

InnServices Utilities Inc.

Stroud Sewage Pumping Station

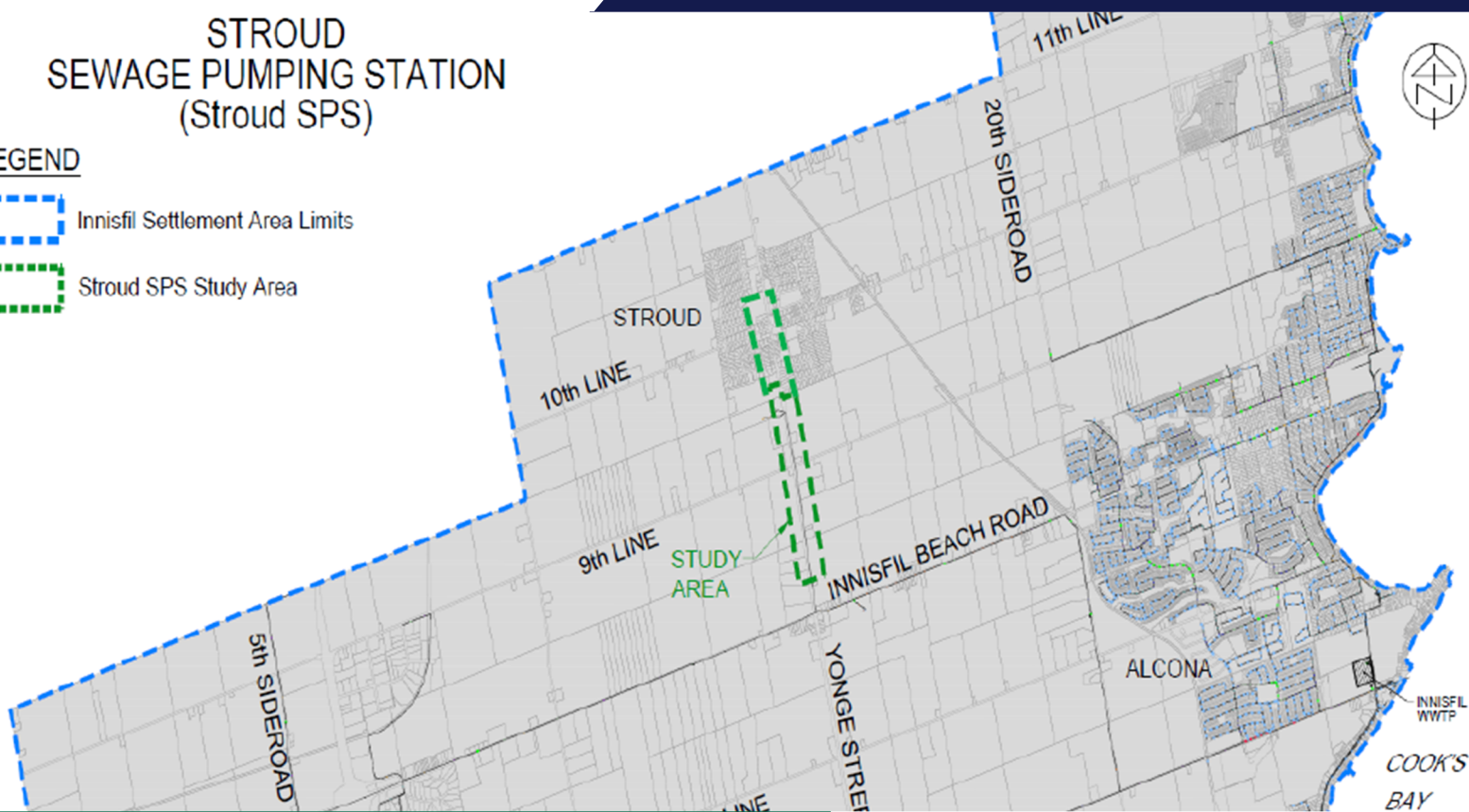
Schedule 'B' Municipal Class Environmental Assessment

PROJECT FILE REPORT - DRAFT

STROUD SEWAGE PUMPING STATION (Stroud SPS)

LEGEND

-  Innisfil Settlement Area Limits
-  Stroud SPS Study Area



PREPARED FOR:

InnServices Utilities Inc.

MAY 2025

PROJECT NO. 121031



CONSULTING
ENGINEERS
PLANNERS

280 Pretty River Pkwy, Collingwood, ON

L9Y 4J5

Tel.: (705) 445-3451

Email: collingwood@ainleygroup.com

WWW.AINLEYGROUP.COM

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GLOSSARY OF TERMS

Ainley	Primary engineering consultant for the Class EA process.
Alternative	A possible approach to fulfilling the goal and objective of the study or a component of the study.
Class EA	Municipal Class Environmental Assessment, a planning process approved under the EA Act in Ontario for a class or group of municipal undertakings. The process must meet the requirements outlined in the “Municipal Class Environmental Assessment” document (Municipal Engineers Association, October 2000, as amended). The Class EA process involves evaluating the environmental effects of alternative solutions and design concepts to achieve a project objective and goal and includes mandatory requirements for public consultation.
Design Concept	A method of implementing an alternative solution(s).
Dewatering	Removal of water from an area under consideration, usually for construction purposes, or to avoid potential contamination.
EA Act	<i>Environmental Assessment Act</i> , R.S.O. 1990, c.E.18 (Ontario)
Effluent	Liquid after treatment. Effluent refers to the liquid discharged from a Waste Water Treatment Plant to a receiving water.
EIA	Environmental Impact Assessment (EIA) is a process of evaluating the likely environmental impacts of a proposed project or development, taking into account interrelated socio-economic, cultural and human-health impacts, both beneficial and adverse.
Evaluation Criteria	Criteria applied to assist in identifying the preferred solution(s).
Forcemain	A pressurized pipe used to convey pumped wastewater from a sewage pumping station.
Geotechnical Investigation	Study of the engineering behavior of earth materials such as soil properties, rock characteristics, natural slopes, earthworks and foundations, within the study area
Gravity sewer	A pipe that relies on gravity to convey sewage.
Hydrogeological	Study of the distribution and movement of groundwater in soil or bedrock.
Infiltration/Inflow (I&I)	Rainwater and groundwater that enters a sanitary sewer during wet weather events or due to leakages, etc.
Intensification	A process of development within existing urban areas that are already largely developed. Refers specifically to the redevelopment of lots to increase occupancy.
Local Conservation Authority	A conservation authority is a local, community-based natural resource management agency based in Ontario. Conservation authorities are mandated to develop programs to further the conservation, restoration, development and management of Ontario’s natural resources.
LSRCA	Lake Simcoe and Region Conservation Authority
Master Servicing Plan (MSP)	A comprehensive plan to guide long-term development in a particular area that is broad in scope. It focuses on the analysis of a system for the purpose of outlining a framework for use in future individual projects.
MECP	Ministry of the Environment, Conservation and Parks, the provincial agency responsible for water, wastewater and waste regulation and

	approvals, and environmental assessments in Ontario.
Official Plan (OP)	An official plan describes upper, lower or single-tier municipal council's policies on how land in a community should be used. It is prepared with input from members in a community and helps to ensure that future planning and development will meet the specific needs of the community.
Preferred Solution	The alternative solution which is the recommended course of action to meet the objective statement based on its performance under the selection criteria.
ROW	Right-of-way applies to lands which have an access right for highways, roads, railways or utilities, such as wastewater conveyance pipes.
Sanitary Sewer	Sewer pipe that conveys sewage to a sewage pumping station or sewage treatment plant. Part of the sewage collection system.
Sanitary Sewer Collection System	The system consists of gravity pipes, manholes, tanks, lift stations, control structures, and forcemains. It is designed to collect wastewater from both residential and non-residential areas and transport the flow to the wastewater treatment plant.
Service Area	The defined area that will receive sewage servicing.
Sewage	The liquid waste products of domestic, industrial, and manufacturing activities directed to the sanitary sewage collection system.
Sewage Pumping Station (SPS)	A facility containing pumps to convey sewage through a forcemain to a higher elevation.
Wastewater Treatment Plant (WWTP)	A plant that treats wastewater to remove solids, contaminants and other undesirable materials before discharging the treated effluent back to the environment.
Study Area	The area under investigation in which construction may take place in order to provide servicing to the Service Area.
Surficial Geology	Surficial geology refers to the study of landforms and the unconsolidated sediments that lie beneath them.
Threatened Species	A species likely to become endangered in Canada if the factors affecting its vulnerability are not reversed.
Trenchless technology	Methods of installing a utility, such as a sewer, without excavating a trench, including directional drilling, microtunneling etc.
Wastewater	See Sewage
Wet Well	The tank of a sewage pumping station where wastewater is collected before pumping.

1. BACKGROUND

1.1 Introduction

InnServices Utilities Inc. completed the *Innisfil Master Servicing Plan Update* (MSP Update) in 2018 which identified short- and long-term strategies for both water and wastewater servicing to accommodate the population and employment growth outlined in the Innisfil Official Plan (2018) and Official Plan Amendment No. 1. The MSP Update meets the goal to protect the environment and public health. It considers aligned infrastructure projects within the 2018 Transportation Master Plan (TMP) to minimize or avoid potential disruptions to residents. Major rehabilitation and optimization projects are also taken into account in the MSP Update to extend the servicing life of the existing infrastructure.

As part of the MSP Update various alternatives were examined in order to provide servicing to the first phase of the expansion plan of the Innisfil Heights economic district, an area designated as a Strategic Settlement Employment Area. In order to promote, facilitate and maximize the planned expansion of this area, the MSP Update identified that a municipal sanitary sewage collection system is required and the preferred solution to be 'Alternative 6B'. The MSP Update identified "Alternative 6, Option B" as the preferred option (Figure 1). The existing Lakeshore wastewater system servicing Alcona and the surrounding area consists of a network of sanitary sewers, seven sewage pumping stations, and the Lakeshore Water Pollution Control Plant (WPCP). Alternative 6B establishes a sanitary collection system connected to the existing Lakeshore wastewater system via Innisfil Beach Road for the first phase of development, projected up to the year 2031. As part of this alternative, several sewage pumping stations were proposed along the sewer route, including the new Stroud Sewage Pumping Station (Stroud SPS).

The MSP Update recommended construction of five new sewage pumping stations (SPS) to service the Innisfil Heights economic district. Each proposed SPS requires a Schedule B Municipal Class Environmental Assessments (MCEA) prior to its construction. The MSP Update categorized the proposed SPS projects by suggested implementation timeline (i.e., within short-term 2019 -2023, mid-term 2024 -2031, and long-term post 2031) and identified the expected triggers for their implementation.

Under Section 18.4 of the MSP Update, Recommended Wastewater Master Servicing Plan, the Stroud SPS and forcemain was suggested for implementation under the long-term timeline. An amendment was sought to implement the Stroud SPS and forcemain in advance of the timeline proposed in the MSP Update. The 'trigger' to begin planning earlier than the expected timeline was the submission of new development proposals in Stroud that would require municipal sewers.

This Class EA focuses on the proposed new Stroud SPS to be located adjacent to Yonge Street between the South end of Stroud and Innisfil Beach Road in the Town of Innisfil. The sewage pumping station will receive flows from the new Stroud development area and direct it to the Lakeshore Water Pollution Control Plant (WPCP).

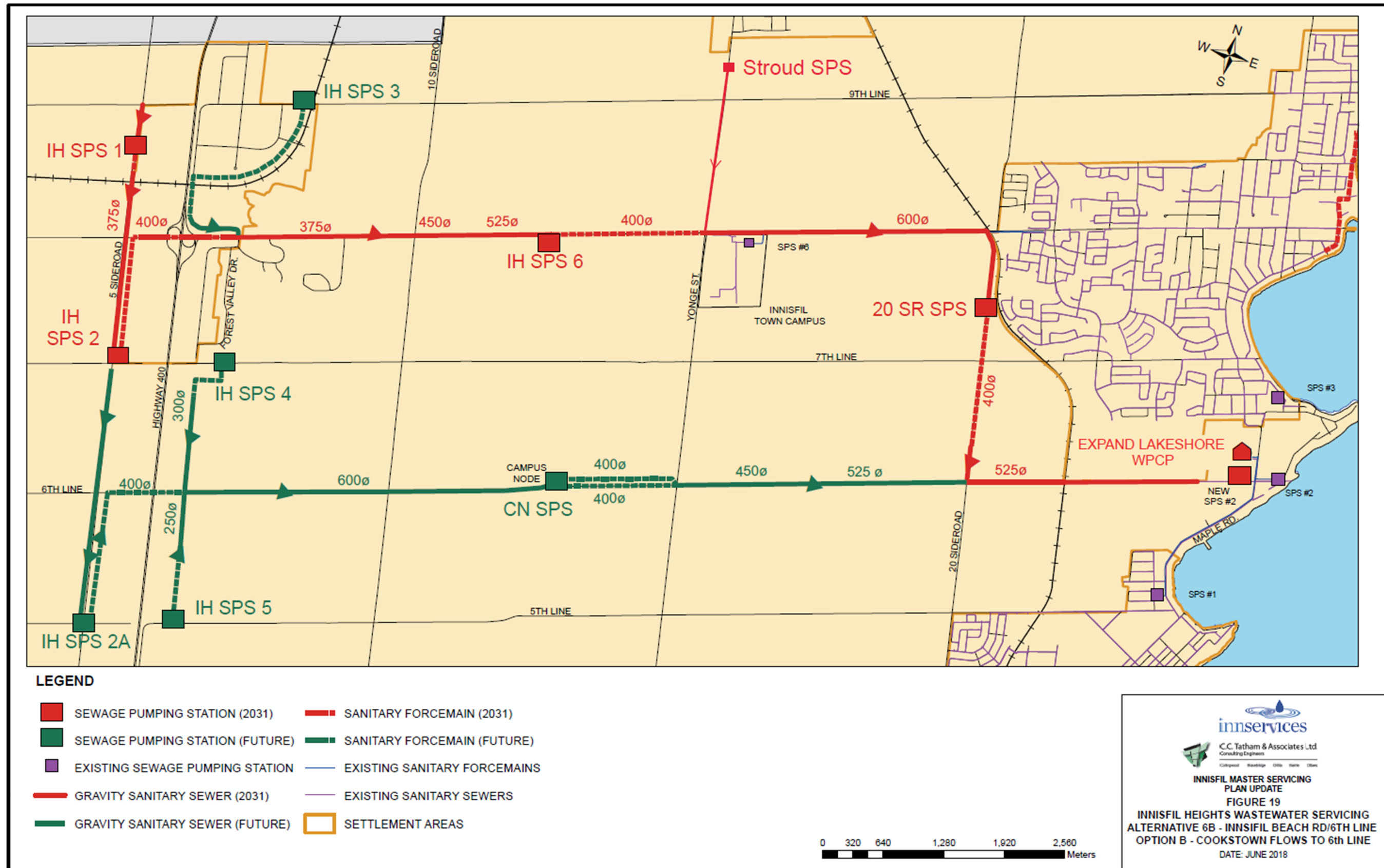


Figure 1 – Stroud SPS and Forcemain Connected to Wastewater Servicing Alternative 6B

1.2 Class Environmental Assessment Process

The Municipal Class Environmental Assessment document (amended 2024) as published by the Municipal Engineers Association outlines a planning process for municipalities to follow so as to complete infrastructure projects in an environmentally responsible manner and in accordance with the *Environmental Assessment Act (EA Act)*. Based on the scope of the proposed improvements, a Schedule 'B' level of planning was determined to be required. A Schedule 'B' project requires completion of Phases 1 & 2 of the Class EA process as illustrated in Figure 2, which is generally comprised of the following tasks:

PHASES 1 & 2

- Identify the problem/opportunity;
- Issue Notice of Study Commencement
- Inventory the existing environment (physical, natural, social and economic);
- Develop alternative solutions to address the problem/opportunity;
- Evaluate proposed alternative solutions;
- Consult with the public, review agencies, relevant stakeholders;
- Select the Preferred Solution giving consideration to the evaluation and any feedback received through consultation;
- Establish mitigation measures to minimize potential environmental impacts;
- Document the process in a Project File Report (PFR);
- Issue a Notice of Completion followed by a 30-day review period; and
- Address and final comments and conclude the Class EA process.

