PROVIDING MORE EPCOR

Gold Bar Wastewater Treatment Plant
Plant Performance Report
September 2022

Digested Sludge: Total Monthly Volume (ML)	67.6

Volume of Flow (ML)

DATE	Peak Flow (ML/D)	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	341.9	0.0	269.6	0.0	0.0	12.3	0.0	257.3	257.3
Fri-02	315.9	0.0	264.8	0.0	0.0	11.6	0.0	253.2	253.2
Sat-03	325.1	0.0	259.1	0.0	0.0	11.2	0.0	247.9	247.9
Sun-04	326.0	0.0	257.1	0.0	0.0	11.3	0.0	245.8	245.8
Mon-05	356.0	0.0	259.7	0.0	0.0	11.4	0.0	248.3	248.3
Tue-06	360.1	0.0	270.8	0.0	0.0	11.5	0.0	259.3	259.3
Wed-07	435.6	0.0	272.9	8.2	0.0	11.3	0.0	253.4	253.4
Thu-08	355.9	0.0	263.9	0.1	0.0	12.1	0.0	251.7	251.7
Fri-09	311.1	0.0	263.7	0.0	0.0	11.9	0.0	251.8	251.8
Sat-10	325.3	0.0	258.4	0.0	0.0	11.4	0.0	247.0	247.0
Sun-11	351.0	0.0	266.8	0.0	0.0	11.5	0.0	255.3	255.3
Mon-12	331.4	0.0	270.8	0.0	0.0	11.3	0.0	259.5	259.5
Tue-13	322.5	0.0	260.1	0.0	0.0	11.4	0.0	248.7	248.7
Wed-14	316.5	0.0	260.6	0.0	0.0	11.5	0.0	249.1	249.1
Thu-15	1,305.7	0.0	330.0	67.9	0.0	11.7	0.0	250.4	250.4
Fri-16	551.1	0.0	297.6	11.1	0.0	11.1	0.0	275.4	275.4
Sat-17	334.0	0.0	258.7	0.0	0.0	11.6	0.0	247.1	247.1
Sun-18	344.5	0.0	262.0	0.0	0.0	11.4	0.0	250.6	250.6
Mon-19	588.9	0.0	310.8	16.9	0.0	11.2	0.0	282.7	282.7
Tue-20	315.0	0.0	260.2	0.0	0.0	11.2	0.0	249.0	249.0
Wed-21	301.3	0.0	263.1	0.0	0.0	11.6	0.0	251.5	251.5
Thu-22	303.1	0.0	250.9	0.0	0.0	11.6	0.0	239.3	239.3
Fri-23	293.2	0.0	259.3	0.0	0.0	11.6	0.0	247.7	247.7
Sat-24	330.7	0.0	256.5	0.0	0.0	11.9	0.0	244.6	244.6
Sun-25	354.1	0.0	258.8	0.0	0.0	11.8	0.0	247.0	247.0
Mon-26	338.9	0.0	264.0	0.0	0.0	11.7	0.0	252.3	252.3
Tue-27	317.8	0.0	257.6	0.0	0.0	11.7	0.0	245.9	245.9
Wed-28	336.0	0.0	260.3	0.0	0.0	11.6	0.0	248.7	248.7
Thu-29	310.9	0.0	260.2	0.0	0.0	11.4	0.0	248.8	248.8
Fri-30	318.6	0.0	261.7	0.0	0.0	11.3	0.0	250.4	250.4
Average	380.6	0.0	267.0	3.5	0.0	11.5	0.0	252.0	252.0
Minimum	293.2	0.0	250.9	0.0	0.0	11.1	0.0	239.3	239.3
Maximum	1,305.7	0.0	330.0	67.9	0.0	12.3	0.0	282.7	282.7
GeoMean	---	---	---	---	---	---	---	---	---
TOTAL	---	0	8,010	104	0	346	0	7,560	7,560

