



## Administrative Report

**To:** Warden MacDonald and Members of Essex County Council

**From:** Justin Lammers  
Chief, Essex-Windsor Emergency Medical Services

**Date:** Wednesday, July 17, 2024

**Subject:** Mid-Year Status Update - EWEMS

**Report #:** 2024-0717-EMS-R08-JL

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### Purpose

To provide Essex County Council with background knowledge and information on the ambulance call response experience and activity across the Essex-Windsor region, utilizing historical data, up to May 31, 2024. Current pressures experienced by Essex-Windsor EMS, call volume projections and future considerations will be identified.

### Background

Call response data is reviewed utilizing the ESO electronic patient care records (ePCR) analytics platform, the Province of Ontario's Ambulance Dispatch Reporting System (ADRS), and Central Ambulance Communication Centre data. By leveraging these tools, the operations of EWEMS are continually measured, reviewed, and adjusted to maintain the best performance possible, in the current circumstances.

Call volumes, offload delays, and instances of code red and black were reported at the March 6, 2024 council meeting. This report focuses on the effects of the work that has happened to date in 2024, especially around Paramedic staffing, ambulance enhancements, and working with hospital partners to reduce offload delays.

For clarity, one (1) 12-hour, seven (7) days per week ambulance was enhanced in the last quarter of 2023 through 2024 pre-budget approval and that resource was immediately staffed. In the 2024 Budget, County Council approved an additional three (3) x 12-hour, seven (7) days per week shifts, which when added to the 2024 pre-budget approval enhancement, totals two (2) additional ambulances in our region, 24-hour per day, seven (7) days per week. The remaining three (3) x 12-hour shifts were started on

June 3, 2024, due to needing to recruit Paramedics, and the effects of this enhancement won't be fully realized with data, until the end of the year. Data up to May 31, 2024 is contained within this report.

Starting July 1, 2024, Essex-Windsor EMS began working with Operational Research in Health (ORH), on refreshing the 2019 Master Plan. This refresh was approved in the 2024 Budget and seeks to reevaluate the current state of our region, including economic investments, population growth, patient demographics, and Essex-Windsor EMS service profile. With all of the growth in our region, it's important to know how our profile has changed from the original review, what our call volume could look like over the next five (5) years, optimum station locations for future builds, and resource requirements. Additionally, the question has been asked, "Is Essex-Windsor EMS service delivery aligned with best practices in other Ontario municipalities?".

The master plan refresh is projected to take 19 weeks, and County Council should expect a report at the end of 2024 or early 2025 on the results and subsequent recommendations.

