



Essex-Windsor Solid Waste Authority Regular Board Meeting Agenda

Meeting Date: Tuesday, February 4, 2025
Time: 4:00PM
Location and: Essex County Civic Centre
Council Chambers, 2nd Floor
360 Fairview Avenue West
Essex, Ontario N8M 1Y6

Meeting will be held in person for Board Members and staff. Media representatives and interested members of the general public are invited to attend in person.

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- A. **By-Law 4-2025** 33
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Being a By-Law to Confirm the Proceedings of the Meeting of the Board of the Essex-Windsor Solid Waste Authority for February 4, 2025.

11. Next Meeting Dates

- Tuesday, March 4, 2025
- Tuesday, April 1, 2025
- Tuesday, May 6, 2025
- Tuesday, June 3, 2025
- Wednesday, July 9, 2025
- Wednesday, August 13, 2025
- Wednesday, September 10, 2025
- Tuesday, October 7, 2025
- Tuesday, November 4, 2025
- Tuesday, December 2, 2025

12. Adjournment



**Essex-Windsor Solid Waste Authority
Regular Board Meeting
MINUTES**

Meeting Date: Tuesday, January 7, 2025

Time: 4:00 PM

Location: Essex County Civic Centre
Council Chambers, 2nd Floor
360 Fairview Avenue West
Essex, Ontario N8M 1Y6

Attendance

Board Members:

Gary McNamara – Chair	County of Essex
Hilda MacDonald	County of Essex
Michael Akpata	County of Essex
Rob Shepley	County of Essex
Kirk Walstedt	County of Essex
Gary Kaschak – Vice Chair	City of Windsor
Kieran McKenzie	City of Windsor
Jim Morrison	City of Windsor

EWSWA Staff:

Michelle Bishop	General Manager
Steffan Brisebois	Manager of Finance & Administration
Cathy Copot-Nepszy	Manager of Waste Diversion
Tom Marentette	Manager of Waste Disposal
Madison Mantha	Project Lead
Teresa Policella	Executive Assistant

City of Windsor Staff:

Tony Ardovini	Deputy Treasurer Financial Planning
Jim Leather	Manager of Environmental Services

County of Essex Staff:

Melissa Ryan	Director of Financial Services/Treasurer
David Sundin	Solicitor/Interim Director, Legislative and Community Services

Absent:

Drew Dilkens	City of Windsor (Ex-Officio)
Mark McKenzie	City of Windsor
Mark Spizzirri	Manager of Performance Management and Business Case Development

1. Call to Order

The General Manager called the meeting to order at 4:04 PM.

2. Board Composition for 2025

The General Manager welcomed returning Board Member, Kirk Walstedt. She thanked Board Member Fred Francis for his contributions to the Board in 2024. Mr. Francis will return to the Board in 2026.

3. Election of Chair and Vice Chair for 2025

The General Manager stated that per the agreement between the City of Windsor (City) and the County of Essex (County) that created the Authority, the positions of Chair and Vice Chair rotate between the City and the County on a yearly basis. She noted that for 2025, the Chair will be a County of Essex Board member and the Vice Chair will be a City of Windsor Board member.

In the event there are more than one nominee for each position, all Board members will vote by ballot.

The General Manager called for any declarations of pecuniary interest in regard to the elections of the Chair and Vice Chair. None were noted.

The General Manager called for nominations for the position of Board Chair.

Board Member Rob Shepley nominated Board Member Gary McNamara for Board Chair.

The General Manager called three (3) additional times for nominations for the position of Board Chair. There were no other nominations.

The General Manager asked Mr. McNamara if he would stand for the position of Board Chair.

Mr. McNamara accepted the nomination as Board Chair.

The General Manager declared Mr. McNamara as Chair for 2025.

The General Manager asked for a motion for the nominations for Chair to be closed.

Moved by Rob Shepley

Seconded by Kirk Walstedt

That Gary McNamara is named as Board Chair for the period ending December 31, 2025.

**1-2025
Carried**

The General Manager called for nominations for Vice Chair.

Board Member Jim Morrison nominated Board Member Gary Kaschak for the position of Vice Chair.

The General Manager called three (3) additional times for nominations for the position of Board Vice Chair. There were no other nominations.

The General Manager asked Mr. Kaschak if he would stand for the position of Board Vice Chair.

Mr. Kaschak accepted the nomination of Board Vice Chair.

The General Manager declared Mr. Kaschak as Vice Chair for 2025.

The General Manager asked for a motion for the nominations of Vice Chair to be closed.

Moved by Kieran McKenzie
Seconded by Michael Akpata

That Gary Kaschak is **named** as Board Vice Chair for the period ending December 31, 2025.

**2-2025
Carried**

4. Motion to Move In-Camera

Moved by Gary Kaschak
Seconded by Kieran McKenzie

That the Board **move** into a closed meeting pursuant to Section 239 (2) (f) of the Municipal Act, 2001, as amended for the following reason:

- (f) advice that is subject to solicitor-client privilege, including communications necessary for that purpose.

**3-2025
Carried**

Moved by Rob Shepley
Seconded by Kirk Walstedt

That the EWSWA Board **rise** from the Closed Meeting at 4:42 PM.

**6-2025
Carried**

5. Declaration of Pecuniary Interest

The Chair called for any declarations of pecuniary interest and none were noted. He further expressed that should a conflict of a pecuniary nature or other arise at any time during the course of the meeting that it would be noted at that time.

6. Approval of the Minutes

Moved by Rob Shepley

Seconded by Gary Kaschak

That the minutes from the Essex-Windsor Solid Waste Authority Regular Meeting, dated November 5, 2024, be **approved and adopted**.

**7-2025
Carried**

7. Business Arising from the Minutes

No items were raised for discussion.

8. Waste Diversion

A. Source Separated Organics Hauling at the Essex-Windsor Solid Waste Authority Facilities

The General Manager presented the report and recommended the Board approve the execution of the extension provision included within the existing contract with 1869096 Ontario Limited (operating as Canadian Transfer Essex Waste Depot (CT)) for the hauling of refuse to the Essex-Windsor Regional Landfill (RL) from the Windsor Transfer Station (TS1) and Transfer Station 2 (TS2) in Kingsville for a period of 5 years. Further, that the Board approve the amendment of the existing refuse hauling contract to include the provision of Source Separated Organics (SSO) hauling services from the Essex-Windsor Solid Waste Facilities to Seaciff Energy (Seaciff) located at 1200 Mersea Road 1 in Leamington, Ontario, or to another processing facility as directed by the Authority under the same terms and conditions of the base contract.