Consultation is a key component of the Class EA process as it allows members of the public, Indigenous communities, and review agencies opportunity to provide relevant information and feedback for consideration.

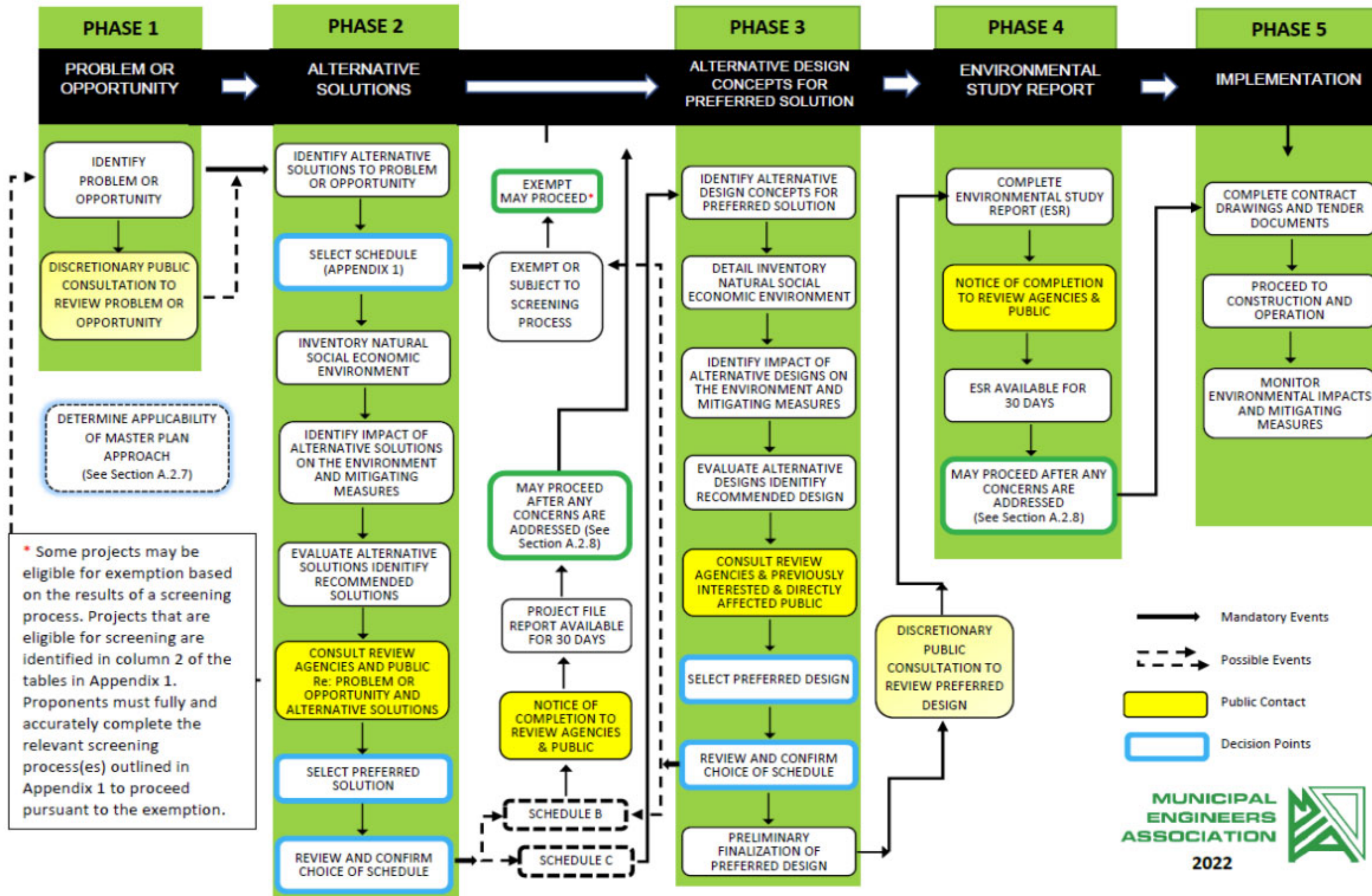


Figure 2 – Municipal Class Environmental Assessment Flow Chart

1.3 Objective of this Report

The objective of this project file report is to document the Class EA, Schedule 'B', planning process for the project. This report identifies the deficiencies affecting the project study area; the Problem/Opportunity Statement to be addressed; the alternative solutions considered; the evaluation of these alternatives to demonstrate the decision-making process leading to the selection of the preferred solution; and the consultation process. Decision-making criteria includes impacts on technical environment, natural environment, cultural and social environment and economic environment.

1.4 Project Team

The project team involved in the completion of this Schedule 'B' Class EA includes the following:

Proponent: InnServices Utilities Inc.
Prime Consultant: Ainley Group
Sub-Consultants: Azimuth Environmental Consultants Limited
Archaeological Service Inc.
GEI Consultants

2. PLANNING POLICY AND THIS CLASS EA

This section provides a brief discussion of various land use planning policies and principles to illustrate the consistency of this project in relation to provincial, regional and municipal planning goals.

2.1 Provincial Policy Statement (2024)

The *Provincial Policy Statement (2024)* provides policy direction relating to land use planning and development in Ontario. Section 3 of the *Planning Act* stipulates that all decisions affecting planning matters are to be consistent with the *Provincial Policy Statement (PPS)*. Policies applicable to this project include the following:

- Section 3.1.1 "Infrastructure and public service facilities shall be provided in an efficient manner while accommodating projected needs."
- Section 3.6.2 "Municipal sewage services and municipal water services are the preferred form of servicing for settlement areas to support protection of the environment and minimize potential risks to human health and safety. For clarity, municipal sewage services and municipal water services include both centralized servicing systems and decentralized servicing systems."
- Section 4.1.1 "Natural features and areas shall be protected for the long term."
- Section 4.6.1 "Protected heritage property, which may contain built heritage resources or cultural heritage landscapes, shall be conserved."

As the current project is following a Municipal Class Environmental Assessment process consideration is being given to the potential to impact the physical, natural, social, and economic environment prior to selection of the preferred solution. Various studies have been completed to obtain a better understanding of the existing conditions of the study area so that impacts can be properly assessed, and appropriate mitigation developed.

2.2 Places to Grow Act (2005)

Under the *Places to Grow Act (2005)*, the Growth Plan for the Greater Golden Horseshoe (2020) is the Ontario government's initiative to plan for growth and development in a way that supports economic prosperity, protects the environment, and helps communities achieve a high quality of life. A framework for water and wastewater infrastructure investments in the Greater Golden Horseshoe area are provided to optimize existing and future investments to serve growth to the year 2031 and beyond. Population and employment growth for each municipality, including the Town of Innisfil are required to be accommodated through intensification in existing settlement area.

2.3 Safe Drinking Water Act (2002)

The *Safe Drinking Water Act, 2002 (SDWA)* and the *Drinking Water System Regulation (O.Reg. 170/03 as amended)* regulate the treatment and distribution of drinking water, including the regulation and control of drinking water systems. Requirements for all the water systems within treatment and testing processes are specified under *the Drinking Water Systems Regulation (O. Reg. 170/03 as amended)*.

2.4 Clean Water Act (2006)

The purpose of the *Clean Water Act, 2006 (CWA)* is to provide protection of municipal drinking water at the source and to safeguard human health and the environment. It aims to protect existing and future drinking water sources. The CWA and its regulations ensure that municipal drinking water supplies such as the groundwater wells in Churchill, Stroud and Innisfil Heights, and the surface water intake at the Lakeshore WPCP are protected through prevention by the development of watershed-based source protection plans. The source protection plans identify vulnerable areas within each municipality and provide policies to address existing and future risks to municipal drinking water sources. This project is subject to the South Georgian Bay Lake Simcoe Source Protection Plan (2015, amended June 2021) and is within the Lake Simcoe and Couchiching/Black River Source Protection Area.

2.5 Ontario Water Resources Act (1990)

Under the *Ontario Water Resources Act, 1990 (OWCA)*, the construction and operation of wastewater treatment facilities is regulated and controlled in Ontario including the Lake Simcoe basin. Requirements for the planning, design, construction and operations of wastewater systems are specified, along with the requirements that systems must satisfy in order for the province to grant approval for establishing, altering, extending, or replacing wastewater system components.

2.6 Lake Simcoe Protection Act (2008)

The purpose of the *Lake Simcoe Protection Act, 2008 (LSPA)* is to protect and restore the ecological health of the Lake Simcoe watershed, providing a legislative framework for the development of the *Lake Simcoe Protection Plan (LSPP)* and setting out its objectives. Development of the LSPP collaborated with key partners, including Indigenous communities, municipalities, local conservation authorities, agricultural and commercial sectors and residents to set objectives to reduce the discharge of pollutants and the loadings of nutrients to the Lake Simcoe watershed and to the lake. It also sets out policies that prohibit the establishment of new municipal sewage treatment plants in the Lake Simcoe watershed.

2.7 Town of Innisfil Official Plan (2018)

At the municipal level, provincial policy is implemented through the Town of Innisfil Official Plan (OP). “Our Place” Official Plan 2018 guides development of the Town of Innisfil to the year 2031 and provides the vision, goals and policies to plan growth in a responsible and sustainable way while maintaining a sense of community.

A previous released Official Plan Amendment No.1 (OPA No.1) was approved by the County of Simcoe in October 2009, specifying future population and employment growth in the Town of Innisfil. By 2031, the population target is 65,000 and employment target is 32,500.

The Town OP provides a pro-active strategy for adapting to and mitigating climate change by managing both the built and natural environment. This is achieved through the regulation of land use and development patterns, ensuring that they align with the objectives of climate change adaptation and mitigation.

2.8 Town of Innisfil Transportation Master Plan (2018)

A Transportation Master Plan (TMP) is a long-range strategic plan that identifies transportation infrastructure requirements to address existing challenges and support growth. The Town of Innisfil TMP builds upon the Town’s OP and serves to advance Innisfil’s Community Strategic Plan, Inspiring Innisfil 2020. The 2018 TMP update was taken into consideration in the preparation of the MSP Update to ensure appropriate alignment of the two studies and consideration of the phasing of infrastructure projects to minimize disruptions to residents and business owners.

2.9 Climate Change

The MECP guidance document entitled “Considering Climate Change in the Environmental Assessment Process” provides guidance relating to the Ministry’s expectations for considering climate change in the preparation, execution and documentation of EA studies and processes. The Guide is now a part of the Environmental Assessment Program’s Guides and Codes of Practice. The environmental assessment of proposed undertakings is to consider how a project might impact climate change and how climate change may impact a project.

The guide outlines two types of climate change effects for consideration. The first is, it discusses the impact a project can exert on climate change, focusing on its potential to mitigate climate change by decreasing carbon emissions and/or preserving natural landscapes that serve as carbon sinks. Secondly, it addresses how climate change affects a project, emphasizing the importance of assessing the project’s ability to adapt to climate change impacts.

Climate Change was considered during the course of this Class EA, and mitigation and adaptation measures were incorporated into the evaluation of alternative solutions, as discussed further in Section 3.5 and 10.11 of this report.

3. EXISTING CONDITIONS

3.1 Study Area

The Town of Innisfil is one of sixteen municipalities within the County of Simcoe, located on the western shore of Lake Simcoe. The study area is within Innisfil and is situated on Treaty 18, Williams Treaty Settlement of 2018, Michi Saagiig and Chippewas Nations. It is shared between the Anishinaabe peoples of Beausoleil First Nation, Chippewas of Rama First Nation, and Chippewas of Georgina Island First Nation.

The Village of Stroud is centered at the intersection of Yonge Street and 10th Line. The MSP lists the existing population of Stroud at approximately 1,600 people.

The Study Area is defined as the overall area bounded by the east and west side of Yonge Street between Innisfil Beach Road and Stroud on which a new sewage pumping station can be located to best service new development within the settlement boundary of Stroud. (Figure 3).

