

AMENDED ENVIRONMENTAL COMPLIANCE APPROVAL

NUMBER 1070-CHJKWX
 Issue Date: September 20, 2022

The Corporation of the United Counties of Leeds and Grenville
 25 Central Ave W, No. 100
 Brockville, Ontario
 K6V 4N6

Site Location: Maple View Lodge
 744 County Road 42 E
 Township of Athens, United Counties of Leeds and Grenville
 K0E 1B0

You have applied under section 20.2 of Part II.1 of the Environmental Protection Act, R.S.O. 1990, c. E. 19 (Environmental Protection Act) for approval of:

PROPOSED WORKS

establishment, usage and operation of new municipal Works, for the treatment of sanitary sewage from the proposed new Long Term Care building (with a total capacity of 192 beds) and disposal of effluent to subsurface via a new Sewage Treatment Plant (Newterra MBR Treatment System) and Final Effluent disposal facilities as follows:

Classification of Sewage Treatment Plant: Secondary

Design Capacity of Sewage Treatment Plant:

Design Capacity with All Treatment Trains in Operation	Upon Completion of Construction of All Proposed Works
Maximum Daily Flow	86.4 m ³ /d

Influent:

Receiving Location	Types
In Collection System	Sanitary Sewage
At Sewage Treatment Plant	None

Sewage Treatment Plant - Newterra Membrane Bioreactor (MBR) Treatment System

Primary Treatment System

- one (1) in-ground fibre reinforced plastic (FRP) circular Tank #1 consisting of two (2) chambers, as follows:
 - one (1) vented primary clarifier tank having a working capacity of approximately 43.2 cubic metres, complete with an access riser with hatch and high level alarm instrumentation, receiving raw sewage by gravity from the proposed Long Term Care building and discharging by gravity to an equalization tank as described below; and
 - one (1) vented equalization tank having a working capacity of approximately 28.8 cubic metres, equipped with two (2) submersible sewage pumps (one duty, one standby) each rated at 95 litres per minute and coarse bubble air diffusers receiving air supply from two (2) air mixing blowers (one duty, one standby) each rated at 28.3 normal cubic metres per hour, and complete with an access riser with hatch and high/low level alarm instrumentation, discharging to a pre-anoxic tank within Tank #2 as described below;

Influent Flow Sampling Point

- sampling of Influent at the equalization tank;

Secondary Treatment System

- one (1) in-ground fibre reinforced plastic (FRP) circular Tank #2 consisting of four (4) chambers, as follows:
 - one (1) vented pre-anoxic tank for denitrification, having a working capacity of approximately 11.9 cubic metres, equipped with one (1) submersible sewage pump (one duty) and four (4) eductor mixing assemblies, and complete with an access riser with hatch and high level alarm instrumentation, receiving effluent from the equalization tank and a recycle stream from an aerobic tank described below, discharging effluent by gravity to the aerobic tank;
 - one (1) vented aerobic tank having a working capacity of approximately 26.6 cubic metres, equipped with fine bubble air diffuser grid receiving air supply from two (2) air mixing blowers (one duty, one standby) each rated at 154.6 normal cubic metres per hour, and one (1)

submersible recirculation pump (one duty) rated at 240 litres per minute discharging the mixed liquor back to the pre-anoxic tank described above, and complete with an access riser with hatch and instrumentation (high level alarm, pH transmitter and DO transmitter), discharging effluent by gravity to a post-anoxic tank as described below;

- one (1) vented post-anoxic tank for denitrification, having a working capacity of approximately 14.2 cubic metres, equipped with one (1) submersible sewage pump (one duty) and four (4) eductor mixing assemblies, and two (2) submersible sewage pumps (two duty) each rated at 150 litres per minute, and complete with an access riser with hatch and high/low level alarm instrumentation, discharging effluent to two (2) membrane tanks as described below; and
- one (1) vented activated sludge holding tank having a working capacity of approximately 15.4 cubic metres, equipped with coarse bubble air diffusers receiving air supply from two (2) air mixing blowers (one duty, one standby) each rated at 28.3 normal cubic metres per hour, and complete with an access riser with hatch and high/low level alarm instrumentation, discharging supernatant to the primary clarifier tank via a submersible chain supported decant pump (one duty) rated at 75 litres per minute, with resulting sludge to be hauled off-site for disposal at an appropriately-approved receiving facility;
- two (2) membrane tanks, each having a working capacity of approximately 2.1 cubic metres and equipped with four (4) submerged ultrafiltration membrane modules per tank (each module having a membrane surface area of 27.9 square metres, for a total of 111.6 square metres per tank), two (2) air scouring blowers (one duty for each tank) each rated at 70 normal cubic metres per hour, and two (2) permeate pumps (one duty for each tank) each rated at 33.3 litres per minute, complete with high level alarm instrumentation, air bleed/prime pumps (one duty for each tank) and a backwash system consisting of one (1) duty backwash pump, one (1) duty backwash tank and two (2) cleaning agent dosing pumps, discharging return activated sludge to the aerobic tank and Final Effluent to the balancing tanks within Final Effluent Disposal Facilities as described below via two (2) 50 millimetre diameter forcemains;

Supplementary Treatment System

- one (1) carbon source dosing system consisting of one (1) carbon material storage tank with spill containment and one (1) metering pump (one duty) rated at 0.47 litres per hour, dosing external carbon material into the post anoxic tank;
- one (1) provisional caustic chemical dosing system consisting of one (1) caustic chemical storage tank with spill containment and one (1) metering pump (one duty), dosing caustic chemical into the aerobic tank, if required;

Final Effluent Flow Measurement and Sampling Point

- one (1) flow measurement device per permeate effluent system for a total of two (2). Total Final Effluent flow is calculated as the sum of flow measurement by each flow meter;

- sampling of Final Effluent at final combined discharge from the Sewage Treatment Plant upstream of the balancing tanks described below;

Final Effluent Disposal Facilities

- two (2) single-compartment concrete balancing tanks (BT#1 and BT#2) placed in series and connected at the bottom, each having a working capacity of 45,000 litres (90,000 litres in total), with BT#1 equipped with four (4) disposal effluent pumps operating alternating and timer controlled, each rated at 310.3 litres per minute against a TDH of 21.3 metres, discharging to a shallow buried trench as described below via four (4) 50 millimetre diameter forcemains and four (4) rotating distribution valves;
- one (1) fully raised shallow buried trench disposal system, consisting of 1,766.4 metres of 38 millimetre diameter pressurized distribution piping constructed in eight (8) zones, with each zone having eight (8) runs of 27.6 metre long distribution piping spaced 2.0 metres apart, complete with 3 millimetre diameter orifices drilled at 12 o'clock throughout the length of the run and spaced 1.2 metres apart, as well as 3 millimetre diameter drain orifices drilled at 6 o'clock throughout the length of the run spaced at 3.0 metres apart and covered with Sim/Tech orifice shields (or Equivalent Equipment); the distribution piping network in each zone is to be installed on a 100 millimetre thick layer of washed septic stone meeting the specifications of OBC Table 8.7.3.3 and covered with Quick 4 Plus Equalizer 24 low profile chambers (or Equivalent Equipment) with geotextile placed over the chambers and the stone, equipped with a 1,200 millimetre thick layer of imported sand with a percolation rate (T) of 6 to 8 minutes per centimetre with less than 5% passing the #200 sieve under the stone layer, a 500 millimetre thick sand mantle and loading area extending 49 metres beyond the distribution area in the southwest direction, and a 300 millimetre thick layer of septic sand used to backfill the leaching bed, which is overlain by 150 millimetre thick topsoil to the design finish grade elevation;

including all other mechanical system, electrical system, instrumentation and control system, standby power system, piping, pumps, valves and appurtenances essential for the proper, safe and reliable operation of the Works in accordance with this Approval, in the context of process performance and general principles of wastewater engineering only;

