PROVIDING MORE EPCOR

Gold Bar Wastewater Treatment Plant
Plant Performance Report
May 2016

Digested Sludge: Total Monthly Volume (ML)	68.83

Volume of Flow (ML) / Liquid Stream Quality: pH, TSS

DATE	Peak Flow (MLD)	Influent RAW	Effluent Non UV Disinfected OUT-FAL30 BYPASS	Non UV Disinfected MPW	UV Disinfected EPEPS	UV Disinfected OUTFAL 10 FEC	UV Disinfected OUTFAL 10 FE	pH@25°C RAW	pH@25°C OUT-FAL30	pH@25°C OUT-FAL10 FEC	TSS (mg/L) RAW	TSS (mg/L) OUT-FAL30	TSS (mg/L) EPEPS	TSS (mg/L) OUTFAL 10 FEC	TSS (mg/L) OUTFAL 10 FE
Sun 01	352.31	239.86	0.00	11.57		228.29	228.29	7.7		7.4	258			3.3	3.3
Mon 02	343.88	251.35	0.00	11.50		239.72	239.72	7.6		7.7	180			3.5	3.5
Tue 03	341.22	252.09	0.00	10.56		241.53	241.53	7.6		7.5	232			4.3	4.3
Wed 04	337.95	257.47	0.00	10.01		247.46	247.46	7.6		7.5	226			3.7	3.7
Thu 05	342.08	252.55	0.00	9.47		243.08	243.08	7.6		7.5	266			4.8	4.8
Fri 06	350.60	257.93	0.00	9.50		248.43	248.43	7.6		7.5	288			4.0	4.0
Sat 07	364.62	254.26	0.00	9.40		244.86	244.86	7.7		7.6	220			3.2	3.2
Sun 08	358.45	252.12	0.00	9.41		242.71	242.71	7.4		7.4	240			4.4	4.4
Mon 09	352.56	258.39	0.00	9.15		249.24	249.24	7.6		7.5	310			5.3	5.3
Tue 10	348.32	254.71	0.00	8.81		245.90	245.90	7.6		7.5	296			6.2	6.2
Wed 11	475.46	257.18	0.00	8.80		248.26	248.26	7.6		7.7	296			6.6	6.6
Thu 12	341.19	256.42	0.00	9.16		247.14	247.14	7.5		7.5	312			6.8	6.8
Fri 13	349.14	257.87	0.00	9.18		248.69	248.69	7.7		7.5	243			7.2	7.2
Sat 14	361.01	251.61	0.00	9.10		242.51	242.51	7.6		7.5	284			7.1	7.1
Sun 15	367.60	252.24	0.00	9.34		242.90	242.90	7.7		7.6	258			6.0	6.0
Mon 16	347.50	261.89	0.00	10.15		251.74	251.74	7.5		7.5	296			6.1	6.1
Tue 17	488.54	263.41	0.00	4.26		259.15	259.15	7.5		7.5	280			3.8	3.8
Wed 18	451.23	261.44	0.00	9.41		252.03	252.03	7.6		7.5	346			4.6	4.6
Thu 19	**661.55**	**299.39**	**34.56**	**10.00**		**254.83**	**254.83**	7.5	7.2	7.6	644	70		4.2	**4.2**
Fri 20	**1,207.60**	**605.80**	**266.25**	**9.47**	**11.66**	**330.08**	**318.42**	7.5	7.5	7.4	472	12	46	6.7	**5.2**
Sat 21	**854.01**	**449.00**	**119.77**	**8.43**		**320.68**	**320.68**	7.7	8.2	7.2	208	69		5.2	**5.2**
Sun 22	**1,231.64**	**759.42**	**438.65**	**8.53**		**312.15**	**312.15**	7.6	7.4	7.4	328	131		5.4	**5.4**
Mon 23	**688.17**	**512.28**	**184.16**	**8.76**		**319.36**	**319.36**	7.6	7.7	7.4	131	43		3.6	**3.6**
Tue 24	**470.88**	**350.80**	**6.65**	**9.66**		**334.49**	**334.49**	7.7	7.7	7.4	236	73		4.1	**4.1**
Wed 25	**622.92**	**339.96**	**38.00**	**8.40**		**293.56**	**293.56**	7.7	7.4	7.5	358	56		3.8	**3.8**
Thu 26	**502.42**	**320.67**	**12.28**	**8.51**		**299.88**	**299.88**	7.7	7.6	7.5	272	49		3.0	**3.0**
Fri 27	**569.79**	**327.42**	**17.20**	**8.65**		**301.57**	**301.57**	7.7	7.4	7.6	250	48		2.3	**2.3**
Sat 28	**783.64**	**313.73**	**32.58**	**8.29**		**272.86**	**272.86**	7.7	7.5	7.6	320	58		2.8	**2.8**
Sun 29	**916.37**	**343.21**	**50.53**	**7.84**		**284.84**	**284.84**	7.6	7.8	7.4	286	47		2.6	**2.6**
Mon 30	**769.42**	**413.63**	**87.67**	**7.71**		**318.25**	**318.25**	7.7	7.8	7.4	402	40		2.8	**2.8**
Tue 31	437.68	317.11	0.00	7.55		309.56	309.56	7.6		7.4	234			4.8	4.8
Average	528.70	320.81	41.56	9.05	11.66	270.19	269.81	7.6	7.6	7.5	289	58	46	4.6	4.5
Minimum	337.95	239.86	0.00	4.26	11.66	228.29	228.29	7.4	7.2	7.2	131	12	46	2.3	2.3
Maximum	1,231.64	759.42	438.65	11.57	11.66	334.49	334.49	7.7	8.2	7.7	644	131	46	7.2	7.2
GeoMean	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
TOTAL	---	9,945	1,288	281	12	8,376	8,364	---	---	---	---	---	---	---	---

