PROVIDING MORE EPCOR

Gold Bar Wastewater Treatment Plant
Plant Performance Report
March 2019

Digested Sludge: Total Monthly Volume (ML)	67.72

Volume of Flow (ML)

DATE	Peak Flow (MLD)	Influent	Effluent					
			Non UV Disinfected			UV Disinfected		
		RAW	OUTFALL 30	OUTFALL 20	MPW	EPEPS	OUTFALL 10 FEC	OUTFALL 10 FE
Fri-01	329.00	250.50	0.00	0.00	12.20	0.00	238.30	238.30
Sat-02	348.10	250.10	0.00	0.00	12.30	0.00	237.80	237.80
Sun-03	353.60	248.00	0.00	0.00	12.40	0.00	235.60	235.60
Mon-04	347.10	256.60	0.00	0.00	12.20	0.00	244.40	244.40
Tue-05	335.50	253.20	0.00	0.00	12.30	0.00	240.90	240.90
Wed-06	335.10	250.30	0.00	0.00	10.80	0.00	239.50	239.50
Thu-07	339.70	258.00	0.00	0.00	10.40	0.00	247.60	247.60
Fri-08	328.60	249.60	0.00	0.00	11.40	0.00	238.20	238.20
Sat-09	358.20	248.60	0.00	0.00	9.90	0.00	238.70	238.70
Sun-10	365.20	249.70	0.00	0.00	9.50	0.00	240.20	240.20
Mon-11	369.90	260.60	0.00	0.00	10.10	0.00	250.50	250.50
Tue-12	414.90	277.72	0.00	0.02	10.70	0.00	267.00	267.00
Wed-13	474.10	289.77	20.80	0.07	11.20	0.00	257.70	257.70
Thu-14	470.60	287.10	14.10	0.30	11.30	0.00	261.40	261.40
Fri-15	533.80	322.07	39.30	0.77	11.00	0.00	271.00	271.00
Sat-16	541.40	321.67	37.20	0.97	10.70	0.00	272.80	272.80
Sun-17	815.20	396.73	103.90	1.13	10.20	0.00	281.50	281.50
Mon-18	751.90	426.33	114.10	1.33	9.60	0.00	301.30	301.30
Tue-19	787.60	435.78	116.70	0.78	10.60	0.00	307.70	307.70
Wed-20	698.90	426.30	101.80	0.00	10.80	0.00	313.70	313.70
Thu-21	698.30	423.80	98.00	0.00	10.40	0.00	315.40	315.40
Fri-22	580.50	399.20	63.80	0.00	10.80	0.00	324.60	324.60
Sat-23	546.90	358.70	39.10	0.00	11.40	0.00	308.20	308.20
Sun-24	474.60	318.80	3.40	0.00	11.70	0.00	303.70	303.70
Mon-25	460.00	295.30	0.00	0.00	11.70	0.00	283.60	283.60
Tue-26	511.90	307.90	17.60	0.00	11.50	0.00	278.80	278.80
Wed-27	421.10	302.90	1.50	0.00	11.50	0.00	289.90	289.90
Thu-28	376.10	292.00	0.00	0.00	11.10	0.00	280.90	280.90
Fri-29	367.80	284.60	0.00	0.00	10.60	0.00	274.00	274.00
Sat-30	379.80	280.10	0.00	0.00	11.30	0.00	268.80	268.80
Sun 31	375.20	275.20	0.00	0.00	10.80	0.00	264.40	264.40
Average	477.42	309.19	27.55	0.19	11.06	0.00	270.39	270.39
Minimum	328.60	248.00	0.00	0.00	9.50	0.00	235.60	235.60
Maximum	815.20	435.78	116.70	1.33	12.40	0.00	324.60	324.60
GeoMean	---	---	---	---	---	---	---	---
TOTAL	---	9,497	771	5.37	342	0	8,378	8,378

