PROVIDING MORE EPCOR

Gold Bar Wastewater Treatment Plant
Plant Performance Report
June 2019

Digested Sludge: Total Monthly Volume (ML)	67.6

Volume of Flow (ML) and **Liquid Stream Quality** (pH, TSS, BOD₅/cBOD₅)

DATE	Peak Flow (MLD)	Influent RAW	Effluent Non UV Disinfected OUTFALL 30	Effluent Non UV Disinfected OUTFALL 20	Effluent Non UV Disinfected MPW	Effluent UV Disinfected EPEPS	Effluent UV Disinfected OUTFALL 10 FEC	Effluent UV Disinfected OUTFALL 10 FE	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	BOD_5/$cBOD_5$ (mg/L) RAW BOD_5	BOD_5/$cBOD_5$ (mg/L) OUTFALL 30 BOD_5	BOD_5/$cBOD_5$ (mg/L) OUTFALL 20 BOD_5	BOD_5/$cBOD_5$ (mg/L) EPEPS BOD_5	BOD_5/$cBOD_5$ (mg/L) OUTFALL 10 FEC $cBOD_5$	BOD_5/$cBOD_5$ (mg/L) OUTFALL 10 FE $cBOD_5$
Sat-01	338.4	256.8	0.0	0.0	10.9	0.0	245.9	245.9	7.8			7.7	356				4.4	4.4	312				4.0	4.0
Sun-02	338.8	256.2	0.0	0.0	11.4	0.0	244.8	244.8	7.9			7.7	294				4.9	4.9	313				3.0	3.0
Mon-03	334.2	261.9	0.0	0.0	10.0	0.0	251.9	251.9	7.7			7.7	308				4.4	4.4	214				3.0	3.0
Tue-04	605.1	290.1	17.2	0.0	9.5	0.0	263.4	263.4	7.5	7.3		7.6	488	117			4.5	4.5	277	145			3.0	3.0
Wed-05	329.5	263.6	0.0	0.0	10.6	0.0	253.0	253.0	7.6			7.6	312				4.3	4.3	279				3.0	3.0
Thu-06	908.8	361.9	63.4	0.0	9.8	0.0	288.7	288.7	7.5	7.6		7.8	400	52			4.5	4.5	242	78			3.0	3.0
Fri-07	1,456.2	556.3	235.3	0.4	10.1	0.0	310.5	310.5	7.5	7.5	7.4	7.7	297	88	377		4.3	4.3	163	86	117		3.0	3.0
Sat-08	437.3	310.6	3.4	0.0	11.5	0.0	295.7	295.7	7.7	8.0		7.5	262	22			3.3	3.3	354	47			3.0	3.0
Sun-09	469.9	290.5	10.6	0.0	10.3	0.0	269.6	269.6	7.7	7.6		7.7	311	64			2.8	2.8	314	151			4.0	4.0
Mon-10	711.9	310.9	22.6	0.0	10.8	0.0	277.5	277.5	7.7	7.8		7.6	416	58			4.4	4.4	228	119			3.0	3.0
Tue-11	383.0	279.1	0.6	0.0	11.7	0.0	266.8	266.8	7.7			7.7	287				3.7	3.7	243				3.0	3.0
Wed-12	329.5	274.9	0.0	0.0	11.8	0.0	263.1	263.1	7.7			7.7	238				2.5	2.5	243				3.0	3.0
Thu-13	499.8	301.5	5.7	0.0	11.9	0.0	283.9	283.9	7.6	7.8		7.6	266	57			2.9	2.9	214	106			2.0	2.0
Fri-14	377.6	279.7	0.0	0.0	12.2	0.0	267.5	267.5	7.7			7.7	300				3.2	3.2	189				2.0	2.0