Liquid Stream Quality: BOD, TP, NH3-N

DATE	BOD_5/$cBOD_5$ (mg/L) RAW BOD_5	OUT-FAL30 BOD_5	EPEPS BOD_5	OUTFAL 10 FEC $cBOD_5$	OUTFAL 10 FE $cBOD_5$	TP (mg/L) RAW	TP OUT-FAL30	TP EPEPS	TP OUTFAL 10 FEC	TP OUTFAL 10 FE	NH3-N (mg/L) RAW	NH3-N OUT-FAL30	NH3-N EPEPS	NH3-N OUTFAL 10 FEC	NH3-N OUTFAL 10 FE
Sun 01	346			4	4	6.16			0.22	0.22	37.7			1.03	1.03
Mon 02	264			4	4	6.84			0.24	0.24	31.7			0.95	0.95
Tue 03	294			3	3	7.45			0.30	0.30	35.5			0.30	0.30
Wed 04	308			3	3	6.67			0.27	0.27	28.7			0.40	0.40
Thu 05	297			3	3	7.45			0.29	0.29	37.4			0.64	0.64
Fri 06	400			3	3	7.27			0.25	0.25	36.4			1.38	1.38
Sat 07	292			4	4	6.80			0.32	0.32	35.2			1.49	1.49
Sun 08	334			4	4	6.47			0.25	0.25	32.0			1.70	1.70
Mon 09	269			3	3	7.25			0.30	0.30	35.8			1.70	1.70
Tue 10	334			3	3	6.93			0.35	0.35	38.0			1.46	1.46
Wed 11	310			4	4	7.30			0.37	0.37	38.8			1.29	1.29
Thu 12	321			4	4	7.15			0.39	0.39	37.8			1.35	1.35
Fri 13	328			4	4	6.62			0.38	0.38	36.3			1.25	1.25
Sat 14	272			4	4	6.33			0.37	0.37	38.4			1.44	1.44
Sun 15	269			4	4	6.14			0.38	0.38	34.9			1.58	1.58
Mon 16	296			4	4	6.21			0.31	0.31	33.9			0.99	0.99
Tue 17	308			3	3	7.46			0.22	0.22	37.7			0.29	0.29
Wed 18	280			3	3	6.98			0.23	0.23	35.2			0.45	0.45
Thu 19	339	137		2	**2**	7.79	3.70		0.23	**0.23**	33.9	36.6		0.70	**0.70**
Fri 20	152	34	44	5	**4**	3.97	0.30	1.04	0.22	**0.19**	15.9	17.7	14.6	0.73	**0.23**
Sat 21	152	58		3	**3**	4.82	2.62		0.20	**0.20**	22.4	33.8		1.00	**1.00**
Sun 22	99	48		3	**3**	4.26	1.06		0.18	**0.18**	24.3	12.5		1.76	**1.76**
Mon 23	116	47		2	**2**	4.38	1.13		0.13	**0.13**	20.6	21.8		0.23	**0.23**
Tue 24	202	106		3	**3**	6.39	3.23		0.20	**0.20**	30.3	24.8		2.14	**2.14**
Wed 25	247	85		2	**2**	6.11	2.47		0.17	**0.17**	28.6	26.9		2.31	**2.31**
Thu 26	190	95		< 2	< **2**	6.09	2.20		0.16	**0.16**	25.5	24.7		0.71	**0.71**
Fri 27	211	88		< 2	< **2**	5.40	2.01		0.15	**0.15**	23.2	24.2		0.30	**0.30**
Sat 28	243	114		2	**2**	6.01	3.35		0.14	**0.14**	27.4	25.8		0.50	**0.50**
Sun 29	267	81		2	**2**	5.52	2.10		0.16	**0.16**	20.0	19.1		0.84	**0.84**
Mon 30	205	59		< 2	< **2**	5.88	1.72		0.15	**0.15**	20.1	23.5		0.49	**0.49**
Tue 31	241			4	4	5.17			0.17	0.17	28.9			0.36	0.36
Average	264	79	44	3	3	6.30	2.16	1.04	0.25	0.25	31.0	24.3	14.6	1.02	1.01
Minimum	99	34	44	< 2	< 2	3.97	0.30	1.04	0.13	0.13	15.9	12.5	14.6	0.23	0.23
Maximum	400	137	44	5	4	7.79	3.70	1.04	0.39	0.39	38.8	36.6	14.6	2.31	2.31
GeoMean	---	---	---	---	---	---	---	---	---	---	---	---	---		---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---	---		---

