PROVIDING MORE EPCOR

Gold Bar Wastewater Treatment Plant
Plant Performance Report
October 2017

Digested Sludge: Total Monthly Volume (ML)	63.16

Volume of Flow (ML)

DATE	Peak Flow (MLD)	Influent	Effluent					
			Non UV Disinfected			UV Disinfected		
		RAW	OUTFALL 30	OUTFALL 20	MPW	EPEPS	OUTFALL 10 FEC	OUTFALL 10 FE
Sun 01	668.22	269.72	13.01	0.00	10.27	0.00	246.44	246.44
Mon 02	729.51	418.16	81.99	0.00	11.11	0.00	325.06	325.06
Tue 03	377.75	268.84	0.00	0.00	11.03	0.00	257.81	257.81
Wed 04	380.68	266.18	0.00	0.00	11.20	0.00	254.98	254.98
Thu 05	374.14	267.66	0.00	0.00	11.36	0.00	256.30	256.30
Fri 06	363.85	258.25	0.00	0.00	10.97	0.00	247.28	247.28
Sat 07	371.27	251.12	0.00	0.00	11.28	0.00	239.84	239.84
Sun 08	374.41	246.48	0.00	0.00	11.41	0.00	235.07	235.07
Mon 09	408.14	254.43	0.00	0.00	11.24	0.00	243.19	243.19
Tue 10	373.85	258.91	0.00	0.00	11.45	0.00	247.46	247.46
Wed 11	365.67	261.33	0.00	0.00	11.46	0.00	249.87	249.87
Thu 12	357.59	257.27	0.00	0.00	11.03	0.00	246.24	246.24
Fri 13	369.06	257.13	0.00	0.00	10.85	0.00	246.28	246.28
Sat 14	369.01	250.48	0.00	0.00	11.06	0.00	239.42	239.42
Sun 15	381.65	250.19	0.00	0.00	11.24	0.00	238.95	238.95
Mon 16	371.33	254.26	0.00	0.00	11.55	0.00	242.71	242.71
Tue 17	516.51	272.73	9.01	0.00	11.56	0.00	252.16	252.16
Wed 18	380.71	253.36	0.00	0.00	10.86	0.00	242.50	242.50
Thu 19	360.66	250.63	0.00	0.00	10.56	0.00	240.07	240.07
Fri 20	324.18	249.52	0.00	0.00	10.55	0.00	238.97	238.97
Sat 21	360.65	243.20	0.00	0.00	10.78	0.00	232.42	232.42
Sun 22	365.74	244.96	0.00	0.00	10.69	0.00	234.27	234.27
Mon 23	348.49	249.32	0.00	0.00	9.65	0.00	239.67	239.67
Tue 24	333.63	247.41	0.00	0.00	10.16	0.00	237.25	237.25
Wed 25	325.57	248.25	0.00	0.00	10.42	0.00	237.83	237.83
Thu 26	441.51	246.60	0.00	0.00	9.45	0.00	237.15	237.15
Fri 27	317.44	247.24	0.00	0.00	10.39	0.00	236.85	236.85
Sat 28	359.98	244.24	0.00	0.00	10.57	0.00	233.67	233.67
Sun 29	356.51	243.61	0.00	0.00	10.44	0.00	233.17	233.17
Mon 30	343.97	247.90	0.00	0.00	10.67	0.00	237.23	237.23
Tue 31	587.83	318.11	51.54	0.00	10.80	0.00	255.77	255.77
Average	398.69	261.21	5.02	0.00	10.84	0.00	245.35	245.35
Minimum	317.44	243.20	0.00	0.00	9.45	0.00	232.42	232.42
Maximum	729.51	418.16	81.99	0.00	11.56	0.00	325.06	325.06
GeoMean	---	---	---	---	---	---	---	---
TOTAL	---	8,097	156	0	336	0	7,606	7,606

