



July 27, 2017

File: MV2009L3-0025

Mr. Alan Harris
Manager, Municipal Operations
Hamlet of Fort Liard
General Delivery
FORT LIARD NT X0G 0A0

Email: mws@fortliard.com

Dear Mr. Harris:

Hamlet of Fort Liard – Corrections to Licence Surveillance Network Program

The Mackenzie Valley Land and Water Board (the Board) met on June 22, 2017 to review the 2016 Annual Water Licence Report submitted by the Hamlet of Fort Liard (Hamlet) on March 8, 2017, in accordance with Part B, item 1 and Schedule 1, item 1 and Surveillance Network Program (SNP) Part 4 of Water Licence MV2009L3-0025. At that time, the Board accepted the Annual Report as submitted, and distributed a revised version of the Hamlet's Water Licence.

It has since come to the attention of Board staff that the administrative updates made to the Licence SNP on June 22, 2017 were not based on the most current version of the Hamlet's Water Licence.

Board staff have further revised the Licence SNP to incorporate all of the administrative updates made since the issuance of the Hamlet's Water Licence. The version attached, dated July 27, 2017, reflects all revisions to date.

If you have any questions or concerns, please contact Erica Janes at (867) 766-7466 or email ejanes@mvlwb.com.

Yours sincerely,

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

Mavis Cli-Michaud
MVLWB, Chair

Copied to: Distribution List

Attached: Water Licence MV2009L3-0025 Updated to July 24, 2017



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 Liard

(Licensee)

of General Delivery, Fort Liard, Northwest Territories X0G 0A0

(mailing address)

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

Licence number: MV2009L3-0025

Licence type: B

Water Management Area: Northwest Territories 03

Location: Fort Liard, Northwest Territories
(Latitude 60°14' N and longitude 123°28'
W for the community wells and latitude
60°09'09" N and longitude 123°13'08" W
for the Waste Disposal Facility)

Purpose: To use water and dispose of waste and
associated uses

Description: Municipal

Quantity of water **not to be exceeded**: 40,000 cubic metres annually

Effective date of Licence: March 1, 2010

Expiry date of Licence: February 29, 2020

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

Mackenzie Valley Land and Water Board

A handwritten signature in black ink, appearing to be "M. J. ...".

Chair

A handwritten signature in black ink, appearing to be "A. ...".

Witness

Part A: Scope and Definitions

Scope

1. This Licence entitles the Hamlet of Fort Liard to Use Water and dispose of Waste for municipal undertakings at Fort Liard, Northwest Territories (latitude 60°14' N and longitude 123°28' W for the community wells and latitude 60°09'09" N and longitude 123°13'08" W for the Waste Disposal Facility).
2. 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 deposits of such Waste may enter any Waters. Whenever new Regulations are made or existing Regulations are amended by the Governor in Council under the *Northwest Territories Waters 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 to such Regulations.
3. Compliance with the terms and conditions of this Licence does not absolve the Licensee from its responsibility for compliance with the requirements of all applicable federal, territorial, and municipal legislation.

Definitions

In this Licence: MV2009L3-0025:

“Act” means the *Northwest Territories Waters Act*.

“Analyst” means an Analyst designated by the Minister under subsection 35(1) of the *Northwest Territories Waters Act*.

“Average Concentration” means the discrete average of four consecutive analytical results, or if less than four, the analytical results collected during a batch decant and as submitted to the Board in accordance with the sampling and analysis requirements specified in the Surveillance Network Program.

“Board” means the Mackenzie Valley Land and Water Board established under Part 4 of the *Mackenzie Valley Resource Management Act*.

“Freeboard” means the vertical distance between the water line and the lowest elevation of the effective water containment crest on a dam or dyke’s upstream slope.

“Engineer” means a professional engineer registered to practice in the Northwest Territories in accordance with the *Engineering and Geoscience Professions Act*, S.N.W.T. 2006, c.16.

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

“Inspector” means an Inspector designated by the Minister under section 35(1) of the *Northwest Territories Waters Act*.

“Licensee” means the holder of this Licence.

“Minister” means the Minister of Indian Affairs and Northern Development.

“Modification” means an alteration to a physical work that introduces a new structure or eliminates an existing structure and does not alter the purpose or function of the work but does not include an expansion.

