PROVIDING MORE EPCOR

Gold Bar Wastewater Treatment Plant
Plant Performance Report
June 2023

Digested Sludge: Total Monthly Volume (ML)	65.0

Volume of Flow (ML)

DATE	Peak Flow (MLD)	Influent INFs	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
Thu-01	640.8	0.0	327.6	19.0	0.0	10.6	0.0	298.0	298.0
Fri-02	324.4	0.0	277.8	0.0	0.0	10.3	0.0	267.5	267.5
Sat-03	338.2	0.0	271.9	0.0	0.0	10.2	0.0	261.7	261.7
Sun-04	344.5	0.0	273.1	0.0	0.0	9.9	0.0	263.2	263.2
Mon-05	334.7	0.0	275.7	0.0	0.0	9.8	0.0	265.9	265.9
Tue-06	302.9	0.0	269.8	0.0	0.0	9.8	0.0	260.0	260.0
Wed-07	317.4	0.0	273.4	0.0	0.0	9.8	0.0	263.6	263.6
Thu-08	316.3	0.0	275.5	0.0	0.0	10.5	0.0	265.0	265.0
Fri-09	312.1	0.0	277.2	0.0	0.0	11.6	0.0	265.6	265.6
Sat-10	326.5	0.0	268.1	0.0	0.0	10.2	0.0	257.9	257.9
Sun-11	358.5	0.0	271.4	0.0	0.0	10.2	0.0	261.2	261.2
Mon-12	331.2	0.0	277.4	0.0	0.0	9.9	0.0	267.5	267.5
Tue-13	1,507.1	1.0	421.0	108.7	0.0	10.0	0.0	302.3	302.3
Wed-14	1,559.5	14.0	514.1	211.4	0.0	10.2	0.0	292.5	292.5
Thu-15	1,825.4	75.0	1,122.5	789.0	0.4	11.7	0.0	321.4	321.4
Fri-16	540.7	0.0	384.3	31.6	0.0	11.0	0.0	341.7	341.7
Sat-17	937.1	0.0	397.4	87.2	0.0	11.2	0.0	299.0	299.0
Sun-18	1,863.2	94.0	932.2	608.8	0.2	11.5	0.0	311.7	311.7
Mon-19	1,769.9	49.0	1,021.8	692.1	0.0	11.2	0.0	318.5	318.5
Tue-20	1,636.2	8.0	789.5	470.5	0.0	11.6	0.0	307.4	307.4
Wed-21	655.6	0.0	482.2	171.0	0.0	11.9	0.0	299.3	299.3
Thu-22	468.7	0.0	369.9	14.5	0.0	12.2	0.0	343.2	343.2
Fri-23	462.2	0.0	364.5	6.8	0.0	12.2	0.0	345.5	345.5
Sat-24	431.2	0.0	344.1	0.0	0.0	11.1	0.0	333.0	333.0
Sun-25	405.1	0.0	335.9	0.0	0.0	10.8	0.0	325.1	325.1
Mon-26	407.6	0.0	332.5	0.0	0.0	11.1	0.0	321.4	321.4
Tue-27	399.3	0.0	324.7	0.0	0.0	12.1	0.0	312.6	312.6
Wed-28	753.6	0.0	340.8	22.2	0.0	13.0	0.0	305.6	305.6
Thu-29	373.2	0.0	312.6	0.0	0.0	12.6	0.0	300.0	300.0
Fri-30	367.9	0.0	304.6	0.0	0.0	12.8	0.0	291.8	291.8
Average	687.0	8.0	414.5	107.8	0.0	11.0	0.0	295.6	295.6
Minimum	302.9	0.0	268.1	0.0	0.0	9.8	0.0	257.9	257.9
Maximum	1,863.2	94.0	1,122.5	789.0	0.4	13.0	0.0	345.5	345.5
GeoMean	---	---	---	---	---	---	---	---	---
TOTAL	---	241	12,434	3,233	1	331	0	8,869	8,869