EXISTING WORKS

Q = 20,155 litres per day

Existing Works designed at a Maximum Daily Flow of 20,155 litres per day for the treatment and subsurface disposal of domestic sewage from the existing Maple View Lodge long term care facility, consisting of the following:

Grease Trap

- one (1) grease trap rated at a minimum of 42 litres per minute installed on the outlet from the kitchen facilities in the existing Maple View Lodge long term care facility upstream of both septic tanks as described below;

Septic Tanks

- one (1) two-compartment septic tank having a total capacity of approximately 45,400 litres, installed upstream of a septic tank as described below to collect sewage from the existing Maple View Lodge long term care facility and discharging effluent by gravity to the downstream septic tank;
- one (1) two-compartment septic tank having a total capacity of approximately 45,400 litres, equipped with an effluent filter capable of screening out particles larger than 3.2 millimetres, discharging effluent to a pumping chamber as described below;

Pumping Chamber

- one (1) one-compartment pumping chamber having a minimum total capacity of 6,000 litres and dosing volume of 300 litres, equipped with two (2) effluent submersible pumps (one duty, one standby), each pump rated at approximately 208.2 litres per minute, discharging the dosing volume to a Waterloo Biofilter as described below;

Waterloo Biofilter

- one (1) above grade Waterloo Biofilter Unit (40 foot container), rated to treat capacities from 30 to 40 cubic metres per day, installed downstream of the septic tank, discharging approximately 50% of effluent back to the septic tank with a balance of treated effluent dosed to a leaching bed as described below;

Dosing Pump Chamber

- one (1) one-compartment vented Dosing Pump Chamber, having a total capacity of approximately 4,500 litres and dosing volume of 1,020 litres, equipped with two (2) submersible effluent pumps (one duty and one standby), each rated at approximately 68 litres per minute at a TDH of 2.6 metres, discharging dosing volume to one (1) leaching bed at a time as described below;

Leaching Beds

- two (2) an above-grade leaching beds (No.1 & No.2) installed on imported soil, having a percolation time of approximately 6-10 minutes per centimetre, each having a sand area of 201.6 square metres and stone area of approximately 201.5 square metres consisting of twelve (12) parallel runs of 100 millimetre diameter distribution pipes, each pipe 14.5 metres long for a total length of distribution piping of approximately 174 metres (348 metres for both leaching beds) and having a sand mantle, extending a minimum of 15 metres beyond the outermost distribution pipes in any direction which the effluent will move laterally in the soil away from the leaching beds;

including all other controls, electrical equipment, instrumentation, piping, pumps, valves and appurtenances essential for the proper operation of the aforementioned Works;

all in accordance with the submitted supporting documents listed in **Schedule A**.

For the purpose of this environmental compliance approval, the following definitions apply:

1. "Annual Average Effluent Concentration" is the mean of all Single Sample Results of the concentration of a contaminant in the Final Effluent sampled or measured during a calendar year;
2. "Approval" means this environmental compliance approval and any schedules attached to it, and the application;
3. "BOD5" (also known as TBOD5) means five day biochemical oxygen demand measured in an unfiltered sample and includes carbonaceous and nitrogenous oxygen demands;
4. "CBOD5" means five day carbonaceous (nitrification inhibited) biochemical oxygen demand measured in an unfiltered sample;
5. "Director" means a person appointed by the Minister pursuant to section 5 of the EPA for the purposes of Part II.1 of the EPA;
6. "District Manager" means the District Manager of the appropriate local district office of the Ministry where the Works is geographically located;
7. "EPA" means the *Environmental Protection Act*, R.S.O. 1990, c.E.19, as amended;
8. "Equivalent Equipment" means alternate piece(s) of equipment that meets the design requirements and performance specifications of the piece(s) of equipment to be substituted;
9. "Existing Works" means those portions of the Works included in the Approval that have been constructed previously;
10. "Final Effluent" means effluent that is discharged to the environment through the approved effluent disposal facilities, that is required to meet the compliance limits stipulated in the Approval for the Works at the Final Effluent sampling point(s);
11. "Grab Sample" or "Grab" means an individual sample of at least 1000 millilitres collected in an appropriate container at a randomly selected time over a period of time not exceeding 15 minutes;
12. "Influent" means flows to the Sewage Treatment Plant or the Existing Works from the collection system;
13. "Limited Operational Flexibility" (LOF) means the conditions that the Owner shall follow in order to undertake any modification that is pre-authorized as part of this Approval;
14. "Maximum Daily Flow" (also referred to as Peak Daily Flow Rate or Maximum Day Flow) means the largest volume of flow to be received during a one-day period for which the sewage treatment process unit

or equipment is designed to handle;

15. "Ministry" means the ministry of the government of Ontario responsible for the EPA and OWRA and includes all officials, employees or other persons acting on its behalf;
16. "Normal Operating Condition" means the condition when all unit process(es), excluding Preliminary Treatment System, in a treatment train is operating within its design capacity;
17. "Operating Agency" means the Owner or the entity that is authorized by the Owner for the management, operation, maintenance, or alteration of the Works in accordance with this Approval;
18. "Owner" means The Corporation of the United Counties of Leeds and Grenville and its successors and assignees;
19. "OWRA" means the *Ontario Water Resources Act* , R.S.O. 1990, c. O.40, as amended;
20. "Primary Treatment System" means all facilities in the Sewage Treatment Plant associated with the primary sedimentation unit process and includes chemically enhanced primary treatment;
21. "Professional Engineer" means a person entitled to practice as a Professional Engineer in the Province of Ontario under a license issued under the Professional Engineers Act;
22. "Professional Geoscientist" means the same as defined in O.Reg. 98/12.
23. "Proposed Works" means those portions of the Works included in the Approval that are under construction or to be constructed;
24. "Secondary Treatment System" means all facilities in the Sewage Treatment Plant associated with biological treatment, secondary sedimentation and phosphorus removal unit processes;
25. "Sewage Treatment Plant" means all the facilities related to sewage treatment within the sewage treatment plant site excluding the Final Effluent disposal facilities;
26. "Single Sample Result" means the test result of a parameter in the effluent discharged on any day, as measured by a probe, analyzer or in a composite or grab sample, as required;
27. "Works" means the approved sewage works, and includes Proposed Works, Existing Works and modifications made under Limited Operational Flexibility.

You are hereby notified that this environmental compliance approval is issued to you subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

1. GENERAL PROVISIONS

1. The Owner shall ensure that any person authorized to carry out work on or operate any aspect of the Works is notified of this Approval and the terms and conditions herein and shall take all reasonable measures to ensure any such person complies with the same.
2. The Owner shall design, construct, operate and maintain the Works in accordance with the conditions of this Approval.
3. Where there is a conflict between a provision of any document referred to in this Approval and the conditions of this Approval, the conditions in this Approval shall take precedence.

2. CHANGE OF OWNER AND OPERATING AGENCY

1. The Owner shall, within **thirty (30) days** of issuance of this Approval, prepare/update and submit to the District Manager the Municipal and Local Services Board Wastewater System Profile Information Form, as amended (**Schedule E**) under any of the following situations:
 - a. the form has not been previously submitted for the Works;
 - b. this Approval is issued for extension, re-rating or process treatment upgrade of the Works;
 - c. when a notification is provided to the District Manager in compliance with requirements of change of Owner or Operating Agency under this condition.
2. The Owner shall notify the District Manager and the Director, in writing, of any of the following changes within **thirty (30) days** of the change occurring:
 - a. change of address of Owner;
 - b. change of Owner, including address of new owner;
 - c. change of partners where the Owner is or at any time becomes a partnership, and a copy of the most recent declaration filed under the *Business Names Act, R.S.O. 1990, c. B.17* , as amended, shall be included in the notification;
 - d. change of name of the corporation and a copy of the most current information filed under the *Corporations Information Act, R.S.O. 1990, c. C.39* shall be included in the notification.

