

Appendix 1 - Tables

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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
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)
7-South Mining Operation			
E292069	7-South Surface Decant	7SSD	Discharge (SW)
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
	Possible Seepage Area by QU1109	S	GW/SW
	Possible Seepage Area by QU1105	S2	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 near the outlet)	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 Bridge	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
E292118	Lower Quinsam Lake Centre	LQL (1, 4, 9 & 1m from Bottom)	FW
7-South Area 5 Mining Operation			
E297231	Iron River upstream of 7SA5 and 242 influence	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
Block 242 Mining Operation (Reclaimed / Not Monitored)			
E225798	Iron River upstream of the 242 influence	Not Monitored	FW
E225808	Iron River downstream of the 242 influence	Not Monitored	FW
N/A	Old portal sump used for collection of water from underground	Reclaimed	FW / GW
Long Lake Seep Passive Treatment System			
N/A	Groundwater well (2-South Mine Pool) influent to the Passive Treatment System (PTS)	QU11-11 (INF-EFF)	MW
N/A	Biochemical Reactor	BCR-EFF	MW
N/A	Sulphide Polishing Cell	SPC-EFF	MW
N/A	2-South Inflow (From Passive Treatment System)	2SI	MW
N/A	2-South Culvert into 3-South Pit (Seepage under liner and overflow from 2S-pit)	2SC	MW

* MW= Mine Water, FW= Freshwater, GW =Groundwater NIDZ = Near Initial Dilution Zone

Table 2 Summary of Permit Limit Exceedances, Permit Non-Compliances and Unauthorised Discharges 1 Page(s)

Summary of Permit Limit Exceedances, Permit Non-Compliances and Unauthorised Discharges `					
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.
E292131 - Long Lake Seeps	Unauthorised discharge	PNC	Q2	Seepage from mine pool into Long lake. No authorization to discharge.	Q2 - (68/92) days
E297232 - Iron River (IR8)	PNC	No results for flow	Summer 5 in 30	Level Logger stopped logging	Summer 5 in 30
E206619and E206618 -= Long and Middle Quinsam Lakes - Depth Profiling for pH	PNC	No results for pH except at 1, 4, 9 and 1MB	28-Jul-22	Probe was not working for pH	(1/5) weeks

Table 3 Summary of Water Quality Guideline Observations at Monitoring Locations 2 Page(s)

Summary of Water Quality Guideline Observations at Receiving Environment Monitoring Locations Summer 2022						
EMS ID & Site Name	Parameter (mg/L)	Guideline Limit	Result (mg/L)	Date	Guideline	Sampling Events Outside Guideline
Quarter 2 (July through September 2022)						
E297231- Iron River Site 8 (IR8)	As-T	0.005	0.00672, 0.00857 and 0.00921	Summer 5 in 30	Acute	(3/5) Summer 5 and 30 sampling
E292130 - South end water entering Long Lake (LLE)	SO ₄ -D	128	Ranging from 258 to 546	July through September	Chronic	(9) rolling averages >128mg/L
	Fe-T	1.00	2.06 and 6.47	August and September	Acute	(2/3) Monthly Samples
	Fe-D	0.35	1.44 and 5.41	August and September	Acute	(2/3) Monthly Samples
E206619 - Long Lake 1 metre from bottom (1MB)	P-T	0.007	0.015	July through August	Chronic	4 weeks during summer
E206619 - Long Lake Hypolimnion (17 m - 21 m)	Dissolved Oxygen	>3.00	Ranging from 2.58 to 2.88	Aug-10	Acute	(1/5) Weekly Samples
Observations at Sites That Are Not Receiving Environment Locations Provided for Comparison Purposes Only.						
E292131- Smaller seep into Long Lake (LLS)	Fe-T (mg/L)	1.00	1.31	July through September	Acute	(1/3) Monthly sampling events
	Fe-D (mg/L)	0.35	1.29	July through September	Acute	(1/3) Monthly sampling events
Potential Seepage from shallow groundwater near QU11-09 (S)	As-T (mg/L)	0.005	0.0558 to 0.0740	July through September	Acute	(8/8) Weekly samples
	SO ₄ -D (mg/L)	128	Ranging from 212 to 240	July through September	Chronic	(8) rolling averages >128mg/L
Potential Seepage from shallow groundwater near QU11-05 (S2A)	As-T (mg/L)	0.005	Ranging from 0.0443 to 0.129	July through September	Acute	(13/13) Weekly samples
	SO ₄ -D (mg/L)	128	Ranging from 128 to 208	July through September	Chronic	(13) rolling averages > 128mg/L
	Fe-T (mg/L)	1.00	1.03 to 1.54	July through September	Acute	(8/13) Weekly samples
	Fe-D (mg/L)	0.35	0.421 to 1.26	July through September	Acute	(13/13) Weekly samples
Min = Minimum Water Quality Guideline (WQG) Acute = Maximum WQG, Chronic = Average WQG						
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.						
Results Above Freshwater Aquatic Life Dissolved Copper Guidelines - Summer 2022 <i>Calculated from the Biotic Ligand Model (BLM)</i>						
EMS ID	Site Name	Station Code	Date	Copper Concentration (mg/L)	Acute Guideline (mg/L)	
No sampling events exceeded the Acute Guidelines.						
EMS ID	Site Name	Station Code	Date	Copper Concentration (mg/L)	Chronic Guideline (mg/L)	
E206619	Long Lake Middle 9M	LLM9	Summer 5 in 30	0.00038	0.00038	
E206619	Long Lake Middle 1 meter from bottom	LLMB	Summer 5 in 30	0.00037	0.00030	
E206618	Middle Quinsam Lake 4M	MQL4	Summer 5 in 30	0.00047	0.00037	
126402	Quinsam River at Argonaut Road	WA	Summer 5 in 30	0.00053	0.00040	

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

Q2 Ex-situ Groundwater																	
Description	2 / 3 North Area		2 / 3 North Area		2 / 3 North Area		2 / 3 North Area		2 / 3 North Area		RBP		7-South		4-South		
Well ID	QU0821GS	QU0821GD	QU0821GD	QU1010S	QU1105S	QU1105S	QU1105D	QU1109S	QU1109S	QU1109S	QU0813A	QU0813B	QU0813B	QU1009S	QU1009D		
Station Type	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW		
Date	9-Aug-22		9-Aug-22		7-Jul-22		20-Sep-22		20-Sep-22		20-Sep-22		28-Jul-22		21-Sep-22		
Sample Class	Freshwater Aquatic Life (CSR-AW)		Replicate		Replicate		Replicate		Replicate		Replicate		Replicate		Replicate		
S2- as H2S	mg/L	H2S	0.02	0.0670	0.103	0.103	0.872	0.170	0.138	26.6	0.904	1.49	0.223			0.0733	
As-D	mg/L		0.05	0.197	0.182	0.181	0.0722				0.117	0.0914	0.386	0.486	0.492	0.0915	0.122
Se-D	mg/L		0.01							0.0526							

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Table 5 Settling Pond # 4 - Authorized Discharge Location for North Mine Water 1 Page(s)

EMS ID	E207409		Stn Std	PL-N												
Site Description	Settling Pond # 4 - Authorized Discharge Location for North Mine Water															
Site Name	WD															
Date	Max	05-07-2022	11-07-2022	18-07-2022	18-07-2022	25-07-2022	02-08-2022	08-08-2022	15-08-2022	22-08-2022	29-08-2022	06-09-2022	12-09-2022	19-09-2022	26-09-2022	
pH-F	pH Units	6.00 - 8.50	7.84	7.62	7.67	7.67	7.57	7.77	7.48	7.6	7.4	7.52	7.7	7.46	7.43	7.71
Cond-F	uS/cm		1262	1648	1707	1707	1661	1826	1578	1606	1744	1876	1603	1555	1730	1830
SO4-D	mg/L		300	460	530	560	480	540	460	410	400	450	380	410	470	450
TSS	mg/L	25	2.0	<1.0	4.0	4.0	2.0	2.8	2.4	1.6	3.6	2.0	2.8	4.0	6.0	2.4
Alk-T	mg/L		400					450					470			
Acidity83	mg/L		1.6					3.9					2.2			
Al-T	mg/L		0.0175										0.0095			
As-T	mg/L		0.00111										0.00137			
Ba-T	mg/L		0.0171										0.0196			
B-T	mg/L		0.659										0.907			
Cd-T	mg/L		<0.000010										<0.000010			
Ca-T	mg/L		106										117			
Cr-T	mg/L		<0.0010										<0.0010			
Co-T	mg/L		<0.00020										<0.00020			
Cu-T	mg/L		0.00085										0.00055			
Hard-T	mg/L		313										344			
Fe-T	mg/L		0.292										0.372			
Pb-T	mg/L		<0.00020										<0.00020			
Mg-T	mg/L		11.9										12.7			
Mn-T	mg/L		0.0836										0.0583			
Mo-T	mg/L		<0.0010										<0.0010			
Ni-T	mg/L		<0.0010										<0.0010			
K-T	mg/L		3.01										3.31			
S-T	mg/L		134										140			
Se-T	mg/L		<0.00010										<0.00010			
Si-T	mg/L		2.35										2.81			
Ag-T	mg/L		<0.000020										<0.000020			
Na-T	mg/L		224										257			
Sr-T	mg/L		0.935										1.04			
Zn-T	mg/L		<0.0050										<0.0050			
Al-D	mg/L	0.5	<0.0030					<0.0060					<0.0030			
As-D	mg/L		0.00104					0.00092					0.00089			
Ba-D	mg/L		0.0186					0.0181					0.0185			
B-D	mg/L		0.775					0.78					0.949			
Be-D	mg/L		<0.00010					<0.00020					<0.00010			
Cd-D	mg/L		<0.000010					<0.000020					<0.000010			
Ca-D	mg/L		119					118					112			
Cr-D	mg/L		<0.0010					<0.0020					<0.0010			
Co-D	mg/L		<0.00020					<0.00040					<0.00020			
Cu-D	mg/L	0.02	0.00045					0.00042					0.00024			
Hard-D	mg/L		350					348					332			
Fe-D	mg/L	0.3	0.0237					0.038					0.0408			
Pb-D	mg/L	0.05	<0.00020					<0.00040					<0.00020			
Mg-D	mg/L		12.9					13.1					12.8			
Mn-D	mg/L		0.0952					0.110					0.0451			
Mo-D	mg/L		<0.0010					<0.0020					<0.0010			
Ni-D	mg/L		<0.0010					<0.0020					<0.0010			
K-D	mg/L		3.13					3.66					3.17			
S-D	mg/L		149					161					143			
Se-D	mg/L		<0.00010					<0.00020					<0.00010			
Si-D	mg/L		2.56					3.02					2.59			
Na-D	mg/L		236					265					253			
Sr-D	mg/L		1.03					1.11					1.03			
Zn-D	mg/L	0.1	<0.0050					<0.010					<0.0050			
O&G	mg/L		10					<1.0								
N-NH3	mg/L	1.0						0.030					<0.015			
P-T	mg/L							<0.0030					<0.0030			

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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		
Date		05-07-2022	02-08-2022	06-09-2022
pH-F	pH Units	7.99	7.92	7.88
Cond-F	uS/cm	2200	2080	1975
SO4-D	mg/L	680	750	590
TSS	mg/L	2.4	1.2	2.4
Alk-T	mg/L	310	350	410
Acidity83	mg/L	3.3	<1.0	3.2
Al-T	mg/L	0.0065	0.0052	0.0099
As-T	mg/L	0.00112	0.00125	0.00177
Ba-T	mg/L	0.0139	0.0125	0.0153
B-T	mg/L	0.737	0.944	0.927
Cd-T	mg/L	<0.000010	<0.000010	<0.000010
Ca-T	mg/L	140	115	131
Cr-T	mg/L	<0.0010	<0.0010	<0.0010
Co-T	mg/L	0.00056	<0.00020	<0.00020
Cu-T	mg/L	0.00093	<0.00050	0.00062
Hard-T	mg/L	428	360	395
Fe-T	mg/L	0.896	0.684	0.969
Pb-T	mg/L	<0.00020	<0.00020	<0.00020
Mg-T	mg/L	18.9	17.5	16.4
Mn-T	mg/L	0.146	0.0939	0.151
Mo-T	mg/L	<0.0010	<0.0010	<0.0010
Ni-T	mg/L	0.0014	<0.0010	<0.0010
K-T	mg/L	4.11	4.50	4.94
S-T	mg/L	220	231	220
Se-T	mg/L	<0.00010	<0.00010	<0.00010
Si-T	mg/L	2.45	2.64	3.25
Ag-T	mg/L	<0.000020	<0.000020	<0.000020
Na-T	mg/L	269	321	330
Sr-T	mg/L	1.24	1.21	1.33
Zn-T	mg/L	<0.0050	<0.0050	<0.0050
Al-D	mg/L	0.0045	<0.0060	<0.0030
As-D	mg/L	0.00043	0.00056	0.00081
Ba-D	mg/L	0.0142	0.0129	0.0130
B-D	mg/L	0.705	0.90	1.11
Be-D	mg/L	<0.00010	<0.00020	<0.00010
Cd-D	mg/L	0.000011	<0.000020	<0.000010
Ca-D	mg/L	141	113	115
Cr-D	mg/L	<0.0010	<0.0020	<0.0010
Co-D	mg/L	0.00142	<0.00040	<0.00020
Cu-D	mg/L	0.00085	0.00085	0.00022
Hard-D	mg/L	431	353	357
Fe-D	mg/L	0.0151	<0.010	0.0430
Pb-D	mg/L	<0.00020	<0.00040	<0.00020
Mg-D	mg/L	19.1	17.4	16.9
Mn-D	mg/L	0.192	0.0489	0.0909
Mo-D	mg/L	<0.0010	<0.0020	<0.0010
Ni-D	mg/L	0.0030	<0.0020	<0.0010
K-D	mg/L	3.80	4.74	4.84
S-D	mg/L	218	232	238
Se-D	mg/L	0.00014	<0.00020	<0.00010
Si-D	mg/L	2.34	2.86	3.04
Na-D	mg/L	231	312	329
Sr-D	mg/L	1.14	1.27	1.28
Zn-D	mg/L	<0.0050	<0.010	<0.0050

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

EMS ID		E283433		
Site Description		2-North Portal Sump Effluent		
Site Name		2NPS		
Date		05-07-2022	02-08-2022	06-09-2022
pH-F	pH Units	7.35	7.43	7.51
Cond-F	uS/cm	2150	2300	2180
SO4-D	mg/L	950	1100	930
Alk-T	mg/L	250	320	330
Acidity83	mg/L	5.1	12.3	7.1
Al-T	mg/L	0.106	0.0097	0.0480
As-T	mg/L	0.00072	0.00047	0.00059
Ba-T	mg/L	0.0116	0.0102	0.0122
B-T	mg/L	0.67	0.82	0.84
Cd-T	mg/L	<0.000020	<0.000020	<0.000020
Ca-T	mg/L	244	282	258
Cr-T	mg/L	<0.0020	<0.0020	<0.0020
Co-T	mg/L	0.00130	0.00051	0.00114
Cu-T	mg/L	0.0018	<0.0010	<0.0010
Hard-T	mg/L	716	831	771
Fe-T	mg/L	0.363	0.202	0.349
Pb-T	mg/L	<0.00040	<0.00040	<0.00040
Mg-T	mg/L	26.3	30.8	31.0
Mn-T	mg/L	0.169	0.0892	0.132
Mo-T	mg/L	<0.0020	<0.0020	<0.0020
Ni-T	mg/L	0.0032	<0.0020	0.0027
K-T	mg/L	3.44	3.46	4.01
S-T	mg/L	294	326	314
Se-T	mg/L	<0.00020	<0.00020	<0.00020
Si-T	mg/L	2.98	3.09	3.43
Ag-T	mg/L	<0.000040	<0.000040	<0.000040
Na-T	mg/L	191	220	242
Sr-T	mg/L	1.67	1.75	1.88
Zn-T	mg/L	<0.010	<0.010	<0.010
Al-D	mg/L	0.0124	<0.0060	0.0076
As-D	mg/L	0.00055	0.00037	0.00035
Ba-D	mg/L	0.0115	0.0114	0.0114
B-D	mg/L	0.75	0.71	1.04
Be-D	mg/L	<0.00020	<0.00020	<0.00020
Cd-D	mg/L	<0.000020	<0.000020	<0.000020
Ca-D	mg/L	245	280	258
Cr-D	mg/L	<0.0020	<0.0020	<0.0020
Co-D	mg/L	0.00125	0.00057	0.00098
Cu-D	mg/L	0.00076	<0.00040	<0.00040
Hard-D	mg/L	731	831	770
Fe-D	mg/L	<0.010	0.015	0.097
Pb-D	mg/L	<0.00040	<0.00040	<0.00040
Mg-D	mg/L	28.7	32.1	30.4
Mn-D	mg/L	0.166	0.0936	0.125
Mo-D	mg/L	<0.0020	<0.0020	<0.0020
Ni-D	mg/L	0.0031	0.0021	0.0022
K-D	mg/L	3.45	3.94	3.78
S-D	mg/L	309	343	319
Se-D	mg/L	<0.00020	<0.00020	<0.00020
Si-D	mg/L	2.92	3.24	3.41
Na-D	mg/L	201	226	234
Sr-D	mg/L	1.64	2.08	1.85
Zn-D	mg/L	<0.010	<0.010	<0.010

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EMS ID				
Site Description		Road Side Ditch Draining into MQL		
Site Name		PDSR		
Date		05-07-2022	02-08-2022	02-09-2022
pH-F	pH Units	7.64	Dry	Dry
Cond-F	uS/cm	1824		
SO4-D	mg/L	810		
TSS	mg/L	<1.0		
Al-T	mg/L	0.0138		
As-T	mg/L	<0.00020		
Ba-T	mg/L	0.0295		
B-T	mg/L	0.40		
Cd-T	mg/L	<0.000020		
Ca-T	mg/L	264		
Cr-T	mg/L	<0.0020		
Co-T	mg/L	<0.00040		
Cu-T	mg/L	<0.0010		
Hard-T	mg/L	838		
Fe-T	mg/L	<0.020		
Pb-T	mg/L	<0.00040		
Mg-T	mg/L	43.4		
Mn-T	mg/L	<0.0020		
Mo-T	mg/L	<0.0020		
Ni-T	mg/L	<0.0020		
K-T	mg/L	1.99		
S-T	mg/L	260		
Se-T	mg/L	<0.00020		
Si-T	mg/L	4.20		
Ag-T	mg/L	<0.000040		
Na-T	mg/L	58.0		
Sr-T	mg/L	1.71		
Zn-T	mg/L	<0.010		
Al-D	mg/L	0.0102		
As-D	mg/L	0.00020		
Ba-D	mg/L	0.0301		
B-D	mg/L	0.43		
Be-D	mg/L	<0.00020		
Cd-D	mg/L	<0.000020		
Ca-D	mg/L	271		
Cr-D	mg/L	<0.0020		
Co-D	mg/L	<0.00040		
Cu-D	mg/L	0.00053		
Hard-D	mg/L	863		
Fe-D	mg/L	<0.010		
Pb-D	mg/L	<0.00040		
Mg-D	mg/L	45.3		
Mn-D	mg/L	<0.0020		
Mo-D	mg/L	<0.0020		
Ni-D	mg/L	<0.0020		
K-D	mg/L	2.05		
S-D	mg/L	263		
Se-D	mg/L	<0.00020		
Si-D	mg/L	4.40		
Na-D	mg/L	58.8		
Sr-D	mg/L	1.63		
Zn-D	mg/L	<0.010		

Appendix 1 - Tables

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		
Date		05-07-2022	02-08-2022	06-09-2022
pH-F	pH Units	8.37	8.26	7.95
Cond-F	uS/cm	1593	1691	1508
SO4-D	mg/L	310	530	410
TSS	mg/L	<1.0	<1.0	<1.0
Al-T	mg/L	<0.0030		<0.0030
As-T	mg/L	0.00036		0.00043
Ba-T	mg/L	0.0124		0.0145
B-T	mg/L	0.692		0.848
Cd-T	mg/L	<0.000010		<0.000010
Ca-T	mg/L	83.5		89.6
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	254		278
Fe-T	mg/L	0.050		0.047
Pb-T	mg/L	<0.00020		<0.00020
Mg-T	mg/L	11.1		13.2
Mn-T	mg/L	0.0102		0.0172
Mo-T	mg/L	<0.0010		<0.0010
Ni-T	mg/L	<0.0010		<0.0010
K-T	mg/L	2.87		3.53
S-T	mg/L	128		151
Se-T	mg/L	<0.00010		<0.00010
Si-T	mg/L	2.55		3.52
Ag-T	mg/L	<0.000020		<0.000020
Na-T	mg/L	229		267
Sr-T	mg/L	0.879		1.02
Zn-T	mg/L	<0.0050		<0.0050
Al-D	mg/L	<0.0030		<0.0030
As-D	mg/L	0.00041		0.00040
Ba-D	mg/L	0.0131		0.0140
B-D	mg/L	0.755		1.00
Be-D	mg/L	<0.00010		<0.00010
Cd-D	mg/L	<0.000010		<0.000010
Ca-D	mg/L	88.3		85.9
Cr-D	mg/L	<0.0010		<0.0010
Co-D	mg/L	<0.00020		<0.00020
Cu-D	mg/L	0.00025		<0.00020
Hard-D	mg/L	270		270
Fe-D	mg/L	0.0142		0.0138
Pb-D	mg/L	<0.00020		<0.00020
Mg-D	mg/L	12.0		13.5
Mn-D	mg/L	0.0100		0.0155
Mo-D	mg/L	<0.0010		<0.0010
Ni-D	mg/L	<0.0010		<0.0010
K-D	mg/L	3.05		3.32
S-D	mg/L	138		153
Se-D	mg/L	<0.00010		<0.00010
Si-D	mg/L	2.71		3.45
Na-D	mg/L	236		269
Sr-D	mg/L	0.898		1.02
Zn-D	mg/L	<0.0050		<0.0050

Appendix 1 - Tables

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

EMS ID		E218582		Stn Std											
Site Description		Settling Pond #1 - Authorized Discharge Location for South Mine Water													
Site Name		SPD		Std Val											
Date		Max	Min	05-07-2022	11-07-2022	18-07-2022	25-07-2022	03-08-2022	08-08-2022	15-08-2022	22-08-2022	29-08-2022	06-09-2022	12-09-2022	19-09-2022
pH-F	pH Units	8.5	6	7.42	7.76	7.85	7.88	7.72	7.55	7.61	7.47	7.04	7.7	7.74	8.08
Cond-F	uS/cm			1020	919	900	990	1047	958	1013	1101	1118	1066	1050	1076
SO4-D	mg/L			430	420	470	460	470	470	450	460	460	450	480	490
TSS	mg/L	25		<1.0	4.0	1.6	<1.0	1.2	1.6	2.4	2.0	1.6	2.0	2.8	<1.0
Alk-T	mg/L			94				100					110		
Acidity83	mg/L			2.4				4.2					2.6		
Al-T	mg/L			0.0044									<0.0030		
As-T	mg/L			0.00164									0.00166		
Ba-T	mg/L			0.0165									0.0174		
B-T	mg/L			0.244									0.315		
Cd-T	mg/L			<0.000010									<0.000010		
Ca-T	mg/L			150									169		
Cr-T	mg/L			<0.0010									<0.0010		
Co-T	mg/L			<0.00020									<0.00020		
Cu-T	mg/L			0.00061									<0.00050		
Hard-T	mg/L			456									513		
Fe-T	mg/L			0.160									0.217		
Pb-T	mg/L			<0.00020									<0.00020		
Mg-T	mg/L			19.9									22.4		
Mn-T	mg/L			0.244									0.0539		
Mo-T	mg/L			<0.0010									<0.0010		
Ni-T	mg/L			<0.0010									<0.0010		
K-T	mg/L			1.54									1.89		
S-T	mg/L			145									158		
Se-T	mg/L			<0.00010									<0.00010		
Si-T	mg/L			1.02									4.50		
Ag-T	mg/L			<0.000020									<0.000020		
Na-T	mg/L			32.7									42.5		
Sr-T	mg/L			0.995									1.17		
Zn-T	mg/L			<0.0050									<0.0050		
Al-D	mg/L	0.5		<0.0030				<0.0030					<0.0030		
As-D	mg/L			0.00150				0.00161					0.00154		
Ba-D	mg/L			0.0162				0.0178					0.0166		
B-D	mg/L			0.264				0.284					0.359		
Be-D	mg/L			<0.00010				<0.00010					<0.00010		
Cd-D	mg/L			<0.000010				<0.000010					<0.000010		
Ca-D	mg/L			155				155					168		
Cr-D	mg/L			<0.0010				<0.0010					<0.0010		
Co-D	mg/L			<0.00020				<0.00020					<0.00020		
Cu-D	mg/L	0.02		0.00023				0.00033					<0.00020		
Hard-D	mg/L			474				469					512		
Fe-D	mg/L	0.5		0.118				0.174					0.134		
Pb-D	mg/L	0.05		<0.00020				<0.00020					<0.00020		
Mg-D	mg/L			20.8				20.2					22.5		
Mn-D	mg/L			0.237				0.0644					0.0227		
Mo-D	mg/L			<0.0010				<0.0010					<0.0010		
Ni-D	mg/L			<0.0010				<0.0010					<0.0010		
K-D	mg/L			1.53				1.73					1.74		
S-D	mg/L			154				153					161		
Se-D	mg/L			<0.00010				<0.00010					<0.00010		
Si-D	mg/L			1.02				2.90					4.55		
Na-D	mg/L			33.7				36.9					43.0		
Sr-D	mg/L			0.983				1.09					1.13		
Zn-D	mg/L	0.2		<0.0050				<0.0050					<0.0050		
O&G	mg/L	10						<1.0							
N-NH3	mg/L	1.0						0.035					<0.015		
P-T	mg/L							0.0074					0.0065		

Appendix 1 - Tables

Table 11 Passive Treatment System (PTS) Influent from 2-S Mine Pool 1 Page(s)

Site Description		Passive Treatment System (PTS) Influent from 2-S Mine Pool														
Site Name		INF														
Date		05-07-2022	11-07-2022	11-07-2022	18-07-2022	25-07-2022	03-08-2022	08-08-2022	15-08-2022	22-08-2022	29-08-2022	06-09-2022	12-09-2022	12-09-2022	19-09-2022	26-09-2022
Flow	m ³ /s	0.0084	0.0081	0.0081	0.0082	0.0082	0.0082	0.0082	0.0082	0.0079	0.0082	0.0081	0.008	0.008	0.008	0.008
pH-F	pH Units	6.83	7.22	7.22	7.24	7.07	7.31	7	7.05	7.2	7.26	7.36	7.43	7.43	7.12	7.34
Cond-F	uS/cm	1610	1540	1540	1459	1566	1633	1474	1590	1629	1675	1436	1430	1430	1043	1519
H2S	mg/L	0.0058	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.12	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
SO4-D	mg/L	570	630	610	650	640	650	630	570	570	530	520	540	520	520	500
TSS	mg/L	8.0					4.0					3.6				
Alk-T	mg/L	240					250					260				
Acidity83	mg/L	7.1					13.8					10.8				
Al-T	mg/L	<0.0030					<0.0060					<0.0030				
As-T	mg/L	0.00415					0.00384					0.00426				
Ba-T	mg/L	0.0232					0.0209					0.0214				
B-T	mg/L	0.564					0.58					0.573				
Cd-T	mg/L	<0.000010					<0.000020					<0.000010				
Ca-T	mg/L	229					206					212				
Cr-T	mg/L	<0.0010					<0.0020					<0.0010				
Co-T	mg/L	0.00094					0.00080					0.00075				
Cu-T	mg/L	<0.00050					<0.0010					<0.00050				
Hard-T	mg/L	641					573					586				
Fe-T	mg/L	2.59					2.56					2.66				
Pb-T	mg/L	<0.00020					<0.00040					<0.00020				
Mg-T	mg/L	16.8					14.5					13.9				
Mn-T	mg/L	0.361					0.321					0.342				
Mo-T	mg/L	<0.0010					<0.0020					<0.0010				
Ni-T	mg/L	0.0014					<0.0020					0.0011				
K-T	mg/L	1.99					1.72					1.82				
S-T	mg/L	216					188					180				
Se-T	mg/L	<0.00010					<0.00020					<0.00010				
Si-T	mg/L	3.22					3.10					3.20				
Ag-T	mg/L	<0.000020					<0.000040					<0.000020				
Na-T	mg/L	110					98.5					99.2				
Sr-T	mg/L	2.13					1.89					1.89				
Zn-T	mg/L	<0.0050					<0.010					<0.0050				
Al-D	mg/L	<0.0030					<0.0030					<0.0030				
As-D	mg/L	0.00414					0.00392					0.00400				
Ba-D	mg/L	0.0244					0.0225					0.0211				
B-D	mg/L	0.660					0.583					0.697				
Be-D	mg/L	<0.00010					<0.00010					<0.00010				
Cd-D	mg/L	<0.000010					<0.000010					<0.000010				
Ca-D	mg/L	237					220					211				
Cr-D	mg/L	<0.0010					<0.0010					<0.0010				
Co-D	mg/L	0.00102					0.00079					0.00071				
Cu-D	mg/L	<0.00020					<0.00020					<0.00020				
Hard-D	mg/L	665					611					586				
Fe-D	mg/L	2.76					2.52					2.63				
Pb-D	mg/L	<0.00020					<0.00020					<0.00020				
Mg-D	mg/L	17.6					15.2					14.3				
Mn-D	mg/L	0.370					0.332					0.328				
Mo-D	mg/L	<0.0010					<0.0010					<0.0010				
Ni-D	mg/L	0.0015					0.0011					0.0010				
K-D	mg/L	1.96					1.82					1.73				
S-D	mg/L	222					199					183				
Se-D	mg/L	<0.00010					<0.00010					0.00047				
Si-D	mg/L	3.35					3.29					3.18				
Na-D	mg/L	113					100					100				
Sr-D	mg/L	2.11					2.09					1.88				
Zn-D	mg/L	<0.0050					<0.0050					<0.0050				

Appendix 1 - Tables

Table 12 PTS Biochemical Reactor Cell 1 Page(s)

Site Description		Passive Treatment System Biochemical Reactor Cell												
Site Name		BCR												
Date		05-07-2022	11-07-2022	18-07-2022	25-07-2022	03-08-2022	08-08-2022	15-08-2022	22-08-2022	29-08-2022	06-09-2022	13-09-2022	19-09-2022	26-09-2022
pH-F	pH Units	7.58	7.22	7.23	7.2	7.27	6.99	7.12	7.12	7.07	7.27	7.33	7.29	7.27
Cond-F	uS/cm	1400	1421	1410	1440	1487	1419	1475	1559	1538	1397	1366	1375	1446
H2S	mg/L	42	27	27	32	42	39	11	12	31	30	36	22	
SO4-D	mg/L	320	540	600	510	500	510	460	480	460	440	470	490	460
TSS	mg/L	1.6				<1.0					<1.0			
Alk-T	mg/L	280				340					330			
Acidity83	mg/L	13.4				20.5					13.9			
Al-T	mg/L	0.0070				0.0070					0.0060			
As-T	mg/L	0.00014				0.00022					0.00020			
Ba-T	mg/L	0.0276				0.0286					0.0277			
B-T	mg/L	0.644				0.645					0.595			
Cd-T	mg/L	<0.000010				<0.000010					<0.000010			
Ca-T	mg/L	212				211					211			
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	591				587					588			
Fe-T	mg/L	<0.010				<0.010					<0.010			
Pb-T	mg/L	<0.00020				<0.00020					<0.00020			
Mg-T	mg/L	15.2				14.8					14.9			
Mn-T	mg/L	0.244				0.213					0.182			
Mo-T	mg/L	<0.0010				<0.0010					<0.0010			
Ni-T	mg/L	<0.0010				<0.0010					<0.0010			
K-T	mg/L	1.92				2.01					1.94			
S-T	mg/L	172				159					152			
Se-T	mg/L	<0.00010				<0.00010					<0.00010			
Si-T	mg/L	3.75				4.14					4.15			
Ag-T	mg/L	<0.000020				<0.000020					<0.000020			
Na-T	mg/L	109				105					105			
Sr-T	mg/L	1.96				2.09					1.98			
Zn-T	mg/L	<0.0050				<0.0050					<0.0050			
Al-D	mg/L	0.0163				<0.0060					<0.0060			
As-D	mg/L	0.00027				0.00022					<0.00020			
Ba-D	mg/L	0.0285				0.0286					0.0262			
B-D	mg/L	0.75				0.65					0.74			
Be-D	mg/L	<0.00020				<0.00020					<0.00020			
Cd-D	mg/L	<0.000020				<0.000020					<0.000020			
Ca-D	mg/L	213				210					200			
Cr-D	mg/L	<0.0020				<0.0020					<0.0020			
Co-D	mg/L	<0.00040				<0.00040					<0.00040			
Cu-D	mg/L	<0.00040				<0.00040					<0.00040			
Hard-D	mg/L	599				584					557			
Fe-D	mg/L	<0.010				<0.010					<0.010			
Pb-D	mg/L	<0.00040				<0.00040					<0.00040			
Mg-D	mg/L	16.1				14.4					13.9			
Mn-D	mg/L	0.247				0.206					0.179			
Mo-D	mg/L	<0.0020				<0.0020					<0.0020			
Ni-D	mg/L	<0.0020				<0.0020					<0.0020			
K-D	mg/L	1.94				1.98					1.87			
S-D	mg/L	225				273					340			
Se-D	mg/L	0.0154				0.0111					0.0598			
Si-D	mg/L	3.98				4.25					3.98			
Na-D	mg/L	112				101					103			
Sr-D	mg/L	1.94				2.04					1.91			
Zn-D	mg/L	<0.010				<0.010					<0.010			