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

“Regulations” means Regulations proclaimed pursuant to section 33 of the *Northwest Territories Waters Act*.

“Sewage” means all Toilet Wastes and Greywater.

“Sewage Disposal Facilities” comprise the area and engineered structures designed to contain Sewage as identified in drawing number 101, titled “Lagoon Site Plan and Sections”, dated December 2007, and drawing number 102, titled “Lagoon Sections and Details”, dated December 2007.

“Solid Waste Disposal Facilities” comprise the area and engineered structures designed to contain solid Wastes as depicted in Figure 6, titled “Existing Sewage Treatment Lagoons and Solid Waste Disposal Site”, dated October 2008.

“Toilet Wastes” means all human excreta and associated products but does not include Greywater;

“Waste” means Waste as defined by section 2 of the *Northwest Territories Waters Act*.

“Waste Disposal Facilities” means all facilities designated for the disposal of Waste and includes the Sewage Disposal Facilities and Solid Waste Disposal Facilities.

“Waters” means any Waters as defined by section 2 of the *Northwest Territories Waters Act*.

“Water Supply Facilities” comprise the area and associated intake infrastructure as identified in Figure 1, titled “Location of Water Use Facilities”, dated December 2001; Figure 2, titled “Water Treatment Plant Site Plan”, dated October 2008; and Figure 3, titled “Water Treatment Plant Process Control Schematic”, dated October 2008.

“Water Use” means the use of Water as defined by section 2 of the *Northwest Territories Waters Act* and shall include freshwater from all sources.

Part B: General Conditions

1. The Licensee shall file an annual report with the Board not later than **March 31** of the year following the calendar year reported which shall contain 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, including Sewage discharged into Sewage Disposal Facilities;
 - c) A summary of Modifications and/or major maintenance work carried out on the Water Supply and Waste Disposal Facilities, including all associated structures;
 - d) Tabular summaries of all data generated under the Surveillance Network Program;
 - e) A list of unauthorized discharges;
 - f) An outline of any spill training and communications exercises carried out;
 - g) A summary of any abandonment and restoration work completed during the year and an outline of any work anticipated for the next year;
 - h) 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;
 - i) Any other details on Water Use or Waste disposal requested by the Board by November 1 of the year being reported;
 - j) Any revisions to the approved Spill Contingency Plan;
 - k) The monthly and annual quantities of Sewage solids removed from the Sewage Disposal Facilities for disposal;
 - l) Updates or revisions to the approved Operation and Maintenance Plans; and
 - m) The annual quantity of all sewage deposited by each remote camp and liquid waste haulers into the Sewage Disposal Facilities.
2. The Licensee shall comply with the Surveillance Network Program annexed to this Licence and any amendment to the said Surveillance Network Program as may be made from time to time pursuant to the conditions of this Licence.
3. The Surveillance Network Program and compliance dates specified in the Licence may be modified at the discretion of the Board.
4. 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.
5. The Licensee shall, within 90 days of the issuance of this Licence, post the necessary signs, where possible, to identify the station(s) of the Surveillance Network Program. All postings shall be located and maintained to the satisfaction of an Inspector.
6. The Licensee shall, within 90 days of the issuance of this Licence, submit a map and GPS coordinates of the Surveillance Network Program station(s) to the Board and Inspector.
7. The Licensee shall, within 90 days of issuance of this Licence, post signs in the appropriate areas to inform the public of Water Supply and Waste Disposal Facilities. All postings shall be located and maintained to the satisfaction of an Inspector.

8. The Licensee shall immediately report to the 24-hour Spill Report Line (867-920-8130) any spills of Waste which are reported to or observed by the Licensee within the municipal boundaries or in the areas of the water supply or Waste Disposal Facilities.
9. The Licensee shall ensure a copy of this Licence is maintained at the municipal office at all times.

Part C: Conditions Applying to Water Use

1. The Licensee shall obtain all water for municipal undertakings from the community wells using the Water Supply Facilities or as otherwise approved by the Board.
2. The Licensee may obtain water from the Petitot River for use on an emergency basis upon approval of the Board when it is not possible to obtain water from source as described in Part C, item 1.
3. The Licensee shall notify the Board within 30 days of using any emergency water source other than that described in Part C, item 2.
4. The annual quantity of water used for all purposes shall not exceed 40,000 cubic metres.