3. The Owner shall notify the District Manager, in writing, of any of the following changes within **thirty (30) days** of the change occurring:
 - a. change of address of the Operating Agency;
 - b. change of the Operating Agency, including address of the new Operating Agency.
4. In the event of any change in ownership of the Works, the Owner shall notify the succeeding owner in writing, of the existence of this Approval, and forward a copy of the notice to the District Manager.
5. The Owner shall ensure that all communications made pursuant to this condition refer to the number of this Approval.

3. CONSTRUCTION OF PROPOSED WORKS

1. All Proposed Works in this Approval shall be constructed and installed and must commence operation within **five (5) years** of issuance of this Approval, after which time the Approval ceases to apply in respect of any portions of the Works not in operation. In the event that the construction, installation and/or operation of any portion of the Proposed Works is anticipated to be delayed beyond the time period stipulated, the Owner shall submit to the Director an application to amend the Approval to extend this time period, at least six (6) months prior to the end of the period. The amendment application shall include the reason(s) for the delay and whether there is any design change(s).
2. Within **thirty (30) days** of commencement of construction, the Owner shall prepare and submit to the District Manager a schedule for the completion of construction and commissioning operation of the Proposed Works. The Owner shall notify the District Manager within **thirty (30) days** of the commissioning operation of any Proposed Works. Upon completion of construction of the Proposed Works, the Owner shall prepare and submit a statement to the District Manager, certified by a Professional Engineer, that the Proposed Works is constructed in accordance with this Approval.
3. Within **one (1) year** of completion of construction of the Proposed Works, a set of record drawings of the Works shall be prepared or updated. These drawings shall be kept up to date through revisions undertaken from time to time and a copy shall be readily accessible for reference at the Works.

4. DESIGN OBJECTIVES

1. The Owner shall design and undertake everything practicable to operate the Works in accordance with the Final Effluent parameters design objectives listed in the tables included in **Schedule B**.

5. OPERATION AND MAINTENANCE

1. The Owner shall ensure that, at all times, the Works and the related equipment and appurtenances used to achieve compliance with this Approval are properly operated and maintained. Proper operation and maintenance shall include effective performance, adequate funding, adequate staffing and training, including training in all procedures and other requirements of this Approval and the OWRA and

regulations, adequate laboratory facilities, process controls and alarms and the use of process chemicals and other substances used in the Works.

2. The Owner shall prepare/update the operations manual for the Works within **six (6) months** of completion of construction of the Proposed Works, that includes, but not necessarily limited to, the following information:
 - a. operating procedures for the Works under Normal Operating Conditions;
 - b. inspection programs, including frequency of inspection, for the Works and the methods or tests employed to detect when maintenance is necessary;
 - c. repair and maintenance programs, including the frequency of repair and maintenance for the Works;
 - d. procedures for the inspection and calibration of monitoring equipment;
 - e. operating procedures for the Works to handle situations outside Normal Operating Conditions and emergency situations such as a structural, mechanical or electrical failure, or an unforeseen flow condition;
 - f. a spill prevention control and countermeasures plan, consisting of contingency plans and procedures for dealing with equipment breakdowns, potential spills and any other abnormal situations, including notification of the Spills Action Centre (SAC) and District Manager;
 - g. procedures for receiving, responding and recording public complaints, including recording any followup actions taken.
3. The Owner shall maintain the operations manual up-to-date and make the manual readily accessible for reference at the Works.
4. The Owner shall ensure that the Operating Agency fulfills the requirements under O. Reg. 129/04, as amended for the Works, including the classification of facilities, licensing of operators and operating standards.
5. The Owner shall maintain a logbook to record the results of all inspections, repair and maintenance undertaken, calibrations, monitoring and spill response or contingency measures undertaken and shall make the logbook available for inspection by Ministry staff. The logbook shall include the following:
 - a. the name of the operator making the entry; and
 - b. the date and results of each inspection, repair, maintenance, calibration, monitoring, spill response and contingency measure.
6. The Owner shall, upon the construction, prepare and make available for inspection by Ministry staff, a maintenance agreement with the manufacturer for the treatment process/technology. The maintenance

agreement must be retained at the site and kept current for the operational life of the Works.

7. The Owner shall ensure that grass-cutting is maintained regularly over the subsurface disposal bed(s), and that adequate steps are taken to ensure that the area of the underground works is protected from vehicle traffic.
8. The Owner shall visually inspect the general area where Works are located for break-out once every month during the operating season.
9. In the event a break-out is observed from a subsurface disposal bed, the Owner shall do the following:
 - a. sewage discharge to that subsurface disposal system shall be discontinued;
 - b. the incident shall be **immediately** reported verbally to the Spills Action Centre (SAC) at (416) 325-3000 or 1-800-268-6060;
 - c. submit a written report to the District Manager within **one (1) week** of the break-out;
 - d. access to the break-out area shall be restricted until remedial actions are complete;
 - e. during the time remedial actions are taking place the sewage generated at the site shall not be allowed to discharge to the environment; and
 - f. sewage generated at the site shall be safely collected and disposed of through a licensed waste hauler to an approved sewage disposal site.
10. The Owner shall ensure that the septic tanks be inspected at least twice per year by a qualified person, and the sewage sludge accumulated in the septic tanks be periodically withdrawn at the frequency required to maintain efficiency of the treatment system. The effluent filters in septic tanks shall be cleaned out at least once every six (6) months, when the tank is pumped out, or as determined by the Operating Agency, whichever comes first.
11. The Owner shall ensure the grease trap be cleaned out at least once per year, or more frequently as determined by the Operating Agency, for removal of fats, oil and grease from the kitchen wastewater.
12. The Owner shall have a valid written agreement with a hauler who is in possession of a Waste Management Systems Approval, for the treatment and disposal of the sludge generated from the Works, at all times during operation of the Works.
13. The Owner shall ensure that flow of treated effluent discharged into the proposed shallow buried trench disposal system does not exceed **86,400 litres per day**.
14. The Owner shall ensure that flow of treated effluent discharged into the existing leaching beds (No. 1 & No. 2) does not exceed **20,155 litres per day**.

15. The Owner shall retain for a minimum of **five (5) years** from the date of their creation, all records and information related to or resulting from the operation and maintenance activities required by this Approval.

6. MONITORING AND RECORDING

1. The Owner shall, upon commencement of operation of the Works, carry out a scheduled monitoring program of collecting samples at the required sampling points, at the frequency specified or higher, by means of the specified sample type and analyzed for each parameter listed in the tables under the monitoring program included in **Schedule C** and record all results, as follows:
 - a. all samples and measurements are to be taken at a time and in a location characteristic of the quality and quantity of the sewage stream over the time period being monitored.
 - b. definitions and preparation requirements for each sample type are included in document referenced in Paragraph 2.b.
 - c. definitions for frequency:
 - i. Daily means once every day;
 - ii. Biweekly means once every two weeks;
 - iii. Monthly means once every month;
 - iv. Quarterly means once every three months;
 - v. Annually means once every year.
 - d. a schedule of the day of the week/month for the scheduled sampling shall be created. The sampling schedule shall be revised and updated every year through rotation of the day of the week/month for the scheduled sampling program, except when the actual scheduled monitoring frequency is three (3) or more times per week.
 - e. The measurement frequencies specified in **Schedule C** in respect to any parameter may, after **two (2) years** of monitoring in accordance with this Condition, be modified by the Director in writing.
2. The methods and protocols for sampling, analysis and recording shall conform, in order of precedence, to the methods and protocols specified in the following documents and all analysis shall be conducted by a laboratory accredited to the ISO/IEC:17025 standard or as directed by the District Manager:
 - a. the Ministry's Procedure F-10-1, "Procedures for Sampling and Analysis Requirements for Municipal and Private Sewage Treatment Works (Liquid Waste Streams Only), as amended;
 - b. the Ministry's publication "Protocol for the Sampling and Analysis of Industrial/Municipal

Wastewater Version 2.0" (January 2016), PIBS 2724e02, as amended;

- c. the publication "Standard Methods for the Examination of Water and Wastewater", as amended; and
 - d. for any parameters not mentioned in the documents referenced in Paragraphs 2.a, 2.b and 2.c, the written approval of the District Manager shall be obtained prior to sampling.
3. The Owner shall monitor and record the flow rate and daily quantity using flow measuring devices or other methods of measurement as approved below calibrated to an accuracy within plus or minus 15 per cent (+/- 15%) of the actual flowrate of the Final Effluent discharged from the Sewage Treatment Plant by continuous flow measuring devices and instrumentations.
 4. The Owner shall measure and record the daily water consumption in order to estimate the daily volume of effluent being discharged to the existing subsurface disposal system under Existing Works.
 5. The Owner shall retain for a minimum of **five (5) years** from the date of their creation, all records and information related to or resulting from the monitoring activities required by this Approval.

