

# OPASATIKA WATER FINANCIAL PLAN

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## Water Financial Plan

Township of Opasatika: November 2015

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## Water Financial Plan

### 1. Introduction and Summary

In 2007, the Ministry of the Environment (MOE) issued Ontario Regulation 453/07 *Financial Plans* under the *Safe Drinking Water Act, 2002*. The regulation and accompanying guideline prescribes the requirements for Financial Plans to be prepared as part of the Municipal Drinking-Water License Program set out in Part V of the SDWA. This regulation was designed by the MOE in response to Justice Dennis O'Connor's Walkerton Inquiry recommendations. The intent is to ensure that municipalities plan for the long-term financial sustainability of their drinking-water systems and ensure the safety of their drinking water into the future. This report has been created to comply with the requirements of O. Reg. 453/07 and covers the Township of Opasatika distribution system which includes all pipes, valves, treatment systems, pumping stations and reservoirs. The financial statements included in this report project 7 years into the future.

The plan laid out in this document, will maintain *Opasatika's Advantage* of a safe, clean and secure water supply for this and future generations of Opasatika residents. The Township of Opasatika is a firm believer that financial planning is essential to ensure that a drinking water system provides value not just for today's customers but also for future generations. The financial plans represent a balanced approach. 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. Efforts continue to further enhance and protect water quality and reliability. Utilities are continually faced with the renewal needs of an aging infrastructure and inflation, particularly on construction costs. Re-thinking past practices and investing in new approaches, while ensuring the reliability of the service, have become fundamental to the daily delivery of clean water.

## Water Financial Plan

The Financial Plan is a summary of various capital and operational expenditures and revenues for the next 7 years. Following approval of the Financial Plan by Council, any requested changes will be made and the plan will be published to the public and submitted to the Ministry of Municipal Affairs and Housing, as required by the legislation. Hard copies will be available to the public on request.

### 1.1. Service Context

The supply of fresh, clean water is a very important service to the Township of Opasatika and is part of *Opasatika's Advantage*. 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 Township of Opasatika 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 in Opasatika.

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## **1.1.1. Opasatika Water Service Objectives and Financial Principles**

Below are the broad objectives and financial principles for the Opasatika Water Service that was adopted by the Township of Opasatika.

- 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 rate payers,
- 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 ,
- vii. Set rates to achieve financial sustainability in the “near” term (*target year is 2017*),
- 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,
- x. Commit to life cycle infrastructure renewal needs when it is less expensive to renew infrastructure that is approaching failure than to attempt to maintain and repair it;

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## **1.1.2. Water Operations**

The municipality of Opasatika and OCWA provide continuing maintenance of the water treatment and distribution system in the Township of Opasatika to ensure that water can be conveyed to the residents of Opasatika. They are responsible for the treatment operation and control of all valves, pumping stations, disinfection equipment, reservoirs and any other element of the system that needs control. They also are responsible for both preventative and unplanned maintenance on these elements as well as water mains, hydrants and any other aspect of the system requiring maintenance. The water supply is operated and maintained by OCWA.

(An agreement was signed for the period that covers 2011 to 2015, a new agreement will be negotiated and signed in December of 2015)

### **- Annual Price for the Initial Term 2016 and projection for subsequent years .**

Subject to any adjustments made pursuant to other provisions of the Agreement, the Client shall pay OCWA a price for the Services for each Year of the Initial Term in the following amounts (the “Annual Price”):

- (i) From January 1, 2016 through to December 31, 2016 inclusive: \$109,584.85 + the greater of CPI or a 2% adjustment.
- (ii) Subsequent Years: plus the greater of CPI or 2% Adjustment, plus an adjustment for maintaining the Insurance which is renewed annually by OCWA. The CPI Adjustment shall be calculated as soon as necessary information is available from Statistics Canada. The CPI Adjustment shall be added to the Annual Price, on a cumulative basis.

