	0.002	0.002	0.002	N/A
Copper (mg/L)	2	N/A	2	0.005	0.005	0.005	N/A
Fluoride (mg/L)	1.5	N/A	2	0.79	0.8	0.8	N/A
Lead (mg/L)	0.01	N/A	2	<0.0001	0.0003	0.0002	N/A
Manganese (mg/L)	0.5	N/A	2	<0.0005	<0.0005	0.0003	N/A
Mercury (mg/L)	0.001	N/A	2	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	2	0.0006	0.0007	0.0007	N/A
Nickel (mg/L)	0.02	N/A	2	<0.0005	<0.0005	0.0003	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	2	40	40	40	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.9	N/A	N/A
Selenium (mg/L)	0.01	N/A	2	0.002	0.002	0.002	N/A
Silver (mg/L)	0.1	N/A	2	<0.0001	<0.0001	0.00005	N/A
Uranium (mg/L)	0.02	N/A	2	0.006	0.006	0.006	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	2	<0.005	<0.005	0.0025	N/A
Chloride (mg/L)	N/A	250	2	73	74	73.5	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	33	1.12	1.61	1.4	N/A
Copper (mg/L)	N/A	1	2	0.0048	0.0054	0.0051	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	2	245	245	245	N/A
Iron (mg/L)	N/A	0.3	2	<0.01	<0.01	0.005	N/A
Manganese (mg/L)	N/A	0.1	2	<0.0005	<0.0005	0.00025	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	2	7.8	7.84	7.8	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	2	36.9	38.4	37.7	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	2	107	108	110	N/A
Sodium (Na) (mg/L)	N/A	180	2	71.2	73.2	72.2	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	2	504	526	515	N/A
True Colour (HU)	N/A	15	2	<2	<2	1.5	N/A
Turbidity (lab) (NTU)	N/A	5	2	0.52	0.99	0.76	N/A
Zinc (mg/L)	N/A	3	2	0.004	0.017	0.011	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	200	210	210	N/A
Apparent Colour (HU)	N/A	N/A	2	3	7	5	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	250	250	250	N/A
Bromine (mg/L)	N/A	N/A	2	0.3	0.3	0.3	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	56.1	56.6	56	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	810	840	830	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	0.2	0.2	0.2	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	25.2	25.5	25	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	8.6	8.6	8.6	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	8.6	8.6	8.6	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	2	22	22.2	22	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	120	120	120	N/A
Tin (mg/L)	N/A	N/A	2	<0.0002	<0.0002	0.0001	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	36	<1	<1	N/A	N/A

Table 97 – Water quality data assessment for Ramingining

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	4	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	4	<0.0005	<0.0005	0.0003	N/A
Barium (mg/L)	2	N/A	4	<0.05	<0.05	0.03	N/A
Beryllium (mg/L)	0.06	N/A	4	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	4	0.02	0.02	0.02	N/A
Cadmium (mg/L)	0.002	N/A	4	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	154	1	2	1	2
Chromium (mg/L)	0.05	N/A	4	<0.005	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	4	<0.01	<0.01	0.008	N/A
Fluoride (mg/L)	1.5	N/A	3	<0.1	<0.1	0.05	N/A
Lead (mg/L)	0.01	N/A	4	<0.001	<0.001	0.0006	N/A
Manganese (mg/L)	0.5	N/A	4	<0.005	<0.005	0.003	N/A
Mercury (mg/L)	0.001	N/A	4	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	4	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	4	<0.002	<0.002	0.001	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	3	0.6	0.9	0.8	N/A
Nitrite mg-NO ₂ /L*	3	N/A	3	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.1	N/A	N/A
Selenium (mg/L)	0.01	N/A	4	<0.001	<0.001	0.0005	N/A
Silver (mg/L)	0.1	N/A	4	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	4	0.00002	0.00004	0.00003	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	4	<0.02	<0.02	0.01	N/A
Chloride (mg/L)	N/A	250	3	8	10	8.67	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	154	1	2.09	1.3	N/A
Copper (mg/L)	N/A	1	4	<0.01	<0.01	0.0075	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	3	3.5	5	4.37	N/A
Iron (mg/L)	N/A	0.3	3	<0.01	<0.01	0.0067	N/A
Manganese (mg/L)	N/A	0.1	4	<0.005	<0.005	0.0025	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	3	5.34	5.76	5.6	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	3	<0.3	<0.3	0.15	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	3	13.7	14.1	14	N/A
Sodium (Na) (mg/L)	N/A	180	3	5.06	6.74	5.77	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	3	18	24	21	N/A
True Colour (HU)	N/A	15	3	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	3	0.28	0.51	0.37	N/A
Zinc (mg/L)	N/A	3	4	<0.01	0.03	0.015	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	3	<20	<20	10	N/A
Apparent Colour (HU)	N/A	N/A	3	2	4	2.7	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	3	<10	<10	5	N/A
Bromine (mg/L)	N/A	N/A	4	0.012	0.016	0.015	N/A
Calcium (Ca) (mg/L)	N/A	N/A	3	0.4	0.7	0.6	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	3	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	3	21	47	36	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	3	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	4	<0.01	<0.01	0.005	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	3	0.6	0.8	0.7	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	3	0.1	0.2	0.17	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	3	0.1	0.2	0.17	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	3	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	3	0.3	0.3	0.3	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	3	13	16	14	N/A
Tin (mg/L)	N/A	N/A	4	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	163	<1	200	N/A	N/A

Table 98 – Water quality data assessment for Rittarangu

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	2	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	2	<0.0005	<0.0005	0.0003	N/A
Barium (mg/L)	2	N/A	2	0.2	0.3	0.2	N/A
Beryllium (mg/L)	0.06	N/A	2	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	2	0.04	0.04	0.04	N/A
Cadmium (mg/L)	0.002	N/A	2	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	48	0.7	1	0.9	1
Chromium (mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	2	<0.01	<0.01	0.005	N/A
Fluoride (mg/L)	1.5	N/A	2	<0.1	<0.1	0.05	N/A
Lead (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Manganese (mg/L)	0.5	N/A	2	<0.005	<0.005	0.003	N/A
Mercury (mg/L)	0.001	N/A	2	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	2	<0.002	<0.002	0.001	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	2	2	2	2	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.1	N/A	N/A
Selenium (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Silver (mg/L)	0.1	N/A	2	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	2	0.0005	0.0005	0.0005	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	2	<0.02	<0.02	0.01	N/A
Chloride (mg/L)	N/A	250	2	23	24	23.5	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	48	0.72	1.2	0.9	N/A
Copper (mg/L)	N/A	1	2	<0.01	<0.01	0.005	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	2	307	308	308	N/A
Iron (mg/L)	N/A	0.3	2	<0.01	<0.01	0.005	N/A
Manganese (mg/L)	N/A	0.1	2	<0.005	<0.005	0.0025	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	2	7.46	7.48	7.5	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	2	<0.3	<0.3	0.15	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	2	21.6	21.8	22	N/A
Sodium (Na) (mg/L)	N/A	180	2	13.4	13.4	13.4	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	2	307	313	310	N/A
True Colour (HU)	N/A	15	2	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	2	0.18	0.31	0.25	N/A
Zinc (mg/L)	N/A	3	2	<0.01	<0.01	0.005	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	280	280	280	N/A
Apparent Colour (HU)	N/A	N/A	2	<2	<2	1	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	340	340	340	N/A
Bromine (mg/L)	N/A	N/A	2	0.056	0.066	0.061	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	60.4	60.5	60	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	590	590	590	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	37.9	38.1	38	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	0.4	0.5	0.45	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	0.4	0.5	0.45	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	2	3.4	3.5	3.5	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	38	39	39	N/A
Tin (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	57	<1	<1	N/A	N/A

