PROVIDING MORE EPCOR

Gold Bar Wastewater Treatment Plant
Plant Performance Report
April 2019

Digested Sludge: Total Monthly Volume (ML)	66.21

Volume of Flow (ML) / Liquid Stream Quality

DATE	Peak Flow (MLD)	Influent	Effluent					
			Non UV Disinfected			UV Disinfected		
		RAW	OUTFALL 30	OUTFALL 20	MPW	EPEPS	OUTFALL 10 FEC	OUTFALL 10 FE
Mon-01	368.9	278.7	0.0	0.0	10.6	0.0	268.1	268.1
Tue-02	352.9	270.3	0.0	0.0	10.9	0.0	259.4	259.4
Wed-03	370.1	268.7	0.0	0.0	10.7	0.0	258.0	258.0
Thu-04	433.9	267.3	0.0	0.0	10.1	0.0	257.2	257.2
Fri-05	325.0	264.1	0.0	0.0	10.4	0.0	253.7	253.7
Sat-06	346.6	262.1	0.0	0.0	11.0	0.0	251.1	251.1
Sun-07	370.9	265.7	0.0	0.0	10.9	0.0	254.8	254.8
Mon-08	345.7	264.2	0.0	0.0	11.0	0.0	253.2	253.2
Tue-09	323.7	257.7	0.0	0.0	10.9	0.0	246.8	246.8
Wed-10	348.0	260.5	0.0	0.0	10.7	0.0	249.8	249.8
Thu-11	319.5	257.7	0.0	0.0	9.3	0.0	248.4	248.4
Fri-12	325.8	257.5	0.0	0.0	10.0	0.0	247.5	247.5
Sat-13	353.6	257.6	0.0	0.0	10.6	0.0	247.0	247.0
Sun-14	354.2	258.0	0.0	0.0	10.9	0.0	247.1	247.1
Mon-15	344.6	260.4	0.0	0.0	11.5	0.0	248.9	248.9
Tue-16	319.6	255.4	0.0	0.0	11.8	0.0	243.6	243.6
Wed-17	321.5	251.7	0.0	0.0	11.9	0.0	239.8	239.8
Thu-18	322.0	251.8	0.0	0.0	11.7	0.0	240.1	240.1
Fri-19	348.0	248.1	0.0	0.0	10.7	0.0	237.4	237.4
Sat-20	344.7	245.0	0.0	0.0	11.5	0.0	233.5	233.5
Sun-21	344.7	244.1	0.0	0.0	11.4	0.0	232.7	232.7
Mon-22	350.2	254.1	0.0	0.0	11.1	0.0	243.0	243.0
Tue-23	329.0	254.9	0.0	0.0	11.5	0.0	243.4	243.4
Wed-24	317.8	252.5	0.0	0.0	11.3	0.0	241.2	241.2
Thu-25	317.0	255.3	0.0	0.0	11.1	0.0	244.2	244.2
Fri-26	325.5	256.2	0.0	0.0	11.0	0.0	245.2	245.2
Sat-27	521.6	300.6	20.6	0.0	10.0	0.0	270.0	270.0
Sun-28	396.7	274.2	0.0	0.0	10.2	0.0	264.0	264.0
Mon-29	351.5	261.3	0.0	0.0	10.0	0.0	251.3	251.3
Tue-30	352.3	264.5	0.0	0.0	10.6	0.0	253.9	253.9
Average	351.49	260.51	0.74	0.00	10.88	0.00	248.90	248.90
Minimum	317.00	244.10	0.00	0.00	9.30	0.00	232.70	232.70
Maximum	521.60	300.60	20.60	0.00	11.90	0.00	270.00	270.00
GeoMean	---	---	---	---	---	---	---	---
TOTAL	---	7,820	21	0.00	325	0	7,474	7,474

