PROVIDING MORE EPCOR

GOLD BAR WASTEWATER TREATMENT PLANT
PLANT PERFORMANCE REPORT
May 2015

Digested Sludge: Total Monthly Volume (ML)	62.63

Volume of Flow (ML)

DATE	Peak Flow (MLD)	Influent RAW	Effluent – Non UV Disinfected – BYPASS OUT-FAL 30	BYPASS OUT-FAL 20 PRIM	BYPASS OUT-FAL 20 SEC	BYPASS Total	MPW	UV Disinfected OUT-FAL 10 EPE!	UV Disinfected OUT-FAL 10 FEC
Fri 01	382.27	261.15	0.00	0.00	0.00	0.00	5.68		255.47
Sat 02	434.53	266.93	7.98	0.00	0.00	7.98	6.32		252.63
Sun 03	404.02	263.77	12.52	0.00	0.00	12.52	6.45		244.80
Mon 04	359.51	262.44	0.00	0.00	0.00	0.00	6.77		255.67
Tue 05	359.74	261.15	0.00	0.00	0.00	0.00	6.46		254.69
Wed 06	956.85	496.19	178.84	0.00	0.00	178.84	5.96		311.39
Thu 07	631.39	407.95	104.76	0.00	0.00	104.76	5.78		297.41
Fri 08	444.65	313.20	14.66	0.00	0.00	14.66	6.82		291.72
Sat 09	413.38	268.08	0.00	0.00	0.00	0.00	6.81		261.27
Sun 10	416.03	262.50	0.00	0.00	0.00	0.00	10.19		252.31
Mon 11	378.88	279.20	0.00	0.00	0.00	0.00	11.11		268.09
Tue 12	375.65	275.65	0.00	0.00	0.00	0.00	10.83		264.82
Wed 13	363.70	271.01	0.00	0.00	0.00	0.00	11.03		259.98
Thu 14	371.14	271.25	0.00	0.00	0.00	0.00	11.43		259.82
Fri 15	417.65	270.09	0.00	0.00	0.00	0.00	11.58		258.51
Sat 16	368.02	251.67	0.00	0.00	0.00	0.00	11.74		239.93
Sun 17	373.81	246.55	0.00	0.00	0.00	0.00	11.66		234.89
Mon 18	385.70	256.73	0.00	0.00	0.00	0.00	11.50		245.23
Tue 19	399.14	272.19	0.00	0.00	0.00	0.00	11.09		261.10
Wed 20	426.90	266.15	0.00	0.00	0.00	0.00	11.86		254.29
Thu 21	364.39	269.91	0.00	0.00	0.00	0.00	11.28		258.63
Fri 22	366.43	265.82	0.00	0.00	0.00	0.00	11.36		254.46
Sat 23	380.02	260.03	0.00	0.00	0.00	0.00	11.99		248.04
Sun 24	385.63	268.05	0.00	0.00	0.00	0.00	11.66		256.39
Mon 25	369.83	281.29	0.00	0.00	0.00	0.00	11.68		269.61
Tue 26	364.19	272.64	0.00	0.00	0.00	0.00	12.51		260.13
Wed 27	369.69	273.81	0.00	0.00	0.00	0.00	12.72		261.09
Thu 28	366.89	268.06	0.00	0.00	0.00	0.00	13.16		254.90
Fri 29	368.18	266.69	0.00	0.00	0.00	0.00	11.97		254.72
Sat 30	369.37	254.40	0.00	0.00	0.00	0.00	11.02		243.38
Sun 31	694.55	327.07	30.40	0.00	0.00	30.40	12.40		284.27
Average	421.36	281.67	11.26	0.00	0.00	11.26	10.09	---	260.31
Minimum	359.51	246.55	0.00	0.00	0.00	0.00	5.68	0.00	234.89
Maximum	956.85	496.19	178.84	0.00	0.00	178.84	13.16	0.00	311.39
GeoMean	---	---	---	---	---	---	---	---	---
TOTAL	---	8,732	349.16	0.00	0.00	349.16	312.82	0.00	8,070

