Annual Report Drinking Water Quality Management Plan

2023-24

Presented by: Water and Waste Directorate
Current as at: 12/12/2024

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INTRODUCTION

This report documents the performance of Isaac Regional Council's (IRC) drinking water service with respect to water quality and performance in implementing the actions detailed in the Drinking Water Quality Management Plan (DWQMP) as required under the *Water Supply (Safety and Reliability) Act 2008* (*the Act*). The approved DWQMP applies to the eight (8) drinking water supply schemes owned and operated by Isaac Regional Council:

- Carmila
- Clermont
- Dysart
- Glenden
- Middlemount
- Moranbah
- Nebo
- St Lawrence

SECTION 1: ACTIONS TAKEN TO IMPLEMENT THE DWQMP

The IRC DWQMP was reviewed and comprehensively rewritten in 2023, with an amendment application submitted to the Regulator. The amended DWQMP was approved and has been implemented.

The amended plan has provided a consistent approach to identification and management of risk across all schemes and has included the development and implementation of new critical control points, and an updated operational and verification monitoring program to ensure drinking water safety.

REVISIONS MADE TO THE VERIFICATION MONITORING PROGRAM

The verification monitoring program was reviewed and updated in the 2023 amendment. The new verification monitoring program has been implemented as per the DWQMP.

REVISIONS MADE TO THE OPERATIONAL MONITORING PROGRAM

The operational monitoring program was reviewed and updated in 2023 as part of the overall DWQMP review.

THE RISK MANAGEMENT IMPROVEMENT PROGRAM

IRC's Risk Management Improvement Program (RMIP) was developed from a series of risk assessment workshops as detailed in the DWQMP. [redacted] improvement actions identified and prioritised. IRC has been working on implementing the new actions against the RMIP.

Implementation of the RMIP

Progress has been made across all water schemes to meet the requirements of the DWQMP.

The full improvement plan, including the actions taken to date, and the target completion date are included in the table overleaf.

Table 1 IRC Improvement Plan, actions taken and target completion dates

Site	Ref	Treatment Stage	Improvement Action	Action Taken	Target date for completion
Clermont Middlemount Dysart Moranbah WTP Moranbah Boby	CLM1 CLM4 CLM20 MMT4 MMT6 DYS1 MBHW1 MBHB1	Multiple treatment processes	Review Blue Green Algae (BGA) management plan	Budget sourced	Dec 2024
Carmila	CAR1	Raw Water Abstraction	Turbidity meter	Planning phase for filter turbidity and transition to SCADA	Jun 2026
Carmila	CAR2	Raw Water Bypass	Disconnect or decommission the raw water bypass.	In progress	Mar 2025
Carmila	CAR5 CAR9	Chemical Dosing - Aluminium Sulphate Chemical Dosing - Polyelectrolyte	Turbidity meter	Planning phase for filter turbidity and transition to SCADA	Jun 2026
Carmila	CAR11	Clarification	Investigate flow paced dosing and implement as achievable, Turbidity meter	Planning phase for capital upgrade	Jun 2026

Site	Ref	Treatment Stage	Improvement Action	Action Taken	Target date for completion
Carmila	CAR12	Filtration - Media filtration	Turbidity meter	Planning phase for filter turbidity and transition to SCADA	Dec 2025
Carmila	CAR13	Filtration - Media	Investigate ability to waste on ripening and implement if achievable	Planning phase for capital upgrade	Jun 2026
Clermont	CLM2 CLM3	Chlorine Oxidation	Will require automation to reinstate.	Developing scope for chemical dosing upgrade	Dec 2025
Clermont	CLM5	Chemical Dosing - Potassium Permanganate	Reinstate online analysers, require flow switch for potassium permanganate to allow dosing into 2 ML raw water tank.	EZ Mn analyser operational. Developing scope for chemical dosing upgrade	Dec 2025
Clermont	CLM7	Supernatant return and storage	Exclude animals from accessing sludge lagoon.	Stock removed from lagoon area	Complete
Clermont	CLM16 CLM17	Bypass of flash mixer Bypass of clarification process	Lock out valves	In progress	Mar 2025
Clermont	CLM21 CLM22	Filtration - Media filtration	Investigate online turbidity meters for individual filters.	In progress	Jun 2025
Glenden	GLN1	Raw water sourcing	Ensure there is a process to engage with stakeholders to ensure access to Glencore Dam water.	Review in progress	Mar 2025

Site	Ref	Treatment Stage	Improvement Action	Action Taken	Target date for completion
Glenden	GLN2 GLN3 GLN7 GLN10	Raw Water Abstraction Supernatant return and storage Chemical Dosing – coagulant Clarification	Improve recording of online turbidity meter readings to confirm correct plant operation.	Commenced checking and recording combined filter multiple times each day.	Complete
Glenden	GLN11 GLN12	Filtration - Media filtration	Filter valves require repair or replacement.	Investigation in progress	Jun 2025
Middlemount	MMT1 MMT20	Raw Water Abstraction Disinfection - improvements	[redacted]	Decreased outflow from clear water tanks from 100 L/s to 60 L/s. Reconfigured clearwater tanks into series rather than parallel. Changed the minimum operating level of clear water tanks to 70%	Complete
Middlemount	MMT5	Supernatant return and storage	Identify the control philosophy for the waste stream and reroute so that clarifier sludge cannot directly enter Turkeys Nest.	Sludge bleed routed to the drying beds Signage required	Mar 2025
Middlemount	MMT12 MMT15	Chemical Dosing - Aluminium Chlorohydrate Clarification	[redacted]	Controls review in progress	Mar 2025
Middlemount	MMT16	Filtration - Media filtration	Alarms to be checked to ensure operators are made aware at 0.2 NTU. [redacted]	Alarms for 0.2 NTU in place Controls review in progress for shutdown on critical limit	Mar 2025

Site	Ref	Treatment Stage	Improvement Action	Action Taken	Target date for completion
Middlemount	MMT17	Filtration - Media filtration	Investigate feasibility of automated backwash and implement if possible	Assess benefits of automated trigger for backwash	June 2025
Middlemount	MMT18	Disinfection - chlorine gas	Investigate shutdown on high chlorine	Treated water chlorine and pH analyser have been installed. [redacted]	Mar 2025
Dysart	DYS2	Supernatant return	Develop procedure to isolate supernatant return if raw water tank is offline. Is possible to discharge to sewer.	In progress	Apr 2025
Dysart	DYS3	Chemical Dosing - Aluminium Chlorohydrate (ACH)	Consider alarms for DAF turbidity meter	Controls review in progress	Mar 2025
Dysart	DYS10	Chemical Dosing - Potassium permanganate	[redacted].	Controls review in progress	Mar 2025
Dysart	DYS12	Chemical Dosing - PAC	Repair PAC scales to ensure chemical usage can be monitored.		Complete
Dysart	DYS14	Chemical Dosing – Coagulant ACH	[redacted]	Controls review in progress	Mar 2025
Dysart	DYS17	Chemical Dosing- Chlorine gas	[redacted]. Replace dosing lines with chemical compatible materials	Controls review in progress	Mar 2025

Site	Ref	Treatment Stage	Improvement Action	Action Taken	Target date for completion
Dysart	DYS19 DYS20	Filtration - Media filtration Filtration - Media	Service meters and reinstate shutdowns	Controls review in progress	Mar 2025
Dysart	DYS24	Disinfection - chlorine gas	Chlorine meter to be reinstated, ideally recirculating in clearwater tank.	Controls review in progress	Mar 2025
Moranbah WTP	MBHW13	Filtration - Media filtration	Actuators positioners and valve sets to be serviced/inspected/ repaired	In progress.	Jun 2025
Moranbah WTP	MBHW14	Filtration - Media filtration	Investigate improvements to actuators to allow for improved automation of processes.	In progress	Jun 2025
Moranbah WTP	MBHW16 MBHW17	Disinfection - chlorine gas	Install tapping into Clear water to allow installation of online chlorine meter	Contractor selected	Mar 2025
Moranbah WTP	MBHW22	Disinfection - chlorine gas	Investigate necessity of bypass, review options for improved management of risk (e.g., air gapping, installing a second valve, etc.)	In progress – valve to be locked and signed	Mar 2025
Moranbah Boby	MBHB11	Clarification	Investigate improved automation of processes	Restart Boby plant after capital works on filter media and long term shut down	Jun 2025
Moranbah Boby	MBHB12 MBHB13	Filtration - Media filtration	Currently refurbishing filters at Boby treatment plant including filter replacement. Require online turbidity meters - include tappings for these meters in current project - need to investigate whether pairs of filters can be individual meters, or combined meter on pair.	Tapping on filters in place	Jun 2025

Site	Ref	Treatment Stage	Improvement Action	Action Taken	Target date for completion
Moranbah Boby	MBHB15	Disinfection - chlorine gas	Install tapping into Clear water to allow installation of online chlorine meter	Contractor selected	Mar 2025
Moranbah Boby	MBHB19	Disinfection - chlorine gas	Investigate necessity of valve, consider air gapping or removing infrastructure	In progress – valve to be locked and signed	Mar 2025
Nebo	NBO5	Filtration - Media	Initiate backwash on turbidity trigger.	Controls review in progress	Mar 2025
Nebo	NBO9	Ultraviolet Disinfection	Confirm that UV changes over on failure to meet dose.	Controls review in progress	Mar 2025
St Lawrence	STL1	Raw Water Abstraction	Consider ability to install turbidity meter and plant shut down on poor water quality.	Planning phase for upgrade	Jun 2026
St Lawrence	STL4 STL5	Chemical Dosing- Potassium permanganate	Planning for 0.5 ML raw water tank to smooth out variability in raw water	Delivery phase for raw water tank	Jun 2025
St Lawrence	STL7 STL8	Chemical Dosing - soda ash Chemical Dosing	Consider ability to install turbidity meter and plant shut down on poor water quality	Planning phase for upgrade	Jun 2026
St Lawrence	STL13	Filtration - Media filtration	Consider ability to install turbidity meter and plant shut down on poor water quality	Planning phase for upgrade	Jun 2026
St Lawrence	STL14	Filtration - Media filtration	Consider ability to install turbidity meter and plant shut down on poor water quality. Manual diversion of ripening water to waste.	Planning phase for upgrade	Jun 2026
Whole of System	WOS9	Cyber	Have commenced upgrades on SCADA.	Planning phase for SCADA upgrade	Jun 2025

Site	Ref	Treatment Stage	Improvement Action	Action Taken	Target date for completion
Whole of System	WOS11	Whole of system	Maintain training for all operational staff.	Ongoing at all times	Ongoing

SECTION 2: COMPLIANCE WITH WATER QUALITY CRITERIA

IRC sends verification monitoring samples to the Mackay Regional Council Laboratory (MRCL) National Association of Testing Authorities (NATA) accredited Laboratory.

Detailed summaries of each supply system's verification monitoring and compliance with water quality criteria are included in Appendix A.

While the vast majority of samples were fully compliant with the water quality criteria, there have been nine (9) instances where incidents or events have been identified and reported to the Regulator.

Carmila:	1 detection of trihalomethanes (THMs) above Australian Drinking Water Guidelines (ADWG) health guideline
	1 endrin aldehyde detection parameter with no guideline value
Clermont:	1 event for elevated turbidity
	1 detection of formaldehyde above ADWG health guideline
Dysart:	No events or ADWG health exceedances
Glenden:	No events or ADWG health exceedances
Middlemount:	2 events for low chlorine in reticulation
	1 event for raw water pump failure requiring tinkering of potable water
	1 event for the detection of cyanobacterial cells in treated water
Moranbah:	No events or ADWG health exceedances
Nebo:	[redacted]
St Lawrence:	No events or ADWG health exceedances

SECTION 3: NOTIFICATIONS TO THE REGULATOR

The following table provides details of each of the notifications made to the Department of Local Government, Water and Volunteers (DLGWV).

Table 2 IRC Notifications to the Regulator

INCIDENT DATE	REFERENCE	SCHEME	LOCATION	PARAMETER	DESCRIPTION OF EVENT	IMPROVEMENT	STATUS WITH DLGWV
19/7/2023	DWI-486-23-10333	Nebo	Network – Airstrip Road	[redacted]	[redacted]	New sample tap was installed at location.	Closed 25/9/23
13/9/2023	DWI-486-23-10406	Middlemount	Network – Emu Park	Free Chlorine 0.06 mg/L	[redacted] The operator then tested the 6 Network sample points in the town and found at 9:03am Network Point 2 - Emu Park had a free chlorine measurement of 0.06 mg/L against a limit of 0.2 mg/L. All other network points were within limits.	Council identifies there are both manual and automatic chlorine gas change over systems installed across 5 of its 8 Water Treatment Plants (WTP). Council will conduct additional chlorine familiarisation training with operators on the plants they are operating to ensure they understand the specific system on the plant and whether it is manual or automatic change over. If operators move between plants, being aware of the chlorine gas system requirements on the site is	Closed 25/9/23

INCIDENT DATE	REFERENCE	SCHEME	LOCATION	PARAMETER	DESCRIPTION OF EVENT	IMPROVEMENT	STATUS WITH DLGWV
						covered in the site-specific induction.	
20/9/2023	DWI-486-23-10416	Clermont	Clarified Water	Turbidity 8 NTU	Turbidity in the Clarifier was reading 8 NTU. [redacted]. [redacted] Due to the failures, Council reported the issue as a precaution [redacted]	SCADA coding was reviewed and rectified by contractors engaged by Council to: [redacted] The installation of online turbidity meters has been completed and SCADA upgrades at the Clermont WTP are underway.	Closed 3/12/24
9/10/2023	DWI-486-23-10558	Carmila	Treated Water	Endrin aldehyde 0.1310 µg/l	Endrin aldehyde detected in annual compliance sampling at Carmila Water Treatment Plant.	Limits have been included in IRC's DWQMP as directed by DLGWV with limits directed by Queensland Health.	Closed 3/12/24

INCIDENT DATE	REFERENCE	SCHEME	LOCATION	PARAMETER	DESCRIPTION OF EVENT	IMPROVEMENT	STATUS WITH DLGWV
7/9/2022	DWI-486-23-10627	Clermont	Treated Water	Formaldehyde 0.7mg/L	[redacted]	Retraining of operators on correct compliance sampling process.	Closed 21/2/24
6/12/2023	DWI-486-23-10641	Middlemount	Treated Water	Cyanobacteria	Council became aware of the positive detection of *Anabaena spiroides* 90 cells/ml and *Raphidiopsis raciborskii* 150 cells/ml in the treated water sample from the Middlemount WTP on December 6 2023. Council increased operational monitoring of the filters and identified an upward trend in turbidity in the filtered water.	Filter optimisation process completed with operators. Seasonal testing of water included in the DWQMP risk assessment and review with seasonal testing updated accordingly.	Closed 3/12/24
12/12/2023	DWI-486-23-10633	Middlemount	Treated Water	Raw Water Pump Failure	The two (2) raw water pumps at the Middlemount WTP stopped working between 2am and 4am on 12 December due to becoming flooded after a pipe burst. Council commenced tankering potable water from Clermont and Dysart on midday 12 December to supplement the water supply until the Raw Water Pumps were functional and able to supply the Middlemount WTP with water to process.	Raw Water Pumps are included in the preventative maintenance program and are serviced on a 6 monthly basis. Alarms received by the operators were reviewed and improved.	Closed 3/12/24
22/12/2023	DWI-486-23-10734	Middlemount	Treated Water	Free Chlorine 0.09 mg/L	Water samples taken from two (2) network locations in Middlemount Township indicated low chlorine 0.09 mg/L and NTU of 0.22.	Increase chlorine levels at WTP and a Work Instruction for maintaining free chlorine in Middlemount Network has	Closed 3/12/24

INCIDENT DATE	REFERENCE	SCHEME	LOCATION	PARAMETER	DESCRIPTION OF EVENT	IMPROVEMENT	STATUS WITH DLGWV
					The design of the network and pipework filling the Treated Water Reservoir lengthens/increases the water storage age and chlorine degradation occurs during high temperature days	been reviewed with improvements made. 2nd main from the WTP to the treated water reservoir has been released for tender.	
7/02/2024	DWI-486-24-10839	Carmila	Treated Water	THM's 391.1 µg/L	Elevated Total Trihalomethanes (THM) result in the Treated Water sample from Carmila WTP on 7 February 2024. This was due to a change in raw water quality and town demand. The plant at Carmila doses Calcium Hypochlorite (2%) prior to the flash mixer. This is the only dosing point for chlorine. The Carmila WTP is not able to dose PAC or Potassium Permanganate.	Managing Raw Water Quality procedure has been created to assist operators in understanding when changes are occurring and how to manage them. Carmila is scheduled for a chemical and plant capital project upgrade.	Closed 3/12/24

SECTION 4: CUSTOMER COMPLAINTS RELATED TO WATER QUALITY

Table 3 outlines the water quality complaints reported by consumers in the 2023-2024 reporting year. Complaints decreased significantly compared to the previous year.