Part D: Conditions Applying to Waste Disposal

1. The Licensee shall direct all piped and Pumpout Sewage to the Sewage Disposal Facilities or as otherwise approved by the Board.
2. All Sewage effluent discharged from the Sewage Disposal Facilities at Surveillance Network Program station number 1478-9 shall meet the following effluent quality standards:

Parameter	Maximum average concentration
Suspended Solids	30 mg/L
BOD ₅	40 mg/L
Faecal Coliforms	1,000 CFU/100mL

The Waste discharged shall have a pH between 6 and 9 and no visible sheen of oil and grease.

3. The Licensee shall decant from the west end of new cell 3 (old cell 2) of the Sewage Disposal Facilities (see attached map entitled Existing Sewage Treatment Lagoons and Solid Waste Disposal Site).
4. A Freeboard limit of 1 metre, or as recommended by a qualified Engineer and as approved by the Board, shall be maintained at all dykes and earthfill structures associated with the Sewage Disposal Facilities.

5. The Licensee shall advise an Inspector at least ten days prior to initiating the decant of the Sewage lagoon.
6. The Sewage lagoon shall be maintained and operated in such a manner as to prevent structural failure.
7. The Licensee shall maintain the Sewage Disposal Facilities to the satisfaction of an Inspector.
8. The Licensee shall dispose of all solid Wastes at the Solid Waste Disposal Facilities or as otherwise approved by the Board.
9. The Licensee shall ensure that any unauthorized Wastes associated with this undertaking do not enter any Waters.
10. The Licensee shall submit to the Board for approval a hazardous waste management plan by August 30, 2010.
11. The Licensee shall revise and resubmit the plan required under Part D, item 10 if not approved by the Board. The revised plan shall be submitted to the Board at a time and in a form set out by the Board in a directive which will accompany such a rejection.
12. The Licensee shall, within six months of the issuance of the Licence, submit to the Board a plan to monitor and regulate the volume of Sewage deposited by remote camp operators and liquid Waste haulers.
13. The Licensee shall implement the plan specified in Part D, item 12 as and when approved by the Board.

Part E: Conditions Applying to Modifications

1. The Licensee may, without written approval from the Board, carry out Modifications to the Water Supply and Waste Disposal Facilities provided that such Modifications are consistent with the terms of this Licence and the following requirements are met:
 - a) The Licensee has notified the Board in writing of such proposed Modifications at least 60 days prior to beginning the Modifications;
 - b) Such Modifications do not place the Licensee in contravention of either the Licence or the Act;
 - c) The Board has not, during the 60 days following notification of the proposed Modifications, informed the Licensee that review of the proposal will require more than 60 days; and
 - d) The Board has not rejected the proposed Modifications.
2. Modifications for which all of the conditions referred to in Part E, item 1 have not been met may be carried out only with written approval from the Board.

3. The Licensee shall provide to the Board as-built plans and drawings of the Modifications referred to in this Licence within 90 days of completion of the Modifications.

Part F: Conditions Applying to Spill Contingency Planning

1. The Licensee shall, by August 30, 2010, submit to the Board for approval an updated contingency plan in accordance with the Indian and Northern Affairs' "Guidelines for Spill Contingency Planning" dated April 2007.
2. The Licensee shall revise and resubmit the plan required under Part F, item 1 if not approved by the Board. The revised plan shall be submitted to the Board at a time and in a form set out by the Board in a directive which will accompany such a rejection.
3. The Licensee shall review the Contingency Plan annually and modify the plan as necessary to reflect changes in operation and technology. Any proposed Modifications shall be submitted to the Board for approval.
4. If, during the period of this Licence, an unauthorized discharge of Waste occurs, or if such a discharge is foreseeable, the Licensee shall:
 - a) Employ the appropriate Contingency Plan;
 - b) Report the incident immediately via the 24-hour NWT Spill Report Line. Currently the number is (867) 920-8130; and
 - c) Submit to an Inspector a detailed report on each occurrence not later than 30 days after initially reporting the event.

