TOWNSHIP OF BONNECHERE VALLEY
WATER AND SEWAGE DEPARTMENT

2019

MONTH	FLOWS			BIOCHEMICAL OXYGEN DEMAND				TOTAL SUSPENDED SOLIDS			
	TOTAL X1000m3	AVG.DAY X1000m3	MAX DAY X1000m3	BOD5 INF 24HR COMP mg/L	* CBOD5 EFF 24HR COMP mg/L	PERCENT REMOVAL %	** EFF LOADING kg/day	INF 24HR COMP mg/L	EFF MONTHLY AVG CONC mg/L	PERCENT REMOVAL %	** EFF LOADING kg/day
JAN.	13.762	0.444	0.538	203	3.0	98.52	1.33	88	7	92.05	3.11
FEB.	12.890	0.460	0.544	186	5.0	97.31	2.30	123	5	95.93	2.30
MAR.	18.170	0.586	0.931	223	3.0	98.65	1.76	113	8	92.92	4.69
APR.	50.727	1.691	2.209	63	3.0	95.24	5.07	115	7	93.91	11.84
MAY	39.997	1.290	1.692	29	3.0	89.66	3.87	66	6	90.91	7.74
JUN.	26.108	0.870	1.021	67	3.0	95.52	2.61	64	5	92.19	4.35
JUL.	19.368	0.625	0.834	106	3.0	97.17	1.88	128	6	95.31	3.75
AUG.	14.633	0.472	0.555	246	3.0	98.78	1.42	85	7	91.76	3.30
SEP.	12.705	0.424	0.462	106	3.0	97.17	1.27	187	7	96.26	2.97
OCT.	12.430	0.485	0.871	186	3.0	98.39	1.46	158	6	96.20	2.91
NOV.	13.091	0.454	0.602	83	3.0	96.39	1.36	175	6	96.57	2.72
DEC.	13.117	0.423	0.496	161	3.0	98.14	1.27	152	5	96.71	2.12
TOTAL	246.998										
AVERAGE	20.583	0.685	0.896	138	3.2	96.74	2.13	121	6.3	94.23	4.32
MAX	50.727	1.691	2.209	246	5.0	98.78	5.07	187	8	96.71	11.84
LIMITS		**1.080**	**2.700**		**25**		**27**		**25**		**27.00**
OBJECTIVES					**15**		**16.2**		**15**		**16.20**

* CBOD5 - sample analysis reported as <3 mg/L (MDL is 3mg/L)

** EFF Loading - based on monthly average daily flow

Average Daily Flow: .676 m3

CBOD5 Annual Average Concentration: 3.2 mg/L

CBOD5 Annual Average Loading: 2.16 kg/day

TSS Annual Average Concentration: 6.3 mg/L

TSS Annual Average Loading: 4.25 kg/day

TOWNSHIP OF BONNECHERE VALLEY
WATER AND SEWAGE DEPARTMENT

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MONTH	TOTAL PHOSPHORUS				TKN	pH		
	INF 24HR COMP	EFF MONTHLY AVG CONC	PERCENT REMOVAL	** EFF LOADING	INF 24HR COMP	INFLUENT AVERAGE	EFFLUENT MINIMUM	EFFLUENT MAXIMUM
	mg/L	mg/L	%	kg/day	mg/L			
JAN.	9.64	0.24	97.51	0.11	85.0	8.27	6.58	6.78
FEB.	14.50	0.35	97.59	0.16	70.2	8.33	6.58	6.62
MAR.	9.30	0.60	93.55	0.35	65.3	8.46	6.58	7.02
APR.	3.80	0.56	85.26	0.95	14.5	8.27	7.54	7.80
MAY	2.20	0.53	75.91	0.68	13.5	8.10	7.39	7.65
JUN.	3.90	0.58	85.13	0.50	17.9	7.85	6.63	7.43
JUL.	8.10	0.67	91.73	0.42	3.1	7.60	6.57	6.76
AUG.	8.45	0.37	95.62	0.17	39.7	7.70	6.56	6.73
SEP.	6.53	0.61	90.66	0.26	48.5	7.86	6.55	6.70
OCT.	7.46	0.71	90.48	0.34	66.1	7.94	6.55	6.71
NOV.	4.38	0.70	84.02	0.32	33.5	7.85	6.56	6.94
DEC.	13.30	0.47	96.47	0.20	56.1	7.95	6.57	6.83
AVERAGE	7.63	0.53	90.33	0.37	42.78		6.72	7.00
MAX(MIN)	14.50	0.71	97.59	0.95			6.55	7.80
LIMITS		**1.00**		**1.10**			**>6**	**<8.5**
OBJECTIVES		**1.00**		**1.10**			**>6.5**	**<8.5**