7. LIMITED OPERATIONAL FLEXIBILITY

1. The Owner may make pre-authorized modifications to the Sewage Treatment Plant in Works in accordance with the document "Limited Operational Flexibility - Protocol for Pre-Authorized Modifications" (**Schedule D**), as amended, subject to the following:
 - a. the modifications will not involve the addition of any new treatment process or the removal of an existing treatment process, including chemical systems, from the liquid or solids treatment trains as originally designed and approved.
 - b. the scope and technical aspects of the modifications are in line with those delineated in **Schedule D** and conform with the Ministry's publication "Design Guidelines for Sewage Works 2008", as amended, Ministry's regulations, policies, guidelines, and industry engineering standards;
 - c. the modifications shall not negatively impact on the performance of any process or equipment in the Works or result in deterioration in the Final Effluent quality;
 - d. where the pre-authorized modification requires notification, a "Notice of Modifications to Sewage Works" (**Schedule D**), as amended shall be completed with declarations from a Professional Engineer and the Owner and retained on-site prior to the scheduled implementation date. All supporting information including technical memorandum, engineering plans and specifications, as applicable and appropriate to support the declarations that the modifications conform with LOF shall remain on-site for future inspection.
2. The following modifications are not pre-authorized under Limited Operational Flexibility:
 - a. Modifications that involve addition or extension of process structures, tankages or channels;

- b. Modifications that involve relocation of the Final Effluent outfall or any other discharge location or that may require reassessment of the impact to the receiver or environment;
- iii. Modifications that involve addition of or change in technology of a treatment process or that may involve reassessment of the treatment train process design;
- d. Modifications that require changes to be made to the emergency response, spill prevention and contingency plan; or
- e. Modifications that are required pursuant to an order issued by the Ministry.

8. REPORTING

1. In the event that Reasonable Use Guideline B-7 is unlikely to be met, the Owner shall carry out the following:
 - a. Notify the District Manager orally **as soon as possible** and in writing within **seven (7) days** from the occurrence.
 - b. Develop an action plan to bring the site into compliance with Guideline B-7 and submit this plan to the District Manager for approval.
2. **One week** prior to the start up of the operation of the Works, the Owner shall notify the District Manager (in writing) of the pending start up date.
3. In addition to the obligations under Part X of the EPA and O. Reg. 675/98 (Classification and Exemption of Spills and Reporting of Discharges) made under the EPA, the Owner shall, within fifteen (15) days of the occurrence of any reportable spill as provided in Part X of the EPA and O. Reg. 675/98, submit a full written report of the occurrence to the District Manager describing the cause and discovery of the spill, clean-up and recovery measures taken, preventative measures to be taken and a schedule of implementation.
4. The Owner shall, upon request, make all manuals, plans, records, data, procedures and supporting documentation available to Ministry staff.
5. The Owner shall prepare performance reports on a calendar year basis and submit to the District Manager by **March 31** of the calendar year following the period being reported upon. The reports shall contain, but shall not be limited to, the following information pertaining to the reporting period:
 - a. a summary and interpretation of all Influent, and a review of the historical trend of the sewage characteristics and flow rates;
 - b. a summary and interpretation of all flow data and results achieved in not exceeding the Maximum Daily Flow discharged into each of the subsurface disposal systems;

- c. a summary and interpretation of all Final Effluent monitoring data, including concentrations, flow rates and a comparison to the design objectives in this Approval, including an overview of the success and adequacy of the Works;
- d. a summary of any deviation from the monitoring schedule and reasons for the current reporting year and a schedule for the next reporting year;
- e. a summary and interpretation of groundwater monitoring data by a Professional Geoscientist or Professional Engineer, including shallow groundwater flow direction, historical analytical results of each monitoring well, calculation of Reasonable Use Guideline B-7 limits for the major contaminants, and assessment of compliance with Guideline B-7;
- f. a summary of all operating issues encountered and corrective actions taken;
- g. a summary of all normal and emergency repairs and maintenance activities carried out on any major structure, equipment, apparatus or mechanism forming part of the Works;
- h. a summary of any effluent quality assurance or control measures undertaken;
- i. a summary of the calibration and maintenance carried out on all Influent and Final Effluent monitoring equipment to ensure that the accuracy is within the tolerance of that equipment as required in this Approval or recommended by the manufacturer;
- j. a summary of efforts made to achieve the design objectives in this Approval, including an assessment of the issues and recommendations for pro-active actions when any of the design objectives is not achieved more than 50% of the time in a year or there is an increasing trend in deterioration of Final Effluent quality;
- k. a tabulation of the volume of sludge generated, an outline of anticipated volumes to be generated in the next reporting period and a summary of the locations to where the sludge was disposed;
- l. a summary of any complaints received and any steps taken to address the complaints;
- m. a summary of all situations outside Normal Operating Conditions and spills within the meaning of Part X of EPA and abnormal discharge events;
- n. a summary of all Notice of Modifications to Sewage Works completed under Paragraph 1.d. of Condition 7, including a report on status of implementation of all modification.
- o. any changes or updates to the schedule for the completion of construction and commissioning operation of major process(es) / equipment groups in the Proposed Works.
- p. any other information the District Manager requires from time to time.

The reasons for the imposition of these terms and conditions are as follows:

1. Condition 1 regarding general provisions is imposed to ensure that the Works are constructed and operated in the manner in which they were described and upon which approval was granted.
2. Condition 2 regarding change of Owner and Operating Authority is included to ensure that the Ministry records are kept accurate and current with respect to ownership and Operating Authority of the Works and to ensure that subsequent owners of the Works are made aware of the Approval and continue to operate the Works in compliance with it.
3. Condition 3 regarding construction of Proposed Works is included to ensure that the Works are constructed in a timely manner so that standards applicable at the time of Approval of the Works are still applicable at the time of construction to ensure the ongoing protection of the environment, and that prior to the commencement of construction of the portion of the Works that are approved in principle only, the Director will have the opportunity to review detailed design drawings, specifications and an engineer's report containing detailed design calculations for that portion of the Works, to determine capability to comply with the Ministry's requirements stipulated in the terms and conditions of the Approval, and also ensure that the Works are constructed in accordance with the Approval and that record drawings of the Works "as constructed" are updated and maintained for future references.
4. Condition 4 regarding design objectives is imposed to establish non-enforceable design objectives to be used as a mechanism to trigger corrective action proactively and voluntarily before environmental impairment occurs.
5. Condition 5 regarding operation and maintenance is included to require that the Works be properly operated, maintained, funded, staffed and equipped such that the environment is protected and deterioration, loss, injury or damage to any person or property is prevented. As well, the inclusion of a comprehensive operations manual governing all significant areas of operation, maintenance and repair is prepared, implemented and kept up-to-date by the Owner. Such a manual is an integral part of the operation of the Works. Its compilation and use should assist the Owner in staff training, in proper plant operation and in identifying and planning for contingencies during possible abnormal conditions. The manual will also act as a benchmark for Ministry staff when reviewing the Owner's operation of the Works.
6. Condition 6 regarding monitoring and recording is included to enable the Owner to evaluate and demonstrate the performance of the Works, on a continual basis, so that the Works are properly operated and maintained at a level which is consistent with the design objectives and compliance limits.
7. Condition 7 regarding Limited Operational Flexibility is included to ensure that the Works are constructed, maintained and operated in accordance with the Approval, and that any pre-approved modification will not negatively impact on the performance of the Works.
8. Condition 8 regarding reporting is included to provide a performance record for future references, to

ensure that the Ministry is made aware of problems as they arise, and to provide a compliance record for this Approval.

