PROVIDING MORE EPCOR

GOLD BAR WASTEWATER TREATMENT PLANT
PLANT PERFORMANCE REPORT
April 2014

Digested Sludge: Total Monthly Volume (ML)	73.43

DATE	Peak Flow (MLD)	Volume of Flow (ML)								Liquid Stream Quality																																			
		Influent	Effluent							pH@25°C			TSS (mg/L)				BOD$_5$/cBOD$_5$ (mg/L)							TP (mg/L)				NH3-N (mg/L)				un-ionoed ammonia (mg/L)	TKN (mg/L)				NO$_2$+NO$_3$ (mg/L)				Chloride (mg/L)				E.Coli (Counts/100 mL)			
			Non UV Disinfected					UV Disinfected																																					
			BYPASS																																									
				OUT-FAL 20				OUT-FAL 10																																					
		RAW	OUT-FAL 30	PRIM	SEC	Total	MPW	EPE!	FEC	OUT-FAL 30	OUT-FAL 20	OUT-FAL 10	RAW	OUT-FAL30	OUT-FAL20	OUT-FAL 10	RAW BOD$_5$	OUT-FAL30 cBOD$_5$	OUT-FAL30 BOD$_5$	OUT-FAL20 cBOD$_5$	OUT-FAL20 BOD$_5$	OUT-FAL 10 cBOD$_5$	RAW	OUT-FAL30	OUT-FAL20	OUT-FAL 10	RAW	OUT-FAL30	OUT-FAL20	OUT-FAL 10	OUT-FAL 10	RAW	OUT-FAL30	OUT-FAL20	OUT-FAL 10	RAW	OUT-FAL30	OUT-FAL20	OUT-FAL 10	RAW	OUT-FAL30	OUT-FAL20	OUT-FAL 10	RAW X10^6	OUT-FAL30 X10^6	OUT-FAL20 X10^6	OUT-FAL 10
1-Apr-14	360.11	270.16	0.00	0.00	0.00	0.00	11.11	0.00	259.05	---	---	7.5	364	---	---	4.1	348	---	---	---	---	4	7.19	---	---	0.250	30.5	---	---	4.91	0.049	51.8	---	---	7.03	0.14	---	---	5.7	83	---	---	82	---	---	---	3
2-Apr-14	341.01	267.39	0.00	0.00	0.00	0.00	8.93	0.00	258.46	---	---	7.5	340	---	---	5.3	311	---	---	---	---	4	6.51	---	---	0.238	33.5	---	---	4.90	0.040	50.4	---	---	6.54	---	---	---	5.0	89	---	---	96	---	---	---	3
3-Apr-14	360.72	269.66	0.00	0.00	0.00	0.00	8.93	0.00	260.73	---	---	7.4	336	---	---	21.9	* 480	---	---	---	---	9	7.13	---	---	0.981	34.3	---	---	4.86	0.037	52.8	---	---	9.33	---	---	---	5.2	86	---	---	91	---	---	---	1
4-Apr-14	523.81	323.19	43.18	0.00	0.00	43.18	9.78	0.00	270.23	---	---	7.4	450	47	---	10.0	258	62	70	---	---	5	6.52	1.67	---	0.417	26.7	30.0	---	4.31	0.036	46.2	35.9	---	6.58	---	0.461	---	6.3	95	128	---	96	---	0.9	---	1
5-Apr-14	530.78	328.07	43.50	0.00	0.00	43.50	9.81	0.00	274.76	---	---	7.5	336	12	---	8.9	221	61	62	---	---	5	6.20	0.65	---	0.322	29.6	31.6	---	4.24	0.041	46.1	36.3	---	5.94	---	0.218	---	5.8	75	90	---	97	---	* 0.2	---	1
6-Apr-14	523.30	327.47	45.65	0.00	0.00	45.65	8.00	0.00	273.82	---	---	7.3	324	15	---	6.2	289	66	69	---	---	4	6.32	1.08	---	0.234	26.9	34.1	---	4.43	0.029	48.0	37.6	---	5.91	---	0.284	---	7.8	69	71	---	81	---	* 0.2	---	< 1
7-Apr-14	405.99	318.73	4.07	0.00	0.00	4.07	8.05	0.00	306.61	---	---	7.3	292	---	---	4.1	* 230	---	---	---	---	* 2	5.68	---	---	0.157	30.1	---	---	5.07	0.031	41.8	---	---	6.86	---	---	---	8.2	74	---	---	74	---	0.1	---	2
8-Apr-14	388.43	303.98	0.00	0.00	0.00	0.00	10.15	0.00	293.83	---	---	7.3	308	---	---	3.1	241	---	---	---	---	2	5.92	---	---	0.183	28.7	---	---	6.13	0.036	44.1	---	---	7.02	0.05	---	---	7.2	77	---	---	78	---	---	---	3
