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November 21, 2022

File: MV2016L3-0001

Susan Christie, SAO
Hamlet of Fort Providence
P.O. Box 290
FORT PROVIDENCE NT X0E 0L0

Sent via Email

Dear Susan Christie:

**Surveillance Network Program Proposal - Approval
Hamlet of Fort Providence – Fort Providence, NT**

The Mackenzie Valley Land and Water Board (MVLWB or the Board) met on November 17, 2022 and reviewed the Hamlet of Fort Providence's (Hamlet) Proposal to revise the Surveillance Network Program (Proposal) included in Annex A of the Hamlet's municipal Water Licence (Licence) MV2016L3-0001.

The Board hereby approves the Hamlet's Proposal and has approved the revised Annex A: Surveillance Network Program for Licence MV2016L3-0001. A revised Licence MV2016L3-0001 is attached.

The Board notes and appreciates the Hamlet's recent work to address outstanding Licence requirements and to conduct SNP sampling in accordance with the requirements of Licence MV2016L3-0001. The full cooperation of the Hamlet is anticipated and appreciated. If you have any questions or concerns, please contact Erica Janes at (867) 766-7466 or via [email](#).

Yours sincerely,

A handwritten signature in blue ink, appearing to read "Mavis Cli-Michaud".

Mavis Cli-Michaud
Chair, Mackenzie Valley Land and Water Board

Copied to: Hamlet of Fort Providence Distribution List
Annriza Enerio, Colliers Project Leaders
Alex Rodriguez, Colliers Project Leaders

Attached: Water Licence MV2016L3-0001 Current to November 21, 2022
Reasons for Decision



**Mackenzie Valley Land and Water Board
Water Licence**

Pursuant to the *Mackenzie Valley Resource Management Act* and Regulations, the Mackenzie Valley Land and Water Board, hereinafter referred to as the Board, hereby grants to:

Hamlet of Fort Providence
(Licensee)

of _____
Fort Providence, Northwest Territories
(Mailing Address)

hereinafter called the Licensee, the right to alter, divert, or otherwise use water subject to the restrictions and conditions contained in the *Waters Act* and Regulations made thereunder and subject to and in accordance with the conditions specified in this Licence.

Licence Number:	_____ MV2016L3-0001 _____
Licence Type:	_____ B _____
Water Management Area:	_____ Northwest Territories 01 _____
Location:	_____ 61° 21' N, 117° 39' W _____
Purpose:	_____ To use water and dispose of waste and associated uses _____
Description:	_____ Municipal use _____
Quantity of Water not to be exceeded :	_____ 60,000 cubic metres (m ³) per year _____
Effective date of licence:	_____ July 7, 2016 _____
Expiry date of licence:	_____ July 6, 2026 _____

This Licence issued and recorded at Yellowknife includes and is subject to the annexed conditions.

Mackenzie Valley Land and Water Board

Handwritten signature of Mavis Cli-Michaud in blue ink.

Mavis Cli-Michaud, Chair

Handwritten signature of Amanda Gauthier in black ink.

Amanda Gauthier, Witness

**Type B Water Licence MV2016L3-0001
Hamlet of Fort Providence – Municipal**

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Part A: Scope and Definitions

1. Scope:

- a) This Licence entitles the Licensee to use Water and dispose of Waste for the purpose of a municipal undertaking at the Hamlet of Fort Providence, Northwest Territories.
- b) This Licence is issued subject to the conditions contained herein with respect to the taking of Water and the depositing of Waste of any type in any Waters or in any place under any conditions where such Waste or any other Waste that results from the deposit of such Waste may enter any Waters. Whenever new Regulations are made or existing Regulations are amended by the Commissioner in Executive Council under the Act, or other statutes imposing more stringent conditions relating to the quantity or type of Waste that may be so deposited or under which any such Waste may be so deposited, this Licence shall be deemed, upon promulgation of such Regulations, to be automatically amended to conform with such Regulations.
- c) Compliance with the terms and conditions of this Licence does not relieve the Licensee from responsibility for compliance with the requirements of all applicable Federal, Territorial, or municipal legislation.
- d) The Licensee shall take every reasonable precaution to protect the environment.
- e) In conducting its activities under this Licence, the Licensee shall make best efforts to consider and incorporate any scientific and Traditional Knowledge that is made available to the Licensee.

2. Definitions:

Act – the *Waters Act*, S.G.N.W.T. 2014, C.18.

Analyst – an Analyst designated by the Minister under subsection 65(1) of the Act.

Board – the Mackenzie Valley Land and Water Board established under subsection 99(1) of the *Mackenzie Valley Resource Management Act*,

Construction - any activities undertaken to construct or build any components of, or associated with, the undertaking.

Discharge - the direct or indirect release of any Water or Waste to the Receiving Environment.

Freeboard – the vertical distance between Water line and the effective Water containment crest on the upstream slope of a dam or dyke.

Greywater – all liquid Wastes from showers, baths, sinks, kitchens and domestic washing facilities, but does not include Toilet Wastes.

Inspector – an Inspector designated by the Minister under subsection 65(1) of the Act.

Licensee – the holder of this Licence.

Maximum Average Concentration – the running average of any four (4) consecutive analytical results submitted to the Board in accordance with the sampling and analysis requirements specified in the Surveillance Network Program.

Minister – a duly appointed member of the Executive Council who is responsible for the *Waters Act* or the department responsible for administering that Act.

Modification – a change, other than an expansion, that does not alter the purpose or function of that structure.

Professional Engineer – a person registered with the Northwest Territories and Nunavut Association of Professional Engineers and Geoscientists in accordance with the *Engineering and Geoscience Professions Act*, S.N.W.T. 2006, V.16, and whose principal field of specialization is appropriate to address the components of the undertaking at hand.

Pumpout Sewage – all Toilet Wastes and/or Greywater collected by means of a vacuum truck for disposal and/or treatment at an approved facility.

Receiving Environment – the aquatic environment that receives any Water or Waste released from the undertaking.

Reclamation – activities which facilitate the return of areas affected by the Waste Disposal Facilities to viable and, wherever practicable, self-sustaining ecosystems that are compatible with a healthy environment, human activities, and the surrounding environment.

Regulations – Regulations promulgated pursuant to section 63 of the Act.

