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# Town of Mattawa Asset Management Plan

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December 2013

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## **Town of Mattawa Asset Management Plan**

### **Executive Summary**

This Asset Management Plan is intended to describe the infrastructure owned, operated, and maintained by the Town of Mattawa to support its core services to ratepayers. It is a compilation of documents including the asset inventory which was started in 2009 as part of the PSAB 3150 requirements, updated roads needs studies and several financial based analyses.

This document, which shall be updated on an annual basis, outlines in detail the Town's ongoing Capital Asset Management strategy including ongoing actions regarding capital asset management, planned asset refurbishment, maintenance, and or replacement requirements including analysis of budgeted funding, including anticipated funding shortfalls. The funding shortfalls (referred to as the Funding Gap) are anticipated to be satisfied through a combination of ratepayer contributions (increased taxation), debt, and continued support from Federal and Provincial grant funding opportunities as they become available over the lifecycle of the capital assets of the Town.

The details of this document provide information on the implementation of Asset Management in Mattawa, current state of the infrastructure along with current and future activities. Please note there are several supporting detailed appendices.

This document is intended to be compliant with the ministry of infrastructure's "Building Together : Guide for municipal Asset Management Plans – Part III"

This document was prepared in conjunction with Pahapill and Associates Chartered Accountants.

### Strategic Overview Town of Mattawa Capital Assets

The Town of Mattawa has undertaken a detailed review and documentation of a comprehensive Capital Asset Management Strategy. Conceptually the implementation of a Comprehensive Asset Management Plan provides a number of benefits through improved accountability and a deeper understanding of the extent and affect of aging infrastructure, documentation of shortfalls in sustainable funding levels in a quantifiable and measurable way.

Through the implementation of asset management best practices, infrastructure assets that support core municipal services are monitored and maintained at levels which should enable Mattawa to provide these services at acceptable levels of risk and reliability and confidence to those that receive these services.

It is anticipated that funding will always remain as an ongoing challenge to overcome the accumulated backlog of capital renewals and maintenance deficits (Ie: current repair and replacement needs often in many cases outweigh current available funding).

This asset management plan addresses these shortfalls and identifies potential longer term solutions and techniques.

## **Introduction**

The Province of Ontario definition of municipal core services includes water, waste-water , storm drainage, and road networks.

In the Town of Mattawa these core services provide primary transportation, flood protection, safe drinking water and sewage removal. Without these core services, the viability of the municipality from an economic, health, and environmental perspective would be at risk. The Asset Management Plan includes the infrastructure and equipment assets that support these core services: Local Roads, Bridges, water and wastewater as well as related supporting equipment infrastructure. Mattawa is a single-tier municipality and accordingly works directly with the Province of Ontario and local ratepayers in support and delivery of municipal service. Because of this, it is of great importance to note that Mattawa operates full water and wastewater service without the support of regional municipalities.

As part of this plan, Mattawa will begin to initiate a formalized Corporate Sustainability Plan which incorporates Mattawa's corporate vision to 'promote and deliver sustainable service levels which satisfy the needs of ratepayers while maintaining a fiscally responsible level of budgetary use and debt structure' and additionally to support ongoing implementation and evolution of Asset Management activities as seen fit in the achievement of the above mandate.

The Town of Mattawa has had a relatively stable population for the last 10 years. Consequently there are no major anticipated changes in future infrastructure demands beyond current levels, hence the focus of this plan is around the maintenance of current and desired service levels.

Taxation and user rates have historically fallen short of recognizing the full life-cycle cost of ownership of infrastructure assets resulting in a growing backlog of capital renewals, deferred pro-active maintenance, and increasing re-active repairs and replacements. According to the Province of Ontario The Walkerton incident, was the catalyst that identified the need for better oversight, management, and funding of municipal core infrastructure. This plan builds upon that need for the Town of Mattawa.

## **Detailed Asset Management Plan**

### **Part A**

This asset management plan incorporates the following roles and objectives:

- Maintain current inventory of assets
- Ongoing and updated documentation of asset condition assessments
- Documentation of strategic and detailed capital planning
- Long-term horizon (10 year to 20 year) capital funding requirement projections
- Formalization of collaboration between Finance; public works and internal engineers and external consultants (as required)
- Promotes the utilization of modern technologies to assist in business decisions related to core services delivery

### **Part B**

#### **Asset Inventory / Data Management:**

**Product:** Population of official asset registry (maintained in excel based software spreadsheets; transitioning to custom software within the municipal accounting and management software database as part of this overall plan / project ).

