



Meeting Date: August 7, 2024

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Report No: PWE 36-2024

Subject: Asset Management Update 2024

Recommendation:

THAT Report No. PWE 36-2024 dated August 7, 2024, regarding the Municipality's asset management programs be received for information.

Purpose:

The purpose of this report is to provide Council with information on the municipality's asset management program. Annually, staff will present a report to Council on the asset management plan as required under O. Reg. 588/17.

Background:

The municipal asset management planning regulation (O. Reg. 588/17) was made under the *Infrastructure for Jobs and Prosperity Act, 2015*, and came into force on January 1, 2018. The purpose of the Act and its regulation(s) is to “establish mechanisms to encourage principled, evidence-based and strategic long-term infrastructure planning that supports job creation and training opportunities, economic growth and protection of the environment, and incorporate design excellence into infrastructure planning.”

In compliance with the O. Reg 588/17, Middlesex Centre Council approved the municipal asset management plan on June 9, 2021. A key piece of the municipality's overall asset management program, the plan is intended:

- to guide the consistent use of asset management across the organization,
- to facilitate logical and evidence-based decision-making for the management of municipal infrastructure assets, and
- to support the delivery of sustainable community services now and in the future.

About Asset Management

The Municipality of Middlesex Centre is responsible for providing a range of essential services to the community, including transportation networks, municipal water and sewer, stormwater management, and parks & recreation. To deliver these services, it owns and manages a diverse municipal asset portfolio of roads, bridges, culverts, facilities, parks, and water and wastewater infrastructure. As the social, economic, and environmental wellbeing of the community depends on the reliable performance of these municipal infrastructure assets, it is critical to implement a systemic, sustainable approach to their management.

An asset management approach allows municipalities to make informed decisions regarding the planning, building, operating, maintaining, renewing, replacing and disposing of their infrastructure assets throughout their lifecycle.

Asset management is an organization-wide process that involves the coordination of activities across multiple departments and service areas. As such, it is useful to adopt a structured and coordinated approach which outlines the activities, roles and responsibilities required of organizational actors, as well as the key principles that guide all asset management decision-making.

A comprehensive and holistic asset management approach supports efficient and effective service delivery and ensures that due regard and process are applied to the long-term management and stewardship of all municipal infrastructure assets. It aligns Middlesex Centre with provincial and national standards which enables us to take full advantage of available grant funding opportunities.

Tangible Capital Assets (TCA)

The service focus of our asset management plan may require assets to be defined differently from the definitions within the municipality's Tangible Capital Assets Policy (e.g., assets that do not meet the minimum capitalization thresholds set out in the Tangible Capital Assets Policy). The determination of which assets will be covered by the municipality's asset management planning processes will be independent of the municipality's Tangible Capital Assets Policy.

Analysis:

Middlesex Centre's Asset Management Plan is in-line with the municipality's strategic asset management policy and meets the requirements of O. Reg 588/17. It includes:

- Identification of current levels of service and the cost of maintaining those levels of service for core assets, fleet and facilities.
- Identification of proposed levels of service, what activities will be required to meet proposed levels of service, and a strategy to fund these activities for core assets, fleet and facilities.

The Municipality's asset management program is intended to achieve the following goals and objectives:

- Manage assets based on the principles of sustainability, continuous improvement and simplicity.
- Enable the integration of corporate priorities and plans.
- Provide reliable data with the integrity to meet or surpass regulatory demands.
- Enable clear, accurate reporting in a timely manner.
- Enable robust, repeatable and defensible decision-making with regards to asset decisions (purchases, rehabilitation and disposal).

Annually, staff will prepare a report to Council to outline the following:

1. The municipality's progress in implementing its asset management plan.
2. Any factors impeding the municipality's ability to implement its asset management plan; and
3. A strategy to address the factors described in clause (2).

Asset Management Plan Progress Updates

Middlesex Centre Council approved the Asset Management Plan on June 9, 2021 which covers all the regulatory requirement of July 1, 2024.

Staff have made numerous improvements to the asset management program over the past few years. Specific improvements outlined below are for the period of July 15, 2023 to July 15, 2024.