### **OCWA cost projection for water and distribution services**

<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
<b>111,776.55</b>	<b>114,012.08</b>	<b>116,292.32</b>	<b>118,618.17</b>	<b>120,990.53</b>	<b>123,410.34</b>

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## **1.2. Historical Perspective**

### **1.2.1. Overview**

The residents of the Township of Opatatika first voted to establish a public water supply system in the 1980's. The Opatatika Well Supply System is owned by the Corporation of the Township of Opatatika. It is a standalone system that neither receives nor sends water to another system. The Ontario Clean Water Agency is the operating authority for the water treatment plant and the distribution system. The Opatatika distribution system serves a population of approximately 200 residents and has approximately 110 service connections. All piping in this system consists of PVC piping that was installed in 1991. The water main leaving the water treatment plant is a 200 mm water line going to Ste Therese Street. This 200 mm water main then branches off into 150 mm mains on all of the side streets with the exception of Ste Anthony Street which has a 200 mm main. This system has thirty-two hydrants, four release valves/blow-offs and one dead end location. The Corporation of the Town of Opatatika has an active flushing program and flushes the entire system annually.

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

The Township of Opatatika has a by-law that specifies the rates to be charged for Water Services. This By-law is to establish a water service rate which states the rates that will be charged for services. That by-law is to achieve cost recovery through a user-pay approach. This was done in the past but since Walkerton the cost per household is higher than anticipated. Referring to recommendation 84 from Dennis R. O'Connor .The provincial government should make assistance available to lower the cost per household.

### **1.2.3. Infrastructure Deficit**

An infrastructure deficit is the difference between infrastructure funding needs and revenues. Many other municipalities, has a significant infrastructure deficit but Opatatika has no deficit and will aim to keep it this way.

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## 2. Water System Needs and Revenue Requirements

The Township of Opasatika's distribution system contains over 4.6 km of water mains, 4 release valves, 32 hydrants, as well as approximately 113 water services. The average age of water distribution system components is approximately 20 years old. Two wells (No 1 Duty, No. 2 (Standby)) each with a 5.6 kW submersible pump rated at 8.5 l/s at 20.6 m TDH discharging to a water treatment plant building. Treatment consists of two greensand pressure filters operating in parallel with a maximum filtration rate of 15.78 m/hr each filter containing 0.6 m greensand, 0.3 m anthrafil and 1.09 m sand with continuous regeneration by potassium permanganate, provision for primary disinfection using sodium hypochlorite with two metering pumps; two (2) ammonium sulphate metering pumps and two sodium hypochlorite metering pumps for secondary disinfection; a backwash wastewater sump equipped with two submersible pumps, Four high lift pumps and metering systems for flow, turbidity and chlorine residual monitoring. There is a standby diesel generator set rated at 125 kw/156 kva. Two concrete tanks, one operating as a chlorine contact tank and one as a reservoir providing a total of 600 m treated water storage.

The street address of the Facility is as follows:

Water Treatment plant- approximately 80m north of Hwy No.11, and approximately 33 m east of Rue Hyundai Road in the Township of Opasatika ( NAD 27:UTM Zone 17: 364096.00 m E, 5497834.00 m N)

Well No. 1- approximately 25 m north of the water treatment plant building  
- (NAD 27:UTM Zone 17: 364107.00 m E, 5487857.00 m N)

Well No. 2(standby) - approximately 9 m west of the water treatment plant building  
- (NAD 27:UTM Zone 17: 364096.00 m E, 5497834.00 m N)

Water Distribution- Within the town site of Opasatika

### 2.1. Capital

1. On an annual basis, the Operations Manager (OCWA) and/or designate conducts a review of the drinking water system's infrastructure to assess its adequacy for the operation and maintenance of the system.
2. The output of the review is a letter from OCWA which summarizes capital works recommendations and estimates expenditures. The letter is submitted to the owner for review and comment. The timelines and responsibilities for implementation of priority items are determined and documented by OCWA and the owner.
3. The Operations Manager or designate ensures that results of their view are included as input to the Management Review process.

