

Drinking Water Quality Management Plan Report

Carpentaria Shire Council

SPID: 32

2017-18

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

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1 Introduction

This is the Drinking Water Quality Management Plan (DWQMP) report for Carpentaria Shire Council (CSC) for the financial year 2017-18.

CSC is a registered service provider with identification (SPID) number 32. CSC is operating under an approved DWQMP to ensure consistent supply of safe quality drinking water in order to protect public health. This is done through proactive identification and minimisation of public health related risks associated with drinking water.

The DWQMP report includes:

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

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

2 Summary of scheme/s operated

Table 1 – Summary of schemes

<i>Scheme</i>	<i>Water Source</i>	<i>Treatment processes</i>	<i>Treatment capacity</i>	<i>Towns supplied</i>
Normanton-Karumba scheme	Glenore weir, Norman River Wharf and Normanton artesian bore	Coagulation, flocculation, clarification, filtration and chlorination	3.7ML/day design capacity	Normanton and Karumba

3 DWQMP implementation

The actions undertaken to implement the DWQMP are summarised below.

Water (and sewer) staff met regularly to discuss water (and sewerage) issues. This provided the opportunity to refer to the approved DWQMP and emphasise the importance of using the plan. The meetings were chaired by the Manager of Water and Waste.

During the reporting period, each staff member undertook a day of training in relation to the DWQMP and received a hard copy of the DWQMP and SOPs as part of the induction package. This package was put together and delivered by the incoming Manager of Water and Waste.

The actions undertaken to implement the risk management improvement program are discussed in Table 2.

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
Normanton-Karumba	WQ1	Servicing	Investigate arrangement with relevant suppliers (Veolia and Endress Hauser) for maintenance and calibration visits every 2 years.	Sep-18	Replaced analysers and purchased equipment to perform in-house calibrations. Engaged trades contractors to perform inspections and maintenance on relevant equipment.	Complete (maintenance ongoing)	Operations supervisor
Normanton-Karumba	WQ3	Administration	Modify water quality data spreadsheet to capture measurement for clarified water, filtered water and chlorine analyser from the respective online meter readings at least daily when grab samples are tested, and when there is a CCP breach. Include CCP targets and critical levels in the spreadsheet - colour code for breaches.	Mar-18	Spreadsheets and recording process updated to capture extra monitoring data as well as CCP targets.	Complete	Manager Water and Waste
Normanton-Karumba	WQ5	Reservoirs	Karumba reservoirs - secure overflow pipes to ensure no access point for pests and vermin.	Jun-18	Secured pipe outlets to prevent vermin ingress.	Complete	Operations staff

Scheme name	Ref	Component	Improvement actions	Target date	Actions taken to date	Status and revised target date	Responsible Officer / Position
Normanton-Karumba	WQ6	Karumba Reservoirs	Investigate options to reduce THMs, e.g. re-configuration of Karumba reservoir pipeworks and optimising amount of rechlorination. Consider relocating the rechlorination point.	Dec-17	Re-configuration of pipework completed, shed built and new dosing system built off-site. Installation due December 18. Will require optimisation and monitoring.	In progress – Apr-19	Manager Water and Waste
Normanton-Karumba	WQ8	Whole of System	Compile operating procedures for the service into a Manual, including reservoir cleaning (with schedule), jar tests, filter backwash, mains repairs, hygiene (tools, personnel), sampling, equipment calibration, flushing. This includes development of relevant checklist to record preventive measures undertaken.	Jun-18	A complete induction package compiled and rolled out to staff to include all elements required.	complete	Manager Water and Waste

4 Verification monitoring - water quality information and summary

This section discusses the compliance with the water quality criteria.