Sewage – all Toilet Wastes and Greywater.

Sewage Disposal Facilities – comprises the area and engineered structures designed to contain Sewage as identified in Figure Number 2, titled “Sewage Treatment Lagoon System”, which was included in the Water Licence Renewal application dated April 6, 2016.

Solid Waste Disposal Facilities – comprises the area and associated infrastructure designed to contain solid Wastes as identified in Figure Number 3, titled “Domestic Solid Waste and Sewage Treatment Lagoon Site”, which was submitted during the application review and is dated May 31, 2016. These components include: the Landfill site, Construction Waste Area, and Contaminated Soil (remediated).

Spill Contingency Plan – a document, developed in accordance with Indian and Northern Affairs Canada’s April 2007, *Guidelines for Spill Contingency Planning*, that describes the set of procedures to be implemented to minimize the effects of a spill or Unauthorized Discharge.

Surveillance Network Program – a monitoring program established to define environmental sampling and analysis requirements, as detailed in Annex A of this Licence, to collect Water quality data, and to assess discharge quality, Licence compliance, and potential for impacts to the environment.

Toilet Wastes – all human excreta and associated products but does not include Greywater;

Traditional Knowledge – the cumulative, collective body of knowledge, experience, and values built up by a group of people through generations of living in close contact with nature. It builds upon the historic experiences of a people and adapts to social, economic, environmental, spiritual, and political change.

Unauthorized Discharge – a release or discharge of any Water or Waste not authorized under this Licence.

Waste – any substance defined as Waste by section 1 of the Act.

Waste Disposal Facilities – comprises the area and associated infrastructure designated for the disposal of Waste, including the Sewage Disposal Facilities and the Solid Waste Disposal Facilities.

Water – any Water as defined by section 1 of the Act.

Water Supply Facilities – comprises the area and associated infrastructure designed to collect, treat, and supply Water for municipal purposes as identified in Figure Number 1, titled “Water and Waste Facility Locations”, which was submitted during the application review and is dated May 31, 2016.

Water Use – a use of Water as defined by section 1 of the Act.

Part B: General Conditions

1. The Licensee shall ensure a copy of this Licence is maintained at the municipal office at all times.
2. All information submitted to the Board for this Licence shall:
 - a) Be submitted in a form acceptable to the Board;
 - b) Be in accordance with the Board's March 2012, *Document Submission Standards*; and,
 - c) Include a section within each submission which identifies where the pertinent requirements of the Licence are addressed.
3. The Licensee shall operate in accordance with plans and programs approved pursuant to the conditions of this Licence, and with any revisions to such plans and programs as may be made pursuant to the conditions of this Licence and as approved by the Board. If any plan is not approved by the Board, the Licensee shall revise the plan as directed by the Board and resubmit it to the Board for approval.
4. The Licensee shall submit to the Board an **Annual Water Licence Report** no later than June 30 of the year following the year reported (April 1 – March 31), which shall be in accordance with Schedule 1.
5. The Licensee shall comply with the Schedules, which are annexed to, and form part of this Licence, and any changes to the Schedules as may be made by the Board.
6. The Licensee shall comply with the **Surveillance Network Program**, which is annexed to and forms part of this Licence, and any changes to the Surveillance Network Program as may be made by the Board.
7. The Schedules, Surveillance Network Program, and any compliance dates specified in the Licence may be changed at the discretion of the Board. If any date for the submission of a plan, report, or program falls on a weekend or holiday, the plan, report, or program shall be submitted on the following business day.
8. Meters, devices, or other such methods used for measuring the volumes of Water used and Waste discharged shall be installed, operated, and maintained by the Licensee to the satisfaction of an Inspector.
9. The Licensee shall post the necessary signs to inform the public of the location of the Water Supply Facilities, Waste Disposal Facilities, and Surveillance Network Program stations. All postings shall be located and maintained to the satisfaction of an Inspector.
10. All references to policies, guidelines, codes of practice, statutes, regulations or other authorities shall be read as a reference to the most recent versions, unless otherwise denoted.

Part C: Conditions Applying to Water Use

1. The Licensee shall obtain all Water for municipal purposes from the Mackenzie River using the Water Supply Facilities, or as otherwise approved by Board.
2. The annual quantity of fresh Water withdrawn using the Water Supply Facilities shall not exceed 60,000 cubic metres.
3. The Licensee shall adhere to the best practices outlined in Fisheries and Oceans Canada's *Fish Screen Design Criteria for Flood and Water Truck Pumps*, 2011.
4. The Licensee shall equip and maintain the fresh Water intake pumps with a screen designed to prevent the impingement and/or entrainment of fish. The screen shall have a mesh size sufficient to ensure no entrainment of fish, as outlined in Fisheries and Oceans Canada's *Freshwater Intake End-of-Pipe Fish Screen Guidelines*, 1995.

Part D: Conditions Applying to Waste Disposal

1. The Licensee shall ensure that any unauthorized Wastes associated with this undertaking do not enter any Waters.
2. The Licensee shall immediately notify an Inspector of the exceedance of any effluent quality criterion.
3. Sewage and solid Waste from industrial, commercial and institutional operators working outside of the local government boundaries of Fort Providence shall not be accepted at the Waste Disposal Facilities, unless otherwise authorized in writing by an Inspector.

Sewage

4. The Licensee shall direct all piped and Pumpout Sewage to the Sewage Disposal Facilities, or as otherwise approved by the Board.
5. The Sewage Disposal Facilities shall be maintained and operated in such a manner as to prevent structural failure.
6. A Freeboard limit of one (1) metre, or as recommended by a Professional Engineer and as approved by the Board, shall be maintained at all dykes and earthfill structures associated with the Sewage Disposal Facilities.
7. All effluent from the Waste Disposal Facilities at Surveillance Network Program station 1412-2 shall meet the following effluent quality criteria:

Parameter	Maximum Average Concentration
Suspended Solids	300 mg/L
Oil and Grease	5 mg/L
CBOD	330 mg/L
Faecal Coliforms	1x10 ⁵ CFU / 100mL
pH	Above 6

CFU = Colony Forming Units

8. The Licensee shall provide Water sampling results from Surveillance Network Program station 1412-2 to an Inspector and the Board no later than five (5) days prior to the discharge of effluent from the Sewage Disposal Facilities to the Receiving Environment. Discharge shall not commence until authorized in writing by an Inspector.
9. The Licensee shall submit written notification to the Board and an Inspector sixty (60) days prior to the removal of sludge from the Sewage Disposal Facilities. The notification shall include the following details: how the sludge shall be removed; where the sludge will be deposited; how the sludge shall be treated; and final disposal/ end use. Sludge removal shall not commence until authorized in writing by an Inspector.

