Gold Bar Wastewater Treatment Plant
Plant Performance Report
July 2016

PROVIDING MORE EPCOR

Digested Sludge: Total Monthly Volume (ML)	60.24

Volume of Flow (ML)

DATE	Peak Flow (MLD)	Influent RAW	Effluent Non UV Disinfected OUTFALL30 BYPASS	Non UV Disinfected MPW	UV Disinfected OUTFALL20	UV Disinfected EPEPS	OUTFALL10 FEC	OUTFALL10 FE
Fri 01	416.52	313.84	0.00	8.92	0.00	0.00	304.92	304.92
Sat 02	462.17	316.53	1.89	9.61	0.00	0.74	305.03	304.29
Sun 03	401.50	296.79	0.00	8.28	0.00	0.00	288.51	288.51
Mon 04	381.79	291.04	0.00	9.41	0.00	0.00	281.63	281.63
Tue 05	376.12	281.86	0.00	9.45	0.00	0.00	272.41	272.41
Wed 06	361.08	273.98	0.00	7.36	0.00	0.00	266.62	266.62
Thu 07	369.82	274.24	0.00	10.56	0.00	0.00	263.68	263.68
Fri 08	456.76	286.20	3.26	9.65	0.00	4.03	273.29	269.26
Sat 09	373.59	268.80	0.00	9.51	0.00	0.00	259.29	259.29
Sun 10	1,005.59	475.34	113.95	9.69	0.00	14.85	351.70	336.85
Mon 11	565.19	351.22	9.35	9.73	0.00	4.92	332.14	327.22
Tue 12	414.78	289.42	0.00	9.76	0.00	0.00	279.66	279.66
Wed 13	563.45	302.09	10.33	9.61	0.00	5.18	282.15	276.97
Thu 14	373.60	285.08	0.00	9.64	0.00	0.00	275.44	275.44
Fri 15	1,409.71	444.05	115.35	9.79	0.00	27.26	318.91	291.65
Sat 16	766.48	353.99	14.34	9.80	0.00	7.17	329.85	322.68
Sun 17	393.02	291.03	0.00	9.85	0.00	0.00	281.18	281.18
Mon 18	380.64	293.05	0.00	9.94	0.00	0.00	283.11	283.11
Tue 19	383.55	285.09	0.00	9.96	0.00	0.00	275.13	275.13
Wed 20	658.75	357.28	18.23	10.22	0.00	17.16	328.83	311.67
Thu 21	366.51	278.73	0.00	10.08	0.00	0.00	268.65	268.65
Fri 22	369.82	278.32	0.00	10.35	0.00	0.00	267.97	267.97
Sat 23	367.42	260.34	0.00	10.08	0.00	0.00	250.26	250.26
Sun 24	379.02	262.16	0.00	9.70	0.00	0.00	252.46	252.46
Mon 25	381.66	279.94	0.00	8.78	0.00	0.00	271.16	271.16
Tue 26	727.28	299.74	17.53	10.31	0.00	4.59	271.90	267.31
Wed 27	1,476.08	452.76	161.00	10.21	0.00	0.00	281.55	281.55
Thu 28	436.18	320.94	3.27	10.22	0.00	0.00	307.45	307.45
Fri 29	385.66	285.19	0.00	9.86	0.00	0.00	275.33	275.33
Sat 30	1,339.71	505.05	163.26	10.03	0.00	9.74	331.76	322.02
Sun 31	661.08	348.28	21.64	9.95	0.00	0.00	316.69	316.69
Average	561.44	319.43	21.08	9.69	0.00	3.09	288.67	285.58
Minimum	361.08	260.34	0.00	7.36	0.00	0.00	250.26	250.26
Maximum	1,476.08	505.05	163.26	10.56	0.00	27.26	351.70	336.85
GeoMean	---	---	---	---	---	---	---	---
TOTAL	---	9,902	653	300	0.00	96	8,949	8,853

