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# DWQMP Regular Audit Report

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McKinlay Shire Council  
October 2025

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## **Appendices**

### A. [Audit Checklist](#)

## EXECUTIVE SUMMARY

### Background

Viridis Consultants Pty Ltd (Viridis) conducted the regular audit of McKinlay Shire Council's (MSC) approved Drinking Water Quality Management Plan (DWQMP). The audit is a requirement of the *Water Supply (Safety and Reliability) Act 2008* (the Act). The scope of the audit was in accordance with the Guideline for the preparation, review and audit of drinking water quality management plans (October 2022).

The audit was conducted on 28-29 August 2025. The audit sample included site inspections, interviews with relevant staff and observation of documentation and records. This report includes the findings and conclusions from the regular audit of the DWQMP.

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### Positives

The auditor was especially pleased to note the following:

- McKinlay staff were keen to learn and improve their DWQMP systems.
- Adoption of the safety culture app to document inspection records is a positive action.

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### Compliance Summary

The degree to which the audit criteria was fulfilled is summarised in Table 1, sixteen (16) requirements needed to be audited. There was a low level of compliance identified.

The auditor concluded based on the results of the audit that:

- data reporting to the regulator should be improved
- there are major gaps with the implementation of the DWQMP
- relevance of the plan could be enhanced
- the objectives of the audit were fulfilled without any issues.

*Table 1 Compliance Summary*

Compliance Codes	Number of Findings
Conformance	6
Minor Non-Conformance	7
Major Non-Conformance	3
No requirement	0

The Recommendations (RECs) and Opportunities for Improvement (OFIs), as relevant, are outlined below.

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## Recommendations

- **Verification monitoring reporting**  
**REC 1:** Review the DWQMP verification monitoring requirements and ensure all parameters are analysed at the required frequency and reported in the annual report.
- **Reporting to Regulator**  
**REC 2:** Ensure all periodic reporting conditions including open incidents are followed, analysed and reported.
- **Bore integrity**  
**REC 3:** Ensure Management reviews Safety Culture bore condition reports and action repairs to any defects that may allow ingress (Scour Bore).
- **Reservoir Inspection and cleaning**  
**REC 4:** Implement a reservoir cleaning program including roof access for inspections. Add reservoir visual inspection to safety culture inspection app.
- **WQ Training**  
**REC 5:** Ensure water operators are appropriately trained in WQ operations such as Cert 3 in water operations.
- **Incident Reporting**  
**REC 6:** Review the IERP and ensure all management and staff are fully trained and aware of their responsibilities under the DWQMP IERP requirements.
- **Verification Microbiological Testing**  
**REC 7:** Ensure all verification microbiological testing is undertaken according to the monitoring schedule and results documented in an appropriate form for management review.
- **DWQMP Reviews**  
**REC 8:** Review management commitment to DWQMP implementation and provide adequate resources to ensure reviews and DWQMP requirements can be fulfilled.
- **Records Management**  
**REC 9:** Ensure a records management system is utilised for all DWQMP information and data. Develop a procedure to ensure documents are recorded and stored in a secure location that can be accessed by appropriate staff. Include document version control. Once a system is in place ensure all officers are trained in the system.
- **Catchment Category Assessment**  
**REC 10:** At next DWQMP review undertake a catchment category assessment that includes HBT using recent water quality datasets.
- **Review Risk Assessment**  
**REC 11:** Review and amend the risk assessment to include review of hazards, hazardous events, preventative measures and reassess the risk ratings.

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## Opportunities for Improvement

- **Microbiological testing**  
**OFI 1:** Consider reviewing the verification sampling requirements with the regulator prior to next review and updating the DWQMP.
- **O&M Procedures**  
**OFI 2:** Consider developing a training program to ensure officers are aware of and can demonstrate competence in each procedure.
- **Operational and verification monitoring**  
**OFI 3:** Consider review of operational and verification monitoring tables to ensure all requirements are implemented.

- **WQ data monitoring**

**OFI 4:** Consider compiling all WQ data into an excel spreadsheet so trends and anomalies can be visually identified and reviewed regularly.

- **Review RMIP**

**OFI 5:** Consider reviewing RMIP and updating RMIP target dates against action requirements to provide more realistic action timeframes.

- **Process Schematics**

**OFI 6:** Review and update process schematics for all schemes to reflect operation as required at next review

## 1. INTRODUCTION

Viridis Consultants Pty Ltd (Viridis) has been engaged as part of a joint procurement by the North West Queensland Water and Sewerage Alliance (NWQWSA) to undertake the regular (external) audit of McKinlay Shire Council (MSC) (service provider identification (SPID) number 84) approved Drinking Water Quality Management Plan (DWQMP).

As required by the *Water Supply (Safety and Reliability) Act 2008* (the Act), MSC is operating its drinking water service under an approved DWQMP and is required to complete the regular audit of its approved DWQMP in 2025.

This report includes the findings and conclusions from the regular audit undertaken in 2025.

### 1.1. Objectives

The objectives of the audit are to:

- undertake an audit of the DWQMP to fulfil the requirements of the Act and approval notice
- conduct the audit in line with the *Regulator's Guideline for the preparation, review and audit of drinking water quality management plans (October 2022)*.

### 1.2. Audit Client

MSC is the audit client (for their respective audit).

### 1.3. Regulatory Regime

The statutory requirements for DWQMP regular audits are detailed in the Act. The relevant provisions in the Act for providing audit reports are:

- Section 99(2)(c) - if the regulator approves the plan, the notice of the decision or information notice for the decision, will state that if the regulator requires audits of the approved plan – the intervals at which the audits must be conducted.
- Section 99(4) - the interval for regular audits will not be less than two years.
- Section 105(2) - the regular audit report for the plan must be prepared by a person:
  - is not the provider or employee of the provider
  - is not the owner or employee of a prescribed related entity of a relevant infrastructure owner
  - is not employed in the operation of the provider's infrastructure.
- Section 105(3)(a) – the auditor must be a person who is certified under the Drinking Water Quality Management System Auditor Certification Scheme to conduct an audit of the type to which the report relates or has a qualification the regulator is satisfied is at least equivalent to this certification.
- Section 108(1) - the provider must arrange for regular audit reports to be prepared about the provider's plans and compliance with the plans.
- Section 108(2) - regular audit reports must be prepared in accordance with the notice given by the regulator under section 99 and provided to the regulator within 30 business days after its completion.
- Section 108(3) states that the purpose of the regular audit report for the plan is:
  - to be prepared by the auditor in accordance with any guidelines about preparing the report made by the regulator
  - to verify the accuracy of the monitoring and performance data provided to the regulator under the plan
  - to assess the service provider's compliance with the plan and its conditions

- to assess the relevance of the plan in relation to the provider's drinking water service.
- Section 575 states that the provider must keep a copy of the audit report available for inspection and purchase by the public during office hours on business days at the office of the service provider.