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
Thu-01	7.4	7.5		7.5	416	42			2.9	2.9
Fri-02	7.4			7.5	308				3.5	3.5
Sat-03	7.4			7.6	270				3.3	3.3
Sun-04	7.5			7.6	268				3.2	3.2
Mon-05	7.5			7.5	320				4.1	4.1
Tue-06	7.4			7.6	292				3.7	3.7
Wed-07	7.5			7.6	360				3.8	3.8
Thu-08	7.5			7.6	346				3.0	3.0
Fri-09	7.6			7.7	312				3.5	3.5
Sat-10	7.5			7.6	308				3.5	3.5
Sun-11	7.5			7.6	344				4.1	4.1
Mon-12	7.6			7.5	332				4.2	4.2
Tue-13	7.3	7.1		7.7	448	93			5.3	5.3
Wed-14	7.3	7.5		7.4	352	121			5.3	5.3
Thu-15	7.2	7.5	7.4	7.3	188	78	81		5.0	5.0
Fri-16	7.4	7.6		7.4	236	60			3.3	3.3
Sat-17	7.5	7.6		7.4	280	51			3.7	3.7
Sun-18	7.5	7.5	7.5	7.4	292	113	53		2.7	2.7
Mon-19	7.7	7.8		7.4	178	55			3.2	3.2
Tue-20	7.3	7.6		7.5	190	53			4.4	4.4
Wed-21	7.6	7.8		7.4	236	34			4.8	4.8
Thu-22	7.6	7.7		7.5	249	75			4.9	4.9
Fri-23	7.6	8.0		7.4	488	55			4.6	4.6
Sat-24	7.6			7.4	252				6.4	6.4
Sun-25	7.6			7.5	258				7.3	7.3
Mon-26	7.5			7.5	264				6.8	6.8
Tue-27	7.6			7.5	303				6.5	6.5
Wed-28	7.5	7.7		7.5	380	111			7.1	7.1
Thu-29	7.5			7.6	420				5.8	5.8
Fri-30	7.7			7.6	336				5.6	5.6
Average	7.5	7.6	7.4	7.5	307	72	67	---	4.5	4.5
Minimum	7.2	7.1	7.4	7.3	178	34	53	---	2.7	2.7
Maximum	7.7	8.0	7.5	7.7	488	121	81	---	7.3	7.3
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	BOD_5 OUTFALL 10 FE	$cBOD_5$ OUTFALL 10 FEC	$cBOD_5$ OUTFALL 10 FE
Thu-01	317	51			< 2	< 2		
Fri-02	292				< 2	< 2		
Sat-03	301				< 2	< 2		
Sun-04	309				2	2		
Mon-05	313				2	2		
Tue-06	341				2	2		
Wed-07	378				2	2		
Thu-08	343				2	2		
Fri-09	268				2	2		
Sat-10	304				2	2		
Sun-11	326				2	2		
Mon-12	296				< 2	< 2		
Tue-13	240	100			2	2		
Wed-14	144	89			3	3		
Thu-15	88	41	42		< 2	< 2		
Fri-16	202	70			< 2	< 2		
Sat-17	259	73			3	3		
Sun-18	93	52	24		< 2	< 2		
Mon-19	110	27			< 2	< 2		
Tue-20	98	42			2	2		
Wed-21	164	34			< 2	< 2		
Thu-22	195	81			2	2		
Fri-23	202	62			3	3		
Sat-24	201				3	3		
Sun-25	250				3	3		
Mon-26	277				3	3		
Tue-27	253				3	3		
Wed-28	267	315			3	3		
Thu-29	280				4	4		
Fri-30	286				3	3		
Average	246	80	33	---	2.4	2.4		
Minimum	88	27	24	---	< 2	< 2		
Maximum	378	315	42	---	4	4		
GeoMean	---	---	---	---	---	---		
TOTAL	---	---	---	---	---	---		

