PROVIDING MORE EPCOR

Gold Bar Wastewater Treatment Plant
Plant Performance Report
July 2022

Digested Sludge: Total Monthly Volume (ML)	74.5

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
Fri-01	374.5	0.0	295.9	0.0	0.0	10.4	0.0	285.5	285.5
Sat-02	1,112.6	0.0	480.6	167.6	0.0	10.4	0.0	302.6	302.6
Sun-03	392.3	0.0	329.4	0.0	0.0	10.5	0.0	318.9	318.9
Mon-04	410.1	0.0	321.2	0.0	0.0	10.5	0.0	310.7	310.7
Tue-05	1,768.6	26.0	709.2	358.3	0.0	10.8	0.0	340.1	340.1
Wed-06	565.5	0.0	415.6	57.0	0.0	10.8	0.0	347.8	347.8
Thu-07	1,211.7	0.0	411.8	64.9	0.0	10.7	0.0	336.2	336.2
Fri-08	765.2	0.0	395.3	50.6	0.0	10.7	0.0	334.0	334.0
Sat-09	617.1	0.0	358.1	24.7	0.0	10.4	0.0	323.0	323.0
Sun-10	392.0	0.0	320.2	0.0	0.0	10.3	0.0	309.9	309.9
Mon-11	388.7	0.0	319.9	0.0	0.0	10.6	0.0	309.3	309.3
Tue-12	378.9	0.0	314.6	0.0	0.0	10.7	0.0	303.9	303.9
Wed-13	373.6	0.0	305.8	0.0	0.0	10.6	0.0	295.2	295.2
Thu-14	356.7	0.0	299.1	0.0	0.0	10.8	0.0	288.3	288.3
Fri-15	351.1	0.0	299.0	0.0	0.0	10.7	0.0	288.3	288.3
Sat-16	349.6	0.0	287.3	0.0	0.0	10.4	0.0	276.9	276.9
Sun-17	377.9	0.0	289.3	0.0	0.0	10.7	0.0	278.6	278.6
Mon-18	360.2	0.0	291.6	0.0	0.0	10.5	0.0	281.1	281.1
Tue-19	348.7	0.0	290.2	0.0	0.0	10.5	0.0	279.7	279.7
Wed-20	330.5	0.0	280.0	0.0	0.0	10.5	0.0	269.5	269.5
Thu-21	324.1	0.0	277.8	0.0	0.0	10.7	0.0	267.1	267.1
Fri-22	330.4	0.0	273.6	0.0	0.0	10.9	0.0	262.7	262.7
Sat-23	330.0	0.0	265.4	0.0	0.0	10.8	0.0	254.6	254.6
Sun-24	332.3	0.0	271.0	0.0	0.0	10.8	0.0	260.2	260.2
Mon-25	561.7	0.0	306.5	16.0	0.0	10.9	0.0	279.6	279.6
Tue-26	321.8	0.0	278.8	0.0	0.0	10.7	0.0	268.1	268.1
Wed-27	325.2	0.0	277.4	0.0	0.0	10.8	0.0	266.6	266.6
Thu-28	331.6	0.0	282.9	0.0	0.0	11.3	0.0	271.6	271.6
Fri-29	327.8	0.0	285.1	0.0	0.0	10.2	0.0	274.9	274.9
Sat-30	313.6	0.0	265.9	0.0	0.0	9.3	0.0	256.6	256.6
Sun-31	1,320.5	0.0	356.7	79.1	0.0	10.8	0.0	266.8	266.8
Average	517.6	0.8	327.6	26.4	0.0	10.6	0.0	290.6	290.6
Minimum	313.6	0.0	265.4	0.0	0.0	9.3	0.0	254.6	254.6
Maximum	1,768.6	26.0	709.2	358.3	0.0	11.3	0.0	347.8	347.8
GeoMean	---	---	---	---	---	---	---	---	---
TOTAL	---	26	10,155	818	0	329	0	9,008	9,008