Part G: Conditions Applying to Closure and Reclamation

1. The Licensee shall submit to the Board for approval a closure and reclamation plan at least six months prior to abandoning any Waste Disposal Facilities. The plan shall include but not be limited to:
 - a) Contaminated site remediation;
 - b) Leachate prevention;
 - c) An implementation schedule;
 - d) Maps delineating all disturbed areas, borrow material locations, and site facilities;
 - e) Consideration of altered drainage patterns;
 - f) Type and source of cover materials;
 - g) Future area use; and
 - h) Hazardous wastes.
2. The Licensee shall revise and resubmit the plan required under Part G, item 1 if not approved by the Board. The revised plan shall be submitted to the Board at a time and in a form set out by the Board in a directive which will accompany such a rejection.
3. The Licensee shall implement the plan specified in Part G, item 1 as and when approved by the Board.

Part H: Conditions Applying to Construction

1. Prior to construction of any dams, dykes, or structures intended to contain, withhold, divert, or retain water or Wastes other than as contemplated in the Contingency Plan, the Licensee shall submit to the Board for approval a design report stamped by a qualified Engineer.
2. Construction of designed structures shall be carried out as approved by the Board.
3. The Licensee shall provide to the Board as-built plans and drawings of the constructed facilities referred to in Part H, item 1 within 90 days of completion of the facilities, and stamped and signed by an Engineer.

Part I: Conditions Applying to Operation and Maintenance

1. The Licensee shall, within six months of the issuance of this Licence, submit to the Board for approval, an updated plan for the operation and maintenance of the Waste Disposal Facilities. The plan shall include, but not be limited to, the following:
 - a) A description of how facilities are operated and maintained, including:
 - i. How often the tasks are performed; and
 - ii. The personnel responsible for their completion;
 - b) Details about the maintenance of the fence around the Solid Waste Disposal Facility;
 - c) Frequency of inspection of dams, dykes, and drainage courses;
 - d) Removal of floating materials from the Sewage Disposal Facilities;
 - e) Control of effluent discharge quality;
 - f) Runoff and drainage control within and around the facility and restoration of erosion;
 - g) Treatment of contaminated drainage;
 - h) Prevention of windblown debris;
 - i) Management of hazardous Waste;
 - j) Segregation of domestic, metal, and recyclable Waste materials;
 - k) Method and frequency of site maintenance including burning where permitted;
 - l) Alternatives designed to reduce burning; and
 - m) All applicable territorial guidelines.
2. The Licensee shall revise and resubmit the plan required under Part I, item 1 if not approved by the Board. The revised plan shall be submitted to the Board at a time and in a form set out by the Board in a directive which will accompany such a rejection.
3. The Licensee shall implement the plan specified in Part I, item 1, as and when approved by the Board.
4. The Licensee shall review, and amend as needed, the plan specified in Part I, item 1 on an annual basis and shall advise the Board of any amendments in accordance with Part B, item 1 of this licence.

5. The Licensee shall submit a sludge management plan to the Board for approval 90 days prior to desludging the Sewage Disposal Facility. The plan shall include, but not be limited to, the following:
 - a. Maintenance procedures (periodic removal and disposal of Sewage sludge);
 - b. Quantities of sludge likely to be produced;
 - c. Identification of the required frequency of extraction from the lagoons; and
 - d. Operational procedures developed for environmentally sound removal and disposal.
6. The Licensee shall revise and resubmit the plan required under Part I, item 5 if not approved by the Board. The revised plan shall be submitted to the Board at a time and in a form set out by the Board in a directive which will accompany such a rejection.
7. The Licensee shall, within six months of the issuance of this Licence, submit to the Board for approval, an updated plan for the operation and maintenance of the Water Supply Facilities.
8. The Licensee shall revise and resubmit the plan required under Part I, item 7 if not approved by the Board. The revised plan shall be submitted to the Board at a time and in a form set out by the Board in a directive which will accompany such a rejection.

