PROVIDING MORE EPCOR

GOLD BAR WASTEWATER TREATMENT PLANT
PLANT PERFORMANCE REPORT
June 2015

Digested Sludge: Total Monthly Volume (ML)	56.01

Volume of Flow (ML)

DATE	Peak Flow (MLD)	Influent RAW	Effluent Non UV Disinfected BYPASS OUT-FAL 30	OUT-FAL 20 PRIM	OUT-FAL 20 SEC	OUT-FAL 20 Total	MPW	UV Disinfected OUT-FAL 10 EPE[1]	UV Disinfected OUT-FAL 10 FEC
Mon 01	369.60	270.34	0.00	0.00	0.00	0.00	11.51		258.83
Tue 02	414.71	282.77	0.00	0.00	0.00	0.00	12.02		270.75
Wed 03	370.38	267.39	0.00	0.00	0.00	0.00	11.98		255.41
Thu 04	363.02	264.88	0.00	0.00	0.00	0.00	11.53		253.35
Fri 05	363.29	255.03	0.00	0.00	0.00	0.00	11.79		243.24
Sat 06	378.05	259.14	0.00	0.00	0.00	0.00	11.31		247.83
Sun 07	376.83	259.30	0.00	0.00	0.00	0.00	11.58		247.72
Mon 08	360.53	269.11	0.00	0.00	0.00	0.00	11.38		257.73
Tue 09	355.57	266.47	0.00	0.00	0.00	0.00	11.30		255.17
Wed 10	356.04	268.35	0.00	0.00	0.00	0.00	10.85		257.50
Thu 11	703.96	318.26	42.57	0.00	0.00	42.57	11.10		264.59
Fri 12	440.21	280.74	4.31	0.00	0.00	4.31	11.12		265.31
Sat 13	374.24	259.10	0.00	0.00	0.00	0.00	12.16		246.94
Sun 14	374.33	255.98	0.00	0.00	0.00	0.00	12.75		243.23
Mon 15	360.70	264.88	0.00	0.00	0.00	0.00	12.37		252.51
Tue 16	426.29	265.63	0.00	0.00	0.00	0.00	12.12		253.51
Wed 17	355.23	273.01	0.00	0.00	0.00	0.00	12.00		261.01
Thu 18	356.86	262.65	0.00	0.00	0.00	0.00	11.85		250.80
Fri 19	1,079.33	334.78	65.55	0.00	0.00	65.55	11.56		257.67
Sat 20	571.81	306.14	13.53	0.00	0.00	13.53	11.46		281.15
Sun 21	373.21	261.15	0.00	0.00	0.00	0.00	11.10		250.05
Mon 22	363.25	272.01	0.00	0.00	0.00	0.00	10.08		261.93
Tue 23	434.80	265.07	0.00	0.00	0.00	0.00	11.47		253.60
Wed 24	358.44	268.02	0.00	0.00	0.00	0.00	11.52		256.50
Thu 25	355.12	267.28	0.00	0.00	0.00	0.00	11.76		255.52
Fri 26	364.86	272.75	0.00	0.00	0.00	0.00	11.77		260.98
Sat 27	388.49	260.34	0.00	0.00	0.00	0.00	11.66		248.68
Sun 28	366.76	253.87	0.00	0.00	0.00	0.00	11.85		242.02
Mon 29	402.67	272.57	0.00	0.00	0.00	0.00	11.68		260.89
Tue 30	525.66	333.18	15.54	0.00	0.00	15.54	10.49		307.15
Average	422.81	273.67	4.72	0.00	0.00	4.72	11.57	---	257.39
Minimum	355.12	253.87	0.00	0.00	0.00	0.00	10.08	0.00	242.02
Maximum	1,079.33	334.78	65.55	0.00	0.00	65.55	12.75	0.00	307.15
GeoMean	---	---	---	---	---	---	---	---	---
TOTAL	---	8,210	141.50	0.00	0.00	141.50	347.12	0.00	7,722

Liquid Stream Quality

DATE	pH@25°C RAW	pH@25°C OUT-FAL 30	pH@25°C OUT-FAL 20	pH@25°C OUT-FAL 10	TSS (mg/L) RAW	TSS OUT-FAL30	TSS OUT-FAL20	TSS OUT-FAL 10
Mon 01				7.5	477			10.3
Tue 02				7.5	467			8.5
Wed 03				7.7	428			6.9
Thu 04				7.8	372			6.5
Fri 05				7.5	1,310			6.0
Sat 06				7.5	480			6.0
Sun 07				7.5	1,630			4.8
Mon 08				7.4	356			5.0
Tue 09				7.5	413			5.8
Wed 10				7.5	340			4.2
Thu 11				7.8	560	132		6.0
Fri 12				7.4	204	71		7.0
Sat 13				7.4	53			6.0
Sun 14				7.4	54			8.0
Mon 15				7.5	49			7.1
Tue 16				7.6	57			11.9
Wed 17				7.4	202			5.5
Thu 18				7.4	55			5.8
Fri 19				7.5	307	156		5.5
Sat 20				7.2	284	81		6.8
Sun 21				7.5	240			8.4
Mon 22				7.4	254			8.4
Tue 23				7.5	282			4.3
Wed 24				7.4	488			4.3
Thu 25	7.8			7.5	206			3.7
Fri 26	7.6			7.6	66			4.2
Sat 27	7.4			7.5	49			7.2
Sun 28	7.5			7.6	90			5.4
Mon 29	7.6			7.6	211			7.3
Tue 30	7.5	7.5		7.5	309	61		8.0
Average	7.6	7.5	---	7.5	343	100	---	6.5
Minimum	7.4	7.5	---	7.2	49	61	---	3.7
Maximum	7.8	7.5	---	7.8	1630	156	---	11.9
GeoMean	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---