She explained that the Authority must retain a service provider to haul SSO material from Authority facilities to Seaciff. Since CT is currently transferring waste for the Authority, Administration engaged in discussions with CT to amend the hauling contract for refuse from its sites to include the hauling of SSO from the Authority's new SSO Transfer to Seaciff.

She noted that amending the contract with CT will offer synergies with refuse hauling and eliminate the need for a short-term contract. CT provides excellent service and the Authority is pleased with their work.

The General Manager asked if there were any questions. No questions were asked.

Moved by Kieran McKenzie

Seconded by Hilda MacDonald

1. THAT the Board **approve** the recommendation to execute the extension provisions included within the contract for refuse hauling to the Essex-Windsor Regional Landfill from the Windsor Transfer Station (TS1) and the Kingsville Transfer Station (TS2) with 1869096 Ontario Limited (operating as Canadian Transfer Essex Waste Depot) for the period of January 1, 2029 to December 31, 2033 per the original contract terms and agreement.
2. And further, THAT the Board **approve** the amendment of the existing refuse hauling contract to include the provision of Source Separated Organics hauling services from Essex-Windsor Solid Waste Facilities to Seaciff Energy located at 1200 Mersea Road 1 in Leamington, Ontario, or to another processing facility as directed by the Authority under the same terms and conditions of the base contract.

**8-2025
Carried**

B. Promotion & Education Plan for the 2025 Green Bin Program Launch

The Manager of Waste Diversion provided an update on the Promotion and Education (P&E) Program Plan for 2025 that Administration has developed to prepare Essex-Windsor for the Green Bin Program launch the week of October 21, 2025. This comprehensive plan will inform, engage, and connect local residents and partners to the launch of the Green Bin Program.

The report identified a number of communication campaigns that will be rolled out in 2025 through multiple media strategies and partnerships (e.g., municipal) including:

- Campaign 1: Grow Green in 2025 - This campaign will be initiated with the reveal of the new EWSWA Logo and ask partners and residents to go green in 2025 with the Authority.
- Campaign 2: Grow Green with the Green Team - The Green Team, a group of diverse Green Superheroes selected to help engage residents in the program and lighten the conversation around the program will be launched in Q2 (e.g., annual Earth Day event).
- Campaign 3: Bin Roll-out - The key message here is that the "Bins are coming!" and advise residents on when their Green Bin Kit will be delivered to their home.

- Campaign 4: Green Bin Launch: "How to be ready" - The key message is that the Green Bin Collection Program starts the week of October 21, 2025 for Phase 1 municipalities and many pieces of information on how residents can be ready for collection will be shared.
- Campaign 5: How Are We Doing?/Prep for Winter – This will provide feedback on Green Bin participation and opportunities to improve participation and/or usage of the program and provide tips for the winter.

Mr. Shepley asked if this information is being included in the 2025 collection calendar.

The Manager of Waste Diversion confirmed this information will be included in the 2025 calendars. She also noted that information for Phase 2 municipalities will also be included.

Mr. McKenzie asked if any groups inquired or expressed interest in participating in the public education.

The Manager of Waste Diversion stated no organizations have yet to reach out. The Authority is looking at a partnership with the migrant community and the Multicultural Council of Windsor to assist with language translation.

Mr. McKenzie believes that apprehension from residents is anticipated. He asked what type of message would assist with apprehension.

The Manager of Waste Diversion stated that Campaign #2 will focus on debunking any myths or apprehension regarding pests, cold weather situations and odours. The Authority will produce videos on how to use the system successfully. The Authority benchmarked other municipalities and it has been advised that apprehension should be addressed. The Authority will be working alongside the City of Windsor to align with their transition to bi-weekly garbage collection as well as looking for ambassadors to assist with P&E.

Mr. Kaschak asked if P&E will be conducted in grade schools.

The Manager of Waste Diversion stated that school education is not part of the first year of the rollout of the program. The Authority will reach out to teachers to engage with their students.

Mr. Kaschak asked if it has been decided which items will be accepted in the green bin.

The Manager of Waste Diversion stated that the items have been identified in order to award the processing contract.

There were no further questions.

Moved by Kieran McKenzie
Seconded by Gary Kaschak
That the Board **receive** the report as information.

**9-2025
Carried**

9. Waste Disposal

A. Board Appointment to the Landfill Liaison Committee for 2025

The Chair called for nominations to appoint a Board member to the Regional Landfill Liaison Committee.

Rob Shepley nominated Board member Kirk Walstedt.

The Chair called for other nominations.

There were no other nominations.

The Chair asked Mr. Walstedt if he accepted the nomination.

Mr. Walstedt accepted the nomination.

Moved by Rob Shepley
Seconded by Hilda MacDonald

That the Board appoint Kirk Walstedt, who is not a member of the Council of the Town of Essex, to the Landfill Liaison Committee for a one-year term for 2025.

**10-2025
Carried**

B. Regional Landfill Dozer Purchase

The Manager of Waste Disposal presented the report regarding the acquisition of a new Dozer to be utilized at the Regional Landfill. He recommended the acquisition be made through a Buying Group which will result in a discount off the list price of the Dozer. Additionally, he recommended the Authority enter into a MARC agreement with the supplier of the Dozer. Purchasing through a Buying Group is permitted per the Authority's Procurement Policy

The Chair asked if there were any questions. No questions were asked.

Moved by Jim Morrison
Seconded by Kirk Walstedt

1. **That** the Board **approve** the acquisition of the New Dozer through the Buying Group at a cost of \$1,511,089.20, plus applicable taxes.

2. **That** the Board **approve** the Authority entering into a MARC Agreement with the supplier of the New Dozer for a period of five (5) years or 12,000 hours (whichever occurs first), at a pre-tax rate of \$46.87 per hour.

**11-2025
Carried**

10. Finance and Administration

A. Approval Status of the 2025 EWSWA Budget

The Manager of Finance and Administration provided an update on the EWSWA 2025 Operational Plan and Budget approval process. On November 5, 2024, the Authority Board approved the 2025 recommendations.

As a part of the budget approval process, the Budget is referred to the County of Essex and the City of Windsor and their Councils for their consideration. On December 4, 2024, Administration attended Essex County Council to present the 2025 Budget, address questions and seek approval. Essex County Council resolved to approve the Authority's budget. Authority Administration will attend City of Windsor Council on January 27, 2025 to present the 2025 Budget.

Moved by Rob Shepley

Seconded by Hilda MacDonald

That the Board **receive** the report as information.

