



Municipality of Port Hope

Staff Report

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Report Title: 2022-2024 Asset Management Plan

Report to: Works & Engineering Committee

Date of meeting: June 7, 2022

Report Author:

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Department responsible:

Works & Engineering

Report Number: WE-19-22

Recommendation:

That a resolution be presented to Council to approve the following:

1. Drinking Water Asset Management Plan, consistent with Provincial regulations, included as Attachment 1;
3. Wastewater Asset Management Plan, consistent with Provincial regulations, included as Attachment 2;
4. Stormwater Asset Management Plan, consistent with Provincial regulations, included as Attachment 3;
5. Transportation Asset Management Plan, consistent with the Provincial regulations, included as Attachment 4; and
6. Direct staff to update the Strategic Asset Management Policy to add the CAO, Asset Management & GIS Coordinator to the Executive Lead

Highlights:

- Update to the 2016 Asset Management Plan (A.M.P) in compliance with Ontario Regulation 588/17 *Asset Management Planning for Municipal Infrastructure*
- Inclusive of separated Core Asset Management Plans with required Levels of Service and Lifecycle Management Strategies

Background:

Port Hope is a remarkably picturesque community located on the shore of Lake Ontario and the Northumberland Hills. With a population of approximately 17,294 and thriving business and tourism sectors, our Municipality is well-positioned for long-term growth and sustainability. The Municipality is generating more opportunities for cultural

activities, sporting events and exciting projects, and the infrastructure, the backbone of our community, must be safe and reliable.

In 2012, Ontario's Ministry of Infrastructure released a guide titled *Building Together: Guide for Municipal Asset Management Plans*. This guide forms part of a comprehensive strategy called the Municipal Infrastructure Investment Initiative (MIII) which aims to develop a strong and cooperative relationship between municipalities and the Province of Ontario to address the significant challenges that currently face our deteriorating infrastructure.

In 2013, the Municipality retained the services of R.V. Anderson Associates Limited (RVA) to establish an A.M.P. for the Municipality of Port Hope. This first version of the A.M.P. identified a long-term need of approximately \$4.8 million per year to renew the Municipality's existing infrastructure for the assets that were in the scope of this study. The assets that were included in the original scope were transportation services assets, such as roads, bridges, and sidewalks; water, wastewater and storm sewer linear assets; and water and wastewater facilities. A cursory review of the out-of-scope assets (i.e., municipal buildings, parks, fleet) indicated that this infrastructure required an additional \$2.2 million per year to be renewed over the long term.

The 2016 A.M.P. was the first plan to include all assets owned and operated by the Municipality of Port Hope and has been developed from information provided in the Tangible Capital Asset inventory and verified by operating departments. With the addition of the out-of-scope assets, as well as the refinement of the replacement values for the linear assets, this resulted in an annual increase of \$6.1 million dollars from the previous 2013 A.M.P. This increases the total annual investment need for all assets in the Municipality to approximately \$13.1 million to be renewed over the long term. The total annual replacement value of \$13.1 million includes both tax levy funded assets, as well as water and wastewater funded assets.

The Strategic Asset Management Policy was adopted in 2019. The policy outlines goals, policies, and plans that are supported by the asset management plan, the process by which the asset management plan is considered in the development of the municipality's budget and approach to continuous improvement and adoption of appropriate practices regarding asset management planning. The municipality's commitment to consider vulnerabilities that may be caused by climate change to the municipality's infrastructure assets, operations, such as increased maintenance schedules, levels of service, and lifecycle management, the anticipated costs, adaptation, mitigation approaches to climate change, such as greenhouse gas emission reduction goals and targets, and disaster planning and contingency funding. It defines the process to ensure that the municipality's asset management planning is aligned with the Rate Study, Strategic Plan, The Official Plan and Tangible Capital Asset Policy. The Strategic Asset Management Policy contains our commitment to working through asset management practices with our associated government bodies. It defines the staff

responsible for the municipality's asset management planning, including the executive lead, an explanation of the municipal council's involvement, opportunities for municipal residents' engagement, and other interested parties to provide input into the municipality's asset management planning.

In 2019, the Municipality implemented Enterprise CityWide Asset Management Software. This has been a gradual development throughout the pandemic which is now supporting our Asset Inventory through category profiles that assist with managing the assets according to our Level of Service and Lifecycle Management Strategies. It also includes a Maintenance Manager module that assists in managing public service requests, work order management, scheduled maintenance activities on our assets (including our Treatment Plant Operations), a GIS Map Viewer to allow staff geospatial analysis of assets and a Permitting module to manage building, plumbing and other development workflows.

