

CSO INTERIM WATER QUALITY MONITORING

2014 ASSINIBOINE RIVER MONITORING REPORT

Survey Date: October 15, 2014		Assiniboine Sampling Locations								
Parameter	Unit	HEADINGLEY BRIDGE			ASSINIBOINE PARK FOOT BRIDGE			OSBORNE STREET BRIDGE		
		(R1)			(R3)			(RX1)		
		A	B	C	A	B	C	A	B	C
Temperature	°C	9.7	9.6	9.6	9.6	9.7	9.7	10.1	10.2	10.1
Dissolved Oxygen	mg/L	10.3	10.2	10.2	10.3	10.1	10.2	10.2	10.2	10.2
Conductivity	mS/cm	1.262	1.235	1.253	1.307	1.315	1.307	1.322	1.32	1.31
pH	units	8.3	8.3	8.3	8.3	8.2	8.2	8.3	8.3	8.2
Biochemical Oxygen Demand	mg/L	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6
Carbonaceous BOD	mg/L	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6
Total Suspended Solids	mg/L	219	247	244	256	244	241	236	253	253
Ammonia Nitrogen	mg/L N	0.017	0.017	0.017	0.018	0.013	0.017	0.016	0.015	0.018
Nitrate Nitrogen	mg/L N	0.31	0.31	0.316	0.314	0.318	0.317	0.313	0.31	0.311
Nitrite Nitrogen	mg/L N	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nitrate-Nitrite Nitrogen	mg/L N	0.31	0.31	0.316	0.314	0.318	0.317	0.313	0.31	0.311
Total Kjeldahl Nitrogen	mg/L N	1.17	1.26	1.15	1.29	1.39	1.3	1.22	1.34	1.44
Total Nitrogen <sup>1</sup>	mg/L N	1.48	1.57	1.47	1.6	1.71	1.62	1.53	1.65	1.75
Total Phosphorus	mg/L P	0.255	0.244	0.233	0.247	0.25	0.236	0.248	0.282	0.331
Escherichia Coliform	MPN/100 mL	*	21	*	*	43	*	*	43	*
Fecal Coliform	MPN/100 mL	*	21	*	*	43	*	*	43	*

- Notes:
- 1) Calculated values
  - 2) \* - Fecal coliform testing performed only at Sample B locations to compare with historical data.
  - 3) Analysed by contract laboratory

Client File No: 3205.00

CSO INTERIM WATER QUALITY MONITORING

2014 ASSINIBOINE RIVER MONITORING REPORT

Survey Date: October 16, 2014		Assiniboine Sampling Locations								
Parameter	Unit	HEADINGLEY BRIDGE			ASSINIBOINE PARK FOOT BRIDGE			OSBORNE STREET BRIDGE		
		(R1)			(R3)			(RX1)		
		A	B	C	A	B	C	A	B	C
Temperature	° C	9.8	9.8	9.8	10	10	10.1	10.2	10.1	10.1
Dissolved Oxygen	mg/L	10.1	10	10	9.8	10	10.1	9.9	10	9.8
Conductivity	mS/cm	1.265	1.28	1.27	1.32	1.31	1.309	1.323	1.315	1.323
pH	units	8.2	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
Biochemical Oxygen Demand	mg/L	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6
Carbonaceous BOD	mg/L	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6
Total Suspended Solids	mg/L	236	242	250	273	247	246	215	233	282
Ammonia Nitrogen	mg/L N	0.016	0.017	0.013	0.014	0.01	0.022	0.013	0.012	0.012
Nitrate Nitrogen	mg/L N	0.355	0.35	0.352	0.364	0.365	0.365	0.364	0.36	0.36
Nitrite Nitrogen	mg/L N	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nitrate-Nitrite Nitrogen	mg/L N	0.355	0.35	0.352	0.364	0.365	0.365	0.364	0.36	0.36
Total Kjeldahl Nitrogen	mg/L N	1.31	1.27	1.22	1.21	1.25	1.24	1.22	1.2	1.26
Total Nitrogen <sup>1</sup>	mg/L N	1.66	1.62	1.57	1.57	1.62	1.61	1.58	1.56	1.62
Total Phosphorus	mg/L P	0.244	0.222	0.206	0.178	0.184	0.192	0.208	0.198	0.197
Escherichia Coliform	MPN/100 mL	7	230	23	43	15	93	43	93	23
Fecal Coliform	MPN/100 mL	*	230	*	*	43	*	*	93	*

