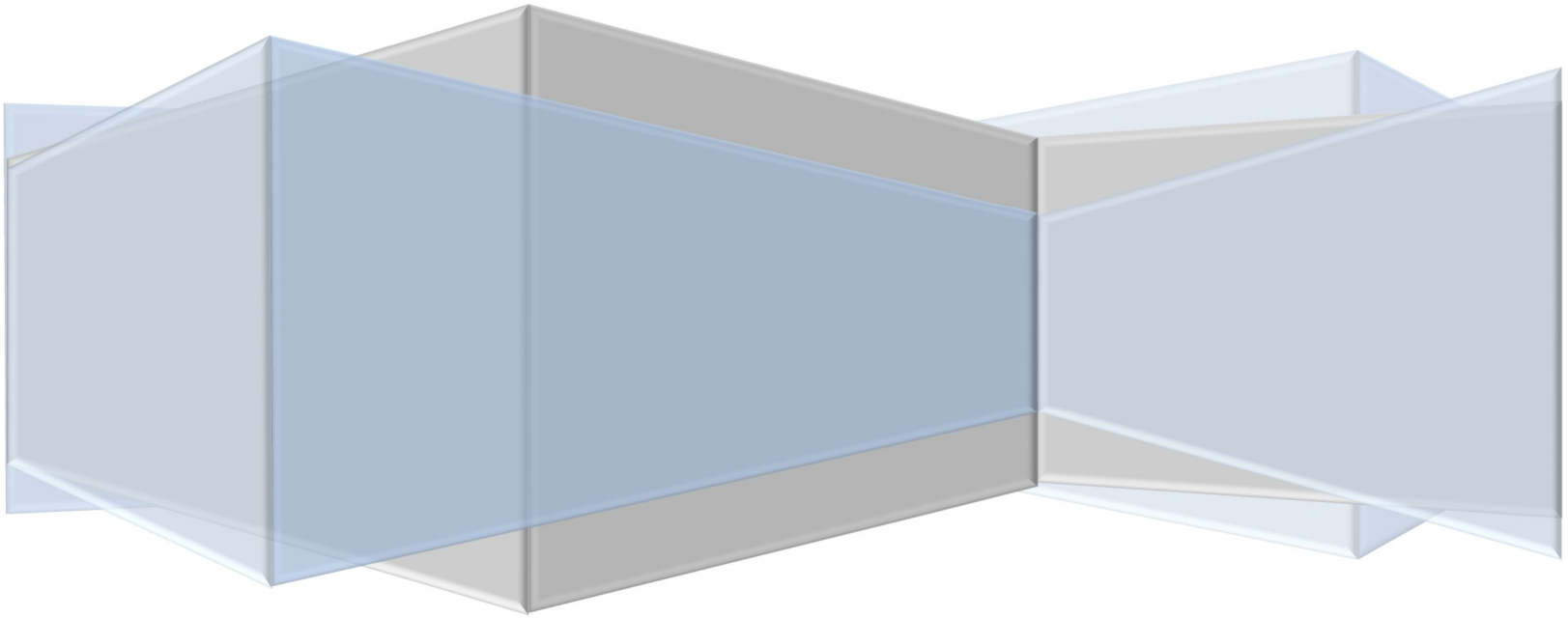
Quinsam Coal Corporations Quarterly Report (July-September)

For Effluent Permit PE: 7008

Environmental Department



Appendix I

Tables 1-37

INTRODUCTION

During Q2 (July through September 2021) Quinsam Mine maintained the environmental obligations for permits PE: 7008 held with the Ministry of Environment and Climate Change Strategy and the Mines Act permit, C-172. The mine continues to be operated in a "*care and maintenance*" mode with The Bowra Group Inc. as the receiver.

NORTH END WATER MANAGEMENT SYSTEM:

Stage pumping / dewatering continued from 7-South Area 5 (7SA5) into 1-Mains 7-South (1M7S) sump, and then pumps into the 5-South Mine (5SMW), where it remained for Q2.

The 3-Mains 2-North (3M2N) mine pool pump cycled intermittently throughout Q2. The 2-North Portal Sump (2NPS) collects seepage water from the tailings dam and groundwater from 2-North mine. The combined 3M2N and 2NPS discharges into Brinco Brook.

The other two major dewatering wells located in the 2-North mine include, 1-Mains 2-North (1M2N) and 5-Mains #2 (5M#2). Both pumps were operating through the quarter discharging through Settling Pond #4 (SP4). These pumps discharge into either Brinco brook or 2-North Pond (WP). This pond (WP) contains Potentially Acid Generating (PAG) Course Coal Refuse (CCR). The flow direction is controlled by opening gate valves located at the end of the lines into either or both areas.

SP4 is the authorized discharge location for the North mine area, water management system, where permit limits are applied to water quality and quantity. Discharge occurred 91 out of 91 days. Water quantity for Q2 discharged at SP4 was calculated as 500,342 m^3 compared to 2020 Q2 where 595,728 m^3 was discharged. All water quality remained below effluent permit limits at Settling Pond #4. Results are available in Appendix I, Table 23.

SOUTH END WATER MANAGEMENT SYSTEM:

Water in the south end is managed by pumping the 2-South mine pool into the Passive Treatment System (PTS) where it is directed into the 2-South and 3-South pits. This maintains a water cover over the PAG-CCR during the dry season in 2-South pit while containing the water within the authorized works. Pumping rates range from 4.5 L/s to 5.0 L/s measured at 2-South mine pool (INF) where it is pumped into the first treatment system cell, Biochemical reactor (BCREFF). Treated water flows passively from the BCR to the Sulphide Polishing Cell (SPCEFF) where it is gravity feed into the inlet of the 2S pit entering at 2-South Inflow (2SI). At this location there is a V-notch weir coupled with a pressure transducer and a staff gauge (hydrometric station), where continuous flow is monitored.

The 3-South pit maintains a water cover over the contained PAG-CCR via 2-South pit seepage under the liner and surface water cover overflow. 2-South pit water flows down a designed channel into 3-South pit. Continuous discharge is measured at location 2-South Culvert (2SC) into 3-South Pit. Here there is an H-flume and a flow meter measuring continuous inflow to 3-South pit and outflow from 2-South pit.

Currently 3-South pit water levels are managed by an 88-horsepower pump operating on a float system. Water is directed through a pipeline into Settling Pond #1 (SPD/ SP1) or by toggling a valve located on the 2-South highwall, 3-South water can be directed back to 2-South pit. When water pumped from 3-South pit is directed into 2-South pit it maintains a closed loop circuit and aids in maintaining a water cover over the

2-South Pit. As a result, SP1 will stop discharging (normally during mid-May) reducing the load from mine contact water on the receiving environment.

SP1 is the authorized discharge location for the South water management system where permit limits are applied to water quality and quantity. This quarter all water quality remained within permit limits. Discharge occurred for 9 out of 91 days. With a cumulative quarterly total of 59,878 m^3 compared to last year Q2 where 87,495 m^3 was discharged. All water quality remained below effluent permit limits at Settling Pond #1. Results are available in Appendix I, Table 24.

7-SOUTH (7SSD) WATER MANAGEMENT:

Discharge did not occur during Q2 at 7SSD. Sedimentation pond outflow is controlled by pumping water accumulated in the pre-settling pond to the 7-South Portal Sump. This procedure reduces discharge, decreasing the overall parameter loading and the potential for adverse aquatic impact in the receiving environment; as the biological availability for parameters of concern is much lower than under constant discharge conditions.

A quarterly sample was obtained from the ponded water (7SSD) and the results are available in Appendix I, Table 21. Steam 1,7S was dry throughout the quarter.

QUARTERLY MONITORING:

During the 2nd Quarter (Q2) (Summer 2021), the receiving environment monitoring program for both lakes and river/stream stations was completed. Quarterly monitoring was performed for groundwater quality, effluent and with-in (in-situ) mine releases.

Sediment and benthic monitoring were performed at 4 sites on the Quinsam river following the procedures outlined in the Canadian Aquatic Biomonitoring Network (CABIN). The CABIN methodology measures freshwater ecosystem health using standardized methods and measures changes in biological communities providing a picture of aquatic health. This modified version of the biological monitoring program required by permit (PE:7008) was carried out as an alternative to the full program due to the mines position, in care and maintenance with a Receiver. The full program required in the permit is a more comprehensive monitoring program and undertaking necessitating a significant amount of resources. Carrying out the CABIN on the river provides an assessment of aquatic health and sediment chemistry. Sampling locations included upstream of mine influence on the Quinsam River at Argonaut Bridge (WA) and downstream of the River Barrier Pillar and influence from the 2-North Mine at two locations (QRDS and QRDS1) in order to capture any impacts from seepage areas. The last location was captured downstream of all mine influence on the Quinsam River at 7SQR. Results will be reported once they are received and reviewed.

All other environmental sampling and obligations pertaining to permit PE-7008 were completed and results are available in Appendix I.

The reader should note that concentrations for most parameters of interest were not elevated above water quality guideline (WQG) levels in the receiving environment throughout the 5 in 30 sampling period. Those parameters that were include the following: pH, dissolved oxygen (DO), total arsenic (As-T), dissolved copper (Cu-D), total and dissolved iron (Fe-T / Fe-D). These parameters occurred at different locations. The majority of the WQG observations were found with dissolved copper. A conservative copper guideline was used for comparison. This data is subject to be reviewed as the dissolved copper guideline has recently

been developed, requiring certain parameters such as dissolved organic carbon (DOC), temperature and pH to accurately calculate the acute and chronic guideline used for each sample at each site. Appendix I, Table 3 displays all WQG observations.

Additional monitoring included in-situ and ex-situ groundwater wells, underground sumps and dewatering wells located in 2-3 North, 2-3 South, 4-South, 5-South and 7-South mine areas. Ex-situ groundwater is compared to the British Columbia Contaminated Site Regulation (CSR) (BC reg.375/96. O.C. 1480/96), Schedule 6, Aquatic life (CSR-AL). Certain parameters found in ex-situ groundwater continually result above the CSR-AL, these include the following dissolved parameters: arsenic, chloride and sulphide as H_2S and occasionally selenium. Selenium is observed periodically in the ex-situ deep groundwater of QU1105D situated to monitor water quality and vertical gradients downstream of the 2-North Mine and River Barrier Pillar. Appendix I, Table 4 displays those parameters in ex-situ groundwater above the CSR-AW.

Routine inspections were also completed with any required maintenance of the water management structures preformed.

NON-COMPLIANCE EVENTS:

A non-compliance event for 5 days of missing flow at Settling Pond #4 during September 9-12 and 15th to report this quarter. The flow meter did not record continuous flow due the voltage stabilizer failing. The problem was corrected, and continuous flow has been recorded since September 6th.

PRECIPITATION:

The amount of precipitation accumulated this quarter was 140 mm, much lower than Q2 last year where 160 mm was observed. Precipitation in Q2 occurred mostly in September (115 mm). This is displayed in Figure 1 below and in Appendix I, Table 28. The receiving environment monitoring program followed the 5 samples in 30 days schedule with sampling events spanning July 8th through August 10th, indicating the "*summer low flow*" was captured during this monitoring period.

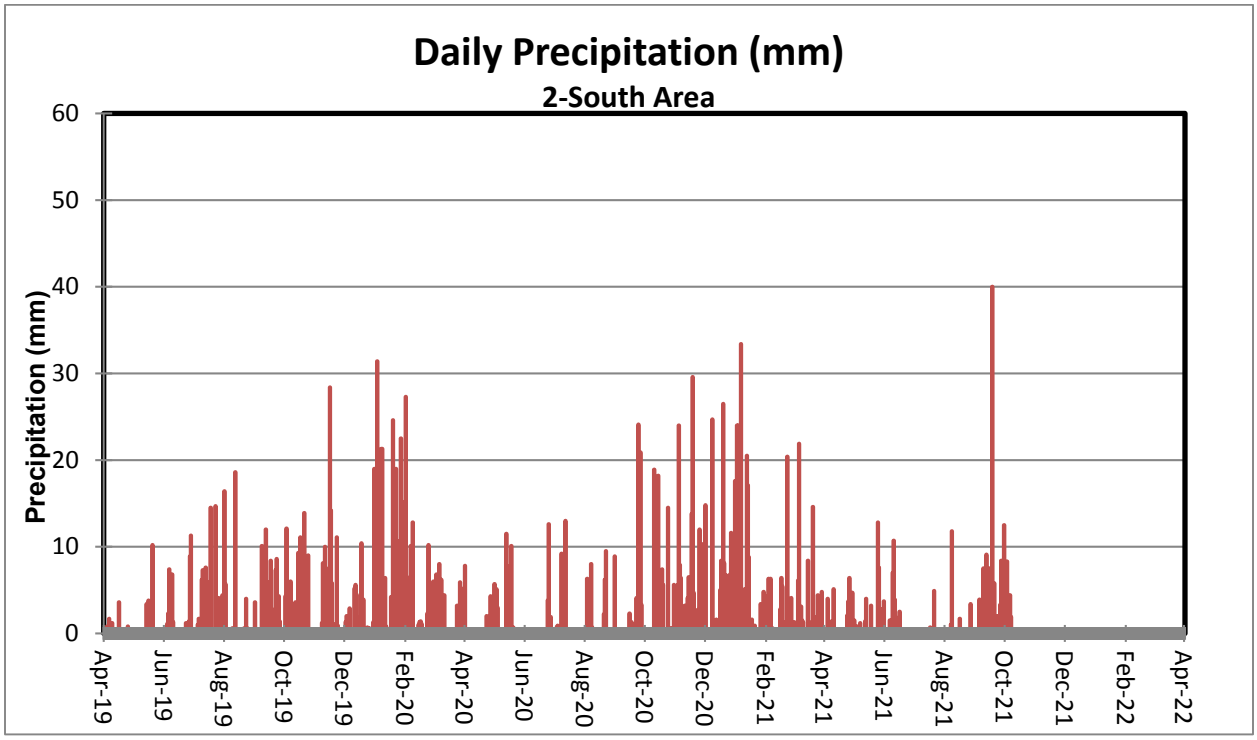


Figure 1: Daily Precipitation 2-South Pit Area (mm)

RECEIVING ENVIRONMENT WATER QUALITY:

Preamble – Water Hardness

For the purposes of this report, the water quality guideline(s) (WQG) for hardness dependent parameters has been derived using site appropriate background values (i.e. monitoring location WA hardness ~30mg/L). Quinsam Coal has adopted this approach for the Iron River to provide a conservative comparison of receiving environment water quality.

LAKES

Lake sampling commenced July 8th following the 5 samples in 30 days approach. This program included Long Lake (LLM) and Middle Quinsam Lake (MQL). The November 1st, 2019 amendment permit 7008 reduced the monitoring program removing No Name and Lower Quinsam Lakes during summer and fall. Appendix I, Tables 29 and 30 displays the depth profiling field results with Table 31 displaying the water chemistry results compared to guidelines.

Table 1: Summary of Water Quality Guideline Observation for Lakes

SUMMARY OF WATER QUALITY GUIDELINE OBSERVATIONS AT RECEIVING MONITORING LOCATIONS 2020-2021						
EMS ID & Site Name	Parameter (mg/L or pH Units)	Guideline Limit	Result	Date	Guideline	Sampling Events Exceeding Guideline
E206619 - Long Lake Middle (LLM) (13m-21m depths)	pH	<6.5	6.49 to 6.43	Summer 5 in 30	Min	pH <6.5 at 15 depths profiled (13 m to 21 m) during summer for 2 out of 5 weeks
E206619 - Long Lake Middle (LLM) (18 m-21m depths)	D.O.	<3.0 mg/L	2.97 to 0.62	Summer 5 in 30	Min	D.O. <3.00 mg/L at 9 depths profiled (18 m to 21 m) during summer for 4 out of 5 weeks
*SO4 at LLE was calculated using a rolling average.						
Min = Minimum Water Quality Guideline (WQG) M = Maximum WQG /WQO, A = Average WQG /WQO						
For all Middle Quinsam Lake Sub-basin and Iron River results background hardness of 30 mg/L was used to calculate those parameters that are hardness dependent.						

Noteworthy observations resulting from the summer lake monitoring program include:

- Average sulphate concentrations were measured at or below the chronic water quality guideline (128 mg/L) at all depths sampled (1 metre (1m), 4 metre (4m), 9 metre (9m) and 1 metre from bottom (1MB)) in both lakes.
- In Long lake sulphate accumulates at depth with average sulphate resulting in 67 mg/L at 1m, 71 mg/L at 4m and 104 mg/L at 9m and 105 mg/L at 1MB.
- During summer stratification period there are limited surface contribution to Long lake.
- Long lake displayed pH values < 6.50 at depths13 to 21 metres in 2 out of 5 weeks of sampling. The minimum pH was observed to be 6.43.
- Dissolved oxygen in Long lake's hypolimnion (18 to 21 metres) resulted in <3 mg/L in 9 depths profiled during 4 out of 5 weeks of sampling, indicating anoxic conditions at depth.
- Total manganese was elevated and neared acute WQG at 1MB in Long lake on week 2 as a result of anoxic conditions.
- Average sulphate in Middle Quinsam lake (MQL) remained well below chronic guideline level (128 mg/L) throughout the lake averaging 50 mg/L at 1 and 4 meters and 44 mg/L to 24 mg/L, at the 9m and 1MB, respectively from surface to bottom depths (1m, 4m, 9m and 1MB).

STREAMS AND RIVERS

The 5 samples in 30 days receiving environment program at river and stream sites commenced July 8th and concluded August 4th. Appendix I, Tables 37 through 44 display water quality results from this program compared to water quality guidelines for the Middle Quinsam Lake Sub-basin and Iron River.

Monitoring stations captured within the Middle Quinsam Lake sub-basin include:

- Middle Quinsam Lake Inlet (WA),
- Middle Quinsam Lake Outlet (WB),
- Quinsam River Downstream of QU1109 (QRDS)
- Quinsam River Downstream Site 1 (QRDS1)
- No Name Lake Outlet (NNO),
- Long Lake Outlet (LLO),
- 7-South Quinsam River (7SQR),
- Quinsam River downstream of the confluence with Iron River (IRQR).

Monitoring stations on the Iron River include:

- Iron River Upstream of future 7-South Area 5 development (IR6), and
- Iron River above the confluence with Quinsam River (IR8).

While monitoring location LLE is considered the initial dilution zone (for water quality evaluation purposes) it is important to note that this location is a wetland and represents the uppermost extent of an initial dilution zone for the South water management system discharge into Long Lake.

The Long Lake Seeps (LLSM and LLS) and the shallow groundwater seepage near QU1109 are not considered receiving environment sites but are provided in this table for comparison purposes only.

Table 2: Summary of Guideline Observations for Rivers / Streams, Seeps (LLS, LLSM) and wetland (LLE)

SUMMARY OF WATER QUALITY GUIDELINE OBSERVATIONS AT RECEIVING MONITORING LOCATIONS 2020-2021						
EMS ID & Site Name	Parameter (mg/L or pH Units)	Guideline Limit	Result	Date	Guideline	Sampling Events Exceeding Guideline
E217017 - No Name Lake Outlet (NNO)	Cu-D	0.0003	0.00043	Summer 5 in 30	A	5 in 30 Average
E292113 -7 South Quinsam River (7SQR)	Cu-D	0.0003	0.00044	Summer 5 in 30	A	5 in 30 Average
E299256 - Downstream of the confluence of the Iron River and Quinsam River (IRQR)	Cu-D	0.0003	0.00049	Summer 5 in 30	A	5 in 30 Average
E297231 -Iron River upstream of 7SA5 (IR6)	Cu-D	0.0003	0.00046	Summer 5 in 30	A	5 in 30 Average
	As-T	0.005	0.006 - 0.0117	Summer 5 in 30	M	5/5 sampling events
E297232 - Iron River Downstream of 7SA5 and 242 inputs (IR8)	Cu-D	0.0003	0.00064	Summer 5 in 30	A	5 in 30 Average
	As-T	0.005	0.0124 - 0.020	Summer 5 in 30	M	5/5 sampling events
E292130 - South end water entering Long Lake (LLE)	Fe-T	1.00	1.24	July	M	(1/3) Monthly sampling events
E292131- Smaller seep into Long Lake (LLS)	Fe-T	1.00	1.85, 1.46 and 1.38	July through September	M	(3/3) Monthly sampling events
	Fe-D	0.35	1.71, 1.47 and 1.39	July through September	M	(3/3) Monthly sampling events
E292131- Long Lake Seep Middle (LLSM)	Fe-D	0.35	0.869, 0.712 and 0.664	July through September	M	(3/3) Monthly sampling events
Seepage from shallow groundwater	As-T	0.005	0.0164 to 0.0298	July through September	M	(7/7) samples
	Fe-T	1	1.14	September 21, 2021	M	(1/7) samples
*SO4 at LLE was calculated using a rolling average.						
Min = Minimum Water Quality Guideline (WQG) M = Maximum WQG /WQO, A = Average WQG /WQO						
For all Middle Quinsam Lake Sub-basin and Iron River results background hardness of 30 mg/L was used to calculate those parameters that are hardness dependent.						

Noteworthy observations resulting from the river/stream monitoring program include:

- Dissolved copper was above the chronic -WQG (0.0003 mg/L) for the averaged results at all river / stream sites (NNO, 7SQR, IRQR, IR6 and IR8). These guidelines provide a conservative comparison.
- Total arsenic was above the acute WQG (0.005 mg/L) at Iron River Site 8 (IR8) in 5 out of 5 sampling events.
- All other parameters were below the chronic and acute WQG's for rivers and streams during the summer monitoring.

Noteworthy observations resulting from the Seeps and LLE wetland monitoring locations:

- Flows ceased at the LLSM August 16 through September 11. On September 11 through 15 LLSM started discharging with no discharge reaching the lake and stopped again on September 16. Discharge did not stop at the smaller seep (LLS)
- Long Lake Seeps display elevated iron in both forms (Fe2+ and Fe3+)
- LLE displays elevated concentrations of both total iron, due to low dissolved oxygen in the wetland (anoxic conditions).
- The shallow groundwater seepage area displayed elevated arsenic for 7 out of 7 sampling events with 1 event where total iron was elevated.

GROUNDWATER

Groundwater wells are categorized as either 'in-situ' or 'ex-situ'; the definition for each is as follows:

- In-situ: groundwater wells located within the mine workings (disturbance footprint) and therefore represent water accumulated within the mining void. In the absence of groundwater well samples, underground sump samples are used for comparison.

- Ex-situ: groundwater wells located outside the mine workings (disturbance footprint) which reflect water quality flowing from the mine void towards the receiving environment. This also includes baseline and background (up-gradient of workings) groundwater wells.

The groundwater wells outside the mine footprint (ex-situ) are compared to the British Columbia Contaminated Site Regulation (CSR) (BC reg.37/96. O.C. 1480/96), describing water quality standards for freshwater Aquatic Life (AW). The aquatic life standard assumes that a minimum 1:10 dilution is available for groundwater discharged to a freshwater system; together, they are referred to as CSR-AW.

Appendix 1, Tables 35 and 37 provide a description of wells and results of the mine pool / groundwater chemistry.

Exceedances of the CSR-AW in ex-situ groundwater were observed for dissolved concentrations of arsenic, sulphide as H_2S, chloride and selenium as displayed in Table 3 below. Arsenic is naturally elevated in the groundwater and is associated with perched water tables interacting with the Dunsmuir sandstone. This has been observed in baseline groundwater monitoring.

Table 3: Summary of Parameters above CSR-AW in Ex-Situ Groundwater

Parameter	Sites above the CSR-AL	CSR-AL	Results
As-D	QU08-13 (A), QU08-21G (S and D), QU10-10 (S), QU11-05 (S and D) and QU11-09 (S)	0.05	0.085 to 0.378
Sulphide as H2S	QU08-13 (A), QU08-21G (S and D), QU11-05 (S & D), QU11-09 (S), QU10-10 (S), QU10-11 (D)	0.02	0.0202 to 42.5
Cl-D	QU10-10 (D)	1500	3100
Se-D	QU11-05 (D)	0.01	0.0209 to 0.0154

PASSIVE TREATMENT SYSTEM (PTS)

The PTS was operational for most of the quarter. Due to extreme fire hazard in 2-South area next to the power lines the power was isolated and shut off in 2-South resulting in the 15-horsepower pump in borehole QU11-11 (INF) powered off from August 11 to September 20 (41 days). The treatment system was operating at 4.5 to 5.0 L/s for July and August.

A notification letter was sent to the Ministry of Environment and Climate Change Strategy (ENV) of a temporary power shut off in the 2-South mine area for PE: 7008 on August 23, 2021. As recommended by Ministry of Environment and Climate Change Strategy (ENV), after an onsite inspection on August 18, 2021, Quinsam's notified ENV in writing with respect to the 2-South pump shut down requesting a temporary authorization to bypass the works for Long lake Seeps in case the seeps flow rates increase as a result of the pump being off. The LLSM seep flow did increase but no discharge reached the lake. Discharge ceased from LLSM on September 16th. The power was restarted on September 20.

QUALITY ASSURANCE QUALITY CONTROL

All replicate sampling was performed in compliance with the *British Columbia Field Sampling Manual for Continuous Monitoring and the Collection of Air, Air Emission, Water, Wastewater, Soil, Sediment, and Biological Samples, 2013 Edition*.

As per these guidelines and in accordance with the Quinsam Coal Quality Assurance/Quality Control (QA/QC) program, one field replicate sample was collected per sampling event. Relative Percent Difference, RPD values were calculated in accordance with the B.C. field sampling manual.

CONCLUSION:

Quinsam Coal is dedicated to reducing the environmental impacts as a result of mining on the environment. Overall, there were no permit limit exceedances and few provincial water quality guideline observations on site and in the receiving environment this quarter. This exemplifies that the environmental management practices employed by the environmental department are effective in reducing impacts to the surrounding environment. In closing, we trust the information presented in this report satisfies the conditions under Effluent Permit PE-7008. Please contact the Quinsam Coal Environmental Department if you have any questions or comments.

Appendix 1 - 2021 Annual Water Quality Report

Table of Contents

Table 1 Description of Effluent, In-Mine Releases Receiving Environment Monitoring Sites 1 Page(s)

Description of Effluent, In-Mine Releases & Receiving Environment Monitoring Sites			
EMS ID #	**Monitoring Sites**	**Abbreviation (Station Code)**	***Type of Water (MW, FW or GW)**
	North Coal Mining Operation		
E207409	Settling Pond #4 Decant	WD	**Discharge (MW)**
E207411	Culvert, at Middle Quinsam Lake Road	WC	MW & FW
E283433	2-North Portal Sump (Adit Sump)	2NPS	MW
E207412	2-North Pit Sump CCR Cover	WP	PAG-CCR Water Cover - MW
E292126	South Dyke Sump	SDS	MW
	South Coal Mine		
E218582	Settling Pond #1 Decant	SPD	**Discharge (MW)**
E217014	Culvert, Downstream End at Access Road	SPC	MW & FW
E217015	South Pit Main Sump Water	3S	PAG-CCR Water Cover (MW & FW)
E292127	2-South Pit In Pit Water Cover (2-South Standpipe)	2S	PAG-CCR Water Cover (MW & FW)
E292128	1977 Bulk Sample Pit	3S77	MW & FW
E292129	Culvert Downstream of 4 South Access Road	4S-Lo	MW & FW
	7-South Mining Operation		
E292069	7-South Surface Decant	7SSD	**Discharge (MW & FW)**
E292110	7-South Adit Sump	7SPS	MW
	Seep Monitoring Sites		
E292131	Long Lake Seeps	LLS & LLSM	GW / MW
	Culvert that collects groundwater and Coal Main logging road water entering MQL (PDSR)	PDSR	GW / SW
	Receiving Environment Monitoring Sites - Near Initial Zone of Dilution (NIDZ)		
Near Initial Dilution Zone (NIDZ) Monitoring Sites			
E292130	Long Lake Entrance (South end water entering Long Lake)	LLE	NIDZ
E292109	Road Crossing Bridge on Stream 1 above the Lower Wetland (Downstream of 7SSD).The site name is Stream 1, 7S.	7S	NIDZ
	Receiving Water (Rivers & Lakes Monitoring Sites) 5 in 30 Monitoring Locations		
North Coal Mining Operation			
E0126402	Quinsam River at Argonaut Road	WA	FW
E206618	Middle Quinsam Lake Centre	MQL (1, 4, 9 & 1m from Bottom)	FW
E0900504	Outflow from Middle Quinsam Lake	WB	FW
South Coal Mine			
E217018	No Name Lake	NNL (1, 4, 9 & 1m from Bottom)	FW
E217017	No Name Lake Outlet	NNO	FW
E206619	Long Lake at Centre	LLM (1, 4, 9 & 1m from Bottom)	FW
E219412	Long Lake Outlet	LLO	FW
7-South Mining Operation (Areas 1 to 4)			
E286930	Quinsam River Upstream of 7-South Mining Operation	QRDS1	FW
E292113	Quinsam River Downstream of 7-South Mining Operation	7SQR	FW
E292112	Lower Wetland Outlet at the confluence of the Quinsam River	LWO	FW
E292118	Lower Quinsam Lake Centre	LQL (1, 4, 9 & 1m from Bottom)	FW
7-South (Proposed) Area 5 Mining Operation			
E297231	Iron River upstream of 7SA5	IR6	FW
E297232	Iron River downstream of 7SA5 and 242 inputs	IR8	FW
E299256	Quinsam River downstream of confluence with Iron River	IRQR	FW
E292118	Lower Quinsam Lake Centre	LQL (1, 4, 9 & 1m from Bottom)	FW
Long Lake Seep Passive Treatment System			
N/A	Groundwater well (2-South Mine Pool) influent to the treatment system	QU11-11 (INF-EFF)	MW
N/A	Bio Cell Reactor	BCR-EFF	MW
N/A	Sulphide Polishing Cell	SPC-EFF	MW
N/A	2-South Inflow	2SI	MW
N/A	Aeration Lagoon	AL-EFF	Not in use
N/A	Settling Pond Effluent	SP-EFF	Not in use
*** MW= Mine Water, FW= Freshwater, GW =Groundwater NIDZ = Near Intial Dilution Zone**			

Table 2 Exceedance Summary Table for EMS ID: E207409 Settling Pond #4 1 Page(s)

SUMMARY OF PERMIT LIMIT EXCEEDANCES & PERMIT NON-COMPLIANCES

EMS ID & Site Name	Non-Compliance (PNC)	Result (mg/L)	Date	Non-Compliance Reason	Number of events or period for PNC, P or spill event.
E207409- SP4	PNC- Continuous flow	5 days of no flow	September 9 - 12 and 15	Flow meter failed to coninually operate due to voltage stabilzer failure.	5 out of 92 days

Appendix 1 - Q2 (July-September 2021) Water Quality Report

SUMMARY OF WATER QUALITY GUIDELINE OBSERVATIONS AT RECEIVING MONITORING LOCATIONS 2020-2021

EMS ID & Site Name	Parameter (mg/L or pH Units)	Guideline Limit	Result	Date	Guideline	Sampling Events Exceeding Guideline
E206619 - Long Lake Middle (LLM) (13m-21m depths)	pH	<6.5	6.49 to 6.43	Summer 5 in 30	Min	pH <6.5 at 15 depths profiled (13 m to 21 m) during summer for 2 out of 5 weeks
E206619 - Long Lake Middle (LLM) (18 m-21m depths)	D.O.	<3.0 mg/L	2.97 to 0.62	Summer 5 in 30	Min	D.O. <3.00 mg/L at 9 depths profiled (18 m to 21 m) during summer for 4 out of 5 weeks
E217017 - No Name Lake Outlet (NNO)	Cu-D	0.0003	0.00043	Summer 5 in 30	A	5 in 30 Average
E292113 -7 South Quinsam River (7SQR)	Cu-D	0.0003	0.00044	Summer 5 in 30	A	5 in 30 Average
E299256 - Downstream of the confluence of the Iron River and Quinsam River (IRQR)	Cu-D	0.0003	0.00049	Summer 5 in 30	A	5 in 30 Average
E297231 -Iron River upstream of 7SA5 (IR6)	Cu-D	0.0003	0.00046	Summer 5 in 30	A	5 in 30 Average
	As-T	0.005	0.006 - 0.0117	Summer 5 in 30	M	5/5 sampling events
E297232 - Iron River Downstream of 7SA5 and 242 inputs (IR8)	Cu-D	0.0003	0.00064	Summer 5 in 30	A	5 in 30 Average
	As-T	0.005	0.0124 - 0.020	Summer 5 in 30	M	5/5 sampling events
E292130 - South end water entering Long Lake (LLE)	Fe-T	1.00	1.24	July	M	(1/3) Monthly sampling events
E292131- Smaller seep into Long Lake (LLS)	Fe-T	1.00	1.85, 1.46 and 1.38	July through September	M	(3/3) Monthly sampling events
	Fe-D	0.35	1.71, 1.47 and 1.39	July through September	M	(3/3) Monthly sampling events
E292131- Long Lake Seep Middle (LLSM)	Fe-D	0.35	0.869, 0.712 and 0.664	July through September	M	(3/3) Monthly sampling events
Seepage from shallow groundwater	As-T	0.005	0.0164 to 0.0298	July through September	M	(7/7) samples
	Fe-T	1	1.14	September 21, 2021	M	(1/7) samples

***SO4 at LLE was calculated using a rolling average.**

Min = Minimum Water Quality Guideline (WQG) M = Maximum WQG /WQO, A = Average WQG /WQO

For all Middle Quinsam Lake Sub-basin and Iron River results background hardness of 30 mg/L was used to calculate those parameters that are hardness dependent.