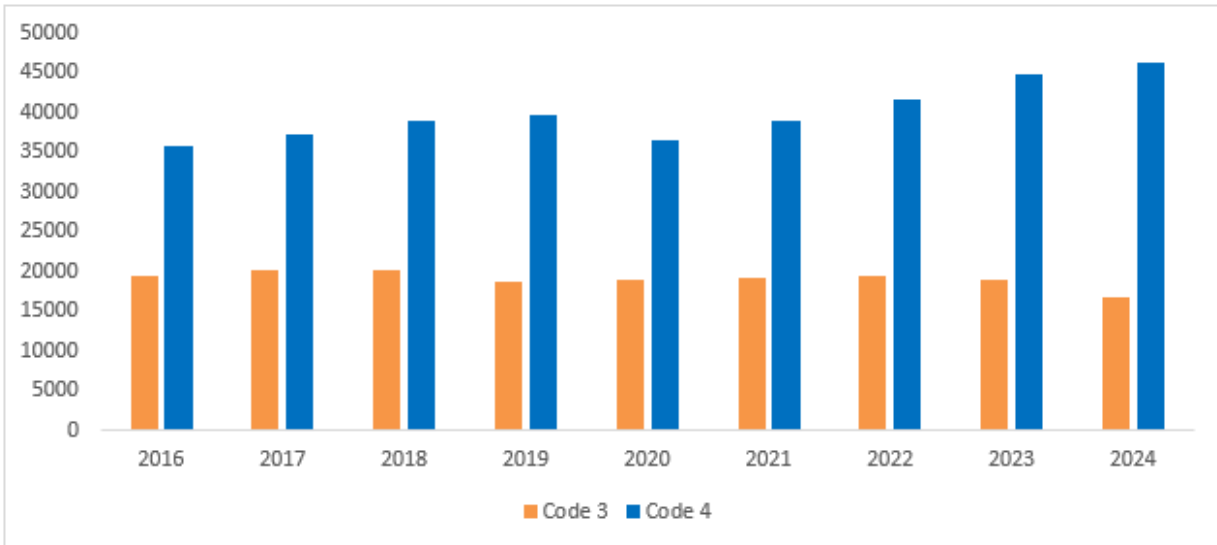
## **Discussion**

Effective June 3, 2024, two additional ambulances are now deployed 24 hours per day, 7 days per week. Figure 1 includes projections for 2024, including a 3% increase for Code 4 responses and a 13% decrease for code 3 responses. The decrease in code 3 responses can be attributed to the success of the Mobile Integrated Healthcare Community Paramedicine (MIH-CP) program within Essex-Windsor EMS, as well as the ongoing work of the Windsor Essex Ontario Health Team and all of its partners.

Figure 2 reflects resource staffing by hour of day. This includes transport ambulances and first response vehicles but does not include MIH-CP (four (4) first response vehicles) or supervisors (three (3) first response vehicles). In periods of surge, MIH-CP and supervisors deploy to the front line to support with calls to 911 and offload delays. It should be noted that unscheduled absences and a need to increase the part-time Paramedic complement creates difficulties in maintaining full resource deployment and down-staffing of resources does occur. While a peak of 32 units is scheduled, it is not always guaranteed that those units are all in service. Efforts to reduce operational stressors, and improve employee wellbeing and recruitment initiatives are ongoing.

**Figure 1**

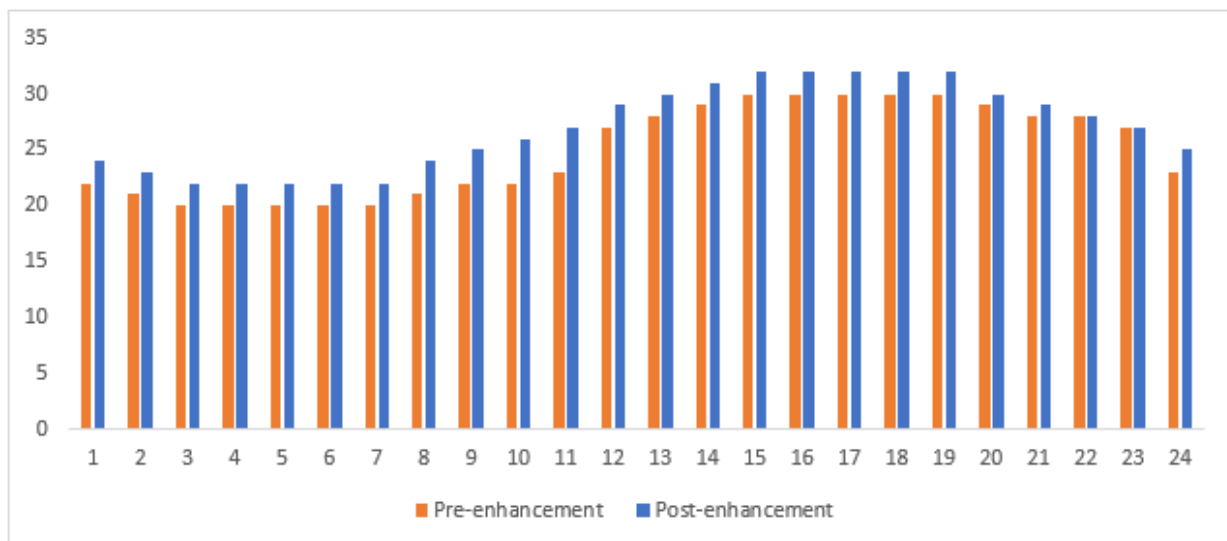
*Code 3 and 4 call volumes from 2016 to 2024 (projected)*



*Note.* Code 3 is a low-acuity response, whereas Code 4 is a high-acuity response. Code 3 responses are delayed in times of high volume and low resources.