Appendix 1 - Tables

Table 13 PTS Sulphide Polishing Cell 1 Page(s)

Site Description		Passive Treatment System Sulphide Polishing Cell													
Site Name		SPCEFF													
Date		05-07-2022	11-07-2022	18-07-2022	25-07-2022	03-08-2022	08-08-2022	15-08-2022	22-08-2022	29-08-2022	06-09-2022	12-09-2022	19-09-2022	19-09-2022	26-09-2022
pH-F	pH Units	7.55	7.57	7.82	7.63	7.69	7.47	7.49	7.51	7.45	7.58	7.6	7.62	7.62	7.67
Cond-F	uS/cm	1240	1340	1359	1403	1380	1269	1346	1386	1404	1347	1301	1364	1364	1396
H2S	mg/L	0.051	0.20	0.020	<0.0020	<0.0020	0.0065	0.0081	0.0055	0.0076	0.012	0.051	2.7	1.5	0.093
SO4-D	mg/L	330	470	520	510	450	420	380	380	360	380	400	410	410	390
TSS	mg/L	2.0				<1.0					5.2				
Alk-T	mg/L	280				330					370				
Acidity83	mg/L	2.4				8.7					5.4				
Al-T	mg/L	0.0095				0.0096					0.0110				
As-T	mg/L	0.00184				0.00275					0.00269				
Ba-T	mg/L	0.0323				0.0357					0.0300				
B-T	mg/L	0.578				0.690					0.590				
Cd-T	mg/L	0.000030				<0.000010					<0.000010				
Ca-T	mg/L	178				191					194				
Cr-T	mg/L	<0.0010				<0.0010					<0.0010				
Co-T	mg/L	0.00037				0.00025					0.00020				
Cu-T	mg/L	0.00223				0.00430					0.00181				
Hard-T	mg/L	494				538					544				
Fe-T	mg/L	0.472				0.462					0.529				
Pb-T	mg/L	0.00054				<0.00020					<0.00020				
Mg-T	mg/L	12.1				14.7					14.4				
Mn-T	mg/L	0.0791				0.0199					0.0545				
Mo-T	mg/L	<0.0010				<0.0010					<0.0010				
Ni-T	mg/L	<0.0010				<0.0010					<0.0010				
K-T	mg/L	1.60				1.80					1.82				
S-T	mg/L	134				155					133				
Se-T	mg/L	<0.00010				<0.00010					<0.00010				
Si-T	mg/L	3.46				3.66					4.20				
Ag-T	mg/L	<0.000020				<0.000020					<0.000020				
Na-T	mg/L	90.4				109					105				
Sr-T	mg/L	1.63				2.08					1.93				
Zn-T	mg/L	<0.0050				0.0105					<0.0050				
Al-D	mg/L	0.0044				0.0054					0.0057				
As-D	mg/L	0.00130				0.00218					0.00193				
Ba-D	mg/L	0.0307				0.0354					0.0290				
B-D	mg/L	0.586				0.673					0.719				
Be-D	mg/L	<0.00010				<0.00010					<0.00010				
Cd-D	mg/L	<0.000010				<0.000010					<0.000010				
Ca-D	mg/L	171				196					195				
Cr-D	mg/L	<0.0010				<0.0010					<0.0010				
Co-D	mg/L	0.00035				0.00024					<0.00020				
Cu-D	mg/L	0.00077				0.00146					0.00033				
Hard-D	mg/L	477				551					548				
Fe-D	mg/L	0.0530				0.219					0.118				
Pb-D	mg/L	<0.00020				<0.00020					<0.00020				
Mg-D	mg/L	12.2				14.7					14.7				
Mn-D	mg/L	0.0754				0.0181					0.0503				
Mo-D	mg/L	<0.0010				<0.0010					<0.0010				
Ni-D	mg/L	<0.0010				<0.0010					<0.0010				
K-D	mg/L	1.52				1.80					1.75				
S-D	mg/L	134				156					139				
Se-D	mg/L	<0.00010				<0.00010					0.00062				
Si-D	mg/L	3.31				3.75					4.38				
Na-D	mg/L	88.0				107					105				
Sr-D	mg/L	1.58				2.11					1.92				
Zn-D	mg/L	<0.0050				<0.0050					<0.0050				

Appendix 1 - Tables

Table 14 2 South Pit Inflow 1 Page(s)

Site Description		2 South Pit Inflow														
Site Name		2S1														
Date		05-07-2022	11-07-2022	18-07-2022	25-07-2022	03-08-2022	08-08-2022	15-08-2022	22-08-2022	29-08-2022	29-08-2022	06-09-2022	06-09-2022	12-09-2022	19-09-2022	26-09-2022
pH-F	pH Units	7.45	7.72	7.87	7.71	7.97	7.8	7.85	7.81	7.83	7.83	8.03	8.03	8.01	7.94	8.02
Cond-F	uS/cm	1340	1242	1375	1420	1498	1425	1501	1520	1506	1506	1434	1434	1382	1411	1412
H2S	mg/L	0.017	0.0036	0.0063	0.011	0.018	0.017	0.014	0.020	0.036	0.031	0.013	0.015	0.0091	0.0035	0.014
SO4-D	mg/L	430	500	610	580	570	570	520	530	500	490	490	500	510	530	500
TSS	mg/L	<2.4				<1.0						<1.0	1.6			
Alk-T	mg/L	220				270						280	270			
Acidity83	mg/L	<1.0				4.1						<1.0	<1.0			
Al-T	mg/L	0.0053				0.0052						0.0032	0.0036			
As-T	mg/L	0.00039				0.00054						0.00043	0.00042			
Ba-T	mg/L	0.0270				0.0312						0.0275	0.0278			
B-T	mg/L	0.494				0.590						0.583	0.562			
Cd-T	mg/L	<0.000010				<0.000010						<0.000010	<0.000010			
Ca-T	mg/L	179				200						210	210			
Cr-T	mg/L	<0.0010				<0.0010						<0.0010	<0.0010			
Co-T	mg/L	0.00043				0.00037						0.00025	0.00025			
Cu-T	mg/L	<0.00050				<0.00050						<0.00050	<0.00050			
Hard-T	mg/L	504				562						586	588			
Fe-T	mg/L	0.242				0.296						0.181	0.185			
Pb-T	mg/L	<0.00020				<0.00020						<0.00020	<0.00020			
Mg-T	mg/L	13.6				15.5						15.1	15.3			
Mn-T	mg/L	0.241				0.190						0.121	0.126			
Mo-T	mg/L	<0.0010				<0.0010						<0.0010	<0.0010			
Ni-T	mg/L	<0.0010				<0.0010						<0.0010	<0.0010			
K-T	mg/L	1.42				1.80						1.77	1.83			
S-T	mg/L	159				187						172	181			
Se-T	mg/L	<0.00010				<0.00010						<0.00010	<0.00010			
Si-T	mg/L	3.75				3.91						3.91	3.89			
Ag-T	mg/L	<0.000020				<0.000020						<0.000020	<0.000020			
Na-T	mg/L	84.3				103						102	106			
Sr-T	mg/L	1.54				2.05						1.88	1.87			
Zn-T	mg/L	<0.0050				<0.0050						<0.0050	<0.0050			
Al-D	mg/L	0.0038				<0.0030						<0.0030	<0.0030			
As-D	mg/L	0.00041				0.00047						0.00039	0.00038			
Ba-D	mg/L	0.0274				0.0307						0.0273	0.0273			
B-D	mg/L	0.532				0.612						0.685	0.676			
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	183				215						203	203			
Cr-D	mg/L	<0.0010				<0.0010						<0.0010	<0.0010			
Co-D	mg/L	0.00045				0.00037						0.00021	0.00021			
Cu-D	mg/L	0.00025				<0.00020						<0.00020	<0.00020			
Hard-D	mg/L	516				601						570	568			
Fe-D	mg/L	0.101				0.0527						0.0467	0.0459			
Pb-D	mg/L	<0.00020				<0.00020						<0.00020	<0.00020			
Mg-D	mg/L	14.4				15.5						15.1	15.1			
Mn-D	mg/L	0.243				0.183						0.122	0.126			
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	1.44				1.77						1.73	1.72			
S-D	mg/L	164				189						180	181			
Se-D	mg/L	<0.00010				<0.00010						<0.00010	<0.00010			
Si-D	mg/L	3.93				4.09						3.80	3.81			
Na-D	mg/L	85.5				103						105	107			
Sr-D	mg/L	1.57				2.05						1.92	1.89			
Zn-D	mg/L	<0.0050				<0.0050						<0.0050	<0.0050			

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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		
Date		05-07-2022	03-08-2022	06-09-2022
pH-F	pH Units	7.84	8.02	8.15
Cond-F	uS/cm	1130	1277	1224
SO4-D	mg/L	510	510	480
TSS	mg/L	1.6	<1.0	
Alk-T	mg/L	150	140	150
Acidity83	mg/L	<1.0	1.7	<1.0
Al-T	mg/L	0.0032	0.0032	0.0034
As-T	mg/L	0.00044	0.00073	0.00062
Ba-T	mg/L	0.0215	0.0235	0.0241
B-T	mg/L	0.507	0.519	0.557
Cd-T	mg/L	<0.000010	<0.000010	<0.000010
Ca-T	mg/L	152	156	165
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	0.00082	<0.00050
Hard-T	mg/L	432	452	475
Fe-T	mg/L	0.030	0.032	0.021
Pb-T	mg/L	<0.00020	<0.00020	<0.00020
Mg-T	mg/L	13.0	15.1	15.2
Mn-T	mg/L	0.0126	0.0163	0.0034
Mo-T	mg/L	<0.0010	<0.0010	<0.0010
Ni-T	mg/L	<0.0010	<0.0010	<0.0010
K-T	mg/L	1.43	1.59	1.74
S-T	mg/L	160	177	178
Se-T	mg/L	<0.00010	<0.00010	<0.00010
Si-T	mg/L	2.78	3.17	3.15
Ag-T	mg/L	<0.000020	<0.000020	<0.000020
Na-T	mg/L	85.4	98.7	103
Sr-T	mg/L	1.49	1.68	1.78
Zn-T	mg/L	<0.0050	<0.0050	<0.0050
Al-D	mg/L	<0.0030	<0.0030	<0.0030
As-D	mg/L	0.00052	0.00075	0.00060
Ba-D	mg/L	0.0215	0.0222	0.0236
B-D	mg/L	0.524	0.621	0.652
Be-D	mg/L	<0.00010	<0.00010	<0.00010
Cd-D	mg/L	<0.000010	<0.000010	<0.000010
Ca-D	mg/L	152	152	166
Cr-D	mg/L	<0.0010	<0.0010	<0.0010
Co-D	mg/L	<0.00020	<0.00020	<0.00020
Cu-D	mg/L	0.00040	0.00030	0.00026
Hard-D	mg/L	438	440	478
Fe-D	mg/L	0.0160	0.0185	0.0075
Pb-D	mg/L	<0.00020	<0.00020	<0.00020
Mg-D	mg/L	14.0	14.3	15.4
Mn-D	mg/L	0.0098	<0.0010	<0.0010
Mo-D	mg/L	<0.0010	<0.0010	<0.0010
Ni-D	mg/L	<0.0010	<0.0010	<0.0010
K-D	mg/L	1.43	1.48	1.68
S-D	mg/L	164	168	184
Se-D	mg/L	<0.00010	<0.00010	<0.00010
Si-D	mg/L	2.84	3.25	3.23
Na-D	mg/L	87.6	94.2	105
Sr-D	mg/L	1.44	1.65	1.80
Zn-D	mg/L	<0.0050	<0.0050	<0.0050

Appendix 1 - Tables

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				
Date		05-07-2022	03-08-2022	06-09-2022
pH-F	pH Units	7.72	8	8.06
Cond-F	uS/cm	1240	1427	1324
SO4-D	mg/L	540	640	530
Alk-T	mg/L	160	190	200
Acidity83	mg/L	<1.0	3.3	<1.0
Al-T	mg/L	0.0044	<0.0030	<0.0030
As-T	mg/L	0.00074	0.00039	0.00033
Ba-T	mg/L	0.0170	0.0160	0.0141
B-T	mg/L	0.382	0.344	0.347
Cd-T	mg/L	<0.000010	<0.000010	<0.000010
Ca-T	mg/L	189	213	217
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	560	635	642
Fe-T	mg/L	0.022	0.015	<0.010
Pb-T	mg/L	<0.00020	<0.00020	<0.00020
Mg-T	mg/L	21.1	25.0	24.4
Mn-T	mg/L	0.0135	0.0028	0.0042
Mo-T	mg/L	<0.0010	<0.0010	<0.0010
Ni-T	mg/L	<0.0010	<0.0010	<0.0010
K-T	mg/L	1.98	2.26	2.20
S-T	mg/L	170	196	181
Se-T	mg/L	0.00012	0.00014	0.00015
Si-T	mg/L	2.37	2.43	2.55
Ag-T	mg/L	<0.000020	<0.000020	<0.000020
Na-T	mg/L	52.1	48.2	52.4
Sr-T	mg/L	1.24	1.44	1.32
Zn-T	mg/L	<0.0050	<0.0050	<0.0050
Al-D	mg/L	<0.0030	<0.0030	<0.0030
As-D	mg/L	0.00077	0.00036	0.00034
Ba-D	mg/L	0.0170	0.0156	0.0148
B-D	mg/L	0.407	0.360	0.392
Be-D	mg/L	<0.00010	<0.00010	<0.00010
Cd-D	mg/L	<0.000010	<0.000010	<0.000010
Ca-D	mg/L	189	233	228
Cr-D	mg/L	<0.0010	<0.0010	<0.0010
Co-D	mg/L	<0.00020	<0.00020	<0.00020
Cu-D	mg/L	0.00040	0.00021	<0.00020
Hard-D	mg/L	565	686	676
Fe-D	mg/L	0.0090	0.0093	<0.0050
Pb-D	mg/L	<0.00020	<0.00020	<0.00020
Mg-D	mg/L	22.7	25.2	25.9
Mn-D	mg/L	0.0056	0.0021	0.0038
Mo-D	mg/L	<0.0010	<0.0010	<0.0010
Ni-D	mg/L	<0.0010	<0.0010	<0.0010
K-D	mg/L	2.00	2.24	2.25
S-D	mg/L	176	200	200
Se-D	mg/L	0.00012	0.00014	0.00015
Si-D	mg/L	2.41	2.64	2.74
Na-D	mg/L	54.1	47.9	56.3
Sr-D	mg/L	1.17	1.44	1.37
Zn-D	mg/L	<0.0050	<0.0050	<0.0050

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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		
Date		05-07-2022	03-08-2022	06-09-2022
pH-F	pH Units	7.63	8.01	8.04
Cond-F	uS/cm	1230	1337	1260
SO4-D	mg/L	530	630	530
Alk-T	mg/L	140	140	150
Acidity83	mg/L	<1.0	2.4	1.5
Al-T	mg/L	0.0181		<0.0030
As-T	mg/L	0.00055		0.00048
Ba-T	mg/L	0.0151		0.0151
B-T	mg/L	0.332		0.358
Cd-T	mg/L	0.000012		<0.000010
Ca-T	mg/L	184		214
Cr-T	mg/L	<0.0010		<0.0010
Co-T	mg/L	<0.00020		<0.00020
Cu-T	mg/L	0.00083		<0.00050
Hard-T	mg/L	549		638
Fe-T	mg/L	0.048		0.035
Pb-T	mg/L	<0.00020		<0.00020
Mg-T	mg/L	21.9		25.2
Mn-T	mg/L	0.0195		0.0217
Mo-T	mg/L	<0.0010		<0.0010
Ni-T	mg/L	<0.0010		<0.0010
K-T	mg/L	2.02		2.32
S-T	mg/L	169		190
Se-T	mg/L	<0.00010		0.00012
Si-T	mg/L	1.78		3.14
Ag-T	mg/L	<0.000020		<0.000020
Na-T	mg/L	44.4		53.2
Sr-T	mg/L	1.19		1.40
Zn-T	mg/L	<0.0050		<0.0050
Al-D	mg/L	<0.0030		<0.0030
As-D	mg/L	0.00058		0.00050
Ba-D	mg/L	0.0150		0.0152
B-D	mg/L	0.381		0.454
Be-D	mg/L	<0.00010		<0.00010
Cd-D	mg/L	<0.000010		<0.000010
Ca-D	mg/L	191		212
Cr-D	mg/L	<0.0010		<0.0010
Co-D	mg/L	<0.00020		<0.00020
Cu-D	mg/L	0.00040		<0.00020
Hard-D	mg/L	576		635
Fe-D	mg/L	0.0168		0.0209
Pb-D	mg/L	<0.00020		<0.00020
Mg-D	mg/L	23.8		25.9
Mn-D	mg/L	0.0134		0.0250
Mo-D	mg/L	<0.0010		<0.0010
Ni-D	mg/L	<0.0010		<0.0010
K-D	mg/L	2.01		2.28
S-D	mg/L	182		198
Se-D	mg/L	0.00011		<0.00010
Si-D	mg/L	1.85		3.22
Na-D	mg/L	48.1		54.5
Sr-D	mg/L	1.21		1.39
Zn-D	mg/L	<0.0050		<0.0050

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Table 18 Culvert Downstream End at Access Road 1 Page(s)

EMS ID		E217014		
Site Description		Culvert Downstream End at Access Road		
Site Name		SPC		
Date		05-Jul-22	01-08-2022	01-09-2022
pH-F	pH Units	7.51	Dry	Dry
Cond-F	uS/cm	340		
SO4-D	mg/L	120		
TSS	mg/L	<1.0		
Alk-T	mg/L	51		
Acidity83	mg/L	1.5		
Al-T	mg/L	0.0801		
As-T	mg/L	0.00079		
Ba-T	mg/L	0.0110		
B-T	mg/L	0.069		
Cd-T	mg/L	<0.000010		
Ca-T	mg/L	43.7		
Cr-T	mg/L	<0.0010		
Co-T	mg/L	<0.00020		
Cu-T	mg/L	0.00059		
Hard-T	mg/L	134		
Fe-T	mg/L	0.248		
Pb-T	mg/L	<0.00020		
Mg-T	mg/L	6.07		
Mn-T	mg/L	0.0061		
Mo-T	mg/L	<0.0010		
Ni-T	mg/L	<0.0010		
K-T	mg/L	0.478		
S-T	mg/L	33.4		
Se-T	mg/L	<0.00010		
Si-T	mg/L	4.29		
Ag-T	mg/L	<0.000020		
Na-T	mg/L	8.42		
Sr-T	mg/L	0.274		
Zn-T	mg/L	<0.0050		
Al-D	mg/L	0.0603		
As-D	mg/L	0.00081		
Ba-D	mg/L	0.0110		
B-D	mg/L	0.073		
Be-D	mg/L	<0.00010		
Cd-D	mg/L	<0.000010		
Ca-D	mg/L	45.4		
Cr-D	mg/L	<0.0010		
Co-D	mg/L	<0.00020		
Cu-D	mg/L	0.00056		
Hard-D	mg/L	139		
Fe-D	mg/L	0.178		
Pb-D	mg/L	<0.00020		
Mg-D	mg/L	6.27		
Mn-D	mg/L	0.0032		
Mo-D	mg/L	<0.0010		
Ni-D	mg/L	<0.0010		
K-D	mg/L	0.481		
S-D	mg/L	34.6		
Se-D	mg/L	<0.00010		
Si-D	mg/L	4.30		
Na-D	mg/L	8.68		
Sr-D	mg/L	0.271		
Zn-D	mg/L	<0.0050		

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Table 19 South End Mine Water Entering Long Lake Near the Outlet 1 Page(s)

EMS ID	E292130		Stn Std	Max-WQG											
Site Description	South End Mine Water Entering Long Lake Near the Outlet														
Site Name	LLE	Std Val													
Date	Max	05-07-2022	11-07-2022	18-07-2022	25-07-2022	03-08-2022	08-08-2022	15-08-2022	22-08-2022	29-08-2022	06-09-2022	12-09-2022	19-09-2022	26-09-2022	
Flow	m3/s		0.02264	0.000587	0.01493	0.18	0.00072	0.00057	0.000274	0.00072	0.00003	0.00044	0.0000	0.00072	0.00072
pH-F	pH Units	9.0	7.05	7.28	7.31	7.08	7.33	7.17	7.35	7.15	7.33	7.34	7.36	7.72	7.28
Cond-F	uS/cm		480	425	472	670	1087	1109	1163	1246	1376	1304	1333	1335	1392
SO4-D	mg/L		180	170	230	280	430	500	25	470	530	510	560	580	550
TSS	mg/L	25	<1.0				4.4					9.6			
DOC	mg/L		9.2				4.5								
Alk-T	mg/L		56				140					200			
Acidity83	mg/L		1.8				9.0					4.6			
N-NH3	mg/L	12.9	<0.015				0.060					0.12			
N-NO23	mg/L		0.032				<0.020					<0.020			
P-T	mg/L		0.0094				0.0062					0.0049			
Al-T	mg/L		0.0437				0.0062					0.0118			
As-T	mg/L	0.005	0.00072				0.00192					0.00314			
Ba-T	mg/L		0.0176				0.0354					0.0497			
B-T	mg/L		0.113				0.333					0.494			
Cd-T	mg/L		<0.000010				<0.000010					<0.000010			
Ca-T	mg/L		64.6				136					208			
Cr-T	mg/L		<0.0010				<0.0010					<0.0010			
Co-T	mg/L	0.11	<0.00020				0.00021					<0.00020			
Cu-T	mg/L		0.00057				<0.00050					<0.00050			
Hard-T	mg/L		197				426					647			
Fe-T	mg/L	1.0	0.304				2.06					6.47			
Pb-T	mg/L	0.01763	<0.00020				<0.00020					<0.00020			
Mg-T	mg/L		8.75				20.6					30.9			
Mn-T	mg/L	0.8706	0.0458				0.372					0.424			
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		0.668				1.90					2.92			
S-T	mg/L		56.0				139					193			
Se-T	mg/L		<0.00010				<0.00010					<0.00010			
Si-T	mg/L		4.08				4.96					6.89			
Ag-T	mg/L	0.0001	<0.000020				<0.000020					<0.000020			
Na-T	mg/L		13.6				41.4					66.2			
Sr-T	mg/L		0.388				0.916					1.27			
Zn-T	mg/L	0.033	<0.0050				<0.0050					<0.0050			
Al-D	mg/L	0.1	0.0323				<0.0030					0.0037			
As-D	mg/L		0.00074				0.00164					0.00281			
Ba-D	mg/L		0.0175				0.0357					0.0488			
B-D	mg/L		0.122				0.342					0.580			
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		63.7				147					204			
Cr-D	mg/L		<0.0010				<0.0010					<0.0010			
Co-D	mg/L		<0.00020				0.00020					<0.00020			
Cu-D	mg/L		0.00055				<0.00020					<0.00020			
Hard-D	mg/L		198				453					637			
Fe-D	mg/L	0.35	0.203				1.44					5.41			
Pb-D	mg/L		<0.00020				<0.00020					<0.00020			
Mg-D	mg/L		9.42				21.0					31.3			
Mn-D	mg/L		0.0465				0.369					0.420			
Mo-D	mg/L		<0.0010				<0.0010					<0.0010			
Ni-D	mg/L		<0.0010				<0.0010					<0.0010			
K-D	mg/L		0.686				1.87					2.82			
S-D	mg/L		58.9				136					195			
Se-D	mg/L		<0.00010				<0.00010					<0.00010			
Si-D	mg/L		4.05				5.28					6.85			
Na-D	mg/L		14.2				41.7					68.6			
Sr-D	mg/L		0.378				0.962					1.26			
Zn-D	mg/L	0.033	0.0051				<0.0050					0.0212			

Appendix 1 - Tables

Table 20 Seep into Long Lake 1 Page(s)

EMS ID	E292131	Stn Std	Max-WQG		
Site Description	Seep into Long Lake				
Site Name	LLS	Std Val			
Date		Max	05-07-2022	04-08-2022	06-09-2022
pH-F	pH Units	9.0	6.72	7.05	7.46
Cond-F	uS/cm		1510	1376	1098
SO4-D	mg/L		640	530	400
TSS	mg/L	25	3.6	3.2	2.4
Alk-T	mg/L		210	220	210
Acidity83	mg/L		3.8	5.4	1.5
Al-T	mg/L		<0.0030	<0.0030	0.0031
As-T	mg/L	0.005	0.00238	0.00124	0.00113
Ba-T	mg/L		0.0161	0.0159	0.0173
B-T	mg/L		0.506	0.504	0.388
Cd-T	mg/L		<0.000010	<0.000010	<0.000010
Ca-T	mg/L		214	201	171
Cr-T	mg/L		<0.0010	<0.0010	<0.0010
Co-T	mg/L	0.11	0.00076	0.00065	0.00047
Cu-T	mg/L		<0.00050	<0.00050	<0.00050
Hard-T	mg/L		614	574	490
Fe-T	mg/L	1.0	1.31	0.962	0.622
Pb-T	mg/L	0.01763	<0.00020	<0.00020	<0.00020
Mg-T	mg/L		19.3	17.6	15.5
Mn-T	mg/L	0.8706	0.301	0.252	0.184
Mo-T	mg/L	2.0	<0.0010	<0.0010	<0.0010
Ni-T	mg/L		0.0017	0.0013	0.0013
K-T	mg/L		2.41	2.27	2.12
S-T	mg/L		201	177	138
Se-T	mg/L		<0.00010	<0.00010	<0.00010
Si-T	mg/L		2.64	2.48	2.47
Ag-T	mg/L	0.0001	<0.000020	<0.000020	<0.000020
Na-T	mg/L		87.8	81.2	64.1
Sr-T	mg/L		1.91	1.79	1.49
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		0.00240	0.00117	0.00113
Ba-D	mg/L		0.0168	0.0154	0.0175
B-D	mg/L		0.555	0.487	0.444
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		219	188	169
Cr-D	mg/L		<0.0010	<0.0010	<0.0010
Co-D	mg/L		0.00084	0.00068	0.00045
Cu-D	mg/L		<0.00020	<0.00020	<0.00020
Hard-D	mg/L		633	537	484
Fe-D	mg/L	0.35	1.29	0.889	0.596
Pb-D	mg/L		<0.00020	<0.00020	<0.00020
Mg-D	mg/L		20.9	16.6	15.2
Mn-D	mg/L		0.315	0.232	0.181
Mo-D	mg/L		<0.0010	<0.0010	<0.0010
Ni-D	mg/L		0.0018	0.0012	0.0010
K-D	mg/L		2.49	2.19	1.99
S-D	mg/L		215	165	136
Se-D	mg/L		<0.00010	<0.00010	<0.00010
Si-D	mg/L		2.77	2.55	2.36
Na-D	mg/L		92.5	76.5	65.0
Sr-D	mg/L		1.91	1.70	1.50
Zn-D	mg/L	0.033	<0.0050	<0.0050	<0.0050

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Table 21 Long Lake Middle Seep 1 Page(s)

EMS ID	E292131	Max-WQG			
Site Description	Long Lake Middle Seep				
Site Name	LLSM	Std Val			
Date		Max	05-07-2022	04-08-2022	06-09-2022
pH-F	pH Units	9.0	7.33	7.54	7.94
Cond-F	uS/cm		1080	1087	1001
SO4-D	mg/L		400	370	340
TSS	mg/L	25	<1.0	<1.0	3.2
Alk-T	mg/L		160	170	190
Acidity83	mg/L		1.6	2.3	2.4
Al-T	mg/L		0.0124	0.0055	0.0082
As-T	mg/L	0.005	0.00043	0.00018	0.00025
Ba-T	mg/L		0.0182	0.0190	0.0188
B-T	mg/L		0.343	0.341	0.293
Cd-T	mg/L		<0.000010	<0.000010	<0.000010
Ca-T	mg/L		160	161	151
Cr-T	mg/L		<0.0010	<0.0010	<0.0010
Co-T	mg/L	0.11	0.00031	0.00021	<0.00020
Cu-T	mg/L		0.00063	0.00058	0.00060
Hard-T	mg/L		464	465	438
Fe-T	mg/L	1.0	0.205	0.088	0.145
Pb-T	mg/L	0.01763	<0.00020	<0.00020	<0.00020
Mg-T	mg/L		15.8	15.3	14.9
Mn-T	mg/L	0.8706	0.0861	0.0639	0.0642
Mo-T	mg/L	2.0	<0.0010	<0.0010	<0.0010
Ni-T	mg/L		0.0013	<0.0010	<0.0010
K-T	mg/L		2.00	1.97	1.89
S-T	mg/L		140	130	114
Se-T	mg/L		<0.00010	<0.00010	<0.00010
Si-T	mg/L		2.72	2.52	2.32
Ag-T	mg/L	0.0001	<0.000020	<0.000020	<0.000020
Na-T	mg/L		52.8	52.7	49.3
Sr-T	mg/L		1.34	1.34	1.30
Zn-T	mg/L	0.033	<0.0050	<0.0050	<0.0050
Al-D	mg/L	0.1	0.0034	0.0044	0.0038
As-D	mg/L		0.00046	0.00017	0.00022
Ba-D	mg/L		0.0178	0.0183	0.0183
B-D	mg/L		0.363	0.337	0.367
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		158	143	148
Cr-D	mg/L		<0.0010	<0.0010	<0.0010
Co-D	mg/L		0.00034	0.00024	<0.00020
Cu-D	mg/L		0.00056	0.00059	0.00043
Hard-D	mg/L		464	419	429
Fe-D	mg/L	0.35	0.156	0.0513	0.0408
Pb-D	mg/L		<0.00020	<0.00020	<0.00020
Mg-D	mg/L		16.5	15.0	14.6
Mn-D	mg/L		0.0890	0.0611	0.0645
Mo-D	mg/L		<0.0010	<0.0010	<0.0010
Ni-D	mg/L		0.0013	<0.0010	<0.0010
K-D	mg/L		1.96	1.97	1.83
S-D	mg/L		141	125	116
Se-D	mg/L		<0.00010	<0.00010	<0.00010
Si-D	mg/L		2.73	2.42	2.31
Na-D	mg/L		54.5	49.0	49.7
Sr-D	mg/L		1.29	1.27	1.27
Zn-D	mg/L	0.033	<0.0050	<0.0050	<0.0050

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Table 22 Authorised Discharge Location for 7S South Mine Water 1 Page(s)

EMS ID	E292069		
Site Description	Authorised Discharge Location for 7S South Mine Water		
Site Name	7SSD	Std Val	
Date	Max		05-07-2022
pH-F	pH Units	6.00 - 8.00	7.63
Cond-F	uS/cm		320
SO4-D	mg/L	500	10
TSS	mg/L	25	<2.5
Alk-T	mg/L		120
Acidity83	mg/L		<1.0
DOC	mg/L		4.3
Al-T	mg/L		0.0273
As-T	mg/L		0.00190
Ba-T	mg/L		0.0047
B-T	mg/L		<0.050
Cd-T	mg/L		<0.000010
Ca-T	mg/L		32.4
Cr-T	mg/L		<0.0010
Co-T	mg/L		<0.00020
Cu-T	mg/L		0.00069
Hard-T	mg/L		120
Fe-T	mg/L		0.133
Pb-T	mg/L		<0.00020
Mg-T	mg/L		9.56
Mn-T	mg/L		0.155
Mo-T	mg/L		<0.0010
Ni-T	mg/L		<0.0010
K-T	mg/L		0.560
S-T	mg/L		3.9
Se-T	mg/L		<0.00010
Si-T	mg/L		4.42
Ag-T	mg/L		<0.000020
Na-T	mg/L		5.32
Sr-T	mg/L		0.129
Zn-T	mg/L		<0.0050
Al-D	mg/L	0.1	0.0032
As-D	mg/L		0.00194
Ba-D	mg/L		0.0060
B-D	mg/L		<0.050
Be-D	mg/L		<0.00010
Cd-D	mg/L	0.000045	<0.000010
Ca-D	mg/L		35.0
Cr-D	mg/L		<0.0010
Co-D	mg/L		<0.00020
Cu-D	mg/L	0.014	0.00061
Hard-D	mg/L		129
Fe-D	mg/L	0.35	0.0586
Pb-D	mg/L		<0.00020
Mg-D	mg/L		10.2
Mn-D	mg/L		0.163
Mo-D	mg/L		<0.0010
Ni-D	mg/L		<0.0010
K-D	mg/L		0.642
S-D	mg/L		3.0
Se-D	mg/L	0.016	<0.00010
Si-D	mg/L		4.74
Na-D	mg/L		5.58
Sr-D	mg/L		0.141
Zn-D	mg/L		<0.0050

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Table 23 7 South Portal Sump 1 Page(s)

