PROVIDING MORE EPCOR

Gold Bar Wastewater Treatment Plant
Plant Performance Report
November 2019

Digested Sludge: Total Monthly Volume (ML)	69.27

Volume of Flow (ML)

DATE	Peak Flow (MLD)	Influent RAW	Effluent – Non UV Disinfected OUTFALL 30	Effluent – Non UV Disinfected OUTFALL 20	Effluent – Non UV Disinfected MPW	Effluent – UV Disinfected EPEPS	Effluent – UV Disinfected OUTFALL 10 FEC	Effluent – UV Disinfected OUTFALL 10 FE
Fri-01	338.2	252.1	0.0	0.0	10.3	0.0	241.8	241.8
Sat-02	359.4	253.8	0.0	0.0	10.4	0.0	243.4	243.4
Sun-03	368.1	267.8	0.0	0.0	11.3	0.0	256.5	256.5
Mon-04	348.2	256.2	0.0	0.0	10.9	0.0	245.3	245.3
Tue-05	347.8	256.5	0.0	0.0	11.2	0.0	245.3	245.3
Wed-06	343.8	259.0	0.0	0.0	11.4	0.0	247.6	247.6
Thu-07	349.1	260.1	0.0	0.0	11.4	0.0	248.7	248.7
Fri-08	504.5	377.5	49.2	0.0	11.2	0.0	317.1	317.1
Sat-09	360.4	259.1	0.0	0.0	11.4	0.0	247.7	247.7
Sun-10	353.5	251.9	0.0	0.0	11.3	0.0	240.6	240.6
Mon-11	363.0	255.6	0.0	0.0	11.0	0.0	244.6	244.6
Tue-12	356.0	262.5	0.0	0.0	10.8	0.0	251.7	251.7
Wed-13	408.6	285.1	0.0	0.0	11.0	0.0	274.1	274.1
Thu-14	366.0	272.9	0.0	0.0	10.6	0.0	262.3	262.3
Fri-15	446.8	269.4	1.3	0.0	11.1	0.0	257.0	257.0
Sat-16	460.6	299.0	14.0	0.0	11.1	0.0	273.9	273.9
Sun-17	497.6	298.0	36.7	0.0	11.4	0.0	249.9	249.9
Mon-18	421.8	302.7	6.2	0.0	11.1	0.0	285.4	285.4
Tue-19	377.5	273.3	0.0	0.0	11.1	0.0	262.2	262.2
Wed-20	373.9	274.2	0.0	0.0	11.2	0.0	263.0	263.0
Thu-21	342.6	266.6	0.0	0.0	10.1	0.0	256.5	256.5
Fri-22	362.0	269.5	0.0	0.0	10.9	0.0	258.6	258.6
Sat-23	395.2	269.2	0.0	0.0	10.9	0.0	258.3	258.3
Sun-24	390.5	268.9	0.0	0.0	11.0	0.0	257.9	257.9
Mon-25	354.4	265.0	0.0	0.0	11.2	0.0	253.8	253.8
Tue-26	342.7	258.4	0.0	0.0	11.3	0.0	247.1	247.1
Wed-27	340.9	258.5	0.0	0.0	11.2	0.0	247.3	247.3
Thu-28	335.2	259.3	0.0	0.0	11.7	0.0	247.6	247.6
Fri-29	339.4	252.9	0.0	0.0	10.5	0.0	242.4	242.4
Sat-30	361.6	247.3	0.0	0.0	12.0	0.0	235.3	235.3
Average	378.87	271.60	3.84	0.00	11.05	0.00	256.61	256.61
Minimum	335.20	251.90	0.00	0.00	10.10	0.00	240.60	240.60
Maximum	504.50	377.50	49.20	0.00	11.70	0.00	317.10	317.10
GeoMean	—	—	—	—	—	—	—	—
TOTAL	—	8,102	107	0.00	332	0	7,663	7,663

Liquid Stream Quality – pH@25°C and TSS (mg/L)