#### **1.4. Auditing Team**

##### **1.4.1. Audit Team Leader**

Tasleem Hasan is the audit team leader. Tasleem's qualifications to undertake this audit are detailed below:

##### **Education**

- Master of Science (Chemistry)
- Bachelor of Science (Chemistry/Mathematics)

##### **Auditor certification held with Exemplar Global**

- Lead Water Quality Management Systems Auditor:
  - Drinking Water
  - Recycled Water

##### **Experience**

- >50 audits undertaken, ranging from regulatory, compliance and process improvement audits.
- Audit clients have included small supplies to very large metropolitan supplies.
- DWQMP development, review and implementation for >50 utilities across QLD and NSW.

##### **1.4.2. Onsite Lead Auditor**

The onsite auditor is Tracy Hay. Tracy's qualifications to undertake this audit are detailed below:

##### **Education**

- Master of Science
- Bachelor of Applied Science

##### **Auditor certification held with**

- Lead Drinking Water Quality Management Systems Auditor: Exemplar Global
- Lead Food Safety Auditor- BRC9

##### **Experience**

- > 20 years' experience in R&D, natural resource and project management within the public and private sectors implementing food safety and water quality management systems in roles including Quality Assurance Manager, Operations Manager, Implementation Manager and Senior Consultant.
- Development, review and/or updated of food and water quality management systems across a number of industries, guidelines and standards (Australian Drinking Water Guidelines (ADWG), Hazard Analysis and Critical Control Points (HACCP), ISO9001, ISO22000).
- Recent audits and projects include Kowanyama DWQMP Audit, Seqwater DWQMP Audit, Cloncurry DWQMP audit, Urban Utilities (UU) DWQMP audit team, Carpentaria Shire DWQMP and Site Based Management Plan (SBMP) reviews, Bogan Shire Standard Operating Procedures (SOPs) development and Seqwater (Water Quality (WQ) Sampling ISO9001 review).



## 2. AUDIT METHODOLOGY

### 2.1. Audit Scope

The scope of the audit was to:

- verify the accuracy of monitoring and performance data given to the regulator under the plan
- assess compliance with the plan and its conditions
- assess the relevance of the plan in relation to the drinking water service

### 2.2. Audit Standard

ISO 19011:2018 Guidelines for auditing management systems was used to ensure good auditing practice.

### 2.3. Audit Criteria and Period

The audit focused on the implementation of the DWQMP and relevance of the plan to manage risks to water quality. The criteria for assessing compliance were:

- the approved versions of the DWQMP active during the audit period.
- approval information notices during the audit period.

The audit period was from the last regular DWQMP to current.

### 2.4. Audit Process

The audit was undertaken in accordance with the methodology outlined in the Audit Standard. The audit steps and responsible parties are outlined in Table 2.

*Table 2 Audit Steps*

Step Description	Responsibility
Initiate audit / engage auditor	Council
Information request	Viridis
Supply audit evidence requested	Council
Prepare Audit Plan	Viridis
Audit preparation	Viridis
Opening meeting (onsite)	Viridis/Council
Attend interviews and site inspection (onsite)	Viridis/Council
Closing meeting (onsite)	Viridis/Council
Draft audit report preparation	Viridis
Review and provide comments on draft report	Council
Final audit report	Viridis
Signed statutory declarations	Viridis/Council
Submit final audit report and statutory declarations to the regulator	Viridis

## 2.5. Audit Grades

Table 3 identifies the grades used for this audit.

*Table 3 Audit Grades*

Compliance Codes	Definitions
<b>Compliant</b>	Indicates compliance of audit findings with audit criteria.
<b>Minor Non-Compliance</b>	Does not comply, however, deficiency does not compromise the delivery of products or outcomes and does not compromise the ability to achieve defined objectives.
<b>Major Non-Compliance</b>	Does not comply. Deficiency compromises the delivery of products or outcomes, and the ability to achieve defined objectives.
No requirement	There was no requirement to meet this criterion within the audit period.

A recommendation (REC) is provided for requirements which do not comply, that is, minor or major non-compliance.

An opportunity for improvement (OFI) is identified for activities which comply but may also be improved.

## 2.6. Quality Assurance Process

This audit was carried out in accordance with the Viridis Quality Manual, which aligns to standard *ISO 9001 Quality Management Systems*. Quality assurance activities undertaken during the audit comprised of:

- compliance with the Viridis Quality Manual
- document control and approval processes
- quality review of the report.

## 2.7. Sampling

Audits by nature are a sampling exercise; as such there is a risk that the audit evidence examined is not representative. The audit sample included onsite inspection of the supply infrastructure, interviews with relevant staff and observation of documentation and records.

## 2.8. Audit Schedule

Refer to Table 4 for the audit schedule.

*Table 4 Audit Agenda*

Start	Finish	Details
<b>Thursday 28/08 – McKinlay SC – Site Visits</b>		
7:15	8:30	Drive from Julia Creek to McKinlay
8:30	9:15	McKinlay supply site visit <ul style="list-style-type: none"> <li>• Compliance with plan / Relevance of plan               <ul style="list-style-type: none"> <li>○ Process steps</li> <li>○ Monitoring and CCPs</li> <li>○ Calibration</li> <li>○ Preventive measures</li> <li>○ Changes in catchment</li> <li>○ Staff training – operators, water sampler</li> </ul> </li> </ul>
9:15	10:15	Drive to Kynuna
10:15	11:00	Kynuna supply site visit <ul style="list-style-type: none"> <li>• Compliance with plan / Relevance of plan               <ul style="list-style-type: none"> <li>○ Process steps</li> <li>○ Monitoring and CCPs</li> <li>○ Calibration</li> <li>○ Preventive measures</li> <li>○ Changes in catchment</li> <li>○ Staff training – operators, water sampler</li> </ul> </li> </ul>
11:00	11:30	Lunch in Kynuna (may need packaged lunch)
11:30	13:30	Drive to Nelia
13:30	14:15	Nelia supply site visit <ul style="list-style-type: none"> <li>• Compliance with plan / Relevance of plan               <ul style="list-style-type: none"> <li>○ Process steps</li> <li>○ Monitoring and CCPs</li> <li>○ Calibration</li> <li>○ Preventive measures</li> <li>○ Changes in catchment</li> <li>○ Staff training – operators, water sampler</li> </ul> </li> </ul>
14:15	14:45	Drive to Julia Creek
14:45	15:30	Julia Creek supply site visit <ul style="list-style-type: none"> <li>• Compliance with plan / Relevance of plan               <ul style="list-style-type: none"> <li>○ Process steps</li> <li>○ Monitoring and CCPs</li> <li>○ Calibration</li> <li>○ Preventive measures</li> <li>○ Changes in catchment</li> <li>○ Staff training – operators, water sampler</li> </ul> </li> </ul>

