PROVIDING MORE EPCOR

Gold Bar Wastewater Treatment Plant
Plant Performance Report
August 2016

Digested Sludge: Total Monthly Volume (ML)	60.57

Volume of Flow (ML)

DATE	Peak Flow (MLD)	Influent RAW	Effluent Non UV Disinfected OUTFALL30 BYPASS	Effluent Non UV Disinfected MPW	Effluent UV Disinfected OUTFALL20	Effluent UV Disinfected EPEPS	Effluent UV Disinfected OUTFALL10 FEC	Effluent UV Disinfected OUTFALL10 FE
Mon 01	648.70	380.12	36.43	10.08	0.00	0.00	333.61	333.61
Tue 02	383.58	296.84	0.00	9.79	0.00	0.00	287.05	287.05
Wed 03	452.54	305.05	0.17	10.47	0.00	0.00	294.41	294.41
Thu 04	381.66	284.48	0.02	8.11	0.00	0.00	276.35	276.35
Fri 05	380.11	278.21	0.01	9.69	0.00	0.00	268.51	268.51
Sat 06	382.81	279.70	0.00	9.53	0.00	0.00	270.17	270.17
Sun 07	376.92	262.98	0.00	9.60	0.00	0.00	253.38	253.38
Mon 08	1,058.21	288.34	10.59	9.85	0.03	1.43	267.90	266.47
Tue 09	1,390.19	722.60	335.28	9.71	0.20	12.70	377.61	364.91
Wed 10	622.20	367.63	16.88	10.01	0.00	5.02	340.74	335.72
Thu 11	402.95	315.69	0.00	8.98	0.00	0.00	306.71	306.71
Fri 12	389.92	296.72	0.00	8.47	0.00	0.00	288.25	288.25
Sat 13	379.46	279.18	0.00	10.28	0.00	0.00	268.90	268.90
Sun 14	426.08	276.65	0.00	8.70	0.00	0.00	267.95	267.95
Mon 15	382.01	288.04	0.00	10.24	0.00	0.00	277.80	277.80
Tue 16	374.33	281.63	0.00	10.04	0.00	0.00	271.59	271.59
Wed 17	365.50	275.74	0.00	10.16	0.00	0.00	265.58	265.58
Thu 18	362.61	273.05	0.00	10.03	0.00	0.00	263.02	263.02
Fri 19	359.09	271.06	0.00	10.06	0.00	0.00	261.00	261.00
Sat 20	364.29	258.41	0.00	9.74	0.00	0.00	248.67	248.67
Sun 21	491.02	297.97	8.69	9.50	0.00	0.00	279.78	279.78
Mon 22	1,062.93	444.01	117.27	9.05	0.00	15.90	317.69	301.79
Tue 23	662.20	412.35	48.76	10.04	0.00	6.53	353.55	347.02
Wed 24	529.44	294.94	3.31	8.94	0.00	0.74	282.69	281.95
Thu 25	821.94	372.22	38.40	10.24	0.00	13.62	323.58	309.96
Fri 26	360.63	277.74	0.00	9.77	0.00	0.00	267.97	267.97
Sat 27	369.06	261.63	0.00	10.34	0.00	0.00	251.29	251.29
Sun 28	368.96	260.14	0.00	9.97	0.00	0.00	250.17	250.17
Mon 29	354.56	273.94	0.00	9.63	0.00	0.00	264.31	264.31
Tue 30	353.83	193.14	0.00	9.64	0.00	0.00	183.50	183.50
Wed 31	383.33	296.30	0.00	9.85	0.00	0.00	286.45	286.45
Average	504.55	311.82	19.86	9.69	0.01	1.80	282.26	280.46
Minimum	353.83	193.14	0.00	8.11	0.00	0.00	183.50	183.50
Maximum	1,390.19	722.60	335.28	10.47	0.20	15.90	377.61	364.91
GeoMean	---	---	---	---	---	---	---	---
TOTAL	---	9,667	616	301	0.23	56	8,750	8,694