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## 2.1.1. Asset Management

This information is from TCA spreadsheet 2015

<b>WATER SERVICE</b>	Cost
<i>Land</i>	
Property-Water treatment plant	1.00
<i>Buildings</i>	
Buildings-Water treatment plant	1,744,729.00
Water plant upgrade 2003	73,259.00
Water plant upgrade 2008-2009	120,498.45
Water Plant upgrade 2012	<u>26,974.86</u>
	1,965,462.31
<i>Distribution/Transmission Mains</i>	
Water system-Water mains	<u>933,571.45</u>
<b>TOTAL WATER SERVICE</b>	<b><u>2,899,033.76</u></b>

<b>WATER SERVICE</b>	NBV 2015
<i>Land</i>	
Property-Water treatment plant	1.00
<i>Buildings</i>	
Buildings-Water treatment plant	942,153.66
Water plant upgrade 2003	54,211.66
Water plant upgrade 2008-2009	103,628.66
Water plant upgrade 2012	<u>13 073.02</u>
	1,113,068.01
<i>Distribution/Transmission Mains</i>	
Water system-Water mains	<u>448,114.31</u>
<b>TOTAL WATER SERVICE</b>	<b><u>1,561,182.32</u></b>

Total Accumulated Amortization as of December 2015 is 1,337,851.44

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## **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. The Township of Opasatika is committed to maintaining a strong, healthy environment through protecting the sources of water that we share. 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 **Opasatika Operational Plan** has been submitted and approved. This Operational Plan has been developed with OCWA’s operating practices in mind and utilizing OCWA personnel to implement it. OCWA act as the Accredited Operating Authority. The Drinking Water Works Permit application has been received. The external audit of the Operational Plan was completed in 2010. The Township of Opasatika received their **Municipal Drinking Water License** in May 2011 Permit # 294-201.

As per O-Reg. 170/03 section 15.1 lead sampling programs took place in 2007/2008; Opasatika has qualified for reduced sampling for 2011 and the results in 2011 provided were again excellent.

## **2.1.3. Growth**

Non-growth is funded through the budget, meaning these costs are funded by the ratepayer and directly impact this Financial Plan.

## **2.2. Operations and Maintenance**

OCWA, under contract with the owner, maintains a program of scheduled inspection and maintenance of infrastructure for which it is operationally responsible. Specific requirements related to the general operation and routine maintenance of the drinking water system are contained within the contractual agreement with the owner. Records of these activities are maintained the budget for operations and maintenance is used to keep the system operating and safe as well as to perform the necessary testing, maintenance and repairs to keep the water distribution system functioning. A major component of this budget is OCWA services charges. Maintenance is general divided into two major categories, preventative maintenance and unplanned maintenance. These two categories are described in more detail below. EMS Procedure QP-01 Document and Records Control.

**The two critical elements of OCWA’s approach to infrastructure maintenance, rehabilitation and renewals are:**

**1) A computerized Work Management System (WMS) that allows users to:**

- Enter detailed asset information
- Generate and process work orders
- Access maintenance and inspection procedures
- Plan, schedule and document all asset related tasks and activities
- Access maintenance records and asset histories



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## **2) Development of a list of capital works required for the water system and regular consultation with the owner to set priorities:**

Maintenance plans are developed according to the manufacturer's instructions, regulatory requirements, industry standards, and/or client service requirements. Equipment Operation and

Maintenance (O&M) manuals are accessible to staff at the locations specified in QEMS Procedure QP-01 Document and Records Control.

To assist in monitoring the effectiveness of program, Regional Managers, Operations Managers and Operational & Compliance Managers are provided with Monthly Operations Reports (MOIR)

and Action/Analysis Plans (AAP) which address items listed in the Required Actions section of annual Inspection Reports from the Ministry of the Environment. In addition, OCWA's Senior Management Committee is provided with hub and regional summary reports on an ongoing basis.

