

**STAFF REPORT: Financial & Information Services**

**REPORT TO:** Council  
**MEETING DATE:** May 9, 2011  
**REPORT NO.:** FIS.11.22  
**SUBJECT:** Municipal Drinking Water License Financial Plan  
**PREPARED BY:** Darcy Chapman, Capital Accountant  
John Caswell, Manager of Water & Wastewater Division

**A. Recommendations**

THAT Council receive Staff Report FIS.11.22 “Municipal Drinking Water License Financial Plan” for information purposes; and,

THAT Council approve the Municipal Drinking Water License Financial Plan as attached; and,

THAT Council direct staff to forward the Municipal Drinking Water License Financial Plan to the Ministry of Municipal Affairs and Housing and the Ministry of the Environment as required through the legislation to ensure the Town fulfills the requirements for a Municipal Water License.

**B. Background**

In Part Two Report of the Walkerton Inquiry, Justice O’Connor recommended that “the **MOE** should require owners of municipal water systems to obtain an owner’s licence for the operation of their waterworks”. The MOE has implemented this recommendation through the new Municipal Drinking Water Licensing Program. A Municipal Drinking Water Licence will be issued once the Town of The Blue Mountains has the following in place:

1. A Drinking Water Works Permit (DWWP). A permit to establish or alter a drinking water system; which, together with a licence, will replace the current certificate of approval. The Town received this permit on November 10, 2010.
2. An Accepted Operational Plan. The plan will be based on the MOE Drinking Water Quality Management Standard (DWQMS) and will document the Town’s Quality Management System (QMS) and was submitted on June 23, 2009.
3. Accreditation of the Operating Authority. A successful third-party audit of the Town’s QMS will be the basis for accreditation. To be completed in early 2012.
4. Financial Plan as required under the Financial Plans Regulation (O. Reg. 453/07 of the SDWA). The Town is required to submit a Financial Plan that satisfies the regulation prior to May 10, 2011.

5. A Permit to Take Water (PTTW). The existing PTTW Program will not be altered as a result of the new Licensing Program, but the Town is required to submit all current PTTW numbers as part of the Licence application.

The Municipal Drinking Water License (MDWL) Financial Plan is a component of the legislated requirements noted above as component 4 “Financial Plan” of the new Municipal Drinking Water Licence program. The intent of the legislation is to ensure that water utilities are adequately funded to eliminate health risks to the public and are financially sustainable over the long term. The legislation requires a minimum six year plan however Staff recommend that it is necessary to look at a longer term plan to ensure the system will remain sustainable for future generations. For this reason a 20 Year Financial Plan has been prepared.

Consequently, in order to complete the MDWL Financial Plan extensive work was required to understand the capital demands over the planning period. For this reason a financial model was created that included both an in-depth 20 year Capital Plan and a broader 100-year Capital Forecast (Asset Management Plan). Both the Town’s AMP and the Water Division 20 Year Capital Plan feed the required information into the MDWL Financial Plan and associated financial statements. A final component of the process was to generate estimated annual operational costs which the MDWL Financial Plan model was responsible for. The three reports work in combination with each other to form the overall strategies, framework and financial modelling to support the short, medium and long range projected fiscal requirements for the Water Division.

The three plans that were presented to Council provide the tools that will be available for budgetary purposes and can be easily updated. Although the plans presented include recommended rate increases, the budgets must be approved annually by Council and the assumptions can be changed to allow flexibility in establishing priorities of the Water Division each year.

Although not a direct requirement of the legislation, Council requested Staff to hold a Public Information Centre (PIC) to introduce the water users to the 20-year Capital Plan and the MDWL Financial Plan. This PIC was also used to re-familiarize the public with the Drinking Water Quality Management System (DWQMS).

The PIC was held between 10am and 12pm on April 30, 2011 at the L. E. Shore Memorial Library in Thornbury. Interested parties were invited to attend through direct mail-outs, newspaper advertising, the Town’s website, Facebook, Twitter and Town email blasts. There were 18 residents in attendance at the PIC in which a presentation was made regarding the Water Financial Plan. Upon completion of the presentation, Deputy Mayor McKinlay acted as a session monitor and allowed those in attendance to ask questions of Staff. The questions have been attached for Council reference.

Following the PIC, Staff has finalized the original draft MDWL Financial Plan based on direction from Council. Following approval by Council, the MDWL Financial Plan will be published on the Town’s website and submitted to the Ministry of Municipal Affairs and Housing and the Ministry of the Environment prior to May 10, 2011, as required by the

legislation. Hard copies will be available to the public on request. The Town's website will host all relevant information including the PIC presentation, full copies of the Town's Asset Management Plan, and Water Division 20-year Capital Plan. As well, Community Information Sheets, which are simplified, easy to read, one page versions of the reports will also be available.

### **C. The Blue Mountains' Strategic Plan**

2. Addressing the Town's municipal infrastructure needs
  - 2.1 Identifying existing deficiencies in the current municipal infrastructure.
5. Ensuring long-term financial sustainability
  - 5.1 Create policies and procedures for current and long term capital budgets including public input
  - 5.2 Create a solid long term capital budget (3-5 years with a 6-15 year vision)

### **D. Environmental Impacts**

N/A

### **E. Financial Impact**

Acceptance of the Water Financial Plan will ensure that The Blue Mountains will have a living document that can help establish annual budgets and ensure the water system remains sustainable for current and future generations.

### **F. Attached**

1. Town of The Blue Mountains Municipal Drinking Water License Financial Plan #111-301
2. Public Information Centre - Question & Answer highlights

Respectfully submitted,

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Darcy Chapman, Capital Accountant

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John Caswell, Manager of Water & Wastewater Services

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## MEMORANDUM



**DATE:** April 30, 2011  
**SUBJECT:** Water Financial Plan Public Information Centre  
**LOCATION:** L. E. Shore Memorial Library

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### In Attendance:

Duncan McKinlay, Deputy Mayor  
Darcy Chapman, Capital Accountant  
John Caswell, Manager of Water and Wastewater Services  
Elizabeth Thompson, Manager of Accounting and Budgets  
Darren Shilvock, Water Supervisor  
Meghan Boyd, Compliance and Efficiency Co-ordinator  
Liz Saunders, Operations Assistant  
Amanda Norris, Administrative Assistant

18 local residents

### **Questions & Answers**

**Question 1:** With regard to the rate increases, will the plan be a rolling forward 20 year plan?

**Answer 1:** Yes, the plan will be a rolling forward 20 year plan.

**Question 2:** Will the rate increase apply to the water use rate or the flat rate?

**Answer 2:** If the rate increase will be applied to the water use rate or the flat rate will be determined by Council.

**Question 3:** What role is Collingwood playing?

**Answer 3:** The Town has an agreement with Collus to take 4,000 cubic meters of water per day, which offsets the Town's water needs and ensures that no treatment expansion is required in the near future.

**Question 4:** What impact is conservation going to play, are there going to be programs available to educate the public and developers?

**Answer 4:** The Town currently offers a toilet rebate program and plans to continue efforts to implement water metering throughout the Town. New

development will offset reductions in water use associated with conservation initiatives. Future technologies are expected to further reduce costs and infrastructure needs.

**Question 5:** How is an 8.2% rate increase over 7 years more fair than a 5.9% rate increase over 20 years?

**Answer 5:** The 8.2% increase over 7 years is a better option in order for the Town to be better prepared for unforeseen problems and avoid a larger one time increase.

**Question 6:** How is it fair that base ratepayers who conserve water experience this rate increase? Should permanent residents be paying this much?

**Answer 6:** The base rate structure (60 – 40 split) will be reviewed annually by Council in order to determine if the rate structure remains an adequate rate split.

**Question 7:** Could you provide an overview of the Town's water supply, where is it coming from and is it sustainable?

**Answer 7:** The source of The Blue Mountains' and Town of Collingwood's drinking water supply is Georgian Bay. There are currently several programs and initiatives in place that work to preserve the quality of this supply for future generations.

**Question 8:** How close are we to determining the Town's water loss?

**Answer 8:** The Town has a process in place to track water loss and will be performing a leak detection survey of the Town's water distribution system in the near future.

**Question 9:** Why is the Town using cast iron piping?

**Answer 9:** The Town no longer uses cast iron piping in the distribution system. Old, existing cast iron piping is being replaced a more durable, longer lasting PVC piping material.

**Question 10:** Why is so much water being wasted waiting for the water to become hot?

**Answer 10:** If tap water takes a long time to warm up this is likely a water heater or pipe insulation issue. Consider insulating exposed pipes, purchasing a more efficient water heater or relocating the water heater.

**Additional Comments:**

- Town needs to get information regarding cost saving water initiatives out to the public and developers
- Water conservation technology in North America is way behind that in Europe
- There has to be more incentive for people to conserve water
- There needs to be discussions with developers to try and get them to consider implementing water conservation initiatives
- More public information regarding conservation initiatives could be distributed by the Town, much like is being done at the landfill
- The Town may want to consider mandating conservation initiatives such as rainwater harvesting



*THE CORPORATION OF THE TOWN OF THE  
BLUE MOUNTAINS  
Municipal Drinking Water License*

*FINANCIAL PLAN*

*Financial Plan # 111-301*

This Financial Plan was approved by Town  
Council on \_\_\_\_\_, 2011

This Financial Plan was prepared by:

Financial & Information Services and  
Engineering & Public Works

*Town of The Blue Mountains  
32 Mill Street,  
Thornbury, ON  
N0H 2P0*

*A copy of this Financial Plan is available at [www.thebluemountains.ca](http://www.thebluemountains.ca) and is also available for pickup at the above address*

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## ***1. Introduction and Summary***

Justice Dennis O'Connor, in Part Two of his Walkerton Inquiry, highlighted the importance of ensuring that municipalities plan for the long-term financial sustainability of their drinking-water systems in order to ensure the safety of drinking water into the future. Financial sustainability is required to ensure that consumers continue to enjoy the clean and safe drinking water we are accustomed to. In order to achieve this goal, the Provincial government has declared that water services need to promote long term planning in order to ensure environmental protection.

In response to Justice O'Connor's recommendations, the Provincial government introduced Ontario Regulation 453/07, under the *Safe Drinking Water Act* requiring Financial Plans be prepared as part of the Municipal Drinking-Water License Program (MDWL).

This Financial Plan has been prepared to comply with the requirements of Ontario Regulation 453/07 and addresses The Corporation of the Town of The Blue Mountains' (Town) Drinking Water System and associated distribution system. The financial statements included in this plan not only adhere to the minimum 6 year requirement but also detail a 20 year plan and a long range 100 year projection.

This Financial Plan utilizes the guidelines of the Public Sector Accounting Board's accounting standards PSAB 3150 for Tangible Capital Assets (TCA) as required by Ontario Regulation 453/07. PSAB 3150 ensures municipalities and ratepayers are more aware of the investment in physical infrastructure and the cost of using an asset to provide services over its useful life. Furthermore, it also encourages long-term planning for capital renewal and replacement.

The plan laid out in this document, and its associated appendices will maintain the Town's safe, clean and secure water supply for current and future residents. The Blue Mountains is a firm believer that financial planning is essential to ensure that the drinking water system provides value not just for today's customers but also for future generations. The financial plans represent a balanced approach to the installation of new infrastructure in conjunction with the Town's Official Plan, Zoning By-laws, Development Charge Studies, and the investment and renewal required to sustain existing infrastructure. System improvements are also contemplated to improve the customer experience. Reliable infrastructure and performance of the water system are key elements to not only economic development but also quality-of-life and safety in the community. The Financial Plan is a summary of various capital and operational programs already approved and implemented by Council or those that are in draft form or will be completed in the near future.

As system needs change and evolve, so too, will this plan. This plan will be updated at a minimum every five years.

## **1.1. Service Context**

The supply of fresh, clean water is a very important service to the Town. Residents expect to be able to turn on their tap at any time and be able to trust that the water coming out is safe to drink. The Town owes a duty of care to residents and businesses to ensure that water is available, clean and safe and it is this responsibility that guides Staff in its day to day operations, long term planning and recommendations to Council. Below is a description of the objectives and principles of the waterworks area as well as a description of the organizational make up of the staff involved in supplying clean water within the Water Division.

### **1.1.1. Water Division Objectives and Financial Principles**

Below are the broad objectives and financial principles for the Water Division that were adopted by The Blue Mountains' Council in April 2011 ([link to resolution](#)).

- I. Growth pays for growth,
- II. Pay-as-you-go for operating and routine life cycle expenditures,
- III. Strive for inter-generational equity to avoid burdening future generations in order to benefit current ratepayers,
- IV. Use debt to smooth out cash requirements for large infrequent life cycle or system improvement projects,
- V. Build reserve funds to provide cash for emergency repairs and/or moderate cash requirements for intermittent medium sized projects,
- VI. Use reserve funds to balance annual revenue fluctuations resulting from demand fluctuations,
- VII. Set rates to achieve financial sustainability in the “near” term (*target year is 2018*),
- VIII. Address cash requirements for new legislation driven improvements at the time that they are known and use reserve funds or debt as appropriate,
- IX. Commit to life cycle infrastructure renewal needs irrespective of water usage trends since pipe deterioration is generally insensitive to the amount of water consumed,
- X. Commit to life cycle infrastructure renewal needs since it is less expensive to renew infrastructure that is approaching the end of its useful life than to attempt to maintain and repair it;

### **1.1.2. Operations**

The Thornbury Water Treatment Plant (WTP) is owned by The Corporation of the Town of The Blue Mountains and is operated by employees of the Town. The WTP supplies water to residents and businesses of the Town. Operators are responsible for such aspects as the treatment operation and control of all valves, pumping stations, reservoirs and disinfection equipment. In addition to this, Operators also are responsible for both preventative and unplanned maintenance of the aforementioned elements as well as the distribution system including watermains and hydrants.