**12-2025
Carried**

11. New Business

A. Collection Calendar

In light of the recent issues with garbage collection in the Town of Essex during the holidays, Mr. Shepley requested that the Authority share the municipal collection calendar development process and provide a possible solution to ensure that this would not happen again.

The General Manager stated that this was an unfortunate situation because it was during the holiday season but was pleased that the Town of Essex was able to work with the contractor to provide a solution. She noted that the Authority does not have any legal right to deal with the contractor as the waste collection contract is between the municipality and the contractor, not the Authority. She referred to the Manager of Waste Diversion to explain the development process of the collection calendars.

The Manager of Waste Diversion provided a detailed explanation of the process that is guided by a Letter of Understanding (LOU) and a standardized data collection form. The process is led by the Authority's Communications

Coordinator. She noted that the Letter of Understanding was developed approximately 5 years ago as a result of timeline issues with some municipalities and to eliminate errors.

The Manager of Waste Diversion outlined the design process of the calendars:

- The first draft is sent to the municipal lead to verify yard waste, recycling and waste collection dates as well as any municipal information (i.e. Council dates) that the municipalities provided.
- The second draft is sent to the municipal lead in early October. As the first and second drafts are prepared, municipalities are working with their collection contractor.
- The third draft is sent to the municipal lead the second week of December. Municipalities are provided 3-4 weeks to review the last draft.

Although the collection dates are provided by the municipality, in an attempt to identify how the error occurred Administration discussed the situation with the municipality and after a review of the process, noted opportunities to ensure correct information is received. A suggestion to the municipalities is to have the contractor sign off on the final draft of the calendar. It was also noted that the Authority requests 3-4 revisions/drafts but actually 5-9 revisions are received.

While this process has been successful for many years and most municipalities for the 2024 calendar, as a result of the recent issues, Administration is reviewing the current process and looking for opportunities to enhance it to reduce staff resources and publication errors. Administration will be meeting with its municipal partners in the coming weeks to discuss opportunities that will form the 2026 calendar process. She noted that all municipalities should review the 2025 collection calendars upon receipt and before they are distributed to residents.

Mr. Shepley thanked Administration for the excellent description of the process. He appreciates the Authority for extending hours to receive the garbage.

The Chair asked if there were any further questions or new business. No further questions were asked.

12. Other Items

No other items raised for discussion.

13. By-Laws

A. By-Law 1-2025

Moved by Rob Shepley

Seconded by Kieran McKenzie

That By-Law 1-2025, Being a By-Law to **authorize** the Extension of an Agreement between the Essex-Windsor Solid Waste Authority and 1869096 Ontario Limited, operating as Canadian Transfer, for Refuse Hauling to the Essex-Windsor Regional Landfill from the Windsor Transfer Station (TS1) and the Kingsville Transfer Station (TS2) for the period of January 1, 2029 to December 31, 2033, and further, **amend** the existing Refuse Hauling contract to include the provision of Source Separated Organics.

**13-2025
Carried**

B. By-Law 2-2025

Moved by Rob Shepley

Seconded by Kieran McKenzie

That By-Law 2-2025, Being a By-Law to **authorize** the acquisition of a New Dozer through the Buying Group at a cost of \$1,511,089.20, plus applicable taxes, and further, enter into a MARC Agreement with the supplier of the New Dozer for a period of five (5) years or 12,000 hours (whichever occurs first), at a pre-tax rate of \$46.87 per hour.

**14-2025
Carried**

C. By-Law 3-2025

Moved by Hilda MacDonald

Seconded by Jim Morrison

That By-Law 3-2025, being a By-law to Confirm the Proceedings of the Board of the Essex-Windsor Solid Waste Authority be given three readings and be **adopted** this 7th day of January, 2025.

**15-2025
Carried**

14. Next Meeting Dates

Tuesday, February 4, 2025
Tuesday, March 4, 2025
Tuesday, April 1, 2025
Tuesday, May 6, 2025
Tuesday, June 3, 2025
Wednesday, July 9, 2025
Wednesday, August 13, 2025
Wednesday, September 10, 2025
Tuesday, October 7, 2025
Tuesday, November 4, 2025
Tuesday, December 2, 2025

15. Adjournment

Moved by Kieran McKenzie
Seconded by Rob Shepley
THAT the Board stand **adjourned** at 5:36 PM.

**16-2025
Carried**

All of which is respectfully submitted.

**Gary McNamara
Chair**

**Michelle Bishop
General Manager**



Essex-Windsor Solid Waste Authority

Administrative Report

January 24, 2025

To: The Chair and Board of the Essex-Windsor Solid Waste Authority

From: Michelle Bishop, General Manager

Meeting Date: Tuesday, February 04, 2025

Subject: Tender Award for Windsor Source Separated Organics Transfer Station Retrofit

Purpose

The purpose of this report is to recommend that the Board award the Request for Tender (RFT) for the Source Separated Organics Transfer Station Retrofit at the Authority's Windsor site to TCI Titan Contracting Inc. at a cost of \$4,516,709.11 exclusive of HST.

Background

At the April 10, 2024 Board Meeting, the Board approved Administration's recommendation to retrofit the Fibre Material Recovery Facility (MRF) located at its Windsor site into a Transfer Station to receive residential source separated organics (SSO) to support the new Green Bin Program beginning in October 2025. Given the timelines, Administration recommended to the Board to engage Stantec Consulting Ltd. (Stantec) for engineering services for detailed design and approvals to construct an SSO Transfer Station at the Authority's Windsor site in order to avoid the duplication of work already completed by Stantec and the urgency to meet the timelines required by the MECP. As part of the scope of work, Stantec is also responsible for providing services during the tender period as well as contract administration and inspection services during construction.

Discussion

On December 3, 2024, in accordance with the Authority's Procurement Policy, RFT 2024-11-18 was issued for the Source Separated Organics Transfer Station Building Retrofit and posted on Bids and Tenders. A mandatory site visit was held on

December 12, 2024 and was attended by thirteen (13) contractors and subcontractors.

The tender closed on January 16, 2025 and five bids were submitted by Barrinetti Construction Ltd., Front Construction Industries Inc., Intrepid General Limited, TCI Titan Contracting Ltd., and Vince Ferro Construction Ltd. All five submissions were reviewed and were deemed compliant with the requirements of the RFT.

The lowest bid received for the RFT was submitted by TCI Titan Contracting Inc. (TCI Titan) at a cost of \$4,516,709.11. The term of this Contract is expected to commence no later than February 28, 2025 and must be substantially complete by September 30, 2025.

