



**Longreach
Regional Council**
Ilfracombe Isisford Longreach Yaraka

A photograph of a river scene. The water is very turbid and brown, indicating high sediment levels. The river flows over rocks on the left side. In the background, there are green trees and a clear blue sky. The overall scene suggests a natural water source that may be affected by environmental factors.

Drinking Water Service Report

ANNUAL REPORT 2022/2023

SPID: 488
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Report prepared by: Ingrid Miller, Engineering Technical Officer

This report has been prepared in accordance with the Guideline for the preparation, review and audit of drinking water quality management plans including supporting information Version 3 1 October 2022.

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Appendix A – Water Quality Verification Certificates and Results

1 Introduction

This report documents the performance of Longreach Regional Council's (LRC) drinking water service with respect to water quality and performance in implementing actions detailed in the Drinking Water Quality Management Plan (DWQMP) as required under the Water Supply (Safety and Reliability) Act 2008 for the financial year 2022-23.

This report assists the Regulator to determine whether the approved DWQMP and any approval conditions have been complied with, and provide a mechanism for providers to report publicly on their performance in managing drinking water quality.

Longreach Regional Council is a registered service provider (service provider identification number 488). Longreach Regional Council supplies drinking water for the towns of Longreach, Ilfracombe, Isisford and Yaraka under an approved DWQMP to ensure a safe and reliable supply of drinking water for its community. This is achieved through a proactive risk management approach to public health risks associated with drinking water.

This DWQMP annual report includes:

- The activities undertaken over the financial year in operating our drinking water service
- Drinking water quality summary
- An overview of our performance across implementation of the Plan.

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's Office Locations.



2 Summary of scheme/s operated

The table below summarise the water supplies and treatment process used for each town. Further information is available in the DWQMP.

Table 1 - Summary of Schemes

	Water Source	Treatment processes	Treatment capacity	Towns supplied
Longreach	Surface water - Thomson River	Coagulation, flocculation, clarification, filtration, chlorination	9ML/day	Longreach
Ilfracombe	Surface water - Collumpton Creek supplemented with bore water (up to 4kL/day)	Surface water - Coagulation, flocculation, clarification, filtration, chlorination Bore water - cooling, aeration, filtration, reverse osmosis, calcium carbonate (for softness) prior to blending for chlorination	684kL/day	Ilfracombe
Isisford	Surface water - Barcoo River	Coagulation, flocculation, clarification, filtration, chlorination and UV	720kL/day	Isisford
Yaraka	Surface water - Kiama Dam	Coagulation, flocculation, clarification, filtration, chlorination	45kL/day	Yaraka



3 DWQMP implementation

The focus for management of water quality this year has been improving water sampling, compliance with the DWQMP and addressing the Risk Management Improvement Plan actions through infrastructure projects and process implementation. Activities undertaken across our schemes are summarised below:

Longreach

- Pump replacement in one of the clarifier sludge dump ponds.
- Hosted 2 x school tour groups to educate students on water treatment and quality.
- Investigated and implemented a safe process for launder cleaning in the clarifiers.
- Upgraded/replaced VSD's on 3 x relift pumps

Ilfracombe

- New laboratory office installed.
- Completed design and scope valve automation for backwash and sludge dump at WTP
- Completed design and scope to upgrade electrical switchboard at Murray McMillan Dam.
- Tender processes for these projects to commence in future FY's.

Isisford

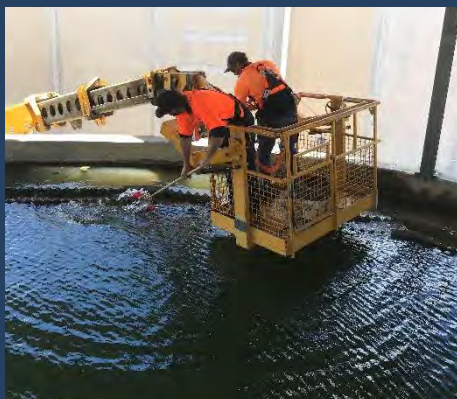
- New laboratory office installed.
- Completion of Isisford Weir Replacement.
- Water Mains Replacement completed.
- Clarifier buffer tank upgrade completed.
- New exclusion fence installed around town dam reservoir.
- New UV treatment unit installed and commissioned.

Yaraka

- Improved chlorine management.

Council remains committed to the development of our team as continuous improvement, professional development and networking opportunities arise. Staff hosted or attended a range of activities during the 2022-2023 financial year:

- Barcaldine Water Regulation Workshop and delivered a presentation on our in-house E.coli testing program (May 2023)
- SWIM Local Training in Brisbane (June 2023)
- Submitted samples to the QLD Water Annual Taste Test Competition (September 2022)
- Regular virtual meetings with the Water Services Regulator (ongoing)
- Hold Quarterly Water Treatment Team Meetings for continuous improvement (ongoing)
- Develop Water Wise Tips for water consumption awareness across the community.



SIMPLE WAYS TO SAVE

Water

Help reduce the likelihood of receiving an excess water bill with your rates notice...



Monitor your water use

Most residential households have an allocation of 1200KL per financial year. This equates to approximately **3 x 1000L pods** per day over one year for your household.

Check for concealed leaks

- Make sure toilet cistern is shutting off after flushing - no water running into bowl.
- Check the float on roof mounted evaporative air-conditioners & make sure the overflow is not constantly running.
- Fix dripping taps & leaking pipes.



Sprinklers & Irrigation Systems

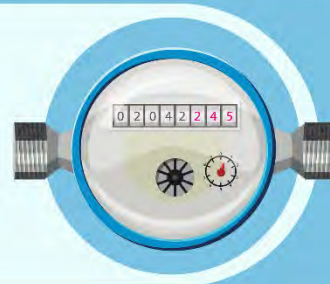
In our climate, lawns & gardens will use most of your yearly household water allocation.

EXAMPLE: On average, a standard button sprinkler uses 800L - 1000L of water per hour.

Restrict sprinkler use to 30mins at a time.

Reading your water meter

Most standard water meters have 5 **black** digits & 3 **red** digits. The black digits represent 1000L (1KL) & the red digits represent 1L. Write down your daily water figures for 1 week or more to monitor your average use.



Average Household Water Usage

Item	Water Use (LITRES)
Washing Machine	50L - 130L per wash
Shower Rose	9L - 19L per minute
Toilet	3L - 10L per flush
Dishwasher	Up to 15L per wash



**Longreach
Regional Council**
Ilfracombe Isisford Longreach Yaraka

Get in touch

(07) 4658 4111

www.longreach.qld.gov.au

The majority of the actions from our DWQMP Audit finalised in May 2022 were carried over into the 2022-2023 Financial Year. The team has dedicated considerable time and effort in addressing the recommendations or OFI's where budget or resourcing has permitted.

Table 2 - Status of Audit Actions

Audit Item	Status of actions
Recommendation: Ensure that treated water storage tanks are secured for unauthorised human access and entry, securely vermin-proofed, and protected from runoff ingress, including operational monitoring and preventive maintenance.	Completed. All reservoir and storage facilities have been inspected and repaired accordingly. LRC has implemented a Quarterly Reservoir Inspection program. Council also participates in a 5 yearly reservoir and inspection program in collaboration with RAPADWSA.
Recommendation: Review the height, location, signage, colour, and accessibility of the service lines, taps, threads and connections, and so on, of the non-potable water system against the plumbing code.	Completed. Non-potable water signage has been installed at Yaraka and Isisford parks and key locations.
Recommendation: Record when all verification monitoring is undertaken even if the results report a 'non-detect'	Completed. All verification monitoring is being documented including non-detects.
OFI: Given the zero values being reported, it is worth checking the calibration or dynamic range of the colour measurement instrument at the Ilfracombe site.	Completed. Instrument calibration by external consultant undertaken on a quarterly basis. Instruments are rotated between schemes as part of the calibration process and results documented
OFI: The in-house laboratory should keep all materials and chemical reagents within their vendor-advised use-by dates, or retain evidence that extending their shelf lives is sound.	Completed. All materials and chemicals are used within their storage dates. This is monitored by WTP Operators at each scheme.
OFI: Ensure the tenderer selected for the clarifier upgrade addresses means to provide ready access to the clarifiers to enable them to be kept clean and well-maintained.	To be considered in future budget. The ladder to the Isisford WTP clarifier requires upgrades to improve access. An improved design is to be investigated.
OFI: Seek clarification on the reliance of Isisford filters as a barrier to protozoan pathogens.	Completed. UV filter has been installed at Isisford. Council will monitor WTP performance and assess need for filter upgrade in line with budget process.
OFI: Ilfracombe RO Plant UV system is not shown on the process flow diagram on the DWQMP.	Completed. Updates have been made to the Ilfracombe WTP schematic.
OFI: Improve signage and labelling to reduce the risk of confusion for relief operators or maintenance personnel when operating plants.	In progress. 50% completed. Improved signage and labelling to be developed and installed across all schemes.
OFI: Determine whether or not reservoir inspections are intended to cover water quality.	Completed. Quarterly Reservoir Inspection program is in place.
OFI: Discontinue the use of 'pool grade' chemicals at Yaraka	Completed. Sodium Hypochlorite is collected from Longreach and transported to Yaraka in smaller quantities to maintain product quality. The use of pool grade chlorine has been discontinued.
OFI: Seek assurance that BTX coagulants are fit for purpose for drinking water treatment.	Completed. All product SDS Sheets are supplied and updated accordingly.

4 Verification monitoring - water quality information and summary

There have been no changes to the verification monitoring program undertaken by LRC, which was brought into line with regulatory requirements in the last review of the DWQMP. Water treatment plant operators undertake verification monitoring in accordance with a comprehensive schedule each year.

Water quality results were compliant with ADWG and Regulatory guidelines for the financial year 2022-2023. A summary can be found for each scheme in the tables below.

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
Longreach	<i>E. coli</i>	88	88	<1MPN/100mL	0	
Longreach	Coliforms	88	88	No guideline	0	
Longreach	Free Chlorine	88	88	>5mg/L	0	
Longreach	Turbidity	88	88	>5 NTU	0	
Longreach	pH	88	88	6.5 - 7.5	0	
Ilfracombe	<i>E. coli</i>	48	48	<1MPN/100mL	0	
Ilfracombe	Coliforms	48	48	No guideline	0	
Ilfracombe	Free Chlorine	48	48	>5mg/L	0	
Ilfracombe	Turbidity	48	48	>5 NTU	0	
Ilfracombe	pH	48	48	6.5 - 7.5	0	
Isisford	<i>E. coli</i>	48	48	<1MPN/100mL	0	
Isisford	Coliforms	48	48	No guideline	0	
Isisford	Free Chlorine	48	48	>5mg/L	0	
Isisford	Turbidity	48	48	>5 NTU	0	
Isisford	pH	48	48	6.5 - 7.5	0	
Yaraka	<i>E. coli</i>	24	24	<1MPN/100mL	0	
Yaraka	Coliforms	24	24	No guideline	0	
Yaraka	Free Chlorine	24	24	>5mg/L	0	
Yaraka	Turbidity	24	24	>5 NTU	0	
Yaraka	pH	24	24	6.5 - 7.5	0	

Table 4 - E. coli compliance with annual value - Longreach

Drinking water scheme: LONGREACH

Year	2022-2023											
Month	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
No. of samples collected	8	7	8	7	7	8	7	7	8	7	7	7
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	4	6	7	8	7	7	8	7	7	8	7	7
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 5 - E. coli compliance with annual value - Ilfracombe

Drinking water scheme: ILFRACOMBE

Year	2022 – 2023											
Month	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
No. of samples collected	4	4	4	4	4	4	4	4	4	4	4	4
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	4	4	4	4	4	4	4	4	4	4	4	4
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 6 - E. coli compliance with annual value - Isisford

Drinking water scheme: ISISFORD

Year	2022 – 2023											
Month	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
No. of samples collected	4	4	4	4	4	4	4	4	4	4	4	4
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	0	4	0	4	4	0	4	4	4	4	4	4
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 7 - E. coli compliance with annual value - Yaraka

Drinking water scheme: YARAKA

Year	2022 – 2023											
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 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	2	2	2	2	0	2	2	2	2	2	0	2
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

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.

The Isisford water treatment plant (WTP) continues to struggle to handle high levels of turbidity to a level that manages the risk of protozoan pathogens adequately. LRC will notify the Regulator if turbidity is higher than 1.0NTU (as stated in the DWQMP). If the turbidity exceeds 1.0NTU from the Isisford WTP, a boil water notice will be issued to the community, to manage the risk, until plant upgrades can be planned and implemented. During the 2022-2023 financial year Isisford was on a boil water notice for 6 days. Initial Notification of Drinking Water Events were provided to the Regulator as per Table 8 below.

Table 8 – Incidents reported to the regulator

Incident date	Scheme / location	Parameter / issue	Preventive actions
22/09/2022	Isisford	Low level reservoirs resulting in sediment in water network	<ul style="list-style-type: none"> • Routine testing of low level alarms to ensure Operators are advised in advance of pending low levels. • Ongoing participation in the regional joint Reservoir Cleaning project to reduce sediment in storage tanks.
14/11/2023	Isisford	Chlorate level detected	<ul style="list-style-type: none"> • Improve Chlorine storage and turnover processes. • Implement CCP for Chlorates in the next DWQMP review.
14/11/2023	Yaraka	Chlorate level detected	<ul style="list-style-type: none"> • Improve Chlorine storage and turnover processes. • Implement CCP for Chlorates in the next DWQMP review.
14/11/2023	Ilfracombe	Blue Green Algae samples not sighted for WTP Filter	<ul style="list-style-type: none"> • Work with freight companies to improve timely delivery of samples within required timeframes.
27/02/2023	Isisford	E.coli testing not recorded in 2021 (various dates)	<ul style="list-style-type: none"> • Adjustments made to in house recording sheets. • Reminders/training on data collection and accurate recording communicated to Operators.
27/02/2023	Yaraka	E.coli testing not recorded in 2021 (various dates)	<ul style="list-style-type: none"> • Adjustments made to in house recording sheets. • Reminders/training on data collection and accurate recording communicated to Operators.

6 Customer complaints

No customer complaints relating to water quality were received during 2022-2023. This includes the period that LRC had in place a boil water notice for the Isisford supply due to higher than desired turbidity in treated water.

7 DWQMP review outcomes

No review of the DWQMP was undertaken during this period. Longreach Regional Council continues to identify and documents improvement opportunities in preparation for our next review in the 2023/2024 FY.

8 DWQMP audit findings

No audit of the Longreach Regional Council DWQMP was undertaken during this period. The next audit is scheduled for 2026.



9. Risk Management Improvement Program

Risk management improvements are being implemented according to prioritisation based on risk and available budget. Longreach Regional Council has continued to implement improvement actions in accordance with its Risk Management Improvement Program (RMIP) throughout 2022-2023.

Actions undertaken to implement the risk management improvement program are discussed in Table 9. The table shows consolidate risks from the most recent review of the DWQMP, undertaken during 2022, and risk improvement actions identified previous to that.

Progress on improvements is ongoing but largely dependent on availability of funding. Staff changes have also impacted the implementation of some improvements. Risk management items with low cost and high risk are generally attended to first, while expensive risk management items are generally still in progress. The latter require detailed investigation to ensure the solution will be suitable and cost effective.

Table 9 - Status of RMIP Actions

Scheme name	Ref	Component	Improvement actions	Target date	Actions taken to date	Status and revised target date	Responsible Officer Position
All	1	Treatment	Undertake HBT assessment and need for further treatment (eg UV) include supernatant in assessment criteria.	Sep-22	Council is yet to commence assessments in regards to HBT's. Investigations for the rollout of further UV filters at our other schemes is underway. Further installations will be subject to budgets and funding.	In progress. Aiming to complete by June 2026.	Director of Works
All	2	Treatment	Implement additional treatment as per HBT assessment (eg UV).	Dec-23	UV treatment has been installed at Isisford WTP.	Completed June 2023.	Director of Works
Longreach	3	Catchment	Masterplan for full amenities at camping area near Thompson River.	TBA	Project remains included within the Thomson River Master Plan – further progress is pending funding.	Council has placed this project on hold.	LRC
All	4	Whole of Scheme	Review Drought Management Plan.	Sep-22	To commence review in early 2023. Identification of key stakeholders completed.	Aiming to complete full review during 2024.	Director of Works
Longreach	5	Catchment	Undertake condition assessment on inlet pumps.	Jan-23	Carry out inspection of inlet pumps and undertake any maintenance.	Scheduled October 2023.	Director of Works
Longreach	6	Catchment	Develop contingency plan for pump failure as replacement will	Jan-24	Council has an additional duty standby process in place for these	Completed.	Director of Works

Scheme name	Ref	Component	Improvement actions	Target date	Actions taken to date	Status and revised target date	Responsible Officer Position
			take long lead time, and operating one pump only could lead to second failure.		pumps should a failure occur. Secondary pumps can be hooked up should the duty and standby fail at the same time.		
All	7	Whole of Scheme	Prepare SCADA/telemetry & online monitoring specification through RAPAD group.	Jun-22	On hold and to be considered as funding is made available.	Ongoing.	Director of Works
Longreach	8	Treatment	Assess need to upgrade clarifier to meet OCP limits.	Jan-23	Clarifier samples assessed during FY. It has been identified that clarifier NTU's vary but this does not compromise filtration results and they remain within limits.	Completed.	Director of Works
All	9	Whole of Scheme	Implementation of SCADA upgrades, including accessing funding.	Jun-25	On hold and to be considered as funding is made available.	Ongoing.	Director of Works
Longreach	10	Treatment	Implement upgrades if appropriate as per outcomes of clarifier Assessment.	Jun-27	Not required. See comment as per Item 8.	N/A	Director of Works
All	11	Whole of Scheme	Incorporate reservoir security/vermin inspections into routine operational Safety Hazard inspections.	Aug-22	An inspection checklist and schedule has been identified.	Completed. Commenced during 2022.	Director of Works
Longreach	12	Reservoir	Implement chlorine monitoring from the water tower to determine if there is loss of FCR in the tower.	Jun-22	Operator to conduct sampling 3 times weekly and monitor results.	Completed. Satisfactory results with ADWG.	Director of Works
All	13	Whole of Scheme	Develop documentation (SOP) for routine flushing program.	Jan-23	Flushing is being carried out currently but not documented. An inspection checklist and schedule is to be developed and implemented.	Completed. Commenced during 2022.	Director of Works

