



CITY OF PORT COLBORNE
Municipal Offices
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**OFFICE OF THE DIRECTOR OF
COMMUNITY AND CORPORATE SERVICES**

June 29, 2010

Mr. Jim Gordon, Team Project Lead
Financing and Infrastructure Policy Section, Municipal Affairs and Housing
13th Floor, 777 Bay Street
Toronto, Ontario M5G 2E5

Dear Mr. Gordon:

RE: Port Colborne Distribution System Financial Plan

Please be advised that at the Port Colborne City Council meeting on June 28, 2010, Council resolved, the following, as amended:

That Department of Engineering & Operations, Operations Division, Report No. 2010-37, Subject: Port Colborne Distribution System Financial Plan, be approved recommending:

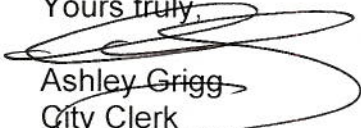
That Report 2010-37 of the Engineering and Operations Department, Operations Division, dated June 28, 2010 entitled "Port Colborne Distribution System Financial Plan" be received;
and

That the Council of the City of Port Colborne, as the Owner of the Port Colborne Distribution System, approves the City of Port Colborne Distribution System Financial Plan #073-301;
and

That staff submit the City of Port Colborne Distribution System Financial Plan #073-301 to the Province by July 1, 2010 in compliance with Ontario Regulation 453/07.

That succession planning for qualified and sufficient staff to perform the work be brought forward to the next Budget session.

Yours truly,


Ashley Grigg
City Clerk

cc. D. Suddard, Water/Wastewater Compliance Coordinator

2010

City of Port Colborne
Distribution System
FINANCIAL PLAN



EXECUTIVE SUMMARY

In 2007, as part of the Municipal Drinking Water Licensing Program, the Ministry of Environment released Regulation 453/07 that requires the preparation of a Financial Plan for all municipal drinking water systems. The City of Port Colborne, Engineering and Operations Department (Operating Authority), together with the Treasury Department, has prepared this Financial Plan in accordance with the Regulation (O. Reg. 453/07), and as required by the Regulation, has submitted the Plan to Council for approval prior to the July 1, 2010 submission deadline.

In preparing the Financial Plan, the financial impacts of the drinking water system have been considered. Based on the Projected Financial Statements and the assumptions herein, the Drinking Water System will be financially viable and will continue to provide safe drinking water to consumers.

Expected Achievements

Through the process of developing this Financial Plan, the Operating Authority set out to achieve the following:

- Financial viability;
- Provide safe drinking water;
- Enable the long term plan for capital renewal to be realized;
- Achieve full cost recovery over the long term; and
- Maintain current service levels.

Operating Plan

The operating plan includes day to day operations, maintaining and administering the drinking water system; the capital investments that will be incurred to renew and replace existing capital infrastructure; and debt management, being the resulting debt repayments and interest charges that are incurred to achieve the above.

Key highlights from the operating plan include:

- Operating costs are projected to be maintained in 2010, increased 4.8% in 2011, 3.7% in 2012, by 2.6% in 2013 and by 2.8% annually until 2019;
- Completing an Infrastructure Needs Study (INS) in 2011 is critical to future forecasts. This Financial Plan is based on the outdated information provided in the last INS, which was completed in 1996;
- Significant capital infrastructure investments are required for the next 10 years to address an “infrastructure deficit”. 35 km of watermains are well past their life expectancy, based on industry standards, with another 4.6 km of watermains

reaching their life expectancy in the next 10 years. At 2010 prices, \$21.7 million is required to address this deficit. Despite life expectancy at industry standards, experience in Port Colborne demonstrates that life expectancy of watermain is variable. Consequently, this plan reflects management of main replacement based on local knowledge and the City's empirical experience;

- As aging infrastructure is replaced, cost-savings, in the form of reducing the unaccounted for water loss within the PCDS, will be realized. These monies can then be directed towards additional watermain replacements, thus accelerating the replacement rate, and further decreasing unaccounted for water loss;
- Under the existing Plan, approximately 10 km of watermain will be replaced over the next decade; and,
- Total projected cash expenditures, including operating expenses, capital costs and debt repayment and interest charges fluctuate between \$4-5 million annually, gradually increasing as required to continue to maintain a water system compliant with legislation.

Funding Plan

The funding plan was developed to determine the most appropriate balance of operating revenues and new debt financing. The achievements of the funding plan include:

- Increases in operating revenues will be realized through water rate increases. Forecasted increases over the next few years are: 2011 – 7.13%, 2012 – 4.58%, 2013 – 5.07%, 2014 and onward – 3% annually;
- Water consumption is assumed to decline approximately 2% per year from 2011 to 2013. Beyond 2013, it is projected that consumption will decline by 1% or less and stabilize as conservation matches the demand from growth;
- This plan does not rely on the use of municipal tax dollars to operate the Operating Authority;
- Additional debt of \$1 million will be assumed in 2011 and 2012 (\$500,000 in each year);
- This Plan provides annual financing for ongoing capital renewal; however, it may be prudent to finance a portion of significant capital infrastructure investments in the future. This plan will be reviewed as needed accordingly;
- Through a combination of operating revenues and new debt, it is projected that the Operating Authority will achieve sufficient cash receipts to cover its annual cash expenditures of \$4.7 million for operating and asset repair and replacement; and
- Revenue levels will gradually increase to allow the Operating Authority to invest in a reserve fund for significant future capital investments and rate stabilization.

Financial Plan

Appendix One of this Financial Plan includes projected financial statements for the Operating Authority. These statements include a projected statement of financial position, projected statement of operations and projected statement of cash flow for the periods ending from December 31, 2009 to 2019.

As required, these statements are in accordance with the new Public Sector Accounting Standards. Actual results will vary from the projections herein and the differences may be material.

This is a living document which will require regular review and updates.

It is the intention of staff to regularly review this plan for internal compliance, performance measurement, adjustment and revisions if required and to ensure absolute performance congruent with O.Reg. 453/07 and the Safe Drinking Water Act (2002). Consequently, this plan can be considered to be a work in progress even after it's adoption.

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Appendix One – Financial Statements and Projections

1. INTRODUCTION

This financial plan for the City of Port Colborne's Water Distribution System (PCDS), was prepared in accordance with Regulation 453/07 as approved by the Ontario Ministry of Environment on August 14, 2007. The approach taken to develop this plan focused on achieving a balance between maintaining the water system in a safe and effective manner, while limiting expenditures. A flexible and gradual approach was taken to achieve financial viability, recognizing that the use of one-time funding sources for the purposes of sustaining the water system is limited, and the reliance on debt to support all future capital expenditures is unrealistic.

This financial plan incorporates information from the PSAB full-cost accrual accounting requirements that were required to be submitted by May 31, 2010. Additionally, information from the City of Port Colborne's list of outstanding distribution system capital expenditures were utilized in forecasting system expenditures.

Considering historic results and future needs, financial projections to the year 2019 were prepared. These projections allow financial viability of the operation of the PCDS, while providing safe drinking water over the short and long term.

1.1. Ministry of Environment Financial Plans Regulation 453/07

Drinking water system owners are required to prepare a financial plan for their drinking water system as part of the new Municipal Drinking Water Licensing Program as set out in Part V of the Safe Drinking Water Act (SDWA). The financial plan must be prepared in accordance with the Ministry of Environment Financial Plans Regulation 453/07.

Regulation 453/07 requires the following:

- the financial plan be approved by resolution of Council
- full-cost accounting to be utilized to determine the true cost of the drinking water system; and projections must apply to a period of at least six years

There are numerous recommendations and other guidelines that have been prepared to assist the municipalities in the development of their financial plan.

1.2. Operations

The City of Port Colborne has identified the Engineering and Operations Department as the Operating Authority for the Port Colborne Distribution System (PCDS). The Public Works, Water Department operates under the Engineering and Operations Department, and is specifically responsible for the daily operation and maintenance of the distribution system.

The Operating Authority's top priority is to provide a safe, sustainable supply of water, providing public health protection, fire protection and support for the local economy, all contributing to a high quality of life. Through implementing the Quality Management System in conformance with the Drinking Water Quality Management Standard, the Operating Authority has been able to better manage risks, identify operational efficiencies, enhance staff knowledge and create public awareness of its commitment to provide safe drinking water.

This long term financial plan details the commitment of the Operating Authority and Council, as the Owner of the PCDS, to ensuring that the distribution system is operated and maintained in a manner that not only meets and exceeds all regulatory requirements, but that these activities are accomplished in a prudent manner.