Table 3 Summary of Water Quality Complaints

	Health Concern	Discoloured Water	Taste and Odour	Other	Total
CARMILA					0
CLERMONT			1		1
DYSART					0
GLENDEN					0
MIDDLEMOUNT		3			3
MORANBAH				2	2
NEBO			1	2	3
ST LAWRENCE		2			2
TOTAL					11

HEALTH CONCERN

One (1) complaint was received where the primary complaint was for discoloured water damaging shirts, but the customer also reported that the water supply was causing welts on the skin.

The water supply was tested and found to be within normal ranges.

AESTHETIC COMPLAINTS

When water quality complaints are received, the following standard responses are performed as appropriate. Between each action, the water is sampled to determine whether the situation has been rectified.

1. Localised flushing.
2. Mains flushing.
3. Samples collected for further investigation (if required, particularly if the cause of the complaint is unknown).

TASTE AND ODOUR

Taste and odour complaints can be related to the taste of chlorine in the water supply, or due to the inherent hardness of water in some schemes. During testing, staff explain to customers the importance of free chlorine in drinking water.

DISCOLOURED WATER

The majority of complaints for the current reporting year FY 23/24 related to discoloured water across Middlemount, and St Lawrence with five (5) total complaints.

When a complaint is received relating to discoloured drinking water, the following investigations are conducted, and the corrective actions taken as considered appropriate:

a. Conduct sampling and testing of the affected water.

b. Review treatment processes and chemical dosing systems.

c. Undertake flushing of network mains.

d. Take corrective actions and monitor water quality at a higher frequency.

SECTION 5: OUTCOME OF THE REVIEW OF THE DWQMP

The DWQMP was comprehensively reviewed in 2023 and submitted to the Regulator for approval in accordance with requirements. The amended plan was approved and is being implemented.

SECTION 6: FINDINGS AND RECOMMENDATIONS OF THE DWQMP AUDITOR

No audits were completed in this financial year. The previous audit was conducted in 2022 and are conducted on a four (4) yearly cycle with the next audit for IRC due in 2026.

APPENDIX A

SUMMARY OF COMPLIANCE WITH WATER QUALITY CRITERIA

All verification testing was obtained via the Mackay NATA accredited laboratory. These results were supplemented with operator collected data in accordance with the operational monitoring program as part of the DWQMP, and individual to the specific schemes. Some schemes do not operate every day, so daily sampling refers to days on which plant was operational. Australian Drinking Water Guidelines (ADWG) health exceedances and Queensland Health (QH) exceedances are highlighted and counted in tables.

- Microbial values lower than the limit of detection (<LOR) are reported as 0
- All other analyte values lower than the limit of detection (<LOR) are reported as 0.5 x LOR. This allows for a more reflective calculation of the median value where results that were less than detection limit contribute to the median calculation. This practice is in accordance with the recommendations of the ADWG.

CARMILA SUPPLY SYSTEM

Table 4 Carmila Operator Tested Water Quality (Treatment Plant)

Parameter	Units	Count	Minimum	5th%ile	Median	Std Dev	95th%ile	Maximum
Alkalinity	**(mg/L $CaCO_3$)**	42	60	70	102.5	16.85	124.25	135
Free Chlorine	**(mg/L)**	173	0.39	0.8	1.99	0.86	3.2	4.8
pH		173	0.35	6.95	7.28	0.65	7.95	8.15
Total Al	**(mg/L)**	45	0.012	0.032	0.06	0.08	0.14	0.51
Total Fe	**(mg/L)**	71	0	0	0.02	0.04	0.09	0.26
Total Mn	**(mg/L)**	54	0	0	0	0.03	0.0477	0.208
True Colour	**HU**	141	0	0	0	0.43	0.000	5
Turbidity	**NTU**	172	0.1	0.15	0.26	0.10	0.41	0.84
UVA		137	0	0.0176	0.03	0.04	0.081	0.26

Table 5 Carmila Verification Monitoring (Reticulation)

Parameter	Count	Minimum	5th%ile	Median	Std Dev	95th%ile	Maximum
2.3.4.6-tetrachlorophenol (µg/L)	4	0.00	0.01	0.05	0.02	0.05	0.05
2.4.5-Trichlorophenol (µg/L)	4	0.00	0.01	0.05	0.02	0.05	0.05
2.4.6-Trichlorophenol (µg/L)	4	0.00	0.01	0.05	0.02	0.05	0.05
2.4-Dichlorophenol (µg/L)	4	0.00	0.01	0.05	0.02	0.05	0.05
2.4-Dimethylphenol (µg/L)	4	0.00	0.01	0.05	0.02	0.05	0.05
2.4-Dinitrophenol (µg/L)	4	0.00	0.01	0.05	0.02	0.05	0.05
2.6-Dichlorophenol (µg/L)	4	0.00	0.01	0.05	0.02	0.05	0.05
2-Chlorophenol (µg/L)	4	0.00	0.01	0.05	0.02	0.05	0.05
2-Methylphenol (µg/L)	4	0.00	0.01	0.05	0.02	0.05	0.05
2-Nitrophenol (µg/L)	4	0.00	0.01	0.05	0.02	0.05	0.05
3- & 4-Methylphenol (µg/L)	4	0.00	0.01	0.05	0.02	0.05	0.05
4.4`.DDD (µg/L)	4	0.00	0.00	0.02	0.01	0.03	0.03
4.4`-DDE (µg/L)	4	0.00	0.00	0.02	0.01	0.03	0.03
4.4`-DDT (µg/L)	4	0.00	0.00	0.02	0.01	0.03	0.03
4.6-Dinitro-2-methylphenol (µg/L)	4	0.00	0.01	0.05	0.02	0.05	0.05

Parameter	Count	Minimum	5th%ile	Median	Std Dev	95th%ile	Maximum
4-Chloro-3-Methylphenol (µg/L)	4	0.00	0.01	0.05	0.02	0.05	0.05
4-Nitrophenol (µg/L)	4	0.00	0.01	0.05	0.02	0.05	0.05
Acenaphthene (µg/L)	4	0.00	0.00	0.01	0.00	0.01	0.01
Acenaphthylene (µg/L)	4	0.00	0.00	0.01	0.00	0.01	0.01
Aldrin (µg/L)	4	0.00	0.00	0.02	0.01	0.03	0.03
Aldrin and Dieldrin (µg/L)	4	0.01	0.01	0.03	0.03	0.08	0.09
Alkalinity (mg/L)	12	71.86	74.04	84.62	9.42	101.39	104.29
Alpha-BHC (µg/L)	4	0.00	0.00	0.02	0.01	0.03	0.03
Aluminium (Total) (µg/L)	39	2.50	6.76	31.69	99.93	240.64	563.07
Ametryn (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03
Ammonia (mg/L)	3	0.00	0.00	0.00	0.00	0.00	0.00
Anthracene (µg/L)	4	0.00	0.00	0.01	0.00	0.01	0.01
Arsenic (Total) (µg/L)	4	0.50	0.50	0.50	0.00	0.50	0.50
Atrazine (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03
Azinophos methyl (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03
Barium (Total) (µg/L)	1	21.35	21.35	21.35		21.35	21.35
Benz(a)anthracene (µg/L)	4	0.00	0.00	0.01	0.00	0.01	0.01
Benzo(a)pyrene (µg/L)	4	0.00	0.00	0.01	0.00	0.01	0.01
Benzo(b)fluoranthene (µg/L)	4	0.00	0.00	0.01	0.00	0.01	0.01
Benzo(g.h.i)perylene (µg/L)	4	0.00	0.00	0.01	0.00	0.01	0.01
Benzo(k)fluoranthene (µg/L)	4	0.00	0.00	0.01	0.00	0.01	0.01
Beryllium (Total) (µg/L)	1	0.25	0.25	0.25		0.25	0.25
Beta-BHC (µg/L)	4	0.00	0.00	0.02	0.01	0.03	0.03
Bicarbonate (mg/L)	12	87.00	89.75	101.50	10.97	121.50	127.00
Boron (Total) (µg/L)	3	10.35	11.01	17.00	4.01	17.50	17.56
Bromacil (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03
Bromate (µg/L)	11	10.00	10.00	10.00	0.00	10.00	10.00
Bromide (mg/L)	2	0.20	0.20	0.20	0.00	0.20	0.20
Bromodichloromethane^ (µg/L)	10	9.25	10.30	15.19	11.96	39.83	47.09
Bromoform^ (µg/L)	10	2.50	2.50	2.50	0.00	2.50	2.50
Cadmium (Total) (µg/L)	4	0.05	0.05	0.05	0.04	0.12	0.13
Calcium (Total) (mg/L)	12	14.63	16.09	23.56	4.04	28.18	28.45
Carbonate (mg/L)	12	0.05	0.05	0.10	0.02	0.10	0.10
Chlorate (µg/L)	11	10.00	40.57	194.99	198.38	597.47	655.94
Chlordane cis (µg/L)	4	0.00	0.00	0.02	0.01	0.03	0.03
Chlordane trans (µg/L)	4	0.00	0.00	0.02	0.01	0.03	0.03
Chloride (mg/L)	2	28.99	29.20	31.16	3.07	33.11	33.33
Chlorite (µg/L)	11	10.00	10.00	10.00	0.00	10.00	10.00
Chloroform^ (µg/L)	10	9.35	11.70	38.30	101.50	246.58	339.15
Chlorpyrifos (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03
Chromium (Total) (µg/L)	4	0.05	0.05	0.08	0.06	0.16	0.17
Chrysene (µg/L)	4	0.00	0.00	0.01	0.00	0.01	0.01
Colour - True (TCU)	12	0.50	0.50	0.50	4.21	9.50	15.00
Conductivity (µS/cm)	39	241.00	265.26	329.60	35.12	372.90	390.00
Copper (Total) (µg/L)	6	0.50	0.50	0.50	1.79	3.79	4.89
delta-BHC (µg/L)	4	0.00	0.00	0.02	0.01	0.03	0.03
Diazinon (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03

Parameter	Count	Minimum	5th%ile	Median	Std Dev	95th%ile	Maximum
Dibenz(a.h)anthracene (µg/L)	4	0.00	0.00	0.01	0.00	0.01	0.01
Dibromochloromethane^ (µg/L)	10	2.50	2.50	6.49	2.14	7.60	8.12
Dichlorvos (µg/L)	4	0.00	0.08	0.50	0.25	0.50	0.50
Dieldrin (µg/L)	4	0.01	0.01	0.03	0.03	0.08	0.09
Dimethoate (µg/L)	4	0.00	0.08	0.50	0.25	0.50	0.50
Dinoseb (µg/L)	4	0.00	0.01	0.05	0.02	0.05	0.05
Dissolved Oxygen (% Sat)	9	47.30	47.62	51.60	9.13	70.76	74.20
Diuron (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03
E. coli (MPN/100mL)	36	0.00	0.00	0.00	0.00	0.00	0.00
Endosulphan (alpha + beta + sulphate) (µg/L)	4	0.00	0.00	0.03	0.03	0.05	0.05
Endosulphan alpha (µg/L)	4	0.00	0.00	0.02	0.01	0.03	0.03
Endosulphan beta (µg/L)	4	0.00	0.00	0.02	0.01	0.03	0.03
Endosulphan Sulphate (µg/L)	4	0.00	0.00	0.02	0.01	0.03	0.03
Endrin (µg/L)	4	0.00	0.00	0.02	0.01	0.03	0.03
Endrin aldehyde (µg/L)	4	0.01	0.01	0.03	0.06	0.12	0.13
Endrin ketone (µg/L)	4	0.00	0.00	0.02	0.01	0.03	0.03
Ethion (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03
Fluoranthene (µg/L)	4	0.00	0.00	0.01	0.00	0.01	0.01
Fluorene (µg/L)	4	0.00	0.00	0.01	0.00	0.01	0.01
Fluoride (mg/L)	12	0.05	0.05	0.05	0.00	0.05	0.05
Formaldehyde (mg/L)	3	0.05	0.05	0.05	0.09	0.19	0.20
Free Carbon Dioxide (mg/L)	12	5.10	6.31	14.70	4.99	20.25	20.80
Free Chlorine Residual (Client tested) (mg/L)	36	1.50	1.58	2.20	0.45	2.95	3.00
Gross alpha (Bq/L)	1	0.03	0.03	0.03		0.03	0.03
Gross beta (Bq/L)	1	0.05	0.05	0.05		0.05	0.05
Hardness (mg/L)	12	69.00	70.65	99.00	15.03	112.50	118.00
Heptachlor (µg/L)	4	0.00	0.00	0.02	0.01	0.03	0.03
Heptachlor Epoxide (µg/L)	4	0.00	0.00	0.02	0.01	0.03	0.03
Hexazinone (µg/L)	4	0.00	0.00	0.03	0.11	0.20	0.23
Hydroxide (mg/L)	12	0.05	0.05	0.05	0.00	0.05	0.05
Indeno(1.2.3.cd)pyrene (µg/L)	4	0.00	0.00	0.01	0.00	0.01	0.01
Iodide (µg/L)	1	10.00	10.00	10.00		10.00	10.00
Iron (Total) (µg/L)	39	1.00	1.00	18.22	118.09	293.45	574.29
Lead (Total) (µg/L)	4	0.25	0.25	0.25	0.00	0.25	0.25
Lindane (µg/L)	4	0.00	0.00	0.02	0.01	0.03	0.03
Magnesium (Total) (mg/L)	12	6.24	6.71	9.52	1.50	11.16	11.46
Malathion (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03
Manganese (Total) (µg/L)	39	0.50	0.50	2.52	9.09	23.26	37.09
Mercury (Total) (µg/L)	4	0.25	0.25	0.25	0.00	0.25	0.25
Methamidophos (µg/L)	4	0.00	0.08	0.50	0.25	0.50	0.50
Methidathion (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03
Methoxychlor (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03
Metolachlor (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03
Metribuzin (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03
Molybdenum (Total) (µg/L)	1	0.50	0.50	0.50		0.50	0.50
Naphthalene (µg/L)	4	0.00	0.00	0.01	0.02	0.04	0.05
Naphthalene, 1-methyl- (µg/L)	4	0.00	0.00	0.01	0.00	0.01	0.01

