PROVIDING MORE EPCOR

Gold Bar Wastewater Treatment Plant
Plant Performance Report
May 2017

Digested Sludge: Total Monthly Volume (ML)	65.99

Volume of Flow (ML)

DATE	Peak Flow (MLD)	Influent RAW	Effluent – Non UV Disinfected OUTFALL 30	Effluent – Non UV Disinfected OUTFALL 20	Effluent – UV Disinfected MPW	Effluent – UV Disinfected OUTFALL 20	Effluent – UV Disinfected EPEPS	OUTFALL 10 FEC	OUTFALL 10 FE
Mon 01	443.86	304.89	10.23	0.00	7.55	0.00	0.00	287.11	287.11
Tue 02	394.74	285.06	0.00	0.00	7.34	0.00	0.00	277.72	277.72
Wed 03	380.92	285.20	0.00	0.00	6.52	0.00	0.00	278.68	278.68
Thu 04	395.82	291.38	0.00	0.00	8.80	0.00	0.00	282.58	282.58
Fri 05	385.56	289.88	0.00	0.00	10.12	0.00	0.00	279.76	279.76
Sat 06	479.01	281.99	0.00	0.00	11.02	0.00	0.00	270.97	270.97
Sun 07	420.53	289.26	0.00	0.00	11.29	0.00	0.00	277.97	277.97
Mon 08	372.71	279.98	0.00	0.00	11.49	0.00	0.00	268.49	268.49
Tue 09	368.00	273.21	0.00	0.00	10.45	0.00	0.00	262.76	262.76
Wed 10	365.34	278.87	0.00	0.00	10.82	0.00	0.00	268.05	268.05
Thu 11	384.86	272.70	0.00	0.00	9.78	0.00	0.00	262.92	262.92
Fri 12	371.92	272.21	0.00	0.00	11.57	0.00	0.00	260.64	260.64
Sat 13	868.07	462.32	134.64	0.00	10.50	0.00	0.00	317.18	317.18
Sun 14	476.12	288.38	0.00	0.00	10.18	0.00	0.00	278.20	278.20
Mon 15	668.46	364.22	48.91	0.00	10.17	0.00	0.00	305.14	305.14
Tue 16	460.67	307.80	7.02	0.00	10.37	0.00	0.00	290.41	290.41
Wed 17	378.03	285.88	0.00	0.00	9.67	0.00	0.00	276.21	276.21
Thu 18	370.34	286.02	0.00	0.00	10.58	0.00	0.00	275.44	275.44
Fri 19	471.31	292.27	0.00	0.00	10.36	0.00	0.00	281.91	281.91
Sat 20	378.06	264.88	0.00	0.00	9.98	0.00	0.00	254.90	254.90
Sun 21	379.33	255.43	0.00	0.00	9.97	0.00	0.00	245.46	245.46
Mon 22	377.80	261.30	0.00	0.00	11.38	0.00	0.00	249.92	249.92
Tue 23	376.84	280.01	0.00	0.00	11.24	0.00	0.00	268.77	268.77
Wed 24	1,143.74	704.71	397.50	1.71	11.45	0.00	0.00	294.05	294.05
Thu 25	646.99	411.31	60.22	0.00	11.50	0.00	0.00	339.59	339.59
Fri 26	425.18	328.85	0.00	0.00	11.62	0.00	0.00	317.23	317.23
Sat 27	396.36	296.65	0.00	0.00	11.13	0.00	0.00	285.52	285.52
Sun 28	403.59	290.56	0.00	0.00	10.64	0.00	0.00	279.92	279.92
Mon 29	382.46	297.19	0.00	0.00	10.60	0.00	0.00	286.59	286.59
Tue 30	427.53	293.83	0.00	0.00	11.47	0.00	0.00	282.36	282.36
Wed 31	464.25	304.50	0.00	0.00	10.21	0.00	0.00	294.29	294.29
Average	459.95	312.28	21.24	0.06	10.32	0.00	0.00	280.67	280.67
Minimum	365.34	255.43	0.00	0.00	6.52	0.00	0.00	245.46	245.46
Maximum	1,143.74	704.71	397.50	1.71	11.62	0.00	0.00	339.59	339.59
GeoMean	---	---	---	---	---	---	---	---	---
TOTAL	---	9,681	659	2	320	0.00	0	8,701	8,701

