

**ENVIRONMENTAL COMPLIANCE APPROVAL**

NUMBER 7930-CSXJA9  
 Issue Date: August 4, 2023

Eagles Rest Estates Inc.  
 200 Ronson Dr, No. 103  
 Toronto, Ontario  
 M9W 5Z9

Site Location: Eagles Rest Estates  
 1552 Bass Lake Side Rd W  
 Oro-Medonte Township, County of Simcoe  
 L0L 1T0

*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:*

establishment, usage and operation of new non-municipal Works, for the treatment of sanitary sewage from the Eagles Rest Estates residential development (Phase I and Phase II) in the Township of Oro-Medonte, and disposal of effluent via a sewage treatment plant and final effluent disposal facilities as follows:

**Classification of Sewage Treatment Plant:** Tertiary

**Classification of Sewage Treatment Plant (Upon Completion of Construction of All Proposed Works):**  
 Tertiary

Design Capacity with All Treatment Trains in Operation	Upon Completion of Construction of All Proposed Works
Rated Capacity	502.5 m <sup>3</sup> /d

**PROPOSED WORKS**

**New Equalization Tank**

- One (1) 114 m<sup>3</sup> pre-cast concrete equalization tank (approximately 9.0 m long, 3.65 m wide and 4.6 m deep) with an operating volume of 108.5 m<sup>3</sup>, equipped with pressure transducer level control with redundant mechanical level and alarm point;

- Fourteen (14) submersible VFD-controlled pumps (two pumps dedicated to each SBR module in duty and standby arrangement), each capable of 378 L/min @ 7.5m of head, equipped with "lift-out" slide rail system, pumping flow to the SBRs;

### **New Sequencing Batch Reactors**

- Seven (7) pre-cast concrete sequencing batch reactors (SBR) for biological sewage treatment with nitrification/denitrification, each SBR basin with a volume capacity of 108.5 m<sup>3</sup> and dimensions of 9.0 m long by 3.65 m wide by 4.6 m deep, each rated for a nominal flow rate of 72 m<sup>3</sup>/day (504 m<sup>3</sup>/day in total) with a 5 hour cycle and a peak flow rate of 117.3 m<sup>3</sup>/day (821 m<sup>3</sup>/day in total) with a 3.9 hour cycle;
- Fourteen (14) decant pumps (two pumps dedicated to each SBR module in duty and standby arrangement), each rated for 378 L/min at 8 m TDH;
- Seven (7) waste sludge pumps, each rated for 189 L/min at 8 m TDH and complete with slide rail system and lifting davit;
- Variable height stainless steel decanter mechanism with automatic VFD control for normal and peak design flow discharge modes;
- Total suspended solids sensor with 4-20 mA feedback for calculation of sludge age, decanter height control and waste pump run times;
- Digital level control system for decanter level control;

### **Air Supply System**

- Two (2) air blowers, located in the ancillary room, each rated at 506 m<sup>3</sup>/h at 8 psi with air supply lines to sequencing batch reactor basins and the sludge storage tank;
- Dissolved oxygen sensor with 4-20 mA feedback for control of aeration system;

### **Chemical Feed System**

- Eight (8) chemical feed pumps (one on standby), each capable of delivering 1.58 L/h at 25 psi into the sequencing batch reactor basins;

### **Chemical Storage System**

- Two (2) 205 litres chemical storage barrels, located in the the ancillary room.

### **Post Equalization Tank**

- One (1) 27 m<sup>3</sup> pre-cast closed top concrete basin with an operating volume capacity of 25.3 m<sup>3</sup> and dimensions of 4.9 m long by 2.6 m wide by 2.7 m deep;
- Two (2) sewage pumps (duty and standby), each with a rated capacity of 510 L/min at 18.0 m TDH, equipped with VFD control, local HOA panel, and a Myers SRA “lift-out” slide rail system, dosing effluent to the tertiary filters at a rate of 473.21 L/min when the level in the tank is above the low level and 900 L/min when the level is above the “high trigger”;