**Figure 2**

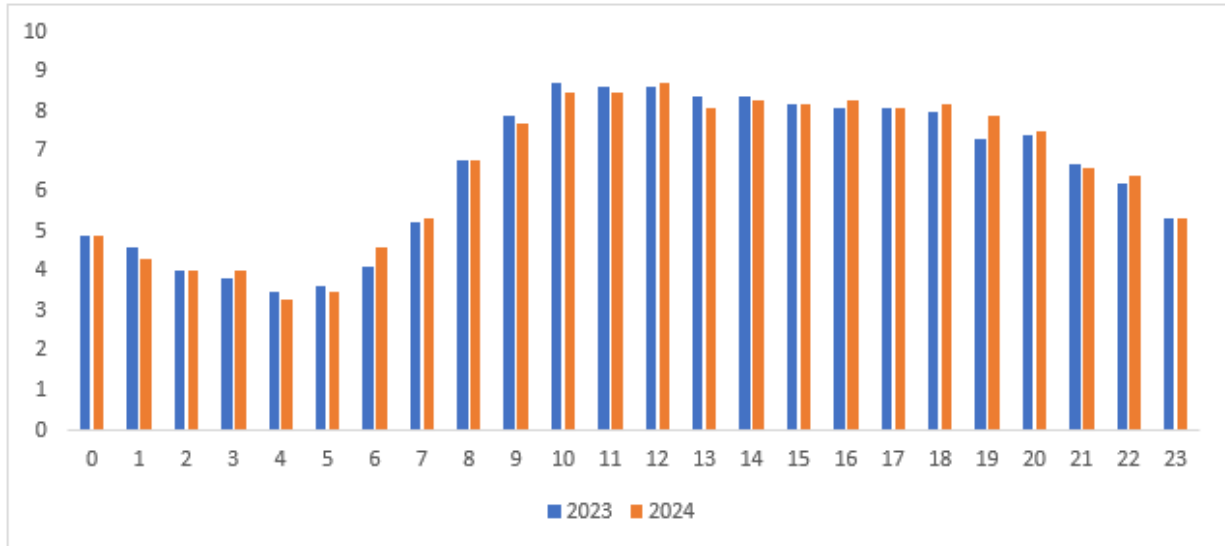
*Resource Staffing by Hour of Day, 2023 (pre-enhancement) vs 2024 (post-enhancement)*



*Note.* Figure 2 does not include MIH-CP or supervisors. In times of increased call volume and decreased resources, MIH-CP and supervisors deploy to support.

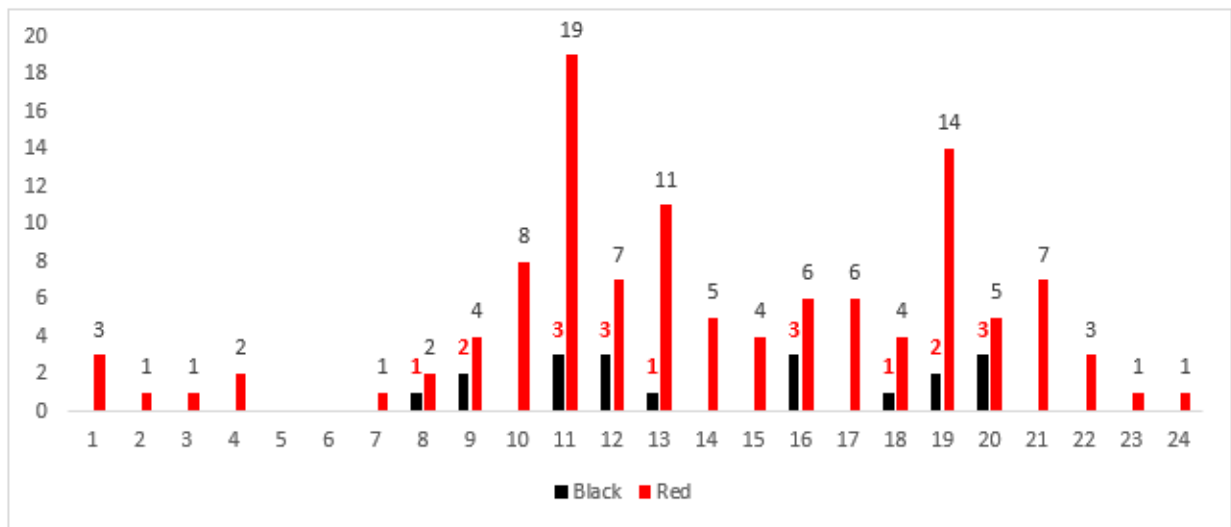
**Figure 3**

*Average Count of 911 Responses by Hour of Day, 2023 vs 2024*



**Figure 4**

*Sum of Occurrences of Codes Red and Black by Hour of Day for 2024*



*Note.* Occurrences trend in the same manner as response by hour and resource staffing.