Discussion:

Overview of the Asset Management Program

Staff are building a network of peers, navigating, and facilitating a respected strategic approach to asset management. Asset Management draws information from all parts of the organization and this collaborative approach provides the foundation for both short-term and long-term planning.

Since amalgamation in 2001, where the urban and rural areas had different infrastructure asset conditions and record keeping practices, significant progress has been made. Staff have established a comprehensive inventory of the Municipality's infrastructure assets and is progressing towards developing a program to prioritize asset renewal strategically, investing the right amount of money, on the right asset, at the right time.

Prior to having the A.M.P.'s, the Tangible Capital Asset Reporting was produced by the Municipality to advance and foster awareness of the developing Asset Management Program. The A.M.P. is a living document that connects tactical actions at the asset level to service outcomes, based on organizational goals and objectives.

The 2016 A.M.P. referenced the beginnings of a framework, which exceeded existing guidelines at the time, to support the future development of service-based Asset Management Plans.

On July 2, 2019, Council approved a Strategic Asset Management Policy (Resolution 60/2019) and received an update on initiatives under the Asset Management Program.

Consistent with Council's Strategic Plan and in keeping with sound financial planning practices, the Enterprise Asset Management Software and A.M.P. are progressing toward aligned financial forecasting. The Municipality is advancing its asset

management practices and aligning to the mandatory Provincial regulations. The Asset Management Plans provide more comprehensive information, which includes, among other things, information on the condition of the infrastructure.

The Municipality has been successful in receiving funding from other levels of government to offset some of the costs and/or advance the renewal of key infrastructure assets. The Municipality will continue to leverage these external funding opportunities whenever possible and advocate for support from upper levels of government.

Leadership in Asset Management

The Municipality of Port Hope is a recognized local leader in asset management and has been involved with the following initiatives:

- Participation in geographical cohort consisting of municipalities in Northumberland County to facilitate peer to peer learning and knowledge sharing on asset management challenges and practical solutions guided by the Association of Municipalities Ontario (AMO)
- Staff certification and training has created a stronger and broader knowledge base around asset management requirements and best practices
- Active member and participant of the Canadian Network of Asset Managers (CNAM), the association of public infrastructure asset management in Canada, focusing on policy, tools, and technologies to improve the level of service for infrastructure assets by sharing information with members.
- Collaboration with the Federation of Canadian Municipalities (FCM), including participating as a panelist at the 2021 workshop series “Case Studies in Current Level of Service”
- Collaboration with Public Sector Digest, including participating as a speaker at the 2022 CityWide User Group Conference regarding data conversion between our existing computerized maintenance management systems into Enterprise Asset Management Software.
- Regular communication with Asset Management Ontario (AMONTario), a non-profit community comprised of asset management practitioners who share information and best practices to advance public sector asset management and stewardship of publicly owned infrastructure in Ontario.
- Collaborates where possible with other agencies and municipalities on planning, designing, and building major infrastructure including sharing innovation, knowledge transfer and new technologies

Investments in Infrastructure

Works & Engineering annually delivers infrastructure construction projects based on our A.M.P. with a value that changes based on the condition of the assets. These investments either rehabilitate or replace critical infrastructure assets such as roads, bridges, buildings, water mains and appurtenances, wastewater mains and appurtenances, pumping stations, booster stations, reservoirs, water purification treatment plant and the wastewater treatment plant. Council has made significant infrastructure investments and has put a priority on critical infrastructure - water and wastewater, roads, and bridges.

In 2022, Council has invested approximately \$9,558,113 million in core Municipal infrastructure as part of the Capital budget.

Here are some highlights:

- \$1.6 million for rural road rehabilitation
- \$2 for bridges
- \$5 million for integrated road-water-sewer reconstruction projects
- \$3 for improvements strictly related to water/wastewater projects

The Municipality has been successful in receiving funding from other levels of government to offset some of the costs and/or advance the renewal of key infrastructure assets. The Municipality will continue to leverage these external funding opportunities whenever possible and advocate for support from upper levels of government.