Table 99 – Water quality data assessment for Robinson River

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	6	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	6	<0.0002	<0.0005	0.0002	N/A
Barium (mg/L)	2	N/A	6	0.7	1	0.9	N/A
Beryllium (mg/L)	0.06	N/A	6	<0.0001	<0.001	0.0002	N/A
Boron (mg/L)	4	N/A	6	0.1	0.1	0.1	N/A
Cadmium (mg/L)	0.002	N/A	6	<0.00005	<0.0002	0.00005	N/A
Chlorine Free Residual (mg/L)	5	N/A	31	0.8	1	1	1
Chromium (mg/L)	0.05	N/A	6	<0.0002	<0.005	0.0009	N/A
Copper (mg/L)	2	N/A	6	<0.0005	<0.01	0.003	N/A
Fluoride (mg/L)	1.5	N/A	8	0.68	1.1	0.94	N/A
Lead (mg/L)	0.01	N/A	6	<0.0001	<0.001	0.0002	N/A
Manganese (mg/L)	0.5	N/A	6	<0.0005	<0.005	0.001	N/A
Mercury (mg/L)	0.001	N/A	6	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	6	0.0004	<0.005	0.001	N/A
Nickel (mg/L)	0.02	N/A	6	<0.0005	<0.002	0.0005	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	8	5	10	7	N/A
Nitrite mg-NO ₂ /L*	3	N/A	8	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.3	N/A	N/A
Selenium (mg/L)	0.01	N/A	6	<0.0002	<0.001	0.0003	N/A
Silver (mg/L)	0.1	N/A	6	<0.0001	<0.01	0.002	N/A
Uranium (mg/L)	0.02	N/A	6	0.002	0.002	0.002	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	6	<0.005	<0.02	0.005	N/A
Chloride (mg/L)	N/A	250	8	37	110	51.1	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	31	0.76	1.42	1.1	N/A
Copper (mg/L)	N/A	1	6	<0.0005	<0.01	0.0031	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	8	379	601	506	N/A
Iron (mg/L)	N/A	0.3	8	<0.01	0.131	0.026	N/A
Manganese (mg/L)	N/A	0.1	6	<0.0005	<0.005	0.001	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	10	7.66	8.78	8	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	8	<0.3	<0.3	0.15	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	8	34.9	43	38	N/A
Sodium (Na) (mg/L)	N/A	180	8	16.6	23.8	21.3	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	10	360	540	477	N/A
True Colour (HU)	N/A	15	8	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	8	0.2	1.9	0.58	N/A
Zinc (mg/L)	N/A	3	6	0.001	<0.01	0.0032	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	8	330	500	440	N/A
Apparent Colour (HU)	N/A	N/A	8	<2	7	2.5	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	8	400	620	520	N/A
Bromine (mg/L)	N/A	N/A	6	<0.1	0.16	0.084	N/A
Calcium (Ca) (mg/L)	N/A	N/A	8	44.4	52.7	48	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	8	<10	36	12	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	10	750	1000	920	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	8	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	6	0.03	<0.1	0.043	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	8	62.6	114	93	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	8	1	2.2	1.5	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	8	1	2.2	1.5	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	8	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	8	2.9	4.9	3.9	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	8	60	190	85	N/A
Tin (mg/L)	N/A	N/A	6	<0.0002	<0.01	0.0017	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	31	<1	<1	N/A	N/A

Table 100 – Water quality data assessment for Santa Teresa

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	4	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	4	<0.0005	<0.0005	0.0003	N/A
Barium (mg/L)	2	N/A	4	0.4	0.5	0.4	N/A
Beryllium (mg/L)	0.06	N/A	4	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	4	0.06	0.06	0.06	N/A
Cadmium (mg/L)	0.002	N/A	4	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	30	0.9	2	1	2
Chromium (mg/L)	0.05	N/A	4	<0.005	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	4	<0.01	<0.01	0.006	N/A
Fluoride (mg/L)	1.5	N/A	4	0.18	0.2	0.2	N/A
Lead (mg/L)	0.01	N/A	4	<0.001	<0.001	0.0005	N/A
Manganese (mg/L)	0.5	N/A	4	<0.005	<0.005	0.003	N/A
Mercury (mg/L)	0.001	N/A	4	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	4	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	4	<0.002	<0.002	0.001	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	4	8	8	8	N/A
Nitrite mg-NO ₂ /L*	3	N/A	4	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.3	N/A	N/A
Selenium (mg/L)	0.01	N/A	4	0.002	0.003	0.003	N/A
Silver (mg/L)	0.1	N/A	4	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	4	0.003	0.004	0.003	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	4	<0.02	<0.02	0.01	N/A
Chloride (mg/L)	N/A	250	4	11	13	11.8	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	30	0.86	1.72	1.2	N/A
Copper (mg/L)	N/A	1	4	<0.01	<0.01	0.0063	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	4	273	277	275	N/A
Iron (mg/L)	N/A	0.3	4	<0.01	0.018	0.0083	N/A
Manganese (mg/L)	N/A	0.1	4	<0.005	<0.005	0.0025	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	4	7.65	7.75	7.7	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	4	1.62	2.16	1.94	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	4	17	19.4	18	N/A
Sodium (Na) (mg/L)	N/A	180	4	7.74	8.51	8.15	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	4	293	306	298	N/A
True Colour (HU)	N/A	15	4	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	4	0.23	0.29	0.26	N/A
Zinc (mg/L)	N/A	3	4	<0.01	<0.01	0.005	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	4	240	250	250	N/A
Apparent Colour (HU)	N/A	N/A	4	<2	<2	1	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	4	300	300	300	N/A
Bromine (mg/L)	N/A	N/A	4	0.034	0.056	0.044	N/A
Calcium (Ca) (mg/L)	N/A	N/A	4	70.5	71.6	71	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	4	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	4	550	560	560	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	4	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	4	<0.01	0.02	0.01	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	4	23.1	23.8	23	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	4	1.8	1.9	1.9	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	4	1.8	1.9	1.8	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	4	<0.1	<0.1	0.063	N/A
Potassium (K) (mg/L)	N/A	N/A	4	4.3	4.5	4.4	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	4	17	21	19	N/A
Tin (mg/L)	N/A	N/A	4	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	33	<1	<1	N/A	N/A