Table 4 Contaminated Sites Regulations - Aquatic Life Standards 1 Page(s)

Parameter	Sites above the CSR-AL	CSR-AL	Results
As-D	QU08-13 (A), QU08-21G (S and D), QU10-10 (S), QU11-05 (S and D) and QU11-09 (S)	0.05	0.085 to 0.378
Sulphide as H2S	QU08-13 (A), QU08-21G (S and D), QU11-05 (S & D), QU11-09 (S), QU10-10 (S), QU10-11 (D)	0.02	0.0202 to 42.5
Cl-D	QU10-10 (D)	1500	3100
Se-D	QU11-05 (D)	0.01	0.0209 to 0.0154

Table 5 Settling Pond # 4 - Authorized Discharge Location for North Mine Water 3 Page(s)

EMS ID	E207409				Stn Std	PL-N	
Site Description			Settling Pond # 4 - Authorized Discharge Location for				
Site Name	WD	Std Val	WD-5JUL21-P	WD-12Jul2121-P	WD-19JUL21-P	WD-26JUL21-P	WD-29JUL21-P
Date		Max	7/5/2021	7/12/2021	7/19/2021	7/26/2021	7/29/2021
pH-F	pH Units		7.85	7.86	7.61	7.43	
Cond-F	uS/cm		2780	2500	1845	2150	
SO4-D	mg/L		1000	790	560	550	750
TSS	mg/L	25	3.2	1.6	1.6		4.4
Alk-T	mg/L		490				
Acidity83	mg/L		11.1				
Al-T	mg/L		0.0041				
As-T	mg/L		0.00089				
Ba-T	mg/L		0.0213				
B-T	mg/L		1.12				
Cd-T	mg/L		<0.000010				
Ca-T	mg/L		188				
Cr-T	mg/L		<0.0010				
Co-T	mg/L		0.00037				
Cu-T	mg/L		0.00118				
Hard-T	mg/L		558				
Fe-T	mg/L		0.974				
Pb-T	mg/L		<0.00020				
Mg-T	mg/L		21.4				
Mn-T	mg/L		0.295				
Hg-T	mg/L		<0.0000019				
Mo-T	mg/L		<0.0010				
Ni-T	mg/L		0.0014				
K-T	mg/L		5.07				
S-T	mg/L		331				
Se-T	mg/L		<0.00010				
Si-T	mg/L		2.87				
Ag-T	mg/L		<0.000020				
Na-T	mg/L		417				
Sr-T	mg/L		2.00				
Zn-T	mg/L		<0.0050				
Al-D	mg/L	0.5	<0.0060				
As-D	mg/L		0.00036				
Ba-D	mg/L		0.0200				
B-D	mg/L		1.12				
Be-D	mg/L		<0.00020				
Cd-D	mg/L		<0.000020				
Ca-D	mg/L		180				
Cr-D	mg/L		<0.0020				
Co-D	mg/L		<0.00040				
Cu-D	mg/L	0.02	0.00059				
Hard-D	mg/L		537				
Fe-D	mg/L	0.3	0.016				
Pb-D	mg/L	0.05	<0.00040				
Mg-D	mg/L		21.1				
Mn-D	mg/L		0.291				
Hg-D	mg/L		<0.0000019				
Mo-D	mg/L		<0.0020				
Ni-D	mg/L		<0.0020				
K-D	mg/L		4.98				
S-D	mg/L		323				
Se-D	mg/L		<0.00020				
Si-D	mg/L		2.88				
Na-D	mg/L		400				
Sr-D	mg/L		1.95				
Zn-D	mg/L	0.1	<0.010				
O&G	mg/L	10					

Table 5 Settling Pond # 4 - Authorized Discharge Location for North Mine Water 3 Page(s)

EMS ID	E207409						
Site Description		North Mine Water					
Site Name	WD	Std Val	WD-4AUG21-P	WD-9AUG21-P	WD-16AUG21-R	WD-16AUG21-P	WD-23AUG21-P
Date		Max	8/4/2021	8/9/2021	8/16/2021	8/16/2021	8/23/2021
pH-F	pH Units		7.59	7.6		7.42	7.5
Cond-F	uS/cm		2740	2670		1918	2740
SO4-D	mg/L		880	850	620	590	810
TSS	mg/L	25	2.0	4.8	<1.0	2.4	5.6
Alk-T	mg/L			500			
Acidity83	mg/L			8.7			
Al-T	mg/L			<0.0060			
As-T	mg/L			0.00126			
Ba-T	mg/L			0.0192			
B-T	mg/L			1.19			
Cd-T	mg/L			<0.000020			
Ca-T	mg/L			169			
Cr-T	mg/L			<0.0020			
Co-T	mg/L			<0.00040			
Cu-T	mg/L			<0.0010			
Hard-T	mg/L			502			
Fe-T	mg/L			1.42			
Pb-T	mg/L			<0.00040			
Mg-T	mg/L			19.7			
Mn-T	mg/L			0.304			
Hg-T	mg/L			<0.0000019			
Mo-T	mg/L			<0.0020			
Ni-T	mg/L			<0.0020			
K-T	mg/L			4.79			
S-T	mg/L			284			
Se-T	mg/L			<0.00020			
Si-T	mg/L			3.22			
Ag-T	mg/L			<0.000040			
Na-T	mg/L			395			
Sr-T	mg/L			1.61			
Zn-T	mg/L			<0.010			
Al-D	mg/L	0.5		<0.0060			
As-D	mg/L			0.00059			
Ba-D	mg/L			0.0182			
B-D	mg/L			1.18			
Be-D	mg/L			<0.00020			
Cd-D	mg/L			<0.000020			
Ca-D	mg/L			168			
Cr-D	mg/L			<0.0020			
Co-D	mg/L			<0.00040			
Cu-D	mg/L	0.02		<0.00040			
Hard-D	mg/L			496			
Fe-D	mg/L	0.3		0.013			
Pb-D	mg/L	0.05		<0.00040			
Mg-D	mg/L			18.7			
Mn-D	mg/L			0.292			
Hg-D	mg/L			<0.0000019			
Mo-D	mg/L			<0.0020			
Ni-D	mg/L			<0.0020			
K-D	mg/L			4.59			
S-D	mg/L			281			
Se-D	mg/L			<0.00020			
Si-D	mg/L			3.38			
Na-D	mg/L			372			
Sr-D	mg/L			1.67			
Zn-D	mg/L	0.1		<0.010			
O&G	mg/L	10		<1.0			

Table 5 Settling Pond # 4 - Authorized Discharge Location for North Mine Water 3 Page(s)

EMS ID	E207409							
Site Description								
Site Name	WD	Std Val	WD-1SEP21-P	WD-8SEP21-P	WD-13SEP21-R	WD-13SEP21-P	WD-20SEP21-P	WD-27SEP21-P
Date		Max	9/1/2021	9/8/2021	9/13/2021	9/13/2021	9/20/2021	9/27/2021
pH-F	pH Units		7.51	7.42		7.37	7.46	7.35
Cond-F	uS/cm		2700	2490		2330	2010	2130
SO4-D	mg/L		880	950	700	750	630	700
TSS	mg/L	25	2.8	2.8	2.4	3.6	3.6	2.4
Alk-T	mg/L		490					
Acidity83	mg/L		3.0					
Al-T	mg/L							
As-T	mg/L							
Ba-T	mg/L							
B-T	mg/L							
Cd-T	mg/L							
Ca-T	mg/L							
Cr-T	mg/L							
Co-T	mg/L							
Cu-T	mg/L							
Hard-T	mg/L							
Fe-T	mg/L							
Pb-T	mg/L							
Mg-T	mg/L							
Mn-T	mg/L							
Hg-T	mg/L							
Mo-T	mg/L							
Ni-T	mg/L							
K-T	mg/L							
S-T	mg/L							
Se-T	mg/L							
Si-T	mg/L							
Ag-T	mg/L							
Na-T	mg/L							
Sr-T	mg/L							
Zn-T	mg/L							
Al-D	mg/L	0.5	<0.0030					
As-D	mg/L		0.00059					
Ba-D	mg/L		0.0181					
B-D	mg/L		1.01					
Be-D	mg/L		<0.00010					
Cd-D	mg/L		<0.000010					
Ca-D	mg/L		181					
Cr-D	mg/L		<0.0010					
Co-D	mg/L		<0.00020					
Cu-D	mg/L	0.02	<0.00020					
Hard-D	mg/L		526					
Fe-D	mg/L	0.3	0.0131					
Pb-D	mg/L	0.05	<0.00020					
Mg-D	mg/L		18.4					
Mn-D	mg/L		0.253					
Hg-D	mg/L		<0.0000019					
Mo-D	mg/L		<0.0010					
Ni-D	mg/L		<0.0010					
K-D	mg/L		4.66					
S-D	mg/L		280					
Se-D	mg/L		<0.00010					
Si-D	mg/L		3.27					
Na-D	mg/L		392					
Sr-D	mg/L		1.70					
Zn-D	mg/L	0.1	<0.0050					
O&G	mg/L	10						

Table 6 2 North Pit Sump CCR Water Cover 1 Page(s)

EMS ID	E207412			
Site Description	2 North Pit Sump CCR Water Cover			
Site Name	WP	WP-5JUL21-M	WP-9AUG21-M	WP-1SEP21-M
Date		7/5/2021	8/9/2021	9/1/2021
pH-F	pH Units	7.95	7.17	7.67
Cond-F	uS/cm	2940	3320	3290
SO4-D	mg/L	1300	580	1400
TSS	mg/L	16	2.0	2.4
Alk-T	mg/L	240	200	360
Acidity83	mg/L	2.5	<1.0	2.8
Al-T	mg/L	0.0115	<0.0030	<0.0060
As-T	mg/L	0.00092	0.00025	0.00040
Ba-T	mg/L	0.0160	0.0159	0.0129
B-T	mg/L	1.15	1.02	1.03
Cd-T	mg/L	<0.000020	<0.000010	<0.000020
Ca-T	mg/L	167	231	196
Cr-T	mg/L	<0.0020	<0.0010	<0.0020
Co-T	mg/L	<0.00040	<0.00020	<0.00040
Cu-T	mg/L	0.0015	<0.00050	<0.0010
Hard-T	mg/L	542	703	592
Fe-T	mg/L	0.422	0.071	0.284
Pb-T	mg/L	<0.00040	<0.00020	<0.00040
Mg-T	mg/L	30.6	30.4	25.1
Mn-T	mg/L	0.0458	0.190	0.0563
Hg-T	mg/L	<0.0000019	<0.0000019	<0.0000019
Mo-T	mg/L	<0.0020	<0.0010	<0.0020
Ni-T	mg/L	0.0020	0.0015	<0.0020
K-T	mg/L	5.87	6.65	6.07
S-T	mg/L	422	473	396
Se-T	mg/L	<0.00020	<0.00010	<0.00020
Si-T	mg/L	3.55	3.36	3.31
Ag-T	mg/L	<0.000040	<0.000020	<0.000040
Na-T	mg/L	452	482	424
Sr-T	mg/L	2.04	2.46	2.26
Zn-T	mg/L	<0.010	<0.0050	<0.010
Al-D	mg/L	<0.0060	<0.0060	<0.0060
As-D	mg/L	0.00062	0.00027	0.00026
Ba-D	mg/L	0.0143	0.0159	0.0130
B-D	mg/L	1.08	1.25	1.10
Be-D	mg/L	<0.00020	<0.00020	<0.00020
Cd-D	mg/L	<0.000020	<0.000020	<0.000020
Ca-D	mg/L	150	222	213
Cr-D	mg/L	<0.0020	<0.0020	<0.0020
Co-D	mg/L	<0.00040	<0.00040	<0.00040
Cu-D	mg/L	0.00117	<0.00040	<0.00040
Hard-D	mg/L	493	672	644
Fe-D	mg/L	0.018	<0.010	0.015
Pb-D	mg/L	<0.00040	<0.00040	<0.00040
Mg-D	mg/L	28.7	28.9	27.5
Mn-D	mg/L	0.0254	0.171	0.0466
Hg-D	mg/L	<0.0000019	<0.0000019	<0.0000019
Mo-D	mg/L	<0.0020	<0.0020	<0.0020
Ni-D	mg/L	<0.0020	<0.0020	<0.0020
K-D	mg/L	5.58	6.24	6.43
S-D	mg/L	413	454	425
Se-D	mg/L	<0.00020	<0.00020	<0.00020
Si-D	mg/L	3.46	3.55	3.33
Na-D	mg/L	425	461	483
Sr-D	mg/L	2.00	2.34	2.23
Zn-D	mg/L	<0.010	<0.010	<0.010

Table 7 2-North Portal Sump Effuent 1 Page(s)

EMS ID	E283433			
Site Description		2-North Portal Sump Effuent		
Site Name	2NPS	2NPS-5JUL21-M	2NPS-9AUG21-M	2NPS-1SEP21-M
Date		7/5/2021	8/9/2021	9/1/2021
pH-F	pH Units	7.7	7.02	7.43
Cond-F	uS/cm	2640	2710	2840
SO4-D	mg/L	1000	1200	1200
Alk-T	mg/L	310	330	280
Acidity83	mg/L	12.3	18.4	4.0
Al-T	mg/L	0.0133	0.0076	<0.0060
As-T	mg/L	0.00068	0.00041	0.00062
Ba-T	mg/L	0.0120	0.0138	0.0121
B-T	mg/L	0.85	0.94	0.83
Cd-T	mg/L	<0.000020	<0.000020	<0.000020
Ca-T	mg/L	268	297	293
Cr-T	mg/L	<0.0020	<0.0020	<0.0020
Co-T	mg/L	0.00066	0.00093	0.00071
Cu-T	mg/L	<0.0010	<0.0010	<0.0010
Hard-T	mg/L	799	883	857
Fe-T	mg/L	0.190	0.182	0.210
Pb-T	mg/L	<0.00040	<0.00040	<0.00040
Mg-T	mg/L	31.3	34.2	30.8
Mn-T	mg/L	0.170	0.179	0.159
Hg-T	mg/L	<0.0000019	<0.0000019	<0.0000019
Mo-T	mg/L	<0.0020	<0.0020	<0.0020
Ni-T	mg/L	<0.0020	<0.0020	<0.0020
K-T	mg/L	4.02	4.09	4.14
S-T	mg/L	351	381	379
Se-T	mg/L	<0.00020	<0.00020	<0.00020
Si-T	mg/L	2.80	3.09	2.93
Ag-T	mg/L	<0.000040	<0.000040	<0.000040
Na-T	mg/L	257	276	275
Sr-T	mg/L	2.07	2.08	2.27
Zn-T	mg/L	<0.010	<0.010	<0.010
Al-D	mg/L	0.0081	0.0065	<0.0060
As-D	mg/L	0.00049	0.00039	0.00042
Ba-D	mg/L	0.0114	0.0129	0.0114
B-D	mg/L	0.79	0.90	0.84
Be-D	mg/L	<0.00020	<0.00020	<0.00020
Cd-D	mg/L	<0.000020	<0.000020	<0.000020
Ca-D	mg/L	262	270	298
Cr-D	mg/L	<0.0020	<0.0020	<0.0020
Co-D	mg/L	0.00066	0.00072	0.00073
Cu-D	mg/L	0.00058	<0.00040	<0.00040
Hard-D	mg/L	780	807	876
Fe-D	mg/L	0.020	0.035	0.022
Pb-D	mg/L	<0.00040	<0.00040	<0.00040
Mg-D	mg/L	30.3	32.2	32.0
Mn-D	mg/L	0.170	0.148	0.157
Hg-D	mg/L	<0.0000019	<0.0000019	<0.0000019
Mo-D	mg/L	<0.0020	<0.0020	<0.0020
Ni-D	mg/L	<0.0020	<0.0020	<0.0020
K-D	mg/L	3.96	4.02	4.19
S-D	mg/L	361	382	390
Se-D	mg/L	<0.00020	<0.00020	<0.00020
Si-D	mg/L	2.83	3.10	2.81
Na-D	mg/L	250	265	288
Sr-D	mg/L	2.17	2.06	2.12
Zn-D	mg/L	<0.010	<0.010	<0.010

Table 8 Road Side Ditch Draining into MQL 1 Page(s)

EMS ID				
Site Description	**Road Side Ditch Draining into MQL**			
Site Name	**PDSR**			
Date	**No Flow**			
pH-F	pH Units			
Cond-F	uS/cm			
SO4-D	mg/L			
TSS	mg/L			
Al-T	mg/L			
As-T	mg/L			
Ba-T	mg/L			
B-T	mg/L			
Cd-T	mg/L			
Ca-T	mg/L			
Cr-T	mg/L			
Co-T	mg/L			
Cu-T	mg/L			
Hard-T	mg/L			
Fe-T	mg/L			
Pb-T	mg/L			
Mg-T	mg/L			
Mn-T	mg/L			
Hg-T	mg/L			
Mo-T	mg/L			
Ni-T	mg/L			
K-T	mg/L			
S-T	mg/L			
Se-T	mg/L			
Si-T	mg/L			
Ag-T	mg/L			
Na-T	mg/L			
Sr-T	mg/L			
Zn-T	mg/L			
Al-D	mg/L			
As-D	mg/L			
Ba-D	mg/L			
B-D	mg/L			
Be-D	mg/L			
Cd-D	mg/L			
Ca-D	mg/L			
Cr-D	mg/L			
Co-D	mg/L			
Cu-D	mg/L			
Hard-D	mg/L			
Fe-D	mg/L			
Pb-D	mg/L			
Mg-D	mg/L			
Mn-D	mg/L			
Hg-D	mg/L			
Mo-D	mg/L			
Ni-D	mg/L			
K-D	mg/L			
S-D	mg/L			
Se-D	mg/L			
Si-D	mg/L			
Na-D	mg/L			
Sr-D	mg/L			
Zn-D	mg/L			
O&G	mg/L			

Table 9 Culvert at Middle Quinsam Lake Road 1 Page(s)

EMS ID	E207411				
Site Description	Culvert at Middle Quinsam Lake Road				
Site Name	WC	WC-5JUL21-M	WC-9AUG21-M	WC-9AUG21-R	WC-1SEP21-M
Date		7/5/2021	8/9/2021	8/9/2021	9/1/2021
pH-F	pH Units	8.29	7.96		8.07
Cond-F	uS/cm	1738	2500		2410
SO4-D	mg/L	980	810	820	880
TSS	mg/L	1.6	3.2	3.2	1.6
Al-T	mg/L		<0.0060	<0.0030	
As-T	mg/L		0.00029	0.00032	
Ba-T	mg/L		0.0179	0.0171	
B-T	mg/L		1.22	0.842	
Cd-T	mg/L		<0.000020	<0.000010	
Ca-T	mg/L		147	138	
Cr-T	mg/L		<0.0020	<0.0010	
Co-T	mg/L		<0.00040	<0.00020	
Cu-T	mg/L		<0.0010	<0.00050	
Hard-T	mg/L		452	421	
Fe-T	mg/L		0.094	0.087	
Pb-T	mg/L		<0.00040	<0.00020	
Mg-T	mg/L		20.5	18.5	
Mn-T	mg/L		0.0189	0.0175	
Hg-T	mg/L		<0.0000019	<0.0000019	
Mo-T	mg/L		<0.0020	<0.0010	
Ni-T	mg/L		<0.0020	<0.0010	
K-T	mg/L		4.93	4.59	
S-T	mg/L		296	278	
Se-T	mg/L		<0.00020	<0.00010	
Si-T	mg/L		3.57	3.28	
Ag-T	mg/L		<0.000040	<0.000020	
Na-T	mg/L		401	363	
Sr-T	mg/L		1.61	1.57	
Zn-T	mg/L		<0.010	<0.0050	
Al-D	mg/L		<0.0060	<0.0060	
As-D	mg/L		0.00037	0.00035	
Ba-D	mg/L		0.0171	0.0171	
B-D	mg/L		1.13	1.13	
Be-D	mg/L		<0.00020	<0.00020	
Cd-D	mg/L		<0.000020	<0.000020	
Ca-D	mg/L		137	138	
Cr-D	mg/L		<0.0020	<0.0020	
Co-D	mg/L		<0.00040	<0.00040	
Cu-D	mg/L		<0.00040	<0.00040	
Hard-D	mg/L		419	422	
Fe-D	mg/L		<0.010	0.010	
Pb-D	mg/L		<0.00040	<0.00040	
Mg-D	mg/L		18.5	18.8	
Mn-D	mg/L		0.0174	0.0174	
Hg-D	mg/L		<0.0000019	<0.0000019	
Mo-D	mg/L		<0.0020	<0.0020	
Ni-D	mg/L		<0.0020	<0.0020	
K-D	mg/L		4.60	4.72	
S-D	mg/L		279	286	
Se-D	mg/L		<0.00020	<0.00020	
Si-D	mg/L		3.64	3.74	
Na-D	mg/L		366	365	
Sr-D	mg/L		1.57	1.60	
Zn-D	mg/L		<0.010	<0.010	

Table 10 Settling Pond #1 - Authorized Discharge Location for South Mine Water 1 Page(s)

EMS ID	E218582						Stn Std	PL-S									
Site Description	Settling Pond #1 - Authorized Discharge Location for South Mine Water																
Site Name	SPD	Std Val		SPD-5JUL21-P	SPD-12Jul2121-P	SPD-19Jul21-P	SPD-26Jul21-P	SPD-4Aug21-P	SPD-9AUG21-P	SPD-16Aug21-P	SPD-23Aug21-P	SPD-1SEP21-P	SPD-8Sep21-P	SPD-13Sep21-P	SPD-20Sep21-P	SPD-23SEP21-P	SPD-27SEP21-P
Date		Max	Min	7/5/2021	7/12/2021	7/19/2021	7/26/2021	8/4/2021	8/9/2021	8/16/2021	8/23/2021	9/1/2021	9/8/2021	9/13/2021	9/20/2021	9/23/2021	9/27/2021
pH-F	pH Units			7.81	7.91	8.6	8.88	8	7.55	7.77	7.22	7.83	7.57	7.44	7.01	7.16	7.53
Cond-F	uS/cm			1018	907	884	862	884	942	1005	992	1044	1027	1112	902	988	1017
pH-L	pH Units	8.5	6.0	7.74	7.91							7.96				8.11	8.12
Cond-L	uS/cm			960	950							990				950	1000
SO4-D	mg/L			490	460				480			450				440	470
TSS	mg/L	25	0	2.4	2.4				2.0			2.8				<1.0	<1.0
Alk-T	mg/L			110					110			99					110
Acidity83	mg/L			1.8					4.5			3.3					3.8
Al-T	mg/L								<0.0030								<0.0030
As-T	mg/L								0.00175								0.00115
Ba-T	mg/L								0.0179								0.0168
B-T	mg/L								0.296								0.307
Cd-T	mg/L								<0.000010								<0.000010
Ca-T	mg/L								147								156
Cr-T	mg/L								<0.0010								<0.0010
Co-T	mg/L								<0.00020								<0.00020
Cu-T	mg/L								<0.00050								<0.00050
Hard-T	mg/L								463								485
Fe-T	mg/L								0.189								0.126
Pb-T	mg/L								<0.00020								<0.00020
Mg-T	mg/L								23.2								23.2
Mn-T	mg/L								0.0308								0.0342
Hg-T	mg/L								<0.0000019								<0.0000019
Mo-T	mg/L								<0.0010								<0.0010
Ni-T	mg/L								<0.0010								<0.0010
K-T	mg/L								1.67								1.93
S-T	mg/L								144								157
Se-T	mg/L								<0.00010								<0.00010
Si-T	mg/L								6.95								5.01
Ag-T	mg/L								<0.000020								<0.000020
Na-T	mg/L								33.5								38.3
Sr-T	mg/L								1.00								1.05
Zn-T	mg/L								<0.0050								0.0204
Al-D	mg/L	0.5	0	<0.0030					<0.0030			0.0033					<0.0030
As-D	mg/L			0.00161					0.00170			0.00172					0.00103
Ba-D	mg/L			0.0184					0.0178			0.0165					0.0161
B-D	mg/L			0.251					0.291			0.290					0.293
Be-D	mg/L			<0.00010					<0.00010			<0.00010					<0.00010
Cd-D	mg/L			<0.000010					<0.000010			<0.000010					<0.000010
Ca-D	mg/L			141					146			154					152
Cr-D	mg/L			<0.0010					<0.0010			<0.0010					<0.0010
Co-D	mg/L			<0.00020					<0.00020			<0.00020					<0.00020
Cu-D	mg/L	0.02	0	0.00025					0.00022			0.00022					<0.00020
Hard-D	mg/L			434					455			481					473
Fe-D	mg/L	0.5	0	0.203					0.146			0.105					0.0819
Pb-D	mg/L	0.05	0	<0.00020					<0.00020			<0.00020					<0.00020
Mg-D	mg/L			20.1					21.7			23.4					22.6
Mn-D	mg/L			0.0643					0.0255			0.0146					0.0050
Hg-D	mg/L			<0.0000019					<0.0000019			<0.0000019					<0.0000019
Mo-D	mg/L			<0.0010					<0.0010			<0.0010					<0.0010
Ni-D	mg/L			<0.0010					<0.0010			<0.0010					<0.0010
K-D	mg/L			1.69					1.64			1.77					1.86
S-D	mg/L			141					143			152					153
Se-D	mg/L			0.00020					<0.00010			<0.00010					<0.00010
Si-D	mg/L			3.47					7.20			7.81					4.86
Na-D	mg/L			28.5					32.1			34.7					37.1
Sr-D	mg/L			1.04					0.974			1.04					1.02
Zn-D	mg/L	0.2	0	<0.0050					<0.0050			0.0085					0.0070
O&G	mg/L	10	0						<1.0								

Table 11 Passage Treatment System (PTS) Influent for Biocell 1 Page(s)

EMS ID									
Site Description	**Passive Treatment System (PTS) Influent from 2-S Mine Pool**								
Site Name	**INF**	**INF-5JUL-M**	**INF-12Jul21-M**	**INF-19JUL21-M**	**INF-26JUL21-M**	**INF-26JUL21-R**	**INF-4AUG21-M**	**INF-9AUG21-M**	**INF-27SEP21-M**
Date		**7/5/2021**	**7/12/2021**	**7/19/2021**	**7/26/2021**	**7/26/2021**	**8/4/2021**	**8/9/2021**	**9/27/2021**
pH-F	pH Units	7.7	7.14	7.39	7.2		7.16	7.17	7.17
Cond-F	uS/cm	1555	1475	1554	1544		1580	1469	1650
SO4-D	mg/L	470		650	620	650	690	600	670
TSS	mg/L							10	6.4
Alk-T	mg/L	240						280	280
Acidity83	mg/L	14.6						19.1	18.6
Al-T	mg/L	0.0070						<0.0030	<0.0030
As-T	mg/L	0.00615						0.00487	0.00481
Ba-T	mg/L	0.0195						0.0234	0.0225
B-T	mg/L	0.711						0.673	0.683
Cd-T	mg/L	<0.000010						<0.000010	<0.000010
Ca-T	mg/L	193						235	247
Cr-T	mg/L	<0.0010						<0.0010	<0.0010
Co-T	mg/L	<0.00020						0.00075	0.00065
Cu-T	mg/L	<0.00050						<0.00050	<0.00050
Hard-T	mg/L	545						652	679
Fe-T	mg/L	15.2						3.47	4.12
Pb-T	mg/L	<0.00020						<0.00020	<0.00020
Mg-T	mg/L	15.5						16.1	15.2
Mn-T	mg/L	0.355						0.413	0.426
Hg-T	mg/L	<0.0000019						<0.0000019	<0.0000019
Mo-T	mg/L	<0.0010						<0.0010	<0.0010
Ni-T	mg/L	<0.0010						0.0011	0.0011
K-T	mg/L	2.22						1.94	1.93
S-T	mg/L	194						217	224
Se-T	mg/L	<0.00010						<0.00010	<0.00010
Si-T	mg/L	3.00						3.12	3.49
Ag-T	mg/L	<0.000020						<0.000020	<0.000020
Na-T	mg/L	117						114	116
Sr-T	mg/L	2.03						2.17	2.29
Zn-T	mg/L	<0.0050						<0.0050	<0.0050
Al-D	mg/L	0.0038						<0.0030	<0.0030
As-D	mg/L	0.00426						0.00488	0.00471
Ba-D	mg/L	0.0187						0.0233	0.0221
B-D	mg/L	0.684						0.717	0.700
Be-D	mg/L	<0.00010						<0.00010	<0.00010
Cd-D	mg/L	<0.000010						<0.000010	<0.000010
Ca-D	mg/L	187						236	245
Cr-D	mg/L	<0.0010						<0.0010	<0.0010
Co-D	mg/L	<0.00020						0.00075	0.00067
Cu-D	mg/L	<0.00020						<0.00020	<0.00020
Hard-D	mg/L	532						653	675
Fe-D	mg/L	9.47						3.48	4.09
Pb-D	mg/L	<0.00020						<0.00020	<0.00020
Mg-D	mg/L	15.5						15.7	15.1
Mn-D	mg/L	0.367						0.398	0.428
Hg-D	mg/L	<0.0000019						<0.0000019	<0.0000019
Mo-D	mg/L	<0.0010						<0.0010	<0.0010
Ni-D	mg/L	<0.0010						0.0012	0.0010
K-D	mg/L	2.29						1.94	1.90
S-D	mg/L	198						219	223
Se-D	mg/L	0.00012						<0.00010	<0.00010
Si-D	mg/L	2.85						3.28	3.45
Na-D	mg/L	116						113	114
Sr-D	mg/L	2.17						2.15	2.18
Zn-D	mg/L	<0.0050						<0.0050	<0.0050

Table 12 PTS Biochemical Reactor Cell 1 Page(s)

EMS ID							
Site Description	**PassiveTreatment System Biochemical Reactor Cell**						
Site Name	**BCR**	**BCREFF-5JUL-M**	**BCREFF-19JUL21-M**	**BCREFF-26JUL21-M**	**BCREFF-4AUG21-M**	**BCREFF-9AUG21-M**	**BCREFF-27SEP21-M**
Date		**7/5/2021**	**7/19/2021**	**7/26/2021**	**8/4/2021**	**8/9/2021**	**9/27/2021**
pH-L	pH Units	7.89	8.12	7.82	8.00		8.04
Cond-L	uS/cm	1600	1500	1500	1500		1500
SO4-D	mg/L	540	540	500	440	410	250
TSS	mg/L					8.4	6.4
Alk-T	mg/L	370				430	570
Acidity83	mg/L	21.7				21.5	20.4
Al-T	mg/L	0.0069				0.0059	0.0110
As-T	mg/L	0.00020				0.00048	0.00100
Ba-T	mg/L	0.0342				0.0313	0.0309
B-T	mg/L	0.826				0.667	0.738
Cd-T	mg/L	<0.000010				<0.000010	<0.000010
Ca-T	mg/L	240				224	227
Cr-T	mg/L	<0.0010				<0.0010	<0.0010
Co-T	mg/L	<0.00020				<0.00020	<0.00020
Cu-T	mg/L	<0.00050				<0.00050	<0.00050
Hard-T	mg/L	667				626	629
Fe-T	mg/L	<0.010				<0.010	<0.010
Pb-T	mg/L	<0.00020				<0.00020	<0.00020
Mg-T	mg/L	16.5				16.0	15.3
Mn-T	mg/L	0.266				0.212	0.148
Hg-T	mg/L	<0.000038				<0.000038	<0.000038
Mo-T	mg/L	<0.0010				<0.0010	<0.0010
Ni-T	mg/L	<0.0010				<0.0010	<0.0010
K-T	mg/L	2.21				2.15	2.17
S-T	mg/L	192				155	101
Se-T	mg/L	<0.00010				<0.00010	<0.00010
Si-T	mg/L	4.39				4.57	6.21
Ag-T	mg/L	<0.000020				<0.000020	<0.000020
Na-T	mg/L	121				117	116
Sr-T	mg/L	2.41				2.13	2.15
Zn-T	mg/L	<0.0050				<0.0050	<0.0050
Al-D	mg/L	0.0073				<0.015	<0.015
As-D	mg/L	<0.00020				0.00058	0.00085
Ba-D	mg/L	0.0334				0.0312	0.0293
B-D	mg/L	0.82				0.89	0.84
Be-D	mg/L	<0.00020				<0.00050	<0.00050
Cd-D	mg/L	<0.000020				<0.000050	<0.000050
Ca-D	mg/L	231				223	214
Cr-D	mg/L	<0.0020				<0.0050	<0.0050
Co-D	mg/L	<0.00040				<0.0010	<0.0010
Cu-D	mg/L	0.00143				<0.0010	<0.0010
Hard-D	mg/L	641				624	612
Fe-D	mg/L	0.014				<0.025	<0.025
Pb-D	mg/L	<0.00040				<0.0010	<0.0010
Mg-D	mg/L	15.7				16.0	16.0
Mn-D	mg/L	0.275				0.214	0.153
Hg-D	mg/L	<0.000038				<0.0000019	<0.000038
Mo-D	mg/L	<0.0020				<0.0050	<0.0050
Ni-D	mg/L	<0.0020				<0.0050	0.0051
K-D	mg/L	2.22				2.18	2.08
S-D	mg/L	279				170	505
Se-D	mg/L	0.0982				0.0807	0.0164
Si-D	mg/L	4.34				5.21	5.65
Na-D	mg/L	116				119	121
Sr-D	mg/L	2.43				2.11	2.01
Zn-D	mg/L	<0.010				<0.025	<0.025

Table 13 PTS Sulphide Polishing Cell 1 Page(s)

EMS ID								
Site Description	Passive Treatment System Sulphide Polishing Cell							
Site Name	SPCEFF	SPCEFF-5JUL-M	SPCEFF-19JUL21-M	SPCEFF-26JUL21-M	SPCEFF-4AUG21-R	SPCEFF-4AUG21-M	SPCEFF-9AUG21-M	SPCEFF-27SEP21-M
Date		7/5/2021	7/19/2021	7/26/2021	8/4/2021	8/4/2021	8/9/2021	9/27/2021
pH-F	pH Units	8.1	7.95	7.8		7.56	7.19	7.3
Cond-F	uS/cm	1639	1449	1471		1464	1512	1355
SO4-D	mg/L	480	330	450	500	530	420	250
TSS	mg/L						19	2.8
Alk-T	mg/L	350					380	540
Acidity83	mg/L	9.4					11.0	17.1
Al-T	mg/L	0.0207					0.0075	0.0136
As-T	mg/L	0.00911					0.00411	0.00576
Ba-T	mg/L	0.0401					0.0394	0.0354
B-T	mg/L	0.871					0.791	0.743
Cd-T	mg/L	<0.000010					<0.000010	<0.000010
Ca-T	mg/L	233					217	193
Cr-T	mg/L	<0.0010					<0.0010	<0.0010
Co-T	mg/L	0.00043					0.00036	0.00039
Cu-T	mg/L	<0.00050					0.00097	0.00121
Hard-T	mg/L	652					605	542
Fe-T	mg/L	1.33					0.867	0.598
Pb-T	mg/L	<0.00020					<0.00020	<0.00020
Mg-T	mg/L	17.1					15.6	14.2
Mn-T	mg/L	0.0910					0.0625	0.0818
Hg-T	mg/L	<0.0000019					<0.0000019	<0.000038
Mo-T	mg/L	<0.0010					<0.0010	<0.0010
Ni-T	mg/L	<0.0010					<0.0010	<0.0010
K-T	mg/L	2.31					2.32	2.13
S-T	mg/L	193					147	75.9
Se-T	mg/L	<0.00010					<0.00010	<0.00010
Si-T	mg/L	2.94					4.44	5.24
Ag-T	mg/L	<0.000020					<0.000020	<0.000020
Na-T	mg/L	129					118	115
Sr-T	mg/L	2.47					2.11	1.97
Zn-T	mg/L	<0.0050					<0.0050	<0.0050
Al-D	mg/L	0.0116					0.0057	0.0104
As-D	mg/L	0.00284					0.00259	0.00508
Ba-D	mg/L	0.0381					0.0393	0.0343
B-D	mg/L	0.776					0.803	0.729
Be-D	mg/L	<0.00010					<0.00010	<0.00010
Cd-D	mg/L	<0.000010					<0.000010	<0.000010
Ca-D	mg/L	227					218	192
Cr-D	mg/L	<0.0010					<0.0010	<0.0010
Co-D	mg/L	0.00038					0.00031	<0.00020
Cu-D	mg/L	<0.00020					0.00023	<0.00020
Hard-D	mg/L	634					607	539
Fe-D	mg/L	0.0392					0.0683	0.0105
Pb-D	mg/L	<0.00020					<0.00020	<0.00020
Mg-D	mg/L	16.3					15.1	14.1
Mn-D	mg/L	0.0833					0.0600	0.0820
Hg-D	mg/L	<0.0000019					<0.0000019	<0.000038
Mo-D	mg/L	<0.0010					<0.0010	<0.0010
Ni-D	mg/L	<0.0010					<0.0010	<0.0010
K-D	mg/L	2.28					2.29	2.09
S-D	mg/L	191					151	150
Se-D	mg/L	0.00011					<0.00010	0.0144
Si-D	mg/L	2.88					4.82	5.19
Na-D	mg/L	123					117	113
Sr-D	mg/L	2.55					2.14	1.91
Zn-D	mg/L	<0.0050					<0.0050	<0.0050

Table 14 2 South Pit Inflow 1 Page(s)