Middlesex Centre’s asset management improvements and initiatives have included the following:

- Implementation of new Enterprise Asset Management (EAM) and Computerized Maintenance Management System (CMMS) – public Go Live! August 28, 2024.
- Staff completed physical inventory of all water facilities. Other facilities are near completion.
- Creation of coordinated procedures on recording asset changes between Finance Department and asset management including yearend reconciliation of asset management data against tangible capital asset data.
- Current Replacement Values (CRVs) for OCIF purposes are now based on actual cost analysis. CRVs reported:

Reporting Year	Amount
2024	\$ 1,263,626,671
2023	\$ 790,303,731
2022	\$ 578,779,902

- Five-year capital budget 2023-2027 was financed in accordance with the asset management plan as applicable.
- Collected and/or updated condition assessment data on core and non-core assets:
 - 2023 Bridge Inspection Report as completed by BM Ross and Associates Limited
 - 2022 Roads Needs Study completed by Stantec Consulting. 2024 Roads Needs Study to be completed later this fall.
 - Transportation Master Plan adopted by Council on May 2024.
 - Master Servicing Plan for Water, Wastewater, and Stormwater is currently in Ministry review phase.
 - Additional condition assessment data on facilities and parks (structures and equipment) completed by internal staff since 2020.
 - Inventory and Assessment of Municipal Street Light Assets completed February 2024.
 - Traffic Sign Retroreflectivity Inspections and Inventory completed April 2024.
 - Street and Park Tree Inventory completed May 2024.

- Adopted an infrastructure levy and/or have dedicated reserves to address required funding needs
 - As indicated above. Specific reserve funds allocated for assets as noted in the asset management plan; 2024 annual and budgeted 2025 dedicated amounts to support capital asset needs:

Table 1: Infrastructure Reserve Funds

Reserve Funds	Budgeted 2025	2024	2023	2022
Roads Capital Reserve Fund	\$ 5,300,000	\$ 4,750,000	\$ 4,200,000	\$ 3,100,000
Buildings and Facility Reserve Fund	\$ 1,953,000	\$ 1,803,000	\$ 1,653,000	\$ 1,353,000
Fire Vehicles and Equipment Reserve Fund	\$ 475,000	\$ 425,000	\$ 375,000	\$ 275,000
General Vehicles and Equipment Reserve Fund	\$ 2,000,000	\$ 1,750,000	\$ 1,500,000	\$ 1,000,000

The following items were included in the 2021 approved asset management plan as next steps. Some of these items are now completed, while for others a plan is in place to complete these over the next five years.

Table 2: Asset Management Plan, In-Progress and Next Steps

Time Frame	Next Step
Short term – Started within a year.	<ul style="list-style-type: none"> • The municipality should review asset inventories to ensure that all equipment with a replacement value over the tangible capital asset (TCA) threshold of \$5,000 is included when doing the next asset management plan update. As an example, equipment in facilities such as large refrigerators may need to be captured. COMPLETED • Staff will be updating the TCA policy in the summer of 2023; at this time, staff will be reviewing the threshold of \$5,000. Once this policy is approved and a standard practice is developed, consistent application will occur between the assets as recorded in the AMP and in the financial statements (TCA). COMPLETED • The municipality should assess condition of streetlights and sidewalks either directly or based on age and include the information in a future update of the asset management plan. COMPLETED

	<ul style="list-style-type: none"> • Condition assessment of sidewalks was completed as part of the 2021/2022 street scan results. COMPLETED • Streetlight condition assessment is being completed in 2023. COMPLETED • The municipality should consider adding smaller culverts to the asset management plan either as stand-alone assets or as part of roads. These are culverts with a diameter less than three metres not covered by the biennial OSIM inspections. COMPLETED • The municipality should develop a condition assessment methodology for water mains, perhaps based on number of breaks. IN PROGRESS • The municipality should develop a method for assessing the condition of wastewater mains, perhaps involving CCTV inspections. IN PROGRESS • The municipality should develop a method for assessing the condition of stormwater mains and ponds. This could involve CCTV inspections or the performance of the system during flood events. IN PROGRESS
<p>Medium term – Start in next two to three years.</p>	<ul style="list-style-type: none"> • The municipality should evaluate the capital needs of the three gravel pits and include them in the next update of the asset management plan. IN PROGRESS • The cost estimate of \$9,048 per square metre for bridge replacement includes a factor of 20% to account for the deck area of replacement bridges typically being 20% larger than the deck area of the existing bridges. The Municipality should review this assumption on a case-by-case basis to identify more precisely the deck area of future replacement bridges. This could be done as part of a future OSIM bridge inspection. Once more accurate dimensions for replacement bridges are determined, the municipality should recalculate the estimated replacement costs for the bridges. These updated costs should be included in the next update to the asset management plan. COMPLETED • The municipality should develop a methodology for reporting on the percentage of properties in the municipality resilient to a 100-year storm and the percentage of the municipal stormwater management system resilient to a 5-year storm. These measures should be included in a future update to the asset management plan. IN PROGRESS

Long-term – Complete when guidance and data becomes available.	<ul style="list-style-type: none"> The municipality should review and update the generalized lifecycle models and associated condition degradation profiles when more data on how road condition degrades over time is available. COMPLETED
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Financial Update

Early this year, staff completed the first Current Replacement Values (CRV) analysis in determining the Municipality’s replacement costs for each category of assets. Similar analysis is to be completed each year as part of the Municipality’s asset management programs.