### **1.1.3. Engineering**

The Water Division is provided with engineering services through the Engineering & Public Works Department in conjunction with many third party engineering firms. Overall responsibility for the capital projects fall under the Town's Engineering Division or the Water Division. This work can include life-cycle renewal of watermains, capital projects for pumping stations like expansion or refurbishment and system improvements to increase water quality or pressure as well as other engineering projects. The Water Division is also responsible for maintaining the Tangible Capital Asset database, Capital Plan and Long Term Forecast in conjunction with the Town's Financial & Information Services Department.

## **1.2. Historical Perspective**

### **1.2.1. Overview**

The Blue Mountains was formed by the amalgamation of the former Town of Thornbury and former Township of Collingwood in 1998. The Town of Thornbury originally was serviced with municipal water that was taken from the Beaver River just north of the bridge on Highway 26. A pump station and treatment facility at that location distributed water through a distribution network to a stand pipe that was located on the former Fire Station property on Bruce Street.

In 1977 the Thornbury Water Treatment plant was constructed on the shoreline of Georgian Bay and pumped water from Georgian Bay through a distribution network to a new elevated water tower located on Victoria Street.

Between 1980 and 1985 the water distribution network was extended to service development and existing properties in the former Township of Collingwood. There was also a reservoir constructed at Happy Valley Road near Blue Mountain Resorts. During the subsequent years, development increased substantially and a number of reservoirs and pump stations were constructed to meet the demands. In 1988, the Thornbury Water Treatment Plant was expanded with two additional filtration units. In 2005, the construction of a pump house and watermain was completed to connect to the Town of Collingwood (Collus) water system to supplement The Blue Mountains' municipal water supply.

In 2008 and 2009, the Thornbury Water Treatment Plant underwent substantial upgrades to facilitate the installation of micro membrane filtration units. This expansion also provided piping upgrades that would enable future expansion to accommodate new development.

### **1.2.2. Water By-laws**

The By-law for the Regulation of Water Supply [By-law No. 2008-02](#) is a comprehensive by-law addressing all water related matters such as application for water service, operation of water system, water services, water meters, cross connections and backflow prevention, water restrictions, prohibitions and enforcement.

### **1.2.3. Infrastructure Deficit**

An infrastructure deficit is the difference between infrastructure funding needs and reserves or anticipated revenue generation. This is often referred to as an infrastructure gap. Like many other municipalities, the Town has a significant infrastructure deficit. Town Staff is aware and has studied this deficit and there are currently long term plans being carried out to close that funding gap over time. The 2006 Water Rate Study as completed by Hemson Consulting Ltd. identified that 2007 budgeted capital expenditures amounted to \$565,000 annually and that a further estimated \$566,000 was required to be allocated each year for capital works or placed in a reserve for future asset replacement. Town Council was made aware of this deficit as detailed reports and public consultation was provided through 2006 with a final public presentation by Hemson Consulting at an April 11, 2007 meeting. During the process Council determined that 25% of the overall estimated deficit would be placed annually into a reserve fund for future infrastructure rehabilitation until such time as a full asset inventory, asset management plan and financial strategy was put in place through the DWQMS requirements.

## **2. Water System Needs and Revenue Requirements**

The Blue Mountains distribution system contains over 120 km of watermains, in excess of 1,200 valves, 669 hydrants, as well as approximately 6,000 water services and meters. The average age of water distribution system components is approximately 14.4 years old with some components over 55 years old. The 2006 Hemson report was completed to determine the long term financial needs of The Blue Mountains' water system. This study identified an infrastructure deficit of approximately \$566,000 annually. The needs of the system have also evolved since then. This section provides a summary of some of the needs and requirements that constitute the priorities of Water Department programs and budgets. These are Council approved programs which are ongoing in many cases or have a firm completion date. These programs form key components which drive the Financial Plan to achieve financial sustainability by 2030.

### **2.1. Capital Activities**

The 20-year Capital Plan identified five capital activities listed below to mitigate maintenance problems, health concerns, performance deficiencies and fire fighting deficiencies, including:

1. Watermain replacement to address watermain breaks and corrosion potential;
2. Watermain replacement to address undersized mains and substandard mains due to changing municipal and MOE requirements;
3. Watermain rehabilitation (ie. clean and line) to address excessive hydraulic roughness;
4. Replacement of mains identified through the Hydraulic Water Modeling Study; and
5. Rehabilitation/replacement of watermains to address other performance deficiencies (i.e. Excessive velocities and fire fighting deficiencies)

### **2.1.1. Asset Management**

To enable the delivery of safe drinking water to all, the water system has significant assets, including: Thornbury Water Treatment Plant; five (5) water storage facilities; eight (8) water pumping stations; six (6) water pressure zones; 120 kilometres of watermains; and thousands of connections, fire hydrants, manholes and valves. These assets are referred to as capital.

The capital asset management plan was developed in conjunction with the requirements under PSAB 3150 – Accounting for Tangible Capital Assets (TCA) and Ontario Regulation 453/07 Financial Plans under the *Safe Drinking Water Act, 2002*. Two distinct approaches were developed to ensure that the existing assets are maintained, renewed or upgraded as required. Along with the existing 6,000 users currently connected to the system, the Town has an inventory in excess of 900 serviced vacant lots that will put additional demand on water treatment, pumping and storage as infilling occurs.

Over the long term, it has also been determined that there will be a need for significant expenditures related to expanding the Town's water system. Long range plans have incorporated capital and operating expenses as a result of development pressures that will be placed on the Town over the next 50 years until the anticipated build out of the community has occurred. Planning projects would suggest that the potential build out of the community will see the requirements to service an additional 8,000 residential, commercial and industrial units. The expansion of the system is based on information contained with the Town of [The Blue Mountains Development Charges Background Study](#) for Town Wide Services and the [Lora Bay Division](#). A final component to the expansion process is contained within the Water Division's 20 year Service Extension Capital Program (draft) that outlines the plan to extend services to pockets of developed urban lands that currently do not have water services.

The renewal and rehabilitation of the Town's water system had been reviewed and summarized in two reports: The Blue Mountains Asset Management Plan, dated April 18, 2011 ([hot link to report](#)), and The Blue Mountains 20 Year Capital Plan – Water Division, dated April 18, 2011 ([hot link to report](#)).

The Blue Mountains Asset Management Plan was prepared to determine long range infrastructure strategies, current technical and financial practices with a goal to maintain, upgrade and operate the Town's physical assets in a cost-effective manner. The strategy for the water system relates to a 100 year forecast for the replacement and / or rehabilitation of the watermains and all additional linear works including valves, hydrants and services. As well, the forecast outlines the replacement of all buildings, machinery, equipment, land improvements and vehicles under the control of the Water Division based on useful life expectancies as established in the Town's TCA Policy (see Appendix B – Table 1). With over 120 km of watermains, the cost-effective rehabilitation will be prioritized based on the age, material type, size, and pressure related issues, as well as the integration with road resurfacing, road reconstruction work and other utilities underground efforts including wastewater, natural gas, hydro, phone

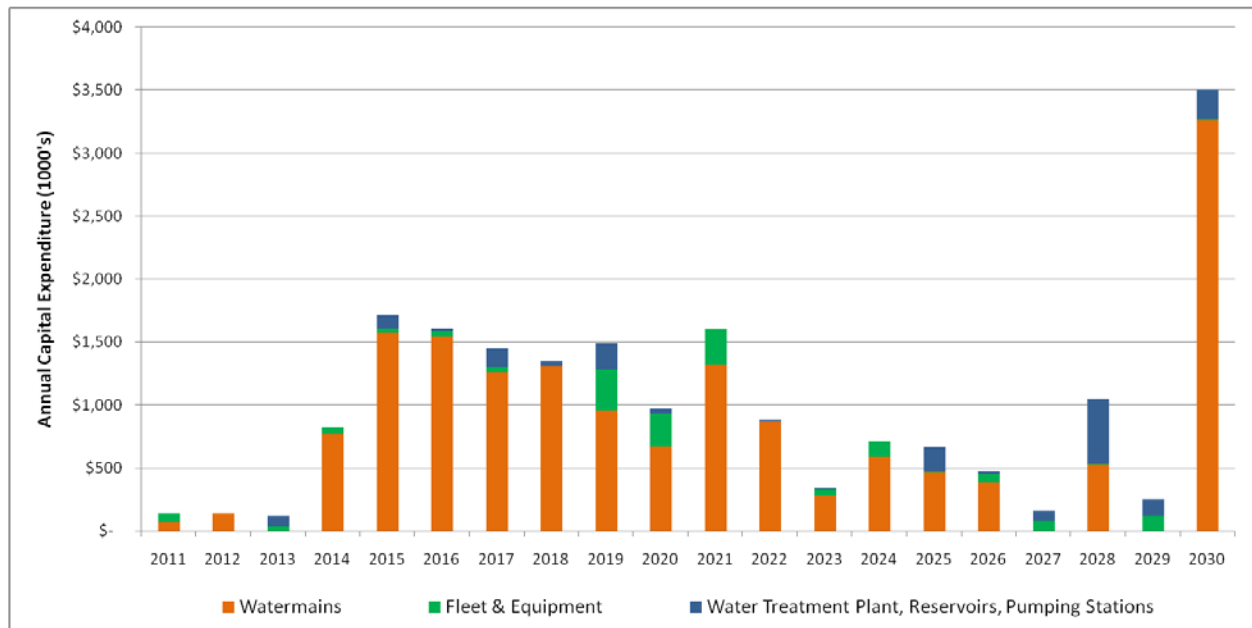
and cable lines. In this report, it was estimated that the cost to rehabilitate the system to ensure the safe delivery of drinking water was \$1,288,000 per year with the requirement for annual inflationary adjustments.

The Blue Mountains 20 Year Capital Plan – Water Division was compiled and established by gathering information on all Water Division assets through the TCA process. In this report, an internal condition assessment was performed for the Thornbury Water Treatment Plant, watermains, pumping stations, the storage reservoirs and standpipes, and all other vehicles, buildings, machinery and equipment resulting in the determination of maintenance and renewal needs up to 2030. The report also outlines the requirements on user rates for projects related to growth of the system through development charge expansions and local service extensions.

Over the next twenty years, there is significant capital costs required to upgrade and maintain the Town’s water system. On average, approximately \$972,000 of capital investments will be incurred each year. These expenditures will help to ensure the delivery of safe drinking water to residents of the Town in the short term and the long term, and will be performed in a cost-effective manner through priority planning and integration with other Town department upgrades.

Figure 1 below summarizes the type and amount of expenditure required each year to renew or rehabilitate the existing infrastructure within The Blue Mountains 20 Year Capital Plan.

**FIGURE 1**



Both the 20 Year Capital Plan and the 100 year forecast are at the centre of understanding and closing the infrastructure gap. It is most important to recognize that unlike many towns and cities within Simcoe and Grey Counties, the Town has a relatively new water system with assets that do not require renewal for many years.

The 100 year forecast is daunting. The report suggests that over the life of all existing assets the total financing required is in excess of \$128.8 million based on 2011 replacement valuations. To simply base a long term plan on the 20 Year Capital Plan would ensure that a back loading effect would occur with potential negative affects for future generations to come. In an effort to ensure that both current and future users are treated fairly and equitably, the process of establishing contributions to infrastructure renewal reserves to bridge the gap between the 20 year average of \$972,000 and the long term forecast of \$1,288,000 annually is necessary and prudent. As can be seen in the Statement of Cash Flow (Section 5.3), an estimated balance of \$18M in cash reserves will be available to use post 2030 to bridge the annual \$300,000 gap.

The Water Division will prioritize the replacement of watermains in the future phase of a water infrastructure condition assessment program. This will start with the oldest part of the system (Thornbury) and move systematically towards a full catalogue that can be updated annually. This broad based project will use data about all the watermains in the Town and rate them based on several attributes determined by Staff. The attributes will include factors such as age, number of breaks, pipe material, presence of lead services, hydraulics and importance factors. Once the water renewal priorities are established, consultations will be held through the Engineering Division with both the Roads & Drainage and Wastewater Divisions so that the timing of the works can be coordinated to save on overall construction costs and minimize social disruption.

The Water Division keeps abreast of the newest technological innovations in both watermain reconstruction and rehabilitation and is always looking for ways to apply these to reduce the costs of asset management of the distribution system in the long term and reduce impacts on the environment and our users. Such an example would be the use of trenchless technologies. Compared to open cut excavation and surface restoration techniques, trenchless methods minimize the amount of excavation required to install watermain, minimize damage to surface structures, cause less disruption of traffic and other social inconveniences on and around job sites. This technology allows installations to be made in areas where open cut excavation is significantly more costly and disruptive.

The Water Division will also have to develop a water meter replacement and meter reading strategy to be implemented in the future. As the Town underwent a meter installation program between 2005 and 2007, approximately 90% of all meters will be scheduled to be replaced in a short time frame nearing the end of the meters useful life. As such, a program will need to be implemented to ensure that all meters get replaced as necessary and with the latest technology, such as automated reading capabilities. This is required to ensure meters don't go beyond their optimum replacement age. Meters that are in a deteriorating state of condition quickly become a source of non-revenue water and result in revenue loss for both Water and Wastewater revenue streams. An interim water meter strategy is in place annually to repair existing commercial meters that were utilized prior to 2006. However, an aggressive meter replacement program is required. At the current rate the majority of the systems meters will need to be replaced due to age prior to 2019. The replacement program can mitigate a backlog of meter replacements where risk of failure is high.

### **2.1.2. System Improvements**

While it is important to maintain the system in working condition, it also at times becomes necessary or desirable to improve the system. Some of these improvements are driven by senior government legislation while others are driven by needs at the local level.

The existing Thornbury Water Treatment Plant (WTP) was put into service in 1978. The initial construction consisted of the raw water intake, low lift wells and low lift pumps, high lift and backwash pumps, two sand media filters, gas chlorination and clear wells with high lift pumps.

