Drumbo Wastewater Treatment Plant (WWTP) Capacity Expansion

Schedule C Municipal Class Environmental Assessment (EA) Study

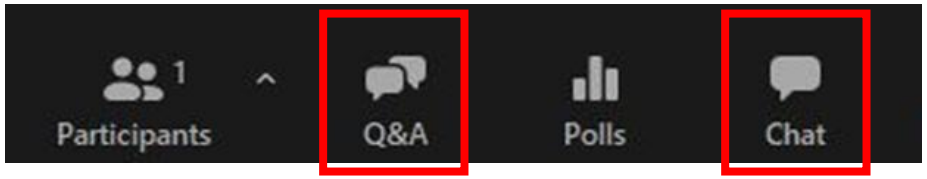
Increase WWTP hydraulic capacity from 450 m^3/d to approx. 660 m^3/d

During the Presentation

This meeting is being recorded and
will be posted to the project website:
https://speakup.oxfordcounty.ca/drumbo-wwtp-expansion

When joining the meeting, your microphone and video will be turned off. Use the Chat button to let us know about any technical difficulties.

Use the Q&A button to put forward a question to the presenters. Questions will be answered after the presentation.



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Comment Period:
February 3 – 17, 2026

Question or Comment During the Meeting?

- Use the Q&A button to put forward a question to the presenters. Questions will be answered after the presentation.
- Submit your comments via email or phone
- Leave a comment or question for the study team on Speak Up, Oxford!

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Drumbo WWTP EA| Speak Up, Oxford! (oxfordcounty.ca)

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Municipal Class EA Schedule C – Planning and Design Process

Phase 1: Problem or Opportunity

Phase 2: Field Investigations

Phase 3: Develop Alternative Solutions

Phase 4: Public Consultation Centre (PCC) #1

Phase 5: Select a Preferred Alternative

Phase 6: Develop Design Options for Preferred Alternative

Phase 7: Public Consultation Centre (PCC) #2

Phase 8: Select Preferred Design Option

Phase 9: Environmental Study Report

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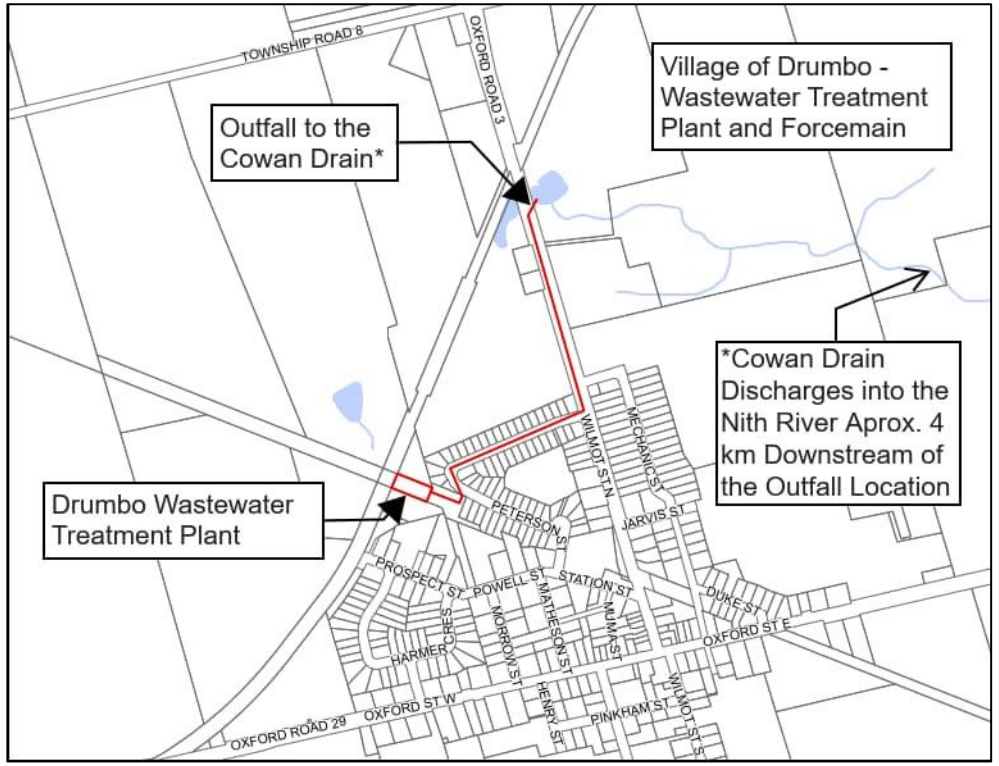
Opportunity Statement