Liquid Stream Quality: TKN, NO2+NO3, Chloride, E. coli

DATE	TKN (mg/L) RAW	TKN OUT-FAL30	TKN OUT-FAL10 FEC	NO_2+NO_3 (mg/L) RAW	NO_2+NO_3 OUT-FAL30	NO_2+NO_3 OUT-FAL10 FEC	Chloride (mg/L) RAW	Chloride OUT-FAL30	Chloride OUT-FAL10 FEC	*E. coli* (Counts/100 mL) RAW X10^6	*E. coli* OUT-FAL30 X10^6	*E. coli* OUT-FAL10 FEC
Sun 01	53.0		2.73			12.8	67		74			8
Mon 02	54.1		2.70			13.2	74		73			8
Tue 03	56.2		1.97			12.5	71		74			9
Wed 04	53.5		2.18	< 0.05		10.7	58		77			9
Thu 05	58.0		2.25			12.0	77		93			5
Fri 06	60.4		3.66			12.7	72		83			4
Sat 07	55.4		3.48			11.7	72		83			5
Sun 08	55.6		3.73			12.0	71		77			18
Mon 09	58.0		3.72			11.5	89		75			7
Tue 10	50.6		3.21			11.8	79		102			6
Wed 11	56.4		3.16	< 0.01		11.8	75		87			11
Thu 12	56.6		3.26			12.1	74		82			3
Fri 13	53.3		3.46			12.5	74		81			3
Sat 14	50.9		3.42			11.9	70		80			4
Sun 15	51.7		3.38			13.6	69		79			3
Mon 16	51.3		2.78			11.8	71		73	4.2		4
Tue 17	58.6		1.92			11.4	75		79			11
Wed 18	54.5		2.26	< 0.01		9.4	72		81			18
Thu 19	55.0	45.6	2.18		1.11	13.0	70	81	80		4.2	10
Fri 20	26.1	20.6	2.31		1.34	6.4	43	35	65		0.2	64
Sat 21	34.7	39.9	2.25		1.95	6.4	53	63	52		0.5	4
Sun 22	25.0	16.1	3.05		2.08	7.1	36	33	61		0.4	1
Mon 23	30.0	25.0	1.30		2.53	5.3	57	54	45		0.1	8
Tue 24	45.1	34.6	3.82		1.56	9.7	79	60	68	2.5	3.4	20
Wed 25	44.9	32.8	4.11	< 0.01	1.76	9.0	77	71	86		2.1	20
Thu 26	41.0	31.4	2.11		1.12	8.0	69	62	79		1.8	9
Fri 27	39.9	30.6	1.70		0.02	9.3	64	64	73		1.4	19
Sat 28	41.1	35.2	1.85		0.25	10.4	66	59	72		2.2	7
Sun 29	36.9	24.1	2.28		0.24	10.6	56	48	66		1.3	7
Mon 30	39.8	25.9	1.86		0.29	9.0	52	51	62		0.6	6
Tue 31	42.8		1.57			9.1	60		64			18
Average	48.1	30.2	2.70	0.02	1.19	10.6	67	57	75	---	---	---
Minimum	25.0	16.1	1.30	< 0.01	0.02	5.26	36	33	45	2.5	0.1	1
Maximum	60.4	45.6	4.11	< 0.05	2.53	13.6	89	81	102	4.2	4.2	64
GeoMean	---	---	---	---	---	---	---	---	---	3.2	0.9	8
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)

EPE volume calculated based on pump curve

Enhanced Primary Treatment (EPT) Usage					
Total Bypass (hrs)	EPT Usage (hrs)	% Usage	Total Bypass YTD (hrs)	EPT Usage YTD	% Usage
106	106	100%	146	146	100.00%

Report Comments

	May 20 - Outfall 10 FEC: Replaced results from primary composite sampler with results from backup composite sampler due to unusually low NH3-N result in the primary sample. Primary sampler results were: pH = 7.4, TSS = 6.0 mg/L, cBOD = 4 mg/L, TP = 0.25 mg/L, TKN = 2.27 mg/L, NH3-N = 0.517 mg/L, NO2-NO3 = 64.6 mg/L, Cl = 64.6 mg/L.

AEP Ref #

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 OUTFAL 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-ultraviolet disinfection.
FEC ⇨ Combined pre - UV disinfection (FE+EPEPS)
OUT FAL 10 ⇨ UV-disinfected, discharged via OUTFAL 10
OUT FAL 20 ⇨ Combined Bypass (RAW + PE + EPE)
OUT FAL 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

06/29/2016
(mm/dd/yyyy)
Abhishek Bhargava
Senior Manager, Operations

06/29/2016
(mm/dd/yyyy)
Debra Long
Senior Manager, Analytical Operations