PROVIDING MORE EPCOR

Gold Bar Wastewater Treatment Plant
Plant Performance Report
September 2018

Digested Sludge: Total Monthly Volume (ML)	61.40

Volume of Flow (ML)

DATE	Peak Flow (MLD)	Influent RAW	Effluent Non UV Disinfected OUTFALL 30	Non UV Disinfected OUTFALL 20	Non UV Disinfected MPW	UV Disinfected EPEPS	UV Disinfected OUTFALL 10 FEC	UV Disinfected OUTFALL 10 FE
Sat 01	359.00	279.33	0.00	0.00	11.33	0.00	268.00	268.00
Sun 02	335.00	253.37	0.00	0.00	11.37	0.00	242.00	242.00
Mon 03	354.00	281.22	0.00	0.00	11.22	0.00	270.00	270.00
Tue 04	345.20	256.89	0.00	0.00	10.89	0.00	246.00	246.00
Wed 05	334.00	254.06	0.00	0.00	11.06	0.00	243.00	243.00
Thu 06	327.00	254.55	0.00	0.00	10.55	0.00	244.00	244.00
Fri 07	327.00	259.23	0.00	0.00	10.23	0.00	249.00	249.00
Sat 08	338.00	251.34	0.00	0.00	10.34	0.00	241.00	241.00
Sun 09	358.00	253.55	0.00	0.00	10.55	0.00	243.00	243.00
Mon 10	549.00	297.85	18.00	0.00	10.85	0.00	269.00	269.00
Tue 11	340.70	252.90	0.00	0.00	11.00	0.00	241.90	241.90
Wed 12	521.60	326.90	11.90	0.00	10.50	0.00	304.50	304.50
Thu 13	381.80	294.90	0.00	0.00	11.30	0.00	283.60	283.60
Fri 14	356.30	279.90	0.00	0.00	11.00	0.00	268.90	268.90
Sat 15	965.80	474.30	179.50	0.00	10.60	0.00	284.20	284.20
Sun 16	950.20	515.60	177.90	0.00	10.50	0.00	327.20	327.20
Mon 17	453.40	335.50	5.70	0.00	10.30	0.00	319.50	319.50
Tue 18	368.10	287.90	0.00	0.00	10.40	0.00	277.50	277.50
Wed 19	347.40	279.80	0.00	0.00	10.60	0.00	269.20	269.20
Thu 20	343.20	274.40	0.00	0.00	10.80	0.00	263.60	263.60
Fri 21	586.70	369.80	40.10	0.00	10.70	0.00	319.00	319.00
Sat 22	539.60	349.80	34.20	0.00	10.70	0.00	304.90	304.90
Sun 23	550.30	349.50	49.40	0.00	11.60	0.00	288.50	288.50
Mon 24	421.40	318.00	4.60	0.00	11.60	0.00	301.80	301.80
Tue 25	389.10	296.40	0.00	0.00	11.80	0.00	284.60	284.60
Wed 26	413.70	293.90	0.00	0.00	12.00	0.00	281.90	281.90
Thu 27	357.40	280.70	0.00	0.00	11.80	0.00	268.90	268.90
Fri 28	352.10	264.10	0.00	0.00	11.60	0.00	252.50	252.50
Sat 29	392.80	262.40	0.00	0.00	12.20	0.00	250.20	250.20
Sun 30	405.00	267.20	0.00	0.00	12.40	0.00	254.80	254.80
Average	435.43	290.82	17.38	0.00	11.06	0.00	272.07	263.30
Minimum	327.00	0.00	0.00	0.00	10.23	0.00	241.00	0.00
Maximum	965.80	515.60	179.50	0.00	12.40	0.00	327.20	327.20
GeoMean	---	---	---	---	---	---	---	---
TOTAL	---	9,015	521	0	332	0	8,162	8,162

