PROVIDING MORE EPCOR

GOLD BAR WASTEWATER TREATMENT PLANT
PLANT PERFORMANCE REPORT
August 2015

Digested Sludge: Total Monthly Volume (ML)	58.75

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	Total	MPW	UV Disinfected – OUT-FAL 10 EPE[!]	OUT-FAL 10 FEC
Sat 01	746.99	381.57	75.60	0.00	0.00	75.60	11.48		294.49
Sun 02	343.16	249.11	0.00	0.00	0.00	0.00	11.63		237.48
Mon 03	364.70	252.36	0.00	0.00	0.00	0.00	11.93		240.43
Tue 04	349.95	266.96	0.00	0.00	0.00	0.00	11.50		255.46
Wed 05	372.46	262.00	0.00	0.00	0.00	0.00	11.69		250.31
Thu 06	346.19	261.70	0.00	0.00	0.00	0.00	11.85		249.85
Fri 07	397.56	260.68	0.00	0.00	0.00	0.00	12.30		248.38
Sat 08	349.33	249.34	0.00	0.00	0.00	0.00	11.96		237.38
Sun 09	367.73	254.44	0.00	0.00	0.00	0.00	11.79		242.65
Mon 10	361.46	265.58	0.00	0.00	0.00	0.00	10.48		255.10
Tue 11	347.60	265.48	0.00	0.00	0.00	0.00	11.16		254.32
Wed 12	351.51	268.62	0.00	0.00	0.00	0.00	11.92		256.70
Thu 13	353.04	266.12	0.00	0.00	0.00	0.00	11.64		254.48
Fri 14	342.19	262.70	0.00	0.00	0.00	0.00	12.01		250.69
Sat 15	827.53	350.14	51.33	0.00	0.00	51.33	11.90		286.91
Sun 16	354.28	246.55	0.00	0.00	0.00	0.00	11.85		234.70
Mon 17	377.79	263.62	0.00	0.00	0.00	0.00	12.28		251.34
Tue 18	357.98	263.74	0.00	0.00	0.00	0.00	12.28		251.46
Wed 19	340.14	258.90	0.00	0.00	0.00	0.00	12.23		246.67
Thu 20	415.80	254.10	0.00	0.00	0.00	0.00	12.03		242.07
Fri 21	606.21	292.29	20.76	0.00	0.00	20.76	12.18		259.35
Sat 22	351.63	243.43	0.00	0.00	0.00	0.00	10.64		232.79
Sun 23	353.15	243.50	0.00	0.00	0.00	0.00	11.86		231.64
Mon 24	349.89	258.26	0.00	0.00	0.00	0.00	12.90		245.36
Tue 25	334.36	256.66	0.00	0.00	0.00	0.00	12.16		244.50
Wed 26	334.65	256.43	0.00	0.00	0.00	0.00	12.11		244.32
Thu 27	337.89	257.35	0.00	0.00	0.00	0.00	12.09		245.26
Fri 28	344.40	260.31	0.00	0.00	0.00	0.00	11.87		248.44
Sat 29	356.11	247.38	0.00	0.00	0.00	0.00	11.69		235.69
Sun 30	367.16	248.61	0.00	0.00	0.00	0.00	11.71		236.90
Mon 31	345.77	261.40	0.00	0.00	0.00	0.00	11.08		250.32
Average	391.89	265.46	4.76	0.00	0.00	4.76	11.81	---	248.89
Minimum	334.36	243.43	0.00	0.00	0.00	0.00	10.48	0.00	231.64
Maximum	827.53	381.57	75.60	0.00	0.00	75.60	12.90	0.00	294.49
GeoMean	---	---	---	---	---	---	---	---	---
TOTAL	---	8,229	147.69	0.00	0.00	147.69	366.20	0.00	7,715

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 $cBOD_5$	TP (mg/L) RAW	TP OUT-FAL30	TP OUT-FAL20	TP OUT-FAL 10
Sat 01	7.5	7.8		8.0	372	50		5.8	290	47	53			5	4.46	2.04		0.23
Sun 02	7.4			7.5	924			9.6	330					4	7.08			0.22
Mon 03	7.6			7.5	912			5.0	392					3	6.06			0.21
Tue 04	7.6			7.5	352			6.9	259					3	5.98			0.19
Wed 05	7.5			7.5	938			4.9	302					4	7.09			0.23
Thu 06	7.5			7.6	468			5.8	374					4	4.85			0.23
Fri 07	7.6			7.6	545			5.8	315					4	6.77			0.26
Sat 08	7.6			7.6	500			5.0	370					3	6.36			0.18
Sun 09	7.5			7.6	370			4.5	394					3	5.55			0.22
Mon 10	7.5			7.6	740			5.0	357					3	6.28			0.21
Tue 11	7.6			7.5	460			5.4	360					4	5.14			0.21
Wed 12	7.5			7.6	542			5.3	368					3	5.92			0.20
Thu 13	7.6			7.6	604			5.6	382					3	8.32			0.24
Fri 14	7.6			7.6	568			5.1	414					3	6.82			0.23
Sat 15	7.5	7.3		7.5	460	45		6.6	284	77	82			4	6.53	2.21		0.27
Sun 16	7.6			7.6	460			5.5	302					3	8.71			0.24
Mon 17	7.5			7.6	674			7.2	318					4	6.11			0.25
Tue 18	7.5			7.6	535			6.5	337					5	6.87			0.27
Wed 19	7.5			7.7	563			8.6	332					5	6.74			0.32
Thu 20	7.7			7.7	628			5.0	464					3	8.86			0.27
Fri 21	7.5	7.5		7.6	351	57		6.3	250	113	120			3	6.79	3.62		0.28
Sat 22	7.5			7.5	308			5.7	292					3	6.90			0.29
Sun 23	7.6			7.6	200			5.0	253					3	6.45			0.26
Mon 24	7.4			7.6	211			10.4	268					4	6.81			0.36
Tue 25	7.4			7.6	474			7.6	334					3	7.06			0.35
Wed 26	7.4			7.5	426			6.6	344					4	6.93			0.34
Thu 27	7.5			7.6	392			6.1	410					4	7.36			0.29
Fri 28	7.6			7.6	533			6.2	318					6	8.05			0.32
Sat 29	7.5			7.6	336			5.7	305					4	6.75			0.28
Sun 30	7.5			7.7	411			5.5	330					4	6.83			0.32
Mon 31	7.5			7.7	356			5.7	278					4	6.96			0.39
Average	7.5	7.5	---	7.6	504	51	---	6.1	333	79	85	---	---	4	6.69	2.62	---	0.26
Minimum	7.4	7.3	---	7.5	200	45	---	4.5	250	47	53	---	---	3	4.46	2.04	---	0.18
Maximum	7.7	7.8	---	8.0	938	57	---	10.4	464	113	120	---	---	6	8.86	3.62	---	0.39
GeoMean	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

