PROVIDING MORE EPCOR

Gold Bar Wastewater Treatment Plant
Plant Performance Report
December 2024

Digested Sludge: Total Monthly Volume (ML)	64.4

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
Sun-01	366.3	0.0	272.5	0.0	0.0	12.2	0.0	260.3	260.3
Mon-02	359.4	0.0	277.8	0.0	0.0	11.8	0.0	266.0	266.0
Tue-03	443.4	0.0	309.8	5.2	0.0	11.7	0.0	292.9	292.9
Wed-04	352.4	0.0	278.2	0.0	0.0	12.1	0.0	266.1	266.1
Thu-05	390.5	0.0	277.3	0.0	0.0	13.2	0.0	264.1	264.1
Fri-06	391.5	0.0	301.5	0.0	0.0	13.4	0.0	288.1	288.1
Sat-07	497.4	0.0	303.5	9.0	0.0	13.4	0.0	281.1	281.1
Sun-08	490.0	0.0	330.8	13.4	0.0	13.2	0.0	304.2	304.2
Mon-09	370.2	0.0	287.5	0.3	0.0	13.0	0.0	274.2	274.2
Tue-10	339.6	0.0	270.6	0.0	0.0	12.1	0.0	258.5	258.5
Wed-11	329.7	0.0	270.8	0.0	0.0	12.1	0.0	258.7	258.7
Thu-12	367.3	0.0	272.0	0.0	0.0	12.3	0.0	259.7	259.7
Fri-13	322.5	0.0	271.3	0.0	0.0	13.2	0.0	258.1	258.1
Sat-14	358.6	0.0	275.6	0.0	0.0	13.3	0.0	262.3	262.3
Sun-15	356.1	0.0	274.8	0.0	0.0	13.3	0.0	261.5	261.5
Mon-16	349.3	0.0	279.4	0.0	0.0	12.6	0.0	266.8	266.8
Tue-17	327.9	0.0	276.0	0.0	0.0	13.5	0.0	262.5	262.5
Wed-18	328.2	0.0	272.2	0.0	0.0	12.9	0.0	259.3	259.3
Thu-19	321.4	0.0	273.0	0.0	0.0	12.9	0.0	260.1	260.1
Fri-20	318.1	0.0	278.5	0.0	0.0	12.9	0.0	265.6	265.6
Sat-21	347.7	0.0	276.0	0.0	0.0	13.2	0.0	262.8	262.8
Sun-22	346.6	0.0	272.1	0.0	0.0	13.3	0.0	258.8	258.8
Mon-23	340.2	0.0	276.6	0.0	0.0	12.7	0.0	263.9	263.9
Tue-24	364.8	0.0	280.7	0.0	0.0	13.0	0.0	267.7	267.7
Wed-25	329.6	0.0	253.3	0.0	0.0	12.8	0.0	240.5	240.5
Thu-26	319.9	0.0	250.7	0.0	0.0	12.2	0.0	238.5	238.5
Fri-27	355.1	0.0	267.1	0.0	0.0	12.4	0.0	254.7	254.7
Sat-28	341.9	0.0	266.7	0.0	0.0	12.2	0.0	254.5	254.5
Sun-29	335.2	0.0	265.2	0.0	0.0	12.9	0.0	252.3	252.3
Mon-30	338.5	0.0	271.4	0.0	0.0	11.8	0.0	259.6	259.6
Tue-31	365.9	0.0	279.9	0.0	0.0	12.0	0.0	267.9	267.9
Average	361.1	0.0	277.8	0.9	0.0	12.7	0.0	264.2	264.2
Minimum	318.1	0.0	250.7	0.0	0.0	11.7	0.0	238.5	238.5
Maximum	497.4	0.0	330.8	13.4	0.0	13.5	0.0	304.2	304.2
GeoMean	---	---	---	---	---	---	---	---	---
TOTAL	---	0	8,613	28	0	394	0	8,191	8,191