DATE	TP (mg/L) RAW	TP OUTFALL 30	TP OUTFALL 20	TP EPEPS	TP OUTFALL 10 FEC	TP OUTFALL 10 FE	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
Thu-01	7.51	2.60			0.22	0.22	30.9	16.6			1.18	1.18
Fri-02	8.43				0.22	0.22	36.7				2.35	2.35
Sat-03	9.09				0.25	0.25	35.3				1.71	1.71
Sun-04	8.50				0.24	0.24	36.8				2.61	2.61
Mon-05	9.41				0.28	0.28	35.8				1.70	1.70
Tue-06	9.44				0.29	0.29	33.7				1.35	1.35
Wed-07	8.67				0.32	0.32	36.4				2.81	2.81
Thu-08	8.62				0.28	0.28	37.0				3.45	3.45
Fri-09	7.92				0.28	0.28	38.2				1.34	1.34
Sat-10	8.16				0.27	0.27	37.7				0.88	0.88
Sun-11	8.11				0.29	0.29	35.7				1.27	1.27
Mon-12	8.18				0.29	0.29	35.0				0.79	0.79
Tue-13	5.98	2.66			0.37	0.37	22.9	13.2			0.09	0.09
Wed-14	4.21	4.56			0.33	0.33	14.3	10.2			0.41	0.41
Thu-15	1.99	2.26	2.16		0.28	0.28	7.9	14.6	8.6		0.11	0.11
Fri-16	4.91	4.08			0.20	0.20	25.1	28.0			2.23	2.23
Sat-17	5.08	4.44			0.22	0.22	23.5	28.5			2.13	2.13
Sun-18	3.20	2.61	1.26		0.18	0.18	10.2	11.7	5.6		0.37	0.37
Mon-19	2.92	1.85			0.20	0.20	13.1	8.9			0.07	0.07
Tue-20	2.79	2.02			0.23	0.23	10.5	19.5			0.06	0.06
Wed-21	4.24	2.48			0.28	0.28	18.0	26.2			0.11	0.11
Thu-22	5.17	3.84			0.34	0.34	25.7	30.6			1.89	1.89
Fri-23	5.76	3.42			0.44	0.44	26.3	30.2			3.35	3.35
Sat-24	6.33				0.47	0.47	27.4				3.04	3.04
Sun-25	5.96				0.38	0.38	27.9				1.96	1.96
Mon-26	6.43				0.40	0.40	25.2				1.71	1.71
Tue-27	7.29				0.42	0.42	28.2				1.34	1.34
Wed-28	7.70	7.29			0.42	0.42	26.3	38.7			0.65	0.65
Thu-29	7.63				0.38	0.58	29.3				0.58	0.58
Fri-30	7.16				0.38	0.38	27.7				0.83	0.83
Average	6.56	3.39	1.71	---	0.31	0.31	27.3	21.3	7.1	---	1.41	1.41
Minimum	1.99	1.85	1.26	---	0.18	0.18	7.9	8.9	5.6	---	0.06	0.06
Maximum	9.44	7.29	2.16	---	0.47	0.47	38.2	38.7	8.6	---	3.45	3.45
GeoMean	---	---	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---

DATE	un-ionized NH3-N (mg/L) OUTFALL 30	un-ionized NH3-N OUTFALL 20	un-ionized NH3-N OUTFALL 10	TKN (mg/L) RAW	TKN OUTFALL 30	TKN OUTFALL 20	TKN OUTFALL 10 FEC	NO_3+NO_2 (mg/L) RAW	NO_3+NO_2 OUTFALL 30	NO_3+NO_2 OUTFALL 20	NO_3+NO_2 OUTFALL 10 FEC
Thu-01				51.2	24.0		2.6		0.34		6.82
Fri-02				59.0			4.5				10.1
Sat-03				60.6			4.0				11.2
Sun-04				57.1			4.1				11.4
Mon-05				64.4			3.1				11.0
Tue-06				62.8			3.0				10.9
Wed-07				46.5			3.9	< 0.01			9.10
Thu-08				49.2			4.5				9.9
Fri-09				49.5			2.5				10.9
Sat-10				49.9			2.1				11.2
Sun-11				50.5			2.3				11.1
Mon-12				47.4			2.1				11.7
Tue-13				36.1	16.7		1.4		0.29		6.27
Wed-14				23.4	26.7		2.0	< 0.01	0.22		7.95
Thu-15				12.9	16.3	11.0	1.3		2.30	0.52	3.01
Fri-16				35.0	30.7		3.2		0.84		8.67
Sat-17				30.2	30.1		3.2		0.03		10.2
Sun-18				19.6	14.8	6.7	1.6		1.23	2.18	7.55
Mon-19				19.9	13.5		1.0		7.61		3.87
Tue-20				17.3	22.3		1.2		2.48		7.57
Wed-21				27.5	26.5		1.2	< 0.01	2.44		6.66
Thu-22				34.9	34.8		3.3		0.16		9.93
Fri-23				39.9	34.2		4.8		0.01		10.3
Sat-24				41.2			4.7				10.5
Sun-25				39.1			3.4				10.8
Mon-26				40.1			3.2				10.3
Tue-27				41.4			2.8				9.68
Wed-28				43.6	48.3		2.3	< 0.01	0.04		10.7
Thu-29				46.1			2.2				10.4
Fri-30				39.9			2.3				11.1
Average	---	---	---	41.2	26.1	8.9	2.8	< 0.01	1.38	1.35	9.36
Minimum	---	---	---	12.9	13.5	6.7	1.0	< 0.01	0.01	0.52	3.01
Maximum	---	---	---	64.4	48.3	11.0	4.8	< 0.01	7.61	2.18	11.7
GeoMean	---	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---