Table 101 – Water quality data assessment for Tara

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	2	<0.0005	<0.0005	0.0003	N/A
Arsenic (mg/L)	0.01	N/A	2	0.002	0.002	0.002	N/A
Barium (mg/L)	2	N/A	2	<0.05	<0.05	0.04	N/A
Beryllium (mg/L)	0.06	N/A	2	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	2	0.5	0.6	0.5	N/A
Cadmium (mg/L)	0.002	N/A	2	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	33	0.8	1	1	1
Chromium (mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	2	0.07	0.1	0.09	N/A
Fluoride (mg/L)	1.5	N/A	2	0.91	0.94	0.93	N/A
Lead (mg/L)	0.01	N/A	2	<0.001	0.002	0.001	N/A
Manganese (mg/L)	0.5	N/A	2	0.01	0.02	0.01	N/A
Mercury (mg/L)	0.001	N/A	2	<0.0002	<0.0002	0.0001	N/A
Molybdenum(mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	2	<0.002	<0.002	0.001	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	2	20	20	20	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.5	N/A	N/A
Selenium (mg/L)	0.01	N/A	2	<0.002	0.003	0.002	N/A
Silver (mg/L)	0.1	N/A	2	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	2	0.005	0.006	0.005	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	2	<0.02	<0.02	0.01	N/A
Chloride (mg/L)	N/A	250	2	360	390	375	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	33	0.78	1.47	1.1	N/A
Copper (mg/L)	N/A	1	2	0.07	0.11	0.09	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	2	336	384	360	N/A
Iron (mg/L)	N/A	0.3	2	0.327	0.494	0.41	N/A
Manganese (mg/L)	N/A	0.1	2	0.01	0.015	0.013	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	2	7.74	7.83	7.8	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	2	146	157	152	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	2	22.7	27.6	25	N/A
Sodium (Na) (mg/L)	N/A	180	2	231	246	239	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	2	1100	1130	1120	N/A
True Colour (HU)	N/A	15	2	<2	<2	1.5	N/A
Turbidity (lab) (NTU)	N/A	5	2	3.5	4.5	4	N/A
Zinc (mg/L)	N/A	3	2	0.14	0.29	0.22	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	200	210	210	N/A
Apparent Colour (HU)	N/A	N/A	2	17	26	22	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	260	290	280	N/A
Bromine (mg/L)	N/A	N/A	2	1.53	1.76	1.6	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	38.5	47.4	43	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	1900	2000	2000	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	0.2	0.21	0.21	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	58.2	64.5	61	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	4.6	4.9	4.8	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	4.6	4.9	4.8	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	2	28.6	29.5	29	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	600	640	620	N/A
Tin (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	33	<1	<1	N/A	N/A

Table 102 – Water quality data assessment for Titjikala

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	2	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	2	0.001	0.001	0.001	N/A
Barium (mg/L)	2	N/A	2	0.3	0.3	0.3	N/A
Beryllium (mg/L)	0.06	N/A	2	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	2	0.08	0.1	0.09	N/A
Cadmium (mg/L)	0.002	N/A	2	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	33	1	2	1	2
Chromium (mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	2	<0.01	<0.01	0.005	N/A
Fluoride (mg/L)	1.5	N/A	2	0.6	0.6	0.6	N/A
Lead (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Manganese (mg/L)	0.5	N/A	2	<0.005	<0.005	0.003	N/A
Mercury (mg/L)	0.001	N/A	2	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	2	<0.002	<0.002	0.001	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	2	10	10	10	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.3	N/A	N/A
Selenium (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Silver (mg/L)	0.1	N/A	2	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	2	0.003	0.004	0.003	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	2	<0.02	<0.02	0.01	N/A
Chloride (mg/L)	N/A	250	2	28	29	28.5	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	33	0.96	1.61	1.2	N/A
Copper (mg/L)	N/A	1	2	<0.01	<0.01	0.005	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	2	235	238	237	N/A
Iron (mg/L)	N/A	0.3	2	<0.01	<0.01	0.005	N/A
Manganese (mg/L)	N/A	0.1	2	<0.005	<0.005	0.0025	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	2	7.98	8.02	8	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	2	7.86	8.04	7.95	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	2	31.9	32.3	32	N/A
Sodium (Na) (mg/L)	N/A	180	2	29.9	30.5	30.2	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	2	318	325	322	N/A
True Colour (HU)	N/A	15	2	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	2	0.33	0.36	0.35	N/A
Zinc (mg/L)	N/A	3	2	<0.01	<0.01	0.005	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	210	220	220	N/A
Apparent Colour (HU)	N/A	N/A	2	<2	<2	1.5	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	260	260	260	N/A
Bromine (mg/L)	N/A	N/A	2	0.06	0.074	0.067	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	68.8	69.6	69	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	570	570	570	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	0.03	0.03	0.03	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	15.3	15.5	15	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	3.1	3.1	3.1	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	3.1	3.1	3.1	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	2	4	4	4	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	46	47	47	N/A
Tin (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	36	<1	<1	N/A	N/A

Table 103 – Water quality data assessment for Umbakumba

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	1	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	1	<0.0005	<0.0005	0.0003	N/A
Barium (mg/L)	2	N/A	1	<0.05	<0.05	0.03	N/A
Beryllium (mg/L)	0.06	N/A	1	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	1	0.02	0.02	0.02	N/A
Cadmium (mg/L)	0.002	N/A	1	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	36	0.7	1	1	1
Chromium (mg/L)	0.05	N/A	1	<0.005	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	1	0.03	0.03	0.03	N/A
Fluoride (mg/L)	1.5	N/A	2	<0.1	<0.1	0.05	N/A
Lead (mg/L)	0.01	N/A	1	<0.001	<0.001	0.0005	N/A
Manganese (mg/L)	0.5	N/A	1	0.03	0.03	0.03	N/A
Mercury (mg/L)	0.001	N/A	1	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	1	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	1	<0.002	<0.002	0.001	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	2	0.7	0.7	0.7	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.1	N/A	N/A
Selenium (mg/L)	0.01	N/A	1	<0.001	<0.001	0.0005	N/A
Silver (mg/L)	0.1	N/A	1	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	1	0.00002	0.00002	0.00002	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	1	<0.02	<0.02	0.01	N/A
Chloride (mg/L)	N/A	250	2	59	60	59.5	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	36	0.73	1.44	1.1	N/A
Copper (mg/L)	N/A	1	1	0.03	0.03	0.03	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	2	17.3	17.3	17.3	N/A
Iron (mg/L)	N/A	0.3	2	0.011	0.016	0.014	N/A
Manganese (mg/L)	N/A	0.1	1	0.025	0.025	0.025	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	2	5.28	5.3	5.3	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	2	2.28	2.34	2.31	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	2	11.9	12	12	N/A
Sodium (Na) (mg/L)	N/A	180	2	33.3	33.6	33.5	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	2	109	110	110	N/A
True Colour (HU)	N/A	15	2	4	4	4	N/A
Turbidity (lab) (NTU)	N/A	5	2	0.24	0.59	0.42	N/A
Zinc (mg/L)	N/A	3	1	<0.01	<0.01	0.005	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	<20	<20	10	N/A
Apparent Colour (HU)	N/A	N/A	2	8	9	8.5	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Bromine (mg/L)	N/A	N/A	1	0.206	0.206	0.21	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	1.5	1.5	1.5	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	240	240	240	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	1	<0.01	<0.01	0.005	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	3.3	3.3	3.3	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	0.2	0.2	0.2	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	0.2	0.2	0.2	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	2	0.8	0.8	0.8	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	97	99	98	N/A
Tin (mg/L)	N/A	N/A	1	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	36	<1	<1	N/A	N/A

