TOWN OF AYLMER

ASSET MANAGEMENT PLAN

DECEMBER 4, 2013

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Planning for growth

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EXECUTIVE SUMMARY

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This report contains the Asset Management Plan for the Town of Aylmer (Town) and has been organized as follows:

Chapter 1: Introduction;
Chapter 2: State of Local Infrastructure;
Chapter 3: Expected Levels of Service;
Chapter 4: Asset Management Strategy;
Chapter 5: Financing Strategy; and
Chapter 6: Recommendations.

The "state of local infrastructure" chapter provides an overview of the capital assets owned by the Town. This includes detailed information on the Town's asset inventory, including asset attributes, accounting valuations, replacement costs, useful life, age and asset condition. This information provides the foundation for other sections of the asset management plan.

"Expected levels of service" compares the current level of service provided by the Town to the level of service determined to be expected in each area. This analysis combines both descriptions/comments as well as performance measures in establishing service levels.

The "asset management strategy" provides a long term operating and capital forecast for asset related costs, indicating the requirements for maintaining, rehabilitating, replacing/disposing and expanding the Town's assets, while moving towards the specified expected levels of service identified above. The goal of the asset management strategy is to have the Town in (or moving towards) a sustainable asset management position over the forecast period.

The "financing strategy" identifies a funding plan for the asset management strategy, including a review of historical results and recommendations with respect to the required amounts and types of funding (revenue) annually. Also, any infrastructure funding deficits/shortfalls are identified and recommendations are made regarding potential approaches to reduce and mitigate the shortfall over the forecast period.

Overall, this asset management plan is a tool to be used by Town staff for capital and financial decision making. It can be tied to various existing reports (such as the Town's budget, official plan and strategic planning reports) to ensure the asset management plan can be updated to reflect any changes in Town priorities.

1. INTRODUCTION

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1.1 Overview

The main objective of an asset management plan is to use a municipality's best available information to develop a comprehensive long term plan for capital assets. In addition, the plan should provide sound methodologies and support in order to improve the accuracy of the plan on a go forward basis.

Watson & Associates Economists Ltd. (Watson) was retained by the Town to prepare an asset management plan. This plan is intended to be a tool for Town staff to use during various decision making processes, including the annual budgeting process and capital grant application processes. This plan will serve as a road map for sustainable infrastructure planning going forward.

The following assets are included in this asset management plan:

- Roads;
- Bridges;
- Stormwater;
- Facilities;
- Land Improvements;
- Vehicles and Equipment;
- Water related (mains, facilities, vehicles and equipment); and
- Wastewater (mains, facilities, land improvements, and equipment.

The Town's goals and objectives with respect to their capital assets relate to the level of service being provided to Town residents. Services should be provided at expected levels, as defined within this asset management plan. Town infrastructure and other capital assets should be maintained at condition levels that provides a safe and functional environment for its residents. Therefore, the asset management plan and its implementation will be evaluated based on the Town's ability to meet these goals and objectives.

1.2 Plan Development

The asset management plan process developed a program that leverages the Town's asset database information, staff and engineering input and asset management principles.

The development of the Town's asset management plan was based on the steps summarized below:

1) Develop a complete listing of capital assets to be included in the plan, including attributes such as size/material type, useful life, age, accounting valuation and current valuation. Update current valuation to 2013 dollars, where required, using applicable inflationary indices.
2) Assess current condition of the assets, based on a combination of existing Town reports and an age analysis.
3) Assess the risk of asset failure for each asset, based on determining the probability of each asset failing, as well as the consequence of the asset failing. This risk analysis identifies priority projects for inclusion in the asset management plan, as well as asset risk levels that require mitigation.
4) Determine and document current levels of service, as well as expected levels of service, based on discussions with Town staff.
5) Prepare an asset management strategy (i.e. operating and capital forecast) based on the asset inventory, identified priorities, forecast scenarios, and level of service analysis discussed above.
6) Determine a financing strategy to support asset management strategy, thus determining how the operating and capital related expenditure forecast will be funded over the period.
7) Prepare a comprehensive Asset Management Plan final report.