EMS ID									
Site Description	**2 South Pit Inflow**								
Site Name	**2SI**	**2SI-5JUL-M**	**2SI-19JUL21-M**	**2SI-19JUL21-R**	**2SI-20Jul21-M**	**2SI-26JUL21-M**	**2SI-4AUG21-M**	**2SI-9AUG21-M**	**2SI-27SEP21-M**
Date		**7/5/2021**	**7/19/2021**	**7/19/2021**	**7/20/2021**	**7/26/2021**	**8/4/2021**	**8/9/2021**	**9/27/2021**
pH-F	pH Units	7.85	7.68			7.76	7.85	7.69	7.34
Cond-F	uS/cm	1561	1519			1497	1504	1439	1295
SO4-D	mg/L	520	440	400		640	620	420	570
TSS	mg/L							4.0	9.2
Alk-T	mg/L	310						340	160
Acidity83	mg/L	10.2						7.7	7.4
Al-T	mg/L	0.0091						<0.0030	0.0359
As-T	mg/L	0.00043						0.00086	0.00059
Ba-T	mg/L	0.0337						0.0335	0.0447
B-T	mg/L	0.624						0.637	0.566
Cd-T	mg/L	<0.000010						<0.000010	<0.000010
Ca-T	mg/L	207						213	179
Cr-T	mg/L	<0.0010						<0.0010	<0.0010
Co-T	mg/L	0.00028						0.00032	0.00200
Cu-T	mg/L	<0.00050						<0.00050	0.00076
Hard-T	mg/L	586						597	505
Fe-T	mg/L	0.382						0.476	2.00
Pb-T	mg/L	<0.00020						<0.00020	<0.00020
Mg-T	mg/L	16.9						15.5	14.1
Mn-T	mg/L	0.475						0.128	1.62
Hg-T	mg/L	<0.0000019						<0.0000019	<0.0000019
Mo-T	mg/L	<0.0010						<0.0010	<0.0010
Ni-T	mg/L	<0.0010						<0.0010	0.0010
K-T	mg/L	1.68						2.08	2.37
S-T	mg/L	179						159	178
Se-T	mg/L	<0.00010						<0.00010	<0.00010
Si-T	mg/L	5.66						4.31	5.52
Ag-T	mg/L	<0.000020						<0.000020	<0.000020
Na-T	mg/L	106						116	80.8
Sr-T	mg/L	1.91						1.98	1.48
Zn-T	mg/L	<0.0050						<0.0050	<0.0050
Al-D	mg/L	<0.0030						<0.0030	<0.0030
As-D	mg/L	0.00036						0.00068	0.00045
Ba-D	mg/L	0.0339						0.0334	0.0458
B-D	mg/L	0.601						0.758	0.566
Be-D	mg/L	<0.00010						<0.00010	<0.00010
Cd-D	mg/L	<0.000010						<0.000010	<0.000010
Ca-D	mg/L	203						214	180
Cr-D	mg/L	<0.0010						<0.0010	<0.0010
Co-D	mg/L	0.00032						0.00031	0.00215
Cu-D	mg/L	0.00020						<0.00020	0.00050
Hard-D	mg/L	574						599	507
Fe-D	mg/L	0.0209						0.0295	0.645
Pb-D	mg/L	<0.00020						<0.00020	<0.00020
Mg-D	mg/L	16.1						15.6	13.9
Mn-D	mg/L	0.600						0.124	1.80
Hg-D	mg/L	<0.0000019						<0.0000019	<0.0000019
Mo-D	mg/L	<0.0010						<0.0010	<0.0010
Ni-D	mg/L	<0.0010						<0.0010	<0.0010
K-D	mg/L	1.68						2.09	2.35
S-D	mg/L	182						164	176
Se-D	mg/L	<0.00010						<0.00010	<0.00010
Si-D	mg/L	5.74						4.58	5.20
Na-D	mg/L	103						118	81.8
Sr-D	mg/L	2.05						2.00	1.49
Zn-D	mg/L	<0.0050						<0.0050	<0.0050

Table 15 2-South Pit in Pit Water Cover Over PAG-CCR 1 Page(s)

EMS ID	E292127			
Site Description	2-South Pit in Pit Water Cover Over PAG-CCR			
Site Name	2S	2S-5JUL21-M	2S-9AUG21-M	2S-1SEP21-M
Date		7/5/2021	8/9/2021	9/1/2021
pH-F	pH Units	8.12	7.73	7.83
Cond-F	uS/cm	1213	1281	1386
SO4-D	mg/L	530	640	590
Alk-T	mg/L	100	170	110
Acidity83	mg/L	2.0	2.7	1.6
Al-T	mg/L	0.0042	<0.0030	0.0031
As-T	mg/L	0.00129	0.00098	0.00116
Ba-T	mg/L	0.0243	0.0255	0.0229
B-T	mg/L	0.609	0.645	0.676
Cd-T	mg/L	<0.000010	<0.000010	<0.000010
Ca-T	mg/L	138	165	146
Cr-T	mg/L	<0.0010	<0.0010	<0.0010
Co-T	mg/L	<0.00020	<0.00020	<0.00020
Cu-T	mg/L	0.00066	<0.00050	<0.00050
Hard-T	mg/L	405	480	428
Fe-T	mg/L	0.083	0.053	0.029
Pb-T	mg/L	<0.00020	<0.00020	<0.00020
Mg-T	mg/L	14.9	16.7	15.5
Mn-T	mg/L	0.0599	0.0067	0.0055
Hg-T	mg/L	<0.0000019	<0.0000019	<0.0000019
Mo-T	mg/L	<0.0010	<0.0010	<0.0010
Ni-T	mg/L	<0.0010	<0.0010	<0.0010
K-T	mg/L	1.81	1.91	1.94
S-T	mg/L	171	202	191
Se-T	mg/L	<0.00010	<0.00010	<0.00010
Si-T	mg/L	3.41	4.12	4.21
Ag-T	mg/L	<0.000020	<0.000020	<0.000020
Na-T	mg/L	99.1	115	112
Sr-T	mg/L	1.60	1.85	1.91
Zn-T	mg/L	<0.0050	<0.0050	<0.0050
Al-D	mg/L	<0.0030	<0.0030	<0.0030
As-D	mg/L	0.00118	0.00096	0.00115
Ba-D	mg/L	0.0231	0.0251	0.0236
B-D	mg/L	0.578	0.730	0.745
Be-D	mg/L	<0.00010	<0.00010	<0.00010
Cd-D	mg/L	<0.000010	<0.000010	<0.000010
Ca-D	mg/L	126	164	158
Cr-D	mg/L	<0.0010	<0.0010	<0.0010
Co-D	mg/L	<0.00020	<0.00020	<0.00020
Cu-D	mg/L	0.00054	0.00038	0.00050
Hard-D	mg/L	374	476	463
Fe-D	mg/L	0.0412	0.0242	0.0218
Pb-D	mg/L	<0.00020	<0.00020	<0.00020
Mg-D	mg/L	14.2	16.3	16.9
Mn-D	mg/L	0.0014	0.0029	0.0053
Hg-D	mg/L	<0.0000019	<0.0000019	<0.0000019
Mo-D	mg/L	<0.0010	<0.0010	<0.0010
Ni-D	mg/L	<0.0010	<0.0010	<0.0010
K-D	mg/L	1.76	1.88	2.04
S-D	mg/L	173	206	211
Se-D	mg/L	<0.00010	<0.00010	<0.00010
Si-D	mg/L	3.36	4.36	4.29
Na-D	mg/L	92.0	115	124
Sr-D	mg/L	1.70	1.81	1.95
Zn-D	mg/L	<0.0050	<0.0050	<0.0050

Table 16 2-South Outflow Culvert into 3-South Pit 1 Page(s)

EMS ID				
Site Description	**2-South Outflow Culvert into 3-South Pit**			
Site Name	**2SC**	**2SC-5JUL21-R**	**2SC-5JUL21-M**	**2SC-1SEP21-M**
Date		**7/5/2021**	**7/5/2021**	**9/1/2021**
pH-F	pH Units	8.1	8.1	7.9
Cond-F	uS/cm	1491	1491	1493
SO4-D	mg/L	550	540	610
Alk-T	mg/L	220	220	200
Acidity83	mg/L	3.5	3.6	<1.0
Al-T	mg/L	<0.0030	<0.0030	<0.0030
As-T	mg/L	0.00040	0.00040	0.00034
Ba-T	mg/L	0.0152	0.0150	0.0141
B-T	mg/L	0.363	0.367	0.354
Cd-T	mg/L	<0.000010	<0.000010	<0.000010
Ca-T	mg/L	238	232	223
Cr-T	mg/L	<0.0010	<0.0010	<0.0010
Co-T	mg/L	<0.00020	<0.00020	<0.00020
Cu-T	mg/L	<0.00050	<0.00050	<0.00050
Hard-T	mg/L	712	697	661
Fe-T	mg/L	0.023	0.014	<0.010
Pb-T	mg/L	<0.00020	<0.00020	<0.00020
Mg-T	mg/L	28.4	28.5	25.2
Mn-T	mg/L	0.0047	0.0025	0.0081
Hg-T	mg/L			<0.0000019
Mo-T	mg/L	<0.0010	<0.0010	<0.0010
Ni-T	mg/L	<0.0010	<0.0010	<0.0010
K-T	mg/L	2.39	2.41	2.40
S-T	mg/L	199	199	182
Se-T	mg/L	0.00013	0.00012	<0.00010
Si-T	mg/L	2.70	2.63	2.76
Ag-T	mg/L	<0.000020	<0.000020	<0.000020
Na-T	mg/L	49.6	48.9	48.8
Sr-T	mg/L	1.41	1.40	1.39
Zn-T	mg/L	<0.0050	<0.0050	<0.0050
Al-D	mg/L	<0.0030	<0.0030	<0.0030
As-D	mg/L	0.00034	0.00032	0.00034
Ba-D	mg/L	0.0150	0.0147	0.0144
B-D	mg/L	0.346	0.344	0.368
Be-D	mg/L	<0.00010	<0.00010	<0.00010
Cd-D	mg/L	<0.000010	<0.000010	<0.000010
Ca-D	mg/L	225	221	241
Cr-D	mg/L	<0.0010	<0.0010	<0.0010
Co-D	mg/L	<0.00020	<0.00020	<0.00020
Cu-D	mg/L	<0.00020	<0.00020	<0.00020
Hard-D	mg/L	671	662	717
Fe-D	mg/L	<0.0050	<0.0050	<0.0050
Pb-D	mg/L	<0.00020	<0.00020	<0.00020
Mg-D	mg/L	26.6	26.7	27.7
Mn-D	mg/L	0.0023	0.0023	0.0086
Hg-D	mg/L			<0.0000019
Mo-D	mg/L	<0.0010	<0.0010	<0.0010
Ni-D	mg/L	<0.0010	<0.0010	<0.0010
K-D	mg/L	2.38	2.34	2.53
S-D	mg/L	199	197	201
Se-D	mg/L	0.00017	0.00014	<0.00010
Si-D	mg/L	2.65	2.64	2.83
Na-D	mg/L	46.5	46.3	54.0
Sr-D	mg/L	1.48	1.50	1.40
Zn-D	mg/L	<0.0050	<0.0050	<0.0050

Table 17 3-South Pit Water Cover Over PAG-CCR 1 Page(s)

EMS ID	E217015				
Site Description	3-South Pit Water Cover Over PAG-CCR				
Site Name	3S	3S-5JUL21-M	3S-9AUG21-M	3S-1SEP21-M	3S-1SEP21-R
Date		7/5/2021	8/9/2021	9/1/2021	9/1/2021
pH-F	pH Units	7.99	7.47	7.81	
Cond-F	uS/cm	1342	1229	1366	
SO4-D	mg/L	620	520	640	650
Alk-T	mg/L	130	120	120	120
Acidity83	mg/L	2.6	3.6	1.4	1.1
Al-T	mg/L		0.0045		
As-T	mg/L		0.00066		
Ba-T	mg/L		0.0154		
B-T	mg/L		0.348		
Cd-T	mg/L		<0.000010		
Ca-T	mg/L		205		
Cr-T	mg/L		<0.0010		
Co-T	mg/L		<0.00020		
Cu-T	mg/L		<0.00050		
Hard-T	mg/L		636		
Fe-T	mg/L		0.025		
Pb-T	mg/L		<0.00020		
Mg-T	mg/L		30.4		
Mn-T	mg/L		0.0107		
Hg-T	mg/L		<0.0000019		
Mo-T	mg/L		<0.0010		
Ni-T	mg/L		<0.0010		
K-T	mg/L		2.66		
S-T	mg/L		209		
Se-T	mg/L		<0.00010		
Si-T	mg/L		2.45		
Ag-T	mg/L		<0.000020		
Na-T	mg/L		51.5		
Sr-T	mg/L		1.38		
Zn-T	mg/L		<0.0050		
Al-D	mg/L		<0.0030		
As-D	mg/L		0.00067		
Ba-D	mg/L		0.0155		
B-D	mg/L		0.392		
Be-D	mg/L		<0.00010		
Cd-D	mg/L		<0.000010		
Ca-D	mg/L		200		
Cr-D	mg/L		<0.0010		
Co-D	mg/L		<0.00020		
Cu-D	mg/L		0.00020		
Hard-D	mg/L		617		
Fe-D	mg/L		0.0121		
Pb-D	mg/L		<0.00020		
Mg-D	mg/L		28.7		
Mn-D	mg/L		0.0140		
Hg-D	mg/L		<0.0000019		
Mo-D	mg/L		<0.0010		
Ni-D	mg/L		<0.0010		
K-D	mg/L		2.60		
S-D	mg/L		208		
Se-D	mg/L		<0.00010		
Si-D	mg/L		2.52		
Na-D	mg/L		50.7		
Sr-D	mg/L		1.41		
Zn-D	mg/L		<0.0050		

Table 18 South End Mine Water Entering Long Lake Near the Outlet 1 Page(s)

EMS ID	E292130		WQG-Max						
Site Description	South End Mine Water Entering Long Lake Near the Outlet								
Site Name	LLE	Std Val	LLE-5JUL21-M	LLE-9AUG21-M	LLE-16AUG21-M	LLE-23Aug21-M	LLE-20SEP21-M	LLE-27SEP21-R	LLE-27SEP21-M
Date		Max	7/5/2021	8/9/2021	8/16/2021	8/23/2021	9/20/2021	9/27/2021	9/27/2021
pH-F	pH Units		7.23	7.06	7.3	7.08	6.54		7.3
Cond-F	uS/cm		1289	1384	1509	1603	1073		1374
SO4-D	mg/L		610	620	660		470	620	540
TSS	mg/L	25	5.2	5.2			2.4		
Alk-T	mg/L		130	150			120		
Acidity83	mg/L		10.7	8.3			5.2		
N-NH3	mg/L	12.9	<0.015	0.56			0.30		
N-NO23	mg/L		<0.020	<0.020			<0.020		
P-T	mg/L		<0.0030	0.0041			0.0056		
Al-T	mg/L		0.0052	0.0259			0.0230		
As-T	mg/L	0.005	0.00111	0.00095			0.00071		
Ba-T	mg/L		0.0293	0.0298			0.0286		
B-T	mg/L		0.433	0.480			0.312		
Cd-T	mg/L		<0.000010	<0.000010			<0.000010		
Ca-T	mg/L		176	224			148		
Cr-T	mg/L		<0.0010	<0.0010			<0.0010		
Co-T	mg/L	0.11	<0.00020	<0.00020			0.00051		
Cu-T	mg/L		<0.00050	<0.00050			<0.00050		
Hard-T	mg/L		553	712			467		
Fe-T	mg/L	1.0	1.24	0.657			0.258		
Pb-T	mg/L	0.01763	<0.00020	<0.00020			<0.00020		
Mg-T	mg/L		27.3	37.1			23.8		
Mn-T	mg/L	0.8706	0.338	0.0992			0.0870		
Hg-T	mg/L		<0.0000019	<0.0000019			<0.0000019		
Mo-T	mg/L	2.0	<0.0010	<0.0010			<0.0010		
Ni-T	mg/L		<0.0010	<0.0010			<0.0010		
K-T	mg/L		1.79	2.72			2.60		
S-T	mg/L		187	246			159		
Se-T	mg/L		<0.00010	<0.00010			<0.00010		
Si-T	mg/L		4.43	5.39			4.30		
Ag-T	mg/L	0.0001	<0.000020	<0.000020			<0.000020		
Na-T	mg/L		55.3	73.9			48.0		
Sr-T	mg/L		1.10	1.40			0.928		
Zn-T	mg/L	0.033	<0.0050	<0.0050			<0.0050		
Al-D	mg/L	0.1	<0.0030	<0.0030			0.0092		
As-D	mg/L		0.00085	0.00079			0.00068		
Ba-D	mg/L		0.0283	0.0297			0.0279		
B-D	mg/L		0.415	0.541			0.328		
Be-D	mg/L		<0.00010	<0.00010			<0.00010		
Cd-D	mg/L	0.00017	<0.000010	<0.000010			<0.000010		
Ca-D	mg/L		167	223			145		
Cr-D	mg/L		<0.0010	<0.0010			<0.0010		
Co-D	mg/L		<0.00020	<0.00020			0.00049		
Cu-D	mg/L	0.00385	<0.00020	<0.00020			0.00021		
Hard-D	mg/L		525	706			453		
Fe-D	mg/L	0.35	0.228	0.0141			0.0716		
Pb-D	mg/L		<0.00020	<0.00020			<0.00020		
Mg-D	mg/L		26.5	36.5			21.9		
Mn-D	mg/L		0.335	0.0916			0.0779		
Hg-D	mg/L		<0.0000019	<0.0000019			<0.0000019		
Mo-D	mg/L		<0.0010	<0.0010			<0.0010		
Ni-D	mg/L		<0.0010	<0.0010			<0.0010		
K-D	mg/L		1.83	2.70			2.37		
S-D	mg/L		190	249			155		
Se-D	mg/L		<0.00010	<0.00010			<0.00010		
Si-D	mg/L		4.41	5.51			4.41		
Na-D	mg/L		53.4	74.2			44.3		
Sr-D	mg/L		1.18	1.38			0.939		
Zn-D	mg/L		<0.0050	<0.0050			<0.0050		

Table 19 Seep into Long Lake 1 Page(s)

EMS ID	E292131	Stn Std			
Site Description		Seep into Long Lake			
Site Name	LLS	Std Val	LLS-5JUL21-M	LLS-9AUG21-M	LLS-1SEP21-M
Date		Max	7/5/2021	8/9/2021	9/1/2021
pH-F	pH Units		7.33	6.91	6.69
Cond-F	uS/cm		1609	1382	1505
pH-L	pH Units	9.0	7.56		8.11
Cond-L	uS/cm		1500		1400
SO4-D	mg/L		650	540	580
TSS	mg/L	25	4.0	4.0	1.6
Alk-T	mg/L		260	260	260
Acidity83	mg/L		14.6	16.2	3.3
Al-T	mg/L		0.0053	<0.0030	<0.0030
As-T	mg/L	0.005	0.00461	0.00230	0.00217
Ba-T	mg/L		0.0192	0.0173	0.0174
B-T	mg/L		0.615	0.574	0.527
Cd-T	mg/L		<0.000010	<0.000010	<0.000010
Ca-T	mg/L		231	199	206
Cr-T	mg/L		<0.0010	<0.0010	<0.0010
Co-T	mg/L	0.11	0.00100	0.00100	0.00089
Cu-T	mg/L		<0.00050	<0.00050	<0.00050
Hard-T	mg/L		663	573	584
Fe-T	mg/L	1.0	**1.85**	**1.46**	**1.38**
Pb-T	mg/L	0.01763	<0.00020	<0.00020	<0.00020
Mg-T	mg/L		21.0	18.5	17.0
Mn-T	mg/L	0.8706	0.466	0.399	0.391
Hg-T	mg/L		<0.0000019	<0.0000019	<0.0000019
Mo-T	mg/L	2.0	<0.0010	<0.0010	<0.0010
Ni-T	mg/L		0.0019	0.0018	0.0016
K-T	mg/L		2.56	2.28	2.31
S-T	mg/L		215	178	171
Se-T	mg/L		<0.00010	<0.00010	<0.00010
Si-T	mg/L		2.77	2.45	2.72
Ag-T	mg/L	0.0001	<0.000020	<0.000020	<0.000020
Na-T	mg/L		105	87.1	84.6
Sr-T	mg/L		2.23	1.80	1.94
Zn-T	mg/L	0.033	<0.0050	<0.0050	<0.0050
Al-D	mg/L	0.1	<0.0030	<0.0030	<0.0030
As-D	mg/L		0.00436	0.00225	0.00204
Ba-D	mg/L		0.0180	0.0173	0.0171
B-D	mg/L		0.576	0.547	0.555
Be-D	mg/L		<0.00010	<0.00010	<0.00010
Cd-D	mg/L	0.00017	<0.000010	<0.000010	<0.000010
Ca-D	mg/L		215	198	214
Cr-D	mg/L		<0.0010	<0.0010	<0.0010
Co-D	mg/L		0.00093	0.00098	0.00097
Cu-D	mg/L	0.00385	<0.00020	<0.00020	<0.00020
Hard-D	mg/L		615	569	609
Fe-D	mg/L	0.35	**1.71**	**1.47**	**1.39**
Pb-D	mg/L		<0.00020	<0.00020	<0.00020
Mg-D	mg/L		19.0	18.2	18.4
Mn-D	mg/L		0.436	0.399	0.408
Hg-D	mg/L		<0.0000019	<0.0000019	<0.0000019
Mo-D	mg/L		<0.0010	<0.0010	<0.0010
Ni-D	mg/L		0.0018	0.0018	0.0017
K-D	mg/L		2.40	2.29	2.41
S-D	mg/L		202	179	184
Se-D	mg/L		<0.00010	<0.00010	<0.00010
Si-D	mg/L		2.74	2.54	2.65
Na-D	mg/L		93.2	86.7	92.4
Sr-D	mg/L		2.23	1.80	1.91
Zn-D	mg/L		<0.0050	<0.0050	<0.0050

Table 20 Long Lake Middle Seep 1 Page(s)

EMS ID	E292131		WQG-Max		
Site Description		Long Lake Middle Seep			
Site Name	LLSM	Std Val	LLSM-5JUL21-M	LLSM-9AUG21-M	LLSM-1SEP21-M
Date		Max	7/5/2021	8/9/2021	9/1/2021
pH-F	pH Units		7.65	7.29	7.2
Cond-F	uS/cm		1467	1210	1356
SO4-D	mg/L		540	450	490
TSS	mg/L	25	2.4	2.0	2.0
Alk-T	mg/L		240	250	230
Acidity83	mg/L		7.5	9.1	1.8
Al-T	mg/L		<0.0030	<0.0030	<0.0030
As-T	mg/L	0.005	0.00176	0.00090	0.00081
Ba-T	mg/L		0.0174	0.0168	0.0172
B-T	mg/L		0.494	0.495	0.471
Cd-T	mg/L		<0.000010	<0.000010	<0.000010
Ca-T	mg/L		190	171	184
Cr-T	mg/L		<0.0010	<0.0010	<0.0010
Co-T	mg/L	0.11	0.00095	0.00096	0.00094
Cu-T	mg/L		<0.00050	<0.00050	<0.00050
Hard-T	mg/L		548	498	526
Fe-T	mg/L	1.0	0.952	0.774	0.694
Pb-T	mg/L	0.01763	<0.00020	<0.00020	<0.00020
Mg-T	mg/L		17.8	17.0	15.8
Mn-T	mg/L	0.8706	0.350	0.342	0.362
Hg-T	mg/L		<0.0000019	<0.0000019	<0.0000019
Mo-T	mg/L	2.0	<0.0010	<0.0010	<0.0010
Ni-T	mg/L		0.0021	0.0019	0.0019
K-T	mg/L		2.25	2.08	2.18
S-T	mg/L		171	145	153
Se-T	mg/L		<0.00010	<0.00010	<0.00010
Si-T	mg/L		2.30	2.14	2.39
Ag-T	mg/L	0.0001	<0.000020	<0.000020	<0.000020
Na-T	mg/L		82.3	72.5	74.7
Sr-T	mg/L		1.79	1.54	1.73
Zn-T	mg/L	0.033	<0.0050	<0.0050	<0.0050
Al-D	mg/L	0.1	<0.0030	<0.0030	<0.0030
As-D	mg/L		0.00166	0.00091	0.00074
Ba-D	mg/L		0.0175	0.0171	0.0172
B-D	mg/L		0.477	0.491	0.503
Be-D	mg/L		<0.00010	<0.00010	<0.00010
Cd-D	mg/L	0.00017	<0.000010	<0.000010	<0.000010
Ca-D	mg/L		187	179	196
Cr-D	mg/L		<0.0010	<0.0010	<0.0010
Co-D	mg/L		0.00094	0.00098	0.00097
Cu-D	mg/L	0.00385	<0.00020	<0.00020	<0.00020
Hard-D	mg/L		537	517	559
Fe-D	mg/L	0.35	**0.869**	**0.712**	**0.664**
Pb-D	mg/L		<0.00020	<0.00020	<0.00020
Mg-D	mg/L		17.1	16.9	16.8
Mn-D	mg/L		0.350	0.350	0.369
Hg-D	mg/L		<0.0000019	<0.0000019	<0.0000019
Mo-D	mg/L		<0.0010	<0.0010	<0.0010
Ni-D	mg/L		0.0020	0.0020	0.0019
K-D	mg/L		2.26	2.13	2.26
S-D	mg/L		173	155	160
Se-D	mg/L		<0.00010	<0.00010	<0.00010
Si-D	mg/L		2.42	2.31	2.39
Na-D	mg/L		79.6	76.0	81.8
Sr-D	mg/L		1.88	1.61	1.72
Zn-D	mg/L		<0.0050	<0.0050	<0.0050

Table 21 Authorised Discharge Location for 7S South Mine Water 1 Page(s)

EMS ID	E292069	PL-7S	
Site Description	Authorised Discharge Location for 7S South Mine Water		
Site Name	7SSD	Std Val	7SSD-5JUL21-P
Date		Max	7/5/2021
pH-F	pH Units		8.04
Cond-F	uS/cm		307
SO4-D	mg/L	500	2.7
TSS	mg/L	25	1.6
Alk-T	mg/L		130
Acidity83	mg/L		<1.0
DOC	mg/L		7.7
Al-T	mg/L		0.0047
As-T	mg/L		0.00907
Ba-T	mg/L		0.0049
B-T	mg/L		<0.050
Cd-T	mg/L		<0.000010
Ca-T	mg/L		28.3
Cr-T	mg/L		<0.0010
Co-T	mg/L		<0.00020
Cu-T	mg/L		0.00060
Hard-T	mg/L		116
Fe-T	mg/L		0.309
Pb-T	mg/L		<0.00020
Mg-T	mg/L		11.1
Mn-T	mg/L		0.108
Hg-T	mg/L		<0.0000019
Mo-T	mg/L		<0.0010
Ni-T	mg/L		<0.0010
K-T	mg/L		1.19
S-T	mg/L		<3.0
Se-T	mg/L		<0.00010
Si-T	mg/L		3.05
Ag-T	mg/L		<0.000020
Na-T	mg/L		6.11
Sr-T	mg/L		0.144
Zn-T	mg/L		<0.0050
Al-D	mg/L	0.1	0.0044
As-D	mg/L		0.00834
Ba-D	mg/L		0.0043
B-D	mg/L		<0.050
Be-D	mg/L		<0.00010
Cd-D	mg/L	0.000045	<0.000010
Ca-D	mg/L		27.0
Cr-D	mg/L		<0.0010
Co-D	mg/L		<0.00020
Cu-D	mg/L	0.014	0.00057
Hard-D	mg/L		110
Fe-D	mg/L	0.35	0.220
Pb-D	mg/L		<0.00020
Mg-D	mg/L		10.3
Mn-D	mg/L		0.0696
Hg-D	mg/L		<0.0000019
Mo-D	mg/L		<0.0010
Ni-D	mg/L		<0.0010
K-D	mg/L		1.18
S-D	mg/L		<3.0
Se-D	mg/L	0.016	<0.00010
Si-D	mg/L		3.11
Na-D	mg/L		5.62
Sr-D	mg/L		0.146
Zn-D	mg/L		<0.0050

Table 22 7 South Portal Sump 1 Page(s)

EMS ID	E292110			
Site Description		7 South Portal Sump		
Site Name	7SPS	7SPS-5JUL21-M	7SPS-9AUG21-M	7SPS-1SEP21-M
Date		7/5/2021	8/9/2021	9/1/2021
pH-F	pH Units	7.66	7.18	7.7
Cond-F	uS/cm	944	922	1201
SO4-D	mg/L	380	360	470
TSS	mg/L	6.8	2.0	2.4
Alk-T	mg/L	130	120	110
Acidity83	mg/L	2.6	3.7	1.0
Al-T	mg/L	0.0266	0.0178	0.0042
As-T	mg/L	0.00085	0.00032	0.00031
Ba-T	mg/L	0.0250	0.0671	0.0507
B-T	mg/L	0.098	0.385	0.316
Cd-T	mg/L	<0.000010	<0.000010	<0.000010
Ca-T	mg/L	127	136	145
Cr-T	mg/L	<0.0010	<0.0010	<0.0010
Co-T	mg/L	0.00100	0.00181	0.00064
Cu-T	mg/L	0.00083	<0.00050	<0.00050
Hard-T	mg/L	448	478	504
Fe-T	mg/L	3.71	2.14	1.06
Pb-T	mg/L	<0.00020	<0.00020	<0.00020
Mg-T	mg/L	31.9	33.9	34.4
Mn-T	mg/L	0.109	0.142	0.0633
Hg-T	mg/L	<0.0000019	<0.0000019	<0.0000019
Mo-T	mg/L	<0.0010	<0.0010	<0.0010
Ni-T	mg/L	0.0046	0.0063	0.0042
K-T	mg/L	1.68	2.42	2.60
S-T	mg/L	122	137	148
Se-T	mg/L	<0.00010	<0.00010	<0.00010
Si-T	mg/L	5.50	4.96	5.20
Ag-T	mg/L	<0.000020	<0.000020	<0.000020
Na-T	mg/L	18.0	23.6	23.5
Sr-T	mg/L	0.535	0.791	0.841
Zn-T	mg/L	0.0065	<0.0050	<0.0050
Al-D	mg/L	<0.0030	<0.0030	<0.0030
As-D	mg/L	0.00035	0.00020	0.00024
Ba-D	mg/L	0.0222	0.0643	0.0508
B-D	mg/L	0.089	0.352	0.335
Be-D	mg/L	<0.00010	<0.00010	<0.00010
Cd-D	mg/L	<0.000010	<0.000010	<0.000010
Ca-D	mg/L	122	129	151
Cr-D	mg/L	<0.0010	<0.0010	<0.0010
Co-D	mg/L	0.00072	0.00172	0.00065
Cu-D	mg/L	0.00054	0.00022	0.00036
Hard-D	mg/L	427	458	531
Fe-D	mg/L	0.257	0.0098	0.0138
Pb-D	mg/L	<0.00020	<0.00020	<0.00020
Mg-D	mg/L	29.5	32.6	37.3
Mn-D	mg/L	0.0872	0.140	0.0640
Hg-D	mg/L	<0.0000019	<0.0000019	<0.0000019
Mo-D	mg/L	<0.0010	<0.0010	<0.0010
Ni-D	mg/L	0.0040	0.0060	0.0043
K-D	mg/L	1.61	2.41	2.71
S-D	mg/L	120	137	159
Se-D	mg/L	<0.00010	<0.00010	<0.00010
Si-D	mg/L	5.42	4.80	5.03
Na-D	mg/L	16.7	23.2	25.7
Sr-D	mg/L	0.538	0.767	0.843
Zn-D	mg/L	<0.0050	<0.0050	<0.0050

Table 23 Discharge From Settling Pond #4 (WD) 1 Page(s)

EMS ID	**E207409**											
Discharge From Settling Pond #4 (SP4/WD)												
Date	**April** Max. (m^3/s)	**April** Daily (m^3/s)	**May** Max. (m^3/s)	**May** Daily (m^3/s)	**June** Max. (m^3/s)	**June** Daily (m^3/s)	**July** Max. (m^3/s)	**July** Daily (m^3/s)	**August** Max. (m^3/s)	**August** Daily (m^3/s)	**September** Max. (m^3/s)	**September** Daily (m^3/s)
1	0.1470	0.1370	0.1520	0.1420	0.1520	0.1450	0.1850	0.1700	0.0820	0.0760	0.0490	0.0320
2	0.1470	0.1380	0.1420	0.1340	0.1810	0.1640	0.1650	0.0720	0.0830	0.0760	0.0230	0.0100
3	0.1290	0.1090	0.1460	0.1360	0.1730	0.1590	0.0180	0.0090	0.0820	0.0750	0.0140	0.0110
4	0.1300	0.1110	0.1600	0.1450	0.1700	0.1530	0.0150	0.0090	0.0830	0.0760	0.0150	0.0130
5	0.0990	0.0800	0.1360	0.1270	0.1470	0.1380	0.0160	0.0090	0.0830	0.0780	0.0180	0.0120
6	0.1240	0.0930	0.1520	0.1410	0.1540	0.1390	0.0570	0.0160	0.0830	0.0790	0.0160	0.0130
7	0.1380	0.1230	0.1570	0.1450	0.1500	0.1350	0.1900	0.1320	0.0830	0.0790	0.0260	0.0180
8	0.1520	0.1270	0.1350	0.1200	0.1430	0.1350	0.2020	0.1980	0.0820	0.0750	0.0610	0.0600
9	0.1030	0.0820	0.1350	0.1280	0.1600	0.1440	0.1940	0.1870	0.0820	0.0740	**PNC**	**PNC**
10	0.1510	0.1280	0.1370	0.1280	0.1580	0.1450	0.1870	0.1840	0.0660	0.0530	**PNC**	**PNC**
11	0.1470	0.1390	0.1640	0.1400	0.1870	0.1650	0.1860	0.1830	0.0630	0.0440	**PNC**	**PNC**
12	0.1470	0.1360	0.1680	0.1520	0.1930	0.1880	0.1880	0.1850	0.0430	0.0150	**PNC**	**PNC**
13	0.1480	0.1360	0.1760	0.1630	0.1710	0.1150	0.1880	0.1850	0.0560	0.0440	0.0680	0.0630
14	0.1610	0.1430	0.1600	0.1420	0.1670	0.1540	0.1880	0.1840	0.0570	0.0450	0.0710	0.0670
15	0.1680	0.1510	0.1710	0.1580	0.1690	0.1630	0.1820	0.1630	0.0540	0.0430	**PNC**	**PNC**
16	0.1690	0.1530	0.1620	0.1520	0.1790	0.1670	0.1340	0.1190	0.0720	0.0550	0.0400	0.0380
17	0.1630	0.1460	0.1740	0.1630	0.1990	0.1840	0.1170	0.1020	0.0760	0.0670	0.0720	0.0640
18	0.1720	0.1540	0.1840	0.1560	0.2100	0.2040	0.1140	0.0830	0.0750	0.0690	0.0780	0.0780
19	0.1570	0.1420	0.1310	0.1010	0.2100	0.2070	0.0530	0.0290	0.0760	0.0680	0.0740	0.0700
20	0.1660	0.1480	0.1440	0.1350	0.2100	0.2080	0.0680	0.0510	0.0750	0.0660	0.0720	0.0690
21	0.1680	0.1520	0.1310	0.0880	0.2100	0.2060	0.0590	0.0480	0.0750	0.0670	0.0600	0.0440
22	0.1680	0.1440	0.0970	0.0810	0.2100	0.2020	0.0550	0.0440	0.0750	0.0660	0.0700	0.0650
23	0.1590	0.1280	0.0870	0.0780	0.2030	0.1960	0.0580	0.0510	0.0750	0.0640	0.2330	0.0360
24	0.1670	0.1470	0.0850	0.0810	0.2030	0.1960	0.0580	0.0500	0.0730	0.0640	0.0430	0.0290
25	0.1530	0.1430	0.0970	0.0870	0.1850	0.1720	0.0600	0.0480	0.0740	0.0630	0.2330	0.0440
26	0.1410	0.1330	0.1550	0.1130	0.1840	0.1550	0.0770	0.0540	0.0740	0.0690	0.0170	0.0120
27	0.1550	0.1380	0.1910	0.1730	0.2040	0.1970	0.0820	0.0740	0.0750	0.0650	0.0200	0.0160
28	0.1550	0.1400	0.1490	0.1440	0.2040	0.2020	0.0820	0.0760	0.0730	0.0640	0.0200	0.0090
29	0.1540	0.1450	0.1510	0.1380	0.2050	0.2020	0.0830	0.0750	0.0740	0.0650	0.0060	0.0010
30	0.1370	0.1320	0.1700	0.1510	0.2050	0.1940	0.0830	0.0760	0.0730	0.0680	0.0300	0.0080
31			0.1790	0.1580			0.0830	0.0770	0.0730	0.0540		
Monthly Max	**0.1720**		**0.1910**		**0.2100**		**0.2020**		**0.0830**		**0.2330**	
Monthly Avg		**0.1326**		**0.1323**		**0.1711**		**0.0949**		**0.0634**		**0.0353**

TSS is required **weekly** when max daily flow > 0.054 m^3/s

NF= No Flow **PNC= Permit Non-compliance** All flow data is subject to review

Table 24 Discharge From Settling Pond # 1 (SPD) 1 Page(s)