DATE	NH3-N (mg/L) RAW	NH3-N OUT-FAL30	NH3-N OUT-FAL20	NH3-N OUT-FAL 10	un-ionized NH3-N (mg/L) OUT-FAL 30	un-ionized OUT-FAL 20	un-ionized 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	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
Sat 01	17.7	11.2		0.37					36.2	30.9		1.95		0.378		6.8	53	49		73		0.52		8
Sun 02	27.5			0.29					54.1			1.77				6.0	59			58				1
Mon 03	29.7			0.28					51.1			1.46				6.9	65			63				1
Tue 04	28.4			0.31					47.5			1.76				7.7	71			66	23.0			7
Wed 05	28.5			0.18					50.4			1.66				8.0	69			73				3
Thu 06	30.4			0.27					38.3			1.62				7.5	69			75				1
Fri 07	29.3			0.43					50.6			2.17				8.1	66			76				4
Sat 08	28.6			0.32					51.5			1.62				8.3	63			71				2
Sun 09	29.4			0.28					47.2			2.03				8.3	62			68				< 1
Mon 10	28.8			0.27					55.9			2.02				7.1	64			65				2
Tue 11	28.5			0.23					48.2			1.87				7.0	68			74				7
Wed 12	28.3			0.19					52.1			1.77				6.7	68			73				1
Thu 13	30.0			0.19					61.7			1.80				7.1	67			74				7
Fri 14	29.4			0.14					55.0			1.65				7.3	70			71				3
Sat 15	24.8	19.1		0.14					52.0	27.5		1.85		0.035		6.2	57	52		67		1.16		4
Sun 16	33.5			0.27					70.3			1.93				8.7	65			62				3
Mon 17	28.0			0.35					51.2			1.99				8.6	72			69				5
Tue 18	32.2			0.39					54.0			2.17				7.2	71			74				17
Wed 19	29.4			0.33					48.9			2.18				7.1	66			72				5
Thu 20	28.2			0.20					57.7			1.84				7.5	68			73				5
Fri 21	28.6	26.0		0.20					46.1	34.0		1.95		0.026		8.2	73	67		72		1.35		5
Sat 22	34.3			0.27					52.2			1.76				8.6	62			69				4
Sun 23	32.4			0.33					51.6			1.67				9.2	64			66				3
Mon 24	27.7			0.27					44.7			2.00				9.6	63			65				5
Tue 25	30.4			0.14					53.5			1.92				8.2	69			69				3
Wed 26	31.8			0.10					51.3			1.77				8.3	62			69	3.60			6
Thu 27	31.5			0.06					50.8			1.47				7.9	65			73				5
Fri 28	31.6			0.17					62.0			1.67				8.2	69			73				1
Sat 29	33.4			0.18					49.9			1.60				8.5	62			71				1
Sun 30	33.0			0.20					47.0			1.83				9.2	64			68				1
Mon 31	28.7			0.15					52.0			1.86				9.0	71			67				2
Average	29.5	18.8	---	0.24	---	---	---	---	51.5	30.8	---	1.83	---	0.146	---	7.8	66	56	---	70	---	---	---	---
Minimum	17.7	11.2	---	0.06	---	---	< ---	---	36.2	27.5	---	1.46	---	0.026	---	6.0	53	49	---	58	3.60	0.52	---	< 1
Maximum	34.3	26.0	---	0.43	---	---	---	---	70.3	34.0	---	2.18	---	0.378	---	9.6	73	67	---	76	23.0	1.35	---	17
GeoMean	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	9.10	0.93	---	3
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.

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

Toxicity - Outfal 10

Acute Toxicity (Monthly)			Chronic Toxicity (Quarterly)		
12-Aug	Daphnia_LC50 (%)	>100	28-Aug	P. subcapitata_IC25 (%)	>90.91
12-Aug	Rainbow_Trout_LC50 (%)	>100			
12-Aug	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
14	14	100	371	323	87.1

09/24/2015

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

09/21/2015

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

Report Comments

AEP Ref #

* AEP - Alberta Environment & Parks