APPROVAL TO OPERATE

S-3374

Pursuant to paragraph 8(1) of the *Water Quality Regulation - Clean Environment Act,* this Approval to Operate is hereby issued to:

Greater Moncton Wastewater Commission
for the operation of the
Wastewater Works - TransAqua

Description of Source:	**This Approval covers the discharge of effluent from the locations contained in the Federal Effluent Regulatory Reporting Information System for the following system.** Biological Treatment WWC: Class II WWT: Class IV
Mailing Address:	**355 Hillsborough Road** **Riverview, NB** **E1B 1S5**
Conditions of Approval:	**See attached Schedules "A" & "B" of this Approval**
Supersedes Approval:	**S-3159**
Valid From:	**January 1st, 2021**
Valid To:	**December 31, 2025**

Recommended by: _____

Issued by: _____ December 18, 2020
for the Minister of Environment and Climate Change — Date

SCHEDULE "A"

A. DEFINITIONS

1. **"Accredited"** means accreditation to ISO/IEC 17025 by the Standards Council of Canada (SCC), the Canadian Association for Laboratory Accreditation Inc. (CALA), or accreditation to ISO/IEC 17025:2005 from another body that is recognized to grant such accreditation per ISO/IEC 17011 criteria.

2. **"Acutely Lethal"** means that the effluent at 100% concentration kills, during a 96-hour period, more than 50% of the rainbow trout subjected to it.

3. **"Approval Holder"** means the name listed on the Certificate page of this Approval.

4. **"Authorization Officer"** means the Manager of the Permitting North Section of the Department of Environment and Local Government, and includes any person designated to act on the Manager's behalf.

5. **"Average Daily Volume"** means a calculation of the sum of the daily volumes of influent or effluent and dividing that sum by the number of days in that calendar year.

6. **"CBOD"** or **"Carbonaceous Biochemical Oxygen Demanding Matter"** means the carbonaceous matter that consumes, by biochemical oxidation, oxygen dissolved in water.

7. **"Certified"** means a valid certificate of qualification that states the class of the *Operator* issued by the Minister of the New Brunswick Department of Post-Secondary Education, Training and Labour.

8. **"Deleterious Substances"** means the following substances or classes of substances: carbonaceous biochemical oxygen demanding matter, suspended solids, total chlorine, and un-ionized ammonia.

9. **"Environmental Emergency"** means a situation where there has been or will be an unauthorized wastewater deposit at a location other than at the *Final Discharge Point* and/or unplanned bypasses of at least one of the treatment processes normally applied to wastewater in the system. Unauthorized deposits include wastewater overflows that are the result of excessive rainfall or snowmelt.

10. **"ERRIS"** or **"Effluent Regulatory Reporting Information System"** means the web based application developed by Environment and Climate Change Canada to facilitate the reporting of information as required under Regulations.

11. **"Final Discharge Point"** means the point, other than an *Overflow Point*, of a wastewater works beyond which the *Approval Holder* or operator no longer exercises control over the quality of the wastewater before it is deposited as effluent to the environment.

12. **"Lagoon"** means a wastewater treatment facility where the average period during which wastewater is retained for treatment within the wastewater system is five days or more.

13. **"Operator"** means a person who directs, adjusts, inspects, tests or evaluates an operation or process that controls the effectiveness or efficiency of the wastewater works.

14. **"Overflow Point"** means a point of a wastewater work via which excess wastewater may be deposited in the environment and beyond which the *Approval Holder* or operator no longer exercises control over the quality of wastewater before it is deposited as effluent.

15. **"Point of Entry"** means any point where effluent is deposited in water frequented by fish via the *Final Discharge Point* or an *Overflow Point*.

16. **"Quarter"** in respect of a year, means any of the four periods of three months that begin on the first day of January, April, July and October.

17. **"Suspended Solids"** means any solid matter contained in effluent that is retained on a filter of 2.0 micrometre (μm) or smaller pore size.

18. **"Total Residual Chlorine"** means the sum of free chlorine and combined chlorine, including inorganic chloramines.

B. TERMS AND CONDITIONS

EMERGENCY REPORTING

19. **Immediately** following the discovery of an *Environmental Emergency*, a designate representing the *Approval Holder* shall notify the Environment and Climate Change Canada's National Environmental Emergencies Centre (NEEC) **until personal contact is made** and provide all information, such as: location in latitude and longitudes, flow, time and a brief description known about the *Environmental Emergency*.