Scheme name	Ref	Component	Improvement actions	Target date	Actions taken to date	Status and revised target date	Responsible Officer Position
Ilfracombe	14	Treatment	Develop BGA manual/SOP and PAC dosing decision flowchart.	Dec-22	BGA SOP and PAC dosing manuals and flow charts are in the process of being developed.	To be completed early 2024.	Director of Works
All	15	Whole of Scheme	Review current operational monitoring and implement a formal quarterly review of water quality data with key stakeholders.	Jul-22	Quarterly meetings scheduled to commence in late 2022.	Completed and ongoing.	Director of Works
Ilfracombe Isisford	16	Treatment	Determine flow rate and validate chlorine contact time to determine minimum critical limit.	Jul-22	Being investigated.	Yet to commence.	Director of Works
Ilfracombe Isisford	17	Treatment	Develop SOP for fire flows, incorporating any chlorine Ct actions.	Sep-22	Being investigated.	Yet to commence.	Director of Works
All	18	Whole of Scheme	Undertake asset criticality assessment to ensure all critical assets and spares are identified and documented (Qld Water Directorate have a tool available for WSP).	TBA	Council's Store keeps an appropriate number of critical spares on hand and these are replenished as and when required.	In progress and ongoing.	Director of Works
All	19	Whole of Scheme	Ensure AMS captures water critical spares in development of the AMS.	TBA	As above.	As above.	Director of Works
Isisford	20	Reservoir	Complete fencing of offline storage.	Jun-22	Exclusion fencing installed around reservoir.	Completed September 2022.	Director of Works
Isisford	21	Treatment	Upgrade/refurbishment of clarifiers.	Jun-22	New Clarifier Buffer tank installed.	Completed November 2022.	Director of Works
Isisford	22	Treatment	Supplier to review pressure filter operation to provide advice on if it able to meet CCP.	Jun-22	Council looking at replacing the filters pending budget and funding.	Ongoing.	Director of Works
All	23	Whole of Scheme	Implement THM and HAA testing every quarter with Longreach	Mar-22	Council has developed a revised quarterly testing schedule for all	Completed.	Director of Works

Scheme name	Ref	Component	Improvement actions	Target date	Actions taken to date	Status and revised target date	Responsible Officer Position
			sampling. Implement chlorate testing all schemes.		schemes including chlorates, BGA, THM & HAA's.		
Isisford	24	Reticulation	Implement mains replacement program.	Dec-22	Mains Replacement Project in Isisford has been completed.	Completed February 2023.	Director of Works
Isisford	25	Reticulation	Assess removal of raw water system once mains replacement is complete.	Jun-25	Not started.	On hold.	Director of Works
Yaraka	26	Reticulation	Implement chlorine testing at outskirts/dead ends in Yaraka and establish flushing regime if necessary.	Mar-22	An inspection checklist and schedule is to be developed.	Implementation during 2024.	Director of Works
Yaraka	27	Reticulation	Assess opportunities to eliminate dead end mains if needed.	Jan-24	Opportunities to eliminate dead ends have been assessed and found not practical. Regular flushing currently in progress.	Ongoing.	Director of Works
Yaraka	28	Treatment	Succession planning for a new operator -as part of succession planning LRC will assess automation of plant. In interim back-up operators from other systems are available.	Jan-25	Council is investigating options for an additional WTP operator to be trained as a succession planning measure.	In progress.	Director of Works
All	29	Whole of Scheme	At least two operators to be trained in use & calibration of monitoring equipment for all systems.	Dec-22	Council has atleast 2 WTP Operator that are trained in the calibration of monitoring equipment.	Completed.	Director of Works

10. Updates to Customer Service Standards

During 2022/2023, Longreach Regional Council undertook a review and update of the Customer Service Standards for our Water Supply and Sewerage Schemes. Provided to the public in a tri-fold brochure format, the Customer Service Standards include the following:

- Details of Councils Water Supply and Sewerage Schemes for each town.
- Council's Goals in relation to drinking water and the management of wastewater.
- Levels of Service Standards.
- Customer Assistance in relation to Service Connections, clarification of responsibilities between Council and Customers, metering, billing and payment.
- Consultation and communication process in relation to service interruptions.
- Council's contact options and process for feedback or complaints.



Customer Consultation

In order to maintain or upgrade services, supply may be interrupted from time to time to perform the work. Where possible, customers will be notified in writing at least forty-eight hours before such planned interruptions take place.

Council Officers may need to enter private property to maintain services. Where possible, Council will notify customers in writing at least forty-eight hours before such work takes place.

Feedback & Complaints

Council values customer feedback.

Longreach Regional Council will investigate all complaints as per the Complaints Management Policy.

The Council will endeavour to resolve all customer complaints; however, if a complaint is not being resolved to the Customers satisfaction, the customer has a right to make a further complaint to the Ombudsman.

Longreach Regional Council
Ilfracombe Isisford Longreach Yureka

For more Information

Please contact Longreach Regional Council

07 4658 4111

assist@longreach.qld.gov.au

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Monday to Friday
8.30am – 5.00pm

Emergency / System Faults / After hours phone: 07 4658 4111

Longreach Regional Council
Ilfracombe Isisford Longreach Yureka

CUSTOMER Service Standards

Water Supply and Sewerage Schemes

www.longreach.qld.gov.au

Issued: January 2023

11. Approval

In signing this approval:

I agree that this report meets the standards required and approve the report to be submitted to the Water Supply Regulation, Department of Natural Resources, Mines and Energy.


Andre Pretorius

Director of Works





Appendix A

Water Quality Verification Certificates and Results

CERTIFICATE OF ANALYSIS

CLIENT : Longreach Regional Council - Longreach
(HLONLN) PO Box 144
ILFRACOMBE QLD 4727

Laboratory Reference : SSP0079993
Client Order No. : DIRECTOR
Date Received : 27-Jul-2022
Laboratory Number/s : SS22MW11244-SS22MW11247

Copies sent to: Environmental Health Central QLD

Number of Samples : 4

Reason for Analysis : Compliance

Method/s of Analysis : 20902 - SHW17 - Coliforms and Escherichia coli - enzyme hydrolysable substrate

Remarks : One or more samples > 24 hours old on testing. This exceeds the maximum allowable holding time for E. coli. Accuracy of results may be reduced.

Key :

- cfu = Colony Forming Units
- est = Estimated Count
- FDMEAS = Field Measurements as provided by Submitting Authority
- mg = Milligrams
- mL = Millilitre
- MPN = Most Probable Number
- NA = Not Applicable
- NR = No Result
- NT = Not Tested
- NTU = Nephelometric Turbidity Units
- pfu = Plaque Forming Units
- Positive = Detected, but no count possible due to confluent growth on the plate(s)
- TFOL = Results to Follow
- = Not Ordered
- < = Less than
- > = More than



SS22MW11244-SS22MW11247



Lawrence Ariotti
Supervising Scientist, Water Microbiology
28-Jul-22

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Enquiries	Lawrence Ariotti	39 Kessels Road	PO Box 594	Phone	(+61) 1800 000 FSS (377)
Phone	(+61 7) 3096 2822	Coopers Plains QLD 4108	Archerfield QLD 4108	Fax	(+61 7) 3096 2977
Email	Lawrence.Ariotti@health.qld.gov.au	AUSTRALIA	AUSTRALIA	Email	FSS@health.qld.gov.au

Client Reference			2098	2099	2100	2101
Sample Type			Water River Chlorinated	Water River Chlorinated	Water River Chlorinated	Water River Chlorinated
Sampling Time/Date			10:17 26-Jul-2022	10:45 26-Jul-2022	10:58 26-Jul-2022	10:38 26-Jul-2022
Testing Time/Date			11:55 27-Jul-2022	11:55 27-Jul-2022	11:55 27-Jul-2022	11:55 27-Jul-2022
Sample Description			DPI	GLR	WREN	PCYC
Method	Test Microorganisms	Units	SS22MW11244	SS22MW11245	SS22MW11246	SS22MW11247
20902	Coliforms	MPN/100mL	0	0	0	0
20902	E. coli	MPN/100mL	0	0	0	0
Interpretation of Results			PASS	PASS	PASS	PASS

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Notes on the Interpretation of Results

For a number of tests, if the target organism is not detected, the result is reported as < the lower limit of detection for the method used. For the Heterotrophic Colony Count test, a less than result is reported if the precision of the count falls below a lower limit.

PASS means that a sample is microbiologically fit-for-purpose, and FAIL means that a sample is not microbiologically fit-for-purpose. The fitness-for-purpose of a water sample is determined by reference to relevant regulations and guidelines:

Cooling System Water - AS/NZS 3666.3:2011: *Australian/New Zealand Standard: Air-handling and water systems of buildings-Microbial Control: Part 3: Performance based maintenance of cooling water systems.* (Tables 3.1 and 3.2)

Dental Unit Waterline Water (Immunocompromised Patients) - *Australian Dental Association Guidelines for Infection Control.*

Drinking Water - *The Public Health Regulation 2018 and the Australian Drinking Water Guidelines 2011.* (Section 10.2.2 and microorganism factsheets)

Recycled Water - *The Public Health Regulation 2018.* (Schedule 6 and Schedule 7)

Swimming and Spa Pool Water - *Queensland Health Water quality guidelines for public aquatic facilities.* (Table A2.3-Microbiological criteria for all facilities)

Washer - Disinfectors, Final Rinse Water - AS/NZS 4187: 2014 *Reprocessing of reusable medical devices in health service organizations.* (Table 7.2.1)

An interpretation may be made where none of the above guidelines or regulation apply. In such cases, an explanation for the interpretation will be provided on the report.

Maximum Acceptable Delays Between Sampling and Analysis (Holding Times)	
Test Required	Maximum Sample Storage Time (hr)
Coliphages	72
Campylobacter	24
Clostridium perfringens (spores)	72
Clostridium perfringens (vegetative cells)	18
Cryptosporidium/Giardia	96
Total Coliforms/E. coli	24
Enterococci	18
Heterotrophic Colony Count	12
Total Viable Count	12
Legionella	48
Pseudomonas	12
Salmonella	18
Shiga-toxigenic E. coli	18
Vibrio cholerae	18

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CERTIFICATE OF ANALYSIS

CLIENT : Longreach Regional Council - Longreach
(HLONLN) PO Box 144
ILFRACOMBE QLD 4727

Laboratory Reference : SSP0079993
Client Order No. : DIRECTOR
Date Received : 27-Jul-2022
Date Commenced : 02-Aug-2022
Date Completed : 03-Aug-2022
Laboratory Number/s : 22KE8177-22KE8178

Number of Samples : 2

Method/s of Analysis : 16307 - Haloacetic Acids in Water by GC
28017 - Trihalomethanes in Water by Purge and Trap GCMS

Remarks : Health Values based on the Australian Drinking Water Guidelines 2011.

The samples as submitted comply with the Australian Drinking Water Guidelines (2011) for haloacetic acids and total trihalomethane in water.

NATA accreditation does not cover QIS16307.

THM results in this report have been authorised for release by R. Patel.



22KE8177-22KE8178



Darina Hnatko
Chemist, Organic Chemistry
03-Aug-22

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Fax **(+61 7) 3096 2977**
Email **FSS@health.qld.gov.au**

Client Reference					2096	2097
Sample Type					Water River Chlorinated	Water River Chlorinated
Sampling Time/Date					10:12 26-Jul-2022	10:33 26-Jul-2022
Sample Description					DPI	PCYC
Method	Trihalomethanes	ADWG Health Value	Units	Reporting Limit	22KE8177	22KE8178
28017	Chloroform	250	µg/L	1	75	58
28017	Bromodichloromethane	250	µg/L	1	5	5
28017	Dibromochloromethane	250	µg/L	1	< 1	< 1
28017	Bromoform	250	µg/L	1	< 1	< 1
28017	Total Trihalomethanes	250	µg/L	4	80	62
Haloacetic Acids						
16307	Monochloroacetic Acid (MCAA)	150	µg/L	5	< 5	< 5
16307	Monobromoacetic Acid (MBAA)		µg/L	5	< 5	< 5
16307	Dichloroacetic Acid (DCAA)	100	µg/L	5	35	31
16307	Trichloroacetic Acid (TCAA)	100	µg/L	5	72	64
16307	Bromochloroacetic Acid (BCAA)		µg/L	5	< 5	< 5
16307	Bromodichloroacetic Acid (BDCAA)		µg/L	5	5	< 5
16307	Dibromoacetic Acid (DBAA)		µg/L	5	< 5	< 5
16307	Chlorodibromoacetic Acid (CDBAA)		µg/L	5	< 5	< 5
16307	Dalapon (2,2-DPA)	500	µg/L	10	< 10	< 10

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CERTIFICATE OF ANALYSIS

CLIENT : Longreach Regional Council - Longreach
(HLONLN) PO Box 144
ILFRACOMBE QLD 4727

Laboratory Reference : SSP0080355
Client Order No. : DIRECTOR
Date Received : 25-Aug-2022
Laboratory Number : 22NA7105
Batch No : 642-38

ATTN: Director of Infrastructure Services

Client Reference : 2105
Date Sampled : 24-Aug-2022
Sample Source : River
Sample Point : Longreach Raw
Further Information: :

Submitting Authority : Longreach Regional Council - Longreach
Reason for Analysis : Compliance
Water Treatment : Untreated

Method	Units	Result	Guidelines **		Method	Units	Result	Guidelines **	
			Health	Aesthetic				Health	Aesthetic
18320	Conductivity @ 25°C	µs/cm	91		CATIONS				
18320	pH	at 21°C	6.70	6.5 - 8.5	18195	Sodium	mg/L	8.3	180
18209	Total Hardness*	mg CaCO ₃ /L	23	200	18195	Potassium	mg/L	3.0	
18209	Temporary Hardness*	mg CaCO ₃ /L	23		18195	Calcium	mg/L	6.3	
18320	Alkalinity	mg CaCO ₃ /L	33		18195	Magnesium	mg/L	1.7	
18209	Residual Alkali*	meq/L	0.2		18209	Hydrogen*	mg/L	0.0	
18195	Silica	mg/L	14	80	ANIONS				
18209	Total Dissolved Ions*	mg/L	71		18209	Bicarbonate*	mg/L	41	
18209	Total Dissolved Solids*	mg/L	64	600	18209	Carbonate*	mg/L	0.0	
18206	True Colour	Hazen	100	15	18209	Hydroxide*	mg/L	0.0	
18212	Turbidity	NTU	310	5	35047	Chloride	mg/L	5.7	250
18209	pH Sat.* (calc. for CaCO ₃)		9.1		35047	Fluoride	mg/L	0.08	1.5
18209	Saturation Index*		-2.4		35047	Nitrate	mg/L	0.15	50
18209	Mole Ratio*		2.9		35047	Sulphate	mg/L	4.8	500 250
18209	Sodium Absorpt. Ratio*		0.8		OTHER DISSOLVED ELEMENTS				
18209	Figure of Merit Ratio*		1.2		18195	Iron	mg/L	0.34	0.3
Notes: * parameter is derived from calculation.					18195	Manganese	mg/L	0.003	0.5 0.1
** Australian Drinking Water Guidelines 2011 (ADWG) Health and Aesthetic Values					18195	Zinc	mg/L	< 0.06	3
* not determined					18195	Aluminium	mg/L	0.64	0.2
Lab use Only: TE 614.00 TC 0.89 TA 0.93 Imb 0.05 A VC 0.55					18195	Boron	mg/L	0.03	4
					18195	Copper	mg/L	< 0.003	2 1

Please note that the concentration of total elements present may be higher than that of dissolved elements stated in this report. The water does not comply with the Australian Drinking Water Guidelines 2011 for Aluminium, Colour, Iron and Turbidity. Fine particles (< 0.45 micrometre) may cause elevated metal and true colour results.



22NA7105

Ludwika Nieradzki
Laboratory Technician, Inorganic Chemistry
05-Sep-2022

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CERTIFICATE OF ANALYSIS

CLIENT : Longreach Regional Council - Longreach
(HLONLN) PO Box 144
ILFRACOMBE QLD 4727

Laboratory Reference : SSP0080355
Client Order No. : DIRECTOR
Date Received : 25-Aug-2022
Laboratory Number : 22NA7106
Batch No : 642-39

ATTN: Director of Infrastructure Services

Client Reference : 2106
Date Sampled : 24-Aug-2022
Sample Source : River
Sample Point : Long Reach GLR
Further Information: :

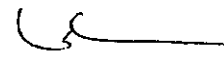
Submitting Authority : Longreach Regional Council - Longreach
Reason for Analysis : Compliance
Water Treatment : Chlorinated

Method	Units	Result	Guidelines **	Method	Units	Result	Guidelines **
			Health Aesthetic				Health Aesthetic
18320	Conductivity @ 25°C	µs/cm	110	CATIONS			
18320	pH	at 21°C	6.74	18195	Sodium	mg/L	12
18209	Total Hardness*	mg CaCO ₃ /L	23	18195	Potassium	mg/L	3.0
18209	Temporary Hardness*	mg CaCO ₃ /L	23	18195	Calcium	mg/L	6.5
18320	Alkalinity	mg CaCO ₃ /L	34	18195	Magnesium	mg/L	1.7
18209	Residual Alkal*	meq/L	0.2	18209	Hydrogen*	mg/L	0.0
18195	Silica	mg/L	12	ANIONS			
18209	Total Dissolved Ions*	mg/L	81	18209	Bicarbonate*	mg/L	41
18209	Total Dissolved Solids*	mg/L	72	18209	Carbonate*	mg/L	0.0
18206	True Colour	Hazen	< 8	18209	Hydroxide*	mg/L	0.0
18212	Turbidity	NTU	< 1	35047	Chloride	mg/L	12
18209	pH Sat.* (calc. for CaCO ₃)		9.1	35047	Fluoride	mg/L	0.08
18209	Saturation Index*		-2.4	35047	Nitrate	mg/L	0.30
18209	Mole Ratio*		3.3	35047	Sulphate	mg/L	4.9
18209	Sodium Absorpt. Ratio*		1.0	OTHER DISSOLVED ELEMENTS			
18209	Figure of Merit Ratio*		0.9	18195	Iron	mg/L	< 0.01
Notes: * parameter is derived from calculation.				18195	Manganese	mg/L	< 0.001
** Australian Drinking Water Guidelines 2011 (ADWG) Health and Aesthetic Values				18195	Zinc	mg/L	< 0.06
** not determined				18195	Aluminium	mg/L	< 0.03
Lab use Only: TE 230.00 TC 1.04 TA 1.12 Tmb 0.08 A W/C 0.53				18195	Boron	mg/L	0.03
				18195	Copper	mg/L	< 0.003

Please note that the concentration of total elements present may be higher than that of dissolved elements stated in this report. The water complies with Australian Drinking Water Guidelines 2011 for the parameters tested.



