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**DRINKING WATER QUALITY  
MANAGEMENT PLAN REPORT  
2018-19**

**4 DECEMBER 2019**

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## 1 INTRODUCTION

This report documents the performance of Mount Isa City Council's (MICC) drinking water service with respect to water quality and performance in implementing the actions detailed in the drinking water quality management plan (DWQMP) as required under the *Water Supply (Safety and Reliability) Act 2008* (the Act).

The report assists the Regulator to determine whether the approved DWQMP and any approval conditions have been complied with and provides a mechanism for providers to report publicly on their performance in managing drinking water quality.

## 2 OVERVIEW OF OPERATIONS

Council manages and operates two drinking water schemes – Mount Isa and Camooweal.

To supply the city of Mount Isa, MICC receives treated water from Mount Isa Water Board (MIWB) before distributing to its approximately 21,000 consumers. Water for the Mount Isa scheme is obtained from two storage dams – Lake Julius and Lake Moondarra – on the Leichhardt River to the north of the city.

Camooweal utilises a local groundwater source via two sub-artesian bores with chlorine disinfection as the only treatment. Drinking water is supplied to an estimated local population of 187 people.

## 3 DWQMP IMPLEMENTATION

### 3.1 Risk management improvement program (RMIP)

Please see Attachment 1 for a breakdown on progress regarding the actions taken to reduce our drinking water risks in 2018-19.

### 3.2 Monitoring

The results from the verification monitoring for the reporting period are discussed in section 5.

### 3.3 Amendments to the plan

No amendments to the DWQMP were made in 2018-19

## 4 NOTIFICATIONS TO THE REGULATOR

There were no instances in 2018-19 where the Regulator was required to be notified under sections 102 or 102A of the Act.

## 5 COMPLIANCE WITH WATER QUALITY CRITERIA

Verification of drinking water quality provides an assessment of the overall performance of the system and the ultimate quality of the drinking water being supplied to customers. It confirms compliance with water quality criteria set by DNRME, Queensland Health and any other formal requirements.

Mount Isa City Council undertakes verification monitoring in both schemes to ensure that the water quality that we provide to our customers is safe; council exceeds the required monitoring frequency outlined in the *Public Health Regulation 2018*.

## 5.1 Mount Isa Scheme

The verification monitoring data is summarised in Table 1, 2 & 3.

**Table 1: Mount Isa Terminal Reservoir monitoring data, 2018-19**

	Free Chlorine (mg/L)	pH (pH units)	Turbidity (NTU)	HPC (cfu/mL)	Total coliforms (MPN/100 mL)	<i>E. coli</i> (MPN/100 mL)	Iron (mg/L)	THMs (µg/L)
Minimum	0.3	7.0	0.1	1	<1	<1	0.05	60
Maximum	3	7.8	7.0*	10	1	<1	0.08	175
Average	2.0	7.5	0.5	3	<1	<1	0.06	99
Number of Tests	52	52	52	12	52	52	4	4

*\*Note: This reservoir is managed by MIWB, however samples are collected by MICC to verify the performance. Work done on the service line supplying the sample tap is believed to have caused a period of higher turbidity results in July 2018 (no corresponding elevation in turbidity was seen at any other sample point to suggest there was a network water quality issue).*

**Table 2: Annual testing results, Mount Isa Terminal Reservoir, 2018-19**

Analyte	Result (mg/L unless otherwise stated)
Total Oxidised Nitrogen	0.14
Nitrate	0.14
Nitrite	<0.01
Aluminium	<0.01
Arsenic	<0.001
Barium	0.027
Beryllium	<0.001
Boron	<0.05
Cadmium	<0.0001
Chromium	<0.001
Copper	0.003
Iodide	<0.01
Iron	<0.05
Lead	<0.001
Manganese	0.008
Mercury	<0.0001
Molybdenum	<0.001
Nickel	<0.001
Selenium	<0.01
Silver	<0.001
Zinc	0.017
Fluoride	<0.1
Hardness	46 (mg/L as CaCO <sub>3</sub> )
TDS	99

*\*Note: this reservoir is managed by MIWB, however samples are collected by MICC to verify the performance.*

**Table 3: Mount Isa reservoirs and reticulation monitoring data, 2018-19**

	Chlorine (mg/L)	pH (pH units)	Turbidity (NTU)	HPC (cfu/mL)	Total coliforms (MPN/100 mL)	<i>E. coli</i> (MPN/100 mL)	Iron (mg/L)	THMs (µg/L)
Minimum	0.1	7.0	0.03	<1	<1	<1	<0.05	62
Maximum	2.5	8.0	1.5	68	145	<1	<0.05	166
Average	0.35	7.6	0.25	6	1	<1	<0.05	101
Number of Tests	461	461	461	71	156	461	12	12

## 5.2 Camooweal Scheme

The verification monitoring data for the Camooweal scheme reticulation sites (combined), and level of compliance are summarised in Table 4.