**Implementation date:** (substantially completed December 31, 2008; updated annually in conjunction with annual external financial audit)

**Current Status:** Continuously augmented/updated through up to date roads needs studies; and annual audit procedures. See Appendix A for complete listing. (Update to be complete December 2013)

### **Part C**

#### **Geographic Information System**

**Product:** Via independently prepared roads needs study and CGIS collected Data.

**Implementation Date:** Fall 2013, with continuous updates as required.

**Current Status and planned Utilization:** Currently the CGIS software is mainly utilized by the

building department when assessing new permit applications and rezoning plans. Additionally it is used as an aid when assessing the replacement needs and costs for Town roads. See complaint management section for further planned utilization.

#### **Part D**

##### **Service Requests / Complaint Management**

**Product:** Computerized database / log to record reactive activities related to core services (ie rate payer requests and complaints specifically related to infrastructure).

**Implementation Date:** Throughout 2014

**Current Status:** Currently there are two ways in which infrastructure complaints are collected and handled. The primary method: telephonic complaints are received by Town office staff and then forwarded onto appropriate public works staff such that the complaint can be adequately addressed. The secondary method consists of a complaint worksheet kept at the Town office which ratepayers can physically come in; write down there complaint and then it is passed onto the appropriate Town staff.

**Enhanced Complaint Management:** As part of the overall asset management program; the Town is going to (on a test basis) explore the utilization of the CGIS software to log ratepayer complaints about specific infrastructure service issues. The software has the ability to store and maintain on an asset by asset basis; a vernacular account if issues related to the particular asset in question. Thereby during the annual review of the asset management program and plan; a detailed account of ratepayers experience with service levels can be accurately taken into account and addressed in long term spending and financing plans.

#### **Part E**

##### **Current Condition Assessment**

**Product:** Formalized assessment of individual assets based on expert field analysis.

**Implementation Date:** Fall 2013

**Current Status:** Completed in conjunction with Town staff and engineering department; and has been directly incorporated in the 10 year financial plan. – *See attached financial plan*

##### **Predictive Modeling**

**Product:** A model of expected failure of assets supported by empirical data.

**Implementation date:** December 2013

**Current Status:** An ongoing review of asset life expectancy / accounting amortization rates is being undertaken as part of this project. Rates will be adjusted as asset impairment evidence is updated.

#### **State of Mattawa's Infrastructure**

##### **Inventory**

Through intensive data collection efforts via annual financial audits of asset procurement, and external engineering studies, Mattawa's asset registry is considered to be a reliable and comprehensive resource for asset information. By assignment of data collection and maintenance tasks it will enable the asset registry to be maintained on an annual timely basis. (Appendix A)

*See attached 10 year capital plan for additional spending details.*

### **Road Network (Rounded)**

Road Type	Historical Cost	Current Value (Accounting Based)	10 year Spending Requirements
Paved	3,017,750	1,410,609	1,469,562

### **Bridges and Major Culverts (Rounded)**

Asset Type	Historical Cost	Current Value (Accounting Based)	10 Year Spending Requirements
Bridges & Culverts	3,872,129	1,004,089	None Projected

### **Town Vehicles and Roads Equipment**

Contains assets required for the maintenance or continued operation of municipally owned roads and road structures.

Asset Type	Historical Cost	Current Value (Accounting Based)	10 Year Spending Requirements
Vehicles	482,863	153,584	400,000
Equipment	2,507,493	727,453	140,000

### **Town Water and Wastewater**

Contains assets required for the maintenance or continued operation of water and wastewater services.

Asset Type	Historical Cost	Current Value (Accounting Based)	10 Year Spending Requirements
Water	4,658,622	3,443,515	1,429,629
Waste Water	4,777,730	2,831,802	1,384,629

**All other assets**

(Includes assets not vital to transportation or water; however vital to the delivery of several key municipal services such as landfill community enjoyment centers etc.)