22NA7106



Ludwika Nieradzik
Laboratory Technician, Inorganic Chemistry
05-Sep-2022

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CERTIFICATE OF ANALYSIS

CLIENT : Longreach Regional Council
HLONLN 96A Eagle Street
LONGREACH QLD 4730
RCGroup@longreach.qld.gov.au

ATTN: Director of Infrastructure Services

Laboratory Reference : SSP80972
Client Order Number :
Quote Number :
Client Project :
Client Batch Reference :
Date Received : 18-Oct-2022
Date Commenced : 19-Oct-2022
Laboratory Numbers : 22KP662-22KP663

Number of Samples 2

Reason for Analysis Cyanobacterial (Blue Green Algal) Identification and Enumeration

Method/s of Analysis 13032 - Identification and Enumeration of Planktonic Phytoplankton in Freshwater by Microscopy

Notations n.s. = not sighted
s = sighted
cf. = compared with
NA = not analysed
spp. = possible multiple species of the same genus

Remarks FSS guidelines require samples to be preserved within 48 hours of sampling. One or more samples submitted fall outside this criteria therefore results may be compromised

The calculated biovolume is based on mean literature values of the organisms identified and should be used as an estimate only



NATA Accredited
Laboratory 41
Accredited for compliance
with ISO/IEC 17025 - Testing

WORLD RECOGNISED
ACCREDITATION

22KP662-22KP663



Karen Reardon
Senior Scientist, Organic Chemistry
19-October-2022

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Enquiries	Karen Reardon	39 Kessels Road	PO Box 594	Phone	(+61 7) 3274 9111
Phone	(+61 7) 3096 2846	Coopers Plains QLD 4108	Archerfield QLD 4108	Fax	(+61 7) 3000 9628
Email	karen.reardon@health.qld.gov.au	AUSTRALIA	AUSTRALIA	Email	FSS@health.qld.gov.au

Client Reference			2135	2136
Request			Cyanobacterial Count	Cyanobacterial Count
Date Analysed			19-Oct-2022	19-Oct-2022
Sample Description			WTP Treated	WTP Raw
Method	Organism/s	Units	22KP662	22KP663
13032	CYANOBACTERIA (blue-green algae)			
13032	<i>Aphanocapsa</i> spp. (< 2µm)	Cells/mL	n.s	1600
13032	<i>Cyanocatena imperfecta</i>	Cells/mL	n.s	1400
13032	<i>Cyanodictyon</i> spp.	Cells/mL	n.s	430
13032	<i>Cyanogranis libera</i>	Cells/mL	n.s	44000
13032	<i>Merismopedia</i> spp. (small)	Cells/mL	n.s	430
13032	<i>Myxobaktron plankticus</i>	Cells/mL	n.s	67
13032	Picoplankton	Cells/mL	n.s	150
13032	<i>Planktolyngbya minor</i>	Cells/mL	n.s	6500
13032	<i>Pseudanabaena galeata</i>	Cells/mL	n.s	80
13032	<i>Pseudanabaena limnetica</i>	Cells/mL	n.s	67
13032	<i>Rhabdoderma</i> spp.	Cells/mL	n.s	67
13032	Total (CYANOBACTERIA)	Cells/mL	n.s	55000
13032	TOTAL CELLS PER ML	Cells/mL	n.s	55000
13032	TOTAL CYANOBACTERIA BIOVOLUME	mm ³ /L	N/A	0.04

CERTIFICATE OF ANALYSIS

CLIENT : Longreach Regional Council - Longreach
(HLONLN) PO Box 144
ILFRACOMBE QLD 4727

Laboratory Reference : SSP0081100
Client Order No. : RC_Group
Date Received : 26-Oct-2022
Date Commenced : 28-Oct-2022
Date Completed : 09-Nov-2022
Laboratory Number/s : 22KE11425-22KE11428

Number of Samples : 4

Method/s of Analysis : 16307 - Haloacetic Acids in Water by GC
28017 - Trihalomethanes in Water by Purge and Trap GCMS

Remarks : Health Values based on the Australian Drinking Water Guidelines 2011.

THM results released by A. Tronoff

The samples submitted for analysis comply with the Australian Drinking Water Guidelines (2011) for total trihalomethanes and haloacetic acids in water.

NATA accreditation does not cover the performance of QIS Method 16307.



22KE11425-22KE11428

.....
Cassandra Kelly
Analyst
09-Nov-22



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Client Reference					2143	2144	2145	2146
Sample Type					Water River Treated	Water River Treated	Water Dam Treated	Water Dam Treated
Sampling Time/Date					10:30 24-Oct-2022	10:45 24-Oct-2022	09:00 24-Oct-2022	09:15 24-Oct-2022
Sample Description					PCYC	DPI	Rec centre	Memorial park
Method	Trihalomethanes	ADWG Health Value	Units	Reporting Limit	22KE11425	22KE11426	22KE11427	22KE11428
28017	Chloroform	250	µg/L	1	74	100	31	29
28017	Bromodichloromethane	250	µg/L	1	7	8	11	10
28017	Dibromochloromethane	250	µg/L	1	< 1	< 1	3	3
28017	Bromoform	250	µg/L	1	< 1	< 1	< 1	< 1
28017	Total Trihalomethanes	250	µg/L	4	81	110	45	42
	Haloacetic Acids							
16307	Monochloroacetic Acid (MCAA)	150	µg/L	5	< 5	6	< 5	< 5
16307	Monobromoacetic Acid (MBAA)		µg/L	5	< 5	< 5	< 5	< 5
16307	Dichloroacetic Acid (DCAA)	100	µg/L	5	35	41	12	12
16307	Trichloroacetic Acid (TCAA)	100	µg/L	5	46	62	11	9
16307	Bromochloroacetic Acid (BCAA)		µg/L	5	< 5	< 5	< 5	< 5
16307	Bromodichloroacetic Acid (BDCAA)		µg/L	5	5	5	< 5	< 5
16307	Dibromoacetic Acid (DBAA)		µg/L	5	< 5	< 5	< 5	< 5
16307	Chlorodibromoacetic Acid (CDBAA)		µg/L	5	< 5	< 5	< 5	< 5
16307	Dalapon (2,2-DPA)	500	µg/L	10	< 10	< 10	< 10	< 10

This report overrides all previous reports. The results relate solely to the sample/s as received and are limited to the specific tests undertaken as listed on the report. The results on this report are confidential and are not to be used or disclosed to any other person or used for any other purpose, whether directly or indirectly, unless that use is disclosed or the purpose is expressly authorised in writing by Queensland Health and the named recipient on this report. To the fullest extent permitted by law, Queensland Health will not be liable for any loss or claim (including legal costs calculated on an indemnity basis) which arise because of (a) problems related to the merchantability, fitness or quality of the sample/s, or (b) any negligent or unlawful act or omissions by Queensland Health that is connected with any activities or services provided by Queensland Health under this agreement (including the timing and/or method under which the sample/s were taken, stored or transported).

CERTIFICATE OF ANALYSIS

CLIENT : Longreach Regional Council - Longreach
(HLONLN) PO Box 144
ILFRACOMBE QLD 4727

Laboratory Reference : SSP0081299
Client Order No. : RC_GROUP
Date Received : 10-Nov-2022
Laboratory Number/s : SS22MW16939-SS22MW16952

Copies sent to: Environmental Health Central QLD

Number of Samples : 14

Reason for Analysis : Compliance

Method/s of Analysis : 20902 - SHW17 - Coliforms and Escherichia coli - enzyme hydrolysable substrate

Remarks : Samples were not adequately chilled while being transported. Samples must be adequately chilled (2 to 8 degrees C) at all stages after collection to the point of testing. Adequate chilling is necessary to ensure accurate microbiological results.

One or more samples > 24 hours old on testing. This exceeds the maximum allowable holding time for E. coli. Accuracy of results may be reduced.

Key :

- cfu = Colony Forming Units
- est = Estimated Count
- FDMEAS = Field Measurements as provided by Submitting Authority
- mg = Milligrams
- mL = Millilitre
- MPN = Most Probable Number
- NA = Not Applicable
- NR = No Result
- NT = Not Tested
- NTU = Nephelometric Turbidity Units
- pfu = Plaque Forming Units
- Positive = Detected, but no count possible due to confluent growth on the plate(s)
- TFOL = Results to Follow
- = Not Ordered
- < = Less than
- > = More than



SS22MW16939-SS22MW16952



Lawrence Ariotti
Supervising Scientist, Water Microbiology
11-Nov-22

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Email **Lawrence.Ariotti@health.qld.gov.au** AUSTRALIA AUSTRALIA Email FSS@health.qld.gov.au

Client Reference			2179	2180	2181	2182
Sample Type			Water River Chlorinated	Water River Chlorinated	Water River Chlorinated	Water River Chlorinated
Sampling Time/Date			10:05 09-Nov-2022	10:16 09-Nov-2022	10:22 09-Nov-2022	10:36 09-Nov-2022
Testing Time/Date			12:14 10-Nov-2022	12:15 10-Nov-2022	12:15 10-Nov-2022	12:15 10-Nov-2022
Sample Description			Gull St	DPI	GLR Longreach	Wren St
Method	Test Microorganisms	Units	SS22MW16939	SS22MW16940	SS22MW16941	SS22MW16942
20902	Coliforms	MPN/100mL	0	0	0	0
20902	E. coli	MPN/100mL	0	0	0	0
Interpretation of Results			PASS	PASS	PASS	PASS

Client Reference			2183	2184	2185	2186
Sample Type			Water Dam Chlorinated	Water Dam Chlorinated	Water Dam Chlorinated	Water Dam Chlorinated
Sampling Time/Date			09:00 09-Nov-2022	09:16 09-Nov-2022	09:32 09-Nov-2022	09:47 09-Nov-2022
Testing Time/Date			12:15 10-Nov-2022	12:15 10-Nov-2022	12:15 10-Nov-2022	12:15 10-Nov-2022
Sample Description			Rcc Centre	Memorial Park	Mitchell St	Ilfracombe WTP
Method	Test Microorganisms	Units	SS22MW16943	SS22MW16944	SS22MW16945	SS22MW16946
20902	Coliforms	MPN/100mL	0	0	0	0
20902	E. coli	MPN/100mL	0	0	0	0
Interpretation of Results			PASS	PASS	PASS	PASS

Client Reference			2187	2188	2189	2190
Sample Type			Water Dam Chlorinated	Water Dam Chlorinated	Water Dam Chlorinated	Water Dam Chlorinated
Sampling Time/Date			07:10 09-Nov-2022	07:00 09-Nov-2022	07:30 09-Nov-2022	08:00 09-Nov-2022
Testing Time/Date			12:15 10-Nov-2022	12:15 10-Nov-2022	12:15 10-Nov-2022	12:15 10-Nov-2022
Sample Description			Isisford Town Park	Isisford Skate Park	Isisford Lunch Room	Isisford WTP
Method	Test Microorganisms	Units	SS22MW16947	SS22MW16948	SS22MW16949	SS22MW16950
20902	Coliforms	MPN/100mL	0	0	0	0
20902	E. coli	MPN/100mL	0	0	0	0
Interpretation of Results			PASS	PASS	PASS	PASS

Client Reference			2191	2192
Sample Type			Water Dam Chlorinated	Water Dam Chlorinated
Sampling Time/Date			07:00 09-Nov-2022	07:00 09-Nov-2022
Testing Time/Date			12:15 10-Nov-2022	12:15 10-Nov-2022
Sample Description			Long Res Yaraka	Yaraka WTP
Method	Test Microorganisms	Units	SS22MW16951	SS22MW16952
20902	Coliforms	MPN/100mL	0	0
20902	E. coli	MPN/100mL	0	0
	Interpretation of Results		PASS	PASS

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Notes on the Interpretation of Results

For a number of tests, if the target organism is not detected, the result is reported as < the lower limit of detection for the method used. For the Heterotrophic Colony Count test, a less than result is reported if the precision of the count falls below a lower limit.

PASS means that a sample is microbiologically fit-for-purpose, and FAIL means that a sample is not microbiologically fit-for-purpose. The fitness-for-purpose of a water sample is determined by reference to relevant regulations and guidelines:

Cooling System Water - AS/NZS 3666.3:2011: *Australian/New Zealand Standard: Air-handling and water systems of buildings-Microbial Control: Part 3: Performance based maintenance of cooling water systems.* (Tables 3.1 and 3.2)

Dental Unit Waterline Water (Immunocompromised Patients) - *Australian Dental Association Guidelines for Infection Control.*

Drinking Water - *The Public Health Regulation 2018 and the Australian Drinking Water Guidelines 2011.* (Section 10.2.2 and microorganism factsheets)

Recycled Water - *The Public Health Regulation 2018.* (Schedule 6 and Schedule 7)

Swimming and Spa Pool Water - *Queensland Health Water quality guidelines for public aquatic facilities.* (Table A2.3-Microbiological criteria for all facilities)

Washer - Disinfectors, Final Rinse Water - AS/NZS 4187: 2014 *Reprocessing of reusable medical devices in health service organizations.* (Table 7.2.1)

An interpretation may be made where none of the above guidelines or regulation apply. In such cases, an explanation for the interpretation will be provided on the report.

Maximum Acceptable Delays Between Sampling and Analysis (Holding Times)	
Test Required	Maximum Sample Storage Time (hr)
Coliphages	72
Campylobacter	24
Clostridium perfringens (spores)	72
Clostridium perfringens (vegetative cells)	18
Cryptosporidium/Giardia	96
Total Coliforms/E. coli	24
Enterococci	18
Heterotrophic Colony Count	12
Total Viable Count	12
Legionella	48
Pseudomonas	12
Salmonella	18
Shiga-toxigenic E. coli	18
Vibrio cholerae	18

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CERTIFICATE OF ANALYSIS

CLIENT : Longreach Regional Council - Longreach
(HLONLN) PO Box 144
ILFRACOMBE QLD 4727

Laboratory Reference : SSP0081218
Client Order No. : DIRECTOR
Date Received : 04-Nov-2022
Date Commenced : 04-Nov-2022
Date Completed : 22-Nov-2022
Laboratory Number/s : 22NA9378-22NA9381

ATTN: Director of Infrastructure Serv.

Number of Samples : 4

Method/s of Analysis : 18328 - Selected Anions in Water by Ion Chromatography



Shu-Huei Huang

Shu-Huei (Daphne) Huang
Chemist, Inorganic Chemistry
22-Nov-2022

22NA9378-22NA9381

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Client Reference				2156	2157	2154	2155
Sample Type				Water Dam Chlorinated	Water Dam Chlorinated	Water River Chlorinated	Water River Chlorinated
Sampling Time/Date				10:03 01-Nov-2022	10:21 01-Nov-2022	10:10 01-Nov-2022	10:33 01-Nov-2022
Sample Description				Rec Centre	Memorial Park	PCYC	DPI
Method	Analyte	Units	Reporting Limit	22NA9378	22NA9379	22NA9380	22NA9381
18328	Chlorate (ClO ₃)	mg/L	0.01	0.27	0.27	0.41	0.40

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NATA Accredited
Laboratory 41
Accredited for compliance
with ISO/IEC 17025 - Testing

22NA9378-22NA9381

60816-77352 Printed: 12:56 23-Nov-22 shdp3



CERTIFICATE OF ANALYSIS

CLIENT : Longreach Regional Council - Longreach
(HLONLN) PO Box 144
ILFRACOMBE QLD 4727

Laboratory Reference : SSP0081762
Client Order No. : DIRECTOR
Date Received : 14-Dec-2022
Date Commenced : 15-Dec-2022
Date Completed : 21-Dec-2022
Laboratory Number/s : 22NA10708-22NA10715

ATTN: Director of Infrastructure Services

Number of Samples : 8

Method/s of Analysis : 18328 - Selected Anions in Water by Ion Chromatography



Shu-Huei (Daphne) Huang
Chemist, Inorganic Chemistry
21-Dec-2022

22NA10708-22NA10715

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Client Reference				2205	2206	2211	2212
Sample Type				Water Dam Chlorinated	Water Dam Chlorinated	Water Dam Chlorinated	Water Dam Chlorinated
Sampling Time/Date				08:25 13-Dec-2022	08:42 13-Dec-2022	08:30 13-Dec-2022	08:40 13-Dec-2022
Sample Description				Rec Centre	Memorial Park	Isisford Skatepark	Isisford Park
Method	Analyte	Units	Reporting Limit	22NA10708	22NA10709	22NA10710	22NA10711
18328	Chlorite (ClO ₂)	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
18328	Chlorate (ClO ₃)	mg/L	0.01	0.25	0.24	0.58	0.58

Client Reference				2215	2216	2201	2202
Sample Type				Water Dam Chlorinated	Water Dam Chlorinated	Water River Chlorinated	Water River Chlorinated
Sampling Time/Date				08:00 13-Dec-2022	08:15 13-Dec-2022	08:42 13-Dec-2022	09:11 13-Dec-2022
Sample Description				Hall Toilets Yaraka	Long Res Yaraka	PCYC	DPI
Method	Analyte	Units	Reporting Limit	22NA10712	22NA10713	22NA10714	22NA10715
18328	Chlorite (ClO ₂)	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
18328	Chlorate (ClO ₃)	mg/L	0.01	0.49	0.45	0.42	0.41

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CERTIFICATE OF ANALYSIS

CLIENT : (HLONLN)	Longreach Regional Council - Longreach PO Box 144 ILFRACOMBE QLD 4727	Laboratory Reference : SSP0081762 Client Order No. : DIRECTOR Date Received : 14-Dec-2022 Date Commenced : 16-Dec-2022 Date Completed : 21-Dec-2022 Laboratory Number/s : 22KE14393-22KE14400
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ATTN: Director of Infrastructure Services

Number of Samples : 8

Method/s of Analysis : 16307 - Haloacetic Acids in Water by GC
28017 - Trihalomethanes in Water by Purge and Trap GCMS

Remarks : Health Values based on the Australian Drinking Water Guidelines 2011.

NATA accreditation does not cover the performance of QIS 16307.

The samples as submitted comply with the Australian Drinking Water Guidelines (2011) for haloacetic acids in water.

The samples submitted for analysis, therefore, comply with the Australian Drinking Water Guidelines (2011) for total trihalomethanes in water.