DATE	BOD5/cBOD5 (mg/L) RAW BOD5	OUT-FAL30 cBOD5	OUT-FAL30 BOD5	OUT-FAL20 cBOD5	OUT-FAL20 BOD5	OUT-FAL 10 cBOD5	TP (mg/L) RAW	TP OUT-FAL30	TP OUT-FAL20	TP OUT-FAL 10
Mon 01	332					3	7.50			0.33
Tue 02	324					4	6.75			0.37
Wed 03	319					4	6.93			0.37
Thu 04	312					4	7.53			0.32
Fri 05	394					4	12.00			0.35
Sat 06	283					4	7.25			0.32
Sun 07	497					5	10.50			0.26
Mon 08	358					4	6.89			0.26
Tue 09	296					4	6.98			0.28
Wed 10	209					3	6.75			0.30
Thu 11	237	127	114			4	7.40	6.71		0.35
Fri 12	200	97	87			3	5.97	5.19		0.30
Sat 13	141					3	5.60			0.37
Sun 14	165					3	4.65			0.27
Mon 15	120					3	5.12			0.32
Tue 16	195					3	5.80			0.32
Wed 17	219					3	6.13			0.31
Thu 18	136					4	5.61			0.36
Fri 19	176	155	152			4	6.20	6.22		0.35
Sat 20	253	* 138	* 76			5	5.47	3.43		0.32
Sun 21	240					4	6.38			0.28
Mon 22	275					4	6.24			0.30
Tue 23	282					4	6.33			0.29
Wed 24	418					4	7.02			0.28
Thu 25	243					4	5.64			0.27
Fri 26	186					4	5.16			0.29
Sat 27	162					4	5.44			0.28
Sun 28	172					4	6.43			0.30
Mon 29	240					5	5.90			0.39
Tue 30	257	86	94			5	5.34	3.80		4.22
Average	255	121	105	---	---	4	6.56	5.07	---	0.44
Minimum	120	86	76	---	---	3	4.65	3.43	---	0.26
Maximum	497	155	152	---	---	5	12.00	6.71	---	4.22
GeoMean	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---

DATE	NH3-N (mg/L) RAW	NH3-N OUT-FAL30	NH3-N OUT-FAL20	NH3-N OUT-FAL 10	un-ionized ammonia (mg/L) OUT-FAL 10	TKN (mg/L) RAW	TKN OUT-FAL30	TKN OUT-FAL20	TKN OUT-FAL 10
Mon 01	32.0			1.40	0.011	56.4			3.32
Tue 02	32.6			0.92		52.9			2.82
Wed 03	31.1			1.95	0.036	55.2			3.93
Thu 04	35.4			1.16	0.023	58.3			2.80
Fri 05	32.4			0.99	0.011	79.8			2.72
Sat 06	34.5			1.01	0.013	56.7			2.68
Sun 07	28.6			1.00	0.011	81.8			2.74
Mon 08	33.8			0.68	0.007	55.4			2.44
Tue 09	33.9			0.25	0.003	52.1			1.98
Wed 10	34.6			0.72	0.007	53.9			2.69
Thu 11	30.0	31.1		1.49	0.037	52.4	46.6		3.40
Fri 12	21.0	29.4		0.88	0.008	47.0	39.0		2.57
Sat 13	36.0			1.89	0.017	46.5			3.29
Sun 14	34.7			2.35	0.023	42.2			4.60
Mon 15	33.2			2.23	0.057	44.5			4.18
Tue 16	36.4			1.20	0.014	51.3			2.83
Wed 17	42.5			0.39	0.004	50.3			2.34
Thu 18	39.5			0.24	0.002	49.9			2.10
Fri 19	30.4	28.1		0.18	0.003	46.8	42.2		2.11
Sat 20	25.1	18.7		0.53	0.006	43.6	23.3		2.22
Sun 21	34.2			1.03	0.012	50.5			2.69
Mon 22	33.4			0.73	0.007	49.2			2.38
Tue 23	33.6			0.17	0.002	49.8			1.61
Wed 24	35.1			0.13	0.002	53.7			1.67
Thu 25	33.9			0.12	0.001	45.9			1.64
Fri 26	30.7			0.09	0.001	42.0			1.77
Sat 27	34.6			0.20	0.002	40.9			1.68
Sun 28	37.1			0.20	0.002	43.9			1.86
Mon 29	32.9			0.36	0.004	44.5			2.13
Tue 30	25.8	22.7		11.9	0.148	39.6	27.5		14.10
Average	33.0	26.0	---	1.21	0.016	51.2	35.7	---	2.98
Minimum	21.0	18.7	---	0.09	0.001	39.6	23.3	---	1.61
Maximum	42.5	31.1	---	11.9	0.148	81.8	46.6	---	14.10
GeoMean	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---