Schedule A

1. Application for Environmental Compliance Approval for Municipal and Private Sewage Works, dated March 9, 2022 and received on March 24, 2022, submitted by The Corporation of the United Counties of Leeds and Grenville, including the design brief, final plans, specifications and all supporting documentation and correspondence submitted in support of this application.
2. Maple View Lodge Sewage System Design (Revision 3) drawing, dated August 31, 2022, prepared by Kollaard Associates Incorporated.

Schedule B

Final Effluent Design Objectives

- Sewage Treatment Plant (Newterra MBR Treatment System)

Final Effluent Parameter	Averaging Calculator	Objective
CBOD5	Annual Average Effluent Concentration	10 mg/L
Total Suspended Solids	Annual Average Effluent Concentration	10 mg/L
Total Inorganic Nitrogen (Ammonia Nitrogen, Nitrate Nitrogen and Nitrite Nitrogen)	Annual Average Effluent Concentration	2.5 mg/L
pH	Single Sample Result	6.5 - 8.5 inclusive

Final Effluent Design Objectives

- Existing Works (Waterloo Biofilter Treatment System)

Final Effluent Parameter	Averaging Calculator	Objective
CBOD5	Annual Average Effluent Concentration	10 mg/L
Total Suspended Solids	Annual Average Effluent Concentration	10 mg/L
Nitrate Nitrogen	Annual Average Effluent Concentration	10 mg/L
pH	Single Sample Result	6.5 - 8.5 inclusive

Schedule C

Monitoring Program

Influent

- Influent sampling point for the Newterra MBR Treatment System (Page 2)

Parameters	Sample Type	Minimum Frequency
BOD5	Grab	Monthly
Total Suspended Solids	Grab	Monthly
Total Phosphorus	Grab	Monthly
Total Kjeldahl Nitrogen	Grab	Monthly

Final Effluent

- Final Effluent sampling point for the Newterra MBR Treatment System (Page 4)

Parameters	Sample Type	Minimum Frequency
CBOD5	Grab	Biweekly/Monthly ²
Total Suspended Solids	Grab	Biweekly/Monthly ²
Total Ammonia Nitrogen	Grab	Biweekly/Monthly ²
Total Kjeldahl Nitrogen	Grab	Biweekly/Monthly ²
Nitrate as Nitrogen	Grab	Biweekly/Monthly ²
Nitrite as Nitrogen	Grab	Biweekly/Monthly ²
pH ¹	Grab/Probe/Analyzer	Biweekly/Monthly ²
Temperature ¹	Grab/Probe/Analyzer	Biweekly/Monthly ²

Note 1: pH and temperature of the Final Effluent shall be determined in the field at the time of sampling for Total Ammonia Nitrogen.

Note 2: Biweekly for the first twenty-four (24) months upon commencement of operation of the Proposed Works and monthly thereafter.

Final Effluent

- On the discharge from the existing Waterloo Biofilter Treatment System

Parameters	Sample Type	Minimum Frequency
CBOD5	Grab	Quarterly
Total Suspended Solids	Grab	Quarterly
Total Ammonia Nitrogen	Grab	Quarterly
Nitrate as Nitrogen	Grab	Quarterly
Nitrite as Nitrogen	Grab	Quarterly
pH ¹	Grab/Probe/Analyzer	Quarterly
Temperature ¹	Grab/Probe/Analyzer	Quarterly

Note 1: pH and temperature of the Final Effluent shall be determined in the field at the time of sampling for Total Ammonia Nitrogen.

Sludge/Biosolids

- Sludge holding tank of the Newterra MBR Treatment System

Parameters	Sample Type	Minimum Frequency
Total Solids	Grab	Annually
Total Phosphorus	Grab	Annually
Total Ammonia Nitrogen	Grab	Annually
Nitrate as Nitrogen	Grab	Annually
Metal Scan - Arsenic - Cadmium - Cobalt - Chromium - Copper - Lead - Mercury - Molybdenum - Nickel - Potassium - Selenium - Zinc	Grab	Annually

Groundwater

- Groundwater monitoring wells MW1, MW2, MW3 & MW4 ¹

Parameters	Sample Type	Minimum Frequency
Total Ammonia Nitrogen	Grab	Quarterly
Nitrate as Nitrogen	Grab	Quarterly
Nitrite as Nitrogen	Grab	Quarterly
Total Kjeldahl Nitrogen	Grab	Quarterly
Chloride	Grab	Quarterly
Sodium	Grab	Quarterly

Note 1: As identified in the Maple View Lodge Sewage System Design (Revision 3) drawing included in **Schedule A**.

Groundwater (Background Water Quality)

- Groundwater monitoring wells MW1, MW2, MW3 & MW4 ¹

Parameters	Sample Type	Minimum Frequency
Total Ammonia Nitrogen	Grab	Four (4) samples spaced over two (2) weeks for all parameters prior to the commencement of operation of the Proposed Works
Nitrate as Nitrogen	Grab	
Nitrite as Nitrogen	Grab	
Total Kjeldahl Nitrogen	Grab	
Chloride	Grab	
Sodium	Grab	

Note 1: As identified in the Maple View Lodge Sewage System Design (Revision 3) drawing included in **Schedule A**.

Schedule D

Limited Operational Flexibility

Protocol for Pre-Authorized Modifications

1. General

1. Pre-authorized modifications are permitted only where Limited Operational Flexibility has already been granted in the Approval and only permitted to be made at the pumping stations and sewage treatment plant in the Works, subject to the conditions of the Approval.
2. Where there is a conflict between the types and scope of pre-authorized modifications listed in this document, and the Approval where Limited Operational Flexibility has been granted, the Approval shall take precedence.
3. The Owner shall consult the District Manager on any proposed modifications that may fall within the scope and intention of the Limited Operational Flexibility but is not listed explicitly or included as an example in this document.
4. The Owner shall ensure that any pre-authorized modifications will not:
 - a. adversely affect the hydraulic profile of the Sewage Treatment Plant or the performance of any upstream or downstream processes, both in terms of hydraulics and treatment performance;
 - b. result in new Overflow or Bypass locations, or any potential increase in frequency or quantity of Overflow(s) or Bypass(es).
 - c. result in a reduction in the required Peak Flow Rate of the treatment process or equipment as originally designed.

2. Modifications that do not require pre-authorization:

1. Sewage works that are exempt from Ministry approval requirements;
2. Modifications to the electrical system, instrumentation and control system.

3. Pre-authorized modifications that do not require preparation of “Notice of Modification to Sewage Works”

1. Normal or emergency maintenance activities, such as repairs, renovations, refurbishments and replacements with Equivalent Equipment, or other improvements to an existing approved piece of equipment of a treatment process do not require pre-authorization. Examples of these activities are:

- a. Repairing a piece of equipment and putting it back into operation, including replacement of minor components such as belts, gear boxes, seals, bearings;
 - b. Repairing a piece of equipment by replacing a major component of the equipment such as motor, with the same make and model or another with the same or very close power rating but the capacity of the pump or blower will still be essentially the same as originally designed and approved;
 - c. Replacing the entire piece of equipment with Equivalent Equipment.
2. Improvements to equipment efficiency or treatment process control do not require pre-authorization. Examples of these activities are:
- a. Adding variable frequency drive to pumps;
 - b. Adding on-line analyzer, dissolved oxygen probe, ORP probe, flow measurement or other process control device.

