FREQUENTLY ASKED QUESTIONS: REGIONAL SEWER ODOURS

JUNE 11, 2025

Why are the lagoons smelling?

This is a biological plant where bacteria consume waste through five treatment lagoons. Oxygen is added to incoming wastewater through a series of blowers and oxygen diffusers in the lagoons. After cycling through the biological treatment process, the treated wastewater passes over ultraviolet (UV) lights.

Healthy bacteria require oxygen in the water to consume organic materials. In the past, dated and plugged aerators did not supply enough air in the lagoons. The old aerators have been replaced with new air diffusers over the last two years. These upgrades also included the removal of a significant amount of built-up biosolids from the lagoons. Unfortunately, there is still not enough oxygen going into the lagoons. The lack of oxygen is believed to be the leading reason for the odour.

What is being done to eliminate the smell?

The air blowers supplying oxygen to Lagoons 1 and 2 have been upgraded and reconfigured (placed into operation on June 5). A second existing air blower supplying Lagoons 3, 4, and 5 was tuned during the first week of June and we now have two blowers supplying approximately 70% more air to those lagoons. A bulk dose of an oxygen-boosting compound was added on June 5, and maintenance dosing is now ongoing. Temporary measures have been ongoing since May, including the placement of “mechanical mixers”

in Lagoons 1 and 2 to improve circulation and the installation of an overland recirculating pump that has been transferring water from healthier lagoons back to Lagoon 1.

Figure 1. Views of new Air Blowers

Figure 2. Dosing Equipment

Figure 3. Mechanical Mixers

Figure 4. Recirculation Pump

Figure 5. Reconfigured and Tuned Blowers for Lagoons 3,4 & 5

What professional advice has been received?

Professional process engineers have been providing guidance for upgrades to the system. The Municipality, through open procurement processes, has engaged firms experienced in the design and operation of wastewater systems. The Municipality has further consulted with operators of other large wastewater systems to inquire and gain knowledge about the problems they have experienced and the corrective actions that they have undertaken.

How long does it take for the system to process waste?

The lagoon-based treatment plant retains wastewater for approximately 60 days from the time of inlet, through the 5-lagoon treatment system, to the point of effluent discharge.

Have biosolids been removed from the lagoons?

Yes. During 2021and 2024 there has been in excess of 11,000 metric tonnes removed from the lagoons. Additionally, the Municipality has been measuring the buildup of sludge with sonar technology. The purpose of these ongoing measurements is to ensure excess sludge is removed on an ongoing basis. Another desludging contract has been planned for this fall.

How much money has been spent on what components in recent years?

Regional Wastewater Treatment Plant 2019-20 to 2024-25

Fiscal Year	Aeration/Plant Upgrades	Engineering - Treatment	Forcemain	Engineering - Forcemain	Fencing & Other	Lift Station Upgrades	Sludge Management	Forcemain Estimated Payable	Grand Total
2019/20	$ 775,572	$ 39,533	$ -	$ 18,803	$ 52,577	$ -	$ -	$ -	**$ 886,484**
2020/21	248,940	3,050	144,435	-	-	-	-	-	**396,425**
2021/22	25,512	16,686	-	7,084	18,004	-	1,971,613	-	**2,038,899**
2022/23	573,734	29,465	-	16,575	-	-	47,972	-	**667,746**
2023/24	2,842,881	170,169	-	15,121	12,514	-	2,408,476	-	**5,449,162**
2024/25	64,490	15,571	821,774	147,998	3,135	42,138	221,179	1,767,958	**3,084,242**
Grand Total	**$ 4,531,129**	**$ 274,474**	**$ 966,209**	**$ 205,581**	**$ 86,230**	**$ 42,138**	**$ 4,649,240**	**$ 1,767,958**	**$ 12,522,958**

Sludge Management (weight)

Year	Metric Tonnes
2019-21	6,943
2022-24	3,996
Total [1]	**10,939**

Sludge Management by Activity

Desludge/D	$ 3,058,238
Disposal	710,695
Transport	880,306
Grand Total	**$ 4,649,240**

1. Does not include the weight contained in Geotubes that were filled and are being maintained on site.

How large is the system and who are the users?

The system services residents, businesses, industry, and institutional users between Greenwich and Coldbrook, which includes approximately 22,000 residents, the businesses and industry within the Kentville Industrial Park, the retail sector in New Minas, and the Valley Regional Hospital.

Who are the Regional Partners and What is the Annual Budget?

The system (plant and collection components) is owned by the Municipality but operated through Regional Partnership Agreements. The current operating and capital budgets are summarized as follows:

2025/2026 REGIONAL SEWER BUDGET				
	Capital[1]	Operating	Total	Percent
Kentville	$ 461,912	$ 639,977	$ 1,101,890	48.0%
New Minas	146,938	343,374	490,312	21.4%
Pepsico	117,394	179,270	296,664	12.9%
Kings	84,256	320,779	405,035	17.7%
	$ 810,500	$ 1,483,400	$ 2,293,900	100.0%

1. $810,550 is the current year portion of the below 2025-26 capital budget

2025-26 Capital Spend:	
Sewerlines - Conveyance line replacement	$ 400,000
Aeration and desludging	1,600,000
Regional Equipment	310,000
Consulting (I&I and Hydraulic Retention)	90,000
Lift Stations (including wet well wizards/aeration)	1,325,000
Rehabilitation of 4 overflow chambers and UV upgrades	900,000
	$ 4,625,000

Funding Sources:	
Capital Reserve	$ 410,000
Operations	90,000
Grants	1,532,500
Debenture	2,592,500
	$ 4,625,000

What is being looked at for the longer term?

Through a procurement process in February 2025, a consulting engineering firm (CBCL) was selected to undertake a pre-design report on the entire system. The work will generate recommendations related to the Regional Wastewater Treatment Facility including process upgrades (pre-screening solutions, possible conversion to alternative treatment technologies, post-treatment clarification or filtration, sludge management solutions and overall sewer treatment facility optimization). The study will encompass the type of incoming waste and projected growth and development in the area.

This study is scheduled to be completed by the spring of 2026. The work has been delayed as the same consultant has been asked to advise the Municipality on present-day odour and treatment issues.