

Response to Regional Sewer Odour

May 7, 2025 (updated version of May 6, 2025 presentation)

Speaking Points

1. System Overview
2. What We Have Done in Recent Years
3. Current Problems – Potential Causes
4. What We Are Doing

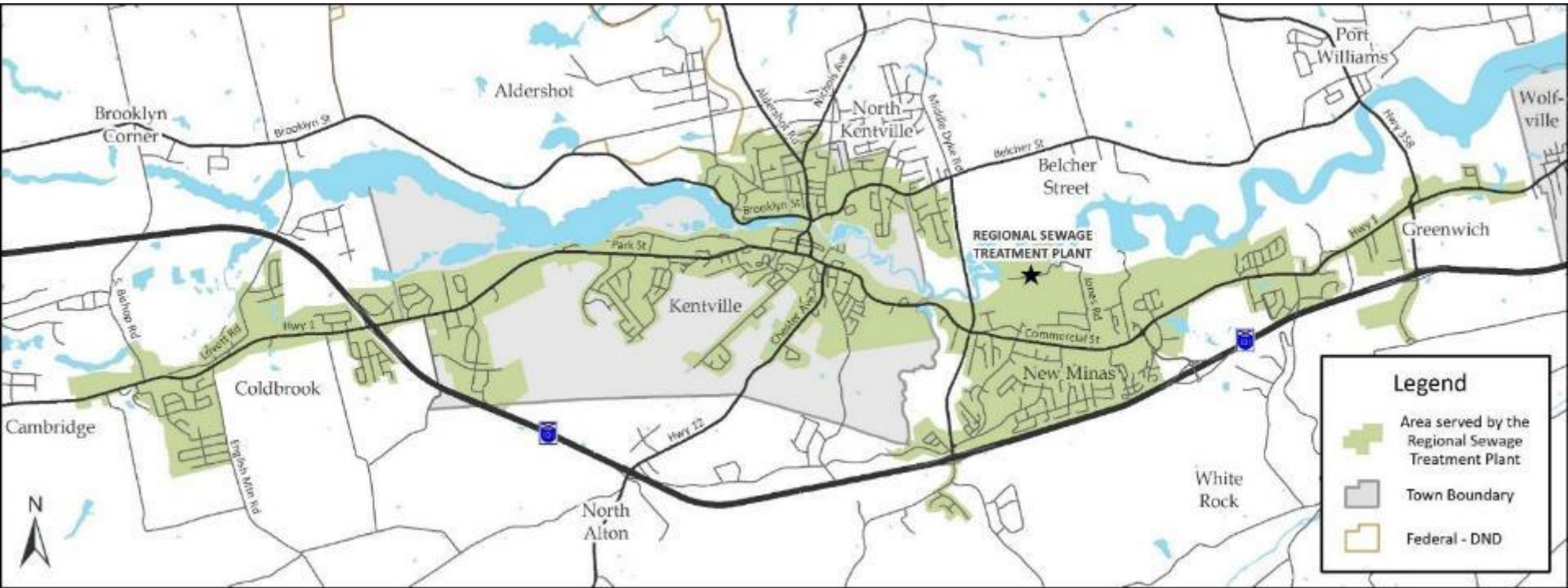


1. System Overview

- Biological system
- Dissolved oxygen (DO) in the lagoons is key
- Materials are screened before entering the first lagoon
- Waste migrates through 5 lagoons (all aerated)
- Effluent is treated by ultraviolet light before discharge
- Regional Sewer is a partnership of the Municipality, the Town of Kentville, Village of New Minas, and PepsiCo



Area Serviced by Regional System



2. What We Have Done in Recent Years

- Desludging (centrifuge and geotube)
- New aeration/diffuser equipment (380 in Lagoon 1, 140 in Lagoon 2)
- New yard piping
- Changed inflow line in Lagoon 1 to improve circulation



Barge removing biosolids from lagoon





Moving biosolids from lagoons to geotubes

Biosolid removal via centrifuge operation



These Aerators Have Been Replaced with Diffusers



New Aerator Diffusers in Operation (on the right)





New airline installation



Relocation of inlet line to improve circulation



3. Current Problems – Potential Causes

- Lack of Dissolved Oxygen in the first lagoon
- Foam on the second lagoon
- Intermittent problem - (no smell then bad smell)



Foam in Lagoon 2 – Spring 2025



3. Current Problems – Potential Causes, Con't

- Too much inert materials entering the system (sand, wipes, etc.)
- BOD levels being impacted by volumes and materials (too much loading)
- Fats, Oils, and Grease entering the system (FOGs)
- High levels of ammonia
- Problem being compounding by spring turnover



4. How We Are Addressing 2025 Upset

- Diluting lagoon lacking oxygen with healthy, pre-treated water from other lagoons
- Installed “lagoon masters” to improve circulation
- Consulting subject matter experts (Process Engineers) regularly
- Increased sampling to monitor Dissolved Oxygen, and BOD parameters
- Investigating odour mitigation





Temporary pumps
installed to transfer
water from healthy
lagoons to Lagoon 1





Temporary yard piping installed to transfer water from healthy lagoons to Lagoon 1

One of three lagoon masters installed to improve circulation



4. How We Are Addressing 2025 Upset – Con't

- In-depth Engineering review is underway:
 - mechanical (or partial mechanical conversion)
 - pre-treatment options
- Two new high efficiency blowers are being installed (increasing the volume of air)
- Upstream mixing equipment (dealing with anerobic materials in transfer lines)



4. How We Are Addressing 2025 Upset – Con't

- Conducting inspection of diffuser conditions, e.g., presence of inert materials
- Ammonia testing in Lagoon 1 (may be consuming DO)
- Additional desludging (creating more capacity)



For more information, visit:

www.countyofkings.ca/regionalsewerupdates