In 1988, the Thornbury WTP was upgraded to include the addition of two sand media mixed media filters, zebra mussel control by chlorination at the intake, and low lift and high lift pump upgrades. An Optimization Study in 1999/2000 was completed to address concerns with respect to chlorine residuals in supernate discharges to the Little Beaver River and to investigate the feasibility of increasing filter rates. It was discovered that the filters did not meet Certificate of Approval capacities during turbidity events. In 2001, an upgrade to the WTP saw the addition of filter backwash water de-chlorination. In 2002-2003, the removal and replacement of media filters # 1 and # 2 media was completed. Several upgrades were completed in 2004 including the addition of ultraviolet disinfection, filter to waste capability, filter valve and filter level control additions as required by the Ministry of the Environment.

Numerous upgrades have been completed to the Supervisory Control and Data Acquisition (SCADA) system. The early SCADA system recorded levels, alarms and some plant control. Currently, the SCADA system records levels, pressures, water quality parameters, trending, equipment starts and stops, generates alarms and allows operators to view and operate at the Water Plant or remotely by laptop.

In 2006, a Feasibility Study was completed which outlined operating problems at the WTP such as, during high turbidity events the filter run times for the plant are low which results in frequent backwashing and poor plant performances. As a result, six alternative solutions were explored and it was determined that a micro membrane filtration system would be the best overall fit.

In 2008 and 2009, the WTP was upgraded to replace the existing conventional filters with microfiltration membrane units to achieve the rated firm capacity of 13,536 m<sup>3</sup>/d. The WTP now consists of the following components: intake, low lift pumping facilities, strainers, three membrane trains, clear well for storage, high lift pumps, ultraviolet disinfection, gas chlorine disinfection, chlorine gas scrubber, a backwash wastewater system, and de-chlorination of wastewater to the Little Beaver River.

A Town Wide Hydraulic Water Modeling project was initiated in March 2010 and is expected to be completed by December 2011. This report will provide information allowing the Town to determine appropriate locations of strategic infrastructure such as storage reservoirs and watermain replacement or upgrades to reduce hydraulic

constraints. As well, the report will provide important data in determining potential deficiencies in fire flows. This will allow the Water Division to develop strategies for watermain replacements, upgrades and/or looping to ensure adequate flow levels are obtained.

#### Other Related Legislation

The “[Licensing of Municipal Drinking Water Systems](#)” (O. Reg. 188/07) requires 5 components:

1. A Drinking Water Works Permit (DWWP)
2. An Accepted Operational Plan
3. Accreditation of the Operating Authority
4. A Financial Plan (This Document)
5. A Permit to Take Water (PTTW).

The requirement for a Drinking Water Quality Management System (DWQMS) and related implementation requirements are underway. The Town’s Operational Plan was submitted on June 23, 2009 and has been approved. The Drinking Water Works Permit application has been submitted and receipt occurred in November 2010. The external audit of the Operational Plan will be completed in 2012.

#### **2.1.3. Growth**

A Master Servicing Plan was undertaken between 1999 and 2002 to establish the required upgrades to service designated development lands within the Town and the nine distinct service areas. Background studies based on the Master Servicing Plan established the costs associated with providing services for growth and the corresponding by-laws were adopted through Council. Council passed By-law 2009-56 to establish area specific Development Charges – Service Area 6, Lora Bay on August 9, 2009, By-law 2009-70 to establish area specific Development Charges – Service Area 2, Camperdown was passed on October 14, 2009 and By-law 2010-18 establishing Town Wide Development Charges was passed on March 8, 2010. The purpose of the background studies and By-laws was to determine costs and timing of Town-initiated infrastructure works in conjunction with the approval of development applications. The studies identify priority areas for growth over the 1 to 5, 6 to 10, 11 to 15, 16 to 20, and 21 plus year time periods. The costs of water projects related to growth are funded from various sources but divided into two main groups, growth and non-growth. Growth is generally the larger of the two groups and is funded through Development Charges. The non-growth share is further divided into two categories - local improvement charges and user fee funded projects. User fee projects are funded through the Water Division capital budget, meaning these costs are funded by the ratepayer and directly impact this Financial Plan. As well, the Water Division has been developing a 20 year Service Extension Capital Program. This document is currently in draft form however. Costs associated with providing water service have been included to illustrate the pressures of providing services to currently non-serviced lands. Table 1

below illustrates the non-growth costs obtained in the Development Charges Background Studies for the 1-5, 6-10, 11-15, 16-20 and 21 plus year periods.

**TABLE 1**

<b>Growth Related Costs</b>			
<i>Period</i>	<i>Development Charge</i>	<i>Local Improvement Charge</i>	<i>User Fee</i>
1-5 year (2011-2015)	\$ 2,182,900	\$ 617,100	\$ -
6-10 year (2016-2020)	\$ 11,556,150	\$ -	\$ 1,030,250
11-15 year (2021-2025)	\$ 8,891,100	\$ 116,600	\$ -
16-20 year (2026-2030)	\$ 9,424,800	\$ 5,221,600	\$ -
21+ year (2031-2050)	\$ 5,108,800	\$ 1,732,500	\$ -

## **2.2. Operations and Maintenance**

Operating expenses typically detail the on-going, day-to-day expenses associated with the production and treatment of water. Items such as wages, benefits, chemicals, and utility costs are included in the systems operating expenses. A major component of the operating budget is the water purchased from the Town of Collingwood. The Town started receiving water from the Town of Collingwood's Public Utility Service – Collus, on January 5, 2005 by an agreement signed by both Towns which has an incremental increase in water taking up to 8,000 m<sup>3</sup>/day. Under the current level within the contract the Town is receiving 4,000 m<sup>3</sup>/d.

As well, due to the continued pressures presented from the future growth of the system through development and service extension related projects there will be additional expenses related to operations and maintenance. It is anticipated that an additional operator will be required in 2015-2016 as reservoirs in the Craigleith and Lora Bay service areas become operational. The future servicing of Clarksburg, Osler Bluff and Castle Glen will also put added pressures on the annual operations budget in the longer term.

Maintenance is general divided into two major categories, preventative maintenance and unplanned maintenance. These two categories are described in more detail below.

### **2.2.1. Preventative Maintenance**

Preventative maintenance represents a proactive approach to maintaining the water distribution system. Acts of preventative maintenance often address issues before they cause a major problem or breakdown and can result in significant cost savings. Below are some of the key programs that fall under this heading.

- Regular inspection of controlled and metered flushing stations.
- Hydrant maintenance is conducted and is comprised of two components:
  1. Annual Maintenance, and
  2. Frost Checks during freezing months.

- Valves are exercised to ensure functionality and identify deficiencies.
- The Supervisory Control and Data Acquisition (SCADA) system equipment and station pumps undergo life cycle maintenance based on manufacturers' specifications or as required by the regulations.
- Reservoir inspections are performed by contracted divers, at a minimum frequency of every five (5) years. Reservoir cleaning is scheduled based on these inspections.
- Enhancement of the leak detection monitoring program is currently underway. Benefits will include increased detection and reduction of non-revenue water, increased reliability of infrastructure and avoidance of failures.

### **2.2.2. *Unplanned Maintenance***

Unplanned maintenance typically consists of repairing leaks or other deficiencies (e.g. damaged hydrants) that are reported by the public, other utilities, or Town staff. For facilities, required maintenance work may be identified by Operators during regular visits to the facilities. Often unplanned maintenance can be costly and disruptive for the customers, which is why significant effort and focus is put on preventative maintenance.

### **2.3. *Source Water Protection***

Financial plans should include source protection costs related to the provision of water services. Any current source water protection costs should be discussed as a separate cost item. Current source water protection costs are approximately \$42,000 annually as a component of the Nottawasaga Valley Conservation Authority and the Grey-Sauble Conservation Authority levies.

The Source Water Protection Assessment Studies have been funded by the Ministry of the Environment on behalf of the Province. The Thornbury WTP has been identified as low risk. The Province has not yet determined the final remedial plans or who will pay for the remedial works where or when required.

### **2.4. *Ontario's Lead Action Plan***

Ontario Regulation 453/07 also contains requirements for municipalities to include in their Financial Plans the costs associated with replacing lead service pipes that are part of the drinking-water system. The Town conducted lead sampling as per Provincial Legislation. The Town has included Alice Street in the twenty year capital replacement program.

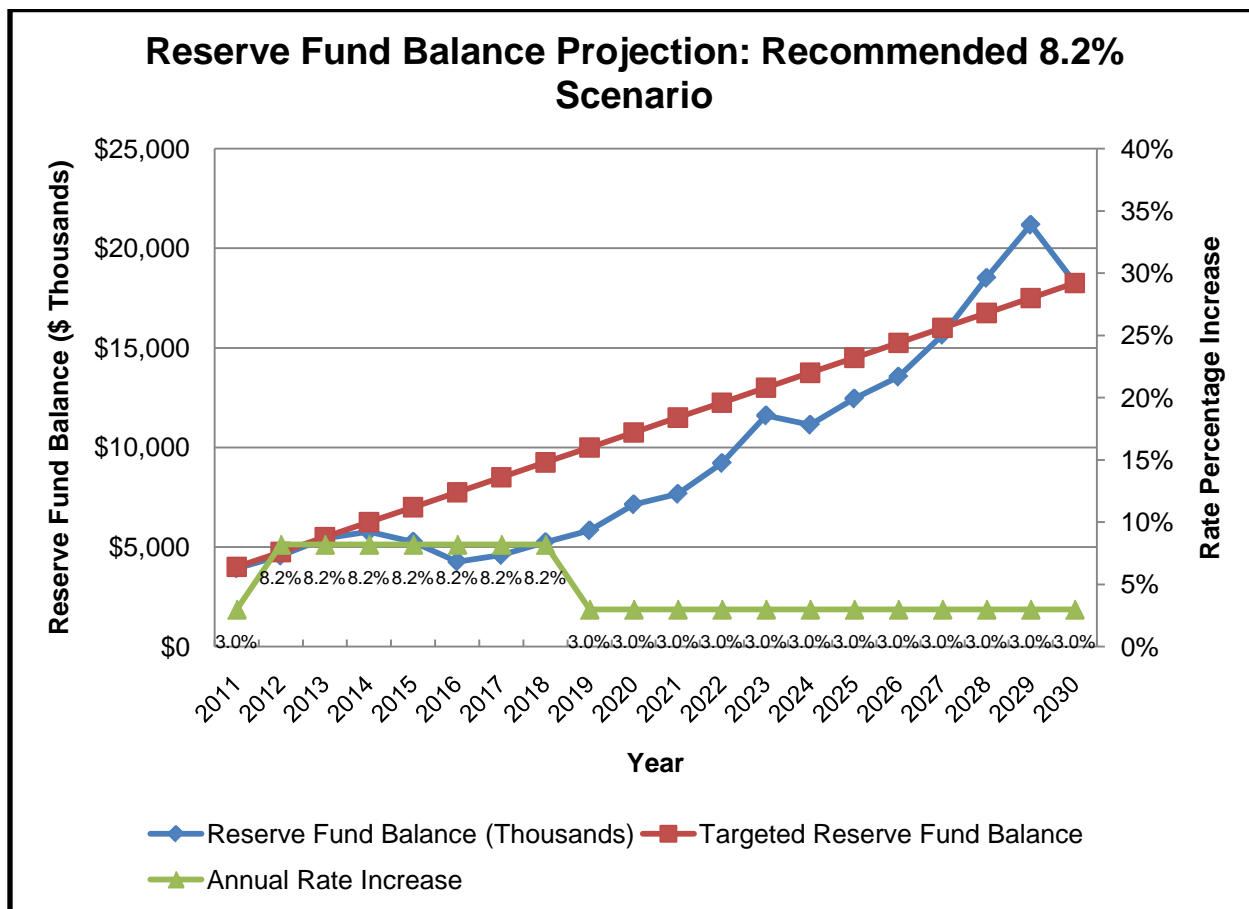
## **3. *Financial Model and Budget Process***

### **3.1. *Financial Model***

The Water Division through the assistance of Financial Services maintains a financial model to aide in long-term forecasting and budget consultations. Principles supporting this model were adopted by Council through report "The Blue Mountains 20 Year Capital Plan – Water Division" ([link to resolution](#)). The model will be used in budget

deliberations for all budgets commencing with the 2012 process. It is anticipated that the plan, along with regular updates will prove to be a very useful tool in assessing the financial health of the water system. The report initially illustrated several different scenarios to help Council understand the impact of rate increases both in the short term and the long term and will be updated annually to allow educated decision making while establishing the annual budget. Figure 2 shows the recommended scenario shown to Council and on which this Financial Plan is based as well as a description of the budget process.

**FIGURE 2**



Attached in Appendix A are four financial model scenarios that display the effect of different rate increases over time. These scenarios were presented to Council in April 2011 as part of the 20 Year Capital Plan.

**3.2. Budget Process**

The rates charged for the Water Division support costs that can be broken into two broad types of expenditures, Capital and Operating. In the budget process these two expenditures are approved by Council at the same time and venue.

**3.2.1. Operating Budget Process**

Operating Costs are generally those costs that relate to the operational issues of supply, distribution, and purchase of water for the current year including the staff, supplies and other costs required for management and maintenance of meters, pumping stations, pipes, and reservoirs. These expenditures do not increase the value of the system or the life of the system but are required to ensure the reliable delivery of safe clean water to the community and achieve the anticipated life of the infrastructure components. It is generally accepted that due to the immediate benefit and short term impact of Operating expenditures, they will be funded through the collection of user rates within the year the costs are incurred.