DATE	pH RAW	pH OUTFALL 30	pH OUTFALL 20	pH OUTFALL 10 FEC	TSS RAW	TSS OUTFALL 30	TSS OUTFALL 20	TSS EPEPS	TSS OUTFALL 10 FEC	TSS OUTFALL 10 FE
Fri-01	7.6			7.65	276				4.1	4.1
Sat-02	7.8			7.64	288				4.3	4.3
Sun-03	7.7			7.64	308				3.9	3.9
Mon-04	7.6			7.68	292				4.1	4.1
Tue-05	7.6			7.66	328				4.0	4.0
Wed-06	7.5			7.59	268				3.9	3.9
Thu-07	7.5			7.63	312				5.0	5.0
Fri-08	7.5	7.6		7.51	372	81			5.2	5.2
Sat-09	7.7			7.54	264				4.4	4.4
Sun-10	7.7			7.58	276				4.2	4.2
Mon-11	7.6			7.61	272				5.0	5.0
Tue-12	7.6			7.64	254				3.7	3.7
Wed-13	7.5			7.62	380				4.6	4.6
Thu-14	7.5			7.61	264				4.3	4.3
Fri-15	7.6	7.5		7.73	296	116			3.9	3.9
Sat-16	7.5	7.6		7.69	472	80			3.7	3.7
Sun-17	7.5	7.6		7.66	260	77			3.7	3.7
Mon-18	7.5	7.6		7.57	284	90			5.2	5.2
Tue-19	7.5			7.61	284				5.5	5.5
Wed-20	7.6			7.66	264				5.9	5.9
Thu-21	7.5			7.70	264				4.9	4.9
Fri-22	7.6			7.59	248				4.8	4.8
Sat-23	7.6			7.64	300				5.1	5.1
Sun-24	7.6			7.66	380				4.0	4.0
Mon-25	7.5			7.62	272				4.1	4.1
Tue-26	7.6			7.66	280				4.4	4.4
Wed-27	7.6			7.65	312				4.3	4.3
Thu-28	7.5			7.65	312				4.5	4.5
Fri-29	7.5			7.69	360				4.3	4.3
Sat-30	7.7			7.81	308				4.0	4.0
Average	7.6	7.6	—	7.6	302	69	—	—	4.4	4.4
Minimum	7.5	7.5	—	7.5	248	77	—	—	3.7	3.7
Maximum	7.8	7.6	—	7.8	472	116	—	—	5.9	5.9
GeoMean	—	—	—	—	—	—	—	—	—	—
TOTAL	—	—	—	—	—	—	—	—	—	—

Liquid Stream Quality – BOD_5/$cBOD_5$ (mg/L) and TP (mg/L)

