

MUNCIPALITY OF STRATHROY - CARADOC

Pollution Prevention Control Plan Final

December 5, 2024



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December 5, 2024

Municipality of Strathroy-Caradoc 52 Frank Street Strathroy, ON N7G 2R4

Attention: Paul Zuberbuhler B.Sc, B.Comm, C.E.T, Manager of Environmental Services

Dear Sir:

Re: Municipality of Strathroy-Caradoc Pollution Prevention Control Plan

(PPCP)

Please find attached the final version of the Pollution Prevention Control Plan (PPCP) for the Municipality of Strathroy-Caradoc (Municipality) for placement on the public record for the Notice of Completion period. This report has been prepared in accordance with the Municipal Class Environmental Assessment (MCEA, 2023), approved under the Ontario Environmental Assessment Act. The Master Plan report followed Approach 1 of the MCEA process, which fulfills the requirements for Exempt (Schedule A and A+) projects and provides a basis for future investigations for Schedule B and C projects (where additional project specific investigations may be required to satisfy additional MCEA requirements before implementation).

The main objective of the PPCP is to provide the Municipality with a road map for implementation of infrastructure and operational improvements that will mitigate the impacts of wet weather sewer system overflows on the environment. This report covers the following:

- Evaluation of the collection system with regards to influence of extraneous flows via inflow and infiltration (I&I).
- Using the hydraulic model of the Municipality's sanitary sewer system created as part of the WWWSWM Master Plan to characterize issues and develop solutions with respect to the ability of the system to convey normal and wet weather flows.
- Identifying the quantity and quality of system overflows and by-passes and its impact to the natural environment.
- Making recommendations to manager I&I within the municipality's collection systems.



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If you have any questions regarding this report, please do not hesitate to contact me. Yours very truly,

R.V. ANDERSON ASSOCIATES LIMITED

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Encls.: Municipality of Strathroy-Caradoc Pollution Prevention Control Plan

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1.0 INTRODUCTION

1.1 Background

The Municipality of Strathroy-Caradoc (Municipality) is the largest municipality in Middlesex County and is located 40 km west of London in southwestern Ontario. The Municipality is an urban-rural municipality and primarily consists of bedroom communities. Of these, the communities of Strathroy and Mount Brydges are fully serviced; that is, the residential and non-residential population in both communities are serviced by the municipal drinking water supply, and wastewater collection and treatment system. Figure 1-1 provides an overview of the Municipality with the boundaries of both communities indicated.

As part of ongoing efforts to improve the performance of their sanitary and storm sewer infrastructure, the Municipality has retained R.V. Anderson Associates Limited (RVA) for the preparation of a Pollution Prevention Control Plan (PPCP). As only Mount Brydges and Strathroy have a wastewater treatment system (WWTS), this report will focus on these two communities.

1.2 Objectives

The main objective of the PPCP is to provide the Municipality with a road map for implementation of infrastructure and operational improvements that will mitigate the impacts of wet weather sewer system overflows on the environment. Key deliverables include:

- Undertaking the PPCP concurrently with the 2025 Water, Wastewater and Stormwater Management Master Plan (WWWSWM Master Plan).
- Evaluate the collection system with regards to influence of extraneous flows via inflow and infiltration (I&I).
- Use the hydraulic model of the Municipality's sanitary sewer system to characterize issues and develop solutions with respect to the ability of the system to convey normal and wet weather flows.
- Identify the quantity and quality of system overflows and by-passes and its impact to the natural environment.
- Prepare a PPCP Report Document.
- Present findings of the PPCP to Senior Municipality staff and Council.

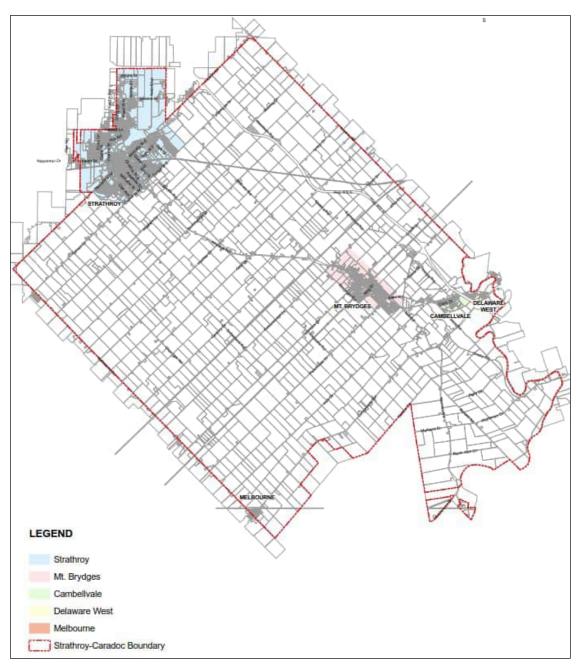


Figure 1-1: Municipality of Strathroy Caradoc Overview Map

2.0 CLASS ENVIRONMENTAL ASSESSMENT AND MASTER PLAN PROCESS

2.1 Overview

The Master Plan process provides the basis for developing long-range servicing plans which integrates infrastructure requirements for existing / future land use and evaluates all reasonable servicing alternatives with considerations to natural, social, and economic environments ("triple bottom line").

The PPCP was completed concurrently with the WWWSWM Master Plan and follows Approach #1 of the MCEA process. The MCEA is an approved planning and design process under the Ontario Environmental Assessment Act. The process provides the framework for planning of municipal infrastructure projects to fulfill the requirements of Ontario Environmental Assessment Act for a class or category of infrastructure projects. Projects are divided into schedules based on the type of projects and activities. Schedules are categorized as Exempt, B and C with reference to the magnitude of their anticipated environmental impact.

Master Plan Approach #1 of the MCEA process which involves a broad scope and a high level of assessment of the projects identified in the Study Area. This PPCP is intended to fulfill the MCEA requirements for Exempt projects that are identified and to outline additional work that will be required for any identified Schedule B and C projects.

Appendix 1 provides a summary of the Pollution Prevention Control Plan consultation that was undertaken as part of this study.

2.2 Evaluation Criteria

The MCEA process requires that a reasonable range of alternative management techniques be developed for addressing the issues identified through the study. The first strategy is the *Do-Nothing* scenario which is a compulsory check per the MCEA process.

The remaining alternatives will be established based on the recommended strategies for the identified projects.

2.3 Cost Opinion

ASTM E 2516 (Standard Classification for Cost Estimate Classification System) provides a five-level classification system based on several characteristics, with the primary characteristic being the level of project definition (i.e., percentage of design completion).

The ASTM standard, shown in Table 2-1, illustrates the typical accuracy ranges that may be associated with the general building industries.

Table 2-1 – ASTM E2516 Accuracy Range of Cost Opinions for General Building Industries

Cost Estimate Class	Expressed as % of Design Completion	Anticipated Accuracy Range as % of Actual Cost
5	0-2	-30 to +50
4	1-15	-20 to +30
3	10-40	-15 to +20
2	30-70	-10 to +15
1	50-100	-5 to +10

The cost estimates developed in this report would be best described as a **Class 5 Cost Estimate** which is typically used for high level study project.

3.0 NATURAL ENVIRONMENT

3.1 Overview

A Natural Environment Review (NER) was conducted to identify and characterize the significance and sensitivity of the natural water features in the study area. This section was prepared through a desktop review of available federal and provincial databases and is intended to provide a general framework for future water/wastewater pollution control projects.

Natural heritage features warrant protection, wherever possible, from development impacts and other activities that can disturb its natural state and cause adverse impacts to its natural features. This NER focuses on the communities of Strathroy and Mount Brydges and their municipal wastewater treatment facilities.

3.2 Methodology – Data Collection

The following sources were reviewed for information related to natural water features and components, and associated policy within the Study Area:

- 2018 St Clair Region Watershed Report Card.
- 2022 Upper Thames River Conservation Authority (UTRCA) Watershed Report Card for the River Bend Corridor.
- Strathroy Caradoc Official Plan (Official Plan) as amended in 2023.

This desktop review does not include fieldwork. Prior to any future works, a site-specific field investigation is to be conducted as required by the extent of the work proposed and the corresponding MCEA requirements.

3.3 Environmental Planning and Review

3.3.1 Provincial Policy Statement

The Provincial Policy Statement (PPS), 2020 sets out the Provincial policy direction for land use planning in Ontario, including managing growth, using, and managing natural resources, protecting the environment, and ensuring public health and safety. The wise use and management of the natural environment is understood to be vital for Ontario's long-term prosperity, environmental health, and social well-being. Accordingly:

 Section 2.1 (Natural Heritage) of the PPS provides directions for the long-term protection, rehabilitation, and improvement of the diversity and connectivity of natural features including significant wetlands, woodlands, valley-lands, wildlife habitat, areas of natural and scientific interest, and coastal wetlands.

 Section 2.2 (Water) of the PPS describes the requirements to protect, improve and restore the quality and quantity of water at a watershed scale.

3.3.2 Strathroy Caradoc Official Plan

The Strathroy Caradoc Official Plan (2023) has several objectives for the natural environment with regards to development, growth, and associated municipal infrastructure within its communities. A key objective is to ensure that 'new development, site alteration, the expansion of existing development and the provision of public facilities and infrastructure result in no negative impacts on the natural features or their ecological functions.' As such, the recommendations provided in this PPCP will align with these goals.

3.3.3 Species at Risk and Endangered Species Act

The Species at Risk Act (SARA) and the Endangered Species Act (ESA) are federal and provincial legislations, respectively, that seek to protect wildlife habitats. Species that are identified as Endangered or Threatened under the SAR are afforded both individual and critical habitat protection on federal lands.

3.3.4 Conservation Authorities Act

The Conservation Authorities Act empowers Conservation Authorities with the ability to make regulations governing development that can have an impact on watercourses and waterbodies, including wetlands. The receivers for the Strathroy WWTF and Mount Brydges WWTF fall under the jurisdiction of the St Clair Region Conservation Authority and Upper Thames River Conservation Authority respectively and are regulated under, and are to be assessed per, the Authorities requirements and goals.

3.4 Strathroy Natural Environment

3.4.1 Existing Conditions

Natural heritage features in Strathroy are primarily associated with the Sydenham River and its tributaries. The community of Strathroy has the following locally significant environmental areas:

- The Sinker Drain Wetland.
- St Clair Region Conservation Authority Watershed (SCRCA).
- The Upper Sydenham River Watershed.

Vanneck Woods.

The Strathroy downtown core is bordered by the Sydenham River to the north. Effluent from the Strathroy WWTF is discharged to Sydenham headwaters tributary which connects to the East Sydenham River terminating to Lake St Clair. The tributary covers a total Subwatershed area of 79 ha.

The Sydenham River valley hosts rare, native species that have been identified as under risk in the ESA. As such, wetlands and watersheds associated with the river are significantly more sensitive to activities that can impact the integrity of the river. Additionally, the river itself is nationally and globally significant for its freshwater mussels, a number of which have been declared as endangered aquatic species. The Official Plan mandates protection of their habitat and requires management of the river's water quality as a critical objective of any future projects.

3.4.2 Water Quality

The Sydenham River is the largest drainage area within the SCRCA. Water quality of the St Clair region is affected by land use, weather, and soil. Watershed Report Cards prepared by the SCRCA provides information on the features of the region and the environmental health of its watersheds every five years, including assessment of the surface water quality, forest conditions, and wetlands covers. These are then scored on a descending quality grade scale of A (excellent) to F (very poor).

Surface water quality is assessed using the following three parameters: total phosphorus, bacteria (E. coli), and benthic macroinvertebrate.

Data collection and sampling is taken at the outlet of each catchment area per the Conservation Ontario guidelines. Water chemistry and bacterial stations in the Sydenham Headwaters are located upstream from the Municipality of Strathroy and, thereby, exclude urban influent from the Report Card grade calculation.

The 2018 report card uses data over a 10-year period from 2006 to 2015. The water quality report the following for the Sydenham Headwater tributary:

- Total Phosphorus: grade of C from 2001 to 2010, and a D from 2011 to 2015.
- E. coli: grade of C from 2001 to 2010, and a D from 2011 to 2015.
- Benthic: grade of D from 2001 to 2005, and a C from 2006 to 2015.

Grades of C indicate a fairly substantial pollution issue, and grade of D indicates a substantial pollution issue from organic compounds. These low grades are, however, typical

of watersheds in southwestern Ontario. Minimizing wastewater treatment system overflows and bypasses are crucial to mitigating pollution in these waterbodies.

3.5 Mount Brydges Natural Environment

3.5.1 Existing Conditions

Community of Mount Brydges falls within between the following three conservation authorities:

- 1. SCRCA.
- 2. The Upper Thames River Conservation Authority (UTRCA).
- 3. Lower Thames Valley Conservation Authority (LTVCA).

Natural heritage features in Mount Brydges are limited to woodlands and two wetlands. The Strathroy Caradoc Official Plan does not identify any endangered or species at risk within the wetlands.

The Mount Brydges WWTF discharges to the Vermeersh Drain located in the Upper Thames River watershed under the UTRCA.

3.5.2 Water Quality

UTRCA produces watershed report cards every 5 years covering its 28 sub-watersheds. Each report card assesses and grades surface water quality and forest conditions, as well as providing information on the watershed features. The grades follow the same descending system as the SCRCA report card. Indicators of quality are also the same (concentrations of Total Phosphorus, Bacteria (E. Coli) and Benthic Invertebrates). Additionally, fish monitoring is also conducted.

The 2022 UTRCA report notes that surface water quality in the Upper Thames Rives range from a C to a D grade. Overall average grade for surface water quality is a D which is consistent with the findings from the 2012 report card.

4.0 CRITERIA FOR PPCP

4.1 Municipal Design Guidelines

4.1.1 Overview

4.1.1.1 Design Parameters

The Ontario Design Guidelines for Sewage Works (MECP Guidelines), as amended in 1984 and 2008, provides a list of parameters and the design criteria used for determining the wastewater treatment plant capacity required to service the connected population. The parameters are:

- Average Daily Flow (ADF)
 - ADF is the cumulative total sewage flow to the treatment system during a calendar year, divided by the number of days during which sewage was flowing to the sewage treatment works that year.
- Maximum Daily Flow (MDF)
 - o MDF is the largest volume of flow to be received during a one-day period expressed as a volume per unit time.
- Average and Peak extraneous flows in design year.

The ratio of the MDF to the ADF is termed Peaking Factor (PF).

4.1.1.2 Extraneous Flows

Pollution prevention of the Municipality's sewer system requires determining the volume of extraneous flows allowed into the system. Extraneous flows comprise of inflow from rainfall and infiltration from groundwater (I&I) which can enter sanitary sewers at vulnerable locations including pipe joints and indirect sources such as service connections. Excessive I&I can increase operation and maintenance costs and can consume the collection system and the wastewater treatment plant's hydraulic capacity. As such, the Wastewater Guidelines requires that all sewer construction should exclude inflow and infiltration to the greatest extent possible. To determine if the WWTS has higher than typical I&I entering the system, the study area's I&I per hectare can be compared to the values provided in the 1984 Revision of Ontario Ministry of the Environment (1984 MECP GL) Wastewater Guidelines as follows:

0.043 - 0.107 L/ha/s (average to peak).

• 90 L/cap/day – 227 L/cap/day (average to peak).

I&I control is recommended via proper design, construction, and maintenance. The 1984 MECP GL indicate that if infiltration, based upon the highest weekly average within a 12-month period, is less than 0.14 L/(mm·d)/m (litres per millimetre of pipe diameter per day per linear metre of sewer length), rehabilitation of the sewer system will not be economical.

Section 2: Sanitary Sewers of the Strathroy – Caradoc Servicing Standards indicates that the minimum infiltration allowance for all types of development must be 0.08 L/s per hectare while other nearby Municipalities use an infiltration value of 0.1 L/s per hectare.

4.1.2 MECP Guideline F-5 and Its Procedures

The Strathroy wastewater collection system (WWCS) is considered to be a separated sewer system and per Procedure F-5-1 *Determination of Treatment Requirements for Municipal and Private Sewage Treatment Works*, bypassing of raw sewage and primary effluent from nominally separate sewerage systems will not be allowed except in emergency conditions.

4.2 Water Environmental Federation (WEF) Guideline

The WEF guideline provides typical daily and instantaneous peaking factors (PFs) for a range of average daily flow (ADF) values. Comparison of historical flow data to these typical values allows atypical conditions, such as excess I&I, to be identified.

5.0 EXISTING WASTEWATER SYSTEM

5.1 Wastewater Collection Systems

5.1.1 Wastewater Collection System Overflow Locations

Wastewater collection systems are designed such that during exceptional circumstances including atypically large flows and/or equipment failure, wastewater can be released to prevent damage to residential properties or infrastructure. Overflows at a sewage pumping station (SPS) is a common way to prevent flooding of residences during equipment failure or when flows exceed pump's capacity. Other features such as regulators or overflow structures in the sewer system help to protect downstream infrastructure by only permitting a maximum flow to pass through and directing excess flow away.

Overflows of this nature are to be avoided through good design practices, as well as ensuring infrastructure is appropriately maintained, to prevent aquatic and human impacts in the receiving waters.

The collection system and its overflow locations in both Strathroy and Mount Brydges are described in the following subsections.

5.1.2 Strathroy Wastewater Collection System

5.1.2.1 Sewage Pumping Stations

The Strathroy WWCS comprises of nine SPSs that direct flow to the Strathroy Wastewater Treatment Plant. Details regarding the pump station wet wells and the pumping equipment for each are provided in Table 5-1. A map of the Strathroy WWCS is attached to **Appendix 2.1**.

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Table 5-1: Strathroy Sewage Pumping Stations

SPS Name	No. of Pumps	Rated Flow (L/s)	Rated Head (m)	Pump Power (hp)	Pump Model	Wet Well Dimensions
Albert Street	3	128	40	140	Flygt Model NT-3231	Variable geometry
Arnella Street	1	-	-	-	Not known	2.1 m in diameter
Bella Street	2	ı	-	-	Flygt 3085, 2.4HP, 240V	1.83 m in diameter by 4.72m deep concrete wet well
Ewart Street	2	193	12	-	Liberty Pumps LSG200	2.85 m X 2.85 m X 2.05 m
High Street	1	-	-	-	Flygt NP 3127 MT	Assumed 2.4 m in diameter by 0.8 m working depth
McNab Avenue	2	41.4	9.1	7.5	Flygt Model NP 3127 MOUNT	3.0 m in diameter
Metcalfe Street	2	75	30.8	-	Flygt Model NT 3202.180 With VFD	Wet well with 25 cubic meter normal operating value
Mill Pond Crescent	2	-	-	2.4	Flygt N-3085	Assumed 3.0 m in diameter
		Liberty Pump Model #3LM10	2.8 m in diameter by 0.75 m working depth			

Table 5-2 provides details of emergency overflows and their discharge locations for each SPS. It is noted that all sewage overflows will eventually impact the Sydenham River or one of its tributaries. Details regarding the Sydenham River watershed are provided in Section 3.4.

Table 5-2: Strathroy Wastewater Collection System SPS Overflow Details

SPS	Overflow Location		
Albert Street	The SPS has a 750 mm overflow pipe with a flapper for backwater		
Albert Street	protection which discharges to the Sydenham River.		
Arnella Street	Available information indicates there is no overflow		
	The SPS is equipped with a 200 mm overflow, which discharges to		
Bella Street	the storm sewer located on Bella Street, which discharges to the		
	Sydenham River.		
High Street	Available information indicates there is no overflow		
McNab Avenue	Available information indicates there is no overflow		
Mill Pond	Available information indicates there is no overflow		
Crescent			
Park Street	Available information indicates there is no overflow		
	The 525 mm sewer upstream of the Metcalf SPS has an overflow		
Metcalfe Street	structure with flap gate for emergency overflow to an adjacent ditch		
Wetcalle Street	and then to Humphrey Creek which discharges into the Sydenham		
	River.		
	The SPS is equipped with a 200 mm overflow. It is not clear where the		
Ewart Street	overflow line discharges too; however, it may discharge to the Ewart		
	Street storm sewer which discharges to the Sydenham River.		

5.1.2.2 Sewage Collection System

Approximately 96 km comprised of both sanitary sewer and forcemains networks form Strathroy's sewage conveyance system. A breakdown of the conveyance system is provided in

Table 5-3.

Table 5-3: Strathroy Sewer Summary

Sewer Style	Length (km)	Percentage	
Forcemains	6.2	6%	
Sanitary Sewers	89.8	94%	
Total	96.0	100%	

5.1.2.3 Strathroy Wastewater Collection Modeling

A hydraulic model was developed for Strathroy's collection system as part of the WWWSWM Master Plan. Appendix 3 of the WWWSWM Master Plan provides the results of the analysis. Initial data provided by the Municipality indicated that there were some combined sewers within the collection system based on their historic records. However, the Municipality has confirmed that these were converted to sanitary sewers circa 2015.

Wastewater flow monitors were installed in five key locations throughout Strathroy and were monitored from September 2023 to January 2024. The resulting flow data was used in conjunction with rainfall data to estimate average I&I rates during rainfall events which was then used to calibrate the model. The **Appendix 2.1** also shows the flow monitoring locations for the Strathroy WWCS.

The model results did not indicate any sewers are currently surcharging, nor will they with the exception of a small section of sewer on Head Street North as flows increase with population growth. This sewer section along Head Street North has been recently upsized and is no longer an issue.

Finally, the average I&I rate for the sub-catchment was found to be 0.08 L/s/ha. This is equal to with the Municipality's guideline value and further indicate that the combined sewers are not currently adversely impacting the system.

5.1.2.4 Strathroy Wastewater Compliance with MECP Procedure F-5-1 and F-5-5

Strathroy had no recorded sewage overflows in the period reviewed, during both the wet and dry periods, and is therefore in compliance with MECP Procedures F-5-1 and F-5-5.

5.1.3 Mount Brydges Wastewater Collection System

5.1.3.1 Sewage Pumping Stations

The Mount Brydges WWCS comprises of two SPSs that direct flow to the Mount Brydges WWTF. Details regarding the pump station wet wells and the pumping equipment for each are provided in Table 5-4 provides details for the pump stations in the Mount Brydges sewage collection system.

Main Sewage PS Northwest PS **Parameter** No. of Pumps 2 2 Rated Flow (L/s) 53 31.3 Rated Head (m) 15.7 15.8 Pump Power 20 20 (hp) National Process Equipment National Process Equipment Pump Model S6I 2000M5-4 with VFD S4K2000M5-4 Wet Well 3.5 m X 8.0 m 2.9 m X 6.7 m **Dimensions**

Table 5-4 – Mount Brydges Sewage Pumping Stations

A map of the Mount Brydges WWCS Mapping Flow Monitoring Locations is attached in **Appendix 2.2**.

Table 5-5 provides details of emergency overflows and their discharge locations for both SPS. It is noted that all sewage overflows will eventually impact the Thames River or one of its tributaries.

SPS	Overflow Location		
	The SPS has a 250mm overflow sewer that outlets to storm		
Lion's Park SPS	maintenance hole (Manhole 4) located upstream on Adelaide		
(North West SPS)	Road. Via this maintenance hole, flow is discharged to a		
	Municipal drain on the southwest side of Queen Street.		
Mill Road PS (Main			
Street SPS)	Available record drawings indicate there is no overflow		

Table 5-5: Mount Brydges Wastewater Collection System SPS Overflow Details

5.1.3.2 Sewage Collection System

Table 5-6 provides details of the Mount Brydges sewage conveyance system. Mount Brydges does not have any combined sewers. As of 2023, a large portion of the Mount Brydges population is serviced by on-site sewage disposal systems and are not connected to the Mount Brydges WWTS.

Sewer Style	Length (km)	Percentage
Forcemains	2.01	15%
Sanitary Sewers	10.98	85%
Total	12.99	100%

Table 5-6 – Mount Brydges Sewer Summary

5.1.3.3 Mount Brydges' Wastewater Collection Modeling

The hydraulic model was also developed for the Mount Brydges' wastewater collection system as part of the Master Plan. The model was developed using the same calibration process and baseline characteristics as that of Strathroy's model (Section 5.1.2.3). Flow monitoring locations are shown in the Mount Brydges WWCS map in **Appendix 2. 2**.

The model results showed that the Mount Brydges WWCS has sufficient capacity for future flows projected out to 2046.

5.1.3.4 Mount Brydges Wastewater Compliance with MECP Procedure F-5-1 and F-5-5

Mount Brydges had no recorded sewage overflows in the period reviewed in the collection system, during both the wet and dry periods, and is therefore in compliance with MECP Procedures F-5-1 and F-5-5.

5.2 Wastewater Treatment Facilities

5.2.1 Wastewater Treatment Facilities By-Pass Locations

The various unit processes within wastewater treatment facilities are designed such that initial unit processes (such as influent pumping, screening, and grit removal) can handle high instantaneous flows while excess wastewater is by-passed around downstream processes, such as aeration and clarification, to protect them from damage. Ideally the treated and by-passed flows combine together at the end of the plant before disinfection to limit impacts on the receiver.

The wastewater treatment facilities and its by-pass locations in both Strathroy and Mount Brydges are described in the following subsections.

5.2.2 Strathroy Wastewater Treatment Plant

5.2.2.1 Overview

The Strathroy Wastewater Treatment Facility (WWTF) is located at 27886 Pike Road. It is an extended-aeration process based mechanical sewage treatment plant with an average rated capacity of 10,000 m³/day and a peak rated capacity of 23,280 m³/day per MECP Environmental Compliance Approval # 5933-C37KWJ issued on June 24, 2021. The Strathroy WWTF includes the following unit processes:

- Preliminary treatment via a mechanically cleaned screen.
- Secondary (biological) treatment provided in a lined earthen aeration basin with a volume of 8,560 m³ and equipped with a coarse bubble aeration system.
- Two circular secondary clarifiers.
- Tertiary treatment via cloth media disc filters.
- Two UV disinfection systems.
- Effluent re-aeration prior to discharge to the Sydenham River.
- One sludge storage pond equipped with a surface aerator.

In 2020, the Municipality acquired the engineering services of RVA to upgrade certain components of the WWTF in response to ongoing maintenance and operational issues. The planned upgrades include:

- Rehabilitation of the existing influent chamber.
- Replacement of the existing headworks facility with a new headworks building which will house a fine step screen and grit removal system.
- Addition of a new aeration basin with available treatment volume of 8,560m³ to provide redundancy and allow a basin to be taken offline for maintenance and cleaning and the addition of a fine bubble diffuser system.
- Replacement of the existing two UV systems and the inclusion of one standby unit.
- Replacement of the existing generator.

The above upgrades will maintain the exiting WWTF's capacity but will ensure the plant continues to meet its effluent objectives.

5.2.2.2 Plant By-Pass Locations

The Strathroy WWTF is equipped, or will be equipped following the on-going upgrades, with three by-pass locations which are detailed in Table 5-7. As all flow the WWTF is pumped, the maximum instantaneous flowrate to the plant is fixed to the capacities for the upstream SPS's and is therefore known. High wet weather flows cannot impact the WWTF as any flow that exceed the capacity of the upstream SPSs will overflow the conveyance system at the locations detailed in Table 5-7.

At the maximum influent flow rate, the influent chamber at the WWTF will receive influent from Albert SPS with a maximum flowrate of 175 L/s and from Metcalfe SPS with a maximum flowrate of 75 L/s, resulting in a total capacity of 250 L/s, equivalent to 21,565m³/d. This is less than the plant designed PIF of 32,000 m³/d and less than the plant designed PHF of 26,000 m³/d. Barring catastrophic failure of both duty and standby equipment unit process by-passes are not anticipated. Furthermore, the WWTF's ability to by-pass influent to Cell 4 for storage further limits the probability of the plant releasing untreated, or partially treated, wastewater to the receiver.

By-Pass Description Location Albert Street SPS A manual valve can direct flows from the Albert Street SPS to Forcemain WWTF Cell 4 for storage. Influent can then be pumped back to the By-Pass headworks for treatment Following the on-going upgrade, influent will be able to bypass the plant headworks and be routed directly to aeration basin 1 Headworks By-Pass should the level in the influent chamber rise to a sufficient height Following the on-going upgrade, A manual valve will allow flows **Tertiary Filtration** to be directed around the cloth media filters and go directly to By-Pass the UV system for disinfection and re-aeration.

Table 5-7: Strathroy WWTF By-Pass Location Details

5.2.2.3 Historical Flow Data

To identify data anomalies and flow trends, the historical influent flow data from 2018 through 2023 into the Strathroy WWTF was reviewed. Figure 5-1 illustrates the ADF and PDF trend over this period. The trend line shows that both ADF and MDF to Strathroy WWTF has been consistent. Peaks in the MDF (circled in red) also occur within the same ranges in each year and, therefore, cannot be assumed to be random anomalies.

Table 5-8 shows that the historical average PF is 2.88, which is slightly above the typical WEF recommended PF of 2.2. However, it does not indicate large amounts of stormwater

¹ Peaking Factor = PDF/ADF

impacting the system. This finding aligns well with the hydraulic modeling completed in Section 5.1.2.3, which did not indicate any capacity issues at the currently experience flows.

Parameter	Value (m³/d)	Peaking Factor ¹
Average Daily Flow, ADF (2018 – 2023)	4,950	-
Max Daily Flow, MDF	14,266	2.88
99 th Percentile Flow	12,989	2.62
WEF Guidelines	_	2.2

Table 5-8 – Strathroy WWTF Peaking Factors

Annual wastewater treatment reports from 2019 through 2023 for the Strathroy WWTF were reviewed and noted wastewater by-passes and overflows are detailed in Table 5-9. With the exception of a MECP approved tertiary by-pass which occurred during 2022 while the new cloth-media filters were installed the Plant has had no untreated of partially treated discharges to the receiver.

Year	Spill/Bypass Noted
	Wastewater from Pond 4 overflowed into Pond 5 when the Pond 4 supernatant
2019	pump was turned off and sludge continued to be added to the Pond. Volume
	was not specified.
2020	No Spills or Overflows Noted
2021	Blower building generator failed and resulted in no aeration for an estimated
	30 minutes.
0000	The Municipality received approval to bypass the existing filters during the
2022	installation of new filters.
2023	No Spills or Overflows Noted

Table 5-9 – Strathroy WWTF Bypasses and Overflows

5.2.2.4 Per Capita Flows

The entire community of Strathroy is serviced by municipal wastewater treatment. The historical average per capital flows is 294 L/cap/day which falls within typical ranges corresponding to the population size of Strathroy.

5.2.3 Mount Brydges Wastewater Treatment Plant

5.2.3.1 Overview

The Mount Brydges WWTF is located 22416 Mill Road and is currently rated at 825 m³/day per MECP ECA # 5977-CPKPGM issued on December 20, 2023. The WWTF is a rotating biological contactor (RBC) system and includes the following unit processes:

- Secondary (biological) treatment provided in two RBC tanks with a rated capacity of 825 m³/day.
- An interim flow equalization tank (repurposed from existing future RBC tank) with a volume of 207.3 m³, equipped with two submersible pumps to return sewage to the RBC tanks and two mechanical mixers (not yet installed).
- Solid-liquid separation post biological treatment provided in two final clarifiers with a rated capacity of 3,260 m³/day each.
- Tertiary treatment provided via an effluent filtration system consisting of three continuous backwash filters designed for a peak flow rate of 5,595 m³/day.
- UV disinfection system with a rated capacity of 4,200 m³/day.

Effluent is discharged to the Vermeersch Drain that is located within the Upper Thames River watershed.

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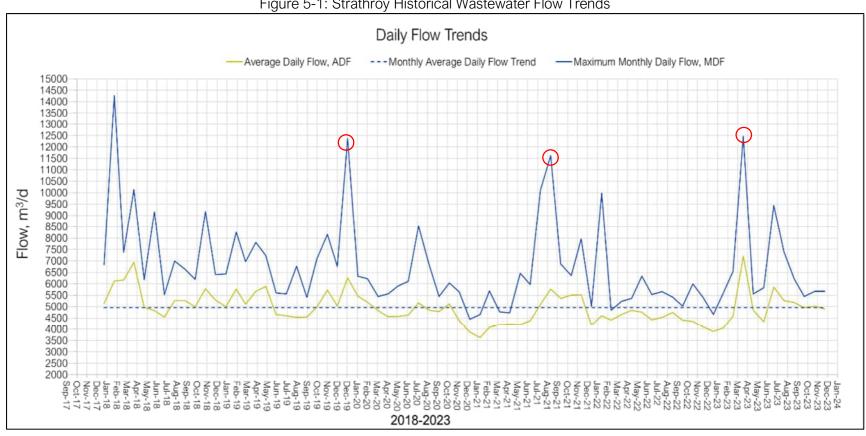


Figure 5-1: Strathroy Historical Wastewater Flow Trends

In 2022, RVA was retained by the Municipality to undertake the design and tender services for the Mount Brydges WWTF Upgrades project in response to ECA effluent limit exceedances. Additionally, the WWTF received flows during a short span of 5 to 6 hours which resulted in high peak loadings that exceeded the capacity of the RBCs. The proposed upgrades include a new headworks facility with screening grit removal system, converting the existing RBC system to extended aeration system, and provision of a sludge holding tank.

5.2.3.2 Plant By-Pass Locations

The Mount Brydges WWTF is equipped with two by-pass locations only one of which actually by-passes a unit process, which are detailed in Table 5-10.

As all flow the WWTF is pumped from the Main St SPS, the maximum instantaneous flowrate to the plant is fixed to the capacity of the SPS (53 L/s or 4,579 m³/d). High wet weather flows cannot impact the WWTF as any flow that exceed the capacity of the upstream Main Street SPS will overflow the conveyance system at the location detailed in Table 5-5. Barring catastrophic failure of both duty and standby equipment unit process at the WWTF, by-passes during wet weather conditions are not anticipated.

Location

By-Pass Description

Secondary influent is pumped to the tertiary filter box. If flows exceed the capacity of the tertiary filters, excess flow will overflow the splitter box weir and be routed back to the filter reject wet well and eventually pumped back to the head of the plant.

A manual valve will allow flows to be directed around the tertiary filters and go directly to the UV system for disinfection.

Table 5-10: Mount Brydges WWTF By-Pass Location Details

5.2.3.3 Historical Flow Data

Figure 5-2 illustrates the influent flow data from 2018 through 2022. The graph shows that both the ADF and MDF to the Mount Brydges WWTF has been increasing steadily since 2021. Since 2022 and throughout 2023, the flows significantly increase such that they no longer fall within the 2018 – 2021 ADF trendline. In addition, the MDF reaches a new peak of approximately 600 m³/day in 2023. In December 2023, an uprise in seen in both the MDF and ADF, indicating that flows can be expected to rise in the following months (2024). Table

5-11 shows that the historical PF is 2.45, which falls below the PF of 3.0 noted in the WEF guidelines. This indicates that the Mount Brydges system is not currently being impacted by extraneous flows. Also, the PF of more recent data was calculated separately which showed that PF from 2020 to 2023 is 2.14 and in 2023 alone is 1.8. This further confirms that the Mount Brydges collection system has minimal exposure to extraneous flows.

Parameter Value (m³/d) **Peaking Factor** Average Daily Flow 233

Table 5-11: Mount Brydges Peaking Factors

Peak Daily Flow 2.45 571 99th Percentile Flow 544 2.33 WEF Guidelines

3.0

Wastewater by-passes and overflows information obtained from Annual Wastewater Treatment reports from 2019 through 2023 are detailed in Table 5-12. Reported spills and by-passes at the Mount Brydges WWTF are the result of the failing RBC system and will be remedied by the above noted upgrade projects.

Table 5-12 – Mount Brydges WWTF Bypasses and Overflows

Year	Spill/Bypass Noted		
2019	No Spills or Overflows Noted		
	Bypasses occurred on the following days due to RBC failure with estimated volumes:		
	1. June 27, 2020: 33 m ³		
	2. July 11, 2020: 12 m ³		
2020	3. July 24, 2020:18 m³		
	4. July 27, 2020: 9 m ³		
	The report notes that the volumes are assumed to have		
	received some treatment, given that the RBC can hold		
	approximately 207 m ³		
2021	No Spills or Overflows Noted		
2022	No Spills or Overflows Noted		
2023	No Spills or Overflows Noted		

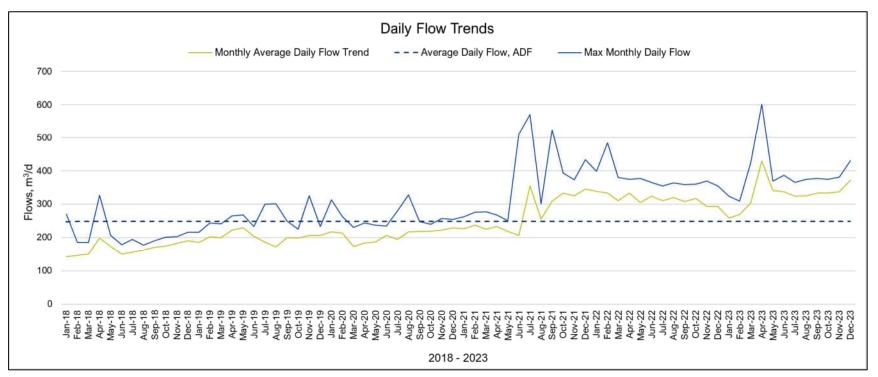
5.2.3.4 Per Capital Flows

As of 2023, approximately one third of Mount Brydges population is connected to the municipal sanitary system. The remaining population are on private septic systems. The historical average per capita flows up to 2020 hovered around 210 L/cap/day. In 2021, a sharp rise to 273 L/cap/day was estimated. Following this year and up to 2023, the average per capita flow remains steady at 312 L/cap/day which is typical for the size of Mount Brydges. As Mount Brydges is a growing community with significant housing construction, it would be recommended that the Municipality ensure that sufficient surveillance is undertaken to monitor that storm and sanitary private drain connections are not cross connected and that drainage is not directed to the sanitary sewer during home building.

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6.0 RECOMMENDATIONS

6.1 Strathroy Wastewater Collection System

Data review and hydraulic modeling indicated that the sanitary sewers in Strathroy's wastewater collection system are unlikely to lead to sewer by-passes or overflows in the period to 2046.

6.2 Mount Brydges Wastewater Collection System

Per the MECP Guidelines, the parameters used for determining peak sewage flows for designing the municipal sewer system includes the design population as derived from the drainage area. As such, the Municipality is recommended to verify the serviced population estimation to ensure accuracy of forecasted flow figures and update the hydraulic model of the collection system so that issues such as overestimating the I&I contributing areas that lead to artificially low I&I per hectare flows are prevented. The Mount Brydges WWTF is also currently undergoing design phase for plant upgrades. Part of the upgrades will include a new flow meter, which will help in monitoring wastewater flows during dry and wet weather conditions which can help establish if the system is subject to excessive extraneous flows. As no current or projected issues are identified for Mount Brydges collection system,

6.3 Improvements to System Understanding and Risk Management

The WWWSWM Master Plan recommended continued development of the sanitary system hydraulic model to better define the collection system and to upgrade it as the system develops to 2046. A recommendation of this PPCP is for the Municipality to invest in the sanitary system hydraulic model to better understand risks associated with infiltration and overflows. This would include a program of manhole and pumping station surveys to gather the missing, incomplete or inaccurate data as noted in Table 5-4 and pump performance tests for all the sewage pumping stations be completed. The goals of this program would be to:

- Update any missing information of the collection system, including sewer and drainage maps, overflow locations, industries connected, sewer inspection videos etc.
- Provide flow monitoring in watersheds to identify issues that may currently be masked by a potentially oversized collection system.
- Identify any operational costs that can be optimized once the updated information is received.

• Ensure construction techniques prevent or, at least, limit discharging water removed during excavation to the sanitary sewer system.

Table 6-1 summarizes the recommended investment which would be in addition to the recommended budget program for the continued development of the sanitary system hydraulic model that was recommended in the WWWSWM Master Plan.

Year	Budget	Year	Budget
2025	\$25,000	2036	\$25,000
2026	\$25,000	2037	\$25,000
2027	\$25,000	2038	\$25,000
2028	\$25,000	2039	\$25,000
2029	\$25,000	2040	\$0
2030	\$0	2041	\$0
2031	\$0	2042	\$0
2032	\$0	2043	\$0
2033	\$0	2044	\$0
2034	\$0	2045	\$25,000
2035	\$25,000	2046	\$25,000

Table 6-1 – Recommended Investment in PPCP Studies

6.4 Other Initiatives

Nearby municipalities have implemented grant programs for property owners which provide financial grants to disconnect foundation drains from the sanitary collection system, install backwater valves and sump pumps for disposal of foundation drain water to a suitable outlet and rebates to property owners for plumbing fees to rod their drain connections because of blockages on the Municipality's portion of the sanitary sewer connection. As Mount Brydges is a growing community with significant housing construction, it would be recommended that the Municipality ensure that sufficient surveillance is undertaken to monitor that storm and sanitary private drain connections are not cross connected and that drainage is not directed to the sanitary sewer during home building.

7.0 CONCLUSIONS

The following are the conclusions from our background investigation review and modeling analysis:

- An analysis of historical flows and resulting peaking factors in Strathroy and Mount Brydges finds that they are in the expected range which indicates neither community is impacted by excessive I&I issues in their respective collection system.
- A review of historical data from 2019 through 2023 did not find records of any overflows in the conveyance system in both Strathroy and Mount Brydges.
- This is corroborated by modeling completed by RVA that found that the existing conveyance system will have sufficient capacity as flows increase to 2046, with the exception of a section of sewer on Head Street North.
- The Municipality of Strathroy had no recorded sewage overflows in the period reviewed and is therefore in compliance with MECP Procedure F-5-1 and F-5-5.
- A review of historical data from 2019 through 2023 found minor by-passes at the WWTFs in both Strathroy and Mount Brydges however none of these occurrences were caused by wet weather flows.
- By-passes at the Mount Brydges WWTF were the result of equipment failures and will be addressed through the on-going upgrades.
- The major by-pass at Strathroy was permitted by the MECP and was allowed during the upgrade of the tertiary filters. As the work is completed no further by-passes are expected.

Based on the findings, the Municipality is recommended to further improve the accuracy of the models. The following may be considered:

- The Municipality commission a program of manhole and pumping station surveys to gather the missing, incomplete or inaccurate data as noted in Table 5-4.
- Pump performance tests for all the sewage pumping stations be completed.
- Updating the sanitary system hydraulic model to better understand risks associated with infiltration and overflows.

- Consider implementation of grant programs for property owners to disconnect foundation drains from the sanitary collection system and similar preventative measures.
- That in Mount Brydges the Municipality monitor that storm and sanitary private drain connections are not cross connected and that drainage is not directed to the sanitary sewer during home building.