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
Mon 01	7.7	7.5		7.5	286	37			4.0	4.0
Tue 02	7.7			7.6	297				4.4	4.4
Wed 03	7.6			7.6	296				4.9	4.9
Thu 04	7.6			7.5	348				5.9	5.9
Fri 05	7.7			7.6	328				6.2	6.2
Sat 06	7.7			7.6	397				4.8	4.8
Sun 07	7.6			7.6	286				5.7	5.7
Mon 08	7.5			7.5	348				9.6	9.6
Tue 09	7.6			7.7	344				8.9	8.9
Wed 10	7.6			7.5	364				8.6	8.6
Thu 11	7.8			7.6	356				9.8	9.8
Fri 12	7.6			7.5	328				8.1	8.1
Sat 13	7.6	7.8		7.6	344	103			7.6	7.6
Sun 14	7.6			7.4	364				4.9	4.9
Mon 15	7.6	7.9		7.6	376	35			7.5	7.5
Tue 16	7.5	7.7		7.5	414	44			5.1	5.1
Wed 17	7.7			7.5	380				5.9	5.9
Thu 18	7.6			7.5	351				6.7	6.7
Fri 19	7.6			7.5	488				7.8	7.8
Sat 20	7.7			7.6	344				7.5	7.5
Sun 21	7.7			7.6	316				7.1	7.1
Mon 22	7.6			7.6	351				7.1	7.1
Tue 23	7.6			7.7	366				9.7	9.7
Wed 24	7.5	7.6	8.0	7.5	464	288	298		10.9	10.9
Thu 25	7.7	8.0		7.5	267	23			6.4	6.4
Fri 26	7.6			7.5	314				6.5	6.5
Sat 27	7.7			7.5	360				6.3	6.3
Sun 28	7.5			7.8	236				7.0	7.0
Mon 29	7.6			7.8	320				6.8	6.8
Tue 30	7.7			7.9	309				6.2	6.2
Wed 31	7.6			7.7	308				5.4	5.4
Average	7.6	7.8	8.0	7.6	344	88	298	---	6.9	6.9
Minimum	7.5	7.5	8.0	7.4	236	23	298	---	4.0	4.0
Maximum	7.8	8.0	8.0	7.9	488	288	298	---	10.9	10.9
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
Mon 01	217	123			3	3	5.51	2.46			0.18	0.18
Tue 02	268				3	3	5.88				0.21	0.21
Wed 03	259				3	3	5.64				0.23	0.23
Thu 04	285				3	3	6.11				0.20	0.20
Fri 05	251				3	3	6.13				0.23	0.23
Sat 06	250				3	3	6.13				0.24	0.24
Sun 07	328				4	4	5.51				0.26	0.26
Mon 08	252				4	4	7.12				0.33	0.33
Tue 09	280				3	3	6.70				0.30	0.30
Wed 10	338				4	4	8.16				0.38	0.38
Thu 11	320				4	4	6.65				0.45	0.45
Fri 12	278				4	4	7.77				0.33	0.33
Sat 13	180	87			4	4	5.52	3.29			0.32	0.32
Sun 14	267				3	3	6.63				0.23	0.23
Mon 15	267	109			3	3	6.23	3.15			0.31	0.31
Tue 16	326	96			4	4	7.46	3.06			0.20	0.20
Wed 17	265				4	4	6.45				0.25	0.25
Thu 18	263				3	3	7.18				0.28	0.28
Fri 19	319				4	4	7.23				0.32	0.32
Sat 20	267				4	4	7.19				0.30	0.30
Sun 21	259				3	3	7.07				0.32	0.32
Mon 22	346				4	4	6.83				0.31	0.31
Tue 23	267				4	4	7.19				0.45	0.45
Wed 24	184	116	50		5	5	4.30	2.48	2.38		0.43	0.43
Thu 25	197	50			3	3	4.60	1.45			0.27	0.27
Fri 26	238				4	4	5.86				0.25	0.25
Sat 27	266				4	4	6.83				0.32	0.32
Sun 28	207				4	4	6.56				0.30	0.30
Mon 29	358				4	4	7.02				0.30	0.30
Tue 30	273				4	4	7.09				0.30	0.30
Wed 31	227				3	3	7.92				0.35	0.35
Average	268	97	50	---	3.6	3.6	6.53	2.65	2.38	---	0.30	0.30
Minimum	180	50	50	---	3	3	4.30	1.45	2.38	---	0.18	0.18
Maximum	358	123	50	---	5	5	8.16	3.29	2.38	---	0.45	0.45
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
Mon 01	26.3	23.3			1.22	1.22	44.4	29.1		2.60
Tue 02	29.5				2.39	2.39	49.8			4.20
Wed 03	29.2				1.70	1.70	48.0			3.38
Thu 04	26.6				1.41	1.41	52.1			2.73
Fri 05	29.0				1.19	1.19	49.1			3.02
Sat 06	29.3				1.18	1.18	48.0			2.93
Sun 07	27.3				1.57	1.57	44.3			3.50
Mon 08	29.6				1.09	1.09	55.1			3.01
Tue 09	30.2				0.99	0.99	51.7			2.80
Wed 10	32.3				1.68	1.68	60.5			4.02
Thu 11	29.6				1.70	1.70	50.4			4.00
Fri 12	34.7				2.32	2.32	54.2			4.48
Sat 13	21.5	25.6			1.97	1.97	39.2	33.8		4.31
Sun 14	33.1				3.51	3.51	52.2			5.37
Mon 15	27.4	28.1			3.99	3.99	47.9	36.0		6.42
Tue 16	31.4	26.3			2.43	2.43	51.6	34.3		4.26
Wed 17	35.2				2.87	2.87	55.0			5.43
Thu 18	35.7				3.06	3.06	58.0			5.18
Fri 19	34.6				3.33	3.33	55.2			5.25
Sat 20	37.2				2.25	2.25	58.0			4.30
Sun 21	37.6				2.21	2.21	58.6			4.27
Mon 22	31.9				1.10	1.10	53.6			3.24
Tue 23	30.3				0.43	0.43	54.5			2.84
Wed 24	13.5	11.9	9.12		0.28	0.28	27.8	19.7		2.34
Thu 25	24.7	21.5			1.02	1.02	38.7	26.2		2.74
Fri 26	26.8				4.94	4.94	49.3			7.11
Sat 27	30.6				3.44	3.44	51.9			5.46
Sun 28	34.8				3.03	3.03	52.1			5.08
Mon 29	33.0				2.90	2.90	52.4			5.40
Tue 30	32.9				1.19	1.19	50.6			3.13
Wed 31	29.0				0.97	0.97	53.7			3.36
Average	30.2	22.8	9.12	---	2.04	2.04	50.6	29.9	---	4.07
Minimum	13.5	11.9	9.12	---	0.28	0.28	27.8	19.7	---	2.34
Maximum	37.6	28.1	9.12	---	4.94	4.94	60.5	36.0	---	7.11
GeoMean	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---