2. OPERATING PLAN

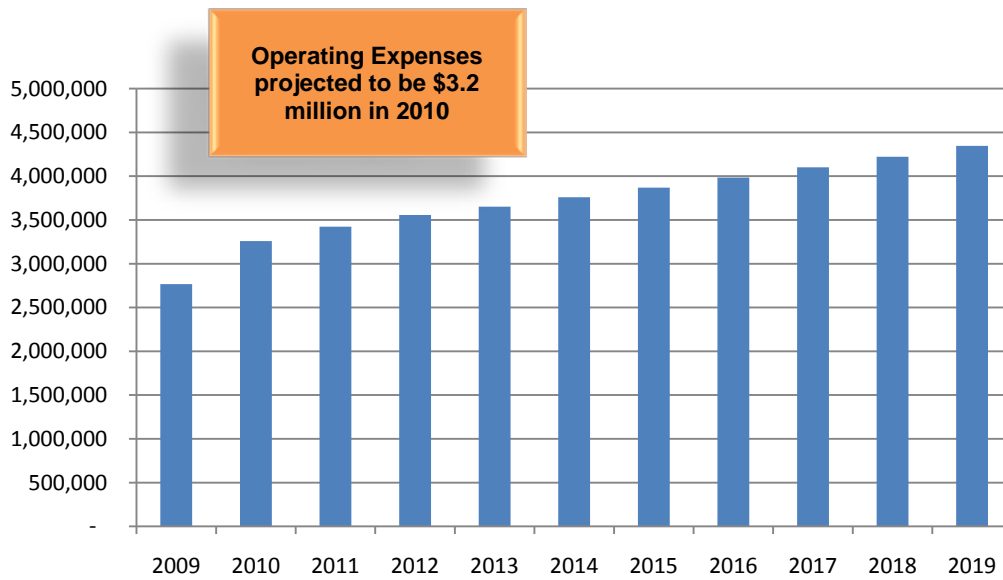
Through the achievement of its operating plan, the Operating Authority will continue to provide safe drinking water in the short term and long term. The Operating Authority's operating plan includes its day to day operations maintaining and administering the drinking water system; the capital investments that it will incur to renew and replace its existing capital infrastructure; and debt management, being the resulting debt repayments and interest charges that are incurred to achieve the above.

2.1. Operations

The Operating Authority's key operating expenses include the cost of purchasing water from Niagara Region, personnel costs, utilities, materials and supplies, and administrative costs. Annual operating expenses, excluding amortization and long term debt interest, are projected to be approximately \$3.2 million in 2010, increasing to \$4.3 million by 2019. It is anticipated that operating expenses will increase by 4.8% in 2011, by 3.7% in 2012, by 2.6% in 2013 and by 2.8% annually until 2019.

2.1.1 Key Assumptions in Projections

The detailed operating expenses are outlined in the projected statement of operations, included as part of Appendix One. In these projections, it is assumed that general operating expenses will increase by 2% (2011 – 2013) and 3% (2014 - 2019). It is assumed that water purchases from the Region will increase 7% in 2011, 5% in 2012 and 3% from 2013 to 2019.



2.2. Capital Costs

To enable the delivery of safe drinking water to all, the water system holds significant assets, including: 105 kilometres of watermains; thousands of connections and water meters; and hundreds of fire hydrants and valves. These assets are referred to as capital.

The City is currently in the process of preparing the Terms of Reference for a 2011 Infrastructure Needs Study (INS) for the distribution system. The current INS, which is the foundation for the list of outstanding distribution system capital projects used to prepare this Financial Plan, was prepared in 1996. Recognizing that this information is dated and likely not a good reflection of the current status of the distribution system infrastructure, an INS has been budgeted in this Financial Plan for completion in 2011, and every 5-6 years in future. This will ensure that the most up-to-date information is available for the preparation of future Financial Plans, and will result in meaningful projections and expenditure forecasting.

Water System Assets at a Glance:

- 105 km watermains
- 6,600 service connections
- 6,600 water meters
- 970 valves
- 591 hydrants

To provide a simple estimate of the capital expenditures required for the preparation of this Financial Plan, the following table, details the remaining life of the watermains in the City, using industry standards for life expectancies for each material type

Table 2.2: Current condition of watermains in 2010

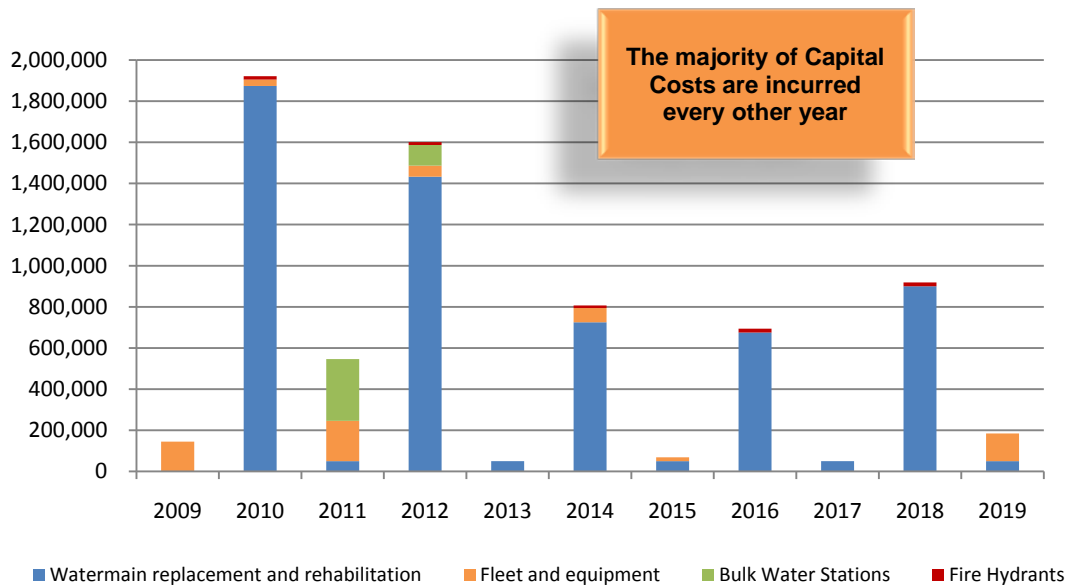
Watermain Material	Life Expectancy (years)	Length Currently in Ground (km)	Installation Year Range	Age of Oldest Pipe as of 2010 (years)	Earliest Remaining Life as of 2010 (years)	Length Exceeding Life Expectancy in 2010 (km)	Length Exceeding Life Expectancy 2011-2019 (km)
PVC	75	53.44	1969 - 2008	41	34	0	0
Cast Iron	45	40.88	1920 - 1992	90	- 45	34.85	4.53
Ductile Iron	60	4.00	1925 - 2002	85	- 25	0.33	0.12
Steel	60	0.70	1925 - 1968	85	- 25	0.43	0
Asbestos Cement	60	4.50	1964 - 1976	46	14	0	0
Hyprescon	60	0.26	1964	46	14	0	0
PE/PHE	75	0.05	1970 - 2001	40	35	0	0
TOTAL LENGTH OF WATERMAINS EXCEEDING LIFE EXPECTANCY (km)						35.61	4.65

Table 2.2 above indicates that, based solely on the age of the watermains and the life expectancy for each material type, just over 40 kms of watermains have or will have exceeded their life expectancy by the end of 2019. At today's average replacement cost of \$538 per metre, that translates into a total expenditure of \$21.7 million. However, City experience is that these pipes (primarily cast iron) have and continue to last longer than 45 years. This Plan is developed for pipe replacement using City experience which is outside of industry standard. Clearly, though, efforts are needed to accelerate a move towards those standards. Hence the "work-in-progress" mode of this Financial Plan. Realising that past under investing cannot be reversed in one decade, a more gradual and fiscally manageable approach to replacements is proposed in this Plan, which sees higher levels of capital allocations annually in comparison with previous years. This increase in capital allocations will not only benefit the City by ensuring the infrastructure remains capable of producing water of the highest quality, but will also enable cost savings to be realized.

Due to the age of Port Colborne's infrastructure, unaccounted for water loss constitutes a large portion of the City's water purchased from the Region, and reduces the funds available to re invest in the PCDS. As the aging infrastructure is replaced, the savings in billings from the Region should be re-invested in the capital expenditures, thus accelerating replacements in the City and allowing more savings to be realized.

It's important to note that an INS takes into account the age and materials in the distribution system, and also examines items such as historical watermain breaks, maintenance issues, water quality issues etc. and prioritizes watermain replacements

based on these and other factors. An INS will more clearly define the estimated replacement costs, hence why it is important to conduct an INS on a regular basis.