Council maintains comprehensive monitoring programs to ensure that the quality of water supplied to customers is safe. The monitoring programs assist to identify any issue before it becomes a significant water quality incident. There has been no change to the verification monitoring plan, as there has not been any new development in the reticulation network to warrant an additional testing site. Council also undertakes operational monitoring, which includes the planned sequence of measurements and observations to assess and confirm the performance of our preventive or control measures. Measurements are of operational parameters that indicate whether processes are functioning effectively. Council is working to continually strengthen the process of operational monitoring. Quality assurance is important to guarantee consistently reliable and legally defensible results and ensure customers are provided with the best quality water. Council utilises the Cairns Regional Council's Water and Waste Laboratory Services, which is a NATA accredited laboratory, for all external testing

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
Normanton-Karumba	<i>E. coli</i>	64	89	<1cfu/100mL	0	Additional <i>E. coli</i> samples were collected but not received by Cairns Lab due to issues with flights/transport.
Normanton-Karumba	THM	4	8	<250ppb	0	

Table 4. E. coli compliance with annual value

Drinking water scheme: Normanton-Karumba

Year	2017 – 2018											
Month	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
No. of samples collected	9	8	9	8	9	7	8	7	5	6	9	4
No. of samples collected in which E. coli is detected (i.e. a failure)	0	0	0	0	0	0	0	0	0	0	0	0
No. of samples collected in previous 12 month period	120	118	118	116	114	112	110	111	101	101	95	89

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%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Compliance with 98% annual value	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

5 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
n/a			

6 Customer complaints

This section discusses details of any complaints received about the drinking water service

Refer to section 2.3.6 in the Guidance Note.

Table 6 – Example: customer complaints about water quality

Scheme	Health concern	Dirty water	Taste and odour	Other
Normanton-Karumba	0	0	0	0
Total	0	0	0	0

No complaints were made in relation to the water supply, with past complaints related to taste and smell. CSC takes customer complaints seriously and responds and rectifies issues through investigation, flushing and re-sampling in a timely fashion to avoid any potential secondary issues.

7 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: DD/MM/YY

Review component	Findings	Outcomes	Status of actions	Responsible Officer / Position
Service description	No changes	Not applicable	Not applicable	
Details of infrastructure	No changes	Not applicable	Not applicable	
Water quality and catchment characteristics	No changes to catchment description. New CCP values for filter turbidity.	Turbidity values in CCP 3 and water quality table to be changed	completed	Manager Water and Waste
Risk assessment	No changes	Not applicable	Not applicable	
Operations and maintenance procedures	No changes	Not applicable	Not applicable	
Management of incidents and emergencies	No changes	Not applicable	Not applicable	
Risk management improvement program	Improvement actions have been implemented and some are in progress. Boron assessed as a new hazard.	The risk management program needs to be revised. Boron was assessed.	The risk management improvement plan will be updated during the next review in 2019. Due to dilution of bore water (<5%), the residual risk for Boron was not of concern (acceptable).	Risk Management Team
Service wide information management	No changes	Not applicable	Not applicable	

Review component	Findings	Outcomes	Status of actions	Responsible Officer / Position
Operational monitoring	Installation of online turbidity meters required for each filter and clarifier.	Installed/replaced online turbidity meters	Completed	Manager Water and Waste
Verification monitoring	No changes	Not applicable	Not applicable	

8 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:

A review of CSC's DWQMP was undertaken in October 2017 through the engagement of Viridis Consultants Pty Ltd. The reviewer submitted the updated document along with an amendment application. The purpose of the audit was to:

- Verify the accuracy of data
- Assess compliance with the plan and its conditions
- Assess the relevance of the plan

A summary of the findings includes:

- There was no major noncompliance to impact public health
- Data supplied to the regulator under the approved plan was accurate
- CSC is overall complying with the plan and its conditions
- The plan remains largely relevant to the water scheme
- Required the addition of boron as a new hazard
- Critical control points were suitable, with limits updated
- Improvement Plan required updating

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
Boron assessed as a potential hazard	Recommendation	Perform risk assessment on potential for boron to exceed guideline threshold	Complete – not considered an issue due to the high dilution rate of bore water	
Critical control points	Recommendation	Review CCP limits for suitability	Complete – reduced turbidity critical limit	
Improvement Plan Register	OFI	Improvement Plan Register needed reviewing and updating	Complete – progress on existing items updated and addition of new items	