EMS ID		E292110		
Site Description		7 South Portal Sump		
Site Name		7SPS		
Date		05-07-2022	04-08-2022	06-09-2022
pH-F	pH Units	7.59	7.27	7.75
Cond-F	uS/cm	744	879	924
SO4-D	mg/L	260	310	330
TSS	mg/L	5.2	4.4	6.0
Alk-T	mg/L	120	150	150
Acidity83	mg/L	1.7	2.4	1.4
Al-T	mg/L	0.259	0.0171	0.0043
As-T	mg/L	0.00207	0.00107	0.00059
Ba-T	mg/L	0.0251	0.0206	0.0191
B-T	mg/L	0.109	0.095	0.090
Cd-T	mg/L	0.000017	<0.000010	<0.000010
Ca-T	mg/L	90.1	132	142
Cr-T	mg/L	<0.0010	<0.0010	<0.0010
Co-T	mg/L	0.00163	0.00112	0.00042
Cu-T	mg/L	0.00458	0.00081	0.00058
Hard-T	mg/L	304	457	488
Fe-T	mg/L	2.38	5.58	2.30
Pb-T	mg/L	<0.00020	<0.00020	<0.00020
Mg-T	mg/L	19.2	30.7	32.6
Mn-T	mg/L	0.115	0.190	0.124
Mo-T	mg/L	<0.0010	<0.0010	<0.0010
Ni-T	mg/L	0.0034	0.0037	0.0024
K-T	mg/L	1.33	1.47	1.75
S-T	mg/L	73.6	112	118
Se-T	mg/L	0.00014	<0.00010	<0.00010
Si-T	mg/L	4.47	6.33	6.45
Ag-T	mg/L	<0.000020	<0.000020	<0.000020
Na-T	mg/L	7.44	15.7	18.9
Sr-T	mg/L	0.333	0.503	0.551
Zn-T	mg/L	0.0066	<0.0050	<0.0050
Al-D	mg/L	0.0182	<0.0030	<0.0030
As-D	mg/L	0.00063	0.00047	0.00070
Ba-D	mg/L	0.0202	0.0182	0.0190
B-D	mg/L	0.111	0.095	0.118
Be-D	mg/L	<0.00010	<0.00010	<0.00010
Cd-D	mg/L	<0.000010	<0.000010	<0.000010
Ca-D	mg/L	87.3	116	138
Cr-D	mg/L	<0.0010	<0.0010	<0.0010
Co-D	mg/L	0.00164	0.00094	0.00034
Cu-D	mg/L	0.00190	0.00058	0.00055
Hard-D	mg/L	301	412	480
Fe-D	mg/L	0.236	0.454	0.156
Pb-D	mg/L	<0.00020	<0.00020	<0.00020
Mg-D	mg/L	20.1	29.6	32.8
Mn-D	mg/L	0.134	0.168	0.120
Mo-D	mg/L	<0.0010	<0.0010	<0.0010
Ni-D	mg/L	0.0036	0.0032	0.0022
K-D	mg/L	1.15	1.44	1.70
S-D	mg/L	72.1	104	119
Se-D	mg/L	0.00013	<0.00010	<0.00010
Si-D	mg/L	4.29	5.81	6.17
Na-D	mg/L	8.11	14.8	19.2
Sr-D	mg/L	0.310	0.478	0.540
Zn-D	mg/L	<0.0050	<0.0050	<0.0050

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Table 24 Road Side Crossing Bridge on Stream 1 above the Lower Wetland 1 Page(s)

EMS ID		E292109		Max-WQG	
Site Description		Road Side Crossing Bridge on Stream 1 above the Lower Wetland			
Site Name		7S		Std Val	
Date		Max	05-07-2022	04-08-2022	01-09-2022
pH-F	pH Units	9.0	6.98	DRY	DRY
Cond-F	uS/cm		72.7		
SO4-D	mg/L		3.8		
TSS	mg/L	25	<1.0		
Alk-T	mg/L		21		
Acidity83	mg/L		<1.0		
DOC	mg/L		1.6		
Al-T	mg/L		0.0398		
As-T	mg/L	0.005	0.00047		
Ba-T	mg/L		0.0021		
B-T	mg/L		<0.050		
Cd-T	mg/L		<0.000010		
Ca-T	mg/L		5.90		
Cr-T	mg/L		<0.0010		
Co-T	mg/L	0.11	<0.00020		
Cu-T	mg/L		<0.00050		
Hard-T	mg/L		20.4		
Fe-T	mg/L	1.0	0.050		
Pb-T	mg/L	0.01763	<0.00020		
Mg-T	mg/L		1.37		
Mn-T	mg/L	0.8706	<0.0010		
Mo-T	mg/L	2.0	<0.0010		
Ni-T	mg/L		<0.0010		
K-T	mg/L		0.086		
S-T	mg/L		<3.0		
Se-T	mg/L		<0.00010		
Si-T	mg/L		5.91		
Ag-T	mg/L	0.0001	<0.000020		
Na-T	mg/L		1.99		
Sr-T	mg/L		0.0241		
Zn-T	mg/L	0.033	<0.0050		
Al-D	mg/L	0.1	0.0218		
As-D	mg/L		0.00011		
Ba-D	mg/L		0.0019		
B-D	mg/L		<0.050		
Be-D	mg/L		<0.00010		
Cd-D	mg/L	0.00017	<0.000010		
Ca-D	mg/L		5.86		
Cr-D	mg/L		<0.0010		
Co-D	mg/L		<0.00020		
Cu-D	mg/L	≤ 0.00334	0.00034		
Hard-D	mg/L		20.6		
Fe-D	mg/L	0.35	<0.0050		
Pb-D	mg/L		<0.00020		
Mg-D	mg/L		1.44		
Mn-D	mg/L		<0.0010		
Mo-D	mg/L		<0.0010		
Ni-D	mg/L		<0.0010		
K-D	mg/L		0.089		
S-D	mg/L		<3.0		
Se-D	mg/L		<0.00010		
Si-D	mg/L		5.76		
Na-D	mg/L		2.01		
Sr-D	mg/L		0.0236		
Zn-D	mg/L	0.033	<0.0050		

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Table 25 Discharge From Settling Pond #4 (WD) 1 Page(s)

EMS ID E207409												
Discharge From Settling Pond #4 (SP4/WD)												
Date	April		May		June		July		August		September	
	Max. (m ³ /s)	Daily (m ³ /s)	Max. (m ³ /s)	Daily (m ³ /s)	Max. (m ³ /s)	Daily (m ³ /s)	Max. (m ³ /s)	Daily (m ³ /s)	Max. (m ³ /s)	Daily (m ³ /s)	Max. (m ³ /s)	Daily (m ³ /s)
1	0.1460	0.1360	0.1680	0.1560	0.0710	0.0620	0.0700	0.0620	0.1290	0.1150	0.0990	0.0860
2	0.1490	0.1400	0.1700	0.1620	0.0690	0.0610	0.0710	0.0610	0.1290	0.1190	0.0830	0.0760
3	0.1400	0.1290	0.1640	0.1490	0.0670	0.0640	0.0710	0.0600	0.1290	0.1150	0.0820	0.0740
4	0.1470	0.1360	0.1390	0.1340	0.0720	0.0670	0.0750	0.0680	0.1290	0.1220	0.0820	0.0750
5	0.1550	0.1480	0.1420	0.1180	0.0700	0.0650	0.0820	0.0770	0.1240	0.0930	0.0810	0.0780
6	0.1510	0.1330	0.1530	0.1490	0.0690	0.0620	0.0840	0.0750	0.0740	0.0610	0.0800	0.0710
7	0.1500	0.1430	0.1640	0.1450	0.0840	0.0710	0.0860	0.0830	0.0730	0.0640	0.0810	0.0730
8	0.1500	0.1380	0.1690	0.1580	0.0930	0.0840	0.0980	0.0830	0.0760	0.0650	0.0820	0.0750
9	0.1520	0.1450	0.1640	0.1530	0.0920	0.0860	0.0840	0.0560	0.0750	0.0650	0.0830	0.0740
10	0.1450	0.1400	0.1740	0.1550	0.1000	0.0920	0.0910	0.0850	0.0750	0.0650	0.0810	0.0720
11	0.1450	0.1410	0.1860	0.1790	0.1000	0.0890	0.0920	0.0850	0.0750	0.0690	0.0810	0.0730
12	0.1500	0.1380	0.1800	0.1740	0.0930	0.0870	0.0890	0.0810	0.0740	0.0680	0.0810	0.0770
13	0.1530	0.1420	0.1800	0.1740	0.0920	0.0850	0.0890	0.0810	0.0760	0.0660	0.0880	0.0780
14	0.1490	0.1190	0.1760	0.1500	0.1000	0.0880	0.0870	0.0790	0.0760	0.0720	0.0960	0.0870
15	0.1530	0.1420	0.1550	0.1510	0.1060	0.0870	0.0860	0.0820	0.0760	0.0690	0.0970	0.0890
16	0.1580	0.1480	0.1660	0.1590	0.0950	0.0880	0.0870	0.0830	0.0750	0.0670	0.0970	0.0910
17	0.1600	0.1480	0.1860	0.1720	0.0930	0.0880	0.0860	0.0820	0.0820	0.0670	0.0960	0.0870
18	0.1540	0.1450	0.1860	0.1780	0.0920	0.0830	0.0860	0.0800	0.0840	0.0780	0.0950	0.0850
19	0.1560	0.1520	0.1800	0.1710	0.0910	0.0850	0.0850	0.0730	0.0870	0.0750	0.0920	0.0840
20	0.1530	0.1430	0.1830	0.1690	0.0930	0.0830	0.0730	0.0640	0.0800	0.0750	0.0920	0.0830
21	0.1520	0.1450	0.1890	0.1750	0.0890	0.0830	0.0710	0.0600	0.0780	0.0690	0.0920	0.0830
22	0.1440	0.1410	0.1890	0.1760	0.0890	0.0850	0.0990	0.0790	0.0780	0.0750	0.0900	0.0830
23	0.1540	0.1280	0.2110	0.1980	0.0890	0.0820	0.1020	0.0920	0.1320	0.0980	0.0910	0.0840
24	0.1570	0.1470	0.2150	0.2120	0.0890	0.0800	0.1040	0.0920	0.1310	0.1180	0.0900	0.0870
25	0.1550	0.1450	0.2150	0.1910	0.0880	0.0790	0.1020	0.0920	0.1280	0.0920	0.0890	0.0850
26	0.1590	0.1430	0.1370	0.1020	0.0870	0.0790	0.1240	0.1010	0.1300	0.0930	0.0880	0.0820
27	0.1680	0.1550	0.0950	0.0880	0.0860	0.0780	0.1290	0.1150	0.1300	0.1000	0.0880	0.0800
28	0.1440	0.1320	0.0970	0.0890	0.0870	0.0730	0.1290	0.1160	0.1040	0.0920	0.0810	0.0730
29	0.1680	0.1460	0.0950	0.0860	0.0730	0.0630	0.1300	0.1170	0.0990	0.0920	0.0800	0.0770
30	0.1690	0.1550	0.0920	0.0870	0.0710	0.0660	0.1290	0.0930	0.1000	0.0920	0.0800	0.0720
31			0.0930	0.0800			0.1240	0.1010	0.1000	0.0880		
Monthly Max	0.1690		0.2150		0.1060		0.1300		0.1320		0.0990	
Monthly Avg	0.1414		0.1497		0.0782		0.0825		0.0838		0.0798	
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					

Appendix 1 - Tables

Table 26 Discharge From Settling Pond # 1 (SPD) 1 Page(s)

EMS ID		E218582										
Discharge From Settling Pond #1 (SP1/SPD)												
Date	April		May		June		July		August		September	
	Max. (m ³ /s)	Daily (m ³ /s)	Max. (m ³ /s)	Daily (m ³ /s)	Max. (m ³ /s)	Daily (m ³ /s)	Max. (m ³ /s)	Daily (m ³ /s)	Max. (m ³ /s)	Daily (m ³ /s)	Max. (m ³ /s)	Daily (m ³ /s)
1	0.0443	0.0245	0.0534	0.0328	0.0250	0.0136	0.0091	0.0029	0.0091	0.0034	0.0032	0.0028
2	0.0443	0.0350	0.0534	0.0372	0.0443	0.0294	0.0032	0.0020	0.0032	0.0013	0.0160	0.0056
3	0.0534	0.0354	0.0639	0.0460	0.0443	0.0260	0.0341	0.0142	0.0160	0.0083	0.0160	0.0064
4	0.0877	0.0520	0.0764	0.0592	0.0341	0.0194	0.0534	0.0323	0.0091	0.0045	0.0032	0.0027
5	0.0877	0.0621	0.0764	0.0588	0.0443	0.0258	0.0534	0.0259	0.0032	0.0020	0.0160	0.0057
6	0.0639	0.0505	0.0639	0.0569	0.0443	0.0169	0.0534	0.0350	0.0091	0.0031	0.0160	0.0067
7	0.0534	0.0376	0.0639	0.0531	0.0341	0.0161	0.0534	0.0333	0.0091	0.0041	0.0091	0.0031
8	0.0443	0.0290	0.0639	0.0420	0.0341	0.0194	0.0443	0.0264	0.0160	0.0056	0.0032	0.0013
9	0.0534	0.0304	0.0534	0.0403	0.0250	0.0139	0.0250	0.0156	0.0160	0.0053	0.0091	0.0044
10	0.0443	0.0302	0.0534	0.0305	0.0341	0.0228	0.0341	0.0217	0.0032	0.0017	0.0091	0.0043
11	0.0341	0.0202	0.0443	0.0285	0.0443	0.0216	0.0250	0.0120	0.0160	0.0053	0.0032	0.0024
12	0.0443	0.0388	0.0534	0.0377	0.0341	0.0163	0.0341	0.0131	0.0160	0.0063	0.0091	0.0023
13	0.0534	0.0402	0.0534	0.0352	0.0341	0.0172	0.0341	0.0143	0.0091	0.0033	0.0160	0.0083
14	0.0639	0.0412	0.0534	0.0338	0.0341	0.0195	0.0091	0.0067	0.0160	0.0103	0.0091	0.0038
15	0.0764	0.0510	0.0443	0.0270	0.0160	0.0095	0.0341	0.0214	0.0091	0.0042	0.0250	0.0097
16	0.0764	0.0508	0.0534	0.0312	0.0341	0.0218	0.0160	0.0101	0.0250	0.0067	0.0160	0.0095
17	0.0639	0.0549	0.0443	0.0276	0.0341	0.0142	0.0250	0.0174	0.0160	0.0070	0.0250	0.0081
18	0.0877	0.0772	0.0443	0.0236	0.0341	0.0139	0.0160	0.0098	0.0032	0.0030	0.0160	0.0082
19	0.0764	0.0657	0.0443	0.0248	0.0250	0.0159	0.0250	0.0127	0.0250	0.0078	0.0091	0.0041
20	0.0764	0.0568	0.0443	0.0215	0.0160	0.0092	0.0250	0.0145	0.0160	0.0052	0.0032	0.0027
21	0.0764	0.0616	0.0443	0.0198	0.0341	0.0187	0.0160	0.0093	0.0032	0.0021	0.0091	0.0028
22	0.0639	0.0557	0.0443	0.0224	0.0160	0.0078	0.0091	0.0050	0.0250	0.0097	0.0091	0.0031
23	0.0639	0.0447	0.0341	0.0186	0.0341	0.0153	0.0250	0.0130	0.0091	0.0044	0.0250	0.0165
24	0.0639	0.0417	0.0341	0.0164	0.0160	0.0052	0.0160	0.0085	0.0160	0.0037	0.0091	0.0060
25	0.0639	0.0390	0.0341	0.0161	0.0250	0.0146	0.0250	0.0068	0.0160	0.0078	0.0250	0.0079
26	0.0534	0.0350	0.0250	0.0100	0.0160	0.0057	0.0250	0.0081	0.0091	0.0025	0.0250	0.0125
27	0.0534	0.0338	0.0341	0.0198	0.0250	0.0106	0.0032	0.0030	0.0160	0.0045	0.0091	0.0043
28	0.0443	0.0288	0.0091	0.0065	0.0160	0.0092	0.0160	0.0050	0.0160	0.0066	0.0250	0.0113
29	0.0443	0.0261	0.0341	0.0191	0.0250	0.0141	0.0091	0.0047	0.0032	0.0026	0.0160	0.0089
30	0.0443	0.0292	0.0250	0.0108	0.0160	0.0063	0.0160	0.0048	0.0160	0.0057	0.0091	0.0039
31		0.0000	0.0341	0.0172		0.0000	0.0091	0.0053	0.0160	0.0060		
Monthly Max	0.0877		0.0764		0.0443		0.0534		0.0250		0.0250	
Monthly Avg		0.0413		0.0298		0.0152		0.0134		0.0050		0.0060
PNC = Permit Non-compliance												
TSS is required weekly when max daily flow > 0.046m ³ /s												
NF= No Flow All flow data is subject to review												

Appendix 1 - Tables

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)						

Appendix 1 - Tables

Table 28 2S Inflow and Outflow 1 Page(s)

EMS ID: E292127 2-South Pit Inflow							EMS ID: E292127 2-South Pit 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	15.541	16.079	16.86	16.41	13.37	12.85	1	7.084	12.762	11.216	9.15	4.881	5.12
2	15.405	21.919	16.99	15.31	13.46	13.06	2	6.989	13.842	12.403	8.16	5.036	5.13
3	21.034	25.836	18.50	17.03	13.78	13.11	3	7.611	18.333	13.286	9.46	5.783	5.40
4	35.702	25.356	17.11	20.58	13.18	13.32	4	10.332	22.608	12.451	16.75	5.971	5.40
5	39.679	28.470	17.39	20.58	12.12	11.87	5	12.549	21.969	11.124	13.59	5.364	5.01
6	20.331	34.715	16.31	12.57	13.00	12.11	6	13.414	25.547	10.031	8.55	5.119	4.65
7	11.448	28.525	15.14	14.51	5.57	12.79	7	11.881	25.594	9.500	9.06	5.300	4.66
8	11.681	22.828	15.67	12.28	12.95	12.25	8	10.851	20.452	9.455	8.62	5.387	4.51
9	10.251	14.281	18.87	12.74	12.56	12.10	9	9.857	15.746	10.727	7.30	5.098	4.53
10	11.321	17.460	22.67	12.65	13.58	12.25	10	9.443	13.644	12.897	6.84	5.289	4.79
11	11.593	17.372	21.77	12.45	13.83	12.59	11	8.443	14.962	13.361	6.15	5.574	4.89
12	13.983	19.259	19.35	13.36	14.50	12.64	12	9.311	16.550	11.914	6.38	5.788	5.01
13	16.565	17.523	15.52	12.93	15.66	12.93	13	8.619	15.728	10.517	5.96	6.952	5.25
14	18.541	17.462	11.72	12.85	15.01	13.39	14	13.976	14.806	8.736	6.23	6.886	5.66
15	17.921	16.806	14.19	13.24	14.79	13.57	15	19.990	14.090	8.606	6.68	6.626	6.74
16	17.797	14.741	15.31	13.36	14.51	13.07	16	19.879	12.640	9.796	6.89	6.118	6.43
17	17.194	10.796	14.41	12.98	14.04	12.90	17	21.098	10.445	8.987	7.03	5.748	6.07
18	20.956	12.771	14.89	13.66	13.98	12.61	18	25.352	10.480	8.582	6.42	5.603	5.50
19	23.287	12.014	14.73	15.16	14.28	13.20	19	24.110	9.008	8.194	6.76	6.085	5.23
20	25.098	11.319	14.29	14.80	13.91	13.13	20	25.821	8.092	7.715	6.69	6.191	5.26
21	27.554	11.265	14.19	14.40	14.34	13.40	21	26.647	7.688	8.391	6.38	6.172	5.40
22	25.876	10.881	14.12	14.35	14.02	14.39	22	24.144	7.658	7.857	6.32	5.944	5.96
23	23.785	10.964	13.99	13.99	13.65	15.04	23	22.580	7.324	7.247	5.92	5.684	6.93
24	22.446	10.449	14.07	13.77	13.57	14.96	24	21.106	7.779	7.042	5.83	5.407	6.98
25	18.693	10.768	13.45	13.53	13.60	14.49	25	19.502	6.938	6.946	5.72	5.339	6.64
26	15.626	10.321	13.14	13.63	13.74	14.36	26	16.020	7.402	6.411	5.55	5.538	6.51
27	14.382	11.002	15.82	13.77	13.69	14.53	27	13.414	7.265	6.504	5.43	5.377	6.44
28	15.673	10.424	18.74	14.51	13.67	15.10	28	12.012	6.790	8.903	5.46	5.373	7.02
29	15.185	11.141	10.86	13.84	13.73	14.95	29	11.762	7.307	10.030	5.80	5.580	6.56
30	18.403	13.586	17.34	12.49	13.00	14.61	30	13.537	7.380	9.740	5.14	5.422	6.43
31		17.26		13.08	12.92		31		9.862		4.70	5.190	

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Water Level EMS ID: E292131				Weekly Flow Requirements (L/s) EMS IDE292131						
Site LLS				Site LLSM						
Water Level (m)				Flow (L/s)						
Weeks	Level (m)	Weeks	Level	Date	Apr	May	June	July	Aug	Sep
1	0.010	32		1	6.500	10.757	2.624	0.539	0.000	0.0444
2	0.010	33		2	6.500	9.201	2.624	0.539	0.000	0.0359
3	0.010	34		3	6.500	12.456	1.946	0.539	-	0.0418
4	0.010	35		4	10.757	16.295	1.946	0.539	0.462	0.0345
5	0.010	36		5	16.295	16.295	1.946	0.555	0.170	0.0389
6	0.010	37		6	10.757	16.295	1.376	0.539	0.170	0.0149
7	0.010	38		7	10.757	14.300	1.376	0.539	0.170	NF
8	0.010	39		8	10.757	16.295	1.376	-	0.162	NF
9	0.010	40		9	10.757	14.300	1.376	0.539	0.170	NF
10	0.010	41		10	10.757	14.300	0.909	-	0.170	NF
11	0.010	42		11	10.757	12.456	0.909	0.539	0.170	NF
12	0.010	43		12	10.757	12.456	0.909	0.539	0.170	NF
13	0.010	44		13	12.456	10.757	0.909	0.539	-	NF
14	0.010	45		14	12.456	10.757	0.909	0.539	-	NF
15	0.010	46		15	16.295	9.201	0.909	0.401	0.117	NF
16	0.010	47		16	20.749	9.201	0.909	-	0.078	NF
17	0.010	48		17	20.749	9.201	0.909	-	0.072	NF
18	0.010	49		18	25.847	7.783	0.909	-	0.064	NF
19	0.010	50		19	25.847	7.783	0.909	0.401	0.068	NF
20	0.010	51		20	25.847	7.783	0.909	0.401	0.078	NF
21	0.010	52		21	25.847	6.500	0.909	0.066	0.039	NF
22	0.010			22	23.216	6.500	0.909	0.039	0.039	NF
23	0.010			23	23.216	6.500	0.909	0.039	0.039	NF
24	0.010			24	20.749	5.347	0.909	0.039	0.039	NF
25	0.010			25	18.443	5.347	0.909	0.039	0.039	NF
26	NF			26	16.295	5.347	0.539	0.036	0.035	NF
27	NF			27	14.300	4.319	0.539	0.035	0.041	NF
28				28	12.456	4.319	0.909	0.033	0.039	NF
29				29	12.456	4.319	0.909	0.033	0.039	NF
30				30	10.757	3.413	0.539	0.033	0.039	NF
31				31		3.413		0.039	0.039	NF
Notes: No flow = NF				Notes: No flow = NF						

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Continuous Flow Requirements (L/s)						
EMS ID: E292109						
Site 7S						
Flow (L/S)	Estimated Flow					
Date	Apr	May	June	July	Aug	Sep
1	3.16	4.71	0.29	0.05	NF	NF
2	2.91	7.52	0.39	0.03	NF	NF
3	3.57	11.47	1.01	0.04	NF	NF
4	15.36	23.03	1.22	0.47	NF	NF
5	21.71	16.68	1.81	0.63	NF	NF
6	10.79	11.77	1.55	0.52	NF	NF
7	5.84	8.62	1.08	0.85	NF	NF
8	5.26	6.27	0.97	1.04	NF	NF
9	4.20	5.12	1.23	0.84	NF	NF
10	3.71	4.29	1.79	0.66	NF	NF
11	3.15	3.33	1.49	0.40	NF	NF
12	3.89	4.18	1.17	0.34	NF	NF
13	5.81	4.91	1.38	0.30	NF	NF
14	8.79	4.33	0.98	0.25	NF	NF
15	10.45	3.40	1.41	0.25	NF	NF
16	8.74	3.36	1.56	0.26	NF	NF
17	6.50	2.67	1.17	0.26	NF	NF
18	12.80	3.33	1.13	0.22	NF	NF
19	14.51	2.96	0.91	0.15	NF	NF
20	8.26	2.17	0.68	0.12	NF	NF
21	8.99	1.79	0.61	0.08	NF	NF
22	6.82	1.46	0.47	0.06	NF	NF
23	5.27	1.24	0.33	0.03	NF	NF
24	4.15	1.05	0.24	0.02	NF	NF
25	4.01	0.88	0.18	0.01	NF	NF
26	4.17	0.69	0.13	NF	NF	NF
27	4.85	0.67	0.09	NF	NF	NF
28	4.55	0.50	0.09	NF	NF	NF
29	3.70	0.50	0.01	NF	NF	NF
30	5.25	0.48	0.07	NF	NF	NF
31		0.32		NF	NF	NF

Notes: **No flow = NF**

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5 in 30 Flow Requirements						
EMS ID: 126402						
Site WA						
Flow (m³/s)						
Date	Apr	May	June	July	Aug	Sep
1	2.13	2.09	1.24	1.19	1.34	1.14
2	2.13	2.09	1.26	1.34	1.35	1.27
3	2.14	1.59	1.27	1.35	1.35	1.16
4	2.20	1.16	1.27	1.38	1.34	1.18
5	2.21	1.17	1.28	1.37	1.34	1.09
6	2.17	1.17	1.29	1.37	1.34	1.21
7	2.16	1.17	1.27	1.37	1.34	1.28
8	2.14	1.17	1.27	1.36	1.34	1.21
9	2.14	1.16	1.27	1.35	1.34	1.17
10	2.14	1.16	1.27	1.35	1.34	1.12
11	2.13	1.17	1.27	1.34	1.36	1.20
12	2.18	1.18	1.22	1.34	1.37	1.14
13	2.18	1.18	1.07	1.33	1.35	1.19
14	2.14	1.18	1.21	1.33	1.34	1.04
15	2.12	1.18	1.25	1.34	1.34	1.19
16	2.12	1.18	1.22	1.34	1.34	1.30
17	2.12	1.18	1.06	1.33	1.33	1.33
18	2.12	1.19	1.05	1.33	1.33	1.34
19	2.12	1.15	1.05	1.33	1.33	1.34
20	2.11	1.15	1.05	1.32	1.32	1.34
21	2.11	1.15	1.05	1.32	1.32	1.34
22	2.10	1.15	1.04	1.32	1.32	1.33
23	2.09	1.15	1.03	1.32	1.31	1.32
24	2.08	1.13	1.03	1.32	1.31	1.32
25	2.09	1.16	1.03	1.33	1.30	1.31
26	2.09	1.17	1.04	1.33	1.30	1.30
27	2.09	1.18	1.04	1.33	1.29	1.30
28	2.09	1.19	1.04	1.33	1.29	1.19
29	2.08	1.19	1.10	1.34	1.29	1.06
30	2.09	1.21	1.14	1.34	1.13	1.01
31		1.24		1.34	1.22	

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5 in 30 Flow Requirements (Level)						
EMS ID: 900504						
Site WB						
Level (m)						
Date	Apr	May	June	July	Aug	Sep
1	0.6074	0.6033	0.5130	0.4887	0.5083	0.4890
2	0.6050	0.5991	0.5189	0.4980	0.5087	0.4909
3	0.6189	0.6002	0.5222	0.5055	0.5088	0.4897
4	0.6248	0.5839	0.5250	0.5240	0.5053	0.4840
5	0.6665	0.5750	0.5196	0.5199	0.5074	0.4829
6	0.6930	0.5760	0.5187	0.5317	0.5060	0.4824
7	0.6795	0.5725	0.5239	0.5378	0.5064	0.4843
8	0.6487	0.5700	0.5193	0.5449	0.5057	0.4883
9	0.6381	0.5581	0.5234	0.5467	0.5054	0.4873
10	0.6307	0.5512	0.5219	0.5448	0.5032	0.4831
11	0.6188	0.5505	0.5200	0.5468	0.5086	0.4816
12	0.6173	0.5456	0.5191	0.5392	0.5091	0.4839
13	0.6290	0.5486	0.5085	0.5335	0.5087	0.4852
14	0.6322	0.5455	0.4971	0.5298	0.5102	0.4821
15	0.6351	0.5461	0.5126	0.5253	0.5084	0.4827
16	0.6370	0.5383	0.5115	0.5256	0.5040	0.4920
17	0.6381	0.5415	0.5082	0.5265	-	0.4970
18	0.6430	0.5393	0.4972	0.5220	-	0.4983
19	0.6448	0.5347	0.4955	0.5217	-	0.4961
20	0.6511	0.5322	0.4943	0.5189	-	0.4994
21	0.6418	0.5271	0.4956	0.5176	-	0.5008
22	0.6372	0.5245	0.4932	0.5138	0.5039	0.4967
23	0.6328	0.5213	0.4892	0.5141	0.5064	0.4978
24	0.6275	0.5212	0.4866	0.5142	0.5057	0.4988
25	0.6213	0.5171	0.4851	0.5136	0.5032	0.5005
26	0.6144	0.5186	0.4849	0.5111	0.5031	0.4983
27	0.6114	0.5123	0.4846	0.5110	0.5004	0.4961
28	0.6056	0.5146	0.4793	0.5122	0.4983	0.4907
29	0.6026	0.5101	0.4453	0.5115	0.4976	0.4833
30	0.6004	0.5118	0.4874	0.5085	0.4962	0.4775
31		0.5128		0.5086	0.4927	
Notes: Flow curve is being developed.						

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5 in 30 Flow Requirements (Level)						
EMS ID: E219412						
Site LLO						
Average Level (m)						
Date	Apr	May	June	July	Aug	Sep
1	0.6618	0.6581	0.5420	0.4664	0.4356	0.3074
2	0.6511	0.6515	0.5502	0.4642	0.4291	0.3024
3	0.6720	0.6638	0.5605	0.4635	0.4240	0.2954
4	0.7184	0.6992	0.5737	0.4996	0.4169	0.2908
5	0.8124	0.7196	0.5702	0.5432	0.4179	0.2869
6	0.8272	0.7235	0.5657	0.5921	0.4143	0.2828
7	0.7921	0.7158	0.5651	0.6119	0.4115	0.2722
8	0.7440	0.7065	0.5538	0.6368	0.4067	0.2698
9	0.7228	0.6861	0.5531	0.6415	0.4030	0.2667
10	0.7057	0.6697	0.5520	0.6288	0.3967	0.2594
11	0.6891	0.6575	0.5512	0.6177	0.4008	0.2524
12	0.6775	0.6442	0.5484	0.5957	0.3967	0.2521
13	0.6999	0.6446	0.5379	0.5765	0.3958	0.2488
14	0.7221	0.6382	0.5233	0.5606	0.3973	0.2485
15	0.7275	0.6371	0.5311	0.5440	0.3943	0.2566
16	0.7300	0.6232	0.5258	0.5371	0.3812	0.2600
17	0.7322	0.6210	0.5323	0.5359	0.3729	0.2604
18	0.7447	0.6145	0.5296	0.5297	0.3687	0.2567
19	0.7671	0.6151	0.5288	0.5263	0.3665	0.2506
20	0.7728	0.6125	0.5244	0.5178	0.3646	0.2519
21	0.7551	0.6018	0.5219	0.5104	0.3620	0.2512
22	0.7480	0.5933	0.5153	0.4988	0.3609	0.2451
23	0.7378	0.5844	0.5082	0.4917	0.3607	0.2458
24	0.7223	0.5798	0.5008	0.4849	0.3556	0.2465
25	0.7048	0.5691	0.4943	0.4794	0.3506	0.2482
26	0.6890	0.5665	0.4892	0.4714	0.3444	0.2479
27	0.6765	0.5555	0.4835	0.4660	0.3334	0.2465
28	0.6623	0.5543	0.4727	0.4623	0.3253	0.2436
29	0.6537	0.5446	0.4346	0.4563	0.3191	0.2445
30	0.6516	0.5441	0.4705	0.4489	0.3160	0.2483
31		0.5434		0.4430	0.3112	
Notes: Flow curve is being developed.						