Start	Finish	Details
15:30		End of Day Stay in Julia Creek
<b>Friday 29/08 – McKinlay SC – Interviews, Opening and Closing Meetings</b>		
8:30	9:00	McKinlay - Opening meeting / Introduction to audit
9:00	9:30	Review outcomes of previous DWQMP regular audit
9:30	10:00	Interviews <ul style="list-style-type: none"> <li>• Verify accuracy of data               <ul style="list-style-type: none"> <li>○ Data for the DWQMP Annual Report</li> </ul> </li> <li>• DWQMP - Assess compliance with Plan               <ul style="list-style-type: none"> <li>○ Implementation of the verification monitoring program</li> </ul> </li> </ul>
10:00	10:15	Break
10:15	10:45	<ul style="list-style-type: none"> <li>• DWQMP - Assess compliance with Plan               <ul style="list-style-type: none"> <li>○ Implementation of process for managing incidents and emergencies</li> </ul> </li> </ul>
10:45	11:15	<ul style="list-style-type: none"> <li>• DWQMP - Assess compliance with Plan               <ul style="list-style-type: none"> <li>○ Implementation of operational and maintenance procedures – reservoirs / repairs in reticulation</li> </ul> </li> </ul>
11:15	11:30	<ul style="list-style-type: none"> <li>• DWQMP - Assess compliance with Plan               <ul style="list-style-type: none"> <li>○ Document management system, including document reviews and version control</li> <li>○ Maintain records using information management systems</li> </ul> </li> </ul>
11:30	12:00	Lunch
12:00	12:30	<ul style="list-style-type: none"> <li>• DWQMP - Assess compliance with Plan               <ul style="list-style-type: none"> <li>○ Implementation of the risk management improvement program</li> </ul> </li> </ul>
12:30	12:45	<ul style="list-style-type: none"> <li>• DWQMP - Assess compliance with Plan               <ul style="list-style-type: none"> <li>○ Provisions and conditions in the approval notice - DWQMP regular reviews</li> </ul> </li> </ul>
12:45	13:15	Break and auditor time
13:15	13:45	McKinlay SC Closing Meeting Finding summary and next steps
13:45	PM	<b>End</b>

## 2.9. Auditees

The auditees were as follows:

- Andrew Masters, MSC, Water and Sewer Officer
- Jason Brady, MSC, Environmental Regulatory Services, Team Leader

### 3. STATUS OF RECOMMENDATIONS FROM PREVIOUS AUDIT

The status of the recommendations from the previous regular audit of the DWQMP (undertaken in 2021) was discussed with the provider and is noted in Table 5 below. The status of OFIs from the last audit is not discussed here.

*Table 5 Status of Previous Regular Audit Recommendations*

Non-conformance	Recommendation	Status
The DWQMP does not explicitly identify all preventive measures for managing the identified hazards. Examples include: vermin/bird proofing of water storages, replacement of ion exchange resin at Kynuna	Review and update the risk assessment in a scheme by scheme format, so that scheme specific circumstances can be captured	Risk assessment has been updated
The bore head integrity at Kynuna and McKinlay was poor, with holes in all boreheads in both schemes.	Seal boreheads to prevent external contamination from entering the bores.	Completed
There were no backflow prevention devices on customer connections (both the current and previous versions of the plan stated that backflow prevention devices were a current preventive measure mitigating the risk of backflow into the reticulation network)	Proceed with the program of backflow prevention device installation and amend the DWQMP accordingly.	Backflow installation is 90% and DWQMP updated
Although a Reservoir Integrity procedure exists, there was a gap in the roofing at the Kynuna storage tower	Address the integrity breach and to ensure the procedure is amended and/or implemented such that integrity breaches are able to be identified and addressed in a timely manner.	Gap in roof is no longer evident via drone footage inspection – WHS issue with ladder and walkway make inspection difficult
No sample results were recorded in the spreadsheet for January 2018, February 2019, and June 2019.	Ensure the verification monitoring program is implemented as stated in the DWQMP, and if staff absences occur (e.g. sick or annual leave), then sampling should be rescheduled for earlier or later in the month or alternative arrangements made	Verification has been reviewed and implemented as per the plan, although gaps have been noted in the 2025 audit
The response to the Mosse report indicates that pipes are stored undercover, however during the audit the pipe storage rack at Julia Creek was inspected, and was out in the open (though pipes were stored off the ground).	Store pipes under cover (or amend the response to the Mosse report)	Storage area has been covered
A gap remains where the level sensor/indicator cable extends through the Kynuna Tower roof	The gap should be sealed.	Unknown drone will be deployed to investigate
There were two standpipes sighted at Kynuna, with no physical air gap at either one	It is recommended that a backflow prevention device be installed on the pipework upstream of the tanker filling point.	Kynuna standpipe is no longer used and is planned to be disconnected and removed
There were visible gaps/openings in both McKinlay bore heads	Seal boreheads to prevent external contamination from entering the bores.	Have been sealed in 2023



Non-conformance	Recommendation	Status
The McKinlay standpipe was still able to be operated by turning the valve on, and there was no signage to indicate that it should not be used.	The recommendation is to either install backflow prevention, or decommission the standpipe.	Is scheduled to be removed

## 4. AUDIT FINDINGS

The audit was carried out as described in Section 2. The completed Audit Checklist is in Appendix A, which provides the detailed findings for the audit. These findings have been summarised in the following subsections.

### 4.1. Accuracy of Monitoring and Performance Data

Compliance grade by component:

- Verification data generated
- Data Accuracy in the DWQMP (annual) Reports
- Data Accuracy in periodic reports

**Minor Non-Compliance**  
**Compliant**  
**Minor Non-Compliance**

There were minor non-compliances noted for this audit area.

### 4.2. Compliance with the Plan and its Conditions

Compliance grade by component:

- Implementation of preventive measures
- Implementation of operational and maintenance procedures
- Implementation of process for managing incidents and emergencies
- Implementation of operational and verification monitoring programs
- Implementation of the risk management improvement program
- Reviews undertaken
- Maintaining records

**Minor Non-Compliance**  
**Minor Non-Compliance**  
**Major Non-Compliance**  
**Major Non-Compliance**  
**Compliant**  
**Major Non-Compliance**  
**Minor Non-Compliance**

Compliance with the plan needs to be improved.

### 4.3. Relevance of the Plan

Compliance grade by component:

- Service description and details of infrastructure
- Catchment characteristics and water quality information
- Risk assessment and risk management
- Incident Management
- Operational and verification monitoring
- Improvement Plan

**Compliant**  
**Minor Non-Compliance**  
**Minor Non-Compliance**  
**Compliant**  
**Compliant**  
**Compliant**

There were two minor non-compliances noted for this audit area.

## 5. AUDIT CONCLUSIONS

The audit objectives were completed successfully. A low level of compliance was identified.

The regulatory audit identified significant compliance gaps requiring management attention. The audit revealed three major and seven minor non-compliances, indicating systemic deficiencies in DWQMP implementation.

There are concerns with the incident management process, where thermotolerant coliform and *E. coli* detections were not reported to the regulator as required, demonstrating a breakdown in incident reporting protocols. This major non-compliance, combined with the absence of IERP training for staff, presents a public health risk that requires immediate corrective action.

Also concerning is the failure to implement verification monitoring programs as specified in the DWQMP. In-house Colilert testing results are not being documented, required microbiological parameters as per the DWQMP including *Legionella* and *Naegleria fowleri* are not being tested at specified frequencies, and radiological testing has not been conducted. The audit period showed gaps in monitoring data collection, particularly in April 2024 and May-December 2023.

