PROVIDING MORE EPCOR

Gold Bar Wastewater Treatment Plant
Plant Performance Report
February 2017

Digested Sludge: Total Monthly Volume (ML)	58.26

Volume of Flow (ML)

DATE	Peak Flow (MLD)	Influent RAW	Effluent Non UV Disinfected OUTFALL 30	Effluent Non UV Disinfected MPW	Effluent UV Disinfected OUTFALL 20	Effluent UV Disinfected EPEPS	Effluent UV Disinfected OUTFALL 10 FEC	Effluent UV Disinfected OUTFALL 10 FE
Wed 01	372.93	242.64	0.00	10.95	0.00	0.00	231.69	231.69
Thu 02	346.27	244.77	0.00	10.65	0.00	0.00	234.12	234.12
Fri 03	351.31	244.91	0.00	10.58	0.00	0.00	234.33	234.33
Sat 04	355.19	239.45	0.00	9.94	0.00	0.00	229.51	229.51
Sun 05	380.48	240.36	0.00	9.91	0.00	0.00	230.45	230.45
Mon 06	370.13	245.67	0.00	10.70	0.00	0.00	234.97	234.97
Tue 07	334.61	237.00	0.00	10.74	0.00	0.00	226.26	226.26
Wed 08	373.85	244.68	0.00	9.78	0.00	0.00	234.90	234.90
Thu 09	369.53	240.20	0.00	10.40	0.00	0.00	229.80	229.80
Fri 10	348.23	239.59	0.00	10.02	0.00	0.00	229.57	229.57
Sat 11	371.35	236.07	0.00	10.36	0.00	0.00	225.71	225.71
Sun 12	389.17	242.41	0.00	10.16	0.00	0.00	232.25	232.25
Mon 13	362.95	258.90	0.00	10.07	0.00	0.00	248.83	248.83
Tue 14	467.04	279.53	0.00	9.20	0.00	0.00	270.33	270.33
Wed 15	669.77	342.65	55.00	8.85	0.00	0.00	278.80	278.80
Thu 16	587.42	339.76	52.00	7.36	0.00	0.00	280.39	280.39
Fri 17	647.43	338.94	48.00	9.53	0.00	0.00	281.41	281.41
Sat 18	390.10	259.08	0.00	8.26	0.00	0.00	250.82	250.82
Sun 19	768.56	439.29	117.00	7.95	0.37	0.00	314.34	314.34
Mon 20	399.00	277.54	0.00	7.51	0.00	0.00	270.03	270.03
Tue 21	393.54	268.93	0.00	10.14	0.00	0.00	258.79	258.79
Wed 22	383.31	249.70	0.00	11.29	0.00	0.00	238.41	238.41
Thu 23	357.79	244.54	0.00	10.49	0.00	0.00	234.05	234.05
Fri 24	334.18	243.20	0.00	10.67	0.00	0.00	232.53	232.53
Sat 25	380.11	241.92	0.00	10.67	0.00	0.00	231.25	231.25
Sun 26	391.22	243.83	0.00	9.98	0.00	0.00	233.85	233.85
Mon 27	362.75	250.53	0.00	10.22	0.00	0.00	240.31	240.31
Tue 28	395.81	242.05	0.00	10.98	0.00	0.00	231.07	231.07
Average	416.22	264.93	9.71	9.91	0.01	0.00	245.31	245.31
Minimum	334.18	236.07	0.00	7.36	0.00	0.00	225.71	225.71
Maximum	768.56	439.29	117.00	11.29	0.37	0.00	314.34	314.34
GeoMean	---	---	---	---	---	---	---	---
TOTAL	---	7,418	272	277	0.37	0	6,869	6,869