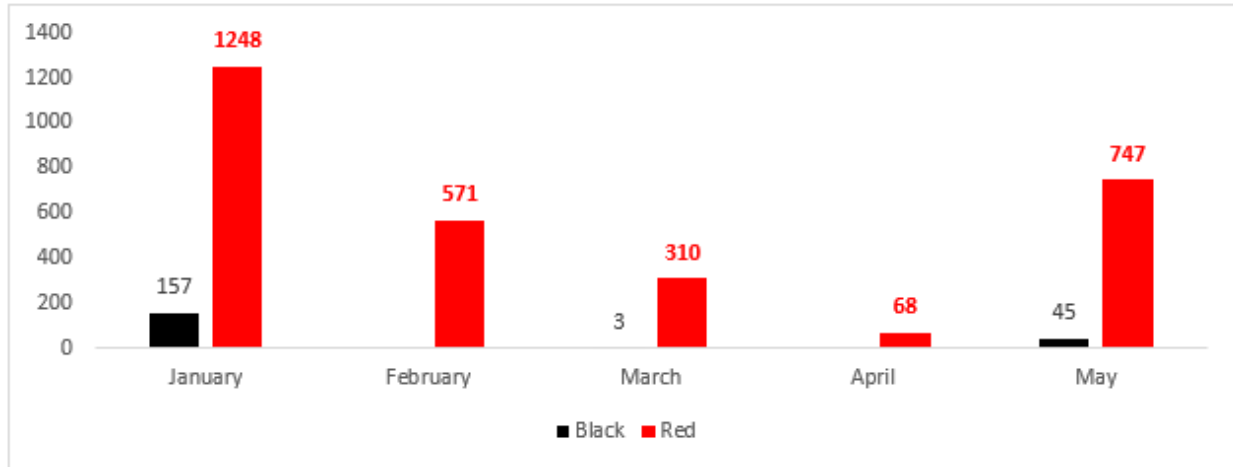
Figure 4 above shows a similar pattern to the staffing of resources and the average count of response by the hour, suggesting our resources are placed appropriately. However, in Figure 3 you will notice an increase in average responses by hour starting at 0600 and continuing to its peak at 1200, with a gradual tapering off starting at 1900. As part of the 2024 Master Plan refresh, reviewing resource placement to better coincide with the increase in call volume between 0600 and 1900 will occur. Further, Essex-Windsor EMS will undergo a master schedule rebid in the spring of 2025, where all shift start and end times will be evaluated and adjusted as necessary. This is a collaborative process with CUPE 2974.2 Union Executives, leveraging the results of the master plan refresh, to ensure we strike a balance between operational requirements, strategic resource locations to reduce response times and the importance of providing work-life balance as much as reasonably possible in the circumstances.

Through provincial networking, it was learned earlier this year that decreasing offload delay wait times were occurring at North York General and London Health Sciences Centre. Essex-Windsor EMS met with local hospital leadership to discuss opportunities to replicate these benefits locally. Collaboratively, the hospitals that were realizing a decrease in offload delays were contacted and a review occurred. Part of the review included representation from Essex-Windsor EMS, Windsor Regional Hospital and Erie Shores Healthcare attending on-site at these hospitals to learn how they improved offload delays. Additionally, an employee from North York General attended both Windsor Regional Hospital and Erie Shores Healthcare to better understand our local system, and recommend opportunities for improvement.

Implementing the recommended changes, where appropriate, continues to this day, but you will notice a gradual downward trend in code reds and blacks (figures 5 and 6), decreasing offload delays (Figure 7) and a significant decrease in utilization of the Paramedic Offload Program (Figure 8). The month of May was particularly difficult, especially as it was recorded as our highest call volume month for 2024, but again, leadership from all sites continue to gather to strategize for improvement.