MUNCIPALITY OF STRATHROY - CARADOC

Pollution Prevention Control Plan Appendix 1 - Pollution Prevention Control Plan Consultation

December 5, 2024



APPENDIX 1.1 Public and Agency Notices

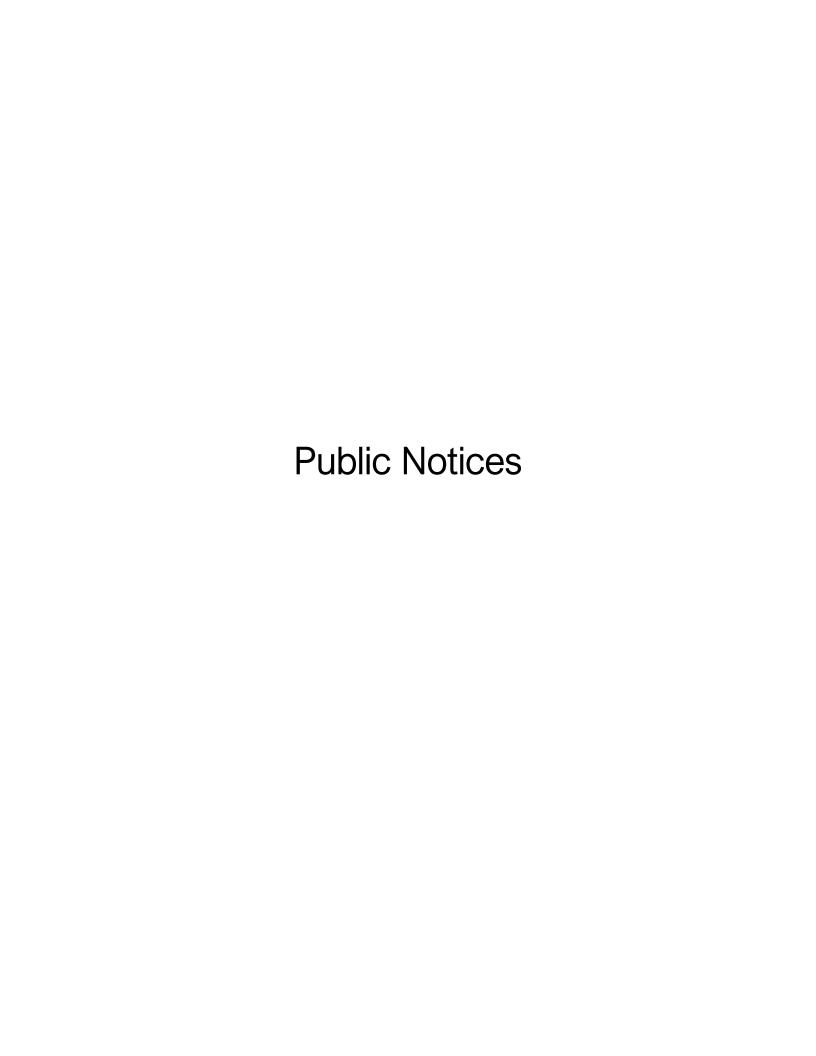


Public/Agency Contact Register

March Marc	Agency	Contact	Title	Email	Address Phone	Notes	Date Added to List Removed from List (date sent)	SC WWWSWM Master Plan – FAQs	Notice of PIC1 (date sent)	Notice of PIC2 (date sent)
Part										
Part	Ministry of the Environment, Conservation and Parks (MECP)	Southwest Region		eanotification.swregion@ontario.ca		copy of notice + form by email	2023-11-21			2024-07-31
Part		General (Notices)		MEA.Notices.EAAB@ontario.ca		NOTICE OF COMPLETION ONLY	2023-11-21			2024-07-31
March Marc	Ministry of Natural Resources and Forestry (MNRF)	Karina Cerniavskaia	District Planner - Avlmer	karina cerniavskaja@ontario ca	615 John Street N., Avlmer, ON 519-773-4757		2023-11-21	2023-12-14		2024-07-31
March Andrew Company (1979) Marc		· ·	Surface Water Evaluator/Team	,	N5H 2S8					2024-07-31
Control Cont	Ministry of the Environment, Conservation and Parks (MECP)	Roland Plante		roland.plante@ontario.ca		3	2023-11-21	2023-12-14		2024-07-31
Page	MECP	Mark Badali		Mark.Badali1@ontario.ca	IL3		2023-11-21	2023-12-14		2024-07-31
Content of the cont	MECP	Monika Macki	Regional Environmental	Monika.MacKi@ontario.ca						
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1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986 1986	Ministry of the Environment, Conservation and Parks (MECP)	Kathryn Markham	Management Biologist	kathryn.markham@ontario.ca	615 John St. N, Aylmer, ON N5H 519-773-4711 2S8		2023-11-21	2023-12-14		2024-07-31
According to Transmit Information According to Transmit Inform	Ministry of the Environment, Conservation and Parks (MECP)	Mark Smith	Water Compliance Supervisor	Mark.Smith@ontario.ca			2023-11-21	2023-12-14		2024-07-31
Security of Tension Cutter and Security (1972)	Ministry of Municipal Affairs and Housing (EA Policy)	Erick Boyd	Manager (Acting)	erick.boyd@ontario.ca			2023-11-21	2023-12-14		2024-07-31
Part	Ministry of Agriculture, Food and Rural Affairs	David Marriott		david.marriott@ontario.ca	1 Stone Road W, 3rd Floor, Guelph, 519-766-5990		2023-11-21	2023-12-14		2024-07-31
	Ministry of Economic Development, Job Creation and Trade	David B. Meyer	Director	david.b.meyer@ontario.ca	30th Flr Suite 3001, 250 Yonge St, 416-212-6280		2023-11-21	2023-12-14		2024-07-31
Preserved Pres	Ministry of Tourism, Culture and Sport (MTCS)	Karla Barboza	Heritage Planning Unit		Suite 1700, 401 Bay Street,		2023-11-21	2023-12-14		2024-07-31
Participant Forward Participant Partic	Ministry of Tourism, Culture and Sport (MTCS)	Laura Romeo	Planner(A)	laura.romeo@ontario.ca	Suite 1700, 401 Bay Street,		2023-11-21	2023-12-14		2024-07-31
Program (Vis) Earne Ambients Earne	Ministry of Tourism, Culture and Sport (MTCS)	Joseph Harvey	Heritage Planner A (Heritage	joseph.harvey@ontario.ca	Suite 1700, 401 Bay Street, 613-242-3743	Do not contact until after first notice is sent	2023-11-21	2023-12-14		2024-07-31
Program Unity Tourism, Culture and Sport (ATCS) Dan Minism Territage Planner (Culture Scholos (Unit) Substitution	Ministry of Tourism, Culture and Sport (MTCS)	Laura E. Hatcher		laura.e.hatcher@ontario.ca		Do not contact until after first notice is sent	2023-11-21	2023-12-14		2024-07-31
Services Unit ON MTA CA7	Ministry of Tourism, Culture and Sport (MTCS)	Jack Mallon		jack.mallon@ontario.ca		Do not contact until after first notice is sent	2023-11-21	2023-12-14		2024-07-31
Partnersips Unit	Ministry of Tourism, Culture and Sport (MTCS)	Dan Minkin		Dan.Minkin@ontario.ca		Do not contact until after first notice is sent	2023-11-21	2023-12-14		2024-07-31
The form of the method The form of the met	Ministry of Indigenous Affairs	Lise Chabot		lise.Chabot@ontario.ca			2023-11-21	2023-12-14		2024-07-31
Manicipal MPs	Environmental Assessment and Permissions Branch			enviropermissions@ontario.ca	135 St. Clair Avenue West, 1st		2023-11-21	2023-12-14		2024-07-31
Lambton - Kent - Middlesex MP Lianne Rood Uanne. Rood@part.gc.ca 55 Front Street West Strathroy, Onlario N7G 1X6 Lambton - Kent - Middlesex MPP Monte McNaughton monte. meraughtence@pc-ola.org 36J. James St, Chathar-Kent, ON, N8A 2N5 London Middlesex Unit Health Unit 519-663-5317 London Middlesex Unit Health Unit 52023-11-21 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2	Municipal, MPs, MPPs				FIOOI, TOTOTILO ON WHY IFO					2024-07-31
Lambton - Kent - Middlesex		MP	Lianne Rood	Lianne.Rood@parl.gc.ca	Strathroy, Ontario		2023-11-21	2023-12-14		2024-07-31
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Strathroy ON N7G 2R4 Council Member - Strathroy Caradoc Mike McGuire Deputy Mayor mmcguire@strathroy-caradoc.ca 52 Frank Street, Strathroy ON N7G 2R4 Council Member - Strathroy Caradoc John G. Brennan Ward 1 jbrennan@strathroy-caradoc.ca 52 Frank Street, 519-245-1070 Strathroy ON N7G 2R4 519-245-1070 2023-11-21 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14	London Middlesex Unit Health Unit			health@mlhu.on.ca			2023-11-21	2023-12-14		2024-07-31
Strathroy ON N7G 2R4 Strathroy ON N7G 2R4 Council Member - Strathroy Caradoc John G. Brennan Ward 1 jbrennan@strathroy-caradoc.ca 52 Frank Street, 519-245-1070 2023-11-21 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14	Council Member - Strathroy Caradoc	Colin Grantham	Mayor	cgrantham@strathroy-caradoc.ca			2023-11-21	2023-12-14		2024-07-31
	Council Member - Strathroy Caradoc	Mike McGuire	Deputy Mayor	mmcguire@strathroy-caradoc.ca			2023-11-21	2023-12-14		2024-07-31
	Council Member - Strathroy Caradoc	John G. Brennan	Ward 1	jbrennan@strathroy-caradoc.ca			2023-11-21	2023-12-14		2024-07-31

e Ward 2 Ward 2 Ward 1 Ward 1 Ward 1 Ward 2	bderbyshire@strathroy-caradoc.ca shipple@strathroy-caradoc.ca fkennes@strathroy-caradoc.ca dpammer@strathroy-caradoc.ca spelkman@strathroy-caradoc.ca gwillsie@strathroy-caradoc.ca tmckibbin@strathroy-caradoc.ca bhammer@strathroy-caradoc.ca jvandervaart@strathroy-caradoc.ca dpayne@strathroy-caradoc.ca	52 Frank Street, Strathroy ON N7G 2R4 52 Frank Street, Strathroy ON N7G 2R4	519-245-1070 519-245-1070 519-245-1070 519-245-1070 519-245-1070				2023-11-21 2023-11-21 2023-11-21 2023-11-21 2023-11-21 2023-11-21	FAQs 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14 2023-12-14		2024-07-31 2024-07-31 2024-07-31 2024-07-31 2024-07-31
Ward 1 Ward 1 Ward 1 Ward 2	fkennes@strathroy-caradoc.ca dpammer@strathroy-caradoc.ca spelkman@strathroy-caradoc.ca gwillsie@strathroy-caradoc.ca tmckibbin@strathroy-caradoc.ca bhammer@strathroy-caradoc.ca jvandervaart@strathroy-caradoc.ca	Strathroy ON N7G 2R4 52 Frank Street, Strathroy ON N7G 2R4	519-245-1070 519-245-1070 519-245-1070				2023-11-21 2023-11-21 2023-11-21 2023-11-21	2023-12-14 2023-12-14 2023-12-14 2023-12-14		2024-07-31 2024-07-31 2024-07-31
Ward 1 Ward 1 Ward 2	dpammer@strathroy-caradoc.ca spelkman@strathroy-caradoc.ca gwillsie@strathroy-caradoc.ca tmckibbin@strathroy-caradoc.ca bhammer@strathroy-caradoc.ca jvandervaart@strathroy-caradoc.ca	Strathroy ON N7G 2R4 52 Frank Street, Strathroy ON N7G 2R4 52 Frank Street, Strathroy ON N7G 2R4 52 Frank Street,	519-245-1070 519-245-1070				2023-11-21 2023-11-21 2023-11-21	2023-12-14 2023-12-14 2023-12-14		2024-07-31 2024-07-31 2024-07-31
Ward 1 Ward 2	spelkman@strathroy-caradoc.ca gwillsie@strathroy-caradoc.ca tmckibbin@strathroy-caradoc.ca bhammer@strathroy-caradoc.ca jvandervaart@strathroy-caradoc.ca	Strathroy ON N7G 2R4 52 Frank Street, Strathroy ON N7G 2R4 52 Frank Street,	519-245-1070				2023-11-21	2023-12-14		2024-07-31
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	tmckibbin@strathroy-caradoc.ca bhammer@strathroy-caradoc.ca jvandervaart@strathroy-caradoc.ca		519-245-1070							
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	jvandervaart@strathroy-caradoc.ca									
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	dpayne@strathroy-caradoc.ca						2023-11-21	2023-12-14		2024-07-31
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	bsmith@strathroy-caradoc.ca						2023-11-21	2023-12-14		2024-07-31
	j straus@strathroy.caradoc.ca						2023-11-21	2023-12-14		2024-07-31
	jhuff@strathroy-caradoc.ca						2023-11-21	2023-12-14		2024-07-31
	rlilbourne@strathroy-caradoc.ca						2023-11-21	2023-12-14		2024-07-31
	sbeasley@strathroy-caradoc.ca						2023-11-21	2023-12-14		2024-07-31
	mcampbell@spcs.on.ca			undeliverable			2023-11-21	2023-12-14		2024-07-31
	weaster@strathroy-caradoc.ca						2023-11-21	2023-12-14		2024-07-31
	rkennedy@strathroy-caradoc.ca						2023-11-21	2023-12-14		2024-07-31
	gleclair@strathroy-caradoc.ca						2023-11-21	2023-12-14		2024-07-31
	Ecrouch@strathroy-caradoc.ca						2023-11-21	2023-12-14		2024-07-31
	jhelkaa@strathroy-caradoc.ca						2023-11-21	2023-12-14		2024-07-31
	astockton@strathroy-caradoc.ca						2023-11-21	2023-12-14		2024-07-31
	dverberne@strathroy-caradoc.ca						2023-11-21	2023-12-14		2024-07-31
	bverberne@strathroy-caradoc.ca						2023-11-21	2023-12-14		2024-07-31
		rkennedy@strathroy-caradoc.ca gleclair@strathroy-caradoc.ca Ecrouch@strathroy-caradoc.ca jhelkaa@strathroy-caradoc.ca astockton@strathroy-caradoc.ca dverberne@strathroy-caradoc.ca	rkennedy@strathroy-caradoc.ca gleclair@strathroy-caradoc.ca Ecrouch@strathroy-caradoc.ca jhelkaa@strathroy-caradoc.ca astockton@strathroy-caradoc.ca dverberne@strathroy-caradoc.ca	rkennedy@strathroy-caradoc.ca gleclair@strathroy-caradoc.ca Ecrouch@strathroy-caradoc.ca jhelkaa@strathroy-caradoc.ca astockton@strathroy-caradoc.ca dverberne@strathroy-caradoc.ca	rkennedy@strathroy-caradoc.ca gleclair@strathroy-caradoc.ca Ecrouch@strathroy-caradoc.ca jhelkaa@strathroy-caradoc.ca astockton@strathroy-caradoc.ca dverberne@strathroy-caradoc.ca	rkennedy@strathroy-caradoc.ca gleclair@strathroy-caradoc.ca Ecrouch@strathroy-caradoc.ca jhelkaa@strathroy-caradoc.ca astockton@strathroy-caradoc.ca dverberne@strathroy-caradoc.ca	rkennedy@strathroy-caradoc.ca gleclair@strathroy-caradoc.ca Ecrouch@strathroy-caradoc.ca jhelkaa@strathroy-caradoc.ca astockton@strathroy-caradoc.ca dverberne@strathroy-caradoc.ca	rkennedy@strathroy-caradoc.ca 2023-11-21 gleclair@strathroy-caradoc.ca 2023-11-21 Ecrouch@strathroy-caradoc.ca 2023-11-21 jhelkaa@strathroy-caradoc.ca 2023-11-21 dverberne@strathroy-caradoc.ca 2023-11-21	rkennedy@strathroy-caradoc.ca 2023-11-21 2023-12-14 gleclair@strathroy-caradoc.ca 2023-11-21 2023-12-14 Ecrouch@strathroy-caradoc.ca 2023-11-21 2023-12-14 jhelkaa@strathroy-caradoc.ca 2023-11-21 2023-12-14 astockton@strathroy-caradoc.ca 2023-11-21 2023-12-14 dverberne@strathroy-caradoc.ca 2023-11-21 2023-12-14	Tkennedy@strathroy.caradoc.ca 2023-11-21 2023-12-14 gleclair@strathroy.caradoc.ca 2023-11-21 2023-12-14 Ecrouch@strathroy.caradoc.ca 2023-11-21 2023-12-14 Jhelkaa@strathroy.caradoc.ca 2023-11-21 2023-12-14 astockton@strathroy.caradoc.ca 2023-11-21 2023-12-14 dverberne@strathroy.caradoc.ca 2023-11-21 2023-12-14

Agency	Contact	Title	Email	Address	Phone	Notes	Date Added to List	Removed from List	Notice of Study (date sent)	SC WWWSWM Master Plan – FAQs	Notice of PIC1 (date sent)	Notice of PIC (date sent)
Municipality of Strathroy Caradoc	Cam Tyler		ctyler@strathroy-caradoc.ca						2023-11-21	2023-12-14		2024-07-3
Municipality of Strathroy Caradoc	Bill Dakin		bdakin@strathroy-caradoc.ca						2023-11-22	2023-12-14		2024-07-3
Middlesex Centre	Rae Piggott	Chief Administrative Officer	rpiggott@strathroy-caradoc.ca						2023-11-21	2023-12-14		2024-07-3
Adelaide Metcalfe	Paul Otis	Chief Administrative Officer	potis@strathroy-caradoc.ca						2023-11-21	2023-12-14		2024-07-3
SW Middlesex	Mike Henry	Chief Administrative Officer	mhenry@southwestmiddlesex.ca						2023-11-21	2023-12-14		2024-07-3
Middlesex County	Bill Rayburn	Chief Administrative Officer	cao@mdlsx.ca						2023-11-21	2023-12-14		2024-07-3
Middlesex County	Cathy Burghardt-Jesson	n Warden	cburghardtjesson@middlesex.ca						2023-11-21	2023-12-14		2024-07-3
Regional Water Supply												2024-07-3
Lake Huron & Elgin Area Water Supply Systems	Andrew Henry	Director, Regional Water	ahenry@huronelginwater.ca	235 North Centre Rd., Suite 200	Tel.: 519.930.3505 ext.1355				2023-11-21	2023-12-14		2024-07-3
Conservation Authority				London, Ontario N5X 4E7								2024-07-3
St. Clair Region Conservation Authority			stclair@scrca.on.ca	205 Mill Pond Cres., Strathroy, Ontario N7G 3P9	Tel.: 519-245-3710				2023-11-21	2023-12-14		2024-07-3
Upper Thames River Conservation Authority	Tracy Annett	General Manager/ Secretary - Treasurer	annettt@thamesriver.on.ca	1424 Clarke Road, London, Ontario, Canada N5V 5B9					2023-11-21	2023-12-14		2024-07-3
Lower Thames Valley Conservation Authority	Mark Peacock	Chief Administrative Officer / Secretary-Treasurer	mark.peacock@ltvca.ca						2023-11-21	2023-12-14		2024-07-3
Indigenous Groups		ocorciary fredourci										
Metis Nation of Ontario	Margaret Frosh	Chief	MargaretF@metisnation.org	311-75 Sherbourne Street, Toronto, ON M5A 2P9					2023-11-21	2023-12-14		2024-07-3
Metis Nation of Ontario	Linda Norheim	Director, Lands, Resources- and Consultations	lindan@metisnation.org	ONMONERO	416-977-9881	2023-12-01 Linda emailed to be removed off list only using general email below			2023-11-21	2023-12-14		2024-07-3
Metis Nation of Ontario			consultations@metisnation.org	Métis Consultation Unit Métis Nation of Ontario Head Office Suite 1100 – 66 Slater Street Ottawa, ON K1P 5H1					2023-11-21	2023-12-14		2024-07-3
Aamjiwnaang First Nation	Chris Plan	Chief	chief.plain@aamjiwnaang.ca	978 Tashmoo Avenue, Sarnia, ON	519-336-8410				2023-11-21	2023-12-14		2024-07-3
Aamjiwnaang First Nation	Sharilyn Johnston	Enviroment Coordinator	sjohnstong@aajiwnaang.ca	N7T 7H5 979 Tashmoo Avenue, Sarnia, ON N7T 7H5		undeliverable			2023-11-21	2023-12-14		2024-07-3
Caldwell First Nation	Robin Perkins	Acting Chief	chief@caldwellfirstnation.ca	P.O. Box 388 Leamington, ON N8H					2023-11-21	2023-12-14		2024-07-3
Caldwell First Nation	Nikki van Oirschot	Director of Operations	nikki@caldwellfirstnation.ca	9.O. Box 388 Leamington, ON N8H					2023-11-21	2023-12-14		2024-07-3
Caldwell First Nation	Brianna Sands	Consultation Coordinator	brianna@caldwellfirstnation.ca	P.O. Box 388 Leamington, ON N8H 3W5					2023-11-21	2023-12-14		2024-07-3
Chippewas of Kettle and Stony Point First Nation	Chief	Jason Henry	jason.henry@kettlepoint.org	6247 Indian Lane, Forest, ON N0N 1J0					2023-11-21	2023-12-14		2024-07-3
Chippewas of Kettle and Stony Point First Nation	Consultation Officer	Valerie George	valerie.george@kettlepoint.org	6248 Indian Lane, Forest, ON N0N 1J0					2023-11-21	2023-12-14		2024-07-3
Chippewa of the Thames First Nation	Fallon Burch	Consultation Coordinator - Lands & Environment	Nations Connect - See Tisha	320 Chippewa Road, Muncey, ON NOL 1Y0	519-289-2662 ext. 213				2023-11-21	2023-12-14		2024-07-3
Chippewa of the Thames First Nation	Leslee-White-Eye	Chief	Nations Connect - See Tisha	NOL TTO					2023-11-21	2023-12-14		2024-07-3
Delaware Nation (Moravian of the Thames)	Denise Stonefish	Chief	denis.stonefish@delawarenation.on.ca	14760 School House Line RR3 Thamesville ON N0P 2K0					2023-11-21	2023-12-14		2024-07-3
Delaware Nation (Moravian of the Thames)- EELÜNAAPÉEWI LAHKÉEWIIT	Justin Logan	Lands and Resources Consultation Assistant	loganju@xplornet.ca	14761 School House Line RR3 Thamesville ON N0P 2K0					2023-11-21	2023-12-14		2024-07-3
Delaware Nation (Moravian of the Thames)- EELÜNAAPÉEWI LAHKÉEWIIT	Tina Jacobs	Lands and Resources Consultation Manager	tnajay@xplornet.ca	14762 School House Line RR3 Thamesville ON N0P 2K0					2023-11-21	2023-12-14		2024-07-3
Munsee-Delaware Nation	Roger Thomas	Chief Chief	Chief.thomas@munsee-delaware.org	279 Jubilee Road, Muncey ON NOL 1Y0		undeliverable			2023-11-21	2023-12-14		2024-07-3
Munsee-Delaware Nation	Dan Miskokoman	Band Manager	band.manager@munsee-delware.org	280 Jubilee Road, Muncey ON NOL		undeliverable			2023-11-21	2023-12-14		2024-07-3
Oneida of the Thames First Nation	Todd Cornelius	Chief	todd.cornelius@oneida.on.ca	2212 Elm Ave, Southwold, ON NOL 2G0	519-318-4605				2023-11-21	2023-12-14		2024-07-3
Oneida of the Thames First Nation	Brandon Doxtator	Economic Development	councillor.brandon@oneida.on.ca	200	226-378-4725				2023-11-21	2023-12-14		2024-07-3
Bkejwanong Territory (Walpole Island)	Dan Miskokomon	Chief	dan.miskokomon@wifn.org	117 Tahgahoning Road,					2023-11-21	2023-12-14		2024-07-3
Bkejwanong Territory (Walpole Island)	Faye Johnson	Governance Manager	faye.johnson@wifn.org	Wallaceburg, ON N8A 4K9 118 Tahgahoning Road, Wallaceburg, ON N8A 4K9					2023-11-21	2023-12-14		2024-07-3
1	1			Transcoburg, ON NOA 4N3	I			1	1	1		





Notice of Study Commencement

Water, Wastewater and Stormwater Master Plan and Pollution Prevention Control Plan

The Municipality of Strathroy-Caradoc is preparing a Master Plan for its water, wastewater, and stormwater infrastructure as part of ongoing efforts to improve the performance of the Municipality's infrastructure. Additionally, the Municipality is undertaking a Pollution Prevention Control Plan (PPCP) to provide a road map for implementing infrastructure and operational improvements that will mitigate the impacts of wet weather sewer system overflows on the environment. The Master Plan and PPCP will provide the Municipality with guidance for capital planning and project implementation for water, wastewater, and stormwater services to accommodate growth for the next 20 years and beyond in a cost-effective and environmentally sustainable manner.

The study is being undertaken in accordance with the Municipal Class Environmental Assessment (EA) process for Master Plans (Municipal Engineer's Association Class EA document, March 2023). There will be opportunities to participate throughout the study. Two public engagement events will be held during the study to provide opportunities to review project information and provide feedback to the study team.

As the project proceeds, notices and information will be posted on the Strathroy-Caradoc website. Please refer to the Municipality of Strathroy-Caradoc's 'News and Public Notices' webpage (www.strathroy-caradoc.ca/Modules/News/en) for project updates. To be added to the study's distribution list to receive updates, or for more information, please contact a member of the study team below:

Paul Zuberbuhler B.Sc, B.Comm, C.E.T

Manager of Environmental Services
Municipality of Strathroy-Caradoc
Tel: 519-245-1105 ext. 274
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Strathroy ON N7G 2R4

John Tyrrell, M.Sc. (Eng.), P. Eng.

Senior Project Manager R.V. Anderson Associates Limited **Tel:** 519-681-9916 ext. 5038 **jtyrrell@rvanderson.com** 557 Southdale Road East, Suite 200 London, ON N6E 1A2

Project information is being collected in accordance with the Environmental Assessment Act and Municipal Freedom of Information and Protection of Privacy Act. With the exception of personal information, all comments will form part of the public record.



Notice of Public Information Session #1

Water, Wastewater and Stormwater Master Plan and Pollution Prevention Control Plan

The Municipality of Strathroy-Caradoc is preparing a Master Plan for its water, wastewater, and stormwater infrastructure as part of ongoing efforts to improve the performance of the Municipality's infrastructure. Additionally, the Municipality is undertaking a Pollution Prevention Control Plan (PPCP) to provide a road map for implementation of infrastructure and operational improvements that will mitigate the impacts of wet weather sewer system overflows on the environment. The Master Plan and PPCP will provide the Municipality with guidance for capital planning and project implementation for water, wastewater, and stormwater services to accommodate growth for the next 20 years and beyond in a cost effective and environmentally sustainable manner.

The study is being undertaken in accordance with the Municipal Class Environmental Assessment (MCEA) 2023 process for Master Plans.

How do I participate?

When: Wednesday, January 10, 2024, from 6:00 – 8:00 p.m.

Where: Caradoc Community Centre. 565 Lions Park Drive, Mount Brydges, ON

How: In-person

The presentation boards from the meeting along with a summary of Question and Answers will be posted on the project webpage following the meeting: www.strathroy-caradoc.ca/en/city-hall/water-wastewater-and-stormwater-master-plan-and-pollution-prevention-control-plan.aspx.

For more information or to be added to the study's distribution list to receive updates, please contact a member of the study team below:

Paul Zuberbuhler B.Sc, B.Comm, C.E.T

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52 Frank Street

Strathroy ON N7G 2R4

John Tyrrell, M.Sc. (Eng.), P. Eng.

Senior Project Manager R.V. Anderson Associates Limited

Tel: 519-681-9916 ext. 5038

jtyrrell@rvanderson.com

557 Southdale Road East, Suite 200

London, ON N6E 1A2

Except for personal information, all comments will become part of the public record of the study. The study is being conducted according to the requirements of the MCEA, which is a planning process approved under Ontario's Environmental Assessment Act



Notice of Public Information Session #2 - Water, Wastewater and Stormwater Master Plan and PPCP

Posted on Thursday, August 01, 2024

The Municipality of Strathroy-Caradoc is preparing a Master Plan for its water, wastewater, and stormwater infrastructure as part of ongoing efforts to improve the performance of the Municipality 's infrastructure. Additionally, the Municipality is undertaking a Pollution Prevention Control Plan (PPCP) to provide a road map for implementation of infrastructure and operational improvements that will mitigate the impacts of wet weather sewer system overflows on the environment. The Master Plan and PPCP will provide the Municipality with guidance for capital planning and project implementation for water, wastewater, and stormwater ser vices to accommodate growth for the next 20 years and beyond in a cost effective and environmentally sustainable manner.

The study is being undertaken in accordance with the Municipal Class Environmental Assessment (MCEA) 2023 process for Master Plans.

How can I participate?

The Municipality is hosting Public Information Meeting #2 to report on the progress of the study and provide members of the public with an opportunity to provide comments prior to its finalization. The Public Information Meeting will be hosted in person and will include presentation boards and the opportunity for the public to ask questions of the project team.

When: Wednesday, September 11, 2024, from 6:00 – 8:00 p.m. **Where:** Gemini Sportsplex – 667 Adair Blvd., Strathroy, ON

How: In-person

The presentation boards from the meeting along with a summary of Question and Answers will be posted on the project webpage following the meeting: www.strathroy-caradoc.ca/en/city-hall/water-wastewater-and-stormwater-master-plan-aspx (/en/city-hall/water-wastewater-and-stormwater-master-plan-and-pollution-prevention-control-plan.aspx). For more information or to be added to the study's distribution list to receive updates, please contact a member of the study team below:

Paul Zuberbuhler B.Sc, B.Comm, C.E.T Manager of Environmental Services Municipality of Strathroy-Caradoc Tel: 519-245-1105 ext. 274 pzuberbuhler@strathroy-caradoc.ca (mailto:pzuberbuhler@strathroy-caradoc.ca)52 Frank Street Strathroy ON N7G 2R4

John Tyrrell, M.Sc. (Eng.), P. Eng. Senior Project Manager R.V. Anderson Associates Limited Tel: 519-681-9916 ext. 5038 jtyrrell@rvanderson.com

(mailto:jtyrrell@rvanderson.com)557 Southdale Road East, Suite 200

Except for personal information, all comments will become part of the public record of the study. The study is being conducted according to the requirements of the MCEA, which is a planning process approved under Ontario's Environmental Assessment Act

Notice of Public Information Session #2
 (/en/resourcesGeneral/2024/EPW/public information session notice 2.pdf)
 (PDF[86kB])

Contact Us

The Municipality of Strathroy-Caradoc 52 Frank Street Strathroy, Ontario N7G 2R4 Map this Location.

E-Mail General Inquiries

T. 519-245-1070 F. 519-245-6353

© 2024 Municipality of Strathroy-Caradoc

52 Frank Street, Strathroy ON N7G 2R4 Phone: 519-245-1070 Fax: 519-245-6353

Customer Service: Monday - Friday 9:00am - 4:00pm

The Municipality of Strathroy-Caradoc acknowledges that it is located on Pre-Confederation Treaty 25 territory. We are thankful to the generations of people who have taken care of this land, including The Chippewas of the Thames First Nation, The Munsee-Delaware First Nation, and The Oneida Nation of the Thames.

<u>Designed by eSolutions</u>

Agency Notices

Samya Chams

From: Darika Sharma < DSharma@rvanderson.com>

Sent: November 21, 2023 9:18 PM

To: Paul Zuberbuhler Cc: John Tyrrell

Subject: Strathroy-Caradoc Water, Wastewater & Stormwater Management Master Plan -

Notice of Study Commencement

Attachments: Notice of Study Commencement 2023Nov21.pdf

Categories: Filed by Newforma

Good Evening,

The Municipality of Strathroy-Caradoc has initiated the process of developing a Water, Wastewater and Stormwater Management Master Plan (WWWSWM MP) that will be supported by a Pollution Prevention Control Plan (PPCP). The WWWSWM MP will provide the Municipality with strategic long-term water and wastewater servicing, and stormwater management strategies that support existing needs and accommodate projected population and employment growth to the year 2046. The PPCP will provide a road map for implementing the identified infrastructure and operational improvements.

You have been identified as potentially having interest and/or information that may assist the study team in developing the Master Plan.

Attached, please the Notice of Study Commencement regarding this study.

Thank you,

Darika Sharma, M.Eng, EIT

Process Designer



R.V. Anderson Associates Limited 557 Southdale Road East, Suite 200, London ON N6E 1A2 t 519 681 9916 ext. 5032 | m 647 648 0461

<u>LinkedIn</u> | <u>Facebook</u> | <u>Website</u>











Samya Chams

From: Samya Chams

Sent: December 1, 2023 9:58 AM

To: eanotification.swregion@ontario.ca

Cc: John Tyrrell; Paul Zuberbuhler; Darika Sharma

Subject: Strathroy-Caradoc Water, Wastewater and Stormwater Master Plan and Pollution

Prevention Control Plan- Notice of Study Commencement

Attachments: Notice of Study Commencement 2023Nov21.pdf;

streamlined_ea_project_information_form_2 (1) - 236786.xlsx

Categories: Filed by Newforma

Good morning,

Please find attached a Project Information Form and Notice of Study Commencement for the Strathroy-Caradoc Water, Wastewater and Stormwater Master Plan and Pollution Prevention Control Plan.

Thank you,

Samya

Samya Chams, B.A. (she/her)

Administrative Assistant/ Project Support Coordinator



R.V. Anderson Associates Limited 557 Southdale Road East, Suite 200, London ON N6E 1A2 t 519 681 9916 ext. 5021

<u>LinkedIn</u> | Facebook | Website













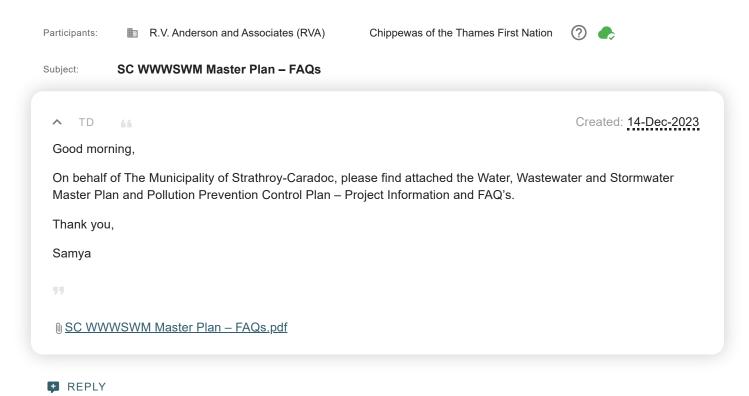
APPENDIX 1.2 Indigenous Consultation



Indigenous Agency/Community Notices

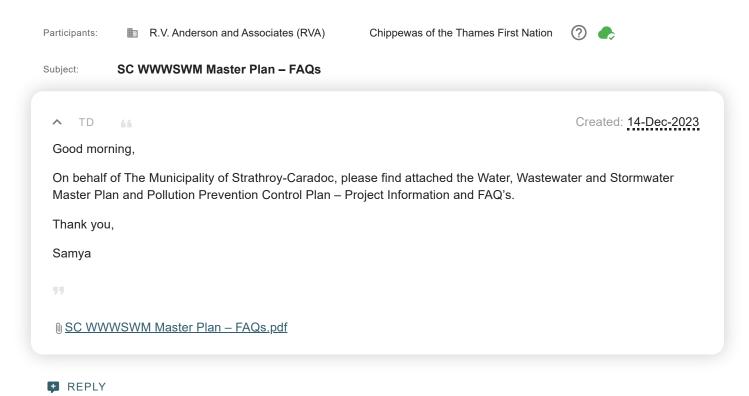
10/2/24, 9:54 AM NationsConnect

SC WWWSWM Master Plan - FAQs



10/2/24, 9:54 AM NationsConnect

SC WWWSWM Master Plan - FAQs



Indigenous Agency/Community Responses



320 Chippewa Road Muncey, ON, NOL 1Y0 Tel: 519-289-5555 Fax: 519-289-2230 info@cottfn.com

Project Name:

Strathroy - Caradoc W and WW SWM MP

FN Consultation ID:

236786

Consulting Org Contact:

Tisha Doucette

Consulting Organization:

R.V. Anderson and Associates (RVA)

Date Received:

Tuesday, November 28, 2023

December 19, 2023

Dear: Tisha,

We have received information concerning the Strathroy - Caradoc W and WW SWM MP, dated November 28, 2023. The proposed project is located within the Longwoods treaty area to which Chippewas of the Thames First Nation (COTTFN) is the sole-signatory. It is also located within the Big Bear Creek Additions to Reserve (ATR) land selection area, as well as COTTFN Traditional Territory. After reviewing the information that has been provided at this time, we have identified the Master Plan to be of moderate concern.

The relationship our citizens have with Deshkan Ziibi (Thames River) and its Tributaries is integral to our First Nation's spiritual and physical health and wellbeing. The Thames River and its Tributaries continue to be a source of sustenance and areas for culturally significant practices for our peoples. Our First Nation has interests in the health and protection of the creeks, rivers and its animal and plant species that rely on these waterways for survival. These stewardship principles are derived from our cultural practices which we have practiced since time immemorial.

Chippewas of the Thames First Nation members continue to use the natural environment for hunting, fishing and the gathering of traditional medicinal plants. We look forward to the opportunity to review and provide input into the development of the Water, Wastewater Master Plan and the Pollution Prevention Control Plan.

We look forward to continuing this open line of communication. To implement meaningful consultation, COTTFN has developed its own protocols - a document and a process that will guide positive working relationships. As per 'Appendix C' of the Wiindmaagewin, a filing fee will reflected on the invoice issued. The invoice will come from COTTFN's Finance Department.

Please do not hesitate to contact me if you need further clarification of this letter.

Sincerely,

Original Signed
Fallon Burch
Consultation Coordinator
Chippewa of the Thames First Nation
320 Chippewa Road, Muncey, ON, NOL 1Y0
(519) 289-5555 Ext 251



320 Chippewa Road Muncey, ON, NOL 1Y0 Tel: 519-289-5555

Fax: 519-289-2230 info@cottfn.com

January 18, 2024

Via Email

Jennifer Huff Director of Building and Planning 52 Frank Street Strathroy, ON N7G 2R4

Re: Municipality's Settlement Area Boundaries in Strathroy and Mt. Brydges

Dear Jennifer,

Thank you for the opportunity to review the preliminary recommendations for settlement area boundaries within the Municipality of Strathroy-Caradoc. We do value the early engagement and positive relationship building, however there is concern with the rapid expansion which does raise important questions from our perspective.

The relationship our citizens have with the Land is integral to our First Nation's spiritual and physical health and wellbeing. It is a source of sustenance and provides culturally significant practices for our peoples. Our First Nation has interests in the agency for the health and protection of the land, water, animals and plant species. Our citizens continue to utilize the land for hunting, fishing, and gathering of traditional medicinal plants, therefore any adverse impacts to the land and water within our Treaty and Traditional Territory are a violation to our inherent rights.

After reviewing the information provide, we would like to share our feedback and we look forward to your follow-up:

- 1. The proposed expansion takes place within Chippewas of the Thames First Nation (COTTFN) Longwoods Treaty (1822) area, COTTFN is the sole-signatory to this treaty.
- 2. The settlement area expansions are also within the Big Bear Creek Additions to Reserve Land Selection Area. In 2013, COTTFN settled a land claim with Canada. Within this agreement, COTTFN is entitled to purchase approximately 5,000 acres of land within Southwestern, Ontario to add to current reserve lands. Strathroy-Caradoc expanding towards COTTFN reserve land directly competes with COTTFN's ability to expand Reserve lands within the vicinity around COTTFN.
- 3. Future development causes displacement of various species and their habitats such as species at risk. Further to our concern how will non-species at risk be impacted? This includes deer (which COTTFN utilizes as a food source), plants and medicines that hold cultural significance to COTTFN.
- 4. COTTFN has Water Quality concerns relating to stormwater management and the lack of infrastructure in Mount Brydges. How will increased development impact local water courses? This includes impacts from stormwater, road salts and wastewater.



320 Chippewa Road Muncey, ON, NOL 1Y0 Tel: 519-289-5555

Fax: 519-289-2230 info@cottfn.com

- 5. Some of the proposed development sites are adjacent to areas known to experience flooding. Will the Municipality proceed in residential development on sites known to experience flooding or avoid these locations?
- 6. In the case of Mount Brydges, how is the town equipped to support additional growth when there is currently insufficient infrastructure and amenities to support current residents? This includes enrollment constraints at the local elementary school, minimal local employment opportunities, and the absence of a sufficient grocery store. This leads to needing further understanding of the justification of removing greenspace for residential development when the town is unable to adequately support its current population.
- 7. As a partner in the Tri-Township Arena, COTTFN has a strong interest in any future recreation plans for the proposed settlement boundary expansion in Mount Brydges.

We look forward to continuing this open line of communication. If you have any questions, please feel free to contact me.

Sincerely,

Fallon Burch

Consultation Coordinator

Treaties, Lands and Environment (TLE) Department

Deshkan Ziibiing (Chippewa of the Thames First Nation)

(519) 289-5555 Ext. 251



APPENDIX 1.3 Public Information Centres



PIC # 1 INFORMATION

R.V. Anderson Associates Limited 557 Southdale Road East, Suite 200 London ON N6E 1A2 Canada T 519 681 9916 F 855 833 4022 rvanderson.com



MEMORANDUM

To:	_File	Date:	January 15, 2024
From:	John Tyrrell	Project No.:	236786.01
Subject:	Notes from PIC # 1		

- 1. PIC#1 was held on January 10, 2024, for the Municipality of Strathroy Caradoc's Water, Wastewater and Stormwater Master Plan and Pollution Prevention Control Plan at the Caradoc Community Centre in Mount Brydges. The posted hours were from 6:00 PM to 8:00 PM.
- 2. In attendance for proponents were:

Municipality of Strathroy - Caradoc

Mayor - Colin Grantham Deputy Mayor - Mike McGuire Members of Council

- John Brennan
- Brian Derbyshire
- Frank Kennes
- Greg Willsie

CAO - Trisha McKibbin

Director, Engineering and Public Works – Jake

Stauss

Manager of Environmental Services – Paul

Zuberbuhler

Director of Building and Planning – Jennifer Huff

Director of Human Resources – Doug Payne

R.V. Anderson Associates Limited

Project Manager – John Tyrrell Senior Wastewater Engineer – Harpreet Rai Process Designer – Darika Sharma Vice President – David Evans

- 3. Approximately 56 residents and landowners' names were noted on the sign in sheets for this event.
- 4. Handouts were provided and boards of the presentation were displayed.
- 5. Comment sheets were provided and a box to drop off comments was put out. Additionally a QR Code was provided should participants wish to provide electronic comments.
- 6. The presentation began at approximately 6:10 PM and was followed by a Q& A session.
- 7. The following is a summation of the questions from the Q& A session:
 - a. Question on current and past Mount Brydges wastewater treatment plant performance in meeting effluent targets. Response was that the annual reports for



the wastewater treatment plants are available on the Municipal website and are linked here for reference.

