PROVIDING MORE EPCOR

Gold Bar Wastewater Treatment Plant
Plant Performance Report
August 2018

Digested Sludge: Total Monthly Volume (ML)	66.96

Volume of Flow (ML)

DATE	Peak Flow (MLD)	Influent RAW	Effluent Non UV Disinfected OUTFALL 30	Non UV Disinfected OUTFALL 20	Non UV Disinfected MPW	UV Disinfected EPEPS	UV Disinfected OUTFALL 10 FEC	UV Disinfected OUTFALL 10 FE
Wed 01	626.65	276.48	1.32	0.00	10.36	0.00	264.80	264.80
Thu 02	711.36	299.95	16.09	0.00	10.02	0.00	273.84	273.84
Fri 03	578.08	317.38	17.54	0.00	9.98	0.00	289.86	289.86
Sat 04	1,151.67	343.69	54.69	0.00	10.74	0.00	278.27	278.27
Sun 05	351.72	259.90	0.00	0.00	11.24	0.00	248.66	248.66
Mon 06	370.07	254.88	0.00	0.00	10.37	0.00	244.51	244.51
Tue 07	363.95	266.91	0.00	0.00	11.64	0.00	255.27	255.27
Wed 08	351.86	264.10	0.00	0.00	10.34	0.00	253.75	253.75
Thu 09	348.95	264.54	0.00	0.00	9.77	0.00	254.77	254.77
Fri 10	355.01	265.44	0.00	0.00	11.77	0.00	253.67	253.67
Sat 11	858.54	289.36	28.88	0.00	10.17	0.00	250.32	250.32
Sun 12	1,023.04	452.51	149.35	0.00	11.60	0.00	291.56	291.56
Mon 13	453.05	310.25	1.51	0.00	11.31	0.00	297.43	297.43
Tue 14	336.68	274.48	0.00	0.00	11.46	0.00	263.02	263.02
Wed 15	326.54	266.23	0.00	0.00	11.29	0.00	254.94	254.94
Thu 16	318.29	263.92	0.00	0.00	11.57	0.00	252.34	252.34
Fri 17	405.42	267.69	0.00	0.00	11.73	0.00	255.96	255.96
Sat 18	414.43	263.05	0.00	0.00	11.97	0.00	251.09	251.09
Sun 19	335.14	249.23	0.00	0.00	12.09	0.00	237.14	237.14
Mon 20	302.51	261.43	0.00	0.00	11.69	0.00	249.74	249.74
Tue 21	314.61	260.26	0.00	0.00	10.07	0.00	250.19	250.19
Wed 22	315.30	259.03	0.00	0.00	9.52	0.00	249.51	249.51
Thu 23	294.67	255.63	0.00	0.00	10.09	0.00	245.54	245.54
Fri 24	332.81	260.48	0.00	0.00	12.13	0.00	248.36	248.36
Sat 25	326.34	248.00	0.00	0.00	11.97	0.00	236.02	236.02
Sun 26	339.66	249.95	0.00	0.00	12.05	0.00	237.89	237.89
Mon 27	326.10	266.18	0.00	0.00	11.53	0.00	254.65	254.65
Tue 28	477.62	275.45	2.34	0.00	11.55	0.00	261.56	261.56
Wed 29	381.38	263.45	0.00	0.00	11.49	0.00	251.97	251.97
Thu 30	351.60	254.68	0.00	0.00	11.49	0.00	243.19	243.19
Fri 31	543.57	273.52	8.59	0.00	11.31	0.00	253.62	253.62
Average	451.18	276.71	9.04	0.00	11.11	0.00	256.56	256.56
Minimum	294.67	248.00	0.00	0.00	9.52	0.00	236.02	236.02
Maximum	1,151.67	452.51	149.35	0.00	12.13	0.00	297.43	297.43
GeoMean	---	---	---	---	---	---	---	---
TOTAL	---	8,578	280	0	344	0	7,953	7,953