Appendix 1 - Tables

Table 20. Precipitation - 1 Page(s)

Daily Precipitation (mm)						
DATE	APRIL	MAY	JUNE	JULY	AUG	SEPT
1	0.0	8.1	0.0	0.0	0.0	0.0
2	4.1	0.0	6.0	0.0	0.0	0.0
3	2.6	8.2	3.9	0.0	0.0	0.0
4	21.1	16.2	8.2	16.3	0.2	0.0
5	18.3	0.3	3.1	25.8	0.0	0.6
6	0.0	7.0	0.9	0.0	0.0	0.0
7	0.6	1.7	1.1	5.0	0.0	0.0
8	0.7	2.4	0.0	9.2	0.0	0.0
9	2.0	0.0	2.4	1.1	0.0	0.0
10	0.2	0.5	5.5	0.3	0.0	0.0
11	10.5	0.0	0.0	0.0	0.2	0.0
12	0.1	0.6	0.9	0.0	0.1	0.0
13	18.2	9.2	0.1	0.0	0.0	0.0
14	21.4	1.0	4.0	0.0	0.0	0.0
15	0.0	1.5	0.0	0.0	0.0	2.3
16	0.0	0.8	1.5	0.1	0.0	0.6
17	0.0	0.6	5.2	0.0	0.0	0.2
18	0.0	0.7	0.0	0.0	0.0	0.9
19	12.0	6.5	1.0	0.0	0.0	2.2
20	0.0	0.0	0.0	0.0	0.0	0.0
21	6.1	0.0	0.0	0.0	0.0	0.0
22	2.3	0.0	0.7	0.0	0.0	0.0
23	1.4	0.0	0.0	0.0	0.0	0.2
24	0.0	0.7	0.0	0.0	0.0	0.1
25	1.4	0.0	0.0	0.0	0.0	0.0
26	2.7	0.0	0.0	0.0	0.0	0.1
27	2.9	0.7	0.0	0.0	0.0	0.0
28	0.4	0.3	0.0	0.0	0.0	0.0
29	1.1	0.0	0.4	0.0	0.0	1.0
30	2.5	3.2	0.0	0.0	0.0	0.0
31		0.0		0.0	0.0	
Monthly Total (mm)	132.60	70.20	44.90	57.80	0.50	8.20
Quarterly Total (mm)	247.70				66.50	

Table 31 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 in 1-Mains Area, Dewatering well
	5 Mains#2 (5M#2)	In-situ	No. 1 Seam	Flooded Underground Workings in 5-Mains Area, Dewatering well
	3 Mains 2-North (3M2N)	In-situ	No. 1 Seam	Flooded Underground Workings in 3-Mains Area, Underground Pump System
	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, measures water quality and hydraulic head downgradient 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, measures water quality and hydraulic head down gradient t of 2 North workings
	QU10-13D	In-situ	Caved Zone	Down gradient of u/g tailings disposal, measures water quality and hydraulic head down gradient of 2 North workings
5-South Mine Pool	5SMW	In-situ	Mine Pool (1 Seam)	Water pumped from 5-South Flooded Mine Pool into 3-Mains of 2-North Mine
River Barrier Pillar (RBP)	QU11-05S	Ex-situ	Sandstone	Down gradient of u/g tailings disposal, measure water quality and hydraulic head down gradient 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 & upward vertical gradients 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 in the RBP and 2-North workings. Mine pool – CCR backfill in River Barrier Pillar.
2-North Plant Site	MW-00-1S	Ex-situ	Till	Shallow Groundwater Below Plant Coal pad
	MW-00-1D	Ex-situ	1-Seam	Groundwater below the coal pad
	MW-00-6D	Ex-situ	Till	Groundwater below the coal pad
	MW-00-6S	Ex-situ	Till	Groundwater below the coal pad
4-South	QU10-08D	Ex-situ	No. 3 Seam	4 South (just outside mine pool) up gradient of existing workings
	QU11-01	In-Situ	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
	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-CCR Water Cover in Mine Void
7- South Area 5	1M7SA5	In-Situ	Sump	Underground Sump
	QU11-35	Ex-situ	Sandstone above No. 4 Seam	South end of 7SA5 footprint at 100280m N (mine grid)
242 AREA	QU11-36D	Ex-situ	Sandstone below No. 5 seam	Downgradient of 7SA5
	242MW	In-situ	No. 4 Seam	Mine pool

Appendix 1 - Tables

Table 32 In-Situ Groundwater Wells Q2 4 Page(s)

H ₂ O Level	Description Well ID	WID	2 / 3 North Area							
			Station Type	QU0821GS	QU0821GD	QU0821GD	QU1010S	QU1105S	QU1105S	QU1105D
				GW	GW	GW	GW	GW	GW	GW
Date	Sample Class	Top Elev.	9-Aug-22	9-Aug-22	9-Aug-22	7-Jul-22	20-Sep-22	20-Sep-22	20-Sep-22	
Parameter	Units	Bottom Elev.	M	M	Replicate	M	M	Replicate	M	
SO4-D	mg/L	1280	<1.0	<1.0	<1.0	3.5	36	36	120	
H2SEquiv	mg/L	H2S 0.02	0.0670	0.103	0.103	0.872	0.170	0.138	26.6	
Cond-F	uS/cm		862	2728	2728	1375	220.8	220.8	4530	
pH-F	pH Units		8.03	7.79	7.79	6.89	7.42	7.42	7.88	
Temp-F	C		12.3	10.5	10.5	14	11	11	10	
DO-F	mg/L		0.4	0.39	0.39	2.6	0.38	0.38	0.53	
ORP-F	mV		-172.8	-158.9	-158.9	-106.8	108.7	108.7	1.6	
Turb	NTU		2.0	0.14	4.8	57	0.76	0.81	130	
Alk-T	mg/L		190	200	200	200	70	71	390	
Acidity83	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
N-D	mg/L		0.233	0.425	0.454	0.427	0.132	0.143	0.399	
DOC	mg/L		1.1	3.3	2.6	2.2	1.0	1.3	5.9	
Hydrox	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Bicarb	mg/L		230	240	240	240	85	86	440	
Carb	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	17	
Cl-D	mg/L	1500	200	880	900	220	1.0	1.1	1300	
F-D	mg/L		1.7	1.2	1.2	0.92	0.11	0.11	0.068	
Flu-CSR	mg/L	Flu-CSR	3.00	3.00	3.00	3.00	2.00	2.00	3.00	
Br-D	mg/L		2.21	2.72	2.73	0.338	<0.010	<0.010	2.35	
P-D	mg/L		0.096	0.093	0.092	0.0055	0.0044	0.0057	0.34	
Al-D	mg/L		<0.0060	<0.015	<0.015	0.0183	<0.0030	<0.0030	<0.015	
Ag-D	mg/L		<0.000040	<0.00010	<0.00010	<0.000020	<0.000020	<0.000020	<0.0010	
Ag-CSR	mg/L	Ag-CSR	0.000500	0.0150	0.0150	0.0150	0.000500	0.000500	0.0150	
As-D	mg/L	0.05	0.197	0.182	0.181	0.0722	0.0106	0.0113	0.00588	
Ba-D	mg/L	10	0.531	1.99	1.99	0.583	0.0352	0.0362	0.151	
B-D	mg/L	50	2.16	2.93	3.12	1.42	0.165	0.173	0.68	
Be-D	mg/L	0.053	<0.00020	<0.00050	<0.00050	<0.00010	<0.00010	<0.00010	<0.00050	
Bi-D	mg/L	0.053	<0.0020	<0.0050	<0.0050	<0.0010	<0.0010	<0.0010	<0.0050	
Cd-CSR	mg/L	Cd-CSR	0.000300	0.000600	0.000600	0.000500	0.000300	0.000300	0.000600	
Cd-D	mg/L		<0.000020	<0.000050	<0.000050	<0.000010	<0.000010	<0.000010	<0.000050	
Ca-D	mg/L		25.1	97.3	95.9	46.5	15.8	15.4	130	
Cr-D	mg/L	0.010	<0.0020	<0.0050	<0.0050	<0.0010	<0.0010	<0.0010	<0.0050	
Co-D	mg/L	0.04	<0.00040	<0.0010	<0.0010	<0.00020	<0.00020	<0.00020	<0.0010	
Cu-D	mg/L		<0.00040	<0.0010	<0.0010	<0.00020	<0.00020	<0.00020	<0.0010	
Cu-CSR	mg/L	Cu-CSR	0.0400	0.0900	0.0900	0.0600	0.0200	0.0200	0.0900	
Fe-D	mg/L		0.374	0.860	0.858	0.262	0.0954	0.0880	<0.025	
Hard-D	mg/L		82.7	292	290	142	49.6	48.5	343	
Pb-D	mg/L		<0.00040	<0.0010	<0.0010	<0.00020	<0.00020	<0.00020	<0.0010	
Pb-CSR	mg/L	Pb-CSR	0.0500	0.110	0.110	0.0600	0.0400	0.0400	0.160	
Mg-D	mg/L		4.88	11.8	12.3	6.30	2.47	2.44	4.45	
Mn-D	mg/L		0.0368	0.0591	0.0593	0.102	0.0216	0.0211	0.122	
Na-D	mg/L		165	492	509	215	25.3	25.1	891	
Mo-D	mg/L	10	<0.0020	<0.0050	<0.0050	<0.0010	<0.0010	<0.0010	<0.0050	
Ni-D	mg/L		<0.0020	<0.0050	<0.0050	<0.0010	<0.0010	<0.0010	<0.0050	
Ni-CSR	mg/L	Ni-CSR	0.650	1.50	1.50	1.10	0.250	0.250	1.50	
K-D	mg/L		4.51	8.20	8.37	5.91	0.901	0.878	4.49	
S-D	mg/L		<6.0	<15	<15	<3.0	14.4	12.7	408	
Sb-D	mg/L	0.2	<0.0010	<0.0025	<0.0025	0.00061	<0.00050	<0.00050	<0.0025	
Se-D	mg/L	0.01	<0.00020	<0.00050	<0.00050	<0.00010	0.00076	0.00101	0.0526	
Si-D	mg/L	0.01	3.42	3.48	3.57	4.32	2.19	2.18	6.55	
Sr-D	mg/L	0.01	0.601	1.92	1.91	0.834	0.145	0.145	1.54	
Tl-D	mg/L	0.003	<0.00020	<0.00050	<0.00050	<0.00010	<0.00010	<0.00010	<0.00050	
Ti-D	mg/L	1.00	<0.010	<0.025	<0.025	<0.0050	<0.0050	<0.0050	<0.025	
U-D	mg/L	3	<0.00020	<0.00050	<0.00050	0.00062	<0.00010	<0.00010	<0.00050	
V-D	mg/L	3	<0.010	<0.025	<0.025	<0.0050	<0.0050	<0.0050	<0.025	
Zn-D	mg/L		<0.010	<0.025	<0.025	<0.0050	<0.0050	<0.0050	<0.025	
Zn-CSR	mg/L	Zn-CSR	0.075	1.650	1.650	0.900	0.075	0.075	2.400	
Al-T	mg/L					3.99				
As-T	mg/L					0.0625				
B-T	mg/L	50				1.59				
Ba-T	mg/L	50				0.649				
Be-T	mg/L	50				0.00087				
Bi-T	mg/L					<0.0020				
Ca-T	mg/L					46.1				
Cd-T	mg/L					0.00046				
Co-T	mg/L					0.00108				
Cr-T	mg/L					<0.0020				
Cu-T	mg/L					0.0053				
Fe-T	mg/L					1.78				
Hard-T	mg/L					141				
Hg-T	mg/L									
K-T	mg/L					5.85				
Li-T	mg/L					0.0747				
Mg-T	mg/L					6.37				
Mn-T	mg/L					0.119				
Mo-T	mg/L					<0.0020				
N-NH3	mg/L									
NH3	mg/L									
NH3-CSR	mg/L	NH3-CSR	3.70	11.3	11.3	18.4	18.5	18.5	11.3	
N-T	mg/L									
Na-T	mg/L					175				
Ni-T	mg/L	0.25				0.0022				
P-T	mg/L	0.25								
S-T	mg/L	0.25				<6.0				
Sb-T	mg/L					<0.0010				
Se-T	mg/L					<0.00020				
Si-T	mg/L					12.4				
Sn-T	mg/L					<0.010				
Sr-T	mg/L					0.785				
Ti-T	mg/L					0.021				
U-T	mg/L	3				0.00164				
Zn-T	mg/L					<0.010				

Appendix 1 - Tables

Table 32 In-Situ Groundwater Wells Q2 4 Page(s)

Description Well ID	WID	Station Type Top Elev. Bottom Elev.	RBP	RBP	RBP Water Cover Over PAG-CCR		7 South			4-South		4-South		5 Mains Pump #2 - 2-North Mine		1 Mains 2-North Mine Water	
			QU11095 GW	QU11095 GW	QU1109M GW	QU1109M GW	QU0813A GW	QU0813B GW	QU0813B GW	QU1009S GW	QU1009D GW	5M#2 MW	5M#2 MW	1M2N MW	1M2N MW		
H ₂ O Level	m		226.297	226.297	226.297	226.297	221.0979556	221.097956	221.097956	221.097956	303.8	303.8	268.22	268.22	262.43	262.43	
Date			201.497	201.497	153.497	153.497	168.9979556	194.697956	194.697956	288.3	288.3	138.68	138.68	110.03	110.03		
			5.7	6.35	25.57	43.22	13.6	16.29	16.29	4.1	4.85						
			28-Jul-22	21-Sep-22	28-Jul-22	21-Sep-22	11-Aug-22	18-Aug-22	18-Aug-22	7-Sep-22	7-Sep-22	27-Jul-22	6-Sep-22	27-Jul-22	6-Sep-22		
			M	M	M	M	M	M	Replicate	M	M	M	M	M	M		
Parameter	Units																
SO4-D	mg/L	1280	150	130	800	700	81	37	36	100	63	190	170	720	660		
H2SEquiv	mg/L	H2S 0.02	0.904	1.49	0.0170	0.0128	0.223	0.00648	0.00648	0.00234	0.0733	0.0255	0.0170	0.103	0.170		
Cond-F	uS/cm		1316	1287	2345	2263	651	327.8	327.8	480	482.6	1550	1386	2160	2020		
pH-F	pH Units		7.84	8.03	7.09	7.09	7.83	8.13	8.13	7.06	7.76	7.53	7.71	7.39	7.58		
Temp-F	C		12	9.8	11.4	9.1	11	10.3	10.3	9.7	9.4	15.1	15.2	15.9	13.6		
DO-F	mg/L		0.3	0.3	0.6	2.38	0.2	0.47	0.47	0.41	0.29						
ORP-F	mv		-264.6	71.6	-165.5	106.2	-162.1	-172	-172	-210.6	-275.2						
Turb	NTU		0.55	1.7	73	94	1.6	5.9	6.0	44	3.0						
Alk-T	mg/L		470	480	500	500	220	130	120	130	170	520	540	480	480		
Acidity83	mg/L		<1.0	<1.0	11.9	9.8	<1.0	<1.0	<1.0	13.1	2.3	4.5	<1.0	11.2	3.9		
N-D	mg/L		0.293	0.316	0.359	0.331	0.233	0.159	0.164	0.151	0.187	0.169	0.379	0.379	0.122		
DOC	mg/L		0.98	1.2	0.90	0.99	<0.50	0.57	0.78	2.0	1.2	1.0	0.78	<0.50	<0.50		
Hydrox	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0		
Bicarb	mg/L		570	560	610	610	270	160	150	150	210	630	660	580	590		
Carb	mg/L		<1.0	10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0		
Cl-D	mg/L	1500	56	52	31	30	23	3.3	3.5	<1.0	2.1	8.0	12	11	13		
F-D	mg/L		0.60	0.11	0.10	0.086	0.74	0.40	0.40	0.066	0.30	0.076	0.067	0.13	0.14		
Flu-CSR	mg/L	Flu-CSR	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00		
Br-D	mg/L		<0.10	0.096	<0.10	0.038	0.010	<0.010	0.022	0.012	<0.10	0.024	<0.10	0.031			
P-D	mg/L		0.055	0.040	<0.0030	<0.0030	0.13	0.21	0.21	0.038	0.046	0.0050	0.23	0.21	0.0039		
Al-D	mg/L		<0.0060	<0.0060	<0.0060	<0.0030	<0.0030	0.0031	0.0031	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030		
Ag-D	mg/L		<0.000040	<0.000040	<0.000020	<0.000040	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020		
Ag-CSR	mg/L	Ag-CSR	0.000500	0.000500	0.0150	0.0150	0.0150	0.0150	0.0150	0.0150	0.0150	0.0150	0.0150	0.0150	0.0150		
As-D	mg/L	0.05	0.117	0.0914	0.00448	0.00525	0.386	0.486	0.492	0.0915	0.122	0.00909	0.00778	0.00712	0.00895		
Ba-D	mg/L	10	0.0382	0.0392	0.0119	0.0113	0.199	0.0561	0.0567	0.118	0.123	0.0284	0.0192	0.0185			
B-D	mg/L	50	1.95	1.93	1.04	1.14	1.10	0.375	0.379	0.059	0.686	0.864	1.05	1.00	1.17		
Be-D	mg/L	0.053	<0.00020	<0.00020	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010		
Bi-D	mg/L	0.053	<0.0020	<0.0020	<0.0010	<0.0020	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010		
Cd-CSR	mg/L	Cd-CSR	0.000300	0.000300	0.000600	0.000600	0.000500	0.000500	0.000500	0.000600	0.000600	0.000600	0.000600	0.000600	0.000600		
Cd-D	mg/L		<0.000020	<0.000020	<0.000010	<0.000020	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010		
Ca-D	mg/L		21.5	19.1	143	141	39.8	31.5	31.9	70.9	46.8	66.7	70.6	144	142		
Cr-D	mg/L	0.010	<0.0020	<0.0020	<0.0010	<0.0020	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010		
Co-D	mg/L	0.04	<0.00040	<0.00040	<0.00020	<0.00040	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00026	0.00023	<0.00020	<0.00020		
Cu-D	mg/L		<0.00040	<0.00040	<0.00020	<0.00040	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00024	<0.00020	<0.00020		
Cu-CSR	mg/L	Cu-CSR	0.0300	0.0300	0.0900	0.0900	0.0600	0.0500	0.0500	0.0900	0.0700	0.0800	0.0800	0.0900	0.0900		
Fe-D	mg/L		0.300	0.166	7.38	7.75	0.182	0.144	0.143	4.44	0.364	0.588	0.636	5.37	5.46		
Hard-D	mg/L		70.6	63.9	412	405	143	102	102	219	156	189	199	420	416		
Pb-D	mg/L		<0.00040	<0.00040	<0.00020	<0.00040	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020		
Pb-CSR	mg/L	Pb-CSR	0.0500	0.0500	0.160	0.160	0.0600	0.0600	0.0600	0.110	0.0600	0.0600	0.0600	0.160	0.160		
Mg-D	mg/L		4.12	3.94	13.2	13.1	10.5	5.59	5.56	10.3	9.56	5.49	5.54	14.7	14.7		
Mn-D	mg/L		0.0344	0.0255	0.316	0.280	0.0359	0.0709	0.0722	0.358	0.0394	0.182	0.167	0.551	0.551		
Na-D	mg/L		277	279	393	397	78.5	33.3	33.6	9.37	43.9	236	253	333	346		
Mo-D	mg/L	10	<0.0020	<0.0020	0.0017	<0.0020	<0.0010	0.0024	0.0025	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010		
Ni-D	mg/L		<0.0020	<0.0020	<0.0010	<0.0020	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010		
Ni-CSR	mg/L	Ni-CSR	0.650	0.650	1.50	1.50	1.10	0.650	0.650	1.50	1.10	1.50	1.50	1.50	1.50		
K-D	mg/L		3.68	3.38	5.56	5.44	2.68	1.42	1.45	0.663	1.80	2.67	2.56	5.04	4.97		
S-D	mg/L		47.3	61.5	251	243	26.1	13.0	12.3	34.0	21.2	56.4	56.0	223	217		
Sb-D	mg/L	0.2	<0.0010	<0.0010	<0.00050	<0.0010	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050		
Se-D	mg/L	0.01	<0.00020	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010		
Si-D	mg/L	0.01	4.91	5.34	3.90	4.05	3.85	4.80	4.86	9.36	9.56	3.52	3.49	3.76	3.88		
Sr-D	mg/L	0.01	0.382	0.325	1.77	1.63	0.604	0.267	0.266	0.260	0.869	0.700	0.732	1.47	1.41		
Tl-D	mg/L	0.003	<0.00020	<0.00020	<0.00010	<0.00020	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010		
Ti-D	mg/L	1.00	<0.010	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050		
U-D	mg/L	3	<0.00020	<0.00020	<0.00010	<0.00020	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010		
V-D	mg/L	3	<0.010	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050		
Zn-D	mg/L		<0.010	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050		
Zn-CSR	mg/L	Zn-CSR	0.075	0.075	2.400	2.400	0.900	0.900	0.900	1.650	0.900	0.900	2.400	2.400	2.400		
Al-T	mg/L																
As-T	mg/L																
B-T	mg/L	50															
Ba-T	mg/L	50															
Be-T	mg/L	50															
Bi-T	mg/L																
Ca-T	mg/L																

Appendix 1 - Tables

Table 32 In-Situ Groundwater Wells Q2 4 Page(s)

Description Well ID	WID	Station Type Top Elev. Bottom Elev.	Passive Treatment System (PTS) Influent from 2-5					
			2N GW MW QU1013D GW	3-Mains 2-North Mine Water			Mine Water	
			22-Aug-22	28-Jul-22	7-Sep-22	5-Jul-22	3-Aug-22	6-Sep-22
H ₂ O Level	m		270.68 127.68 77.81			353.5 291 9.5	353.5 291 8.6	353.5 291 7.1
Date	Sample Class	CSR-AW	M	M	M	M	M	M
Parameter	Units							
SO4-D	mg/L	1280	490	730	930	570	650	520
H2SEquiv	mg/L	H2S 0.02	0.128			0.00574	0.000957	0.000957
Cond-F	uS/cm		1945	2190	2040	1610	1633	1436
pH-F	pH Units		7.4	6.75	8	6.83	7.31	7.36
Temp-F	C		9.4	13.4	19.3	10.9	11.9	12.1
DO-F	mg/L		0.36					
ORP-F	mV		-155					
Turb	NTU		8.1		0.22			
Alk-T	mg/L		610	380	280	240	250	260
Acidity83	mg/L		1.7	13.8	8.4	7.1	13.8	10.8
N-D	mg/L		0.315	0.188	0.107			
DOC	mg/L		0.87	0.72	<0.50			
Hydrox	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bicarb	mg/L		750	460	350	300	310	320
Carb	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Cl-D	mg/L	1500	26	3.9	7.0			
F-D	mg/L		0.11	0.14	0.10			
Flu-CSR	mg/L	Flu-CSR	3.00	3.00	3.00	3.00	3.00	3.00
Br-D	mg/L		<0.10	<0.10	<0.10			
P-D	mg/L		0.021	<0.0030	<0.0030			
Al-D	mg/L		<0.0060	0.0084	<0.0060	<0.0030	<0.0030	<0.0030
Ag-D	mg/L		<0.00040	<0.00020	<0.00040	<0.00020	<0.00020	<0.00020
Ag-CSR	mg/L	Ag-CSR	0.0150	0.0150	0.0150	0.0150	0.0150	0.0150
As-D	mg/L	0.05	<0.00020	0.00020	<0.00020	0.00414	0.00392	0.00400
Ba-D	mg/L	10	0.0323	0.0142	0.0117	0.0244	0.0225	0.0211
B-D	mg/L	50	1.26	0.739	0.93	0.660	0.583	0.697
Be-D	mg/L	0.053	<0.00020	<0.00010	<0.00020	<0.00010	<0.00010	<0.00010
Bi-D	mg/L	0.053	<0.0020	<0.0010	<0.0020	<0.0010	<0.0010	<0.0010
Cd-CSR	mg/L	Cd-CSR	0.000600	0.000600	0.000600	0.000600	0.000600	0.000600
Cd-D	mg/L		<0.000020	0.000012	<0.000020	<0.000010	<0.000010	<0.000010
Ca-D	mg/L		69.3	130	276	237	220	211
Cr-D	mg/L	0.010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0010	<0.0010
Co-D	mg/L	0.04	0.00058	0.00291	<0.00040	0.00102	0.00079	0.00071
Cu-D	mg/L		<0.00040	0.00101	<0.00040	<0.00020	<0.00020	<0.00020
Cu-CSR	mg/L	Cu-CSR	0.0800	0.0900	0.0900	0.0900	0.0900	0.0900
Fe-D	mg/L		0.658	0.0930	<0.010	2.76	2.52	2.63
Hard-D	mg/L		192	396	789	665	611	586
Pb-D	mg/L		<0.00040	<0.00020	<0.00040	<0.00020	<0.00020	<0.00020
Pb-CSR	mg/L	Pb-CSR	0.0600	0.160	0.160	0.160	0.160	0.160
Mg-D	mg/L		4.60	17.6	24.3	17.6	15.2	14.3
Mn-D	mg/L		0.207	0.204	0.0078	0.370	0.332	0.328
Na-D	mg/L		433	304	220	113	100	100
Mo-D	mg/L	10	<0.0020	<0.0010	<0.0020	<0.0010	<0.0010	<0.0010
Ni-D	mg/L		<0.0020	0.0053	0.0020	0.0015	0.0011	0.0010
Ni-CSR	mg/L	Ni-CSR	1.50	1.50	1.50	1.50	1.50	1.50
K-D	mg/L		4.09	3.56	4.05	1.96	1.82	1.73
S-D	mg/L		175	231	303	222	199	183
Sb-D	mg/L	0.2	<0.0010	<0.00050	<0.0010	<0.00050	<0.00050	<0.00050
Se-D	mg/L	0.01	<0.00020	<0.00010	<0.00020	<0.00010	<0.00010	0.00047
Si-D	mg/L	0.01	5.11	3.16	2.88	3.35	3.29	3.18
Sr-D	mg/L	0.01	0.806	1.37	1.72	2.11	2.09	1.88
Tl-D	mg/L	0.003	<0.00020	<0.00010	<0.00020	<0.00010	<0.00010	<0.00010
Ti-D	mg/L	1.00	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.0050
U-D	mg/L	3	<0.00020	<0.00010	<0.00020	<0.00010	<0.00010	<0.00010
V-D	mg/L	3	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.0050
Zn-D	mg/L		<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.0050
Zn-CSR	mg/L	Zn-CSR	0.900	2.400	2.400	2.400	2.400	2.400
Al-T	mg/L				0.0094	<0.0030	<0.0060	<0.0030
As-T	mg/L				<0.00020	0.00415	0.00384	0.00426
B-T	mg/L	50			0.97	0.564	0.58	0.573
Ba-T	mg/L	50			0.0124	0.0232	0.0209	0.0214
Be-T	mg/L	50			<0.00020	<0.00010	<0.00020	<0.00010
Bi-T	mg/L				<0.0020	<0.0010	<0.0020	<0.0010
Ca-T	mg/L				266	229	206	212
Cd-T	mg/L				<0.00020	<0.00010	<0.00020	<0.00010
Co-T	mg/L				0.00044	0.00094	0.00080	0.00075
Cr-T	mg/L				<0.0020	<0.0010	<0.0020	<0.0010
Cu-T	mg/L				<0.0010	<0.00050	<0.0010	<0.00050
Fe-T	mg/L				<0.020	2.59	2.56	2.66
Hard-T	mg/L				768	641	573	586
Hg-T	mg/L							
K-T	mg/L				4.03	1.99	1.72	1.82
Li-T	mg/L				0.0140	0.0189	0.0192	0.0163
Mg-T	mg/L				25.3	16.8	14.5	13.9
Mn-T	mg/L				0.0084	0.361	0.321	0.342
Mo-T	mg/L				<0.0020	<0.0010	<0.0020	<0.0010
N-NH3	mg/L			0.11	<0.015	0.077		0.061
NH3	mg/L							
NH3-CSR	mg/L	NH3-CSR	18	18.4	4	18.4	18.5	18.5
Na-T	mg/L				211	110	98.5	99.2
Ni-T	mg/L	0.25			0.0022	0.0014	<0.0020	0.0011
P-T	mg/L	0.25				<0.0030	<0.0030	<0.0030
S-T	mg/L	0.25				309	216	188
Sb-T	mg/L				<0.0010	<0.00050	<0.0010	<0.00050
Se-T	mg/L				<0.00020	<0.00010	<0.00020	<0.00010
Si-T	mg/L				3.27	3.22	3.10	3.20
Sn-T	mg/L				<0.010	<0.0050	<0.010	<0.0050
Sr-T	mg/L				1.65	2.13	1.89	1.89
Ti-T	mg/L				<0.010	<0.0050	<0.010	<0.0050
U-T	mg/L	3			<0.00020	<0.00010	<0.00020	<0.00010
Zn-T	mg/L				<0.010	<0.0050	<0.010	<0.0050

Appendix 1 - Tables

Table 32 In-Situ Groundwater Wells Q2 4 Page(s)

Description Well ID	WID Station Type Top Elev. Bottom Elev.	3-South Pit MW002 GW 325 318.2 3.48	3-South Pit MW002 GW 325 318.2 3.48	2-South MW004 MW 347.8 298.1 43.5	3-South MW005 GW 342.8 297.1 37.86	7-South Water Cover Over	
						PAG-CR QU1410 MW 240.832 209.432 10.87	
H ₂ O Level	m						
Date	Sample Class	CSR-AW	21-Jul-22	21-Jul-22 Replicate	21-Jul-22	19-Sep-22	18-Aug-22
Parameter	Units		M	Replicate	M	M	M
S04-D	mg/L	1280	1400	1400	440	1800	1600
H2SEquiv	mg/L	H2S 0.02	0.000957	0.000957	0.000957	0.000957	0.000957
Cond-F	uS/cm		2392	2392	1021	6.94	3032
pH-F	pH Units		6.19	6.19	6.46	15.5	6.81
Temp-F	C		11.2	11.2	19.4	3492	14.7
DO-F	mg/L		0.8	0.8	2.21	1.41	0.89
ORP-F	mV		-71.3	-71.3	30	132.7	-64.9
Turb	NTU		61	60	1.3	38	28
Alk-T	mg/L		280	280	120	270	280
Acidity83	mg/L		10.9	10.0	2.2	19.6	15.6
N-D	mg/L		0.215	0.202	0.178	0.193	0.244
DOC	mg/L		0.95	0.73	2.4	0.73	1.5
Hydrox	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Bicarb	mg/L		340	340	150	320	350
Carb	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Cl-D	mg/L	1500	2.3	2.3	1.4	4.5	6.5
F-D	mg/L		0.12	0.12	0.076	0.20	0.17
Flu-CSR	mg/L	Flu-CSR	3.000	3.000	3.00	3.000	3.000
Br-D	mg/L		0.022	0.022	<0.010	0.014	<0.10
P-D	mg/L		<0.030	<0.030	<0.0030	<0.0030	0.022
Al-D	mg/L		<0.015	<0.015	0.0108	<0.0030	<0.015
Ag-D	mg/L		<0.00010	<0.00010	<0.000020	<0.000020	<0.00010
Ag-CSR	mg/L	Ag-CSR	0.01500	0.01500	0.0150	0.01500	0.01500
As-D	mg/L	0.05	0.00202	0.00223	0.00030	0.00104	0.0957
Ba-D	mg/L	10	0.0134	0.0139	0.0242	0.0138	0.0164
B-D	mg/L	50	0.86	0.85	0.221	1.44	1.13
Be-D	mg/L	0.053	<0.00050	<0.00050	<0.00010	<0.00010	<0.00050
Bi-D	mg/L	0.053	<0.0050	<0.0050	<0.0010	<0.0010	<0.0050
Cd-CSR	mg/L	Cd-CSR	0.0006000	0.0006000	0.000600	0.0006000	0.0006000
Cd-D	mg/L		<0.000050	<0.000050	<0.000010	<0.000010	<0.000050
Ca-D	mg/L		474	483	149	396	554
Cr-D	mg/L	0.010	<0.0050	<0.0050	<0.0010	<0.0010	<0.0050
Co-D	mg/L	0.04	0.0034	0.0035	<0.00020	0.00184	<0.0010
Cu-D	mg/L		<0.0010	<0.0010	0.00125	<0.00020	<0.0010
Cu-CSR	mg/L	Cu-CSR	0.09000	0.09000	0.0900	0.09000	0.09000
Fe-D	mg/L		5.07	5.12	0.0100	2.64	2.32
Hard-D	mg/L		1400	1420	447	1160	2090
Pb-D	mg/L		<0.0010	<0.0010	<0.00020	<0.00020	<0.0010
Pb-CSR	mg/L	Pb-CSR	0.1600	0.1600	0.160	0.1600	0.1600
Mg-D	mg/L		51.7	52.3	18.5	40.7	171
Mn-D	mg/L		1.53	1.56	0.0021	0.269	1.48
Na-D	mg/L		52.7	52.3	31.3	485	68.0
Mo-D	mg/L	10	<0.0050	<0.0050	<0.0010	<0.0010	<0.0050
Ni-D	mg/L		<0.0050	<0.0050	0.0011	0.0033	<0.0050
Ni-CSR	mg/L	Ni-CSR	1.500	1.500	1.50	1.500	1.500
K-D	mg/L		5.48	5.67	1.43	4.54	7.41
S-D	mg/L		407	431	131	636	650
Sb-D	mg/L	0.2	<0.0025	<0.0025	<0.00050	<0.00050	<0.0025
Se-D	mg/L	0.01	<0.00050	<0.00050	<0.00010	<0.00010	<0.00050
Si-D	mg/L	0.01	3.85	3.89	2.95	3.10	3.79
Sr-D	mg/L	0.01	3.90	4.16	1.07	4.99	4.74
Tl-D	mg/L	0.003	<0.000050	<0.000050	<0.000010	<0.000010	<0.000050
Ti-D	mg/L	1.00	<0.025	<0.025	<0.0050	<0.0050	<0.025
U-D	mg/L	3	<0.00050	<0.00050	<0.00010	0.00017	0.00089
V-D	mg/L	3	<0.025	<0.025	<0.0050	<0.0050	<0.025
Zn-D	mg/L		<0.025	<0.025	0.0095	<0.0050	<0.025
Zn-CSR	mg/L	Zn-CSR	2.400	2.400	2.400	2.400	2.400
Al-T	mg/L						
As-T	mg/L						
B-T	mg/L	50					
Ba-T	mg/L	50					
Be-T	mg/L	50					
Bi-T	mg/L						
Ca-T	mg/L						
Cd-T	mg/L						
Co-T	mg/L						
Cr-T	mg/L						
Cu-T	mg/L						
Fe-T	mg/L						
Hard-T	mg/L						
Hg-T	mg/L						
K-T	mg/L						
Li-T	mg/L						
Mg-T	mg/L						
Mn-T	mg/L						
Mo-T	mg/L						
N-NH3	mg/L					0.13	
NH3	mg/L						
NH3-CSR	mg/L	NH3-CSR	18.4	18.4	18.4	1.31	18.4
N-T	mg/L						
Na-T	mg/L						
Ni-T	mg/L	0.25					
P-T	mg/L	0.25					
S-T	mg/L	0.25					
Sb-T	mg/L						
Se-T	mg/L						
Si-T	mg/L						
Sn-T	mg/L						
Sr-T	mg/L						
Ti-T	mg/L						
U-T	mg/L	3					
Zn-T	mg/L						

