



Edgewater Sewage Lagoons Annual Report 2017



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1. Introduction

The Edgewater Sewage Lagoons are operated under Registration #RE -17372 by the Regional District of East Kootenay. The Registration was issued in July 2003 under the Municipal Sewage Regulation (MSR). The MSR was replaced by the Municipal Wastewater Regulation (MWR) in 2012.

The Letter of Introduction accompanying the Registration specifies the following restrictions applicable to the effluent discharged to the Columbia River:

- Quantity – 417m³/day
- Quality – BOD = 45, TSS = 60

The Letter of Introduction also details monitoring and reporting requirements. One of the reporting requirements is an annual report which records compliance and impact issues.

The Letter of Introduction was amended January 12, 2010 to reflect consistently high effluent quality and low impact on the receiving environment.

The 2017 Annual Report indicates the effluent from the Edgewater Sewage Lagoons complies with the MWR.

2. Monitoring Requirements

The following monitoring is required under the MWR:

Daily Flow (m ³ /day)	Data Submission	Flow	BOD/TSS		Fecal Coliform		Toxicity	
Range	Frequency	Freq.	Freq	Type	Freq.	Type	Freq.	Type
>10 - <500	2 x / year	Wkly	Qrtly	Grab	Qrtly	Grab	1 x / 3yrs	Grab

The following monitoring is required under the 2010 Registration Letter:

Parameter	Site		
	Columbia River*		Treatment Facility
	Upstream	IDZ**	Effluent
Flow			Daily
BOD			Quarterly
TSS			Quarterly
pH (field test)	WS/2y	WS/2y	
Ammonia	WS/2y	WS/2y	
Nitrate	WS/2y	WS/2y	
Nitrite	WS/2y	WS/2y	
Sodium	WS/2y	WS/2y	
Chloride	WS/2y	WS/2y	
Fecal Coli.	WS/2y	WS/2y	Quarterly
Enterococci	WS/2y	WS/2y	
E-Coli	WS/2y	WS/2y	
Toxicity			1 x / 2 years

*Testing performed Weekly Seasonal (WS) for 5 weeks during late summer/ early autumn every second year (2y)

**Initial Dilution Zone

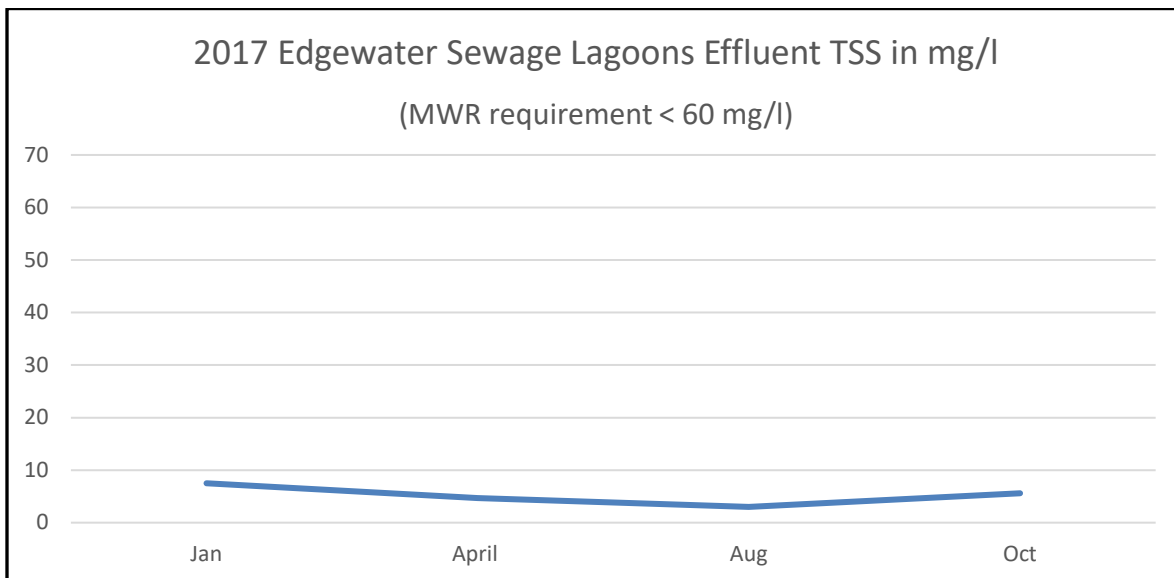
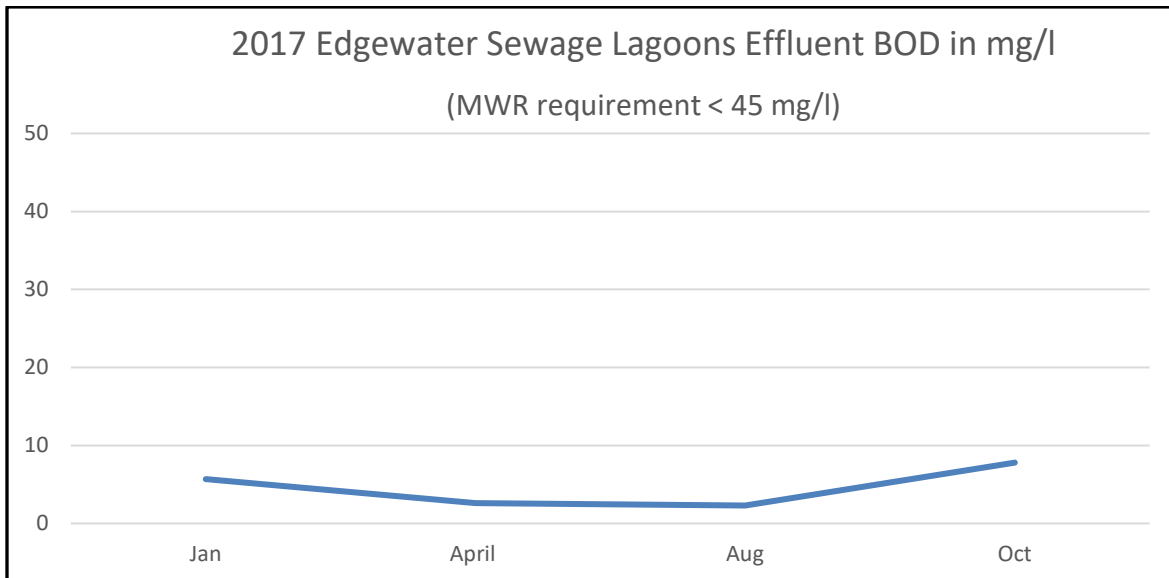
NB: All samples are Grab except flow volume