.....
Jeff Herse
Chemist, Organic Chemistry
06-Jan-23

22KE14393-22KE14400

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Email	jeff.herse@health.qld.gov.au	AUSTRALIA	AUSTRALIA	Email	FSS@health.qld.gov.au

Client Reference					2213	2214	2217	2218
Sample Type					Water Dam Chlorinated	Water Dam Chlorinated	Water Dam Chlorinated	Water Dam Chlorinated
Sampling Time/Date					08:35 13-Dec-2022	08:45 13-Dec-2022	08:10 13-Dec-2022	08:20 13-Dec-2022
Sample Description					Isisford Skatepark	Isisford Park	Hall Toilets Yaraka	Long Res Yaraka
Method	Trihalomethanes	ADWG Health Value	Units	Reporting Limit	22KE14393	22KE14394	22KE14395	22KE14396
28017	Chloroform	250	µg/L	1	94	86	56	43
28017	Bromodichloromethane	250	µg/L	1	17	16	26	22
28017	Dibromochloromethane	250	µg/L	1	3	3	11	9
28017	Bromoform	250	µg/L	1	< 1	< 1	1	1
28017	Total Trihalomethanes	250	µg/L	4	110	110	94	75
	Haloacetic Acids							
16307	Monochloroacetic Acid (MCAA)	150	µg/L	5	< 5	< 5	< 5	5
16307	Monobromoacetic Acid (MBAA)		µg/L	5	< 5	< 5	< 5	< 5
16307	Dichloroacetic Acid (DCAA)	100	µg/L	5	21	21	21	17
16307	Trichloroacetic Acid (TCAA)	100	µg/L	5	23	22	16	14
16307	Bromochloroacetic Acid (BCAA)		µg/L	5	< 5	< 5	10	9
16307	Bromodichloroacetic Acid (BDCAA)		µg/L	5	< 5	5	9	9
16307	Dibromoacetic Acid (DBAA)		µg/L	5	< 5	< 5	< 5	< 5
16307	Chlorodibromoacetic Acid (CDBAA)		µg/L	5	< 5	< 5	< 5	< 5
16307	Dalapon (2,2-DPA)	500	µg/L	10	< 10	< 10	< 10	< 10

Client Reference					2199	2200	2203	2204
Sample Type					Water River Chlorinated	Water River Chlorinated	Water Dam Chlorinated	Water Dam Chlorinated
Sampling Time/Date					08:38 13-Dec-2022	09:05 13-Dec-2022	08:22 13-Dec-2022	08:40 13-Dec-2022
Sample Description					PCYC	DPI	Rec Centre	Memorial Park
Method	Trihalomethanes	ADWG Health Value	Units	Reporting Limit	22KE14397	22KE14398	22KE14399	22KE14400
28017	Chloroform	250	µg/L	1	70	92	28	17
28017	Bromodichloromethane	250	µg/L	1	12	14	11	8
28017	Dibromochloromethane	250	µg/L	1	1	1	4	3
28017	Bromoform	250	µg/L	1	< 1	< 1	< 1	< 1
28017	Total Trihalomethanes	250	µg/L	4	82	110	44	30
Haloacetic Acids								
16307	Monochloroacetic Acid (MCAA)	150	µg/L	5	< 5	< 5	< 5	< 5
16307	Monobromoacetic Acid (MBAA)		µg/L	5	< 5	< 5	< 5	< 5
16307	Dichloroacetic Acid (DCAA)	100	µg/L	5	26	30	9	7
16307	Trichloroacetic Acid (TCAA)	100	µg/L	5	47	54	7	5
16307	Bromochloroacetic Acid (BCAA)		µg/L	5	< 5	5	< 5	< 5
16307	Bromodichloroacetic Acid (BDCAA)		µg/L	5	8	8	< 5	< 5
16307	Dibromoacetic Acid (DBAA)		µg/L	5	< 5	< 5	< 5	< 5
16307	Chlorodibromoacetic Acid (CDBAA)		µg/L	5	< 5	< 5	< 5	< 5
16307	Dalapon (2,2-DPA)	500	µg/L	10	< 10	< 10	< 10	< 10

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CERTIFICATE OF ANALYSIS

CLIENT : Longreach Regional Council - Longreach
(HLONLN) PO Box 144
ILFRACOMBE QLD 4727

Laboratory Reference : SSP0082433
Client Order No. : RCGROUP
Date Received : 15-Feb-2023
Laboratory Number/s : SS23MW2882-SS23MW2895

Number of Samples : 14

Reason for Analysis : Compliance

Method/s of Analysis : 20902 - SHW17 - Coliforms and Escherichia coli - enzyme hydrolysable substrate

Remarks : One or more samples > 24 hours old on testing. This exceeds the maximum allowable holding time for E. coli. Accuracy of results may be reduced.

Samples were not cold on arrival. Samples MUST be adequately chilled (2 to 8 degrees C) at all stages after collection up to the point of testing. Adequate chilling is necessary to ensure accurate microbiological results.

Key :

- cfu = Colony Forming Units
- est = Estimated Count
- FDMEAS = Field Measurements as provided by Submitting Authority
- mg = Milligrams
- mL = Millilitre
- MPN = Most Probable Number
- NA = Not Applicable
- NR = No Result
- NT = Not Tested
- NTU = Nephelometric Turbidity Units
- pfu = Plaque Forming Units
- Positive = Detected, but no count possible due to confluent growth on the plate(s)
- TFOL = Results to Follow
- = Not Ordered
- < = Less than
- > = More than



SS23MW2882-SS23MW2895



Lawrence Ariotti
Supervising Scientist, Water Microbiology
16-Feb-23

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Client Reference			2234	2235	2236	2237
Sample Type			Water River Treated	Water River Treated	Water River Treated	Water River Treated
Sampling Time/Date			08:00 14-Feb-2023	08:15 14-Feb-2023	08:30 14-Feb-2023	08:45 14-Feb-2023
Testing Time/Date			12:30 15-Feb-2023	12:30 15-Feb-2023	12:30 15-Feb-2023	12:30 15-Feb-2023
Sample Description			DPI	Longreach GLR	WREN	PCYC
Method	Test Microorganisms	Units	SS23MW2882	SS23MW2883	SS23MW2884	SS23MW2885
20902	Coliforms	MPN/100mL	0	0	0	0
20902	E. coli	MPN/100mL	0	0	0	0
Interpretation of Results			PASS	PASS	PASS	PASS

Client Reference			2238	2239	2240	2241
Sample Type			Water Dam Treated	Water Dam Treated	Water Dam Treated	Water Dam Treated
Sampling Time/Date			09:15 14-Feb-2023	09:30 14-Feb-2023	09:45 14-Feb-2023	10:00 14-Feb-2023
Testing Time/Date			12:30 15-Feb-2023	12:30 15-Feb-2023	12:30 15-Feb-2023	12:30 15-Feb-2023
Sample Description			Rec centre	Memorial Park	Mitchell Street	Ilfracombe WTP
Method	Test Microorganisms	Units	SS23MW2886	SS23MW2887	SS23MW2888	SS23MW2889
20902	Coliforms	MPN/100mL	0	0	0	0
20902	E. coli	MPN/100mL	0	0	0	0
Interpretation of Results			PASS	PASS	PASS	PASS

Client Reference			2244	2245	2246	2247
Sample Type			Water Dam Treated	Water Dam Treated	Water Dam Treated	Water Dam Treated
Sampling Time/Date			06:30 14-Feb-2023	06:30 14-Feb-2023	06:45 14-Feb-2023	07:45 14-Feb-2023
Testing Time/Date			12:30 15-Feb-2023	12:30 15-Feb-2023	12:30 15-Feb-2023	12:30 15-Feb-2023
Sample Description			Skate park	Town Park	Depot lunch room Isisford	Isisford WTP
Method	Test Microorganisms	Units	SS23MW2890	SS23MW2891	SS23MW2892	SS23MW2893
20902	Coliforms	MPN/100mL	0	0	0	0
20902	E. coli	MPN/100mL	0	0	0	0
Interpretation of Results			PASS	PASS	PASS	PASS

Client Reference			2248	2249
Sample Type			Water Dam Treated	Water Dam Treated
Sampling Time/Date			07:00 14-Feb-2023	07:00 14-Feb-2023
Testing Time/Date			12:30 15-Feb-2023	12:30 15-Feb-2023
Sample Description			Yaraka WTP	Yaraka Long's house
Method	Test Microorganisms	Units	SS23MW2894	SS23MW2895
20902	Coliforms	MPN/100mL	0	0
20902	E. coli	MPN/100mL	0	0
Interpretation of Results			PASS	PASS

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Notes on the Interpretation of Results

For a number of tests, if the target organism is not detected, the result is reported as < the lower limit of detection for the method used. For the Heterotrophic Colony Count test, a less than result is reported if the precision of the count falls below a lower limit.

PASS means that a sample is microbiologically fit-for-purpose, and FAIL means that a sample is not microbiologically fit-for-purpose. The fitness-for-purpose of a water sample is determined by reference to relevant regulations and guidelines:

Cooling System Water - AS/NZS 3666.3:2011: *Australian/New Zealand Standard: Air-handling and water systems of buildings-Microbial Control: Part 3: Performance based maintenance of cooling water systems.* (Tables 3.1 and 3.2)

Dental Unit Waterline Water (Immunocompromised Patients) - *Australian Dental Association Guidelines for Infection Control.*

Drinking Water - *The Public Health Regulation 2018 and the Australian Drinking Water Guidelines 2011.* (Section 10.2.2 and microorganism factsheets)

Recycled Water - *The Public Health Regulation 2018.* (Schedule 6 and Schedule 7)

Swimming and Spa Pool Water - *Queensland Health Water quality guidelines for public aquatic facilities.* (Table A2.3-Microbiological criteria for all facilities)

Washer - Disinfectors, Final Rinse Water - AS/NZS 4187: 2014 *Reprocessing of reusable medical devices in health service organizations.* (Table 7.2.1)

An interpretation may be made where none of the above guidelines or regulation apply. In such cases, an explanation for the interpretation will be provided on the report.

Maximum Acceptable Delays Between Sampling and Analysis (Holding Times)	
Test Required	Maximum Sample Storage Time (hr)
Coliphages	72
Campylobacter	24
Clostridium perfringens (spores)	72
Clostridium perfringens (vegetative cells)	18
Cryptosporidium/Giardia	96
Total Coliforms/E. coli	24
Enterococci	18
Heterotrophic Colony Count	12
Total Viable Count	12
Legionella	48
Pseudomonas	12
Salmonella	18
Shiga-toxigenic E. coli	18
Vibrio cholerae	18

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CERTIFICATE OF ANALYSIS

CLIENT : Longreach Regional Council - Longreach
(HLONLN) PO Box 144
ILFRACOMBE QLD 4727

Laboratory Reference : SSP0083001
Client Order No. : LACEY_K
Date Received : 23-Mar-2023
Laboratory Number : 23NA2209
Batch No : 723-05

ATTN: K Lacey

Client Reference : 2256
Date Sampled : 22-Mar-2023
Sample Source : River
Sample Point : Longreach raw
Further Information: :

Submitting Authority : Longreach Regional Council - Longreach
Reason for Analysis : Compliance
Water Treatment : Untreated

Method	Units	Result	Guidelines **		Method	Units	Result	Guidelines **	
			Health	Aesthetic				Health	Aesthetic
18320	Conductivity @ 25°C	µs/cm	110		18195	Sodium	mg/L	12	180
18320	pH	at 21°C	6.76	6.5 - 8.5	18195	Potassium	mg/L	3.8	
18209	Total Hardness*	mg CaCO ₃ /L	23	200	18195	Calcium	mg/L	6.5	
18209	Temporary Hardness*	mg CaCO ₃ /L	23		18195	Magnesium	mg/L	1.7	
18320	Alkalinity	mg CaCO ₃ /L	45		18209	Hydrogen*	mg/L	0.0	
18209	Residual Alkali*	meq/L	0.4						
18195	Silica	mg/L	15	80					
18209	Total Dissolved Ions*	mg/L	87						
18209	Total Dissolved Solids*	mg/L	75	600					
18206	True Colour	Hazen	38	15					
18212	Turbidity	NTU	240	5					
18209	pH Sat.* (calc. for CaCO ₃)		9.0						
18209	Saturation Index*		-2.2						
18209	Mole Ratio*		2.7						
18209	Sodium Absorpt. Ratio*		1.1						
18209	Figure of Merit Ratio*		0.9						
Notes: * parameter is derived from calculation. ** Australian Drinking Water Guidelines 2011 (ADWG) Health and Aesthetic Values * not determined									
Lab use Only: TE 507.00 TC 1.07 TA 1.12 Imb 0.05 A I/C 0.55									

Note the concentration of total elements present may be higher than that of dissolved elements stated in this report.

Fine particles (< 0.45 microns) may cause elevated metal and true colour results.

The result reported indicates that the value for Colour and Turbidity exceeds the Australian Drinking Water Guidelines (ADWG) 2011.

Refer to ADWG section 10.3.7 and part V for details (<https://www.nhmrc.gov.au/about-us/publications/australian-drinking-water-guidelines>).
Contact your local Public Health Unit for assistance with interpretation of results.



23NA2209

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Shu-Huei (Daphne) Huang
Chemist, Inorganic Chemistry
19-Apr-2023

CERTIFICATE OF ANALYSIS

CLIENT : Longreach Regional Council - Longreach
(HLONLN) PO Box 144
ILFRACOMBE QLD 4727

Laboratory Reference : SSP0083001
Client Order No. : LACEY_K
Date Received : 23-Mar-2023
Laboratory Number : 23NA2210
Batch No : 723-06

ATTN: K Lacey

Client Reference : 2257	Submitting Authority : Longreach Regional Council - Longreach
Date Sampled : 22-Mar-2023	Reason for Analysis : Compliance
Sample Source : River	Water Treatment : Chlorinated
Sample Point : Longreach GLR	
Further Information :	

Method	Units	Result	Guidelines **		Method	Units	Result	Guidelines **	
			Health	Aesthetic				Health	Aesthetic
18320	Conductivity @ 25°C	µs/cm	140		18195	Sodium	mg/L	18	180
18320	pH	at 21°C	6.98	6.5 - 8.5	18195	Potassium	mg/L	3.9	
18209	Total Hardness*	mg CaCO ₃ /L	25	200	18195	Calcium	mg/L	7.2	
18209	Temporary Hardness*	mg CaCO ₃ /L	25		18195	Magnesium	mg/L	1.8	
18320	Alkalinity	mg CaCO ₃ /L	48		18209	Hydrogen*	mg/L	0.0	
18209	Residual Alkali*	meq/L	0.4						
18195	Silica	mg/L	15	80					
18209	Total Dissolved Ions*	mg/L	106						
18209	Total Dissolved Solids*	mg/L	92	600					
18206	True Colour	Hazen	< 8	15					
18212	Turbidity	NTU	< 1	5					
18209	pH Sat.* (calc. for CaCO ₃)		8.9						
18209	Saturation Index*		-1.9						
18209	Mole Ratio*		2.9						
18209	Sodium Absorpt. Ratio*		1.5						
18209	Figure of Merit Ratio*		0.7						
Notes:					<p>* parameter is derived from calculation.</p> <p>** Australian Drinking Water Guidelines 2011 (ADWG) Health and Aesthetic Values</p> <p>† not determined</p>				
Lab use Only: TE 282.00 TC 1.37 TA 1.40 fmb 0.03 A I/C 0.53									

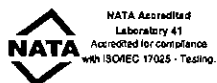
Note the concentration of total elements present may be higher than that of dissolved elements stated in this report.

Fine particles (< 0.45 microns) may cause elevated metal and true colour results.

The result reported indicates the values do not exceed the Australian Drinking Water Guidelines (ADWG) 2011.

Refer to ADWG section 10.3.7 and part V for details (<https://www.nhmrc.gov.au/about-us/publications/australian-drinking-water-guidelines>).

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23NA2210



Shu-Huei (Daphne) Huang
Chemist, Inorganic Chemistry
19-Apr-2023

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Email	Daphne.Huang@health.qld.gov.au	AUSTRALIA	AUSTRALIA	Email	FSS@health.qld.gov.au

CERTIFICATE OF ANALYSIS

CLIENT : Longreach Regional Council - Longreach
(HLONLN) PO Box 144
ILFRACOMBE QLD 4727

Laboratory Reference : SSP0083001
Client Order No. : LACEY_K
Date Received : 23-Mar-2023
Laboratory Number : 23NA2209
Batch No : 723-05

ATTN: K Lacey

Client Reference : 2256
Date Sampled : 22-Mar-2023
Sample Source : River
Sample Point : Longreach raw
Further Information :
Submitting Authority : Longreach Regional Council - Longreach
Reason for Analysis : Compliance
Water Treatment : Untreated

Method	Units	Result	Guidelines ** Health Aesthetic	Method	Units	Result	Guidelines ** Health Aesthetic	
18320	Conductivity @ 25°C	µs/cm	110	18195	Sodium	mg/L	12	
18320	pH	at 21°C	6.76	18195	Potassium	mg/L	3.8	
18209	Total Hardness*	mg CaCO ₃ /L	23	18195	Calcium	mg/L	6.5	
18209	Temporary Hardness*	mg CaCO ₃ /L	23	18195	Magnesium	mg/L	1.7	
18320	Alkalinity	mg CaCO ₃ /L	45	18209	Hydrogen*	mg/L	0.0	
18209	Residual Alkali*	meq/L	0.4					
18195	Silica	mg/L	15					
18209	Total Dissolved Ions*	mg/L	87					
18209	Total Dissolved Solids*	mg/L	75					
18206	True Colour	Hazen	38					
18212	Turbidity	NTU	240					
18209	pH Sat.* (calc. for CaCO ₃)		9.0					
18209	Saturation Index*		-2.2					
18209	Mole Ratio*		2.7					
18209	Sodium Absorpt. Ratio*		1.1					
18209	Figure of Merit Ratio*		0.9					
Notes: * parameter is derived from calculation. ** Australian Drinking Water Guidelines 2011 (ADWG) Health and Aesthetic Values * not determined				CATIONS				
Lab use Only: TE 507.00 TC 1.07 TA 1.12 Imb 0.05 A I/C 0.55				18195 Bicarbonate* mg/L 54				
				18209 Carbonate* mg/L 0.0				
				18209 Hydroxide* mg/L 0.0				
				35047 Chloride mg/L 4.7				250
				35047 Fluoride mg/L 0.11				1.5
				35047 Nitrate mg/L 0.38				50
				35047 Sulphate mg/L 3.9				500
				OTHER DISSOLVED ELEMENTS				
				18195 Iron mg/L 0.04				0.3
				18195 Manganese mg/L < 0.001				0.5
				18195 Zinc mg/L < 0.06				3
				18195 Aluminium mg/L 0.05				0.2
				18195 Boron mg/L 0.04				4
				18195 Copper mg/L 0.013				2

Note the concentration of total elements present may be higher than that of dissolved elements stated in this report.

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The result reported indicates that the value for Colour and Turbidity exceeds the Australian Drinking Water Guidelines (ADWG) 2011.