**Figure 5**

*Sum of Minutes for Codes Red and Black by Month, for 2024*



**Figure 6**

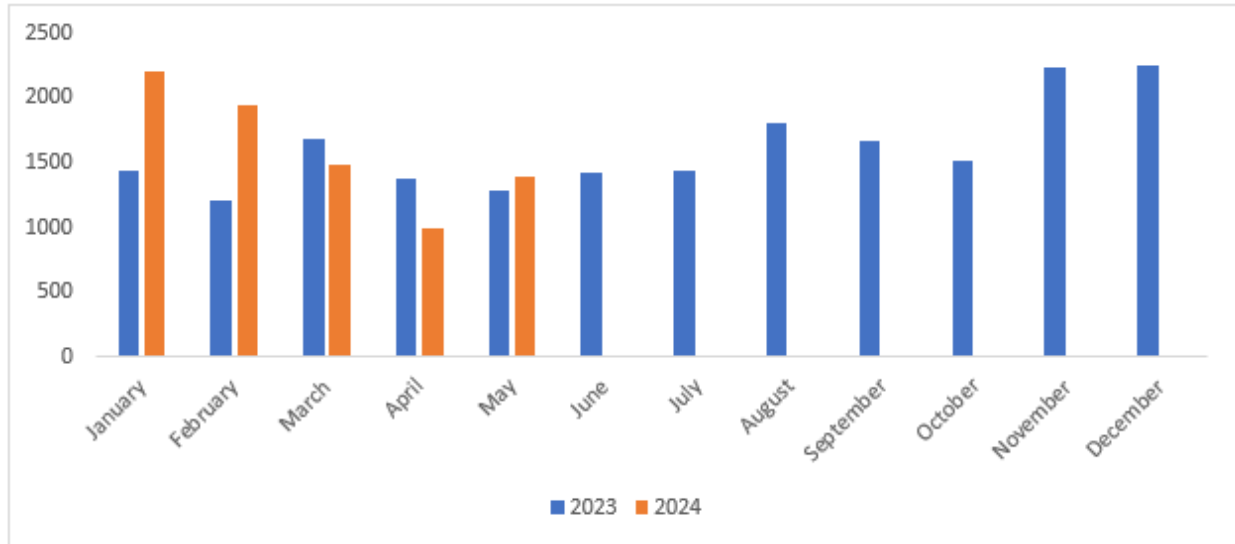
*Percentage Change of Codes Yellow, Red, and Black from 2019 to 2024(Projected)*

Year	Code Yellow (min)	% Change	Code Rd (min)	% Change	Code Black (min)	% Change
2019	136234	-	447	-	97	-
2020	122054	-10%	767	72%	249	156%
2021	182906	50%	3234	322%	789	217%
2022	228510	25%	8086	150%	2272	188%
2023	240645	5%	8907	10%	1701	-25%
2024 (P)	251817	5%	7067	-21%	492	-71%

*Note.* Code yellow occurs when the number of available ambulances is between 4 and 10. Code red occurs when the number of available ambulances is between 1 and 3. Code black occurs when there are no available ambulances.

**Figure 7**

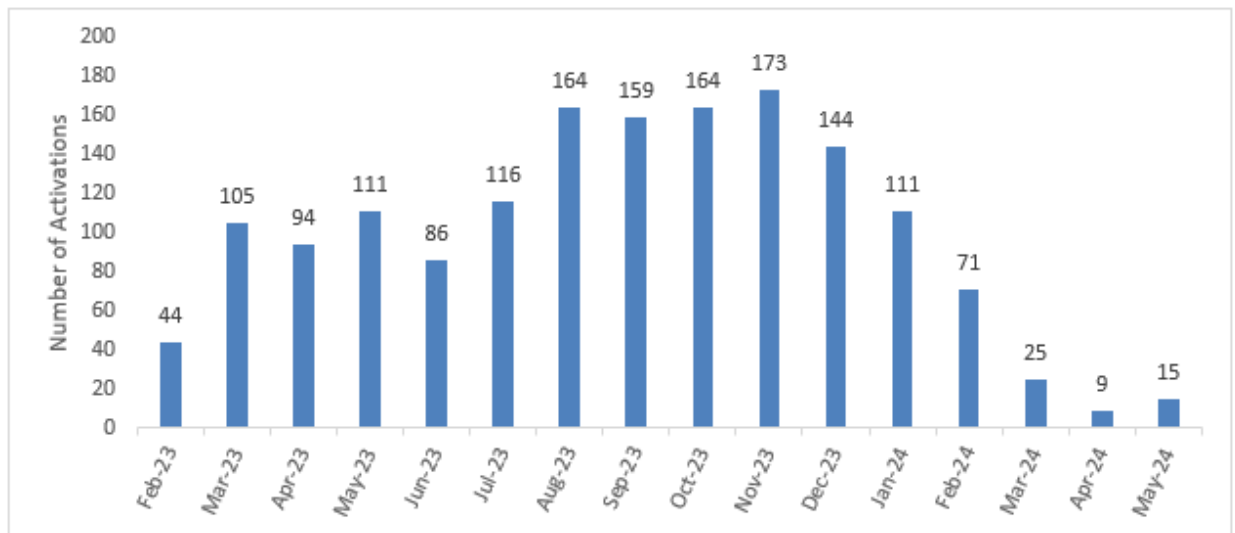
*Sum of Offload Delay Hours Comparing 2023 to 2024*



*Note.* Offload delay includes all transports to the emergency department where it takes greater than 30 minutes for Paramedics to transfer care.

