



Servicing Options Statement Proposed Lot Development Seguin Township, ON

Rosseau Springs Limited

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FINAL

Project Name:

Servicing Options Statement
Proposed Lot Development
Seguin Township, ON

Project Number:

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Prepared By:

Jamie Batten, Hydrogeologist
EXP Services Inc.
885 Regent Street
Sudbury, Ontario, P3E 5M4
t: +1.705.674.9681
f: +1.705.674.5583

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1. Introduction

EXP Services Inc. (EXP) was retained by Rosseau Springs Limited (“the Client”) to complete a water and septic servicing study for a proposed subdivision lot development at its property south of Highway 632 and adjacent to Maplehurst Road, Little Morgan Bay Road and Summit Drive, in Seguin Township, Ontario (“the Site”). The servicing study is required to address requirements from the Seguin Township Planning Board.

This report provides the results of a servicing options study of the Site.

2. Background

The Site is approximately 116 hectares in size and is generally forested. The proposed subdivision is to include forty-nine (49) inland lots, with sizes ranging from 0.41 to 0.62 hectares and a single, approximately 4.8-hectare, waterfront lot near the north end of the Site. The proposed lots are located near the north shoreline of Lake Rosseau. The Site plan for the proposed lots is shown in **Drawing 1**.

The Seguin Township Planning Department requires a servicing options study in order to identify the preferred options for water and sanitary services at the Site. This study will address the relevant sections of the provincial 2020 Provincial Policy Statement (PPS) under the Planning Act. Specifically, Section 1.6.6 of the PPS provides direction for the planning of sewage, water and stormwater services:

“...where municipal sewage services and municipal water services are not available, planned or feasible, planning authorities have the ability to consider the use of the servicing options set out through policies 1.6.6.3, 1.6.6.4, and 1.6.6.5 provided that the specified conditions are met.”

3. Scope of Work

The servicing options study addressed the following:

- Evaluation of proximity of full municipal or communal services to the Site, and potential for future connection to these services;
- Assessment of the environmental suitability of the proposed services for the Site;
- Evaluation of the relative potential and merit of each of the servicing options;
- Documentation of the process and rationale that led to the determination of the preferred servicing options; and,
- Documentation of consultations with any affected parties.

4. Site Description

The Site is approximately 116 hectares in size and is currently vacant and generally forested. Lake Rosseau is located west, south and east of the Site, with Highway 632 running north of the Site. Bedrock across the Site is generally shallow, with thin sand or clay overburden noted in some areas. No wells or septic systems are currently on the Site, while water supplies on adjacent properties consist of wells and surface water, where possible. Sewage treatment appears to be individual septic systems.

5. Municipal Servicing

The Site is in the boundaries of Seguin Township. After correspondence with Taylor Elgie Seguin Township (June 27, 2023) via email, the township does not have any municipal water or sewer services as it's entirely on private wells and septic systems. Also, some communal services may be present at nearby resorts, but private communal services require a high level of analysis (via email with Taylor Elgie). Based on a review of online documents, the closest municipal services or infrastructure for sewer and water appear to be in Port Carling (approximately 14 km southeast of the Site) and Bala (approximately 25 km southwest of the Site), both of which are within Muskoka Lakes Township. As such, there is no anticipation that municipal water and sewage services will be extended to the Site in the near future.

Based on the above, municipal water and wastewater servicing is not considered to be a viable option for the Site.

6. Communal Servicing Options

Communal water and wastewater services may be viable options for the Site. Communal services would entail having multiple units connected to a water supply system and/or a wastewater treatment unit. All units may be connected to the same communal systems for water and wastewater, or more than one communal system may service clusters of units within the Site. However, as noted in an email exchange with Taylor Elgie (Director of Planning for Seguin Township) on June 27, 2023, private communal septic and water services are rare in the township, and require a high level of analysis. According to the Seguin Township website, the North Bay - Mattawa Conservation Authority is responsible for the enforcement of the provisions of the Building Code Act and Part 8 (sewage systems) of the Ontario Building Code.