1.3 Maintaining the Asset Management Plan

The asset management plan should be updated as the capital needs and priorities of the Town change. This can be accomplished in conjunction with the Town's budget process. Town staff will have the tools available to perform updates to the plan when needed.

When updating the asset management plan, note that the state of local infrastructure, expected levels of service, asset management strategy and financing strategy are integrated and impact each other. Looking at these components in reverse order, the financing strategy outlines how the asset management strategy will be funded. The asset management strategy illustrates the costs required to maintain expected levels of service at a sustainable level. The expected levels of service component summarizes and links each service area to specific assets contained in the state of local infrastructure section and thus determines how these assets will be used to provide expected service levels.

While this report covers a forecast period of 20 years, the full lifecycle of the Town's assets was considered in the calculations. It is suggested that more focus and attention be put on the first 5 years of the asset management plan, to ensure accurate capital planning in the short term.

1.4 Plan Integration

The municipal environment is a continually changing and demanding environment when it comes to legislation and other responsibilities. Integrating the asset management plan with the Town's budget process as well as Public Sector Accounting Board Section 3150 (PSAB 3150) requirements can make updates in all three areas more efficient.

With respect to integrating the Town's budget process with asset management planning, both require a projection of capital and operating costs of a future period. The budget outlines total operating and capital requirements of the Town, while the asset management plan focuses in on specific asset related requirements. With this link to the annual budget, the budget update process can become an asset management plan update process.

Both asset management and PSAB 3150 require a complete and accurate asset inventory. The significant difference between the two lies in valuation approaches; PSAB 3150 requires historical cost valuation, while asset management requires future replacement cost valuation. Using a single asset inventory containing both valuation methods is an effective approach to maintaining the Town's asset data.

Further integration into other Town financial/planning documents would assist in ensuring the ongoing accuracy of the asset management plan, as well as the integrated financial/planning documents. The asset management plan has been developed to allow linkages to documents such as:

- Development Charge Background Study;
- Official Plan;
- Strategic Planning Reports;
- Fiscal Impact/Operating Studies; and
- Insurance valuations and records.

2. STATE OF LOCAL INFRASTRUCTURE

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2.1 Scope and Process

This section of the plan provides an opportunity to develop a greater understanding of the capital assets owned by the Town. The state of local infrastructure analysis includes:

- An asset database documenting asset types, sub-types including quantities, materials and other similar asset attributes;
- Financial accounting valuation (where available);
- Replacement cost valuation;
- Asset age distribution analysis and asset age as a proportion of expected useful life;
- Asset condition information;
- Data Verification and Asset Condition policies; and
- Documentation of assumptions made in creating the asset inventory.

The Town has a detailed inventory listing, created for PSAB 3150 purposes. This asset inventory is updated annually and was used as a starting point in fulfilling the requirements of this report. This inventory provides current financial account valuations (i.e. historical cost, accumulated amortization and net book value) as well as attributes such as useful life and age. With respect to replacement cost, historical costs were generally inflated in order to estimate current 2013 replacement costs. For roads, storm, water, and wastewater assets, replacement costs were provided by CJDL Consulting Engineers.

The following data and reports were used to supplement the Town's asset inventory during this process:

a) Roads, Storm, Water, and Wastewater condition, valuation and priorities (CJDL Consulting Engineers);
b) 2012 Facility Condition Assessments;
c) 2011 Water and Wastewater Rate Study; and
d) Discussions with Town staff.

