



**MORNINGTON
SHIRE COUNCIL**

Drinking Water Quality Management Plan Annual Report

Morrington Shire Council

SPID: 515

Financial year to which report relates.

2022 - 2023

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 Mornington Shire Council (MSC) for the financial year 2022-2023.

MSC is a registered service provider with identification (SPID) number 515. MSC 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 services.
- 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 customer through our website or for inspection upon request at council office.

2 Summary of scheme/s operated

The Potable Water Supply for the township of Gununa is sourced from the Dithery Creek Dam and its catchment area located 2.5 kms north of the township of Gununa.

The Dithery Creek Dam has a total storage capacity of 846 ML, the Dam's water (RAW water) is pumped from the Dam to the Water Treatment Plant (WTP) where pH correction if required and disinfection is undertaken via Sodium Hypochlorite - liquid chlorination system, before the water is stored into 2 x 1.7 ML (Clear-water) Reservoirs then supply to the towns reticulation network.

Table 1 – Summary of schemes

Scheme	Water Source	Treatment processes	Treatment capacity	Towns supplied
Gununa	Dithery Dam	Chlorination	1 ML/Day	Gununa

3 DWQMP implementation

The actions undertaken to implement the DWQMP are summarised below.

- Daily/Weekly operation and maintenance schedule maintained for all water and wastewater operations staff. These schedules include water testing, mains flushing, chlorination and network monitoring.
- Daily water testing of chlorine, pH and turbidity performed on-site by water and wastewater operations staff. This testing also includes weekly monitoring of E.coli
- Fortnightly water testing sent to independent external laboratory incorporating E.coli, total coliforms and heterotrophic plate counts.
- Annual scheduled maintenance and review of all water and wastewater telemetry performed under service agreement.
- Review was completed by June 2023 and submitted to the regulator.
- Cert III in Water Operations training has been organised for all relevant water operations staff through LGAQ. Training commenced in 2023 with one remaining block – Simmons and Bristow Pty Ltd (to be completed by end of 2024 financial year)
- Weekly toolbox talk held to discuss water and sewerage issues. This provides opportunity to refer to various reporting requirements and incident response procedures.
- Three (3) new T/A Water operators recruited to provide assistance with daily operations.
- Engaged contractor to inspect the integrity of the reservoir infrastructure. Completed 2 November 2022.
- Engaged consultants to undertake preliminary study to determine suitable primary water treatment system.
- Ongoing services with Queensland Health through their Safe and Healthy Drinking Water Program to provide onsite training and guidance on water monitoring and public health matters.

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
Gununa	WT1	Records, Recording, Data Transfer	Short Term: Radio Network upgrades for SCADA	2021/23	Installed a new generator at the clearwater, switchboard at the dam and telemetry. Generators at the clearwater and the dam trending on SCADA. Remote access not in place phone alarm in place	Completion Date: 31 November 2022 Ongoing training plan to be created and correct training methods. Revised Target: 31 May 2022	CEO, Water and Sewer Manager, relevant staff
			Long-term: Improved SCADA network, with remote access for staff	2025			
Gununa	WT2	Source Water	Short Term: Radio Network upgrades for SCADA	2022	Continued on-the-job training provided to water testing staff.	Ongoing support required and accredited courses for training. Ongoing Target: 31 December 2025	CEO, Water and Sewer Manager, relevant staff
			Long-term: Improved SCADA network, with remote access for staff	2025			
Gununa	WTP3	Reticulation Network	Repair and Operational inspection of reticulation pipework.	2022	<ul style="list-style-type: none"> On-the-job training (informal) to trade assistants and apprentices. Seeking an assessment of the reticulation network in near future 	Training to be identified and provided as required as repairs within reticulation pipework. Revised Target: 31 May 2022	CEO, Water and Sewer Manager, relevant staff
Gununa	WT4	Network Services	Installation of backflow prevention	2023	<ul style="list-style-type: none"> Valve inspections undertaken at the WTP to ensure isolation of the system Completed by CCIS - 31 	Formal update to commence. Revised Target:	CEO, Water and Sewer Manager, relevant staff