10. The Licensee shall maintain the Sewage Disposal Facilities to the satisfaction of an Inspector.

Solid Waste

11. The Licensee shall dispose of all solid Wastes at the Solid Waste Disposal Facilities, or as otherwise approved by the Board.

12. The Licensee shall create and maintain waste segregation areas to the satisfaction of the Inspector for:

- a) Household/municipal hazardous Waste;
- b) Municipal solid Waste;
- c) Bulky Waste and scrap metal;
- d) Construction Waste; and
- e) Waste oil.

13. Within one (1) year following issuance of this Licence, the Licensee shall develop and install signage to promote the proper segregation of waste at the Solid Waste Disposal Facilities to the satisfaction of the Inspector.

14. Incineration at the Solid Waste Disposal Facilities is prohibited, unless otherwise authorized in writing by an Inspector.

15. The Licensee shall maintain fencing at the Solid Waste Disposal Facilities to the satisfaction of an Inspector.

16. Contaminated soil from industrial, commercial, residential and institutional operators shall not be accepted at the Solid Waste Disposal Facilities, unless otherwise authorized in writing by an Inspector.

17. The Licensee shall not accept hazardous Wastes at the Waste Disposal Facilities generated by commercial and industrial operators.

18. The Licensee shall take measures to minimize or eliminate standing water at the Solid Waste Disposal Facilities to the satisfaction of an Inspector.

19. The Licensee shall provide Water sampling results from Surveillance Network Program stations 2016-2 and/or 2016-3, and the proposed discharge location to an Inspector and the Board a minimum of ten (10) days prior to the discharge of standing Water from the Solid Waste Disposal Facilities. Discharge shall not commence until authorized in writing by an Inspector.

20. The Licensee shall maintain the Solid Waste Disposal Facilities to the satisfaction of an Inspector.

21. The Licensee shall apply cover material over exposed Waste to the satisfaction of an Inspector.

22. The Licensee shall, within one year of issuance, submit to the Board for approval an **Action Plan** to address capacity issues at Solid Waste Disposal Facilities. The Action Plan shall include, but not be limited to the following:

- a) Design criteria for the proposed new facility;
- b) Technical information for the proposed site, including drainage patterns;
- c) Discussion of available siting and design options for the new Solid Waste Disposal Facilities, including a decision matrix that compares the viable siting and design options considered and the criteria by which they are rated;
- d) Rationale for why the proposed new facility is the best choice;
- e) An evaluation of the remaining capacity at the existing Solid Waste Disposal Facility and the measures that will be taken to provide short term Waste disposal in a safe and environmentally sound manner until the new facility is available; and
- f) A timeline for implementation of the Action Plan, including start and finish dates for construction of the new facility.

Part E: Conditions Applying to Operation and Maintenance

1. The Licensee shall act in accordance with the Operation and Maintenance Plan – Sewage and Solid Waste Disposal Facilities submitted to the Board on December 10, 2015 until new plans are approved by the Board.
2. Within one (1) year following issuance of this Licence, the Licensee shall submit to the Board, for approval, an **Operation and Maintenance Plan for the Solid Waste Disposal Facilities**, which shall be in accordance with comments and commitments made during the review process for the Water Licence application and Schedule 2, item 1.
3. Within one (1) year following issuance of this Licence, the Licensee shall submit to the Board, for approval, an **Operation and Maintenance Plan for the Sewage Disposal Facilities**, which shall be in accordance with comments and commitments made during the review process for the Water Licence application and Schedule 2, item 2.
4. Within one (1) year following issuance of this Licence, the Licensee shall submit to the Board, for approval, an **Operation and Maintenance Plan for the Water Treatment Plant**, which shall be in accordance with comments and commitments made during the review process for the Water Licence application and Schedule 2, item 3.
5. The Licensee shall act in accordance with the approved plans referred to in Part E, items 2, 3, and 4 and shall annually review the plans and make any necessary revisions to reflect changes in operations, technology, and the results from research and other studies, or as directed by an Inspector or the Board. Revised plans shall include a brief summary of the changes made, and shall be submitted to the Board, for approval, at least sixty (60) days prior to any proposed changes to the requirements in the approved plans.

Part F: Conditions Applying to Construction

1. A minimum of ninety (90) days prior to construction of any structures intended to contain, withhold, divert or retain Waters or Wastes, the Licensee shall submit to the Board, **final design drawings** stamped and signed by a Professional Engineer, which notes “issued for construction” or similar phrase.
2. Construction of structures referred to in Part F, item 1 shall be carried out in accordance with the recommendations of the Professional Engineer responsible for the design, including, but not limited to, recommendations regarding field supervision and inspection requirements.
3. A minimum of ten (10) days prior to the commencement of construction of the structures referred to in Part F, item 1, the Licensee shall provide written notification to the Board and an Inspector. Notification shall include the name and contact information for the construction superintendent.
4. Within ninety (90) days of the completion of the construction of the structures referred to in Part F, item 1, the Licensee shall submit to the Board an **As-built Report** which shall include as-built drawings stamped and signed by a Professional Engineer and descriptions and rationale for changes made that deviate from the final design drawings referred to in Part F, item 1, and notes “final” or similar phrase.
5. The Licensee shall only use material that is clean and free of contaminants and is from a source that has been approved in writing by an Inspector.