Historical Cost: \$ 4,705,370  
Current Value: \$ 1,992,364  
10 Year Spending: \$ 780,480

**Part F**

**Long Term Capital Budget Planning – see attached 10 year capital plan**

**Product:** 10 year detailed forecast of operating and capital funding needs using life-cycle analysis of assets and 20 year outlook for operating and capital needs.

**Implementation Date:** December 2013; as an extrapolation from the latest roads needs study; and concurrent input from municipal staff.

**Current Status:** In conjunction with Town staff this Plan identifies current capital refurbishment and capital maintenance backlog, including short and long term funding requirements. An annual update of capital maintenance backlog and updated capital funding projections will be required to maintain the accuracy and usability of this plan.

**Part F**

**Road Network:**

The Town monitors road condition and repair; however, due to the significant age of the “water/sewer infrastructure (generally located directly beneath the road surfaces major road rehabilitation tends to be driven by the urgent needs and aging physical state of the underlying water and wastewater linear assets.

**Condition**

**Roads**

Mattawa has a unique situation with regards to road condition; whereby road replacement is driven in 90% of the cases by the deterioration of the underlying infrastructure; water and sewer mains / system. As a result, road spending needs are significantly impacted by the requirements to repair/replace the underlying water and sewer infrastructure.

**Bridges**

Mattawa has one major bridge, which is seemingly in good condition; there is no spending highlighted for the foreseeable future other than basic minor maintenance. The municipal engineering department will continue to monitor the condition of the bridge, and update conclusions and spending accordingly.



### Water Lines

The public works department reviews frequency of repetitive repairs to the same components and determine whether that system needs to be replaced. The aging of water and sewer components is a significant concern and has been reflected in the short and mid- term capital expenditure requirements plan.

Public works staff routinely reviews and inspects (where practicable) facilities and if something stands out at them as being in need of maintenance, they bring it to the engineer's attention and it is subsequently addressed.

Despite the age of the water pipes, we assess our system as "in good shape", but in constant need of maintenance and careful observation to ensure we catch things that break down soon after they do.

### Other Assets

In conjunction with Town staff; we have developed a 10 year spending plan based upon the condition of these assets; which include the arena, equipment and parks assets. An overall comment on the condition of these assets is considered not appropriate as they are looked at on an individual basis due to their nature.

### Rehabilitation Needs

Asset	Urgent	1-5 Years	6-10 Years	Total
Roads	563,372	782,100	124,090	1,469,562
Bridges				
Equipment	7,000	19,000	114,000	140,000
Water	429,529	950,100	50,000	1,429,629
Sewer	447,529	837,100	100,000	1,384,629
Buildings	30,000	275,000	35,000	340,000
Vehicles	153,584	290,000	40,000	483,584
Other Assets	13,000	312,480	115,000	440,480

#### Additional Point:

Mattawa currently has an ongoing industrial park project which includes the addition of water and sewer infrastructure. The Project is continuing in to 2014 and may carry with it future additional lifecycle costs to the above table. The project is intended to improve commerce potential in the town.

## **Part G**

### **Expected Service Levels**

The town of Mattawa has a commitment to its ratepayers to uphold a certain level of service in relation to municipal infrastructure including the following:

- Delivery of safe and quality tasting drinking water to most residents; including the environmentally responsible and reliable removal and treatment of septic wastewater.
- Upkeep 20 km of safe and usable town roads inclusive of during winter months which have a significant draw on the overall Town budget and financial results.
- Provide the services of a volunteer fire department which is essential to the safety of the Town's ratepayers as first responders to emergency situations. It is expected that the fire department is adequately supplied and staffed to ensure the level of service meets the needs of the Town.
- Provide access to a community rink; library, court facilities, emergency management locations all of which must remain in good repair in order to appropriately and effectively serve the community.

## **Part H**

### **Determination of Capital Refurbishment and Deferred Maintenance Backlog and Financing and Funding Strategies**

The Canadian Infrastructure Report Card has estimated that the average household in Canada has a combined infrastructure deficit of \$13,813 in water, storm water, wastewater, and road infrastructure.