EMS ID	E218582											
Discharge From Settling Pond #1 (SP1/SPD)												
Date	April Max. (m^3/s)	April Daily (m^3/s)	May Max. (m^3/s)	May Daily (m^3/s)	June Max. (m^3/s)	June Daily (m^3/s)	July Max. (m^3/s)	July Daily (m^3/s)	August Max. (m^3/s)	August Daily (m^3/s)	September Max. (m^3/s)	September Daily (m^3/s)
1	0.0250	0.0123	0.0250	0.0109	0.0091	0.0025	**NF**	**NF**	**NF**	**NF**	**NF**	**NF**
2	0.0250	0.0081	0.0250	0.0109	0.0160	0.0073	**NF**	**NF**	**NF**	**NF**	**NF**	**NF**
3	0.0250	0.0135	0.0091	0.0071	0.0160	0.0061	**NF**	**NF**	**NF**	**NF**	**NF**	**NF**
4	0.0250	0.0080	0.0250	0.0071	0.0091	0.0037	**NF**	**NF**	**NF**	**NF**	**NF**	**NF**
5	0.0250	0.0097	0.0250	0.0142	0.0032	0.0023	**NF**	**NF**	**NF**	**NF**	**NF**	**NF**
6	0.0250	0.0060	0.0091	0.0071	0.0032	0.0015	**NF**	**NF**	**NF**	**NF**	**NF**	**NF**
7	0.0250	0.0136	0.0091	0.0041	0.0160	0.0100	**NF**	**NF**	**NF**	**NF**	**NF**	**NF**
8	0.0091	0.0047	0.0250	0.0157	0.0091	0.0061	**NF**	**NF**	**NF**	**NF**	**NF**	**NF**
9	0.0250	0.0164	0.0160	0.0078	0.0160	0.0093	**NF**	**NF**	**NF**	**NF**	**NF**	**NF**
10	0.0160	0.0062	0.0091	0.0041	0.0341	0.0137	**NF**	**NF**	**NF**	**NF**	**NF**	**NF**
11	0.0250	0.0099	0.0091	0.0030	0.0341	0.0160	**NF**	**NF**	**NF**	**NF**	**NF**	**NF**
12	0.0160	0.0099	0.0341	0.0158	0.0091	0.0073	**NF**	**NF**	**NF**	**NF**	**NF**	**NF**
13	0.0160	0.0077	0.0091	0.0061	0.0091	0.0070	**NF**	**NF**	**NF**	**NF**	**NF**	**NF**
14	0.0341	0.0193	0.0091	0.0035	0.0250	0.0118	**NF**	**NF**	**NF**	**NF**	**NF**	**NF**
15	0.0160	0.0099	0.0250	0.0057	0.0250	0.0131	**NF**	**NF**	**NF**	**NF**	**NF**	**NF**
16	0.0341	0.0120	0.0250	0.0129	0.0091	0.0074	**NF**	**NF**	**NF**	**NF**	**NF**	**NF**
17	0.0341	0.0152	0.0091	0.0059	0.0091	0.0050	**NF**	**NF**	**NF**	**NF**	**NF**	**NF**
18	0.0160	0.0084	0.0091	0.0037	0.0091	0.0032	**NF**	**NF**	**NF**	**NF**	**NF**	**NF**
19	0.0250	0.0136	0.0250	0.0077	0.0091	0.0060	**NF**	**NF**	**NF**	**NF**	**NF**	**NF**
20	0.0160	0.0063	0.0250	0.0096	0.0091	0.0059	**NF**	**NF**	**NF**	**NF**	**NF**	**NF**
21	0.0091	0.0034	0.0091	0.0033	0.0091	0.0039	**NF**	**NF**	**NF**	**NF**	**NF**	**NF**
22	0.0091	0.0030	0.0032	0.0024	0.0160	0.0097	**NF**	**NF**	**NF**	**NF**	0.0250	0.0162
23	0.0032	0.0022	0.0032	0.0013	0.0160	0.0075	**NF**	**NF**	**NF**	**NF**	0.0160	0.0083
24	0.0091	0.0040	0.0160	0.0128	0.0091	0.0040	**NF**	**NF**	**NF**	**NF**	0.0091	0.0032
25	0.0091	0.0067	0.0250	0.0150	0.0032	0.0032	**NF**	**NF**	**NF**	**NF**	0.0032	0.0023
26	0.0091	0.0052	0.0160	0.0081	0.0032	0.0020	**NF**	**NF**	**NF**	**NF**	0.0091	0.0042
27	0.0091	0.0051	0.0091	0.0043	0.0032	0.0010	**NF**	**NF**	**NF**	**NF**	0.0091	0.0051
28	0.0341	0.0183	0.0091	0.0025	0.0000	0.0001	**NF**	**NF**	**NF**	**NF**	0.0250	0.0098
29	0.0160	0.0105	0.0250	0.0064	**NF**	**NF**	**NF**	**NF**	**NF**	**NF**	0.0160	0.0096
30	0.0091	0.0069	0.0250	0.0125	**NF**	**NF**	**NF**	**NF**	**NF**	**NF**	0.0091	0.0073
31			0.0091	0.0040			**NF**	**NF**	**NF**	**NF**		
Monthly Max	**0.0341**		**0.0341**		**0.0341**		**0.0000**		**0.0000**		**0.0250**	
Monthly Avg		**0.0092**		**0.0076**		**0.0063**		**0.0000**		**0.0000**		**0.0073**

TSS is required **weekly** when max daily flow > $0.046 m^3/s$

NF= No Flow All flow data is subject to review

Table 25 Discharge From 7 South Surface Decant Pond (7SSD) 1 Page(s)

EMS ID E292069 Discharge From 7 South Surface Decant Pond (7SSD)	April	May	June	July	August	September
Date	Daily Average L/S			Daily Average L/S		
1	NF	NF	NF	NF	NF	NF
2	NF	NF	NF	NF	NF	NF
3	NF	NF	NF	NF	NF	NF
4	NF	NF	NF	NF	NF	NF
5	NF	NF	NF	NF	NF	NF
6	NF	NF	NF	NF	NF	NF
7	NF	NF	NF	NF	NF	NF
8	NF	NF	NF	NF	NF	NF
9	NF	NF	NF	NF	NF	NF
10	NF	NF	NF	NF	NF	NF
11	NF	NF	NF	NF	NF	NF
12	NF	NF	NF	NF	NF	NF
13	NF	NF	NF	NF	NF	NF
14	NF	NF	NF	NF	NF	NF
15	NF	NF	NF	NF	NF	NF
16	NF	NF	NF	NF	NF	NF
17	NF	NF	NF	NF	NF	NF
18	NF	NF	NF	NF	NF	NF
19	NF	NF	NF	NF	NF	NF
20	NF	NF	NF	NF	NF	NF
21	NF	NF	NF	NF	NF	NF
22	NF	NF	NF	NF	NF	NF
23	NF	NF	NF	NF	NF	NF
24	NF	NF	NF	NF	NF	NF
25	NF	NF	NF	NF	NF	NF
26	NF	NF	NF	NF	NF	NF
27	NF	NF	NF	NF	NF	NF
28	NF	NF	NF	NF	NF	NF
29	NF	NF	NF	NF	NF	NF
30	NF	NF	NF	NF	NF	NF
31	NF	NF	NF	NF	NF	
Monthly Avg	0.000	0.000	0.000	0.000	0.000	0.000
Annual Avg Cummulative Daily Totalizer Value For Maximum Decant Flow (5.00 L/s)						

Table 26 2S Inflow Outflow 1 Page(s)

EMS ID: E292127 2-South Pit Continous Inflow and Outflow							EMS ID: E292127 2-South Pit Continous Inflow and Outflow						
2S Inflow							2S Outflow Culvert into 3S Pit						
Date	April Q (L/s)	May Q (L/s)	June Q (L/s)	July Q (L/s)	August Q (L/s)	September Q (L/s)	Date	April Q (L/s)	May Q (L/s)	June Q (L/s)	July Q (L/s)	August Q (L/s)	September Q (L/s)
1	12.314	11.861	1.94	12.65	20.49	0.00	1	6.421	4.660	3.553	3.57	3.480	2.97
2	12.248	11.286	1.90	11.65	20.08	0.00	2	6.410	4.709	3.718	3.38	3.465	2.89
3	12.694	11.521	1.83	6.15	15.93	0.00	3	6.418	4.989	3.456	3.32	3.433	3.32
4	12.243	11.359	1.86	3.32	8.32	0.00	4	5.846	4.418	3.855	3.29	3.433	3.46
5	11.991	10.550	1.94	2.31	10.95	0.00	5	5.616	4.995	3.704	3.12	3.492	3.14
6	11.810	11.380	1.67	1.51	17.53	0.00	6	5.861	4.936	3.843	3.06	3.835	3.05
7	12.503	11.134	1.70	1.35	18.50	0.00	7	5.718	4.458	3.715	3.13	4.044	2.80
8	12.476	10.663	1.86	1.18	17.12	0.00	8	5.531	4.787	3.811	3.00	3.561	3.36
9	12.728	10.959	2.21	1.04	16.12	0.06	9	5.856	4.510	3.965	3.05	3.486	3.26
10	13.744	10.755	14.73	0.95	17.02	0.10	10	5.480	4.254	3.884	3.00	3.488	2.97
11	13.128	9.974	14.79	0.74	12.71	0.17	11	5.180	4.249	4.154	2.93	3.437	3.44
12	12.704	10.423	11.33	0.41	5.44	0.42	12	5.056	4.271	4.178	2.93	3.286	2.94
13	12.833	9.601	11.49	0.21	4.73	0.30	13	4.933	3.912	3.875	2.93	3.212	2.85
14	12.372	9.478	11.06	0.42	4.53	0.48	14	4.837	3.944	3.788	2.93	3.234	3.41
15	11.907	9.330	11.69	0.35	4.69	0.66	15	4.835	3.941	3.826	3.02	3.583	2.91
16	12.492	9.216	11.18	6.23	4.34	0.40	16	4.775	4.061	3.567	3.39	3.554	3.02
17	12.091	10.774	10.53	11.51	2.39	1.21	17	4.736	4.320	3.559	3.36	3.218	4.66
18	11.968	12.347	10.40	11.73	1.56	1.42	18	4.684	4.182	3.441	3.53	3.332	3.49
19	11.585	10.567	11.09	12.71	1.33	1.37	19	5.386	3.983	3.832	3.49	3.119	3.33
20	10.795	7.102	10.99	12.64	1.00	1.22	20	4.603	3.900	3.349	3.67	3.260	3.44
21	10.553	3.688	6.77	16.25	0.82	4.71	21	4.664	3.783	3.297	3.61	3.205	3.21
22	11.111	2.615	2.41	23.80	0.63	6.89	22	4.486	3.737	3.255	3.54	3.100	3.19
23	10.983	2.268	1.98	33.31	0.37	3.47	23	4.991	3.861	3.271	3.88	3.063	3.33
24	11.313	2.977	1.92	29.13	0.20	2.30	24	5.182	4.437	3.241	3.97	3.035	3.25
25	12.493	4.584	3.07	23.01	0.11	1.73	25	5.289	4.285	3.048	3.71	3.270	3.42
26	11.482	2.566	3.16	16.53	0.14	2.16	26	4.797	4.350	3.038	3.67	3.543	3.47
27	10.705	3.391	3.09	4.96	0.24	2.87	27	5.092	4.245	3.048	3.35	3.079	3.68
28	11.465	2.762	3.02	2.21	0.11	4.87	28	5.208	3.764	3.071	3.07	3.230	3.30
29	11.858	2.267	7.90	5.10	0.04	5.39	29	4.981	3.544	3.086	2.96	2.995	3.69
30	12.301	2.721	13.77	20.72	0.02	7.31	30	4.687	4.212	3.258	2.97	3.453	4.01
31		2.38		20.70	0.01		31		3.799		3.45	3.079	

Table 27 Flow Tables LLE, LLS, LLSM, 7S, WA, WB, LLO IR8 7 Page(s)

Weekly Flow Requirements (L/s)
EMS ID: E292130
Site LLE
Flow (L/S)

Date	April	May	June	July	August	September
1	18	11	5	**NF**	**NF**	**NF**
2	18	11	3	**NF**	**NF**	**NF**
3	16	11	3	**NF**	**NF**	**NF**
4	16	9	3	**NF**	**NF**	**NF**
5	9	9	3	**NF**	**NF**	**NF**
6	10	9	3	**NF**	**NF**	**NF**
7	10	7	3	**NF**	2.20	**NF**
8	9	7	3	**NF**	2.30	**NF**
9	9	6	6	**NF**	1.90	**NF**
10	12	12	23	**NF**	0.80	**NF**
11	10	22	40	**NF**	0.80	**NF**
12	12	26	14	**NF**	0.70	**NF**
13	18	23	12	**NF**	0.60	**NF**
14	16	22	11	**NF**	0.60	**NF**
15	16	21	10	**NF**	0.70	**NF**
16	16	21	6	**NF**	0.80	**NF**
17	16	15	7	**NF**	0.50	**NF**
18	14	4	7	**NF**	**NF**	**NF**
19	12	4	7	**NF**	**NF**	1.80
20	12	4	5	**NF**	**NF**	1.80
21	12	4	7	**NF**	**NF**	0.60
22	11	3	6	**NF**	**NF**	0.40
23	12	3	4	**NF**	**NF**	0.10
24	14	3	3	**NF**	**NF**	0.20
25	17	5	3	**NF**	**NF**	0.20
26	14	7	3	**NF**	**NF**	0.20
27	11	7	2	**NF**	**NF**	0.50
28	11	6	2	**NF**	**NF**	0.80
29	14	2	2	**NF**	**NF**	0.60
30	13	1	2	**NF**	**NF**	0.70
31		6		**NF**	**NF**	

Notes: **NF= No flow**

Table 27 Flow Tables LLE, LLS, LLSM, 7S, WA, WB, LLO IR8 7 Page(s)

Weekly Flow Requirements (L/s)
EMS ID: E292131
Site LLSM
Flow (L/S)

Date	April	May	June	July	August	September
1	5.81	2.62	2.11	0.9	0.3	**NF**
2	4.78	2.62	2.29	0.5	0.3	**NF**
3	4.83	2.62	2.29	0.5	0.3	**NF**
4	4.32	2.62	2.29	0.5	0.3	**NF**
5	4.32	2.62	2.32	0.5	0.3	**NF**
6		2.62	2.26	0.5	0.1	**NF**
7			2.33	0.9	0.1	**NF**
8	3.84	2.62	2.25	0.5	0.1	**NF**
9	3.87		2.29	0.5	0.1	**NF**
10	3.87	2.29	2.29	0.5	0.1	**NF**
11	3.87		2.29	0.5	0.1	**NF**
12	3.87		2.31	0.5	0.1	0.1
13	3.87	2.29	2.29	0.5	0.1	0.1
14	3.87	2.29	2.29	0.5	0.1	0.1
15	3.58	2.29	2.29	0.5	0.1	0.3
16	3.02	2.29	2.29	0.5	**NF**	**NF**
17	3.02	2.29	2.29	0.5	**NF**	**NF**
18	3.02		2.29	0.5	**NF**	**NF**
19	3.02	2.29	2.29	0.5	**NF**	**NF**
20	2.99	2.29	2.29	0.5	**NF**	**NF**
21	3.02	2.29	2.29	0.5	**NF**	**NF**
22	3.02	2.29	2.26	0.5	**NF**	**NF**
23	3.02	2.29	2.29	0.5	**NF**	**NF**
24			2.29	0.3	**NF**	**NF**
25		2.29	2.31	0.3	**NF**	**NF**
26		2.29	2.23	0.3	**NF**	**NF**
27		2.29	2.29	0.3	**NF**	**NF**
28		2.29	2.29	0.3	**NF**	**NF**
29		2.29	2.29	0.3	**NF**	**NF**
30	2.62	2.29	0.89	0.3	**NF**	**NF**
31		2.26		0.3	**NF**	

Notes: **NF= No flow**

Weekly Flow Requirements (L/s)
EMS ID: E292131
Site LLS
Flow (L/S)

Weeks	Level	Estimated Flow L/s
06/Apr/21	0.010	0.0175
13/Apr/21	0.010	0.018
20/Apr/21	0.010	0.018
27/Apr/21	0.010	0.018
04/May/21	0.010	0.018
11/May/21	0.010	0.018
18/May/21	0.010	0.018
25/May/21	0.010	0.018
01/Jun/21	0.010	0.018
08/Jun/21	0.010	0.018
15/Jun/21	0.010	0.018
22/Jun/21	0.010	0.018
29/Jun/21	0.010	0.018
06/Jul/21	0.010	0.018
13/Jul/21	0.010	0.018
20/Jul/21	0.010	0.018
27/Jul/21	0.010	0.018
03/Aug/21	0.010	0.018
10/Aug/21	0.010	0.018
17/Aug/21	0.010	0.018
24/Aug/21	0.010	0.018
31/Aug/21	0.010	0.018
07/Sep/21	0.010	0.018
14/Sep/21	0.010	0.018
21/Sep/21	0.010	0.018
28/Sep/21	0.010	0.018
05/Oct/21	0.010	0.018
12/Oct/21	0.010	0.018
19/Oct/21		
26/Oct/21		
02/Nov/21		

Notes: **NF= No flow**

Table 27 Flow Tables LLE, LLS, LLSM, 7S, WA, WB, LLO IR8 7 Page(s)

Continuous Flow Requirements (L/s)

EMS ID: E292109

Site 7S

Flow (L/S) Estimated Flow

Date	April	May	June	July	August	September
1	18.24	8.15	1.35	**NF**	**NF**	**NF**
2	13.54	7.48	1.07	**NF**	**NF**	**NF**
3	13.93	7.39	0.79	**NF**	**NF**	**NF**
4	13.80	6.56	0.72	**NF**	**NF**	**NF**
5	14.00	5.47	0.76	**NF**	**NF**	**NF**
6	14.00	5.95	0.67	**NF**	**NF**	**NF**
7	15.00	5.69	0.83	**NF**	**NF**	**NF**
8	10.32	5.12	0.70	**NF**	**NF**	**NF**
9	13.87	4.51	0.94	**NF**	**NF**	**NF**
10	11.79	4.12	1.00	**NF**	**NF**	**NF**
11	11.20	3.62	0.68	**NF**	**NF**	**NF**
12	10.54	4.79	0.63	**NF**	**NF**	**NF**
13	10.17	4.47	0.95	**NF**	**NF**	**NF**
14	9.30	3.73	0.73	**NF**	**NF**	**NF**
15	5.10	3.01	0.84	**NF**	**NF**	**NF**
16	7.55	2.47	0.74	**NF**	**NF**	**NF**
17	6.85	2.55	0.59	**NF**	**NF**	**NF**
18	5.59	2.59	0.58	**NF**	**NF**	**NF**
19	4.78	2.20	0.60	**NF**	**NF**	**NF**
20	3.94	1.98	0.51	**NF**	**NF**	**NF**
21	3.59	1.79	0.44	**NF**	**NF**	**NF**
22	3.54	1.48	0.48	**NF**	**NF**	**NF**
23	3.59	1.34	0.54	**NF**	**NF**	**NF**
24	3.75	1.68	0.49	**NF**	**NF**	**NF**
25	5.24	2.19	0.41	**NF**	**NF**	**NF**
26	5.68	1.96	0.38	**NF**	**NF**	**NF**
27	5.12	2.64	0.34	**NF**	**NF**	**NF**
28	7.27	2.40	0.33	**NF**	**NF**	**NF**
29	8.60	2.06	0.35	**NF**	**NF**	**NF**
30	8.78	2.22	0.45	**NF**	**NF**	**NF**
31		1.86	0.00	**NF**	**NF**	

Notes: **NF= No flow**

Table 27 Flow Tables LLE, LLS, LLSM, 7S, WA, WB, LLO IR8 7 Page(s)

5 in 30 Flow Requirements (Level)
EMS ID: 126402
Site WA
Flow (m^3/s)

Date	April	May	June	July	August	September
1	2.15	2.25	1.10	1.3129	1.2319	0.9418
2	2.15	2.26	1.07	1.3053	1.2079	0.9392
3	2.15	2.26	1.07	1.3075	1.1695	0.9359
4	2.15	1.75	1.07	1.2925	1.1476	0.9391
5	2.14	1.27	1.07	1.3139	1.0544	0.9353
6	2.15	1.26	1.08	1.3096	1.0190	0.9347
7	2.16	1.26	1.08	1.2959	1.0140	0.9257
8	2.17	1.26	1.08	1.2993	1.0001	0.9357
9	2.17	1.26	1.08	1.2840	0.9859	0.9323
10	2.17	1.26	1.22	1.3108	0.9801	0.9377
11	2.17	1.26	1.23	1.3127	0.9776	0.9425
12	2.17	1.27	1.23	1.2752	0.9691	0.9409
13	2.17	1.27	1.23	1.2081	0.9571	0.9682
14	2.17	1.27	1.23	1.2018	0.9539	1.0198
15	2.17	1.28	1.22	1.1828	0.9517	1.0182
16	2.17	1.28	1.24	1.1826	0.9517	1.0112
17	2.17	1.24	1.18	1.1803	0.9858	1.0370
18	2.19	1.11	1.09	1.1377	1.0734	1.0602
19	2.21	1.10	1.09	1.1282	1.1970	1.0566
20	2.21	1.08	1.12	1.1830	1.1542	1.0522
21	2.22	1.21	1.09	1.2132	0.9867	1.0470
22	2.22	1.24	1.09	1.2226	0.9658	1.0413
23	2.22	1.25	1.07	1.2309	0.9629	1.0320
24	2.22	1.25	1.22	1.2168	0.9582	1.0332
25	2.23	1.25	1.41	1.1160	0.9566	1.0265
26	2.23	1.25	1.42	1.1069	0.9545	1.0344
27	2.23	1.17	1.43	1.0519	0.9481	1.0487
28	2.24	1.09	1.43	1.1109	0.9461	1.0583
29	2.24	1.09	1.43	1.2103	0.9421	1.0842
30	2.24	1.09	1.36	1.1876	0.9424	1.1588
31		1.09		1.1451	0.9426	

Notes: Flow curve is being developed as a resultant of high flows removing hydometic station

Table 27 Flow Tables LLE, LLS, LLSM, 7S, WA, WB, LLO IR8 7 Page(s)

5 in 30 Flow Requirements (Level)

EMS ID: **900504**

Site **WB**

Level (m)

Date	April	May	June	July	August	September
1	0.58	0.57	0.49	0.4989	0.4928	0.4610
2	0.58	0.57	0.48	0.4958	0.4959	0.4590
3	0.58	0.57	0.48	0.4927	0.4945	0.4572
4	0.58	0.57	0.48	0.4892	0.4931	0.4569
5	0.58	0.54	0.48	0.4871	0.4880	0.4551
6	0.58	0.52	0.48	0.4900	0.4837	0.4536
7	0.58	0.51	0.48	0.4845	0.4832	0.4554
8	0.57	0.51	0.48	0.4847	0.4781	0.4589
9	0.58	0.51	0.49	0.4873	0.4766	0.4624
10	0.57	0.50	0.49	0.4874	0.4719	0.4602
11	0.58	0.50	0.50	0.4892	0.4699	0.4626
12	0.58	0.50	0.50	0.4831	0.4664	0.4647
13	0.58	0.50	0.50	0.4791	0.4628	0.4620
14	0.58	0.50	0.50	0.4909	0.4620	0.4639
15	0.57	0.50	0.50	0.4893	0.4645	0.4612
16	0.57	0.50	0.50	0.4891	0.4649	0.4631
17	0.57	0.50	0.50	0.4874	0.4618	0.4774
18	0.57	0.49	0.49	0.4866	0.4694	0.4835
19	0.57	0.49	0.49	0.4845	0.4782	0.4758
20	0.57	0.48	0.49	0.4693	0.4883	0.4774
21	0.57	0.48	0.48	0.4878	0.4824	0.4746
22	0.57	0.49	0.48	0.4903	0.4727	0.4653
23	0.57	0.49	0.48	0.4913	0.4668	0.4662
24	0.57	0.49	0.48	0.4944	0.4680	0.4668
25	0.57	0.50	0.49	0.4925	0.4660	0.4626
26	0.57	0.50	0.50	0.4864	0.4656	0.4667
27	0.57	0.50	0.50	0.4816	0.4664	0.4634
28	0.57	0.49	0.51	0.4810	0.4673	0.4654
29	0.58	0.49	0.51	0.4886	0.4669	0.4706
30	0.58	0.49	0.50	0.4909	0.4638	0.4696
31		0.49		0.4906	0.4617	

Notes: Flow curve is being developed as a resultant of high flows removing hydometic station

Table 27 Flow Tables LLE, LLS, LLSM, 7S, WA, WB, LLO IR8 7 Page(s)

5 in 30 Flow Requirements (Level)
EMS ID: E219412
Site LLO
Flow (m^3/s)

Date	April	May	June	July	August	September
1	0.14	0.07	0.02	0.0000	0.0000	0.0000
2	0.13	0.07	0.02	0.0000	0.0000	0.0000
3	0.12	0.06	0.01	0.0000	0.0000	0.0000
4	0.12	0.06	0.01	0.0000	0.0000	0.0000
5	0.12	0.06	0.00	0.0000	0.0000	0.0000
6	0.11	0.04	0.00	0.0000	0.0000	0.0000
7	0.10	0.04	0.00	0.0000	0.0000	0.0000
8	0.09	0.04	0.00	0.0000	0.0000	0.0000
9	0.10	0.04	0.00	0.0000	0.0000	0.0000
10	0.09	0.04	0.01	0.0000	0.0000	0.0000
11	0.09	0.03	0.02	0.0000	0.0000	0.0000
12	0.08	0.03	0.02	0.0000	0.0000	0.0000
13	0.09	0.04	0.02	0.0000	0.0000	0.0000
14	0.09	0.03	0.01	0.0000	0.0000	0.0000
15	0.07	0.03	0.01	0.0000	0.0000	0.0000
16	0.07	0.02	0.01	0.0000	0.0000	0.0000
17	0.07	0.02	0.01	0.0000	0.0000	0.0000
18	0.07	0.02	0.00	0.0000	0.0000	0.0000
19	0.06	0.02	0.00	0.0000	0.0000	0.0000
20	0.05	0.01	0.00	0.0000	0.0000	0.0000
21	0.05	0.01	0.00	0.0000	0.0000	0.0000
22	0.04	0.01	0.00	0.0000	0.0000	0.0000
23	0.04	0.00	0.00	0.0000	0.0000	0.0000
24	0.04	0.00	0.00	0.0000	0.0000	0.0000
25	0.05	0.02	0.00	0.0000	0.0000	0.0000
26	0.05	0.03	0.00	0.0000	0.0000	0.0000
27	0.06	0.03	0.00	0.0000	0.0000	0.0000
28	0.06	0.03	0.00	0.0000	0.0000	0.0000
29	0.08	0.03	0.00	0.0000	0.0000	0.0000
30	0.08	0.02	0.00	0.0000	0.0000	0.0000
31		0.02		0.4906	0.0000	

Table 27 Flow Tables LLE, LLS, LLSM, 7S, WA, WB, LLO IR8 7 Page(s)

5 in 30 Flow Requirements (Level)
EMS ID: E297232
Site IR8
Flow (m^3/s)

Date	April	May	June	July	August	September
1	0.97	2.22	0.88	0.0131	4.4583	4.2967
2	0.94	1.67	0.77	0.0059	4.4453	4.2666
3	0.91	1.46	0.63	*	4.4535	4.2444
4	0.92	1.43	0.52	*	4.4132	4.2693
5	0.88	1.50	0.44	*	4.3873	4.3779
6	0.86	1.58	0.38	*	4.3505	4.5490
7	0.85	1.70	0.31	*	4.4211	4.6125
8	0.85	1.26	0.30	*	4.7278	4.5632
9	0.85	1.09	0.44	*	5.9445	4.7911
10	0.79	1.27	0.67	0.1186	5.8119	4.9198
11	0.74	1.34	0.62	*	5.2428	4.9568
12	0.69	1.92	0.51	*	5.1186	5.0265
13	0.68	1.91	0.48	5.8119	4.8711	5.3852
14	0.72	1.85	0.41	*	4.6758	5.7737
15	0.87	1.73	0.38	*	4.5662	5.6398
16	1.39	1.81	0.45	*	4.5499	5.6785
17	2.13	1.52	0.38	*	4.5702	5.6494
18	2.74	1.30	0.32	*	4.4350	7.8814
19	3.20	0.94	0.29	*	4.4388	21.5827
20	2.66	0.82	0.25	2.1474	4.4094	15.2698
21	2.68	0.94	0.21	1.0772	4.3658	15.1248
22	2.43	1.09	0.18	4.8540	4.3219	13.2196
23	2.04	1.23	0.15	4.8550	4.2651	11.5596
24	2.33	1.20	0.13	4.8348	4.2182	10.7974
25	2.24	1.38	0.11	4.8565	4.2423	9.9581
26	2.11	1.01	0.09	4.8076	4.2080	9.1486
27	1.81	0.92	0.07	4.7338	4.2630	9.5229
28	1.69	0.91	0.05	4.6719	4.4380	14.0276
29	2.26	0.84	0.04	4.6337	4.5168	22.6960
30	2.88	0.84	0.02	4.5903	4.4675	18.8039
31		0.86		4.5182	4.3565	

* Level Logger was out of water

Table 28 Precipitation 1 Page(s)

Daily Precipitation (mm)						
DATE	APRIL	MAY	JUNE	JULY	AUG	SEPT
1	0	1.5	0	0	0	0
2	0	0	0	0	0	0
3	0	0	0	0	0	0
4	4	0.8	0	0	0	0.1
5	0	0	0.3	0	0	3.9
6	0	0	1.5	0	0	0
7	0	1.2	0.2	0	1	0
8	1.4	0	0	0	11.8	0
9	0	0	7	0	0	7.5
10	5.1	0.2	10.7	0	0	3.1
11	0.1	0	3.9	0	0	0
12	0	1.4	0	0	0	9.1
13	0	4	1.8	0	0	0.1
14	0	0	1.3	0	0	0
15	0	0	0.8	0	0	7.5
16	0	0	2.5	0	1.7	0
17	0	0	0	0.7	0.4	0.2
18	0	3.2	0	0	0	40
19	0	0.3	0	0	0	3
20	0	0.1	0.5	0	0	5.8
21	0	0	0	4.9	0	1.3
22	0	0	0	0	0	0
23	0	0	0	0.1	0	2
24	2.1	0	0	0	0	0
25	3.7	12.8	0	0	0	0
26	6.4	7.6	0	0	0	3.3
27	0.2	1.8	0	0	3.4	8.4
28	4.1	2.8	0	0	0.1	6.7
29	4.7	0	0	0	0	1.3
30	1.2	0	0	0	0	12.5
31		3.7		0	0	
Monthly Total (mm)	**33.00**	**41.40**	**30.50**	**5.70**	**18.40**	**115.80**
Quarterly Total (mm)	**104.90**			**Quarterly Total (mm)**	**139.90**	

Table 29 Long Lake Depth Profiling 1 Page(s)

EMS ID: E206619

Site NAME: LONG LAKE (LLM) **LONG LAKE DEPTH PROFILING SUMMER**

Sample Date	12-Jul						19-Jul						26-Jul						4-Aug						10-Aug					
Parameter	TEMP.	pH	COND.	% Sat.	D.O.	ORP	TEMP.	pH	COND.	% Sat.	D.O.	ORP	TEMP.	pH	COND.	% Sat.	D.O.	ORP	TEMP.	pH	COND.	% Sat.	D.O.	ORP	TEMP.	pH	COND.	% Sat.	D.O.	ORP
Sample Depth (m	Celcius		µS/cm		mg/L	mV	Celcius		µS/cm		mg/L	mV	Celcius		µS/cm		mg/L	mV	Celcius		µS/cm		mg/L	mV	Celcius		µS/cm		mg/L	mV
1	23.87	7.60	192.10	98.10	8.28	138.40	21.64	7.61	196.80	96.30	8.48	143.90	22.40	7.60	207.20	98.90	8.74	161.00	23.29	7.57	222.60	99.30	8.46	165.30	22.13	7.50	224.20	96.60	8.42	146.40
2	23.79	7.60	192.30	97.90	8.27	140.00	21.66	7.60	196.80	96.30	8.47	146.30	21.37	7.60	207.00	98.50	8.71	162.50	23.26	7.57	222.80	99.10	8.46	167.10	22.05	7.50	224.30	96.10	8.39	146.80
3	23.71	7.60	192.20	97.40	8.24	141.60	21.03	7.60	196.80	96.10	8.46	148.70	21.18	7.57	206.70	98.40	8.73	165.30	23.10	7.57	222.70	98.60	7.56	168.80	21.93	7.48	224.20	95.90	8.39	148.20
4	20.32	7.14	198.60	109.60	9.96	163.10	21.55	7.60	197.70	96.60	8.54	151.00	20.70	7.47	210.60	96.90	8.69	170.70	22.11	7.36	225.80	99.40	7.36	174.40	21.63	7.44	224.70	95.70	8.42	150.30
5	13.22	6.96	172.60	101.90	10.56	173.30	14.55	7.08	248.70	102.70	10.45	171.90	14.54	6.96	262.50	102.70	10.50	190.40	17.27	7.04	268.20	110.10	10.64	191.40	19.61	6.93	252.90	111.20	10.20	164.90
6	9.84	6.88	266.50	84.00	9.54	178.60	11.24	7.04	269.50	89.40	9.92	176.60	10.24	6.87	275.30	85.40	9.60	194.70	10.99	6.80	290.20	84.80	9.36	198.20	13.36	6.84	281.50	95.00	10.03	172.30
7	8.37	6.82	271.10	74.20	8.66	180.10	8.62	6.97	273.70	71.60	8.40	180.10	8.24	6.80	280.70	69.30	8.13	197.90	8.76	6.72	293.60	70.00	8.12	201.20	9.32	6.70	289.50	71.30	8.17	177.80
8	7.54	6.81	275.20	63.50	7.68	181.10	7.21	6.87	277.00	64.00	7.72	181.50	7.23	6.68	283.10	58.70	7.09	202.70	7.82	6.64	295.10	63.00	7.47	202.10	7.76	6.64	292.70	60.40	7.15	181.00
9	6.33	6.75	276.10	59.70	7.35	181.80	6.51	6.83	276.90	59.00	7.23	182.60	6.62	6.65	283.40	56.10	6.87	203.10	7.02	6.59	296.10	58.00	7.05	203.90	6.88	6.58	293.10	55.00	6.68	181.10
10	5.85	6.74	276.60	55.10	6.73	182.50	6.05	6.79	277.80	52.10	6.41	182.60	6.10	6.61	285.50	49.80	6.14	204.10	6.42	6.56	296.50	52.30	6.44	204.80	6.32	6.54	294.30	48.60	5.98	181.70
11	5.72	6.50	278.00	48.50	6.07	183.10	5.78	6.80	278.30	50.00	6.24	180.50	5.77	6.60	285.70	45.20	5.66	204.20	6.05	6.54	297.70	47.50	5.89	205.90	6.05	6.52	295.00	45.40	5.63	181.60
12	5.57	6.68	278.70	46.10	5.80	183.00	5.58	6.82	279.30	45.10	5.66	180.00	5.62	6.59	285.80	42.80	5.36	204.50	5.79	6.51	298.30	42.80	5.34	206.10	5.85	6.55	295.40	42.20	5.27	181.30
13	5.44	6.67	278.90	43.20	5.44	183.00	5.42	6.79	279.40	42.30	5.33	180.50	5.49	6.58	286.20	40.80	5.13	204.20	5.62	6.51	298.90	40.70	5.09	206.70	5.43	*6.49*	295.90	34.70	4.37	180.00
14	5.35	6.66	279.30	40.60	5.15	183.10	5.28	6.78	280.10	39.80	5.02	181.10	5.32	6.57	287.00	37.70	4.77	204.40	5.33	*6.48*	300.40	33.80	4.26	207.50	5.43	6.52	296.00	34.40	4.32	177.20
15	5.21	6.66	280.20	38.30	4.81	183.30	5.22	6.75	280.90	36.90	4.62	181.00	5.23	6.56	288.00	32.60	4.13	204.70	5.21	*6.46*	301.60	27.30	3.44	207.60	5.29	*6.49*	297.50	29.40	3.72	179.10
16	5.11	6.65	281.10	34.20	4.33	183.40	5.12	6.74	281.70	33.20	4.22	181.20	5.15	6.55	288.60	29.90	3.80	204.50	5.18	*6.46*	301.90	25.70	3.26	207.70	5.21	*6.45*	297.40	25.60	3.25	179.50
17	5.07	6.64	281.60	32.40	4.07	183.30	5.10	6.73	282.40	30.50	3.87	181.10	5.13	6.54	289.30	27.20	3.45	204.30	5.16	*6.47*	302.30	23.90	3.04	207.40	5.19	*6.44*	297.90	24.50	3.09	179.30
18	5.06	6.63	282.00	30.20	3.84	183.30	5.09	6.72	282.60	28.40	3.60	180.80	5.11	6.54	289.70	25.50	3.24	204.10	5.15	*6.46*	302.20	23.60	3.00	207.40	5.17	*6.43*	297.70	23.30	2.96	179.40
19	5.06	6.63	282.50	28.80	3.66	183.10	5.08	6.72	283.20	26.10	3.30	180.50	5.11	6.54	290.10	24.80	3.15	204.20	5.15	*6.46*	302.40	23.40	2.97	207.40	5.17	*6.44*	297.90	22.80	2.90	179.10
20	5.02	6.63	282.30	27.00	3.43	182.30	5.09	6.95	294.60	12.70	1.62	71.90	5.11	6.55	289.90	24.10	3.07	203.80	5.14	*6.46*	302.50	22.80	2.89	207.30	5.16	*6.43*	298.30	21.60	2.73	179.20
21	5.06	6.64	283.20	24.30	3.12	175.60							5.11	6.54	292.50	19.40	2.46	156.40	5.38	*6.45*	303.90	19.30	2.37	139.40	5.16	6.74	329.60	5.00	0.62	-23.20
	BS=21m						BS=20m						BS=21m						BS=21m						BS=21m					