Liquid Stream Quality

DATE	pH@25°C RAW	pH OUT-FAL 30	pH OUT-FAL 20	pH OUT-FAL 10	TSS (mg/L) RAW	TSS OUT-FAL30	TSS OUT-FAL20	TSS OUT-FAL 10	$BOD_5/cBOD_5$ (mg/L) RAW BOD_5	OUT-FAL30 $cBOD_5$	OUT-FAL30 BOD_5	OUT-FAL20 $cBOD_5$	OUT-FAL20 BOD_5	OUT-FAL 10 $cBOD_5$
Fri 01				7.5	428			7.2	390					5
Sat 02				7.7	700	122		7.9	357	194	178			5
Sun 03				7.5	391	79		10.8	354	172	158			5
Mon 04				7.5	600			9.8	392					5
Tue 05				7.7	405			7.3	386					4
Wed 06				7.5	512	208		7.7	286	99	74			5
Thu 07				7.8	291	99		6.7	184	116	109			4
Fri 08				7.7	300	54		4.2	268	124	104			3
Sat 09				7.6	300			4.9	356					4
Sun 10				7.6	347			4.9	322					3
Mon 11				7.5	316			5.7	326					4
Tue 12				7.6	500			6.5	340					4
Wed 13				7.8	795			6.3	345					4
Thu 14				7.6	228			7.4	268					3
Fri 15				7.6	592			5.7	434					4
Sat 16				7.5	1,180			5.1	337					3
Sun 17				7.5	420			5.9	416					2
Mon 18				7.6	656			4.5	370					4
Tue 19				7.6	552			5.5	* 383					3
Wed 20				7.5	400			5.0	317					3
Thu 21				7.6	436			6.5	343					4
Fri 22				7.5	344			4.6	368					4
Sat 23				7.5	332			7.0	335					5
Sun 24				7.5	556			9.0	500					6
Mon 25				7.5	460			37.3	318					7
Tue 26				7.6	346			7.3	325					5
Wed 27				7.6	390			7.3	343					4
Thu 28				7.5	580			6.9	461					5
Fri 29				7.5	324			4.7	391					4
Sat 30				7.5	386			4.3	326					4
Sun 31				7.5	530	194		4.1	376	170	163			4
Average	---	---	---	7.6	471	126.1	---	7.4	352	146	131	---	---	4
Minimum	---	---	---	7.5	228	54.2	---	4.1	184	99	74	---	---	2
Maximum	---	---	---	7.8	1180	208.0	---	37.3	500	194	178	---	---	7
GeoMean	---	---	---	---	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---	---	---