DATE	RAW BOD_5	OUTFALL 30 BOD_5	OUTFALL 20 BOD_5	EPEPS BOD_5	OUTFALL 10 FEC $cBOD_5$	OUTFALL 10 FE $cBOD_5$	TP RAW	TP OUTFALL 30	TP OUTFALL 20	TP EPEPS	TP OUTFALL 10 FEC	TP OUTFALL 10 FE
Fri-01	299				3.0	3.0	8.18				0.42	0.42
Sat-02	341				3.0	3.0	8.41				0.37	0.37
Sun-03	291				2.0	2.0	7.84				0.35	0.35
Mon-04	233				2.0	2.0	8.15				0.34	0.34
Tue-05	361				3.0	3.0	8.87				0.31	0.31
Wed-06	305				3.0	3.0	7.83				0.32	0.32
Thu-07	314				3.0	3.0	8.26				0.31	0.31
Fri-08	270	102			3.0	3.0	6.22	3.26			0.25	0.25
Sat-09	241				3.0	3.0	6.83				0.25	0.25
Sun-10	302				3.0	3.0	7.29				0.28	0.28
Mon-11	251				2.0	2.0	7.22				0.28	0.28
Tue-12	272				3.0	3.0	7.49				0.25	0.25
Wed-13	348				4.0	4.0	7.03				0.26	0.26
Thu-14	261				3.0	3.0	7.09				0.21	0.21
Fri-15	329	257			3.0	3.0	12.2	5.96			0.24	0.24
Sat-16	344	155			3.0	3.0	9.35	5.20			0.17	0.17
Sun-17	254	134			3.0	3.0	6.85	4.75			0.27	0.27
Mon-18	393	148			2.0	2.0	9.78	4.58			0.26	0.26
Tue-19	248				3.0	3.0	6.91				0.25	0.25
Wed-20	362				3.0	3.0	7.58				0.26	0.26
Thu-21	289				1.0	1.0	6.84				0.26	0.26
Fri-22	269				3.0	3.0	7.27				0.29	0.29
Sat-23	392				3.0	3.0	7.77				0.29	0.29
Sun-24	363				3.0	3.0	8.08				0.26	0.26
Mon-25	320				3.0	3.0	7.47				0.30	0.30
Tue-26	281				3.0	3.0	7.49				0.32	0.32
Wed-27	312				3.0	3.0	7.70				0.35	0.35
Thu-28	296				3.0	3.0	7.30				0.23	0.23
Fri-29	314				3.0	3.0	7.12				0.28	0.28
Sat-30	373				3.0	3.0	7.02				0.28	0.28
Average	308	159	—	—	2.8	2.8	7.78	4.76	—	—	0.29	0.28
Minimum	233	102	—	—	1.0	1.0	6.22	3.26	—	—	0.17	0.17
Maximum	393	257	—	—	4.0	4.0	12.2	5.96	—	—	0.42	0.42
GeoMean	—	—	—	—	—	—	—	—	—	—	—	—
TOTAL	—	—	—	—	—	—	—	—	—	—	—	—

Liquid Stream Quality – NH3-N (mg/L) and TKN (mg/L)

DATE	NH3-N RAW	NH3-N OUTFALL 30	NH3-N OUTFALL 20	NH3-N EPEPS	NH3-N OUTFALL 10 FEC	NH3-N OUTFALL 10 FE	TKN RAW	TKN OUTFALL 30	TKN OUTFALL 20	TKN OUTFALL 10 FEC
Fri-01	44.8				4.25	4.25	64.0			5.96
Sat-02	42.5				5.24	5.24	68.2			6.43
Sun-03	43.8				4.86	4.86	64.3			7.01
Mon-04	42.2				4.66	4.66	61.1			3.83
Tue-05	43.4				2.25	2.25	65.9			3.75
Wed-06	43.2				2.84	2.84	62.4			4.43
Thu-07	40.6				2.93	2.93	63.9			4.58
Fri-08	27.8	26.3			0.97	0.97	49.8	36.5		2.67
Sat-09	42.8				2.68	2.68	55.8			4.15
Sun-10	45.4				3.72	3.72	63.8			5.67
Mon-11	43.5				3.53	3.53	60.5			5.01
Tue-12	40.8				2.67	2.67	59.5			4.11
Wed-13	39.2				2.70	2.70	55.2			4.48
Thu-14	41.4				2.59	2.59	57.2			4.36
Fri-15	41.3	38.4			2.17	2.17	90.9	52.6		4.02
Sat-16	35.6	37.1			2.23	2.23	66.6	49.1		4.22
Sun-17	36.8	36.6			2.45	2.45	60.0	51.4		4.21
Mon-18	35.6	32.6			2.16	2.16	81.8	44.5		3.80
Tue-19	39.4				2.70	2.70	55.6			4.49
Wed-20	41.5				2.70	2.70	65.9			4.58
Thu-21	40.8				1.88	1.88	58.9			4.04
Fri-22	38.7				0.95	0.95	61.1			2.73
Sat-23	26.2				1.78	1.78	66.1			4.02
Sun-24	40.0				2.40	2.40	66.6			4.40
Mon-25	45.2				1.85	1.85	64.4			3.71
Tue-26	44.0				1.46	1.46	66.0			3.10
Wed-27	41.0				1.77	1.77	68.5			3.67
Thu-28	43.4				2.03	2.03	66.8			3.96
Fri-29	35.9				2.98	2.98	64.8			5.11
Sat-30	43.0				3.35	3.35	61.9			5.35
Average	40.3	34.2	—	—	2.69	2.69	63.9	46.8	—	4.40
Minimum	26.2	26.3	—	—	0.95	0.95	49.8	36.5	—	2.73
Maximum	45.4	38.4	—	—	5.24	5.24	90.9	52.6	—	7.01
GeoMean	—	—	—	—	—	—	—	—	—	—
TOTAL	—	—	—	—	—	—	—	—	—	—