Parameter	Count	Minimum	5th%ile	Median	Std Dev	95th%ile	Maximum
Naphthalene, 2-methyl- (µg/L)	4	0.00	0.00	0.01	0.00	0.01	0.01
Nickel (Total) (µg/L)	4	0.25	0.25	0.25	0.00	0.25	0.25
Nitrate (mg/L)	12	0.15	0.15	0.48	0.68	1.65	2.63
Nitrite (mg/L)	12	0.20	0.20	0.20	0.00	0.20	0.20
Omethoate (µg/L)	4	0.00	0.08	0.50	0.25	0.50	0.50
Pentachlorophenol (µg/L)	4	0.00	0.01	0.05	0.02	0.05	0.05
pH (Client tested) (pH unit)	36	7.00	7.00	7.00	0.06	7.15	7.20
pH (pH unit)	3	7.28	7.29	7.34	0.09	7.44	7.45
Phenanthrene (µg/L)	4	0.00	0.00	0.01	0.00	0.01	0.01
Phenol (µg/L)	4	0.00	0.01	0.05	0.02	0.05	0.05
Phosphate (mg/L)	2	0.25	0.25	0.25	0.00	0.25	0.25
Pirimiphos methyl (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03
Potassium (Total) (mg/L)	3	0.80	0.80	0.83	0.08	0.94	0.96
Profenofos (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03
Prometryn (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03
Propazine (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03
Propyzamide (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03
Prothiofos (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03
Pyrazophos (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03
Pyrene (µg/L)	4	0.00	0.00	0.01	0.00	0.01	0.01
Selenium (Total) (µg/L)	4	2.50	2.50	2.50	0.00	2.50	2.50
Silver (Total) (µg/L)	1	0.05	0.05	0.05		0.05	0.05
Simazine (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03
Sodium (Total) (mg/L)	3	16.22	16.83	22.34	5.82	27.31	27.86
Sulphate (mg/L)	2	7.93	8.31	11.71	5.35	15.11	15.49
Sulphide (mg/L)	3	0.00	0.00	0.00	0.01	0.01	0.01
Tebuthiuron (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03
Terbutryn (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03
Tin (Total) (µg/L)	1	13.03	13.03	13.03		13.03	13.03
Tolclofos-methyl (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03
Total Dissolved Solids (mg/L)	39	145.00	159.50	198.00	21.04	223.60	234.00
Trifluralin (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03
Trihalomethanes (Total)^ (µg/L)	10	28.06	30.65	59.86	111.91	290.81	391.05
Turbidity (Client tested) (NTU)	36	0.15	0.20	0.30	0.05	0.37	0.39
Turbidity (NTU)	3	0.05	0.06	0.18	0.16	0.34	0.36
Uranium (Total) (µg/L)	1	0.25	0.25	0.25		0.25	0.25
Zinc (Total) (µg/L)	6	1.49	1.71	2.83	1.34	4.89	5.02

Table 6 Carmila - *E. coli* Compliance

Financial Year	2023-2024

Month	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
No. of samples collected	4	5	4	4	5	4	5	4	4	4	5	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 months	51	52	52	52	52	52	53	53	52	52	52	52
No. of failures in previous 12 months	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	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

CLERMONT SUPPLY SYSTEM

Table 7 Clermont Operator Tested Water Quality (Treatment Plant)

Parameter	Units	Count	Minimum	5th%ile	Median	Std Dev	95th%ile	Maximum
Alkalinity	(mg/L $CaCO_3$)	166	35	80	95	15.27	115	205
Free Chlorine	(mg/L)	199	1.31	2.199	3.08	0.56	4.063	4.46
pH		199	7.16	7.219	7.36	0.10	7.56	7.73
Temp	(°C)	198	17.8	19.07	25.3	3.38	29.92	30.9
Total Aluminium	(mg/L)	169	0	0	0.04	0.03	0.07	0.3
Total Iron	(mg/L)	198	-0.05	0	0.01	0.02	0.07	0.16
Total Manganese	(mg/L)	198	-0.28	0	0.002	0.02	0.017	0.042
True Colour	(HU)	198	0	0	0	0.36	0	5
Turbidity	(NTU)	199	0.03	0.069	0.1	0.06	0.181	0.7
UVA		196	0	0.015	0.0295	0.02	0.05	0.22

Clermont Reticulation

Table 8 Clermont - Verification Monitoring (Reticulation)

Parameter	Count	Minimum	5th%ile	Median	Std Dev	95th%ile	Maximum
2.3.4.6-tetrachlorophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
2.4.5-Trichlorophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
2.4.6-Trichlorophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
2.4-Dichlorophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
2.4-Dimethylphenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
2.4-Dinitrophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
2.6-Dichlorophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
2-Chlorophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
2-Methylphenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
2-Nitrophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
3- & 4-Methylphenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
4.4`.DDD (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
4.4`-DDE (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
4.4`-DDT (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
4.6-Dinitro-2-methylphenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05

Parameter	Count	Minimum	5th%ile	Median	Std Dev	95th%ile	Maximum
4-Chloro-3-Methylphenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
4-Nitrophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
Acenaphthene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Acenaphthylene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Aldrin (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Aldrin and Dieldrin (µg/L)	3	0.00	0.00	0.01	0.02	0.03	0.03
Alkalinity (mg/L)	12	69.64	70.09	87.76	10.69	101.94	103.19
Alpha-BHC (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Aluminium (Total) (µg/L)	39	2.50	14.41	39.40	66.11	93.60	426.30
Ametryn (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Ammonia (mg/L)	3	0.00	0.00	0.00	0.00	0.00	0.00
Anthracene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Arsenic (Total) (µg/L)	4	0.50	0.50	0.50	0.00	0.50	0.50
Atrazine (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Azinophos methyl (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Barium (Total) (µg/L)	1	34.85	34.85	34.85		34.85	34.85
Benz(a)anthracene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Benzo(a)pyrene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Benzo(b)fluoranthene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Benzo(g.h.i)perylene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Benzo(k)fluoranthene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Beryllium (Total) (µg/L)	1	0.25	0.25	0.25		0.25	0.25
Beta-BHC (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Bicarbonate (mg/L)	12	82.00	82.55	106.50	14.02	123.35	125.00
Boron (Total) (µg/L)	3	26.40	26.53	27.75	5.46	35.59	36.46
Bromacil (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Bromate (µg/L)	9	10.00	10.00	10.00	0.00	10.00	10.00
Bromide (mg/L)	2	0.20	0.20	0.20	0.00	0.20	0.20
Bromodichloromethane^ (µg/L)	9	18.05	18.66	23.48	12.19	46.67	49.05
Bromoform^ (µg/L)	9	2.50	2.50	2.50	0.00	2.50	2.50
Cadmium (Total) (µg/L)	4	0.05	0.05	0.05	0.00	0.05	0.05
Calcium (Total) (mg/L)	12	12.08	13.81	19.06	4.80	27.27	30.65
Carbonate (mg/L)	12	0.10	0.10	0.10	0.07	0.25	0.30
Chlorate (µg/L)	9	10.00	10.00	10.00	0.00	10.00	10.00
Chlordane cis (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Chlordane trans (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Chloride (mg/L)	2	56.35	56.63	59.13	3.93	61.63	61.91
Chlorite (µg/L)	9	10.00	10.00	10.00	0.00	10.00	10.00
Chloroform^ (µg/L)	9	19.93	22.87	31.21	33.82	103.18	116.93
Chlorpyrifos (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Chromium (Total) (µg/L)	4	0.05	0.05	0.05	0.03	0.11	0.12
Chrysene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Colour - True (TCU)	12	0.50	0.50	0.50	1.44	4.00	4.00
Conductivity (µS/cm)	39	288.50	289.93	349.60	38.68	393.16	455.50
Copper (Total) (µg/L)	6	1.38	1.39	1.52	0.26	1.98	2.03
Cyanobacteria Total Cells (cells/mL)	3	0.00	0.00	0.00	0.00	0.00	0.00
Cylindrospermopsin (CYN) Æ (µg/L)	7	0.10	0.10	0.10	0.00	0.10	0.10

Parameter	Count	Minimum	5th%ile	Median	Std Dev	95th%ile	Maximum
delta-BHC (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Diatom Total Cells (cells/mL)	3	0.00	0.00	0.00	0.00	0.00	0.00
Diazinon (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Dibenz(a.h)anthracene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Dibromochloromethane^ (µg/L)	9	12.39	12.57	15.76	4.46	23.36	23.46
Dichlorvos (µg/L)	3	0.00	0.05	0.50	0.29	0.50	0.50
Dieldrin (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Dimethoate (µg/L)	3	0.00	0.05	0.50	0.29	0.50	0.50
Dinoseb (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
Dissolved Oxygen (% Sat)	9	71.60	72.20	82.90	6.57	87.66	87.70
Diuron (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
E. coli (MPN/100mL)	36	0.00	0.00	0.00	0.00	0.00	0.00
Endosulphan (alpha + beta + sulphate) (µg/L)	3	0.00	0.00	0.01	0.03	0.05	0.05
Endosulphan alpha (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Endosulphan beta (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Endosulphan Sulphate (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Endrin (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Endrin aldehyde (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Endrin ketone (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Ethion (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Flagellates Total Cells (cells/mL)	3	0.00	0.00	0.00	0.00	0.00	0.00
Fluoranthene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Fluorene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Fluoride (mg/L)	12	0.05	0.05	0.05	0.03	0.10	0.16
Formaldehyde (mg/L)	3	0.05	0.05	0.05	0.09	0.19	0.20
Free Carbon Dioxide (mg/L)	12	3.50	3.89	5.85	1.38	7.94	8.60
Free Chlorine Residual (Client tested) (mg/L)	36	1.10	1.24	1.76	0.42	2.57	2.60
Geosmin (ng/L)	9	1.00	1.00	1.00	7.14	15.40	23.00
Green Algae Total Cells (cells/mL)	3	0.00	0.00	0.00	0.00	0.00	0.00
Gross alpha (Bq/L)	1	0.03	0.03	0.03		0.03	0.03
Gross beta (Bq/L)	1	0.12	0.12	0.12		0.12	0.12
Hardness (mg/L)	12	58.00	63.50	78.00	18.23	112.25	126.00
Heptachlor (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Heptachlor Epoxide (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Hexazinone (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Hydroxide (mg/L)	12	0.05	0.05	0.05	0.00	0.05	0.05
Indeno(1.2.3.cd)pyrene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Iodide (µg/L)	1	10.00	10.00	10.00		10.00	10.00
Iron (Total) (µg/L)	39	1.00	1.00	2.51	6.73	15.29	32.00
Lead (Total) (µg/L)	4	0.25	0.25	0.25	0.00	0.25	0.25
Lindane (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Magnesium (Total) (mg/L)	12	6.61	6.66	7.51	1.62	10.74	12.13
Malathion (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Manganese (Total) (µg/L)	39	0.50	0.50	0.50	2.12	3.62	10.42
Mercury (Total) (µg/L)	4	0.25	0.25	0.25	0.00	0.25	0.25
Methamidophos (µg/L)	3	0.00	0.05	0.50	0.29	0.50	0.50
Methidathion (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03

Parameter	Count	Minimum	5th%ile	Median	Std Dev	95th%ile	Maximum
Methoxychlor (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Methyl Isoborneol (ng/L)	9	1.00	1.00	1.00	5.98	13.40	19.00
Metolachlor (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Metribuzin (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Molybdenum (Total) (µg/L)	1	0.50	0.50	0.50		0.50	0.50
Naphthalene (µg/L)	3	0.00	0.00	0.01	0.03	0.05	0.05
Naphthalene, 1-methyl- (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Naphthalene, 2-methyl- (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Nickel (Total) (µg/L)	4	0.25	0.25	0.25	0.00	0.25	0.25
Nitrate (mg/L)	12	0.15	0.30	0.56	0.17	0.76	0.78
Nitrite (mg/L)	12	0.20	0.20	0.20	0.00	0.20	0.20
Omethoate (µg/L)	3	0.00	0.05	0.50	0.29	0.50	0.50
Pentachlorophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
pH (Client tested) (pH unit)	43	7.10	7.21	7.38	0.10	7.51	7.54
pH (pH unit)	3	7.60	7.61	7.65	0.08	7.75	7.76
Phenanthrene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Phenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
Phosphate (mg/L)	2	0.25	0.25	0.25	0.00	0.25	0.25
Pirimiphos methyl (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Potassium (Total) (mg/L)	3	4.19	4.21	4.38	0.33	4.78	4.82
Profenofos (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Prometryn (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Propazine (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Propyzamide (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Prothiofos (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Pyrazophos (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Pyrene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Selenium (Total) (µg/L)	4	2.50	2.50	2.50	0.00	2.50	2.50
Silver (Total) (µg/L)	1	0.05	0.05	0.05		0.05	0.05
Simazine (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Sodium (Total) (mg/L)	3	28.65	29.38	36.00	10.60	48.19	49.55
Sulphate (mg/L)	2	4.05	4.05	4.08	0.04	4.11	4.11
Sulphide (mg/L)	3	0.00	0.00	0.00	0.00	0.01	0.01
Tebuthiuron (µg/L)	3	0.00	0.00	0.03	0.11	0.19	0.21
Terbutryn (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Tin (Total) (µg/L)	1	12.69	12.69	12.69		12.69	12.69
Tolclofos-methyl (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Total Dissolved Solids (mg/L)	39	173.00	174.00	210.00	23.24	235.90	273.00
Total Saxitoxins Æ (µg/L)	7	1.00	1.00	1.00	0.00	1.00	1.00
Trifluralin (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Trihalomethanes (Total)^ (µg/L)	9	54.76	57.41	73.63	49.29	173.84	188.79
Turbidity (Client tested) (NTU)	36	0.05	0.05	0.05	0.08	0.18	0.51
Turbidity (NTU)	3	0.05	0.07	0.26	0.19	0.41	0.42
Uranium (Total) (µg/L)	1	0.25	0.25	0.25		0.25	0.25
Zinc (Total) (µg/L)	6	0.50	0.70	1.55	0.56	1.99	2.00

Table 9 Clermont - *E. coli* Compliance

Financial year	2023-2024

Month	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
No. of samples collected	8	10	8	8	10	8	10	8	11	12	16	12
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 months	105	104	104	104	104	104	106	106	107	111	117	121
No. of failures in previous 12 months	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	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

DYSART SUPPLY SYSTEM

Table 10 Dysart Operator Tested Water Quality (Treatment Plant)

Parameter	Units	Count	Minimum	5th%ile	Median	Std Dev	95th%ile	Maximum
Alkalinity	(mg/L $CaCO_3$)	154	0.008	77.9	105	19.83	130	148
Free Chlorine	(mg/L)	354	0.98	1.28	1.81	0.37	2.4435	3.47
Hardness	(mg/L $CaCO_3$)	154	60.4	72.815	100	12.46	115	135
pH		355	6.71	6.91	7.24	0.22	7.69	7.82
Temp	(°C)	21	23.2	23.9	26.6	1.99	31.1	31.9
Total Al	(mg/L)	174	0	0.00965	0.02	7.11	20.035	22.3
Total Iron	(mg/L)	297	0	0	0.01	0.02	0.020	0.2
Total Mn	(mg/L)	296	0	0	0.001	0.00	0.006	0.018
True Colour	(HU)	354	0	0	0	0.45	1	4
Turbidity (Lab)	(NTU)	354	0	0.088	0.128	0.05	0.24675	0.434
UVA		259	0.009	0.014	0.021	0.005	0.031	0.038

Dysart Reticulation

Table 11 Dysart - Verification Monitoring (Reticulation)