About TCI Titan Contracting Inc.

TCI Titan is a general contractor specializing in industrial, commercial, and institutional design and build. They are a local company based in the City of Windsor.

As part of the RFT process, bidders were asked to submit previous and relatable work experience. TCI Titan has delivered projects in the City of Windsor similar in scope to this project. Most relevant, in 2024 Titan replaced the exterior metal siding and insulation of the Crawford Yard Garage in the City of Windsor. Included in this project was the replacement of deteriorating exterior block walls, the replacement of the existing interior trench drain system, and the corresponding oil & grit interceptor.

Financial Implications

The approved 2025 Operational Plan and Budget included a capital expenditure of \$3,804,800 for the cost of retrofitting the Fibre MRF to an SSO Transfer Station. The TCI Titan Contracting Inc's price including the non-refundable portion of HST is \$4,596,200. The difference represents an increase of \$791,400 over the 2025 capital budget. Administration formed the 2025 Budget using the pre-tender cost estimate prepared by Stantec for the project.

The approved funding strategy for the engineering and construction of the SSO Transfer Station is to draw \$2,626,500 from the Equipment Replacement Reserve (ERR) and have the remaining costs funded through a loan from the ERR. The loan repayment is scheduled for 20-years plus interest and is anticipated to commence in 2026. Due to the increase in costs to construct the SSO Transfer Station the total loan principle will increase. There is no financial impact to the 2025 Operating Budget as the loan repayment is anticipated to commence in 2026.

It is noted that the tender prices received were higher than anticipated and on average were 39% higher than the engineer's pre-tender estimate. It is also noted that there does not appear to be any significant unbalanced prices received in the tender submissions as the next two lowest bids received were within 2% and 3% of the lowest bid. The primary causes of the cost increase can be attributed to the following assumptions:

- **Tight Construction Schedule:** In particular, the substantial completion date for this project is September 29th, 2025, with the commissioning of the odour control unit two (2) months prior to substantial completion.
- **Higher Labour Costs:** The average cost of general labour is much higher than anticipated. This could be due to the shortage of skilled labour locally that would be necessary to carry out a project of this magnitude in the short time frame.
- **Limited Subcontractor Competition:** Another observation of the tenders received was that all five (5) of the contractors named the same mechanical subcontractor. Since there was no competition amongst mechanical subcontractors, the price for this service could be inflated.
- **Underestimated Installation Costs:** The installation prices for the odour control unit and metal panels were higher than initially estimated.

Administration has entered into discussions with TCI Titan as the Preferred Proponent to understand the discrepancy between the tender price and pre-tender estimates and to identify potential cost-saving opportunities. Any material savings resulting from these discussions will be presented to the Board through future financial or project updates.

Essex SSO Transfer Station

Administration has carefully considered various alternatives in an attempt to mitigate the costs associated with this project.

As a result of this analysis, Administration recommends not pursuing the Essex SSO Transfer Station at this time and reallocating the funds to the Windsor SSO Transfer Station project. Capital cost estimates for the Essex SSO Transfer Station previously prepared by EXP Services Inc. (EXP)¹ ranged from \$521,000 to \$772,000 for two different capacity options. However, it is important to note the cost estimate was "very basic" and would "need to be confirmed". It was also prepared in early 2023 prior to recent inflationary pressures and does not include for allowances such as running power to the facility or a contingency allowance.

¹ *Logistics and Transfer of Regional Solid Waste and Source Separated Organics: Review and Strategic Plan*, May 23, 2023

Given this, Administration estimates the project could cost \$2M to \$3M depending on complexity and requirements to satisfy the Ministry of Environment, Conservation and Parks. This would result in a net savings of \$1M to \$2M overall for both SSO Transfer Station projects.

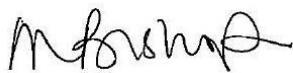
The Windsor SSO Transfer Station is designed to accept up to approximately 19,000 tonnes per year, which based on current projections is expected to meet the program needs for at least the first seven years of the program, which aligns with the collection contract period with Miller. Operational modifications can be made to increase the transfer station's capacity, if necessary, to meet program needs as the program matures and participation increases.

Administration has proactively had discussions with Miller Waste Systems Inc., the service provider for curbside SSO collection in the County of Essex, and no significant concerns with this approach have been noted. Transferring all material at the Windsor location does not present material operational or financial implications.

Recommendation

1. THAT the Board award the Request for Tender 2024-11-18 for the Source Separated Organics Transfer Station Retrofit to TCI Titan Contracting Inc. with an upset limit in the amount of \$4,516,709.11 (plus HST) and that the Chair and General Manager be authorized to enter into an agreement in accordance with the tender documents.

Submitted By



Michelle Bishop, General Manager



Essex-Windsor Solid Waste Authority

Administrative Report

January 27, 2025

To: The Chair and Board of the Essex-Windsor Solid Waste Authority

From: Tom Marentette, Manager of Waste Disposal

Meeting Date: Tuesday, February 04, 2025

Subject: Regional Landfill Remaining Lifespan

Purpose

The purpose of this report is to provide information to the Board regarding the projected remaining lifespan of the Essex-Windsor Regional Landfill (the “**Landfill**”).

Background

The Landfill is one of the most valuable assets in the County, serving the community since it first began accepting waste in 1997. The Landfill accepts non-hazardous solid waste from municipal and industrial, commercial, and institutional (IC&I) sources, contaminated soil, some agricultural materials including vines, and dewatered sewage sludge.

The original design in the 1993 Solid Waste Management Master Plan (Master Plan) and Design and Operations Report indicates that the proposed Regional Landfill Site was to serve the needs of Essex-Windsor for a 25-year period (1997 to 2022) at a minimum. Through diversion and other efforts, the projected lifespan has been greatly extended.

The Landfill is comprised of five (5) cells with each cell split into two (2) constructible cells (north and south), or 10 cells total. Cell 5 North is currently under construction and will begin receiving waste in 2025. New cells are constructed as additional waste capacity is forecasted, generally about every five (5) years.

Following the construction of Cell 5 North, the Landfill will have two (2) remaining cells left to construct, Cell 4 South and Cell 5 South, until the design capacity is reached.

Discussion

The original lifespan of the Landfill was determined in the Master Plan based on a 25-year planning period, and assumed the Landfill would commence operations in 1995. The Landfill actually opened and began receiving waste on July 1, 1997, shifting the planning period from 1995-2019 to 1997-2022.