Appendix 1 - Tables
 Table 32 In-Situ Groundwater Wells Q2 4 Page(s)

Description Well ID	WID Station Type Top Elev. Bottom Elev.	242 Mine Pool Water		242 Mine Pool Water		7-South		7-South Area 5	
		242MW MW 290 256.5	242MW MW 290 256.5	242MW MW 290 256.5	242MW MW 290 256.5	1M7SA5 MW	1M7SA5 MW	7SA5 MW	7SA5 MW
H ₂ O Level	m								
Date		CSR-AW	23-Aug-22	23-Aug-22	28-Jul-22	7-Sep-22	28-Jul-22	7-Sep-22	
Parameter	Sample Class		M	Replicate	M	M	M	M	
	Units								
SO4-D	mg/L	1280	33	33	190	210	98	120	
H2SEquiv	mg/L	H2S 0.02	0.000957	0.000957					
Cond-F	uS/cm		220.2	220.2	64	627	510	515	
pH-F	pH Units		6.74	6.74	7.78	8.09	7.97	8.11	
Temp-F	C		10.4	10.4	15.7	17.1	16.4	17.8	
DO-F	mg/L		0.55	0.55					
ORP-F	mV		-86.7	-86.7					
Turb	NTU		90	110		1.1		1.5	
Alk-T	mg/L		88	89	140	130	150	150	
Acidity83	mg/L		2.9	1.5	2.0	1.9	<1.0	<1.0	
N-D	mg/L		0.106	0.109	0.261	0.661	0.169	0.306	
DOC	mg/L		0.55	0.53	0.61	0.98	2.0	1.6	
Hydrox	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Bicarb	mg/L		110	110	170	160	180	180	
Carb	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Cl-D	mg/L	1500	1.2	<1.0	2.4	1.5	2.4	2.0	
F-D	mg/L		0.075	0.074	0.45	0.47	0.54	0.56	
Flu-CSR	mg/L	Flu-CSR	3.00	3.00	3.00	3.00	3.00	3.00	
Br-D	mg/L		<0.010	<0.010	<0.010	<0.010	<0.10	<0.010	
P-D	mg/L		0.015	0.019	0.0039	0.0040	0.057	0.044	
Al-D	mg/L		<0.0030	<0.0030	0.0108	0.0081	0.0045	0.0042	
Ag-D	mg/L		<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	
Ag-CSR	mg/L	Ag-CSR	0.0150	0.0150	0.0150	0.0150	0.0150	0.0150	
As-D	mg/L	0.05	0.0985	0.0998	0.00661	0.0224	0.184	0.178	
Ba-D	mg/L	10	0.0763	0.0760	0.163	0.145	0.145	0.127	
B-D	mg/L	50	0.068	0.067	0.560	0.623	0.625	0.643	
Be-D	mg/L	0.053	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Bi-D	mg/L	0.053	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Cd-CSR	mg/L	Cd-CSR	0.000500	0.000500	0.000600	0.000600	0.000600	0.000600	
Cd-D	mg/L		<0.000010	<0.000010	0.000012	<0.000010	<0.000010	<0.000010	
Ca-D	mg/L		42.5	41.3	76.9	82.5	56.0	62.8	
Cr-D	mg/L	0.010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Co-D	mg/L	0.04	0.00100	0.00100	0.00127	0.00094	0.00083	0.00035	
Cu-D	mg/L		<0.00020	<0.00020	0.00257	0.00049	0.00029	0.00036	
Cu-CSR	mg/L	Cu-CSR	0.0500	0.0500	0.0900	0.0900	0.0800	0.0900	
Fe-D	mg/L		12.6	12.8	0.0993	0.0666	0.0459	0.0510	
Hard-D	mg/L		122	119	272	305	198	226	
Pb-D	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
Pb-CSR	mg/L	Pb-CSR	0.0600	0.0600	0.110	0.160	0.0600	0.110	
Mg-D	mg/L		3.89	3.84	19.4	24.0	14.1	16.8	
Mn-D	mg/L		0.556	0.569	0.0586	0.0350	0.0220	0.0100	
Na-D	mg/L		2.20	2.13	20.8	21.8	25.4	25.8	
Mo-D	mg/L	10	<0.0010	<0.0010	<0.0010	<0.0010	0.0011	0.0011	
Ni-D	mg/L		<0.0010	<0.0010	0.0040	0.0033	0.0030	0.0021	
Ni-CSR	mg/L	Ni-CSR	1.10	0.650	1.50	1.50	1.50	1.50	
K-D	mg/L		0.471	0.439	2.28	2.45	2.23	2.31	
S-D	mg/L		10.8	10.5	58.6	70.2	30.5	42.4	
Sb-D	mg/L	0.2	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Se-D	mg/L	0.01	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Si-D	mg/L	0.01	5.08	4.92	4.38	4.30	5.56	5.02	
Sr-D	mg/L	0.01	0.0674	0.0621	0.691	0.759	0.618	0.659	
Tl-D	mg/L	0.003	<0.000010	<0.000010	0.000020	0.000015	<0.000010	<0.000010	
Ti-D	mg/L	1.00	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
U-D	mg/L	3	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
V-D	mg/L	3	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
Zn-D	mg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
Zn-CSR	mg/L	Zn-CSR	0.900	0.900	1.650	2.400	0.900	1.650	
Al-T	mg/L					0.0141		0.0132	
As-T	mg/L					0.0317		0.199	
B-T	mg/L	50				0.628		0.631	
Ba-T	mg/L	50				0.154		0.131	
Be-T	mg/L	50				<0.00010		<0.00010	
Bi-T	mg/L					<0.0010		<0.0010	
Ca-T	mg/L					78.3		58.3	
Cd-T	mg/L					<0.000010		<0.000010	
Co-T	mg/L					0.00104		0.00065	
Cr-T	mg/L					<0.0010		<0.0010	
Cu-T	mg/L					0.00071		0.00062	
Fe-T	mg/L					0.259		0.192	
Hard-T	mg/L					295		214	
Hg-T	mg/L								
K-T	mg/L					2.40		2.23	
Li-T	mg/L					0.0498		0.0499	
Mg-T	mg/L					24.1		16.6	
Mn-T	mg/L					0.0375		0.0118	
Mo-T	mg/L					<0.0010		0.0011	
N-NH3	mg/L				<0.015	<0.015	0.018	<0.015	
NH3	mg/L								
NH3-CSR	mg/L	NH3-CSR	18.4	18.4	11.3	3.70	11.3	3.70	
N-T	mg/L								
Na-T	mg/L					21.5		24.2	
Ni-T	mg/L	0.25				0.0036		0.0022	
P-T	mg/L	0.25							
S-T	mg/L	0.25				68.5		39.0	
Sb-T	mg/L					<0.00050		<0.00050	
Se-T	mg/L					<0.00010		<0.00010	
Si-T	mg/L					4.23		4.97	
Sn-T	mg/L					<0.0050		<0.0050	
Sr-T	mg/L					0.722		0.646	
Ti-T	mg/L					<0.0050		<0.0050	
U-T	mg/L	3				<0.00010		<0.00010	
Zn-T	mg/L					<0.0050		<0.0050	

Appendix 1 - Tables
Table 34 Potential Seepage Near QU1109 1 Page(s)

EMS ID		Max-WQG									
Site Description		Potential Seepage near QU1109									
Site Name	S	Std Val									
Date	Max	05-07-2022	11-07-2022	21-07-2022	26-07-2022	04-08-2022	11-08-2022	18-08-2022	25-08-2022	31-08-2022	
Flow	m3/s		0.0002	0.00019	0.0001	0.00004	0.000066	0.000033	0.00002325	0.000013	Dry
pH-F	pH Units	9.0	8.16	8.00	8.13	8.01	8.14	8.07	7.84	7.96	
Cond-F	uS/cm		1564	1368	1735	1566	1506	1480	1606	1254	
SO4-D	mg/L		260	210	230	230	200	190	260	200	
Turb	NTU			1.2	0.92	1.0		1.2	3.0	1.5	
Alk-T	mg/L		410	440	450	440	470	450	460	470	
Acidity83	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
DOC	mg/L		2.1	2.2	2.0	1.5	2.1	2.4	3.2	3.2	
Cl-D	mg/L	600	50	250	56	51	57	48	53	54	
F-D	mg/L		0.61	0.61	0.56	0.64	0.65	0.67	0.65	0.65	
Al-T	mg/L		0.0257	0.0178	0.0311	0.0232	0.0218	0.0167	0.0546	0.0400	
As-T	mg/L	0.005	0.0702	0.0730	0.0716	0.0730	0.0670	0.0558	0.0740	0.0648	
Ba-T	mg/L		0.0534	0.0539	0.0533	0.0543	0.0501	0.0427	0.0559	0.0493	
B-T	mg/L		1.73	1.75	1.73	1.85	1.74	1.75	1.81	1.87	
Cd-T	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000020	<0.000010	<0.000010	
Ca-T	mg/L		25.8	26.7	27.5	26.8	27.4	25.0	25.9	28.7	
Cr-T	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0010	
Co-T	mg/L	0.11	<0.00020	<0.00020	0.00026	<0.00020	<0.00020	<0.00040	0.00054	0.00032	
Cu-T	mg/L		<0.00050	<0.00050	0.00059	<0.00050	<0.00050	<0.0010	0.00062	0.00059	
Hard-T	mg/L		91.0	94.3	97.1	94.6	96.2	89.3	89.9	98.7	
Fe-T	mg/L	1.0	0.368	0.362	0.473	0.350	0.390	0.289	0.849	0.597	
Pb-T	mg/L	0.01763	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00040	<0.00020	<0.00020	
Mg-T	mg/L		6.48	6.72	6.90	6.74	6.70	6.52	6.14	6.58	
Mn-T	mg/L	0.8706	0.0555	0.0486	0.0858	0.0474	0.0513	0.0304	0.222	0.120	
Mo-T	mg/L	2.0	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0010	
Ni-T	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0010	
K-T	mg/L		4.05	4.25	4.21	4.40	4.18	3.96	4.13	4.37	
S-T	mg/L		71.9	74.9	72.0	73.7	72.0	62.9	68.2	69.0	
Se-T	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	<0.00010	<0.00010	
Si-T	mg/L		5.29	5.26	4.98	4.63	4.82	4.48	5.18	5.27	
Ag-T	mg/L	0.0001	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000040	<0.000020	<0.000020	
Na-T	mg/L		280	292	291	297	295	288	292	311	
Sr-T	mg/L		0.436	0.444	0.433	0.435	0.423	0.362	0.391	0.424	
Zn-T	mg/L	0.033	<0.0050	<0.0050	0.0057	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	
Al-D	mg/L	0.1	0.0107	0.0078	0.0069	0.0072	0.0146	0.0080	0.0107	0.0135	
As-D	mg/L		0.0673	0.0611	0.0586	0.0632	0.0619	0.0584	0.0565	0.0522	
Ba-D	mg/L		0.0525	0.0487	0.0493	0.0509	0.0462	0.0450	0.0454	0.0435	
B-D	mg/L		1.71	1.73	1.51	1.69	1.78	1.87	1.83	2.33	
Be-D	mg/L		<0.00010	<0.00020	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	
Cd-D	mg/L	0.00017	<0.000010	<0.000020	<0.000020	<0.000010	<0.000010	<0.000010	<0.000010	<0.000020	
Ca-D	mg/L		26.3	24.6	24.6	26.9	24.7	23.1	25.0	24.5	
Cr-D	mg/L		<0.0010	<0.0020	<0.0020	0.0015	<0.0010	<0.0010	<0.0010	<0.0020	
Co-D	mg/L		<0.00020	<0.00040	<0.00040	<0.00020	<0.00020	<0.00020	<0.00020	<0.00040	
Cu-D	mg/L	≤ 0.0054	0.00038	0.00052	0.00061	0.00063	0.00030	0.00033	0.00093	<0.00040	
Hard-D	mg/L		93.9	88.2	87.4	95.1	89.8	84.4	88.3	92.2	
Fe-D	mg/L	0.35	0.177	0.123	0.112	0.138	0.140	0.149	0.150	0.192	
Pb-D	mg/L		<0.00020	<0.00040	<0.00040	<0.00020	<0.00020	<0.00020	<0.00020	<0.00040	
Mg-D	mg/L		6.88	6.49	6.27	6.75	6.83	6.46	6.27	7.53	
Mn-D	mg/L		0.0289	0.0166	0.0136	0.0122	0.0154	0.0164	0.0134	0.0178	
Mo-D	mg/L		<0.0010	<0.0020	<0.0020	<0.0010	<0.0010	<0.0010	<0.0010	<0.0020	
Ni-D	mg/L		<0.0010	<0.0020	<0.0020	<0.0010	<0.0010	<0.0010	<0.0010	<0.0020	
K-D	mg/L		4.14	4.08	3.96	4.34	4.17	3.99	4.39	4.04	
S-D	mg/L		74.8	67.5	65.5	70.6	73.1	64.5	67.9	67.6	
Se-D	mg/L		<0.00010	<0.00020	<0.00020	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	
Si-D	mg/L		5.03	4.62	4.48	4.93	4.65	4.35	4.94	5.99	
Na-D	mg/L		287	275	260	283	294	301	299	340	
Sr-D	mg/L		0.407	0.407	0.403	0.427	0.411	0.387	0.419	0.393	
Zn-D	mg/L	0.033	<0.0050	<0.010	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	

Appendix 1 - Tables
Table 35 Potential Seepage Near QU1105 1 Page(s)

EMS ID		Max-WQG												
Site Description		Seepage Entering River at S2A near QU1105												
Site Name	S2A	Std Val												
Date	Max	05-07-2022	11-07-2022	21-07-2022	26-07-2022	04-08-2022	11-08-2022	18-08-2022	25-08-2022	31-08-2022	08-09-2022	20-09-2022	28-09-2022	
Flow	m3/s		0.00073	0.00065	0.00061	0.0003	0.000216	0.000117	0.001	0.00009	0.0000433		0.00025	
pH-F	pH Units	9.0	7.55	7.59	7.73	7.45	7.38	7.45	7.39	7.14	7.13	7.29	7.44	7.58
Cond-F	uS/cm		1152	1082	1040	1123	1054	1024	1003	774	1026	879	754	780
SO4-D	mg/L		200	190	200	200	180	180	210	160	150	140	120	100
Turb	NTU			1.4	1.5	2.1		4.2	2.7	3.4	3.3	3.0	1.4	1.2
Alk-T	mg/L		310	320	310	300	300	300	290	270	270	260	220	220
Acidity83	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0		<1.0	7.5	<1.0	<1.0
Cl-D	mg/L	600	21	20	20	19	19	20	19	17	17	20	14	13
DOC	mg/L		1.8	1.5	1.7	1.1	1.9	2.2	2.9	1.8	1.4	2.3	1.7	1.9
F-D	mg/L		0.43	0.43	0.41	0.46	0.45	0.49	0.47	0.43	0.44	1.4	0.40	0.39
Al-T	mg/L		0.0049	0.0044	0.0065	0.0071	0.0073	0.0079	0.0076	0.0313	0.0095	0.0110	0.0100	0.0085
As-T	mg/L	0.005	0.0443	0.0521	0.0673	0.0789	0.103	0.111	0.0922	0.129	0.119	0.119	0.0907	0.0668
Ba-T	mg/L		0.0678	0.0700	0.0714	0.0724	0.0711	0.0695	0.0652	0.0627	0.0610	0.0575	0.0457	0.0433
B-T	mg/L		0.859	0.845	0.845	0.832	0.821	0.838	0.916	0.822	0.898	0.719	0.615	0.616
Cd-T	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Ca-T	mg/L		42.4	44.2	42.8	40.3	42.4	40.0	36.7	37.4	33.2	33.3	28.1	27.1
Cr-T	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Co-T	mg/L	0.11	0.00039	0.00041	0.00054	0.00055	0.00052	0.00054	0.00050	0.00049	0.00045	0.00047	0.00033	0.00028
Cu-T	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Hard-T	mg/L		141	146	144	135	141	137	121	123	112	110	92.9	89.0
Fe-T	mg/L	1.0	0.438	0.502	0.717	0.832	1.15	1.26	1.07	1.54	1.34	1.43	1.03	0.698
Pb-T	mg/L	0.01763	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Mg-T	mg/L		8.57	8.55	9.05	8.25	8.61	8.97	7.14	7.26	7.00	6.49	5.51	5.20
Mn-T	mg/L	0.8706	0.666	0.681	0.742	0.755	0.653	0.660	0.675	0.585	0.557	0.482	0.390	0.320
Mo-T	mg/L	2.0	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Ni-T	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
K-T	mg/L		3.76	4.12	4.14	3.95	4.26	3.99	3.86	4.02	3.68	3.45	2.92	2.85
S-T	mg/L		62.9	65.3	65.3	62.6	67.3	63.4	58.9	56.6	55.0	51.4	41.2	38.6
Se-T	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Si-T	mg/L		3.68	3.92	3.83	3.50	3.94	3.83	4.06	4.07	3.77	3.64	3.42	3.57
Ag-T	mg/L	0.0001	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Na-T	mg/L		175	176	178	170	185	186	165	168	160	153	121	118
Sr-T	mg/L		0.684	0.667	0.656	0.644	0.648	0.608	0.578	0.584	0.543	0.502	0.456	0.411
Zn-T	mg/L	0.033	<0.0050	<0.0050	0.0104	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Al-D	mg/L	0.1	0.0033	0.0033	0.0030	<0.0030	0.0038	0.0040	0.0047	0.0061	0.0053	0.0049	0.0053	0.0048
As-D	mg/L		0.0444	0.0482	0.0640	0.0691	0.0823	0.102	0.0842	0.109	0.108	0.113	0.0905	0.0676
Ba-D	mg/L		0.0714	0.0682	0.0720	0.0696	0.0615	0.0654	0.0619	0.0649	0.0583	0.0578	0.0476	0.0472
B-D	mg/L		0.870	0.859	0.794	0.785	0.803	0.966	0.788	0.962	0.819	0.814	0.618	0.649
Be-D	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cd-D	mg/L	0.00017	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Ca-D	mg/L		45.0	41.8	39.9	40.9	36.1	33.3	35.9	33.4	33.4	34.4	28.7	28.4
Cr-D	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Co-D	mg/L		0.00042	0.00040	0.00053	0.00053	0.00046	0.00056	0.00051	0.00046	0.00045	0.00045	0.00033	0.00030
Cu-D	mg/L	≤ 0.0054	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00042	<0.00020	<0.00020	<0.00020	0.00020	<0.00020
Hard-D	mg/L		150	140	133	135	122	114	120	117	112	114	94.7	94.3
Fe-D	mg/L	0.35	0.421	0.433	0.637	0.716	0.791	1.02	0.861	1.23	1.16	1.26	0.940	0.671
Pb-D	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Mg-D	mg/L		9.22	8.55	8.14	8.02	7.63	7.47	7.37	8.18	6.76	6.75	5.59	5.69
Mn-D	mg/L		0.679	0.648	0.752	0.714	0.583	0.638	0.687	0.592	0.526	0.504	0.386	0.336
Mo-D	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Ni-D	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
K-D	mg/L		4.24	3.97	3.90	3.91	3.79	3.94	3.98	3.66	3.55	3.63	2.98	3.06
S-D	mg/L		66.8	62.8	60.9	59.9	60.0	57.6	60.2	55.7	54.6	53.8	43.8	43.0
Se-D	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Si-D	mg/L		3.85	3.64	3.61	3.78	3.68	3.39	3.90	5.05	3.77	3.80	4.09	3.92
Na-D	mg/L		176	174	163	163	160	173	166	180	154	160	125	121
Sr-D	mg/L		0.666	0.640	0.636	0.631	0.563	0.587	0.606	0.581	0.541	0.523	0.432	0.436
Zn-D	mg/L	0.033	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050

Appendix 1 - Tables
 Table 37 LLM Depth Profile 1 Page(s)

EMS ID: E206619		LONG LAKE DEPTH PROFILING SUMMER																													
Sample Date	Parameter	20-Jul					28-Jul					03-Aug					10-Aug					17-Aug									
		TEMP. Celcius	pH	COND. µS/cm	% Sat.	D.O. mg/L	ORP mV	TEMP. Celcius	pH	COND. µS/cm	% Sat.	D.O. mg/L	ORP mV	TEMP. Celcius	pH	COND. µS/cm	% Sat.	D.O. mg/L	ORP mV	TEMP. Celcius	pH	COND. µS/cm	% Sat.	D.O. mg/L	ORP mV	TEMP. Celcius	pH	COND. µS/cm	% Sat.	D.O. mg/L	ORP mV
Sample Depth (m)																															
1		21.0	7.33	120.0	72.9	6.53	142.7	25.0	7.40	129.2	76.5	6.21	153.4	24.2	7.62	117.9	71.7	5.98	122.6	23.1	7.71	130.1	72.8	6.05	101.1	22.5	7.73	153.3	89.5	7.74	77.5
2		20.7	7.40	120.5	74.5	6.64	136.1	23.4		127.0	131.3	8.91	152.7	24.2	7.61	117.9	71.4	6.09	121.9	23.1	7.71	130.2	64.7	5.57	111.4	22.4	7.70	153.2	89.1	7.74	72.1
3		19.5	7.26	135.1	73.4	6.73	135.1	21.7		144.1	68.3	8.92	150.6	22.9	7.36	136.8	72.1	6.30	122.0	22.8	7.66	132.3	64.6	5.51	146.5	22.2	7.69	153.0	89.4	7.83	70.2
4		17.2	7.17	172.8	76.2	7.35	134.6	18.2	7.22	180.1	73.8	7.12	151.7	17.4	7.26	167.8	73.0	6.98	119.2	18.9	7.32	175.4	70.0	6.45	172.0	19.2	7.30	204.7	98.0	9.06	70.9
5		11.6	6.95	223.3	79.3	8.56	115.3	13.3		233.2	72.7	7.69	152.9	12.6	7.16	217.2	72.6	7.75	116.3	13.1	7.18	230.0	63.4	6.55	191.0	15.2	7.18	250.3	90.0	9.13	65.9
6		8.8	6.94	279.7	79.1	9.20	105.6	10.2		281.4	63.4	7.08	148.1	9.5	7.09	266.6	63.0	7.17	114.0	10.0	7.12	280.7	54.2	6.20	200.2	10.4	7.13	315.0	82.1	9.06	57.2
7		7.0	6.92	300.9	77.6	9.33	102.3	8.3		306.0	57.8	6.72	146.4	7.7	7.06	285.8	57.8	6.85	108.1	8.4	7.10	207.2	49.5	5.86	207.8	8.5	7.02	338.4	70.5	8.37	48.4
8		6.1	6.90	304.8	73.8	9.03	98.2	6.6		317.6	50.7	6.14	143.6	6.8	7.04	291.0	50.1	6.14	106.4	6.8	7.07	215.8	43.6	5.28	217.0	7.1	7.00	344.8	64.6	7.67	43.6
9		5.7	6.90	306.7	70.5	8.82	94.1	6.0	6.97	319.0	45.6	5.65	140.3	6.0	7.03	292.2	50.7	6.23	103.2	6.2	7.06	306.9	42.3	6.24	222.6	6.5	7.01	345.6	57.6	7.03	39.3
10		5.5	6.90	303.3	68.0	8.54	91.3	5.7		321.3	46.9	5.94	136.2	5.7	7.01	293.6	46.6	5.83	104.7	5.6	7.05	308.2	38.6	4.80	230.7	5.8	7.00	348.8	58.4	7.27	36.2
11		5.4	6.91	309.6	63.9	8.03	86.7	5.5		322.1	42.9	5.39	132.7	5.5	7.00	294.5	44.0	5.50	105.3	5.5	7.03	309.4	36.3	4.58	243.2	5.6	7.00	350.7	51.2	6.38	33.4
12		5.2	6.91	310.4	60.7	7.68	76.2	5.3		323.1	42.0	5.29	129.6	5.4	6.99	295.3	41.8	5.33	103.7	5.4	7.02	310.2	35.6	4.47	250.3	5.5	6.97	350.9	51.7	6.51	32.6
13		5.1	6.91	311.4	57.0	7.17	74.3	5.2		325.0	38.4	4.87	125.2	5.3	6.99	295.6	39.7	5.00	104.7	5.2	7.01	311.6	32.1	4.07	259.0	5.3	6.98	351.9	47.4	5.96	30.7
14		5.0	6.91	312.7	54.4	6.93	73.2	5.1		325.3	37.0	4.66	123.3	5.2	6.98	296.6	39.1	4.92	106.1	5.1	7.00	312.6	32.0	4.02	268.2	5.2	6.97	351.9	46.0	5.84	29.3
15		5.0	6.91	313.5	52.8	6.67	73.2	5.0		326.9	33.9	4.30	118.5	5.0	6.97	298.0	36.2	4.57	106.2	5.0	6.99	314.0	28.0	3.56	277.5	5.2	6.96	353.0	43.4	5.51	25.9
16		4.9	6.92	314.3	50.7	6.63	60.9	4.9		327.7	31.7	4.90	115.7	5.0	6.95	299.1	33.2	4.16	107.1	5.0	6.97	314.9	25.3	3.22	286.4	5.1	6.96	354.6	38.5	4.87	24.7
17		4.9	6.92	315.0	48.0	6.14	64.4	4.9		328.4	29.4	4.90	113.0	4.9	6.90	299.9	28.7	3.68	108.0	5.0	6.97	315.3	22.5	2.88	296.7	5.0	6.95	355.8	35.2	4.48	20.9
18		4.9	6.92	315.3	46.8	5.91	63.4	4.9		328.7	29.0	4.90	107.5	4.9	6.94	300.1	28.1	3.59	109.7	4.9	6.96	315.5	21.3	2.74	303.5	5.0	6.95	356.2	35.0	4.45	22.7
19		4.9	6.92	315.6	44.1	5.62	58.7	4.9		328.7	27.6	3.46	104.0	4.9	6.94	300.2	27.3	3.49	111.7	4.9	6.95	315.7	21.6	2.73	311.2	5.0	6.94	356.8	31.7	3.97	22.3
20		4.9	6.92	315.8	42.5	5.43	56.3	4.9		329.2	25.6	3.22	100.2	4.9	6.94	300.3	25.4	3.33	113.3	4.9	6.95	315.8	20.7	2.63	312.7						
21		4.9	6.91	316.1	38.7	4.90	54.1	4.9	6.85	329.1	25.3	3.25	96.3	4.9	6.93	300.5	24.3	3.11	116.2	4.9	6.95	315.9	20.2	2.57	314.2						
1m from Bottom (BS)		BS=21.0m					BS=21.0m					BS=21.0m					BS=21.0m					BS=19.5m									

Appendix 1 - Tables
Table 38 MQL Depth Profile 1 Page(s)

EMS ID E206618 Site NAME: MIDDLE QUINSAM LAKE (MQL)		MIDDLE QUINSAM LAKE DEPTH PROFILING SUMMER																												
Sample Date Parameter Sample Depth (m)	20-Jul						28-Jul						03-Aug						10-Aug						17-Aug					
	TEMP. Celcius	pH	COND. µS/cm	% Sat.	D.O. mg/L	ORP mV	TEMP. Celcius	pH	COND. µS/cm	% Sat.	D.O. mg/L	ORP mV	TEMP. Celcius	pH	COND. µS/cm	% Sat.	D.O. mg/L	ORP mV	TEMP. Celcius	pH	COND. µS/cm	% Sat.	D.O. mg/L	ORP mV	TEMP. Celcius	pH	COND. µS/cm	% Sat.	D.O. mg/L	ORP mV
1	22.0	7.65	163.6	73.2	6.37	128.0	25.8	7.95	161.2	90.3	7.35	91.0	24.7	8.20	143.2	89.1	7.37	56.2	24.0	8.30	150.8	72.6	6.05	49.4	23.2	8.28	160.8	71.5	6.20	86.5
2	21.7	7.65	163.2	72.9	6.41	122.6	24.8		160.3	90.3	7.46	88.3	24.7	8.19	143.2	82.5	6.87	54.3	23.8	8.31	151.0	72.0	6.00	49.4	23.1	8.28	161.3	69.6	5.89	62.5
3	20.8	7.54	163.0	74.3	6.68	121.0	23.7		157.8	85.9	7.34	84.6	24.7	8.19	143.2	84.7	6.85	65.2	23.6	8.30	151.0	68.8	5.95	55.2	22.9	8.25	161.5	67.8	5.90	49.1
4	20.3	7.47	162.5	76.2	6.88	124.3	22.4	7.87	160.1	81.3	6.91	84.6	24.1	8.06	144.4	83.3	7.07	77.0	23.2	8.20	147.9	68.3	5.84	56.4	22.8	8.20	161.5	67.7	5.84	48.1
5	19.6	7.37	163.0	76.3	6.89	126.8	21.3		169.1	79.5	7.03	79.7	22.7	7.99	151.9	84.2	6.99	86.7	22.7	8.05	153.3	66.8	5.70	79.8	22.5	8.10	160.3	64.7	5.59	33.6
6	18.3	7.35	166.1	80.6	7.58	126.6	19.7		172.5	78.8	7.11	75.3	20.7	7.93	156.5	84.7	7.59	95.4	20.9	8.03	165.1	72.1	6.42	92.8	21.1	7.97	185.8	73.7	6.54	14.9
7	16.0	7.34	161.5	86.6	7.29	129.5	17.8		170.7	88.5	8.64	64.2	17.7	8.00	154.1	90.9	8.64	103.3	17.8	8.37	162.4	83.1	7.90	103.7	18.8	8.15	185.1	76.6	7.13	-0.2
8	13.8	7.36	157.0	93.6	9.63	131.5	14.9		165.7	96.3	9.80	53.9	15.3	8.33	149.6	97.6	9.90	123.0	15.9	8.38	157.8	81.3	8.04	135.2	16.5	8.27	179.5	81.7	8.17	-12.4
9	12.2	7.18	153.0	91.2	9.85	126.6	12.8	7.91	161.4	89.6	9.22	42.6	13.2	8.21	146.6	95.5	10.12	135.8	13.7	8.29	155.9	77.7	7.96	161.4	13.7	8.14	175.5	75.9	7.97	-23.4
10	10.9	6.90	153.0	85.4	9.63	127.4	11.4		161.4	76.1	8.22	38.5	11.7	7.82	145.9	81.8	8.90	155.8	11.6	7.81	155.1	67.3	7.29	186.3	12.5	7.84	175.2	66.2	7.12	-27.5
11	10.3	6.82	153.7	80.2	8.95	123.3	10.6		161.4	69.8	7.74	34.9	10.7	7.57	147.1	75.4	8.37	167.6	10.8	7.51	156.2	58.7	6.46	206.7	10.8	7.59	176.8	57.2	6.31	-21.8
12	9.9	6.70	154.5	77.0	8.75	122.5	10.1		162.9	63.4	7.11	23.3	10.2	7.49	147.9	68.3	7.64	176.2	10.4	7.47	156.8	52.1	5.82	221.6	10.5	7.43	177.4	52.2	5.77	-25.9
13	9.7	6.63	152.3	74.2	8.52	121.0	9.9		163.3	61.7	7.17	19.6	10.0	7.30	148.3	64.4	7.26	188.6	10.1	7.38	157.7	50.2	5.60	237.8	10.2	7.33	179.0	47.7	5.36	-31.5
13.5							9.8	7.64	163.8	61.4	6.91	14.7																		
14	9.5	6.50	155.5	71.5	8.13	117.0							9.9	7.34	149.2	61.1	6.97	204.5												
14.5													9.9	7.32	149.6	59.1	6.67	210.4												
1m from Bottom (BS)	BS=14.0m						BS=13.5m						BS=14.5m						BS=13.0m						BS=13.0m					

Appendix 1 - Tables
Table 41 Summer Rivers 7 Page(s)