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
Sun 01	7.6	7.7		7.6	246	54			7.1	7.1
Mon 02	7.5	7.5		7.4	183	37			7.3	7.3
Tue 03	7.8			7.5	238				8.0	8.0
Wed 04	7.5			7.6	294				5.9	5.9
Thu 05	7.5			7.5	280				7.1	7.1
Fri 06	7.7			7.7	304				6.2	6.2
Sat 07	7.7			7.7	264				6.4	6.4
Sun 08	7.6			7.6	280				8.7	8.7
Mon 09	7.6			7.6	264				6.9	6.9
Tue 10	7.5			7.5	320				8.2	8.2
Wed 11	7.6			7.5	334				8.8	8.8
Thu 12	7.6			7.4	312				7.8	7.8
Fri 13	7.6			7.5	224				7.1	7.1
Sat 14	7.6			7.4	300				8.4	8.4
Sun 15	7.6			7.5	396				10.3	10.3
Mon 16	7.6			7.5	268				9.9	9.9
Tue 17	7.7	7.7		7.6	332	112			9.8	9.8
Wed 18	7.6			7.6	300				4.7	4.7
Thu 19	7.6			7.4	260				6.9	6.9
Fri 20	7.7			7.5	262				6.2	6.2
Sat 21	7.6			7.4	278				6.5	6.5
Sun 22	7.6			7.4	248				6.2	6.2
Mon 23	7.5			7.5	344				7.9	7.9
Tue 24	7.6			7.5	272				6.1	6.1
Wed 25	7.6			7.5	152				6.4	6.4
Thu 26	7.7			7.5	242				6.0	6.0
Fri 27	7.6			7.5	266				6.8	6.8
Sat 28	7.7			7.5	269				8.2	8.2
Sun 29	7.7			7.9	274				7.2	7.2
Mon 30	7.7			7.6	320				7.7	7.7
Tue 31	7.6	7.5		7.6	156	75			6.7	6.7
Average	7.6	7.6	---	7.5	274	70	---	---	7.3	7.3
Minimum	7.5	7.5	---	7.4	152	37	---	---	4.7	4.7
Maximum	7.8	7.7	---	7.9	396	112	---	---	10.3	10.3
GeoMean	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---

DATE	BOD_5/$cBOD_5$ (mg/L) RAW	BOD_5/$cBOD_5$ (mg/L) OUTFALL 30	BOD_5/$cBOD_5$ (mg/L) OUTFALL 20	BOD_5/$cBOD_5$ (mg/L) EPEPS	BOD_5/$cBOD_5$ (mg/L) OUTFALL 10 FEC	BOD_5/$cBOD_5$ (mg/L) OUTFALL 10 FE	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
Sun 01	311	193			2	2	8.38	4.70			0.34	0.34
Mon 02	169	76			4	4	6.02	3.26			0.39	0.39
Tue 03	255				4	4	8.06				0.43	0.43
Wed 04	321				4	4	8.02				0.34	0.34
Thu 05	325				3	3	8.11				0.34	0.34
Fri 06	296				3	3	8.81				0.32	0.32
Sat 07	298				4	4	8.87				0.31	0.31
Sun 08	255				3	3	8.70				0.45	0.45
Mon 09	290				4	4	7.74				0.36	0.36
Tue 10	277				4	4	8.71				0.40	0.40
Wed 11	234				4	4	8.04				0.40	0.40
Thu 12	373				4	4	8.02				0.41	0.41
Fri 13	278				4	4	8.05				0.39	0.39
Sat 14	341				5	5	9.08				0.39	0.39
Sun 15	281				5	5	9.37				0.48	0.48
Mon 16	242				5	5	8.96				0.43	0.43
Tue 17	309	143			4	4	8.74	7.47			0.40	0.40
Wed 18	248				3	3	9.38				0.40	0.40
Thu 19	299				5	5	8.63				0.36	0.36
Fri 20	305				5	5	10.1				1.27	1.27
Sat 21	287				3	3	7.51				0.38	0.38
Sun 22	256				3	3	8.91				0.36	0.36
Mon 23	367				4	4	9.17				0.37	0.37
Tue 24	299				3	3	6.83				0.37	0.37
Wed 25	317				3	3	8.68				0.37	0.37
Thu 26	262				4	4	8.16				0.35	0.35
Fri 27	274				4	4	8.35				0.37	0.37
Sat 28	301				4	4	8.17				0.38	0.38
Sun 29	351				3	3	8.24				0.31	0.31
Mon 30	328				4	4	8.16				0.41	0.41
Tue 31	175	116			4	4	4.85	3.52			0.40	0.40
Average	288	132	---	---	3.8	3.8	8.28	4.74	---	---	0.41	0.41
Minimum	169	76	---	---	2.0	2.0	4.85	3.26	---	---	0.31	0.31
Maximum	373	193	---	---	5.0	5.0	10.1	7.47	---	---	1.27	1.27
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	TKN (mg/L) RAW	TKN (mg/L) OUTFALL 30	TKN (mg/L) OUTFALL 20	TKN (mg/L) OUTFALL 10 FEC
Sun 01	40.5	34.2			0.539	0.539	57.6	41.5		2.10
Mon 02	26.4	25.1			0.501	0.501	37.7	31.1		2.08
Tue 03	40.5				0.939	0.939	57.3			2.63
Wed 04	46.5				0.794	0.794	63.1			2.32
Thu 05	40.0				0.311	0.311	64.6			2.02
Fri 06	47.2				0.216	0.216	72.8			2.01
Sat 07	46.2				0.743	0.743	73.7			2.52
Sun 08	47.5				0.921	0.921	74.9			3.56
Mon 09	38.5				1.66	1.66	70.5			3.54
Tue 10	42.4				1.56	1.56	73.6			3.69
Wed 11	39.3				1.23	1.23	67.4			3.47
Thu 12	41.5				0.836	0.84	66.9			2.92
Fri 13	43.0				0.658	0.658	66.6			2.82
Sat 14	47.8				1.60	1.60	72.9			3.63
Sun 15	42.6				2.01	2.01	73.9			4.52
Mon 16	49.5				1.57	1.57	67.8			3.60
Tue 17	46.1	44.8			1.05	1.05	63.3	70.6		2.92
Wed 18	45.5				1.16	1.16	64.1			2.90
Thu 19	32.6				0.683	0.683	55.7			2.50
Fri 20	47.4				0.944	0.944	64.7			2.58
Sat 21	37.7				0.63	0.630	57.5			2.40
Sun 22	37.1				0.597	0.60	55.0			2.52
Mon 23	31.3				0.300	0.300	71.3			2.13
Tue 24	36.4				0.202	0.202	55.6			2.05
Wed 25	42.9				0.725	0.725	61.0			2.48
Thu 26	43.9				1.43	1.43	70.1			3.01
Fri 27	42.6				1.02	1.02	59.8			2.92
Sat 28	44.2				1.76	1.76	61.0			3.45
Sun 29	43.0				2.50	2.50	57.2			4.09
Mon 30	33.5				1.16	1.16	63.2			2.99
Tue 31	29.1	26.7			0.142	0.142	42.0	36.3		1.99
Average	41.1	32.7	---	---	0.980	0.980	63.3	44.9	---	2.85
Minimum	26.4	25.1	---	---	0.142	0.142	37.7	31.1	---	1.99
Maximum	49.5	44.8	---	---	2.50	2.50	74.9	70.6	---	4.52
GeoMean	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---

