HINCHINBROOK SHIRE COUNCIL

DRINKING WATER QUALITY MANAGEMENT PLAN 2018/2019 ANNUAL REPORT

2018/2019 ANNUAL REPORT

HINCHINBROOK SHIRE COUNCIL
SP62
PO BOX 366
INGHAM QLD 4850
Phone: (07) 4776 4600
Email: council@hinchinbrook.qld.gov.au

CONTENTS

1. GLOSSARY OF TERMS

ADWG	Australian Drinking Water Guidelines (2011). Published by the National Health and Medical Research Council of Australia.
DWQMP	Drinking Water Quality Management Plan
E. coli	Escherichia coli, a bacterium which is considered to indicate the presence of faecal contamination and therefore potential health risk.
mg/L	Milligrams per litre
NTU	Nephelometric Turbidity Units
RMIP	Risk Management Improvement Program, which was developed in the Drinking Water Quality Management Plan.
<	Less than
>	Greater than

2. INTRODUCTION

The Water Supply (Safety and Reliability) Act 2008 requires water service providers in Queensland to provide a Drinking Water Quality Management Plan Report for each financial year from when the Drinking Water Quality Management Plan (DWQMP) was implemented.

This report documents the performance of Hinchinbrook Shire Council's drinking water service with respect to water quality and performance in implementing the actions detailed in the DWQMP for the 2018/2019 financial year. 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.

The Report details the following information:

- Document actions taken by the service provider to implement the DWQMP.
    - Summarise any amendments that have been made to the DWQMP.
    - Describe which actions in the Risk Management Improvement Program (RMIP) were completed, currently in progress or deferred.
    - Discuss if the actual verification monitoring undertaken met the monitoring program described in the DWQMP.
- Details of compliance with water quality criteria for drinking water.
    - Summary of results for the verification monitoring for the drinking water service.
    - Detail the months, if any, where the annual value for E. coli was not achieved for the service.
    - Comments on where the water quality results met the recommended values in the Australian Drinking Water Guidelines, E. coli and fluoride standards.
- Details information given to the Regulator under sections 102 and 102A of the Act.
    - Summary of each incident reported to the Regulator and describe the corrective and preventive actions undertaken.
- Summary of any water quality complaints received and the responses that were undertaken.
- Details of the findings and any recommendations of audit reports given to the Regulator.
- Outcome of any review and how the service provider has addressed any matters raised in the review.

3. IMPLEMENTATION OF THE DWQMP

3.1. Amendments to Council's DWQMP

Hinchinbrook Shire Council's DWQMP was approved on the 25 March 2013 by the Department of Energy and Water Supply. Hinchinbrook Shire Council undertook a Review of their DWQMP on the 23 March 2018, which resulted in some amendments. Revision E of Council's DWQMP was issued on 14 May 2018.

3.2. Risk Management Improvement Program

Hinchinbrook Shire Council's DWQMP includes a Risk Management Improvement Program (RMIP), which aim is to manage any unacceptable residual risks identified by the hazard/risk assessment and improve parts of the Plan where deficiencies in information did not allow the criteria to be completely and accurately addressed.

The RMIP identified 15 areas where Council could implement changes to manage identified hazards/risk and uncertainties. The program outlines interim, short-term and long-term actions for Council to implement to manage the identified hazards/risk and uncertainties.

The following table is an excerpt from the RMIP table in Council's DWQMP and addresses the actions in the RMIP that have been completed, currently in progress or have been deferred.

Table 3.1 – Summary of Items completed, in progress or deferred from RMIP

☐ Denotes that it is a copy from the RMIP in HSC's DWQMP

	1	2	3	4	6	7	8	9	Status as at 30 June 2019	Details and Update
	Scheme	Scheme Component/ Sub-component	Hazard/ Hazardous Event	Proposed Preventative Measure	Actions			Target Date/s		
					Interim	Short-term	Long-term			
1	All	River and Groundwater Systems	Inadequate well or bore head protection	~ Improve borehead construction under the borehead replacement program	Investigate upgrade of Halifax Bores as first priority. Halifax has a total of 5 bores, but not all are used due to low pump rates and the possibility of saline intrusion. Cyclone Yasi has also damage fencing and there is currently a power supply issue to some bores.	Commence upgrade of Halifax Bores, if required seal and abandon unused bore.	Complete an inspection report for all bores (Macknade, Forrest Beach, Halifax and Como Road) and complete a works program for required maintenance.	2017	100% complete and operational	Complete
2	All	River and Groundwater Systems	Industrial chemical waste discharge contaminating groundwater &/or surface water	~ No control over private enterprise. ~ Continue to monitor chemical levels in raw water supplies.	Investigate private enterprises within the district that could affect drinking water quality and the possible risks that they present. Those identified will be posing a direct risk to council's drinking water supply.		Continue with existing chemical monitoring and identify any significant changes.	Ongoing	Ongoing	Standard Water Analysis taken from each WTP every month.

