CLEARWATER SHORES
CIVIL ENGINEERING

February 5, 2026

Via: Email

Matt Brown
64 Howe Drive
Shallow Lake, ON N0H 2K0

Dear Mr. Brown:

Re: Main Street Development - Feasibility Assessment for Private Sewage System Servicing Amendment Letter
Project No.: 24075.000

Clearwater Shores Inc. (Clearwater) has been retained to prepare an amendment to the Site Feasibility Assessment for Private Sewage System Servicing (D-5-4 Study) for a proposed change to the severance of the property located at 440 Princess Street, Shallow Lake, Township of Georgian Bluffs. This letter is to be read in conjunction with the Feasibility Assessment for Private Sewage System Servicing – D-5-4 Study, Lot Severance of 440 Princess Street, Shallow Lake completed by GM BluePlan Engineering Limited (GMBP) signed and dated September 22, 2023.

The development on the property that has been severed is being revised from a fourplex to a fiveplex. Below is a summary of the recalculated nitrate release rate based on the proposed increase from the original fourplex to a new fiveplex.

Nitrogen attenuation calculations were updated in accordance with MECP Guideline D-5-4 using the same site parameters as the GMBP Study. Based on an Ontario Building Code design flow of 750 L/day per one-bedroom unit, D-5-4 guidelines of 1000 L/day/lot for single detached residences, nitrate loading of 40mg/L per resident dwelling, and 50% nitrate removal for the proposed tertiary sewage system as originally proposed, the total site nitrate output (retained dwelling plus the proposed new fiveplex) is 115 g/day. The total water input for the site is 11,993 L/day, which results in an attenuated nitrate-nitrogen concentration of 9.59 mg/L; this is still below the Ontario Drinking Water Standard criterion of 10 mg/L. Updated calculations are provided in the attached spreadsheet.

As indicated above, the revised fiveplex unit count and attenuated nitrate nitrogen concentration continue to satisfy the intent of the D-5-4 Predictive Assessment and confirm the feasibility of private sewage servicing for the proposed severance. All other conclusions and recommendations of the Study remain unchanged.

Should you have any further questions, please don’t hesitate to contact the undersigned.

CLEARWATER SHORES
CIVIL ENGINEERING

CALCULATION SHEET

Prepared by: Jimmy St. Marie
Checked by: Keith Welsh
Project Number: 24075.000
Date: 04-Feb-26

Project: Main Street Development - 440 Princess St., Shallow Lake
Attenuated Nitrogen Concentration Calculation
MECP Guideline D-5-4

Item	Item Description	Value	Source
1	Average Annual Precipitation(mm/yr)	1,294.00	Tara precipitation Via Environment Canada
2	Average Annual Evapotranspiration(mm/yr)	550.00	MNR(1984)
3	Impervious Area Factor	0.40	Estimated based on soil type via MTO Drainage Management Manual, Chat 1.07
4	Lot Area(m^2)	5,922.00	Based off of Conceptual Site Plan
5	Hydrologic Input(L/day)	7,242.69	(Item 1 - Item 2) * Item 4 (with unit conversions)
6	Number of Single Detached Residences	1.00	-
7	Number of Units in Complex	5.00	-
8	Sewage Effluent for Single Detached Residences(L/Lot/day)	1,000.00	Via Ministry of Environment D-5-4
9	Sewage Effluent for Complex units(L/Unit/Day)	750.00	Via Ontario Building Code
10	Daily Sewage Effluent(L/day)	4,750.00	(Item 6 * Item 8)+(Item 7*Item 9)
11	Total Water Input(L/day)	11,992.69	Item 10 + Item 5
12	Nitrate-Nitrogen Concentration of Effluent(mg/L)	40.00	Empirical Value Via D-5-4
13	Nitrate Output per Detached Residence(g/day)	40.00	Item 8 * Item 12 (with unit conversions)
14	Nitrate Output per Complex Unit(g/day)	30.00	Item 12 * Item 9
15	Nitrate Reduction Factor	0.50	Percent of Nitrogen Removed by Sewage System (units converted)
16	Total Nitrate output(g/day)	115.00	(Item 6 * Item 13)+((Item 7 * Item 14) * (1 - Item 15))
17	Annual Nitrogen Loading(g/yr)	41,975.00	Item 16 * 365
18	Attenuated Nitrate-nitrogen(mg/L)	9.59	Item 16 / Item 11 (units converted

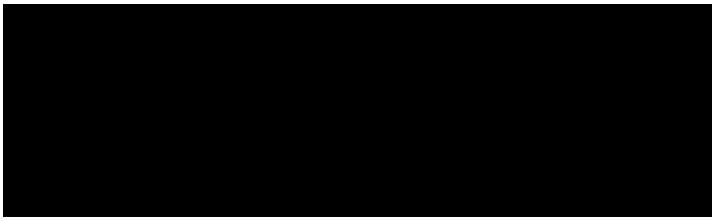
Yours truly,

Clearwater Shores Inc.

Report Prepared By:

Jimmy St. Marie
Junior Civil Designer
Clearwater Shores Inc.

Report Reviewed By:



Keith Welsh, C.Tech.
Senior Technologist, President
Clearwater Shores Inc.