Part G: Conditions Applying to Modifications

1. The Licensee may, without written approval from the Board, carry out Modifications to the Water Supply Facilities and Waste Disposal Facilities provided that the following requirements are met:
 - a) The Licensee has notified the Board and Inspector, in writing, of such proposed Modifications at least sixty (60) days prior to beginning the Modifications;
 - b) The Modifications do not place the Licensee in contravention of either the Licence or the Act;
 - c) The Board has not, during the sixty (60) days following notification of the proposed Modifications, informed the Licensee that further information is required or that review of the proposal will require more than sixty (60) days;
 - d) An Inspector has authorized the proposed Modifications and provided a letter of notification to the Board; and,
 - e) The Board has not rejected the proposed Modifications.
2. Modifications for which all of the conditions referred to in Part G, item 1, have not been met, may be carried out only with written approval from the Board.
3. Within ninety (90) days of the completion of the Modifications referred to in Part G, item 1, the Licensee shall submit to the Board **As-built drawings** stamped and signed by a Professional Engineer, which notes “final” or similar phrase.

Part H: Conditions Applying to Spill Contingency Planning

1. The Licensee shall act in accordance with the **Spill Contingency Plan** submitted to the Board on April 6, 2016, as part of the Water Licence renewal application until a revised plan is approved by the Board.
2. Within one(1) year following issuance, the Licensee shall submit to the Board, for approval, a revised **Spill Contingency Plan**. The Plan shall be revised in accordance with comments and commitments made during the review process for the Water Licence application. The Plan shall include, but not be limited to, all of the components outlined in the Board's *Operation and Maintenance Plan Templates for Municipal Water Licences: Spill Contingency Plan*.
3. The Licensee shall act in accordance with the approved Spill Contingency Plan referred to in Part H, item 2, and shall annually review the Plan and make any necessary revisions to reflect changes in operations, technology, chemicals or fuels, or as directed by an Inspector or the Board. Revised Plans shall include a brief summary of the changes made, and shall be submitted to the Board, for approval, at least sixty (60) days prior to any proposed changes to the requirements in the approved Plan.
4. If, during the term of this Licence, a spill or an Unauthorized Discharge occurs or is foreseeable, the Licensee shall:
 - a) Implement the Spill Contingency Plan;
 - b) Report the incident immediately via the 24-hour NWT Spill Report Line at (867) 920-8130 in accordance with the instructions contained in the Spill Report Form NWT 1752/0593;
 - c) Report each spill and Unauthorized Discharge to the Board and an Inspector within 24 hours; and
 - d) Submit a detailed report on each spill and Unauthorized Discharge, including descriptions of root causes, response actions and any changes to procedures to prevent similar occurrences in the future, to the Board within thirty (30) days.
5. All spills and Unauthorized Discharges of Water or Waste shall be reclaimed to the satisfaction of an Inspector.

Part I: Conditions Applying to Closure and Reclamation

1. The Licensee shall carry out progressive Reclamation of disturbed areas as soon as is reasonably practical.
2. The Licensee shall submit to the Board, for approval, a **Closure and Reclamation Plan** at least six (6) months prior to the closure of any component or cell of the Sewage or Solid Waste Disposal Facilities. The plan shall be in accordance with Schedule 3, item 1.
3. The Licensee shall act in accordance with the approved Closure and Reclamation Plans referred to in Part I, item 2.
4. The Licensee shall complete Reclamation activities within the time schedule specified in the Plan or as subsequently revised and approved by the Board.

Signed the behalf of the Mackenzie Valley Land and Water Board



Mavis Cli-Michaud, Chair



Amanda Gauthier, Witness

Schedule 1 – Annual Water Licence Report

1. The **Annual Water Licence Report** referred to in Part B, item 4 of this Licence shall include, but not be limited to, the following information:
 - a) The monthly and annual quantities in cubic metres of fresh Water obtained from all sources;
 - b) The monthly and annual quantities in cubic metres of each and all Waste discharged to the Waste Disposal Facilities;
 - c) The monthly and annual quantities in cubic metres of Waste removed from the Waste Disposal Facilities;
 - d) The monthly and annual quantities of all Sewage and solid Waste deposited into the Waste Disposal Facilities by commercial and industrial operators working outside the municipal boundaries of Fort Providence;
 - e) Tabular summaries of all data generated under the Surveillance Network Program (SNP) referred to in Part B, item 6 of this Licence;
 - f) Laboratory reports for all samples collected for the Surveillance Network Program, attached as an appendix;
 - g) Geographic coordinates for all Surveillance Network Program stations and a map showing station locations;
 - h) A summary of activities undertaken to install and maintain fencing at the Waste Disposal Facilities;
 - i) A summary of activities undertaken to install and maintain signage at the Waste Disposal Facilities and Surveillance Network Program stations;
 - j) A summary of sludge management activities including results of depth and volume measurements, sludge removal and treatment;
 - k) A summary of Construction activities conducted in accordance with Part F of this Licence;
 - l) A summary of Modification activities and major maintenance work conducted on the Water Supply and Waste Disposal Facilities, including all associated structures, in accordance with Part G of this Licence;
 - m) A list and description of all Unauthorized Discharges that occurred during the previous calendar year, including the date, NWT spill number, volume, location, and summary of the circumstances and follow-up actions taken, and the status (i.e. open or closed), in accordance with the reporting requirements referred to in Part H, item 4 of this Licence;
 - n) An outline of any spill training and communications exercises carried out during the previous calendar year;
 - o) A summary of any closure and reclamation work completed during the year and an outline of any work anticipated for the next year;
 - p) A summary of any studies requested by the Board that relate to Waste disposal, Water Use or Reclamation, and a brief description of any future studies planned;
 - q) A summary of actions taken to address concerns, non-conformances, or deficiencies in any reports filed by an Inspector;
 - r) A summary of any updates or revisions to the Spill Contingency Plan, Management Plans and Operation & Maintenance Plans; and
 - s) Any other details on Water Use, operating procedures, Modifications, maintenance work, or other topics, requested by the Board on or before November 1 of the year being reported.

Schedule 2 – Operation and Maintenance

1. The revised **Operation and Maintenance Plan for the Solid Waste Disposal Facilities** referred to in Part E, item 2 of this Licence shall include, but not be limited to, the following information:
 - a) All of the components outlined in the Board's *Operation and Maintenance Plan Template for Municipal Water Licences: Solid Waste Facility*;
 - b) A map showing all the components of the Solid Waste Disposal Facilities and SNP stations that monitor these facilities;
 - c) The remaining capacity or lifespan for each component of the Solid Waste Disposal Facilities;
 - d) Details about which sections of Solid Waste Disposal Facilities have been progressively reclaimed;
 - e) Frequency of compaction and cover of Waste, and source of cover material;
 - f) Use of drainage controls, measures employed to minimize standing water in waste cells, and contingency measures for leachate that does not receive approval to discharge;
 - g) Monitoring conducted under the Surveillance Network Program;
 - h) Provisions for secondary containment of Hazardous Waste;
 - i) Measures to prevent commercial, industrial and institutional Hazardous Wastes from entering the facilities; and
 - j) Details on contaminated soil management, including soil testing results, and plans and timeline for the end use of the soil and site.

