

ENVIRONMENTAL COMPLIANCE APPROVAL For a Municipal Sewage Collection System

ECA Number: 234-W601

Issue Number: 1

Pursuant to the *Environmental Protection Act*, R.S.O. 1990, c. E. 19 (EPA), and the regulations made thereunder and subject to the limitations thereof, this environmental compliance approval is issued under section 20.3 of Part II.1 of the EPA to:

Red Lake, The Corporation of the Municipality of

**2 Fifth St P.O. Box 1000
Balmertown, ON P0V 1C0**

For the following Sewage Works:

Red Lake Municipal Sewage Collection System

This Environmental Compliance Approval (ECA) includes the following:

Schedule	Description
Schedule A	System Information
Schedule B	Municipal Sewage Collection System Description
Schedule C	List of Notices of Amendment to this ECA: Additional Approved Works
Schedule D	General
Schedule E	Operating Conditions
Schedule F	Residue Management

All prior ECAs, or portions thereof, issued by the Director for Sewage Works described in section 1 of Schedule B are revoked and replaced by this Approval.

DATED at TORONTO this 26th day of November, 2025

Signature



Aziz Ahmed, P.Eng.
Director, Part II.1, *Environmental Protection Act*

Schedule A: System Information

System Owner	Red Lake, The Corporation of the Municipality of
ECA Number	234-W601
System Name	Red Lake Municipal Sewage Collection System
ECA Issue Date	November 26th, 2025

1.0 ECA Information and Mandatory Review Date

ECA Issue Date	November 26th, 2025
Application for ECA Review Due Date	November 30, 2030

- 1.1 Pursuant to section 20.12 of the EPA, the Owner shall submit an application for review of the Approval no later than the Application for ECA Review Date indicated above.

2.0 Related Documents

- 2.1 STPs, Satellite Treatment Facilities, and Pumping Stations connected to the Authorized System that are not part of the Authorized System:

System/Facility Name	Wastewater System Number	Location	ECA Number	Issue Date
Red Lake WPCP	110003497	442,625.40E 5,651,881.90N m	3803-BTFLQ3	
Cochenour Lagoon	110002504	444,537.87E 5,658,177.95N m	9838-8Q7K9B	
Balmertown WPCP	110003291	448,220.82E 5,656,237.93N m	1376-5C3K4N	
Madsen WPCP	110000265	435,521.60E 5,646,746.70N m	3-0543-82-006	

2.2 Other Documents

Document Title	Version
Design Criteria for Sanitary Sewers, Storm Sewers, and Forcemains for Alterations Authorized under Environmental Compliance Approval	v.2.0 (May 31, 2023)

3.0 Asset Management Plan

Document Title	Version
Red Lake Asset Management Plan	2022

4.0 Pollution Prevention and Control Plan (if applicable)

Document Title	Version
N/A	

5.0 Operating Authority

System	Operating Authority
Red Lake Municipal Sewage Collection System	Northern Waterworks Inc.

Schedule B: Municipal Sewage Collection System Description

System Owner	Red Lake, The Corporation of the Municipality of
ECA Number	234-W601
System Name	Red Lake Municipal Sewage Collection System
ECA Issue Date	November 26th, 2025

1.0 System Description

- 1.1 The following is a summary description of the Sewage Works comprising the Municipal Sewage Collection System:

Overview

The Red Lake Municipal Sewage Collection System consists of works for the collection and transmission of sewage, consisting of trunk sewers, separate sewers, sewage pumping stations, and forcemains/Low Pressure sewer mains, with discharge into Red lake WPCP, Balmertown WPCP, Cochenour Lagoon and Madsen WPCP.

Sewage Collection System

- 1.2 The Authorized System comprises:

- 1.2.1 The Sewage Works described and depicted in each document or file identified in column 1 of Table B1.

Table B1: Infrastructure Map	
Column 1 Document or File Name	Column 2 Date
Sewage Management Ministry Map	June 11th, 2024

- 1.2.2 Sewers, forcemains, pumping stations and other Sewage Works that have been added, modified, replaced, or extended through authorization provided in a Schedule C Notice respecting this Approval, where Completion occurs on or after the date identified in column 2 of Table B1 for each document or file identified in column 1.
- 1.2.3 Sewers, forcemains, pumping stations and other Sewage Works that have been added, modified, replaced, or extended through authorization provided in Schedule D of this Approval, where Completion occurs on or after the date identified in column 2 of Table B1 for each document or file identified in column 1.

1.2.4 Any Sewage Works described in conditions 1.3, through 1.7 below.

Sewage Pumping Stations

1.3 The following are Sewage pumping stations in the Authorized System:

Sanitary Sewage Pumping Stations

Cochenour Lift Station

Asset ID and Name	CWPCP Lstn - Cochenour lift station
Site Location	2721.5 HWY 125
Latitude and Longitude	93.8141263°W 51.0742811°N
Coordinates (optional)	442,964.75E 5,658,400.53N m
Description	
Pumping Station Capacity	2 x 25.3 L/s pumps
Equipment	[2] pumps (1 duty, 1 standby), with 767 m3/d and X total head, [1] wet well of ___ m3 capacity. The station is connected to 150mm diameter forcemains, discharging to lagoon.
Equipment: Associated controls and appurtenances	Station control panel
Collection System Overflow	McKenzie Channel of Red Lake, (Bruce Channel)
On-site Receiving Stations (if applicable)	N/A
Odour Control Units	N/A
Standby Power	70 kW diesel, ATS and fuel tank size of 680L
Reference ECA(s)	NUMBER - 9838-9Q7K9B
Notes	Discharging to lagoon Previous ECA - 5259-9C4JFL

Balmertown Lift Station #1

Asset ID and Name	BWPCP Lstn #1
Site Location	70 Detta Rd
Latitude and Longitude	93.7389501°W 51.0553714°N
Coordinates (optional)	448,210.21E 5,656,242.18N m
Description	
Pumping Station Capacity	43 L/s
Equipment	[3] pumps (1 duty, 2 standby), with 3715 m ³ /d and 6.1m total head. The station is connected to sewage treatment plant.
Equipment: Associated controls and appurtenances	Station control panel
Collection System Overflow	Balmer Creek
On-site Receiving Stations (if applicable)	
Odour Control Units	
Standby Power	50 kW diesel, ATS and fuel tank size of 680L
Reference ECA(s)	C of A #3-1303-80-006
Notes	Discharging to Wastewater Treatment If a former ECA exists for a pumping station, it would be included in this notes section

Balmertown Lift Station #2

Asset ID and Name	BWPCP Lstn #2
Site Location	2 Pine Rd.
Latitude and Longitude	93.7547214°W 51.0563785°N
Coordinates (optional)	447,106.02E 5,656,365.38N m
Description	
Pumping Station Capacity	
Equipment	[2] pumps (1 duty, 1 standby),
Equipment: Associated controls and appurtenances	Station control panel
Collection System Overflow	
On-site Receiving Stations (if applicable)	
Odour Control Units	
Standby Power	17.5 kW diesel, ATS and fuel tank size of 680L
Reference ECA(s)	
Notes	Discharging to Wastewater Treatment Plant (for final pumping station only) Chemical addition (e.g., coagulants, flocculants, disinfection, pH adjustment that pre-condition sewage for further treatment downstream) If a former ECA exists for a pumping station, it would be included in this notes section

Red Lake Lift Station #1

Asset ID and Name	RLWPCP Lstn #1
Site Location	5 HWY 105
Latitude and Longitude	93.8239266°W 51.0194112°N
Coordinates (optional)	442,209.94E 5,652,306.51N m
Description	
Pumping Station Capacity	2 x 46.8L/s pumps
Equipment	[2] pumps (1 duty, 1 standby), with 4043.52 m ³ /d and 78' total head, [1] wet well of ___ m ³ capacity. The station is connected to 200mm diameter forcemains, discharging to RLWPCP.
Equipment: Associated controls and appurtenances	Station control panel
Collection System Overflow	Howey Bay
On-site Receiving Stations (if applicable)	N/A
Odour Control Units	N/A
Standby Power	65 kW diesel, ATS and fuel tank size of 680L
Reference ECA(s)	NUMBER – 3803-BTFLQ3
Notes	Previous ECA – 3-1060-81-823

Red Lake Lift Station #2

Asset ID and Name	RLWPCP Lstn #2
Site Location	105 Howey Street
Latitude and Longitude	93.8208322°W 51.0240595°N
Coordinates (optional)	442,432.73E 5,652,820.98N m
Description	
Pumping Station Capacity	2 x 30 L/s pumps
Equipment	[2] pumps (1 duty, 1 standby), with X m3/d and X total head, [1] wet well of ___ m3 capacity. The station is connected to 100mm diameter forcemains, discharging to Lstn #1.
Equipment: Associated controls and appurtenances	Station control panel
Collection System Overflow	Howey Bay
On-site Receiving Stations (if applicable)	N/A
Odour Control Units	N/A
Standby Power	25 kW diesel, ATS and fuel tank size of 680L
Reference ECA(s)	NUMBER – 3803-BTFLQ3
Notes	Previous ECA – 3-1060-81-823

Red Lake Lift Station #3

Asset ID and Name	RLWPCP Lstn #3
Site Location	41 Young Street
Latitude and Longitude	93.8130247°W 51.0159535°N
Coordinates (optional)	442,970.35E 5,651,913.51N m
Description	
Pumping Station Capacity	2 x 34 L/s pumps
Equipment	[2] pumps (1 duty, 1 standby), with X m3/d and X total head, [1] wet well of ___ m3 capacity. The station is connected to 150mm diameter forcemains, discharging to RLWPCP.
Equipment: Associated controls and appurtenances	Station control panel
Collection System Overflow	Howey Bay
On-site Receiving Stations (if applicable)	N/A
Odour Control Units	N/A
Standby Power	
Reference ECA(s)	NUMBER – 3803-BTFLQ3
Notes	Previous ECA – 3-1060-81-823

Red Lake Lift Station #4

Asset ID and Name	RLWPCP Lstn #4
Site Location	43 Howey Bay Rd.
Latitude and Longitude	93.8142412°W 51.0196232°N
Coordinates (optional)	442,889.52E 5,652,322.53N m
Description	
Pumping Station Capacity	2 x 24 L/s pumps
Equipment	[2] pumps (1 duty, 1 standby), with X m ³ /d and X total head, [1] wet well of ___ m ³ capacity. The station is connected to 100mm diameter forcemain, discharging to Lstn #1.
Equipment: Associated controls and appurtenances	Station control panel
Collection System Overflow	Howey Bay
On-site Receiving Stations (if applicable)	N/A
Odour Control Units	N/A
Standby Power	
Reference ECA(s)	NUMBER – 3803-BTFLQ3
Notes	Previous ECA – 3-1060-81-823

Red Lake Lift Station #5

Asset ID and Name	RLWPCP Lstn #5
Site Location	5.5 Discovery Rd.
Latitude and Longitude	93.8196878°W 51.0190969°N
Coordinates (optional)	442,506.86E 5,652,268.24N m
Description	
Pumping Station Capacity	2 x 18 L/s pumps
Equipment	[2] pumps (1 duty, 1 standby), with X m ³ /d and X total head, [1] wet well of ___ m ³ capacity. The station is connected to 75mm diameter forcemains, discharging to Lstn #1.
Equipment: Associated controls and appurtenances	Station control panel
Collection System Overflow	Howey Bay
On-site Receiving Stations (if applicable)	N/A
Odour Control Units	N/A
Standby Power	
Reference ECA(s)	NUMBER – 3803-BTFLQ3
Notes	Previous ECA – 3-1060-81-823

Red Lake Lift Station #6

Asset ID and Name	RLWPCP Lstn #6
Site Location	24 Forestry Rd.
Latitude and Longitude	93.8371736°W 51.0214378°N
Coordinates (optional)	441,283.37E 5,652,542.34N m
Description	
Pumping Station Capacity	2 x 27 L/s pumps
Equipment	[2] pumps (1 duty, 1 standby), with X m3/d and X total head, [1] wet well of ___ m3 capacity. The station is connected to 100mm diameter forcemains, discharging to Lstn #1.
Equipment: Associated controls and appurtenances	Station control panel
Collection System Overflow	Forestry Rd.
On-site Receiving Stations (if applicable)	N/A
Odour Control Units	N/A
Standby Power	30 kW diesel, ATS and fuel tank size of 680L
Reference ECA(s)	NUMBER – 3803-BTFLQ3
Notes	Previous ECA – 3-1060-81-823

Red Lake Lift Station #7

Asset ID and Name	RLWPCP Lstn #7
Site Location	31 Lake Drive
Latitude and Longitude	93.8072912°W 51.0187578°N
Coordinates (optional)	443,375.94E 5,652,220.94N m
Description	
Pumping Station Capacity	2 x 18 L/s pumps
Equipment	[2] pumps (1 duty, 1 standby), with X m3/d and X total head, [1] wet well of ___ m3 capacity. The station is connected to 150mm diameter forcemains, discharging to Lstn #1.
Equipment: Associated controls and appurtenances	Station control panel
Collection System Overflow	No overflow from lift station
On-site Receiving Stations (if applicable)	N/A
Odour Control Units	N/A
Standby Power	No
Reference ECA(s)	NUMBER – 3803-BTFLQ3
Notes	Previous ECA – 3-1060-81-823

Real-Time Control

- 1.4 The following are identified Real-Time Control Systems in the Authorized System:

Description	Brief Description of Real-Time Control System
Process Equipment/System Elements	Mini PLC with Hardwired Float backup system
Flow Measurement Locations	RLWPCP, BTWPCP, Cochenour Lagoon
Level Measurement Locations	Internally at each Lift Station
Other Instrumentation and Controls	N/A

Combined Sewage Structures

- 1.5 The following are regulators and combined Sewage storage structures in the Authorized System:

Table B2: Identified Combined Sewer Overflow Regulators			
Column 1 Asset ID/Name	Column 2 Site Location (Latitude & Longitude)	Column 3 Regulator Capacity (m ³ /s)	Column 4 Overflow Location (Latitude & Longitude)
N/A			

Table B3: Identified Combined Sewage Storage Tanks and Storage Structures			
Column 1 Asset ID/Name	Column 2 Site Location (Latitude & Longitude)	Column 3 Regulator Capacity (m ³ /s)	Column 4 Overflow Location (Latitude & Longitude)
N/A			

Collection System Overflow Points

- 1.6 The following are Collection System Overflow points in the Authorized System:

Table B4: Identified Combined Sewer Overflow Points including Pumping Stations			
Column 1 Asset ID / Name	Column 2 Regulator or Combined Sewer Storage Asset ID	Column 3 Overflow Location (Latitude & Longitude)	Column 4 Point of Entry to Receiver (Latitude and Longitude)
N/A			

Table B5: Identified Sanitary Sewer Overflow Points including Pumping Stations			
Column 1 Asset ID	Column 2 Asset Name	Column 3 Overflow Location (Latitude & Longitude)	Column 4 Point of Entry to Receiver (Latitude and Longitude)
CWPCP Lstn	Cochenour lift station	93.8141263°W 51.0742811°N	93.8177632°W 51.0746330°N
BWPCP Lstn #1	Balmertown water pollution control plant lift station #1	93.7389501°W 51.0553714°N	93.7337316°W 51.0540926°N
RLWPCP Lstn #1	Red Lake lift station #1	93.8239266°W 51.0194112°N	93.8241919°W 51.0198367°N
RLWPCP Lstn #2	Red Lake lift station #2	93.8208322°W 51.0240595°N	93.8200839°W 51.0241248°N
RLWPCP Lstn #3	Red Lake lift station #3	93.8130247°W 51.0159535°N	93.8105773°W 51.0192742°N
RLWPCP Lstn #4	Red Lake lift station #4	93.8142412°W 51.0196232°N	93.8139933°W 51.0200738°N
RLWPCP Lstn #5	Red Lake lift station #5	93.8196878°W 51.0190969°N	93.8200302°W 51.0192561°N
RLWPCP Lstn #6	Red Lake lift station #6	93.8371736°W 51.0214378°N	93.8377863°W 51.0210500°N

Other Works:

1.7 The following works are part of Authorized System:

Table B6: Other Works			
Column 1 Asset ID / Name	Column 2 Site Location (Latitude & Longitude)	Column 3 Component	Column 4 Description
N/A			

**Schedule C: List of Notices of Amendment to this ECA:
Additional Approved Sewage Works**

System Owner	Red Lake, The Corporation of the Municipality of
ECA Number	234-W601
System Name	Red Lake Municipal Sewage Collection System
ECA Issue Date	November 26th, 2025

1.0 General

- 1.1 Table C1 provides a list of all notices of amendment to this Approval that have been issued pursuant to clause 20.3(1) of the EPA that impose terms and conditions in respect of the Authorized System after consideration of an application by the Director (Schedule C Notices).