Oxford County is undertaking a Schedule C Municipal Class Environmental Assessment (Class EA) Study to explore a wide range of possibilities for expanding the Drumbo Wastewater Treatment Plant (WWTP) to increase capacity above 600 m3/day in order to determine the most appropriate solution that will support the growing wastewater servicing needs within the Village of Drumbo in the Township of Blandford-Blenheim.



Drumbo WWTP Background

- Membrane BioReactor (MBR) system substantially completed in June 2024
- MBR process separates treated effluent from aeration biomass, prior to disinfection and discharge. Membranes have replaced the clarifiers used in the conventional activated sludge (CAS) process
- The system is expandable and was originally designed to accommodate capacity expansion without the need to construct additional tankage or buildings
- The membrane system contains two identical treatment trains. Each train contains two cassettes, with cassettes being made up of membrane modules.
- Each cassette can accept up to 16 modules and are currently partially filled, with 12 modules installed per cassette. In total, the system has 48 modules installed with space for 16 additional modules.
- Capacity is gained by installing additional membrane modules into the existing membrane system. The ultimate design capacity of the plant has not yet been defined. The final capacity will depend on the treatment technology and cassette configuration ultimately selected, which is expected to be further explored during PCC#2 and confirmed through the detailed design phase following completion of the EA.

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Effluent Quality of Drumbo WWTP

Pre- and Post- Membrane BioReactor (MBR) Technology Installation

Membrane system online since mid-December 2023

Significant reduction in Total Suspended Solids

Fine bubble diffusers online since March 20, 2024

Parameter	Average Effluent Loadings (2023) Pre-MBR	Average Effluent Loadings (2025) Post-MBR	Effluent Loading Limits
Daily Flow (m3)	267	241	450
CBOD5 (kg/d)	0.71	0.5	2.8
Total Suspended Solids, TSS (kg/d)	1.72	0.5	2.8
Total Phosphorus, TP (kg/d)	0.05	0.04	0.14
Total Ammonia Nitrogen, TAN (kg/d) – May to Oct	1.06	0.02	0.82
Total Ammonia Nitrogen, TAN (kg/d) – Nov to Apr	0.96	0.03	1.36

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Investigations and Chronology

May 30, 2024
- Meeting with MECP to discuss plan to support proposed rated capacity increase to approx. 660 m3/d

June 4, 2024
- Meeting with MECP and HEL to discuss environmental requirements of EA
- MECP state that maintaining existing ECA loading limits and assessing impacts to the Cowan Drain aquatic habitat/biota would be required if effluent is not fully mixed prior to entering the pond. Further confirmation would be provided by MECP

July 12, 2024
- Summary of requirements from MECP
  - Provided the effluent loadings from the Drumbo WWTP remain within the current loadings (Schedule C of ECA #7607-BYQRYA) and it can be demonstrated there would be no impacts to Species at Risk (SAR) in the Cowan Drain, the MECP SWR Technical Support would support this WWTP upgrade
  - A permission letter from the property owner acknowledging and consenting to the assimilation (final mixing) of Drumbo WWTP effluent within their private pond
  - Commitment letter from County stating that the growth and development of serviced lands in the community of Drumbo will be limited to the capacity of 660 m3/d at the current effluent discharge location
    - Any future wastewater servicing, beyond the current EA, will require consideration for establishing an alternate outlet to an approved location in consultation with the MECP at a later date.