Refer to ADWG section 10.3.7 and part V for details (<https://www.nhmrc.gov.au/about-us/publications/australian-drinking-water-guidelines>).
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23NA2209

Shu-Huei Huang

Shu-Huei (Daphne) Huang
Chemist, Inorganic Chemistry
19-Apr-2023

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Email Daphne.Huang@health.qld.gov.au AUSTRALIA AUSTRALIA Email FSS@health.qld.gov.au

CERTIFICATE OF ANALYSIS

CLIENT : Longreach Regional Council - Longreach
(HLONLN) PO Box 144
ILFRACOMBE QLD 4727

Laboratory Reference : SSP0083001
Client Order No. : LACEY_K
Date Received : 23-Mar-2023
Laboratory Number : 23NA2210
Batch No : 723-06

ATTN: K Lacey

Client Reference : 2257
Date Sampled : 22-Mar-2023
Sample Source : River
Sample Point : Longreach GLR
Further Information: :
Submitting Authority : Longreach Regional Council - Longreach
Reason for Analysis : Compliance
Water Treatment : Chlorinated

Method	Units	Result	Guidelines **	Method	Units	Result	Guidelines **
			Health Aesthetic				Health Aesthetic
18320	Conductivity @ 25°C	µs/cm	140	18195	Sodium	mg/L	18
18320	pH	at 21°C	6.98	18195	Potassium	mg/L	3.9
18209	Total Hardness*	mg CaCO ₃ /L	25	18195	Calcium	mg/L	7.2
18209	Temporary Hardness*	mg CaCO ₃ /L	25	18195	Magnesium	mg/L	1.8
18320	Alkalinity	mg CaCO ₃ /L	48	18209	Hydrogen*	mg/L	0.0
18209	Residual Alkali*	meq/L	0.4	ANIONS			
18195	Silica	mg/L	15	18209	Bicarbonate*	mg/L	58
18209	Total Dissolved Ions*	mg/L	106	18209	Carbonate*	mg/L	0.0
18209	Total Dissolved Solids*	mg/L	92	18209	Hydroxide*	mg/L	0.0
18206	True Colour	Hazen	< 8	35047	Chloride	mg/L	12
18212	Turbidity	NTU	< 1	35047	Fluoride	mg/L	0.11
18209	pH Sat.* (calc. for CaCO ₃)		8.9	35047	Nitrate	mg/L	0.47
18209	Saturation Index*		-1.9	35047	Sulphate	mg/L	4.7
18209	Mole Ratio*		2.9	OTHER DISSOLVED ELEMENTS			
18209	Sodium Absorpt. Ratio*		1.5	18195	Iron	mg/L	< 0.01
18209	Figure of Merit Ratio*		0.7	18195	Manganese	mg/L	< 0.001
Notes:				18195	Zinc	mg/L	< 0.06
* parameter is derived from calculation.				18195	Aluminium	mg/L	< 0.03
** Australian Drinking Water Guidelines 2011 (ADWG) Health and Aesthetic Values				18195	Boron	mg/L	0.04
* not determined				18195	Copper	mg/L	< 0.003
Lab use Only: TE 282.00 TC 1.37 TA 1.40 fmb 0.03 A I/C 0.53							

Note the concentration of total elements present may be higher than that of dissolved elements stated in this report.
Fine particles (< 0.45 microns) may cause elevated metal and true colour results.
The result reported indicates the values do not exceed the Australian Drinking Water Guidelines (ADWG) 2011.
Refer to ADWG section 10.3.7 and part V for details (<https://www.nhmrc.gov.au/about-us/publications/australian-drinking-water-guidelines>).
Contact your local Public Health Unit for assistance with interpretation of results.



Shu-Huei Huang

Shu-Huei (Daphne) Huang
Chemist, Inorganic Chemistry
19-Apr-2023

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AUSTRALIA
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Fax: (+61 7) 3096 2977
Email: FSS@health.qld.gov.au

CERTIFICATE OF ANALYSIS

CLIENT : Longreach Regional Council - Longreach
(HLONLN) PO Box 144
ILFRACOMBE QLD 4727

Laboratory Reference : SSP0083001
Client Order No. : LACEY_K
Date Received : 23-Mar-2023
Date Commenced : 23-Mar-2023
Date Completed : 24-Mar-2023
Laboratory Number/s : 23NA2211-23NA2222

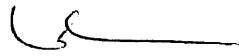
ATTN: K Lacey

Number of Samples : 8

Method/s of Analysis : 18328 - Selected Anions in Water by Ion Chromatography



23NA2211-23NA2222



.....
Ludwika Nieradzik
Laboratory Technician, Inorganic Chemistry
24-Mar-2023

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Enquiries **Ludwika Nieradzik**
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Phone **(+61) 1800 000 FSS (377)**
Fax **(+61 7) 3096 2977**
Email **FSS@health.qld.gov.au**

Client Reference				2260	2261	2266	2267
Sample Type				Water River Treated	Water River Treated	Water Dam Treated	Water Dam Treated
Sampling Time/Date				10:40 22-Mar-2023	11:00 22-Mar-2023	10:10 22-Mar-2023	10:30 22-Mar-2023
Sample Description				PCYC	DPI	Rec centre	Memorial park
Method	Analyte	Units	Reporting Limit	23NA2211	23NA2212	23NA2215	23NA2216
18328	Chlorate (ClO ₃)	mg/L	0.01	0.43	0.43	0.29	0.31

Client Reference				2268	2269	2274	2275
Sample Type				Water Dam Chlorinated	Water Dam Chlorinated	Water River Chlorinated	Water River Chlorinated
Sampling Time/Date				07:00 22-Mar-2023	07:00 22-Mar-2023	07:00 22-Mar-2023	07:00 22-Mar-2023
Sample Description				Yaraka hall	Yaraka long's res	Isisford town park	Isisford skate park
Method	Analyte	Units	Reporting Limit	23NA2217	23NA2218	23NA2221	23NA2222
18328	Chlorate (ClO ₃)	mg/L	0.01	1.12	1.02	2.20	2.18

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NATA Accredited
Laboratory 41
Accredited for compliance
with ISO/IEC 17025 - Testing

23NA2211-23NA2222

60979-88262 Printed: 12:53 24-Mar-23 lmp6



CERTIFICATE OF ANALYSIS

CLIENT : Longreach Regional Council - Longreach
(HLONLN) PO Box 144
ILFRACOMBE QLD 4727

Laboratory Reference : SSP0083001
Client Order No. : LACEY_K
Date Received : 23-Mar-2023
Date Commenced : 28-Mar-2023
Date Completed : 05-Apr-2023
Laboratory Number/s : 23KE3095-23KE3102

ATTN: K Lacey

Number of Samples : 8

Method/s of Analysis : 16307 - Haloacetic Acids in Water by GC
28017 - Trihalomethanes in Water by Purge and Trap GCMS

Remarks : Health Values based on the Australian Drinking Water Guidelines 2011.

THM results released by A. Tronoff

The samples submitted for analysis comply with the Australian Drinking Water Guidelines (2011) for total trihalomethanes in water.

The samples as submitted comply with the Australian Drinking Water Guidelines (2011) for haloacetic acids in water.

NATA accreditation does not cover the performance of QIS Method 16307.



23KE3095-23KE3102

.....
Cassandra Kelly
Analyst
05-Apr-23

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Enquiries **Cassandra Kelly**
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PO Box 594
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AUSTRALIA

Phone (+61) 1800 000 FSS (377)
Fax (+61 7) 3096 2977
Email FSS@health.qld.gov.au

Client Reference					2258	2259	2264	2265
Sample Type					Water River Treated	Water River Treated	Water Dam Treated	Water Dam Treated
Sampling Time/Date					10:30 22-Mar-2023	10:50 22-Mar-2023	10:00 22-Mar-2023	10:20 22-Mar-2023
Sample Description					PCYC	DPI	Rec centre	Memorial park
Method	Trihalomethanes	ADWG Health Value	Units	Reporting Limit	23KE3095	23KE3096	23KE3097	23KE3098
28017	Chloroform	250	µg/L	1	97	130	32	29
28017	Bromodichloromethane	250	µg/L	1	8	10	12	11
28017	Dibromochloromethane	250	µg/L	1	< 1	< 1	4	4
28017	Bromoform	250	µg/L	1	< 1	< 1	< 1	< 1
28017	Total Trihalomethanes	250	µg/L	4	110	140	48	44
	Haloacetic Acids							
16307	Monochloroacetic Acid (MCAA)	150	µg/L	5	< 5	< 5	< 5	< 5
16307	Monobromoacetic Acid (MBAA)		µg/L	5	< 5	< 5	< 5	< 5
16307	Dichloroacetic Acid (DCAA)	100	µg/L	5	41	33	11	11
16307	Trichloroacetic Acid (TCAA)	100	µg/L	5	72	87	11	10
16307	Bromochloroacetic Acid (BCAA)		µg/L	5	< 5	< 5	< 5	< 5
16307	Bromodichloroacetic Acid (BDCAA)		µg/L	5	< 5	6	< 5	< 5
16307	Dibromoacetic Acid (DBAA)		µg/L	5	< 5	< 5	< 5	< 5
16307	Chlorodibromoacetic Acid (CDBAA)		µg/L	5	< 5	< 5	< 5	< 5
16307	Dalapon (2,2-DPA)	500	µg/L	10	< 10	< 10	< 10	< 10

Client Reference					2270	2271	2276	2277
Sample Type					Water Dam Chlorinated	Water Dam Chlorinated	Water River Chlorinated	Water River Chlorinated
Sampling Time/Date					07:00 22-Mar-2023	07:00 22-Mar-2023	07:00 22-Mar-2023	07:00 22-Mar-2023
Sample Description					Yaraka hall	Yaraka long's res	Isisford town park	Isisford skate park
Method	Trihalomethanes	ADWG Health Value	Units	Reporting Limit	23KE3099	23KE3100	23KE3101	23KE3102
28017	Chloroform	250	µg/L	1	48	38	94	120
28017	Bromodichloromethane	250	µg/L	1	22	21	14	17
28017	Dibromochloromethane	250	µg/L	1	9	9	2	2
28017	Bromoform	250	µg/L	1	< 1	< 1	< 1	< 1
28017	Total Trihalomethanes	250	µg/L	4	80	68	110	140
Haloacetic Acids								
16307	Monochloroacetic Acid (MCAA)	150	µg/L	5	< 5	< 5	< 5	< 5
16307	Monobromoacetic Acid (MBAA)		µg/L	5	< 5	< 5	< 5	< 5
16307	Dichloroacetic Acid (DCAA)	100	µg/L	5	24	21	35	35
16307	Trichloroacetic Acid (TCAA)	100	µg/L	5	16	15	50	53
16307	Bromochloroacetic Acid (BCAA)		µg/L	5	10	9	5	< 5
16307	Bromodichloroacetic Acid (BDCAA)		µg/L	5	10	10	7	8
16307	Dibromoacetic Acid (DBAA)		µg/L	5	< 5	< 5	< 5	< 5
16307	Chlorodibromoacetic Acid (CDBAA)		µg/L	5	< 5	< 5	< 5	< 5
16307	Dalapon (2,2-DPA)	500	µg/L	10	< 10	< 10	< 10	< 10

This report overrides all previous reports. The results relate solely to the sample/s as received and are limited to the specific tests undertaken as listed on the report. The results on this report are confidential and are not to be used or disclosed to any other person or used for any other purpose, whether directly or indirectly, unless that use is disclosed or the purpose is expressly authorised in writing by Queensland Health and the named recipient on this report. To the fullest extent permitted by law, Queensland Health will not be liable for any loss or claim (including legal costs calculated on an indemnity basis) which arise because of (a) problems related to the merchantability, fitness or quality of the sample/s, or (b) any negligent or unlawful act or omissions by Queensland Health that is connected with any activities or services provided by Queensland Health under this agreement (including the timing and/or method under which the sample/s were taken, stored or transported).



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23KE3095-23KE3102

60979-88262 Printed: 16:16 05-Apr-23 ctkp1



CERTIFICATE OF ANALYSIS

CLIENT : Longreach Regional Council - Longreach
(HLONLN) PO Box 144
ILFRACOMBE QLD 4727

Laboratory Reference : SSP0083001
Client Order No. : LACEY_K
Date Received : 23-Mar-2023
Date Commenced : 28-Mar-2023
Date Completed : 05-Apr-2023
Laboratory Number/s : 23KE3095-23KE3102

ATTN: K Lacey

Number of Samples : 8

Method/s of Analysis : 16307 - Haloacetic Acids in Water by GC
28017 - Trihalomethanes in Water by Purge and Trap GCMS

Remarks : Health Values based on the Australian Drinking Water Guidelines 2011.

THM results released by A. Tronoff

The samples submitted for analysis comply with the Australian Drinking Water Guidelines (2011) for total trihalomethanes in water.

The samples as submitted comply with the Australian Drinking Water Guidelines (2011) for haloacetic acids in water.

NATA accreditation does not cover the performance of QIS Method 16307.



23KE3095-23KE3102

.....
Cassandra Kelly
Analyst
05-Apr-23

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Fax (+61 7) 3096 2977
Email FSS@health.qld.gov.au

Client Reference					2258	2259	2264	2265
Sample Type					Water River Treated	Water River Treated	Water Dam Treated	Water Dam Treated
Sampling Time/Date					10:30 22-Mar-2023	10:50 22-Mar-2023	10:00 22-Mar-2023	10:20 22-Mar-2023
Sample Description					PCYC	DPI	Rec centre	Memorial park
Method	Trihalomethanes	ADWG Health Value	Units	Reporting Limit	23KE3095	23KE3096	23KE3097	23KE3098
28017	Chloroform	250	µg/L	1	97	130	32	29
28017	Bromodichloromethane	250	µg/L	1	8	10	12	11
28017	Dibromochloromethane	250	µg/L	1	< 1	< 1	4	4
28017	Bromoform	250	µg/L	1	< 1	< 1	< 1	< 1
28017	Total Trihalomethanes	250	µg/L	4	110	140	48	44
Haloacetic Acids								
16307	Monochloroacetic Acid (MCAA)	150	µg/L	5	< 5	< 5	< 5	< 5
16307	Monobromoacetic Acid (MBAA)		µg/L	5	< 5	< 5	< 5	< 5
16307	Dichloroacetic Acid (DCAA)	100	µg/L	5	41	33	11	11
16307	Trichloroacetic Acid (TCAA)	100	µg/L	5	72	87	11	10
16307	Bromochloroacetic Acid (BCAA)		µg/L	5	< 5	< 5	< 5	< 5
16307	Bromodichloroacetic Acid (BDCAA)		µg/L	5	< 5	6	< 5	< 5
16307	Dibromoacetic Acid (DBAA)		µg/L	5	< 5	< 5	< 5	< 5
16307	Chlorodibromoacetic Acid (CDBAA)		µg/L	5	< 5	< 5	< 5	< 5
16307	Dalapon (2,2-DPA)	500	µg/L	10	< 10	< 10	< 10	< 10

Client Reference					2270	2271	2276	2277
Sample Type					Water Dam Chlorinated	Water Dam Chlorinated	Water River Chlorinated	Water River Chlorinated
Sampling Time/Date					07:00 22-Mar-2023	07:00 22-Mar-2023	07:00 22-Mar-2023	07:00 22-Mar-2023
Sample Description					Yaraka hall	Yaraka long's res	Isisford town park	Isisford skate park
Method	Trihalomethanes	ADWG Health Value	Units	Reporting Limit	23KE3099	23KE3100	23KE3101	23KE3102
28017	Chloroform	250	µg/L	1	48	38	94	120
28017	Bromodichloromethane	250	µg/L	1	22	21	14	17
28017	Dibromochloromethane	250	µg/L	1	9	9	2	2
28017	Bromoform	250	µg/L	1	< 1	< 1	< 1	< 1
28017	Total Trihalomethanes	250	µg/L	4	80	68	110	140
Haloacetic Acids								
16307	Monochloroacetic Acid (MCAA)	150	µg/L	5	< 5	< 5	< 5	< 5
16307	Monobromoacetic Acid (MBAA)		µg/L	5	< 5	< 5	< 5	< 5
16307	Dichloroacetic Acid (DCAA)	100	µg/L	5	24	21	35	35
16307	Trichloroacetic Acid (TCAA)	100	µg/L	5	16	15	50	53
16307	Bromochloroacetic Acid (BCAA)		µg/L	5	10	9	5	< 5
16307	Bromodichloroacetic Acid (BDCAA)		µg/L	5	10	10	7	8
16307	Dibromoacetic Acid (DBAA)		µg/L	5	< 5	< 5	< 5	< 5
16307	Chlorodibromoacetic Acid (CDBAA)		µg/L	5	< 5	< 5	< 5	< 5
16307	Dalapon (2,2-DPA)	500	µg/L	10	< 10	< 10	< 10	< 10

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23KE3095-23KE3102

60979-88262 Printed: 16:16 05-Apr-23 ctkp1

CERTIFICATE OF ANALYSIS

CLIENT : Longreach Regional Council - Longreach
(HLONLN) PO Box 144
ILFRACOMBE QLD 4727

Laboratory Reference : SSP0083898
Client Order No. : DIRECTOR
Date Received : 02-Jun-2023
Laboratory Number : 23NA4511
Batch No : 753-20

ATTN: Director of Infrastructure Services

Client Reference : 2303 Submitting Authority : Longreach Regional Council - Longreach
Date Sampled : 30-May-2023 Reason for Analysis : Human Consumption
Sample Source : Tank Water Treatment : Untreated
Sample Point : A. Rain water tank (colour, blue ring??) Copper??
Further Information: :

Method	Units	Result	Guidelines **	Method	Units	Result	Guidelines **
			Health Aesthetic				Health Aesthetic
18320 Conductivity @ 25°C	µs/cm	11		CATIONS			
18320 pH	at 21°C	5.87	6.5 - 8.5	18195 Sodium	mg/L	< 0.5	180
18209 Total Hardness*	mg CaCO ₃ /L	1.5	200	18195 Potassium	mg/L	0.18	
18209 Temporary Hardness*	mg CaCO ₃ /L	1.5		18195 Calcium	mg/L	< 0.4	
18320 Alkalinity	mg CaCO ₃ /L	3		18195 Magnesium	mg/L	0.13	
18209 Residual Alkali*	meq/L	0.0		18209 Hydrogen*	mg/L	0.0	
18195 Silica	mg/L	0.68	80	ANIONS			
18209 Total Dissolved Ions*	mg/L	8		18209 Bicarbonate*	mg/L	3	
18209 Total Dissolved Solids*	mg/L	7	600	18209 Carbonate*	mg/L	0.0	
18209 pH Sat.* (calc. for CaCO ₃)		11.4		18209 Hydroxide*	mg/L	0.0	
18209 Saturation Index*		-5.5		35047 Chloride	mg/L	0.9	250
18209 Mole Ratio*		3.7		35047 Fluoride	mg/L	< 0.02	1.5
18209 Sodium Absorpt. Ratio*		0.1		35047 Nitrate	mg/L	2.5	50
18209 Figure of Merit Ratio*		1.9		35047 Sulphate	mg/L	0.6	500 250
Notes:	* parameter is derived from calculation.						
	** Australian Drinking Water Guidelines 2011 (ADWG) Health and Aesthetic Values						
	* not determined						
Lab use Only:	TE 49.00	TC 0.05	TA 0.14	Imb 0.09 A	I/C 0.69		

Note the concentration of total elements present may be higher than that of dissolved elements stated in this report.