Parameter	Count	Minimum	5th%ile	Median	Std Dev	95th%ile	Maximum
2.3.4.6-tetrachlorophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
2.4.5-Trichlorophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
2.4.6-Trichlorophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
2.4-Dichlorophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
2.4-Dimethylphenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
2.4-Dinitrophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
2.6-Dichlorophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
2-Chlorophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
2-Methylphenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
2-Nitrophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
3- & 4-Methylphenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
4.4`.DDD (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
4.4`-DDE (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
4.4`-DDT (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03

Parameter	Count	Minimum	5th%ile	Median	Std Dev	95th%ile	Maximum
4.6-Dinitro-2-methylphenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
4-Chloro-3-Methylphenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
4-Nitrophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
Acenaphthene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Acenaphthylene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Aldrin (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Aldrin and Dieldrin (µg/L)	3	0.00	0.00	0.01	0.02	0.03	0.03
Alkalinity (mg/L)	12	69.60	69.90	92.03	38.60	157.73	213.09
Alpha-BHC (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Aluminium (Total) (µg/L)	39	2.50	2.50	38.07	36.57	76.53	235.33
Ametryn (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Ammonia (mg/L)	3	0.00	0.00	0.00	0.00	0.01	0.01
Anthracene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Antimony (Total) (µg/L)	3	0.25	0.25	0.25	0.00	0.25	0.25
Arsenic (Total) (µg/L)	4	0.50	0.50	0.50	0.00	0.50	0.50
Atrazine (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Azinophos methyl (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Barium (Total) (µg/L)	4	38.87	39.10	42.02	4.85	48.89	49.82
Benz(a)anthracene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Benzo(a)pyrene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Benzo(b)fluoranthene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Benzo(g.h.i)perylene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Benzo(k)fluoranthene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Beryllium (Total) (µg/L)	4	0.25	0.25	0.25	0.00	0.25	0.25
Beta-BHC (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Bicarbonate (mg/L)	11	85.00	85.00	108.00	47.09	194.00	251.00
Boron (Total) (µg/L)	6	30.07	32.10	44.78	12.32	61.90	66.68
Bromacil (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Bromate (µg/L)	10	10.00	10.00	10.00	0.00	10.00	10.00
Bromide (mg/L)	5	0.20	0.20	0.20	0.00	0.20	0.20
Bromodichloromethane^ (µg/L)	9	12.11	12.34	16.05	5.86	26.48	28.83
Bromoform^ (µg/L)	9	2.50	2.50	2.50	2.68	8.75	9.36
Cadmium (Total) (µg/L)	4	0.05	0.05	0.05	0.00	0.05	0.05
Calcium (Total) (mg/L)	12	13.10	14.77	24.45	5.15	28.14	29.95
Carbonate (mg/L)	11	0.05	0.08	0.10	0.07	0.25	0.30
Chlorate (µg/L)	10	10.00	10.00	10.00	0.00	10.00	10.00
Chlordane cis (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Chlordane trans (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Chloride (mg/L)	5	19.88	20.52	34.76	23.11	70.61	74.25
Chlorite (µg/L)	10	10.00	10.00	10.00	0.00	10.00	10.00
Chloroform^ (µg/L)	9	2.50	5.26	14.43	8.45	28.96	30.91
Chlorpyrifos (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Chromium (Total) (µg/L)	4	0.05	0.05	0.05	0.00	0.05	0.05
Chrysene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Cobalt (Total) (µg/L)	3	0.10	0.10	0.10	0.00	0.10	0.10
Colour - True (TCU)	12	0.50	0.50	0.50	1.19	3.45	4.00
Conductivity (µS/cm)	39	223.70	266.72	419.00	84.15	495.00	681.10

Parameter	Count	Minimum	5th%ile	Median	Std Dev	95th%ile	Maximum
Copper (Total) (µg/L)	6	3.80	3.82	10.62	5.14	15.55	15.95
Cyanobacteria Total Cells (cells/mL)	3	0.00	0.00	0.00	0.00	0.00	0.00
Cylindrospermopsin (CYN) Æ (µg/L)	3	0.10	0.10	0.10	0.00	0.10	0.10
delta-BHC (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Diatom Total Cells (cells/mL)	3	0.00	0.00	0.00	0.00	0.00	0.00
Diazinon (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Dibenz(a.h)anthracene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Dibromochloromethane^ (µg/L)	9	11.35	11.42	15.45	6.48	26.94	27.04
Dichlorvos (µg/L)	3	0.00	0.05	0.50	0.29	0.50	0.50
Dieldrin (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Dimethoate (µg/L)	3	0.00	0.05	0.50	0.29	0.50	0.50
Dinoseb (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
Dissolved Oxygen (% Sat)	9	80.30	80.34	88.30	5.50	94.46	95.50
Diuron (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
E. coli (MPN/100mL)	36	0.00	0.00	0.00	0.00	0.00	0.00
Endosulphan (alpha + beta + sulphate) (µg/L)	3	0.00	0.00	0.01	0.03	0.05	0.05
Endosulphan alpha (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Endosulphan beta (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Endosulphan Sulphate (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Endrin (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Endrin aldehyde (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Endrin ketone (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Ethion (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Flagellates Total Cells (cells/mL)	3	0.00	0.00	0.00	0.00	0.00	0.00
Fluoranthene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Fluorene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Fluoride (mg/L)	12	0.05	0.05	0.05	0.00	0.05	0.05
Formaldehyde (mg/L)	3	0.05	0.05	0.05	0.09	0.19	0.20
Free Carbon Dioxide (mg/L)	11	4.50	4.55	8.20	5.68	18.95	24.50
Free Chlorine Residual (Client tested) (mg/L)	37	1.22	1.39	1.67	0.26	2.18	2.51
Geosmin (ng/L)	9	1.00	1.00	1.00	1.00	2.80	4.00
Green Algae Total Cells (cells/mL)	3	0.00	0.00	0.00	0.00	0.00	0.00
Gross alpha (Bq/L)	1	0.03	0.03	0.03	#NUM!	0.03	0.03
Gross beta (Bq/L)	1	0.19	0.19	0.19	#NUM!	0.19	0.19
Hardness (mg/L)	12	54.00	62.80	103.50	22.30	124.00	135.00
Heptachlor (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Heptachlor Epoxide (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Hexazinone (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Hydroxide (mg/L)	11	0.05	0.05	0.05	0.00	0.05	0.05
Indeno(1.2.3.cd)pyrene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Iodide (µg/L)	1	10.00	10.00	10.00	#NUM!	10.00	10.00
Iron (Total) (µg/L)	39	1.00	1.00	1.00	4.66	13.47	22.82
Lead (Total) (µg/L)	4	0.25	0.25	0.25	0.16	0.52	0.56
Lindane (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Magnesium (Total) (mg/L)	12	5.19	6.37	10.84	2.49	13.03	14.66
Malathion (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Manganese (Total) (µg/L)	39	0.50	0.50	0.50	1.48	3.47	8.04

Parameter	Count	Minimum	5th%ile	Median	Std Dev	95th%ile	Maximum
Mercury (Total) (µg/L)	4	0.25	0.25	0.25	0.00	0.25	0.25
Methamidophos (µg/L)	3	0.00	0.05	0.50	0.29	0.50	0.50
Methidathion (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Methoxychlor (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Methyl Isoborneol (ng/L)	9	1.00	1.00	1.00	4.27	10.00	14.00
Metolachlor (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Metribuzin (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Molybdenum (Total) (µg/L)	4	0.50	0.50	0.50	0.00	0.50	0.50
Naphthalene (µg/L)	3	0.00	0.00	0.01	0.03	0.05	0.05
Naphthalene, 1-methyl- (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Naphthalene, 2-methyl- (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Nickel (Total) (µg/L)	4	0.25	0.25	0.25	0.19	0.57	0.63
Nitrate (mg/L)	12	0.15	0.15	0.72	0.32	1.06	1.06
Nitrite (mg/L)	12	0.20	0.20	0.20	0.11	0.36	0.57
Omethoate (µg/L)	3	0.00	0.05	0.50	0.29	0.50	0.50
Pentachlorophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
pH (Client tested) (pH unit)	44	6.95	7.03	7.25	0.21	7.70	7.72
pH (pH unit)	3	7.31	7.33	7.54	0.14	7.56	7.56
Phenanthrene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Phenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
Phosphate (mg/L)	5	0.25	0.25	0.25	0.00	0.25	0.25
Pirimiphos methyl (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Potassium (Total) (mg/L)	3	5.31	5.46	6.82	0.94	7.02	7.04
Profenofos (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Prometryn (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Propazine (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Propyzamide (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Prothiofos (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Pyrazophos (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Pyrene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Selenium (Total) (µg/L)	4	2.50	2.50	2.50	0.00	2.50	2.50
Silver (Total) (µg/L)	4	0.05	0.05	0.05	0.16	0.32	0.37
Simazine (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Sodium (Total) (mg/L)	3	9.58	11.05	24.25	11.66	31.79	32.63
Strontium (Total) (µg/L)	3	191.02	197.51	255.85	62.08	309.22	315.15
Sulphate (mg/L)	5	2.82	3.05	5.77	8.54	20.44	23.70
Sulphide (mg/L)	3	0.00	0.00	0.00	0.01	0.01	0.01
Tebuthiuron (µg/L)	3	0.00	0.00	0.03	0.29	0.46	0.51
Terbutryn (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Thallium (Total) (µg/L)	3	0.25	0.25	0.25	0.00	0.25	0.25
Tin (Total) (µg/L)	4	0.50	2.11	13.19	9.36	21.83	23.02
Titanium (Total) (µg/L)	3	0.25	0.33	1.00	1.08	2.25	2.39
Tolclofos-methyl (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Total Dissolved Solids (mg/L)	39	134.00	160.20	251.00	50.49	296.60	409.00
Total Saxitoxins Æ (µg/L)	3	1.00	1.00	1.00	0.00	1.00	1.00
Trifluralin (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Trihalomethanes (Total)^ (µg/L)	9	33.14	34.77	49.32	17.99	77.87	81.52

Parameter	Count	Minimum	5th%ile	Median	Std Dev	95th%ile	Maximum
Turbidity (Client tested) (NTU)	37	0.05	0.05	0.11	0.04	0.17	0.18
Turbidity (NTU)	3	0.05	0.06	0.17	0.08	0.20	0.20
Uranium (Total) (µg/L)	4	0.25	0.25	0.25	0.00	0.25	0.25
Vanadium (Total) (µg/L)	3	0.34	0.35	0.41	0.22	0.72	0.76
Zinc (Total) (µg/L)	6	2.02	3.30	11.50	5.78	17.29	17.96

Table 12 Dysart *E. coli* Compliance

Financial year	2023-2024

Month	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
No. of samples collected	8	10	8	8	10	8	10	8	12	12	15	12
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 months	106	100	102	104	104	104	106	106	108	112	117	121
No. of failures in previous 12 months	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	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

GLENDEN SUPPLY SYSTEM

Table 13 Glenden Operator Tested Water Quality (Treatment Plant)

Parameter	Units	Count	Minimum	5th%ile	Median	Std Dev	95th%ile	Maximum
Alkalinity	(mg/L $CaCO_3$)	355	25	40	55	12.92	80	105
Free Chlorine	(mg/L)	364	0.5	1	1.3	0.28	1.8485	1.98
pH		364	6.85	7	7.15	0.11	7.30	7.55
Total Al	(mg/L)	334	0	0.01	0.03	0.02	0.06	0.09
Total Iron	(mg/L)	341	0	0	0	0.01	0.02	0.04
Total Manganese	(mg/L)	333	0	0	0.003	0.00	0.008	0.05
True Colour	(HU)	361	0	0	0	2.61	5	10
Turbidity	(NTU)	363	0.004	0.01	0.01	0.06	0.16	0.46
UVA		53	0	0	0.006	0.00	0.0144	0.019

Glenden Reticulation

Table 14 Glenden – Verification data (Reticulation)

Parameter	Count	Minimum	5th%ile	Median	Std Dev	95th%ile	Maximum
2.3.4.6-tetrachlorophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
2.4.5-Trichlorophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
2.4.6-Trichlorophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
2.4-Dichlorophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
2.4-Dimethylphenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
2.4-Dinitrophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
2.6-Dichlorophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
2-Chlorophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
2-Methylphenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05

Parameter	Count	Minimum	5th%ile	Median	Std Dev	95th%ile	Maximum
2-Nitrophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
3- & 4-Methylphenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
4.4`.DDD (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
4.4`-DDE (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
4.4`-DDT (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
4.6-Dinitro-2-methylphenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
4-Chloro-3-Methylphenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
4-Nitrophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
Acenaphthene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Acenaphthylene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Aldrin (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Aldrin and Dieldrin (µg/L)	3	0.00	0.00	0.01	0.02	0.03	0.03
Alkalinity (mg/L)	12	34.79	41.28	54.17	9.57	68.15	70.60
Alpha-BHC (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Aluminium (Total) (µg/L)	39	2.50	5.40	29.52	78.02	115.99	488.75
Ametryn (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Ammonia (mg/L)	3	0.00	0.00	0.00	0.00	0.00	0.00
Anthracene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Arsenic (Total) (µg/L)	4	0.50	0.50	0.50	0.00	0.50	0.50
Atrazine (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Azinophos methyl (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Barium (Total) (µg/L)	1	19.52	19.52	19.52		19.52	19.52
Benz(a)anthracene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Benzo(a)pyrene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Benzo(b)fluoranthene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Benzo(g.h.i)perylene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Benzo(k)fluoranthene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Beryllium (Total) (µg/L)	1	0.25	0.25	0.25		0.25	0.25
Beta-BHC (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Bicarbonate (mg/L)	12	42.00	49.15	64.50	12.07	83.25	86.00
Boron (Total) (µg/L)	3	11.55	11.98	15.85	3.73	18.67	18.98
Bromacil (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Bromate (µg/L)	10	10.00	10.00	10.00	0.00	10.00	10.00
Bromide (mg/L)	2	0.20	0.20	0.20	0.00	0.20	0.20
Bromodichloromethane^ (µg/L)	9	9.59	9.91	11.75	6.61	25.01	26.60
Bromoform^ (µg/L)	9	2.50	2.50	2.50	0.00	2.50	2.50
Cadmium (Total) (µg/L)	4	0.05	0.05	0.05	0.00	0.05	0.05
Calcium (Total) (mg/L)	12	9.51	12.78	19.57	4.28	24.25	24.48
Carbonate (mg/L)	12	0.05	0.05	0.05	0.02	0.10	0.10
Chlorate (µg/L)	11	120.59	132.58	233.27	208.15	657.83	748.96
Chlordane cis (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Chlordane trans (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Chloride (mg/L)	2	19.07	19.08	19.23	0.23	19.38	19.39
Chlorite (µg/L)	10	10.00	10.00	10.00	0.00	10.00	10.00
Chloroform^ (µg/L)	9	12.92	13.36	17.05	32.11	89.99	97.24
Chlorpyrifos (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Chromium (Total) (µg/L)	4	0.05	0.05	0.09	0.05	0.14	0.14