WQG-Max / Min pH. 6.5 - 9.0

Table 30 Middle Quinsam Lake Depth Profiling 1 Page(s)

EMS ID E206618

Site NAME: MIDDLE QUINSAM LAKE (MQL) **MIDDLE QUINSAM LAKE DEPTH PROFILING SUMMER**

Sample Date	12-Jul						19-Jul						26-Jul						4-Aug						10-Aug					
Parameter	TEMP.	pH	COND.	% Sat.	D.O.	ORP	TEMP.	pH	COND.	% Sat.	D.O.	ORP	TEMP.	pH	COND.	% Sat.	D.O.	ORP	TEMP.	pH	COND.	% Sat.	D.O.	ORP	TEMP.	pH	COND.	% Sat.	D.O.	ORP
Sample Depth (m)	Celcius		µS/cm		mg/L	mV	Celcius		µS/cm		mg/L	mV	Celcius		µS/cm		mg/L	mV	Celcius		µS/cm		mg/L	mV	Celcius		µS/cm		mg/L	mV
1	25.00	8.12	190.50	106.20	8.77	158.10	22.49	8.10	189.00	103.70	8.98	118.60	22.24	8.02	182.20	105.40	9.17	115.50	24.36	7.99	188.60	106.90	8.94	90.10	22.76	7.87	193.80	102.80	8.85	104.90
2	24.87	8.12	190.80	106.00	8.78	159.80	22.39	8.10	187.40	102.80	8.92	120.70	21.93	8.11	185.10	104.80	9.17	125.70	24.23	7.99	188.30	108.30	9.08	92.80	22.57	7.87	194.20	102.90	8.89	109.50
3	24.56	8.12	187.00	108.10	9.03	163.50	22.35	8.10	188.20	102.90	8.93	122.60	21.68	8.10	186.80	104.50	9.19	134.30	24.03	7.93	187.80	110.00	9.25	94.60	22.46	7.87	193.70	102.00	8.84	112.10
4	23.80	8.15	208.70	119.60	10.12	161.40	22.31	8.09	188.90	103.00	8.95	124.20	21.50	8.08	187.90	104.60	9.24	136.30	23.35	7.90	185.70	109.70	9.36	96.10	22.41	7.88	193.40	101.90	8.84	112.90
5	20.69	8.31	234.50	122.60	11.02	163.80	21.76	8.16	193.30	104.10	9.14	126.00	21.41	8.06	188.90	103.30	9.14	138.50	22.75	7.95	186.90	108.90	9.37	96.40	22.23	7.83	195.50	102.10	8.88	115.10
6	19.05	8.30	234.10	109.80	10.25	172.80	19.62	8.21	232.80	115.90	10.63	130.00	21.12	8.03	198.50	110.20	9.95	139.60	21.74	7.99	199.20	108.90	9.58	98.30	21.92	7.77	201.30	102.80	9.00	117.90
7	16.78	8.31	223.10	113.40	11.19	166.50	16.84	8.30	201.30	122.20	11.82	130.40	17.53	8.32	195.00	125.50	12.20	139.20	18.53	8.45	217.90	132.20	12.54	96.80	19.13	8.38	217.10	132.70	12.30	111.10
8	14.29	8.38	154.40	128.00	13.16	165.90	14.90	8.47	160.60	128.70	13.03	128.60	14.64	8.27	152.70	127.10	12.96	140.60	16.06	8.41	179.90	133.30	13.05	100.80	15.65	8.38	164.90	132.90	13.21	115.00
9	12.10	7.99	123.50	121.60	13.10	174.00	11.61	7.88	123.10	116.80	12.66	140.90	13.31	8.12	131.60	124.00	13.02	147.20	13.27	8.04	136.10	121.10	12.72	109.80	13.38	7.86	135.80	121.20	12.66	127.30
10	11.18	7.79	122.60	115.00	12.63	178.40	10.95	7.63	122.90	109.00	12.03	144.30	11.01	7.60	126.80	105.00	11.57	158.70	11.93	7.68	133.00	111.30	12.02	112.90	11.94	7.49	132.10	106.60	11.49	133.60
11	10.50	7.58	122.60	122.50	11.89	183.00	10.41	7.45	123.90	98.40	11.04	147.40	10.52	7.45	127.30	96.90	10.80	161.20	11.20	7.34	133.70	99.30	10.89	113.70	11.05	7.21	133.20	91.00	10.02	137.50
12	10.15	7.42	123.10	101.90	11.25	185.70	10.08	7.31	89.10	92.40	10.40	149.60	10.27	7.31	128.30	90.10	10.07	162.60	10.55	7.15	135.30	86.70	9.60	110.20	10.73	7.10	134.30	83.90	9.30	138.70
13	9.96	7.31	123.80	95.40	10.77	187.50	9.97	7.16	126.30	83.20	9.38	152.00	10.16	7.16	129.40	84.10	9.45	163.90	10.41	7.02	136.40	78.90	8.75	109.80	10.50	6.99	135.30	76.30	8.48	140.30
13.5							9.93	7.02	126.90	76.40	8.64	86.70	10.16	7.08	129.30	83.20	9.34	164.00							10.46	6.89	135.70	73.30	8.19	140.30

WQG-Max / Min pH 6.5 -9.0

Table 31 Q2 - Lakes 9 Page(s)

EMS ID		E206619						Water Quality Guidelines			
StnName		Long Lake Middle 1 Metre									
StnCode		LLM1									
Date	Unit	12/Jul/21	19/Jul/21	26/Jul/21	4/Aug/21	10/Aug/21	Count	Maximum	5 in 30 Ave	Average	Max
SO4-D	mg/L	59	68	68	71	69	5	71	67.0	128	
Turb	NTU	0.16	0.16	0.20	0.18	0.18	5	0.20	0.18	2.5	8.5
Alk-T	mg/L	35	37	39	37	40	5	40	37.6		
Al-T	mg/L	0.0090	0.0091	0.0077	0.0089	0.0080	5	0.0091	0.0085		
As-T	mg/L	0.00048	0.00054	0.00050	0.00064	0.00055	5	0.00064	0.00054		0.005
Ba-T	mg/L	0.0050	0.0051	0.0051	0.0056	0.0052	5	0.0056	0.0052	1	5
B-T	mg/L	0.063	0.066	0.063	0.074	0.067	5	0.074	0.067	1.2	
Cd-T	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.0000050		
Ca-T	mg/L	25.2	26.4	25.1	30.1	27.5	5	30.1	26.9		
Cr-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		
Co-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100	0.004	0.11
Cu-T	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	5	<0.00050	0.000250	0.002	0.007
Hard-T	mg/L	76.2	80.3	76.2	90.7	83.0	5	90.7	81.3		
Fe-T	mg/L	0.024	0.025	0.021	0.023	0.021	5	0.025	0.023		1
Pb-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100	0.0039978	0.01763
Mg-T	mg/L	3.20	3.47	3.26	3.76	3.45	5	3.76	3.43		
Mn-T	mg/L	0.0079	0.0080	0.0063	0.0064	0.0066	5	0.0080	0.0070	0.737	0.8706
Hg-T	mg/L	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	5	<0.0000019	0.00000095	0.00002	0.00001
Mo-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	1	2
Ni-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	0.025	0.025
K-T	mg/L	0.303	0.293	0.301	0.345	0.330	5	0.345	0.314		
S-T	mg/L	19.8	20.3	20.8	24.2	21.2	5	24.2	21.3		
Se-T	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050	0.002	
Ag-T	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	5	<0.000020	0.0000100	0.00005	0.0001
Na-T	mg/L	8.44	8.74	8.30	9.93	9.01	5	9.93	8.88		
Sr-T	mg/L	0.171	0.187	0.177	0.195	0.182	5	0.195	0.182		
Zn-T	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250	0.0075	0.033
Al-D	mg/L	0.0157	0.0075	0.0075	0.0078	0.0071	5	0.0157	0.0091	0.05	0.1
As-D	mg/L	0.00051	0.00051	0.00045	0.00055	0.00048	5	0.00055	0.00050		
Ba-D	mg/L	0.0049	0.0052	0.0051	0.0053	0.0053	5	0.0053	0.0052		
B-D	mg/L	0.060	0.062	0.061	0.068	0.066	5	0.068	0.063		
Cd-D	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.0000050	0.000087	0.00017
Ca-D	mg/L	25.0	26.8	26.2	28.1	28.2	5	28.2	26.9		
Cr-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		
Co-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100		
Cu-D	mg/L	0.00043	0.00029	0.00029	0.00041	0.00024	5	0.00043	0.00033	0.000645	0.00385
Hard-D	mg/L	75.5	80.3	79.1	84.7	84.4	5	84.7	80.8		
Fe-D	mg/L	0.0171	0.0155	0.0139	0.0127	0.0115	5	0.0171	0.0141		0.35
Pb-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100		
Mg-D	mg/L	3.15	3.26	3.29	3.50	3.40	5	3.50	3.32		
Mn-D	mg/L	0.0033	0.0012	<0.0010	<0.0010	<0.0010	5	0.0033	0.00120		
Hg-D	mg/L	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	5	<0.0000019	0.00000095		
Mo-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		
Ni-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		
K-D	mg/L	0.289	0.290	0.312	0.313	0.301	5	0.313	0.301		
S-D	mg/L	20.5	21.1	20.7	22.4	20.9	5	22.4	21.1		
Se-D	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050		
Na-D	mg/L	8.05	8.18	8.62	8.95	8.66	5	8.95	8.49		
Sr-D	mg/L	0.161	0.184	0.179	0.192	0.193	5	0.193	0.182		
Zn-D	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250		
Chlr-a	ug/L	<0.50					1	<0.50	0.250		
N-NO2	mg/L	<0.0050	<0.0050	<0.0050		<0.0050	4	<0.0050	0.00250	0.02	0.06
N-NO3	mg/L	<0.020	<0.020	<0.020		<0.020	4	<0.020	0.0100	3	32.8
N-NO23	mg/L	<0.020	<0.020	<0.020	<0.020	<0.020	5	<0.020	0.0100		
P-T	mg/L	0.0056	<0.0030	0.0056	<0.0030	<0.0030	5	0.0056	0.00314	0.007	
P-D	mg/L	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	5	<0.0030	0.00150		
DOC	mg/L	2.3	2.3	<0.50	4.1	2.6	5	4.1	2.310		
Notes:											
Factor applied to less-than results when calculating statistics: 0.5											

Table 31 Q2 - Lakes 9 Page(s)

EMS ID		E206619						Water Quality Guidelines			
StnName		Long Lake Middle 4 Metre									
StnCode		LLM4									
Date	Unit	12/Jul/21	19/Jul/21	26/Jul/21	4/Aug/21	10/Aug/21	Count	Maximum	5 in 30 Ave	Average	Max
SO4-D	mg/L	67	67	71	75	76	5	76	71.2	128	
Turb	NTU	0.15	0.16	0.25	0.21	0.18	5	0.25	0.19	2.5	8.5
Alk-T	mg/L	32	37	39	40	39	5	40	37.4		
Al-T	mg/L	0.0083	0.0090	0.0081	0.0085	0.0081	5	0.009	0.0084		
As-T	mg/L	0.00038	0.00057	0.00049	0.00058	0.00056	5	0.00058	0.00052		0.005
Ba-T	mg/L	0.0049	0.0054	0.0051	0.0057	0.0055	5	0.0057	0.00530	1	5
B-T	mg/L	0.065	0.067	0.064	0.072	0.071	5	0.072	0.068	1.2	
Cd-T	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.00001		
Ca-T	mg/L	25.7	27.0	26.5	28.5	28.8	5	28.8	27.3		
Cr-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.0005		
Co-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.0001	0.004	0.11
Cu-T	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	5	<0.00050	0.000250	0.002	0.007
Hard-T	mg/L	77.5	81.9	80.0	85.9	86.7	5	86.7	82.40		
Fe-T	mg/L	0.025	0.025	0.023	0.026	0.023	5	0.026	0.024		1
Pb-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.0001	0.0039978	0.01763
Mg-T	mg/L	3.25	3.49	3.38	3.60	3.61	5	3.61	3.47		
Mn-T	mg/L	0.0076	0.0081	0.0071	0.0065	0.0075	5	0.0081	0.0074	0.737	0.8706
Hg-T	mg/L	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	5	<0.0000019	0.00000095	0.00002	0.00001
Mo-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.0005	1	2
Ni-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.0005	0.025	0.025
K-T	mg/L	0.305	0.300	0.318	0.335	0.351	5	0.351	0.322		
S-T	mg/L	21.1	21.8	21.2	23.7	23.6	5	23.7	22.3		
Se-T	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.00005	0.002	
Ag-T	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	5	<0.000020	0.000010	0.00005	0.0001
Na-T	mg/L	8.62	8.95	8.62	9.35	9.37	5	9.37	8.98		
Sr-T	mg/L	0.174	0.190	0.183	0.186	0.187	5	0.19	0.184		
Zn-T	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.0025	0.0075	0.033
Al-D	mg/L	0.0068	0.0070	0.0076	0.0089	0.0064	5	0.0089	0.00730	0.05	0.1
As-D	mg/L	0.00040	0.00055	0.00046	0.00055	0.00050	5	0.00055	0.00049		
Ba-D	mg/L	0.0049	0.0052	0.0051	0.0053	0.0054	5	0.00540	0.0052		
B-D	mg/L	0.060	0.062	0.062	0.071	0.067	5	0.071	0.064		
Cd-D	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.000005	0.000087	0.00017
Ca-D	mg/L	24.1	25.8	26.5	29.5	27.8	5	29.5	26.7		
Cr-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.0005		
Co-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.00010		
Cu-D	mg/L	0.00025	0.00027	0.00028	0.00031	0.00025	5	0.00031	0.000270	0.000645	0.00385
Hard-D	mg/L	72.8	78.1	80.1	88.4	83.7	5	88.4	80.6		
Fe-D	mg/L	0.0169	0.0161	0.0142	0.0147	0.0120	5	0.0169	0.0148		0.35
Pb-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.0001		
Mg-D	mg/L	3.04	3.33	3.40	3.58	3.45	5	3.58	3.4		
Mn-D	mg/L	0.0043	0.0012	<0.0010	<0.0010	0.0010	5	0.0043	0.0015		
Hg-D	mg/L	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	5	<0.0000019	0.00000095		
Mo-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.0005		
Ni-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		
K-D	mg/L	0.279	0.293	0.319	0.328	0.308	5	0.328	0.305		
S-D	mg/L	19.7	21.2	20.5	24.1	23.2	5	24.100	21.7		
Se-D	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.00005		
Na-D	mg/L	7.96	8.25	8.76	9.10	8.90	5	9.1	8.59		
Sr-D	mg/L	0.159	0.190	0.186	0.197	0.192	5	0.197	0.185		
Zn-D	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.0025		
N-NO2	mg/L	<0.0050	<0.0050	<0.0050		<0.0050	4	<0.0050	0.00250	0.02	0.06
N-NO3	mg/L	<0.020	<0.020	<0.020		<0.020	4	<0.020	0.01	3	32.8
N-NO23	mg/L	<0.020	<0.020	<0.020	<0.020	<0.020	5	<0.020	0.01		
P-T	mg/L	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	5	<0.0030	0.0015	0.007	
P-D	mg/L	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	5	<0.0030	0.0015		
DOC	mg/L	2.4	2.2	2.5	3.8	2.4	5	3.8	2.7		
Notes:											
Factor applied to less-than results when calculating statistics: 0.5											

Table 31 Q2 - Lakes 9 Page(s)

EMS ID		E206619						Water Quality Guidelines			
StnName		Long Lake Middle 9 Metre									
StnCode		LLM9									
Date	Unit	12/Jul/21	19/Jul/21	26/Jul/21	4/Aug/21	10/Aug/21	Count	Maximum	5 in 30 Ave	Average	Max
SO4-D	mg/L	110	110	98	93	110	5	110	104.2	128	
Turb	NTU	0.15	0.14	0.18	0.19	0.18	5	0.19	0.17	2.5	8.5
Alk-T	mg/L	40	46	50	48	46	5	50	46.0		
Al-T	mg/L	0.0115	0.0104	0.0106	0.0108	0.0103	5	0.0115	0.0107		
As-T	mg/L	0.0002	0.00022	0.00019	0.00033	0.00018	5	0.0003	0.00022		0.005
Ba-T	mg/L	0.0053	0.0055	0.0053	0.0056	0.0052	5	0.0056	0.0054	1	5
B-T	mg/L	0.093	0.093	0.088	0.096	0.09	5	0.096	0.092	1.2	
Cd-T	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.000005		
Ca-T	mg/L	37	38.2	35.6	38.5	37.3	5	38.5	37.30		
Cr-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.0005		
Co-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.0001	0.004	0.11
Cu-T	mg/L	<0.00050	<0.00050	0.00514	<0.00050	<0.00050	5	0.00514	0.0012	0.002	0.007
Hard-T	mg/L	110	114	106	114	111	5	114	111		
Fe-T	mg/L	0.02	0.015	0.02	0.026	0.022	5	0.026	0.021		1
Pb-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.0001	0.0039978	0.01763
Mg-T	mg/L	4.22	4.42	4.23	4.42	4.28	5	4.42	4.31		
Mn-T	mg/L	0.0516	0.0548	0.0591	0.0522	0.0647	5	0.0647	0.0565	0.737	0.8706
Hg-T	mg/L	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	5	<0.0000019	0.00000095	0.00002	0.00001
Mo-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.0005	1	2
Ni-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.0005	0.025	0.025
K-T	mg/L	0.457	0.453	0.453	0.482	0.461	5	0.482	0.461		
S-T	mg/L	31.9	32.8	32.1	33.7	32.1	5	33.7	32.5		
Se-T	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.00005	0.002	
Ag-T	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	5	<0.000020	0.000010	0.00005	0.0001
Na-T	mg/L	13.9	13.9	13.1	13.7	13.3	5	13.9	13.60		
Sr-T	mg/L	0.282	0.295	0.274	0.272	0.267	5	0.295	0.278		
Zn-T	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.0025	0.0075	0.033
Al-D	mg/L	0.0096	0.0101	0.01	0.0094	0.0085	5	0.0101	0.0095	0.05	0.1
As-D	mg/L	0.00021	0.00022	0.00016	0.00024	0.00015	5	0.00024	0.0002		
Ba-D	mg/L	0.005	0.0054	0.0056	0.0053	0.0053	5	0.0056	0.0053		
B-D	mg/L	0.088	0.088	0.086	0.09	0.089	5	0.09	0.088		
Cd-D	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.000005	0.000087	0.00017
Ca-D	mg/L	35.5	37.7	37.5	37	37.4	5	37.7	37		
Cr-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.0005		
Co-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.00010		
Cu-D	mg/L	0.00026	0.00029	0.00031	0.00028	0.00027	5	0.00031	0.000280	0.000645	0.00385
Hard-D	mg/L	105	112	111	109.00000	110	5	112	109.4		
Fe-D	mg/L	0.014	0.0193	0.0143	0.0145	0.0128	5	0.0193	0.015		0.35
Pb-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.0001		
Mg-D	mg/L	4.1	4.2	4.31	4.11	4.12	5	4.31	4.17		
Mn-D	mg/L	0.0453	0.0559	0.0575	0.044	0.0595	5	0.0595	0.0524		
Hg-D	mg/L	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	5	<0.0000019	0.0000010		
Mo-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.0005		
Ni-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		
K-D	mg/L	0.439	0.437	0.457	0.428	0.44	5	0.457	0.440		
S-D	mg/L	30.7	31.7	32.7	29.4	32.6	5	32.7	31.4		
Se-D	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.00005		
Na-D	mg/L	13	12.9	13.5	12.7	13.2	5	13.5	13.1		
Sr-D	mg/L	0.265	0.292	0.28	0.275	0.283	5	0.292	0.279		
Zn-D	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.0025		
N-NO2	mg/L	<0.0050	<0.0050	<0.0050		<0.0050	4	<0.0050	0.00250	0.02	0.06
N-NO3	mg/L	0.033	0.049	0.025		0.045	4	0.049	0.038	3	32.8
N-NO23	mg/L	0.033	0.049	0.025	0.032	0.045	5	0.049	0.037		
P-T	mg/L	<0.0030	<0.0030	<0.0030	0.0031	<0.0030	5	0.0031	0.00182	0.007	
P-D	mg/L	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	5	<0.0030	0.0015		
DOC	mg/L	2	1.9	<0.50	3.5	2.3	5	3.5	1.99		
Notes:											
Factor applied to less-than results when calculating statistics: 0.5											

Table 31 Q2 - Lakes 9 Page(s)

EMS ID		E206619						Water Quality Guidelines			
StnName		Long Lake Middle 1 Metre from Bottom									
StnCode		LLM 1MB									
Date	Unit	12/Jul/21	19/Jul/21	26/Jul/21	4/Aug/21	10/Aug/21	Count	Maximum	5 in 30 Ave	Average	Max
SO4-D	mg/L	110	110	95	110	100	5	110	105	128	
Turb	NTU	0.46	0.77	0.30	1.7	3.6	5	3.6	1.37	2.5	8.5
Alk-T	mg/L	44	49	51	49	48	5	51	48.2		
Al-T	mg/L	0.0112	0.0109	0.01	0.0111	0.0092	5	0.0112	0.0105		
As-T	mg/L	0.00025	0.00033	0.00023	0.0003	0.0003	5	0.00034	0.0003		0.005
Ba-T	mg/L	0.00850	0.0109	0.0073	0.0099	0.0087	5	0.0109	0.0091	1	5
B-T	mg/L	0.0920	0.094	0.09	0.1	0.093	5	0.1000	0.094	1.2	
Cd-T	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.000005		
Ca-T	mg/L	37.6	39	36.8	39.7	38	5	39.7	38.20		
Cr-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.0005		
Co-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.00010	0.004	0.11
Cu-T	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	5	<0.00050	0.000250	0.002	0.007
Hard-T	mg/L	111	115	109	118	112	5	118	113.0		
Fe-T	mg/L	0.048	0.071	0.037	0.066	0.05	5	0.071	0.1		1
Pb-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.0001	0.0039978	0.01763
Mg-T	mg/L	4.25	4.38	4.21	4.59	4.29	5	4.59	4.34		
Mn-T	mg/L	0.487	0.858	0.317	0.597	0.507	5	0.858	0.553	0.737	0.8706
Hg-T	mg/L	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	5	<0.0000019	0.00000095	0.00002	0.00001
Mo-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.0005	1	2
Ni-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	0.025	0.025
K-T	mg/L	0.473	0.469	0.458	0.517	0.487	5	0.517	0.481		
S-T	mg/L	32.9	32.2	32.8	35.1	31.8	5	35.1	33		
Se-T	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.00005	0.002	
Ag-T	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	5	<0.000020	0.000010	0.00005	0.0001
Na-T	mg/L	14.2	14.2	13.2	14.5	13.7	5	14.5	14.0		
Sr-T	mg/L	0.288	0.312	0.3	0.281	0.274	5	0.312	0.287		
Zn-T	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.003	0.0075	0.033
Al-D	mg/L	0.0097	0.0075	0.0081	0.0079	0.0061	5	0.0097	0.0079	0.05	0.1
As-D	mg/L	0.00024	0.0003	0.00017	0.0002	0.00017	5	0.0003	0.00021		
Ba-D	mg/L	0.0083	0.0103	0.0065	0.0087	0.007	5	0.0103	0.0082		
B-D	mg/L	0.091	0.093	0.088	0.096	0.093	5	0.096	0.092		
Cd-D	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.000005	0.000087	0.00017
Ca-D	mg/L	35.5	39.1	37.9	39.3	37.8	5	39.3	37.90		
Cr-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.0005		
Co-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.00010		
Cu-D	mg/L	0.00033	0.00033	0.00029	0.00028	0.00026	5	0.00033	0.0003	0.000645	0.00385
Hard-D	mg/L	106	115	113	116.00000	111	5	116	112.2		
Fe-D	mg/L	0.0136	0.0164	0.0142	0.0144	0.009	5	0.0164	0.0135		0.35
Pb-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.0001		
Mg-D	mg/L	4.19	4.28	4.4	4.38	4.15	5	4.4	4.28		
Mn-D	mg/L	0.423	0.839	0.217	0.454	0.208	5	0.839	0.428		
Hg-D	mg/L	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	5	<0.0000019	0.00000095		
Mo-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.0005		
Ni-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		
K-D	mg/L	0.471	0.469	0.474	0.473	0.447	5	0.474	0.467		
S-D	mg/L	31.5	34.5	32.700	33.6	32.6	5	34.500	33		
Se-D	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.00005		
Na-D	mg/L	13.5	13.8	13.9	14	13.4	5	14	13.70		
Sr-D	mg/L	0.277	0.307	0.27	0.3	0.286	5	0.307	0.288		
Zn-D	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.0025		
N-NO2	mg/L	<0.0050	<0.0050	<0.0050		<0.0050	4	<0.0050	0.00250	0.02	0.06
N-NO3	mg/L	0.08	0.193	0.047		0.088	4	0.193	0.102	3	32.8
N-NO23	mg/L	0.08	0.193	0.047	0.083	0.088	5	0.193	0.098		
P-T	mg/L	<0.0030	0.0049	<0.0030	<0.0030	<0.0030	5	0.0049	0.00218	0.007	
P-D	mg/L	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	5	<0.0030	0.0015		
DOC	mg/L	2	2	0.78	3.1	2.2	5	3.1	2.02		
Notes:											
Factor applied to less-than results when calculating statistics: 0.5											

Table 31 Q2 - Lakes 9 Page(s)

EMS ID		E206618						Water Quality Guidelines			
StnName		Middle Quinsam Lake 1 Metre									
StnCode		MQL1									
Date	Unit	12/Jul/21	19/Jul/21	26/Jul/21	4/Aug/21	10/Aug/21	Count	Maximum	5 in 30 Ave	Average	Max
SO4-D	mg/L	52	52	50	47	51	5	52	50.4	128	
Turb	NTU	0.22	0.24	0.24	0.2	0.23	5	0.24	0.23	2.5	8.5
Alk-T	mg/L	43	44	49	50	51	5	51	47.4		
Al-T	mg/L	0.0153	0.0138	0.0143	0.0154	0.0135	5	0.0154	0.0145		
As-T	mg/L	0.00017	0.00021	0.0002	0.00024	0.00017	5	0.00024	0.00020		0.005
Ba-T	mg/L	0.00190	0.00190	0.0018	0.0017	0.0017	5	0.0019	0.0018	1	5
B-T	mg/L	0.073	0.069	0.063	0.0730	0.07	5	0.073	0.070	1.2	
Cd-T	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.0000050		
Ca-T	mg/L	14.7	14.3	14.3	14.3	13.4	5	14.7	14.2		
Cr-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		
Co-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.00010	0.004	0.11
Cu-T	mg/L	<0.00050	<0.00050	<0.00050	0.00051	<0.00050	5	0.00051	0.00030	0.002	0.007
Hard-T	mg/L	44.5	43.3	43.7	43.5	41.1	5	44.5	43.2		
Fe-T	mg/L	0.04	0.044	0.04	0.045	0.0	5	0.045	0.042		1
Pb-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.00010	0.0039978	0.01763
Mg-T	mg/L	1.9	1.85	1.93	1.92	1.85	5	1.93	1.89		
Mn-T	mg/L	0.0109	0.0104	0.01	0.007	0.0073	5	0.0109	0.0086	0.737	0.8706
Hg-T	mg/L	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	5	<0.0000019	0.00000095	0.00002	0.00001
Mo-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	1	2
Ni-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	0.025	0.025
K-T	mg/L	0.324	0.291	0.294	0.306	0.306	5	0.324	0.304		
S-T	mg/L	17.2	15.3	14.8	15.3	15.4	5	17.2	15.6		
Se-T	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050	0.002	
Ag-T	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	5	<0.000020	0.000010	0.00005	0.0001
Na-T	mg/L	24	21.9	22.4	22.7	21.9	5	24.0	22.6		
Sr-T	mg/L	0.0998	0.0963	0.0837	0.0851	0.0856	5	0.0998	0.0901		
Zn-T	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250	0.0075	0.033
Al-D	mg/L	0.0176	0.0125	0.0131	0.0134	0.0135	5	0.0176	0.0140	0.05	0.1
As-D	mg/L	0.00019	0.0002	0.00014	0.00018	0.00015	5	0.00020	0.00017		
Ba-D	mg/L	0.0018	0.0018	0.0019	0.0016	0.0017	5	0.0019	0.0018		
B-D	mg/L	0.069	0.08	0.063	0.068	0.07	5	0.080	0.070		
Cd-D	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.0000050	0.000087	0.00017
Ca-D	mg/L	13.5	14.1	14.4	13.3	13.7	5	14.4	13.8		
Cr-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		
Co-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.00010		
Cu-D	mg/L	0.00053	0.00043	0.00046	0.00047	0.00041	5	0.00053	0.00046	0.000645	0.00385
Hard-D	mg/L	41.60000	42.8	43.7	40.5	41.6	5	43.7	42.0		
Fe-D	mg/L	0.0227	0.0255	0.0	0.0243	0.0237	5	0.0255	0.0242		0.35
Pb-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.00010		
Mg-D	mg/L	1.88	1.83	1.86	1.78	1.82	5	1.88	1.83		
Mn-D	mg/L	0.0015	0.00	0.001	<0.0010	<0.0010	5	0.0015	0.00094		
Hg-D	mg/L	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	5	<0.0000019	0.00000095		
Mo-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		
Ni-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		
K-D	mg/L	0.329	0.279	0.304	0.282	0.297	5	0.329	0.298		
S-D	mg/L	15.9	15.5	14.9	13	15.1	5	15.9	14.9		
Se-D	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050		
Na-D	mg/L	22.2	21.9	21.7	21	22	5	22.2	21.8		
Sr-D	mg/L	0.0947	0.0929	0.0896	0.0833	0.1	5	0.0947	0.0896		
Zn-D	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250		
Chlr-a	ug/L	<0.50					1	<0.50	0.250		
N-NO2	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250	0.02	0.06
N-NO3	mg/L	0.076	<0.020	0.155	0.033	<0.020	5	0.155	0.0568	3	32.8
N-NO23	mg/L	0.076	<0.020	0.155	0.033	<0.020	5	0.155	0.0568		
P-T	mg/L	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	5	<0.0030	0.00150	0.007	
P-D	mg/L	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	5	<0.0030	0.00150		
DOC	mg/L	1.9	1.6	<0.50	2.5	1.8	5	2.5	1.610		
Notes:											
Factor applied to less-than results when calculating statistics: 0.5											

Table 31 Q2 - Lakes 9 Page(s)

EMS ID		E206618						Water Quality Guidelines			
StnName		Middle Quinsam Lake 4 Metre									
StnCode		MQL4									
Date	Unit	12/Jul/21	19/Jul/21	26/Jul/21	4/Aug/21	10/Aug/21	Count	Maximum	5 in 30 Ave	Average	Max
SO4-D	mg/L	50	53	47	47	50	5	53	49.4	128	
Turb	NTU	0.29	0.21	0.23	0.25	0.24	5	0.29	0.24	2.5	8.5
Alk-T	mg/L	42	49	48	50	49	5	50	47.6		
Al-T	mg/L	0.0141	0.0152	0.0128	0.0135	0.0136	5	0.0152	0.01380		
As-T	mg/L	0.00017	0.00023	0.00017	0.00023	0.00016	5	0.00023	0.00019		0.005
Ba-T	mg/L	0.002	0.0019	0.002	0.0016	0.0018	5	0.002	0.0019	1	5
B-T	mg/L	0.072	0.074	0.065	0.069	0.072	5	0.074	0.07	1.2	
Cd-T	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.000005		
Ca-T	mg/L	14.2	15	13.8	13.7	13.9	5	15	14.1		
Cr-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		
Co-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.00010	0.004	0.11
Cu-T	mg/L	0.00052	<0.00050	<0.00050	<0.00050	0.00052	5	0.00052	0.000358	0.002	0.007
Hard-T	mg/L	43.1	45.70000	42.1	41.7	42.6	5	45.7	43		
Fe-T	mg/L	0.048	0.047	0.039	0.046	0.043	5	0.048	0.045		1
Pb-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.0001	0.0039978	0.01763
Mg-T	mg/L	1.83	1.99	1.87	1.85	1.93	5	1.99	1.89		
Mn-T	mg/L	0.0126	0.0111	0.0083	0.0076	0.008	5	0.0126	0.01	0.737	0.8706
Hg-T	mg/L	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	5	<0.0000019	0.00000095	0.00002	0.00001
Mo-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.0005	1	2
Ni-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	0.025	0.025
K-T	mg/L	0.31	0.302	0.286	0.29	0.318	5	0.318	0.301		
S-T	mg/L	15.7	16.6	15	14.6	15.8	5	16.6	15.5		
Se-T	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.00005	0.002	
Ag-T	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	5	<0.000020	0.000010	0.00005	0.0001
Na-T	mg/L	22.5	23.4	21.9	21.4	23.3	5	23.4	22.5		
Sr-T	mg/L	0.0969	0.0996	0.0861	0.082	0.0869	5	0.0996	0.0903		
Zn-T	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.0025	0.0075	0.033
Al-D	mg/L	0.0129	0.0148	0.0123	0.0116	0.0125	5	0.0148	0.01280	0.05	0.1
As-D	mg/L	0.00018	0.0002	0.00014	0.00015	0.00014	5	0.0002	0.00016		
Ba-D	mg/L	0.0018	0.0019	0.0018	0.0017	0.0017	5	0.0019	0.0018		
B-D	mg/L	0.066	0.068	0.064	0.064	0.069	5	0.069	0.066		
Cd-D	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.000005	0.000087	0.00017
Ca-D	mg/L	13.6	14.5	14	13.4	12.9	5	14.5	13.70		
Cr-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.0005		
Co-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.00010		
Cu-D	mg/L	0.00044	0.0005	0.00046	0.00041	0.00042	5	0.0005	0.000450	0.000645	0.00385
Hard-D	mg/L	41.5	44	42.8	40.8	39.6	5	44	41.7		
Fe-D	mg/L	0.0284	0.0415	0.0211	0.0254	0.0208	5	0.0415	0.0274		0.35
Pb-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.0001		
Mg-D	mg/L	1.84	1.91	1.91	1.8	1.81	5	1.91	1.850		
Mn-D	mg/L	0.0011	0.0103	<0.0010	<0.0010	<0.0010	5	0.0103	0.00258		
Hg-D	mg/L	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	5	<0.0000019	0.0000010		
Mo-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.0005		
Ni-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		
K-D	mg/L	0.293	0.294	0.307	0.273	0.284	5	0.307	0.290		
S-D	mg/L	15.1	16	15.6	13.5	14.9	5	16	15		
Se-D	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.00005		
Na-D	mg/L	21.3	21.8	22	20.7	21.9	5	22	21.50		
Sr-D	mg/L	0.0932	0.098	0.1	0.1	0.0889	5	0.098	0.0906		
Zn-D	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.0025		
N-NO2	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250	0.02	0.06
N-NO3	mg/L	0.022	<0.020	<0.020	<0.020	0.027	5	0.027	0.0158	3	32.8
N-NO23	mg/L	0.022	<0.020	<0.020	<0.020	0.027	5	0.027	0.0158		
P-T	mg/L	<0.0030	<0.0030	<0.0030	0.0037	<0.0030	5	0.0037	0.00194	0.007	
P-D	mg/L	<0.0030	<0.0030	<0.0030	0.0066	<0.0030	5	0.0066	0.00252		
DOC	mg/L	1.5	1.7	<0.50	2.6	1.7	5	2.6	1.55		
Notes:											
Factor applied to less-than results when calculating statistics: 0.5											