The Water Operating Budget can be divided into the following categories:

- Salaries, Wages & Benefits
- Personnel Costs
- Engineering and Administration
- Water Supply Costs (Purchase of Water)
- Treatment & Distribution Costs
- Equipment & Vehicle Costs
- Financial & Interest Expenses

In addition to these categories the Income Statement for the Water Division will include amortization of Tangible Capital Assets (TCA) consistent with PSAB Section 3150. The 2011 Budget is the first year in which amortization has been included as it is a new consideration for municipalities.

The budgets for Salaries, Wages & Benefits, Personnel Costs, Engineering and Administration, Treatment & Distribution Costs and Equipment & Vehicle Costs are typically driven by inflation and in some cases changes in operations. Based on the long term contract with Collus, the water supply costs were negotiated through a long term contract with annual inflationary increases. As well, the contract is a take or pay program in which the Town pays for 4,000 m<sup>3</sup>/day whether used or not. The agreement also allows for an escalation in volume to 8,000 m<sup>3</sup>/day starting in 2015. Interest expenses are driven by the planned borrowings to support the Capital Plan.

The annual budget is developed through consultation with the various stakeholders and a public participation process is undertaken prior to approval by Council. It is generally the practice to undertake this approval in December of the year prior to the effective year of the budget in order to implement rate increases in the billing process by February of the next year.

### **3.2.2. Capital Budget Process**

Capital Costs are those expenditures which are believed to increase the value of the system, improve the system, replace existing assets and/or extend the lifespan of those assets.

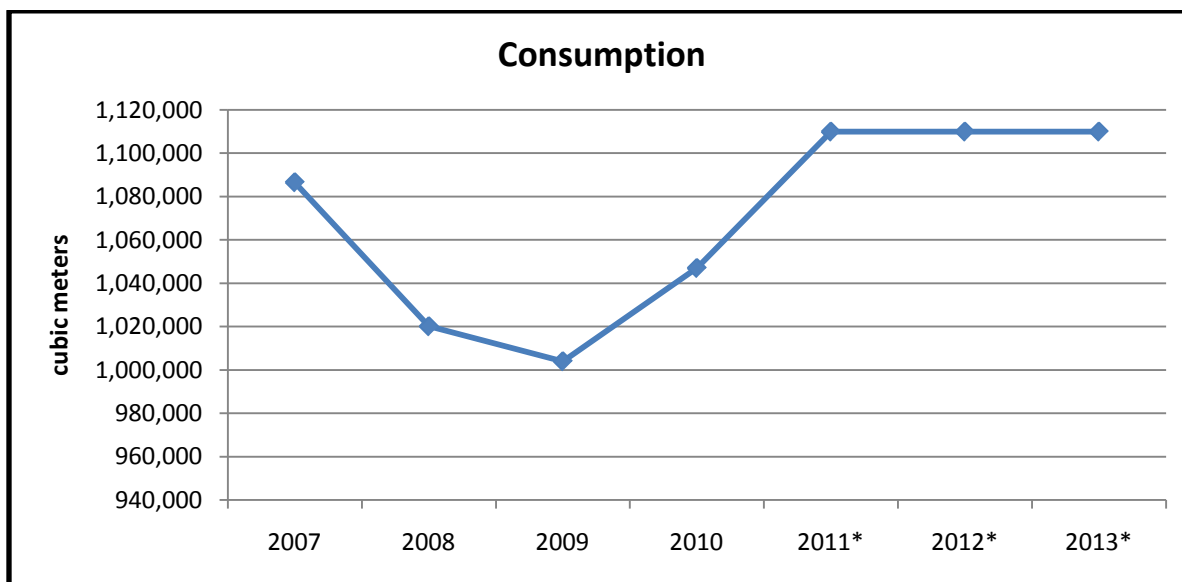
The Blue Mountains 20 Year Capital Plan - Water Division is developed based on various studies such as the Master Servicing Plan, Castle Glen & Osler Combined

Environmental Assessment (EA), Comprehensive EA, Phase 3 & 4 EA for Water Supply at the Thornbury Water Treatment Plant and the Development Charge Background Studies. Town staff also completed The Blue Mountains 20 Year Capital Plan – Water Division and the 20 year Service Extension Capital Program (draft). These studies are described in Section 2 and are updated occasionally but not necessarily annually. On an annual basis projects are reviewed and adjusted to reflect changes in the background information, inflationary impacts, changing priorities within the Town and coordination with construction plans of other Service Areas, primarily Roads and Wastewater. The resulting annual Capital Budgets are approved by Council following the public participation process.

**3.3. Revenues and Rates**

The majority of the revenues for the Water Division prior to 2007 were based on flat rates depending on service size. In 2006, the Town underwent a major water meter installation project and implemented consumption based billing starting January 2007. The majority of revenues are now derived from consumption based billings with a small portion of the overall rate based on a fixed charge. Revenues are therefore the product of the rates charged and the quantity of water used. The implementation of the water meter program has allowed people to understand their usage and has promoted conservation through a user-pay approach. Since the onset of consumption based billing demand has been declining for billable water due to conservation efforts. Over the past five years this has become a very challenging area to forecast for the water budget.

**FIGURE 3**



\*2011, 2012, 2013 Consumption rates are estimated flows from the 2011 budget process

Annual rate increases are based on the 20-year Capital Plan and the long term asset management strategy as contained in the Town's Asset Management Plan which considers the funding needs for both Operating and Capital. The need to build

adequate Reserve Funds and to maintain appropriate levels of debt as well are also built into the rate within the long term financial plans.

## **4. Capital Financing**

The expenditures required to maintain, improve and grow the water supply and distribution system represent more than one third of the total revenues collected from water rates.

### **4.1. Financing Options**

The 20 Year Capital Plan – Water Division has been divided into three categories described in Section 2.1:

- Asset Management (Lifecycle Renewal)
- System Improvements
- Growth

There are a number of available sources of financing for Capital Works. The benefits, uses and costs associated with each source are summarized in Table 2.

**TABLE 2**

<b><i>Financing Options for Capital Categories</i></b>						
<b>Category</b>	<b>Pay-As-You-Go</b>	<b>Reserve Funds</b>	<b>Debt</b>	<b>Development Charges</b>	<b>Government Funding</b>	<b>Local Imp't Charge</b>
<i>Asset Management</i>	<i>Yes - Preferred</i>	<i>Yes</i>	<i>No (1)</i>	<i>No</i>	<i>Yes, if eligible</i>	<i>No</i>
<i>System Improvements</i>	<i>No (2)</i>	<i>Yes</i>	<i>Yes</i>	<i>No</i>	<i>Yes, if eligible</i>	<i>Yes</i>
<i>Growth</i>	<i>No</i>	<i>Yes (3)</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes, if eligible</i>	<i>Yes</i>

Notes:

(1) Could be considered if the asset to be renewed has a major expenditure with long life providing benefit to a large number of users. This form of debt repayment should be applied to a minimum time frame to ensure long term repayment pressures do not occur.

(2) Could be considered if of a minor nature. (<\$50k)

(3) Utilize water reserve funds for non-eligible growth related works and/or non-growth component of project.

Financing decisions for Capital Works are based on a number of considerations including:

#### **1. Is it an Asset Management (Lifecycle Renewal) project?**

- The preferred funding source for Lifecycle Renewal works is Pay-as-you-go. This funding is from the current year’s revenues. This ensures that the taxpayers who are benefiting most are paying for the works. Secondary, as the long term forecast suggests, further contributions above the 20 year capital renewal future projects will depend highly on reserve fund contributions.

## **2. Does this project create capacity necessary for growth in the Town?**

- When additional water supply capacity is created, allowing for future growth in the Town, Development Charges should fund a corresponding portion of the works. As well, many areas within the Town currently have undersized mains or no water infrastructure at all. In order to allow development of these lands, Development Charges will be utilized to construct necessary in-ground infrastructure, pump stations and reservoirs.

## **3. What is the life span of the project?**

- When a project has a significant life span and funding is not otherwise available it may be appropriate to issue debt, thereby transferring costs to future benefitting generations.

## **4. Are there available funds from other levels of government?**

- From time to time senior levels of government will invite application for funding. These funding sources often have stringent criteria for eligibility and timing of works. Alternatively, ongoing funding is provided through some programs such as the Federal Gas Tax. Although given the relative good health of the water division and low debt, Town Council has chosen not to allocate Federal Gas Tax funds to water infrastructure.

## **5. Does the project benefit specific residents?**

- Some works are undertaken which benefit residents of a particular street or neighbourhood. Examples of this type of work would be new sidewalks, water supply or sanitary sewer collection. In some cases the residents will contribute to the funding of those works through Local Improvement Charges or Area Rate Charges enacted through municipal by-laws.

### **4.2. Inter-Generational Equity**

A guiding principle for financing decisions is the concept of generational equity for municipal capital works intended to equitably distribute the costs across present and future taxpayers. This means that the generation which will receive the most benefit of the works should bear the majority of the cost of the works. This is a connecting point for the Water Division's 100 year forecast. Looking at a medium term plan of 20 years would ensure that inequities would occur for future generations that would have to pay for replacement of assets to which they received little or no use of. The 100 year forecast allows the Town to plan for future expenses beyond the 20 year capital plan horizon to establish future financial requirements for the replacement of assets utilized within the first 20 years but not yet replaced. Some of the means to achieve this include:

- Paying for replacement and renewal works through Pay-as-You-Go financing,
- Annually placing money into reserves to offset the difference between the average annual needs of the 20 year capital plan and the 100 year forecast,
- Issuing debt for only long term projects with significant future years of benefit.

### 4.3. Reserve Funds Policy

Reserve Funds assist in smoothing out rates for water users by creating a funding source for future larger, intermittent projects and fluctuating revenue streams. Capital Budgets can vary significantly year over year and large non-recurring projects can create funding needs that are best funded over time. The Water Division has maintained Reserve Funds for over 25 years allowing the utility to remain mainly debt free. [Staff Report FIS.10.09 Water Reserve & Reserve Fund Consolidation, February 16, 10](#) established the need to consolidate the Water Division Reserves into two useable functions. The report suggests that a Water Rate Stabilization Reserve be established and that a targeted balance of 15% of previous year's consumption based revenues be set. As well, [By-law 2010-27](#) establishing Consolidated Reserve Funds for the purposes of maintaining and expanding the Municipal Water and Wastewater Systems was passed on April 12, 2010. Although the Report and By-law did not set targets for a minimum reserve fund balance, the rationale of a minimum balance of \$3 to \$4 million has been established. This represents approximately three percent of the 100-year long term forecast requirements based on current asset values of the system. As well, based on an annual shortfall of \$316,000 (\$1.288M - \$972,000) it is also anticipated that the requirement of \$6.33 million plus annual inflation in additional reserves should be in place to contend with the annual shortfall in the 20 year Capital Plan opposed to the Long Term Forecast. Table 3 illustrates the rationale for the reserve fund target.

**TABLE 3**

<b>Minimum Rate Stabilization Reserve Targets</b>	
2010 Consumption Revenue	\$ 1,526,000
<b>15% Target</b>	<b>\$ 229,000</b>

<b>Minimum Reserve Fund Targets</b>	
Catastrophic Failure	\$1.0M
Planning for Future Capital Expenditures (Preliminary Engineering, Studies, Etc.)	\$0.5M
Capital Replacement Fluctuations	\$1.5M - \$2.5M
Costs Associated with Legislative Changes	unknown
<b>TOTAL</b>	<b>\$3M - \$4M</b>

### 4.4. Growth Pays for Growth

The prime guiding principle of the Development Charges (DC) By-law is that growth should pay for growth. As such, the 2010 DC By-law update allocated water distribution works required to build out of the community in the various nine service areas, setting aside all non-growth benefit amounts. The portion of water supply system non-growth expenditures must be supported by the water rate through the pay-as-you-go approach or through contributions to reserves.

#### **4.5. Debt Management**

The overall goal of the Town to properly manage debt should be to eliminate the use of debt financing to fund the “average” capital budget. Debt financing should ultimately be used exclusively to fund large, extraordinary works, or to mitigate the impact of a larger than average total capital budget.

The Water Division has two outstanding debts. The Thornbury Reservoir project loan had an outstanding balance of \$1.68 million ending 2010. The reservoir project is fully financed over time through development charges and is slated to be paid in 2031. The Thornbury Water Treatment Plant Upgrade had an outstanding balance of \$1.7 million as at the end of 2010. This debt is the full responsibility of the annual rates and is anticipated to be repaid in 2015. It is anticipated that the Water Division will incur a portion of debt from the construction of the new Town Hall facility beginning in 2011 in the amount of \$225,000. This debt will be repaid over a 15 year period. No other debt has been planned under the current approved 2011 budget which includes projections to 2015. Long term plans however have shown that there will be significant debt incurred on projects beyond 2015 such as the Craigleith Reservoir Upgrade, Thornbury Water Treatment Plant Upgrade and servicing within Clarksburg. Although these projects are to be funded mostly from Development Charges or Local Improvement Charges, these amounts will impact the overall debt carrying capacity for the Town.

#### **4.6 Senior Government Funding**

##### Federal Gas Tax

Prior to 2011 there has been no allocation of the Town’s Federal Gas Tax Funding to the Water Division as per a funding allocation report [Federal Gas Tax Funding Expenditure Update](#) from April 14, 2009. As part of the 2012 Budget process, Staff will be preparing a Council recommendation to allocate future funding beyond 2013 to various capital projects that may include water asset replacements. Current funding until 2013 has been allocated for necessary infrastructure in other departments within the Town however the Gas Tax funding is anticipated to be permanent and may assist in ultimately closing the infrastructure gap.

##### Infrastructure/Stimulus Funding

The Town has been successful in the past obtaining infrastructure renewal funding through various Provincial and Federal programs. The current grant structure typically responds favourably to projects that are construction ready. A piece of the reserve fund apportionment strategy as outlined in the 20-year Capital Plan is to ensure that there is money available to allow projects to undergo study and preliminary design to ensure the Town, and specifically the Water Division, has projects that are considered construction ready under grant qualifications. Although a plan has been established to ensure viability of the system, senior government funding will help alleviate pressures on the ratepayer and ultimately help close the infrastructure gap. Sources of funding may also be applied to projects that have benefit to local residents through local improvement or system upgrade projects to ensure that capital costs to new users are kept at an affordable level.