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	7.6			7.6	368				4.6	4.6
Fri-02	7.6			7.6	368				5.3	5.3
Sat-03	7.6			7.6	332				4.8	4.8
Sun-04	7.7			7.5	388				5.1	5.1
Mon-05	7.7			7.5	340				4.9	4.9
Tue-06	7.6			7.6	364				5.1	5.1
Wed-07	7.6	7.8		7.6	392	76			4.8	4.8
Thu-08	7.5			7.6	344				3.7	3.7
Fri-09	7.6			7.6	416				3.9	3.9
Sat-10	7.7			7.6	336				3.4	3.4
Sun-11	7.5			7.6	372				5.1	5.1
Mon-12	7.7			7.7	376				4.6	4.6
Tue-13	7.6			7.6	364				4.0	4.0
Wed-14	7.6			7.5	384				4.7	4.7
Thu-15	7.3	7.4		7.6	893	135			5.6	5.6
Fri-16	7.5	7.8		7.6	500	52			5.2	5.2
Sat-17	7.6			7.5	304				5.0	5.0
Sun-18	7.7			7.6	296				4.7	4.7
Mon-19	7.5	7.6		7.5	356	66			3.7	3.7
Tue-20	7.5			7.5	348				4.0	4.0
Wed-21	7.7			7.6	356				5.4	5.4
Thu-22	7.7			7.5	516				6.0	6.0
Fri-23	7.6			7.5	356				4.4	4.4
Sat-24	7.6			7.6	344				5.3	5.3
Sun-25	7.7			7.6	376				4.7	4.7
Mon-26	7.5			7.7	324				3.3	3.3
Tue-27	7.6			7.5	352				3.9	3.9
Wed-28	7.6			7.6	320				4.0	4.0
Thu-29	7.6			7.6	308				3.6	3.6
Fri-30	7.5			7.5	287				4.2	4.2
Average	7.6	7.6		7.6	379	82			4.6	4.6
Minimum	7.3	7.4	---	7.5	287	52	---	---	3.3	3.3
Maximum	7.7	7.8	---	7.7	893	135	---	---	6.0	6.0
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
Thu-01	336				3	3	8.0				0.34	0.34
Fri-02	301				3	3	8.11				0.40	0.40
Sat-03	223				3	3	7.36				0.55	0.55
Sun-04	287				3	3	8.66				0.35	0.35
Mon-05	278				3	3	7.14				0.33	0.33
Tue-06	252				3	3	7.04				0.32	0.32
Wed-07	310	154			2	2	7.50	5.48			0.29	0.29
Thu-08	294				2	2	6.96				0.29	0.29
Fri-09	306				3	3	7.36				0.28	0.28
Sat-10	286				3	3	7.45				0.30	0.30
Sun-11	315				3	3	7.96				1.00	1.00
Mon-12	300				4	4	7.28				0.62	0.62
Tue-13	330				3	3	7.54				0.28	0.28
Wed-14	269				3	3	7.76				0.31	0.31
Thu-15	403	197			4	4	8.96	4.97			0.39	0.39
Fri-16	331	22			3	3	8.46	2.12			0.34	0.34
Sat-17	295				3	3	7.44				0.33	0.33
Sun-18	242				4	4	7.12				0.38	0.38
Mon-19	260	104			3	3	6.18	4.63			0.32	0.32
Tue-20	339				3	3	6.66				0.28	0.28
Wed-21	276				3	3	7.15				0.34	0.34
Thu-22	318				3	3	8.66				0.34	0.34
Fri-23	314				3	3	7.06				0.91	0.91
Sat-24	307				3	3	7.44				0.75	0.75
Sun-25	285				3	3	7.62				0.33	0.33
Mon-26	337				3	3	7.56				0.30	0.30
Tue-27	261				2	2	7.59				0.30	0.30
Wed-28	216				3	3	6.99				0.34	0.34
Thu-29	292				2	2	7.03				0.31	0.31
Fri-30	285				3	3	7.26				0.29	0.29
Average	295	119			3.0	3.0	7.51	4.30			0.40	0.40
Minimum	216	22	---	---	2	2	6.18	2.12	---	---	0.28	0.28
Maximum	403	197	---	---	4	4	8.96	5.48	---	---	1.00	1.00
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
Thu-01	30.0				1.01	1.01	54.7			2.5
Fri-02	31.8				1.79	1.79	54.0			3.5
Sat-03	30.5				0.43	0.43	48.2			2.1
Sun-04	30.8				0.26	0.26	57.2			2.2
Mon-05	32.1				0.46	0.46	53.0			2.0
Tue-06	30.0				1.01	1.01	48.4			2.8
Wed-07	30.6	2.0			1.15	1.15	46.9	49.1		2.5
Thu-08	30.8				0.77	0.77	50.9			2.1
Fri-09	31.2				1.33	1.33	45.8			3.1
Sat-10	31.6				1.66	1.66	50.0			3.2
Sun-11	31.2				3.43	3.43	54.7			5.1
Mon-12	30.2				5.95	5.95	51.6			8.0
Tue-13	27.0				1.14	1.14	51.1			2.7
Wed-14	30.7				1.40	1.40	53.9			3.3
Thu-15	21.6	29.3			2.06	2.06	55.3	39.1		3.8
Fri-16	28.7	20.1			1.45	1.45	55.3	22.6		3.4
Sat-17	31.6				2.13	2.13	55.8			4.3
Sun-18	34.3				2.26	2.26	57.9			4.1
Mon-19	27.5	27.7			1.61	1.61	48.2	35.9		3.3
Tue-20	29.7				0.58	0.58	45.4			2.0
Wed-21	32.4				1.74	1.74	52.3			3.2
Thu-22	32.4				1.65	1.65	51.0			3.4
Fri-23	31.2				0.67	0.67	46.4			2.4
Sat-24	30.7				0.75	0.75	57.1			2.7
Sun-25	31.3				1.09	1.09	48.5			2.8
Mon-26	32.1				0.82	0.82	49.5			2.5
Tue-27	32.8				1.08	1.08	51.8			2.9
Wed-28	32.0				1.44	1.44	50.0			3.2
Thu-29	31.0				0.76	0.76	48.4			2.6
Fri-30	32.5				0.77	0.77	50.0			2.5
Average	30.7	19.8			1.42	1.42	51.4	36.7		3.1
Minimum	21.6	2.0	---	---	0.26	0.26	45.4	22.6	---	2.0
Maximum	34.3	29.3	---	---	5.95	5.95	57.9	49.1	---	8.0
GeoMean	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---