Parameter	Count	Minimum	5th%ile	Median	Std Dev	95th%ile	Maximum
Chrysene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Colour - True (TCU)	12	0.50	0.50	0.50	1.03	2.90	4.00
Conductivity (µS/cm)	39	180.60	201.71	229.00	22.95	264.10	265.00
Copper (Total) (µg/L)	6	5.01	5.03	5.40	1.05	7.35	7.51
Cyanobacteria Total Cells (cells/mL)	3	0.00	0.00	0.00	0.00	0.00	0.00
delta-BHC (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Diatom Total Cells (cells/mL)	3	0.00	0.00	0.00	0.00	0.00	0.00
Diazinon (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Dibenz(a.h)anthracene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Dibromochloromethane^ (µg/L)	9	5.46	5.50	6.78	1.27	8.72	8.75
Dichlorvos (µg/L)	3	0.00	0.05	0.50	0.29	0.50	0.50
Dieldrin (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Dimethoate (µg/L)	3	0.00	0.05	0.50	0.29	0.50	0.50
Dinoseb (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
Dissolved Oxygen (% Sat)	9	80.40	82.44	91.40	5.25	95.06	95.10
Diuron (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
E. coli (MPN/100mL)	36	0.00	0.00	0.00	0.00	0.00	0.00
Endosulphan (alpha + beta + sulphate) (µg/L)	3	0.00	0.00	0.01	0.03	0.05	0.05
Endosulphan alpha (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Endosulphan beta (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Endosulphan Sulphate (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Endrin (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Endrin aldehyde (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Endrin ketone (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Ethion (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Flagellates Total Cells (cells/mL)	3	0.00	0.00	0.00	0.00	0.00	0.00
Fluoranthene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Fluorene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Fluoride (mg/L)	12	0.05	0.05	0.05	0.00	0.05	0.05
Formaldehyde (mg/L)	3	0.05	0.05	0.05	0.09	0.19	0.20
Free Carbon Dioxide (mg/L)	12	3.50	3.61	7.75	2.23	9.57	9.90
Free Chlorine Residual (Client tested) (mg/L)	36	1.01	1.05	1.34	0.23	1.79	1.90
Geosmin (ng/L)	9	1.00	1.00	1.00	1.22	3.60	4.00
Green Algae Total Cells (cells/mL)	3	0.00	0.00	0.00	0.00	0.00	0.00
Gross alpha (Bq/L)	1	0.03	0.03	0.03		0.03	0.03
Gross beta (Bq/L)	1	0.05	0.05	0.05		0.05	0.05
Hardness (mg/L)	12	36.00	43.70	64.50	13.88	83.35	85.00
Heptachlor (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Heptachlor Epoxide (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Hexazinone (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Hydroxide (mg/L)	12	0.05	0.05	0.05	0.00	0.05	0.05
Indeno(1.2.3.cd)pyrene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Iodide (µg/L)	1	10.00	10.00	10.00		10.00	10.00
Iron (Total) (µg/L)	39	1.00	1.00	7.81	7.78	21.55	37.58
Lead (Total) (µg/L)	4	0.25	0.25	0.25	0.00	0.25	0.25
Lindane (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Magnesium (Total) (mg/L)	12	2.76	2.84	4.07	0.90	5.57	5.73

Parameter	Count	Minimum	5th%ile	Median	Std Dev	95th%ile	Maximum
Malathion (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Manganese (Total) (µg/L)	39	0.50	1.02	2.41	4.15	12.62	19.13
Mercury (Total) (µg/L)	4	0.25	0.25	0.25	0.00	0.25	0.25
Methamidophos (µg/L)	3	0.00	0.05	0.50	0.29	0.50	0.50
Methidathion (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Methoxychlor (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Methyl Isoborneol (ng/L)	9	1.00	1.00	1.00	2.92	7.20	10.00
Metolachlor (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Metribuzin (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Molybdenum (Total) (µg/L)	1	0.50	0.50	0.50		0.50	0.50
Naphthalene (µg/L)	3	0.00	0.00	0.01	0.03	0.05	0.05
Naphthalene, 1-methyl- (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Naphthalene, 2-methyl- (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Nickel (Total) (µg/L)	4	0.25	0.25	0.25	1.03	2.00	2.30
Nitrate (mg/L)	12	0.15	0.15	0.51	0.25	0.80	0.85
Nitrite (mg/L)	12	0.20	0.20	0.20	0.00	0.20	0.20
Omethoate (µg/L)	3	0.00	0.05	0.50	0.29	0.50	0.50
Pentachlorophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
pH (Client tested) (pH unit)	43	6.95	7.00	7.15	0.11	7.30	7.45
pH (pH unit)	3	7.27	7.29	7.43	0.10	7.44	7.44
Phenanthrene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Phenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
Phosphate (mg/L)	2	0.25	0.25	0.25	0.00	0.25	0.25
Pirimiphos methyl (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Potassium (Total) (mg/L)	3	1.19	1.22	1.53	0.22	1.60	1.61
Profenofos (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Prometryn (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Propazine (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Propyzamide (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Prothiofos (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Pyrazophos (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Pyrene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Selenium (Total) (µg/L)	4	2.50	2.50	2.50	0.00	2.50	2.50
Silver (Total) (µg/L)	1	0.05	0.05	0.05		0.05	0.05
Simazine (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Sodium (Total) (mg/L)	3	13.26	13.32	13.91	3.99	19.82	20.48
Sulphate (mg/L)	2	21.75	21.85	22.69	1.33	23.54	23.64
Sulphide (mg/L)	3	0.00	0.00	0.00	0.01	0.01	0.01
Tebuthiuron (µg/L)	3	0.00	0.00	0.03	0.07	0.13	0.14
Terbutryn (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Tin (Total) (µg/L)	1	16.11	16.11	16.11		16.11	16.11
Tolclofos-methyl (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Total Dissolved Solids (mg/L)	39	108.00	120.80	137.00	13.83	158.10	159.00
Trifluralin (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Trihalomethanes (Total)^ (µg/L)	9	29.47	30.15	38.31	38.74	122.11	131.26
Turbidity (Client tested) (NTU)	36	0.05	0.05	0.05	0.06	0.16	0.40
Turbidity (NTU)	3	0.18	0.19	0.25	0.06	0.29	0.29

Parameter	Count	Minimum	5th%ile	Median	Std Dev	95th%ile	Maximum
Uranium (Total) (µg/L)	1	0.25	0.25	0.25		0.25	0.25
Zinc (Total) (µg/L)	6	1.71	2.00	3.20	2.37	7.37	7.55

Table 15 Glenden *E. coli* Compliance

Year	2023-2024

Month	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
No. of samples collected	8	10	8	8	10	8	10	7	8	8	10	8
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 months	98	98	100	104	106	104	106	105	103	103	103	103
No. of failures in previous 12 months	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	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

MIDDLEMOUNT SUPPLY SYSTEM

Table 16 Middlemount Operator Tested Water Quality (Treatment Plant)

Parameter	Units	Count	Minimum	5th%ile	Median	Std Dev	95th%ile	Maximum
Alkalinity	(mg/L CaCO3)	43	14.8	60.4	105	32.03	134.5	218
Free Chlorine	(mg/L)	347	1.45	1.989	2.94	0.49	3.67	4.23
Hardness	(mg/L CaCO3)	43	9.2	17.18	70	31.83	111.8	124
pH		351	6.88	7.02	7.47	0.28	7.86	8.05
Total Aluminium	(mg/L)	38	0	0	0.023	0.023	0.05	0.11
Total Iron	(mg/L)	342	0	0	0.01	0.02	0.03	0.3
Total Manganese	(mg/L)	334	0	0	0.017	0.01	0.03435	0.084
True Colour	(HU)	348	0	0	0	0.68	0	12
Turbidity (Lab)	(NTU)	351	0.027	0.12	0.21	0.07	0.35	0.53
UVA		197	0.023	0.0538	0.072	0.06	0.0882	0.93

Middlemount Reticulation

Table 17 Middlemount - Verification data (Reticulation)

Parameter	Count	Minimum	5th%ile	Median	Std Dev	95th%ile	Maximum
2.3.4.6-tetrachlorophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
2.4.5-Trichlorophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
2.4.6-Trichlorophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
2.4-Dichlorophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
2.4-Dimethylphenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
2.4-Dinitrophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
2.6-Dichlorophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
2-Chlorophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
2-Methylphenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
2-Nitrophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05

Parameter	Count	Minimum	5th%ile	Median	Std Dev	95th%ile	Maximum
3- & 4-Methylphenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
4.4`.DDD (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
4.4`-DDE (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
4.4`-DDT (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
4.6-Dinitro-2-methylphenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
4-Chloro-3-Methylphenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
4-Nitrophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
Acenaphthene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Acenaphthylene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Aldrin (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Aldrin and Dieldrin (µg/L)	3	0.00	0.00	0.01	0.02	0.03	0.03
Alkalinity (mg/L)	12	57.07	57.60	100.57	36.35	168.69	171.56
Alpha-BHC (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Aluminium (Total) (µg/L)	39	2.50	2.50	15.52	11.05	29.85	65.01
Ametryn (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Ammonia (mg/L)	3	0.00	0.00	0.00	0.00	0.00	0.01
Anthracene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Arsenic (Total) (µg/L)	4	0.50	0.50	0.50	0.35	1.09	1.19
Atrazine (µg/L)	3	0.00	0.00	0.03	0.56	0.89	0.99
Azinophos methyl (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Barium (Total) (µg/L)	1	46.67	46.67	46.67		46.67	46.67
Benz(a)anthracene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Benzo(a)pyrene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Benzo(b)fluoranthene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Benzo(g.h.i)perylene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Benzo(k)fluoranthene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Beryllium (Total) (µg/L)	1	0.25	0.25	0.25		0.25	0.25
Beta-BHC (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Bicarbonate (mg/L)	12	69.00	70.10	120.00	43.24	201.30	209.00
Boron (Total) (µg/L)	3	36.07	36.36	39.00	7.13	48.55	49.61
Bromacil (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Bromate (µg/L)	9	10.00	10.00	10.00	0.00	10.00	10.00
Bromide (mg/L)	2	0.20	0.20	0.20	0.00	0.20	0.20
Bromodichloromethane^ (µg/L)	9	12.64	14.35	21.36	8.52	37.11	37.73
Bromoform^ (µg/L)	9	2.50	2.50	2.50	1.49	5.91	6.48
Cadmium (Total) (µg/L)	4	0.05	0.05	0.05	0.00	0.05	0.05
Calcium (Total) (mg/L)	12	8.58	11.23	23.44	6.99	28.40	29.69
Carbonate (mg/L)	12	0.05	0.08	0.25	0.18	0.54	0.70
Chlorate (µg/L)	9	10.00	10.00	10.00	0.00	10.00	10.00
Chlordane cis (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Chlordane trans (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Chloride (mg/L)	2	14.91	17.31	38.92	33.96	60.53	62.93
Chlorite (µg/L)	9	10.00	10.00	10.00	0.00	10.00	10.00
Chloroform^ (µg/L)	9	12.37	12.74	26.40	30.19	84.39	86.88
Chlorpyrifos (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Chromium (Total) (µg/L)	4	0.05	0.05	0.05	0.10	0.21	0.24
Chrysene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01

Parameter	Count	Minimum	5th%ile	Median	Std Dev	95th%ile	Maximum
Colour - True (TCU)	13	0.50	0.50	1.00	0.80	2.40	3.00
Conductivity (µS/cm)	39	167.00	182.53	418.00	110.57	494.63	574.30
Copper (Total) (µg/L)	6	20.78	22.10	27.35	4.87	34.06	34.71
Cyanobacteria Total Cells (cells/mL)	3	0.00	0.00	0.00	0.00	0.00	0.00
Cylindrospermopsin (CYN) Æ (µg/L)	2	0.10	0.10	0.10	0.00	0.10	0.10
delta-BHC (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Diatom Total Cells (cells/mL)	3	0.00	0.00	0.00	0.00	0.00	0.00
Diazinon (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Dibenz(a.h)anthracene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Dibromochloromethane^ (µg/L)	9	2.50	2.50	19.13	10.46	30.74	35.98
Dichlorvos (µg/L)	3	0.00	0.05	0.50	0.29	0.50	0.50
Dieldrin (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Dimethoate (µg/L)	3	0.00	0.05	0.50	0.29	0.50	0.50
Dinoseb (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
Dissolved Oxygen (% Sat)	9	73.40	75.80	97.50	11.56	106.74	109.70
Diuron (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
E. coli (MPN/100mL)	36	0.00	0.00	0.00	0.00	0.00	0.00
Endosulphan (alpha + beta + sulphate) (µg/L)	3	0.00	0.00	0.01	0.03	0.05	0.05
Endosulphan alpha (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Endosulphan beta (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Endosulphan Sulphate (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Endrin (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Endrin aldehyde (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Endrin ketone (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Ethion (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Flagellates Total Cells (cells/mL)	3	0.00	0.00	0.00	0.00	0.00	0.00
Fluoranthene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Fluorene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Fluoride (mg/L)	12	0.05	0.05	0.05	0.00	0.05	0.05
Formaldehyde (mg/L)	3	0.05	0.05	0.05	0.09	0.19	0.20
Free Carbon Dioxide (mg/L)	12	3.10	3.16	4.30	3.87	12.18	16.80
Free Chlorine Residual (Client tested) (mg/L)	37	0.27	1.55	2.67	0.63	3.27	3.50
Geosmin (ng/L)	9	1.00	1.00	1.00	0.67	2.20	3.00
Green Algae Total Cells (cells/mL)	3	0.00	0.00	0.00	0.00	0.00	0.00
Gross alpha (Bq/L)	1	0.03	0.03	0.03		0.03	0.03
Gross beta (Bq/L)	1	0.15	0.15	0.15		0.15	0.15
Hardness (mg/L)	12	45.00	50.50	104.50	32.24	132.35	134.00
Heptachlor (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Heptachlor Epoxide (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Hexazinone (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Hydroxide (mg/L)	12	0.05	0.05	0.05	0.00	0.05	0.05
Indeno(1.2.3.cd)pyrene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Iodide (µg/L)	1	10.00	10.00	10.00		10.00	10.00
Iron (Soluble) (µg/L)	1	1.00	1.00	1.00		1.00	1.00
Iron (Total) (µg/L)	40	1.00	1.00	1.00	4.14	10.99	18.41
Lead (Total) (µg/L)	4	0.25	0.25	0.25	0.00	0.25	0.25
Lindane (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03

Parameter	Count	Minimum	5th%ile	Median	Std Dev	95th%ile	Maximum
Magnesium (Total) (mg/L)	12	4.99	5.28	11.19	3.72	14.76	15.16
Malathion (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Manganese (Soluble) (µg/L)	1	0.50	0.50	0.50		0.50	0.50
Manganese (Total) (µg/L)	40	0.50	0.50	8.31	5.75	16.79	22.07
Mercury (Total) (µg/L)	4	0.25	0.25	0.25	0.00	0.25	0.25
Methamidophos (µg/L)	3	0.00	0.05	0.50	0.29	0.50	0.50
Methidathion (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Methoxychlor (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Methyl Isoborneol (ng/L)	9	1.00	1.00	1.00	0.00	1.00	1.00
Metolachlor (µg/L)	3	0.00	0.00	0.03	0.21	0.35	0.38
Metribuzin (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Molybdenum (Total) (µg/L)	1	0.50	0.50	0.50		0.50	0.50
Naphthalene (µg/L)	3	0.00	0.00	0.01	0.03	0.05	0.05
Naphthalene, 1-methyl- (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Naphthalene, 2-methyl- (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Nickel (Total) (µg/L)	4	1.01	1.02	1.21	0.53	2.05	2.18
Nitrate (mg/L)	12	0.15	0.15	0.54	0.99	2.33	3.75
Nitrite (mg/L)	12	0.20	0.20	0.20	0.00	0.20	0.20
Omethoate (µg/L)	3	0.00	0.05	0.50	0.29	0.50	0.50
Pentachlorophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
pH (Client tested) (pH unit)	44	6.89	7.02	7.59	0.32	7.93	8.05
pH (pH unit)	3	7.52	7.54	7.72	0.14	7.78	7.79
Phenanthrene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Phenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
Phosphate (mg/L)	2	0.25	0.25	0.25	0.00	0.25	0.25
Pirimiphos methyl (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Potassium (Total) (mg/L)	3	6.85	6.87	7.06	0.45	7.65	7.72
Profenofos (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Prometryn (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Propazine (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Propyzamide (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Prothiofos (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Pyrazophos (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Pyrene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Selenium (Total) (µg/L)	4	2.50	2.50	2.50	0.00	2.50	2.50
Silver (Total) (µg/L)	1	0.05	0.05	0.05		0.05	0.05
Simazine (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Sodium (Total) (mg/L)	3	9.12	12.06	38.60	18.96	43.92	44.51
Sulphate (mg/L)	2	3.06	3.34	5.84	3.93	8.34	8.62
Sulphide (mg/L)	3	0.00	0.00	0.00	0.00	0.01	0.01
Tebuthiuron (µg/L)	3	0.00	0.00	0.03	0.28	0.45	0.49
Terbutryn (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Tin (Total) (µg/L)	1	16.40	16.40	16.40		16.40	16.40
Tolclofos-methyl (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Total Dissolved Solids (mg/L)	39	100.00	109.70	251.00	66.42	297.10	345.00
Total Saxitoxins Æ (µg/L)	2	1.00	1.00	1.00	0.00	1.00	1.00
Trifluralin (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03