Table C1: Schedule C Notices				
Column 1 Issue #	Column 2 Issue Date	Column 3 Description	Column 4 Status	Column 5 DN#
N/A	N/A	N/A	N/A	N/A

Schedule D: General

System Owner	Red Lake, The Corporation of the Municipality of
ECA Number	234-W601
System Name	Red Lake Municipal Sewage Collection System
ECA Issue Date	November 26th, 2025

1.0 Definitions

1.1 For the purpose of this Approval, the following definitions apply:

“Adverse Effect(s)” has the same meaning as defined in section 1 of the EPA.

“Alteration(s)” includes the following, in respect of the Authorized System, but does not include repairs to the system:

- a) An extension of the system,
- b) A replacement or retirement of part of the system, or
- c) A modification of, addition to, or enlargement of the system.

“Approval” means this Environmental Compliance Approval including any Schedules attached to it.

“Appurtenance(s)” has the same meaning as defined in O. Reg. 525/98 (Approval Exemptions) made under the OWRA.

“Authorized System” means the Sewage Works comprising the Municipal Sewage Collection System authorized under this Approval”.

“Average Year” means the long term average of flow based on:

- a) Simulation of at least twenty years of rainfall data;
- b) A year in which the rainfall pattern (e.g., intensity, volume, and frequency) is consistent with the long-term mean of the area;
- c) A year in which the runoff pattern resulting from the rainfall (e.g., rate, volume, and frequency) is consistent with the long-term mean of the area; or
- d) Any combination of a), b) and c).

“Collection System Overflow(s)” means a discharge (SSO or CSO) to the environment at designed location(s) from the Authorized System.

“Combined Sewer(s)” means pipes that collect and transmit both sanitary Sewage and other Sewage from residential, commercial, institutional and industrial buildings, and facilities and Stormwater through a single-pipe system, but does not include Nominally Separate Sewers.

“Completion” means substantial performance as described in s.2 (1) of the *Construction Act*, R.S.O. 1990, c. C.30.

“Compound of Concern” means a Contaminant that is discharged from the Facility in an amount that is not negligible.

“Contaminant” has the same meaning as defined in section 1 of the EPA.

“CSO” means a combined sewer overflow which is a discharge to the environment at designated location(s) from a Combined Sewer or Partially Separated Sewer as per Table B4 that usually occurs as a result of precipitation when the capacity of the Sewer is exceeded. An intervening time of twelve hours or greater separating a CSO from the last prior CSO at the same location is considered to separate one overflow Event from another.

“CWA” means the *Clean Water Act*, R.S.O. 2006, c.22.

“Design Criteria” means the design criteria set out in the Ministry’s publication “Design Criteria for Sanitary Sewers, Storm Sewers and Force mains for Alterations Authorized under Environmental Compliance Approval”, (as amended from time to time).

“Design Guidelines for Sewage Works” means the Ministry document titled “Design Guidelines for Sewage Works”, 2008 (as amended from time to time).

“Director” means a person appointed by the Minister pursuant to section 5 of the EPA for the purposes of Part II.1 of EPA (Environmental Compliance Approvals).

“Director Notification Form” means the most recent version of the Ministry form titled Director Notification – Alterations to a Municipal Sewage Collection System, as obtained directly from the Ministry or from the Ministry’s website.

“District Manager” means the district manager or a designated representative of the Local Ministry Office.

“Dry Weather Flow(s)” means Sewage flow resulting from both sanitary Sewage, and infiltration and inflows from foundation drains or other drains occurring during periods with an absence of rainfall or snowmelt.

"EAA" means the *Environmental Assessment Act*, R.S.O. 1990, c. E.18.

"EPA" means the *Environmental Protection Act*, R.S.O. 1990, c.E.19.

"Emergency Situation" means a structural, mechanical, electrical failure, or operational health and safety incident, that causes a temporary reduction in the capacity, function, or performance of any part of the Authorized System or an unforeseen flow condition that may result in:

- a) Danger to the health or safety of any person;
- b) Injury or damage to any property, or serious risk of injury or damage to any property;
- c) Adverse Effect to the Natural Environment; or
- d) Spill.

“Equipment” means equipment or processes described in this Approval and any other equipment or process that supports the operation or maintenance of the Authorized System.

“ESC” means erosion and sediment control.

"Event(s)" means an action or occurrence, at any given location within the Authorized System that causes a Collection System Overflow. An Event ends when there is no recurrence of a CSO or SSO in the collection system at the same location in the 12-hour period following the last Collection System Overflow.

“Facility” means the entire operation located on the property where the Sewage Works or Equipment is located.

“Form A1” means the most recent version of the Ministry form titled Record of Future Alteration Authorized for Equipment Discharging a Contaminant of Concern to the Atmosphere from a Municipal Sewage Collection System, as obtained directly from the Ministry or from the Ministry’s website.

“Form CS1” means the most recent version of the Ministry form titled Record of Future Alteration Authorized for Combined Sewers/Partially Separated Sewers/Combined Sewage Storage Tanks and Storage Structures as obtained directly from the Ministry or from the Ministry’s website.

“Form SS1” means the most recent version of the Ministry form titled Record of Future Alteration Authorized for Separate Sewers/Nominally Separate Sewers/Force mains, as obtained directly from the Ministry or from the Ministry’s website.

“Form SS2” means the most recent version of the Ministry form titled Record of Future Alteration Authorized for Components of the Municipal Sewage Collection System, as obtained directly from the Ministry or from the Ministry’s website.

“Hauled Sewage” has the same meaning as defined in section 1 of Regulation 347 (General – Waste Management) made under the EPA.

“Licensed Engineering Practitioner” means a person who holds a licence, limited licence, or temporary licence under the *Ontario Professional Engineers Act* R.S.O. 1990, c. P.28.

“Local Ministry Office” means the local office of the Ministry responsible for the geographic area where the Authorized System is located.

“Minister” means the Minister of the Ministry, or such other member of the Executive Council as may be assigned the administration of the EPA and OWRA under the *Executive Council Act*, R.S.O. 1990, c. E.25.

“Ministry” means the Ministry of the Minister and includes all employees or other persons acting on its behalf.

“Municipal Sewage Collection System” means all Sewage Works, located in the geographical area of a municipality that collect and transmit Sewage and are owned, or may be owned pursuant to an agreement with a municipality entered into under the *Planning Act* or *Development Charges Act*, 1997, by:

- a) A municipality, a municipal service board established under the *Municipal Act*, 2001 or a city board established under the *City of Toronto Act*, 2006; or
- b) A corporation established under sections 9, 10, and 11 of the *Municipal Act*, 2001 in accordance with section 203 of that Act or under sections 7 and 8 of the *City of Toronto Act*, 2006 in accordance with sections 148 and 154 of that Act.

“Natural Environment” has the same meaning as defined in section 1 of the EPA.

“Nominally Separate Sewer(s)” mean Separate Sewers that also have connections from roof leaders and foundation drains, and are not considered to be Combined Sewers.

“Operating Authority” means, in respect of the Authorized System, the person, entity, or assignee that is given responsibility by the Owner for the operation, management, maintenance or Alteration of the Authorized System or a portion of the Authorized System.

“Owner” for the purposes of this Approval means The Corporation of the Municipality of Red Lake and includes its successors and assigns.

“OWRA” means the *Ontario Water Resources Act*, R.S.O. 1990, c. O.40.

“O&M Manual” means the operation and maintenance manual prepared and maintained by the Owner under condition 3.2 in Schedule E of this Approval.

“Partially Separated Sewer(s)” means Combined Sewers that have been retrofitted to transmit sanitary Sewage but in which roof leaders or foundation drains still contribute Stormwater inflow to the Partially Separated Sewer.

“Peak Hourly Flow” means the the largest volume of flow to be received during a one-hour period expressed as a volume per unit time. This is also referred to as maximum hourly flow or maximum hour flow.

“Point of Entry” has same meaning as in the Wastewater Systems Effluent Regulations (SOR/2012-139) under the *Fisheries Act*, R.S.C 1985, c. F-14.

“Pollution Prevention and Control Plan” or “PPCP” means a plan developed for Combined Sewers in the Authorized System to meet the goals of Procedure F-5-5.

“Prescribed Person” means a person prescribed in O. Reg. 208/19 (Environmental Compliance Approval in Respect of Sewage Works) for the purpose of ss. 20.6 (1) of the EPA, and where the alteration, extension, enlargement, or replacement is carried out under an agreement with the Owner.

“Procedure F-5-1” means the Ministry document titled “F-5-1 Determination of Treatment Requirements for Municipal and Private Sewage Treatment Works” (as amended from time to time).

“Procedure F-5-5” means the Ministry document titled “F-5-5 Determination of Treatment Requirements for Municipal and Private Combined and Partially Separated Sewer System” (as amended from time to time).

“Publication NPC-207” means the Ministry draft technical publication “Impulse Vibration in Residential Buildings”, November 1983,

supplementing the Model Municipal Noise Control By-Law, Final Report, August 1978, (as amended from time to time).

“Publication NPC-300” means the Ministry publication NPC-300, “Environmental Noise Guideline: Stationary and Transportation Sources – Approval and Planning” August 2013, (as amended from time to time).

“Pumping Station Capacity” means the design Peak Hourly Flow of Sewage which the Sewage pumping station is designed to handle.

“Real-time Control System” means the dynamic operation of the collection system, including Real-Time Physical Control Structures, by responding to continuous field monitoring to maintain and achieve performance and operational objectives, during dry and wet weather conditions.

“Real-time Physical Control Structure” means a structure (e.g., pumps, gates, and weirs) that reacts in real-time based on direction from the Real-Time Control System.

“Regulator Capacity” means the flowrate (m^3/s) at which Collection System Overflow begins.

“SAC” means the Ministry’s Spills Action Centre.

“SCADA” means a supervisory control and data acquisition system used for process monitoring, control, automation, recording, and/or reporting within the Sewage system.

“Schedule C Notice(s)” means a notice(s) of amendment to this Approval issued pursuant to clause 20.3(1) of the EPA that imposes terms and conditions in respect of the Authorized System after consideration of an application by the Director.

“Separate Sewer(s)” means pipes that collect and transmit sanitary Sewage and other Sewage from residential, commercial, institutional, and industrial buildings.

“Sewage” has the same meaning as defined in section 1 of the OWRA.

“Sewage Works” has the same meaning as defined in section 1 of the OWRA.

“Sewer” has the same meaning as defined in section 1 of O. Reg. 525/98 under the OWRA.

“Significant Drinking Water Threat” has the same meaning as defined in section 2 of the CWA.

“Significant Snowmelt Event(s)” means the melting of snow at a rate which adversely affects the performance and function of the Authorized System and/or the STP(s) identified in Schedule A of this Approval.

“Significant Storm Event(s)” means a minimum of 25 mm of rain in any 24 hours period.

“Source Protection Authority” has the same meaning as defined in section 2 of the CWA.

“Source Protection Plan” means a drinking water source protection plan prepared under the CWA.

“Spill(s)” has the same meaning as defined in subsection 91(1) of the EPA.

“SSO” means a sanitary sewer overflow which is a discharge of Sewage from a Separate Sewer or Nominally Separate Sewer to the environment from designated location(s) in the Authorized System as per Table B5.

“Standard Operating Policy for Sewage Works” means the standard operating policy developed by the Ministry to assist in the implementation of Source Protection Plan policies related to Sewage Works and providing minimum design and operational standards and considerations to mitigate risks to sources of drinking water, as amended from time to time.

“Storm Sewer” means Sewers that collect and transmit, but not exfiltrate or lose by design, Stormwater resulting from precipitation and snowmelt.

“Stormwater” means rainwater runoff, water runoff from roofs, snowmelt, and surface runoff.

“Stormwater Management Facility(ies)” means a Facility for the treatment, retention, infiltration, or control of Stormwater.

“STP” means sewage treatment plant.

“STP Bypass(es)” means diversion of Sewage around one or more treatment processes, excluding preliminary treatment system, within the STP with the diverted Sewage flows being returned to the STP treatment train upstream of the final effluent sampling point(s) and discharged via the approved effluent disposal facilities.

“STP Overflow(s)” means a discharge to the environment from the STP at designed location(s) other than the approved effluent disposal facilities or via the effluent disposal facilities downstream of the final effluent sampling point.

“Uncommitted Reserve Hydraulic Capacity” means uncommitted reserve capacity as described in the Ministry document titled “D-5-1 Calculating and Reporting Uncommitted Reserve Capacity at Sewage and Water Treatment Plants” (as amended from time to time).

“Undertaking” has the same meaning as in the EAA.

“Vulnerable Area(s)” has the same meaning as in the CWA.

“Wet Weather Flow(s)” means the flow resulting from the combination of sanitary Sewage and extraneous flows resulting from the inflow and infiltration of groundwater, rainfall or snowmelt, and snow or ice melt that enters the Authorized System.

2.0 General Conditions

- 2.1 The works comprising the Authorized System shall be constructed, installed, used, operated, maintained, replaced, or retired in accordance with the conditions of this Approval, which includes the following Schedules:

Schedule A – System Information

Schedule B – Municipal Sewage Collection System Description

Schedule C – List of Notices of Amendment to this ECA

Schedule D – General

Schedule E – Operating Conditions

Schedule F – Residue Management

- 2.2 The issuance of this Approval does not negate the requirements of other regulatory bodies, which includes but is not limited to, the Ministry of Northern Development, Mines, Natural Resources and Forestry and the local Conservation Authority.
- 2.3 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. Where there is a conflict between the information in a Schedule C Notice and another section of this Approval, the document bearing the most recent date shall prevail.
- 2.4 The Owner shall ensure that any person authorized to carry out work on or operate any aspect of the Authorized System is provided with a print or electronic copy of this Approval and the conditions herein and shall take all reasonable measures to ensure any such person complies with the same.
- 2.5 The conditions of this Approval are severable. If any condition of this Approval, or the application of any requirement of this Approval to any circumstance, is held invalid or unenforceable, the application of such

condition to other circumstances and the remainder of this Approval shall not be affected thereby.