9-Apr-14	379.94	293.84	0.00	0.00	0.00	0.00	10.59	0.00	283.25	---	---	7.6	316	---	---	3.9	247	---	---	---	---	2	5.92	---	---	0.187	30.0	---	---	6.90	0.073	43.8	---	---	6.48	---	---	---	7.7	70	---	---	81	---	---	---	4
10-Apr-14	328.88	279.15	0.00	0.00	0.00	0.00	9.31	0.00	269.84	---	---	7.5	348	---	---	3.8	302	---	---	---	---	3	6.47	---	---	0.191	32.7	---	---	4.06	0.039	44.9	---	---	5.85	---	---	---	7.7	71	---	---	82	---	---	---	5
11-Apr-14	333.01	272.24	0.00	0.00	0.00	0.00	9.03	0.00	263.21	---	---	7.5	392	---	---	4.1	318	---	---	---	---	3	6.62	---	---	0.175	32.0	---	---	4.25	0.040	44.9	---	---	4.76	---	---	---	6.9	73	---	---	79	---	---	---	3
12-Apr-14	351.19	259.40	0.00	0.00	0.00	0.00	8.79	0.00	250.61	---	---	7.5	340	---	---	2.9	* 341	---	---	---	---	* 3	6.90	---	---	0.178	32.4	---	---	4.56	0.067	48.1	---	---	5.18	---	---	---	6.9	68	---	---	81	---	---	---	2
13-Apr-14	352.15	259.63	0.00	0.00	0.00	0.00	8.90	0.00	250.73	---	---	7.4	340	---	---	2.6	340	---	---	---	---	3	6.80	---	---	0.172	34.9	---	---	4.40	0.007	47.8	---	---	5.58	---	---	---	6.9	65	---	---	73	---	---	---	1
14-Apr-14	329.76	266.44	0.00	0.00	0.00	0.00	9.65	0.00	256.79	---	---	7.4	291	---	---	3.2	302	---	---	---	---	3	9.00	---	---	0.176	30.9	---	---	3.87	0.021	45.6	---	---	5.11	---	---	---	6.0	55	---	---	73	---	---	---	2
15-Apr-14	353.05	269.66	0.00	0.00	0.00	0.00	7.28	0.00	262.38	---	---	7.5	388	---	---	2.3	326	---	---	---	---	2	7.12	---	---	0.179	34.7	---	---	3.07	0.028	52.0	---	---	3.79	---	---	---	7.3	89	---	---	77	3.87	---	---	3
16-Apr-14		265.15	0.00	0.00	0.00	0.00	6.33	0.00	258.82	---	---	7.6	328	---	---	2.8	334	---	---	---	---	3	6.60	---	---	0.187	33.5	---	---	3.40	0.048	53.0	---	---	4.59	---	---	---	7.7	73	---	---	99	---	---	---	4
17-Apr-14		262.27	0.00	0.00	0.00	0.00	7.95	0.00	254.32	---	---	7.4	300	---	---	2.8	318	---	---	---	---	4	6.93	---	---	0.191	34.7	---	---	3.31	0.024	47.2	---	---	4.45	---	---	---	6.6	75	---	---	86	---	---	---	3
18-Apr-14	463.19	293.50	28.15	0.00	0.00	28.15	7.10	0.00	258.25	---	---	7.4	403	191	---	3.5	306	125	166	---	---	3	6.39	3.72	---	0.200	31.7	34.7	---	4.47	0.036	48.3	43.2	---	5.64	---	0.423	---	6.1	278	366	---	154	---	1.7	---	1
19-Apr-14	637.87	308.97	33.31	0.00	0.00	33.31	5.88	0.00	269.78	---	---	7.3	324	222	---	3.8	372	116	152	---	---	3	6.93	5.08	---	0.200	30.8	33.9	---	3.77	0.028	47.3	44.0	---	5.01	---	0.685	---	7.6	81	96	---	195	---	1.7	---	< 1
20-Apr-14	406.45	288.91	0.00	0.00	0.00	0.00	6.65	0.00	282.26	---	---	7.4	357	---	---	8.9	298	---	---	---	---	4	7.12	---	---	0.391	30.9	---	---	4.00	0.031	47.9	---	---	5.42	---	---	---	8.1	81	---	---	108	---	---	---	6
21-Apr-14	342.84	273.08	0.00	0.00	0.00	0.00	7.77	0.00	265.31	---	---	7.4	291	---	---	2.6	314	---	---	---	---	3	7.40	---	---	0.226	31.3	---	---	4.89	0.059	49.2	---	---	6.26	---	---	---	9.3	70	---	---	82	---	---	---	2