DATE	pH@25°C RAW	pH@25°C OUTFALL 30	pH@25°C OUTFALL 20	pH@25°C OUTFALL 10 FEC
Mon-01	7.6			7.4
Tue-02	7.4			7.6
Wed-03	7.6			7.5
Thu-04	7.5			7.6
Fri-05	7.5			7.5
Sat-06	7.6			7.6
Sun-07	7.6			7.5
Mon-08	7.5			7.6
Tue-09	7.5			7.5
Wed-10	7.7			7.8
Thu-11	7.5			7.5
Fri-12	7.6			7.6
Sat-13	7.6			7.7
Sun-14	7.6			7.7
Mon-15	7.6			7.6
Tue-16	7.6			7.6
Wed-17	7.6			7.6
Thu-18	7.6			7.6
Fri-19	7.7			7.5
Sat-20	7.7			7.6
Sun-21	7.7			7.6
Mon-22	7.6			7.6
Tue-23	7.7			7.6
Wed-24	7.6			7.7
Thu-25	7.4			7.5
Fri-26	7.6			7.6
Sat-27	7.6	7.6		7.5
Sun-28	7.6			7.5
Mon-29	7.6			7.5
Tue-30	7.6			7.8
Average	7.6	7.6	---	7.6
Minimum	7.4	7.6	---	7.4
Maximum	7.7	7.6	---	7.8
GeoMean	---	---	---	---
TOTAL	---	---	---	---

DATE	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
Mon-01	300				3.1	3.1
Tue-02	332				2.5	2.5
Wed-03	304				3.3	3.3
Thu-04	360				2.4	2.4
Fri-05	348				4.0	4.0
Sat-06	728				6.0	6.0
Sun-07	360				5.0	5.0
Mon-08	272				5.9	5.9
Tue-09	356				4.6	4.6
Wed-10	352				4.9	4.9
Thu-11	326				5.4	5.4
Fri-12	348				4.8	4.8
Sat-13	368				4.6	4.6
Sun-14	332				5.3	5.3
Mon-15	386				5.2	5.2
Tue-16	576				4.8	4.8
Wed-17	328				5.8	5.8
Thu-18	360				5.3	5.3
Fri-19	336				6.0	6.0
Sat-20	336				4.2	4.2
Sun-21	336				3.4	3.4
Mon-22	316				3.6	3.6
Tue-23	327				3.8	3.8
Wed-24	348				4.2	4.2
Thu-25	300				5.3	5.3
Fri-26	304				4.2	4.2
Sat-27	440	70.7			24.9	24.9
Sun-28	296				28.0	28.0
Mon-29	320				5.5	5.5
Tue-30	276				9.0	9.0
Average	356	70.7	---	---	6.2	6.2
Minimum	272	70.7	---	---	2.4	2.4
Maximum	728	70.7	---	---	28.0	28.0
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
Mon-01	220				< 2.0	< 2.0
Tue-02	321				3.0	3.0
Wed-03	266				3.0	3.0
Thu-04	199				2.0	2.0
Fri-05	256				3.0	3.0
Sat-06	369				3.0	3.0
Sun-07	292				3.0	3.0
Mon-08	275				3.0	3.0
Tue-09	373				2.0	2.0
Wed-10	316				3.0	3.0
Thu-11	293				3.0	3.0
Fri-12	329				3.0	3.0
Sat-13	330				3.0	3.0
Sun-14	304				4.0	4.0
Mon-15	296				3.0	3.0
Tue-16	325				3.0	3.0
Wed-17	326				4.0	4.0
Thu-18	316				4.0	4.0
Fri-19	333				3.0	3.0
Sat-20	373				4.0	4.0
Sun-21	364				3.0	3.0
Mon-22	307				3.0	3.0
Tue-23	322				3.0	3.0
Wed-24	214				3.0	3.0
Thu-25	324				3.0	3.0
Fri-26	254				< 2.0	2.0
Sat-27	224	107			7.0	7.0
Sun-28	331				7.0	7.0
Mon-29	364				5.0	5.0
Tue-30	365				9.0	9.0
Average	306	107	---	---	3.5	3.5
Minimum	199	107	---	---	< 2.0	< 2.0
Maximum	373	107	---	---	9.0	9.0
GeoMean	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---

