PROVIDING MORE EPCOR

Gold Bar Wastewater Treatment Plant
Plant Performance Report
August 2017

Digested Sludge: Total Monthly Volume (ML)	59.49

Volume of Flow (ML)

DATE	Peak Flow (MLD)	Influent RAW	Effluent Non UV Disinfected OUTFALL 30	Effluent Non UV Disinfected OUTFALL 20	Effluent Non UV Disinfected MPW	UV Disinfected EPEPS	UV Disinfected OUTFALL 10 FEC	UV Disinfected OUTFALL 10 FE
Tue 01	624.53	319.51	28.37	0.00	8.84	0.00	282.30	282.30
Wed 02	371.11	274.42	0.00	0.00	10.16	0.00	264.26	264.26
Thu 03	357.00	267.06	0.00	0.00	8.99	0.00	258.07	258.07
Fri 04	699.73	340.86	46.90	0.00	10.35	0.00	283.61	283.61
Sat 05	1,551.32	433.32	148.86	0.19	10.35	0.00	274.11	274.11
Sun 06	416.45	279.78	1.96	0.00	10.42	0.00	267.40	267.40
Mon 07	475.81	278.67	7.15	0.00	9.56	0.00	261.96	261.96
Tue 08	365.84	275.37	0.00	0.00	9.89	0.00	265.48	265.48
Wed 09	367.04	274.67	0.00	0.00	9.67	0.00	265.00	265.00
Thu 10	390.39	274.01	0.00	0.00	9.66	0.00	264.35	264.35
Fri 11	369.64	268.43	0.00	0.00	9.55	0.00	258.88	258.88
Sat 12	373.78	256.09	0.00	0.00	9.79	0.00	246.30	246.30
Sun 13	1,095.37	298.26	40.95	0.00	10.26	0.00	247.05	247.05
Mon 14	840.32	336.69	26.86	0.00	9.98	0.00	299.85	299.85
Tue 15	357.98	269.07	0.00	0.00	10.08	0.00	258.99	258.99
Wed 16	351.69	265.57	0.00	0.00	10.21	0.00	255.36	255.36
Thu 17	406.74	263.55	0.00	0.00	10.25	0.00	253.30	253.30
Fri 18	523.20	274.33	3.10	0.00	10.20	0.00	261.03	261.03
Sat 19	653.28	290.78	25.91	0.00	9.76	0.00	255.11	255.11
Sun 20	350.09	255.77	0.00	0.00	10.20	0.00	245.57	245.57
Mon 21	341.44	265.10	0.00	0.00	10.22	0.00	254.88	254.88
Tue 22	361.25	262.67	0.00	0.00	10.13	0.00	252.54	252.54
Wed 23	380.03	255.37	0.00	0.00	10.88	0.00	244.49	244.49
Thu 24	592.86	285.42	20.31	0.00	10.89	0.00	254.22	254.22
Fri 25	409.13	268.00	1.30	0.00	10.35	0.00	256.35	256.35
Sat 26	351.89	247.76	0.00	0.00	10.47	0.00	237.29	237.29
Sun 27	387.51	250.06	0.00	0.00	10.42	0.00	239.64	239.64
Mon 28	371.06	263.87	0.00	0.00	10.63	0.00	253.24	253.24
Tue 29	385.12	262.81	0.00	0.00	10.80	0.00	252.01	252.01
Wed 30	406.48	261.39	0.00	0.00	11.21	0.00	250.18	250.18
Thu 31	357.55	260.66	0.00	0.00	11.31	0.00	249.35	249.35
Average	493.08	279.98	11.34	0.01	10.18	0.00	258.46	258.46
Minimum	341.44	247.76	0.00	0.00	8.84	0.00	237.29	237.29
Maximum	1,551.32	433.32	148.86	0.19	11.31	0.00	299.85	299.85
GeoMean	---	---	---	---	---	---	---	---
TOTAL	---	8,679	352	0	315	0	6,012	8,012