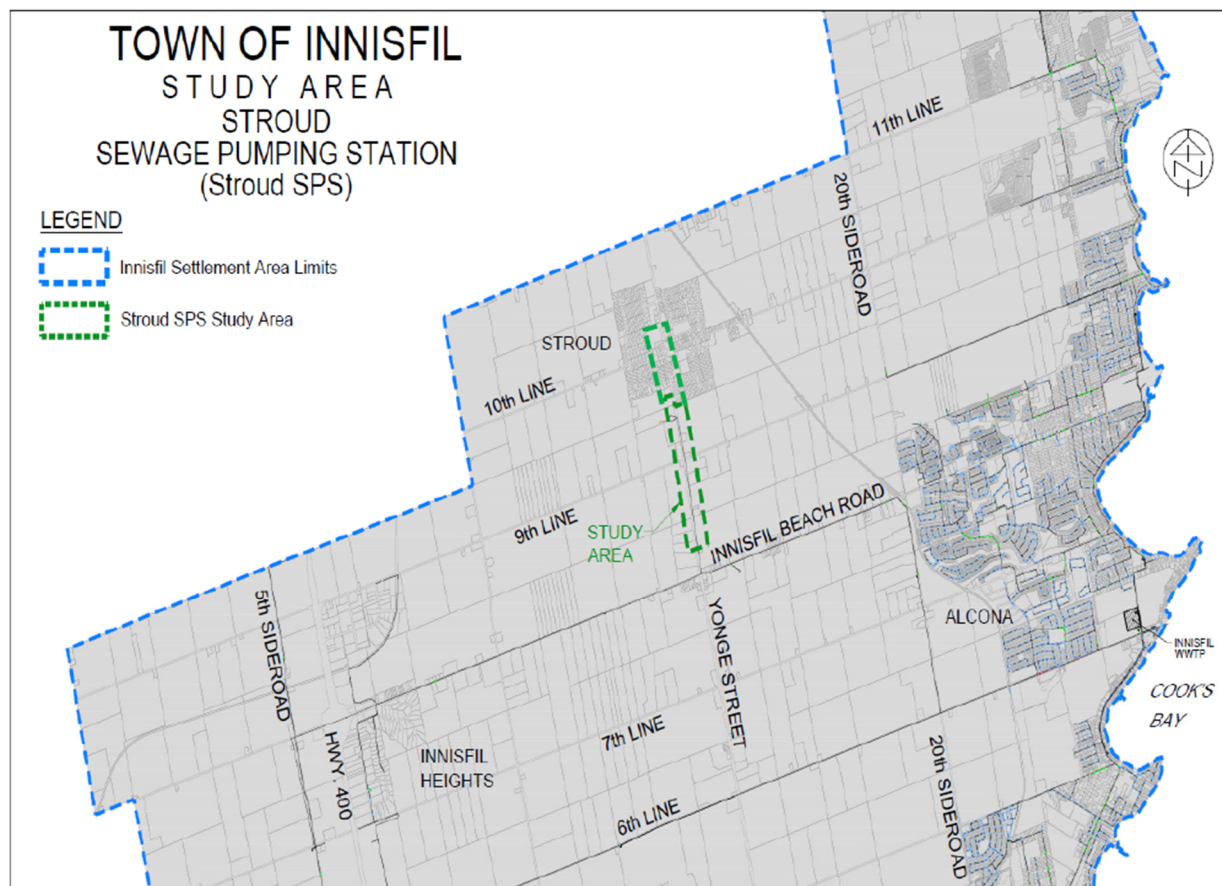


Figure 3 – Stroud SPS Study Area

Stroud is located in the northcentral area of Innisfil. The existing land use within the study area is designated as agricultural, residential and commercial under the Town of Innisfil Official Plan (Figure 4).



Figure 4 – Aerial Map of Study Area

(Source: County of Simcoe Mapping)

Existing properties are currently serviced by septic systems. No municipal wastewater infrastructure exists to service any component of Stroud.

3.2 Technical/Physical Environment

This section describes the characteristics of the study area to provide context and allow for accurate evaluation of potential impacts. Various studies have been completed to determine existing environmental conditions as well as to identify any potential impacts the alternatives solutions pose to the environment within the Study Area

3.2.1 Existing Wastewater Flows

The MSP Update (InnServices Utilities Inc., 2018) reviewed the daily wastewater flows measured at the Lakeshore WPCP from 2007 to 2017 and were reviewed to determine the per capita wastewater generation rates. Considering five years of data from 2013 to 2017 at the Lakeshore WPCP, the average per capita wastewater flow was 334 L/p/day (Litre per person per day). Of this average flow, a portion is considered base domestic flow and the other dry weather infiltration. The dry weather flow averaged 288 L/p/day in the period between 2013 and 2017. The five-year average inflow and infiltration (I/I) contribution was 46 L/p/day. However, contribution of I/I to the average flow was higher in 2017 than in previous years.

Analysis of the peak daily wastewater flow data shows that the per capita peak flow was lower in the period between 2013 and 2017, averaging 716 L/p/day. The estimated wet weather I/I contribution to the peak flow varies: the highest per capita I/I was 560 L/p/day in 2016, less than was estimated based on earlier data.

3.2.2 Existing Wastewater System

The Lakeshore wastewater system consists of a network of sanitary sewers, nine sewage pumping stations, and the Lakeshore WPCP. Current SPS #6 services the Town Campus, including the Town Hall, the Multi Use Recreational Facility (MURF), the Ontario Provincial Police (OPP) building and a new private school. Existing SPS #6 with 2 pumps has rated capacity of 10 L/s which can also serve existing and future population in 2031. SPS #7 serves a small area in Alcona North, which means once future development on Spring Street proceeds it will be eliminated.

3.2.3 Projected Wastewater Flows

Stroud SPS is designed to handle an Average Daily Flow (ADF) of 22.0 L/s, with a peak wet weather flow of 64.1 L/s, as detailed in Appendix A – Stroud SPS Future Flows Memorandum.

The Stroud SPS is proposed to connect to the future sanitary system within the Village, with potential future connections to adjacent lands located within the Town of Innisfil's Settlement Boundary. The station will be sized to service approximately 700 existing residential units, 18 hectares of existing commercial area, and 1,600 future residential units, however as per the 2018 and 2023 MSP updates, the new SPS is intended to service new growth within the settlement boundary.

Wastewater will be conveyed through a forcemain to the proposed trunk sewer along Innisfil Beach Road. The system is designed to accommodate the area's planned growth while ensuring wastewater infrastructure efficiency during peak flow conditions.

Error! Reference source not found. provides a summary of the projected flows for the Stroud SPS.

Table 1 – Flow Projection Summary to Stroud SPS

Identification	Designation	Units	Population	Area (Ha)	ADF Estimate (L/s)	Peak Wet Weather Flow Estimate (L/s)
Existing Residential	Residential	700	1,764	-	6.6	19.4

Identification	Designation	Units	Population	Area (Ha)	ADF Estimate (L/s)	Peak Wet Weather Flow Estimate (L/s)
Existing Commercial*	Commercial	-	-	18	0.2	0.4
Future Residential	Residential	1,600	4,032	-	15.2	44.3
Total	-	2,300	5,796	18	22.0	64.1
⁽¹⁾ Area provided by Master Servicing Plan project team						

3.2.4 Geotechnical and Hydrogeological Conditions

GEI Consultants, on behalf of Ainley Group, completed Geotechnical and Hydrogeological Background Conditions reports that discuss the background site conditions (Figure 5). The investigation is based on a desktop review of previous findings in the area. A copy of the full report is included in Appendix B.

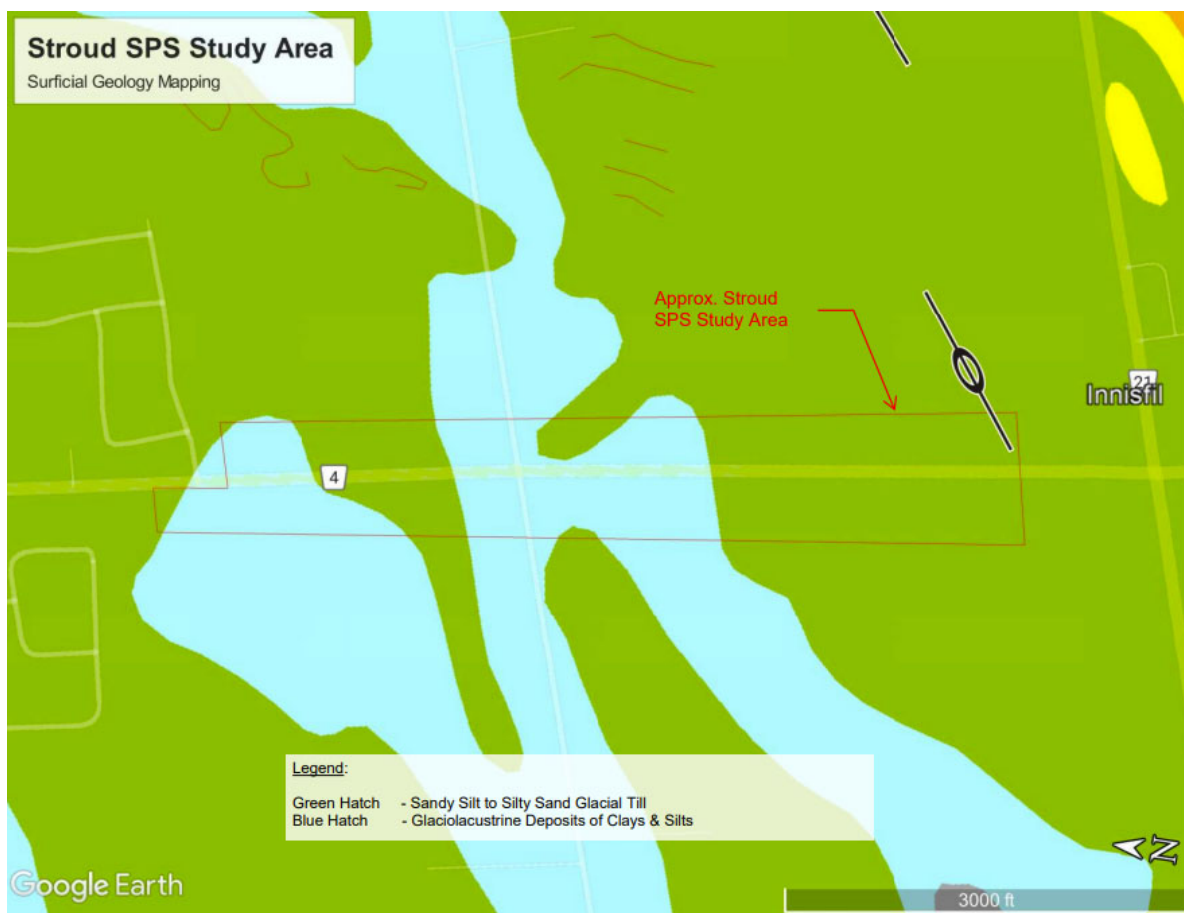


Figure 5 – Surficial Geology Mapping

Glacial Till Deposits:

- The glacial till deposits encountered in the boreholes were generally cohesive and stiff to very stiff. It is expected that glacial till deposits beneath the site will be competent and favourable for the support of buildings, structures, construction and drilling equipment, and for support of shoring wall tie-backs or anchors.
- Glacial till deposits are typically well graded and laboratory testing from the GEI boreholes indicate a relatively high percentage of fines. The glacial till is expected to have a lower permeability, which can significantly reduce water taking rates and potential complications during construction dewatering.
- The lower permeability will reduce the dewatering radius of influence which reduces the potential impacts to nearby surface water features, drinking water wells, or settlement of nearby land.
- An excavation made fully within glacial till has a reduced potential to require a PTTW from the MECP (i.e. less than 400,000 L/day of pumping).
- Cobbles and boulders may be embedded within the deposits. This has a potential to interfere with caisson drill rigs (e.g. for shoring wall installation) or during excavations and would need to be addressed in construction contracts.
- There is a reduced potential for temporary cased holes or drilling mud to install caisson piles for shoring walls or for augered holes for tie-backs.
- Glacial till is considered the most favourable soil type for the SPS construction.

Glaciolacustrine Deposits of Clays and Silts:

- Deposits of clays and silts are expected to be similar to the glacial till in terms of precluding groundwater flow into the excavation, and the benefit this provides during construction as summarized above.
- The deposits will provide similar support of structures, access roads, shoring systems, etc.
- Cobbles and boulders are not expected within the glaciolacustrine deposits.

It appears that sand deposits can be expected underlying the surficial glacial till deposits or clays and silts across the study area, based on the well records and borehole results. Considerations for the sand deposits are as follows:

- The major consideration for the sand deposits is groundwater control and constructability. Depending on the grain size distribution and percentage of fines, higher groundwater flow rates are expected for excavations made into the sands.
- Higher flow rates may require a more robust dewatering system and increases the potential for a PTTW from the MECP. The dewatering radius of influence will also be higher in the sands which has an increased potential to impact nearby surface water features, drinking water wells, or settlement of nearby land.
- There is an increased potential for temporary cased holes or drilling mud to install caisson piles for shoring walls or for augered holes for tie-backs.

- There may be cobble or gravel zones within the sands that can increase the difficulty of excavation or caisson installation for shoring walls.

A preferred location based on geotechnical and hydrogeological considerations is less obvious for the Stroud SPS study area as the subsurface conditions appear to be relatively consistent and there are fewer constraints noted. From the information available, it appears that sand deposits will be encountered underlying surficial clay or glacial till across the study area and similar conditions related to foundation support, excavations, dewatering and construction access are expected.

The vacant farmland between the houses in the southern half of the study area (south of 9th Line and north of Innisfil Beach Road) may be preferable because there is likely more space to facilitate open cut excavations (reducing costs for design and construction of shoring), there are fewer nearby domestic drinking water wells that could be impacted by construction dewatering, and the southern area has a higher elevation than the northern part of the study area which may improve the chance of a deeper groundwater table (resulting in less dewatering) and better surface drainage for construction access.

The northernmost part of the site may be less preferred due to the nearby residential neighbourhoods and potential for more impacts related to construction vibrations, noise, and settlement from construction dewatering. There is also the tributary that flows west from Yonge Street which could be impacted by dewatering.

3.3 Natural Environment

The Lake Simcoe Region Conservation Authority (LSRCA) is a local watershed management organization, incorporated under the *Conservation Authorities Act* (1946), regulated under Ontario Regulation 179/06. A portion of the study area is within lands regulated by the LSRCA and a permit may be required for this project.

Azimuth Environmental Consulting, Inc. (Azimuth) on behalf of Ainley Group, completed an Environmental Constraints Analysis of Natural Heritage Features within the study area. Sections 4.3.1 to 4.3.4 provide a summary of the environmental constraints analysis and consideration of potential impacts. A copy of the report is included in Appendix C. The study approach used by Azimuth involved background information research and field surveys from the roadway.

