TOWN OF COBOURG

ASSET MANAGEMENT PLAN

TRANSPORTATION, FACILITIES, STORMWATER, WATER AND WASTEWATER ASSETS

DRAFT: For Discussion Purposes

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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 Cobourg (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 Town'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:

- Road related (roads, sidewalks, lighting, bridges and culverts);
- Stormwater related (mains, facilities, catch basins and leads);
- Facilities;
- Water related (mains and facilities); and
- Wastewater (mains, man holes and facilities).

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 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 valuation to current dollars, where required, using applicable inflationary indices.

2) Assess current condition of the assets, based on a combination of existing Town reports and an asset 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 Town's capital forecast, as well as high risk assets 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 specific asset legislative requirements as well as 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 defined forecast period, 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;
- Water and Wastewater Rate Study;
- 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 both capital planning and 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 inflated to current dollars where replacement costs were not provided by Town staff. Appendix B contains the assumptions made while completing the asset management plan.

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

a) Bridge condition data;
b) Documents and data for water from Lakefront Utility Services Inc. (LUSI);
c) 2011 Development Charge Study Final Report; and
d) Discussions with Town staff.

In addition, a water and wastewater rate study was performed in conjunction with this asset management plan (under a separate memorandum report, dated January 20, 2014).

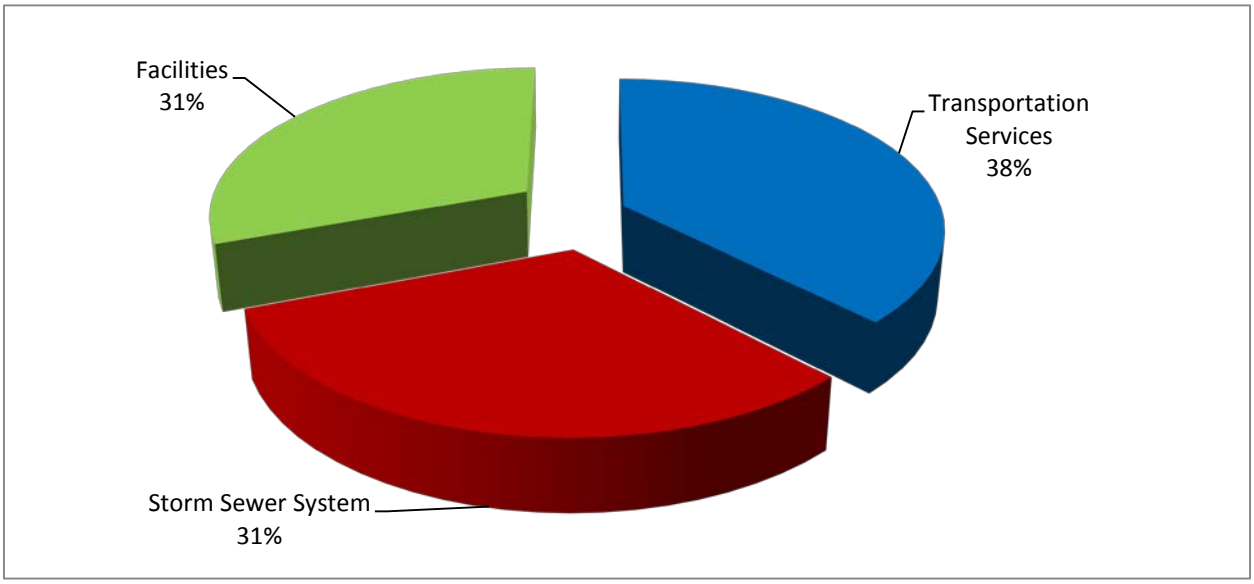
2.2 Capital Asset Overview

The Town presently owns and manages tax supported capital assets with a 2014 replacement value of approximately $221.58 million (excluding vehicles, machinery and equipment, land improvements and 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
2014 Tax Supported Assets

Asset Type	Historical Cost 12/31/2012	Accumulated Amortization 12/31/2012	Net Book Value 12/31/2012	Replacement Cost 2014$
Transporation Services	30,196,092	11,458,489	18,737,603	83,441,646
Storm Sewer System	29,104,508	6,887,630	22,216,879	70,028,255
Facilities	39,595,531	6,027,564	33,567,967	68,111,539
Total Tax Supported Capital Assets	$ 98,896,132	$ 24,373,683	$ 74,522,448	$ 221,581,440

Figure 2-1
2014 Tax Supported Assets Distribution
Based on Replacement Cost

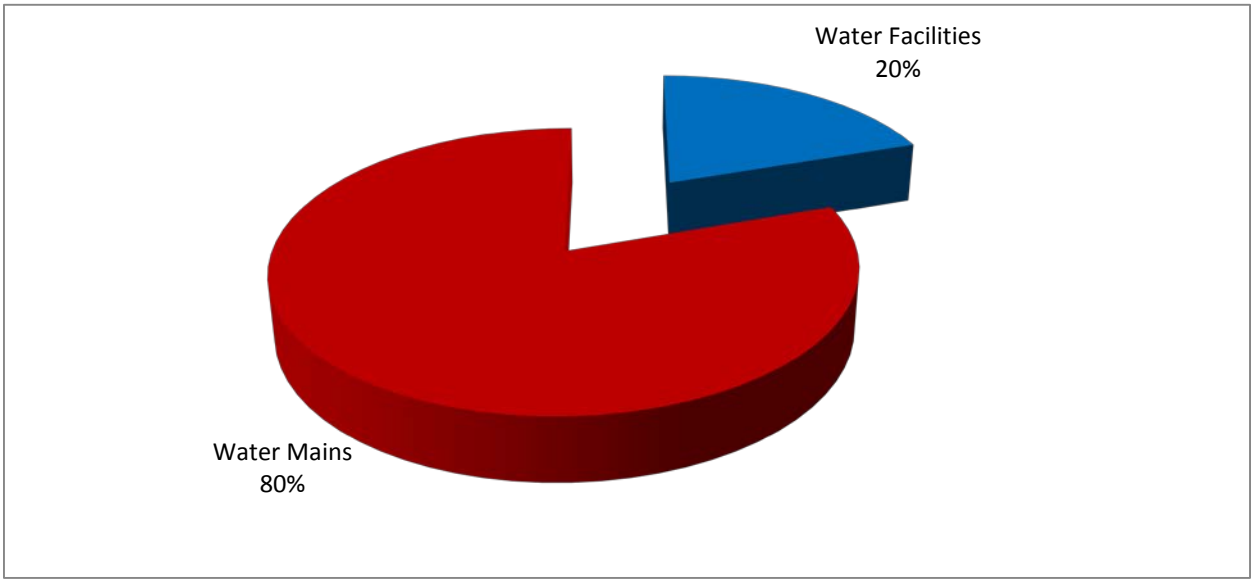


The Town presently owns and manages water capital assets with a 2014 replacement value of approximately $75.4 million (excluding vehicles, machinery and equipment, land improvements and land assets as they are not included in this plan). Table 2-2 outlines the breakdown of these totals and Figure 2-2 illustrates the breakdown.

Table 2-2
2014 Water Assets

Asset Type	Historical Cost 12/31/2012	Accumulated Amortization 12/31/2012	Net Book Value 12/31/2012	Replacement Cost 2014$
Facilities	1,505,135	674,662	830,473	14,872,513
Mains	30,983,718	13,277,812	17,705,906	60,561,329
Total Water Capital Assets	$ 32,488,853	$ 13,952,474	$ 18,536,379	$ 75,433,842

Figure 2-2
2014 Water Assets Distribution
Based on Replacement Cost

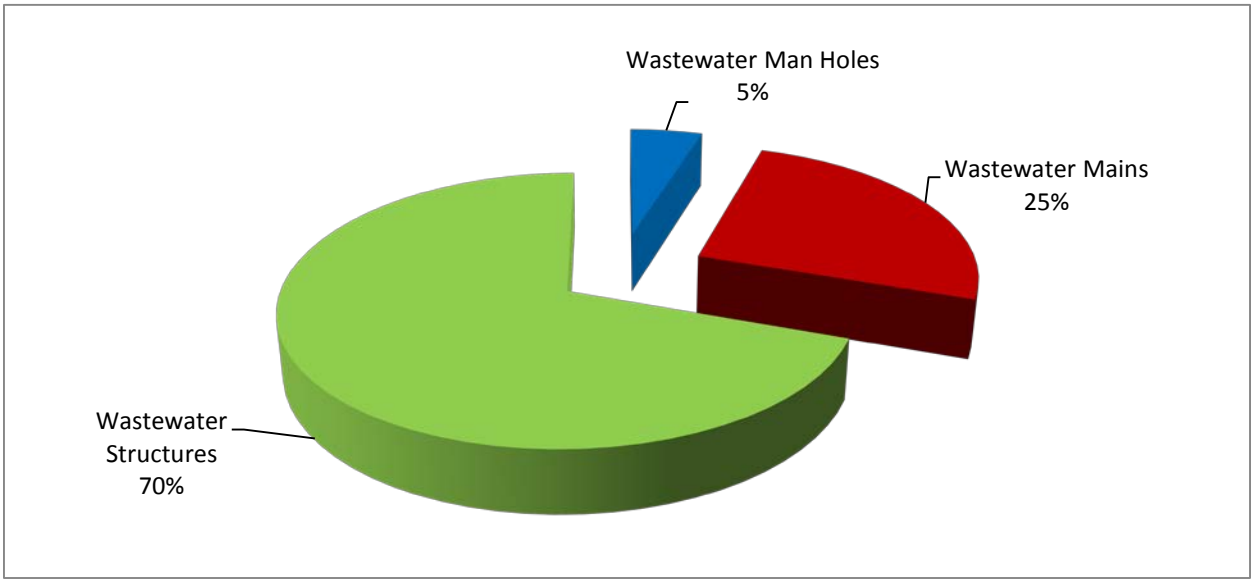


The Town presently owns and manages wastewater capital assets with a 2014 replacement value of approximately $140.2 million (excluding vehicles, machinery and equipment, land improvements and land assets as they are not included in this plan). Table 2-3 outlines the breakdown of these totals and Figure 2-3 illustrates the breakdown.

Table 2-3
2014 Wastewater Assets

Asset Type	Historical Cost 12/31/2012	Accumulated Amortization 12/31/2012	Net Book Value 12/31/2012	Replacement Cost 2014$
Man Holes	2,265,680	585,547	1,680,133	6,781,523
Mains	11,129,324	3,080,916	8,048,408	35,829,424
Structures	35,636,233	15,590,990	20,045,243	97,584,169
Total Wastewater	$ 49,031,237	$ 19,257,453	$ 29,773,784	$ 140,195,116

Figure 2-3
2014 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 PSAB 3150 to maintain asset listings complete with historical cost (i.e. the original cost to purchase or construct an asset), accumulated amortization and net book value. These values are reported on the Town's audited financial statements each year.

It is recommended at that vehicles, machinery and equipment and land improvements capital assets be added to this plan in the future, so that all capital assets managed by the Town are included in the analysis.

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 (Tax Supported)

Asset Type	Weighted (rounded)		
	Useful Life	Remaining Useful Life	% Useful Life Remaining
Transportation Services			
Road Base Granular A and B	80	50	62.5%
Road Surface HL3	25	4	16.0%
Road Surface HL4	40	13	32.5%
Road Surface HL8	40	6	15.0%
Sidewalks	25	6	24.0%
Bridge Structure	70	40	57.1%
Bridge Deck	30	7	23.3%
Traffic Control Signals	20	5	25.0%
Storm Sewer System			
Mains	80	52	65.0%
Structures	38	7	18.4%

Facilities

Asset Type	Weighted (rounded)		
	Useful Life	Remaining Useful Life	% Useful Life Remaining
General Government	64	35	54.7%
Fire	59	34	57.6%
Police	52	44	84.6%
Roadways	52	22	42.3%
Recreation	60	44	73.3%
Parks	65	35	53.8%

Water

Asset Type	Weighted Average (rounded)		
	Useful Life	Remaining Useful Life	% Useful Life Remaining
Facilities	41	16	39.3%
Mains	61	25	41.2%

Wastewater

Asset Type	Weighted Average (rounded)		
	Useful Life	Remaining Useful Life	% Useful Life Remaining
Mains	80	44	55.0%
Structures	52	23	44.2%

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 were derived from a combination of ratings provided by available studies (listed in section 2.1), data provided by Town, data provided by LUSI staff and an asset age analysis. A rating of 10 represents an asset in very good condition while a rating of 1 represents an asset in very poor condition. A high level summary of the weighted average condition in each asset category is as follows:

Table 2-5
Weighted Average Condition by Asset Category

Infrastructure (Tax Supported)

Asset Type	Weighted Condition
Transportation Services	
Road Base Granular A and B	7
Road Surface HL3	6
Road Surface HL4	6
Road Surface HL8	9
Sidewalks	4
Bridge Structure	6
Bridge Deck	8
Traffic Control Signals	3
Storm Sewer System	
Mains	7
Structures	2

Facilities

Asset Type	Weighted Condition
General Government	5
Fire	5
Police	8
Roadways	4
Recreation	7
Parks	5

Water

Asset Type	Weighted Condition
Facilities	4
Mains	3

Wastewater

Asset Type	Weighted Condition
Mains	7
Structures	4

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. As some condition assessments are currently based on the age of the assets, 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.

3. EXPECTED LEVELS OF SERVICE

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3.1 Scope and Process

A level of service (LOS) analysis gives the Town an opportunity to document the level of service that is currently being provided and compare it to the level of service that is expected. This can be done through a review of current practices and procedures, an examination of trends or issues facing the Town, or through an analysis of performance measures and targets that staff can use to measure performance.

Expected LOS can be impacted by a number of factors, including:

- Legislative requirements;
- Strategic planning goals and objectives;
- Resident expectations;
- Council or Town staff expectations; and
- Financial or resource constraints.

The previous task of determining the state of the Town's local infrastructure establishes the asset inventory and condition, as well as asset management policies and principles to guide the refinement and upkeep of asset infrastructure. The LOS analysis will utilize this information and factors in the impact of asset service level targets. It is important to document an expected LOS that is realistic to the Town. It is common to strive for the highest LOS, however these service levels usually come at a cost. It is also helpful to consider the risk associated with a certain LOS. Therefore, expected LOS should be determined in a way that balances both level of investment and associated risk to the Town.

3.2 Current Levels of Service versus Expected Levels of Service

The Town's current LOS has resulted in the current state of infrastructure discussed in chapter 2. The current LOS also relates to the risk assessment discussed in later report sections. Regarding the cost of LOS, the Town has established an operating and capital budget for the current year that includes the cost of providing this LOS to residents.

Therefore in moving from the current LOS to an expected LOS, consideration has to be made for the associated cost (or impact on the Town's current budget). The table below outlines broad LOS descriptions (both current and expected LOS). This analysis was documented through discussions with Town staff. As this analysis relates to services that are guided by legislative requirements and standards (i.e. roads, water and wastewater), the current and expected LOS are similar.

Table 3-1
Level of Service Analysis

Roads Related

Department	Level of Service Description	
	Current	Expected
Public Works	Meet "Minimum Maintenance Standards" as defined by Ontario Regulation 239/02.	Meet "Minimum Maintenance Standards" as defined by Ontario Regulation 239/02.
Public Works	Maintain adequate road condition ratings.	Maintain adequate road condition ratings.
Public Works	Road Maintenance/Rehabilitation Program based on current funding availability.	Proactive Road Maintenance/Rehabilitation Program.

Bridges

Department	Level of Service Description	
	Current	Expected
Public Works	Maintain adequate condition and load limits.	Maintain adequate condition and load limits.
Public Works	Proactive Bridge and Culvert maintenance and rehabilitation.	Proactive Bridge and Culvert maintenance and rehabilitation.
Public Works	Bridge inspections (i.e. using OSIM reports) required every 2 years.	Bridge inspections (i.e. using OSIM reports) required every 2 years.

Buildings

Department	Level of Service Description	
	Current	Expected
Various	Meet legislative requirement (Building Code, Fire Code, Accessibility, Health & Safety, etc.)	Meet legislative requirement (Building Code, Fire Code, Accessibility, Health & Safety, etc.)
Various	Condition assessments performed when needed.	Planned condition assessments, with results being incorporated into the asset management plan
Various	Proactive facility rehabilitation & maintenance.	Proactive facility rehabilitation & maintenance.
Various	Provide safe and functional buildings for Town staff and residents.	Provide safe and functional buildings for Town staff and residents.

Wastewater

Department	Level of Service Description	
	Current	Expected
Wastewater	Meet all legislative requirements.	Meet all legislative requirements.
Wastewater	Proactive maintenance procedures.	Proactive maintenance procedures.
Wastewater	Minimize wastewater main backups.	Minimize wastewater main backups.
Wastewater	Full cost recovery rates, calculation through a Rate Study, as needed.	Full cost recovery rates, calculation through a Rate Study, as needed.

Water

Department	Level of Service Description	
	Current	Expected
Water	Meet all legislative requirements.	Meet all legislative requirements.
Water	Proactive maintenance procedures.	Proactive maintenance procedures.
Water	Minimize water main breaks.	Minimize water main breaks.
Water	Full cost recovery rates, calculation through a Rate Study, as needed.	Full cost recovery rates, calculation through a Rate Study, as needed.

Please refer to Appendix D of this report for a table summarizing the estimated budget impacts associated with implementing the expected LOS over the forecast period. This impact analysis will be factored into the asset management strategy discussed in chapter 4 of this report.

3.3 Level of Service Performance Measures

As mentioned above, using performance measures in the LOS review can also be helpful in measuring the Town's goals and objectives when it comes to asset management. The Town currently tracks specific performance measures as part of the Municipal Performance Measurement Program (MPMP) which the province has in place as part of the annual Financial Information Return (FIR) submission. The FIR provides the annual financial results of the Town, while the MPMP provides an evaluation of the Town's "performance". The following table provides a summary of the specific MPMPs relating to capital asset effectiveness.

Table 3-2
Performance Measures Analysis

Department	Assets	Performance Measure Description	Historical Performance			Goal
			2011	2012	2013	
Transportation	Roads	Percentage of paved lane km where condition is rated as good to very good	100.00%	100.00%	100.00%	Maximize
Transportation	Bridges & Culverts	Percentage of bridges & culverts where condition is rated as good to very good	100.00%	100.00%	100.00%	Maximize
Transportation	Roads	Percentage of winter events where response met or exceeded local service levels	100.00%	100.00%	100.00%	Maximize
Wastewater	Wastewater Mains	Number of wastewater main backups per 100 km of mains	5.4945	5.9406	-	Minimize
Wastewater	Buildings	Percentage of wastewater estimated to have by-passed treatment	0.00%	0.00%	0.00%	Minimize
Water	Water Mains	Weighted # days when a boil water advisory was issued	-	-	-	Minimize
Water	Water Mains	Number of water main breaks per 100 km of pipe	7.8125	3.8760	5.1852	Minimize
Recreation & Culture	Buildings	Participant hours for recreation programs per 1,000 persons	2,591.9330	2,618.9320	975.9170	Maintain or Increase
Library	Buildings	Total library uses per person	22.9020	26.2180	27.2620	Maintain or Increase

The Town will continue to calculate and monitor these performance measures, both for MPMP and asset management purposes. As the Town's asset management plan evolves over time, new performance measures can be introduced to further measure the LOS being provided in each service area.

4. ASSET MANAGEMENT STRATEGY

4. ASSET MANAGEMENT STRATEGY

4.1 Scope and Process

The asset management strategy provides the recommended course of actions required to maintain (or move towards) a sustainable asset funding position while delivering the expected levels of service discussed in the previous chapter. The course of actions, when combined together, form a long-term operating and capital forecast that includes:

a) Non-infrastructure solutions: reduce costs and/or extend expected useful life estimates;
b) Maintenance activities: regularly scheduled activities to maintain existing useful life levels, or repairs needed due to unplanned events;
c) Renewal/Rehabilitation: significant repairs or maintenance planned to increase the useful life of assets;
d) Replacement/Disposal: complete disposal and replacement of assets, when renewal or rehabilitation is no longer an option; and
e) Expansion: given planned growth as outlined in the Town's Development Charge Background Study, other expansion or due to the introduction of new services.

Priority identification becomes a critical process during the asset management strategy development. Priorities have been determined based on a risk assessment calculation as well as a prominence factor established by Town staff. The consequences of the Town not meeting desired levels of service must also be considered in determining risk and prominence. As discussed in chapter 3, moving to expected levels of service results in both operating and capital budget impacts over the forecast period. This has to be taken into consideration, with the overall objective of reaching sustainable levels while mitigating risk.

4.2 Risk and Prominence Factors

Asset risk and prominence play a critical role in setting capital priorities within an asset management plan. When limited financial resources are available on an annual basis, a uniform risk and prominence setting process allows a municipality to compare capital needs across service areas and departments.