- i. 2022 Strathroy-Caradoc WWTP report https://www.strathroy-caradoc.ca/en/resourcesGeneral/2024/EPW/2022-Strathroy-WWTF-Annual-Report.pdf; and
- ii. 2022 Mt Brydges WWTP report https://www.strathroy-caradoc.ca/en/resourcesGeneral/2024/EPW/2022-Mt-Brydges-WWTF-annual-report.pdf
- iii. Mount Brydges and Strathroy 2011 to 2022 annual water systems reports https://www.strathroy-caradoc.ca/en/city-hall/Reports-and-Studies.aspx
- b. Question from residents in Campbellville on high groundwater levels and surface flooding. Response was that while this is not within the scope of the Master Plan but that issues could be written down on the comment sheets for review of Municipality staff.
- c. Question from consultant on apparent difference between Comprehensive Review Mount Brydges meeting on January 8th and this meeting regarding growth numbers presented in this PIC. Response was that information from both meetings was based on the 2022 Residential Lands Needs Assessment Study (RLNA) prepared by Waterson & Associates Economists Ltd.
- d. Question from resident on why current problems at Mount Brydges WWTP are not part of this meeting? Response was that the Master Plan is focussed on the future servicing and the upgrades to water/wastewater/SWM and that the Mount Brydges WWTP ongoing project is to bring it to its current approved capacity.
- e. Question if need for capacity above current Mount Brydges WWTP is required in the 20-year period or past this, would it make sense to derate existing WWTP capacity and build another plant somewhere else. If WWTP capacity expansion is required, master plan will look at options to achieve this and propose a recommended option.
- f. Question on what is the pollution in the PPCP? The response was that pollution refers to untreated or partially treated sewage that is discharged into the environment which usually occurs during unusually heavy rain or spring runoff events.
- 8. The Presentation and Q&A session was approximately an hour and a half in length.
- 9. Municipality and RVA staff remained available to respond to individual questions following the formal Presentation and Q&A session until 8:00 PM.
- 10. The meeting concluded at 8:00 PM.
- 11. Comments received via the electronic QR Code provided will be reviewed separately,

Memo Prepared by:

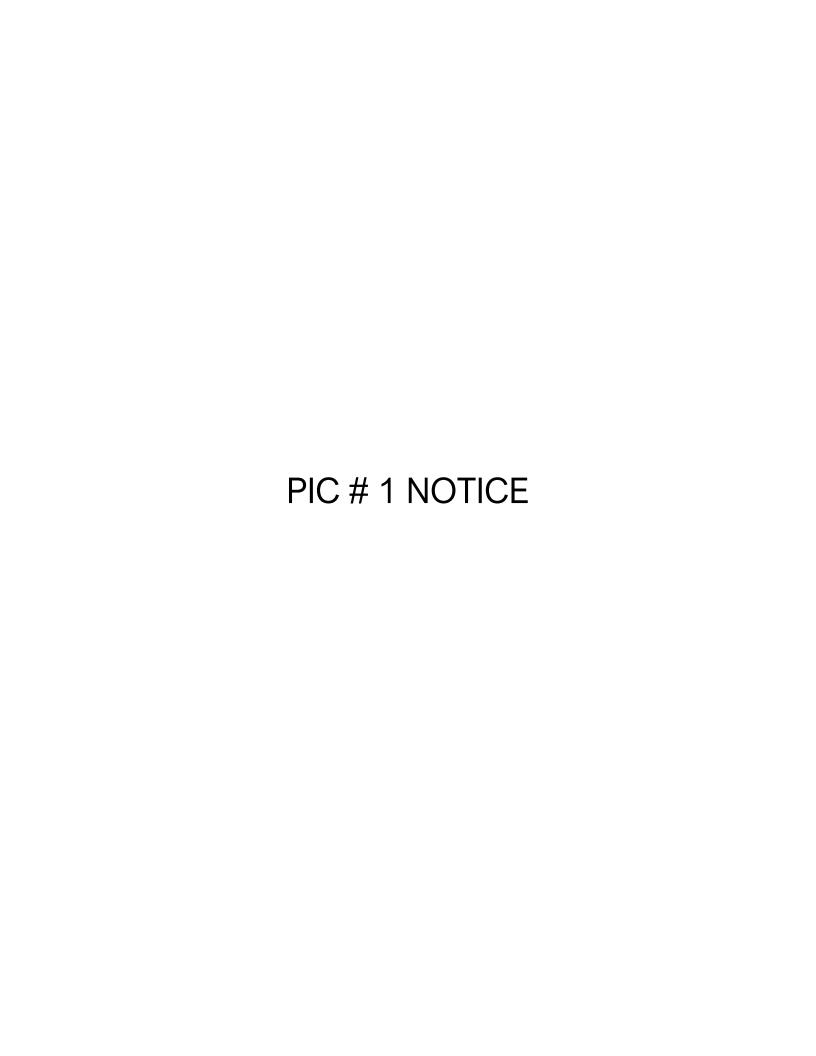
John Tyrrell, M.Sc. (Eng.), P.Eng. Associate/Regional Manager

Project Manager

Attachments:

- # Attachment
- 1 PIC Notice
- 2 PIC # 1 Sign-in Sheet
- 3 PIC # 1 Presentation
- 4 Written comments received in comments box.

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Notice of Public Information Session #1

Water, Wastewater and Stormwater Master Plan and Pollution Prevention Control Plan

The Municipality of Strathroy-Caradoc is preparing a Master Plan for its water, wastewater, and stormwater infrastructure as part of ongoing efforts to improve the performance of the Municipality's infrastructure. Additionally, the Municipality is undertaking a Pollution Prevention Control Plan (PPCP) to provide a road map for implementation of infrastructure and operational improvements that will mitigate the impacts of wet weather sewer system overflows on the environment. The Master Plan and PPCP will provide the Municipality with guidance for capital planning and project implementation for water, wastewater, and stormwater services to accommodate growth for the next 20 years and beyond in a cost effective and environmentally sustainable manner.

The study is being undertaken in accordance with the Municipal Class Environmental Assessment (MCEA) 2023 process for Master Plans.

How do I participate?

When: Wednesday, January 10, 2024, from 6:00 – 8:00 p.m.

Where: Caradoc Community Centre. 565 Lions Park Drive, Mount Brydges, ON

How: In-person

The presentation boards from the meeting along with a summary of Question and Answers will be posted on the project webpage following the meeting: www.strathroy-caradoc.ca/en/city-hall/water-wastewater-and-stormwater-master-plan-and-pollution-prevention-control-plan.aspx.

For more information or to be added to the study's distribution list to receive updates, please contact a member of the study team below:

Paul Zuberbuhler B.Sc, B.Comm, C.E.T

Manager of Environmental Services Municipality of Strathroy-Caradoc **Tel:** 519-245-1105 ext. 274

pzuberbuhler@strathroy-caradoc.ca

52 Frank Street

Strathroy ON N7G 2R4

John Tyrrell, M.Sc. (Eng.), P. Eng.

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London, ON N6E 1A2

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PIC # 1 SIGN-IN SHEET



Municipality of Strathroy-Caradoc Water, Wastewater and Stormwater Master Plan and Pollution Prevention Control Plan

Public Information Session # 1 January 10, 2024

ATTENDANCE SHEET

Name	Affiliation (i.e., resident, landowner, agent,	Contact Information (please include one of email address, phone number, address)
	agency, consultant)	number, address)
Alex Gubbels	resident	alex.gubbels@yahoo.ca
DEL DOW DOW D	4 11	j-graansma@ notmail-com
Johnny Graansm		j-graansma & notmail-com
James white	Resident	jameswhite27@love.ca
Anthory Gubbe	s consuctant	anthony gulfoels & LDS consuctionts. co
Mike Jurak		masseriale @ Homail. com
Kick Mackinson	ROSIDETE	mackinnon sick 50 gmanl.com
Paul & Brench Den	my resident	bdennis 1973 d vahor.ca
A 1	- 0	ext billwordell as kynet c
Jerry Rose Byrowsk		jbujnowski@execulink.com
Douglas MPhee	resident	mstermphee@anail.com
JIM BALICSAR	D	Thalicsaka gmail, com
Raymond Franke	Ц	
PAUL POMNIKON	h	pomnikoup@gmail.com
L. Vandertuin	Resident	the vander truns @ ymail. com.
D . tom chick	residut	the vander tuins @ ymail.com. daren tomehick o smarl.com
1.But	Parchy	Moment law @ yahoo. ca.
JOT W. Mamser	resident	



Municipality of Strathroy-Caradoc Water, Wastewater and Stormwater Master Plan and Pollution Prevention Control Plan

Public Information Session # 1 January 10, 2024

ATTENDANCE SHEET

	Name	Affiliation (i.e., resident, landowner, agent, agency, consultant)	Contact Information (please include one of email address, phone number, address)
	Alan Johnson	Residat	
	Gre Willie		
(Jaxel van		
0	Devary.		
	CAD Donald	landowner	
	Sheila Pellow	resident.	
(Charlie & Murt Payne	4 − − − − − − − − − − − − − − − − − − −	
18	Lista Sake Friesa	Residents/hander	LV:
	RPL Demeulengen	landown	
	TredWarren	Resident	
	Ven Londhjan	Resident	
	MIKE EARLEY		
	hoave HATHANAY	Rh5/13/4/MT	
	SHELLY MORRISON	RESIDENT.	
1	AAMES BURR	RESIDENT.	
	EMPOR LANSfort	RECIDENT.	
	Peter Melink	Resident	
	July Rok	1)	



Municipality of Strathroy-Caradoc Water, Wastewater and Stormwater Master Plan and Pollution Prevention Control Plan

Public Information Session # 1 January 10, 2024

ATTENDANCE SHEET

Name	Affiliation (i.e., resident, landowner, agent, agency, consultant)	Contact Information (please include one of email address, phone number, address)
Suzie Flegal	resident	Suzie Gregel@hatmail.com
Catherine Nikota Brion Nikota	resident/landou	brianiko a Jahoo. ca
Ide person	ResideL	Joel-deborro Hotmail.com
MichelloGeen	Pondent	acanadianwhocares@yahoo.cg
Brian Persystore	concellor	
Robert Brun	et landowne	- rahbrunet@hotmail.com
Gary Lawton	Courselon	grlawton 315@ quail. com
MIKE NALY	CONTRACTOR	FUR TOWN
Pallic PEARX	Le adul	
Rob Water	Resident	
Jonatha Coupra	Residen	
)!

PIC # 1 PRESENTATION







PURPOSE OF MEETING





- Introduce you to the study
- Provide an overview of the study process
- Identify the issues and reason for this study
- Summarize the Municipality's water, wastewater and stormwater systems
- Present information on what we have found to date

We want to hear from you!

- Do you have any observations that you would like to share?
- Do you have any questions regarding the study?
- Do you have any questions regarding the Master Plan process?









- Formed in 2001 from an amalgamation of the Town of Strathroy and the Township of Caradoc
- Covers an area of approximately 27,000 ha.
- Urban-rural municipality with large agricultural areas and a few urban settlements.
- 2021 Census population 23,871 residing in 9,695 private dwellings.
- Two main urban settlement areas Strathroy and Mount Brydges – and smaller settlements comprising of Melbourne, Campbellville, and Delaware West.
- The Master Plan focuses on the municipal services in the two urban settlement areas (Strathroy and Mount Brydges).





Municipality of Strathroy Caradoc – Official Plan

An Official Plan is a legal policy that guides the short-term and long-term development in your community. The plan is developed through a public and legislative process in accordance with the Ontario Planning Act, and the community input helps ensure that future planning and development will meet the specific needs of your community.

Some policies that Official Plans deals with include:

- Where new housing, industry, offices and shops will be located;
- What services like roads, watermains, sewers, parks and schools will be needed;
- When, and in what order, parts of your community will grow; and
- Community improvement initiatives.

Once an Official Plan is in effect, it guides all Municipal planning decisions, meaning:

- The local council and municipal officials must follow the Plan;
- All new services, sewer or watermains etc. must conform to the Plan; and
- All bylaws must conform to the official plan.



Municipality of Strathroy Caradoc – Official Plan

- Under the Municipality's Official Plan, Strathroy, Mount Brydges and Melbourne are designated as settlement areas.
- Only settlements of Strathroy and Mount Brydges are fully serviced by both Water Distribution System and Wastewater Collection & Treatment System.
- Service-Related Policies:
 - By-Law No. 14-20 <u>mandates connection to municipal WDS</u> of all housing units including buildings <u>fronting or adjacent to watermain</u>, and water consumption to be <u>metered</u>. Once connection is established, alternative water supply cannot be used and cannot enter municipal sanitary sewer system.
 - By-Law 64-14 mandates connection to sanitary sewer mains of housing units including buildings, provided treatment capacity is available. Sewage entering sewer may only contain water originating from municipal WDS (except for homes connected prior to enactment of this by-law, and for commercial/industrial properties that have entered a discharge agreement.



Master Plan and PPCP Purpose and Objectives

Master Plans rely on the analysis and detailed policies developed in municipal Official Plans such as speed of growth, growth location, and types of growth to determine infrastructure needs.

Master Planning provides a basis for integrating water, wastewater and stormwater infrastructure requirements for existing and future land uses as follows:

- Provides the Municipality the benefit of reducing time and costs associated with undertaking specific studies to support individual project planning; and
- Projects may be proposed in this Master Plan and some may require additional investigation (Schedule B and C projects) per the Municipal Class Environmental Assessment (MCEA) process.

A Pollution Prevention Plan (PPCP) is:

- Intended to be a part of the Municipality's ongoing efforts to improve the performance of sanitary and storm sewer infrastructure; and
- The aim is to minimize the discharge of untreated or partially treated wastewater during extreme weather events.

Summary of Differences between Official Plan and Master Plan





Official Plan (OP)

- The local council and municipal officials must follow the Plan;
- All new services, sewer or watermains etc. must conform to the Plan;
- All bylaws must conform to the official plan; and
- An OP deals mainly with issues such as:
 - where new housing, industry, offices and shops will be located,
 - what services like roads, watermains, sewers, parks and schools will be needed,
 - when, and in what order, parts of your community will grow.

Master Plan (MP)

- Governed by Environmental Assessment Act;
- Build upon the analysis and detailed policies developed through OP;
- Plans on how to service growth detailed in the OP in municipal servicing (roads, water, wastewater, stormwater);
- No policies/bylaws created; and
- Can be undertaken:
 - As a high-level review for planning infrastructure services and support future planning of specific projects based on OP (MCEA Approach 1),
 - In conjunction with OP, Secondary Plans, or subdivision plans and/or include planning of specific infrastructure (MCEA Approaches 2 and 3).

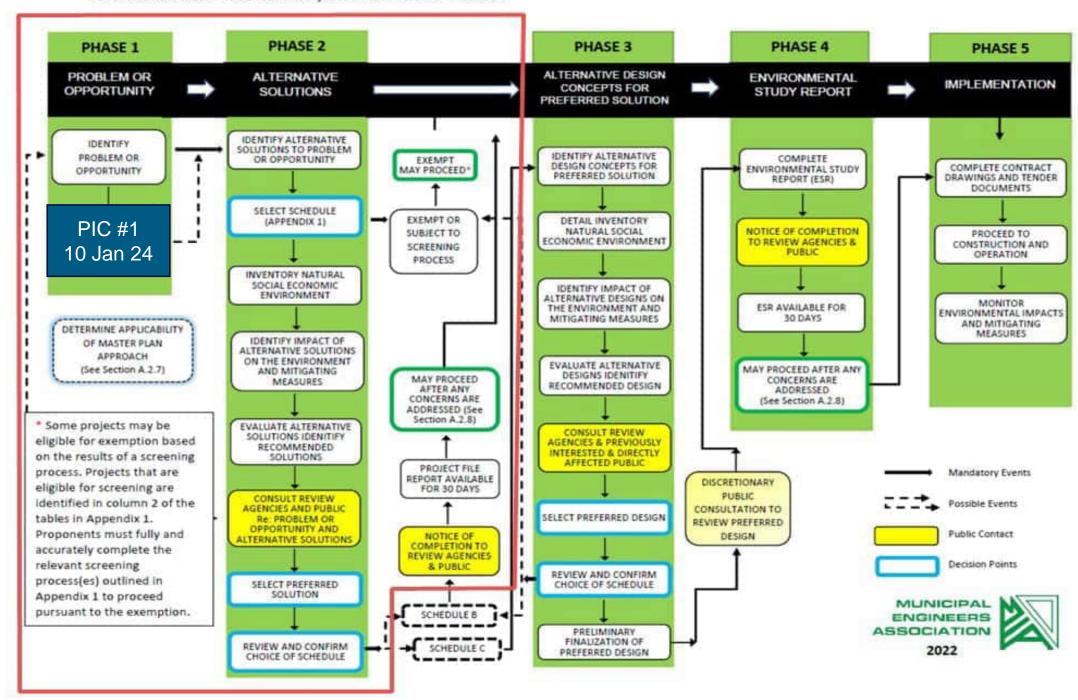






EXHIBIT A.2. MUNICIPAL CLASS EA PLANNING AND DESIGN PROCESS

NOTE: This flow chart is to be read in conjunction with Part A of the MCEA







Master Plan Approach

The Strathroy-Caradoc Master Plan will be developed following Approach #1 of the MCEA process, which entails:

- Phase 1 Identification of problem (deficiency) or opportunity;
- Phase 2 Identification of alternative solutions to address the problem or opportunity; and
- Provide the public and review agency the opportunity for comments prior to being finalized.

The Master Plan would therefore become the basis for and be used in support of future investigations for the specific Schedule B and C projects identified within it.

Master Plan Purpose



The final WWSMP and PPCP deliverables are generally described as to:

- ✓ Conduct a high-level validation of water demand and wastewater flow design criteria;
- ✓ Propose projects for the 20-year WWWSWM Capital Implementation Plan (2025 to 2046) detailed in five-year horizons 2025-2029, 2030-2034, 2035-2039 and 2040-2046;
- ✓ Identify future Class EA Study requirements for applicable water wastewater and stormwater capital projects; and
- ✓ Establish a framework from which development infrastructure can be appropriately identified, costed and phased in Development Charges according to DC policies.





Master Plan Problem and Opportunity Statement

- As the first step in Phase 1 of the Class EA process, the proponent (the Municipality) must identify and describe the problem or opportunity that the project is intended to address.
- The Problem and Opportunity Statement outlines the need for the project and establishes the general parameters of the study.
- The Municipality has chosen the following as its statement of the Problem and Opportunity Statement to be addressed by the Master Plan/PPCP:

To identify preferred water and wastewater serving strategies to meet the Municipality of Strathroy-Caradoc's growth needs to 2046 as well as provide effective on-going continuity to existing serviced community areas across the Municipality of Strathroy-Caradoc as appropriate.





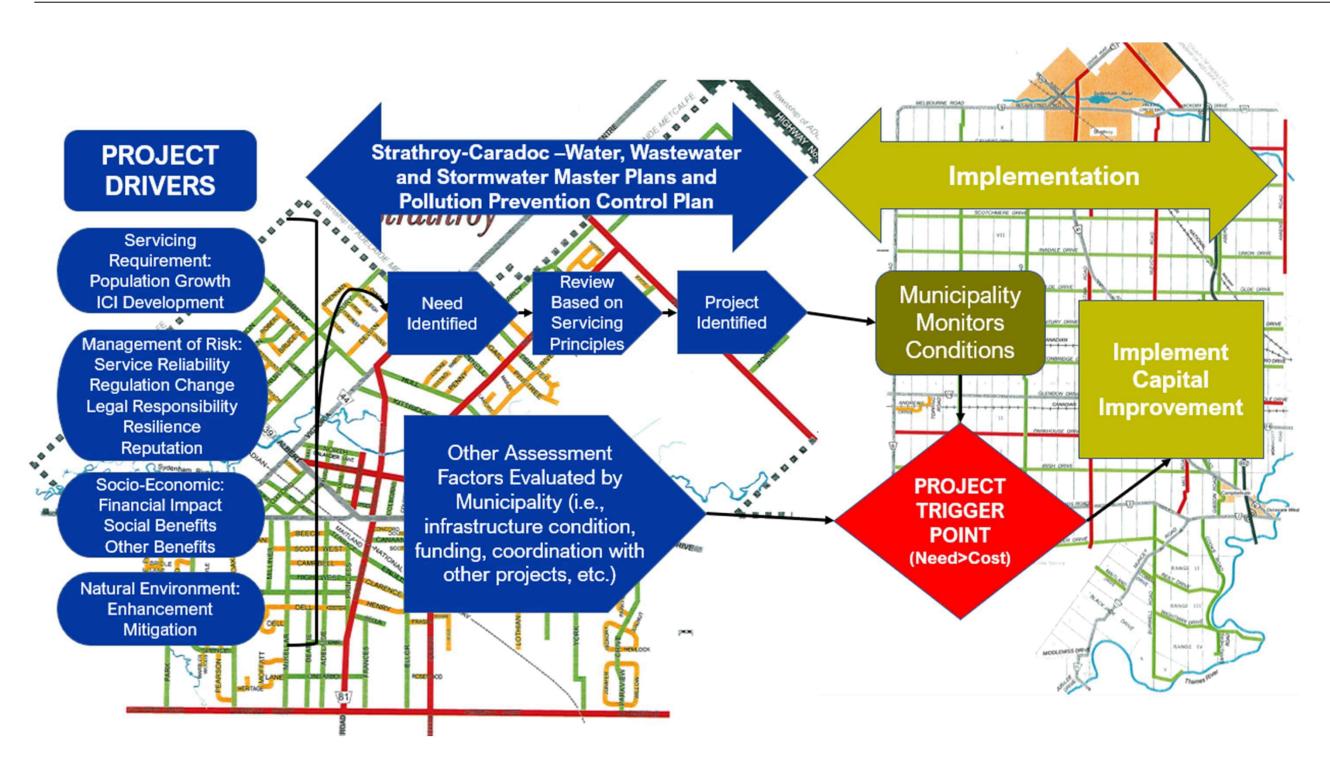
Master Plan Charter Principles

#	Principle	#	Principle
1	The Master Plan and PPCP should be informed by the Strathroy-Caradoc's Strategic Plan.	8	Proven, cost effective technologies that should be in long term use and are capable of continuous improvement should be utilized.
2	The Master Plan and PPCP should support the Strathroy-Caradoc's Official Plan and Green Initiatives and other initiatives to address Climate Change.	9	Consider solutions that build upon the current assets provided they are still viable over the horizon of the Master Plan.
3	Master Plan and PPCP solutions should suit the Strathroy- Caradoc's Growth Plan – If Strathroy-Caradoc wishes growth in an area, the Master Plan would not prevent it.	10	Recommended Master Plan solution be 20-year solutions and ensure that there is expandability to 40-years, if possible (or to the life expectancy of the infrastructure).
4	Preference should be for long term servicing solutions over interim solutions.	11	PPCP solutions should be long term solutions that "fix" the pollution issue.
5	All services to be fully funded through adequate planning, budgeting and identified revenue streams.	12	Synergy - Look for synergies with current or potential future infrastructure requirements with other municipalities and regional systems if this is in the best interest of the Strathroy-Caradoc.
6	Master Plan and PPCP solutions should be developed which minimize risk to the Strathroy-Caradoc, users, and others during construction, commissioning, and operation of the upgrades.	13	Minimize Complexity – Examples include minimizing mechanical components and pumping.
7	The PPCP solution should integrate the collection system, pumping stations and the WWTPs to achieve the F-5-5-5 requirements.		





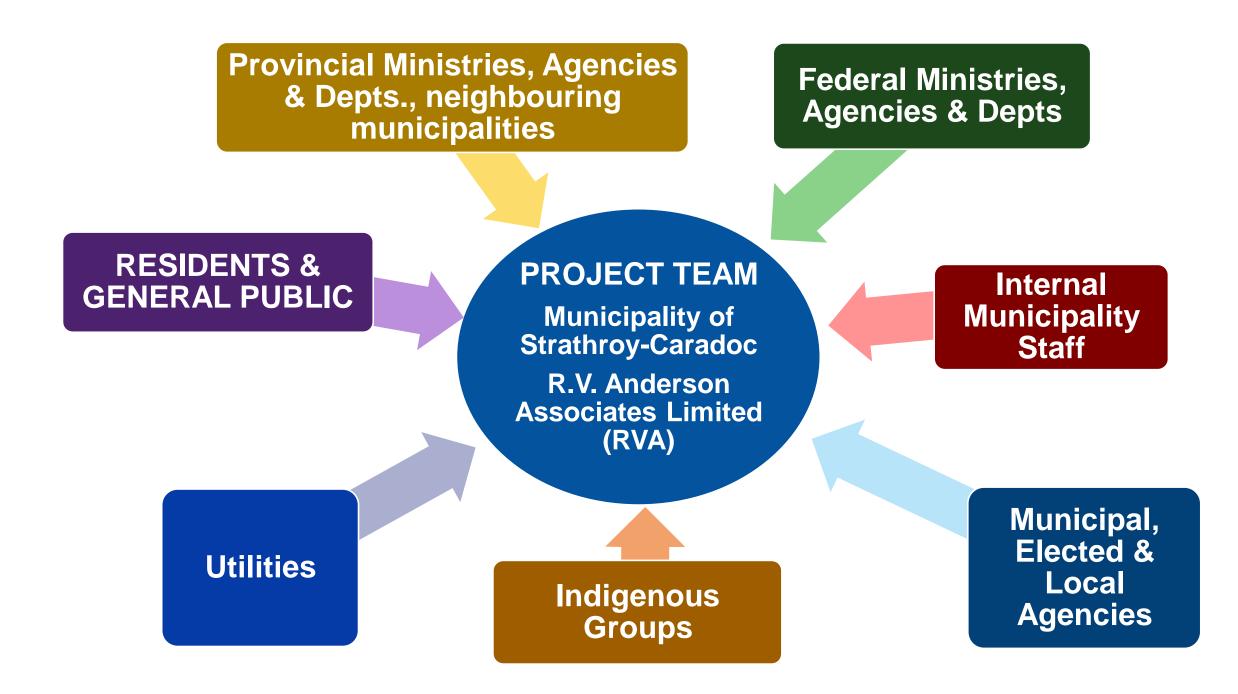
Master Plan/PPCP Implementation Framework



Input Into Master Plan





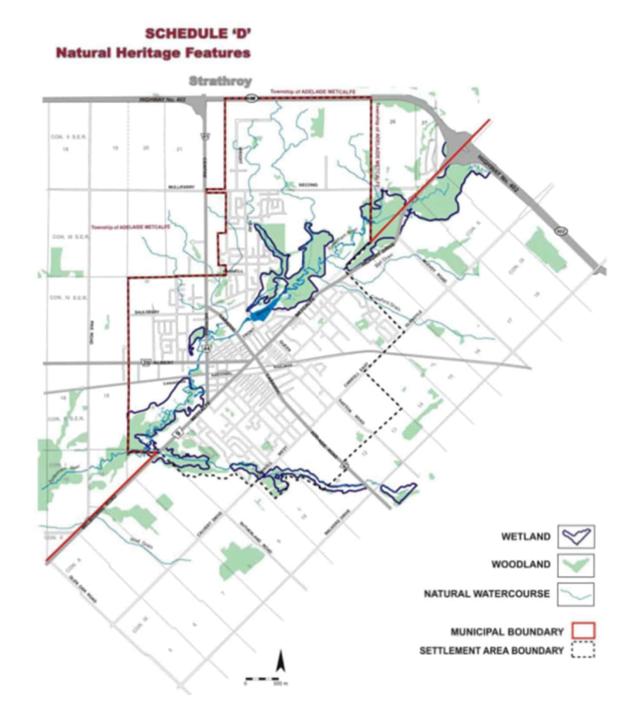








- Land Use within the Strathroy portion of the Study Area is generally:
 - Urban (residential, commercial, industrial);
 - Wetland and woodland features within the valley lands of the Sydenham River and its tributaries; and
 - Agricultural lands to the south.
- Strathroy portion of the Study Area is in the St. Clair Region Conservation Authority watershed.

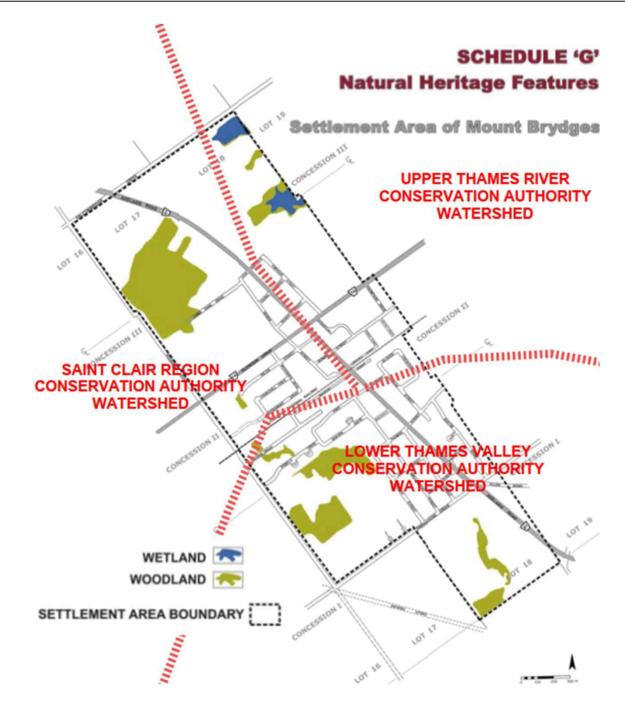








- Land Use within the Mount Brydges portion of the Study Area is generally Urban (residential, commercial, industrial).
- Mount Brydges portion of the Study Area is within the following watersheds:
 - St. Clair Regional Conservation Authority;
 - Upper Thames River Conservation Authority; and
 - Lower Thames Valley Conservation Authority.



Population Projections



2022 Residential Lands Needs Assessment Study (RLNA) prepared by Waterson & Associates

Economists Ltd.

Population	2021	2026	2031	2036	2041	2046
Strathroy-Caradoc	24,700	27,030	30,190	32,400	33,960	35,360

Town of Strathroy:

- Total population of 23,900 by 2046, with an average annual growth rate of 1.5%; and
- 3,920 additional houses at an annual growth rate of approximately 157 houses, bringing the total to 10,480 by 2046.

Town of Mount Brydges:

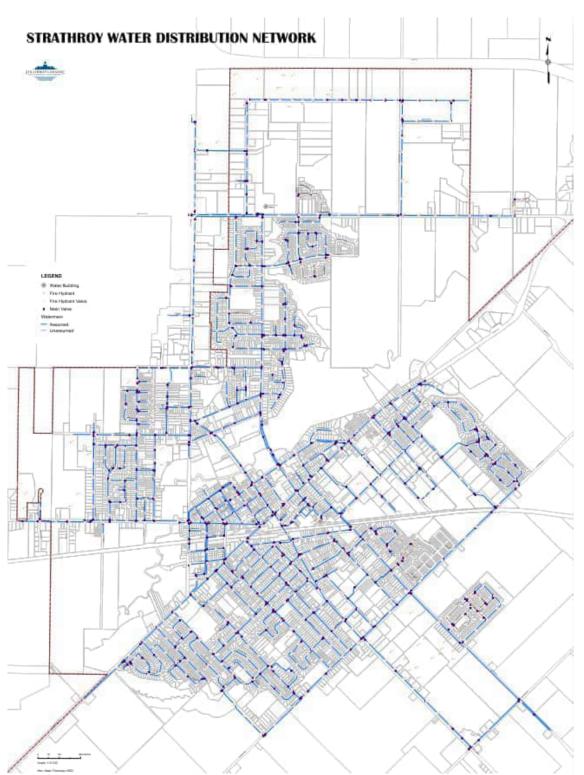
- Will have a total population of 7,500 by 2046, with an average annual growth rate of 3.3%;
 and
- It will also see 1,750 additional houses at an annual growth rate of approximately 70 houses, bringing the total to 2,940 by 2046.





- Zone 1 located south of the booster pumping station with lower elevations; and
- Zone 2 which is located north of the booster pumping station and is on higher elevated ground.
- Second Street pumping station which has a 3-celled storage reservoir, each of volume 3,750 m³ for a total capacity of 11,250 m³;
- One elevated water tower with a total volume of 1,900 m³;
- Approximately 107 km of watermains and 685 fire hydrants.

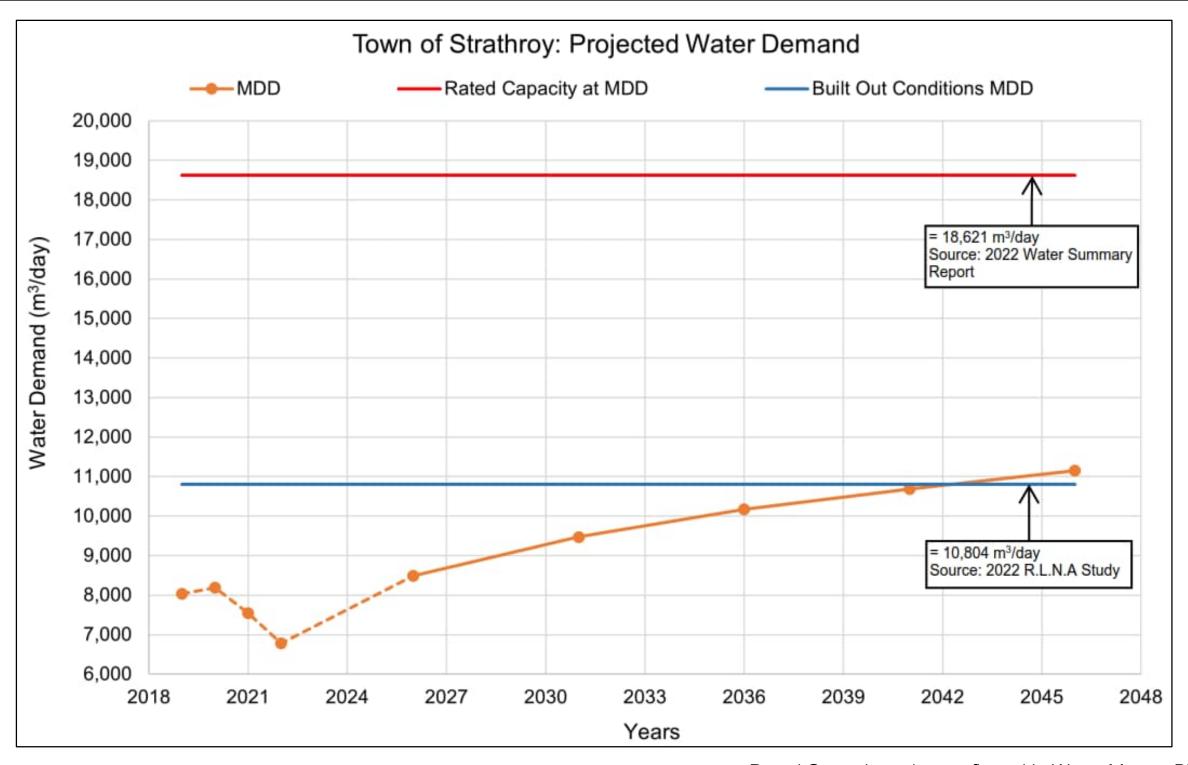
	Supplied	Billed Non-Revenue (%			Distribution supplied volume)	
Year	(m ³)	(m ³)	Volume (m ³)	Billed	Non-Revenue Volume	
2022 - 2023 July-Jun.	964,812	898,462	66,350	93	7	







Strathroy Water Demand Projection







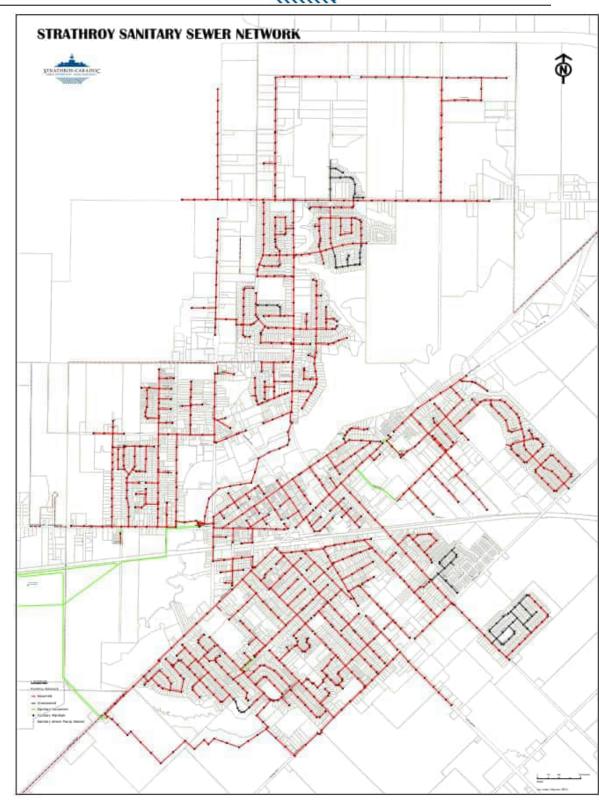


Collection System:

- Nine (9) sanitary pump stations;
- 90 km of gravity sewers and 6 km of forcemains; and
- 1,236 maintenance holes.

Wastewater Treatment Plant

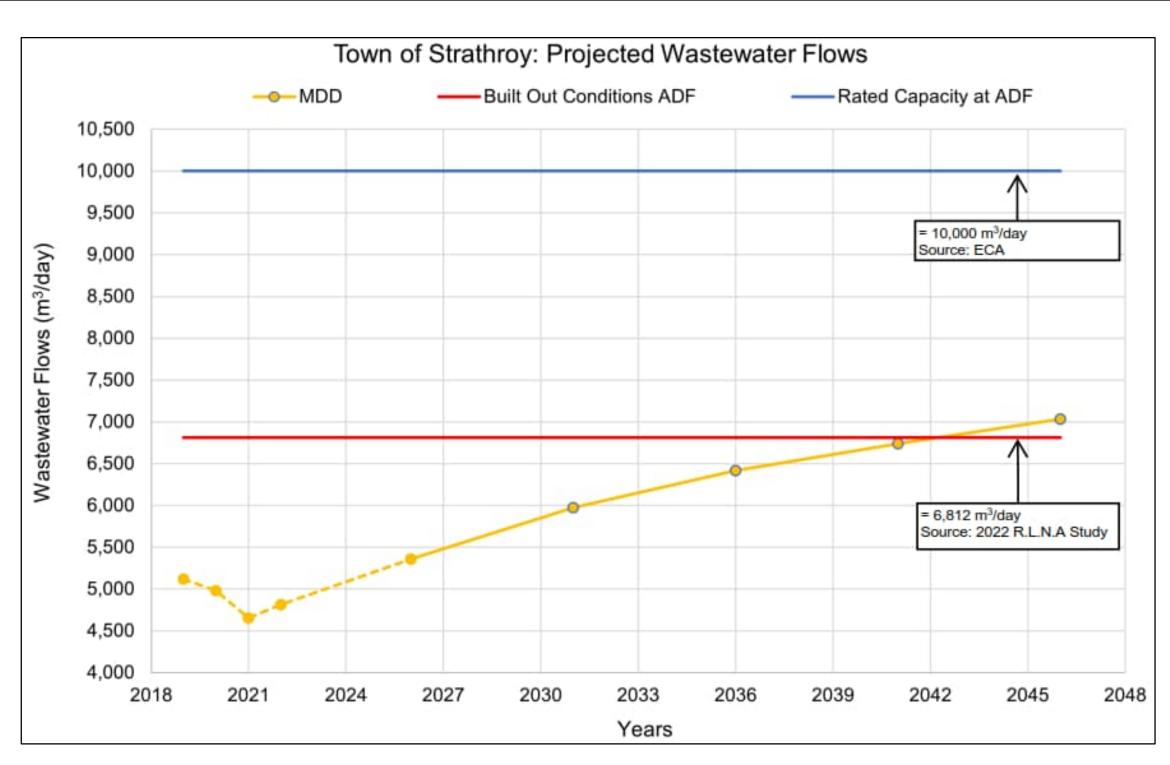
- Mechanical treatment plant with a design rated capacity of 10,000 m³/day.
- Liquid train comprises of mechanical screening, one aeration basin, chemical phosphorus removal, two secondary clarifiers, filtration and UV disinfection.
- Sludge storage is provided by an onsite lagoon.







Strathroy Wastewater Flow Projection

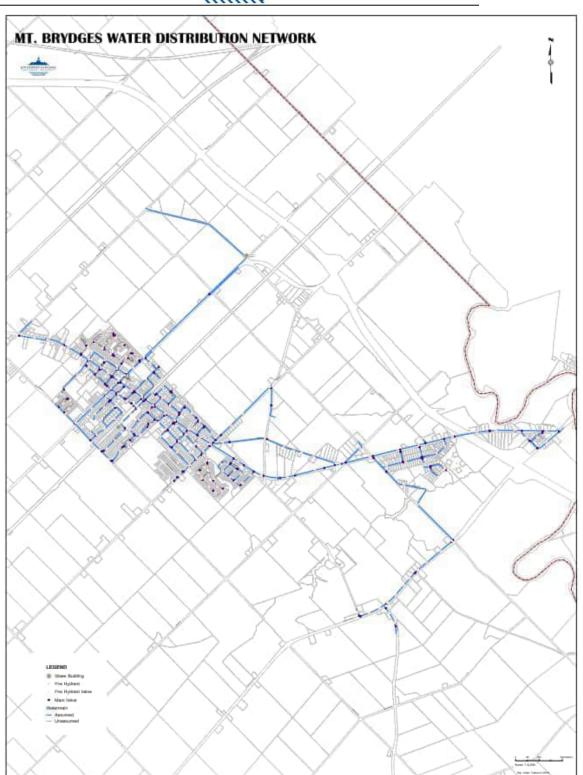






- The Glendon Drive High Lift PS (HLPS) that has an underground 2-celled storage reservoir with total capacity of 1,630 m³. The HLPS has back-up power;
- Oriole Drive Monitoring and Re-chlorination Facility (Monitoring Station #3) that also has backuppower;
- Water Tower with a total volume of 720 m³; and
- The system consists of 45 km of watermains and 179 fire hydrants.

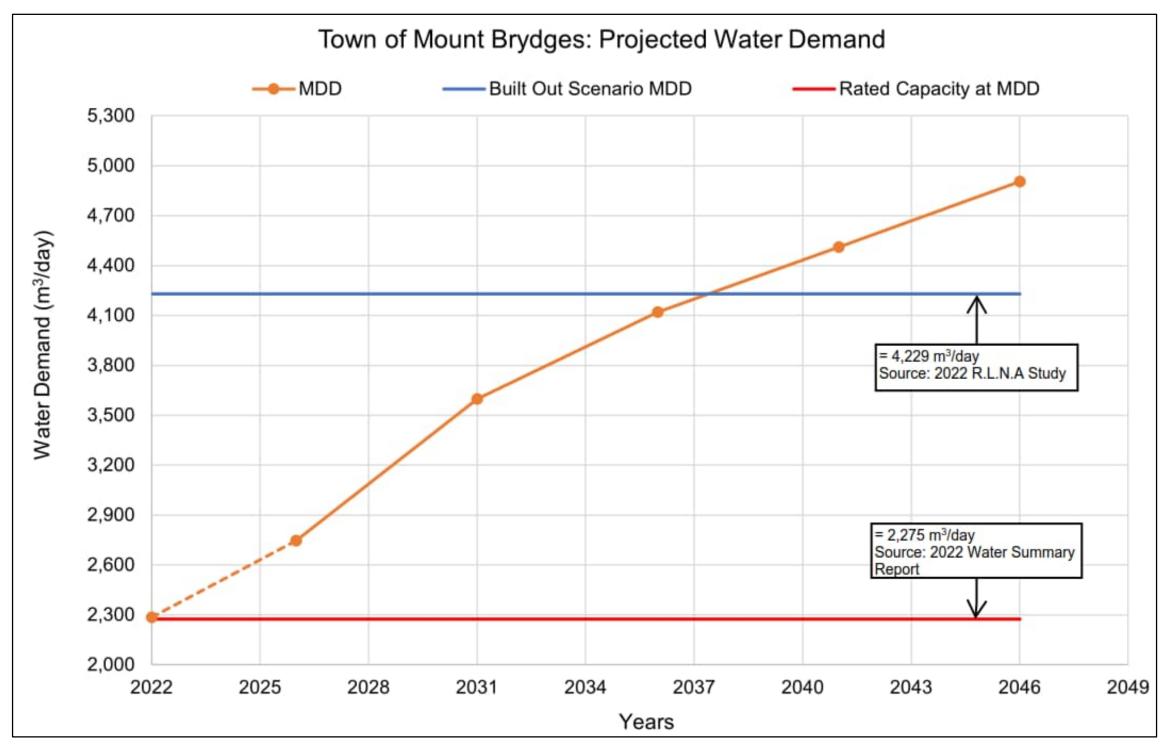
Voor	Supplied	Billed	Non-Revenue Water Volume (m³)	Distribution (% of supplied volume)	
Year	ear (m³)	(m ³)		Billed	Non- Revenue
2022 - 2023 July-Jun.	179,504	173,883	5,621	97	3







Mount Brydges Water Demand Projection



Mount Brydges – Wastewater Collection and Treatment System





Collection System:

- 11 km of gravity sewers and 2 km of forcemains; and
- 145 maintenance holes and two (2) sanitary pump stations.