2.2.1 Significant Capital Costs

Table 2.2.1: Amount of watermain exceeding its life expectancy – in 2010 and in subsequent decades (based on average life expectancy of materials)

Watermain Material	Total Watermains (km) Exceeding Life Expectancy in:					
	2010	2011 – 2019	2020 – 2029	2030 – 2039	2040 - 2049	2050 - 2059
PVC	0	0	0	0	0.31	16.9
Cast Iron	34.85	4.53	0.99	0.51		
Ductile Iron	0.33	0.12	0.42	2.76	0.43	
Steel	0.43	0	0.27			
Asbestos Cement	0	0	0.41	4.08		
Hyprescon	0	0	0.23			
PE/PHE	0	0	0	0	0.02	
TOTAL KMs "EXPIRED"	35.61	4.65	2.32	7.35	0.76	16.9

Table 2.2.1 illustrates that not only have a significant amount of watermains have exceeded their life expectancy in 2010, but that by 2051, the amount of watermains reaching their life expectancy begins to climb again. This is not only reflective of the most active decades of watermain installation in Port Colborne (1950s and 1980s), but also reflective of the material types used. As detailed in Table 2.2 above, before the

advent of plastic, the metal/cast iron pipes installed have a lower life expectancy than the plastic pipes installed in more recent years.

Past underfunding or capital works deferrals have resulted in the current infrastructure challenges and led to infrastructure deficits. In Port Colborne, the challenge is to manage this deficit to ensure sustainability of a reliable, safe drinking water system.

Industry standards demonstrate that Port Colborne has 34.85 km of cast iron pipe that needs to be prioritized in capital programs. This represents 38% of the system. This Financial Plan, once the INS is completed in 2011, will be revised to accelerate replacements as required. This Plan, as a “work-in-progress”, demonstrates in the above chart that it is evident that replacing infrastructure as it expires, at a rate of 3 to 17 km over the course of 10 years, is more desirable – and more affordable - than having to replace 40 km in 10 years

Significant capital investments are required over the next 40 years to bring the PCDS “up-to-date” – in advance of the next big group of watermains – installed in the 1980s, that will begin to meet their life expectancies. It is important to note that any watermains that have exceeded their life expectancy and that are not replaced in a given decade will simply shift to the next decade, adding to the “infrastructure deficit” in that time period.

Port Colborne is not alone in facing an “infrastructure deficit” as it relates to drinking water at this time. Infrastructure deficits are being experienced by almost every municipality, not only in Niagara, but throughout Ontario and Canada, and even throughout North America. To address our infrastructure deficit, the City anticipates relying on the INS recommendations for replacement timing, and will allocate resource and capital investments accordingly.

A future capital cost to be considered in subsequent versions of this Plan, is the budgeting for a water meter replacement program. Water meters are owned by the City and the meters have a life span associated with them. In this case, exceeding the life expectancy of a water meter will affect the City’s bottom line. As water meters age, they begin to under-register, thus, water users may not be paying the full value for the water they use, and the City is losing that revenue. Water meter replacement costs, and the best approach to replacement will be part of the scope of the INS and recommendations of the INS will become part of future Financial Plans.

2.2.2. Key Assumptions in Projections

Capital costs will be incurred as set out on Schedule F of these projections (Appendix One). Most capital costs have been based on the current (1996) INS. Financing of future capital costs are based on the amortization (depreciation) amounts projected plus capital contributions with an annual 2% increase and proceeds from debentures (long term debt) of \$500,000 in each of 2011 and 2012.

Capital projects are anticipated to be undertaken every 2 years beginning in 2012 with engineering and planning activities occurring in the alternating years.

2.3. Debt Management

Debt management is the ability to repay debt over time, including both principal payments and interest charges. As of January 1, 2010, just over \$758,000 of debt was owed by the City on past water capital projects. Debt is projected to reach its highest level of \$1.26 million in 2012 and decrease thereafter.

The principal payments and interest costs on this debt are estimated to be approximately \$150,000 in 2010 and 2011; with a maturing debenture in 2012, debt costs decline to \$120,000. With the assumption of new debentures in 2011 and 2012, debt costs increase to approximately \$167,000 annually until 2019 where a further debenture matures and costs decline to approximately \$77,000.

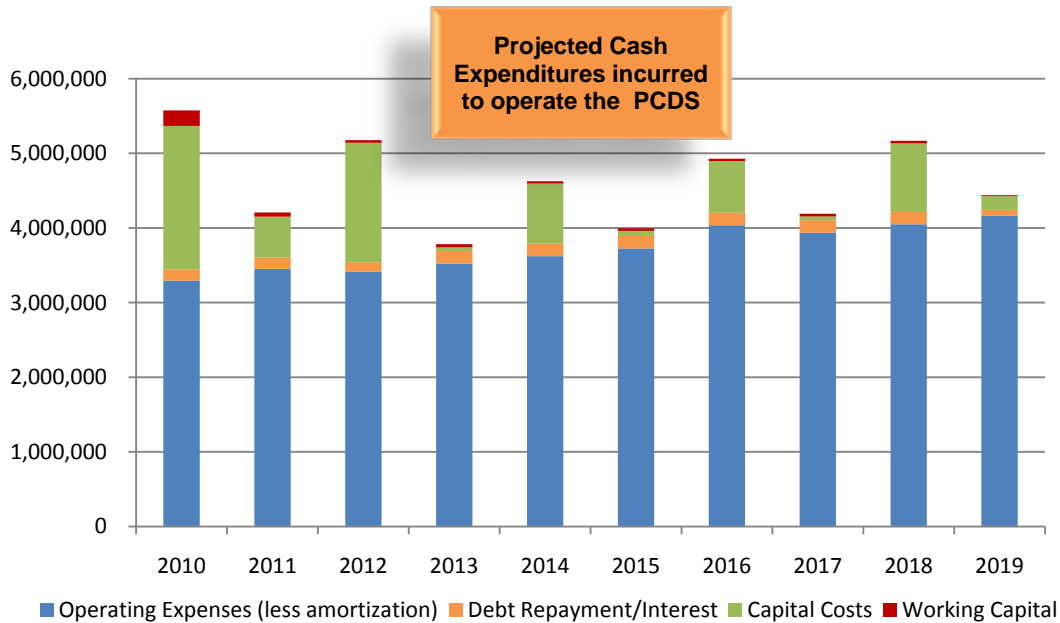
2.3.1 Assumptions in Projections

Schedule D, or the projected statement of liabilities and accumulated surplus, included as part of Appendix One, provides the detailed debt levels and repayments over the projected period, as well as assumptions. It is assumed that new debt will be repaid semi-annually over twenty years, with interest charged at 4.7% compounded semi-annually. Should interest rates increase the cash expenditures would also increase.

2.4. Total Cash Expenditures

The City of Port Colborne Operating Authority has significant cash expenditures, including operating expenses, debt repayments and interest charges, and capital costs. These expenditures are projected to fluctuate between \$4 and \$5 million per annum depending upon the anticipated capital projects.

Note that the aggregate cash expenditures cannot be found on any of the projected financial statements attached in Appendix One. Rather, these cash expenditures are gathered from the various statements to illustrate the cash required to sustain a safe drinking water system.



3. FUNDING PLAN

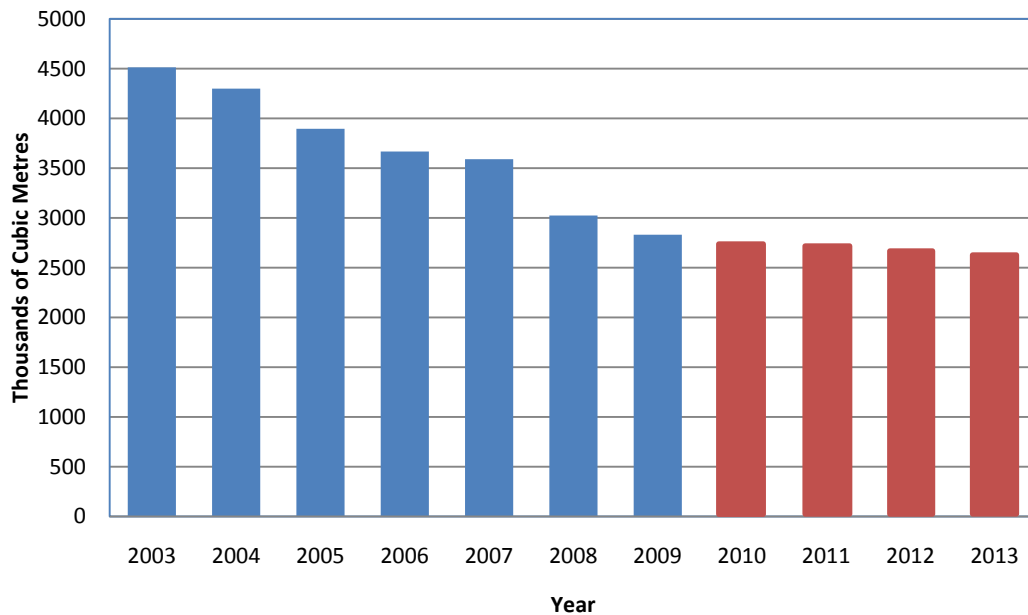
As discussed previously, cash expenditures are projected to be about \$4 to \$5 million per year. To fund these critical expenditures, the Operating Authority will rely on a blend of operating revenues and new debt financing throughout the duration of the Financial Plan. In 2010, one-time government funding was included in the budget, however this plan does not depend on future government funding.