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	7.6	8.2		7.6	326	17			10.9	10.9
Thu 02	7.6	7.7		7.5	350	90			12.5	12.5
Fri 03	7.5	7.6		7.5	300	65			8.8	8.8
Sat 04	7.5	7.6		7.4	664	111			9.8	9.8
Sun 05	7.6			7.4	380				8.0	8.0
Mon 06	7.6			7.5	268				7.1	7.1
Tue 07	7.6			7.5	327				10.0	10.0
Wed 08	7.6			7.6	297				7.6	7.6
Thu 09	7.6			7.6	264				5.0	5.0
Fri 10	7.7			7.6	316				7.7	7.7
Sat 11	7.6	7.6		7.6	324	106			8.2	8.2
Sun 12	7.6	7.4		7.4	242	72			9.0	9.0
Mon 13	7.6	7.9		7.4	270	57			8.7	8.7
Tue 14	7.6			7.7	271				8.3	8.3
Wed 15	7.6			7.6	411				5.9	5.9
Thu 16	7.5			7.6	332				4.0	4.0
Fri 17	7.7			7.7	336				3.7	3.7
Sat 18	7.7			7.6	316				4.3	4.3
Sun 19	7.5			7.5	284				3.2	3.2
Mon 20	7.6			7.8	284				3.5	3.5
Tue 21	7.5			7.6	303				3.0	3.0
Wed 22	7.6			7.6	329				3.7	3.7
Thu 23	7.6			7.7	337				3.7	3.7
Fri 24	7.6			7.6	317				4.0	4.0
Sat 25	7.5			7.6	277				3.9	3.9
Sun 26	7.6			7.6	300				4.2	4.2
Mon 27	7.7			7.6	476				5.2	5.2
Tue 28	7.6	8.1		7.5	357	30			4.5	4.5
Wed 29	7.6			7.7	308				4.9	4.9
Thu 30	7.6			7.6	288				4.4	4.4
Fri 31	7.6	7.8		7.7	364	55			4.3	4.3
Average	7.6	7.8	---	7.6	330	67	---	---	6.2	6.2
Minimum	7.5	7.4	---	7.4	242	17	---	---	3.0	3.0
Maximum	7.7	8.2	---	7.8	664	111	---	---	12.5	12.5
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	OUTFALL 30	OUTFALL 20	EPEPS	OUTFALL 10 FEC	OUTFALL 10 FE
Wed 01	275	175			4	4	7.85	5.80			0.51	0.51
Thu 02	268	109			4	4	6.78	2.65			0.52	0.52
Fri 03	319	72			4	4	6.86	4.16			0.48	0.48
Sat 04	280	73			5	5	7.24	3.71			0.50	0.50
Sun 05	275				4	4	7.42				0.38	0.38
Mon 06	224				4	4	7.70				0.42	0.42
Tue 07	295				4	4	7.51				0.54	0.54
Wed 08	251				4	4	7.70				0.45	0.45
Thu 09	284				4	4	7.84				0.42	0.42
Fri 10	268				4	4	7.58				0.43	0.43
Sat 11	302	152			5	5	7.02	4.36			0.43	0.43
Sun 12	188	75			5	5	4.25	3.12			0.45	0.45
Mon 13	233	62			4	4	6.37	3.10			0.41	0.41
Tue 14	265				4	4	7.22				0.48	0.48
Wed 15	309				4	4	8.45				0.41	0.41
Thu 16	289				3	3	7.66				0.29	0.29
Fri 17	339				3	3	7.95				0.30	0.30
Sat 18	368				3	3	6.83				0.34	0.34
Sun 19	263				2	2	6.50				0.24	0.24
Mon 20	333				3	3	7.40				0.26	0.26
Tue 21	340				< 2	< 2	7.37				0.26	0.26
Wed 22	316				2	2	7.56				0.25	0.25
Thu 23	302				2	2	7.63				0.27	0.27
Fri 24	253				3	3	7.75				0.29	0.29
Sat 25	312				3	3	7.60				0.30	0.30
Sun 26	298				< 2	< 2	7.25				0.29	0.29
Mon 27	381				3	3	6.80				0.32	0.32
Tue 28	252	54			3	3	7.51	1.76			0.31	0.31
Wed 29	295				3	3	7.60				0.34	0.34
Thu 30	264				3	3	7.75				0.36	0.36
Fri 31	375	141			3	3	7.55	4.05			0.34	0.34
Average	291	101	---	---	3.4	3.4	7.31	3.63	---	---	0.37	0.37
Minimum	188	54	---	---	< 2.0	< 2.0	4.25	1.76	---	---	0.24	0.24
Maximum	381	175	---	---	5.0	5.0	8.45	5.80	---	---	0.54	0.54
GeoMean	---	---	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---