- Notes:
- 1) Calculated values
  - 2) \* - Fecal coliform testing performed only at Sample B locations to compare with historical data.
  - 3) Analysed by contract laboratory

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CSO INTERIM WATER QUALITY MONITORING

2014 ASSINIBOINE RIVER MONITORING REPORT

Survey Date: October 17, 2014		Assiniboine Sampling Locations								
Parameter	Unit	HEADINGLEY BRIDGE			ASSINIBOINE PARK FOOT BRIDGE			OSBORNE STREET BRIDGE		
		(R1)			(R3)			(RX1)		
		A	B	C	A	B	C	A	B	C
Temperature	° C	9.4	9.4	9.3	9.2	9.4	9.3	9	9.1	9.1
Dissolved Oxygen	mg/L	9.9	9.9	9.8	10	10	10	10	10.1	10.2
Conductivity	mS/cm	1.278	1.275	1.278	1.338	1.34	1.303	1.298	1.294	1.296
pH	units	8.3	8.3	8.3	8.2	8.3	8.2	8.3	8.4	8.4
Biochemical Oxygen Demand	mg/L	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6
Carbonaceous BOD	mg/L	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6
Total Suspended Solids	mg/L	226	338	332	345	334	244	261	234	306
Ammonia Nitrogen	mg/L N	0.035	0.015	< 0.01	0.015	0.034	< 0.01	0.017	0.017	< 0.01
Nitrate Nitrogen	mg/L N	0.291	0.279	0.285	0.289	0.288	0.291	0.288	0.284	0.288
Nitrite Nitrogen	mg/L N	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nitrate-Nitrite Nitrogen	mg/L N	0.291	0.279	0.285	0.289	0.288	0.291	0.288	0.284	0.288
Total Kjeldahl Nitrogen	mg/L N	1.45	1.09	1.3	1.27	1.23	1.26	1.33	1.51	1.38
Total Nitrogen <sup>1</sup>	mg/L N	1.74	1.37	1.58	1.56	1.52	1.55	1.62	1.79	1.67
Total Phosphorus	mg/L P	0.298	0.177	0.253	0.195	0.193	0.215	0.22	0.293	0.245
Escherichia Coliform	MPN/100 mL	23	9	4	15	9	9	9	43	15
Fecal Coliform	MPN/100 mL	*	23	*	*	9	*	*	43	*

- Notes:
- 1) Calculated values
  - 2) \* - Fecal coliform testing performed only at Sample B locations to compare with historical data.
  - 3) Analysed by contract laboratory

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CSO INTERIM WATER QUALITY MONITORING