### **Tertiary Filtration**

- Six (6) 30” Next-Sand pressure filters, with a filter loading rate of 10 gpm/ft<sup>2</sup> to provide 5-8 micron nominal filtration, each filter rated for 185.4 L/min for a total capacity of 1,112.8 L/min, consisting of FRP (fiberglass reinforced plastic) vessels with Clack WS series control heads and Sch80 PVC piping and isolation/sample valves;

### **UV Disinfection**

- Four (4) UV disinfection units consisting of Hallett 1000 reactors connected in series, each of these independently isolated reactors rated for 284 L/min at 50% UVT and equipped with alarms to the main control panel;

### **Effluent Flow Monitoring**

- An Endress & Hauser magnetic flow meter to record the daily discharge volume of treated effluent discharging to the exfiltration lagoon.

### **Treated Effluent Disposal Facility**

- One (1) exfiltration lagoon for the discharge of effluent, with a total lagoon surface area of approximately 9,950 m<sup>2</sup>, a bottom surface area of approximately 2670 m<sup>2</sup>, a working volume of approximately 37,000 m<sup>3</sup>, an operating depth of 6.0 m and a 2:1 slope, providing a residence time of greater than 100 days;

### **Sludge Storage Facility**

- One (1) aerated sludge storage tank (9 m x 3.65 m x 4.6 deep) with a storage capacity of 108.5 m<sup>3</sup>, equipped with an automated aeration system, gravity return of super-nat to raw balance tank and integral riser located outside of sludge tank for the pumping of concentrated waste to sludge hauler;

All in accordance with the supporting documents set out in Schedule "A" attached to this Approval.

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

1. "Annual Average Daily Influent Flow" means the cumulative total sewage flow of Influent to the Sewage Treatment Plant during a calendar year divided by the number of days during which sewage was flowing to

the Sewage Treatment Plant that 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. "E. coli" refers to the thermally tolerant forms of *Escherichia* that can survive at 44.5 degrees Celsius;
8. "EPA" means the *Environmental Protection Act*, R.S.O. 1990, c.E.19, as amended;
9. "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;
10. "Final Effluent" means effluent that is discharged to the environment through the approved effluent disposal facilities, including all Bypasses, that are required to meet the compliance limits stipulated in the Approval for the Sewage Treatment Plant at the Final Effluent sampling point(s);
11. "Influent" means flows to the Sewage Treatment Plant from the collection system and Imported Sewage but excluding process return flows;
12. "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;
13. "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;
14. "Monthly 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 month, calculated and reported as per the methodology specified in Schedule F;
15. "Monthly Average Daily Effluent Flow" means the cumulative total Final Effluent discharged during a calendar month divided by the number of days during which Final Effluent was discharged that month;
16. "Monthly Geometric Mean Density" is the mean of all Single Sample Results of *E.coli* measurement in the

samples taken during a calendar month, calculated and reported as per the methodology specified in Schedule F;

17. "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;
18. "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;
19. "Owner" means Eagles Rest Estates Inc. and its successors and assignees;
20. "OWRA" means the *Ontario Water Resources Act*, R.S.O. 1990, c. O.40, as amended;
21. "Proposed Works" means those portions of the Works included in the Approval that are under construction or to be constructed;
22. "Rated Capacity" means the Annual Average Daily Influent Flow for which the Sewage Treatment Plant is designed to handle;
23. "Sewage Treatment Plant" means all the facilities related to sewage treatment within the sewage treatment plant site excluding the Final Effluent disposal facilities;
24. "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;
25. "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) calendar 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 G) 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 where the Owner is or at any time becomes a corporation, and a copy of the most current information filed under the *Corporations Information Act, R.S.O. 1990, c. C.39* , as amended, 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 Operating Agency;
  - b. change of Operating Agency, including address of 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 environmental compliance approval number.

