



WUJAL WUJAL
Aboriginal Shire Council
2017 - 2018

Drinking Water Quality Management Plan Report

Wujal Wujal Aboriginal Shire Council

SPID: 517

Approved by CEO	Eileen Deemal-Hall
Effective date	Review date
15 th April 2019	Continuous review and September 20-19
Report Author	
Michelle Barath, Water Compliance Officer	
Endorsed by	
Eileen Deemal-Hall	
Responsible Position	
Office of the CEO	

This report has been prepared in accordance with the Drinking Water Quality Management Plan Report Guidance Note.

Table of contents

1	Introduction	1
2	Summary of scheme/s operated	2
3	DWQMP implementation	3
4	Verification monitoring - water quality information and summary	6
5	Incidents reported to the regulator	8
6	Customer complaints	9
7	DWQMP review outcomes	10
8	DWQMP audit findings	11

Table of tables

Table 1 – Summary of schemes	2
Table 2 – Risk management improvement program implementation status	Error! Bookmark not defined.
Table 3 – Drinking water quality performance - verification monitoring	6
Table 4. - E. coli compliance with annual value	6
Table 5 – Incidents reported to the regulator	8
Table 6 - Customer complaints about water quality	9
Table 7 – DWQMP review outcomes	10
Table 8 – DWQMP audit findings and status	Error! Bookmark not defined.

Introduction

This is the Drinking Water Quality Management Plan ('DWQMP') report for Wujal Wujal Aboriginal Shire Council ('WWASC') for the Financial year 2017 – 2018.

WWASC is a registered service provider with the identification (SPID) 517. WWASC is operating under its approved DWQMP to ensure consistent supply of safe quality drinking water in order to protect public health. The plan requires active identification and minimisation of public health related risks associated with drinking water.

This DWQMP report includes:

- The activities undertaken over the financial year in operating the drinking water service.
- Drinking water quality summary.
- Summary of performance in implementing the approved drinking water quality management plan.

This report is submitted to the regulator to fulfil the regulatory requirement and is also made available to our customers through our website or for inspection upon request at Council office.

Summary of scheme/s operated

Table 1 – Summary of schemes

	<i>Water Source</i>	<i>Treatment processes</i>	<i>Treatment capacity</i>	<i>Towns supplied</i>
Wujal Wujal	Bloomfield river	Pre-filtration to 100 micron scintered stainless steel filter screen. Ultra- filtration to 0.04 microns, hypochlorite chlorination prior to storage, additional chlorination in supply line post storage.	Up to 500 kL/day Average 115 kL/day	Wujal Wujal

DWQMP implementation

The actions undertaken to implement the DWQMP are summarised below.

- Wujal Wujal Aboriginal Shire Council is operating in accordance with the revised version #3 of the DWQMP approved in February 2018.
- In April 2018 an audit of the DWQMP was conducted by Bligh Tanner.
- The audit report highlighted a number of compliance issues and suggested recommendations for improvement. These issues and the recommendations will be addressed and included in the review of the DWQMP due to be submitted to the Water Supply Regulator by 30 April 2019.

The actions undertaken to implement the risk management improvement program within the DWQMP are discussed in Table 2 below

Table 2 – Risk management improvement program implementation status

Scheme name	Ref	Component	Improvement actions	Target date	Actions taken to date	Status and revised target date	Responsible Officer / Position
WWASC	1	Bloomfield river Pollution or catastrophic weather event	Collect base line data from river sonde & environmental raw water monitoring.	April 2019	Historical data from river sonde stored on SCADA (prior to weather event Jan 2018). Environmental raw water sampling program initiated.	River sonde removed after recent flood event (Jan 2019) for service & calibration. Re-installation expected May 2019. Raw water monitoring proposed to be conducted during April 2019.	TBA
	2	Pre-filtration process Feed water turbidity high	Schedule yearly maintenance & inspection per water intake pump manual. Pre-filter (located post intake) inspection & clean to assist in particle removal.	ongoing	Turbidity monitored at CMF unit. Pre-filter cleaned if high turbidity observed or quarterly. Intake pumps not operated when high turbidity apparent.	Intake pump inspection & maintenance, conducted annually. Ongoing pre-filter clean when required. Turbidity monitored daily at CMF unit. Ongoing	TBA
	3	Raw water storage Sludge on bottom of tank causing high turbidity	Visual inspection of inside of tank to determine if cleaning is required.	ongoing	Visual inspection of inside of tank to determine status	6 monthly visual inspection by operators & recorded in operators daily log book. Ongoing	TBA
	4	Treatment process Membrane fail	Daily TMP monitoring using SCADA & operator check	ongoing	Daily SCADA & operator monitoring. CMF service provider perform membrane integrity test & service (conducted 6 monthly).	Ongoing	TBA
	5	Disinfection process Chlorine fail, no available chlorine	200 litres of supply is the re-order trigger. Weekly check of available supply.	ongoing	Weekly visual check of available supply. Re-order if required	ongoing	TBA
	6	Reservoirs Faecal contamination by dead animals	Check integrity of seals, lids & vents. Record inspection in operators log book & report to supervisor if required.	ongoing	Visual inspections of reservoirs by operators.	6 monthly visual inspection by operators & recorded on operators daily log book. Ongoing	TBA