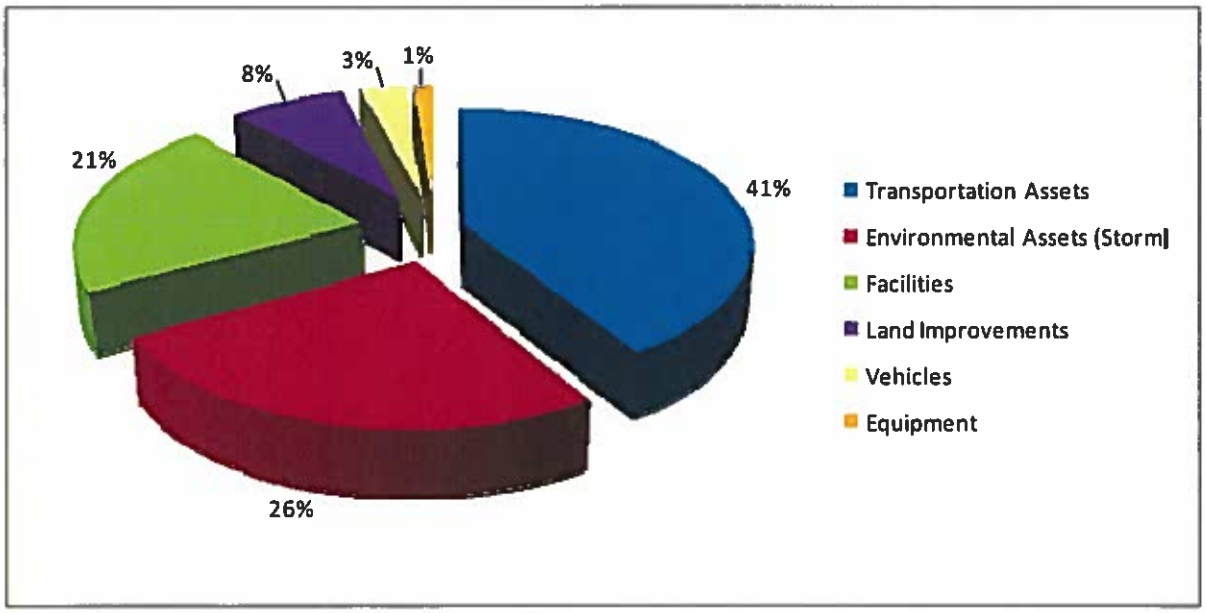
2.2 Capital Asset Overview

The Town presently owns and manages tax supported capital assets with a 2013 replacement value of approximately $105.4 million (excluding land assets as they are not included in this plan). Table 2-1 outlines the breakdown of these totals and Figure 2-1 illustrates the breakdown.

Table 2-1
2013 Tax Supported Assets

Asset Type	Historical Cost 12/31/2012	Accumulated Amortization 13/31/2012	Net Book Value 12/31/2012	Replacement Cost 2013$
Transportation Assets	15,718,845	5,786,459	9,932,386	43,444,633
Environmental Assets (Storm)	9,458,000	2,576,781	6,881,219	27,087,328
Facilities	14,200,307	2,658,036	11,542,271	22,596,367
Land Improvements	2,240,820	728,365	1,512,455	7,952,665
Vehicles	1,983,742	1,452,341	531,400	3,121,595
Equipment	856,474	411,381	445,093	1,205,487
Total Tax Supported Assets	**$ 44,458,188**	**$ 13,613,364**	**$ 30,844,824**	**$ 105,408,075**