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 OUTFALL 30	TSS OUTFALL 20	TSS EPEPS	TSS OUTFALL 10 FEC	TSS OUTFALL 10 FE
Wed 01	7.7			7.5	264				3.0	3.0
Thu 02	7.7			7.6	360				4.1	4.1
Fri 03	7.6			7.5	304				4.4	4.4
Sat 04	7.6			7.5	291				4.3	4.3
Sun 05	7.7			7.5	276				5.5	5.5
Mon 06	7.6			7.5	260				4.4	4.4
Tue 07	7.6			7.5	291				4.4	4.4
Wed 08	7.7			7.5	227				4.7	4.7
Thu 09	7.7			7.5	316				4.3	4.3
Fri 10	7.6			7.5	246				5.1	5.1
Sat 11	7.7			7.6	464				4.5	4.5
Sun 12	7.7			7.5	340				4.8	4.8
Mon 13	7.7			7.6	420				5.2	5.2
Tue 14	7.7			7.5	552				5.7	5.7
Wed 15	7.5	7.4		7.5	508	120			8.1	8.1
Thu 16	7.6	7.6		7.4	303	145			4.3	4.3
Fri 17	7.6	7.6		7.6	340	125			5.4	5.4
Sat 18	7.6			7.5	376				4.0	4.0
Sun 19	7.6	7.5	7.1	7.5	460	172	444		11.7	11.7
Mon 20	7.7			7.4	240				5.9	5.9
Tue 21	7.7			7.6	236				5.7	5.7
Wed 22	7.6			7.5	256				4.0	4.0
Thu 23	7.7			7.5	291				3.4	3.4
Fri 24	7.7			7.5	305				6.2	6.2
Sat 25	7.8			7.5	251				4.1	4.1
Sun 26	7.8			7.5	270				6.4	6.4
Mon 27	7.7			7.5	271				8.0	8.0
Tue 28	7.6			7.4	292				5.0	5.0
Average	7.7	7.5	7.1	7.5	322	141	444	---	5.2	5.2
Minimum	7.5	7.4	7.1	7.4	227	120	444	---	3.0	3.0
Maximum	7.8	7.6	7.1	7.6	552	172	444	---	11.7	11.7
GeoMean	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---

DATE	$BOD_5/cBOD_5$ (mg/L) RAW BOD_5	OUTFALL 30 BOD_5	OUTFALL 20 BOD_5	EPEPS BOD_5	OUTFALL 10 FEC $cBOD_5$	OUTFALL 10 FE $cBOD_5$	TP (mg/L) RAW	TP OUTFALL 30	TP OUTFALL 20	TP EPEPS	TP OUTFALL 10 FEC	TP OUTFALL 10 FE
Wed 01	304				3	3	8.87				0.25	0.25
Thu 02	350				3	3	8.99				0.26	0.26
Fri 03	319				3	3	9.10				0.26	0.26
Sat 04	308				3	3	9.25				0.28	0.28
Sun 05	282				3	3	8.23				0.27	0.27
Mon 06	365				3	3	8.71				0.26	0.26
Tue 07	315				3	3	8.56				0.30	0.30
Wed 08	283				2	2	10.20				0.30	0.30
Thu 09	278				3	3	10.80				0.28	0.28
Fri 10	364				4	4	10.20				0.27	0.27
Sat 11	456				3	3	9.88				0.30	0.30
Sun 12	234				3	3	8.64				0.27	0.27
Mon 13	287				4	4	8.96				0.29	0.29
Tue 14	282				3	3	8.52				0.29	0.29
Wed 15	288	169			4	4	8.88	5.95			0.42	0.42
Thu 16	262	157			4	4	6.39	5.80			0.26	0.26
Fri 17	281	164			3	3	7.26	5.79			0.26	0.26
Sat 18	253				4	4	8.00				0.25	0.25
Sun 19	288	153	150		6	6	6.81	4.76	6.68		0.61	0.61
Mon 20	284				4	4	7.00				0.29	0.29
Tue 21	251				3	3	7.42				0.25	0.25
Wed 22	279				3	3	8.25				0.22	0.22
Thu 23	316				3	3	8.28				0.24	0.24
Fri 24	320				4	4	8.14				0.24	0.24
Sat 25	316				2	2	9.24				0.23	0.23
Sun 26	408				3	3	8.56				0.24	0.24
Mon 27	304				3	3	8.15				0.33	0.33
Tue 28	316				3	3	8.00				0.27	0.27
Average	307	161	150	---	3	3	8.55	5.58	6.68	---	0.29	0.29
Minimum	234	153	150	---	2	2	6.39	4.76	6.68	---	0.22	0.22
Maximum	456	169	150	---	6	6	10.8	5.95	6.68	---	0.61	0.61
GeoMean	---	---	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---