Parameter	Count	Minimum	5th%ile	Median	Std Dev	95th%ile	Maximum
Trihalomethanes (Total)^ (µg/L)	9	53.42	53.71	77.04	27.83	126.97	136.49
Turbidity (Client tested) (NTU)	37	0.13	0.15	0.21	0.54	0.36	3.48
Turbidity (NTU)	4	0.15	0.16	0.22	0.07	0.31	0.33
Uranium (Total) (µg/L)	1	0.25	0.25	0.25		0.25	0.25
Zinc (Total) (µg/L)	6	4.29	4.61	7.12	2.57	10.79	11.86

Table 18 Middlemount *E. coli* Compliance

Financial year	2023-2024

Month	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
No. of samples collected	8	10	8	8	10	8	10	8	14	16	20	16
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 months	99	99	99	103	103	103	105	105	109	117	128	136
No. of failures in previous 12 months	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	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

MORANBAH SUPPLY SYSTEM

Table 19 Moranbah Operator Tested Water Quality (Treatment Plant)

Parameter	Units	Count	Minimum	5th%ile	Median	Std Dev	95th%ile	Maximum
Alkalinity	(mg/L $CaCO_3$)	34	0	23.25	40	9.24	48.7	51
Free Chlorine	(mg/L)	358	0.05	1.18	1.52	0.23	1.89	2.1
Hardness	(mg/L $CaCO_3$)	34	0	29.85	37	8.21	46.35	52
pH		358	6.61	6.8485	7.19	0.17	7.3715	7.81
Temperature (°C)		356	17.8	19	25.25	3.58	29.5	30.2
Total Aluminium	(mg/L)	48	0	0.00805	0.043	0.06	0.0769	0.41
Total Iron	(mg/L)	38	0	0	0.01	0.01	0.02	0.02
Total Manganese	(mg/L)	320	0	0	0.002	0.00	0.00705	0.017
True Colour	(HU)	355	0	0	0	0.93	0	17
Turbidity (Lab)	(NTU)	357	0	0.1	0.16	0.067	0.25	0.77
UVA		349	0	0.008	0.017	0.02	0.027	0.3
Fluoride	(mg/L)	337	0.044	0.42	0.68	0.13	0.84	0.93

Moranbah Reticulation

Table 20 Moranbah - Verification data (Reticulation)

Parameter	Count	Minimum	5th%ile	Median	Std Dev	95th%ile	Maximum
2.3.4.6-tetrachlorophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
2.4.5-Trichlorophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
2.4.6-Trichlorophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
2.4-Dichlorophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
2.4-Dimethylphenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
2.4-Dinitrophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
2.6-Dichlorophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
2-Chlorophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
2-Methylphenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
2-Nitrophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
3- & 4-Methylphenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
4.4`.DDD (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
4.4`-DDE (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
4.4`-DDT (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
4.6-Dinitro-2-methylphenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
4-Chloro-3-Methylphenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
4-Nitrophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
Acenaphthene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Acenaphthylene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Aldrin (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Aldrin and Dieldrin (µg/L)	3	0.00	0.00	0.01	0.02	0.03	0.03
Alkalinity (mg/L)	12	34.57	34.80	38.70	30.85	102.90	142.57
Alpha-BHC (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Aluminium (Total) (µg/L)	39	2.50	7.20	18.87	75.89	46.84	487.02
Ametryn (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Ammonia (mg/L)	3	0.00	0.00	0.00	0.00	0.00	0.00
Anthracene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Arsenic (Total) (µg/L)	4	0.50	0.50	0.50	0.00	0.50	0.50
Atrazine (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Azinophos methyl (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Barium (Total) (µg/L)	1	25.61	25.61	25.61		25.61	25.61
Benz(a)anthracene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Benzo(a)pyrene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Benzo(b)fluoranthene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Benzo(g.h.i)perylene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Benzo(k)fluoranthene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Beryllium (Total) (µg/L)	1	0.25	0.25	0.25		0.25	0.25
Beta-BHC (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Bicarbonate (mg/L)	12	41.00	41.55	46.50	36.01	121.25	168.00
Boron (Total) (µg/L)	3	17.44	18.13	24.34	4.13	24.76	24.81
Bromacil (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Bromate (µg/L)	9	10.00	10.00	10.00	0.00	10.00	10.00
Bromide (mg/L)	3	0.20	0.20	0.20	0.00	0.20	0.20
Bromodichloromethane^ (µg/L)	9	9.00	9.04	11.11	2.23	14.45	14.76

Parameter	Count	Minimum	5th%ile	Median	Std Dev	95th%ile	Maximum
Bromoform^ (µg/L)	9	2.50	2.50	2.50	0.00	2.50	2.50
Cadmium (Total) (µg/L)	4	0.05	0.05	0.05	0.00	0.05	0.05
Calcium (Total) (mg/L)	12	2.82	3.85	8.45	2.29	10.27	10.56
Carbonate (mg/L)	12	0.05	0.05	0.05	0.05	0.15	0.20
Chlorate (µg/L)	9	10.00	10.00	10.00	0.00	10.00	10.00
Chlordane cis (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Chlordane trans (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Chloride (mg/L)	3	17.38	17.38	17.43	0.79	18.63	18.76
Chlorite (µg/L)	9	10.00	10.00	10.00	0.00	10.00	10.00
Chloroform^ (µg/L)	9	19.97	21.32	26.70	5.93	37.47	39.65
Chlorpyrifos (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Chromium (Total) (µg/L)	4	0.05	0.06	0.11	0.04	0.13	0.14
Chrysene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Colour - True (TCU)	12	0.50	0.50	0.50	0.80	2.45	3.00
Conductivity (µS/cm)	39	127.00	132.73	142.90	48.32	170.29	407.20
Copper (Total) (µg/L)	6	0.50	0.69	1.78	1.28	3.71	4.29
Cyanobacteria Total Cells (cells/mL)	2	0.00	0.00	0.00	0.00	0.00	0.00
Cylindrospermopsin (CYN) Æ (µg/L)	7	0.10	0.10	0.10	0.00	0.10	0.10
delta-BHC (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Diatom Total Cells (cells/mL)	2	0.00	0.00	0.00	0.00	0.00	0.00
Diazinon (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Dibenz(a.h)anthracene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Dibromochloromethane^ (µg/L)	9	2.50	2.50	2.50	1.67	6.35	6.83
Dichlorvos (µg/L)	3	0.00	0.05	0.50	0.29	0.50	0.50
Dieldrin (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Dimethoate (µg/L)	3	0.00	0.05	0.50	0.29	0.50	0.50
Dinoseb (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
Dissolved Oxygen (% Sat)	9	80.60	81.56	90.10	7.07	99.98	101.70
Diuron (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
E. coli (MPN/100mL)	36	0.00	0.00	0.00	0.00	0.00	0.00
Endosulphan (alpha + beta + sulphate) (µg/L)	3	0.00	0.00	0.01	0.03	0.05	0.05
Endosulphan alpha (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Endosulphan beta (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Endosulphan Sulphate (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Endrin (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Endrin aldehyde (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Endrin ketone (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Ethion (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Flagellates Total Cells (cells/mL)	2	0.00	0.00	0.00	0.00	0.00	0.00
Fluoranthene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Fluorene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Fluoride (mg/L)	52	0.05	0.05	0.28	0.14	0.48	0.74
Formaldehyde (mg/L)	3	0.05	0.05	0.05	0.09	0.19	0.20
Free Carbon Dioxide (mg/L)	12	1.40	1.51	5.55	4.11	13.05	13.60
Free Chlorine Residual (Client tested) (mg/L)	36	1.03	1.14	1.59	0.25	1.89	2.09
Geosmin (ng/L)	9	1.00	1.00	1.00	0.00	1.00	1.00
Green Algae Total Cells (cells/mL)	2	0.00	0.00	0.00	0.00	0.00	0.00

Parameter	Count	Minimum	5th%ile	Median	Std Dev	95th%ile	Maximum
Gross alpha (Bq/L)	1	0.03	0.03	0.03		0.03	0.03
Gross beta (Bq/L)	1	0.05	0.05	0.05		0.05	0.05
Hardness (mg/L)	12	14.00	17.85	36.50	9.00	43.90	45.00
Heptachlor (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Heptachlor Epoxide (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Hexazinone (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Hydroxide (mg/L)	12	0.05	0.05	0.05	0.00	0.05	0.05
Indeno(1.2.3.cd)pyrene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Iodide (µg/L)	1	10.00	10.00	10.00		10.00	10.00
Iron (Total) (µg/L)	39	1.00	1.00	8.15	22.52	27.85	141.29
Lead (Total) (µg/L)	4	0.25	0.25	0.25	0.00	0.25	0.25
Lindane (µg/L)	3	0.00	0.00	0.01	0.01	0.02	0.03
Magnesium (Total) (mg/L)	12	1.77	2.09	3.67	0.78	4.40	4.54
Malathion (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Manganese (Total) (µg/L)	39	0.50	0.50	1.24	2.50	8.72	11.18
Mercury (Total) (µg/L)	4	0.25	0.25	0.25	0.00	0.25	0.25
Methamidophos (µg/L)	3	0.00	0.05	0.50	0.29	0.50	0.50
Methidathion (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Methoxychlor (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Methyl Isoborneol (ng/L)	9	1.00	1.00	1.00	1.67	4.00	6.00
Metolachlor (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Metribuzin (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Molybdenum (Total) (µg/L)	1	0.50	0.50	0.50		0.50	0.50
Naphthalene (µg/L)	3	0.00	0.00	0.01	0.03	0.05	0.05
Naphthalene, 1-methyl- (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Naphthalene, 2-methyl- (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Nickel (Total) (µg/L)	4	0.25	0.25	0.25	0.00	0.25	0.25
Nitrate (mg/L)	12	0.15	0.15	0.44	0.28	0.89	0.89
Nitrite (mg/L)	12	0.20	0.20	0.20	0.00	0.20	0.20
Omethoate (µg/L)	3	0.00	0.05	0.50	0.29	0.50	0.50
Pentachlorophenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
pH (Client tested) (pH unit)	43	6.77	6.84	7.21	0.21	7.39	7.81
pH (pH unit)	3	7.69	7.69	7.70	0.02	7.72	7.72
Phenanthrene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Phenol (µg/L)	3	0.00	0.01	0.05	0.03	0.05	0.05
Phosphate (mg/L)	3	0.25	0.25	0.25	0.00	0.25	0.25
Pirimiphos methyl (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Potassium (Total) (mg/L)	3	2.13	2.13	2.15	0.10	2.29	2.31
Profenofos (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Prometryn (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Propazine (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Propyzamide (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Prothiofos (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Pyrazophos (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Pyrene (µg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Selenium (Total) (µg/L)	4	2.50	2.50	2.50	0.00	2.50	2.50
Silver (Total) (µg/L)	1	0.05	0.05	0.05		0.05	0.05

Parameter	Count	Minimum	5th%ile	Median	Std Dev	95th%ile	Maximum
Simazine (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Sodium (Total) (mg/L)	3	11.06	11.35	13.99	3.91	18.32	18.81
Sulphate (mg/L)	3	0.86	0.90	1.20	0.24	1.32	1.33
Sulphide (mg/L)	3	0.00	0.00	0.00	0.00	0.01	0.01
Tebuthiuron (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Terbutryn (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Tin (Total) (µg/L)	1	12.31	12.31	12.31		12.31	12.31
Tolclofos-methyl (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Total Dissolved Solids (mg/L)	39	76.00	79.80	86.00	28.94	101.80	244.00
Total Saxitoxins Æ (µg/L)	7	1.00	1.00	1.00	0.00	1.00	1.00
Trifluralin (µg/L)	3	0.00	0.00	0.03	0.01	0.03	0.03
Trihalomethanes (Total)^ (µg/L)	9	34.50	35.53	45.05	8.71	58.54	62.11
Turbidity (Client tested) (NTU)	36	0.10	0.12	0.17	0.09	0.28	0.66
Turbidity (NTU)	3	0.14	0.14	0.15	0.36	0.70	0.77

Table 21 Moranbah *E.coli* Compliance

Financial year	2023-2024

Month	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
No. of samples collected	12	14	12	12	14	12	14	12	12	8	10	8
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 months	139	139	145	152	152	152	155	155	152	148	144	140
No. of failures in previous 12 months	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	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

NEBO SUPPLY SYSTEM

Table 22 Nebo Operator Tested Water Quality (Treatment Plant)

Parameter	Units	Count	Minimum	5th%ile	Median	Std Dev	95th%ile	Maximum
Alkalinity	(mg/L $CaCO_3$)	349	120	180	230	27.92	268	300
Conductivity	µS/cm	362	843	892.45	982	56.51	1082.95	1142
Free Chlorine	(mg/L)	361	0.92	1.12	1.28	0.13	1.56	2
Hardness	(mg/L $CaCO_3$)	305	120	162	195	15.72	207	219
pH	pH	362	7.03	7.17	7.34	0.13	7.56	7.87
Temperature	°C	363	21.1	22.4	24.9	1.85	28.3	31
Total Al	(mg/L)	347	0	0.01	0.07	0.045	0.14	0.5
Total Iron	(mg/L)	345	-0.02	0	0.01	0.014	0.04	0.07
Total Manganese	(mg/L)	303	0	0.002	0.003	0.006	0.014	0.071
True Colour	(HU)	355	0	0	0	0.00	0	0
Turbidity	(NTU)	354	0	0.01	0.07	0.41	0.11	0.19

Table 23 Nebo - Verification data (Reticulation)