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Investigations and Chronology

County provided assurances, supported by documentation submitted to MECP:

- Commitment Letter for the Drumbo Wastewater Treatment Plant Expansion – November 19, 2024
- Permission Letter to Landowner – February 12, 2025

March 25, 2025

- MECP (Monica Macki) confirm above documents were received and satisfactory

September 25, 2025

- SAR investigation and report completed. No adverse effects on SAR.

October 6, 2025

- MECP reviewed SAR report and had no further comments. Oxford County to proceed with EA process

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Develop Alternative Solutions
Evaluation Criteria

Criteria	Description
Community Growth	• Ability of community to increase population including residential/industrial growth while minimizing time-to-construction schedule
Natural Environment	• Effects on vegetation, water quality, wildlife and aquatic habitat, wetlands, terrestrial resources, woodlands, species at risk. • Ongoing impacts to receiver • Improved attenuation and reduced impacts to the receiving environment • Impacts of spills or overflows
Social Environment and Health	• Impacts on local community and risk to downstream drinking water sources – City of Brantford, Town of Dunville, Ohsweken • Influence on community aesthetics.
Heritage/Cultural Impacts	• Potential impacts on cultural heritage resources, including built heritage resources, cultural heritage landscapes, and archeological resources.
County Operations	• Operation of the WWTP (i.e., safety, maintenance, emergency response, etc.)
Technical Feasibility	• Construction feasibility • WWTP operation (capacity constraints, complexity - such as high skilled operation, operator time, equipment complexity).
Cost	• Anticipated capital, operating, and maintenance costs.

Criteria	Weighing
Community Growth Ability of County to permit more development – main driver of EA	20%
Natural Environment Increase in effluent volume to the receiver	20%
Social Environment Minimal anticipated risks to communities and minimal construction	10%
Heritage/Cultural Impacts No anticipated changes	10%
County Operations No anticipated changes	10%
Technical Feasibility Staff familiar with MBR process and it's operations	10%
Cost Majority of costs already incurred in last upgrade	20%

Develop Alternative Solutions

Evaluation Matrix

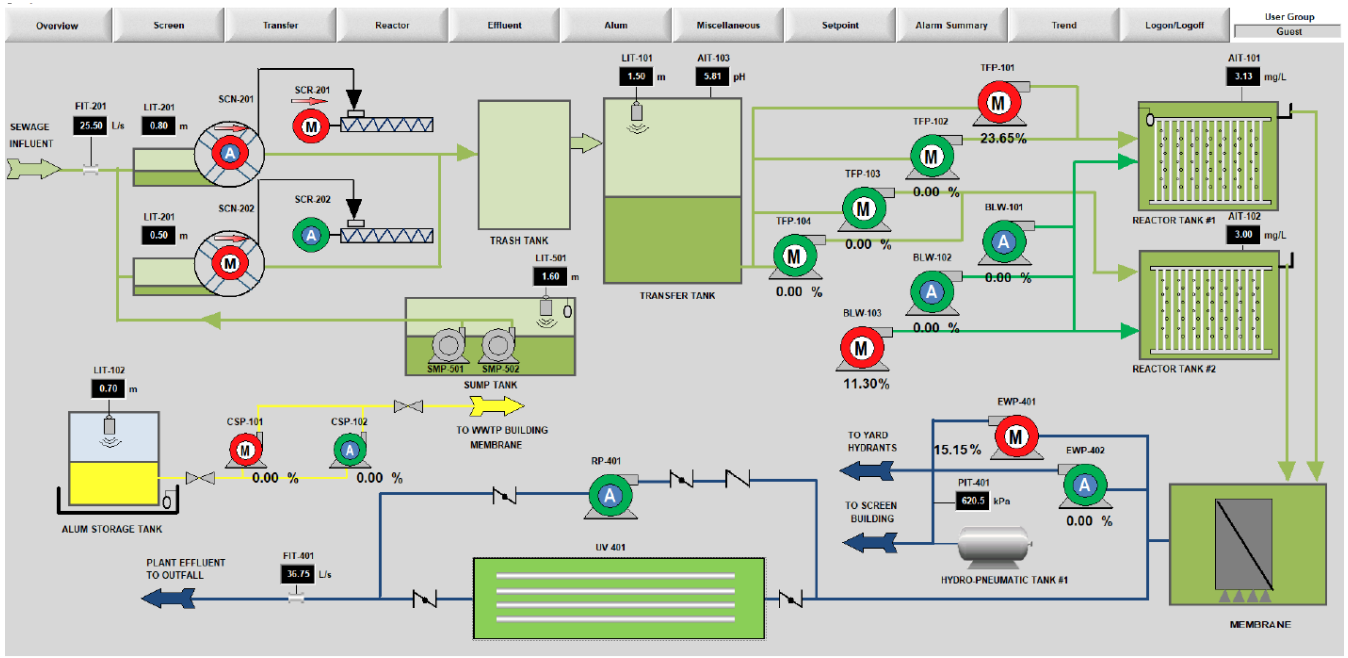
2024 Water/Wastewater Master Plan considers up to 625 m^3/d for year 2046