Asset risk can be defined as the probability of failure multiplied by the consequence of failure. Probability of failure has been linked to the condition assessment for each of the assets, assuming that an asset with a good condition rating would have a low probability of failure. Consequence of failure refers to the impact on the Town if a particular asset were to fail. Types of impacts include the following:

- **Cost Impacts:** the cost of failure to the Town (i.e. capital replacement, rehabilitation, fines & penalties, damages, etc.);
- **Social impacts:** potential injury to residents or Town staff;

- **Environmental impacts:** the impact of the asset failure on the environment;
- **Service delivery impacts:** the impact of the asset failure on the Town's ability to provide services at desired levels; and
- **Location impacts:** the varying impact of asset failure based on the asset's location within the Town.

As mentioned above, total risk is defined by looking at both probability and consequence risk factors. As part of the priority setting exercise, Town staff should consider these risk factors while determining projects for inclusion in each annual capital budget. The ultimate goal is to mitigate higher risk assets through planned maintenance, rehabilitation or replacement.

Town staff calculate prominence factors for road related assets. These prominence factors consider variables such as:

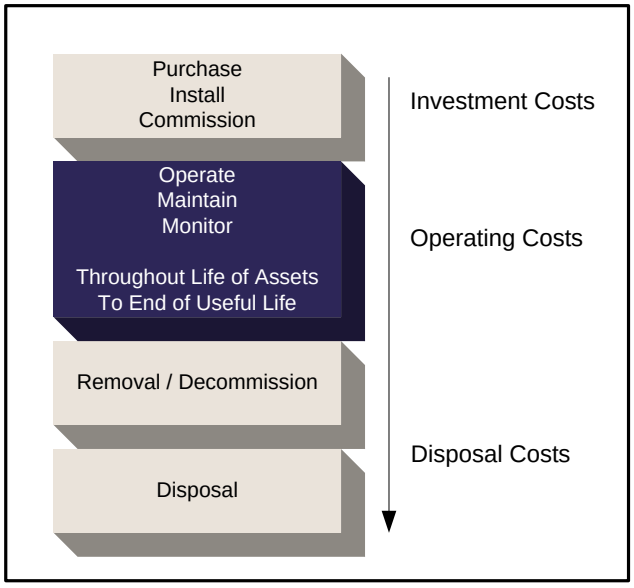
- Traffic volumes;
- Type of road (i.e. arterial)
- Alternate routes;
- Area of Town (i.e. heritage districts, commercial core, etc.); and
- Proximity to development.

Town staff use the prominence factor when selecting capital projects for inclusion in the annual budget. Please refer to Appendix A for the detailed asset listings with associated prominence factors for roads related assets.

4.3 Long-term Forecast

For many years, lifecycle costing has been used in the field of maintenance engineering and to evaluate the advantages of using alternative materials in construction or production design. The method has gained wider acceptance and have been used recently in the management of capital assets. By definition, lifecycle costs are all the costs which are incurred during the lifecycle of a capital asset, from the time it is purchased or constructed, to the time it is taken out of service for disposal. The stages which an asset goes through in its lifecycle are as follows:

Figure 4-1
Asset Lifecycle Diagram



In defining the long-term forecast for the Town's asset management strategy, costs incurred through an asset's lifecycle were considered and documented.

Asset Replacement Analysis

In forecasting the Town's asset replacement needs, comparisons were made between the following scenarios:

- *Scenario 1: Replacement forecast based on "PSAB 3150 Asset Data"*
  - Utilizing the PSAB 3150 inventory, year of installation and estimated service life, the replacement of each asset was projected.
- *Scenario 2: Replacement forecast based on "Phased-in Approach"*;
  - Adjustments were made to the first scenario to allow for a phased-in approach to capital needs. Town staff can use this scenario to prioritize projects based on individual risk assessments.

Scenario 1: Replacement forecast based on "PSAB 3150 Asset Data"

The replacement forecast based on the PSAB 3150 asset data provides a snapshot of assets at or nearing the end of their useful lives from a purely financial accounting perspective.

Figures 4-2 to 4-4 below show the forecasts over a 10 year period, where approximately $25 million (replacement cost) in tax supported capital assets, $16.4 million in water capital assets and $9.9 in wastewater capital assets are showing as "immediate needs". For this scenario, this simply means that these assets have reached the end of their accounting useful lives. Please refer to Appendix E for charts and graphs depicting the entire forecast for this scenario.

Figure 4-2
Tax Supported Capital Assets - 10 Year Forecast

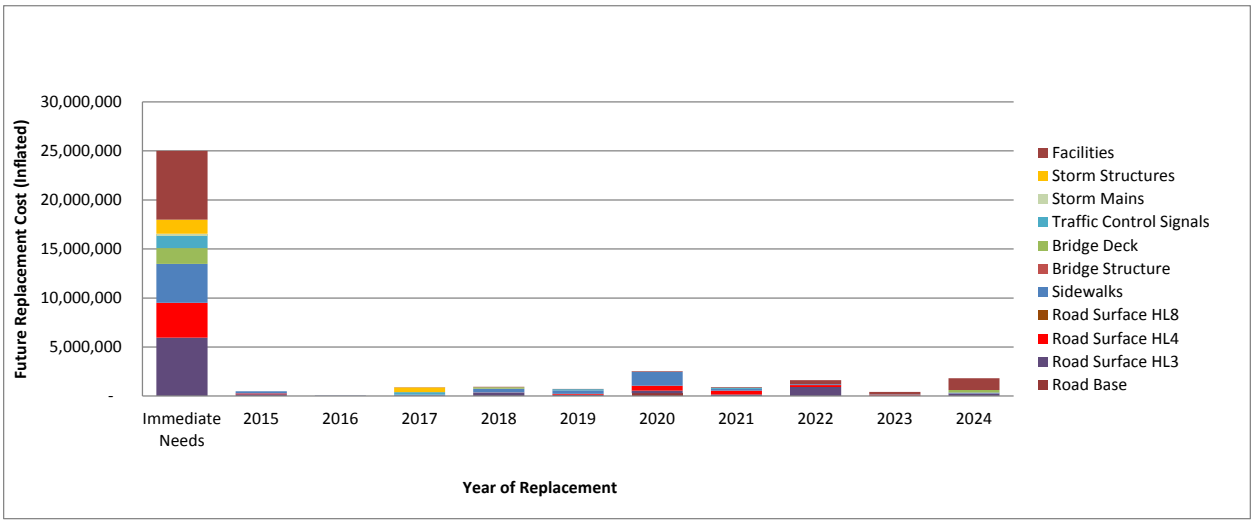


Figure 4-3
Water Capital Assets - 10 Year Forecast

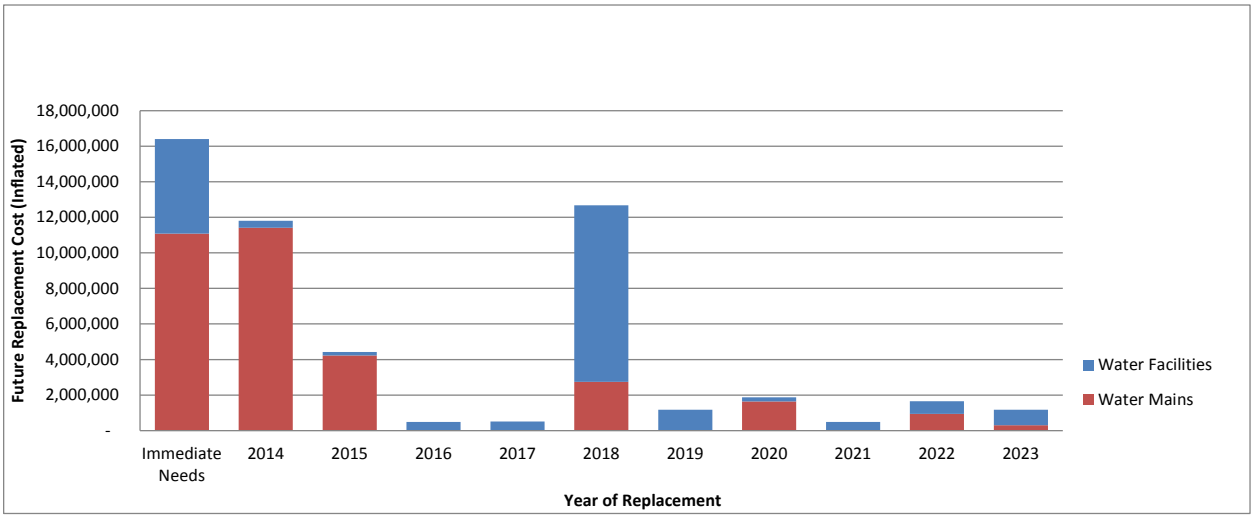
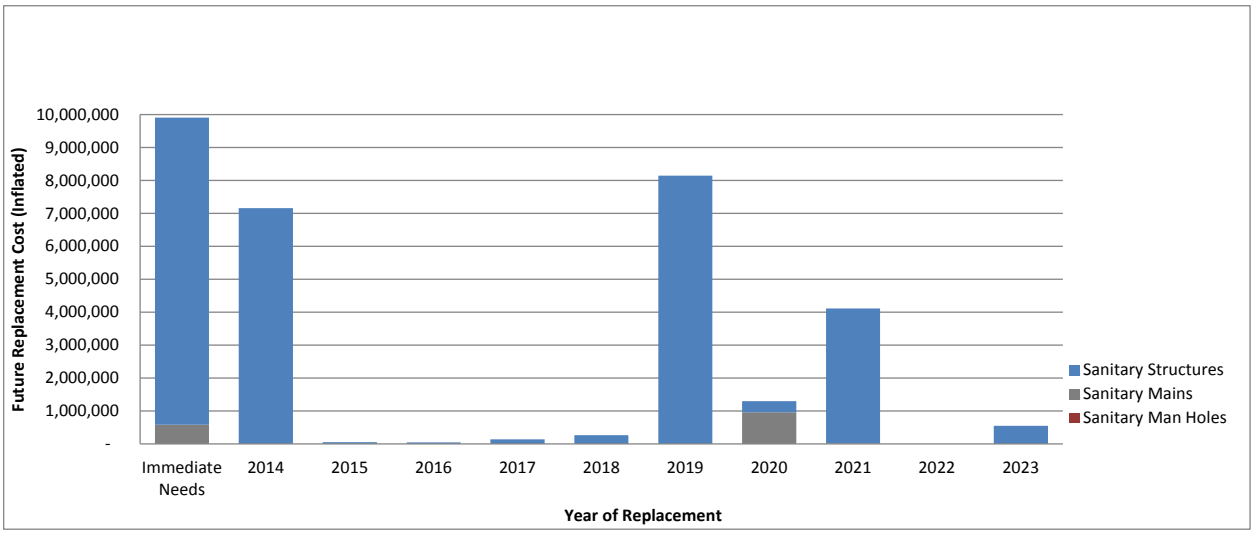


Figure 4-4
Wastewater Capital Assets - 10 Year Forecast



Scenario 2: Replacement forecast based on "Phased-In Approach"

Within this scenario, adjustments were made based on discussions with staff and items that had been identified under the previous scenario have been distributed within the forecast period. The result of these adjustments is, $0 of tax supported capital assets, water capital assets and wastewater capital assets are identified as "immediate needs". Figures 4-5 to 4-7 show the 10 year forecasts under this scenario.

This is the recommended scenario for the Town. It allows for a gradual increase in capital investments over the forecast period, with Town staff using the risk/prominence/priority rakings described in this chapter as a basis for selecting specific project timing.

Please refer to Appendix E for charts and graphs depicting the entire forecast for this scenario. A total of $31.08 million in tax supported, $31.4 million in water capital and $27.67 million in wastewater capital replacement needs are identified over the 10 year forecast period.

Included in the adjustments mentioned above, was the incorporation of the Town's proactive maintenance program for roads and bridges. This program establishes key maintenance and rehabilitation "events" within an assets useful life. Please refer to the tables below for a summary of these events. The recommendations under this capital forecast scenario include the necessary maintenance and rehabilitation needs within the level of service impact analysis (see Appendix D), which including replacement needs in Figure 4-5 below.

Maintenance, Rehabilitation and Replacement Events Schedule

Roads

Year	Event
7	Rout and Seal - Surface
14	Rout and Seal - Surface
25	Mill Top Lift of Surface Asphalt
40	Replace - Surface
47	Rout and Seal - Surface
54	Rout and Seal - Surface
65	Mill Top Lift of Surface Asphalt
80	Replace - Base and Surface

Bridges

Year	Event
25	Deck Rehabilitation
50	Deck Rehabilitation
70	Replacement - Deck and Structure

Figure 4-5
Tax Supported Capital Assets - 10 Year Forecast

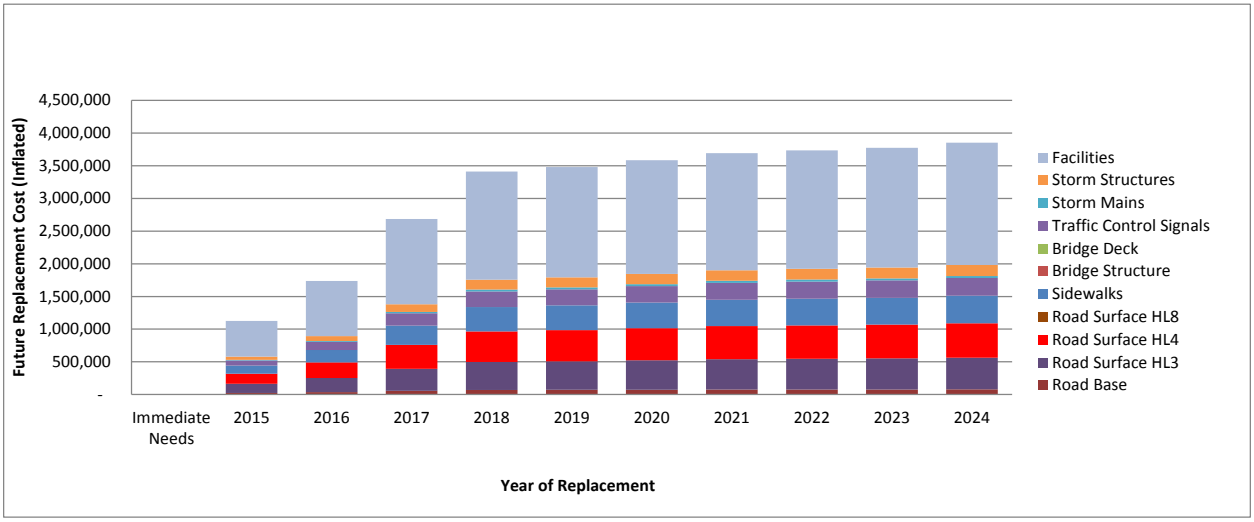
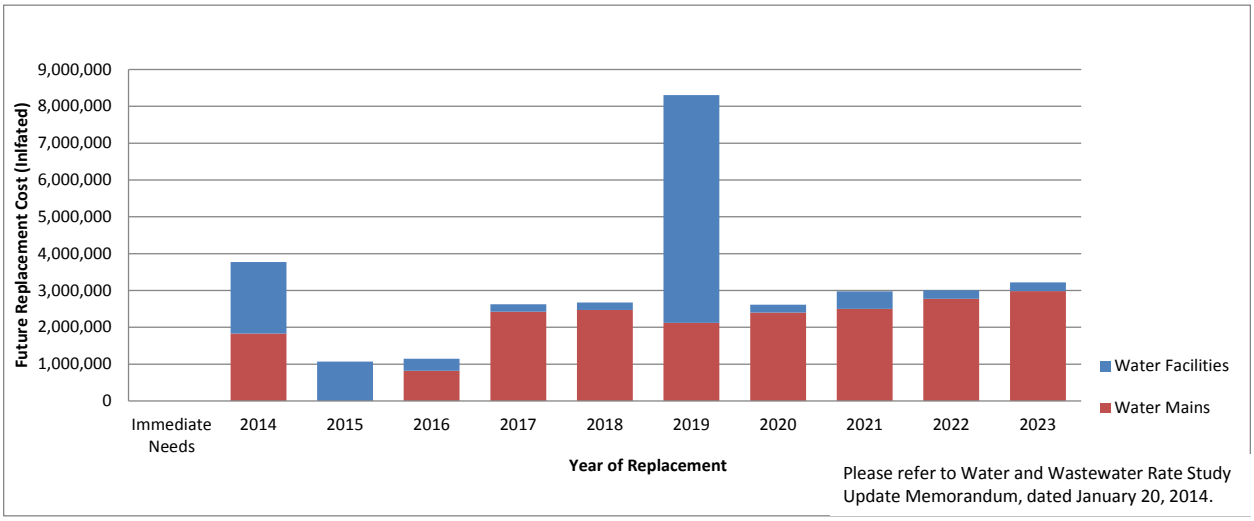
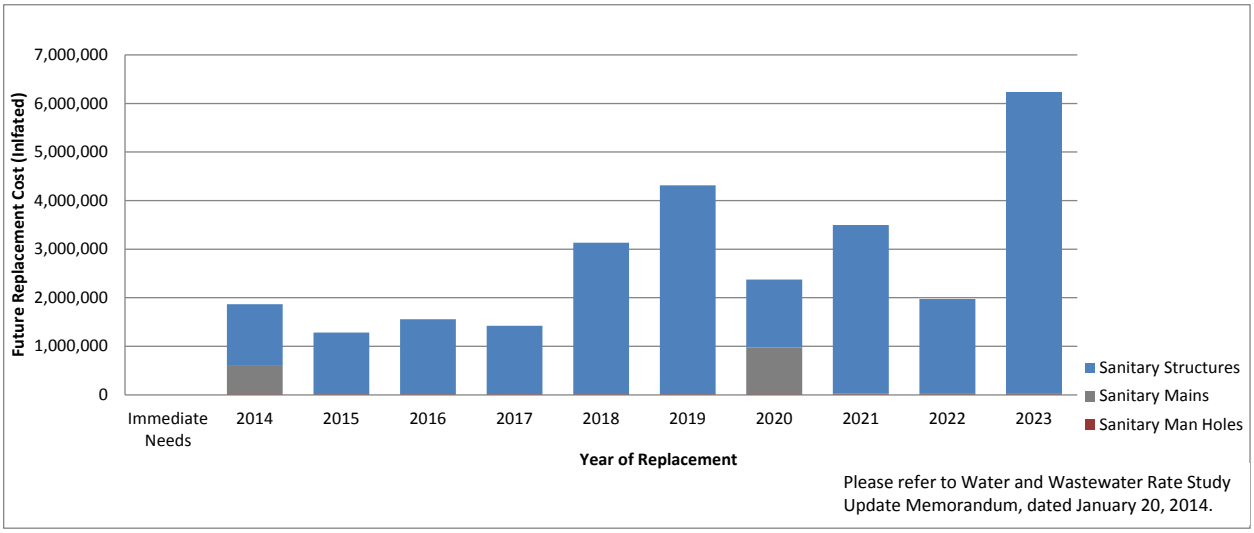


Figure 4-6
Water Capital Assets - 10 Year Forecast



Please refer to Water and Wastewater Rate Study Update Memorandum, dated January 20, 2014.

Figure 4-7
Wastewater Capital Assets – 10 Year Forecast



Maintenance, Non-Infrastructure Solutions, Renewal & Rehabilitation

For the recommended scenario to be feasible, the level of service adjustments discussed in Chapter 3 and Appendix D are required in conjunction with current level of service amounts in order to effectively maintain and rehabilitate the assets as needed. Appendix D provides additional rehabilitation and maintenance requirements over the forecast period identified through discussions with Town and LUSI staff.

The financing strategy discussed in the next Chapter will incorporate the level of service adjustments outlined in Appendix D into the recommended financing analysis. In addition, expansion related needs will be layered into the forecast to determine total capital needs for each year.

4.4 Priority Identification

Through discussions with Town staff and review of the asset risk of failure assessment, the following assets/categories were identified as being priorities of the Town:

Table 4-1
Priorities Based on Asset Risk

Area / Category	Description	Total Risk	Planned Action
Stormwater	Midtown Creek Stormwater Management System	High	Included in short-term capital
Roads	Division St/Munroe St Intersection Improvements	High	Included in short-term capital
Roads	Albert Street	High	Included in short-term capital
Roads	Queen Street	High	Included in short-term capital
Roads	D'Arcy Street	High	Included in short-term capital
Roads	Coronation Crescent	High	Included in short-term capital
Roads	Danforth Road	High	Included in short-term capital
Roads	Elgin Street East	High	Included in short-term capital
Roads	Ball Street/Furnance Street	High	Included in short-term capital
Roads	Various Sidewalk Sections	High	Included in short-term capital
Facilities	Various HVAC & Roof Replacements	High	Included in short-term capital
Storm	Pumping Station Rehabilitations	High	Included in short-term capital
Wastewater	Pumping Station Rehabilitations	High	Included in short-term capital
Wastewater	Treatment Plant Rehabilitations	High	Included in short-term capital
Water	Watermain Replacements (Pebble Beach Drive, Henry St, Walton St,	High	Included in short-term capital
Water Facilities	Filter Building Envelope Upgrades	High	Included in short-term capital
Water Facilities	Clarifier Replacement	High	Included in short-term capital

4.5 Procurement Methods

Section 270(1) of the Municipal Act, S.O. 2001, provides that municipalities (and local boards) shall adopt and maintain policies with respect to its procurement of goods and services. Procurement policies are developed to provide a framework to support open, fair, transparent and accountable purchasing processes, and to ensure procurement processes are consistently

managed. Moreover, the establishment of a by-law adopting the procurement policy provides a document which has the approval of Council, which allows an opportunity for public debate.