3.3.1 Vegetation and Vegetation Communities

The study area is largely dominated by agricultural and rural residential uses and includes several small natural heritage components including woodlands and meadow habitat. A total of two vegetation communities, Dry-Fresh Mixed Meadow (MEMM3) and Fresh-Moist Poplar Deciduous Forest (FODM8-1), were identified.

The road right of way (ROW) was typically composed of open 'field' habitat composed of opportunistic herbaceous/grass species. Riparian vegetation typically exists in proximity to the mapped watercourse within the study area and within the ROW. Although not considered a Key Natural Heritage Feature (KNHF), many of the rural properties are treed and include hedgerows that border the properties.

No Butternut (threatened) were observed during both surveys conducted on October 1st, 2021, and October 20th, 2021.

3.3.2 Species at Risk

The Ministry of Natural Resources and Forestry's (MNRF) Natural Heritage Information Centre database identifies records for one species listed as provincially Special Concern, Snapping Turtle, and two species listed as Threatened, Bobolink and Eastern Meadowlark. The records for Snapping Turtle are likely associated with the wetland habitat found outside of the study area and adjacent lands including the Lover's Creek Provincially Significant Wetland (PSW). The records for Bobolink and Eastern Meadowlark are likely associated with the agricultural lands within the area.

The following list only considers species that have a moderate or high possibility of occurring within the study area:

- Barn Swallow (Threatened): Several barns were identified within the study area (Figure 2d) which could be utilized by Barn Swallow for nesting;
- Bobolink (Threatened): Potential nesting habitat for Bobolink occurs within the agricultural lands of the study area;
- Butternut (Endangered): While no Butternut were identified during 2021 field surveys, potential habitat for this species occurs within the small deciduous forest community in addition to individual trees on rural properties or within hedgerows;
- Eastern Meadowlark (Threatened): Potential habitat for Eastern Meadowlark occurs within the agricultural lands of the study area; and
- Endangered Bats (Little Brown Myotis, Northern Myotis and Tri-colored Bat): The deciduous forest within the study area provides potential habitat for Endangered bat species.

3.3.3 Watercourses and Fish Habitat

The study area includes one drainage feature on the west side of Yonge Street, that conveys flow westward, ultimately discharging to the main branch of Lover's Creek within the Lover's Creek PSW approximately 2.7 kilometers (km) downstream. In the study area the feature is a straight channel perpendicular to Yonge Street that appears to receive drainage from roadside drainage (there is no defined channel on the east side of Yonge Street). Drainage is in an entrenched, open trapezoidal channel within agricultural lands, and has a narrow herbaceous buffer with minimal cover. This feature is identified as the '8th Line Municipal Drain – Branch B'. The feature is managed as a Class 'D' drain, characteristic of permanently flowing water, with potential for sensitive fish species including fall spawning Brook Trout within the catchment. Background information from the Barrie Creeks, Lover's Creek, and Hewitt's Creek Subwatershed Plan Report, indicates that the main Lover's Creek is thermally considered warmwater, however tributaries to the main Lover's Creek have potential to function as coldwater fish habitat.

The drain in the study area is regulated by the LSRCA, and recognized as a watercourse that requires site specific Fisheries Act review for works that have the potential to impact fish habitat. There are no known aquatic SAR known to occur within the Lovers Creek watershed.

3.3.4 Ground water

The Ministry of Environment, Conservation and Parks (MECP) Source Protection Information Atlas was reviewed to confirm whether the subject study area is located within a designated vulnerable area. The study area is not classified as a Highly Vulnerable Aquifer, and only a small parcel falls within an Intake Protection Zone 3. This indicates that there is no significant threat to drinking water in these locations,

and therefore, no specific policies apply from the South Georgian Bay Lake Simcoe Source Protection Plan.



Figure 6 – Key Natural Heritage Features

3.4 Cultural Environment

Archaeological Services Inc. on behalf of Ainley Group completed a Stage 1 Archaeological Assessment and a scoped Cultural Heritage Report as part of the Stroud SPS Municipal Class EA. Copies of the full reports are included in Appendix E and G.

3.4.1 Stage 1 Archaeological Study

Background research determined that there are two previously registered archaeological sites located within 1 kilometre of the Study Area, none of which are located within 50 metres of the study area. Current conditions indicate that parts of the Study Area exhibit archaeological potential. These lands require Stage 2 Archaeological Assessment by test pit and pedestrian survey at 5m intervals prior to any proposed construction activities. The remainder of the Study Area does not retain archaeological potential on account of deep and extensive land disturbance, low and wet conditions, slopes in excess of 20 degrees, or being previously assessed. These lands do not require further archaeological assessment. Further archaeological assessment should be conducted to determine the archaeological potential of the surrounding lands if the proposed work extend beyond the current Study Area.

3.4.2 Cultural Heritage Resources

The purpose of this report is to present an inventory of known and potential built heritage resources and cultural heritage landscapes, identify existing conditions of the project study area, provide a preliminary impact assessment, and propose appropriate mitigation measures. The results of background historical research and a review of secondary source material, including historical mapping, indicate a study area with a rural land use history dating back to the early nineteenth century. A review of federal, provincial, and municipal registers, inventories, and databases revealed that there are no previously identified features of cultural heritage value within the Stroud SPS study area. A total of four cultural heritage landscapes (CHLs) were identified during the fieldwork. Figures 7 provides mapping completed by ASI indicating the presence of heritage resources as described.



Figure 7 – Location of Identified CHLs in the Study Area
(Source: Cultural Heritage Report by Archaeological Services Inc.)

3.5 Climate Change

As per the MECP guidance document referenced in Section 2.9, the project's potential impacts to climate change and how climate change may impact the project were considered. Climate change concerns generally relate to the increased concentration of greenhouse gases in the atmosphere, which can result in a rise in the global mean surface temperature. Increased temperatures worldwide are creating changes in climate that is resulting in extreme weather events.

The current project is relatively small in scale, as it involves the construction of only one sewage pumping station. The construction footprint is limited, and it extends up to the property line, where it will connect to the future municipal system through the sewage forcemain located in the ROW. Climate change has the potential to result in increased storm events that can lead to flooding. This is a small-scale project and a long-term increased risk to surface flooding is not anticipated; however, the project will increase paved surfaces and therefore, impermeable areas. During the preliminary design stage, we may explore the implementation of Low Impact Development (LID) measures for increased infiltration, which will assist in reducing potential environmental impacts. Stormwater will be managed to control both storm flow maintained at the pre-development level and quality managed to meet requirements.

Mitigation and adaptation measures will be further discussed in Section 10.11.

4. PHASE 1 – PROBLEM/OPPORTUNITY STATEMENT

The purpose of Phase 1 of the Class EA process is to develop a problem/opportunity statement that clearly identifies the issue, challenge, or opportunity that is being reviewed and addressed. The problem/opportunity statement that has been developed for InnServices' New Stroud Pumping Station is as follows:

"Identify and develop a preferred solution (location) for the new Stroud Sewage Pumping Station on Yonge Street to meet the future capacity requirements of new development within the settlement boundaries as established in the MSP Update (2020)."

5. PHASE 2 - PROPOSED ALTERNATIVE SOLUTIONS

5.1 Preliminary Screening Criteria

As part of Phase 2 of the Class EA process, several alternatives have been developed to address the problem/opportunity statement. A Preliminary Screening was conducted to eliminate alternatives that would not meet the basic criteria below.

- Screening Criteria No. 1 – Does the alternative meet the problem/opportunity statement?
- Screening Criteria No. 2 – Does the alternative meet the minimum technical requirements?
- Screening Criteria No. 3 - Can the alternative be implemented without facing significant impacts that mitigation measures could not address?

5.2 Preliminary Screening of Long List Alternative Solutions

The long list of alternative solutions was evaluated against the screening criteria outlined in Section 5.1. The results of the screening evaluation are presented in Table 2, alternatives carried forward for further consideration are highlighted in light blue.

Table 2 – Ability of Alternatives to Meet Preliminary Screening Criteria

Alternative	Description	Feasibility
A: Do Nothing	No changes from the existing conditions.	Will not solve the problem, as it does not facilitate development stated in the MSP and the Town of Innisfil Official Plan. Not carried forward for further evaluation.
B: Limit Development	Inconsistent with the MSP and Town of Innisfil Official Plan.	Not feasible. This option will not be carried forward for further evaluation.
C: Construction of a New Pumping Station	Will allow for the collection and conveyance of all wastewater generated within the Innisfil Heights economic area to the Water Pollution Control Plant (WPCP) and facilitate development consistent with the Town of Innisfil Official Plan.	Six alternative locations have been identified for evaluation.

As part of Phase 2 of the Class EA process, several alternative solutions were developed to address the problem/opportunity statement. The footprint of the SPS is small in comparison to the land parcel of the study area. The full length of the parcel frontage was evaluated to result less inconvenience to the property owner, thorough geotechnical investigation (boreholes results), and elevation changes across the site. Selected land parcels which are along Yonge Street were picked to avoid commercial-used lands, stay away from any nearby structures to the frontage, and specified residential dwelling/parcels, if possible. Five properties have been considered in the review of site alternatives with a total of six alternative locations being considered.

Alternative 1

The site is located near the northwest corner of the intersection of Yonge Street and Victoria Street within the Stroud Settlement Boundary. It is surrounded by residential houses.

Alternative 2

The site is located on the southwest corner of the intersection of Yonge Street and Victoria Street within the Stroud Settlement Boundary. The land is currently designated for use as a community centre area.

Alternative 3

The site is located on a parcel of land beyond the Stroud Settlement Boundary. The property is bound by Yonge Street to the east and residential area on the south end of the boundary, with a section designated as 'Rural Commercial' in the Town OP.

Alternative 4A

The site is located on agricultural land between the south end of the Stroud Settlement Boundary and 9th Line. A part of the location falls within areas of groundwater discharge. The frontage of this property is within the LSRCA regulatory limit and is recognized as a watercourse. The land is designated as Agricultural in the Town OP

Alternative 4B

The site is located on the south of the agricultural land situated between the south end of the Stroud Settlement Boundary and 9th Line. The land is designated as Agricultural in the Town OP.

Alternative 5

The site is located on the south of 9th Line along Yonge Street, outside of the Stroud Settlement Boundary. The land is designated as Agricultural in the Town OP.

An overall plan showing each alternative is provided in Figure 8.

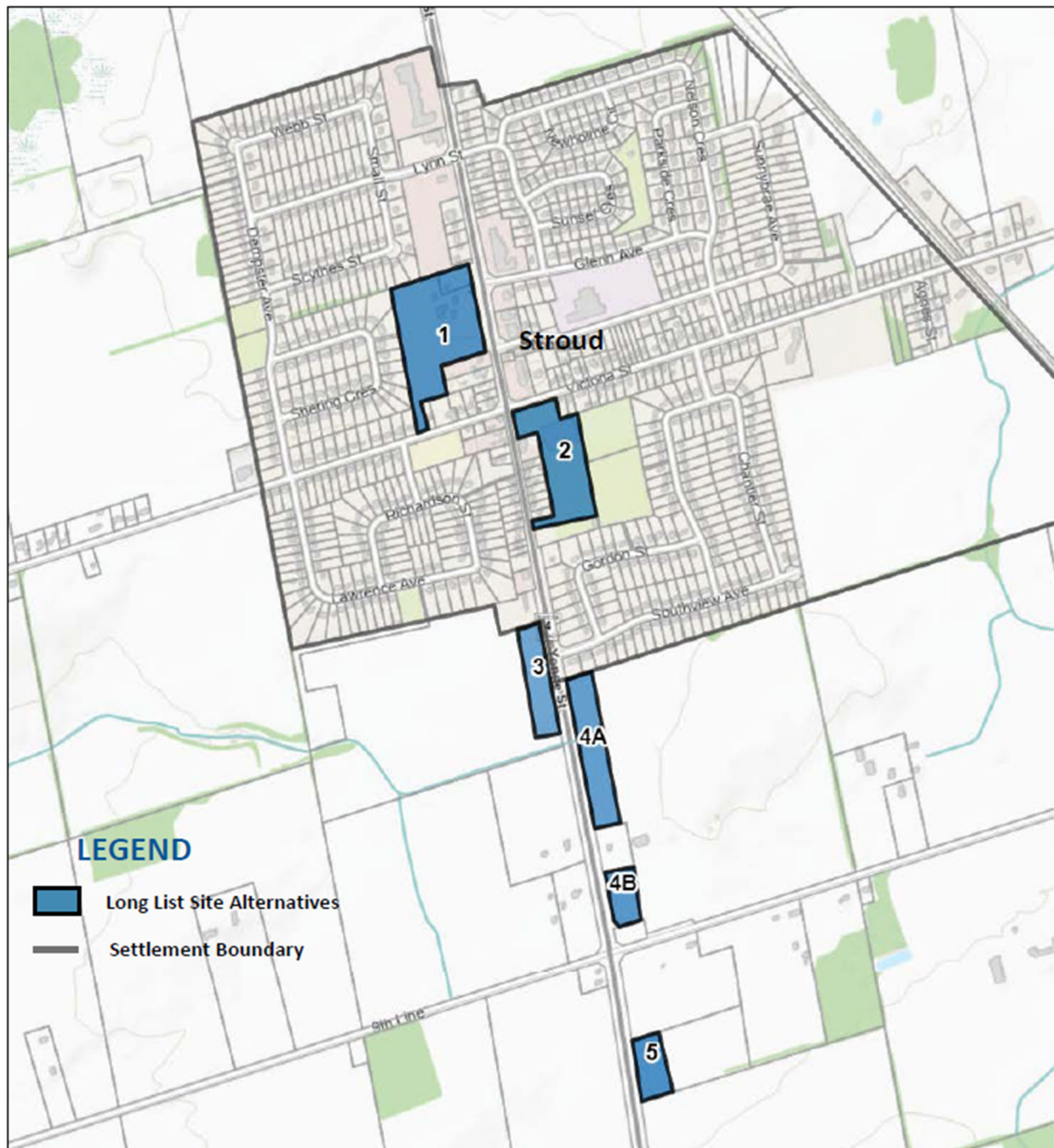


Figure 8 – Preliminary Alternatives (1-5)

5.3 Secondary Screening of Alternative Sites for the Shortlisted Solutions

A preliminary analysis of site alternatives was conducted to evaluate the environmental impacts each alternative might present and the potential for mitigation. Table 3 provides a discussion on the extent to which each site alternative meets the preliminary screening criteria.

