

Regional Wastewater Treatment Plant

Updated Summary of May 11, 2023 Community Meeting

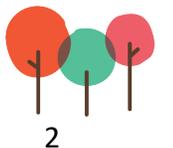
Aaron Dondale, Manager, Public Works
June 6, 2023
Municipal Council



MUNICIPALITY *of the*
COUNTY *of* KINGS

Topics

- Regional Wastewater Collection and Treatment
- The odour problem & what we're doing about it
- Future work



Regional Partnership

Partners

2023/2024 Contribution*

Municipality of the County of Kings

15%

Owner/Operator, Partner

Town of Kentville

51%

Partner

Village of New Minas

21%

Partner

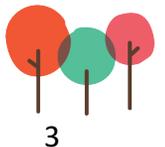
Pepsico

12%

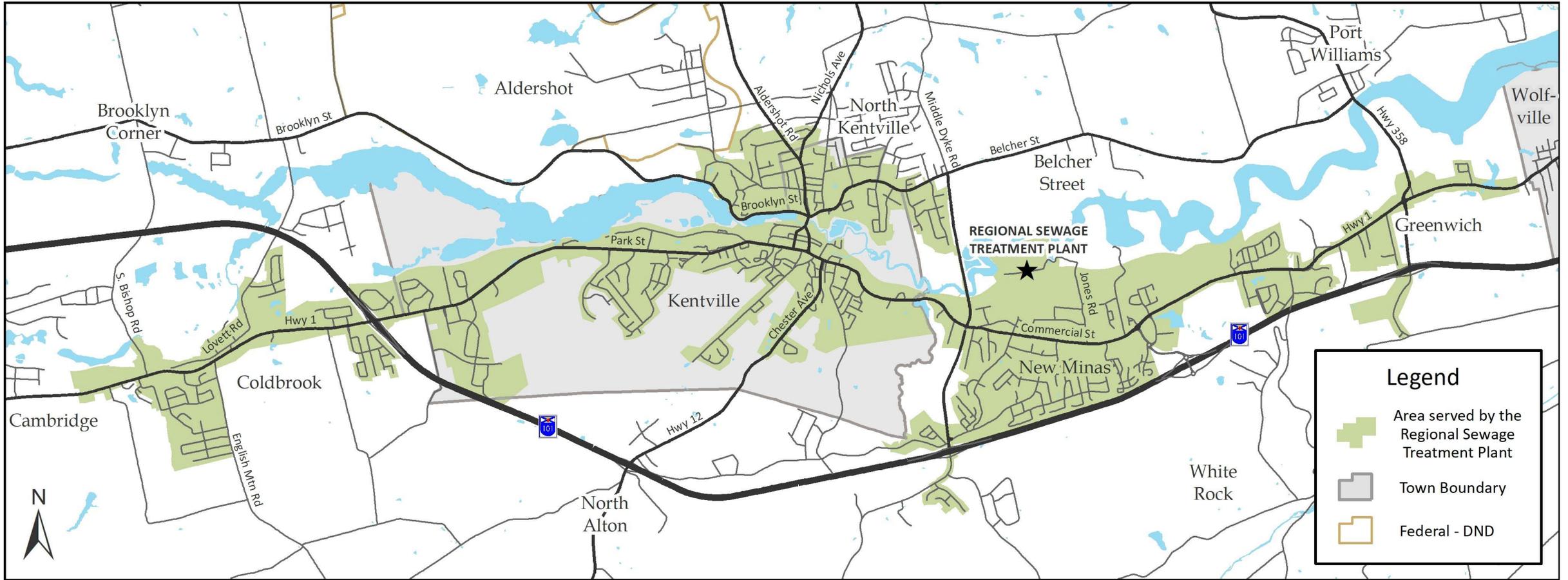
Partner

- Partners participate on the Regional Sewer Committee

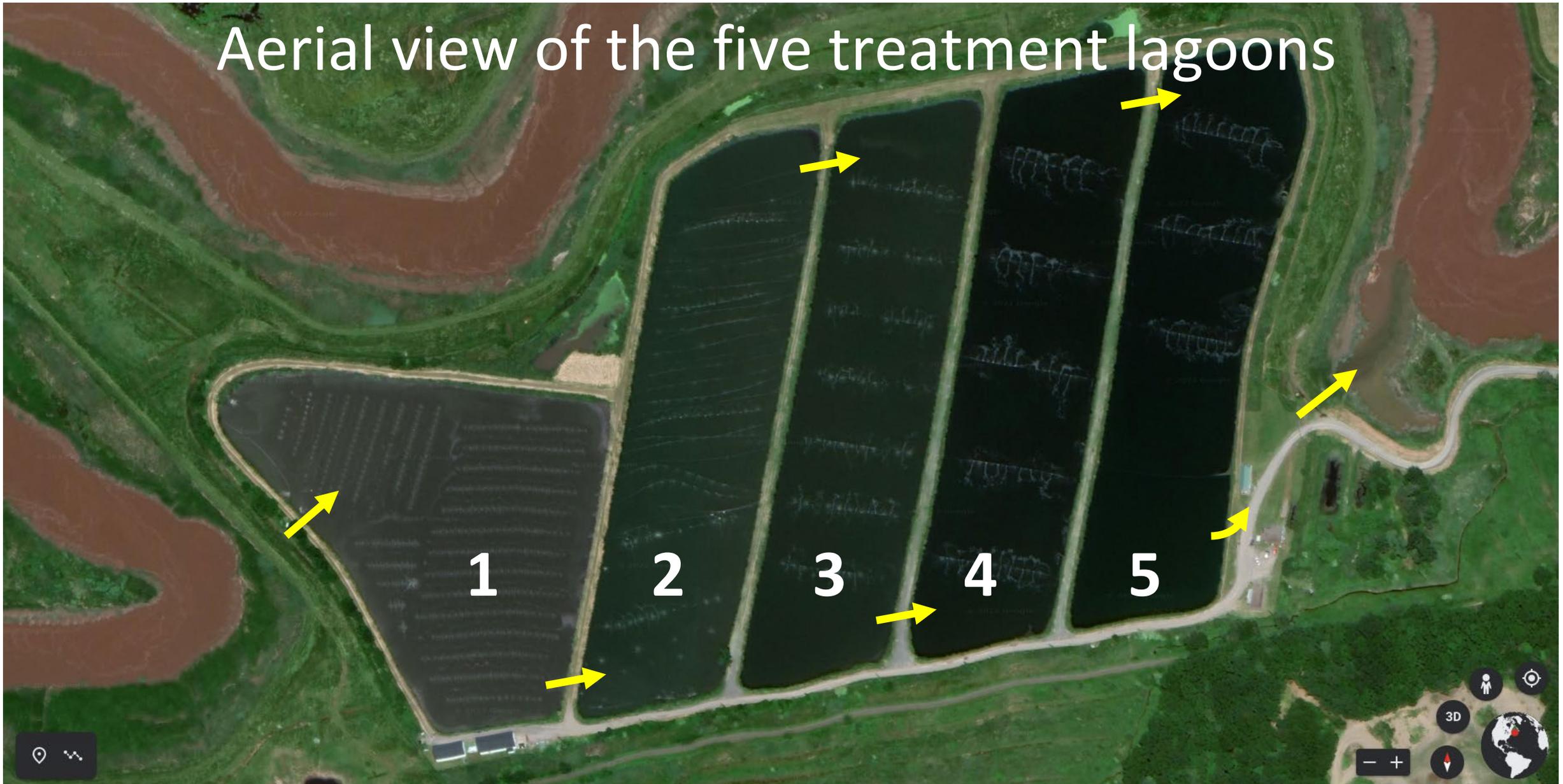
** Operating component adjusted annually based on inflows; capital contribution is fixed*



Wastewater Collection System



Aerial view of the five treatment lagoons



Wastewater Collection System

- Daily flow
 - 1.5 - 6 million gallons per day
- Average organic load to Regional Plant
 - ~450 mg/L
- Up to 22,500lbs of solid material enters the Plant each day

The Problem: Odour



- **Inefficient aeration**

- Equipment is 25 years old; leaks in headers; clogged aerators
- Limits oxygen transfer and leads to odour

- **Excess sludge**

- Limits water available to process organic waste
- Limits oxygen transfer and leads to odour

The Problem: Odour

What are we doing about it?

2021

- Removed 6,000MT of sludge from Lagoon 1
- Removed 2,000MT sludge from Lagoon 2

2022

- Operational improvements (equipment install for influent dilution; upgrades to pre-treatment filtration)
- Site assessment with experts to plan future work; tendering; contractor selection