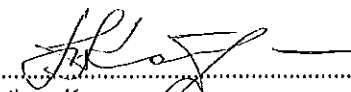
Fine particles (< 0.45 microns) may cause elevated metal and true colour results.

The result reported indicates that the value for pH exceeds the Australian Drinking Water Guidelines (ADWG) 2011.

Refer to ADWG section 10.3.7 and part V for details (<https://www.nhmrc.gov.au/about-us/publications/australian-drinking-water-guidelines>).

Contact your local Public Health Unit for assistance with Interpretation of results.




Tatiana Komarova
Chemist, Inorganic Chemistry
21-Jun-2023

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CERTIFICATE OF ANALYSIS

CLIENT : Longreach Regional Council - Longreach
(HLONLN) PO Box 144
ILFRACOMBE QLD 4727

Laboratory Reference : SSP0083995
Client Order No. : RC GROUP
Date Received : 09-Jun-2023
Date Commenced : 10-Jun-2023
Date Completed : 22-Jun-2023
Laboratory Number/s : 23NA4755-23NA4762

ATTN: Director of Works

Number of Samples : 8

Method/s of Analysis : 18328 - Selected Anions in Water by Ion Chromatography



Ludwika Nieradzik
Laboratory Technician, Inorganic Chemistry
22-Jun-2023

23NA4755-23NA4762

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Phone (+61) 1800 000 FSS (377)
Fax (+61 7) 3096 2977
Email FSS@health.qld.gov.au

Client Reference				2306	2308	2309	2310
Sample Type				Water River Chlorinated	Water River Chlorinated	Water Dam Chlorinated	Water Dam Chlorinated
Sampling Time/Date				09:37 07-Jun-2023	10:10 07-Jun-2023	08:45 07-Jun-2023	09:06 07-Jun-2023
Sample Description				PCYC	DPI	RCC Centre	Memorial Park
Method	Analyte	Units	Reporting Limit	23NA4755	23NA4756	23NA4757	23NA4758
18328	Chlorate (ClO ₃)	mg/L	0.01	0.13	0.15	0.18	0.19

Client Reference				2313	2314	2317	2319
Sample Type				Water Dam Chlorinated	Water Dam Chlorinated	Water Dam Chlorinated	Water Dam Chlorinated
Sampling Time/Date				06:30 07-Jun-2023	06:40 07-Jun-2023	07:00 07-Jun-2023	07:20 07-Jun-2023
Sample Description				Isisford Race Course	Town Park	Yaraka Longs House	Yaraka Hall
Method	Analyte	Units	Reporting Limit	23NA4759	23NA4760	23NA4761	23NA4762
18328	Chlorate (ClO ₃)	mg/L	0.01	0.34	0.35	2.51	2.37

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CERTIFICATE OF ANALYSIS

CLIENT : Longreach Regional Council - Longreach
(HLONLN) PO Box 144
ILFRACOMBE QLD 4727

Laboratory Reference : SSP0084061
Client Order No. : RC_GROUP
Date Received : 14-Jun-2023
Date Completed : 22-Jun-2023
Laboratory Number/s : 23NA4887-23NA4888

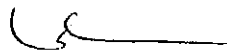
ATTN: Director of Works

Number of Samples : 2

Method/s of Analysis : 18328 - Selected Anions in Water by Ion Chromatography



23NA4887-23NA4888



Ludwika Nieradzik
Laboratory Technician, Inorganic Chemistry
22-Jun-2023

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Archerfield QLD 4108
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Fax (+61 7) 3096 2977
Email FSS@health.qld.gov.au

Client Reference				2326	2327
Sample Type				Water River Chlorinated	Water River Chlorinated
Sampling Time/Date				10:15 13-Jun-2023	09:20 13-Jun-2023
Sample Description				DPI	Rec Centre
Method	Analyte	Units	Reporting Limit	23NA4887	23NA4888
18328	Chlorate (ClO ₃)	mg/L	0.01	0.14	0.21

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NATA Accredited
Laboratory #1

23NA4887-23NA4888

Accredited for compliance
with ISO/IEC 17025 - Testing

34035-23980 Printed: 18:16 22-Jun-23 lmp6

CERTIFICATE OF ANALYSIS

CLIENT : Longreach Regional Council - Longreach
(HLONLN) PO Box 144
ILFRACOMBE QLD 4727

Laboratory Reference : SSP0084061
Client Order No. : RC_GROUP
Date Received : 14-Jun-2023
Laboratory Number/s : SS23MW9811-SS23MW9815

Number of Samples : 5

Reason for Analysis : Compliance

Method/s of Analysis : 20902 - SHW17 - Coliforms and Escherichia coli - enzyme hydrolysable substrate

Remarks : One or more samples > 24 hours old on testing. This exceeds the maximum allowable holding time for E. coli. Accuracy of results may be reduced.

Key :

- cfu = Colony Forming Units
- est = Estimated Count
- FDMEAS = Field Measurements as provided by Submitting Authority
- mg = Milligrams
- mL = Millilitre
- MPN = Most Probable Number
- NA = Not Applicable
- NR = No Result
- NT = Not Tested
- NTU = Nephelometric Turbidity Units
- pfu = Plaque Forming Units
- Positive = Detected, but no count possible due to confluent growth on the plate(s)
- TFOL = Results to Follow
- = Not Ordered
- < = Less than
- > = More than



Leonie Cover
.....
Leonie Cover
Laboratory Technician, Water Microbiology
15-Jun-23

SS23MW9811-SS23MW9815

This report overrides all previous reports. The results relate solely to the sample/s as received and are limited to the specific tests undertaken as listed on the report. The results on this report are confidential and are not to be used or disclosed to any other person or used for any other purpose, whether directly or indirectly, unless that use is disclosed or the purpose is expressly authorised in writing by Queensland Health and the named recipient on this report. To the fullest extent permitted by law, Queensland Health will not be liable for any loss or claim (including legal costs calculated on an indemnity basis) which arise because of (a) problems related to the merchantability, fitness or quality of the sample/s, or (b) any negligent or unlawful act or omissions by Queensland Health that is connected with any activities or services provided by Queensland Health under this agreement (including the timing and/or method under which the sample/s were taken, stored or transported).

Enquiries	Leonie Cover	39 Kessels Road	PO Box 594	Phone	(+61) 1800 000 FSS (377)
Phone	(+61 7) 3096 2822	Coopers Plains QLD 4108	Archerfield QLD 4108	Fax	(+61 7) 3096 2977
Email	Leonie_Cover@health.qld.gov.au	AUSTRALIA	AUSTRALIA	Email	FSS@health.qld.gov.au

Client Reference			2322	2323	2324	2325
Sample Type			Water River Chlorinated	Water River Chlorinated	Water River Chlorinated	Water River Chlorinated
Sampling Time/Date			09:30 13-Jun-2023	09:45 13-Jun-2023	09:55 13-Jun-2023	10:05 13-Jun-2023
Testing Time/Date			12:15 14-Jun-2023	12:15 14-Jun-2023	12:15 14-Jun-2023	12:15 14-Jun-2023
Sample Description			Longeach GLR	Wren	PCYC	Edkins
Method	Test Microorganisms	Units	SS23MW9811	SS23MW9812	SS23MW9813	SS23MW9814
20902	Coliforms	MPN/100mL	0	0	0	0
20902	E. coli	MPN/100mL	0	0	0	0
Interpretation of Results			PASS	PASS	PASS	PASS

Client Reference			2327
Sample Type			Water River Chlorinated
Sampling Time/Date			09:20 13-Jun-2023
Testing Time/Date			12:15 14-Jun-2023
Sample Description			Rec Centre
Method	Test Microorganisms	Units	SS23MW9815
20902	Coliforms	MPN/100mL	0
20902	E. coli	MPN/100mL	0
Interpretation of Results			PASS

This report contains a preliminary report. The results relate solely to the sample as taken and are limited to the specific tests undertaken as stated on the report. The results on this report are confidential and are not to be used or disclosed to any other person or used for any other purpose, whether directly or indirectly, unless the use is discussed or the purpose is expressly authorised in writing by Queensland Health and the named recipient on this report. To the fullest extent permitted by law, Queensland Health will not be liable for any loss or claim (including legal costs) incurred on an indemnity basis, which arise because of (a) a procedure related to the microactivity, fitness or quality of the sample; or (b) any negligence or an award or compensation by Queensland Health in connection with any activities or services provided by Queensland Health under this agreement (including the timing and/or method under which the sample is taken, stored or transported).

Notes on the Interpretation of Results

For a number of tests, if the target organism is not detected, the result is reported as < the lower limit of detection for the method used. For the Heterotrophic Colony Count test, a less than result is reported if the precision of the count falls below a lower limit.

PASS means that a sample is microbiologically fit-for-purpose, and FAIL means that a sample is not microbiologically fit-for-purpose. The fitness-for-purpose of a water sample is determined by reference to relevant regulations and guidelines:

- Cooling System Water** - AS/NZS 3666.3:2011: Australian/New Zealand Standard: Air-handling and water systems of buildings-Microbial Control: Part 3: Performance based maintenance of cooling water systems. (Tables 3.1 and 3.2)
- Dental Unit Waterline Water (Immunocompromised Patients)** - Australian Dental Association Guidelines for Infection Control.
- Drinking Water** - The Public Health Regulation 2018 and the Australian Drinking Water Guidelines 2011. (Section 10.2.2 and microorganism factsheets)
- Recycled Water** - The Public Health Regulation 2018. (Schedule 6 and Schedule 7)
- Swimming and Spa Pool Water** - Queensland Health Water quality guidelines for public aquatic facilities. (Table A2.3-Microbiological criteria for all facilities)
- Washer - Disinfectors, Final Rinse Water** - AS/NZS 4187: 2014 Reprocessing of reusable medical devices in health service organizations. (Table 7.2.1)

An interpretation may be made where none of the above guidelines or regulation apply. In such cases, an explanation for the interpretation will be provided on the report.

Maximum Acceptable Delays Between Sampling and Analysis (Holding Times)	
Test Required	Maximum Sample Storage Time (hr)
Coliphages	72
Campylobacter	24
Clostridium perfringens (spores)	72
Clostridium perfringens (vegetative cells)	18
Cryptosporidium/Giardia	96
Total Coliforms/E. coli	24
Enterococci	18
Heterotrophic Colony Count	12
Total Viable Count	12
Legionella	48
Pseudomonas	12
Salmonella	18
Shiga-toxigenic E. coli	18
Vibrio cholerae	18

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CERTIFICATE OF ANALYSIS

CLIENT : Longreach Regional Council - Longreach
(HLONLN) PO Box 144
ILFRACOMBE QLD 4727

Laboratory Reference : SSP0083995
Client Order No. : RC GROUP
Date Received : 09-Jun-2023
Date Commenced : 13-Jun-2023
Date Completed : 27-Jun-2023
Laboratory Number/s : 23KE5329-23KE5336

ATTN: Director of Works

Number of Samples : 8

Method/s of Analysis : 16307 - Haloacetic Acids in Water by GC
28017 - Trihalomethanes in Water by Purge and Trap GCMS

Remarks : Health Values based on the Australian Drinking Water Guidelines 2011.

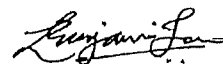
The samples as submitted comply with the Australian Drinking Water Guidelines (2011) for haloacetic acids in water.

NATA accreditation does not cover the performance of QIS 16307.
16307 - Results in this report have been authorised for release by D.Hnatko.

The samples submitted for analysis, therefore, comply with the Australian Drinking Water Guidelines (2011) for total trihalomethanes in water.



23KE5329-23KE5336



Benjamin Tan
Chemist, Organic Chemistry
27-Jun-23

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Enquiries **Benjamin Tan**
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PO Box 594
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AUSTRALIA

Phone **(+61) 1800 000 FSS (377)**
Fax **(+61 7) 3096 2977**
Email **FSS@health.qld.gov.au**

Client Reference					2306	2308	2309	2310
Sample Type					Water River Chlorinated	Water River Chlorinated	Water Dam Chlorinated	Water Dam Chlorinated
Sampling Time/Date					09:37 07-Jun-2023	10:10 07-Jun-2023	08:45 07-Jun-2023	09:06 07-Jun-2023
Sample Description					PCYC	DPI	RCC Centre	Memorial Park
Method	Trihalomethanes	ADWG Health Value	Units	Reporting Limit	23KE5329	23KE5330	23KE5331	23KE5332
28017	Chloroform	250	µg/L	1	61	75	25	22
28017	Bromodichloromethane	250	µg/L	1	11	12	10	7
28017	Dibromochloromethane	250	µg/L	1	1	1	4	2
28017	Bromoform	250	µg/L	1	< 1	< 1	< 1	< 1
28017	Total Trihalomethanes	250	µg/L	4	73	88	39	32
	Haloacetic Acids							
16307	Monochloroacetic Acid (MCAA)	150	µg/L	5	< 5	< 5	< 5	< 5
16307	Monobromoacetic Acid (MBAA)		µg/L	5	< 5	< 5	< 5	< 5
16307	Dichloroacetic Acid (DCAA)	100	µg/L	5	25	32	9	10
16307	Trichloroacetic Acid (TCAA)	100	µg/L	5	42	53	9	9
16307	Bromochloroacetic Acid (BCAA)		µg/L	5	< 5	5	< 5	< 5
16307	Bromodichloroacetic Acid (BDCAA)		µg/L	5	8	9	< 5	< 5
16307	Dibromoacetic Acid (DBAA)		µg/L	5	< 5	< 5	< 5	< 5
16307	Chlorodibromoacetic Acid (CDBAA)		µg/L	5	< 5	< 5	< 5	< 5
16307	Dalapon (2,2-DPA)	500	µg/L	10	< 10	< 10	< 10	< 10

Client Reference					2313	2314	2317	2319
Sample Type					Water Dam Chlorinated	Water Dam Chlorinated	Water Dam Chlorinated	Water Dam Chlorinated
Sampling Time/Date					06:30 07-Jun-2023	06:40 07-Jun-2023	07:00 07-Jun-2023	07:20 07-Jun-2023
Sample Description					Isisford Race Course	Town Park	Yaraka Longs House	Yaraka Hall
Method	Trihalomethanes	ADWG Health Value	Units	Reporting Limit	23KE5333	23KE5334	23KE5335	23KE5336
28017	Chloroform	250	µg/L	1	82	65	34	41
28017	Bromodichloromethane	250	µg/L	1	12	12	18	21
28017	Dibromochloromethane	250	µg/L	1	1	2	9	10
28017	Bromoform	250	µg/L	1	< 1	< 1	< 1	< 1
28017	Total Trihalomethanes	250	µg/L	4	96	78	63	73
Haloacetic Acids								
16307	Monochloroacetic Acid (MCAA)	150	µg/L	5	--	--	--	--
16307	Monobromoacetic Acid (MBAA)		µg/L	5	--	--	--	--
16307	Dichloroacetic Acid (DCAA)	100	µg/L	5	--	--	--	--
16307	Trichloroacetic Acid (TCAA)	100	µg/L	5	--	--	--	--
16307	Bromochloroacetic Acid (BCAA)		µg/L	5	--	--	--	--
16307	Bromodichloroacetic Acid (BDCAA)		µg/L	5	--	--	--	--
16307	Dibromoacetic Acid (DBAA)		µg/L	5	--	--	--	--
16307	Chlorodibromoacetic Acid (CDBAA)		µg/L	5	--	--	--	--
16307	Dalapon (2,2-DPA)	500	µg/L	10	--	--	--	--

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CERTIFICATE OF ANALYSIS

CLIENT : Longreach Regional Council
HLONLN 96A Eagle Street
LONGREACH QLD 4730
RCGroup@longreach.qld.gov.au

ATTN: Director of Infrastructure Services

Laboratory Reference : SSP81101
Client Order Number :
Quote Number :
Client Project :
Client Batch Reference :
Date Received : 26-Oct-2022
Date Commenced : 27-Oct-2022
Laboratory Numbers : 22KP702-22KP703

Number of Samples 2

Reason for Analysis Cyanobacterial (Blue Green Algal) Identification and Enumeration

Method/s of Analysis 13032 - Identification and Enumeration of Planktonic Phytoplankton in Freshwater by Microscopy

Notations n.s. = not sighted
s = sighted
cf. = compared with
NA = not analysed
spp. = possible multiple species of the same genus

Remarks

The calculated biovolume is based on mean literature values of the organisms identified and should be used as an estimate only



Karen Reardon
Senior Scientist, Organic Chemistry
27-October-2022



NATA Accredited
Laboratory 41
Accredited for compliance
with ISO/IEC 17025 - Testing

WORLD RECOGNISED
ACCREDITATION
22KP702-22KP703

This report overrides all previous reports. The results relate solely to the sample/s as received and are limited to the specific tests undertaken as listed on the report. The results of this report are confidential and are not to be used or disclosed to any other person or used for any other purpose, whether directly or indirectly, unless that use is disclosed or the purpose is expressly authorised in writing by Queensland Health and the named recipient on this report. To the fullest extent permitted by law, Queensland Health will not be liable for any loss or claim (including legal costs calculated on an indemnity basis) which arise because of (a) problems related to the merchantability, fitness or quality of the sample/s, or (b) any negligent or unlawful act or omissions by Queensland Health that is connected with any activities or services provided by Queensland Health under this agreement (including the timing and/or method under which the sample/s were taken, stored or transported).

