ST. THOMAS AREA SECONDARY WATER SUPPLY SYSTEM

JOINT BOARD OF MANAGEMENT

Wednesday, November 9, 2016 at 4:00 p.m.

City Hall, Room 309

AGENDA

DISCLOSURES OF INTEREST

Minutes

Review and approval of the minutes of September 22, 2016

Reports

1. Report SWB07-16 - St. Thomas Area Secondary Water Rates – 2017

2. Report SWB08-16 – EMPS Pumps Upgrade

Unfinished Business

New Business

Adjournment

Corporation of the
City of St. Thomas

Report No. SWB07-16

File No.

Directed to:	Chairman Kohler and the Members of the Joint Board of Management for the St. Thomas Secondary Area Water Supply System
Meeting Date:	November 9, 2016
Date Authored:	October 17, 2016
Department:	Environmental Services
Attachment	
Prepared By:	Lynn Stafford, C.E.T., Compliance Coordinator
Subject:	**St. Thomas Area Secondary Water Supply System – 2017 Water Rate**

Recommendation:

THAT: Report SWB07-16, St. Thomas Area Secondary Water Supply System- 2017 Water Rate be received for information; and further,

THAT: The Blended Supply Rate for the Secondary, $0.8921/m^3, effective January 1st 2017, be approved.

Origin:

The St. Thomas Area Secondary Water Supply System provides water to the City of St. Thomas, the Municipality of Central Elgin and the Township of Southwold, which is supplied by the Primary System.

The St. Thomas Area Secondary Water Supply System water rate is calculated as a portion of the overall Blended Supply Rate for the St. Thomas and Suburban Service Area. The forecast Blended Supply Rate is calculated to reflect 70% of the overall supply to the area being purchased directly from the Primary System with 30% being purchased from the Secondary System (i.e. a rate comprising both the Primary and Secondary rates.) The cost of supplying water services is recovered through the Blended Supply Rate, which forms part of the St. Thomas and Suburban Service area Rate. The Blended Supply Rate includes water purchased through the Primary and Secondary System.

Analysis:

The Primary System Water Rate was approved by the Elgin Area Primary Water Supply System Joint Board of Management on October 6, 2016, at a rate increase of 5%. In 2017, the rate is scheduled to be changed from $0.7370/m^3 to $0.7738/m^3.

In order the meet the requirements of the provincial water legislation and to build an adequate reserve fund balance, the Secondary System Water Rate will increase from $0.3578/m^3 to $0.3939/m^3, a 10.1% increase.

The Blended Supply Rate is a combination of the Primary and the Secondary Rates, which will increase from $0.8443/m^3 to $0.8921/m^3, resulting in an **overall rate increase of 5.7%** for the Secondary System.

The table outlines the current rate increase and the projected rates. The full version of the 2015 Secondary Rate Study is available on the city website at http://stthomas.civicwebcms.com/content/secondary-water-supply-system, for the period of 2015-2024.

Year	2016	**2017**	2018	2019	2020	2021	2022	2023	2024
Secondary Rate ($/m^3)	0.3578	**0.3939**	0.4336	0.4773	0.5255	0.5785	0.6368	0.7011	0.7718
Primary Rate ($/m^3)	0.7370	**0.7738**	0.8126	0.8532	0.8959	0.9407	0.9877	1.0371	1.0890
Blended Supply Rate (70% Primary and 30% Secondary)	**0.8443**	**0.8921**	**0.9427**	**0.9964**	**1.0535**	**1.1142**	**1.1788**	**1.2474**	**1.3205**
% Increase	**5.7%**	**5.7%**	**5.7%**	**5.7%**	**5.7%**	**5.8%**	**5.8%**	**5.8%**	**5.9%**

Financial Considerations

The 2017 Residential Customer Water Rate impact for the total annual water increase (Primary and Secondary blended rate) will be an increase of $8.56 per year, which is in keeping with the approved 2015 St. Thomas Area Secondary Water Supply System Water Rate Study.