Table 2 – Risk management improvement program implementation status

Scheme name	Ref	Component	Improvement actions	Target date	Actions taken to date	Status and revised target date	Responsible Officer / Position
	7	Whole of service Fail	Ensure SOP parameters & inspections are monitored & checked weekly. CMF unit operational status & daily work task sheets developed.	ongoing	Use of daily log sheets for recording operational status of CMF unit, water quality results & daily tasks. Review of SOP's. Reporting any incidents to supervisor. Daily sign off by supervisor to ensure tasks are completed.	Ongoing	TBA

Verification monitoring - water quality information and summary

This section discusses the compliance with the water quality criteria.

Table 3 – Drinking water quality performance - verification monitoring						
Scheme name	Parameter	No. of samples required to be collected (as per the approved DWQMP)	No. of samples actually collected and tested	Water quality criteria (i.e ADWG health guideline value)	No. of non compliant samples	Comments
WWASC	free chlorine	500	250	0.5 mg/L	unknown	Records unable to be located from January to 30 June 2018
	E.coli	12	8	<1 cfu/100mL	0	Records unable to be located from January to March 29 2018 & May 2018 to June 30 for e.coli. Six samples were collected for in-house “colisure” testing & two samples were collected & tested at Cairns laboratory in Nov. 2017 & June 2018. See comments next page

Comment: 2 samples collected daily (calculated as 250 operational work days a year) from the Art centre & Technical services workshop for free chlorine.

Table 4. E. coli compliance with annual value

Drinking water scheme: Wujal Wujal Aboriginal Shire Council area												
	2017 – 2018											
Month	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
No. of samples collected	1	1	-	2	1	-	-	-	1	1	-	1
No. of samples collected in which E. coli is detected (i.e. a failure)	0	0	-	0	0	-	-	-	-	0	-	0
No. of samples collected in previous 12 month period	1	1	1	1	1	1	1	1	1	1	1	1
No. of failures for previous 12 month period	0	0	0	0	0	0	0	0	0	0	0	0
% of samples that comply	100	100	50	100	100	50	50	50	100	100	50	100
Compliance with 98% annual value	yes	yes	no	yes	yes	no	no	no	yes	yes	no	yes

Comment: July, August, & October 2017 in-house "colisure" e.coli testing. March & April 2018 in-house "colisure" e.coli testing .Nov. 2018 & June 2019 samples analysed by Cairns lab. Records unable to be located from 1 Jan to March 2018 & again in May 2018. Reagents expired Sept 2017

Incidents reported to the regulator

The incidents reported to the regulator and management actions undertaken over the financial year are provided in this section.

Table 5 – Incidents reported to the regulator

Incident date	Scheme / location	Parameter / issue	Preventive actions
nil	Wujal Wujal		

DWQMP review outcomes

A summary of the outcomes of the review and how issues/changes raised in the review, were actioned is provided in this section.

Table 7 – DWQMP review outcomes

Review Date: 30/04/19

Review component	Findings	Outcomes	Status of actions	Responsible Officer / Position
Service description	See comment below			
Details of infrastructure	See comment below			
Water quality and catchment characteristics	See comment below			
Risk assessment	See comment below			
Operations and maintenance procedures	See comment below			
Management of incidents and emergencies	See comment below			
Risk management improvement program	See comment below			
Service wide information management	See comment below			
Operational monitoring	See comment below			
Verification monitoring	See comment below			

Comment: A review of the approved DWQMP is currently underway and will be completed by 30 April 2019, as stated earlier in this report. An audit and risk review was conducted by Bligh Tanner that will be considered & recommendations included within the DWQMP review.