DATE	NH3-N (mg/L) RAW	OUTFALL 30	OUTFALL 20	EPEPS	OUTFALL 10 FEC	OUTFALL 10 FE	TKN (mg/L) RAW	OUTFALL 30	OUTFALL 20	OUTFALL 10 FEC
Wed 01	37.2	31.3			0.40	0.40	58.4	43.9		3.04
Thu 02	29.8	22.0			0.20	0.20	48.4	30.8		2.44
Fri 03	33.4	34.3			0.24	0.24	51.3	41.2		2.16
Sat 04	27.4	29.8			0.79	0.79	49.4	36.7		3.13
Sun 05	42.9				0.55	0.55	59.2			2.28
Mon 06	39.8				0.84	0.84	55.6			3.00
Tue 07	38.7				0.80	0.80	54.7			2.93
Wed 08	43.2				1.02	1.02	56.9			2.92
Thu 09	41.3				1.32	1.32	58.3			3.02
Fri 10	36.1				0.86	0.86	53.2			2.85
Sat 11	37.2	33.7			1.11	1.11	51.3	40.5		2.80
Sun 12	20.3	24.8			0.58	0.58	32.8	29.2		3.12
Mon 13	33.6	28.4			1.12	1.12	50.1			3.12
Tue 14	38.9				2.43	2.43	54.3			4.41
Wed 15	40.3				1.31	1.31	64.8			3.18
Thu 16	37.2				0.46	0.46	56.7			2.12
Fri 17	42.3				0.40	0.40	58.2			1.90
Sat 18	33.9				0.61	0.61	44.7			2.31
Sun 19	32.9				0.27	0.27	48.4			1.54
Mon 20	38.3				0.19	0.19	54.6			1.48
Tue 21	35.3				0.25	0.25	52.8			1.80
Wed 22	40.7				0.21	0.21	54.0			1.64
Thu 23	43.4				0.31	0.31	58.8			1.79
Fri 24	43.4				0.76	0.76	60.1			2.39
Sat 25	47.2				1.28	1.28	61.6			2.87
Sun 26	45.1				1.42	1.42	60.2			2.98
Mon 27	41.6				1.03	1.03	56.8			2.57
Tue 28	42.1	9.19			0.70	0.70	59.3	12.4		2.22
Wed 29	41.5				0.81	0.81	56.3			2.54
Thu 30	41.9				0.64	0.64	57.1			2.27
Fri 31	39.3	25.8			0.49	0.49	54.8	31.1		2.18
Average	38.3	26.6	---	---	0.75	0.75	54.6	33.2	---	2.55
Minimum	20.3	9.19	---	---	0.19	0.19	32.8	12.4	---	1.48
Maximum	47.2	34.3	---	---	2.43	2.43	64.8	43.9	---	4.41
GeoMean	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---

DATE	NO_2+NO_3 (mg/L) RAW	OUTFALL 30	OUTFALL 20	OUTFALL 10 FEC	Chloride (mg/L) RAW	OUTFALL 30	OUTFALL 20	OUTFALL 10 FEC	*E. coli* (Counts/100 mL) RAW X10^6	OUTFALL 30 X10^6	OUTFALL 20 X10^6	OUTFALL 10 FEC
Wed 01	< 0.15	0.88		11.6	71.7	79.5		83.8		0.4		7
Thu 02		0.03		8.23	79.1	82.6		83.0		1.8		16
Fri 03		0.09		8.38	71.3	79.3		89.7		2.0		5
Sat 04		0.34		9.94	58.2	60.1		76.6		1.5		6
Sun 05				8.35	73.4			64.8				2
Mon 06				12.6	77.1			74.4				4
Tue 07				10.8	80.9			80.6	2.1			3
Wed 08	< 0.15			12.3	77.7			86.0				5
Thu 09				12.9	77.5			85.2				11
Fri 10				11.2	77.7			84.3				5
Sat 11		3.98		11.5	78.2	71.2		84.9		1.0		2
Sun 12		1.84		8.92	47.1	49.9		78.8		1.0		10
Mon 13				9.89	66.4			57.0		0.6		7
Tue 14				10.3	73.3			78.5				5
Wed 15	< 0.01			10.6	77.5			81.3				9
Thu 16				11.9	77.6			89.6				6
Fri 17				12.4	77.6			89.8				5
Sat 18				12.1	71.6			92.9				11
Sun 19				11.0	67.9			78.5				7
Mon 20				11.3	68.8			75.3				5
Tue 21				11.4	74.1			79.2	5.9			6
Wed 22	< 0.01			12.9	73.2			76.6				8
Thu 23				10.1	76.6			83.4				11
Fri 24				14.1	74.8			81.0				12
Sat 25				15.4	72.5			88.8				19
Sun 26				13.6	72.0			86.8				15
Mon 27				12.8	78.4			85.2				9
Tue 28		3.82		12.2	76.4	79.3		85.9		0.2		7
Wed 29	0.03			12.1	79.1			84.6				9
Thu 30				12.2	71.9			82.9				14
Fri 31		1.86		12.7	67.7	73.4		79.3		0.3		5
Average	0.07	1.61	---	11.5	73.1	71.9	---	81.6	---	---	---	---
Minimum	0.01	0.03	---	8.23	47.1	49.9	---	57.0	2.1	0.2	---	2
Maximum	0.15	3.98	---	15.4	80.9	82.6	---	92.9	5.9	2.0	---	19
GeoMean	---	---	---	---	---	---	---	---	3.5	0.7	---	7
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
34	34	100%	286	286	100.00%

Report Comments

1.	OUTFALL 30 - August 01, 2018: Insufficient sample available to produce an adequate amount of TSS residue as required by *Standard Methods*.
2.	RAW - August 24, 2018: BOD test was repeated. Consequently, the recommended holding time was exceeded prior to analysis.

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

Abhishek Bhargava
Senior Manager, Operations

Shane Harnish
Senior Manager, Analytical Operations