DATE	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
Thu-01				9.66	92.6			94.9				4
Fri-02				11.4	90.9			98.8				4
Sat-03				12.8	75.2			96.2				6
Sun-04				14.2	79.3			89.2				4
Mon-05				13.6	79.3			86.8				3
Tue-06				12.0	83.8			89.3				7
Wed-07	< 0.01	0.10		9.93	81.8	102		94.1		2.2		3
Thu-08				10.6	81.8			90.8				2
Fri-09				10.8	81.6			90.6				6
Sat-10				10.3	75.9			90.4				4
Sun-11				9.03	77.2			86.5				4
Mon-12				9.04	75.9			63.0				13
Tue-13				10.9	86.1			89.8				5
Wed-14	< 0.01			11.1	79.9			88.4				3
Thu-15		0.29		10.5	62.1	73.2		82.5		2.7		7
Fri-16		0.82		7.55	68.7	49.9		72.2	4.5	0.2		4
Sat-17		0.45		9.82	74.5			76.4				4
Sun-18				10.6	73.7			75.9				1
Mon-19		1.66		9.03	78.3	60.4		71.2		3.4		3
Tue-20				8.25	82.7			80.1				4
Wed-21	< 0.01			10.7	76.0			79.4				2
Thu-22				12.7	81.9			80.4				2
Fri-23				15.0	81.0			79.4				3
Sat-24				12.4	74.0			81.0				5
Sun-25				11.3	78.1			76.9				2
Mon-26				10.4	77.3			76.1	2.7			5
Tue-27				10.4	80.9			80.8				4
Wed-28	< 0.01			10.2	79.5			84.1				6
Thu-29				12.5	82.8			82.6				3
Fri-30				12.9	80.9			83.0				1
Average	< 0.01	0.66		11.0	79.1	71.4		83.7				
Minimum	< 0.01	0.10	---	7.55	62.1	49.9	---	63.0	2.7	0.2	---	1
Maximum	< 0.01	1.66	---	15.0	92.6	102	---	98.8	4.5	3.4	---	13
GeoMean	---	---	---	---	---	---	---	---	3.5	1.4	---	4
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
12	12	100%	642	642	100%

Report Comments

1	This is the amended report to the orginal Gold bar Plant Performance Report 2022-09.
	Reason for the amendment: The Sept 17 Outfall 30 sample results were removed since there was no flow through Outfall 30 that day.

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 + 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
AEP	Alberta Environment & Parks

Allan Gordon P.Eng for

Alfredo Suarez M.Sc.; P.Eng.
Senior Manager, Operations

Jeff Charrois PhD
Senior Manager, Analytical Operations & Process Development Teams