Liquid Stream Quality

DATE	pH@25°C RAW	pH@25°C OUTFALL 30	pH@25°C OUTFALL 20	pH@25°C OUTFALL 10 FEC	TSS (mg/L) RAW	TSS (mg/L) OUTFALL 30	TSS (mg/L) OUTFALL 20	TSS (mg/L) EPEPS	TSS (mg/L) OUTFALL 10 FEC	TSS (mg/L) OUTFALL 10 FE
Tue 01	7.7	7.8		7.6	324	63			8.4	8.4
Wed 02	7.6			7.6	396				8.4	8.4
Thu 03	7.6			7.6	240				6.5	6.5
Fri 04	7.5	7.6		7.7	308	28			8.5	8.5
Sat 05	7.5	7.4	7.3	7.6	544	98	330		6.5	6.5
Sun 06	7.7	7.9		7.6	260	33			6.2	6.2
Mon 07	7.6	7.8		7.5	236	58			5.0	5.0
Tue 08	7.6			7.5	283				4.5	4.5
Wed 09	7.5			7.6	292				4.6	4.6
Thu 10	7.6			7.6	311				6.5	6.5
Fri 11	7.6			7.7	280				5.3	5.3
Sat 12	7.6			7.6	324				3.7	3.7
Sun 13	7.5	7.7		7.7	403	77			5.2	5.2
Mon 14	7.6	7.5		7.7	308	35			5.2	5.2
Tue 15	7.6			7.5	212				4.9	4.9
Wed 16	7.6			7.7	193				3.9	3.9
Thu 17	7.5			7.6	251				4.5	4.5
Fri 18	7.6			7.7	328				5.6	5.6
Sat 19	7.5	7.7		7.7	269	52			7.0	7.0
Sun 20	7.6			7.6	240				4.7	4.7
Mon 21	7.7			7.6	276				6.4	6.4
Tue 22	7.6			7.6	235				6.0	6.0
Wed 23	7.6			7.7	268				6.9	6.9
Thu 24	7.6	7.4		7.6	300	50			8.5	8.5
Fri 25	7.7	7.9		7.6	242	53			7.6	7.6
Sat 26	7.6			7.6	298				4.1	4.1
Sun 27	7.6			7.6	356				4.8	4.8
Mon 28	7.6			7.7	309				4.8	4.8
Tue 29	7.5			7.6	277				4.5	4.5
Wed 30	7.6			7.6	328				5.2	5.2
Thu 31	7.6			7.6	368				6.2	6.2
Average	7.6	7.7	7.3	7.6	299	55	330	---	5.8	5.8
Minimum	7.5	7.4	7.3	7.5	193	28	330	---	3.7	3.7
Maximum	7.7	7.9	7.3	7.7	544	98	330	---	8.5	8.5
GeoMean	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---

DATE	BOD_5/$cBOD_5$ (mg/L) RAW	BOD_5 OUTFALL 30	BOD_5 OUTFALL 20	BOD_5 EPEPS	$cBOD_5$ OUTFALL 10 FEC	$cBOD_5$ OUTFALL 10 FE
Tue 01	241	101			4	4
Wed 02	386				4	4
Thu 03	242				4	4
Fri 04	224	48			3	3
Sat 05	178	35	33		3	3
Sun 06	195	48			3	3
Mon 07	231	100			3	3
Tue 08	224				3	3
Wed 09	243				2	2
Thu 10	238				2	2
Fri 11	215				2	2
Sat 12	272				3	3
Sun 13	209	110			2	2
Mon 14	239	53			3	3
Tue 15	213				3	3
Wed 16	181				3	3
Thu 17	272				3	3
Fri 18	191				3	3
Sat 19	244	93			3	3
Sun 20	260				3	3
Mon 21	276				4	4
Tue 22	289				3	3
Wed 23	334				4	4
Thu 24	303	131			4	4
Fri 25	274	93			3	3
Sat 26	309				3	3
Sun 27	336				3	3
Mon 28	287				3	3
Tue 29	304				3	3
Wed 30	282				4	4
Thu 31	293				3	3
Average	258	81	33.0	---	3.1	3.1
Minimum	178	35	33.0	---	2.0	2.0
Maximum	386	131	33.0	---	4.0	4.0
GeoMean	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---