Liquid Stream Quality

DATE	pH@25°C RAW	pH@25°C OUTFALL 30	pH@25°C OUTFALL 20	pH@25°C OUTFALL 10 FEC	TSS (mg/L) RAW	TSS (mg/L) OUTFALL 30	TSS (mg/L) OUTFALL 20	TSS (mg/L) EPEPS	TSS (mg/L) OUTFALL 10 FEC	TSS (mg/L) OUTFALL 10 FE
Fri-01	7.5			7.4	398				4.8	4.8
Sat-02	7.6			7.5	328				6.4	6.4
Sun-03	7.5			7.5	356				5.3	5.3
Mon-04	7.6			7.4	348				18.1	18.1
Tue-05	7.5			7.4	336				8.0	8.0
Wed-06	7.6			7.5	340				6.2	6.2
Thu-07	7.6			7.5	384				6.5	6.5
Fri-08	7.5			7.5	424				5.2	5.2
Sat-09	7.5			7.5	392				3.6	3.6
Sun-10	7.5			7.6	328				4.4	4.4
Mon-11	7.6			7.5	356				3.6	3.6
Tue-12	7.6			7.6	280				4.4	4.4
Wed-13	7.5	7.4		7.6	348	300			4.9	4.9
Thu-14	7.6	7.6		7.6	536	232			2.8	2.8
Fri-15	7.5	7.5		7.4	572	222			4.0	4.0
Sat-16	7.6	7.6		7.4	356	158			3.2	3.2
Sun-17	7.4	7.4		7.4	488	262			4.8	4.8
Mon-18	7.4	7.4		7.4	246	173			3.0	3.0
Tue-19	7.4	7.3	7.5	7.3	310	117	348		5.9	5.9
Wed-20	7.4	7.3		7.2	237	85			3.1	3.1
Thu-21	7.5	7.4		7.5	388	108			4.4	4.4
Fri-22	7.5	7.4		7.4	257	105			4.3	4.3
Sat-23	7.5	7.4		7.4	284	98			3.7	3.7
Sun-24	7.4	7.5		7.4	254	80			4.2	4.2
Mon-25	7.5			7.4	204				3.5	3.5
Tue-26	7.4	7.5		7.5	340	110			3.0	3.0
Wed-27	7.5	7.7		7.5	132	56			4.3	4.3
Thu-28	7.4			7.4	300				3.4	3.4
Fri-29	7.5			7.6	286				2.3	2.3
Sat-30	7.5			7.6	408				3.0	3.0
Sun 31	7.6			7.5	320				3.2	3.2
Average	7.5	7.5	7.5	7.4	340	150	348	---	4.8	4.8
Minimum	7.4	7.3	7.5	7.2	132	56	348	---	2.3	2.3
Maximum	7.6	7.7	7.5	7.6	572	300	348	---	18.1	18.1
GeoMean	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---