3.0 Alterations to the Municipal Sewage Collection System

- 3.1 Any Schedule C Notice shall provide authority to alter the Authorized System in accordance with the conditions of this Approval.
- 3.2 All Schedule C Notices issued by the Director for the Municipal Sewage Collection System shall form part of this Approval.
- 3.3 The Owner and a Prescribed Person shall ensure that the documentation required through conditions in this Approval and the documentation required in the Design Criteria are prepared for any Alteration of the Authorized System.
- 3.4 The Owner shall notify the Director within thirty (30) calendar days of the placing into service or Completion of any Alteration of the Authorized System which had been authorized:
 - 3.4.1 Under Schedule D to this Approval where the Alteration results in a change to Sewage Works or Equipment specifically described in Schedule B of this Approval;
 - 3.4.2 Through a Schedule C Notice respecting Sewage Works other than Sewers or forcemains; or
 - 3.4.3 Through another approval that was issued under the EPA prior to the issue date of this Approval.
- 3.5 The notification requirements set out in condition 3.4 do not apply to any Alteration in respect of the Authorized System which:
 - 3.5.1 Is exempt under section 53(6) of the OWRA or by O. Reg. 525/98;
 - 3.5.2 Constitutes maintenance or repair of the Authorized System; or
 - 3.5.3 Is a Sewer or forcemain authorized by condition 4.1 of Schedule D of this Approval.
- 3.6 The Owner shall notify the Director within ninety (90) calendar days of:
 - 3.6.1 The discovery of existing Sewage Works not described or depicted in Schedule B, or
 - 3.6.2 Additional or revised information becoming available for any Sewage Works or Equipment described in Schedule B of this Approval.

- 3.7 The notifications required in condition 3.4 and 3.6 shall be submitted to the Director using the Director Notification Form.
- 3.8 The Owner shall ensure that an ESC plan is prepared, and temporary ESC measures are installed in advance of and maintained during any construction activity on the Authorized System, subject to the following conditions:
- 3.8.1 Inspections of ESC measures are to be conducted at a frequency specified per the ESC plan, for dry weather periods (active and inactive construction phases), after Significant Storm Events and Significant Snowmelt Events, and after any extreme weather events.
- 3.8.2 Any deficiencies shall be addressed, and any required maintenance actions(s) shall be undertaken as soon as practicable once they have been identified.
- 3.8.3 Inspections and maintenance of the temporary ESC measures shall continue until they are no longer required.
- 3.8.4 The ESC plan, ESC measures and its installation, inspections and maintenance shall have regard to at least one of the following:
- a) CSA W202 Erosion and Sediment Control Inspection and Monitoring Standard, as amended from time to time;
 - b) Erosion and Sediment Control Guideline for Urban Construction (2019), as amended from time to time, prepared by the Toronto Region Conservation Authority; or
 - c) CSA W208 Erosion and Sediment Control Installation and Maintenance, as amended from time to time.
- 3.9 The Owner shall ensure that records of inspections required by this Approval during any construction activity, including those required under condition 3.8:
- 3.9.1 Include the name of the inspector, date of inspection, visual observations, and the remedial measures, if any, undertaken to maintain the temporary ESC measures.
- 3.9.2 Be retained with records relating to the Alteration that the construction relates to, such as the form required in conditions 4.3.1, 5.4.1, 6.9.1, or 7.6.1 of Schedule D, or the Schedule C Notice.

3.9.3 Be retrievable and made available to the Ministry upon request.

3.10 The document(s) or file(s) referenced in Table B1 of Schedule B of this Approval shall:

3.10.1 Be retained by the Owner;

3.10.2 Include at a minimum:

- a) Identification of the type of Sewers in the Municipal Sewage Collection System (e.g., Separate Sewer; Combined Sewer; Partially Separated Sewer; Nominally Separate Sewer) including:
 - i Location of Sewers relative to street names or easements;
 - ii Sewer and/or forcemain diameters;
 - iii Identification of pumping stations and storage structures, including asset IDs;
 - iv Identification of SSO and/or CSO locations, including asset IDs;
 - v Identification of small-bore systems, if any; and
 - vi Identification of any source protection Vulnerable Areas.

3.10.3 Be updated to include:

- a) Alterations authorized under Schedule D of this Approval or through a Schedule C Notice within twelve (12) months of the Alteration being placed into service.
- b) Updates to information contained in the document(s) or files(s) not associated with an Alteration within twelve (12) months of becoming aware of the updated information.

3.11 An Alteration is not authorized under Schedule D of this Approval for projects that impact Indigenous treaty rights or asserted rights where:

3.11.1 The project is on Crown land or would alter access to Crown land;

3.11.2 The project is in an open or forested area where hunting, trapping or plant gathering occur;

- 3.11.3 The project involves the clearing of forested land unless the clearing has been authorized by relevant municipal, provincial, or federal authorities, where applicable;
- 3.11.4 The project alters access to a water body;
- 3.11.5 The proponent is aware of any concerns from Indigenous communities about the proposed project and these concerns have not been resolved; or
- 3.11.6 Conditions respecting Indigenous consultation in relation to the project were placed in another permit or approval and have not been met.
- 3.12 No less than 60 days prior to construction associated with an Alteration the Director may notify the Owner in writing that a project is not authorized through Schedule D of this Approval where:
 - 3.12.1 Concerns regarding treaty rights or asserted rights have been raised by one or more Indigenous communities that may be impacted by the Alteration; or
 - 3.12.2 The Director believes that it is in the public interest due to site specific, system specific, or project specific considerations.
- 3.13 Where an Alteration is not authorized under condition 3.11 or 3.12 above:
 - 3.13.1 An application respecting the Alteration shall be submitted to the Ministry; and,
 - 3.13.2 The Alteration shall not proceed unless:
 - a) Approval for the Alteration is granted by the Ministry (i.e., a Schedule C Notice); or,
 - b) The Director provides written notice that the Alteration may proceed in accordance with conditions in Schedule D of this Approval.

4.0 Authorizations of Future Alterations for Separate Sewers, Nominally Separate Sewers and Forcemains - Additions, Modifications, Replacements and Extensions

- 4.1 The Owner or a Prescribed Person may alter the Authorized System by adding, modifying, replacing, or extending a Separate Sewer, Nominally Separate Sewer or forcemain within the Authorized System subject to the following conditions and condition 4.2 below:

- 4.1.1 The design of the addition, modification, replacement, or extension:
- a) Has been prepared by a Licensed Engineering Practitioner;
 - b) Has been designed only to collect and transmit Sewage and has not been designed to treat Sewage;
 - c) Satisfies the Design Criteria or any municipal criteria that have been established that exceed the minimum requirements set out in the Design Criteria;
 - d) Is consistent with or otherwise addresses the design objectives contained within the Design Guidelines for Sewage Works; and
 - e) Includes design considerations to protect sources of drinking water, including those set out in the Standard Operating Policy for Sewage Works, and any applicable local Source Protection Plan policies.
- 4.1.2 The addition, modification, replacement, or extension shall be designed so that it will:
- a) Not cause overflows or backups nor increase surcharging at any maintenance holes or privately owned infrastructure (e.g., service connections to basements) connected to the Authorized System or any Municipal Sewage Collection System connected to it;
 - b) Provide smooth flow transition to existing gravity Sewers; and
 - c) Not increase the generation of sulfides and other odorous compounds in the Municipal Sewage Collection System.
- 4.1.3 The maximum discharge/generation of Sewage by users who will be served by the addition, modification, replacement, or extension will not result in:
- a) An exceedance of the Authorized System hydraulic capacity, STP Uncommitted Reserve Hydraulic Capacity, or the downstream Pumping Station Capacity as specified in this Approval;
 - b) Adverse Effects;
 - c) Any increase in Collection System Overflows that is not offset by measures; or

- d) Any increase in the frequency or volume of STP Bypasses or STP Overflows that is not offset by measures.
- 4.1.4 The addition, modification, replacement, or extension is wholly located within the municipal boundary over which the Owner has jurisdiction or there is a written agreement in place with the adjacent municipality respecting the Alteration and resulting Sewage Works.
- 4.1.5 The Owner consents in writing to the addition, modification, replacement, or extension.
- 4.1.6 A Licensed Engineering Practitioner has verified in writing that the addition, modification, replacement, or extension meets the requirements of conditions 4.1.1 a) to d).
- 4.1.7 The Owner has verified in writing that the addition, modification, replacement, or extension has complied with inspection and testing requirements in the Design Criteria.
- 4.1.8 The Owner has verified in writing that the addition, modification, replacement, or extension meets the requirements of conditions 4.1.1 e) and 4.1.2 to 4.1.6.
- 4.2 The Owner or a Prescribed Person is not authorized to undertake an Alteration described above in condition 4.1 where the Alteration relates to the addition, modification, replacement or extension of a Separate Sewer, Nominally Separate Sewer, or forcemain that:
 - 4.2.1 Passes under or through a body of surface water unless trenchless construction methods are used, or the local Conservation Authority has authorized an alternative construction method.
 - 4.2.2 Has a nominal diameter greater than 750 mm for a Separate Sewer or Nominally Separate Sewer.
 - 4.2.3 Has a nominal diameter greater than 350 mm for a forcemain.
 - 4.2.4 Is a Combined Sewer or Partially Separated Sewer.
 - 4.2.5 Connects to another Municipal Sewage Collection System, unless:
 - a) Prior to construction, the Owner of the Authorized System obtains written consent from the Owner or Owner's delegate of the Municipal Sewage Collection System being connected to; and
 - b) The Owner of the Authorized System retains a copy of the written consent from the Owner or Owner's delegate of the

Municipal Sewage Collection System being connected to as part of the record that is recorded and retained under condition 4.3.

- 4.2.6 Creates a new discharge point to the Natural Environment.
- 4.2.7 Is part of an Undertaking in respect of which:
 - a) A request under s.16(6) of the EAA has been made, namely a request that the Minister make an order under s.16;
 - b) The Minister has made an order under s.16; or
 - c) The Director under that EAA has given notice under s.16.1 (2) that the Minister is considering making an order under s.16.
- 4.3 The consents and verifications required in conditions 4.1 and 4.2, if applicable, shall be:
 - 4.3.1 Recorded on Form SS1 prior to the Separate Sewer, Nominally Separate Sewer or forcemain addition, modification, replacement, or extension being placed into service; and
 - 4.3.2 Retained for a period of at least ten (10) years by the Owner.
- 4.4 For greater certainty, the verification requirements set out in condition 4.3 do not apply to any Alteration in respect of the Authorized System which:
 - 4.4.1 Is exempt under section 53(6) of the OWRA or by O. Reg. 525/98; or
 - 4.4.2 Constitutes maintenance or repair of the Authorized System.

5.0 Authorizations of Future Alterations for Combined Sewers, Partially Separated Sewers and Combined Sewage Storage Tanks and Storage Structures

- 5.1 Subject to conditions 5.2 and 5.3, the Owner or a Prescribed Person may alter the Combined Sewers, Partially Separated Sewers and combined Sewage storage tanks and storage structures in the Authorized System by:
 - 5.1.1 Modifying or replacing Combined Sewers, Partially Separated Sewers, overflow Regulators and/or outfalls if the purpose of the project is to restore the Sewage Works to good condition.
 - 5.1.2 Replacing Combined Sewers with Separate Sewers for Stormwater and sanitary Sewage.

5.1.3 Modifying or replacing Combined Sewers, Partially Separated Sewers, overflow regulators, outfalls, or combined Sewage storage tanks, provided that:

- a) The Alteration is designed in such a manner that will contribute to the ultimate attainment of the capture and treatment for an Average Year of all the Dry Weather Flow plus a minimum of 90% of the volume resulting from Wet Weather Flow that is above Dry Weather Flow;
- b) The volume control criterion described in 5.1.3 a) is applied:
 - i For a consecutive seven (7) month period commencing within fifteen (15) calendar days of April 1; and
 - ii To the flows collected by the Authorized System immediately above each Collection System Overflow location unless it can be shown through modelling that the criterion is being achieved on a system-wide basis.
- c) The Alteration is designed in a manner that will not increase CSO volumes above existing levels at each outfall except where the increase is due to the elimination of upstream CSO outfalls as part of the Alteration; and
- d) During the remainder of the year following the seven (7) month period described in condition 5.1.3 b) above, at least the same storage and treatment capacity are maintained for treating Wet Weather Flow.

5.1.4 Adding oversized pipes provided they are designed to alleviate local / neighbourhood basement flooding and the Alteration satisfies condition 5.1.3 a), b), c), and d).

5.2 Any Alteration to the Authorized System authorized under condition 5.1 is subject to the following conditions:

5.2.1 The design of the Alteration shall:

- a) Be prepared by a Licensed Engineering Practitioner;
- b) Be designed only to collect and transmit Sewage and shall not be designed to treat Sewage;
- c) Satisfy the Design Criteria or any municipal criteria that have been established that exceed the minimum requirements set out in the Design Criteria;

- d) Be consistent with or otherwise address the design objectives contained within the Design Guidelines for Sewage Works; and
- e) Include design considerations to protect sources of drinking water, including those set out in the Standard Operating Policy for Sewage Works and any applicable local Source Protection Plan policies.

5.2.2 The design of the Alteration shall be:

- a) Undertaken in accordance with a Pollution Prevention and Control Plan; or
- b) If no Pollution Prevention and Control Plan is available, undertaken in accordance with an interim detailed plan for the local sewershed that:
 - i Describes the location, frequency, and volume of the CSOs, as well as the concentrations and mass pollutant loadings resulting from CSOs from the study area.
 - ii Includes the following minimum information:
 - 1. Location and physical description of CSO outfalls in the Authorized System, Collection System Overflows at pumping stations in Emergency Situations, STP Bypass and STP overflows locations;
 - 2. Location and identification of receiving water bodies, including sensitive receivers, for all Combined Sewer outfalls;
 - 3. Authorized System flow and STP treatment component capacities, present and future expected peak flow rates during dry weather and wet weather;
 - 4. Capacity of all regulators; and
 - 5. Location of cross connections between Sewage and Stormwater infrastructure.
 - iii Is intended to reduce the overall CSO volume, frequency, duration, or by-pass of treatment in the Authorized and/or municipal STP; and

- iv If there is a temporary Storm Sewer connection to a combined system as part of a Combined Sewer separation project, the construction plan includes a timeline to disconnect the Storm Sewer to a separated storm outlet.

5.2.3 The Alteration shall not result in:

- a) An exceedance of hydraulic capacity of the Authorized System, STP Uncommitted Reserve Hydraulic Capacity, or the Pumping Station Capacity as specified in this Approval;
- b) Adverse Effects;
- c) Any increase in Collection System Overflows that is not offset by measures elsewhere in the Authorized System; or
- d) Any increase in the frequency and/or volume of STP Bypasses or STP Overflows that is not offset by measures.

5.2.4 Where replacement of pipes to achieve Combined Sewer separation has been authorized under conditions 5.1.2 or 5.1.3, the following conditions apply:

- a) Stormwater quantity, quality and water balance control shall be provided such that Combined Sewer separation shall not result in an overall increase in pollutants discharged to the Natural Environment;
- b) Any new Storm Sewers that result from the Combined Sewer separation can be constructed but not operated until the proposed Stormwater Management Facilities designed to satisfy condition 5.2.4 a) are in operation; and
- c) Where any temporary structures have been installed to facilitate Combined Sewer separation, the Owner shall ensure that immediately upon Completion of the Combined Sewer separation, the temporary structure connection shall be disconnected and decommissioned.