The original design and approval of the Landfill stipulates a capacity of 12.2 million m³. At the time of design, the landfill engineers estimated that 6.1 million tonnes of refuse could be disposed of within the 12.2 m³. cubic metres. This was determined using a compaction ratio of 600 kg/m³.

Through improvements in technology and operational efficiencies, the actual average compaction rate achieved between 1998-2023 was 800 kg/m³, and was as high as 951 kg/m³ in 2022 and 1,170 kg/m³ in 2023. Table 1 outlines the estimated waste capacity of the Landfill by cell using the original compaction ratio estimate of 600 kg/m³ and the revised actual average compaction ratio of 800 kg/m³. This extends the estimated tonnes of waste to be landfilled from 6.1 million tonnes to 8 million tonnes.

Table 1. Regional Landfill Capacity by Cell

Cell No.	Total Cell Volume m³ (Including Daily and Interim Cover)	Waste Volume (m³)	Original Estimate Waste Capacity at 600 kg/m³ (tonnes)	Revised Estimate Waste Capacity at 800 kg/m³ (tonnes)
1	1,569,000	1,307,000	784,000	1,028,000
2	2,721,000	2,267,000	1,360,000	1,784,000
3	2,568,000	2,140,000	1,284,000	1,684,000
4	2,854,000	2,378,000	1,427,000	1,871,000
5	2,491,000	2,075,000	1,245,000	1,633,000
Total	12,203,000	10,167,000	6,100,000	8,000,000

Further, based on the Master Plan period of 25-years and the engineer’s estimate of 6.1 million tonnes, the annual average refuse being deposited in the Landfill was planned to be 244,000 tonnes per year.

Figure 1 illustrates the annual tonnes of waste landfilled between 1997 to 2024 as compared to the planned annual tonnes of waste to be landfilled in accordance with the Master Plan of 244,000 tonnes per year.



Figure 1. Tonnes Disposed at Regional Landfill 1997 to 2024

For the period July 1, 1997 to December 31, 2015, an average of 195,300 tonnes per year was deposited in the Landfill, approximately 25% less than the planned annual tonnes. This equates to a surplus capacity of 801,700 tonnes, or approximately 3.2 years of additional landfill capacity, for the 18.5-year timeframe. As shown, annual tonnes landfilled increased in and after 2016. These increases are as a result of the rise in demand for landfilling of contaminated soil, and greenhouse waste and vines.

The top four waste categories accepted at the Landfill are IC&I waste, contaminated soil, greenhouse waste and vines, and municipal solid waste (MSW). Figure 2, below, illustrates the amount of waste received annually from 2010 to 2024 for the top four categories.

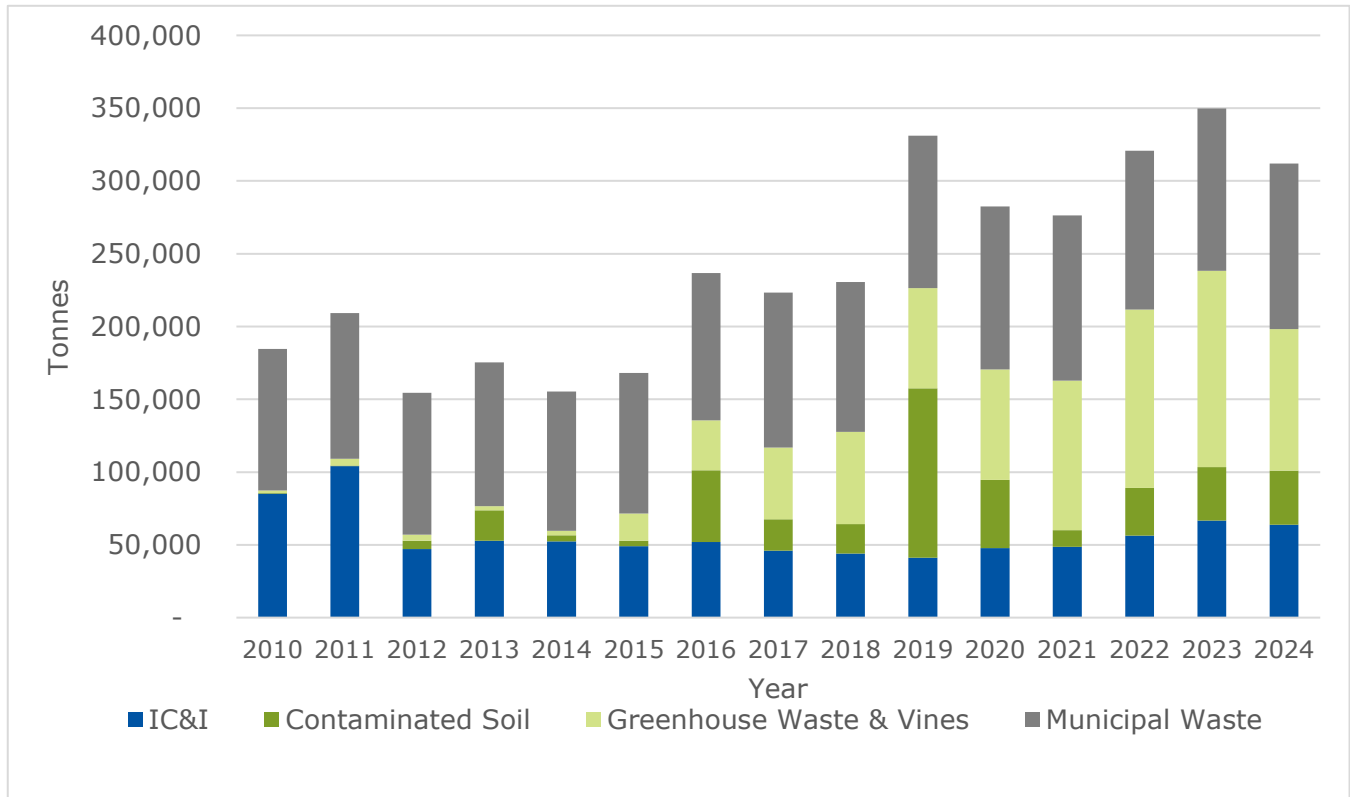


Figure 2. Tonnes Disposed at Regional Landfill 2010 to 2024

Figure 2 demonstrates the variability of landfill demands for these waste categories with the exception of MSW, which has remained consistent with some natural growth observed over time. Despite the increase in annual tonnages, averaging 302,600 tonnes per year between 2016 to 2024, these increases are primarily from contaminated soil and material from the greenhouse sector. This increase in annual tonnes has not significantly impacted the remaining lifespan of the Landfill as contaminated soil is generally used as alternative daily and interim cover, and greenhouse waste has a high water content, which results in approximately 95% recovery of airspace per tonne landfilled.