    The telephone number for the **Environment and Climate Change Canada's NEEC** is **1-800-565-1633**.

20. **Within five (5) days** of the time of initial notification, a copy of a Detailed Emergency Report shall be e-mailed or faxed to the Wastewater Approvals Coordinator or Engineer responsible for the regulation of the *Approval Holder*'s wastewater works. The Detailed Emergency Report shall include, as a minimum, the following: i) a description of the problem that occurred; ii) a description of the impact that occurred; iii) a description of what was done to minimize the impact; and iv) a description of what was done to prevent recurrence of the problem.

TEMPORARY BYPASS AUTHORIZATION

21. The *Approval Holder* shall apply to the *Authorization Officer* for a temporary authorization to bypass at least one of the treatment processes normally applied to wastewater in the system. An application **must be made at least 45 days before the day** on which the bypass is required, in the form and format provided in the *ERRIS*.

EFFLUENT PERFORMANCE STANDARDS

22. The *Approval Holder* shall ensure that the average concentration of contaminants in the effluent deposited via the *Final Discharge Point* of the wastewater works does not exceed the following limiting criteria. The average must be calculated by using the applicable calculating period listed in Condition 28:

    i. *$CBOD_5$*: 25 mg of $CBOD_5$/L (average); and,
    ii. *Suspended Solids*: 25 mg/L (average).

23. For a *Lagoon*, the *Approval Holder*, in the determination of the average referred to in Condition 22 is not to take into account the result of any determination of the concentration of *Suspended Solids* in a sample of effluent referred to in Condition 28 that was taken during the month of July, August, September or October, if that result was greater than 25 mg/L.

24. The *Approval Holder* shall **immediately** apply to the *Authorization Officer*, in the form and format specified by the *ERRIS* if any samples of the effluent deposited via the *Final Discharge Point* contain a calculated concentration of un-ionized ammonia that is greater than or equal to 1.25 mg/L, expressed as nitrogen (N) at 15°C ± 1°C.

25. For systems that the *Average Daily Volume* of effluent calculated in Condition 26 is greater than or equal to 5,000 m^3, the *Approval Holder* shall ensure the average concentration of *Total Residual Chlorine* in the effluent deposited via the *Final Discharge Point* does not exceed 0.02 mg/L if chlorine, or one of its compounds, was used in the treatment of wastewater. For all other systems, where the *Average Daily Volume* of effluent calculated in Condition 26 is less than 5,000 m^3, the *Approval Holder* shall ensure the average concentration of *Total Residual Chlorine* in the effluent deposited via the *Final Discharge Point* does not exceed 0.02 mg/L **by January 1st, 2021,** if chlorine, or one of its compounds, was used in the treatment of wastewater.

MONITORING AND SAMPLING

Pursuant to Section 17 of the *Water Quality Regulation*, this Approval is subject to the following conditions:

26. The *Approval Holder* shall, for each calendar year, calculate and record the *Average Daily Volume* of effluent deposited via the *Final Discharge Point*. The volume of effluent during each day must be determined by using monitoring equipment that provides:
    i. A continuous measure of the volume of influent or effluent or a measure of the rate of flow of the influent or effluent upon which that daily volume of effluent may be estimated; or,
    ii. A continuous measure of the volume of influent or effluent if the *Average Daily Volume* measured during the previous calendar year is greater than 2,500 m^3.

27. The *Approval Holder* shall collect monitoring samples for the following parameters in accordance with the requirements of Condition 28.
    i. The concentration of *CBOD*; and,
    ii. The concentration of *Suspended Solid.*

28. The *Approval Holder* shall collect monitoring samples at the *Final Discharge Point* of the type and at the frequency indicated below based on the *Average Daily Volume* of effluent calculated in Condition 26:

Average Daily Volume **(m^3)**	**Treatment Type**	**Type of Sample to be Taken**	**Monitoring Frequency**	**Calculating Period[1]**	**Reporting Frequency**
less than 2,500	*Lagoon*	Grab or composite	Quarterly, but at least 60 days after any other sample	Annual	Annual
	Mechanical	Grab or composite	Monthly, but at least 10 days after any other sample	Quarterly	Quarterly
greater than 2,500 but less than or equal to 17,500	*Lagoon*	Grab or Composite	Every two weeks, but at least seven days after any other sample	Quarterly	Quarterly
	Mechanical	Composite			
greater than 17,500 but less than or equal to 50,000	*Lagoon*	Grab or Composite	Weekly, but at least five days after any other sample	Monthly	Quarterly
	Mechanical	Composite			
Greater than 50,000	*Lagoon*	Grab or Composite	Three days per week, but at least one day after any other sample	Monthly	Quarterly
	Mechanical	Composite			