5.2.5 The Alteration shall:

- a) Not cause overflows or backups nor increase surcharging at any maintenance holes or privately owned infrastructure (e.g., service connections to basements) connected to the Authorized System or any Municipal Sewage Collection System connected to it;

- b) Provide smooth flow transition to existing gravity sewers; and
 - c) Not increase the generation of sulfides and other odorous compounds in the Authorized System.
- 5.2.6 The Alteration is wholly located within the municipal boundary over which the Owner has jurisdiction or there is a written agreement in place with the adjacent municipality respecting the Alteration and resulting Sewage Works.
- 5.2.7 The Owner consents in writing to the Alteration authorized under condition 5.1.
- 5.2.8 A Licensed Engineering Practitioner has verified in writing that the Alteration authorized under condition 5.1 meets the design requirements of conditions 5.2.1 a) to d) and to 5.2.2.
- 5.2.9 The Owner has verified in writing that the Alteration authorized under condition 5.1 has complied with inspection and testing requirements in the Design Criteria.
- 5.2.10 The Owner has verified in writing that the Alteration authorized under condition 5.1 meets the requirements of conditions 5.2.1 e) and 5.2.3 to 5.2.8.
- 5.3 The authorization in condition 5.1 does not apply:
 - 5.3.1 To the modification or replacement of a Combined Sewer or Partially Separated Sewer that has a nominal diameter greater than 750 mm.
 - 5.3.2 To the modification or replacement of a Combined Sewer or Partially Separated Sewer that connects to another Municipal Sewage Collection System, unless:
 - a) Prior to construction, the Owner of the Authorized System seeking the connection obtains written consent from the Owner or Owner's delegate of the Municipal Sewage Collection System being connected to; and
 - b) The Owner of the Authorized System retains a copy of the written consent from the Owner or Owner's delegate of the Municipal Sewage Collection System being connected to as part of the record that is recorded and retained under condition 5.4.
 - 5.3.3 Where the Alteration would create a new discharge point to the Natural Environment.

- 5.3.4 Where the Alteration would result in the addition of a new combined Sewage storage tank in the Authorized System.
- 5.4 The consents and verifications required in conditions 5.2.7 to 5.2.10, and 5.3.2 if applicable, shall be:
 - 5.4.1 Recorded on Form CS1, prior to the Combined Sewer or Partially Separated Sewer modification or replacement being placed into service; and
 - 5.4.2 Retained for a period of at least ten (10) years by the Owner.
- 5.5 For greater certainty, the verification requirements set out in condition 5.4 do not apply to any Alteration in respect of the Authorized System which:
 - 5.5.1 Is exempt under section 53(6) of the OWRA or by O. Reg. 525/98; or,
 - 5.5.2 Constitutes maintenance or repair of the Authorized System.

6.0 Authorizations of Future Alterations to Components of the Municipal Sewage Collection System

- 6.1 The Owner or a Prescribed Person may make the following Alterations to the Authorized System subject to conditions 6.4 through 6.7:
 - 6.1.1 Adding, modifying, or replacing the following components of Sewage pumping stations, Separate Sewers, or Nominally Separate Sewers:
 - a) In-line and/or off-line storage to manage peak flow / inflow and infiltration that does not require pumping;
 - b) Off-line storage to manage peak flow / inflow and infiltration that only requires electricity to empty the structure;
 - c) Any associated Equipment for cleaning; and
 - d) All Appurtenances associated with in-line or off-line storage facilities, including odour, and corrosion control.
 - 6.1.2 Modifying existing Sewage pumping stations and odour control units / Facilities, including adding, replacing, or modifying the following components:
 - a) Pumps, including replacement parts, in an existing pumping system;
 - b) Grinders and screens;

- c) Aeration and/or mixing Equipment;
- d) Chemicals and associated Equipment and tanks (including secondary containment);
- e) Odour and corrosion control structures;
- f) Instrumentation and controls;
- g) Discharge and process piping;
- h) Valves;
- i) Wet-wells; and
- j) Fat, oil, and grease separators (FOGs).

6.1.3 Adding new Sewage pumping stations, where they:

- a) Are designed to transmit a Peak Hourly Flow of no greater than 30 L/s;
- b) Include emergency stand-by power, Spill containment, and emergency alarms (SCADA, if applicable);
- c) Include emergency storage designed to provide at minimum two (2) hours of response time at peak design flow;
- d) Include odour and corrosion control, as applicable;
- e) Would serve a new residential development (or new phased residential development), which may include existing residential development that has no Combined or Partially Separated Sewers;
- f) Are designed to only collect sanitary Sewage and not Stormwater; and
- g) Do not include an emergency sanitary overflow or piping to a municipal Stormwater management system or a natural receiver to prevent the discharge to the Natural Environment.

6.1.4 Adding, modifying, or replacing Equipment associated with Real-time Control Systems, where:

- a) The Equipment is designed and implemented as part of the Owner's CSO reduction strategy or to optimize use of Sewage Works comprising the Authorized System;

- b) The Real-Time Control System is designed and integrated with fail-safe procedures such that they are automatically activated when the requirements of the current mode of operation cannot be met;
 - c) Risk management procedures are in place or will be in place prior to use of the Real-time Control System; and
 - d) Station alarms to control center are in place or will be in place prior to use of the Real-time Control System.
- 6.1.5 Adding, modifying, replacing, or removing chemical storage tanks (including fuel storage tanks) with Spill containment and associated Equipment.
- 6.1.6 Adding, modifying, replacing, or removing Motor Control Centre (MCC) and/or associated electrical.
- 6.2 The Owner or a Prescribed Person may alter the Authorized System by adding, modifying, replacing, or removing the following components subject to conditions 6.4 through 6.7:
 - 6.2.1 Valves and their associated controls installed for maintenance purposes;
 - 6.2.2 Instrumentation for monitoring and controls, including SCADA systems, and hardware associated with these monitoring devices;
 - 6.2.3 Spill containment works for chemicals used within the Authorized System;
 - 6.2.4 Chemical metering pumps and chemical handling pumps;
 - 6.2.5 Measuring and monitoring devices that are not required by regulation, by a condition in this Approval, or by a condition otherwise imposed by the Ministry;
 - 6.2.6 Process piping within a Sewage pumping station, storage tank, or other structures; and
 - 6.2.7 Valve chambers or maintenance holes.
- 6.3 The Owner or a Prescribed Person may alter the Authorized System by adding, modifying, or replacing the following components subject to conditions 6.4 through 6.7:

- 6.3.1 Measuring and monitoring devices that are required by regulation, by a condition in this Approval, or by a condition otherwise imposed by the Ministry.
- 6.4 The design of the Alteration shall:
 - 6.4.1 Be prepared by a Licensed Engineering Practitioner, where the Alteration falls within the practice of professional engineering as defined in the *Professional Engineers Act*, R.S.O. 1990;
 - 6.4.2 Be consistent with or otherwise address the design objectives contained within the Design Guidelines for Sewage Works; and
 - 6.4.3 Include design considerations to protect sources of drinking water, such as those included in the Standard Operating Policy for Sewage Works, and any applicable local Source Protection Plan policies.
- 6.5 The Alteration shall:
 - 6.5.1 Not cause overflows or backups nor increase surcharging at any maintenance holes or privately owned infrastructure (e.g., service connections to basements) connected to the Authorized System or any Municipal Sewage Collection System connected to it;
 - 6.5.2 Provide smooth flow transition to existing gravity Sewers;
 - 6.5.3 Not increase the generation of sulfides and other odourous compounds in the Authorized System; and
 - 6.5.4 Be wholly located within the municipal boundary over which the Owner has jurisdiction or there is a written agreement in place with the adjacent municipality respecting the Alteration and resulting Sewage Works.
- 6.6 Any Alteration of the Authorized System made under conditions 6.1, 6.2, or 6.3 shall not result in:
 - 6.6.1 Exceedance of hydraulic capacity (including Uncommitted Reserve Hydraulic Capacity, as applicable) of the downstream:
 - a) Municipal Sewage Collection System; or
 - b) Receiving STPs.
 - 6.6.2 Exceedance of any downstream Pumping Station Capacity as specified in Schedule B of this Approval.

- 6.6.3 An increase in the capacity of an existing Pumping Station Capacity of greater than 30%.
- 6.6.4 Any increase in Collection System Overflows that is not offset by measures taken elsewhere in the Authorized System.
- 6.6.5 Any increase in the frequency and/or volume of STP Bypasses or STP Overflows that is not offset by measures.
- 6.6.6 Deterioration of the normal operation of municipal STPs and/or the Authorized System.
- 6.6.7 A negative impact on the ability to undertake monitoring necessary for the operation of the Authorized System.
- 6.6.8 Adverse Effects.
- 6.7 The Alteration is subject to the following conditions:
 - 6.7.1 The Owner consents in writing to the Alteration.
 - 6.7.2 The person responsible for the design has verified in writing that the Alteration meets the requirements of conditions 6.4.1 and 6.4.2, as applicable.
 - 6.7.3 The Owner has verified in writing that the Alteration meets the requirements of conditions 6.4.3, 6.7.1, and 6.7.2.
- 6.8 The Owner shall verify in writing that any Alteration of the Authorized System in accordance with conditions 6.1 or 6.2 has met the requirements of the conditions listed in conditions 6.5 and 6.6.
- 6.9 The consents, verifications and documentation required in conditions 6.7 and 6.8 shall be:
 - 6.9.1 Recorded on Form SS2 prior to undertaking the Alteration; and
 - 6.9.2 Retained for a period of at least ten (10) years by the Owner.
- 6.10 For greater certainty, the verification requirements set out in condition 6.9 do not apply to any Alteration in respect of the Authorized System which:
 - 6.10.1 Is exempt under section 53(6) of the OWRA or by O. Reg. 525/98; or
 - 6.10.2 Constitutes maintenance or repair of the Authorized System, including changes to software for an existing SCADA system resulting from Alterations authorized in condition 6.2.

- 6.11 The Owner shall update, within twelve (12) months of the Alteration of the Sewage Works being placed into service, any drawings maintained for the Municipal Sewage Collection System to reflect the Alterations of the Sewage Works, where applicable.

7.0 Authorizations of Future Alterations to Equipment with Emissions to the Air

- 7.1 The Owner and a Prescribed Person may alter the Authorized System by adding, modifying, or replacing the following Equipment in the Municipal Sewage Collection System:
- 7.1.1 Venting for odour control using solid scavenging or carbon adsorption units;
 - 7.1.2 Venting for odour control by replacing existing biofiltration or wet air scrubbing systems, including any components, with Equipment of the same or better performance characteristics; and
 - 7.1.3 Emergency generators that fire No. 2 fuel oil (diesel fuel) with a sulphur content of 0.5 per cent or less measured by weight, natural gas, propane, gasoline, or biofuel, and that are used for emergency duty only with periodic testing.
- 7.2 Any Alteration of the Municipal Sewage Collection System made under condition 7.1 that may discharge or alter the rate or manner of a discharge of a Compound of Concern to the atmosphere is subject to the following conditions:
- 7.2.1 The Owner shall, at all times, take all reasonable measures to minimize odorous emissions and odour impacts from all potential sources at the Facility.
 - 7.2.2 The Owner shall ensure that the noise emissions from the Facility comply with the limits set out in Publication NPC-300.
 - 7.2.3 The Owner shall ensure that the vibration emissions from the Facility comply with the limits set out in Publication NPC-207.
- 7.3 The Owner shall not add, modify, or replace Equipment in the Municipal Sewage Collection System as set out in condition 7.1 unless the Equipment performs an activity that is directly related to municipal Sewage collection and transmission.
- 7.4 The emergency generators identified in condition 7.1.3 shall not be used for non-emergency purposes (excluding generator testing) including the generation of electricity for sale or for peak shaving purposes.

- 7.5 The Owner shall verify in writing that any addition, modification, or replacement of Equipment in accordance with condition 7.1 has met the requirements of the conditions listed in conditions 7.2, 7.3, and 7.4.
- 7.6 The verifications and documentation required in condition 7.5 shall be:
- 7.6.1 Recorded on Form A1 prior to the additional, modified or replacement Equipment being placed into service; and
- 7.6.2 Retained for a period of at least ten (10) years by the Owner.
- 7.7 For greater certainty, the verification and documentation requirements set out in condition 7.5 and 7.6 do not apply to any addition, modification, or replacement in respect of the Authorized System which:
- 7.7.1 Is exempt from the requirements of the EPA, or for Equipment that is exempt from s.9 of the EPA under O. Reg. 524/98; or
- 7.7.2 Constitutes maintenance or repair of the Authorized System.

8.0 Previously Approved Sewage Works

- 8.1 If approval for an Alteration to the Authorized System was issued under the EPA and is revoked by this Approval, the Owner may make the Alteration in accordance with:
- 8.1.1 The terms of this Approval; or
- 8.1.2 The terms and conditions of the revoked approval that were applicable as of the date this approval was issued, provided that the Alteration is commenced within five (5) years of the date that the revoked approval was issued.

9.0 Transition

- 9.1 An Alteration of the Authorized System is exempt from the requirements in clause (c) of condition 4.1.1 and clause (c) of condition 5.2.1 where:
- 9.1.1 Effort to undertake the Alteration, such as tendering or commencement of construction of the Sewage Works associated with the Alteration, begins on or before May 13, 2027.
- 9.1.2 The design of the Alteration conforms to the Design Guidelines for Sewage Works;
- 9.1.3 The design of the Alteration was completed on or before the issue date of this Approval or a Class Environmental Assessment was

completed for the Alteration and changes to the design result in significant cost increase or significant project delays; and

- 9.1.4 The Alteration would be otherwise authorized under this Approval.

Schedule E: Operating Conditions

System Owner	Red Lake, The Corporation of the Municipality of
ECA Number	234-W601
System Name	Red Lake Municipal Sewage Collection System
ECA Issue Date	November 26th, 2025

1.0 General Operations

- 1.1 The Owner shall ensure that, at all times, the Sewage Works comprising the Authorized System and the related Equipment and Appurtenances used to achieve compliance with this Approval are properly operated and maintained.
- 1.2 Prescribed Persons and Operating Authorities shall ensure that, at all times, the Sewage Works under their care and control and the related Equipment and Appurtenances used to achieve compliance with this Approval are properly operated and maintained.
- 1.3 In conditions 1.1 and 1.2 “properly operated and maintained” includes effective performance, adequate funding, adequate operator staffing and training, including training in applicable procedures and other requirements of this Approval and the EPA, OWRA, CWA, and regulations, adequate laboratory services, process controls and alarms and the use of process chemicals and other substances used in the Authorized System.

2.0 Duties of Owners and Operating Authorities

- 2.1 The Owner, Prescribed Persons and any Operating Authority shall ensure the following:
 - 2.1.1 At all times that the Sewage Works within the Authorized System are in service the Sewage Works are:
 - a) Operated in accordance with the requirements under the EPA and OWRA, and
 - b) Maintained in a state of good repair.
 - 2.1.2 The Authorized System is operated by persons having the training or expertise for their operating functions that is required by O. Reg. 129/04 (Licensing of Sewage Works Operators) under the OWRA and this Approval.