The third major concern relates to DWQMP reviews, where Council withdrew its amendment request in August 2025 due to insufficient resources. This reflects negatively on management commitment and resource allocation to drinking water quality management. The regulator's request for data analysis and interpretation was not satisfactorily addressed.

Some infrastructure deficiencies were evident across multiple sites. The Nelia bore casing is severely corroded with compromised fencing, the Scour bore at Julia Creek requires concrete footing replacement, and reservoir inspections and cleaning programs have not been implemented due to workplace health and safety access issues. These physical defects increase contamination risks.

Additional improvement areas include the absence of formal water quality training for operators, inadequate records management with in-house testing not documented, missing HBT catchment assessments, and incomplete risk assessments that fail to address all relevant hazards.

Addressing the identified gaps and implementing the recommended actions will improve the effectiveness and resilience of Council's drinking water quality management system.

## 6. GLOSSARY

Word	Description
<b>ADWG</b>	Australian Drinking Water Guidelines
<b>CCP</b>	Critical Control Point
<b>DWQMP</b>	Drinking Water Quality Management Plan
<b>DWQ</b>	Drinking Water Quality
<b><i>E. coli</i></b>	<i>Escherichia coli</i>
<b>HBT</b>	Health Based Target
<b>mg/L</b>	Milligram per Litre
<b>NA</b>	Not Applicable
<b>OFI</b>	Opportunity for Improvement
<b>O&amp;M</b>	Operations and Maintenance
<b>QH</b>	Queensland Health
<b>QLD</b>	Queensland
<b>RA</b>	Risk Assessment
<b>REC</b>	Recommendation
<b>RMIP</b>	Risk Management Improvement Plan
<b>Regulator, DLGWV</b>	Department of Local Government Water and Volunteers
<b>SCADA</b>	Supervisory Control and Data Acquisition
<b>SOP</b>	Standard Operating Procedure
<b>NWQWSA</b>	North West Queensland Water and Sewerage Alliance
<b>The Act</b>	Water Supply (Safety and Reliability) Act 2008
<b>Viridis</b>	Viridis Consultants Pty Ltd
<b>WQ</b>	Water Quality
<b>WTP</b>	Water Treatment Plant

## DOCUMENT HISTORY AND TRACKING

### Document History

Version	Section/s Modified	Brief Description of Amendment	Author	Approver	Issue Date
0.1	NA	Draft	Tasleem Hasan and Tracy Hay	Tasleem Hasan	12/09/2025
0.2	NA	Draft for client feedback	Tasleem Hasan and Tracy Hay	Tasleem Hasan	16/09/2025
1.0	None	Final	Tasleem Hasan and Tracy Hay	Tasleem Hasan	7/10/2025

### Document Tracking

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## **A. AUDIT CHECKLIST**



## Qld DWQMP Regulatory Audit

Audit Details	
<b>Auditee - WSP</b>	McKinlay SC
<b>WSP Number</b>	84
<b>Audit Date/s</b>	28-29 August 2025
<b>Audit Team Leader</b>	Tasleem Hasan
<b>Onsite Auditor</b>	Tracy Hay
<b>Location of audit</b>	McKinlay, Kynuna, Neila & Julia Creek
<b>Date of last audit</b>	10.03.2021
<b>Audit Period</b>	April 2021- August 2025
DWQMP	
<b>Approved DWQMP Date</b>	13/12/2024
<b>Approved DWQMP Version</b>	V 0.8
<b>Approval notice date</b>	6 January 2025

## Flagged items & Actions

Data Accuracy / Verification Data

**Does the verification monitoring data presented in the Annual Report match the requirement of the approved DWQMP, including parameters?**

Minor Non-Compliance

REC 1: Verification monitoring reporting

REC: Review the DWQMP verification monitoring requirements and ensure all parameters are analysed at the required frequency and reported in the annual report

Data Accuracy

**Is the reported periodic data accurate**

Minor Non-Compliance

REC 2: Reporting to Regulator

REC: Ensure all periodic reporting conditions including open incidents are followed, analysed and reported

Compliance with the DWQMP and its Conditions / Preventive Measures

**Preventive measures for managing hazards and hazardous events are implemented**

Minor Non-Compliance

REC 3: Bore integrity

REC: Ensure Management reviews Safety Culture bore condition reports and action repairs to any defects that may allow ingress (Scour Bore)

REC 4: Reservoir Inspection and cleaning

REC: Implement a reservoir cleaning program including roof access for inspections. Add reservoir visual inspection to safety culture inspection app

Compliance with the DWQMP and its Conditions / O&M Procedures

**O&M Procedures are current and implemented**

Minor Non-Compliance

OFI 2: O&M Procedures

OFI: Consider developing a training program to ensure officers are aware of and can demonstrate competence in each procedure.

REC 5: WQ Training

REC: Ensure water operators are appropriately trained in WQ operations such as Cert 3 in water operations

Compliance with the DWQMP and its Conditions / Incidents and Emergencies

**Incident and emergency management protocols were implemented**

Major Non-Compliance

REC 6: Incident Reporting

REC: Review the IERP and ensure all management and staff are fully trained and aware of their responsibilities under the DWQMP IERP requirements.

Compliance with the DWQMP and its Conditions / Monitoring

## Operational and verification monitoring programs implemented

Major Non-Compliance

### REC 7: Verification Microbiological Testing

REC: Ensure all verification microbiological testing is undertaken according to the monitoring schedule and results documented in an appropriate form for management review

Compliance with the DWQMP and its Conditions / Reviews

## Reviews undertaken

Major Non-Compliance

### REC 8: DWQMP Reviews

REC: Review management commitment to DWQMP implementation and provide adequate resources to ensure reviews and DWQMP requirements can be fulfilled

Compliance with the DWQMP and its Conditions / Records Management

## Records are maintained

Minor Non-Compliance

### REC 9: Records Management

REC: Ensure a records management system is utilised for all DWQMP information and data. Develop a procedure to ensure documents are recorded and stored in a secure location that can be accessed by appropriate staff. Include document version control. Once a system is in place ensure all officers are trained in the system.

DWQMP relevance / Catchment

## Catchment characteristics and water quality data

Minor Non-Compliance

### REC 10: Catchment Category Assessment

REC: At next DWQMP review undertake a catchment category assessment that includes HBT using recent water quality datasets.

DWQMP relevance / Risk assessment and risk Management

## Hazard identification, risk assessment and preventive measures

Minor Non-Compliance

### REC 11: Review Risk Assessment

REC: Review and amend the risk assessment to include review of hazards, hazardous events, preventative measures and reassess the risk ratings.