DATE	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
Mon 01		0.05		8.40	84.9	74.7		89.7		1.1		6
Tue 02				7.57	84.2			90.6				8
Wed 03	< 0.01			9.20	86.5			90.1				10
Thu 04				8.33	85.5			92.0				15
Fri 05				8.01	85.0			91.0				6
Sat 06				8.97	79.6			90.6				9
Sun 07				7.98	80.8			94.1				10
Mon 08				10.1	80.9			85.8				8
Tue 09				8.87	87.1			86.5				5
Wed 10	< 0.07			7.99	91.3			91.0				5
Thu 11				8.26	81.6			94.9				5
Fri 12				8.66	87.1			88.1				7
Sat 13		2.62		5.50	64.8	66.4		76.5		2.1		8
Sun 14				7.67	61.9			67.6				10
Mon 15		1.14		8.08	71.8	67.0		71.5		3.4		14
Tue 16		1.10		9.15	70.8	66.8		76.0		2.4		8
Wed 17	0.06			12.0	82.6			80.0				14
Thu 18				14.2	81.2			88.6				10
Fri 19				13.5	80.4			87.1				20
Sat 20				12.4	75.5			90.4				2
Sun 21				13.5	78.3			82.3				7
Mon 22				12.4	69.9			80.3				5
Tue 23				9.72	83.2			81.0				10
Wed 24	< 0.01	1.58		5.63	42.2	36.0		78.1	1.5	0.9	0.9	12
Thu 25				6.09	68.6	53.9		56.8		0.7		4
Fri 26				9.47	83.5			80.6				23
Sat 27				10.5	83.6			91.6				21
Sun 28				10.8	83.9			91.6				24
Mon 29				12.4	87.1			85.2				23
Tue 30				12.4	86.6			89.9	2.1			5
Wed 31	0.03			13.0	89.1			90.9				11
Average	0.03	1.30	---	9.70	79.3	60.8	---	84.9	---	---	---	---
Minimum	< 0.01	0.05	---	5.50	42.2	36.0	---	56.8	1.5	0.7	0.9	2
Maximum	0.06	2.62	---	14.2	91.3	74.7	---	94.9	2.1	3.4	0.9	24
GeoMean	---	---	---	---	---	---	---	---	1.8	1.5	0.9	9
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---

* contact Laboratory for information about the quality assurance associated with the result

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

Enhanced Primary Treatment (EPT) Usage

Total Bypass (hrs)	EPT Usage (hrs)	% Usage	Total Bypass YTD (hrs)	EPT Usage YTD	% Usage
68	68	100%	312	312	100.00%

Report Comments

1	Outfall 20 - May 24: sample results represent rainfall discharged from the outfall. Two grab samples were analyzed for *E. coli*. However, no auto-sampler composite was available. The remaining tests were run on a composite of two previously frozen back-up grab samples. Consequently, recommended holding times were exceeded for pH, TSS, BOD, TP and NH3-N.

AEP Ref #**

** AEP - Alberta Environment & Parks

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