In addition to the above, the Authority has undertaken strategic airspace reclamation and optimization efforts including excavation of interim cover in older closed cells to add additional waste where settlement was observed.

Lastly, through efficient landfill operations, the Authority has been able to extend the life of the Landfill further by placing more waste in each cell than estimated in the Master Plan. Table 2 provides the estimated tonnes of waste to be landfilled by cell compared to actual waste landfilled to the end of 2024.

Table 2. Estimated Tonnes Landfilled per Cell vs. Actual

Cell No.	Original Estimate Waste Capacity at 600 kg/m ³ (tonnes)	Revised Estimate Waste Capacity at 800 kg/m ³ (tonnes)	Actual Waste Landfilled to Dec 31, 2024 (tonnes)	Percent Difference Estimate vs. Actual	Cell Status
1	784,000	1,028,000	1,440,049	+40%	Closed
2	1,360,000	1,784,000	2,634,339	+48%	Closed
3	1,284,000	1,684,000	1,824,971	+8%	Active
4	1,427,000	1,871,000	531,216	TBD	Active
5	1,245,000	1,633,000	0	TBD	Construction
Total	6,100,000	8,000,000	6,430,575		

As shown, Cells 1, 2, and 3, have deposited more waste than estimated as a result of higher compaction ratios and strategic uses of daily and interim cover, including the use of auto shredder residue (ASR) and contaminated soil as opposed to clay, which is much denser. Cells 1 and 2 alone have deposited 40% and 48% more waste than estimated, respectively. Collectively, Cells 1, 2, and 3, have deposited 1.4 million tonnes of waste more than estimated, which equates to approximately 5.75 years of additional landfill capacity. As Cell 3 is still actively accepting waste, this number is expected to increase.

Estimated Remaining Lifespan

In consideration of the above, based on current fill rates and status quo waste generation, the available capacity of the Landfill is expected to be exhausted in approximately 15 years or estimated around the year 2040. It is important to note these estimates do not consider population growth, which will further decrease the Landfill’s lifespan. A study on future waste generation, diversion, and population growth would be required to refine these estimates.

The impact of the new Green Bin Program on the Landfill’s remaining lifespan will largely depend on the level of program uptake and participation. The recent curbside waste audit revealed that organics make up approximately 48% of the MSW stream, highlighting the program’s potential to significantly extend the Landfill’s lifespan. It is noted that based on current waste management practices, the program could extend the lifespan by an estimated 1 to 2 years to 2042. This projection may increase following the rollout and as the program matures. Authority staff will be closely monitoring participation rates and the tonnage of organics collected at the curb, and will provide updates to the Board as more data becomes available.

Administration will review options for future waste disposal planning including timelines and report to the Board at a future date.

Financial Implications

There are no financial implications to report at this time.

Recommendation

THAT the Board receive this report as information.

Submitted By



Tom Marentette, Manager of Waste Disposal



Essex-Windsor Solid Waste Authority

Administrative Report

January 15, 2025

To: The Chair and Board of the Essex-Windsor Solid Waste Authority

From: Tom Marentette, Manager of Waste Disposal

Meeting Date: Tuesday, February 04, 2025

Subject: **Operational Update: Reverse Osmosis Plant at the Regional Landfill**

Purpose

The purpose of this report is to provide information to the Board regarding the operation and maintenance of the Reverse Osmosis (RO) leachate treatment plant at the Essex-Windsor Regional Landfill (Landfill), which began full-scale operation in April 2024. This report provides an update on the plant's operation and expenditures.

Background

Leachate generation at the Landfill has increased in recent years as a direct result of Landfill expansion and the increase in the quantity of agricultural waste delivered from nearby greenhouses (vines) due to their high moisture content.

The original Landfill design, which includes the Design and Operation Report, as well as the site Environmental Compliance Approval (ECA), included the requirement for the construction of a leachate treatment facility at the site. Due to budgetary constraints and concerns related to the suitability of available technologies, a leachate treatment facility was not pursued and leachate has been disposed of through hauling and treatment offsite at the City of Windsor Pollution Control Plants and some on-site irrigation. The Ministry of Environment, Conservation and Parks (MECP) has been notified that trucking of leachate off-site for processing and on-site irrigation would continue, including a note that the Authority would continue to assess other leachate management alternatives. The Authority continues to report to the MECP on a regular basis through annual monitoring reports.

Throughout 2022 and 2023, Authority staff provided the Board with information regarding current leachate management efforts and long-term leachate management options at the Landfill. The information provided described operational challenges for both the Authority and the City of Windsor Pollution Control Plants and forecasted a significant financial burden to the Authority for ongoing site and infrastructure maintenance as well as leachate transportation and treatment.

At the July 12, 2023, Board meeting, Authority staff presented the findings of the Feasibility Study of EWSWA Leachate Treatment report conducted by Stantec Consulting Ltd. (Stantec), which examined the technical feasibility and financial viability of alternate leachate disposal solutions. The report evaluated the technical and financial feasibility of RO and Membrane Bioreactor (MBR) technologies. While MBR technology was identified as the more cost-effective option, concerns were raised about its suitability for the Landfill due to the challenges faced by the Windsor Pollution Control Plant to treat leachate, which uses a similar process. Additionally, MBR technology requires a large footprint, more manpower for operation, and has a lengthy implementation timeline of approximately three years, which would not address the immediate need for leachate treatment at the Landfill. In consultation with the Technical Staff Committee (TSC), and following a bench-scale study by Rochem Americas Inc. (Rochem), RO was selected as the preferred treatment technology for a pilot study that would then lead to a long-term solution.

Further, at the July 12, 2023, the Board approved the release of an Advance Contract Award Notice (ACAN) to Rochem to provide notice to any potential proponents with available RO equipment and leachate processing experience an opportunity to submit a written statement of capabilities.

On August 9, 2023, the Authority Board approved a contract with Rochem for a one (1) year term for the rental of a 50,000 Gal-per-day (gpd) (189 m³ per day) portable high-pressure RO system (RO Plant) to treat and process leachate, including hydro service upgrades at the Landfill.

On January 8, 2024, the RO Plant was delivered to the Landfill from Rochem and on February 20, 2024 the plant was commissioned.

Due to start up operational challenges and extensive infrastructure improvements, the RO Plant one (1)-year rental agreement with Rochem began on April 1, 2024.