EMS ID StnName StnCode	E206619 Long Lake Middle 1 M LLM1						Water Quality Guidelin					
	20-Jul-22	28-Jul-22	3-Aug-22	10-Aug-22	17-Aug-22	Count	Max	5 in 30 Ave	Chronic	Acute	90th Percentile	
	mg/L	mg/L	mg/L	mg/L	mg/L							
SO4-D	33	33	32	37	36	5	37	34.2	128		36.6	
Turb	0.22	0.16	0.29	<0.10	0.30	5	0.30	0.204			0.296	
Alk-T	24	25	26	25	26	5	26	25.2			26	
Al-T	0.0161	0.0152	0.0141	0.0132	0.0116	5	0.0161	0.0140			0.0157	
As-T	0.00067	0.00071	0.00073	0.00079	0.00078	5	0.00079	0.00074		0.005	0.00079	
B-T	<0.050	<0.050	<0.050	<0.050	<0.050	5	<0.050	0.0250	1.2		0.025	
Ba-T	0.0043	0.0043	0.0045	0.0047	0.0044	5	0.0047	0.0044	1		0.0046	
Cd-T	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.0000050			5.00E-06	
Ca-T	15.4	15.7	15.6	17.4	17.3	5	17.4	16.3			17.4	
Cr-T	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	
Co-T	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100	0.004	0.11	0.0001	
Cu-T	<0.00050	<0.00050	<0.00050	0.00089	<0.00050	5	0.00089	0.000378			0.000634	
Fe-T	0.085	0.090	0.092	0.085	0.073	5	0.092	0.085		1	0.091	
Hard-T	47.7	48.8	48.8	54.4	53.2	5	54.4	50.6			53.9	
Pb-T	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100	0.0039978	0.01763	0.0001	
Mg-T	2.20	2.32	2.39	2.65	2.43	5	2.65	2.40			2.56	
Mn-T	0.0143	0.0152	0.0154	0.0137	0.0093	5	0.0154	0.0136	0.737	0.8706	0.0153	
P-T	0.0037		0.016	0.0036	<0.0030	4	0.016	0.00620	0.007*		0.01231	
Ag-D	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	5	<0.000020	0.0000100			1.00E-05	
Mo-T	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	1	2	0.0005	
Ni-T	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	0.025		0.0005	
K-T	0.193	0.186	0.206	0.210	0.208	5	0.210	0.201			0.209	
S-T	10.6	10.6	11.6	11.9	12.9	5	12.9	11.5			12.5	
Se-T	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050	0.002		5.00E-05	
Ag-T	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	5	<0.000020	0.0000100	0.00005	0.0001	1.00E-05	
Na-T	4.16	4.19	4.36	4.76	4.61	5	4.76	4.42			4.7	
Sr-T	0.0931	0.0935	0.0947	0.0999	0.0991	5	0.0999	0.0961			0.0996	
Zn-T	0.0120	<0.0050	<0.0050	<0.0050	<0.0050	5	0.0120	0.00440	0.0075	0.033	0.0082	
Al-D	0.0131	0.0134	0.0122	0.0104	0.0104	5	0.0134	0.0119	0.05	0.1	0.0133	
As-D	0.00066	0.00067	0.00072	0.00073	0.00078	5	0.00078	0.00071			0.00076	
Ba-D	0.0041	0.0043	0.0042	0.0044	0.0044	5	0.0044	0.0043			0.0044	
B-D	<0.050	<0.050	<0.050	0.057	<0.050	5	0.057	0.0314			0.0442	
Cd-D	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.0000050	0.000087	0.00017	5.00E-06	
Ca-D	15.3	16.2	15.0	16.2	17.0	5	17.0	15.9			16.7	
Cl-D	1.3	1.0	<1.0	1.1	1.4	5	1.4	1.06	150	600	1.36	
Cr-D	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	
Co-D	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100			0.0001	
Cu-D	0.00038	0.00039	0.00035	0.00040	0.00037	5	0.00040	0.00038	0.00114	**	0.0004	
DOC	2.7	3.5	3.0	3.9	3.6	5	3.9	3.3			3.8	
Hard-D	47.2	50.1	47.1	49.2	52.7	5	52.7	49.3			51.7	
Fe-D	0.0772	0.0761	0.0736	0.0716	0.0618	5	0.0772	0.0721		0.35	0.0768	
Pb-D	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100			0.0001	
Mg-D	2.19	2.31	2.33	2.15	2.47	5	2.47	2.29			2.41	
Mn-D	0.0135	0.0131	0.0117	0.0083	0.0051	5	0.0135	0.0103			0.0133	
Mo-D	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	
Ni-D	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	
K-D	0.183	0.177	0.189	0.186	0.205	5	0.205	0.188			0.199	
S-D	10.1	10.5	10.7	10.7	11.5	5	11.5	10.7			11.2	
Se-D	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050			5.00E-05	
Na-D	4.13	4.13	4.22	4.25	4.60	5	4.60	4.27			4.46	
Sr-D	0.0946	0.0911	0.0898	0.0933	0.100	5	0.100	0.0938			0.0978	
Zn-D	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250	0.0075	0.033	0.0025	
N-NO23	<0.020	<0.020	<0.020	<0.020	<0.020	5	<0.020	0.0100			0.01	
Chlr-a	0.86					1						

Notes: * P-T is a Water Quality Objective. **Copper is a variable guideline. See Exceedance Table.
Factor applied to less-than results when calculating statistics: 0.5

Appendix 1 - Tables
Table 41 Summer Rivers 7 Page(s)

EMS ID StnName StnCode	E206619 Long Lake Middle 4 M LLM4							Water Quality Guidelin				
	20-Jul-22	28-Jul-22	3-Aug-22	10-Aug-22	17-Aug-22	Count	Max	5 in 30 Ave	Chronic	Acute	90th Percentile	
	mg/L	mg/L	mg/L	mg/L	mg/L							
SO4-D	49	48	53	45	38	5	53	46.6	128		51.4	
Turb	0.22	0.18	0.25	0.29	0.22	5	0.29	0.23			0.27	
Alk-T	27	27	29	25	26	5	29	26.8			28.2	
Al-T	0.0143	0.0143	0.0130	0.0133	0.0123	5	0.0143	0.0134			0.0143	
As-T	0.00053	0.00054	0.00045	0.00069	0.00079	5	0.00079	0.00060		0.005	0.00075	
B-T	<0.050	<0.050	0.051	<0.050	<0.050	5	0.051	0.0302	1.2		0.0406	
Ba-T	0.0053	0.0052	0.0053	0.0051	0.0046	5	0.0053	0.0051	1		0.0053	
Cd-T	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.0000050			5.00E-06	
Ca-T	20.6	20.3	21.8	20.6	18.4	5	21.8	20.3			21.3	
Cr-T	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	
Co-T	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100	0.004	0.11	0.0001	
Cu-T	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	5	<0.00050	0.000250			0.00025	
Fe-T	0.060	0.059	0.053	0.069	0.074	5	0.074	0.063		1	0.072	
Hard-T	62.2	62.0	66.6	63.1	56.7	5	66.6	62.1			65.2	
Pb-T	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100	0.0039978	0.01763	0.0001	
Mg-T	2.62	2.73	2.96	2.84	2.61	5	2.96	2.75			2.91	
Mn-T	0.0144	0.0149	0.0171	0.0164	0.0101	5	0.0171	0.0146	0.737	0.8706	0.0168	
P-T	0.0043		0.0031	0.0043	0.0036	4	0.0043	0.0038	0.007*		0.0043	
Ag-D	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	5	<0.000020	0.0000100			1.00E-05	
Mo-T	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	1	2	0.0005	
Ni-T	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	0.025		0.0005	
K-T	0.245	0.224	0.283	0.230	0.220	5	0.283	0.240			0.268	
S-T	16.0	15.7	18.2	14.4	14.0	5	18.2	15.7			17.3	
Se-T	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050	0.002		5.00E-05	
Ag-T	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	5	<0.000020	0.0000100	0.00005	0.0001	1.00E-05	
Na-T	5.67	5.64	7.00	5.79	4.88	5	7.00	5.80			6.52	
Sr-T	0.134	0.139	0.157	0.124	0.109	5	0.157	0.133			0.15	
Zn-T	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250	0.0075	0.033	0.0025	
Al-D	0.0115	0.0119	0.0111	0.0101	0.0099	5	0.0119	0.0109	0.05	0.1	0.0117	
As-D	0.00053	0.00053	0.00045	0.00063	0.00073	5	0.00073	0.00057			0.00069	
Ba-D	0.0053	0.0049	0.0050	0.0047	0.0045	5	0.0053	0.0049			0.0052	
B-D	<0.050	0.050	<0.050	<0.050	<0.050	5	0.050	0.0300			0.04	
Cd-D	<0.000010	<0.000010	0.000024	<0.000010	<0.000010	5	0.000024	0.0000088	0.000087	0.00017	1.64E-05	
Ca-D	21.1	20.2	21.2	18.7	18.4	5	21.2	19.9			21.2	
Cl-D	2.1	<1.0	<1.0	<1.0	1.3	5	2.1	0.98	150	600	1.78	
Cr-D	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	
Co-D	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100			0.0001	
Cu-D	0.00035	0.00037	0.00036	0.00035	0.00038	5	0.00038	0.00036	0.000715	**	0.00038	
DOC	2.0	3.3	3.1	3.2	3.7	5	3.7	3.1			3.5	
Hard-D	64.5	62.0	64.6	56.0	56.9	5	64.6	60.8			64.6	
Fe-D	0.0480	0.0484	0.0375	0.0572	0.0587	5	0.0587	0.0500		0.35	0.0581	
Pb-D	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100			0.0001	
Mg-D	2.84	2.79	2.86	2.30	2.63	5	2.86	2.68			2.85	
Mn-D	0.0132	0.0132	0.0124	0.0094	0.0055	5	0.0132	0.0107			0.0132	
Mo-D	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	
Ni-D	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	
K-D	0.244	0.226	0.257	0.205	0.222	5	0.257	0.231			0.252	
S-D	16.0	15.3	16.2	12.7	13.4	5	16.2	14.7			16.1	
Se-D	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050			5.00E-05	
Na-D	5.97	5.78	6.53	4.99	5.09	5	6.53	5.67			6.31	
Sr-D	0.138	0.134	0.143	0.113	0.110	5	0.143	0.128			0.141	
Zn-D	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250	0.0075	0.033	0.0025	
N-NO23	0.025	<0.020	<0.020	<0.020	<0.020	5	0.025	0.0130			0.019	

Notes: * P-T is a Water Quality Objective. **Copper is a variable guideline. See Exceedance Table.
Factor applied to less-than results when calculating statistics: 0.5

Appendix 1 - Tables
Table 41 Summer Rivers 7 Page(s)

EMS ID StnName StnCode	E206619 Long Lake Middle 9 M LLM9							Water Quality Guidelin				
	20-Jul-22	28-Jul-22	3-Aug-22	10-Aug-22	17-Aug-22	Count	Max	5 in 30 Ave	Chronic	Acute	90th Percentile	
	mg/L	mg/L	mg/L	mg/L	mg/L							
SO4-D	110	100	120	130	99	5	130	111.8	128		126	
Turb	0.19	0.14	0.15	0.29	0.23	5	0.29	0.20			0.27	
Alk-T	44	42	46	43	44	5	46	43.8			45.2	
Al-T	0.0162	0.0152	0.0163	0.0157	0.0154	5	0.0163	0.0158			0.0163	
As-T	0.00024	0.00028	0.00021	0.00024	0.00023	5	0.00028	0.00024		0.005	0.00026	
B-T	0.108	0.095	0.108	0.105	0.110	5	0.110	0.105	1.2		0.109	
Ba-T	0.0064	0.0062	0.0067	0.0064	0.0061	5	0.0067	0.0064	1		0.0066	
Cd-T	<0.000010	<0.000010	<0.000010	<0.000010	0.000012	5	0.000012	0.0000064			9.20E-06	
Ca-T	41.1	38.9	40.9	43.7	42.2	5	43.7	41.4			43.1	
Cr-T	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	
Co-T	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100	0.004	0.11	0.0001	
Cu-T	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	5	<0.00050	0.000250			0.00025	
Fe-T	0.025	0.029	0.023	0.023	0.023	5	0.029	0.025		1	0.027	
Hard-T	121	115	122	129	124	5	129	122.2			127	
Pb-T	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100	0.0039978	0.01763	0.0001	
Mg-T	4.54	4.28	4.74	4.82	4.59	5	4.82	4.59			4.79	
Mn-T	0.0439	0.0399	0.0423	0.0392	0.0367	5	0.0439	0.0404	0.737	0.8706	0.0433	
P-T	<0.0030		0.0034	0.0037	<0.0030	4	0.0037	0.00252	0.007*		0.00361	
Ag-D	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	5	<0.000020	0.0000100			1.00E-05	
Mo-T	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	1	2	0.0005	
Ni-T	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	0.025		0.0005	
K-T	0.493	0.449	0.547	0.501	0.503	5	0.547	0.499			0.529	
S-T	36.5	34.5	39.5	39.4	39.7	5	39.7	37.9			39.6	
Se-T	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050	0.002		5.00E-05	
Ag-T	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	5	<0.000020	0.0000100	0.00005	0.0001	1.00E-05	
Na-T	15.3	13.9	16.6	16.3	15.9	5	16.6	15.6			16.5	
Sr-T	0.322	0.303	0.348	0.341	0.318	5	0.348	0.326			0.345	
Zn-T	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250	0.0075	0.033	0.0025	
Al-D	0.0138	0.0121	0.0139	0.0122	0.0129	5	0.0139	0.0130	0.05	0.1	0.0139	
As-D	0.00021	0.00023	0.00019	0.00020	0.00022	5	0.00023	0.00021			0.00023	
Ba-D	0.0061	0.0060	0.0059	0.0059	0.0059	5	0.0061	0.0060			0.0061	
B-D	0.109	0.103	0.105	0.102	0.105	5	0.109	0.105			0.107	
Cd-D	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.0000050	0.000087	0.00017	5.00E-06	
Ca-D	41.1	40.9	39.8	39.3	41.7	5	41.7	40.6			41.5	
Cl-D	1.5	1.1	<1.0	1.1	1.5	5	1.5	1.14	150	600	1.5	
Cr-D	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	
Co-D	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100			0.0001	
Cu-D	0.00041	0.00040	0.00034	0.00036	0.00038	5	0.00041	0.000378	0.000377	**	0.00041	
DOC	1.8	2.7	2.6	2.8	3.3	5	3.3	2.6			3.1	
Hard-D	121	120	118	115	123	5	123	119.4			122.2	
Fe-D	0.0159	0.0202	0.0141	0.0145	0.0141	5	0.0202	0.0158		0.35	0.0185	
Pb-D	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100			0.0001	
Mg-D	4.52	4.33	4.49	3.98	4.55	5	4.55	4.37			4.54	
Mn-D	0.0352	0.0372	0.0331	0.0328	0.0335	5	0.0372	0.0344			0.0364	
Mo-D	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	
Ni-D	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	
K-D	0.492	0.444	0.499	0.456	0.495	5	0.499	0.477			0.497	
S-D	35.3	36.0	36.3	33.9	35.9	5	36.3	35.5			36.2	
Se-D	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050			5.00E-05	
Na-D	15.7	14.5	15.5	14.6	15.5	5	15.7	15.2			15.6	
Sr-D	0.320	0.310	0.308	0.296	0.317	5	0.320	0.310			0.319	
Zn-D	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250	0.0075	0.033	0.0025	
N-NO23	0.050	0.032	0.047	0.056	0.046	5	0.056	0.046			0.054	

Notes: * P-T is a Water Quality Objective. **Copper is a variable guideline. See Exceedance Table.
Factor applied to less-than results when calculating statistics: 0.5

Appendix 1 - Tables
Table 41 Summer Rivers 7 Page(s)

EMS ID	E206619							Water Quality Guidelin				
StnName	Long Lake Middle 1M From B											
StnCode	LLMB											
	20-Jul-22	28-Jul-22	3-Aug-22	10-Aug-22	17-Aug-22	Count	Max	5 in 30 Ave	Chronic	Acute	90th Percentile	
SO4-D	mg/L	120	120	100	86	36	5	120	92.4	128	120	
Turb	NTU	0.86	0.54	0.57	0.43	0.33	5	0.86	0.55		0.74	
Alk-T	mg/L	46	46	42	36	26	5	46	39.2		46	
Al-T	mg/L	0.0170	0.0151	0.0151	0.0149	0.0123	5	0.0170	0.0149		0.0162	
As-T	mg/L	0.00041	0.00040	0.00038	0.00054	0.00080	5	0.00080	0.00051	0.005	0.0007	
B-T	mg/L	0.112	0.108	0.096	0.076	<0.050	5	0.112	0.0834	1.2	0.1104	
Ba-T	mg/L	0.0134	0.0118	0.0100	0.0073	0.0046	5	0.0134	0.0094	1	0.0128	
Cd-T	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.0000050		5.00E-06	
Ca-T	mg/L	41.7	43.2	38.1	33.2	18.0	5	43.2	34.8		42.6	
Cr-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		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	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	5	<0.00050	0.000250		0.00025	
Fe-T	mg/L	0.107	0.104	0.077	0.086	0.076	5	0.107	0.090		1	
Hard-T	mg/L	123	127	113	98.6	55.7	5	127	103.5		125.4	
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	4.51	4.61	4.41	3.83	2.60	5	4.61	3.99		4.57	
Mn-T	mg/L	0.436	0.405	0.265	0.138	0.0098	5	0.436	0.2508	0.737	0.8706	
P-T	mg/L	0.054		<0.0030	0.0030	<0.0030	4	0.054	0.01500	0.007*	0.0387	
Ag-D	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	5	<0.000020	0.0000100		1.00E-05	
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	0.0005	
K-T	mg/L	0.553	0.502	0.513	0.369	0.220	5	0.553	0.431		0.537	
S-T	mg/L	39.0	36.9	35.7	25.2	13.8	5	39.0	30.1		38.2	
Se-T	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050	0.002	5.00E-05	
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	15.4	15.8	15.2	11.0	4.90	5	15.8	12.46		15.64	
Sr-T	mg/L	0.357	0.340	0.321	0.229	0.107	5	0.357	0.271		0.35	
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	0.0100	0.0096	0.0112	0.0095	0.0116	5	0.0116	0.0104	0.05	0.1	
As-D	mg/L	0.00028	0.00027	0.00033	0.00045	0.00077	5	0.00077	0.00042		0.00064	
Ba-D	mg/L	0.0122	0.0111	0.0081	0.0078	0.0045	5	0.0122	0.0087		0.0118	
B-D	mg/L	0.111	0.114	0.090	0.076	<0.050	5	0.114	0.0832		0.1128	
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	42.8	43.5	34.2	30.2	18.0	5	43.5	33.7		43.2	
Cl-D	mg/L	1.7	1.3	<1.0	1.2	1.2	5	1.7	1.18	150	600	
Cr-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		0.0005	
Co-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100		0.0001	
Cu-D	mg/L	0.00039	0.00038	0.00035	0.00035	0.00038	5	0.00039	0.00037	0.000302	**	
DOC	mg/L	1.7	2.4	2.5	2.9	3.7	5	3.7	2.6		3.4	
Hard-D	mg/L	125	128	102	89.0	55.9	5	128	100.0		126.8	
Fe-D	mg/L	0.0287	0.0288	0.0269	0.0479	0.0633	5	0.0633	0.0391		0.35	
Pb-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100		0.0001	
Mg-D	mg/L	4.54	4.63	4.15	3.27	2.64	5	4.63	3.85		4.59	
Mn-D	mg/L	0.385	0.362	0.155	0.184	0.0054	5	0.385	0.2183		0.3758	
Mo-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		0.0005	
Ni-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050		0.0005	
K-D	mg/L	0.513	0.489	0.449	0.358	0.215	5	0.513	0.405		0.503	
S-D	mg/L	37.4	37.0	31.7	24.9	12.1	5	37.4	28.6		37.2	
Se-D	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050		5.00E-05	
Na-D	mg/L	15.8	15.9	13.7	10.5	4.88	5	15.9	12.16		15.86	
Sr-D	mg/L	0.333	0.336	0.282	0.220	0.104	5	0.336	0.255		0.335	
Zn-D	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250	0.0075	0.033	
N-NO23	mg/L	0.070	0.085	0.051	0.032	<0.020	5	0.085	0.0496		0.079	

Notes: * P-T is a Water Quality Objective. **Copper is a variable guideline. See Exceedance Table.
Factor applied to less-than results when calculating statistics: 0.5

Appendix 1 - Tables
Table 41 Summer Rivers 7 Page(s)

EMS ID	E206618							Water Quality Guidelin				
StnName	Middle Quinsam Lake 1M											
StnCode	MQL1											
	20-Jul-22	28-Jul-22	3-Aug-22	10-Aug-22	17-Aug-22	Count	Max	5 in 30 Ave	Chronic	Acute	90th Percentile	
SO4-D	mg/L	34	32	28	31	26	5	34	30.2	128		33.2
Turb	NTU	0.45	0.16	0.39	0.22	0.30	5	0.45	0.30			0.43
Alk-T	mg/L	44	43	44	42	41	5	44	42.8			44
Al-T	mg/L	0.0136	0.0154	0.0176	0.0148	0.0155	5	0.0176	0.0154			0.0168
As-T	mg/L	0.00018	0.00018	0.00018	0.00021	0.00021	5	0.00021	0.00019		0.005	0.00021
B-T	mg/L	0.065	0.061	0.063	0.058	0.059	5	0.065	0.061	1.2		0.064
Ba-T	mg/L	0.0017	0.0017	0.0018	0.0015	0.0015	5	0.0018	0.0016	1		0.0018
Cd-T	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.0000050			5.00E-06
Ca-T	mg/L	11.9	12.6	13.0	12.1	11.8	5	13.0	12.3			12.8
Cr-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			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	0.0001
Cu-T	mg/L	0.00051	0.00062	0.00053	0.00051	<0.00050	5	0.00062	0.000484			0.000584
Fe-T	mg/L	0.032	0.039	0.053	0.038	0.041	5	0.053	0.041		1	0.048
Hard-T	mg/L	36.4	38.1	39.7	36.7	35.8	5	39.7	37.3			39.1
Pb-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100	0.0039978	0.01763	0.0001
Mg-T	mg/L	1.61	1.59	1.73	1.60	1.51	5	1.73	1.61			1.68
Mn-T	mg/L	0.0058	0.0073	0.0113	0.0090	0.0077	5	0.0113	0.0082	0.737	0.8706	0.0104
P-T	mg/L	<0.0030		<0.0030	<0.0030	<0.0030	4	<0.0030	0.00150	0.006*		0.0015
Ag-D	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	5	<0.000020	0.0000100			1.00E-05
Mo-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	1	2	0.0005
Ni-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	0.025		0.0005
K-T	mg/L	0.265	0.274	0.284	0.243	0.250	5	0.284	0.263			0.28
S-T	mg/L	10.2	10.0	10.6	10.4	9.7	5	10.6	10.2			10.5
Se-T	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050	0.002		5.00E-05
Ag-T	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	5	<0.000020	0.0000100	0.00005	0.0001	1.00E-05
Na-T	mg/L	17.7	17.1	18.5	16.8	16.3	5	18.5	17.3			18.2
Sr-T	mg/L	0.0776	0.0770	0.0762	0.0682	0.0604	5	0.0776	0.0719			0.0774
Zn-T	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250	0.0075	0.033	0.0025
Al-D	mg/L	0.0131	0.0141	0.0151	0.0127	0.0134	5	0.0151	0.0137	0.05	0.1	0.0147
As-D	mg/L	0.00019	0.00017	0.00018	0.00019	0.00020	5	0.00020	0.00019			0.0002
Ba-D	mg/L	0.0017	0.0016	0.0015	0.0015	0.0017	5	0.0017	0.0016			0.0017
B-D	mg/L	0.071	0.065	0.063	0.064	0.059	5	0.071	0.064			0.069
Cd-D	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.0000050	0.000087	0.00017	5.00E-06
Ca-D	mg/L	12.7	12.3	11.6	11.1	11.8	5	12.7	11.9			12.5
Cl-D	mg/L	1.9	<1.0	<1.0	1.4	1.5	5	1.9	1.16	150	600	1.74
Cr-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005
Co-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100			0.0001
Cu-D	mg/L	0.00049	0.00053	0.00047	0.00043	0.00048	5	0.00053	0.00048	0.000939	**	0.00051
DOC	mg/L	1.6	2.5	1.8	3.1	2.0	5	3.1	2.2			2.9
Hard-D	mg/L	38.9	37.3	35.5	34.3	35.3	5	38.9	36.3			38.3
Fe-D	mg/L	0.0235	0.0263	0.0262	0.0228	0.0228	5	0.0263	0.0243		0.35	0.0263
Pb-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100			0.0001
Mg-D	mg/L	1.73	1.63	1.56	1.56	1.44	5	1.73	1.58			1.69
Mn-D	mg/L	0.0020	0.0012	0.0016	0.0013	<0.0010	5	0.0020	0.00132			0.00184
Mo-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005
Ni-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005
K-D	mg/L	0.282	0.251	0.250	0.236	0.239	5	0.282	0.252			0.27
S-D	mg/L	11.1	10.9	8.9	8.8	9.1	5	11.1	9.8			11
Se-D	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050			5.00E-05
Na-D	mg/L	19.2	17.1	17.2	16.6	16.0	5	19.2	17.2			18.4
Sr-D	mg/L	0.0784	0.0741	0.0667	0.0629	0.0650	5	0.0784	0.0694			0.0767
Zn-D	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250	0.0075	0.033	0.0025
N-NO23	mg/L	<0.020	<0.020	<0.020	0.043	<0.020	5	0.043	0.0166			0.0298
Chlr-a	ug/L	0.92					1					

Notes: * P-T is a Water Quality Objective. **Copper is a variable guideline. See Exceedance Table.
Factor applied to less-than results when calculating statistics: 0.5

Appendix 1 - Tables
Table 41 Summer Rivers 7 Page(s)

EMS ID StnName StnCode	E206618 Middle Quinsam Lake 4M						Water Quality Guidelin					
	MQL4						Count	Max	5 in 30 Ave	Chronic	Acute	90th Percentile
	20-Jul-22	28-Jul-22	3-Aug-22	10-Aug-22	17-Aug-22	mg/L						
SO4-D	mg/L	36	31	30	30	25	5	36	30.4	128		34
Turb	NTU	0.27	0.18	0.27	0.26	0.29	5	0.29	0.25			0.28
Alk-T	mg/L	44	46	44	42	41	5	46	43.4			45.2
Al-T	mg/L	0.0138	0.0146	0.0154	0.0157	0.0154	5	0.0157	0.0150			0.0156
As-T	mg/L	0.00018	0.00019	0.00017	0.00020	0.00020	5	0.00020	0.00019		0.005	0.0002
B-T	mg/L	0.063	0.062	0.060	0.061	0.062	5	0.063	0.062	1.2		0.063
Ba-T	mg/L	0.0018	0.0017	0.0017	0.0016	0.0015	5	0.0018	0.0017	1		0.0018
Cd-T	mg/L	<0.000010	<0.000010	0.000011	<0.000010	<0.000010	5	0.000011	0.0000062			8.60E-06
Ca-T	mg/L	12.2	12.6	12.2	12.2	11.9	5	12.6	12.2			12.4
Cr-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			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	0.0001
Cu-T	mg/L	0.00052	0.00050	0.00053	0.00058	<0.00050	5	0.00058	0.000476			0.00056
Fe-T	mg/L	0.038	0.044	0.076	0.047	0.041	5	0.076	0.049		1	0.064
Hard-T	mg/L	37.2	38.0	37.3	37.2	36.0	5	38.0	37.1			37.7
Pb-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100	0.0039978	0.01763	0.0001
Mg-T	mg/L	1.62	1.60	1.64	1.65	1.52	5	1.65	1.61			1.65
Mn-T	mg/L	0.0077	0.0077	0.0113	0.0107	0.0076	5	0.0113	0.0090	0.737	0.8706	0.0111
P-T	mg/L	<0.0030		<0.0030	<0.0030	<0.0030	4	<0.0030	0.00150	0.006*		0.0015
Ag-D	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	5	<0.000020	0.0000100			1.00E-05
Mo-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	1	2	0.0005
Ni-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	0.025		0.0005
K-T	mg/L	0.274	0.267	0.273	0.251	0.248	5	0.274	0.263			0.274
S-T	mg/L	11.5	9.4	10.0	9.8	9.5	5	11.5	10.0			10.9
Se-T	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050	0.002		5.00E-05
Ag-T	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	5	<0.000020	0.0000100	0.00005	0.0001	1.00E-05
Na-T	mg/L	18.2	16.9	17.4	17.1	15.9	5	18.2	17.1			17.9
Sr-T	mg/L	0.0792	0.0751	0.0737	0.0690	0.0599	5	0.0792	0.0714			0.0776
Zn-T	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250	0.0075	0.033	0.0025
Al-D	mg/L	0.0121	0.0127	0.0127	0.0119	0.0144	5	0.0144	0.0128	0.05	0.1	0.0137
As-D	mg/L	0.00018	0.00017	0.00018	0.00019	0.00020	5	0.00020	0.00018			0.0002
Ba-D	mg/L	0.0018	0.0017	0.0016	0.0015	0.0015	5	0.0018	0.0016			0.0018
B-D	mg/L	0.072	0.063	0.065	0.065	0.057	5	0.072	0.064			0.069
Cd-D	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.0000050	0.000087	0.00017	5.00E-06
Ca-D	mg/L	12.7	12.2	12.0	11.2	11.6	5	12.7	11.9			12.5
Cl-D	mg/L	1.9	1.7	1.1	1.5	1.4	5	1.9	1.5	150	600	1.8
Cr-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005
Co-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00026	5	0.00026	0.000132			0.000196
Cu-D	mg/L	0.00050	0.00047	0.00050	0.00041	0.00047	5	0.00050	0.00047	0.00037	**	0.0005
DOC	mg/L	1.4	2.1	1.9	1.9	2.1	5	2.1	1.9			2.1
Hard-D	mg/L	38.7	36.9	36.3	34.4	34.9	5	38.7	36.2			38
Fe-D	mg/L	0.0286	0.0267	0.0262	0.0254	0.0234	5	0.0286	0.0261		0.35	0.0278
Pb-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100			0.0001
Mg-D	mg/L	1.69	1.57	1.56	1.54	1.44	5	1.69	1.56			1.64
Mn-D	mg/L	0.0020	0.0014	0.0017	0.0012	<0.0010	5	0.0020	0.00136			0.00188
Mo-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005
Ni-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005
K-D	mg/L	0.295	0.249	0.256	0.235	0.237	5	0.295	0.254			0.279
S-D	mg/L	10.9	10.2	10.6	8.7	9.7	5	10.9	10.0			10.8
Se-D	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050			5.00E-05
Na-D	mg/L	19.1	16.2	17.8	16.3	15.9	5	19.1	17.1			18.6
Sr-D	mg/L	0.0806	0.0723	0.0681	0.0622	0.0650	5	0.0806	0.0696			0.0773
Zn-D	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250	0.0075	0.033	0.0025
N-NO23	mg/L	<0.020	<0.020	<0.020	<0.020	<0.020	5	<0.020	0.0100			0.01

Notes: * P-T is a Water Quality Objective. **Copper is a variable guideline. See Exceedance Table.
Factor applied to less-than results when calculating statistics: 0.5

Appendix 1 - Tables
Table 41 Summer Rivers 7 Page(s)

EMS ID StnName StnCode	E206618 Middle Quinsam Lake 9M						Water Quality Guidelin					
	mg/L	MQL9					Count	Max	5 in 30 Ave	Chronic	Acute	90th Percentile
		20-Jul-22	28-Jul-22	3-Aug-22	10-Aug-22	17-Aug-22						
SO4-D	mg/L	36	36	34	37	30	5	37	34.6	128		36.6
Turb	NTU	0.23	0.14	0.21	0.20	9.0	5	9.0	1.96			5.49
Alk-T	mg/L	40	46	42	39	41	5	46	41.6			44.4
Al-T	mg/L	0.0094	0.0102	0.0114	0.0102	0.0122	5	0.0122	0.0107			0.0119
As-T	mg/L	0.00014	0.00015	0.00015	0.00017	0.00019	5	0.00019	0.00016		0.005	0.00018
B-T	mg/L	0.056	0.064	0.063	0.059	0.071	5	0.071	0.063	1.2		0.068
Ba-T	mg/L	0.0019	0.0020	0.0021	0.0019	0.0016	5	0.0021	0.0019	1		0.0021
Cd-T	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.0000050			5.00E-06
Ca-T	mg/L	12.3	13.3	14.2	13.5	12.6	5	14.2	13.2			13.9
Cr-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			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	0.0001
Cu-T	mg/L	0.00052	<0.00050	<0.00050	0.00063	<0.00050	5	0.00063	0.000380			0.000586
Fe-T	mg/L	0.020	0.023	0.024	0.024	0.031	5	0.031	0.024		1	0.028
Hard-T	mg/L	37.2	40.3	43.2	40.8	38.3	5	43.2	40.0			42.2
Pb-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100	0.0039978	0.01763	0.0001
Mg-T	mg/L	1.57	1.69	1.91	1.71	1.68	5	1.91	1.71			1.83
Mn-T	mg/L	0.0058	0.0054	0.0067	0.0067	0.0085	5	0.0085	0.0066	0.737	0.8706	0.0078
P-T	mg/L	<0.0030		0.0068	<0.0030	<0.0030	4	0.0068	0.00282	0.006*		0.00521
Ag-D	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	5	<0.000020	0.0000100			1.00E-05
Mo-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	1	2	0.0005
Ni-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	0.025		0.0005
K-T	mg/L	0.231	0.271	0.259	0.227	0.260	5	0.271	0.250			0.267
S-T	mg/L	11.2	10.7	12.5	12.0	11.7	5	12.5	11.6			12.3
Se-T	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050	0.002		5.00E-05
Ag-T	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	5	<0.000020	0.0000100	0.00005	0.0001	1.00E-05
Na-T	mg/L	16.5	18.2	19.1	17.7	17.7	5	19.1	17.8			18.7
Sr-T	mg/L	0.0722	0.0820	0.0815	0.0737	0.0661	5	0.0820	0.0751			0.0818
Zn-T	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250	0.0075	0.033	0.0025
Al-D	mg/L	0.0119	0.0098	0.0081	0.0074	0.0103	5	0.0119	0.0095	0.05	0.1	0.0113
As-D	mg/L	0.00014	0.00016	0.00014	0.00016	0.00018	5	0.00018	0.00016			0.00017
Ba-D	mg/L	0.0019	0.0019	0.0018	0.0018	0.0017	5	0.0019	0.0018			0.0019
B-D	mg/L	0.064	0.070	0.060	0.066	0.063	5	0.070	0.065			0.068
Cd-D	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.0000050	0.000087	0.00017	5.00E-06
Ca-D	mg/L	12.8	13.0	12.7	12.1	12.6	5	13.0	12.6			12.9
Cl-D	mg/L	2.2	1.6	1.6	1.8	1.5	5	2.2	1.7	150	600	2
Cr-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005
Co-D	mg/L	<0.00020	<0.00020	<0.00020	0.00023	<0.00020	5	0.00023	0.000126			0.000178
Cu-D	mg/L	0.00053	0.00047	0.00050	0.00043	0.00046	5	0.00053	0.00048	0.000889	**	0.00052
DOC	mg/L	1.2	1.9	1.8	1.7	2.4	5	2.4	1.8			2.2
Hard-D	mg/L	38.9	39.4	38.6	37.1	37.9	5	39.4	38.4			39.2
Fe-D	mg/L	0.0136	0.0145	0.0133	0.0101	0.0151	5	0.0151	0.0133		0.35	0.0149
Pb-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100			0.0001
Mg-D	mg/L	1.70	1.70	1.71	1.70	1.56	5	1.71	1.67			1.71
Mn-D	mg/L	0.0025	0.0015	0.0021	0.0013	0.0011	5	0.0025	0.0017			0.0023
Mo-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005
Ni-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005
K-D	mg/L	0.231	0.259	0.226	0.214	0.255	5	0.259	0.237			0.257
S-D	mg/L	11.2	11.5	10.9	10.8	10.8	5	11.5	11.0			11.4
Se-D	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050			5.00E-05
Na-D	mg/L	17.5	18.2	17.9	17.1	17.5	5	18.2	17.6			18.1
Sr-D	mg/L	0.0721	0.0790	0.0698	0.0654	0.0720	5	0.0790	0.0717			0.0762
Zn-D	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250	0.0075	0.033	0.0025
N-NO23	mg/L	<0.020	<0.020	<0.020	<0.020	<0.020	5	<0.020	0.0100			0.01