Wastewater Treatment Plant

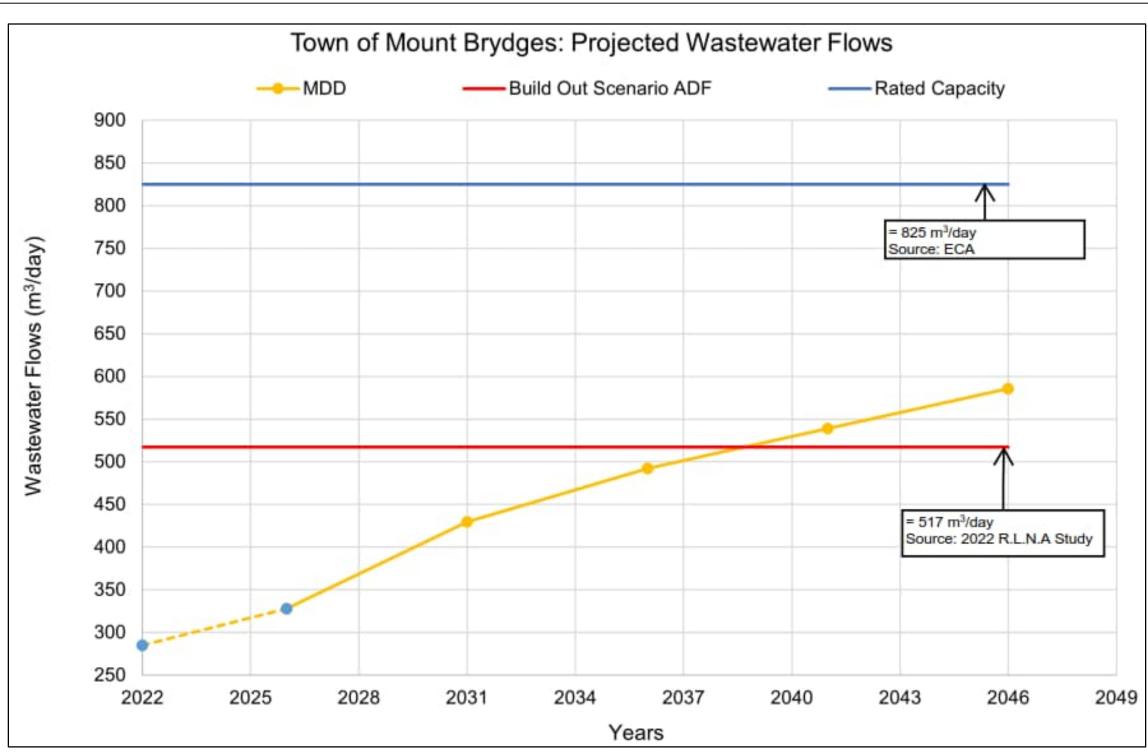
- Rotating Biological Contactor (RBC) based WWTP.
- Liquid train comprises of an inlet flow distribution chamber, two rotating biological contactor units, two secondary clarifiers, three continuous backwash filters, chemical addition, and UV disinfection. The rated capacity of the plant is 825 m³/day.
- Some areas of Mount Brydges remain serviced by private on-site sewage disposal systems.







Mount Brydges Wastewater Flow Projection





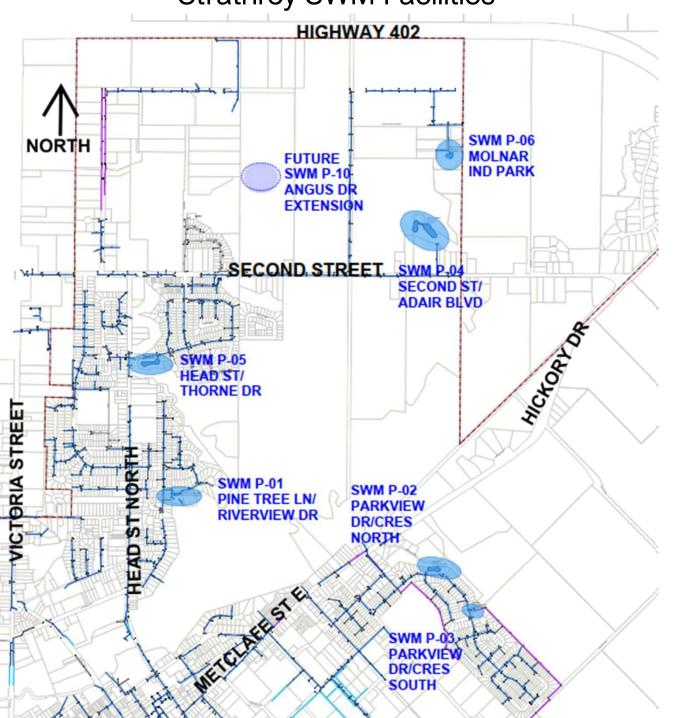
Stormwater Management (SWM) Facilities

- SWM facilities are generally required for new development and are intended to protect the environment by:
 - Matching post development to predevelopment flow rates (quantity treatment),
 - Providing water quality treatment primarily through sediment removal with some biological treatment (depending on time of year); and
 - Providing other benefits such as thermal control of runoff and environmental enhancement.
- Quantity facilities were first installed in 1980's and Quantity/Quality facilities in the 1990's
- Like water and wastewater systems, SWM facilities are regulated by the MECP
- MECP's Environmental Compliance Approval for a Municipal Stormwater Management System ECA Number: 058-S701, Issue Number: 1 dated February 8, 2023, Schedule B, identifies nine SWM facilities (SWMP 01 to 09)
- Agnes Drive Roadway Extension SWM Pond in Strathroy is a future SWMP-10 currently under review by MECP.

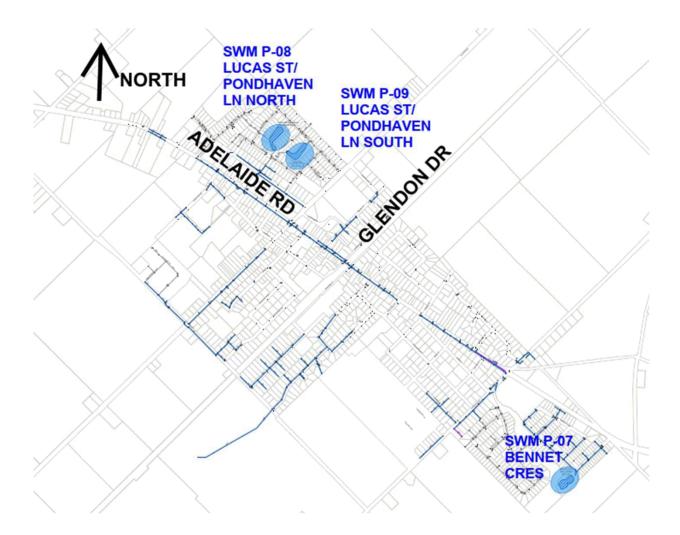
SWM Facilities



Strathroy SWM Facilities



Mount Brydges SWM Facilities



Project Schedule



- Undertake PIC # 1- January 10, 2024
- Completion of water modeling February 2024
- Completion of wastewater modeling March 2024
- Develop Water System Master Plan January to April 2024
- Develop Wastewater System Master Plan

 January to April 2024
- Develop Stormwater Master Plan January to April 2024
- Undertake Pollution Prevention Plan

 January to April 2024
- Council Presentation of Master Plan Progress (Council Presentation # 1) February 2024 if required
- Undertake PIC # 2 June 2024
- Municipality Council Presentation of Master Plan Report (Council Presentation # 2) July 2024
- Municipality Issues Notice of Completion July 2024
- Master Plan Completed (following 30-day review period) August 2024

Strathroy – Caradoc W/WW SWM MP







Thank you for attending this meeting.

Material on this meeting will be posted on the News & Public Notices Page:

https://www.strathroy-caradoc.ca/en/city-hall/water-wastewater-and-stormwater-master-plan-and-pollution-prevention-control-plan.aspx

Please feel free to ask a question or submit your comments via email or phone a member of the study team

Paul Zuberbuhler B.Sc, B.Comm, C.E.T. Manager of Environmental Services Municipality of Strathroy-Caradoc Tel: 519-245-1105 ext. 274 pzuberbuhler@strathroy-caradoc.ca 52 Frank Street Strathroy ON N7G 2R4





John Tyrrell, M.Sc. (Eng.), P. Eng.
Senior Project Manager
R.V. Anderson Associates Limited
Tel: 519-681-9916 ext. 5038
jtyrrell@rvanderson.com
557 Southdale Road East, Suite 200
London, ON N6E 1A2

PIC # 1 COMMENTS RECEIVED IN COMMENT BOX

Name:

Municipality of Strathroy-Caradoc

Comments and Questions Form



Water, Wastewater and Stormwater Master Plan and Pollution Prevention Control Plan

If you have any comments/questions you would like to provide to the Study Team, please fill out this form. The Study Team will review your comments and send you a response.

Contact Information: (to provide a reply)	Please provide one of the following: email address OR phone number OR mailing address
Comments and (Questions:
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Space for additional comments is available on the back of the page

Please submit comments in comment box at meeting or else forward your comments to the following members of the study team below:

Paul Zuberbuhler B.Sc, B.Comm, C.E.T

Manager of Environmental Services Municipality of Strathroy-Caradoc **Tel:** 519-245-1105 ext. 274 **pzuberbuhler@strathroy-caradoc.ca** 52 Frank Street Strathroy ON N7G 2R4

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Comments and Questions:
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Municipality of Strathroy-Caradoc

Comments and Questions Form



Water, Wastewater and Stormwater Master Plan and Pollution Prevention Control Plan

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Contact Information: (to provide a reply)	Please provide one of the following: email address OR phone number OR mailing address			
Comments and	Questions:			
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Manager of Environmental Services
Municipality of Strathroy-Caradoc

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pzuberbuhler@strathroy-caradoc.ca

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jtyrrell@rvanderson.com
557 Southdale Road East, Suite 200
London, ON N6E 1A2

Comments and Questions:				
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Was flow pryection inclusive of hiple?				

PIC # 2 INFORMATION



MEMORANDUM

To:	_ File	Date:	September 12, 2024
From:	John Tyrrell	Project No.:	236786.01
Subject:	Notes from PIC # 2		

- 1. PIC#2 was held on September 11, 2024, for the Municipality of Strathroy Caradoc's Water, Wastewater and Stormwater Master Plan and Pollution Prevention Control Plan at the Gemini Sportsplex in Strathroy. The posted hours were from 6:00 PM to 8:00 PM.
- 2. In attendance for proponents were:

Municipality of Strathroy – Caradoc

Councillor - Steve Pelkman
CAO - Trisha McKibbin
Director, Engineering and Public Works Mark Ortiz
Manager of Environmental Services - Paul
Zuberbuhler

R.V. Anderson Associates Limited

Project Manager – John Tyrrell Process Designer – Darika Sharma

- 3. Present at the meeting were:
 - 5 residents;
 - 2 consultants; and
 - 1 developer.
- 4. Handouts were provided and boards of the presentation were displayed. Comment sheets were provided and a box to drop off comments was put out. Additionally, a QR Code was provided should participants wish to provide electronic comments. The presentation began at approximately 6:10 PM and Municipal staff and RVA attended following the presentation to address any questions from participants.
- 5. Questions from the Presentation
 - a. Population Forecast

Q1: What is the basis of the population forecast?

A1: As directed by the Municipality, the 2022 Residential Lands Needs Assessment (RLNA) was prepared by Watson & Associates Economists Ltd.

Q2: What if this under counts actual population growth?

A2: The intent of the Master Plan is to provide a 20-year forecast but for this to be updated every 5 years. The next Master Plan will take into consideration actual population growth and updated planning projections for population.



b. Water Supply

Q: Is it confirmed that there is sufficient water supply capacity for Mount Brydges?

A: As noted in the water supply slide for Strathroy and Mount Brydges, the water supply from the LHPWSS is sufficient for future needs.

c. Campbellvale

Q: What are the surface water and high groundwater issues not addressed as part of this study?

A: This issue is not within the scope of the Water/Wastewater/SWM Master Plan nor the PPCP. Staff will review this issue and look to address this with Campbellvale residents separate from the Master Plan/PPCP.

d. Mount Brydges

Q: What would be the timing to address the Water Storage and Wastewater Treatment issues in Mount Brydges?

A: Municipal staff stated that they will review the findings of the Master Plan and look to confirm the timing for the needed projects to address these issues and that it would likely be in the near term.

- 6. The Presentation and Q&A session was approximately an hour in length.
- 7. Municipality and RVA staff remained available to respond to individual questions following the formal Presentation and Q&A session until 8:00 PM.
- 8. The meeting concluded at 8:00 PM.
- 9. Comments received via the electronic QR Code provided will be reviewed separately.

Memo Prepared by:

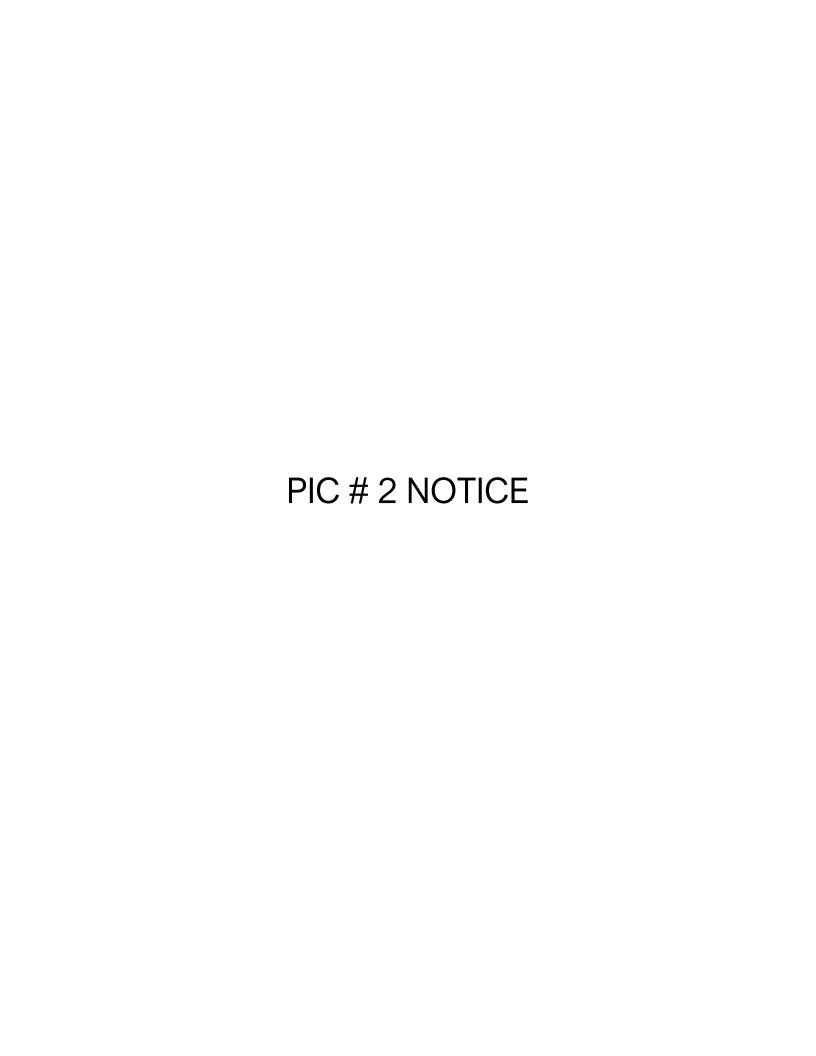
John Tyrrell, M. Sc. (Eng.), P. Eng.

Project Manager

Attachments:

- # Attachment
- 1 PIC Notice
- 2 PIC # 2 Sign-in Sheet
- 3 PIC # 2 Presentation
- 4 Written comments received in comments box.

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Notice of Public Information Session #2 - Water, Wastewater and Stormwater Master Plan and PPCP

Posted on Thursday, August 01, 2024

The Municipality of Strathroy-Caradoc is preparing a Master Plan for its water, wastewater, and stormwater infrastructure as part of ongoing efforts to improve the performance of the Municipality 's infrastructure. Additionally, the Municipality is undertaking a Pollution Prevention Control Plan (PPCP) to provide a road map for implementation of infrastructure and operational improvements that will mitigate the impacts of wet weather sewer system overflows on the environment. The Master Plan and PPCP will provide the Municipality with guidance for capital planning and project implementation for water, wastewater, and stormwater ser vices to accommodate growth for the next 20 years and beyond in a cost effective and environmentally sustainable manner.

The study is being undertaken in accordance with the Municipal Class Environmental Assessment (MCEA) 2023 process for Master Plans.

How can I participate?

The Municipality is hosting Public Information Meeting #2 to report on the progress of the study and provide members of the public with an opportunity to provide comments prior to its finalization. The Public Information Meeting will be hosted in person and will include presentation boards and the opportunity for the public to ask questions of the project team.

When: Wednesday, September 11, 2024, from 6:00 – 8:00 p.m. **Where:** Gemini Sportsplex - 667 Adair Blvd., Strathroy, ON

How: In-person

The presentation boards from the meeting along with a summary of Question and Answers will be posted on the project webpage following the meeting: www.strathroy-caradoc.ca/en/city-hall/water-wastewater-and-stormwater-and-stormwater-master-plan-and-pollution-prevention-control-plan.aspx (/en/city-hall/water-wastewater-and-stormwater-master-plan-and-pollution-prevention-control-plan.aspx). For more information or to be added to the study's distribution list to receive updates, please contact a member of the study team below:

Paul Zuberbuhler B.Sc, B.Comm, C.E.T Manager of Environmental Services Municipality of Strathroy-Caradoc Tel: 519-245-1105 ext. 274 pzuberbuhler@strathroy-caradoc.ca (mailto:pzuberbuhler@strathroy-caradoc.ca)52 Frank Street Strathroy ON N7G 2R4

John Tyrrell, M.Sc. (Eng.), P. Eng. Senior Project Manager R.V. Anderson Associates Limited Tel: 519-681-9916 ext. 5038 jtyrrell@rvanderson.com

(mailto:jtyrrell@rvanderson.com)557 Southdale Road East, Suite 200

Except for personal information, all comments will become part of the public record of the study. The study is being conducted according to the requirements of the MCEA, which is a planning process approved under Ontario's Environmental Assessment Act

Notice of Public Information Session #2
 (/en/resourcesGeneral/2024/EPW/public information session notice 2.pdf)
 (PDF[86kB])

Contact Us

The Municipality of Strathroy-Caradoc 52 Frank Street Strathroy, Ontario N7G 2R4 Map this Location.

E-Mail General Inquiries

T. 519-245-1070 F. 519-245-6353

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52 Frank Street, Strathroy ON N7G 2R4 Phone: 519-245-1070 Fax: 519-245-6353

Customer Service: Monday - Friday 9:00am - 4:00pm

The Municipality of Strathroy-Caradoc acknowledges that it is located on Pre-Confederation Treaty 25 territory. We are thankful to the generations of people who have taken care of this land, including The Chippewas of the Thames First Nation, The Munsee-Delaware First Nation, and The Oneida Nation of the Thames.

<u>Designed by eSolutions</u>

PIC # 2 SIGN-IN SHEET



Municipality of Strathroy-Caradoc Water, Wastewater and Stormwater Master Plan and Pollution Prevention Control Plan

Public Information Session # 2 September 11, 2024

ATTENDANCE SHEET

	Name	Affiliation (i.e., resident, landowner, agent, agency, consultant)	Contact Information (please include one of email address, phone number, address)
	Erin deNo.	Resident	devuserin@hotmail.com.
ł	Terry Flegre	Resident	tel. (519) 264-2321
	Catherine Nikota	٨.	catherniko@yahoo.ca
	Josh Monster	consultant	imaster@mte85.com
	Loug MAhae	resident	mistermophee@gmail.com
	LobBrunet	n	rahbrunet@hotmail.com
	JIM BANMAN	CIRRUS DEV.	jim@cirrusdevelipments.ca mpletch@dillon.ca
	Mike plotel	Dillon	mpletch @dillon.ca
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PIC # 2 PRESENTATION







Purpose of Meeting





- Provide details on findings of the Water, Wastewater and Stormwater Management (SWM) Master Plan
- Provide details on findings of the Pollution Prevention Plan (PPCP) Identify the issues and reason for this study
- Summarize the recommendations and costs associated with the Master Plan and PPCP

We want to hear from you!

- Do you have any observations that you would like to share?
- Do you have any questions regarding the study?
- Do you have any questions regarding the Master Plan process?



Master Plan/PPCP Project Schedule





- Undertake PIC # 2 September 11, 2024
- Comments Received from PIC # 2 September 25, 2024
- Finalize Master Plan and PPCP
- Municipality Council Presentation of Master Plan Report and PPCP October 2024
- Municipality Issues Notice of Completion October 2024
- Master Plan and PPCP Completed (following 30-day review period) November 2024





Master Plan/PPCP Purpose and Objectives

Master Plans rely on the analysis and detailed policies developed in municipal Official Plans such as speed of growth, growth location, and types of growth to determine infrastructure needs.

The Municipality has chosen the following as its statement of the Problem and Opportunity Statement to be addressed by the Master Plan/PPCP:

To identify preferred water and wastewater serving strategies to meet the Municipality of Strathroy-Caradoc's growth needs to 2046 as well as provide effective on-going continuity to existing serviced community areas across the Municipality of Strathroy-Caradoc as appropriate.

The Master Plan follows Approach #1 of the MCEA process

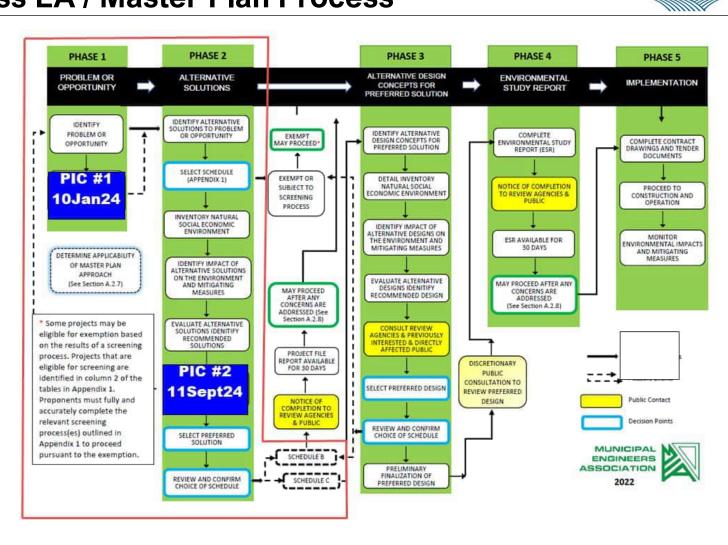
A Pollution Prevention Control Plan (PPCP) is Intended to be a part of the Municipality's ongoing efforts to improve the performance of sanitary and storm sewer infrastructure

The Master Plan and PPCP focus on the two urban settlement areas (Strathroy and Mount Brydges)





Class EA / Master Plan Process







Master Plan Charter Principles

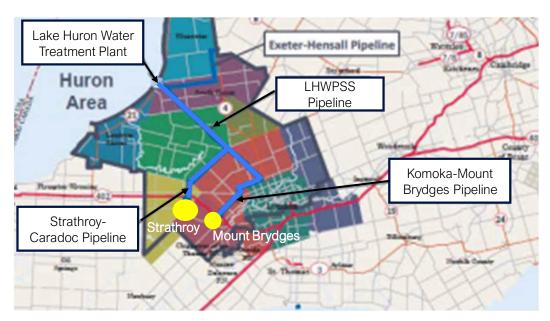
#	Principle	#	Principle
1	The Master Plan and PPCP should be informed by the Strathroy-Caradoc's Strategic Plan.	8	Proven, cost effective technologies that should be in long term use and are capable of continuous improvement should be utilized.
2	The Master Plan and PPCP should support the Strathroy-Caradoc's Official Plan and Green Initiatives and other initiatives to address Climate Change.	9	Consider solutions that build upon the current assets provided they are still viable over the horizon of the Master Plan.
3	Master Plan and PPCP solutions should suit the Strathroy- Caradoc's Growth Plan – If Strathroy-Caradoc wishes growth in an area, the Master Plan would not prevent it.	10	Recommended Master Plan solution be 20-year solutions and ensure that there is expandability to 40-years, if possible (or to the life expectancy of the infrastructure).
4	Preference should be for long term servicing solutions over interim solutions.	11	PPCP solutions should be long term solutions that "fix" the pollution issue.
5	All services to be fully funded through adequate planning, budgeting and identified revenue streams.	12	Synergy - Look for synergies with current or potential future infrastructure requirements with other municipalities and regional systems if this is in the best interest of the Strathroy-Caradoc.
6	Master Plan and PPCP solutions should be developed which minimize risk to the Strathroy-Caradoc, users, and others during construction, commissioning, and operation of the upgrades.	13	Minimize Complexity – Examples include minimizing mechanical components and pumping.
7	The PPCP solution should integrate the collection system, pumping stations and the WWTFs to achieve the F-5-5-5 requirements.		

Water Distribution Systems





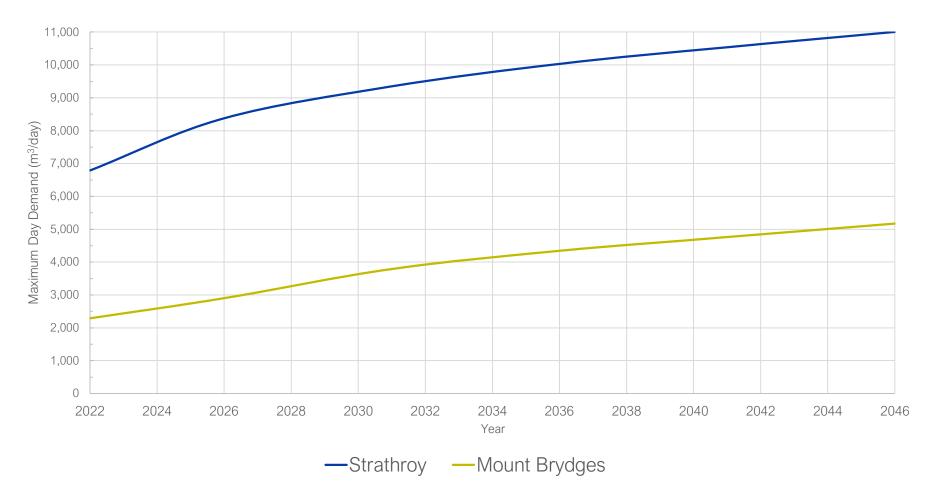
- Strathroy WDS and Mount Brydges WDS are both supplied water from the Lake Huron Primary Water Supply System (LHPWSS) through separate connections
- LHPWSS current capacity is 340 megalitres per day and the 2023 maximum day flow was 198.5 ML/d
- The current water supply agreements with LHPWSS does not specify a maximum day limit on water supply to either community
- Water supply to address growth is not expected to be an issue given LHWPSS' capacity



Water Demand



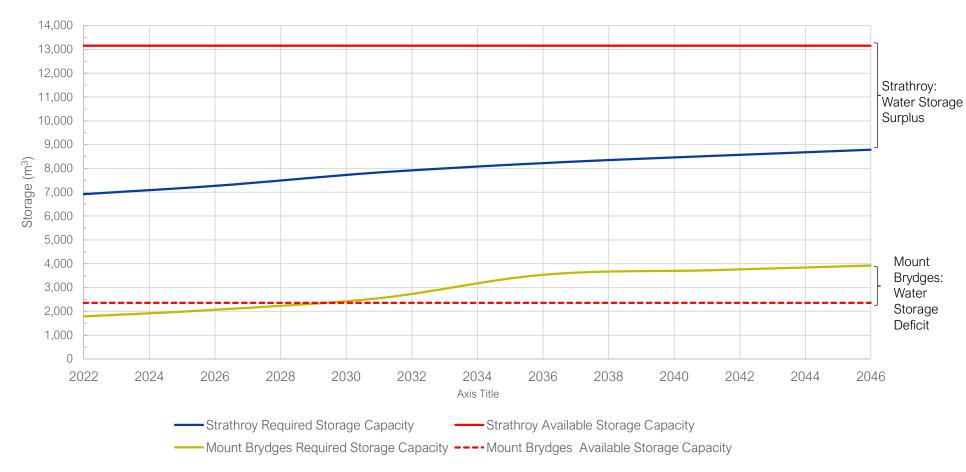




Water Storage







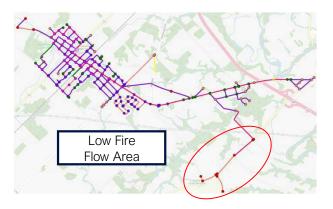
Water Modeling and Storage Assessment





- Undertook storage assessment and modeling WDS to 2046 expected demands
- Strathroy Findings
 - No issues were noted related to growth
 - 9 sections of undersized watermains in the distribution system that need to be upsized to meet fire flow targets
- Mount Brydges
 - Currently have 2,350 m³ of storage but will need additional storage capacity by 2031 with a total required of 3,913 m³ for 2046
 - Some isolated rural areas east of Adelaide Rd. and Gibson Rd. have lower than required fire flows





Recommended Water Strategy





- Upsize 9 sections of undersized watermains in Strathroy (2025 to 2035)
- Upgrade Mount Brydges storage with two above ground storage tanks on current Glendon Rd Storage Facility (2025-2026)
- Upgrading watermain sizes for isolated rural areas east of Adelaide Rd. and Gibson Rd. will impact water quality and operations, therefore treat these areas like rural residents for fire protection



Strathroy – WW Collection and Treatment

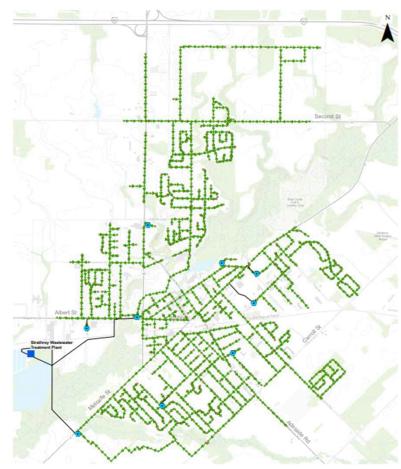




 Wastewater flow projections to 2046 were undertaken and are shown in the table below

Parameter	2026	2031	2036	2041	2046
Population	18,200	20,300	21,800	22,900	23,900
Average Day Flow (ADF)	5,357	5,975	6,416	6,740	7,034

- The Strathroy wastewater collection system was modelled (PS, forcemains and sewers)
- Existing collection system adequate for flows to 2046
- The Strathroy WWTF has a ADF capacity of 10,000 m³/day and does not need to be expanded for capacity in the period to 2046



Strathroy- WW Collection and Treatment



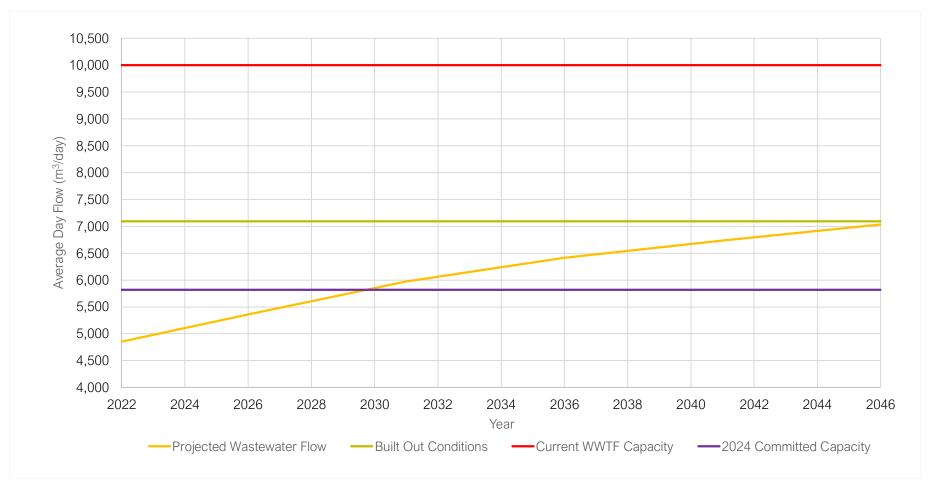


- Strathroy WWTF:
 - Due to operational issues, an upgrade program for WWTF was begun in 2020
 - Phase 1 of the upgrades was replacement of the tertiary filters which were in poor working condition (completed in 2022)
 - Phase 2 upgrades include:
 - Addition of a new lagoon with same capacity as the existing lagoon to provide redundancy including aeration
 - New air blowers replacing the existing blowers to supply the required air demand for both the
 existing and the new lagoons
 - Construction of a new headworks building
 - Modifications to the existing lagoon to provide the same level of treatment as the new lagoon
 - Replacement of the existing generator with new generator sized to include for upgrades
 - Modifications and additions to the yard works, electrical system, process piping and controls
 - This work is independent of the Master Plan and the costs for this are not included in any capital forecast projections





Strathroy Wastewater Flow Projection



Mount Brydges WW Collection and Treatment

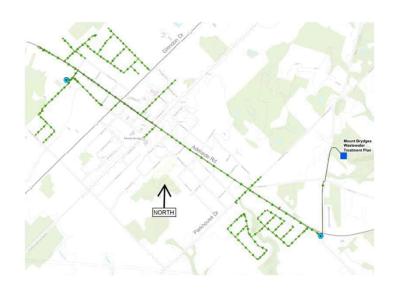




Wastewater flow projections to 2046 were undertaken and are shown in the table below

			Years		
Parameter	2026	2031	2036	2041	2046
Total Population	4,200	5,500	6,300	6,900	7,500
Connected Population Growth	2,295	4,111	5,440	6,593	7,500
WWTF Capacity Requirement (m ³ /day)	718	1,287	1,703	2,064	2,348

- Municipality is intending to connect all population in Mount Brydges by 2046
- The Mount Brydges wastewater collection system was modelled (PS, forcemains and sewers)
- Existing collection system adequate for flows from currently connected areas
- Collection system will have to be upgraded to bring in existing non-serviced residents (not including new growth)



Mount Brydges – WW Collection and Treatment STRATHROY-CARADOC Transport Control of the Collection and Co





- Mount Brydges WWTF:
 - Constructed in 2011 and has a capacity of 825 m³/day ADF per the Approval issued by MECP
 - WWTF consists of 2 Rotating Biological Contactors (RBC's); 2 Final Settling Tanks; Tertiary Filter System; 3 backwash filters; and UV Disinfection System
 - Operational constrains currently restrict the Mount Brydges WWTF to significantly less than allowable capacity
 - Municipality has actively engaged with MECP to mitigate these issues
 - These issues have not allowed the WWTF to operate to is allowable Capacity of 825 m³/day
 - Municipality acted in 2021 to modify the Main SPS to better control peak flows to the WWTF
 - Resolution to this issue:
 - Construction of an equalization tank to provide an interim capacity of 571 m³/day (expected completion December 2024)
 - Construction of headworks and conversion of biological process to Extended Aeration to restore treatment capacity of WWTF to 825 m³/day (expected completion December 2026)
 - As this work is separate from the Master Plan, this work has not been included in the capital costs were not included in the Master Plan capital forecasts





Mount Brydges Wastewater Flow Projection

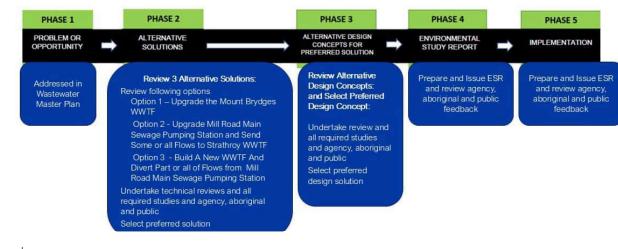


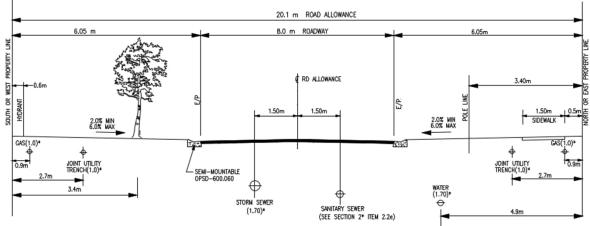
Mount Brydges WW Capacity Expansion





- WWTF treatment capacity of 825 m³/day will be restored by end of 2026
- WWTF expansion from 825 to 2,348 m³/day is required
- MCEA Schedule C Class EA study is required to confirm wastewater treatment capacity
- To connect the existing population, 11.6 km of new sanitary sewers will be required
- Road and storm sewers will be evaluated along with sanitary sewer construction



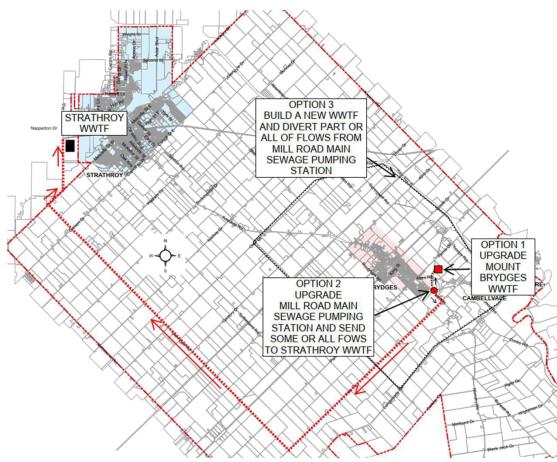


Mount Brydges WW Capacity Expansion





- Options:
 - Upgrade Existing Mount Brydges WWTF
 - 2. Upgrade Mill Road Main Sewage Pumping Station and construct new forcemain to pump flows to Strathroy WWTF
 - 3. Build New WWTF, upgrade Mill Road Main Sewage Pumping Station and construct new forcemain to pump flows to New WWTF

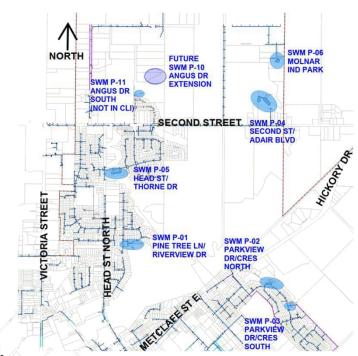


Stormwater Management (SWM)

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- SWM facilities are generally required for new development and are intended to protect the environment by:
 - Matching post development to predevelopment flow rates (quantity treatment)
 - Providing water quality treatment primarily through sediment removal with some biological treatment (depending on time of year)
 - Providing other benefits such as thermal control of runoff and environmental enhancement
- Municipality has 11 SWM facilities 10 of which are included in the MECP Environmental Compliance Approval for a Municipal Stormwater Management System ECA Number: 058-S701

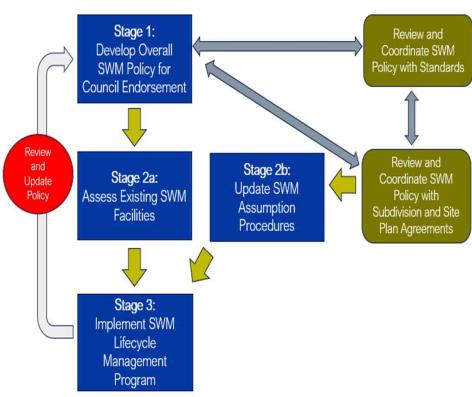


Stormwater Management (SWM)





- Municipality's policies, standards, development agreements, capital budget and asset management plan was reviewed
- Gaps were noted in aspects of the Current Subdivision Agreement, Site Plan Agreement and the current SCSS
- The current 10-year capital plan appears to underfund the required management and maintenance of SWM Facilities that is needed over their lifecycle to maintain function and reduce risks and impacts to Municipality
- Recommended program for SWM Facility management includes
 - Stage 1: Develop Overall SWM Policy for Council Endorsement
 - Stage 2: Update Procedures Facility Assessment and Assumption
 - Stage 3: Implement SWM Lifecycle Management Program to prioritize the rehabilitation of SWM Facilities



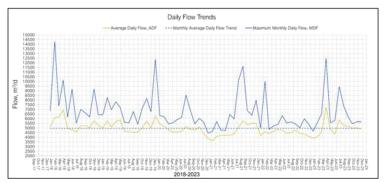
SWM Policy Implementation

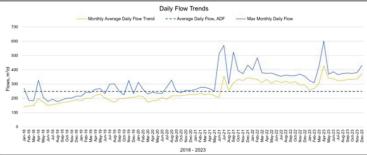
Pollution Prevention Control Plan (PPCP)





- PPCP was
 - Undertaken concurrently with the Master Plan
 - Evaluated the collection system with regards to influence of extraneous flows via inflow and infiltration (I&I)
 - Used the hydraulic model of the Municipality's sanitary sewer system to characterize issues and develop solutions with respect to the ability of the system to convey normal and wet weather flows
 - Reviewed data on the quantity and quality of system overflows and by-passes and its impact to the natural environment
- Findings of PPCP were as follows:
 - A review of historical data from 2019 through 2023 did not find records of any overflows in the conveyance system in both Strathroy and Mount Brydges





STRATHROY-CARADOC URBAN OPPORTUNITY - RURAL HOSPITALITY



Pollution Prevention Control Plan (PPCP)

- Findings of PPCP were as follows:
 - Modeling completed corroborated that the existing conveyance system will have sufficient capacity as flows increase to 2046
 - The Municipality had no recorded sewage overflows in the period reviewed and is therefore in compliance with MECP Procedure F-5-1 and F-5-5
 - A review of historical data from 2019 through 2023 found minor by-passes at the WWTFs in both Strathroy and Mount Brydges however none of these occurrences were caused by wet weather flows
 - By-passes at the Mount Brydges WWTF were the result of equipment failures and will be addressed through the on-going upgrades
- PPCP recommendations area as follows:
 - Any cross connections found should be addressed through separation and storm sewer installation
 - To improve the accuracy of the sanitary hydraulic model, combined sewer and pumping station surveys should be undertaken to gather any missing, incomplete or inaccurate data

STRATHROY-CA URBAN OPPORTUNITY - RURAL



Master Plan Cost Opinion

- Opinions are Class 5 based on a design definition of 0-2% complete and are considered to have a range of accuracy of -30% to +50%
- Linear construction costing is based on data from 2023 linear urban infrastructure renewal projects in Strathroy-Caradoc
- Water and wastewater facility and study costing is based on recent projects in Ontario
- SWM restoration costs are based on recent public tenders for the rehabilitation of SWM Facilities
- Hydraulic model costs include field work to confirm systems, upgrades to model from additional data and new infrastructure, and upgrades to modelling software over the time of the Master Plan
- It is recommended that the Municipality review the proposed projects identified and consider them within the context of:
 - The 10-year Capital Plan
 - The Asset Management Plan
 - Other Municipal policies, studies and initiatives
 - The Municipality's financial capacity
- NOTE: Cost estimates to not include current work being undertaken at Strathroy WWTF and Mount Brydges WWTF

Master Plan Cost Opinion





	Project	Area	Cost Opinion
	Water System		
	Centre Street Watermain Upgrades	S	\$840,000
	Concord Drive Watermain Upgrades	S	\$760,000
E	Riverview Drive Watermain Upgrades	S	\$760,000
Water System	Oak Avenue Watermain Upgrades	S	\$1,830,000
S	North Street Watermain Upgrades	S	\$1,770,000
e	Locke Heights Watermain Upgrades	S	\$1,430,000
/at	Lamore Crescent Watermain Upgrades	S	\$1,210,000
>	Mill Pond Crescent Watermain Upgrades	S	\$1,430,000
	Head Street Watermain Upgrades	S	\$2,030,000
	Storage Upgrades	MB	\$1,950,000
	Updating of Water Hydraulic Model	SC	\$400,000
		ter Total	\$14,410,000
<u>_</u>	Wastewater System		
Wastewater System	WWTF Schedule C Class EA	MB	\$350,000
ite 🧏	WWTF Cost	MB	\$25,975,000
astewat System	Existing Servicing Phase 1-10	MB	\$54,000,000
8 S	Updating of Wastewater Hydraulic Model	SC	\$600,000
	Wastewa	ter Total	\$80,925,000
	Stormwater Management		
>	Stage 1 SWM Policy Initial Policy & 1 Update	SC	\$200,000
SWM	Stage 2 SWM	SC	\$315,000
တ	Stage 3 SWM	SC	\$5,640,000
	Stormwa	ter Total	\$6,155,000
<u>م</u>	Pollution Prevention Control Plan		
PPCP	PPCP Data Collection to Update WW Hydraulic Model	SC	\$300,000
죠	PP	CP Total	\$300,000
		TOTAL	\$101,790,000
			, , , , , , , , , , , , ,

Strathroy - Caradoc W/WW SWM MP and PPCP STRATHROY-CARADOC





Material on this meeting will be posted on the News & Public Notices Page:

https://www.strathroy-caradoc.ca/en/city-hall/water-wastewater-and-stormwater-master-plan-and-pollution-prevention-control-plan.aspx

Please feel free to ask a question or submit your comments via email or phone a member of the study team.