Liquid Stream Quality

DATE	pH@25°C RAW	TSS (mg/L) RAW	TSS (mg/L) OUTFALL30	TSS (mg/L) OUTFALL20	TSS (mg/L) EPEPS	TSS (mg/L) OUTFALL10 FEC	TSS (mg/L) OUTFALL10 FE	BOD_5/$cBOD_5$ (mg/L) RAW BOD_5	BOD_5/$cBOD_5$ (mg/L) OUTFALL30 BOD_5	BOD_5/$cBOD_5$ (mg/L) OUTFALL20 BOD_5	BOD_5/$cBOD_5$ (mg/L) EPEPS BOD_5	BOD_5/$cBOD_5$ (mg/L) OUTFALL10 FEC $cBOD_5$	BOD_5/$cBOD_5$ (mg/L) OUTFALL10 FE $cBOD_5$	TP (mg/L) RAW	TP (mg/L) OUTFALL30	TP (mg/L) OUTFALL20	TP (mg/L) EPEPS	TP (mg/L) OUTFALL10 FEC	TP (mg/L) OUTFALL10 FE	NH3-N (mg/L) RAW	NH3-N (mg/L) OUTFALL30	NH3-N (mg/L) OUTFALL20	NH3-N (mg/L) EPEPS	NH3-N (mg/L) OUTFALL10 FEC	NH3-N (mg/L) OUTFALL10 FE	un-ionized NH3-N (mg/L) OUT-FAL 30	un-ionized NH3-N (mg/L) OUT-FAL 20	un-ionized NH3-N (mg/L) OUT-FAL 10	TKN (mg/L) RAW	TKN (mg/L) OUTFALL30	TKN (mg/L) OUTFALL20	TKN (mg/L) OUTFALL10 FEC	NO_2+NO_3 (mg/L) RAW	NO_2+NO_3 (mg/L) OUTFALL30	NO_2+NO_3 (mg/L) OUTFALL20	NO_2+NO_3 (mg/L) OUTFALL10 FEC	Chloride (mg/L) RAW	Chloride (mg/L) OUTFALL30	Chloride (mg/L) OUTFALL20	Chloride (mg/L) OUTFALL10 FEC	*E. coli* (Counts/100 mL) RAW	*E. coli* (Counts/100 mL) OUTFALL30	*E. coli* (Counts/100 mL) OUTFALL20	*E. coli* (Counts/100 mL) OUTFALL10 FEC
												FEC	FE																																
Mon 01	7.5	232	50.0			4.4	4.4	154	60			3	3	3.26	3.08			1.16	1.16	14.7	25.2			0.94	0.94				26.3	30.80		2.46				9.4	56.9	53.6		60.5		2.80		34
Tue 02	7.7	180				4.8	4.8	190				3	3	5.00				1.58	1.58	25.4				1.28	1.28				38.4			2.93				11.0	72.5			71.9				105
Wed 03	7.7	282				6.1	6.1	162				3	3	5.34				0.64	0.64	25.6				1.26	1.26				40.8			2.87	< 0.01			10.9	72.3			79.9				22
Thu 04	7.9	230				4.5	4.5	229				3	3	5.53				0.37	0.37	27.4				1.02	1.02				41.7			2.85				10.3	75.2			77.5				16
Fri 05	7.8	249				3.5	3.5	246				4	4	5.69				0.25	0.25	27.9				0.37	0.37				45.5			2.08				10.6	72.3			78.7				21
Sat 06	7.8	229				3.8	3.8	211				3	3	5.93				0.23	0.23	28.2				0.44	0.44				44.0			2.15				11.0	66.2			81.6				14
Sun 07	7.9	196				3.7	3.7	212				3	3	5.70				0.24	0.24	27.1				0.68	0.68				45.4			2.34				10.8	65.6			69.7				17
Mon 08	7.6	268	85.6		NS	4.2	4.2	251	NS		NS	3	3	5.81	5.42		NS	0.23	0.23	27.7	30.8		NS	0.76	0.76				44.5	NS		2.18				11.4	67.3	NS		72.3				14
Tue 09	7.5	434	77.0		72.0	10.7	8.6	170	48		72.0	6	4	3.85	1.38		2.29	0.39	0.32	9.80	8.42		17.9	2.02	1.47				23.4	11.5		3.72			0.68		4.5	35.6	25.0		52.8		1.7	0.4	230
Wed 10	7.7	248	48.0		NS	5.3	5.3	208	55		NS	3	3	4.14	2.64		4.64	0.30	0.24	20.6	18.5		33.4	0.97	0.49				31.3	24.9		2.24	0.02	1.36			5.6	64.1	44.9		52.0		* 2.4		20
Thu 11	7.6	224				4.1	4.1	172				2	2	4.76				0.20	0.20	22.7				0.92	0.92				35.1			2.64				7.5	73.0			75.1				29
Fri 12	7.7	282				3.7	3.7	233				3	3	7.66				0.18	0.18	28.4				0.55	0.55				63.9			2.29				10.3	78.3			86.9				16
Sat 13	7.7	234				3.3	3.3	238				2	2	5.67				0.22	0.22	30.3				0.58	0.58				44.8			2.15				11.1	72.7			80.5				25
Sun 14	7.6	246				2.9	2.9	221				< 2	< 2	5.48				0.19	0.19	28.5				0.33	0.33				41.9			1.88				12.6	69.6			75.7				13
Mon 15	7.6	247				3.0	3.0	233				< 2	< 2	5.29				0.18	0.18	27.2				0.16	0.16				42.3			1.40				10.1	71.8			70.2				95
Tue 16	7.7	262				2.6	2.6	231				< 2	< 2	5.48				0.17	0.17	28.2				0.15	0.15				43.1			1.44				10.0	75.7			75.1				11
Wed 17	7.8	274				2.3	2.3	244				< 2	< 2	5.06				0.17	0.17	26.4				0.10	0.10				41.5			1.41	< 0.01			9.4	77.2			79.9				37