Notes: * P-T is a Water Quality Objective. **Copper is a variable guideline. See Exceedance Table.
Factor applied to less-than results when calculating statistics: 0.5

Appendix 1 - Tables
Table 41 Summer Rivers 7 Page(s)

EMS ID StnName StnCode	E206618 Middle Quinsam Lake 1MB MQLB						Water Quality Guidelin					
	20-Jul-22	28-Jul-22	3-Aug-22	10-Aug-22	17-Aug-22	Count	Max	5 in 30 Ave	Chronic	Acute	90th Percentile	
	mg/L	mg/L	mg/L	mg/L	mg/L							
SO4-D	37	34	35	38	28	5	38	34.4	128		37.6	
Turb	0.21	0.14	0.17	0.23	0.26	5	0.26	0.20			0.25	
Alk-T	39	41	40	39	40	5	41	39.8			40.6	
Al-T	0.0070	0.0104	0.0078	0.0067	0.0121	5	0.0121	0.0088			0.0114	
As-T	<0.00010	0.00014	<0.00010	0.00012	0.00017	5	0.00017	0.000106		0.005	0.000158	
B-T	0.056	0.057	0.057	0.054	0.066	5	0.066	0.058	1.2		0.062	
Ba-T	0.0023	0.0019	0.0024	0.0024	0.0018	5	0.0024	0.0022	1		0.0024	
Cd-T	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.0000050			5.00E-06	
Ca-T	12.3	12.5	13.3	13.3	12.5	5	13.3	12.8			13.3	
Cr-T	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	
Co-T	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100	0.004	0.11	0.0001	
Cu-T	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	5	<0.00050	0.000250			0.00025	
Fe-T	0.025	0.028	0.019	0.020	0.034	5	0.034	0.025		1	0.032	
Hard-T	38.0	37.8	41.2	41.3	38.0	5	41.3	39.3			41.3	
Pb-T	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100	0.0039978	0.01763	0.0001	
Mg-T	1.75	1.62	1.97	1.95	1.66	5	1.97	1.79			1.96	
Mn-T	0.0068	0.0069	0.0074	0.0080	0.0084	5	0.0084	0.0075	0.737	0.8706	0.0082	
P-T	<0.0030		0.0062	0.0079	<0.0030	4	0.0079	0.00428	0.006*		0.00739	
Ag-D	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	5	<0.000020	0.0000100			1.00E-05	
Mo-T	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	1	2	0.0005	
Ni-T	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	0.025		0.0005	
K-T	0.231	0.248	0.263	0.234	0.246	5	0.263	0.244			0.257	
S-T	11.1	10.3	12.7	11.5	10.9	5	12.7	11.3			12.2	
Se-T	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050	0.002		5.00E-05	
Ag-T	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	5	<0.000020	0.0000100	0.00005	0.0001	1.00E-05	
Na-T	15.3	16.1	17.8	17.2	16.4	5	17.8	16.6			17.6	
Sr-T	0.0721	0.0719	0.0763	0.0703	0.0639	5	0.0763	0.0709			0.0746	
Zn-T	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250	0.0075	0.033	0.0025	
Al-D	0.0063	0.0102	0.0055	0.0040	0.0114	5	0.0114	0.0075	0.05	0.1	0.0109	
As-D	0.00011	0.00015	0.00010	0.00011	0.00017	5	0.00017	0.00013			0.00016	
Ba-D	0.0024	0.0019	0.0022	0.0023	0.0017	5	0.0024	0.0021			0.0024	
B-D	0.061	0.063	0.056	0.062	0.056	5	0.063	0.060			0.063	
Cd-D	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.0000050	0.000087	0.00017	5.00E-06	
Ca-D	13.3	12.6	13.3	12.7	12.0	5	13.3	12.8			13.3	
Cl-D	4.2	1.5	2.3	2.8	1.5	5	4.2	2.5	150	600	3.6	
Cr-D	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	
Co-D	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100			0.0001	
Cu-D	0.00046	0.00046	0.00053	0.00039	0.00048	5	0.00053	0.00046	0.000889	**	0.00051	
DOC	1.8	2.0	1.7	1.9	2.0	5	2.0	1.9			2	
Hard-D	41.1	38.1	41.3	39.4	36.2	5	41.3	39.2			41.2	
Fe-D	0.0106	0.0186	0.0108	0.0075	0.0188	5	0.0188	0.0133		0.35	0.0187	
Pb-D	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100			0.0001	
Mg-D	1.94	1.64	1.98	1.87	1.51	5	1.98	1.79			1.96	
Mn-D	0.0040	0.0026	0.0045	0.0044	0.0018	5	0.0045	0.0035			0.0045	
Mo-D	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	
Ni-D	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	
K-D	0.245	0.239	0.234	0.218	0.242	5	0.245	0.236			0.244	
S-D	12.0	10.6	11.2	11.7	9.2	5	12.0	10.9			11.9	
Se-D	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050			5.00E-05	
Na-D	16.9	16.5	17.2	16.3	16.2	5	17.2	16.6			17.1	
Sr-D	0.0725	0.0737	0.0678	0.0653	0.0669	5	0.0737	0.0692			0.0732	
Zn-D	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250	0.0075	0.033	0.0025	
N-NO23	<0.020	<0.020	<0.020	<0.020	<0.020	5	<0.020	0.0100			0.01	

Notes: * P-T is a Water Quality Objective. **Copper is a variable guideline. See Exceedance Table.
Factor applied to less-than results when calculating statistics: 0.5

Appendix 1 - Tables
Table 41 Summer Rivers 7 Page(s)

EMS ID StnName StnCode	LLE Zone of Dilution 2 LLEZ2	Water Quality Guidelin										
		20-Jul-22	28-Jul-22	3-Aug-22	10-Aug-22	17-Aug-22	Count	Max	5 in 30 Ave	Chronic	Acute	90th Percentile
		mg/L	mg/L	mg/L	mg/L	mg/L						
SO4-D	mg/L	33	33	32	38	36	5	38	34.4	128		37.2
Turb	NTU	0.20	0.25	0.19	0.42	0.31	5	0.42	0.27			0.38
Alk-T	mg/L	24	26	26	25	26	5	26	25.4			26
Al-T	mg/L	0.0143	0.0149	0.0137	0.0140	0.0119	5	0.0149	0.0138			0.0147
As-T	mg/L	0.00061	0.00077	0.00074	0.00080	0.00080	5	0.00080	0.00074		0.005	0.0008
B-T	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	5	<0.050	0.0250	1.2		0.025
Ba-T	mg/L	0.0040	0.0045	0.0044	0.0047	0.0044	5	0.0047	0.0044	1		0.0046
Cd-T	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.0000050			5.00E-06
Ca-T	mg/L	14.0	16.0	15.5	17.4	17.6	5	17.6	16.1			17.5
Cr-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			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	0.0001
Cu-T	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	5	<0.00050	0.000250			0.00025
Fe-T	mg/L	0.076	0.090	0.093	0.085	0.077	5	0.093	0.084		1	0.092
Hard-T	mg/L	43.3	49.7	48.4	53.9	54.2	5	54.2	49.9			54.1
Pb-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100	0.0039978	0.01763	0.0001
Mg-T	mg/L	2.04	2.35	2.35	2.55	2.51	5	2.55	2.36			2.53
Mn-T	mg/L	0.0132	0.0157	0.0159	0.0139	0.0101	5	0.0159	0.0138	0.737	0.8706	0.0158
P-T	mg/L	0.0031		0.0054	0.0039	0.0032	4	0.0054	0.0039	0.007*		0.005
Ag-D	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	5	<0.000020	0.0000100			1.00E-05
Mo-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	1	2	0.0005
Ni-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	0.025		0.0005
K-T	mg/L	0.173	0.187	0.203	0.207	0.211	5	0.211	0.196			0.209
S-T	mg/L	10.3	10.8	10.9	11.9	13.1	5	13.1	11.4			12.6
Se-T	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050	0.002		5.00E-05
Ag-T	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	5	<0.000020	0.0000100	0.00005	0.0001	1.00E-05
Na-T	mg/L	3.74	4.23	4.24	4.79	4.70	5	4.79	4.34			4.75
Sr-T	mg/L	0.0870	0.0945	0.0950	0.101	0.103	5	0.103	0.0961			0.1022
Zn-T	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250	0.0075	0.033	0.0025
Al-D	mg/L	0.0136	0.0129	0.0119	0.0106	0.0096	5	0.0136	0.0117	0.05	0.1	0.0133
As-D	mg/L	0.00066	0.00070	0.00070	0.00074	0.00076	5	0.00076	0.00071			0.00075
Ba-D	mg/L	0.0043	0.0043	0.0041	0.0043	0.0044	5	0.0044	0.0043			0.0044
B-D	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	5	<0.050	0.0250			0.025
Cd-D	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.0000050	0.000087	0.00017	5.00E-06
Ca-D	mg/L	15.5	15.7	14.7	15.9	17.1	5	17.1	15.8			16.6
Cl-D	mg/L	1.5	<1.0	<1.0	1.0	1.1	5	1.5	0.92	150	600	1.34
Cr-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005
Co-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100			0.0001
Cu-D	mg/L	0.00039	0.00041	0.00038	0.00035	0.00045	5	0.00045	0.00040	0.00114	**	0.00043
DOC	mg/L	2.3	2.9	3.1	3.1	3.2	5	3.2	2.9			3.2
Hard-D	mg/L	48.1	48.6	46.3	48.8	53.0	5	53.0	49.0			51.3
Fe-D	mg/L	0.0759	0.0732	0.0723	0.0712	0.0632	5	0.0759	0.0712		0.35	0.0748
Pb-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100			0.0001
Mg-D	mg/L	2.29	2.30	2.31	2.18	2.49	5	2.49	2.31			2.42
Mn-D	mg/L	0.0136	0.0136	0.0121	0.0086	0.0058	5	0.0136	0.0107			0.0136
Mo-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005
Ni-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005
K-D	mg/L	0.192	0.172	0.191	0.183	0.206	5	0.206	0.189			0.2
S-D	mg/L	10.6	10.6	10.1	10.7	10.8	5	10.8	10.6			10.8
Se-D	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050			5.00E-05
Na-D	mg/L	4.30	4.09	4.27	4.31	4.59	5	4.59	4.31			4.48
Sr-D	mg/L	0.0952	0.0912	0.0889	0.0944	0.0993	5	0.0993	0.0938			0.0977
Zn-D	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250	0.0075	0.033	0.0025
N-NO23	mg/L	<0.020	<0.020	<0.020	<0.020	<0.020	5	<0.020	0.0100			0.01

Notes: * P-T is a Water Quality Objective. **Copper is a variable guideline. See Exceedance Table.

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

Appendix 1 - Tables
Table 41 Summer Rivers 7 Page(s)

River's Summer 2022													
EMS ID	E217017						Water Quality Guidelines						
StnName	No Name Lake Outlet												
StnCode	NNO												
Date	Unit	18-Jul-22	25-Jul-22	2-Aug-22	8-Aug-22	15-Aug-22	Count	Max	5 in 30 Av	Chronic	Acute	90th Percentile	Count of results exceeding standard
pH-F	pH Units	7.65	7.33	7.11	7.20	7.30	5	7.65	7.32		6.5-9.0	7.52	0
Cond-F	uS/cm	59.9	66.1	44.2	65.2	63.1	5	66.1	59.7			65.7	0
SO4-D	mg/L	<1.0	1.3	1.2	1.4	<1.0	5	1.4	0.98	128		1.36	0
Cl-D	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	5	<1.0	0.50	150	600	0.5	0
TSS	mg/L	<0.99	<1.0	<1.0	<1.0	<1.0	4	<1.0	0.50	5	25	0.5	0
Alk-T	mg/L	16	16	17	16	16	5	17	16.2			16.6	0
Al-T	mg/L	0.0257	0.0258	0.0233	0.0228	0.0213	5	0.0258	0.0238			0.0258	0
As-T	mg/L	0.00051	0.00057	0.00055	0.00063	0.00059	5	0.00063	0.00057		0.005	0.00061	0
Ba-T	mg/L	0.0012	0.0013	0.0011	0.0013	0.0012	5	0.0013	0.0012	1		0.0013	0
B-T	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	5	<0.050	0.0250	1.2		0.025	0
Cd-T	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.0000050			0.00001	0
Ca-T	mg/L	4.53	4.96	4.99	5.10	4.95	5	5.10	4.91			5.06	0
Cr-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	0
Co-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100	0.004	0.11	0.0001	0
Cu-T	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	5	<0.00050	0.000250			0.00025	0
Hard-T	mg/L	15.4	16.8	17.0	17.3	16.7	5	17.3	16.6			17.2	0
Fe-T	mg/L	0.115	0.136	0.159	0.167	0.162	5	0.167	0.148		1	0.165	0
Pb-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100	0.004	0.01763	0.0001	0
Mg-T	mg/L	0.998	1.07	1.09	1.10	1.05	5	1.10	1.062			1.096	0
Mn-T	mg/L	0.0066	0.0072	0.0115	0.0116	0.0111	5	0.0116	0.0096	0.737	0.8706	0.0116	0
Mo-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	1	2	0.0005	0
Ni-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	0.025		0.0005	0
K-T	mg/L	0.076	0.094	0.062	0.062	<0.050	5	0.094	0.0638			0.0868	0
S-T	mg/L	<3.0	<3.0	<3.0	<3.0	<3.0	5	<3.0	1.50			1.5	0
Se-T	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050	0.002		0.00005	0
Ag-T	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	5	<0.000020	0.0000100	0.00005	0.0001	0.00001	0
Na-T	mg/L	1.20	1.24	1.28	1.30	1.17	5	1.30	1.24			1.29	0
Sr-T	mg/L	0.0145	0.0163	0.0145	0.0158	0.0161	5	0.0163	0.0154			0.0162	0
Zn-T	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250	0.0075	0.033	0.0025	0
Al-D	mg/L	0.0226	0.0208	0.0184	0.0162	0.0159	5	0.0226	0.0188	0.05	0.1	0.0219	0
As-D	mg/L	0.00051	0.00046	0.00056	0.00058	0.00062	5	0.00062	0.00055			0.0006	0
Ba-D	mg/L	0.0012	0.0012	0.0012	0.0013	0.0012	5	0.0013	0.0012			0.0013	0
B-D	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	5	<0.050	0.0250			0.025	0
Cd-D	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.0000050	0.000087	0.00017	0.00001	0
Ca-D	mg/L	4.64	4.65	5.03	4.99	4.93	5	5.03	4.85			5.01	0
Cr-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	0
Co-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100			0.0001	0
Cu-D	mg/L	0.00043	0.00044	0.00044	0.00054	0.00045	5	0.00054	0.00046	0.000616	*	0.0005	0
Hard-D	mg/L	15.9	15.8	17.0	16.9	16.8	5	17.0	16.5			17	0
DOC	mg/L	3.4	2.8	3.9	3.3	4.0	4	4.0	3.5			4	0
Fe-D	mg/L	0.0991	0.110	0.133	0.144	0.145	5	0.145	0.1262		0.35	0.1446	0
Pb-D	mg/L	<0.00020	<0.00020	<0.00020	0.00046	<0.00020	5	0.00046	0.000172			0.000316	0
Mg-D	mg/L	1.03	1.00	1.09	1.07	1.10	5	1.10	1.06			1.1	0
Mn-D	mg/L	0.0045	0.0042	0.0083	0.0081	0.0082	5	0.0083	0.0067			0.0083	0
Mo-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	0
Ni-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	0
K-D	mg/L	0.060	0.057	0.078	0.095	0.063	5	0.095	0.071			0.088	0
S-D	mg/L	<3.0	<3.0	<3.0	<3.0	<3.0	5	<3.0	1.50			1.5	0
Se-D	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050			0.00005	0
Na-D	mg/L	1.19	1.21	1.25	1.28	1.24	5	1.28	1.23			1.27	0
Sr-D	mg/L	0.0143	0.0155	0.0165	0.0157	0.0151	5	0.0165	0.0154			0.0162	0
Zn-D	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250	0.0075	0.033	0.0025	0

Notes: *Copper is a variable guideline. See Exceedance Table.

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

Appendix 1 - Tables
Table 41 Summer Rivers 7 Page(s)

EMS ID	E219412						Water Quality Guidelines							Count of results exceeding standard			
	StnName	Long Lake Outlet					StnCode	18-Jul-22	25-Jul-22	2-Aug-22	8-Aug-22	15-Aug-22	Count		Max	5 in 30 Av	Chronic
Date	Unit	18-Jul-22	25-Jul-22	2-Aug-22	8-Aug-22	15-Aug-22	Count	Max	5 in 30 Av	Chronic	Acute	90th Percentile	Count of results exceeding standard				
pH-F	pH Units	7.56	7.39	7.47	7.12	7.25	5	7.56	7.36		6.5-9.0	7.52	0				
Cond-F	uS/cm	154.7	129.8	135.1	138.6	157.7	5	157.7	143.2			156.5	0				
SO4-D	mg/L	39	37	34	36	33	5	39	35.8	128		38.2	0				
Cl-D	mg/L	2.0	<1.0	<1.0	<1.0	<1.0	5	2.0	0.80	150	600	1.4	0				
TSS	mg/L	<0.99	<1.0	<1.0	<1.0	<1.0	4	<1.0	0.50	5	25	0.5	0				
Alk-T	mg/L	25	26	27	26	27	5	27	26.2			27	0				
Al-T	mg/L	0.0185	0.0182	0.0167	0.0144	0.0250	5	0.0250	0.0186			0.0224	0				
As-T	mg/L	0.00065	0.00067	0.00066	0.00067	0.00063	5	0.00067	0.00066		0.005	0.00067	0				
Ba-T	mg/L	0.0041	0.0046	0.0042	0.0045	0.0048	5	0.0048	0.0044	1		0.0047	0				
B-T	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	5	<0.050	0.0250	1.2		0.025	0				
Cd-T	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.0000050			0.00001	0				
Ca-T	mg/L	14.8	16.4	17.7	17.0	17.2	5	17.7	16.6			17.5	0				
Cr-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	0				
Co-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100	0.004	0.11	0.0001	0				
Cu-T	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	5	<0.00050	0.000250			0.00025	0				
Hard-T	mg/L	45.8	50.4	54.9	52.9	53.0	5	54.9	51.4			54.1	0				
Fe-T	mg/L	0.092	0.103	0.103	0.086	0.111	5	0.111	0.099		1	0.108	0				
Pb-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100	0.004	0.01763	0.0001	0				
Mg-T	mg/L	2.15	2.30	2.59	2.54	2.46	5	2.59	2.41			2.57	0				
Mn-T	mg/L	0.0121	0.0125	0.0114	0.0121	0.0248	5	0.0248	0.0146	0.737	0.8706	0.0199	0				
Mo-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	1	2	0.0005	0				
Ni-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	0.025		0.0005	0				
K-T	mg/L	0.194	0.229	0.207	0.209	0.210	5	0.229	0.210			0.221	0				
S-T	mg/L	10.7	11.9	12.7	11.7	9.4	5	12.7	11.3			12.4	0				
Se-T	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050	0.002		0.00005	0				
Ag-T	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	5	<0.000020	0.0000100	0.00005	0.0001	0.00001	0				
Na-T	mg/L	4.08	4.31	4.83	4.63	4.72	5	4.83	4.51			4.79	0				
Sr-T	mg/L	0.0950	0.0991	0.0938	0.104	0.106	5	0.106	0.0996			0.1052	0				
Zn-T	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250	0.0075	0.033	0.0025	0				
Al-D	mg/L	0.0128	0.0113	0.0080	0.0057	0.0070	5	0.0128	0.0090	0.05	0.1	0.0122	0				
As-D	mg/L	0.00067	0.00064	0.00062	0.00053	0.00053	5	0.00067	0.00060			0.00066	0				
Ba-D	mg/L	0.0040	0.0042	0.0043	0.0043	0.0044	5	0.0044	0.0042			0.0044	0				
B-D	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	5	<0.050	0.0250			0.025	0				
Cd-D	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.0000050	0.000087	0.00017	0.00001	0				
Ca-D	mg/L	15.5	16.1	15.9	16.6	18.0	5	18.0	16.4			17.4	0				
Cr-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	0				
Co-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100			0.0001	0				
Cu-D	mg/L	0.00033	0.00036	0.00033	0.00029	0.00026	5	0.00036	0.00031	0.000812	*	0.00035	0				
Hard-D	mg/L	48.2	49.5	49.1	51.1	55.0	5	55.0	50.6			53.4	0				
DOC	mg/L	3.5	2.1	2.5	3.3	4.4	4	4.4	3.1			4.1	0				
Fe-D	mg/L	0.0736	0.0763	0.0670	0.0536	0.0515	5	0.0763	0.0644		0.35	0.0752	0				
Pb-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100			0.0001	0				
Mg-D	mg/L	2.29	2.26	2.27	2.36	2.43	5	2.43	2.32			2.4	0				
Mn-D	mg/L	0.0057	0.0034	0.0021	0.0019	0.0018	5	0.0057	0.0030			0.0048	0				
Mo-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	0				
Ni-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	0				
K-D	mg/L	0.188	0.184	0.215	0.226	0.188	5	0.226	0.200			0.222	0				
S-D	mg/L	11.3	11.5	10.9	11.6	11.1	5	11.6	11.3			11.6	0				
Se-D	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050			0.00005	0				
Na-D	mg/L	4.24	4.08	4.28	4.32	4.51	5	4.51	4.29			4.43	0				
Sr-D	mg/L	0.0912	0.0946	0.103	0.0978	0.101	5	0.103	0.0975			0.1022	0				
Zn-D	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250	0.0075	0.033	0.0025	0				

Notes: *Copper is a variable guideline. See Exceedance Table.

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

Appendix 1 - Tables
Table 41 Summer Rivers 7 Page(s)

EMS ID	E0126402							Water Quality Guidelines					
StnName	Quinsam River at Argonaut Bridge												
StnCode	WA							Count of results exceeding standard					
Date	Unit	18-Jul-22	25-Jul-22	2-Aug-22	8-Aug-22	15-Aug-22	Count	Max	5 in 30 Av	Chronic	Acute	90th Percentile	
pH-F	pH Units	7.78	7.88	7.92	7.11	7.16	5	7.92	7.57		6.5-9.0	7.9	0
Cond-F	uS/cm	51.4	109.5	123.3	48.5	53.5	5	123.3	77.2			117.8	0
SO4-D	mg/L	<1.0	1.5	1.4	1.9	1.5	5	1.9	1.36	128		1.74	0
Cl-D	mg/L	<1.0	<1.0	<1.0	1.1	<1.0	5	1.1	0.62	150	600	0.86	0
TSS	mg/L	<1.00	<1.0	<1.0	<1.0	<1.0	4	<1.0	0.50	5	25	0.5	0
Alk-T	mg/L	22	23	23	21	21	5	23	22.0			23	0
Al-T	mg/L	0.0224	0.0238	0.0229	0.0214	0.0199	5	0.0238	0.0221			0.0234	0
As-T	mg/L	0.00014	0.00010	0.00012	0.00013	0.00014	5	0.00014	0.00013		0.005	0.00014	0
Ba-T	mg/L	<0.0010	0.0080	<0.0010	<0.0010	<0.0010	5	0.0080	0.00200	1		0.005	0
B-T	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	5	<0.050	0.0250	1.2		0.025	0
Cd-T	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.0000050			0.00001	0
Ca-T	mg/L	6.93	7.00	7.09	7.25	7.22	5	7.25	7.10			7.24	0
Cr-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	0
Co-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100	0.004	0.11	0.0001	0
Cu-T	mg/L	0.00059	0.00064	0.00053	0.00053	0.00062	5	0.00064	0.00058			0.00063	0
Hard-T	mg/L	20.4	20.6	21.0	21.3	21.2	5	21.3	20.9			21.3	0
Fe-T	mg/L	0.019	0.022	0.020	0.016	0.016	5	0.022	0.019		1	0.021	0
Pb-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100	0.0040	0.01763	0.0001	0
Mg-T	mg/L	0.750	0.770	0.797	0.767	0.778	5	0.797	0.772			0.789	0
Mn-T	mg/L	0.0021	0.0024	0.0020	0.0017	0.0017	5	0.0024	0.0020	0.737	0.8706	0.0023	0
Mo-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	1	2	0.0005	0
Ni-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	0.025		0.0005	0
K-T	mg/L	0.065	0.092	0.051	<0.050	<0.050	5	0.092	0.0516			0.0812	0
S-T	mg/L	<3.0	<3.0	<3.0	<3.0	<3.0	5	<3.0	1.50			1.5	0
Se-T	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050	0.002		0.00005	0
Ag-T	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	5	<0.000020	0.0000100	0.00005	0.0001	0.00001	0
Na-T	mg/L	0.639	0.612	0.635	0.630	0.638	5	0.639	0.631			0.639	0
Sr-T	mg/L	0.0118	0.0123	0.0109	0.0119	0.0124	5	0.0124	0.0119			0.0124	0
Zn-T	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250	0.0075	0.033	0.0025	0
Al-D	mg/L	0.0153	0.0163	0.0164	0.0140	0.0156	5	0.0164	0.0155	0.05	0.1	0.0164	0
As-D	mg/L	0.00017	<0.00010	0.00011	<0.00010	0.00012	5	0.00017	0.000100			0.00015	0
Ba-D	mg/L	<0.0010	0.0011	<0.0010	<0.0010	<0.0010	5	0.0011	0.00062			0.00086	0
B-D	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	5	<0.050	0.0250			0.025	0
Cd-D	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.0000050	0.000087	0.00017	0.00001	0
Ca-D	mg/L	6.81	6.94	7.19	7.15	7.20	5	7.20	7.06			7.2	0
Cr-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	0
Co-D	mg/L	<0.00020	<0.00020	<0.00020	0.00046	<0.00020	5	0.00046	0.000172			0.000316	0
Cu-D	mg/L	0.00052	0.00056	0.00050	0.00053	0.00052	5	0.00056	0.00053	0.000402	*	0.00055	1
Hard-D	mg/L	20.1	20.4	21.2	21.0	21.2	5	21.2	20.8			21.2	0
DOC	mg/L	1.5	1.0	1.9	1.8	2.3	4	2.3	1.8			2.2	0
Fe-D	mg/L	0.0097	0.0122	0.0105	0.0091	0.0087	5	0.0122	0.0100		0.35	0.0115	0
Pb-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100			0.0001	0
Mg-D	mg/L	0.753	0.743	0.801	0.768	0.776	5	0.801	0.768			0.791	0
Mn-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	0
Mo-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	0
Ni-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	0
K-D	mg/L	0.051	<0.050	0.062	0.078	0.052	5	0.078	0.0536			0.0716	0
S-D	mg/L	<3.0	<3.0	<3.0	<3.0	<3.0	5	<3.0	1.50			1.5	0
Se-D	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050			0.00005	0
Na-D	mg/L	0.638	0.618	0.649	0.656	0.646	5	0.656	0.641			0.653	0
Sr-D	mg/L	0.0110	0.0116	0.0114	0.0117	0.0112	5	0.0117	0.0114			0.0117	0
Zn-D	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250	0.0075	0.033	0.0025	0

Notes: *Copper is a variable guideline. See Exceedance Table.

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

Appendix 1 - Tables
Table 41 Summer Rivers 7 Page(s)

EMS ID	E0900504						Water Quality Guidelines						
StnName	Middle Quinsam Lake Outlet												
StnCode	WB						Count of results exceeding standard						
Date	Unit	18-Jul-22	25-Jul-22	2-Aug-22	8-Aug-22	15-Aug-22	Count	Max	5 in 30 Av	Chronic	Acute	90th Percentile	
pH-F	pH Units	7.94	7.91	7.78	7.7	7.57	5	7.94	7.78		6.5-9.0	7.93	0
Cond-F	uS/cm	161.6	161.7	164	165.7	149.7	5	165.7	160.5			165	0
SO4-D	mg/L	40	35	30	32	26	5	40	32.6	128		38	0
Cl-D	mg/L	1.1	1.2	1.3	1.5	<1.0	5	1.5	1.12	150	600	1.42	0
TSS	mg/L	<0.97	<1.0	2.0	<1.0	<1.0	4	2.0	0.88	5	25	1.55	0
Alk-T	mg/L	44	45	45	43	41	5	45	43.6			45	0
Al-T	mg/L	0.0156	0.0168	0.0173	0.0149	0.0157	5	0.0173	0.0161			0.0171	0
As-T	mg/L	0.00026	0.00022	0.00024	0.00021	0.00020	5	0.00026	0.00023		0.005	0.00025	0
Ba-T	mg/L	0.0021	0.0019	0.0016	0.0016	0.0016	5	0.0021	0.0018	1		0.002	0
B-T	mg/L	0.059	0.068	0.069	0.067	0.065	5	0.069	0.066	1.2		0.069	0
Cd-T	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.0000050			0.00001	0
Ca-T	mg/L	12.9	13.0	12.9	12.2	11.8	5	13.0	12.6			13	0
Cr-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	0
Co-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100	0.004	0.11	0.0001	0
Cu-T	mg/L	<0.00050	0.00052	0.00050	<0.00050	0.00069	5	0.00069	0.000442			0.000622	0
Hard-T	mg/L	39.5	39.4	39.4	36.7	35.6	5	39.5	38.1			39.5	0
Fe-T	mg/L	0.046	0.039	0.066	0.040	0.043	5	0.066	0.047		1	0.058	0
Pb-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100	0.0039978	0.01763	0.0001	0
Mg-T	mg/L	1.76	1.70	1.71	1.51	1.52	5	1.76	1.64			1.74	0
Mn-T	mg/L	0.0124	0.0087	0.0170	0.0128	0.0129	5	0.0170	0.0128	0.737	0.8706	0.0154	0
Mo-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	1	2	0.0005	0
Ni-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	0.025		0.0005	0
K-T	mg/L	0.279	0.307	0.263	0.231	0.248	5	0.307	0.266			0.296	0
S-T	mg/L	10.9	11.6	10.5	9.7	9.9	5	11.6	10.5			11.3	0
Se-T	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050	0.002		0.00005	0
Ag-T	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	5	<0.000020	0.0000100	0.00005	0.0001	0.00001	0
Na-T	mg/L	16.9	17.9	18.0	16.2	16.1	5	18.0	17.0			18	0
Sr-T	mg/L	0.0837	0.0812	0.0711	0.0703	0.0682	5	0.0837	0.0749			0.0827	0
Zn-T	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250	0.0075	0.033	0.0025	0
Al-D	mg/L	0.0126	0.0134	0.0147	0.0116	0.0121	5	0.0147	0.0129	0.05	0.1	0.0142	0
As-D	mg/L	0.00031	0.00019	0.00020	0.00019	0.00021	5	0.00031	0.00022			0.00027	0
Ba-D	mg/L	0.0020	0.0018	0.0017	0.0017	0.0015	5	0.0020	0.0017			0.0019	0
B-D	mg/L	0.066	0.067	0.065	0.059	0.063	5	0.067	0.064			0.067	0
Cd-D	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.0000050	0.000087	0.00017	0.00001	0
Ca-D	mg/L	13.1	12.8	12.2	12.1	11.9	5	13.1	12.4			13	0
Cr-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	0
Co-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100			0.0001	0
Cu-D	mg/L	0.00045	0.00053	0.00047	0.00057	0.00048	5	0.00057	0.00050	0.000753	*	0.00055	0
Hard-D	mg/L	40.4	38.9	37.1	36.5	36.3	5	40.4	37.8			39.8	0
DOC	mg/L	2.4	1.5	2.6	2.2	2.3	4	2.6	2.2			2.5	0
Fe-D	mg/L	0.0318	0.0283	0.0284	0.0262	0.0241	5	0.0318	0.0278		0.35	0.0304	0
Pb-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100			0.0001	0
Mg-D	mg/L	1.84	1.68	1.60	1.53	1.57	5	1.84	1.64			1.78	0
Mn-D	mg/L	0.0076	0.0036	0.0064	0.0054	0.0035	5	0.0076	0.0053			0.0071	0
Mo-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	0
Ni-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	0
K-D	mg/L	0.271	0.254	0.256	0.282	0.241	5	0.282	0.261			0.278	0
S-D	mg/L	11.7	10.7	10.1	9.6	8.9	5	11.7	10.2			11.3	0
Se-D	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050			0.00005	0
Na-D	mg/L	17.4	17.4	17.4	16.5	16.5	5	17.4	17.0			17.4	0
Sr-D	mg/L	0.0772	0.0756	0.0690	0.0707	0.0692	5	0.0772	0.0723			0.0766	0
Zn-D	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250	0.0075	0.033	0.0025	0

Notes: *Copper is a variable guideline. See Exceedance Table.