- 2.1.3 All sampling, testing, monitoring, and reporting requirements under the EPA and this Approval that relate to the Authorized System are complied with.
- 2.1.4 Any person who is operating the Sewage Works within the Authorized System is supervised by an operator-in-charge as described in O. Reg. 129/04 under the OWRA.
- 2.2 For clarity, the requirements outlined in the above conditions 2.1.1 through 2.1.4 for Prescribed Persons and any Operating Authority only apply to Sewage Works within the Authorized System where they are responsible for the operation.
- 2.3 The Owner, Prescribed Persons and Operating Authority shall take all reasonable steps to minimize and ameliorate any Adverse Effect on the Natural Environment or impairment of the quality of water of any waters resulting from the operation of the Authorized System, including such accelerated or additional monitoring as may be necessary to determine the nature and extent of the effect or impairment.

3.0 Operations and Maintenance

3.1 Inspection

- 3.1.1 The Owner shall ensure that all Sewage Works within the Authorized System are inspected at the frequency and in accordance with procedures set out in their O&M Manual.
- 3.1.2 The Owner shall ensure that:
 - a) Any pumping stations, combined Sewage storage tanks, and any Collection System Overflow within the Authorized System as of the date of issuance of this Approval are inspected at least once per calendar year starting the year after the O&M Manual is required to be prepared and implemented as per condition 3.2.1 in Schedule E of this Approval, and more frequently if required by the O&M Manual; and
 - b) Any pumping stations, combined Sewage storage tanks, and any Collection System Overflow established or replaced within the Authorized System after the date of issuance of this Approval are inspected within one year of being placed into service and thereafter once per calendar year and more frequently if required by the O&M Manual.
- 3.1.3 The inspection of the combined Sewage storage tanks required in condition 3.1.2 shall include physical inspection at the Point of

Entry, including looking for signs of unplanned discharges from Wet Weather Flow and Dry Weather Flow.

3.1.4 The Owner shall clean and maintain Sewage Works within the Authorized System to ensure the Sewage Works perform as designed.

3.1.5 The Owner shall maintain records of the results of the inspections required in condition 3.1.1, 3.1.2, and 3.1.3, monitoring (if applicable) and any cleaning and maintenance operations undertaken, and shall make available the records for inspection by the Ministry upon request. The records shall include the following:

- a) Asset ID and name of the Sewage Works;
- b) Date and results of each inspection, maintenance, or cleaning; and
- c) Name of person who conducted the inspection, maintenance, or the name of the inspecting official, where applicable.

3.2 Operations & Maintenance (O&M) Manual

3.2.1 The Owner shall prepare and implement an operations and maintenance manual for Sewage Works within the Authorized System on or before May 13, 2028, that includes or references, but is not necessarily limited to, the following information:

- a) Procedures for the routine operation of the Sewage Works;
- b) Inspection programs, including the frequency of inspection, and the methods or tests employed to detect when maintenance is necessary;
- c) Maintenance and repair programs, including:
 - i The frequency of maintenance and repair for the Sewage Works.
 - ii Clean out requirements for any storage or overflow tanks, if applicable.
- d) Operational and maintenance requirements to protect sources of drinking water, such as those included in the Standard Operating Policy for Sewage Works, and any applicable local Source Protection Plan policies;

- e) Procedures for routine physical inspection and checks of controlling systems (e.g., SCADA) to ensure the mechanical integrity of Equipment and its accuracy on the controlling system.
- f) Procedures for preventing odours and odour impacts;
- g) Procedures for calibration of monitoring Equipment (e.g., flow, level, pressure);
- h) Emergency Response, Spill Reporting and Contingency Plans and Procedures for dealing with Equipment breakdowns, potential Spills and any other abnormal situations, including notification to the SAC, the Medical Officer of Health, and the District Manager, as applicable;
- i) Procedures for receiving, responding and recording public complaints, including recording any follow-up actions taken; and
- j) As-built drawings or record drawings of the Sewage Works for Sewage Works constructed on or after January 1, 2010 and where available for Sewage Works constructed before January 1, 2010.

3.2.2 The Owner shall review and update the O&M Manual and ensure that operating staff have access, as per O. Reg 129/04 (Licensing of Sewage Works Operators) under the OWRA. Upon request, the Owner shall make the O&M Manual available to Ministry staff.

3.2.3 The Owner shall revise the O&M Manual to include procedures necessary for the operation and maintenance of any Sewage Works within the Authorized System that are established, altered, extended, replaced, or enlarged after the date of issuance of this approval prior to placing into service those Sewage Works.

3.2.4 For greater certainty, the O&M Manual may be a single document or a collection of documents that, when considered together, apply to all parts of the Authorized System.

3.3 Collection System Overflows

3.3.1 Any CSO at a point listed in Table B4 of Schedule B is considered a Class 1 approved discharge type Spill under O.Reg.675/98:

- a) Where the CSO is as a result of wet weather events when the designed capacity of the Authorized System is exceeded;

- b) Where the CSO is a direct and unavoidable result of a planned repair and/or maintenance procedure, the Owner has notified the Local Ministry Office fifteen at least (15) calendar days prior to the CSO and the Local Ministry Office has provided written consent of the CSO; or
- c) Where the CSO is planned for research or training purposes, the Owner has notified the Local Ministry Office fifteen at least (15) calendar days prior to the CSO and the Local Ministry Office has provided written consent of the CSO.

3.3.2 Any SSO at a point listed in Table B5 of Schedule B is considered a Class 1 approved discharge type Spill under O.Reg. 675/98:

- a) Where the SSO is a direct and unavoidable result of a planned repair or maintenance procedure and the Owner has notified the Local Ministry Office at least fifteen (15) calendar days prior to the SSO and the Director for the purposes of s.4 of O. Reg. 675/98 under the EPA has provided written consent of the SSO; or
- b) Where the SSO is planned for research or training purposes, the Owner has notified the Local Ministry Office at least fifteen (15) calendar days prior to the SSO and the Director for the purposes of s.4 of O. Reg. 675/98 under the EPA has provided written consent of the SSO.

3.3.3 On or before May 13, 2029, the Owner shall establish signage to notify the public, at the nearest publicly accessible point(s) downstream of any CSO outfall location identified in Schedule B, Table B4, and any SSO when the overflow is piped to a specified outlet point. If the nearest publicly accessible point is more than 100m away, then signage shall be established at the CSO or SSO outfall location. The signage shall include the following minimum information:

- a) Type of Collection System Overflow;
- b) Identification of potential hazards and limitations of water use, as applicable;
- c) ECA number and/or asset ID; and
- d) The Owner's contact information.

3.4 Monitoring

- 3.4.1 For a Collection System Overflow that occurs at a designated location, the following conditions apply:
- a) For CSO storage tanks/facilities listed in Table B3, the Owner shall:
 - i On or before November 13, 2026 or within six (6) months of the date of the publication of the Ministry's monitoring guidance, whichever is later, collect a composite sample of the combined Sewage from the CSO tank whenever the tank(s) is(are) in operation. If there is more than one tank, the tank nearest to the discharge point shall be sampled. The composite sample shall consist, at a minimum, of one sample at the beginning of the Event, and one sample at approximately every 8-hours until the end of the Event. The composite sample shall be analyzed, at a minimum, for Biochemical Oxygen Demand (BOD) (or Chemical Oxygen Demand (COD) if agreed upon by the District Manager), total suspended solids, total phosphorus and total Kjeldahl nitrogen. If the CSO continues for more than one day, multiple composite samples are allowed.
 - ii If 3.4.1 a) ii) cannot be achieved, then surrogate sampling may be used to determine the contamination concentrations of the discharge CSO tank overflow, at a minimum, for BOD (or COD), total suspended solids, total phosphorus and total Kjeldahl nitrogen. The methodology in determining, applying, and analyzing surrogate sampling shall be proposed by the Owner and subject to the written approval of the District Manager.
 - b) For CSO regulator structures listed in Table B2, and for any CSO or SSO locations listed under Table B4 or Table B5, the Owner shall:
 - i On or before November 13, 2026 or within six (6) months of the date of publication of the Ministry's monitoring guidance, whichever is later, take at least one (1) grab sample, for BOD (or COD, if agreed upon by the District Manager), total suspended solids, total phosphorus, total Kjeldahl nitrogen, and E. Coli, or
 - ii On or before November 13, 2026 or within six (6) months of the date of publication of the Ministry's monitoring guidance, whichever is later, use surrogate sampling to determine the Contaminant concentrations of the

discharged Collection System Overflow, at a minimum, for BOD (or COD), total suspended solids, total phosphorus, total Kjeldahl nitrogen, and E. Coli. The methodology in determining, applying, and analyzing surrogate sampling shall be proposed by the Owner and subject to the written approval of the District Manager.

- c) The Owner shall use the Event discharged volume and the concentrations as determined in condition 3.4.1 to calculate the loading to the Natural Environment for each parameter.

3.4.2 For any Spill of Sewage that does not meet 3.4.1 a) or b):

- a) Where practicable, take at least one (1) grab sample, for BOD (or COD, if agreed upon by the District Manager), total suspended solids, total phosphorus, total Kjeldahl nitrogen, and E. Coli
- b) The Owner shall use the discharged volume, where possible, and the concentrations as determined in condition 3.4.2 a) to calculate the loading to the Natural Environment for each parameter.

3.4.3 If COD sampling was completed, the equivalent BOD values are required to be included with the data reported to the Ministry.

3.4.4 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) Procedure F-10-1, "Procedures for Sampling and Analysis Requirements for Municipal and Private Sewage Treatment Works (Liquid Waste Streams Only)", as amended from time to time.
- b) The Ministry's publication "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater Version 2.0" (January 2016), as amended from time to time.
- c) The publication "Standard Methods for the Examination of Water and Wastewater", as amended from time to time.

4.0 Reporting

- 4.1 The Owner shall, upon request, make all manuals, plans, records, data, procedures and supporting documentation available to Ministry staff.

4.2 Collection System Overflows

4.2.1 If the Collection System Overflow meets the criteria listed in condition 3.3.1 or 3.3.2:

- a) The Owner shall report the Event as a Class 1 approved discharge type Spill as soon as practicable to the Ministry either by a verbal to SAC or in an electronic format if the Ministry makes a system available;
- b) The Owner shall report the Event to the local Medical Officer of Health in a manner agreed upon with the local Medical Officer of Health;
- c) The manner of notification to the Ministry shall be in two (2) stages and include, at a minimum, the following information:
 - i The Asset ID, infrastructure description as detailed in Table B5 in Schedule B, the outfall location, and the Point of Entry (as applicable), and the reason(s) for the Event.
 - ii First stage of reporting:
 - a. The date and time (start) of the Event.
 - iii Second stage of reporting (as soon as practicable and may be reported at same time as first stage):
 - a. The date, duration, and time (start and end) of the Event;
 - b. The estimated or measured volume of the Event, accurate to at least +/- 20% of the volume;
 - i. If the volume of the Event is not readily available at the time of the second stage of reporting, the estimated volume can be provided to the Ministry within seven (7) calendar days of the second stage of reporting;
 - c. If any, summary of complaints, observed adverse impacts, any additional sampling obtained, disinfection, and any corrective measures taken;
- d) Upon request of the local office, the Owner shall within fifteen (15) calendar days of the occurrence of any Collection

System Overflow, the Owner shall submit a full written report of the occurrence to the District Manager describing the cause and discovery of the Collection System Overflow, clean-up and recovery measures taken, preventative measures to be taken and schedule of implementation, or an alternate report as agreed to in writing by the District Manager.

4.3 Spills

4.3.1 If the Collection System Overflow does not meet the criteria listed in condition 3.3.1 or 3.3.2, or is otherwise considered a Spill of Sewage:

- a) The Owner shall report the Spill to SAC pursuant to O.Reg.675/98 and Part X of the EPA;
- b) The Owner shall report the Event to the local Medical Officer of Health in a manner agreed upon with the local Medical Officer of Health;
- c) In addition to the obligations under Part X of the Environmental Protection Act, the Owner shall, within fifteen (15) calendar days of the occurrence of any reportable Spill, submit a full written report of the occurrence to the District Manager describing the cause and discovery of the spill or loss, actual/estimated volume of the Spill, clean-up and recovery measures taken, preventative measures to be taken and schedule of implementation.

4.4 If the Owner is unable to determine the volume of a Collection System Overflow for the purpose of reporting, the Owner shall develop procedures that enable estimated or measured volumes to be included in the required reporting for any Collection System Overflow occurring on or after May 13, 2027.

4.5 The Owner shall follow the direction of the Ministry and the local Medical Officer of Health regarding any Collection System Overflows.

4.6 The Owner shall prepare an annual performance report for the Authorized System that:

4.6.1 Is submitted to the Director on or before March 31st of each year and covers the period from January 1st to December 31st of the preceding calendar year.

- a) For clarity, the first report shall cover the period of January 1st, 2026 to December 31st, 2026 and be submitted to the Director on or before March 31st, 2027.
 - b) For the transitional period of January 1, 2022 to December 31, 2022, annual reporting requirements from previous ECAs pertaining to Spills only, where these occurred in the reporting period, and that have been revoked through issuance of this ECA shall apply.
 - i For the transitional period, condition 4.7.2 does not apply.
- 4.6.2 Is also submitted to the District Manager where a Collection System Overflow or Spill of Sewage has occurred in the reporting period.
- 4.6.3 If applicable, includes a summary of all required monitoring data along with an interpretation of the data and any conclusion drawn from the data evaluation about the need for future modifications to the Authorized System or system operations.
- 4.6.4 Includes a summary of any operating problems encountered and corrective actions taken.
- 4.6.5 Includes a summary of all calibration, maintenance, and repairs carried out on any major structure, Equipment, apparatus, mechanism, or thing forming part of the Municipal Sewage Collection System.
- 4.6.6 Includes a summary of any complaints related to the Sewage Works received during the reporting period and any steps taken to address the complaints.
- 4.6.7 Includes a summary of all Alterations to the Authorized System within the reporting period that are authorized by this Approval including a list of Alterations that pose a Significant Drinking Water Threat.
- 4.6.8 Includes a summary of all Collection System Overflow(s) and Spill(s) of Sewage, including:
- a) Dates;
 - b) Volumes and durations;
 - c) If applicable, loadings for total suspended solids, BOD, total phosphorus, and total Kjeldahl nitrogen, and sampling results for E.coli;

- d) Disinfection, if any; and
 - e) Any adverse impact(s) and any corrective actions, if applicable.
- 4.6.9 Includes a summary of efforts made to reduce Collection System Overflows, Spills, STP Overflows, and/or STP Bypasses, including the following items, as applicable:
 - a) A description of projects undertaken and completed in the Authorized System that result in overall overflow reduction or elimination including expenditures and proposed projects to eliminate overflows with estimated budget forecast for the year following that for which the report is submitted.
 - b) Details of the establishment and maintenance of a PPCP, including a summary of project progresses compared to the PPCP's timelines.
 - c) An assessment of the effectiveness of each action taken.
 - d) An assessment of the ability to meet Procedure F-5-1 or Procedure F-5-5 objectives (as applicable) and if able to meet the objectives, an overview of next steps and estimated timelines to meet the objectives.
 - e) Public reporting approach including proactive efforts.
- 4.7 The report described in condition 4.6 shall be:
 - 4.7.1 Made available, on request and without charge, to members of the public who are served by the Authorized System; and
 - 4.7.2 Made available, by June 1st of the same reporting year, to members of the public without charge by publishing the report on the Internet, if the Owner maintains a website on the Internet.