Figure 2-1
2013 Tax Supported Assets Distribution
Based on Replacement Cost

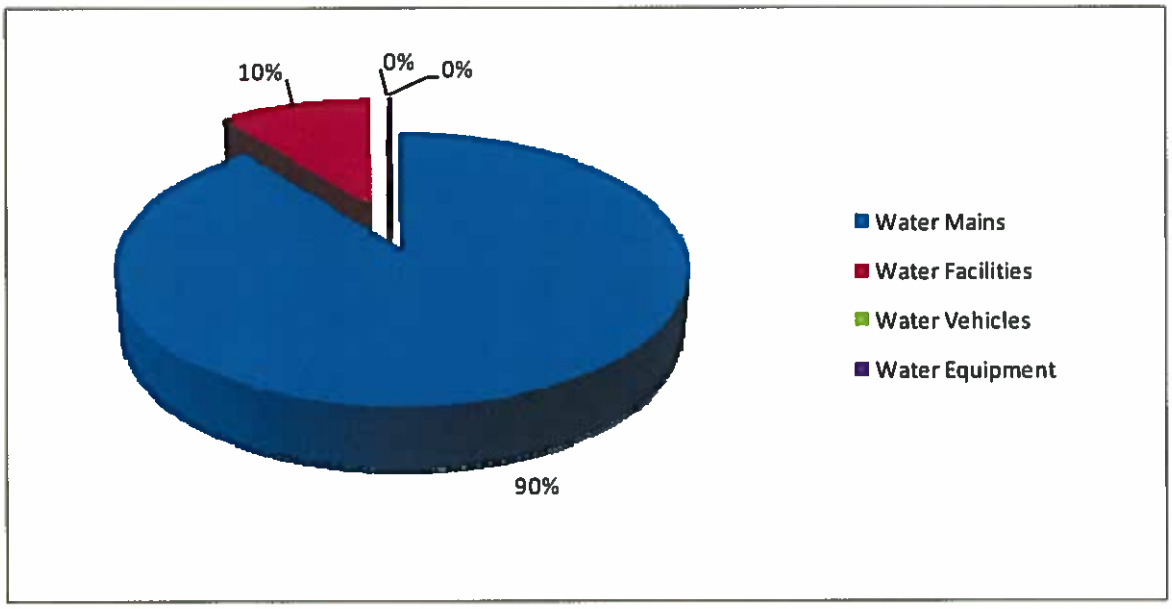


The Town presently owns and manages water capital assets with a 2013 replacement value of approximately $33.5 million (excluding land assets as they are not included in this plan). Table 2-2 outlines the breakdown of these totals and Figure 2-2 illustrates the breakdown.

Table 2-2
2013 Water Assets

Asset Type	Historical Cost 12/31/2012	Accumulated Amortization 13/31/2012	Net Book Value 12/31/2012	Replacement Cost 2013$
Water Mains	10,458,905	2,328,337	8,130,568	30,091,606
Water Facilities	1,388,351	825,443	562,908	3,382,330
Water Vehicles	28,790	25,451	3,340	33,548
Water Equipment	37,895	8,708	29,187	39,413
Total Water Assets	**$ 11,913,940**	**$ 3,187,938**	**$ 8,726,002**	**$ 33,546,898**