Discussion

The RO Plant is designed to treat a maximum of 189 cubic meters (m³) of leachate per day, which equals approximately 4 tanker trucks per day. In consultation with Rochem, the Plant operates within 85 to 90% of the Plant's maximum rated capacity, or 160 to 170 m³ per day. The RO Plant is designed to produce 80% permeate and 20% concentrate from the incoming leachate.

Since beginning operations, from April to December 2024, the RO Plant has processed approximately 30,370 m³ of raw leachate and produced approximately 24,300 m³ of permeate.

Overall, the first nine months of the Plant's operations have been promising, with steady progress and positive outcomes despite some initial challenges at start-up. As with any new operation, the first year presented some challenges to overcome and a learning curve for Authority staff. Rochem has provided thorough oversight and mentored Authority staff on operation, maintenance and repairs during the first month of operation to support the RO Plant start-up, and continue to support the Authority as needed.

One of the limiting factors experienced in the first nine months of operation relate to scheduled and unscheduled downtime. The RO Plant requires approximately 5 days per month of scheduled downtime for preventative maintenance such as cleaning, flushing, filter replacement, etc. During the start-up, the Authority experienced unscheduled downtime due to commissioning and equipment modifications (computers, level sensors, piping, freezing conditions, etc.), which is not uncommon in the operation of a physical chemical treatment system, however, limited the Authority's ability to achieve the maximum design capacity.

From April to December 2024, the RO Plant operated on average 20 days per month, or approximately 180 days total. This equates to approximately 168 m³ per day. The RO Plant is capable of operating 24 hour per day, 7 days per week, not including downtime for scheduled maintenance. Given this, the operating days are expected to improve to 25 days per month or 305 days total in 2025, providing more processing capacity and opportunity to operate at the intended design capacity.

Table 1 summarizes the operating days, plant capacity, leachate processed, and resultant permeate produced during the period of April to December 2024 and the 2025 estimates.

Table 1. Reverse Osmosis Plant – Leachate Processed to Date and 2025 Estimates

Description	Unit	April to December 2024	2025 Target
Average Operating Days per Month	days	20	25
Total Operating Days	days	180	305
Max. Daily Processing Capacity	m ³ per day	168	170
Total Leachate Processed	m ³	30,370	51,850
Total Permeate Produced ¹	m ³	24,300	41,480
Number of Tanker Trucks of Permeate	each	608	1,037

Notes: 1. Based on an average recovery rate of 80% permeate to 20% concentrate

As shown in Table 1 and based on the Plant’s performance over the last nine months, the Plant is estimated to process 51,850 m³ of leachate in 2025. This will produce approximately 41,480 m³ of permeate, or 1,037 truckloads. For reference, in 2023 72,548 m³ of leachate was hauled off-site for processing, or approximately 1,813 tanker truck loads. Additionally, in 2024, 119,147 m³ of leachate was hauled off-site for processing, or approximately 2,978 tanker truck loads.

Increasing the operational performance of the RO Plant will provide the ability to generate additional volume of permeate, which allows the Landfill to offset the truckloads of raw leachate sent to the Pollution Control Plants. Permeate loads essentially act to flush or dilute the incoming waste stream, which assists with plant performance and allows additional loads of leachate to be exported from the Landfill that will bring the site back to normal operating conditions (i.e., below surcharge conditions).

Significant efforts have been made to improve and streamline the RO Plant process. Staff members have devoted significant time, effort and expertise to the successful start-up and ongoing operation of the RO Plant. Key members of this team have contributed to improving the technical elements of the Plant to ensure efficient operation with minimal downtime. Management wants to recognize their efforts as significant time has been spent coordinating and leveraging Rochem’s team to optimize performance and to ensure a successful launch of this process. The team continues to address technical issues as they arise and suggest innovative solutions to improve overall efficiency.

Further operational improvements made since operations began include increasing the permeate storage capacity from two tanks to three in order to extend the run time of the Plant during weekends and holidays. Following a recent analysis of Plant performance and tank rental costs, a permanent retention pond was constructed in November 2024 to provide more permeate storage volume, reduce costs associated with the tank rental, and increase operational efficiency.

In addition, in November 2024, the Authority retained RWDI to develop a Long-Term Permeate Management Plan for the RO Plant, with the goal of permitting the discharge of permeate to surface water on-site, to the County Road 18 Drain, and eliminate the need for off-site trucking and treatment. The Long-Term Permeate Management Plan includes plans to obtain necessary approvals including consultation with the MECP. The process is expected to take a minimum of 1-year.

Financial Implications

There are no significant financial variances to report as the cost to rent and operate the RO Plant has been included in both the 2024 and 2025 Operating Plan and Budget with the additional cost being offset by an increase in the tipping fee assessed for the disposal of greenhouse vines and growing media. The following section outlines to-date operational expenses and 2025 Budget estimates.

For the purpose of this report, only costs related to the operation and maintenance of the RO Plant have been considered as one-time capital costs related to the Plant start-up, such as hydro connections, have been previously reported to the Board.

Table 2 provides the 2024 operation and maintenance expenditures associated with the RO Plant, the 2025 budget for the RO Plant, and the resultant estimated cost per cubic meter.

Table 2. Reverse Osmosis Plant 2024 Expenditures and 2025 Budget

SUMMARY OF RO PROGRAM EXPENDITURES	Apr to Dec 2024 Expenditures	2025 Budget
EQUIPMENT RENTAL	\$894,757	\$1,225,000
OPERATING COSTS		
Cost of Energy	\$72,205	\$103,000
Cost of Consumables	\$243,792	\$307,000
Cost of Labour (One (1) Existing FT Labourer)	\$76,500	\$102,000
TOTAL 2025 OPERATING EXPENDITURES	\$392,497	\$512,000

SUMMARY OF RO PROGRAM EXPENDITURES	Apr to Dec 2024 Expenditures	2025 Budget
TOTAL 2025 RO PROGRAM EXPENDITURES	\$1,287,254	\$1,737,000
COST PER CUBIC METER (m ³)	\$42.39	\$33.50

Based on the estimate of 51,850 m³ of raw leachate to be processed in 2025, the total 2025 RO program expenditures are equal to **\$33.50 per m³** (excluding the costs to truck and treat leachate).

For comparison, the costs to truck and leachate are provided as follows:

- Trucking = **\$6.27** per tonne (2025), where 1 tonne = 1 m³
- Treatment = **\$5.43** per tonne (2025)
- Total Leachate Trucking and Treatment Costs = **\$11.70** per tonne or m³

The 2025 Operating Budget includes an estimate for hauling and treating leachate of 120,100 tonnes.