DWQMP audit findings

The audit findings and any recommendations and/or opportunities for improvement (OFI), including how these were actioned are discussed below.

The audit findings include: Refer to table 8

The actions undertaken to address the audit recommendations are outlined in Table 8.

Table 8 – DWQMP audit findings and status

Item	Recommendation or OFI	Action	Status of actions	Responsible Officer / Position
<p>Water supply analysis: Assemble a team with appropriate knowledge & expertise</p>	Recommendation	Currently being determined. Training provided by Cairns Tropical Public Health service (TPHS) in 2019	In progress	WWASC ESO (TBA) & operational staff.
<p>Hazard identification & risk assessment: Define the approach & methodology to be used for hazard identification & risk assessment</p>	Recommendation	DWQMP review due by 30 April 2019	In progress	WWASC ESO (TBA)
<p>Critical control points: Assess preventative measures from catchment to consumer to identify critical control points</p>	Recommendation	CCP's to be reviewed during DWQMP risk assessment review in April 2019.	In progress	WWASC/CEO & ESO (TBA) & Service providers (TBA)
<p>Corrective Action: Establish & document procedures for corrective action to control excursions in operational parameters</p>	Recommendation	Contingency procedures to be considered during review of DWQMP in April 2019	In progress	WWASC operational staff
<p>Equipment capability & maintenance: Ensure that equipment performs adequately & provides sufficient flexibility & process control</p>	Recommendation	WTP & compressors currently serviced every 6 months by service providers. Handheld portable chlorine & turbidity meters currently being used to check & record actual readings in retic. line for verification of system performance.	In progress	WWASC CEO/ESO (TBA) & operational staff & Service providers (TBA)
<p>ADWG component: Ensure monitoring data are representative & reliable</p>	Recommendation	WWASC operational staff working with Cairns TPHS & also using Cairns laboratory for verification monitoring. Training in use of new portable handheld monitoring equipment	In progress	WWASC ESO (TBA) & operational staff

Table 8 – DWQMP audit findings and status

Item	Recommendation or OFI	Action	Status of actions	Responsible Officer / Position
Short term evaluation of results: Establish procedures for the daily review of DWQ monitoring data & consumer satisfaction	Recommendation	Currently being reviewed by Cairns TPHS & operational staff	In progress	WWASC ESO (TBA) & operational staff
Incident & emergency response protocols: Train employees & regularly test emergency response plans	Recommendation	Currently being reviewed	In progress	WWASC ESO (TBA) & operational staff
Investigate any incidents or emergencies & revise protocols if necessary	Recommendation	Currently being reviewed	In progress	WWASC ESO (TBA) & operational staff
Corrective action: Establish & document procedures for corrective action in response to non-conformance or consumer feedback	Recommendation	Currently being reviewed	In progress	WWASC ESO (TBA) & operational staff
Employee awareness & involvement: develop mechanisms & communication procedures to increase employees awareness of & participation in DWQ Management	Recommendation	Cairns TPHS Safe Water Project which involves educational training of operational staff in DWQ management currently in progress.	In progress	WWASC ESO (TBA) & operational staff
Management of documentation & records: Document information pertinent to all aspects of DWQ management	Recommendation	Provide specific SOP's & specific location of hard copies of daily results to be digitised	In progress	WWASC ESO (TBA) & operational staff
Establish a records management system & ensure that employees are trained to fill out records	Recommendation	Being reviewed. Training in progress	In progress	WWASC ESO (TBA) & operational staff
Reporting: Establish procedures for effective internal & external reporting	recommendation	Being reviewed	In progress	WWASC ESO (TBA) & operational staff

In summary, Wujal Wujal Aboriginal Shire Council has approached Cairns Tropical Public Health Services – Safe drinking water program, to add an additional level of peer review whilst at the same time build capacity around compliance and monitoring skill sets at the local level.

Council is aiming to ensure regulators are confident that data provided is verifiable through a number of collection points (ie Cairns Laboratory).