## 5. Financial Statements

### Format

In June 2006, the Public Sector Accounting Board (PSAB) approved PSAB 3150, requiring municipalities to report Tangible Capital Assets (TCA) in their Statement of Financial Position effective January 1, 2009. Starting with the 2009 audited financial statements all municipalities moved to a full accrual financial statement format. This change required the inclusion of tangible capital assets, related accumulated amortization, removal of capital and reserve and reserve fund statements, introduction of accumulated surplus including all reserve and reserve funds balances. The attached forecasted financial statements have been prepared under these new requirements. As well, Appendix B “Tangible Capital Assets” contains tables outlining the Water Division’s TCA useful life and 2010 estimated net book value.

### Financial Information

At the time of preparation of this plan The Blue Mountains had finalized the 2009 TCA entries and the audit of TCA processes had occurred. Estimates have been used to create the baseline for 2010 as the audit of the TCA additions and disposals for 2010 had not occurred at the time of preparing this report.

The 20 year forecast is based on reasonable assumptions for the starting point of these documents which is 2011. The future year assumptions are derived from the Long Term Financial Model for Water which includes elements from the Council-approved 20 year Capital Plan, 100 Year Forecast, Water Operating Budget and Forecast, and DC Studies.

### Glossary

#### **Tangible Capital Assets**

- a) *Tangible capital assets are non-financial assets having physical substance that:*
- b) *are held for use in the production or supply of goods and services, for rental to others, for administrative purposes or for the development, construction, maintenance or repair of other tangible capital assets;*
- c) *have useful economic lives extending beyond an accounting period;*
- d) *are used on a continuing basis; and*
- e) *are not for resale in the ordinary course of operations. (PS 3150.05)*

#### **Amortization**

Amortization is the attribution of the historical cost of TCA across the useful life of the specific asset. The amortized cost becomes an expense on the Statement of Operations and the historical cost of the TCA is reduced by the same amount on the Statement of Financial Position. This process roughly allocates the costs of the TCA into the years of benefit.

*The amortization of the costs of tangible capital assets should be accounted for as expenses in the statement of operations. (PS 3150.23)*

**Annual Surplus (Deficit)**

With the inclusion of Amortization in the Statement of Operations, Capital expenditures are no longer reflected as expenses. In the case of Water, the annual surplus (deficit) is essentially derived from the difference between the Amortization and the actual spending on capital as well as the increase in reserve and reserve funds within the year.

**Accumulated Surplus (Deficit)**

This is a new balance that is reported as part of the Statement of Financial Position. It represents the accumulation of prior and current surpluses and deficits and reflects the net economic resources of the Water Division. In the case of the Water Division the accumulated surplus is made up primarily of the lifetime total cost of Tangible Capital Assets minus the Amortization that has occurred to date in addition to the reserve and reserve fund balances.

## 5.1. Statement of Operations

Town of The Blue Mountains Water Division - Statement of Operations																					
(\$ THOUSANDS)	Unaudited*	Approved										Forecasted									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
<b>Revenue</b>																					
Projected Rate Increase		3.0%	8.2%	8.2%	8.2%	8.2%	8.2%	8.2%	8.2%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	
User Rate Billings	\$2,933.9	\$3,087.4	\$3,340.5	\$3,614.4	\$3,910.8	\$4,231.5	\$4,578.5	\$4,953.9	\$5,360.2	\$5,521.0	\$5,686.6	\$5,857.2	\$6,032.9	\$6,213.9	\$6,400.3	\$6,592.3	\$6,790.1	\$6,993.8	\$7,203.6	\$7,419.7	\$7,642.3
Miscellaneous User Charges	\$34.9	\$29.0	\$32.0	\$32.0	\$33.0	\$33.9	\$35.0	\$36.0	\$37.1	\$38.2	\$39.4	\$40.5	\$41.8	\$43.0	\$44.3	\$45.6	\$47.0	\$48.4	\$49.9	\$51.4	\$52.9
Interest & Investment Income	\$21.5	\$15.0	\$15.0	\$15.0	\$15.5	\$15.9	\$16.4	\$16.9	\$17.4	\$17.9	\$18.4	\$19.0	\$19.6	\$20.2	\$20.8	\$21.4	\$22.0	\$22.7	\$23.4	\$24.1	\$24.8
Fees & Charges	\$19.9	\$25.8	\$25.8	\$25.8	\$26.6	\$27.4	\$28.2	\$29.0	\$29.9	\$30.8	\$31.7	\$32.7	\$33.7	\$34.7	\$35.7	\$36.8	\$37.9	\$39.0	\$40.2	\$41.4	\$42.6
Government Transfers																					
Provincial	\$53.9	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Federal	\$53.9	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Other municipalities	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Local Improvement Charges	\$0.0	\$0.0	\$0.0	\$0.0	\$674.5	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$161.4	\$0.0	\$0.0	\$0.0	\$4,075.2	\$2,426.8	\$1,808.2	\$0.0	\$0.0
Development Charges (transfer from Town Reserve Fund)	\$276.8	\$164.8	\$161.2	\$156.4	\$2,538.5	\$148.5	\$144.6	\$1,026.5	\$1,843.7	\$4,023.6	\$2,420.8	\$1,560.1	\$1,416.6	\$1,320.4	\$620.3	\$616.3	\$1,302.6	\$1,298.5	\$1,294.6	\$10,406.4	\$6,297.7
<b>Total Revenue</b>	<b>\$3,394.7</b>	<b>\$3,321.9</b>	<b>\$3,574.5</b>	<b>\$3,843.6</b>	<b>\$7,198.8</b>	<b>\$4,457.2</b>	<b>\$4,802.7</b>	<b>\$6,062.4</b>	<b>\$7,288.2</b>	<b>\$9,631.5</b>	<b>\$8,197.0</b>	<b>\$7,509.5</b>	<b>\$7,705.9</b>	<b>\$7,632.1</b>	<b>\$7,121.4</b>	<b>\$7,312.4</b>	<b>\$12,274.8</b>	<b>\$10,829.2</b>	<b>\$10,419.9</b>	<b>\$17,942.9</b>	<b>\$14,060.3</b>
<b>Expenses</b>																					
Salaries, Wages, Benefits	\$744.0	\$782.0	\$813.8	\$838.7	\$863.9	\$944.8	\$973.1	\$1,002.3	\$1,032.4	\$1,063.4	\$1,095.3	\$1,128.1	\$1,162.0	\$1,196.8	\$1,232.7	\$1,269.7	\$1,307.8	\$1,347.0	\$1,387.5	\$1,429.1	\$1,471.9
Personnel Costs	\$16.1	\$20.7	\$21.6	\$21.9	\$22.6	\$24.6	\$25.4	\$26.1	\$26.9	\$27.7	\$28.6	\$29.4	\$30.3	\$31.2	\$32.1	\$33.1	\$34.1	\$35.1	\$36.2	\$37.3	\$38.4
Engineering & Administration	\$294.8	\$318.4	\$360.4	\$376.4	\$387.6	\$399.3	\$411.3	\$423.6	\$436.3	\$449.4	\$462.9	\$476.8	\$491.1	\$505.8	\$521.0	\$536.6	\$552.7	\$569.3	\$586.4	\$603.9	\$622.1
Water Supply Costs	\$316.8	\$435.0	\$445.0	\$450.0	\$463.5	\$477.4	\$491.7	\$506.5	\$521.7	\$537.3	\$553.4	\$570.0	\$587.1	\$604.8	\$622.9	\$641.6	\$660.8	\$680.7	\$701.1	\$722.1	\$743.8
Treatment & Distribution Costs	\$305.4	\$314.8	\$322.5	\$328.0	\$337.9	\$348.0	\$358.4	\$369.2	\$380.3	\$391.7	\$403.4	\$415.5	\$428.0	\$440.8	\$454.1	\$467.7	\$481.7	\$496.2	\$511.0	\$526.4	\$542.2
Equipment & Vehicle Costs	\$142.0	\$148.4	\$151.8	\$154.7	\$159.4	\$164.1	\$169.1	\$174.1	\$179.4	\$184.7	\$190.3	\$196.0	\$201.9	\$207.9	\$214.2	\$220.6	\$227.2	\$234.0	\$241.1	\$248.3	\$255.7
Insurance & Property Taxes	\$69.0	\$74.5	\$75.9	\$77.5	\$79.8	\$82.2	\$84.6	\$87.2	\$89.8	\$92.5	\$95.3	\$98.1	\$101.1	\$104.1	\$107.2	\$110.4	\$113.8	\$117.2	\$120.7	\$124.3	\$128.0
Financial & Interest Expenses	\$263.5	\$131.9	\$119.9	\$106.6	\$93.9	\$80.9	\$67.7	\$380.5	\$366.0	\$351.6	\$336.9	\$321.3	\$305.2	\$288.8	\$271.2	\$253.4	\$665.0	\$633.0	\$599.8	\$678.6	\$638.8
Non TCA Capital Expenditures	\$120.4	\$117.5	\$27.5	\$35.0	\$29.2	\$30.0	\$38.2	\$31.8	\$32.8	\$41.6	\$34.7	\$35.8	\$45.3	\$37.9	\$39.1	\$49.4	\$41.4	\$42.7	\$53.9	\$45.2	\$46.6
Amortization (estimated)	\$881.4	\$869.0	\$867.6	\$863.8	\$893.1	\$933.8	\$1,018.3	\$1,057.2	\$1,037.3	\$1,078.8	\$1,134.6	\$1,169.3	\$1,194.2	\$1,215.0	\$1,245.1	\$1,315.7	\$1,391.7	\$1,420.5	\$1,464.8	\$1,480.1	\$1,570.4
<b>Total Expenses</b>	<b>\$3,153.3</b>	<b>\$3,212.1</b>	<b>\$3,206.0</b>	<b>\$3,252.6</b>	<b>\$3,330.8</b>	<b>\$3,485.1</b>	<b>\$3,637.8</b>	<b>\$4,058.6</b>	<b>\$4,102.8</b>	<b>\$4,218.7</b>	<b>\$4,335.3</b>	<b>\$4,440.3</b>	<b>\$4,546.2</b>	<b>\$4,633.2</b>	<b>\$4,739.6</b>	<b>\$4,898.2</b>	<b>\$5,476.2</b>	<b>\$5,575.7</b>	<b>\$5,702.3</b>	<b>\$5,895.3</b>	<b>\$6,058.0</b>
Annual Surplus (Deficit)	\$241.4	\$109.8	\$368.4	\$591.0	\$3,868.0	\$972.1	\$1,164.9	\$2,003.8	\$3,185.4	\$5,412.8	\$3,861.6	\$3,069.2	\$3,159.7	\$2,998.9	\$2,381.8	\$2,414.2	\$6,798.6	\$5,253.5	\$4,717.6	\$12,047.6	\$8,002.3
Annual Surplus (Deficit)	\$241.4	\$109.8	\$368.4	\$591.0	\$3,868.0	\$972.1	\$1,164.9	\$2,003.8	\$3,185.4	\$5,412.8	\$3,861.6	\$3,069.2	\$3,159.7	\$2,998.9	\$2,381.8	\$2,414.2	\$6,798.6	\$5,253.5	\$4,717.6	\$12,047.6	\$8,002.3
Accumulated Surplus - beginning of year	\$39,167.3	\$39,408.7	\$39,518.5	\$39,887.0	\$40,478.0	\$44,346.0	\$45,318.1	\$46,483.0	\$48,486.8	\$51,672.2	\$57,085.0	\$60,946.6	\$64,015.8	\$67,175.5	\$70,174.4	\$72,556.2	\$74,970.4	\$81,769.0	\$87,022.5	\$91,740.1	\$103,787.7
Accumulated Surplus - end of year	\$39,408.7	\$39,518.5	\$39,887.0	\$40,478.0	\$44,346.0	\$45,318.1	\$46,483.0	\$48,486.8	\$51,672.2	\$57,085.0	\$60,946.6	\$64,015.8	\$67,175.5	\$70,174.4	\$72,556.2	\$74,970.4	\$81,769.0	\$87,022.5	\$91,740.1	\$103,787.7	\$111,790.1