DATE	BOD_5/$cBOD_5$ (mg/L) RAW BOD_5	BOD_5 OUTFALL 30	BOD_5 OUTFALL 20	BOD_5 EPEPS	$cBOD_5$ OUTFALL 10 FEC	$cBOD_5$ OUTFALL 10 FE	TP (mg/L) RAW	TP OUTFALL 30	TP OUTFALL 20	TP EPEPS	TP OUTFALL 10 FEC	TP OUTFALL 10 FE
Fri-01	347				4.0	4.0	7.2				0.33	0.33
Sat-02	412				4.0	4.0	7.86				0.35	0.35
Sun-03	258				3.0	3.0	7.94				0.33	0.33
Mon-04	364				6.0	6.0	8.11				0.73	0.73
Tue-05	352				4.0	4.0	7.70				0.35	0.35
Wed-06	362				4.0	4.0	7.42				0.33	0.33
Thu-07	288				4.0	4.0	7.42				0.35	0.35
Fri-08	406				3.0	3.0	7.47				0.32	0.32
Sat-09	314				3.0	3.0	6.93				0.27	0.27
Sun-10	372				3.0	3.0	6.53				0.27	0.27
Mon-11	334				4.0	4.0	6.70				0.25	0.25
Tue-12	332				3.0	3.0	6.10				0.27	0.27
Wed-13	328	232			3.0	3.0	7.33	2.14			0.20	0.20
Thu-14	361	163			2.0	2.0	7.63	4.60			0.18	0.18
Fri-15	322	135			4.0	4.0	6.76	4.24			0.21	0.21
Sat-16	378	138			2.0	2.0	5.79	3.60			0.19	0.19
Sun-17	295	97			3.0	3.0	5.38	3.79			0.22	0.22
Mon-18	151	126			3.0	3.0	3.46	3.32			0.15	0.15
Tue-19	240	137	140		3.0	3.0	4.62	3.36	4.06		0.24	0.24
Wed-20	180	117			3.0	3.0	3.90	3.17			0.17	0.17
Thu-21	171	101			3.0	3.0	4.44	3.49			0.18	0.18
Fri-22	186	130			3.0	3.0	5.09	0.60			0.19	0.19
Sat-23	188	107			2.0	2.0	5.32	3.82			0.18	0.18
Sun-24	289	119			3.0	3.0	5.72	3.70			0.19	0.19
Mon-25	230				3.0	3.0	5.70				0.17	0.17
Tue-26	292	165			2.0	2.0	6.32	3.96			0.17	0.17
Wed-27	222	150			3.0	3.0	4.62	2.64			0.18	0.18
Thu-28	308				3.0	3.0	5.89				0.15	0.15
Fri-29	321				2.0	2.0	6.08				0.15	0.15
Sat-30	432				2.0	2.0	6.27				0.16	0.16
Sun 31	349				3.0	3.0	6.14				0.19	0.19
Average	303	137	140	---	3.1	3.1	6.25	3.32	4.06	---	0.25	0.25
Minimum	151	97	140	---	2.0	2.0	3.46	0.60	4.06	---	0.15	0.15
Maximum	432	232	140	---	6.0	6.0	8.11	4.60	4.06	---	0.73	0.73
GeoMean	---	---	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---

DATE	NH3-N (mg/L) RAW	NH3-N OUTFALL 30	NH3-N OUTFALL 20	NH3-N EPEPS	NH3-N OUTFALL 10 FEC	NH3-N OUTFALL 10 FE	TKN (mg/L) RAW	TKN OUTFALL 30	TKN OUTFALL 20	TKN OUTFALL 10 FEC	NO_2+NO_3 (mg/L) RAW	NO_2+NO_3 OUTFALL 30	NO_2+NO_3 OUTFALL 20	NO_2+NO_3 OUTFALL 10 FEC
Fri-01	42.0				0.76	0.76	58.4			2.55				17.3
Sat-02	42.0				2.18	2.18	57.3			4.14				17.1
Sun-03	45.2				2.70	2.70	61.2			4.48				16.6
Mon-04	39.7				5.74	5.74	65.3			7.91				15.1
Tue-05	22.4				4.24	4.24	63.5			6.38				15.1
Wed-06	37.0				2.19	2.19	61.6			4.62	0.02			16.2
Thu-07	43.5				3.49	3.49	64.6			5.60				16.0
Fri-08	43.0				3.86	3.86	63.2			5.74				11.2
Sat-09	31.5				4.23	4.23	53.8			5.92				10.9
Sun-10	34.4				3.36	3.36	51.4			6.05				10.9
Mon-11	21.6				5.00	5.00	52.6			6.32				9.9
Tue-12	32.5				4.87	4.87	46.5			6.20				9.0
Wed-13	32.2	33.0			2.94	2.94	55.2	46.4		4.10	< 0.01	0.99		8.6
Thu-14	32.1	33.0			3.60	3.60	55.8	42.0		4.89		1.96		8.2
Fri-15	31.0	27.6			4.30	4.30	63.0	37.1		5.66		1.71		9.4
Sat-16	30.3	27.2			3.08	3.08	44.4	34.8		6.13		2.66		9.3
Sun-17	23.8	18.8			4.82	4.82	41.2	32.0		5.66		2.56		9.0
Mon-18	22.7	15.6			2.48	2.48	31.6	31.0		3.67		0.94		8.9
Tue-19	22.0	22.9	16.8		2.62	2.62	37.2	30.9	27.0	4.12		1.29	0.56	8.2
Wed-20	20.6	17.8			3.21	3.21	30.1	29.8		4.06	< 0.01	1.46		7.1
Thu-21	20.6	23.1			3.26	3.26	34.7	31.7		4.73		1.33		8.6
Fri-22	25.9	26.6			3.77	3.77	38.4	36.6		5.43		0.21		8.0
Sat-23	23.5	25.7			5.35	5.35	40.4	38.5		6.37		0.25		9.1
Sun-24	34.6	26.1			6.31	6.31	48.0	34.1		7.27		0.28		9.6
Mon-25	35.0				6.36	6.36	49.5			7.68				10.9
Tue-26	33.2	29.8			5.64	5.64	48.2	39.8		6.60		0.41		11.3
Wed-27	32.3	28.9			4.73	4.73	39.4	32.6		5.37	< 0.01	0.01		10.9
Thu-28	32.4				5.47	5.47	41.0			6.20				11.7
Fri-29	35.4				4.93	4.93	44.0			5.98				11.80
Sat-30	34.6				4.92	4.92	46.6			5.90				13.00
Sun 31	37.0				4.490	4.49	46.6			5.62				13.2
Average	32.1	25.4	16.8	---	4.03	4.03	49.5	35.5	27.0	5.53	0.01	1.15	0.56	11.4
Minimum	20.6	15.6	16.8	---	0.76	0.76	30.1	---	27.0	2.55	< 0.01	0.01	0.56	7.1
Maximum	45.2	33.0	16.8	---	6.36	6.36	65.3	46.4	27.0	7.91	0.02	2.66	0.56	17.3
GeoMean	---	---	---	---	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---	---	---