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
Fri-01	7.5			7.6	265				1.5	1.5
Sat-02	7.5	7.5		7.5	226	62			2.2	2.2
Sun-03	7.6			7.4	287				2.3	2.3
Mon-04	7.5			7.5	238				2.7	2.7
Tue-05	7.5	7.5		7.4	344	67			3.3	3.3
Wed-06	7.6	7.5		7.4	320	64			2.9	2.9
Thu-07	7.7	7.7		7.5	456	109			2.1	2.1
Fri-08	7.5	7.6		7.6	304	38			3.2	3.2
Sat-09	7.7	7.6		7.6	308	63			2.4	2.4
Sun-10	7.6			7.6	286				2.4	2.4
Mon-11	7.6			7.6	300				2.5	2.5
Tue-12	7.5			7.6	344				2.1	2.1
Wed-13	7.5			7.6	328				2.5	2.5
Thu-14	7.7			7.7	368				2.6	2.6
Fri-15	7.6			7.6	348				2.0	2.0
Sat-16	7.7			7.7	337				2.4	2.4
Sun-17	7.6			7.8	380				3.3	3.3
Mon-18	7.5			7.7	368				3.4	3.4
Tue-19	7.6			7.7	436				3.3	3.3
Wed-20	7.8			7.7	437				2.5	2.5
Thu-21	7.4			7.7	400				2.9	2.9
Fri-22	7.5			7.7	296				2.8	2.8
Sat-23	7.6			7.7	312				3.0	3.0
Sun-24	7.5			7.7	324				3.3	3.3
Mon-25	7.5	7.7		7.7	408	96			5.4	5.4
Tue-26	7.6			7.7	276				4.4	4.4
Wed-27	7.5			7.7	300				2.4	2.4
Thu-28	7.4			7.7	296				3.2	3.2
Fri-29	7.5			7.6	286				2.3	2.3
Sat-30	7.5			7.7	314				1.9	1.9
Sun-31	7.3	7.3		7.6	568	58			2.6	2.6
Average	7.6	7.6		7.6	337	70			2.8	2.8
Minimum	7.3	7.3	---	7.4	226	38	---	---	1.5	1.5
Maximum	7.8	7.7	---	7.8	568	109	---	---	5.4	5.4
GeoMean	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---

