



Drinking Water Quality Management Plan Report
QUILPIE SHIRE COUNCIL

SPID: 108

2019-2020

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

Table of contents

1	Introduction	2
2	Summary of scheme/s operated	2
3	DWQMP implementation	2
4	Verification monitoring - water quality information and summary	7
5	Incidents reported to the regulator	11
6	Customer complaints.....	11
7	DWQMP review outcomes	12
8	DWQMP audit findings	12

Table of tables

Table 1 – Summary of schemes	2
Table 2 – Risk management improvement program implementation status.....	5
Table 3 – Drinking water quality performance - verification monitoring	7
Table 4 – E. coli compliance with annual value	9
Table 5 – Incidents reported to the regulator	11
Table 6 – Customer complaints about water quality	11
Table 7 – DWQMP review outcomes.....	
Table 8 – DWQMP audit findings and status	

1 Introduction

This is the Drinking Water Quality Management Plan (DWQMP) report for Quilpie Shire Council (QSC) for the financial year 2019-2020.

A new amended DWQMP was approved on 13 November 2020. This report relates to the previous DWQMP.

QSC is a registered service provider with identification (SPID) number 108. QSC 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.

This 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 office.

2 Summary of scheme/s operated

Table 1 – Summary of schemes

Scheme	Water Source	Treatment processes	Treatment capacity	Towns supplied
Quilpie	Bore	NIL/ no disinfection*	N/A	Quilpie
Eromanga	Bore	Reverse Osmosis & Chlorine Dosing System	20kL	Eromanga

*The artesian bore water is at a high temperature which precludes disinfection.

3 DWQMP implementation

The actions undertaken to implement the DWQMP are summarised below.

Council continues to distribute the fact sheet provided by Queensland Health – *Naturally Occurring Fluoride in Quilpie’s Drinking Water*. This is available on QSC’s website under Services.

[\(https://quilpie.qld.gov.au/quilpie-services/water-supply/\)](https://quilpie.qld.gov.au/quilpie-services/water-supply/)

Water and sewerage staff meet daily on work days to discuss water and sewerage issues. They are a small team of three people (two plumbers plus an apprentice).

Following the report on the assessment of QSC drinking water service carried out on 12-13 April 2018, key personnel met to discussed key issues and recommendations, the following table addresses each key issue

Key Issue	Action Recommended	Action
Council's in-house E.coli test equipment and all related consumables is currently located in an open environment in a corner of the works shed	<ul style="list-style-type: none"> • Council should develop a dedicated laboratory area where all in-house test equipment and consumables are stored. • Council should also consider and purchase a dedicated refrigerator to store drinking water samples and related consumables. 	Council is installing a new donga building to be used as a standalone laboratory. A dedicated refrigerator will be installed and new testing equipment installed.
The DWQMP refers to 'engage RO specialist to implement critical maintenance on ongoing basis' in the table 5-10 Eromanga Risk Management Improvement Program	<ul style="list-style-type: none"> • If council has completed the action, the current status should be included in the DWQMP Report 2017/18 due by 18 December 	Civil Mech Solutions attended the RO plant in April 2017 to address critical issues. Mak Water have were engaged to assist Council to rectify ongoing issues and adjust and modify current maintenance procedures. Water staff have completed Operate and Control Desalination Processes course. This action is complete.
The approved DWQMP does not reflect actual verification monitoring practice in Eromanga Scheme	<ul style="list-style-type: none"> • Amend the Table 6-4 Verification Monitoring in DWQMP to reflect the actual practice. • Council must amend its approved DWQMP and apply for its approval, if any changes are made to its current verification monitoring program 	A review of the DWQMP was carried out by George Bourne and Associates (February 2020). The new plan was approved by the regulator on 13 November 2020. This action now complete.
Incident/Emergency level description in the DWQMP do not represent actual practice.	<ul style="list-style-type: none"> • Amend the DWQMP to update incident level descriptions, responsible positions and summary of actions; as appropriate, to reflect actual circumstances. 	A review of the DWQMP was carried out by George Bourne and Associates (February 2020). The new plan was approved by the regulator on 13 November 2020. This action now complete.
OFI'S	Action Recommended	Action
Water and Sewerage staff were not aware of relevant Queensland Health public health unit (PHU) contacts	<p>Make contact with Darling Downs PHU to:</p> <ul style="list-style-type: none"> • introduce all relevant council staff involved in management and operation of drinking water service (this is to ensure if key council staff are away then other staff are able to communicate); and • verify currency of Boil Water Alert template and Fluoride factsheet 	Boil Water Alert updated – DOC ID 164341 Fluoride Fact Sheet is unique to Quilpie and is available on Council's website. https://quilpie.qld.gov.au/quilpie-services/water-supply/