We would request that questions and comments be submitted by September 25, 2024, so that the Municipality can complete the Master Plan process.

Paul Zuberbuhler B.Sc, B.Comm, C.E.T. Manager of Environmental Services Municipality of Strathroy-Caradoc Tel: 519-245-1105 ext. 274 pzuberbuhler@strathroy-caradoc.ca 52 Frank Street Strathroy ON N7G 2R4





John Tyrrell, M.Sc. (Eng.), P. Eng. Senior Project Manager R.V. Anderson Associates Limited Tel: 519-681-9916 ext. 5038 jtyrrell@rvanderson.com 557 Southdale Road East, Suite 200 London, ON N6E 1A2

PIC # 2 COMMENTS RECEIVED IN COMMENT BOX



Comments and Questions Form

Water, Wastewater and Stormwater Master Plan and Pollution Prevention Control Plan

If you have any comments/questions you would like to provide to the Study Team, please fill out this form. The Study Team will review your comments and send you a response.

Name:	TERRY FLEGEL
Contact Information: (to provide a reply)	Please provide one of the following: email address OR phone number OR mailing address $(5/9)$ $264-252/$

Comments and Questions:			
We have severe	water	issues	Ín
dur area and			
some soluti			1
			1

Space for additional comments is available on the back of the page

Please submit comments in comment box at meeting or else forward your comments to the following members of the study team below:

Paul Zuberbuhler B.Sc, B.Comm, C.E.T

Manager of Environmental Services
Municipality of Strathroy-Caradoc

Tel: 519-245-1105 ext. 274

pzuberbuhler@strathroy-caradoc.ca

52 Frank Street

Strathroy ON N7G 2R4

John Tyrrell, M.Sc. (Eng.), P. Eng.

Senior Project Manager R.V. Anderson Associates Limited **Tel:** 519-681-9916 ext. 5038 **jtyrrell@rvanderson.com** 557 Southdale Road East, Suite 200 London, ON N6E 1A2



Comments and Questions Form

Water, Wastewater and Stormwater Master Plan and Pollution Prevention Control Plan

If you have any comments/questions you would like to provide to the Study Team, please fill out this form. The Study Team will review your comments and send you a response.

Name:	Douglas MPhil
Contact Information: (to provide a reply)	Please provide one of the following: email address OR phone number OR mailing address mistermspheeognail.com

Comments and Questions:
The indexstand this is a master som meeting, but we encourage
you to include more local projects in the presentation because
It is not likely the municipality is going to hold a special
meeting for a commenty the ser of Complethiale.
Pallel you also consider Bosting on agenda

Space for additional comments is available on the back of the page

Please submit comments in comment box at meeting or else forward your comments to the following members of the study team below:

Paul Zuberbuhler B.Sc, B.Comm, C.E.T

Manager of Environmental Services Municipality of Strathroy-Caradoc **Tel:** 519-245-1105 ext. 274 **pzuberbuhler@strathroy-caradoc.ca** 52 Frank Street Strathroy ON N7G 2R4

John Tyrrell, M.Sc. (Eng.), P. Eng.

Senior Project Manager
R.V. Anderson Associates Limited
Tel: 519-681-9916 ext. 5038
jtyrrell@rvanderson.com
557 Southdale Road East, Suite 200
London, ON N6E 1A2

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Comments and Questions Form

Water, Wastewater and Stormwater Master Plan and Pollution Prevention Control Plan

If you have any comments/questions you would like to provide to the Study Team, please fill out this form. The Study Team will review your comments and send you a response.

Name:	Catherine Nikota
Contact	Please provide one of the following: email address OR phone number OR mailing address
Information: (to provide a reply)	Catherniko@yahoo.ca

Comments and Questions:
Campbellvale has significant wastern stormwater
issues due to a lack of proper drainage
4 a high water table. Individual residents have
implemented individual solutions that have caused
additional issues for their neighbours. All homes
have septic systems that can be compromised
by these compounding issues. In addition, mature
(30 yr.) trees, have been lost. We need a collective
(30 yr.) trees, have been lost. We need a collective municiple solution to resolve these issues.

Space for additional comments is available on the back of the page

Please submit comments in comment box at meeting or else forward your comments to the following members of the study team below:

Paul Zuberbuhler B.Sc, B.Comm, C.E.T

Manager of Environmental Services
Municipality of Strathroy-Caradoc
Tel: 519-245-1105 ext. 274
pzuberbuhler@strathroy-caradoc.ca
52 Frank Street

Strathroy ON N7G 2R4

John Tyrrell, M.Sc. (Eng.), P. Eng.

Senior Project Manager
R.V. Anderson Associates Limited **Tel:** 519-681-9916 ext. 5038 **jtyrrell@rvanderson.com**557 Southdale Road East, Suite 200
London, ON N6E 1A2

APPENDIX 1.4 Responses Received



Public Responses

From: Jim Banman < jim@cirrusdevelopments.ca>

Sent: November 24, 2023 4:53 PM

To: Darika Sharma

Cc: Paul Zuberbuhler; John Tyrrell

Subject: Re: Strathroy-Caradoc Water, Wastewater & Stormwater Management Master Plan -

Notice of Study Commencement

Categories: Filed by Newforma

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Thank you for providing me with the notice of the study.

Please continue to keep me informed on any developments in this particular study, and I look forward to any participation that may be of value to the community.

Kind Regards

Have a good weekend.





4090 CARRIAGE ROAD, DELAWARE, ON, NOL 1EO E: JIM@CIRRUSDEVELOPMENTS CA P: 519-630-5800

On Nov 21, 2023, at 9:17 PM, Darika Sharma < DSharma@rvanderson.com> wrote:

Good Evening,

The Municipality of Strathroy-Caradoc has initiated the process of developing a Water, Wastewater and Stormwater Management Master Plan (WWWSWM MP) that will be supported by a Pollution Prevention Control Plan (PPCP). The WWWSWM MP will provide the Municipality with strategic long-term water and wastewater servicing, and stormwater management strategies that support existing needs and accommodate projected population and employment growth to the year 2046. The PPCP will provide a road map for implementing the identified infrastructure and operational improvements.

You have been identified as potentially having interest and/or information that may assist the study team in developing the Master Plan.

Attached, please the Notice of Study Commencement regarding this study.

Thank you,

Darika Sharma, M.Eng, EIT

Process Designer

<image001.png> R.V. Anderson Associates Limited 557 Southdale Road East, Suite 200, London ON N6E 1A2

t 519 681 9916 ext. 5032 | m 647 648 0461

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<image002.png>

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<Notice of Study Commencement 2023Nov21.pdf>

From: katelyn.c@zpplan.com
Sent: December 4, 2023 1:26 PM

To: pzuberbuhler@strathroy-caradoc.ca; John Tyrrell
Cc: 'Randy Lucas'; 'Jared Flynn'; 'Dave Hannam'

Subject: Strathroy-Caradoc Water, Wastewater & Stormwater Management Master Plan -

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Hi Paul and John,

We received notice that the Municipality has initiated the process of developing a Water, Wastewater and Stormwater Management Master Plan (WWWSWM MP) that will be supported by a Pollution Prevention Control Plan (PPCP). I would like to ensure that myself, along with those cc'd on this email, be added to the circulation list for any updates or information on this process. We are consultants for the owner of the below noted properties:

137 Frank St, Strathroy 25788 Melbourne Rd, Strathroy 8396 Glengyle Drive, Strathroy

Kind Regards,

Katelyn Crowley, BA Intermediate Planner

Zelinka Priamo Ltd.

London Office

318 Wellington Rd. London, ON N6C 4P4 Office: 519-474-7137 Cell: 519-319-6092 Katelyn.c@zpplan.com www.zpplan.com

From: Rob Brunet <rob@brunetco.com>
Sent: January 10, 2024 12:40 PM

To: John Tyrrell

Cc: Anthony Gubbels; Darika Sharma; Paul Zuberbuhler

Subject: RE: Strathroy-Caradoc Water, Wastewater & Stormwater Management Master Plan -

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Thank-you, John. We are aware of the current plan for Delaware, which includes a forcemain to pump wastewater up to the Komoka WWTP. The fifteen year old plan for Delaware has not been acted upon, to my understanding due to cost, and there continue to be issues for Delaware residents on septic systems due to seasonal flooding and high groundwater tables. This is a longstanding problem and the Mayor was thus receptive to exploring alternative solutions, particularly those that allow Delaware to be serviced by gravity to a downstream WWTP that is shared with Strathroy-Caradoc, which is at least partially funded through available infrastructure grants arising from the Province's Affordable Housing initiatives.

The topography of Mt. Brydges is complex, with three watersheds and several pumping stations required to service existing development. For future growth to be cost effective for the municipality, careful analysis of servicing cost for land proposed to be added to the settlement boundary needs to be undertaken as part of an integrated approach to updating the OP. I have spoken publicly about the need for the OP amendment process to consider the Stormwater and Sanitary Servicing Master Plan as a key input before final boundary decisions are made, in an effort to eliminate the need for additional pumping stations and stormwater flowing across watershed boundaries. I look forward to speaking with you tonight about the topographical analysis we conducted and what we consider to be the best long term solution (a new WWTP downstream of Delaware on the Thames), with short term solutions that effectively utilize existing infrastructure to facilitate the current growth needs of Strathroy-Caradoc.

Best regards,

Robert A.H. Brunet, BESc., MESc., P.Eng

Principal | Registered Patent Agent

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E rob@brunetco.com

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From: John Tyrrell <JTyrrell@rvanderson.com>

Sent: Monday, January 8, 2024 8:57 AM To: Rob Brunet <rob@brunetco.com>

Cc: Anthony Gubbels <anthony.gubbels@LDSConsultants.ca>; Darika Sharma <DSharma@rvanderson.com>; Paul

Zuberbuhler <pzuberbuhler@strathroy-caradoc.ca>

Subject: RE: Strathroy-Caradoc Water, Wastewater & Stormwater Management Master Plan - Notice of Study

Commencement

Hi Rob.

We do acknowledge receipt of your November 23rd email and your comments will be considered when we undertake the Wastewater Master Planning portion of this assignment.

Additionally, your correspondence will be included in the Master Plan document when it is prepared and submitted for public review.

You may wish to review your proposal as the current Middlesex Centre Master Servicing Plan (https://www.middlesexcentre.on.ca/articles/servicing-master-plan) envisages wastewater from Delaware being sent to the Komoka WWTP via a pumping station. The Komoka WWTP was upgraded in 2008 with the intention of being expanded to take in flows from new and existing development in Delaware. That appears to be the current plan.

John Tyrrell, M.Sc.(Eng.), P.Eng.

Associate/Regional Manager



R.V. Anderson Associates Limited 557 Southdale Road East, Suite 200, London ON N6E 1A2 t 519 681 9916 ext. 5038 | m 519 878 7903

LinkedIn | Facebook | Website











From: Rob Brunet < rob@brunetco.com > Sent: Friday, January 5, 2024 2:21 PM

To: Darika Sharma < <u>DSharma@rvanderson.com</u>>; Paul Zuberbuhler < <u>pzuberbuhler@strathroy-caradoc.ca</u>> Cc: John Tyrrell < <u>JTyrrell@rvanderson.com</u>>; Anthony Gubbels < <u>anthony.gubbels@LDSConsultants.ca</u>> Subject: RE: Strathroy-Caradoc Water, Wastewater & Stormwater Management Master Plan - Notice of Study

Commencement

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Hi Darika,

Happy New Year to you. I am following up on this correspondence of November 23. I did not receive any acknowledgement of receipt of the correspondence, nor a response to my offer to meet with you and the project team to discuss the engineering work we conducted.

Can you please confirm receipt and advise whether you wish to meet?

Best regards,

Robert A.H. Brunet, BESc., MESc., P.Eng

Principal | Registered Patent Agent

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From: Rob Brunet

Sent: Thursday, November 23, 2023 7:37 PM

To: Darika Sharma < DSharma@rvanderson.com; Paul Zuberbuhler pzuberbuhler@strathroy-caradoc.ca Cc: John Tyrrell JTyrrell@rvanderson.com; Anthony Gubbels anthony.gubbels@LDSConsultants.ca Subject: RE: Strathroy-Caradoc Water, Wastewater & Stormwater Management Master Plan - Notice of Study

Commencement

Hi Darika,

During the Public Meeting held April 19, 2022, to review Strathroy-Caradoc's Development Charges By-Law, I presented to Council the attached information. This package of information was prepared by our engineering consultant, Land Development Solutions Inc. (LDS), and includes a topographic study and assessment of constraints and capabilities of existing wastewater infrastructure.

The ultimate conclusion of the work was to support the construction of a new facility (or at least the purchase of land in anticipation of the need for such a facility in future) along the Thames river near Longwoods Rd. Importantly, such a

facility could be shared with the neighboring Municipality of Middlesex Centre, which is faced with a servicing constraint that limits further development in the Town of Delaware. I have also included a letter of support for further investigation of a shared WWTF from the Mayor of Middlesex Center and have received a verbal indication from the previous Minister of Infrastructure that financial support would be available, particularly given the urgent need to provide housing in the Province.

Much of the detailed engineering work behind this study is not provided in these high-level documents presented to Council. Both Anthony Gubbels of LDS and I are available for further discussion of these details at an appropriate time, in the spirit of reaching an optimal sanitary servicing solution for the Municipality.

Best regards,

Robert A.H. Brunet, BESc., MESc., P.Eng

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E rob@brunetco.com

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From: Darika Sharma < DSharma@rvanderson.com>

Sent: Tuesday, November 21, 2023 9:18 PM

To: Paul Zuberbuhler <pzuberbuhler@strathroy-caradoc.ca>

Cc: John Tyrrell <JTyrrell@rvanderson.com>

Subject: Strathroy-Caradoc Water, Wastewater & Stormwater Management Master Plan - Notice of Study

Commencement

Good Evening,

The Municipality of Strathroy-Caradoc has initiated the process of developing a Water, Wastewater and Stormwater Management Master Plan (WWWSWM MP) that will be supported by a Pollution Prevention Control Plan (PPCP). The WWWSWM MP will provide the Municipality with strategic long-term water and wastewater servicing, and stormwater management strategies that support existing needs and accommodate projected population and employment growth to the year 2046. The PPCP will provide a road map for implementing the identified infrastructure and operational improvements.

You have been identified as potentially having interest and/or information that may assist the study team in developing the Master Plan.

Attached, please the Notice of Study Commencement regarding this study.

Thank you,

Darika Sharma, M.Eng, EIT

Process Designer



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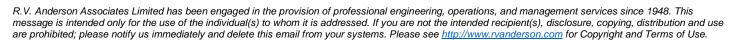
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From: Rob Brunet <rob@brunetco.com>
Sent: November 23, 2023 7:37 PM
To: Darika Sharma; Paul Zuberbuhler
Cc: John Tyrrell; Anthony Gubbels

Subject: RE: Strathroy-Caradoc Water, Wastewater & Stormwater Management Master Plan -

Notice of Study Commencement

Attachments: Conceptual Sanitary Servicing Master Plan; RE: Conceptual Sanitary Servicing Master

Plan

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Hi Darika,

During the Public Meeting held April 19, 2022, to review Strathroy-Caradoc's Development Charges By-Law, I presented to Council the attached information. This package of information was prepared by our engineering consultant, Land Development Solutions Inc. (LDS), and includes a topographic study and assessment of constraints and capabilities of existing wastewater infrastructure.

The ultimate conclusion of the work was to support the construction of a new facility (or at least the purchase of land in anticipation of the need for such a facility in future) along the Thames river near Longwoods Rd. Importantly, such a facility could be shared with the neighboring Municipality of Middlesex Centre, which is faced with a servicing constraint that limits further development in the Town of Delaware. I have also included a letter of support for further investigation of a shared WWTF from the Mayor of Middlesex Center and have received a verbal indication from the previous Minister of Infrastructure that financial support would be available, particularly given the urgent need to provide housing in the Province.

Much of the detailed engineering work behind this study is not provided in these high-level documents presented to Council. Both Anthony Gubbels of LDS and I are available for further discussion of these details at an appropriate time, in the spirit of reaching an optimal sanitary servicing solution for the Municipality.

Best regards,

Robert A.H. Brunet, BESc., MESc., P.Eng

Principal | Registered Patent Agent

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E rob@brunetco.com

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From: Darika Sharma < DSharma@rvanderson.com>

Sent: Tuesday, November 21, 2023 9:18 PM

To: Paul Zuberbuhler <pzuberbuhler@strathroy-caradoc.ca>

Cc: John Tyrrell <JTyrrell@rvanderson.com>

Subject: Strathroy-Caradoc Water, Wastewater & Stormwater Management Master Plan - Notice of Study

Commencement

Good Evening,

The Municipality of Strathroy-Caradoc has initiated the process of developing a Water, Wastewater and Stormwater Management Master Plan (WWWSWM MP) that will be supported by a Pollution Prevention Control Plan (PPCP). The WWWSWM MP will provide the Municipality with strategic long-term water and wastewater servicing, and stormwater management strategies that support existing needs and accommodate projected population and employment growth to the year 2046. The PPCP will provide a road map for implementing the identified infrastructure and operational improvements.

You have been identified as potentially having interest and/or information that may assist the study team in developing the Master Plan.

Attached, please the Notice of Study Commencement regarding this study.

Thank you,

Darika Sharma, M.Eng, EIT

Process Designer



R.V. Anderson Associates Limited 557 Southdale Road East, Suite 200, London ON N6E 1A2 t 519 681 9916 ext. 5032 | m 647 648 0461

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From: Paul Zuberbuhler <pzuberbuhler@strathroy-caradoc.ca>

Sent: January 9, 2024 8:56 AM

To: R L Demeulenaere

Cc: John Tyrrell; Darika Sharma

Subject: RE: Strathroy-Caradoc Water, Wastewater & Stormwater Management Master Plan -

Notice of Study Commencement

Attachments: Notice-of-Public-Information-Session-1.pdf

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Hi Loretta,

Thank you for your email. Please see attached with regards to date/time of the Public Information Session on Wednesday.

Regards,

Paul Zuberbuhler B.Sc, B.Comm, C.E.T. Manager of Environmental Services

Municipality of Strathroy-Caradoc 52 Frank Street | Strathroy, ON | N7G 2R4

Phone: 519-245-1105 x274

Email: pzuberbuhler@strathroy-caradoc.ca

Visit us online at www.strathroy-caradoc.ca



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From: R L Demeulenaere < Ronnie.loretta@hotmail.com>

Sent: January-09-24 8:52 AM

To: Paul Zuberbuhler <pzuberbuhler@strathroy-caradoc.ca>

Subject: FW: Strathroy-Caradoc Water, Wastewater & Stormwater Management Master Plan - Notice of Study

Commencement

Good morning Paul.

We received the attached email back in November. I am not sure why we are on the list to receive the email. We have land that is in the proposed boundary for future expansion of Mt Brydges.

Is there a meeting that is coming up regarding this study?

Thank you, Loretta Demeulenaere

From: Darika Sharma < DSharma@rvanderson.com>

Sent: November 21, 2023 9:18 PM

Cc: John Tyrrell <JTyrrell@rvanderson.com>

Subject: Strathroy-Caradoc Water, Wastewater & Stormwater Management Master Plan - Notice of Study

Commencement

Good Evening,

The Municipality of Strathroy-Caradoc has initiated the process of developing a Water, Wastewater and Stormwater Management Master Plan (WWWSWM MP) that will be supported by a Pollution Prevention Control Plan (PPCP). The WWWSWM MP will provide the Municipality with strategic long-term water and wastewater servicing, and stormwater management strategies that support existing needs and accommodate projected population and employment growth to the year 2046. The PPCP will provide a road map for implementing the identified infrastructure and operational improvements.

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Attached, please the Notice of Study Commencement regarding this study.

Thank you,

Darika Sharma, M.Eng, EIT

Process Designer



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From: Colin Grantham < cgrantham@strathroy-caradoc.ca>

Sent: November 22, 2023 9:04 AM
To: Darika Sharma; Paul Zuberbuhler

Cc: John Tyrrell

Subject: RE: Strathroy-Caradoc Water, Wastewater & Stormwater Management Master Plan -

Notice of Study Commencement

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Thanks and I look forward to chatting

Colin J Grantham



Mayor of Strathroy-Caradoc Middlesex County Councillor 519 808 0614

From: Darika Sharma < DSharma@rvanderson.com>

Sent: November 21, 2023 9:18 PM

To: Paul Zuberbuhler <pzuberbuhler@strathroy-caradoc.ca>

Cc: John Tyrrell < JTyrrell@rvanderson.com>

Subject: Strathroy-Caradoc Water, Wastewater & Stormwater Management Master Plan - Notice of Study

Commencement

Good Evening,

The Municipality of Strathroy-Caradoc has initiated the process of developing a Water, Wastewater and Stormwater Management Master Plan (WWWSWM MP) that will be supported by a Pollution Prevention Control Plan (PPCP). The WWWSWM MP will provide the Municipality with strategic long-term water and wastewater servicing, and stormwater management strategies that support existing needs and accommodate projected population and employment growth to the year 2046. The PPCP will provide a road map for implementing the identified infrastructure and operational improvements.

You have been identified as potentially having interest and/or information that may assist the study team in developing the Master Plan.

Attached, please the Notice of Study Commencement regarding this study.

Thank you,

Darika Sharma, M.Eng, EIT

Process Designer



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From: Paul Zuberbuhler <pzuberbuhler@strathroy-caradoc.ca>

Sent: January 17, 2024 7:32 AM

To: Darika Sharma
Cc: John Tyrrell

Subject: FW: Water, Waste Water and Stormwater Master Plan ...

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FYI

Regards,

Paul Zuberbuhler B.Sc, B.Comm, C.E.T. Manager of Environmental Services

Municipality of Strathroy-Caradoc 52 Frank Street | Strathroy, ON | N7G 2R4

Phone: 519-245-1105 x274

Email: pzuberbuhler@strathroy-caradoc.ca

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From: catherine nikota <catherniko@yahoo.ca>

Sent: January-16-24 7:08 PM

To: Paul Zuberbuhler <pzuberbuhler@strathroy-caradoc.ca>; jtyrrell@rvanderson.com

Subject: Water, Waste Water and Stormwater Master Plan ...

Why did we not receive proper notice of the Master Plan meeting? A friend of a friend of a friend let us know. All affected residents should have had proper and ample notice.

Why is Campbellvale not included in the Water, Wastewater & Stormwater Master Plan?

It should be. We have serious stormwater drainage issues that are killing trees and could cause septic systems to fail. Between our backyard neighbour and ourselves we have lost 8, 30 year old cedar trees due to the stormwater that has accumulated in our back yards during the heavy spring rains we've experienced in recent years. We have moved dirt to our yard in a attempt to resolve the issue, to no avail. The rain we received in the spring of 2023 was so significant, we had a small lake in our yard complete with ducks. We had to buy a pump and very long hose to direct the water to the drains on Highway 81 or we would cause flooding issues for our neighbours to the east of us. It took several days to

1

remove most of the water. Still it took a few months for the ground to dry sufficiently to be able to cut the grass. We invited a person from the municipality to come and see our issue. Nothing was resolved.

The problems we are experiencing cannot be resolved by a single individual homeowner without negatively affecting the surrounding neighbours.

Campbellvale and the proposed development that may take place in the vicinity needs to be a part of this Water Master Plan to ensure that our issues are resolved and that they do not worsen.

Catherine Nikota 786 Clark St. 519-494-9862 catherniko@yahoo.ca

This email was scanned by Bitdefender

From: Darika Sharma

Sent: August 2, 2024 9:34 AM

To: Samya Chams

Subject: FW: New Response Completed for Water Study Comments and Questions Form

Hi Samya,

Please add this to the comments log.

Thanks.

Darika Sharma, M.Eng, EIT

Process Designer



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From: Paul Zuberbuhler <pzuberbuhler@strathroy-caradoc.ca>

Sent: Tuesday, July 16, 2024 2:33 PM

To: John Tyrrell <JTyrrell@rvanderson.com>; Darika Sharma <DSharma@rvanderson.com>; Erika Frost

<efrost@rvanderson.com>

Subject: FW: New Response Completed for Water Study Comments and Questions Form

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Hello

Please see the masterplan comment below.

Regards,

Paul Zuberbuhler B.Sc, B.Comm, C.E.T. Manager of Environmental Services

Municipality of Strathroy-Caradoc 52 Frank Street | Strathroy, ON | N7G 2R4

Phone: 519-245-1105 x274

Email: pzuberbuhler@strathroy-caradoc.ca

Visit us online at www.strathroy-caradoc.ca



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From: noreply@esolutionsgroup.ca <noreply@esolutionsgroup.ca>

Sent: July-16-24 2:31 PM

To: Paul Zuberbuhler <pzuberbuhler@strathroy-caradoc.ca>

Subject: New Response Completed for Water Study Comments and Questions Form

Hello,

Please note the following response to Water Study Comments and Questions Form has been submitted at Tuesday July 16th 2024 2:26 PM with reference number 2024-07-16-003.

- Name Ryan Kelly
- Contact Information (to provide a reply)
 Ryan
- Comments and Questions
 Hello I am a suggestion for strathroy ballpart and splash pad the river and the creek to go through there should be dug out and then it could be more clean and less of the water coming over the banks of the river and at the same time. Make the river the focal point
 Of are town

[This is an automated email notification -- please do not respond].

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From: Samya Chams

Sent: August 1, 2024 11:39 AM

To: Pattie Pearn

Cc: Paul Zuberbuhler; John Tyrrell

Subject: RE: Strathroy-Caradoc Water, Wastewater & Stormwater Management Master Plan -

Notice of PIC #2

Attachments: SC W-WW SWM MP Notice of PIC #2.pdf

Categories: Filed by Newforma

Good morning Pattie,

Thank you for your email.

The details for the PIC#2 are located in the attached Notice. Please see below snippet with location and time.

How do I participate?

The Municipality is hosting **Public Information Meeting #2** to report on the prostudy and provide members of the public with an opportunity to provide com to its finalization. The Public Information Meeting will be hosted in person and presentation boards and the opportunity for the public to ask questions of the pr

When: Wednesday, September 11, 2024, from 6:00 - 8:00 p.m.

Where: Gemini Sportsplex - 667 Adair Blvd., Strathroy, ON

How: In-person

Thank you,

Samya

Samya Chams, B.A. (she/her)

Administrative Assistant



R.V. Anderson Associates Limited 557 Southdale Road East, Suite 200, London ON N6E 1A2 t 519 681 9916 ext. 5021

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From: Pattie Pearn <pattiepearn@gmail.com> Sent: Thursday, August 1, 2024 11:25 AM To: Samya Chams <schams@rvanderson.com>

Subject: Re: Strathroy-Caradoc Water, Wastewater & Stormwater Management Master Plan - Notice of PIC #2

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Good Morning
When is the 2 nd meeting and where
I could not find it in your cover email

Patricia (Pattie) Pearn

pattiepearn@gmail.com 519-671-9144

On Thu, Aug 1, 2024 at 11:06 AM Samya Chams < schams@rvanderson.com> wrote:

Dear Sir/Madam,

On behalf of the Municipality of Strathroy - Caradoc, please find attached the Notice of Public Information Session (PIC) #2 for the Water, Wastewater and Stormwater Master Plan and Pollution Prevention Control Plan. A webpage has been created and all relevant documents have been uploaded including the Notice of Study Commencement. This webpage can be found here: https://www.strathroy-caradoc.ca/en/city-hall/water-wastewater-and-stormwater-master-plan-and-pollution-prevention-control-plan.aspx

The project team values the participation of all stakeholders and wishes to ensure that the community's interests and concerns are taken into consideration. Please contact the project team members listed on the attached notice should you require further information on this project.

Thank you,

Samya

Samya Chams, B.A. (she/her)

Administrative Assistant



R.V. Anderson Associates Limited

557 Southdale Road East, Suite 200, London ON N6E 1A2

t 519 681 9916 ext. 5021

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Agency Responses

From: Marcy McKillop <mmckillop@huronelginwater.ca>

Sent: September 23, 2024 2:03 PM

To: Samya Chams

Cc: Andrew Henry; Marcus Schaum; Submissions; John Tyrrell; Darika Sharma; Paul

Zuberbuhler; Jessy Van der Vaart; Trisha McKibbin

Subject: RE: Strathroy-Caradoc Water, Wastewater & Stormwater Management Master Plan -

Notice of PIC #2

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Good afternoon,

Thank for continuing to provide updates regarding the Strathroy-Caradoc Water, Wastewater and Stormwater Management Master Plan.

Please ensure any municipal planning, development, design and construction projects consider the importance and location of LHPWSS transmission infrastructure and any easements, and includes applicable consultation and coordination with the LHPWSS. Any planning or development documentation should continue to be shared with LHPWSS through email to submissions@huronelginwater.ca

Please note that member municipalities are responsible for water distribution system infrastructure, including operation, replacement/upgrade and maintenance, as well as equalization, emergency and fire storage, in accordance with applicable provincial guidelines and regulations.

The Lake Huron Primary Water Supply System (LHPWSS) is currently undertaking a Master Plan. A Notice of Commencement and PIC #1 will be issued this fall. More information will be made available here as the Master Plan advances over the next

year: https://www.huronelginwater.ca/lake-huron-primary-water-supply-system-master-plan/

Please note that the LHPWSS is providing a transmission connection to Oneida Nation of the Thames. Our engineering consultant, Stantec Consulting, will continue to work with Strathroy-Caradoc municipal staff regarding this project, and will circulate detailed design drawings for review this fall. The transmission main will extend from northeast of Mount Brydges along Falconbridge Road to Christina Road and construction is anticipated for spring 2025. It was noted that two wastewater servicing/treatment alternatives for Mount Brydges, shown in Public Information Centre #2, included new sanitary sewers (or forcemains) that would cross existing or new transmission infrastructure. Please consider the location of LHPWSS transmission infrastructure as part of any evaluation of alternatives.

Best regards,

Marcy McKillop, P.Eng. (she/her) Environmental Services Engineer, Regional Water Supply

Lake Huron & Elgin Area Primary Water Supply Systems

235 North Centre Road, Suite 200

London, Ontario N5X 4E7 T: 519-930-3505 ext. 4976

E: mmckillop@huronelqinwater.ca

https://huronelginwater.ca

www.facebook.com/RegionalWaterSupply

The Lake Huron and Elgin Area Primary Water Supply Systems serve communities and people within the traditional lands of the Anishinaabek, Haudenosaunee, Lūnaapéewak and Attawandaron. We honour and respect the history, languages and culture of the diverse Indigenous people who call this territory home. This region is currently home to many First Nations, Inuit and Métis. We are grateful to have the opportunity to work and live in this territory.

From: Samya Chams < schams@rvanderson.com>

Sent: Thursday, August 1, 2024 11:06 AM To: Samya Chams <schams@rvanderson.com>

Cc: John Tyrrell < <u>JTyrrell@rvanderson.com</u>>; Darika Sharma < <u>DSharma@rvanderson.com</u>>; Paul Zuberbuhler < <u>pzuberbuhler@strathroy-caradoc.ca</u>>; Jessy Van der Vaart < <u>jvandervaart@strathroy-caradoc.ca</u>>; Trisha McKibbin < tmckibbin@strathroy-caradoc.ca>

Subject: Strathroy-Caradoc Water, Wastewater & Stormwater Management Master Plan - Notice of PIC #2

You don't often get email from schams@rvanderson.com. Learn why this is important

Dear Sir/Madam,

On behalf of the Municipality of Strathroy - Caradoc, please find attached the Notice of Public Information Session (PIC) #2 for the Water, Wastewater and Stormwater Master Plan and Pollution Prevention Control Plan. A webpage has been created and all relevant documents have been uploaded including the Notice of Study Commencement. This webpage can be found here: https://www.strathroy-caradoc.ca/en/city-hall/water-wastewater-and-stormwater-master-plan-and-pollution-prevention-control-plan.aspx

The project team values the participation of all stakeholders and wishes to ensure that the community's interests and concerns are taken into consideration. Please contact the project team members listed on the attached notice should you require further information on this project.

Thank you,

Samya

Samya Chams, B.A. (she/her)

Administrative Assistant

R.V. Anderson Associates Limited
557 Southdale Road East, Suite 200, London ON N6E 1A2
t 519 681 9916 ext. 5021

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Ministry of Citizenship and Multiculturalism

Heritage Planning Unit Heritage Branch Citizenship, Inclusion and Heritage Division 5th FIr, 400 University Ave Tel.: 613-242-3743

Ministère des Affaires civiques et du Multiculturalisme

Unité de la planification relative au patrimoine Direction du patrimoine Division des affaires civiques, de l'inclusion et du patrimoine Tél.: 613-242-3743



December 7, 2023

EMAIL ONLY

Paul Zuberbuhler B.Sc, B.Comm, C.E.T Manager of Environmental Services Municipality of Strathroy-Caradoc pzuberbuhler@strathroy-caradoc.ca

MCM File : 0020701

Proponent : Municipality of Strathroy-Caradoc

Subject: Notice of Commencement - Master Plan

Project : Water, Wastewater and Stormwater Master Plan and Pollution

Prevention Control Plan

Location : Municipality of Strathroy-Caradoc, County of Middlesex

Dear Paul Zuberbuhler:

Thank you for providing the Ministry of Citizenship and Multiculturalism (MCM) with the Notice of Commencement for this project.

MCM's interest in this master plan relates to its mandate of conserving Ontario's cultural heritage, which includes archaeological resources, built heritage resources and cultural heritage landscapes.

MCM understands that master plans are long range plans which integrate infrastructure requirements for existing and future land use with environmental assessment planning principles. The Municipal Class Environmental Assessment (MCEA) outlines a framework for master plan and associated studies which should recognize the planning and design Process of this Class EA, and should incorporate the key principles of successful environmental assessment planning identified in Section A.1.1. The master planning process will, at minimum, address Phases 1 and 2 of the Planning and Design Process of the MCEA.

This letter provides advice on how to incorporate consideration of cultural heritage in the abovementioned master planning process by outlining the technical cultural heritage studies and the level of detail required to address cultural heritage in master plans. In accordance with the MCEA, cultural heritage resources should be identified early in the process in order to determine known and potential resources and potential impacts.

Master Plan Summary

The Municipality of Strathroy-Caradoc is preparing a Master Plan for its water, wastewater, and stormwater infrastructure as part of ongoing efforts to improve the performance of the

Municipality's infrastructure. Additionally, the Municipality is undertaking a Pollution Prevention Control Plan (PPCP) to provide a road map for implementing infrastructure and operational improvements that will mitigate the impacts of wet weather sewer system overflows on the environment. The Master Plan and PPCP will provide the Municipality with guidance for capital planning and project implementation for water, wastewater, and stormwater services to accommodate growth for the next 20 years and beyond in a cost-effective and environmentally sustainable manner. The study is being undertaken in accordance with the MCEA process for Master Plans.

It is unclear what approach is being taken in accordance with the Master Planning Process outlined in the MCEA. We recommend you clearly identify your proposed study approach. Any individual undertakings proceeding as part of this master plan should be screened for impacts to cultural heritage resources.

Identifying Cultural Heritage Resources

MCM understands that the final public notice for the master plan could become the notice of completion for the Schedule B and C MCEAs within it and that this approach would likely result in extensive documentation should the master plan include numerous Schedule C MCEA undertakings. In regards to cultural heritage resources, the Master Plan document should:

- · identify existing baseline environmental conditions,
- identify expected environmental impacts and,
- Include measures to mitigate potential negative impacts.

Archaeological Resources

Any undertakings included as part of the master plan should be screened using the Ministry's <u>Criteria for Evaluating Archaeological Potential</u> and <u>Criteria for Evaluating Marine Archaeological Potential</u> (if shoreline or in-water works are proposed) to determine if an archaeological assessment is needed. If the EA project area exhibits archaeological potential, then an archaeological assessment (AA) should be undertaken by an archaeologist licensed under the Ontario Heritage Act and submitted for MCM review prior to the completion of the master plan.

Built Heritage Resources and Cultural Heritage Landscapes

A Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessment will be undertaken for the entire study area during the planning phase and will be summarized in the EA Report. This study will:

- Describe the existing baseline cultural heritage conditions within the study area by identifying all known or potential built heritage resources and cultural heritage landscapes, including a historical summary of the study area. The Ministry has developed screening criteria that may assist with this exercise: <u>Criteria for Evaluating for Potential Built Heritage</u> <u>Resources and Cultural Heritage Landscapes</u>.
- 2. <u>Identify preliminary potential project-specific impacts</u> on the known and potential built heritage resources and cultural heritage landscapes that have been identified. The report should include a description of the anticipated impact to each known or potential built heritage resource or cultural heritage landscape that has been identified.
- 3. Recommend measures to avoid or mitigate potential negative impacts to known or potential built heritage resources and cultural heritage landscapes. The proposed mitigation measures are to inform the next steps of project planning and design.

Given that this project covers a large study area, MCM recommends that the Cultural Heritage Report is carried out so that step 1 described above is undertaken early in the planning process. Then, steps 2 and 3 can be undertaken once the preferred alternatives have been selected.

Where a known or potential built heritage resource or cultural heritage landscape may be directly and adversely impacted, and where it has not yet been evaluated for Cultural Heritage Value or Interest (CHVI), completion of a Cultural Heritage Evaluation Report (CHER) is required to fully understand its CHVI and level of significance. The CHER must be completed as part of the final EA report. If a potential resource is found to be of CHVI, then a Heritage Impact Assessment (HIA) will need to be undertaken and included in the final EA report. Please send the HIA to MCM for review and make it available to local organizations or individuals who have expressed interest in review.

While some cultural heritage landscapes are contained within individual property boundaries, others span across multiple properties. For certain cultural heritage landscapes, it will be more appropriate for the CHER and HIA to include multiple properties, in order to reflect the extent of that cultural heritage landscape in its entirety.

Community input should be sought to identify locally recognized and potential cultural heritage resources. Sources include, but are not limited to, municipal heritage committees, community heritage registers, historical societies and other local heritage organizations.

Cultural heritage resources are often of critical importance to Indigenous communities. Indigenous communities may have knowledge that can contribute to the identification of cultural heritage resources, and we suggest that any engagement with Indigenous communities includes a discussion about known or potential cultural heritage resources that are of value to them.

Environmental Assessment Reporting

Technical cultural heritage studies are to be undertaken by a qualified person who has expertise, recent experience, and knowledge relevant to the type of cultural heritage resources being considered and the nature of the activity being proposed. Please advise MCM whether any technical heritage studies will be completed for this master plan and provide them to MCM before issuing a Notice of Completion.

Please note that the responsibility for administration of the *Ontario Heritage Act* and matters related to cultural heritage have been transferred from the Ministry of Tourism, Culture and Sport (MTCS) to the Ministry of Citizenship and Multiculturalism (MCM). Individual staff roles and contact information remain unchanged. Please continue to send any notices, report and/or documentation to both Karla Barboza and Joseph Harvey.

- Karla Barboza, Team Lead Heritage | Heritage Planning Unit (Citizenship and Multiculturalism) | 416-660-1027 | karla.barboza@ontario.ca
- Joseph Harvey, Heritage Planner | Heritage Planning Unit (Citizenship and Multiculturalism) | 613-242-3743 | joseph.harvey@ontario.ca

Thank you for consulting MCM on this project. Please continue to do so through the master plan process and contact Joseph Harvey for any questions or clarification.

Sincerely,

Erika Leclerc

On behalf of

Joseph Harvey Heritage Planner Joseph.harvey@ontario.ca

Copied to: John Tyrell, Senior Project Manager, R.V. Anderson Associates Limited

Darika Sharma, Process Designer, R.V. Anderson Associates Limited

Karla Barboza, Team Lead - Heritage Planning Unit, MCM

It is the sole responsibility of proponents to ensure that any information and documentation submitted as part of their EA report or file is accurate. The Ministry of Citizenship and Multiculturalism (MCM) makes no representation or warranty as to the completeness, accuracy or quality of the any checklists, reports or supporting documentation submitted as part of the EA process, and in no way shall MCM be liable for any harm, damages, costs, expenses, losses, claims or actions that may result if any checklists, reports or supporting documents are discovered to be inaccurate, incomplete, misleading or fraudulent.

Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48(1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out an archaeological assessment, in compliance with Section 48(1) of the *Ontario Heritage Act*.

The Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33 requires that any person discovering human remains must cease all activities immediately and notify the police or coroner. If the coroner does not suspect foul play in the disposition of the remains, in accordance with Ontario Regulation 30/11 the coroner shall notify the Registrar, Ontario Ministry of Public and Business Service Delivery, which administers provisions of that Act related to burial sites. In situations where human remains are associated with archaeological resources, the Ministry of Citizenship and Multiculturalism should also be notified (at archaeology@ontario.ca) to ensure that the archaeological site is not subject to unlicensed alterations which would be a contravention of the Ontario Heritage Act.



Ministry of the Environment, Conservation and Parks

Ministère de l'Environnement, de la Protection de la nature et des Parcs

Environmental Assessment

Branch

Direction des évaluations environnementales

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December 28, 2023

Paul Zuberbuhler Manager of Environmental Services Municipality of Strathroy-Caradoc pzuberbuhler@strathroy-caradoc.ca

BY EMAIL ONLY

Re: Strathroy-Caradoc Water, Wastewater and Stormwater Master Plan and Pollution Prevention Control Plan
Municipality of Strathroy-Caradoc
Municipal Class Environmental Assessment, Master Plan
Acknowledgement of Notice of Commencement

Dear Paul Zuberbuhler,

This letter is in response to the Notice of Commencement for the above noted Master Plan. The Ministry of the Environment, Conservation and Parks (MECP) acknowledges that the Municipality of Strathroy-Caradoc (proponent) has indicated that the study is following the approved environmental planning process for a Master Plan under the Municipal Class Environmental Assessment (Class EA).