\*Note - 2010 amounts are draft and unaudited

## 5.2. Statement of Financial Position

Town of The Blue Mountains Water Division - Statement of Financial Position																					
(\$ THOUSANDS)	Unaudited*	Approved	Forecasted																		
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
<b>Financial Assets</b>																					
Cash, Receivables and Investments	\$3,520.2	\$3,923.8	\$4,560.2	\$5,437.5	\$5,770.0	\$5,264.6	\$4,269.1	\$4,593.3	\$5,241.9	\$5,833.1	\$7,141.5	\$7,666.2	\$9,214.2	\$11,606.4	\$11,138.7	\$12,454.0	\$13,554.1	\$15,654.7	\$18,512.4	\$21,178.9	\$18,266.7
<b>Total Financial Assets</b>	\$3,520.2	\$3,923.8	\$4,560.2	\$5,437.5	\$5,770.0	\$5,264.6	\$4,269.1	\$4,593.3	\$5,241.9	\$5,833.1	\$7,141.5	\$7,666.2	\$9,214.2	\$11,606.4	\$11,138.7	\$12,454.0	\$13,554.1	\$15,654.7	\$18,512.4	\$21,178.9	\$18,266.7
<b>Financial Liabilities</b>																					
Accounts Payable and Deferred Revenue**	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Long Term Liabilities***	\$3,606.8	\$3,190.0	\$2,764.9	\$2,331.2	\$1,888.7	\$1,437.3	\$7,682.4	\$7,079.0	\$6,475.4	\$5,871.5	\$5,267.2	\$4,662.7	\$4,057.8	\$3,452.6	\$2,847.1	\$10,845.2	\$9,566.1	\$8,287.0	\$9,284.3	\$7,822.6	\$6,360.8
<b>Total Financial Liabilities</b>	\$3,606.8	\$3,190.0	\$2,764.9	\$2,331.2	\$1,888.7	\$1,437.3	\$7,682.4	\$7,079.0	\$6,475.4	\$5,871.5	\$5,267.2	\$4,662.7	\$4,057.8	\$3,452.6	\$2,847.1	\$10,845.2	\$9,566.1	\$8,287.0	\$9,284.3	\$7,822.6	\$6,360.8
<b>Net Financial Assets (Net Debt)</b>	<b>(\$86.6)</b>	\$733.8	\$1,795.3	\$3,106.3	\$3,881.3	\$3,827.3	<b>(\$3,413.3)</b>	<b>(\$2,485.7)</b>	<b>(\$1,233.5)</b>	<b>(\$38.4)</b>	\$1,874.2	\$3,003.5	\$5,156.4	\$8,153.8	\$8,291.6	\$1,608.8	\$3,987.9	\$7,367.7	\$9,228.1	\$13,356.4	\$11,906.0
<b>Non Financial Assets</b>																					
Prepaid Expenses	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Tangible Capital Assets (estimated)	\$52,293.4	\$52,353.9	\$52,293.8	\$52,402.5	\$56,026.5	\$57,529.5	\$65,469.1	\$66,787.4	\$69,082.9	\$71,534.2	\$73,804.8	\$75,981.8	\$77,330.6	\$79,451.7	\$81,842.5	\$88,572.1	\$92,121.5	\$93,710.6	\$96,047.2	\$101,516.0	\$106,788.2
Accumulated Depreciation (estimated)	<b>(\$12,798.1)</b>	<b>(\$13,592.8)</b>	<b>(\$14,260.5)</b>	<b>(\$15,097.8)</b>	<b>(\$15,991.0)</b>	<b>(\$16,744.3)</b>	<b>(\$17,604.7)</b>	<b>(\$18,217.1)</b>	<b>(\$19,158.6)</b>	<b>(\$18,531.6)</b>	<b>(\$18,881.3)</b>	<b>(\$19,937.9)</b>	<b>(\$20,914.3)</b>	<b>(\$21,900.5)</b>	<b>(\$23,184.9)</b>	<b>(\$24,369.7)</b>	<b>(\$25,611.9)</b>	<b>(\$26,586.5)</b>	<b>(\$27,802.1)</b>	<b>(\$29,252.1)</b>	<b>(\$29,833.8)</b>
<b>Total Non-Financial Assets</b>	\$39,495.3	\$38,761.1	\$38,033.4	\$37,304.7	\$40,035.6	\$40,785.1	\$47,864.4	\$48,570.3	\$49,924.2	\$53,002.6	\$54,923.5	\$56,043.9	\$56,416.3	\$57,551.2	\$58,657.6	\$64,202.4	\$66,509.7	\$67,124.1	\$68,245.1	\$72,263.9	\$76,954.4
<b>Accumulated Surplus</b>	\$39,408.7	\$39,494.9	\$39,828.6	\$40,410.9	\$43,916.9	\$44,612.4	\$44,451.1	\$46,084.6	\$48,690.8	\$52,964.2	\$56,797.7	\$59,047.4	\$61,572.7	\$65,705.1	\$66,949.2	\$65,811.2	\$70,497.6	\$74,491.8	\$77,473.2	\$85,620.3	\$88,860.3

\*Note - 2010 amounts are draft and unaudited

\*\*Note - Accounts Payable and accrued liabilities related to the Water Division are integrated into the Town's accounts payable system and can not be easily identified. For the purposes of these projections, it is assumed that expenses are paid immediately.

\*\*\*Note - See Schedule of Projected Liabilities for full detail

### 5.3. Statement of Cash Flow

Town of The Blue Mountains Water Division - Statement of Cash Flow																					
(\$ THOUSANDS)	Unaudited*	Approved	Forecasted																		
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
<b>OPERATING TRANSACTIONS</b>																					
Projected Annual Surplus (Deficit)	\$241.4	\$109.8	\$368.4	\$591.0	\$3,868.0	\$972.1	\$1,164.9	\$2,003.8	\$3,185.4	\$5,412.8	\$3,861.6	\$3,069.2	\$3,159.7	\$2,998.9	\$2,381.8	\$2,414.2	\$6,798.6	\$5,253.5	\$4,717.6	\$12,047.6	\$8,002.3
<i>Items not involving cash:</i>																					
Amortization	\$881.4	\$869.0	\$867.6	\$863.8	\$893.1	\$933.8	\$1,018.3	\$1,057.2	\$1,037.3	\$1,078.8	\$1,134.6	\$1,169.3	\$1,194.2	\$1,215.0	\$1,245.1	\$1,315.7	\$1,391.7	\$1,420.5	\$1,464.8	\$1,480.1	\$1,570.4
Prepays, accounts payable, deferred revenue, capital	(\$18.2)	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
<b>Cash provided by operating transactions</b>	<b>\$1,141.0</b>	<b>\$978.8</b>	<b>\$1,236.1</b>	<b>\$1,454.9</b>	<b>\$4,761.1</b>	<b>\$1,905.9</b>	<b>\$2,183.1</b>	<b>\$3,061.0</b>	<b>\$4,222.7</b>	<b>\$6,491.6</b>	<b>\$4,996.2</b>	<b>\$4,238.4</b>	<b>\$4,354.0</b>	<b>\$4,213.9</b>	<b>\$3,626.9</b>	<b>\$3,729.9</b>	<b>\$8,190.3</b>	<b>\$6,674.1</b>	<b>\$6,182.4</b>	<b>\$13,527.7</b>	<b>\$9,572.8</b>
<b>FINANCING TRANSACTIONS</b>																					
Proceeds from long-term debt	\$225.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$6,339.4	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$8,604.0	\$0.0	\$0.0	\$2,276.4	\$0.0	\$0.0
Repayment of long-term debt	(\$290.2)	(\$416.8)	(\$425.1)	(\$433.7)	(\$442.5)	(\$451.4)	(\$94.4)	(\$603.3)	(\$603.6)	(\$603.9)	(\$604.2)	(\$604.6)	(\$604.9)	(\$605.2)	(\$605.5)	(\$605.9)	(\$1,279.1)	(\$1,279.1)	(\$1,279.1)	(\$1,461.8)	(\$1,461.8)
<b>Cash provided (used) by financing transactions</b>	<b>(\$65.2)</b>	<b>(\$416.8)</b>	<b>(\$425.1)</b>	<b>(\$433.7)</b>	<b>(\$442.5)</b>	<b>(\$451.4)</b>	<b>\$6,245.1</b>	<b>(\$603.3)</b>	<b>(\$603.6)</b>	<b>(\$603.9)</b>	<b>(\$604.2)</b>	<b>(\$604.6)</b>	<b>(\$604.9)</b>	<b>(\$605.2)</b>	<b>(\$605.5)</b>	<b>\$7,998.1</b>	<b>(\$1,279.1)</b>	<b>(\$1,279.1)</b>	<b>\$997.3</b>	<b>(\$1,461.8)</b>	<b>(\$1,461.8)</b>
<b>CAPITAL TRANSACTIONS</b>																					
<i>Capital Asset Purchases</i>																					
System Improvements	(\$25.0)	(\$20.0)	(\$30.5)	(\$15.0)	(\$25.0)	(\$31.0)	(\$27.5)	(\$28.3)	(\$29.2)	(\$30.0)	(\$31.0)	(\$31.9)	(\$32.8)	(\$33.8)	(\$34.8)	(\$35.9)	(\$37.0)	(\$38.1)	(\$39.2)	(\$40.4)	(\$41.6)
Watermain Replacement and Rehabilitation	(\$281.9)	(\$70.0)	(\$144.1)	\$0.0	(\$3,901.5)	(\$1,772.4)	(\$1,788.9)	(\$1,880.8)	(\$2,897.0)	(\$4,591.2)	(\$2,266.1)	(\$1,765.9)	(\$2,154.5)	(\$907.9)	(\$873.6)	(\$699.9)	(\$5,635.3)	(\$3,001.2)	(\$3,413.0)	(\$7,605.8)	(\$5,726.5)
Fleet and Equipment	(\$13.4)	(\$41.9)	\$0.0	(\$37.1)	(\$59.5)	(\$41.3)	(\$54.9)	(\$54.1)	\$0.0	(\$458.0)	(\$328.5)	(\$384.0)	\$0.0	(\$45.3)	(\$168.6)	(\$14.3)	(\$113.5)	(\$127.2)	\$0.0	(\$199.2)	(\$8.1)
Water Treatment Plant, Reservoirs, Pumping Stations	(\$29.9)	(\$26.5)	\$0.0	(\$91.8)	\$0.0	(\$115.2)	(\$7,552.4)	(\$170.2)	(\$44.3)	(\$217.3)	(\$458.1)	(\$927.4)	(\$13.7)	(\$229.5)	(\$2,412.2)	(\$9,662.6)	(\$25.4)	(\$127.9)	(\$869.8)	(\$1,554.0)	(\$5,247.1)
<b>Cash used for capital transactions</b>	<b>(\$350.2)</b>	<b>(\$158.4)</b>	<b>(\$174.6)</b>	<b>(\$143.9)</b>	<b>(\$3,986.1)</b>	<b>(\$1,960.0)</b>	<b>(\$9,423.7)</b>	<b>(\$2,133.4)</b>	<b>(\$2,970.5)</b>	<b>(\$5,296.5)</b>	<b>(\$3,083.6)</b>	<b>(\$3,109.1)</b>	<b>(\$2,201.1)</b>	<b>(\$1,216.5)</b>	<b>(\$3,489.2)</b>	<b>(\$10,412.7)</b>	<b>(\$5,811.1)</b>	<b>(\$3,294.3)</b>	<b>(\$4,322.0)</b>	<b>(\$9,399.4)</b>	<b>(\$11,023.2)</b>
<b>Net change in cash and cash equivalents</b>	<b>\$725.6</b>	<b>\$403.7</b>	<b>\$636.3</b>	<b>\$877.3</b>	<b>\$332.6</b>	<b>(\$505.5)</b>	<b>(\$995.5)</b>	<b>\$324.3</b>	<b>\$648.6</b>	<b>\$591.2</b>	<b>\$1,308.4</b>	<b>\$524.7</b>	<b>\$1,548.0</b>	<b>\$2,392.2</b>	<b>(\$467.8)</b>	<b>\$1,315.3</b>	<b>\$1,100.1</b>	<b>\$2,100.7</b>	<b>\$2,857.7</b>	<b>\$2,666.5</b>	<b>(\$2,912.2)</b>
<b>Cash and Cash equivalents, beginning of year</b>	<b>\$2,794.6</b>	<b>\$3,520.2</b>	<b>\$3,923.8</b>	<b>\$4,560.2</b>	<b>\$5,437.5</b>	<b>\$5,770.0</b>	<b>\$5,264.6</b>	<b>\$4,269.1</b>	<b>\$4,593.3</b>	<b>\$5,241.9</b>	<b>\$5,833.1</b>	<b>\$7,141.5</b>	<b>\$7,666.2</b>	<b>\$9,214.2</b>	<b>\$11,606.4</b>	<b>\$11,138.7</b>	<b>\$12,454.0</b>	<b>\$13,554.1</b>	<b>\$15,654.7</b>	<b>\$18,512.4</b>	<b>\$21,178.9</b>
<b>Cash and Cash equivalents, end of year</b>	<b>\$3,520.2</b>	<b>\$3,923.8</b>	<b>\$4,560.2</b>	<b>\$5,437.5</b>	<b>\$5,770.0</b>	<b>\$5,264.6</b>	<b>\$4,269.1</b>	<b>\$4,593.3</b>	<b>\$5,241.9</b>	<b>\$5,833.1</b>	<b>\$7,141.5</b>	<b>\$7,666.2</b>	<b>\$9,214.2</b>	<b>\$11,606.4</b>	<b>\$11,138.7</b>	<b>\$12,454.0</b>	<b>\$13,554.1</b>	<b>\$15,654.7</b>	<b>\$18,512.4</b>	<b>\$21,178.9</b>	<b>\$18,266.7</b>