5.0 Record Keeping

- 5.1 The Owner shall retain for a minimum of ten (10) years from the date of their creation:
 - 5.1.1 All records, reports and information required by this Approval and related to or resulting Alterations to the Authorized System, and
 - 5.1.2 All records, report and information related to the operation, maintenance and monitoring activities required by this Approval.

- 5.2 The Owner shall update, within twelve (12) months of any Alteration to the Authorized System being placed into service, any drawings maintained for the Municipal Sewage Collection System to reflect the Alteration of the Sewage Works, where applicable.

6.0 Review of this Approval

- 6.1 No later than the date specified in Condition 1 of Schedule A of this Approval, the Owner shall submit to the Director an application to have the Approval reviewed. The application shall, at minimum:
- 6.1.1 Include an updated description of the Sewage Works within the Authorized System, including any Alterations to the Sewage Works that were made since the Approval was last issued; and
 - 6.1.2 Be submitted in the manner specified by Director and include any other information requested by the Director.

7.0 Source Water Protection

- 7.1 The Owner shall ensure that any Alteration in the Authorized System is designed, constructed, and operated in such a way as to be protective of sources of drinking water in Vulnerable Areas as identified in the Source Protection Plan, if available.
- 7.2 The Owner shall prepare a "Significant Drinking Water Threat Assessment Report for Proposed Alterations" for the Authorized System on or before May 13, 2028 that includes, but is not necessarily limited to:
- 7.2.1 An outline of the circumstances under which the proposed Alterations could pose a Significant Drinking Water Threat based on the Director's Technical Rules established under the CWA.
 - 7.2.2 An outline of how the Owner assesses the proposed Alterations to identify drinking water threats under the CWA.
 - 7.2.3 For any proposed Alteration a list of components, Equipment, or Sewage Works that are being altered and have been identified as a Significant Drinking Water Threat.
 - 7.2.4 A summary of design considerations and other measures that have been put into place to mitigate risks resulting from construction or operation of the components, Equipment or Sewage Works identified in condition 7.2.3, such as those included in the Standard Operating Policy for Sewage Works.
- 7.3 The Owner shall make any necessary updates to the report required in condition 7.2 at least once every twelve (12) months.

- 7.4 Any components, Equipment or Sewage Works added to the report required in condition 7.2 shall be included in the report for the operational life of the Sewage Works.
- 7.5 Upon request, the Owner shall make a copy of the report required in condition 7.2 available to the Ministry or Source Protection Authority staff.

8.0 Additional Studies

Assessment of Wet Weather Flows Compared to Dry Weather Flows

8.1 This condition and the following requirements apply where:

- a) The Authorized System has no Combined Sewers or Partially Separated Sewers; and
- b) There has been one or more of: an STP Overflow, STP Bypass, or Collection System Overflow within the ten (10) year period starting January 1, 2012 and ending December 31, 2021.

The following requirements do not apply if:

- a) The Collection System Overflow is a result of emergency overflows at pumping stations during power outage or Equipment failure; and
- b) There has been no STP Overflow or STP Bypass.

8.1.1 The Owner shall conduct an assessment of Wet Weather Flows compared to the Dry Weather Flows in the Authorized System and/or to the STP(s) described in Schedule A, as per the following conditions:

- a) The assessment shall evaluate available data from the ten (10) year period starting January 1, 2012 and ending December 31, 2021.
- b) The assessment shall be completed and submitted to the Director by November 13, 2027.
- c) In the event that Wet Weather Flows in the ten (10) year period described above have created STP Bypasses or STP Overflows at the STP(s) specified in Schedule A or Collection System Overflows in an Average Year, then the study shall include:
 - i Actions and timelines to meeting the Procedure F-5-1 objectives;

- ii Review of causes of STP Overflow, STP Bypass and/or Collection System Overflow Events, including inflow and infiltration, sewer use, and characteristics of rainfall events, as applicable;
- iii Inspection of the Sewers and bypass structures; and
- iv Identification of any near and/or long-term corrective actions with anticipated timelines.

Assessment of Conformance to Procedure F-5-1 and F-5-5

8.2 This condition and the following requirements apply where:

- a) The Authorized System includes Combined Sewers or Partially Separated Sewers, and
 - b) The Authorized System experienced a Collection System Overflow, an STP Bypass, or STP Overflow within the ten (10) year period starting January 1, 2012 and ending December 31, 2021.
- 8.2.1 The Owner shall conduct an assessment to demonstrate conformance of the Authorized System to Procedure F-5-1 or Procedure F-5-5, as applicable, in accordance with the following conditions:
- a) The assessment shall:
 - i Be prepared by a Licensed Engineering Practitioner and be submitted to the Director by November 13, 2027;
 - ii Be performed for each of the years 2012 through to 2021;
 - iii Include the number of Collection System Overflows as a result of storms that are not Significant Storm Events for each year;
 - iv Include the estimated length of Combined Sewers and Separate Sewers within the collection system;
 - v Include the date of the most recent PPCP;
 - vi Include the status of each action items specified in the PPCP, as applicable;
 - vii Include a summary of additional action items not specified in a PPCP which have been taken to prevent

Collection System Overflows in the ten (10) year period starting January 1, 2012 and ending December 31, 2021; and

- viii Identify timelines for achieving conformance to Procedure F-5-1 or Procedure F-5-5 objectives, as applicable.

8.2.2 The Owner shall submit a new or updated PPCP to the Director, no later than May 13, 2031, if:

- a) No PPCP exists for the Authorized System, or
- b) The PPCP for the Authorized System is older than ten (10) years as of November 26th, 2025.

8.2.3 The PPCP shall include, at minimum:

- a) Characterization of the Combined Sewer System (CSS) – Monitoring, modeling and other appropriate means shall be used to characterize the CSS and the response of the CSS to precipitation events. The characterization shall be based on the ten (10) year period starting January 1, 2012 and ending December 31, 2021 and include the determination of the location, frequency and volume of the CSOs, concentrations and mass pollutants resulting from CSOs, and identification and severity of suspected CSS deficiencies. Records shall be kept for CCS including the following:
 - i Location and physical description of CSO and SSO outfalls in the collection systems, emergency overflows at pumping stations, and bypass locations at STPs;
 - ii Location and identification of receiving water bodies, including sensitive receivers, for all Combined Sewer outfalls;
 - iii Combined Sewer system flow and STP treatment capacities, present and future (20-year timeframe) expected peak flow rates during dry weather and wet weather;
 - iv Capacity of all regulators;
 - v Location of cross connections between sanitary Sewage and Stormwater infrastructure; and

- vi Location and identification of infrastructure in the CSS where monitoring Equipment is installed.
- b) Operational procedures shall be developed including the following:
 - i Combined Sewer maintenance program; and
 - ii Regulator inspection and maintenance programs.
- c) An examination of non-structural and structural CSO control alternatives that may include:
 - i Source control;
 - ii Inflow/Infiltration reduction;
 - iii Operation and maintenance improvements;
 - iv Control structure improvements;
 - v Collection system improvements;
 - vi Storage technologies;
 - vii Treatment technologies; and
 - viii Sewer separation.
- d) An implementation plan with a schedule of all practical measures to eliminate dry weather overflows and minimize wet weather overflows, as well as an overflow percent reduction target.
 - i The implementation plan shall show how the minimum CSO prevention and control requirements and other criteria in Procedure F-5-5 are being achieved.

8.2.4 The Owner shall ensure that an updated PPCP for the Authorized System is prepared within ten (10) years of the date that the previous PPCP was finalized.

Sewer Model

8.3 The Owner shall prepare a new/updated Sewer model, within three (3) years of November 26th, 2025, if any of the following pertain to the Authorized System:

8.3.1 It includes Combined Sewers;

- 8.3.2 It services a population greater than 10,000; or
- 8.3.3 The Sewer model for the Authorized System was last updated prior to 2012 and 8.3.1 or 8.3.2 apply.

Schedule F: Residue Management

System Owner	Red Lake, The Corporation of the Municipality of
ECA Number	234-W601
System Name	Red Lake Municipal Sewage Collection System
ECA Issue Date	November 26th, 2025

1.0 Residue Management System

1.1 Not Applicable:

AMENDED ENVIRONMENTAL COMPLIANCE APPROVAL

NUMBER 1014-DTBQFX
Issue Date: April 20, 2026

The Corporation of the Municipality of Red Lake
Post Office Box, No. 1000
Balmertown, Ontario
P0V 1C0

Site Location: Red Lake Water Pollution Control Plant
14 Young St
Red Lake Municipality, District of Kenora
P0V 2M0

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:

alteration, usage and operation of existing municipal sewage works, for the treatment of sanitary sewage and disposal of effluent to Howey Bay on Red Lake via a Sewage Treatment Plant (Red Lake Water Pollution Control Plant) and Final Effluent disposal facilities as follows:

Classification of Collection System: Nominally Separate Sewer System

Classification of Sewage Treatment Plant (Prior to Completion of Construction of All Proposed Works):
Secondary

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

Design Capacity of Sewage Treatment Plant

Design Capacity with All Treatment Trains in Operation	Prior to Completion of Construction of All Proposed Works	Upon Completion of Construction of All Proposed Works
Rated Capacity	2,460 m ³ /d	2,460 m ³ /d
Peak Daily Flow Rate	5,637 m ³ /d	5,637 m ³ /d

Influent, Imported Sewage and Processed Organic Waste

Receiving Location	Types
In Collection System	Sanitary Sewage, Septage
At Sewage Treatment Plant	none

Proposed Works:

Red Lake Water Pollution Control Plant (WWTP)

Supplementary Treatment Systems

- **Phosphorus Removal**

a liquid alum system located in a new Chemical Metering and Storage Building, for total phosphorus removal, including,

- three (3) metering pumps (2 duty 1 standby) each having a capacity of 6.4 L/h, and one (1) control panel;
- two (2) 2700 L chemical storage tank, protected with secondary containment (concrete berms);

- **Alkalinity Addition**

a sodium carbonate (soda ash) alkalinity adjustment system located in the new Chemical Metering and Storage Building,, including,

- two (2) metering pumps (1 duty 1 standby) each having a capacity of 114. L/h, and one (1) control panel;
- two (2) 1400 L chemical storage tank equipped with tank mixers, protected with secondary containment (concrete berms);

Disinfection System

- sodium hypochlorite (SH) disinfection system located in the new Chemical Metering and Storage Building, including,
- two (2) metering pumps (1 duty 1 standby) each having a capacity of 15.0 L/h, and one (1) control panel, discharging mixture of SH and potable water to the existing Chlorine Contact Chamber (CCC);

- two (2) 1800 L chemical storage tanks, protected with secondary containment (concrete berms);
- sodium bisulphite dechlorination (SBS) system located in the new Chemical Metering and Storage Building, including,
 - two (2) metering pumps (1 duty 1 standby) each having a capacity of 2.0 L/h, and one (1) control panel, injecting SBS solution to the CCC's effluent v-notch weir;
 - one (1) 1000 L chemical storage tank, protected with secondary containment (concrete berm);
 - installation of a sharp-crest weir in the existing second effluent manhole to provide a dechlorination reagent contact volume of approximately 2.7 m³ upstream of the weir;

decommissioning and removal

- decommissioning and removal of the existing gas chlorination system, including but not limited to, a v-notch chlorinator, chlorine gas cylinder(s), a chlorine gas cylinder weight scale;

Influent Flow Measurement and Sampling Point

- automatic composite sampler at the grit building to collect raw sewage samples from the Grit Channels prior to the application of any chemicals; and

Drainage from the New Chemical Metering and Storage Building

- a sump, equipped with a single sump pump, discharging via a 75 mm diameter forcemain to the existing Grit Channels of the WWTP.

Existing Works:

Red Lake Water Pollution Control Plant (WWTP)

Influent Sewers

- a 200 mm diameter forcemain from the Main Lift Pumping Station #1 on Highway 105, discharging to the WWTP;
- a 100 mm diameter forcemain from the Young Street Pumping Station #3 on Young Street, discharging to the WWTP;

Influent Flow Measurement and Sampling Point

- A raw sewage metering chamber housing one (1) 150 mm diameter magnetic flow meter on the forcemain from the Main Lift Pumping Station #1, and one (1) 100 mm diameter magnetic flow meter on the forcemain from the Young Street Pumping Station #1;

Preliminary Treatment System

- Grit Removal
 - Three (3) parallel Grit Channels, each with a design capacity of $2576 \text{ m}^3/\text{d}$, for a total Peak Instantaneous Flow Rate of $7728 \text{ m}^3/\text{d}$;
 - grit settles by gravity in the Grit Channels and periodically removed by vacuum truck for offsite disposal;
- Screening
 - one (1) manually cleaned Bar Screen with a Peak Instantaneous Flow of 89.44 L/s , located between the three (3) parallel grit channels and the flow splitting chamber;
 - screenings from the Bar Screen, hauled offsite for disposal;

Influent Splitting and Secondary Bypass

- a Flow Splitting Chamber after the grit removal and screening, splitting dry weather flow (DWF) to the subsequent the Small and Large Plants on 48% ~ 52% basis; or wet weather flow (WWF) to the Small and Large Plants on 33% ~ 67% basis up to $5,637 \text{ m}^3/\text{d}$; the WWF exceeding $5,637 \text{ m}^3/\text{d}$ is bypassed at the Flow Splitting Chamber around the secondary treatment systems to the Chlorine Contact Chamber (CCC);

Secondary Treatment Systems

- Biological Treatment

employing extended aeration treatment, including,

 - Small Plant: an aeration tank having a working volume of 730 m^3 and a hydraulic capacity of $1864 \text{ m}^3/\text{d}$, rated for a $1,184 \text{ m}^3/\text{day}$ treatment capacity with a retention time of 14.8 hours and an organic loading rate of $0.21 \text{ kg BOD}_5/\text{m}^3/\text{d}$, equipped with fine bubble diffuser system;
 - Large Plant: an aeration tank having a working volume of 795 m^3 and a hydraulic capacity of $3773 \text{ m}^3/\text{d}$, rated for a $1273 \text{ m}^3/\text{d}$ treatment capacity with a retention time of 15 hours and an organic loading rate of $0.21 \text{ kg BOD}_5/\text{m}^3/\text{d}$, equipped with fine bubble diffuser system;
 - three (3) positive displacement blowers: two (2) being 40 hp (2250 rpm) and one (1) being 50 hp (2250 rpm), supplying process air to the aeration tanks in the Small and Larger Plants, as well as to the Aerobic Digester;

- Secondary Sedimentation
 - Small Plant: a covered 7.8 m diameter secondary clarifier, complete with access walkway and bridge assembly, equipped with sludge rakes and surface scraper arm, providing a surface overflow rate (SOR) of $1.63 \text{ m}^3/\text{h}/\text{m}^2$ at flow rate of $1864 \text{ m}^3/\text{d}$;
 - returned activated sludge (RAS) returned by an air life pump to the head of the aeration tank of the Small Plant;
 - Large Plant: a covered 11.0 m diameter secondary clarifier, complete with access walkway and bridge assembly, equipped with sludge rakes and surface scraper arm, providing a SOR of $1.63 \text{ m}^3/\text{h}/\text{m}^2$ at flow rate of $3773 \text{ m}^3/\text{d}$;
 - RAS returned by submersible pumps (1 duty, 1 standby, each rated at 3.0 hp) to the head the aeration tank of the Big Plant;
 - wasted activated sludge (WAS) by periodical valve manipulation on RAS return lines of the Small and Large Plants, allowing portion or all of the RAS flow to be re-directed to the common Aerobic Digester;