** EFF Loading - based on monthly average daily flow

Total Phosphorus Annual Average Loading: 0.36 kg/day

TOWNSHIP OF BONNECHERE VALLEY
WATER AND SEWAGE DEPARTMENT

2019

MONTH	Total Flow	Sodium Hypochorite			* E. coli	Pre Hydr Alum Sulphate		Sodium Bisulphite		Number of By-passes
	X1000m3	Kg Used	Dosage mg/l	Effluent Residual mg/l	Counts per 100ml	Kg Used	Dosage mg/l	Kg Used	Dosage mg/l	
JAN.	13.762	65.88	4.79	0.0	2	579.31	42.09	53.58	3.89	0
FEB.	12.890	55.20	4.28	0.0	2	479.32	37.19	42.56	3.30	0
MAR.	18.170	89.40	4.92	0.0	2	616.81	33.95	53.58	2.95	0
APR.	50.727	209.30	4.13	0.0	4	1183.00	23.32	93.48	1.84	0
MAY	39.997	137.20	3.43	0.0	2	1718.60	42.97	76.38	1.91	0
JUN.	26.108	93.00	3.56	0.0	2	1472.30	56.39	74.48	2.85	0
JUL.	19.368	96.70	4.99	0.0	11	1241.10	64.08	39.14	2.02	0
AUG.	14.633	85.80	5.86	0.0	2	1142.00	78.04	31.16	2.13	0
SEP.	12.705	81.48	6.41	0.0	5	726.17	57.16	38.38	3.02	0
OCT.	12.430	73.92	5.95	0.0	2	713.05	57.37	25.84	2.08	0
NOV.	13.091	79.56	6.08	0.0	2	673.68	51.46	41.42	3.16	0
DEC.	13.117	82.60	6.30	0.0	2	653.06	49.79	43.32	3.30	0
TOTAL	246.998	1150.04				11198.40		613.32		
AVERAGE	20.583	95.84	5.06	0.0	3	933.20	49.48	51.11	2.71	
MAX	50.727	209.3	6.41		11	1718.60	78.04	93.48	3.89	
LIMITS					**<200**					
OBJECTIVES					**<200**					

* E. coli - monthly geometric mean density

Date	Effluent Total Ammonia Nitrogen NH3-N		Effluent Unionized Ammonia NH3	Date	Effluent Total Ammonia Nitrogen NH3-N		Effluent Unionized Ammonia NH3	Date	Effluent Total Ammonia Nitrogen NH3-N		Effluent Unionized Ammonia NH3
	mg/l	kg/day	ug/l		mg/l	kg/day	ug/l		mg/l	kg/day	ug/l
Jan.2	0.04	0.02	0.06	Mar.6	0.05	0.03	0.02	May 16	0.03	0.04	0.17
Jan.8	0.09	0.04	0.09	Mar.12	0.08	0.05	0.05	May 8	0.02	0.03	0.14
Jan.16	0.05	0.02	0.02	Mar.20	0.05	0.03	0.24	May 14	0.04	0.05	0.22
Jan.23	0.29	0.13	0.19	Mar.27	0.04	0.02	0.19	May 22	0.03	0.04	0.22
Jan.30	0.63	0.28	0.30					May 29	0.02	0.03	0.11
Feb.6	0.09	0.04	0.04	Apr.3	0.06	0.10	0.41	Jun. 5	0.02	0.02	0.12
Feb.12	0.07	0.03	0.02	Apr.9	0.03	0.05	0.18	Jun. 11	0.02	0.02	0.10
Feb.20	0.10	0.05	0.06	Apr.17	0.08	0.14	0.59	Jun. 19	0.14	0.12	0.32
Feb.27	0.02	0.01	0.01	Apr.24	0.04	0.07	0.30	Jun. 26	0.04	0.03	0.05
MAX.	0.63	0.28	0.30		0.08	0.14	0.59		0.14	0.12	0.32
LIMITS	**5.00**	**5.40**	**20**		**5.00**	**5.40**	**20**		**5.00**	**5.40**	**20**

Date	Effluent Total Ammonia Nitrogen NH3-N		Effluent Unionized Ammonia NH3	Date	Effluent Total Ammonia Nitrogen NH3-N		Effluent Unionized Ammonia NH3	Date	Effluent Total Ammonia Nitrogen NH3-N		Effluent Unionized Ammonia NH3
	mg/l	kg/day	ug/l		mg/l	kg/day	ug/l		mg/l	kg/day	ug/l
Jul. 3	0.03	0.02	0.06	Sep. 4	0.06	0.03	0.10	Nov. 6	0.09	0.04	0.07
Jul. 9	0.04	0.03	0.07	Sep. 10	0.04	0.02	0.07	Nov. 12	0.04	0.02	0.05
Jul. 17	0.05	0.03	0.08	Sep. 18	0.04	0.02	0.06	Nov. 20	0.24	0.11	0.21
Jul. 24	0.03	0.02	0.05	Sep. 25	0.08	0.03	0.12	Nov. 27	0.06	0.03	0.06
Jul.31	0.03	0.02	0.05								
Aug. 7	0.03	0.01	0.05	Oct. 2	0.04	0.02	0.05	Dec. 4	0.37	0.16	0.32
Aug. 13	0.03	0.01	0.06	Oct. 8	0.02	0.01	0.04	Dec. 10	0.05	0.02	0.05
Aug. 21	0.05	0.02	0.11	Oct. 16	0.03	0.01	0.07	Dec. 18	0.07	0.03	0.07
Aug. 28	0.05	0.02	0.07	Oct. 23	0.17	0.08	0.30	Dec. 24	0.04	0.02	0.03
				Oct. 30	0.11	0.05	0.23				
MAX.	0.05	0.03	0.11		0.17	0.08	0.30		0.37	0.16	0.32
LIMITS	**5.00**	**5.40**	**20**		**5.00**	**5.40**	**20**		**5.00**	**5.40**	**20**

