Appendix 9.3 - Surface Water Hydrochemistry Database

Sample Details		Environmental Quality Standards (EQSs)	Dry	Wet	Dry	Wet	Dry	Wet	Dry	Wet	Wet	Dry	Wet	Dry	Wet	Dry	Wet	Dry	Wet	Dry	Wet	Dry
Sample ID			SW1	SW1	SW2	SW2	SW3	SW3	SW4	SW5	SW5	SW6	SW6	SW7	SW7	SW8	SW8	SW9	SW9	SW10	SW10	SW11
Project COC Reference			604569 (COC1)	604569 (COC2)	604569 (COC1)	604569 (COC2)	604569 (COC1)	604569 (COC2)	604569 (COC1)	604569 (COC1)	604569 (COC2)	604569 (COC1)	604569 (COC3)	604569 (COC1)	604569 (COC3)	604569 (COC1)	604569 (COC3)	604569 (COC1)	604569 (COC3)	604569 (COC1)	604569 (COC2)	604569 (COC1)
Sample Type	Medium		Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
Date Sampled	dd/mm/yyyy		13/06/2023	17/10/2023	13/06/2023	17/10/2023	13/06/2023	17/10/2023	13/06/2023	13/06/2023	17/10/2023	13/06/2023	18/06/2023	13/06/2023	18/06/2023	13/06/2023	18/06/2023	13/06/2023	18/06/2023	13/06/2023	18/06/2023	13/06/2023
Grid Reference for Sampling Location	OTM		655234S.43N667483.51	655234S.43N667483.51	655415S.47N667346.18	655415S.47N667346.18	655506S.67N667194.08	655506S.67N667194.08	655450S.48N668716.75	655815S.26N666172.85	655815S.26N666172.85	655185S.28N670597.2	655185S.28N670597.2	655078S.67N671265.1	655078S.67N671265.1	655734S.8N672471.13	655734S.8N672471.13	655737S.17N669511.41	655737S.17N669511.41	655818S.12N671169.88	655818S.12N671169.88	655643S.85N670377.87
Field Data Discharge Data																						
Surface Water Feature	Type		Stream	Stream	Stream	Stream	River	River	River	River	River	River	River	River	River	River	River	River	River	River	River	River
Description of sample location	Type		On site	On site	On site	On site	On site	On site	On site	On site	On site	On site	On site	On site	On site	Bridge	Bridge	river bank	river bank	Bridge	Bridge	river bank
Width of Water Body (m)	m		0.3m	0.3m	0.8m	0.8m	1-3m	1-3m	1.5-3m	2.5m	2.5m	1.5m	1.5m	4m	4m	2m	2m	1m	1m	Dry	Dry	0.5m
Depth (m)	m		0.3m	0.3m	0.2m	0.3m	0.3m	0.3m	0.9m	0.1m	0.3m	1.5m	1.7m	1m	1.1m	0.6m	0.8m	0.5m	0.8m	1.5m	1.5m	1m
Total Rain 3 Days Prior R1 (mm)	mm/72hours		1.3	41.0	1.3	41.0	1.3	41.0	1.3	1.3	41.0	1.3	41	1.3	41	1.3	41	1.3	41	1.3	41.0	1.3
Field Data																						
Clarity			Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear	/	/	Clear
Colour			Clear	Clear	Light yellow	Yellow tint	Yellow tint	Light Yellow	Golden	Clear	Clear	Light Yellow	Clear	Yellow	Light Yellow	Light	Clear	Light Yellow	Clear	/	/	Light Yellow
Odour			None	None	No odour	None	Fish	No Odour	No Odour	No Odour	No Odour	No odour	No Odour	none	None	No Odour	None	No odour	None	/	/	Earthy
