PROVIDING MORE EPCOR

Gold Bar Wastewater Treatment Plant
Plant Performance Report
September 2019

Digested Sludge: Total Monthly Volume (ML)	71.43

Volume of Flow (ML) and pH@25°C (Liquid Stream Quality)

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	pH@25°C RAW	pH OUTFALL 30	pH OUTFALL 20	pH OUTFALL 10 FEC
Sun-01	348.1	267.0	0.0	0.00	10.9	0.0	256.1	256.1	7.6			7.7
Mon-02	495.9	293.8	6.5	0.00	10.7	0.0	276.6	276.6	7.6	7.7		7.7
Tue-03	379.8	283.2	0.0	0.00	10.9	0.0	272.3	272.3	7.5			7.7
Wed-04	371.0	271.6	0.0	0.00	11.0	0.0	260.6	260.6	7.8			7.7
Thu-05	370.6	271.5	0.0	0.00	11.0	0.0	260.5	260.5	7.5			7.7
Fri-06	336.9	269.5	0.0	0.00	10.8	0.0	258.7	258.7	7.6			7.7
Sat-07	346.5	263.8	0.0	0.00	10.7	0.0	253.1	253.1	7.6			7.7
Sun-08	1,057.2	359.0	44.2	0.00	10.0	0.0	304.8	304.8	7.4	7.6		7.5
Mon-09	547.6	312.8	12.1	0.00	10.1	0.0	290.6	290.6	7.5	7.8		7.5
Tue-10	442.9	316.4	9.1	0.00	9.9	0.0	297.4	297.4	7.5	7.7		7.6
Wed-11	385.2	281.1	0.0	0.00	9.6	0.0	271.5	271.5	7.6			7.6
Thu-12	381.3	277.0	0.0	0.00	9.8	0.0	267.2	267.2	7.5			7.6
Fri-13	360.4	276.0	0.0	0.00	9.8	0.0	266.2	266.2	7.6			7.7
Sat-14	375.4	265.1	0.0	0.00	10.0	0.0	255.1	255.1	7.6			7.6
Sun-15	384.2	266.0	0.0	0.00	10.0	0.0	256.0	256.0	7.6			7.7
Mon-16	374.4	272.3	0.0	0.00	10.2	0.0	262.1	262.1	7.6			7.6
Tue-17	475.8	282.9	4.7	0.00	10.4	0.0	267.8	267.8	7.5	7.8		7.6
Wed-18	351.4	265.6	0.0	0.00	10.1	0.0	255.5	255.5	7.6			7.6
Thu-19	347.8	265.7	0.0	0.00	10.2	0.0	255.5	255.5	7.7			7.6
Fri-20	346.0	268.5	0.0	0.00	10.0	0.0	258.5	258.5	7.6			7.6
Sat-21	362.6	256.7	0.0	0.00	10.4	0.0	246.3	246.3	7.5			7.6
Sun-22	378.9	258.3	0.0	0.00	10.1	0.0	248.2	248.2	7.6			7.7
Mon-23	355.7	265.9	0.0	0.00	10.2	0.0	255.7	255.7	7.6			7.7
Tue-24	351.6	260.8	0.0	0.00	10.3	0.0	250.5	250.5	7.6			7.7
Wed-25	348.9	263.0	0.0	0.00	10.1	0.0	252.9	252.9	7.7			7.8
Thu-26	899.3	370.6	62.8	0.88	10.6	0.0	296.3	296.3	7.5	7.5	7.5	7.6
Fri-27	808.3	345.8	34.3	0.00	10.6	0.0	300.9	300.9	7.4	7.5		7.7
Sat-28	375.2	265.0	0.0	0.00	10.4	0.0	254.6	254.6	7.6			7.6
Sun-29	386.0	267.0	0.0	0.00	10.5	0.0	256.5	256.5	7.6			7.6
Mon-30	376.4	268.4	0.0	0.00	10.7	0.0	257.7	257.7	7.7			7.6
Average	441.39	282.67	6.20	0.03	10.31	0.00	266.13	266.13	7.6	7.6	7.5	7.6
Minimum	336.90	256.70	0.00	0.00	9.60	0.00	246.30	246.30	7.4	7.5	7.5	7.5
Maximum	1,057.20	370.58	62.80	0.88	11.00	0.00	304.80	304.80	7.8	7.8	7.5	7.8
GeoMean	---	---	---	---	---	---	---	---	---	---	---	---
TOTAL	---	8,450	174	0.88	310	0	7,966	7,966	---	---	---	---

