



**Asset Management
Plan – Phase One**

(STAMP – P1)



Annual Update

December 2016

Introduction

This annual update is provided as a requirement of the Selwyn Township Asset Management Plan – Phase One (STAMP-P1) and provides an overview of the progress and challenges that the Township experienced in 2016 as it relates to asset management and long term financial planning for infrastructure.

Background

Council adopted the Selwyn Township Asset Management Plan – Phase One (STAMP-P1) in December 2013 as the starting point for a new long term asset management planning and budgeting process at Selwyn Township. Since that time, progress has been made in many areas of the plan and a number of the recommendations have been fulfilled and/or incorporated into annual updates.

Phase One of STAMP-P1 included core infrastructure. For the purposes of the plan, **core infrastructure** included:

1. Roads network
2. Water treatment and distribution system
3. Sewage treatment and collection system
4. Stormwater management ponds

In establishing STAMP-P1 every effort was made to tie back to the Township Strategic Plan, and in particular overarching Goal # 3 - Support a sustainable, balanced and investment-ready community.

Using these principles, staff has made steady progress in several areas, most notably, improving the fullness and quality of asset data on hand. This in turn has uncovered additional data sources and in some areas proven initial assumptions incorrect. This process has resulted in new recommendations for improvement.

Overall minimum service levels have been established. In time, it is expected that a customized “made in Selwyn” service level expectation will be developed. These service levels will involve more feedback mechanisms from the public and will take considerably more time, effort and debate with staff and Council.

Financial strategies and priority setting needs to gain a better focus moving forward and this will transform the plan into a more highly regarded decision making document .

STAMP-P1 is a ‘living’ document and an ongoing work-in-progress. Annual updates and refinements will ensure that the plan is a key tool for prioritizing investments in maintenance activities and infrastructure renewal.

2016 Overview

Sound Data Gathering

Corporate Memory

As noted in the original STAMP-P1, the need to capture intangible corporate knowledge is important. In water and sewer operations, two (2) key staff members for the accredited operator PUS, Lakefield Operator in Charge and Vice President - Water, have retired. Fortunately, the Township was able to develop a part time contract position and keep the Lakefield staff member in the information loop while utilizing his expertise as part of the Sump Pump Inspection Program.

In 2017, the Manager of Public Works will be retiring and this marks another senior manager with an immense working knowledge of road asset details that will be removed from day to day operations.

Storm Water Collection

One of the most important points related to data gathering in 2016 was the realization that the storm water collection systems were not captured in replacement costs related to urban road sections as originally believed. Urban road section costs only take into account the road base, road surface and above ground components such as curbs and gutters.

In addition, it was pointed out that there are numerous small drainage installations throughout the Township that are not included in urban road documentation. These small stormwater management systems contribute to appropriate drainage and consist of core infrastructure that will need to be maintained and ultimately replaced.

This underlines the need for ongoing review of base data and requirement for annual questioning related to base assumptions.

Roads

Working with the Township's most recent Roads Needs Study and up-to-date patrol records, the Manager of Public Works continues to establish annual road maintenance and construction priorities.

The department continues to place a high priority on roadside maintenance, ditching efforts, sweeping, and resurfacing. Clearing roadside grasses and brush farther away from the road surface, yields better sightlines and improved drying of the road surface.

With respect to roads resurfacing and construction, the Township continued to utilize tar and chip applications with variations of single lifts and double lifts to either hold a road base together or complete a reconstruction project.

Also in 2016, the roads department made use of a contracted pulverizer and significantly decreased the amount of time that Edenderry Line was affected by construction. This allowed for faster shaping and preparation of the road surface for the application of a new tar and chip surface.



Water

The CAO and Manager of Financial Services continue to work with representatives from Peterborough Utilities Services Inc. (PUS), the Township's accredited operator for the Lakefield Water system.

The elevated storage tank or water tower is functioning well and, despite some routine maintenance with marker lights and communications equipment, continued to provide adequate water supply and pressures for the Lakefield water service area in 2016.

Unfortunately, the water standpipe remains out of service pending a long term solution related to interior ice accumulation and related damage to interior piping.

It is expected that the working group will get together in the first quarter of 2017 to develop a solution with support from all parties. The solution will result not only in a required capital investment but will have positive impacts on water quality in terms of stand pipe turnover and possibly hydro savings based on the time of day that the standpipe is topped up.



Water distribution system records and digital plans continue to be updated annually to reflect any water main breaks and additional refinements.

Woodland Acres – Water

The Township engineer was engaged to review their records and paper-based plans to provide details on phase one of the Woodland Acres water service area.