pH	pH Units	>6 & <9	7.68	7.41	7.96	7.96	8.82	8.01	8.29	8.35	7.69	7.69	7.84	8.02	8.01	7.76	7.41	/	7.88	/	/	7.2
Conductivity	µS/cm	2.5	163.5	155.9	163.6	148.4	115.3	123.6	139.9	248.8	263	121.9	213	279.8	198.1	168.9	167.3	/	157.6	/	/	92.5
Temperature	deg. C	21.5	13.2	11.6	11.8	10.8	11.2	10.9	11.2	11.2	11.1	12.7	10.4	16.7	9.80	13.3	10.5	/	10.11	/	/	13.1
Dissolved Oxygen (mg/l)	%		0.10%	45.90%	0.10%	50.10%	N/A	43.60%	76.90%	68.60%	48.70%	N/A	49.90%	0.2	49.20%	0.10%	43.20%	/	47.80%	/	/	0.10%
Oxidation Reduction Potential	mgl	50% Samples >9	N/A	-145.3	-42.7	-152.2	-57.5	-152.1	-65.8	109.1	-104.2	-31.9	-98.6	33.3	-105	-92.3	-152.1	/	-165.6	/	/	53
Laboratory data																						
Conductivity @ 25 deg.C	uS/cm	2.5	162	161	171	209	188	136	139	239	168	119	94	269	264	173	168	147	125	/	/	77
pH	pH Units	>6 & <9	6.83	6.84	7.08	7.09	7.1	6.88	6.91	7.82	7.06	6.64	6.43	7.52	7.33	7.12	7	7.09	6.78	/	/	6.59
Carbon, Organic (diss.filt)	mgl		5	7	16	10	12	9	13	2	6	17	13	9	11	4	3	14	13	/	/	20
Ammoniacal Nitrogen as N (low level)	mgl	0.02	0.02	0.02	0.03	1.19	0.02	0.02	0.05	0.02	0.02	0.02	0.02	0.04	0.02	0.02	0.02	0.02	0.02	/	/	0.05
BOD, unfiltered	mgl	3	N/A	1	N/A	4	N/A	<1	N/A	N/A	<1	N/A	<1	N/A	<1	N/A	<1	N/A	<1	/	/	N/A
Nitrate as NO3	mgl		1.1	2	2.7	7.8	1.1	1.2	0.4	1.3	1.6	<0.2	0.3	<0.2	1.6	2.2	2.9	<0.2	0.3	/	/	<0.2
Nitrite as NO2	mgl	0.05	<0.02	<0.02	<0.02	0.31	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	/	/	<0.02
Nitrogen, Kjeldahl	mgl		N/A	<0.05	N/A	1.8	N/A	<0.5	N/A	N/A	<0.5	N/A	0.8	N/A	0.7	N/A	<0.5	N/A	<0.5	/	/	N/A
OrthoPhosphate (PO4)	mgl		<0.03	0.04	<0.03	0.16	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	/	/	<0.03
Suspended solids, Total	mgl	25	<10	<10	10	<10	<10	15	<10	<10	<10	<10	13	<10	<10	<10	<10	14	<10	/	/	<10
Turbidity	ntu		1.2	1.2	1.6	12.5	3	3.5	10.5	1.3	0.9	8.1	12.7	1.2	3	1	8.2	2.7	5	/	/	3.8
Copper (diss.filt)	µgl	5	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	/	/	<7
Phosphorus (diss.filt)	µgl		13	<5	17	241	9	14	13	10	14	28	20	11	21	12	13	7	10	/	/	11
Zinc (diss.filt)	µgl		3	<3	7	7	<3	<3	4	<3	<3	6	8	<3	4	3	3	4	8	/	/	4
Copper (tot.unfilt)	µgl	2000	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	/	/	<7
Hardness, Total as CaCO3 unfiltered	mgl		51	38	60	60	76	44	44	98	58	31	10	123	106	69	56	58	36	/	/	19
Zinc (tot.unfilt)	µgl	30	3	<3	4	<7	3	<3	4	<3	<3	7	7	<3	<3	89	3	3	4	/	/	3
Apparent Colour	mgl PtCo		34	43	63	87	102	113	239	30	46	320	255	88	115	21	48	181	150	/	/	229
Phosphorus (tot.unfilt)	µgl	No Impact on Fish	11	8	12	259	7	15	10	7	11	33	34	16	25	13	27	7	15	/	/	10