DATE	TP (mg/L) RAW	TP (mg/L) OUTFALL 30	TP (mg/L) OUTFALL 20	TP (mg/L) EPEPS	TP (mg/L) OUTFALL 10 FEC	TP (mg/L) OUTFALL 10 FE
Tue 01	7.53	5.92			0.35	0.35
Wed 02	9.55				0.35	0.35
Thu 03	7.16				0.29	0.29
Fri 04	5.49	2.14			0.28	0.28
Sat 05	5.48	1.96	2.17		0.25	0.25
Sun 06	5.82	1.99			0.21	0.21
Mon 07	6.02	4.58			0.23	0.23
Tue 08	7.07				0.23	0.23
Wed 09	7.20				0.23	0.23
Thu 10	6.86				0.25	0.25
Fri 11	6.62				0.24	0.24
Sat 12	6.42				0.21	0.21
Sun 13	6.34	3.39			0.22	0.22
Mon 14	5.73	1.27			0.23	0.23
Tue 15	5.55				0.20	0.20
Wed 16	5.64				0.21	0.21
Thu 17	6.54				0.23	0.23
Fri 18	6.66				0.24	0.24
Sat 19	5.85	2.54			0.28	0.28
Sun 20	6.86				0.23	0.23
Mon 21	7.18				0.27	0.27
Tue 22	7.06				0.28	0.28
Wed 23	6.46				0.30	0.30
Thu 24	6.56	3.11			0.41	0.41
Fri 25	5.96	3.20			0.33	0.33
Sat 26	6.34				0.20	0.20
Sun 27	6.75				0.22	0.22
Mon 28	7.58				0.24	0.24
Tue 29	7.89				0.23	0.23
Wed 30	7.83				0.26	0.26
Thu 31	8.65				0.26	0.26
Average	6.73	3.01	2.2	---	0.26	0.26
Minimum	5.48	1.27	2.2	---	0.20	0.20
Maximum	9.55	5.92	2.2	---	0.41	0.41
GeoMean	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---

DATE	NH3-N (mg/L) RAW	NH3-N (mg/L) OUTFALL 30	NH3-N (mg/L) OUTFALL 20	NH3-N (mg/L) EPEPS	NH3-N (mg/L) OUTFALL 10 FEC	NH3-N (mg/L) OUTFALL 10 FE
Tue 01	31.0	36.8			0.309	0.309
Wed 02	29.9				0.082	0.082
Thu 03	28.9				0.067	0.067
Fri 04	23.0	17.9			0.073	0.073
Sat 05	21.3	15.3	9.5		0.072	0.072
Sun 06	29.4	18.7			0.295	0.295
Mon 07	32.2	38.4			0.389	0.389
Tue 08	37.0				0.435	0.435
Wed 09	34.0				0.709	0.709
Thu 10	39.5				0.546	0.546
Fri 11	33.9				0.128	0.128
Sat 12	36.3				0.131	0.13
Sun 13	29.4	23.5			0.147	0.147
Mon 14	28.5	15.8			0.123	0.123
Tue 15	31.2				0.089	0.089
Wed 16	35.2				0.032	0.032
Thu 17	33.2				0.269	0.269
Fri 18	33.4				0.070	0.070
Sat 19	28.9	25.2			0.151	0.151
Sun 20	35.6				0.197	0.197
Mon 21	33.9				0.173	0.173
Tue 22	33.7				0.113	0.113
Wed 23	30.2				0.099	0.099
Thu 24	28.8	27.4			0.126	0.126
Fri 25	30.0	25.8			0.140	0.140
Sat 26	31.2				0.125	0.125
Sun 27	27.2				0.167	0.167
Mon 28	35.9				0.071	0.071
Tue 29	32.2				0.070	0.070
Wed 30	43.8				0.205	0.205
Thu 31	46.2				0.246	0.246
Average	32.4	24.5	9.5	---	0.189	0.189
Minimum	21.3	15.3	9.5	---	0.032	0.032
Maximum	46.2	38.4	9.5	---	0.709	0.709
GeoMean	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---