The owner is provided with a Quarterly Report which is generated by the Operations.

An Annual Compliance/Summary Report is produced by the Kirkland Lake Compliance Department and is also provided to the owner every year.

The budget for operations and maintenance is used to keep the system operating and safe as well as to perform the necessary testing, maintenance and repairs to keep the water distribution system functioning. A major component of this budget is OCWA services charges. 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. 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.

### ***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, or Township 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.

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

### **3.1. Financial Model**

Council understands the impact of rate increases both in the short term and the long term. Attached is the recommended scenario shown to Council and on which this Financial Plan is based as well as a description of the budget process.

### **3.2. Budget Process**

The rates charged for the Water Service 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. 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 with the assistance from provincial government when available.

#### ***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. On an annual basis projects are reviewed and adjusted to reflect changes. Senior levels of government implications have to always consider.

### **3.3. Revenues and Rates**

As water demand has been declining over the past decade (less household) this has become a very challenging area to forecast for the water budget. Annual rate increases are based on the Long Term Financial 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 setting within the Long Term Financial Plan.

## **4. Capital Financing**

The expenditures required to maintain, improve and grow the water supply and distribution system represent are collected from water rates. Since the plant is up to date and the infrastructure is in good condition and fairly new, no major capital expenditures are predicted in the near future. Funding from senior levels of government has to be considered when planning for capital expenditures. As of today program like OSTAR, OSWAP have been a great help to avoid issue of debt.

### **4.1. Financing Options**

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. 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 but all other options has to be consider before. 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 utility and low debt, Opatatika Council has chosen to allocate very little Federal Gas Tax funds to water infrastructure.

### **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. Some of the means to achieve this include: Paying for replacement and renewal works through Pay-as-You-Go financing, Issuing debt for only long term projects with significant future years of benefit if no other option are suitable.

### **4.3. Reserve Funds Policy**

Capital Budgets can vary significantly year over year and large non-recurring projects can create funding needs that are best funded over time. It is the intent to target a minimum reserve fund balance based on the asset value of the system.

### **4.4. Growth Pays for Growth**

This portion of water supply system growth is supported by the water rate. N/A at this time.

### **4.5. Debt Management**

The overall goal of the Township debt management strategy is not the use of debt financing to fund the "average" capital budget. Debt financing will ultimately be used exclusively to fund large, extraordinary works, or to mitigate the impact of larger than average total capital budget. The Opatatika Water Service is debt free.

### **4.6 Senior Government Funding**

The challenge lies not in making small systems safe rather the challenge is to be economically viable. Presently OSWAP funding is guarantee until 2012 and we anticipated that it will continue small systems do not have the economy of scale that bigger systems have if this funding is not renew this will impose a challenge to small water works system in Opatatika and also in all the province.

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## 4. Financial Statements

### Format

In June 2006, the Public Sector Accounting Board (PSAB) approved PS3150, 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 are moving to a full accrual financial statement format. This change requires 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.

### Financial Information

At the time of preparation of this plan the Township of Opasatika has done the 2009 & 2010 TCA entries and the audit of TCA processes was done. Estimates have been used based on reasonable assumptions for the starting point of these documents which is 2009.

The future year assumptions are derived from the Long Term Financial Model for Water.

### Glossary

#### Tangible Capital Assets

*Tangible capital assets are non-financial assets having physical substance that:*

*a) 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;*

*b) have useful economic lives extending beyond an accounting period;*

*c) are used on a continuing basis; and*

*d) 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 Service. In the case of the Water Service 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.

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## **5.1. Statement of Operations**

Water Financial Plan

## **5.2. Statement of Financial Position**

Water Financial Plan

## **5.3. Statement of Cash Flow**

Water Financial Plan

## **6. Attached Documents:**

– Water By-laws

– Asset Management

– Financial Model

Water Budget