## **3. CONSTRUCTION OF PROPOSED WORKS / RECORD DRAWINGS**

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. EFFLUENT OBJECTIVES**

1. The Owner shall design and undertake everything practicable to operate the Sewage Treatment Plant in accordance with the following objectives:
  - a. Effluent objectives listed in the table(s) included in Schedule B are not exceeded in the effluent from the Works.
  - b. The effluent from the Works is essentially free of floating and settleable solids and does not contain oil or any other substance in amounts sufficient to create a visible film or sheen or foam or discoloration on the receiving waters.
  - c. Annual Average Daily Influent Flow is within the Rated Capacity of the Sewage Treatment Plant.

#### **5. COMPLIANCE LIMITS**

1. The Owner shall operate and maintain the Sewage Treatment Plant such that compliance limits for the Final Effluent parameters listed in the table(s) included in Schedule C are met.

#### **6. 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 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, including procedures to minimize Bypasses and Overflows;
  - f. a spill prevention and contingency plan, consisting of procedures and contingency plans, including notification to the District Manager, to reduce the risk of spills of pollutants and prevent, eliminate or ameliorate any adverse effects that result or may result from spills of pollutants;
  - 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 fulfils the requirements under O. Reg. 129/04, as amended for the Works, including the classification of facilities, licensing of operators and operating standards.

## **7. 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 D 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. 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.

- c. definitions and preparation requirements for each sample type are included in document referenced in Paragraph 3.b.
- d. definitions for frequency:
  - i. Bi-weekly means once every two weeks;
2. In addition to the scheduled monitoring program required in Paragraph 1, the Owner shall collect daily sample(s) of the Final Effluent, on any day when there is any situation outside Normal Operating Conditions, by means of the specified sample type and analyzed for each parameter listed in the tables under the monitoring program included in Schedule D, except for *E. coli*, toxicity to Rainbow Trout and *Daphnia magna*, total residual chlorine / bisulphite residual, dissolved oxygen, pH, temperature and unionized ammonia.
3. 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.
4. 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 following:
  - a. Influent flow to the Sewage Treatment Plant by continuous flow measuring devices and instrumentations.
  - b. Final Effluent discharged from the Sewage Treatment Plant by continuous flow measuring devices and instrumentations.
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.

## **8. LIMITED OPERATIONAL FLEXIBILITY**

1. The Owner may make pre-authorized modifications to the sewage pumping stations and Sewage Treatment Plant in Works in accordance with the document "Limited Operational Flexibility - Protocol for Pre-Authorized Modifications to Municipal Sewage Works" (Schedule E), 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 E 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 E), 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;
  - c. 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.

## **9. REPORTING**

1. The Owner shall report to the District Manager orally as soon as possible any non-compliance with the compliance limits, and in writing within seven (7) days of non-compliance.
2. The Owner shall, within fifteen (15) days of occurrence of a spill within the meaning of Part X of the EPA, 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 schedule of implementation, in addition to fulfilling the requirements under the EPA and O. Reg. 675/98

"Classification and Exemption of Spills and Reporting of Discharges".

3. The Owner shall, upon request, make all manuals, plans, records, data, procedures and supporting documentation available to Ministry staff.
4. 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 monitoring data, and a review of the historical trend of the sewage characteristics and flow rates;
  - b. a summary and interpretation of all effluent monitoring data, including concentration, flow rates, loading and a comparison to the effluent objectives and compliance limits in this Approval, including an overview of the success and adequacy of the Works;
  - c. a summary of any deviation from the monitoring schedule and reasons for the current reporting year and a schedule for the next reporting year;
  - d. a summary of all operating issues encountered and corrective actions taken;
  - e. 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;
  - f. a summary of any effluent quality assurance or control measures undertaken;
  - g. 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;
  - h. a summary of efforts made to achieve the effluent objectives in this Approval, including an assessment of the issues and recommendations for pro-active actions if any are required under the following situations:
    - i. when any of the effluent 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;
    - ii. when the Annual Average Daily Influent Flow reaches 80% of the Rated Capacity;
  - i. a summary of any complaints received and any steps taken to address the complaints;
  - j. a summary of all Bypasses, Overflows, other situations outside Normal Operating Conditions and spills within the meaning of Part X of EPA and abnormal discharge events;
  - k. a summary of all Notice of Modifications to Sewage Works completed under Paragraph 1.d. of

Condition 9, including a report on status of implementation of all modification.