An effective procurement policy assists municipalities in identifying cost-effective options for providing services, while at the same time reducing risk. Innovative project management models, such as public-private partnerships (P3's) or co-operative purchasing, can help bring together expertise, resources and funding opportunities. Where appropriate, bidders can be required to provide lifecycle costing for the products and/or services being tendered. Lifecycle costs can include initial construction/purchase price, plus operating costs for a contracted period of time. Incorporating a lifecycle perspective in the procurement process can encourage effective asset management in the time period following the initial capital investment.

In order to have an effective and efficient procurement program, especially related to the purchase/construction of large capital assets, the procurement policy can include clauses to protect the Town, as well as assist in receiving competitive responses. Examples include:

- Identification of the criteria used to determine the type of competitive process to be followed (i.e. tender, RFP, RFQ);
- Identification of circumstances when Sole Sourcing, Negotiation, and/or In-House Bids can be used;
- Description of the methods to be used for advertising a competitive process;
- Providing direction for purchasing in cases of emergency;
- Providing direction for purchasing as part of a co-operative purchasing group;
- Outlining any requirements related to bid deposits or other financial security;
- Inclusion of a non-discrimination clause highlighting positions such as having a 'no local preference' policy;
- Notification that any bid can be rejected by the Town;
- Identification of reasons for terminating a contract with a supplier/contractor (i.e. poor performance, unethical behaviour);
- Identification of restrictions on the types and/or amounts of damages to which bidders may be entitled, arising from their responding to a competitive process; and
- Requirement for bidders to supply proof of insurance and WSIB.

As part of the continuous asset management update process, it is recommended that the Town's procurement policies and procedures be reviewed and compared against procurement best practices to ensure resources are being allocated in an efficient manner.

5. FINANCING STRATEGY

5. FINANCING STRATEGY

5.1 Scope and Process

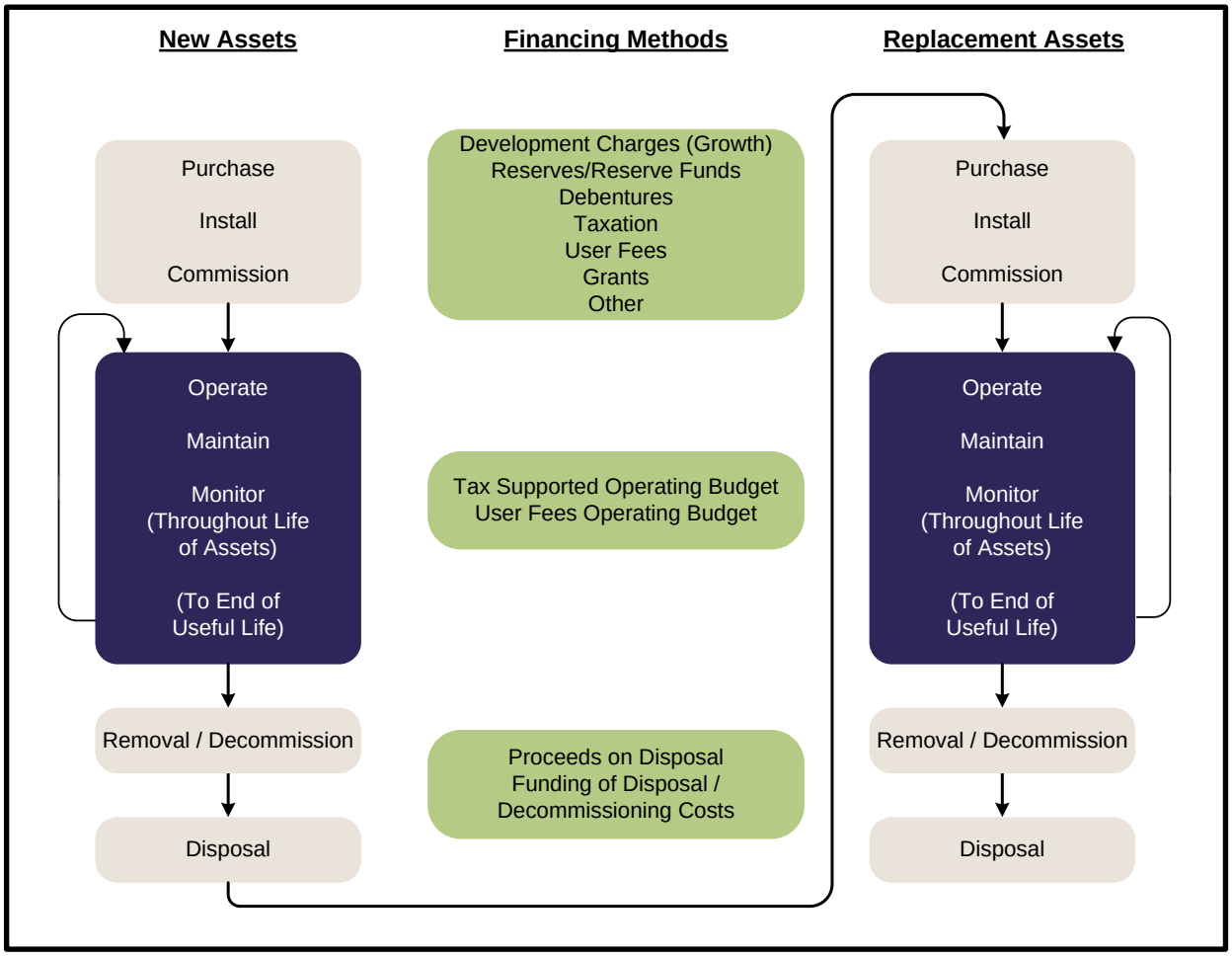
The financing strategy outlines the suggested financial approach to funding the recommended asset management strategy outlined in Chapter 4, while utilizing the Town's existing budget structure. This section of the asset management plan includes:

- Annual expenditure forecasts broken down by:
    - Maintenance/non-infrastructure solutions;
    - Renewal/rehabilitation activities;
    - Replacement/disposal activities; and
    - Expansion activities.
- Actual expenditures in the above named categories for 2011, 2012 and budget expenditures for 2013 and 2014;
- A breakdown of annual funding/revenue by source;
- Identification of the funding shortfall, including how the impact will be managed; and
- All key assumptions are documented within Appendix B.

The long-term financing strategy forecast (including both expenditure and revenue sources) was prepared, consistent with the Town's departmental budget structure, so that it can be used in conjunction with the annual budget process. Various financing options, including taxation, reserves, reserve funds, debt, user fees and grants were considered and discussed with Town staff during the process. Figure 5-1 provides a visual representation of how various financing methods can be used for both initial asset purchases, as well as asset replacements.

For the recommended asset management strategy scenario, a detailed twenty (20) year plan for tax supported assets, and detailed ten (10) year plans for water and wastewater were generated. The plan identifies specific maintenance & non-infrastructure solutions, renewal & rehabilitation, replacement & disposal, and expansion activities required for the forecast period as described in Chapter 4.

Figure 5-1
Financing Methods of Lifecycle Costs



5.2 Historical Results

Table 5-1 outlines the historical supported maintenance/non-infrastructure costs for 2011 and 2012, as well as 2013 and 2014 budgeted results. All maintenance for assets was funded through taxation revenue for tax supported assets, water rates for water related assets and wastewater rates for wastewater related assets based on the Town's budget structure.

Table 5-1
Historical Results
Maintenance & Non-Infrastructure Solutions

Tax Supported

Description	Actual 2011	Actual 2012	Budget 2013	Budget 2014
Asset Maintenance	1,204,622	1,166,626	1,323,287	1,394,356
Taxation Funding	1,204,622	1,166,626	1,323,287	1,394,356
Net Unfunded	-	-	-	-

Water

Description	Actual 2011	Actual 2012	Budget 2013	Budget 2014
Asset Maintenance	385,080	392,781	400,637	408,650
Water Rate Revenue	385,080	392,781	400,637	408,650
Net Unfunded	-	-	-	-

Wastewater

Description	Actual 2011	Actual 2012	Budget 2013	Budget 2014
Asset Maintenance	192,081	176,015	440,126	451,055
Wastewater Rate Revenue	192,081	176,015	440,126	451,055
Net Unfunded	-	-	-	-

Tables 5-2 to 5-4 outline the historical capital results for 2011, 2012 and budgeted results for 2013 and 2014 including renewal/rehabilitation, replacement/disposal, and expansion. The capital funding includes the use of development charges for growth (expansion) related costs, reserve/reserve funds, gas tax funds, contribution revenue, debt, grants/subsidies, as well as contributions from the operating budget.

Table 5-2
Tax Supported Historical Results
Renewal/Rehabilitation, Replacement/Disposal & Expansion

Description	Actual 2011	Actual 2012	Budget 2013	Budget 2014
Capital Expenses - Roads and Facilities				
General Government	-	53,996	215,000	662,500
Protection Services	156,182	159,606	170,000	313,000
Public Works	1,298,358	382,415	1,440,000	6,788,000
Parks and Recreation	7,201,822	297,292	35,900	112,000
Culture and Community	-	77,565	92,500	10,200
Total Capital Expenditures	**8,656,362**	**970,874**	**1,953,400**	**7,885,700**
Capital Expenses - Roads and Facilities				
Provincial/Federal Grants	4,415,651	-	-	50,000
Non-Growth Related Debt	-	-	-	4,000,000
Growth Related Debt	-	-	-	-
Capital Levy	774,250	295,000	252,500	239,700
Reserve Fund: Development Charges (All)	-	-	30,000	577,200
Reserve Fund: Gas Tax	350,310	215,589	1,047,000	1,015,000
Reserves/Reserve Funds: Other	315,356	234,606	544,000	1,573,800
Prior Year Budget	-	-	69,900	80,000
Other Revenue: LUSI	-	-	-	350,000
Other Revenue	584,263	-	10,000	-
Total Capital Financing	**6,439,830**	**745,195**	**1,953,400**	**7,885,700**
Total Capital Expenses less Capital Financing	**2,216,532**	**225,679**	**-**	**-**

Table 5-3
Water Historical Results
Renewal/Rehabilitation, Replacement/Disposal & Expansion

Description	Actual 2011	Actual 2012	Budget 2013	Budget 2014
Capital Expenses				
Facilities and Other	-	-	2,704,000	-
Water Mains	-	-	789,000	1,618,000
Water Expenditures	858,968	1,208,728		
Total Capital Expenditures	**858,968**	**1,208,728**	**3,493,000**	**1,618,000**
Capital Financing				
Provincial/Federal Grants	-	-	-	-
Non-Growth Related Debt	-	-	-	-
Growth Related Debt	-	-	-	-
Reserve Fund: Development Charges (All)	-	-	-	-
Reserve Fund: Sewers	858,968	1,208,728	3,493,000	1,618,000
Other: Donations and Other Contributions	-	-	-	-
Total Capital Financing	**858,968**	**1,208,728**	**3,493,000**	**1,618,000**
Total Capital Expenses less Capital Financing	**-**	**-**	**-**	**-**

Table 5-4
Wastewater Historical Results
Renewal/Rehabilitation, Replacement/Disposal & Expansion

Description	Actual 2011	Actual 2012	Budget 2013	Budget 2014
Capital Expenses				
Wastewater Expenditures	670,725	2,087,885	1,427,500	5,682,000
Total Capital Expenditures	**670,725**	**2,087,885**	**1,427,500**	**5,682,000**
Capital Financing				
Provincial/Federal Grants	7,872	40,692	-	-
Non-Growth Related Debt	-	-	600,000	-
Growth Related Debt	-	-	-	5,000,000
Reserve Fund: Development Charges (All)	-	-	-	-
Reserve Fund: Sewers	-	-	827,500	682,000
Other: Donations and Other Contributions	30,050	-	-	-
Total Capital Financing	**37,921**	**40,692**	**1,427,500**	**5,682,000**
Total Capital Expenses less Capital Financing	**632,804**	**2,047,193**	**-**	**-**

5.3 Financing Strategy

Tax Supported

Table 5-5 shows the tax supported expenditure forecast for maintenance, renewal/rehabilitation, replacement/disposal and expansion for the first 10 years of the forecast. While this summary only shows high level cost classifications, further detail (including the full 20 year forecast) can be obtained from Appendix F.

Table 5-5
Tax Supported Expenditure Forecast Summary

Asset Lifecycle Costs	Forecast (Inflated)									
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Maintenance: Current Service Levels	1,422,243	1,450,688	1,479,702	1,509,296	1,539,482	1,570,271	1,601,677	1,633,710	1,666,384	1,699,712
Maintenance: LOS Adjustment	76,205	111,081	120,476	101,350	97,612	108,975	80,948	36,952	46,469	75,937
Total Asset Maintenance	1,498,448	1,561,769	1,600,178	1,610,646	1,637,094	1,679,246	1,682,625	1,670,662	1,712,853	1,775,649
Renewal/Rehabilitation	2,250,000	-	-	-	-	-	-	-	-	-
Renewal/Rehabilitation - LOS Adjustment	2,851	7,473	57,672	166,930	105,191	91,655	639,015	66,914	45,671	124,260
Total Renewal/Rehabilitation	2,252,851	7,473	57,672	166,930	105,191	91,655	639,015	66,914	45,671	124,260
Replacement/Disposal	1,124,537	1,737,409	2,684,298	3,409,953	3,480,609	3,585,028	3,692,579	3,734,204	3,775,004	3,851,572
Replacement/Disposal - LOS Adjustment	51,500	63,654	76,491	90,041	104,335	119,405	135,286	152,012	169,621	188,148
Total Replacement/Disposal	1,176,037	1,801,063	2,760,789	3,499,994	3,584,944	3,704,433	3,827,865	3,886,216	3,944,625	4,039,720
Expansion: DC Related	1,214,937	2,121,800	-	-	-	857,407	2,020,768	-	1,672,002	3,841,619
Expansion: LOS Adjustment	-	-	-	-	-	-	-	-	-	-
Total Expansion	1,214,937	2,121,800	-	-	-	857,407	2,020,768	-	1,672,002	3,841,619
Total	**6,142,272**	**5,492,105**	**4,418,638**	**5,277,569**	**5,327,229**	**6,332,741**	**8,170,272**	**5,623,792**	**7,375,151**	**9,781,248**

Items in Table 5-5 labelled as "LOS Adjustment" refer to the level of service analysis discussed in Chapter 2 and Appendix D. Expansion related costs labelled as "DC related" refer to projects identified in the Town's Development Charge Background Study (please refer to Appendix F). Table 5-6 summarizes the recommended strategy to finance the asset related costs identified in Table 5-5.

Table 5-6
Breakdown of Annual Tax Supported Funding (Revenue) by Source

Funding (Revenue) by Source	Forecast									
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Taxation	1,498,448	1,561,769	1,600,178	1,610,646	1,637,094	1,679,246	1,682,625	1,670,662	1,712,853	1,775,649
Grants	1,508,336	-	-	-	-	-	-	-	-	-
Transfers From Operating	155,775	158,891	162,069	165,310	168,616	171,989	175,428	178,937	182,516	186,166
Debentures	1,350,000	1,100,000	600,000	700,000	-	-	1,300,000	-	-	-
Development Charges Reserve Funds	948,241	1,284,936	-	-	-	510,145	1,022,858	-	846,379	1,944,562
Gas Tax Reserve Funds	-	-	-	-	-	-	-	-	-	-
Capital Reserve Fund	681,472	1,386,510	2,056,392	2,801,614	3,521,518	3,971,361	3,989,361	3,774,193	4,633,402	5,874,871
Total	**6,142,272**	**5,492,105**	**4,418,638**	**5,277,569**	**5,327,228**	**6,332,741**	**8,170,272**	**5,623,792**	**7,375,150**	**9,781,248**

These lifecycle costs are being recovered through several methods:

- Taxation funding is suggested for all maintenance costs, as well as level of service adjustment related costs related to operations.
- Grant funding has been identified for two projects for which the Town is in the application process.
- Transfers from Operating are used each year, increasing by inflation.

- Debt financing is shown as required in years where significant capital needs are identified.
- The portion of newly acquired or constructed assets that are "growth (DC) related" are shown as financed by development charges.
- Gas Tax funding has been shown as a stable and long-term funding source for eligible capital projects.
- The Town will be dependent upon maintaining healthy capital reserves/reserve funds in order to provide the remainder of the required lifecycle funding over the forecast period. This will require the Town to proactively increase amounts being transferred to these capital reserves during the annual budget process.

While the annual funding requirement may fluctuate, it is important for the Town to implement a consistent, yet increasing annual investment in capital so that the excess annual funds can accrue in capital reserve funds.

In order to fund the recommended asset requirements over the forecast period using the Town's own available funding sources (i.e. using taxation, gas tax funding and debentures), an increase in the Town's taxation levy of 4.08% per year for the first 5 years, declining to 1.63% annual increases thereafter would be required. This includes annual inflationary adjustments to all operating accounts. However, if other funding sources become available (i.e. grant funding) or if maintenance and rehabilitation practices allow for the deferral of capital works, then the impact on the Town's taxation levy would decrease.

Water

Table 5-7 shows the water expenditure forecast for maintenance, renewal/rehabilitation, replacement/disposal and expansion for the forecast period. While this summary only shows high level cost classifications, further detail can be obtained from Appendix G.

Table 5-7
Water Expenditure Forecast Summary

Asset Lifecycle Costs	Forecast									
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Maintenance: Current Service Levels	408,650	416,823	425,159	433,662	442,336	451,182	460,206	469,410	478,798	488,374
Maintenance: LOS Adjustment	-	-	-	-	-	-	-	-	-	-
Total Asset Maintenance	408,650	416,823	425,159	433,662	442,336	451,182	460,206	469,410	478,798	488,374
Renewal/Rehabilitation/Replacement	3,770,830	1,068,860	1,144,632	2,625,920	2,675,231	8,304,038	2,617,138	2,979,392	3,004,260	3,221,661
Replacement/Disposal - LOS Adjustment	-	-	-	-	-	-	-	-	-	-
Total Replacement/Disposal	3,770,830	1,068,860	1,144,632	2,625,920	2,675,231	8,304,038	2,617,138	2,979,392	3,004,260	3,221,661
Total	**4,179,480**	**1,485,683**	**1,569,791**	**3,059,582**	**3,117,567**	**8,755,220**	**3,077,344**	**3,448,802**	**3,483,058**	**3,710,035**

Table 5-8 summarizes the recommended strategy to finance the asset related costs identified in Table 5-7.

Table 5-8
Breakdown of Annual Water Funding (Revenue) by Source

Funding (Revenue) by Source	Forecast									
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Water Rate Revenue	408,650	416,823	425,159	433,662	442,336	451,182	460,206	469,410	478,798	488,374
Grants	-	-	-	-	-	-	-	-	-	-
Debentures	-	-	-	-	-	2,500,000	-	-	-	-
Development Charges Reserve Funds	-	-	-	-	-	-	-	-	-	-
Capital Reserve Fund	3,770,830	1,068,860	1,144,632	2,625,920	2,675,231	5,804,038	2,617,138	2,979,392	3,004,260	3,221,661
Total	**4,179,480**	**1,485,683**	**1,569,791**	**3,059,582**	**3,117,567**	**8,755,220**	**3,077,344**	**3,448,802**	**3,483,058**	**3,710,035**

These lifecycle costs are being recovered through several methods:

- Water rate revenue is suggested for all maintenance costs, as well as level of service adjustment related costs related to operations.
- Debt financing is shown as required in years where significant capital needs are identified.
- The Town will be dependent upon maintaining healthy capital reserves/reserve funds in order to provide the remainder of the required lifecycle funding over the forecast period. This will require the Town to proactively increase amounts being transferred to these capital reserves during the annual budget process.

While the annual funding requirement may fluctuate, it is important for the Town to implement a consistent, yet increasing annual investment in capital so that the excess annual funds can accrue in capital reserve funds.

In order to fund the recommended asset requirements over the forecast period using the Town's own available funding sources (i.e. using water rate revenue and debentures), rate projections have been determined as part of a water and wastewater rate study update (see Table 5-9 below). However, if other funding sources become available (i.e. grant funding) or if maintenance and rehabilitation practices allow for the deferral of capital works, then the impact on Town water rates would decrease.