4. Pre-Authorized Modifications that require preparation of “Notice of Modification to Sewage Works”

1. Pumping Stations

- a. Replacement, realignment of existing sewers including manholes, valves, gates, weirs and associated appurtenances provided that the modifications will not add new influent source(s) or result in an increase in flow from existing sources as originally approved.
- b. Extension or partition of wetwell to increase retention time for emergency response and improve station maintenance and pump operation;
- c. Replacement or installation of inlet screens to the wetwell;
- d. Replacement or installation of flowmeters, construction of station bypass;
- e. Replacement, reconfiguration or addition of pumps and modifications to pump suction and discharge pipings including valve, gates, motors, variable frequency drives and associated appurtenances to maintain firm pumping capacity or modulate the pump rate provided that the modifications will not result in a reduction in the firm pumping capacity or discharge head or an increase in the peak pumping rate of the pumping station as originally designed;
- f. Replacement, realignment of existing forcemain(s) including valves, gates, and associated appurtenances provided that the modifications will not reduce the flow capacity or increase the total dynamic head and transient in the forcemain.

2. Sewage Treatment Plant

1. Sewers and appurtenances

- a. Replacement, realignment of existing sewers (including pipes and channels) or construction of new sewers, including manholes, valves, gates, weirs and associated appurtenances within the a sewage treatment plant, provided that the modifications will not add new influent source(s) or result in an increase in flow from existing sources as originally approved and that the modifications will remove hydraulic bottlenecks or improve the conveyance of sewage into and through the Works.

2. Flow Distribution Chambers/Splitters

- a. Replacement or modification of existing flow distribution chamber/splitters or construction of new flow distribution chamber/splitters, including replacements or installation of sluice gates, weirs, valves for distribution of flows to the downstream process trains, provided that the modifications will not result in a change in flow distribution ratio to the downstream process trains as originally designed.

3. Imported Sewage Receiving Facility

- a. Replacement, relocation or installation of loading bays, connect/disconnect hook-up systems and unloading/transferring systems;
- b. Replacement, relocation or installation of screens, grit removal units and compactors;
- c. Replacement, relocation or installation of pumps, such as dosing pumps and transfer pumps, valves, piping and appurtenances;
- d. Replacement, relocation or installation of storage tanks/chambers and spill containment systems;
- e. Replacement, relocation or installation of flow measurement and sampling equipment;
- f. Changes to the source(s) or quantity from each source, provided that changes will not result in an increase in the total quantity and waste loading of each type of Imported Sewage already approved for co-treatment.

4. Preliminary Treatment System

- a. Replacement of existing screens and grit removal units with equipment of the same or higher process performance technology, including where necessary replacement or upgrading of existing screenings dewatering washing compactors, hydrocyclones, grit classifiers, grit pumps, air blowers conveyor system, disposal bins and other ancillary equipment to the screening and grit removal processes.
- b. Replacement or installation of channel aeration systems, including air blowers, air supply main, air

headers, air laterals, air distribution grids and diffusers.

5. Primary Treatment System

- a. Replacement of existing sludge removal mechanism, including sludge chamber;
- b. Replacement or installation of scum removal mechanism, including scum chamber;
- c. Replacement or installation of primary sludge pumps, scum pumps, provided that:the modifications will not result in a reduction in the firm pumping capacity or discharge head that the primary sludge pump(s) and scum pump(s) are originally designed to handle.

6. Secondary Treatment System

1. Biological Treatment

- a. Conversion of complete mix aeration tank to plug-flow multi-pass aeration tank, including modifications to internal structural configuration;
- b. Addition of inlet gates in multi-pass aeration tank for step-feed operation mode;
- c. Partitioning of an anoxic/flip zone in the inlet of the aeration tank, including installation of submersible mixer(s);
- d. Replacement of aeration system including air blowers, air supply main, air headers, air laterals, air distribution grids and diffusers, provided that the modifications will not result in a reduction in the firm capacity or discharge pressure that the blowers are originally designed to supply or in the net oxygen transferred to the wastewater required for biological treatment as originally required.

2. Secondary Sedimentation

- a. Replacement of sludge removal mechanism, including sludge chamber;
- b. Replacement or installation of scum removal mechanism, including scum chamber;
- c. Replacement or installation of return activated sludge pump(s), waste activated sludge pump(s), scum pump(s), provided that the modifications will not result in a reduction in the firm pumping capacity or discharge head that the activated sludge pump(s) and scum pump(s) are originally designed to handle.

7. Post-Secondary Treatment System

- a. Replacement of filtration system with equipment of the same filtration technology, including feed pumps, backwash pumps, filter reject pumps, filtrate extract pumps, holding tanks associated with

the pumping system, provided that the modifications will not result in a reduction in the capacity of the filtration system as originally designed.

8. Disinfection System

1. UV Irradiation

- a. Replacement of UV irradiation system, provided that the modifications will not result in a reduction in the design capacity of the disinfection system or the radiation level as originally designed.

2. Chlorination/Dechlorination and Ozonation Systems

- a. Extension and reconfiguration of contact tank to increase retention time for effective disinfection and reduce dead zones and minimize short-circuiting;
- b. Replacement or installation of chemical storage tanks, provided that the tanks are provided with effective spill containment.

9. Supplementary Treatment Systems

1. Chemical systems

- a. Replacement, relocation or installation of chemical storage tanks for existing chemical systems only, provided that the tanks are sited with effective spill containment;
- b. Replacement or installation of chemical dosing pumps provided that the modifications will not result in a reduction in the firm capacity that the dosing pumps are originally designed to handle.
- c. Relocation and addition of chemical dosing point(s) including chemical feed pipes and valves and controls, to improve phosphorus removal efficiency;
- d. Use of an alternate chemical provided that it is a non-proprietary product and is a commonly used alternative to the chemical approved in the Works, provided that the chemical storage tanks, chemical dosing pumps, feed pipes and controls are also upgraded, as necessary..

10. Sludge Management System

1. Sludge Holding and Thickening

- a. Replacement or installation of sludge holding tanks, sludge handling pumps, such as transfer pumps, feed pumps, recirculation pumps, provided that modifications will not result in reduction in the solids storage or handling capacities;

2. Sludge Digestion

- a. Replacement or installation of digesters, sludge handling pumps, such as transfer pumps, feed pumps, recirculation pumps, provided that modifications will not result in reduction in the solids storage or handling capacities;
- b. replacement of sludge digester covers.

3. Sludge Dewatering and Disposal

- a. Replacement of sludge dewatering equipment, sludge handling pumps, such as transfer pumps, feed pumps, cake pumps, loading pumps, provided that modifications will not result in reduction in solids storage or handling capacities.

4. Processed Organic Waste

- a. Changes to the source(s) or quantity from each source, provided that changes will not result in an increase in the total quantity already approved for co-processing.

11. Standby Power System

1. Replacement or installation of standby power system, including feed from alternate power grid, emergency power generator, fuel supply and storage systems, provided that the existing standby power generation capacity is not reduced.

12. Pilot Study

1. Small side-stream pilot study for existing or new technologies, alternative treatment process or chemical, provided:
 - a. all effluent from the pilot system is hauled off-site for proper disposal or returned back to the sewage treatment plant for at a point no further than immediately downstream of the location from where the side-stream is drawn;
 - b. no proprietary treatment process or propriety chemical is involved in the pilot study;
 - c. the effluent from the pilot system returned to the sewage treatment plant does not significantly alter the composition/concentration of or add any new contaminant/inhibiting substances to the sewage to be treated in the downstream process;
 - d. the pilot study will not have any negative impacts on the operation of the sewage treatment plant or cause a deterioration of effluent quality;
 - e. the pilot study does not exceed a maximum of two years and a notification of completion shall be

submitted to the District Manager within one month of completion of the pilot project.