Staff are now in receipt of a number of Excel tables related to pipe type, including dimension, length and valves. These data sets have been compared to existing TCA records and updates are occurring as required. The engineers have also completed their digital mapping for phase one and two of Woodland Acres and all have been ground-proofed.

The digital files for the last phase of Woodland Acres, the Summer Lane subdivision, have now been provided by the developer's consultant to our engineering firm. Once the plans are finalized in full, they will be added to the digital records on file and then provided to the County of Peterborough to upload to their GIS system.

Sewer

As noted above in the water section, the CAO and Manager of Financial Services continue to work with representatives from PUS, the Township's accredited operator for the Lakefield Sewer system.

As outlined in STAMP – P1 next steps in terms of priority and system renewal is replacement of aging pumping stations.

Two stations have been identified as priorities for rehabilitation;

- **George Street pumping station**
- **Lakefield College School pumping station**

George Street Pumping Station

2016 marked the completion of the Lakefield sewer system environmental assessment (EA) which began in 2014. The EA was a broad and all-encompassing review of the necessary Lakefield Sanitary Servicing Upgrades.

An essential piece identified in the EA was the importance of the George Street pumping station. Indeed, the problem statement for the EA reflected its importance. This involves a combination of required upgrades to this key pumping station and regard for expansion of the system to link the Lakefield South development area and currently underserved areas on west Bridge Street and west Smith Street.

A list of nine (9) alternative solutions was provided that would potentially address the problem statement. Based on preliminary evaluations the list of nine (9) was reduced to three (3) viable alternatives. Following a detailed analysis of the three (3) viable alternatives and having regard for technical, environmental, social, cultural and economic impacts, the preferred solution identified was #5A - *servicing all developable lands within Lakefield South Development Area with an Upgraded George Street SPS, incorporating Gravity Flow from Bridge Street to George Street.*

The first step of the preferred solution is the replacement of the George Street Sewage Pumping Station with a new station.



George Street Pumping Station Access

The current pumping station:

1. Has surpassed its expected useful life at approximately 40 years old
2. Is the sole sewage transfer point for the west sector with no redundancy
3. Has no standby backup power
4. Creates the need for an immediate response by the system service provider in the event of a power emergency (i.e. call outs)
5. Is located directly adjacent to the Otonabee River on the Trent Severn Waterway and upstream of the City of Peterborough.

While all infrastructure investments are necessary, the replacement of the George Street pumping station has been identified as the top investment priority for the Township.

As a result, the George Street pumping station was advanced and application submitted under the OCIF Top Up program with eligible project costs of \$1,950,000 and OCIF grant request of \$1,755,000. The application has been acknowledged and it is anticipated that the Township will hear back on the status of the application in January or February 2017.

Lakefield College School Pumping Station



Lakefield College School Pumping Station Access

With respect to the Lakefield College School (LCS) pumping station, staff has been working with PUS representatives and the project engineer to develop a plan for replacement of station components, top of station and electrical components.

These upgrades were the subject of an application under the CWWF for \$265,000 and participation from the federal and provincial government with a proposed funding grant of \$169,185.

Township staff will be convening a meeting with LCS representatives to discuss necessary changes to power supply configuration and ensuring that standby back-up power is available to the station.

Sewer Collection System Review

The Township issued a tender document for the flushing, cleaning and CCTV inspection of 26,100 metres of sanitary sewers in Lakefield and Woodland Acres. CCTV Inspection involves the flushing, cleaning and camera inspection of sewer mains to determine debris accumulation, structural integrity and crack frequency. Access to the sewer mains is through the sewer manholes.

A tender was awarded of approximately \$100,000 and based on the video evidence, our engineers reviewed all footage and will recommend proposed corrective actions which may include crack sealing, trenchless repairs involving sleeve placement or complete sewer main replacement. As part of the engineer's assignment, a condition rating of each sewer segment will also be provided.

Woodland Acres – Sewer

Similar to the project outlined above in the Woodland Acres Water section, the Township engineer was engaged to review their records and paper-based plans to provide details on Phase One of the Woodland Acres sewer service area.

Staff is now in receipt of a number of Excel tables related to pipe type, including dimension, length and valves. These data sets have been compared to existing TCA records and updates are occurring as required. The engineers have also completed their digital mapping for phase one and two of Woodland Acres and all have been ground-proofed.

The digital files for the last phase of Woodland Acres, the Summer Lane subdivision, have now been provided by the developer's consultant to our engineering firm. Once the plans are finalized in full, they will be added to the digital records on file and then provided to the County of Peterborough to upload to their GIS system.

Storm Water Management Ponds

In 2016, staff worked with the Township engineering firm on a facility study related to the ponds currently owned by the Township. Recommendations were received related to deficiencies, maintenance and housekeeping matters. None of the issues identified were emergency items.