		<p>PHU contact details are displayed near the testing equipment.</p> <p>This action is complete.</p>
<p>E. coli monitoring is compliant with the Public Health Regulation 2005, but considered Inadequate.</p>	<ul style="list-style-type: none"> Review current sampling locations for Eromanga and Quilpie and rationalise the monitoring program so that the entire reticulation is adequately sampled. Council must amend its approved DWQMP and apply for its approval, if any changes are made to its current verification monitoring program 	<p>A review of the DWQMP was carried out by George Bourne and Associates (February 2020). The new plan was approved by the regulator on 13 November 2020.</p> <p>This action now complete.</p>
<p>The accuracy of the incubator temperature should be verified at regular intervals</p>	<ul style="list-style-type: none"> Council should regularly engage a contractor to check, maintain and as necessary, re-calibrate the incubator to ensure its effective operation 	<p>New incubator to be purchased when new laboratory is completed.</p>
<p>The four raw water bores in Eromanga scheme did not appear to have a dedicated sample tap.</p>	<ul style="list-style-type: none"> Council should consider installing a permanent sample tap at each bore in Eromanga (similar to Quilpie town bores) to assist council staff collecting raw water samples(s) 	<p>Sample taps have been installed.</p> <p>This is now complete.</p>
<p>Eromanga water supply system map in the DWQMP should be updated to reflect current practice.</p>	<ul style="list-style-type: none"> Amend the DWQMP to correct the naming of Eromanga's bores 1 and 2. This change can be approved, by Regulator agreement, under section 99A of the Act and once made, Council should apply to the Regulator by email to drinkingwater.reporting@dnrme.qld.gov.au, for approval of this minor change. Amend the Eromanga water supply system map in the DWQMP to include verification monitoring sample locations. If this change is only to update the map with existing sample locations, an email to request the Regulator's agreement under section 99A will suffice. If additional E. coli sampling sites or the frequency of sampling is changed in the DWQMP, an application to approve these changes under section 100 of the Act is required. 	<p>A review of the DWQMP was carried out by George Bourne and Associates (February 2020). The new plan was approved by the regulator on 13 November 2020.</p> <p>This action now complete.</p>

All other recommendations listed in the Assessment of the Operation of the Quilpie and Eromanga Drinking Water Supply Systems were reviewed and considered during the review of the DWQMP which was approved by the Regulator on 13 November 2020.

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
Quilpie	Q1	Bore	Distribute fact sheet to the community informing them of potential health risks.	July 13	Fact sheet remains on Council’s corporate website, and a public notice is displayed yearly on strategically placed public notice boards. A Facebook notice is issued in November each year (Facebook is a highly used communication media due to no published newspaper being available.)	Ongoing November 30 each year	Chief Executive Officer
	Q2	Bore & Distribution System & Sourcing Infrastructure	Update Operational & Maintenance Procedures	June 2018	Update O & M procedures to address deficiencies such as operational monitoring data capture, backup staffing to achieve monitoring at required frequencies and safe work	Reviewed & updated October 2018. Incorporated into DWQMP update approved 13 November 2020.	
		Distribution System & Sourcing Infrastructure			Update O & M Procedures to include safe practices for maintenance and repair of water mains	Reviewed & updated. Additional Safe Work Method Statements in addition to those listed are available in Council Electronic Records Management System	
	Q3	Whole of system	Develop roles and responsibilities for operational and administrative duties	April 2018		Complete Doc ID164387	
	Q4	Whole of system	Develop DWQM Document register & Review DWQM Documentation ensuring correct document control.	March 2018		Complete Doc ID 164386	
	Q5	Whole of system	Develop training matrix for operational staff to be implemented.	June 2019		Annual training management plan is done for all water and sewerage staff. New planning commenced 25/02/20. Training	

Scheme name	Ref	Component	Improvement actions	Target date	Actions taken to date	Status and revised target date	Responsible Officer / Position
						plans adopted for each staff member.	
Eromanga	E1	Bore & Distribution System & Sourcing Infrastructure	Update Operational & Maintenance Procedures	June 2018	Update O & M procedures to address deficiencies such as operational monitoring data capture, backup staffing to achieve monitoring at required frequencies and safe work	Reviewed & updated October 2018. Incorporated into revised DWQMP.	Chief Executive Officer
		Distribution System & Sourcing Infrastructure			Update O & M Procedures to include safe practices for maintenance and repair of water mains	Reviewed & updated. Additional Safe Work Method Statements in addition to those listed are available in Council Electronic Records Management System	
	E2	Treatment Plant	Engage RO specialist to implement critical maintenance on ongoing basis		Private contractor approached to perform works	Works completed	
	E3	Whole of system	Develop roles and responsibilities for operational and administrative duties	April 2018	R & R completed	Complete Doc ID164387	
	E4	Whole of system	Develop DWQM Document register & Review DWQM documentation ensuring correct document control.	March 2018		Complete Doc ID 164386	
	E5	Whole of system	Develop training matrix for operational staff to be implemented.	June 2019		Annual training management plan is done for all water and sewerage staff. See Q5 above.	