Liquid Stream Quality – NO_2+NO_3 (mg/L), Chloride (mg/L) and *E. coli* (Counts/100 mL)

DATE	NO_2+NO_3 RAW	NO_2+NO_3 OUTFALL 30	NO_2+NO_3 OUTFALL 20	NO_2+NO_3 OUTFALL 10 FEC	Chloride RAW	Chloride OUTFALL 30	Chloride OUTFALL 20	Chloride OUTFALL 10 FEC	*E. coli* RAW X10^6	*E. coli* OUTFALL 30 X10^6	*E. coli* OUTFALL 20 X10^6	*E. coli* OUTFALL 10 FEC
Fri-01				9.10	82.5			83.9				4
Sat-02				9.04	77.1			84.7				12
Sun-03				9.50	78.5			84.4				3
Mon-04				9.44	83.4			82.2				8
Tue-05				10.1	131			106				4
Wed-06	< 0.005			9.72	99.0			116				4
Thu-07				10.2	95.6			102				2
Fri-08		0.35		8.52	212	210		164		< 0.7		4
Sat-09				8.80	107			148				6
Sun-10				10.9	96.3			112				3
Mon-11				10.9	95.8			101				6
Tue-12				9.44	202			110				4
Wed-13	0.02			8.77	308			226	2.4			4
Thu-14				8.60	151			266				3
Fri-15		0.02		10.3	130	128		165		2.2		7
Sat-16		0.29		10.5	162	201		157		3.5		3
Sun-17		0.29		10.2	116	124		136		1.6		1
Mon-18		1.43		9.84	113	107		126		1.8		2
Tue-19				10.7	132			109				3
Wed-20	< 0.005			12.2	142			145				18
Thu-21				11.2	98.7			133				12
Fri-22				10.5	101			108				14
Sat-23				11.3	99.2			110				17
Sun-24				11.0	99.0			103				10
Mon-25				10.9	92.3			101				13
Tue-26				10.8	95.8			101	2.0			15
Wed-27	0.25			13.6	106			106				18
Thu-28				12.2	114			111				18
Fri-29				10.2	105			114				10
Sat-30				10.6	95.7			108				7
Average	0.07	0.48	—	10.3	121	154	—	124	—	—	—	—
Minimum	< 0.005	0.02	—	8.52	77.1	107	—	82.2	2	< 0.7	—	1
Maximum	0.25	1.43	—	13.6	308	210	—	266	2	4	—	18
GeoMean	—	—	—	—	—	—	—	—	2	1	—	6
TOTAL	—	—	—	—	—	—	—	—	—	—	—	—

* Contact Laboratory for information about the quality assurance associated with the results

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).
FEC	Combined pre-UV disinfection (FE+EPEPS)
OUTFALL 10	UV-disinfected, discharged via OUTFALL 10
OUTFALL 20	Combined Bypass (RAW + PE + EPE)
OUTFALL 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
INS	Insufficient Sample

Enhanced Primary Treatment (EPT) Usage

Total Bypass (hrs)	EPT Usage (hrs)	% Usage	Total Bypass YTD (hrs)	EPT Usage YTD (hrs)	% Usage
25	25	100%	673	673	100%

Report Comments

AEP Ref #**

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