Liquid Stream Quality: TSS, BOD₅/cBOD₅ and TP

DATE	TSS (mg/L) RAW	TSS OUTFALL 30	TSS OUTFALL 20	TSS EPEPS	TSS OUTFALL 10 FEC	TSS OUTFALL 10 FE	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
Sun-01	492				5.5		220				3.0		9.06				0.30	0.30
Mon-02	336	53			5.7		303	108			3.0		7.34	6.92			0.31	0.31
Tue-03	165				6.4		193				4.0		6.57				0.41	0.41
Wed-04	290				5.9		143				3.0		6.35				0.36	0.36
Thu-05	303				5.8		269				3.0		7.17				0.43	0.43
Fri-06	396				5.2		305				3.0		7.29				0.42	0.42
Sat-07	292				5.1		273				3.0		7.07				0.35	0.35
Sun-08	352	49			4.6		242	119			2.0		5.51	4.64			0.30	0.30
Mon-09	266	38			5.1		235	74			2.0		5.74	4.21			0.29	0.29
Tue-10	288	45			6.2		373	64			3.0		6.43	4.44			0.46	0.46
Wed-11	303				5.6		332				3.0		7.28				0.34	0.34
Thu-12	320				6.0		254				3.0		7.52				0.40	0.40
Fri-13	320				5.0		275				3.0		7.62				0.38	0.38
Sat-14	248				5.4		248				3.0		7.70				0.35	0.35
Sun-15	270				6.3		292				2.0		7.00				0.33	0.33
Mon-16	284				6.6		258				3.0		7.38				0.39	0.39
Tue-17	311	71			6.1		368	154			3.0		7.45	5.72			0.37	0.37
Wed-18	332				6.0		251				3.0		7.42				0.41	0.41
Thu-19	310				6.0		282				3.0		8.68				0.34	0.34
Fri-20	292				3.4		269				4.0		7.70				0.36	0.36
Sat-21	304				5.8		284				3.0		6.82				0.33	0.33
Sun-22	300				5.7		235				3.0		6.58				0.33	0.33
Mon-23	246				5.3		278				3.0		7.54				0.34	0.34
Tue-24	282				7.6		221				3.0		9.17				0.36	0.36
Wed-25	286				5.7		219				3.0		9.69				0.39	0.39
Thu-26	424	83	692		8.7		254	127	139		2.0		7.48	5.73	5.51		0.40	0.40
Fri-27	292	40			6.8		208	64			3.0		6.62	3.10			0.40	0.40
Sat-28	258				13.4		218				4.0		9.09				0.67	0.67
Sun-29	268				3.6		232				2.0		9.18				0.35	0.35
Mon-30	303				9.2		304				4.0		12.40				0.58	0.58
Average	304	54	692	---	6.1	---	261	101	139	---	3.0	---	7.63	4.97	5.51	---	0.38	0.38
Minimum	165	38	692	---	3.4	---	143	64	139	---	2.0	---	5.51	3.10	5.51	---	0.29	0.29
Maximum	492	83	692	---	13.4	---	373	154	139	---	4.0	---	12.40	6.92	5.51	---	0.67	0.67
GeoMean	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Liquid Stream Quality: NH3-N, TKN, NO_2+NO_3, Chloride and *E. coli*