Parameter	Count	Minimum	5th%ile	Median	Std Dev	95th%ile	Maximum
2.3.4.6-tetrachlorophenol (µg/L)	4	0.00	0.01	0.05	0.02	0.05	0.05
2.4.5-Trichlorophenol (µg/L)	4	0.00	0.01	0.05	0.02	0.05	0.05
2.4.6-Trichlorophenol (µg/L)	4	0.00	0.01	0.05	0.02	0.05	0.05
2.4-Dichlorophenol (µg/L)	4	0.00	0.01	0.05	0.02	0.05	0.05
2.4-Dimethylphenol (µg/L)	4	0.00	0.01	0.05	0.02	0.05	0.05
2.4-Dinitrophenol (µg/L)	4	0.00	0.01	0.05	0.02	0.05	0.05
2.6-Dichlorophenol (µg/L)	4	0.00	0.01	0.05	0.02	0.05	0.05
2-Chlorophenol (µg/L)	4	0.00	0.01	0.05	0.02	0.05	0.05
2-Methylphenol (µg/L)	4	0.00	0.01	0.05	0.02	0.05	0.05
2-Nitrophenol (µg/L)	4	0.00	0.01	0.05	0.02	0.05	0.05
3- & 4-Methylphenol (µg/L)	4	0.00	0.01	0.05	0.02	0.05	0.05
4.4`.DDD (µg/L)	4	0.00	0.00	0.01	0.01	0.02	0.03
4.4`-DDE (µg/L)	4	0.00	0.00	0.01	0.01	0.02	0.03
4.4`-DDT (µg/L)	4	0.00	0.00	0.01	0.01	0.02	0.03
4.6-Dinitro-2-methylphenol (µg/L)	4	0.00	0.01	0.05	0.02	0.05	0.05
4-Chloro-3-Methylphenol (µg/L)	4	0.00	0.01	0.05	0.02	0.05	0.05
4-Nitrophenol (µg/L)	4	0.00	0.01	0.05	0.02	0.05	0.05
Acenaphthene (µg/L)	4	0.00	0.00	0.01	0.00	0.01	0.01
Acenaphthylene (µg/L)	4	0.00	0.00	0.01	0.00	0.01	0.01
Aldrin (µg/L)	4	0.00	0.00	0.01	0.01	0.02	0.03
Alkalinity (mg/L)	13	33.81	110.34	171.18	39.28	185.39	188.56
Alpha-BHC (µg/L)	4	0.00	0.00	0.01	0.01	0.02	0.03
Aluminium (Total) (µg/L)	40	2.50	2.50	2.50	100.93	15.04	643.00
Ametryn (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03
Ammonia (mg/L)	3	0.00	0.00	0.00	0.00	0.00	0.00
Anthracene (µg/L)	4	0.00	0.00	0.01	0.00	0.01	0.01
Antimony (Total) (µg/L)	1	0.25	0.25	0.25		0.25	0.25
Arsenic (Total) (µg/L)	4	0.50	0.50	0.50	0.00	0.50	0.50
Atrazine (µg/L)	4	0.00	0.00	0.03	0.04	0.08	0.09
Azinophos methyl (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03
Barium (Total) (µg/L)	2	12.54	12.74	14.58	2.88	16.41	16.62
Benz(a)anthracene (µg/L)	4	0.00	0.00	0.01	0.00	0.01	0.01
Benzo(a)pyrene (µg/L)	4	0.00	0.00	0.01	0.00	0.01	0.01
Benzo(b)fluoranthene (µg/L)	4	0.00	0.00	0.01	0.00	0.01	0.01
Benzo(g.h.i)perylene (µg/L)	4	0.00	0.00	0.01	0.00	0.01	0.01
Benzo(k)fluoranthene (µg/L)	4	0.00	0.00	0.01	0.00	0.01	0.01
Beryllium (Total) (µg/L)	2	0.25	0.25	0.25	0.00	0.25	0.25
Beta-BHC (µg/L)	4	0.00	0.00	0.01	0.01	0.02	0.03
Bicarbonate (mg/L)	13	41.00	134.00	205.00	47.38	225.80	230.00
Boron (Total) (µg/L)	5	14.99	15.64	23.29	5.40	27.95	28.91
Bromacil (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03
Bromate (µg/L)	9	10.00	10.00	10.00	0.00	10.00	10.00
Bromide (mg/L)	3	0.20	0.20	0.20	0.00	0.20	0.20
Bromodichloromethane^ (µg/L)	9	2.50	2.50	2.50	0.00	2.50	2.50
Bromoform^ (µg/L)	9	2.50	3.51	7.55	5.25	16.51	18.22
Cadmium (Total) (µg/L)	4	0.05	0.05	0.05	0.00	0.05	0.05

Parameter	Count	Minimum	5th%ile	Median	Std Dev	95th%ile	Maximum
Calcium (Total) (mg/L)	40	5.68	32.67	40.92	7.81	45.83	51.00
Carbonate (mg/L)	13	0.10	0.10	0.20	0.13	0.44	0.50
Chlorate (µg/L)	9	10.00	10.00	10.00	52.98	111.12	170.04
Chlordane cis (µg/L)	4	0.00	0.00	0.01	0.01	0.02	0.03
Chlordane trans (µg/L)	4	0.00	0.00	0.01	0.01	0.02	0.03
Chloride (mg/L)	3	15.26	32.72	189.81	103.34	197.54	198.40
Chlorite (µg/L)	9	10.00	10.00	10.00	0.00	10.00	10.00
Chloroform^ (µg/L)	9	2.50	2.50	2.50	0.00	2.50	2.50
Chlorpyrifos (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03
Chromium (Total) (µg/L)	4	0.13	0.13	0.18	0.38	0.82	0.93
Chrysene (µg/L)	4	0.00	0.00	0.01	0.00	0.01	0.01
Cobalt (Total) (µg/L)	1	0.10	0.10	0.10		0.10	0.10
Colour - True (TCU)	13	0.50	0.50	0.50	0.70	1.80	3.00
Conductivity (µS/cm)	40	124.60	919.99	986.00	150.24	1107.05	1109.00
Copper (Total) (µg/L)	7	3.78	4.06	5.92	6.02	18.13	20.99
delta-BHC (µg/L)	4	0.00	0.00	0.01	0.01	0.02	0.03
Diazinon (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03
Dibenz(a.h)anthracene (µg/L)	4	0.00	0.00	0.01	0.00	0.01	0.01
Dibromochloromethane^ (µg/L)	9	2.50	2.50	2.50	2.41	7.66	8.41
Dichlorvos (µg/L)	4	0.00	0.08	0.50	0.25	0.50	0.50
Dieldrin (µg/L)	4	0.00	0.00	0.01	0.01	0.02	0.03
Dimethoate (µg/L)	4	0.00	0.08	0.50	0.25	0.50	0.50
Dinoseb (µg/L)	4	0.00	0.01	0.05	0.02	0.05	0.05
Dissolved Oxygen (% Sat)	10	82.80	84.24	89.60	4.89	97.88	100.80
Diuron (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03
E. coli (MPN/100mL)	37	0.00	0.00	0.00	0.00	0.00	0.00
Endosulphan alpha (µg/L)	4	0.00	0.00	0.01	0.01	0.02	0.03
Endosulphan beta (µg/L)	4	0.00	0.00	0.01	0.01	0.02	0.03
Endosulphan Sulphate (µg/L)	4	0.00	0.00	0.01	0.01	0.02	0.03
Endrin (µg/L)	4	0.00	0.00	0.01	0.01	0.02	0.03
Endrin aldehyde (µg/L)	4	0.00	0.00	0.01	0.01	0.02	0.03
Endrin ketone (µg/L)	4	0.00	0.00	0.01	0.01	0.02	0.03
Ethion (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03
Fluoranthene (µg/L)	4	0.00	0.00	0.01	0.00	0.01	0.01
Fluorene (µg/L)	4	0.00	0.00	0.01	0.00	0.01	0.01
Fluoride (mg/L)	13	0.05	0.05	0.05	0.02	0.08	0.14
Formaldehyde (mg/L)	3	0.05	0.05	0.05	0.03	0.10	0.10
Free Carbon Dioxide (mg/L)	13	1.60	4.30	14.00	6.24	22.06	23.20
Free Chlorine Residual (Client tested) (mg/L)	36	0.96	1.13	1.29	0.16	1.59	1.75
Free Chlorine Residual (mg/L)	1	1.36	1.36	1.36		1.36	1.36
Gross alpha (Bq/L)	1	0.03	0.03	0.03		0.03	0.03
Gross beta (Bq/L)	1	0.05	0.05	0.05		0.05	0.05
Hardness (mg/L)	40	23.00	162.65	202.50	36.48	236.90	257.00
Heptachlor (µg/L)	4	0.00	0.00	0.01	0.01	0.02	0.03
Heptachlor Epoxide (µg/L)	4	0.00	0.00	0.01	0.01	0.02	0.03
Heterotrophic Plate Count (cfu/mL)	1	0.00	0.00	0.00		0.00	0.00
Hexazinone (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03

Parameter	Count	Minimum	5th%ile	Median	Std Dev	95th%ile	Maximum
Hydroxide (mg/L)	13	0.05	0.05	0.05	0.00	0.05	0.05
Indeno(1.2.3.cd)pyrene (µg/L)	4	0.00	0.00	0.01	0.00	0.01	0.01
Iodide (µg/L)	1	10.00	10.00	10.00		10.00	10.00
Iron (Total) (µg/L)	40	1.00	1.00	1.76	6.08	13.81	32.72
Larson Index (LI)	1	0.67	0.67	0.67		0.67	0.67
Lead (Total) (µg/L)	4	0.25	0.25	0.25	0.00	0.25	0.25
Lindane (µg/L)	4	0.00	0.00	0.01	0.01	0.02	0.03
Magnesium (Total) (mg/L)	40	2.26	19.89	24.42	4.51	29.76	32.11
Malathion (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03
Manganese (Total) (µg/L)	40	0.50	0.50	0.50	2.07	0.87	11.50
Mercury (Total) (µg/L)	3	0.25	0.25	0.25	0.00	0.25	0.25
Methamidophos (µg/L)	4	0.00	0.08	0.50	0.25	0.50	0.50
Methidathion (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03
Methoxychlor (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03
Metolachlor (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03
Metribuzin (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03
Molybdenum (Total) (µg/L)	2	0.50	0.50	0.50	0.00	0.50	0.50
Naphthalene (µg/L)	4	0.00	0.00	0.03	0.03	0.05	0.05
Naphthalene, 1-methyl- (µg/L)	4	0.00	0.00	0.01	0.00	0.01	0.01
Naphthalene, 2-methyl- (µg/L)	4	0.00	0.00	0.01	0.00	0.01	0.01
Nickel (Total) (µg/L)	4	0.25	0.25	0.40	0.52	1.23	1.35
Nitrate (mg/L)	13	1.20	1.39	2.12	0.44	2.61	2.63
Nitrite (mg/L)	13	0.20	0.20	0.20	0.00	0.20	0.20
Omethoate (µg/L)	4	0.00	0.08	0.50	0.25	0.50	0.50
Pentachlorophenol (µg/L)	4	0.00	0.01	0.05	0.02	0.05	0.05
pH (Client tested) (pH unit)	36	7.13	7.17	7.36	0.12	7.55	7.63
pH (pH unit)	4	7.60	7.60	7.64	0.06	7.72	7.73
Phenanthrene (µg/L)	4	0.00	0.00	0.01	0.00	0.01	0.01
Phenol (µg/L)	4	0.00	0.01	0.05	0.02	0.05	0.05
Phosphate (mg/L)	3	0.25	0.25	0.25	0.00	0.25	0.25
Pirimiphos methyl (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03
Potassium (Total) (mg/L)	4	0.71	0.72	0.77	0.50	1.61	1.76
Profenofos (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03
Prometryn (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03
Propazine (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03
Propyzamide (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03
Prothiofos (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03
Pyrazophos (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03
Pyrene (µg/L)	4	0.00	0.00	0.01	0.00	0.01	0.01
Selenium (Total) (µg/L)	4	2.50	2.50	2.50	0.00	2.50	2.50
Silver (Total) (µg/L)	2	0.05	0.05	0.09	0.05	0.12	0.12
Simazine (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03
Sodium (Total) (mg/L)	40	12.57	93.69	119.09	27.16	163.06	193.23
Strontium (Total) (µg/L)	1	44.32	44.32	44.32		44.32	44.32
Sulphate (mg/L)	3	0.98	1.66	7.78	4.34	8.92	9.05
Sulphide (mg/L)	4	0.00	0.00	0.00	0.01	0.01	0.01
Tebuthiuron (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03

Parameter	Count	Minimum	5th%ile	Median	Std Dev	95th%ile	Maximum
Terbutryn (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03
Thallium (Total) (µg/L)	1	0.25	0.25	0.25		0.25	0.25
Tin (Total) (µg/L)	2	9.42	9.84	13.59	5.90	17.35	17.77
Titanium (Total) (µg/L)	1	2.20	2.20	2.20		2.20	2.20
Tolclofos-methyl (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03
Total Chlorine (mg/L)	1	1.54	1.54	1.54		1.54	1.54
Total Coliforms (MPN/100mL)	1	0.50	0.50	0.50		0.50	0.50
Total Dissolved Solids (mg/L)	39	550.00	558.30	595.00	34.43	664.10	665.00
Total Organic Carbon (mg/L)	1	3.82	3.82	3.82		3.82	3.82
Trifluralin (µg/L)	4	0.00	0.00	0.03	0.01	0.03	0.03
Trihalomethanes (Total)^ (µg/L)	9	9.01	9.41	10.77	7.39	26.50	28.97
Turbidity (Client tested) (NTU)	36	0.05	0.05	0.05	0.01	0.06	0.12
Turbidity (NTU)	4	0.05	0.05	0.05	0.08	0.18	0.20
Uranium (Total) (µg/L)	2	0.25	0.27	0.48	0.33	0.69	0.71
Vanadium (Total) (µg/L)	1	0.52	0.52	0.52		0.52	0.52
Zinc (Total) (µg/L)	7	2.63	2.64	3.89	1.29	5.82	6.37

Table 24 Nebo *E. coli* Compliance

Financial year	2023-2024

Month	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
No. of samples collected	13	10	8	8	10	8	10	9	8	8	10	8
No. of samples collected in which *E. coli* is detected (i.e. a failure)	1	0	0	0	0	0	0	0	0	0	0	0
No. of samples collected in previous 12 months	106	106	108	110	110	110	112	113	111	110	110	110
No. of failures in previous 12 months	1	1	1	1	1	1	1	1	1	1	1	1
% of samples that comply	99.1 %	99.1 %	99.1 %	99.1 %	99.1 %	99.1 %	99.1 %	99.1 %	99.1 %	99.1 %	99.1 %	99.1 %
Compliance with 98% annual value	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

ST LAWRENCE SUPPLY SYSTEM

Table 25 St Lawrence Operator Tested Water Quality (Treatment Plant)

Parameter	Units	Count	Minimum	5th%ile	Median	Std Dev	95th%ile	Maximum
Alkalinity	(mg/L $CaCO_3$)	33	60	70	100	18.34	120	140
Free Chlorine	(mg/L)	153	0.39	0.61	1.8	.65	2.8	3.35
pH		151	7.4	7.55	7.75	0.15	8.031	8.15
Total Al	(mg/L)	37	0	0.0365	0.07	0.06	0.163	0.29
Total Iron	(mg/L)	59	0	0	0.01	0.01	0.031	0.04
Total Manganese	(mg/L)	52	0	0	0	0.015	0.044	0.077
True Colour	(HU)	131	0	0	0	0.47	0	5
Turbidity	(NTU)	151	0.14	0.165	0.32	0.16	0.66	0.94
UVA		128	0.005	0.016	0.03	0.06	0.072	0.42

Table 26 St Lawrence - Verification data (Reticulation)