3.1. Operating Revenues

Operating revenues include water, and other charges or receipts. The majority of the operating revenues are achieved as a result of two variables: consumption and water rates.

3.1.1 Consumption

Since 2003, water consumption has declined 37.25%, from 4.51 million cubic metres to 2.83 million cubic metres in 2009. In analyzing this trend, it is anticipated that consumption will continue to decline by about 2% annually from 2010 to 2012. In 2013, it is projected that consumption will decline by less than 1%, and that consumption will stabilize beyond 2013.



Note: Data taken from the amount of water purchased annually from Niagara Region. 2010-2013 forecasted values were calculated using the percent declines calculated from the above data.

This graph illustrates the cubic metres (thousands) consumed annually in Port Colborne from 2003 to 2009, and the forecasted consumption, based on the anticipated annual declines described above, to 2013. Beyond 2013, it is projected that consumption will remain stable at approximately 2.6 million cubic metres per annum.

The decline in consumption has a direct affect on the amount of water sold to consumers and thus a direct affect on the revenues. To soften some of the variability, the Region is currently investigated changing to a 50/50 allocation, whereby 50% of the price of water is fixed, and 50% of the price is volumetric. Area Municipalities are being urged to adopt a similar rate structure, and the City of Port Colborne is beginning to move towards this structure, with our water rates currently 39% fixed and 61% volumetric. By 2019, it is forecasted that the City's rates will be 46% fixed and 54% volumetric.

3.1.2 Water Rates

In order to finance the requirements outlined in this Financial Plan, it is anticipated that water rates will be required to increase. The highest increase, 7.13%, is projected to occur in 2011, with increases of 4.58% and 5.07% in 2012 and 2013, respectively, with modest increases of around 3% annually beginning in 2014.

It is important to note that these projections are in fact, projections. Future annual increases will be dependant upon numerous factors, with the biggest factor being the rate that the Region charges the City for the drinking water purchased.

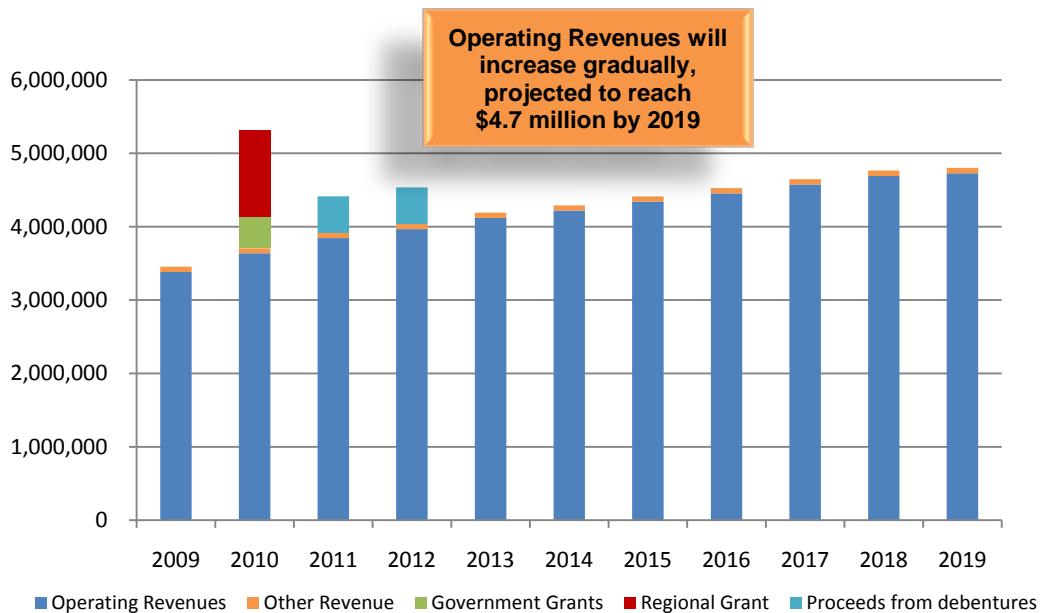
Projected Increase in Water Rates	2010	2011	2012	2013	2014 and thereafter
	6.18%	7.13%	4.58%	5.07%	3%

3.1.3 Summary of Operating Revenues

Over the projected period, operating revenues are expected to gradually increase to \$4.7 million (the total cash expenditure level).

Projected Increase in Operating Revenues	2010	2011	2012	2013	2014	2019
	7.56%	5.70%	3.16%	3.87%	3%	<1%

See the graph below for an illustration of the projected operating revenues. They are also summarized on the Projected Statement of Operations in Appendix One.



3.1.4 Key Assumption in projections

To forecast revenues, a consumption of 2,780,000 cubic metres was projected in 2011, 2,720,000 in 2012, 2,670,000 in 2013 and 2,640,000 in 2014 to 2019. These

assumptions are based on the forecasted percent declines illustrated in the graph in section 3.1.1.

3.2. One Time Government Funding

Although one-time government funding was received in 2010, long term government funding has not been assumed in creating this sustainable model.

3.3. New Debt

While it is planned to gradually increase operating revenues, there is still monies required to cover the expenditures in the short term. In this financial plan, through careful consideration for rising debt levels and costs, as well as rate increases charged to customers, it is projected that new debt will be required.

Over a two year period from 2011 to 2012, new debt of \$1 million (\$500,000 each year) is projected to be required in order to finance future capital costs. Based on these projections, there will be minimal requirement to finance annual ongoing capital renewal; however, it may be prudent to finance a portion of significant capital infrastructure investments as discussed in section 2.2.1.

3.3.1 Key Assumptions in Projections

The existing and new debt is outlined on Schedule D in Appendix One. To arrive at the projections herein, it is assumed that new debt of \$1 million (\$500,000 each year) will be incurred in 2011 and 2012, and debt will be repaid semi-annually over twenty years, interest charged at 4.7% compounded semi-annually.

3.4. Funding to Meet Cash Requirements

Recapping, the funds required to pay for the Operating Authority's cash expenditures will be derived from operating revenues, one time funding and new debt incurred, as shown in the preceding graph.

Through accessing all of these funding sources, it is projected that the Operating Authority will achieve sufficient available cash to meet its annual expenditures.

4. FINANCIAL PLAN

The financial impacts of the drinking water system have been considered through the projected financial statements for years ending December 31, 2009 to 2019, included as Appendix One and summarized below. These financial statements are required, by the Financial Plans Regulation to include a full-cost accounting, meaning that the all of the costs, whether operating financial or capital, related to operating the drinking water system, must be included.

The projected financial statements include the following:

Projected Statement of Financial Position	Projected Statement of Operations	Projected Statement of Cash Flow
<ul style="list-style-type: none">• Financial assets and liabilities; and• Other non-financial assets, including inventory and capital assets• See Appendix for more detail	<ul style="list-style-type: none">• Revenues;• Operating expenses and interest on long term debt; and• Amortization	<ul style="list-style-type: none">• Operating transactions;• Capital transactions (capital costs);• Financing (new debt and debt repayment) transactions.• Cash in and cash out

These projected financial statements are prepared to conform to new Public Sector Accounting Standards. These statements reflect the City of Port Colborne's new accounting policies, along with estimates and assumptions related to the operations of the Operating Authority, and are based on 2009 actual results, and the 2010 budget as derived from internal financial statements of the City of Port Colborne.

Actual results will vary from these projections and the differences may be material. Any future changes to accounting policies or key assumptions will impact these projected financial statements, and should be updated to reflect such changes.