13. Lagoons

- a. installing baffles in lagoon provided that the operating capacity of the lagoon system is not reduced;
- b. raise top elevation of lagoon berms to increase free-board;
- c. replace or install interconnecting pipes and chambers between cells, provided that the process design operating sequence is not changed;
- d. replace or install mechanical aerators, or replace mechanical aerators with diffused aeration system provided that the mixing and aeration capacity are not reduced;
- e. removal of accumulated sludge and disposal to an approved location offsite.

3. Final Effluent Disposal Facilities

- a. Replacement or realignment of the Final Effluent channel, sewer or forcemain, including manholes, valves and appurtenances from the end of the treatment train to the discharge outfall section, provided that the sewer conveys only effluent discharged from the Sewage Treatment Plant and that the replacement or re-aligned sewer has similar dimensions and performance criteria and is in the same or approximately the same location and that the hydraulic capacity will not be reduced.

Schedule E

Municipal and Local Services Board Wastewater System Profile Information Form

(For reference only, images of the form are attached on the next four pages. A digital copy can be obtained from the District Manger.)



Municipal and Local Services Board Wastewater System Profile Information Form

The information in this form is necessary to administer the Ministry's approvals, compliance and enforcement programs with respect to wastewater treatment and collection systems owned by municipalities and local services boards. These programs are authorized under the *Ontario Water Resources Act*, the *Environmental Protection Act*, the *Nutrient Management Act* and their respective regulations.

Email the completed form to: waterforms@ontario.ca
For any questions call 1-866-793-2588.

[A] SYSTEM PROFILE INFORMATION

Wastewater System Number (if assigned)		<input type="checkbox"/> New Profile <input type="checkbox"/> Update Existing Profile	
Name of System		Level of Treatment (select one*) <input type="checkbox"/> Primary <input type="checkbox"/> Secondary <input type="checkbox"/> Tertiary <input type="checkbox"/> Secondary Equivalent <input type="checkbox"/> Other (specify): <i>*See Terms and Concepts on page 4</i>	
Name of Municipality or Local Services Board			
Population Served	Population (Design)	Type of System <input type="checkbox"/> Treatment & Collection System <input type="checkbox"/> Collection System Only	
Design Rated Capacity (m ³ /day)	Peak Flow Rate (m ³ /day)	Current Environmental Compliance Approval (ECA) Number	Current ECA Issue Date (yyyy/mm/dd):
The treatment plant receives sewage from: (Check all that applies. *If you have checked more than one option below, indicate the approximate %)			
<input type="checkbox"/> Sanitary Sewer		<input type="checkbox"/> Combined Sewer	
<input type="checkbox"/> Nominally Separated Sewer		<input type="checkbox"/> Partially Separated Sewer	
<i>*See Terms and Concepts on page 4</i>			

[B] OWNER INFORMATION

Legal Name of Municipality or Local Services Board

Unit No	Street No.	Street Name.	Street Type (St, Rd, etc)	Street Direction (N,S,E,W)
PO Box	City/Town		Postal Code	
<input type="checkbox"/> Dr <input type="checkbox"/> Miss <input type="checkbox"/> Mr <input type="checkbox"/> Mrs <input type="checkbox"/> Ms	Owner Contact First Name	Owner Contact Last Name	Owner Contact Job Title	
Tel. No. () - ext.	Fax Number () -	Email address		

[C] OPERATING AUTHORITY Check if same as owner

Legal Name of Operator

Unit No	Street No.	Street Name.	Street Type (St, Rd, etc)	Street Direction (N,S,E,W)
PO Box	City/Town		Postal Code	
<input type="checkbox"/> Dr <input type="checkbox"/> Miss <input type="checkbox"/> Mr <input type="checkbox"/> Mrs <input type="checkbox"/> Ms	Operator Contact First Name	Operator Contact Last Name	Operator Contact Job Title	
Tel. No. () - ext.	Fax Number () -	Email address		

[D] 24/7 CONTACT

<input type="checkbox"/> Dr	<input type="checkbox"/> Miss	First Name	Last Name	Job Title
<input checked="" type="checkbox"/> Mr	<input type="checkbox"/> Mrs			
<input type="checkbox"/> Ms				
Tel. No. () - ext.		Fax Number () -		Email address

[E] SYSTEM CIVIC LOCATION ADDRESS (I.E. ADDRESS OF TREATMENT PLANT)

Unit No.	Street No.	Street Name.	Street Type (St, Rd, etc)	Street Direction (N,S,E,W)
PO Box	City/Town		Postal Code	

If the Wastewater System has no street address

Geographical Township	Lot	Concession
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Geographical Referencing (if known, enter the Geographical Reference information for this Wastewater System)

Map Datum	Geo-Referencing Method	Accuracy Estimate	Location Reference	
Latitude	Longitude	Zone	Easting	Northing

[F] TREATMENT PROCESS

Preliminary	Primary	Secondary	Secondary Equivalent	Post-Secondary	Additional Treatment
<input type="checkbox"/> Screening <input type="checkbox"/> Shredding/ grinding <input type="checkbox"/> Grit Removal <input type="checkbox"/> Other(specify):	<input type="checkbox"/> Settling/sedimentation/ clarification <input type="checkbox"/> Scum Removal <input type="checkbox"/> Polymer Addition <input type="checkbox"/> Other(specify):	<input type="checkbox"/> Conventional Activated Sludge (CAS) <input type="checkbox"/> Extended Aeration <input type="checkbox"/> Membrane Bioreactor (MBR) <input type="checkbox"/> Sequencing Batch Reactor (SBR) <input type="checkbox"/> Rotating Biological Contactor (RBC) <input type="checkbox"/> Tricking Filter (TF) <input type="checkbox"/> Biological Aerated Filter (BAF) <input type="checkbox"/> Other(specify):	<input type="checkbox"/> Aerated Lagoon <input type="checkbox"/> Facultative Lagoon <input type="checkbox"/> Anaerobic Lagoon <input type="checkbox"/> Aerobic Lagoon <input type="checkbox"/> Other(specify):	<input type="checkbox"/> Filtration <input type="checkbox"/> Clarification <input type="checkbox"/> Intermittent Sand Filter (after lagoons) <input type="checkbox"/> Polishing Wetlands <input type="checkbox"/> Polishing Lagoons <input type="checkbox"/> Other(specify):	<input type="checkbox"/> Phosphorous Removal <input type="checkbox"/> Biological <input type="checkbox"/> Chemical If chemical is used, specify: <input type="checkbox"/> Nitrification <input type="checkbox"/> Denitrification <input type="checkbox"/> Other(specify):

[G] DISINFECTION

Method of Disinfection	Disinfection Period
<input type="checkbox"/> Chlorination If you chlorinate, do you practice de-chlorination? <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Continuous <input type="checkbox"/> Seasonal
<input type="checkbox"/> Ultraviolet Irradiation	<input type="checkbox"/> Continuous <input type="checkbox"/> Seasonal
<input type="checkbox"/> Other (specify):	<input type="checkbox"/> Continuous <input type="checkbox"/> Seasonal

[H] SLUDGE

Sludge Stabilization Process	Method of Sludge Disposal/Utilization
<input type="checkbox"/> Aerobic Digestion	<input type="checkbox"/> Agricultural
<input type="checkbox"/> Anaerobic Digestion	<input type="checkbox"/> Landfill
<input type="checkbox"/> Drying & Pelletization	<input type="checkbox"/> Incineration
<input type="checkbox"/> Lime Treatment	<input type="checkbox"/> Other (specify):
<input type="checkbox"/> Composting	
<input type="checkbox"/> Other (specify):	

Available Sludge Storage Capacity (m³):

[I] EFFLUENT

Effluent Disposal Method	Effluent Discharge Frequency
<input type="checkbox"/> Surface Water Receiving Water Body Name:	<input type="checkbox"/> Continuous <input type="checkbox"/> Seasonal
<input type="checkbox"/> Subsurface	<input type="checkbox"/> Continuous <input type="checkbox"/> Seasonal
<input type="checkbox"/> Other (specify):	<input type="checkbox"/> Continuous <input type="checkbox"/> Seasonal

Is the effluent discharged in a vulnerable area identified in the local source protection assessment report approved under the Clean Water Act, 2006?