Table 3 – Secondary Screening of Alternative Sites

Alternative	Discussion on Ability of Alternative to Meet Preliminary Screening Criteria	Carried Forward for Further Evaluation
Alternative 1	This alternative does not meet the problem/opportunity statement. Preliminary analysis indicates that this option does not maximize the number of benefitting users to improve affordability and implementation.	✗
Alternative 2	This alternative does not meet the problem/opportunity statement. Preliminary analysis indicates that this option does not maximize the number of benefitting users to improve affordability and implementation.	✗
Alternative 3	Preliminary analysis indicates that it will be possible to construct the SPS at this site while meeting the minimum technical requirements and without facing major constraints	✓
Alternative 4A	Preliminary analysis indicates that it will be possible to construct the SPS at this site while meeting the minimum technical requirements and without facing major constraints	✓
Alternative 4B	Preliminary analysis indicates that it will be possible to construct the SPS at this site while meeting the minimum technical requirements and without facing major constraints	✓
Alternative 5	Preliminary analysis indicates that it will be possible to construct the SPS at this site while meeting the minimum technical requirements and without facing major constraints	✓

Based on the ability of alternatives to meet the above three preliminary screening criteria, 3, 4A, 4B, and 5 are found to be the alternatives that can be carried forward for further detail evaluation. They are analyzed as possible site locations to construct the SPS with minimum technical requirements and the least potential environmental impacts.

6. DETAILED EVALUATION OF ALTERNATIVE SOLUTIONS

6.1 Detailed Evaluation Matrix

Each of the alternatives underwent an evaluation based on their potential impact on the environment of the study area, including physical, natural, cultural, and socio-economic aspects. The results of this evaluation are presented in a table or matrix to present a simplified, visual comparison, as shown in Figure 9.

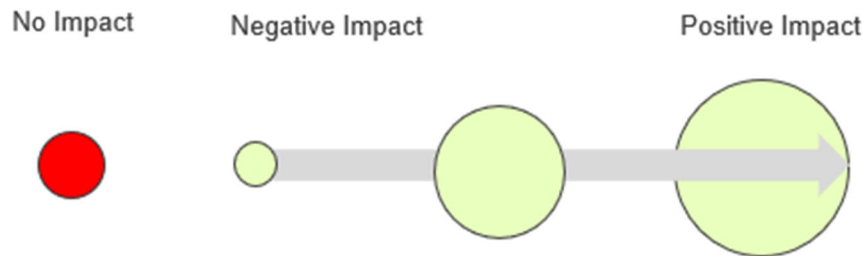


Figure 9 – Evaluation Matrix (Visual Comparison)

An increased number of larger circles indicates that an alternative has increasing positive impacts and fewer negative impacts.

6.2 Detailed Evaluation Criteria

Each alternative solutions were evaluated with respect to their impact on the environment. The completion of the evaluation considered a number of factors, which were separated into evaluation criteria:

- **Physical/Technical Environment:** Suitability of Elevation and Topography, Geotechnical Suitability, Hydrogeological Suitability, Hydraulics, Impacts to Utilities
- **Natural Environment:** Proximity to Key Natural Heritage Features, Terrestrial Vegetation/Wildlife (Including SAR), Surface Water and Fisheries, Groundwater, and Climate Change/Air Quality
- **Cultural and Social Environment:** Archaeological Resources, Cultural Heritage Resources, Aesthetics (Noise, Odour, Visibility), Impacts to Property Owners, and Impacts to Adjacent Business/Commercial Properties
- **Economic Environment:** Operating and Maintenance Costs, Capital costs, and Land Acquisition Costs

6.3 Evaluation Scoring

The evaluation scoring for each alternative is presented in a table to provide a simplified, visual comparison (Table 4). A full discussion on the evaluation of each criteria is found in section 6.4.

Table 4 – Evaluation Matrix for Alternative 3, 4A, 4B and 5

EVALUATION CRITERIA	ALT 3	ALT 4A	ALT 4B	ALT 5	DESCRIPTION OF EFFECTS
PHYSICAL ENVIRONMENT					
Suitability of Elevation and Topography					All alternatives are at a similar topographic elevation with Alternative 4 being at a slightly lower elevation. Alternative 3 and 4A pose a slight technical disadvantage due to the longest pumping distance. Preliminary layout indicates that there is adequate space for station footprint within each Alternative site.
Geotechnical Suitability					A preliminary desktop review of subsurface conditions shows mainly glacial till deposits and glaciolacustrine deposits of clays and silts. It is expected that the soil types will provide similar benefits in terms of construction.
Hydrogeological Suitability					Preliminary review shows the preferred location from a hydrogeological consideration is less obvious as the subsurface conditions appear to be relatively consistent and fewer constraints are noted. It is expected that soils will have low permeability which will reduce the dewatering radius of influence and potential impacts to surface water features and groundwater wells, however, further studies are needed to confirm. Construction dewatering in close proximity to the watercourse could cause impacts.
Hydraulics					Alternatives 4B and 5 allow for lower head and a reduced the pumping distance. These alternatives allow for additional system flexibility.
Impacts to Utilities					Overhead hydro is located on the west side of the road making construction access more difficult.
NATURAL ENVIRONMENT					
Proximity to Key Natural Heritage Features					Alternatives 3 and 4A are in closer proximity to the watercourse and regulated area.
Terrestrial Vegetation/Wildlife (Including SAR)					Potential for SAR habitat within the agricultural fields. The MNRF database identifies one species listed two threatened species including the bobolink and Eastern Meadowlark in the greater area. The preferred alternative will be studied further to consider site specific impacts.
Surface Water and Fisheries					Alternatives 3 and 4A are in closer proximity to the drainage feature and regulated area. The drain is recognized as a watercourse that requires site specific Fisheries Act review. The watercourse has the potential for sensitive fish species.
Groundwater					None of the alternatives are within areas of 'Significant Groundwater Recharge'. Similarly, none of the alternatives are within an area classified as a 'Highly Vulnerable Aquifer'. Alternative 3 is in an area designated as an 'area of groundwater discharge'.
Climate Change /Air Quality					All alternatives are similar in air quality and climate change impacts.

EVALUATION CRITERIA	ALT 3	ALT 4A	ALT 4B	ALT 5	DESCRIPTION OF EFFECTS
CULTURAL AND SOCIAL ENVIRONMENT					
Archeological					The site alternatives exhibit archaeological resource potential and further investigation is required to confirm and to develop suitable mitigation measures.
Cultural Heritage Resources					Site alternatives 3, 4A and 5 have been confirmed as having no potential for Cultural Heritage impacts. Site 4B is near a property considered as a 'potential cultural heritage landscape'.
Aesthetics (noise, odour, visibility)					Alternatives 3 and 4A are nearer to more residential homes. Alternative 5 has fewest surrounding homes.
Impacts to Property Owners					All of the Alternatives will impact private property owners, as land acquisition is required. Additional long-term impacts are considered for Alternative 5 regarding loss of agricultural land with less positive benefit.
Impacts to Business/Commercial Properties					All of the Alternatives will have some impact on farming in the small portion of land that will be acquired. Additional long-term impacts are considered for Alternative 5 regarding loss of agricultural land with less positive future benefit, as the other two properties are being considered for future development.
ECONOMIC ENVIRONMENT					
Operating and Maintenance Costs					In general, operation and maintenance costs escalate as pumping distance increases due to the increase in dynamic headlosses and resulting increased energy use and increase in pump size requirements.
Capital Costs					The capital costs for the SPS's will be similar under each alternative site location.
Land Acquisition Costs					All site locations will require property acquisition.
TOTAL SCORE					
	4	3	1	2	

6.4 Evaluation Discussion

6.4.1 Technical/Physical Environment Evaluation

a) Suitability of Elevation and Topography

All alternatives share a similar topographic elevation, with Alternative 4A and 4B being marginally lower in elevation. Alternative 3 and 4A present a slight technical disadvantage due to their longer pumping distance from the station to the proposed trunk sewer on Innisfil Beach Road.

b) Geotechnical Suitability

A preliminary desktop review of subsurface conditions indicates the presence of mainly glacial till deposits and glaciolacustrine deposits consisting of clays and silts. It is anticipated that these soil types will offer similar advantages in terms of construction for all four alternatives.

c) Hydrogeological Suitability

The preliminary review from a hydrogeological perspective indicates that the subsurface conditions appear relatively consistent with few constraints noted. Construction dewatering in close proximity to the watercourse could lead to impacts and will need to be carefully assessed. A portion of the Alternative 3 and 4A site locations falls within Intake Protection Zone 3, qualifying these two alternatives for a lower score compared to Alternative 4B and 5.

d) Hydraulics

Alternatives 4B and 5 offer the advantage of lower head and reduced pumping distance, providing additional hydraulic flexibility to adapt to changes in flow rates, pressures, or other hydraulic conditions compared to Alternative 3 and 4A.

e) Utilities Impacts

The presence of overhead hydro on the west side of Yonge Street makes construction access more challenging. Alternative 3, which is situated on the west side of Yonge Street, is particularly affected by this constraint, as it needs to bring hydro over Yonge Street.

6.4.2 Natural Environment Evaluation

a) Proximity to Key Natural Heritage Feature or Regulated Area

Alternatives 3 and 4A are situated in closer proximity to the watercourse and LSRCA regulated area.

b) Terrestrial Vegetation/Wildlife (Including SAR)

The potential for SAR habitat within the agricultural fields is noted. As of the current investigation, all four alternatives are receiving the same score.

c) Surface Water and Fisheries

Alternatives 3 and 4A are situated in closer proximity to the drainage feature and regulated area. The drain is acknowledged as a watercourse, necessitating a site-specific Fisheries Act review. The watercourse has the potential habitat for sensitive fish species.

d) Ground Water

None of the alternatives are within areas of 'Significant Groundwater Recharge'. Similarly, none of the alternatives are within an area classified as a 'Highly Vulnerable Aquifer'. However, Alternative 3 is in an area designated as an 'area of groundwater discharge'.

f) Climate Change and Air Quality

All alternatives exhibit comparable effects on air quality and climate change since they are situated away from residential areas, thereby minimizing direct impacts on nearby residents.

6.4.3 Cultural and Social Environment Evaluation

a) Archaeological

Through the Stage 1 Archaeological Assessment it was determined that all four site alternatives show potential for archaeological resources, and additional investigation is necessary to confirm this and develop appropriate mitigation measures.

b) Cultural Heritage

Site alternatives 3, 4A, and 4B have been confirmed to have no potential for Cultural Heritage impacts. However, site 5 is in proximity to a property considered a 'potential cultural heritage landscape'.

c) Aesthetics (Noise, Odour, Visibility)

Alternatives 3 and 4A are closer to the south edge of the Stroud Settlement Boundary, where residential homes are situated. In contrast, Alternative 5 has the fewest surrounding homes.

d) Impacts to Property Owners

All of the alternatives will impact private property owners, as land acquisition is required. There are additional long-term impacts considered for Alternative 5, specifically related to the loss of agricultural land with fewer positive benefits.

e) Impacts to Adjacent Business or Commercial Properties

All of the alternatives will have some impact on farming in the small portion of land that will be acquired. There are additional long-term impacts considered for Alternative 5, specifically related to the loss of agricultural land with fewer positive future benefits, as the other two properties are being considered for future development.

6.4.4 Economic Environment

a) Operating and Maintenance Costs

In general, operation and maintenance costs tend to rise as the pumping distance increases, primarily because of the growing dynamic headlosses, which necessitate larger pump sizes. Furthermore, longer forcemains can lead to potential odour issues if the retention time is excessively long. However, dynamic headlosses can be mitigated through appropriate forcemain sizing, and retention time can be reduced through design alternatives such as the use of dual forcemains.

b) Capital Costs

The capital costs for the SPS's are expected to be similar under each alternative site location.

c) Land Acquisition Costs

All of these four site locations are situated outside of the Stroud Settlement Boundary. These sites will require private property acquisition to proceed with the project.

7. CONSULTATION

The Innisfil Heights Stroud Sewage Pumping Station Class EA included an active public consultation program that sought the comments and concerns of the public and other stakeholders. Responses to comments and concerns were provided throughout the project via a number of means, including responses provided by project team members to emails and phone calls, and materials provided to the project contact list and posted on the project website.

A summary of all comments received and responses provided can be found in Table 5. A complete consultation record can be found in Appendix M – Consultation Records. The contact information for all public member comments has been removed.

7.1 Notice of Amendment to MSP

The Notice of Amendment was issued on October 14th, 2021, and comments were requested by November 14th, 2021.

InnServices Utilities Inc. issued an amendment to the Innisfil Master Servicing Plan (MSP) to update the implementation timeline for the Stroud SPS and forcemain project. This project was originally identified in the 2018 MSP with a long-term implementation schedule, targeting construction beyond 2031. However, due to the recent submission of development proposals in the Stroud area that require municipal sewer servicing, the project is now being advanced to align with current servicing needs.

The decision to advance this project is consistent with the MSP's approach, which allows flexibility in implementation based on development triggers. No other components of the preferred servicing solutions outlined in the MSP are affected by this change.

The amendment is not considered a major change and does not require a full update to the 2018 MSP.

A copy of the Notice is provided in Appendix H.

7.2 Notice of Study Commencement

A Notice of Study Commencement was placed in the Innisfil Journal newspaper for the November 25th, December 7th and 9th, 2021 editions and a copy of the notice was also posted on the Town of Innisfil's website. A mail out to area residents adjacent to the project study area, relevant review agencies as well as Indigenous communities and nations was issued on November 25th, 2021 providing notification of the commencement of the project. Copies of the issued letters and notices, as well as the agency mailing list and copies of all comments received and associated responses as a result of the Notice of Study Commencement are included in Appendix I.

MECP staff provided a formal letter dated November 25th, 2021 that acknowledged that the study is following the approved environmental planning process for a Schedule B project under the Municipal Class Environmental Assessment. The letter had attached "Areas of Interest" document that provides guidance regarding the ministry's interests with respect to the Class EA process. The letter continued to describe the Crown's duty to consult and provided information on Indigenous communities the proponent is required to consult with as they may be potentially affected by the proposed project. Comments were received from the City of Barrie regarding future works and servicing in the City of

Barrie through adjacent lands to the study area. A summary of the comments and responses is also provided in Table 5.