Table 31 Q2 - Lakes 9 Page(s)

EMS ID		E206618						Water Quality Guidelines			
StnName		Middle Quinsam Lake 9 Metre									
StnCode		MQL9									
Date	Unit	12/Jul/21	19/Jul/21	26/Jul/21	4/Aug/21	10/Aug/21	Count	Maximum	5 in 30 Ave	Average	Max
SO4-D	mg/L	36	46	41	47	49	5	49	43.8	128	
Turb	NTU	0.19	0.2	0.28	0.27	0.37	5	0.37	0.26	2.5	8.5
Alk-T	mg/L	33	44	47	50	40	5	50	42.8		
Al-T	mg/L	0.0098	0.0135	0.0121		0.0108	5	0.0135	0.01150		
As-T	mg/L	0.00011	0.0002	0.00016	0.00021	0.00014	5	0.00021	0.00016		0.005
Ba-T	mg/L	0.00150	0.0018	0.00170	0.0017	0.0017	5	0.0018	0.0017	1	5
B-T	mg/L	<0.050	0.065	0.06	0.06	0.059	5	0.065	0.0538	1.2	
Cd-T	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.0000050		
Ca-T	mg/L	12.6	14.3	13.4	14	13.7	5	14.3	13.60		
Cr-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.0005		
Co-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.00010	0.004	0.11
Cu-T	mg/L	<0.00050	<0.00050	<0.00050	0.00054	0.00053	5	0.00054	0.000364	0.002	0.007
Hard-T	mg/L	38.1	43.5	41	42.5	41.6	5	43.5	41.3		
Fe-T	mg/L	0.018	0.035	0.034	0.037	0.032	5	0.037	0.031		1
Pb-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.0001	0.0039978	0.01763
Mg-T	mg/L	1.6	1.92	1.8	1.83	1.81	5	1.92	1.79		
Mn-T	mg/L	0.01	0.0092	0.0078	0.0082	0.0101	5	0.01	0.0083	0.737	0.8706
Hg-T	mg/L	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	5	<0.0000019	0.00000095	0.00002	0.00001
Mo-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.0005	1	2
Ni-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	0.025	0.025
K-T	mg/L	0.189	0.258	0.253	0.249	0.259	5	0.259	0.2420		
S-T	mg/L	11.4	15.2	13.6	14	14.2	5	15.2	13.7		
Se-T	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.00005	0.002	
Ag-T	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	5	<0.000020	0.000010	0.00005	0.0001
Na-T	mg/L	14.4	20.8	19.8	19.3	18.6	5	20.8	18.60		
Sr-T	mg/L	0.0674	0.0907	0.0787	0.1	0.079	5	0.0907	0.0789		
Zn-T	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.0025	0.0075	0.033
Al-D	mg/L	0.0101	0.0097	0.0121	0.0116	0.0093	5	0.0121	0.01060	0.05	0.1
As-D	mg/L	0.00013	0.00017	0.00011	0.00016	0.00012	5	0.00017	0.00014		
Ba-D	mg/L	0.0015	0.0018	0.0018	0.0016	0.00170	5	0.00180	0.00170		
B-D	mg/L	<0.050	0.057	0.057	0.062	0.06	5	0.062	0.0522		
Cd-D	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.000005	0.000087	0.00017
Ca-D	mg/L	12	13.5	13.9	13.6	13.6	5	13.9	13.30		
Cr-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.0005		
Co-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.00010		
Cu-D	mg/L	0.00045	0.00048	0.00047	0.00043	0.00045	5	0.00048	0.000460	0.000645	0.00385
Hard-D	mg/L	36.8	41.1	42.2	41.1	41.10000	5	42.2	40.5		
Fe-D	mg/L	0.0094	0.0146	0.0193	0.0211	0.0109	5	0.0211	0.0151		0.35
Pb-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.0001		
Mg-D	mg/L	1.65	1.78	1.81	1.76	1.77	5	1.81	1.750		
Mn-D	mg/L	0.001	0.0011	0.0011	<0.0010	<0.0010	5	0.0011	0.00084		
Hg-D	mg/L	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	5	<0.0000019	0.00000095		
Mo-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.0005		
Ni-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		
K-D	mg/L	0.196	0.229	0.274	0.257	0.247	5	0.274	0.241		
S-D	mg/L	12	13.4	14.7	13.5	13.5	5	14.7	13.40		
Se-D	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.00005		
Na-D	mg/L	14.5	18	19.6	19	19	5	19.6	18.0		
Sr-D	mg/L	0.0682	0.085	0.1	0.0806	0.0842	5	0.1	0.0801		
Zn-D	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.0025		
N-NO2	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250	0.02	0.06
N-NO3	mg/L	<0.020	0.029	<0.020	<0.020	<0.020	5	0.029	0.01380	3	32.8
N-NO23	mg/L	<0.020	0.029	<0.020	<0.020	<0.020	5	0.029	0.01380		
P-T	mg/L	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	5	<0.0030	0.0015	0.007	
P-D	mg/L	<0.0030	0.0061	<0.0030	<0.0030	<0.0030	5	0.0061	0.00242		
DOC	mg/L	1.6	1	1.6	2.5	1.8	5	2.5	1.7		

Notes:

Factor applied to less-than results when calculating statistics: 0.5

Table 31 Q2 - Lakes 9 Page(s)

EMS ID		E206618						Water Quality Guidelines			
StnName		Middle Quinsam Lake 1 Metre from Bottom									
StnCode		MQL 1MB									
Date	Unit	12/Jul/21	19/Jul/21	26/Jul/21	4/Aug/21	10/Aug/21	Count	Maximum	5 in 30 Ave	Average	Max
SO4-D	mg/L	29	30	30	29	26	5	30	28.8	128	
Turb	NTU	0.17	0.16	0.26	0.26	0.22	5	0.26	0.21	2.5	8.5
Alk-T	mg/L	32	35	37	36	37	5	37	35.4		
Al-T	mg/L	0.0073	0.0069	0.0066	0.0074	0.0054	5	0.0074	0.00670		
As-T	mg/L	<0.00010	0.00013	0.0001	0.00015	<0.00010	5	0.00015	0.000096		0.005
Ba-T	mg/L	0.0017	0.00180	0.0021	0.0021	0.0022	5	0.0022	0.002	1	5
B-T	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	5	<0.050	0.025	1.2	
Cd-T	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.000005		
Ca-T	mg/L	12.3	12.1	12.7	12.9	12.4	5	12.9	12.50		
Cr-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.0005		
Co-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.00010	0.004	0.11
Cu-T	mg/L	<0.00050	<0.00050	0.00054	0.00055	0.00055	5	0.00055	0.000428	0.002	0.007
Hard-T	mg/L	37.1	37.1	39	39.3	38	5	39.3	38.1		
Fe-T	mg/L	0.019	0.02	0.024	0.028	0.029	5	0.029	0.024		1
Pb-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.0001	0.0039978	0.01763
Mg-T	mg/L	1.56	1.68	1.75	1.7	1.69	5	1.75	1.68		
Mn-T	mg/L	0.01	0.0077	0.0098	0.0093	0.0097	5	0.0098	0.0086	0.737	0.8706
Hg-T	mg/L	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	5	<0.0000019	0.00000095	0.00002	0.00001
Mo-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.0005	1	2
Ni-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	0.025	0.025
K-T	mg/L	0.179	0.175	0.183	0.184	0.192	5	0.192	0.183		
S-T	mg/L	9.2	9.1	9.2	9.4	9	5	9.4	9.2		
Se-T	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.00005	0.002	
Ag-T	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	5	<0.000020	0.000010	0.00005	0.0001
Na-T	mg/L	12	12.1	12.4	12.1	11.7	5	12.4	12.10		
Sr-T	mg/L	0.0595	0.0612	0.0575	0.0608	0.0573	5	0.0612	0.0593		
Zn-T	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.0025	0.0075	0.033
Al-D	mg/L	0.0051	0.0072	0.0059	0.0047	0.0044	5	0.0072	0.00550	0.05	0.1
As-D	mg/L	0.00011	0.0001	<0.00010	<0.00010	<0.00010	5	0.00011	0.000074		
Ba-D	mg/L	0.0016	0.0019	0.002	0.002	0.00220	5	0.00220	0.001900		
B-D	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	5	<0.050	0.025		
Cd-D	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.000005	0.000087	0.00017
Ca-D	mg/L	11.5	12.1	12.5	12.2	12.6	5	12.6	12.20		
Cr-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.0005		
Co-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.00010		
Cu-D	mg/L	0.00043	0.00045	0.00048	0.00046	0.00046	5	0.00048	0.000460	0.000645	0.00385
Hard-D	mg/L	35.1	36.8	38.1	37.4	38.20000	5	38.2	37.1		
Fe-D	mg/L	0.0097	0.0107	0.0117	0.0101	0.0109	5	0.0117	0.0106		0.35
Pb-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.0001		
Mg-D	mg/L	1.54	1.62	1.68	1.65	1.65	5	1.68	1.63		
Mn-D	mg/L	0.0037	0.0047	0.0057	0.0049	0.0053	5	0.0057	0.0049		
Hg-D	mg/L	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	5	<0.0000019	0.00000095		
Mo-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.0005		
Ni-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		
K-D	mg/L	0.166	0.164	0.186	0.182	0.193	5	0.193	0.1780		
S-D	mg/L	9	9.2	8.6	8.7	8.5	5	9.2	8.8		
Se-D	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.00005		
Na-D	mg/L	11.1	11.4	11.7	11.6	11.7	5	11.7	11.5		
Sr-D	mg/L	0.0541	0.0605	0.0585	0.0584	0.1	5	0.0605	0.0581		
Zn-D	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.0025		
N-NO2	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250	0.02	0.06
N-NO3	mg/L	<0.020	<0.020	<0.020	<0.020	<0.020	5	<0.020	0.010	3	32.8
N-NO23	mg/L	<0.020	<0.020	<0.020	<0.020	<0.020	5	<0.020	0.010		
P-T	mg/L	<0.0030	<0.0030	0.0031	0.0039	<0.0030	5	0.0039	0.00230	0.007	
P-D	mg/L	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	5	<0.0030	0.00150		
DOC	mg/L	1.5	1.7	1.7	2.5	1.8	5	2.5	1.80		
Notes:											
Factor applied to less-than results when calculating statistics: 0.5											

Table 31 Q2 - Lakes 9 Page(s)

EMS ID										Water Quality Guidelines	
StnName		LLE Zone of Dilution 2									
StnCode		LLEZ2									
Date	Unit	12/Jul/21	19/Jul/21	26/Jul/21	4/Aug/21	10/Aug/21	Count	Maximum	5 in 30 Ave	Average	Max
SO4-D	mg/L	66	68	68	70	70	5	70	68.4	128	
Turb	NTU	0.18	0.18	0.18	0.21	0.2	5	0.21	0.19	2.5	8.5
Alk-T	mg/L	33	36	38	39	39	5	39	37		
Al-T	mg/L	0.0094	0.0097	0.0083	0.0106	0.0082	5	0.0106	0.00920		
As-T	mg/L	0.00047	0.00055	0.00051	0.00061	0.00058	5	0.00061	0.00054		0.005
Ba-T	mg/L	0.0049	0.00750	0.0052	0.0054	0.0054	5	0.0075	0.0057	1	5
B-T	mg/L	0.066	0.067	0.065	0.0720	0.068	5	0.0720	0.068	1.2	
Cd-T	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.000005		
Ca-T	mg/L	25.4	26.9	26	28.2	27.8	5	28.2	26.9		
Cr-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.0005		
Co-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.00010	0.004	0.11
Cu-T	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	5	<0.00050	0.000250	0.002	0.007
Hard-T	mg/L	76.7	81.3	79.2	85.6	84.3	5	85.6	81.4		
Fe-T	mg/L	0.024	0.028	0.023	0.023	0.021	5	0.028	0.024		1
Pb-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000	0.0039978	0.01763
Mg-T	mg/L	3.2	3.42	3.45	3.7	3.62	5	3.7	3.48		
Mn-T	mg/L	0.0085	0.0086	0.0072	0.0063	0.0069	5	0.0086	0.0075	0.737	0.8706
Hg-T	mg/L	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	5	<0.0000019	0.00000095	0.00002	0.00001
Mo-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.0005	1	2
Ni-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	0.025	0.025
K-T	mg/L	0.297	0.298	0.321	0.328	0.3400	5	0.3400	0.317		
S-T	mg/L	20.600	20.5	20.8	24.4	24.2	5	24.4	22.1		
Se-T	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.00005	0.002	
Ag-T	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	5	<0.000020	0.00001	0.00005	0.0001
Na-T	mg/L	8.59	8.75	8.7	9.37	9.19	5	9.37	8.92		
Sr-T	mg/L	0.17	0.191	0.18	0.181	0.185	5	0.191	0.182		
Zn-T	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.0025	0.0075	0.033
Al-D	mg/L	0.0073	0.0075	0.0094	0.0084	0.0073	5	0.0094	0.0080	0.05	0.1
As-D	mg/L	0.0005	0.00054	0.00045	0.00055	0.00049	5	0.00055	0.00051		
Ba-D	mg/L	0.0049	0.0053	0.0053	0.00520	0.00530	5	0.00530	0.0052		
B-D	mg/L	0.06	0.065	0.063	0.068	0.071	5	0.071	0.065		
Cd-D	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.000005	0.000087	0.00017
Ca-D	mg/L	23.5	25.8	26.5	28.3	27.6	5	28.3	26.30		
Cr-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.0005		
Co-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.00010		
Cu-D	mg/L	0.00031	0.00031	0.00048	0.00027	0.00026	5	0.00048	0.0003	0.000645	0.00385
Hard-D	mg/L	71.5	77.90000	80.2	85	83.3	5	85	79.6		
Fe-D	mg/L	0.0172	0.0157	0.0147	0.0138	0.0116	5	0.0172	0.0146		0.35
Pb-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.0001		
Mg-D	mg/L	3.09	3.3	3.43	3.48	3.5	5	3.5	3.36		
Mn-D	mg/L	0.0039	0.0015	0.0011	<0.0010	0.001	5	0.0039	0.0016		
Hg-D	mg/L	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	5	<0.0000019	0.00000095		
Mo-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.0005		
Ni-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		
K-D	mg/L	0.288	0.294	0.331	0.322	0.317	5	0.331	0.310		
S-D	mg/L	18.6	21.5	21.3	23.200	23.6	5	23.6	21.6		
Se-D	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.00005		
Na-D	mg/L	7.93	8.48	8.84	8.94	8.96	5	8.96	8.63		
Sr-D	mg/L	0.158	0.188	0.181	0.197	0.193	5	0.197	0.183		
Zn-D	mg/L	<0.0050	<0.0050	<0.0050	0.0059	<0.0050	5	0.0059	0.00318		
N-NO2	mg/L	<0.0050	<0.0050	<0.0050		<0.0050	5	<0.0050	0.00250	0.02	0.06
N-NO3	mg/L	0.041	0.349	<0.020		0.02	5	0.349	0.105	3	32.8
N-NO23	mg/L	0.041	0.349	<0.020	0.214	0.02	5	0.349	0.127		
P-T	mg/L	<0.0030	<0.0030	<0.0030	0.0043	<0.0030	5	0.0043	0.00206	0.007	
P-D	mg/L	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	5	<0.0030	0.0015		
DOC	mg/L	2.2	1.9	1.1	4.7	2.4	5	4.7	2.5		

Table 32 Q2 - Rivers 10 Page(s)

Q2 (July 1st to September 30th, 2021)											
EMS ID		E217017								Water Quality Guidelines	
StnName		No Name Lake Outlet									
StnCode		NNO									
Date	Unit	8/Jul/21	13/Jul/21	20/Jul/21	27/Jul/21	3/Aug/21	Count	Maximum	5 in 30 Ave	Average	Maximum
pH-F	pH Units	6.51	6.85	60.6	Dry	Dry	3	60.6	24.65		6.5 - 9.0
Cond-F	uS/cm	39.6	54.3	6.95			3	54.3	33.62		
SO4-D	mg/L	3.3	3.5	2.9			3	3.5	3.2	128	
TSS	mg/L	2	3.6	1.6			3	3.6	2.4	5	25
Alk-T	mg/L	18	23	26			3	26	22.3		
P-T	mg/L	<0.0030	0.0069	0.0056			3	0.0069	0.00467	0.007	
Al-T	mg/L	0.015	0.0187	0.0124			3	0.0187	0.0154		
As-T	mg/L	0.00048	0.00043	0.00045			3	0.00048	0.00045		0.005
Ba-T	mg/L	0.0015	0.0022	0.0020			3	0.0022	0.0019	1	5
B-T	mg/L	<0.050	<0.050	<0.050			3	<0.050	0.025	1.2	
Cd-T	mg/L	<0.000010	<0.000010	<0.000010			3	<0.000010	0.000005		
Ca-T	mg/L	5.28	6.73	7.13			3	7.13	6.38		
Cr-T	mg/L	<0.0010	<0.0010	<0.0010			3	<0.0010	0.0005		
Co-T	mg/L	<0.00020	<0.00020	<0.00020			3	<0.00020	0.0001	0.004	0.11
Cu-T	mg/L	0.00051	0.00057	<0.00050			3	0.00057	0.000443		
Hard-T	mg/L	18	22.9	24.8			3	24.8	21.9		
Fe-T	mg/L	0.123	0.149	0.158			3	0.158	0.143		1
Pb-T	mg/L	<0.00020	<0.00020	<0.00020			3	<0.00020	0.0001	0.0039978	0.01763
Mg-T	mg/L	1.17	1.48	1.690			3	1.69	1.45		
Mn-T	mg/L	0.0429	0.158	0.104			3	0.158	0.1016	0.737	0.8706
Hg-T	mg/L	<0.0000019	<0.0000019	0.0000023			3	0.0000023	0.0000014	0.00002	0.00001
Mo-T	mg/L	<0.0010	<0.0010	<0.0010			3	<0.0010	0.0005	1	2
Ni-T	mg/L	<0.0010	<0.0010	<0.0010			3	<0.0010	0.0005	0.025	0.025
K-T	mg/L	0.117	0.154	0.175			3	0.175	0.149		
S-T	mg/L	<3.0	<3.0	<3.0			3	<3.0	1.5		
Se-T	mg/L	<0.00010	<0.00010	<0.00010			3	<0.00010	0.00005	0.002	
Ag-T	mg/L	<0.000020	<0.000020	<0.000020			3	<0.000020	0.00001	0.00005	0.0001
Na-T	mg/L	1.39	1.56	1.85			3	1.85	1.6		
Sr-T	mg/L	0.0172	0.0221	0.0234			3	0.0234	0.0209		
Zn-T	mg/L	<0.0050	<0.0050	<0.0050			3	<0.0050	0.0025	0.0075	0.033
Al-D	mg/L	0.0132	0.0095	0.0072			3	0.0132	0.01	0.05	0.1
As-D	mg/L	0.0004	0.00040	0.00034			3	0.0004	0.00038		
Ba-D	mg/L	0.0026	0.0022	0.0019			3	0.0026	0.0022		
B-D	mg/L	<0.050	<0.050	<0.050			3	<0.050	0.025		
Cd-D	mg/L	<0.000010	<0.000010	<0.000010			3	<0.000010	0.000005	0.000087	0.00017
Ca-D	mg/L	5.36	6.52	7.19			3	7.19	6.36		
Cr-D	mg/L	<0.0010	<0.0010	<0.0010			3	<0.0010	0.0005		
Co-D	mg/L	<0.00020	<0.00020	<0.00020			3	<0.00020	0.0001		
Cu-D	mg/L	0.00052	0.00044	0.00033			3	0.00052	**0.00043**	0.0003	0.002
Hard-D	mg/L	18.1	22.4	25.0			3	25	21.8		
DOC	mg/L	1.7	1.9	2.1			3	2.1	1.9		
Fe-D	mg/L	0.089	0.0746	0.0792			3	0.089	0.0809		0.35
Pb-D	mg/L	<0.00020	<0.00020	<0.00020			3	<0.00020	0.0001		
Mg-D	mg/L	1.13	1.48	1.7			3	1.7	1.440		
Mn-D	mg/L	0.0513	0.143	0.0887			3	0.143	0.0943		
Hg-D	mg/L	<0.0000019	<0.0000019	<0.0000019			3	<0.0000019	0.00000095		
Mo-D	mg/L	<0.0010	<0.0010	<0.0010			3	<0.0010	0.0005		
Ni-D	mg/L	<0.0010	<0.0010	<0.0010			3	<0.0010	0.0005		
K-D	mg/L	0.131	0.164	0.189			3	0.189	0.161		
S-D	mg/L	<3.0	<3.0	<3.0			3	<3.0	1.5		
Se-D	mg/L	<0.00010	<0.00010	<0.00010			3	<0.00010	0.00005		
Na-D	mg/L	1.33	1.55	1.76			3	1.76	1.55		
Sr-D	mg/L	0.0162	0.0215	0.0236			3	0.0236	0.0204		
Zn-D	mg/L	<0.0050	<0.0050	<0.0050			3	<0.0050	0.0025		

Notes: NNO was dry for the last two weeks of monitoring.

Factor applied to less-than results when calculating statistics: 0.5

Table 32 Q2 - Rivers 10 Page(s)

EMS ID		E219412						Water Quality Guidelines			
StnName		Long Lake Outlet									
StnCode		LLO									
Date	Unit	8/Jul/21	13/Jul/21	20/Jul/21	27/Jul/21	3/Aug/21	Count	Max	5 in 30 Ave	Average	Maximum
pH-F	pH Units	7.15	7.11	201	6.68	6.76	5	201	45.74		6.5 - 9.0
Cond-F	uS/cm	179.9	191.9	7.21	199.5	206	5	206	156.9		
SO4-D	mg/L	58	65	66	66	68	5	68	64.6	128	
TSS	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	5	<1.0	0.5	5	25
Alk-T	mg/L	35	35	32	35	39	5	39	35.2		
P-T	mg/L	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	5	<0.0030	0.00150	0.007	
Al-T	mg/L	0.0103	0.0528	0.0093	0.0083	0.0088	5	0.0528	0.0179		
As-T	mg/L	0.00047	0.00051	0.00034	0.00028	0.00035	5	0.00051	0.00039		0.005
Ba-T	mg/L	0.0059	0.0069	0.0066	0.0067	0.0079	5	0.0079	0.0068	1	5
B-T	mg/L	0.061	0.058	0.054	0.058	0.057	5	0.061	0.0580	1.2	
Cd-T	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.0000050		
Ca-T	mg/L	24.4	25	24.5	25.1	26.4	5	26.4	25.1		
Cr-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		
Co-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100	0.004	0.11
Cu-T	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	5	<0.00050	0.000250	0.002	0.007
Hard-T	mg/L	74.1	76.4	75.8	77.1	81.2	5	81.2	76.9		
Fe-T	mg/L	0.026	0.154	0.023	0.019	0.046	5	0.154	0.054		1
Pb-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100	0.0039978	0.01763
Mg-T	mg/L	3.22	3.41	3.52	3.49	3.69	5	3.69	3.47		
Mn-T	mg/L	0.0178	0.0658	0.0284	0.0216	0.0416	5	0.0658	0.035	0.737	0.8706
Hg-T	mg/L	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	5	<0.0000019	0.00000095	0.00002	0.00001
Mo-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	1	2
Ni-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.0005	0.025	0.025
K-T	mg/L	0.324	0.365	0.324	0.366	0.404	5	0.404	0.357		
S-T	mg/L	18.6	19.5	18.8	19.9	20.5	5	20.5	19.5		
Se-T	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050	0.002	
Ag-T	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	5	<0.000020	0.0000100	0.00005	0.0001
Na-T	mg/L	8.12	8.2	8.04	8.04	8.16	5	8.2	8.11		
Sr-T	mg/L	0.169	0.168	0.167	0.165	0.174	5	0.174	0.169		
Zn-T	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250	0.0075	0.033
Al-D	mg/L	0.0048	0.0035	<0.0030	0.0038	0.004	5	0.0048	0.00352	0.05	0.1
As-D	mg/L	0.00038	0.00033	0.00022	0.00028	0.00034	5	0.00038	0.00031		
Ba-D	mg/L	0.0057	0.006	0.0063	0.0065	0.0079	5	0.0079	0.0065		
B-D	mg/L	0.059	0.059	0.053	0.059	0.062	5	0.062	0.0580		
Cd-D	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.0000050	0.000087	0.00017
Ca-D	mg/L	25.1	23.5	23.5	26.1	27.7	5	27.7	25.2		
Cr-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		
Co-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100		
Cu-D	mg/L	0.00027	0.00025	0.00023	0.00027	0.00032	5	0.00032	0.00027		
Hard-D	mg/L	75.6	72.4	72.4	79.8	84.2	5	84.2	76.9		
DOC	mg/L	1.6	1.8	1.5	1.4	1.9	5	1.9	1.6		
Fe-D	mg/L	0.0071	<0.0050	<0.0050	<0.0050	0.0059	5	0.0071	0.0041		0.35
Pb-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100		
Mg-D	mg/L	3.16	3.34	3.31	3.53	3.67	5	3.67	3.4		
Mn-D	mg/L	0.0108	0.0117	0.0172	0.015	0.0294	5	0.0294	0.0168		
Hg-D	mg/L	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	5	<0.0000019	0.00000095		
Mo-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		
Ni-D	mg/L	<0.0010	0.001	<0.0010	<0.0010	<0.0010	5	0.001	0.00060		
K-D	mg/L	0.326	0.332	0.336	0.344	0.4	5	0.400	0.348		
S-D	mg/L	18.7	19.4	18	19.7	21.5	5	21.5	19.5		
Se-D	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050		
Na-D	mg/L	8.79	7.9	7.73	8.34	8.04	5	8.79	8.16		
Sr-D	mg/L	0.152	0.162	0.157	0.163	0.183	5	0.183	0.163		
Zn-D	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250		
Notes:											
Factor applied to less-than results when calculating statistics: 0.5											

Table 32 Q2 - Rivers 10 Page(s)

EMS ID		E0126402						Water Quality Guidelines			
StnName		Quinsam River at Argonaut Road									
StnCode		WA	WA	WA	WA	WA					
Date	Unit	8/Jul/21	13/Jul/21	20/Jul/21	27/Jul/21	3/Aug/21	Count	Max	5 in 30 Ave	Average	Maximum
pH-F	pH Units	7.3	7.36	55.5	6.79	7.18	5	55.5	16.83		6.5 - 9.0
Cond-F	uS/cm	64.9	62.2	7.26	55	56.7	5	64.9	49.21		
SO4-D	mg/L	2.4	1.9	1.8	1.9	2.0	5	2.4	2.0	128	
TSS	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	5	<1.0	0.50	5	25
Alk-T	mg/L	23	23	17	24	23	5	24	22.0		
P-T	mg/L	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	5	<0.0030	0.00150	0.007	
Al-T	mg/L	0.0220	0.0223	0.0202	0.0190	0.0216	5	0.0223	0.0210		
As-T	mg/L	0.00011	<0.00010	0.00011	<0.00010	0.00024	5	0.00024	0.000112		0.005
Ba-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	1	5
B-T	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	5	<0.050	0.0250	1.2	
Cd-T	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.0000050		
Ca-T	mg/L	7.48	7.47	6.96	7.22	7.88	5	7.88	7.40		
Cr-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		
Co-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100	0.004	0.11
Cu-T	mg/L	0.00055	0.00066	0.00056	0.00057	0.00057	5	0.00066	0.00058	0.002	0.007
Hard-T	mg/L	22.1	22.2	20.6	21.5	23.2	5	23.2	21.9		
Fe-T	mg/L	0.024	0.020	0.020	0.016	0.024	5	0.024	0.021		1
Pb-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100	0.0039978	0.01763
Mg-T	mg/L	0.816	0.851	0.790	0.834	0.849	5	0.851	0.828		
Mn-T	mg/L	0.0021	0.0020	0.0019	0.0015	0.0018	5	0.0021	0.0019	0.737	0.8706
Hg-T	mg/L	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	5	<0.0000019	0.00000095	0.00002	0.00001
Mo-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	1	2
Ni-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	0.025	0.025
K-T	mg/L	0.055	0.067	0.052	0.054	0.058	5	0.067	0.057		
S-T	mg/L	<3.0	<3.0	<3.0	<3.0	<3.0	5	<3.0	1.50		
Se-T	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050	0.002	
Ag-T	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	5	<0.000020	0.0000100	0.00005	0.0001
Na-T	mg/L	0.686	0.718	0.659	0.661	0.699	5	0.718	0.685		
Sr-T	mg/L	0.0117	0.0121	0.0115	0.0116	0.0124	5	0.0124	0.0119		
Zn-T	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250	0.0075	0.033
Al-D	mg/L	0.0228	0.0170	0.0151	0.0147	0.0162	5	0.0228	0.0172	0.05	0.1
As-D	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00012	5	0.00012	0.000064		
Ba-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		
B-D	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	5	<0.050	0.0250		
Cd-D	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.0000050	0.000087	0.00017
Ca-D	mg/L	8.17	7.05	7.09	7.17	7.64	5	8.17	7.42		
Cr-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		
Co-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100		
Cu-D	mg/L	0.00067	0.00049	0.00048	0.00052	0.00050	5	0.00067	0.00053		
Hard-D	mg/L	23.8	21.0	21.0	21.2	22.4	5	23.8	21.9		
DOC	mg/L	0.95	1.4	1.3	1.8	2.1	5	2.1	1.51		
Fe-D	mg/L	0.0189	0.0121	0.0130	0.0098	0.0135	5	0.0189	0.0135		0.35
Pb-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100		
Mg-D	mg/L	0.828	0.811	0.803	0.795	0.813	5	0.828	0.810		
Mn-D	mg/L	0.0013	<0.0010	<0.0010	<0.0010	<0.0010	5	0.0013	0.00066		
Hg-D	mg/L	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	5	<0.0000019	0.00000095		
Mo-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		
Ni-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		
K-D	mg/L	0.074	0.058	0.055	0.054	<0.050	5	0.074	0.0532		
S-D	mg/L	<3.0	<3.0	<3.0	<3.0	<3.0	5	<3.0	1.50		
Se-D	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050		
Na-D	mg/L	0.671	0.658	0.642	0.698	0.679	5	0.698	0.670		
Sr-D	mg/L	0.0118	0.0116	0.0114	0.0110	0.0125	5	0.0125	0.0117		
Zn-D	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250		

Notes:

Factor applied to less-than results when calculating statistics: 0.5

Table 32 Q2 - Rivers 10 Page(s)

EMS ID		E0900504						Water Quality Guidelines			
StnName		Middle Quinsam Lake Outlet									
StnCode		WB									
Date	Unit	8/Jul/21	13/Jul/21	20/Jul/21	27/Jul/21	3/Aug/21	Count	Max	5 in 30 Ave	Average	Maximum
pH-F	pH Units	7.76	7.46	197.8	7.24	7.66	5	197.8	45.58		6.5 - 9.0
Cond-F	uS/cm	222	200	7.82	197	183.4	5	222	162.04		
SO4-D	mg/L	59	60	54	51	51	5	60	55	128	
TSS	mg/L	<1.0	<1.0	1.6	<1.0	<1.0	5	1.6	0.72	5	25
Alk-T	mg/L	48	47	43	42	50	5	50	46		
P-T	mg/L	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	5	<0.0030	0.00150	0.007	
Al-T	mg/L	0.0176	0.0178	0.0138	0.0142	0.0154	5	0.0178	0.0158		
As-T	mg/L	0.00021	0.00019	0.00021	0.00016	0.00022	5	0.00022	0.0002		0.005
Ba-T	mg/L	0.0022	0.002	0.0018	0.0017	0.0017	5	0.0022	0.0019	1	5
B-T	mg/L	0.083	0.07	0.064	0.065	0.062	5	0.083	0.069	1.2	
Cd-T	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.0000050		
Ca-T	mg/L	16.5	14.6	13.8	13.6	13.7	5	16.5	14.4		
Cr-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		
Co-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100	0.004	0.11
Cu-T	mg/L	0.00055	0.0005	0.00051	<0.00050	0.00057	5	0.00057	0.000476	0.002	0.007
Hard-T	mg/L	50.3	44.5	42.5	41.6	41.8	5	50.3	44.1		
Fe-T	mg/L	0.049	0.043	0.041	0.038	0.054	5	0.054	0.045		1
Pb-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100	0.0039978	0.01763
Mg-T	mg/L	2.19	1.95	1.97	1.84	1.83	5	2.19	1.96		
Mn-T	mg/L	0.0158	0.017	0.0110	0.01	0.0118	5	0.017	0.0131	0.737	0.8706
Hg-T	mg/L	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	5	<0.0000019	0.00000095	0.00002	0.00001
Mo-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	1	2
Ni-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.0005	0.025	0.025
K-T	mg/L	0.379	0.324	0.297	0.295	0.294	5	0.379	0.318		
S-T	mg/L	19.6	17.1	15.7	15.9	14.1	5	19.6	16.5		
Se-T	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050	0.002	
Ag-T	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	5	<0.000020	0.0000100	0.00005	0.0001
Na-T	mg/L	27.8	23.1	22.7	20.8	21	5	27.8	23.1		
Sr-T	mg/L	0.117	0.0999	0.0909	0.0882	0.0857	5	0.117	0.0963		
Zn-T	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250	0.0075	0.033
Al-D	mg/L	0.0162	0.0142	0.0123	0.0131	0.014	5	0.0162	0.014	0.05	0.1
As-D	mg/L	0.00017	0.00019	0.00013	0.00017	0.00022	5	0.00022	0.000180		
Ba-D	mg/L	0.002	0.0019	0.0017	0.0017	0.0018	5	0.002	0.0018		
B-D	mg/L	0.082	0.07	0.065	0.065	0.067	5	0.082	0.07		
Cd-D	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.0000050	0.000087	0.00017
Ca-D	mg/L	16	14.6	14	13.8	14	5	16	14.5		
Cr-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		
Co-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100		
Cu-D	mg/L	0.00073	0.00045	0.00042	0.00046	0.0005	5	0.00073	0.00051		
Hard-D	mg/L	48.8	44.6	42.9	42.2	42.4	5	48.8	44.2		
DOC	mg/L	1.6	2.4	1.9	2.1	2.1	5	2.4	2		
Fe-D	mg/L	0.0215	0.0241	0.0243	0.0232	0.026	5	0.026	0.0238		0.35
Pb-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100		
Mg-D	mg/L	2.15	1.97	1.9	1.86	1.82	5	2.15	1.94		
Mn-D	mg/L	0.0047	0.0052	0.0024	0.0032	0.0039	5	0.0052	0.0039		
Hg-D	mg/L	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	5	<0.0000019	0.00000095		
Mo-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		
Ni-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		
K-D	mg/L	0.468	0.318	0.306	0.279	0.278	5	0.468	0.33		
S-D	mg/L	19.3	16.4	15.4	15.3	14.2	5	19.3	16.1		
Se-D	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050		
Na-D	mg/L	29.7	22.8	22.3	21.7	20.5	5	29.7	23.4		
Sr-D	mg/L	0.108	0.0992	0.0923	0.0819	0.0864	5	0.108	0.0936		
Zn-D	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250		
Notes:											
Factor applied to less-than results when calculating statistics: 0.5											