Sat-15	347.2	261.1	0.0	0.0	12.4	0.0	248.7	248.7	7.7			7.7	352				3.4	3.4	194				3.0	3.0
Sun-16	375.4	266.1	0.0	0.0	12.3	0.0	253.8	253.8	7.6			7.7	420				3.2	3.2	206				3.0	3.0
Mon-17	339.6	274.8	0.0	0.0	12.5	0.0	262.3	262.3	7.6			7.6	297				2.9	2.9	226				3.0	3.0
Tue-18	323.0	271.1	0.0	0.0	12.3	0.0	258.8	258.8	7.6			7.6	288				3.5	3.5	257				2.0	2.0
Wed-19	1,456.2	599.6	279.8	0.7	11.9	0.0	307.2	307.2	7.5	7.5	7.5	7.6	360	91	656		4.6	4.6	115	63	116		2.0	2.0
Thu-20	1,479.4	641.0	271.2	0.2	11.9	0.0	357.7	357.7	7.6	7.6	7.7	7.4	290	47	137		4.1	4.1	112	43	35		2.0	2.0
Fri-21	829.3	396.6	30.8	0.0	11.5	0.0	354.3	354.3	7.7	7.7		7.4	196	27			4.5	4.5	134	40			2.0	2.0
Sat-22	411.3	326.1	0.0	0.0	11.5	0.0	314.6	314.6	7.8			7.7	250				4.2	4.2	196				3.0	3.0
Sun-23	416.1	303.1	0.0	0.0	11.6	0.0	291.5	291.5	7.8			7.7	226				4.0	4.0	194				1.0	1.0
Mon-24	597.2	343.2	43.7	0.0	11.4	0.0	288.1	288.1	7.6	7.6		7.5	279	25			3.3	3.3	186	68			3.0	3.0
Tue-25	1,350.0	401.3	95.9	0.1	11.3	0.0	294.0	294.0	7.6	7.6		7.5	443	47			3.0	3.0	179	59			2.0	2.0
Wed-26	1,226.6	423.9	108.2	0.0	11.4	0.0	304.3	304.3	7.6	7.6		7.4	377	61			3.1	3.1	156	57			2.0	2.0
Thu-27	549.3	325.9	8.3	0.0	11.5	0.0	306.1	306.1	7.6	7.7		7.5	264	46			3.1	3.1	196	72			2.0	2.0
Fri-28	1,402.2	483.0	142.8	0.1	11.4	0.0	328.7	328.7	7.7	7.7	7.9	7.6	268	49	360		3.9	3.9	165	49	52		2.0	2.0
Sat-29	1,017.5	401.4	86.1	0.0	11.4	0.0	303.9	303.9	7.6	7.7		7.5	332	43			2.8	2.8	148	53			1.0	1.0
Sun-30	405.3	319.4	1.4	0.0	10.9	0.0	307.1	307.1	7.8	8.0		7.6	194	31			3.5	3.5	164	48			1.0	1.0
Average	665.10	343.24	47.84	0.05	11.34	0.00	284.01	284.01	7.7	7.7	7.6	7.6	312	54	383	---	3.7	3.7	214	76	80	---	2.5	2.5
Minimum	323.00	256.20	0.00	0.00	9.50	0.00	244.80	244.80	7.5	7.3	7.4	7.4	194	22	137	---	2.5	2.5	112	40	35	---	1.0	1.0
Maximum	1,479.40	641.01	279.80	0.70	12.50	0.00	357.70	357.70	7.9	8.0	7.9	7.8	488	117	656	---	4.9	4.9	354	151	117	---	4.0	4.0
GeoMean	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
TOTAL	---	10,332	1,427	1.45	340	0	8,563	8,563	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Liquid Stream Quality (continued: TP, NH3-N, TKN, NO_2+NO_3, Chloride, *E. coli*)