Table 104 – Water quality data assessment for Wadeye

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	3	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	3	<0.0005	<0.0005	0.0003	N/A
Barium (mg/L)	2	N/A	3	<0.05	<0.05	0.03	N/A
Beryllium (mg/L)	0.06	N/A	3	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	3	<0.02	<0.02	0.01	N/A
Cadmium (mg/L)	0.002	N/A	3	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	245	0.7	2	1	2
Chromium (mg/L)	0.05	N/A	3	<0.005	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	3	0.01	0.07	0.03	N/A
Fluoride (mg/L)	1.5	N/A	100	<0.1	0.7	0.3	0.6
Lead (mg/L)	0.01	N/A	3	<0.001	<0.001	0.0008	N/A
Manganese (mg/L)	0.5	N/A	3	<0.005	<0.005	0.003	N/A
Mercury (mg/L)	0.001	N/A	3	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	3	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	3	<0.002	<0.002	0.001	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	3	0.1	0.3	0.2	N/A
Nitrite mg-NO ₂ /L*	3	N/A	3	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.1	N/A	N/A
Selenium (mg/L)	0.01	N/A	3	<0.001	<0.001	0.0005	N/A
Silver (mg/L)	0.1	N/A	3	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	3	0.0002	0.0002	0.0002	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	3	<0.02	<0.02	0.01	N/A
Chloride (mg/L)	N/A	250	3	6	8	6.67	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	245	0.7	1.62	1.2	1.51
Copper (mg/L)	N/A	1	3	0.01	0.07	0.03	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	3	1.7	3.4	2.33	N/A
Iron (mg/L)	N/A	0.3	3	<0.01	0.17	0.06	N/A
Manganese (mg/L)	N/A	0.1	3	<0.005	<0.005	0.0025	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	3	4.89	5.49	5.1	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	3	<0.3	<0.3	0.15	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	3	14.4	16.1	15	N/A
Sodium (Na) (mg/L)	N/A	180	3	4.49	6.35	5.21	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	3	27	35	31.7	N/A
True Colour (HU)	N/A	15	3	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	3	0.21	0.31	0.26	N/A
Zinc (mg/L)	N/A	3	3	0.01	0.02	0.013	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	3	<20	<20	10	N/A
Apparent Colour (HU)	N/A	N/A	3	<2	<2	1	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	3	<10	<10	5	N/A
Bromine (mg/L)	N/A	N/A	3	0.006	0.008	0.0073	N/A
Calcium (Ca) (mg/L)	N/A	N/A	3	<0.03	0.7	0.27	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	3	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	3	29	37	32	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	3	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	3	<0.01	<0.01	0.005	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	3	0.4	0.4	0.4	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	3	<0.1	<0.1	0.067	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	3	<0.1	<0.1	0.067	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	3	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	3	0.2	0.3	0.27	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	3	10	14	11	N/A
Tin (mg/L)	N/A	N/A	3	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	255	<1	<1	N/A	N/A

Table 105 – Water quality data assessment for Wallace Rockhole

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	2	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	2	0.0005	0.0005	0.0005	N/A
Barium (mg/L)	2	N/A	2	<0.05	<0.05	0.03	N/A
Beryllium (mg/L)	0.06	N/A	2	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	2	0.4	0.4	0.4	N/A
Cadmium (mg/L)	0.002	N/A	2	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	6	0.9	1	1	N/A
Chromium (mg/L)	0.05	N/A	2	0.04	0.04	0.04	N/A
Copper (mg/L)	2	N/A	2	<0.01	0.03	0.02	N/A
Fluoride (mg/L)	1.5	N/A	2	0.82	0.82	0.82	N/A
Lead (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Manganese (mg/L)	0.5	N/A	2	<0.005	<0.005	0.003	N/A
Mercury (mg/L)	0.001	N/A	2	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	2	0.002	0.002	0.002	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	2	20	20	20	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.5	N/A	N/A
Selenium (mg/L)	0.01	N/A	2	0.004	0.004	0.004	N/A
Silver (mg/L)	0.1	N/A	2	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	2	0.005	0.006	0.005	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	2	<0.02	<0.02	0.01	N/A
Chloride (mg/L)	N/A	250	2	150	150	150	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	6	0.92	1.22	1.1	N/A
Copper (mg/L)	N/A	1	2	<0.01	0.03	0.018	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	2	310	313	312	N/A
Iron (mg/L)	N/A	0.3	2	0.016	0.041	0.029	N/A
Manganese (mg/L)	N/A	0.1	2	<0.005	<0.005	0.0025	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	2	7.56	7.56	7.6	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	2	61.8	63.3	62.6	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	2	11.2	11.3	11	N/A
Sodium (Na) (mg/L)	N/A	180	2	91.9	93.5	92.7	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	2	583	591	587	N/A
True Colour (HU)	N/A	15	2	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	2	0.38	0.55	0.47	N/A
Zinc (mg/L)	N/A	3	2	0.01	0.02	0.015	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	230	230	230	N/A
Apparent Colour (HU)	N/A	N/A	2	3	3	3	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	280	280	280	N/A
Bromine (mg/L)	N/A	N/A	2	0.548	0.6	0.57	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	76.3	77.4	77	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	1100	1100	1100	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	0.08	0.09	0.085	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	29.1	29.1	29	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	3.5	3.6	3.6	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	3.5	3.6	3.6	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	2	9.2	9.2	9.2	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	240	250	250	N/A
Tin (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	27	<1	<1	N/A	N/A

Table 106 – Water quality data assessment for Warruwi

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	2	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	2	<0.0005	<0.0005	0.0003	N/A
Barium (mg/L)	2	N/A	2	<0.05	<0.05	0.03	N/A
Beryllium (mg/L)	0.06	N/A	2	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	2	0.04	0.04	0.04	N/A
Cadmium (mg/L)	0.002	N/A	2	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	27	0.7	2	1	2
Chromium (mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	2	0.01	0.02	0.02	N/A
Fluoride (mg/L)	1.5	N/A	2	<0.1	<0.1	0.05	N/A
Lead (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Manganese (mg/L)	0.5	N/A	2	<0.005	<0.005	0.003	N/A
Mercury (mg/L)	0.001	N/A	2	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	2	<0.002	<0.002	0.001	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	2	1	1	1	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.1	N/A	N/A
Selenium (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Silver (mg/L)	0.1	N/A	2	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	2	0.00006	0.00009	0.00008	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	2	0.08	0.08	0.08	N/A
Chloride (mg/L)	N/A	250	2	46	48	47	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	27	0.73	1.77	1.4	2
Copper (mg/L)	N/A	1	2	0.01	0.02	0.015	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	2	21.1	21.6	21.4	N/A
Iron (mg/L)	N/A	0.3	2	<0.01	0.016	0.011	N/A
Manganese (mg/L)	N/A	0.1	2	<0.005	<0.005	0.0025	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	2	4.9	4.96	4.9	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	2	4.59	4.65	4.62	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	2	10.9	10.9	11	N/A
Sodium (Na) (mg/L)	N/A	180	2	21.4	21.9	21.7	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	2	89	94	91.5	N/A
True Colour (HU)	N/A	15	2	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	2	0.22	0.39	0.31	N/A
Zinc (mg/L)	N/A	3	2	<0.01	<0.01	0.005	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	<20	<20	10	N/A
Apparent Colour (HU)	N/A	N/A	2	3	4	3.5	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Bromine (mg/L)	N/A	N/A	2	0.172	0.182	0.18	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	1.2	1.4	1.3	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	200	200	200	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	4.4	4.4	4.4	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	0.2	0.2	0.2	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	0.2	0.2	0.2	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	2	0.2	0.2	0.2	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	76	78	77	N/A
Tin (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	27	<1	<1	N/A	N/A