The project team received a letter from Curve Lake First Nation in regard to the proposed Innisfil Heights Sewage Pumping Station. The letter provided information on *Curve Lake First Nation's Consultation and Accommodation Standards*. Ongoing consultation with Curve Lake has occurred throughout the project process and is further described in Section 7.5.1.

7.3 Notice of Public Information Centre

A Notice of Public Information Centre was published on the Town of Innisfil's website and social media accounts in December 2022. The notice was published in the *Innisfil Journal* in the December 8th, 2022 edition.

The PIC virtual presentation material provided information pertaining to the Municipal Class EA Schedule 'B' planning process and its application to the current project. The scopes of the location of the study area were identified as well as a description of the existing conditions. Six (6) Alternatives to address the identified problem/opportunity statement were presented to the public for their review and input. An Evaluation Table was created that summarized the potential impacts associated with each alternative for each site location. Through this evaluation, a preliminary preferred solution was identified although it was noted that the final Preferred Solution would be selected based on continued evaluation and consideration of comments received during the consultation period. The PIC was conducted in the form of a pre-recorded presentation, which was made accessible for review on the Town of Innisfil's website for interested parties.

The project team received comments from the LSRCA. Planning staff from the LSRCA identified that Alternative 4B and 5 sites are not within lands regulated by LSRCA, but portion of the site within Alternative 3 is and a permit would be required for any work at this site.

Appendix J includes a copy of the Notice of the PIC period, and Appendix K contains a copy of the PIC materials.

7.4 Notice of Completion

The Notice of Completion was posted on the Town of Innisfil's and InnServices' websites on May 7th, 2025.

A copy of the Notice of Completion is included in Appendix L.

7.5 Consultation with First Nations

Throughout this Class EA, engagement with the following First Nation (FN) has occurred.

- Chippewas of Georgina Island First Nation
- Chippewas of Rama First Nation
- Beausoleil First Nation
- Curve Lake First Nation
- Mississaugas of Scugog Island First Nation
- Hiawatha First Nation

- Alderville First Nation
- Huron-Wendat Nation
- Métis Nation of Ontario (MNO)
- Saugeen First Nation
- Chippewas of Nawash Unceded First Nation
- Saugeen Ojibway Nation (as the consultation contact for Saugeen First Nation and Chippewas of Nawash Unceded First Nation).

Consultation with the above mention communities is required as outlined in the MECP's letter dated December 20th, 2021.

The Notice of Study Commencement was sent to all the above-mentioned FNs on November 25th, 2021, to inform them about the initiation of this EA. The notice outlined the type of project, provided a brief overview, and included the contact information of the project team.

The Huron-Wendat Nation expressed interest in any archaeological studies or fieldwork related to the project. The Stage 1 Archaeological Assessment report was provided on February 9th, 2022.

Details of the consultation with Curve Lake First Nation (CLFN) are provided in Section 7.4.1.

The Notice of Public Information Center was issued on December 2nd, 2022, to provide details about the availability date of the presentation materials and the link to access it. It also included information on the method and timeline for submitting comments.

Public Information Center was held on December 15th, 2022 and the comment deadline for public closed on December 29th, 2022. The preferred alternative solution was provided after public commenting period.

As part of their development plans, the property owner's engineers conducted archaeological assessments on the site, including a Stage 2 Archaeological Assessment, and have agreed to share the report for the purposes of the Class EA. The report was provided to the Chippewas of Rama First Nation, the Huron-Wendat Nation, and CLFN on March 4th, 2025, with a follow-up sent on March 19th, 2025. Following the follow-up, the Chippewas of Rama First Nation confirmed that they had no comments based on their review.

7.5.1 Consultation with Curve Lake First Nation

Throughout this Class EA, engagement with Curve Lake First Nation (CLFN) has occurred. As previously described, multiple teleconference meetings were held with members of Curve Lake First Nation to discuss the project.

Initial introductory meeting held on January 12th, 2022 – A general overview of this class EA and consultation framework were provided to CLFN. CLFN advised they will review all draft reports and provide feedback and recommendations regarding mitigation plans. By the time of meeting, the progress of background studies was presented to CLFN. Background studies including cultural heritage report, stage 1 archeological report, environmental constraints report and geotechnical desktop report were submitted to CLFN for review on February 28th, 2022.

Public Information Center was held on December 15th, 2022 and the comment deadline for public closed on December 29th, 2022. The preferred alternative solution was provided after public commenting period.

Consultation meeting held on May 4th, 2022 – CLFN reviewed reports that were provided to date.

Consultation meeting held on June 2nd, 2022 – Reports were reviewed by CLFN. Once the dates of additional field studies are confirmed, Ainley will provide CLFN with the opportunity to join the field review.

CLFN issued a Technical Field Memorandum on September 29th, 2022, addressing the land base and ecology surrounding the proposed SPS and its alternative locations. The memo required the development of an Environmental Monitoring Plan to ensure cultural integrity during and after the construction phase.

Consultation meeting held on November 23rd, 2022 – This meeting was to present the PIC display boards to CLFN to provide opportunities to comment and ask questions.

Consultation meeting held on September 12th, 2023 – Ainley identified the preferred location to CLFN and verified that it is situated at a distance from wetlands or watercourses.

CLFN confirmed on March 5th, 2024 that this EA can proceed to next step (completion stage) if all actions mentioned in previous communications are completed.

7.6 Consultation with Property Owner/Consulting Group

The property located at 7667 Yonge Street, Innisfil, is owned by SanDiego Homes. SCS Consulting Group, as the consulting firm for the Stroud Village Developers Group (including SanDiego Homes), is tasked with offering preliminary comments on the land, while R.J. Burnside & Associates Limited serves as the engineering consulting firm for future development.

After the Public Information Centre (PIC), SCS Consulting Group requested additional details concerning development information in Stroud. Ainley responded by furnishing proposed growth information sourced from the Town of Innisfil. Subsequently, SCS Consulting Group conveyed that SanDiego Homes is keen to engage in further discussions about having the SPS placed on their property.

Subsequently, Ainley issued a letter to SanDiego Homes, notifying them that additional studies are required before determining the location of SPS. Further, R.J. Burnside & Associates Limited, representing SanDiego Homes, initiated contact to discuss their conceptual development plan and coordinate the location of the SPS along with the necessary further studies for the land. Following a meeting, Ainley presented a rough sketch outlining the approximate site layout based on the conceptual development plan. The property owner has agreed with the proposed site plan.

On January 23rd, 2025, the property owner granted permission to use the Stage 1 and Stage 2 Archaeological Assessment report for the purposes of this EA, in order to satisfy the archaeological requirements.

7.7 Summary of Comments

The following Table 5 summarizes all comments received during the EA period. Contact information for all public member comments has been removed.

Table 5 – Comment Summary Table

NO.	RESPONDENT INFORMATION	COMMENTS RECEIVED	DRAFT RESPONSE / ACTION REQUIRED
PRE CONSULTATION COMMENTS (ALL)			
Notice of Amendment to Town of Innisfil Master Servicing Plan – October 2021			
1.	Mr. Derek Wantuch Town of Innisfil Derek Wantuch dwantuch@innisfil.ca	<u>Comment received via email October 14, 2021:</u> “Is this the version that supposed to have the update? Followed the link (more like I had to copy it) and date November 2018 is seen on cover page. Is this the correct document?” <u>Comment received via email October 14, 2021:</u> “Thank you. I see that short paragraph describing what is starting now.”	<u>Response provided by InnServices October 14, 2021:</u> “Yes this is the version from the Town’s website. Page 136 (Section 18.4) speaks about the need for the Stroud SPS”
2.	Peter Dorton Senior Project Manager Ministry of Transportation 159 Sir William Hearst Avenue, 7th Floor Toronto, ON M3M 0B7 peter.dorton@ontario.ca	<u>Comment received via email October 15, 2021:</u> “The Stroud SPS and forcemain project are beyond MTO’s permit control area. MTO review and approvals are not required.”	MTO has been removed from the project contact list.
3.	Roger Howard Rice Development Corp 7735 Kennedy Rd. South, Brampton, ON L6W 0B9 roger@ricedevlopment.ca	<u>Comment received via email October 20, 2021:</u> “We own commercial property in Stroud and are interested in the proposed advancement of the SPS and forcemain to service the Stroud community. We received the Notice of Amendment but do not see any mention in it of an intended new date as to when services would now be planned. Could you provide further information on the details of the new timing for sanitary services in Stroud. <u>Comment received via email November 1, 2021:</u> “I am just following up on my below email of October 20th, 2021 regarding the proposed bump up in timing of the sanitary servicing of Stroud. Could one of you please respond to my inquiry as to the actual timing of the proposed works as the Notice doesn’t appear to offer even a range of possible advanced timing.” <u>Comment received via email November 1, 2021:</u> “Thanks for the update Preya, and for adding us to the mailing list”	<u>Response provided by Ainley Group November 1, 2021:</u> “Please find attached, our response to your inquiry about the Stroud Sewage Pumping Station Class EA. We will add you to the mailing list and send any public updates and notices to you directly as they are released.” A copy of the full letter can be found in Appendix M of the Project File Report
4.	Dan Minkin Heritage Planner Heritage Planning Unit MHSTCI Dan.Minkin@ontario.ca	<u>Comment received via email November 10, 2021:</u> “Our letter of August 31, 2018, commenting on the final draft of the MSP dated July 13, 2018, noted that there was no discussion of potential impacts to cultural heritage resources, nor reference to any cultural heritage technical studies carried out in support of the project such as an archaeological assessment or cultural heritage evaluation report. With the timeline being advanced for the Stroud SPS, we would appreciate an update on the status of cultural heritage investigations (archaeological assessment and cultural heritage evaluation report, if identified as necessary through screening) for the Stroud SPS specifically and the MSP components generally. As the proposed amendment does not change the physical components of the undertaking, we have no new comments at this time.” A copy of the full letter can be found in Appendix M.	<u>Response provided by Ainley Group November 11, 2021:</u> “Thank you for your feedback on the amendment related to the Stroud SPS. Archaeological assessments are planned as part of the Schedule B activity needed to identify a preferred location for the SPS. However, we’ll send you a formal response that addresses both the archeological and cultural heritage aspects and will send you a copy of any reports generated in this study on either topics.”

NO.	RESPONDENT INFORMATION	COMMENTS RECEIVED	DRAFT RESPONSE / ACTION REQUIRED
5.	Sandra Rizzardo President San Diego Homes	<u>Comment received via email November 17, 2021:</u> “We anticipate the SPS being placed in the southwest corner of our property, closer to the intersection of Yonge Street and 9th Line. As for sizing, we are assuming a 40m by 40m block would be sufficient for the SPS and all required buildings. If that needs to be adjusted through the EA process or during detailed design, we have the flexibility to adjust the design. I respectfully request SanDiego Homes, with respect to offering this block to the Town and in lieu of financial compensation for the land, receive a guarantee that this property will be included within the developable limits within a reasonable time period.”	<u>Response to phone call inquiry from Ms. Rizzarda provided by Ainley Group November 16, 2021:</u> “It was nice speaking to you earlier. As we were discussing, I understand that Sandiego Homes has a piece of land that they would be willing to offer as the location of the Stroud sewage pumping station. That’s great and could potentially make for an easier and faster Class EA process. Please find attached the map of development in the Stroud community that Candice Ward sent previously. Can you please indicate the location of the area available and, if you know the approximate size, can you please let us know that as well.” <u>Response provided by Ainley Group November 17, 2021:</u> Thanks for the information on the land that Sandiego Homes has available for siting the Stroud SPS. At the moment, we are developing a list of possible locations to be evaluated as part of this Class EA. The preferred location will be selected through the evaluation process. At this time, we will include this property as an option for evaluation. If the results of the Class EA show that this is the preferred location then the Town will enter into discussion with Sandiego Homes in terms or agreements associated with use of the land. Ainley is doing the Class EA and is not involved with these agreements, however, I’ve copied Jenna DeGroote of InnServices, who represents the Town and can more comment on this. You have been added to this Class EA’s contact database and will receive any updates and notices as the study progresses. If you have questions at any time, please feel free to email me.
6.	Candice Ward SCS Consulting Group Ltd.	<u>Comment received via email November 10, 2021:</u> “Over the last year, Stroud Village Developers Group has been working with the Town of Innisfil and InnServices to cultivate a vision for the Community of Stroud. We are writing on behalf of the Stroud Village Developers Group concerning the proposed Stroud SPS required to service the Community of Stroud. The Stroud Village Developers Group has formalized themselves with the intent to collaborate with the Town of Innisfil and InnServices to advance the timing of the delivery of the external servicing for the Community of Stroud and participate in upfront financing arrangements. A copy of the Land Ownership Figure has been attached for your review. As illustrated in the figure, the ownership of lands is both within and adjacent to the existing settlement boundary where an expansion of the settlement area is required. It is understood that adjustments to the Stroud settlement boundary will occur through the Town’s Growth Management Review process in consultation with the County of Simcoe as part of the Municipal Comprehensive Review.” The letter continues to outline the understanding of the proposed Stroud SPS and the amended timeline. A copy of the full letter and attachments can be found in Appendix M.	<u>Response provided by Ainley Group November 22, 2021:</u> “Thanks for reaching out to the study team. We have added the Stroud Village Developers Group as an interested party to the Class EA and to our mailing list to provide updates directly as we progress with the Stroud SPS Class EA. If you have any questions throughout the study, please feel free to reach out to out again.”
7.		<u>Comment received via email November 12, 2021:</u> “I’m new to Stroud Innisfil and I read through the expansion of waste water proposals but I couldn’t really make out when Stroud would be connected to the sewer. Would you have a rough guess as to when that might be?”	<u>Response provided by InnServices November 15, 2021:</u> As per our 2018 Master Servicing Plan, there are currently no plans to service the existing properties within Stroud, however this is something that will be looked at in the 2022 Master Servicing Plan update. At this time, a sewage pumping station is proposed in Stroud to service new developments. The location of the pump station

NO.	RESPONDENT INFORMATION	COMMENTS RECEIVED	DRAFT RESPONSE / ACTION REQUIRED
			will be determined through our Environmental Assessment Study.
AGENCY COMMENTS			
Notice of Commencement – November 2021			
1.	Tom Reeve Senior Project Manager – Water/Wastewater Planning The City of Barrie 705 Tom Reeve Tom.Reeve@barrie.ca	<u>Comment received via email December 2, 2021:</u> “Could you add me to the list of contacts for this EA?”	<u>Response provided by Ainley Group December 7, 2021:</u> “You have been added to the project contact list. Thank you for your interest.” Contact list has been updated.
2.	Chunmei Liu Regional Environmental Planner – Central Region MECP chunmei.liu@ontario.ca	<u>Comment received via email December 20, 2021:</u> “The Ministry of the Environment, Conservation and Parks (MECP) acknowledges that the Town of Innisfil (proponent) has indicated that the study is following the approved environmental planning process for a Schedule B project under the Municipal Class Environmental Assessment (Class EA). The 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 <i>Environmental Assessment Act</i> through Bill 197, Covid-19 Economic Recovery Act 2020.” The letter continued to describe the Crown’s duty to consult and provided information on Indigenous communities the proponent is required to consult with as they may be potentially affected by the proposed project. A copy of the full letter and attachments can be found in Appendix M.	No response is required at this time.
3.	Dan Minkin Heritage Planner Heritage Planning Unit MHSTCI Dan.Minkin@ontario.ca	<u>Comment received via email December 20, 2021:</u> “All technical cultural heritage studies and their recommendations are to be addressed and incorporated into EA projects. Please advise MHSTCI whether any technical cultural heritage studies will be completed for this EA project, and provide them to MHSTCI before issuing a Notice of Completion or commencing any work on the site. If screening has identified no known or potential cultural heritage resources, or no impacts to these resources, please include the completed checklists and supporting documentation in the EA report or file” The letter provided details on components of cultural heritage that must be considered as part for the Class EA. A copy of the full letter and attachments can be found in Appendix M.	No response required.
4.	Info Pubs Indigenous Services Canada (ISC) infopubs@sac-isc.gc.ca	<u>Comment received via email January 13, 2022:</u> “Thank you for contacting Indigenous Services Canada (ISC) and Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC). Please note that in order to support national efforts to contain the COVID-19 pandemic, the Public Enquiries Contact Centre resuming service by phone between 9am and 6pm(EST) only during the COVID-19 pandemic. We are currently experiencing higher call volumes than normal. Also, note that in order to support national efforts to contain the COVID-19 pandemic, many staffs and departments are teleworking to minimize in-person interactions and to promote social distancing. They are prioritizing requests based on their urgency. Your message was redirected to the appropriate department.”	No response required.