4 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
Quilpie	Nitrate	4	4	50	0	
	Sulphate	4	4	500	0	
	Fluoride (naturally occurring)	4	4	1.5	4*	No action taken as fluoride in Quilpie water is naturally occurring. This is an ongoing incident, ID DWI-7-108-00003 .
	Aluminium (acid-soluble)	4	4	n/a	0	
	Boron	4	4	4	0	
	Copper	4	4	2	0	
	Iron	4	4	n/a	0	
	Manganese	4	4	0.5	0	
	Zinc	4	4	n/a	0	
	pH	4	4	6.5-8.5 aesthetic	1	8.52 on one test
	Turbidity	4	4	5 aesthetic	0	
Escherichia coli (E.coli) Public Health Regulation 2005	12	12	0	0		

Scheme name	Parameter	No. of samples required to 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
Eromanga	Nitrate	4	4	50	0	
	Sulphate	4	4	500	0	
	Fluoride (naturally occurring)	4	4	1.5	0	
	Aluminium (acid-soluble)	4	4	n/a	0	
	Boron	4	4	4	0	
	Copper	4	4	2	0	
	Iron	4	4	n/a	0	
	Manganese	4	4	0.5	0	
	Zinc	4	4	n/a	0	
	pH	4	4	6.5-8.5 aesthetic	0	
	Turbidity	4	4	5 aesthetic	0	
	Chlorine	52	52	9	0	
	Escherichia coli (E.coli) Public Health Regulation 2005	12	12	0	0	

Table 4. *E. coli* compliance with annual value

Drinking water scheme: Quilpie

Year	2019 to 2020											
Month	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
No. of samples collected	2	2	2	2	2	2	2	2	2	2	2	2
No. of samples collected in which <i>E. coli</i> 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	24	24	24	24	24	24	24	24	24	24	24	24
No. of failures for previous 12 month period	0	0	0	0	0	0	0	0	0	0	0	0
% of samples that comply	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Compliance with 98% annual value	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES

CALCULATE PERCENTAGE USING A TWELVE (12) MONTH 'ROLLING' ANNUAL VALUE

The *Public Health Regulation 2005* (the regulation) requires that 98 per cent of samples taken in a 12 month period should contain no *E. Coli*. This requirement is referred to as the 'annual value' in Schedule 3A of the regulation.

This requirement comes into effect once you have 12 months data and should be assessed every month based on the previous 12 months data (so that it is a 'rolling' assessment).

Drinking water scheme: Eromanga

<i>Year</i>	<i>2019 to 2020</i>											
<i>Month</i>	<i>July</i>	<i>Aug</i>	<i>Sept</i>	<i>Oct</i>	<i>Nov</i>	<i>Dec</i>	<i>Jan</i>	<i>Feb</i>	<i>Mar</i>	<i>Apr</i>	<i>May</i>	<i>Jun</i>
No. of samples collected	2	2	2	2	2	2	2	2	2	2	2	2
No. of samples collected in which <i>E. coli</i> 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	24	24	24	24	24	24	24	24	24	24	24	24
No. of failures for previous 12 month period	0	0	0	0	0	0	0	0	0	0	0	0
% of samples that comply	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Compliance with 98% annual value	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES

CALCULATE PERCENTAGE USING A TWELVE (12) MONTH 'ROLLING' ANNUAL VALUE

The *Public Health Regulation 2005* (the regulation) requires that 98 per cent of samples taken in a 12 month period should contain no *E. Coli*. This requirement is referred to as the 'annual value' in Schedule 3A of the regulation.

This requirement comes into effect once you have 12 months data and should be assessed every month based on the previous 12 months data (so that it is a 'rolling' assessment).

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
14/09/17	Quilpie	Fluoride	No action taken as fluoride in Quilpie water is naturally occurring. This is an ongoing incident, ID DWI-7-108-00003 .
14/12/17	Quilpie	Fluoride	No action taken as fluoride in Quilpie water is naturally occurring. This is an ongoing incident, ID DWI-7-108-00003 .
14/06/18	Quilpie	Fluoride	No action taken as fluoride in Quilpie water is naturally occurring. This is an ongoing incident, ID DWI-7-108-00003 .

6 Customer complaints

This section discusses details of any complaints received about the drinking water service. The complaints if received are noted in the monthly Status Report presented each month to the Council. No complaints were received for water quality issues during the report period. Normal breakage and leakage complaints are not part of this reporting but are reported to Council monthly.

Table 6: customer complaints about water quality

Scheme	Health concern	Dirty water	Taste and odour	Other
Quilpie	0	0	0	0
Eromanga	0	0	0	0
Total	0	0	0	0

7 DWQMP review outcomes

No review was conducted during the reporting period 1/7/18 to 30/6/19 as the DWQMP amendment was approved in February 2018.

A full review of the DWQMP has been completed and was approved by the Regulator on 13 November 2020.

8 DWQMP audit findings

No audit was conducted during the reporting period 1/7/18 to 30/6/19 as the DWQMP amendment was approved in February 2018