Table 107 – Water quality data assessment for Weemol

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	2	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	2	<0.0005	<0.0005	0.0003	N/A
Barium (mg/L)	2	N/A	2	<0.05	<0.05	0.03	N/A
Beryllium (mg/L)	0.06	N/A	2	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	2	0.02	0.02	0.02	N/A
Cadmium (mg/L)	0.002	N/A	2	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	32	0.9	1	1	1
Chromium (mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	2	<0.01	0.02	0.01	N/A
Fluoride (mg/L)	1.5	N/A	2	0.15	0.15	0.15	N/A
Lead (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Manganese (mg/L)	0.5	N/A	2	<0.005	<0.005	0.003	N/A
Mercury (mg/L)	0.001	N/A	2	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	2	<0.002	<0.002	0.001	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	2	0.5	2	1	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.1	N/A	N/A
Selenium (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Silver (mg/L)	0.1	N/A	2	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	2	0.0003	0.0003	0.0003	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	2	<0.02	<0.02	0.01	N/A
Chloride (mg/L)	N/A	250	2	8	9	8.5	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	32	0.86	1.43	1.1	1
Copper (mg/L)	N/A	1	2	<0.01	0.02	0.013	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	2	403	408	406	N/A
Iron (mg/L)	N/A	0.3	2	<0.01	<0.01	0.005	N/A
Manganese (mg/L)	N/A	0.1	2	<0.005	<0.005	0.0025	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	2	7.33	7.36	7.3	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	2	<0.3	<0.3	0.15	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	2	31.5	32.3	32	N/A
Sodium (Na) (mg/L)	N/A	180	2	9.19	9.54	9.37	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	2	387	389	388	N/A
True Colour (HU)	N/A	15	2	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	2	0.21	0.36	0.29	N/A
Zinc (mg/L)	N/A	3	2	<0.01	0.03	0.018	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	380	380	380	N/A
Apparent Colour (HU)	N/A	N/A	2	<2	<2	1	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	460	460	460	N/A
Bromine (mg/L)	N/A	N/A	2	0.02	0.022	0.021	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	80.6	81.5	81	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	710	710	710	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	0.01	0.01	0.01	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	49.1	49.7	49	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	0.1	0.3	0.2	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	0.1	0.3	0.2	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	2	2.8	2.8	2.8	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	14	15	15	N/A
Tin (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	36	<1	<1	N/A	N/A

Table 108 – Water quality data assessment for Willowra

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	10	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	10	0.002	0.002	0.002	N/A
Barium (mg/L)	2	N/A	10	0.05	0.06	0.06	N/A
Beryllium (mg/L)	0.06	N/A	10	<0.0001	<0.001	0.0001	N/A
Boron (mg/L)	4	N/A	10	0.4	0.6	0.4	N/A
Cadmium (mg/L)	0.002	N/A	10	<0.00005	<0.0002	0.00004	N/A
Chlorine Free Residual (mg/L)	5	N/A	27	0.8	1	1	1
Chromium (mg/L)	0.05	N/A	10	0.004	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	10	0.003	0.08	0.02	N/A
Fluoride (mg/L)	1.5	N/A	12	0.71	0.84	0.8	N/A
Lead (mg/L)	0.01	N/A	10	<0.0001	<0.001	0.0004	N/A
Manganese (mg/L)	0.5	N/A	10	<0.0005	<0.005	0.0008	N/A
Mercury (mg/L)	0.001	N/A	10	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	10	0.001	<0.005	0.002	N/A
Nickel (mg/L)	0.02	N/A	10	<0.0005	<0.002	0.0004	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	12	30	40	40	N/A
Nitrite mg-NO ₂ /L*	3	N/A	12	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.9	N/A	N/A
Selenium (mg/L)	0.01	N/A	10	0.003	0.004	0.003	N/A
Silver (mg/L)	0.1	N/A	10	<0.0001	<0.01	0.001	N/A
Uranium (mg/L)	0.02	N/A	10	0.02	0.02	0.02	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	10	<0.005	<0.02	0.0048	N/A
Chloride (mg/L)	N/A	250	12	170	170	170	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	27	0.84	1.37	1.1	N/A
Copper (mg/L)	N/A	1	10	0.0028	0.0776	0.019	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	12	254	273	262	N/A
Iron (mg/L)	N/A	0.3	12	<0.01	<0.01	0.005	N/A
Manganese (mg/L)	N/A	0.1	10	<0.0005	<0.005	0.00079	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	12	7.97	8.14	8.1	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	12	66.6	76.2	71	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	12	80.2	96.1	88	N/A
Sodium (Na) (mg/L)	N/A	180	12	132	143	136	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	12	696	772	736	N/A
True Colour (HU)	N/A	15	12	<2	<2	1.25	N/A
Turbidity (lab) (NTU)	N/A	5	12	0.16	1.5	0.45	N/A
Zinc (mg/L)	N/A	3	10	0.008	0.02	0.012	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	12	230	240	240	N/A
Apparent Colour (HU)	N/A	N/A	12	<2	9	2.4	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	12	290	290	290	N/A
Bromine (mg/L)	N/A	N/A	10	0.2	1.1	0.7	N/A
Calcium (Ca) (mg/L)	N/A	N/A	12	52.6	57.8	55	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	12	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	12	1200	1300	1300	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	12	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	10	0.1	0.3	0.21	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	12	29.9	32.4	31	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	12	7.5	9.4	8.2	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	12	7.5	9.4	8.2	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	12	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	12	31.9	34.8	33	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	12	270	290	280	N/A
Tin (mg/L)	N/A	N/A	10	<0.0002	<0.01	0.0011	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	33	<1	<1	N/A	N/A

Table 109 – Water quality data assessment for Wilora

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	6	<0.0002	<0.0005	0.0002	N/A
Arsenic (mg/L)	0.01	N/A	6	<0.0002	0.003	0.001	N/A
Barium (mg/L)	2	N/A	6	0.05	0.05	0.05	N/A
Beryllium (mg/L)	0.06	N/A	6	<0.0001	<0.001	0.0002	N/A
Boron (mg/L)	4	N/A	6	0.2	0.9	0.6	N/A
Cadmium (mg/L)	0.002	N/A	6	<0.00005	<0.0002	0.00005	N/A
Chlorine Free Residual (mg/L)	5	N/A	N/A	N/A	N/A	N/A	N/A
Chromium (mg/L)	0.05	N/A	6	<0.0002	<0.005	0.001	N/A
Copper (mg/L)	2	N/A	6	0.003	0.04	0.02	N/A
Fluoride (mg/L)	1.5	N/A	6	0.88	0.94	0.92	N/A
Lead (mg/L)	0.01	N/A	6	<0.0001	0.003	0.0008	N/A
Manganese (mg/L)	0.5	N/A	6	<0.0005	0.008	0.003	N/A
Mercury (mg/L)	0.001	N/A	6	<0.0001	<0.0002	0.00007	N/A
Molybdenum(mg/L)	0.05	N/A	6	0.001	<0.005	0.002	N/A
Nickel (mg/L)	0.02	N/A	6	<0.0005	<0.002	0.0007	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	6	20	20	20	N/A
Nitrite mg-NO ₂ /L*	3	N/A	6	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.5	N/A	N/A
Selenium (mg/L)	0.01	N/A	6	0.0003	0.006	0.003	N/A
Silver (mg/L)	0.1	N/A	6	<0.0001	<0.01	0.002	N/A
Uranium (mg/L)	0.02	N/A	6	0.00006	0.02	0.01	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	6	<0.005	0.051	0.02	N/A
Chloride (mg/L)	N/A	250	6	490	540	517	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	N/A	N/A	N/A	N/A	N/A
Copper (mg/L)	N/A	1	6	0.0032	0.04	0.017	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	6	587	701	666	N/A
Iron (mg/L)	N/A	0.3	6	<0.01	0.055	0.013	N/A
Manganese (mg/L)	N/A	0.1	6	<0.0005	0.0078	0.0031	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	6	7.81	8.39	8.1	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	6	195	233	216	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	6	77.7	97.8	89	N/A
Sodium (Na) (mg/L)	N/A	180	6	310	340	324	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	6	1560	1750	1650	N/A
True Colour (HU)	N/A	15	6	<2	<2	1.17	N/A
Turbidity (lab) (NTU)	N/A	5	6	0.19	1.4	0.8	N/A
Zinc (mg/L)	N/A	3	6	0.001	0.22	0.054	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	6	370	380	380	N/A
Apparent Colour (HU)	N/A	N/A	6	<2	4	1.8	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	6	440	460	460	N/A
Bromine (mg/L)	N/A	N/A	6	0.7	3.9	2.7	N/A
Calcium (Ca) (mg/L)	N/A	N/A	6	79.1	120	110	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	6	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	6	2800	2900	2800	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	6	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	6	0.2	0.6	0.33	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	6	89.9	102	97	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	6	4	4.4	4.1	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	6	4	4.4	4.1	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	6	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	6	58.5	64.9	63	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	6	810	880	850	N/A
Tin (mg/L)	N/A	N/A	6	<0.0002	<0.01	0.0017	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	33	<1	<1	N/A	N/A