Table 5-9
Water Rates Forecast

Description	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Total Water Billing Recovery	1,862,887	2,020,610	2,066,347	2,143,242	2,361,048	2,599,433	2,861,602	3,149,906	3,466,927	3,815,496	4,198,727
Total Consumption (m^3)	2,256,135	2,279,641	2,152,944	2,071,019	2,093,559	2,116,099	2,138,639	2,161,179	2,183,719	2,206,259	2,228,799
Increasing Block Rates ($/m^3)											
Block 1	**$ 0.75**	**$ 0.81**	**$ 0.88**	**$ 0.97**	**$ 1.05**	**$ 1.15**	**$ 1.25**	**$ 1.36**	**$ 1.49**	**$ 1.62**	**$ 1.77**
Block 2	**$ 0.93**	**$ 1.00**	**$ 1.10**	**$ 1.20**	**$ 1.31**	**$ 1.42**	**$ 1.55**	**$ 1.69**	**$ 1.84**	**$ 2.01**	**$ 2.19**
Block 3	**$ 1.17**	**$ 1.26**	**$ 1.38**	**$ 1.51**	**$ 1.64**	**$ 1.79**	**$ 1.95**	**$ 2.13**	**$ 2.32**	**$ 2.53**	**$ 2.76**

Wastewater

Table 5-10 shows the wastewater expenditure forecast for maintenance, renewal/rehabilitation, replacement/disposal and expansion for the forecast period. While this summary only shows high level cost classifications, further detail can be obtained from Appendix H.

Table 5-10
Wastewater Expenditure Forecast Summary

Asset Lifecycle Costs	Forecast (Inflated)									
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Maintenance: Current Service Levels	451,055	460,076	469,278	478,663	488,236	498,001	507,961	518,120	528,483	539,052
Maintenance: LOS Adjustment	-	-	-	-	-	-	-	-	-	-
Total Asset Maintenance	451,055	460,076	469,278	478,663	488,236	498,001	507,961	518,120	528,483	539,052
Renewal/Rehabilitation/Replacement	6,388,060	5,781,905	1,283,955	776,602	1,507,057	1,134,349	1,537,340	1,872,272	1,928,440	1,986,294
Replacement/Disposal - LOS Adjustment	14,935	15,383	15,845	16,320	16,810	17,315	17,833	18,369	18,919	19,487
Total Replacement/Disposal	6,402,995	5,797,288	1,299,800	792,922	1,523,867	1,151,664	1,555,173	1,890,641	1,947,359	2,005,781
Expansion: DC Related	-	-	-	-	-	-	-	-	-	-
Expansion: LOS Adjustment	-	-	-	-	-	-	-	-	-	-
Total Expansion	-	-	-	-	-	-	-	-	-	-
Total	**6,854,050**	**6,257,364**	**1,769,078**	**1,271,585**	**2,012,103**	**1,649,665**	**2,063,134**	**2,408,761**	**2,475,842**	**2,544,833**

Table 5-11 summarizes the recommended strategy to finance the asset related costs identified in Table 5-10.

Table 5-11
Breakdown of Annual Wastewater Funding (Revenue) by Source

Funding (Revenue) by Source	Forecast									
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Wastewater Rate Revenue	451,055	460,076	469,278	478,663	488,236	498,001	507,961	518,120	528,483	539,052
Grants	-	-	-	-	-	-	-	-	-	-
Debentures	4,535,444	2,845,384	-	-	-	-	-	-	-	-
Development Charges Reserve Funds	-	-	-	-	-	-	-	-	-	-
Capital Reserve Fund	1,867,551	2,951,904	1,299,800	792,922	1,523,866	1,151,663	1,555,173	1,890,640	1,947,359	2,005,781
Total	**6,854,050**	**6,257,364**	**1,769,078**	**1,271,585**	**2,012,103**	**1,649,665**	**2,063,134**	**2,408,761**	**2,475,842**	**2,544,833**

These lifecycle costs are being recovered through several methods:

- Wastewater rate revenue is suggested for all maintenance costs, as well as level of service adjustment related costs related to operations.
- Debt financing is shown as required in years where significant capital needs are identified.
- The Town will be dependent upon maintaining healthy capital reserves/reserve funds in order to provide the remainder of the required lifecycle funding over the forecast period. This will require the Town to proactively increase amounts being transferred to these capital reserves during the annual budget process.

While the annual funding requirement may fluctuate, it is important for the Town to implement a consistent, yet increasing annual investment in capital so that the excess annual funds can accrue in capital reserve funds.

In order to fund the recommended asset requirements over the forecast period using the Town's own available funding sources (i.e. using wastewater rate revenue and debentures) rate projections have been determined as part of a water and wastewater rate study update (see Table 5-12 below). However, if other funding sources become available (i.e. grant funding) or if

maintenance and rehabilitation practices allow for the deferral of capital works, then the impact on Town wastewater rates would decrease.

Table 5-12
Wastewater Rates Forecast

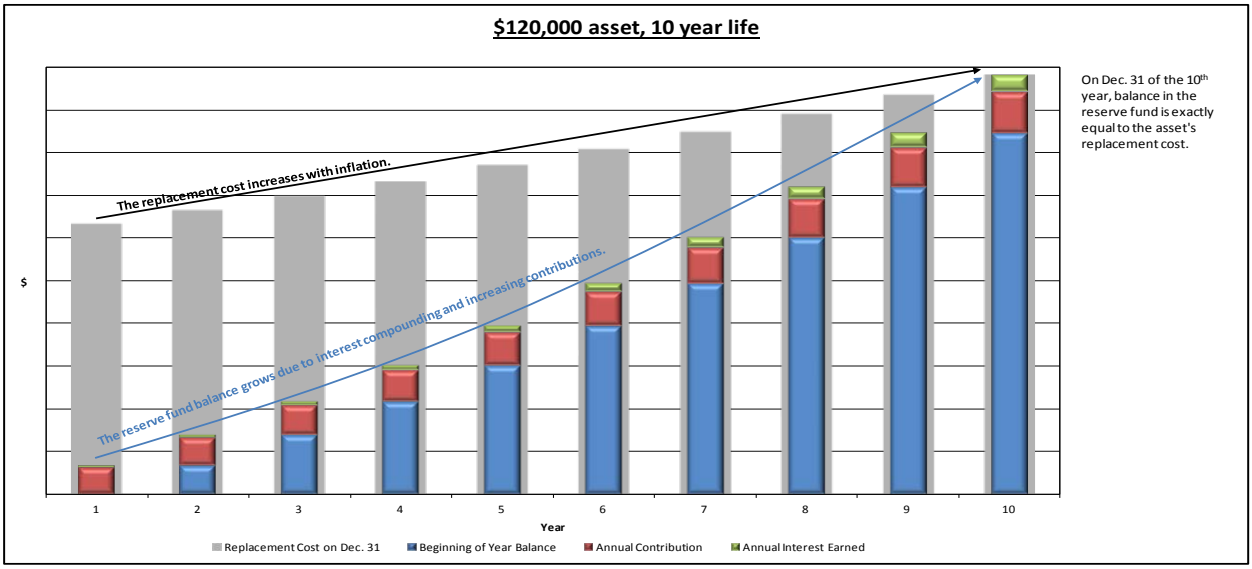
Description	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Total Wastewater Billing Recovery	2,180,366	2,298,395	2,421,667	2,551,344	2,687,753	2,831,236	2,982,150	3,140,874	3,307,801	3,483,347	3,667,949
Total Consumption (m^3)	1,749,402	1,767,628	1,785,106	1,802,583	1,820,061	1,837,538	1,855,016	1,872,493	1,889,971	1,907,448	1,924,925
Increasing Block Rates ($/m^3)											
Block 1	**$ 1.14**	**$ 1.19**	**$ 1.24**	**$ 1.30**	**$ 1.36**	**$ 1.42**	**$ 1.48**	**$ 1.54**	**$ 1.61**	**$ 1.68**	**$ 1.76**
Block 2	**$ 1.42**	**$ 1.48**	**$ 1.55**	**$ 1.62**	**$ 1.69**	**$ 1.76**	**$ 1.84**	**$ 1.92**	**$ 2.01**	**$ 2.10**	**$ 2.19**

5.4 Funding Shortfall

Assuming the Town maintains adequate capital reserve funds, the recommended asset management strategy discussed in Chapter 4 will be fully funded. It is believed this can be accomplished through each annual budget process. However, the recommended asset management strategy does defer significant capital replacements, in comparison to recommendations stated in various Town asset related reports. In the event that certain deferred replacements result in increased risks and/or projected asset failures, further funding may be required to address the costs associated with accelerating replacement timelines. In addition, in the event that the Town is not successful in recent grant applications, additional funding would be required in the short-term.

A fundamental approach to calculating the cost of using a capital asset and for the provision of the revenue required when the time comes to retire and replace it is the “sinking fund method”. This method first estimates the future value of the asset at the time of replacement, by inflating the current value of the asset at an assumed annual capital inflation rate. A calculation is then performed to determine annual contributions which, when invested in a reserve fund, will grow with interest to a balance equal to the future replacement cost. The contributions are calculated such that they also increase annually with inflation. Under this approach, an annual capital investment amount is calculated where funds are available for short-term needs while establishing a funding plan for long-term needs. Annual contributions in excess of capital costs in a given year would be transferred to a “capital replacement reserve fund” for future capital replacement needs. This approach provides for a stable funding base, eliminating variances in annual funding requirements, particularly in years when capital replacement needs exceed typical capital levy funding. Please refer to Figure 5-2 for an illustration of this method.

Figure 5-2
Sinking Fund Method



Tax Supported (Roads, Stormwater and Facilities)

From a tax supported asset base perspective, the estimated annual sinking fund requirement, based on using the calculations discussed above, is approximately $7.27 million (in 2014 dollars). Based on the Town's 2014 budget, current annual capital investment is approximately $776,000. This would provide a high level estimate of the Town's annual tax supported infrastructure funding deficit at $6.49 million (in 2014 dollars).

Water

From a water asset base perspective, the estimated annual sinking fund requirement, based on using the calculations discussed above, is approximately $3.46 million (in 2014 dollars). Based on the Town's 2014 budget, current annual capital investment is approximately $1.84 million. This would provide a high level estimate of the Town's annual water infrastructure funding deficit at $1.62 million (in 2014 dollars).

Wastewater

From a wastewater asset base perspective, the estimated annual sinking fund requirement, based on using the calculations discussed above, is approximately $3.29 million (in 2014 dollars). Based on the Town's 2014 budget, current annual capital investment is approximately $1.94 million. This would provide a high level estimate of the Town's annual wastewater infrastructure funding deficit at $1.35 million (in 2014 dollars).

Under the recommended financing strategy, the Town would be making proactive attempts to mitigate these funding gaps over the forecast period. Please see Figures 5-3 to 5-5 below for a 10 year forecast of implementing this strategy for tax supported, water and wastewater assets respectively. The blue portion of the graph outlines the current capital investment amounts,

increasing at inflation over the forecast period. The red portion indicates the result of implementing recommended increases in available funding sources (resulting in increases in capital investment annually). The green represents optimal annual capital investment amounts (calculated as described above). Please note "optimal" capital investment funding can come from a number of additional sources, such as grants, donations, debt and other contributions.

Figure 5-3
Tax Supported Assets

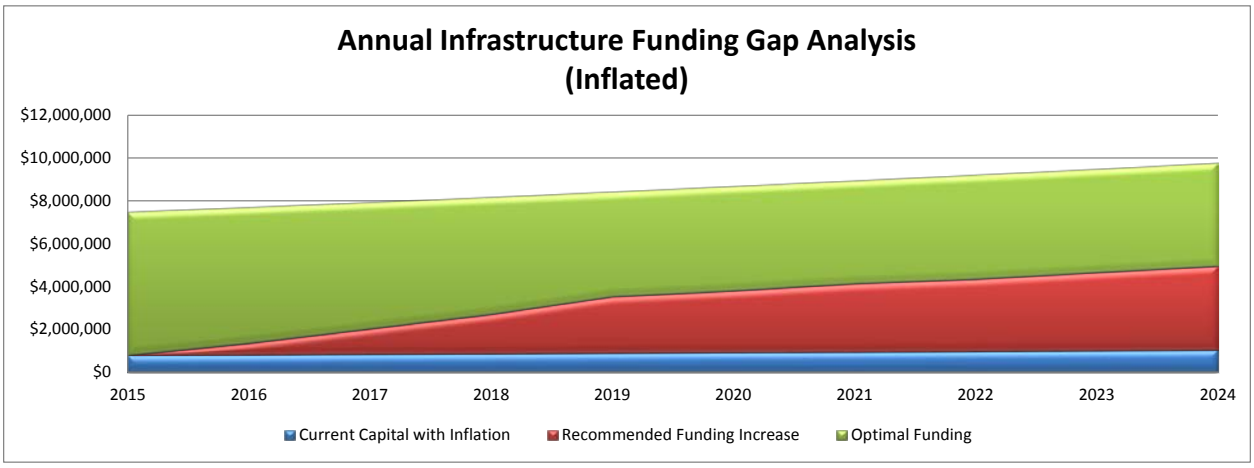


Figure 5-4
Water Assets

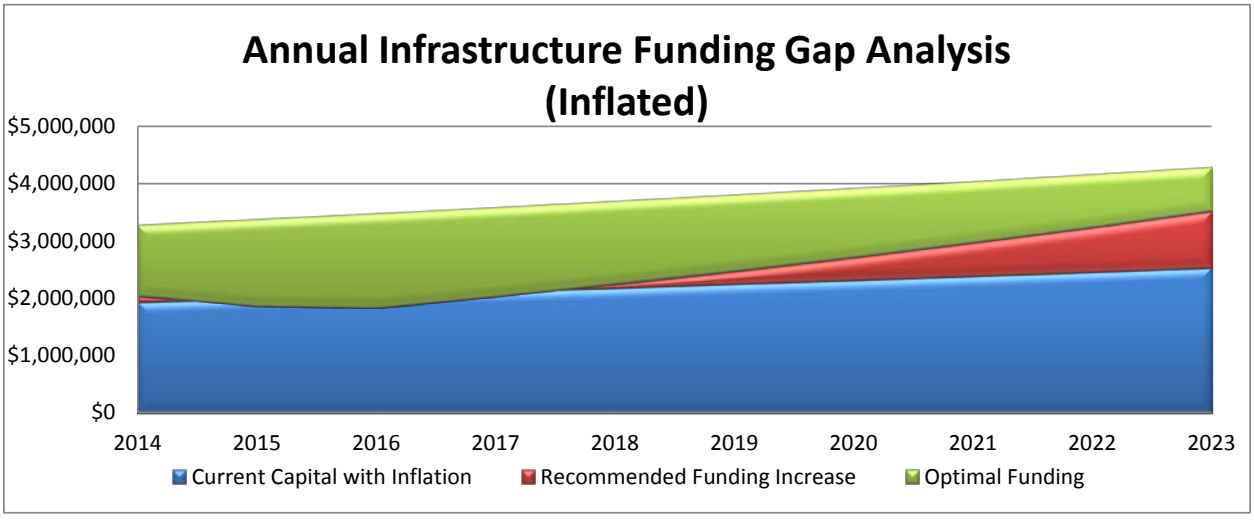
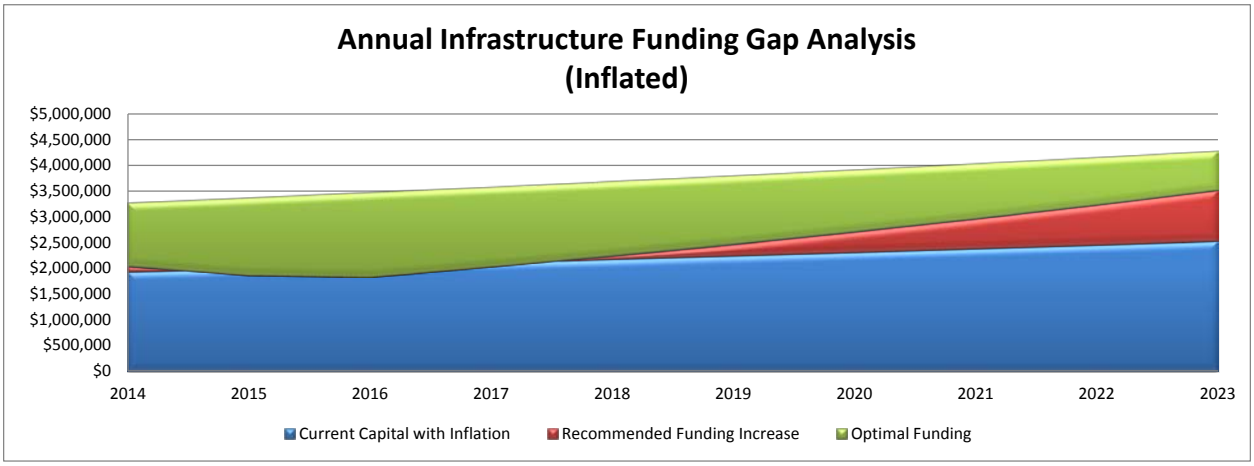


Figure 5-5
Wastewater Assets



To further mitigate the potential infrastructure funding deficit, the Town could consider:

- Decreasing expected levels of service to make available capital funding;
- Issuing debt for significant and/or unforeseen capital projects, in addition to the debt recommended within this report, while staying within the Town's debt capacity limits (this would have the impact of spreading out the capital repayment over a defined term);
- Actively seeking out and applying for grants;
- Consider approaching the development community for funding assistance with respect to growth/expansion related projects;
- Rate increases, where needed (i.e. taxation, user fees); or
- Implementing operating efficiencies (i.e. reduced operating costs to allow more capital investment).

6. RECOMMENDATIONS

6. RECOMMENDATIONS

The following recommendations have been provided for consideration:

- That the Town of Cobourg Asset Management Plan be received and approved by Council;
- That consideration of this Asset Management Plan be made as part of the annual budgeting process to ensure sufficient capital funds are available to fund capital requirements; and
- That this Asset Management plan be updated as needed over time to reflect the current priorities of the Town.

The current level of funding for asset replacement and renewal at the Town will not sufficiently fund capital needs or close the infrastructure funding gap. As such, it is recommended that the following additional recommendations be considered during the annual budget process:

- Initiation of "level of service" (LOS) strategies discussed in Chapters 3, 4 and Appendix D;
- An increase in taxation as part of upcoming budget deliberations, dedicated to capital, to be transferred to capital reserve(s);
- Water and wastewater revenue increases consistent with the calculations provided in this report and verified through the recently completed rate study update;
- Allocating a portion (i.e. at least 50%) of any annual operating surplus to applicable capital reserve funds;
- Consider the capital priorities identified within this report when applying for future grants;
- When annual budget savings are realized from fully paying debt obligations, these budget savings are to be invested in future capital needs; and
- Increase the accuracy of the asset data (i.e. valuation, condition, useful life, remaining service life, etc…) in order to increase the accuracy of the overall asset management plan.

Substantial investment in capital needs will be required over the forecast period. Through the recommendations provided above, proactive steps would be taken to increase capital investment, as well as reduce the annual infrastructure funding gap for these assets. Enhanced level of service will assist in maintaining adequate asset conditions, mitigate asset risk, as well as potentially defer capital needs within the forecast period. In addition, the Town should pursue available capital grants, wherever possible, to further reduce the infrastructure funding gap.

Through the creation of this plan, Town staff have been provided with a model in which amendments and revisions can be made as needed. It is anticipated that the final plan adopted by Council will be monitored and updated frequently by Town staff as part of the budget process, with refinements and specific recommendations being provided with respect to the priority of each individual project.

APPENDIX A
DETAILED ASSET INVENTORY

PLEASE REFER TO TECHNICAL APPENDIX

APPENDIX B
ASSET MANAGEMENT ASSUMPTIONS

APPENDIX B: ASSET MANAGEMENT PLAN ASSUMPTIONS

The following assumptions were made during the creation of the Town's asset management plan.

1. STATE OF LOCAL INFRASTRUCTURE
   a) All external reports and documentation containing data relating to capital assets including condition data, replacement cost, age, etc…, where available have been utilized.
   b) For any applicable water, wastewater or stormwater main assets, the value in the plan may exclude the cost of road reinstatement. It is recommended, where required, that staff for budgeting purposes, determine where the road reinstatement costs are to be funded.
   c) Indexing: When inflating an asset value to a current replacement value, the Non-Residential Building Construction Price Index (NRBCPI) was used for Roads, Bridges, Culverts, Facilities, Stormwater, Water and Wastewater related assets. In order to establish an initial condition assessment for some assets, calculations were performed to link condition to asset age.
   d) In order to establish an initial condition assessment for some assets, calculations were performed to link condition to asset age. This was done in order to establish condition ratings for this report and it is recommended that the Town follow the "Condition Assessment Policy" shown in Appendix C in the future.

2. ASSET MANAGEMENT STRATEGY
   a) Capital inflation rate will be assumed to be 3% annually.
   b) Operating budget inflation rate will be assumed to be 2% annually.
   c) Regarding operating expenses included in the Town's current budget, it is assumed that they will increase at an operating inflation rate annually, unless staff have provided alternative impacts.
   d) When any existing debenture payments are complete (if applicable), annual budget savings created through removing these payments have been dedicated to capital.