The following are the Effluent Quality requirements as per the MWR and the 2010 Registration Letter:

- BOD: 45mg/l
- TSS: 60mg/l
- Daily Flow: 417m³

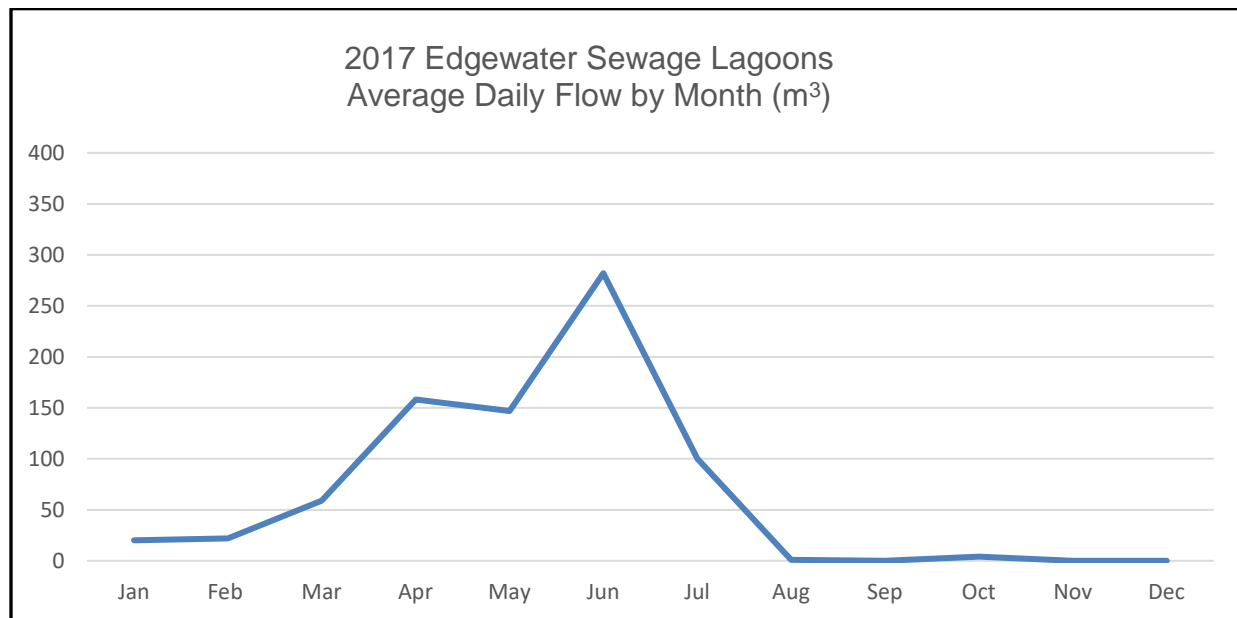
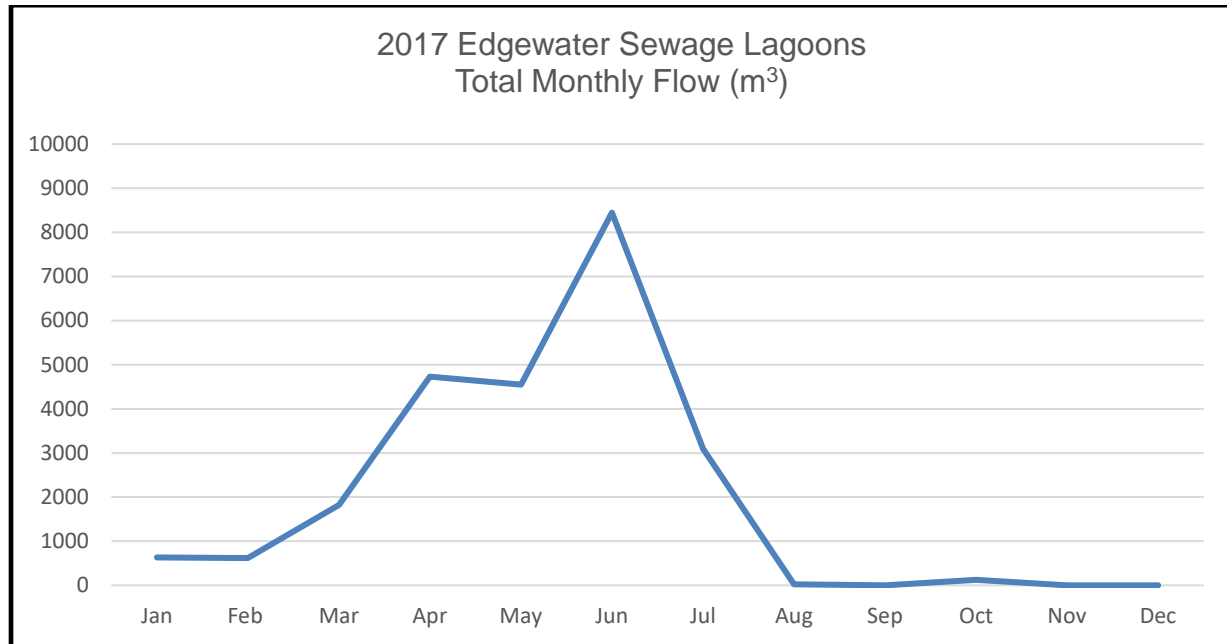
3. 2017 Monitoring Results

Effluent Quality was monitored as per MWR in 2017:



Other Quality Note: November Bioassay Results – LC50, 96 hr Trout > 100%

Effluent flows are monitored daily. The monthly total and daily average results are detailed below:



Effluent Flow Notes:

- 2017 average daily flow = 66m³/day
- Authorized maximum daily flow of 417m³/day was exceeded on three days in June
- 2017 flow volumes compliance: 99.18%

4. System Notes

- Approximately 80 muskrats trapped in 2017
- Lagoon levels drawn down in summer to allow for vegetation control
- No discharge from lagoons Aug – Sept to allow lagoons to refill after vegetation control

5. Operators

Employee	EOCP Cert. #	Level
Norm Thies	6330	MWWT-I, WWC-II
Ginger Palmer	6821	MWWT-I, WWC-I
Paul Oaks	6500	MWWT-1, WWC-I
Claudia Henrich	1900	MWWT-II

MWWT: Wastewater Treatment
WWC: Wastewater Collection

6. Summary

The Edgewater Sewage Lagoons 2017 effluent quality exceeded to the MWP and Registration Letter requirements by a substantial margin. The maximum daily flow was exceeded during the lagoon drawdown process in June, but the overall 2017 average daily flow was well under the required maximum flow.