Aligning Comprehensive Asset Management and the Financial Plan

To continue delivering essential services, the Municipality requires its aging infrastructure to remain safe and reliable to respond to population growth and demand for higher safety, health, and environmental standards. In an ever-changing world, the Municipality has a balanced, dependable, and predictable approach to asset management, with the ability to evolve its tools and processes with best practices and new technologies. Since implementation there has been alignment between the Asset Management Plan and the annual budgeting process, with funding targets established in 2013 and updated in 2016, to maintain critical infrastructure in a state of good repair while remaining affordable and sustainable. In 2013, the Municipality had increased annual capital funding to \$4.8 million per year with an estimated \$2.2 million for out-of-scope assets, from both Tax Levy and Rate supported programs. The predicted capital asset requirements were updated in 2016 and it was estimated that the annual contribution should be increased to \$8.6 million for Tax Levy and \$4.5 million for Rate programs.

The 2016-2018 Strategic Plan provided a comprehensive vision to aid in guiding the A.M.P.

Goal 1.1 Implement the Strategic Financial Plan:

- a) Expand the Asset Management Plan to include all infrastructure assets, securing Provincial and Federal funding beyond 2016.
- b) Refine and integrate the Asset Management Plan to ensure sustainability of our municipal infrastructure assets.
- c) Increase Infrastructure Funding to reach 50% of the \$4M annual requirement outlined in the 2013 Asset Management Plan: 2016 \$1M, 2017 \$1.5M, 2018 \$2.0M

The 2019-2022 Strategic Plan provided a comprehensive vision to aid in guiding the A.M.P., inclusive of Infrastructure Sustainability:

Priority: A financially sustainable municipal infrastructure management plan.

Goal: Reduce the infrastructure funding deficit and expand the infrastructure management plan.

Objectives:

- Establish a strategic asset management policy to guide the current infrastructure plan
- Complete a development charges study to identify 10-year growth impacts on infrastructure and ensure that growth contributes corresponding funding
- Implement a water and wastewater utilities 10-year financial plan and rate study
- Introduce asset management planning software, integrated with Geographic Information System (GIS), work orders, permitting and budgeting capabilities for coordination among all departments
- Identify current levels of service and associated costs to maintain infrastructure, in accordance with emerging Provincial regulation
- Dedicate funds annually from net growth in tax base to increase infrastructure funding in order to continue progress towards reducing the infrastructure deficit

Asset Management Plans

The Provincial regulation, O.Reg. 588/17, enacted in 2018, requires Council to formally adopt Asset Management Plans. The Plans build on the progress municipalities have made while bringing consistency and standardization to asset management policy and plans to help spread best practices throughout the sector and enable the collection of comparable data.

In addition to incorporating the necessary changes due to provincial legislation and the evolving landscape of the community, the new Asset Management Plans will be broadened to include all Municipal assets. The plans will also consider accessibility, Council approved policies, equity, diversity, inclusion, and climate change. This will help

to identify opportunities as well as community priorities. The Plans are building on the Municipality's ongoing commitment to transparency and accountability for reporting.

The key difference between the analysis done in 2016 and the analysis done for the Asset Management Plans today is the focus on core infrastructure. Core infrastructure includes all the Municipal assets that support drinking water, wastewater, stormwater, and transportation. The core A.M.P.'s have been expanded to provide Level of Service Metrics and Lifecycle Management Strategies.

Future refinement of our A.M.P. and development of lifecycle approaches that balance the Municipal asset profile will result in a report that will represent funding requirements and guide approach to whole life asset management.

As per the provincial regulation, the timeline is as follows:

2022

The provincial regulation requires Council to formally adopt the Asset Management Plans for core services – current state.

The province has defined the categories for core infrastructure as municipal infrastructure assets as they relate to drinking water, wastewater, stormwater, roads, bridges, and culverts. The roads, bridges and culverts are included in the Transportation Asset Management Plan.

2024

As per the provincial regulation, Asset Management Plans for other infrastructure (current state) require formal adoption by July 1, 2024.

The Municipality's A.M.P. (2016) identifies the services the Municipality provides. These include Transit; Parks, Recreation and Culture; Community Services; Emergency and Protective Services (Police, Fire and Bylaw); Libraries; Corporate Services, and Information Technology. Recognizing the increased importance of natural infrastructure, the Municipality is also considering including an Asset Management Plan for Greenspace and Urban Forestry.

2025

Council will consider all Asset Management Plans with target levels of service, along with an updated financial strategy.

