PROVIDING MORE EPCOR

Gold Bar Wastewater Treatment Plant
Plant Performance Report
September 2020

Digested Sludge: Total Monthly Volume (ML)	65.7

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
Tue-01	320.7	0.0	274.0	0.0	0.0	11.4	0.0	262.6	262.6
Wed-02	535.3	0.0	325.4	12.4	0.0	10.6	0.0	302.4	302.4
Thu-03	341.7	0.0	275.5	0.0	0.0	10.5	0.0	265.0	265.0
Fri-04	335.5	0.0	274.3	0.0	0.0	11.1	0.0	263.2	263.2
Sat-05	325.2	0.0	258.8	0.0	0.0	9.8	0.0	249.0	249.0
Sun-06	329.0	0.0	254.5	0.0	0.0	10.5	0.0	244.0	244.0
Mon-07	494.5	0.0	280.5	9.8	0.0	10.8	0.0	259.9	259.9
Tue-08	350.9	0.0	272.7	0.0	0.0	10.6	0.0	262.1	262.1
Wed-09	339.9	0.0	270.6	0.0	0.0	10.7	0.0	259.9	259.9
Thu-10	331.9	0.0	270.2	0.0	0.0	10.9	0.0	259.3	259.3
Fri-11	322.5	0.0	269.1	0.0	0.0	11.0	0.0	258.1	258.1
Sat-12	330.5	0.0	258.6	0.0	0.0	10.8	0.0	247.8	247.8
Sun-13	350.8	0.0	260.3	0.0	0.0	11.7	0.0	248.6	248.6
Mon-14	331.6	0.0	267.4	0.0	0.0	11.5	0.0	255.9	255.9
Tue-15	337.4	0.0	266.3	0.0	0.0	11.6	0.0	254.7	254.7
Wed-16	337.9	0.0	266.9	0.0	0.0	10.7	0.0	256.2	256.2
Thu-17	326.4	0.0	267.4	0.0	0.0	10.9	0.0	256.5	256.5
Fri-18	324.8	0.0	266.4	0.0	0.0	10.8	0.0	255.6	255.6
Sat-19	332.8	0.0	259.5	0.0	0.0	11.1	0.0	248.4	248.4
Sun-20	340.9	0.0	261.1	0.0	0.0	11.1	0.0	250.0	250.0
Mon-21	327.4	0.0	269.5	0.0	0.0	11.3	0.0	258.2	258.2
Tue-22	326.1	0.0	261.3	0.0	0.0	11.5	0.0	249.8	249.8
Wed-23	324.1	0.0	264.0	0.0	0.0	12.1	0.0	251.9	251.9
Thu-24	319.4	0.0	263.0	0.0	0.0	11.8	0.0	251.2	251.2
Fri-25	316.9	0.0	265.0	0.0	0.0	11.6	0.0	253.4	253.4
Sat-26	338.1	0.0	256.3	0.0	0.0	11.7	0.0	244.6	244.6
Sun-27	336.5	0.0	256.8	0.0	0.0	11.6	0.0	245.2	245.2
Mon-28	326.3	0.0	256.9	0.0	0.0	12.0	0.0	244.9	244.9
Tue-29	315.1	0.0	255.0	0.0	0.0	11.8	0.0	243.2	243.2
Wed-30	318.6	0.0	264.0	0.0	0.0	12.6	0.0	251.4	251.4
Average	343.0	0.0	267.0	0.7	0.0	11.2	0.0	255.1	255.1
Minimum	315.1	0.0	254.5	0.0	0.0	9.8	0.0	243.2	243.2
Maximum	535.3	0.0	325.4	12.4	0.0	12.6	0.0	302.4	302.4
GeoMean	---	---	---	---	---	---	---	---	---
TOTAL	---	0	8,011	22	0	336	0	7,653	7,653