DATE	TP (mg/L) RAW	TP OUT-FAL30	TP OUT-FAL20	TP OUT-FAL 10	NH3-N (mg/L) RAW	NH3-N OUT-FAL30	NH3-N OUT-FAL20	NH3-N OUT-FAL 10	un-ioned ammonia (mg/L) OUT-FAL 10	TKN (mg/L) RAW	TKN OUT-FAL30	TKN OUT-FAL20	TKN OUT-FAL 10
Fri 01	7.56			0.42	33.8			2.72	0.024	53.7			4.52
Sat 02	8.08	6.43		0.49	34.5	35.9		2.39	0.020	59.0	47.7		4.90
Sun 03	6.86	6.62		0.42	35.3	44.8		3.09	0.036	52.4	54.8		4.70
Mon 04	7.83			0.55	23.4			2.84	0.025	55.1			5.32
Tue 05	7.22			0.36	32.7			2.61		50.3			4.19
Wed 06	4.66	3.59		0.39	17.4	18.9		0.74	0.007	32.1	26.4		2.53
Thu 07	4.38	3.94		0.26	23.2	24.8		1.06	0.014	34.2	31.5		2.52
Fri 08	5.63	3.84		0.24	25.2	29.9		1.07	0.016	43.7	35.9		2.43
Sat 09	5.98			0.27	32.4			2.12	0.033	46.9			3.52
Sun 10	6.54			0.30	34.1			2.52	0.040	49.9			4.06
Mon 11	7.04			0.34	35.1			2.48	0.034	50.0			3.95
Tue 12	7.99			0.33	36.3			1.64		56.7			3.28
Wed 13	9.82			0.31	35.2			2.70	0.047	72.7			4.69
Thu 14	6.76			0.34	43.7			3.02	0.035	57.4			4.94
Fri 15	7.41			0.30	34.2			2.66	0.029	61.6			4.34
Sat 16	11.60			0.06	33.5			2.83	0.034	94.1			5.05
Sun 17	8.52			0.32	36.7			3.43	0.036	61.2			4.72
Mon 18	8.08			0.49	36.8			3.97	0.045	60.3			5.41
Tue 19	6.28			0.39	34.7			4.56		54.1			6.21
Wed 20	6.26			0.32	33.8			2.72	0.031	53.6			4.34
Thu 21	6.86			0.30	34.0			1.68	0.029	60.3			3.53
Fri 22	6.11			0.36	30.5			1.59	0.013	52.7			3.96
Sat 23	6.36			0.41	34.4			3.00	0.027	54.3			4.77
Sun 24	7.14			0.45	35.7			4.33	0.083	60.2			6.45
Mon 25	7.27			1.22	33.8			4.90	0.050	60.9			8.78
Tue 26	5.83			0.38	32.1			3.85		51.2			6.07
Wed 27	5.83			0.36	32.1			2.04	0.019	54.2			4.14
Thu 28	6.89			0.29	31.3			1.01	0.008	61.6			2.89
Fri 29	5.36			0.24	33.4			1.13	0.011	50.0			2.66
Sat 30	5.86			0.28	33.9			2.24	0.020	51.9			4.05
Sun 31	6.84	5.05		0.31	28.1	27.6		2.55	0.024	50.2	39.0		4.51
Average	6.93	4.91	---	0.37	32.6	30.3	---	2.56	0.029	55.0	39.2	---	4.43
Minimum	4.38	3.6	---	0.06	17.4	18.9	---	0.74	0.007	32.1	26.4	---	2.43
Maximum	11.6	6.62	---	1.22	43.7	44.8	---	4.90	0.083	94.1	54.8	---	8.78
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
Fri 01				10.1	71			78				14
Sat 02		1.490		9.8	75	92		76		2.6		10
Sun 03		0.016		10.1	66	71		85		4.1		21
Mon 04				6.6	68			72				12
Tue 05	0.23			9.1	71			76				10
Wed 06		0.476		8.1	77	69		81		1.6		12
Thu 07		0.803		6.4	58	55		75		2.9		28
Fri 08		0.715		6.9	65	59		66		2.8		15
Sat 09				9.8	67			79				10
Sun 10				10.2	61			73				7
Mon 11				10.4	72			71				16
Tue 12	0.01			9.9	64			80				14
Wed 13				10.9	67			77				76
Thu 14				11.6	72			79				38
Fri 15				12.5	72			82				14
Sat 16				12.9	68			79				5
Sun 17				13.5	68			74				2
Mon 18				13.8	68			70				5
Tue 19	0.08			12.5	69			73				28
Wed 20				11.9	70			79	2.91			8
Thu 21				10.8	70			80				8
Fri 22				10.0	67			83				4
Sat 23				11.4	65			78				4
Sun 24				9.6	58			73				4
Mon 25				8.1	70			71				7
Tue 26	0.07			9.2	72			74	6.13			10
Wed 27				10.3	69			83				3
Thu 28				10.5	79			82				9
Fri 29				11.2	68			79				6
Sat 30				10.7	67			77				< 1
Sun 31		0.057		8.7	73	63		74		2.2		9
Average	0.10	0.59	---	10.2	68	68	---	77	---	---	---	---
Minimum	0.01	0.02	---	6.35	58	55	---	66	2.91	1.60	---	< 1
Maximum	0.23	1.49	---	13.8	79	92	---	85	6.13	4.10	---	76
GeoMean	---	---	---	---	---	---	---	---	4.22	2.59	---	9
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)
13-May-15	Daphnia_LC50 (%)	>100	not done
13-May-15	Rainbow_Trout_LC50 (%)	>100	
13-May-15	Microtox (% of control)	>81.8	

Enhanced Primary Treatment (EPT) Usage					
Total Bypass (hrs)	EPT Usage (hrs)	% Usage	Total Bypass YTD (hrs)	EPT Usage YTD (hrs)	% Usage YTD
35	35	100	292	244	83.6

Report Comments

AEP Ref #	
300064	pH not measured.

* AEP - Alberta Environment & Parks

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

07/02/2015
Abhishek Bhargava (mm/dd/yyyy)
Senior Manager, Operations

07/02/2015
Debra Long (mm/dd/yyyy)
Senior Manager, Analytical Operations