The Asset Management Plans for drinking water, wastewater, stormwater, and transportation, required by the new Provincial regulation, will be brought to Council for consideration and adoption. However, this does not change the Municipality's current Asset Management Program and planned capital investment requirements.

Drinking Water Asset Management Plan and Wastewater Asset Management Plan

The Drinking Water Asset Management Plan encompasses all infrastructure supporting the delivery of clean, safe drinking water, including the Water Treatment Plant, watermains, storage tanks and pumping stations.

The Wastewater Asset Management Plan encompasses all infrastructure supporting the conveyance and treatment of wastewater, including the Wastewater Treatment Plant, sewers and pumping stations.

The total replacement value of all the Municipality’s core drinking water and wastewater assets is \$378.89 million, and per the current Rate Study, the Municipality’s planned investment for the renewal of these assets over the next 10 years is \$37.85 million, as outlined in Table 1 below.

Table 1 - Total replacement value and planned renewal investment in drinking water and wastewater assets Service	Total Replacement Value	Planned 10-year Investment to Maintain Core Infrastructure in a State of Good Repair (per Rate Study)	Estimated Preliminary Cost to Maintain All Infrastructure at Current Level of Service (per Provincial Requirement)
Drinking Water	\$ 190.15 million	\$ 19.38 million	Well-aligned to the current Rate Study
Wastewater	\$ 188.75 million	\$18.47 million	Well-aligned to the current Rate Study

The preliminary costs are well-aligned to the Municipality’s current forecast and in 2019, Council approved an improved rate structure for water and wastewater to create a more equitable, fair, and more sustainable revenue framework for the Municipality, residents, and businesses.

Beyond the 10-year horizon, it is expected, future investments will be required to address the wave of renewal needs for infrastructure built in the post-war era.

Staff recommend Council approve the Drinking Water Asset Management Plan and the Wastewater Asset Management Plan, attached as **Document 1 and 2**.

Stormwater Asset Management Plan

The Stormwater Asset Management Plan encompasses all infrastructure supporting the collection, conveyance, and treatment of stormwater runoff, including storm sewers, outfalls, roadside ditches, and stormwater management facilities. Stormwater management requires a holistic approach from when rain hits the ground to when it

enters the receiving environment, as it travels through a combination of hard and natural infrastructure.

Stormwater infrastructure is becoming more and more important in the context of climate change and risks related to flooding.

The total replacement value of all the Municipality’s core stormwater assets is \$95.43 million and as per the current forecast, the Municipality’s planned investment for the renewal of these assets will be reviewed in the 2025 A.M.P. update, as outlined in Table 2 below.

Table 2: Total replacement value and planned renewal investment in stormwater assets

Table 2: Total replacement value and planned renewal investment in stormwater assets Service	Total Replacement Value	Planned 10-year Investment to Maintain Core Infrastructure in a State of Good Repair	Estimated Preliminary Cost to Maintain All Infrastructure at Current Level of Service (per Provincial Requirement)
Stormwater	\$ 95.43 million	TBD in the 2025 A.M.P. update	Up to an additional \$1.8 million average annual lifecycle cost (Capital)

Up to an additional \$1.8 million is identified in the estimated preliminary costs to maintain all the infrastructure at the current level of service for the next 10 years.

The information presented only includes stormwater sewers and stormwater management facilities as there was insufficient data to provide accurate information on the other assets.

It is estimated preliminary costs and is not intended to represent capital funding requirements. New service levels will be defined in the next version of the asset management plans, which are due in 2025.

Following the 2025 plan consideration may be given to establishing a dedicated stormwater fee and funding source, whereas, currently, funding is combined with the Tax Levy.

Natural infrastructure is beginning to be more formally recognized as part of the Municipality’s stormwater infrastructure assets. A rising number of extreme precipitation events as a result of climate change, are increasing demands on the Municipality’s stormwater infrastructure.

Staff recommend Council approve the Stormwater Asset Management Plan, attached as **Document 3**.

Transportation Asset Management Plan

The Transportation Asset Management Plan encompasses all infrastructure supporting transportation, except public transit, including arterial, collector, and local roads, bridges, large diameter culverts, and sidewalks.

The total replacement value of all the Municipality's core transportation assets is \$391.43 million, and per the current practice, the Municipality's 's planned investment for the renewal of these assets will be reviewed in the 2025 A.M.P. update, as outlined in Table 3 below.