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
Sun-01	7.5			7.5	320				4.2	4.2
Mon-02	7.6			7.5	328				3.1	3.1
Tue-03	7.4	7.6		7.6	352	210			3.4	3.4
Wed-04	7.5			7.5	320				3.7	3.7
Thu-05	7.6			7.4	288				2.7	2.7
Fri-06	7.6			7.5	296				2.8	2.8
Sat-07	7.5	7.5		7.4	344	144			3.0	3.0
Sun-08	7.4	7.4		7.3	252	168			3.0	3.0
Mon-09	7.5			7.5	291				3.3	3.3
Tue-10	7.4			7.5	280				2.7	2.7
Wed-11	7.5			7.5	332				2.4	2.4
Thu-12	7.6			7.5	292				2.7	2.7
Fri-13	7.6			7.5	292				3.1	3.1
Sat-14	7.5			7.5	340				3.5	3.5
Sun-15	7.5			7.5	396				2.9	2.9
Mon-16	7.6			7.6	316				3.0	3.0
Tue-17	7.5			7.5	396				3.4	3.4
Wed-18	7.6			7.4	371				3.6	3.6
Thu-19	7.5			7.5	272				3.3	3.3
Fri-20	7.7			7.5	328				3.8	3.8
Sat-21	7.5			7.5	316				3.9	3.9
Sun-22	7.6			7.4	324				3.7	3.7
Mon-23	7.6			7.5	312				2.9	2.9
Tue-24	7.5			7.5	312				3.8	3.8
Wed-25	7.6			7.5	391				3.6	3.6
Thu-26	7.6			7.4	368				3.5	3.5
Fri-27	7.5			7.4	368				2.9	2.9
Sat-28	7.6			7.5	386				3.5	3.5
Sun-29	7.6			7.5	328				3.3	3.3
Mon-30	7.6			7.6	312				3.8	3.8
Tue-31	7.5			7.6	296				4.1	4.1
Average	7.5	7.5	---	7.5	326	174	---	---	3.3	3.3
Minimum	7.4	7.4	---	7.3	252	144	---	---	2.4	2.4
Maximum	7.7	7.6	---	7.6	396	210	---	---	4.2	4.2
GeoMean	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---

DATE	BOD_5/$cBOD_5$ (mg/L) RAW	BOD_5 OUTFALL 30	BOD_5 OUTFALL 20	BOD_5 EPEPS	$cBOD_5$ OUTFALL 10 FEC	$cBOD_5$ OUTFALL 10 FE	TP (mg/L) RAW	TP OUTFALL 30	TP OUTFALL 20	TP EPEPS	TP OUTFALL 10 FEC	TP OUTFALL 10 FE
Sun-01	357				3	3	8.08				0.26	0.26
Mon-02	339				< 2	< 2	8.19				0.21	0.21
Tue-03	360	178			3	3	7.73	4.61			0.21	0.21
Wed-04	272				2	2	7.70				0.20	0.20
Thu-05	293				3	3	9.00				0.22	0.22
Fri-06	280				2	2	8.55				0.25	0.25
Sat-07	371	204			2	2	8.66	6.20			0.24	0.24
Sun-08	316	239			2	2	7.59	5.97			0.18	0.18
Mon-09	307				< 2	< 2	8.28				0.21	0.21
Tue-10	286				2	2	7.61				0.19	0.19
Wed-11	352				2	2	8.09				0.21	0.21
Thu-12	298				2	2	8.94				0.22	0.22
Fri-13	294				2	2	9.91				0.24	0.24
Sat-14	315				2	2	7.39				0.24	0.24
Sun-15	326				2	2	7.72				0.25	0.25
Mon-16	305				2	2	8.08				0.21	0.21
Tue-17	323				2	2	9.74				0.28	0.28
Wed-18	353				2	2	10.00				0.24	0.24
Thu-19	365				3	3	9.67				0.29	0.29
Fri-20	352				3	3	9.67				0.27	0.27
Sat-21	336				3	3	9.32				0.25	0.25
Sun-22	322				3	3	9.57				0.26	0.26
Mon-23	307				3	3	9.49				0.25	0.25
Tue-24	339				3	3	9.36				0.27	0.27
Wed-25	308				3	3	10.10				0.22	0.22
Thu-26	328				< 2	< 2	10.30				0.21	0.21
Fri-27	343				3	3	9.59				0.27	0.27
Sat-28	297				2	2	10.40				0.22	0.22
Sun-29	351				3	3	3.93				0.27	0.27
Mon-30	258				3	3	9.39				0.26	0.26
Tue-31	299				2	2	9.75				0.28	0.28
Average	321	207	---	---	2.4	2.4	8.77	5.59	---	---	0.24	0.24
Minimum	258	178	---	---	< 2	< 2	3.93	4.61	---	---	0.18	0.18
Maximum	371	239	---	---	3	3	10.40	6.20	---	---	0.29	0.29
GeoMean	---	---	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---