DATE	NO_3+NO_2 (mg/L) RAW	NO_3+NO_2 (mg/L) OUTFALL 30	NO_3+NO_2 (mg/L) OUTFALL 20	NO_3+NO_2 (mg/L) OUTFALL 10 FEC	Chloride (mg/L) RAW	Chloride (mg/L) OUTFALL 30	Chloride (mg/L) OUTFALL 20	Chloride (mg/L) OUTFALL 10 FEC	*E. coli* (Counts/100 mL) RAW	*E. coli* OUTFALL 30	*E. coli* OUTFALL 20	*E. coli* OUTFALL 10 FEC
Sun 01		2.67		13.5	70.4	71.3		74.0		4.3		7
Mon 02		0.72		8.32	50.2	45.9		62.8		3.0		17
Tue 03				9.75	72.7			67.1				13
Wed 04	< 0.01			12.7	82.5			73.7				5
Thu 05				14.4	81.4			82.4				13
Fri 06				13.8	82.7			78.9				6
Sat 07				13.9	76.4			78.4				7
Sun 08				14.5	76.1			77.2				5
Mon 09				14.0	77.2			76.9				9
Tue 10				11.4	82.6			79.0				14
Wed 11	< 0.01			13.1	85.7			83.5				8
Thu 12				14.2	81.0			83.7	1.6			10
Fri 13				12.4	84.9			78.6				9
Sat 14				13.9	81.3			80.4				5
Sun 15				14.7	76.7			77.6				5
Mon 16				13.6	83.6			75.6				11
Tue 17		0.21		14.1	81.2	98.0		83.4		2.6		6
Wed 18	< 0.01			11.7	81.3			84.7				11
Thu 19				11.3	77.1			80.1				10
Fri 20				11.5	78.8			77.9				10
Sat 21				13.1	71.2			75.6				5
Sun 22				11.6	65.2			69.2				4
Mon 23				10.8	72.5			72.2				5
Tue 24	< 0.01			11.0	68.7			73.8				5
Wed 25				12.3	68.4			71.6	2.7			5
Thu 26				12.1	70.4			78.8				6
Fri 27				14.1	66.4			75.3				12
Sat 28				13.4	64.8			73.5				5
Sun 29				13.5	61.0			71.0				8
Mon 30				12.0	71.1			67.6				11
Tue 31		0.17		10.5	77.5	82.5		88.2		1.9		9
Average	< 0.01	0.94	---	12.6	74.9	74.4	---	76.5	---	---	---	---
Minimum	< 0.01	0.17	---	8.32	50.2	45.9	---	62.8	1.6	1.9	---	4
Maximum	< 0.01	2.67	---	14.7	85.7	98.0	---	88.2	2.7	4.3	---	17
GeoMean	---	---	---	---	---	---	---	---	2.1	2.8	---	8
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---

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

Enhanced Primary Treatment (EPT) Usage

Total Bypass (hrs)	EPT Usage (hrs)	%	Total Bypass YTD (hrs)	EPT Usage YTD	% Usage YTD
25	25	100%	501	501	100.00%

Report Comments

1	Outfall 10 - October 16: This sample was repeated for Customer /Quality / Operational reasons. The repeated analysis exceeded the recommended holding time for this analyte by 22.7 hours.

AEP Ref #**

** AEP - Alberta Environment & Parks

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

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