Liquid Stream Quality

DATE	pH@25°C RAW	pH OUTFALL30	pH OUTFALL20	pH OUTFALL10 FEC	TSS (mg/L) RAW	TSS OUTFALL30	TSS OUTFALL20	TSS EPEPS	TSS OUTFALL10 FEC	TSS OUTFALL10 FE
Fri 01	7.6			7.5	247				2.9	2.9
Sat 02	7.7	8.1		7.6	260	59.0		ns	3.0	3.0
Sun 03	7.7			7.6	270				2.3	2.3
Mon 04	7.7			7.7	258				2.5	2.5
Tue 05	7.8			7.6	312				3.7	3.7
Wed 06	7.7			7.7	238				2.8	2.8
Thu 07	7.6			7.7	248				3.7	3.7
Fri 08	7.7	7.9		7.6	300	82.4		ns	5.0	5.1
Sat 09	7.7			7.7	304				2.9	2.9
Sun 10	7.5	7.7		7.5	409	52.7		ns	6.0	6.3
Mon 11	7.6	7.6		7.4	236	64.0		ns	5.1	5.2
Tue 12	7.7			7.6	232				2.2	2.2
Wed 13	7.7	7.7		7.6	397	48.0		ns	4.6	4.7
Thu 14	7.7			7.7	303				3.4	3.4
Fri 15	7.3	7.6		7.6	732	134		ns	7.4	8.1
Sat 16	7.7	7.6		7.6	238	40.7		ns	4.3	4.4
Sun 17	7.7			7.6	366				4.2	4.2
Mon 18	7.7			7.6	229				3.4	3.4
Tue 19	7.7			7.7	406				3.6	3.6
Wed 20	7.6	7.6		7.5	270	42.0		ns	4.8	5.1
Thu 21	7.7			7.5	251				2.5	2.5
Fri 22	7.7			7.7	282				2.6	2.6
Sat 23	7.7			7.6	308				3.6	3.6
Sun 24	7.7			7.6	230				3.3	3.3
Mon 25	7.6			7.6	280				4.0	4.0
Tue 26	7.8	7.8		7.6	282	122		ns	5.2	5.3
Wed 27	7.7	7.9		7.6	484	147			4.3	4.3
Thu 28	7.7	7.9		7.5	575	28.0			3.7	3.7
Fri 29	7.7			7.6	249				4.3	4.3
Sat 30	7.4	* 8.1		7.5	346	* 70.7		76.7	6.1	4.0
Sun 31	7.8	7.6		7.4	272	51.3			3.5	3.5
Average	7.7	7.8	---	7.6	317	72.4	---	76.7	3.9	3.9
Minimum	7.3	7.6	---	7.4	229	28.0	---	76.7	2.2	2.2
Maximum	7.8	8.1	---	7.7	732	147	---	76.7	7.4	8.1
GeoMean	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---

DATE	BOD_5/$cBOD_5$ (mg/L) RAW BOD_5	OUTFALL30 BOD_5	OUTFALL20 BOD_5	EPEPS BOD_5	OUTFALL10 FEC $cBOD_5$	OUTFALL10 FE $cBOD_5$	TP (mg/L) RAW	TP OUTFALL30	TP OUTFALL20	TP EPEPS	TP OUTFALL10 FEC	TP OUTFALL10 FE
Fri 01	198				< 2.0	< 2.0	4.86				0.15	0.15
Sat 02	199	109		ns	3.0	3.0	5.09	4.78		ns	0.18	0.18
Sun 03	220				2.0	2.0	5.51				0.19	0.19
Mon 04	236				2.0	2.0	5.82				0.22	0.22
Tue 05	278				3.0	3.0	6.58				0.22	0.22
Wed 06	267				2.0	2.0	6.61				0.22	0.22
Thu 07	236				3.0	3.0	6.61				0.23	0.23
Fri 08	243	144		ns	4.0	4.1	6.00	6.82		ns	0.31	0.31
Sat 09	256				2.0	2.0	6.65				0.17	0.17
Sun 10	161	44		ns	6.0	6.3	3.99	3.01		4.73	0.39	0.20
Mon 11	251	130		ns	5.0	5.1	4.88	5.87		4.15	0.34	0.28
Tue 12	249				< 2.0	< 2.0	5.50				0.24	0.24
Wed 13	236	121		ns	5.0	5.1	6.36	5.80		ns	0.33	0.34
Thu 14	224				2.0	2.0	6.12				0.24	0.24
Fri 15	185	74		ns	6.0	6.6	5.85	4.01		ns	0.62	0.68
Sat 16	149	36		ns	3.0	3.1	5.15	3.04		ns	0.27	0.28
Sun 17	201				2.0	2.0	6.31				0.32	0.32
Mon 18	204				2.0	2.0	5.20				0.50	0.50
Tue 19	259				< 2.0	< 2.0	6.05				0.35	0.35
Wed 20	244	57		ns	6.0	6.3	4.45	2.55		ns	0.32	0.34
Thu 21	246				2.0	2.0	5.85				0.25	0.25
Fri 22	222				< 2.0	< 2.0	5.93				0.23	0.23
Sat 23	302				2.0	2.0	5.90				0.25	0.25
Sun 24	233				3.0	3.0	5.94				0.23	0.23
Mon 25	252				3.0	3.0	6.45				0.27	0.27
Tue 26	234	342		ns	5.0	5.1	6.68	7.67		ns	0.38	0.39
Wed 27	172	42			2.0	2.0	4.29	2.46			0.27	0.27
Thu 28	241	45			< 2.0	< 2.0	5.41	3.33			0.26	0.26
Fri 29	251				3.0	3.0	6.49				0.35	0.35
Sat 30	170	* 60		ns	5.0	5.2	4.20	* 2.63		4.17	0.44	0.33
Sun 31	164	73			2.0	2.0	3.99	3.42			0.40	0.40
Average	225	98	---	---	3.1	3.1	5.64	4.26	---	4.35	0.29	0.29
Minimum	149	36	---	---	< 2.0	< 2.0	3.99	2.46	---	4.15	0.15	0.15
Maximum	302	342	---	---	6.0	6.6	6.68	7.67	---	4.73	0.62	0.68
GeoMean	---	---	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---

