

**TOWNSHIP OF BONNECHERE VALLEY
WATER AND SEWAGE DEPARTMENT**

**EGANVILLE SEWAGE TREATMENT PLANT
SEWAGE MONITORING REPORT**

2023

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.	16.146	0.521	0.666	285	3.0	98.95	1.56	81	7	91.36	3.65
FEB.	13.086	0.467	0.627	142	3.0	97.89	1.40	109	7	93.58	3.27
MAR.	19.220	0.828	1.080	113	3.0	97.35	2.48	92	5	94.57	4.14
APR.	38.808	1.254	1.807	44	3.0	93.18	3.76	69	7	89.86	8.78
MAY	31.238	1.027	1.740	110	3.0	97.27	3.08	68	7	89.71	7.19
JUN.	17.713	0.590	0.681	76	3.0	96.05	1.77	76	8	89.47	4.72
JUL.	15.660	0.505	0.565	93	3.0	96.77	1.52	35	8	77.14	4.04
AUG.	11.800	0.381	0.496	116	3.0	97.41	1.14	70	7	90.00	2.67
SEP.	9.602	0.320	0.391	130	3.0	97.69	0.96	104	9	91.35	2.88
OCT.	9.613	0.310	0.427	133	3.0	97.74	0.93	138	9	93.48	2.79
NOV.	9.671	0.322	0.376	175	3.0	98.29	0.97	87	7	91.95	2.25
DEC.	11.016	0.363	0.514	87	3.0	96.55	1.09	114	6	94.74	2.18
TOTAL	203.573										
AVERAGE	16.964		0.781	125	3.0	97.10	1.72	87	7.3	90.60	4.05
MAX	38.808	1.254	1.807	285	3.0	98.95	3.76	138	9	94.74	8.78
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: 558 m3

CBOD5 Annual Average Concentration: 3 mg/L

CBOD5 Annual Average Loading: 1.67 kg/day

TSS Annual Average Concentration: 7.3 mg/L

TSS Annual Average Loading: 4.07 kg/day

MONTH	TOTAL PHOSPHORUS				TKN INF 24HR COMP	pH		
	INF 24HR COMP	EFF MONTHLY AVG CONC	PERCENT REMOVAL	** EFF LOADING		INFLUENT AVERAGE	EFFLUENT MINIMUM	EFFLUENT MAXIMUM
	mg/L	mg/L	%	kg/day	mg/L			
JAN.	7.85	0.67	91.46	0.35	34.8	7.61	6.58	6.76
FEB.	6.85	0.69	89.93	0.32	37.4	7.63	6.55	7.13
MAR.	5.14	0.45	91.25	0.37	43.6	7.65	6.89	7.08
APR.	3.20	0.53	83.44	0.66	11.9	7.47	6.94	7.06
MAY	3.30	0.68	79.39	0.70	20.9	7.52	6.95	7.18
JUN.	3.40	0.54	84.12	0.32	32.8	7.79	6.89	7.36
JUL.	4.10	0.15	96.34	0.08	35.0	7.82	6.89	7.00
AUG.	4.10	0.22	94.63	0.08	48.6	7.85	6.89	6.96
SEP.	5.27	0.43	91.84	0.14	35.2	8.01	6.55	6.91
OCT.	6.92	0.45	93.50	0.14	52.2	7.96	6.67	6.76
NOV.	6.98	0.46	93.41	0.15	62.2	8.02	6.65	6.85
DEC.	5.56	0.45	91.91	0.16	20.6	7.96	6.55	6.67
AVERAGE	5.22	0.48	90.10	0.29	36.27		6.75	6.98
MAX(MIN)	7.85	0.69	96.34	0.70			6.55	7.36
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: 0.27 kg/day

MONTH	Total Flow X1000m3	Sodium Hypochlorite			* E. coli	Pre Hydr Alum Sulphate		Sodium Bisulphite		Number of By-passes
		Kg Used	Dosage mg/l	Effluent Residual mg/l	Counts per 100ml	Kg Used	Dosage mg/l	Kg Used	Dosage mg/l	
JAN.	16.146	93.96	5.82	0.0	0	1221.70	75.67	58.90	3.65	0
FEB.	13.086	86.88	6.64	0.0	3	1014.90	77.56	49.78	3.80	0
MAR.	19.220	100.44	5.23	0.0	5	1203.00	62.59	67.62	3.52	0
APR.	38.808	177.60	4.58	0.0	3	1837.90	47.36	112.86	2.91	0
MAY	31.238	147.10	4.71	0.0	4	1450.50	46.43	68.40	2.19	0
JUN.	17.713	96.60	5.45	0.0	1	873.00	49.29	42.18	2.38	0
JUL.	15.660	94.26	6.02	0.0	1	749.92	47.89	40.47	2.58	0
AUG.	11.800	67.20	5.69	0.0	0	529.32	44.86	28.88	2.45	0
SEP.	9.602	88.20	9.19	0.0	2	435.00	45.30	29.26	3.05	0
OCT.	9.613	81.60	8.49	0.0	16	435.58	45.31	29.64	3.08	0
NOV.	9.671	73.80	7.63	0.0	2	434.95	44.97	31.54	3.26	0
DEC.	11.016	83.04	7.54	0.0	2	493.70	44.82	46.36	4.21	0
TOTAL	203.573	1190.68				10679.47		605.89		
AVERAGE	16.964	99.22	6.42	0.0	3	889.96	52.67	50.49	3.09	
MAX	38.808	177.6	9.19		16	1837.90	77.56	112.86	4.21	
LIMITS					<200					
OBJECTIVES					<200					