NO.	RESPONDENT INFORMATION	COMMENTS RECEIVED	DRAFT RESPONSE / ACTION REQUIRED
Notice of Public Information Centre (PIC) – December 2022			
1.	Taylor Stevenson Infrastructure Permitting Coordinator Lake Simcoe Region Conservation Authority (LSRCA) T.Stevenson@lsrca.on.ca	<u>Comment received via email January 10, 2023:</u> “I apologize for missing the commenting deadline. If it is not too late, the LSRCA prefers Alternatives 4 and 5 since they are not regulated under the CA Act and there are no natural hazards or natural heritage features on those sites. Alternative 3 is partially located within regulatory floodplain based off LSRCA mapping tool (attached). A topographic survey would accurately delineate the floodplain and may demonstrate that the building envelope is outside the regulatory floodplain, at which point we would have no objection to the location.”	No response required.
Notice of Completion – May 2025			
INDIGENOUS COMMUNITY COMMENTS			
Notice of Commencement – November 2021			
1.	Dominic Ste-Marie Huron Wendat Nation Dominic.Sainte-Marie@wendake.ca	<u>Comment received via email November 26, 2021:</u> “Thank you for your email. Could you please let us know if any archaeological studies or fieldwork will be necessary as part of this project?”	The report was provided for review.
2.	Kaitlin Hill Lands and Resources Consultation Liaison Curve Lake First Nation Government Services Building 22 Winookeeda Street, Curve Lake, ON K0L 1R0 705.657.8045 ext 222 KaitlinH@curvelake.ca	<u>Comment received via email December 22, 2021:</u> “Please find attached a letter from Curve Lake First Nation in regard to the proposed Stroud Sewage Pumping Station project.” The letter shared that based on the information that you have provided us with respect to the Proposed Stroud Sewage Pumping Station project, Curve Lake First Nation may require a Special Consultation Framework for this project. Information on this Framework can be found on page 9 of our <i>Consultation and Accommodation Standards</i> document. A copy of the full letter and attachments can be found in Appendix M.	<u>Response provided by Ainley Group December 22, 2021:</u> “Thank you for the feedback. We have scheduled a meeting with the Curve Lake First Nations on January 12, 2022 to discuss the Class EAs for the five pumping stations proposed for Innisfil and the requirement for a Special Consultation Framework. We hope to address any concerns and implement measures deemed necessary from discussions at that meeting.”
Notice of Public Information Centre (PIC) –			
1.	Thomas Turoczi Mississaugas of Scugog Island First Nation (MSIFN) tturoczi@scugogfirstnation.com	<u>Comment received via email December 6, 2022:</u> “Due to capacity issues, MSIFN will not be consulting on this project at this time. However, please continue to provide updates on this and future projects.”	No response required.
Notice of Completion – May 2025			

NO.	RESPONDENT INFORMATION	COMMENTS RECEIVED	DRAFT RESPONSE / ACTION REQUIRED
PUBLIC COMMENTS			
Notice of Commencement – November 2021			
1.	Roger Howard Rice Development Corp	<u>Comment received via email November 25, 2021:</u> “Is the plan for the new Stroud PS for it to serve all of the existing Stroud community and take all existing development off existing private septic systems by installing a new sanitary collection system on all existing roads or for it only to service new development at the south end of Stroud that would be designed and built based on full municipal services right from the start? If you can provide clarification on this it would be very helpful.”	<u>Response provided by Ainley Group December 21, 2021:</u> A copy of the full letter and attachments can be found in Appendix M.
2.	██████████	<u>Comment received via email November 25, 2021:</u> “Perfect, thank you so much.”	No response required.
3.	██████████	<u>Comment received via phone call to Ainley December 13, 2021:</u> “ I received a phone call. He’s a retired home owner in the Stroud area and had some questions about the timing and location for the Stroud SPS. I advised him that the timeline has been moved forward to about 2024/2025 due to the planned developments happening sooner than originally anticipated. I also told him that the location of the SPS hasn’t been selected and we’ll be picking and evaluating a few options within the study area shown on the Notice of Commencement. He has two questions that I wasn’t able to answer off-hand I told him that we’d look into it and provide him with information. - How large will the SPS building be? - He and his wife have lived in that house for 30 years and they were previously told that there would be no new growth due to concerns about insufficient water supply. Apparently, the Town gets their drinking water from wells and previously didn’t think that the water available could support growth from development. This resident wants to know if and how the Town has addressed the water issue. The need for an SPS building is mostly depended on the capacity of the SPS and somewhat on client preferences. Buildings are provided for larger SPSs, but I’m thinking that Stroud will be small enough that the SPS will consist of an underground wetwell with an at-grade control panel installed beside it. Can you please discuss the expected flows for this SPS with Simon and have him tell you if he thinks that there will or won’t be a building. If a building is needed, we can discuss a size with Jatin.	<u>Response provided by Ainley Group January 27, 2022:</u> “Prior to the holidays you were in contact with the Ainley Group to request for more information about the Stroud sewage pumping station. You had some questions about the timing and location for the Stroud SPS and were advised that the timeline has been moved forward from the dates originally set in the Master Servicing Plan to approximately 2024/2025 due to the planned developments happening sooner than originally anticipated. You had two additional questions that we had to review and respond to as follows: - How large will the SPS building be? Presently, the size of the SPS building is undetermined. We will better understand sizing as we continue through the environmental assessment process. The need for a SPS building is mostly dependent on the capacity of the SPS, however, there are other factors such as the size of pumps that are needed, as well as whether or not certain types of equipment are necessary which would require a building. - You indicated that you were previously told that there would be no new growth in Stroud due to concerns about insufficient water supply. How has the Town addressed the water supply issue? Planning for the water and wastewater system is reviewed under the Master Servicing Plan (MSP), the latest update was completed in 2018. Stroud is currently serviced by a municipal groundwater system, however, a reliable water supply is needed for existing servicing and to accommodate planned growth. The MSP determined that the preferred water servicing solution for Stroud is to connect to the Lakeshore water system via a new watermain on Yonge Street connecting to the existing Stroud water reservoir. The existing wells would be decommissioned. (Section 5 of the MSP - https://innisfil.ca/en/my-government/resources/R-Innisfil-MSP-Final-Report-1.pdf) The SPS is intended to service new developments. As per the 2018 MSP, there are

NO.	RESPONDENT INFORMATION	COMMENTS RECEIVED	DRAFT RESPONSE / ACTION REQUIRED
			no current plans to service the existing residential properties in Stroud, but it is something that will be looked at in the 2022 MSP update.”
4.	██████████	<u>Comment received via email January 3, 2022:</u> “Could you please add my personal e-mail address (the address I'm sending this message from) to the mailing list for the Stroud Sewage Pumping Station EA? Since I live in Stroud, I figure I will want to participate on the resident level rather than the Town employee level.”	<u>Response provided by InnServices January 3, 2022:</u> “We will add your personal email to our communications list.”
Notice of Public Information Centre (PIC) – December 2022			
1.	Catherine Pan Brookfield Properties	<u>Comment received via email December 21, 2022</u> “We are supportive of alternative 4B located at 7667 Yonge Street as the preferred location for the Stroud SPS.” A copy of the full letter and attachments can be found in Appendix M.	<u>Response provided by Ainley Group March 24, 2023:</u> “Thank you for reaching out to the study team. Please find the formal response to your question in the attached letter.” A copy of the full letter and attachments can be found in Appendix M.
2.	Candice Ward SCS Consulting Group Ltd.	<u>Comment received via email January 4, 2023:</u> “Further to December 15, 2022, PIC No. 01, I am sharing with you the Stroud Village Developers Group’s comments. We look forward to hearing back from you. A meeting with the Developers Group might be helpful.” A copy of the full letter and attachments can be found in Appendix M.	<u>Response provided by Ainley Group March 24, 2023:</u> “Thank you for reaching out to the study team. Please find the formal response to your question in the attached letter.” A copy of the full letter and attachments can be found in Appendix M.
3.	Gloria Lai SCS Consulting Group Ltd.	<u>Comment received via email May 1, 2023:</u> “Please find attached our responses to your comments.” A copy of the full letter and attachments can be found in Appendix M.	<u>Response provided by Ainley Group March 24, 2023:</u> “Please find the formal response to your question in the attached letter and feel free to contact us if you have additional questions.” A copy of the full letter and attachments can be found in Appendix M.
Notice of Completion – May 2025			

8. PREFERRED SOLUTION

8.1 Preferred Site Location

Following the completion of the Public Information Centre and the review of all received comments, the following alternative was selected as the Preferred Solution:

Alternative 4B – Site Location at 7667 Yonge St., Innisfil

The alternative best addresses the need for a new sewage pumping station with limited potential to impact the environment as following aspects:

- **Physical Environment:** Suitable elevation and topography, as well as hydrogeological and hydraulic conditions, due to its lower elevation placement.
- **Environmental Considerations:** Minimal impact on local vegetation and wildlife, preserving the ecological integrity of the area.
- **Cultural Heritage Preservation:** The location is away from any BHRs and CHLs, and therefore requires no further assessment.

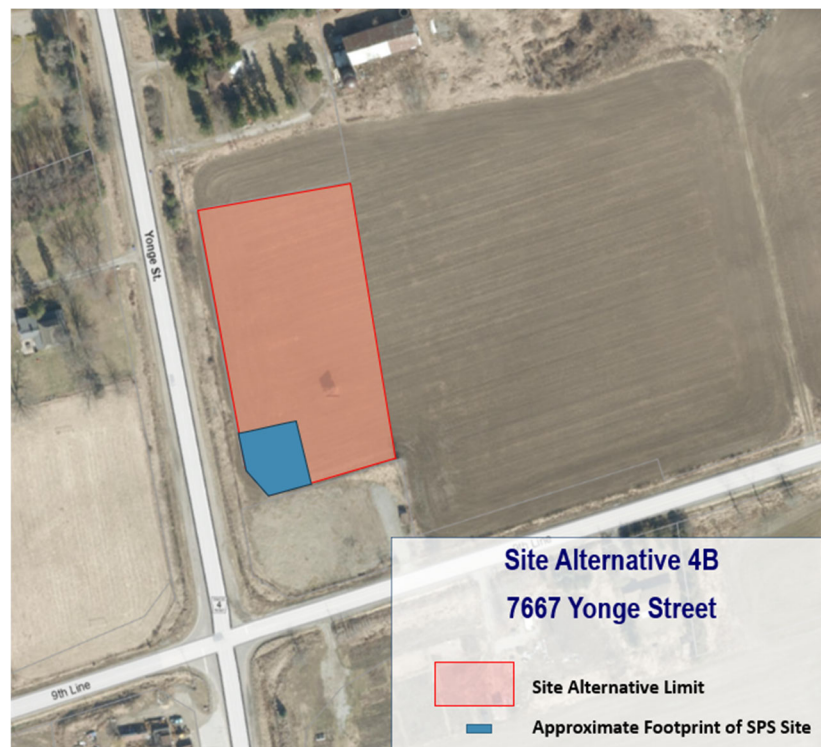


Figure 10 – Alternative 4B Location and Approximate SPS Footprint

The anticipated timing for next steps includes; property acquisitions and detailed design to be completed within the year 2025, with construction implemented in 2026.

8.2 Proposed SPS Location

Following the selection of the preferred location, an environmental constraints analysis was conducted at 7667 Yonge Street to identify a suitable placement for the SPS. The final location also considers discussions with the property owner and traffic considerations, aligning with the preliminary development plan proposed by the property owner.

8.2.1 Environmental Constraints Analysis

Azimuth, on behalf of Ainley Group, has completed a scoped Environment Impact Study (EIS) at 7667 Yonge Street.

The analysis concludes that environmental conditions do not pose constraints to the construction of the Stroud SPS. The proposed infrastructure is consistent with the applicable natural heritage policies of the ESA, the County of Simcoe Official Plan, the Town of Innisfil Official Plan, and the Lake Simcoe Protection Plan.

The works are not expected to negatively impact the ecological functions of Candidate Significant Wildlife Habitat, and no threatened or endangered species or fish habitat are anticipated to be present.

A copy of the EIS report is included in Appendix D.

8.2.2 Stage 2 Archaeological Study

The Stage 2 Archaeological Assessment was conducted as part of the broader Archaeological Assessment completed by Archaeological Services Inc. on behalf of the property owner. The property owner has granted permission for the EA team to use this report for the purposes of the EA. A copy of the full report is included in Appendix F.