Liquid Stream Quality

DATE	pH@25°C RAW	pH OUTFALL 30	pH OUTFALL 20	pH OUTFALL 10 FEC	TSS RAW	TSS OUTFALL 30	TSS OUTFALL 20	TSS EPEPS	TSS OUTFALL 10 FEC	TSS OUTFALL 10 FE
Sat 01	7.6			7.6	300				4.2	4.2
Sun 02	7.6			7.6	248				4.7	4.7
Mon 03	7.5			7.6	287				4.2	4.2
Tue 04	7.5			7.6	297				4.9	4.9
Wed 05	7.6			7.6	288				5.8	5.8
Thu 06	7.6			7.6	296				4.7	4.7
Fri 07	7.5			7.6	332				5.5	5.5
Sat 08	7.6			7.6	370				5.6	5.6
Sun 09	7.6			7.5	584				12.0	12.0
Mon 10	7.6	7.5		7.6	405	98.0			6.7	6.7
Tue 11	7.6			7.6	266				5.1	5.1
Wed 12	7.5	7.5		7.6	288	61.0			4.1	4.1
Thu 13	7.4			7.4	294				4.0	4.0
Fri 14	7.6			7.4	263				6.0	6.0
Sat 15	7.5	7.5		7.3	320	59.0			6.9	6.9
Sun 16	7.5	7.5		7.4	58.7	39.1			4.5	4.5
Mon 17	7.5	7.5		7.5	268	94.0			3.8	3.8
Tue 18	7.5			7.7	277				3.2	3.2
Wed 19	7.6			7.7	407				3.1	3.1
Thu 20	7.5			7.7	289				3.3	3.3
Fri 21	7.5	7.5		7.5	296	53.3			4.3	4.3
Sat 22	7.6	7.6		7.6	256	35.6			3.5	3.5
Sun 23	7.5	7.6		7.7	271	70.0			3.3	3.3
Mon 24	7.6	7.9		7.5	278	73.1			3.3	3.3
Tue 25	7.6			7.7	280				3.2	3.2
Wed 26	7.5			7.7	269				3.2	3.2
Thu 27	7.5			7.6	280				2.9	2.9
Fri 28	7.7			7.8	280				3.2	3.2
Sat 29	7.6			7.7	280				3.8	3.8
Sun 30	7.6			7.7	272				4.0	4.0
Average	7.6	7.6	---	7.6	297	65	---	---	4.6	4.6
Minimum	7.4	7.5	---	7.3	58.7	36	---	---	2.9	2.9
Maximum	7.7	7.9	---	7.8	584	98	---	---	12.0	12.0
GeoMean	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---