DATE	NH3-N (mg/L) RAW	NH3-N OUTFALL30	NH3-N OUTFALL20	NH3-N EPEPS	NH3-N OUTFALL10 FEC	NH3-N OUTFALL10 FE	un-ionized NH3-N (mg/L) OUT-FAL 30	OUT-FAL 20	OUT-FAL 10
Fri 01	25.0				0.55	0.55			
Sat 02	18.2	32.9		ns	0.72	0.72			
Sun 03	25.5				0.80	0.80			
Mon 04	28.6				0.76	0.76			
Tue 05	27.0				0.34	0.34			
Wed 06	29.1				0.47	0.47			
Thu 07	28.6				0.65	0.65			
Fri 08	27.0	46.1		ns	0.98	0.99			
Sat 09	31.1				0.65	0.65			
Sun 10	14.6	21.7		34.3	2.00	0.58			
Mon 11	19.1	36.8		25.6	1.48	1.12			
Tue 12	27.0				0.41	0.41			
Wed 13	22.2	42.7		ns	1.09	1.11			
Thu 14	26.4				0.35	0.35			
Fri 15	16.1	19.0		ns	2.17	2.37			
Sat 16	18.7	19.4		ns	0.68	0.70			
Sun 17	24.2				0.31	0.31			
Mon 18	25.3				0.22	0.22			
Tue 19	24.8				0.13	0.13			
Wed 20	16.2	18.1		ns	1.04	1.10			
Thu 21	26.5				0.19	0.19			
Fri 22	25.1				0.36	0.36			
Sat 23	31.1				0.73	0.73			
Sun 24	31.1				0.65	0.65			
Mon 25	30.1				0.52	0.52			
Tue 26	28.8	42.9		ns	1.80	1.83			
Wed 27	16.0	12.0			0.35	0.35			
Thu 28	26.1	25.1			0.54	0.54			
Fri 29	27.9				1.03	1.03			
Sat 30	13.2	* 18.3		25.8	1.38	0.64			
Sun 31	18.9	21.5			0.41	0.41			
Average	24.2	27.4	---	28.6	0.77	0.70	---	---	---
Minimum	13.2	12.0	---	25.6	0.13	0.13	---	---	---
Maximum	31.1	46.1	---	34.3	2.17	2.37	---	---	---
GeoMean	---	---	---	---		---	---	---	---
TOTAL	---	---	---	---		---	---	---	---