## Other actions

Data Accuracy / Verification Data

## What data is missing and has it been reported to the regulator?

Radiological testing

### OFI 1: Microbiological testing

OFI: Consider reviewing the verification sampling requirements with the regulator prior to next review and updating the DWQMP

**Are verification and operational monitoring programs clearly documented, parameter, location, frequency?**

Partial

**OFI 3: Operational and verification monitoring**

OFI: Consider review of operational and verification monitoring tables to ensure all requirements are implemented

**Is data appropriately recorded (operational data may be onsite)?**

Partial

**OFI 4: WQ data monitoring**

OFI: Consider compiling all WQ data into an excel spreadsheet so trends and anomalies can be visually identified and reviewed regularly

**RMIP is implemented**

Compliant

**OFI 5: Review RMIP**

OFI: Consider reviewing RMIP and updating RMIP target dates against action requirements to provide more realistic action timeframes

**Service description and details of infrastructure (including schematics/process flow diagrams)**

Compliant

**OFI 6: Process Schematics**

OFI: Review and update process schematics for all schemes to reflect operation as required at next review



## Data Accuracy

### Verification Data

**Where is the verification monitoring program detailed in the DWQMP, does it clearly specify parameter, frequency and location?**

DWQMP Section 8.2 - Table 8.2  
Verification Monitoring

DWQMP Table 8.2 outlines parameter, ADWG limit, test frequency, location, internal/external test and exceedance response

**How is data stored (e.g. spreadsheets, database, emails etc) and is it reliable?**

Emails, council server

External analysis is conducted by Townsville Laboratory Services who send each batch of results in a pdf as a certificate of analysis and also in excel format attached to an email. If requested the lab can send a full summary of results for a given period as an excel file.

**Does the verification monitoring data presented in the Annual Report match the requirement of the approved DWQMP, including parameters?**

Minor Non-Compliance

Annual report 2022-23 reports on E. coli and thermotolerant coliforms, however the DWQMP verification monitoring requires E. coli, total coliforms, heterotrophic plate count (monthly), Legionella and Naegleria fowleri (6 monthly). Inhouse E. coli and total coliform testing is required weekly and fortnightly at the various schemes - this is not reported in the annual report.

Lead, cadmium (monthly) and radiological (Annually) are required but are not reported in the annual report

### REC 1: Verification monitoring reporting

REC: Review the DWQMP verification monitoring requirements and ensure all parameters are analysed at the required frequency and reported in the annual report

**What data is missing and has it been reported to the regulator?**

Radiological testing

Thermotolerant coliforms are being tested instead of total coliforms, Legionella was tested in September 2021 and December 2022 but has not been tested again. Check with regulator if this is still a requirement, Naegleria fowleri was tested in Dec 2022 at McKinlay.

### OFI 1: Microbiological testing

OFI: Consider reviewing the verification sampling requirements with the regulator prior to next review and updating the DWQMP

### Annual Reports

**Is there a consistent process for the preparation of annual reports and is it reliable?**

Partial

Review of annual reports 2021-22 & 22-23 provides similar format and reporting with a summary of verification monitoring for the 4 schemes, incidents reported to the regulator, customer complaints, review outcomes and RMIP updates. 2 versions of the 2023-24 Annual report were reviewed a word version that did not include an RMIP update and reported 1 incident to the regulator but does not include a summary of the incident. The second version was in pdf and labelled as 2023-24 Annual report but contained the same information as the 2022-23 annual report.

**Check frequency of testing in the DWQMP - does this tally with the Annual Report?**

Partial

E. coli & total coliform (T.C) tests required weekly at Julia Creek and fortnightly at Kynuna, McKinlay and Nelia - in house testing is not reported in annual reports.

E. coli & T.C Monthly all sites - 2023-24 Annual Report includes external testing as 2 E. coli samples tested per month reported for Julia Creek, Kynuna and McKinlay and 1 per month for Nelia compliant

**Do the statistics match the raw data for selected parameters?**

Partial

**Is the data in the annual reports accurate**

Annual reporting requires attention Refer REC 1.

Compliant

Periodic reporting condition

**Is there a periodic reporting condition in the DWQMP approval notice**

Yes

**What is the requirement?**

1. Council has an open incident for fluoride and is required to provide monthly analysis summaries.
2. Council was asked to provide an interpretation and analysis of its water quality data via a condition stated in the Information Notice for the Decision, issued on 6 January 2025.

**Has the requested information been reported to the regulator at the specified timeframes?**

Partial

1. Council notified by regulator of non-compliance in submitting required fluoride information 11 July 2025.
2. Council submitted an Excel spreadsheet entitled "Water Sample Averages past 5 years". This submission does not address the requirement for analysis and interpretation.

**Do the statics reported match that of the raw data**

N/A

Council now supplies all external analyses to the regulator as the results are received

**Is the reported periodic data accurate**

Minor Non-Compliance

REC 2: Reporting to Regulator

REC: Ensure all periodic reporting conditions including open incidents are followed, analysed and reported

**Compliance with the DWQMP and its Conditions**

Preventive Measures

**Have preventive measures been identified?**

Yes

DWQMP V0.8 Table 5.2 Existing and proposed preventative measures outline bore integrity, bore and reservoir inspections, water mains repair procedures including disinfection, backflow prevention, flushing

Filtration for iron and manganese

Water main repair procedure

Reservoir inspection visual

**Are preventive measures actionable and clear?**

Yes

<b>Are preventive measures being appropriately implemented (refer to site inspections)?</b>  There is a safety culture checklist that is completed at every site visit Reservoir internal and roof inspections and cleaning are not implemented due to WHS issues with access.	Yes
<b>Are staff appropriately trained to implement preventive measures?</b>  Staff have no formal WQ training, is all on the job. There is no formal training matrix Training is organised and documented by HR	Partial
<b>Are preventive measures effective at managing risks?</b>  There have been a number of low-level E. coli and thermotolerant coliform detections. These have been attributed to sampling techniques of a former officer.	Partial
<b>Are records being maintained for implementation?</b>  Safety culture reports are saved in the app and emailed to the ERS team leader	Yes
<b>Preventive measures for managing hazards and hazardous events are implemented</b>	Minor Non-Compliance
REC 3: Bore integrity REC: Ensure Management reviews Safety Culture bore condition reports and action repairs to any defects that may allow ingress (Scour Bore)  REC 4: Reservoir Inspection and cleaning REC: Implement a reservoir cleaning program including roof access for inspections. Add reservoir visual inspection to safety culture inspection app	
O&M Procedures	
<b>Are the required procedures in place?</b>  DWQMP table 5.3 Operational Procedures lists 8 procedures Reservoir integrity and bore head maintenance procedure 2 Water mains repairs procedure 2 Water monitoring sampling procedure 2	Partial
<b>Are procedures accessible?</b>  Procedures are located on council H drive	Yes
<b>Is there a process for document management to ensure currency?</b>  There is no formal process	Partial
<b>Is training provided on implementing procedures correctly?</b>	No
<b>Are O&amp;M procedures being implemented (refer to site inspections)?</b>  Safety culture records viewed for bore integrity inspections Reservoir inspections are not yet actioned due to WHS issues	Partial

**O&M Procedures are current and implemented**

Minor Non-Compliance

**O&M Procedures**

O&M: Consider developing a training program to ensure officers are aware of and can demonstrate competence in each procedure.