4.1. New Public Sector Accounting Standards

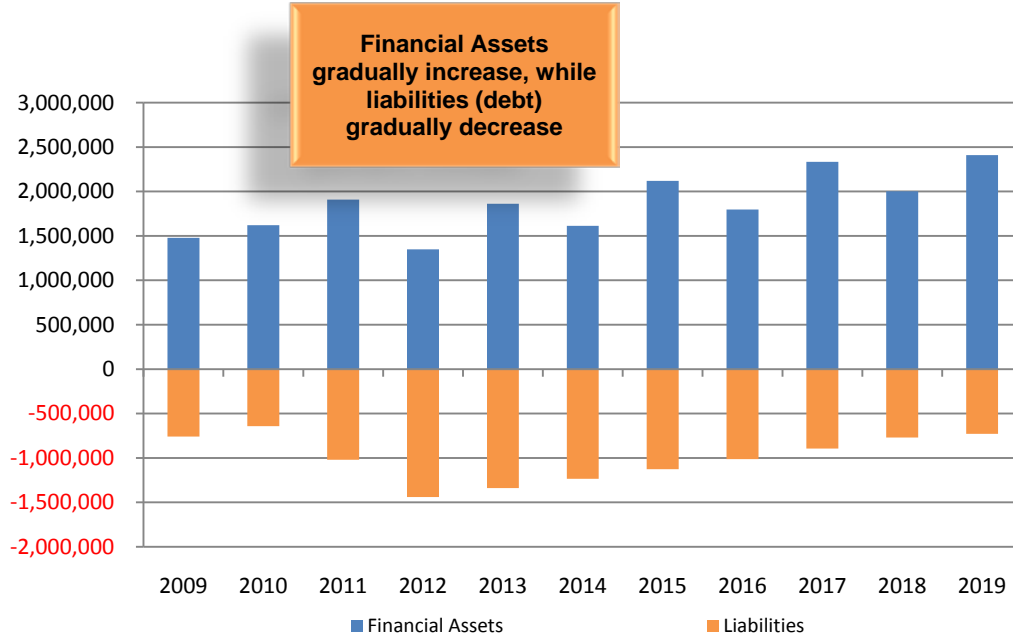
In 2006, the Canadian Institute of Chartered Accountant's Public Sector Accounting Board approved that municipalities will prepare annual financial statements, utilizing full accrual accounting. In simple terms, full-accrual accounting means that all municipalities will be required to include tangible capital assets in the financial statements.

4.2. Projected Statement of Financial Position

The projected statement of financial position reflects both the financial and non-financial assets of the Operating Authority.

4.2.1 Net Financial assets

Net financial assets are the financial assets, including cash and accounts receivable, offset by the liabilities (debt) of the Operating Authority. Net financial assets are projected to be as follows:



In 2010, the Operating Authority has a low level of liabilities (debt) and a higher level of cash and accounts receivable. By 2019, it is projected that the Operating Authority will have reduced its liabilities significantly and begun to build a higher level of net financial assets, allowing it to save for significant future capital expenditures.

4.2.2 Non-Financial Assets

Non-financial assets include inventory and capital assets. The capital assets represent the infrastructure required to provide safe drinking water to the community. As the Regional Municipality of Niagara is responsible for the water treatment plant, water tower and reservoir, the only capital assets related to the drinking water system owned by the City of Port Colborne are the watermains, affiliated appurtenances and the water fleet (i.e., vehicles used by water staff, the water truck etc.)

These capital assets are recorded at net book value, which is their original cost, less accumulated amortization.

Below, the cost and net book value of the capital assets has been illustrated. It is projected that in 2010, the original cost of the capital assets required to provide safe

drinking water is approximately \$21.6 million. The net book value or the net cost remaining in the useful life, of those same assets is \$14.5 million.



4.2.3 Accumulated Surplus

The accumulated surplus is a new term in Municipal financial statements. It is essentially the accumulation of the Operating Authority's excess of revenues over expenses over time, including the net book value of tangible capital assets.

4.3. Projected Statement of Operations

The projected statement of operations includes the revenues less the expenses, arriving at the excess or net revenues over expenses.

4.3.1 Revenues

Revenues include operating revenues, other revenue, proceeds from debentures and one time government funding received. A chart illustrating the operating revenues earned over time is shown on page 10.

4.3.2 Expenses

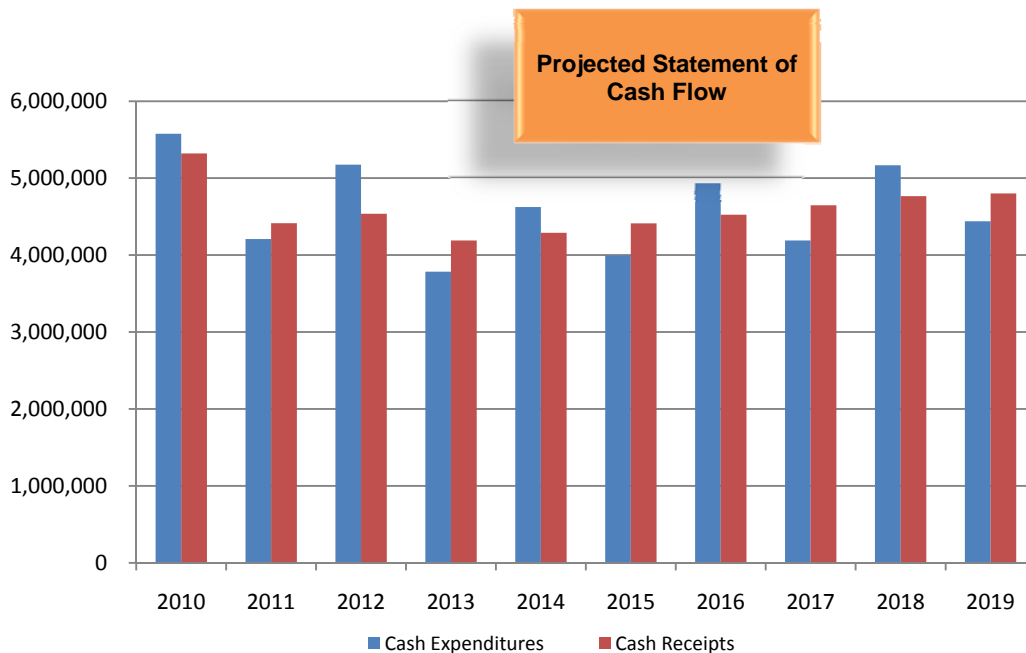
Expenses include a list of detailed projected expenses, including operating expenses, interest on long term debt and amortization. Amortization is the write off of the capital assets or the water system infrastructure over their useful life. It does not represent a cash expenditure.

4.4. Projected Statement of Cash Flow

The projected statement of cash flow is a very useful statement for a capital intensive operation, such as the operation of the distribution system. This projected statement of cash flow summarizes the key transactions that either increase or decrease the cash balance. It is set out in three sections: operating transactions; capital transactions and financing transactions.

Projected operating transactions section is a summary of the projected net revenues over expenses, adjusted for any non-cash items, such as amortization. Projected capital transactions show the capital additions and sale of assets, if any, while the projected financing transactions reveal if any new debt will be incurred and the amount of debt that will be repaid.

In the Operating Plan section of this financial plan, the cash expenditures, such as operating expenses, debt repayments and capital costs, were identified. In the Funding Plan section of this financial plan, the cash receipts, or funds required to cover the cash expenditures were discussed. These funds include operating revenues, one time funding and new debt.



The chart on the preceding page is a summary of those cash expenditures and receipts, which is essentially a summary of the Projected Statement of Cash Flow.

As shown on the graph, the Operating Authority will accumulate cash on a bi-annual basis and undertake capital projects every other year. Construction projects will reduce cash

flow in the year they are undertaken; however the overall cash flow will continue to grow to meet future capital infrastructure projects. It is important to note that in order to escalate infrastructure projects, additional debt proceeds will be required.

Should management have any reasons to believe that significant costs will be required before the current life expectancies of existing infrastructure; the projections provided herein should be revisited; as previously mentioned in section 2.2.1

5. SUMMARY

This Financial Plan has been prepared in accordance with the MOE Financial Plans Regulation (O. Reg. 453/07). The process in developing this plan has focused on the achievement of a balance between maintaining the water system in a safe and effective manner, while limiting expenditure and water rate increases. A flexible and gradual approach has been utilized to achieve financial viability.

This Financial Plan must be approved by a City Council resolution, indicating that as a result of this plan, the City of Port Colborne Operating Authority is financially viable.

In Summary, this Financial Plan:

- Provides safe drinking water
- Achieves financial viability
- Develops long term plan for capital renewal
- Achieves full cost recovery over the long term
- Maintains current service levels

6. FEEDBACK AND CONTINUOUS IMPROVEMENT

The financial plan must be updated every five years, and submitted with the Municipal Drinking Water Licence renewal, however, it is recommended that the Plan be reviewed at least annually, and updated as required to reflect changes in operations, economic climate, financing costs, consumption and pricing.

It is anticipated that the Financial Plan will require updating more frequently in the beginning of its inception, as the concept of “full cost recovery” is relatively new, and budgeting for this eventuality may not be as precise originally.