Disinfection System

- a 2-chamber (operated in series) Chlorine Contact Chamber (CCC), complete with chlorine diffusers, having a working volume of 80.7 m^3 with a contact time of 15 minutes at WWF of $7,728 \text{ m}^3/\text{d}$, and 47 minutes at Rated Capacity of $2,460 \text{ m}^3/\text{d}$;

Final Effluent Flow Measurement and Sampling Point

- an ultrasonic flow monitoring device located upstream of a primary V-notch final effluent weir;
- automatic composite sampler collecting effluent samples from the final effluent v-notch weir;

Sludge Management System

- Sludge Digestion

employing aerobic digestion, including,

 - a covered arcuate Aerobic Digester around the central secondary clarifier in the centre of the Large Plant, having a working volume of 226.5 m^3 , equipped with fine bubble diffusers;
 - a decant pump for supernatant dewatering;

- Biosolids Storage and Disposal
 - sludge from the Aerobic Digester is hauled by vacuum truck to the sludge drying beds at Sully Lake Disposal Site for disposal; and

Final Effluent Disposal Facilities

- a 250 mm diameter effluent sewer approximately 550 m long, discharging from the CCC to the Howey Bay on Red Lake;

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;

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 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. "Bypass" means diversion of sewage around one or more treatment processes, excluding Preliminary Treatment System, within the Sewage Treatment Plant with the diverted sewage flows being returned to the Sewage Treatment Plant treatment train upstream of the Final Effluent sampling point(s) and discharged via the approved effluent disposal facilities;
5. "CBOD5" means five day carbonaceous (nitrification inhibited) biochemical oxygen demand measured in an unfiltered sample;
6. "Combined Sewers" means pipes that collect and convey both wastewater from residential, commercial, institutional and industrial buildings and facilities (including infiltration and inflow) and stormwater runoff through a single-pipe system, but do not include Nominally Separate Sewers;
7. "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;
8. "District Manager" means the District Manager of the appropriate local district office of the Ministry

where the Works is geographically located;

9. "*E. coli* " refers to coliform bacteria that possess the enzyme beta-glucuronidase and are capable of cleaving a fluorogenic or chromogenic substrate with the corresponding release of a fluorogen or chromogen, that produces fluorescence under long wavelength (366 nm) UV light, or color development, respectively. Enumeration methods include tube, membrane filter, or multi-well procedures. Depending on the method selected, incubation temperatures include 35.5 ± 0.5 °C or 44.5 ± 0.2 °C (to enumerate thermotolerant species). Depending on the procedure used, data are reported as either colony forming units (CFU) per 100 mL (for membrane filtration methods) or as most probable number (MPN) per 100 mL (for tube or multi-well methods);
10. "EPA" means the *Environmental Protection Act* , R.S.O. 1990, c.E.19, as amended;
11. "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;
12. "Event" means an action or occurrence, at a given location within the Works that causes a Bypass or Overflow. An Event ends when there is no recurrence of Bypass or Overflow in the 12-hour period following the last Bypass or Overflow. Overflows and Bypasses are separate Events even when they occur concurrently;
13. "Existing Works" means those portions of the Works included in the Approval that have been constructed previously;
14. "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);
15. "Influent" means flows to the Sewage Treatment Plant from the collection system and Imported Sewage but excluding process return flows;
16. "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;
17. "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;
18. "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;
19. "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;
20. "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;

21. "Nominally Separate Sewer Systems" means wastewater collection systems that comprised of Sanitary Sewers and Nominally Separate Sewers while runoff from precipitation and snowmelt are separately collected in Storm Sewers;
22. "Nominally Separate Sewers" means Sanitary Sewers that also have connections from roof leaders and foundation drains, and are not considered to be Combined Sewers;
23. "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;
24. "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;
25. "Overflow" means a discharge to the environment from the Works at designed location(s) other than the approved effluent disposal facilities or via the effluent disposal facilities downstream of the Final Effluent sampling point;
26. "Owner" means The Corporation of the Municipality of Red Lake and its successors and assignees;
27. "OWRA" means the *Ontario Water Resources Act* , R.S.O. 1990, c. O.40, as amended;
28. "Peak Daily Flow Rate" (also referred to as maximum daily flow 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;
29. "Peak Instantaneous Flow Rate" means the instantaneous maximum flow rate as measured by a metering device for which the sewage treatment process unit or equipment is designed to handle;
30. "Preliminary Treatment System" means all facilities in the Sewage Treatment Plant associated with screening and grit removal;
31. "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;
32. "Proposed Works" means those portions of the Works included in the Approval that are under construction or to be constructed;
33. "Rated Capacity" means the Annual Average Daily Influent Flow for which the Sewage Treatment Plant is designed to handle;
34. "Sanitary Sewers" means pipes that collect and convey wastewater from residential, commercial, institutional and industrial buildings, and some infiltration and inflow from extraneous sources such as groundwater and surface runoff through means other than stormwater catch basins;

35. "Secondary Treatment System" means all facilities in the Sewage Treatment Plant associated with biological treatment, secondary sedimentation and phosphorus removal unit processes;
36. "Sewage Treatment Plant" means all the facilities related to sewage treatment within the sewage treatment plant site excluding the Final Effluent disposal facilities;
37. "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;
38. "Storm Sewers" means pipes that collect and convey runoff resulting from precipitation and snowmelt (including infiltration and inflow);
39. "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

1. All Proposed Works in this Approval shall be constructed and installed and must commence operation by December 31, 2031, 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. BYPASSES

1. Any Bypass is prohibited, except:
 - a. an emergency Bypass when a structural, mechanical or electrical failure causes a temporary reduction in the capacity of a treatment process or when an unforeseen flow condition exceeds the design capacity of a treatment process that is likely to result in personal injury, loss of life, health hazard, basement flooding, severe property damage, equipment damage or treatment process upset, if a portion of the flow is not bypassed;
 - b. a planned Bypass that is a direct and unavoidable result of a planned repair and maintenance procedure or other circumstance(s), the Owner having notified the District Manager in writing at least fifteen (15) days prior to the occurrence of Bypass, including an estimated quantity and duration of the Bypass, an assessment of the impact on the quality of the Final Effluent and the mitigation measures if necessary, and the District Manager has given written consent of the Bypass;
 - c. a designed Bypass under the following flow conditions:
 - i. Bypass of secondary treatment system when flow rate to this system exceeds $5,637 \text{ m}^3/\text{d}$.
2. Notwithstanding the exceptions given in Paragraph 1, the Operating Agency shall undertake everything practicable to maximize the flow through the downstream treatment process(es) prior to bypassing.
3. At the beginning of a Bypass Event, the Owner shall immediately notify the Spills Action Centre (SAC) and the local Medical Officer of Health. This notice shall include, at a minimum, the following information:
 - a. the type of the Bypass as indicated in Paragraph 1 and the reason(s) for the Bypass;
 - b. the date and time of the beginning of the Bypass;
 - c. the treatment process(es) gone through prior to the Bypass and the treatment process(es) bypassed;
 - d. the effort(s) done to maximize the flow through the downstream treatment process(es) and the reason(s) why the Bypass was not avoided.
4. Upon confirmation of the end of a Bypass Event, the Owner shall immediately notify the Spills Action Centre (SAC) and the local Medical Officer of Health. This notice shall include, at a minimum, the following information:

- a. the date and time of the end of the Bypass;
 - b. the estimated or measured volume of Bypass.
5. For any Bypass Event, the Owner shall collect daily sample(s) of the Final Effluent, inclusive of the Event and analyze for all effluent parameters outlined in Compliance Limits condition that require composite samples, following the same protocol specified in the Monitoring and Recording condition for the regular samples. The sample(s) shall be in addition to the regular Final Effluent samples required under the monitoring and recording condition. If the Event occurs on a scheduled monitoring day, the regular sampling requirements prevail. If representative sample for the effluent parameter(s) that require grab sample cannot be obtained, they shall be collected after the Event at the earliest time when situation returns to normal.
 6. The Owner shall submit a summary report of the Bypass Event(s) to the District Manager on a quarterly basis, no later than each of the following dates for each calendar year: February 15, May 15, August 15, and November 15. The summary reports shall contain, at a minimum, the types of information set out in Paragraphs (3), (4) and (5) and either a statement of compliance or a summary of the non-compliance notifications submitted as required under Paragraph 1 of Condition 11. If there is no Bypass Event during a quarter, a statement of no occurrence of Bypass is deemed sufficient.
 7. The Owner shall develop a notification procedure in consultation with the District Manager and SAC and notify the public and downstream water users that may be adversely impacted by any Bypass Event.

5. OVERFLOWS

1. Any Overflow is prohibited, except:
 - a. an emergency Overflow in an emergency situation when a structural, mechanical or electrical failure causes a temporary reduction in the capacity of the Works or when an unforeseen flow condition exceeds the design capacity of the Works that is likely to result in personal injury, loss of life, health hazard, basement flooding, severe property damage, equipment damage or treatment process upset, if a portion of the flow is not overflowed;
 - b. a planned Overflow that is a direct and unavoidable result of a planned repair and maintenance procedure or other circumstance(s), the Owner having notified the District Manager in writing at least fifteen (15) days prior to the occurrence of Overflow, including an estimated quantity and duration of the Overflow, an assessment of the impact on the environment and the mitigation measures if necessary, and the District Manager has given written consent of the Overflow;
2. Notwithstanding the exceptions given in Paragraph 1, the Operating Agency shall undertake everything practicable to maximize the flow through the downstream treatment process(es) and Bypass(es) prior to overflowing.
3. At the beginning of an Overflow Event, the Owner shall immediately notify the Spills Action Centre (SAC) and the local Medical Officer of Health. This notice shall include, at a minimum, the following

information:

- a. the type of the Overflow as indicated in Paragraph 1 and the reason(s) for the Overflow;
 - b. the date and time of the beginning of the Overflow;
 - c. the point of the Overflow from the Works, the treatment process(es) gone through prior to the Overflow, the disinfection status of the Overflow and whether the Overflow is discharged through the effluent disposal facilities or an alternate location;
 - d. the effort(s) done to maximize the flow through the downstream treatment process(es) and Bypass(es) and the reason(s) why the Overflow was not avoided.
4. Upon confirmation of the end of an Overflow Event, the Owner shall immediately notify the Spills Action Centre (SAC) and the local Medical Officer of Health. This notice shall include, at a minimum, the following information:
- a. the date and time of the end of the Overflow;
 - b. the estimated or measured volume of the Overflow.
5. For any Overflow Event
- a. in the Sewage Treatment Plant, the Owner shall collect grab sample(s) of the Overflow, one near the beginning of the Event and one every eight (8) hours for the duration of the Event, and have them analyzed at least for CBOD5, total suspended solids, total phosphorus, total ammonia nitrogen, nitrate as N, nitrite as N, total Kjeldahl nitrogen, and *E. coli.* , except that raw sewage and primary treated effluent Overflow shall be analyzed for BOD5, total suspended solids, total phosphorus and total Kjeldahl nitrogen only.
6. The Owner shall submit a summary report of the Overflow Event(s) to the District Manager on a quarterly basis, no later than each of the following dates for each calendar year: February 15, May 15, August 15, and November 15. The summary report shall contain, at a minimum, the types of information set out in Paragraphs (3), (4) and (5). If there is no Overflow Event during a quarter, a statement of no occurrence of Overflow is deemed sufficient.
7. The Owner shall develop a notification procedure in consultation with the District Manager and SAC and notify the public and downstream water users that may be adversely impacted by any Overflow Event.

6. DESIGN OBJECTIVES

1. The Owner shall design and undertake everything practicable to operate the Sewage Treatment Plant in accordance with the following objectives:

- a. Final Effluent parameters design objectives listed in the table(s) included in Schedule B.
- b. Final Effluent 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 discolouration on the receiving waters.
- c. As of January 1, 2021, Total Residual Chlorine (TRC) in the Final Effluent shall be non-detectable as measured by a method with a sensitivity of at least 0.02 mg/L. Normal operation of de-chlorination equipment should provide for proper doses of reagents to ensure that total chlorine residuals are not detected, and dissolved oxygen in Final Effluent is not depleted.
- d. Annual Average Daily Influent Flow is within the Rated Capacity of the Sewage Treatment Plant.

7. 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.
- 2. Upon commissioning of the Proposed Work, the Owner shall operate and maintain the Sewage Treatment Plant such that the Final Effluent is disinfected continuously year-round.

8. 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 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, 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.

9. 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. definitions and preparation requirements for each sample type are included in document referenced in Paragraph 3.b.
 - c. definitions for frequency:
 - i. Weekly means once every week;
 - ii. Quarterly means once every three months; and
 - iii. 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.
- 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, and analyze for all effluent parameters outlined in Compliance Limits condition that require composite samples, following the same protocol specified in this condition for the regular samples. If

the Event occurs on a scheduled monitoring day, the regular sampling requirements prevail. If representative sample for the effluent parameter(s) that require grab sample cannot be obtained, they shall be collected after the Event at the earliest time when situation returns to normal.

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.
 - d. the Environment Canada publications "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout" (EPS 1/RM/13 Second Edition - December 2000) and "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to *Daphnia magna* " (EPS 1/RM/14 Second Edition - December 2000), as amended, subject to the following:
 - i. the use of pH stabilization in the determination of acute lethality of Final Effluent to Rainbow Trout in accordance with the Environment Canada publication "Procedure for pH Stabilization during the Testing of Acute Lethality of Wastewater Effluent to Rainbow Trout (EPS 1/RM/50)" (2008), as amended, is permitted only if:
 - a. all the three criteria stipulated in the Environment Canada EPS 1/RM/50 are met; and
 - b. the Final Effluent is not discharged to a receiver in which the Final Effluent contributes more than 50% of the total flow in the receiving water, unless the District Manager, having reviewed additional information submitted regarding the Final Effluent and the receiving water approves on the use of RM50 on a site-specific basis.
4. The minimum monitoring frequency with respect to acute lethality to Rainbow Trout and *Daphnia magna* shall, after eight (8) consecutive quarters of monitoring results not indicating acute lethality, be reduced to annually. If any Final Effluent sample indicates acute lethality to Rainbow Trout or *Daphnia magna*, the monitoring frequency shall revert back to quarterly and the Owner shall carry out the following immediately:
 - a. Review the following:
 - i. Final Effluent quality and confirm that concentrations of ammonia are within the limits;
 - ii. plant operations around the time of the toxicity event; and
 - iii. all data available regarding plant operations and Final Effluent quality.

- b. If the observed effluent toxicity is not associated with ammonia, an investigation shall be undertaken to determine the cause or source of the toxicity.
 - c. Upon determination of cause or source of acute lethality to Rainbow Trout and *Daphnia magna*, the Owner shall determine appropriate control measures to achieve non-acutely lethal effluent and time lines for the implementation of identified control measures. The Owner shall submit the proposed control measures and implementation time lines for approval to the District Manager.
5. 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 flow rate of the following:
- a. Influent flow to the Sewage Treatment Plant by continuous flow measuring devices and instrumentations/pumping rates/details of other methods (e.g. top water elevation of lagoons), or in lieu of an actual installation of equipment, adopt the flow measurements of the Final Effluent for the purpose of estimating Influent flows if the Influent and Final Effluent streams are considered not significantly different in flow rates and quantities; and
 - b. Final Effluent discharged from the Sewage Treatment Plant by continuous flow measuring devices and instrumentations/pumping rates/details of other methods (e.g. level of lagoons), or in lieu of an actual installation of equipment, adopt the flow measurements of the Influent for the purpose of estimating Final Effluent flows if the Influent and Final Effluent streams are considered not significantly different in flow rates and quantities.
6. 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.