22-Apr-14	369.70	269.86	0.00	0.00	0.00	0.00	6.75	0.00	263.11	---	---	7.3	336	---	---	3.7	325	---	---	---	---	4	6.95	---	---	0.219	31.7	---	---	4.76	0.047	49.5	---	---	6.10	0.09	---	---	8.6	72	---	---	81	---	---	---	3
23-Apr-14	959.36	567.32	265.93	0.00	0.00	265.93	6.37	0.00	295.02	---	---	7.5	496	172	---	2.8	183	63	80	---	---	3	6.59	3.06	---	0.213	19.0	15.7	---	1.82	0.018	32.1	21.2	---	3.25	---	1.520	---	6.2	65	60	---	79	1.38	0.3	---	4
24-Apr-14	930.90	382.37	43.70	0.00	0.00	43.70	7.57	0.00	331.10	---	---	7.3	304	56	---	3.1	217	54	62	---	---	3	7.92	2.11	---	0.173	23.1	26.6	---	1.91	0.012	56.9	31.3	---	3.27	---	2.220	---	5.3	74	73	---	69	---	0.8	---	3
25-Apr-14	281.45	311.44	0.00	0.00	0.00	0.00	5.99	0.00	305.45	---	---	7.6	356	---	---	3.7	305	---	---	---	---	3	6.43	---	---	0.204	25.5	---	---	4.48	0.064	42.7	---	---	6.45	---	---	---	8.0	74	---	---	80	---	---	---	5
26-Apr-14		280.40	0.00	0.00	0.00	0.00	6.85	0.00	273.55	---	---	7.6	300	---	---	3.1	297	---	---	---	---	3	6.52	---	---	0.184	28.8	---	---	5.07	0.065	44.9	---	---	6.62	---	---	---	7.8	69	---	---	80	---	---	---	9
27-Apr-14		310.48	0.00	0.00	0.00	0.00	8.74	0.00	301.74	---	---	7.5	300	---	---	8.9	304	---	---	---	---	4	5.84	---	---	0.319	30.7	---	---	4.93	0.053	42.7	---	---	6.84	---	---	---	7.2	73	---	---	80	---	---	---	5
28-Apr-14		287.22	0.00	0.00	0.00	0.00	8.76	0.00	278.46	---	---	7.4	320	---	---	4.0	276	---	---	---	---	3	6.00	---	---	0.219	30.0	---	---	4.17	0.024	41.1	---	---	5.59	---	---	---	7.0	71	---	---	78	---	---	---	90
29-Apr-14		276.84	0.00	0.00	0.00	0.00	10.09	0.00	266.75	---	---	7.4	340	---	---	7.4	269	---	---	---	---	4	7.68	---	---	0.315	31.4	---	---	2.98	0.036	55.1	---	---	4.75	0.02	---	---	7.6	73	---	---	83	---	---	---	13
30-Apr-14		272.99	0.00	0.00	0.00	0.00	9.09	0.00	263.90	---	---	7.5	353	---	---	4.4	316	---	---	---	---	3	7.50	---	---	0.201	31.5	---	---	2.93	0.029	51.1	---	---	4.13	---	---	---	8.6	69	---	---	87	---	---	---	15
Average	445.82	298.66	16.92	0.00	0.00	16.92	8.34	0.00	273.40	---	---	7.4	342	102.1	---	5.1	300	78	94	---	---	3	6.77	2.48	---	0.25	30.4	29.5	---	4.23	0.038	47.2	35.6	---	5.68	0.08	0.83	---	7.1	81	126	---	89	---	---	---	---
Minimum	281.45	259.40	0.00	0.00	0.00	0.00	5.88	0.00	250.61	---	---	7.3	291	12.0	---	2.3	183	54	62	---	---	2	5.68	0.65	---	0.16	19.0	15.7	---	1.82	0.007	32.1	21.2	---	3.25	0.02	0.22	---	5.00	55	60	---	69	1.38	0.10	---	1
Maximum	959.36	567.32	265.93	0.00	0.00	265.93	11.11	0.00	331.10	---	---	7.6	496	222.0	---	21.9	480	125	166	---	---	9	9.0	5.08	---	0.98	34.9	34.7	---	6.90	0.073	56.9	44.0	---	9.33	0.14	2.22	---	9.3	278	366	---	195	3.87	1.70	---	90
GeoMean	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2.31	0.47	---	3
TOTAL	---	8,960	507.49	0.00	0.00	507.49	250.20	0.00	8,202	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