2014 ASSINIBOINE RIVER MONITORING REPORT

Survey Date: October 18, 2014		Assiniboine Sampling Locations								
Parameter	Unit	HEADINGLEY BRIDGE			ASSINIBOINE PARK FOOT BRIDGE			OSBORNE STREET BRIDGE		
		(R1)			(R3)			(RX1)		
		A	B	C	A	B	C	A	B	C
Temperature	° C	8.6	8.7	8.9	8.9	8.8	8.9	8.9	9	9
Dissolved Oxygen	mg/L	9.8	9.9	10	10.1	10.1	10	10	10	10.1
Conductivity	mS/cm	1.268	1.267	1.268	1.295	1.291	1.288	1.291	1.285	1.291
pH	units	8.3	8.3	8.2	8.2	8.3	8.3	8.3	8.3	8.3
Biochemical Oxygen Demand	mg/L	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6
Carbonaceous BOD	mg/L	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6
Total Suspended Solids	mg/L	312	280	269	242	276	288	218	222	218
Ammonia Nitrogen	mg/L N	0.023	0.02	0.022	0.022	0.022	0.038	0.021	0.022	0.021
Nitrate Nitrogen	mg/L N	0.291	0.294	0.292	0.29	0.29	0.289	0.291	0.29	0.29
Nitrite Nitrogen	mg/L N	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nitrate-Nitrite Nitrogen	mg/L N	0.291	0.294	0.292	0.29	0.29	0.289	0.291	0.29	0.29
Total Kjeldahl Nitrogen	mg/L N	1.73	1.53	1.69	1.52	1.54	1.74	1.56	1.54	1.5
Total Nitrogen <sup>1</sup>	mg/L N	2.02	1.82	1.98	1.81	1.83	2.03	1.85	1.83	1.79
Total Phosphorus	mg/L P	0.374	0.301	0.342	0.292	0.318	0.38	0.32	0.323	0.301
Escherichia Coliform	MPN/100 mL	9	4	< 3	7	4	9	4	9	21
Fecal Coliform	MPN/100 mL	*	4	*	*	4	*	*	43	*

- Notes:
- 1) Calculated values
  - 2) \* - Fecal coliform testing performed only at Sample B locations to compare with historical data.
  - 3) Analysed by contract laboratory

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CSO INTERIM WATER QUALITY MONITORING

2014 ASSINIBOINE RIVER MONITORING REPORT

Survey Date: October 19, 2014		Assiniboine Sampling Locations								
Parameter	Unit	HEADINGLEY BRIDGE			ASSINIBOINE PARK FOOT BRIDGE			OSBORNE STREET BRIDGE		
		(R1)			(R3)			(RX1)		
		A	B	C	A	B	C	A	B	C
Temperature	°C	8.2	8.1	8.4	8.6	8.4	8.6	8.9	9.1	8.9
Dissolved Oxygen	mg/L	9.8	10	10	10.1	9.9	9.9	10	10	10.1
Conductivity	mS/cm	1.259	1.259	1.261	1.265	1.257	1.265	1.285	1.286	1.287
pH	units	8.3	8.3	8.2	8.3	8.3	8.3	8.3	8.2	8.2
Biochemical Oxygen Demand	mg/L	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6
Carbonaceous BOD	mg/L	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6
Total Suspended Solids	mg/L	203	233	220	209	216	230	219	219	249
Ammonia Nitrogen	mg/L N	0.017	0.021	0.021	0.017	0.018	0.014	0.014	0.015	0.011
Nitrate Nitrogen	mg/L N	0.357	0.354	0.357	0.357	0.357	0.358	0.358	0.36	0.359
Nitrite Nitrogen	mg/L N	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nitrate-Nitrite Nitrogen	mg/L N	0.357	0.354	0.357	0.357	0.357	0.358	0.358	0.36	0.359
Total Kjeldahl Nitrogen	mg/L N	1.42	1.42	1.41	1.21	1.36	1.36	1.5	1.34	1.26
Total Nitrogen <sup>1</sup>	mg/L N	1.78	1.77	1.77	1.57	1.72	1.72	1.86	1.7	1.62
Total Phosphorus	mg/L P	0.31	0.291	0.312	0.239	0.306	0.285	0.318	0.243	0.218
Escherichia Coliform	MPN/100 mL	4	< 3	9	9	23	7	23	21	23
Fecal Coliform	MPN/100 mL	*	< 3	*	*	23	*	*	21	*

- Notes:
- 1) Calculated values
  - 2) \* - Fecal coliform testing performed only at Sample B locations to compare with historical data.
  - 3) Analysed by contract laboratory

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