Gold Bar Wastewater Treatment Plant
Plant Performance Report
October 2016

Digested Sludge: Total Monthly Volume (ML)	66.00

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
Sat 01	821.56	434.14	156.18	9.58	0.00	0.00	268.38	268.38
Sun 02	528.02	330.82	18.55	10.36	0.00	0.00	301.91	301.91
Mon 03	371.34	272.09	0.00	10.37	0.00	0.00	261.72	261.72
Tue 04	361.37	259.79	0.00	10.55	0.00	0.00	249.24	249.24
Wed 05	366.03	259.07	0.00	10.79	0.00	0.00	248.28	248.28
Thu 06	364.26	258.18	0.00	11.91	0.00	0.00	246.27	246.27
Fri 07	353.73	257.00	0.00	10.37	0.00	0.00	246.63	246.63
Sat 08	446.50	282.29	10.85	8.78	0.00	0.00	262.66	262.66
Sun 09	550.88	304.87	38.32	9.31	0.00	0.00	257.24	257.24
Mon 10	395.60	260.86	0.00	9.95	0.00	0.00	250.91	250.91
Tue 11	372.12	273.59	0.00	9.42	0.00	0.00	264.17	264.17
Wed 12	370.52	269.02	0.00	9.05	0.00	0.00	259.97	259.97
Thu 13	358.45	262.13	0.00	8.58	0.00	0.00	253.55	253.55
Fri 14	387.04	273.01	0.00	8.97	0.00	0.00	264.04	264.04
Sat 15	528.79	320.31	26.62	9.31	0.00	0.00	284.38	284.38
Sun 16	468.08	327.11	23.93	8.66	0.00	0.00	294.52	294.52
Mon 17	403.12	294.26	0.00	9.37	0.00	0.00	284.89	284.89
Tue 18	382.66	279.06	0.00	8.32	0.00	0.00	270.74	270.74
Wed 19	388.92	282.27	0.00	9.03	0.00	0.00	273.24	273.24
Thu 20	379.50	268.49	0.00	9.01	0.00	0.00	259.48	259.48
Fri 21	367.17	267.22	0.00	9.01	0.00	0.00	258.21	258.21
Sat 22	379.96	260.05	0.00	9.81	0.00	0.00	250.24	250.24
Sun 23	391.89	259.65	0.00	9.16	0.00	0.00	250.49	250.49
Mon 24	374.13	263.75	0.00	9.79	0.00	0.00	253.96	253.96
Tue 25	396.69	266.34	0.00	10.87	0.00	0.00	255.47	255.47
Wed 26	388.09	271.26	0.00	11.69	0.00	0.00	259.57	259.57
Thu 27	564.12	307.93	45.16	9.72	0.00	0.00	253.05	253.05
Fri 28	351.02	263.87	0.00	11.23	0.00	0.00	252.64	252.64
Sat 29	377.47	259.38	0.00	11.44	0.00	0.00	247.94	247.94
Sun 30	386.52	260.21	0.00	11.43	0.00	0.00	248.78	248.78
Mon 31	361.94	263.26	0.00	11.43	0.00	0.00	251.83	251.83
Average	417.34	281.01	10.31	9.91	0.00	0.00	260.79	260.79
Minimum	351.02	257.00	0.00	8.32	0.00	0.00	246.27	246.27
Maximum	821.56	434.14	156.18	11.91	0.00	0.00	301.91	301.91
GeoMean	---	---	---	---	---	---	---	---
TOTAL	---	8,711	320	307	0.00	0	8,084	8,084