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

! The values in EPE (flow) column indicate wet weather events, then the OUT FAL 10 Average calculation exclude numbers for that day (grey/italics)

x - analysis performed at an ISO 17025 Accredited external laboratory.

Report Comments

AESRD Ref #

---	Standard Method Code A - GGA reference recovery not within acceptable QC limits Standard Method Code B - Dilution water blanks exceeded 0.20 mg/L depletion
---	Standard Method Code B - Dilution water blanks exceeded 0.20 mg/L depletion
---	Precision of the method could not be determined (i.e. quality control duplicate did not meet acceptance criteria).
---	Standard Method Code K - Reported mean when no values fall within the 29% acceptance range.

* ESRD - Alberta Environment & Sustainable Resource and Development

RAW ⇨ Plant Influent (Untreated Wastewater)
PRIM ⇨ Primary
SEC ⇨ Secondary
EPT ⇨ Enhanced Primary Treatment
EPEPS ⇨ Enhanced Primary Effluent and Pump St. Membrane Product Water (Effluent re-use water)
MPW ⇨ Membrane Product Water (Effluent re-use water)
OUT FAL 10 ⇨ Combined, UV-disinfected (FE +EPEPS)
OUT FAL 20 ⇨ Combined Bypass (RAW + PE + EPE)
OUT FAL 30 ⇨ Combined Bypass (INF + INFS + PE30 + EPE)
ML ⇨ Megalitres (1,000,000 Litres)
MPN ⇨ Most Probable Number
E ⇨ Estimated Value
A ⇨ Average
nr ⇨ No Result
ns ⇨ No Sample
ws ⇨ Wrong Sample

Geoff Heise	06/04/2014	**Debra Long**	**06/03/2014**
Senior Manager, Operations	Date (mm/dd/yyyy)	Senior Manager, Analytical Operations	Date (mm/dd/yyyy)