2. The revised **Operation and Maintenance Plan for the Sewage Disposal Facilities** referred to in Part E, item 3 of this Licence shall include, but not be limited to, the following information:
 - a) All of the components outlined in the Board's *Operation and Maintenance Plan Template for Municipal Water Licences: Wastewater (Sewage) Treatment System*;
 - b) A map showing all the components of the Sewage Disposal Facilities and Surveillance Network Program stations that monitor these facilities;
 - c) Measures that will be taken to manage effluent that does not meet effluent quality criteria set out in Part D, item 7;
 - d) Sludge management, including how sludge depth is monitored, how sludge is managed, tested, removed, treated and disposed of; and
 - e) Water quality monitoring conducted under the Surveillance Network Program.

3. The revised **Operation and Maintenance Plan for the Water Treatment Plant** referred to in Part E, item 4 of this Licence shall include, but not be limited to, the following information:
- a) All of the components outlined in the Board's *Operation and Maintenance Plan Templates for Municipal Water Licences: Water Treatment Plant*;
 - b) A map showing the area and associated infrastructure for the water supply facilities, including the raw water intake location. The map should be at an adequate scale to show the location of any wastewater discharge;
 - c) Information on the quality and quantity of Waste and backwash water discharged from the Water Treatment Plant;
 - d) Details of Waste and backwash water disposal;
 - e) Discharge criteria for backwash water; and
 - f) Contingency plans to manage backwash water that does not meet criteria referred to in Schedule 2, condition 3(e).

Schedule 3 – Closure and Reclamation Plan

1. With regard to the facility being closed, the **Closure and Reclamation Plan** referred to in Part I, items 2 shall include, but not be limited to, the following information:
 - a) A description of existing conditions, including photographs;
 - b) A description of monitoring activities conducted prior to closure and a summary of results obtained;
 - c) Contaminated site remediation;
 - d) Plans to minimize the potential for leachate to contaminate groundwater and surface runoff;
 - e) Consideration of altered drainage patterns;
 - f) Type and source of cover materials;
 - g) Future area use;
 - h) Hazardous Wastes removal, transportation, and disposal;
 - i) A post-closure monitoring plan;
 - j) An implementation schedule; and
 - k) Maps delineating all disturbed areas, borrow material locations, and site facilities including hydrological features and elevation contours.

**Annex A:
Surveillance Network Program (SNP)
Annexed to Water Licence MV2016L3-0001 Part B, item 6
Hamlet of Fort Providence**

Table of Contents:

Part A: Reporting Requirements

Part B: Sampling and Analysis Requirements

Part C: Surveillance Network Program Station Descriptions

Part A: Reporting Requirements

1. The effective date of this Surveillance Network Program (SNP) is July 7, 2016.
2. The Licensee shall include all of the data and information required in Part C of this Annex in the Annual Water Licence Report, as specified in Part B, item 4 of this Licence.
3. The Licensee shall also provide SNP data at other times, if requested by an Inspector or the Board.

Part B: Sampling and Analysis Requirements

1. More frequent sample collection or provision of data may be required at the request of an Inspector.
2. The location of sampling sites is subject to the approval of an Inspector. The Licensee shall work with an Inspector to determine suitable locations for sampling sites. Signs shall be posted as per Part B, item 9 of this Licence.
3. All sampling, sample preservation, and analyses shall be conducted in accordance with methods prescribed in the current edition of American Public Health Association's (APHA) *Standard Methods for the Examination of Water and Wastewater* at the time of analysis, or by other such methods approved by an Analyst.
4. All analyses shall be performed in a laboratory accredited by the Canadian Association for Laboratory Accreditation (CALA) for the specific analyses to be performed or as approved by an Analyst.

Part C: SNP Station Descriptions and Monitoring Requirements

SNP station	Location and Coordinates	Sampling Frequency	Sampling Parameters	Rationale
1412-1	Raw Water intake line at the Water Supply Facilities 61°20'17.01" N 117°38'5.04" W	Monthly	Volume of Water in cubic metres	To monitor the monthly and annual quantity of Water withdrawn for municipal purposes.
1412-2	Sewage effluent from the Sewage Disposal Facilities 61°21'20.64" N 117°36'42.53" W	Prior to discharge and weekly during discharge	pH, CBOD ₅ , Total Suspended Solids, Ammonia, Total Phosphorus, Nitrate, Nitrite, Faecal Coliforms, Oil and Grease	Site of compliance. To monitor final effluent quality prior to discharge to the Receiving Environment.
1412-3	Raw sewage from pump out truck	Discontinued	Discontinued	Discontinued
2016-1	Sewage effluent flowing through the ponded area of the wetland, adjacent to road 61° 20' 59.64" N 117° 38' 14.28" W	At the beginning and end of the open water season, (i.e. one week following freshet, and before freeze-up)	pH, CBOD ₅ , Total Suspended Solids, Ammonia, Total Phosphorus, Nitrate, Nitrite, Faecal Coliforms, Oil and Grease	To monitor the quality of effluent that has been discharged from the Sewage Disposal Facilities and determine the effectiveness of wetland treatment before final discharge to the Mackenzie River.
2016-2	Ponded water within the Solid Waste Disposal Facilities 61° 21' 8.64" N 117° 37' 6.60" W	When ponded water present	Volume of water discharged in cubic metres. Total Suspended Solids, Total Cadmium, Total Chromium, Total Cobalt, Total Copper, Total Iron, Total Lead, Magnesium, Total Manganese, Total Mercury, Total Nickel, Oil and Grease, Total Petroleum Hydrocarbons, BTEX, Total Phenols, Total Phosphate, Calcium,	In accordance with Part D, Condition 19, to monitor potential impacts of the Solid Waste Disposal Facilities on groundwater and surface Water, and to monitor water quality and quantity prior to discharge.