3. FINANCING STRATEGY
   a) Taxation assessment growth is assumed to be 1.0% annually.
   b) Development charges rates are assumed to increase at 2% annually.
   c) Gas tax revenue and OLG revenue have been identified as funding sources for the purposes of this analysis (i.e. for asset replacement purposes), and has been assumed to continue throughout the forecast period.
   d) Interest rate earned on a Capital Replacement Reserve Fund will be 2% annually.

e) In the case where debt financing is needed, the model assumed debt terms of 20 years at 5% annual interest. For growth related debt, debt payments are shown as funded directly from the development charge reserve funds.

APPENDIX C
DATA VERIFICATION AND CONDITION ASSESSMENT POLICY

APPENDIX C: DATA VERIFICATION AND CONDITION ASSESSMENT POLICY

Town of Cobourg
Data Verification and Condition Assessment Policy

Data Verification

1. The main source of asset data updating and editing will be though the Town's PSAB 3150 compliance procedures.
2. Asset additions, disposals, betterments, and write-offs will be recorded based on the Town's PSAB 3150 Compliance Policies.
3. Verification of the correct treatment of asset revisions will be completed through frequent annual reviews by the Town's Treasurer as well as an annual review by the Town's external auditor.
4. During years in which condition assessments are not being performed, asset replacement cost will be determined based on a combination of inflating previous current values or thorough the use of the current year's historical invoice data. Where indices are being used, the Non-Residential Building Construction Price Index (NRBCPI) shall be used for construction related assets (i.e. roads related, storm, water, and facilities) and the Consumer Price Index (CPI) shall be used for all other assets (i.e. machinery & equipment, vehicles and land improvements).

Condition Assessment

1. Condition assessments shall be performed as outlined in Table C-1 below. Condition assessments shall be performed by qualified individuals (or companies) and shall include a review of the following:
    - Current asset condition (consistent with the rating format used within this report, unless Town staff stipulate a new format);
        i. Identify any unusual wear from asset use that may hinder asset performance and eventually reduce useful life.
        ii. Assess asset performance and identify (if any) capital improvements that can be applied to extend the asset's useful life and/or bring the asset back to proper service levels.
    - Current asset replacement cost. This is to be based on replacing the asset under current legislation/requirements using the Town's specifications; and
    - Remaining service life, assuming current maintenance and usage levels.

The condition assessment process will continue to be guided by provincial legislation and environmental regulations. The provisions provided above are not intended to replace other required processes.

Table C-1

Condition Assessment Time Table

Asset Type	Frequency of Condition Assessment
Roads Related	Every 5 years, based on Minimum Maintenance Standards
Bridges and Culverts (greater than 3m)	Every 2 years, based on applicable legislation
Facilities	Every 5-10 years, with priority given to older buildings
Water, Wastewater and Stormwater Related	Every 5 years or more frequently based on applicable legislation and environmental regulations

APPENDIX D
LEVEL OF SERVICE IMPACT ANALYSIS

Town of Cobourg
2014 Asset Management Plan
Asset Management Strategy - Change in Level of Service

Table D-1
Tax Supported Services

Departments	Description	Planned Actions	Impact (in Current Year $)																		
			2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Transportation Services																						
Expenditures																						
Capital Expenditures	Streetlights	Replacement	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000
Capital Expenditures	Bridge Deck Rehabilitation	Rehabilitation/Renewal	-	-	-	125,344	-	21,276	347,895	22,572	-	23,947	-	-	98,127	84,226	128,394	125,097	184,071	30,335	564,669	-
Capital Expenditures	Roads - Mill Top Lift of Asphalt	Rehabilitation/Renewal	2,768	7,044	52,778	22,972	90,738	55,483	171,683	30,250	35,003	68,514	66,677	69,079	111,248	87,018	113,525	82,843	94,496	66,280	22,856	44,846
Operating Expenditures	Roads - Rout and Seal Maintenance	Maintenance	63,236	95,063	101,588	81,455	75,989	84,098	57,547	18,357	25,438	48,581	24,959	101,833	85,091	42,677	9,390	924	168,647	31,729	107,594	244,401
Operating Expenditures	Sidewalk - Grinding Lifted Joints	Maintenance	11,475	11,705	11,939	12,177	12,421	12,669	12,923	13,181	13,445	13,714	13,988	14,268	14,553	14,844	15,141	15,444	15,753	16,068	16,389	16,717
Sub-total Expenditures			117,479	153,811	206,305	281,947	219,148	213,526	630,048	124,360	113,885	194,756	145,624	225,179	349,019	268,766	306,450	264,308	502,968	184,413	751,509	345,964
Environmental Services (Storm)																						
Expenditures																						
Capital Expenditures	Catch Basin, Man Holes Replacement	Replacement	10,000	20,000	30,000	40,000	50,000	60,000	70,000	80,000	90,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
Sub-total Expenditures			10,000	20,000	30,000	40,000	50,000	60,000	70,000	80,000	90,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
Total Expenditures (Uninflated)			**127,479**	**173,811**	**236,305**	**321,947**	**269,148**	**273,526**	**700,048**	**204,360**	**203,885**	**294,756**	**245,624**	**325,179**	**449,019**	**368,766**	**406,450**	**364,308**	**602,968**	**284,413**	**851,509**	**445,964**

Total Operating Expenditure	74,711	106,768	113,527	93,632	88,410	96,767	70,470	31,538	38,883	62,295	38,947	116,100	99,644	57,522	24,531	16,368	184,400	47,797	123,984	261,118
Total Capital Expenditures (	52,768	67,044	122,778	228,315	180,738	176,760	629,578	172,823	165,003	232,461	206,677	209,079	349,375	311,244	381,919	347,940	418,568	236,615	727,525	184,846
Total Operating Expenditure	76,205	111,081	120,476	101,350	97,612	108,975	80,948	36,952	46,469	75,937	48,426	147,243	128,900	75,899	33,015	22,470	258,205	68,266	180,621	388,008
Total Capital Expenditures (	54,351	71,127	134,163	256,971	209,525	211,060	774,301	218,926	215,291	312,408	286,090	298,096	513,069	470,784	595,017	558,341	691,829	402,822	1,275,719	333,852

Planned Actions Summary	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Maintenance	76,205	111,081	120,476	101,350	97,612	108,975	80,948	36,952	46,469	75,937	48,426	147,243	128,900	75,899	33,015	22,470	258,205	68,266	180,621	388,008
Rehabilitation/Renewal	2,851	7,473	57,672	166,930	105,191	91,655	639,015	66,914	45,671	124,260	92,297	98,490	307,475	259,022	376,902	333,682	460,430	164,481	1,030,229	80,996
Replacement	51,500	63,654	76,491	90,041	104,335	119,405	135,286	152,012	169,621	188,148	193,793	199,607	205,595	211,763	218,115	224,659	231,399	238,341	245,491	252,856
Expansion	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Grand Total (Inflated)	130,556	182,208	254,639	358,321	307,138	320,035	855,249	255,878	261,761	388,345	334,516	445,340	641,970	546,684	628,032	580,811	950,034	471,088	1,456,341	721,860

APPENDIX E
SCENARIO ANALYSIS – CAPITAL FORECASTS

Town of Cobourg
2013 Asset Management Plan
Scheduled Capital Replacement (Tax Supported Assets) - Inflated

Table E-1
Replacement Year Based on Scenario 1

Asset Type	Immediate Needs	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	TOTAL
Total Scheduled Capital - Inflated	**24,998,124**	**482,643**	**44,328**	**879,730**	**943,660**	**715,647**	**2,532,176**	**915,965**	**1,620,976**	**430,554**	**1,807,268**	**3,136,301**	**2,767,070**	**1,873,419**	**1,932,008**	**2,908,920**	**3,096,518**	**21,781,809**	**235,296**	**963,042**	**6,471,622**	**80,537,077**
Road Base	-	-	-	-	-	-	284,797	-	-	-	-	-	366,961	-	275,184	35,144	400,492	-	135,600	18,933	142,318	1,659,429
Road Surface HL3	5,964,316	187,563	18,372	22,949	341,623	134,730	257,090	155,254	928,102	50,119	232,315	301,142	262,795	443,502	415,765	133,941	556,855	350,084	-	50,220	47,582	10,854,317
Road Surface HL4	3,539,787	78,717	-	-	7,989	99,280	516,690	385,908	182,997	60,372	5,160	1,294,121	50,765	105,089	1,058,824	577,089	326,725	32,003	39,975	595,090	234,692	9,191,273
Road Surface HL8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sidewalks	3,969,609	216,363	25,956	135,853	408,325	332,534	1,412,768	184,227	83,659	47,734	108,932	683,037	357,059	289,126	-	400,177	110,529	575,829	-	154,044	535,033	10,030,793
Bridge Structure	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridge Deck	1,619,676	-	-	-	144,772	-	-	-	-	-	261,917	-	44,459	125,930	47,166	-	-	-	-	-	-	2,243,920
Traffic Control Signals	1,297,471	-	-	243,386	-	129,104	-	136,966	-	-	-	-	549,058	259,965	78,035	40,314	224,952	-	-	-	2,413,678	5,372,929
Storm Mains	149,219	-	-	-	-	-	-	-	-	-	-	-	-	-	57,034	-	175,580	-	34,696	25,455	204,903	646,887
Storm Structures	1,449,199	-	-	470,708	-	-	-	-	-	-	-	727,312	-	-	-	-	-	-	-	-	-	2,647,220
Facilities	7,008,847	-	-	6,835	40,951	19,998	60,831	53,609	426,219	272,330	1,198,943	130,689	1,135,974	649,807	-	1,722,255	1,301,386	20,823,894	25,026	119,300	2,893,415	37,890,307

Table E-2
Replacement Year Based on Scenario 2

Asset Type	Immediate Needs	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	TOTAL
Total Scheduled Capital - Inflated	**-**	**1,124,537**	**1,737,409**	**2,684,298**	**3,409,953**	**3,480,609**	**3,585,028**	**3,692,579**	**3,734,204**	**3,775,004**	**3,851,572**	**3,967,119**	**4,086,133**	**4,208,717**	**4,334,978**	**4,465,028**	**4,598,978**	**4,736,948**	**4,879,056**	**5,025,428**	**5,176,191**	**76,553,767**
Road Base	-	23,055	35,621	55,034	69,912	71,360	73,501	75,706	76,559	77,396	78,966	81,335	83,775	86,288	88,877	91,543	94,289	97,118	100,031	103,032	106,123	1,569,521
Road Surface HL3	-	141,458	218,553	337,665	428,946	437,835	450,970	464,499	469,735	474,867	484,499	499,034	514,005	529,425	545,308	561,667	578,517	595,873	613,749	632,161	651,126	9,629,890
Road Surface HL4	-	154,052	238,011	367,727	467,135	476,815	491,119	505,853	511,555	517,144	527,634	543,463	559,766	576,559	593,856	611,672	630,022	648,923	668,390	688,442	709,095	10,487,234
Road Surface HL8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sidewalks	-	122,356	189,040	292,067	371,022	378,710	390,071	401,773	406,302	410,742	419,073	431,645	444,594	457,932	471,670	485,820	500,395	515,407	530,869	546,795	563,199	8,329,482
Bridge Structure	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridge Deck	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Traffic Control Signals	-	79,497	122,824	189,763	241,062	246,057	253,438	261,041	263,984	266,868	272,281	280,450	288,863	297,529	306,455	315,649	325,118	334,872	344,918	355,265	365,923	5,411,857
Storm Mains	-	9,161	14,153	21,866	27,778	28,353	29,204	30,080	30,419	30,751	31,375	32,316	33,286	34,285	35,313	36,372	37,464	38,588	39,745	40,938	42,166	623,613
Storm Structures	-	49,551	76,556	118,280	150,254	153,368	157,969	162,708	164,542	166,340	169,714	174,805	180,049	185,451	191,014	196,745	202,647	208,727	214,988	221,438	228,081	3,373,227
Facilities	-	545,406	842,652	1,301,897	1,653,843	1,688,112	1,738,756	1,790,918	1,811,107	1,830,895	1,868,031	1,924,072	1,981,794	2,041,248	2,102,485	2,165,560	2,230,527	2,297,442	2,366,366	2,437,357	2,510,477	37,128,944

Figure E-1
Tax Supported Assets
Scenario 1 -Replacement Year Based on PSAB 3150 Data

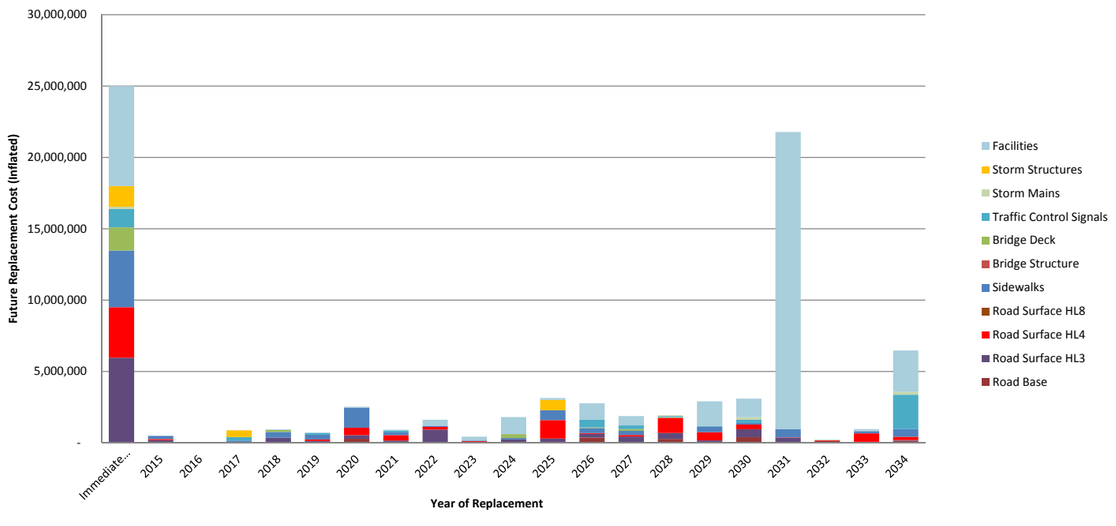
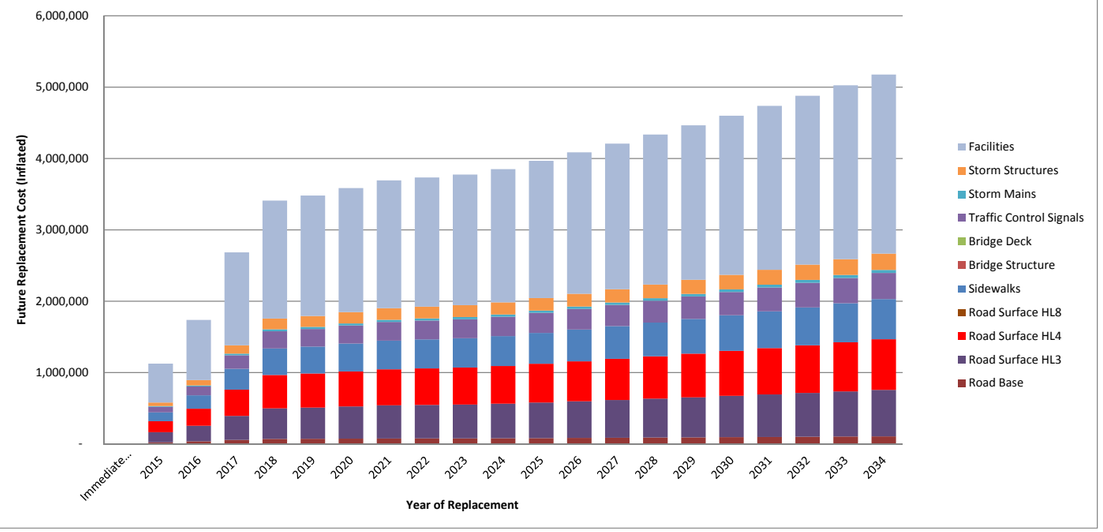


Figure E-2
Tax Supported Assets
Scenario 2 -Replacement Year Based on Condition and Risk



Town of Cobourg
2013 Asset Management Plan
Scheduled Capital Replacement (Water Assets) - Inflated

Table E-3
Replacement Year Based on Scenario 1

Asset Type	Immediate Needs	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	TOTAL
Total Scheduled Capital - Inflated	**16,403,975**	**11,807,954**	**4,426,094**	**486,786**	**505,793**	**12,679,004**	**1,175,604**	**1,866,010**	**484,363**	**1,653,017**	**1,178,554**	**52,667,155**
Water Mains	11,081,629	11,414,078	4,229,777	-	-	2,737,740	-	1,636,900	-	945,519	298,841	32,344,484
Water Facilities	5,322,346	393,876	196,317	486,786	505,793	9,941,264	1,175,604	229,109	484,363	707,499	879,713	20,322,671

Table E-4
Replacement Year Based on Scenario 2

Asset Type	Immediate Needs	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	TOTAL
Total Scheduled Capital - Inflated	**-**	**3,770,830**	**1,068,860**	**1,144,632**	**2,625,920**	**2,675,231**	**8,304,038**	**2,617,138**	**2,979,392**	**3,004,260**	**3,221,661**	**31,411,962**
Water Mains	-	1,828,250	-	819,545	2,426,705	2,470,039	2,122,430	2,399,450	2,501,820	2,773,315	2,983,788	20,325,342
Water Facilities	-	1,942,580	1,068,860	325,087	199,215	205,192	6,181,608	217,688	477,572	230,945	237,873	11,086,620

Figure E-3
Water Assets
Scenario 1 - Replacement Year Based on PSAB 3150 Data

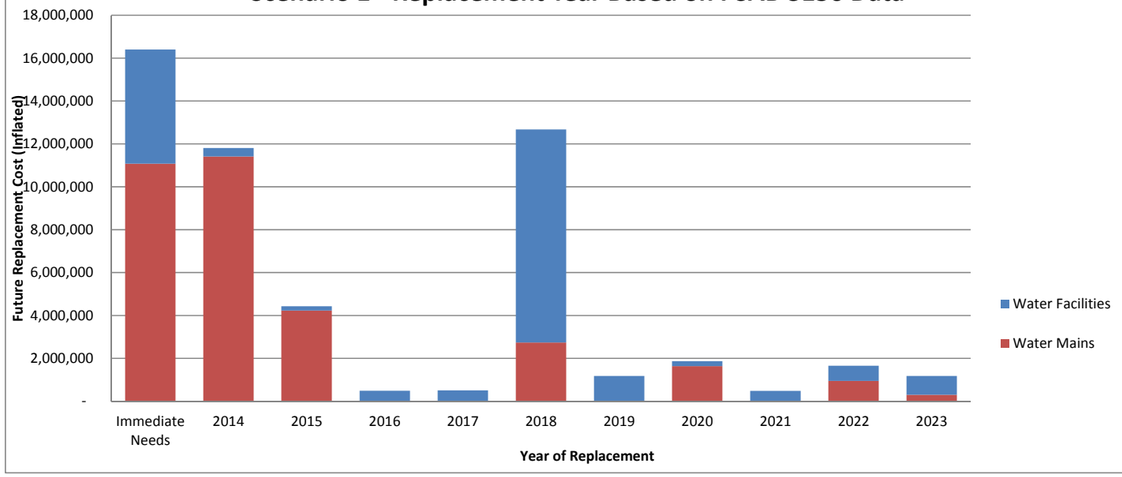
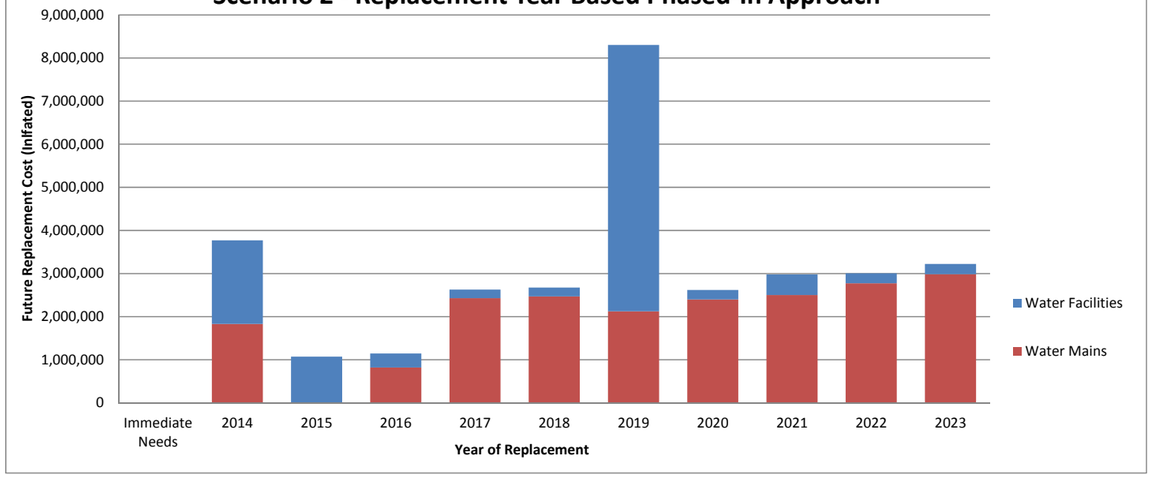