Table 3 – Total replacement value and planned renewal investment in transportation assets

Service	Total Replacement Value	Planned 10-year Investment to Maintain Critical Infrastructure in a State of Good Repair (per LRFP)	Estimated Preliminary Cost to Maintain All Infrastructure at Current Level of Service (per Provincial Requirement)
Transportation	\$ 391.43 million	TBD in the 2025 A.M.P. update	Up to an additional \$9.2 million

Up to an additional \$9.2 million is identified in the estimated preliminary costs to maintain all the infrastructure at the current level of service for the next 10 years.

The information presented is based on estimated preliminary costs and is not intended to represent capital funding requirements. Target levels of service will be defined in the next version of the asset management plans, which are required in 2025.

There are several considerations in the estimated preliminarily costs:

- Since 2013, when the Municipality's asset management strategies were first established, the Municipality has experienced changes in levels of service expectations, as such, replacement costs have increased. These factors have an impact on the costs of renewal work.
- Climate change requires mitigation measures to both reduce future carbon emissions and maintain service despite less predictable weather conditions. For example, this could include increased demand for more sustainable infrastructure such as active transportation networks. It could also include more robust and

resilient road and stormwater infrastructure, capable of withstanding increasingly frequent intense precipitation events and freeze-thaw cycles.

- As per the approach, considerations for arterial, collector and local roads include cost effective strategies including ongoing maintenance and operations, such as small repairs and pothole repairs, will be utilized until the roads need reconstruction. Since the Provincial regulation requires all the assets be considered, local road classifications are included in the calculation the same way arterial and collector roads are.
- Other assets, including sidewalks are also prioritized with the same asset management strategies, where there are some opportunities to undertake stand-alone replacement projects in addition to those replaced as part of road reconstruction projects to maximize efficiencies.

Like most Municipality's, Port Hope will require additional long-term, predictable funding from senior levels of government to complement municipal resources.

Staff recommend Council approve the Transportation Asset Management Plan (TAMP), attached as **Document 4**.

Update to the Strategic Asset Management Policy

The Policy must now be updated to include the Additional roles of Chief Administrative officer and Asset Management & GIS Coordinator which have been added to our staffing structure since the Policy's adoption. The Chief Administrative Officer position has been added the Asset Management Team composition. The Asset Management & GIS Coordinator position has been added to both the Asset Management Team and Asset Management Steering Committee compositions. The committees have been updated to include staff titles that reflect the current terminology.

Financial Considerations:

There are no financial implications to this report. The Council approved budget for tax levy Operating and Capital and for Water and Wastewater Rate supported programs, remains in effect.

The developing financial strategy for these plans will also take into consideration the asset renewal funding requirements of the next version of the Transportation, Drinking Water, Wastewater and Stormwater Asset Management Plans to be approved by Council and made available to the public prior to July 1, 2025.

Communication and Public Engagement:

From the time of adoption of the Strategic Asset Management Policy, the Asset Management Team and Asset Management Steering Committee members and various operations staff have been given the opportunity for training and engagement related to

the implementation of the Asset Management Software and opportunity to provide feedback on the development of the first four Core Asset Management Plans, water, wastewater, stormwater, and transportation.

A survey will be developed and posted to myporthope.ca and promoted to internal and external stakeholders, social media, and the Asset Management Steering Committee for the upcoming 2025 requirements.

Conclusion:

The Municipality has completed the legislated requirements outlined in O.Reg. 588/17 in line with the July 1, 2022, deadline.

Community input is integral to the ongoing success of the Asset Management Program, development of the additional Asset Management Plans and target levels of service. Therefore, public and stakeholder engagement will play a pivotal role as the Municipality moves forward in our steps to meet Provincial regulations.

The next steps, as per the Provincial regulation, by 2024, requires Council to adopt the remaining infrastructure Asset Management Plans.

Following this, new service levels will be defined, prior to 2025, and will align with the associated financial strategy.

Working with both internal and external partners, staff will continue to implement the Asset Management strategies outlined in the Asset Management Plan and defined in the regulation and build its initiatives linking investment decisions to the delivery of services to Port Hope residents, businesses, and visitors.

Attachments:

1. Drinking Water Asset Management Plan
2. Wastewater Asset Management Plan
3. Stormwater Asset Management Plan
4. Transportation Asset Management Plan