SNP station	Location and Coordinates	Sampling Frequency	Sampling Parameters	Rationale
2016-3	<p>Ponded water within or adjacent to the construction waste cell at the Solid Waste Disposal Facilities</p> <p>61° 21' 7.20" N 117° 36' 59.76" W</p>	<p>Twice per year during the months of June and September; and prior to discharge of accumulated water.</p>	<p>Potassium, Sodium, Sulphate, Total Zinc, pH, conductivity</p> <p>Volume of water discharged in cubic metres.</p> <p>Total Suspended Solids, Total Cadmium, Total Chromium, Total Cobalt, Total Copper, Total Iron, Total Lead, Magnesium, Total Manganese, Total Mercury, Total Nickel, Oil and Grease, Total Petroleum Hydrocarbons, BTEX, Total Phenols, Total Phosphate, Calcium, Potassium, Sodium, Sulphate, Total Zinc, pH, conductivity</p>	<p>In accordance with Part D, Condition 19, to monitor potential impacts of the Solid Waste Disposal Facilities on groundwater and surface Water and to monitor water quality and quantity prior to discharge.</p>

Signed on behalf of the Mackenzie Valley Land and Water Board

Mavis Cli-Michaud, Chair

Witness

**Annex B:
Concordance Table of Items Requiring Submission in Water Licence MV2016L3-0001**

This table summarizes the information the Licensee is required to submit as per the Water Licence Conditions. It supplements the Water Licence. If there are any discrepancies between this table and the body of the Water Licence, the Water Licence conditions prevail.

Table 1: Concordance Table of Items Requiring Submission

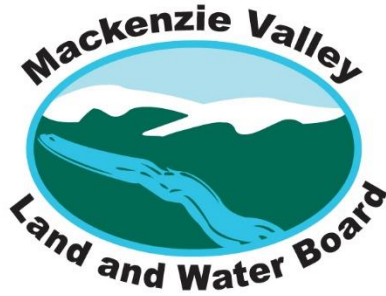
Part of Licence	Item	Timeline
B	Annual Water Licence Report	By June 30, each year
D	Notify an Inspector of the exceedance of any effluent quality criterion	When any effluent quality criteria are exceeded
D	Submit sampling results from SNP 1412-2 to an Inspector and the Board	Minimum of five (5) days prior to discharge
D	Submit written notification of sludge removal from the Sewage Disposal Facilities	60 days prior to the removal of sludge
D	Develop and install signage to promote the proper segregation of Waste at the Solid Waste Disposal Facilities	Within one (1) year of issuance
D	Submit sampling results from SNP 2016-2 and/or 2016-3 and proposed discharge location to an Inspector and the Board	Minimum of ten (10) days prior to discharge
D	Submit an Action Plan to address capacity issues at the Solid Waste Disposal Facilities	Within one (1) year of issuance
E	Submit an Operation and Maintenance Plan for the Solid Waste Disposal Facilities	Within one (1) year of issuance
E	Submit an Operation and Maintenance Plan for the Sewage Disposal Facilities	Within one (1) year of issuance
E	Submit an Operation and Maintenance Plan for the Water Treatment Plant	Within one (1) year of issuance
F	Final design drawings	90 days prior to construction of any structures intended to contain, withhold, divert or retain Waters or Wastes
F	Written notification to the Board and an Inspector	10 days prior to commencement of construction
F	As-built Report	Within 90 days of completion of construction

G	Written notification to the Board and an Inspector of any proposed Modifications to Water Supply Facilities or Waste Disposal Facilities	60 days prior to beginning the Modification
G	As-built plans and drawings	Within 90 days of completion of Modification
H	Submit a revised Spill Contingency Plan	Within one (1) year of issuance
I	Submit a Closure and Reclamation Plan	Six (6) months prior to the closure of any component or cell of the Sewage or Solid Waste Disposal Facilities

Annex C: Table of Revision History for Water Licence MV2016L3-0001

Table 1: Updates and changes that have been made to the Water Licence since issuance

Date	Location of change	Description of change
December 4, 2017	Schedule 2, condition 3(f)	Administrative correction to correctly refer to Schedule 2, condition 3(e) rather than Part 4, item 4(c).
November 21, 2022	Annex A, Part C: Licence SNP	<ul style="list-style-type: none"> - Coordinates added for all stations, - Descriptions for stations 2016-1, 2016-2 and 2016-3 revised - Rationale for stations 2016-2 and 2016-3 revised



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Reasons for Decision

Issued pursuant to section 72.25 of the *Mackenzie Valley Resource Management Act* (MVRMA) and subsection 26(1) of the *Waters Act*.

Water Licence Surveillance Network Program Proposal	
File Number	MV2016L3-0001
Company	Hamlet of Fort Providence
Project	Municipal operations
Location	Fort Providence, NT
Activity	Surveillance Network Program revisions
Date of Decision	November 17, 2022

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On November 17, 2022, the Mackenzie Valley Land and Water Board (MLWB or Board) met and considered the Proposal to revise the Surveillance Network Program (SNP) submitted to the Board by the Hamlet of Fort Providence (Hamlet) on October 6, 2021 for Water Licence (Licence) MV2016L3-0001. After reviewing the Proposal and the evidence gathered during the regulatory proceeding, the Board has made the decision to revise Annex A: Surveillance Network Program of Water Licence MV2016L3-0001.

These Reasons for Decision set out the Board’s regulatory process for the Proposal and rationale for decisions regarding the Licence SNP. A summary of the Proposal and the main issues identified during the proceeding is provided in sections [2.0](#) and [3.0](#) below, followed by an outline of the regulatory process for the Proposal in [section 4.0](#). [Section 5.0](#) describes how the applicable legislative requirements have been met. The Board’s decisions and supporting rationale are set out in [section 6.0](#) for the Licence.