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Phone	(+61 7) 3096 2846	Coopers Plains QLD 4108	Archerfield QLD 4108	Fax	(+61 7) 3000 9628
Email	karen.reardon@health.qld.gov.au	AUSTRALIA	AUSTRALIA	Email	FSS@health.qld.gov.au

Client Reference			2141	2142
Request			Cyanobacterial Count	Cyanobacterial Count
Date Analysed			27-Oct-2022	27-Oct-2022
Sample Description			WTP ILF Raw	WTP Filter Unchlorinated
Method	Organism/s	Units	22KP702	22KP703
13032	CYANOBACTERIA (blue-green algae)			
13032	<i>Anathece</i> spp.	Cells/mL	1800	n.s
13032	<i>Aphanocapsa</i> spp. (< 2µm)	Cells/mL	5700	n.s
13032	<i>Cyanocatena imperfecta</i>	Cells/mL	550	n.s
13032	<i>Cyanodictyon</i> spp.	Cells/mL	1900	n.s
13032	<i>Cyanogranis libera</i>	Cells/mL	600	n.s
13032	<i>Cyanonephron</i> spp.	Cells/mL	200	n.s
13032	<i>Gloeocapsa</i> spp.	Cells/mL	50	n.s
13032	<i>Gloeothece</i> spp.	Cells/mL	250	n.s
13032	<i>Merismopedia</i> spp. (small)	Cells/mL	1800	n.s
13032	<i>Myxobaktron plankticus</i>	Cells/mL	2800	n.s
13032	<i>Planktolyngbya limnetica</i>	Cells/mL	500	n.s
13032	<i>Planktolyngbya minor</i>	Cells/mL	7500	n.s
13032	<i>Pseudanabaena</i> spp.	Cells/mL	130	n.s
13032	Unidentified Chroococcales/Synechococcales	Cells/mL	200	n.s
13032	Unidentified Oscillatoriales	Cells/mL	70	n.s
13032	Total (CYANOBACTERIA)	Cells/mL	24000	n.s
13032	TOTAL CELLS PER ML	Cells/mL	24000	n.s
13032	TOTAL CYANOBACTERIA BIOVOLUME	mm ³ /L	0.04	N/A

CERTIFICATE OF ANALYSIS

CLIENT : Longreach Regional Council
HLONLN 96A Eagle Street
LONGREACH QLD 4730
RCGroup@longreach.qld.gov.au

ATTN: Director of Infrastructure Services

Laboratory Reference : SSP81218
Client Order Number :
Quote Number :
Client Project :
Client Batch Reference :
Date Received : 04-Nov-2022
Date Commenced : 04-Nov-2022
Laboratory Numbers : 22KP729-22KP730

Number of Samples 2

Reason for Analysis Cyanobacterial (Blue Green Algal) Identification and Enumeration

Method/s of Analysis 13032 - Identification and Enumeration of Planktonic Phytoplankton in Freshwater by Microscopy

Notations n.s. = not sighted
s = sighted
cf. = compared with
NA = not analysed
spp. = possible multiple species of the same genus

Remarks FSS guidelines require samples to be preserved within 48 hours of sampling. One or more samples submitted fall outside this criteria therefore results may be compromised

The calculated biovolume is based on mean literature values of the organisms identified and should be used as an estimate only

The following potentially toxic species were detected: Raphidiopsis raciborskii



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ACCREDITATION

22KP729-22KP730



Karen Reardon
Senior Scientist, Organic Chemistry
04-November-2022

This report overrides all previous reports. The results relate solely to the sample/s as received and are limited to the specific tests undertaken as listed on the report. The results of this report are confidential and are not to be used or disclosed to any other person or used for any other purpose, whether directly or indirectly, unless that use is expressly authorised in writing by Queensland Health and the named recipient on this report. To the fullest extent permitted by law, Queensland Health will not be liable for any loss or claim (including legal costs calculated on an indemnity basis) which arise because of (a) problems related to the merchantability, fitness or quality of the sample/s, or (b) any negligent or unlawful act or omissions by Queensland Health that is connected with any activities or services provided by Queensland Health under this agreement (including the timing and/or method under which the sample/s were taken, stored or transported).

Enquiries	Karen Reardon	39 Kessels Road	PO Box 594	Phone	(+61 7) 3274 9111
Phone	(+61 7) 3096 2846	Coopers Plains QLD 4108	Archerfield QLD 4108	Fax	(+61 7) 3000 9628
Email	karen.reardon@health.qld.gov.au	AUSTRALIA	AUSTRALIA	Email	FSS@health.qld.gov.au

Client Reference			2158	2159
Request			Cyanobacterial Count	Cyanobacterial Count
Date Analysed			04-Nov-2022	04-Nov-2022
Sample Description			ILF WTP Raw	ILF WTP Filter
Method	Organism/s	Units	22KP729	22KP730
13032	CYANOBACTERIA (blue-green algae)			
13032	<i>Anathece</i> spp.	Cells/mL	600	n.s
13032	<i>Aphanocapsa</i> spp. (< 2µm)	Cells/mL	1900	n.s
13032	<i>Chroococcus minutus</i>	Cells/mL	33	n.s
13032	<i>Cyanocatenata imperfecta</i>	Cells/mL	1500	n.s
13032	<i>Cyanogranis libera</i>	Cells/mL	4000	n.s
13032	<i>Gloeothece</i> spp.	Cells/mL	330	n.s
13032	<i>Merismopedia punctata</i>	Cells/mL	130	n.s
13032	<i>Merismopedia</i> spp. (small)	Cells/mL	270	n.s
13032	<i>Myxobaktron plankticus</i>	Cells/mL	67	n.s
13032	Picoplankton	Cells/mL	33	n.s
13032	<i>Planktolyngbya limnetica</i>	Cells/mL	620	n.s
13032	<i>Planktolyngbya minor</i>	Cells/mL	2300	n.s
13032	<i>Pseudanabaena galeata</i>	Cells/mL	67	n.s
13032	<i>Pseudanabaena</i> spp.	Cells/mL	230	n.s
13032	Unidentified Chroococcales/Synechococcales	Cells/mL	500	n.s
13032	Potentially Toxic			
13032	<i>Raphidiopsis raciborskii</i>	Cells/mL	90	n.s
13032	Total (Potentially Toxic)	Cells/mL	90	n.s
13032	Total (CYANOBACTERIA)	Cells/mL	13000	n.s
13032	TOTAL CELLS PER ML	Cells/mL	13000	n.s
13032	TOTAL CYANOBACTERIA BIOVOLUME	mm ³ /L	0.03	N/A

CERTIFICATE OF ANALYSIS

CLIENT : Longreach Regional Council
HLONLN 96A Eagle Street
LONGREACH QLD 4730
RCGroup@longreach.qld.gov.au

ATTN: Director of Infrastructure Services

Laboratory Reference : SSP81762
Client Order Number :
Quote Number :
Client Project :
Client Batch Reference :
Date Received : 14-Dec-2022
Date Commenced : 14-Dec-2022
Laboratory Numbers : 22KP824-22KP827

Number of Samples 4

Reason for Analysis Cyanobacterial (Blue Green Algal) Identification and Enumeration

Method/s of Analysis 13032 - Identification and Enumeration of Planktonic Phytoplankton in Freshwater by Microscopy

Notations n.s. = not sighted
s = sighted
cf. = compared with
NA = not analysed
spp. = possible multiple species of the same genus

Remarks

The calculated biovolume is based on mean literature values of the organisms identified and should be used as an estimate only

The following potentially toxic species were detected: Raphidiopsis raciborskii



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Laboratory 41
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with ISO/IEC 17025 - Testing

WORLD RECOGNISED
ACCREDITATION

22KP824-22KP827

Karen Reardon
Senior Scientist, Organic Chemistry
15-December-2022

This report overrides all previous reports. The results relate solely to the sample/s as received and are limited to the specific tests undertaken as listed on the report. The results of this report are confidential and are not to be used or disclosed to any other person or used for any other purpose, whether directly or indirectly, unless that use is disclosed or the purpose is expressly authorised in writing by Queensland Health and the named recipient on this report. To the fullest extent permitted by law, Queensland Health will not be liable for any loss or claim (including legal costs calculated on an indemnity basis) which arise because of (a) problems related to the merchantability, fitness or quality of the sample/s, or (b) any negligent or unlawful act or omissions by Queensland Health that is connected with any activities or services provided by Queensland Health under this agreement (including the timing and/or method under which the sample/s were taken, stored or transported).

Enquiries	Karen Reardon	39 Kessels Road	PO Box 594	Phone	(+61 7) 3274 9111
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Email	karen.reardon@health.qld.gov.au	AUSTRALIA	AUSTRALIA	Email	FSS@health.qld.gov.au

Client Reference			2207	2208	2209	2210
Request			Cyanobacterial Count	Cyanobacterial Count	Cyanobacterial Count	Cyanobacterial Count
Date Analysed			14-Dec-2022	14-Dec-2022	14-Dec-2022	14-Dec-2022
Sample Description			Ilfracombe Raw	Ilfracombe Filter	GLR Isisford	Raw Isisford
Method	Organism/s	Units	22KP824	22KP825	22KP826	22KP827
13032	CYANOBACTERIA (blue-green algae)					
13032	<i>Anathece</i> spp.	Cells/mL	2600	n.s	n.s	n.s
13032	<i>Aphanizomenon gracile</i>	Cells/mL	550	n.s	n.s	n.s
13032	<i>Aphanocapsa</i> spp. (< 2µm)	Cells/mL	100	n.s	n.s	500
13032	<i>Cyanodictyon</i> spp.	Cells/mL	750	n.s	n.s	n.s
13032	<i>Cyanogranis libera</i>	Cells/mL	10000	n.s	n.s	130
13032	<i>Glaucospira laxissima</i>	Cells/mL	n.s	n.s	n.s	1500
13032	<i>Gloeocapsa</i> spp.	Cells/mL	950	n.s	n.s	100
13032	<i>Gloeothece</i> spp.	Cells/mL	400	n.s	n.s	n.s
13032	<i>Merismopedia punctata</i>	Cells/mL	400	n.s	n.s	n.s
13032	<i>Merismopedia</i> spp. (small)	Cells/mL	2800	n.s	n.s	2800
13032	<i>Planktolyngbya limnetica</i>	Cells/mL	49000	n.s	n.s	3500
13032	<i>Planktolyngbya minor</i>	Cells/mL	15000	n.s	n.s	4800
13032	<i>Rhabdoderma</i> spp.	Cells/mL	150	n.s	n.s	n.s
13032	Unidentified Chroococcales/Synechococcales	Cells/mL	n.s	n.s	n.s	300
13032	Unidentified Nostocales (coiled)	Cells/mL	n.s	n.s	n.s	200
13032	Potentially Toxic					
13032	<i>Raphidiopsis raciborskii</i>	Cells/mL	14000	n.s	n.s	1800
13032	Total (Potentially Toxic)	Cells/mL	14000	n.s	n.s	1800
13032	Total (CYANOBACTERIA)	Cells/mL	97000	n.s	n.s	16000
13032	TOTAL CELLS PER ML	Cells/mL	97000	n.s	n.s	16000
13032	TOTAL CYANOBACTERIA BIOVOLUME	mm ³ /L	0.96	N/A	N/A	0.13

CERTIFICATE OF ANALYSIS

CLIENT : Longreach Regional Council
HLONLN 96A Eagle Street
LONGREACH QLD 4730
RCGroup@longreach.qld.gov.au

ATTN: Director of Infrastructure Services

Laboratory Reference : SSP82433
Client Order Number :
Quote Number :
Client Project :
Client Batch Reference :
Date Received : 15-Feb-2023
Date Commenced : 17-Feb-2023
Laboratory Numbers : 23KP131-23KP135

Number of Samples 5

Reason for Analysis Cyanobacterial (Blue Green Algal) Identification and Enumeration

Method/s of Analysis 13032 - Identification and Enumeration of Planktonic Phytoplankton in Freshwater by Microscopy

Notations n.s. = not sighted
s = sighted
cf. = compared with
NA = not analysed
spp. = possible multiple species of the same genus

Remarks

The calculated biovolume is based on mean literature values of the organisms identified and should be used as an estimate only

The following potentially toxic species were detected: Raphidiopsis raciborskii



.....
Karen Reardon
Senior Scientist, Organic Chemistry
17-February-2023



NATA Accredited
Laboratory 41
Accredited for compliance
with ISO/IEC 17025 - Testing

WORLD RECOGNISED
ACCREDITATION

23KP131-23KP135

This report overrides all previous reports. The results relate solely to the sample/s as received and are limited to the specific tests undertaken as listed on the report. The results of this report are confidential and are not to be used or disclosed to any other person or used for any other purpose, whether directly or indirectly, unless that use is expressly authorised in writing by Queensland Health and the named recipient on this report. To the fullest extent permitted by law, Queensland Health will not be liable for any loss or claim (including legal costs calculated on an indemnity basis) which arise because of (a) problems related to the merchantability, fitness or quality of the sample/s, or (b) any negligent or unlawful act or omissions by Queensland Health that is connected with any activities or services provided by Queensland Health under this agreement (including the timing and/or method under which the sample/s were taken, stored or transported).

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Email	karen.reardon@health.qld.gov.au	AUSTRALIA	AUSTRALIA	Email	FSS@health.qld.gov.au

Client Reference			2242	2243	2250	2251
Request			Cyanobacterial Count	Cyanobacterial Count	Cyanobacterial Count	Cyanobacterial Count
Date Analysed			17-Feb-2023	17-Feb-2023	17-Feb-2023	17-Feb-2023
Sample Description			Ilfracombe Raw	Ilfracombe Filter	Yaraka WTP Untreated	Isisford WTP Untreated
Method	Organism/s	Units	23KP131	23KP132	23KP133	23KP134
13032	CYANOBACTERIA (blue-green algae)					
13032	<i>Anabaenopsis</i> spp.	Cells/mL	180	n.s	n.s	n.s
13032	<i>Aphanocapsa</i> spp. (< 2µm)	Cells/mL	2200	n.s	n.s	300
13032	<i>Dolichospermum</i> spp. (coiled)	Cells/mL	2600	n.s	n.s	n.s
13032	<i>Dolichospermum</i> spp. (straight)	Cells/mL	n.s	n.s	380	n.s
13032	<i>Glaucospira laxissima</i>	Cells/mL	230	n.s	n.s	n.s
13032	<i>Gloeocapsa</i> spp.	Cells/mL	1900	n.s	n.s	n.s
13032	<i>Merismopedia punctata</i>	Cells/mL	100	n.s	n.s	n.s
13032	<i>Merismopedia</i> spp. (small)	Cells/mL	5300	n.s	n.s	n.s
13032	<i>Planktolyngbya limnetica</i>	Cells/mL	10000	n.s	650	170
13032	<i>Planktolyngbya minor</i>	Cells/mL	2300	n.s	n.s	n.s
13032	<i>Pseudanabaena galeata</i>	Cells/mL	150	n.s	n.s	n.s
13032	<i>Pseudanabaena</i> spp.	Cells/mL	300	n.s	n.s	n.s
13032	Potentially Toxic					
13032	<i>Raphidiopsis raciborskii</i>	Cells/mL	7600	n.s	170	40
13032	Total (Potentially Toxic)	Cells/mL	7600	n.s	170	40
13032	Total (CYANOBACTERIA)	Cells/mL	33000	n.s	1200	510
13032	TOTAL CELLS PER ML	Cells/mL	33000	n.s	1200	510
13032	TOTAL CYANOBACTERIA BIOVOLUME	mm ³ /L	0.52	N/A	0.02	0.00

Client Reference			2252
Request			Cyanobacterial Count
Date Analysed			17-Feb-2023
Sample Description			Isisford Swimming Pool Treated
Method	Organism/s	Units	23KP135
13032	CYANOBACTERIA (blue-green algae)		
13032	<i>Anabaenopsis</i> spp.	Cells/mL	n.s
13032	<i>Aphanocapsa</i> spp. (< 2µm)	Cells/mL	n.s
13032	<i>Dolichospermum</i> spp. (coiled)	Cells/mL	n.s
13032	<i>Dolichospermum</i> spp. (straight)	Cells/mL	n.s
13032	<i>Glaucospira laxissima</i>	Cells/mL	n.s
13032	<i>Gloeocapsa</i> spp.	Cells/mL	n.s
13032	<i>Merismopedia punctata</i>	Cells/mL	n.s
13032	<i>Merismopedia</i> spp. (small)	Cells/mL	n.s
13032	<i>Planktolyngbya limnetica</i>	Cells/mL	n.s
13032	<i>Planktolyngbya minor</i>	Cells/mL	n.s
13032	<i>Pseudanabaena galeata</i>	Cells/mL	n.s
13032	<i>Pseudanabaena</i> spp.	Cells/mL	n.s
13032	Potentially Toxic		
13032	<i>Raphidiopsis raciborskii</i>	Cells/mL	n.s
13032	Total (Potentially Toxic)	Cells/mL	n.s
13032	Total (CYANOBACTERIA)	Cells/mL	n.s
13032	TOTAL CELLS PER ML	Cells/mL	n.s
13032	TOTAL CYANOBACTERIA BIOVOLUME	mm ³ /L	N/A



CERTIFICATE OF ANALYSIS

CLIENT : HLONLN	Longreach Regional Council 96A Eagle Street LONGREACH QLD 4730 RCGroup@longreach.qld.gov.au ATTN: Director of Infrastructure Services	Laboratory Reference : SSP83604 Client Order Number : Quote Number : Client Project : Client Batch Reference : Date Received : 11-May-2023 Date Commenced : 12-May-2023 Laboratory Numbers : 23KP418-23KP423
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Number of Samples 6

Reason for Analysis Cyanobacterial (Blue Green Algal) Identification and Enumeration

Method/s of Analysis 13032 - Identification and Enumeration of Planktonic Phytoplankton in Freshwater by Microscopy

Notations

n.s. = not sighted
 s = sighted
 cf. = compared with
 NA = not analysed
 spp. = possible multiple species of the same genus

Remarks

The calculated biovolume is based on mean literature values of the organisms identified and should be used as an estimate only

The following potentially toxic species were detected: Raphidiopsis raciborskii

Please Note: It would appear that the raw and filtered sample for Ilfracombe were incorrectly subsampled into the sample bottles. The sample labelled as filtered (2294) contained algae whereas the sample labelled as raw (2293) contained no algae. The data was reported as described in the sample submission form and bottle label.

Karen Reardon
 Senior Scientist, Organic Chemistry
 12-May-2023



NATA Accredited
 Laboratory 41
 Accredited for compliance
 with ISO/IEC 17025 - Testing

23KP418-23KP423

This report overrides all previous reports. The results relate solely to the sample/s as received and are limited to the specific tests undertaken as listed on the report. The results of this report are confidential and are not to be used or disclosed to any other person or used for any other purpose, whether directly or indirectly, unless that use is expressly authorised in writing by Queensland Health and the named recipient on this report. To the fullest extent permitted by law, Queensland Health will not be liable for any loss or claim (including legal costs calculated on an indemnity basis) which arise because of (a) problems related to the merchantability, fitness or quality of the sample/s, or (b) any negligent or unlawful act or omissions by Queensland Health that is connected with any activities or services provided by Queensland Health under this agreement (including the timing and/or method under which the sample/s were taken, stored or transported).