The recent Ministry submission for OCIF purposes no longer relies on historical costs and CPI, which are proven to severely underestimate values. The updated replacement costs are now based on the following:

- Actual cost information on recent projects completed by the Municipality (e.g. Delaware Project 2023) and other municipalities (e.g. City of London – Dingman Drive Project).
- Actual cost data provided by vendors
- Statistics Canada Non-Residential Building Construction Price Index

Table 3: Ministry of Infrastructure CRV Submissions

Asset Category	2024 Data Collection	2023 Data Collection
Road	\$ 503,948,491	\$ 217,451,594
Bridges and Culverts	\$ 183,314,462	\$ 158,880,727
Water	\$ 128,541,475	\$ 103,887,171
Wastewater	\$ 294,119,546	\$ 169,348,176
Stormwater	\$ 153,722,697	\$ 140,736,062
TOTAL	\$ 1,263,646,671	\$ 790,303,731

Factor Impacting the Implementation of the Asset Management Plan

Factors with drastic impact on the implementation of asset management plan include:

- Inflationary pressures – Inflation is commonly defined as the general increase in prices for goods and services in an economy over a period of time. The Municipality is severely affected by the rising Consumer Price Index (CPI) for general goods and services and Building Construction Price Index for infrastructure projects. CPI rose by 15.5% and Non-residential Building Construction Price Index rose by 43.7% in the last five years.
- Increasing Fuel Costs – The increased costs of fuel have had a significant impact on the cost of infrastructure in 2023 and 2024. A combination of rising oil prices, the state of the Canadian dollar, provincial taxes and the federal government's Clean Fuel Standard (CFS), could result in the continuation of significantly increased fuel costs.

The following challenges presented themselves in the implementation of the asset management plan, which may see identified assets in the capital budgets being underestimated and result in budget overruns. Staff are monitoring this closely.

Strategies are in place to address all factors impeding the implementation of the asset management plan. These strategies have been addressed in throughout this report.

PSD Citywide

Beginning March this year, the staff began implementation of PSD Citywide, allowing for a centralized repository of all of the Municipality's assets, service requests, work orders and preventative maintenance.

- *Citywide Asset Manager* – is an enterprise asset management system and asset register that support all asset classes. It is a central database for all assets providing users with a single municipal-wide source for asset information including financial reporting, lifecycle planning, risk management, levels of service and decision optimization.
- *Citywide Maintenance Manager* – is a computerized maintenance management system designed to enable the departments to prioritize, schedule, and track maintenance projects and access and manage service requests and work orders from within the office or while out in the field. The system also meets Public Works requirements for daily workflow management, project management and resource calculations.

The public facing of the system is due to be available on August 28, 2024. This will allow residents to send service requests via a link from our Municipal website.