Until such time as the Regional Landfill receives approval from the MECP to discharge to local watercourses, the financial impact will continue to include both the cost to process leachate through the RO Plant and the cost for trucking and treating at the Pollution Control Plant. The long-term goal is to discharge permeate to surface water on-site, eliminating the need for hauling and treating leachate with the exception of contingency reasons, which is a requirement by the MECP. This long-term plan would serve the Landfill pre and post-closure, possibly to the end of its contaminating lifespan.

Although the short-term cost for processing leachate on-site and the cost for trucking and treating are high, the combination of trucking RO permeate and raw leachate does have a net positive effect on the ability of the Pollution Control Plant to receive additional volume, as permeate assists in flushing the plant in between loads of raw leachate.

The Regional Landfill continues to reduce the current leachate surcharge in the Landfill, which otherwise would not be possible without the RO Plant. In review of pump station leachate level data, it is projected that leachate levels in the Landfill will return to normal in approximately January 2026 if the current processing, trucking, and treatment levels are maintained.

To support and enhance future planning efforts, Administration has requested Rochem prepare a detailed cost estimate for the purchase of the RO Plant. Given the intricate nature of permitting requirements, such as compliance with the Technical Safety Standards Authority (TSSA), Rochem is diligently working to finalize the cost estimate. Administration will report the findings in a future report.

Conclusions

- Overall, the first nine months of the RO Plant's operations have been promising, with steady progress and positive outcomes despite some initial challenges.
- The RO Plant is effectively supporting the Authority's long-term goals to establish an on-site leachate treatment facility and return leachate levels in the Landfill to below surcharge conditions.
- RO is the preferred solution over other processing technologies such as MBR for a number of reasons, including:
 - MBR uses the same process as the pollution control plant, which does not perform well with high amounts of raw leachate;
 - MBR would require more manpower with specialized skills to operate (lab, techs, etc.) than RO;
 - The footprint for an MBR system is higher than RO, which is a limiting factor at the Landfill; and
 - The implementation timeline is much longer (3 years).
- There are currently no other options for leachate treatment locally due to the impact of leachate quality and quantity on local pollution control plant operations.
- Further, rising costs for trucking and treating leachate highlight the need for a cost-effective long-term solution. With the leachate hauling contract set to expire in June 2027 (with an optional one-year extension), aligning the implementation of a long-term RO Plant and permeate management plan is both practical and timely.

Recommendation

THAT the Board **receive** this report as information.

Submitted By



Tom Marentette, Manager of Waste Disposal



Essex-Windsor Solid Waste Authority Administrative Report

January 30, 2025

To: The Chair and Board of the Essex-Windsor Solid Waste Authority
From: Steffan Brisebois, Manager of Finance and Administration
Meeting Date: Tuesday, February 04, 2025
Subject: Approval Status of the EWSWA 2025 Budget

Purpose

The purpose of this report is to update the Board on the status of the 2025 EWSWA Operational Plan and Budget (Budget) approval process.

Background

The Board approved the 2025 Budget and Administration's recommendations included in the November 5, 2024 report.

As part of the final approval process, Administration referred the 2025 Budget to both the County of Essex and the City of Windsor Councils for their consideration.

On December 4, 2024, Administration attended Essex County Council to present the 2025 Budget, address questions and seek approval. Essex County Council resolved to approve the 2025 Budget at that meeting.

Discussion

Administration attended Windsor City Council on January 27, 2025 to respond to any questions regarding the 2025 Budget and to seek Council approval. The Windsor City Council approved the 2025 Budget at this meeting.

Recommendation

For the Board's information.

Submitted By



Steffan Brisebois, Manager of Finance and Administration



**Essex-Windsor Solid Waste Authority
By-Law Number 4-2025**

**Being a By-Law to Authorize the Execution of an Agreement with
TCI Titan Contracting Inc. for the Source Separated Organics
Transfer Station Retrofit with an upset limit in the amount of
\$4,516,709.11 (plus HST).**

Whereas the Essex-Windsor Solid Waste Authority has approved entering into an Agreement with TCI Titan Contracting Inc.

Now Therefore the Essex-Windsor Solid Waste Authority (EWSWA) enacts as follows:

1. THAT EWSWA hereby approves a contract with TCI Titan Contracting Inc. for the source separated organics transfer station retrofit with an upset limit in the amount of \$4,516,709.11 (plus HST) and that the Chair and General Manager be authorized to enter into an agreement in accordance with the tender documents.

THIS By-Law shall take effect upon the final passing thereof.

Gary McNamara, EWSWA Board Chair

Michelle Bishop, General Manager

Read a First, Second and Third Time, Enacted and Passed This 4th Day of February, 2025.



**Essex-Windsor Solid Waste Authority
By-Law Number 5-2025**

**Being a By-law to Confirm the Proceedings of the
Meeting of the Board of the Essex-Windsor Solid Waste Authority**

WHEREAS by Agreement dated 18 May 1994, made between the Corporation of the County of Essex and the Corporation of the City of Windsor, the Essex-Windsor Solid Waste Authority (The Authority) was created as a joint board of management pursuant to Sections 207.5 and 209.19 of the *Municipal Act, RSO 1990, Chapter M.45* and;

WHEREAS Subsection 5.(3) of the Municipal Act, RSO 2001, Chapter 25, provides that the powers of a municipality shall be exercised by By-Law and;

WHEREAS Section 1 of the Municipal Act RSO 1990, Chapter M 46 defines a municipality as including a board, commission or other local authority exercising any power with respect to municipal affairs or purposes and;

WHEREAS it is deemed expedient that the proceedings of the Authority at this meeting be confirmed and adopted by By-Law

NOW THEREFORE the members of the Authority enact as follows:

- 1) The action of the members of the Authority in respect to each recommendation contained in the Report/Reports of the Committees and each motion and resolution passed and other action taken by the members of the Authority at this meeting is hereby adopted and confirmed as if all such proceedings were expressly set out in this by-law.
- 2) The Chair and the proper officials of the Authority are hereby authorized and directed to do all things necessary to give effect to the action of the members of the Authority referred to in the preceding section hereof.
- 3) The Chair and the General Manager of the Authority are authorized and directed to execute all documents necessary in that behalf.

EWSWA Board Chair

Michelle Bishop, General Manager

Read a First, Second and Third Time, Enacted and Passed This 4th Day of February, 2025.