DATE	TP (mg/L) RAW	TP (mg/L) OUTFALL 30	TP (mg/L) OUTFALL 20	TP (mg/L) EPEPS	TP (mg/L) OUTFALL 10 FEC	TP (mg/L) OUTFALL 10 FE
Mon-01	6.63				0.18	0.18
Tue-02	6.64				0.20	0.20
Wed-03	6.71				0.20	0.20
Thu-04	7.21				0.21	0.21
Fri-05	7.90				0.25	0.25
Sat-06	8.84				0.29	0.29
Sun-07	7.53				0.27	0.27
Mon-08	7.46				0.28	0.28
Tue-09	8.05				0.26	0.26
Wed-10	7.70				0.29	0.29
Thu-11	8.11				0.28	0.28
Fri-12	7.79				0.30	0.30
Sat-13	8.61				0.28	0.28
Sun-14	7.40				0.29	0.29
Mon-15	7.32				0.33	0.33
Tue-16	8.01				0.28	0.28
Wed-17	7.87				0.36	0.36
Thu-18	8.37				0.30	0.30
Fri-19	9.93				0.35	0.35
Sat-20	10.80				0.25	0.25
Sun-21	9.28				0.25	0.25
Mon-22	9.20				0.21	0.21
Tue-23	9.18				0.24	0.24
Wed-24	7.92				0.26	0.26
Thu-25	8.07				0.33	0.33
Fri-26	8.01				0.34	0.34
Sat-27	7.05	4.09			0.94	0.94
Sun-28	6.88				0.99	0.99
Mon-29	7.06				0.46	0.46
Tue-30	7.34				0.55	0.55
Average	7.96	4.09	---	---	0.33	0.33
Minimum	6.63	4.09	---	---	0.18	0.18
Maximum	10.8	4.09	---	---	0.99	0.99
GeoMean	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---

DATE	NH3-N (mg/L) RAW	NH3-N (mg/L) OUTFALL 30	NH3-N (mg/L) OUTFALL 20	NH3-N (mg/L) EPEPS	NH3-N (mg/L) OUTFALL 10 FEC	NH3-N (mg/L) OUTFALL 10 FE
Mon-01	36.8				3.83	3.83
Tue-02	35.1				3.35	3.35
Wed-03	36.5				4.51	4.51
Thu-04	40.4				4.73	4.73
Fri-05	46.4				4.69	4.69
Sat-06	46.3				3.53	3.53
Sun-07	37.6				6.14	6.14
Mon-08	42.8				5.78	5.78
Tue-09	42.1				4.16	4.16
Wed-10	43.5				4.06	4.06
Thu-11	40.4				4.38	4.38
Fri-12	43.1				5.28	5.28
Sat-13	44.1				6.11	6.11
Sun-14	45.8				6.15	6.15
Mon-15	47.1				7.11	7.11
Tue-16	47.0				4.65	4.65
Wed-17	46.8				4.45	4.45
Thu-18	47.5				4.34	4.34
Fri-19	46.5				4.72	4.72
Sat-20	47.7				5.08	5.08
Sun-21	45.1				5.29	5.29
Mon-22	44.0				5.20	5.20
Tue-23	45.9				6.52	6.52
Wed-24	47.9				6.28	6.28
Thu-25	47.1				7.18	7.18
Fri-26	47.8				6.39	6.39
Sat-27	38.6	43.5			5.40	5.40
Sun-28	45.0				6.74	6.74
Mon-29	42.7				7.24	7.24
Tue-30	42.8				9.62	9.62
Average	43.7	43.5	---	---	5.43	5.43
Minimum	35.1	43.5	---	---	3.35	3.35
Maximum	47.9	43.5	---	---	9.62	9.62
GeoMean	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---

DATE	TKN (mg/L) RAW	TKN (mg/L) OUTFALL 30	TKN (mg/L) OUTFALL 20	TKN (mg/L) OUTFALL 10 FEC
Mon-01	50.4			4.97
Tue-02	52.2			4.67
Wed-03	49.6			5.54
Thu-04	52.6			5.87
Fri-05	65.2			5.96
Sat-06	67.6			6.17
Sun-07	63.3			7.10
Mon-08	61.6			7.20
Tue-09	62.0			5.44
Wed-10	59.8			5.71
Thu-11	57.6			6.03
Fri-12	62.7			6.82
Sat-13	62.9			7.30
Sun-14	58.6			8.01
Mon-15	56.0			8.59
Tue-16	59.7			6.21
Wed-17	60.8			6.35
Thu-18	58.9			5.82
Fri-19	63.2			6.59
Sat-20	65.5			6.78
Sun-21	66.0			6.06
Mon-22	68.0			6.27
Tue-23	67.4			8.24
Wed-24	70.4			8.23
Thu-25	67.9			9.16
Fri-26	67.9			8.67
Sat-27	60.1	50.9		8.95
Sun-28	59.0			9.90
Mon-29	57.7			8.68
Tue-30	66.9			12.60
Average	61.4	50.9	---	7.13
Minimum	49.6	50.9	---	4.67
Maximum	70.4	50.9	---	12.6
GeoMean	---	---	---	---
TOTAL	---	---	---	---