The study also outlined a number of recommended maintenance guidelines for the seven (7) municipal storm water management ponds located throughout the Township. These guidelines will be adhered to when addressing the issues outlined in the study.

There are four (4) other storm water management ponds pending final approval of subdivision conditions and assumption by the Township. Should approval be granted, these will also be Township owned and maintenance will fall under Township responsibility.

Service Levels

STAMP-P1 Consolidation in 2015 established some base service levels. These generally accepted base levels of service build upon accepted practices. The established levels of service inform maintenance activities by setting out the objectives (or expectations) to be achieved and level of service standards for each class of infrastructure (e.g. roads, water, wastewater)

In an effort to improve service level expectations in a cost effective manner, the Manager of Financial Services is participating in a Municipal Finance Officers of Ontario (MFOA) project called AMP It Up. It is a partnership between MFOA and the Ministry of Municipal Affairs that engages experts in the field of asset management to develop increased capacity and improve asset management plans.

While the Municipal Action Plan has not yet been received, it has been suggested by the MFOA consultant that a process has been used at other municipalities that would allow for the development of a tiered service level. In this process a base service level would be established that relates to responsibilities and due diligence matters. Then an additional enhanced service level would be established as a goal to strive for moving forward.

In a related matter, the annual AMO Gas Tax reporting requires that a series of questions are answered related to asset management, financial policy and standard operating procedures. A good number of these questions are currently answered in the negative and as such are an indication that the Township needs to be more diligent in not only establishing these policies and operating guidelines, but in using them in more formal decision making as it relates to infrastructure priority setting and investment.

The levels of service will set out a written series of procedures that will guide staff's recommendations to Council as they make financial decisions designed to maintain all of the Township's capital assets to the level appropriate for the Township given its relative priorities and minimum legislated requirements.

Update to Recommendations

STAMP–P1 included a number of recommendations to be addressed over its five year implementation cycle. In 2017 the following points will be addressed:

Data collection continues

A stormwater collection system base map will be developed for the urban areas, followed by other service areas throughout the Township. This will be followed by a more detailed analysis of the infrastructure at hand and eventually ground proofed as to size, composition and condition. This project is slated to begin in 2107 and continue until data base is complete.

Project work will proceed in 2017 to be ready for the update of the Township's development charges study in 2018. This document will feed into the financial strategies for infrastructure investment and ensure that growth pays for growth.

Roads

The approach to road maintenance and reconstruction will continue. In terms of data a key task for 2016 is the five year update of the roads needs study, inclusive of traffic counts. In addition, prioritization considerations will be provided in keeping with the asset management service level discussion.

Water

Township staff, PUS representatives and the Township's project engineer will develop a long term solution to bring the Lakefield standpipe back into service.

Sewer

As noted above the pumping stations at George Street and the Lakefield College School are currently submitted for external funding. Based on the responses, additional reports will be provided on the course of action for these projects.

Following receipt of the sewer collection system condition rating report, a tender will be developed and bids called to complete sewer main grouting and crack sealing in accordance with approved budget. Following the completion of this work, the condition rating of the collection network will be updated.

Combined projects

In accordance with the infrastructure core principles, any design for urban or semi-urban road work will have regard for all related infrastructure. As such, design for upgrades to Charlotte Street will include considerations for water, sewer and stormwater infrastructure. Likewise, design work in the Youngs Point hamlet will include roadway, streetscape amenities and stormwater collection systems.

Stormwater ponds

Maintenance and housekeeping as outlined in the report received in 2016 will be completed. As well, data will be added for ponds when subdivisions and new developments come on stream.

Public Engagement

Overall, the Township has committed to moving forward with sustainable asset management planning. Resources and sufficient time to meet and follow through on tasks continues to be a challenge in accomplishing this commitment.

The Township of Selwyn's contribution agreement with the Ministry of Agriculture, Food and Rural Affairs under the Ontario Community Infrastructure Fund (OCIF) has provided stable funding to further strengthen municipal asset management practices. And despite the limited funding envelope, OCIF has helped to address some of the critical core infrastructure needs related to water and wastewater in that the Township can rely on expertise of the engineering firm, engage individuals or firms to complete scoped tasks/projects, and generally fill-in the missing gaps.

Reporting back to Council, and as a result to the public, will occur on the status of grant applications under OCIF and CWWF and next steps related to infrastructure renewal for the George Street Pumping Station and Lakefield College School pumping station.

The Township has made considerable effort in recent years to address infrastructure needs and improve the condition of assets. Over time an updated and continually improving asset management plan will provide the Township with the information it needs to make informed decisions on managing capital assets in a sustainable manner over the long term.