ANALYSIS FOR GRAB SAMPLE OF ACTIVATED SLUDGE FROM AEROBIC DIGESTER #1																
MONTH	SLUDGE	PHOS.	TOTAL	VOLATILE	AMMONIA	Arsenic	Cadm.	Cobalt	Chrom.	Copper	Merc.	Moly	Nickel	Lead	Selen.	Zinc
	Processed		SOLIDS	SOLIDS	NITRATE	As	Cd	Co	Cr	Cu	Hg	Mo	Ni	Pb	Se	Zn
	m3	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
JAN.	89	585	19,400	12,700	1.67	0.10	0.03	0.03	0.25	8.5	0.006	0.14	0.25	0.5	0.10	8.35
FEB.	83															
MAR.	114															
APR.	31															
MAY	162															
JUN.	83															
JUL.	62															
AUG.	143															
SEPT.	50															
OCT.	10															
NOV.	166	849	25,700	15,200	8.20	0.10	0.03	0.03	0.38	9.70	0.005	0.10	0.28	0.5	0.10	9.55
DEC.	135															
TOTAL	**1128**															
AVG.	**94**	**717**	**22550**	**13950**	**4.94**	**0.10**	**0.03**	**0.03**	**0.32**	**9.10**	**0.01**	**0.12**	**0.27**	**0.50**	**0.10**	**8.95**

ANALYSIS FOR COMPOSITE SAMPLE OF DEWATERED SLUDGE PRIOR TO REMOVAL FROM GEOTUBES																
Geotube	**Volume**	**% Solids**	**% V.S.**	**Total P**	**Ammonia (N)**	**As**	**Cd**	**Co**	**Cr**	**Cu**	**Hg**	**Mo**	**Ni**	**Pb**	**Se**	**Zn**
#	**m3**			**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
2B(6)	**68.7**	**13.3**	**60.6**	**26700**	**3850**	**2**	**0.5**	**2**	**17**	**387**	**0.48**	**1**	**13**	**16**	**2**	**404**
3A(8)	**74.7**	**16.3**	**60.2**	**25200**	**1490**	**2**	**0.5**	**1**	**18**	**402**	**0.25**	**2**	**14**	**17**	**2**	**384**
TOTAL	**143.4**															
AVG.		**14.80**	**60.40**	**25950**	**2670**	**2.0**	**0.50**	**1.5**	**17.5**	**394.50**	**0.37**	**1.5**	**13.5**	**16.5**	**2.0**	**394.0**

EGANVILLE SEWAGE TREATMENT PLANT
SLUDGE MONITORING REPORT

METALS	MAXIMUM PERMISSIBLE METAL CONCENTRATIONS (AGRICULTURAL USE) (mg/kg of solids)	AVERAGE METAL CONCENTRATIONS IN DIGESTER SLUDGE (mg/kg of solids)	AVERAGE METAL CONCENTRATIONS IN GEOTUBE SLUDGE (mg/kg of solids)	DEWATERED BIOSOLIDS HAULED TO SNODRIFTER ROAD WASTE DISPOSAL SITE				
				DATE	Geotube	Volume	%Total	E. coli
					#	m3	Solids	cts/100ml
ARSENIC (As)	170	4.43	2					
CADMIUM (Cd)	34	1.33	0.50	Oct. 24, 2019	2B(6)	68.7	13.3	20000
COBALT (Co)	340	1.33	1.50	Oct. 24, 2019	3A(8)	74.7	16.3	20000
CHROMIUM (Cr)	2800	13.97	17.50					
COPPER (Cu)	1700	403.55	394.50					
MERCURY (Hg)	11	0.24	0.37					
MOLYBDENUM (Mo)	94	5.32	1.50	**TOTAL**		143.4		
NICKEL (Ni)	420	11.75	13.50					
LEAD (Pb)	1100	22.17	16.50					
SELENIUM (Se)	34	4.43	2.00					
ZINC (Zc)	4200	396.90	394.0					