Table 32 Q2 - Rivers 10 Page(s)

EMS ID								Water Quality Guidelines			
StnName	nstream of Seepage Area and Groundwater Discharge Zone										
StnCode		QRDS									
Date	Unit	8/Jul/21	13/Jul/21	20/Jul/21	27/Jul/21	3/Aug/21	Count	Max	5 in 30 Ave	Average	Maximum
pH-F	pH Units	7.58	7.78	242	7.31	7.57	5	242	54.45		6.5 - 9.0
Cond-F	uS/cm	227	222	7.85	193.2	173.1	5	227	164.63		
SO4-D	mg/L	66	59	55	48	47	5	66	55	128	
TSS	mg/L	<1.0	2	<1.0	1.2	<1.0	5	2.0	0.94	5	25
Alk-T	mg/L	50	46	40	42	38	5	50	43.2		
P-T	mg/L	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	5	<0.0030	0.00150	0.007	
Al-T	mg/L	0.0248	0.0188	0.0165	0.0174	0.0183	5	0.0248	0.0192		
As-T	mg/L	0.00034	0.00033	0.00046	0.00024	0.00026	5	0.00046	0.00033		0.005
Ba-T	mg/L	0.0027	0.0023	0.0023	0.002	0.002	5	0.0027	0.0023	1	5
B-T	mg/L	0.083	0.069	0.066	0.067	0.063	5	0.083	0.07	1.2	
Cd-T	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.0000050		
Ca-T	mg/L	15.8	14.6	14.6	14	13.6	5	15.8	14.5		
Cr-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		
Co-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100	0.004	0.11
Cu-T	mg/L	0.00055	0.00051	0.0005	0.00055	<0.00050	5	0.00055	0.000472	0.002	0.007
Hard-T	mg/L	48.3	44.4	44.4	42.5	41.2	5	48.3	44.2		
Fe-T	mg/L	0.076	0.047	0.06	0.043	0.044	5	0.076	0.054		1
Pb-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100	0.0039978	0.01763
Mg-T	mg/L	2.14	1.9	1.95	1.86	1.77	5	2.14	1.92		
Mn-T	mg/L	0.0257	0.0152	0.0159	0.0108	0.0094	5	0.0257	0.0154	0.737	0.8706
Hg-T	mg/L	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	5	<0.0000019	0.00000095	0.00002	0.00001
Mo-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	1	2
Ni-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	0.025	0.025
K-T	mg/L	0.375	0.329	0.308	0.298	0.285	5	0.375	0.319		
S-T	mg/L	19.5	16.7	16.3	14.9	14.1	5	19.5	16.3		
Se-T	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050	0.002	
Ag-T	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	5	<0.000020	0.0000100	0.00005	0.0001
Na-T	mg/L	27.4	23.1	23.4	21.3	20.6	5	27.4	23.2		
Sr-T	mg/L	0.117	0.102	0.0927	0.092	0.0842	5	0.117	0.0975		
Zn-T	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250	0.0075	0.033
Al-D	mg/L	0.0203	0.0143	0.0121	0.0122	0.0135	5	0.0203	0.0145	0.05	0.1
As-D	mg/L	0.00028	0.00027	0.00021	0.00024	0.00026	5	0.00028	0.00025		
Ba-D	mg/L	0.0024	0.0021	0.002	0.002	0.0021	5	0.0024	0.0021		
B-D	mg/L	0.085	0.075	0.068	0.067	0.068	5	0.085	0.0730		
Cd-D	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.0000050	0.000087	0.00017
Ca-D	mg/L	16.4	14.3	14.2	13.6	13.9	5	16.4	14.5		
Cr-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		
Co-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100		
Cu-D	mg/L	0.00044	0.00044	0.00039	0.00048	0.00055	5	0.00055	0.00046		
Hard-D	mg/L	49.6	43.5	43.4	41.8	42.3	5	49.6	44.1		
DOC	mg/L	1.6	1.7	2	1.9	1.7	5	2	1.8		
Fe-D	mg/L	0.0179	0.0186	0.0216	0.0202	0.0234	5	0.0234	0.0203		0.35
Pb-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100		
Mg-D	mg/L	2.1	1.92	1.93	1.92	1.82	5	2.1	1.94		
Mn-D	mg/L	0.002	0.0018	0.0015	0.0017	0.0016	5	0.002	0.0017		
Hg-D	mg/L	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	5	<0.0000019	0.00000095		
Mo-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		
Ni-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		
K-D	mg/L	0.378	0.335	0.316	0.306	0.29	5	0.378	0.325		
S-D	mg/L	19.7	17.1	15.9	15.7	15.2	5	19.7	16.7		
Se-D	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050		
Na-D	mg/L	29.4	23.3	22.9	22.6	21.3	5	29.4	23.9		
Sr-D	mg/L	0.109	0.0974	0.0936	0.087	0.089	5	0.109	0.0952		
Zn-D	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250		
Notes:											
Factor applied to less-than results when calculating statistics: 0.5											

Table 32 Q2 - Rivers 10 Page(s)

EMS ID		E286930						Water Quality Guidelines			
StnName		Quinsam River Downstream Site 1									
StnCode		QRDS1									
Date	Unit	8/Jul/21	13/Jul/21	20/Jul/21	27/Jul/21	3/Aug/21	Count	Max	5 in 30 Ave	Average	Maximum
pH-F	pH Units	7.41	7.56	196.4	7.09	7.29	5	196.4	45.15		6.5 - 9.0
Cond-F	uS/cm	228	202	7.35	189.6	191.8	5	228	163.75		
SO4-D	mg/L	58	60	54	55	***54***	5	54	56.2	128	
TSS	mg/L	<1.0	<1.0	<1.0	<1.0	***1.6***	5	1.6	1.60	5	25
Alk-T	mg/L	48	46	41	43	***48***	5	48	45.2		
P-T	mg/L	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	5	<0.0030	0.00150	0.007	
Al-T	mg/L	0.0212	0.0209	0.0164	0.0204	0.0194	5	0.0212	0.0197		
As-T	mg/L	0.00053	0.00048	0.00043	0.00040	0.00040	5	0.00053	0.00045		0.005
Ba-T	mg/L	0.0028	0.0026	0.0024	0.0023	0.0022	5	0.0028	0.0025	1	5
B-T	mg/L	0.086	0.073	0.070	0.069	0.066	5	0.086	0.073	1.2	
Cd-T	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.0000050		
Ca-T	mg/L	16.0	14.5	14.6	13.9	13.7	5	16	14.5		
Cr-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		
Co-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100	0.004	0.11
Cu-T	mg/L	<0.00050	0.00051	0.00051	0.00050	0.00052	5	0.00052	0.000458	0.002	0.007
Hard-T	mg/L	48.7	44.3	44.7	42.4	41.8	5	48.7	44.4		
Fe-T	mg/L	0.056	0.051	0.049	0.051	0.049	5	0.056	0.051		1
Pb-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100	0.0039978	0.01763
Mg-T	mg/L	2.14	1.96	2.00	1.90	1.86	5	2.14	1.97		
Mn-T	mg/L	0.0152	0.0145	0.0131	0.0108	0.0095	5	0.0152	0.0126	0.737	0.8706
Hg-T	mg/L	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	5	<0.0000019	0.00000095	0.00002	0.00001
Mo-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	1	2
Ni-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	0.025	0.025
K-T	mg/L	0.380	0.348	0.316	0.316	0.300	5	0.38	0.332		
S-T	mg/L	19.4	16.8	16.9	15.7	14.1	5	19.4	16.6		
Se-T	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050	0.002	
Ag-T	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	5	<0.000020	0.0000100	0.00005	0.0001
Na-T	mg/L	27.8	23.7	23.8	22.1	21.6	5	27.8	23.8		
Sr-T	mg/L	0.116	0.103	0.0940	0.0926	0.0863	5	0.116	0.0984		
Zn-T	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250	0.0075	0.033
Al-D	mg/L	0.0115	0.0142	0.0112	0.0126	0.0120	5	0.0142	0.0123	0.05	0.1
As-D	mg/L	0.00042	0.00045	0.00036	0.00037	0.00036	5	0.00045	0.00039		
Ba-D	mg/L	0.0025	0.0024	0.0022	0.0022	0.0021	5	0.0025	0.0023		
B-D	mg/L	0.084	0.075	0.069	0.070	0.069	5	0.084	0.073		
Cd-D	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.0000050	0.000087	0.00017
Ca-D	mg/L	16.4	14.7	14.4	13.9	13.9	5	16.4	14.7		
Cr-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		
Co-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100		
Cu-D	mg/L	0.00044	0.00044	0.00042	0.00061	0.00048	5	0.00061	0.00048		
Hard-D	mg/L	49.7	44.9	44.0	42.5	42.3	5	49.7	44.7		
DOC	mg/L	1.5	2.1	1.3	2.2	1.9	5	2.2	1.8		
Fe-D	mg/L	0.0173	0.0194	0.0227	0.0206	0.0225	5	0.0227	0.0205		0.35
Pb-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100		
Mg-D	mg/L	2.12	1.99	1.94	1.90	1.83	5	2.12	1.96		
Mn-D	mg/L	0.0025	0.0023	0.0019	0.0022	0.0018	5	0.0025	0.0021		
Hg-D	mg/L	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	5	<0.0000019	0.00000095		
Mo-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		
Ni-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		
K-D	mg/L	0.404	0.348	0.329	0.335	0.296	5	0.404	0.342		
S-D	mg/L	19.4	16.4	15.7	15.4	14.8	5	19.4	16.3		
Se-D	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050		
Na-D	mg/L	30.7	23.6	23.2	22.7	21.0	5	30.7	24.2		
Sr-D	mg/L	0.109	0.102	0.0951	0.0841	0.0878	5	0.109	0.0956		
Zn-D	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250		

Notes: ***Aug 3rd sulphate, TSS and Alk were collected on Aug 26 due to Aug 3 rd raw water sample being preserved either in the field or in the labortory.***

Factor applied to less-than results when calculating statistics: 0.5

Table 32 Q2 - Rivers 10 Page(s)

EMS ID		E292113						Water Quality Guidelines			
StnName		7 South Quinsam River									
StnCode		7SQR									
Date	Unit	8/Jul/21	13/Jul/21	20/Jul/21	27/Jul/21	3/Aug/21	Count	Max	5 in 30 Ave	Average	Maximum
pH-F	pH Units	7.26	7.29	209	6.95	7.29	5	209	47.56		6.5 - 9.0
Cond-F	uS/cm	232	198.2	7.22	201	178.8	5	232	163.44		
SO4-D	mg/L	62	60	54	48	51	5	62	55	128	
TSS	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	5	<1.0	0.5	5	25
Alk-T	mg/L	51	49	42	44	34	5	51	44		
P-T	mg/L	<0.0030	0.0033	<0.0030	<0.0030	<0.0030	5	0.0033	0.00186	0.007	
Al-T	mg/L	0.0249	0.0274	0.0188	0.0272	0.0301	5	0.0301	0.0257		
As-T	mg/L	0.00066	0.00057	0.00055	0.0005	0.00053	5	0.00066	0.00056		0.005
Ba-T	mg/L	0.0034	0.0031	0.0027	0.0028	0.0027	5	0.0034	0.0029	1	5
B-T	mg/L	0.089	0.079	0.069	0.073	0.066	5	0.089	0.075	1.2	
Cd-T	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.0000050		
Ca-T	mg/L	16.5	14.9	14	14.5	14.0	5	16.5	14.8		
Cr-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.0005		
Co-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100	0.004	0.11
Cu-T	mg/L	0.00052	<0.00050	0.00052	0.00053	0.00052	5	0.00053	0.000468	0.002	0.007
Hard-T	mg/L	50.4	45.8	43.2	44.4	42.5	5	50.4	45.3		
Fe-T	mg/L	0.104	0.098	0.087	0.105	0.108	5	0.108	0.1		1
Pb-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100	0.0039978	0.01763
Mg-T	mg/L	2.22	2.07	2.01	1.98	1.84	5	2.22	2.02		
Mn-T	mg/L	0.0107	0.011	0.0091	0.009	0.0093	5	0.011	0.0098	0.737	0.8706
Hg-T	mg/L	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	5	<0.0000019	0.00000095	0.00002	0.00001
Mo-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	1	2
Ni-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	0.025	0.025
K-T	mg/L	0.394	0.357	0.313	0.336	0.31	5	0.394	0.342		
S-T	mg/L	20.9	17.4	15.6	15.5	15	5	20.9	16.9		
Se-T	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050	0.002	
Ag-T	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	5	<0.000020	0.0000100	0.00005	0.0001
Na-T	mg/L	28.6	24.6	23.6	22.9	21.4	5	28.6	24.2		
Sr-T	mg/L	0.121	0.105	0.0925	0.0962	0.0874	5	0.121	0.1004		
Zn-T	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250	0.0075	0.033
Al-D	mg/L	0.0115	0.0109	0.0093	0.0098	0.0113	5	0.0115	0.0106	0.05	0.1
As-D	mg/L	0.00055	0.00052	0.00041	0.00049	0.00048	5	0.00055	0.00049		
Ba-D	mg/L	0.0032	0.003	0.0026	0.0026	0.0027	5	0.0032	0.0028		
B-D	mg/L	0.092	0.079	0.07	0.073	0.069	5	0.092	0.077		
Cd-D	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.0000050	0.000087	0.00017
Ca-D	mg/L	16.4	14.8	14.4	14.2	14.2	5	16.4	14.8		
Cr-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		
Co-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100		
Cu-D	mg/L	0.00046	0.00042	0.00048	0.00041	0.00043	5	0.00048	0.00044	0.0003	0.002
Hard-D	mg/L	50.1	45.4	44	43.6	43.1	5	50.1	45.2		
DOC	mg/L	1.1	1.8	1.5	1.8	1.6	5	1.8	1.6		
Fe-D	mg/L	0.0453	0.0418	0.0484	0.0467	0.0469	5	0.0484	0.0458		0.35
Pb-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100		
Mg-D	mg/L	2.19	2.04	1.94	1.95	1.86	5	2.19	2		
Mn-D	mg/L	0.0067	0.0066	0.0060	0.0058	0.006	5	0.0067	0.0062		
Hg-D	mg/L	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	5	<0.0000019	0.00000095		
Mo-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		
Ni-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		
K-D	mg/L	0.401	0.359	0.342	0.302	0.297	5	0.401	0.340		
S-D	mg/L	20	17.7	15.6	15.4	14.4	5	20	16.6		
Se-D	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050		
Na-D	mg/L	30.8	24.5	22.8	22.6	21.1	5	30.8	24.4		
Sr-D	mg/L	0.1050	0.106	0.0961	0.0863	0.0895	5	0.106	0.0966		
Zn-D	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250		
Notes:											
Factor applied to less-than results when calculating statistics: 0.5											

Table 32 Q2 - Rivers 10 Page(s)

EMS ID		E299256									
StnName		Iron River & Quinsam River									
StnCode		IRQR									
Date	Unit	8/Jul/21	13/Jul/21	20/Jul/21	27/Jul/21	3/Aug/21	Count	Max	5 in 30 Ave	Average	Maximum
pH-F	pH Units	7.28	7.4	195.9	6.87	7.25	5	195.9	44.94		6.5 - 9.0
Cond-F	uS/cm	234	202	7.28	185.6	176.3	5	234	161.04		
SO4-D	mg/L	63	60	57	52	47	5	63	55.8	128	
TSS	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	5	<1.0	0.5	5	25
Alk-T	mg/L	51	46	41	46	46	5	51	46		
P-T	mg/L	<0.0030	<0.0030	0.0045	<0.0030	0.0049	5	0.0049	0.00278	0.007	
Al-T	mg/L	0.0255	0.026	0.0198	0.0254	0.0224	5	0.026	0.0238		
As-T	mg/L	0.00070	0.00063	0.0006	0.00053	0.00055	5	0.0007	0.0006		0.005
Ba-T	mg/L	0.0037	0.0035	0.0029	0.0029	0.0028	5	0.0037	0.0032	1	5
B-T	mg/L	0.086	0.079	0.071	0.071	0.065	5	0.086	0.0740	1.2	
Cd-T	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.000005		
Ca-T	mg/L	16.7	15.1	14.8	14.2	14	5	16.7	15		
Cr-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.0005		
Co-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100	0.004	0.11
Cu-T	mg/L	0.00051	0.0005	<0.00050	<0.00050	<0.00050	5	0.00051	0.000352	0.002	0.007
Hard-T	mg/L	50.8	45.9	45.5	43.4	42.8	5	50.8	45.7		
Fe-T	mg/L	0.102	0.094	0.098	0.094	0.093	5	0.102	0.096		1
Pb-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100	0.0039978	0.01763
Mg-T	mg/L	2.24	2.02	2.05	1.94	1.87	5	2.24	2.02		
Mn-T	mg/L	0.0106	0.0107	0.0098	0.0089	0.009	5	0.0107	0.0098	0.737	0.8706
Hg-T	mg/L	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	5	<0.0000019	0.00000095	0.00002	0.00001
Mo-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.0005	1	2
Ni-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.0005	0.025	0.025
K-T	mg/L	0.397	0.365	0.319	0.325	0.303	5	0.397	0.342		
S-T	mg/L	19.7	18	15.7	15.5	14.5	5	19.7	16.7		
Se-T	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.00005	0.002	
Ag-T	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	5	<0.000020	0.0000100	0.00005	0.0001
Na-T	mg/L	28.1	24.1	23.5	21.7	21.2	5	28.1	23.7		
Sr-T	mg/L	0.12	0.105	0.0938	0.0935	0.0859	5	0.12	0.0996		
Zn-T	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250	0.0075	0.033
Al-D	mg/L	0.0113	0.0171	0.0099	0.0094	0.0125	5	0.0171	0.012	0.05	0.1
As-D	mg/L	0.00062	0.00061	0.00043	0.00046	0.00051	5	0.00062	0.00053		
Ba-D	mg/L	0.0035	0.0032	0.0028	0.0028	0.0027	5	0.0035	0.003		
B-D	mg/L	0.089	0.077	0.068	0.07	0.068	5	0.089	0.0740		
Cd-D	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.000005	0.000087	0.00017
Ca-D	mg/L	16.4	14.7	14.3	14.4	14.2	5	16.4	14.8		
Cr-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		
Co-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100		
Cu-D	mg/L	0.00045	0.00048	0.00063	0.0004	0.00047	5	0.00063	0.00049	0.0003	0.002
Hard-D	mg/L	49.9	44.9	43.7	43.9	43.3	5	49.9	45.1		
DOC	mg/L	1	1.6	1.9	1.7	2.5	5	2.5	1.7		
Fe-D	mg/L	0.0471	0.0812	0.0495	0.0534	0.0482	5	0.0812	0.0559		0.35
Pb-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100		
Mg-D	mg/L	2.17	2.03	1.93	1.94	1.91	5	2.17	2.00		
Mn-D	mg/L	0.0079	0.0101	0.007	0.0062	0.0068	5	0.0101	0.0076		
Hg-D	mg/L	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	5	<0.0000019	0.00000095		
Mo-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		
Ni-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		
K-D	mg/L	0.401	0.359	0.358	0.301	0.296	5	0.401	0.343		
S-D	mg/L	19.6	17.0	14.9	14.9	14.9	5	19.6	16.3		
Se-D	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.00005		
Na-D	mg/L	29.6	23.7	22.6	22.3	20.8	5	29.6	23.8		
Sr-D	mg/L	0.11	0.101	0.0933	0.085	0.0879	5	0.11	0.0954		
Zn-D	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250		

Water Quality Guidelines

Notes:

Factor applied to less-than results when calculating statistics: 0.5

Table 32 Q2 - Rivers 10 Page(s)

EMS ID		E297231						Water Quality Guidelines			
StnName		Iron River Site 6									
StnCode		IR6									
Date	Unit	13/Jul/21	20/Jul/21	27/Jul/21	3/Aug/21	10/Aug/21	Count	Max	5 in 30 Ave	Average	Maximum
pH-F	pH Units	7.34	158.4	6.77	7.22	7.4	5	158.4	37.43		6.5 - 9.0
Cond-F	uS/cm	140.6	6.96	172.4	185.5	197	5	197	140.49		
SO4-D	mg/L	9.7	12	12	13	16	5	16	12.5	128	
TSS	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	5	<1.0	0.5	5	25
Alk-T	mg/L	64	52	67	75	74	5	75	66.4		
P-T	mg/L	0.0034	<0.0030	<0.0030	<0.0030	<0.0030	5	0.0034	0.00188	0.007	
Al-T	mg/L	0.0194	0.0153	0.0158	0.0164	0.0157	5	0.0194	0.0165		
As-T	mg/L	0.00612	0.0073	0.00859	0.0117	0.0061	5	0.0117	0.00796		0.005
Ba-T	mg/L	0.0114	0.0117	0.0134	0.0153	0.0133	5	0.0153	0.013	1	5
B-T	mg/L	<0.050	<0.050	0.053	0.062	<0.050	5	0.062	0.038	1.2	
Cd-T	mg/L	0.000014	0.000011	0.000011	0.000011	<0.000010	5	0.000014	0.0000104		
Ca-T	mg/L	21.8	23.6	24.6	27.4	28.5	5	28.5	25.2		
Cr-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.0005		
Co-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.0001	0.004	0.11
Cu-T	mg/L	0.00065	<0.00050	<0.00050	<0.00050	0.00066	5	0.00066	0.000412	0.002	0.007
Hard-T	mg/L	62.1	67.7	70.7	79	80.1	5	80.1	71.9		
Fe-T	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	5	<0.010	0.005		1
Pb-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.0001	0.0039978	0.01763
Mg-T	mg/L	1.87	2.09	2.23	2.57	2.2	5	2.57	2.19		
Mn-T	mg/L	0.0011	<0.0010	0.0011	0.0012	0.0027	5	0.0027	0.00132	0.737	0.8706
Hg-T	mg/L	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	5	<0.0000019	0.00000095	0.00002	0.00001
Mo-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.0005	1	2
Ni-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.0005	0.025	0.025
K-T	mg/L	0.318	0.306	0.352	0.394	0.377	5	0.394	0.349		
S-T	mg/L	<3.0	<3.0	3.3	3.9	3.9	5	3.9	2.82		
Se-T	mg/L	0.00018	0.00016	0.00015	0.00017	0.00026	5	0.00026	0.00018	0.002	
Ag-T	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	5	<0.000020	0.00001	0.00005	0.0001
Na-T	mg/L	2.59	2.92	3.24	3.84	3.07	5	3.84	3.13		
Sr-T	mg/L	0.0781	0.0831	0.0932	0.104	0.101	5	0.104	0.0919		
Zn-T	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.0025	0.0075	0.033
Al-D	mg/L	0.0171	0.0148	0.0138	0.014	0.0143	5	0.0171	0.0148	0.05	0.1
As-D	mg/L	0.00623	0.0073	0.00856	0.0119	0.00621	5	0.0119	0.00804		
Ba-D	mg/L	0.0112	0.0124	0.013	0.0156	0.0135	5	0.0156	0.0131		
B-D	mg/L	<0.050	<0.050	0.054	0.065	<0.050	5	0.065	0.0388		
Cd-D	mg/L	0.000013	0.000012	<0.000010	0.00001	0.000014	5	0.000014	0.0000108	0.000087	0.00017
Ca-D	mg/L	21.5	24.8	25.6	28.6	28.8	5	28.8	25.9		
Cr-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.0005		
Co-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.0001		
Cu-D	mg/L	0.00049	0.00043	0.00044	0.00045	0.00047	5	0.00049	0.00046	0.0003	0.002
Hard-D	mg/L	61.6	70.4	73.5	82.3	81.3	5	82.3	73.8		
DOC	mg/L	1.3	1.5	1.2	1.8	1.4	5	1.8	1.4		
Fe-D	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.0025		0.35
Pb-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.0001		
Mg-D	mg/L	1.93	2.04	2.34	2.6	2.27	5	2.6	2.24		
Mn-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.0005		
Hg-D	mg/L	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	5	<0.0000019	0.00000095		
Mo-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.0005		
Ni-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.0005		
K-D	mg/L	0.336	0.302	0.337	0.378	0.365	5	0.378	0.344		
S-D	mg/L	<3.0	<3.0	3.9	3.7	4	5	4	2.92		
Se-D	mg/L	0.00017	0.00016	0.00014	0.00017	0.00027	5	0.00027	0.00018		
Na-D	mg/L	2.65	2.9	3.37	3.78	3.12	5	3.78	3.16		
Sr-D	mg/L	0.0788	0.0893	0.0857	0.103	0.103	5	0.103	0.092		
Zn-D	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.0025		

Notes:

Factor applied to less-than results when calculating statistics: 0.5

Table 32 Q2 - Rivers 10 Page(s)

EMS ID		E297232						Water Quality Guidelines			
StnName		Iron River Site 8									
StnCode		IR8									
Date	Unit	13/Jul/21	20/Jul/21	27/Jul/21	3/Aug/21	10/Aug/21	Count	Max	5 in 30 Ave	Average	Maximum
pH-F	pH Units	7.65	167.7	7.13	7.44	7.24	5	167.7	39.43		6.5 - 9.0
Cond-F	uS/cm	147.1	7.53	185.5	189.5	204	5	204	146.73		
SO4-D	mg/L	9.6	11	12	13	16	5	16	12.3	128	
TSS	mg/L	1.6	<1.0	<1.0	<1.0	<1.0	5	1.6	0.72	5	25
Alk-T	mg/L	67	57	69	80	77	5	80	70.0		
P-T	mg/L	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	5	<0.0030	0.00150	0.007	
Al-T	mg/L	0.0193	0.0165	0.0156	0.0152	0.0131	5	0.0193	0.0159		
As-T	mg/L	0.0124	0.0151	0.0164	0.0200	0.0140	5	0.0200	0.0156		0.005
Ba-T	mg/L	0.0115	0.0124	0.0129	0.0153	0.0146	5	0.0153	0.0133	1	5
B-T	mg/L	0.052	0.060	0.071	0.091	0.056	5	0.091	0.066	1.2	
Cd-T	mg/L	0.000010	0.000012	0.000011	0.000011	<0.000010	5	0.000012	0.0000098		
Ca-T	mg/L	22.2	25.1	24.8	29.6	29.3	5	29.6	26.2		
Cr-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		
Co-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100	0.004	0.11
Cu-T	mg/L	0.00060	0.00062	0.00073	0.00066	0.00056	5	0.00073	0.00063	0.002	0.007
Hard-T	mg/L	63.8	71.9	71.4	84.8	83.3	5	84.8	75.0		
Fe-T	mg/L	0.011	0.016	0.012	0.020	<0.010	5	0.020	0.0128		1
Pb-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100	0.0039978	0.01763
Mg-T	mg/L	1.99	2.22	2.30	2.66	2.43	5	2.66	2.32		
Mn-T	mg/L	0.0012	0.0013	0.0014	0.0029	0.0011	5	0.0029	0.0016	0.737	0.8706
Hg-T	mg/L	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	5	<0.0000019	0.00000095	0.00002	0.00001
Mo-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	1	2
Ni-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	0.025	0.025
K-T	mg/L	0.343	0.339	0.399	0.434	0.360	5	0.434	0.375		
S-T	mg/L	3.1	<3.0	3.6	3.7	3.8	5	3.8	3.14		
Se-T	mg/L	0.00013	0.00013	0.00013	0.00014	0.00020	5	0.00020	0.00015	0.002	
Ag-T	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	5	<0.000020	0.0000100	0.00005	0.0001
Na-T	mg/L	3.77	4.41	4.89	6.39	4.27	5	6.39	4.75		
Sr-T	mg/L	0.0809	0.0886	0.0949	0.114	0.107	5	0.114	0.0971		
Zn-T	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250	0.0075	0.033
Al-D	mg/L	0.0197	0.0152	0.0141	0.0140	0.0132	5	0.0197	0.0152	0.05	0.1
As-D	mg/L	0.0122	0.0149	0.0169	0.0200	0.0135	5	0.0200	0.0155		
Ba-D	mg/L	0.0120	0.0121	0.0133	0.0155	0.0151	5	0.0155	0.0136		
B-D	mg/L	0.056	0.062	0.074	0.093	0.065	5	0.093	0.070		
Cd-D	mg/L	0.000014	<0.000010	0.000012	0.000013	0.000010	5	0.000014	0.0000108	0.000087	0.00017
Ca-D	mg/L	22.0	23.4	26.9	29.2	28.8	5	29.2	26.1		
Cr-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		
Co-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100		
Cu-D	mg/L	0.00058	0.00051	0.00057	0.00060	0.00096	5	0.00096	0.00064	0.0003	0.002
Hard-D	mg/L	63.3	67.6	76.7	83.8	81.9	5	83.8	74.7		
DOC	mg/L	2.3	1.2	1.4	0.96	1.4	5	2.3	1.45		
Fe-D	mg/L	0.0083	0.0091	0.0109	0.0154	0.0096	5	0.0154	0.0107		0.35
Pb-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100		
Mg-D	mg/L	2.00	2.20	2.33	2.63	2.41	5	2.63	2.31		
Mn-D	mg/L	<0.0010	0.0011	0.0013	0.0022	<0.0010	5	0.0022	0.00112		
Hg-D	mg/L	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	5	<0.0000019	0.00000095		
Mo-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		
Ni-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		
K-D	mg/L	0.341	0.342	0.359	0.428	0.389	5	0.428	0.372		
S-D	mg/L	<3.0	<3.0	3.1	4.0	4.1	5	4.1	2.84		
Se-D	mg/L	0.00013	0.00013	0.00012	0.00013	0.00020	5	0.00020	0.00014		
Na-D	mg/L	3.77	4.35	5.14	6.37	4.25	5	6.37	4.78		
Sr-D	mg/L	0.0804	0.0872	0.0903	0.113	0.105	5	0.113	0.0952		
Zn-D	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250		
Notes:											
Factor applied to less-than results when calculating statistics: 0.5											

Table 33 Q2 - Zooplankton 1 Page(s)

Summer Taxa and Abundance of Zooplankton Samples				
level of id. : lowest/lowest				
Site Name		LLM	MQL	LLM - Replicate
FES Sample Number		**210015**	**210016**	**210017**
Sampling Date(s)		July 12,2021	July 12,2021	July 12,2021
units = total organisms/sample				
	stage			
Sub-class : Copepoda				
Order : Cyclopoida				
Achanthocyclops vernalis	adult	3		
Cryptocyclops bicolor	adult	3	50	
Diacyclops thomasi	adult		20	
Ectocyclops phaleratus	adult			6
Microcyclops varicans	adult	7		
UID	copepodid	31	119	58
Order : Calanoida				
Family : Diaptomidae				
Hesperodiaptomus novemdecimus	adult		23	
Skistodiaptomus oregonensis	adult	138	213	106
UID	copepodid	99	69	52
UID Calanoida / Cyclopoida	nauplii	240	211	304
Order : Cladocera				
Bosmina longirostris	adult	44	74	27
Bosmina longirostris	juvenile	6		3
Ceriodaphnia reticulatus	adult	20	3	18
Daphnia longiremis	adult	36		30
Daphnia rosea	adult	923	694	635
Daphnia sp.	adult	42	51	55
Daphnia sp.	juvenile	131	102	61
Diaphanosoma birgei	adult		7	
Diaphanosoma brachyurum	adult	42	26	15
Leptodora kindtii	adult	2	2	3
Polyphemus pediculus	adult	26	2	24
Phylum : Rotifera				
Asplanchna sp.		68		49
Conochilus sp.	colonies		5	
Kellicottia longispina		128	15	125
Keratella cochlearis		13	14	15
Keratella quadrata		3	2	
Polyarthra sp.		3	5	6
UID		9		3
Benthic				
Group : Hydracarina			7	
TOTAL		**2,017**	**1,714**	**1,595**
UID = unidentified due to lack of size and/or missing morphological characters.				