DATE	BOD_5/$cBOD_5$ (mg/L) RAW BOD_5	BOD_5 OUTFALL 30	BOD_5 OUTFALL 20	BOD_5 EPEPS	$cBOD_5$ OUTFALL 10 FEC	$cBOD_5$ OUTFALL 10 FE	TP (mg/L) RAW	TP OUTFALL 30	TP OUTFALL 20	TP EPEPS	TP OUTFALL 10 FEC	TP OUTFALL 10 FE
Sat 01	260				3	3	6.87				0.32	0.32
Sun 02	295				3	3	7.38				0.35	0.35
Mon 03	256				3	3	6.63				0.38	0.38
Tue 04	283				4	4	7.41				0.45	0.45
Wed 05	329				3	3	7.53				0.34	0.34
Thu 06	294				3	3	7.47				0.34	0.34
Fri 07	326				3	3	7.47				0.31	0.31
Sat 08	413				3	3	8.05				0.32	0.32
Sun 09	308				4	4	7.38				0.35	0.35
Mon 10	346	119			4	4	7.14	3.58			0.36	0.36
Tue 11	324				4	4	6.16				0.31	0.31
Wed 12	192	107			3	3	5.45	0.60			0.35	0.35
Thu 13	246				3	3	5.99				0.32	0.32
Fri 14	310				< 2	< 2	6.31				0.31	0.31
Sat 15	162	58			3	3	4.17	2.23			0.30	0.30
Sun 16	87	61			3	3	1.99	1.96			0.21	0.21
Mon 17	265	80			3	3	5.68	2.46			0.21	0.21
Tue 18	279				3	3	6.42				0.22	0.22
Wed 19	268				2	2	7.41				0.23	0.23
Thu 20	295				3	3	7.21				0.21	0.21
Fri 21	242	57			3	3	5.44	2.30			0.21	0.21
Sat 22	242	88			2	2	6.02	4.36			0.19	0.19
Sun 23	224	95			2	2	5.99	4.41			0.19	0.19
Mon 24	321	100			2	2	5.93	3.96			0.18	0.18
Tue 25	262				3	3	5.85				0.19	0.19
Wed 26	282				2	2	6.15				0.20	0.20
Thu 27	237				3	3	7.55				0.19	0.19
Fri 28	234				3	3	8.71				0.22	0.22
Sat 29	295				3	3	8.63				0.23	0.23
Sun 30	259				2	2	9.14				0.38	0.38
Average	271	85	---	---	2.9	2.9	6.65	2.87	---	---	0.28	0.28
Minimum	87	57	---	---	< 2.0	< 2.0	1.99	0.60	---	---	0.18	0.18
Maximum	413	119	---	---	4.0	4.0	9.14	4.41	---	---	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
Sat 01	38.7				0.74	0.74	49.0			2.26
Sun 02	42.5				1.58	1.58	57.4			3.16
Mon 03	38.4				1.52	1.52	52.4			3.45
Tue 04	40.8				1.64	1.64	62.2			3.52
Wed 05	40.9				1.35	1.35	62.1			3.19
Thu 06	37.0				0.95	0.95	59.5			3.10
Fri 07	42.1				0.69	0.69	59.4			2.38
Sat 08	37.5				1.16	1.16	66.1			3.13
Sun 09	34.3				1.59	1.59	62.6			3.60
Mon 10	37.4	31.8			0.87	0.87	55.8	40.4		2.40
Tue 11	34.8				0.18	0.18	46.4			1.72
Wed 12	26.9	21.8			0.48	0.48	43.5	32.1		2.32
Thu 13	32.0				1.12	1.12	46.7			2.58
Fri 14	33.8				1.35	1.35	52.4			3.13
Sat 15	15.5	12.2			0.20	0.20	27.5	23.3		1.68
Sun 16	14.0	17.4			0.10	0.10	21.0	24.0		2.61
Mon 17	24.8	23.0			1.37	1.37	46.7	28.4		2.59
Tue 18	36.0				2.65	2.65	50.8			3.95
Wed 19	36.0				2.03	2.03	60.1			3.82
Thu 20	35.9				1.18	1.18	53.3			2.69
Fri 21	27.0	25.2			0.74	0.74	41.9	29.8		2.07
Sat 22	28.3	30.1			1.66	1.66	45.4	40.3		2.94
Sun 23	29.5	30.9			1.50	1.50	43.9	37.1		2.86
Mon 24	29.5	25.6			1.10	1.10	46.4	33.9		2.44
Tue 25	32.7				1.16	1.16	48.6			2.53
Wed 26	32.1				0.87	0.87	47.9			2.25
Thu 27	36.4				1.77	1.77	51.4			3.23
Fri 28	41.0				3.28	3.28	60.6			5.18
Sat 29	32.5				3.47	3.47	59.3			5.78
Sun 30	31.0				4.76	4.76	64.6			6.46
Average	33.3	24.2	---	---	1.44	1.44	51.5	32.1	---	3.10
Minimum	14.0	12.2	---	---	0.10	0.10	21.0	23.3	---	1.68
Maximum	42.5	31.8	---	---	4.76	4.76	66.1	40.4	---	6.46
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
Sat 01				11.6	65.6			76.8				3
Sun 02				13.7	74.9			77.5				6
Mon 03				12.5	66.7			81.0				7
Tue 04				9.03	77.3			75.6				8
Wed 05	0.02			8.56	71.8			81.4				5
Thu 06				11.8	66.9			80.9				8
Fri 07				11.1	66.7			77.7				5
Sat 08				9.70	78.5			82.1				6
Sun 09				12.3	72.8			78.3				6
Mon 10		0.03		10.4	74.3	84.7		75.9		1.3		24
Tue 11				10.3	72.6			78.3				10
Wed 12	< 0.01	0.03		7.90	61.0	59.7		72.4	2.6	1.2		11
Thu 13				8.38	74.3			75.3				19
Fri 14				7.15	68.7			75.3				8
Sat 15		0.50		8.05	42.5	39.4		76.8		1.0		6
Sun 16		0.66		5.51	41.5	48.3		46.2		0.6		5
Mon 17		1.10		5.05	74.3	51.8		57.0		1.0		5
Tue 18				7.28	76.9			82.5				22
Wed 19	< 0.01			8.84	72.5			82.1				8
Thu 20				8.08	69.7			81.4	3.0			5
Fri 21		1.37		6.42	62.7	59.1		79.4		0.6		9
Sat 22		1.06		6.71	56.6	59.7		70.8		2.0		3
Sun 23		1.80		7.44	55.2	51.2		67.4		2.2		6
Mon 24		1.78		6.93	63.0	54.2		66.1		0.7		4
Tue 25				7.02	64.9			73.3				5
Wed 26	NR			6.77	69.1			73.0				4
Thu 27				5.85	66.8			78.7				6
Fri 28				9.93	73.9			80.4				5
Sat 29				11.7	68.1			81.4				8
Sun 30				9.69	62.7			76.0				20
Average	0.01	0.93	---	8.86	67.1	56.5	---	75.4	---	---	---	---
Minimum	< 0.01	0.03	---	5.05	41.5	39.4	---	46.2	2.6	0.6	---	3
Maximum	0.02	1.80	---	13.7	78.5	84.7	---	82.5	3.0	2.2	---	24
GeoMean	---	---	---	---	---	---	---	---	2.8	1.1	---	7
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---

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

Enhanced Primary Treatment (EPT) Usage

Total Bypass (hrs)	EPT Usage (hrs)	%	Total Bypass YTD (hrs)	EPT Usage YTD	% Usage
57	52	91.2%	343	338	98.50%

Report Comments

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). Pre-

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

Abhishek Bhargava

Senior Manager, Operations

Shane Harnish

Senior Manager, Analytical Operations