



# Drinking Water Quality Management Plan (DWQMP) report

2015-2016

## Hope Vale Shire Council

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## Glossary of terms

ADWG 2004	Australian Drinking Water Guidelines (2004). Published by the National Health and Medical Research Council of Australia
ADWG 2011	Australian Drinking Water Guidelines (2011). Published by the National Health and Medical Research Council of Australia
<i>E. coli</i>	<i>Escherichia coli</i> , a bacterium which is considered to indicate the presence of faecal contamination and therefore potential health risk
HACCP	Hazard Analysis and Critical Control Points certification for protecting drinking water quality
mg/L	Milligrams per litre
NTU	Nephelometric Turbidity Units
MPN/100mL	Most probable number per 100 millilitres
CFU/100mL	Colony forming units per 100 millilitres
<	Less than
>	Greater than

## 1. Introduction

This report documents the performance of **Hope Vale Shire Council'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.

This template has been prepared in accordance with the *Water Industry Regulatory Reform – drinking water quality management plan report factsheet* published by the Department of Energy and Water Supply, Queensland, accessible at [www.dews.qld.gov.au](http://www.dews.qld.gov.au).

## 2. Overview of Operations

*This section is intended to inform the reader of the context of the water supply schemes that this annual report relates to.*

*The provider may choose to provide detail such as the number of customers supplied, the type of treatment and the overall performance of the provider. It may provide an introduction to the provider's development and application of the drinking water quality management DWQMP, and the purpose of the DWQMP (to protect public health by ensuring the provision of a safe water supply).*

The **Hope Vale Shire Council's** treatment DWQMP sources water from the **ground water bores**. The treatment comprises of **Aeration to treat iron bacteria and PH correction by using Soda Ash**. Water is disinfected before reticulation. Hope Vale Shire has a population of about 1300 with about 400 water connections.

## 3. Actions taken to implement the DWQMP

*Describe how your DWQMP has been implemented – for example, if operational limits have been set, describe how this has ensured water quality.*

### **Progress in implementing the risk management improvement program**

Refer to the Appendices for a summary of progress in implementing each of the Improvement Program actions.

*Several initiatives were undertaken to mitigate risk as per the improvement program. These have been outlined in more detail in the Appendix. Further Relevant SOPs have been developed during 2015-2016 for Aeration, PH correction, Primary Disinfection and Re-doze Disinfection.*

### **Revisions made to the operational monitoring program to assist in maintaining the compliance with water quality criteria<sup>1</sup> in verification monitoring.**

*NIL Revisions.*

### **Amendments made to the DWQMP**

*NIL.*

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<sup>1</sup> Refer to *Water Quality and Reporting Guideline for a Drinking Water Service* for the water quality criteria for drinking water.

## 4. Compliance with water quality criteria for drinking water

The water quality criteria mean health guideline values in the most current Australian Drinking Water Guidelines, as well as the standards in the Public Health Regulation 2005.

- You should summarise the results of the verification monitoring for your drinking water service.
- Present the data in a way that is most meaningful, such as grouping by town serviced. Examples are shown in the report template.

Ensure you include:

- parameter
- unit of measure
- total number of samples collected
- number of samples that did not meet the water quality criteria
- maximum concentration or count
- Detail the months, if any, where the annual value for *E. coli* was not achieved for the service.

Comment on whether the water quality results met the recommended values in the Australian Drinking Water Guidelines and the *E. coli* and fluoride standards.

## 5. Notifications to the Regulator under sections 102 and 102A of the Act

This financial year there were **ZERO** instances where the Regulator was notified under sections 102 or 102A of the Act. **Zero** of these notifications involved the detection of *E. coli* – an organism that may not directly represent a hazard to human health, but indicates the presence of recent faecal contamination. The remaining **ZERO** notifications; were non-compliances with water quality criteria caused by **NIL**. **None** of these incidents required **Hope Vale Shire Council** to issue a boil water or do not drink notice in the communities.

## 6. Customer complaints related to water quality

Hope Vale Shire Council is required to report on the number of complaints, general details of complaints, and the responses undertaken.

Throughout the year there were **zero** complaints about water quality:

### **Suspected Illness**

Complaints are sometimes received from customers who suspect their water may be associated with an illness they are experiencing. Hope Vale Shire Council investigates each complaint relating to alleged illness from our water quality, typically by testing the customers tap and closest reticulation sampling point for the presence of *E. coli*.

During 2015-16, there were **ZERO** confirmed cases of illness arising from the water supply system.

## 7. Findings and recommendations of the DWQMP auditor

Nil. No audit undertaken during 2015-2016.

## 8. Outcome of the review of the DWQMP and how issues raised have been addressed

The next internal review of the DWQMP is due before 30 June 2017.

## 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 per ADWG recommendations, the data could be presented per water quality monitoring zone. Additionally the 95<sup>th</sup> percentile statistic could be stated, but these aspects are beyond the minimum requirements in the annual report.*

**Table 1 - Verification monitoring results**

Scheme name	Scheme component	Parameter	Units	Frequency of sampling	Total No. samples collected	No. of samples in which parameter was detected	No. of samples exceeding water quality criteria	Min	Max	Average (Mean)	Limit of reporting	Laboratory name
Hope Vale	Reticulation	Free Chlorine	mg/L	7 days/week	365	0	0	0.2	0.95	0.575	>0.1	In House and Quarterly at Cairns Lab
	Reticulation	PH		5 days/week	260	0	0	6.8	7.5	7.15	5.5-8.5	In House and Quarterly at Cairns Lab
	Reticulation	Turbidity	NTU	5 days/week	260	0	0	0.9	4.9	2.9	5	In House and Quarterly at Cairns Lab

Double click to edit in Excel. Copy and paste table and caption for each scheme. The original Excel tool is accessible at [www.dews.qld.gov.au](http://www.dews.qld.gov.au).

**Table 2 - Reticulation *E. coli* verification monitoring**

<b>No. of samples collected</b>	16	16	16	16	16	16	16	16	16	16	16	16
<b>No. of samples collected in which <i>E. coli</i> is detected (i.e. a failure)</b>	0	0	0	0	0	0	0	0	0	0	0	0
<b>No. of samples collected in previous 12 month period</b>	16	32	48	64	80	96	112	128	144	160	176	192
<b>No. of failures for previous 12 month period</b>	0	0	0	0	0	0	0	0	0	0	0	0
<b>% of samples that comply</b>	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
<b>Compliance with 98% annual value</b>	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).



## Appendix B – Implementation of the DWQMP Risk Management Improvement Program

**Table 3 – Progress against the risk management improvement program in the approved DWQMP**

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)
1.0	Disinfection	Change chlorine dosing pumps	2014-2015	Completed (Improved results noticed)	
2.0	Aeration to improve PH and reduce iron	Build deck/platform for improved access to regularly clean the aerator	Late 2013	Completed (significant improvement achieved)	
3.0	Reservoirs	Inspection and cleaning of both 2ML reservoirs	2014-2015	Completed (not much sludge in reservoirs)	
4.0	Bore Pumps	Service and upgrade electricals to current standards	2014-2015	Completed (Better yield in pumps)	
5.0	Chlorate	Source fresh liquid chlorine. Set up a system to procure fresh chlorine from neighbouring Cook Shire who purchase fresh chlorine in bulk	2013-2014	Completed (Resulted in reduced usage of chlorine and better disinfection and significantly reduced risk for chlorates)	
6.0	Aeration, PH Correction, Primary Dosing and Re-Dosing	Develop Relevant SOPs	2015-2016	Currently implementing inside Council Safety IMS	