The **updated** (August 2022) attached "Areas of Interest" document provides guidance regarding the ministry's interests with respect to the Class EA process. Please address all areas of interest in the EA documentation at an appropriate level for the EA study. Proponents who address all the applicable areas of interest can minimize potential delays to the project schedule. Further information is provided at the end of the Areas of Interest document relating to recent changes to the Environmental Assessment Act through Bill 197, Covid-19 Economic Recovery Act 2020.

The Crown has a legal duty to consult Aboriginal communities when it has knowledge, real or constructive, of the existence or potential existence of an Aboriginal or treaty right and contemplates conduct that may adversely impact that right. Before authorizing the projects identified in this Master Plan, the Crown must ensure that its duty to consult has been fulfilled, where such a duty is triggered. Although the duty to consult with Aboriginal peoples is a duty of the Crown, the Crown may delegate procedural aspects of this duty to project proponents while retaining oversight of the consultation process.

The proposed Master Plan projects may have the potential to affect Aboriginal or treaty rights protected under Section 35 of Canada's *Constitution Act* 1982. Where the Crown's duty to consult is triggered in relation to the proposed projects, the MECP is delegating the procedural aspects of rights-based consultation to the proponent through this letter. The Crown intends to rely on the delegated consultation process in discharging its duty to consult and maintains the right to participate in the consultation process as it sees fit.

Based on information provided to date and the Crown's preliminary assessment the proponent is required to consult with the following communities who have been identified as potentially affected by the proposed Master Plan projects:

- Aamjiwnaang First Nation
- Bkejwanong (Walpole Island)
- Caldwell First Nation
- Chippewas of Kettle and Stony Point
- Chippewas of the Thames First Nation
- Oneida Nation of the Thames

Steps that the proponent may need to take in relation to Aboriginal consultation for the proposed projects are outlined in the "Code of Practice for Consultation in Ontario's Environmental Assessment Process". Additional information related to Ontario's Environmental Assessment Act is available online at: www.ontario.ca/environmentalassessments.

Please also refer to the attached document "A Proponent's Introduction to the Delegation of Procedural Aspects of consultation with Aboriginal Communities" for further information, including the MECP's expectations for EA report documentation related to consultation with communities.

The proponent must contact the Director of Environmental Assessment Branch (EABDirector@ontario.ca) under the following circumstances after initial discussions with the communities identified by the MECP:

- Aboriginal or treaty rights impacts are identified to you by the communities;
- You have reason to believe that your proposed projects may adversely affect an Aboriginal or treaty right;
- Consultation with Indigenous communities or other stakeholders has reached an

impasse; or

• A Section 16 Order request is expected based on impacts to Aboriginal or treaty rights

The MECP will then assess the extent of any Crown duty to consult for the circumstances and will consider whether additional steps should be taken, including what role you will be asked to play should additional steps and activities be required.

Please ensure a copy of the final notice is sent to the ministry's Southwestern Region EA notification email account (eanotification.swregion@ontario.ca).

Should you or any members of your project team have any questions regarding the material above, please contact me at mark.badali1@ontario.ca.

Sincerely,

Mark Badali

Senior Project Evaluator

Mark Fields

Environmental Assessment Program Support, Environmental Assessment Branch

Cc: Pierre Adrien, Manager, London District Office, MECP

Adam Grant, Water Compliance Supervisor, London District Office, MECP John Tyrrell, Senior Project Manager, R.V. Anderson Associates Limited

Enclosed: Areas of Interest

Attached: Client's Guide to Preliminary Screening for Species at Risk

A Proponent's Introduction to the Delegation of Procedural Aspects of Consultation

with Aboriginal Communities

AREAS OF INTEREST (v. August 2022)

It is suggested that you check off each section after you have considered / addressed it.

□ Planning and Policy

- Applicable plans and policies should be identified in the report, and the proponent should describe how the proposed Master Plan projects adhere to the relevant policies in these plans.
 - Projects located in MECP Central, Eastern or West Central Region may be subject to A Place to Grow: Growth Plan for the Greater Golden Horseshoe (2020).
 - Projects located in MECP Central or Eastern Region may be subject to the <u>Oak</u>
 <u>Ridges Moraine Conservation Plan</u> (2017) or the <u>Lake Simcoe Protection Plan</u>
 (2014).
 - Projects located in MECP Central, Southwest or West Central Region may be subject to the <u>Niagara Escarpment Plan</u> (2017).
 - Projects located in MECP Central, Eastern, Southwest or West Central Region may be subject to the <u>Greenbelt Plan</u> (2017).
 - Projects located in MECP Northern Region may be subject to the <u>Growth Plan</u> <u>for Northern Ontario</u> (2011).
- The <u>Provincial Policy Statement</u> (2020) contains policies that protect Ontario's natural heritage and water resources. Applicable policies should be referenced in the report, and the proponent sdvhould <u>describe</u> how the proposed projects are consistent with these policies.
- In addition to the provincial planning and policy level, the report should also discuss the planning context at the municipal and federal levels, as appropriate.

□ Source Water Protection

The Clean Water Act, 2006 (CWA) aims to protect existing and future sources of drinking water. To achieve this, several types of vulnerable areas have been delineated around surface water intakes and wellheads for every municipal residential drinking water system that is located in a source protection area. These vulnerable areas are known as a Wellhead Protection Areas (WHPAs) and surface water Intake Protection Zones (IPZs). Other vulnerable areas that have been delineated under the CWA include Highly Vulnerable Aquifers (HVAs), Significant Groundwater Recharge Areas (SGRAs), Event-based modelling areas (EBAs), and Issues Contributing Areas (ICAs). Source protection plans have been developed that include policies to address existing and future risks to sources of municipal drinking water within these vulnerable areas.

Projects that are subject to the Environmental Assessment Act that fall under a Class EA, or one of the Regulations, have the potential to impact sources of drinking water if they occur in designated vulnerable areas or in the vicinity of other at-risk drinking water systems (i.e. systems that are not municipal residential systems). MEA Class EA projects may include activities that, if located in a vulnerable area, could be a threat to sources of drinking water (i.e. have the potential to adversely affect the quality or quantity of drinking water sources) and the activity could therefore be subject to policies in a source protection plan. Where an activity poses a risk to drinking water, policies in the local source protection plan may impact how or where that activity is undertaken. Policies may prohibit certain activities, or they may require risk management measures for these activities. Municipal Official Plans, planning decisions, Class EA projects (where the project includes an activity that is a threat to drinking water) and prescribed instruments must conform with policies that address significant risks to drinking water and must have regard for policies that address moderate or low risks.

- In October 2015, the MEA Parent Class EA document was amended to include reference to the Clean Water Act (Section A.2.10.6) and indicates that proponents undertaking a Municipal Class EA project must identify early in their process whether a project is or could potentially be occurring with a vulnerable area. **Given this requirement, please include a section in the report on source water protection.**
 - The proponent should identify the source protection area and should clearly document how the proximity of the project to sources of drinking water (municipal or other) and any delineated vulnerable areas was considered and assessed.
 Specifically, the report should discuss whether or not the project is located in a vulnerable area and provide applicable details about the area.
 - o If located in a vulnerable area, proponents should document whether any project activities are prescribed drinking water threats and thus pose a risk to drinking water (this should be consulted on with the appropriate Source Protection Authority). Where an activity poses a risk to drinking water, the proponent must document and discuss in the report how the project adheres to or has regard to applicable policies in the local source protection plan. This section should then be used to inform and be reflected in other sections of the report, such as the identification of net positive/negative effects of alternatives, mitigation measures, evaluation of alternatives etc.
- While most source protection plans focused on including policies for significant drinking
 water threats in the WHPAs and IPZs it should be noted that even though source protection
 plan policies may not apply in HVAs, these are areas where aquifers are sensitive and at risk
 to impacts and within these areas, activities may impact the quality of sources of drinking
 water for systems other than municipal residential systems.
- In order to determine if these Master Plan projects are occurring within a vulnerable area, proponents can use <u>Source Protection Information Atlas</u>, which is an online mapping tool

available to the public. Note that various layers (including WHPAs, WHPA-Q1 and WHPA-Q2, IPZs, HVAs, SGRAs, EBAs, ICAs) can be turned on through the "Map Legend" bar on the left. The mapping tool will also provide a link to the appropriate source protection plan in order to identify what policies may be applicable in the vulnerable area.

 For further information on the maps or source protection plan policies which may relate to their project, proponents must contact the appropriate source protection authority. Please consult with the local source protection authority to discuss potential impacts on drinking water. Please document the results of that consultation within the report and include all communication documents/correspondence.

More Information

For more information on the *Clean Water Act*, source protection areas and plans, including specific information on the vulnerable areas and drinking water threats, please refer to Conservation Ontario's website where you will also find links to the local source protection plan/assessment report.

A list of the prescribed drinking water threats can be found in <u>section 1.1 of Ontario Regulation</u> <u>287/07</u> made under the *Clean Water Act*. In addition to prescribed drinking water threats, some source protection plans may include policies to address additional "local" threat activities, as approved by the MECP.

□ Climate Change

The document "Considering Climate Change in the Environmental Assessment Process" (Guide) is now a part of the Environmental Assessment program's Guides and Codes of Practice. The Guide sets out the MECP's expectation for considering climate change in the preparation, execution and documentation of environmental assessment studies and processes. The guide provides examples, approaches, resources, and references to assist proponents with consideration of climate change in EA. Proponents should review this Guide in detail.

• The MECP expects proponents of Class EA projects to:

- 1. Consider during the assessment of alternative solutions and alternative designs, the following:
 - a. the project's expected production of greenhouse gas emissions and impacts on carbon sinks (climate change mitigation); and
 - b. resilience or vulnerability of the undertaking to changing climatic conditions (climate change adaptation).
- 2. Include a discrete section in the report detailing how climate change was considered in the EA.

How climate change is considered can be qualitative or quantitative in nature and should be scaled to the project's level of environmental effect. In all instances, both a project's impacts on

climate change (mitigation) and impacts of climate change on a project (adaptation) should be considered.

• The MECP has also prepared another guide to support provincial land use planning direction related to the completion of energy and emission plans. The "Community Emissions Reduction Planning: A Guide for Municipalities" document is designed to educate stakeholders on the municipal opportunities to reduce energy and greenhouse gas emissions, and to provide guidance on methods and techniques to incorporate consideration of energy and greenhouse gas emissions into municipal activities of all types. We encourage you to review the Guide for information.

☐ Air Quality, Dust and Noise

- If there are sensitive receptors in the surrounding area of these Master Plan projects, a quantitative air quality/odour impact assessment will be useful to evaluate alternatives, determine impacts and identify appropriate mitigation measures. The scope of the assessment can be determined based on the potential effects of the proposed alternatives, and typically includes source and receptor characterization and a quantification of local air quality impacts on the sensitive receptors and the environment in the study area. The assessment will compare to all applicable standards or guidelines for all contaminants of concern. Please contact this office for further consultation on the level of Air Quality Impact Assessment required for these projects if not already advised.
- If a quantitative Air Quality Impact Assessment is not required for a project, the MECP expects that the report contain a qualitative assessment which includes:
 - A discussion of local air quality including existing activities/sources that significantly impact local air quality and how the project may impact existing conditions;
 - A discussion of the nearby sensitive receptors and the project's potential air quality impacts on present and future sensitive receptors;
 - A discussion of local air quality impacts that could arise from this project during both construction and operation; and
 - A discussion of potential mitigation measures.
- As a common practice, "air quality" should be used an evaluation criterion for all road projects.
- Dust and noise control measures should be addressed and included in the construction
 plans to ensure that nearby residential and other sensitive land uses within the study area
 are not adversely affected during construction activities.
- The MECP recommends that non-chloride dust-suppressants be applied. For a comprehensive list of fugitive dust prevention and control measures that could be applied,

refer to <u>Cheminfo Services Inc. Best Practices for the Reduction of Air Emissions from Construction and Demolition Activities</u> report prepared for Environment Canada. March 2005.

The report should consider the potential impacts of increased noise levels during the
operation of the completed project. The proponent should explore all potential measures to
mitigate significant noise impacts during the assessment of alternatives.

☐ Ecosystem Protection and Restoration

- Any impacts to ecosystem form and function must be avoided where possible. The report should describe any proposed mitigation measures and how project planning will protect and enhance the local ecosystem.
- Natural heritage and hydrologic features should be identified and described in detail to
 assess potential impacts and to develop appropriate mitigation measures. The following
 sensitive environmental features may be located within or adjacent to the study area:
 - Key Natural Heritage Features: Habitat of endangered species and threatened species, fish habitat, wetlands, areas of natural and scientific interest (ANSIs), significant valleylands, significant woodlands; significant wildlife habitat (including habitat of special concern species); sand barrens, savannahs, and tallgrass prairies; and alvars.
 - Key Hydrologic Features: Permanent streams, intermittent streams, inland lakes and their littoral zones, seepage areas and springs, and wetlands.
 - Other natural heritage features and areas such as: vegetation communities, rare species of flora or fauna, Environmentally Sensitive Areas, Environmentally Sensitive Policy Areas, federal and provincial parks and conservation reserves, Greenland systems etc.

We recommend consulting with the Ministry of Natural Resources and Forestry (MNRF), Fisheries and Oceans Canada (DFO) and your local conservation authority to determine if special measures or additional studies will be necessary to preserve and protect these sensitive features. In addition, for projects located in Central Region you may consider the provisions of the Rouge Park Management Plan if applicable.

□ Species at Risk

• The Ministry of the Environment, Conservation and Parks has now assumed responsibility of Ontario's Species at Risk program. Information, standards, guidelines, reference materials and technical resources to assist you are found at https://www.ontario.ca/page/speciesrisk.

- The Client's Guide to Preliminary Screening for Species at Risk (Draft May 2019) has been attached to the covering email for your reference and use. Please review this document for next steps.
- For any questions related to subsequent permit requirements, please contact SAROntario@ontario.ca.

☐ Surface Water

- The report must include enough information to demonstrate that there will be no negative impacts on the natural features or ecological functions of any watercourses within the study area. Measures should be included in the planning and design process to ensure that any impacts to watercourses from construction or operational activities (e.g. spills, erosion, pollution) are mitigated as part of the proposed undertaking.
- Additional stormwater runoff from new pavement can impact receiving watercourses and flood conditions. Quality and quantity control measures to treat stormwater runoff should be considered for all new impervious areas and, where possible, existing surfaces. The ministry's <u>Stormwater Management Planning and Design Manual (2003)</u> should be referenced in the report and utilized when designing stormwater control methods. <u>A</u> <u>Stormwater Management Plan should be prepared as part of the Class EA process</u> that includes:
 - Strategies to address potential water quantity and erosion impacts related to stormwater draining into streams or other sensitive environmental features, and to ensure that adequate (enhanced) water quality is maintained
 - Watershed information, drainage conditions, and other relevant background information
 - Future drainage conditions, stormwater management options, information on erosion and sediment control during construction, and other details of the proposed works
 - Information on maintenance and monitoring commitments.
- Ontario Regulation 60/08 under the Ontario Water Resources Act (OWRA) applies to the
 Lake Simcoe Basin, which encompasses Lake Simcoe and the lands from which surface
 water drains into Lake Simcoe. If the proposed sewage treatment plant is listed in Table 1 of
 the regulation, the report should describe how the proposed Master Plan projects and its
 mitigation measures are consistent with the requirements of this regulation and the OWRA.
- Any potential approval requirements for surface water taking or discharge should be identified in the report. A Permit to Take Water (PTTW) under the OWRA will be required

for any water takings that exceed 50,000 L/day, except for certain water taking activities that have been prescribed by the Water Taking EASR Regulation – *O. Reg. 63/16*. These prescribed water-taking activities require registration in the EASR instead of a PTTW. Please review the Water Taking User Guide for EASR for more information. Additionally, an Environmental Compliance Approval under the OWRA is required for municipal stormwater management works.

☐ Groundwater

- The status of, and potential impacts to any well water supplies should be addressed. If the Master Plan projects involve groundwater takings or changes to drainage patterns, the quantity and quality of groundwater may be affected due to drawdown effects or the redirection of existing contamination flows. In addition, project activities may infringe on existing wells such that they must be reconstructed or sealed and abandoned. Appropriate information to define existing groundwater conditions should be included in the report.
- If the potential construction or decommissioning of water wells is identified as an issue, the report should refer to Ontario Regulation 903, Wells, under the OWRA.
- Potential impacts to groundwater-dependent natural features should be addressed. Any
 changes to groundwater flow or quality from groundwater taking may interfere with the
 ecological processes of streams, wetlands or other surficial features. In addition,
 discharging contaminated or high volumes of groundwater to these features may have
 direct impacts on their function. Any potential effects should be identified, and appropriate
 mitigation measures should be recommended. The level of detail required will be
 dependent on the significance of the potential impacts.
- Any potential approval requirements for groundwater taking or discharge should be identified in the report. A Permit to Take Water (PTTW) under the OWRA will be required for any water takings that exceed 50,000 L/day, with the exception of certain water taking activities that have been prescribed by the Water Taking EASR Regulation O. Reg. 63/16. These prescribed water-taking activities require registration in the EASR instead of a PTTW. Please review the Water Taking User Guide for EASR for more information.
- Consultation with the railroad authorities is necessary wherever there is a plan to use construction dewatering in the vicinity of railroad lines or where the zone of influence of the construction dewatering potentially intercepts railroad lines.

Excess Materials Management

- In December 2019, MECP released a new regulation under the Environmental Protection Act, titled "On-Site and Excess Soil Management" (O. Reg. 406/19) to support improved management of excess construction soil. This regulation is a key step to support proper management of excess soils, ensuring valuable resources don't go to waste and to provide clear rules on managing and reusing excess soil. New risk-based standards referenced by this regulation help to facilitate local beneficial reuse which in turn will reduce greenhouse gas emissions from soil transportation, while ensuring strong protection of human health and the environment. The new regulation is being phased in over time, with the first phase in effect on January 1, 2021. For more information, please visit https://www.ontario.ca/page/handling-excess-soil.
- The report should reference that activities involving the management of excess soil should be completed in accordance with O. Reg. 406/19 and the MECP's current guidance document titled "Management of Excess Soil – A Guide for Best Management Practices" (2014).
- All waste generated during construction must be disposed of in accordance with ministry requirements

□ Contaminated Sites

- Any current or historical waste disposal sites should be identified in the report. The status of
 these sites should be determined to confirm whether approval pursuant to Section 46 of
 the EPA may be required for land uses on former disposal sites. We recommend referring to
 the MECP's D-4 guideline for land use considerations near landfills and dumps.
 - Resources available may include regional/local municipal official plans and data;
 provincial data on <u>large landfill sites</u> and <u>small landfill sites</u>; Environmental Compliance
 Approval information for waste disposal sites on Access Environment.
- Other known contaminated sites (local, provincial, federal) in the study area should also be identified in the report (Note – information on federal contaminated sites is found on the Government of Canada's <u>website</u>).
- The location of any underground storage tanks should be investigated in the report.
 Measures should be identified to ensure the integrity of these tanks and to ensure an appropriate response in the event of a spill. The ministry's Spills Action Centre must be contacted in such an event.

Since the removal or movement of soils may be required, appropriate tests to determine
contaminant levels from previous land uses or dumping should be undertaken. If the soils
are contaminated, you must determine how and where they are to be disposed of,
consistent with Part XV.1 of the Environmental Protection Act (EPA) and Ontario Regulation
153/04, Records of Site Condition, which details the new requirements related to site
assessment and clean up. Please contact the appropriate MECP District Office for further
consultation if contaminated sites are present.

Servicing, Utilities and Facilities

- The report should identify any above or underground utilities in the study area such as transmission lines, telephone/internet, oil/gas etc. The owners should be consulted to discuss impacts to this infrastructure, including potential spills.
- The report should identify any servicing infrastructure in the study area such as wastewater, water, stormwater that may potentially be impacted by the Master Plan projects.
- Any facility that releases emissions to the atmosphere, discharges contaminants to ground
 or surface water, provides potable water supplies, or stores, transports or disposes of waste
 must have an Environmental Compliance Approval (ECA) before it can operate lawfully.
 Please consult with MECP's Environmental Permissions Branch to determine whether a new
 or amended ECA will be required for any proposed infrastructure.
- We recommend referring to the ministry's <u>environmental land use planning guides</u> to ensure that any potential land use conflicts are considered when planning for any infrastructure or facilities related to wastewater, pipelines, landfills or industrial uses.

☐ Mitigation and Monitoring

- Contractors must be made aware of all environmental considerations so that all
 environmental standards and commitments for both construction and operation are met.
 Mitigation measures should be clearly referenced in the report and regularly monitored
 during the construction stage of the Master Plan projects. In addition, we encourage
 proponents to conduct post-construction monitoring to ensure all mitigation measures have
 been effective and are functioning properly.
- Design and construction reports and plans should be based on a best management approach that centres on the prevention of impacts, protection of the existing environment, and opportunities for rehabilitation and enhancement of any impacted areas.

• The proponent's construction and post-construction monitoring plans must be documented in the report, as outlined in Section A.2.5 and A.4.1 of the MEA Class EA parent document.

Consultation

- The report must demonstrate how the consultation provisions of the Class EA have been fulfilled, including documentation of all stakeholder consultation efforts undertaken during the planning process. This includes a discussion in the report that identifies concerns that were raised and <u>describes how they have been addressed by the proponent</u> throughout the planning process. The report should also include copies of comments submitted on the Master Plan by interested stakeholders, and the proponent's responses to these comments (as directed by the Class EA to include full documentation).
- Please include the full stakeholder distribution/consultation list in the documentation.

□ Class EA Process

- There are several different approaches that can be used to conduct a Master Plan, examples of which are outlined in Appendix 4 of the Class EA. The Master Plan should clearly indicate the selected approach for conducting the plan, by identifying whether the levels of assessment, consultation and documentation are sufficient to fulfill the requirements for Schedule B or C projects. Please note that any Schedule B or C projects identified in the plan would be subject to Part II Order Requests under the Environmental Assessment Act, although the plan itself would not be. Please include a description of the approach being undertaken (use Appendix 4 as a reference).
- Any identified projects should also include information on the MCEA schedule associated with the project.
- The report should provide clear and complete documentation of the planning process in order to allow for transparency in decision-making.
- The Class EA requires the consideration of the effects of each alternative on all aspects of
 the environment (including planning, natural, social, cultural, economic, technical). The
 report should include a level of detail (e.g. hydrogeological investigations, terrestrial and
 aquatic assessments, cultural heritage assessments) such that all potential impacts can be
 identified, and appropriate mitigation measures can be developed. Any supporting studies
 conducted during the Class EA process should be referenced and included as part of the
 report.

- Please include in the report a list of all subsequent permits or approvals that may be required for the implementation of the preferred alternative, including but not limited to, MECP's PTTW, EASR Registrations and ECAs, conservation authority permits, species at risk permits, MTO permits and approvals under the *Impact Assessment Act*, 2019.
- Ministry guidelines and other information related to the issues above are available at
 http://www.ontario.ca/environment-and-energy/environment-and-energy. We encourage
 you to review all the available guides and reference any relevant information in the report.

Amendments to the EAA through the Covid-19 Economic Recovery Act, 2020

Once the EA Report is finalized, the proponent must issue a Notice of Completion providing a minimum 30-day period during which documentation may be reviewed and comment and input can be submitted to the proponent. The Notice of Completion must be sent to the appropriate MECP Regional Office email address.

The public can request a higher level of assessment on any of the Schedule B or Schedule C projects identified in the Master Plan if they are concerned about potential adverse impacts to constitutionally protected Aboriginal and treaty rights. In addition, the Minister may issue an order on his or her own initiative within a specified time period. The Director (of the Environmental Assessment Branch) will issue a Notice of Proposed Order to the proponent if the Minister is considering an order for the project(s) within 30 days after the conclusion of the comment period on the Notice of Completion. At this time, the Director may request additional information from the proponent. Once the requested information has been received, the Minister will have 30 days within which to make a decision or impose conditions on your project(s).

Therefore, the proponent cannot proceed with the Master Plan projects until at least 30 days after the end of the comment period provided for in the Notice of Completion. Further, the proponent may not proceed after this time if:

- a Section 16 Order request has been submitted to the ministry regarding potential adverse impacts to constitutionally protected Aboriginal and treaty rights, or
- the Director has issued a Notice of Proposed order regarding the project(s).

Please ensure that the Notice of Completion advises that outstanding concerns are to be directed to the proponent for a response, and that in the event there are outstanding concerns regarding potential adverse impacts to constitutionally protected Aboriginal and treaty rights, Section 16 Order requests on those matters should be addressed in writing to:

Minister of the Environment, Conservation and Parks Ministry of the Environment, Conservation and Parks 777 Bay Street, 5th Floor Toronto ON M7A 2J3 minister.mecp@ontario.ca

and

Director, Environmental Assessment Branch Ministry of Environment, Conservation and Parks 135 St. Clair Ave. W, 1st Floor Toronto ON, M4V 1P5 EABDirector@ontario.ca



A PROPONENT'S INTRODUCTION TO THE DELEGATION OF PROCEDURAL ASPECTS OF CONSULTATION WITH ABORIGINAL COMMUNITIES

DEFINITIONS

The following definitions are specific to this document and may not apply in other contexts:

Aboriginal communities – the First Nation or Métis communities identified by the Crown for the purpose of consultation.

Consultation – the Crown's legal obligation to consult when the Crown has knowledge of an established or asserted Aboriginal or treaty right and contemplates conduct that might adversely impact that right. This is the type of consultation required pursuant to s. 35 of the *Constitution Act, 1982.* Note that this definition does not include consultation with Aboriginal communities for other reasons, such as regulatory requirements.

Crown - the Ontario Crown, acting through a particular ministry or ministries.

Procedural aspects of consultation – those portions of consultation related to the process of consultation, such as notifying an Aboriginal community about a project, providing information about the potential impacts of a project, responding to concerns raised by an Aboriginal community and proposing changes to the project to avoid negative impacts.

Proponent – the person or entity that wants to undertake a project and requires an Ontario Crown decision or approval for the project.

I. PURPOSE

The Crown has a legal duty to consult Aboriginal communities when it has knowledge of an existing or asserted Aboriginal or treaty right and contemplates conduct that may adversely impact that right. In outlining a framework for the duty to consult, the Supreme Court of Canada has stated that the Crown may delegate procedural aspects of consultation to third parties. This document provides general information about the Ontario Crown's approach to delegation of the procedural aspects of consultation to proponents.

This document is not intended to instruct a proponent about an individual project, and it does not constitute legal advice.

II. WHY IS IT NECESSARY TO CONSULT WITH ABORIGINAL COMMUNITIES?

The objective of the modern law of Aboriginal and treaty rights is the *reconciliation* of Aboriginal peoples and non-Aboriginal peoples and their respective rights, claims and interests. Consultation is an important component of the reconciliation process.

The Crown has a legal duty to consult Aboriginal communities when it has knowledge of an existing or asserted Aboriginal or treaty right and contemplates conduct that might adversely impact that right. For example, the Crown's duty to consult is triggered when it considers

issuing a permit, authorization or approval for a project which has the potential to adversely impact an Aboriginal right, such as the right to hunt, fish, or trap in a particular area.

The scope of consultation required in particular circumstances ranges across a spectrum depending on both the nature of the asserted or established right and the seriousness of the potential adverse impacts on that right.

Depending on the particular circumstances, the Crown may also need to take steps to accommodate the potentially impacted Aboriginal or treaty right. For example, the Crown may be required to avoid or minimize the potential adverse impacts of the project.

III. THE CROWN'S ROLE AND RESPONSIBILITIES IN THE DELEGATED CONSULTATION PROCESS

The Crown has the responsibility for ensuring that the duty to consult, and accommodate where appropriate, is met. However, the Crown may delegate the procedural aspects of consultation to a proponent.

There are different ways in which the Crown may delegate the procedural aspects of consultation to a proponent, including through a letter, a memorandum of understanding, legislation, regulation, policy and codes of practice.

If the Crown decides to delegate procedural aspects of consultation, the Crown will generally:

- Ensure that the delegation of procedural aspects of consultation and the responsibilities of the proponent are clearly communicated to the proponent;
- Identify which Aboriginal communities must be consulted;
- Provide contact information for the Aboriginal communities;
- Revise, as necessary, the list of Aboriginal communities to be consulted as new information becomes available and is assessed by the Crown;
- Assess the scope of consultation owed to the Aboriginal communities;
- Maintain appropriate oversight of the actions taken by the proponent in fulfilling the procedural aspects of consultation;
- Assess the adequacy of consultation that is undertaken and any accommodation that may be required;
- Provide a contact within any responsible ministry in case issues arise that require direction from the Crown; and
- Participate in the consultation process as necessary and as determined by the Crown.

IV. THE PROPONENT'S ROLE AND RESPONSIBILITIES IN THE DELEGATED CONSULTATION PROCESS

Where aspects of the consultation process have been delegated to a proponent, the Crown, in meeting its duty to consult, will rely on the proponent's consultation activities and documentation of those activities. The consultation process informs the Crown's decision of whether or not to approve a proposed project or activity.

A proponent's role and responsibilities will vary depending on a variety of factors including the extent of consultation required in the circumstance and the procedural aspects of consultation the Crown has delegated to it. Proponents are often in a better position than the Crown to discuss a project and its potential impacts with Aboriginal communities and to determine ways to avoid or minimize the adverse impacts of a project.

A proponent can raise issues or questions with the Crown at any time during the consultation process. If issues or concerns arise during the consultation that cannot be addressed by the proponent, the proponent should contact the Crown.

a) What might a proponent be required to do in carrying out the procedural aspects of consultation?

Where the Crown delegates procedural aspects of consultation, it is often the proponent's responsibility to provide notice of the proposed project to the identified Aboriginal communities. The notice should indicate that the Crown has delegated the procedural aspects of consultation to the proponent and should include the following information:

- a description of the proposed project or activity;
- mapping;
- proposed timelines;
- details regarding anticipated environmental and other impacts;
- details regarding opportunities to comment; and
- any changes to the proposed project that have been made for seasonal conditions or other factors, where relevant.

Proponents should provide enough information and time to allow Aboriginal communities to provide meaningful feedback regarding the potential impacts of the project. Depending on the nature of consultation required for a project, a proponent also may be required to:

- provide the Crown with copies of any consultation plans prepared and an opportunity to review and comment;
- ensure that any necessary follow-up discussions with Aboriginal communities take place in a timely manner, including to confirm receipt of information, share and update information and to address questions or concerns that may arise;

- as appropriate, discuss with Aboriginal communities potential mitigation measures and/or changes to the project in response to concerns raised by Aboriginal communities;
- use language that is accessible and not overly technical, and translate material into Aboriginal languages where requested or appropriate;
- bear the reasonable costs associated with the consultation process such as, but not limited to, meeting hall rental, meal costs, document translation(s), or to address technical & capacity issues;
- provide the Crown with all the details about potential impacts on established or asserted Aboriginal or treaty rights, how these concerns have been considered and addressed by the proponent and the Aboriginal communities and any steps taken to mitigate the potential impacts;
- provide the Crown with complete and accurate documentation from these meetings and communications; and
- notify the Crown immediately if an Aboriginal community not identified by the Crown approaches the proponent seeking consultation opportunities.

b) What documentation and reporting does the Crown need from the proponent?

Proponents should keep records of all communications with the Aboriginal communities involved in the consultation process and any information provided to these Aboriginal communities.

As the Crown is required to assess the adequacy of consultation, it needs documentation to satisfy itself that the proponent has fulfilled the procedural aspects of consultation delegated to it. The documentation required would typically include:

- the date of meetings, the agendas, any materials distributed, those in attendance and copies of any minutes prepared;
- the description of the proposed project that was shared at the meeting;
- any and all concerns or other feedback provided by the communities;
- any information that was shared by a community in relation to its asserted or established Aboriginal or treaty rights and any potential adverse impacts of the proposed activity, approval or disposition on such rights;
- any proposed project changes or mitigation measures that were discussed, and feedback from Aboriginal communities about the proposed changes and measures;
- any commitments made by the proponent in response to any concerns raised, and feedback from Aboriginal communities on those commitments;
- copies of correspondence to or from Aboriginal communities, and any materials distributed electronically or by mail;

- information regarding any financial assistance provided by the proponent to enable participation by Aboriginal communities in the consultation;
- periodic consultation progress reports or copies of meeting notes if requested by the Crown;
- a summary of how the delegated aspects of consultation were carried out and the results; and
- a summary of issues raised by the Aboriginal communities, how the issues were addressed and any outstanding issues.

In certain circumstances, the Crown may share and discuss the proponent's consultation record with an Aboriginal community to ensure that it is an accurate reflection of the consultation process.

c) Will the Crown require a proponent to provide information about its commercial arrangements with Aboriginal communities?

The Crown may require a proponent to share information about aspects of commercial arrangements between the proponent and Aboriginal communities where the arrangements:

- include elements that are directed at mitigating or otherwise addressing impacts of the project;
- include securing an Aboriginal community's support for the project; or
- may potentially affect the obligations of the Crown to the Aboriginal communities.

The proponent should make every reasonable effort to exempt the Crown from confidentiality provisions in commercial arrangements with Aboriginal communities to the extent necessary to allow this information to be shared with the Crown.

The Crown cannot guarantee that information shared with the Crown will remain confidential. Confidential commercial information should not be provided to the Crown as part of the consultation record if it is not relevant to the duty to consult or otherwise required to be submitted to the Crown as part of the regulatory process.

V. WHAT ARE THE ROLES AND RESPONSIBILITIES OF ABORIGINAL COMMUNITIES' IN THE CONSULTATION PROCESS?

Like the Crown, Aboriginal communities are expected to engage in consultation in good faith. This includes:

- responding to the consultation notice;
- engaging in the proposed consultation process;
- providing relevant documentation;

- clearly articulating the potential impacts of the proposed project on Aboriginal or treaty rights; and
- discussing ways to mitigates any adverse impacts.

Some Aboriginal communities have developed tools, such as consultation protocols, policies or processes that provide guidance on how they would prefer to be consulted. Although not legally binding, proponents are encouraged to respect these community processes where it is reasonable to do so. Please note that there is no obligation for a proponent to pay a fee to an Aboriginal community in order to enter into a consultation process.

To ensure that the Crown is aware of existing community consultation protocols, proponents should contact the relevant Crown ministry when presented with a consultation protocol by an Aboriginal community or anyone purporting to be a representative of an Aboriginal community.

VI. WHAT IF MORE THAN ONE PROVINCIAL CROWN MINISTRY IS INVOLVED IN APPROVING A PROPONENT'S PROJECT?

Depending on the project and the required permits or approvals, one or more ministries may delegate procedural aspects of the Crown's duty to consult to the proponent. The proponent may contact individual ministries for guidance related to the delegation of procedural aspects of consultation for ministry-specific permits/approvals required for the project in question. Proponents are encouraged to seek input from all involved Crown ministries sooner rather than later.

Ministry of the Environment, Conservation and Parks
Species at Risk Branch, Permissions and Compliance
DRAFT - May 2019

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1.0 Purpose, Scope, Background and Context

1.1 Purpose of this Guide

This guide has been created to:

- help clients better understand their obligation to gather information and complete a preliminary screening for species at risk before contacting the ministry,
- outline guidance and advice clients can expect to receive from the ministry at the preliminary screening stage,
- help clients understand how they can gather information about species at risk by accessing publicly available information housed by the Government of Ontario, and
- provide a list of other potential sources of species at risk information that exist outside the Government of Ontario.

It remains the client's responsibility to:

- carry out a preliminary screening for their projects,
- obtain best available information from all applicable information sources,
- conduct any necessary field studies or inventories to identify and confirm the presence or absence of species at risk or their habitat,
- consider any potential impacts to species at risk that a proposed activity might cause, and
- comply with the Endangered Species Act (ESA).

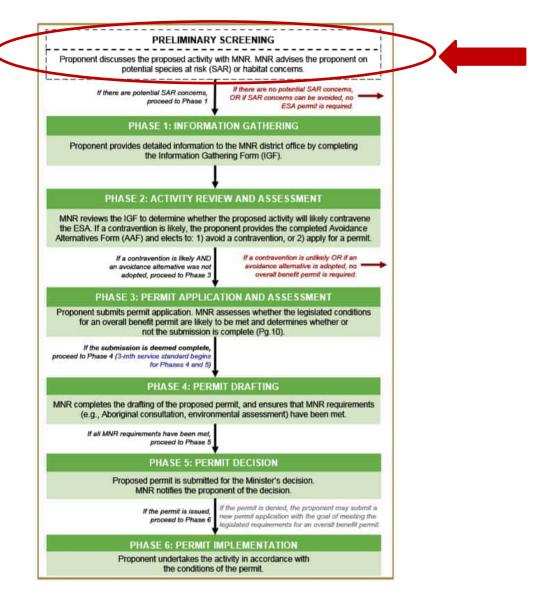
To provide the most efficient service, clients should initiate species at risk screenings and seek information from all applicable information sources identified in this guide, at a minimum, <u>prior to</u> contacting Government of Ontario ministry offices for further information or advice.

1.2 Scope

This guide is a resource for clients seeking to understand if their activity is likely to impact species at risk or if they are likely to trigger the need for an authorization under the ESA. It is not intended to circumvent any detailed site surveys that may be necessary to document species at risk or their habitat nor to circumvent the need to assess the impacts of a proposed activity on species at risk or their habitat. This guide is not an exhaustive list of available information sources for any given area as the availability of information on species at risk and their habitat varies across the province. This guide is intended to support projects and activities carried out on Crown and private land, by private landowners, businesses, other provincial ministries and agencies, or municipal government.

1.3 Background and Context

To receive advice on their proposed activity, clients <u>must first</u> determine whether any species at risk or their habitat exist or are likely to exist at or near their proposed activity, and whether their proposed activity is likely to contravene the ESA. Once this step is complete, clients may contact the ministry at <u>SAROntario@ontario.ca</u> to discuss the main purpose, general methods, timing and location of their proposed activity as well as information obtained about species at risk and their habitat at, or near, the site. At this stage, the ministry can provide advice and guidance to the client about potential species at risk or habitat concerns, measures that the client is considering to avoid adverse effects on species at risk or their habitat and whether additional field surveys are advisable. This is referred to as the "Preliminary Screening" stage. For more information on additional phases in the diagram below, please refer to the *Endangered Species Act Submission Standards for Activity Review and 17(2)(c) Overall Benefit Permits* policy available online at https://www.ontario.ca/page/species-risk-overall-benefit-permits



2.0 Roles and Responsibilities

To provide the most efficient service, clients should initiate species at risk screenings and seek information from all applicable information sources identified in this guide <u>prior to</u> contacting Government of Ontario ministry offices for further information or advice.

Step 1: Client seeks information regarding species at risk or their habitat that exist, or are likely to exist, at or near their proposed activity by referring to all applicable information sources identified in this guide.

Step 2: Client reviews and consider guidance on whether their proposed activity is likely to contravene the ESA (see section 3.4 of this guide for guidance on what to consider).

Step 3: Client gathers information identified in the checklist in section 4 of this guide.

Step 4: Client contacts the ministry at SAROntario@ontario.ca to discuss their preliminary screening. Ministry staff will ask the client questions about the main purpose, general methods, timing and location of their proposed activity as well as information obtained about species at risk and their habitat at, or near, the site. Ministry staff will also ask the client for their interpretation of the impacts of their activity on species at risk or their habitat as well as measures the client has considered to avoid any adverse impacts.

Step 5: Ministry staff will provide advice on next steps.

Option A: Ministry staff may advise the client they can proceed with their activity without an authorization under the ESA where the ministry is confident that:

- no protected species at risk or habitats are likely to be present at or near the proposed location of the activity; or
- protected species at risk or habitats are known to be present but the activity is not likely to contravene the ESA; or
- through the adoption of avoidance measures, the modified activity is not likely to contravene the ESA.

Option B: Ministry staff may advise the client to proceed to Phase 1 of the overall benefit permitting process (i.e. Information Gathering in the previous diagram), where:

- there is uncertainty as to whether any protected species at risk or habitats are present at or near the proposed location of the activity; or
- the potential impacts of the proposed activity are uncertain; or
- ministry staff anticipate the proposed activity is likely to contravene the ESA.

3.0 Information Sources

Land Information Ontario (LIO) and the Natural Heritage Information Centre (NHIC) maintain and provide information about species at risk, as well as related information about fisheries, wildlife, crown lands, protected lands and more. This information is made available to organizations, private individuals, consultants, and developers through online sources and is often considered under various pieces of legislation or as part of regulatory approvals and planning processes.

The information available from LIO or NHIC and the sources listed in this guide should not be considered as a substitute for site visits and appropriate field surveys. Generally, this information can be regarded as a starting point from which to conduct further field surveys, if needed. While this data represents best available current information, it is important to note that a lack of information for a site does not mean that species at risk or their habitat are not present. There are many areas where the Government of Ontario does not currently have information, especially in more remote parts of the province. The absence of species at risk location data at or near your site does not necessarily mean no species at risk are present at that location. Onsite assessments can better verify site conditions, identify and confirm presence of species at risk and/or their habitats.

Information on the location (i.e. observations and occurrences) of species at risk is considered sensitive and therefore publicly available only on a 1km square grid as opposed to as a detailed point on a map. This generalized information can help you understand which species at risk are in the general vicinity of your proposed activity and can help inform field level studies you may want to undertake to confirm the presence, or absence of species at risk at or near your site.

Should you require specific and detailed information pertaining to species at risk observations and occurrences at or near your site on a finer geographic scale; you will be required to demonstrate your need to access this information, to complete data sensitivity training and to obtain a Sensitive Data Use License from the NHIC. Information on how to obtain a license can be found online at https://www.ontario.ca/page/get-natural-heritage-information.

Many organizations (e.g. other Ontario ministries, municipalities, conservation authorities) have ongoing licensing to access this data so be sure to check if your organization has this access and consult this data as part of your preliminary screening if your organization already has a license.

3.1 Make a Map: Natural Heritage Areas

The Make a Natural Heritage Area Map (available online at http://www.gisapplication.lrc.gov.on.ca/mamnh/Index.html?site=MNR_NHLUPS_NaturalHeritage&viewer=NaturalHeritage&locale=en-US provides public access to natural heritage information, including species at risk, without the user needing to have Geographic Information System (GIS) capability. It allows users to view and identify generalized species at risk information, mark areas of interest, and create and print a custom map directly from the web application. The tool also shows topographic information such as roads, rivers, contours and municipal boundaries.

Users are advised that sensitive information has been removed from the natural areas dataset and the occurrences of species at risk has been generalized to a 1-kilometre grid to mitigate the risks to the species (e.g. illegal harvest, habitat disturbance, poaching).

The web-based mapping tool displays natural heritage data, including:

- Generalized Species at risk occurrence data (based on a 1-km square grid),
- Natural Heritage Information Centre data.

Data cannot be downloaded directly from this web map; however, information included in this application is available digitally through Land Information Ontario (LIO) at https://www.ontario.ca/page/land-information-ontario.

3.2 Land Information Ontario (LIO)

Most natural heritage data is publicly available. This data is managed in a large provincial corporate database called the LIO Warehouse and can be accessed online through the LIO Metadata Management Tool at

https://www.javacoeapp.lrc.gov.on.ca/geonetwork/srv/en/main.home. This tool provides descriptive information about the characteristics, quality and context of the data. Publicly available geospatial data can be downloaded directly from this site.

While most data are publicly available, some data may be considered highly sensitive (i.e. nursery areas for fish, species at risk observations) and as such, access to some data maybe restricted.