	1	2	3	4	6	7	8	9	Status as at 30 June 2019	Details and Update
	Scheme	Scheme Component/ Sub-component	Hazard/ Hazardous Event	Proposed Preventative Measure	Actions			Target Date/s		
					Interim	Short-term	Long-term			
4	3 (Forrest Beach)	Groundwater	High iron levels in groundwater	~ Current proposal for funding in place to connect the Forrest Beach Water Supply to Scheme 1 & 2 which will allow a backup water supply if groundwater quality is not suitable for consumption. ~ Looking at new filtration systems	Submit application for funding assistance to the government.	Advertise a tender for the works to be completed. If works can be done internally prepare quote.	Construction phase. Finalise project.	Funding dependant	Completed	Water main has been commissioned from Ingham to Forrest Beach. Upgrades have also been completed on the aerator and sedimentation channels (clarifier).
5	All	WTP	Open filtration system causing growth of cyanobacteria	~ Testing during hot months of the year ~ Improvements to the aeration and filtration system	Provide temporary shading.	Issue Expression of Interest for consultants to investigate council's existing water treatment plants and what would be required for their upgrade.	Depending on results from consultant's report, budget for upgrades to commence.		100% complete and operational	Complete
6	3 (Forrest Beach)	Reservoir	Rainwater ponding on reservoir roof	~ Investigate costs into sealing roof	Prepare specification for require work. Complete cost estimate.WTP Operator to check condition of reservoir roof and conduct any remedial works that can be completed to reduce risk of contamination from ponding rainwater.	Advertise a tender for the works to be completed. If works can be done internally prepare quote.	Construction phase. Finalise project.	December 2013	Complete	Complete

	1	2	3	4	6	7	8	9	Status as at 30 June 2019	Details and Update
	Scheme	Scheme Component/ Sub-component	Hazard/ Hazardous Event	Proposed Preventative Measure	Actions			Target Date/s		
					Interim	Short-term	Long-term			
7	2	WTP	Chemical Dosing Failure - Soda Ash	~ A pH test is always conducted prior to dosing with soda ash.	Investigate existing options and equipment.	Prepare site for installation.	Install and commission chemical dosing equipment.	June 2014	Complete	New aerators installed, which altered the pH which eliminated the need for soda ash dosing.
8	1	River and Groundwater Systems	High Turbidity in river water	~ Installation of turbidity meter	Set control points and critical limits to be monitored.	Purchase and installation of turbidity meter.	Monitor turbidity in supply. If control points exceeded then river system is to shut off with use to only recommence when turbidity has reached an acceptable level.	December 2017	Completed	Identified in DWQMP Audit completed on 28 April 2017. Completed
9	1	River and Groundwater Systems	Protozoa Control	~	Determine appropriate process and control points for testing of Protozoa.		Continual testing for protozoa. If protozoa are found, the relevant health authority to be advised and necessary measure put in place.	Ongoing	Ongoing	Identified in DWQMP Audit completed on 28 April 2017.
10	1	WTP	Increase storage capacity	~ Current proposal for funding in place to construct new bore at Como Rd along with upgrading the Depot WTP, which will allow a secure water supply if river water quality is not suitable for consumption.	Submit application for funding assistance to the government.	Advertise a tender for the works to be completed.	Construction phase. Finalise project.	Funding Dependent	In Progress	GHD is finalising designs with project completion expected to be 29 January 2019. 45% funding has been allocated to this project as part of the Building Our Regions Program.

	1	2	3	4	6	7	8	9	Status as at 30 June 2019	Details and Update
	Scheme	Scheme Component/ Sub-component	Hazard/ Hazardous Event	Proposed Preventative Measure	Actions			Target Date/s		
					Interim	Short-term	Long-term			
11	All	River and Groundwater Systems	Contamination from Septic tanks & Sewer Mains (breakages, etc)	~ Undertake testing monthly for the presence of E. Coli in raw water and monitor the data to identify any peaks associated with high rainfall, etc.	E. Coli testing in river and bore sources. Conduct during dry and wet seasons.	Investigate laboratory results.	Depending on results, further investigations may need to take place to find the source of bacteria into raw source. Some bacteria is to be expected.	Commence first round of testing early 2013	Completed and Implemented	E. Coli testing in river and bore sources commenced in August 2012 and are currently being tested at least once per month.
12	All	Groundwater	Discharge from urban stormwater during rainfall events	~ Terrain currently completing a study on the effects of pesticides to the catchments water supply. Results expected in a 2 year timeframe. ~ Improve borehead construction under the borehead replacement program	As per Item 1 (borehead construction)	As per Item 1 (borehead construction)	As per Item 1 (borehead construction)	As per Item 1 (borehead construction)	100% complete and operational	Complete
13	All	WTP	Formation of disinfection by-products	~ Enforce testing on a yearly basis.	Commence testing on yearly basis. Depending on results further action may need to be taken, but this will need to be assessed when further information is available.	As per interim.	As per interim.	Commence first round of testing early 2013	Deffered	Testing for disinfection by-products has commenced. Regular testing to commence in January 2020.
14	All	Operational & Maintenance Procedures	N.A.	N.A.	Work in conjunction with council surveyor to collate existing data and determine areas where data is missing.	Assign asset numbers and produce drawings that can be distributed to staff.	Final dataset of mapped assets, including a full list of assets with unique numbering which will work in conjunction with council's asset management system.	Jul-13	In Progress	Operation and Maintenance Procedures have been developed, but not finalised. Council's asset management plans have been finalised with operational procedures to be updated.

	1	2	3	4	6	7	8	9	Status as at 30 June 2019	Details and Update
	Scheme	Scheme Component/ Sub-component	Hazard/ Hazardous Event	Proposed Preventative Measure	Actions			Target Date/s		
					Interim	Short-term	Long-term			
15	All	Mapping of Water Assets	N.A.	N.A.	Collate existing data and determine areas where data is missing.	Begin collating and putting together data.	Final dataset of mapped assets.	December 2012	Complete	Complete and available on Dial Before You Dig.
16	All	Staff Training	N.A.	N.A.	Commence training for Water Treatment Assistants. Certificate II or III in Water and Waste Water Treatment.	Provide assistance to staff undertaking Certificate II or III.	Have sufficient staff who have completed the required training as per national requirements. Continue to provide any training that would be beneficial to the day-to-day operations.	July 2014 (based on a two year completion)	Ongoing	Council has implemented a program for Water Treatment Plant Assistants to undertake the Certificate II in Water Treatment. Three Water Treatment Plant Assistants successfully completed the program in 17/18. 2 operator assistants completed their certificate III in Water Operations in 2018 and 1 has completed the course in 2019.
17	All	Customer Complaint Performance	N.A.	N.A.			Council upgrading the Financial System which will include a new component to handle customer complaints. It will be a major upgrade to the system and it will include easier access to data, eg. Response times.	December 2014	Complete	Council has implemented a new customer request system that incorporates all customer requests within Council in line with the customer service charter.
18	All	Historical Data Database	N.A.	N.A.	Discuss with council staff that are familiar with creating databases and work out an approach to creating the database.	Gather all water quality data into the format required and create database.	Have a fully functional database.	December 2014	In Progress	Complete Existing Database in Excel has been improved to provide some reporting functions. Further upgrades to the database are required as further information on reporting is available.