Figure E-4
Water Assets
Scenario 2 - Replacement Year Based Phased-In Approach



Town of Cobourg
2013 Asset Management Plan
Scheduled Capital Replacement (Wastewater Assets) - Inflated

Table E-5
Replacement Year Based on Scenario 1

Asset Type	Immediate Needs	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	TOTAL
Total Scheduled Capital - Inflated	**9,911,067**	**7,160,639**	**51,720**	**46,832**	**135,063**	**260,841**	**8,146,219**	**1,298,842**	**4,108,972**	**-**	**548,401**	**31,668,596**
Sanitary Man Holes	-	-	-	-	-	-	-	-	-	-	-	-
Sanitary Mains	579,243	-	-	-	-	-	-	956,099	16,961	-	-	1,552,303
Sanitary Structures	9,331,824	7,160,639	51,720	46,832	135,063	260,841	8,146,219	342,743	4,092,011	-	548,401	30,116,293

Table E-6
Replacement Year Based on Scenario 2

Asset Type	Immediate Needs	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	TOTAL
Total Scheduled Capital - Inflated	**-**	**1,867,551**	**1,283,122**	**1,558,982**	**1,422,904**	**3,134,481**	**4,315,975**	**2,374,525**	**3,496,384**	**1,976,392**	**6,237,126**	**27,667,442**
Sanitary Man Holes	-	14,935	15,383	15,845	16,320	16,809	17,314	17,833	18,368	18,919	19,487	171,213
Sanitary Mains	-	596,620	-	-	-	-	-	956,099	16,961	-	-	1,569,680
Sanitary Structures	-	1,255,996	1,267,739	1,543,137	1,406,584	3,117,672	4,298,661	1,400,592	3,461,056	1,957,473	6,217,639	25,926,549

Figure E-5
Wastewater Assets
Scenario 1 - Replacement Year Based on PSAB 3150 Data

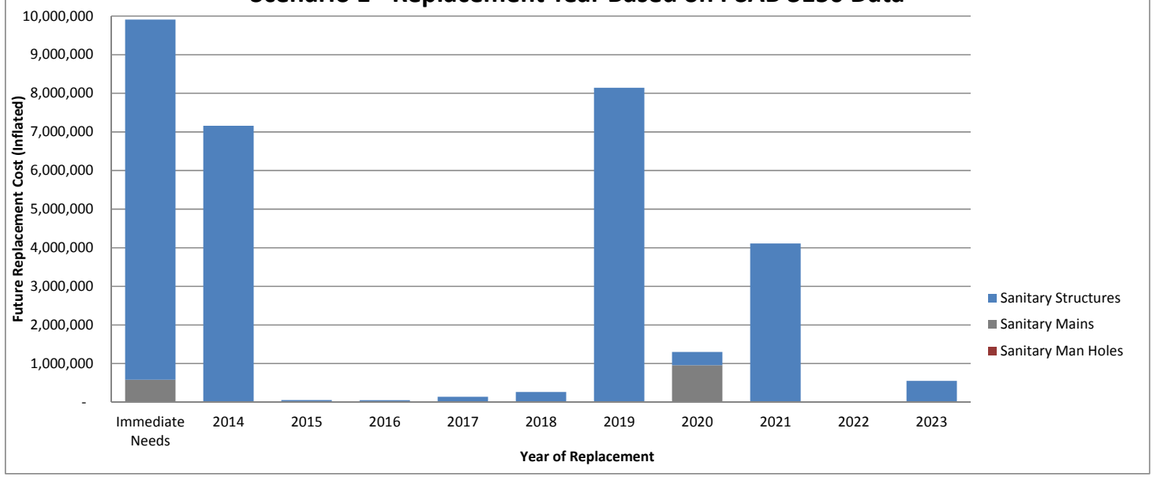
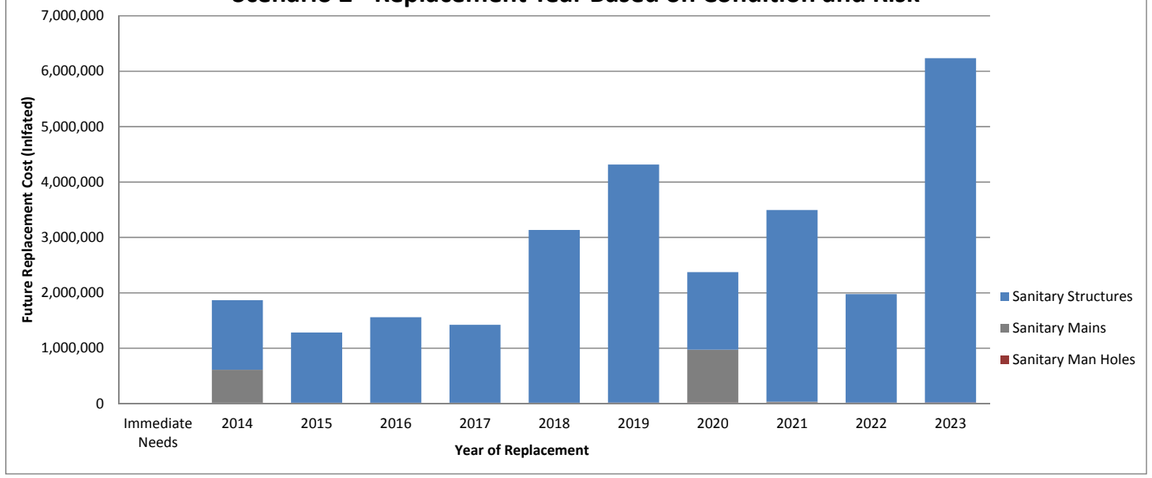


Figure E-6
Wastewater Assets
Scenario 2 - Replacement Year Based on Condition and Risk



APPENDIX F
TAX SUPPORTED ASSET MANAGEMENT STRATEGY & FINANCING STRATEGY

Town of Cobourg
2014 Asset Management Plan

Table F-1
Expansion Projects - Uninflated

Description	Timing	Total	Budget	Forecast																		
			2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Growth Projects (DC)																							
Fire Facilities		-																					
West End Station (8,000 sq.ft.)	2035	-																					
Police Facilities		-																					
Additional Police Space (10,000 sq.ft.)	2035	-																					
Roads		-																					
Kerr St. Extension (Westwood Dr. to William St.)		2,359,400										589,850	1,769,550										
Kerr St. Extension (William St. to Division St.)		1,088,975											1,088,975	-									
Kerr St. Extension (Division St. to Brook Rd.)		1,179,550		1,179,550											-								
Kerr St. Extension (West of Ewing St.)		2,190,759							547,690	1,643,069													
White Street Connection Cobourg Creek	2035	-																					
White St. Extension (Ontario St. to Cobourg Creek)	2035	-																					
White St. Connection/Realignment (Cobourg Creek to Division St.)	2035	-																					
New Amherst Grade Separation	2035	-																					
Rogers Rd. North Extension (Elgin St. to Depalma Dr. W. extension)	2035	-																					
Depalma Dr. Extension (Strathy Rd. to Rogers Rd. N. extension)	2035	-																					
Traffic Signals (5 locations west)		691,600										691,600											
Danforth Rd. Urban Reconstruction (E. property line of Parkview Subd. to Brook Rd.)	2035	-																					
Elgin St. Sidewalks and Streetlighting (Conger St. to Brook Rd.)		170,375							170,375														
Brook Rd. Sidewalks and Streetlighting (Kerr St. to King St.)		227,200																				227,200	
Traffic Signals (Kerr St. and Brook Rd. loop ramp)	2035	-																					
Traffic Signals (Kerr St. loop ramp and Brook Rd.)	2035	-																					
Traffic Signals (Kerr St. and King St.)	2035	-																					
Traffic Signals (Elgin St. and D'Arcy St.)		119,000														119,000							
Traffic Signals (Kerr St. and D'Arcy St.)		119,000																	119,000				
Traffic Signals (King St. and Willmott St.)		119,000																				119,000	
Danforth Rd. - to east property line of Parkview Subdivision	2035	-																					
Depots and Domes		-																					
Public Works/Parks Operations Facility		2,000,000			2,000,000																		
Total Capital Expenditures		10,264,859	-	1,179,550	2,000,000	-	-	-	718,065	1,643,069	-	1,281,450	2,858,525	-	-	119,000	-	-	119,000	-	-	346,200	-
Capital Financing																							
Provincial/Federal Grants		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Growth Related Debenture Requirements		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Non-Growth Related Debenture Requirements		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Development Charges Reserve Fund		6,000,605	-	920,622	1,211,175	-	-	-	427,239	831,677	-	648,679	1,446,937	-	-	104,743	-	-	104,743	-	-	304,790	-
Tax Supported Capital Reserve Fund		4,264,254	-	258,928	788,825	-	-	-	290,826	811,392	-	632,771	1,411,588	-	-	14,257	-	-	14,257	-	-	41,410	-
Lifecycle Reserve Fund		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Capital Financing		10,264,859	-	1,179,550	2,000,000	-	-	-	718,065	1,643,069	-	1,281,450	2,858,525	-	-	119,000	-	-	119,000	-	-	346,200	-

Town of Cobourg
2014 Asset Management Plan
Financing Strategy

Table F-2
Tax Supported Capital Forecast

Description	Actual 2011	Actual 2012	Budget 2013	Budget 2014	Forecast 2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Prior Capital Expenses (Roads, Bridges & Facilities)																								
General Government	-	53,996	215,000	662,500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Protection Services	156,182	159,606	170,000	313,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Public Works	1,298,358	382,415	1,440,000	6,788,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Parks and Recreation	7,201,822	297,292	35,900	112,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Culture and Community	-	77,565	92,500	10,200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Capital Replacement Forecast																								
Road Base					23,055	35,621	55,034	69,912	71,360	73,501	75,706	76,559	77,396	78,966	81,335	83,775	86,288	88,877	91,543	94,289	97,118	100,031	103,032	106,123
Road Surface HL3					141,458	218,553	337,665	428,946	437,835	450,970	464,499	469,735	474,867	484,499	499,034	514,005	529,425	545,308	561,667	578,517	595,873	613,749	632,161	651,126
Road Surface HL4					154,052	238,011	367,727	467,135	476,815	491,119	505,853	511,555	517,144	527,634	543,463	559,766	576,559	593,856	611,672	630,022	648,923	668,390	688,442	709,095
Road Surface HL8					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sidewalks					122,356	189,040	292,067	371,022	378,710	390,071	401,773	406,302	410,742	419,073	431,645	444,594	457,932	471,670	485,820	500,395	515,407	530,869	546,795	563,199
Bridge Structure					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridge Deck					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Traffic Control Signals					79,497	122,824	189,763	241,062	246,057	253,438	261,041	263,984	266,868	272,281	280,450	288,863	297,529	306,455	315,649	325,118	334,872	344,918	355,265	365,923
Storm Mains					9,161	14,153	21,866	27,778	28,353	29,204	30,080	30,419	30,751	31,375	32,316	33,286	34,285	35,313	36,372	37,464	38,588	39,745	40,938	42,166
Storm Structures					49,551	76,556	118,280	150,254	153,368	157,969	162,708	164,542	166,340	169,714	174,805	180,049	185,451	191,014	196,745	202,647	208,727	214,988	221,438	228,081
Facilities					545,406	842,652	1,301,897	1,653,843	1,688,112	1,738,756	1,790,918	1,811,107	1,830,895	1,868,031	1,924,072	1,981,794	2,041,248	2,102,485	2,165,560	2,230,527	2,297,442	2,366,366	2,437,357	2,510,477
Division St/Munroe St Intersection Improvements					750,000																			
Midtown Creek Stormwater Management System					1,500,000																			
Level of Service Adjustments																								
Rehabiliation and Renewal Works					54,351	71,127	134,163	256,971	209,525	211,060	774,301	218,926	215,291	312,408	286,090	298,096	513,069	470,784	595,017	558,341	691,829	402,822	1,275,719	333,852
Capital Expansion Forecast																								
Roads and Other Transportation					1,214,937	2,121,800	-	-	-	857,407	2,020,768	-	1,672,002	3,841,619	-	-	174,756	-	-	190,960	-	-	607,064	-
Total Expenditures	**8,656,362**	**970,874**	**1,953,400**	**7,885,700**	**4,643,824**	**3,930,336**	**2,818,461**	**3,666,924**	**3,690,134**	**4,653,495**	**6,487,647**	**3,953,130**	**5,662,296**	**8,005,599**	**4,253,209**	**4,384,229**	**4,896,541**	**4,805,762**	**5,060,045**	**5,348,280**	**5,428,777**	**5,281,878**	**6,908,211**	**5,510,043**
Capital Financing																								
Provincial/Federal Grants	4,415,651	-	-	50,000	1,508,336	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Non-Growth Related Debentures	-	-	-	4,000,000	1,350,000	1,100,000	600,000	700,000	-	-	1,300,000	-	-	-	-	-	-	-	-	-	-	-	-	-
Growth Related Debentures	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Reserve Fund: Development Charges	-	-	30,000	577,200	948,241	1,284,936	-	-	-	510,145	1,022,858	-	846,379	1,944,562	-	-	153,819	-	-	168,082	-	-	534,451	-
Reserve Fund: Gas Tax	350,310	215,589	1,047,000	1,015,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Reserve/Reserve Fund: Other	315,356	234,606	544,000	1,573,800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other (Donations)	584,263	-	79,900	80,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other (LUSI)	-	-	-	350,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Transfer from Operating (2014 onwards for Sidewalks)	774,250	295,000	252,500	239,700	155,775	158,891	162,069	165,310	168,616	171,989	175,428	178,937	182,516	186,166	189,889	193,687	197,561	201,512	205,542	209,653	213,846	218,123	222,486	226,935
Reserve Fund: New Capital (Tax Supported)	-	-	-	-	681,472	1,386,510	2,056,392	2,801,614	3,521,518	3,971,361	3,989,361	3,774,193	4,633,402	5,874,871	4,063,320	4,190,542	4,545,161	4,604,250	4,854,502	4,970,544	5,214,931	5,063,755	6,151,274	5,283,107
Total Capital Financing	**6,439,830**	**745,195**	**1,953,400**	**7,885,700**	**4,643,824**	**3,930,336**	**2,818,461**	**3,666,924**	**3,690,134**	**4,653,495**	**6,487,647**	**3,953,130**	**5,662,296**	**8,005,599**	**4,253,209**	**4,384,229**	**4,896,541**	**4,805,762**	**5,060,045**	**5,348,280**	**5,428,777**	**5,281,878**	**6,908,211**	**5,510,043**
Total Capital Expenses less Capital Financing	**2,216,532**	**225,679**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

Town of Cobourg
2014 Asset Management Plan
Financing Strategy

Table F-3
Debt Requirements

Non-Growth Related Debt	Principal	Forecast																			
Year	(Inflated)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Budget 2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Budget 2014																					
2015	1,350,000		108,327	108,327	108,327	108,327	108,327	108,327	108,327	108,327	108,327	108,327	108,327	108,327	108,327	108,327	108,327	108,327	108,327	108,327	108,327
2016	1,100,000			88,267	88,267	88,267	88,267	88,267	88,267	88,267	88,267	88,267	88,267	88,267	88,267	88,267	88,267	88,267	88,267	88,267	88,267
2017	600,000				48,146	48,146	48,146	48,146	48,146	48,146	48,146	48,146	48,146	48,146	48,146	48,146	48,146	48,146	48,146	48,146	48,146
2018	700,000					56,170	56,170	56,170	56,170	56,170	56,170	56,170	56,170	56,170	56,170	56,170	56,170	56,170	56,170	56,170	56,170
2019	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2020	-							-	-	-	-	-	-	-	-	-	-	-	-	-	-
2021	1,300,000								104,315	104,315	104,315	104,315	104,315	104,315	104,315	104,315	104,315	104,315	104,315	104,315	104,315
2022	-									-	-	-	-	-	-	-	-	-	-	-	-
2023	-										-	-	-	-	-	-	-	-	-	-	-
2024	-											-	-	-	-	-	-	-	-	-	-
2025	-												-	-	-	-	-	-	-	-	-
2026	-													-	-	-	-	-	-	-	-
2027	-														-	-	-	-	-	-	-
2028	-															-	-	-	-	-	-
2029	-																-	-	-	-	-
2030	-																	-	-	-	-
2031	-																		-	-	-
2032	-																			-	-
2033	-																				-
2034	-																				
Total Annual Non-Growth Related Debt Charges	**5,050,000**	**-**	**108,327**	**196,594**	**244,740**	**300,910**	**300,910**	**300,910**	**405,225**	**405,225**	**405,225**	**405,225**	**405,225**	**405,225**	**405,225**	**405,225**	**405,225**	**405,225**	**405,225**	**405,225**	**405,225**

Growth Related Debt	Principal	Forecast																			
Year	(Inflated)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Budget 2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Budget 2014																					
2015	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2016	-			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2017	-				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2018	-					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2019	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2020	-							-	-	-	-	-	-	-	-	-	-	-	-	-	-
2021	-								-	-	-	-	-	-	-	-	-	-	-	-	-
2022	-									-	-	-	-	-	-	-	-	-	-	-	-
2023	-										-	-	-	-	-	-	-	-	-	-	-
2024	-											-	-	-	-	-	-	-	-	-	-
2025	-												-	-	-	-	-	-	-	-	-
2026	-													-	-	-	-	-	-	-	-
2027	-														-	-	-	-	-	-	-
2028	-															-	-	-	-	-	-
2029	-																-	-	-	-	-
2030	-																	-	-	-	-
2031	-																		-	-	-
2032	-																			-	-
2033	-																				-
2034	-																				
Total Annual Growth Related Debt Charges	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

Table F-4
Reserve and Reserve Fund Continuity Schedules

Development Charges Reserve Fund (Roads)	Budget	Forecast																			
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	2,878,328	3,383,858	2,994,206	2,263,530	2,839,276	3,437,146	4,057,796	4,181,548	3,796,068	4,123,296	3,598,789	1,948,771	2,254,436	2,571,547	2,743,546	3,081,429	3,431,730	3,623,367	3,996,169	4,382,435	4,237,412
Development Charge Proceeds	439,180	499,879	509,876	520,074	530,475	541,085	551,907	562,945	246,379	251,307	256,333	261,460	266,689	272,023	277,463	283,012	288,673	294,446	300,335	306,342	312,469
Transfer to Capital	-	948,241	1,284,936	-	-	-	510,145	1,022,858	-	846,379	1,944,562	-	-	153,819	-	-	168,082	-	-	534,451	-
Transfer to Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Transfer to Operating (Debenture Payments)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interest Earned	66,350	58,710	44,383	55,672	67,395	79,565	81,991	74,433	80,849	70,564	38,211	44,205	50,422	53,795	60,420	67,289	71,046	78,356	85,930	83,087	90,998
Closing Balance	3,383,858	2,994,206	2,263,530	2,839,276	3,437,146	4,057,796	4,181,548	3,796,068	4,123,296	3,598,789	1,948,771	2,254,436	2,571,547	2,743,546	3,081,429	3,431,730	3,623,367	3,996,169	4,382,435	4,237,412	4,640,878
Required from Development Charges	-	948,241	1,284,936	-	-	-	510,145	1,022,858	-	846,379	1,944,562	-	-	153,819	-	-	168,082	-	-	534,451	-
Required Debenture Funding - From Capital Reserve		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

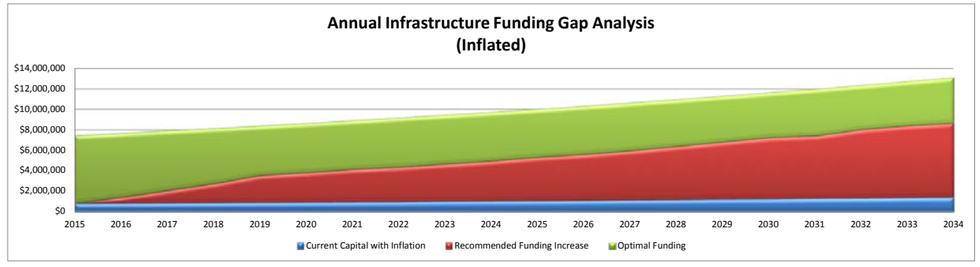
Gas Tax Reserve Funds (All)	Budget	Forecast																			
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	1,097,497	631,097	643,719	656,593	669,725	683,120	696,782	710,718	724,932	739,431	754,219	769,304	784,690	800,383	816,391	832,719	849,373	866,361	883,688	901,362	919,389
Transfers From Operating/Capital	536,225	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital	1,015,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interest Earned	12,374	12,622	12,874	13,132	13,395	13,662	13,936	14,214	14,499	14,789	15,084	15,386	15,694	16,008	16,328	16,654	16,987	17,327	17,674	18,027	18,388
Closing Balance	631,097	643,719	656,593	669,725	683,120	696,782	710,718	724,932	739,431	754,219	769,304	784,690	800,383	816,391	832,719	849,373	866,361	883,688	901,362	919,389	937,777