\*Note - 2010 amounts are draft and unaudited

## 5.4. Schedule of Projected Liabilities

Town of The Blue Mountains Water Division - Shedule of Projected Liabilities																					
(\$ THOUSANDS)	Unaudited*	Approved	Forecasted																		
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
<b>LIABILITES</b>																					
<b>Existing Debentures**</b>																					
Opening	\$1,760.0	\$1,680.0	\$1,600.0	\$1,520.0	\$1,440.0	\$1,360.0	\$1,280.0	\$1,200.0	\$1,120.0	\$1,040.0	\$960.0	\$880.0	\$800.0	\$720.0	\$640.0	\$560.0	\$480.0	\$400.0	\$320.0	\$240.0	\$160.0
Repayments	(\$80.0)	(\$80.0)	(\$80.0)	(\$80.0)	(\$80.0)	(\$80.0)	(\$80.0)	(\$80.0)	(\$80.0)	(\$80.0)	(\$80.0)	(\$80.0)	(\$80.0)	(\$80.0)	(\$80.0)	(\$80.0)	(\$80.0)	(\$80.0)	(\$80.0)	(\$80.0)	(\$80.0)
Balance	\$1,680.0	\$1,600.0	\$1,520.0	\$1,440.0	\$1,360.0	\$1,280.0	\$1,200.0	\$1,120.0	\$1,040.0	\$960.0	\$880.0	\$800.0	\$720.0	\$640.0	\$560.0	\$480.0	\$400.0	\$320.0	\$240.0	\$160.0	\$80.0
<b>New Debentures***</b>																					
Opening	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$6,339.4	\$5,830.8	\$5,322.1	\$4,813.4	\$4,304.7	\$3,796.0	\$3,287.3	\$2,778.6	\$2,269.9	\$10,365.2	\$9,166.1	\$7,967.0	\$9,044.3	\$7,662.6
Repayments	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	(\$508.7)	(\$508.7)	(\$508.7)	(\$508.7)	(\$508.7)	(\$508.7)	(\$508.7)	(\$508.7)	(\$508.7)	(\$1,199.1)	(\$1,199.1)	(\$1,199.1)	(\$1,381.8)	(\$1,381.8)
New Debentures	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$6,339.4	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$8,604.0	\$0.0	\$0.0	\$2,276.4	\$0.0	\$0.0
Balance	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$6,339.4	\$5,830.8	\$5,322.1	\$4,813.4	\$4,304.7	\$3,796.0	\$3,287.3	\$2,778.6	\$2,269.9	\$10,365.2	\$9,166.1	\$7,967.0	\$9,044.3	\$7,662.6	\$6,280.8
<b>Long Term Debt Financed by Town****</b>																					
Opening	\$1,912.0	\$1,926.8	\$1,590.0	\$1,244.9	\$891.2	\$528.7	\$157.3	\$142.9	\$128.3	\$113.3	\$98.1	\$82.5	\$66.7	\$50.5	\$34.0	\$17.2	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Repayments	(\$210.2)	(\$336.8)	(\$345.1)	(\$353.7)	(\$362.5)	(\$371.4)	(\$14.4)	(\$14.7)	(\$14.9)	(\$15.2)	(\$15.5)	(\$15.9)	(\$16.2)	(\$16.5)	(\$16.8)	(\$17.2)	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
New Long Term Debt	\$225.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Balance	\$1,926.8	\$1,590.0	\$1,244.9	\$891.2	\$528.7	\$157.3	\$142.9	\$128.3	\$113.3	\$98.1	\$82.5	\$66.7	\$50.5	\$34.0	\$17.2	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
<b>TOTAL</b>																					
Opening	\$3,672.0	\$3,606.8	\$3,190.0	\$2,764.9	\$2,331.2	\$1,888.7	\$1,437.3	\$7,682.4	\$7,079.0	\$6,475.4	\$5,871.5	\$5,267.2	\$4,662.7	\$4,057.8	\$3,452.6	\$2,847.1	\$10,845.2	\$9,566.1	\$8,287.0	\$9,284.3	\$7,822.6
Repayments	(\$290.2)	(\$416.8)	(\$425.1)	(\$433.7)	(\$442.5)	(\$451.4)	(\$94.4)	(\$603.3)	(\$603.6)	(\$603.9)	(\$604.2)	(\$604.6)	(\$604.9)	(\$605.2)	(\$605.5)	(\$605.9)	(\$1,279.1)	(\$1,279.1)	(\$1,279.1)	(\$1,461.8)	(\$1,461.8)
New Debentures	\$225.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$6,339.4	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$8,604.0	\$0.0	\$0.0	\$2,276.4	\$0.0	\$0.0
Balance	\$3,606.8	\$3,190.0	\$2,764.9	\$2,331.2	\$1,888.7	\$1,437.3	\$7,682.4	\$7,079.0	\$6,475.4	\$5,871.5	\$5,267.2	\$4,662.7	\$4,057.8	\$3,452.6	\$2,847.1	\$10,845.2	\$9,566.1	\$8,287.0	\$9,284.3	\$7,822.6	\$6,360.8

\*Note - 2010 amounts are draft and unaudited

\*\*Note - Currently the Water Division holds one debenture for the Thornbury Reservoir. The payments are slated to end in 2031.

\*\*\*Note - The Water Division may require new debt to pay for some future capital costs. All new debt has been assumed to bear a 5% interest rate payable over 20 years.

\*\*\*\*Note - Currently the Town hold debt for the Water Division for two projects. The Thornbury WTP expansion will be repaid in 2015 and the Water Divisions share of the Town Hall expansion will be repaid in 2025.

**5.5. Costs Associated with Lead Replacement**

**Town of The Blue Mountains Water Division - Costs Associated with Lead Replacement**

	Unaudited*	Approved	Forecasted																		
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
<b>Services Replaced</b>																					
Replaced in Conjunction with a Capital Project	0	0	0	0	0	45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
"One-offs" Replaced by Operations	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	0	0	0	0	0	45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Costs Related to Lead Services</b>																					
Lead Testing	\$0	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
Replaced in Conjunction with a Capital Project	\$0	\$0	\$0	\$0	\$0	\$318,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
"One-offs" Replaced by Operations	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	\$0	\$1,000	\$1,000	\$1,000	\$1,000	\$319,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000

\*Note - 2010 amounts are draft and unaudited

## 6. References

### Section 1.1.1 – Water Division Objectives and Principles

Resolution link

### Section 1.2.2 – Water By-laws

By-law for the Regulation of Water Supply

[http://www.thebluemountains.ca/public\\_docs/bylaws/2008-02%20Regulation%20of%20Water%20Supply1.pdf](http://www.thebluemountains.ca/public_docs/bylaws/2008-02%20Regulation%20of%20Water%20Supply1.pdf)

### Section 2.1.1 – Asset Management

Town Wide Development Charges Background Study

[http://www.thebluemountains.ca/public\\_docs/documents/TBM%20DC%20Background%20Study%20Feb%202010.pdf](http://www.thebluemountains.ca/public_docs/documents/TBM%20DC%20Background%20Study%20Feb%202010.pdf)

Lora Bay Development Charges Background Study

[http://www.thebluemountains.ca/public\\_docs/documents/HEMSON%20-%20Lora%20Bay%20ASDC%20June%202009.pdf](http://www.thebluemountains.ca/public_docs/documents/HEMSON%20-%20Lora%20Bay%20ASDC%20June%202009.pdf)

Link to Asset Management Plan Report

Link to Capital Planning Report

### 2.1.2. – System Improvements

Other Related Legislation

Licensing of Municipal Drinking Water Systems Regulation

[http://www.e-laws.gov.on.ca/html/regs/english/elaws\\_regs\\_070188\\_e.htm](http://www.e-laws.gov.on.ca/html/regs/english/elaws_regs_070188_e.htm)

### Section 3.1 – Financial Model

Resolution Link

### Section 4.3 – Reserve Funds Policy

FIS.10.09 Water Reserves & Reserve Fund Consolidation -

[http://www.thebluemountains.ca/public\\_docs/events/C.4%20-%20FIS.10.09%20Water%20Reserves%20and%20Reserve%20Funds%20Consolidation.pdf](http://www.thebluemountains.ca/public_docs/events/C.4%20-%20FIS.10.09%20Water%20Reserves%20and%20Reserve%20Funds%20Consolidation.pdf)

By-law 2010 – 27 Consolidated Reserve Funds – Municipal Water & Wastewater Systems -

[http://www.thebluemountains.ca/public\\_docs/bylaws/2010-27%20Consolidated%20Reserve%20Funds%20for%20W%20and%20WW%20Systems.pdf](http://www.thebluemountains.ca/public_docs/bylaws/2010-27%20Consolidated%20Reserve%20Funds%20for%20W%20and%20WW%20Systems.pdf)

### Section 4.6 – Senior Government Funding

EPW.09.038 – Federal Gas Tax Funding Expenditure Update -

[http://www.thebluemountains.ca/public\\_docs/events/EPW.09.038%20Federal%20Gas%20Tax%20Funding%20Expenditure%20Update.pdf](http://www.thebluemountains.ca/public_docs/events/EPW.09.038%20Federal%20Gas%20Tax%20Funding%20Expenditure%20Update.pdf)

### Reference – Not Hyperlinked in Document

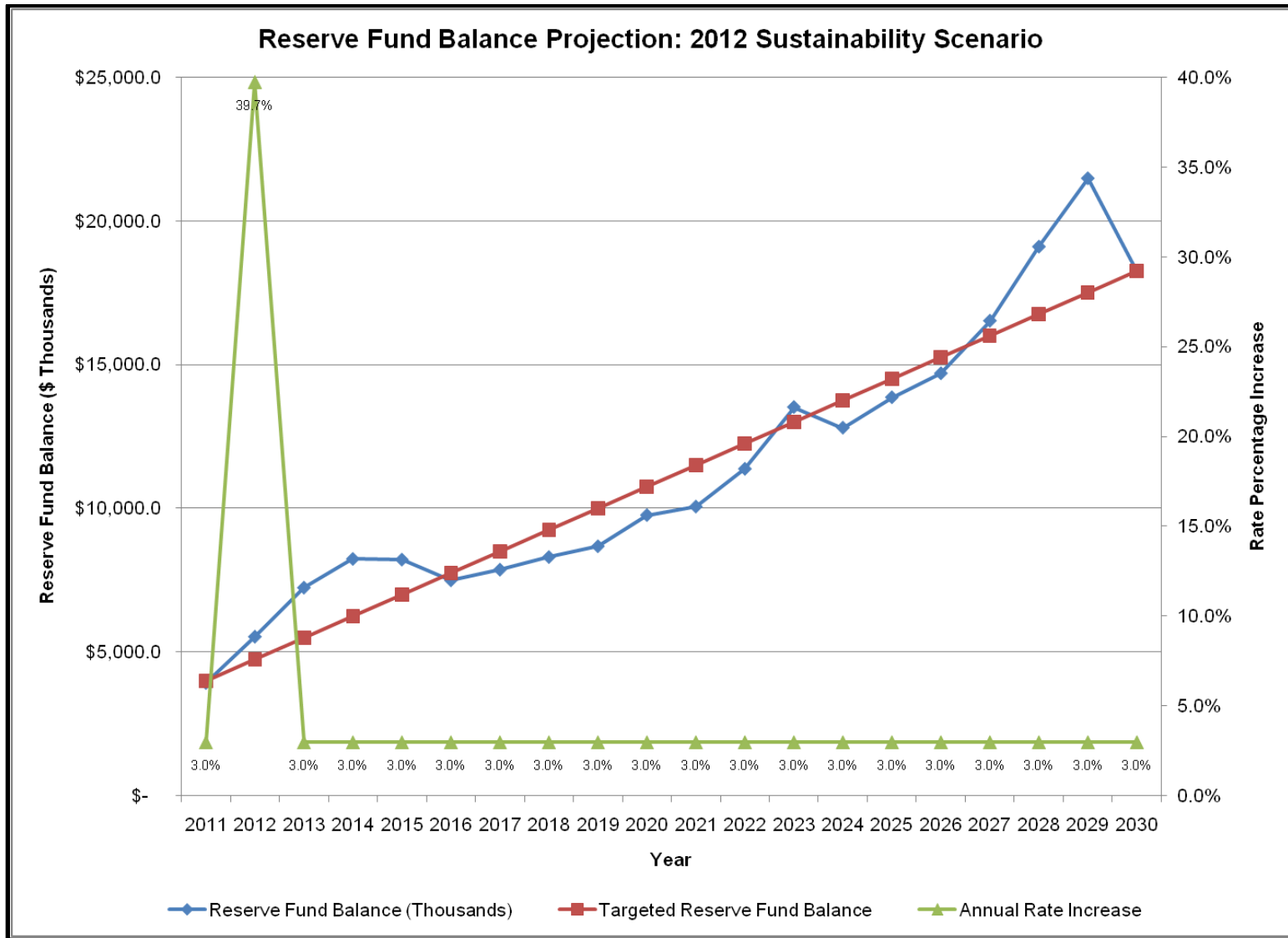
City of London - Water Service Area Financial Plan (April 2010)

City of Thunder Bay Water Authority Financial Plan (February 2010)

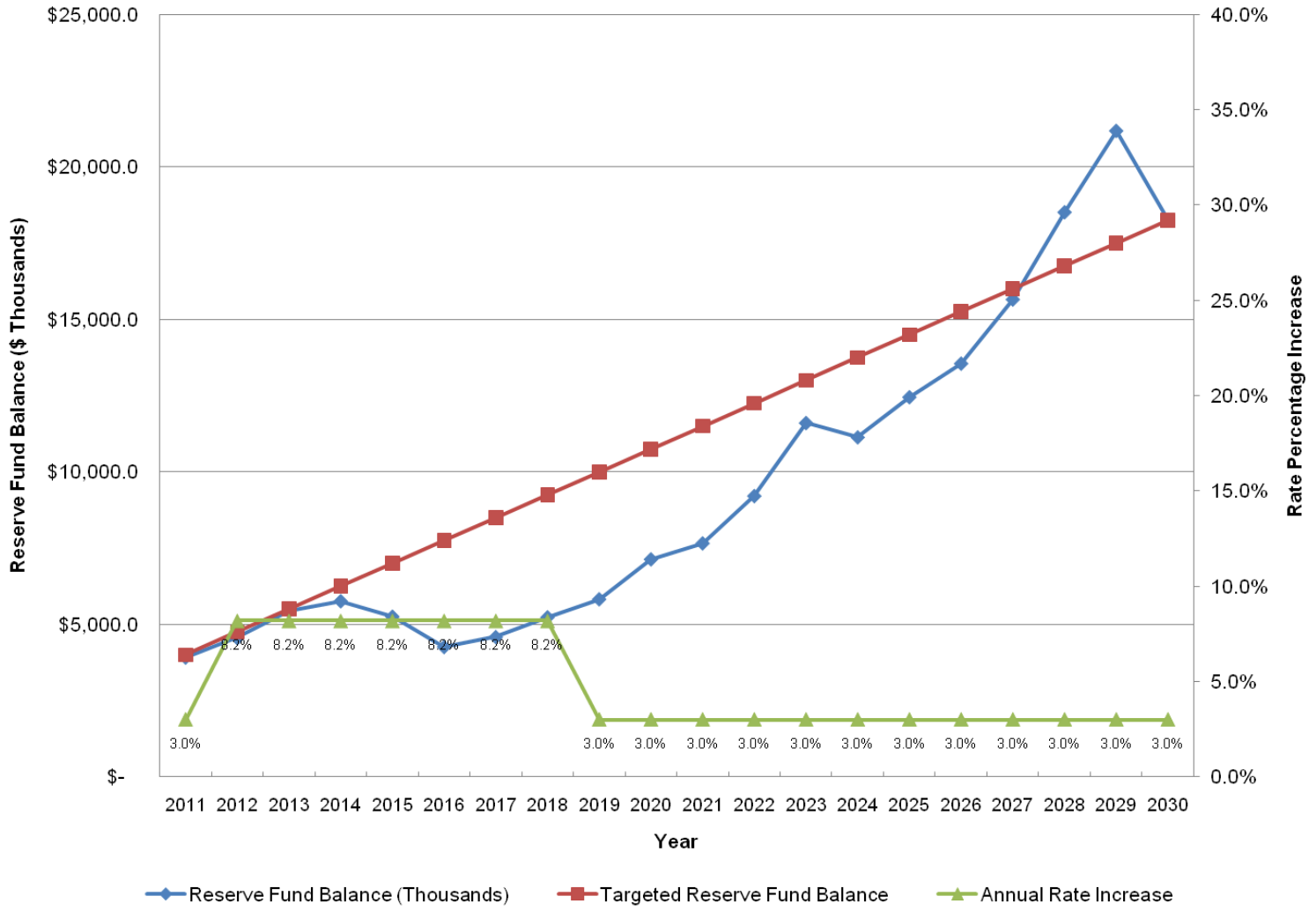
Town of Markham Water and Wastewater System Financial Plan (June 2010)