DATE	Chloride (mg/L) RAW	Chloride OUTFALL 30	Chloride OUTFALL 20	Chloride OUTFALL 10 FEC	*E. coli* (Counts/100 mL) RAW X10^6	*E. coli* OUTFALL 30 X10^6	*E. coli* OUTFALL 20 X10^6	*E. coli* OUTFALL 10 FEC
Fri-01	98.9			123				6
Sat-02	79.6			112				8
Sun-03	78.6			88.1				8
Mon-04	84.2			84.9				5
Tue-05	98.0			97.4				12
Wed-06	97.6			102				5
Thu-07	97.0			100				7
Fri-08	102			106				6
Sat-09	170			121				5
Sun-10	164			158				5
Mon-11	297			172				6
Tue-12	320			280				14
Wed-13	243	453		314		6		6
Thu-14	282	384		274		1		5
Fri-15	266	376		268		9		14
Sat-16	247	330		255		2		6
Sun-17	256	312		237		2		8
Mon-18	240	271		235		2	1	5
Tue-19	204	215	261	218		1	2	5
Wed-20	159	176		190	1	1		6
Thu-21	135	138		156		1		11
Fri-22	124	125		132		1		5
Sat-23	111	113		123		1		10
Sun-24	105	110		112		1		5
Mon-25	106			114				9
Tue-26	157	232		118		2		7
Wed-27	113	190		159		2		10
Thu-28	97.4			124	2			19
Fri-29	97.5			111				11
Sat-30	85.3			110				5
Sun 31	90.1			102				5
Average	155	245	261	158	---	---	---	---
Minimum	78.6	110	261	84.9	1	1	1	5
Maximum	320	453	261	314	2	9	2	19
GeoMean	---	---	---	---	2	2	1	7
TOTAL	---	---	---	---	---	---	---	---

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

Enhanced Primary Treatment (EPT) Usage

Total Bypass (hrs)	EPT Usage (hrs)	% Ussage	Total Bypass YTD (hrs)	EPT Usage YTD (hrs)	% Usage
131	131	100%	135	135	100.00%

Report Comments

1	OUTFALL 20 - March 12 through March 17: Flow of snowmelt not sewage.

AEP Ref #**

** AEP - Alberta Environment & Parks

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

Abhishek Bhargava
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