1.0 List of Defined Terms and Acronyms

Licensee	Hamlet of Fort Providence
Proposal	The Proposal to revise the Licence Surveillance Network Program submitted by the Licensee for Water Licence MV2016L3-0001.
Distribution List	The list of individuals and organizations to whom materials from the regulatory proceeding were circulated. ¹
ECCC	Environment and Climate Change Canada
GNWT	Government of the Northwest Territories
GNWT-ENR	Government of the Northwest Territories – Environment and Natural Resources
Inspector	An Inspector designated under subsection 65(1) of the Waters Act
Licence	Water Licence MV2016L3-0001
MVLWB or Board	Mackenzie Valley Land and Water Board
MVRMA	Mackenzie Valley Resource Management Act
Minister	Minister of the Government of the Northwest Territories (GNWT) – Environment and Natural Resources
ORS	Online Review System (https://new.onlinereviewsystem.ca/reviews)
Party	As per the LWBs’ Rules of Procedures , an Licensee, a person, or an organization participating in this regulatory process.
Project	Municipal undertakings as described in Part A of the Licence.
SNP	Surveillance Network Program, as detailed in Annex A of the Licence.

2.0 Summary of Proposal

On October 6, 2021, the Licensee submitted a Proposal to revise the Surveillance Network Program (SNP) for municipal Licence MV2016L3-0001.² The Proposal is to revise a number of details included in the Licence SNP, including the exact locations of each SNP station, as well as the sampling frequency for one

¹ To access the Distribution List, see the LWBs’ Online Review System for [Fort Providence – Surveillance Network Program Proposal – October 12, 2021](#).

² See MVLWB Online Registry for [Ft Providence – SNP Proposal – Oct6_21](#).

of the SNP stations. When Licence MV2016L3-0001 was issued on July 7, 2016, several of the station locations were listed in Annex A, Part C as “exact location to be determined with the Inspector”. Since issuance, the Inspector has worked with Hamlet staff and Board staff during summer inspection to identify appropriate sampling locations for each of the stations listed in the Licence SNP. Samples have been collected during summer and fall inspections in recent years by the Inspector, along with community members and MVLWB staff, at these proposed locations.

In making its decision and preparing these Reasons for Decision, the Board has reviewed and considered:

- 1) The Proposal as submitted by the Licensee for the Project;
- 2) The evidence and submissions received by the Board from the Licensee in relation to the Surveillance Network Program; and
- 3) The comments and recommendations, evidence, and submissions received by the Board from Parties during the regulatory proceeding.

3.0 Main Issues Raised During the Regulatory Proceeding

Issues that were raised during the proceeding were resolved by Parties to the Board’s satisfaction, and were limited to clarification of whether ponded water collected at SNP stations 2016-2 and 2016-3 is discharged, and if so, where it would be discharged.

4.0 Regulatory Process

On October 6, 2021, the Licensee submitted the Proposal. On October 12, 2021, the Proposal was circulated to the Distribution List for public review on the Online Review System (ORS).³

By November 2, 2021, the Board received comments and recommendations regarding the Proposal from the following Parties: ECCC, GNWT-ENR and Board staff. On November 16, 2021, the Licensee responded to the Parties’ comments and recommendations; however, in their responses, the Hamlet indicated that they would provide the clarifications and confirmations requested in their 2021-22 Annual Water Licence Report (Annual Report), to be submitted by June 30, 2022.⁴

On August 12, 2022, the Hamlet submitted their 2021-22 Annual Report,⁵ which was circulated to the Distribution List for public review on the Online Review System (ORS) on August 25, 2022.⁶

By September 22, 2022, the Board received comments and recommendations regarding the 2021-22 Annual Report from GNWT-ENR and Board staff. On October 28, 2022, the Hamlet provided responses to reviewer comments and recommendations, after requesting an extension to the response deadline.⁷ In

³ See MVLWB Online Review System for [Fort Providence – Surveillance Network Program Proposal – October 12, 2021](#).

⁴ See MVLWB Online Registry for [Hamlet of Fort Providence Licence MV2016L3-0001](#).

⁵ See MVLWB Online Registry for [Ft Providence - 2021-22 Annual Report - Aug12 22](#).

⁶ See MVLWB Online Review System for [Hamlet of Fort Providence 2021-22 Annual Water Licence Report](#).

⁷ See MVLWB Online Registry for [Ft Providence - Request for ORS Extension - Oct 4 22](#).

their responses, the Hamlet provided clarifications relating to the disposal of water from SNP stations 2016-2 and 2016-3, as well as geographic coordinates for SNP stations 1412-1 and 1412-2.

On November 17, 2022, the Board met to make decisions regarding the Proposal. These decisions and related reasons are described in sections [5.0](#) and [6.0](#) below.

5.0 Legislative Requirements Related to Licence

This Project is subject to the [MVRMA](#), the [Waters Act](#), and the [Waters Regulations](#) with respect to licensing, because it is located in a non-federal area. As per the [Waters Regulations](#), the use of water and the deposit of waste for this Project require a licence. Accordingly, the Board has jurisdiction to issue the Licence as per subsection 60(1.1) and section 102 of the [MVRMA](#).

In conducting its regulatory process for the Proposal (as described in sections [3.0](#) and [4.0](#) above), the Board has ensured that section 62 of the [MVRMA](#) and all applicable legislative requirements have been satisfied as outlined in the subsections below. The Board has considered the people and users of the land and water in the Mackenzie Valley, and any Traditional Knowledge and scientific information that was made available to the Board during the regulatory proceeding, as per section 60.1 of the [MVRMA](#). The consideration of information provided to the Board is discussed in detail below and in section [6.0](#).

5.1 Consultation, Engagement, and Public Notice

The Proposal was posted to the Board's Public Registry and distributed through the ORS. As the Project is located in the Dehcho Region, the appropriate organizations, governments, First Nations, and Indigenous organizations were included in the Distribution List.⁸ The Distribution List was used throughout this proceeding to circulate submissions, information, and updates relevant to the proceeding; the List was updated if needed, and (if requested) individuals with specific interests in the Project were added. More information about the proceeding for the Proposal is provided above in [section 4.0](#).

In accordance with sections 63 and 64 of the [MVRMA](#), the Board is satisfied that notice of and access to copies of the Proposal was provided, and that a reasonable amount of time was given to communities, First Nations, and the public to participate in this proceeding and make submissions to the Board.

In accordance with the Northwest Territories Métis Nation Interim Measures Agreement, the Northwest Territories Métis Nation was notified of the Proposal through the ORS distribution. The Board did not receive any evidence from the Northwest Territories Métis Nation during the proceeding.