	1	2	3	4	6	7	8	9	Status as at 30 June 2019	Details and Update
	Scheme	Scheme Component/ Sub-component	Hazard/ Hazardous Event	Proposed Preventative Measure	Actions			Target Date/s		
					Interim	Short-term	Long-term			
19	All	Drinking Water Policy	N.A.	N.A.	Prepare draft Drinking Water Policy.	Conduct a meeting with relevant parties to discuss policy and make notes on areas for improvements.	Finalise policy and get Council to endorse.	June 2020	In Progress	Identified in DWQMP Audit completed on 28 April 2017.
20	All	SCADA Alarm Procedure	N.A.	N.A.	Prepare templates for procedure. Collate any relevant data that could be of use.	Conduct a meeting between relevant tasks to discuss the template that has been produced and make notes on areas for improvements. Conduct site inspections and take photos to include in the procedure.	Create a final Procedure and begin the implementation process. Procedures are to be uploaded to the Council's intranet and distributed to all staff members.	June 2020	In Progress	Identified in DWQMP Audit completed on 28 April 2017.
21	All	Hydraulic Model	N.A.	N.A.		Council to procure consultant to construct Hydraulic Model of Council's water network.	Maintain and update as required.	June 2016	Completed	Completed
22	All	Cyber Security – Access to sites	Unauthorised access to sites	Increase site security to decrease the chances of unauthorised access.	Ensure all sites are secure if there is no personnel onsite.	Update camera systems and number of cameras to deter intruders.	Install security card access to all sites.	June 2030	In Progress	Council to investigate installing swipe card entry to all Water Sites over the next 10 years
23	All	Cyber Security – Access to drives, chlorinators, controllers, etc	Unauthorised access to drives, chlorinators, controllers, etc	Improve security for these devices to decrease the chances of unauthorised access.	Ensure all drives, chlorinators, controllers, etc are secure if there is no personnel onsite.		Passcode protect all drives, chlorinators, controllers, etc to operators, managers, supervisors and fitters	June 2025	In Progress	Council to investigate securing all drives, chlorinators, controllers, etc with password protection.

	1	2	3	4	6	7	8	9	Status as at 30 June 2019	Details and Update
	Scheme	Scheme Component/ Sub-component	Hazard/ Hazardous Event	Proposed Preventative Measure	Actions			Target Date/s		
					Interim	Short-term	Long-term			
24	All	Cyber Security – Patches to Systems	N.A	N.A	Automatic Install windows patches to end users workstation and laptops on Council Systems	Quarterly install Windows Patches on Servers on Council Systems	SCCM patch management software planning to implement for better operation	Dec 2019	In Progress	Councils IT Department is nearing completion.
25	All	Cyber Security – Antivirus scan	N.A	N.A	Council use Sophos antivirus software to scan antivirus on systems		Moving to cloud version for better security and operation which will covers Application whitelisting, application hardening	March 2020	In Progress	Moving to cloud version will be competed on March 2020
26	All	Cyber Security – Backups	N.A	N.A	Council following daily, weekly and monthly backup plans with 3—2-1 strategies of all Servers		Council following monthly backup tapes off-site	Dec 2020	In Progress	Councils IT Department is nearing completion.
27	All	Cyber Security – AusCERT Membership	N.A	N.A			Council is member of AusCERT orgazintion and follow the incident and service management for cyber security	Dec 2020	In Progress	Councils IT Department is nearing completion.

4. COMPLIANCE WITH WATER QUALITY CRITERIA FOR DRINKING WATER

4.1. Escherichia Coli Results for Treated & Reticulated 2018/2019

Table 4.1 – Escherichia Coli Results for Scheme 1 Treated & Reticulated Water

Scheme1 Ingham Water Supply												
Month	***JUL***	***AUG***	***SEPT***	***OCT***	***NOV***	***DEC***	***JAN***	***FEB***	***MAR***	***APR***	***MAY***	***JUN***
No. of samples collected	8	8	4	6	11	5	8	10	4	5	7	6
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	94	95	92	92	93	94	92	94	91	88	83	82
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

Table 4.2 – Escherichia Coli Results for Scheme 2 Treated & Reticulated Water

Scheme 2 Lower Herbert Water Supply												
Month	***JUL***	***AUG***	***SEPT***	***OCT***	***NOV***	***DEC***	***JAN***	***FEB***	***MAR***	***APR***	***MAY***	***JUN***
No. of samples collected	7	8	4	7	7	3	7	9	2	5	6	3
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	78	80	79	79	79	79	77	78	75	75	71	68
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

Table 4.3 – Escherichia Coli Results for Scheme 3 Treated & Reticulated Water

Scheme 3 Forrest Beach Water Supply												
Month	***JUL***	***AUG***	***SEPT***	***OCT***	***NOV***	***DEC***	***JAN***	***FEB***	***MAR***	***APR***	***MAY***	***JUN***
No. of samples collected	4	6	5	4	6	4	6	6	3	3	5	1
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	56	58	56	56	58	59	59	60	60	58	57	53
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