- l. a summary of efforts made to achieve conformance with Procedure F-5-1 including but not limited to projects undertaken and completed in the sanitary sewer system that result in overall Bypass/Overflow elimination including expenditures and proposed projects to eliminate Bypass/Overflows with estimated budget forecast for the year following that for which the report is submitted.
- m. 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.

## **10. RESPONSIBILITY AGREEMENT**

1. The Owner shall take all reasonable steps to enter into a duly signed Responsibility Agreement with Township of Oro-Medonte prior to the construction of the Works approved herein in accordance with the Ministry Procedure D-5-2 entitled "Application of Municipal Responsibility for Communal Water and Sewage Services".
2. The Owner shall provide written confirmation that the Responsibility Agreement was entered into, including the effective date of the Responsibility Agreement, to the Director and the District Manager.

## **11. REGISTRATION ON TITLE REQUIREMENT**

1. Pursuant to Section 197 of the Environmental Protection Act, prior to dealing with any of the properties comprising the Site in any way, the Owner shall provide a copy of this Approval and any amendments, to any person who will acquire an interest in the property as a result of the dealing.
2. Within **sixty (60) calendar days** of the issuance of this Approval, the Owner shall submit to the Director:
  - a. a plan of survey including each property comprising the Site indicating where the Works will be located;
  - b. a completed Certificate of Requirement and its supporting documents containing a registerable description of each property comprising the Site.
3. Within **fifteen (15) calendar days** of receiving a Certificate of Requirement authorized by the Director, the Owner shall:
  - a. register the Certificate of Requirement in the Land Titles Division of the Land Registry Office on the title to each property comprising the Site; and
  - b. submit to the Director written verification that the Certificate of Requirement has been registered on title.

*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 Agency is included to ensure that the Ministry records are kept accurate and current with respect to ownership and Operating Agency 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/record drawings 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 compliance limits is imposed to ensure that the Final Effluent discharged from the Works to the environment meets the Ministry's effluent quality requirements.
6. Condition #6 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.
7. Condition #7 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.
8. Condition #8 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.

9. Condition #9 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.
10. Condition 10 is included to ensure that there is a Responsibility Agreement in place between the Owner and the Municipality prior to construction of the Works so that, in the event that the Owner is unable to continue to provide sewage service, the Municipality may be able to assume ownership and operation of the Works.
11. Condition 11 is included in order to require the Owner to give notice of this Approval to potential future owners of the property before the property is dealt with.

### **Schedule "A"**

1. Application for Approval of Municipal and Private Sewage Works, dated February 23, 2022 and received on September 21, 2022;
2. Wastewater treatment plant design report, dated February 2022 and prepared by Azimuth Environmental Consulting, Inc.
3. Process Narrative for the Packaged Wastewater Treatment System for Eagle's Real Estates Ltd., along with stamped drawings, submitted to the Ministry on June 6, 2023 and prepared by Aslan Technologies;

## Schedule B

### Final Effluent Objectives

#### Concentration Objectives

<b>Final Effluent Parameter</b>	<b>Averaging Calculator</b>	<b>Objective</b> (milligrams per litre unless otherwise indicated)
CBOD5	Monthly Average Effluent Concentration	5.0 mg/L
Total Suspended Solids	Monthly Average Effluent Concentration	5.0 mg/L
Total Phosphorus	Monthly Average Effluent Concentration	1.0 mg/L
E. Coli	Monthly Geometric Mean Density	100 CFU/100 mL
pH	Single Sample Result	6.0 – 8.5 inclusive