Scheme name	Ref	Component	Improvement actions	Target date	Actions taken to date	Status and revised target date	Responsible Officer / Position
					November 2022	12 November 2023	
Gununa	WTP5	Operational & Maintenance Procedures	Identify outdated procedures, update, obtain approval and implement	Ongoing	Operational plan and procedure currently not requiring any updates as of 22/23 financial year.	Plans to update and create new operational and maintenance procedure by 2024	CEO, Water and Sewer Manager
Gununa	WTP6	Water Treatment	Testing, monitoring & training, Capital Upgrade Works Program	2021-24 ongoing	Water Filtration (turbidity control) investigated, and a design was conducted by an independent consultant.	A design was put out to tender.	CEO, Water and Sewer Manager, relevant staff
Gununa	WTP7	Water Treatment	Operator training, create a dedicated Water and Wastewater Officers position	2021-24	Roles established for 2021-24 are as such; <ul style="list-style-type: none"> • 1x dedicated water operator • 1x dedicated sewer operator 	Ongoing	CEO, Water and Sewer Manager, relevant staff

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
Gununa	Free Chlorine	1820	1,374	5 mg/L	0	Gap in samples tested due to public holidays, business closures (sorry business) and lack of staff.
Gununa	Turbidity	1820	1,459	5 NTU	0	Gap in samples tested due to public holidays, business closures (sorry business) and lack of staff.
Gununa	pH	1820	1,466	6.5 – 8.5	0	Gap in samples tested due to public holidays, business closures (sorry business) and lack of staff.
Gununa	E.coli (in-house)	130	144	Nil	0	Total sample number includes raw water (dam) samples. Gap in samples tested due to public holidays, business closures (sorry business) and lack of staff.
Gununa	E.coli (NATA Lab)	130	94	Nil	0	Total sample number includes raw water (dam) samples. Gap in samples tested due to public holidays, business closures (sorry business) and lack of staff.

Note: Total number of samples required for daily testing is calculated for seven sampling locations.

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
Nil for 2022-2023			

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
Gununa	0	0	0	0
Total	0	0	0	0

Mornington Shire Council investigates each complaint relating to alleged illness from our water quality, typically by testing the customers tap and closest reticulation sample point for the presence of

E coli.

Nil complaints for 2022 – 2023 financial year reported.

During the reporting period there were no confirmed cases of illness arising from the water supply system.

7 DWQMP review outcomes

The audit findings and any recommendations and/or opportunities for improvement are discussed below.

Table 7 – DWQMP review outcomes

Review Date: July 2023

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 in catchment description. New set of data available for past 2 years.	Water quality tables in the approved DWQMP needs to be updated.	Water quality data with date range updated in DWQMP.	
Risk assessment	Personnel responsible for the hazard identification process required amendment due to staff turnover. The preventive measures for identified risks required updating.	Amendment of the personnel responsible for the hazard identification process and preventive measures for identified risks updated in DWQMP.	Implementation of the preventive measures ongoing.	
Operations and maintenance procedures	No changes	Not applicable	Not applicable	
Management of incidents and emergencies	Identified requirements for inclusion of the reporting for ADWG parameters with no guideline values and cyber security events in the incident and emergency response section of the plan.	The requirement has been updated in the DWQMP.	Implementation ongoing.	

Review component	Findings	Outcomes	Status of actions	Responsible Officer / Position
Risk management improvement program	Ensuring unacceptable hazards/hazardous events have risk management improvement plan action	Risk management improvement to be revised	A workshop review of improvements to be completed and results to be updated to risk management improvement system.	
Service wide information management	No changes	Not Applicable	Not Applicable	
Operational monitoring	Record keeping process for the calibration of analytical/testing equipment required.	Council's SharePoint system being used as a central record keeping system	Ongoing	
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.