**REC 5: WQ Training**

REC: Ensure water operators are appropriately trained in WQ operations such as Cert 3 in water operations

**Incidents and Emergencies****Is there a documented IERP for drinking water?**

Yes

DWQMP Section 5.3 Management of incidents and emergencies and Appendix D

**Is it adequate and current (reviewed regularly and the identification and notification of events and incidents is clear)?**

DWQMP Table 5.6 outlines the 3 levels of incident/emergency as

Level 1 Exceedance of ADWG aesthetic limit

Level 2 Event with high risk of causing illness i.e. E. coli detection, health guideline exceedance

Level 3 Major disaster or emergency

Table 5.7 outlines the management activities for each level including position responsible/contact details and investigation/ management actions

**Is there a contact list and is it current, and does it include sensitive customers?**

Partial

Table 5.7 lists External agencies Qld Health, police, NATA lab but does not include contact numbers

**Has training been undertaken on the IERP, including scenario training?**

No

**Were there any incidents and events identified by the auditee in the audit period and was the IERP followed?**

Yes

**Were incidents reported to the regulator as required?**

Partial

Annual report 2021-22 notes incident report DWI-84-22-09453 E. coli at McKinlay. Annual report 2023-24 notes one incident but does not provide details, indicating some incidents have been reported to the regulator. However, the regulator notice dated 15 July 2025 details a large number (37) of thermotolerant coliform detections not reported to the regulator over a three-year period and an E. coli detection at McKinlay on 22 January 2024 also not reported.

**Were the corrective and preventative actions appropriate and implemented?**

Yes

For the incidents reported

**Were events, as defined in the decision notice, and incidents, in accordance with the water quality criteria, identified and notified (i.e. were any missed)?**

No

**Incident and emergency management protocols were implemented**

Major Non-Compliance

#### REC 6: Incident Reporting

REC: Review the IERP and ensure all management and staff are fully trained and aware of their responsibilities under the DWQMP IERP requirements.

#### Monitoring

##### **Are verification and operational monitoring programs clearly documented, parameter, location, frequency?**

Partial

DWQMP table 5.4 Operational Monitoring and Reporting Program

DWQMP table 8.1 Operational monitoring

DWQMP table 8.2 Verification monitoring

Sample Site location is obscurely located in appendix E

There are two tables outlining operational monitoring requirements tables 5.4 and 8.1

Review the operational and verification monitoring programs to include effective monitoring that ensures water quality meets the requirements.

#### OFI 3: Operational and verification monitoring

OFI: Consider review of operational and verification monitoring tables to ensure all requirements are implemented

##### **Is data appropriately recorded (operational data may be onsite)?**

Partial

Monthly external certificate of analysis results are emailed in pdf format and excel. Results are reported against the ADWG values with all exceedances highlighted for review.

Lab sends full summary of all results on request.

In-house Colilert testing is conducted however results are not recorded.

#### OFI 4: WQ data monitoring

OFI: Consider compiling all WQ data into an excel spreadsheet so trends and anomalies can be visually identified and reviewed regularly

##### **Are both the verification and operational monitoring programs being implemented (check data)?**

Partial

Annual reports have identified gaps in data collection

Review of data sets provided indicate all the required micro testing was not conducted in April 2024 and for May to December in 2023.

DWQMP 8.2 Verification monitoring indicates that Council commenced in house E. coli and Coliform sampling in June 2023 and turbidity is monitored in the field at time of sample collection.

Table 5.4 - Operational Monitoring and Reporting Program- field testing unit purchased and testing to be completed at time of verification monitoring, turbidity testing at Kynuna as per verification monitoring plan

No records of in-house monitoring of turbidity at Kynuna or Colilert sampling were observed.

##### **Are samplers and analysts appropriately trained?**

Partial

On the job training is provided

##### **Operational and verification monitoring programs implemented**

Major Non-Compliance

#### REC 7: Verification Microbiological Testing



REC: Ensure all verification microbiological testing is undertaken according to the monitoring schedule and results documented in an appropriate form for management review

## Improvement Plan

### Is the RMIP clearly documented?

Partial

DWQMP Section 6 Risk Management Improvement Table 6.1 RMIP assigns an ID number, scheme, priority, action short or long term, target dates, cost and responsibility. The RMIP is loose on time frames.

### Is there a process to update the RMIP and is it current?

Partial

The current plan has December 2025 as a target date for JC01, K01, M01 & N01

### Are actions being closed out in accordance with the RMIP?

Yes

JCO4 Julia creek bore water padlocks installed - Completed  
JC11 Reticulation network replacement of water main - Goldring water main 1st section completed  
JC12 Backflow prevention 90% complete  
JC9-N12 Review of procedures and updates and set up of safety culture data acquisition app - ongoing but underway

### Do annual reports reflect the status of the RMIP at the time of reporting?

Partial

Annual report 2023-24 does not include or report on the RMIP

### Is there a process to add actions as they are identified, through risk assessments, audits or similar?

Yes

Current practice is to add audit actions to RMIP, and after regular reviews

## RMIP is implemented

Compliant

### OFI 5: Review RMIP

OFI: Consider reviewing RMIP and updating RMIP target dates against action requirements to provide more realistic action timeframes

## Reviews

### Have reviews been undertaken in accordance with the decision notice conditions?

Partial

Current DWQMP amendment has been withdrawn 12 August 2025 due to inability to meet the information notice requirements within the required timeframe due to lack of staff.

### Were reviews undertaken in accordance with the Guideline (analysis of data, risk assessment etc)?

Partial

Recent request for analysis of 5 years of data was not provided in correct format

### Were any reviews undertaken appropriately documented (e.g. report)?

Yes

2022-23 and 2023-24 annual report section 7 outlines review outcomes.

### Are review findings addressed appropriately through update and amendment of the approved DWQMP?

Partial

## Reviews undertaken

Major Non-Compliance

#### REC 8: DWQMP Reviews

REC: Review management commitment to DWQMP implementation and provide adequate resources to ensure reviews and DWQMP requirements can be fulfilled

#### Records Management

**Is it clear where different types of data should be recorded (water quality, maintenance, calibrations, inspections, training etc)?**

Partial

Council H drive

**Is the storage method appropriate (e.g. not emails, C: Drive, USB stick etc)?**

Partial

Analysis results are stored as emails and need to be transferred to H drive

**Is data being collected and recorded consistently and accurately?**

Partial

In-house Colilert testing is not documented

**Records are maintained**

Minor Non-Compliance

#### REC 9: Records Management

Ensure a records management system is utilised for all DWQMP information and data. Develop a procedure to ensure documents are recorded and stored in a secure location that can be accessed by appropriate staff. Include document version control. Once a system is in place ensure all officers are trained in the system.