3.3 Additional Species at Risk Information Sources

- The Breeding Bird Atlas can be accessed online at http://www.birdsontario.org/atlas/index.jsp?lang=en
- eBird can be accessed online at https://ebird.org/home
- iNaturalist can be accessed online at https://www.inaturalist.org/
- The Ontario Reptile and Amphibian Atlas can be accessed online at https://ontarionature.org/programs/citizen-science/reptile-amphibian-atlas
- Your local Conservation Authority. Information to help you find your local Conservation
 Authority can be accessed online at https://conservationontario.ca/conservation-authority/
 - Local naturalist groups or other similar community-based organizations
- Local Indigenous communities
- Local land trusts or other similar Environmental Non-Government Organizations
- Field level studies to identify if species at risk, or their habitat, are likely present or absent at or near the site.
- When an activity is proposed within one of the continuous caribou ranges, please be sure to consider the caribou Range Management Policy. This policy includes figures and maps of the continuous caribou range, can be found online at https://www.ontario.ca/page/range-management-policy-support-woodland-caribou-conservation-and-recovery

3.4 Information Sources to Support Impact Assessments

- Guidance to help you understand if your activity is likely to adversely impact species at
 risk or their habitat can be found online at https://www.ontario.ca/page/categorizing-and-protecting-habitat-under-endangered-species-act
- A list of species at risk in Ontario is available online at
 https://www.ontario.ca/page/species-risk-ontario. On this webpage, you can find out more about each species, including where is lives, what threatens it and any specific habitat protections that apply to it by clicking on the photo of the species.

4.0 Check-List

Please feel free to use the check list below to help you confirm you have explored all applicable information sources and to support your discussion with Ministry staff at the preliminary screening stage.

	ing stage.
✓	Land Information Ontario (LIO)
✓	Natural Heritage Information Centre (NHIC)
✓	The Breeding Bird Atlas
✓	eBird
✓	iNaturalist
✓	Ontario Reptile and Amphibian Atlas
✓	List Conservation Authorities you contacted:
√	List local naturalist groups you contacted:
√	List local Indigenous communities you contacted:
	Ziot local malgeneus communico you contactou.
√	List any other local land trusts or Environmental Non-Government Organizations you
	contacted:
✓	List and field studies that were conducted to identify species at risk, or their habitat, likely
	to be present or absent at or near the site:
✓	List what you think the likely impacts of your activity are on species at risk and their
	habitat (e.g. damage or destruction of habitat, killing, harming or harassing species at
	risk):

Samya Chams

From: Badali, Mark (He/Him) (MECP) < Mark.Badali1@ontario.ca>

Sent: November 27, 2023 2:01 PM
To: Darika Sharma; Paul Zuberbuhler

Cc: John Tyrrell

Subject: RE: Strathroy-Caradoc Water, Wastewater & Stormwater Management Master Plan -

Notice of Study Commencement

Attachments: Notice of Study Commencement 2023Nov21.pdf; Instructions for Providing Class EA

Notices to the Ministry of the Environment Conservation and Parks.pdf; Instructions

for Completing the Streamlined EA Project Information Form.pdf

Categories: Filed by Newforma

[CAUTION EXTERNAL EMAIL] Make Sure that it is legitimate before Replying or Clicking on any links

Hi Darika,

Thank you for providing the attached Notice of Commencement. I am presently acting as the Regional Environmental Planner (REP) who is assigned to your project.

As per the ministry's mandatory notification procedure for providing Class EA notices (see attached), please provide a corresponding Project Information Form (PIF) to the appropriate MECP Regional EA email address (in this case, the project is located in MECP South West Region). Upon receipt of the PIF, I will return a Letter of Acknowledgement in response to this Notice.

Also, moving forward, please do not send notices to other MECP contacts besides the appropriate Regional EA email address and the assigned REP. The reason MECP implemented the regional email address notification procedure is to create certainty for proponents/consultants on where to send notices and to avoid situations where proponents send notices to multiple contacts in the MECP which complicates internal processes unnecessarily.

Thank you,

Mark Badali (he/him) | Senior Project Evaluator Environmental Assessment Program Support | Environmental Assessment Branch Ontario Ministry of the Environment, Conservation and Parks Mark.Badali1@ontario.ca | (416) 457-2155

From: Darika Sharma < DSharma@rvanderson.com>

Sent: November 21, 2023 9:18 PM

To: Paul Zuberbuhler <pzuberbuhler@strathroy-caradoc.ca>

Cc: John Tyrrell <JTyrrell@rvanderson.com>

Subject: Strathroy-Caradoc Water, Wastewater & Stormwater Management Master Plan - Notice of Study

Commencement

Good Evening,

The Municipality of Strathroy-Caradoc has initiated the process of developing a Water, Wastewater and Stormwater Management Master Plan (WWWSWM MP) that will be supported by a Pollution Prevention Control Plan (PPCP). The WWWSWM MP will provide the Municipality with strategic long-term water and wastewater servicing, and stormwater management strategies that support existing needs and accommodate projected population and employment growth to the year 2046. The PPCP will provide a road map for implementing the identified infrastructure and operational improvements.

You have been identified as potentially having interest and/or information that may assist the study team in developing the Master Plan.

Attached, please the Notice of Study Commencement regarding this study.

Thank you,

Darika Sharma, M.Eng, EIT

Process Designer



R.V. Anderson Associates Limited 557 Southdale Road East, Suite 200, London ON N6E 1A2 t 519 681 9916 ext. 5032 | m 647 648 0461

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Samya Chams

From: Marcy McKillop <mmckillop@huronelginwater.ca>

Sent: September 23, 2024 2:03 PM

To: Samya Chams

Cc: Andrew Henry; Marcus Schaum; Submissions; John Tyrrell; Darika Sharma; Paul

Zuberbuhler; Jessy Van der Vaart; Trisha McKibbin

Subject: RE: Strathroy-Caradoc Water, Wastewater & Stormwater Management Master Plan -

Notice of PIC #2

[CAUTION EXTERNAL EMAIL] Make Sure that it is legitimate <u>before</u> Replying or Clicking on any links

Good afternoon,

Thank for continuing to provide updates regarding the Strathroy-Caradoc Water, Wastewater and Stormwater Management Master Plan.

Please ensure any municipal planning, development, design and construction projects consider the importance and location of LHPWSS transmission infrastructure and any easements, and includes applicable consultation and coordination with the LHPWSS. Any planning or development documentation should continue to be shared with LHPWSS through email to submissions@huronelginwater.ca

Please note that member municipalities are responsible for water distribution system infrastructure, including operation, replacement/upgrade and maintenance, as well as equalization, emergency and fire storage, in accordance with applicable provincial guidelines and regulations.

The Lake Huron Primary Water Supply System (LHPWSS) is currently undertaking a Master Plan. A Notice of Commencement and PIC #1 will be issued this fall. More information will be made available here as the Master Plan advances over the next

year: https://www.huronelginwater.ca/lake-huron-primary-water-supply-system-master-plan/

Please note that the LHPWSS is providing a transmission connection to Oneida Nation of the Thames. Our engineering consultant, Stantec Consulting, will continue to work with Strathroy-Caradoc municipal staff regarding this project, and will circulate detailed design drawings for review this fall. The transmission main will extend from northeast of Mount Brydges along Falconbridge Road to Christina Road and construction is anticipated for spring 2025. It was noted that two wastewater servicing/treatment alternatives for Mount Brydges, shown in Public Information Centre #2, included new sanitary sewers (or forcemains) that would cross existing or new transmission infrastructure. Please consider the location of LHPWSS transmission infrastructure as part of any evaluation of alternatives.

Best regards,

Marcy McKillop, P.Eng. (she/her)
Environmental Services Engineer, Regional Water Supply

Lake Huron & Elgin Area Primary Water Supply Systems

235 North Centre Road, Suite 200

London, Ontario N5X 4E7 T: 519-930-3505 ext. 4976

E: mmckillop@huronelqinwater.ca

https://huronelginwater.ca

www.facebook.com/RegionalWaterSupply

The Lake Huron and Elgin Area Primary Water Supply Systems serve communities and people within the traditional lands of the Anishinaabek, Haudenosaunee, Lūnaapéewak and Attawandaron. We honour and respect the history, languages and culture of the diverse Indigenous people who call this territory home. This region is currently home to many First Nations, Inuit and Métis. We are grateful to have the opportunity to work and live in this territory.

From: Samya Chams < schams@rvanderson.com>

Sent: Thursday, August 1, 2024 11:06 AM To: Samya Chams <schams@rvanderson.com>

Cc: John Tyrrell < <u>JTyrrell@rvanderson.com</u>>; Darika Sharma < <u>DSharma@rvanderson.com</u>>; Paul Zuberbuhler < <u>pzuberbuhler@strathroy-caradoc.ca</u>>; Jessy Van der Vaart < <u>jvandervaart@strathroy-caradoc.ca</u>>; Trisha McKibbin < tmckibbin@strathroy-caradoc.ca>

Subject: Strathroy-Caradoc Water, Wastewater & Stormwater Management Master Plan - Notice of PIC #2

You don't often get email from schams@rvanderson.com. Learn why this is important

Dear Sir/Madam,

On behalf of the Municipality of Strathroy - Caradoc, please find attached the Notice of Public Information Session (PIC) #2 for the Water, Wastewater and Stormwater Master Plan and Pollution Prevention Control Plan. A webpage has been created and all relevant documents have been uploaded including the Notice of Study Commencement. This webpage can be found here: https://www.strathroy-caradoc.ca/en/city-hall/water-wastewater-and-stormwater-master-plan-and-pollution-prevention-control-plan.aspx

The project team values the participation of all stakeholders and wishes to ensure that the community's interests and concerns are taken into consideration. Please contact the project team members listed on the attached notice should you require further information on this project.

Thank you,

Samya

Samya Chams, B.A. (she/her)

Administrative Assistant

R.V. Anderson Associates Limited
557 Southdale Road East, Suite 200, London ON N6E 1A2
t 519 681 9916 ext. 5021

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Samya Chams

From: Paul Zuberbuhler <pzuberbuhler@strathroy-caradoc.ca>

Sent: September 16, 2024 7:37 AM
To: John Tyrrell; Darika Sharma

Subject: FW: Strathroy-Caradoc Water, Wastewater & Stormwater Management Master Plan -

Meeting Follow Up

Attachments: Projects of Interest.pdf

[CAUTION EXTERNAL EMAIL] Make Sure that it is legitimate before Replying or Clicking on any links

Hi John/Darika.

Please see attached questions below from the Public Meeting. Are you able to answer these?

Regards,

Paul Zuberbuhler B.Sc, B.Comm, C.E.T. Manager of Environmental Services

Municipality of Strathroy-Caradoc 52 Frank Street | Strathroy, ON | N7G 2R4

Phone: 519-245-1105 x274

Email: pzuberbuhler@strathroy-caradoc.ca

Visit us online at www.strathroy-caradoc.ca



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From: Joshua Monster < JMonster@mte85.com>

Sent: September-16-24 7:20 AM

To: Paul Zuberbuhler <pzuberbuhler@strathroy-caradoc.ca>

Subject: Strathroy-Caradoc Water, Wastewater & Stormwater Management Master Plan - Meeting Follow Up

Hello Paul,

Good to see you last Wednesday, thanks for proactively approaching to see if I had any questions.

As discussed, we have a client with parcels of land located within, and in the vicinity of, the Town of Strathroy. Our client has requested that we follow the Master Plan process to ensure that his parcels are being considered in the evaluation of the system and the proposed upgrades.

The parcels and the conceptual development proposals are roughly indicated on the attached figure. Our questions are summarized below, we recognize that the Master Plan is a high-level study and we cannot expect answers on specific infrastructure projects / upgrades but are hoping to confirm that the proposed developments would fit into the growth intensities and areas used in the study update.

- The Melbourne Road and Glengyle Road properties are currently located outside of the Town's settlement boundary. Is the growth being considered in the study allowing for any expansion of the growth boundary in the next 20 years?
- To what extent was intensification of the downtown area considered? Would an apartment complex fit within this projection?
- The 2006 Sanitary Servicing Master Plan completed by BM Ross included allowances for development in the area of the Glengyle property. Does this Master Plan give any consideration to growth in that area and the associated works required to service that growth?
- There is an existing sanitary trunk sewer which snakes through the east side of the Melbourne Road property. We assume that this property has been accounted for in the design of that sewer, that development of the property should be included in the growth estimates, and that infrastructure projects associated with servicing the property (Water, Storm) should also be considered. Please confirm.

Т	h	aı	٦ŀ	(S	

Josh

Joshua Monster, P.Eng. | Technical Practice Leader – Land MTE Consultants Inc.

T: 519-204-6510 x2202 | <u>JMonster@mte85.com</u> 123 St George St., London, Ontario N6A 3A1 <u>www.mte85.com</u> | <u>LinkedIn</u> | <u>Instagram</u> | <u>Facebook</u>

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"Inspiring a Healthy Environment"

January 8, 2024

R.V. Anderson Associates Limited 557 Southdale Road East, Suite #200 London, ON N6E 1A2

Municipality of Strathroy-Caradoc 52 Frank Street Sthrathroy-Caradoc N7G 2R4

Attention: John Tyrrell, R.V Anderson - (sent via e-mail: ityrrell@rvanderson.com)

Paul Zuberbuhler, Strathroy-Caradoc

- (sent via e-mail: pzuberbuhler@strathroy-caradoc.ca)

Re: Water, Wastewater and Stormwater Master Plan and

Pollution Prevention Control Plan Notice of Study Commencement Municipality of Strathroy-Caradoc

Upper Thames River Conservation Authority (UTRCA) staff are in receipt of the Notice of Study Commencement for the Municipality of Strathroy-Caradoc's Water, Wastewater and Stormwater Master Plan and Pollution Prevention Control Plan (PPCP). We are further of the understanding the Master Plan is being prepared as part of ongoing efforts to improve the performance of the municipality's infrastructure while the PPCP will provide a road map for implementing infrastructure and operational improvements that will mitigate the impacts of wet weather sewer system overflows on the environment.

We offer the following comments under Ontario Regulation 157/06 and our responsibilities as a commenting agency providing technical review and advisement related to water resources, pollution prevention and natural hazard management pursuant to relevant legislation and policies set out in the UTRCA Planning Policy Manual (June 28, 2006).:

General Comments

1) We would appreciate the opportunity for our technical staff to review and provide comments on any upcoming draft documents and proposed alternatives including any draft Master Plan or PPCP. Please note that our scope of review is based on the

policies set out in the Upper Thames River Conservation Authority Planning Policy Manual (June 28, 2006). SMP and subsequent detail design project review for site specific works would generally be guided by, but not limited to, natural hazard and pollution prevention areas of concern for lands regulated within our jurisdiction.

Conservation Authority Regulated Areas

- 2) The UTRCA has identified that the study area contains natural [water] hazard lands due to the presence of: a) a variety of watercourses including the main branch of the Thames River; b) riverine flooding and erosion hazard lands associated with these watercourses; c) Wetland (including wetlands that have been designated as Provincially or Locally Significant); and, d) the Area of Interference surrounding these wetland features.
- 3) While it is understandable that some of the water/wastewater/storm infrastructure (such as water and wastewater trunk lines) will need to cross over/under watercourses any new or expanded structures (such as water storage facilities, pumping stations and stormwater management facilities) should be located entirely outside the hazard lands (flood, erosion, wetland).
- 4) Portions of the study areas either lie outside our watershed or are shared with the the St. Clair Region Conservation Authority (SCRCA) or the Lower Thames Valley Conservation Authority (LTVCA) who also have jurisdiction for those areas. We recommend you contact the other relevant Conservation Authorities directly for their comments regarding any works/plans proposed in their portions of the study area.

Digital Mapping

5) Our staff can provide digital mapping which outlines the approximate boundaries of the natural hazard features as well as Drinking Water Source Protection Areas present within the UTRCA portion of the study area. Our digital mapping may be obtained by contacting our GIS department (contact: Phil Simm, 519-451-2800 x 247). Generally there is a fee involved with obtaining digital mapping of our natural hazard features but this fee will be waived as the mapping is intended for use by one of our watershed municipalities for a Servicing Master Plan and PPCP.

Drinking Water Source Protection

- 6) This Master Plan and PPCP is the best time to consider regulatory requirements of the Ontario *Clean Water Act* and local Source Protection Plans as well as designated vulnerable areas. The Master Planning process offers an excellent opportunity to document how these factors have been considered in assessing alternatives through the planning process.
- 7) Wastewater and Storm Water Management is an activity which may be considered a drinking water threat and thus any WW or SWM plan should consider its impact to these designated vulnerable areas and features. Within this municipality, the

vulnerable areas include: Highly Vulnerable Aquifers and Significant Groundwater Recharge Areas. Neither of which have significant policies that need to be addressed but there should be regard for these areas and use Best Management Practices where possible. While it is important to maintain the quantity of water recharged to these vulnerable aquifers it is also important to consider the quality of the water recharged in these vulnerable areas.

- 8) If the Water and Wastewater Master Plan preferred option is either a new well, change in location of existing well, or expansion of current well, please engage our office as soon as you can as this is subject to s.34 amendments to the Thames-Sydenham Source Protection Plans and Assessment Reports as per the *Clean Water Act, 2006*. These changes could affect the Wellhead Protection Area delineation for which polices could apply.
- 9) If the proponents have questions on how source protection and the local plan may affect the proposed alternatives they may contact UTRCA Drinking Water Source Protection (DWSP) staff or their municipal Risk Management Official (RMO).

Comments Specific to Stormwater Management

While most of the following stormwater management comments could be dealt with at the detail design stage we are providing them at the beginning of the study for information and future planning purposes.

10) For details on our policies regarding stormwater management, you may wish to refer to Section 3.5.2 – Policies for Stormwater Management and Erosion and Sediment Control Measures contained within our Environmental Planning Policy Manual for the Upper Thames River Conservation Authority (June 2006, revised October 2017), available on our website at:

https://thamesriver.on.ca/wp-content/uploads/EnvPlanningPolicyManual-update2017.pdf

- 11) Please note the UTRCA takes the 1: 250 Year Storm as our regulatory storm event standard. The UTRCA requires quantity controls on all future stormwater management (SWM) facilities to ensure that post-development flows will be controlled to predevelopment flows for all storm events up to and including the Regulatory (1: 250) Year Storm;
- 12) If any pond is proposed to outlet to an existing storm sewer, then the pond should be designed to the capacity of the receiving storm sewer up to and including the 250-year storm under the post-development conditions.
- 13) Any proposed SWM outlets discharging to open watercourses should be sized to handle the Regulatory (1: 250) Year Storm.

- 14) Enhanced Water Quality Control control (80% long-term average TSS removal), as per MECP's SWM Planning and Design Manual, is recommended for all future stormwater management facilities.
- 15) With regards to any proposed 'Low-Impact Stormwater Controls' only clean and/or treated water should be considered for infiltration. If there are any wetlands associated with the site a Water Balance supported by HydroG may be required.
- 16) UTRCA does not support the diversion of stormwater from one catchment to another.

Summary

Please note that given the broad concept proposal at this time, we are unable to provide detailed technical comments regarding the project. However, we appreciate being contacted early in the process and are always open to meeting with you to discuss and work through any concerns or complications along the way.

Our office would like to be included in future circulations regarding this project. We would appreciate receiving information and reports as they become available in order to ensure that we can meet the project deadlines with our comments.

If you have any questions regarding the above information, please contact the undersigned.

Yours truly,
UPPER THAMES RIVER CONSERVATION AUTHORITY

Karen Winfield

Land Use Regulations Officer

Kan M. Winfield

JW/KW/kw

c.c. - Darika Sharma, R.V. Anderson - (via e-mail: DSharma@rvanderson.com)

Laura Biancolin, UTRCA

Eric Gaskin, UTRCA

Cari Ramsey, UTRCA

Julie Welker, UTRCA

Melissa Diesley, SCRCA

Valerie Towsley, LTVCA

APPENDIX 1.5

Master Plan and PPCP
Report and Presentation to
Strathroy-Caradoc Council
and Endorsement





COUNCIL REPORT

Meeting Date: November 4, 2024

Department: Engineering and Public Works

Report No.: EPW-2024-74

Submitted by: Mark Ortiz, Director of Engineering and Public Works

Approved by: Trisha McKibbin, Chief Administrative Officer

SUBJECT: Water, Wastewater and Stormwater Masterplan

RECOMMENDATION:

THAT: Council receive Report EPW-2024-74 "Water, Wastewater and Stormwater Masterplan" for information, and further;

THAT: Council endorse the 2024 Water, Wastewater and Stormwater Master Plan as the recommended servicing strategies to meet Strathroy-Caradoc's growth needs to 2046 as well as provide effective on-going continuity to existing serviced settlement areas, and further;

THAT: Council direct staff to file a Notice of Completion and commence the 45-day public review period as required under the Municipal Class Environmental Assessment (MCEA) process.

BACKGROUND:

The Water, Wastewater and Stormwater Servicing Masterplan (WWSMP or Masterplan) was developed as a strategic planning document to facilitate long term planning and identify key infrastructure required to accommodate population and employment growth in the Municipality through the year 2046. The Master Planning process is intended to establish the need and justification for projects and ensure the first two phases of the environmental assessment process is satisfied.

The primary goals of the Masterplan were to:

- Determine necessary water, wastewater and stormwater infrastructure projects required to service growth to 2046
- Address the first two phases of the Municipal Class EA including Identification of Problem/Opportunities and Alternative Solutions
- Ensure the recommendations are consistent with and conform to provincial policies and legislations and the Municipality's policies
- Identify options for optimizing the effectiveness of the existing infrastructure

Staff Report No.: EPW-2024-74

Page 1 of 11

The Masterplan was undertaken in accordance with the requirements of the Municipal Class Environmental Assessment (MCEA) March 2023. The MCEA process sets out the process that a proponent must follow to meet the requirements of the *Ontario Environmental Assessment Act* for a class or category of infrastructure projects.

The Masterplan Process provides the basis for developing a long-range plan that integrates infrastructure requirements for existing and future land use.

The Masterplan was developed following Approach #1 of the Municipal Class Environmental Assessment (Municipal Engineers Association) which involves a broad level of assessment, leading to further detailed investigation at a project-specific level for Schedule B or Schedule C projects identified in the Masterplan.

Accordingly, the Masterplan considered all reasonable water and wastewater servicing alternatives and developed a preferred alternative that offered the lowest potential impacts on the natural, cultural, social and economic environment of the community.

In addition to the social, cultural, economic and environmental considerations, focus was placed on sustainability, constructability, operability and service integration with other existing or future water, wastewater and stormwater infrastructure projects.

Water, wastewater and stormwater servicing strategies were assessed using the evaluation criteria shown in the table below.

Water, Wastewater and Stormwater Servicing Evaluation Criteria Category				
Category	Criteria			
	Constructability			
	Improvement to operations			
Technical	Infrastructure required			
	Approval requirements			
	 Risk mitigation – regulatory, supply security, climate change, etc. 			
0 1 1	Public acceptance			
Social and Cultural	 Impact to cultural heritage infrastructure and landscapes 			
Gaitarai	 Impact to archaeological infrastructure and resources 			
	Impact to aquatic and terrestrial species and habitat			
Environmental	 Impact to surface water quantity and quality 			
	Impact on climate change			
	Capital costs			
Economic	Operation and maintenance costs			
	Allows for planned community growth			

The Masterplan implemented population growth forecasts provided by the 2022 Residential Land Needs Assessment (Watson & Associates Economists LTD) and assumed that future development would be established within existing designated settlement areas.

The Masterplan also included the connection of existing, un-serviced homes in Mt. Brydges to the sanitary system as part of the study, as per Council direction.

Public Engagement

Two Public Information Centre's (PIC) were held to provide members of the public an opportunity to review the Masterplan alternatives and provide input on the process. Feedback from the information sessions was taken and included in the development of the Masterplan.

The first PIC was held in Mt. Brydges on January 10th, 2024 and 59 people completed the sign in sheet.

The second PIC was held in Strathroy on September 11th, 2024 and 8 people completed the sign in sheet.

Feedback was received via comment sheets and emails on various topics including but not limited to:

- Growth projections/population determination
- Servicing outside of current settlement boundaries
- Flooding in Campbellvale

Clarification was provided on the growth and servicing as part of the Masterplan. As flooding in Campbellvale is related to water drainage outside of the study area, the Municipality retained Spriet Associates Ltd to complete a field study and preliminary investigation of the existing Campbellvale drain watershed. Staff provided options to the concerned residents on possible solutions based on Spriet Associates Ltd findings.

COMMENTS:

Strathroy-Caradoc Drinking Water Supply

The Strathroy-Caradoc water distribution system is fed from the Lake Huron Water Supply System (LHPWSS). The LHPWSS has a current capacity to supply 340 million litres (ML) of drinking water per day while the maximum day flow (MDF) in 2023 was 198.5 ML.

Current agreements for both Mt. Brydges and Strathroy do not specify a maximum day limit on water supply. As water supply to Strathroy-Caradoc constitute a small portion of the LHPWSS's total available supply (less than 5% by 2046), and significant supply is currently available in the LHWSS (141.5 ML above 2023 MDF) water supply is not expected to be an issue through 2046.

It is recommended that the Municipality convey its future demand requirements to the LHPWSS and formalize a guaranteed minimum supply in a future update to the supply agreements.

Strathroy Drinking Water System

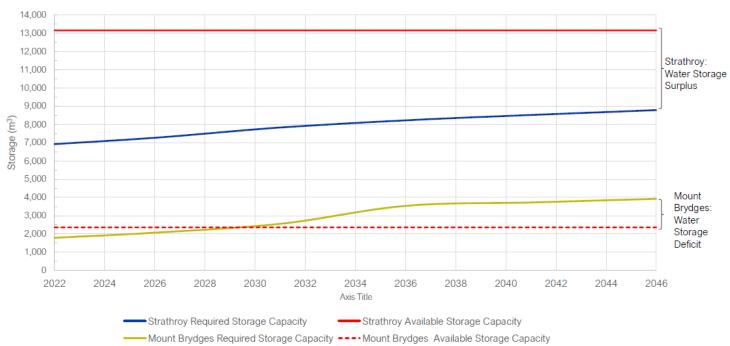
Strathroy Drinking Water Distribution

The Masterplan assessed current and future water demands in Strathroy as well as current distribution and storage capacity in the Strathroy Drinking Water System. Peak Hour Demand is expected to increase from 156 L/s currently to 220 L/s by 2046. Several watermain replacement projects have been identified to improve fire flow through 2046.

Strathroy Drinking Water Storage

The current storage capacity of the Strathroy Drinking Water System is 13,150 m³. The future storage requirement in 2046 is 8,781 m³ (67% of available capacity). This is sufficiently below the 85% threshold typically used to start the planning/design process for upgrades. As such, there are no growth-related water storage projects identified through 2046. It is expected that future Masterplans will identify capacity needs beyond 2046.





Strathroy Drinking Water System Recommendations

The Masterplan provided the Municipality with a list of watermains required to be replaced and increased in size to meet fire flow targets. The watermains recommended for replacement are:

- Centre Street Watermain Upgrades
- Concord Drive Watermain Upgrades
- Riverview Drive Watermain Upgrades
- Oak Avenue Watermain Upgrades
- North Street Watermain Upgrades
- Locke Heights Watermain Upgrades
- Lamore Crescent Watermain Upgrades
- Mill Pond Crescent Watermain Upgrades
- Head Street Watermain Upgrades

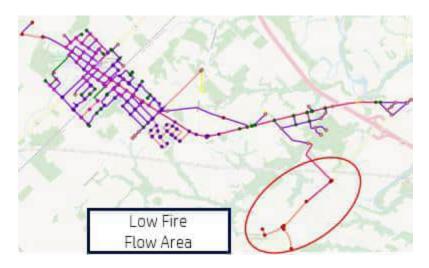
The total value of Strathroy Drinking Water System capital projects identified through 2046 is \$12.5M.

Mt. Brydges Drinking Water System

Mt. Brydges Drinking Water Distribution

The Masterplan assessed current and future water demands in Mount Brydges as well as current distribution and storage capacity in the Mount Brydges Drinking Water System. Peak Hour Demand in Mount Brydges is expected to increase from 32 L/s currently to 73 L/s by 2046. The existing water distribution system was found to be capable of the increased distribution flows and no growth-related water distribution projects identified in Mount Brydges through 2046.

The Masterplan also identified low flow during fire conditions outside of the Mt. Brydges community. It was recommended that these areas be treated as rural areas for fire protection. It was also recommended, to continue regular updates to the hydraulic model.



Mt. Brydges Drinking Water Storage

The current drinking water storage capacity of the Mt. Brydges Drinking Water System is 2,350 m³. As total storage of 3,913 m³ is expected to be required in 2046, additional storage capacity will be needed. The required storage volume will reach 85% of available in late 2025, triggering the start of planning/design for increased capacity.

The total value of Mt. Brydges Drinking Water System capital projects identified through 2046 is \$2.58M.

Strathroy Wastewater System

Strathroy Wastewater Collection

The current Strathroy Wastewater Collection System (WWCS) performance was evaluated using a calibrated hydraulic model. It was found that Strathroy's existing WWCS is capable of conveying future estimated wet weather flows under the 2046 conditions. There are no growth-related wastewater collection projects identified through 2046. It is expected that future Masterplans will identify capacity needs beyond 2046.

Strathroy Wastewater Treatment Facility (WWTF)

The current Strathroy WWTF has a capacity of the Strathroy Wastewater Treatment Facility is System is 10,000 m³/day. The future treatment requirement of 7,034 m³ is projected in 2046. As such there are no growth-related wastewater treatment projects identified through 2046.

There are several capital upgrades currently underway at the Strathroy WWTF including a new aeration basin, headworks facility and blower upgrades which will improve plant operations and redundancy however will not increase capacity.

It is expected that future Masterplans will identify capacity needs beyond 2046.

The chart below summarizes the Strathroy Wastewater Flow Projections:



Strathroy Wastewater System Recommendations

The Masterplan recommends annual updating of the hydraulic model.

The total value of Strathroy Wastewater System masterplan capital projects (excluding on-going capital works) through 2046 is \$0.6 M.

Mt. Brydges Wastewater System

Connection of Existing Un-serviced Residences

Based on direction from Council, the future serviced population for Mt. Brydges was based both on additional growth and the connection of existing un-serviced properties.

It was assumed that there would be a phasing of these connections and by year 2046, the entire unserviced population will be fully connected. The approach of including the existing un-serviced population has a potentially significant impact on the wastewater treatment capacity and collection system upgrades.

Mt. Brydges Wastewater Collection

The current Mt. Brydges WWCS performance was evaluated using a calibrated hydraulic model. It was found that Mt. Brydges existing WWCS is capable of conveying future estimated wet weather flows

under the 2046 conditions. There are no growth-related wastewater collection projects identified through 2046.

The connection of existing, non-serviced residences comprises a significant, non-growth related capital project.

Mount Brydges Wastewater Treatment

Mount Brydges is currently serviced by a single wastewater treatment plant – the Mt. Brydges WWTF – with a rated capacity of 825 m³/day.

As future wastewater treatment requirements are projected to be 2,348 m³ by 2046, Mount Brydges will require significant additional wastewater treatment capacity in order to service growth and connect existing un-serviced residences.

In addition to future treatment capacity needs, the Mt. Brydges WWTF currently struggles to meet effluent compliance limits with existing flows of approximately 400 m³/day. Several initiatives are currently underway independent of the Masterplan to restore capacity at the Mt. Brydges WWTF to its full 825 m³/day rated capacity, including process optimization and re-purposing of three (3) existing Rotating Bioreactor tanks to extended aeration.

For the purpose of the Masterplan, it was assumed that the Mt. Brydges WWTF will be capable of achieving its rated capacity and effectively treating 825 m³/day.

In total there is approximately 900 m³/day of flow expected from currently proposed developments in the Mt. Brydges area. There will be a further 625 m³/day of additional flow required for the servicing of the existing non-serviced residents. These short to medium term flow increases are expected to put significant strain on wastewater treatment capacity in Mount Brydges.

Alternative Solutions for addressing wastewater servicing and increasing wastewater treatment capacity in Mount Brydges will be identified and evaluated in a detailed Class C Environmental Assessment, to be completed as high priority by the Municipality.



Mt. Brydges Wastewater System Recommendations

In order to meet the treatment capacity requirement of 2,348 m³/day by 2046, the Masterplan recommends the undertaking of a Schedule C Class EA on a priority basis followed by the implementation of the proposed solution.

Option #1 (Expansion of the Mount Brydges WWTF) is used in the Masterplan for illustrative and high-level budgetary purposes, noting that the future wastewater servicing strategy is to be confirmed through the separate Schedule C Class EA.

The total estimated value of Mt. Brydges Wastewater System capital projects identified through 2046 is approximately \$80M as follows:

- Expansion of Mount Brydges WWTF \$26M
- Connection of Existing Un-Serviced Residences \$54M

It should be noted that the cost for connecting existing un-serviced residences includes costs for completely upgrading the right-of-way to current municipal servicing standards including all road improvement and storm sewer construction. The sanitary sewer connection expenditure would make up approximately 27% of the total cost.

Strathroy-Caradoc Stormwater System

In the Masterplan process, Strathroy-Caradoc Stormwater Management (SWM) underwent a review of the following:

- Current condition of the existing facilities
- Current Stormwater standards
- Approval requirements for new facilities
- Operations and maintenance of the current Stormwater Facilities

The intent was to provide the Municipality with recommendations to improve the current SWM approval and management process to balance meeting regulatory requirements, safety, environmental protection/enhancement, lifecycle cost, liability, and an equitable apportionment between new and existing development.

Strathroy-Caradoc Stormwater System Recommendations

Findings from the Stormwater review provided the following recommendations:

- Stage 1: Develop Overall SWM Policy for Council Endorsement;
- Stage 2: Update Procedures Facility Assessment and Assumption; and
- Stage 3: Implement SWM Lifecycle Management Program.

KEY FINDINGS:

Strathroy Water

- Watermain Upgrades for improved fire flows
- Regular updating of modeling

Mt Brydges Water

- Increase water storage capacity
- Regular updating of modeling

Strathroy Wastewater

Regular updating of modeling

Mt Brydges Wastewater

- Schedule C Class EA for wastewater capacity
- Wastewater capacity upgrades
- Servicing of non-serviced properties

Stormwater

- Stage 1 Develop overall Stormwater Management Policy
- Stage 2 Update procedures and facility assessments
- Stage 3 Implement Stormwater lifecycle management

The following table shows a breakdown of projects and costs from the findings from the Masterplan.

Project	Area	Cost Opinion	Project Complete Year			
Water System						
Centre Street Watermain Upgrades	S	\$840,000	2032			
Concord Drive Watermain Upgrades	S	\$760,000	2032			
Riverview Drive Watermain Upgrades	S	\$760,000	2032			
Oak Avenue Watermain Upgrades	S	\$1,830,000	2032			
North Street Watermain Upgrades	S	\$1,770,000	2033			
Locke Heights Watermain Upgrades	S	\$1,430,000	2033			
Lamore Crescent Watermain Upgrades	S	\$1,210,000	2034			
Mill Pond Crescent Watermain Upgrades	S	\$1,430,000	2034			
Head Street Watermain Upgrades	S	\$2,030,000	2035			
Storage Upgrades	MB	\$2,575,000	2032			
Updating of Water Hydraulic Model	SC	\$400,000	2032			
Wa	ter Total	\$15,035,000				
Wastewater Sy.	stem					
WWTF Schedule C Class EA	MB	\$350,000	2026			
WWTF Cost	MB	\$25,768,000	2030			
Existing Servicing Phase 1-10	MB	\$54,000,000	2028-2046			
Annual Updating of Wastewater Hydraulic Model	SC	\$600,000	2029, 2039			
Wastewa	iter Total	\$80,718,000				
Stormwater Mana	gement					
Stage 1 SWM Policy Initial Policy & 1 Update	SC	\$200,000	2026			
Stage 2 SWM	SC	\$315,000	2029			
Stage 3 SWM	SC	\$5,640,000	2027-2044			
Stormwa	ter Total	\$6,155,000				
Pollution Prevention Control Plan						
PPCP Data Collection to update WW Hydraulic						
Model	SC	\$300,000	2029, 2039			
PP	CP Total	\$300,000				
	TOTAL	\$102,208,000				

CONSULTATION:

- Director of Finance and IT
- Manager of Public Works
- Manager of Environmental Services
- Senior Development Coordinator
- Chief Administrative Officer

FINANCIAL IMPLICATIONS:

The costs for the recommended works in the table above will be included in the upcoming capital budget.

ALTERNATIVE(S) TO THE RECOMMENDATION:

- 1. Council to reject Masterplan and Alternative Solutions, provide alternate direction.
- 2. Council to provide alternate direction.

STRATEGIC PLAN ALIGNMENT:

This matter is in accord with the following strategic priorities:

• Local Infrastructure – Households and businesses in Strathroy-Caradoc are supported by reliable, financially responsible and well-maintained infrastructure networks

ATTACHMENTS:







Master Plan/PPCP Project Schedule



Presentation Purpose

- Provide details on findings of the Water, Wastewater and Stormwater Management (SWM)
 Master Plan
- Provide details on findings of the Pollution Prevention Plan (PPCP) Identify the issues and reason for this study
- Summarize the recommendations and costs associated with the Master Plan and PPCP

Schedule

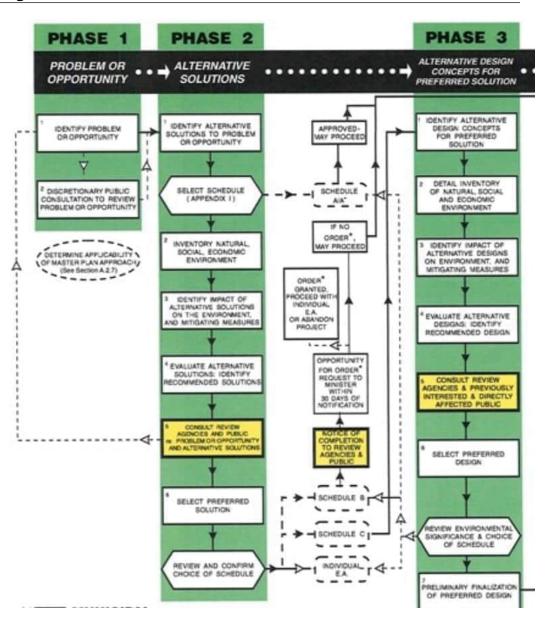
- Assigned to RVA April 2023
- Undertook background review, site visits, flow monitoring, hydraulic modeling
- PIC #1 held on January 10, 2024
- PIC #2 held on September 11, 2024
- Following Council Approval Municipality Issues Notice of Completion November 2024
- Master Plan and PPCP Completed (following 30-day review period) December 2024

Master Plan/PPCP Purpose and Objectives





- Master Plans rely on analysis and policies developed in municipal Official Plans such as the expected speed, location and type of growth to determine infrastructure needs
- Addresses Phases 1 and 2 of Municipal Class EA process
- Follows Approach #1 of the MCEA process



Master Plan/PPCP Purpose and Objectives





The Municipality has chosen the following as its statement of the Problem and Opportunity Statement to be addressed by the Master Plan/PPCP:

To identify preferred water and wastewater serving strategies to meet the Municipality of Strathroy-Caradoc's growth needs to 2046 as well as provide effective on-going continuity to existing serviced community areas across the Municipality of Strathroy-Caradoc as appropriate.

A Pollution Prevention Control Plan (PPCP) is Intended to be a part of the Municipality's ongoing efforts to improve the performance of sanitary and storm sewer infrastructure

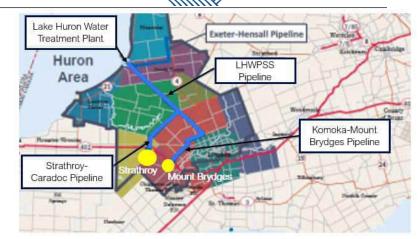
The Master Plan and PPCP focus on the two urban settlement areas (Strathroy and Mount Brydges)

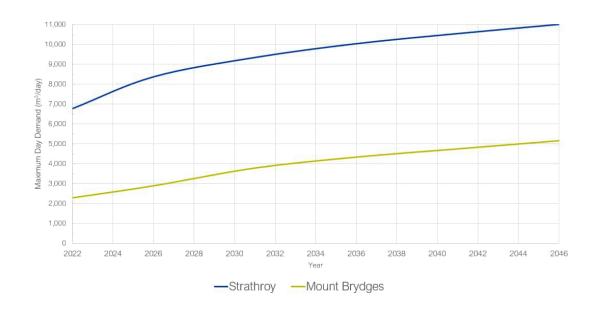
Drinking Water Distribution

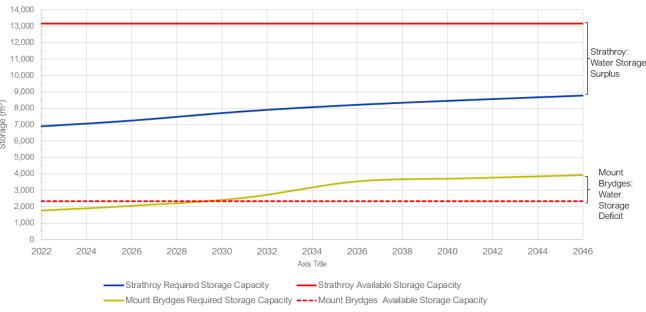
STRATHROY-CARADOC
URBAN OPPORTUNITY - RUBAL HOSPITALITY

RUBAN OPPORTUNITY - RUBAL HOSPITALITY

- Strathroy WDS and Mount Brydges WDS are both supplied from the Lake Huron Primary Water Supply System (LHPWSS) through separate connections
- LHPWSS current capacity is 340 mega-litres per day (ML/d) and the 2023 maximum day flow was 198.5 ML/d - water supply is not an issue







Water Demand

Water Storage

Drinking Water Storage & Hydraulic Modelling



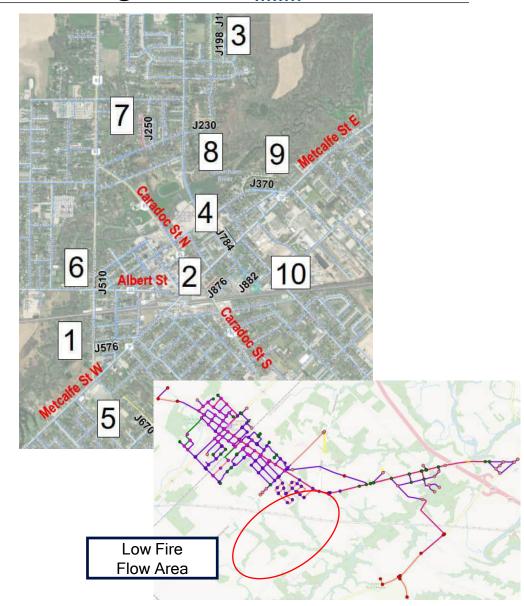


Strathroy Drinking Water System

- No issues noted related to growth
- 10 sections of undersized watermains in the distribution system that need to be upsized to meet fire flow targets

Mount Brydges Drinking Water System

- Currently have 2,350 m³ of storage
- Additional storage capacity required by 2031 for total capacity of 3,913 m³
- Some isolated rural areas east of Adelaide
 Rd. and Gibson Rd. have lower than required fire flows



Recommended Water Strategy





Strathroy Drinking Water System

 Upsize 10 sections of undersized watermains in Strathroy (2025 to 2035)

Mt. Brydges Drinking Water System

 Increase Mount Brydges storage with two above ground storage tanks at current Glendon Rd Storage Facility (2025-2026)

Area east of Adelaide Rd. and Gibson Rd.