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	BOD_5/$cBOD_5$ (mg/L) RAW BOD_5	OUTFALL30 BOD_5	OUTFALL20 BOD_5	EPEPS BOD_5	OUTFALL10 FEC $cBOD_5$	OUTFALL10 FE $cBOD_5$
Sat 01	7.5	7.6		7.5	411	238			4.1	4.1	194	88			4	4
Sun 02	7.6	7.5		7.3	158	32.0			4.1	4.1	216	116			5	5
Mon 03	7.5			7.5	243				3.2	3.2	289				5	5
Tue 04	7.7			7.5	249				3.2	3.2	364				4	4
Wed 05	7.6			7.5	271				3.2	3.2	314				4	4
Thu 06	7.7			7.5	277				3.1	3.1	271				4	4
Fri 07	7.6			7.5	277				3.3	3.3	310				4	4
Sat 08	7.8	7.8		7.5	282	77.3			5.1	5.1	307	125			4	4
Sun 09	7.6	7.6		7.4	256	115			4.0	4.0	304	180			4	4
Mon 10	7.6			7.5	283				3.7	3.7	239				4	4
Tue 11	7.6			7.5	282				3.9	3.9	295				4	4
Wed 12	7.8			7.5	322				3.0	3.0	309				4	4
Thu 13	7.6			7.5	271				3.0	3.0	287				3	3
Fri 14	7.7			7.5	302				3.5	3.5	308				4	4
Sat 15	7.6	7.6		7.5	333	105			13.6	13.6	250	153			4	4
Sun 16	7.7	7.6		7.4	262	93.3			3.8	3.8	212	120			3	3
Mon 17	7.6			7.4	272				5.3	5.3	298				4	4
Tue 18	7.6			7.4	237				2.5	2.5	275				4	4
Wed 19	7.8			7.8	337				4.1	4.1	282				3	3
Thu 20	7.7			7.5	288				4.3	4.3	257				4	4
Fri 21	7.7			7.5	308				4.1	4.1	298				4	4
Sat 22	7.6			7.5	304				3.8	3.8	286				4	4
Sun 23	7.6			7.4	278				3.4	3.4	297				4	4
Mon 24	7.8			7.5	297				3.4	3.4	376				4	4
Tue 25	7.5			7.5	343				3.3	3.3	323				4	4
Wed 26	7.6			7.5	330				3.9	3.9	277				4	4
Thu 27	7.8	7.6		7.5	432	88.0			3.4	3.4	350	** 88			4	4
Fri 28	7.6			7.5	352				3.7	3.7	337				4	4
Sat 29	7.7			7.5	264				3.7	3.7	378				4	4
Sun 30	7.7			7.5	309				3.7	3.7	332				4	4
Mon 31	7.7			7.5	372				4.3	4.3	369				3	3
Average	7.7	7.6	---	7.5	297	107	---	---	4.0	4.0	297	124	---	---	4	4
Minimum	7.5	7.5	---	7.3	158	32.0	---	---	2.5	2.5	194	88	---	---	3	3
Maximum	7.8	7.8	---	7.8	432	238	---	---	13.6	13.6	378	180	---	---	5	5
GeoMean	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

DATE	TP (mg/L) RAW	TP OUTFALL30	TP OUTFALL20	TP EPEPS	TP OUTFALL10 FEC	TP OUTFALL10 FE	NH3-N (mg/L) RAW	NH3-N OUTFALL30	NH3-N OUTFALL20	NH3-N EPEPS	NH3-N OUTFALL10 FEC	NH3-N OUTFALL10 FE	TKN (mg/L) RAW	TKN OUTFALL30	TKN OUTFALL20	TKN OUTFALL10 FEC
Sat 01	5.38	3.50			0.20	0.20	24.1	15.6			0.16	0.16	43.3	29.5		1.69
Sun 02	5.09	2.93			0.19	0.19	32.7	23.8			0.87	0.87	51.3	34.2		2.42
Mon 03	6.36				0.20	0.20	38.0				0.89	0.89	60.1			2.58
Tue 04	7.15				0.30	0.30	35.7				0.51	0.51	61.4			2.22
Wed 05	7.39				0.16	0.16	39.6				0.54	0.54	67.2			2.26
Thu 06	6.98				0.24	0.24	37.8				0.49	0.49	62.7			2.14
Fri 07	7.14				0.22	0.22	43.1				0.47	0.47	62.9			2.06
Sat 08	6.38	5.26			0.22	0.22	35.5	37.0			1.00	1.00	54.9	51.9		2.63
Sun 09	7.24	6.82			0.23	0.23	28.80	35.3			0.83	0.83	61.7	67.1		2.90
Mon 10	7.71				0.21	0.21	38.7				1.44	1.44	69.8			3.84
Tue 11	7.07				0.19	0.19	37.5				2.04	2.04	59.6			4.33
Wed 12	7.37				0.20	0.20	39.6				1.79	1.79	60.4			3.79
Thu 13	6.55				0.21	0.21	35.8				1.15	1.15	57.7			3.09
Fri 14	6.68				0.21	0.21	37.7				1.04	1.04	58.7			2.76
Sat 15	6.01	6.15			0.22	0.22	30.2	34.6			1.89	1.89	47.9	47.6		3.44
Sun 16	5.22	4.73			0.22	0.22	27.6	31.2			0.65	0.65	42.0	43.4		2.18
Mon 17	6.45				0.22	0.22	32.7				0.90	0.90	52.7			2.61
Tue 18	6.41				0.20	0.20	37.1				1.29	1.29	53.0			3.07
Wed 19	6.86				0.21	0.21	39.6				1.56	1.56	54.3			3.38
Thu 20	7.33				0.21	0.21	35.6				1.67	1.67	55.5			3.46
Fri 21	6.50				0.21	0.21	33.0				0.89	0.89	52.5			2.49
Sat 22	6.33				0.19	0.19	34.5				0.66	0.66	51.6			2.24
Sun 23	6.59				0.19	0.19	33.1				0.81	0.81	53.4			2.42
Mon 24	6.52				0.18	0.18	30.3				0.31	0.31	52.1			1.70
Tue 25	6.27				0.20	0.20	28.3				0.38	0.38	46.0			1.78
Wed 26	6.20				0.21	0.21	33.4				0.68	0.68	48.3			2.15
Thu 27	6.04	4.23			0.19	0.19	29.3	29.3			0.48	0.48	45.0	39.0		1.84
Fri 28	6.29				0.19	0.19	31.8				0.25	0.25	49.6			1.57
Sat 29	7.59				0.19	0.19	39.4				1.42	1.42	56.1			2.81
Sun 30	8.43				0.18	0.18	43.5				2.19	2.19	61.8			3.78
Mon 31	9.29				0.22	0.22	42.2				2.08	2.08	66.0			3.77
Average	6.74	4.80	---	---	0.21	0.21	35.0	29.5	---	---	1.01	1.01	55.5	44.7	---	2.69
Minimum	5.09	2.93	---	---	0.16	0.16	24.1	15.6	---	---	0.16	0.16	42.0	29.5	---	1.57
Maximum	9.29	6.82	---	---	0.30	0.30	43.5	37.0	---	---	2.19	2.19	69.8	67.1	---	4.33
GeoMean	---	---	---	---	---	---	---	---	---	---		---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---		---	---	---	---	---