**Table 4: Camooweal Reticulation Monitoring Data, 2018-19**

	Free Chlorine (mg/L)	pH (pH units)	Turbidity (NTU)	HPC (cfu/mL)	Total coliforms (MPN/100mL)	<i>E. coli</i> (MPN/100mL)	THMs (µg/L)
Minimum	<0.1	7.1	0.01	<1	<1	<1	5
Maximum	1.7	7.9	19	151	5	<1	24
Average	0.63	7.5	0.65	15	<1	<1	7
Number of Tests	122	110	115	13	88	110	16

## 5.3 Public Health Regulation compliance summary

Council is required to monitor for *E. coli* in its drinking water schemes as per the *Public Health Regulation 2018*. Our performance against the requirements is summarised in Table 5 below:

**Table 5: Public Health Regulation Compliance Summary, 2018-19**

Scheme	Number of samples required	Number of samples collected	Compliance	Performance requirement (% samples negative)	Actual performance (% samples negative)	Compliance
Mount Isa	88	461	✓	98	100	✓
Camooweal	12	110	✓	98	100	✓

## 6 CUSTOMER COMPLAINTS

There were 6 water quality related complaints (dirty water) received for the Mount Isa scheme. There were no complaints received for the Camooweal scheme.

In all instances, the response to the dirty water complaint was flushing of the water main.

## **7 DWQMP REVIEW**

A regular review of the DWQMP was not conducted within the 2018-19 financial year. The next review is required to be undertaken prior to 31 May 2020.

## **8 DWQMP AUDIT**

No audit was required to be undertaken within the 2018-19 financial year. The next audit for Mount Isa City Council's DWQMP is required prior to 31 May 2021.

## **9 ATTACHMENTS**

See following page.

## Attachment 1: RMIP actions

Ref	Scheme	Improvement Action	Responsibility	Timeframe	Status	Comments
WQ1	Mount Isa	<i>Investigate assigning or installing a sampling location which provides better representation of the incoming treated supply.</i>	<i>Team Leader - Water and Sewerage</i>	<i>Dec-15</i>	<i>Complete</i>	
WQ2	Mount Isa	<i>Investigate the need for management of reservoir levels in consultation with MIWB (for e.g. winter and summer levels).</i>	<i>Team Leader - Water and Sewerage</i>	<i>Jun-16</i>	<i>Complete</i>	
WQ3	Mount Isa	Investigate and identify users that may be of potential concern; check backflow requirements and gaps; maintain backflow register; and enforce council backflow policy. This will need to be undertaken by a Trade Waste Officer or similar and will be recruited by MICC.	Team Leader – Water and Sewerage	Extended to 30/06/2020	In Progress	
WQ4	Camooweal	<i>Educate public about connection between caves and groundwater (fact sheet with Rates Notice).</i>	<i>Team Leader - Water and Sewerage</i>	<i>Jun-17</i>	<i>Complete</i>	
WQ5	Camooweal	<i>Increase monitoring of turbidity and E. coli at the bores during the wet season (twice monthly) to investigate any possible surface water influence.</i>	<i>Laboratory Technician</i>	<i>Nov-15</i>	<i>Complete</i>	
WQ6	Camooweal	Investigate possibility of installing a telemetry system, which would provide remote visibility and be able to send alarms on chlorine system. Include online turbidity analyser with remote visibility and alarming.	Team Leader and Director	Extended to 30/06/2020	In Progress	Funding approved, scoped, design in progress.
WQ7	Camooweal	<i>Investigate C.t to first customer. Use results of this in conjunction with outcomes of WQ5.</i>	<i>Team Leader - Water and Sewerage</i>	<i>Jun-16</i>	<i>Complete</i>	



Ref	Scheme	Improvement Action	Responsibility	Timeframe	Status	Comments
<b>WQ8</b>	Mount Isa	Investigate mixing and online chlorine dosing in the remaining reservoirs, with alarms for dosing failure or faults.	Team Leader and Director	Extended to 30/06/20	In progress	An alternate method of distribution of Drinking Water throughout Mount Isa being trialled in an attempt to increase distribution of chlorine throughout the network. This is also in line with WQ13.
<i>WQ9</i>	<i>Service Wide</i>	<i>Prepare Operations and Maintenance (O&amp;M) manuals for the schemes, detailing routine tasks undertaken.</i>	<i>Team Leader - Water and Sewerage</i>	<i>30/06/18</i>	<i>Complete</i>	
<i>WQ10</i>	<i>Service Wide</i>	<i>Review existing process for water quality related document currency and record retention</i>	<i>Team Leader - Water and Sewerage</i>	<i>Jun-17</i>	<i>Complete</i>	
<b>WQ11</b>	Service Wide	Strengthen laboratory QA/QC practices, including SOPs, calibration, record keeping etc to ensure high quality results	Team Leader and Laboratory Technician	Extended to 30/06/20	In progress	Delayed due to high laboratory workload due to added responsibilities.
<b>WQ12 (New)</b>	Mount Isa	Address vermin proofing issues at Reservoir 3 and seek funding for reservoir replacement	Team Leader Water & Sewerage	Extended to 30/12/19	In progress	Temporary vermin proofing measures installed. Reservoir 3A is currently under construction. Reservoir 3 will be taken offline once works have been completed on Reservoir 3A and 3A is back online.
<b>WQ13 (New)</b>	Mount Isa	Undertake hydraulic modelling of network in collaboration with MIWB and reconfigure network to improve water circulation and decrease water age.	Team Leader Water & Sewerage	Extended to 30/06/19	In progress	Model in the process of being calibrated – also refer to WQ8.