<b>DWQMP relevance</b>	
Service Description	
<b>Is the process description in the DWQMP accurate, including schematics?</b>	Partial
<p>Due to the absence of treatment process schematics are simple.</p> <p>The Regulator has asked for Julia Creek diagram to include identification of primary and back up bores and for the Neila scheme to be more accurately described (12 August 2025).</p> <p>Kynuna process schematic does not identify the filtration nor the addition of the new emergency ground tank addition - The new tank is not inline but is plumbed and ready to be connected if required)</p>	
<b>Has there been any change to a process or a new process included?</b>	No
New ground tank installed at Kynuna does not change process just adds storage capacity in an emergency.	
<b>Service description and details of infrastructure (including schematics/process flow diagrams)</b>	Compliant
<p>OFI 6: Process Schematics</p> <p>OFI: Review and update process schematics for all schemes to reflect operation as required at next review</p>	
Catchment	
<b>Have catchment characteristics been assessed and reviewed for changes?</b>	Partial
DWQMP V 0.8 Section 3.1 Information Gathering – Water Quality and Source Characteristics provides a summary of water quality monitoring data July 2017-March 2022 for each source. Bore depths and great artisan basin characteristics are presented.	
<b>Is raw water quality data used to guide risk reviews?</b>	Partial
DWQMP V 0.8 Section 3.1 Information Gathering – Water Quality and Source Characteristics provides a summary of water quality monitoring data July 2017-March 2022	
<b>Auditor assessment - does raw water data or catchment changes suggest any new risks which should be considered?</b>	Yes
Recent Naegleria detection in Augathella and Charleville bore supplies warrants further investigation	
<b>Has an HBT catchment category been identified and is it accurate?</b>	No
<b>Catchment characteristics and water quality data</b>	Minor Non-Compliance
<p>REC 10: Catchment Category Assessment</p> <p>REC: At next DWQMP review undertake a catchment category assessment that includes HBT using recent water quality datasets.</p>	
Risk assessment and risk Management	

<p><b>Have any new or changed processes been reflected in the DWQMP?</b></p> <p>Install of new bore and filters at Kynuna in 2023/24.</p>	Yes
<p><b>Has the risk assessment been reviewed to address any newly identified hazards or a change in the risk profile of existing hazards?</b></p> <p>Regulator notice 12 August 2025 requirement 3 Review and amend the list of hazards, hazardous events and associated risk assessments now in your DWQMP. All identified hazards must be clearly defined and appropriately assessed to ensure that risks can be effectively managed and mitigated</p>	No
<p><b>Does the risk assessment cover relevant hazardous events?</b></p> <p>Regulator notice 12 August 2025 requirement 3 requests Review and amend the list of hazards, hazardous events and associated risk assessments now in your DWQMP. All identified hazards must be clearly defined and appropriately assessed to ensure that risks can be effectively managed and mitigated</p>	Partial
<p><b>Is the level of risk in the DWQMP compatible with the actual risk on the ground?</b></p> <p>Pathogen risks requires review</p>	Partial
<p><b>Are preventive measures adequate to achieve the risk mitigation identified in the DWQMP?</b></p> <p>Low level microbial detections across schemes indicate a review of preventative measures is warranted</p>	Partial
<p><b>Hazard identification, risk assessment and preventive measures</b></p>	Minor Non-Compliance
<p>REC 11: Review Risk Assessment</p> <p>REC: Review and amend the risk assessment to include review of hazards, hazardous events, preventative measures and reassess the risk ratings.</p>	
<p>Incident Management</p>	
<p><b>Have incidents identified preventive measures to prevent or reduce to risk of reoccurrence?</b></p> <p>E. coli reoccurrence resulted in additional sampling technique training and officer was reassigned to new duties Filter media changes now completed 6 monthly instead of annually.</p>	Yes
<p><b>Have preventive measures been amended or added as required in response to an event or incident?</b></p> <p>A consultant has been engaged to review and update council DWQMP including preventative measures</p>	Partial
<p><b>Outcomes from any incident management activities which required a change to the preventive measures</b></p> <p>New officer has been appointed to manage the drinking water scheme and sample collection. Consultant engaged to review DWQMP</p>	Compliant
<p>RMIP</p>	
<p><b>Do the improvement actions adequately address the identified risks?</b></p>	Yes

<b>Are the relevant improvement items included in the RMIP?</b>	Yes
<b>RMIP Relevance</b>	Compliant
Monitoring	
<b>From the site inspection - is the operational monitoring adequate (parameters, location, frequency)?</b>	Partial
<p>There is no on-site operational monitoring of water quality parameters at any site.</p> <p>Monthly external lab analyses sampling is scheduled at all sites.</p> <p>Visual checks of site integrity are collected weekly or fortnightly as required.</p>	
<b>Does the DWQMP include CCPs</b>	No
<b>Is verification monitoring representative of the network and of the risks/hazards?</b>	Yes
Implementation of the required in-house Colilert and turbidity testing is required	
<b>Operational and verification monitoring programs</b>	Compliant

<b>Site Inspections</b>	
Raw water 1	
<b>Location/Scheme</b>	McKinlay
<b>Source type (e.g. bore, run of river, lake)</b>	Bore x 2
<p>Called New bore and old bore</p> <p>Photo 1 new bore head sealed with silicon photo 2 concrete needs repair</p> <p>Photo 3 Old bore and samples point</p>	



Photo 1



Photo 2



Photo 3



Photo 4



Photo 5

<p><b>Are there sources of pathogens in the inner catchment?</b></p> <p>Cattle, tourism</p>	<p>Yes</p>
<p><b>Is there raw water monitoring undertaken at the intake?</b></p> <p>Sample old bore E. coli every 2 weeks internal Colilert and external monthly Townsville water lab Monthly chem suite</p>	<p>Yes</p>
<p><b>Is the catchment description correct, including the flow diagram?</b></p>	<p>Yes</p>
<p><b>Is the HBT catchment category correct?</b></p> <p>Has not been assessed</p>	<p>NA</p>
<p><b>Are there any required maintenance activities and are these undertaken (e.g. pumps, screens, aerators)?</b></p> <p>Bore logging is completed every 10 years. Bore case condition is also checked using cameras and calipers</p>	<p>Yes</p>
<p><b>What preventive measures are identified in the raw water (a sample of those to be audited)?</b></p> <p>Checks bore head and casing is sealed, and concrete is intact. Recorded on an electronic safety culture phone app each site visit</p>	<p>Bore head condition</p>
<p><b>Are preventive measures being implemented?</b></p>	<p>Yes</p>
<p><b>Any other issues?</b></p> <p>No</p>	



## Raw water 2

**Location/Scheme**

Kynuna

**Source type (e.g. bore, run of river, lake)**

Bore x 1



Photo 6



Photo 7

**Are there sources of pathogens in the inner catchment?**

Yes

Cattle, wildlife

**Is there raw water monitoring undertaken at the intake?**

Yes

Same as McKinlay

**Is the catchment description correct, including the flow diagram?**

Yes

**Is the HBT catchment category correct?**

N/A

Has not been assessed

**Are there any required maintenance activities and are these undertaken (e.g. pumps, screens, aerators)?**

Yes

Six monthly filter media replacement and 12 monthly filter riser pipe replacement  
4 monthly inspection pressure pumps and valves

**What preventive measures are identified in the raw water (a sample of those to be audited)?**

filtration

**Are preventive measures being implemented?**

Yes

Site visit recorded on phone app

**Any other issues?**

No

## Raw water 3

**Location/Scheme**

Nelia

Bore casing is severely corroded - fencing has numerous holes



Photo 8



Photo 9



Photo 10



Photo 11

<b>Source type (e.g. bore, run of river, lake)</b>	Bore x 1
<b>Are there sources of pathogens in the inner catchment?</b> Goats, cattle, wildlife	Yes
<b>Is there raw water monitoring undertaken at the intake?</b> Monitoring is undertaken in the reticulation	No
<b>Is the catchment description correct, including the flow diagram?</b>	Yes
<b>Is the HBT catchment category correct?</b> Has not been assessed	N/A
<b>Are there any required maintenance activities and are these undertaken (e.g. pumps, screens, aerators)?</b> Bore is in poor repair	No
<b>What preventive measures are identified in the raw water (a sample of those to be audited)?</b>	Bore integrity
<b>Are preventive measures being implemented?</b> Bore needs to be refurbished	Yes
<b>Any other issues?</b> Fenced but has many holes from the goats, there is a related REC on attending to bore inspection reports.	





