PROVIDING MORE EPCOR

Gold Bar Wastewater Treatment Plant
Plant Performance Report
January 2020

Digested Sludge: Total Monthly Volume (ML)	72.6

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
Wed-01	337.9	0.0	233.6	0.0	0.0	12.9	0.0	220.7	220.7
Thu-02	340.2	0.0	242.6	0.0	0.0	12.4	0.0	230.2	230.2
Fri-03	341.9	0.0	246.8	0.0	0.0	11.9	0.0	234.9	234.9
Sat-04	353.3	0.0	242.9	0.0	0.0	12.3	0.0	230.6	230.6
Sun-05	359.1	0.0	246.0	0.0	0.0	12.1	0.0	233.9	233.9
Mon-06	343.3	0.0	251.4	0.0	0.0	12.0	0.0	239.4	239.4
Tue-07	331.9	0.0	246.8	0.0	0.0	12.3	0.0	234.5	234.5
Wed-08	340.2	0.0	242.7	0.0	0.0	12.3	0.0	230.4	230.4
Thu-09	331.6	0.0	244.6	0.0	0.0	12.4	0.0	232.2	232.2
Fri-10	330.4	0.0	248.6	0.0	0.0	12.5	0.0	236.1	236.1
Sat-11	352.9	0.0	244.4	0.0	0.0	12.4	0.0	232.0	232.0
Sun-12	363.5	0.0	247.7	0.0	0.0	12.6	0.0	235.1	235.1
Mon-13	363.7	0.0	248.7	0.0	0.0	12.2	0.0	236.5	236.5
Tue-14	329.6	0.0	248.8	0.0	0.0	11.9	0.0	236.9	236.9
Wed-15	344.7	0.0	247.1	0.0	0.0	11.2	0.0	235.9	235.9
Thu-16	332.5	0.0	247.7	0.0	0.0	11.0	0.0	236.7	236.7
Fri-17	326.8	0.0	248.6	0.0	0.0	11.2	0.0	237.4	237.4
Sat-18	377.7	0.0	247.9	0.0	0.0	11.4	0.0	236.5	236.5
Sun-19	378.1	0.0	251.3	0.0	0.0	11.5	0.0	239.8	239.8
Mon-20	360.7	0.0	252.0	0.0	0.0	11.8	0.0	240.2	240.2
Tue-21	341.6	0.0	246.5	0.0	0.0	11.5	0.0	235.0	235.0
Wed-22	361.3	0.0	249.1	0.0	0.0	11.2	0.0	237.9	237.9
Thu-23	357.4	0.0	245.1	0.0	0.0	11.7	0.0	233.4	233.4
Fri-24	386.1	0.0	268.4	0.0	0.0	11.1	0.0	257.3	257.3
Sat-25	364.6	0.0	251.8	0.0	0.0	11.5	0.0	240.3	240.3
Sun-26	370.5	0.0	251.3	0.0	0.0	11.5	0.0	239.8	239.8
Mon-27	352.2	0.0	252.8	0.0	0.0	10.9	0.0	241.9	241.9
Tue-28	344.9	0.0	244.6	0.0	0.0	10.8	0.0	233.8	233.8
Wed-29	361.2	0.0	254.6	0.0	0.0	10.6	0.0	244.0	244.0
Thu-30	333.7	0.0	246.7	0.0	0.0	10.7	0.0	236.0	236.0
Fri 31	330.9	0.0	252.3	0.0	0.0	10.3	0.0	242.0	242.0
Average	349.5	0.0	248.2	0.0	0.0	11.7	0.0	236.5	236.5
Minimum	326.8	0.0	233.6	0.0	0.0	10.3	0.0	220.7	220.7
Maximum	386.1	0.0	268.4	0.0	0.0	12.9	0.0	257.3	257.3
GeoMean	—	—	—	—	—	—	—	—	—
TOTAL	—	0	7,693	0	0	362	0	7,331	7,331