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	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	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	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 X10^6	*E. coli* (Counts/100 mL) OUTFALL 30 X10^6	*E. coli* (Counts/100 mL) OUTFALL 20 X10^6	*E. coli* (Counts/100 mL) OUTFALL 10 FEC
Sat-01	7.83				0.27	0.27	37.4				3.84	3.84	62.6			5.82				10.9	82.5			88				3
Sun-02	7.29				0.25	0.25	41.0				3.15	3.15	57.8			5.28				10.9	85.2			84				1
Mon-03	7.68				0.24	0.24	39.3				2.69	2.69	59.3			4.88				11.0	90.6			82				5
Tue-04	8.30	5.00			0.26	0.26	41.5	44.0			3.08	3.08	65.5	52.3		5.41		0.06		10.3	91.9	91.3		88		2.8		3
Wed-05	8.44				0.24	0.24	51.1				2.50	2.50	75.6			4.36	< 0.01			8.6	86.5			87				5
Thu-06	6.70	3.26			0.25	0.25	37.6	30.3			2.10	2.10	57.6	38.4		4.39		0.09		8.9	73.6	67.4		84		6.0		5
Fri-07	4.05	2.50	3.36		0.23	0.23	21.1	22.2	11.4		1.46	1.46	33.6	29.7	21.3	3.23		0.79	0.24	7.2	49.7	49.3	34.8	74		1.0	17.7	7
Sat-08	7.86	1.75			0.21	0.21	37.6	25.3			1.95	1.95	60.7	28.4		3.71		0.21		6.2	68.2	57.2		65		2.1		6
Sun-09	7.28	4.65			0.22	0.22	42.3	35.9			5.20	5.20	60.8	44.0		6.69		0.10		8.6	85.6	78.6		78		2.7		5
Mon-10	7.37	4.26			0.23	0.23	40.4	38.6			4.14	4.14	55.1	42.8		6.11		0.44		8.1	79.7	75.3		79		6.0		5
Tue-11	8.86				0.21	0.21	45.7				2.66	2.66	62.7			4.17				8.4	78.5			80				8
Wed-12	8.72				0.21	0.21	45.9				3.55	3.55	65.7			5.15	< 0.01			10.1	82.4			81				3
Thu-13	7.60	4.16			0.22	0.22	41.3	34.8			3.04	3.04	61.2	45.3		5.06		0.04		10.4	83.6	72.9		81		1.6		2
Fri-14	9.00				0.24	0.24	38.4				2.80	2.80	62.8			5.15				10.6	79.8			80				8
Sat-15	8.13				0.23	0.23	43.7				2.13	2.13	64.8			4.62				9.6	78.1			80				5
Sun-16	7.94				0.23	0.23	38.7				2.71	2.71	63.6			4.70				11.3	76.6			78				2
Mon-17	7.78				0.18	0.18	41.4				2.16	2.16	57.2			3.33				12.5	82.2			75				7
Tue-18	8.11				0.25	0.25	43.8				1.09	1.09	63.1			3.02				11.1	86.0			81	3.0			4
Wed-19	4.24	2.05	4.06		0.26	0.26	19.8	18.9	9.53		0.40	0.40	31.3	24.9	23.4	2.34	< 0.01	0.82	0.19	8.5	47.7	47.4	36.1	81		1.0	1.6	11
Thu-20	3.87	1.77	1.33		0.20	0.20	17.4	20.4	6.04		0.19	0.19	27.9	27.0	9.69	1.40		2.10	0.78	5.8	59.5	62.0	24.8	56		3.4	0.3	2
Fri-21	4.66	1.49			0.19	0.19	27.1	19.2			1.29	1.29	39.8	25.0		2.82		1.66		8.3	91.6	55.1		68		3.2		4
Sat-22	6.43				0.29	0.29	38.4				3.51	3.51	55.6			5.46				10.8	85.6			83				10
Sun-23	6.66				0.28	0.28	42.8				4.34	4.34	61.4			6.64				10.1	87.9			88				10
Mon-24	6.85	3.22			0.25	0.25	36.0	32.8			2.76	2.76	58.7	44.7		4.98		0.30		11.2	80.0	81.4		84		9.5		5
Tue-25	5.92	2.54			0.26	0.26	27.0	27.0			1.23	1.23	47.0	39.5		2.97		0.23		10.7	69.7	69.9		81		1.2	2.0	29
Wed-26	5.75	2.47			0.21	0.21	29.4	26.5			0.89	0.89	40.9	33.0		2.34	0.03	0.60		9.4	71.1	63.3		73		5.2		4
Thu-27	7.69	2.61			0.19	0.19	39.1	28.4			1.59	1.59	64.1	37.0		2.88		0.52		9.6	78.3	69.7		70	2.7	5.2		5
Fri-28	5.60	2.18	3.02		0.22	0.22	28.6	24.1	7.40		2.01	2.01	41.8	34.2	16.8	3.28		0.42	0.68	8.2	72.3	57.6	34.3	70		8.6	1.3	6
Sat-29	5.32	2.24			0.18	0.18	28.6	27.7			0.33	0.33	37.6	33.4		1.70		0.45		10.3	65.5	63.4		75		2.7		5
Sun-30	6.00	1.85			0.18	0.18	34.8	27.6			0.91	0.91	47.6	31.0		2.14		0.85		10.9	76.0	64.1		72		1.1		5
Average	6.93	2.82	2.94	---	0.23	0.23	36.6	28.5	8.59	---	2.32	2.32	54.8	35.9	17.8	4.13	0.01	0.57	0.47	9.6	78	66.2	32.5	78.1	---	---	---	---
Minimum	3.87	1.49	1.33	---	0.18	0.18	17.4	18.9	6.04	---	0.19	0.19	27.9	24.9	9.7	1.40	< 0.01	0.04	0.19	5.8	47.7	47.4	24.8	55.6	2.7	1.0	0.3	1
Maximum	9.00	5.00	4.06	---	0.29	0.29	51.1	44.0	11.4	---	5.20	5.20	75.6	52.3	23.4	6.69	0.03	2.10	0.78	12.5	92	91.3	36.1	88.2	3.0	10	18	29
GeoMean	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	3	3	2	5
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)	% Usage	Total Bypass YTD (hrs)	EPT Usage YTD (hrs)	% Usage
160	160	100%	324	324	100.00%

Report Comments

1	OUTFALL 20 - June 20: Analysis of the sample exceeded the recommended hold time for BOD.
2	OUTFALL 10 - June 3: Analysis of the sample exceeded the recommended hold time for E. Coli by 36 minutes.

AEP Ref #**

** AEP - Alberta Environment & Parks

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