**Figure 8**

*Total Activations of Paramedic Offload Program, February 2023 to May 2024*



*Note.* The Paramedic Offload Program (POP) remains a resource to support critical incidents (multi-casualty) and times of extreme system pressures but is not a standing resource for daily operations.

While efforts to maintain operational flow and improve response times continue, here are some of the ongoing and upcoming initiatives and processes to help improve ambulance availability within the region:

- Designated Offload Nurse Program
  - The 2024/2025 funding request includes increasing Nurse compliment at all three (3) hospitals to facilitate flow. The results of the request have not been released as of yet.
- Paramedic Aides are onboarded and deployed at both Windsor Regional campuses
- Twenty (20) net new Paramedics are onboarded and deployed
- Two (2) net new ambulances are operational
- Two (2) net new District Chiefs provide support in the Communication Centre seven (7) days per week, twelve (12) hours per day
- Daily huddles (0930 and 1500) with hospital leadership to discuss current operational demands and strategies to maintain or improve flow within the hospitals
- Sharing of EMS operational dashboard with hospital leadership for situational awareness
- 24/7 notifications to all parties on EMS code status changes
- Revising the current escalation pathway for lengthy offload delays
- Paramedic Offload Program (ultimate goal is for periods of crisis only)
- Alternate models of care to safely reduce transporting patients to the emergency departments
- MIH-CP continues to show a decrease in excessive use of EMS resources
  - 2023/24 Data shows:
    - Vulnerable Patient Navigator (VPN) Program – 63% decrease in 911 responses for patients enrolled in this program
    - Mental Health and Addictions Response Team (MHART) – 50% reduction in 911 responses for patients enrolled in this program
    - Community Assessment and Triage Team (CATT) – 69% reduction in patients transported to the Emergency Department (ED) through 911
- Mobilizing MIH-CP and supervisor resources to the front line in periods of limited resources
- Upstaffing additional ambulances in periods of high volume
- Refreshing the EMS Master Plan
- Investigating the benefits of assuming control of ambulance dispatch locally



Essex-Windsor EMS is committed to continue working collaboratively with all stakeholders to investigate and operationalize opportunities within the healthcare system that will help to improve ambulance availability within the region.

**Financial Implications**

There are no financial implications within the report.

**Consultations**

Essex Windsor EMS Senior Leadership Team  
 Sandra Zwiers, Chief Administrative Officer

**Strategic Plan Alignment**

<b>Working as Team Essex County</b>	<b>Growing as Leaders in Public Service Excellence</b>	<b>Building a Regional Powerhouse</b>
<ul style="list-style-type: none"> <li><input type="checkbox"/> Scaling Sustainable Services through Innovation</li> <li><input type="checkbox"/> Focusing "Team Essex County" for Results</li> <li><input checked="" type="checkbox"/> Advocating for Essex County's Fair Share</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Being an Employer with Impact</li> <li><input checked="" type="checkbox"/> A Government Working for the People</li> <li><input checked="" type="checkbox"/> Promoting Transparency and Awareness</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Providing Reliable Infrastructure for Partners</li> <li><input type="checkbox"/> Supporting Dynamic and Thriving Communities Across the County</li> <li><input type="checkbox"/> Harmonizing Action for Growth</li> <li><input type="checkbox"/> Advancing Truth and Reconciliation</li> </ul>

**Recommendation**

That Essex County Council receive report number 2024-0717-EMS-R08-JL Mid-Year Status Update – EWEMS as information.

## Approvals

Respectfully Submitted,

*Justin Lammers*

Justin Lammers, Chief, Essex-Windsor Emergency Medical Services

Concurred With,

*Sandra Zwiers*

Sandra Zwiers, MAcc, CPA, CA, Chief Administrative Officer

Appendix	Title
N/A	N/A