Enquiries	Karen Reardon	39 Kessels Road	PO Box 594	Phone	(+61 7) 3274 9111
Phone	(+61 7) 3096 2846	Coopers Plains QLD 4108	Archerfield QLD 4108	Fax	(+61 7) 3000 9628
Email	karen.reardon@health.qld.gov.au	AUSTRALIA	AUSTRALIA	Email	FSS@health.qld.gov.au

Client Reference			2293	2294	2295	2296
Request			Cyanobacterial Count	Cyanobacterial Count	Cyanobacterial Count	Cyanobacterial Count
Date Analysed			12-May-2023	12-May-2023	12-May-2023	12-May-2023
Sample Description			Ilfracombe Raw	Ilfracombe Filtered	Yaraka Filtered	Yaraka Raw
Method	Organism/s	Units	23KP418	23KP419	23KP420	23KP421
13032	CYANOBACTERIA (blue-green algae)					
13032	<i>Anathece</i> spp.	Cells/mL	n.s	3400	n.s	n.s
13032	<i>Aphanocapsa</i> spp. (< 2µm)	Cells/mL	n.s	56000	n.s	5300
13032	<i>Cyanocatena imperfecta</i>	Cells/mL	n.s	1200	n.s	2800
13032	<i>Cyanodictyon</i> spp.	Cells/mL	n.s	100	n.s	n.s
13032	<i>Cyanogranis libera</i>	Cells/mL	n.s	8800	n.s	6800
13032	<i>Cyanonephron</i> spp.	Cells/mL	n.s	n.s	n.s	230
13032	<i>Dolichospermum</i> spp. (coiled)	Cells/mL	n.s	450	n.s	n.s
13032	<i>Glaucospira laxissima</i>	Cells/mL	n.s	750	n.s	n.s
13032	<i>Gloeocapsa</i> spp.	Cells/mL	n.s	100	n.s	n.s
13032	<i>Gloeotheca</i> spp.	Cells/mL	n.s	15000	n.s	n.s
13032	<i>Merismopedia</i> spp. (small)	Cells/mL	n.s	9600	n.s	n.s
13032	<i>Myxobaktron plankticus</i>	Cells/mL	n.s	200	n.s	n.s
13032	<i>Planktolyngbya limnetica</i>	Cells/mL	n.s	15000	n.s	n.s
13032	<i>Planktolyngbya microspira</i>	Cells/mL	n.s	4000	n.s	n.s
13032	<i>Planktolyngbya minor</i>	Cells/mL	n.s	3000	n.s	n.s
13032	<i>Pseudanabaena galeata</i>	Cells/mL	n.s	150	n.s	n.s
13032	<i>Rhabdoderma</i> spp.	Cells/mL	n.s	100	n.s	n.s
13032	<i>Romeria</i> spp.	Cells/mL	n.s	2300	n.s	n.s
13032	<i>Snowella</i> spp.	Cells/mL	n.s	n.s	n.s	470
13032	<i>Synechococcus</i> spp.	Cells/mL	n.s	430	n.s	n.s
13032	Unidentified Chroococcales/Synechococcales	Cells/mL	n.s	650	n.s	330
13032	Unidentified Nostocales (coiled)	Cells/mL	n.s	130	n.s	n.s
13032	Potentially Toxic					
13032	<i>Raphidiopsis raciborskii</i>	Cells/mL	n.s	8000	n.s	n.s
13032	Total (Potentially Toxic)	Cells/mL	n.s	8000	n.s	n.s
13032	Total (CYANOBACTERIA)	Cells/mL	n.s	130000	n.s	16000
13032	TOTAL CELLS PER ML	Cells/mL	n.s	130000	n.s	16000
13032	TOTAL CYANOBACTERIA BIOVOLUME	mm ³ /L	N/A	0.56	N/A	0.01

Client Reference			2297	2298
Request			Cyanobacterial Count	Cyanobacterial Count
Date Analysed			12-May-2023	12-May-2023
Sample Description			Isisford Filtered	Isisford Raw
Method	Organism/s	Units	23KP422	23KP423
13032	CYANOBACTERIA (blue-green algae)			
13032	<i>Anathece</i> spp.	Cells/mL	n.s	n.s
13032	<i>Aphanocapsa</i> spp. (< 2µm)	Cells/mL	n.s	n.s
13032	<i>Cyanocatena imperfecta</i>	Cells/mL	n.s	n.s
13032	<i>Cyanodictyon</i> spp.	Cells/mL	n.s	n.s
13032	<i>Cyanogranis libera</i>	Cells/mL	n.s	n.s
13032	<i>Cyanonephron</i> spp.	Cells/mL	n.s	n.s
13032	<i>Dolichospermum</i> spp. (coiled)	Cells/mL	n.s	n.s
13032	<i>Glaucospira laxissima</i>	Cells/mL	n.s	n.s
13032	<i>Gloeocapsa</i> spp.	Cells/mL	n.s	n.s
13032	<i>Gloeothece</i> spp.	Cells/mL	n.s	n.s
13032	<i>Merismopedia</i> spp. (small)	Cells/mL	n.s	n.s
13032	<i>Myxobaktron plankticus</i>	Cells/mL	n.s	n.s
13032	<i>Planktolyngbya limnetica</i>	Cells/mL	n.s	n.s
13032	<i>Planktolyngbya microspira</i>	Cells/mL	n.s	n.s
13032	<i>Planktolyngbya minor</i>	Cells/mL	n.s	n.s
13032	<i>Pseudanabaena galeata</i>	Cells/mL	n.s	n.s
13032	<i>Rhabdoderma</i> spp.	Cells/mL	n.s	n.s
13032	<i>Romeria</i> spp.	Cells/mL	n.s	n.s
13032	<i>Snowella</i> spp.	Cells/mL	n.s	n.s
13032	<i>Synechococcus</i> spp.	Cells/mL	n.s	n.s
13032	Unidentified Chroococcales/Synechococcales	Cells/mL	n.s	n.s
13032	Unidentified Nostocales (coiled)	Cells/mL	n.s	n.s
13032	Potentially Toxic			
13032	<i>Raphidiopsis raciborskii</i>	Cells/mL	n.s	n.s
13032	Total (Potentially Toxic)	Cells/mL	n.s	n.s
13032	Total (CYANOBACTERIA)	Cells/mL	n.s	n.s
13032	TOTAL CELLS PER ML	Cells/mL	n.s	n.s

Client Reference		2297	2298
Request		Cyanobacterial Count	Cyanobacterial Count
Date Analysed		12-May-2023	12-May-2023
Sample Description		Isisford Filtered	Isisford Raw
Method	Organism/s	Units	23KP422
13032	TOTAL CYANOBACTERIA BIOVOLUME	mm ³ /L	N/A

CERTIFICATE OF ANALYSIS

CLIENT : Longreach Regional Council - Longreach
(HLONLN) PO Box 144
ILFRACOMBE QLD 4727

Laboratory Reference : SSP0084060
Client Order No. : RC GROUP
Date Received : 14-Jun-2023
Laboratory Number/s : SS23MW9808-SS23MW9810

Copies sent to: Environmental Health Central QLD

Number of Samples : 3

Reason for Analysis : Compliance

Method/s of Analysis : 20902 - SHW17 - Coliforms and Escherichia coli - enzyme hydrolysable substrate


Remarks : Samples were not adequately chilled while being transported. Samples must be adequately chilled (2 to 8 degrees C) at all stages after collection to the point of testing. Adequate chilling is necessary to ensure accurate microbiological results.

One or more samples > 24 hours old on testing. This exceeds the maximum allowable holding time for E. coli. Accuracy of results may be reduced.

Key :

- cfu = Colony Forming Units
- est = Estimated Count
- FDMEAS = Field Measurements as provided by Submitting Authority
- mg = Milligrams
- mL = Millilitre
- MPN = Most Probable Number
- NA = Not Applicable
- NR = No Result
- NT = Not Tested
- NTU = Nephelometric Turbidity Units
- pfu = Plaque Forming Units
- Positive = Detected, but no count possible due to confluent growth on the plate(s)
- TFOL = Results to Follow
- = Not Ordered
- < = Less than
- > = More than




.....
Leonie Cover
Laboratory Technician, Water Microbiology
15-Jun-23

SS23MW9808-SS23MW9810

This report overrides all previous reports. The results relate solely to the sample/s as received and are limited to the specific tests undertaken as listed on the report. The results on this report are confidential and are not to be used or disclosed to any other person or used for any other purpose, whether directly or indirectly, unless that use is disclosed or the purpose is expressly authorised in writing by Queensland Health and the named recipient on this report. To the fullest extent permitted by law, Queensland Health will not be liable for any loss or claim (including legal costs calculated on an indemnity basis) which arise because of (a) problems related to the merchantability, fitness or quality of the sample/s, or (b) any negligent or unlawful act or omissions by Queensland Health that is connected with any activities or services provided by Queensland Health under this agreement (including the timing and/or method under which the sample/s were taken, stored or transported).

Enquiries Leonie Cover	39 Kessels Road	PO Box 594	Phone (+61) 1800 000 FSS (377)
Phone (+61 7) 3096 2822	Coopers Plains QLD 4108	Archerfield QLD 4108	Fax (+61 7) 3096 2977
Email Leonie_Cover@health.qld.gov.au	AUSTRALIA	AUSTRALIA	Email FSS@health.qld.gov.au

Client Reference			2334	2335	2336
Sample Type			Water Dam Chlorinated	Water Dam Chlorinated	Water Dam Chlorinated
Sampling Time/Date			07:40 13-Jun-2023	07:00 13-Jun-2023	07:00 13-Jun-2023
Testing Time/Date			12:15 14-Jun-2023	12:15 14-Jun-2023	12:15 14-Jun-2023
Sample Description			Isisford WTP	Yaraka WTP	Long Res
Method	Test Microorganisms	Units	SS23MW9808	SS23MW9809	SS23MW9810
20902	Coliforms	MPN/100mL	0	0	0
20902	E. coli	MPN/100mL	0	0	0
Interpretation of Results			PASS	PASS	PASS

This report covers the previous reports. The results relate to any to be taken at the time and are limited to the specific tests undertaken as stated on the report. The results on this report are confidential and are not to be used or disclosed to any other person or used for any other purpose, without the prior written consent of the laboratory. The purpose is expressly authorised in writing by Queensland Health and the named recipient on this report. To the full extent permitted by law, Queensland Health will not be liable for any loss or damage (including legal costs calculated on an indemnity basis) which arise because of (a) procedures used to be undertaken by the laboratory or (b) any negligent or unlawful act or omission by Queensland Health that is connected with any activities or services provided by Queensland Health under this agreement (including the timing and/or method under which the samples were taken, stored or transported).

Notes on the Interpretation of Results

For a number of tests, if the target organism is not detected, the result is reported as < the lower limit of detection for the method used. For the Heterotrophic Colony Count test, a less than result is reported if the precision of the count falls below a lower limit.

PASS means that a sample is microbiologically fit-for-purpose, and FAIL means that a sample is not microbiologically fit-for-purpose. The fitness-for-purpose of a water sample is determined by reference to relevant regulations and guidelines:

- Cooling System Water** - AS/NZS 3666.3:2011: Australian/New Zealand Standard: Air-handling and water systems of buildings-Microbial Control: Part 3: Performance based maintenance of cooling water systems. (Tables 3.1 and 3.2)
- Dental Unit Waterline Water (Immunocompromised Patients)** - Australian Dental Association Guidelines for Infection Control.
- Drinking Water** - The Public Health Regulation 2018 and the Australian Drinking Water Guidelines 2011. (Section 10.2.2 and microorganism factsheets)
- Recycled Water** - The Public Health Regulation 2018. (Schedule 6 and Schedule 7)
- Swimming and Spa Pool Water** - Queensland Health Water quality guidelines for public aquatic facilities. (Table A2.3-Microbiological criteria for all facilities)
- Washer - Disinfectors, Final Rinse Water** - AS/NZS 4187: 2014 Reprocessing of reusable medical devices in health service organizations. (Table 7.2.1)

An interpretation may be made where none of the above guidelines or regulation apply. In such cases, an explanation for the interpretation will be provided on the report.

Maximum Acceptable Delays Between Sampling and Analysis (Holding Times)	
Test Required	Maximum Sample Storage Time (hr)
Coliphages	72
Campylobacter	24
Clostridium perfringens (spores)	72
Clostridium perfringens (vegetative cells)	18
Cryptosporidium/Giardia	96
Total Coliforms/E. coli	24
Enterococci	18
Heterotrophic Colony Count	12
Total Viable Count	12
Legionella	48
Pseudomonas	12
Salmonella	18
Shiga-toxigenic E. coli	18
Vibrio cholerae	18

This report provides a previous report. The results relate solely to the samples received and are limited to the scope of tests undertaken as shown on the report. The results in this report are confidential and are not to be used or disclosed to any other person or used for any other purpose, whether directly or indirectly, unless that use is disclosed on the purpose is expressly authorised in writing by Queensland Health and the named recipient on this report. To the extent allowed permitted by law, Queensland Health is not liable for any loss or damage, including legal costs, incurred on any liability claim which arise because of (a) circumstances related to the manufacturer, fitness or quality of the sample kit, or (b) any negligent or unlawful act or omissions by Queensland Health that is connected with any activities or services provided by Queensland Health under this agreement (including the testing and/or method under which the samples were taken, stored or transported).

CERTIFICATE OF ANALYSIS

CLIENT : Longreach Regional Council
HLONLN 96A Eagle Street
LONGREACH QLD 4730
RCGroup@longreach.qld.gov.au

ATTN: Director of Infrastructure Services

Laboratory Reference : SSP81402
Client Order Number :
Quote Number :
Client Project :
Client Batch Reference :
Date Received : 17-Nov-2022
Date Commenced : 18-Nov-2022
Laboratory Numbers : 22KP758-22KP759

Number of Samples 2

Reason for Analysis Cyanobacterial (Blue Green Algal) Identification and Enumeration

Method/s of Analysis 13032 - Identification and Enumeration of Planktonic Phytoplankton in Freshwater by Microscopy

Notations n.s. = not sighted
s = sighted
cf. = compared with
NA = not analysed
spp. = possible multiple species of the same genus

Remarks

The calculated biovolume is based on mean literature values of the organisms identified and should be used as an estimate only

The following potentially toxic species were detected: Raphidiopsis raciborskii



Karen Reardon
Senior Scientist, Organic Chemistry
18-November-2022



NATA Accredited
Laboratory 41
Accredited for compliance
with ISO/IEC 17025 - Testing

WORLD RECOGNISED
ACCREDITATION
22KP758-22KP759

This report overrides all previous reports. The results relate solely to the sample/s as received and are limited to the specific tests undertaken as listed on the report. The results of this report are confidential and are not to be used or disclosed to any other person or used for any other purpose, whether directly or indirectly, unless that use is expressly authorised in writing by Queensland Health and the named recipient on this report. To the fullest extent permitted by law, Queensland Health will not be liable for any loss or claim (including legal costs calculated on an indemnity basis) which arise because of (a) problems related to the merchantability, fitness or quality of the sample/s, or (b) any negligent or unlawful act or omissions by Queensland Health that is connected with any activities or services provided by Queensland Health under this agreement (including the timing and/or method under which the sample/s were taken, stored or transported).

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Phone	(+61 7) 3096 2846	Coopers Plains QLD 4108	Archerfield QLD 4108	Fax	(+61 7) 3000 9628
Email	karen.reardon@health.qld.gov.au	AUSTRALIA	AUSTRALIA	Email	FSS@health.qld.gov.au

Client Reference			2193	2194
Request			Cyanobacterial Count	Cyanobacterial Count
Date Analysed			18-Nov-2022	18-Nov-2022
Sample Description			Ilfracombe Raw	Ilfracombe Filtered
Method	Organism/s	Units	22KP758	22KP759
13032	CYANOBACTERIA (blue-green algae)			
13032	<i>Anathece</i> spp.	Cells/mL	8900	n.s
13032	<i>Aphanocapsa</i> spp. (< 2µm)	Cells/mL	8700	n.s
13032	<i>Chroococcus minimus</i>	Cells/mL	100	n.s
13032	<i>Chroococcus minutus</i>	Cells/mL	100	n.s
13032	<i>Chroococcus</i> spp.	Cells/mL	700	n.s
13032	<i>Cyanocatenella imperfecta</i>	Cells/mL	1800	n.s
13032	<i>Cyanodictyon</i> spp.	Cells/mL	300	n.s
13032	<i>Cyanogranis libera</i>	Cells/mL	3000	n.s
13032	<i>Dolichospermum</i> spp. (straight)	Cells/mL	180	n.s
13032	<i>Gloeocapsa</i> spp.	Cells/mL	200	n.s
13032	<i>Gloeotheca</i> spp.	Cells/mL	2800	n.s
13032	<i>Merismopedia punctata</i>	Cells/mL	300	n.s
13032	<i>Merismopedia</i> spp. (small)	Cells/mL	1200	n.s
13032	<i>Myxobakterion plankticus</i>	Cells/mL	280	n.s
13032	<i>Planktolyngbya limnetica</i>	Cells/mL	10000	n.s
13032	<i>Planktolyngbya minor</i>	Cells/mL	3800	n.s
13032	<i>Pseudanabaena galeata</i>	Cells/mL	100	n.s
13032	<i>Pseudanabaena</i> spp.	Cells/mL	130	n.s
13032	<i>Rhabdoderma</i> spp.	Cells/mL	50	n.s
13032	Unidentified Chroococcales/Synechococcales	Cells/mL	450	n.s
13032	Unidentified Nostocales (straight)	Cells/mL	680	n.s
13032	Unidentified Oscillatoriales	Cells/mL	50	n.s
13032	Potentially Toxic			
13032	<i>Raphidiopsis raciborskii</i>	Cells/mL	260	n.s
13032	Total (Potentially Toxic)	Cells/mL	260	n.s
13032	Total (CYANOBACTERIA)	Cells/mL	44000	n.s
13032	TOTAL CELLS PER ML	Cells/mL	44000	n.s

Client Reference			2193	2194
Request			Cyanobacterial Count	Cyanobacterial Count
Date Analysed			18-Nov-2022	18-Nov-2022
Sample Description			Ilfracombe Raw	Ilfracombe Filtered
Method	Organism/s	Units	22KP758	22KP759
13032	TOTAL CYANOBACTERIA BIOVOLUME	mm ³ /L	0.14	N/A



**Longreach
Regional Council**
Ilfracombe Isisford Longreach Yaraka