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 (mg/L): OUTFALL 30	TSS (mg/L): OUTFALL 20	TSS (mg/L): EPEPS	TSS (mg/L): OUTFALL 10 FEC	TSS (mg/L): OUTFALL 10 FE
Tue-01	7.7			7.6	322				4.5	4.5
Wed-02	7.4	7.6		7.5	380	66			4.2	4.2
Thu-03	7.5			7.5	500				3.8	3.8
Fri-04	7.6			7.5	592				4.6	4.6
Sat-05	7.6			7.5	572				3.5	3.5
Sun-06	7.7			7.6	396				3.8	3.8
Mon-07	7.6	7.6		7.5	420	65			4.7	4.7
Tue-08	7.6			7.6	416				4.2	4.2
Wed-09	7.6			7.5	476				4.2	4.2
Thu-10	7.5			7.8	468				4.0	4.0
Fri-11	7.6			7.5	452				5.2	5.2
Sat-12	7.6			7.6	320				3.8	3.8
Sun-13	7.6			7.6	376				4.2	4.2
Mon-14	7.6			7.7	432				3.4	3.4
Tue-15	7.6			7.6	452				4.4	4.4
Wed-16	7.6			7.6	436				4.2	4.2
Thu-17	7.6			7.6	508				3.9	3.9
Fri-18	7.6			7.6	432				3.7	3.7
Sat-19	7.6			7.7	288				3.5	3.5
Sun-20	7.6			7.7	356				3.2	3.2
Mon-21	7.7			7.6	512				3.6	3.6
Tue-22	7.6			7.6	856				3.5	3.5
Wed-23	7.7			7.5	440				3.6	3.6
Thu-24	7.6			7.5	468				4.5	4.5
Fri-25	7.6			7.5	488				3.8	3.8
Sat-26	7.6			7.5	264				3.4	3.4
Sun-27	7.6			7.5	376				2.5	2.5
Mon-28	7.7			7.6	432				3.6	3.6
Tue-29	7.6			7.6	360				3.5	3.5
Wed-30	7.6			7.7	488				3.2	3.2
Average	7.6	7.6	---	7.6	443	66	---	---	3.9	3.9
Minimum	7.4	7.6	---	7.5	264	65	---	---	2.5	2.5
Maximum	7.7	7.6	---	7.8	856	66	---	---	5.2	5.2
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	TP (mg/L): RAW	TP: OUTFALL 30	TP: OUTFALL 20	TP: EPEPS	TP: OUTFALL 10 FEC	TP: OUTFALL 10 FE
Tue-01	245				< 2.0	< 2.0	7.18				0.24	0.24
Wed-02	250	127			2.0	2.0	6.61	4.20			0.25	0.25
Thu-03	262				2.0	2.0	7.08				0.25	0.25
Fri-04	319				< 2.0	< 2.0	8.02				0.24	0.24
Sat-05	276				2.0	2.0	7.70				0.26	0.26
Sun-06	266				2.0	2.0	7.15				0.25	0.25
Mon-07	297	127			2.0	2.0	7.98	5.18			0.24	0.24
Tue-08	317				2.0	2.0	10.1				0.24	0.24
Wed-09	239				2.0	2.0	7.86				0.23	0.23
Thu-10	354				3.0	3.0	8.34				0.25	0.25
Fri-11	304				< 2.0	< 2.0	7.25				0.24	0.24
Sat-12	301				3.0	3.0	7.17				0.25	0.25
Sun-13	262				2.0	2.0	7.43				0.25	0.25
Mon-14	280				2.0	2.0	7.33				0.23	0.23
Tue-15	248				3.0	3.0	8.60				0.28	0.28
Wed-16	252				3.0	3.0	8.07				0.27	0.27
Thu-17	275				3.0	3.0	8.15				0.27	0.27
Fri-18	280				2.0	2.0	8.32				0.25	0.25
Sat-19	292				2.0	2.0	8.02				0.25	0.25
Sun-20	257				2.0	2.0	7.83				0.24	0.24
Mon-21	273				2.0	2.0	9.10				0.26	0.26
Tue-22	397				< 2.0	< 2.0	14.6				0.26	0.26
Wed-23	293				< 2.0	< 2.0	10.4				0.26	0.26
Thu-24	256				< 2.0	< 2.0	10.3				0.28	0.28
Fri-25	287				2.0	2.0	10.8				0.28	0.28
Sat-26	276				3.0	3.0	10.1				0.27	0.27
Sun-27	331				3.0	3.0	11.1				0.26	0.26
Mon-28	223				3.0	3.0	9.14				0.27	0.27
Tue-29	257				3.0	3.0	7.27				0.23	0.23
Wed-30	346				4.0	4.0	8.63				0.25	0.25
Average	284	127	---	---	2.4	2.4	8.59	4.69	---	---	0.25	0.25
Minimum	223	127	---	---	< 2.0	< 2.0	6.61	4.20	---	---	0.23	0.23
Maximum	397	127	---	---	4.0	4.0	14.6	5.18	---	---	0.28	0.28