Figure 2-2
2013 Water Assets Distribution
Based on Replacement Cost

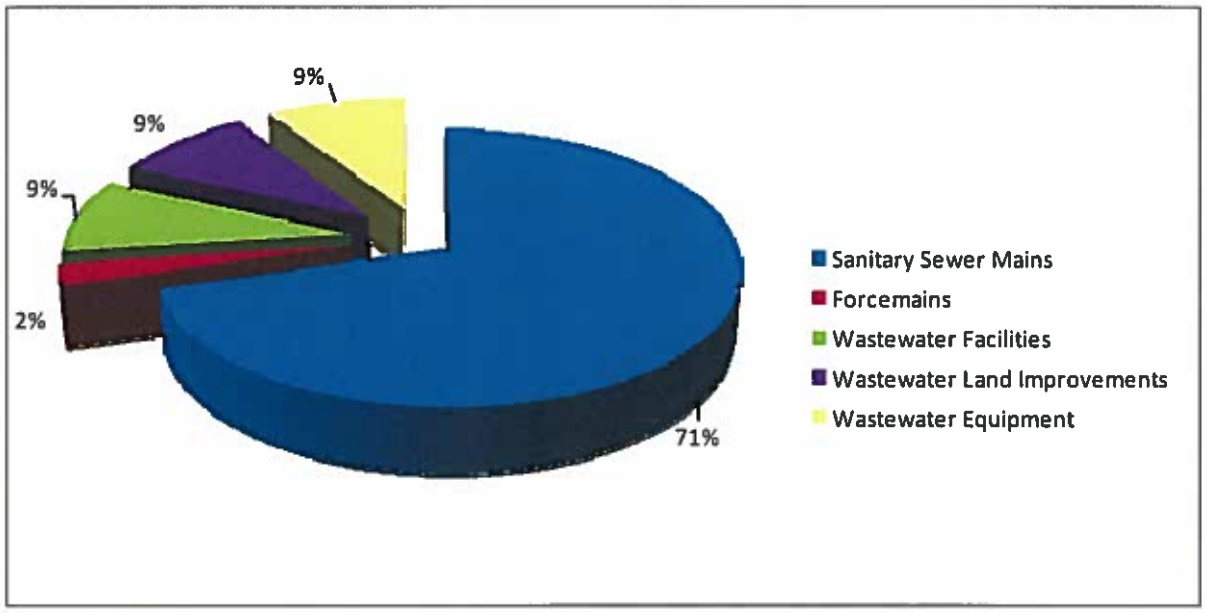


The Town presently owns and manages wastewater capital assets with a 2013 replacement value of approximately $47 million (excluding land assets as they are not included in this plan). Table 2-3 outlines the breakdown of these totals and Figure 2-3 illustrates the breakdown.

Table 2-3
2013 Wastewater Assets

Asset Type	Historical Cost 12/31/2012	Accumulated Amortization 13/31/2012	Net Book Value 12/31/2012	Replacement Cost 2013$
Sanitary Sewer Mains	9,481,495	2,603,286	6,878,209	33,168,696
Forcemains	258,978	124,994	133,984	1,097,750
Wastewater Facilities	2,343,354	1,385,523	957,831	4,150,425
Wastewater Land Improvements	2,282,577	1,217,864	1,064,713	4,267,715
Wastewater Equipment	2,520,995	1,312,069	1,208,926	4,294,434
Total Wastewater Assets	**$ 16,887,399**	**$ 6,643,736**	**$ 10,243,664**	**$ 46,979,020**

Figure 2-3
2013 Wastewater Assets Distribution
Based on Replacement Cost



Tables 2-1, 2-2 and 2-3 also shows the Town's financial accounting valuation summary by asset type. Since 2009, the Town has been required under the PSAB 3150 to maintain asset listings complete with historical cost (i.e. the original cost to purchase or construct an asset), accumulated amotization and net book value. These values are reported on the Town's audited financial statements each year.

The detailed capital asset inventory is contained in Appendix A. Assumptions pertaining to the asset inventory were documented as part of the asset management process are shown in Appendix B.

2.3 Asset Age Analysis

Each asset is tracked based on estimated total useful life and remaining service life. Using this information, an age analysis of the Town's assets can assist in identifying potential areas of focus for the asset management plan.

Table 2-4 provides an age analysis summary, including the weighted (based on replacement cost) average useful life and weighted average remaining useful life for all of the assets included in this plan. This analysis can assist in identifying potential short-term priorities within specific asset areas.

Table 2-4
Asset Age Analysis

Infrastructure - Transportation and Environmental

Asset Type	Weighted Average (rounded)		
	Useful Life	Remaining Life	% of Remaining Useful Life
Transportation			
Roadwork	52	24	46.2%
Bridges	69	19	27.5%
Environmental			
Storm Sewer	80	50	62.5%

Facilities and Land Improvements

Asset Type	Weighted Average (rounded)		
	Useful Life	Remaining Life	% of Remaining Useful Life
Facilities			
General Government	49	41	83.7%
Planning and Development	50	30	60.0%
Protection Services	47	38	80.9%
Recreation and Cultural Services	48	32	66.7%
Transportation Services	50	0	0.0%
Land Improvements			
Recreation and Cultural Services	7	1	14.3%
Transportation Services	25	11	44.0%
Storm Land Improvements	77	69	89.6%

Vehicles, Machinery and Equipment

Asset Type	Weighted Average (rounded)		
	Useful Life	Remaining Life	% of Remaining Useful Life
Vehicles			
Planning and Development	10	6	60.0%
Protection Services	23	4	17.4%
Recreation and Cultural Services	10	4	40.0%
Transportation Services	10	1	10.0%
Machinery and Equipment			
General Government	7	1	14.3%
Protection Services	2	1	50.0%
Recreation and Cultural Services	18	8	44.4%
Transportation Services	20	17	85.0%

Wastewater

Asset Type	Weighted Average (rounded)		
	Useful Life	Remaining Life	% of Remaining Useful Life
Sanitary Sewer Mains	82	49	59.8%
Forcemains	72	27	37.5%
Wastewater Facilities	38	22	57.9%
Wastewater Land Improvements	45	19	42.2%
Wastewater Equipment	44	20	45.5%

Water

Asset Type	Weighted Average (rounded)		
	Useful Life	Remaining Life	% of Remaining Useful Life
Water Mains	100	67	67.0%
Water Facilities	45	18	40.0%
Water Vehicles	10	1	10.0%
Water Equipment	11	8	72.7%

Total useful life and remaining service life for each capital asset is documented in Appendix A.