This report covers the entire property at 7667 Yonge Street. Based on the proposed SPS location, a Test Pit Survey was conducted at 5-metre intervals. One historical site, known as the Thompson site (shown in Figure 11 below), dating to the early- to mid-nineteenth century, was identified and will be subject to a comprehensive Stage 3 Site-Specific Assessment.

However, since the Thompson site is located more than 70m from the proposed SPS site, the SPS location is considered suitable to proceed.



Figure 11 – Detailed Location of Sites and Findspots

8.2.3 Preliminary Site Layout

Figure 12 below illustrate the preliminary layout of the SPS.



Figure 12 – Preliminary Layout of the SPS

9. COST ESTIMATE

Based on the Cost Estimate Classification System (AACE International, 2020), the cost estimate used for the feasibility study is a Class 4 estimate, which considers equipment costs or parametric models, with an expected accuracy range of -30% to +50%.

The cost estimate presented in this Section has been prepared base on the following assumptions:

- Costing of common equipment and construction materials has been based on Ainley's past project experience.
- Structural and architectural cost estimates are based on Ainley's past experience with similar scope projects as detailed Geotechnical investigation is not available at this time.
- A 40% Construction Contingency has been carried. However, considering the size of the project and gaps in information available for existing construction, this may have to be increased. This will be determined at a later design stage.
- A 10% Contractor's Profit has been assumed.
- Costs for Bell/Rogers and other utilities are not included. These costs are unforeseen at this moment and will be paid by the Owner directly.
- No contaminated soils have been assumed on site.
- Estimated construction cost is in 2025 dollars.
- Exclusions:
 - InnServices costs (approvals, SCADA, site investigations, etc.)
 - Engineering Costs
 - Impacts due to inflation and escalation
 - Harmonized Sales Tax (HST)

The total estimated cost for the SPS is \$10.9 million.

The SPS will connect to the trunk sewer along Innisfil Beach Road via a forcemain with an approximate length of 1,540m. The estimated cost for the forcemain, including general works, temporary works, removals, restoration, piping and valves, is \$5.7 million.

10. MITIGATION

The following sub-sections outline the mitigation measures that are to be included in the development of the detailed design for the implementation of the Preferred Solution. The anticipated approvals and permitting requirements are also described.

10.1 Vegetation

- Vegetation clearing should occur outside of the breeding bird season (generally late April to late July) to prevent nest destruction to comply with the Migratory Birds Convention Act. Winter season, during frozen ground conditions, is the ideal period for tree and vegetation removal if feasible. In the event that tree removal must occur within the breeding bird window a qualified

biologist must screen the area. Clearing in identified nesting areas would be prohibited until such time that it has been confirmed that the young have fledged.

- Where feasible, trees proposed to be retained will be protected by tree protection fencing (TPF), which is to be placed at the dripline or in a location to minimize encroachment into the root zone and protect the trunk. Fencing provides protection from potential damage during construction activities such as the use of machinery near trees and branches, and stockpiling of materials over the root zone. ESC fencing can be combined with TPF.
- A tree compensation ratio of 2:1 is recommended, with planting and restoration efforts focused on rehabilitating natural areas disturbed during construction activities.

10.2 Wetlands

In order to mitigate the potential short and long-term impacts to the wetland complex the following key mitigation and protection measures are proposed for implementation:

- Install environmental protection and erosion control fencing along the limits of the reconstruction area prior to the commencement of construction (includes prior to vegetation removal).
- Prior to work near any type of marsh or removal of marsh vegetation, if construction activities occur within the period of April to July, areas with standing water that may support amphibians are to be surveyed by a qualified biologist for the presence of amphibians. If present these are to be relocated to outside of the construction area to suitable habitats.
- Prior to construction works, a qualified ecologist will inspect the work area for the presence of regionally rare plant species (specifically Stiff Marsh Bedstraw and Hoary Sedge) that if present will be transplanted to a suitable location outside the impact zone.
- The Edge Management Plan is to be implemented and the plantings installed as outlined on the Edge Management Plan drawings and details.
- Machinery or equipment will be maintained and refueled within the construction area defined by the ESC measures, and at no time will approach within 30 m of the watercourses or wetland areas.
- Any equipment, stockpiled material or construction material will be stored within the construction area defined by the ESC measures, and in a manner that prevents sediment or deleterious substances from entering any watercourses or wetland areas.
- All work areas are to be effectively isolated from wetland communities and drainage features with appropriate ESC measures in order to ensure that deleterious substances do not enter these areas at any time.

10.3 Groundwater and Surface Water

- To minimize the potential for erosion and off-site transport of sediment into surface water features and the natural environment, the project will implement Best Practices related to erosion and sediment control. ESC measures used by the contractor on all construction should meet guidelines as outlined in Erosion and Sediment Control Guideline for Urban Construction, December 2006 (ESC Guideline), prepared by the Greater Golden Horseshoe Area Conservation Authorities.
- All exposed and newly constructed surfaces should be stabilized using appropriate means in accordance with the characteristics of the exposed soils. These surfaces should be fully

stabilized and re-vegetated with native species as quickly as possible following the completion of the works

- No sediment, sediment-laden water or deleterious substances are to be discharged into watercourses/drainage features at any time. A response plan for spills will be developed before work commences. This plan will be implemented immediately in the event of a sediment release or spill of a deleterious substance and an emergency spill kit will be kept on site.
- All ESC measures are to be inspected daily including after every rainfall, cleaned, maintained and/or adjusted accordingly to ensure sediment does not enter drainage features at any time.
- Any dewatering (if required) is to be filtered to remove sediment prior to discharging to a well vegetated area at least 30 m from a watercourse.
- Given the proximity of wells to the roads, if construction dewatering is required, affected wells in the vicinity will be identified during detailed design and the development of a monitoring program to predict or confirm actual effects during construction and plan for the replacement of such supplies temporarily as needed.
- Any in-water works during culver replacements should be completed in the appropriate construction timing window. The new culvert will be placed at a slight offset so existing culvert remains functional until new culvert is installed.
- To ensure compliance with CTC-SPP Policy SAL-11 regarding the application of road salt, best management practices will be implemented by the Township's Operations Staff.

10.4 Species at Risk

- If a SAR is encountered during construction, all works in the immediate area must cease. The Contract Administrator must contact the MECP at SAROntario@ontario.ca. Harassment to SAR should not occur during construction activities.

10.5 Specific Erosion and Sediment Control Measures

The LSRCA requires that the ESC measures be demonstrated on all relevant plans and/or drawings submitted. Further recommendations for the ESC plan include:

- The ESC measures should remain in place and in good working condition for the duration of the project, until landscaping and sodding has stabilized.
- ESC fencing/measures are to be erected as near to the development as possible.
- ESC measures are to be installed prior to beginning work and are maintained in working order throughout all stages of construction activities.
- That ESC fencing be erected to specifications outlined in Ontario Provincial Standard Drawings (OSPD), being at a minimum, a double row of sediment silt fencing consisting of a non-woven geotextile with straw bales staked in between.

10.6 Excess Materials Management

- Activities involving the management of excess soil should be completed in accordance with O. Reg. 406/19 and the MECP's document entitled "Rules for Soil Management and Excess Soil Quality Standards" includes both "Soil Rules" and "Excess Soil Standards" which are incorporated by reference into the excess soil regulation and must be read alongside the regulation.

- All waste generated during construction must be disposed of in accordance with ministry requirements.

10.7 Archaeological Resources

The Stage 2 Archaeological Assessment report (Appendix F) indicated that no archaeological assessment, no matter how thorough or carefully completed, can necessarily predict, account for, or identify every form of isolated or deeply buried archeological deposit. In the event that archaeological remains are found during subsequent construction activities, the contractor should be advised to stop work immediately and take the appropriate actions as noted below:

- Should previously unknown or un-assessed deeply buried archaeological resources be uncovered, 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 archaeologist to carry out archaeological fieldwork, in compliance with section 48 (1) of the Ontario Heritage Act. The Heritage Operations Unit of the Ministry of Culture must be immediately notified at 807-468-2450.
- In the event that human remains are encountered, the proponent or person discovering human remains must immediately notify the police or coroner and the Registrar of the Bereavement Authority of Ontario at 647-483-2645 or 1-807-468-2450.
- Construction activities and staging should be suitably planned and undertaken to avoid impacts to identified cultural heritage resources.

10.8 Built Heritage and Cultural Landscapes

There is a low potential to impact existing cultural heritage resources. The following mitigation will assist in avoiding and direct or indirect impacts.

- Staging and construction activities should be suitably planned to avoid impacts to an adjacent identified resource.
- Establish no-go zones adjacent to all identified cultural heritage resources and issue instructions to construction crews in order to prevent impacts to existing resources.
- Should future work require an expansion of the study area then a qualified heritage consultant should be contacted in order to confirm the impacts of the proposed work on potential heritage resources.

10.9 Utilities and Servicing

The utility companies are aware of this project. Communication will continue to occur in anticipation of utility relocation as part of this project. Existing utilities will be considered during design.

10.10 Property Impacts

The following measures will assist in keeping impacts to a minimum:

- Construction shall utilize measures to minimize impacts to local traffic to the extent feasible and to maintain access during construction.
- Entrances are to be kept open except when construction activities are taking place in front of the entrance.

- Property acquisition is required and discussions with the affected property owners will continue and if feasible the Township will incorporate their suggestions into detailed design.

10.11 Climate Change

10.11.1 Potential Impact and Mitigation Based on Energy Efficiency

As for constructing one (1) sewage pumping station, long-term increased risk to surface flooding is not anticipated. There will be an increase in hydroelectric power requirements to operate the sewage pumping station but the related impacts to climate change are considered to be minimal. Several measures can be considered to improve the energy efficiency of a structure including:

- Select high-performance, energy efficient pumps and optimize pump control
- Use LED lights and motion sensors for lighting

In addition, rating systems targeting at reducing energy usage and meeting climate change targets, such as Leadership in Energy & Environmental Design (LEED) and Envision, can be taken into consideration to improve the energy efficiency during design, construction, and operation and maintenance.

10.11.2 LEED Green Building Rating System

LEED is an internationally recognized green building certification system and standard for all building types and all building phases, which is developed by the U.S. Green Building Council (USGBC).

LEED-certified buildings are critical to addressing climate change and meeting environmental, social and governance goals. The system includes a set of rating systems for the design, construction, operation and maintenance of green buildings, homes, and neighborhoods.

To achieve LEED certification, a project earns points by adhering to prerequisites and credits that address carbon, energy, water, waste, transportation, materials, health and indoor environmental quality. Four levels of certification will be assigned to the projects based on the number of points they achieve: Certified (40-49 points), Silver (50-59 points), Gold (60-79 points) and Platinum (80+) points.

10.11.3 Envision Sustainable Rating System

Envision is a sustainability framework and rating system that enables a thorough examination of the sustainability and resiliency of all types of civil infrastructure, which is developed by the Institute for Sustainable Infrastructure (ISI) in collaboration with the Zofnass Program for Sustainable Infrastructure at Harvard University's Graduate School of Design.

The system is designed to help infrastructure stakeholders implement more sustainable, resilient, and equitable projects. Envision helps communities cut green house gas (GHG) emissions, create good-paying "green" jobs, address environmental justice, and meet climate-change targets.

10.11.4 Climate Change Impact and Mitigation

Climate change has the potential to result in increased storm events that can lead to flooding. Climate change concerns generally relate to the increased concentration of greenhouse gases in the atmosphere, which can result in a rise in the global mean surface temperature. Increased temperatures worldwide are creating changes in climate that is resulting in extreme weather events. Reasonable risk

reduction measures should be investigated at the detailed design stage to manage the additional challenges presented by climate change.

Stormwater management (Minimize the potential of environmental spill)

- Design new sewage pumping station with an elevated peak instantaneous factor
- Emergency power supply system for critical equipment
- Include the provision of site space for snow storage

Increased mean atmospheric temperature

- Equip the facilities with more robust insulation

10.11.5 LID Stormwater Management Measures

Low Impact Development (LID) is an innovative state-of-the-art approach to managing stormwater by controlling and treating precipitation where it falls, as a resource to be managed and protected rather than a waste.

The MECP document entitled “Low Impact Development Stormwater Management Guidance Manual (2022)” provides information on the benefits of managing rain where it falls and snow melts, including performance guidance on controlling natural systems, and the sustainability of communities.

A LID stormwater management system may include many different types and combinations of LID approach or practice to reduce the volume of stormwater runoff or filters the stormwater runoff on its way to the receiver:

- Rainwater harvesting (roof runoff, prefabricated storage unit, cistern)
- Soakaways, infiltration trenches and chambers (infiltration galleries, French drains, dry well)
- Permeable Pavements (pervious concrete, porous asphalt, permeable interlocking concrete pavers, plastic or concrete grid systems, rubberized granular surfaces)

11. PERMITS AND APPROVALS

During detailed design permits and approvals will need to be acquired from the following agencies:

- Ministry of Environment, Conservation and Parks: During detailed design, the extent and need of the removal will be determined. This would constitute a significant dewatering exercise and a Permit to Take Water (PTTW) or Environmental Activity and Sector Registry (EASR) registration may be required.
- Ministry of Environment, Conservation and Parks: MECP will issue Environmental Compliance Approvals (ECA) for sewage, air and noise, which will delineate the physical extent of the works being approved and the compliance requirements for effluent quality, odour, and noise as well as outlining monitoring and reporting requirements. ECA applications will require completion of the designs and design reports.
- Ministry of Natural Resources and Forestry (MNRF): MNRF will require application for a permit for any works that affect species at risk, fish or bird habitat, as well as work in or near rivers. Applications will require submission of an Environmental Management Plan that delineates all potential impacts as well as planned mitigations.

- Town of Innisfil: The Town will require application for building permits for any building works including the SPS.
- InnPower: A range of permits and inspection will be required from InnPower involving incoming power, protective systems, and installation compliance.
- Technical Standards and Safety Authority (TSSA): TSSA approval will be required for installation of the diesel generator and any fuel systems.

REFERENCES

InnServices Utilities Inc. (2018). *Innisfil Master Servicing Plan Update*. Innisfil, Ontario

AACE International (2020). *Cost Estimate Classification System – As Applied in Engineering, Procurement, and Construction for the Process Industries*