In accordance with the Minister's 2004 [Policy Direction regarding the Deh Cho First Nations Interim Measures Agreement](#), the Dehcho First Nation was notified of the Proposal through the ORS distribution.

⁸ To access the Distribution List, see the MVLWB Online Review System for [Fort Providence – Surveillance Network Program Proposal – October 12, 2021](#).

The Board did not receive any evidence from the Dehcho First Nation member nations during the proceeding.

5.2 Minimization of Adverse Effects

With regards to subsection 27(2) of the [Waters Act](#), the Board must ensure that the Licence conditions minimize potential adverse effects on other water and land users from the proposed use of water and deposit of waste. As discussed above in [section 5.1](#), the Board provided opportunities for potentially affected parties to make submissions to the Board during the regulatory proceeding for the revision of the Licence SNP.

Regardless, as noted above and as detailed in [section 6](#), the Board has maintained conditions in the Licence and revised the Licence SNP to regulate waste management for the purpose of protecting the receiving environment. It is the opinion of the Board that compliance with the Licence conditions and SNP that have been set to protect the water sources and the receiving environment will also minimize any potential adverse effects on other water and land users in the Project area.

6.0 Decision – SNP Proposal

Having due regard to the facts, circumstances, and the merits of the submissions made to it, and to the purpose, and provisions of the [MVRMA](#) and the [Waters Act](#), the Board has determined that the Hamlet's SNP Proposal can be approved, and the Licence SNP revised accordingly. The Board's determinations and reasons for this decision are set out below.

No changes were made to Licence MV2016L3-0001, except to Annex A: Surveillance Network Program, Part C, as detailed below.

6.1 Annex A: Surveillance Network Program

The SNP for Licence MV2016L3-0001 was developed to collect water quality data and to build an understanding of the treatment efficacy and potential impacts of the Sewage Disposal Facilities and Solid Waste Disposal Facility (Board's Reasons for Decision attached). SNP stations 2016-2 and 2016-3 (see Figure 1) were established to "monitor ponded water in the vicinity of the Solid Waste Disposal Facility that has been noted on previous inspections", and in recognition of the fact that the Hamlet had indicated in their Operation and Maintenance Plan submitted with the Application that pumping and discharge of this ponded water to adjacent land had been occurring with Inspector oversight. The establishment of these two SNP stations formalized this process and requires the testing of this water and reporting of any volumes discharged (in the Annual Report). The parameters chosen for this location are typical of those the Board uses to monitor water impacted by solid waste operations, but discharge criteria were not included in the Licence. The Board's Reasons for Decision indicate however, that based on the quality and volumes reported moving forward, future renewals and amendments to this Licence should consider the establishment of discharge criteria.

In addition to the establishment of SNP stations 2016-2 and 2016-3, Part D, Condition 19 of the Licence was included at issuance due to reviewer concern expressed during the renewal proceeding about ponded water at the Solid Waste Disposal Facilities (SWDF; RFD attached). This condition requires the Hamlet to provide analytical results and notification to an Inspector and the Board if either of these stations is sampled, as well as Inspector authorization of the discharge location.

The Hamlet has submitted a proposal to revise the SNP annexed to Licence MV2016L3-0001. The Hamlet notes in this proposal that the Licence was issued with station locations listed as “exact location to be determined with the Inspector”, and that samples have been consistently collected at the locations proposed, over the past couple of years. The Hamlet has proposed the following changes to the SNP:

1. Location coordinates for SNP stations 2016-1, 2016-2 and 2016-3 (see Figure 1 in this Staff Report);
2. A more specific location description for SNP station 2016-1; and
3. A revised sampling frequency for SNP station 2016-2 (ponded water within the Solid Waste Disposal Facilities (SWDF)), to be sampled “when ponded water present”.

The Hamlet noted in the Proposal that coordinates have been approximated, and will be ground-truthed in the near future, based on the SNP signage that has already been posted; following this, the Hamlet planned to provide accurate coordinates with the 2021-22 Annual Report.

The Hamlet’s 2021-22 Annual Report included the exact coordinates for SNP stations 2016-1, 2106-2 and 2016-3, and the Hamlet’s responses to review comments on the 2021-22 Annual Report included coordinates for SNP stations 1412-1 and 1412-2.

During the public reviews of the SNP Proposal and the 2021-22 Annual Water Licence Report, the Hamlet provided ground-truthed geographic coordinates for SNP stations 1412-1, 1412-2, 2016-1, 2016-2 and 2016-3. The Board has added these coordinates to the revised SNP.

During the public review of the SNP Proposal, ECCC asked the Hamlet to provide information on whether any ponded water collected at SNP stations 2016-2 or 2016-3 is discharged, and to where. In the 2021-22 Annual Report, the Hamlet confirmed that no ponded water was collected during that reporting period. The Board notes ECCC’s concern, and points out that the Licence SNP articulates that sampling is required only if water from SNP 2016-2 and 2016-3 is discharged, and the annual report would include details on if, when and where that water is discharged, in accordance with Schedule 1, Condition 1 of the Licence. In addition, Part D, Condition 19 stipulates that sampling results must be provided to the Board and an Inspector at least 10 days in advance and that Inspector authorization of the discharge location is required prior to the discharge of any standing water from the Solid Waste Disposal Facilities, which includes the SNP stations in question.

The Board has included a reference to this Part D, Condition 19 in the revised Licence SNP for further clarity on this matter.

Figure 1 shows the location of each SNP sampling station.

6.2 Annex C: Table of Revision History

Annex C of the Licence contains a table which identifies updates and tracks changes made to the Licence. This table was updated to reflect this SNP revisions.

7.0 Conclusion

Subject to the scope, definitions, conditions, and terms set out in the Licence, and for the reasons expressed herein, the MVLWB is of the opinion that the Surveillance Network Program associated with the Project can be revised while providing for the conservation, development, and utilization of waters in a manner that will provide the optimum benefit for all Canadians and in particular for the residents of the Mackenzie Valley.

SIGNATURE



Mavis Cli-Michaud, Chair
Mackenzie Valley Land and Water Board

November 21, 2022

Date

Figure 1: SNP locations