**CITY OF PORT COLBORNE
DISTRIBUTION SYSTEM FINANCIAL PLAN**

**APPENDIX ONE
PROJECTED FINANCIAL STATEMENTS**

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**The Corporation of the City of Port Colborne
Engineering and Operations - Water Department
Projected Statement of Operations
For The Years Ended December 31**

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
REVENUES		7.56%	5.70%	3.16%	3.87%	2.39%	2.90%	2.57%	2.74%	2.56%	0.77%
Operating Revenues	3,382,216	3,637,805	3,845,317	3,967,000	4,120,400	4,218,800	4,341,000	4,452,400	4,574,300	4,691,500	4,727,600
Other Revenue	72,852	68,000	68,680	69,367	70,060	70,761	71,469	72,183	72,905	73,634	74,371
Government Grants		433,000									
Regional Grant		1,183,000									
	3,455,068	5,321,805	3,913,997	4,036,367	4,190,460	4,289,561	4,412,469	4,524,583	4,647,205	4,765,134	4,801,971
EXPENSES											
Amortization	312,931	313,970	338,643	352,003	372,463	363,973	376,318	374,787	379,465	377,295	377,758
Contract Services	91,113	138,000	140,760	143,575	146,447	150,840	155,365	160,026	164,827	169,772	174,865
Salaries and benefits	362,798	438,574	448,442	458,532	468,849	482,914	497,402	512,324	527,693	543,524	559,830
Water Purchases	1,826,564	1,981,389	2,120,086	2,226,091	2,292,873	2,361,659	2,432,509	2,505,485	2,580,649	2,658,069	2,737,811
Interdepartmental charges											
Administrative	213,055	217,315	221,661	226,095	230,616	237,535	244,661	252,001	259,561	267,348	275,368
Fleet Rental	52,000	55,500	56,610	57,742	58,897	60,664	62,484	64,358	66,289	68,278	70,326
Interest on long term debt	40,668	35,742	29,898	23,866	21,104	18,146	14,987	11,583	7,963	4,116	
Interest on new long term debt				23,320	45,901	44,390	42,808	41,150	39,413	37,594	35,689
General Administration	34,814	42,000	42,840	43,697	44,571	45,908	47,285	48,704	50,165	51,670	53,220
Materials and supplies											
Utilities and telephone	4,949	4,450	4,539	4,630	4,722	4,864	5,010	5,160	5,315	5,475	5,639
Repairs and Maintenance	94,650	91,000	92,820	94,676	96,570	99,467	102,451	105,525	108,690	111,951	115,310
Materials, parts and supplies	57,512	78,000	79,560	81,151	82,774	85,257	87,815	90,450	93,163	95,958	98,837
Other	12,584	28,900	29,478	30,068	30,669	31,589	32,537	33,513	34,518	35,554	36,620
Professional studies/capital contributions	17,008	183,000	186,660	190,393	194,201	198,085	202,047	206,088	210,209	214,414	218,702
	3,120,646	3,607,840	3,791,997	3,955,839	4,090,657	4,185,292	4,303,679	4,411,152	4,527,922	4,641,016	4,759,974
EXCESS REVENUES OVER EXPENSES (EXPENSES OVER REVENUES)	334,422	1,713,965	122,000	80,528	99,803	104,269	108,790	113,431	119,283	124,119	41,996
Operating Expenses	2,767,047	3,258,128	3,423,456	3,556,649	3,651,189	3,758,783	3,869,566	3,983,632	4,101,080	4,222,011	4,346,527
(expenses less amortization and interest)											
Annual Percent Increase			4.8	3.7	2.6	2.9	2.9	2.9	2.9	2.9	2.9
Operating Expenses (less amortization)		3,293,870	3,453,354	3,413,442	3,523,993	3,623,234	3,725,314	4,036,365	3,938,247	4,049,307	4,163,514
Debt Repayment/Interest		152,577	151,859	127,702	166,776	166,818	166,659	166,255	166,635	165,788	77,672
Capital Costs		1,920,900	546,000	1,600,500	50,000	806,500	69,000	694,000	50,000	919,000	185,000
Working Capital		209,205	57,145	34,877	43,172	28,921	35,159	32,402	35,184	34,014	12,981
Total Cash Expenditures		5,576,552	4,208,358	5,176,521	3,783,941	4,625,473	3,996,132	4,929,023	4,190,066	5,168,109	4,439,167
Average Expenditures	4,609,334										
Cash Receipts (revenues plus new debentures)		5,321,805	4,413,997	4,536,367	4,190,460	4,289,561	4,412,469	4,524,583	4,647,205	4,765,134	4,801,971

**The Corporation of the City of Port Colborne
Engineering and Operations - Water Department
Projected Statement of Cash Flows
For The Years Ended December 31**

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
OPERATING TRANSACTIONS											
Projected excess of revenues over expenses	334,422	1,713,965	122,000	80,528	99,803	104,269	108,790	113,431	119,283	124,119	41,996
Add non-cash items:											
Amortization	312,931	313,970	338,643	352,003	372,463	363,973	376,318	374,787	379,465	377,295	377,758
Capital Contributions				190,393	194,201	198,085	202,047		210,209	214,414	218,702
Add (deduct) working capital items											
Accounts receivable	(30,143)	(46,234)	(53,953)	(31,638)	(39,884)	(25,584)	(31,772)	(28,964)	(31,694)	(30,472)	(9,386)
Inventory	10,802	(5,401)	(3,192)	(3,239)	(3,288)	(3,337)	(3,387)	(3,438)	(3,490)	(3,542)	(3,595)
Capital work in progress	(138,070)	157,570	0	0	0	0	0	0	0	0	0
Cash provided by operating transactions	489,942	2,133,870	403,498	588,048	623,295	637,406	651,995	455,816	673,775	681,813	625,475
FINANCING TRANSACTIONS											
Proceeds from debentures	0	0	500,000	500,000	0	0	0	0	0	0	0
Repayment of long-term debt	(111,869)	(116,835)	(121,961)	(80,516)	(99,771)	(104,282)	(108,864)	(113,522)	(119,259)	(124,078)	(41,983)
Cash provided (used) by financing transactions	(111,869)	(116,835)	378,039	419,484	(99,771)	(104,282)	(108,864)	(113,522)	(119,259)	(124,078)	(41,983)
CAPITAL TRANSACTIONS											
Capital assets purchases											
Watermain replacement and rehabilitation	0	1,874,000	50,000	1,433,000	50,000	725,000	50,000	675,000	50,000	900,000	50,000
Fleet and equipment	144,947	30,900	196,000	53,500	0	69,500	19,000	0	0	0	135,000
Bulk Water Stations	0	0	300,000	100,000	0	0	0	0	0	0	0
Fire Hydrants	0	16,000	0	14,000	0	12,000	0	19,000	0	19,000	0
Cash used for Capital Transactions	144,947	1,920,900	546,000	1,600,500	50,000	806,500	69,000	694,000	50,000	919,000	185,000
PROJECTED INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS											
	233,126	96,135	235,537	(592,968)	473,524	(273,376)	474,131	(351,706)	504,516	(361,265)	398,492
Cash and cash equivalents, beginning of year	344,886	578,012	674,147	909,684	316,715	790,239	516,863	990,994	639,288	1,143,804	782,539
Cash and cash equivalents, end of year	578,012	674,147	909,684	316,715	790,239	516,863	990,994	639,288	1,143,804	782,539	1,181,031

**The Corporation of the City of Port Colborne
Engineering and Operations - Water Department
Projected Liabilities and Accumulated Surplus
For The Years Ended December 31**

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
LIABILITIES											
Existing Debentures											
Opening	870,665	758,796	641,961	520,000	455,000	387,000	316,000	242,000	165,000	84,000	0
Repayments on existing debt	111,869	116,835	121,961	65,000	68,000	71,000	74,000	77,000	81,000	84,000	
	758,796	641,961	520,000	455,000	387,000	316,000	242,000	165,000	84,000	0	0
New Debentures											
Opening	0	0	0	500,000	984,484	952,713	919,431	884,567	848,045	809,786	769,708
Repayments				15,516	31,771	33,282	34,864	36,522	38,259	40,078	41,983
New Debentures (20 years @ 4.7%)			500,000	500,000							
	0	0	500,000	984,484	952,713	919,431	884,567	848,045	809,786	769,708	727,725
Total											
Opening	870,665	758,796	641,961	1,020,000	1,439,484	1,339,713	1,235,431	1,126,567	1,013,045	893,786	769,708
Repayments	111,869	116,835	121,961	80,516	99,771	104,282	108,864	113,522	119,259	124,078	41,983
New Debentures	0	0	500,000	500,000	0	0	0	0	0	0	0
	758,796	641,961	1,020,000	1,439,484	1,339,713	1,235,431	1,126,567	1,013,045	893,786	769,708	727,725
ACCUMULATED SURPLUS											
Opening	13,692,537	14,026,959	15,740,924	15,862,924	15,943,452	16,043,255	16,147,524	16,256,314	16,369,745	16,489,028	16,613,147
Excess Revenues over Expenses	334,422	1,713,965	122,000	80,528	99,803	104,269	108,790	113,431	119,283	124,119	41,996
Closing	14,026,959	15,740,924	15,862,924	15,943,452	16,043,255	16,147,524	16,256,314	16,369,745	16,489,028	16,613,147	16,655,143