The Problem: Odour

What are we doing about it?

- Lagoon 1 inlet moved to improve mixing (complete)
- Lagoons 1 & 2 – new header system (complete)

2023

- New aeration equipment has arrived for Lagoons 1 & 2 (800 aeration heads and related laterals)
- Contracts awarded for 6,800m³ of sludge removal



The Problem: Odour

What we discovered in 2023:

- (Upon lowering of water in Lagoon 1) – an additional volume of sludge was discovered that must be removed in order to install new aeration system (aerators are each 36” in diameter 5’ in height and anchored to the lagoon floor by individual cement pads)



Desludging barge | 2021



Desludging | 2021



New header | 2023



New header, aerator cleaning | 2023



Aerator head cleaning, de-watering pad | 2023



Clogged aerators | 2023

Lagoon 1 Inlet Relocated



Our Next Steps

1. Lagoon 1 sludge removal (additional contract)

- Sonar survey of amount to occur this week
- Aiming for mid-Fall 2023 removal

2. Lagoon 2 sludge removal

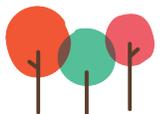
- Presently underway

3. Install new aeration equipment after desludging

- Starting with Lagoon 2
- Lagoon 1 equipment install after fall desludging
- Return to full operation by end of 2023

4. Receive and act on expert advice

- Long-term sludge management
- Strength and flows from partners



How Can the Public Help



Manual removal of
disposable wipes

Disposable wipes accumulated on
aeration equipment

- Be aware of what you're putting down drains and toilets
- If it's not coming from your body and it's not toilet paper, it should not be entering the wastewater system

Follow Project Updates

www.countyofkings.ca/RegionalSewerUpdates



Questions

