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DRINKING WATER QUALITY MANAGEMENT PLAN (DWQMP) REPORT 2015 / 2016 SERVICE PROVIDER NO. 111



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1 Introduction

This report documents the performance of Richmond Shire Council's Water Treatment Plant's 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

Water for the Richmond water supply scheme is obtained from two (2) bores, (Bore 5 and Bore 6) which are drawn from the Great Artesian Basin at depths between 336m and 405m. Water from these two (2) bores is treated by our new water treatment plant using direct filtration method. Bore 6 is pre-dosed with chlorine before it enters four raw water tanks, where bores 5 & 6 are aerated inside the raw water tanks. After this process the water is dosed with Alum before going through 3 trains of 3 flocculation tanks per train to form a floc which then flows through 3 trains of 5 filters per train. Iron & manganese is removed from the water which flows through a dual medium that consists of carbon and filter sand. The water is then dosed with chlorine for disinfection purposes before it enters our 1.5 megalitre clear water tank. The water is then pumped into the watermain reticulation system using variable speed drive pumps.

3 Actions taken to implement the DWQMP

The Richmond Shire Council's (RSC) DWQMP was implemented by setting operational limits to ensure water quality for our Community.

4 Compliance with water quality criteria for drinking water

All testing this financial year did not reach the limits for reporting parameters for E.coli, Chlorine, pH, dissolved oxygen, biochemical oxygen, suspended solids, total nitrogen or total phosphorus.

5 Notifications to the Regulator

This financial year there were zero instances where the Regulator was notified under sections 102 and 102A of the Act.

6 Customer complaints related to water quality

This financial year there were zero complaints received regarding water quality ie, suspected illness, discoloured water or taste and odour issues.

7 Findings and recommendations of the DWQMP auditor

The audit has not been undertaken this financial year as it is due 9/07/2018.

8 Outcome of the review of the DWQMP

The review conducted on the 19th December 2016 has highlighted some changes that will be required to be made to our DWQMP.

9 Appendix A – Summary of compliance with water quality criteria

The results from the verification monitoring program have been compared against the levels of the water quality criteria specified by the Regulator in the Water Quality and Reporting Guideline for a Drinking Water Service. The reported statistics do not include results derived from repeat samples, or from emergency or investigative samples undertaken in response to an elevated result as none of these events have occurred.

Parameter	Scheme component (SW, WTP, T, R)	Name of scheme component (eg. Name of source or treatment plant)	Laboratory name	Unit of measure	Limit of reporting for chemical parameters	Total number of samples taken	Number of samples in which the parameter was detected	Number of samples exceeding health guideline value of in which pathogens were detected	Minimum concentration or count	Maximum concentration or count	Average (mean) concentration or count
E.coli	R		In House	cfu/100ml		40	Nil	Nil			
Chlorine	WTP	Richmond Water Treatment Plant	In House	mg/L	5mg/L	40	Nil	Nil			
	R		In House	mg/L	5mg/L	20	Nil	Nil			
Water Quality Testing											
pH	WTP	Richmond Water Treatment Plant	Townsville Laboratory Services	pH units		3	Nil	Nil			
Dissolved Oxygen	WTP	Richmond Water Treatment Plant	Townsville Laboratory Services	mg/L		3	Nil	Nil			
Biochemical Oxygen	WTP	Richmond Water Treatment Plant	Townsville Laboratory Services	mg/L		3	Nil	Nil			
Suspended Solids	WTP	Richmond Water Treatment Plant	Townsville Laboratory Services	mg/L		3	Nil	Nil			
Total Nitrogen	WTP	Richmond Water Treatment Plant	Townsville Laboratory Services	mg/L		3	Nil	Nil			
Total Phosphorus	WTP	Richmond Water Treatment Plant	Townsville Laboratory Services	mg/L		3	Nil	Nil			

Table 1 - Verification monitoring results

Month	2015/16 Financial Year											
	July	August	September	October	November	December	January	February	March	April	May	June
No. of samples collected	5	5	0	0	4	5	0	5	6	5	0	5
No. that E.coli is detected	0	0	0	0	0	0	0	0	0	0	0	0
No. collected in 12 month prior	5	0	5	0	5	4	5	5	6	5	0	0
No. of failures for 12 month prior	0	0	0	0	0	0	0	0	0	0	0	0
% of samples that comply	100%	0%	100%	0%	100%	100%	100%	100%	100%	100%	0%	0%
Compliance with 98% annual value												

Table 2 – Reticulation E.coli verification monitoring

Item No.	Scheme Component / Sub-component	Action(s)	Target date/s	Status as at <<date>>	(If implementing these actions will take longer than anticipated, please provide detail, as it may affect the approved DWQMP)
R.15 R.16 R. 54 R.55	Richmond Supply Scheme – Management Plan	Richmond Shire Council is continuously reviewing its Local Disaster Management Plan, in this processes are in place to ensure drinking water quality is maintained before and after disaster events.	Rolling	Updated	
		The DWQMP has been reviewed and amendments are being made.	31/01/2017	Being updated	
R.17 R. 56	Richmond Supply Scheme – Sources	Long term permanent fencing has be installed around the new WTP.	Completed	Completed	
R. 21 R. 23 R. 24 R. 25 R. 26 R. 27 R.35	Richmond Supply Scheme – Treatment	Council has finalised and completed construction of the new WTP that has reduced levels of iron and manganese. Council have installed water metres but are still developing a system in which to charge ratepayers for their consumption.	Unknown	Working towards	
R. 32 R. 35	Richmond Supply Scheme – Reticulation	Asbestos pipework has been replaced.	Completed	Completed	
R. 32 R. 57 R. 55 R. 24 R. 25	Richmond Supply Scheme – O & M Procedures	Implemented procedures in regards to reactive network isolation and flushing.	Completed	Completed	
R. 24 R. 25 R. 2 R. 14 R. 40 R. 52	Richmond Supply Scheme – Monitoring	Regular monitoring of chlorine levels and water quality within the reticulation network are undertaken as per the verification monitoring table (Table 1).	Completed	Completed	