Capital Reserve/Reserve Funds (Roads and Facilities)	Budget	Forecast																			
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	134,077	136,758	277,536	286,541	292,453	228,084	261,128	116,151	280,789	886,010	941,259	36,809	1,337,520	2,793,183	4,306,692	6,229,111	8,376,708	10,871,483	13,352,470	16,671,587	19,288,769
Transfers From Operating/Capital	-	816,808	1,389,896	2,056,569	2,732,773	3,549,441	3,824,107	4,148,493	4,362,042	4,670,194	4,969,699	5,337,805	5,591,436	5,974,225	6,404,530	6,837,850	7,252,153	7,434,104	8,055,978	8,390,245	8,644,922
Transfer to Capital - Roads and Facilities Only	-	681,472	1,386,510	2,056,392	2,801,614	3,521,518	3,971,361	3,989,361	3,774,193	4,633,402	5,874,871	4,063,320	4,190,542	4,545,161	4,604,250	4,854,502	4,970,544	5,214,931	5,063,755	6,151,274	5,283,107
Interest Earned	2,682	5,442	5,618	5,734	4,472	5,120	2,277	5,506	17,373	18,456	722	26,226	54,768	84,445	122,139	164,249	213,166	261,813	326,894	378,211	453,012
Closing Balance	136,758	277,536	286,541	292,453	228,084	261,128	116,151	280,789	886,010	941,259	36,809	1,337,520	2,793,183	4,306,692	6,229,111	8,376,708	10,871,483	13,352,470	16,671,587	19,288,769	23,103,595
Note: Closing reserve fund balance as a percentage of capital asset balance		0.12%	0.12%	0.12%	0.09%	0.10%	0.04%	0.10%	0.32%	0.33%	0.01%	0.44%	0.88%	1.32%	1.86%	2.43%	3.06%	3.65%	4.42%	4.96%	5.77%

Town of Cobourg
2014 Asset Management Plan
Financing Strategy
Table F-5
Tax Supported Operating Budget Forecast Summary

Net Impact on Taxation	Actual 2011	Actual 2012	Budget 2013	Budget 2014	Forecast 2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Net Expenditures:																								
General Government	2,859,475	2,696,410	2,313,436	2,614,416	2,676,000	2,738,700	2,802,800	2,868,100	2,934,700	3,002,600	3,071,900	3,142,600	3,214,700	3,288,200	3,363,300	3,439,800	3,517,900	3,597,500	3,678,700	3,761,500	3,845,900	3,932,000	4,019,800	4,109,400
Protection to Persons and Property	8,288,387	8,798,388	8,802,631	9,217,046	9,399,200	9,585,100	9,774,700	10,078,200	10,275,400	10,476,700	10,682,000	10,891,400	11,105,000	11,322,800	11,544,900	11,771,500	12,002,600	12,238,400	12,478,800	12,724,100	12,974,300	13,229,500	13,489,800	13,755,300
Transportation Services	4,283,474	3,820,125	4,315,515	4,325,088	4,395,700	4,471,500	4,548,800	4,627,700	4,708,100	4,790,200	4,873,900	4,959,200	5,046,300	5,135,100	5,225,600	5,318,000	5,412,200	5,508,300	5,606,300	5,706,300	5,808,200	5,912,200	6,018,300	6,126,500
Environmental Services (Waste and Stormwater)	256,797	268,337	300,958	300,039	301,000	302,000	303,000	304,100	305,200	306,300	307,400	341,500	342,700	343,900	345,100	346,300	347,600	348,900	350,200	351,500	352,900	354,300	355,700	357,100
Social & Family Services	41,911	41,747	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Culture & Recreation Services	3,067,210	3,014,229	3,431,775	3,411,329	3,474,600	3,539,200	3,605,100	3,672,400	3,741,000	3,811,000	3,882,300	3,955,100	4,029,300	4,105,000	4,182,200	4,260,900	4,341,200	4,423,100	4,506,700	4,591,900	4,678,800	4,767,500	4,858,000	4,950,300
Planning and Development	296,916	411,545	309,469	334,101	340,800	347,600	354,600	361,600	368,800	376,200	383,700	391,400	399,200	407,200	415,400	423,700	432,200	440,800	449,600	458,500	467,700	477,000	486,500	496,200
Commercial, Indust. & Dev	598,480	591,997	529,574	546,751	557,700	568,900	580,300	591,900	603,700	615,800	628,100	640,700	653,500	666,600	679,900	693,500	707,400	721,500	735,900	750,600	765,600	780,900	796,500	812,400
Other Revenue	(3,380,818)	(2,989,738)	(2,545,700)	(2,769,800)	(2,822,000)	(2,875,300)	(2,929,600)	(2,985,000)	(3,041,400)	(3,099,000)	(3,157,700)	(3,217,600)	(3,278,700)	(3,341,100)	(3,404,800)	(3,469,600)	(3,535,800)	(3,603,300)	(3,672,200)	(3,742,400)	(3,814,000)	(3,887,000)	(3,961,500)	(4,037,600)
Net Expenditures due to Level of Service Adjustments	-	-	-	-	76,205	111,081	120,476	101,350	97,612	108,975	80,948	36,952	46,469	75,937	48,426	147,243	128,900	75,899	33,015	22,470	258,205	68,266	180,621	388,008
Transfer to Capital - Roads and Facilities	774,250	295,000	252,500	239,700	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital - Other	358,236	553,000	245,500	338,000	250,410	255,418	260,527	265,737	271,052	276,473	282,002	287,642	293,395	299,263	305,248	311,353	317,580	323,932	330,411	337,019	343,759	350,634	357,647	364,800
Transfers to Reserve Funds (Historical)																								
Transfers to Gas Tax Reserve Fund	-	-	558,992	536,225	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Transfers to Current Reserve Funds (Capital Related) - Other	2,232,675	2,545,978	1,620,811	1,692,452	1,700,500	1,708,800	1,717,200	1,725,700	1,734,400	1,743,400	1,752,600	1,761,900	1,771,400	1,781,100	1,791,000	1,801,000	1,811,400	1,821,900	1,832,600	1,843,600	1,854,700	1,866,000	1,877,600	1,889,300
Transfer to Tax Supported Capital Reserve Fund (Roads, Bridges & Facilities)	-	-	-	-	816,808	1,389,896	2,056,569	2,732,773	3,549,441	3,824,107	4,148,493	4,362,042	4,670,194	4,969,699	5,337,805	5,591,436	5,974,225	6,404,530	6,837,850	7,252,153	7,434,104	8,055,978	8,390,245	8,644,922
Debentures																								
New Debt - Growth Related	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Debt - Non-Growth Related	-	-	-	-	-	108,327	196,594	244,740	300,910	300,910	300,910	405,225	405,225	405,225	405,225	405,225	405,225	405,225	405,225	405,225	405,225	405,225	405,225	405,225
Transfer from Reserve Fund: Development Charges (Debt)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Surplus/(Deficit) Adjustment	(974,706)	(717,089)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Taxation Levy	18,702,287	19,329,931	20,135,461	20,785,347	21,166,923	22,251,223	23,391,066	24,589,300	25,848,915	26,533,665	27,236,553	27,958,061	28,698,683	29,458,924	30,239,304	31,040,357	31,862,630	32,706,686	33,573,101	34,462,467	35,375,393	36,312,504	37,274,438	38,261,855
Taxation Levy Analysis																								
Prior Year Taxation Levy	17,800,478	18,702,287	19,329,931	20,135,461	20,135,461	21,166,923	22,251,223	23,391,066	24,589,300	25,848,915	26,533,665	27,236,553	27,958,061	28,698,683	29,458,924	30,239,304	31,040,357	31,862,630	32,706,686	33,573,101	34,462,467	35,375,393	36,312,504	37,274,438
Add: Provision for Assessment Growth (see below)	-	-	-	-	201,355	211,669	222,512	233,911	245,893	258,489	265,337	272,366	279,581	286,987	294,589	302,393	310,404	318,626	327,067	335,731	344,625	353,754	363,125	372,744
Current Year Taxation Levy at 0.0% Increase	17,800,478	18,702,287	19,329,931	20,135,461	20,336,816	21,378,592	22,473,735	23,624,977	24,835,193	26,107,404	26,799,001	27,508,919	28,237,642	28,985,670	29,753,513	30,541,698	31,350,761	32,181,257	33,033,753	33,908,832	34,807,092	35,729,147	36,675,629	37,647,183
Additional Increase in Taxation Levy for the year	901,809	627,644	805,530	649,886	830,107	872,630	917,331	964,323	1,013,722	426,261	437,552	449,143	461,041	473,254	485,791	498,660	511,869	525,429	539,348	553,635	568,302	583,356	598,810	614,673
Total Taxation Levy	18,702,287	19,329,931	20,135,461	20,785,347	21,166,923	22,251,223	23,391,066	24,589,300	25,848,915	26,533,665	27,236,553	27,958,061	28,698,683	29,458,924	30,239,304	31,040,357	31,862,630	32,706,686	33,573,101	34,462,467	35,375,393	36,312,504	37,274,438	38,261,855
Percentage Increase (Factoring in Assessment Growth)					4.08%	4.08%	4.08%	4.08%	4.08%	1.63%	1.63%	1.63%	1.63%	1.63%	1.63%	1.63%	1.63%	1.63%	1.63%	1.63%	1.63%	1.63%	1.63%	1.63%

	Forecast 2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Assessment Growth Estimate (%)	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%



APPENDIX G
WATER ASSET MANAGEMENT STRATEGY & FINANCING STRATEGY

Table G-1
Town of Cobourg
Water Service
Capital Budget Forecast
Inflated $

Description	Total	Forecast										
		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Capital Expenditures												
W2013-6 - Pipe Cutter	4,000	4,000	-	-	-	-	-	-	-	-	-	-
W2013-12 - Spring Street Phases 1 & 2	410,000	410,000	-	-	-	-	-	-	-	-	-	-
4th/Tweed Street Watermain Replacement	592,250	-	592,250	-	-	-	-	-	-	-	-	-
Pebble Beach Watermain Replacement/Relining	1,236,000	-	1,236,000	-	-	-	-	-	-	-	-	-
Henry St. Watermain Replacement	562,277	-	-	562,277	-	-	-	-	-	-	-	-
Walton St. Renovations	819,545	-	-	-	819,545	-	-	-	-	-	-	-
Secondary Feeder - Design Work	168,826	-	-	-	-	168,826	-	-	-	-	-	-
Perry St. Reconstruction	844,132	-	-	-	-	844,132	-	-	-	-	-	-
Munroe St. Watermain	225,102	-	-	-	-	225,102	-	-	-	-	-	-
Relining Burke, Blake Matthew & Bayview	927,419	-	-	-	-	-	927,419	-	-	-	-	-
Campbell Street Watermain Replacement	579,637	-	-	-	-	-	579,637	-	-	-	-	-
W2012-14 - Heating / Ventilation Upgrade	7,000	7,000	-	-	-	-	-	-	-	-	-	-
W2012-1X - Heating / Ventilation Upgrade	277,000	277,000	-	-	-	-	-	-	-	-	-	-
W2012-1A - Filter building interior office/control room renovations	62,000	62,000	-	-	-	-	-	-	-	-	-	-
W2012-2 - SCADA upgrades	492,500	492,500	-	-	-	-	-	-	-	-	-	-
W2012-3 - New VFD's for Pump	50,000	50,000	-	-	-	-	-	-	-	-	-	-
W2013-1 - Wastewater Supernatant System Upgrade	25,000	25,000	-	-	-	-	-	-	-	-	-	-
W2013-2 - Water Tower Safety Upgrade	25,000	25,000	-	-	-	-	-	-	-	-	-	-
W2013-3 - Water Pick Up Truck	50,000	50,000	-	-	-	-	-	-	-	-	-	-
W2013-4 - New VFD and booster pump control valve for HL#3 and #4	100,000	100,000	-	-	-	-	-	-	-	-	-	-
W2013-7 - Staff Hardware upgrades	6,000	6,000	-	-	-	-	-	-	-	-	-	-
W2013-8 - Water Meter Wands upgrades	2,000	2,000	-	-	-	-	-	-	-	-	-	-
W2013-9 - 2 New Chlorinators	25,000	25,000	-	-	-	-	-	-	-	-	-	-
W2013-10 - Miscellaneous Unbudgeted	5,000	5,000	-	-	-	-	-	-	-	-	-	-
W2013-11 - Radio Equipment	35,000	35,000	-	-	-	-	-	-	-	-	-	-
W2013-14 - City Works GIS / Asset Management software (GP Integr	42,500	42,500	-	-	-	-	-	-	-	-	-	-
Mobile Delivery Service System	10,300	-	10,300	-	-	-	-	-	-	-	-	-
Rebuild LL Pump #4	20,600	-	20,600	-	-	-	-	-	-	-	-	-
Filter Building Envelope Upgrades	1,751,000	-	1,751,000	-	-	-	-	-	-	-	-	-
Refurb HL Pump #1 and motor	26,523	-	-	26,523	-	-	-	-	-	-	-	-
Refurb LL Pump #1 and motor	15,914	-	-	15,914	-	-	-	-	-	-	-	-
Water Tower - Painting	265,225	-	-	265,225	-	-	-	-	-	-	-	-
Raw Water Chlorine Analyzer Replace	26,523	-	-	26,523	-	-	-	-	-	-	-	-
Service Vehicle	42,436	-	-	42,436	-	-	-	-	-	-	-	-
GAC Replacement	471,899	-	-	-	218,545	-	-	-	-	253,354	-	-
Clarifier	5,970,261	-	-	-	-	-	-	5,970,261	-	-	-	-
Capitalized Labour	378,016	-	103,000	106,090	81,955	28,138	28,982	29,851	-	-	-	-
Water Meter Audit & Replacement (gallons to cubic meters)	50,708	-	5,150	5,305	5,464	11,255	11,593	11,941	-	-	-	-
Miscellaneous Water Capital	15,919	-	5,150	5,305	5,464	-	-	-	-	-	-	-
IT Hardware/Software Upgrades	70,353	-	42,230	7,957	8,195	8,441	1,739	1,791	-	-	-	-
Tools	33,313	-	5,150	5,305	5,464	5,628	5,796	5,970	-	-	-	-
Server Upgrades	11,766	-	-	-	-	-	5,796	5,970	-	-	-	-
Phone System Upgrades	40,575	-	-	-	-	-	40,575	-	-	-	-	-
Growth Related:												
Brook Road (Thomas - King)	-	-	-	-	-	-	-	-	-	-	-	-
Elgin Street (D'Arcy - 300m East)	-	-	-	-	-	-	-	-	-	-	-	-
White Street (Ontario -Division)	-	-	-	-	-	-	-	-	-	-	-	-
Kerr Street (New Amherst - Ewing)	-	-	-	-	-	-	-	-	-	-	-	-
New Amherst (Kerr - Carlyle)	-	-	-	-	-	-	-	-	-	-	-	-
Lifecycle:	-											
Water Facilities	1,085,139	-	-	-	-	145,753	110,711	155,824	217,688	224,218	230,945	237,873
Watermains	11,948,643	-	-	-	-	1,188,645	962,983	2,122,430	2,399,450	2,501,820	2,773,315	2,983,788
Total Capital Expenditures	29,808,301	1,618,000	3,770,830	1,068,860	1,144,632	2,625,920	2,675,231	8,304,038	2,617,138	2,979,392	3,004,260	3,221,661
Capital Financing												
Provincial/Federal Grants	-											
Development Charges Reserve Fund	-	-	-	-	-	-	-	-	-	-	-	-
Non-Growth Related Debenture Requirements	2,500,000	-	-	-	-	-	-	2,500,000	-	-	-	-
Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Operating Contributions	-	-	-	-	-	-	-	-	-	-	-	-
Water Reserve	27,308,301	1,618,000	3,770,830	1,068,860	1,144,632	2,625,920	2,675,231	5,804,038	2,617,138	2,979,392	3,004,260	3,221,661
Total Capital Financing	29,808,301	1,618,000	3,770,830	1,068,860	1,144,632	2,625,920	2,675,231	8,304,038	2,617,138	2,979,392	3,004,260	3,221,661

Table G-2
Town of Cobourg
Water Service
Schedule of Non-Growth Related Debenture Repayments
Inflated $

Debenture Year	Principal (Inflated)	Forecast 2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
2013	-		-	-	-	-	-	-	-	-	-	-
2014	-			-	-	-	-	-	-	-	-	-
2015	-				-	-	-	-	-	-	-	-
2016	-					-	-	-	-	-	-	-
2017	-						-	-	-	-	-	-
2018	-							-	-	-	-	-
2019	2,500,000								200,606	200,606	200,606	200,606
2020	-									-	-	-
2021	-										-	-
2022	-											-
2023	-											
Total Annual Debt Charges	**2,500,000**	-	-	-	-	-	-	-	200,606	200,606	200,606	200,606

Table G-3
Town of Cobourg
Water Service
Schedule of Growth Related Debenture Repayments
Inflated $

Debenture Year	Principal (Inflated)	Forecast 2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
2013	-		-	-	-	-	-	-	-	-	-	-
2014	-			-	-	-	-	-	-	-	-	-
2015	-				-	-	-	-	-	-	-	-
2016	-					-	-	-	-	-	-	-
2017	-						-	-	-	-	-	-
2018	-							-	-	-	-	-
2019	-								-	-	-	-
2020	-									-	-	-
2021	-										-	-
2022	-											-
2023	-											
Total Annual Debt Charges	**-**	-	-	-	-	-	-	-	-	-	-	-

Table G-4
Town of Cobourg
Water Service
Water Reserves/ Reserve Funds Continuity
Inflated $

Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Opening Balance	3,717,257	3,572,869	3,781,243	1,777,915	2,546,611	3,369,715	2,997,613	3,051,917	286,197	879,753	1,518,250	2,580,124
Transfer from Operating	1,017,616	1,788,936	1,749,899	1,812,342	1,934,373	2,224,139	2,699,318	3,035,484	3,201,984	3,602,857	4,040,588	4,518,561
Transfer to Capital	1,208,728	1,618,000	3,770,830	1,068,860	1,144,632	2,625,920	2,675,231	5,804,038	2,617,138	2,979,392	3,004,260	3,221,661
Transfer to Operating		-	-	-	-	-	-	-	-	-	-	-
Closing Balance	3,526,145	3,743,805	1,760,312	2,521,397	3,336,352	2,967,934	3,021,700	283,363	871,043	1,503,218	2,554,579	3,877,024
Interest	46,724	37,438	17,603	25,214	33,364	29,679	30,217	2,834	8,710	15,032	25,546	38,770

Table G-5
Town of Cobourg
Water Service
Water Development Charges Reserve Fund Continuity
Inflated $

Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Opening Balance	(212,430)	(119,018)	(35,757)	50,878	141,022	234,776	332,271	433,560	538,774	648,053	761,509	814,652
Development Charge Proceeds	93,412	83,615	86,132	88,747	91,430	94,205	96,996	99,880	102,863	105,916	45,077	46,444
Transfer to Capital		-	-	-	-	-	-	-	-	-	-	-
Transfer to Operating		-	-	-	-	-	-	-	-	-	-	-
Closing Balance	(119,018)	(35,403)	50,375	139,625	232,452	328,981	429,267	533,439	641,637	753,969	806,587	861,096
Interest		(354)	504	1,396	2,325	3,290	4,293	5,334	6,416	7,540	8,066	8,611