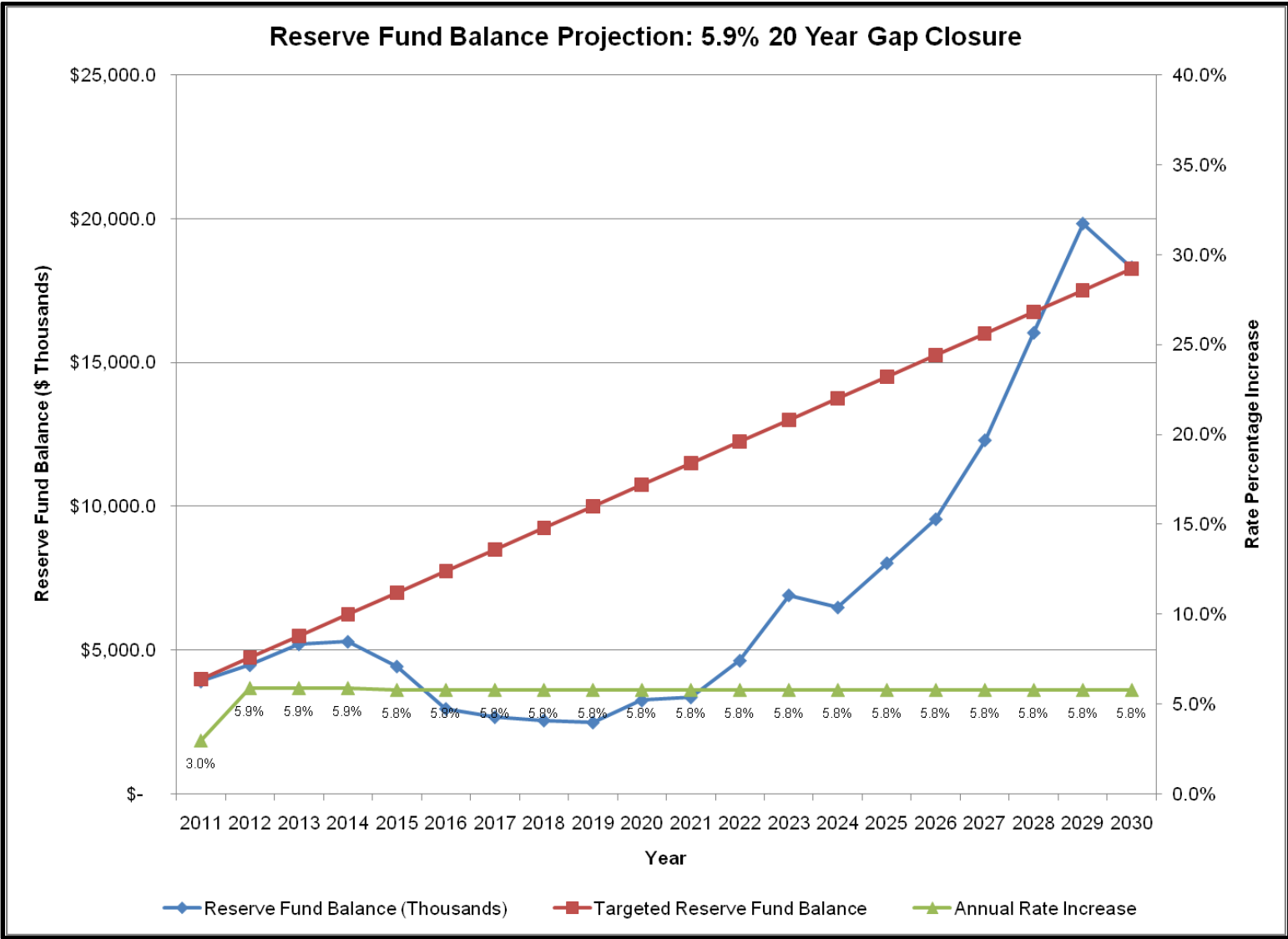
City of Port Colborne Distribution System Financial Plan (June 2010)

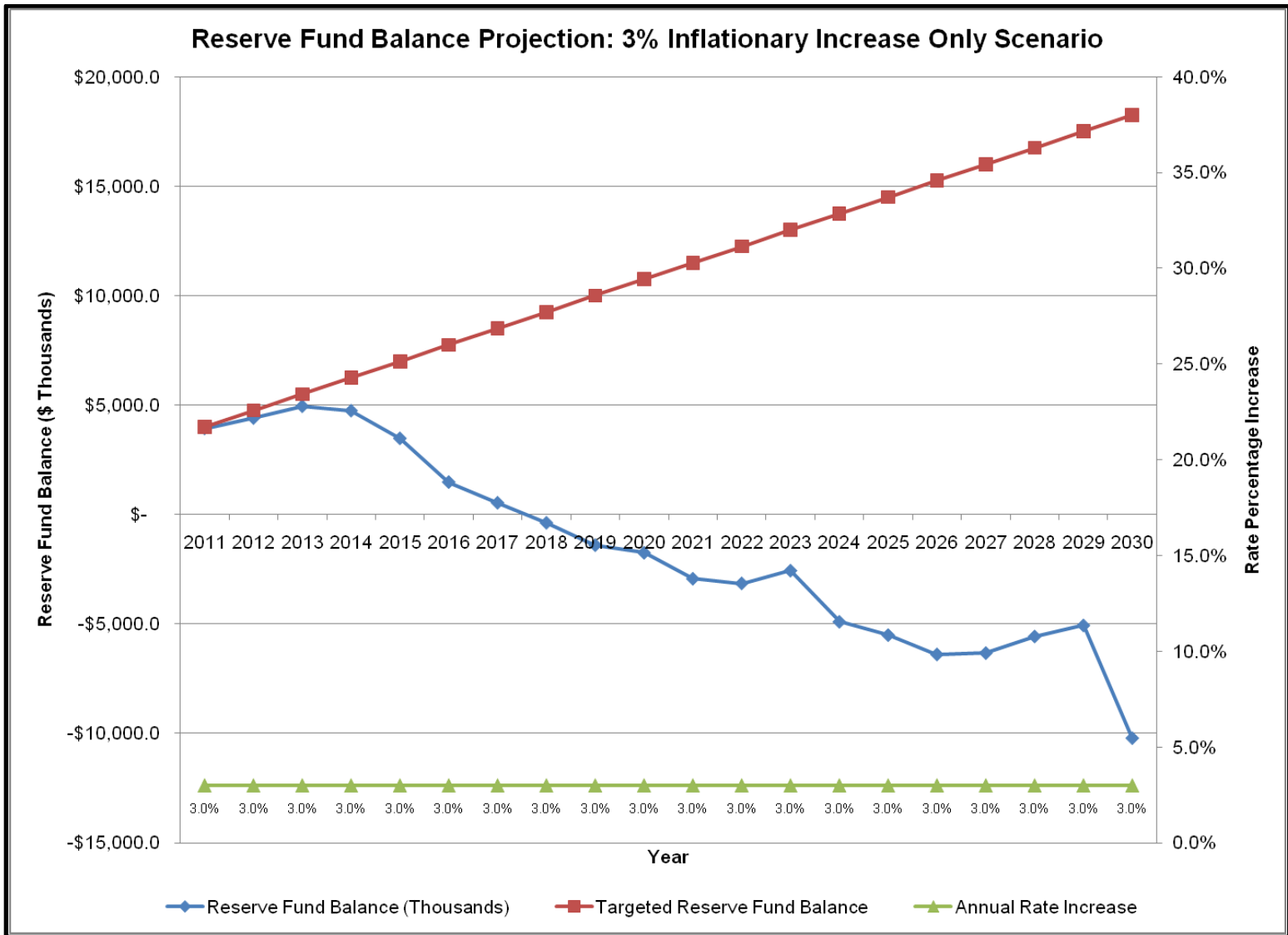
## Appendix A



**Reserve Fund Balance Projection: Recommended 8.2% Scenario**







## Appendix B

TABLE 1 - TANGIBLE CAPITAL ASSET CATEGORIES				
CATEGORY 1	CATEGORY 2	CATEGORY 3	USEFUL LIFE	
<i>Building</i>	Structure		50	
	Roofing	Flat	25	
		Asphalt Shingle	25	
	HVAC	System	25	
	Plumbing	System	30	
	Windows & Doors		25	
<i>Machinery &amp; Equipment</i>	Furniture & Fixtures	Office Furniture	15	
	Office Equipment		5	
	Centrifugal Pump		30	
	Generator		30	
	Water Specific M & E	Water Meters		15
		MCC		25
		Pressure Tank		25
		Chlorine Analyzer		5
		Chlorine Pumps		10
		Water Locator		5
		UV System		25
		Turbidity Meter		15
		Water Filter		50
		SCADA System		15
		Water Storage Tank		75
	Sample Station		20	
Confined Space Equipment		5		
<i>Vehicles</i>	Light Duty - Pick-up, SUV		10	
	Non Road Use		10	
<i>Linear</i>	Fire Hydrants		40	
	Pipe	Stainless Steel		40
		Asbestos Cement		50
		Ductile Iron		50
		Cast Iron		50
		PolyEthylene		50
		PolyVinylChloride Series		50
		PolyVinylChloride Series 160		75
		PolyVinylChloride		100
		PolyVinylChloride DR 18		100
		PolyVinylChloride DR 25		100
	PolyVinylChloride DR 26		100	
	Valves	Pressure Release		50
		Pressure Reducing		50
		Check Valve		50
		Butterfly Valve		50
		Gate		25
Air Release			25	
	Power Actuated		50	
Valve Chamber		50		

<b>TABLE 2 - NET BOOK VALUE OF IN-SERVICE TANGIBLE CAPITAL ASSETS</b>				
(Estimated as of December 31, 2010)				
<b>CATEGORY 1</b>	<b>CATEGORY 2</b>	<b>CATEGORY 3</b>	<b>(1000's)</b>	
<i>Building</i>	Structure		\$ 1,262.9	
	Roofing	Flat	\$ 71.8	
		Asphalt Shingle	\$ 1.6	
	HVAC	System	\$ 57.9	
	Plumbing	System	\$ 8.9	
	Windows & Doors		\$ 28.2	
<i>Machinery &amp; Equipment</i>	Furniture & Fixtures	Office Furniture	\$ 5.3	
	Office Equipment		\$ 1.4	
	Centrifugal Pump		\$ 195.4	
	Generator		\$ 114.2	
	Water Specific M & E	Water Meters		\$ 385.9
		MCC		\$ 298.3
		Pressure Tank		\$ 31.1
		Chlorine Analyzer		\$ 5.3
		Chlorine Pumps		\$ 21.3
		Water Locator		\$ 3.8
		UV System		\$ 179.5
		Turbidity Meter		\$ 4.1
		Water Filter		\$ 4,316.0
		SCADA System		\$ 89.5
		Water Storage Tank		\$ 383.9
	Sample Station		\$ 98.2	
Confined Space Equipment		\$ 8.7		
<i>Vehicles</i>	Light Duty - Pick-up, SUV		\$ 77.8	
	Non Road Use		\$ 67.1	
<i>Linear</i>	Fire Hydrants		\$ 201.7	
	Pipe	Stainless Steel	\$ 179.3	
		Asbestos Cement	\$ 4.7	
		Ductile Iron	\$ 4,773.7	
		Cast Iron	\$ 4.0	
		PolyEthylene	\$ 54.9	
		PolyVinylChloride Series	\$ 152.2	
		PolyVinylChloride Series 160	\$ 59.2	
		PolyVinylChloride	\$14,018.1	
		PolyVinylChloride DR 18	\$ 6,063.7	
		PolyVinylChloride DR 25	\$ 4,387.7	
		PolyVinylChloride DR 26	\$ 1,562.3	
	Valves	Pressure Release	\$ 13.2	
		Pressure Reducing	\$ 7.3	
		Check Valve	\$ 13.2	
		Butterfly Valve	\$ 75.7	
		Gate	\$ 10.7	
		Air Release	\$ 1.1	
		Power Actuated	\$ 209.4	
Valve Chamber		\$ 91.0		
<b>TOTAL In-Service Tangible Capital Assets</b>			<b>\$39,601.1</b>	