Although communal water and wastewater services are a possible option, extensive bedrock throughout the Site may lead to considerable costs system implementation. As such, communal servicing may not be ideal for the Site.

7. Individual Servicing Options

Water and wastewater services for the Site may be provided by individual systems for each of the units. For the purposes of this servicing options assessment, smaller systems that service five or less houses will be considered to have individual (as opposed to communal) water and wastewater systems.

Presently, the lots for the proposed subdivision are not serviced for water supply and wastewater treatment; however, three (3) wells have been drilled for testing purposes, which can be converted to residential wells by a licensed well contractor.

7.1 Individual Water Supply

The proposed subdivision is to be developed with 50 residential lots, with most lots situated away from the shoreline. As such, it is expected that the lots will use groundwater as a water supply. An assessment of groundwater as a potable water source is provided here.

A search of the Ministry of Environment, Conservation and Parks (MECP) Water Well Information System (WWIS) database showed a total of seven (7) existing water wells in areas adjacent to the Site, with an additional three (3) aforementioned wellbores on the Site, itself (**Drawing 2**). The wells were completed between 1972 and 2020, and depths ranged from 36.6 m to 122.0 m. All wells were completed in bedrock, with soil thickness ranging from nil to 5.5 m. Well logs generally described overburden as coarse, including sand, gravel and boulders, while new wells noted clay. In addition, all the wells from the WWIS database were listed as water supply wells and reported to have fresh water. Recommended pumping rates ranged from 2 to 20 gallons per minute (7.5 to 75 liters per minute).

The single waterfront lot in the northeast area of the Site can be supplied with surface water. Surface water supply is generally more vulnerable than groundwater to varying climatic conditions, such as drought and winter freezing. Surface water supply is also generally more vulnerable to immediate impacts from contaminants, such as septic field discharges, petroleum spills and stormwater drainage, while also generally being more vulnerable to microbial contaminants.

Overall, groundwater appears to be the most feasible water supply source across the Site, which is available throughout the year and is (generally) less susceptible to contamination. Due to the notable levels of microbes in water samples, treatment requirements for groundwater need to include filtration, primary disinfection and secondary disinfection, if it is to be used as a potable source.

7.2 Individual Wastewater Treatment

Ontario Regulation 350/06 under the Building Code Act stipulates the requirements for individual sewage systems. The regulation provides for a minimum clearance between on-site sewage systems and property lines of 3 m and 15 m from residential wells. Septic fields in the proposed subdivision can be designed to maintain this minimum clearance. Previous geotechnical investigations of soils showed predominantly high-permeability soils (sand and gravel), with some low-permeability soils and bedrock to surface across the Site.

Based on the above, individual water supply (both groundwater and limited surface water) and wastewater services are considered viable options for the proposed subdivision lots.

8. Summary and Recommendations

EXP was retained to complete a servicing options statement for a proposed 50 lot subdivision on the north shore of Lake Rosseau, south of Highway 632 and adjacent to Maplehurst Road and Summit Drive, in Seguin Township, Ontario. The purpose of the servicing options statement is to demonstrate that the potential for servicing the Site on full municipal services and communal sewage and water services has been investigated. Based on this investigation, the following conclusions are provided:

- The nearest municipal water and wastewater service is in the community of Port Carling, approximately 14 km (straight line) south of the Site, while the entirety of Seguin Township are on private wells and sewage systems. As such, municipal water servicing for the Site is not considered to be a viable option.
- A communal water supply may be obtained from a groundwater or (limited) surface water source and communal septic systems could be installed; however, Seguin Township requires an extensive analysis and are rare in the township (often used for resorts, hotels, etc.). In addition, extensive bedrock throughout the Site would pose both design and cost obstacles for communal water and wastewater systems. As such, communal water and wastewater servicing for the Site is not considered to be a viable option.
- Individual water supplies for each lot (from either groundwater or surface water, where applicable) are considered to be a viable option for the Site.
- Individual sewage systems for each lot are considered to be a viable option for the Site.