A regular audit of MSC's DEQMP was undertaken on **9 – 10 August 2022** through the engagement of Viridis Consultation Pty Ltd. The auditor submitted the audit report to the regulator on 7 October 2022.

The purpose of the audit was to:

- Verify the accuracy of monitoring and performance data given to the regulator under the plan
- Assess compliance with the plan
- Assess compliance with the DWQMP approved conditions
- Assess the relevance of the plan in relation to the drinking water service

A summary of the auditor's findings includes:

- The accuracy of data within the annual report could not be verified due to gaps in record keeping
- Elements of the DWQMP were well implemented but some areas such as reservoir inspection, monitoring and developing procedures need improvement.
- The scheme description, catchment descriptions are reflective of the water supply system, however the risk assessment needs to be revised to better reflect the risk.
- The objectives of the audit were fulfilled without any issues.

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
REC-22-001	Establish a centralised location, for example a spreadsheet that records all verification data, in-house and lab testing	Spreadsheet created for E-coil lab results inhouse and out house external (Cairns Reginal Council Laboratory) data recorded every fortnight and loaded to Council SharePoint.	Complete	CEO, Water and Sewer Manager, relevant staff
REC-22-002	Ensure accurate data is provided in the Annual report to confirm that the requirements of the DWQMP are met including, identifying the correct number of samples required and reporting the number of in-house and lab samples separately	All data recorded is formulated into a table for comparison with monthly readings and provided to Council and SharePoint for future reports and guideline requirements.	Ongoing	CEO, Water and Sewer Manager, relevant staff
REC-22-003	Progress with repair and recommissioning of the alum dosing and Ph correction	pH correction is no longer required at this stage but pH correction infrastructure is on standby if required.	In-progress	CEO, Water and Sewer Manager, relevant staff
REC-22-004	Undertake an inspection of the treated water tanks, by qualified technicians to: <ul style="list-style-type: none"> ○ Identify the level of sediments and initiate cleaning where required. ○ Condition assessment of roof and initiate repairs as required. ○ Investigate the leaks and repair if required 	CCIS performed the inspection on the 11 November 2022.	Complete	CEO, Water and Sewer Manager, relevant staff
REC-22-005	Develop a list of SOPs required for day-to-day operation of the water supply system and commence documenting the procedures with water operators. Ensure record keeping process are included in the SOPs and provide training to operators on the implementation of the SOPs.	SOP's have been developed and implemented.	Complete	CEO, Water and Sewer Manager, relevant staff

REC-22-006	Develop a robust process to ensure weekly verification testing is taken and recorded. Include a contingency to take an in-house sample if the lab sample does not make it to the lab on time. Ensure complete records of the analysis are kept. Review the implementation of the verification monitoring program weekly to ensure all samples have been collected and follow up sample is missed.	A check list and table has been created to record daily water data of the reservoir levels and chlorine levels. This testing is conducted five (5) days a week at multiple sites to gather data. Recorded data is then loaded into SharePoint and provided to Council monthly.	Complete	CEO, Water and Sewer Manager, relevant staff
REC-22-007	Develop a process for managing documents and records for the DWQMP. Utilise SharePoint or a central records management system.	All data recorded is formulated into a table for comparison with monthly readings and provided to Council and SharePoint for future reports and guideline requirements.	Complete	CEO, Water and Sewer Manager, relevant staff
REC-22-009	Review the risk assessment to ensure that the risk methodology has been correctly applied.	Council have submitted the risk assessment within the DWQMP two (2) times that have not accepted the plan but have given Council conditions.	Ongoing	CEO, Water and Sewer Manager, relevant staff
REC-22-010	Include an assessment of the risk of the current staff resourcing and identify improvements. It is necessary to have a dedicated water operator that are appropriately trained.	Four (4) dedicated staff with Cert III undergoing to last block in February 2024	Ongoing	CEO, Water and Sewer Manager, relevant staff
REC-22-011	Review and revise labelling in the water treatment plant.	Labels, identification, and stickers	Complete	CEO, Water and Sewer Manager, relevant staff