DATE	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
Sat 01		0.45		9.9	45.0	34.9		70.9		2.8		21
Sun 02		0.19		7.1	59.4	46.4		53.7		3.0		29
Mon 03				8.6	75.8			66.9				26
Tue 04				10.0	75.3			77.9				8
Wed 05	< 0.01			10.5	83.1			80.4				11
Thu 06				10.9	78.4			82.8				3
Fri 07				10.8	71.4			78.6				10
Sat 08		1.27		9.8	73.0	93.4		82.5		2.7		6
Sun 09		2.79		7.3	135	230		90.3		2.5		15
Mon 10				7.4	85.8			113.0				11
Tue 11				9.0	87.4			88.5				15
Wed 12	< 0.01			9.5	87.2			96.2				21
Thu 13				9.2	79.4			85.5				11
Fri 14				10.4	171			96.2				9
Sat 15		1.11		9.2	211	238		227		2.8		22
Sun 16		0.01		8.7	132	105		176		* 3.5		32
Mon 17				7.7	85.3			104				17
Tue 18				10.0	80.3			90.1				26
Wed 19	< 0.01			10.2	81.1			85.5				25
Thu 20				9.1	78.5			88.0	3.5			11
Fri 21				9.2	78.0			83.0				17
Sat 22				9.2	70.8			79.8				14
Sun 23				8.5	76.5			74.4				7
Mon 24				8.4	77.5			74.0				17
Tue 25				8.3	78.7			79.3	3.5			13
Wed 26	< 0.01			7.9	81.7			80.1				34
Thu 27		0.05		8.3	84.3	87.6		80.5		1.5		32
Fri 28				7.2	74.7			75.7				15
Sat 29				7.6	72.2			76.7				8
Sun 30				10.9	67.7			75.2				25
Mon 31				10.7	75.6			74.5				22
Average	0.01	0.84	---	9.1	87.5	119	---	89.9	---	---	---	---
Minimum	0.01	0.01	---	7.1	45.0	34.9	---	53.7	3.5	1.5	---	3
Maximum	0.01	2.79	---	10.9	211	238	---	227	3.5	3.5	---	34
GeoMean	---	---	---	---	---	---	---	---	3.5	2.6	---	15
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
48	48	100%	430	430	100.00%

Report Comments

**	October 20 RAW: Sample over-aged. BOD test had to be repeated 3.5 days after holding time of 48 hours elapsed.
*	October 27 OUTFALL 30: Sample over-aged. *E. coli* test had to be repeated 17 hours after reecommended holding time

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 Outfall 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 OUTFALL 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 litres)
MPN	Most Probable Number
NR	No result
NS	No sample
INS	Insufficient sample to run test

11/29/2016
Abhishek Bhargava (mm/dd/yyyy)
Senior Manager, Operations

11/28/2016
Debra Long (mm/dd/yyyy)
Senior Manager, Analytical Operations

* AEP - Alberta Environment & Parks