**City of Port Colborne
Analysis of Water System Costs**

	2010		2011		2012		2013		2014		2015		2016		2017		2018		2019	
Budgeted Expenditures																				
City Operating costs	1,093,739	29.5%	1,116,710	28.5%	1,140,166		1,164,115		1,199,038		1,235,010		1,272,061		1,310,221		1,349,530		1,390,015	28.9%
Regional Water Purchases	1,981,389	53.5%	2,120,086	54.2%	2,226,091		2,292,873		2,361,659		2,432,509		2,505,485		2,580,649		2,658,069		2,737,811	57.0%
Capital Contribution	295,100	8.0%		0.0%	190,393		194,201		198,085		202,047				210,209		214,414		218,702	4.6%
Amortization		0.0%	338,643	8.7%	352,000		372,500		364,000		376,300		374,800		379,465		377,295		377,758	7.9%
Water Study	183,000	4.9%	186,660	4.8%									206,000							0.0%
Long Term Debt Payments	152,577	4.1%	151,898	3.9%	127,702		166,776		166,818		166,659		166,255		166,635		165,788		77,672	1.6%
Total Costs	3,705,805	100%	3,913,997	100%	4,036,352		4,190,465		4,289,600		4,412,525		4,524,601		4,647,179		4,765,096		4,801,958	100%
Other Revenue	-68,000		-68,680		-69,367		-70,060		-70,761		-71,469		-72,183		-72,905		-73,634		-74,371	
Net Costs	3,637,805		3,845,317		3,966,985		4,120,405		4,218,839		4,341,056		4,452,418		4,574,274		4,691,462		4,727,587	
Percentage Increase in Net Costs			5.70%		3.16%		3.87%		2.39%		2.90%		2.57%		2.74%		2.56%		0.77%	
Net Costs allocated to Fixed Rate	39.18%		41.06%		42.49%		44.04%		44.83%		45.25%		45.67%		46.13%		46.45%		46.57%	
Net Costs allocated to Usage Rate	60.82%		58.94%		57.51%		55.96%		55.17%		54.75%		54.33%		53.87%		53.55%		53.43%	
Fixed Regional Water Purchases	40.11%		42.54%		45.61%		47.15%		49.22%		50.13%		51.34%		52.45%		53.48%		55.80%	
Water Consumptions																				
Estimated Water Purchases m3	2,831,100		2,780,000		2,720,000		2,670,000		2,640,000		2,640,000		2,640,000		2,640,000		2,640,000		2,640,000	
Unbilled UFW m3 (29%)	821,019		806,200		788,800		774,300		765,600		765,600		765,600		765,600		765,600		765,600	
Estimated Water Sold m3	2,010,081		1,973,800	-1.80%	1,931,200	-2.16%	1,895,700	-1.84%	1,874,400	-1.12%	1,874,400	0.00%	1,874,400	0.00%	1,874,400	0.00%	1,874,400	0.00%	1,874,400	0.00%

Analysis of Water System Costs
Anticipated Future Water Rates

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Cost per cu.m	\$0.991	\$1.101	\$1.148	\$1.181	\$1.216	\$1.242	\$1.268	\$1.291	\$1.315	\$1.340	\$1.348
		11.07%	4.30%	2.87%	2.96%	2.14%	2.09%	1.81%	1.86%	1.90%	0.60%
Annual fixed cost	\$222.50	\$223.01	\$247.42	\$264.10	\$284.31	\$296.33	\$307.82	\$318.62	\$330.61	\$341.43	\$345.01
		0.23%	10.95%	6.74%	7.65%	4.23%	3.88%	3.51%	3.76%	3.27%	1.05%
Annual Cost .75 m3 per day	\$271.29	\$301.31	\$314.27	\$323.30	\$332.88	\$340.00	\$347.12	\$353.41	\$359.98	\$366.83	\$369.02
Total Annual cost	\$493.79	\$524.32	\$561.69	\$587.40	\$617.19	\$636.33	\$654.94	\$672.03	\$690.59	\$708.26	\$714.03
Percentage Increase		6.18%	7.13%	4.58%	5.07%	3.10%	2.92%	2.61%	2.76%	2.56%	0.81%

Schedule J

Analysis of Water System Costs
 Water Rate Calculations
 2010

	Total Costs	Consumption Costs	Fixed Costs
Amortization/Capital	293,000		293,000
Contract Services	138,000	138,000	
Salaries and benefits	438,574	438,574	
Water Purchases	1,981,389	1,186,744	794,645
Interdepartmental			
Administration	217,315	217,315	
Fleet Charges	55,500	55,500	
Long term debt	152,577		152,577
New Long term debt			
General Admin	42,000	42,000	
Materials and supplies			
Utilities and telephone	4,450	4,450	
Repairs and Maintenance	91,000	91,000	
Materials, parts and supplies	78,000	78,000	
Other	28,900	28,900	
Studies/Capital	183,000		183,000
	<u>3,703,705</u>	<u>2,280,483</u>	<u>1,423,222</u>
Other Revenues	- 68,000 -	68,000	
	<u>3,635,705</u>	<u>2,212,483</u>	<u>1,423,222</u>
Estimated Annual Water Sold - m3		2,010,100	
Total Customers			6,382
Water Usage Rate		1.101	
Annual Water Service Fixed Charge			223.01

Schedule K

Analysis of Water System Costs
 Water Rate Calculations
 2011

	Total Costs	Consumption Costs	Fixed Costs
Amortization/Capital	338,643		338,643
Contract Services	140,760	140,760	
Salaries and benefits	448,442	448,442	
Water Purchases	2,120,086	1,218,228	901,858
Interdepartmental			
Administration	221,661	221,661	
Fleet Charges	56,610	56,610	
Long term debt	151,898		151,898
New Long term debt			
General Admin	42,840	42,840	
Materials and supplies			
Utilities and telephone	4,539	4,539	
Repairs and Maintenance	92,820	92,820	
Materials, parts and supplies	79,560	79,560	
Other	29,478	29,478	
Studies/Capital	186,660		186,660
	<u>3,913,997</u>	<u>2,334,938</u>	<u>1,579,059</u>
Other Revenues	- 68,680 -	68,680	
	<u>3,845,317</u>	<u>2,266,258</u>	<u>1,579,059</u>
Estimated Annual Water Sold - m3		1,973,800	
Total Customers			6,382
Water Usage Rate		1.148	
Annual Water Service Fixed Charge			247.42

Schedule L

Analysis of Water System Costs
Water Rate Calculations
2012

	Total Costs	Consumption Costs	Fixed Costs
Amortization/Capital	352,003		352,003
Contract Services	143,575	143,575	
Salaries and benefits	458,532	458,532	
Water Purchases	2,226,091	1,210,721	1,015,370
Interdepartmental			
Administration	226,095	226,095	
Fleet Charges	57,742	57,742	
Long term debt	88,866		88,866
New Long term debt	38,836		38,836
General Admin	43,697	43,697	
Materials and supplies			
Utilities and telephone	4,630	4,630	
Repairs and Maintenance	94,676	94,676	
Materials, parts and supplies	81,151	81,151	
Other	30,068	30,068	
Studies/Capital	190,393		190,393
	4,036,355	2,350,887	1,685,468
Other Revenues	- 69,367 -	69,367	
	3,966,988	2,281,520	1,685,468
Estimated Annual Water Sold - m3		1,931,200	
Total Customers			6,382
Water Usage Rate		1.181	
Annual Water Service Fixed Charge			264.10

Schedule M

Analysis of Water System Costs
 Water Rate Calculations
 2013

	Total Costs	Consumption Costs	Fixed Costs
Amortization/Capital	372,500		372,500
Contract Services	146,447	146,447	
Salaries and benefits	468,849	468,849	
Water Purchases	2,292,873	1,211,873	1,081,000
Interdepartmental			
Administration	230,616	230,616	
Fleet Charges	58,897	58,897	
Long term debt	89,104		89,104
New Long term debt	77,672		77,672
General Admin	44,571	44,571	
Materials and supplies			
Utilities and telephone	4,722	4,722	
Repairs and Maintenance	96,570	96,570	
Materials, parts and supplies	82,774	82,774	
Other	30,669	30,669	
Studies/Capital	194,201		194,201
	<hr/>	<hr/>	<hr/>
	4,190,465	2,375,988	1,814,477
Other Revenues	- 70,060	- 70,060	
	<hr/>	<hr/>	<hr/>
	4,120,405	2,305,928	1,814,477
	<hr/> <hr/>	<hr/> <hr/>	<hr/> <hr/>
Estimated Annual Water Sold - m3		1,895,700	
Total Customers			6,382
Water Usage Rate		1.216	
Annual Water Service Fixed Charge			284.31

**City of Port Colborne
Distribution System Financial Plan
Notes and Assumptions**

Actual results achieved for the periods covered within this Financial Plan will vary from this information presented. The differences may be material. The City's accounting policies can be reviewed with the City of Port Colborne's Annual Financial Reports for the Year Ended December 31.