4.2. Escherichia Coli Tests for Raw Water 2018/2019

Table 4.4 – Number Escherichia Coli Tests for Raw Water

	TOTAL	***JUL***	***AUG***	***SEP***	***OCT***	***NOV***	***DEC***	***JAN***	***FEB***	***MAR***	***APR***	***MAY***	***JUN***
Scheme 1 - Ingham Water Supply	**10**	2	1	1	0	1	0	1	0	1	2	1	0
Scheme 2 - Lower Herbert Water Supply	**10**	1	1	0	1	1	1	2	0	1	1	1	0
Scheme 3 – Forrest Beach Water Supply	**7**	1	0	1	1	0	1	1	0	0	1	0	1

4.3. Water Quality Data 2018/2019 – Scheme 1 Ingham Water Supply

Table 4.5 –Water Quality Data with Drinking Water Quality Criteria 2017/2018 – Scheme 1 Ingham Water Supply

Parameter	Unit	Total Number of Samples Taken	Number of samples parameter was detected.	Number of samples exceeding health guideline value	Min	Max	Average
Raw Water							
Nitrate	mg/L	8	7	0	0.5	14	9.54
Sulphate	mg/L	8	7	0	2	5	3.57
Fluoride	mg/L	8	7	0	0.06	0.11	0.07
pH (Lab)	-	8	8	0	6.39	7.37	6.74
Turbidity	NTU	8	3	1	1	9	4.33
Aluminium	mg/L	8	2	1	0.08	0.45	0.27
Boron	mg/L	8	0	0	<0.02	<0.02	<0.02
Copper	mg/L	8	3	0	0.03	0.05	0.04
Iron	mg/L	8	3	0	0.04	0.22	0.12
Manganese	mg/L	8	0	0	<0.01	<0.01	<0.01
Zinc	mg/L	8	5	0	0.01	0.04	0.02
Treated Water							
Nitrate	mg/L	6	6	0	2.1	14	10.98
Sulphate	mg/L	6	6	0	2	4	3.50
Fluoride	mg/L	6	6	0	0.05	0.1	0.07
pH (Lab)	-	6	6	0	6.95	0	0.00
Turbidity	NTU	6	0	0	<1	<1	<1
Aluminium	mg/L	6	0	0	<0.05	<0.05	<0.05
Boron	mg/L	6	0	0	<0.02	<0.02	<0.02
Copper	mg/L	6	0	0	<0.03	<0.03	<0.03
Iron	mg/L	6	3	0	0.01	0.04	0.03
Manganese	mg/L	6	0	0	<0.01	<0.01	<0.01
Zinc	mg/L	6	1	0	0.04	0.04	0.04
Reticulated Water							
Nitrate	mg/L	4	4	0	2.1	14	7.80
Sulphate	mg/L	4	4	0	2	4	3.00
Fluoride	mg/L	4	4	0	0.05	0.1	0.08
pH (Lab)	-	4	4	0	6.78	7.5	7.03
Turbidity	NTU	4	0	0	<1	<1	<1
Aluminium	mg/L	4	0	0	<0.05	<0.05	<0.05
Boron	mg/L	4	0	0	<0.02	<0.02	<0.02
Copper	mg/L	4	0	0	<0.03	<0.03	<0.03
Iron	mg/L	4	1	0	0.01	0.01	0.01
Manganese	mg/L	4	0	0	<0.01	<0.01	<0.01
Zinc	mg/L	4	3	0	0.01	0.03	0.02
Pesticides/Herbicides Summary*	ug/L	0	-	-			

NOTE: All results that equalled the limit of reporting are assumed to be zero for the purpose of calculating the average value.
*Summary only has been provided. Only samples that have positive detections have been identified. All nil results (i.e. less than the limit of report) has been summarised and reported as total pesticides with zeroes entered for maximum, minimum and average concentration.

4.4. Water Quality Data 2018/2019 – Scheme 2 Lower Herbert Water Supply

Table 4.6 – Water Quality Data with Drinking Water Quality Criteria 2017/2018 – Scheme 2 Lower Herbert Water Supply

Parameter	Unit	Total Number of Samples Taken	Number of samples parameter was detected.	Number of samples exceeding health guideline value	Min	Max	Average
Raw Water							
Nitrate	mg/L	6	6	0	0.9	24	10.65
Sulphate	mg/L	6	6	0	3	17	10.17
Fluoride	mg/L	6	4	0	0.06	0.7	0.24
pH (Lab)	-	6	6	0	6.39	6.82	6.65
Turbidity	NTU	6	1	1	9	9	9.00
Aluminium	mg/L	6	0	0	<0.05	<0.05	<0.05
Boron	mg/L	6	4	0	0.04	0.07	0.05
Copper	mg/L	6	0	0	<0.03	<0.03	<0.03
Iron	mg/L	6	0	0	<0.01	<0.01	<0.01
Manganese	mg/L	6	2	0	0.03	0.06	0.05
Zinc	mg/L	6	1	0	0.02	0.02	0.02
Treated Water							
Nitrate	mg/L	4	4	0	2.6	14	11.15
Sulphate	mg/L	4	4	0	5	19	14.00
Fluoride	mg/L	4	3	0	0.06	0.09	0.07
pH (Lab)	-	4	4	0	6.94	7.86	7.21
Turbidity	NTU	4	2	0	1	2	1.50
Aluminium	mg/L	4	0	0	<0.05	<0.05	<0.05
Boron	mg/L	4	4	0	0.04	0.06	0.05
Copper	mg/L	4	0	0	<0.03	<0.03	<0.03
Iron	mg/L	4	0	0	<0.01	<0.01	<0.01
Manganese	mg/L	4	0	0	<0.01	<0.01	<0.01
Zinc	mg/L	4	0	0	<0.01	<0.01	<0.01
Reticulated Water							
Nitrate	mg/L	3	3	0	9.9	14	12.30
Sulphate	mg/L	3	3	0	10	15	12.67
Fluoride	mg/L	3	3	0	0.07	0.07	0.07
pH (Lab)	-	3	3	0	6.65	7.58	7.20
Turbidity	NTU	3	0	0	<1	<1	<1
Aluminium	mg/L	3	0	0	<0.05	<0.05	<0.05
Boron	mg/L	3	3	0	0.04	0.07	0.06
Copper	mg/L	3	0	0	<0.03	<0.03	<0.03
Iron	mg/L	3	2	0	0.01	0.02	0.02
Manganese	mg/L	3	0	0	<0.01	<0.01	<0.01
Zinc	mg/L	3	1	0	0.02	0.02	0.02
Pesticides/Herbicides Summary*	ug/L	0	-	-			