Table G-6
Town of Cobourg
Water Services
Operating Budget Forecast
Inflated $

Description	Forecast										
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Expenditures											
Wages	1,067,317	1,134,741	1,221,219	1,263,445	1,286,983	1,267,109	1,292,451	1,318,300	1,344,666	1,371,560	1,398,991
Wages Car allowance	4,200	4,200	4,200	4,200	4,200	4,200	4,284	4,370	4,457	4,546	4,637
Wages Board of Directors	2,300	2,320	2,320	2,320	2,320	2,320	2,366	2,414	2,462	2,511	2,561
Management fees	41,000	98,196	103,419	106,044	108,068	102,477	104,527	106,617	108,749	110,924	113,143
Training	18,000	24,650	25,134	25,629	26,135	26,653	27,186	27,730	28,284	28,850	29,427
Training Board of Directors	1,200	3,750	3,750	3,750	3,750	3,750	3,825	3,902	3,980	4,059	4,140
Billing and collecting	280,000	269,021	275,410	281,992	287,375	284,023	289,703	295,498	301,407	307,436	313,584
Dues and feestmemberships	2,065	3,263	3,389	3,517	3,649	3,783	3,859	3,936	4,015	4,095	4,177
Water operations and maintenance	210,580	230,000	233,000	236,045	239,136	242,273	247,118	252,061	257,102	262,244	267,489
Rent	48,000	48,000	48,000	48,000	48,000	48,000	48,960	49,939	50,938	51,957	52,996
Chemicals purchased	39,000	42,000	42,630	43,269	43,918	44,577	45,469	46,378	47,305	48,252	49,217
Water tower maintenance	20,047	24,000	24,360	24,725	25,096	25,473	25,982	26,502	27,032	27,573	28,124
Hydrant maintenance	11,693	112,000	113,680	115,385	117,116	18,873	19,250	19,635	20,028	20,429	20,837
Mains/service maintenance	46,111	42,000	42,630	43,269	43,918	44,577	45,469	46,378	47,305	48,252	49,217
Vehicle maintenance	7,287	8,000	8,120	8,242	8,365	8,491	8,661	8,834	9,011	9,191	9,375
Vehicle gas	25,345	21,800	22,127	22,459	22,796	23,138	23,601	24,073	24,554	25,045	25,546
Building maintenance	23,692	22,500	22,838	23,180	23,528	23,881	24,359	24,846	25,343	25,850	26,367
Professional fees	27,511	18,000	17,400	17,875	16,250	14,625	14,918	15,216	15,520	15,831	16,147
Property taxes	62,907	68,400	70,452	72,566	74,743	76,985	78,525	80,095	81,697	83,331	84,998
Insurance	92,995	95,633	95,633	95,633	95,633	95,633	97,546	99,497	101,487	103,516	105,587
Booster station maintenance	44,095	40,000	41,209	41,209	41,827	42,455	43,304	44,170	45,054	45,955	46,874
IT maintenance	37,132	75,551	71,190	71,331	71,474	71,619	73,051	74,512	76,003	77,523	79,073
Health and safety	5,000	7,000	7,210	7,426	7,649	7,879	8,037	8,197	8,361	8,528	8,699
EOWWA conference	-	7,500	-	-	-	-	-	-	-	-	-
Payband Adjustments	-	11,000	-	-	-	-	-	-	-	-	-
Sub Total Operating	2,117,477	2,413,525	2,499,320	2,561,511	2,601,929	2,482,794	2,532,450	2,583,099	2,634,761	2,687,456	2,741,205
Capital-Related											
Existing Debt (Principal) - Growth Related											
Existing Debt (Interest) - Growth Related											
New Growth Related Debt (Principal)	-	-	-	-	-	-	-	-	-	-	-
New Growth Related Debt (Interest)	-	-	-	-	-	-	-	-	-	-	-
Existing Debt (Principal) - Non-Growth Related											
Existing Debt (Interest) - Non-Growth Related											
New Non-Growth Related Debt (Principal)	-	-	-	-	-	-	-	75,606	79,387	83,356	87,524
New Non-Growth Related Debt (Interest)	-	-	-	-	-	-	-	125,000	121,220	117,250	113,083
Transfer to Capital	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital Reserve	1,788,936	1,749,899	1,812,342	1,934,373	2,224,139	2,699,318	3,035,484	3,201,984	3,602,857	4,040,588	4,518,561
Sub Total Capital Related	1,788,936	1,749,899	1,812,342	1,934,373	2,224,139	2,699,318	3,035,484	3,402,590	3,803,463	4,241,195	4,719,167
Total Expenditures	3,906,413	4,163,424	4,311,662	4,495,884	4,826,068	5,182,112	5,567,934	5,985,689	6,438,224	6,928,651	7,460,372
Revenues											
Base Charge	1,957,474	2,054,813	2,155,995	2,261,982	2,373,000	2,489,279	2,611,064	2,738,609	2,872,180	3,012,055	3,158,525
Other Revenues	86,052	88,000	89,320	90,660	92,020	93,400	95,268	97,173	99,117	101,099	103,121
Contributions from Development Charges Reserve Fund		-	-	-	-	-	-	-	-	-	-
Contributions from Reserves / Reserve Funds	-	-	-	-	-	-	-	-	-	-	-
Total Operating Revenue	2,043,526	2,142,813	2,245,315	2,352,642	2,465,020	2,582,679	2,706,332	2,835,783	2,971,297	3,113,154	3,261,646
Water Billing Recovery - Operating	1,862,887	2,020,610	2,066,347	2,143,242	2,361,048	2,599,433	2,861,602	3,149,906	3,466,927	3,815,496	4,198,727
Lifecycle Reserve Contribution ($)											
Water Billing Recovery - Total	**1,862,887**	**2,020,610**	**2,066,347**	**2,143,242**	**2,361,048**	**2,599,433**	**2,861,602**	**3,149,906**	**3,466,927**	**3,815,496**	**4,198,727**

Table G-7
Town of Cobourg
Water Services
Water Rate Forecast
Inflated $

Description	Existing	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Total Water Billing Recovery		1,862,887	2,020,610	2,066,347	2,143,242	2,361,048	2,599,433	2,861,602	3,149,906	3,466,927	3,815,496	4,198,727
Total Consumption (m^3)		2,256,135	2,279,641	2,152,944	2,071,019	2,093,559	2,116,099	2,138,639	2,161,179	2,183,719	2,206,259	2,228,799
Constant Rate		**0.83**	**0.89**	**0.96**	**1.03**	**1.13**	**1.23**	**1.34**	**1.46**	**1.59**	**1.73**	**1.88**
Annual Percentage Change			**7.3%**	**8.3%**	**7.8%**	**9.0%**	**8.9%**	**8.9%**	**8.9%**	**8.9%**	**8.9%**	**8.9%**
Increasing Block Structure												
Consumption Forecast By Block (m3)												
Block 1		1,359,830	1,383,336	1,405,740	1,428,184	1,450,724	1,473,264	1,495,804	1,518,344	1,540,884	1,563,424	1,585,964
Block 2		856,925	856,925	727,515	636,927	636,927	636,927	636,927	636,927	636,927	636,927	636,927
Block 3		39,380	39,380	19,690	-	-	-	-	-	-	-	-
Check Total Consumption		2,256,135	2,279,641	2,152,944	2,065,112	2,087,652	2,110,192	2,132,732	2,155,272	2,177,812	2,200,352	2,222,892
Increasing Block Rates ($/m ^{3})	**Existing**											
Block 1	**$ 0.75**	**$ 0.75**	**$ 0.81**	**$ 0.88**	**$ 0.97**	**$ 1.05**	**$ 1.15**	**$ 1.25**	**$ 1.36**	**$ 1.49**	**$ 1.62**	**$ 1.77**
Block 2	**$ 0.93**	**$ 0.93**	**$ 1.00**	**$ 1.10**	**$ 1.20**	**$ 1.31**	**$ 1.42**	**$ 1.55**	**$ 1.69**	**$ 1.84**	**$ 2.01**	**$ 2.19**
Block 3	**$ 1.17**	**$ 1.17**	**$ 1.26**	**$ 1.38**	**$ 1.51**	**$ 1.64**	**$ 1.79**	**$ 1.95**	**$ 2.13**	**$ 2.32**	**$ 2.53**	**$ 2.76**

APPENDIX H
WASTEWATER ASSET MANAGEMENT STRATEGY & FINANCING STRATEGY

Table H-1
Town of Cobourg
Wastewater Service
Capital Budget Forecast
Inflated $

Description	Total	Forecast										
		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Capital Expenditures												
WPCP #1												
Headworks Reconstruction/Upgrade	7,271,800	-	5,150,000	2,121,800	-	-	-	-	-	-	-	-
SCADA Implementation	103,000	-	103,000	-	-	-	-	-	-	-	-	-
Clarifier Repairs	257,500	-	257,500	-	-	-	-	-	-	-	-	-
Disinfection Equipment	848,720	-	-	848,720	-	-	-	-	-	-	-	-
Intermediate Building Upgrade	1,060,900	-	-	1,060,900	-	-	-	-	-	-	-	-
Heat Exchanger	273,182	-	-	-	273,182	-	-	-	-	-	-	-
Pump Replacement	395,715	-	-	-	109,273	112,551	173,891	-	-	-	-	-
Garage Upgrade	218,545	-	-	-	218,545	-	-	-	-	-	-	-
Thickener Bldg Electrical Upgrade	81,955	-	-	-	81,955	-	-	-	-	-	-	-
Filter Replacement	28,138	-	-	-	-	28,138	-	-	-	-	-	-
Process Water Lines	289,819	-	-	-	-	-	289,819	-	-	-	-	-
Aeration Diffuser Replacement	119,405	-	-	-	-	-	-	119,405	-	-	-	-
Centrifuge Replacement	597,026	-	-	-	-	-	-	597,026	-	-	-	-
Concrete Work	307,468	-	-	-	-	-	-	-	307,468	-	-	-
Digester Cleanout	307,468	-	-	-	-	-	-	-	307,468	-	-	-
WPCP #2												
Primary Digester Cleanout	513,468	-	206,000	-	-	-	-	-	307,468	-	-	-
Flare Stack Replacement	51,500	-	51,500	-	-	-	-	-	-	-	-	-
SCADA Upgrade - Phases 2-4	484,754	-	161,710	159,135	163,909	-	-	-	-	-	-	-
Primary Clarifier Center Mechanism Repl	103,000	-	103,000	-	-	-	-	-	-	-	-	-
Disinfection Equipment	848,720	-	-	848,720	-	-	-	-	-	-	-	-
Plant #2 Backup Power Generator	424,360	-	-	424,360	-	-	-	-	-	-	-	-
Pump Replacement	228,678	-	-	-	109,273	-	-	119,405	-	-	-	-
SBR Diffuser Replacement	281,377	-	-	-	-	281,377	-	-	-	-	-	-
Lab Equipment	28,138	-	-	-	-	28,138	-	-	-	-	-	-
Office Equipment	16,883	-	-	-	-	16,883	-	-	-	-	-	-
HVAC Replacement	579,637	-	-	-	-	-	579,637	-	-	-	-	-
Primary Clarifier Rotational Mech	173,891	-	-	-	-	-	173,891	-	-	-	-	-
Concrete Work	307,468	-	-	-	-	-	-	-	307,468	-	-	-
Pumping Stations												
Tweed St Sewer Line Replacement	252,350	-	252,350	-	-	-	-	-	-	-	-	-
Brook Rd PS - Diesel Generator	103,000	-	103,000	-	-	-	-	-	-	-	-	-
Replace Sewer Collection Piping	1,715,584	-	-	265,225	273,182	281,377	289,819	298,513	307,468	-	-	-
Pump Stns Structural Repairs	107,681	-	-	53,045	54,636	-	-	-	-	-	-	-
Forth St PS Roof Replacement	28,138	-	-	-	-	28,138	-	-	-	-	-	-
Level of Service Adjustments:												
Rehabiliation and Renewal Works	151,726	-	14,935	15,383	15,845	16,320	16,809	17,314	17,833	18,368	18,919	19,487
Growth Related:												
Pumping Station (EUSA)	-	-	-	-	-	-	-	-	-	-	-	-
Forcemain (EUSA)	-	-	-	-	-	-	-	-	-	-	-	-
Aerator Improvements (Plant #2 - EUSA)	-	-	-	-	-	-	-	-	-	-	-	-
SPS and Forcemain (CEC)	-	-	-	-	-	-	-	-	-	-	-	-
250 mm dia. and Greater Sewer Network (CEC)	-	-	-	-	-	-	-	-	-	-	-	-
Wastewater Treatment Plant (CEC)	-	-	-	-	-	-	-	-	-	-	-	-
Lifecycle:												
Mains	1,427,500	1,427,500	-	-	-	-	-	-	-	-	-	-
Structures	3,800,712	-	-	-	-	-	-	-	-	1,872,272	1,928,440	1,986,294
Total Capital Expenditures	23,789,206	1,427,500	6,402,995	5,797,288	1,299,800	792,922	1,523,866	1,151,663	1,555,173	1,890,640	1,947,359	2,005,781
Capital Financing												
Provincial/Federal Grants	-											
Development Charges Reserve Fund	-	-	-	-	-	-	-	-	-	-	-	-
Non-Growth Related Debenture Requirements	7,980,828	600,000	4,535,444	2,845,384	-	-	-	-	-	-	-	-
Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Operating Contributions	-	-	-	-	-	-	-	-	-	-	-	-
Wastewater Reserve	15,808,378	827,500	1,867,551	2,951,904	1,299,800	792,922	1,523,866	1,151,663	1,555,173	1,890,640	1,947,359	2,005,781
Total Capital Financing	23,789,206	1,427,500	6,402,995	5,797,288	1,299,800	792,922	1,523,866	1,151,663	1,555,173	1,890,640	1,947,359	2,005,781

Table H-2
Town of Cobourg
Wastewater Service
Schedule of Non-Growth Related Debenture Repayments
Inflated $

Debenture Year	Principal (Inflated)	Forecast										
		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
2014	4,535,444			363,936	363,936	363,936	363,936	363,936	363,936	363,936	363,936	363,936
2015	2,845,384				228,321	228,321	228,321	228,321	228,321	228,321	228,321	228,321
2016	-					-	-	-	-	-	-	-
2017	-						-	-	-	-	-	-
2018	-							-	-	-	-	-
2019	-								-	-	-	-
2020	-									-	-	-
2021	-										-	-
2022	-											-
2023	-											
Total Annual Debt Charges	**7,380,828**	-	-	363,936	592,257	592,257	592,257	592,257	592,257	592,257	592,257	592,257

Table H-3
Town of Cobourg
Wastewater Service
Schedule of Growth Related Debenture Repayments
Inflated $

Debenture Year	Principal (Inflated)	Forecast										
		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
2014	-			-	-	-	-	-	-	-	-	-
2015	-				-	-	-	-	-	-	-	-
2016	-					-	-	-	-	-	-	-
2017	-						-	-	-	-	-	-
2018	-							-	-	-	-	-
2019	-								-	-	-	-
2020	-									-	-	-
2021	-										-	-
2022	-											-
2023	-											
Total Annual Debt Charges	**-**	-	-	-	-	-	-	-	-	-	-	-

Table H-4
Town of Cobourg
Wastewater Service
Wastewater Reserves/ Reserve Funds Continuity
Inflated $

Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Opening Balance		2,700,913	3,229,607	2,711,811	1,095,928	1,173,920	1,969,348	2,250,897	3,284,608	4,317,403	5,276,985	6,458,457
Transfer from Operating		1,883,218	2,056,085	1,873,313	1,836,645	2,039,326	2,253,604	2,480,072	2,719,356	2,972,110	3,239,021	3,520,809
Transfer to Capital		827,500	1,867,551	2,951,904	1,299,800	792,922	1,523,866	1,151,663	1,555,173	1,890,640	1,947,359	2,005,781
Transfer to Operating		559,000	733,179	548,143	470,475	470,475	470,475	327,218	174,135	174,135	174,135	174,135
Closing Balance		3,197,631	2,684,961	1,085,077	1,162,297	1,949,850	2,228,610	3,252,087	4,274,656	5,224,738	6,394,512	7,799,351
Interest		31,976	26,850	10,851	11,623	19,498	22,286	32,521	42,747	52,247	63,945	77,994

Table H-5
Town of Cobourg
Wastewater Service
Wastewater Development Charges Reserve Fund Continuity
Inflated $

Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Opening Balance		2,204,897	2,469,893	2,762,238	3,062,859	3,371,947	3,689,694	4,016,300	4,351,966	4,696,898	4,880,094	5,067,846
Development Charge Proceeds		259,800	264,996	270,296	275,702	281,216	286,840	292,577	298,429	134,878	137,576	140,327
Transfer to Capital		-	-				-	-	-	-	-	-
Transfer to Operating		-	-	-	-	-	-	-	-	-	-	-
Closing Balance		2,464,697	2,734,889	3,032,534	3,338,561	3,653,163	3,976,534	4,308,877	4,650,394	4,831,776	5,017,670	5,208,173
Interest		5,196	27,349	30,325	33,386	36,532	39,765	43,089	46,504	48,318	50,177	52,082

Required from Development Charges		-	-	-	-	-	-	-	-	-	-	-

Table H-6
Town of Cobourg
Wastewater Services
Operating Budget Forecast
Inflated $

Description	Forecast										
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Expenditures											
University Avenue Plant	1,463,386	1,492,654	1,522,507	1,552,957	1,584,016	1,615,696	1,648,010	1,680,971	1,714,590	1,748,882	1,783,859
Normar Road Plant	1,193,556	1,217,427	1,241,776	1,266,611	1,291,943	1,317,782	1,344,138	1,371,021	1,398,441	1,426,410	1,454,938
Pumphouses	64,313	65,599	66,911	68,249	69,614	71,007	72,427	73,875	75,353	76,860	78,397
Sanitary Sewers	409,426	417,615	425,967	434,486	443,176	452,039	461,080	470,302	479,708	489,302	499,088
Sub Total Operating	3,130,681	3,193,295	3,257,161	3,322,304	3,388,750	3,456,525	3,525,655	3,596,168	3,668,092	3,741,454	3,816,283
Capital-Related											
Existing Debt (Principal) - Growth Related											
Existing Debt (Interest) - Growth Related											
New Growth Related Debt (Principal)	-	-	-	-	-	-	-	-	-	-	-
New Growth Related Debt (Interest)	-	-	-	-	-	-	-	-	-	-	-
Existing Debt (Principal and Interest) - Non-Growth Related	559,000	733,179	548,143	470,475	470,475	470,475	327,218	174,135	174,135	174,135	174,135
New Non-Growth Related Debt (Principal)	-	-	137,164	230,074	241,577	253,656	266,339	279,656	293,639	308,321	323,737
New Non-Growth Related Debt (Interest)	-	-	226,772	362,183	350,680	338,601	325,918	312,601	298,618	283,936	268,520
Transfer to Capital	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital Reserve	1,883,218	2,056,085	1,873,313	1,836,645	2,039,326	2,253,604	2,480,072	2,719,356	2,972,110	3,239,021	3,520,809
Sub Total Capital Related	2,442,218	2,789,264	2,785,392	2,899,376	3,102,058	3,316,335	3,399,547	3,485,748	3,738,502	4,005,413	4,287,201
Total Expenditures	5,572,899	5,982,559	6,042,553	6,221,680	6,490,808	6,772,860	6,925,203	7,081,916	7,406,593	7,746,866	8,103,484
Revenues											
Base Charge	1,999,533	2,100,304	2,205,049	2,314,814	2,429,831	2,550,346	2,676,614	2,808,904	2,947,494	3,092,677	3,244,758
Other Revenues	834,000	850,680	867,694	885,047	902,748	920,803	939,219	958,004	977,164	996,707	1,016,641
Contributions from Development Charges Reserve Fund		-	-	-	-	-	-	-	-	-	-
Contributions from Reserves / Reserve Funds	559,000	733,179	548,143	470,475	470,475	470,475	327,218	174,135	174,135	174,135	174,135
Total Operating Revenue	3,392,533	3,684,163	3,620,886	3,670,336	3,803,054	3,941,624	3,943,052	3,941,043	4,098,793	4,263,519	4,435,535
Wastewater Billing Recovery - Operating	2,180,366	2,298,395	2,421,667	2,551,344	2,687,753	2,831,236	2,982,150	3,140,874	3,307,801	3,483,347	3,667,949
Lifecycle Reserve Contribution ($)											
Wastewater Billing Recovery - Total	**2,180,366**	**2,298,395**	**2,421,667**	**2,551,344**	**2,687,753**	**2,831,236**	**2,982,150**	**3,140,874**	**3,307,801**	**3,483,347**	**3,667,949**

Table H-7
Town of Cobourg
Wastewater Services
Wastewater Rate Forecast
Inflated $

Description		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Total Wastewater Billing Recovery		2,180,366	2,298,395	2,421,667	2,551,344	2,687,753	2,831,236	2,982,150	3,140,874	3,307,801	3,483,347	3,667,949
Total Consumption (m^3)		1,749,402	1,767,628	1,785,106	1,802,583	1,820,061	1,837,538	1,855,016	1,872,493	1,889,971	1,907,448	1,924,925
Constant Rate		**1.25**	**1.30**	**1.36**	**1.42**	**1.48**	**1.54**	**1.61**	**1.68**	**1.75**	**1.83**	**1.91**
Annual Percentage Change			**4.0%**	**4.0%**	**4.0%**	**4.0%**	**4.0%**	**4.0%**	**4.0%**	**4.0%**	**4.0%**	**4.0%**
Increasing Block Structure												
Consumption Forecast By Block (m3)												
Block 1		1,084,944	1,103,171	1,120,648	1,138,126	1,155,603	1,173,080	1,190,558	1,208,035	1,225,513	1,242,990	1,260,468
Block 2		664,458	664,458	664,458	664,458	664,458	664,458	664,458	664,458	664,458	664,458	664,458
Check Total Consumption		1,749,402	1,767,628	1,785,106	1,802,583	1,820,061	1,837,538	1,855,016	1,872,493	1,889,971	1,907,448	1,924,925
Increasing Block Rates ($/m ^{3})	**Existing**											
Block 1	**$ 1.14**	**$ 1.14**	**$ 1.19**	**$ 1.24**	**$ 1.30**	**$ 1.36**	**$ 1.42**	**$ 1.48**	**$ 1.54**	**$ 1.61**	**$ 1.68**	**$ 1.76**
Block 2	**$ 1.42**	**$ 1.42**	**$ 1.48**	**$ 1.55**	**$ 1.62**	**$ 1.69**	**$ 1.76**	**$ 1.84**	**$ 1.92**	**$ 2.01**	**$ 2.10**	**$ 2.19**