Respectfully submitted,

Lynn Stafford

Lynn Stafford, C.E.T.
Compliance Coordinator, Environmental Services

Reviewed By: _____ Treasury; _____ Env Services; _____ Planning; _____ City Clerk; _____ HR; _____ Other

	Corporation of the **City of St. Thomas**	**Report No.** SWB 08-16 **File No.**
Directed to:	**Members of the Board of Management for the St. Thomas Area Secondary Water Supply System**	**Meeting Date: November 9, 2016** Date Authored: October 24, 2016
Department:	Environmental Services	**Attachments**
Prepared By:	Nathan Bokma, P. Eng. Manager of Development and Compliance	
Subject:	**Project Update on STASWSS Pump Replacement and 2017 Capital Plan**	

Recommendations:

THAT: Report SWB 08-16, Project Update on St. Thomas Area Secondary Water Supply System Pump Replacement, be received for information; and

THAT: Funds for the relining of the Ford Water Tower be reallocated towards the EMPS pump replacement project.

Origin:

In February 2016, the City tendered a Request for Proposal (RFP) to qualified consulting firms to complete an assignment to establish water pressure zones within the City and complete a study to review the existing pumps at the Elgin-Middlesex Pumping Station (EMPS). In April 2016, the City awarded RFP 2016-012 to Parsons Inc. to complete the assignments.

Parsons has submitted both a preliminary design report and a draft final design reports that have outlined several key recommendations for the St. Thomas Area Secondary Water Supply System (STASWSS). City staff has reviewed these recommendations, and provided input back to Parsons to finalize the final design report.

Analysis:

In review of the draft final design report and discussion between City staff and Parsons, several recommendations were made in relation to the STASWSS:

- Replace the existing pumps with similar sizes pumps with variable frequency drives (VFD) to allow for greater operational flexibility.
- Decommission the Ford Water Tower due to its age and limited impact on the overall system's operational capacity. The decommissioning can only happen after two pumps have been replaced at EMPS.
- Install new pressure reducing valve (PRV) along secondary transmission main to relieve high pressure levels within the system. Currently, a PRV at the EMPS does this work, but when this event happens, the EMPS parking lot floods with the backflow of water. Also, this PRV should act as an emergency measure.
- A small surge tank should be installed to take into account the backflow of water in the water pressure blow-off situations as noted above.

Moving forward from these recommendations, City staff has directed Parsons prepare contract documents and engineering drawings for the EMPS pump replacements. The tentative tender schedule for this project is January 2017 with construction to commence in Spring 2017.

The EMPS pump replacement project was slated to be a 2016 capital project as per Report 113-15 to the Board of Management, and will be included with several other projects to be considered for the STASWSS capital plan up to 2018.

Financial Considerations

Through Report ES 113-15 to the Board of Management, a budget of $300,000 was approved for the engineering and replacement of one or more of the EMPS pumps depending on the most efficient strategy. Technical and financial analysis has indicated it is best to replace all three pumps with similar size and to upgrade to VFD's in one project. Preliminary cost estimate provided by Parsons suggests that three replacements and VFD's will require approximately $600,000 plus engineering.

As per the Capital Budget Plan for the STASWSS that was approved in 2015, the relining of the Ford Water Tower was to happen in 2016 at a cost of $408,000, which was to be funded by reserves and potential debt. City staff will remove the tower relining project from the capital plan and reallocate associated funds towards the replacement of the EMPS pumps. Instead of relining the water tower inside and outside, the tower will be decommissioned and removed saving considerable funds and reducing the gross asset value of the secondary system.

Below is the list of the recommended STASWSS capital plan for the next two years.

Description	Forecast		
	2016	2017	2018
Capital Projects			
EMPS Pump Replacement (Engineering)	$70,000		
EMPS Pump Replacement (Construction)		$600,000	
Ford Water Tower Decommissioning			$100,000 - $200,000
Various Instrumentation and Equipment Upgrades	$133,000	$40,000	$15,000
Total Expenditures	$203,000	$640,000	$115,000 - $215,000
Capital Financing			
Yearly Revenue	$2,260,000*	$2,160,000**	$2,279,000
Yearly Expenses	($1,750,000)*	($1,550,000)**	($1,600,000)
Projected Transfer to Secondary Water Reserve	$510,000*	$614,000**	$679,000
Water Reserve Year End Balance	**$307,000**	**$367,000**	**$831,000 – $931,000**

* Values above are projected based on financial statements to date.
**2017 Budgeted Values

The net result of the capital project additions and deletions results in an estimated increase in the reserve fund. However, there is an interest stated by both the board and staff to plan for replacements sections of the transmission main in the next 5 – 10 year period.

Respectfully Submitted,

Nathan Bokma, P. Eng.
Manager of Development and Compliance

Reviewed By:

Treasury	Env Services	Planning	City Clerk	HR	Other