## Schedule C

### Final Effluent Compliance Limits

#### Concentration Limits

<b>Final Effluent Parameter</b>	<b>Averaging Calculator</b>	<b>Limit</b> (maximum unless otherwise indicated)
CBOD5	Monthly Average Effluent Concentration	10.0 mg/L
Total Suspended Solids	Monthly Average Effluent Concentration	10.0 mg/L
Total Nitrogen	Monthly Average Effluent Concentration	2.5 mg/L
pH	Single Sample Result	6.0 - 9.5 inclusive

## Schedule D

### Monitoring Program

#### Influent - Influent sampling point

Parameters	Sample Type	Minimum Frequency
BOD5	minimum 8 hour composite	Bi-weekly
Total Suspended Solids	minimum 8 hour composite	Bi-weekly
Total Phosphorus	minimum 8 hour composite	Bi-weekly
Total Kjeldahl Nitrogen	minimum 8 hour composite	Bi-weekly

#### Final Effluent - Final Effluent sampling point

Parameters	Sample Type	Minimum Frequency
CBOD5	24 hour composite	Weekly
Total Suspended Solids	24 hour composite	Weekly
Total Phosphorus	24 hour composite	Weekly
Total Kheldahl Nitrogen	24 hour composite	Weekly
Total Ammonia Nitrogen	24 hour composite	Weekly
Nitrite Nitrogen	24 hour composite	Weekly
Nitrate Nitrogen	24 hour composite	Weekly
<i>E. coli</i>	Grab	Weekly
Temperature*	Grab/Probe	Weekly
pH*	Grab/Probe	Weekly

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

## Schedule E

### Limited Operational Flexibility

#### Protocol for Pre-Authorized Modifications to Municipal Sewage Works

##### 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.

This page contains an image of the form entitled "Notice of Modification to Sewage Works". A digital copy can be obtained from the District Manager.



Ministry of the Environment, Conservation and Parks

**Notice of Modification to Sewage Works**

RETAIN COPY OF COMPLETED FORM AS PART OF THE ECA ON-SITE PRIOR TO THE SCHEDULED IMPLEMENTATION DATE.

<b>Part 1 – Environmental Compliance Approval (ECA) with Limited Operational Flexibility</b>		
<i>(Insert the ECA's owner, number and issuance date and notice number, which should start with "01" and consecutive numbers thereafter)</i>		
ECA Number	Issuance Date (mm/dd/yy)	Notice number (if applicable)
ECA Owner		Municipality

<b>Part 2: Description of the modifications as part of the Limited Operational Flexibility</b>
<i>(Attach a detailed description of the sewage works)</i>
<p>Description shall include:</p> <ol style="list-style-type: none"> <li>1. A detail description of the modifications and/or operations to the sewage works (e.g. sewage work component, location, size, equipment type/model, material, process name, etc.)</li> <li>2. Confirmation that the anticipated environmental effects are negligible.</li> <li>3. List of updated versions of, or amendments to, all relevant technical documents that are affected by the modifications as applicable, i.e. submission of documentation is not required, but the listing of updated documents is (design brief, drawings, emergency plan, etc.)</li> </ol>

<b>Part 3 – Declaration by Professional Engineer</b>	
<p>I hereby declare that I have verified the scope and technical aspects of this modification and confirm that the design:</p> <ol style="list-style-type: none"> <li>1. Has been prepared or reviewed by a Professional Engineer who is licensed to practice in the Province of Ontario;</li> <li>2. Has been designed in accordance with the Limited Operational Flexibility as described in the ECA;</li> <li>3. Has been designed consistent with Ministry's Design Guidelines, adhering to engineering standards, industry's best management practices, and demonstrating ongoing compliance with s.53 of the Ontario Water Resources Act; and other appropriate regulations.</li> </ol> <p>I hereby declare that to the best of my knowledge, information and belief the information contained in this form is complete and accurate</p>	
Name (Print)	PEO License Number
Signature	Date (mm/dd/yy)
Name of Employer	