DATE	NH_3-N (mg/L) RAW	NH_3-N OUTFALL 30	NH_3-N OUTFALL 20	NH_3-N EPEPS	NH_3-N OUTFALL 10 FEC	NH_3-N OUTFALL 10 FE	un-ionized NH_3-N (mg/L) OUTFALL 30	un-ionized NH_3-N OUTFALL 20	un-ionized NH_3-N OUTFALL10	TKN (mg/L) RAW	TKN OUTFALL 30	TKN OUTFALL 20	TKN OUTFALL 10 FEC
Sun-01	37.9				3.13	3.13				67.0			4.4
Mon-02	40.4				2.14	2.14				64.5			3.6
Tue-03	33.5	35.3			1.66	1.66				53.1	47.5		3.3
Wed-04	38.7				1.52	1.52				61.3			3.0
Thu-05	37.1				1.63	1.63				56.8			3.1
Fri-06	34.1				1.70	1.70				58.0			3.1
Sat-07	32.3	30.3			1.89	1.89				54.8	47.0		3.4
Sun-08	30.5	36.6			1.70	1.70				49.6	53.5		3.1
Mon-09	35.2				1.32	1.32				54.5			2.4
Tue-10	30.9				1.17	1.17				50.8			2.5
Wed-11	38.1				1.32	1.32				48.8			2.4
Thu-12	39.6				1.46	1.46				53.1			2.7
Fri-13	41.4				3.68	3.68				55.8			5.1
Sat-14	36.7				1.34	1.34				54.5			2.6
Sun-15	36.8				1.30	1.30				54.7			2.8
Mon-16	39.5				1.44	1.44				53.8			2.6
Tue-17	41.2				1.85	1.85				60.4			3.4
Wed-18	41.2				2.09	2.09				62.1			3.3
Thu-19	42.5				2.13	2.13				60.6			3.4
Fri-20	41.3				1.89	1.89				58.8			3.3
Sat-21	42.4				1.69	1.69				64.0			3.1
Sun-22	44.6				2.00	2.00				64.0			3.5
Mon-23	42.8				1.73	1.73				60.2			2.9
Tue-24	41.0				1.91	1.91				63.1			3.5
Wed-25	44.9				1.83	1.83				66.3			3.1
Thu-26	45.2				1.90	1.90				66.0			3.1
Fri-27	38.4				2.09	2.09				61.5			3.4
Sat-28	43.8				2.08	2.08				59.7			3.3
Sun-29	41.3				1.99	1.99				10.0			3.3
Mon-30	41.0				1.94	1.94				58.5			3.3
Tue-31	40.7				1.95	1.95				58.5			3.4
Average	39.2	34.1	---	---	1.85	1.85	---	---	---	56.9	49.3	---	3.2
Minimum	30.5	30.3	---	---	1.17	1.17	---	---	---	10.0	47.0	---	2.4
Maximum	45.2	36.6	---	---	3.68	3.68	---	---	---	67.0	53.5	---	5.1
GeoMean	---	---	---	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---	---

DATE	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	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				8.85	91.3			93.5				6
Mon-02				7.88	110			93.4				7
Tue-03		0.05		7.29	255	450		154		1.5		1
Wed-04	< 0.01			7.15	141			239				7
Thu-05				8.26	250			171				5
Fri-06				7.73	334			294				9
Sat-07		0.04		7.28	250	367		304		2.7		8
Sun-08		0.02		7.31	333	387		311		1.6		6
Mon-09				7.01	175			284		0.8		7
Tue-10				7.16	119			193				5
Wed-11	< 0.01			8.01	133			145				5
Thu-12				8.66	142			155				5
Fri-13				12.3	137			149				9
Sat-14				10.3	121			146				7
Sun-15				10.0	103			123				5
Mon-16				9.32	109			110				6
Tue-17				11.0	105			117	2.4			6
Wed-18	< 0.01			11.8	105			114				6
Thu-19				11.1	109			109	2.9			12
Fri-20				11.6	126			110				6
Sat-21				11.2	148			130				6
Sun-22				10.8	134			143				8
Mon-23				11.2	167			138				7
Tue-24				10.4	186			167				9
Wed-25	< 0.01			10.0	146			170				9
Thu-26				12.2	105			128				6
Fri-27				13.1	138			113				5
Sat-28				11.9	115			132				9
Sun-29				12.0	99			110				9
Mon-30				12.0	101			109				12
Tue-31				10.8	95			105				12
Average	< 0.01	0.04	---	9.86	151	401	---	157			---	
Minimum	< 0.01	0.02	---	7.01	91.3	367	---	93.4	2.4	0.8	---	1
Maximum	< 0.01	0.05	---	13.1	334	450	---	311	2.9	2.7	---	12
GeoMean	---	---	---	---	---	---	---	---	2.6	1.5	---	6.6
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
20	20	100%	430	430	100%

Report Comments

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

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