TOWNSHIP OF BONNECHERE VALLEY
WATER AND SEWAGE DEPARTMENT

EGANVILLE SEWAGE TREATMENT PLANT
SEWAGE MONITORING REPORT

2022

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.	12.783	0.412	0.562	53	3.0	94.34	1.24	131	9	93.13	3.71
FEB.	10.700	0.382	0.499	113	3.0	97.35	1.15	144	7	95.14	2.67
MAR.	17.569	0.577	0.925	182	3.0	98.35	1.73	120	8	93.33	4.62
APR.	22.515	0.751	1.066	116	6.0	94.83	4.51	93	7	92.47	5.26
MAY	19.966	0.644	0.804	53	3.0	94.34	1.93	81	10	87.65	6.44
JUN.	21.711	0.724	1.040	52	3.0	94.23	2.17	98	7	92.86	5.07
JUL.	15.313	0.490	0.674	80	3.0	96.25	1.47	139	10	92.81	4.90
AUG.	12.317	0.397	0.473	192	3.0	98.44	1.19	114	7	93.86	2.78
SEP.	13.691	0.534	0.763	276	3.0	98.91	1.60	149	8	94.63	4.27
OCT.	13.675	0.533	0.491	103	3.0	97.09	1.60	137	10	92.70	5.33
NOV.	12.169	0.406	0.458	261	3.0	98.85	1.22	95	8	91.58	3.25
DEC.	12.937	0.417	0.666	81	3.0	96.30	1.25	107	9	91.59	3.75
TOTAL	185.346										
AVERAGE	15.446	0.522	0.702	130	3.3	96.61	1.75	117	8.3	92.65	4.34
MAX	22.515	0.751	1.066	276	6.0	98.91	4.51	149	10	95.14	6.44
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: 508 m3

CBOD5 Annual Average Concentration: 3.3 mg/L

CBOD5 Annual Average Loading: 1.68 kg/day

TSS Annual Average Concentration: 8.3 mg/L

TSS Annual Average Loading: 4.22 kg/day

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.	9.20	0.53	94.24	0.22	35.8	7.49	6.59	7.00
FEB.	10.50	0.59	94.38	0.23	25.5	7.73	6.60	7.24
MAR.	7.93	0.58	92.69	0.33	54.9	7.37	6.56	6.95
APR.	4.33	0.44	89.84	0.33	25.8	7.72	6.62	7.69
MAY	5.70	0.43	92.46	0.28	25.1	7.60	6.58	6.94
JUN.	4.00	0.65	83.75	0.47	19.5	7.62	6.58	6.80
JUL.	9.40	0.63	93.30	0.31	26.3	7.79	6.59	6.80
AUG.	5.40	0.64	88.15	0.25	36.4	7.56	6.61	6.89
SEP.	7.60	0.74	90.26	0.40	67.5	7.51	6.58	7.02
OCT.	8.50	0.49	94.24	0.26	49.8	7.06	6.71	7.09
NOV.	4.70	0.68	85.53	0.28	49.4	7.62	6.70	6.91
DEC.	6.40	0.65	89.84	0.27	24.7	7.81	6.65	7.13
AVERAGE	6.97	0.59	90.72	0.30	36.73	7.57	6.61	7.04
MAX(MIN)	10.50	0.74	94.38	0.47			6.56	7.69
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: 0.30 kg/day