Mackenzie Valley Land and Water Board



Mavis Cli-Michaud, Chair



Amanda Gauthier, Witness



Licensee: Hamlet of Fort Liard

Licence number: MV2009L3-0025

Effective date of Licence: March 1, 2010

Effective date of Surveillance Network Program (SNP): March 1, 2010

Surveillance Network Program

1. Location of Surveillance Station(s)

Station Number	Description	Rationale
1478-1 (Inactive)	Raw water supply – Petitot River at water intake	n/a
1478-2 (Discontinued)	Raw water supply from old community well.	n/a
1478-3	Raw water supply from new community well.	To determine the quality of the community well for use as a municipal potable water supply source.
1478-4 (Inactive)	Wastewater sample from old cell one of the Sewage Disposal Facility.	n/a
1478-5 (Inactive)	Wastewater sample from new cell two (old cell three) of the Sewage Disposal Facility.	Historic final effluent sample location.
1478-6	Water from stream flowing to Petitot River upstream of culvert at Hwy #7 (Exact location to be determined with an Inspector)	To monitor effluent from the Sewage Disposal Facilities following decant.
1478-7	Backwash discharge water from greensand filter at the water treatment plant	To determine water quality of backwash discharge into the Liard River.
1478-8	TBD	To monitor runoff from Solid Waste Disposal Site.
1478-9	Wastewater sample from new cell three (old cell two) of the Sewage Disposal Facility.	Site of compliance. To monitor final effluent quality before discharge into receiving environment.
1478-10	Sedimentation Pond at new solid waste facility.	To test water collected prior to discharge.

2. Sampling and Analysis Requirements

- a) Water at station number 1478-6 and 1478-9 shall be sampled one week prior to discharge and weekly during discharge. If the decant period is less than seven days, station numbers 1478-6 and 1478-9 shall be sampled on the first and last day of decant. Station numbers 1478-6 and 1478-9 shall be analysed for the following parameters:

pH	Ammonia-Nitrogen
Faecal Coliform	BOD ₅
Total Suspended Solids	Total Dissolved Solids
Conductivity	CBOD

- b) Water at station number 1478-7 shall be sampled quarterly during backwash operations of the greensand filter. Samples shall be analysed for the following parameters:

Total Metals

- c) Water at station number 1478-8 shall be sampled at least twice annually during periods of flow and analysed for the following parameters:

pH	Hydrocarbons
Total Suspended Solids	Total Metals

- d) Water at station number 1478-10 shall be sampled prior to discharge and analysed for the following parameters:

pH	Hydrocarbons	Turbidity
Total Suspended Solids	Total Metals	

- e) More frequent sample collection may be required at the request of an Inspector.
- f) All sampling, sample preservation, and analyses shall be conducted in accordance with methods prescribed in the current edition of "Standards Methods for the Examination of Water and Wastewater" or by such other methods approved by an Analyst.
- g) All analyses shall be performed in a laboratory approved by an Analyst.
- h) Station number 1478-3 shall be sampled and analysed to the satisfaction of an Environmental Health Officer and/or Inspector.

3. Flow and Volume Measurement Requirements

- a) The monthly and annual quantities of water pumped from Surveillance Network Program station number 1478-3 for municipal purposes shall be measured and recorded in cubic metres.

- b) The weekly and total volume of effluent discharge during any release of effluent from the Sewage Disposal Facility shall be measured and recorded.
- c) The monthly and annual quantities of Sewage discharged to the Sewage Disposal Facility shall be measured and recorded in cubic metres.

4. **Reports**

- a) The Licensee shall, unless otherwise requested by an Inspector, include all of the data and information required by the Surveillance Network Program including the results of the approved quality assurance/quality control program in the Licensee's Annual Report, which Report shall be submitted to the Board on or before March 31 of the year following the calendar year being reported.

Mackenzie Valley Land and Water Board



Mavis Cli-Michaud, Chair



Amanda Gauthier, Witness

Annex A Revisions to Water Licence MV2009L3-0025

List of changes that have been made to the Water Licence since issuance

Date	Location of change	What has changed
August 19, 2010	Scope, Surveillance Network Program, sections 1 and 2	<ul style="list-style-type: none"> • Part A, item 1 – scope revised to include geographic coordinates for the Waste Disposal Facility and community wells. • SNP Section 1: addition of station 1478-10 • SNP section 2(d): parameters for station 1478-10
July 21, 2016	Surveillance Network Program, sections 1 and 2	<ul style="list-style-type: none"> • Section 1: Reactivation of SNP station 1478-6, rationale added. • Section 2: Sampling requirements for station 1478-6 added to part (a).
June 22, 2017	Surveillance Network Program, sections 1 and 2	<ul style="list-style-type: none"> • Section 1: Revised description of SNP 1478-7 • Section 2: Revised sampling requirements for station 1478-7 added to part (b).
July 27, 2017	Surveillance Network Program, sections 1 and 2	<ul style="list-style-type: none"> • Editorial corrections to include all SNP revisions made since issuance.