DATE	TKN (mg/L) RAW	TKN (mg/L) OUTFALL 30	TKN (mg/L) OUTFALL 20	TKN (mg/L) OUTFALL 10 FEC
Tue 01	44.9	44.9		2.22
Wed 02	57.9			2.14
Thu 03	52.7			1.61
Fri 04	38.2	23.8		1.55
Sat 05	37.5	20.9	15.9	1.53
Sun 06	46.3	24.0		1.65
Mon 07	47.0	47.6		1.94
Tue 08	56.3			2.04
Wed 09	58.2			2.49
Thu 10	55.2			2.65
Fri 11	51.2			1.89
Sat 12	51.6			1.58
Sun 13	47.0	31.3		1.49
Mon 14	44.2	17.3		1.51
Tue 15	45.3			1.38
Wed 16	45.4			1.34
Thu 17	47.5			1.39
Fri 18	47.1			1.39
Sat 19	41.6	29.8		1.66
Sun 20	51.8			1.62
Mon 21	52.9			1.69
Tue 22	52.5			1.70
Wed 23	47.8			1.78
Thu 24	45.5	35.1		1.76
Fri 25	44.4	31.8		1.67
Sat 26	44.9			1.33
Sun 27	46.5			1.35
Mon 28	56.4			1.46
Tue 29	59.5			1.64
Wed 30	63.9			1.75
Thu 31	64.0			1.81
Average	49.8	30.7	15.9	1.71
Minimum	37.5	17.3	15.9	1.33
Maximum	64.0	47.6	15.9	2.65
GeoMean	---	---	---	---
TOTAL	---	---	---	---

DATE	NO_2+NO_3 (mg/L) RAW	NO_2+NO_3 (mg/L) OUTFALL 30	NO_2+NO_3 (mg/L) OUTFALL 20	NO_2+NO_3 (mg/L) OUTFALL 10 FEC
Tue 01		0.130		12.9
Wed 02	< 0.01			7.20
Thu 03				6.94
Fri 04		0.859		6.38
Sat 05		0.877	0.25	8.74
Sun 06		0.26		6.05
Mon 07	< 0.01			8.75
Tue 08				9.69
Wed 09	< 0.01			12.4
Thu 10				12.8
Fri 11				9.59
Sat 12				10.5
Sun 13		0.98		11.3
Mon 14		0.34		8.64
Tue 15				10.5
Wed 16	< 0.01			10.9
Thu 17				11.0
Fri 18				10.4
Sat 19		0.14		8.88
Sun 20				10.0
Mon 21				9.74
Tue 22				9.12
Wed 23	< 0.01			8.72
Thu 24		0.10		8.24
Fri 25				7.80
Sat 26				9.61
Sun 27				9.26
Mon 28				10.3
Tue 29				10.2
Wed 30	< 0.30			11.7
Thu 31				13.7
Average	0.07	0.41	0.25	9.74
Minimum	0.01	0.01	0.25	6.05
Maximum	0.30	0.98	0.25	13.7
GeoMean	---	---	---	---
TOTAL	---	---	---	---