Parameter	Count	Minimum	5th%ile	Median	Std Dev	95th%ile	Maximum
2.3.4.6-tetrachlorophenol (µg/L)	4	0.00	0.00	0.03	0.03	0.05	0.05
2.4.5-Trichlorophenol (µg/L)	4	0.00	0.00	0.03	0.03	0.05	0.05
2.4.6-Trichlorophenol (µg/L)	4	0.00	0.00	0.03	0.03	0.05	0.05
2.4-Dichlorophenol (µg/L)	4	0.00	0.00	0.03	0.03	0.05	0.05
2.4-Dimethylphenol (µg/L)	4	0.00	0.00	0.03	0.03	0.05	0.05
2.4-Dinitrophenol (µg/L)	4	0.00	0.00	0.03	0.03	0.05	0.05
2.6-Dichlorophenol (µg/L)	4	0.00	0.00	0.03	0.03	0.05	0.05
2-Chlorophenol (µg/L)	4	0.00	0.00	0.03	0.03	0.05	0.05
2-Methylphenol (µg/L)	4	0.00	0.00	0.03	0.03	0.05	0.05
2-Nitrophenol (µg/L)	4	0.00	0.00	0.03	0.03	0.05	0.05
3- & 4-Methylphenol (µg/L)	4	0.00	0.00	0.03	0.03	0.05	0.05
4.4`.DDD (µg/L)	4	0.00	0.00	0.00	0.01	0.02	0.03
4.4`-DDE (µg/L)	4	0.00	0.00	0.00	0.01	0.02	0.03
4.4`-DDT (µg/L)	4	0.00	0.00	0.00	0.01	0.02	0.03
4.6-Dinitro-2-methylphenol (µg/L)	4	0.00	0.00	0.03	0.03	0.05	0.05
4-Chloro-3-Methylphenol (µg/L)	4	0.00	0.00	0.03	0.03	0.05	0.05
4-Nitrophenol (µg/L)	4	0.00	0.00	0.03	0.03	0.05	0.05
Acenaphthene (µg/L)	4	0.00	0.00	0.00	0.00	0.01	0.01
Acenaphthylene (µg/L)	4	0.00	0.00	0.00	0.00	0.01	0.01
Aldrin (µg/L)	4	0.00	0.00	0.00	0.01	0.02	0.03
Aldrin and Dieldrin (µg/L)	4	0.00	0.00	0.00	0.02	0.03	0.03
Alkalinity (mg/L)	12	65.87	68.26	74.34	12.77	103.08	110.22
Alpha-BHC (µg/L)	4	0.00	0.00	0.00	0.01	0.02	0.03
Aluminium (Total) (µg/L)	38	2.50	18.75	63.93	93.51	232.06	549.63
Ametryn (µg/L)	4	0.00	0.00	0.01	0.01	0.03	0.03
Ammonia (mg/L)	3	0.00	0.00	0.00	0.00	0.00	0.01
Anthracene (µg/L)	4	0.00	0.00	0.00	0.00	0.01	0.01
Arsenic (Total) (µg/L)	4	0.50	0.50	0.50	0.00	0.50	0.50
Atrazine (µg/L)	4	0.00	0.00	0.01	0.01	0.03	0.03
Azinophos methyl (µg/L)	4	0.00	0.00	0.01	0.01	0.03	0.03
Barium (Total) (µg/L)	1	8.94	8.94	8.94		8.94	8.94
Benz(a)anthracene (µg/L)	4	0.00	0.00	0.00	0.00	0.01	0.01
Benzo(a)pyrene (µg/L)	4	0.00	0.00	0.00	0.00	0.01	0.01
Benzo(b)fluoranthene (µg/L)	4	0.00	0.00	0.00	0.00	0.01	0.01
Benzo(g.h.i)perylene (µg/L)	4	0.00	0.00	0.00	0.00	0.01	0.01
Benzo(k)fluoranthene (µg/L)	4	0.00	0.00	0.00	0.00	0.01	0.01
Beryllium (Total) (µg/L)	1	0.25	0.25	0.25		0.25	0.25
Beta-BHC (µg/L)	4	0.00	0.00	0.00	0.01	0.02	0.03
Bicarbonate (mg/L)	12	80.00	82.75	88.50	14.46	122.40	129.00
Boron (Total) (µg/L)	3	2.50	4.59	23.38	13.50	27.32	27.76
Bromacil (µg/L)	4	0.00	0.00	0.01	0.01	0.03	0.03
Bromate (µg/L)	10	10.00	10.00	10.00	0.00	10.00	10.00
Bromide (mg/L)	2	0.20	0.20	0.20	0.00	0.20	0.20
Bromodichloromethane^ (µg/L)	9	16.97	17.95	19.95	2.88	25.61	26.44
Bromoform^ (µg/L)	9	2.50	2.50	2.50	0.00	2.50	2.50
Cadmium (Total) (µg/L)	4	0.05	0.05	0.05	0.00	0.05	0.05

Parameter	Count	Minimum	5th%ile	Median	Std Dev	95th%ile	Maximum
Calcium (Total) (mg/L)	12	2.23	3.82	7.65	2.08	9.59	10.54
Carbonate (mg/L)	12	0.10	0.16	0.35	0.22	0.74	0.90
Chlorate (µg/L)	10	10.00	34.20	123.54	64.54	217.25	229.06
Chlordane cis (µg/L)	4	0.00	0.00	0.00	0.01	0.02	0.03
Chlordane trans (µg/L)	4	0.00	0.00	0.00	0.01	0.02	0.03
Chloride (mg/L)	2	31.41	31.63	33.66	3.19	35.69	35.92
Chlorite (µg/L)	10	10.00	10.00	10.00	0.00	10.00	10.00
Chloroform^ (µg/L)	9	25.49	29.56	47.83	48.93	147.92	161.09
Chlorpyrifos (µg/L)	4	0.00	0.00	0.01	0.01	0.03	0.03
Chromium (Total) (µg/L)	4	0.05	0.06	0.13	0.06	0.17	0.18
Chrysene (µg/L)	4	0.00	0.00	0.00	0.00	0.01	0.01
Colour - True (TCU)	12	0.50	0.50	1.00	1.23	3.45	4.00
Conductivity (µS/cm)	38	238.00	244.25	266.60	187.44	323.62	1418.00
Copper (Total) (µg/L)	6	0.50	0.50	0.50	0.82	2.21	2.53
Cyanobacteria Total Cells (cells/mL)	3	0.00	0.00	0.00	0.00	0.00	0.00
Cylindrospermopsin (CYN) Æ (µg/L)	1	0.10	0.10	0.10		0.10	0.10
delta-BHC (µg/L)	4	0.00	0.00	0.00	0.01	0.02	0.03
Demeton-S-methyl (µg/L)	1	0.00	0.00	0.00		0.00	0.00
Diatom Total Cells (cells/mL)	3	0.00	0.00	0.00	0.00	0.00	0.00
Diazinon (µg/L)	4	0.00	0.00	0.01	0.01	0.03	0.03
Dibenz(a.h)anthracene (µg/L)	4	0.00	0.00	0.00	0.00	0.01	0.01
Dibromochloromethane^ (µg/L)	9	2.50	3.78	9.05	3.18	11.76	11.82
Dichlorvos (µg/L)	4	0.00	0.00	0.25	0.29	0.50	0.50
Dieldrin (µg/L)	4	0.00	0.00	0.00	0.01	0.02	0.03
Dimethoate (µg/L)	4	0.00	0.00	0.25	0.29	0.50	0.50
Dinoseb (µg/L)	4	0.00	0.00	0.03	0.03	0.05	0.05
Dissolved Oxygen (% Sat)	9	66.50	70.94	91.10	10.08	95.28	96.60
Diuron (µg/L)	4	0.00	0.00	0.01	0.01	0.03	0.03
E. coli (MPN/100mL)	35	0.00	0.00	0.00	0.00	0.00	0.00
Endosulphan (alpha + beta + sulphate) (µg/L)	4	0.00	0.00	0.01	0.02	0.04	0.05
Endosulphan alpha (µg/L)	4	0.00	0.00	0.00	0.01	0.02	0.03
Endosulphan beta (µg/L)	4	0.00	0.00	0.00	0.01	0.02	0.03
Endosulphan Sulphate (µg/L)	4	0.00	0.00	0.00	0.01	0.02	0.03
Endrin (µg/L)	4	0.00	0.00	0.00	0.01	0.02	0.03
Endrin aldehyde (µg/L)	4	0.00	0.00	0.00	0.01	0.02	0.03
Endrin ketone (µg/L)	4	0.00	0.00	0.00	0.01	0.02	0.03
Ethion (µg/L)	4	0.00	0.00	0.01	0.01	0.03	0.03
Flagellates Total Cells (cells/mL)	3	0.00	0.00	0.00	0.00	0.00	0.00
Fluoranthene (µg/L)	4	0.00	0.00	0.00	0.00	0.01	0.01
Fluorene (µg/L)	4	0.00	0.00	0.00	0.00	0.01	0.01
Fluoride (mg/L)	12	0.05	0.05	0.05	0.00	0.05	0.05
Formaldehyde (mg/L)	3	0.05	0.05	0.05	0.09	0.19	0.20
Free Carbon Dioxide (mg/L)	12	1.10	1.16	1.90	1.25	4.53	5.30
Free Chlorine Residual (Client tested) (mg/L)	35	1.50	1.57	2.10	0.41	2.87	2.95
Geosmin (ng/L)	9	1.00	1.00	1.00	0.67	2.20	3.00
Green Algae Total Cells (cells/mL)	3	0.00	0.00	0.00	0.00	0.00	0.00
Gross alpha (Bq/L)	1	0.03	0.03	0.03		0.03	0.03

Parameter	Count	Minimum	5th%ile	Median	Std Dev	95th%ile	Maximum
Gross beta (Bq/L)	1	0.05	0.05	0.05		0.05	0.05
Hardness (mg/L)	12	13.00	17.95	34.00	8.39	40.70	44.00
Heptachlor (µg/L)	4	0.00	0.00	0.00	0.01	0.02	0.03
Heptachlor Epoxide (µg/L)	4	0.00	0.00	0.00	0.01	0.02	0.03
Hexazinone (µg/L)	4	0.00	0.00	0.01	0.01	0.03	0.03
Hydroxide (mg/L)	12	0.05	0.05	0.05	0.00	0.05	0.05
Indeno(1.2.3.cd)pyrene (µg/L)	4	0.00	0.00	0.00	0.00	0.01	0.01
Iodide (µg/L)	1	10.00	10.00	10.00		10.00	10.00
Iron (Total) (µg/L)	38	1.00	1.00	6.04	14.72	27.83	85.72
Lead (Total) (µg/L)	4	0.25	0.25	0.25	0.00	0.25	0.25
Lindane (µg/L)	4	0.00	0.00	0.00	0.01	0.02	0.03
Magnesium (Total) (mg/L)	12	1.82	2.02	3.64	0.82	4.13	4.34
Malathion (µg/L)	4	0.00	0.00	0.01	0.01	0.03	0.03
Manganese (Total) (µg/L)	38	0.50	0.50	13.12	22.39	55.99	115.37
Mercury (Total) (µg/L)	4	0.25	0.25	0.25	0.00	0.25	0.25
Methamidophos (µg/L)	4	0.00	0.00	0.25	0.29	0.50	0.50
Methidathion (µg/L)	4	0.00	0.00	0.01	0.01	0.03	0.03
Methoxychlor (µg/L)	4	0.00	0.00	0.01	0.01	0.03	0.03
Methyl Isoborneol (ng/L)	9	1.00	1.00	3.00	2.32	6.60	7.00
Metolachlor (µg/L)	4	0.00	0.00	0.01	0.01	0.03	0.03
Metribuzin (µg/L)	4	0.00	0.00	0.01	0.01	0.03	0.03
Molybdenum (Total) (µg/L)	1	0.50	0.50	0.50		0.50	0.50
Naphthalene (µg/L)	4	0.00	0.00	0.00	0.02	0.04	0.05
Naphthalene, 1-methyl- (µg/L)	4	0.00	0.00	0.00	0.00	0.01	0.01
Naphthalene, 2-methyl- (µg/L)	4	0.00	0.00	0.00	0.00	0.01	0.01
Nickel (Total) (µg/L)	4	0.25	0.25	0.25	0.00	0.25	0.25
Nitrate (mg/L)	12	0.15	0.15	0.50	0.20	0.68	0.80
Nitrite (mg/L)	12	0.20	0.20	0.20	0.00	0.20	0.20
Omethoate (µg/L)	4	0.00	0.00	0.25	0.29	0.50	0.50
Pentachlorophenol (µg/L)	4	0.00	0.00	0.03	0.03	0.05	0.05
pH (Client tested) (pH unit)	41	7.50	7.55	7.80	0.14	7.95	8.07
pH (pH unit)	3	8.05	8.06	8.11	0.09	8.22	8.23
Phenanthrene (µg/L)	4	0.00	0.00	0.00	0.00	0.01	0.01
Phenol (µg/L)	4	0.00	0.00	0.03	0.03	0.05	0.05
Phosphate (mg/L)	2	0.25	0.25	0.25	0.00	0.25	0.25
Pirimiphos methyl (µg/L)	4	0.00	0.00	0.01	0.01	0.03	0.03
Potassium (Total) (mg/L)	3	1.58	1.59	1.71	0.08	1.71	1.71
Profenofos (µg/L)	4	0.00	0.00	0.01	0.01	0.03	0.03
Prometryn (µg/L)	4	0.00	0.00	0.01	0.01	0.03	0.03
Propazine (µg/L)	4	0.00	0.00	0.01	0.01	0.03	0.03
Propyzamide (µg/L)	4	0.00	0.00	0.01	0.01	0.03	0.03
Prothiofos (µg/L)	4	0.00	0.00	0.01	0.01	0.03	0.03
Pyrazophos (µg/L)	4	0.00	0.00	0.01	0.01	0.03	0.03
Pyrene (µg/L)	4	0.00	0.00	0.00	0.00	0.01	0.01
Selenium (Total) (µg/L)	4	2.50	2.50	2.50	0.00	2.50	2.50
Silver (Total) (µg/L)	1	0.05	0.05	0.05		0.05	0.05
Simazine (µg/L)	4	0.00	0.00	0.01	0.01	0.03	0.03

Parameter	Count	Minimum	5th%ile	Median	Std Dev	95th%ile	Maximum
Sodium (Total) (mg/L)	3	42.33	42.73	46.36	5.22	52.05	52.68
Sulphate (mg/L)	2	1.38	1.39	1.51	0.18	1.62	1.63
Sulphide (mg/L)	3	0.00	0.00	0.01	0.00	0.01	0.01
Tebuthiuron (µg/L)	4	0.00	0.00	0.01	0.01	0.03	0.03
Terbutryn (µg/L)	4	0.00	0.00	0.01	0.01	0.03	0.03
Tin (Total) (µg/L)	1	11.81	11.81	11.81		11.81	11.81
Tolclofos-methyl (µg/L)	4	0.00	0.00	0.01	0.01	0.03	0.03
Total Dissolved Solids (mg/L)	38	143.00	146.55	160.00	112.48	194.30	851.00
Total Saxitoxins Æ (µg/L)	1	1.00	1.00	1.00		1.00	1.00
Trifluralin (µg/L)	4	0.00	0.00	0.01	0.01	0.03	0.03
Trihalomethanes (Total)^ (µg/L)	9	57.14	61.53	79.18	47.93	177.86	193.23
Turbidity (Client tested) (NTU)	35	0.20	0.23	0.36	0.13	0.62	0.70

Table 27 St Lawrence – *E. coli* Compliance

Financial year	2023-2024

Month	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
No. of samples collected	8	10	8	7	10	6	10	8	5	4	5	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 months	97	97	99	102	103	101	103	103	98	94	89	85
No. of failures in previous 12 months	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	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y