DATE	Chloride (mg/L) RAW	Chloride OUTFALL 30	Chloride OUTFALL 20	Chloride OUTFALL 10 FEC	*E. coli* (Counts/100 mL) RAW	*E. coli* OUTFALL 30	*E. coli* OUTFALL 20	*E. coli* OUTFALL 10 FEC
Thu-01	75.7	55.9		73.2		0.6		6
Fri-02	87.0			86.4				12
Sat-03	77.2			89.0				9
Sun-04	79.6			81.8				13
Mon-05	81.6			80.4				6
Tue-06	87.9			89.9				8
Wed-07	91.3			92.6				12
Thu-08	82.0			91.9				6
Fri-09	81.7			86.9				7
Sat-10	76.4			86.1				5
Sun-11	72.5			81.1				3
Mon-12	80.2			79.7				2
Tue-13	60.5	52.4		78.0		1.7		4
Wed-14	42.3	55.6		73.9		2.0		8
Thu-15	31.2	44.3	20.6	47.6		0.8	1	2
Fri-16	81.2	84.7		71.7		1.1		4
Sat-17	66.6	72.2		90.9		1.7		16
Sun-18	37.1	44.5	22.9	87.8		1.5	0.4	6
Mon-19	70.2	57.0		46.7		0.6		12
Tue-20	57.6	73.3		75.0		0.5		6
Wed-21	84.7	92.1		71.2		0.5		8
Thu-22	93.4	102		95.6	2.1	1.5		19
Fri-23	101	107		103		1.1		6
Sat-24	87.1			104				13
Sun-25	88.9			99.7				6
Mon-26	94.6			98.1				27
Tue-27	103			110	1.5			12
Wed-28	85.8	88.6		104		1.1		10
Thu-29	87.7			98.8				10
Fri-30	92.4			106				12
Average	77.9	71.5	21.8	86.0				
Minimum	31.2	44.3	20.6	46.7	1.5	0.5	0.4	2
Maximum	103	107	22.9	110	2.1	2.0	0.7	27
GeoMean	---	---	---	---	1.8	1.0	1	7.6
TOTAL	---	---	---	---	---	---	---	---

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

Enhanced Primary Treatment (EPT) Usage					
Total Bypass (hr)	EPT Usage (hr)	% Usage	Total Bypass YTD (hr)	EPT Usage YTD (hr)	% Usage YTD
157	157	100%	312	312	100%

Report Comments

Note 1:	On July 18, 2023, due to heavy rain, the auto-sampler for RAW Influent overflowed the sample container. The test results shown
	are from the overflow composite sample. Grab samples for RAW were collected following the overflow at 17:30,
	19:30 and 23:30 manually which were combined into a composite and tested. Those results were: pH-7.3, TSS-172 mg/L
	BOD-47 mg/L, TP-1.60 mg/L, NH3-N-4.79 mg/L, TKN-8.3 mg/L N, chloride - 36.1 mg/L.
	Composite sample requirements for RAW Influent on July 18th were met.

AEP Ref #

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 Pump Station
FE	Final Effluent from secondary treatment process (with biological nutrient removal). Pre-Ultraviolet disinfection.
FEC	Combined post-UV disinfection (FE+EPEPS)
OUTFALL 10	UV-disinfected, discharged via OUTFALL 10
OUTFALL 20	Combined Bypass (RAW + PE + EPS)
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
AEP	Alberta Environment & Parks

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