Mattawa, like many other organizations has traditionally followed a pay-as-you-go financial approach in which there is hesitation to assume debt as part of an overall financial strategy. Additionally, public pressure has resulted in many years of lower than inflation increases in rates and taxes that resulted in incremental increased deficits in capital renewal and operating programs. Infrastructure, being mostly roads, with service life of more than 30 years continued to perform without obvious effects. A number of public infrastructure failures in other municipalities and resulting regulations is changing the understanding of the need to fully finance the full life-cycle cost of infrastructure from both a capital and operating perspective that will ensure continued service delivery of core services to Mattawa into the future.

The long range financial plan incorporates updated figures on asset inventory identifying an estimated backlog of \$5,604,300 in core asset spending in order to keep operating programs at same levels. This translates to somewhere between a \$500,000 – \$2,000,000 funding gap over the next decade. This plan incorporates the use of Gas Tax Funding (as anticipated to be available) to assist in funding backlog in water and roads asset renewal and other assets as determined in this part of the Capital Asset Management Plan. However this “funding gap” represents the amount of unfunded asset replacement that must take place.

Mattawa has identified the following potential future sources of funding/financing in meeting its capital plan funding requirements, and has included it in their 10 year financial plan:

## Projected Infrastructure Grants

Grant	Funding	Usage	Benefit
Infrastructure Ontario	1,267,587	Major Road and Water replacement	Ensure future water quality as infrastructure has failed.

## Debt Financing

Mattawa will explore leveraging debt financing in a number of required upcoming infrastructure projects as may be appropriate; we have modeled Mattawa Utilizing debt up to a maximum of 30% of its statutory annual repayment limit in order to fund asset replacement / major repair in the next few years and compared it to a model where no debt is utilized. Conclusions will be analyzed by Town staff and council.

## User Rates

User rates are represented in majority by water and wastewater charges. These are expected to increase in line with inflation; and are incorporated as much as possible in the replacement of water and wastewater assets.

## Development Charges

Due to the state of the local economy in Mattawa; development charges are not considered material to the overall asset management plan.

## Reserves

Mattawa utilizes reserves to fund various activities. With respect to core services, the following outlines the structure:

### Capital Reserves

A shared capital / operational reserve at the corporate level currently exists. A restricted capital reserve is to be funded annually through property taxation targeting levels in the 10 year approved capital forecast. Currently the capital reserves contain: \$800,169

## Part I

### ASSET RENEWAL FINANCIAL FORECASTING (Appendix C)

Asset renewal forecasting is presented at two levels: 10 Year detailed Capital Plan and 20 Year Outlook Capital funding Forecast.

#### *10 Year Capital Planning Forecast*

This is a public and Council endorsed plan that address short term financing needs for infrastructure through an annual official budget process. The infrastructure needs are based on systematic integrated condition assessment process in which infrastructure needs based on condition are reviewed and prioritized and matched to available funding.

Typically, specific projects are identified in the 10 Year Capital Forecast document for a period of 5 years. Allocations for renewal are identified for years 6-10 based on condition-based needs assessments, estimates, and projected available funding. Some particularly large or contentious project may be identified and listed in years 6-10.

At this time, unfunded infrastructure renewal needs are not published as part of the budget process, but are identified within Asset Management. Many of these projects have been, or in process of, preliminary design to enable the project to start-up in relatively short time should additional funding opportunities become available.

### *20 Year Capital Planning Forecast*

Forecast of infrastructure renewal needs are calculated annually based on current replacement value, funded and un-funded infrastructure needs, and supplemented with life-cycle estimates. These forecasts are done on individual infrastructure groups. Although not used to set rates, it provides insight into the degree of infrastructure renewal activity that needs to occur beyond the 10 year capital project plan adopted by Council. It provides a perspective that is used to identify the effect of carrying a backlog of renewal into the future.

This information is a primary input to setting rates to fund current capital renewal along with building reserves that will address immediate and longer term renewal activities and provide a financial net for unexpected expenses.

At this time Mattawa feels that the 10 – 20 year spending timeframe is very difficult to predict with any sort of certainty; due to the size of the municipality. Accordingly for the purposes of this plan; the most reasonable assumption is that spending in the 10 – 20 year time frame will closely mirror that of the 1-10 year plan; however spread across different assets.