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
Sun-01	37.2				1.93	1.93	67.9			5.03				11.5	69			72				4
Mon-02	35.2	43.4			4.92	4.92	55.6	51.8		6.26		1.41		9.9	68	66		74		2.3		2
Tue-03	39.9				6.91	6.91	51.0			8.10				8.2	80			78				13
Wed-04	44.2				4.72	4.72	50.1			6.85	< 0.01			11.8	76			94				8
Thu-05	36.8				4.69	4.69	52.1			5.48				11.5	73			87				8
Fri-06	41.6				2.55	2.55	58.6			4.77				12.2	77			89				34
Sat-07	40.7				1.98	1.98	61.4			4.25				12.5	67			88				8
Sun-08	23.2	36.0			1.41	1.41	43.4	48.2		3.39		0.28		10.0	58	61		82		6.8		7
Mon-09	32.6	40.0			2.36	2.36	47.9	45.6		3.96		0.56		9.7	71	68		72		1.9		4
Tue-10	30.8	38.2			3.33	3.33	56.7	44.6		5.65		0.18		8.8	65	76		76		1.9		11
Wed-11	42.6				5.00	5.00	62.6			6.56	< 0.01			9.7	84			81	4			8
Thu-12	43.7				4.14	4.14	66.5			5.57				10.5	85			87				9
Fri-13	40.8				2.86	2.86	62.9			4.56				10.7	87			87				11
Sat-14	44.7				2.89	2.89	64.0			4.81				11.5	80			94				4
Sun-15	44.3				1.60	1.60	58.6			5.26				12.4	77			83				9
Mon-16	42.4				2.21	2.21	59.2			4.60				10.7	83			81				8
Tue-17	36.8	41.1			2.18	2.18	61.8	47.2		4.26		0.41		10.7	86	78		94		< 0.1		7
Wed-18	42.7				1.74	1.74	62.8			4.23	0.01			11.2	90			87	5			5
Thu-19	47.1				2.18	2.18	65.3			4.11				12.6	82			94				3
Fri-20	43.7				2.00	2.00	61.4			3.82				12.6	80			86				4
Sat-21	37.8				0.76	0.76	54.6			2.68				9.2	72			85				5
Sun-22	35.8				0.64	0.64	53.8			2.26				8.9	78			76				3
Mon-23	39.4				0.72	0.72	58.2			2.48				7.9	80			79				6
Tue-24	47.9				2.16	2.16	66.6			4.06				10.4	77			84				8
Wed-25	49.1				2.53	2.53	66.2			4.87	0.03			11.8	80			83				17
Thu-26	34.7	33.2	14.6		3.00	3.00	52.6	41.7	28.8	5.55		0.34		11.9	58	54	31	80		3.6	2	7
Fri-27	29.3	21.1			1.63	1.63	45.9	27.3		3.50		0.44		10.7	60	40		60		1.6		3
Sat-28	47.8				4.18	4.18	63.1			6.26				15.1	68			72				6
Sun-29	47.3				5.63	5.63	63.0			7.15				12.3	71			74				2
Mon-30	44.7				4.08	4.08	85.2			5.97				12.0	74			74				8
Average	40.2	36.1	14.6	---	2.90	2.90	59.3	43.8	28.8	4.88	0.01	0.52	---	11.0	75	63	31	82	5	---	---	---
Minimum	23.2	21.1	14.6	---	0.64	0.64	43.4	27.3	28.8	2.26	< 0.01	0.18	---	7.9	58	40	31	60	4	< 0.1	2	2
Maximum	49.1	43.4	14.6	---	6.91	6.91	85.2	51.8	28.8	8.10	0.03	1.41	---	15.1	90	78	31	94	5	6.8	2	34
GeoMean	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	4.5	1.5	2	6
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

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

Enhanced Primary Treatment (EPT) Usage					
Total Bypass (hrs)	EPT Usage (hrs)	% Usage	Total Bypass YTD (hrs)	EPT Usage YTD (hrs)	% Usage
28	28	100%	619	619	100%

Report Comments

1	RAW - September 5: Analysis of the sample exceeded the recommended hold time for TSS and BOD.
2	RAW - September 28: Analysis of the sample exceeded the recommended hold time for BOD.

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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