4.5. Water Quality Data 2018/2019 – Scheme 3 Forrest Beach Water Supply

Table 4.7 –Water Quality Data with Drinking Water Quality Criteria 2017/2018 – Scheme 3 Forrest Beach Water Supply

Parameter	Unit	Total Number of Samples Taken	Number of samples parameter was detected.	Number of samples exceeding health guideline value	Min	Max	Average
Raw Water							
Nitrate	mg/L	3	2	0	2.1	2.4	2.25
Sulphate	mg/L	3	3	0	11	15	12.67
Fluoride	mg/L	3	2	0	0.05	0.06	0.06
pH (Lab)	-	3	3	0	6.28	6.56	6.44
Turbidity	NTU	3	3	3	12	19	15.00
Aluminium	mg/L	3	0	0	<0.05	<0.05	<0.05
Boron	mg/L	3	3	0	0.02	0.03	0.03
Copper	mg/L	3	0	0	<0.03	<0.03	<0.03
Iron	mg/L	3	1	0	0.05	0.05	0.05
Manganese	mg/L	3	3	0	0.04	0.04	0.04
Zinc	mg/L	3	0	0	<0.01	<0.01	<0.01
Treated Water							
Nitrate	mg/L	3	3	0	2.4	9.3	6.60
Sulphate	mg/L	3	3	0	7	9	8.00
Fluoride	mg/L	3	2	0	0.06	0.07	0.07
pH (Lab)	-	3	3	0	7.52	7.7	7.62
Turbidity	NTU	3	1	0	1	1	1.00
Aluminium	mg/L	3	0	0	<0.05	<0.05	<0.05
Boron	mg/L	3	0	0	<0.02	<0.02	<0.02
Copper	mg/L	3	0	0	<0.03	<0.03	<0.03
Iron	mg/L	3	3	2	0.18	0.64	0.38
Manganese	mg/L	3	0	0	<0.01	<0.01	<0.01
Zinc	mg/L	3	0	0	<0.01	<0.01	<0.01
Reticulated Water							
Nitrate	mg/L	3	3	0	3.2	8.5	6.63
Sulphate	mg/L	3	3	0	8	9	8.33
Fluoride	mg/L	3	3	0	0.06	0.07	0.06
pH (Lab)	-	3	3	0	6.89	7.8	7.42
Turbidity	NTU	3	0	0	<1	<1	<1
Aluminium	mg/L	3	0	0	<0.05	<0.05	<0.05
Boron	mg/L	3	3	0	0.02	0.02	0.02
Copper	mg/L	3	0	0	<0.03	<0.03	<0.03
Iron	mg/L	3	3	2	0.21	0.37	0.31
Manganese	mg/L	3	0	0	<0.01	<0.01	<0.01
Zinc	mg/L	3	2	0	0.01	0.01	0.01
Pesticides/Herbicides Summary*	ug/L	0	-	-			

5. DRINKING WATER QUALITY INCIDENTS

5.1. Notice of Noncompliance with Water Quality Criteria

Under Section 102 in the Water Supply (Safety and Reliability) Act 2008 the drinking water service provider must, unless the provider has a reasonable excuse, immediately inform the regulator if the service provider becomes aware that the quality of water supplied from the provider's drinking water service does not comply with the water quality criteria relating to the service.

In the 2017/2018 financial year, Hinchinbrook Shire Council had one instance where the water supplied from Council's drinking water service did not comply with the water quality criteria for PFAS, therefore a notice was sent to the Water Supply Regulator. The non-compliance occurred on 11 July 2018. A copy of the non-compliance notification and investigation report is in Appendix A.

5.2. Notice of Prescribed Incident

Under Section 102A in the Water Supply (Safety and Reliability) Act 2008 if the drinking water service provider becomes aware that a prescribed incident has happened in relation to the provider's service, they must, unless the provider has a reasonable excuse, immediately inform the regulator of the prescribed incident.

In the 2017/2018 financial year, Hinchinbrook Shire Council had no prescribed incidents, therefore there was no incidents reported to the regulator.

6. WATER QUALITY COMPLAINTS

Hinchinbrook Shire Council has a Water and Sewerage Request System that allows direct logging of works requests to the Manager of Water and Sewerage for actioning and provides a basis for storing, checking the status of and reporting of all works request activities.

All approved maintenance work generated from the Request system, are prioritised and scheduled for completion. Once the request works has been completed, the person who had requested the works is contacted and informed about the works completed.

If the person who requested the works is not satisfied with the Council's response to the request, further contact can be made to Council with their concerns, which are then dealt with in accordance with Council's Complaints Procedure.

There are specified response timeframes, depending on the type and nature of the request.

