

# 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

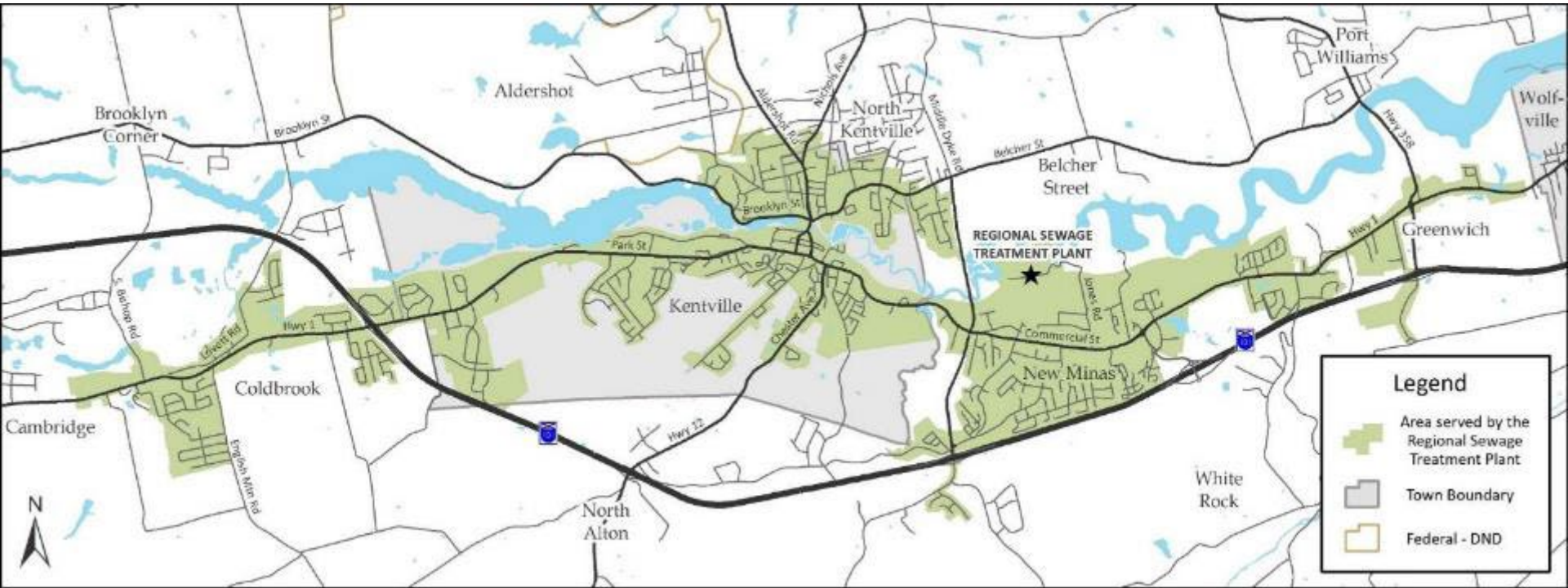


# 1. System Overview

- 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](http://www.countyofkings.ca/regionalsewerupdates)