Thu 18	7.9	292				4.5	4.5	* 184				< 2	< 2	5.37				0.17	0.17	27.3				0.20	0.20				44.6			1.49				9.2	76.9			78.8				15
Fri 19	7.5	254				2.6	2.6	272				* < 2	< 2	5.87				0.18	0.18	27.8				0.25	0.25				46.6			1.75				10.6	83.4			84.0				27
Sat 20	7.8	270				2.1	2.1	277				< 2	< 2	6.10				0.14	0.14	29.7				0.29	0.29				46.7			1.42				11.5	70.0			82.5				17
Sun 21	7.7	332	64.0			2.9	2.9	203	148			< 2	< 2	5.68	4.82			0.16	0.16	23.5	31.2			0.42	0.42				42.9	43.1		1.83		0.02		8.8	66.0	65.3		73.0		4.7		85
Mon 22	7.5	310	72.0		NS	6.1	6.1	203	72		NS	6	6	3.58	2.23		2.15	0.29	0.19	16.5	15.8		17.8	1.29	0.42				27.5	21.7		2.88		0.41		6.9	46.0	43.2		60.0	3.0	1.6		2,100
Tue 23	7.6	354	40.0		NS	4.0	4.0	158	54		50.0	5	4	3.71	2.77		2.24	0.25	0.21	18.1	19.2		20.0	0.84	0.48				30.9	26.3		2.35		0.43		5.8	57.4	51.6		52.9		2.2		26
Wed 24	7.7	224	59.0		NS	2.5	2.5	166	126		NS	< 2	< 2	5.08	5.08		NS	0.14	0.14	24.8	33.3		NS	0.42	0.42				40.6	42.8		1.74	< 0.01			10.8	71.9	70.2		70.8	9.0	3.6		10
Thu 25	7.7	354	40.0		NS	10.8	10.8	185	52		NS	8	8	4.71	2.86		NS	0.37	0.37	24.5	22.6		10.7	1.84	1.45				37.7	27.7		3.49		0.02		7.8	73.9	54.3		69.8		2.9		160
Fri 26	7.6	262				2.4	2.4	241				2	2	5.41				0.14	0.14	30.8				0.46	0.46				43.4			1.68				10.8	70.9			71.3				20
Sat 27	7.7	236				2.6	2.6	248				3	3	5.66				0.14	0.14	32.6				0.49	0.49				45.1			1.90				11.0	72.2			76.8				70
Sun 28	7.6	294				2.0	2.0	292				3	3	5.13				0.15	0.15	29.2				0.56	0.56				43.6			2.05				11.2	64.8			74.5				85
Mon 29	7.5	320				4.0	4.0	298				3	3	7.27				0.21	0.21	38.0				0.61	0.61				60.0			2.12				11.0	82.9			77.1				22
Tue 30	7.3	296				4.4	4.4	248				3	3	7.05				0.21	0.21	36.7				0.19	0.19				56.3			1.82				10.4	74.1			80.3				30
Wed 31	7.6	312				4.2	4.2	221				4	4	7.11				0.73	0.73	32.6				0.71	0.71				51.7			2.51	< 0.01			8.4	79.7			78.3				55
Average	7.7	267	60.7	---	53.2	4.1	4.1	219	77	---	61	3	3	5.40	3.36	---	2.83	0.32	0.31	26.4	22.8	---	20.0	0.68	0.59	---	---	---	42.3	28.6	---	2.20	0.01	0.51	---	9.7	69.6	51.0	---	73.2	---	---	---	---
Minimum	7.5	180	40.0	---	34.3	2.0	2.0	154	48	---	50	< 2	< 2	3.26	1.38	---	2.15	0.14	0.14	9.80	8.42	---	10.7	0.10	0.10	---	---	---	23.4	11.5	---	1.40	< 0.01	0.02	---	4.5	35.6	25.0	---	52.0	3.0	1.6	0.4	11
Maximum	7.9	298	148	---	72.0	10.8	10.8	298	148	---	72	8	8	7.66	5.42	---	4.64	1.58	1.58	38.0	33.3	---	33.4	2.02	1.47	---	---	---	63.9	43.1	---	3.72	0.02	1.36	---	12.6	83.4	70.2	---	86.9	9.0	4.7	0.4	105
GeoMean	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	5.2	2.6	0.4	29
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 (hrs)	% Usage YTD
69	69	100%	364	364	100.00%

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

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.
*	BOD_5/$CBOD_5$: Standard Method Code H - Sample overaged (>48 hours from final sample collection time).
*	E. coli for August 10 Outfall 30: Recommended holding time for two of the four grab samples was exceeded prior to analysis.
*	E. coli for August 25 Outfall 30: Recommended holding time for one of the four grab samples was exceeded prior to sample receipt.

AEP Ref #

Note: EPE flow calculation based on pump curve for all days except for August 22.
Note: August 22 EPE flow based on lab data results due to unreasonable pump curve value.

09/29/2016
Abhishek Bhargava (mm/dd/yyyy)
Senior Manager, Operations

9/23/2016
Steve Craik (mm/dd/yyyy)
Director QA & Environment