Projected Statement of Financial Position

- The assets and liabilities for 2008 and 2009 are derived from internal financial information of the City of Port Colborne.
- Cash and cash equivalents are derived from the Projected Statement of Cash Flows. Opening cash at the beginning of 2009 equates to funds in water reserves and capital for future capital projects.
- Accounts receivable has been calculated and based on 26% of operating revenues from the average historical receivables to water sales.
- Long Term Debt includes current debentures outstanding and new debt of \$500,000 in each year of 2011 and 2012.
- Inventory of materials has been calculated based on actual for 2008 and 2009 averaged for 2010 and increased by 1.5% for each year after.
- Capital work in progress represents outstanding capital works for 2008 and 2009. It is assumed that future capital projects will be completed in the year and the asset will be put into service and capitalized to the appropriate capital asset account.
- Accounts payable and accrued liabilities related directly to the water system are integrated with the City's accounts payable system and assumed to be deducted from the bank in the year the expenses are incurred and paid immediately.
- Capital assets are calculated and based on the most current information available under the regulations of the Public Sector Accounting Board Standards (PSAB). The costs have been established based on discounted historical costs and amortized over the assets normal life expectancy.
- Accumulated surplus is the combination excess revenues over expenses and the net book value of capital assets.

Projected Statement of Operations

- Operating revenues include and is a combination of those derived from the usage water rates based on billable consumption and annual fixed service charges (including capital requirements, amortization established, repayment of debt charges and fixed Regional water charges) billed to each customer.
- Revenues are based on annual expenditure requirements including operations, amortization, long term debt payments and capital contributions.
- Operating revenues are influenced by customer consumption and billable water usage. As water consumption has been on the decline, it is anticipated that the consumption will decline by about 2% annually from 2010 to 2012. In 2013, it is projected that consumption will decline by 1% or less and stabilize beyond 2013.
- Other revenue includes penalties and service installation fees being increased annually at a rate of 1%.
- Amortization is based on a straight line basis at rates which reflect the estimated useful life of the asset.
- General operating expenses will increase by 2% (2011 – 2013) and 3% (2014 – 2019). It assumes water purchases from the Region will increase 7% in 2011, 5% in 2012 and 3% from 2013 to 2019.
- Interest on long term debt includes interest on existing debentures which mature in 2011 and 2018.
- Interest on new long term debt includes interest on new debentures issued in 2011 and 2012 with a maturity in 20 years at an interest rate of 4.7%.
- Professional studies are anticipated for the INS study to be completed in 2011 and every 5 to 6 years thereafter.
- Capital contributions are required in the off years of the studies and are increased annually by 2%.

Projected Statement of Cash Flows

- Operating transactions include the projected excess of revenues over expenses and adds non-cash items for amortization and the capital contributions not expended in the projected year. These add to the monies available for future capital expenditures. The change in working capital items is the difference in cash flows year over year which is very minimal.
- Financing transactions include the proceeds from new debt and the repayment of the long term debt each year.
- Capital transactions include the purchase of new capital assets.

- The balance of the cash and cash equivalents at the end of each year reflects the monies available for the future capital expenditures. Interest earned on this cash balance has not been calculated.

Projected Liabilities and Accumulated Surplus

- Currently the water division holds existing debentures which include two debentures maturing in 2011 and 2018 and shows the annual principle payments.
- New debt is required to pay for some future capital costs. The debt terms are anticipated to be payable semi-annually over twenty (20) years with an interest rate of 4.7%.

Projected Capital Assets – Acquisitions, Disposals and Accumulated Amortization

- The capital assets costs, additions, disposals and accumulated amortization have been developed through the process of satisfying the PSAB requirements and are based on the best available information at the time of preparing this financial plan.
- Additions are defined as capital purchases, valued at cost, which have been put in to service to provide future benefits. The projected additions are based on the current capital program and INS study completed in 1996. A new INS study is budgeted for in this financial plan for 2011.
- Capital projects are anticipated to be undertaken every 2 years commencing 2012 with engineering and planning occurring in the alternate years.
- Capital purchases are assumed to be replacing an existing asset. The cost of the disposed asset has been identified and is based on the actual discounted historical cost from PSAB.
- Amortization is calculated on a straight line basis at rates which reflect the estimated useful life of the asset. The useful life of each category of capital asset is set out in Schedule 2c. The useful life for watermains is based on the City's experience which is outside of the industry standard, especially for cast iron, as the City has experienced longer life than 45 years. Efforts are required to accelerate capital replacement towards these standards.
- No gains or losses have been calculated on any disposal of assets.

Analysis of Water System Costs

- The budgeted expenditures are allocated into components and percentage of total costs determined. In 2011 to 2019, the cost of the INS study is budgeted for 2011 and 2016 with the other year's budget being allocated as a capital contribution.
- As the Region is currently investigating changing to 50% of Regional costs billed as fixed costs, municipalities are urged to do the same. This plan moves towards this structure, with the total net costs allocated to fixed currently at 39% and 61% volumetric. By 2019, it is forecasted that the total net costs will be allocated to 46% fixed. The Regional fixed charges to municipalities currently at 25%, although the City has allocated 40% in 2010 to the fixed rate and forecast to allocate 56% to the fixed rate by 2019.
- To forecast revenues, a consumption amount or water purchased from the Region is estimated at 2,780,000m³ in 2011, 2,720,000m³ in 2012, 2,670,000m³ in 2013 and 2,640,000m³ in 2014 to 2019. Estimated unbilled water purchases or unaccounted for water is set at 29% throughout the years of this plan. As the plan progresses and the 2011 INS study is completed, the plan will be adjusted to account for any change in lost water. The estimated water sold is used to determine volumetric (usage) rates.

Anticipated Future Water Rates

- Based on the projected revenues and expenditures to meet the financial requirements outlined in this Financial Plan, it is anticipated that water rates will be required to increase. Projected increases are 7.13% in 2011, 4.58% in 2012, 5.07% in 2013 and an average of 3% commencing 2014. These increases are a combination of volumetric (usage) rates and annual fixed charges.
- Future annual increases will be dependent on factors such as Regional charges for water purchased and levels of consumption

Water Rate Calculations

- Water rate calculations have been illustrated for 2010 to 2013 and are based on the projections of revenues and expenditures in this plan.
- Costs have been allocated to both consumption (volumetric) and fixed to determine the rates to customers for both the volumetric (usage) rate and the annual fixed charge.
- These costs can be allocated differently between consumption and fixed, although, past practice for the City is to allocate capital costs, debenture costs and unbilled water purchases (now Regional fixed costs) to the annual fixed charge.

- The volumetric (usage) rate is determined by estimating the annual amount of water to be sold in cubic meters and divide it into the consumption costs.
- The annual fixed charge is determined by dividing the total number of customers into the fixed costs.

**CITY OF PORT COLBORNE
DISTRIBUTION SYSTEM FINANCIAL PLAN**

**APPENDIX TWO
DETAILED WATERMAIN INFORMATION**

**INSTALLATION BY DECADE AND MATERIAL TYPE
and
DECADE WHEN LIFE EXPECTANCY IS EXCEEDED
(based on industry standards)**

City of Port Colborne Summary of Watermain Installations, by date and material							
Installation Year Range	Length of Watermains (in km) Installed, by Material Type						
	PVC	Cast Iron	Ductile Iron	Steel	Asbestos Cement	Hyprescon	PE/PHE
1920 - 1929		2.759	0.148	0.432			
1930 - 1939		0.634					
1940 - 1949		9.241	0.184				
1950 - 1959		18.190	0.115				
1960 - 1964		4.029	0.420		0.207	0.226	
1965 - 1969	0.313	3.102		0.269	0.203		
1970 - 1974		1.428	0.801		4.067		0.016
1975 - 1979	2.711	0.855	1.957		0.012		
1980 - 1984	12.155	0.134	0.238				
1985 - 1989	9.673	0.326	0.005				
1990 - 1994	7.437	0.182					
1995 - 1999	12.396						
2000 - 2004	7.591		0.082				0.034
2005 - 2009	1.161						
Total length (km) by material type	53.437	40.877	3.951	0.700	4.490	0.226	0.049

City of Port Colborne Summary of When Watermains Exceed Their Life Expectancy, by decade and material							
Decade	Length of Watermains (in km) Exceeding Life Expectancy in Each Decade, by Material Type						
	PVC	Cast Iron	Ductile Iron	Steel	Asbestos Cement	Hyprescon	PE/PHE
As of 2010		34.852	0.332	0.432			
2011-2019*		4.530	0.115	0			
2020-2029*		0.988	0.420	0.269	0.410	0.226	
2030-2039*		0.507	2.759		4.079		
2040-2049*	0.313		0.243				0.016
2050-2059*	14.866		0				0

*does not include any watermains from the previous decade(s) that were not replaced. Therefore, this number would be adjusted based on infrastructure "carry over" from the previous decade