While this analysis can be useful in looking at the overall age characteristics of specific asset areas, asset condition (see below) will assist in providing a more accurate assessment of assets reaching the end of their useful life.

2.4 Asset Condition

Including condition assessments in the asset management plan provides for a higher level of accuracy than simply relying on useful life assumptions, especially when it comes to older, highly used or more financially significant assets. Condition assessments can provide more realistic estimates of remaining service life, which can then be used to establish rehabilitation or replacement schedules.

Condition ratings (out of a score of 5) were derived from a combination of available studies, assigned condition ratings by Town staff and the age analysis. These ratings were then reviewed and revised, where required, by Town staff. This rating was then converted to a condition rating and a condition description (provided by Town staff), as shown in Table 2-5 below.

Table 2-5
Asset Condition Format – All Assets

Condition Ranking	Condition Rating	Condition Description
1	A	The Asset and its components are functioning as intended; limited (if any) deterioration observed on major systems.
2	B	The asset and its components are functioning as intended; for most infrastructure assets, this would suggest that no maintenance is anticipated within the next five years.
3	C	The asset and its components are functioning as intended; normal deterioration and minor distress observed; maintenance will be required within the next five years to maintain functionality.
4	D	The asset and its components are not functioning as intended; significant deterioration and distress observed; maintenance and some repair required within the next year to restore functionality.
5	E	The asset and its components are not functioning as intended; significant deterioration and major distress observed, possible damage to support structure; may present a risk to people or materials; must be dealt with without delay.

A high level summary of the weighted average condition in each asset category is as follows:

Table 2-6
Weighted Average Condition by Asset Category

Infrastructure - Transportation and Environmental

Asset Type	Weighted Condition
Transportation	
Roadwork	C
Bridges	B
Environmental	
Storm Sewer	B

Facilities and Land Improvements

Asset Type	Weighted Condition
Facilities	
General Government	A
Planning and Development	D
Protection Services	B
Recreation and Cultural Services	A
Transportation Services	E
Land Improvements	
Recreation and Cultural Services	A
Transportation Services	C
Storm Land Improvements	A

Vehicles, Machinery and Equipment

Asset Type	Weighted Condition
Vehicles	
Planning and Development	B
Protection Services	C
Recreation and Cultural Services	B
Transportation Services	B
Machinery and Equipment	
General Government	C
Protection Services	A
Recreation and Cultural Services	B
Transportation Services	A

Wastewater

Asset Type	Weighted Condition
Sanitary Sewer Mains	B
Forcemains	B
Wastewater Facilities	C
Wastewater Land Improvements	C
Wastewater Equipment	C

Water

Asset Type	Weighted Condition
Water Mains	C
Water Facilities	B
Water Vehicles	C
Water Equipment	A

Further discussion of condition assessments will take place in Chapter 4 when assessing asset risk and identifying asset priorities. Furthermore, detailed asset conditions are documented in Appendix A to this report. It is recommended that these condition assessments be updated as new information becomes available. Please see section 2.5 for further details.

2.5 Data Accuracy and Completeness

An important element of this asset management plan is ensuring that tools and procedures are in place to maintain accuracy and completeness of the asset data and calculations moving forward. As time passes, assets are used, maintained, improved, disposed of, and replaced. All of these lifecycle events can trigger changes to the asset database used within the asset management plan. Therefore, tools and procedures are essential to ensure the asset data remains accurate and complete. Please refer to Appendix C to this report for the "Data Verification and Condition Assessment Policy" for the Town. This policy illustrates how the asset data will be updated and verified going forward. This includes the timing of condition assessments for each asset area, as well as what should be included within the condition assessment procedures.