Table 110 – Water quality data assessment for Wurrumiyanga

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	3	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	3	<0.0005	<0.0005	0.0003	N/A
Barium (mg/L)	2	N/A	3	<0.05	<0.05	0.03	N/A
Beryllium (mg/L)	0.06	N/A	3	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	3	<0.02	<0.02	0.01	N/A
Cadmium (mg/L)	0.002	N/A	3	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	117	0.02	2	1	2
Chromium (mg/L)	0.05	N/A	3	<0.005	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	3	0.02	0.07	0.05	N/A
Fluoride (mg/L)	1.5	N/A	98	<0.1	0.65	0.29	0.62
Lead (mg/L)	0.01	N/A	3	<0.001	0.002	0.001	N/A
Manganese (mg/L)	0.5	N/A	3	<0.005	<0.005	0.003	N/A
Mercury (mg/L)	0.001	N/A	3	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	3	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	3	<0.002	<0.002	0.001	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	3	<0.1	<0.1	0.05	N/A
Nitrite mg-NO ₂ /L*	3	N/A	3	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.1	N/A	N/A
Selenium (mg/L)	0.01	N/A	3	<0.001	<0.001	0.0005	N/A
Silver (mg/L)	0.1	N/A	3	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	3	<0.00001	<0.00001	0.000005	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	3	<0.02	<0.02	0.01	N/A
Chloride (mg/L)	N/A	250	3	6	7	6.67	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	117	0.02	1.59	1.2	N/A
Copper (mg/L)	N/A	1	3	0.02	0.07	0.053	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	3	1.3	1.5	1.37	N/A
Iron (mg/L)	N/A	0.3	3	0.01	0.014	0.012	N/A
Manganese (mg/L)	N/A	0.1	3	<0.005	<0.005	0.0025	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	3	4.91	4.97	4.9	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	3	<0.3	<0.3	0.15	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	3	13.5	13.7	14	N/A
Sodium (Na) (mg/L)	N/A	180	3	4.15	4.42	4.24	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	3	19	21	20	N/A
True Colour (HU)	N/A	15	3	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	3	0.44	0.51	0.47	N/A
Zinc (mg/L)	N/A	3	3	<0.01	0.13	0.047	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	3	<20	<20	10	N/A
Apparent Colour (HU)	N/A	N/A	3	<2	<2	1	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	3	<10	<10	5	N/A
Bromine (mg/L)	N/A	N/A	3	0.01	0.038	0.019	N/A
Calcium (Ca) (mg/L)	N/A	N/A	3	<0.03	0.1	0.043	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	3	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	3	29	32	31	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	3	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	3	<0.01	<0.01	0.005	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	3	0.3	0.3	0.3	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	3	<0.1	<0.1	0.05	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	3	<0.1	<0.1	0.05	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	3	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	3	0.1	0.1	0.1	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	3	10	12	11	N/A
Tin (mg/L)	N/A	N/A	3	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	135	<1	<1	N/A	N/A

Table III – Water quality data assessment for Wutunugurra

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	2	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	2	0.0005	0.0005	0.0005	N/A
Barium (mg/L)	2	N/A	2	0.4	0.5	0.4	N/A
Beryllium (mg/L)	0.06	N/A	2	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	2	0.1	0.1	0.1	N/A
Cadmium (mg/L)	0.002	N/A	2	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	30	0.7	2	1	2
Chromium (mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	2	0.01	0.05	0.03	N/A
Fluoride (mg/L)	1.5	N/A	2	0.24	0.24	0.24	N/A
Lead (mg/L)	0.01	N/A	2	<0.001	0.002	0.001	N/A
Manganese (mg/L)	0.5	N/A	2	<0.005	<0.005	0.003	N/A
Mercury (mg/L)	0.001	N/A	2	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	2	<0.002	<0.002	0.001	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	2	3	4	4	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.2	N/A	N/A
Selenium (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Silver (mg/L)	0.1	N/A	2	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	2	0.002	0.002	0.002	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	2	<0.02	<0.02	0.01	N/A
Chloride (mg/L)	N/A	250	2	43	43	43	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	30	0.72	1.54	1.2	N/A
Copper (mg/L)	N/A	1	2	0.01	0.05	0.03	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	2	184	196	190	N/A
Iron (mg/L)	N/A	0.3	2	<0.01	0.011	0.008	N/A
Manganese (mg/L)	N/A	0.1	2	<0.005	<0.005	0.0025	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	2	7.24	7.25	7.2	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	2	5.19	5.52	5.36	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	2	63.3	63.8	64	N/A
Sodium (Na) (mg/L)	N/A	180	2	32.8	33.7	33.3	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	2	263	291	277	N/A
True Colour (HU)	N/A	15	2	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	2	0.26	1.1	0.68	N/A
Zinc (mg/L)	N/A	3	2	0.02	0.03	0.025	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	190	190	190	N/A
Apparent Colour (HU)	N/A	N/A	2	<2	<2	1	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	230	230	230	N/A
Bromine (mg/L)	N/A	N/A	2	0.2	0.2	0.2	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	40.6	44.9	43	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	540	550	550	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	0.05	0.05	0.05	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	20.1	20.4	20	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	0.7	0.9	0.8	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	0.7	0.9	0.8	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	2	8.1	8.2	8.2	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	70	71	71	N/A
Tin (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	33	<1	<1	N/A	N/A

Table 112 – Water quality data assessment for Yarralin

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	2	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	2	<0.0005	<0.0005	0.0003	N/A
Barium (mg/L)	2	N/A	2	0.4	0.4	0.4	N/A
Beryllium (mg/L)	0.06	N/A	2	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	2	0.08	0.08	0.08	N/A
Cadmium (mg/L)	0.002	N/A	2	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	30	0.5	2	1	2
Chromium (mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	2	<0.01	<0.01	0.005	N/A
Fluoride (mg/L)	1.5	N/A	2	0.1	0.11	0.11	N/A
Lead (mg/L)	0.01	N/A	2	<0.001	<0.001	0.0005	N/A
Manganese (mg/L)	0.5	N/A	2	<0.005	<0.005	0.003	N/A
Mercury (mg/L)	0.001	N/A	2	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	2	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	2	<0.002	<0.002	0.001	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	2	9	9	9	N/A
Nitrite mg-NO ₂ /L*	3	N/A	2	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.3	N/A	N/A
Selenium (mg/L)	0.01	N/A	2	0.001	0.001	0.001	N/A
Silver (mg/L)	0.1	N/A	2	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	2	0.003	0.003	0.003	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	2	<0.02	<0.02	0.01	N/A
Chloride (mg/L)	N/A	250	2	12	12	12	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	30	0.5	1.55	1.1	N/A
Copper (mg/L)	N/A	1	2	<0.01	<0.01	0.005	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	2	335	337	336	N/A
Iron (mg/L)	N/A	0.3	2	<0.01	<0.01	0.005	N/A
Manganese (mg/L)	N/A	0.1	2	<0.005	<0.005	0.0025	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	2	8.27	8.3	8.3	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	2	<0.3	<0.3	0.15	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	2	32.1	32.1	32	N/A
Sodium (Na) (mg/L)	N/A	180	2	13.3	13.7	13.5	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	2	353	382	368	N/A
True Colour (HU)	N/A	15	2	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	2	0.23	0.27	0.25	N/A
Zinc (mg/L)	N/A	3	2	<0.01	0.05	0.028	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	340	340	340	N/A
Apparent Colour (HU)	N/A	N/A	2	<2	<2	1	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	420	420	420	N/A
Bromine (mg/L)	N/A	N/A	2	0.056	0.066	0.061	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	73	73.8	73	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	680	680	680	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	37	37.1	37	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	1.9	2	2	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	1.9	2	2	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	2	2.9	3	3	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	19	20	20	N/A
Tin (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	2	340	<1	N/A	N/A