10. 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 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.

11. 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 Final Effluent monitoring data, including concentration, flow rates, loading and a comparison to the design objectives and compliance limits in this Approval, including an overview of the success and adequacy of the Works;

- c. a summary of all operating issues encountered and corrective actions taken;
- d. 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;
- e. a summary of any effluent quality assurance or control measures undertaken;
- f. a summary of the calibration and maintenance carried out on all Influent, ~~Imported Sewage~~ 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;
- g. 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 if any are required under the following situations:
 - i. 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;
 - ii. when the Annual Average Daily Influent Flow reaches 80% of the Rated Capacity;
- h. 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;
- 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 10, 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.
- n. a summary of any deviation from the monitoring schedule and reasons for the current reporting year and a schedule for the next reporting year;

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 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 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 Bypasses is included to indicate that Bypass is prohibited, except in circumstances where the failure to Bypass could result in greater damage to the environment than the Bypass itself. The notification and documentation requirements allow the Ministry to take action in an informed manner and will ensure the Owner is aware of the extent and frequency of Bypass Events.
5. Condition 5 regarding Overflows is included to indicate that Overflow of untreated or partially treated sewage to the receiver is prohibited, except in circumstances where the failure to Overflow could result in greater damage to the environment than the Overflow itself. The notification and documentation requirements allow the Ministry to take action in an informed manner and will ensure the Owner is aware of the extent and frequency of Overflow Events.
6. Condition 6 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.
7. Condition 7 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.
8. Condition 8 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.
9. Condition 9 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.

10. Condition 10 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.
11. Condition 11 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 submitted by Todd Olson of The Corporation of the Municipality of Red Lake received on April 7, 2020 for the proposed establishment of supplementary treatment systems (phosphorus removal and alkalinity adjustment) and a dechlorination system, and alteration to the disinfection system (changing gas chlorine to sodium hypochlorite solution), including design report, final plans and specifications, prepared by R. V. Anderson Associates Ltd. for the Red Lake Water Pollution Control Plant.

Schedule B

Final Effluent Design Objectives

Concentration Objectives prior to completion of construction of all Proposed Works

Final Effluent Parameter	Averaging Calculator	Objective (milligrams per litre unless otherwise indicated)
CBOD5	Monthly Average Effluent Concentration	15 mg/L
Total Suspended Solids	Monthly Average Effluent Concentration	15 mg/L
Total Ammonia Nitrogen	Monthly Average Effluent Concentration	5 mg/L
<i>E. coli</i>	Monthly Geometric Mean Density	*150 CFU/100 mL (as of January 1, 2021)
Total Residual Chlorine**	Single Sample Result	Non-detectable (as of January 1, 2021)

*If the MPN method is utilized for *E. coli* analysis the objective shall be 150 MPN/100 mL (150 should match table value above)

**Total Residual Chlorine shall be non-detectable as measured by a method with a sensitivity of at least 0.02 mg/L

Concentration Objectives upon completion of construction of all Proposed Works

Final Effluent Parameter	Averaging Calculator	Objective
CBOD5	Monthly Average Effluent Concentration	15 mg/L
Total Suspended Solids	Monthly Average Effluent Concentration	15 mg/L
Total Phosphorus	Monthly Average Effluent Concentration	0.5 mg/L
Total Ammonia Nitrogen	Monthly Average Effluent Concentration	5 mg/L
<i>E. coli</i>	Monthly Geometric Mean Density	*150 CFU/100 mL
pH	Single Sample Result	6.5 - 8.5 inclusive
Toxicity to Rainbow Trout and <i>Daphnia magna</i>	Single Sample Result	Non-acutely lethal
Total Residual Chlorine**	Single Sample Result	Non-detectable

*If the MPN method is utilized for *E. coli* analysis the objective shall be 150 MPN/100 mL (150 should match table value above)

**Total Residual Chlorine shall be non-detectable as measured by a method with a sensitivity of at least 0.02 mg/L

Schedule C

Final Effluent Compliance Limits

Concentration Limits prior to completion of construction of all Proposed Works

Final Effluent Parameter	Averaging Calculator	Limit (maximum unless otherwise indicated)
CBOD5	Monthly/Annual/Seasonal Average Effluent Concentration	25 mg/L
Total Suspended Solids	Monthly/Annual/Seasonal Average Effluent Concentration	25 mg/L
Total Ammonia Nitrogen	Monthly Average Effluent Concentration	10 mg/L
<i>E. coli</i>	Monthly Geometric Mean Density	*200 CFU/100 mL (as of January 1, 2021)
Toxicity to Rainbow Trout and <i>Daphnia magna</i>	Single Sample Result	Non-acutely lethal (no more than 50% mortality) (as of January 1, 2021)
Total Residual Chlorine	Single Sample Result	0.02 mg/L** (as of January 1, 2021)

*If the MPN method is utilized for *E. coli* analysis the limit shall be 200 MPN/100 mL
(200 should match table value above)

**If continuous analyzer is used for monitoring of Total Residual Chlorine, reading shall be recorded at a minimum frequency of every 5 minutes and any record is not to exceed 0.1 mg/L and any two-hour moving average is not to exceed 0.02 mg/L

Concentration Limits upon completion of construction of all Proposed Works

Final Effluent Parameter	Averaging Calculator	Limit (maximum unless otherwise indicated)
CBOD5	Monthly Average Effluent Concentration	25 mg/L
Total Suspended Solids	Monthly Average Effluent Concentration	25 mg/L
Total Phosphorus	Monthly Average Effluent Concentration	1.0 mg/L
Total Ammonia Nitrogen	Monthly Average Effluent Concentration	10 mg/L
<i>E. coli</i>	Monthly Geometric Mean Density	*200 CFU/100 mL
pH	Single Sample Result	between 6.0 - 9.5 inclusive
Toxicity to Rainbow Trout and <i>Daphnia magna</i>	Single Sample Result	Non-acutely lethal (no more than 50% mortality)
Total Residual Chlorine	Single Sample Result	0.02 mg/L**

*If the MPN method is utilized for *E. coli* analysis the limit shall be 200 MPN/100 mL
(200 should match table value above)

**If continuous analyzer is used for monitoring of Total Residual Chlorine, reading shall be recorded at a minimum frequency of every 5 minutes and any record is not to exceed 0.1 mg/L and any two-hour moving average is not to exceed 0.02 mg/L

Schedule D

Monitoring Program

Influent - Influent sampling point

Parameters	Sample Type	Minimum Frequency
BOD5	24 hour composite	Weekly
Total Suspended Solids	24 hour composite	Weekly
Total Phosphorus	24 hour composite	Weekly
Total Kjeldahl Nitrogen	24 hour composite	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 Ammonia Nitrogen	24 hour composite	Weekly
Total Kjeldahl Nitrogen	24 hour composite	Weekly
Nitrate as Nitrogen	24 hour composite	Weekly
Nitrite as Nitrogen	24 hour composite	Weekly
<i>E. coli</i>	Grab	Weekly
Total Residual Chlorine	Grab/Analyzer	Weekly
Acute Lethality to Rainbow Trout and <i>Daphnia magna</i>	Grab	Quarterly ***
Dissolved Oxygen	Grab/Probe/Analyzer	Weekly
pH*	Grab/Probe/Analyzer	Weekly
Temperature*	Grab/Probe/Analyzer	Weekly
Un-ionized Ammonia**	As Calculated	Weekly

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

**The concentration of un-ionized ammonia shall be calculated using the total ammonia concentration, pH and temperature using the methodology stipulated in "Ontario's Provincial Water Quality Objectives" dated July 1994, as amended.

*** monitoring frequency subject to change per Paragraph 4 under Condition 9.

Sludge/Biosolids – holding tank/truck loading bay

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

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.



Ontario

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.

Part 1 – Environmental Compliance Approval (ECA) with Limited Operational Flexibility		
<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

Part 2: Description of the modifications as part of the Limited Operational Flexibility
<i>(Attach a detailed description of the sewage works)</i>
Description shall include: 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.) 2. Confirmation that the anticipated environmental effects are negligible. 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.)

Part 3 – Declaration by Professional Engineer	
I hereby declare that I have verified the scope and technical aspects of this modification and confirm that the design: 1. Has been prepared or reviewed by a Professional Engineer who is licensed to practice in the Province of Ontario; 2. Has been designed in accordance with the Limited Operational Flexibility as described in the ECA; 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. I hereby declare that to the best of my knowledge, information and belief the information contained in this form is complete and accurate	
Name (Print)	PEIO License Number
Signature	Date (mm/dd/yy)
Name of Employer	

Part 4 – Declaration by Owner	
I hereby declare that: 1. I am authorized by the Owner to complete this Declaration; 2. The Owner consents to the modification; and 3. This modifications to the sewage works are proposed in accordance with the Limited Operational Flexibility as described in the ECA. 4. The Owner has fulfilled all applicable requirements of the <i>Environmental Assessment Act</i>. I hereby declare that to the best of my knowledge, information and belief the information contained in this form is complete and accurate	
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 Monthly Average Effluent Concentration, Annual Average Effluent Concentration and Monthly Geometric Mean Density

1. Monthly 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 month and proceed as follows depending on the result of the calculation:
- If the arithmetic mean does not exceed the compliance limit for the contaminant, then report and use this arithmetic mean as the Monthly Average Effluent Concentration for this parameter where applicable in this Approval;
 - If the arithmetic mean exceeds the compliance limit for the contaminant and there was no Bypass Event during the calendar month, then report and use this arithmetic mean as the Monthly Average Effluent Concentration for this parameter where applicable in this Approval;
 - If the arithmetic mean exceeds the compliance limit for the contaminant and there was Bypass Event(s) during the calendar month, then proceed to Step 2;
 - If the arithmetic mean does not exceed the compliance limit for the contaminant and there was Bypass Event(s) during the calendar month, 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 month and proceed depending on the result of the calculation:
- Group No Bypass Days (**NBPD**) data and Bypass Days (**BPD**) data during a calendar month separately;
 - 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 month and record it as **Monthly Average NBPD Effluent Concentration**;
 - Obtain the “**Total Monthly NBPD Flow**” which is the total amount of Final Effluent discharged on all NBPD during the calendar month;
 - 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 month and record it as **Monthly Average BPD Effluent Concentration**;

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

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

It should be noted that in this method, if there are no Bypass Event for the month, 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 Monthly Average Effluent Concentration for this parameter where applicable in this Approval.

2. 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:

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

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.

3. Monthly Geometric Mean Density

Geometric mean is defined as the n^{th} root of the product of n numbers. In the context of calculating Monthly Geometric Mean Density for *E. coli*, the following formula shall be used:

$$\sqrt[n]{x_1 x_2 x_3 \cdots x_n}$$

in which,

" n " is the number of samples collected during the calendar month; and

" x " is the value of each Single Sample Result.

For example, four weekly grab samples were collected and tested for *E. coli* during the calendar month. The *E. coli* densities in the Final Effluent were found below:

Sample Number	<i>E. coli</i> Densities* (CFU/100 mL)
1	10
2	100
3	300
4	50

The Geometric Mean Density for these data:

$$\sqrt[4]{10 \times 100 \times 300 \times 50} = 62$$

*If a particular result is zero (0), then a value of one (1) will be substituted into the calculation of the Monthly Geometric Mean Density. If the MPN method is utilized for *E. coli* analysis, values in the table shall be MPN/100 mL.

Schedule G

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.)



Ministry of the
Environment,
Conservation and Parks

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)		☐ New Profile ☐ Update Existing Profile		
Name of System		Level of Treatment (select one*) ☐ Primary ☐ Secondary ☐ Tertiary ☐ Secondary Equivalent ☐ Other (specify): *See Terms and Concepts on page 4		
Name of Municipality or Local Services Board				
Population Served	Population (Design)	Type of System ☐ Treatment & Collection System ☐ 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 %)				
☐ Sanitary Sewer ☐ Combined Sewer				
☐ Nominally Separated Sewer ☐ Partially Separated Sewer *See Terms and Concepts on page 4				
[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	
☐ Dr ☐ Miss ☐ Mr ☐ Mrs ☐ 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	
☐ Dr ☐ Miss ☐ Mr ☐ Mrs ☐ Ms	Operator Contact First Name		Operator Contact Last Name	Operator Contact Job Title
Tel. No. () - ext.	Fax Number () -		Email address	

[D] 24/7 CONTACT					
☐ Dr ☐ Miss ☒ Mr ☐ Mrs ☐ Ms		First Name	Last Name	Job Title	
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	
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
☐ Screening ☐ Shredding/ grinding ☐ Grit Removal ☐ Other(specify):	☐ Settling/sedimentation/ clarification ☐ Scum Removal ☐ Polymer Addition ☐ Other(specify):	☐ Conventional Activated Sludge (CAS) ☐ Extended Aeration ☐ Membrane Bioreactor (MBR) ☐ Sequencing Batch Reactor (SBR) ☐ Rotating Biological Contactor (RBC) ☐ Trickling Filter (TF) ☐ Biological Aerated Filter (BAF) ☐ Other(specify):	☐ Aerated Lagoon ☐ Facultative Lagoon ☐ Anaerobic Lagoon ☐ Aerobic Lagoon ☐ Other(specify):	☐ Filtration ☐ Clarification ☐ Intermittent Sand Filter (after lagoons) ☐ Polishing Wetlands ☐ Polishing Lagoons ☐ Other(specify):	☐ Phosphorous Removal ☐ Biological ☐ Chemical If chemical is used, specify: ☐ Nitrification ☐ Denitrification ☐ Other(specify):
[G] DISINFECTION					
Method of Disinfection			Disinfection Period		
☐ Chlorination If you chlorinate, do you practice de-chlorination? ☐ Yes ☐ No			☐ Continuous ☐ Seasonal		
☐ Ultraviolet Irradiation			☐ Continuous ☐ Seasonal		
☐ Other (specify):			☐ Continuous ☐ Seasonal		

[H] SLUDGE	
Sludge Stabilization Process	Method of Sludge Disposal/Utilization
☐ Aerobic Digestion	☐ Agricultural
☐ Anaerobic Digestion	☐ Landfill
☐ Drying & Pelletization	☐ Incineration
☐ Lime Treatment	☐ Other (specify):
☐ Composting	
☐ Other (specify):	
Available Sludge Storage Capacity (m ³):	
[I] EFFLUENT	
Effluent Disposal Method	Effluent Discharge Frequency
☐ Surface Water Receiving Water Body Name:	☐ Continuous ☐ Seasonal
☐ Subsurface	☐ Continuous ☐ Seasonal
☐ Other (specify):	☐ Continuous ☐ 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 m ³):
	☐ Septage (approximate annual volume in m ³):
	☐ Industrial input (approximate annual volume in m ³):
	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). 3803-BTFLQ3 issued on December 22, 2020

In accordance with Section 139 of the *Environmental Protection Act*, you may by written notice served upon me and the Ontario Land Tribunal within 15 days after receipt of this notice, require a hearing by the Tribunal. 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 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

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 April, 2026



Aziz Ahmed, P.Eng.
Director

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

AA/

c: Area Manager, MECP Kenora

c: District Manager, DWECD, MECP Thunder Bay - District
Ministry initiated, The Corporation of the Municipality of Red Lake