DATE	NH3-N (mg/L) RAW	NH3-N OUTFALL 30	NH3-N OUTFALL 20	NH3-N EPEPS	NH3-N OUTFALL 10 FEC	NH3-N OUTFALL 10 FE	TKN (mg/L) RAW	TKN OUTFALL 30	TKN OUTFALL 20	TKN OUTFALL 10 FEC	NO_2+NO_3 (mg/L) RAW	NO_2+NO_3 OUTFALL 30	NO_2+NO_3 OUTFALL 20	NO_2+NO_3 OUTFALL 10 FEC	Chloride (mg/L) RAW	Chloride OUTFALL 30	Chloride OUTFALL 20	Chloride OUTFALL 10 FEC	*E. coli* (Counts/100 mL) RAW X10^6	*E. coli* OUTFALL 30 X10^6	*E. coli* OUTFALL 20 X10^6	*E. coli* OUTFALL 10 FEC
Wed 01	49.4				1.33	1.33	74.4			3.16	0.027			10.3	93			100				1
Thu 02	51.3				1.14	1.14	73.9			3.54				7.5	97			104				5
Fri 03	36.3				2.46	2.46	69.9			4.26				9.3	95			114				7
Sat 04	51.6				2.96	2.96	70.2			4.82				10.3	90			101				4
Sun 05	42.5				3.16	3.16	63.9			5.77				11.3	79			89				8
Mon 06	49.2				3.28	3.28	70.8			4.69				12.5	84			82				16
Tue 07	49.6				2.17	2.17	68.9			4.25				10.3	92			88				1
Wed 08	48.5				1.06	1.06	71.2			3.55	< 0.01			9.4	83			88				10
Thu 09	52.4				1.76	1.76	68.7			3.78				12.3	85			90				3
Fri 10	48.5				1.62	1.62	80.1			3.66				12.6	90			97				5
Sat 11	45.8				1.67	1.67	75.2			3.58				12.1	119			101				1
Sun 12	48.0				2.22	2.22	69.1			4.48				11.6	111			108				9
Mon 13	38.8				2.69	2.69	67.2			4.83				11.5	164			121	2.6			8
Tue 14	41.3				2.61	2.61	66.9			5.16				9.5	267			225				6
Wed 15	32.4	38.0			3.27	3.27	65.0	NR		5.78	< 0.01	NR		7.6	267	NR		257		2.8		20
Thu 16	34.5	33.6			2.81	2.81	51.9	45.9		5.08		0.57		7.4	233	264		260		2.7		13
Fri 17	35.4	36.2			3.64	3.64	52.5	46.8		5.65		0.05		7.0	167	185		192		2.6		15
Sat 18	42.8				4.42	4.42	60.0			6.64				6.2	111			159				18
Sun 19	31.0	28.3	25.6		6.15	6.15	53.0	39.8	NR	8.75		0.40	NR	6.5	296	275	NR	220		1.3	2.2	55
Mon 20	44.8				5.65	5.65	60.1			7.51				5.0	108			177				12
Tue 21	39.0				6.56	6.56	60.6			8.71				7.0	107			119				10
Wed 22	48.2				5.47	5.47	68.8			7.24	< 0.01			7.6	105			117				12
Thu 23	45.3				3.89	3.89	66.1			7.00				8.2	92			95	3.0			7
Fri 24	45.0				4.14	4.14	65.8			6.15				8.7	90			92				5
Sat 25	41.9				4.18	4.18	77.3			6.27				10.2	83			90				5
Sun 26	50.6				3.97	3.97	72.2			6.29				10.6	86			87				4
Mon 27	44.9				3.75	3.75	70.3			6.10				9.9	88			88				10
Tue 28	45.1				2.36	2.36	65.0			4.30				7.4	99			108				3
Average	44.1	34.0	25.6	---	3.23	3.23	67.1	44.2	---	5.39	0.01	0.34	---	9.3	124	241	---	127	---	---	---	---
Minimum	31.0	28.3	25.6	---	1.06	1.06	51.9	39.8	---	3.16	< 0.01	0.05	---	5.0	79	185	---	82	2.6	1.3	2.2	1
Maximum	52.4	38.0	25.6	---	6.56	6.56	80.1	46.8	---	8.75	0.03	0.57	---	12.6	296	275	---	260	3.0	2.8	2.2	55
GeoMean	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2.8	2.1	2.2	7
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

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

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
EPEP	Enhanced Primary Effluent and Pump Station
FE	Final Effluent from secondary treatment process (with biological nutrient removal). Pre-Ultraviolet disinfection
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)	% Usage	Total Bypass YTD (hrs)	EPT Usage YTD	% Usage YTD
35	35	100%	35	35	100.00%

Report Comments

1	Outfall 30 - February 15: No auto-sampler composite Results are averages of the test results from grab samples.
2	Outfall 20 - February 19: Flow came from catch basins due to early spring run-off. It was not overflow from plant influent channels. No auto-sampler composite available. Except for E. coli, the results were developed on a grab sample that was frozen, thawed, preserved (if applicable) and analyzed. The BOD was consequently run 68.65 hours past the recommended holding time.

AEP Ref #**

** AEP - Alberta Environment & Parks

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