DATE	BOD_5/$cBOD_5$ (mg/L) RAW BOD_5	BOD_5 OUTFALL 30	BOD_5 OUTFALL 20	BOD_5 EPEPS	BOD_5 OUTFALL 10 FEC $cBOD_5$	BOD_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
Fri-01	209				< 2	2	4.64				0.16	0.16
Sat-02	148	53			< 2	2	2.80	2.20			0.10	0.10
Sun-03	227				< 2	2	4.15				0.06	0.06
Mon-04	238				< 2	2	5.14				0.16	0.16
Tue-05	163	44			< 2	2	3.45	1.46			0.17	0.17
Wed-06	185	65			< 2	2	4.38	2.82			0.14	0.14
Thu-07	211	78			2	2	4.90	2.99			0.13	0.13
Fri-08	203	67			< 2	2	4.04	2.16			0.12	0.12
Sat-09	218	81			< 2	2	4.90	3.16			0.14	0.14
Sun-10	213				< 2	2	4.73				0.15	0.15
Mon-11	272				2	2	5.05				0.16	0.16
Tue-12	283				< 2	2	5.82				0.16	0.16
Wed-13	273				2	2	5.85				0.16	0.16
Thu-14	299				< 2	2	5.87				0.18	0.18
Fri-15	279				< 2	2	6.38				0.18	0.18
Sat-16	254				2	2	5.99				0.16	0.16
Sun-17	253				< 2	2	6.55				0.17	0.17
Mon-18	294				< 2	2	6.23				0.18	0.18
Tue-19	326				2	2	7.48				0.20	0.20
Wed-20	287				2	2	6.87				0.20	0.20
Thu-21	335				2	2	7.27				0.20	0.20
Fri-22	314				2	2	6.19				0.20	0.20
Sat-23	256				2	2	6.11				0.22	0.22
Sun-24	283				3	3	6.12				0.70	0.70
Mon-25	304	140			2	2	6.71	5.48			0.30	0.30
Tue-26	262				2	2	6.19				0.21	0.21
Wed-27	246				< 2	2	6.24				0.19	0.19
Thu-28	258				2	2	6.10				0.18	0.18
Fri-29	251				< 2	2	5.83				0.18	0.18
Sat-30	248				< 2	2	6.03				0.18	0.18
Sun-31	242	80			2	2	5.72	2.32			0.19	0.19
Average	253	76			2.0	2.0	5.60	2.82			0.19	0.19
Minimum	148	44	---	---	< 2	2	2.80	1.46	---	---	0.06	0.06
Maximum	335	140	---	---	3	3	7.48	5.48	---	---	0.70	0.70
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	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
Fri-01	29.8				0.30	0.30	44.6			1.60				9.34	100.0			101				6
Sat-02	18.6	20.9			0.13	0.13	32.4	25.0		1.40		0.35		8.26	63.9	60.3		97.1		0.9		3
Sun-03	16.2				0.20	0.20	44.3			1.40				9.13	82.1			76.0				4
Mon-04	27.6				0.29	0.29	47.6			1.90				9.91	84.4			87.1				13
Tue-05	11.7	15.8			0.22	0.22	27.3	21.5		1.60		1.00		5.93	44.8	54.8		83.0		1.2		8
Wed-06	21.2	28.5			0.11	0.11	43.2	38.2		1.40	< 0.01	0.87		6.52	81.3	92.6		71.0		0.6		10
Thu-07	21.4	25.2			0.30	0.30	38.4	32.9		1.60		0.37		9.82	83.1	80.7		92.1	1.4	0.9		3
Fri-08	17.6	21.1			0.22	0.22	32.0	29.2		1.50		0.25		7.71	84.1	81.9		86.1		0.4		10
Sat-09	23.1	26.2			0.15	0.15	40.4	32.2		1.40		0.50		9.16	85.8	90.2		94.6		1.6		1
Sun-10	20.9				0.22	0.22	37.0			1.70				8.41	79.7			91.1				2
Mon-11	19.1				0.30	0.30	41.5			1.70				9.48	90.1			94.3	2.2			6
Tue-12	23.1				0.22	0.22	47.2			2.20				8.96	87.0			100				6
Wed-13	21.3				0.30	0.30	47.2			1.80	< 0.01			7.56	92.0			100				8
Thu-14	27.3				0.27	0.27	47.1			1.90				7.26	96.7			102				4
Fri-15	25.7				0.68	0.68	50.0			2.30				8.03	89.0			104				6
Sat-16	28.0				0.78	0.78	49.7			2.20				8.17	83.6			101				4
Sun-17	23.9				0.65	0.65	56.2			2.50				9.01	85.4			94.9				2
Mon-18	28.8				0.81	0.81	55.0			2.50				9.40	87.2			92.4				6
Tue-19	29.2				1.60	1.60	59.1			3.80				7.31	90.7			95.1				6
Wed-20	25.0				0.49	0.49	54.6			2.10	< 0.01			8.32	92.0			101.0				2
Thu-21	33.8				0.38	0.38	57.3			2.00				8.19	91.2			108.0				1
Fri-22	31.6				0.46	0.46	52.3			2.00				7.80	101			109.0				2
Sat-23	32.0				0.52	0.52	50.1			2.00				8.51	94.0			101.0				1
Sun-24	31.0				0.72	0.72	50.5			2.50				8.88	82.8			95.6				6
Mon-25	30.3	40.6			0.38	0.38	52.7	52.5		2.00		0.29		9.12	94.0	104		92.7		1.2		6
Tue-26	23.6				0.48	0.48	51.8			2.20				7.57	87.6			94.6				16
Wed-27	31.2				0.20	0.20	47.5			1.50	< 0.01			9.52	102			95.3				5
Thu-28	30.2				0.24	0.24	50.2			1.70				9.75	84.4			96.5				2
Fri-29	50.3				0.32	0.32	46.7			1.80				9.50	88.4			91.8				3
Sat-30	28.3				0.20	0.20	48.9			1.60				8.98	83.4			88.0				3
Sun-31	18.6	18.0			0.14	0.14	42.6	27.4		1.60		0.48		8.03	58.4	61.4		86.3		0.8		5
Average	25.8	24.5			0.40	0.40	46.6	32.4		1.92	< 0.01	0.51		8.50	85.5	78.2		94.3				
Minimum	11.7	15.8	---	---	0.11	0.11	27.3	21.5	---	1.40	< 0.01	0.25	---	5.93	44.8	54.8	---	71.0	1.4	0.4	---	1
Maximum	50.3	40.6	---	---	1.60	1.60	59.1	52.5	---	3.80	< 0.01	1.00	---	9.91	102	104	---	109	2.2	1.6	---	16
GeoMean	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1.8	0.9	---	4.1
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
79	79	100%	612	612	100%

Report Comments

1-Jul-22	On July 1, 2022, due to raw water auto-sampler issue, 4 grab samples were collected from 00:00-08:00 and the rest of the day was a
	composite sample. The results of July 1 on this report were calculated from the results of all the associated grab samples and the
	partial composite sample using weighted averages based on the flow rate data.

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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