DATE	NO_2+NO_3 (mg/L) RAW	NO_2+NO_3 OUT-FAL30	NO_2+NO_3 OUT-FAL20	NO_2+NO_3 OUT-FAL 10	Chloride (mg/L) RAW	Chloride OUT-FAL30	Chloride OUT-FAL20	Chloride OUT-FAL 10	E. coli (Counts/100 mL) RAW X10^6	E. coli OUT-FAL30 X10^6	E. coli OUT-FAL20 X10^6	E. coli OUT-FAL 10
Mon 01				9.2	67			68				4
Tue 02	< 0.15			9.3	72			75				11
Wed 03				8.5	68			75				10
Thu 04				9.7	73			78				7
Fri 05				10.9	65			78				1
Sat 06				11.2	67			73				1
Sun 07				10.6	65			73				< 1
Mon 08				10.2	70			69				2
Tue 09	0.02			11.1	69			73				7
Wed 10				12.0	66			72				17
Thu 11		0.092		11.3	61	63		71		2.92		15
Fri 12		0.615		11.8	60	60		66	2.76	3.26		7
Sat 13				13.1	60			69				4
Sun 14				12.6	65			70				6
Mon 15				11.5	68			69				7
Tue 16				11.8	71			73				7
Wed 17				13.4	71			76				5
Thu 18				13.7	73			75				6
Fri 19		1.400		11.7	68	63		74		2.92		16
Sat 20		0.500		8.8	56	46		61		1.74		9
Sun 21				10.7	59			59				5
Mon 22				12.7	65			66				4
Tue 23				11.5	69			72	7.27			4
Wed 24				11.3	66			70				1
Thu 25				11.2	62			71				2
Fri 26				9.2	69			72				5
Sat 27				10.0	68			71				3
Sun 28				10.0	66			67				1
Mon 29				10.3	69			66				5
Tue 30		0.221		3.0	62	63		68		1.17		150
Average	< 0.15	0.566	---	10.7	66	59	---	71	---	---	---	---
Minimum	< 0.15	0.092	---	3.0	56	46	---	59	2.76	1.17	---	< 1
Maximum	< 0.15	1.40	---	13.7	73	63	---	78	7.27	3.26	---	150
GeoMean	---	---	---	---	---	---	---	---	4.48	2.24	---	5
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---

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

! The values in EPE (flow) column indicate wet weather events, then the OUT FAL 10 Average calculation exclude numbers for that day (grey/italics)

x - analysis performed at an ISO 17025 Accredited external laboratory.

Toxicity - Outfal 10

Acute Toxicity (Monthly)			Chronic Toxicity (Quarterly)		
10-Jun-15	Daphnia_LC50 (%)	100	10-Jun-15	Ceriodaphnia LC50 (%)	100
10-Jun-15	Rainbow_Trout_LC50 (%)	100	10-Jun-15	Ceriodaphnia IC50 (%)	100
10-Jun-15	Microtox (% of control)	81.8	10-Jun-15	Fathead Minnows LC50 (%)	100
			10-Jun-15	Fathead Minnows IC50 (%)	100

Enhanced Primary Treatment (EPT) Usage

Total Bypass (hrs)	EPT Usage (hrs)	% Usage	Total Bypass YTD (hrs)	EPT Usage YTD (hrs)	% Usage YTD
14	14	100	306	258	84.3

RAW ⇨ Plant Influent (Untreated Wastewater)
PRIM ⇨ Primary
SEC ⇨ Secondary
EPT ⇨ Enhanced Primary Treatment
EPEPS ⇨ Enhanced Primary Effluent and Pump St.
MPW ⇨ Membrane Product Water (Effluent re-use water)
OUT FAL 10 ⇨ Combined, UV-disinfected (FE +EPEPS)
OUT FAL 20 ⇨ Combined Bypass (RAW + PE + EPE)
OUT FAL 30 ⇨ Combined Bypass (INF + INFS + PE30 + EPE)
ML ⇨ Megalitre (1,000,000 Litre)
MPN ⇨ Most Probable Number
nr ⇨ No Result
ns ⇨ No Sample

Report Comments

AEP Ref #	
300064	pH of raw influent and Bypass 30 was not measured.

* AEP - Alberta Environment & Parks

Abhishek Bhargava
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07/28/2015
(mm/dd/yyyy)

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07/28/2015
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