- Increasing watermain size would affect water quality and operations
- Treat areas as rural for fire protection and monitor water modelling in future



Strathroy - WW Collection and Treatment



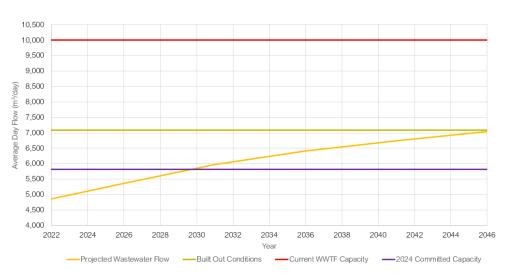


 Wastewater flow projections to 2046 were undertaken and are shown in the table below

Parameter	2026	2031	2036	2041	2046
Population	18,200	20,300	21,800	22,900	23,900
Average Day Flow (ADF)	5,357	5,975	6,416	6,740	7,034

- The Strathroy wastewater collection system was modelled (PS, forcemains and sewers)
- Existing collection system adequate for flows to 2046
- The Strathroy WWTF has a ADF capacity of 10,000 m³/day and does not need to be expanded for capacity in the period to 2046





Mount Brydges WW Collection

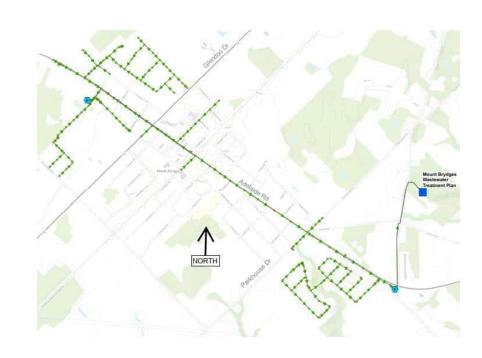




• Wastewater flow projections to 2046 were undertaken and are shown in the table below

			Years		
Parameter	2026	2031	2036	2041	2046
Total Population	4,200	5,500	6,300	6,900	7,500
Connected Population Growth	2,295	4,111	5,440	6,593	7,500
WWTF Capacity Requirement (m³/day)	718	1,287	1,703	2,064	2,348

- Existing collection system adequate for flows from currently connected areas
- Collection system to be upgraded to connect existing, non-serviced residents by 2046
- 11.6 km of new sanitary sewers will be required
- Cost will depend on extent of road and storm sewer upgrades if included as part of sanitary sewer construction



Mount Brydges WW Treatment





Mount Brydges Wastewater Treatment

- Mount Brydges WWTF currently struggling to meet effluent limits
- Treatment capacity of 825 m³/day expected to be restored by 2026

Wastewater Treatment Expansion

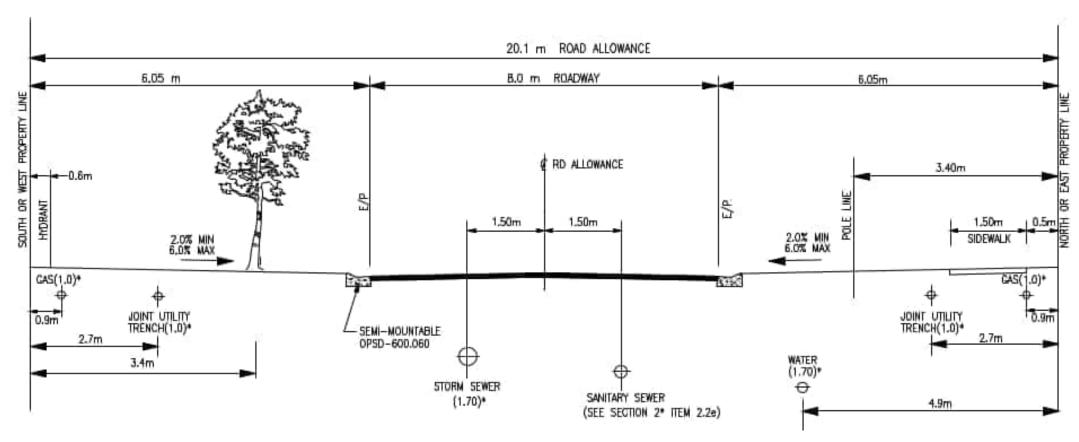
- Total wastewater loading in Mt. Brydges expected to be 2,348 m³/day by 2046
- Schedule C Class EA required to confirm wastewater servicing strategy



Mount Brydges WW Treatment Capacity







Typical Road Allowance

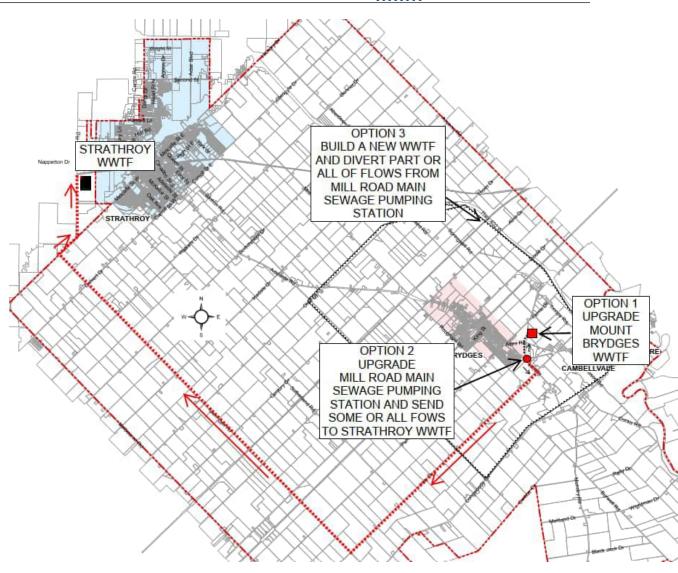
Mount Brydges WW Treatment Expansion





• Options :

- Upgrade Existing Mount Brydges WWTF
- 2. Upgrade Mill Road Main Sewage Pumping Station and construct new forcemain to pump flows to Strathroy WWTF
- 3. Build New WWTF, upgrade Mill Road Main Sewage Pumping Station and construct new forcemain to pump flows to New WWTF

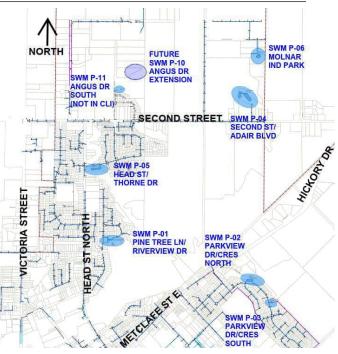


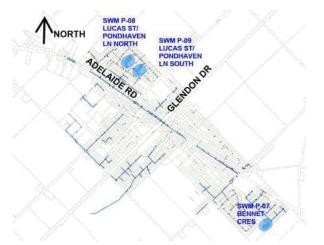
Stormwater Management (SWM)

- Municipality has 11 SWM facilities 10 of which are included in the MECP Environmental Compliance Approval for a Municipal Stormwater Management System ECA Number: 058-S701
- Municipality's policies, standards, development agreements, capital budget and asset management plan was reviewed
- Gaps were noted in aspects of the Current Subdivision Agreement, Site Plan Agreement and the current SCSS
- The current 10-year capital plan appears to underfund the required management and maintenance of SWM Facilities that is needed over their lifecycle to maintain function and reduce risks and impacts to Municipality
- Recommended program for SWM Facility management includes
 - Stage 1: Develop Overall SWM Policy for Council Endorsement
 - Stage 2: Update Procedures Facility Assessment and Assumption
 - Stage 3: Implement SWM Lifecycle Management Program to prioritize the rehabilitation of SWM Facilities









Pollution Prevention Control Plan (PPCP)



- Findings of PPCP were as follows:
 - Modeling completed corroborated that the existing conveyance system will have sufficient capacity as flows increase to 2046
 - The Municipality had no recorded sewage overflows in the period reviewed and is therefore in compliance with MECP Procedure F-5-1 and F-5-5
 - A review of historical data from 2019 through 2023 found minor by-passes at the WWTFs in both Strathroy and Mount Brydges however none of these occurrences were caused by wet weather flows
 - By-passes at the Mount Brydges WWTF were the result of equipment failures and will be addressed through the on-going upgrades

Recommendations:

- Any cross connections found should be addressed through separation and storm sewer installation
- To improve the accuracy of the sanitary hydraulic model, combined sewer and pumping station surveys should be undertaken to gather any missing, incomplete or inaccurate data
- Modeling completed corroborated that the existing conveyance system will have sufficient capacity as flows increase to 2046

Master Plan Cost Opinion



- Opinions are Class 5 based on a design definition of 0-2% complete and are considered to have a range of accuracy of -30% to +50%
- Linear construction costing is based on data from 2023 linear urban infrastructure renewal projects in Strathroy-Caradoc
- Water and wastewater facility and study costing is based on recent projects in Ontario
- SWM restoration costs are based on recent public tenders for the rehabilitation of SWM Facilities
- Hydraulic model costs include field work to confirm systems, upgrades to model from additional data and new infrastructure, and upgrades to modelling software over the time of the Master Plan
- It is recommended that the Municipality review the proposed projects identified and consider them within the context of:
 - The 10-year Capital Plan
 - The Asset Management Plan
 - Other Municipal policies, studies and initiatives
 - The Municipality's financial capacity
- NOTE: Cost estimates to not include current work being undertaken at Strathroy WWTF and Mount Brydges WWTF

Master Plan Cost Opinion





Project	Area	Cost Opinion	Project Complete			
			Year			
Water System						
Centre Street Watermain Upgrades	S	\$840,000	2032			
Concord Drive Watermain Upgrades	S	\$760,000	2032			
Riverview Drive Watermain Upgrades	S	\$760,000	2032			
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North Street Watermain Upgrades	S	\$1,770,000	2033			
Locke Heights Watermain Upgrades	S	\$1,430,000	2033			
Lamore Crescent Watermain Upgrades	S	\$1,210,000	2034			
Mill Pond Crescent Watermain Upgrades	S	\$1,430,000	2034			
Head Street Watermain Upgrades	S	\$2,030,000	2035			
Storage Upgrades	MB	\$2,575,000	2032			
Updating of Water Hydraulic Model	SC	\$400,000	2032			
Wa	iter Total	\$15,035,000				
Wastewater Sys	stem					
WWTF Schedule C Class EA	MB	\$350,000	2026			
WWTF Cost	MB	\$25,768,000	2030			
Existing Servicing Phase 1-10	MB	\$54,000,000	2028-2046			
Annual Updating of Wastewater Hydraulic Model	SC	\$600,000	2029, 2039			
Wastewa	iter Total	\$80,718,000				
Stormwater Mana	gement					
Stage 1 SWM Policy Initial Policy & 1 Update	SC	\$200,000	2026			
Stage 2 SWM	SC	\$315,000	2029			
Stage 3 SWM	SC	\$5,640,000	2027-2044			
Stormwa	ter Total	\$6,155,000				
Pollution Prevention Control Plan						
PPCP Data Collection to update WW Hydraulic						
Model	SC	\$300,000	2029, 2039			
PP	CP Total	\$300,000				
	TOTAL	\$102,208,000				



COUNCIL REPORT

Meeting Date: November 18, 2024

Department: Engineering and Public Works

Report No.: EPW-2024-80

Submitted by: Mark Ortiz, Director of Engineering and Public Works

Approved by: Trisha McKibbin, Chief Administrative Officer

SUBJECT: Water, Wastewater and Stormwater Masterplan

RECOMMENDATION:

THAT: Report EPW-2024-74 "Water, Wastewater and Stormwater Masterplan" be received for information, and further;

THAT: Council endorse the 2024 Water, Wastewater and Stormwater Master Plan as the recommended servicing strategies to meet Strathroy-Caradoc's growth needs to 2046 as well as provide effective on-going continuity to existing serviced settlement areas, and further;

THAT: Council direct Staff to file a Notice of Completion and commence the 45-day public review period as required under the Municipal Class Environmental Assessment (MCEA) process.

BACKGROUND:

This report follows the same report as provided to Council at the November 4, 2024 Council meeting, at which it was deferred until after a pending update on the Mount Brydges Waste Water Treatment Facility. A report titled "Mount Brydges WWTF Program Update" is provided separately to Council at this November 18, 2024 meeting.

The Water, Wastewater and Stormwater Servicing Masterplan (WWSMP or Masterplan) was developed as a strategic planning document to facilitate long term planning and identify key infrastructure required to accommodate population and employment growth in the Municipality through the year 2046. The Master Planning process is intended to establish the need and justification for projects and ensure the first two phases of the environmental assessment process is satisfied.

The primary goals of the Masterplan were to:

 Determine necessary water, wastewater and stormwater infrastructure projects required to service growth to 2046;

Staff Report No.: EPW-2024-80

Page 1 of 11

- Address the first two phases of the Municipal Class EA including Identification of Problem/Opportunities and Alternative Solutions;
- Ensure the recommendations are consistent with and conform to provincial policies and legislations and the Municipality's policies; and
- Identify options for optimizing the effectiveness of the existing infrastructure.

The Masterplan was undertaken in accordance with the requirements of the Municipal Class Environmental Assessment (MCEA) March 2023. The MCEA process sets out the process that a proponent must follow to meet the requirements of the *Ontario Environmental Assessment Act* for a class or category of infrastructure projects.

The Masterplan Process provides the basis for developing a long-range plan that integrates infrastructure requirements for existing and future land use.

The Masterplan was developed following Approach #1 of the Municipal Class Environmental Assessment (Municipal Engineers Association) which involves a broad level of assessment, leading to further detailed investigation at a project-specific level for Schedule B or Schedule C projects identified in the Masterplan.

Accordingly, the Masterplan considered all reasonable water and wastewater servicing alternatives and developed a preferred alternative that offered the lowest potential impacts on the natural, cultural, social and economic environment of the community.

In addition to the social, cultural, economic and environmental considerations, focus was placed on sustainability, constructability, operability and service integration with other existing or future water, wastewater and stormwater infrastructure projects.

Water, wastewater and stormwater servicing strategies were assessed using the evaluation criteria shown in the table below.

Water, Wastewater and Stormwater Servicing Evaluation Criteria Category				
Category	Criteria			
Technical	Constructability			
	Improvement to operations			
	Infrastructure required			
	Approval requirements			
	• Risk mitigation– regulatory, supply security, climate change, etc.			
Coolel and	Public acceptance			
Social and Cultural	 Impact to cultural heritage infrastructure and landscapes 			
Cultural	Impact to archaeological infrastructure and resources			
	Impact to aquatic and terrestrial species and habitat			
Environmental	Impact to surface water quantity and quality			
	Impact on climate change			
Economic	Capital costs			
Economic	Operation and maintenance costs			

Allows for planned community growth

The Masterplan implemented population growth forecasts provided by the 2022 Residential Land Needs Assessment (Watson & Associates Economists LTD) and assumed that future development would be established within existing designated settlement areas.

The Masterplan also included the connection of existing, un-serviced homes in Mt. Brydges to the sanitary system as part of the study, as per Council direction.

Public Engagement

Two Public Information Centre's (PIC) were held to provide members of the public an opportunity to review the Masterplan alternatives and provide input on the process. Feedback from the information sessions was taken and included in the development of the Masterplan.

The first PIC was held in Mt. Brydges on January 10th, 2024 and 59 people completed the sign in sheet.

The second PIC was held in Strathroy on September 11th, 2024 and 8 people completed the sign in sheet.

Feedback was received via comment sheets and emails on various topics including but not limited to:

- Growth projections/population determination
- Servicing outside of current settlement boundaries
- Flooding in Campbellvale

Clarification was provided on the growth and servicing as part of the Masterplan. As flooding in Campbellvale is related to water drainage outside of the study area, the Municipality retained Spriet Associates Ltd to complete a field study and preliminary investigation of the existing Campbellvale drain watershed. Staff provided options to the concerned residents on possible solutions based on Spriet Associates Ltd findings.

COMMENTS:

Strathroy-Caradoc Drinking Water Supply

The Strathroy-Caradoc water distribution system is fed from the Lake Huron Water Supply System (LHPWSS). The LHPWSS has a current capacity to supply 340 million litres (ML) of drinking water per day while the maximum day flow (MDF) in 2023 was 198.5 ML.

Current agreements for both Mt. Brydges and Strathroy do not specify a maximum day limit on water supply. As water supply to Strathroy-Caradoc constitute a small portion of the LHPWSS's total available supply (less than 5% by 2046), and significant supply is currently available in the LHWSS (141.5 ML above 2023 MDF) water supply is not expected to be an issue through 2046.

It is recommended that the Municipality convey its future demand requirements to the LHPWSS and formalize a guaranteed minimum supply in a future update to the supply agreements.

Strathroy Drinking Water System

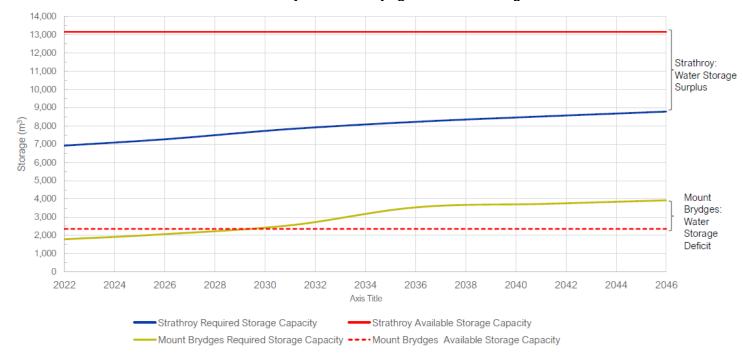
Strathroy Drinking Water Distribution

The Masterplan assessed current and future water demands in Strathroy as well as current distribution and storage capacity in the Strathroy Drinking Water System. Peak Hour Demand is expected to increase from 156 L/s currently to 220 L/s by 2046. Several watermain replacement projects have been identified to improve fire flow through 2046.

Strathroy Drinking Water Storage

The current storage capacity of the Strathroy Drinking Water System is 13,150 m³. The future storage requirement in 2046 is 8,781 m³ (67% of available capacity). This is sufficiently below the 85% threshold typically used to start the planning/design process for upgrades. As such, there are no growth-related water storage projects identified through 2046. It is expected that future Masterplans will identify capacity needs beyond 2046.

The table below summarizes the Strathroy and Mt. Brydges Water Storage:



Strathroy Drinking Water System Recommendations

The Masterplan provided the Municipality with a list of watermains required to be replaced and increased in size to meet fire flow targets. The watermains recommended for replacement are:

- Centre Street Watermain Upgrades
- Concord Drive Watermain Upgrades
- Riverview Drive Watermain Upgrades
- Oak Avenue Watermain Upgrades
- North Street Watermain Upgrades
- Locke Heights Watermain Upgrades
- Lamore Crescent Watermain Upgrades
- Mill Pond Crescent Watermain Upgrades
- Head Street Watermain Upgrades

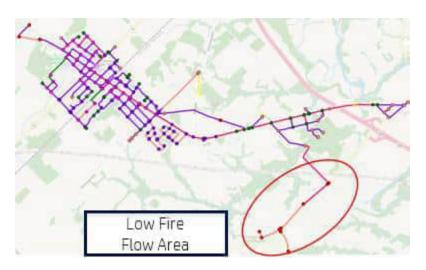
The total value of Strathroy Drinking Water System capital projects identified through 2046 is \$12.5M.

Mt. Brydges Drinking Water System

Mt. Brydges Drinking Water Distribution

The Masterplan assessed current and future water demands in Mount Brydges as well as current distribution and storage capacity in the Mount Brydges Drinking Water System. Peak Hour Demand in Mount Brydges is expected to increase from 32 L/s currently to 73 L/s by 2046. The existing water distribution system was found to be capable of the increased distribution flows and no growth-related water distribution projects identified in Mount Brydges through 2046.

The Masterplan also identified low flow during fire conditions outside of the Mt. Brydges community. It was recommended that these areas be treated as rural areas for fire protection. It was also recommended, to continue regular updates to the hydraulic model.



Mt. Brydges Drinking Water Storage

The current drinking water storage capacity of the Mt. Brydges Drinking Water System is 2,350 m³. As total storage of 3,913 m³ is expected to be required in 2046, additional storage capacity will be needed. The required storage volume will reach 85% of available in late 2025, triggering the start of planning/design for increased capacity.

The total value of Mt. Brydges Drinking Water System capital projects identified through 2046 is \$2.58M.

Strathroy Wastewater System

Strathroy Wastewater Collection

The current Strathroy Wastewater Collection System (WWCS) performance was evaluated using a calibrated hydraulic model. It was found that Strathroy's existing WWCS is capable of conveying future estimated wet weather flows under the 2046 conditions. There are no growth-related wastewater collection projects identified through 2046. It is expected that future Masterplans will identify capacity needs beyond 2046.

Strathroy Wastewater Treatment Facility (WWTF)

The current Strathroy WWTF has a capacity of the Strathroy Wastewater Treatment Facility is System is 10,000 m³/day. The future treatment requirement of 7,034 m³ is projected in 2046. As such there are no growth-related wastewater treatment projects identified through 2046.

There are several capital upgrades currently underway at the Strathroy WWTF including a new aeration basin, headworks facility and blower upgrades which will improve plant operations and redundancy however will not increase capacity.

It is expected that future Masterplans will identify capacity needs beyond 2046.

The chart below summarizes the Strathroy Wastewater Flow Projections:



Strathroy Wastewater System Recommendations

The Masterplan recommends annual updating of the hydraulic model.

The total value of Strathroy Wastewater System masterplan capital projects (excluding on-going capital works) through 2046 is \$0.6 M.

Mt. Brydges Wastewater System

Connection of Existing Un-serviced Residences

Based on direction from Council, the future serviced population for Mt. Brydges was based both on additional growth and the connection of existing un-serviced properties.

It was assumed that there would be a phasing of these connections and by year 2046, the entire unserviced population will be fully connected. The approach of including the existing unserviced population has a potentially significant impact on the wastewater treatment capacity and collection system upgrades.

Mt. Brydges Wastewater Collection

The current Mt. Brydges WWCS performance was evaluated using a calibrated hydraulic model. It was found that Mt. Brydges existing WWCS is capable of conveying future estimated wet weather flows under the 2046 conditions. There are no growth-related wastewater collection projects identified through 2046.

The connection of existing, non-serviced residences comprises a significant, non-growth related capital project.

Mount Brydges Wastewater Treatment

Mount Brydges is currently serviced by a single wastewater treatment plant – the Mt. Brydges WWTF – with a rated capacity of 825 m³/day.

As future wastewater treatment requirements are projected to be 2,348 m³ by 2046, Mount Brydges will require significant additional wastewater treatment capacity in order to service growth and connect existing un-serviced residences.

In addition to future treatment capacity needs, the Mt. Brydges WWTF currently struggles to meet effluent compliance limits with existing flows of approximately 400 m³/day. Several initiatives are currently underway independent of the Masterplan to restore capacity at the Mt. Brydges WWTF to its full 825 m³/day rated capacity, including process optimization and re-purposing of three (3) existing Rotating Bioreactor tanks to extended aeration.

For the purpose of the Masterplan, it was assumed that the Mt. Brydges WWTF will be capable of achieving its rated capacity and effectively treating 825 m³/day.

In total there is approximately 900 m³/day of flow expected from currently proposed developments in the Mt. Brydges area. There will be a further 625 m³/day of additional flow required for the servicing of the existing non-serviced residents. These short to medium term flow increases are expected to put significant strain on wastewater treatment capacity in Mount Brydges.

Alternative Solutions for addressing wastewater servicing and increasing wastewater treatment capacity in Mount Brydges will be identified and evaluated in a detailed Class C Environmental Assessment, to be completed as high priority by the Municipality.



Mt. Brydges Wastewater System Recommendations

In order to meet the treatment capacity requirement of 2,348 m³/day by 2046, the Masterplan recommends the undertaking of a Schedule C Class EA on a priority basis followed by the implementation of the proposed solution.

Option #1 (Expansion of the Mount Brydges WWTF) is used in the Masterplan for illustrative and high-level budgetary purposes, noting that the future wastewater servicing strategy is to be confirmed through the separate Schedule C Class EA.

The total estimated value of Mt. Brydges Wastewater System capital projects identified through 2046 is approximately \$80M as follows:

- Expansion of Mount Brydges WWTF \$26M
- Connection of Existing Un-Serviced Residences \$54M

It should be noted that the cost for connecting existing un-serviced residences includes costs for completely upgrading the right-of-way to current municipal servicing standards including all road improvement and storm sewer construction. The sanitary sewer connection expenditure would make up approximately 27% of the total cost.

Strathroy-Caradoc Stormwater System

In the Masterplan process, Strathroy-Caradoc Stormwater Management (SWM) underwent a review of the following:

- Current condition of the existing facilities
- Current Stormwater standards
- Approval requirements for new facilities
- Operations and maintenance of the current Stormwater Facilities

The intent was to provide the Municipality with recommendations to improve the current SWM approval and management process to balance meeting regulatory requirements, safety, environmental protection/enhancement, lifecycle cost, liability, and an equitable apportionment between new and existing development.

Strathroy-Caradoc Stormwater System Recommendations

Findings from the Stormwater review provided the following recommendations:

- Stage 1: Develop Overall SWM Policy for Council Endorsement;
- Stage 2: Update Procedures Facility Assessment and Assumption; and
- Stage 3: Implement SWM Lifecycle Management Program.

KEY FINDINGS:

Strathroy Water

- Watermain Upgrades for improved fire flows
- Regular updating of modeling

Mt Brydges Water

- Increase water storage capacity
- Regular updating of modeling

Strathroy Wastewater

Regular updating of modeling

Mt Brydges Wastewater

- Schedule C Class EA for wastewater capacity
- Wastewater capacity upgrades
- Servicing of non-serviced properties

Stormwater

- Stage 1 Develop overall Stormwater Management Policy
- Stage 2 Update procedures and facility assessments
- Stage 3 Implement Stormwater lifecycle management

The following table shows a breakdown of projects and costs from the findings from the Masterplan.

Project	Area	Cost Opinion	Project Complete Year			
Water System						
Centre Street Watermain Upgrades	S	\$840,000	2032			
Concord Drive Watermain Upgrades	S	\$760,000	2032			
Riverview Drive Watermain Upgrades	S	\$760,000	2032			
Oak Avenue Watermain Upgrades	S	\$1,830,000	2032			
North Street Watermain Upgrades	S	\$1,770,000	2033			
Locke Heights Watermain Upgrades	S	\$1,430,000	2033			
Lamore Crescent Watermain Upgrades	S	\$1,210,000	2034			
Mill Pond Crescent Watermain Upgrades	S	\$1,430,000	2034			
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Storage Upgrades	MB	\$2,575,000	2032			
Updating of Water Hydraulic Model	SC	\$400,000	2032			
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Wastewater Sy	stem					
WWTF Schedule C Class EA	MB	\$350,000	2026			
WWTF Cost	MB	\$25,768,000	2030			
Existing Servicing Phase 1-10	MB	\$54,000,000	2028-2046			
Annual Updating of Wastewater Hydraulic Model	SC	\$600,000	2029, 2039			
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Stage 1 SWM Policy Initial Policy & 1 Update	SC	\$200,000	2026			
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Stormwa	\$6,155,000					
Pollution Prevention Control Plan						
PPCP Data Collection to update WW Hydraulic						
Model	SC	\$300,000	2029, 2039			
PP	PPCP Total \$300,000					
	TOTAL	\$102,208,000				

CONSULTATION:

- Director of Finance and IT
- Manager of Public Works
- Manager of Environmental Services
- Senior Development Coordinator
- Chief Administrative Officer

FINANCIAL IMPLICATIONS:

The costs for the recommended works in the table above will be included in the upcoming capital budget.

ALTERNATIVE(S) TO THE RECOMMENDATION:

- 1. Council to reject Masterplan and Alternative Solutions, provide alternate direction.
- 2. Council to provide alternate direction.

STRATEGIC PLAN ALIGNMENT:

This matter is in accord with the following strategic priorities:

Local Infrastructure: Households and businesses in Strathroy-Caradoc are supported by reliable, financially responsible and well-maintained infrastructure networks

ATTACHMENTS:

• Municipality of Strathroy-Caradoc Water, Wastewater and Stormwater Master Plan, R.V. Anderson Associates Limited (October 31, 2024)

Municipality of Strathroy-Caradoc
Regular Council Session
Monday, November 18, 2024
Hybrid Meeting (Council Chamber and Virtual)
Strathroy-Caradoc Municipal Office
52 Frank Street, Strathroy, Ontario

Reports from Departments

2

9.1 Engineering and Public Works

9.1.2 Water, Wastewater and Stormwater Masterplan - EPW-2024-80

Moved: Councillor Kennes
Seconded: Councillor Pammer

Result: Carried

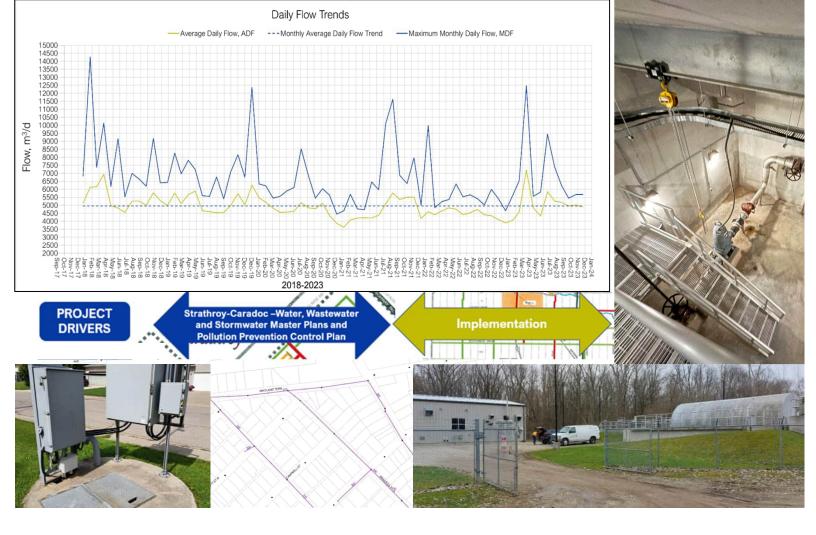
THAT: Report EPW-2024-74 "Water, Wastewater and Stormwater Masterplan" be received for information.

Moved: Councillor Kennes
Seconded: Councillor Brennan

Result: Carried

THAT: Council endorse the 2024 Water, Wastewater and Stormwater Master Plan as the recommended servicing strategies to meet Strathroy-Caradoc's growth needs to 2046 as well as provide effective on-going continuity to existing serviced settlement areas, and further;

THAT: Council direct Staff to file a Notice of Completion and commence the 45-day public review period as required under the Municipal Class Environmental Assessment (MCEA) process.



MUNCIPALITY OF STRATHROY - CARADOC

Pollution Prevention Control Plan Appendix 2 - Mapping

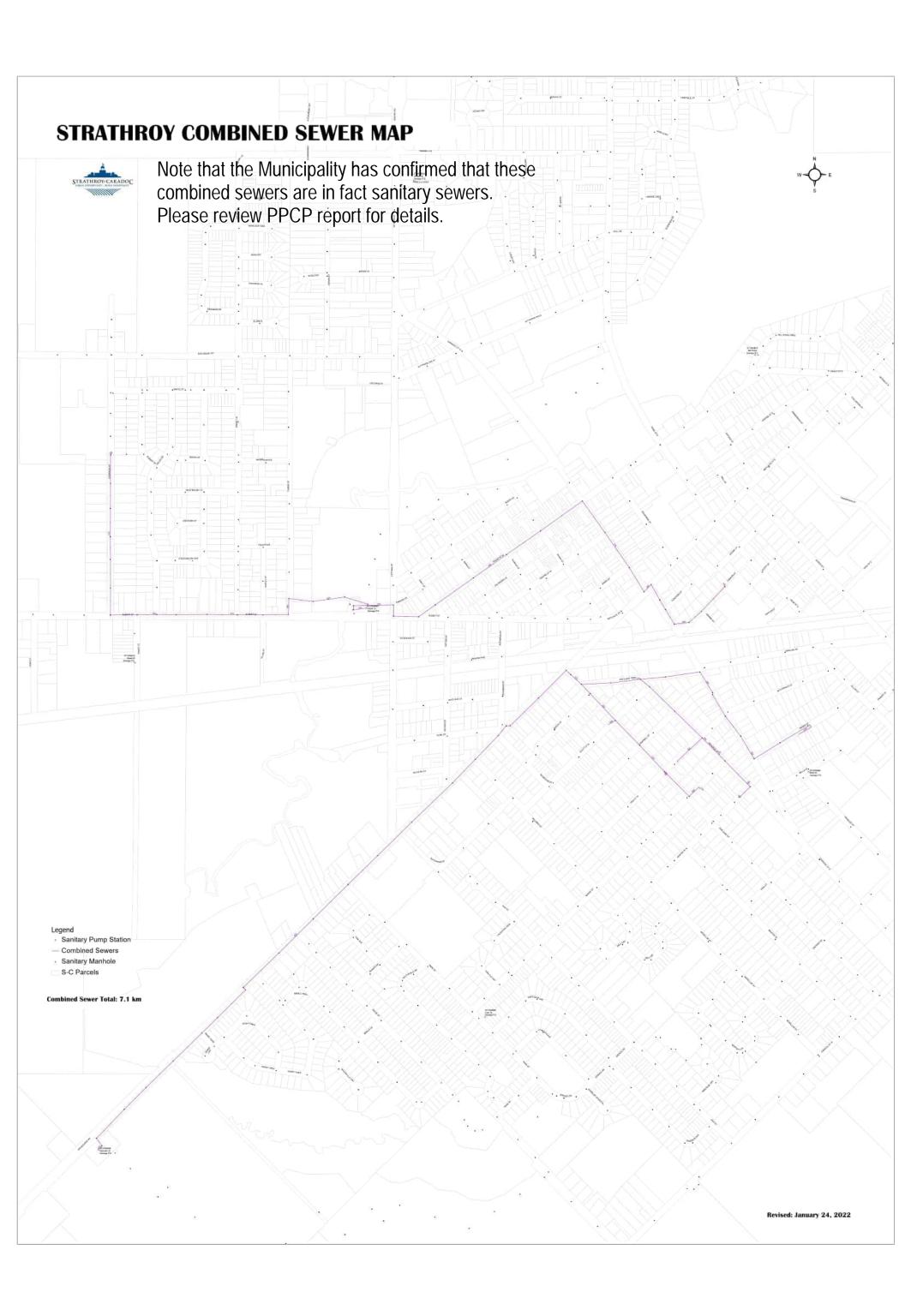
December 5, 2024

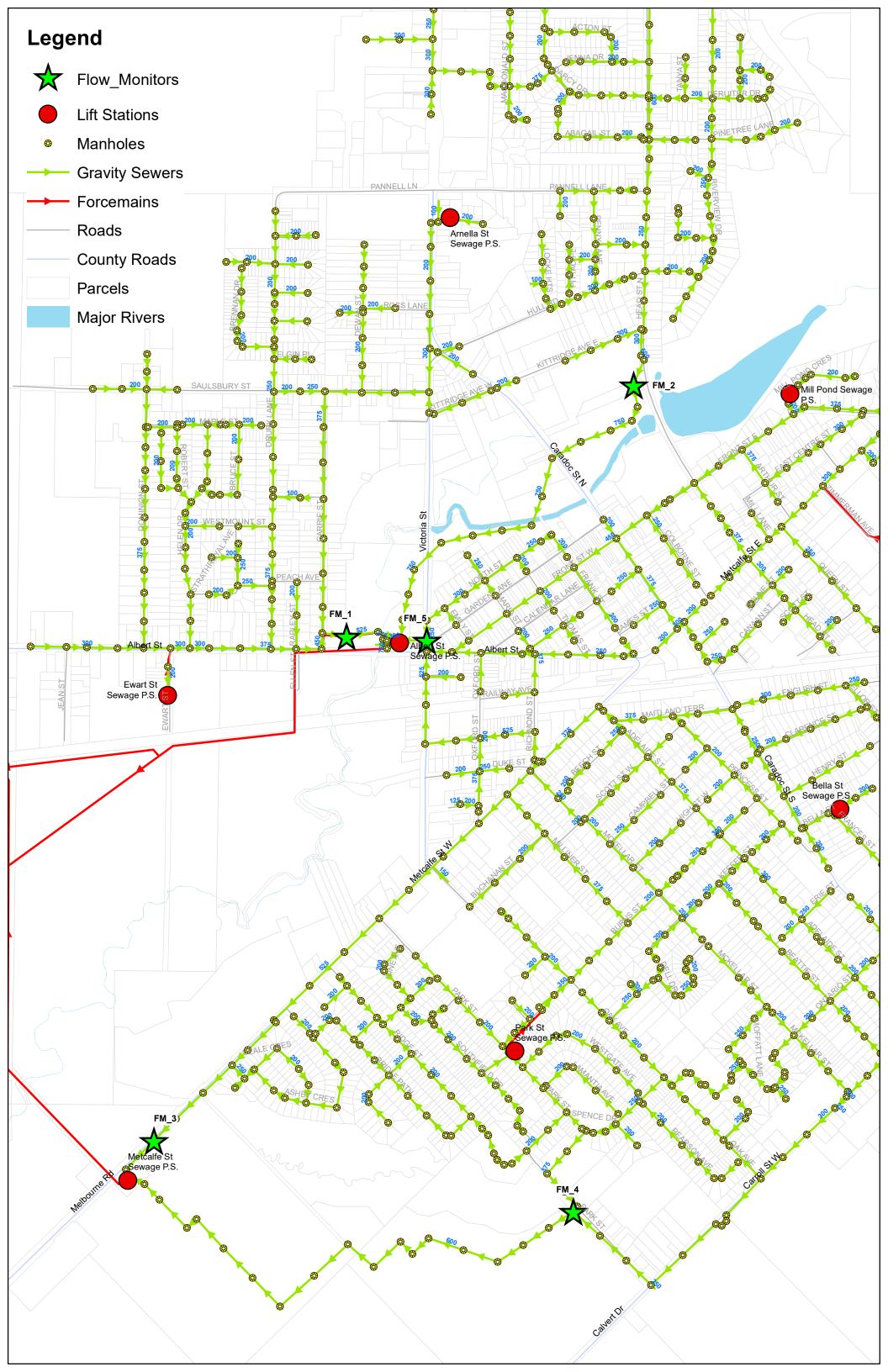


Strathroy WWCS Mapping and Flow Monitoring Locations







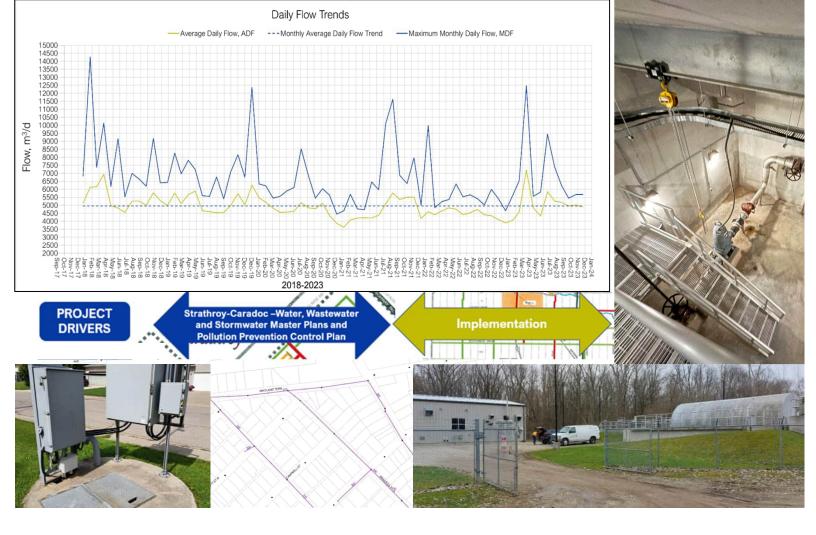


Mount Brydges WWCS Mapping and Flow Monitoring Locations









MUNCIPALITY OF STRATHROY - CARADOC

Pollution Prevention Control Plan Appendix 2 - Mapping

December 5, 2024

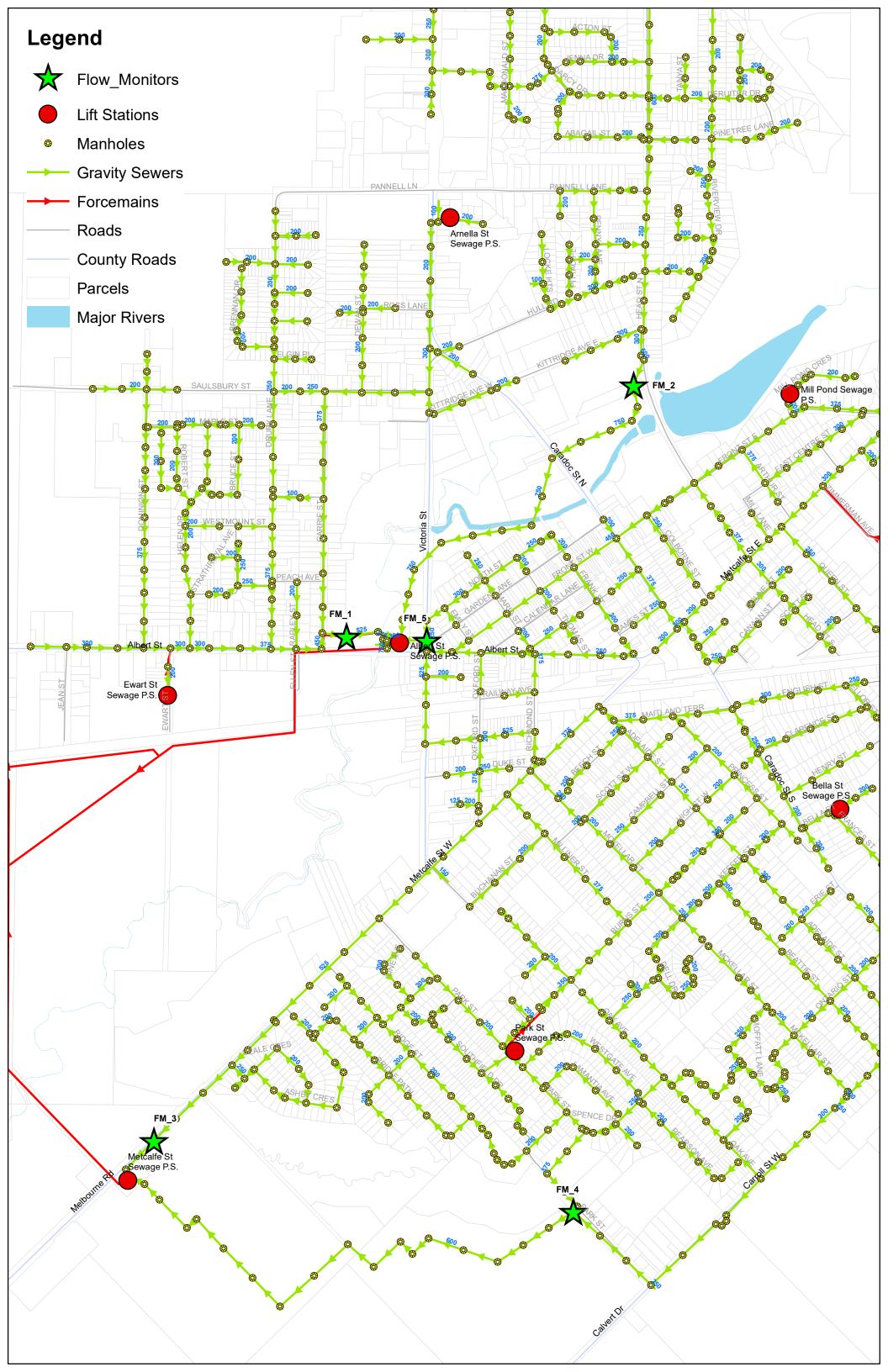


Strathroy WWCS Mapping and Flow Monitoring Locations









Mount Brydges WWCS Mapping and Flow Monitoring Locations