Table 113 – Water quality data assessment for Yirrkala

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	3	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	3	<0.0005	<0.0005	0.0003	N/A
Barium (mg/L)	2	N/A	3	<0.05	<0.05	0.03	N/A
Beryllium (mg/L)	0.06	N/A	3	<0.001	<0.001	0.0005	N/A
Boron (mg/L)	4	N/A	3	<0.02	<0.02	0.01	N/A
Cadmium (mg/L)	0.002	N/A	3	<0.0002	<0.0002	0.0001	N/A
Chlorine Free Residual (mg/L)	5	N/A	186	0.7	2	1	1
Chromium (mg/L)	0.05	N/A	3	<0.005	<0.005	0.003	N/A
Copper (mg/L)	2	N/A	3	0.01	0.02	0.01	N/A
Fluoride (F) (mg/L)	1.5	N/A	3	<0.1	<0.1	0.05	N/A
Lead (mg/L)	0.01	N/A	3	<0.001	<0.001	0.0005	N/A
Manganese (mg/L)	0.5	N/A	3	<0.005	0.02	0.007	N/A
Mercury (mg/L)	0.001	N/A	3	<0.0001	<0.0001	0.00005	N/A
Molybdenum (mg/L)	0.05	N/A	3	<0.005	<0.005	0.003	N/A
Nickel (mg/L)	0.02	N/A	3	<0.002	<0.002	0.001	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	3	0.3	0.4	0.4	N/A
Nitrite mg-NO ₂ /L *	3	N/A	3	<0.3	<0.3	0.2	N/A
Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.1	N/A	N/A
Selenium (mg/L)	0.01	N/A	3	<0.001	<0.001	0.0007	N/A
Silver (mg/L)	0.1	N/A	3	<0.01	<0.01	0.005	N/A
Uranium (mg/L)	0.02	N/A	3	0.00008	0.00008	0.00008	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	3	<0.02	<0.02	0.01	N/A
Chloride (Cl) (mg/L)	N/A	250	3	12	13	12.7	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	186	0.72	1.63	1.2	N/A
Copper (mg/L)	N/A	1	3	0.01	0.02	0.013	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	3	4.2	4.7	4.37	N/A
Iron (mg/L)	N/A	0.3	3	<0.01	0.017	0.011	N/A
Manganese (mg/L)	N/A	0.1	3	<0.005	0.015	0.0067	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	3	5.57	5.59	5.6	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	3	0.81	0.9	0.85	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	3	11.7	11.9	12	N/A
Sodium (Na) (mg/L)	N/A	180	3	7.33	7.54	7.46	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	3	21	31	24.3	N/A
True Colour (HU)	N/A	15	3	<2	<2	1.33	N/A
Turbidity (lab) (NTU)	N/A	5	3	0.22	0.34	0.3	N/A
Zinc (mg/L)	N/A	3	3	<0.01	<0.01	0.005	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	2	340	340	340	N/A
Apparent Colour (HU)	N/A	N/A	2	<2	<2	1	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	2	420	420	420	N/A
Bromine (mg/L)	N/A	N/A	2	0.056	0.066	0.061	N/A
Calcium (Ca) (mg/L)	N/A	N/A	2	73	73.8	73	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	2	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	2	680	680	680	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	2	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	2	37	37.1	37	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	2	1.9	2	2	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	2	1.9	2	2	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	2	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	2	2.9	3	3	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	2	19	20	20	N/A
Tin (mg/L)	N/A	N/A	2	<0.01	<0.01	0.005	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	2	340	<1	N/A	N/A

Table 114 – Water quality data assessment for Yuelamu

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	13	<0.0002	<0.0002	0.0001	N/A
Arsenic (mg/L)	0.01	N/A	13	<0.0002	<0.0005	0.0002	N/A
Barium (mg/L)	2	N/A	13	0.0006	<0.05	0.01	N/A
Beryllium (mg/L)	0.06	N/A	13	<0.0001	<0.001	0.0003	N/A
Boron (mg/L)	4	N/A	13	1	1	1	N/A
Cadmium (mg/L)	0.002	N/A	13	<0.00005	<0.0002	0.00007	N/A
Chlorine Free Residual (mg/L)	5	N/A	30	0.7	2	1	2
Chromium (mg/L)	0.05	N/A	13	<0.0002	<0.005	0.001	N/A
Copper (mg/L)	2	N/A	13	0.004	0.1	0.03	N/A
Fluoride (mg/L)	1.5	N/A	9	0.4	0.8	0.61	N/A
Lead (mg/L)	0.01	N/A	13	0.0001	0.002	0.0007	N/A
Manganese (mg/L)	0.5	N/A	13	<0.0005	<0.005	0.002	N/A
Mercury (mg/L)	0.001	N/A	13	<0.0001	<0.0001	0.00005	N/A
Molybdenum(mg/L)	0.05	N/A	13	<0.0001	<0.005	0.001	N/A
Nickel (mg/L)	0.02	N/A	13	<0.0005	<0.002	0.0007	N/A
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	9	2	6	3	N/A
Nitrite mg-NO ₂ /L*	3	N/A	9	<0.3	<0.3	0.2	N/A
∑ Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.2	N/A	N/A
Selenium (mg/L)	0.01	N/A	13	<0.0002	<0.001	0.0003	N/A
Silver (mg/L)	0.1	N/A	13	<0.0001	<0.01	0.003	N/A
Uranium (mg/L)	0.02	N/A	13	0.003	0.008	0.005	N/A
Aesthetic							
Aluminium (mg/L)	N/A	0.2	13	<0.005	<0.02	0.0067	N/A
Chloride (Cl) (mg/L)	N/A	250	9	21	33	27.7	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	30	0.68	1.67	1.1	N/A
Copper (mg/L)	N/A	1	13	0.0036	0.11	0.027	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	9	47.3	57.6	51.5	N/A
Iron (mg/L)	N/A	0.3	9	<0.01	0.18	0.028	N/A
Manganese (mg/L)	N/A	0.1	13	<0.0005	<0.005	0.0016	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	9	7.56	8.7	8.2	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	9	3.33	10.9	6.84	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	9	69.8	77	73	N/A
Sodium (Na) (mg/L)	N/A	180	9	34.5	62.1	50.1	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	9	194	291	231	N/A
True Colour (HU)	N/A	15	9	<2	<2	1	N/A
Turbidity (lab) (NTU)	N/A	5	9	0.21	0.96	0.42	N/A
Zinc (mg/L)	N/A	3	13	0.01	0.24	0.059	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	9	94	120	100	N/A
Apparent Colour (HU)	N/A	N/A	9	<2	<2	1.3	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	9	120	140	130	N/A
Bromine (mg/L)	N/A	N/A	13	0.5	1.56	0.92	N/A
Calcium (Ca) (mg/L)	N/A	N/A	9	17.8	20.6	19	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	9	<10	<10	5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	9	260	370	320	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	9	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	13	0.09	0.44	0.26	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	9	0.7	1.5	1	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	9	0.5	1.3	0.76	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	9	0.5	1.3	0.76	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	9	<0.1	<0.1	0.05	N/A
Potassium (K) (mg/L)	N/A	N/A	9	0.3	0.5	0.39	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	9	34	54	45	N/A
Tin (mg/L)	N/A	N/A	13	<0.0002	<0.01	0.0027	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	30	<1	<1	N/A	N/A