3:* E. coli - monthly geometric mean density

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**EGANVILLE SEWAGE TREATMENT PLANT
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2023

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			mg/l	kg/day			mg/l	kg/day	
Jan.4	0.02	0.01	0.02	Mar.1	0.09	0.07	0.14	May 3	0.02	0.02	0.04
Jan.10	0.03	0.02	0.03	Mar.8	0.04	0.03	0.01	May 9	0.02	0.02	0.05
Jan.18	0.16	0.08	0.14	Mar.14	0.01	0.01	0.01	May 17	0.03	0.03	0.07
Jan.25	0.03	0.02	0.02	Mar.22	0.01	0.01	0.01	May 24	0.03	0.03	0.07
				Mar.29	0.05	0.04	0.07	May 31	0.04	0.04	0.13
Feb.1	0.04	0.02	0.03	Apr.5	0.05	0.06	0.07	Jun. 7	0.03	0.02	0.18
Feb.8	0.04	0.02	0.02	Apr.11	0.06	0.08	0.10	Jun. 13	0.05	0.03	0.14
Feb.14	0.11	0.05	0.06	Apr.19	0.02	0.03	0.05	Jun. 21	0.11	0.06	0.34
Feb.22	0.07	0.03	0.07	Apr.26	0.05	0.06	0.08	Jun. 28	0.03	0.02	0.11
MAX.	0.16	0.08	0.14		0.09	0.08	0.14		0.11	0.06	0.34
LIMITS	5.00	5.40	20		5.00	5.40	20		5.00	5.40	20

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	mg/l	kg/day			ug/l	mg/l			kg/day	ug/l	
Jul. 5	0.03	0.02	0.09	Sep. 6	0.03	0.01	0.06	Nov. 1	0.03	0.01	0.04
Jul. 11	0.02	0.01	0.08	Sep. 12	0.02	0.01	0.05	Nov. 8	0.02	0.01	0.03
Jul. 19	0.02	0.01	0.08	Sep. 20	0.03	0.01	0.09	Nov. 14	0.03	0.01	0.04
Jul. 26	0.03	0.02	0.11	Sep. 27	0.03	0.01	0.05	Nov. 22	0.03	0.01	0.04
Jul.		0.00						Nov. 29	0.04	0.01	0.04
Aug. 2	0.06	0.02	0.21	Oct. 4	0.03	0.01	0.06	Dec. 6	0.03	0.01	0.02
Aug. 9	0.03	0.01	0.00	Oct. 10	0.03	0.01	0.05	Dec. 12	0.03	0.01	0.02
Aug. 16	0.03	0.01	0.09	Oct. 18	0.04	0.01	0.06	Dec. 20	0.03	0.01	0.02
Aug. 23	0.05	0.02	0.16	Oct. 25	0.03	0.01	0.05	Dec. 27	0.04	0.01	0.02
Aug. 30	0.07	0.03	0.00	Oct.		0.00					
MAX.	0.07	0.03	0.21		0.04	0.01	0.09		0.04	0.01	0.04
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.	27															
FEB.	0															
MAR.	116	1040	29,100	18,700	26.90	0.10	0.03	0.03	0.06	1.61	0.009	0.18	0.05	0.1	0.10	1.35
APR.	64															
MAY	74															
JUN.	109															
JUL.	52															
AUG.	64															
SEPT.	106															
OCT.	0	762	20,100	12,000	16.00	0.10	0.03	0.03	0.24	5.85	0.014	0.18	0.18	0.30	0.10	7.70
NOV.	191															
DEC.	73															
TOTAL	876															
AVG.	73	901	24600	15350	21.45	0.10	0.03	0.03	0.15	3.73	0.01	0.18	0.12	0.20	0.10	4.53

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
3(A)8	83	10.8	60.2	42200	5630	2	0.5	1	15	354	1.17	3	12	12	2	322
2(A)11	66	9.33	59.8	41800	5110	2	0.5	1	14	351	1.43	3	11	13	2	340
TOTAL	149															
AVG.		10.07	60.00	42000	5370	2.0	0.50	1.0	14.5	352.50	1.30	3.0	11.5	12.5	2.0	331.0

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 m3	%Total Solids	E. coli cts/100ml
ARSENIC (As)	170	4.07	2					
CADMIUM (Cd)	34	1.22	0.50	Sept. 13, 2023	2A(11)	66	9.33	10700
COBALT (Co)	340	1.22	1.00					
CHROMIUM (Cr)	2800	6.10	14.50	Sept. 13, 2023	3A(8)	83	10.8	9270
COPPER (Cu)	1700	151.63	352.50					
MERCURY (Hg)	11	0.47	1.30					
MOLYBDENUM (Mo)	94	7.32	3.00	TOTAL		149		
NICKEL (Ni)	420	4.67	11.50					
LEAD (Pb)	1100	8.13	12.50					
SELENIUM (Se)	34	4.07	2.00					
ZINC (Zc)	4200	183.94	331.0					