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_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
Tue-01	37.9				1.15	1.15	60.6			2.9				11.4
Wed-02	31.1	31.0			0.72	0.72	51.5	41.8		2.3	0.02	0.68		10.3
Thu-03	16.4				1.30	1.30	54.8			2.8				10.3
Fri-04	35.7				1.64	1.64	55.7			3.2				10.8
Sat-05	37.3				1.47	1.47	63.7			2.8				11.4
Sun-06	33.7				1.53	1.53	53.9			3.5				12.2
Mon-07	35.6	43.1			2.06	2.06	64.2	52.2		2.6		2.56		12.4
Tue-08	38.2				1.25	1.25	69.0			3.4				11.1
Wed-09	38.0				1.65	1.65	54.0			3.3	< 0.01			11.1
Thu-10	39.8				2.02	2.02	69.2			3.6				10.8
Fri-11	39.1				1.92	1.92	57.9			3.2				10.3
Sat-12	35.6				1.97	1.97	54.1			3.4				11.8
Sun-13	42.8				2.80	2.80	60.2			4.1				13.1
Mon-14	36.0				2.36	2.36	58.6			3.8				11.4
Tue-15	41.6				2.84	2.84	65.7			4.9				12.4
Wed-16	44.0				2.82	2.82	65.4			5.1	< 0.01			12.5
Thu-17	43.4				2.42	2.42	63.1			4.1				13.1
Fri-18	40.8				2.45	2.45	64.2			4.2				12.9
Sat-19	41.8				2.09	2.09	60.8			3.7				12.5
Sun-20	42.2				1.96	1.96	63.8			3.8				13.2
Mon-21	42.4				1.61	1.61	66.4			3.2				13.0
Tue-22	25.6				1.66	1.66	88.0			3.5				14.1
Wed-23	44.2				1.61	1.61	69.6			3.7	0.05			14.9
Thu-24	45.3				1.03	1.03	64.1			3.0				15.8
Fri-25	43.9				0.72	0.72	65.9			2.4				13.8
Sat-26	44.5				1.31	1.31	63.3			3.2				13.9
Sun-27	51.8				2.39	2.39	71.2			4.0				13.1
Mon-28	41.6				1.98	1.98	60.4			3.9				12.9
Tue-29	31.5				0.18	0.18	50.9			1.9				9.6
Wed-30	31.4				0.26	0.26	60.4			2.0	< 0.01			7.93
Average	38.4	37.1	---	---	1.71	1.71	62.4	47.0	---	3.4	0.02	1.62	---	12.1
Minimum	16.4	31.0	---	---	0.18	0.18	50.9	41.8	---	1.9	< 0.01	0.68	---	7.93
Maximum	51.8	43.1	---	---	2.84	2.84	88.0	52.2	---	5.1	0.05	2.56	---	15.8
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
Tue-01	88			89				7
Wed-02	76	78		85		1.4		12
Thu-03	84			83				10
Fri-04	87			90				6
Sat-05	85			92				6
Sun-06	81			88				11
Mon-07	80	90		84		2.2		5
Tue-08	92			84				4
Wed-09	85			90				7
Thu-10	94			90				11
Fri-11	93			91				4
Sat-12	80			88				6
Sun-13	80			85				7
Mon-14	77			83				7
Tue-15	75			80				9
Wed-16	83			89				16
Thu-17	83			91				8
Fri-18	71			91	2.4			4
Sat-19	80			80				9
Sun-20	74			89				8
Mon-21	85			85				10
Tue-22	73			88				4
Wed-23	80			86				10
Thu-24	79			86	2.5			9
Fri-25	76			84				9
Sat-26	76			85				4
Sun-27	78			83				8
Mon-28	77			79				14
Tue-29	78			85				11
Wed-30	80			82				6
Average	81	84	---	86	---	---	---	---
Minimum	71	78	---	79	2.4	1.4	---	4
Maximum	94	90	---	92	2.5	2.2	---	16
GeoMean	---	---	---	---	2.4	1.8	---	8
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
6	6	100%	812	812	100%

Report Comments

1	OUTFALL 10 - September 11: Analysis of the sample exceeded the recommended hold time for BOD.

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

Alfredo Suarez
Senior Manager, Operations

Steve Craik
Director, Quality Assurance and Environment