Table 115 – Water quality data assessment for Yuendumu

Parameter	ADWG Health	ADWG Aesthetics	Sample Count	Minimum	Maximum	Average	95th Percentile
Health							
Antimony (mg/L)	0.003	N/A	24	<0.0002	0.0008	0.0001	0.0007
Arsenic (mg/L)	0.01	N/A	24	<0.0002	<0.0005	0.0002	0.0003
Barium (mg/L)	2	N/A	24	0.04	0.05	0.04	0.05
Beryllium (mg/L)	0.06	N/A	24	<0.0001	<0.001	0.0002	0.0005
Boron (mg/L)	4	N/A	24	0.2	0.4	0.3	0.4
Cadmium (mg/L)	0.002	N/A	24	<0.00005	<0.0002	0.00005	0.0001
Chlorine Free Residual (mg/L)	5	N/A	30	0.8	1	1	1
Chromium (mg/L)	0.05	N/A	24	<0.0002	<0.005	0.001	0.003
Copper (mg/L)	2	N/A	24	0.002	0.1	0.01	0.1
Fluoride (F) (mg/L)	1.5	N/A	22	0.42	0.52	0.47	0.52
Lead (mg/L)	0.01	N/A	24	<0.0001	0.003	0.0005	0.002
Manganese (mg/L)	0.5	N/A	24	<0.0005	<0.005	0.001	0.003
Mercury (mg/L)	0.001	N/A	24	<0.0001	0.0002	0.00006	0.0002
Molybdenum (mg/L)	0.05	N/A	24	<0.0001	<0.005	0.0009	0.003
Nickel (mg/L)	0.02	N/A	24	<0.0005	<0.002	0.0006	0.001
Nitrate as NO ₃ (UV screening) (mg/L)	50	N/A	22	4	8	5	8
Nitrite (mg-NO ₂ /L) *	3	N/A	22	<0.3	<0.3	0.2	0.09
Nitrate and Nitrite Sum of Ratios"	1	N/A	N/A	N/A	0.3	N/A	N/A
Selenium (mg/L)	0.01	N/A	24	0.001	0.003	0.002	0.003
Silver (mg/L)	0.1	N/A	24	<0.0001	<0.01	0.002	0.005
Uranium (mg/L)	0.02	N/A	24	0.008	0.02	0.01	0.02
Aesthetic							
Aluminium (mg/L)	N/A	0.2	24	<0.005	<0.02	0.0051	N/A
Chloride (Cl) (mg/L)	N/A	250	22	190	340	271	N/A
Chlorine Free Residual (mg/L)	N/A	0.6	30	0.82	1.29	1	N/A
Copper (mg/L)	N/A	1	24	0.002	0.13	0.014	N/A
Hardness as CaCO ₃ (mg/L as CaCO ₃)	N/A	200	22	353	578	526	N/A
Iron (mg/L)	N/A	0.3	22	<0.01	0.033	0.015	N/A
Manganese (mg/L)	N/A	0.1	24	<0.0005	<0.005	0.0013	N/A
pH (lab) (pH)	N/A	6.5 - 8.5	22	7.27	8.59	7.8	N/A
S as Sulphate (S as SO ₄) (mg/L)	N/A	250	22	99.9	139	126	N/A
Si as Silica (Si as SiO ₂) (mg/L)	N/A	80	22	11.8	18	16	N/A
Sodium (Na) (mg/L)	N/A	180	22	118	142	133	N/A
Total Dissolved Solids Dried at 180C (mg/L)	N/A	600	22	743	1140	956	N/A
True Colour (HU)	N/A	15	22	<2	<2	1.18	N/A
Turbidity (lab) (NTU)	N/A	5	22	0.21	1.2	0.56	N/A
Zinc (mg/L)	N/A	3	24	0.005	0.246	0.075	N/A
Other							
Alkalinity as CaCO ₃ (mg/L as CaCO ₃)	N/A	N/A	22	230	310	290	N/A
Apparent Colour (HU)	N/A	N/A	22	<2	6	2.5	N/A
Bicarbonate (HCO ₃) (mg/L)	N/A	N/A	22	270	380	350	N/A
Bromine (mg/L)	N/A	N/A	24	0.7	2.6	1.1	N/A
Calcium (Ca) (mg/L)	N/A	N/A	22	74.8	124	110	N/A
Carbonate (CO ₃) (mg/L)	N/A	N/A	22	<10	12	5.5	N/A
Electrical Conductivity (Lab) (uS/cm)	N/A	N/A	22	1300	1800	1700	N/A
Hydroxide (OH) (mg/L)	N/A	N/A	22	<1	<1	0.5	N/A
Iodine (mg/L)	N/A	N/A	24	0.12	0.6	0.29	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	22	40.3	67	60	N/A
Nitrate + Nitrite as N (NO _x -N) (mg/L)	N/A	N/A	22	0.8	1.9	1.2	N/A
Nitrate as N (NO ₃ -N) (mg/L)	N/A	N/A	22	0.8	1.9	1.2	N/A
Nitrite as N (NO ₂ -N) (mg/L)	N/A	N/A	22	<0.1	<0.1	0.052	N/A
Potassium (K) (mg/L)	N/A	N/A	22	16.9	22.6	21	N/A
Sodium Chloride (NaCl) (mg/L)	N/A	N/A	22	310	560	440	N/A
Tin (mg/L)	N/A	N/A	24	<0.0002	<0.01	0.0018	N/A
E. coli							
E. coli (MPN/100 mL)	0	N/A	30	<1	<1	N/A	N/A

* Nitrite concentration (NO₂ mg/L) result is a conversion from Nitrite as nitrogen (NO₂-N mg/L). Converting from nitrite as nitrogen (NO₂-N) to standard nitrite concentration (NO₂), the factor 3.284 is obtained by dividing the molecular weight of nitrite by the molecular weight of nitrogen (46 g/mole ÷ 14 g/mole ≈ 3.284).

"" Because it is possible that nitrate and nitrite may occur simultaneously in drinking-water, and the 2 have a common toxic effect (methaemoglobinaemia), these compounds should be considered together when judging compliance with the ADWG. The sum of the ratios of the concentration (C) of each to its guideline value (GV) should not exceed unity (WHO 2007). This is a standard screening risk assessment approach based on the assumption of dose additivity. Thus, for infants:

$$(C_{\text{nitrate}}/GV_{\text{nitrate}}) + (C_{\text{nitrite}}/GV_{\text{nitrite}}) < 1 = (C_{\text{nitrate}}/50\text{mg/L}) + (C_{\text{nitrite}}/3\text{mg/L}) < 1$$

 Denotes exceedance

 Denotes data is from 2021-2022 period



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