[1]The average must be determined for *CBOD* and *Suspended Solids*

29. The *Approval Holder* shall collect a grab sample at the *Final Discharge Point* for *Acutely Lethal* Toxicity at the frequency indicated below based on the *Average Daily Volume* of effluent calculated in Condition 26:

Average Daily Volume (m^3)	**Minimum Sampling Frequency**
less than or equal to 2,500	n/a
greater than 2,500 but less than or equal to50,000	Quarterly [1]
greater to 50,000	Monthly[2]

[1]At least 60 days after any other sample
[2]At least 21 days after any other sample

30. If a sample is determined to be *Acutely Lethal* at the system's *Final Discharge Point*, the *Approval Holder* shall **immediately** contact the *Authorization Officer*.

31. If the *Final Discharge Point* results are determined not *Acutely Lethal* in accordance to Condition 32, the *Approval Holder* may follow the reduced frequency indicated below, based on the *Average Daily Volume* of effluent calculated in Condition 26:

Average Daily Volume (m^3)	**Number of Tests Not Acutely Lethal**	**Reduced Frequency**[1]
less than or equal to 2,500	n/a	n/a
greater than 2,500 but less than or equal to50,000	4 consecutive quarters	Yearly[2]
greater than 50,000	12 consecutive months	Quarterly[3]

[1] Reduced frequency if numbers of consecutive tests of column 2 of table are passed
[2] At least 6 months after any other sample
[3] At least 60 days after any other sample

32. The *Approval Holder* shall ensure the *Acute Lethality* of the effluent be determined in accordance with Reference Method EPS 1/RM/13 or EPS 1/RM/50.

33. The *Approval Holder* shall ensure that the Effluent Monitoring Plan, based on the wastewater works' Environmental Risk Assessment, is approved by the *Authorization Officer*. The *Approval Holder* shall follow the monitoring requirements outlined in the approved Effluent Monitoring Plan.

34. The *Approval Holder* shall calibrate the flow monitoring equipment at least once in every calendar year and at least five months after a previous calibration.

35. The *Approval Holder* shall ensure that the monitoring equipment is capable to determine the volume or rate of flow with a margin of error of ±15%.

36. The *Approval Holder* shall ensure that all samples are collected using the methods described in the latest edition of the ISO 5667-10, Water quality - Sampling - Part 10: Guidance on sampling of waste waters.

37. The *Approval Holder* shall ensure that all parameters that are required to be analysed by this Approval, are analysed by *Accredited* laboratories whose accreditation includes the analytical method used to make the determination.

38. The *Approval Holder* shall ensure that all equipment used for monitoring parameters required by this Approval is calibrated in accordance with manufacturer's recommendations.

OVERFLOW MANAGEMENT

39. The *Approval Holder* shall maintain a long-term plan to reduce combined sewer overflows and reduce overflows from infiltration. The plan must follow, as a minimum, the *Authorization Officer's* CSO/SSO Long-Term Control Plan Guidelines.

40. The *Approval Holder* shall ensure that all lift stations are designed to prevent the release of floatable materials.

OPERATOR CERTIFICATION

41. Pursuant to Section 19 of the *Water Quality Regulation*, the Minister gives notice that the *Approval Holder* shall employ and have available the following *Certified Operators* based on the Class of the wastewater works listed on the Certificate page of this Approval:

Treatment Class	**Wastewater Treatment (WWT) *Certified Operator***	**Collection Class**	**Wastewater Collection (WWC) *Certified Operator***
I	Minimum one Class I	I	None
II	Minimum one Class II and one Class I	II	One Class I
III	Minimum one Class III and one Class II	III	One Class I
IV	Minimum one Class IV and one Class III	IV	One Class I

RECORD KEEPING

Pursuant to Section 17 of the *Water Quality Regulation*, this Approval is subject to the following conditions:

42. The *Approval Holder* shall record and retain for a period of five (5) years the following information and make it available to the *Authorization Officer* upon request:
    a. The date of each day when wastewater effluent was not discharged via the *Final Discharge Point* (if applicable);
    b. For those days when effluent was deposited via the *Final Discharge Point:*
        i. the daily volume deposited, in m^3, if that volume is yielded by a continuous measure, or
        ii. the estimated daily volume deposited, in m^3, in any other case, and the results of the calculation and measurement used in the estimation, as outlined in Condition 26(i);
    c. For all discharges from each *Overflow Point,* including those that were directly caused by excessive rain or snow melt:
        i. the date of each day on which effluent was deposited via the *Overflow Point*,
        ii. for each of those days, the duration or estimated duration, expressed in hours, of the deposit, along with an indication of whether it is the duration or an estimated duration,
        iii. the daily volume deposited in m^3 if that volume is yielded by a continuous measure, or an estimate of the daily volume, in m^3 in any other case;
    d. For all monitoring equipment used to determine the volume or rate of flow:
        i. A description, including the type,
        ii. The manufacturer's specifications, the year of manufacture and the model number,
        iii. the date on which the equipment was calibrated and its degree of accuracy after each calibration,
        iv. The date the equipment was installed and if applicable, the date on which it ceased to be used for monitoring and on which it was replaced;
    e. For each monitoring sample determination required by Condition 28, as well as any additional sample determinations made by an *Accredited* laboratory:
        i. the results of such determinations for each of the parameters listed in Condition 27 and Condition 29 (if applicable),
        ii. a statement as to whether the sample is a grab sample or a composite sample and the date on which the sample was taken;
    f. All monitoring sample results for each parameter taken as part of the Effluent Monitoring Plan;
    g. All monitoring sample results required by Schedule "B", if applicable; and,
    h. A list identifying the *Operator(s)* and indicating the certification level of each *Operator(s).*

REPORTING

Pursuant to Section 17 of the *Water Quality Regulation*, this Approval is subject to the following conditions:

43. If the information provided in the *ERRIS* identification report changes, the *Approval Holder* shall send a notice that provides the updated information to the *Authorization Officer* no later than **45 days after the change**.

44. The *Approval Holder* shall submit electronically to the *Authorization Officer*, in the form and format specified by the *ERRIS*, a report for the previous reporting period:
    i. **within 45 days of the end of each year**, with the period starting on the first day of January each year, for a *Lagoon* with an *Average Daily Volume* of effluent less than 2,500 m^3/d;
    ii. **within 45 days of the end of each *quarter***, with the first *quarter* starting on the first day of January each year, for all other wastewater works.

    The report must summarize the following:
    a. The number of days during which effluent was deposited;
    b. The volume of effluent that was deposited, expressed in m^3;
    c. The average *CBOD* due to the quantity of *CBOD* matter in the effluent;
    d. The average concentration of *Suspended Solids* in the effluent;
    e. The results of the *Acutely Lethal* toxicity tests; and,
    f. If a temporary bypass authorization was issued.

45. The *Approval Holder* shall submit to the *Authorization Officer* **within 45 days of the end of each year**:
    a. All test results completed as part of the approval Effluent Monitoring Plan required in Condition 33;
    b. A summary report of *Environmental Emergencies* that were reported through the Emergency Reporting procedure described in this Approval; and,
    c. All monitoring sample results required by Schedule “B”, if applicable.

SCHEDULE "B"

A. TERMS AND CONDITIONS

DISINFECTION REQUIREMENTS

Pursuant to Sections 8(2) of the *Water Quality Regulation*, this Approval is subject to the following conditions:

1. The *Approval Holder* shall collect monitoring samples from the *Final Discharge Point* and have them analysed for *E. coli* bacteria monthly for every month that the disinfection system is in operation.

2. The *Approval Holder* shall ensure that the disinfection system is operational from **May 1st to October 31st of each year**.

3. The *Approval Holder* shall ensure that the concentration of contaminants in the effluent deposited via the *Final Discharge Point* of the wastewater works do not exceed 200 MPN/100ml of *E. coli*.

SEPTAGE HAULER RECORD KEEPING

Pursuant to Sections 6 of the *Water Quality Regulation*, this Approval is subject to the following conditions:

4. The *Approval Holder* shall ensure that records are maintained and made available to the *Department* upon request, including:

   i. the name of each septage hauler disposing of septage at these facilities;
   ii. a summary of the dates and volumes of septage received; and,
   iii. the location of sludge disposal.

Prepared by: _____

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Authorizations Branch