Table 34 Groundwater Description 1 Page(s)

Groundwater Wells - Description				
Area	**Groundwater ID**	**In-situ / Ex-situ**	**Screened Interval**	**Comment**
2-North	1 Mains 2-North (1M2N)	In-situ	No. 1 Seam	Flooded Underground Workings Dewatering well
	5 Mains#2 (5M#2)	In-situ	No. 1 Seam	Flooded Underground Workings Dewatering well
	QU08-21GD	Ex-situ	No. 1 Seam	Down gradient of u/g tailings disposal, measure water quality and hydraulic gradients downstream of forjan fault
	QU08-21GS	Ex-situ	No. 4 Coal Seam and	
	QU10-10D	Ex-situ	No. 1 Seam / mudstone	Down gradient of u/g tailings disposal, measure water quality and hydraulic head downstream of 2 North workings
	QU10-10S	Ex-situ	No. 4 Seam /	
	QU10-11S	Ex-situ	Fractured Sandstone	Measure water quality and hydraulic gradient in Forjan Fault
	QU10-11D	Ex-situ	No.1 Seam	Down gradient of u/g tailings disposal, measure water quality and hydraulic head downstream of 2 North workings
	QU10-13D	In-situ	Caved Zone	Down gradient of u/g tailings disposal, measure water quality and hydraulic head downstream of 2 North workings
5-South Mine Pool	5SMW	In-situ	Mine Pool (1 Seam)	Down gradient of u/g tailings disposal, measure water quality and hydraulic head downstream of 2 North workings
River Barrier Pillar (RBP)	QU11-05S	Ex-situ	Sandstone	Down gradient of u/g tailings disposal, measure water quality and hydraulic head downstream of 2 North workings
	QU11-05D	Ex-situ	Sandstone	Monitoring water quality and vertical gradients downstream of the RBP and 2-North mine.
	QU11-09S	Ex-situ	Sandstone	Monitor water quality & gradients downstream of the RBP and 2-North workings. Mine pool – CCR backfill in River Barrier Pillar
	QU11-09M	In-situ	RBP Mine Pool	Monitor water quality & gradients downstream of the RBP and 2-North workings. Mine pool – CCR backfill in River Barrier Pillar.
2-North Plant Site	MW-00-1S	Ex-situ	Till	Seepage to MQL
	MW-00-1D	Ex-situ	1-Seam	Seepage to MQL
	MW-00-6D	Ex-situ	Till	Seepage to MQL
	MW-00-6S	Ex-situ	Till	Seepage to MQL
4-South	QU10-08D	Ex-situ	No. 3 Seam	4 South (just outside mine pool) up gradient of existing workings
	QU11-01		Foot print area of 4 South GOB	Assess 4 South Mine Pool water quality
	QU10-09S	Ex-situ	Down gradient of existing workings	Access vertical gradients and water quality adjacent to Long Lake.
	QU10-09D	Ex-situ	Down gradient of existing workings	Access vertical gradients and water quality adjacent to Long Lake.
2-South & 3-South	MW002	Ex-situ	1 Seam	3S seepage to Long Lake
	MW004	In-Situ	Mine Pool (1 Seam)	2-South Mine Pool Gob depillared area
	MW1223	Ex-situ	Silt Stone	2-South seepage to No Name Lake
	MW1224	Ex-situ	Silt Stone	2-South seepage to No Name Lake
	QU11-11 (INF)	In-Situ	Mine Pool (1 Seam)	2-South mine pool dewatering well for Passive Treatment System
7-South	1M7S	In-Situ	No. 4 Coal Seam	Underground Sump
	QU08-10	Ex-situ	No. 4 Coal Seam	Downgradient of 7S -screened No. 3 Coal -Southern margin of workings
	QU08-13A	Ex-situ	No. 4 Coal Seam	Down Gradient of the CCR backfill towards QR
	QU08-13B	Ex-situ	Till & SST contact	Down Gradient of the CCR backfill towards QR
	QU14-10	In-Situ	Mine Void	PAG Storage Mine Void
7- South Area 5	7SA5	In-Situ	Mine Void	Groundwater draining into mine void
	QU1128	Ex-situ	N0. 4 Seam and 4L	Upgradiernt of 7SA5. Background 7 South Area 5
	QU1118S	Ex-situ	Till	Down Gradient of 7SA5 - Background info for 7S A5 Subcrop
	QU1118D	Ex-situ	Sandstone	Down Gradient of 7SA5 - Background info for 7S A5 Subcrop
	QU1206S	Ex-situ	Faulted sandstone near No. 4 Seam	Upgradient of 7SA5 along margine with proposed 4S expansion
	QU11-35	Ex-situ	Sandstone above No. 4 Seam	South end of 7SA5 footprint at 100280m N (mine grid)
242 AREA	QU11-36S	Ex-situ	Sandstone below No. 5 seam	Downgradient of 7SA5. Background (Between 242 and IR).
	QU11-36D	Ex-situ	Sandstone below No. 5 seam	Downgradient of 7SA5. Background (Between 242 and IR).
	242MW	In-situ	No. 4 Seam	Mine pool
	242PS	Ex-situ	Shallow groundwater/ rain water	Old Portal Sump

Table 35 In-Situ Groundwater Wells 3 Page(s)

Water Level / Date	Area / Well ID. / Replicates / m	5 Mains 2-North 5M#2 14/Jul/21	5M#2 9/Aug/21	5M#2 2/Sep/21	5M#2 Rep 2/Sep/21	1-Mains 2North 1M2N 14/Jul/21	1M2N 9/Aug/21	1M2N 2/Sep/21	2-North Mine Pool QU1013D 89.09 1/Sep/21	3-Mains 2North 3M2N 12/Jul/21	3M2N 2/Sep/21
SO4-D	mg/L	390	360	310	330	1400	1300	1200	1300	830	820
H2SEquiv	mg/L	0.00914	0.0159	0.117	0.117	0.117	0.0542	0.106	0.914		0.000957
Cond-F	uS/cm		1684	2000			3550	3490	3405		2380
pH-F	pH Units		7.36	7.31			6.67	6.59	6.49	7.24	7.35
Turb	NTU			20	22			110	63		16
Alk-T	mg/L	560	580	590	570	540	540	520	530	400	410
Acidity83	mg/L	8.1	7.0	<1.0	<1.0	30.9	31.2	21.9	4.3	8.3	<1.0
N-D	mg/L	0.261		0.211	0.191	0.396		0.405	0.550	0.225	0.317
DOC	mg/L	0.81		0.88	0.84	1.3		0.91	1.1	0.56	0.56
Hydrox	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bicarb	mg/L	680	710	710	700	660	660	640	640	490	500
Carb	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Cl-D	mg/L	14	18	18	18	16	18	19	19	4.0	4.6
F-D	mg/L	0.080	0.084	0.067	0.057	0.087	0.11	0.10	0.080	0.14	0.13
Br-D	mg/L	0.075	0.056	0.063	0.056	0.20	0.17	0.15	0.17	0.076	0.093
P-D	mg/L	<0.0030		<0.0030	<0.0030	<0.0030		<0.0030	<0.0030	<0.0030	<0.0030
TSS	mg/L	1.6	<1.4			28	24			6.4	
Al-D	mg/L	<0.0030	0.0031	<0.0030	<0.0030	<0.0060	<0.0060	0.0048	0.0031	0.0058	0.0037
Ag-D	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000040	<0.000040	<0.000020	<0.000020	<0.000020	<0.000020
As-D	mg/L	0.00934	0.00871	0.00674	0.00666	0.00602	0.00713	0.00787	0.00109	0.00012	0.00019
Ba-D	mg/L	0.0287	0.0287	0.0272	0.0272	0.0225	0.0205	0.0195	0.0396	0.0126	0.0133
B-D	mg/L	0.945	1.10	0.999	1.06	1.10	1.28	1.18	1.18	0.865	0.874
Be-D	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	<0.00020	<0.00010	<0.00010	<0.00010	<0.00010
Bi-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0020	<0.0020	<0.0010	<0.0010	<0.0010	<0.0010
Cd-D	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000020	<0.000020	<0.000010	<0.000010	0.000014	<0.000010
Ca-D	mg/L	88.1	78.3	79.7	82.2	260	235	208	219	144	145
Cr-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0020	<0.0020	<0.0010	<0.0010	<0.0010	<0.0010
Co-D	mg/L	0.00044	0.00034	<0.00020	<0.00020	<0.00040	<0.00040	0.00029	<0.00020	0.00427	0.00184
Cu-D	mg/L	0.00030	0.00037	0.00023	0.00032	<0.00040	<0.00040	0.00033	<0.00020	0.00055	0.00032
Fe-D	mg/L	0.974	0.632	0.0647	0.0547	13.9	11.8	12.6	6.54	0.218	0.0427
Hard-D	mg/L	253	223	227	233	765	691	611	636	450	447
Pb-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00040	<0.00040	<0.00020	<0.00020	<0.00020	<0.00020
Mg-D	mg/L	7.90	6.79	6.71	6.62	28.2	25.5	22.6	21.8	21.7	20.7
Mn-D	mg/L	0.254	0.209	0.217	0.217	1.22	1.07	0.981	1.47	0.263	0.229
Hg-D	mg/L	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019
Na-D	mg/L	325	301	318	316	491	461	456	520	376	355
Mo-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0020	<0.0020	<0.0010	<0.0010	<0.0010	<0.0010
Ni-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0020	<0.0020	0.0066	<0.0010	0.0071	0.0026
K-D	mg/L	3.20	2.91	3.10	3.03	6.69	6.27	6.29	6.25	3.95	3.96
S-D	mg/L	136	110	111	110	446	416	362	414	274	265
Sb-D	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.0010	<0.0010	<0.00050	<0.00050	<0.00050	<0.00050
Se-D	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	<0.00020	<0.00010	0.00162	<0.00010	<0.00010
Si-D	mg/L	2.96	3.40	3.64	3.72	3.97	4.50	4.17	4.76	2.90	3.24
Sr-D	mg/L	0.959	0.843	0.897	0.884	2.51	2.37	2.14	2.23	1.64	1.49
Tl-D	mg/L	0.000017	<0.000010	<0.000010	<0.000010	0.000027	<0.000020	<0.000010	<0.000010	<0.000010	<0.000010
Ti-D	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.0050	<0.0050	<0.0050	<0.0050
U-D	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	<0.00020	<0.00010	<0.00010	<0.00010	<0.00010
V-D	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.0050	<0.0050	<0.0050	<0.0050
Zn-D	mg/L	0.0146	0.0091	0.155	0.158	0.016	<0.010	0.0520	<0.0050	<0.0050	<0.0050

Table 35 In-Situ Groundwater Wells 3 Page(s)

	Area	Next to 3-South Pit		2-3 South Mine Pool			
	Well ID.	MW002	MW002	INF	INF	INF	MW004
	Replicates		Rep				
Water Level	m	3.18			8.2	9.2	46.33
Date		29/Jul/21	29/Jul/21	5/Jul/21	9/Aug/21	27/Sep/21	17/Aug/21
SO4-D	mg/L	1300	1300	470	600	670	430
H2SEquiv	mg/L	0.000957	0.000957	0.0563	0.000957	0.000957	0.000957
Cond-F	uS/cm	2186		1555	1469	1650	1058
pH-F	pH Units	7.19		7.7	7.17	7.17	7.25
Turb	NTU	45	48				0.63
Alk-T	mg/L	280	270	240	280	280	170
Acidity83	mg/L	17.5	14.6	14.6	19.1	18.6	5.5
N-D	mg/L	0.234	0.234				0.104
DOC	mg/L	1.2	1.1			<0.50	1.7
Hydrox	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bicarb	mg/L	340	330	290	340	340	210
Carb	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Cl-D	mg/L	1.5	1.5				<1.0
F-D	mg/L	0.11	0.10				0.12
Br-D	mg/L	0.17	0.16				0.058
P-D	mg/L	<0.0030	<0.0030			<0.0030	<0.0030
TSS	mg/L				10	6.4	
Al-D	mg/L	<0.0060	<0.0060	0.0038	<0.0030	<0.0030	0.0057
Ag-D	mg/L	<0.000040	<0.000040	<0.000020	<0.000020	<0.000020	<0.000020
As-D	mg/L	0.00212	0.00208	0.00426	0.00488	0.00471	0.00066
Ba-D	mg/L	0.0149	0.0144	0.0187	0.0233	0.0221	0.0393
B-D	mg/L	0.78	0.80	0.684	0.717	0.700	0.252
Be-D	mg/L	<0.00020	<0.00020	<0.00010	<0.00010	<0.00010	<0.00010
Bi-D	mg/L	<0.0020	<0.0020	<0.0010	<0.0010	<0.0010	<0.0010
Cd-D	mg/L	<0.000020	<0.000020	<0.000010	<0.000010	<0.000010	<0.000010
Ca-D	mg/L	473	471	187	236	245	170
Cr-D	mg/L	<0.0020	<0.0020	<0.0010	<0.0010	<0.0010	<0.0010
Co-D	mg/L	0.00365	0.00369	<0.00020	0.00075	0.00067	0.00038
Cu-D	mg/L	<0.00040	<0.00040	<0.00020	<0.00020	<0.00020	0.00068
Fe-D	mg/L	4.93	4.88	9.47	3.48	4.09	0.0236
Hard-D	mg/L	1390	1390	532	653	675	496
Pb-D	mg/L	<0.00040	<0.00040	<0.00020	<0.00020	<0.00020	<0.00020
Mg-D	mg/L	50.4	51.1	15.5	15.7	15.1	17.5
Mn-D	mg/L	1.53	1.53	0.367	0.398	0.428	0.0526
Hg-D	mg/L	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019
Na-D	mg/L	64.1	64.9	116	113	114	41.4
Mo-D	mg/L	<0.0020	<0.0020	<0.0010	<0.0010	<0.0010	<0.0010
Ni-D	mg/L	0.0023	0.0023	<0.0010	0.0012	0.0010	0.0013
K-D	mg/L	5.35	5.31	2.29	1.94	1.90	1.65
S-D	mg/L	424	428	198	219	223	148
Sb-D	mg/L	<0.0010	<0.0010	<0.00050	<0.00050	<0.00050	<0.00050
Se-D	mg/L	<0.00020	<0.00020	0.00012	<0.00010	<0.00010	<0.00010
Si-D	mg/L	3.76	3.49	2.85	3.28	3.45	2.90
Sr-D	mg/L	4.03	4.06	2.17	2.15	2.18	1.59
Tl-D	mg/L	<0.000020	<0.000020	<0.000010	<0.000010	<0.000010	<0.000010
Ti-D	mg/L	<0.010	<0.010	<0.0050	<0.0050	<0.0050	<0.0050
U-D	mg/L	0.00047	0.00045	<0.00010	<0.00010	<0.00010	<0.00010
V-D	mg/L	<0.010	<0.010	<0.0050	<0.0050	<0.0050	<0.0050
Zn-D	mg/L	<0.010	<0.010	<0.0050	<0.0050	<0.0050	0.0065

Table 35 In-Situ Groundwater Wells 3 Page(s)

	Area	River Barrier Pillar		7-South Water Cover Over PAG-CCR				242 Mine Pool	7 South		
	Well ID.	QU1109M	QU1109M	QU1410	QU1410 Rep	QU1410	QU1410 Rep	242MW	1M7SA5	7SA5	7SA5
	Replicates										
Water Level	m	37.69	44.4	11.045		11.01		23.705			
Date		19/Aug/21	27/Sep/21	28/Jul/21	28/Jul/21	22/Sep/21	22/Sep/21	23/Sep/21	12/Jul/21	12/Jul/21	2/Sep/21
SO4-D	mg/L	1300	1200	1900	1800	1800	1800	43	170	62	100
H2SEquiv	mg/L	0.0106	1.06	0.000957	0.000957	0.000957	0.000957	0.00829			0.000957
Cond-F	uS/cm	3168.7	2937.3	3002.8		2967.3		305			492
pH-F	pH Units	6.58	6.75	6.48		6.47		6.35	7.84	7.95	7.5
Turb	NTU	61	210	12	10	7.4	10	100			0.74
Alk-T	mg/L	500	440	310	310	320	320	93	150	160	140
Acidity83	mg/L	17.2	14.7	16.4	22.1	36.2	33.9	2.5	<1.0	<1.0	<1.0
N-D	mg/L	0.360	0.419	0.255	0.248	0.328	0.299	0.137	0.507	0.229	0.316
DOC	mg/L	<0.50	1.0	1.8	1.6	1.2	1.2	0.54	1.4	0.83	0.65
Hydrox	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bicarb	mg/L	600	540	380	380	390	380	110	180	200	170
Carb	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Cl-D	mg/L	26	28	7.1	6.9	6.5	6.4	<1.0	1.6	1.7	2.1
F-D	mg/L	0.083	0.095	0.14	0.14	<0.050	0.17	0.075	0.48	0.53	0.54
Br-D	mg/L	0.18	0.18	0.16	0.17	0.20	0.20	<0.050	<0.010	<0.010	0.013
P-D	mg/L	<0.0030	<0.0010	0.0045	<0.0030	<0.0030	<0.0030	0.0071	<0.0030	0.0082	0.011
TSS	mg/L								4.0	1.2	
Al-D	mg/L	<0.0060	<0.0060	<0.015	<0.015	<0.015	<0.015	<0.0030	0.0104	<0.0030	<0.0030
Ag-D	mg/L	<0.000040	<0.000040	<0.00010	<0.00010	<0.00010	<0.00010	<0.000020	<0.000020	<0.000020	<0.000020
As-D	mg/L	0.00341	0.00379	0.107	0.108	0.104	0.102	0.0886	0.0166	0.199	0.215
Ba-D	mg/L	0.0106	0.0155	0.0159	0.0157	0.0152	0.0150	0.0709	0.178	0.329	0.143
B-D	mg/L	1.11	1.07	1.15	1.13	1.06	0.87	0.062	0.552	0.517	0.567
Be-D	mg/L	<0.00020	<0.00020	<0.00050	<0.00050	<0.00050	<0.00050	<0.00010	<0.00010	<0.00010	<0.00010
Bi-D	mg/L	<0.0020	<0.0020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0010	<0.0010	<0.0010	<0.0010
Cd-D	mg/L	<0.000020	<0.000020	<0.000050	<0.000050	<0.000050	<0.000050	<0.000010	<0.000010	<0.000010	<0.000010
Ca-D	mg/L	241	217	536	543	522	524	45.8	72.3	48.0	54.5
Cr-D	mg/L	<0.0020	<0.0020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0010	<0.0010	<0.0010	<0.0010
Co-D	mg/L	<0.00040	<0.00040	<0.0010	<0.0010	<0.0010	<0.0010	0.00175	0.00142	0.00062	0.00026
Cu-D	mg/L	<0.00040	<0.00040	<0.0010	<0.0010	<0.0010	<0.0010	<0.00020	0.00074	0.00032	<0.00020
Fe-D	mg/L	21.5	24.5	2.48	2.49	1.99	2.04	14.4	0.110	0.0090	0.0075
Hard-D	mg/L	703	634	2000	2040	1930	1960	129	260	165	191
Pb-D	mg/L	<0.00040	<0.00040	<0.0010	<0.0010	<0.0010	<0.0010	<0.00020	<0.00020	<0.00020	<0.00020
Mg-D	mg/L	24.3	22.1	162	165	153	158	3.53	19.2	11.0	13.3
Mn-D	mg/L	0.977	0.983	1.42	1.45	1.43	1.46	0.693	0.0624	0.0213	0.0110
Hg-D	mg/L	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019
Na-D	mg/L	492	466	67.8	68.4	59.1	60.2	2.40	23.3	23.4	25.4
Mo-D	mg/L	<0.0020	<0.0020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0010	<0.0010	<0.0010	0.0017
Ni-D	mg/L	<0.0020	<0.0020	<0.0050	<0.0050	<0.0050	<0.0050	0.0014	0.0043	0.0021	0.0013
K-D	mg/L	6.87	6.82	7.60	7.61	6.86	7.14	0.482	2.42	2.25	2.27
S-D	mg/L	420	393	614	621	632	599	11.6	51.0	18.8	31.8
Sb-D	mg/L	<0.0010	<0.0010	<0.0025	<0.0025	<0.0025	<0.0025	<0.00050	<0.00050	<0.00050	<0.00050
Se-D	mg/L	<0.00020	<0.00020	<0.00050	<0.00050	<0.00050	<0.00050	<0.00010	<0.00010	<0.00010	<0.00010
Si-D	mg/L	3.88	4.05	3.27	3.23	3.40	3.27	3.94	3.72	4.26	5.02
Sr-D	mg/L	2.64	2.49	4.35	4.29	4.67	4.61	0.0698	0.729	0.548	0.649
Tl-D	mg/L	<0.000020	<0.000020	<0.000050	<0.000050	<0.000050	<0.000050	0.000014	0.000011	<0.000010	<0.000010
Ti-D	mg/L	<0.010	<0.010	<0.025	<0.025	<0.025	<0.025	<0.0050	<0.0050	<0.0050	<0.0050
U-D	mg/L	<0.00020	<0.00020	0.00092	0.00091	0.00078	0.00086	<0.00010	<0.00010	<0.00010	<0.00010
V-D	mg/L	<0.010	<0.010	<0.025	<0.025	<0.025	<0.025	<0.0050	<0.0050	<0.0050	<0.0050
Zn-D	mg/L	<0.010	<0.010	<0.025	<0.025	<0.025	<0.025	<0.0050	<0.0050	<0.0050	<0.0050

Table 36 Ex-Situ Groundwater Wells 2 Page(s)

Area Well ID Replicates Water Level Parameter Units Date		Freshwater Aquatic Life (CSR-AL)	3-North QU0821GS 5/Aug/21	3-North QU0821GS Rep 5/Aug/21	3-North QU0821GD 5/Aug/21	3-North QU1010S 36.6 2/Sep/21	3-North QU1010D 40.57 2/Sep/21	3-North QU1011S 11.54 24/Aug/21	3-North QU1011D 27.41 24/Aug/21	3-North QU1011D Rep 27.41 24/Aug/21
SO4-D	mg/L	1280	2.3	1.7	3.0	7.1	2.3	7.7	<1.0	<1.0
H2SEquiv	mg/L	0.02	0.0298	0.0361	0.0585	0.574	0.000957	0.000957	0.0861	0.0744
Cond-F	uS/cm		1153.9		3480.6	1936	10145.6	319.4	181.1	
pH-F	pH Units		7.59		7.36	7.71	7.00	7.05	6.87	
Turb	NTU		4.6	4.5	4.8	1300	59	0.91	4.4	4.2
Alk-T	mg/L		200	180	200	210	85	140	340	350
Acidity83	mg/L		<1.0	<1.0	1.1	<1.0	7.1	1.3	9.1	9.7
N-D	mg/L		0.200	0.217	0.424	0.400	0.808	0.135	0.370	0.374
DOC	mg/L		2.1	0.59	6.4	<2.5	42	<0.50	1.8	2.6
Hydrox	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bicarb	mg/L		240	220	250	250	100	180	410	420
Carb	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Cl-D	mg/L	1500	250	240	1100	440	3100	4.0	340	350
F-D	mg/L		1.50	1.50	0.990	0.86	<0.050	0.26	0.46	0.46
Br-D	mg/L		0.36	0.36	1.5	0.70	4.3	<0.010	0.60	0.59
P-D	mg/L		0.029	0.034	0.024	0.0097	0.039	0.0097	0.054	0.058
Al-D	mg/L		<0.0060	<0.0060	<0.015	0.0057	0.0058	<0.0030	0.0153	0.0086
Ag-D	mg/L		<0.000040	<0.000040	<0.00010	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
As-D	mg/L	0.05	0.183	0.185	0.142	0.0957	0.0117	0.00695	0.0271	0.0272
Ba-D	mg/L	10	0.669	0.673	2.41	0.763	1.35	0.199	0.335	0.331
B-D	mg/L	50	2.10	2.11	3.04	1.59	0.333	0.476	1.43	1.42
Be-D	mg/L	0.053	<0.00020	<0.00020	<0.00050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Bi-D	mg/L		<0.0020	<0.0020	<0.0050	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cd-D	mg/L		<0.000020	<0.000020	<0.000050	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Ca-D	mg/L		32.1	31.4	114	60.5	631	28.8	54.7	53.1
Cr-D	mg/L	0.01	<0.0020	<0.0020	<0.0050	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Co-D	mg/L	0.04	<0.00040	<0.00040	<0.0010	<0.00020	0.00033	<0.00020	<0.00020	<0.00020
Cu-D	mg/L		0.00055	<0.00040	<0.0010	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Fe-D	mg/L		0.345	0.333	1.03	0.208	6.56	0.601	2.20	2.15
Hard-D	mg/L		104	102	347	191	1620	97.5	157	153
Pb-D	mg/L		<0.00040	<0.00040	<0.0010	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Mg-D	mg/L		5.79	5.64	15.0	9.61	11.7	6.18	4.89	4.86
Mn-D	mg/L		0.0603	0.0599	0.0998	0.151	0.447	0.101	0.234	0.237
Hg-D	mg/L	0.001	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019
Na-D	mg/L		185	185	567	272	1370	23.0	300	299
Mo-D	mg/L	10	<0.0020	<0.0020	<0.0050	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Ni-D	mg/L		<0.0020	<0.0020	<0.0050	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
K-D	mg/L		4.84	4.79	9.00	5.97	8.07	2.39	4.58	4.51
S-D	mg/L		<6.0	<6.0	<15	5.1	<3.0	<3.0	<3.0	<3.0
Sb-D	mg/L	0.2	<0.0010	<0.0010	<0.0025	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Se-D	mg/L	0.01	<0.00020	<0.00020	<0.00050	0.00159	<0.00010	<0.00010	<0.00010	<0.00010
Si-D	mg/L		3.52	3.43	4.09	4.30	3.97	3.75	5.90	5.77
Sr-D	mg/L		0.756	0.737	2.33	1.23	6.35	0.376	0.858	0.864
Tl-D	mg/L	0.003	<0.000020	<0.000020	<0.000050	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Ti-D	mg/L	1	<0.010	<0.010	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
U-D	mg/L	3	<0.00020	<0.00020	<0.00050	0.00011	<0.00010	<0.00010	<0.00010	<0.00010
V-D	mg/L		<0.010	<0.010	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Zn-D	mg/L		<0.010	<0.010	<0.025	<0.0050	0.0052	<0.0050	<0.0050	<0.0050

Table 36 Ex-Situ Groundwater Wells 2 Page(s)

	Area		2-North/ River Barrier Pillar			River Barrier Pillar			7-South	
	Well ID	Freshwater Aquatic Life (CSR-AL)	QU1105S	QU1105D	QU1105D Rep	QU1109S	QU1109S Rep	QU1109S	QU0813A	QU0813A Rep
Water Level	Replicates									
Parameter	m		27.67	23.08		6.11		6.255	14.67	
	Units									
Date			23/Aug/21	23/Aug/21	23/Aug/21	19/Aug/21	19/Aug/21	27/Sep/21	16/Aug/21	16/Aug/21
SO4-D	mg/L	1280	71	350	280	290	300	240	67	74
H2SEquiv	mg/L	0.02	0.0670	42.5	41.5	1.59	1.59	0.0202	0.170	0.234
Cond-F	uS/cm		393.6	5277.6		1578.3		1456.9	627.5	
pH-F	pH Units		7.96	7.7		7.5		7.62	7.54	
Turb	NTU		5.6	0.54	0.42	3.6	2.6	2.8	2.0	1.7
Alk-T	mg/L		120	320	310	480	490	480	200	220
Acidity83	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2.1
N-D	mg/L		0.154	0.398	0.407	0.381	0.379	0.422	0.224	0.230
DOC	mg/L		<0.50	30	32	<0.50	<0.50	1.2	<0.50	<0.50
Hydrox	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bicarb	mg/L		150	390	380	590	590	560	240	260
Carb	mg/L		<1.0	1.9	<1.0	<1.0	2.9	13	<1.0	<1.0
Cl-D	mg/L	1500	2.1	1300	1300	45	45	41	21	24
F-D	mg/L		0.31	<0.050	<0.050	0.56	0.56	0.62	0.061	0.71
Br-D	mg/L		<0.010	2.0	2.0	0.10	0.10	0.093	0.038	0.045
P-D	mg/L		0.0066	<0.10	<0.10	0.013	0.012	0.013	0.015	0.018
Al-D	mg/L		<0.0030	<0.015	<0.015	<0.0060	<0.0060	<0.0060	<0.0030	<0.0030
Ag-D	mg/L		<0.000020	<0.00010	<0.00010	<0.000040	<0.000040	<0.000040	<0.000020	<0.000020
As-D	mg/L	0.05	0.104	0.00307	0.00324	0.0850	0.0926	0.0982	0.378	0.373
Ba-D	mg/L	10	0.0367	0.163	0.162	0.0303	0.0313	0.0310	0.218	0.217
B-D	mg/L	50	0.453	0.45	0.47	1.93	1.94	1.93	0.986	0.981
Be-D	mg/L	0.053	<0.00010	<0.00050	<0.00050	<0.00020	<0.00020	<0.00020	<0.00010	<0.00010
Bi-D	mg/L		<0.0010	<0.0050	<0.0050	<0.0020	<0.0020	<0.0020	<0.0010	<0.0010
Cd-D	mg/L		<0.000010	<0.000050	<0.000050	<0.000020	<0.000020	<0.000020	<0.000010	<0.000010
Ca-D	mg/L		12.5	150	145	25.2	26.3	21.8	41.7	42.3
Cr-D	mg/L	0.01	<0.0010	<0.0050	<0.0050	<0.0020	<0.0020	<0.0020	<0.0010	<0.0010
Co-D	mg/L	0.04	<0.00020	<0.0010	<0.0010	<0.00040	<0.00040	<0.00040	<0.00020	<0.00020
Cu-D	mg/L		<0.00020	<0.0010	<0.0010	<0.00040	<0.00040	<0.00040	<0.00020	<0.00020
Fe-D	mg/L		0.141	<0.025	0.038	0.251	0.257	0.151	0.174	0.181
Hard-D	mg/L		40.5	395	384	86.9	90.1	74.7	146	147
Pb-D	mg/L		<0.00020	<0.0010	<0.0010	<0.00040	<0.00040	<0.00040	<0.00020	<0.00020
Mg-D	mg/L		2.25	5.11	5.11	5.80	5.95	4.94	10.1	10.1
Mn-D	mg/L		0.0283	0.0816	0.0812	0.0349	0.0351	0.0275	0.0370	0.0365
Hg-D	mg/L	0.001	<0.0000019	<0.000019	<0.000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019
Na-D	mg/L		63.8	909	899	331	334	293	79.0	78.3
Mo-D	mg/L	10	<0.0010	<0.0050	<0.0050	<0.0020	<0.0020	<0.0020	<0.0010	<0.0010
Ni-D	mg/L		<0.0010	<0.0050	<0.0050	<0.0020	<0.0020	<0.0020	<0.0010	<0.0010
K-D	mg/L		2.15	5.09	5.06	4.18	4.20	3.91	2.60	2.55
S-D	mg/L		21.7	140	135	93.0	94.4	82.6	27.4	25.5
Sb-D	mg/L	0.2	<0.00050	<0.0025	<0.0025	<0.0010	<0.0010	<0.0010	<0.00050	<0.00050
Se-D	mg/L	0.01	0.00063	0.0209	0.0154	0.00122	<0.00020	0.00230	0.00070	0.00066
Si-D	mg/L		3.03	4.56	4.48	5.39	5.57	5.67	4.17	4.16
Sr-D	mg/L		0.185	1.78	1.79	0.469	0.468	0.410	0.717	0.724
Tl-D	mg/L	0.003	<0.000010	<0.000050	<0.000050	<0.000020	<0.000020	<0.000020	<0.000010	<0.000010
Ti-D	mg/L	1	<0.0050	<0.025	<0.025	<0.010	<0.010	<0.010	<0.0050	<0.0050
U-D	mg/L	3	<0.00010	<0.00050	<0.00050	<0.00020	<0.00020	<0.00020	<0.00010	<0.00010
V-D	mg/L		<0.0050	<0.025	<0.025	<0.010	<0.010	<0.010	<0.0050	<0.0050
Zn-D	mg/L		<0.0050	<0.025	<0.025	<0.010	<0.010	<0.010	<0.0050	<0.0050

Table 37 Shallow Groundwater Seepage 1 Page(s)

Station Description		Subsurface Seepage near QU1109 before entering river											
	Stn.Code	S											
Date		6/Jul/21	13/Jul/21	20/Jul/21	19/Aug/21	25/Aug/21	21/Sep/21	27/Sep/21					
Parameter	Unit								Average	Count	Min	Max	WQG-Max (M)
pH-F	pH Units	8.28	8.03	1244	7.6	7.56	7.69	7.89	184.44	7	7.56	1244	6.5 - 9.0
Cond-F	uS/cm	1509	1376	8.04	1531	1413	1126	1092	1150.72	7	8.04	1531	
SO4-D	mg/L	250	240	180	180	180	190	170	198.6	7	170	250	
TSS	mg/L	2.8	1.6	1.6			2.0		2.0	4	1.6	2.8	25
Alk-T	mg/L	480	480	470	440	400	340	340	421	7	340	480	
Acidity83	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0.50	7	<1.0	<1.0	
N-NH3	mg/L	0.016	<0.015	<0.015	0.12	0.30	0.065	<0.015	0.0748	7	<0.015	0.30	12.9
N-NO23	mg/L	0.266		0.143			0.073	0.027	0.127	4	0.027	0.266	
Al-T	mg/L	0.0231	0.0101	0.0095	0.0401	0.0325	0.0556	0.0504	0.0316	7	0.0095	0.0556	
As-T	mg/L	0.0284	0.0207	0.0190	0.0298	0.0276	0.0249	0.0164	0.0238	7	0.0164	0.0298	0.005
Ba-T	mg/L	0.0393	0.0361	0.0346	0.0436	0.0407	0.0335	0.0273	0.0364	7	0.0273	0.0436	5
B-T	mg/L	1.62	1.77	1.80	1.97	1.88	1.61	1.48	1.73	7	1.48	1.97	
Cd-T	mg/L	<0.000010	<0.000010	<0.000010	<0.000020	<0.000010	0.000022	<0.000010	0.0000081	7	<0.000010	0.000022	
Ca-T	mg/L	28.4	28.1	29.1	28.1	26.5	22.8	21.6	26.4	7	21.6	29.1	
Cr-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0010	<0.0010	0.00057	7	<0.0010	<0.0020	
Co-T	mg/L	0.00037	<0.00020	<0.00020	0.00075	0.00073	0.00053	<0.00020	0.000383	7	<0.00020	0.00075	0.11
Cu-T	mg/L	0.00052	0.00052	<0.00050	<0.0010	0.00082	0.00121	0.00109	0.000701	7	<0.00050	0.00121	0.00482
Hard-T	mg/L	96.9	97.4	98.5	95.9	91.1	77.4	72.2	89.9	7	72.2	98.5	
Fe-T	mg/L	0.665	0.193	0.163	0.414	0.714	1.14	0.516	0.544	7	0.163	1.14	1
P-T	mg/L	<0.0030	0.0044	0.0037	0.0074		0.016	<0.015	0.00675	6	<0.0030	0.016	
Pb-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00040	<0.00020	<0.00020	<0.00020	0.000114	7	<0.00020	<0.00040	0.01763
Mg-T	mg/L	6.34	6.59	6.25	6.24	6.02	4.94	4.45	5.83	7	4.45	6.59	
Mn-T	mg/L	0.134	0.0276	0.0245	0.521	0.455	0.166	0.0336	0.1945	7	0.0245	0.521	0.8706
Hg-T	mg/L	<0.0000019	<0.0000019	<0.0000019	0.0000020	<0.0000019	0.0000022	<0.0000019	0.00000128	7	<0.0000019	0.0000022	0.00001
Mo-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0010	<0.0010	0.00057	7	<0.0010	<0.0020	2
Ni-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0010	<0.0010	0.00057	7	<0.0010	<0.0020	0.025
K-T	mg/L	4.12	4.10	4.04	3.73	3.65	3.22	3.01	3.70	7	3.01	4.12	
S-T	mg/L	67.2	65.6	63.3	61.4	61.5	62.9	54.6	62.4	7	54.6	67.2	
Se-T	mg/L	<0.00010	<0.00010	<0.00010	<0.00020	<0.00010	<0.00010	<0.00010	0.000057	7	<0.00010	<0.00020	
Si-T	mg/L	4.18	3.97	4.05	4.91	4.56	4.59	4.24	4.36	7	3.97	4.91	
Ag-T	mg/L	<0.000020	<0.000020	<0.000020	<0.000040	<0.000020	<0.000020	<0.000020	0.0000114	7	<0.000020	<0.000040	0.0001
Na-T	mg/L	276	292	288	280	275	236	205	264.6	7	205	292	
Sr-T	mg/L	0.430	0.403	0.402	0.355	0.352	0.288	0.260	0.356	7	0.260	0.430	
Zn-T	mg/L	<0.0050	<0.0050	<0.0050	0.030	<0.0050	<0.0050	<0.0050	0.00643	7	<0.0050	0.030	0.033
Al-D	mg/L	0.0068	0.0080	0.0052	0.0234	0.0218	0.0168	0.0286	0.0158	7	0.0052	0.0286	0.1
As-D	mg/L	0.0196	0.0174	0.0177	0.0266	0.0296	0.0135	0.0135	0.0197	7	0.0135	0.0296	
Ba-D	mg/L	0.0356	0.0329	0.0323	0.0403	0.0412	0.0252	0.0264	0.0334	7	0.0252	0.0412	
B-D	mg/L	1.78	1.86	1.71	1.76	1.71	1.68	1.48	1.71	7	1.48	1.86	
Cd-D	mg/L	<0.000010	<0.000020	<0.000010	<0.000020	<0.000020	0.000106	<0.000010	0.0000216	7	<0.000010	0.000106	0.00017
Ca-D	mg/L	28.2	28.1	27.7	27.1	27.0	21.2	21.3	25.8	7	21.2	28.2	
Cr-D	mg/L	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	<0.0010	<0.0010	0.00071	7	<0.0010	<0.0020	
Co-D	mg/L	<0.00020	<0.00040	<0.00020	0.00071	0.00065	<0.00020	<0.00020	0.000280	7	<0.00020	0.00071	
Cu-D	mg/L	0.00045	0.00046	0.00043	0.00071	0.00049	0.00102	0.00118	0.00068	7	0.00043	0.00118	0.00385
Hard-D	mg/L	97.4	97.1	94.4	90.6	90.2	70.9	71.6	87.5	7	70.9	97.4	
Fe-D	mg/L	0.0977	0.040	0.0276	0.243	0.217	0.130	0.207	0.1375	7	0.0276	0.243	0.35
Pb-D	mg/L	<0.00020	<0.00040	<0.00020	<0.00040	<0.00040	<0.00020	<0.00020	0.000143	7	<0.00020	<0.00040	
Mg-D	mg/L	6.57	6.52	6.13	5.54	5.53	4.37	4.47	5.59	7	4.37	6.57	
Mn-D	mg/L	0.0255	0.0105	0.0062	0.516	0.409	0.0061	0.0191	0.1418	7	0.0061	0.516	
Hg-D	mg/L	<0.0000019	<0.0000019	<0.0000019	0.0000020	<0.0000019	0.0000023	0.0000031	0.00000160	7	<0.0000019	0.0000031	
Mo-D	mg/L	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	<0.0010	<0.0010	0.00071	7	<0.0010	<0.0020	
Ni-D	mg/L	<0.0010	<0.0020	<0.0010	<0.0020	<0.0020	<0.0010	<0.0010	0.00071	7	<0.0010	<0.0020	
K-D	mg/L	4.15	4.12	3.78	3.57	3.74	2.95	2.92	3.60	7	2.92	4.15	
S-D	mg/L	66.4	67.3	60.4	54.2	60.3	58.6	56.0	60.5	7	54.2	67.3	
Se-D	mg/L	<0.00010	<0.00020	<0.00010	<0.00020	<0.00020	<0.00010	<0.00010	0.000071	7	<0.00010	<0.00020	
Si-D	mg/L	3.88	3.64	3.83	4.63	4.52	4.30	4.12	4.13	7	3.64	4.63	
Na-D	mg/L	284	309	276	265	259	212	210	259.3	7	210	309	
Sr-D	mg/L	0.398	0.395	0.382	0.338	0.378	0.289	0.255	0.348	7	0.255	0.398	
Zn-D	mg/L	<0.0050	<0.010	<0.0050	<0.010	<0.010	<0.0050	<0.0050	0.00357	7	<0.0050	<0.010	
Notes:													
Factor applied to less-than results when calculating statistics: 0.5													