Municipality of Middlesex Centre Assets

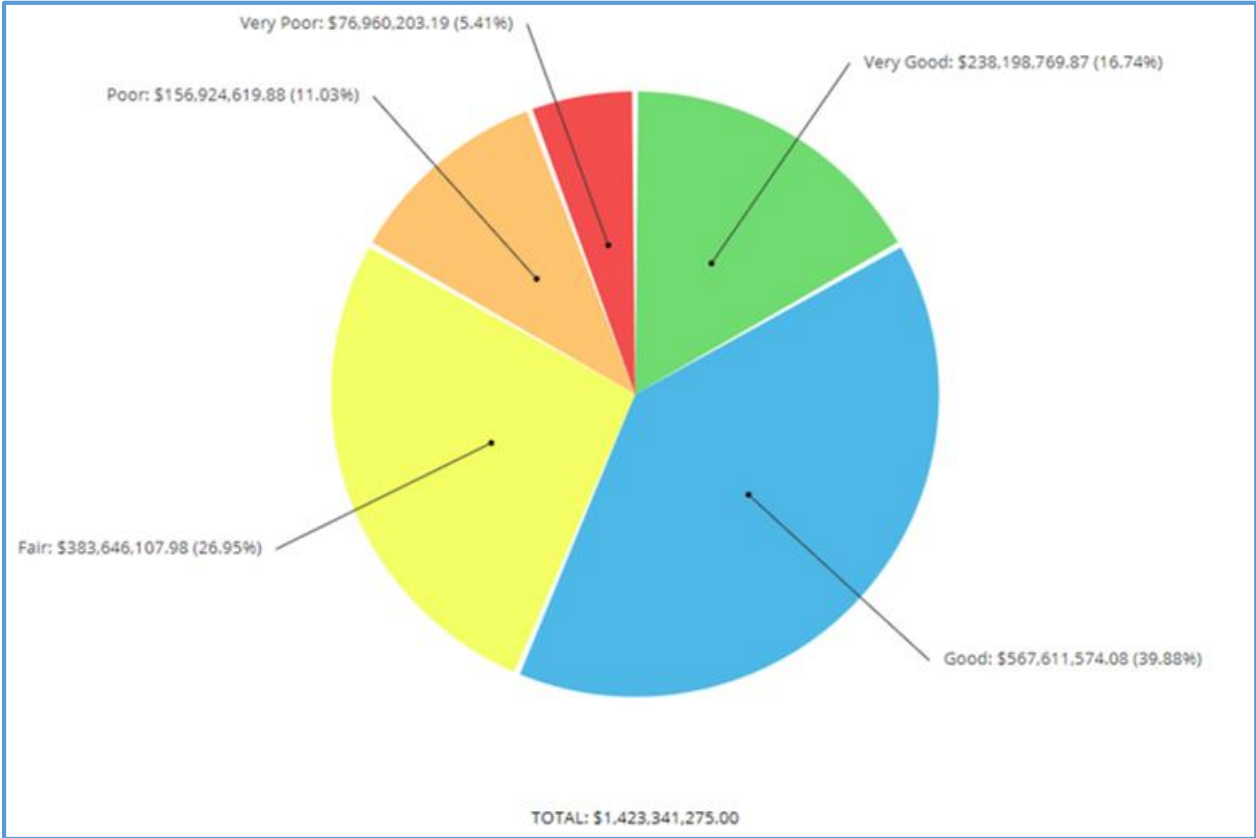
The Municipality's asset portfolio is consisted of 32,526 assets with a total replacement cost of \$1.47 billion. These totals were determined based on the on-going physical inventory and actual cost analysis.

Table 4: PSD Citywide Asset Register Summary

Department	Asset Count	Replacement Cost	Annual Investment
Building Services	3	\$ 136,467	\$ 13,647
Community Services	1,469	\$ 137,001,041	\$ 3,332,628
Corporate Services	140	\$ 44,494,600	\$ 0
Emergency Services	45	\$ 12,209,200	\$ 764,660
Environmental Services	14,901	\$ 579,280,385	\$ 8,441,664
Transportation	15,968	\$ 697,579,182	\$ 16,033,478
TOTAL	32,526	\$ 1,470,700,875	\$ 28,586,077

The current condition of the assets is central to all asset management planning. Collectively, 56.6% of assets in Middlesex Centre are in Good and Very Good condition. This estimate is based on both age-based and field condition data.

Table 5: Current Asset Conditions (Excluding Land)



2025 Asset Management Plan

The Municipality’s current Asset Management Plan meets the 2024 regulatory requirements and is due to be updated next year. For 2025, municipalities are required to have an approved asset management plan for all municipal infrastructure assets that builds upon the requirements set out in 2024. This includes an identification of proposed levels of service, what activities will be required to meet the proposed levels of service, and strategy to fund these activities.

- *Key Performance Indicators (KPIs) and targets:* For core municipal assets, a Ministry prescribed qualitative and technical metrics must be included in the asset management plan for the proposed levels of service. For all other assets, qualitative and technical metrics must be established by the Municipality.

- *Risk Analysis:* Risks associated with the proposed levels of service must be identified to ensure long term sustainability. Explanation on how the proposed levels of service differ from the current levels of service, whether the proposed levels of service are achievable and the Municipality's ability to afford the proposed levels of service are also needed to be included in the new plan.
- *Lifecycle Activities:* A 10-year lifecycle management and financial strategy need to be undertaken to meet the proposed levels of service are to be specified in the new plan.

Financial Implications:

Costs and funding identified in the asset management plan have been incorporated into the budget planning process annually.

Strategic Plan:

This matter aligns with following strategic priorities:

- Sustainable Infrastructure and Services

This report responds directly to Objective 4.3 – Continue with our asset management plan and apply a financial sustainability lens to all municipal assets and infrastructure. It highlights how we are progressively updating our asset management plan and building the reserve funds for the timely repair/replacement of our assets. Additionally, it addresses the communication of our approach to funding capital projects.

Attachments:

PWE 36-2024 A1 Performance Measures

Presentation Slides – August 7, 2024