Table 6.1 – Water Quality Complaints

Category	Request Lodged	Action Completed	Percentage Completed
Dirty Water	8	8	100%
Low Water Pressure	8	8	100%

7. DWQMP AUDIT REPORT

Under Section 99 of the Water Supply (Safety and Reliability) Act 2008, regular audits of the approved Drinking Water Quality Management Plan are required. The first regular audit of the Hinchinbrook Shire Council's Drinking Water Quality Management Plan was conducted by 20th and 21st March 2017, and is required to be completed every four (4) years from that date.

Hinchinbrook Shire Council demonstrated a high level of compliance with the regular audit during the audit period. The overall summary of compliance for Hinchinbrook Shire Council can be seen in table 7.1 below. Eleven (11) requirements were audited within the audit areas.

Table 7.1: Compliance Summary

Compliance Codes		Number of Findings
Compliant	C	8
Minor Non-Compliant	N	2
Major Non-Compliant	M	1

The audit concluded that HSC:

- Provided accurate monitoring and performance data to the regulator
- Generally implemented its DWQMP
- Would benefit from reviewing the relevance of the plan, as the plan does not adequately address protozoa risk in the Herbert River raw water source.

8. DWQMP REVIEW

Under Sections 99 and 105 of the Water Supply (Safety and Reliability) Act 2008, regular reviews of the approved Drinking Water Quality Management Plan are required. The last review of Hinchinbrook Shire Council's Drinking Water Quality Management Plan was finalised on 23 March 2018. The next review of Hinchinbrook Shire Council's Drinking Water Quality Management Plan is required to be conducted by 25 March 2020. Further reviews are required to be completed every two years from that date.

9. APPENDIX A – NOTICE OF NONCOMPLIANCE

Notification of a drinking water event or detection of a parameter with no water quality criteria

Queensland Government

Water Supply (Safety and Reliability) Act 2008

Privacy Disclaimer: Collection of information provided in this form and any attachments is being used for the purpose of informing the Queensland Water Supply Regulator of a drinking water event or detection of a parameter with no water quality criteria. The Department of Energy and Water Supply will endeavour to maintain any confidentiality of information relating to your form. However, consideration of your form may involve consultation and if so, details of your form may be disclosed to third parties. This information will not otherwise be disclosed outside of the department unless required or authorised by law (e.g. as under the *Right to Information Act 2009*).

The information contained in this form is a requirement of a condition of an approved drinking water quality management plan. For further information see section 93 of the *Water Supply (Safety and Reliability) Act 2008*.

Important note: This form consists of two sections. The initial notification section (pages 1-4) and the investigation report section (pages 5-7). These sections are submitted separately to the regulator while dealing with a drinking water event or a parameter with no water quality criteria. Please refer to the Explanatory Notes and Instructions for Notification of a Drinking Water Event or Detection of a Parameter with no Water Quality Criteria for further information on completing this form.

Initial notification

This is the first section of the form and is to be completed and submitted as soon as practicable after becoming aware of a drinking water event or a parameter with no water quality criteria.

1. Drinking water service provider details

Drinking water service provider: Hinchinbrook Shire Council

SPID: SP62

Drinking water scheme: Scheme 2 - Lower Herbert Water Supply

2. Contact details for this notification

Principal Contact

Family name: Martin

Given name(s): Peter

Position: Manager Water & Sewerage

Postal address: PO Box 366

INGHAM QLD Postcode 4850

Telephone number: (07) 4776 4600

Fax number: (07) 4776 3233

Mobile number: 0417 143 224

Email address: pmartin@hinchinbrook.qld.gov.au

3. Details of telephone report to the regulator

Name of person who reported the event or the detection of a parameter with no water quality criteria: Peter R Martin

Person reported to: 1300 596 709

Date reported (dd/mm/yyyy): 11 / 07 / 2018

Time reported (AM/PM): 8:30am

4. Notification type

☐ Event or ☒ Detection of a parameter with no water quality criteria

5. Other communication

Have you informed any other organisation/agency about this event or detection of a parameter with no water quality criteria?

☒ Yes ☐ No

If **Yes**, provide other organisation/agency contact details

Organisation/agency

Queensland Health

Contact name

Alison Crombie

Date (dd/mm/yyyy)

11 / 07 / 2018

Telephone number

(07) 4433 6920

Email address

ALISON.CROMBIE@health.qld.gov.au

Organisation/agency

Contact name

Date (dd/mm/yyyy)

/ /

Telephone number

( )

Email address

6. Event or detection of a parameter with no water quality criteria information

Describe the event or detection of parameter with no water quality criteria; including the circumstances that gave rise to the event or detection of a parameter with no water quality criteria and the immediate impact. What led to the event and the immediate impact? Was this part of the regular sampling program?

PFAS/PFOS testing undertaken after advice from chief health officer.

Tests taken from 6 sites around district .

Not part of regular sampling program

See test results.

(Additional information may be attached)

6. Event or detection of a parameter with no water quality criteria information (continued...)

Sample information (if applicable)

Initial sample

System location ☐ Raw/source water ☒ Treated water from water treatment plant ☐ Transmission ☒ Reticulation

Date taken (dd/mm/yyyy): 19 / 06 / 2018

Time taken (AM/PM): 9:45am

Parameter (e.g. chlorate, emerging pesticides): PFAS/PFOS

Sample location/s (e.g. High Street Reservoir, 56 Gray St Highsville or Queen Street Water Treatment Plant): Lucinda Booster Pump Station Reservoir, 4-6 Dungeness Rd

Results (e.g. mg/L, µg/L): 0.02µg/L & 0.05µg/L

Date results received: 10 / 07 / 2018

Laboratory name where analysis was undertaken or process if own laboratory used: Townsville Laboratory Services

7. Immediate investigation and corrective action

Have immediate corrective actions been taken?

☐ Yes If **Yes**, please describe immediate corrective action taken e.g. what corrective action took place, when it occurred and if any public health notification has already taken place, or will be required?