DATE	TKN (mg/L) RAW	TKN OUTFALL30	TKN OUTFALL20	TKN OUTFALL10 FEC	NO_2+NO_3 (mg/L) RAW	NO_2+NO_3 OUTFALL30	NO_2+NO_3 OUTFALL20	NO_2+NO_3 OUTFALL10 FEC	Chloride (mg/L) RAW	Chloride OUTFALL30	Chloride OUTFALL20	Chloride OUTFALL10 FEC	*E. coli* (Counts/100 mL) RAW X10^6	*E. coli* OUTFALL30 X10^6	*E. coli* OUTFALL20 X10^6	*E. coli* OUTFALL10 FEC
Fri 01	38.5			1.82				9.7	65.9			108				20
Sat 02	40.3	39.6		2.15		0.22		10.5	59.4	65.7		69.2		3.4		17
Sun 03	44.2			2.40				14.2	61.3			69.2				20
Mon 04	42.9			2.27				11.9	71.2			69.0				13
Tue 05	52.1			2.08				10.9	68.5			76.2	2.7			10
Wed 06	48.9			2.05	< 0.01			12.0	71.4			78.2				6
Thu 07	49.0			2.20				12.9	75.8			84.4				13
Fri 08	48.0	62.0		3.03		1.12		13.7	67.2	83.3		79.6		3.5		14
Sat 09	50.8			2.24				11.7	63.6			76.8				17
Sun 10	27.4	33.4		4.16		0.47		8.3	46.1	41.4		59.8		1.5		320
Mon 11	37.8	46.3		3.17		1.27		9.1	57.2	61.2		53.2		2.4		24
Tue 12	42.5			1.89				11.5	64.8			69.4				26
Wed 13	45.0	46.6		2.76	nr	2.17		12.8	64.3	74.2		75.2		2.1		6
Thu 14	44.3			1.83				11.6	65.2			75.4				14
Fri 15	32.4	26.0		4.14		0.75		9.4	44.5	40.7		69.7		2.1		75
Sat 16	32.5	24.2		1.82		0.98		8.1	52.9	37.9		53.2		1.7		14
Sun 17	43.1			1.48				13.7	61.7			67.5				14
Mon 18	37.4			1.69				14.0	62.8			69.8				75
Tue 19	41.6			1.59				11.1	66.1			74.0				15
Wed 20	33.5	27.8		2.77	< 0.01	0.09		11.8	56.8	51.2		67.6		2.4		30
Thu 21	42.5			1.47				12.6	66.5			72.1				38
Fri 22	43.2			1.73				14.4	68.5			74.6				24
Sat 23	43.5			2.12				12.8	65.4			72.9				20
Sun 24	45.8			2.28				13.1	62.7			68.6				45
Mon 25	45.9			2.19				11.8	71.9			70.9				37
Tue 26	47.9	56.3		3.58		0.17		9.1	62.1	66.9		72.4	5.0	3.1		35
Wed 27	28.8	17.5		2.02	< 0.01	0.41		10.6	42.2	28.6		63.1		2.4		28
Thu 28	40.3	35.8		2.04		1.80		8.9	66.1	54.1		59.0		3.0		175
Fri 29	46.0			2.87				10.8	67.6			67.3				145
Sat 30	27.5	* 22.1		3.28		* 0.20		7.8	37.0	* 33.0		62.6		1.6		70
Sun 31	30.4	31.5		1.81		0.99		8.2	56.0	43.9		45.4		2.1		49
Average	41.1	36.1	---	2.35	0.01	0.82	---	11.3	61.7	52.5	---	70.1	---	---	---	---
Minimum	27.4	17.5	---	1.47	< 0.01	0.09	---	7.81	37.0	28.6	---	45.4	2.7	1.5	---	6
Maximum	52.1	62.0	---	4.16	0.01	2.17	---	14.4	75.8	83.3	---	108	5.0	3.5	---	175
GeoMean	---	---	---	---	---	---	---	---	---	---	---	---	3.7	2.3	---	26
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

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

Enhanced Primary Treatment (EPT) Usage

Total Bypass (hrs)	EPT Usage (hrs)	% Usage	Total Bypass YTD (hrs)	EPT Usage YTD	% Usage YTD
71	71	100%	295	295	100.00%

Report Comments

Outfall 10 *E. coli*	As per Operations Plan, the Outfall 10 monthly summary for *E. coli* excludes those days where flow is recorded for EPEPS.
AEP Ref #	
314942	* Auto-sampler failed to collect composite sample. Flow-based composite results were calculated from five grab samples. The five grab samples were previously frozen which deviates from Standard Methods. The results are reported as estimates.

Note: EPE flow calculation based on pump curve for all days except for July 10.
Note: July 10 EPE flow based on lab data results due to unreasonable pump curve value.

RAW	⇨ Untreated influent into the plant	EPT	⇨ Enhanced Primary Treatment	OUT FAL 10	⇨ UV-disinfected, discharged via OUTFALL 10
INF	⇨ Untreated Wastewater from collection system	EPE	⇨ Enhanced Primary Effluent	OUT FAL 20	⇨ Combined Bypass (RAW + PE + EPE)
INFs	⇨ Influent, screened at the Headworks Diversion Structure.	EPEPS	⇨ Enhanced Primary Effluent and Pump Station	OUT FAL 30	⇨ Combined Bypass (INF + INFS + PE30 + EPE)
PE	⇨ Primary Effluent from conventional primaries	FE	⇨ Final Effluent from secondary treatment process (with biological nutrient removal). Pre-ultraviolet disinfection.	MPW	⇨ Membrane Product Water (Effluent re-use water)
PE 30	⇨ Primary Effluent from conventional primaries discharged via OUTFAL 30	FEC	⇨ Combined pre - UV disinfection (FE+EPEPS)		

ML ⇨ Megalitre (1,000,000 Litre) | nr ⇨ No Result
MPN ⇨ Most Probable Number | ns ⇨ No Sample

08/29/2016 (mm/dd/yyyy)
Abhishek Bhargava
Senior Manager, Operations

08/29/2016 (mm/dd/yyyy)
Steve Craik
Director QA & Environment