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

Appendix 1 - Tables
Table 41 Summer Rivers 7 Page(s)

EMS ID	E286930						Water Quality Guidelines						
StnName	Quinsam River Downstream Site 1												
StnCode	QRDS1						Count of results exceeding standard						
Date	Unit	18-Jul-22	25-Jul-22	2-Aug-22	8-Aug-22	15-Aug-22	Count	Max	5 in 30 Av	Chronic	Acute	90th Percentile	
pH-F	pH Units	8.12	7.87	8.13	7.52	7.52	5	8.13	7.83		6.5-9.0	8.13	0
Cond-F	uS/cm	187.1	167.4	226	160.6	155.7	5	226	179.4			210.4	0
SO4-D	mg/L	40	37	30	34	26	5	40	33.4	128		38.8	0
Cl-D	mg/L	1.3	1.4	1.4	1.5	<1.0	5	1.5	1.22	150	600	1.46	0
TSS	mg/L	<0.98	<1.0	<1.0	<1.0	<1.0	4	<1.0	0.50	5	25	0.5	0
Alk-T	mg/L	45	47	46	45	42	5	47	45.0			46.6	0
Al-T	mg/L	0.0178	0.0304	0.0256	0.0234	0.0211	5	0.0304	0.0237			0.0285	0
As-T	mg/L	0.00077	0.00080	0.00078	0.00073	0.00070	5	0.00080	0.00076		0.005	0.00079	0
Ba-T	mg/L	0.0027	0.0028	0.0024	0.0024	0.0021	5	0.0028	0.0025	1		0.0028	0
B-T	mg/L	0.067	0.075	0.083	0.081	0.071	5	0.083	0.075	1.2		0.082	0
Cd-T	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.0000050			0.00001	0
Ca-T	mg/L	12.8	12.8	14.5	12.5	11.7	5	14.5	12.9			13.8	0
Cr-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	0
Co-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100	0.004	0.11	0.0001	0
Cu-T	mg/L	0.00086	0.00053	0.00059	0.00053	0.00051	5	0.00086	0.00060			0.00075	0
Hard-T	mg/L	39.3	39.2	44.0	38.0	35.7	5	44.0	39.2			42.1	0
Fe-T	mg/L	0.194	0.077	0.068	0.056	0.055	5	0.194	0.090		1	0.147	0
Pb-T	mg/L	0.00060	<0.00020	<0.00020	<0.00020	<0.00020	5	0.00060	0.000200	0.0039978	0.01763	0.0004	0
Mg-T	mg/L	1.78	1.75	1.88	1.67	1.55	5	1.88	1.73			1.84	0
Mn-T	mg/L	0.0122	0.0151	0.0143	0.0138	0.0127	5	0.0151	0.0136	0.737	0.8706	0.0148	0
Mo-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	1	2	0.0005	0
Ni-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	0.025		0.0005	0
K-T	mg/L	0.309	0.330	0.306	0.286	0.274	5	0.330	0.301			0.322	0
S-T	mg/L	11.7	11.3	11.3	10.9	10.6	5	11.7	11.2			11.5	0
Se-T	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050	0.002		0.00005	0
Ag-T	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	5	<0.000020	0.0000100	0.00005	0.0001	0.00001	0
Na-T	mg/L	19.0	18.6	20.4	19.3	17.5	5	20.4	19.0			20	0
Sr-T	mg/L	0.0857	0.0809	0.0783	0.0768	0.0722	5	0.0857	0.0788			0.0838	0
Zn-T	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250	0.0075	0.033	0.0025	0
Al-D	mg/L	0.0118	0.0121	0.0135	0.0121	0.0128	5	0.0135	0.0125	0.05	0.1	0.0132	0
As-D	mg/L	0.00071	0.00062	0.00067	0.00061	0.00058	5	0.00071	0.00064			0.00069	0
Ba-D	mg/L	0.0026	0.0026	0.0024	0.0021	0.0019	5	0.0026	0.0023			0.0026	0
B-D	mg/L	0.074	0.073	0.066	0.065	0.069	5	0.074	0.069			0.074	0
Cd-D	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.0000050	0.000087	0.00017	0.00001	0
Ca-D	mg/L	13.4	12.9	12.7	12.3	12.0	5	13.4	12.7			13.2	0
Cr-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	0
Co-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100			0.0001	0
Cu-D	mg/L	0.00044	0.00046	0.00046	0.00043	0.00048	5	0.00048	0.00045	0.000753	*	0.00047	0
Hard-D	mg/L	40.9	39.3	38.4	37.4	36.7	5	40.9	38.5			40.3	0
DOC	mg/L	2.4	1.6	1.7	2.0	2.4	4	2.4	1.9			2.3	0
Fe-D	mg/L	0.0248	0.0266	0.0245	0.0223	0.0212	5	0.0266	0.0239		0.35	0.0259	0
Pb-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100			0.0001	0
Mg-D	mg/L	1.82	1.73	1.60	1.61	1.64	5	1.82	1.68			1.78	0
Mn-D	mg/L	0.0019	0.0024	0.0023	0.0019	0.0016	5	0.0024	0.0020			0.0024	0
Mo-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	0
Ni-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	0
K-D	mg/L	0.299	0.281	0.304	0.316	0.276	5	0.316	0.295			0.311	0
S-D	mg/L	11.8	11.1	10.5	9.8	9.4	5	11.8	10.5			11.5	0
Se-D	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050			0.00005	0
Na-D	mg/L	18.8	18.4	17.7	18.1	17.8	5	18.8	18.2			18.6	0
Sr-D	mg/L	0.0810	0.0797	0.0781	0.0743	0.0689	5	0.0810	0.0764			0.0805	0
Zn-D	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250	0.0075	0.033	0.0025	0

Notes: *Copper is a variable guideline. See Exceedance Table.
Factor applied to less-than results when calculating statistics: 0.5

Appendix 1 - Tables
Table 41 Summer Rivers 7 Page(s)

EMS ID	E292113	Water Quality Guidelines											Count of results exceeding standard
StnName	7 South Quinsam River												
StnCode	7SQR												
Date	Unit	18-Jul-22	25-Jul-22	2-Aug-22	8-Aug-22	15-Aug-22	Count	Max	5 in 30 Av	Chronic	Acute	90th Percentile	
pH-F	pH Units	7.68	7.58	7.67	7.14	7.13	5	7.68	7.44		6.5-9.0	7.68	0
Cond-F	uS/cm	162.5	167.3	172.9	155.9	151.7	5	172.9	162.1			170.7	0
SO4-D	mg/L	39	35	30	32	27	5	39	32.6	128		37.4	0
Cl-D	mg/L	1.2	1.6	1.3	1.7	<1.0	5	1.7	1.26	150	600	1.66	0
TSS	mg/L	<0.96	<1.0	<1.0	<1.0	<1.0	4	<1.0	0.50	5	25	0.5	0
Alk-T	mg/L	48	48	46	46	44	5	48	46.4			48	0
Al-T	mg/L	0.0254	0.0395	0.0372	0.0327	0.0342	5	0.0395	0.0338			0.0386	0
As-T	mg/L	0.00084	0.00085	0.00081	0.00080	0.00086	5	0.00086	0.00083		0.005	0.00086	0
Ba-T	mg/L	0.0031	0.0032	0.0024	0.0027	0.0026	5	0.0032	0.0028	1		0.0032	0
B-T	mg/L	0.073	0.079	0.078	0.080	0.077	5	0.080	0.077	1.2		0.08	0
Cd-T	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.0000050			0.00001	0
Ca-T	mg/L	13.0	12.6	12.5	12.2	12.3	5	13.0	12.5			12.8	0
Cr-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	0
Co-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100	0.004	0.11	0.0001	0
Cu-T	mg/L	0.00054	0.00072	<0.00050	0.00056	0.00063	5	0.00072	0.000540			0.000684	0
Hard-T	mg/L	39.8	38.8	38.5	37.7	37.4	5	39.8	38.4			39.4	0
Fe-T	mg/L	0.120	0.144	0.131	0.114	0.113	5	0.144	0.124		1	0.139	0
Pb-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100	0.0039978	0.01763	0.0001	0
Mg-T	mg/L	1.78	1.75	1.75	1.72	1.64	5	1.78	1.73			1.77	0
Mn-T	mg/L	0.0108	0.0138	0.0120	0.0117	0.0116	5	0.0138	0.0120	0.737	0.8706	0.0131	0
Mo-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	1	2	0.0005	0
Ni-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	0.025		0.0005	0
K-T	mg/L	0.320	0.340	0.274	0.284	0.288	5	0.340	0.301			0.332	0
S-T	mg/L	11.2	10.2	9.0	9.7	12.9	5	12.9	10.6			12.2	0
Se-T	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050	0.002		0.00005	0
Ag-T	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	5	<0.000020	0.0000100	0.00005	0.0001	0.00001	0
Na-T	mg/L	18.5	18.9	19.0	19.1	18.0	5	19.1	18.7			19.1	0
Sr-T	mg/L	0.0899	0.0810	0.0672	0.0745	0.0761	5	0.0899	0.0777			0.0863	0
Zn-T	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250	0.0075	0.033	0.0025	0
Al-D	mg/L	0.0124	0.0124	0.0123	0.0108	0.0111	5	0.0124	0.0118	0.05	0.1	0.0124	0
As-D	mg/L	0.00084	0.00076	0.00077	0.00071	0.00065	5	0.00084	0.00075			0.00081	0
Ba-D	mg/L	0.0030	0.0029	0.0026	0.0026	0.0025	5	0.0030	0.0027			0.003	0
B-D	mg/L	0.072	0.077	0.070	0.067	0.066	5	0.077	0.070			0.075	0
Cd-D	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.0000050	0.000087	0.00017	0.00001	0
Ca-D	mg/L	13.4	13.2	12.5	12.2	12.4	5	13.4	12.7			13.3	0
Cr-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	0
Co-D	mg/L	<0.00020	<0.00020	<0.00020	0.00021	<0.00020	5	0.00021	0.000122			0.000166	0
Cu-D	mg/L	0.00045	0.00047	0.00041	0.00046	0.00041	5	0.00047	0.00044	0.000487	*	0.00047	0
Hard-D	mg/L	40.8	40.3	38.2	37.1	37.6	5	40.8	38.8			40.6	0
DOC	mg/L	2.3	1.3	2.7	2.0	2.4	4	2.7	2.1			2.6	0
Fe-D	mg/L	0.0740	0.0684	0.0640	0.0517	0.0524	5	0.0740	0.0621		0.35	0.0718	0
Pb-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100			0.0001	0
Mg-D	mg/L	1.79	1.77	1.70	1.61	1.60	5	1.79	1.69			1.78	0
Mn-D	mg/L	0.0071	0.0081	0.0077	0.0065	0.0062	5	0.0081	0.0071			0.0079	0
Mo-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	0
Ni-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	0
K-D	mg/L	0.292	0.295	0.296	0.313	0.263	5	0.313	0.292			0.306	0
S-D	mg/L	12.0	11.4	10.4	9.7	8.9	5	12.0	10.5			11.8	0
Se-D	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050			0.00005	0
Na-D	mg/L	18.5	18.9	18.2	18.0	17.5	5	18.9	18.2			18.7	0
Sr-D	mg/L	0.0794	0.0795	0.0720	0.0734	0.0709	5	0.0795	0.0750			0.0795	0
Zn-D	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250	0.0075	0.033	0.0025	0

Notes: *Copper is a variable guideline. See Exceedance Table.
Factor applied to less-than results when calculating statistics: 0.5

Appendix 1 - Tables
Table 41 Summer Rivers 7 Page(s)

EMS ID	E297231						Water Quality Guidelines							Count of results exceeding standard
	StnName	Iron River Site 6					Count	Max	5 in 30 Av	Chronic	Acute	90th Percentile		
StnCode	Unit	18-Jul-22	25-Jul-22	2-Aug-22	8-Aug-22	15-Aug-22								
pH-F	pH Units	7.86	7.72	7.83	7.46	7.47	5	7.86	7.67		6.5-9.0	7.85	0	
Cond-F	uS/cm	79.5	105.1	139.7	145.2	159.4	5	159.4	125.8			153.7	0	
SO4-D	mg/L	5.8	5.3	6.3	8.0	7.6	5	8.0	6.6	128		7.8	0	
Cl-D	mg/L	<1.0	<1.0	1.1	1.4	<1.0	5	1.4	0.80	150	600	1.28	0	
TSS	mg/L	<0.94	<1.0	<1.0	<1.0	<1.0	4	<1.0	0.50	5	25	0.5	0	
Alk-T	mg/L	35	44	52	57	61	5	61	49.8			59.4	0	
Al-T	mg/L	0.0470	0.0305	0.0261	0.0226	0.0227	5	0.0470	0.0298			0.0404	0	
As-T	mg/L	0.00095	0.00163	0.00297	0.00389	0.00416	5	0.00416	0.00272		0.005	0.00405	0	
Ba-T	mg/L	0.0048	0.0062	0.0076	0.0092	0.0101	5	0.0101	0.0076	1		0.0097	0	
B-T	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	5	<0.050	0.0250	1.2		0.025	0	
Cd-T	mg/L	0.000017	<0.000010	0.000014	0.000016	0.000018	5	0.000018	0.0000140			0.00002	0	
Ca-T	mg/L	12.2	15.6	21.4	22.6	23.7	5	23.7	19.1			23.3	0	
Cr-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	0	
Co-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100	0.004	0.11	0.0001	0	
Cu-T	mg/L	0.00068	0.00055	<0.00050	<0.00050	<0.00050	5	0.00068	0.000396			0.000628	0	
Hard-T	mg/L	34.6	43.5	59.8	63.1	65.7	5	65.7	53.3			64.7	0	
Fe-T	mg/L	0.035	0.015	0.010	<0.010	<0.010	5	0.035	0.0140		1	0.027	0	
Pb-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100	0.0039978	0.01763	0.0001	0	
Mg-T	mg/L	0.990	1.11	1.52	1.62	1.59	5	1.62	1.366			1.608	0	
Mn-T	mg/L	0.0017	0.0011	0.0011	0.0011	<0.0010	5	0.0017	0.00110	0.737	0.8706	0.00146	0	
Mo-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	1	2	0.0005	0	
Ni-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	0.025		0.0005	0	
K-T	mg/L	0.182	0.231	0.233	0.232	0.255	5	0.255	0.227			0.246	0	
S-T	mg/L	<3.0	<3.0	<3.0	<3.0	<3.0	5	<3.0	1.50			1.5	0	
Se-T	mg/L	0.00021	0.00023	0.00026	0.00024	0.00024	5	0.00026	0.00024	0.002		0.00025	0	
Ag-T	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	5	<0.000020	0.0000100	0.00005	0.0001	0.00001	0	
Na-T	mg/L	1.30	1.34	1.87	2.00	2.00	5	2.00	1.70			2	0	
Sr-T	mg/L	0.0436	0.0562	0.0675	0.0774	0.0847	5	0.0847	0.0659			0.0818	0	
Zn-T	mg/L	0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	0.0050	0.00300	0.0075	0.033	0.004	0	
Al-D	mg/L	0.0380	0.0251	0.0210	0.0155	0.0172	5	0.0380	0.0234	0.05	0.1	0.0328	0	
As-D	mg/L	0.00096	0.00158	0.00293	0.00373	0.00406	5	0.00406	0.00265			0.00393	0	
Ba-D	mg/L	0.0047	0.0061	0.0083	0.0091	0.0099	5	0.0099	0.0076			0.0096	0	
B-D	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	5	<0.050	0.0250			0.025	0	
Cd-D	mg/L	0.000014	0.000012	0.000014	0.000013	0.000011	5	0.000014	0.000013	0.000087	0.00017	0.00001	0	
Ca-D	mg/L	12.2	15.7	20.1	21.2	24.7	5	24.7	18.8			23.3	0	
Cr-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	0	
Co-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00022	5	0.00022	0.000124			0.000172	0	
Cu-D	mg/L	0.00062	0.00055	0.00046	0.00042	0.00038	5	0.00062	0.00049	0.000723	*	0.00059	0	
Hard-D	mg/L	34.4	43.7	56.0	59.2	68.6	5	68.6	52.4			64.8	0	
DOC	mg/L	3.2	1.2	1.8	1.4	2.2	4	2.2	1.6			2.1	0	
Fe-D	mg/L	0.0178	0.0088	0.0058	0.0055	0.0052	5	0.0178	0.0086		0.35	0.0142	0	
Pb-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100			0.0001	0	
Mg-D	mg/L	0.933	1.10	1.41	1.53	1.67	5	1.67	1.329			1.614	0	
Mn-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	0	
Mo-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	0	
Ni-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	0	
K-D	mg/L	0.157	0.184	0.250	0.256	0.229	5	0.256	0.215			0.254	0	
S-D	mg/L	<3.0	<3.0	<3.0	<3.0	<3.0	5	<3.0	1.50			1.5	0	
Se-D	mg/L	0.00024	0.00021	0.00023	0.00023	0.00024	5	0.00024	0.00023			0.00024	0	
Na-D	mg/L	1.11	1.34	1.75	1.94	2.11	5	2.11	1.65			2.04	0	
Sr-D	mg/L	0.0405	0.0540	0.0726	0.0757	0.0853	5	0.0853	0.0656			0.0815	0	
Zn-D	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250	0.0075	0.033	0.0025	0	

Notes: *Copper is a variable guideline. See Exceedance Table.
Factor applied to less-than results when calculating statistics: 0.5

Appendix 1 - Tables
Table 41 Summer Rivers 7 Page(s)

EMS ID	E297232							Water Quality Guidelines					
StnName	Iron River Site 8												
StnCode	IR8												
Date	Unit	18-Jul-22	25-Jul-22	2-Aug-22	8-Aug-22	15-Aug-22	Count	Max	5 in 30 Av	Chronic	Acute	90th Percentile	Count of results exceeding standard
pH-F	pH Units	7.88	7.78	7.85	7.65	7.63	5	7.88	7.76		6.5-9.0	7.87	0
Cond-F	uS/cm	74.5	98.4	133.3	136.3	154.4	5	154.4	119.4			147.2	0
SO4-D	mg/L	3.2	5.1	6.2	8.0	7.8	5	8.0	6.1	128		7.9	0
Cl-D	mg/L	<1.0	1.2	1.6	1.9	<1.0	5	1.9	1.14	150	600	1.78	0
TSS	mg/L	<1.0	<1.0	<1.0	<1.0	2.8	4	2.8	1.08	5	25	2.11	0
Alk-T	mg/L	35	44	55	57	61	5	61	50.4			59.4	0
Al-T	mg/L	0.0428	0.0273	0.0261	0.0196	0.0218	5	0.0428	0.0275			0.0366	0
As-T	mg/L	0.00172	0.00343	0.00672	0.00857	0.00921	5	0.00921	0.00593		0.005	0.00895	3
Ba-T	mg/L	0.0050	0.0070	0.0086	0.0098	0.0107	5	0.0107	0.0082	1		0.0103	0
B-T	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	5	<0.050	0.0250	1.2		0.025	0
Cd-T	mg/L	0.000013	<0.000010	0.000013	0.000012	0.000012	5	0.000013	0.0000110			0.00001	0
Ca-T	mg/L	11.7	15.0	21.9	21.3	22.9	5	22.9	18.6			22.5	0
Cr-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	0
Co-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100	0.004	0.11	0.0001	0
Cu-T	mg/L	0.00064	0.00064	0.00054	<0.00050	0.00051	5	0.00064	0.000516			0.00064	0
Hard-T	mg/L	33.3	42.1	61.4	60.0	64.5	5	64.5	52.3			63.3	0
Fe-T	mg/L	0.029	0.015	0.012	0.011	<0.010	5	0.029	0.0144		1	0.0234	0
Pb-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100	0.0039978	0.01763	0.0001	0
Mg-T	mg/L	0.966	1.12	1.62	1.66	1.77	5	1.77	1.427			1.726	0
Mn-T	mg/L	0.0013	0.0012	0.0011	0.0011	0.0011	5	0.0013	0.0012	0.737	0.8706	0.0013	0
Mo-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	1	2	0.0005	0
Ni-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	0.025		0.0005	0
K-T	mg/L	0.166	0.229	0.243	0.227	0.263	5	0.263	0.226			0.255	0
S-T	mg/L	<3.0	<3.0	<3.0	<3.0	<3.0	5	<3.0	1.50			1.5	0
Se-T	mg/L	0.00021	0.00019	0.00022	0.00020	0.00022	5	0.00022	0.00021	0.002		0.00022	0
Ag-T	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	5	<0.000020	0.0000100	0.00005	0.0001	0.00001	0
Na-T	mg/L	1.22	1.53	2.45	2.48	2.69	5	2.69	2.07			2.61	0
Sr-T	mg/L	0.0420	0.0551	0.0695	0.0755	0.0831	5	0.0831	0.0650			0.0801	0
Zn-T	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250	0.0075	0.033	0.0025	0
Al-D	mg/L	0.0345	0.0228	0.0205	0.0151	0.0168	5	0.0345	0.0219	0.05	0.1	0.0298	0
As-D	mg/L	0.00178	0.00340	0.00679	0.00856	0.00953	5	0.00953	0.00601			0.00914	0
Ba-D	mg/L	0.0051	0.0068	0.0095	0.0101	0.0110	5	0.0110	0.0085			0.0106	0
B-D	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	5	<0.050	0.0250			0.025	0
Cd-D	mg/L	<0.000010	0.000013	0.000012	0.000013	0.000012	5	0.000013	0.0000110	0.000087	0.00017	0.00001	0
Ca-D	mg/L	12.4	15.6	20.1	20.7	24.1	5	24.1	18.6			22.7	0
Cr-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	0
Co-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100			0.0001	0
Cu-D	mg/L	0.00060	0.00055	0.00055	0.00054	0.00051	5	0.00060	0.00055	0.000796	*	0.00058	0
Hard-D	mg/L	35.2	43.7	56.7	58.7	67.8	5	67.8	52.4			64.2	0
DOC	mg/L	2.8	1.7	1.1	1.4	1.8	4	1.8	1.5			1.8	0
Fe-D	mg/L	0.0169	0.0089	0.0081	0.0077	0.0079	5	0.0169	0.0099		0.35	0.0137	0
Pb-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100			0.0001	0
Mg-D	mg/L	0.995	1.14	1.55	1.67	1.82	5	1.82	1.435			1.76	0
Mn-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	0
Mo-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	0
Ni-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	0
K-D	mg/L	0.153	0.179	0.256	0.284	0.255	5	0.284	0.225			0.273	0
S-D	mg/L	<3.0	<3.0	<3.0	<3.0	<3.0	5	<3.0	1.50			1.5	0
Se-D	mg/L	0.00023	0.00021	0.00019	0.00021	0.00020	5	0.00023	0.00021			0.00022	0
Na-D	mg/L	1.23	1.50	2.17	2.58	2.84	5	2.84	2.06			2.74	0
Sr-D	mg/L	0.0411	0.0531	0.0742	0.0769	0.0851	5	0.0851	0.0661			0.0818	0
Zn-D	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250	0.0075	0.033	0.0025	0

Notes: *Copper is a variable guideline. See Exceedance Table.
Factor applied to less-than results when calculating statistics: 0.5

Appendix 1 - Tables
Table 41 Summer Rivers 7 Page(s)

EMS ID StnName StnCode	Unit	E299256 Downstream of the Confluence of the Iron & Quinsam Rivers					Water Quality Guidelines						Count of results exceeding standard
		18-Jul-22	25-Jul-22	2-Aug-22	8-Aug-22	15-Aug-22	Count	Max	5 in 30 Av	Chronic	Acute	90th Percentile	
pH-F	pH Units	7.66	7.56	7.52	7.26	7.37	5	7.66	7.47		6.5-9.0	7.62	0
Cond-F	uS/cm	142.4	153.6	170.5	148.2	154.3	5	170.5	153.8			164	0
SO4-D	mg/L	25	31	29	33	25	5	33	28.6	128		32.2	0
Cl-D	mg/L	1.3	1.8	1.4	1.5	<1.0	5	1.8	1.30	150	600	1.68	0
TSS	mg/L	<0.99	2.0	<1.0	<1.0	<1.0	4	2.0	0.88	5	25	1.55	0
Alk-T	mg/L	45	47	46	46	44	5	47	45.6			46.6	0
Al-T	mg/L	0.0263	0.0302	0.0281	0.0264	0.0262	5	0.0302	0.0274			0.0294	0
As-T	mg/L	0.00105	0.00098	0.00078	0.00083	0.00072	5	0.00105	0.00087		0.005	0.00102	0
Ba-T	mg/L	0.0039	0.0039	0.0027	0.0031	0.0028	5	0.0039	0.0033	1		0.0039	0
B-T	mg/L	0.055	0.074	0.067	0.076	0.069	5	0.076	0.068	1.2		0.075	0
Cd-T	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.0000050			0.00001	0
Ca-T	mg/L	12.4	13.9	12.7	12.4	12.0	5	13.9	12.7			13.4	0
Cr-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	0
Co-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100	0.004	0.11	0.0001	0
Cu-T	mg/L	0.00074	0.00057	<0.00050	0.00051	0.00051	5	0.00074	0.000516			0.000672	0
Hard-T	mg/L	37.3	41.8	38.4	38.1	36.4	5	41.8	38.4			40.4	0
Fe-T	mg/L	0.097	0.127	0.116	0.104	0.102	5	0.127	0.109		1	0.123	0
Pb-T	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100	0.0039978	0.01763	0.0001	0
Mg-T	mg/L	1.52	1.71	1.61	1.69	1.57	5	1.71	1.62			1.7	0
Mn-T	mg/L	0.0076	0.0114	0.0104	0.0108	0.0113	5	0.0114	0.0103	0.737	0.8706	0.0114	0
Mo-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	1	2	0.0005	0
Ni-T	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050	0.025		0.0005	0
K-T	mg/L	0.269	0.325	0.250	0.284	0.271	5	0.325	0.280			0.309	0
S-T	mg/L	7.6	9.4	8.2	9.5	9.5	5	9.5	8.8			9.5	0
Se-T	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050	0.002		0.00005	0
Ag-T	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	5	<0.000020	0.0000100	0.00005	0.0001	0.00001	0
Na-T	mg/L	12.3	16.4	16.2	17.4	16.6	5	17.4	15.8			17.1	0
Sr-T	mg/L	0.0719	0.0783	0.0612	0.0755	0.0706	5	0.0783	0.0715			0.0772	0
Zn-T	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250	0.0075	0.033	0.0025	0
Al-D	mg/L	0.0173	0.0120	0.0121	0.0100	0.0093	5	0.0173	0.0121	0.05	0.1	0.0152	0
As-D	mg/L	0.00095	0.00087	0.00078	0.00074	0.00069	5	0.00095	0.00081			0.00092	0
Ba-D	mg/L	0.0039	0.0036	0.0032	0.0029	0.0027	5	0.0039	0.0033			0.0038	0
B-D	mg/L	0.054	0.065	0.065	0.063	0.066	5	0.066	0.063			0.066	0
Cd-D	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	5	<0.000010	0.0000050	0.000087	0.00017	0.00001	0
Ca-D	mg/L	12.8	13.2	12.5	12.4	12.6	5	13.2	12.7			13	0
Cr-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	0
Co-D	mg/L	<0.00020	<0.00020	<0.00020	0.00044	<0.00020	5	0.00044	0.000168			0.000304	0
Cu-D	mg/L	0.00052	0.00047	0.00041	0.00046	0.00047	5	0.00052	0.00047	0.000551	*	0.0005	0
Hard-D	mg/L	38.7	39.6	37.7	37.6	37.9	5	39.6	38.3			39.2	0
DOC	mg/L	2.5	1.4	1.3	1.9	2.6	4	2.6	1.8			2.4	0
Fe-D	mg/L	0.0588	0.0623	0.0634	0.0507	0.0540	5	0.0634	0.0578		0.35	0.063	0
Pb-D	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	5	<0.00020	0.000100			0.0001	0
Mg-D	mg/L	1.64	1.62	1.61	1.60	1.56	5	1.64	1.61			1.63	0
Mn-D	mg/L	0.0055	0.0070	0.0077	0.0063	0.0063	5	0.0077	0.0066			0.0074	0
Mo-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	0
Ni-D	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	5	<0.0010	0.00050			0.0005	0
K-D	mg/L	0.318	0.269	0.297	0.313	0.267	5	0.318	0.293			0.316	0
S-D	mg/L	8.3	9.5	9.3	8.8	8.3	5	9.5	8.8			9.4	0
Se-D	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	5	<0.00010	0.000050			0.00005	0
Na-D	mg/L	13.3	15.2	16.4	16.9	16.5	5	16.9	15.7			16.7	0
Sr-D	mg/L	0.0672	0.0742	0.0709	0.0714	0.0695	5	0.0742	0.0706			0.0731	0
Zn-D	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	5	<0.0050	0.00250	0.0075	0.033	0.0025	0

Notes: *Copper is a variable guideline. See Exceedance Table.
Factor applied to less-than results when calculating statistics: 0.5

Nutrient Sampling - Summer Low Flow			mg/L	mg/L	mg/L
Station Name			P-T	Nitrate / Nitrite	N-NH3
Stn.Code		WQG-Chronic	0.007		1.87
EMS ID.	Date	WQG-Acute			12.9
No Name Lake Outlet NNO	2022-07-18		<0.0030	<0.020	<0.015
	2022-07-25		<0.0030	<0.020	0.022
	2022-08-02		0.0054	<0.020	<0.015
	2022-08-08		0.0038	<0.020	<0.015
	2022-08-15		0.0045	<0.020	<0.015
E217017		Average	0.00394	0.02	0.0164
Long Lake Outlet LLO	2022-07-18		<0.0030	<0.020	<0.015
	2022-07-25		<0.0030	<0.020	0.020
	2022-08-02		0.0045	<0.020	<0.015
	2022-08-08		0.0041	<0.020	<0.015
	2022-08-15		<0.0030	0.026	0.029
E219412		Average	0.00352	0.0212	0.0188
Quinsam River at Argonaut Road WA	2022-07-18		<0.0030	<0.020	<0.015
	2022-07-25		<0.0030	<0.020	<0.015
	2022-08-02		0.0030	<0.020	<0.015
	2022-08-08		0.0033	<0.020	<0.015
	2022-08-15		<0.0030	<0.020	<0.015
E0126402		Average	0.00306	0.02	0.015
Middle Quinsam Lake Outlet WB	2022-07-18		<0.0030	<0.020	<0.015
	2022-07-25		<0.0030	<0.020	0.017
	2022-08-02		0.0036	<0.020	<0.015
	2022-08-08		0.0035	<0.020	<0.015
	2022-08-15		<0.0030	<0.020	<0.015
E0900504		Average	0.00322	0.02	0.0154
Quinsam River Downstream 1 QRDS1	2022-07-18		<0.0030	<0.020	<0.015
	2022-07-25		<0.0030	<0.020	0.038
	2022-08-02		0.0043	<0.020	<0.015
	2022-08-08		0.0039	<0.020	<0.015
	2022-08-15		0.0041	<0.020	<0.015
E286930		Average	0.00366	0.02	0.0196
7 South Quinsam River 7SQR	2022-07-18		<0.0030	0.029	<0.015
	2022-07-25		<0.0030	<0.020	<0.015
	2022-08-02		0.0049	<0.020	<0.015
	2022-08-08		0.0032	<0.020	<0.015
	2022-08-15		0.0039	<0.020	<0.015
E292113		Average	0.0036	0.0218	0.015
Iron River & Quinsam River IRQR	2022-07-18		<0.0030	<0.020	<0.015
	2022-07-25		0.0032	<0.020	<0.015
	2022-08-02		0.0056	0.024	<0.015
	2022-08-08		0.0041	<0.020	<0.015
	2022-08-15		0.0031	<0.020	<0.015
E299256		Average	0.0038	0.0208	0.015
Iron River Site 6 IR6	2022-07-18		<0.0030	<0.020	<0.015
	2022-07-25		<0.0030	<0.020	<0.015
	2022-08-02		0.0044	0.051	<0.015
	2022-08-08		0.0049	0.051	<0.015
	2022-08-15		0.0048	0.033	<0.015
E297231		Average	0.00402	0.035	0.015
Iron River Site 8 IR8	2022-07-18		<0.0030	<0.020	<0.015
	2022-07-25		0.0032	<0.020	0.021
	2022-08-02		0.0057	0.054	<0.015
	2022-08-08		0.0066	0.055	<0.015
	2022-08-15		0.0056	0.028	<0.015
E297232		Average	0.00482	0.0354	0.0162