☒ No If **No**, please explain reasons why immediate corrective action has not been taken

Special testing results under guideline values.

Monitoring testing required by Chief Health Officer

Follow up testing will occur to ensure that sample was not compromised in collection.

(Additional information may be attached)

Follow up sample/s (if applicable)

Have you taken follow up sample/s? (This must include a sample from the initial location)

☐ Yes If **Yes**, expected timeframe for receipt of results — Date (dd/mm/yyyy): / / — Time (AM/PM):

☒ No If **No**, expected timeframe for follow up sample/s to be taken — Date (dd/mm/yyyy): 18 / 07 / 2018 — Time (AM/PM):

8. Further action

What further action will be taken?

Follow up testing will be undertaken around reticulation to confirm if parameters are present.

(Additional information may be attached)

9. Declaration

I declare and warrant that I have all the necessary and appropriate authority on behalf of the drinking water service provider to declare the information provided in this approved form, including any attachments or supporting information provided, are true and accurate to the best of my knowledge.

Family name	Given name(s)	Position
Martin	Peter	Manager Water & Sewerage

Signature

Date (dd/mm/yyyy) 11 / 07 / 2018

10. Submission

Please complete and sign the form and send via:

Facsimile: (07) 3405 3156

OR

Email address: DrinkingWater.Reporting@dews.qld.gov.au

Reminder: Pages 5-7 must be completed and submitted to the regulator following your investigation. Before submitting these pages, make sure you have identified the measures you will take to prevent the event in the future.

Print Form Reset Form

TOWNSVILLE LABORATORY SERVICES
TOWNSVILLE CITY COUNCIL
Delivery Address: Douglas Water Plant, Angus Smith Drive, Douglas, Qld 4814
Postal Address: P.O. Box 1268, Townsville, Qld 4810
Ph 07 4727 8666
e-mail labenquiries@townsville.qld.gov.au

CERTIFICATE OF ANALYSIS

Client:	Hinchinbrook Shire
Attention:	Peter Martin
Contact Number:	0747764673
Job Reference:	18-2206
Job Description:	PFAS Analysis 19/06/2018
Sample Condition:	Samples intact and within holding time requirement
Registration Date:	19/06/18
Registration Time:	14:43
Report Date:	5/07/18
Purchase Order Number:	

Alicia Wood
Authorised test signatory

ACCREDITED FOR TECHNICAL COMPETENCE

Acceditation No. 14698 - Chemical Testing (c). Accredited for compliance with ISO17025 - Testing
NATA is a signatory to the ILAC mutual recognition arrangement for the mutual recognition of the equivalence of testing and inspection reports
Test preceded with asterisk (*) are not yet part of the scope of NATA accreditation. Results refer only to the samples as received.

Job Reference: 18-2206

	Sample Description: Sample Date and Time: Sample Number: PFAS - Full Suite**	Units	Lucinda BPS 19/06/2018 9:45 AM /1	Halifax Water Tower 19/06/2018 10:00 AM /2	Forrest Beach Water Tower 19/06/2018 10:25 AM /3	Ingham Water Tower 19/06/2018 10:45 AM /4
	Perfluorobutane sulfonic acid	µg/L	<0.02	<0.02	<0.02	<0.02
	Perfluoropentane sulfonic acid	µg/L	<0.02	<0.02	<0.02	<0.02
	Perfluorohexane sulfonic acid	µg/L	0.02	<0.02	<0.02	<0.02
	Perfluoroheptane sulfonic acid	µg/L	<0.02	<0.02	<0.02	<0.02
	Perfluorooctane sulfonic acid	µg/L	0.05	<0.04	<0.01	<0.01
	Perfluorodecane sulfonic acid	µg/L	<0.02	<0.02	<0.02	<0.02
	Perfluorobutanoic acid	µg/L	<0.1	<0.1	<0.1	<0.1
	Perfluoropentanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02
	Perfluorohexanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02
	Perfluoroheptanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02
	Perfluorooctanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01
	Perfluorononanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02
	Perfluorodecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02
	Perfluoroundecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02
	Perfluorododecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02
	Perfluorotridecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02
	Perfluorotetradecanoic acid	µg/L	<0.05	<0.05	<0.05	<0.05
	Perfluorooctane sulfonamide	µg/L	<0.02	<0.02	<0.02	<0.02
	MeFOSA	µg/L	<0.05	<0.05	<0.05	<0.05
	EtFOSA	µg/L	<0.05	<0.05	<0.05	<0.05
	MeFOSE	µg/L	<0.05	<0.05	<0.05	<0.05
	EtFOSE	µg/L	<0.05	<0.05	<0.05	<0.05
	MeFOSAA	µg/L	<0.02	<0.02	<0.02	<0.02
	EtFOSAA	µg/L	<0.02	<0.02	<0.02	<0.02
	4:2Fluorotelomer sulfonic acid	µg/L	<0.05	<0.05	<0.05	<0.05
	6:2Fluorotelomer sulfonic acid	µg/L	<0.05	<0.05	<0.05	<0.05
	8:2Fluorotelomer sulfonic acid	µg/L	<0.05	<0.05	<0.05	<0.05
	10:2Fluorotelomer sulfonic aci	µg/L	<0.05	<0.05	<0.05	<0.05
	Sum of PFAS	µg/L	0.07	<0.01	<0.01	<0.01
	Sum of PFHxS and PFOS	µg/L	0.07	<0.01	<0.01	<0.01

Job Reference: 18-2206

	Sample Description: Sample Date and Time: Sample Number: PFAS - Full Suite**	Units	Lucinda BPS 19/06/2018 9:45 AM /1	Halifax Water Tower 19/06/2018 10:00 AM /2	Forrest Beach Water Tower 19/06/2018 10:25 AM /3	Ingham Water Tower 19/06/2018 10:45 AM /4
	Sum of PFAS (WA DER List)	µg/L	0.07	<0.01	<0.01	<0.01