Liquid Stream Quality

DATE	pH@25°C RAW	pH OUTFALL 30	pH OUTFALL 20	pH OUTFALL 10 FEC	TSS (mg/L) RAW	TSS OUTFALL 30	TSS OUTFALL 20	TSS EPEPS	TSS OUTFALL 10 FEC	TSS OUTFALL 10 FE
Wed-01	7.6			7.7	328				3.2	3.2
Thu-02	7.6			7.7	328				3.2	3.2
Fri-03	7.6			7.7	336				3.2	3.2
Sat-04	7.6			7.7	352				3.7	3.7
Sun-05	7.6			7.8	300				2.9	2.9
Mon-06	7.5			7.6	340				2.7	2.7
Tue-07	7.5			7.6	288				3.1	3.1
Wed-08	7.5			7.6	304				2.6	2.6
Thu-09	7.6			7.8	332				2.8	2.8
Fri-10	7.6			7.7	300				3.5	3.5
Sat-11	7.6			7.7	348				4.0	4.0
Sun-12	7.5			7.7	280				4.1	4.1
Mon-13	7.5			7.6	380				6.7	6.7
Tue-14	7.5			7.7	317				5.3	5.3
Wed-15	7.6			7.7	296				5.1	5.1
Thu-16	7.5			7.6	312				7.4	7.4
Fri-17	7.5			7.6	296				5.0	5.0
Sat-18	7.5			7.7	300				10.0	10.0
Sun-19	7.6			7.7	392				8.3	8.3
Mon-20	7.5			7.5	420				4.8	4.8
Tue-21	7.6			7.8	344				3.7	3.7
Wed-22	7.5			7.7	324				2.9	2.9
Thu-23	7.5			7.8	340				2.4	2.4
Fri-24	7.7			7.7	347				3.0	3.0
Sat-25	7.6			7.8	332 *				3.5	3.5
Sun-26	7.6			7.7	300				4.0	4.0
Mon-27	7.5			7.7	328				3.7	3.7
Tue-28	7.4			7.6	308				5.4	5.4
Wed-29	7.6			7.7	340				3.8	3.8
Thu-30	7.6			7.8	360				3.7	3.7
Fri 31	7.5			7.7	320				3.5	3.5
Average	7.6	—	—	7.7	329	—	—	—	4.2	4.2
Minimum	7.4	—	—	7.5	280	—	—	—	2.4	2.4
Maximum	7.7	—	—	7.8	420	—	—	—	10.0	10.0
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
Wed-01	328				1.0	1.0	7.28				0.25	0.25
Thu-02	372				3.0	3.0	8.31				0.22	0.22
Fri-03	367				2.0	2.0	8.49				0.24	0.24
Sat-04	302				3.0	3.0	7.93				0.26	0.26
Sun-05	342				2.0	2.0	8.55				0.23	0.23
Mon-06	354				3.0	3.0	8.16				0.18	0.18
Tue-07	370				2.0	2.0	7.20				0.22	0.22
Wed-08	310				2.0	2.0	7.29				0.24	0.24
Thu-09	328				2.0	2.0	8.41				0.23	0.23
Fri-10	360				2.0	2.0	7.79				0.26	0.26
Sat-11	375				3.0	3.0	8.75				0.28	0.28
Sun-12	311				3.0	3.0	8.21				0.28	0.28
Mon-13	410				4.0	4.0	9.25				0.52	0.52
Tue-14	338				3.0	3.0	8.48				0.39	0.39
Wed-15	364				3.0	3.0	8.25				0.29	0.29
Thu-16	350				4.0	4.0	8.40				0.41	0.41
Fri-17	361				3.0	3.0	8.54				0.34	0.34
Sat-18	398				4.0	4.0	8.30				0.50	0.50
Sun-19	365				4.0	4.0	7.48				0.45	0.45
Mon-20	345				3.0	3.0	9.81				0.30	0.30
Tue-21	348				3.0	3.0	7.92				0.24	0.24
Wed-22	370				3.0	3.0	8.32				0.22	0.22
Thu-23	362				2.0	2.0	8.19				0.26	0.26
Fri-24	302				2.0	2.0	8.06				0.24	0.24
Sat-25	331				1.0	1.0	7.73				0.23	0.23
Sun-26	307				2.0	2.0	7.98				0.24	0.24
Mon-27	282				2.0	2.0	7.81				0.25	0.25
Tue-28	371				2.0	2.0	7.12				0.28	0.28
Wed-29	358				3.0	3.0	7.38				0.27	0.27
Thu-30	331				3.0	3.0	7.39				0.30	0.30
Fri 31	320				2.0	2.0	7.58				0.29	0.29
Average	348	—	—	—	2.6	2.6	7.36	—	—	—	0.29	0.29
Minimum	282	—	—	—	1.0	1.0	7.39	—	—	—	0.18	0.18
Maximum	410	—	—	—	4.0	4.0	7.58	—	—	—	0.52	0.52
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) OUT-FAL 30	un-ionized OUT-FAL 20	un-ionized OUT-FAL 10
Wed-01	42.7				1.45	1.46			
Thu-02	42.3				1.74	1.74			
Fri-03	41.1				1.53	1.53			
Sat-04	40.6				1.51	1.51			
Sun-05	40.6				1.85	1.85			
Mon-06	40.7				1.69	1.69			
Tue-07	38.7				1.66	1.66			
Wed-08	39.0				1.38	1.38			
Thu-09	42.7				2.28	2.28			
Fri-10	43.1				2.84	2.84			
Sat-11	43.6				3.02	3.02			
Sun-12	42.2				3.49	3.49			
Mon-13	44.0				4.56	4.56			
Tue-14	44.5				5.7	5.70			
Wed-15	42.7				3.15	3.15			
Thu-16	42.6				3.43	3.43			
Fri-17	43.6				4.08	4.08			
Sat-18	43.3				4.50	4.50			
Sun-19	39.2				4.30	4.30			
Mon-20	40.2				2.66	2.66			
Tue-21	38.2				2.24	2.24			
Wed-22	42.6				3.16	3.16			
Thu-23	36.8				3.74	3.74			
Fri-24	34.7				3.52	3.52			
Sat-25	34.8				5.17	5.17			
Sun-26	34.9				3.6	3.60			
Mon-27	35.1				3.83	3.83			
Tue-28	35.4				2.55	2.55			
Wed-29	31.3				2.74	2.74			
Thu-30	33.9				4.19	4.19			
Fri 31	36.6				4.34	4.34			
Average	39.7	—	—	—	3.09	3.09	—	—	—
Minimum	31.3	—	—	—	1.38	1.38	—	—	—
Maximum	44.5	—	—	—	5.70	5.70	—	—	—
GeoMean	—	—	—	—	—	—	—	—	—
TOTAL	—	—	—	—	—	—	—	—	—