DATE	NO_2+NO_3 (mg/L) RAW	NO_2+NO_3 (mg/L) OUTFALL 30	NO_2+NO_3 (mg/L) OUTFALL 20	NO_2+NO_3 (mg/L) OUTFALL 10 FEC
Mon-01				15.0
Tue-02				11.3
Wed-03	0.03			10.1
Thu-04				10.4
Fri-05				12.8
Sat-06				12.4
Sun-07				13.3
Mon-08				12.2
Tue-09				13.4
Wed-10	0.01			13.8
Thu-11				12.6
Fri-12				10.2
Sat-13				11.3
Sun-14				10.1
Mon-15				7.88
Tue-16				11.8
Wed-17	< 0.01			11.5
Thu-18				12.4
Fri-19				14.1
Sat-20				13.6
Sun-21				14.0
Mon-22				14.3
Tue-23				10.2
Wed-24	0.01			10.2
Thu-25				10.3
Fri-26				10.2
Sat-27		4.44		10.5
Sun-28				8.23
Mon-29				6.38
Tue-30				3.78
Average	0.01	4.44	---	11.3
Minimum	< 0.01	4.44	---	3.78
Maximum	0.03	4.44	---	15.0
GeoMean	---	---	---	---
TOTAL	---	---	---	---

DATE	Chloride (mg/L) RAW	Chloride (mg/L) OUTFALL 30	Chloride (mg/L) OUTFALL 20	Chloride (mg/L) OUTFALL 10 FEC
Mon-01	93.0			98.7
Tue-02	84.1			110
Wed-03	95.8			112
Thu-04	98.2			109
Fri-05	109			103
Sat-06	100			103
Sun-07	100			99.1
Mon-08	105			93.6
Tue-09	105			105
Wed-10	113			99.0
Thu-11	110			102
Fri-12	106			97.8
Sat-13	97.7			98.5
Sun-14	95.2			92.2
Mon-15	102			89.1
Tue-16	100			90.4
Wed-17	89.3			89.1
Thu-18	86.4			89.0
Fri-19	75.6			85.7
Sat-20	70.2			79.0
Sun-21	74.2			76.1
Mon-22	85.4			79.0
Tue-23	76.6			83.6
Wed-24	98.1			86.4
Thu-25	82.4			88.4
Fri-26	95.6			86.7
Sat-27	124	159		102
Sun-28	87.6			97.2
Mon-29	84.4			82.6
Tue-30	103			89.1
Average	94.9	159	---	93.9
Minimum	70.2	159	---	76.1
Maximum	124	159	---	112
GeoMean	---	---	---	---
TOTAL	---	---	---	---

DATE	*E. coli* (Counts/100 mL) RAW	*E. coli* OUTFALL 30	*E. coli* OUTFALL 20	*E. coli* OUTFALL 10 FEC
Mon-01				5
Tue-02				14
Wed-03				15
Thu-04				12
Fri-05				10
Sat-06				13
Sun-07				17
Mon-08				12
Tue-09				15
Wed-10				14
Thu-11				13
Fri-12				14
Sat-13				8
Sun-14				11
Mon-15				10
Tue-16	2			12
Wed-17	2			8
Thu-18				6
Fri-19				7
Sat-20				6
Sun-21				5
Mon-22				2
Tue-23				5
Wed-24				13
Thu-25				3
Fri-26				5
Sat-27		< 1		13
Sun-28				16
Mon-29				26
Tue-30				24
Average	---	---	---	---
Minimum	2	< 1	---	2
Maximum	---	---	---	26
GeoMean	2	< 1	---	10
TOTAL	---	---	---	---

* Contact Laboratory for information about the quality assurance associated with the results

Enhanced Primary Treatment (EPT) Usage					
Total Bypass (hrs)	EPT Usage (hrs)	% Usage	Total Bypass YTD (hrs)	EPT Usage YTD (hrs)	% Usage
7	7	100%	142	142	100.00%

Report Comments

1.	RAW - April 01 and April 03: Analysis of these samples exceeded the recommended holding time for BOD_5.
2.	OUTFALL 10 - April 20: Sample temperature for $cBOD_5$ was not within the range of 20 ± 3°C.
3.	OUTFALL 10 - April 25: Analysis of this sample exceeded the recommended holding time for *E. coli* by one hour.

AEP Ref #**

** AEP - Alberta Environment & Parks

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 and Pump Station
FE	Final Effluent from secondary treatment process (with biological nutrient removal).

FEC	Combined pre-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

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