DATE	Chloride (mg/L) RAW	Chloride (mg/L) OUTFALL 30	Chloride (mg/L) OUTFALL 20	Chloride (mg/L) OUTFALL 10 FEC
Tue 01	60.3	61.1		78.9
Wed 02	66.8			70.3
Thu 03	66.7			75.0
Fri 04	56.3	53.8		73.2
Sat 05	46.4	36.8	17.7	66.7
Sun 06	69.5	44.0		58.5
Mon 07	75.4	90.7		71.2
Tue 08	78.9			75.8
Wed 09	80.9			81.7
Thu 10	83.2			88.6
Fri 11	81.7			85.7
Sat 12	79.7			85.4
Sun 13	68.7	59.1		85.5
Mon 14	62.5	41.3		69.7
Tue 15	82.4			77.0
Wed 16	80.9			84.3
Thu 17	79.1			84.0
Fri 18	78.1			80.6
Sat 19	63.7	64.5		75.6
Sun 20	70.5			69.8
Mon 21	80.0			77.1
Tue 22	77.0			83.2
Wed 23	79.5			84.3
Thu 24	80.5	65.5		82.9
Fri 25	69.1			80.1
Sat 26	74.6			79.6
Sun 27	73.8			78.3
Mon 28	73.8			76.4
Tue 29	80.1			80.4
Wed 30	80.0			84.5
Thu 31	82.1			88.9
Average	73.6	57.4	17.7	78.5
Minimum	46.4	36.8	17.7	58.5
Maximum	83.2	90.7	17.7	88.9
GeoMean	---	---	---	---
TOTAL	---	---	---	---

DATE	*E. coli* (Counts/100 mL) RAW	*E. coli* OUTFALL 30	*E. coli* OUTFALL 20	*E. coli* OUTFALL 10 FEC
Tue 01		1.6		15
Wed 02				8
Thu 03				6
Fri 04		2.5		8
Sat 05		2.9	2.1	15
Sun 06		3.0		4
Mon 07		0.9		5
Tue 08				7
Wed 09	3.3			28
Thu 10				5
Fri 11				5
Sat 12				4
Sun 13		1.2		3
Mon 14		0.9		12
Tue 15				8
Wed 16				5
Thu 17				11
Fri 18		0.3		7
Sat 19		1.7		6
Sun 20				5
Mon 21				7
Tue 22				22
Wed 23				6
Thu 24		2.4		4
Fri 25		0.6		9
Sat 26				6
Sun 27				4
Mon 28				4
Tue 29				6
Wed 30				6
Thu 31				5
Average	---	---	---	---
Minimum	3.3	0.3	2.1	3
Maximum	3.3	3.0	2.1	28
GeoMean	3.3	1.4	2.1	7
TOTAL	---	---	---	---

* Contact Laboratory for information about the quality assurance associated with the results

RAW	Untreated Influent into the plant
INF	Untreated Wastewater from collection system
INFs	Influent, screened at the Headworks Diversion Structure
PE	Primary Effluent from conventional primaries
PE 30	Primary Effluent from conventional primaries discharged via Outfall 30
EPT	Enhanced Primary Treatment
EPE	Enhanced Primary Effluent
EPEPS	Enhanced Primary Effluent and Pump Station
FE	Final Effluent from secondary treatment process (with biological nutrient removal).

FEC	Combined pre-UV disinfection (FE+EPEPS)
OUTFALL 10	UV-disinfected, discharged via OUTFALL 10
OUTFALL 20	Combined Bypass (RAW + PE + EPE)
OUTFALL 30	Combined Bypass (INF + INFS + PE30 + EPE)
MPW	Membrane Product Water (Effluent re-use water)
ML	Megalitre (1,000,000 Litre)
MPN	Most Probable Number
NR	No Result
NS	No Sample
INS	Insufficient Sample

Enhanced Primary Treatment (EPT) Usage					
Total Bypass (hrs)	EPT Usage (hrs)	%	Total Bypass YTD (hrs)	EPT Usage YTD	% Usage
33	33	100%	424	424	100.00%

Report Comments

1	Outfall 20 - August 05: sample results represent rainfall discharged from the outfall. One grab sample was analyzed for *E. coli*. However, no auto-sampler composite was available. Therefore, the remaining tests were run on a previously frozen back-up grab sample. Consequently, recommended holding times were exceeded for pH, TSS, BOD, TP, NH3-N, TKN, (NO3 + NO2)-N, and Chloride.

AEP Ref #**

** AEP - Alberta Environment & Parks

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