Criteria	Alternative 1 Do Nothing	Alternative 2 Add more MBR modules to the existing process to achieve maximum discharge up to 660 m^3/day	Alternative 3 Expand existing WWTP, including new outfall location, with capacity up to 1200 m^3/day*
Community Growth	2	14	10
Natural Environment	12	12	12
Social Environment and Health	8	8	5
Heritage/Cultural Impacts	10	10	7
County Operations	8	8	6
Technical Feasibility	10	9	7
Cost	10	14	4
Total Scores (as percentage)	60	75	51
Rank	2nd	1st	3rd

*WWTP Feasibility Study, RV Anderson, June 2022

Alternative Solution #2 - Preferred

Add more MBR modules to the existing process to achieve maximum discharge up to 660 m^3/d



Overview of the SCADA HMI for the Drumbo WWTP

ZeeWeed 500D microfiltration membrane cassettes

- Currently installed as part of conversion from SBR to MBR process
- Additional capacity for more cassettes in current treatment trains

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Alternative Solution #2 - Preferred

Add more MBR modules to the existing process to achieve maximum discharge up to 660 m^3/d

Community Growth

- Per Commitment letter from County to MECP (November 19, 2024), expansion of WWTP at current outfall limited to 660 m^3/day
- Per 2024 Water/Wastewater Master Plan: up to 625 m^3/day for year 2046

Natural Environment

- Effluent Loadings maintained within current ECA effluent loading limits at 660 m^3/day
- No impacts to Species at Risk

Social Environment

- Minimal impacts to local community
- Construction activities should not impact surrounding land use activities

Heritage/Cultural Impacts

- No heritage or cultural resources are located on or near the proposed location.

County Operations

- County Operations familiar with WWTP site and recently constructed MBR process

Technical Feasibility

- Staff familiar with MBR process and it's operations

Costs

- Will utilize existing infrastructure (lower costs); Expansion of existing process lowers unit costs (m^3/day WW treated per $); majority of capital costs incurred upgrading process after previous EA

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Municipal Class EA Schedule C – Planning and Design Process

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Municipal Class EA Schedule C – Planning and Design Process
Next Steps

February 3, 2026	February 17, 2026	Winter 2026	Spring 2026	Spring 2026
PCC #1	PCC #1 Comment Period	Design Option for Preferred Alternative	PCC #2	Select Preferred Design Option

Summer 2026	Autumn 2026	Winter 2026
Environmental Study Report (ESR)	30-day ESR Comment Period	Final ESR Posting

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We Want to Hear From You!

Please provide comments by filling out the comment form using the QR code below or by contacting the City's representative or the consultant:

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Please provide your comments on or before February 17, 2026.

Thank you for your participation in this PCC.

To receive updates on the project, request that your name/email be added to the mailing list.

Your information into this study is valuable and appreciated.

All information is collected in accordance with the Freedom of Information and Privacy Act.

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