	Sample Description: Sample Date and Time: Sample Number: PFAS - Full Suite**	Units	River Hilift Stn 19/06/2018 10:55 AM /5	Tokalon Water Tower 19/06/2018 11:10 AM /6
	Perfluorobutane sulfonic acid	µg/L	<0.02	<0.02
	Perfluoropentane sulfonic acid	µg/L	<0.02	<0.02
	Perfluorohexane sulfonic acid	µg/L	<0.02	<0.02
	Perfluoroheptane sulfonic acid	µg/L	<0.02	<0.02
	Perfluorooctane sulfonic acid	µg/L	<0.01	<0.01
	Perfluorodecane sulfonic acid	µg/L	<0.02	<0.02
	Perfluorobutanoic acid	µg/L	<0.1	<0.1
	Perfluoropentanoic acid	µg/L	<0.02	<0.02
	Perfluorohexanoic acid	µg/L	<0.02	<0.02
	Perfluoroheptanoic acid	µg/L	<0.02	<0.02
	Perfluorooctanoic acid	µg/L	<0.01	<0.01
	Perfluorononanoic acid	µg/L	<0.02	<0.02
	Perfluorodecanoic acid	µg/L	<0.02	<0.02
	Perfluoroundecanoic acid	µg/L	<0.02	<0.02
	Perfluorododecanoic acid	µg/L	<0.02	<0.02
	Perfluorotridecanoic acid	µg/L	<0.02	<0.02
	Perfluorotetradecanoic acid	µg/L	<0.05	<0.05
	Perfluorooctane sulfonamide	µg/L	<0.02	<0.02
	MeFOSA	µg/L	<0.05	<0.05
	EtFOSA	µg/L	<0.05	<0.05
	MeFOSE	µg/L	<0.05	<0.05
	EtFOSE	µg/L	<0.05	<0.05
	MeFOSAA	µg/L	<0.02	<0.02
	EtFOSAA	µg/L	<0.02	<0.02
	4:2Fluorotelomer sulfonic acid	µg/L	<0.05	<0.05

Job Reference: 18-2206

	Sample Description: Sample Date and Time: Sample Number: PFAS - Full Suite**	Units	River Hilift Stn 19/06/2018 10:55 AM /5	Tokalon Water Tower 19/06/2018 11:10 AM /6
	6:2Fluorotelomer sulfonic acid	µg/L	<0.05	<0.05
	8:2Fluorotelomer sulfonic acid	µg/L	<0.05	<0.05
	10:2Fluorotelomer sulfonic aci	µg/L	<0.05	<0.05
	Sum of PFAS	µg/L	<0.01	<0.01
	Sum of PFHxS and PFOS	µg/L	<0.01	<0.01
	Sum of PFAS (WA DER List)	µg/L	<0.01	<0.01

Notification of a drinking water event or detection of a parameter with no water quality criteria

Queensland Government

Water Supply (Safety and Reliability) Act 2008

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Investigation report

This is the second section of the form to be completed and submitted when the provider has identified the measures the provider will take to prevent the drinking water event in the future or manage the detected parameter with no water quality criteria.

11. Drinking water service provider details

Drinking water service provider: Hinchinbrook Shire Council

SPID: SP62

Drinking water scheme: Scheme 2 - Lower Herbert Water Supply

12. Contact details for this notification

Principal Contact

Family name: Martin

Given name(s): Peter

Position: Manager Water & Sewerage

Postal address: PO Box 366

INGHAM QLD Postcode 4850

Telephone number: (07) 4776 4600

Fax number: (07) 4776 3233

Mobile number: 0417 143 224

Email address: pmartin@hinchinbrook.qld.gov.au

13. Details of initial notification of event or detection of a parameter with no water quality criteria

Date initial written notification (pages 1-4) was submitted to the regulator: 11 / 07 / 2018

14. Notification type

☐ Event or ☒ Detection of a parameter with no water quality criteria

15. Investigation actions and outcomes

What actions were taken to investigate the event or the detection of a parameter with no water quality criteria? What were the outcomes?

Test taken from 10 sites throughout district.

Samples were taken from both Raw Water Sources and the Reticulation System.

See test results attached.

(Additional information may be attached)

16. Corrective actions

Provide evidence that demonstrates that the event has been resolved, or the detection of a parameter with no water quality criteria is being managed.

Macknade Bore 3 has been shutdown.

Flushing program has commenced for the Lower Herbert Water Supply.

Council is working with the PFAS working group and Queensland Health.

Public Notification has issued by Council.

(Additional information may be attached)

17. Preventative actions

What additional measures have been, or will be, implemented to prevent the event from occurring in the future? How is, or will the detected parameter with no water quality criteria be managed?

Macknade Bore 3 will be shutdown until further notice.

Monitoring program is being developed with assistance from Queensland Health

(Additional information may be attached)

17. Preventative actions (continued...)

Are these preventative measures reflected in the approved drinking water quality management plan?

☐ Yes ☒ No

Provide additional information in response to the above question.

(Additional information may be attached)

18. Declaration

I declare and warrant that I have all the necessary and appropriate authority on behalf of the drinking water service provider to declare the information provided in this approved form, including any attachments or supporting information provided, are true and accurate to the best of my knowledge.

Family name	Given name(s)	Position
Martin	Peter	Manager Water & Sewerage

Signature

Date (dd/mm/yyyy) 17 / 07 / 2018

19. Submission

Please complete and sign the form and send to:

Queensland Water Supply Regulator
Department of Energy and Water Supply
PO Box 15456
City East Qld 4002

OR Facsimile: (07) 3405 3156

OR Email: DrinkingWater.Reporting@dews.qld.gov.au

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