The lots are proposed to be developed as yearly residences. It is recommended that the Site be serviced by individual sewage systems and individual water supplies from underlying groundwater within the bedrock aquifer or, where possible, from surface water. In both cases, surface water and groundwater supplies will have to be treated prior to use as a potable source.

9. Qualifications of Assessor

Jamie Batten is a GIT and Intermediate Hydrogeologist with EXP, and has over five years of experience in consulting. He has conducted several environmental assessments, water supply and quality assessments, and wastewater assessments across Ontario. Delwar Ahmed, P. Geo., is a Professional Geoscientist with 15+ years of experience in the consulting industry working on hydrogeological assessments, that includes development and execution of aquifer testing, municipal water supply well study, water well survey, hydrogeological investigations for construction dewatering and related permitting, site plan approval application, environmental and groundwater impact assessment studies for private, municipal, provincial and federal infrastructure projects.

10. Limitations

The information presented in this report is based on a limited investigation designed to provide information to support an assessment of the current water and wastewater servicing options within the subject property. The conclusions and recommendations presented in this report reflect Site conditions existing at the time of the investigation. More specific information with respect to the conditions may become apparent during site development operations.

The environmental investigation was carried out to address the intent of applicable provincial and municipal Regulations, Guidelines, Policies, Standards, Protocols and Objectives administered by the Ministry of Environment, the 2020 Provincial Policy Statement under the Planning Act and the Manitoulin District Official Plan (October 2018). It should also be noted that current Regulations, Guidelines, Policies, Standards, Protocols and Objectives are subject to change, and such changes, when put into effect, could alter the conclusions and recommendations noted throughout this report. Achieving the study objectives stated in this report has required us to arrive at conclusions based upon the best information presently known to us. No investigative method can completely eliminate the possibility of obtaining partially imprecise or incomplete information; it can only reduce the possibility to an acceptable level. Professional judgment was exercised in gathering and analyzing the information obtained and in the formulation of the conclusions. Like all professional persons rendering advice we do not act as absolute insurers of the conclusions we reach, but we commit ourselves to care and competence in reaching those conclusions.

Our undertaking at EXP, therefore, is to perform our work within limits prescribed by our clients, with the usual thoroughness and competence of the engineering profession. It is intended that the outcome of this investigation assist in reducing the client's risk associated with environmental impairment. Our work should not be considered 'risk mitigation'. No other warranty or representation, either expressed or implied, is included or intended in this report.

This report was prepared for the exclusive use of the Client and may not be reproduced in whole or in part, without the prior written consent of EXP, or used or relied upon in whole or in part by other parties for any purposes whatsoever. Any use which a third party makes of this report, or any part thereof, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. EXP Services Inc. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

11. Closure

We thank you for the opportunity of working for you on this project. If you have any questions regarding the content of this report or related issues, please contact the undersigned directly.

Yours truly,

EXP Services Inc.