DATE	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
Wed-01	62.8			3.52	0.08			8.99
Thu-02	67.8			3.34				9.19
Fri-03	66.0			3.44				8.02
Sat-04	62.4			3.23				8.12
Sun-05	65.2			3.77				8.39
Mon-06	68.0			2.28				8.73
Tue-07	60.6			3.64				8.76
Wed-08	62.4			3.08	0.08			8.03
Thu-09	65.4			3.95				8.95
Fri-10	65.8			4.62				8.45
Sat-11	65.0			4.90				7.92
Sun-12	63.8			5.50				7.28
Mon-13	65.4			7.25				5.49
Tue-14	65.5			7.37				5.99
Wed-15	64.5			4.57	0.15			5.81
Thu-16	68.7			5.73				5.72
Fri-17	66.4			6.44				6.14
Sat-18	65.1			6.89				6.07
Sun-19	61.6			6.74				6.64
Mon-20	62.5			4.87				6.04
Tue-21	57.0			3.95				6.77
Wed-22	62.3			5.20	0.06			6.89
Thu-23	61.0			5.67				6.24
Fri-24	60.2			5.83				7.18
Sat-25	58.9			6.27				6.82
Sun-26	56.4			5.46				7.12
Mon-27	54.7			4.67				5.92
Tue-28	53.2			4.34				6.09
Wed-29	57.1			4.97	0.08			5.68
Thu-30	62.7			5.97				5.65
Fri 31	59.4			6.35				6.23
Average	62.5	—	—	4.97	0.15	—	—	7.07
Minimum	53.2	—	—	2.28	0.08	—	—	5.49
Maximum	68.7	—	—	7.37	0.15	—	—	9.2
GeoMean	—	—	—	—	—	—	—	—
TOTAL	—	—	—	—	—	—	—	—

DATE	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
Wed-01	95.5			107				9
Thu-02	130			107				5
Fri-03	104			122				14
Sat-04	94			113				8
Sun-05	84			100				10
Mon-06	99			94				6
Tue-07	90			104				9
Wed-08	101			103	2			9
Thu-09	95			107				7
Fri-10	90			100				5
Sat-11	78			87				6
Sun-12	68			83				7
Mon-13	81			78				13
Tue-14	83			86				15
Wed-15	76			85				14
Thu-16	77			79				10
Fri-17	78			81				14
Sat-18	71			85				13
Sun-19	67			76				10
Mon-20	80			73				5
Tue-21	107			89	2			14
Wed-22	149			119				13
Thu-23	152			150				13
Fri-24	140			151				6
Sat-25	123.0			146				5
Sun-26	97.8			123				4
Mon-27	95			106				8
Tue-28	103.0			119				6
Wed-29	100.0			112				4
Thu-30	128			123				5
Fri 31	134			135				6
Average	99	—	—	105	—	—	—	—
Minimum	67.4	—	—	73.0	2	—	—	4
Maximum	152	—	—	151	2	—	—	15
GeoMean	—	—	—	—	2	—	—	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
0	0	100%	0%	0	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

for/ **Alfredo Suarez**
Senior Manager, Operations

Shane Harnish
Senior Manager, Analytical Operations