Photo 12

## Raw water 4

### Location/Scheme

Julia Creek

### Source type (e.g. bore, run of river, lake)

4 bores

Bore Lions Park, photos 1 to 3 good condition bore head and casing sealed with concrete footings  
 Civic Centre bore photos 4 to 7 good condition bore head and casing sealed with concrete footings  
 Tower bore photos 8 to 10 reasonable condition bore head and casing sealed with concrete footings  
 Hickman Street bore stock feed photos 11 & 12 rusty bore head sealed  
 Scour bore photos 13 to 15 reasonable condition bore head and casing sealed with concrete footing needing replacement



Photo 13



Photo 14



Photo 15

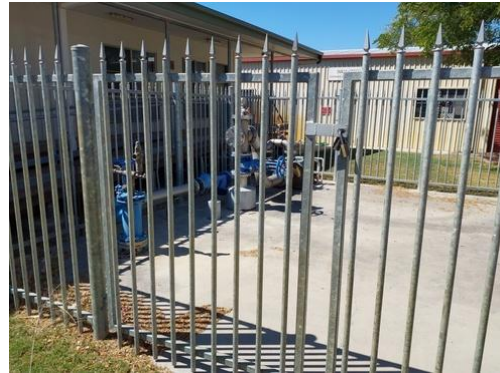


Photo 16



Photo 17



Photo 18



Photo 19



Photo 20





Photo 21



Photo 22



Photo 23



Photo 24



Photo 25



Photo 26



Photo 27

**Are there sources of pathogens in the inner catchment?**


Yes

Cattle, tourism, industry, sewer

**Is there raw water monitoring undertaken at the intake?**

Yes

See McKinlay

<b>Is the catchment description correct, including the flow diagram?</b>	Yes
<b>Is the HBT catchment category correct?</b> Has not been assessed	N/A
<b>Are there any required maintenance activities and are these undertaken (e.g. pumps, screens, aerators)?</b> Bore logging occurs every 10 years 3 times a week general water infrastructure checklist safety culture	Yes
<b>What preventive measures are identified in the raw water (a sample of those to be audited)?</b>	Bore inspection
<b>Are preventive measures being implemented?</b> Site visits logged on safety culture phone app	Yes
<b>Any other issues?</b> No	
WTP	
WTP 1	
<b>Water treatment Plant</b> Kynuna has a Puretec multistage filtration system with six filters designed to remove iron and manganese. Filtration media is replaced every six months.	Kynuna
	
Photo 28	
<b>Is WTP description correct including the flow diagram?</b> The process flow diagram does not include the filtration unit and the new ground water tank	No
<b>Is the chemical dosing as detailed in the plan?</b> No chemical dosing implemented	N/A
<b>Are the processes working as they should?</b> Filtration is working with significant removal of iron and manganese evident 2020 to 2025	Yes
<b>Are there any plant or process bypasses in place?</b>	Yes

Can bypass filtration

**What preventive measures are in place at the WTP (a sample of those to be audited)?**

Filtration



Photo 29

**Are preventive measures being implemented?**

Yes

Filtration is working, online monitoring only measures differential pressure

**Is there an operator checklist that is implemented?**

Yes

Safety culture operation checklist monthly

**Is operational monitoring undertaken and records maintained?**

Partial

Electronic monitoring of the plant for differential pressure

**Are benchtop and online instruments appropriately calibrated?**

N/A

There are no benchtop instruments

**Review SCADA trends, do they indicate that the WTP has been operated in accordance with the DWQMP**

N/A

Limited SCADA only monitors pressure differential to calculate when filter regeneration is required

**Are operators appropriately trained?**

Partial

No certified training

On the job training is implemented however this is not documented

**Any other issues?**

No

Reservoir

Reservoir 1

**Reservoir name/scheme/number**

McKinlay

2 x 50 000L Steel on platforms





Photo 30

**Is security at the site adequate?**

Yes

Fenced



Photo 31

**Is the reservoir vermin and ingress proof?**

N/A

No access is permitted to climb the reservoir to review potential for ingress - MSC is planning to run drone over top

**Is there any monitoring undertaken at the reservoir and is it undertaken?**

No

Monitoring is only conducted at the bore and the reticulation

**What preventive measures are identified in reservoirs (a sample of those to be audited)?**

Reservoir visual inspection

**Are preventive measures being implemented?**

Yes

**Is there a reservoir inspection procedure?**

No

**Are reservoirs inspected as specified and is the frequency adequate?**

N/A

There is a weekly site inspection of bore condition that is recorded in safety culture

**Are reservoirs cleaned?**

No

**Is description correct including the flow diagram?**

Yes

Any other issues

No

Reservoir 2

Reservoir name/scheme/number

Kynuna 1 50 000l elevated tank and 2 x 100000 l ground water tanks one is for emergency use

Ground reservoir is rusty - roof is intact and access gaps have been sealed



Photo 32



Photo 33



Photo 34



Photo 35

Is security at the site adequate?

Yes

Fenced and locked

Is the reservoir vermin and ingress proof?

N/A

Could not check the elevated reservoir due to WHS ladder issues

Is there any monitoring undertaken at the reservoir and is it undertaken?

No

What preventive measures are identified in reservoirs (a sample of those to be audited)?

Reservoir visual inspection

Are preventive measures being implemented?

Yes

Fencing is adequate

Is there a reservoir inspection procedure?

No

Are reservoirs inspected as specified and is the frequency adequate?

N/A

Are reservoirs cleaned?	No
Is description correct including the flow diagram?	Yes
Any other issues	No

Reservoir 3

Reservoir name/scheme/number	Julia Creek town reservoir
------------------------------	----------------------------




Photo 36

Is security at the site adequate?	Yes
Reservoir security paddock door	
Is the reservoir vermin and ingress proof?	Yes
Is there any monitoring undertaken at the reservoir and is it undertaken?	No
What preventive measures are identified in reservoirs (a sample of those to be audited)?	Reservoir visual inspection
Are preventive measures being implemented?	Yes
Is there a reservoir inspection procedure?	No
Are reservoirs inspected as specified and is the frequency adequate?	N/A
Are reservoirs cleaned?	No
Is description correct including the flow diagram?	Yes
Any other issues	No