Yes No

[J] INFLUENT

Does the plant receive sewage from another municipality or local services board either through an interconnected collection system or hauled sewage?

Yes No

(if yes, name(s) of other municipality or local services board):

Plant receives:

- Leachate (approximate annual volume in m³):
- Septage (approximate annual volume in m³):
- Industrial input (approximate annual volume in m³):
or (approximate volume in %):

Terms and Concepts

The following Terms and Concepts are provided to assist you when completing Wastewater System Profile Information Form.

In order to determine the level of treatment that applies to the wastewater system, the effluent quality objectives that the wastewater treatment plant was designed to meet must be considered. The process based approach often used in the past has led to confusion and is open to interpretation due to recent developments and practices in the wastewater treatment industry. For example, a plant with a high rate filter (often referred to as a tertiary filter) after its secondary treatment was considered a tertiary treatment in the past since the filter was designed and operated to produce a tertiary quality effluent. However, secondary plants are now being constructed with these filters as a safeguard against any potential secondary clarifier performance degradation and not for the purpose of ensuring tertiary treatment performance. Also, new technologies have evolved that can produce tertiary quality effluent without having these high rate filters (e.g., membrane bioreactors). Lagoons were considered in the past as being capable of providing only secondary equivalent treatment. However, with add-on treatment after the lagoons (e.g. intermittent sand filters), many lagoon treatment systems are capable of producing secondary or tertiary quality effluent.

During the establishment of sewage works, site-specific effluent limits (including averaging periods) are provided by the Ministry's Regional Technical Support Section, considering the assimilative capacity of the receivers and the minimum treatment requirements provided in Procedure F-5-1. The designer of the sewage works then selects objective values that are acceptable to the Ministry and are less (i.e. more stringent) than the effluent limits, in order to provide an adequate safety factor based on the designer's confidence/experience with the technology chosen and other site-specific conditions. The sewage works are then designed (and operated) to meet these design objectives in a reliable and consistent manner. Therefore, the values that are to be used in the determination of the level of treatment that applies to the sewage works must be based on the design objectives, and not the effluent limits.

Two common parameters used in almost all sewage works designs and performance evaluations are CBOD₅ (carbonaceous biochemical oxygen demand) (BOD₅ – biochemical oxygen demand - for primary sewage works) and total suspended solids (TSS). Therefore, it is logical that the **objective values** of these two parameters are used to determine the level of treatment at the sewage works.

Level of Treatment:

Primary:

Wastewater treatment plants that have only settling/sedimentation (with or without chemical addition) and providing 30% and 50% or better reduction of BOD₅ and TSS respectively are considered primary plants (MOE Procedures F-5-1 and F-5-5).

Secondary:

Wastewater treatment plants that have biological processes (e.g. activated sludge process and its variations, fixed film processes) or physical-chemical processes producing an effluent quality of CBOD₅ and TSS of 15 mg/L or better are considered secondary plants (MOE Design Guidelines for Sewage Works, 2008).

Secondary Equivalent:

Wastewater treatment plants producing an effluent quality of CBOD₅ of 25 mg/L and TSS of 30 mg/L or better are considered as secondary equivalent plants.

Note: Wastewater treatment plants that provide only primary settling of solids and the addition of chemicals to improve the removal of TSS (and phosphorus) are not considered as secondary treatment plants or secondary equivalent plants (MOE Design Guidelines for Sewage Works, 2008).

Tertiary:

Wastewater treatment plants that have biological processes (e.g. activated sludge process and its variations, fixed film processes) and/or physical-chemical processes producing an effluent quality of CBOD₅ and TSS of 5 mg/L or better are considered tertiary plants.

Note: Biological processes such as nitrification, denitrification and enhanced biological phosphorus removal can be part of either a secondary or tertiary treatment plant. They may be described as secondary treatment plant with nitrification, secondary treatment plant with enhanced biological phosphorus removal, tertiary treatment plant with nitrification etc.

Sewer System Type:

Sanitary Sewers:

Pipes that convey sanitary sewage flows made up of wastewater discharges from residential, commercial, institutional and industrial establishments plus extraneous flow components from such sources as groundwater and surface run off.

Combined Sewers:

Pipes that convey both sanitary sewage and stormwater runoff through a single-pipe system.

Partially Separated Sewers:

Exist when either a portion of the combined sewer area was retrofitted to separate (sanitary and storm) sewers and/or a service area with combined sewers has had a new development area with separate sewers added to the service area; whatever the case may be, the final flows will be combined sewage.

Nominally Separated Sewers:

These sewers are constructed as separate sewers, but the sanitary sewers accept stormwater from roof and foundation drains (i.e., these are separated sewers in name only).

Upon issuance of the environmental compliance approval, I hereby revoke Approval No(s). 4610-9FFK4U issued on January 24, 2014.

In accordance with Section 139 of the *Environmental Protection Act*, you may by written notice served upon me, the Ontario Land Tribunal and in accordance with Section 47 of the *Environmental Bill of Rights*, 1993, the Minister of the Environment, Conservation and Parks, within 15 days after receipt of this notice, require a hearing by the Tribunal. The Minister of the Environment, Conservation and Parks will place notice of your appeal on the Environmental Registry. Section 142 of the *Environmental Protection Act* provides that the notice requiring the hearing ("the Notice") shall state:

- a. The portions of the environmental compliance approval or each term or condition in the environmental compliance approval in respect of which the hearing is required, and;
- b. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

Pursuant to subsection 139(3) of the *Environmental Protection Act*, a hearing may not be required with respect to any terms and conditions in this environmental compliance approval, if the terms and conditions are substantially the same as those contained in an approval that is amended or revoked by this environmental compliance approval.

The Notice should also include:

1. The name of the appellant;
2. The address of the appellant;
3. The environmental compliance approval number;
4. The date of the environmental compliance approval;
5. The name of the Director, and;
6. The municipality or municipalities within which the project is to be engaged in.

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

Registrar*
Ontario Land Tribunal
655 Bay Street, Suite 1500
Toronto, Ontario
M5G 1E5
OLT.Registrar@ontario.ca

and

The Minister of the Environment,
Conservation and Parks
777 Bay Street, 5th.Floor
Toronto, Ontario
M7A 2J3

and

The Director appointed for the purposes of
Part II.1 of the *Environmental Protection Act*
Ministry of the Environment,
Conservation and Parks
135 St. Clair Avenue West, 1st Floor
Toronto, Ontario
M4V 1P5

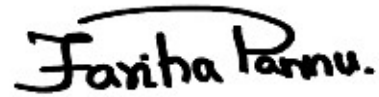
*** Further information on the Ontario Land Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349 or 1 (866) 448-2248, or www.olt.gov.on.ca**

This instrument is subject to Section 38 of the *Environmental Bill of Rights*, 1993, that allows residents of Ontario to

seek leave to appeal the decision on this instrument. Residents of Ontario may seek leave to appeal within 15 days from the date this decision is placed on the Environmental Registry. By accessing the Environmental Registry at <https://ero.ontario.ca/>, you can determine when the leave to appeal period ends.

The above noted activity is approved under s.20.3 of Part II.1 of the *Environmental Protection Act*.

DATED AT TORONTO this 20th day of September, 2022



Fariha Pannu, P.Eng.

Director

appointed for the purposes of Part II.1 of the
Environmental Protection Act

SW/

c: District Manager, MECP Kingston District Office
Kaleb Lakew, P.Eng., Kollaard Associates Inc.