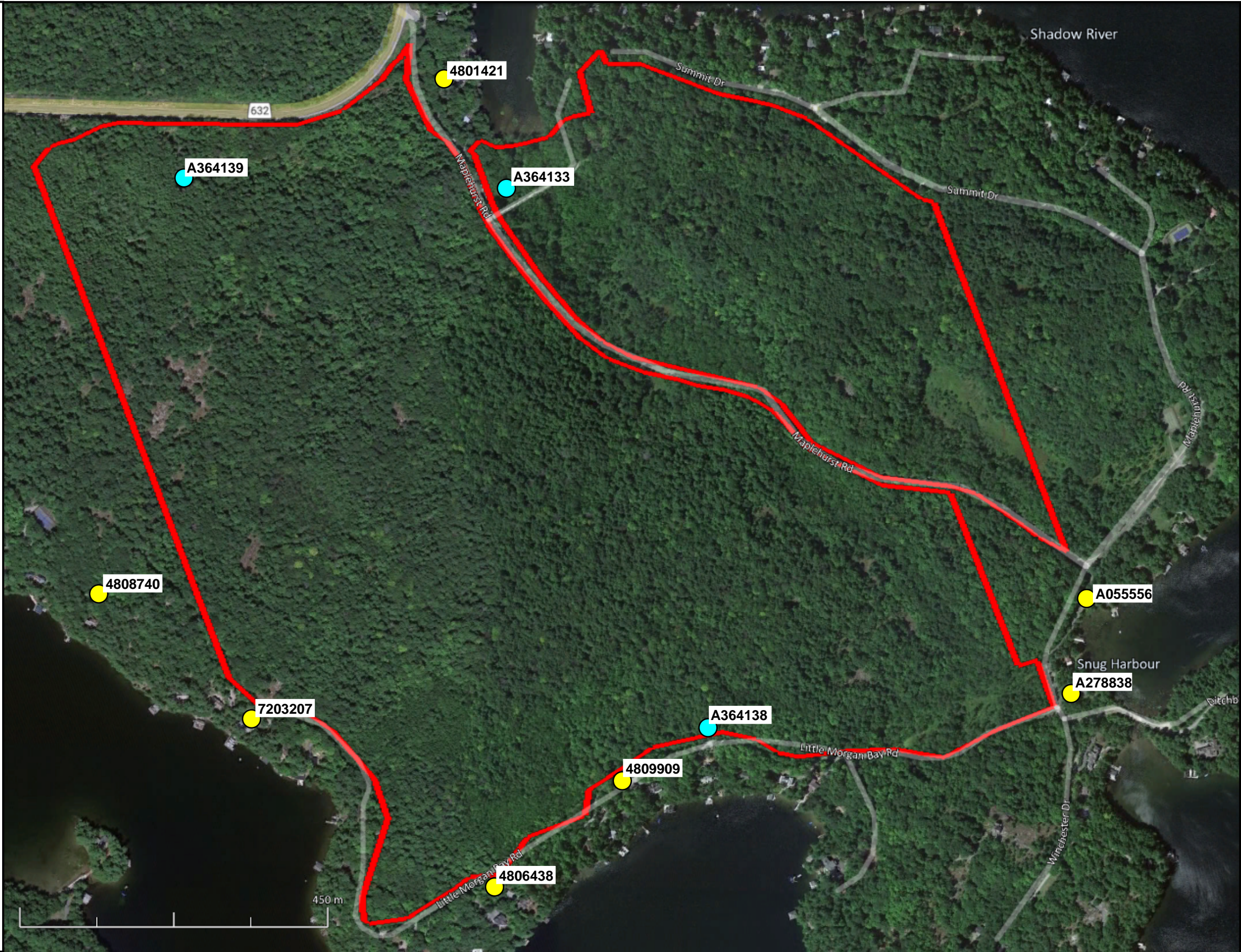


Jamie Batten, GIT.
Int. Hydrogeologist



FOR: Delwar Ahmed, P. Geo
Sr. Reviewer/Hydrogeologist

Drawings



 Approximate Site Boundary

 Nearest Existing Wells

 New Wells (pumped during pumping test)



exp Services Inc.
Sudbury Branch
t: +1.705.674.4401 | f: +1.705.674.5583
885 Regent Street
Sudbury, ON P3E 5M4
Canada



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| No. | DESCRIPTION | DATE |
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| TITLE: | HYDROGEOLOGICAL STUDY WELL LOCATIONS |
| | PROJECT NO. SUD-22025423-A0 |

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| Rosseau, Ontario | | |
| DATE June 2023 | SCALE: | DWG NO. 2 |