<b>Part 4 – Declaration by Owner</b>	
<p>I hereby declare that:</p> <ol style="list-style-type: none"> <li>1. I am authorized by the Owner to complete this Declaration;</li> <li>2. The Owner consents to the modification; and</li> <li>3. This modifications to the sewage works are proposed in accordance with the Limited Operational Flexibility as described in the ECA.</li> <li>4. The Owner has fulfilled all applicable requirements of the <i>Environmental Assessment Act</i>.</li> </ol> <p>I hereby declare that to the best of my knowledge, information and belief the information contained in this form is complete and accurate</p>	
Name of Owner Representative (Print)	Owner representative's title (Print)
Owner Representative's Signature	Date (mm/dd/yy)

## Schedule F

### Methodology for Calculating and Reporting Annual Average Effluent Concentration

#### 1. Annual Average Effluent Concentration

Step 1: Calculate the arithmetic mean of all Single Sample Results of the concentration of a contaminant in the Final Effluent sampled or measured during a calendar year and proceed as follows depending on the result of the calculation:

- a. If the arithmetic mean does not exceed the compliance limit for the contaminant, then report and use this arithmetic mean as the Annual Average Effluent Concentration for this parameter where applicable in this Approval;
- b. If the arithmetic mean exceeds the compliance limit for the contaminant and there was no Bypass Event during the calendar year, then report and use this arithmetic mean as the Annual Average Effluent Concentration for this parameter where applicable in this Approval;
- c. If the arithmetic mean exceeds the compliance limit for the contaminant and there was Bypass Event(s) during the calendar year, then proceed to Step 2;
- d. If the arithmetic mean does not exceed the compliance limit for the contaminant and there was Bypass Event(s) during the calendar year, the Owner may still elect to proceed to Step 2 calculation of the flow-weighted arithmetic mean.

Step 2: Calculate the flow-weighted arithmetic mean of all Single Sample Results of the concentration of a contaminant in the Final Effluent sampled or measured during a calendar year and proceed depending on the result of the calculation:

- a. Group No Bypass Days (**NBPD**) data and Bypass Days (**BPD**) data during a calendar year separately;
- b. Calculate the arithmetic mean of all Single Sample Results of the concentration of a contaminant in the Final Effluent sampled or measured on all NBPD during a calendar year and record it as **Annual Average NBPD Effluent Concentration**;
- c. Obtain the “**Total Annual NBPD Flow**” which is the total amount of Final Effluent discharged on all NBPD during the calendar year;
- d. Calculate the arithmetic mean of all Single Sample Results of the concentration of a contaminant in the Final Effluent sampled or measured on all BPD during a calendar year and record it as **Annual Average BPD Effluent Concentration**;

- e. Obtain the “**Total Annual BPD Flow**” which is the total amount of Final Effluent discharged on all BPD during the calendar year;
- f. Calculate the flow-weighted arithmetic mean using the following formula:

$$\frac{[(\text{Annual Average NBPD Effluent Concentration} \times \text{Total Annual NBPD Flow}) + (\text{Annual Average BPD Effluent Concentration} \times \text{Total Annual BPD Flow})]}{(\text{Total Annual NBPD Flow} + \text{Total Annual BPD Flow})}$$

It should be noted that in this method, if there are no Bypass Event for the calendar year, the calculated result would be the same as the non-flow-weighted arithmetic mean method;

- g. Report and use the lesser of the flow-weighted arithmetic mean obtained in Step 2 and the arithmetic mean obtained in Step 1 as the Annual Average Effluent Concentration for this parameter where applicable in this Approval.

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 Hearing") 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.

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

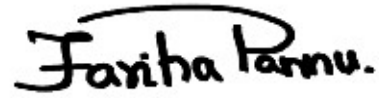
The Director appointed for the purposes of  
Part II.1 of the *Environmental Protection Act*  
Ministry of the Environment,  
Conservation and Parks  
135 St. Clair Avenue West, 1st Floor  
Toronto, Ontario  
M4V 1P5

\* 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](http://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 4th day of August, 2023



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Fariha Pannu, P.Eng.

Director

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

YZ/

c: District Manager, MECP Barrie District Office  
Jackie Coughlin, Azimuth Environmental Consulting Inc.