EGANVILLE SEWAGE TREATMENT PLANT
SEWAGE MONITORING REPORT

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.	12.783	76.30	5.97	0.0	1	659.31	51.58	54.53	4.27	0
FEB.	10.700	66.10	6.18	0.0	1	660.56	61.73	39.90	3.73	0
MAR.	17.569	95.52	5.44	0.0	5	971.15	55.28	51.30	2.92	0
APR.	22.515	126.12	5.60	0.0	1	1443.00	64.09	69.16	3.07	0
MAY	19.966	97.20	4.87	0.0	4	1254.90	62.85	79.42	3.98	0
JUN.	21.711	101.64	4.68	0.0	0	1149.30	52.94	65.74	3.03	0
JUL.	15.313	91.92	6.00	0.0	1	745.55	48.69	45.83	2.99	0
AUG.	12.317	89.70	7.28	0.0	1	598.06	48.56	42.94	3.49	0
SEP.	13.691	95.30	6.96	0.0	3	969.90	70.84	57.00	4.16	0
OCT.	13.675	89.50	6.54	0.0	2	1070.51	78.28	50.54	3.70	0
NOV.	12.169	76.30	6.27	0.0	1	931.78	76.57	28.88	2.37	0
DEC.	12.937	84.20	6.51	0.0	3	957.40	74.00	51.68	3.99	0
TOTAL	185.346	1089.80				11411.42		636.92		
AVERAGE	15.446	90.82	6.03	0.0	2	950.95	62.12	53.08	3.47	
MAX	22.515	126.12	7.28		5	1443.00	78.28	79.42	4.27	
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.5	0.22	0.09	0.14	Mar.2	0.03	0.02	0.02	May 4	0.03	0.02	0.03
Jan.11	0.07	0.03	0.04	Mar.8	0.05	0.03	0.02	May 10	0.04	0.03	0.03
Jan.19	0.62	0.26	0.38	Mar.16	0.02	0.01	0.02	May 18	0.04	0.03	0.07
Jan.23	0.34	0.14	0.2	Mar.23	0.01	0.01	0.02	May 25	0.03	0.02	0.04
				Mar.30	0.02	0.01	0.01				
Feb.2	0.17	0.06	0.42	Apr.6	0.03	0.02	0.03	Jun. 1	0.02	0.01	0.04
Feb.8	0.03	0.01	0.03	Apr.12	0.04	0.03	0.05	Jun. 8	0.05	0.04	0.10
Feb.16	0.02	0.01	0.01	Apr.20	0.01	0.01	0.01	Jun. 14	0.02	0.01	0.04
Feb.23	0.04	0.02	0.02	Apr.27	0.03	0.02	0.03	Jun. 22	0.03	0.02	0.04
								Jun. 29	0.15	0.11	0.23
MAX.	0.62	0.26	0.42		0.05	0.03	0.05		0.15	0.11	0.23
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. 6	0.02	0.01	0.04	Sep. 7	0.09	0.05	0.21	Nov. 2	0.02	0.01	0.05
Jul.12	0.03	0.01	0.05	Sep.13	0.07	0.04	0.08	Nov.8	0.03	0.01	0.05
Jul.20	0.03	0.01	0.06	Sep.21	0.07	0.04	0.11	Nov.16	0.04	0.02	0.07
Jul. 27	0.06	0.03	0.11	Sep.28	0.04	0.02	0.04	Nov. 23	0.05	0.02	0.07
								Nov.30	0.03	0.01	0.02
Aug. 3	0.03	0.01	0.09	Oct. 5	0.03	0.02	0.17	Dec. 5	0.03	0.01	0.02
Aug. 9	0.03	0.01	0.06	Oct. 11	0.02	0.01	0.07	Dec.13	0.04	0.02	0.04
Aug. 17	0.05	0.02	0.09	Oct. 19	0.02	0.01	0.09	Dec.21	0.06	0.03	0.06
Aug. 24	0.04	0.02	0.14	Oct. 26	0.03	0.02	0.07	Dec. 28	0.03	0.01	0.04
Aug. 31	0.07	0.03	0.11								
MAX.	0.07	0.03	0.14		0.07	0.04	0.17		0.06	0.03	0.07
LIMITS	**5.00**	**5.40**	**20**		**5.00**	**5.40**	**20**		**5.00**	**5.40**	**20**

TOWNSHIP OF BONNECHERE VALLEY
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EGANVILLE SEWAGE TREATMENT PLANT
SLUDGE MONITORING REPORT

2022

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.	0															
FEB.	56															
MAR.	79															
APR.	189	523	25,600	17,100	16.20	0.10	0.03	0.05	0.33	10.60	0.041	0.11	0.31	0.4	0.10	8.30
MAY	104															
JUN.	51															
JUL.	64															
AUG.	86															
SEPT.	35															
OCT.	153	881	22,100	11,900	5.75	0.10	0.03	0.03	0.29	7.96	0.027	0.09	0.20	0.40	0.10	9.39
NOV.	48															
DEC.	90															
TOTAL	**955**															
AVG.	**80**	**702**	**23850**	**14500**	**10.98**	**0.10**	**0.03**	**0.04**	**0.31**	**9.28**	**0.03**	**0.10**	**0.26**	**0.40**	**0.10**	**8.85**

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**
1B(7)	**81.5**	**17.8**	**61.1**	**40300**	**2280**	**2**	**0.5**	**1**	**16**	**377**	**0.87**	**4**	**12**	**18**	**2**	**365**
2B(8)	**65.9**	**11.3**	**57.6**	**33400**	**5870**	**2**	**0.5**	**1**	**14**	**342**	**0.53**	**3**	**10**	**12**	**3**	**307**
3B(8)	**63.2**	**10.7**	**58.3**	**19100**	**6210**	**2**	**0.5**	**1**	**14**	**379**	**0.6**	**3**	**12**	**14**	**3**	**352**
TOTAL	**210.6**															
AVG.		**13.27**	**59.00**	**30933**	**4787**	**2.0**	**0.50**	**1.0**	**14.7**	**366.00**	**0.67**	**3.3**	**11.3**	**14.7**	**2.7**	**341.3**

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	4.19	2					
CADMIUM (Cd)	34	1.26	0.50	Aug. 17/22	1B(7)	81.5	17.8	5618
COBALT (Co)	340	1.68	1.00	Sept. 14/22	2B(8)	65.9	11.3	17699
CHROMIUM (Cr)	2800	13.00	14.67	Sept. 14/22	3B(8)	63.20	10.7	18692
COPPER (Cu)	1700	389.10	366.00					
MERCURY (Hg)	11	1.43	0.67					
MOLYBDENUM (Mo)	94	4.19	3.33	**TOTAL**		210.6		
NICKEL (Ni)	420	10.69	11.33					
LEAD (Pb)	1100	16.77	14.67					
SELENIUM (Se)	34	4.19	2.67					
ZINC (Zc)	4200	370.86	341.3					